

**1R - 299**

**2010 AGWMR**

**03/31/2011**

31 March 2011

RECEIVED OCD

2011 APR -1 A 12:51

Mr. Glen Von Gonten, Senior Hydrologist  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: 2010 Annual Groundwater Monitoring Report  
Shell Oil Products US - Penrose 'A' (Winnie Kennan Ranch)  
Case Number: 1R299**

Dear Mr. Von Gonten:

The attached report documents the annual groundwater monitoring activities conducted at the above-referenced site. Due to the absence of constituents of concerns in groundwater monitoring wells MW-2 through MW-5 during the past three years, groundwater sampling activities were discontinued. However, free-product recovery activities associated with groundwater monitoring well MW-1 were re-initiated on May 30, 2010.

Should you have any questions or concerns, please feel free to contact me at (602) 648-2402 or via e-mail at [iain\\_olness@urscorp.com](mailto:iain_olness@urscorp.com). All official correspondence should be submitted to Mr. Ken Springer with Shell Oil Products US at the following address:

Mr. Ken Springer, Staff Project Manager  
Shell Oil Products US  
P. O. Box 1087  
Huffman, TX 77336  
  
(281) 324-5921  
  
Kenneth.Springer@shell.com

Sincerely,

**URS Corporation**



Iain Olness, P.G.  
Senior Geologist

Attachments: *2010 Annual Groundwater Monitoring Report*

cc: Ken Springer, SOPUS – Houston  
Larry Johnson, NMOCD – Hobbs

URS Corporation  
7720 North 16th Street, Suite 100  
Phoenix, AZ 85020  
Tel: 602.371.1100  
Fax: 602.371.1615



**2010 ANNUAL GROUNDWATER  
MONITORING REPORT**

**PENROSE 'A' LEASE  
(WINNIE KENNAN RANCH)**

**CASE NUMBER: 1R299**

**INCIDENT NUMBER: 300108**

**SW $\frac{1}{4}$  SE $\frac{1}{4}$ , SEC. 3, T23S, R37E  
LEA COUNTY, NEW MEXICO**

**Prepared for:  
SHELL OIL PRODUCTS US**

**URS Job No. 49194413  
31 March 2010**

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## 1.0 INTRODUCTION

This *Annual Report* has been prepared to document the results of groundwater monitoring, sampling and remediation activities conducted during 2010 at the Penrose 'A' Lease (Winnie Kennan Ranch) located approximately seven miles southeast of Eunice, New Mexico, off New Mexico State Highway 18, in Lea County, New Mexico (reference Figures 1 and 2). The subject-property is located in the SW<sup>1</sup>/<sub>4</sub> of the SE<sup>1</sup>/<sub>4</sub> of Section 3, T23S, R37E. A review of the New Mexico Office of the State Engineer website in 2007 and the United States Geological Survey (USGS) database revealed the presence of ten water supply wells within a one-mile radius of the point of release (reference Figure 2 and Table 1). No wells were found to be located within a 1,000-foot radius of the point of release, with the nearest wells being located approximately 1,800 feet northeast (i.e., upgradient) of the point of release.

This report complies with the New Mexico Oil Conservation Division (NMOCD) requirements and addresses all activities performed during the annual period of 2010. Groundwater and light non-aqueous phase liquid (LNAPL) level measurements were collected approximately monthly throughout 2010. In addition, the LNAPL skimmer pump was reinstalled in groundwater monitoring well MW-1 on May 30, 2010 in order to continue LNAPL abatement activities. The monitoring events were performed by H<sub>2</sub>A Environmental, Ltd. (H<sub>2</sub>A), under the direction of URS Corporation (URS).

## 2.0 CHRONOLOGY OF EVENTS

A summary of significant events and activities performed at the site is presented below.

March 2000	Shell and Enercon perform a site walk of the property in an area of historic crude oil releases of an unknown amount.
October to November 2000	Enercon was onsite to excavate approximately 10,800 cubic yards of soil, which were transported and landfarmed offsite. The site was excavated to a depth of 40 feet below ground surface (bgs) with TPH exceeding NMOCD standards at that depth. The NMOCD agreed with Shell that for safety purposes further excavation should be halted.
May 2001	Enercon submits the excavation report to the NMOCD.
November 2001	NMOCD requests installation of a soil boring/monitor well in center of excavation to determine amount of remaining hydrocarbon impacts to the soils/groundwater.
January 2002	Enercon is onsite to advance one soil boring within the open excavation from a depth of 40 feet bgs to groundwater located at approximately 75 feet bgs. The soil boring was converted to temporary monitor well TMW-1. Soils exceeded NMOCD standards of 1,000 milligrams per kilogram (mg/Kg) TPH. LNAPL in the form of crude oil was measured in TMW-1.
April 2002	Enercon submits <i>Workplan for Soil Remediation and Monitor Well Installation</i> to NMOCD. Workplan includes installation of clay liner over remaining hydrocarbon impacted soils.
May 2002	Enercon submits <i>Report Detailing the Installation of Temporary Monitor Well TMW-1</i> to NMOCD.
April 2004	NMOCD agrees to work plan design and installation of additional monitor wells to delineate site groundwater impacts.
June 2004	Enercon places a 4-foot clay liner above remaining hydrocarbon impacted soils and backfills excavation with soils from surrounding sand dunes. Temporary monitor well TMW-1 is converted to monitor well MW-1.
July 2004	Enercon advances four soil borings to approximately 80-feet bgs and converts soil borings to monitor wells (MW-2 through MW-5). Monthly LNAPL recovery from MW-1 initiated.
November 2004	Enercon submits <i>Phase II Backfilling Activities with Site Groundwater/Soil Characterization</i> to NMOCD.
January 2005	Continued monthly LNAPL recovery from MW-1.
March 2005	Enercon submits <i>2004 Annual Groundwater Monitoring Report</i> to the NMOCD.
September 2005	Enercon installs one Clean Environments CEE <sup>®</sup> Product Only Pump in monitor well MW-1.

January 2006	Site maintenance and environmental management of property transitioned from Enercon to Conestoga-Rovers and Associates (CRA). Continued monthly LNAPL recovery from MW-1.
April 2006	CRA submits <i>2005 Annual Groundwater Monitoring Report</i> to Shell Oil Products US (SOPUS) and the NMOCD.
October 10, 2006	Site maintenance and environmental management of property transitioned from CRA to URS Corporation.
January 2007	Continued monthly LNAPL recovery from MW-1.
March 2007	URS Corporation submits <i>2006 Annual Groundwater Monitoring Report</i> to SOPUS and the NMOCD, recommending the sampling schedule be reduced from quarterly to semi-annual.
March 23, 2007	H <sub>2</sub> A conducts semi-annual sampling activities.
November 2, 2007	H <sub>2</sub> A conducts semi-annual sampling activities.
January 2008	Continued monthly LNAPL recovery from MW-1.
March 2008	URS submits <i>2007 Annual Groundwater Monitoring Report</i> to SOPUS and the NMOCD.
March 14, 2008	H <sub>2</sub> A conducts semi-annual sampling activities.
November 17, 2008	H <sub>2</sub> A conducts semi-annual sampling activities.
January 2009	Continued monthly LNAPL recovery from MW-1.
March 2009	URS submits <i>2008 Annual Groundwater Monitoring Report</i> to SOPUS and the NMOCD.
May 7, 2009	H <sub>2</sub> A conducts semi-annual sampling activities.
July 2009	The LNAPL skimmer pump is removed from groundwater monitoring/recovery well MW/RW-1 in an attempt to monitor for LNAPL rebound.
December 12, 2009	H <sub>2</sub> A conducts semi-annual sampling activities.
March 2010	URS submits <i>2009 Annual Groundwater Monitoring Report</i> to SOPUS and the NMOCD. Groundwater sampling activities terminated.
May 2010	The LNAPL skimmer pump is reinstalled in groundwater monitoring/recovery well MW/RW-1.
August 2010	Representatives from NMOCD, SOPUS, URS Corporation, and H2A meet to discuss the status of the site and develop a plan to move the site toward closure.

### **3.0 2010 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES**

#### **3.1 FIELD PROCEDURES**

Groundwater monitoring events were performed on January 17, February 28, April 4, April 30, May 30, June 18, July 20, October 6, November 30 and December 31, 2010. Groundwater monitoring well locations and site details are illustrated in Figure 3. During these events, fluid levels were measured in each well and the information documented on field monitoring forms.

#### **3.2 GROUNDWATER GAUGING DATA**

During 2010, depth to groundwater across the site ranged from 70.72 feet to 73.50 feet below the top of the casing, with an average groundwater gradient of approximately 0.0051 ft/ft to the southwest. Groundwater gauging data are summarized in Table 2 and illustrated in Figure 4. These observations are consistent with historical data collected at the site. Average groundwater elevations at the site, adjusted for LNAPL, during the April 30 and November 30, 2010 gauging events were 3,226.22 feet, and 3,226.14 feet above mean sea level, respectively. These data indicate the average groundwater elevation at the site decreased approximately 0.13 feet between December 12, 2009 and December 31, 2010. Groundwater gradient maps for the April 30 and November 30, 2010 sampling events are illustrated on Figures 5 and 6, respectively.

#### **3.3 GROUNDWATER SAMPLING DATA**

Groundwater sampling activities were discontinued during 2010 due to the absence of constituents of concerns during the past three years in all perimeter monitoring wells. Historic data are presented in Table 3 and on Figures 7 through 10.

#### 4.0 LNAPL RECOVERY ACTIVITIES

During the 2010 monitoring period, measurable LNAPL in the form of crude oil was present in groundwater monitoring well MW-1 with an average thickness of 0.15 feet (reference Table 2). Historically, from July 2004 through December 2009, the LNAPL thickness averaged 0.82 feet in MW-1. No LNAPL recovery occurred from July 30, 2009 through May 30, 2010 in an effort to monitor for LNAPL rebound. Beginning on May 30, 2010, LNAPL abatement activities were performed by utilizing a Clean Environments CEE<sup>®</sup> Product Only Pump, installed in groundwater monitoring/recovery well MW/RW-1. LNAPL recovery from the onsite remediation system is summarized on Table 2. As of December 31, 2010, an approximate total of 42.7 gallons of LNAPL have been recovered at the site. Of this, approximately 11.5 gallons of LNAPL have been recovered by hand bailing, and 31.2 gallons by the onsite remediation system. Recovered LNAPL is stored in a 55-gallon steel drum within a fiberglass secondary containment adjacent to groundwater monitoring well MW-1, situated within a poly lined earthen berm.

## 5.0 NMOCD FACILITY MEETING

On August 10, 2010, representatives from the NMOCD, SOPUS, URS Corporation and H2A met to discuss the status of the site and define a path moving towards closure. Representatives from the NMOCD, Mr. Glen Von Gonten and Mr. Jim Griswold, agreed that SOPUS had aggressively remediated the site and that these activities would be beneficial when proposing alternative abatement standards. Results of the meeting included the development of a plan to move the site toward closure, under either a *Technical Infeasibility* option as outlined in Subsection F of 19.15.30.9 of the New Mexico Administrative Code (NMAC) or providing alternative abatement standards. The plan included the following:

- Determine the TDS in the source well (i.e. MW-1) and a background well (i.e., MW-3 or MW-4);
- Collect a water sample from groundwater monitoring well MW-1 to determine petroleum constituent concentrations, if present. The sample will be submitted for quantification of the following constituents:
  - Benzene, toluene, ethylbenzene and total xylenes via EPA Method 8260B; and,
  - Total Dissolved Solids (TDS) via Standard Method (SM) 2540C, pH via SM4500H B, and chlorides via EPA Method E300.0.
- Should analytical results indicate no detectable concentrations of petroleum constituents or levels below the water quality standards as set forth in 20.6.2.3103 NMAC, then an additional sample should be collected to confirm results. If the second round of samples confirms that no petroleum constituents are present at or above the water quality standards, the site may be eligible for closure although LNAPL is present on the water table.
- Prepare and submit a closure request package;

Should analytical results indicate detectable concentrations of petroleum constituents at levels exceeding water quality standards as set forth in 20.6.2.3103, continue site monitoring to confirm stable/declining trends in samples collected from groundwater monitoring well MW-1 to ensure a stable / declining overall trend exists.

In addition to the aforementioned plan, discussions included looking at the option of completing a *Stage II Abatement Plan* and proposing alternative abatement standards. A *Stage II Abatement Plan* would have to be submitted for public review; however, the NMOCD representatives indicated they could support alternative abatement standards based on work previously completed by SOPUS.

## 6.0 SUMMARY OF FINDINGS

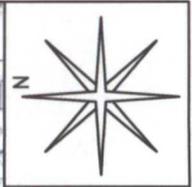
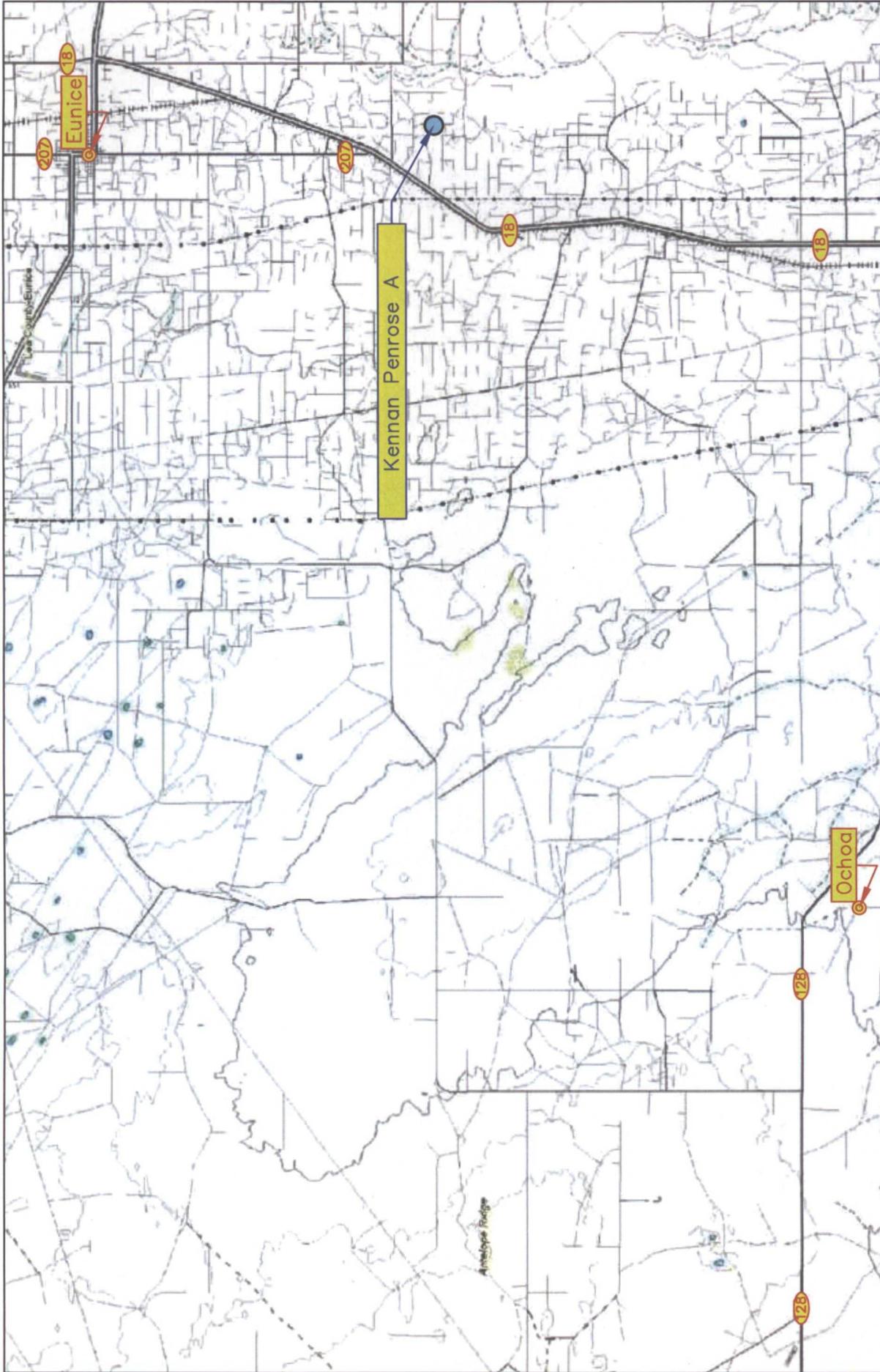
Key findings based on the assessment/remediation activities conducted during 2010 are presented below:

- The groundwater gradient remains relatively constant at approximately 0.0051 ft/ft to the southwest.
- LNAPL was present throughout the year in groundwater monitoring well MW-1 with an average thickness of 0.15 feet.
- A CEE<sup>®</sup> Product Only Pump was installed in groundwater monitoring well MW-1 in September 2005 to enhance recovery of LNAPL and has recovered approximately 31 gallons since installation.
- Groundwater sampling activities in MW-2 through MW-5 were terminated at the end of 2009 due to the absence of constituents of concern in these groundwater monitoring.

## 7.0 RECOMMENDATIONS

Based on field data collected during the past year and analytical results for samples collected previously from the groundwater monitoring well network and results of the NMOCD facility meeting, the following recommendations are made:

- 1) Based on the NMOCD facility meeting it is recommended the following occur during the first quarter of 2011:
  - a. Collect a water sample from a background monitoring well (i.e., MW-3 or MW-4) to determine the TDS;
  - b. Collect a water sample from groundwater monitoring well MW-1 to determine petroleum constituent concentrations, if present. The sample will be submitted for quantification of the following constituents:
    - i. Benzene, toluene, ethylbenzene and total xylenes via EPA Method 8260B; and,
    - ii. Total Dissolved Solids (TDS) via Standard Method (SM) 2540C, pH via SM4500H B, and chlorides via EPA Method E300.0.
- 2) Continue monitoring the free-product recovery system to ensure the system is operating efficiently and effectively.
- 3) Submit the results of the Annual Sampling Program to the NMOCD by April 1, 2012.



DWG By: Daniel Dominguez  
 October 2006

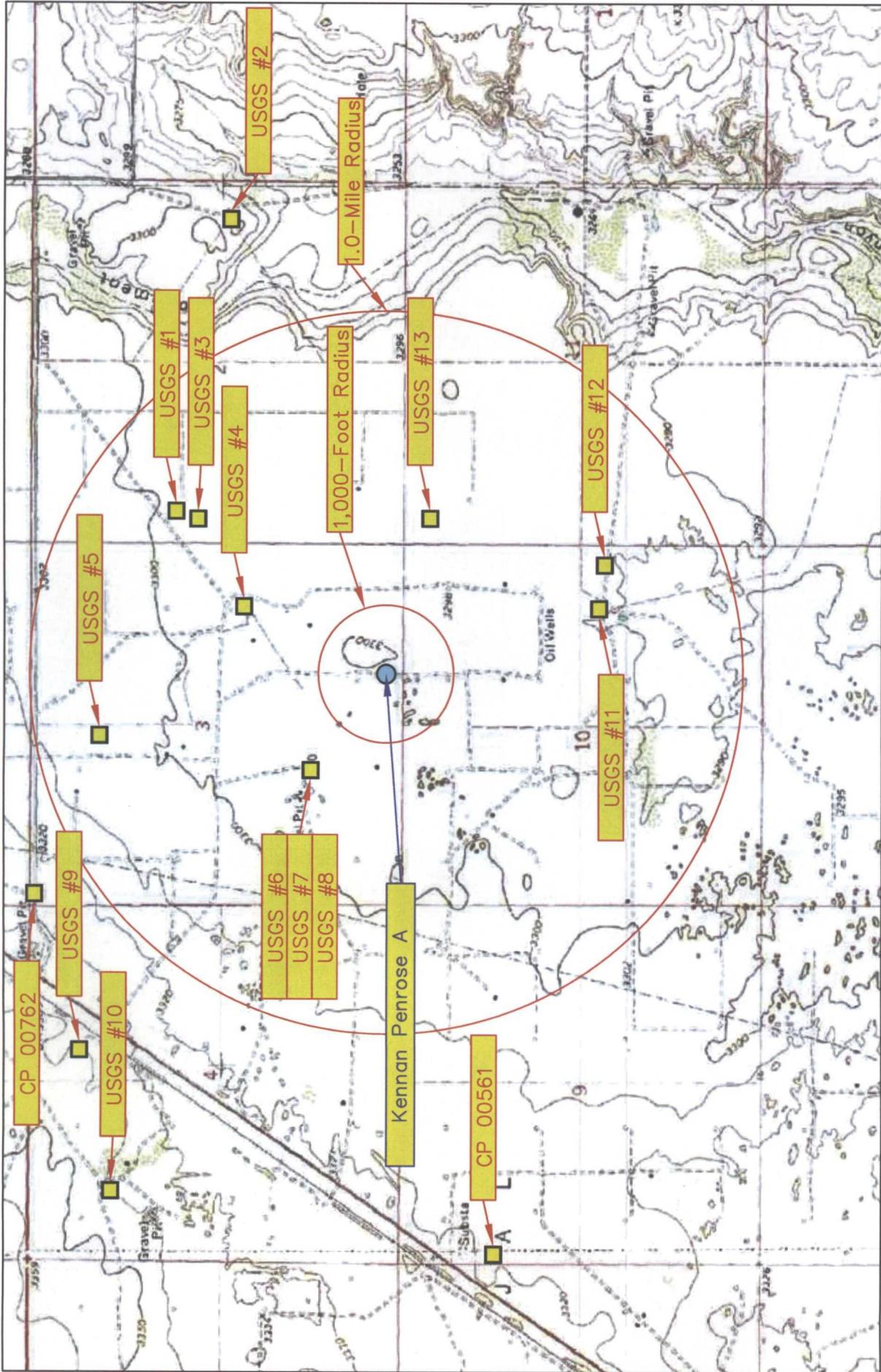
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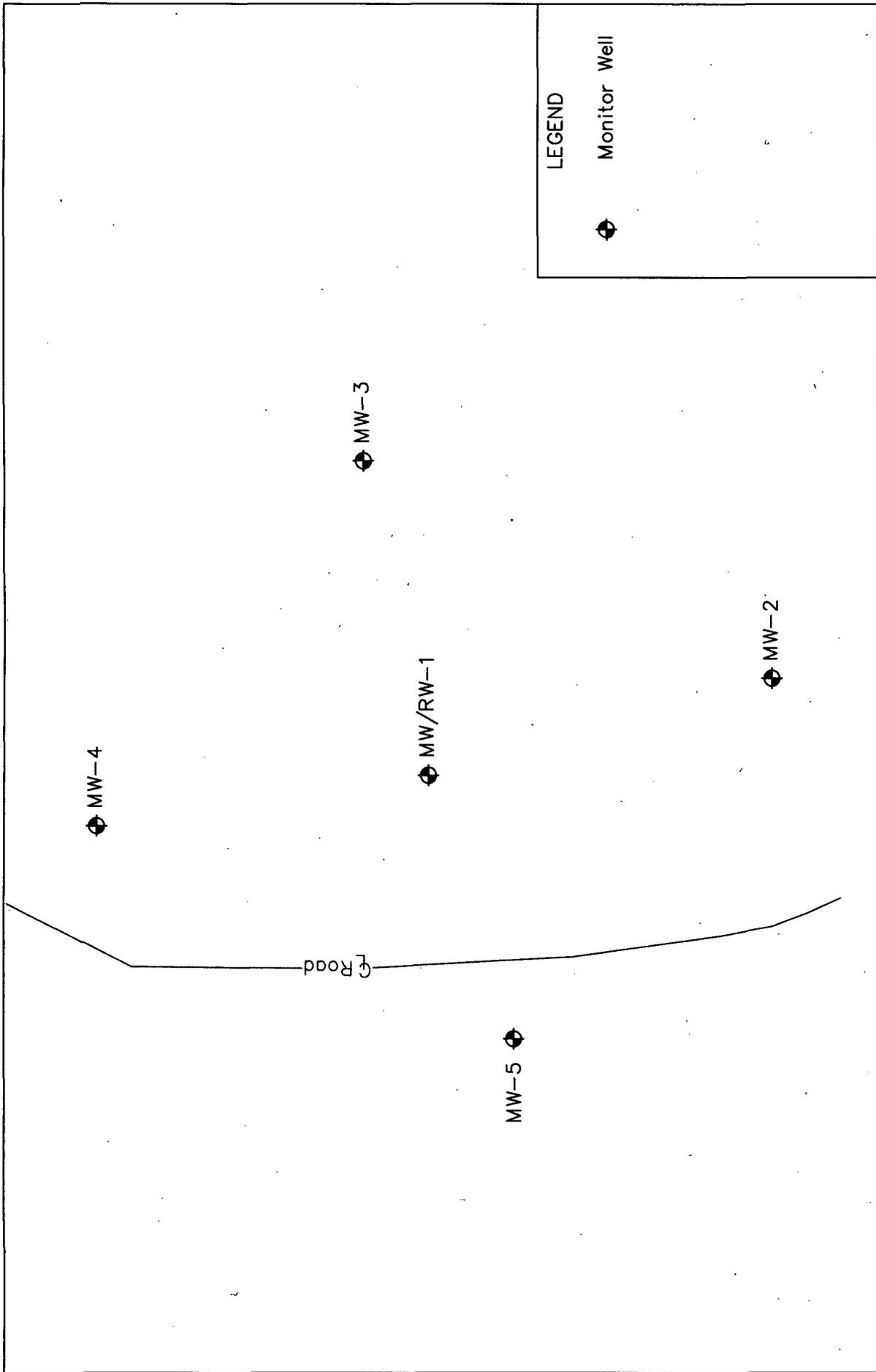
SHEET  
 1 of 1

Lea County, New Mexico  
 SW 1/4 of the SE 1/4, Sec. 3, T23S, R37E  
 N 32° 19' 36.39" W 103° 08' 54.31"  
 Elevation: 3,300 feet amsl

Figure 1  
 Area Map  
 URS  
 Kennan Penrose A



<p>Figure 2 Site Location Map URS Kennan Penrose A</p>	<p>Lea County, New Mexico SW 1/4 of the SE 1/4, Sec. 3, T23S, R37E N 32° 19' 36.39" W 103° 08' 54.31" Elevation: 3,300 feet amsl</p>		<p>REVISSED: DWG By: Daniel Dominguez October 2006</p>	
	<p>0 2,000 4,000 Feet</p>			



LEGEND



Monitor Well

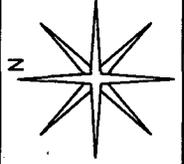
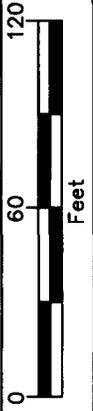
Figure 3  
Site Map  
URS  
Kennan Penrose A

Lea County, New Mexico  
SW 1/4 of the SE 1/4, Sec. 3, T23S, R37E  
N 32° 19' 36.39" W 103° 08' 54.31"  
Elevation: 3,300 feet amsl

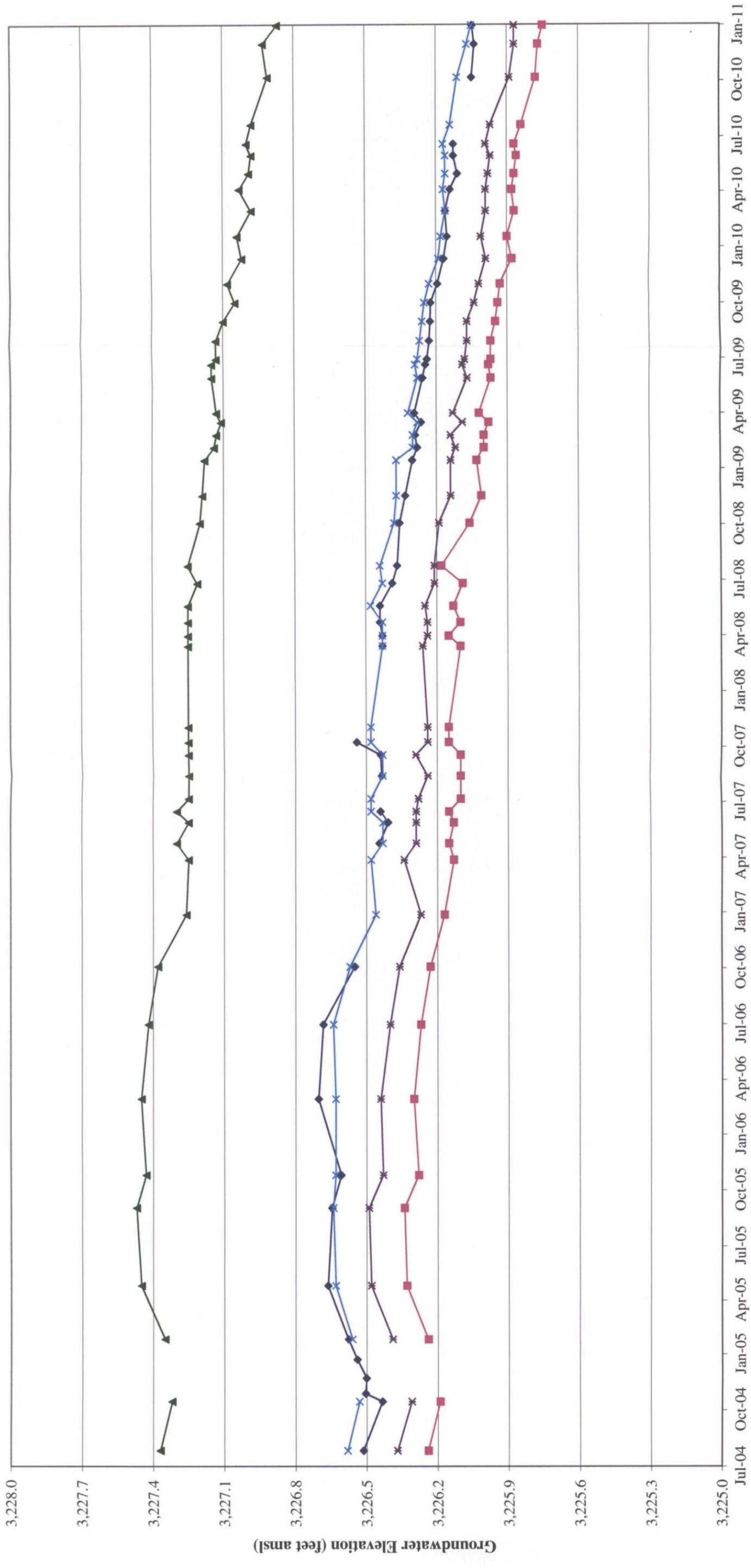
DWG By: Daniel Dominguez  
October 2006

REVISED:

SHEET  
1 of 1



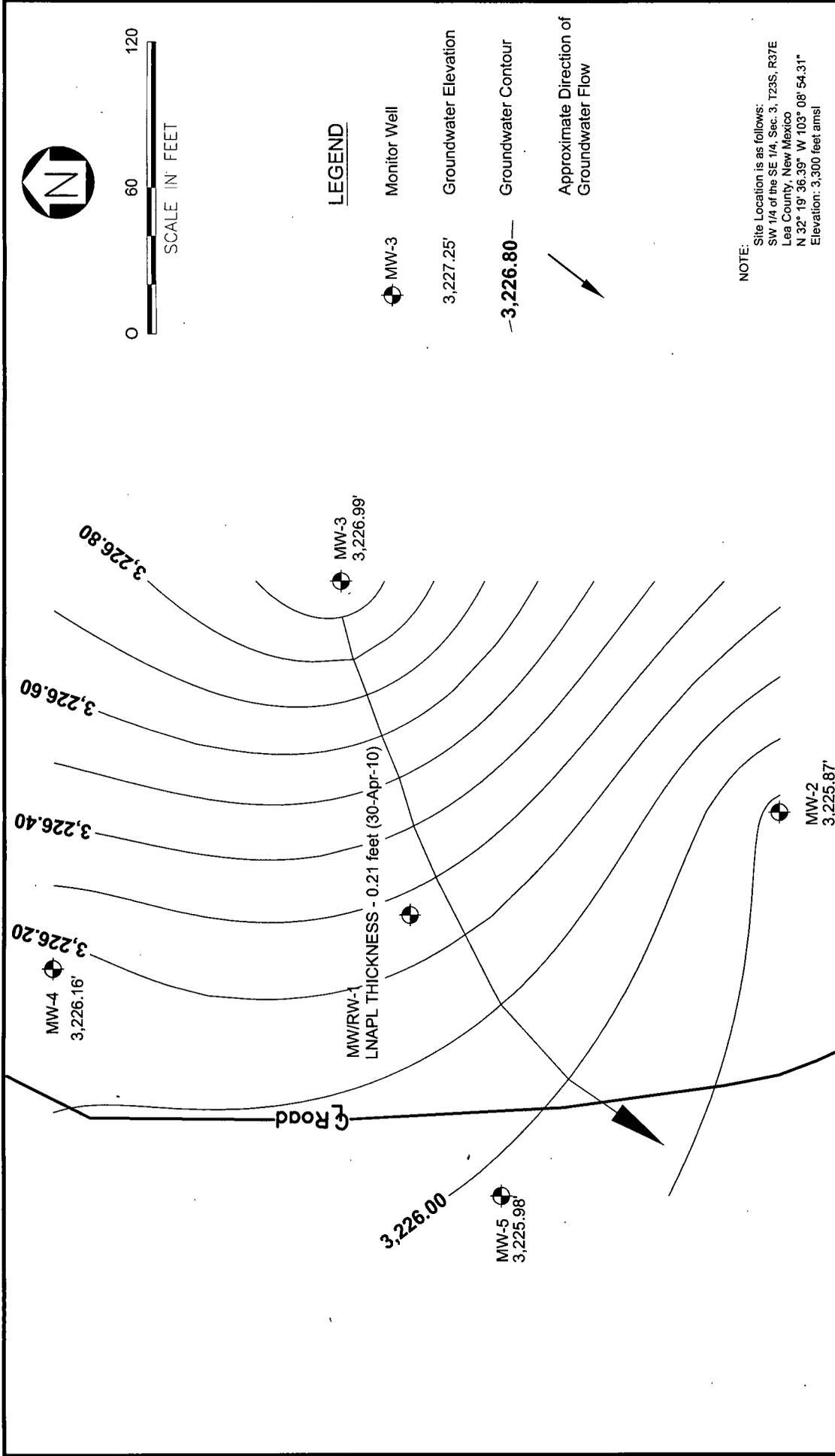
◆ MW-1    ■ MW-2    ▲ MW-3    × MW-4    \* MW-5

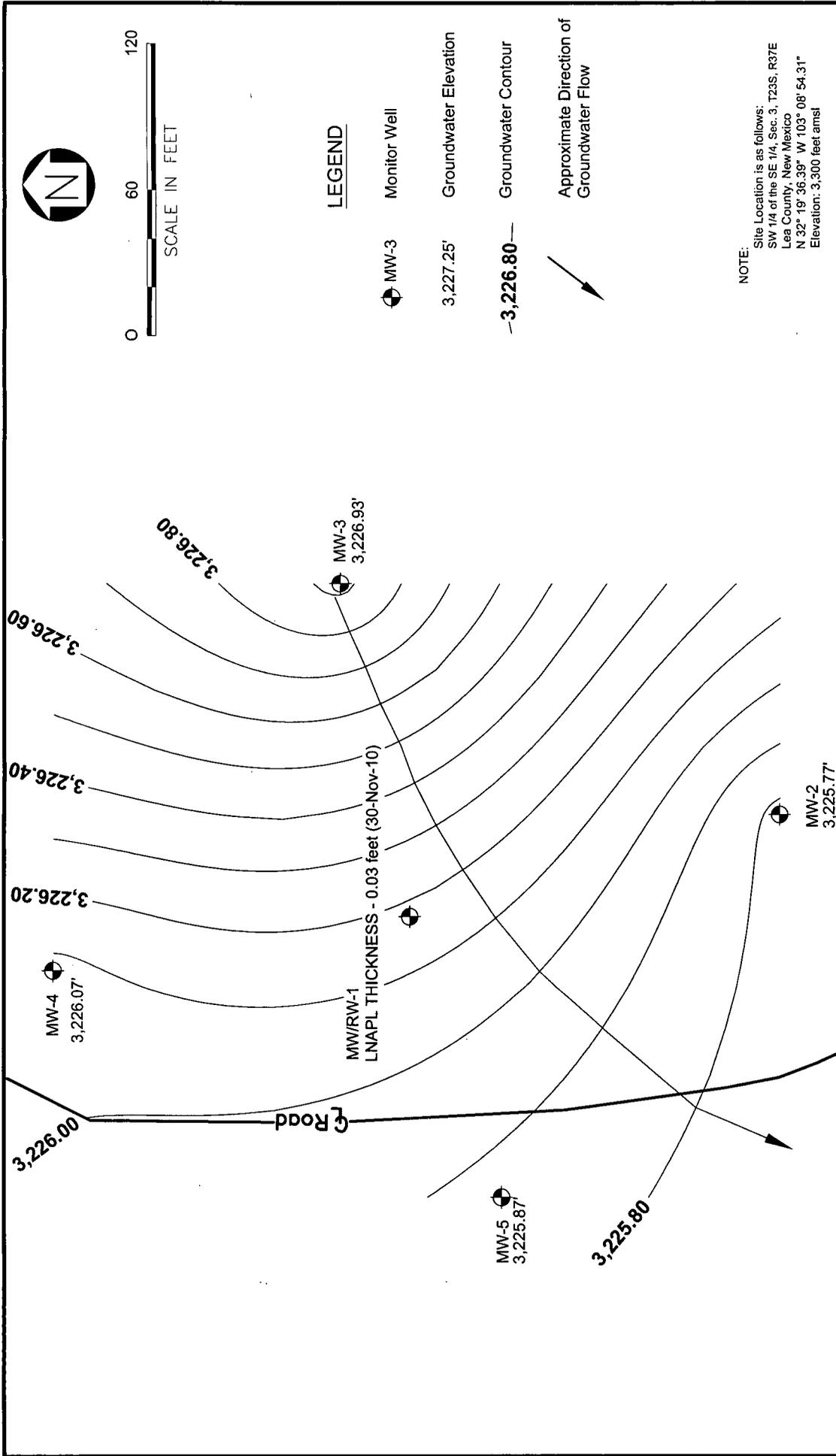


Date Gauged

Figure 4: Hydrograph for Groundwater Monitoring Wells MW-1 through MW-5, Shell Oil Products US Kennan Penrose "A" Lease, Lea County, New Mexico, from 07-26-04 through 12-31-10.

# Groundwater Elevation Contour Map - 30 April 2010 Kennan Penrose "A"





Groundwater Elevation Contour Map - 30 November 2010  
 Kennan Penrose "A"



Figure 6

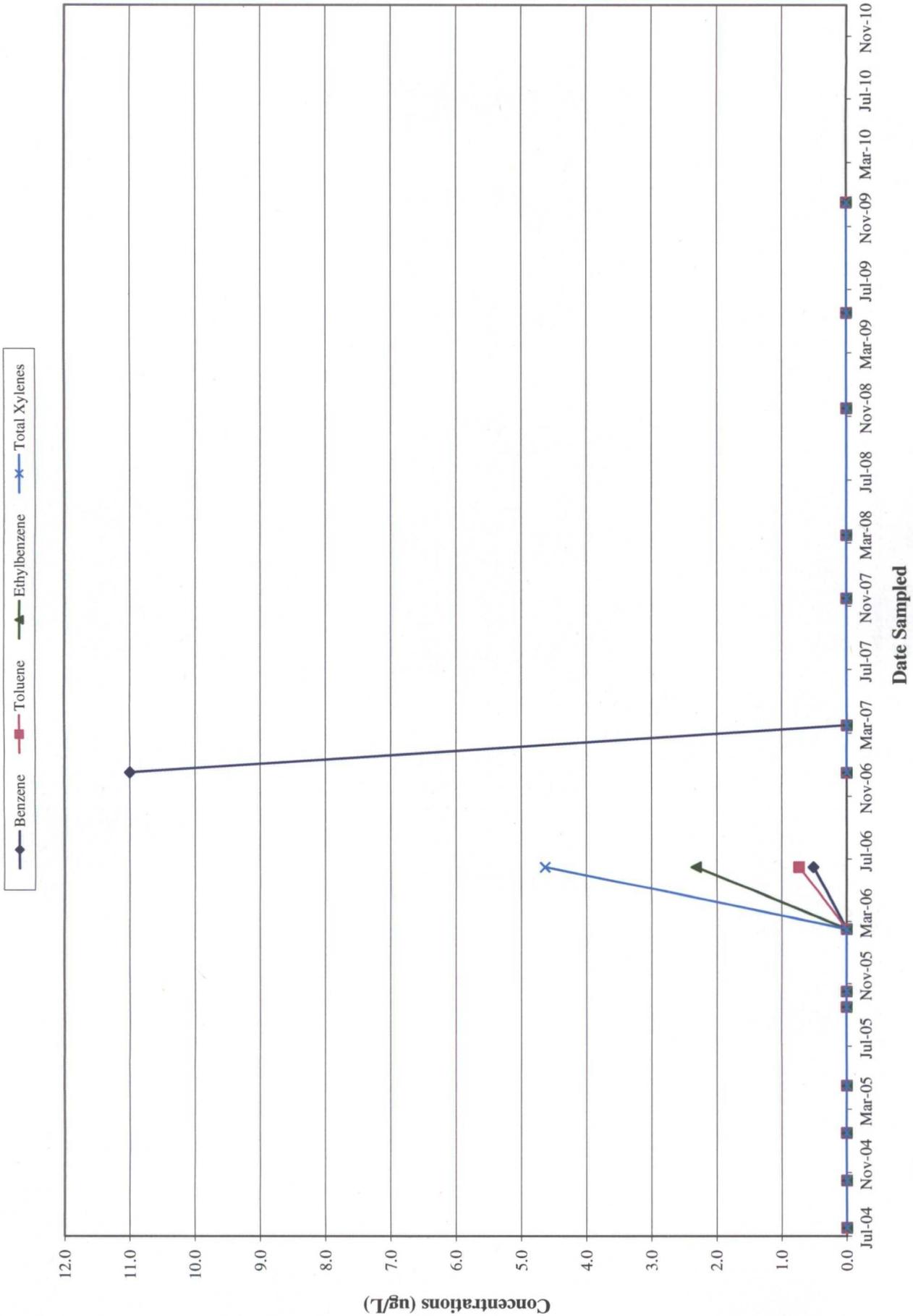


Figure 7: BTEX Concentrations for Groundwater Monitoring Well MW-2, Shell Oil Products US Kennan Pemrose "A" Lease, Lea County, New Mexico, from 07-26-04 through 12-31-10.

Non-detectable concentrations are illustrated as zero concentrations.

Benzene  
 Toluene  
 Ethylbenzene  
 Total Xylenes

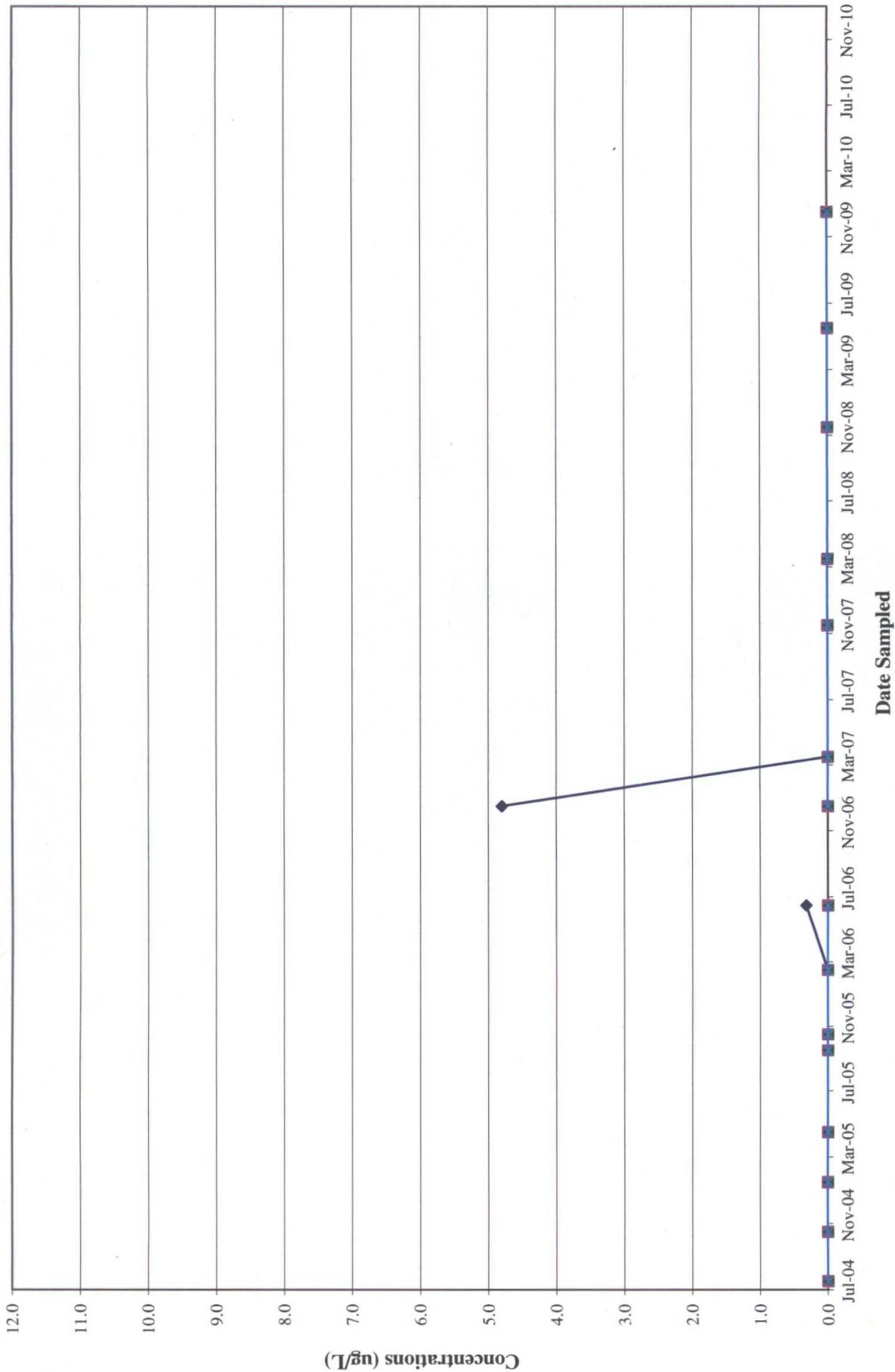


Figure 8: BTEX Concentrations for Groundwater Monitoring Well MW-3, Shell Oil Products US Kennan Penrose "A" Lease, Lea County, New Mexico, from 07-26-04 through 12-31-10.

Non-detectable concentrations are illustrated as zero concentrations.

◆ Benzene   
 ■ Toluene   
 ▲ Ethylbenzene   
 ✱ Total Xylenes

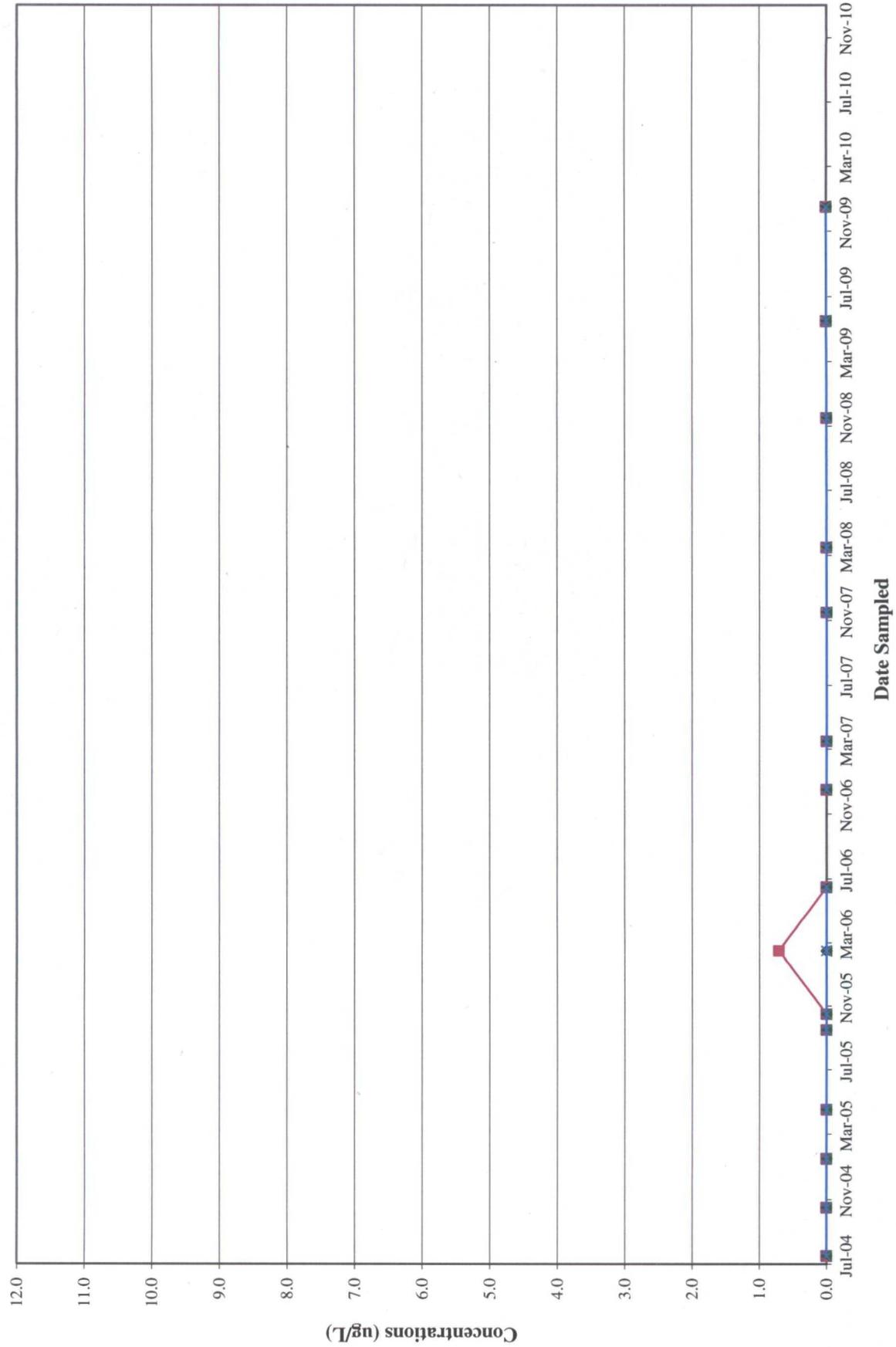


Figure 9: BTEX Concentrations for Groundwater Monitoring Well MW-4, Shell Oil Products US Kennan Penrose "A" Lease, Lea County, New Mexico, from 07-26-04 through 12-31-10.

Non-detectable concentrations are illustrated as zero concentrations.

Benzene  
 Toluene  
 Ethylbenzene  
 Total Xylenes

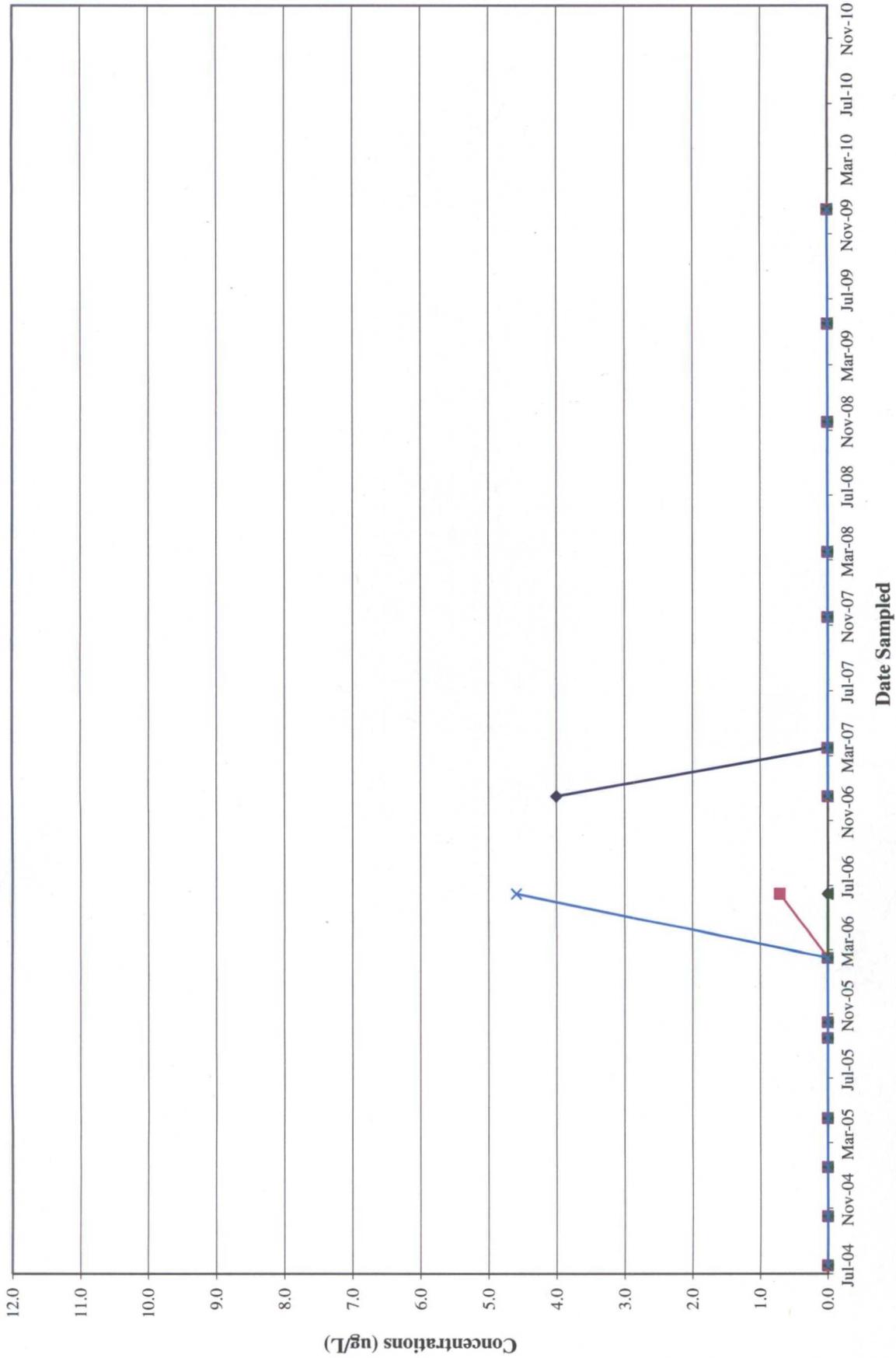


Figure 10: BTEX Concentrations for Groundwater Monitoring Well MW-5, Shell Oil Products US Kennan Penrose "A" Lease, Lea County, New Mexico, from 07-26-04 through 12-31-10.

Non-detectable concentrations are illustrated as zero concentrations.

TABLE 1

Well Data

URS - Kennan Penrose A (EPI Ref. #350001)

Well Number	Diversion <sup>A</sup>	Owner	Use	Twp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation <sup>B</sup>	Depth to
											Water
											(ft bgs)
CP 00762	0	TEXACO	PRO	23S	37E	09 1 1	N32° 19' 20.79"	W103° 10' 33.43"	09-May-91	3,319	100
CP 00561	3	DELLA M. FERGUSON	STK	22S	37E	34 3 3 3	N32° 20' 27.50"	W103° 09' 31.85"	29-Dec-76	3,325	60
USGS #1				23S	37E	2 1 3 3			18-Dec-70	3,299	71.18R
USGS #2				23S	37E	2 4 2 2			29-Feb-96	3,300	63.09
USGS #3				23S	37E	2 1 3 3			19-Mar-81	3,298	64.34
USGS #4				23S	37E	3 4 2 1			16-Jan-76	3,296	70.56
USGS #5				23S	37E	3 1 2 4			21-Feb-96	3,305	69.85
USGS #6				23S	37E	3 3 2 3			19-Mar-81	3,297	107.85
USGS #7				23S	37E	3 3 4 1			27-Oct-65	3,297	66.20
USGS #8				23S	37E	3 3 4 2			16-May-91	3,297	70.52
USGS #9				23S	37E	4 2 1 1			20-Mar-86	3,340	78.90
USGS #10				23S	37E	4 1 1 4			19-Mar-86	3,340	83.25
USGS #11				23S	37E	10 4 2 1			21-Feb-96	3,291	65.93
USGS #12				23S	37E	10 4 2 2			21-Mar-86	3,291	68.74
USGS #13				23S	37E	11 1 1 1			21-Feb-96	3,298	68.55
USGS #14				22S	37E	33 2 2 3			14-Feb-96		72.97
USGS #15				22S	37E	34 4 1 1			19-Mar-81		51.01
USGS #16				22S	37E	34 1 2 1			26-Apr-91		48.47
USGS #17				22S	37E	35 1 4 4			05-Mar-86		54.49
USGS #18				22S	37E	35 1 4 2			19-Mar-81		57.43
USGS #19				22S	37E	35 2 3 2			25-Apr-91		48.28

\* = Data obtained from the New Mexico Office of the State Engineer Website ( [http://waters.ose.state.nm.us:7001/iWATERS/wr\\_RegisServlet1](http://waters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) ) and USGS Database.

<sup>A</sup> = in acre feet per annum

<sup>B</sup> = Elevation interpolated from USGS topographical map based on referenced location.

PRO = 72-12-1 Prospecting or development of natural resource

STK = 72-12-1 Livestock watering

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

Shaded area indicates wells not shown in Figure 2

Well information data in December 2006 by EPI Consultants, Inc.

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
SHELL OIL PRODUCTS US  
PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery		
MW-1 3,296.75	26-Jul-04	2	69.94	72.90	3,226.51	2.96	0.50	0.50	Hand Bail		
	14-Oct-04		70.10	72.26	3,226.43	2.16	0.00	0.50	Hand Bail		
	27-Oct-04		69.99	72.54	3,226.51	2.55	2.00	2.50	Hand Bail		
	21-Nov-04		69.98	72.67	3,226.50	2.69	1.50	4.00	Hand Bail		
	22-Dec-04		70.01	72.01	3,226.54	2.00	1.50	5.50	Hand Bail		
	25-Jan-05		69.89	72.72	3,226.58	2.83	2.00	7.50	Hand Bail		
	25-Apr-05		69.91	71.68	3,226.66	1.77	2.00	9.50	Hand Bail		
	01-Sep-05		69.91	71.85	3,226.65	1.94	2.00	11.50	System installed		
	25-Oct-05		70.08	70.71	3,226.61	0.63	7.00	18.50	Adjusted pump		
	28-Feb-06		69.83	72.00	3,226.70	2.17	NR		Skimmer Pump		
	30-Jun-06		69.88	71.75	3,226.68	1.87	NR		Skimmer Pump		
	03-Oct-06		70.11	71.01	3,226.55	0.90	0.83	19.33	Skimmer Pump		
	28-Dec-06		NOT GAUGED						NO		None
	28-Mar-07		NOT GAUGED						NR		Skimmer Pump
	24-Apr-07		70.20	71.25	3,226.45	1.05	NR		Skimmer Pump		
	28-May-07		70.33	70.45	3,226.41	0.12	2.68	22.01	Skimmer Pump		
	15-Jun-07		70.30	70.40	3,226.44	0.10	1.03	23.05	Skimmer Pump		
	06-Jul-07		NOT GAUGED - Bird Nest in Vault Cap						0.41	23.46	Skimmer Pump
	13-Aug-07		70.30	70.45	3,226.44	0.15	5.16	28.62	Skimmer Pump		
	17-Sep-07		70.30	70.41	3,226.44	0.11	2.06	30.68	Skimmer Pump		
	08-Oct-07		70.20	70.30	3,226.54	0.10	1.03	31.71	Skimmer Pump		
	02-Nov-07		NOT GAUGED						0.62	32.33	Skimmer Pump
	14-Mar-08		70.31	70.41	3,226.43	0.10	2.06	34.40	Skimmer Pump		
	31-Mar-08		70.30	70.50	3,226.43	0.20	1.03	35.43	Skimmer Pump		
	22-Apr-08		70.30	70.40	3,226.44	0.10	0.62	36.05	Skimmer Pump		
	19-May-08		70.30	70.40	3,226.44	0.10	0.00	36.05	Skimmer Pump		
	25-Jun-08		70.36	70.38	3,226.39	0.02	0.41	36.46	Skimmer Pump		
	24-Jul-08		70.38	70.41	3,226.37	0.03	1.03	37.49	Skimmer Pump		
	03-Oct-08		70.38	70.52	3,226.36	0.14	0.00	37.49	Skimmer Pump		
	17-Nov-08		70.40	70.58	3,226.33	0.18	0.00	37.49	Skimmer Pump		
	14-Jan-09		70.42	70.70	3,226.30	0.28	0.00	37.49	Skimmer Pump		
	04-Feb-09		70.46	70.55	3,226.28	0.09	0.00	37.49	Skimmer Pump		
	24-Feb-09		70.45	70.55	3,226.29	0.10	0.00	37.49	Skimmer Pump		
	17-Mar-09		70.48	70.53	3,226.27	0.05	0.00	37.49	Skimmer Pump		
	01-Apr-09		70.45	70.52	3,226.29	0.07	0.00	37.49	Skimmer Pump		
	29-May-09		70.49	70.51	3,226.26	0.02	0.00	37.49	Skimmer Pump		
	20-Jun-09		70.50	70.54	3,226.25	0.04	0.42	37.91	Skimmer Pump		
	29-Jun-09		70.51	70.52	3,226.24	0.01	0.00	37.91	Skimmer Pump		
	30-Jul-09		70.51	70.61	3,226.23	0.10	0.00	37.91	Pump Removed		
	31-Aug-09		70.50	70.75	3,226.23	0.25	0.00	37.91	Pump Removed		
	01-Oct-09		70.51	70.68	3,226.22	0.17	0.00	37.91	Pump Removed		
	01-Nov-09		70.54	70.70	3,226.19	0.16	0.00	37.91	Pump Removed		
12-Dec-09	70.56	70.79	3,226.17	0.23	0.00	37.91	Pump Removed				
17-Jan-10	70.58	70.75	3,226.15	0.17	0.00	37.91	Pump Removed				
28-Feb-10	70.57	70.77	3,226.16	0.20	0.00	37.91	Pump Removed				
04-Apr-10	70.59	70.79	3,226.14	0.20	0.00	37.91	Pump Removed				
30-Apr-10	70.62	70.83	3,226.11	0.21	0.00	37.91	Pump Removed				

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
SHELL OIL PRODUCTS US  
PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery	
MW-1 (cont.)	30-May-10	2	70.60	70.85	3,226.13	0.25	0.00	37.91	Pump Reinserted	
	18-Jun-10		70.60	70.85	3,226.13	0.25	0.62	38.53	Skimmer Pump	
	20-Jul-10		NOT GAUGED - Wasps Around Well Head				NR	38.53	Skimmer Pump	
	06-Oct-10		70.70	70.72	3,226.05	0.02	4.15	42.68	Skimmer Pump	
	30-Nov-10		70.71	70.74	3,226.04	0.03	NR	42.68	Skimmer Pump	
	31-Dec-10		70.70	70.74	3,226.05	0.04	NR	42.68	Skimmer Pump	
	MW-2 3,299.25		26-Jul-04	4	---	73.01	3,226.24	0.00	---	---
14-Oct-04		---	73.06		3,226.19	0.00	---	---	---	
27-Oct-04		NOT GAUGED								
21-Nov-04		NOT GAUGED								
22-Dec-04		NOT GAUGED								
25-Jan-05		---	73.01		3,226.24	0.00	---	---	---	---
25-Apr-05		---	72.92		3,226.33	0.00	---	---	---	---
01-Sep-05		---	72.91		3,226.34	0.00	---	---	---	---
25-Oct-05		---	72.97		3,226.28	0.00	---	---	---	---
28-Feb-06		---	72.95		3,226.30	0.00	---	---	---	---
30-Jun-06		---	72.98		3,226.27	0.00	---	---	---	---
03-Oct-06		---	73.02		3,226.23	0.00	---	---	---	---
28-Dec-06		---	73.08		3,226.17	0.00	---	---	---	---
28-Mar-07		---	73.12		3,226.13	0.00	---	---	---	---
24-Apr-07		---	73.10		3,226.15	0.00	---	---	---	---
28-May-07		---	73.12		3,226.13	0.00	---	---	---	---
15-Jun-07		---	73.10		3,226.15	0.00	---	---	---	---
06-Jul-07		---	73.15		3,226.10	0.00	---	---	---	---
13-Aug-07		---	73.15		3,226.10	0.00	---	---	---	---
17-Sep-07		---	73.15		3,226.10	0.00	---	---	---	---
08-Oct-07		---	73.10		3,226.15	0.00	---	---	---	---
02-Nov-07		---	73.10		3,226.15	0.00	---	---	---	---
14-Mar-08		---	73.15		3,226.10	0.00	---	---	---	---
31-Mar-08		---	73.10		3,226.15	0.00	---	---	---	---
22-Apr-08		---	73.15		3,226.10	0.00	---	---	---	---
19-May-08		---	73.12		3,226.13	0.00	---	---	---	---
25-Jun-08		---	73.16		3,226.09	0.00	---	---	---	---
24-Jul-08		---	73.07		3,226.18	0.00	---	---	---	---
03-Oct-08		---	73.19		3,226.06	0.00	---	---	---	---
17-Nov-08		---	73.24		3,226.01	0.00	---	---	---	---
14-Jan-09		---	73.22		3,226.03	0.00	---	---	---	---
04-Feb-09		---	73.25		3,226.00	0.00	---	---	---	---
24-Feb-09		---	73.25		3,226.00	0.00	---	---	---	---
17-Mar-09		---	73.27		3,225.98	0.00	---	---	---	---
01-Apr-09		---	73.23		3,226.02	0.00	---	---	---	---
29-May-09	---	73.28	3,225.97	0.00	---	---	---	---		
20-Jun-09	---	73.27	3,225.98	0.00	---	---	---	---		
29-Jun-09	---	73.28	3,225.97	0.00	---	---	---	---		
30-Jul-09	---	73.28	3,225.97	0.00	---	---	---	---		
31-Aug-09	---	73.30	3,225.95	0.00	---	---	---	---		
01-Oct-09	---	73.31	3,225.94	0.00	---	---	---	---		
01-Nov-09	---	73.32	3,225.93	0.00	---	---	---	---		

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
SHELL OIL PRODUCTS US  
PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery
MW-2 (cont.) 3,299.25	12-Dec-09	4	---	73.37	3,225.88	0.00	---	---	---
	17-Jan-10		---	73.35	3,225.90	0.00	---	---	---
	28-Feb-10		---	73.38	3,225.87	0.00	---	---	---
	04-Apr-10		---	73.37	3,225.88	0.00	---	---	---
	30-Apr-10		---	73.38	3,225.87	0.00	---	---	---
	30-May-10		---	73.39	3,225.86	0.00	---	---	---
	18-Jun-10		---	73.38	3,225.87	0.00	---	---	---
	20-Jul-10		---	73.41	3,225.84	0.00	---	---	---
	06-Oct-10		---	73.47	3,225.78	0.00	---	---	---
	30-Nov-10		---	73.48	3,225.77	0.00	---	---	---
	31-Dec-10		---	73.50	3,225.75	0.00	---	---	---
MW-3 3,299.25	26-Jul-04	4	---	71.88	3,227.37	0.00	---	---	---
	14-Oct-04		---	71.93	3,227.32	0.00	---	---	---
	27-Oct-04		NOT GAUGED						
	21-Nov-04		NOT GAUGED						
	22-Dec-04		NOT GAUGED						
	25-Jan-05		---	71.90	3,227.35	0.00	---	---	---
	25-Apr-05		---	71.80	3,227.45	0.00	---	---	---
	01-Sep-05		---	71.78	3,227.47	0.00	---	---	---
	25-Oct-05		---	71.82	3,227.43	0.00	---	---	---
	28-Feb-06		---	71.80	3,227.45	0.00	---	---	---
	30-Jun-06		---	71.83	3,227.42	0.00	---	---	---
	03-Oct-06		---	71.87	3,227.38	0.00	---	---	---
	28-Dec-06		---	71.99	3,227.26	0.00	---	---	---
	28-Mar-07		---	72.00	3,227.25	0.00	---	---	---
	24-Apr-07		---	71.95	3,227.30	0.00	---	---	---
	28-May-07		---	72.00	3,227.25	0.00	---	---	---
	15-Jun-07		---	71.95	3,227.30	0.00	---	---	---
	06-Jul-07		---	72.00	3,227.25	0.00	---	---	---
	13-Aug-07		---	72.00	3,227.25	0.00	---	---	---
	17-Sep-07		---	72.00	3,227.25	0.00	---	---	---
	08-Oct-07		---	72.00	3,227.25	0.00	---	---	---
	02-Nov-07		---	72.00	3,227.25	0.00	---	---	---
	14-Mar-08		---	72.00	3,227.25	0.00	---	---	---
	31-Mar-08		---	72.00	3,227.25	0.00	---	---	---
	22-Apr-08		---	72.00	3,227.25	0.00	---	---	---
	19-May-08		---	72.00	3,227.25	0.00	---	---	---
	25-Jun-08		---	72.04	3,227.21	0.00	---	---	---
	24-Jul-08		---	72.00	3,227.25	0.00	---	---	---
	03-Oct-08		---	72.05	3,227.20	0.00	---	---	---
	17-Nov-08		---	72.06	3,227.19	0.00	---	---	---
	14-Jan-09		---	72.07	3,227.18	0.00	---	---	---
	04-Feb-09		---	72.11	3,227.14	0.00	---	---	---
24-Feb-09	---	72.12	3,227.13	0.00	---	---	---		
17-Mar-09	---	72.14	3,227.11	0.00	---	---	---		
01-Apr-09	---	72.12	3,227.13	0.00	---	---	---		
29-May-09	---	72.10	3,227.15	0.00	---	---	---		

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
 SHELL OIL PRODUCTS-US  
 PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
 LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery	
MW-3 (cont.) 3,299.25	20-Jun-09	4	---	72.10	3,227.15	0.00	---	---	---	
	29-Jun-09		---	72.12	3,227.13	0.00	---	---	---	
	30-Jul-09		---	72.12	3,227.13	0.00	---	---	---	
	31-Aug-09		---	72.15	3,227.10	0.00	---	---	---	
	01-Oct-09		---	72.20	3,227.05	0.00	---	---	---	
	01-Nov-09		---	72.17	3,227.08	0.00	---	---	---	
	12-Dec-09		---	72.23	3,227.02	0.00	---	---	---	
	17-Jan-10		---	72.21	3,227.04	0.00	---	---	---	
	28-Feb-10		---	72.27	3,226.98	0.00	---	---	---	
	04-Apr-10		---	72.22	3,227.03	0.00	---	---	---	
	30-Apr-10		---	72.26	3,226.99	0.00	---	---	---	
	30-May-10		---	72.27	3,226.98	0.00	---	---	---	
	18-Jun-10		---	72.25	3,227.00	0.00	---	---	---	
	20-Jul-10		---	72.27	3,226.98	0.00	---	---	---	
	06-Oct-10		---	72.34	3,226.91	0.00	---	---	---	
	30-Nov-10		---	72.32	3,226.93	0.00	---	---	---	
	31-Dec-10		---	72.38	3,226.87	0.00	---	---	---	
MW-4 3,297.43	26-Jul-04	4	---	70.85	3,226.58	0.00	---	---	---	
	14-Oct-04		---	70.90	3,226.53	0.00	---	---	---	
	27-Oct-04		NOT GAUGED							---
	21-Nov-04		NOT GAUGED							---
	22-Dec-04		NOT GAUGED							---
	25-Jan-05		---	70.87	3,226.56	0.00	---	---	---	
	25-Apr-05		---	70.80	3,226.63	0.00	---	---	---	
	01-Sep-05		---	70.79	3,226.64	0.00	---	---	---	
	25-Oct-05		---	70.80	3,226.63	0.00	---	---	---	
	28-Feb-06		---	70.80	3,226.63	0.00	---	---	---	
	30-Jun-06		---	70.79	3,226.64	0.00	---	---	---	
	03-Oct-06		---	70.86	3,226.57	0.00	---	---	---	
	28-Dec-06		---	70.97	3,226.46	0.00	---	---	---	
	28-Mar-07		---	70.95	3,226.48	0.00	---	---	---	
	24-Apr-07		---	71.00	3,226.43	0.00	---	---	---	
	28-May-07		---	71.00	3,226.43	0.00	---	---	---	
	15-Jun-07		---	70.95	3,226.48	0.00	---	---	---	
	06-Jul-07		---	70.95	3,226.48	0.00	---	---	---	
	13-Aug-07		---	71.00	3,226.43	0.00	---	---	---	
	17-Sep-07		---	71.00	3,226.43	0.00	---	---	---	
	08-Oct-07		---	70.95	3,226.48	0.00	---	---	---	
	02-Nov-07		---	70.95	3,226.48	0.00	---	---	---	
	14-Mar-08		---	71.00	3,226.43	0.00	---	---	---	
	31-Mar-08		---	71.00	3,226.43	0.00	---	---	---	
	22-Apr-08		---	71.00	3,226.43	0.00	---	---	---	
	19-May-08		---	70.95	3,226.48	0.00	---	---	---	
	01-Jun-08		---	71.00	3,226.43	0.00	---	---	---	
24-Jul-09	---	70.99	3,226.44	0.00	---	---	---			
03-Oct-08	---	71.05	3,226.38	0.00	---	---	---			
17-Nov-08	---	71.06	3,226.37	0.00	---	---	---			
14-Jan-09	---	71.06	3,226.37	0.00	---	---	---			

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
 SHELL OIL PRODUCTS US  
 PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
 LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery
MW-4 (cont.) 3,297.43	04-Feb-09	4	---	71.13	3,226.30	0.00	---	---	---
	24-Feb-09		---	71.13	3,226.30	0.00	---	---	---
	17-Mar-09		---	71.15	3,226.28	0.00	---	---	---
	01-Apr-09		---	71.11	3,226.32	0.00	---	---	---
	29-May-09		---	71.15	3,226.28	0.00	---	---	---
	20-Jun-09		---	71.14	3,226.29	0.00	---	---	---
	29-Jun-09		---	71.15	3,226.28	0.00	---	---	---
	30-Jul-09		---	71.16	3,226.27	0.00	---	---	---
	31-Aug-09		---	71.17	3,226.26	0.00	---	---	---
	01-Oct-09		---	71.18	3,226.25	0.00	---	---	---
	01-Nov-09		---	71.20	3,226.23	0.00	---	---	---
	12-Dec-09		---	71.24	3,226.19	0.00	---	---	---
	17-Jan-10		---	71.25	3,226.18	0.00	---	---	---
	28-Feb-10		---	71.27	3,226.16	0.00	---	---	---
	04-Apr-10		---	71.26	3,226.17	0.00	---	---	---
	30-Apr-10		---	71.27	3,226.16	0.00	---	---	---
	30-May-10		---	71.27	3,226.16	0.00	---	---	---
	18-Jun-10		---	71.26	3,226.17	0.00	---	---	---
	20-Jul-10		---	71.29	3,226.14	0.00	---	---	---
	06-Oct-10		---	71.32	3,226.11	0.00	---	---	---
30-Nov-10	---	71.36	3,226.07	0.00	---	---	---		
31-Dec-10	---	71.38	3,226.05	0.00	---	---	---		
MW-5 3,299.34	26-Jul-04	4	---	72.97	3,226.37	0.00	---	---	---
	14-Oct-04		---	73.03	3,226.31	0.00	---	---	---
	27-Oct-04		NOT GAUGED						
	21-Nov-04		NOT GAUGED						
	22-Dec-04		NOT GAUGED						
	25-Jan-05		---	72.95	3,226.39	0.00	---	---	---
	25-Apr-05		---	72.86	3,226.48	0.00	---	---	---
	01-Sep-05		---	72.85	3,226.49	0.00	---	---	---
	25-Oct-05		---	72.91	3,226.43	0.00	---	---	---
	28-Feb-06		---	72.90	3,226.44	0.00	---	---	---
	30-Jun-06		---	72.94	3,226.40	0.00	---	---	---
	03-Oct-06		---	72.98	3,226.36	0.00	---	---	---
	28-Dec-06		---	73.07	3,226.27	0.00	---	---	---
	28-Mar-07		---	73.00	3,226.34	0.00	---	---	---
	24-Apr-07		---	73.05	3,226.29	0.00	---	---	---
	28-May-07		---	73.05	3,226.29	0.00	---	---	---
	15-Jun-07		---	73.05	3,226.29	0.00	---	---	---
	06-Jul-07		---	73.06	3,226.28	0.00	---	---	---
	13-Aug-07		---	73.10	3,226.24	0.00	---	---	---
	17-Sep-07		---	73.05	3,226.29	0.00	---	---	---
	08-Oct-07		---	73.10	3,226.24	0.00	---	---	---
	02-Nov-07		---	73.10	3,226.24	0.00	---	---	---
	14-Mar-08		---	73.08	3,226.26	0.00	---	---	---
31-Mar-08	---	73.10	3,226.24	0.00	---	---	---		
22-Apr-08	---	73.10	3,226.24	0.00	---	---	---		
19-May-08	---	73.09	3,226.25	0.00	---	---	---		

TABLE 2

SUMMARY OF GROUNDWATER ELEVATION DATA  
 SHELL OIL PRODUCTS US  
 PENROSE "A" LEASE (WINNIE KENNAN RANCH)  
 LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Date	Casing Diameter (in)	Depth to LNAPL (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation <sup>1</sup> (ft amsl)	LNAPL Thickness (ft)	LNAPL Recovery (gallons)	LNAPL Cumulative Recovery (gallons)	Type of Recovery
MW-5 (cont.) 3,299.34	25-Jun-08	4	---	73.13	3,226.21	0.00	---	---	---
	24-Jul-08		---	73.13	3,226.21	0.00	---	---	---
	03-Oct-08		---	73.15	3,226.19	0.00	---	---	---
	17-Nov-08		---	73.20	3,226.14	0.00	---	---	---
	14-Jan-09		---	73.20	3,226.14	0.00	---	---	---
	04-Feb-09		---	73.22	3,226.12	0.00	---	---	---
	24-Feb-09		---	73.20	3,226.14	0.00	---	---	---
	17-Mar-09		---	73.25	3,226.09	0.00	---	---	---
	01-Apr-09		---	73.21	3,226.13	0.00	---	---	---
	29-May-09		---	73.27	3,226.07	0.00	---	---	---
	20-Jun-09		---	73.25	3,226.09	0.00	---	---	---
	29-Jun-09		---	73.26	3,226.08	0.00	---	---	---
	30-Jul-09		---	73.27	3,226.07	0.00	---	---	---
	31-Aug-09		---	73.27	3,226.07	0.00	---	---	---
	01-Oct-09		---	73.30	3,226.04	0.00	---	---	---
	01-Nov-09		---	73.32	3,226.02	0.00	---	---	---
	12-Dec-09		---	73.35	3,225.99	0.00	---	---	---
	17-Jan-10		---	73.33	3,226.01	0.00	---	---	---
	28-Feb-10	---	73.35	3,225.99	0.00	---	---	---	
	04-Apr-10	---	73.35	3,225.99	0.00	---	---	---	
	30-Apr-10	---	73.36	3,225.98	0.00	---	---	---	
	30-May-10	---	73.37	3,225.97	0.00	---	---	---	
	18-Jun-10	---	73.35	3,225.99	0.00	---	---	---	
	20-Jul-10	---	73.37	3,225.97	0.00	---	---	---	
	06-Oct-10	---	73.45	3,225.89	0.00	---	---	---	
	30-Nov-10	---	73.47	3,225.87	0.00	---	---	---	
31-Dec-10	---	73.47	3,225.87	0.00	---	---	---		

Total Recovered LNAPL is 42.68 gallons

Notes:

1. Corrected groundwater elevations. Calculated using an LNAPL specific gravity of 0.90 per previously reported data.

TOC - Top of Casing.

BTOC - Below Top of Casing.

LNAPL - Light non-aqueous phase liquid.

amsl = above mean sea level

NR - Not Recorded

NO - Not Operating

Shaded cells include data for reporting period.

Data collected prior to December 2006 by Enercon and Conestoga-Rovers and Associates (CRA)

TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX  
SHELL OIL PRODUCTS US  
PENROSE "A" LEASE  
LEA COUNTY, NEW MEXICO

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX
		NMWQCC Standard 20.6.2.3103.A,B.				
		10.000 (µg/L)	750.000 (µg/L)	750.000 (µg/L)	620.000 (µg/L)	-- (µg/L)
MW-1	26-Jul-04	LNAPL Present				
	14-Oct-04	LNAPL Present				
	25-Jan-05	LNAPL Present				
	25-Apr-05	LNAPL Present				
	01-Sep-05	LNAPL Present				
	25-Oct-05	LNAPL Present				
	28-Feb-06	LNAPL Present				
	30-Jun-06	LNAPL Present				
	03-Oct-06	LNAPL Present				
	28-Dec-06	LNAPL Present				
	28-Mar-07	LNAPL Present				
	02-Nov-07	LNAPL Present				
	14-Mar-08	LNAPL Present				
	17-Nov-08	LNAPL Present				
07-May-09	No Sample Submitted Due to LNAPL Present					
12-Dec-09	No Sample Submitted Due to LNAPL Present					
MW-2	26-Jul-04	<1.0	<1.0	<1.0	<1.0	<1.0
	14-Oct-04	<5.0	<5.0	<5.0	<5.0	<5.0
	25-Jan-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Apr-05	<1.0	<1.0	<1.0	<1.0	<1.0
	01-Sep-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Oct-05	<1.0	<1.0	<1.0	<1.0	<1.0
	28-Feb-06	<0.440	<0.540	<0.410	<1.23	<2.62
	30-Jun-06	0.510	0.730	2.32	4.63	8.19
	03-Oct-06	NOT ANALYZED				
	28-Dec-06	11	<2.0	<2.0	<3.0	<18
	28-Mar-07	<1.0	<2.0	<2.0	<3.0	<8.0
	02-Nov-07	<1.0	<2.0	<2.0	<3.0	<8.0
	14-Mar-08	<1.0	<1.0	<1.0	<3.0	<6.0
	17-Nov-08	<1.0	<1.0	<1.0	<3.0	<6.0
07-May-09	<1.0	<1.0	<1.0	<1.0	<1.0	
12-Dec-09	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-3	26-Jul-04	<1.0	<1.0	<1.0	<1.0	<1.0
	14-Oct-04	<5.0	<5.0	<5.0	<5.0	<5.0
	25-Jan-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Apr-05	<1.0	<1.0	<1.0	<1.0	<1.0
	01-Sep-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Oct-05	<1.0	<1.0	<1.0	<1.0	<1.0
	28-Feb-06	<0.440	<0.540	<0.410	<1.23	<2.62

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SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX  
SHELL OIL PRODUCTS US  
PENROSE "A" LEASE  
LEA COUNTY, NEW MEXICO

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX
		NMWQCC Standard 20.6.2.3103.A,B.				
		10.000 (µg/L)	750.000 (µg/L)	750.000 (µg/L)	620.000 (µg/L)	--- (µg/L)
MW-3 (cont.)	30-Jun-06	0.320	<0.280	<0.340	<0.820	0.320
	03-Oct-06	NOT ANALYZED				
	28-Dec-06	4.8	<2.0	<2.0	<3.0	4.8
	28-Mar-07	<1.0	<2.0	<2.0	<3.0	<8.0
	02-Nov-07	<1.0	<2.0	<2.0	<3.0	<8.0
	14-Mar-08	<1.0	<1.0	<1.0	<3.0	<6.0
	17-Nov-08	<1.0	<1.0	<1.0	<3.0	<6.0
	07-May-09	<1.0	<1.0	<1.0	<1.0	<1.0
12-Dec-09	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-4	26-Jul-04	<1.0	<1.0	<1.0	<1.0	<1.0
	14-Oct-04	<5.0	<5.0	<5.0	<5.0	<5.0
	25-Jan-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Apr-05	<1.0	<1.0	<1.0	<1.0	<1.0
	01-Sep-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Oct-05	<1.0	<1.0	<1.0	<1.0	<1.0
	28-Feb-06	<0.440	0.710	<0.410	<1.23	<2.79
	30-Jun-06	<0.290	<0.280	<0.340	<0.820	<1.73
	03-Oct-06	NOT ANALYZED				
	28-Dec-06	<1.0	<2.0	<2.0	<3.0	<8.0
	28-Mar-07	<1.0	<2.0	<2.0	<3.0	<8.0
	02-Nov-07	<1.0	<2.0	<2.0	<3.0	<8.0
	14-Mar-08	<1.0	<1.0	<1.0	<3.0	<6.0
	17-Nov-08	<1.0	<1.0	<1.0	<3.0	<6.0
07-May-09	<1.0	<1.0	<1.0	<1.0	<1.0	
12-Dec-09	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-5	26-Jul-04	<1.0	<1.0	<1.0	<1.0	<1.0
	14-Oct-04	<5.0	<5.0	<5.0	<5.0	<5.0
	25-Jan-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Apr-05	<1.0	<1.0	<1.0	<1.0	<1.0
	01-Sep-05	<1.0	<1.0	<1.0	<1.0	<1.0
	25-Oct-05	<1.0	<1.0	<1.0	<1.0	<1.0
	28-Feb-06	<0.440	<0.540	<0.410	<1.23	<2.62
	30-Jun-06	<0.290	0.710	<0.340	4.59	4.59
	03-Oct-06	NOT ANALYZED				
	28-Dec-06	4.0	<2.0	<2.0	<3.0	4.0
	28-Mar-07	<1.0	<2.0	<2.0	<3.0	<8.0
	02-Nov-07	<1.0	<2.0	<2.0	<3.0	<8.0
	14-Mar-08	<1.0	<1.0	<1.0	<3.0	<6.0

TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX  
 SHELL OIL PRODUCTS US  
 PENROSE "A" LEASE  
 LEA COUNTY, NEW MEXICO

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX
		NMWQCC Standard 20.6.2.3103.A,B.				
		10.000 (µg/L)	750.000 (µg/L)	750.000 (µg/L)	620.000 (µg/L)	-- (µg/L)
MW-5	17-Nov-08	<1.0	<1.0	<1.0	<3.0	<6.0
(cont.)	07-May-09	<1.0	<1.0	<1.0	<1.0	<1.0
	12-Dec-09	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

- NMWQCC - New Mexico Water Quality Control Commission Standard 20.6.2.3103.A,B.
- BTEX analysis by EPA Method 8260B.
- LNAPL - Light non-aqueous phase liquids.
- Data prior to December 2006 collected by Enercon and Conestoga-Rovers and Associates (CRA).
- Analytical results for samples collected on 28-Dec-06 are anomolous as the ydo not correspond to either historical or subsequent analytical results and could be the result of either field and/or laboratory contaminants.
- Shaded cells include data for reporting period.