AP - 12

# ANNUAL MONITORING REPORT

YEAR(S):

SA - 2007

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2008 APR 1 PM 2 08

# 2007
# ANNUAL MONITORING REPORT

## TNM 98-05A
**NE 1/4 NW 1/4 OF SECTION 26, TOWNSHIP 21 SOUTH, RANGE 37 EAST**
**LEA COUNTY, NEW MEXICO**
**PLAINS EMS NUMBER: TNM-98-05A**
**NMOCD Reference AP-12**

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 Street
Midland, Texas 79703

**March 2008**

Ronald K. Rounsaville
Project Manager

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

RECEIVED
2008 APR 1 PM 2 07

March 28, 2008

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,

Camille Reynolds

Camille Reynolds
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

## TABLE OF CONTENTS

## INTRODUCTION

NOVA Safety and Environmental (NOVA), on behalf of Plains Pipeline, L.P. (Plains), has prepared this 2007 Annual Groundwater 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. This report is intended to be viewed as a complete document with figures, attachments, tables, and text. The report presents the results of four quarterly groundwater monitoring/sampling events conducted at the TNM 98-05A crude oil release site (the site), located in Lea County, New Mexico. The site, formerly the responsibility of Enron Oil Trading and Transportation (EOTT) is now the responsibility of Plains. For reference, the Site Location Map is provided as Figure 1.

Groundwater gauging and sampling was conducted during each quarter of 2007 to assess the levels and extent of Phase Separated Hydrocarbons (PSH) and dissolved phase constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells were not sampled if a measurable thickness of PSH were detected during gauging activities.

## SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located approximately two miles northeast of the city of Eunice, New Mexico. The legal description of the site is NE ¼, NW ¼, Section 26, Township 21 South, Range 37 East (Figure 1). On February 5, 1998, an estimated 38 barrels of crude oil were released from a six inch crude oil pipeline. Approximately four barrels of crude oil were recovered during the initial response activities. The release was attributed to internal corrosion of the pipeline. The Release Notification and Corrective Action Form (C-141) is provided as Appendix A. Approximately 3,300 cubic yards of impacted soil was excavated and applied to an on-site treatment cell. In December 2004, a Site Restoration Work Plan and Proposed Soil Closure Strategy Report was submitted to the NMOCD. The report was approved by the NMOCD in a letter dated June 2, 2005. In October 2005, additional excavation along the east sidewall was completed, the excavation was backfilled with remediated soil and the site was graded to match the surrounding topography. In December 2005, a Soil Closure Request was submitted to the NMOCD and this request was approved by the NMOCD in a letter dated January 31, 2006. Plains proposes no further action with regard to soil remediation at the TNM-98-05A site.

During the October 2005 excavation backfilling activities, monitor well MW-4 was damaged and could not be repaired. On January 9, 2006, Plains representatives requested NMOCD approval to plug and abandon monitor well MW-4. On January 19, 2006, NMOCD approved the request to plug and abandon the monitor well. On March 6, 2006, monitor well MW-4 was plugged and abandoned utilizing approved New Mexico Office of the State Engineer plugging and abandonment procedures.

Currently, there are ten monitor wells (MW-1 through MW-3 and MW-5 through MW-11) onsite. For reference, the analytical results are shown in Table 2, 2007 Concentrations of BTEX in Groundwater.

## RECENT FIELD ACTIVITIES

During the reporting period, no measurable thickness of PSH was detected in any of the site monitor wells. A sheen was reported periodically in monitor wells MW-1, MW-2, MW-9 and MW-10 throughout the reporting period. Table 1 displays the groundwater gauging data for the reporting period. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

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 correspondence date January 19, 2006. The table below illustrates the current groundwater sampling schedule approved by the NMOCD.

| Sample Location | Sampling Schedule |
|---|---|
| MW-1 | Quarterly |
| MW-2 | Quarterly |
| MW-3 | Quarterly |
| MW-4 | Plugged and Abandoned March 6, 2006 |
| MW-5 | Annual |
| MW-6 | Semi-annual |
| MW-7 | Semi-annual |
| MW-8 | Annual |
| MW-9 | Quarterly |
| MW-10 | Quarterly |
| MW-11 | Quarterly |

Quarterly sampling events for the calendar year 2007 were performed on February 20, May 15, August 9, and November 13, 2007. Each quarterly sampling event consisted of gauging all wells and purging and sampling monitor wells as per the approved sampling schedule. 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 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.

The most recent inferred groundwater gradient, Figure 2D, indicates a general gradient of approximately 0.004 feet/foot to the southeast as measured between monitor wells MW-5 and MW-6. This data is consistent with data presented on Figures 2A through 2C from earlier in the year. Groundwater elevation data for the calendar year 2007 is provided in Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed disk.

## LABORATORY RESULTS

Groundwater samples collected during the 2007 groundwater 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. A listing of BTEX constituent concentrations for 2007 is summarized in Table 2. Copies of the laboratory reports for 2007 are provided on the enclosed disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A-3D.

**Monitor well MW-1** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 3.00 mg/L during the 1st quarter to 5.55 mg/L during the 4th quarter of 2007. Benzene concentrations were above the NMOCD regulatory standard of 0.01 mg/L during all four quarters of the reporting period. Toluene concentrations ranged from <0.100 mg/L during the 2nd and 3rd quarters to 0.149 mg/L during the 4th quarter of 2007. Toluene concentrations were below the NMOCD regulatory standard of 0.75 mg/L during all four quarters of the reporting period. Ethylbenzene concentrations ranged from 0.993 mg/L during the 1st quarter to 2.20 mg/L during the 4th quarter of 2007. Ethylbenzene concentrations were above the NMOCD regulatory standard of 0.75 mg/L during all four quarters of the reporting period. Xylene concentrations ranged from 0.471 mg/L during the 3rd quarter to 0.681 mg/L during the 2nd quarter of 2007. Xylene concentrations were above the NMOCD regulatory standard of 0.62 mg/L during the 3rd quarter and below the standards during the 1st, 2nd and 4th quarters of the reporting period.

**Monitor well MW-2** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 4.64 mg/L during the 2nd quarter to 8.74 mg/L during the 4th quarter of 2007. Benzene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period. Toluene concentrations ranged from 0.271 mg/L during the 3rd quarter to 2.10 mg/L during the 1st quarter of 2007. Toluene concentrations were above the NMOCD regulatory standard of 0.75 mg/L during the 1st quarter and below the standards during the 2nd, 3rd and 4th quarters of the reporting period. Ethylbenzene concentrations ranged from 0.626 mg/L during the 4th quarter to 1.75 mg/L during the 2nd quarter of 2007. Ethylbenzene concentrations were above the NMOCD regulatory standard of 0.75 mg/L during the 1st, 2nd and 3rd quarters and below the standards during the 4th quarter of the reporting period. Xylene concentrations ranged from 0.98 mg/L during the 3rd quarter to 2.83 mg/L during the 4th quarter of 2007. Xylene concentrations were above the NMOCD regulatory standard of 0.62 mg/L during all four quarters of the reporting period.

**Monitor well MW-3** is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the method detection limit (MDL) and NMOCD regulatory standards for each constituent during each of the four quarterly sampling events. Monitor well MW-3 has exhibited 21 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-5** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each

constituent during the 4th quarter sampling event. Monitor well MW-4 has exhibited 22 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-6** is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each constituent during the 2nd and 4th quarter sampling event. Monitor well MW-6 has exhibited 26 consecutive monitoring events below NMOCD regulatory limits.

**Monitor well MW-7** is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each constituent during the 2nd and 4th quarter sampling event. Monitor well MW-7 has exhibited 26 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 constituent during the 4th 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 benzene concentrations ranged from <0.001 mg/L during the 2nd quarter to 0.025 mg/L during the 4th quarter of 2007. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter and below the standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0092 mg/L during the 4th quarter of 2007. Toluene concentrations were below the NMOCD regulatory standard during the all four quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0194 mg/L during the 2nd quarter to 0.0845 mg/L during the 4th quarter of 2007. Ethylbenzene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from 0.0164 mg/L during the 2nd quarter to 0.102 mg/L during the 4th quarter of 2007. Xylene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period.

**Monitor well MW-10** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 5.40 mg/L during the 1st quarter to 13.5 mg/L during the 4th quarter of 2007. Benzene concentrations were above the NMOCD regulatory standard of 0.01 mg/L during all four quarters of the reporting period. Toluene concentrations were below the MDL of 0.100 mg/L during the reporting period of 2007. Toluene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period. Ethylbenzene concentrations ranged from 1.29 mg/L during the 1st quarter to 3.23 mg/L during the 2nd quarter of 2007. Ethylbenzene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from 0.894 mg/L during the 1st quarter to 2.18 mg/L during the 2nd quarter of 2007. Xylene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period.

**Monitor well MW-11** is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each

constituent during each of the four quarterly sampling events. Monitor well MW-11 has exhibited 13 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 four groundwater monitoring and sampling events for the annual monitoring period of calendar year 2007. Currently, there are ten groundwater monitor wells (MW-1 through MW-3 and MW-5 through MW-11) onsite. The most recent inferred groundwater gradient indicates a general gradient of approximately 0.004 feet/foot to the southeast.

During the reporting period, no measurable thickness of PSH was detected in any of the site monitor wells. A sheen was periodically reported in monitor wells MW-1, MW-2, MW-9 and MW-10 throughout most of the reporting period.

Benzene concentrations were above NMOCD regulatory standards for four monitor wells (monitor well MW-9 exhibited one quarter above and three quarters below NMOCD regulatory standards) during the reporting period. Benzene concentrations were below NMOCD regulatory standards for six monitor wells.

Toluene concentrations were above NMOCD regulatory standards for one monitor well during one of the four quarters of the reporting period. Toluene concentrations for nine monitor wells were below regulatory standards for the 2007 reporting period.

Ethylbenzene concentrations were above NMOCD regulatory standards for three monitor wells (monitor well MW-2 exhibited one quarter below and three quarters above NMOCD regulatory standards) during the reporting period. Ethylbenzene concentrations were below NMOCD regulatory standards for seven monitor wells for the 2007 reporting period.

Xylene concentrations were above NMOCD regulatory standards for three monitor wells (monitor well MW-1 exhibited one quarter above and three quarters below NMOCD regulatory standards). Xylene concentrations were below NMOCD regulatory standards for seven monitor wells for the 2007 reporting period.

## ANTICIPATED ACTIONS

Plains proposes to modify the monitor well MW-5 sampling schedule. The monitor well is currently sampled on an annual schedule, Plains proposes to sample monitor well MW-5 on a semi-annual sampling schedule.

Plains will continue to monitor and perform quarterly groundwater sampling activities at the site. An Annual Monitoring Report will be submitted to the NMOCD by April 1, 2009. Plains will

submit a groundwater and site closure request to the NMOCD when groundwater analytical results demonstrate groundwater contaminant concentrations are below the regulatory standards for the required eight consecutive quarters.

## 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
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Santa Fe, NM 87505

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New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
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Hobbs, NM 88240

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cjreynolds@paalp.com

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jpdann@paalp.com

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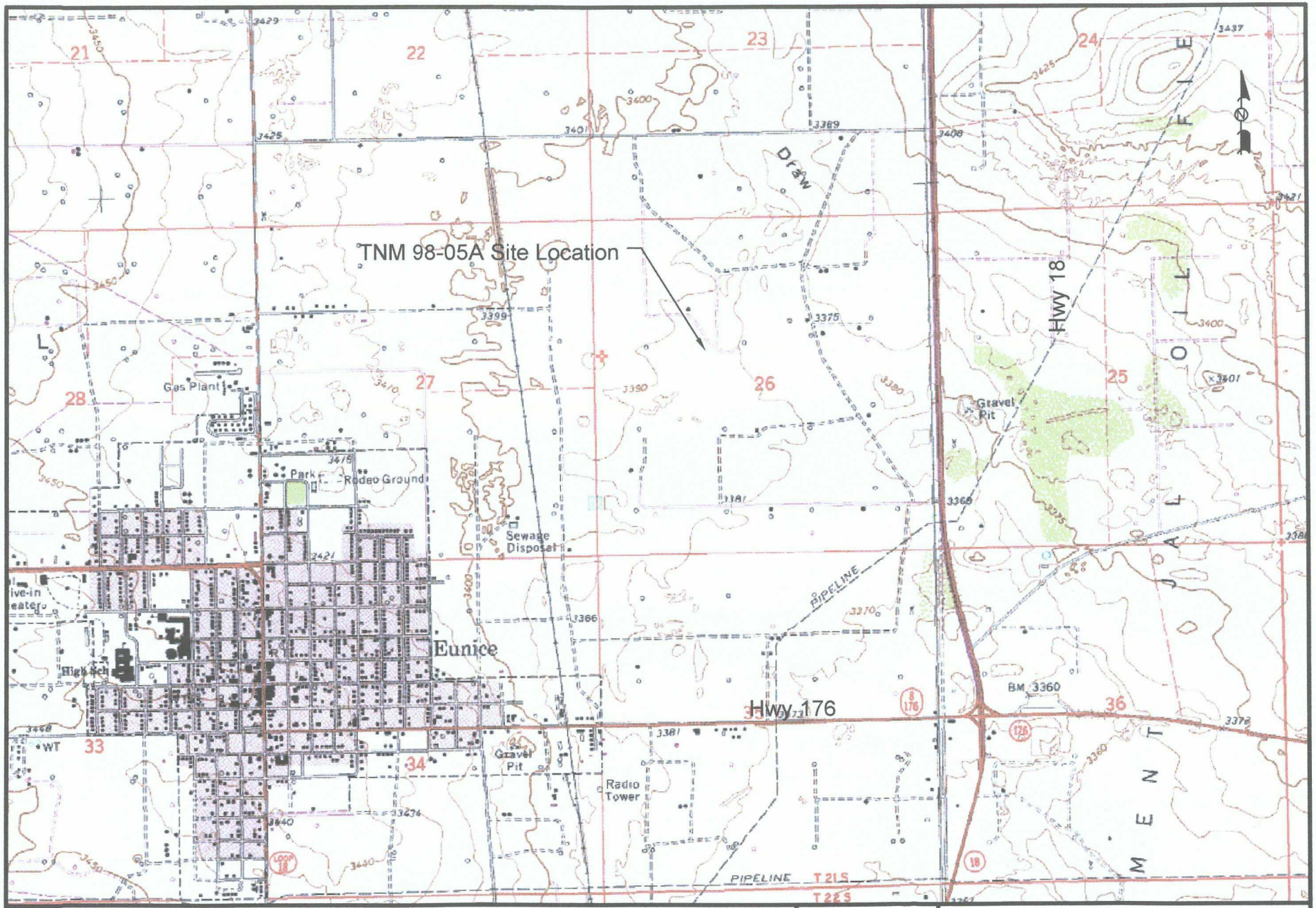
Midland, TX 79703
rrounsaville@novatraining.cc

# Figures




NMOCD Reference # AP-12

Figure 1
Site Location Map

Plains Marketing, L.P.

TNM 98-05A
Lea County, NM

NOVA Safety and Environmental

| | | |
|---|---|---|
| Scale: NTS | Prep By: CDS | Checked By: CE |
| February 24, 2005 | NE1/4 NW1/4 Sec 26 T21S R37E | |
| Lat. N32° 27' 03.9" Long. W103° 08' 29.2" | | |

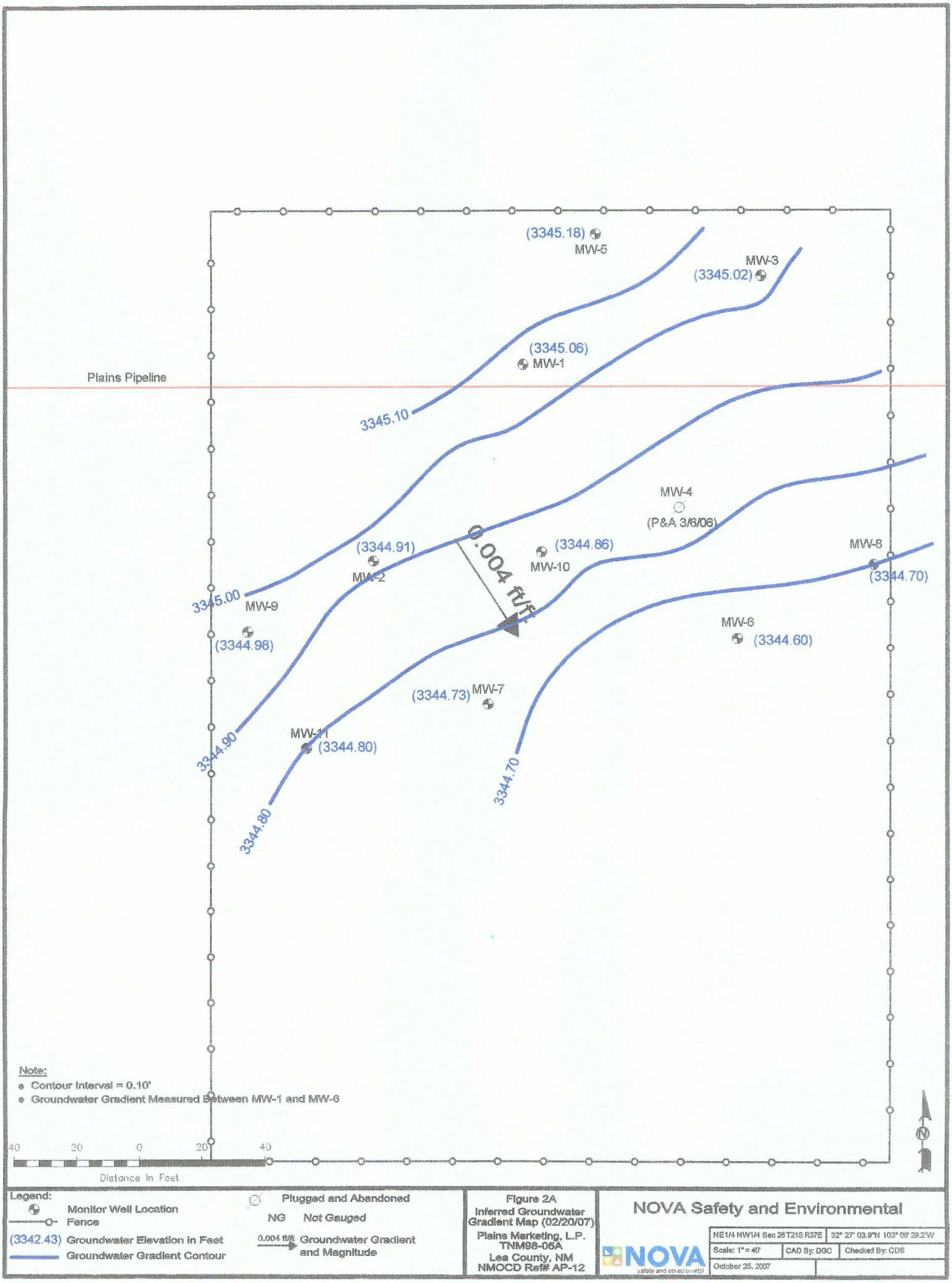



Figure 2A
Inferred Groundwater Gradient Map (02/20/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 26 T21S R37E | 32° 27' 03.9"N 103° 05' 29.2"W | |
| Scale: 1" = 40' | CAD By: DGC | Checked By: CDS |
| October 25, 2007 | | |

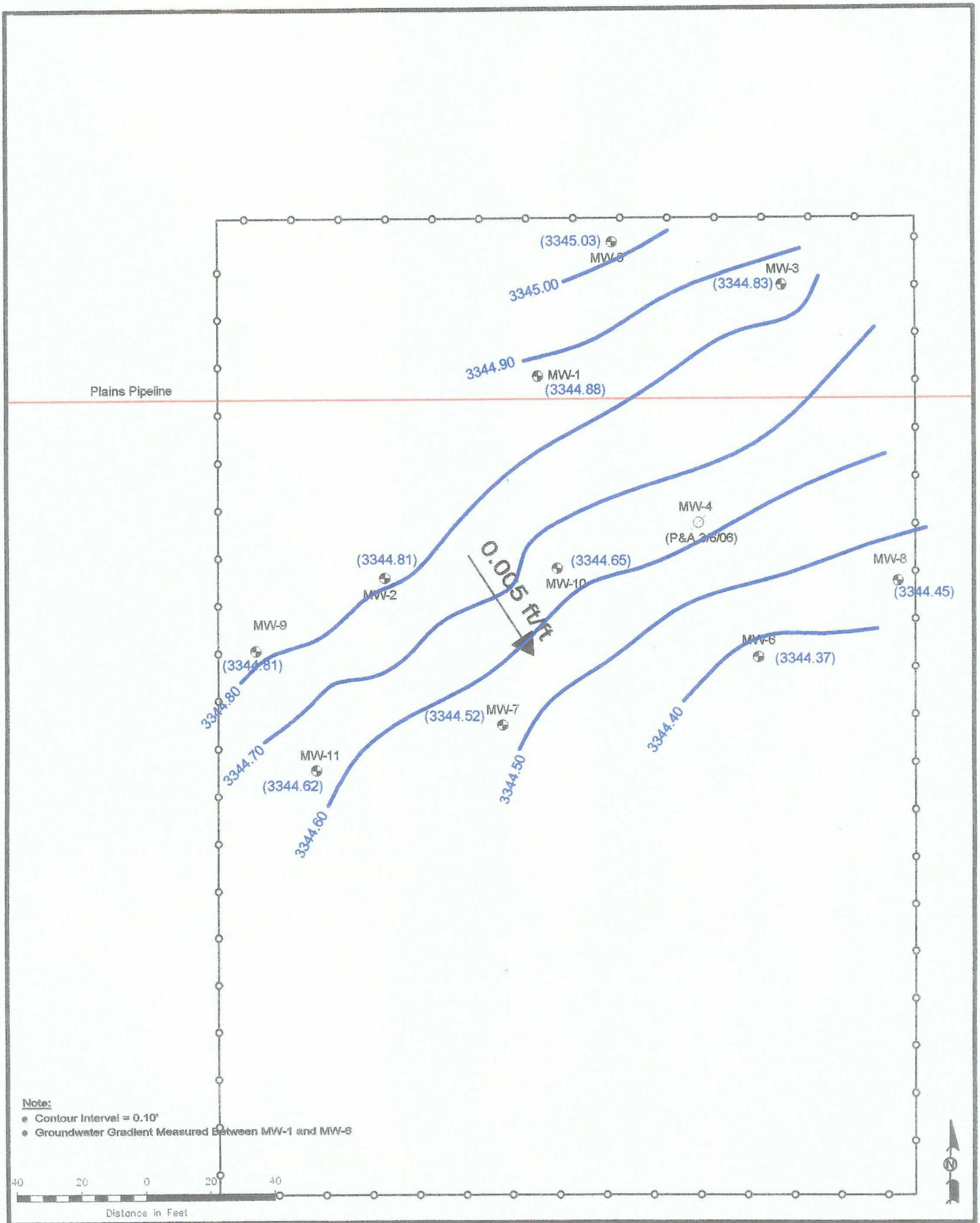
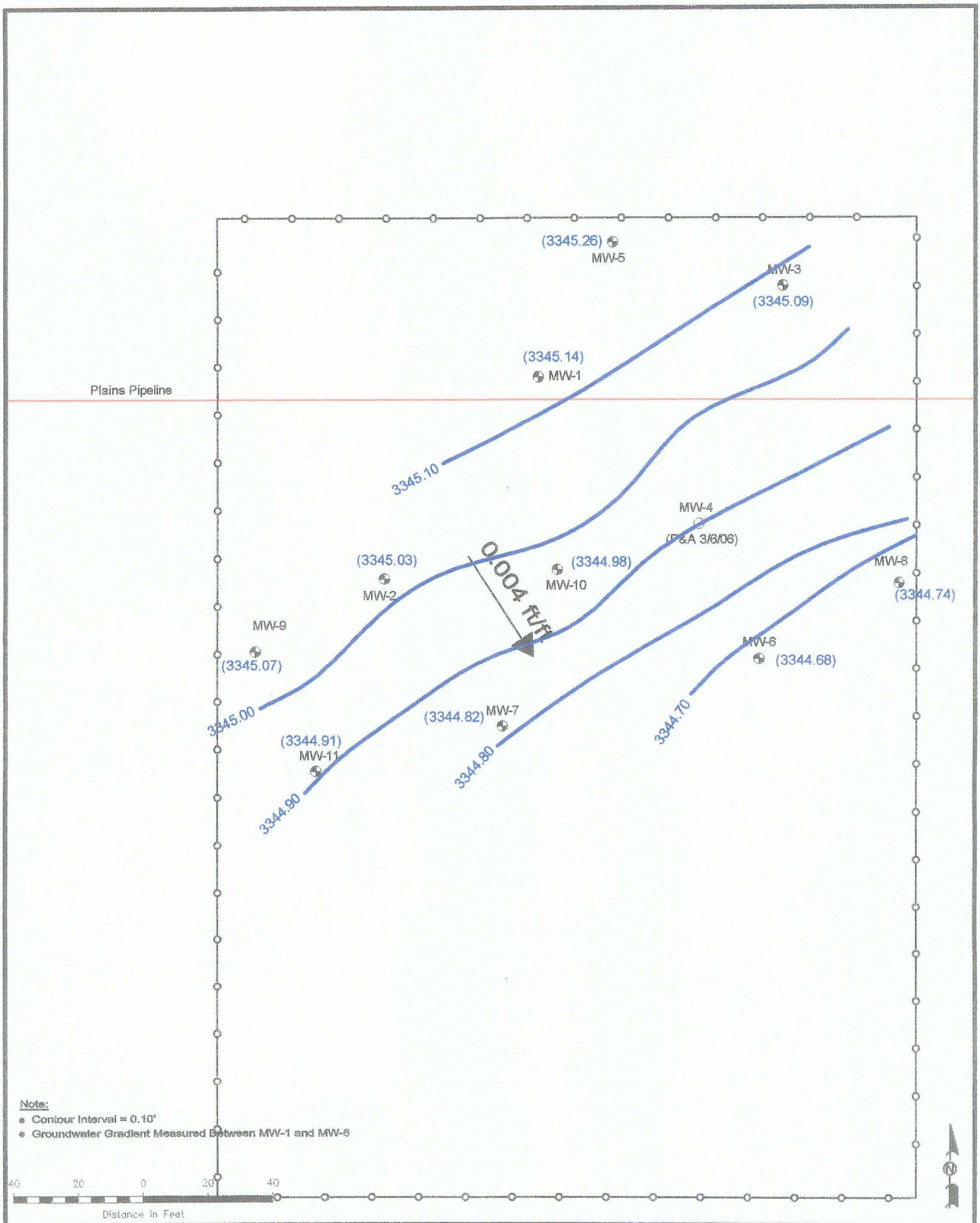



**Figure 2B**
Inferred Groundwater Gradient Map (05/15/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 26 T21S R37E | 32° 27' 03.9"N 103° 05' 29.2"W | |
| Scale: 1" = 40' | CAD By: DGC | Checked By: CDS |
| October 25, 2007 | | |




Legend:

- Monitor Well Location
- Fence
- (3342.43) Groundwater Elevation in Feet
- Groundwater Gradient Contour
- Plugged and Abandoned
- NG Not Gauged
- 0.004 ft/ft Groundwater Gradient and Magnitude

Figure 2C
Inferred Groundwater Gradient Map (08/09/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 28 T21S R37E | 32° 27' 03.9"N 103° 08' 29.2"W | |
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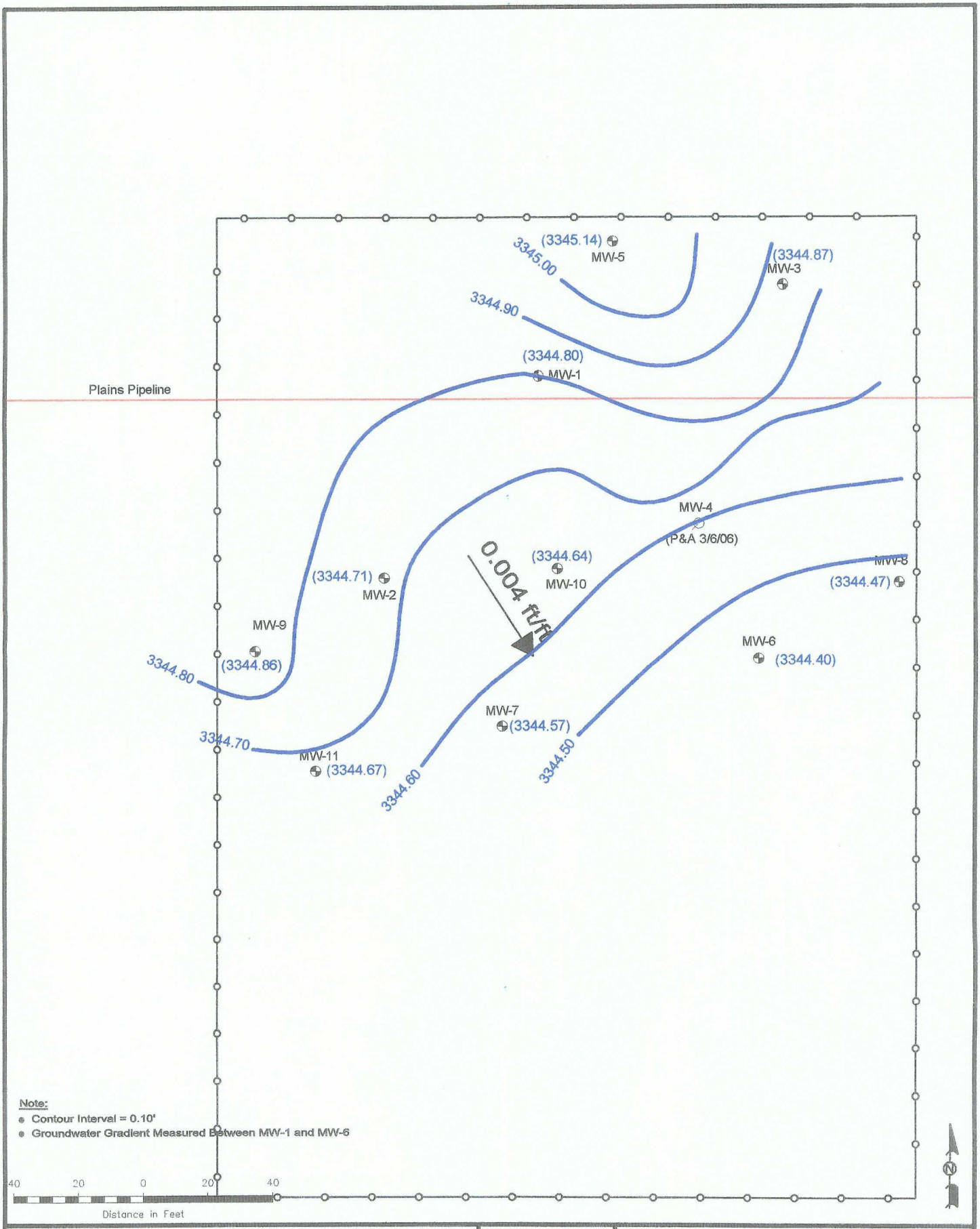
| February 7, 2008 | | |




Legend:

- Monitor Well Location
- Fence
- (3342.43) Groundwater Elevation in Feet
- Groundwater Gradient Contour
- Plugged and Abandoned
- NG Not Gauged
- 0.004 ft/ft Groundwater Gradient and Magnitude

Figure 2D
Inferred Groundwater Gradient Map (11/13/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 28 T21S R37E | 32° 27' 03.9"N 103° 08' 29.2"W | |
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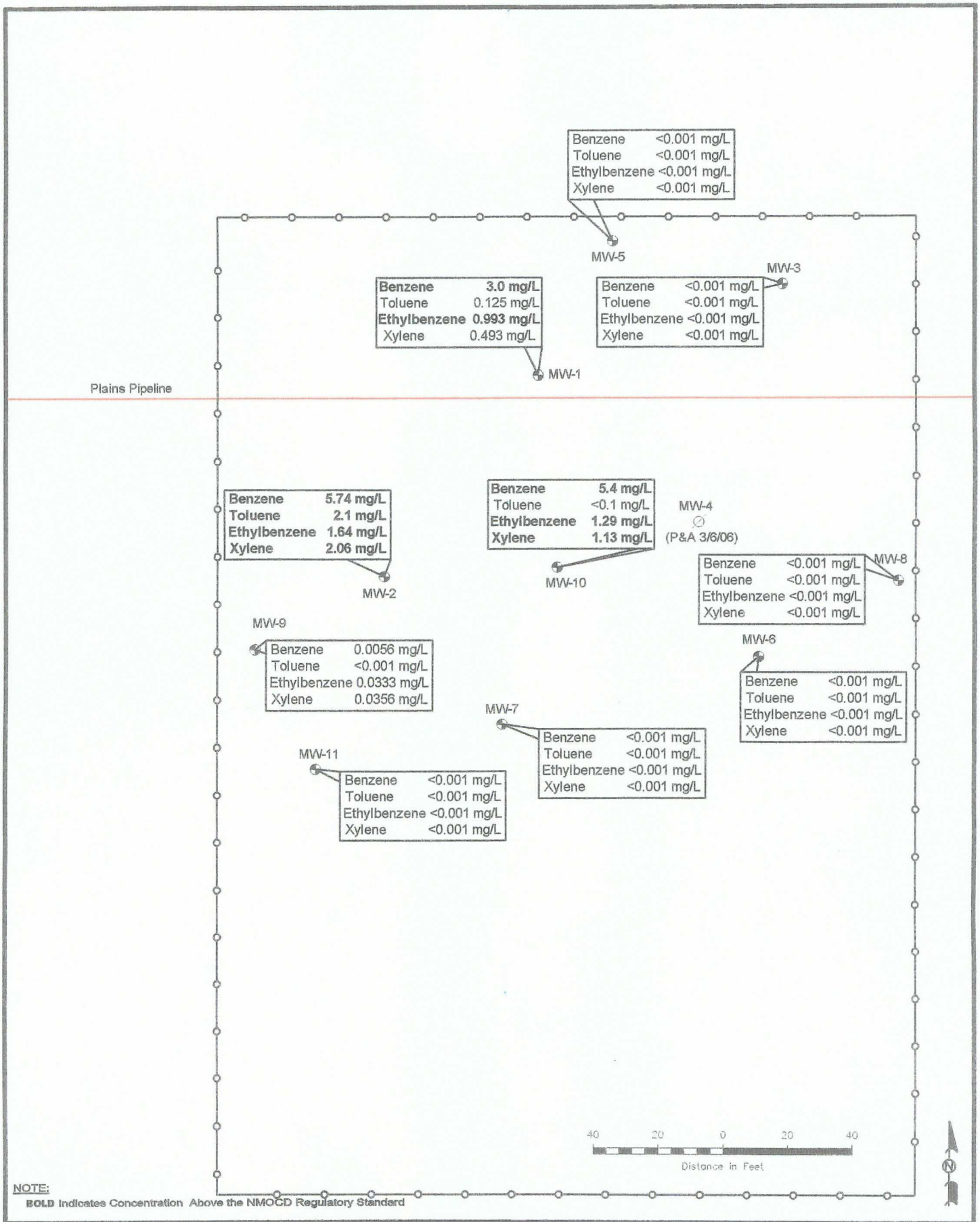
| February 7, 2008 | | |




NOTE:
**BOLD** Indicates Concentration Above the NMOCD Regulatory Standard

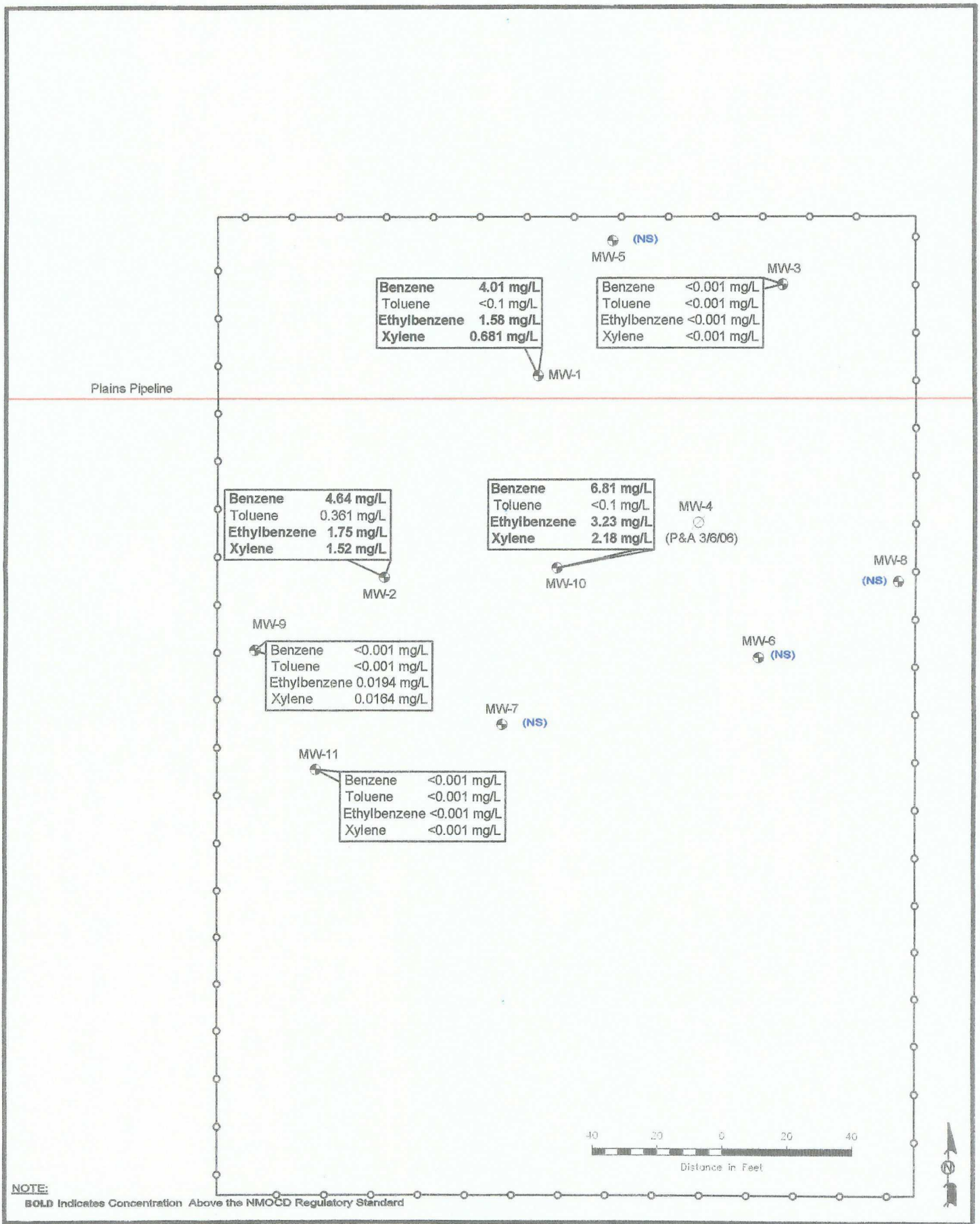
Legend:
- Monitor Well Location
- Fence
- Plugged and Abandoned
- <0.001 Constituent Concentration in mg/L
- (NS) Not Sampled

Figure 3A
Groundwater Concentration and Inferred PSH Extent (02/20/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 26T21S R37E | 32° 27' 03.9"N 103° 06' 22.2"W | |
| Scale: 1" = 40' | CAD By: DGC | Checked By: CDS |
| October 4, 2007 | | |



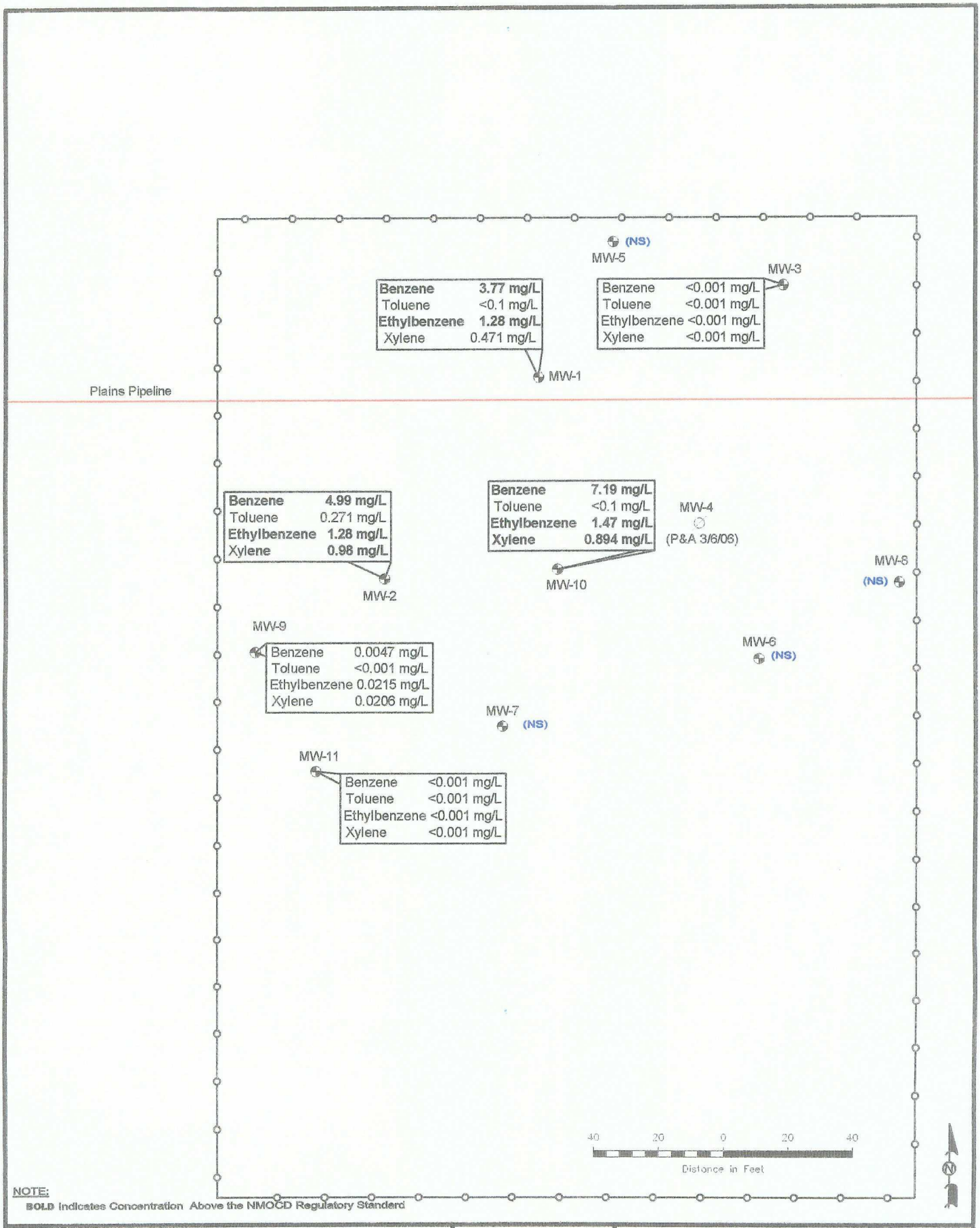

NOTE:
**BOLD** Indicates Concentration Above the NMOCD Regulatory Standard

Legend:
- Monitor Well Location
- Fence
- Plugged and Abandoned
- <0.001 Constituent Concentration in mg/L
- (NS) Not Sampled

Figure 3B
Groundwater Concentration and Inferred PSH Extent (05/15/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 26 T21S R37E | 32° 27' 03.6"N 103° 08' 29.2"W | |
| Scale: 1" = 40' | CAD By: DGC | Checked By: CDS |
| October 4, 2007 | | |




NOTE:
**BOLD** Indicates Concentration Above the NMOCD Regulatory Standard

Legend:
- Monitor Well Location
- Fence
- Plugged and Abandoned
- <0.001 Constituent Concentration in mg/L
- (NS) Not Sampled

Figure 3C
Groundwater Concentration and Inferred PSH Extent (08/09/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 28 T21S R37E | | 32° 27' 03.9"N 103° 06' 29.2"W |
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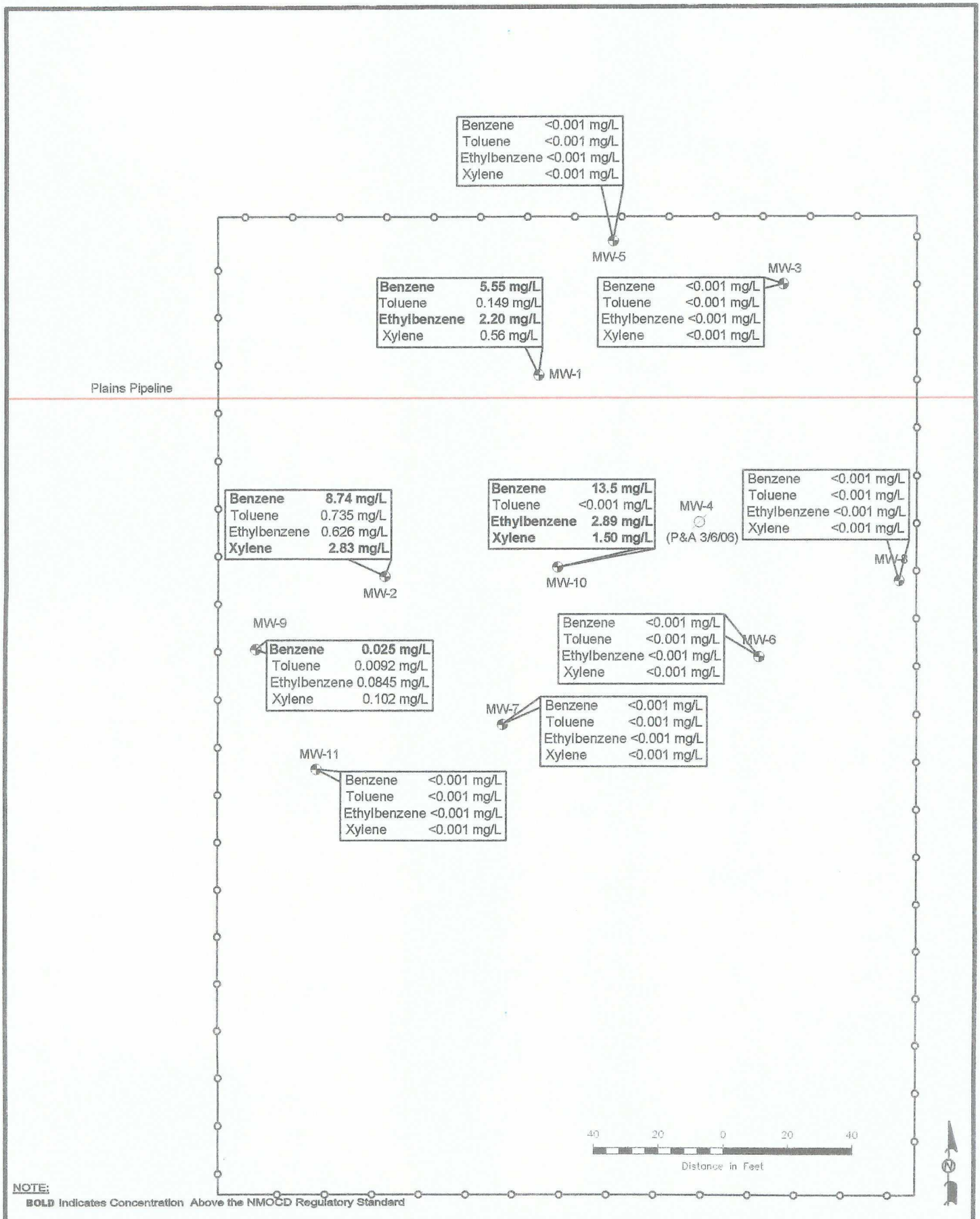
| October 4, 2007 | | |




NOTE:
**BOLD** Indicates Concentration Above the NMOCD Regulatory Standard

Legend:
- Monitor Well Location
- Fence
- Plugged and Abandoned
- <0.001 Constituent Concentration in mg/L
- (NS) Not Sampled

Figure 3D
Groundwater Concentration and Inferred PSH Extent (11/13/07)
Plains Marketing, L.P.
TNM98-05A
Lea County, NM
NMOCD Ref# AP-12

NOVA Safety and Environmental

| | | |
|---|---|---|
| NE1/4 NW1/4 Sec 28 T21S R37E | 32° 27' 03.9"N 103° 08' 29.2"W | |
| Scale: 1" = 40' | CAD By: DGC | Checked By: CDS |
| October 4, 2007 | | |

# Tables

**TABLE 1**

**2007 GROUNDWATER ELEVATION DATA**

**PLAINS MARKETING, LP**
**TNM 98-05A**
**LEA COUNTY, NEW MEXICO**
**NMOCD Reference AP-12**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-1 | 01/26/07 | 3391.62 | sheen | 46.66 | 0.00 | 3,344.96 |
| | 01/31/07 | 3391.62 | sheen | 46.53 | 0.00 | 3,345.09 |
| | 02/15/07 | 3391.62 | | 46.61 | 0.00 | 3,345.01 |
| | *02/20/07* | 3391.62 | | 46.56 | 0.00 | 3,345.06 |
| | *05/15/07* | 3391.62 | | 46.74 | 0.00 | 3,344.88 |
| | *08/09/07* | 3391.62 | | 46.48 | 0.00 | 3,345.14 |
| | 10/01/07 | 3391.62 | sheen | 46.73 | 0.00 | 3,344.89 |
| | 10/12/07 | 3391.62 | sheen | 46.73 | 0.00 | 3,344.89 |
| | *11/13/07* | 3391.62 | | 46.82 | 0.00 | 3,344.80 |
| MW-2 | 01/26/07 | 3390.85 | sheen | 46.02 | 0.00 | 3,344.83 |
| | 01/31/07 | 3390.85 | sheen | 45.91 | 0.00 | 3,344.94 |
| | 02/15/07 | 3390.85 | | 45.96 | 0.00 | 3,344.89 |
| | *02/20/07* | 3390.85 | sheen | 45.94 | 0.00 | 3,344.91 |
| | *05/15/07* | 3390.85 | sheen | 46.04 | 0.00 | 3,344.81 |
| | *08/09/07* | 3390.85 | sheen | 45.82 | 0.00 | 3,345.03 |
| | 10/01/07 | 3390.85 | sheen | 46.11 | 0.00 | 3,344.74 |
| | 10/12/07 | 3390.85 | sheen | 46.11 | 0.00 | 3,344.74 |
| | *11/13/07* | 3390.85 | sheen | 46.14 | 0.00 | 3,344.71 |
| MW-3 | *02/20/07* | 3391.08 | | 46.06 | 0.00 | 3,345.02 |
| | *05/15/07* | 3391.08 | | 46.25 | 0.00 | 3,344.83 |
| | *08/09/07* | 3391.08 | - | 45.99 | 0.00 | 3,345.09 |
| | *11/13/07* | 3391.08 | - | 46.21 | 0.00 | 3,344.87 |
| MW-5 | *02/20/07* | 3391.53 | | 46.35 | 0.00 | 3,345.18 |
| | *05/15/07* | 3391.53 | | 46.50 | 0.00 | 3,345.03 |
| | *08/09/07* | 3391.53 | | 46.27 | 0.00 | 3,345.26 |
| | *11/13/07* | 3391.53 | | 46.39 | 0.00 | 3,345.14 |
| MW-6 | *02/20/07* | 3391.14 | | 46.54 | 0.00 | 3,344.60 |
| | *05/15/07* | 3391.14 | | 46.77 | 0.00 | 3,344.37 |
| | *06/21/07* | 3391.14 | | 46.74 | 0.00 | 3,344.40 |
| | *08/09/07* | 3391.14 | | 46.46 | 0.00 | 3,344.68 |
| | *11/13/07* | 3391.14 | | 46.74 | 0.00 | 3,344.40 |
| MW-7 | *02/20/07* | 3391.21 | | 46.48 | 0.00 | 3,344.73 |
| | *05/15/07* | 3391.21 | | 46.69 | 0.00 | 3,344.52 |
| | *06/21/07* | 3391.21 | | 46.71 | 0.00 | 3,344.50 |
| | *08/09/07* | 3391.21 | | 46.39 | 0.00 | 3,344.82 |
| | *11/13/07* | 3391.21 | | 46.64 | 0.00 | 3,344.57 |

**TABLE 1**

**2007 GROUNDWATER ELEVATION DATA**

**PLAINS MARKETING, LP**
**TNM 98-05A**
**LEA COUNTY, NEW MEXICO**
**NMOCD Reference AP-12**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-8 | *02/20/07* | 3391.14 | | 46.44 | 0.00 | 3,344.70 |
| | *05/15/07* | 3391.14 | | 46.69 | 0.00 | 3,344.45 |
| | *08/09/07* | 3391.14 | | 46.40 | 0.00 | 3,344.74 |
| | *11/13/07* | 3391.14 | | 46.67 | 0.00 | 3,344.47 |
| | | | | | | |
| MW-9 | 01/26/07 | 3391.47 | sheen | 46.58 | 0.00 | 3,344.89 |
| | 01/31/07 | 3391.47 | sheen | 46.47 | 0.00 | 3,345.00 |
| | 02/15/07 | 3391.47 | | 46.54 | 0.00 | 3,344.93 |
| | *02/20/07* | 3391.47 | | 46.49 | 0.00 | 3,344.98 |
| | *05/15/07* | 3391.47 | | 46.66 | 0.00 | 3,344.81 |
| | *08/09/07* | 3391.47 | | 46.40 | 0.00 | 3,345.07 |
| | *11/13/07* | 3391.47 | | 46.61 | 0.00 | 3,344.86 |
| | | | | | | |
| MW-10 | 01/26/07 | 3391.26 | sheen | 46.45 | 0.00 | 3,344.81 |
| | 01/31/07 | 3391.26 | sheen | 46.34 | 0.00 | 3,344.92 |
| | 02/15/07 | 3391.26 | | 46.39 | 0.00 | 3,344.87 |
| | *02/20/07* | 3391.26 | | 46.40 | 0.00 | 3,344.86 |
| | *05/15/07* | 3391.26 | sheen | 46.61 | 0.00 | 3,344.65 |
| | *08/09/07* | 3391.26 | sheen | 46.28 | 0.00 | 3,344.98 |
| | 10/01/07 | 3391.26 | sheen | 46.58 | 0.00 | 3,344.68 |
| | 10/12/07 | 3391.26 | sheen | 46.55 | 0.00 | 3,344.71 |
| | *11/13/07* | 3391.26 | sheen | 46.62 | 0.00 | 3,344.64 |
| | | | | | | |
| MW-11 | *02/20/07* | 3390.73 | | 45.93 | 0.00 | 3,344.80 |
| | *05/15/07* | 3390.73 | - | 46.11 | 0.00 | 3,344.62 |
| | *08/09/07* | 3390.73 | - | 45.82 | 0.00 | 3,344.91 |
| | *11/13/07* | 3390.73 | - | 46.06 | 0.00 | 3,344.67 |
| | | | | | | |

**TABLE 2**

**2007 CONCENTRATIONS OF BTEX IN GROUNDWATER**

**PLAINS MARKETING, L.P.**
**TNM 98-05 A**
**LEA COUNTY, NEW MEXICO**
**NMOCD Reference No. AP-12**
**All concentrations are reported in mg/L**

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8021B, 5030 | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-1 | 02/20/07 | **3.00** | 0.125 | **0.993** | 0.493 | |
| | 05/15/07 | **4.01** | <0.100 | **1.58** | **0.681** | |
| | 08/09/07 | **3.77** | <0.100 | **1.28** | 0.471 | |
| | 11/13/07 | **5.55** | 0.149 | **2.20** | 0.560 | |
| MW-2 | 02/20/07 | **5.74** | **2.1** | **1.64** | **2.06** | |
| | 05/15/07 | **4.64** | 0.361 | **1.75** | **1.52** | |
| | 08/09/07 | **4.99** | 0.271 | **1.28** | **0.98** | |
| | 11/13/07 | **8.74** | 0.735 | 0.626 | **2.83** | |
| MW-3 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 08/09/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-5 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 08/09/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-6 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 06/21/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 08/09/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-7 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 06/21/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 08/09/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-8 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 06/21/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 08/09/07 | Not Sampled on Current Sampling Schedule | | | | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |

**TABLE 2**

**2007 CONCENTRATIONS OF BTEX IN GROUNDWATER**

**PLAINS MARKETING, L.P.**
**TNM 98-05 A**
**LEA COUNTY, NEW MEXICO**
**NMOCD Reference No. AP-12**
**All concentrations are reported in mg/L**

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8021B, 5030 | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-9 | 02/20/07 | 0.0056 | <0.001 | 0.0333 | 0.0356 | |
| | 05/15/07 | <0.001 | <0.001 | 0.0194 | 0.0164 | |
| | 08/09/07 | 0.0047 | <0.001 | 0.0215 | 0.0206 | |
| | 11/13/07 | **0.025** | 0.0092 | 0.0845 | 0.102 | |
| MW-10 | 02/20/07 | **5.4** | <0.1 | **1.29** | **1.13** | |
| | 05/15/07 | **6.81** | <0.100 | **3.23** | **2.18** | |
| | 08/09/07 | **7.19** | <0.100 | **1.47** | **0.894** | |
| | 11/13/07 | **13.5** | <0.100 | **2.89** | **1.50** | |
| MW-11 | 02/20/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 05/15/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 08/09/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 11/13/07 | <0.001 | <0.001 | <0.001 | <0.001 | |

*Concentrations in bold exceed NMOCD Groundwater Cleanup Limits*

# Appendices

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

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

# State of New Mexico
## Energy, Minerals and Natural Resources Department
## Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

98-05A

Form C-141
Originated 2/13/97

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 | Contact |
|---|---|
| Texas-New Mexico Pipe Line Company | Edwin H. Gripp |
| **Address** | **Telephone No.** |
| Box 60028 | 915-947-9000 |
| **Facility Name** | **Facility Type** |
| San Angelo, TX 76906 | pipe line |

| Surface Owner | Mineral Owner | Lease No. |
|---|---|---|
| Nadine Owen | | |

### LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| | 26 | 21S | 37E | | | | | Lea |

### NATURE OF RELEASE

| Type of Release | Volume of Release | Volume Recovered |
|---|---|---|
| Sour Crude | 38 barrels | 4 barrels |
| **Source of Release** | **Date and Hour of Occurrence** | **Date and Hour of Discovery** |
| 6" gathering line | Unknown | 2/5/98; 10:25 a.m. |
| **Was Immediate Notice Given?** ☒ Yes ☐ No ☐ Not Required | **If YES, To Whom?** | |
| | Linda Williams (Clerk #4) | |
| **By Whom?** | **Date and Hour** | |
| Johnny W. Chapman | 2/5/98; 3:00 p.m. | |
| **Was a Watercourse Reached?** ☐ Yes ☒ No | **If Yes, Volume Impacting the Watercourse.** | |
| | N/A | |

**If a Watercourse was Impacted, Describe Fully.***

N/A

**Describe Cause of Problem and Remedial Action Taken.***

Internal Corrosion
Leak successfully clamped off.

**Describe Area Affected and Cleanup Action Taken.***

Approximately 1260 sq.ft. pasture land.
Contaminated soil will be excavated and put on plastic.

**Describe General Conditions Prevailing (Temperature, Precipitation, etc.).***

Cloudy; 60 degrees

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Edwin H. Gripp (mail)
Printed Name: Edwin H. Gripp
Title: District Manager
Date: 2/12/98 Phone: 915-947-9000

**OIL CONSERVATION DIVISION**

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

* Attach Additional Sheets If Necessary

New Mexico Oil Conservation Division — Hazardous Waste Section