AP - 7

Darr Angell #2

# ANNUAL MONITORING REPORT

YEAR(S): 2010

PLAINS
ALL AMERICAN

RECEIVED

MAR 29 2011

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

March 23, 2011

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

Re: Plains All American – 2010 Annual Monitoring Reports
20 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:

| | | |
|---|---|---|
| 34 Junc. to Lea Sta. | 1R-0386 | Section 21, Township 20 South, Range 37 East, Lea County |
| 34 Junction South | 1R-0456 | Section 02, Township 17 South, Range 36 East, Lea County |
| Bob Durham | AP-0016 | Section 32, Township 19 South, Range 37 East, Lea County |
| Darr Angell #1 | AP-007 | Section 11, Township 15 South, Range 37 East, Lea County |
| Darr Angell #2 | AP-007 | Section 11, Township 15 South, Range 37 East, Lea County<br>Section 14, Township 15 South, Range 37 East, Lea County |
| Darr Angell #4 | AP-007 | Section 11, Township 15 South, Range 37 East, Lea County<br>Section 02, Township 15 South, Range 37 East, Lea County |
| Denton Station | 1R-0234 | Section 14, Township 15 South, Range 37 East, Lea County |
| HDO-90-23 | AP-009 | Section 06, Township 20 South, Range 37 East, Lea County |
| LF-59 | 1R-0103 | Section 32, Township 19 South, Range 37 East, Lea County |
| Monument 2 | 1R-0110 | Section 06, Township 20 South, Range 37 East, Lea County<br>Section 07, Township 20 South, Range 37 East, Lea, County |
| Monument 10 | 1R-0119 | Section 30, Township 19 South, Range 37 East, Lea County |
| Monument 17 | 1R-123 | Section 29, Township 19 South, Range 37 East, Lea County |
| Monument 18 | 1R-0124 | Section 07, Township 20 South, Range 37 East, Lea County |
| S. Mon. Gath. Sour | 1R-951 | Section 05, Township 20 South, Range 37 East, Lea County |
| SPS-11 | GW-0140 | Section 18, Township 18 South, Range 36 East, Lea County |
| Texaco Skelly F | 1R-0420 | Section 11, Township 21 South, Range 37 East, Lea County |
| TNM 97-04 | GW-0294 | Section 11, Township 16 South, Range 35 East, Lea County |
| TNM 97-17 | AP-017 | Section 21, Township 20 South, Range 37 East, Lea County |
| TNM 97-18 | AP-0013 | Section 28, Township 20 South, Range 37 East, Lea County |
| TNM 98-05A | AP-12 | Section 26, Township 21 South, Range 37 East, Lea County |

PLAINS
ALL AMERICAN

Nova Safety and Environmental (Nova) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Nova personnel in 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 (575) 441-1099.

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

# 2010
# ANNUAL MONITORING REPORT

## DARR ANGELL 2

**SW ¼, SE ¼ SECTION 11, TOWNSHIP 15 SOUTH, RANGE 37 EAST**
**NW ¼, NE ¼ SECTION 14, TOWNSHIP 15 SOUTH, RANGE 37 EAST**
**LEA COUNTY, NEW MEXICO**
**PLAINS SRS NUMBER: LF-1999-62**
**NMOCD Reference AP-007**

PREPARED FOR:

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

NOVA
safety and environmental

PREPARED BY:

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

**March 2011**

Ronald K. Rounsaville
Senior Project Manager

Brittan K. Byerly, P.G.
President

## TABLE OF CONTENTS



**FIGURES**



**TABLES**



**APPENDICES**



**ENCLOSED ON DATA DISK**

## 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 for the Darr Angell #2 Pipeline Release Site (the site) were assumed by NOVA. The site, formerly 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 text, figures, tables and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2010 only. However, historic data tables as well as 2010 laboratory analytical reports are provided on the enclosed disk. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2010 to assess the levels and extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). Each groundwater monitoring event consisted of measuring static water levels in monitor wells, checking for the presence of PSH on the water column and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 foot were sampled as per a NMOCD directive.

## SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located approximately 12.5 miles east of the town of Lovington, New Mexico near State Highway 82 in the SW ¼ of the SE ¼ Section 11, Township 15 South, Range 37 East and the NW ¼ of the NE ¼ Section 14, Township 15 South, Range 37 East. The site coordinates are latitude 33° 01' 47.0" North, longitude 103° 10' 10.7" West. According to Form C-141, the release was discovered by EOTT employees on July 29, 1999. The release was attributed to structural failure due to external corrosion on the 8-inch steel pipeline and resulted in the loss of approximately 60 barrels of crude oil with no recovery. The release was reported to the New Mexico Oil Conservation Division (NMOCD) on July 29, 1999. A copy of the Release Notification and Corrective Action (Form C-141) is provided in Appendix A.

Initial site characterization activities began in August 1999 and consisted of the advancement of forty soil borings within and around the area of surface staining. In April and May 2000, a previous contractor excavated the areas identified by the soil boring investigation as impacted to a depth of approximately 4.5 feet below ground surface (bgs). Impacted soil was stockpiled on-site. Excavation activities resumed in April and May 2001, with the removal of approximately 3,000 cubic yards (cy) of impacted soil. This material was added to soil previously stockpiled on-site. On various dates between April 2000 and December 2002, monitor wells MW-1 through MW-10 and recovery wells RW-1 through RW-7 were installed.

Partial backfilling of the open excavation occurred subsequent to NMOCD approval of a backfill request submitted on March 11, 2002. Backfill material consisted of previously excavated caliche which had been separated from other excavated material by mechanical screening. In October 2003, approximately 3,100 cy of excavated soil was placed into a treatment area two to

three feet in depth. Quarterly mechanical tilling of this stockpile occurred throughout 2004. Analytical results, detailed in the Site Restoration Work Plan and Proposed Soil Closure Strategy dated January 2006, indicate total petroleum hydrocarbon (TPH) concentrations within the soil treatment cell were below NMOCD regulatory standards.

In a letter from the NMOCD dated April 5, 2006, Plains received NMOCD approval to backfill the excavation at the Darr Angell #2 release site. In June 2006, the excavation was backfilled with remediated soil contained in the soil treatment soil and contoured to grade. A *Soil Closure Request* was submitted to the NMOCD and on February 19, 2010, Plains received an email approving the soil closure request.

Currently, there are ten monitor wells (MW-1 through MW-4 and MW-6 through MW-11) and seven recovery wells (RW-1 through RW-7) on-site. Monitor well MW-5 was plugged and abandoned with NMOCD approval on September 14, 2005. An automated product recovery system operated on-site throughout the reporting period. Manual product recovery was performed on those wells with PSH not included in the recovery system.

## FIELD ACTIVITIES

### Product Recovery Efforts

A measurable thickness of PSH was present in eight monitor or recovery wells (MW-2 and RW-1 through RW-7) during at least three quarters of the reporting period. Recovery wells RW-2, RW-3 and RW-4 use total fluid pumps for PSH recovery. The average thickness of PSH in monitor wells and recovery wells for wells exhibiting PSH is 6.22 feet. The maximum thickness of PSH in monitor and recovery wells was 8.12 feet as recorded in recovery well RW-6 on December 28, 2010. PSH data for the 2010 gauging events can be found in Table 1. Approximately 1,432 gallons (34.1 barrels) of PSH were recovered from the site during this reporting period. Approximately 18,508 gallons (440.6 barrels) of PSH have been recovered from the site utilizing manual and automated methods since project inception. Recovered PSH was reintroduced into the Plains system at the 34 Junction South Station, near Lovington, New Mexico.

### Groundwater Monitoring

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 amended by NMOCD correspondence dated June 20, 2005.

**NMOCD APPROVED SAMPLING SCHEDULE**

| Location | Schedule | Location | Schedule | Location | Schedule |
|---|---|---|---|---|---|
| MW-1 | Annually | MW-7 | Annually | RW-2 | Quarterly |
| MW-2 | Quarterly | MW-8 | Annually | RW-3 | Quarterly |
| MW-3 | Semi-Annually | MW-9 | Annually | RW-4 | Quarterly |
| MW-4 | Semi-Annually | MW-10 | Annually | RW-5 | Quarterly |
| MW-5 | Plugged / Abandoned | MW-11 | Quarterly | RW-6 | Quarterly |
| MW-6 | Annually | RW-1 | Quarterly | RW-7 | Quarterly |

The site monitor wells were gauged and sampled on February 12, May 27, August 20, and November 24, 2010. During each sampling event the monitor wells were purged of a minimum of three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were collected using disposable Teflon samplers. Water samples were placed 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 each quarterly monitoring event, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Maps. Groundwater elevation data for 2010 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

The most recent Inferred Groundwater Gradient map, Figure 2D, indicates a general gradient of approximately 0.005 feet/foot to the southeast as measured between monitor wells MW-1 and MW-2. This is consistent with data presented on Figures 2A through 2C from the earlier quarters. The corrected groundwater elevations ranged between 3723.22 and 3727.24 feet above mean sea level, reported in recovery well RW-2 on May 27 and monitor well MW-3 on May 3, 2010, respectively.

## LABORATORY RESULTS

Monitor well MW-2 and recovery wells RW-1 through RW-7 contained measurable PSH throughout the reporting period and were not sampled during the reporting period of 2010.

Groundwater samples obtained during the quarterly sampling events of 2010 were delivered to Trace Analysis, Inc. in Midland, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021B. Polynuclear Aromatic Hydrocarbons (PAH) analysis was conducted during the 2010 calendar year on monitor well MW-3. Based upon historic PAH analytical data, only those wells exhibiting elevated constituent concentrations above WQCC standards are sampled, with the exclusion of those wells containing measurable PSH thicknesses. A listing of BTEX constituent concentrations for 2010 are summarized in Table 2 and the Historic PAH constituent concentrations are summarized in Table 3. Copies of the laboratory reports generated for 2010 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A through 3D.

**Monitor well MW-1** is sampled on an annual schedule and analytical results indicate benzene, toluene, ethylbenzene and xylene concentrations were below laboratory method detection limits (MDL) and NMOCD regulatory standards of 0.01mg/L for benzene, 0.75 mg/L for toluene, 0.75 mg/L for ethylbenzene and 0.62 mg/L for xylene, during the 4$^{th}$ quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty-six consecutive quarters. PAH analysis was not conducted during the 4$^{th}$ quarter sampling event.

**Monitor well MW-2** is monitored on a quarterly schedule. Monitor well MW-2 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 5.54 feet, 5.27 feet, 5.34 feet and 5.25 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Monitor well MW-3** is sampled on a semi-annual (Plains voluntarily samples monitor well MW-3 quarterly due to benzene concentrations in excess of NMOCD standards) schedule and analytical results indicate benzene concentrations ranged from 0.0145 mg/L during the 4th quarter to 0.0590 mg/L during the 1st quarter of the reporting period. Benzene concentrations were above the NMOCD regulatory standard during all four quarterly sampling events. Toluene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0049 mg/L during the 4th quarter of the reporting period. Toluene concentrations were below NMOCD regulatory standard during the all four quarterly sampling events. Ethyl-benzene concentrations ranged from 0.0053 mg/L during the 2nd quarter to 0.009 mg/L during the 4th quarter. Ethyl-benzene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 2nd and 4th quarters to 0.0150 mg/L during the 3rd quarter of the reporting period. Xylene concentrations were below NMOCD regulatory standards during all four quarters of 2010. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above MDLs for 1-methylnaphthalene (0.0234 mg/L), fluorene (0.00132 mg/L), phenanthrene (0.00112 mg/L) and dibenzofuran (0.00133 mg/L), which are below WQCC standards.

**Monitor well MW-4** 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 2nd quarter sampling event. MW-4 was not sampled during the 4th quarter due to the lack of sufficient groundwater in the well for sampling. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty-nine consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**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 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**Monitor well MW-7** 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 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**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 4th quarter sampling event. The analytical results indicate BTEX

constituent concentrations have been below NMOCD regulatory standards for the last thirty consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**Monitor well MW-9** 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 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**Monitor well MW-10** 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 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last twenty-seven consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**Monitor well MW-11** is sampled on a quarterly schedule and analytical results indicate benzene, toluene, ethyl-benzene and xylene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirteen consecutive quarters. PAH analysis was not conducted during the 4th quarter sampling event.

**Recovery well RW-1** is monitored on a quarterly schedule. Recovery well RW-1 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 7.17 feet, 6.64 feet, 7.04 feet and 2.11 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-2** is monitored on a quarterly schedule. Recovery well RW-2 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 6.06 feet, a sheen, 2.58 feet and 2.52 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-3** is monitored on a quarterly schedule. Recovery well RW-3 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 7.61 feet, 7.48 feet, 7.43 feet and 7.39 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-4** is monitored on a quarterly schedule. Recovery well RW-4 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 0.19 feet, a sheen, 3.34 feet and 3.21 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-5** is monitored on a quarterly schedule. Recovery well RW-5 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 6.80 feet, 7.07 feet, 5.79 feet and 5.56 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-6** is monitored on a quarterly schedule. Recovery well RW-6 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 7.71 feet, 7.81 feet, 7.78 feet and 7.56 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2010, respectively. PAH analysis was not conducted during the 4th quarter sampling event, due to the presence of PSH.

**Recovery well RW-7** is monitored on a quarterly schedule. Recovery well RW-7 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH. PSH thicknesses could not be determined due to a lack of sufficient groundwater in the recovery well. PAH analysis was not conducted due to insufficient water volume in the well.

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 2010 annual monitoring period. Currently, there are ten groundwater monitor wells (MW-1 through MW-11, excluding MW-5) and seven product recovery wells (RW-1 through RW-7) on-site. A measurable thickness of PSH was present in eight monitor or recovery wells (MW-2 and RW-1 through RW-7) during at least three quarters of the reporting period. Approximately 1,432 gallons (34.1 barrels) of PSH were recovered from the site during this reporting period. Approximately 18,508 gallons (440.6 barrels) of PSH have been recovered from the site utilizing manual and automated methods since project inception. Groundwater elevation contours generated from water level measurements acquired during the most recent quarter indicated a general gradient of 0.005 feet/foot to the southeast as measured between monitor wells MW-1 and MW-2.

Monitor well MW-2 and all recovery wells (RW-1 through RW-7) contained measurable PSH and were not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period. The average thickness of PSH in recovery wells containing PSH during 2010 was 6.22 feet. A maximum PSH thickness of 8.12 feet reported in recovery well RW-6 on December 28, 2010. Data indicates that the operation of the automated recovery system at the Darr Angell #2 Release Site has been successful in reducing observed PSH thicknesses in on-site monitor and recovery wells.

Review of laboratory analytical results of the groundwater samples obtained during the 2010 monitoring period indicate the BTEX constituent concentrations are below applicable NMOCD standards in eight of the seventeen monitor and recovery wells currently on-site. The remaining nine monitor / recovery wells contained measurable thicknesses of PSH and were not sampled or exhibited analytical results above the NMOCD regulatory standard during at least three quarterly

monitoring events of 2010. Dissolved phase impact appears to be limited to monitor wells MW-2 and MW-3 and to those recovery wells which exhibit PSH. Review of PAH analysis indicates a decreasing trend in constituent concentrations in one monitor well (MW-3).

## ANTICIPATED ACTIONS

Quarterly groundwater monitoring and sampling will continue in 2011. An Annual Monitoring Report will be submitted to the NMOCD by April 1, 2012. The automated recovery system will be monitored and adjusted to maximize the efficiency of product removal and gradient control.

Based on the results of the PAH analysis over the past several years, further PAH analysis be conducted only on those monitor wells (MW-3) which have historically exhibited elevated constituents near or above the WQCC standards.

## 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

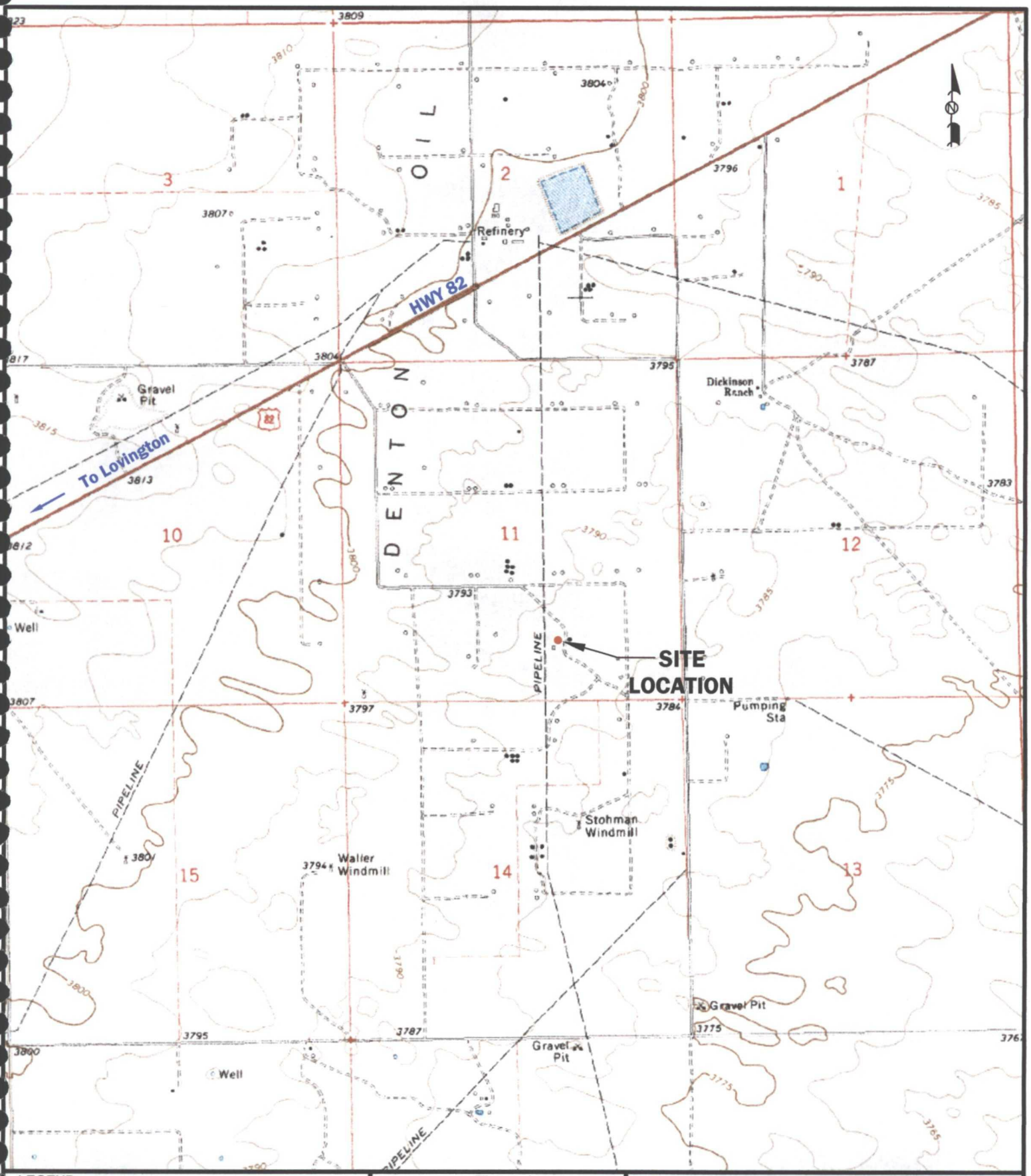
Copy 2:
Geoffrey R. Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240

Copy 3:
Jason Henry
Plains Marketing, L.P.
2530 State Highway 214
Denver City, TX 79323
jhenry@paalp.com

Copy 4:
Jeff Dann
Plains Marketing, L.P.
333 Clay Street
Suite 1600
Houston, TX 77002
jpdann@paalp.com

Copy 5:
NOVA Safety and Environmental
2057 Commerce Street
Midland, TX 79703
rrounsaville@novatraining.cc

# Figures




LEGEND:

2000 1000 0 1000 2000

Distance in Feet

Figure 1

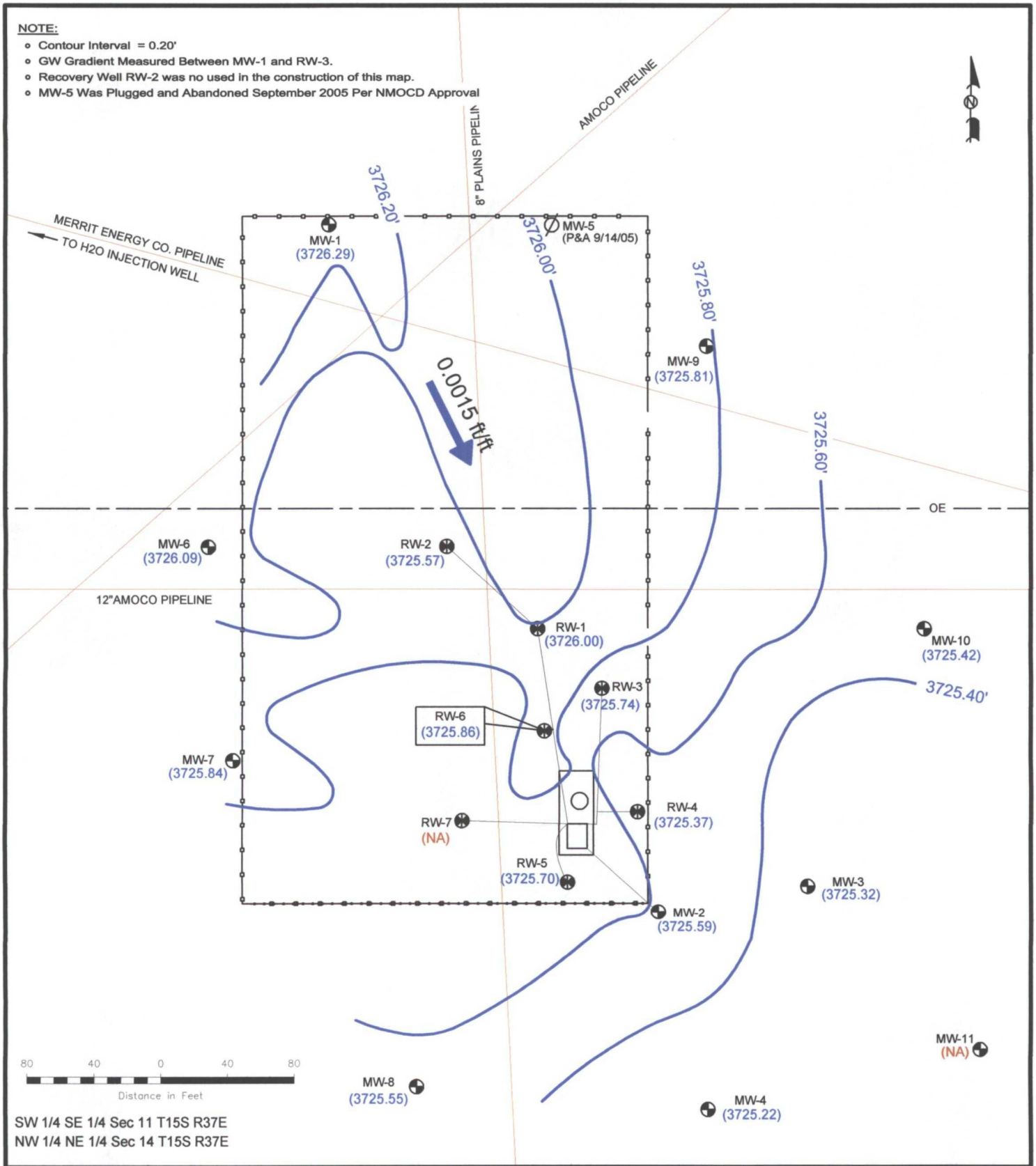
Site Location Map
Plains Marketing, L.P.
Darr Angell # 2
Lea County, NM

NOVA safety and environmental

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

www.novasafetyandenvironmental.com

| February 4, 2011 | Scale: 1" = 2000' | CAD By: TA | Checked By: RKR |
|---|---|---|---|
| Lat. N 33° 1' 39.20" Long. W 103° 10' 5.00" | | | |




LEGEND:

- Monitor Well Location
- Recovery Well Location
- (3728.84) Groundwater Elevation (In Feet)
- Groundwater Gradient Contour Line
- 0.001 ft/ft Groundwater Gradient and Magnitude
- Bermed Containment Area
- (NA) Water Data Unavailable
- Plugged and Abandoned Well

NMOCD Ref# AP-007

**Figure 2A**
**Inferred Groundwater Gradient Map (02/12/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**


NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com


| Scale: 1"=80' | CAD By: SAT | Checked By: RKR |
|---|---|---|
| May 19, 2010 | Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W | |

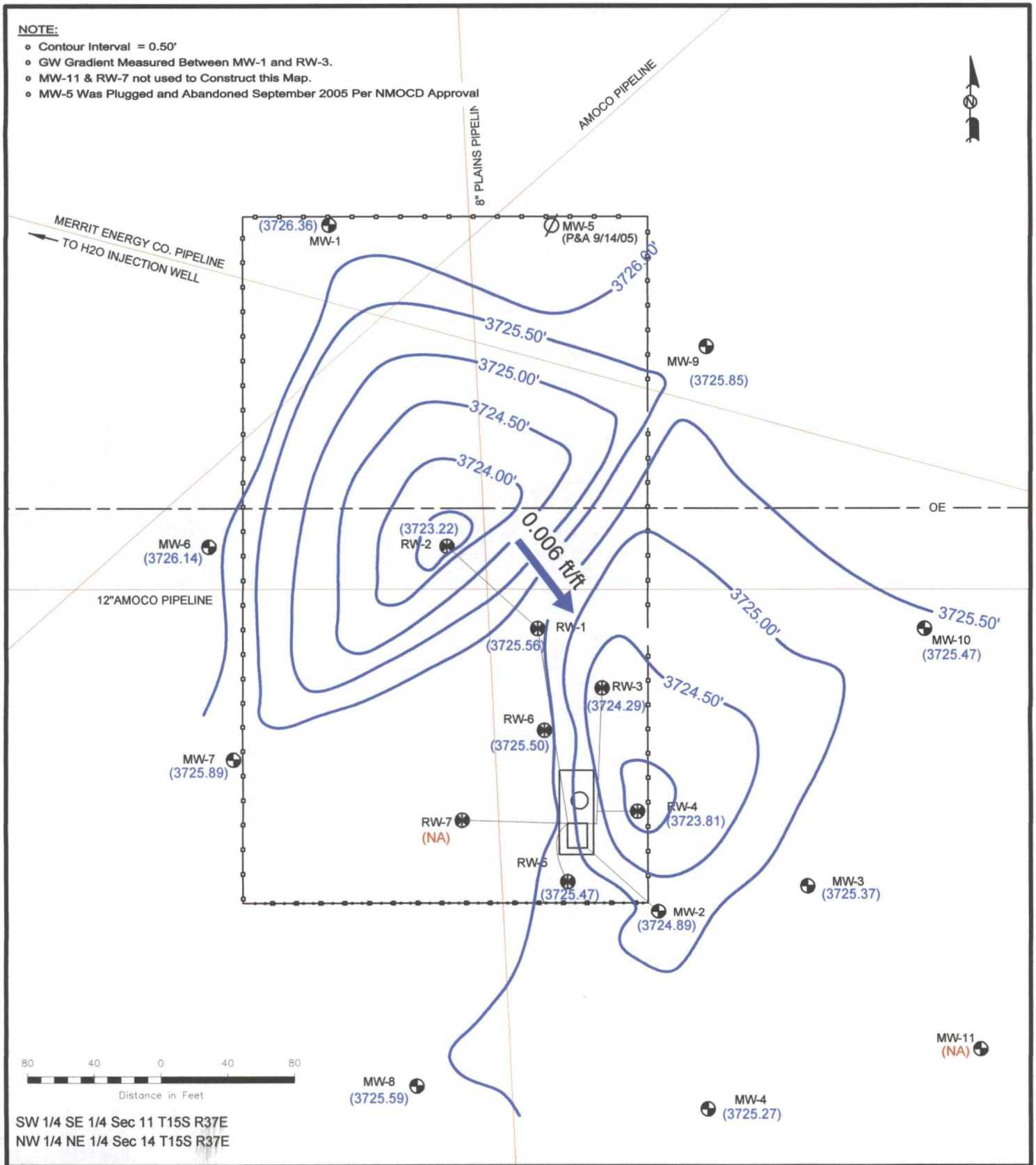



**Figure 2B**
**Inferred Groundwater Gradient Map (05/27/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**


NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com


| Scale: 1"=80' | CAD By: DGC | Checked By: RKR |
|---|---|---|
| June 19, 2010 | Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W | |

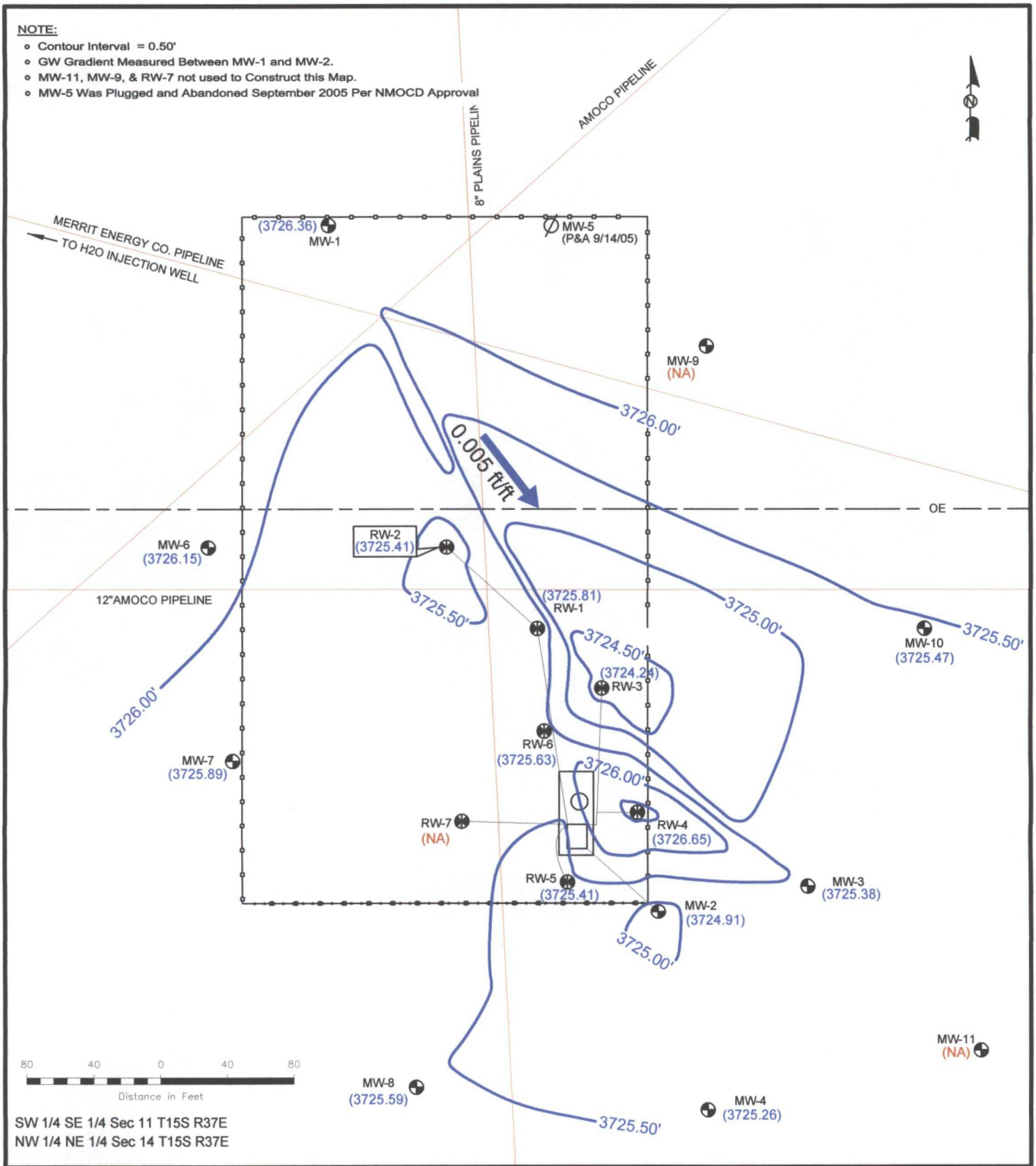
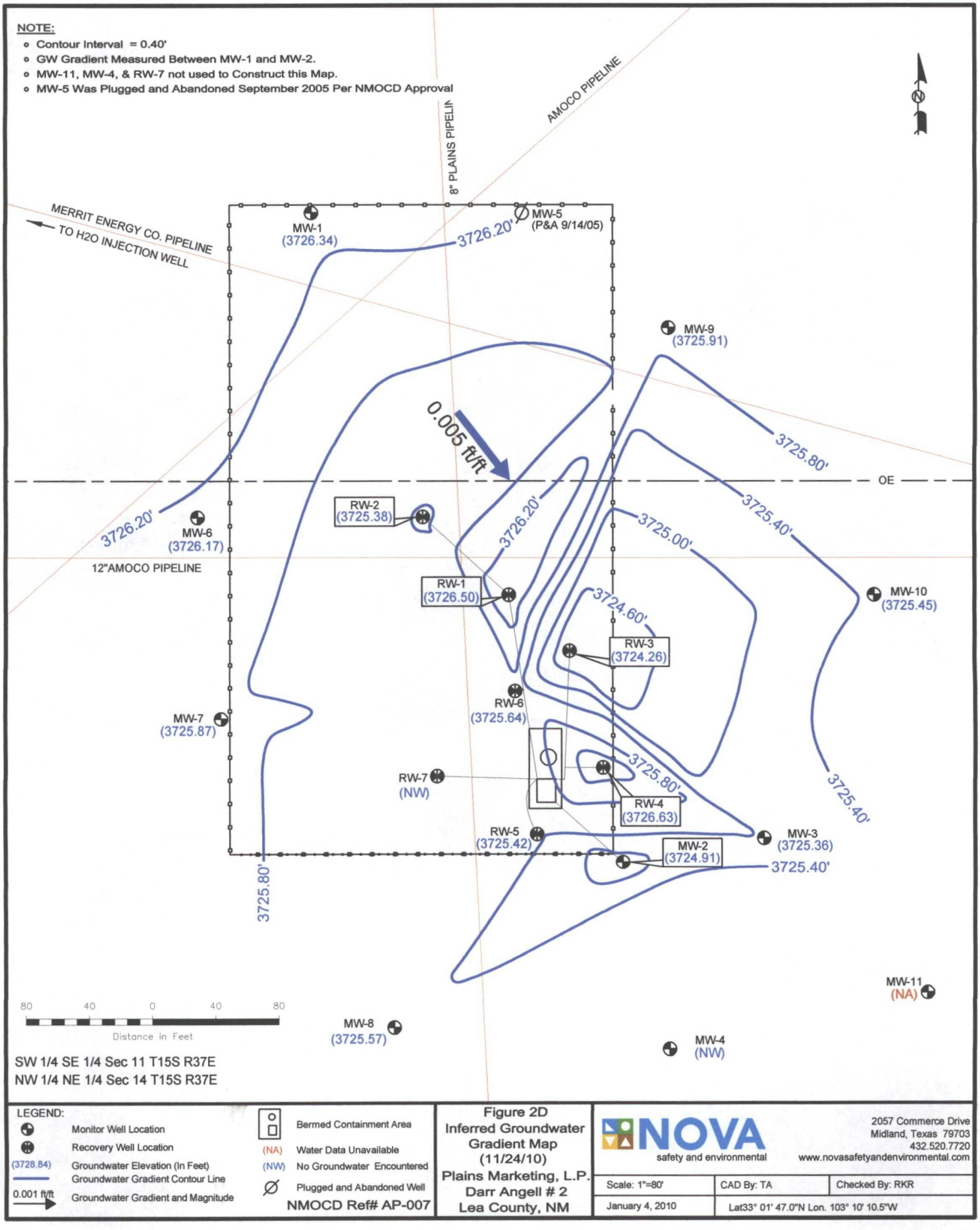



Figure 2C
Inferred Groundwater Gradient Map
(08/20/10)
Plains Marketing, L.P.
Darr Angell # 2
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: TA | Checked By: RKR |
|---|---|---|
| September 14, 2010 | Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W | |




LEGEND:

- Monitor Well Location
- Recovery Well Location
- (3728.84) Groundwater Elevation (In Feet)
- Groundwater Gradient Contour Line
- 0.001 ft/ft Groundwater Gradient and Magnitude
- Bermed Containment Area
- (NA) Water Data Unavailable
- (NW) No Groundwater Encountered
- Plugged and Abandoned Well

NMOCD Ref# AP-007

**Figure 2D**
**Inferred Groundwater Gradient Map (11/24/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: TA | Checked By: RKR |
|---|---|---|
| January 4, 2010 | Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W | |

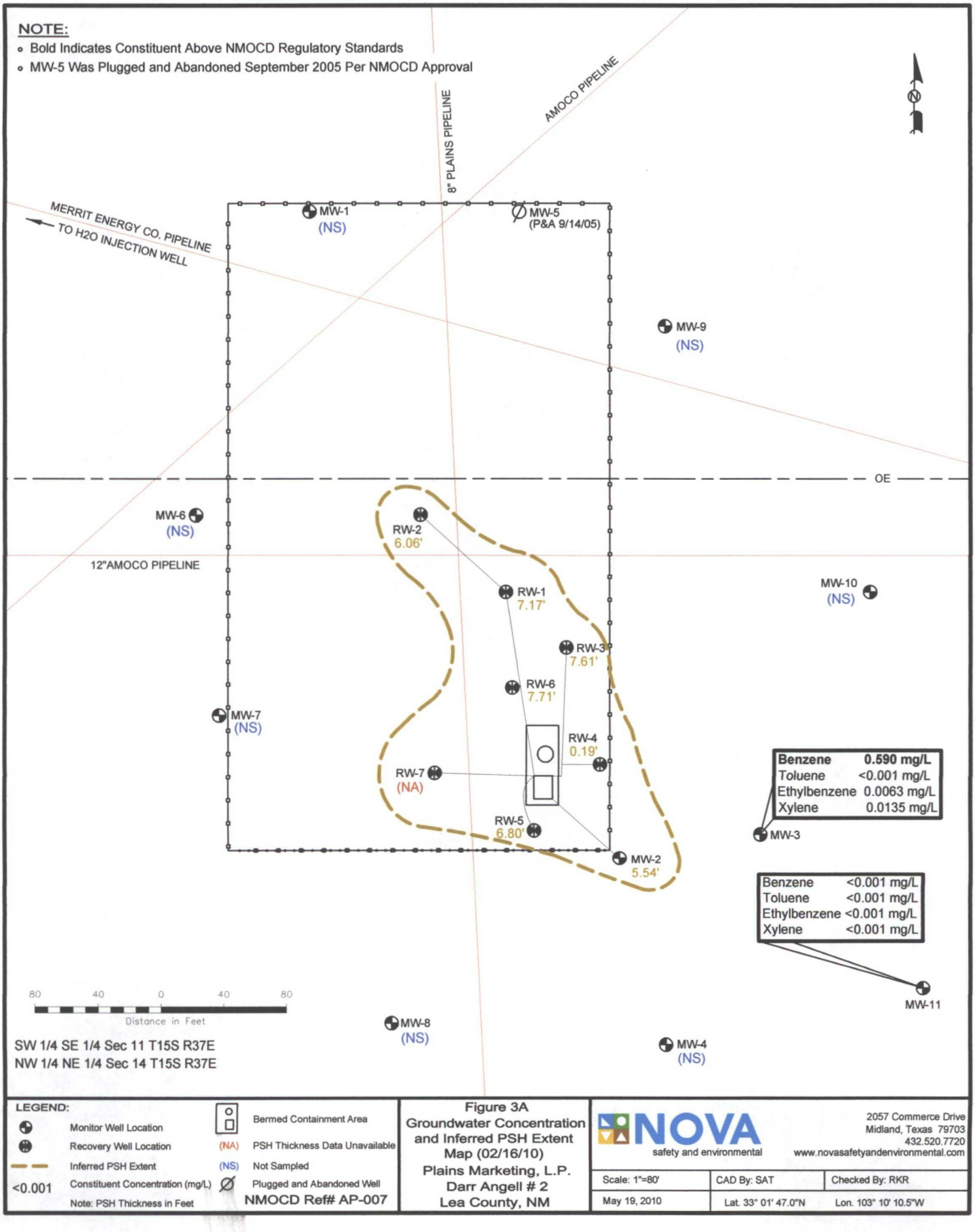
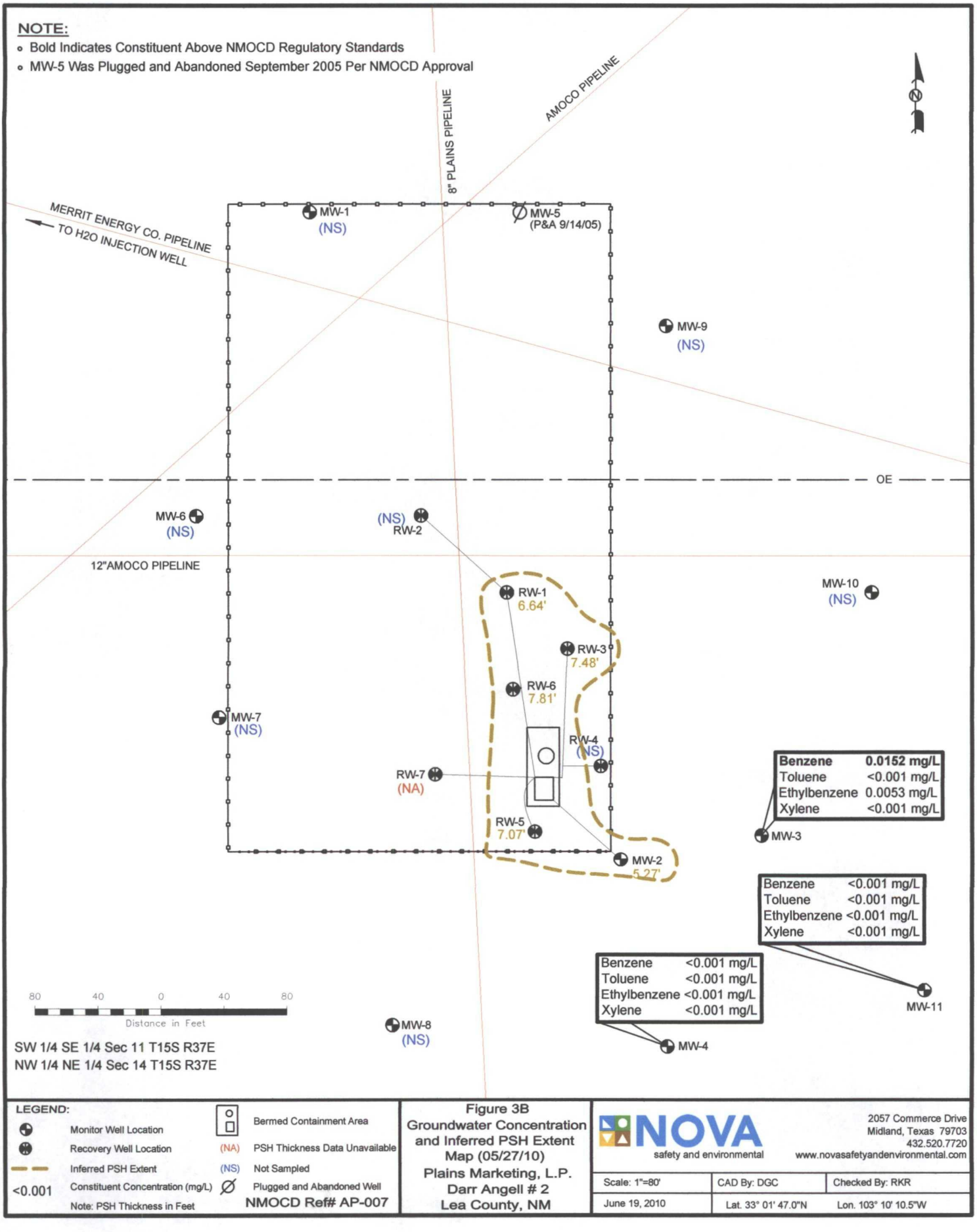



**Figure 3A**
**Groundwater Concentration and Inferred PSH Extent Map (02/16/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: SAT | Checked By: RKR |
|---|---|---|
| May 19, 2010 | Lat. 33° 01' 47.0"N | Lon. 103° 10' 10.5"W |




LEGEND:

- Monitor Well Location
- Recovery Well Location
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- Note: PSH Thickness in Feet
- Bermed Containment Area
- (NA) PSH Thickness Data Unavailable
- (NS) Not Sampled
- Ø Plugged and Abandoned Well

NMOCD Ref# AP-007

**Figure 3B**
**Groundwater Concentration and Inferred PSH Extent Map (05/27/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: DGC | Checked By: RKR |
|---|---|---|
| June 19, 2010 | Lat. 33° 01' 47.0"N | Lon. 103° 10' 10.5"W |

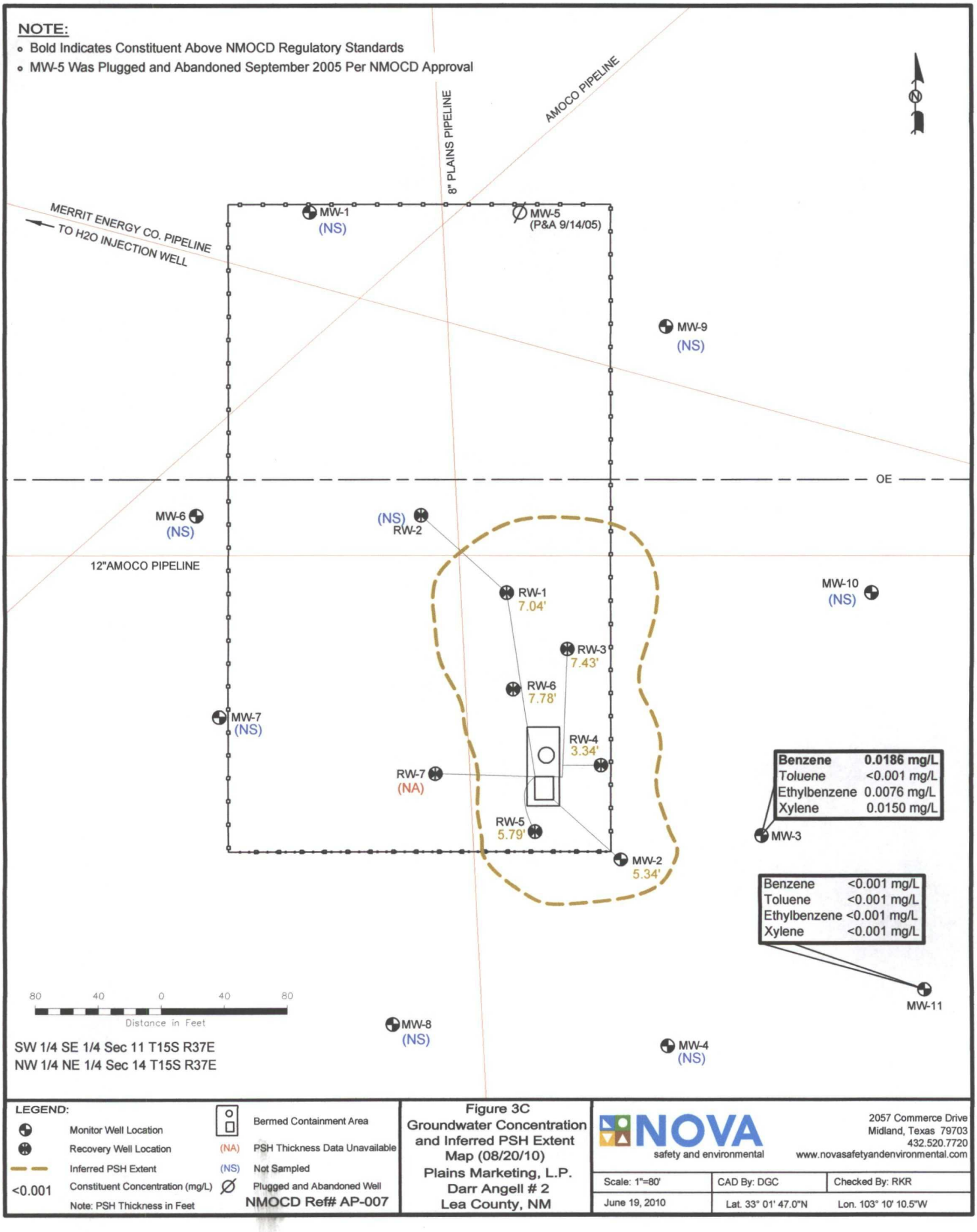



**Figure 3C**
**Groundwater Concentration and Inferred PSH Extent Map (08/20/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: DGC | Checked By: RKR |
|---|---|---|
| June 19, 2010 | Lat. 33° 01' 47.0"N | Lon. 103° 10' 10.5"W |

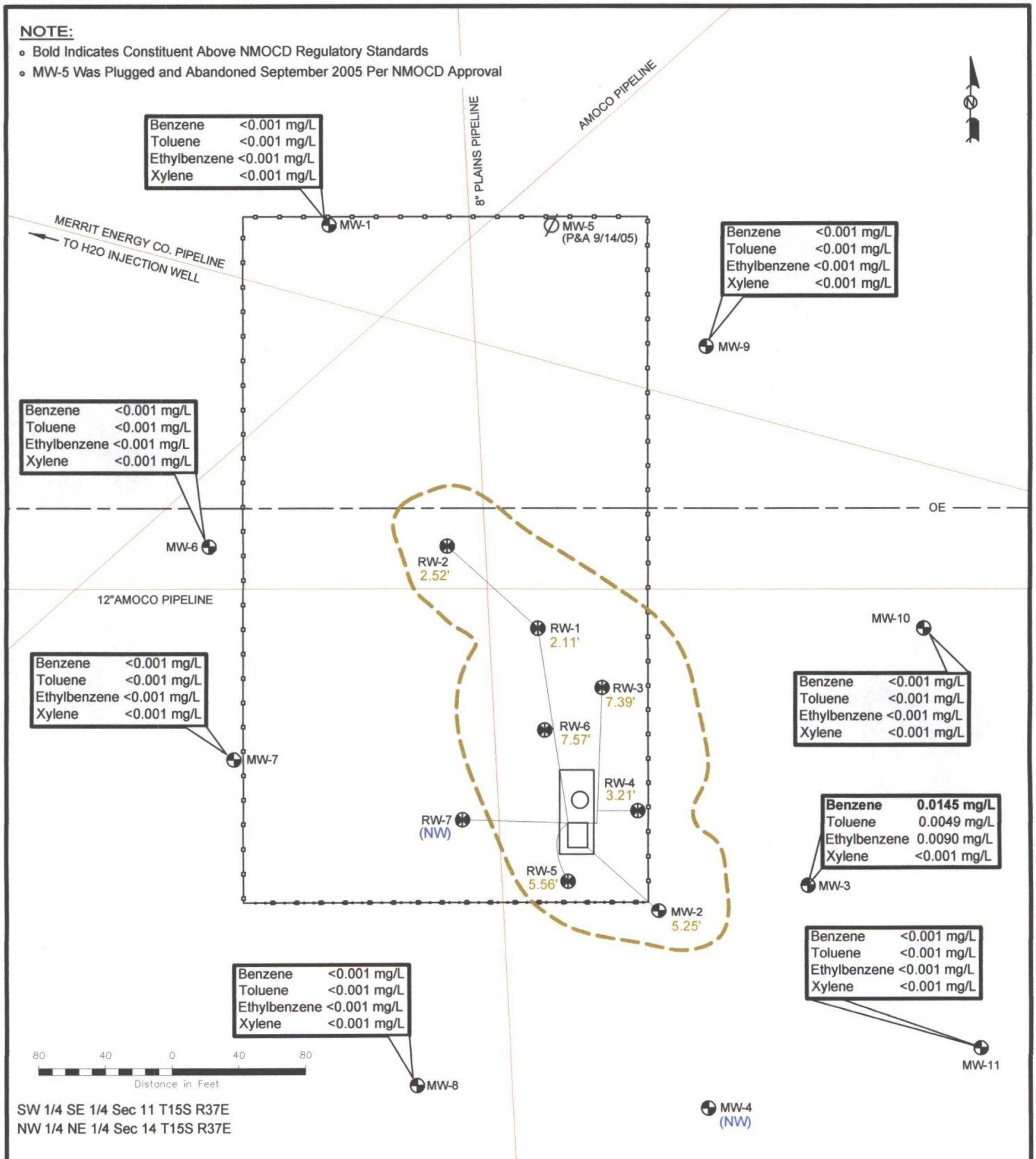



**Figure 3D**
**Groundwater Concentration and Inferred PSH Extent Map (11/24/10)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| Scale: 1"=80' | CAD By: TA | Checked By: RKR |
|---|---|---|
| December 22, 2010 | Lat. 33° 01' 47.0"N | Lon. 103° 10' 10.5"W |

# Tables

TABLE 1

GROUNDWATER ELEVATION DATA - 2010

PLAINS MARKETING, L.P.
DARR ANGELL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW - 1 | *02/12/10* | 3788.04 | - | 61.75 | 0.00 | 3726.29 |
| MW - 1 | *05/27/10* | 3788.04 | - | 61.68 | 0.00 | 3726.36 |
| MW - 1 | *08/20/10* | 3788.04 | - | 61.68 | 0.00 | 3726.36 |
| MW - 1 | *11/24/10* | 3788.04 | - | 61.70 | 0.00 | 3726.34 |
| | | | | | | |
| MW - 2 | *02/12/10* | 3788.41 | 61.99 | 67.53 | 5.54 | 3725.59 |
| MW - 2 | *05/27/10* | 3788.41 | 62.73 | 68.00 | 5.27 | 3724.89 |
| MW - 2 | *08/20/10* | 3788.41 | 62.70 | 68.04 | 5.34 | 3724.91 |
| MW - 2 | *11/24/10* | 3788.41 | 62.71 | 67.96 | 5.25 | 3724.91 |
| | | | | | | |
| MW - 3 | *02/12/10* | 3787.94 | - | 62.62 | 0.00 | 3725.32 |
| MW - 3 | 04/19/10 | 3787.94 | - | 62.13 | 0.00 | 3725.81 |
| MW - 3 | 04/26/10 | 3787.94 | - | 62.15 | 0.00 | 3725.79 |
| MW - 3 | 05/03/10 | 3787.94 | - | 60.70 | 0.00 | 3727.24 |
| MW - 3 | 05/11/10 | 3787.94 | - | 60.72 | 0.00 | 3727.22 |
| MW - 3 | 05/17/10 | 3787.94 | - | 60.71 | 0.00 | 3727.23 |
| MW - 3 | *05/27/10* | 3787.94 | - | 62.57 | 0.00 | 3725.37 |
| MW - 3 | 06/02/10 | 3787.94 | - | 62.59 | 0.00 | 3725.35 |
| MW - 3 | 06/07/10 | 3787.94 | - | 62.62 | 0.00 | 3725.32 |
| MW - 3 | 06/28/10 | 3787.94 | - | 62.58 | 0.00 | 3725.36 |
| MW - 3 | 07/06/10 | 3787.94 | - | 62.56 | 0.00 | 3725.38 |
| MW - 3 | *08/20/10* | 3787.94 | - | 62.56 | 0.00 | 3725.38 |
| MW - 3 | *11/24/10* | 3787.94 | - | 62.58 | 0.00 | 3725.36 |
| | | | | | | |
| MW - 4 | *02/12/10* | 3787.76 | - | 62.54 | 0.00 | 3725.22 |
| MW - 4 | *05/27/10* | 3787.76 | - | 62.49 | 0.00 | 3725.27 |
| MW - 4 | *08/20/10* | 3787.76 | - | 62.50 | 0.00 | 3725.26 |
| MW - 4 | *11/24/10* | 3787.76 | WELL IS DRY | | | |
| | | | | | | |
| MW - 6 | *02/12/10* | 3788.31 | - | 62.22 | 0.00 | 3726.09 |
| MW - 6 | *05/27/10* | 3788.31 | - | 62.17 | 0.00 | 3726.14 |
| MW - 6 | *08/20/10* | 3788.31 | - | 62.16 | 0.00 | 3726.15 |
| MW - 6 | *11/24/10* | 3788.31 | - | 62.14 | 0.00 | 3726.17 |
| | | | | | | |
| MW - 7 | *02/12/10* | 3788.65 | - | 62.81 | 0.00 | 3725.84 |
| MW - 7 | *05/27/10* | 3788.65 | - | 62.76 | 0.00 | 3725.89 |
| MW - 7 | *08/20/10* | 3788.65 | - | 62.76 | 0.00 | 3725.89 |
| MW - 7 | *11/24/10* | 3788.65 | - | 62.78 | 0.00 | 3725.87 |
| | | | | | | |
| MW - 8 | *02/12/10* | 3787.60 | - | 62.05 | 0.00 | 3725.55 |
| MW - 8 | *05/27/10* | 3787.60 | - | 62.01 | 0.00 | 3725.59 |
| MW - 8 | *08/23/10* | 3787.60 | - | 62.01 | 0.00 | 3725.59 |
| MW - 8 | *11/24/10* | 3787.60 | - | 62.03 | 0.00 | 3725.57 |
| | | | | | | |
| MW - 9 | *02/12/10* | 3787.27 | - | 61.46 | 0.00 | 3725.81 |
| MW - 9 | *05/27/10* | 3787.27 | - | 61.42 | 0.00 | 3725.85 |
| MW - 9 | *08/23/10* | 3787.27 | Not Gauged | | | |
| MW - 9 | *11/24/10* | 3787.27 | - | 61.36 | 0.00 | 3725.91 |
| | | | | | | |
| MW - 10 | *02/12/10* | 3787.50 | - | 62.08 | 0.00 | 3725.42 |
| MW - 10 | *05/27/10* | 3787.50 | - | 62.03 | 0.00 | 3725.47 |
| MW - 10 | *08/20/10* | 3787.50 | - | 62.03 | 0.00 | 3725.47 |
| MW - 10 | *11/24/10* | 3787.50 | - | 62.05 | 0.00 | 3725.45 |
| | | | | | | |

**TABLE 1**

**GROUNDWATER ELEVATION DATA - 2010**

**PLAINS MARKETING, L.P.**
**DARR ANGELL #2**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE NUMBER AP-007**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW - 11 | *02/12/10* | | - | 63.21 | 0.00 | |
| MW - 11 | *05/27/10* | | - | 63.14 | 0.00 | |
| MW - 11 | *08/20/10* | | - | 63.15 | 0.00 | |
| MW - 11 | *11/24/10* | | - | 63.15 | 0.00 | |
| | | | | | | |
| RW - 1 | *02/12/10* | 3787.45 | 60.37 | 67.54 | 7.17 | 3726.00 |
| RW - 1 | 04/19/10 | 3787.45 | 60.46 | 66.22 | 5.76 | 3726.13 |
| RW - 1 | 04/26/10 | 3787.45 | 60.49 | 66.21 | 5.72 | 3726.10 |
| RW - 1 | 05/03/10 | 3787.45 | 60.51 | 66.09 | 5.58 | 3726.10 |
| RW - 1 | 05/10/10 | 3787.45 | 60.53 | 66.10 | 5.57 | 3726.08 |
| RW - 1 | 05/17/10 | 3787.45 | 60.49 | 66.09 | 5.60 | 3726.12 |
| RW - 1 | *05/27/10* | 3787.45 | 60.89 | 67.53 | 6.64 | 3725.56 |
| RW - 1 | 06/02/10 | 3787.45 | 60.63 | 67.88 | 7.25 | 3725.73 |
| RW - 1 | 06/07/10 | 3787.45 | 60.65 | 67.85 | 7.20 | 3725.72 |
| RW - 1 | 06/14/10 | 3787.45 | 60.49 | 67.57 | 7.08 | 3725.90 |
| RW - 1 | 06/28/10 | 3787.45 | 60.62 | 67.88 | 7.26 | 3725.74 |
| RW - 1 | 07/06/10 | 3787.45 | 60.53 | 67.58 | 7.05 | 3725.86 |
| RW - 1 | 07/20/10 | 3787.45 | 60.55 | 67.58 | 7.03 | 3725.85 |
| RW - 1 | 07/26/10 | 3787.45 | 60.56 | 67.61 | 7.05 | 3725.83 |
| RW - 1 | 08/03/10 | 3787.45 | 60.57 | 67.60 | 7.03 | 3725.83 |
| RW - 1 | 08/09/10 | 3787.45 | 60.56 | 67.58 | 7.02 | 3725.84 |
| RW - 1 | 08/16/10 | 3787.45 | 60.57 | 67.57 | 7.00 | 3725.83 |
| RW - 1 | *08/20/10* | 3787.45 | 60.58 | 67.62 | 7.04 | 3725.81 |
| RW - 1 | 08/30/10 | 3787.45 | 60.60 | 67.63 | 7.03 | 3725.80 |
| RW - 1 | 09/07/10 | 3787.45 | 60.62 | 67.61 | 6.99 | 3725.78 |
| RW - 1 | 09/13/10 | 3787.45 | 60.63 | 67.58 | 6.95 | 3725.78 |
| RW - 1 | 09/20/10 | 3787.45 | 60.67 | 67.52 | 6.85 | 3725.75 |
| RW - 1 | 09/27/10 | 3787.45 | 60.67 | 67.57 | 6.90 | 3725.75 |
| RW - 1 | 10/04/10 | 3787.45 | 60.71 | 67.53 | 6.82 | 3725.72 |
| RW - 1 | 10/10/10 | 3787.45 | 60.65 | 67.49 | 6.84 | 3725.77 |
| RW - 1 | 10/18/10 | 3787.45 | 60.75 | 67.61 | 6.86 | 3725.67 |
| RW - 1 | 10/26/10 | 3787.45 | 60.69 | 67.66 | 6.97 | 3725.71 |
| RW - 1 | 11/01/10 | 3787.45 | 60.64 | 67.56 | 6.92 | 3725.77 |
| RW - 1 | 11/08/10 | 3787.45 | 60.31 | 67.16 | 6.85 | 3726.11 |
| RW - 1 | 11/15/10 | 3787.45 | 60.63 | 67.75 | 7.12 | 3725.75 |
| RW - 1 | *11/24/10* | 3787.45 | 60.63 | 62.74 | 2.11 | 3726.50 |
| RW - 1 | 11/30/10 | 3787.45 | 60.71 | 67.56 | 6.85 | 3725.71 |
| RW - 1 | 12/06/10 | 3787.45 | 60.55 | 67.59 | 7.04 | 3725.84 |
| RW - 1 | 12/14/10 | 3787.45 | 60.63 | 67.48 | 6.85 | 3725.79 |
| RW - 1 | 12/20/10 | 3787.45 | 60.49 | 67.83 | 7.34 | 3725.86 |
| RW - 1 | 12/28/10 | 3787.45 | 59.83 | 67.55 | 7.72 | 3726.46 |
| | | | | | | |
| RW - 2 | *02/12/10* | 3787.83 | 61.35 | 67.41 | 6.06 | 3725.57 |
| RW - 2 | *05/27/10* | 3787.83 | sheen | 64.61 | 0.00 | 3723.22 |
| RW - 2 | *08/23/10* | 3787.83 | 62.03 | 64.61 | 2.58 | 3725.41 |
| RW - 2 | *11/24/10* | 3787.83 | 62.07 | 64.59 | 2.52 | 3725.38 |
| | | | | | | |
| RW - 3 | *02/12/10* | 3787.81 | 60.93 | 68.54 | 7.61 | 3725.74 |
| RW - 3 | *05/27/10* | 3787.81 | 62.40 | 69.88 | 7.48 | 3724.29 |
| RW - 3 | *08/20/10* | 3787.81 | 62.46 | 69.89 | 7.43 | 3724.24 |
| RW - 3 | *11/24/10* | 3787.81 | 62.44 | 69.83 | 7.39 | 3724.26 |
| | | | | | | |
| RW - 4 | *02/12/10* | 3787.74 | 62.34 | 62.53 | 0.19 | 3725.37 |
| RW - 4 | *05/27/10* | 3787.74 | sheen | 63.93 | 0.00 | 3723.81 |
| RW - 4 | *08/20/10* | 3787.74 | 60.59 | 63.93 | 3.34 | 3726.65 |
| RW - 4 | *11/24/10* | 3787.74 | 60.63 | 63.84 | 3.21 | 3726.63 |
| | | | | | | |

**TABLE 1**

**GROUNDWATER ELEVATION DATA - 2010**

**PLAINS MARKETING, L.P.**
**DARR ANGELL #2**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE NUMBER AP-007**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| RW - 5 | 01/04/10 | 3787.38 | 60.64 | 67.25 | 6.61 | 3725.75 |
| RW - 5 | 01/15/10 | 3787.38 | 60.70 | 67.17 | 6.47 | 3725.71 |
| RW - 5 | 01/18/10 | 3787.38 | 60.65 | 67.28 | 6.63 | 3725.74 |
| RW - 5 | 01/25/10 | 3787.38 | 60.81 | 66.58 | 5.77 | 3725.70 |
| RW - 5 | *02/12/10* | 3787.38 | 60.66 | 67.46 | 6.80 | 3725.70 |
| RW - 5 | 02/17/10 | 3787.38 | 60.66 | 67.46 | 6.80 | 3725.70 |
| RW - 5 | 03/02/10 | 3787.38 | 60.71 | 67.40 | 6.69 | 3725.67 |
| RW - 5 | 03/08/10 | 3787.38 | 60.72 | 67.38 | 6.66 | 3725.66 |
| RW - 5 | 03/17/10 | 3787.38 | 60.71 | 67.50 | 6.79 | 3725.65 |
| RW - 5 | 03/23/10 | 3787.38 | 60.69 | 67.48 | 6.79 | 3725.67 |
| RW - 5 | 03/30/10 | 3787.38 | 60.68 | 67.46 | 6.78 | 3725.68 |
| RW - 5 | 04/06/10 | 3787.38 | 60.71 | 67.62 | 6.91 | 3725.63 |
| RW - 5 | 04/13/10 | 3787.38 | 60.74 | 67.63 | 6.89 | 3725.61 |
| RW - 5 | 04/19/10 | 3787.38 | 60.80 | 67.50 | 6.70 | 3725.58 |
| RW - 5 | 04/26/10 | 3787.38 | 60.79 | 67.47 | 6.68 | 3725.59 |
| RW - 5 | 05/03/10 | 3787.38 | 60.76 | 66.70 | 5.94 | 3725.73 |
| RW - 5 | 05/10/10 | 3787.38 | 60.79 | 66.72 | 5.93 | 3725.70 |
| RW - 5 | 05/17/10 | 3787.38 | 60.77 | 66.63 | 5.86 | 3725.73 |
| RW - 5 | *05/27/10* | 3787.38 | 60.85 | 67.92 | 7.07 | 3725.47 |
| RW - 5 | 06/02/10 | 3787.38 | 60.88 | 67.86 | 6.98 | 3725.45 |
| RW - 5 | 06/07/10 | 3787.38 | 60.90 | 67.83 | 6.93 | 3725.44 |
| RW - 5 | 06/14/10 | 3787.38 | 60.76 | 67.90 | 7.14 | 3725.55 |
| RW - 5 | 06/28/10 | 3787.38 | 60.86 | 67.86 | 7.00 | 3725.47 |
| RW - 5 | 07/06/10 | 3787.38 | 60.80 | 67.95 | 7.15 | 3725.51 |
| RW - 5 | 07/20/10 | 3787.38 | 60.81 | 68.00 | 7.19 | 3725.49 |
| RW - 5 | 07/26/10 | 3787.38 | 61.01 | 67.02 | 6.01 | 3725.47 |
| RW - 5 | 08/03/10 | 3787.38 | 61.00 | 67.20 | 6.20 | 3725.45 |
| RW - 5 | 08/09/10 | 3787.38 | 61.05 | 66.83 | 5.78 | 3725.46 |
| RW - 5 | 08/16/10 | 3787.38 | 61.07 | 66.89 | 5.82 | 3725.44 |
| RW - 5 | *08/20/10* | 3787.38 | 61.10 | 66.89 | 5.79 | 3725.41 |
| RW - 5 | 08/30/10 | 3787.38 | 60.95 | 67.73 | 6.78 | 3725.41 |
| RW - 5 | 09/07/10 | 3787.38 | 61.00 | 67.38 | 6.38 | 3725.42 |
| RW - 5 | 09/13/10 | 3787.38 | 61.17 | 67.68 | 6.51 | 3725.23 |
| RW - 5 | 09/20/10 | 3787.38 | 61.15 | 66.85 | 5.70 | 3725.38 |
| RW - 5 | 09/27/10 | 3787.38 | 61.20 | 66.74 | 5.54 | 3725.35 |
| RW - 5 | 10/04/10 | 3787.38 | 61.19 | 67.04 | 5.85 | 3725.31 |
| RW - 5 | 10/10/10 | 3787.38 | 61.16 | 66.93 | 5.77 | 3725.35 |
| RW - 5 | 10/18/10 | 3787.38 | 61.21 | 67.03 | 5.82 | 3725.30 |
| RW - 5 | 10/26/10 | 3787.38 | 60.96 | 68.01 | 7.05 | 3725.36 |
| RW - 5 | 11/01/10 | 3787.38 | 61.17 | 67.08 | 5.91 | 3725.32 |
| RW - 5 | 11/09/10 | 3787.38 | 61.22 | 67.73 | 6.51 | 3725.18 |
| RW - 5 | 11/15/10 | 3787.38 | 60.67 | 67.84 | 7.17 | 3725.63 |
| RW - 5 | *11/24/10* | 3787.38 | 61.13 | 66.69 | 5.56 | 3725.42 |
| RW - 5 | 11/30/10 | 3787.38 | 61.23 | 67.54 | 6.31 | 3725.20 |
| RW - 5 | 12/06/10 | 3787.38 | 60.93 | 67.84 | 6.91 | 3725.41 |
| RW - 5 | 12/14/10 | 3787.38 | 60.68 | 68.05 | 7.37 | 3725.59 |
| RW - 5 | 12/20/10 | 3787.38 | 60.57 | 68.06 | 7.49 | 3725.69 |
| RW - 5 | 12/28/10 | 3787.38 | 60.91 | 67.82 | 6.91 | 3725.43 |
| | | | | | | |
| RW - 6 | 01/04/10 | 3787.22 | 60.16 | 67.85 | 7.69 | 3725.91 |
| RW - 6 | 01/15/10 | 3787.22 | 60.20 | 67.87 | 7.67 | 3725.87 |
| RW - 6 | 01/18/10 | 3787.22 | 60.15 | 67.80 | 7.65 | 3725.92 |
| RW - 6 | 01/25/10 | 3787.22 | 60.18 | 67.81 | 7.63 | 3725.90 |
| RW - 6 | *02/12/10* | 3787.22 | 60.20 | 67.91 | 7.71 | 3725.86 |
| RW - 6 | 02/17/10 | 3787.22 | 60.20 | 67.91 | 7.71 | 3725.86 |
| RW - 6 | 03/02/10 | 3787.22 | 60.27 | 67.85 | 7.58 | 3725.81 |
| RW - 6 | 03/08/10 | 3787.22 | 60.74 | 67.82 | 7.08 | 3725.42 |

**TABLE 1**

**GROUNDWATER ELEVATION DATA - 2010**

**PLAINS MARKETING, L.P.**
**DARR ANGELL #2**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE NUMBER AP-007**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| RW - 6 | 03/17/10 | 3787.22 | 60.27 | 67.42 | 7.15 | 3725.88 |
| RW - 6 | 03/23/10 | 3787.22 | 60.25 | 67.39 | 7.14 | 3725.90 |
| RW - 6 | 03/30/10 | 3787.22 | 60.24 | 67.36 | 7.12 | 3725.91 |
| RW - 6 | 04/06/10 | 3787.22 | 60.30 | 68.05 | 7.75 | 3725.76 |
| RW - 6 | 04/13/10 | 3787.22 | 60.32 | 68.02 | 7.70 | 3725.75 |
| RW - 6 | 04/19/10 | 3787.22 | 60.30 | 68.05 | 7.75 | 3725.76 |
| RW - 6 | 04/26/10 | 3787.22 | 60.32 | 68.03 | 7.71 | 3725.74 |
| RW - 6 | 05/03/10 | 3787.22 | 60.30 | 66.89 | 6.59 | 3725.93 |
| RW - 6 | 05/10/10 | 3787.22 | 60.32 | 66.84 | 6.52 | 3725.92 |
| RW - 6 | 05/17/10 | 3787.22 | 60.29 | 66.81 | 6.52 | 3725.95 |
| RW - 6 | *05/27/10* | 3787.22 | 60.48 | 68.29 | 7.81 | 3725.57 |
| RW - 6 | 06/02/10 | 3787.22 | 60.50 | 68.24 | 7.74 | 3725.56 |
| RW - 6 | 06/07/10 | 3787.22 | 60.49 | 68.26 | 7.77 | 3725.56 |
| RW - 6 | 06/14/10 | 3787.22 | 60.38 | 68.22 | 7.84 | 3725.66 |
| RW - 6 | 06/28/10 | 3787.22 | 60.46 | 68.31 | 7.85 | 3725.58 |
| RW - 6 | 07/06/10 | 3787.22 | 60.39 | 68.20 | 7.81 | 3725.66 |
| RW - 6 | 07/20/10 | 3787.22 | 60.44 | 68.27 | 7.83 | 3725.61 |
| RW - 6 | 07/26/10 | 3787.22 | 60.47 | 68.29 | 7.82 | 3725.58 |
| RW - 6 | 08/03/10 | 3787.22 | 60.45 | 68.28 | 7.83 | 3725.60 |
| RW - 6 | 08/09/10 | 3787.22 | 60.46 | 68.17 | 7.71 | 3725.60 |
| RW - 6 | 08/16/10 | 3787.22 | 60.43 | 68.23 | 7.80 | 3725.62 |
| RW - 6 | *08/20/10* | 3787.22 | 60.42 | 68.20 | 7.78 | 3725.63 |
| RW - 6 | 08/30/10 | 3787.22 | 60.49 | 68.33 | 7.84 | 3725.55 |
| RW - 6 | 09/07/10 | 3787.22 | 60.44 | 68.28 | 7.84 | 3725.60 |
| RW - 6 | 09/13/10 | 3787.22 | 60.50 | 68.32 | 7.82 | 3725.55 |
| RW - 6 | 09/20/10 | 3787.22 | 60.31 | 68.24 | 7.93 | 3725.72 |
| RW - 6 | 09/27/10 | 3787.22 | 60.56 | 68.32 | 7.76 | 3725.50 |
| RW - 6 | 10/04/10 | 3787.22 | 60.42 | 68.33 | 7.91 | 3725.61 |
| RW - 6 | 10/10/10 | 3787.22 | 60.49 | 68.35 | 7.86 | 3725.55 |
| RW - 6 | 10/18/10 | 3787.22 | 60.55 | 68.43 | 7.88 | 3725.49 |
| RW - 6 | 10/26/10 | 3787.22 | 60.56 | 68.44 | 7.88 | 3725.48 |
| RW - 6 | 11/01/10 | 3787.22 | 60.45 | 68.05 | 7.60 | 3725.63 |
| RW - 6 | 11/09/10 | 3787.22 | 60.65 | 68.37 | 7.72 | 3725.41 |
| RW - 6 | 11/15/10 | 3787.22 | 60.52 | 68.34 | 7.82 | 3725.53 |
| RW - 6 | *11/24/10* | 3787.22 | 60.45 | 68.01 | 7.56 | 3725.64 |
| RW - 6 | 11/30/10 | 3787.22 | 60.62 | 68.25 | 7.63 | 3725.46 |
| RW - 6 | 12/06/10 | 3787.22 | 60.72 | 68.13 | 7.41 | 3725.39 |
| RW - 6 | 12/14/10 | 3787.22 | 60.51 | 68.03 | 7.52 | 3725.58 |
| RW - 6 | 12/20/10 | 3787.22 | 61.04 | 67.34 | 6.30 | 3725.24 |
| RW - 6 | 12/28/10 | 3787.22 | 60.14 | 68.26 | 8.12 | 3725.86 |
| | | | | | | |
| RW - 7 | 01/04/10 | 3787.40 | 60.11 | ND | 0.00 | |
| RW - 7 | 01/15/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 01/18/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 01/25/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | *02/12/10* | 3787.40 | 60.34 | ND | 0.00 | |
| RW - 7 | 02/17/10 | 3787.40 | 60.34 | ND | 0.00 | |
| RW - 7 | 03/02/10 | 3787.40 | 60.29 | ND | 0.00 | |
| RW - 7 | 03/08/10 | 3787.40 | 60.3 | ND | 0.00 | |
| RW - 7 | 03/17/10 | 3787.40 | 60.31 | ND | 0.00 | |
| RW - 7 | 03/23/10 | 3787.40 | 60.3 | ND | 0.00 | |
| RW - 7 | 03/30/10 | 3787.40 | 60.32 | ND | 0.00 | |
| RW - 7 | 04/06/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 04/13/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 04/19/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 04/26/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 05/03/10 | 3787.40 | ND | ND | 0.00 | |

**TABLE 1**

**GROUNDWATER ELEVATION DATA - 2010**

**PLAINS MARKETING, L.P.**
**DARR ANGELL #2**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE NUMBER AP-007**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| RW - 7 | 05/10/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | *05/27/10* | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 06/02/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 06/07/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 06/14/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 06/28/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 07/06/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 07/20/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 07/26/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 08/03/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 08/09/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 08/16/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | *08/20/10* | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 08/30/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 09/07/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 09/13/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 09/20/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 09/27/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 10/04/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 10/10/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 10/18/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 10/26/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 11/01/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 11/09/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 11/15/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | *11/24/10* | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 11/30/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 12/06/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 12/14/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 12/20/10 | 3787.40 | ND | ND | 0.00 | |
| RW - 7 | 12/28/10 | 3787.40 | ND | ND | 0.00 | |

** Complete Historical data Tables are presented on the attached CD.*

*ND - No Depth to groundwater during gauging.*

TABLE 2

CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

*Results are reported in mg/L.*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8021B, 5030,8260b BTEX | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW - 1 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 1 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 1 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 1 | 11/24/10 | <0.001 | <0.001 | <0.001 | <.0.001 | |
| | | | | | | |
| MW - 2 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| MW - 2 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| MW - 2 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| MW - 2 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| MW - 3 | 02/12/10 | **0.0590** | <0.001 | 0.0063 | 0.0135 | |
| MW - 3 | 05/27/10 | **0.0152** | <0.001 | 0.0053 | <0.001 | |
| MW - 3 | 08/20/10 | **0.0186** | <0.001 | 0.0076 | 0.0150 | |
| MW - 3 | 11/24/10 | **0.0145** | 0.0049 | 0.0090 | <0.001 | |
| | | | | | | |
| MW - 4 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 4 | 05/27/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW - 4 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 4 | 11/24/10 | Not Sampled Due to Insufficient Water Volume in well | | | | |
| | | | | | | |
| MW - 6 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 6 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 6 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 6 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |
| MW - 7 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 7 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 7 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 7 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |
| MW - 8 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 8 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 8 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 8 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |
| MW - 9 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 9 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 9 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 9 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |
| MW - 10 | 02/12/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 10 | 05/27/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 10 | 08/20/10 | Not Sampled on Current Sample Schedule | | | | |
| MW - 10 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |
| MW - 11 | 02/12/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW - 11 | 05/27/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW - 11 | 08/20/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW - 11 | 11/24/10 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | | | | | | |

TABLE 2

CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

*Results are reported in mg/L.*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8021B, 5030,8260b BTEX | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| RW - 1 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 1 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 1 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 1 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 2 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 2 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 2 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 2 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 3 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 3 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 3 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 3 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 4 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 4 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 4 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 4 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 5 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 5 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 5 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 5 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 6 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 6 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 6 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 6 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |
| | | | | | | |
| RW - 7 | 02/12/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 7 | 05/27/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 7 | 08/20/10 | Not Sampled Due to PSH in Well | | | | |
| RW - 7 | 11/24/10 | Not Sampled Due to PSH in Well | | | | |

** Complete Historical data Tables are presented on the attached CD.*

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

*All water concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | EPA SW846-8270C, 3510 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acenaphthene | Acenaphthylene | Anthracene | Benzo[a]anthracene | Benzo[a]pyrene | Benzo[b]fluoranthene | Benzo[g,h,i]perylene | Benzo[k]fluoranthene | Chrysene | Dibenz[a,h]anthracene | Fluoranthene | Fluorene | Indeno[1,2,3-cd]pyrene | Phenanthrene | Pyrene | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | Dibenzofuran |
| **Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.** | | — | — | — | **0.0001 mg/L** | **0.0007 mg/L** | **0.0002 mg/L** | — | **0.0002 mg/L** | **0.0002 mg/L** | **0.0003 mg/L** | — | — | **0.0004 mg/L** | — | — | **0.03 mg/L** | | | — |
| MW-1 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-2 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | 0.178 | <0.000183 | 0.230 | <0.000183 | **0.704** | **1.68** | **2.31** | 0.130 |
| | 11/30/09 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | <0.0229 | 0.755 | <0.0229 | 1.04 | <0.0229 | **2.89** | **7.25** | **9.78** | 0.524 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| MW-3 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | 0.00126 | <0.000183 | 0.00103 | <0.000183 | **0.0426** | 0.0260 | <0.000183 | 0.0014 |
| | 11/30/09 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | 0.00155 | <0.000184 | 0.00134 | <0.000184 | **0.0238** | **0.0306** | <0.000184 | 0.00145 |
| | 11/24/10 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | 0.00132 | <0.000184 | 0.00112 | <0.000184 | <0.000184 | 0.0234 | <0.000184 | 0.00133 |
| MW-4 | 12/01/08 | Insufficient Water Volume to Sample | | | | | | | | | | | | | | | | | | |
| | 11/30/09 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | 0.00118 | <0.000184 | <0.000184 | <0.000184 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-6 | 12/01/08 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 | <0.000185 |
| | 11/30/09 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-7 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-8 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-9 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |

**TABLE 3**

**POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER**

**PLAINS MARKETING, L.P.**
**DARR ANGELL #2**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE NUMBER AP-007**

*All water concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | EPA SW846-8270C, 3510 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acenaphthene | Acenaphthylene | Anthracene | Benzo[a]anthracene | Benzo[a]pyrene | Benzo[b]fluoranthene | Benzo[g,h,i]perylene | Benzo[k]fluoranthene | Chrysene | Dibenz[a,h]anthracene | Fluoranthene | Fluorene | Indeno[1,2,3-cd]pyrene | Phenanthrene | Pyrene | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | Dibenzofuran |
| **Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.** | | — | — | — | **0.0001 mg/L** | **0.0007 mg/L** | **0.0002 mg/L** | — | **0.0002 mg/L** | **0.0002 mg/L** | **0.0003 mg/L** | — | — | **0.0004 mg/L** | — | — | **0.03 mg/L** | | | — |
| MW-10 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| MW-11 | 12/01/08 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 | <0.000183 |
| | 11/30/09 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 | <0.000184 |
| | 11/24/10 | Not Sampled as part of Quarterly Monitoring Event. | | | | | | | | | | | | | | | | | | |
| RW-1 | 12/01/08 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | <0.00459 | 0.274 | <0.00459 | 0.346 | <0.00459 | **1.01** | **2.42** | **3.20** | 0.208 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0117 | <0.000922 | 0.0134 | <0.000922 | **0.102** | **0.118** | **0.154** | 0.00842 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| RW-2 | 12/01/08 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | <0.00184 | 0.0507 | <0.00184 | 0.0569 | <0.00184 | **0.224** | **0.410** | **0.526** | 0.0350 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0254 | <0.000922 | 0.0322 | <0.000922 | **0.157** | **0.266** | **0.347** | 0.0178 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| RW-3 | 12/02/08 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0447 | <0.000922 | 0.0523 | <0.000922 | **0.203** | **0.362** | **0.480** | 0.0309 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0114 | <0.000922 | 0.0132 | <0.000922 | **0.113** | **0.128** | **0.164** | 0.0101 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| RW-4 | 12/02/08 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | 0.173 | <0.00183 | 0.216 | <0.00183 | **0.637** | **1.58** | **2.14** | 0.122 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0263 | <0.000922 | 0.0337 | <0.000922 | **0.169** | **0.276** | **0.367** | 0.0184 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| RW-5 | 12/01/08 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0938 | <0.000922 | 0.117 | <0.000922 | **0.283** | **0.835** | **0.910** | 0.0654 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0201 | <0.000922 | 0.0284 | <0.000922 | **0.147** | **0.217** | **0.295** | 0.0155 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

*All water concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | EPA SW846-8270C, 3510 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acenaphthene | Acenaphthylene | Anthracene | Benzo[a]anthracene | Benzo[a]pyrene | Benzo[b]fluoranthene | Benzo[g,h,i]perylene | Benzo[k]fluoranthene | Chrysene | Dibenz[a,h]anthracene | Fluoranthene | Fluorene | Indeno[1,2,3-cd]pyrene | Phenanthrene | Pyrene | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | Dibenzofuran |
| **Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.** | | - | - | - | **0.0001 mg/L** | **0.0007 mg/L** | **0.0002 mg/L** | - | **0.0002 mg/L** | **0.0002 mg/L** | **0.0003 mg/L** | - | - | **0.0004 mg/L** | - | - | **0.03 mg/L** | | | - |
| RW-6 | 12/02/08 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | <0.00183 | 0.188 | <0.00183 | 0.244 | <0.00183 | **0.693** | **1.77** | **2.44** | 0.138 |
| | 11/30/09 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | <0.000922 | 0.0352 | <0.000922 | 0.0492 | <0.000922 | **0.20** | **0.36** | **0.481** | 0.0253 |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |
| RW-7 | 12/02/08 | Insufficient Water Volume to Sample | | | | | | | | | | | | | | | | | | |
| | 11/30/09 | Insufficient Water Volume to Sample | | | | | | | | | | | | | | | | | | |
| | 11/24/10 | Not Sampled Due to Presence of PSH. | | | | | | | | | | | | | | | | | | |

# Appendices

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

2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Darr Angell #2

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: EOTT Energy Pipeline | Contact: Lennah FROST |
| Address: POBox 4660 Midland Tx 79702 | Telephone No: 915/6843467 |
| Facility Name: Delivery Gathering | Facility Type: Pipeline |
| Surface Owner: Darr Angell | Mineral Owner: | Lease No: |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| | 14 | 15-S | 37-E | | | | | Lea |

## NATURE OF RELEASE

| | |
|---|---|
| Type of Release: Crude oil | Volume of Release: 60 bbl | Volume Recovered: 0 |
| Source of Release: Pipeline Leak | Date and Hour of Occurrence: unknown | Date and Hour of Discovery: 7/29/99 4pm |
| Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required | If YES, To Whom? Linda - Holds (C.I) | |
| By Whom? ~~Lennah FROST~~ Jim Henry | Date and Hour 8/3/99 2:30 pm | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)
External Corrosion - pipe will be replaced

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)
will excavate once the pipe has been replaced - Soil able treat on site

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 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 does not relieve the operator of liability should these 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.

Signature: Lennah Frost
Printed Name: Lennah FROST
Title: Sr ENV. Engineer
Date: 8-3-99 Phone: 915/6843467

OIL CONSERVATION DIVISION

Approved by District Supervisor:
Approval Date: | Expiration Date:
Conditions of Approval: | Attached ☐