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**Annual GW Mon.  
REPORTS**

**DATE:  
2007**



2007  
ANNUAL MONITORING REPORT

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2008 APR 1 PM 2 08

**MONUMENT 18**  
NW ¼ NW ¼ SECTION 7, TOWNSHIP 20 SOUTH, RANGE 37 EAST  
LEA COUNTY, NEW MEXICO  
PLAINS SRS NUMBER: TNM MONUMENT 18-KNOWN  
NMOCD Reference 1R-0124

Prepared For:

**PLAINS MARKETING, L.P.**  
333 CLAY STREET, SUITE 1600  
HOUSTON, TEXAS 77002



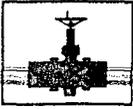
Prepared By:

**NOVA Safety and Environmental**  
2057 Commerce Street  
Midland, Texas 79703

March 2008

Ronald K. Rounsaville  
Project Manager

Todd K. Choban, P.G.  
Vice-President Technical Services



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March 28, 2008

2008 APR 1 PM 2 07

Mr. Edward Hansen  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Plains All American – Annual Monitoring Reports  
25 Sites in Lea County, New Mexico

Dear Mr. Hansen:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

TNM 97-17	Section 21, Township 20 South, Range 37 East, Lea County
TNM 97-18	Section 28, Township 20 South, Range 37 East, Lea County
TNM 98-05A	Section 26, Township 21 South, Range 37 East, Lea County
TNM 98-05B	Section 26, Township 21 South, Range 37 East, Lea County
TNM 97-04	Section 11, Township 16 South, Range 35 East, Lea County
Texaco Skelly "F"	Section 21, Township 20 South, Range 37 East, Lea County
Darr Angell #2	Section 14, Township 15 South, Range 37 East, Lea County
LF-59	Section 32, Township 19 South, Range 37 East, Lea County
SPS-11	Section 18, Township 18 South, Range 36 East, Lea County
Monument #10	Section 32, Township 19 South, Range 37 East, Lea County
Monument #17	Section 29, Township 19 South, Range 37 East, Lea County
Monument #18	Section 7, Township 20 South, Range 37 East, Lea County
Lea Station to Monument 6"	Section 5, Township 20 South, Range 37 East, Lea County
34 Junction South Station	Section 2, Township 17 South, Range 36 East, Lea County
Bob Durham	Section 32, Township 19 South, Range 37 East, Lea County
Darr Angell #1	Section 11, Township 15 South, Range 37 East, Lea County
Darr Angell #4	Sections 2 and 11, Township 15 South, Range 37 East, Lea County
HDO 90-23	Section 6, Township 20 South, Range 37 East, Lea County
Junction 34 to Lea	Section 21, Township 20 South, Range 37 East, Lea County
Monument #2	Section 6, Township 20 South, Range 37 East, Lea County
Monument Barber 10" Sour	Section 32, Township 19 South, Range 37 East, Lea County
Monument #11	Section 30, Township 19 South, Range 37 East, Lea County
Red Byrd #1	Section 1, Township 20 South, Range 36 East, Lea County
South Monument Gathering	Section 5, Township 20 South, Range 37 East, Lea County
Denton Station	Section 14, Township 15 South, Range 37 East, Lea County

order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

A handwritten signature in black ink that reads "Camille Reynolds". The signature is written in a cursive style with a large initial "C".

Camille Reynolds  
Remediation Coordinator  
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

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**ENCLOSED ON DATA DISK**

2007 Annual Monitoring Report

2007 Tables 1 and 2 – Groundwater Elevation and BTEX Concentration Data

2007 Figures 1, 2A-2D, and 3A-3D

Electronic Copies of Laboratory Reports

Historic Table 1 and 2 – Groundwater Elevation and BTEX Concentration Table

## **INTRODUCTION**

On behalf of Plains Marketing, L.P., (Plains), NOVA Safety and Environmental (NOVA) is pleased to submit this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. Beginning on May 29, 2004, project management responsibilities were assumed by NOVA. The Monument 18 site (the site), formally the responsibility of Enron Oil Trading and Transportation (EOTT) is now the responsibility of Plains. This report is intended to be viewed as a complete document with figures, attachments, tables and text. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2007 only. For reference, the Site Location Map is provided as Figure 1. Cumulative tables and laboratory data are provided on the enclosed data disk.

Groundwater monitoring was conducted each quarter of 2007 to assess the levels and extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 foot were not sampled.

## **SITE DESCRIPTION AND BACKGROUND INFORMATION**

The legal description of the site is NW ¼ NW ¼, Section 7, Township 20 South, Range 37 East, Lea County, New Mexico. No information with respect to the release date or volume of crude oil released and recovered is available as the release occurred while the pipeline was operated by Texas New Mexico Pipeline Company (TNM). The Release Notification and Corrective Action Form (C-141) is provided as Appendix A.

Currently, there are nine monitor wells (MW-1 and MW-3 through MW-10) on site. Manual recovery of PSH is performed on a weekly schedule.

## **RECENT FIELD ACTIVITIES**

A measurable thickness of PSH was present in monitor wells MW-1 and MW-4 during 1<sup>st</sup> and 2<sup>nd</sup> quarters of the reporting period. PSH thickness in monitor well MW-1 ranged from 0.04 feet to 0.31 feet. PSH thickness in MW-4 ranged from 0.04 feet to 0.58 feet. The average PSH thickness in monitor wells containing PSH was 0.17 feet. PSH data for the 2007 gauging events can be found in Table 1. Approximately 4.5 gallons (approximately 0.12 barrels) of PSH was recovered from the site during the 2007 reporting period. Approximately 298 gallons (7.5 barrels) of PSH have been recovered since project inception. Recovery of PSH at the site is by manual recovery methods and is monitored on a weekly schedule. Monitor well MW-3 exhibited a sheen throughout the 2007 reporting period.

Quarterly monitoring events for the reporting period were performed according to the following sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004 and amend by NMOCD correspondence dated June 22, 2005.

<b>NMOCD APPROVED SAMPLING SCHEDULE</b>			
<b>Location</b>	<b>Schedule</b>	<b>Location</b>	<b>Schedule</b>
MW-1	Quarterly	MW-6	Annually
MW-2	Plugged and Abandoned	MW-7	Annually
MW-3	Quarterly	MW-8	Annually
MW-4	Quarterly	MW-9	Quarterly
MW-5	Semi-Annually	MW-10	Quarterly

The site monitor wells were gauged and sampled on February 12, May 7, August 8, and November 2, 2007. During each sampling event the monitor wells were purged of a minimum of three well volumes of water or until the wells was dry using a disposable polyethylene bailer or electrical Grundfos pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at a licensed disposal facility.

Locations of the monitor wells and the inferred groundwater gradient, which were constructed from measurements collected during the four quarterly monitoring events, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Maps. Groundwater elevation data for 2007 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.001 feet/foot to the southeast. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,526.00 to 3,535.09 feet above mean sea level, in monitor well MW-3 on September 18, 2007 and in monitor well MW-7 on December 17, 2007, respectively.

## **LABORATORY RESULTS**

Monitor wells MW-1 and MW-4 contained measurable PSH during the 1<sup>st</sup> and 2<sup>nd</sup> quarters of the monitoring period and were not sampled.

Groundwater samples collected during 2007 quarterly sampling events were delivered to Trace Analysis, Inc., of Lubbock, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method SW846-8021b. The 2007 BTEX constituent concentrations are summarized on Table 2. Historical BTEX constituent concentrations and copies of the laboratory reports for 2007 are provided on the enclosed data disk. The quarterly groundwater sample results for benzene and BTEX constituent concentrations are depicted on Figures 3A-3D.

**Monitor well MW-1** is monitored/sampled on a quarterly schedule. Monitor well MW-1 was not sampled during the 1<sup>st</sup> and 2<sup>nd</sup> quarters of the reporting period, due to the reported presence of PSH in the monitor well. PSH thicknesses of 0.25 feet, 0.17 feet were reported during the 1<sup>st</sup> and

2<sup>nd</sup> quarters of 2007, respectively. Analytical results from the 3<sup>rd</sup> and 4<sup>th</sup> quarters indicate benzene concentrations ranged from <0.001 mg/L during the 4<sup>th</sup> quarter to 0.0036 mg/L during the 3<sup>rd</sup> quarter of 2007. Benzene concentrations were below NMOCD regulatory standards of 0.01 mg/L, for the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Toluene concentrations were below the laboratory method detection limit (MDL) of <0.001 mg/L during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Toluene concentrations were below the NMOCD regulatory standard of 0.75 mg/L during all final two quarters of 2007. Ethylbenzene concentrations ranged from 0.0017 mg/L during the 4<sup>th</sup> quarter to 0.0064 mg/L during the 3<sup>rd</sup> quarter of 2007. Ethylbenzene concentrations were below NMOCD regulatory standard of 0.75 mg/L, during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Xylene concentrations ranged from 0.0292 mg/L during the 3<sup>rd</sup> quarter to 0.044 mg/L during the 4<sup>th</sup> quarter of 2007. Xylene concentrations were below NMOCD regulatory standard of 0.62 mg/L, during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period.

**Monitor well MW-3** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0358 mg/L during the 3<sup>rd</sup> quarter of 2007 to 0.0680 mg/L during the 4<sup>th</sup> quarter of 2007. Benzene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period. Toluene concentrations ranged from 0.00300 mg/L during the 4<sup>th</sup> quarter to 0.0053 mg/L during the 2<sup>nd</sup> quarter of 2007. Toluene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0119 mg/L during the 3<sup>rd</sup> quarter to 0.0247 mg/L during the 4<sup>th</sup> quarter of 2007. Ethylbenzene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from 0.0512 mg/L during the 3<sup>rd</sup> quarter to 0.114 mg/L during the 4<sup>th</sup> quarter of 2007. Xylene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period.

**Monitor well MW-4** is sampled on a quarterly schedule. Monitor well MW-4 was not sampled during the 1<sup>st</sup> and 2<sup>nd</sup> quarters of the reporting period, due to the reported presence of PSH in the monitor well. A PSH thickness of 0.21 feet and 0.15 feet was reported during the 1<sup>st</sup> and 2<sup>nd</sup> quarters of the reporting period. Analytical results from the 3<sup>rd</sup> and 4<sup>th</sup> quarters indicate benzene concentrations ranged from 0.0754 mg/L during the 3<sup>rd</sup> quarter to 0.1180 mg/L during the 4<sup>th</sup> quarter of 2007. Benzene concentrations were above NMOCD regulatory standard during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Toluene concentrations were below the MDL of <0.001 mg/L during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Toluene concentrations were below the NMOCD regulatory standard during the last two quarters of 2007. Ethylbenzene concentrations ranged from 0.0728 mg/L during the 4<sup>th</sup> quarter to 0.0924 mg/L during the 3<sup>rd</sup> quarter of 2007. Ethylbenzene concentrations were below NMOCD regulatory standard during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period. Xylene concentrations ranged from 0.0939 mg/L during the 3<sup>rd</sup> quarter to 0.141 mg/L during the 4<sup>th</sup> quarter of 2007. Xylene concentrations were below NMOCD regulatory standard during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the reporting period.

**Monitor well MW-5** is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 2<sup>nd</sup> and 4<sup>th</sup> quarter sampling events. Monitor well MW-5 has exhibited 28 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-6** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 4<sup>th</sup> quarter sampling event. Monitor well MW-6 has exhibited 23 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-7** is sampled on an annual schedule and analytical results indicate benzene, toluene and xylenes concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 4<sup>th</sup> quarter sampling event. Analytical results indicate an ethylbenzene concentration of 0.0027 mg/L (below regulatory standards) during the 4<sup>th</sup> quarter of the reporting period. Monitor well MW-7 has exhibited 22 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-8** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 4<sup>th</sup> quarter sampling event. Monitor well MW-8 has exhibited 22 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-9** is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the each quarter of the reporting period. Monitor well MW-9 has exhibited 13 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-10** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> quarter sampling events to 0.0012 mg/L during the 4<sup>th</sup> quarter of 2007. Benzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Toluene, Ethylbenzene and Xylene concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of the reporting period. Monitor well MW-10 has exhibited 14 consecutive monitoring events below NMOCD regulatory limits.

Laboratory analytical results were compared to NMOCD regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

## **SUMMARY**

This report presents the results of monitoring activities for the 2007 annual monitoring period. Currently, there are nine groundwater monitor wells (MW-1 and MW-3 through MW-10) on site. Recovery of PSH at the site is achieved using manual recovery methods and is monitored on a weekly schedule. The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.001 feet/foot to the southeast.

As discussed above, two monitor wells contained measurable PSH thicknesses during 2007. PSH thicknesses have fluctuated, with an overall decrease throughout the 2007 reporting period, with an average PSH thickness of 0.17 feet in monitor wells MW-1 and MW-4. Monitor well MW-3 exhibited a sheen throughout the 2007 reporting period.

BTEX constituent concentrations were below NMOCD regulatory standards in six of the nine monitor wells during 2007. There were two monitor wells (MW-1 and MW-4) containing measurable thicknesses of PSH during the annual monitoring period and were not sampled during the 1<sup>st</sup> and 2<sup>nd</sup> sampling events. Dissolved phase and phase separated hydrocarbon impact appears to be limited to monitor wells MW-1, MW-3 and MW-4.

### **ANTICIPATED ACTIONS**

Quarterly monitoring, PSH recovery (if necessary) and groundwater sampling will continue in 2008. Manual product recovery and gauging will be conducted on a bi-monthly schedule and will be adjusted according to site conditions.

### **LIMITATIONS**

NOVA has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

NOVA has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. NOVA has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of NOVA and/or Plains.

**DISTRIBUTION**

Copy 1      Ed Hansen  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Copy 2:      Larry Johnson  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division, District 1  
1625 French Drive  
Hobbs, NM 88240

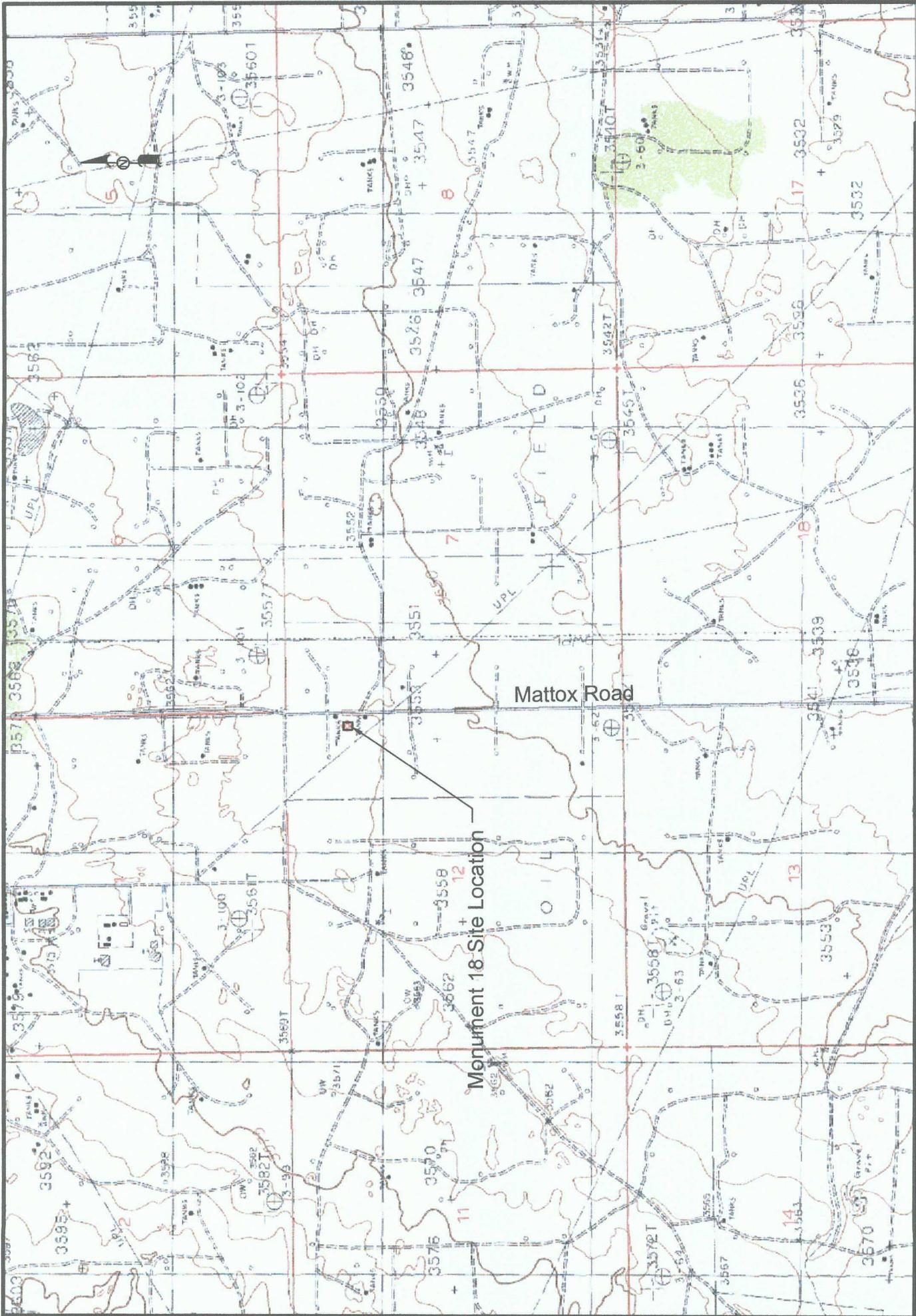
Copy 3:      Camille Reynolds  
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Houston, TX 77002  
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Copy 5:      NOVA Safety and Environmental  
2057 Commerce Street  
Midland, TX 79703  
rrounsaville@novatraining.cc



## Figures



**NOVA Safety and Environmental**

Scale: 1" = 2000'  
 February 25, 2005  
 Section 7 Township 20S Range 37E  
 Lat: 32° 35' 30.00" N Long: 103° 17' 56.00" W



**Figure 1**  
 Site Location Map

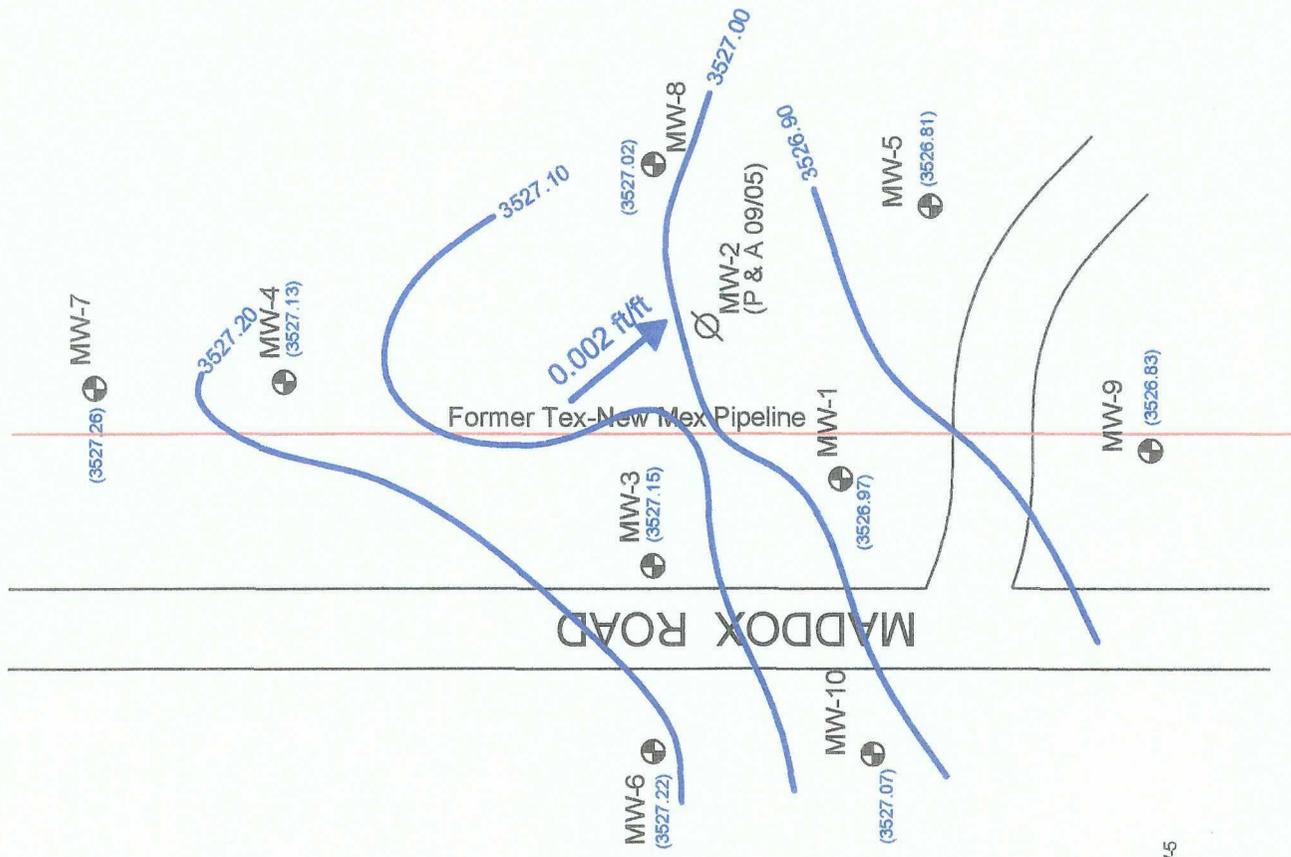
Plains Marketing, L.P.  
 Monument 18  
 Lea County, NM

NW1/4 NW1/4 Sec 7 T20S R37E  
 NE1/4 NE1/4 Sec 12 T20S R36E

NMCOOD Reference #IR-0124







**NOTE:**  
 Contour Interval = 0.10'  
 Groundwater Gradient Measured Between MW-3 and MW-5



- Legend:**
- ⊕ Monitor Well Locations
  - Ground Water Contour Lines
  - ⊘ Plugged and Abandoned

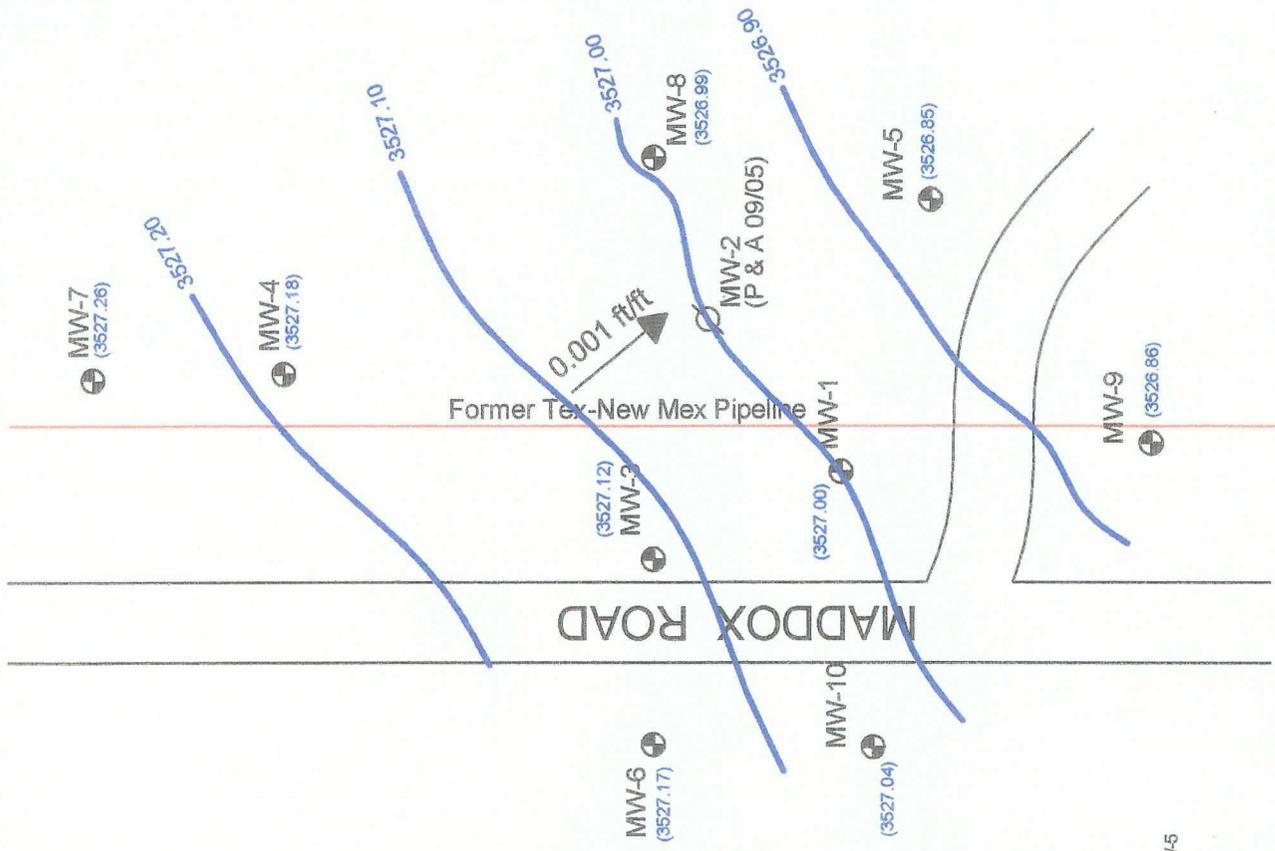
- (3587.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

**Figure 2B**  
 Inferred Groundwater Gradient Map (05/07/07)  
 Plains Marketing, L.P.  
 Lea County, NM  
 NMOCD Ref# 1R-0124

**NOVA Safety and Environmental**



Scale: 1" = 80'  
 CAD By: DGC  
 Checked By: CDS  
 January 17, 2008



**NOTE:**  
 Contour Interval = 0.10'  
 Groundwater Gradient Measured Between MW-3 and MW-5

Distance in Feet

- Legend:**
- Monitor Well Locations
  - Ground Water Contour Lines
  - Plugged and Abandoned

- (3527.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

**Figure 2C**  
 Inferred Groundwater  
 Gradient Map  
 (08/08/07)  
 Plains Marketing, L.P.  
 Monument, NM  
 L. 1000000000  
 NIMCOD Ref# 1R-0124

**NOVA Safety and Environmental**



Scale: 1" = 60'  
 CAD By: DSC  
 Checked By: CDS  
 January 17, 2008

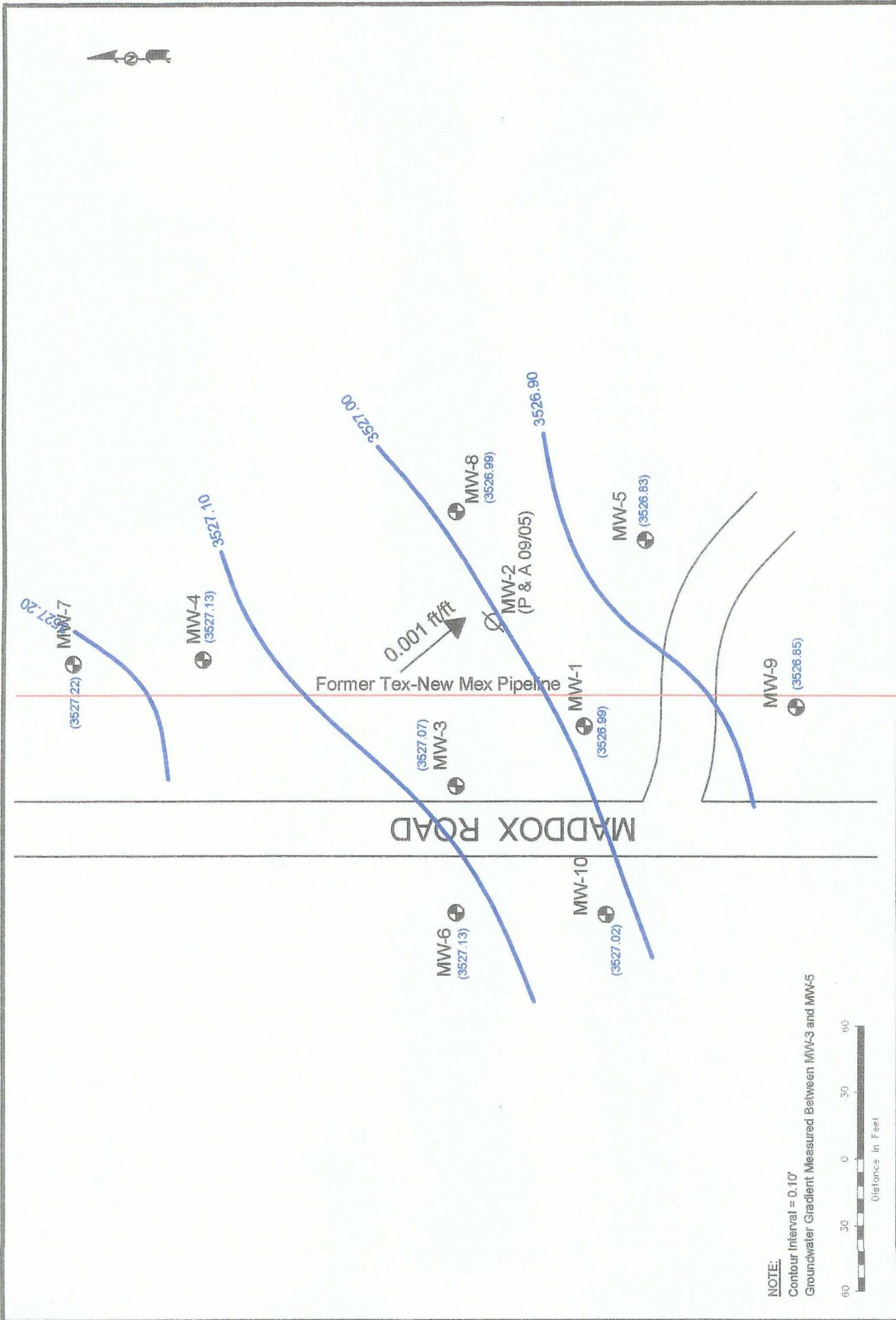


Figure 2D  
 Inferred Groundwater Gradient Map  
 (11/02/07)  
 Plaine Marketing, L.P.  
 Monmouth, NM  
 Lea County, NM  
 NIM/OCD Ref: IR-0124

NOVA Safety and Environmental  
 Scale: 1" = 60'  
 CAD By: DGC  
 Checked By: CDS  
 January 17, 2008



MW-7 (NS)

MW-4  
0.23'

(NS) MW-8

MW-2  
(P & A 09/05)

MW-5 (NS)

Former Tex-New Mex Pipeline

MW-3

MW-1  
0.25'

MW-9

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MADDOX ROAD

MW-6 (NS)

MW-10

Benzene	0.0517 mg/L
Toluene	0.0045 mg/L
Ethylbenzene	0.0175 mg/L
Xylene	0.0901 mg/L

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

**NOTE:**

\* Bold Indicates Concentration Above NMOCD Regulatory Standards.

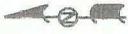


**Legend:**

- Monitor Well Location
- Pipeline
- Plugged and Abandoned

- (NS) Not Sampled
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 0.25' Thickness of PSH (feet)

Figure 3A  
Groundwater Concentration  
and Inferred PSH Extent Map  
(02/12/07)  
Plains Marking, L.P.  
Monument 18  
Lea County, NM  
NMOCD Ref#: 1R-0124



MW-7  
(NS)

MW-4  
0.15

(NS)  
MW-8

Ø  
MW-2  
(P & A 09/05)

MW-5

Benzene <0.001 mg/L  
Toluene <0.001 mg/L  
Ethylbenzene <0.001 mg/L  
Xylene <0.001 mg/L

Former Tex-New Mex Pipeline

MW-1  
0.17

MW-9

Benzene <0.001 mg/L  
Toluene <0.001 mg/L  
Ethylbenzene <0.001 mg/L  
Xylene <0.001 mg/L

MADDOX ROAD

MW-3

MW-6  
(NS)

MW-10

Benzene 0.039 mg/L  
Toluene 0.0053 mg/L  
Ethylbenzene 0.0135 mg/L  
Xylene 0.0721 mg/L

Benzene <0.001 mg/L  
Toluene <0.001 mg/L  
Ethylbenzene <0.001 mg/L  
Xylene <0.001 mg/L

**NOTE:**

• Bold Indicates Concentration Above NMOCED Regulatory Standards.



**Legend:**

⊕ Monitor Well Location

— Pipeline

Ø Plugged and Abandoned

(NS) Not Sampled

— Inferred PSH Extent

— <0.001 Constituent Concentration (mg/L)

0.15 0.17 Thickness of PSH (feet)

Figure 3B  
Groundwater Concentration  
and Inferred PSH Extent Map  
(05/07/07)  
Plains Marketing, L.P.  
McClure, NM  
NMOCD Ref# 1R-0124

NOVA Safety and Environmental



State: 1" = 60'  
CAD By: DGC  
Checked By: CDS  
January 21, 2008



MW-7 (NS)

MW-4

Benzene	0.0754 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	0.0924 mg/L
Xylene	0.0939 mg/L

(NS) MW-8

MW-2 (P & A 09/05)

Benzene	0.0036 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	0.0064 mg/L
Xylene	0.0292 mg/L

(NS) MW-5

Former Tex-New Mex Pipeline

MW-3

MW-1

MW-9

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MADDOX ROAD

(NS) MW-6

Benzene	0.0358 mg/L
Toluene	0.0036 mg/L
Ethylbenzene	0.0119 mg/L
Xylene	0.0512 mg/L

MW-10

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

**NOTE:**

• Bold Indicates Concentration Above NMOCED Regulatory Standards.

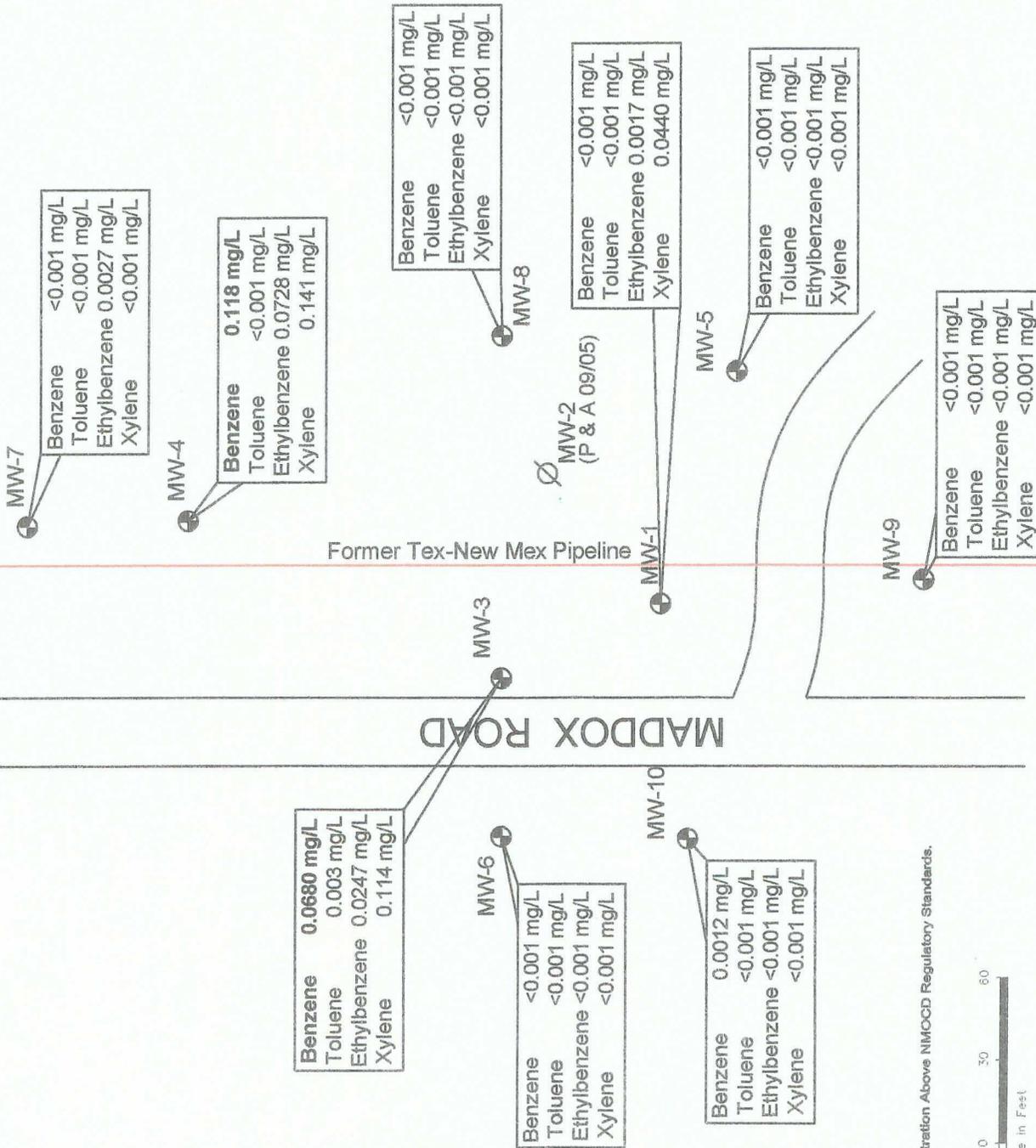
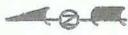


**Legend:**

- Monitor Well Location
- Pipeline
- Plugged and Abandoned

- (NS) Not Sampled
- Inferred PSH Extent
- Constituent Concentration (mg/L)
- Thickness of PSH (feet)

**Figure 3C**  
Groundwater Concentration and Inferred PSH Extent Map (08/08/07)  
Plains Marketing, L.P.  
Monument 18  
LeFlore County, NM  
NMOCED Ref: 1R-0124



**NOTE:**  
 • Bold indicates Concentration Above NIMQCD Regulatory Standards.



- Legend:**
- Monitor Well Location
  - Pipeline
  - Plugged and Abandoned
  - Inferred PSH Extent
  - <0.001 Constituent Concentration (mg/L)
  - 0.05 Thickness of PSH (feet)
  - (NS) Not Sampled

**Figure 3D**  
 Groundwater Concentration and Inferred PSH Extent Map  
 (11/02/07)  
 Plains Monitoring, L.P.  
 Lea County, NM  
 NIMQCD Ref# 1R-0124



# Tables

TABLE 1

## 2007 GROUNDWATER ELEVATION DATA

PLAINS MAREKTING, L.P.  
 MONUMENT 18  
 LEA COUNTY, NEW MEXICO  
 NMOCD Reference 1R-0124

SAMPLE LOCATION	SAMPLE DATE	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-1	01/10/07	3,558.71	sheen	31.71	0.00	3,527.00
	01/25/07	3,558.71	31.86	32.13	0.27	3,526.81
	02/06/07	3,558.71	31.81	32.12	0.31	3,526.85
	02/12/07	3,558.71	31.79	32.04	0.25	3,526.88
	02/13/07	3,558.71	31.81	32.09	0.28	3,526.86
	02/20/07	3,558.71	31.81	32.01	0.20	3,526.87
	03/07/07	3,558.71	31.77	31.99	0.22	3,526.91
	03/27/07	3,558.71	31.75	31.90	0.15	3,526.94
	04/11/07	3,558.71	31.76	31.87	0.11	3,526.93
	04/25/07	3,558.71	31.74	31.87	0.13	3,526.95
	05/01/07	3,558.71	31.72	31.81	0.09	3,526.98
	05/07/07	3,558.71	31.71	31.88	0.17	3,526.97
	05/17/07	3,558.71	31.70	31.76	0.06	3,527.00
	05/25/07	3,558.71	31.68	31.73	0.05	3,527.02
	06/07/07	3,558.71	31.65	31.69	0.04	3,527.05
	06/12/07	3,558.71	31.66	31.70	0.04	3,527.04
	06/20/07	3,558.71	sheen	31.67	0.00	3,527.04
	06/28/07	3,558.71	sheen	31.66	0.00	3,527.05
	07/02/07	3,558.71	sheen	31.66	0.00	3,527.05
	07/11/07	3,558.71	-	31.68	0.00	3,527.03
	07/18/07	3,558.71	-	31.68	0.00	3,527.03
	07/24/07	3,558.71	sheen	31.77	0.00	3,526.94
	08/01/07	3,558.71	sheen	31.71	0.00	3,527.00
	08/08/07	3,558.71	sheen	31.71	0.00	3,527.00
	08/16/07	3,558.71	sheen	31.74	0.00	3,526.97
	09/14/07	3,558.71	sheen	31.80	0.00	3,526.91
	09/18/07	3,558.71	sheen	31.79	0.00	3,526.92
	09/25/07	3,558.71	sheen	31.79	0.00	3,526.92
	10/03/07	3,558.71	sheen	31.74	0.00	3,526.97
	10/10/07	3,558.71	sheen	31.74	0.00	3,526.97
	10/16/07	3,558.71	sheen	31.71	0.00	3,527.00
	10/29/07	3,558.71	sheen	31.73	0.00	3,526.98
	11/02/07	3,558.71	sheen	31.72	0.00	3,526.99
	11/07/07	3,558.71	sheen	31.72	0.00	3,526.99
	11/30/07	3,558.71	sheen	31.71	0.00	3,527.00
	12/07/07	3,558.71	sheen	31.69	0.00	3,527.02
	12/18/07	3,558.71	sheen	31.69	0.00	3,527.02
MW-3	01/25/07	3,558.53	sheen	31.60	0.00	3,526.93
	02/12/07	3,558.53	sheen	31.47	0.00	3,527.06
	05/07/07	3,558.53	sheen	31.38	0.00	3,527.15
	08/08/07	3,558.53	sheen	31.41	0.00	3,527.12
	09/18/07	3,558.53	sheen	32.53	0.00	3,526.00
	09/25/07	3,558.53	sheen	31.52	0.00	3,527.01
	10/03/07	3,558.53	sheen	31.48	0.00	3,527.05
	10/16/07	3,558.53	sheen	31.45	0.00	3,527.08
	11/02/07	3,558.53	sheen	31.46	0.00	3,527.07
MW-4	01/10/07	3,558.14	sheen	31.99	0.00	3,526.15
	01/25/07	3,558.14	31.10	31.68	0.58	3,526.95
	02/06/07	3,558.14	31.07	31.46	0.39	3,527.01
	02/12/07	3,558.14	31.09	31.30	0.21	3,527.02
	02/13/07	3,558.14	31.08	31.34	0.26	3,527.02
	02/20/07	3,558.14	31.06	31.23	0.17	3,527.05
	03/07/07	3,558.14	31.06	31.23	0.17	3,527.05

**TABLE 1**  
**2007 GROUNDWATER ELEVATION DATA**

**PLAINS MAREKTING, L.P.**  
**MONUMENT 18**  
**LEA COUNTY, NEW MEXICO**  
**NMOCD Reference 1R-0124**

SAMPLE LOCATION	SAMPLE DATE	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-4	03/27/07	3,558.14	31.03	31.12	0.09	3,527.10
	04/11/07	3,558.14	31.03	31.11	0.08	3,527.10
	04/25/07	3,558.14	31.01	31.30	0.29	3,527.09
	05/01/07	3,558.14	30.99	31.06	0.07	3,527.14
	05/07/07	3,558.14	30.99	31.14	0.15	3,527.13
	05/17/07	3,558.14	30.96	31.02	0.06	3,527.17
	05/25/07	3,558.14	30.95	31.01	0.06	3,527.18
	06/07/07	3,558.14	30.92	30.96	0.04	3,527.21
	06/12/07	3,558.14	30.91	30.96	0.05	3,527.22
	06/20/07	3,558.14	sheen	30.96	0.00	3,527.18
	06/28/07	3,558.14	sheen	30.93	0.00	3,527.21
	07/02/07	3,558.14	sheen	30.94	0.00	3,527.20
	07/11/07	3,558.14	-	30.95	0.00	3,527.19
	07/18/07	3,558.14	-	30.96	0.00	3,527.18
	07/24/07	3,558.14	sheen	30.96	0.00	3,527.18
	08/01/07	3,558.14	sheen	30.96	0.00	3,527.18
	08/08/07	3,558.14	sheen	30.96	0.00	3,527.18
	08/16/07	3,558.14	sheen	30.99	0.00	3,527.15
	09/14/07	3,558.14	sheen	31.05	0.00	3,527.09
	09/18/07	3,558.14	sheen	31.07	0.00	3,527.07
	09/25/07	3,558.14	sheen	31.06	0.00	3,527.08
	10/03/07	3,558.14	sheen	31.03	0.00	3,527.11
	10/10/07	3,558.14	sheen	31.00	0.00	3,527.14
	10/16/07	3,558.14	sheen	30.99	0.00	3,527.15
	10/29/07	3,558.14	sheen	32.03	0.00	3,526.11
	11/02/07	3,558.14	sheen	31.01	0.00	3,527.13
	11/07/07	3,558.14	sheen	30.98	0.00	3,527.16
	11/30/07	3,558.14	sheen	30.95	0.00	3,527.19
	12/07/07	3,558.14	sheen	30.96	0.00	3,527.18
	12/17/07	3,558.14	sheen	25.81	0.00	3,532.33
	12/18/07	3,558.14	sheen	30.95	0.00	3,527.19
MW-5	02/12/07	3,560.07	-	33.29	0.00	3,526.78
	05/07/07	3,560.07	-	33.26	0.00	3,526.81
	08/08/07	3,560.07	-	33.22	0.00	3,526.85
	11/02/07	3,560.07	-	33.24	0.00	3,526.83
	12/17/07	3,560.07	sheen	25.21	0.00	3,534.86
MW-6	02/12/07	3,557.64	-	30.59	0.00	3,527.05
	05/07/07	3,557.64	-	30.42	0.00	3,527.22
	08/08/07	3,557.64	-	30.47	0.00	3,527.17
	11/02/07	3,557.64	-	30.51	0.00	3,527.13
MW-7	02/12/07	3,558.65	-	31.46	0.00	3,527.19
	05/07/07	3,558.65	-	31.39	0.00	3,527.26
	08/08/07	3,558.65	-	31.39	0.00	3,527.26
	11/02/07	3,558.65	-	31.43	0.00	3,527.22
	12/17/07	3,558.65	sheen	23.56	0.00	3,535.09
MW-8	02/12/07	3,559.30	-	32.37	0.00	3,526.93
	05/07/07	3,559.30	-	32.28	0.00	3,527.02
	08/08/07	3,559.30	-	32.31	0.00	3,526.99
	11/02/07	3,559.30	-	32.31	0.00	3,526.99
MW-9	02/12/07	3,559.94	-	33.13	0.00	3,526.81

TABLE 1

2007 GROUNDWATER ELEVATION DATA

PLAINS MAREKTING, L.P.  
 MONUMENT 18  
 LEA COUNTY, NEW MEXICO  
 NMOCD Reference 1R-0124

SAMPLE LOCATION	SAMPLE DATE	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-9	05/07/07	3,559.94	-	33.11	0.00	3,526.83
	08/08/07	3,559.94	-	33.08	0.00	3,526.86
	11/02/07	3,559.94	-	33.09	0.00	3,526.85
MW-10	02/12/07	3,558.06	-	31.06	0.00	3527.00
	05/07/07	3,558.06	-	31.04	0.00	3527.02
	08/08/07	3,558.06	-	31.02	0.00	3527.04
	11/02/07	3,558.06	-	31.04	0.00	3527.02
	12/17/07	3,558.06	sheen	25.54	0.00	3532.52

TABLE 2

2007 CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.  
 MONUMENT 18  
 LEA COUNTY, NEW MEXICO  
 NMOCD Reference 1R-0124

All concentrations are reported in mg/L.

SAMPLE LOCATION	SAMPLE DATE	SW 846-8012B, 5030			
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES o - XYLENE
NMOCD Regulatory Limit		0.01	0.75	0.75	0.62
MW-1	02/12/07	Not Sampled due to PSH in Well			
	05/07/07	Not Sampled due to PSH in Well			
	08/08/07	0.0036	<0.001	0.0064	0.0292
	11/02/07	<0.001	<0.001	0.0017	0.044
MW-3	02/12/07	0.05170	0.00450	0.01750	0.09010
	05/07/07	0.039	0.00530	0.01350	0.07210
	08/08/07	0.0358	0.00360	0.01190	0.05120
	11/02/07	0.0680	0.00300	0.02470	0.11400
MW-4	02/12/07	Not Sampled due to PSH in Well			
	05/07/07	Not Sampled due to PSH in Well			
	08/08/07	0.0754	<0.001	0.0924	0.0939
	11/02/07	0.1180	<0.001	0.0728	0.1410
MW-5	02/12/07	Not Sampled on Current Sample Schedule			
	05/07/07	<0.001	<0.001	<0.001	<0.001
	08/08/07	Not Sampled on Current Sample Schedule			
	11/02/07	<0.001	<0.001	<0.001	<0.001
MW-6	02/12/07	Not Sampled on Current Sample Schedule			
	05/07/07	Not Sampled on Current Sample Schedule			
	08/08/07	Not Sampled on Current Sample Schedule			
	11/02/07	<0.001	<0.001	<0.001	<0.001
MW-7	02/12/07	Not Sampled on Current Sample Schedule			
	05/07/07	Not Sampled on Current Sample Schedule			
	08/08/07	Not Sampled on Current Sample Schedule			
	11/02/07	<0.001	<0.001	0.00270	<0.001
MW-8	02/12/07	Not Sampled on Current Sample Schedule			
	05/07/07	Not Sampled on Current Sample Schedule			
	08/08/07	Not Sampled on Current Sample Schedule			
	11/02/07	<0.001	<0.001	<0.001	<0.001
MW-9	02/12/07	<0.001	<0.001	<0.001	<0.001
	05/07/07	<0.001	<0.001	<0.001	<0.001
	08/08/07	<0.001	<0.001	<0.001	<0.001
	11/02/07	<0.001	<0.001	<0.001	<0.001

**TABLE 2**  
**2007 CONCENTRATIONS OF BTEX IN GROUNDWATER**

**PLAINS MARKETING, L.P.**  
**MONUMENT 18**  
**LEA COUNTY, NEW MEXICO**  
**NMOCD Reference 1R-0124**

*All concentrations are reported in mg/L.*

SAMPLE LOCATION	SAMPLE DATE	SW 846-8012B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD Regulatory Limit		0.01	0.75	0.75	0.62	
MW-10	02/12/07	<0.001	<0.001	<0.001	<0.001	
	05/07/07	<0.001	<0.001	<0.001	<0.001	
	08/08/07	<0.001	<0.001	<0.001	<0.001	
	11/02/07	0.0012	<0.001	<0.001	<0.001	

# Appendices

Appendix A  
Release Notification and Corrective Action  
(Form C-141)

District I  
625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised October 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	Plains Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name	Monument # 18	Facility Type:	Pipeline

Surface Owner:	Mineral Owner	Lease No.
Jim B Cooper		

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	7	20S	37E					Lea

**Latitude** 32 degrees 35' 30.0" **Longitude** 103 degrees 17' 55.9"

**NATURE OF RELEASE**

Type of Release:	Volume of Release:	Volume Recovered
Source of Release:	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given?	If YES, To Whom?	
Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required <input type="checkbox"/>		
By Whom?	Date and Hour	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Describe Area Affected and Cleanup Action Taken.\*  
**NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release; initial response information is unavailable.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

**OIL CONSERVATION DIVISION**

Signature:	Approved by District Supervisor:		
Printed Name: Camille Reynolds	Approval Date:	Expiration Date:	
Title: Remediation Coordinator	Conditions of Approval:		
E-mail Address: cjreynolds@paalp.com			Attached <input type="checkbox"/>
Date: 3/21/2005	Phone: (505)441-0965		

\* Attach Additional Sheets If Necessary