AP - 9

ANNUAL MONITORING REPORT

YEAR(S): 2007

2007
ANNUAL MONITORING REPORT

HDO-90-23

NE ¼, NW ¼, SECTION 6, TOWNSHIP 20 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO
PLAINS EMS NUMBER: HDO-90-23
NMOCD REFERENCE AP-009

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
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March 2008

Curt D. Stanley
Project Manager

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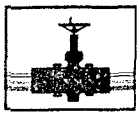
Vice President Technical Services



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

On behalf of Plains Marketing, L.P. (Plains), NOVA Safety and Environmental (NOVA) is pleased to submit this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. Beginning on May 29, 2004, project management responsibilities were assumed by NOVA. The HDO-90-23 site, which was formally the responsibility of Texas New Mexico Pipeline Company (TNM), is now the responsibility of Plains. This report is intended to be viewed as a complete document with text, figures, tables and appendices. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2007 only. However, historic data tables as well as 2007 laboratory analytical reports are provided on the enclosed data disk. A Site Location Map is provided as Figure 1.

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

SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located in the NE 1/4 of the NW 1/4 of Section 6, Township 20 South, Range 37 East in Lea County. The HDO 90-23 release was discovered by TNM personnel and reported on March 27, 1990. According to the release report, an estimated 750 barrels of crude oil were released and 550 barrels were recovered. The release occurred from a 14-inch Texas-New Mexico Pipeline Company (TNM) pipeline and was attributed to structural failure associated with internal pipeline corrosion. Limited excavation occurred around the release point to repair the pipeline. The Release Notification and Corrective Action (Form C-141) is provided as Appendix A.

In February 1998, nine soil borings were advanced and five monitoring wells were installed by a previous contractor to assess the subsurface conditions. In September 1999, three additional monitor wells were installed. In the fall of 2002, monitor wells MW-9 through MW-15 were installed. In November 2004, two additional monitor wells (MW-16 and MW-17) were installed to further delineate the southeast extent of the dissolved phase plume.

On August 9, 2005, NOVA personnel discovered and documented a leaking produced water pipeline approximately 100 feet north of monitor well MW-3. The leaking pipeline was reported to NMOCD, Hobbs District office on the same day. The pipeline was identified as a Mar Oil and Gas (MAR) pipeline. A MAR employee was successful in closing an off site valve to stop the produced water flow. On August 12, 2005, MAR employees began limited excavation surrounding monitor well MW-3, stockpiling the soil on site. Since the activities of August 2005, the excavated soil has been stockpiled on site.

In February 2007, NOVA personnel discovered and documented a crude oil release approximately 500 feet northwest of monitor well MW-15. The release was associated with a production pump jack operated by MAR and to date this release has not been remediated.

Currently, thirteen groundwater monitor wells (MW-2 through MW-6, MW-8, MW-9 and MW-12 through MW-17) and two product recovery wells (RW-1 and RW-2) are onsite.

RECENT FIELD ACTIVITIES

A measurable thickness of PSH was detected in monitor wells MW-2, MW-6, MW-14 and MW-15 during the 2007 annual reporting period. A hydrocarbon sheen was periodically reported in monitor well MW-3 and recovery wells RW-1 and RW-2. A maximum PSH thickness of 1.14 feet in monitor well MW-6 was recorded on March 8, 2007 and is shown on Table 1. The average thickness of PSH in monitor and recovery wells containing PSH during 2007 was 0.31 feet. Approximately fifteen gallons of PSH were recovered from the site during the 2007 reporting period. Approximately 783 gallons (18 barrels) of PSH have been recovered through automated and manual recovery methods since project inception.

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 21, 2005.

NMOCD Approved Sampling Schedule	
MW-1	Plugged and Abandoned
MW-2	Quarterly
MW-3	Quarterly
MW-4	Semi-Annually
MW-5	Semi-Annually
MW-6	Quarterly
MW-7	Plugged and Abandoned
MW-8	Annually
MW-9	Quarterly
MW-10	Plugged and Abandoned
MW-11	Plugged and Abandoned
MW-12	Quarterly
MW-13	Quarterly
MW-14	Quarterly
MW-15	Quarterly
MW-16	Quarterly
MW-17	Quarterly

The site monitor wells were gauged and sampled on February 23, May 18, August 21, and November 5, 2007. During each sampling event, sampled monitor wells were purged 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.

Locations of the monitor wells and the inferred groundwater gradient, which were constructed utilizing measurements collected during the four quarterly monitoring events, are depicted on

Figures 2A through 2D. Groundwater elevation data for 2007 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0007 feet/foot to the southeast as measured between monitor wells MW-6 and MW-17. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevation has ranged between 3,419.27 and 3,420.38 feet above mean sea level, in monitor wells MW-17 on August 21, 2007 and MW-14 on August 21, 2007, respectively.

Currently, thirteen monitor wells and two recovery wells are located on site.

LABORATORY RESULTS

Monitor wells MW-2 (1st, 2nd, and 3rd quarters), MW-6, MW-14 (1st, 2nd, and 3rd quarters), and MW-15 (3rd quarter only) contained PSH and were not sampled in one or more quarters during the reporting period.

Groundwater samples obtained during the sampling events of 2007 were delivered to TraceAnalysis, Inc. in Lubbock, Texas, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021b. A cumulative listing of BTEX constituent concentrations for 2007 is summarized in Table 2. Copies of the laboratory reports generated for 2007 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A-3D.

Monitor well MW-2 is monitored / sampled on a quarterly schedule. Monitor well MW-2 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the reported presence of PSH in the monitor well. PSH thicknesses of 0.14 feet, 0.08 feet and 0.26 feet were reported during the 1st, 2nd, and 3rd quarters of 2007, respectively. Analytical results of groundwater samples collected during the 4th quarter of 2007 indicate benzene concentrations were 2.32 mg/L. This 4th quarter benzene concentration is above the NMOCD regulatory standard of 0.01 mg/L. Toluene concentrations were below the laboratory method detection limits (MDL) and NMOCD regulatory standards of 0.75 mg/L, during the 4th quarter of 2007. Ethylbenzene and Xylene concentrations were 2.31 mg/L and 0.892 mg/L, respectively. Ethylbenzene and Xylene concentrations were above NMOCD regulatory standards of 0.75 mg/L and 0.62 mg/L, respectively, during the 4th quarter of the reporting period.

Monitor well MW-3 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.01 mg/L during the 3rd quarter to 0.0133 mg/L during the 4th quarter of 2007. Benzene concentrations were above NMOCD regulatory standards during the 3rd and 4th quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0296 mg/L during the 3rd quarter to 0.157 mg/L during the 2nd quarter of 2007. Ethylbenzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during

the 1st and 2nd quarters to 0.0244 mg/L during the 2nd quarter of 2007. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period.

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 and 4th quarter sampling events. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last thirty-two consecutive quarters.

Monitor well MW-5 is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 2nd and 4th quarter sampling events. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last twelve consecutive quarters.

Monitor well MW-6 is monitored on a quarterly schedule. Monitor well MW-6 was not sampled during any of the four quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 1.09 feet, 0.93 feet, 1.03 feet, and 0.99 feet were reported during the 1st, 2nd, 3rd and 4th quarter of 2007, respectively.

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-one consecutive quarters.

Monitor well MW-9 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of 2007. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last twenty-one consecutive quarters.

Monitor well MW-12 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of 2007. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last twenty-one consecutive quarters.

Monitor well MW-13 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of 2007. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last eleven consecutive quarters.

Monitor well MW-14 is monitored / sampled on a quarterly schedule. Monitor well MW-14 was not sampled during the 1st, 2nd or 3rd quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 0.47 feet, 0.07 feet, and 0.06 feet were reported during

the 1st, 2nd, and 3rd quarters of 2007, respectively. The monitor well was sampled on the 4th quarter of 2007. Analytical results indicated a benzene concentration of 0.0039 mg/L, a toluene concentration of 0.0036 mg/L, an ethylbenzene concentration of 0.138 mg/L and a xylene concentration of 0.0629. All BTEX constituent concentrations were below NMOCD regulatory standards in the 4th quarter of the reporting period.

Monitor well MW-15 is monitored / sampled on a quarterly schedule. Monitor well MW-15 was not sampled in the 3rd quarter of the reporting period, due to the presence of PSH in the monitor well. Analytical results for the 1st, 2nd and 4th quarters of the reporting period indicate benzene concentrations were <0.001 mg/L. Benzene concentrations were below NMOCD regulatory standards during the three sampled quarters of the reporting period. Toluene, ethylbenzene and xylene constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the three sampled quarters of 2007, with the exception of the 4th quarter. The 4th quarter analytical results indicate an ethylbenzene concentration of 0.0012 mg/L.

Monitor well MW-16 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of 2007. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last fourteen consecutive quarters.

Monitor well MW-17 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of 2007. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last fourteen consecutive quarters.

Recovery well RW-1 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 1.58 mg/L during the 4th quarter to 2.58 mg/L during the 3rd quarter of 2007. Benzene concentrations were above NMOCD regulatory standards all four quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethylbenzene concentrations ranged from <0.2 mg/L during the 4th quarter to 1.43 mg/L during the 3rd quarter of 2007. Ethylbenzene concentrations were above NMOCD regulatory standards during the 3rd quarter of the reporting period. Xylene concentrations ranged from <0.2 mg/L during the 4th quarter to 1.04 mg/L during the 3rd quarter of 2007. Xylene concentrations were above NMOCD regulatory standards during the 2nd and 3rd quarters of the reporting period.

Recovery well RW-2 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 2nd and 4th quarter to 0.162 mg/L during the 3rd quarter of 2007. Benzene concentrations were above NMOCD regulatory standards during the 1st and 3rd quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 2nd and 4th quarters to 0.0131mg/L during the 1st quarter of 2007. Ethylbenzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L

during the 4th quarter to 0.0157 mg/L during the 3rd quarter of 2007. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period.

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 annual monitoring period of 2007. Currently, there are thirteen groundwater monitor wells (MW-2 through MW-6, MW-8, MW-9 and MW-12 through MW-17) and two recovery wells (RW-1 and RW-2) on-site. The most recent Groundwater Gradient Map, Figure 2D indicates a general gradient of approximately 0.0007 feet/foot to the southeast.

Monitor wells MW-2 (first, second, and third quarters), MW-6, MW-14 (first, second, and third quarters), and MW-15 (third quarter only) contained PSH and were not sampled in one or more quarters during the reporting period. The average thickness of PSH in monitor and recovery wells containing PSH during 2007 was 0.31 feet.

Approximately fifteen gallons of PSH were recovered from the site during the 2007 reporting period. Approximately 783 gallons (18 barrels) of PSH have been recovered through automated and manual recovery methods since project inception.

Review of laboratory analytical results generated from analysis of the groundwater samples obtained during the 2007 monitoring period indicates BTEX constituent concentrations are below NMOCD regulatory standards in eleven monitor wells (as of 4th quarter 2007).

ANTICIPATED ACTIONS

Plains respectfully requests NMOCD approval to modify the sampling schedule for the following monitor well:

- Monitor well MW-9 is currently sampled on a quarterly schedule, Plains proposes to modify the schedule to a semi-annual schedule. This upgradient monitor well was installed during the 1st quarter 2003 and the analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last twenty-one consecutive quarters.
- Monitor well MW-16 is currently sampled on a quarterly schedule, Plains proposes to modify the schedule to an annual schedule. This down gradient monitor well was installed during the 4th quarter 2004 and the analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last fourteen consecutive quarters. Down gradient monitoring is maintained by monitor well MW-17.

A Soil Investigation Work Plan will be submitted to the NMOCD in 2008 to evaluate any potential soil issues remaining at the site.

Groundwater monitoring, quarterly sampling, manual weekly PSH recovery will continue in 2008. An Annual Monitoring report will be submitted to the NMOCD before April 1, 2009.

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

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Santa Fe, NM 87505

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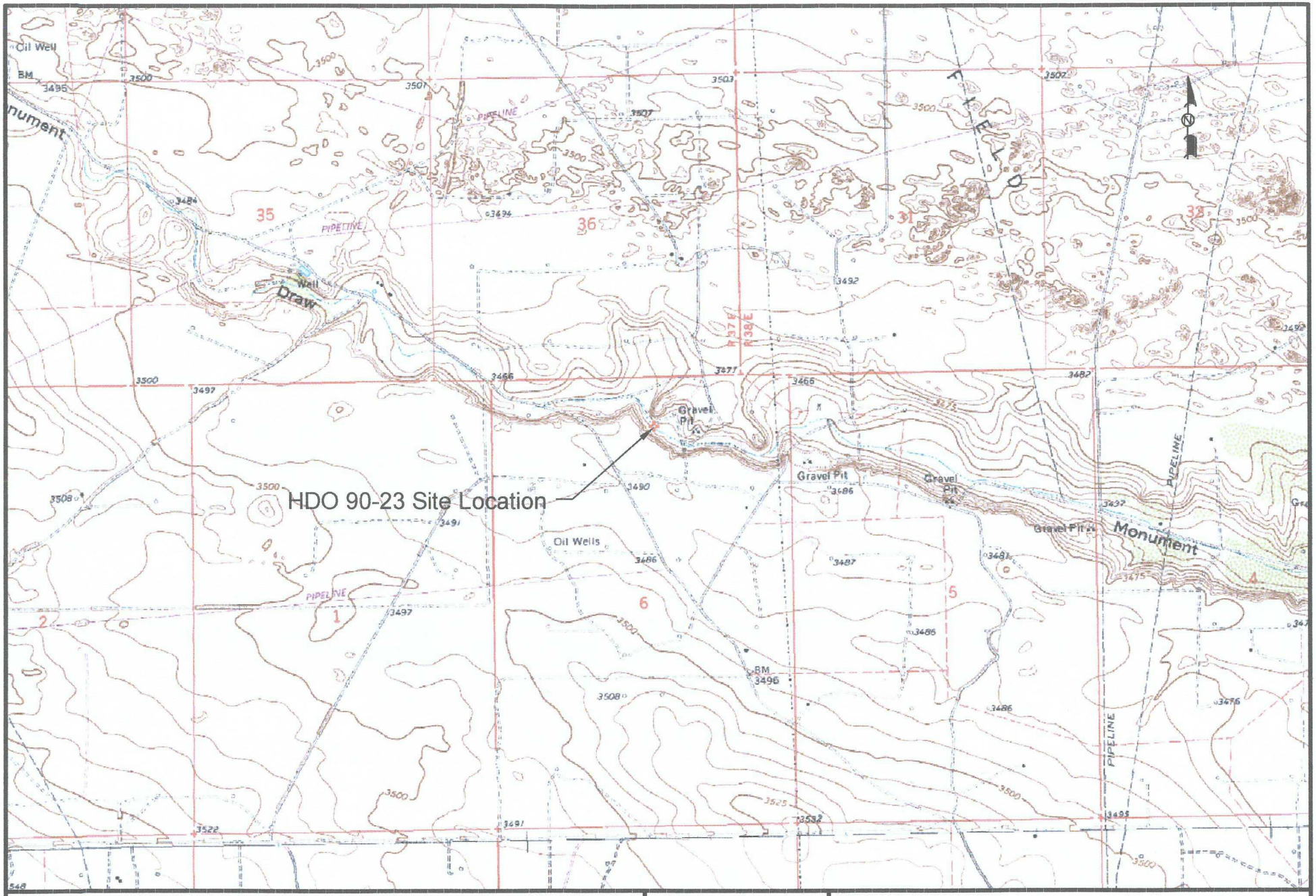
cstanley@novatraining.cc

Figures



NMOCD Reference # AP-009

Figure 1
Site Location Map

Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

NE1/4 NW1/4 Sec 6 T20S R37E			February 20, 2005
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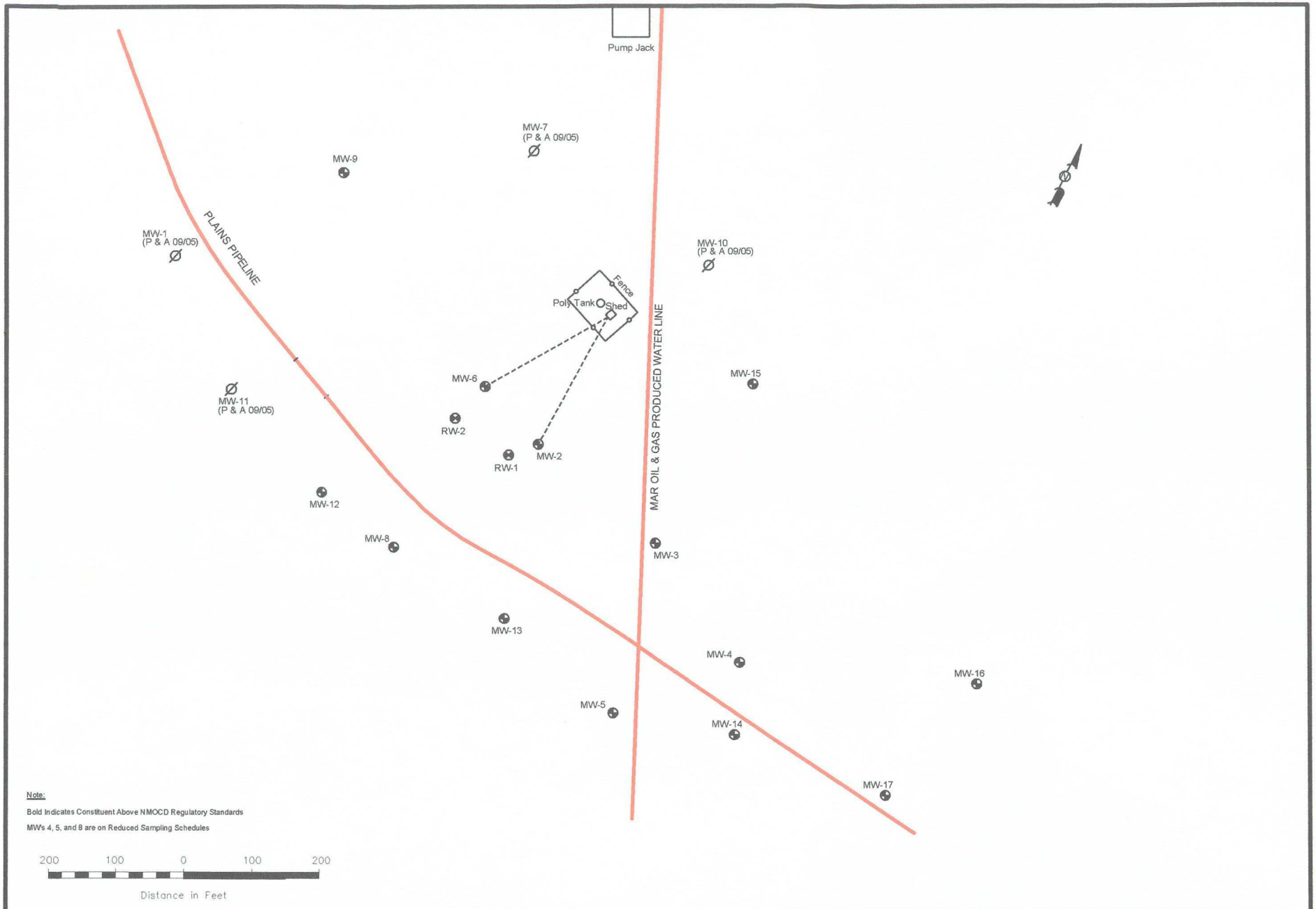


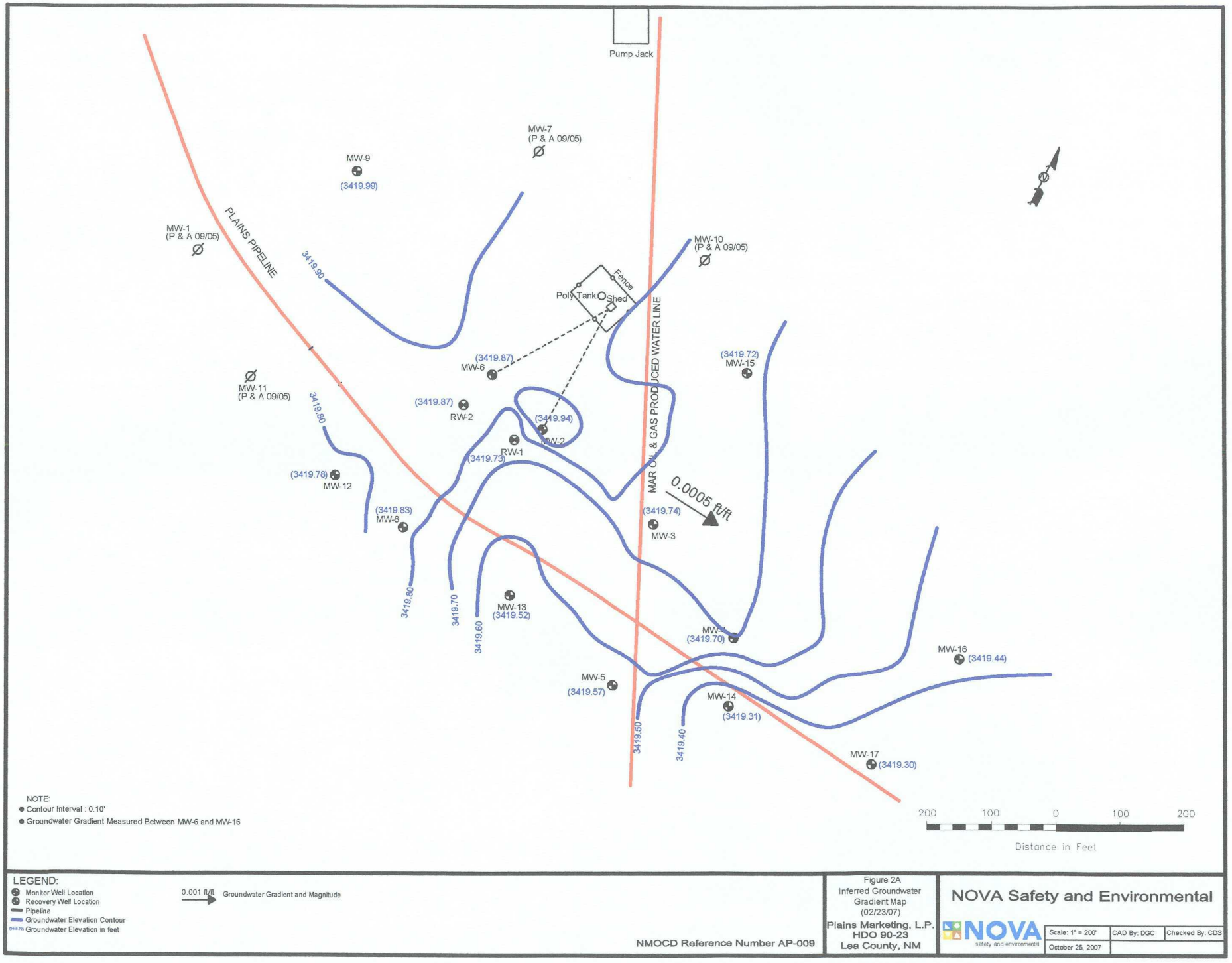
LEGEND:
- Monitor Well Location
- Recovery Well Location
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)

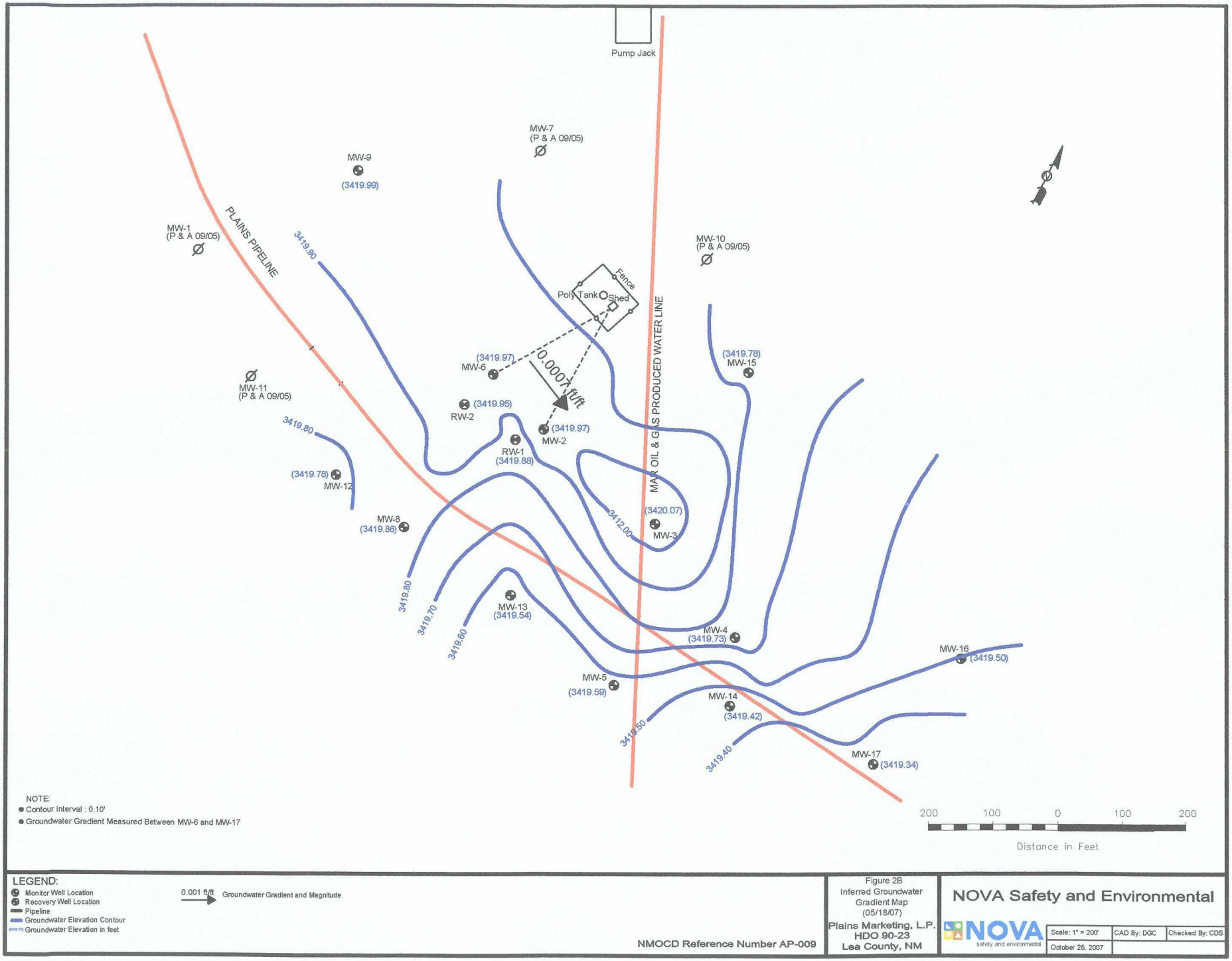
Figure 2
Site Map

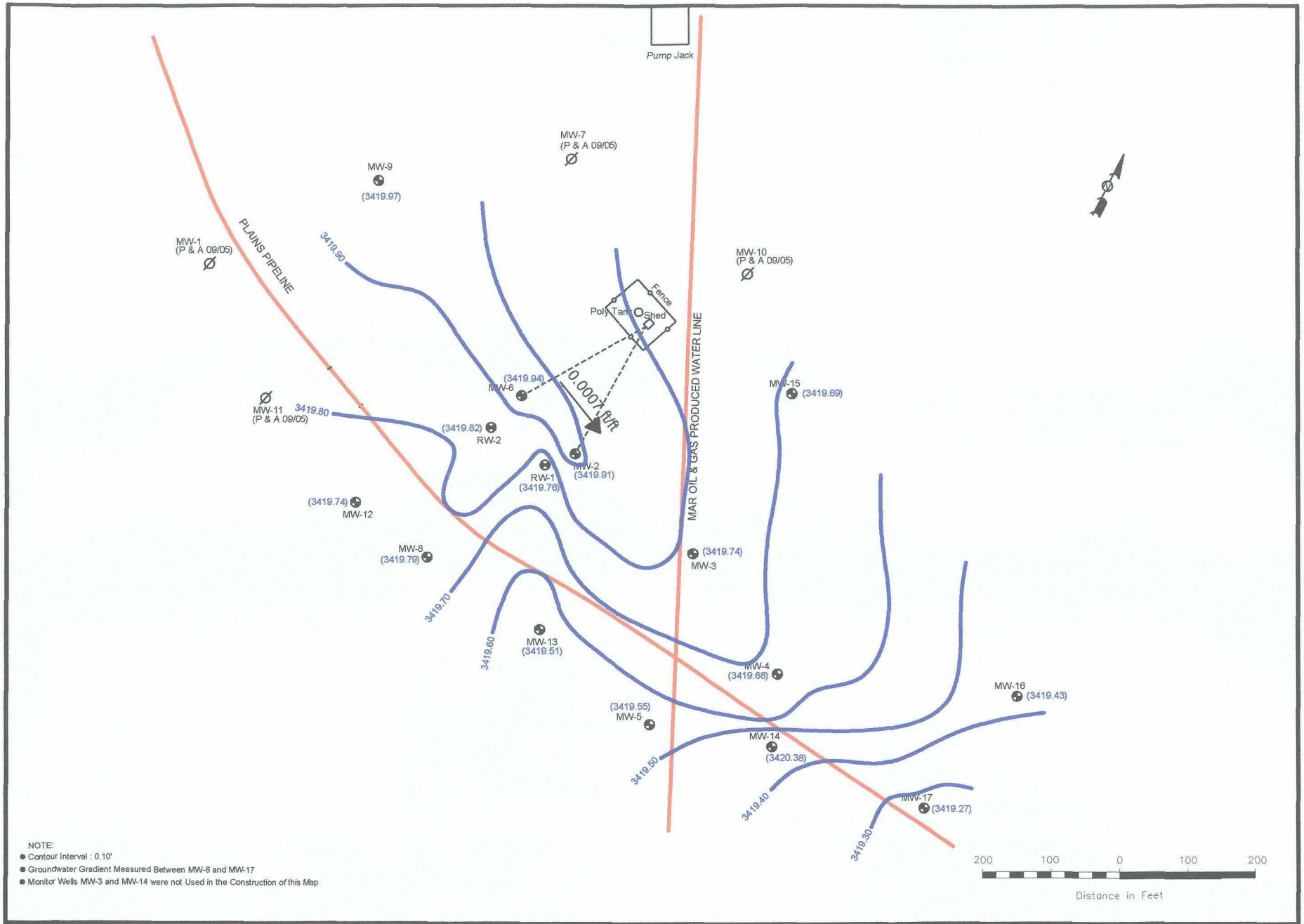
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
February 2, 2007		


Pump Jack
MW-7
(P & A 09/05)
MW-9
(3419.99)
MW-1
(P & A 09/05)
PLAINS PIPELINE
3419.90
MW-10
(P & A 09/05)
Fence
Poly Tank
Shed
MAR OIL & GAS PRODUCED WATER LINE
(3419.87)
MW-6
(3419.72)
MW-15
MW-11
(P & A 09/05)
(3419.87)
RW-2
3419.80
(3419.94)
MW-2
RW-1
(3419.73)
(3419.78)
MW-12
0.0005 ft/ft
(3419.83)
MW-8
(3419.74)
MW-3
3419.80
3419.70
3419.60
MW-13
(3419.52)
MW-4
(3419.70)
MW-16
(3419.44)
MW-5
(3419.57)
MW-14
(3419.31)
3419.50
3419.40
MW-17
(3419.30)
NOTE:
Contour Interval : 0.10'
Groundwater Gradient Measured Between MW-6 and MW-16
200
100
0
100
200
Distance in Feet
LEGEND:
Monitor Well Location
Recovery Well Location
Pipeline
Groundwater Elevation Contour
(3419.73) Groundwater Elevation in feet
0.001 ft/ft Groundwater Gradient and Magnitude
NMOCD Reference Number AP-009
Figure 2A
Inferred Groundwater Gradient Map
(02/23/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM
NOVA Safety and Environmental
NOVA safety and environmental
Scale: 1" = 200'
CAD By: DGC
Checked By: CDS
October 25, 2007


Pump Jack
MW-7
(P & A 09/05)
MW-9
(3419.99)
MW-1
(P & A 09/05)
PLAINS PIPELINE
3419.90
MW-10
(P & A 09/05)
Fence
Poly Tank
Shed
MAX OIL & GAS PRODUCED WATER LINE
(3419.97)
MW-6
0.0007 ft/ft
(3419.78)
MW-15
MW-11
(P & A 09/05)
(3419.95)
RW-2
(3419.97)
MW-2
3419.80
RW-1
(3419.88)
(3419.78)
MW-12
(3420.07)
MW-3
3412.00
MW-8
(3419.86)
3419.80
3419.70
3419.60
MW-13
(3419.54)
MW-4
(3419.73)
MW-16
(3419.50)
MW-5
(3419.59)
MW-14
(3419.42)
3419.50
3419.40
MW-17
(3419.34)
NOTE:
Contour Interval : 0.10'
Groundwater Gradient Measured Between MW-6 and MW-17
200
100
0
100
200
Distance in Feet
LEGEND:
Monitor Well Location
Recovery Well Location
Pipeline
Groundwater Elevation Contour
Groundwater Elevation in feet
0.001 ft/ft
Groundwater Gradient and Magnitude
NMOCD Reference Number AP-009
Figure 2B
Inferred Groundwater Gradient Map
(05/18/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM
NOVA Safety and Environmental
NOVA safety and environmental
Scale: 1" = 200'
CAD By: DGC
Checked By: CDS
October 25, 2007



NOTE:
- Contour Interval : 0.10'
- Groundwater Gradient Measured Between MW-6 and MW-17
- Monitor Wells MW-3 and MW-14 were not Used in the Construction of this Map

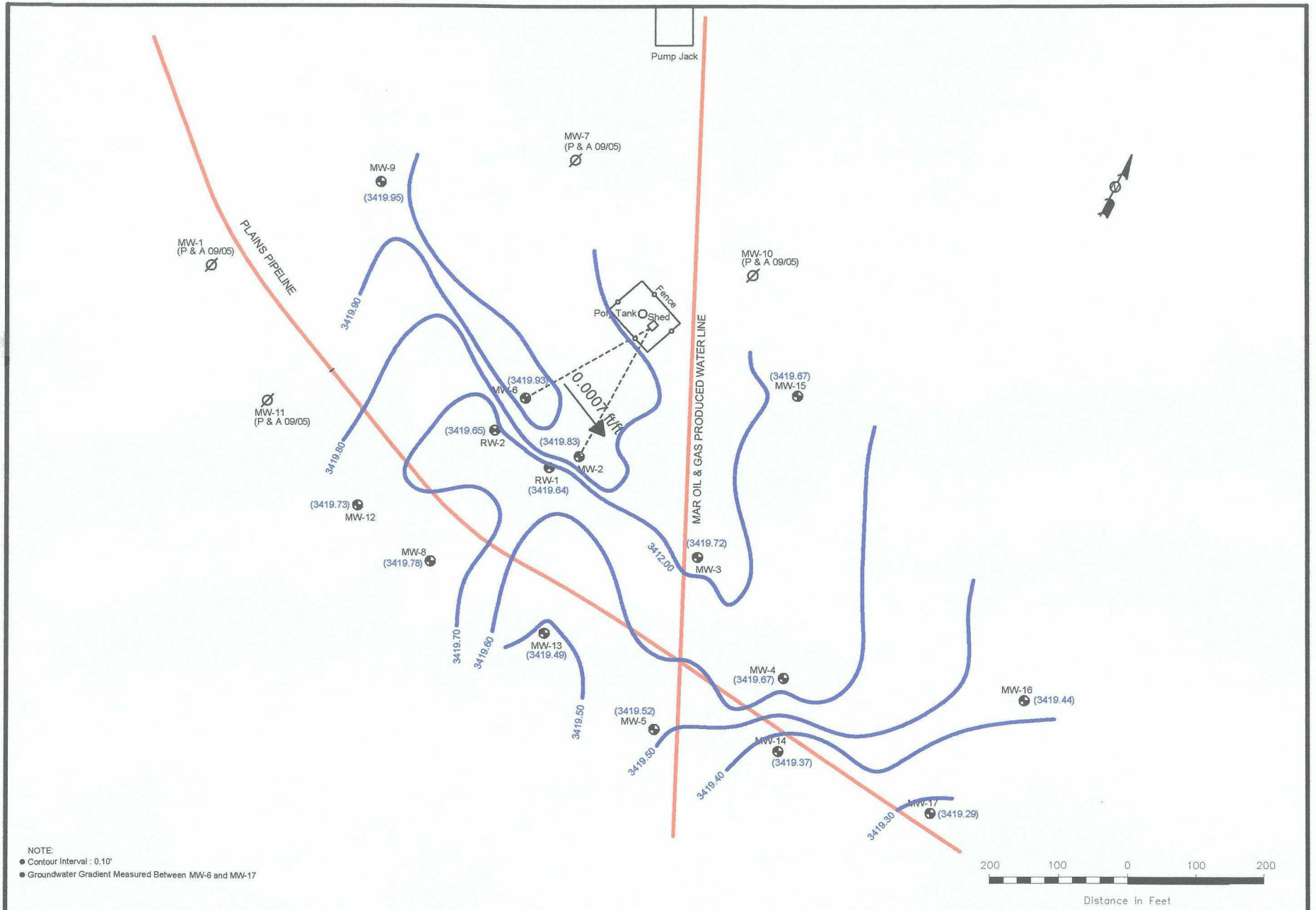
LEGEND:
- Monitor Well Location
- Recovery Well Location
- Pipeline
- Groundwater Elevation Contour
- (3419.73) Groundwater Elevation in feet
- 0.001 ft/ft Groundwater Gradient and Magnitude

NMOCD Reference Number AP-009

Figure 2C
Inferred Groundwater Gradient Map
(08/21/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
January 30, 2008		



LEGEND:

- Monitor Well Location
- Recovery Well Location
- Pipeline
- Groundwater Elevation Contour
- (3419.73) Groundwater Elevation in feet
- 0.001 ft/ft Groundwater Gradient and Magnitude

NMOCD Reference Number AP-009

Figure 2D
Inferred Groundwater Gradient Map
(11/05/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
January 25, 2008		

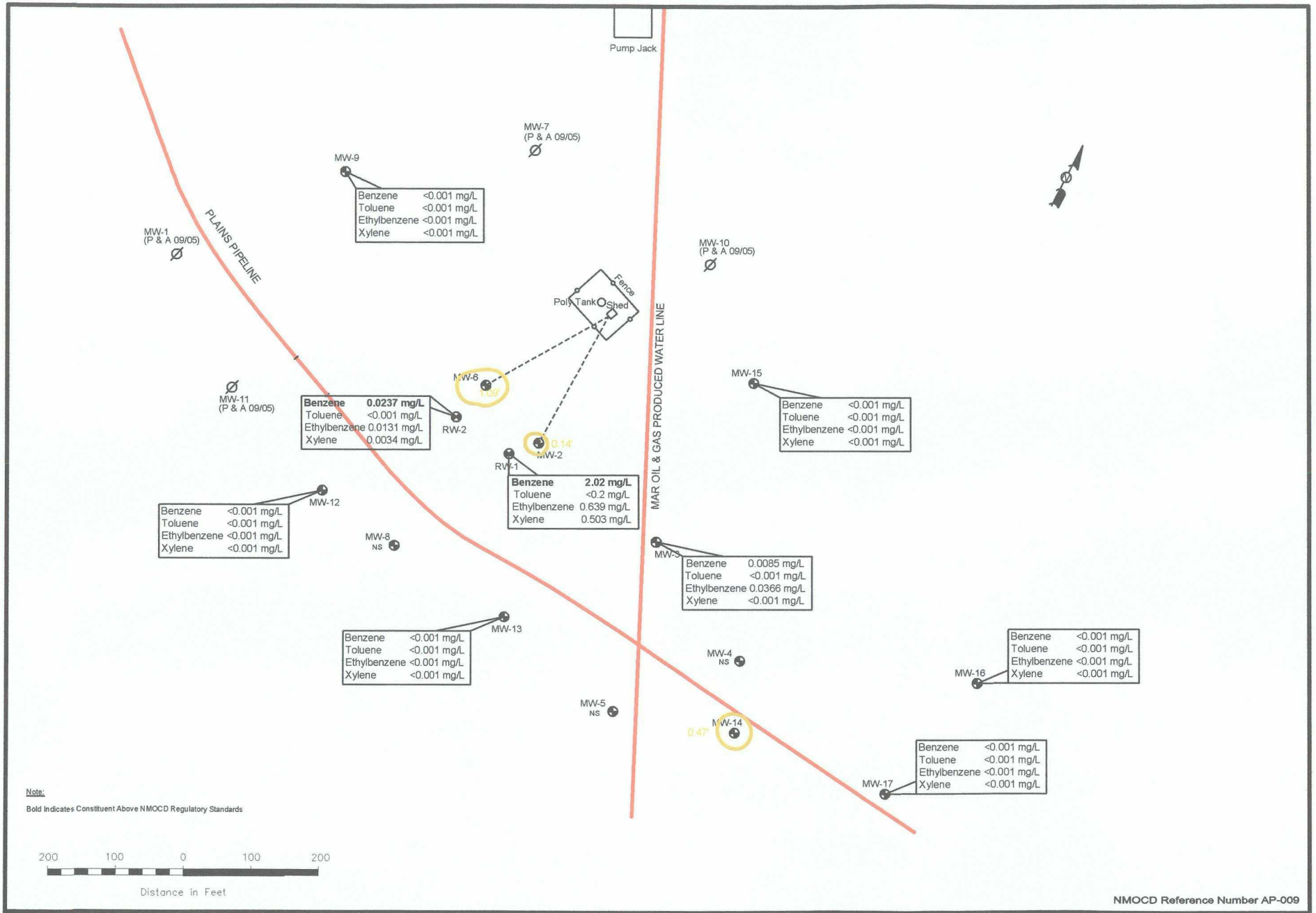
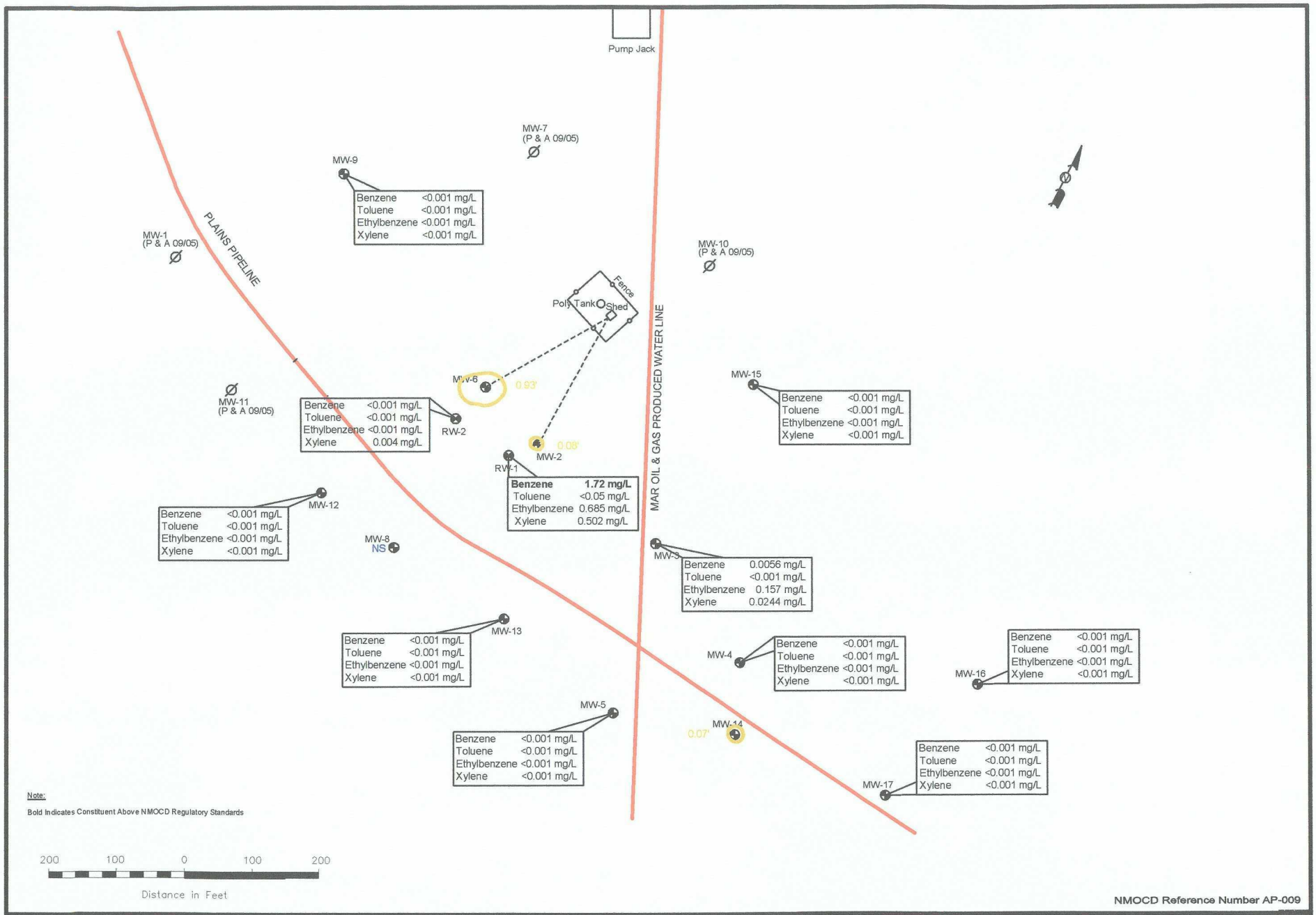


Figure 3A
Groundwater Concentration and Inferred PSH Extent Map (02/23/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
October 26, 2007		

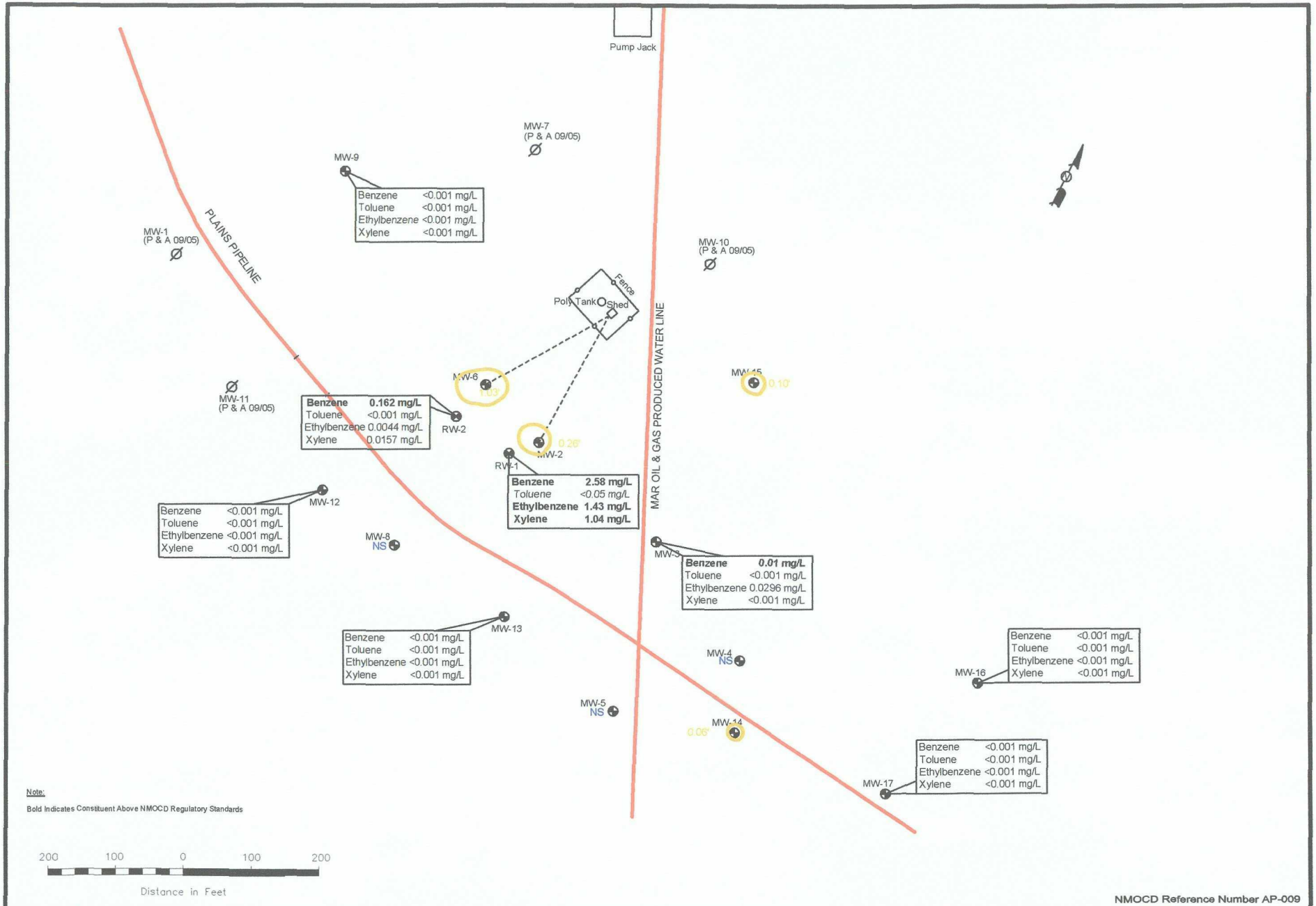


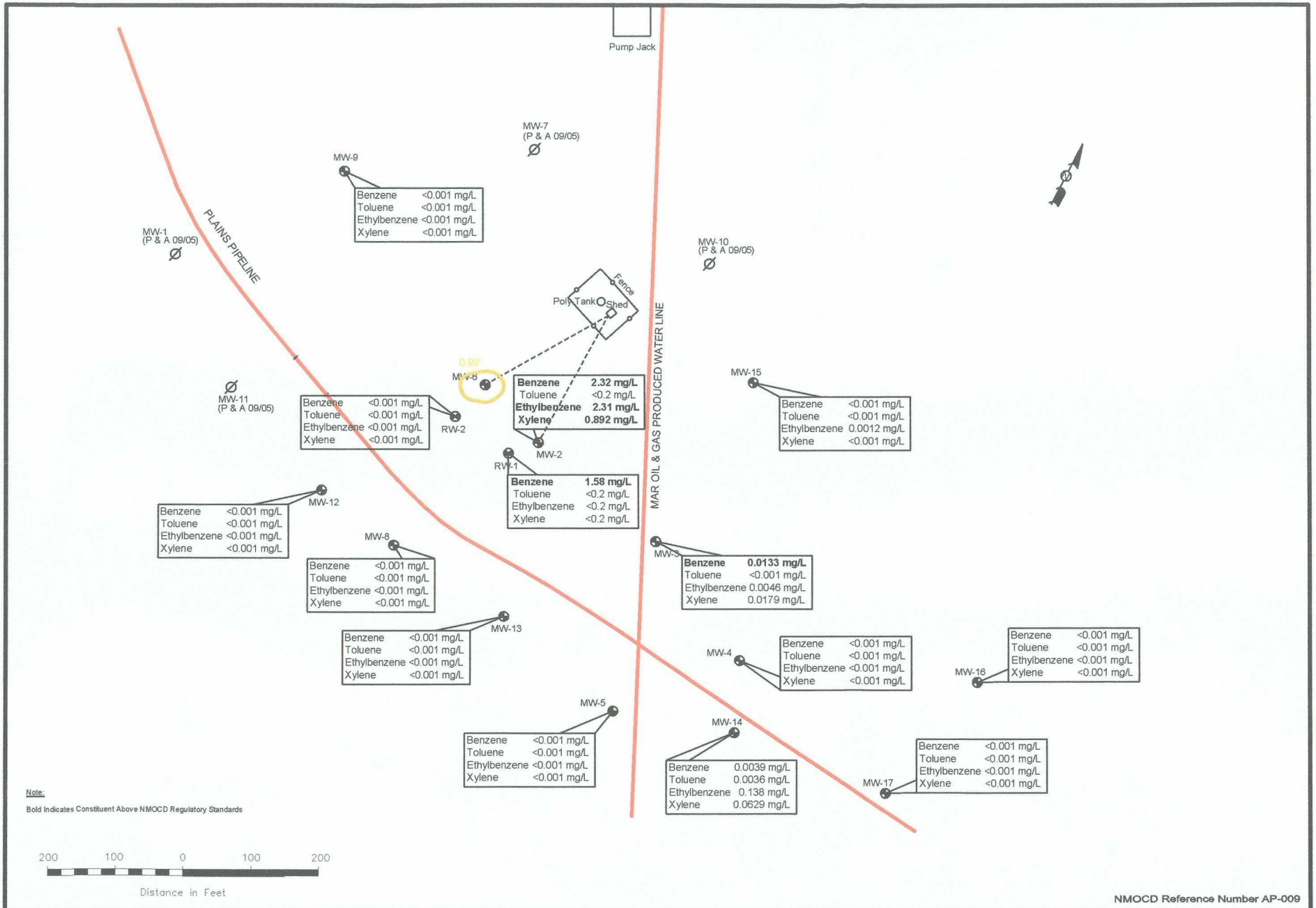
LEGEND:
- Monitor Well Location
- Recovery Well Location
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)

Figure 3B
Groundwater Concentration and Inferred PSH Extent Map
(05/18/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
February 25, 2008		


Pump Jack
MW-7
(P & A 09/05)
MW-9
Benzene <0.001 mg/L
Toluene <0.001 mg/L
Ethylbenzene <0.001 mg/L
Xylene <0.001 mg/L
MW-1
(P & A 09/05)
PLAINS PIPELINE
MW-10
(P & A 09/05)
Fence
Poly Tank
Shed
MAR OIL & GAS PRODUCED WATER LINE
MW-6
MW-15
0.10'
MW-11
(P & A 09/05)
Benzene 0.162 mg/L
Toluene <0.001 mg/L
Ethylbenzene 0.0044 mg/L
Xylene 0.0157 mg/L
RW-2
0.26'
MW-2
RW-1
Benzene 2.58 mg/L
Toluene <0.05 mg/L
Ethylbenzene 1.43 mg/L
Xylene 1.04 mg/L
Benzene <0.001 mg/L
Toluene <0.001 mg/L
Ethylbenzene <0.001 mg/L
Xylene <0.001 mg/L
MW-12
MW-8
NS
MW-3
Benzene 0.01 mg/L
Toluene <0.001 mg/L
Ethylbenzene 0.0296 mg/L
Xylene <0.001 mg/L
Benzene <0.001 mg/L
Toluene <0.001 mg/L
Ethylbenzene <0.001 mg/L
Xylene <0.001 mg/L
MW-13
MW-4
NS
Benzene <0.001 mg/L
Toluene <0.001 mg/L
Ethylbenzene <0.001 mg/L
Xylene <0.001 mg/L
MW-16
MW-5
NS
MW-14
0.06'
Benzene <0.001 mg/L
Toluene <0.001 mg/L
Ethylbenzene <0.001 mg/L
Xylene <0.001 mg/L
MW-17
Note:
Bold Indicates Constituent Above NMOCD Regulatory Standards
200 100 0 100 200
Distance in Feet
NMOCD Reference Number AP-009
LEGEND:
Monitor Well Location
Recovery Well Location
Pipeline
Inferred PSH Extent
(NS) Not Sampled
<0.001 Constituent Concentration (mg/L)
Figure 3C
Groundwater Concentration and Inferred PSH Extent Map
(08/21/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM
NOVA Safety and Environmental
NOVA safety and environmental
Scale: 1" = 200'
CAD By: DGC
Checked By: CDS
February 25, 2008



LEGEND:
- Monitor Well Location
- Recovery Well Location
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)

Figure 3D
Groundwater Concentration and Inferred PSH Extent Map
(11/05/07)
Plains Marketing, L.P.
HDO 90-23
Lea County, NM

NOVA Safety and Environmental

Scale: 1" = 200'	CAD By: DGC	Checked By: CDS
January 25, 2008		

Tables

TABLE 1

2007 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
HDO 90 - 23
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-009

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-2	01/11/07	3,465.44	45.55	45.76	0.21	3419.86
	02/15/07	3,465.44	45.54	45.73	0.19	3419.87
	02/23/07	3,465.44	45.48	45.62	0.14	3419.94
	03/08/07	3,465.44	45.54	45.74	0.20	3419.87
	03/28/07	3,465.44	45.54	45.67	0.13	3419.88
	04/25/07	3,465.44	45.54	45.62	0.08	3419.89
	05/04/07	3,465.44	45.52	45.62	0.10	3419.91
	05/18/07	3,465.44	45.46	45.54	0.08	3419.97
	06/14/07	3,465.44	45.44	45.62	0.18	3419.97
	07/12/07	3,465.44	45.45	45.62	0.17	3419.96
	08/21/07	3,465.44	45.49	45.75	0.26	3419.91
	09/14/07	3,465.44	45.55	45.88	0.33	3419.84
	09/26/07	3,465.44	45.56	45.78	0.22	3419.85
	10/03/07	3,465.44	45.57	45.70	0.13	3419.85
	10/10/07	3,465.44	45.55	45.67	0.12	3419.87
	10/17/07	3,465.44	45.55	45.62	0.07	3419.88
	11/05/07	3,465.44	sheen	45.61	0.00	3419.83
	11/07/07	3,465.44	sheen	45.61	0.00	3419.83
	12/18/07	3,465.44	sheen	45.62	0.00	3419.82
MW-3	01/11/07	3,464.68	sheen	44.98	0.00	3419.70
	02/15/07	3,464.68		44.70	0.00	3419.98
	02/23/07	3,464.68		44.94	0.00	3419.74
	03/28/07	3,464.68	sheen	44.98	0.00	3419.70
	05/18/07	3,464.68	-	44.61	0.00	3420.07
	07/12/07	3,464.68	-	44.87	0.00	3419.81
	08/21/07	3,464.68	-	44.94	0.00	3419.74
	10/03/07	3,464.68	sheen	45.02	0.00	3419.66
	11/05/07	3,464.68	-	44.96	0.00	3419.72
MW-4	*02/23/07*	3,465.76	-	46.06	0.00	3419.70
	05/18/07	3,465.76	-	46.03	0.00	3419.73
	08/21/07	3,465.76	-	46.08	0.00	3419.68
	11/05/07	3,465.76	-	46.09	0.00	3419.67
MW-5	*02/23/07*	3,467.40	-	47.83	0.00	3419.57
	05/18/07	3,467.40	-	47.81	0.00	3419.59
	08/21/07	3,467.40	-	47.85	0.00	3419.55
	11/05/07	3,467.40	-	47.88	0.00	3419.52
MW-6	01/11/07	3,465.42	45.35	46.36	1.01	3419.92
	02/15/07	3,465.42	45.34	46.40	1.06	3419.92
	02/23/07	3,465.42	45.39	46.48	1.09	3419.87
	03/08/07	3,465.42	45.39	46.53	1.14	3419.86
	03/28/07	3,465.42	45.39	46.08	0.69	3419.93
	04/25/07	3,465.42	45.34	46.40	1.06	3419.92
	05/04/07	3,465.42	45.32	46.28	0.96	3419.96
	05/18/07	3,465.42	45.31	46.24	0.93	3419.97
	06/14/07	3,465.42	45.29	46.16	0.87	3420.00
	07/12/07	3,465.42	45.29	46.18	0.89	3420.00
	08/21/07	3,465.42	45.33	46.36	1.03	3419.94
	09/14/07	3,465.42	45.37	46.46	1.09	3419.89
	09/26/07	3,465.42	45.37	46.44	1.07	3419.89
	10/03/07	3,465.42	45.38	46.35	0.97	3419.89

TABLE 1

2007 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
HDO 90 - 23
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-009

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-6	10/10/07	3,465.42	45.40	46.42	1.02	3419.87
	10/17/07	3,465.42	45.34	46.31	0.97	3419.93
	11/05/07	3,465.42	45.34	46.33	0.99	3419.93
	11/07/07	3,465.42	45.36	46.35	0.99	3419.91
	12/18/07	3,465.42	45.33	46.38	1.05	3419.93
MW-8	*02/23/07*	3,467.61	-	47.78	0.00	3419.83
	05/18/07	3,467.61	-	47.75	0.00	3419.86
	08/21/07	3,467.61	-	47.82	0.00	3419.79
	11/05/07	3,467.61	-	47.83	0.00	3419.78
MW-9	*02/23/07*	3,465.74	-	45.75	0.00	3419.99
	05/18/07	3,465.74	-	45.75	0.00	3419.99
	08/21/07	3,465.74	-	45.77	0.00	3419.97
	11/05/07	3,465.74	-	45.79	0.00	3419.95
MW-12	*02/23/07*	3466.69	-	46.91	0.00	3419.78
	05/18/07	3466.69	-	46.91	0.00	3419.78
	08/21/07	3466.69	-	46.95	0.00	3419.74
	11/05/07	3466.69	-	46.96	0.00	3419.73
MW-13	*02/23/07*	3466.98	-	47.46	0.00	3419.52
	05/18/07	3466.98	-	47.44	0.00	3419.54
	08/21/07	3466.98	-	47.47	0.00	3419.51
	11/05/07	3466.98	-	47.49	0.00	3419.49
MW-14	01/11/07	3466.50	47.11	47.21	0.10	3419.38
	02/15/07	3466.50	47.13	47.24	0.11	3419.35
	02/23/07	3466.50	47.12	47.59	0.47	3419.31
	03/08/07	3466.50	47.13	47.23	0.10	3419.36
	03/28/07	3466.50	47.13	47.21	0.08	3419.36
	04/25/07	3466.50	47.11	47.21	0.10	3419.38
	05/04/07	3466.50	47.09	47.11	0.02	3419.41
	05/18/07	3466.50	47.07	47.14	0.07	3419.42
	06/14/07	3466.50	47.04	47.09	0.05	3419.45
	07/12/07	3466.50	47.04	47.08	0.04	3419.45
	08/21/07	3466.50	46.11	46.17	0.06	3420.38
	09/14/07	3466.50	47.15	47.23	0.08	3419.34
	10/03/07	3466.50	sheen	47.12	0.00	3419.38
	10/10/07	3466.50	sheen	47.16	0.00	3419.34
	10/17/07	3466.50	sheen	47.14	0.00	3419.36
	11/05/07	3466.50	sheen	47.13	0.00	3419.37
	12/18/07	3466.50	sheen	47.11	0.00	3419.39
MW-15	*02/23/07*	3466.10	-	46.38	0.00	3419.72
	05/18/07	3466.10	-	46.32	0.00	3419.78
	08/21/07	3466.10	46.40	46.50	0.10	3419.69
	08/27/07	3466.10	46.42	46.47	0.05	3419.67
	09/14/07	3466.10	sheen	46.45	0.00	3419.65
	09/26/07	3466.10	sheen	46.47	0.00	3419.63
	10/03/07	3466.10	sheen	46.46	0.00	3419.64
	10/10/07	3466.10	sheen	46.46	0.00	3419.64
	10/17/07	3466.10	sheen	46.42	0.00	3419.68
	11/05/07	3466.10	sheen	46.43	0.00	3419.67

TABLE 1

2007 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
HDO 90 - 23
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-009

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-15	11/07/07	3466.10	sheen	46.44	0.00	3419.66
	12/18/07	3466.10	sheen	46.43	0.00	3419.67
MW-16	*02/23/07*	3465.93	-	46.49	0.00	3419.44
	05/18/07	3465.93	-	46.43	0.00	3419.50
	08/21/07	3465.93	-	46.50	0.00	3419.43
	11/05/07	3465.93	-	46.49	0.00	3419.44
MW-17	*02/23/07*	3468.68	-	49.38	0.00	3419.30
	05/18/07	3468.68	-	49.34	0.00	3419.34
	08/21/07	3468.68	-	49.41	0.00	3419.27
	11/05/07	3468.68	-	49.39	0.00	3419.29
RW-1	01/11/07	3465.02	sheen	45.37	0.00	3419.65
	02/15/07	3465.02		45.28	0.00	3419.74
	02/23/07	3465.02		45.29	0.00	3419.73
	03/08/07	3465.02	sheen	45.29	0.00	3419.73
	03/28/07	3465.02	sheen	45.26	0.00	3419.76
	04/25/07	3465.02	-	45.28	0.00	3419.74
	05/18/07	3465.02	-	45.14	0.00	3419.88
	07/12/07	3465.02	-	45.21	0.00	3419.81
	08/21/07	3465.02	-	45.26	0.00	3419.76
	11/05/07	3465.02	-	45.38	0.00	3419.64
RW-2	01/11/07	3465.21	sheen	45.39	0.00	3419.82
	02/15/07	3465.21	-	45.34	0.00	3419.87
	02/23/07	3465.21	-	45.34	0.00	3419.87
	03/08/07	3465.21	sheen	45.38	0.00	3419.83
	03/28/07	3465.21	sheen	45.38	0.00	3419.83
	04/25/07	3465.21	-	45.38	0.00	3419.83
	05/18/07	3465.21	-	45.26	0.00	3419.95
	07/12/07	3465.21	-	45.36	0.00	3419.85
	08/21/07	3465.21	-	45.39	0.00	3419.82
	11/05/07	3465.21	-	45.56	0.00	3419.65

Note: Elevations based on North American Vertical Datum of 1929.

TABLE 2

2007 CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.

HDO 90-23

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER AP-009

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8012B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		0.01	0.75	0.75	0.62	
MW-2	02/23/07	Not Sampled due to PSH in Well				
	05/18/07	Not Sampled due to PSH in Well				
	08/21/07	Not Sampled due to PSH in Well				
	11/05/07	**2.32**	<0.2	**2.31**	**0.892**	
MW-3	02/23/07	0.0085	<0.001	0.0366	<0.001	
	05/18/07	0.0056	<0.001	0.157	0.0244	
	08/21/07	**0.01**	<0.001	0.0296	<0.001	
	11/05/07	**0.0133**	<0.001	0.046	0.0179	
MW-4	02/23/07	Not Sampled on Current Sample Schedule				
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	Not Sampled on Current Sample Schedule				
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-5	02/23/07	Not Sampled on Current Sample Schedule				
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	Not Sampled on Current Sample Schedule				
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-6	02/23/07	Not Sampled due to PSH in Well				
	05/18/07	Not Sampled due to PSH in Well				
	08/21/07	Not Sampled due to PSH in Well				
	11/05/07	Not Sampled due to PSH in Well				
MW-8	02/23/07	Not Sampled on Current Sample Schedule				
	05/18/07	Not Sampled on Current Sample Schedule				
	08/21/07	Not Sampled on Current Sample Schedule				
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-9	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	<0.001	<0.001	<0.001	<0.001	
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-12	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	<0.001	<0.001	<0.001	<0.001	
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-13	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	<0.001	<0.001	<0.001	<0.001	
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-14	02/23/07	Not Sampled due to PSH in Well				
	05/18/07	Not Sampled due to PSH in Well				
	08/21/07	Not Sampled due to PSH in Well				
	11/05/07	0.0039	0.0036	0.138	0.0629	
MW-15	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	

TABLE 2

2007 CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.

HDO 90-23

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER AP-009

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8012B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		**0.01**	**0.75**	**0.75**	**0.62**	
MW-15	08/21/07	Not Sampled due to PSH in Well				
	11/05/07	<0.001	<0.001	0.0012	<0.001	
MW-16	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	<0.001	<0.001	<0.001	<0.001	
	11/05/07	<0.001	<0.001	<0.001	<0.001	
MW-17	02/23/07	<0.001	<0.001	<0.001	<0.001	
	05/18/07	<0.001	<0.001	<0.001	<0.001	
	08/21/07	<0.001	<0.001	<0.001	<0.001	
	11/05/07	<0.001	<0.001	<0.001	<0.001	
RW-1	02/23/07	**2.02**	<0.2	0.639	0.503	
	05/18/07	**1.72**	<0.05	0.685	0.502	
	08/21/07	**2.58**	<0.05	**1.43**	**1.04**	
	11/07/07	**1.58**	<0.2	<0.2	<0.2	
RW-2	02/23/07	**0.0237**	<0.001	0.0131	0.0034	
	05/18/07	<0.001	<0.001	<0.001	0.004	
	08/21/07	**0.162**	<0.001	0.0044	0.0157	
	11/05/07	<0.001	<0.001	<0.001	<0.001	

Appendices

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

OIL CONSERVATION DIVISION

NOTIFICATION OF FIRE, BREAKS, SPILLS, LEAKS, AND BLOWOUTS

NAME OF OPERATOR	TEXAS-NEW MEXICO PIPE LINE CO				ADDRESS	P. O. Box 2528, Hobbs, N.M. 88240	
REPORT OF	FIRE	BREAK	SPILL	LEAK X	BLOWOUT	OTHER*	
TYPE OF FACILITY	DRLG WELL	PROD WELL	TANK BTTY	PIPE LINE X	GAS PLNT	OIL RFY	OTHER*
NAME OF FACILITY	14" Trunk Line						
LOCATION OF FACILITY (QUARTER/QUARTER SECTION OR FOOTAGE DESCRIPTION)	NW/4 NE/4				SEC. 6	TWP. 21	RGE. 37	COUNTY Lea
DISTANCE AND DIRECTION FROM NEAREST TOWN OR PROMINENT LANDMARK	6 Mi. NNW of Eunice & 3 Mi. N.W. of Loop 18						
DATE AND HOUR OF OCCURRENCE	Unknown				DATE AND HOUR OF DISCOVERY	3/27/90 2:15 P.M.	
WAS IMMEDIATE NOTICE GIVEN?	YES X	NO	NOT REQUIRED		IF YES, TO WHOM	NMOCC - B. Pritchard SCC - D. Trujillo	
BY WHOM	NMOCC - M. Criswell SCC - C. Johnson				DATE AND HOUR	3/27/90: NMOCC - 3:35 P.M. 3/28/90: SCC - 9:05 A.M.	
TYPE OF FLUID LOST	Sour Crude				QUANTITY OF LOSS	750 BBLS	VOLUME RECOVERED	550 BBLS
DID ANY FLUIDS REACH A WATERCOURSE?	YES	NO X	QUANTITY				

IF YES, DESCRIBE FULLY**

DESCRIBE CAUSE OF PROBLEM AND REMEDIAL ACTION TAKEN**

External Corrosion

Line clamped off

DESCRIBE AREA AFFECTED AND CLEANUP ACTION TAKEN**

45,000 sq ft pasture land; 40,000 sq ft equipment damage.
Cattle in the area
Oil soaked earth covered with fresh soil in prospects of full restoration

DESCRIPTION OF AREA	FARMING	GRAZING X	URBAN	OTHER*			
SURFACE CONDITIONS	SANDY	SANDY LOAM X	CLAY	ROCKY	WET X	DRY	SNOW

DESCRIBE GENERAL CONDITIONS PREVAILING (TEMPERATURE, PRECIPITATION, ETC.)**

55°

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SIGNED B.L. Lednicky TITLE Dist. Manager DATE 3/28/90

*SPECIFY **ATTACH ADDITIONAL SHEETS IF NECESSARY

HDO 90-23

cc: Hazardous Waste Section
N.M. Environmental Improvement Div.

90-063530