# GW - 140

# REPORTS

# DATE:

# 2006

GW-0140

Report

2006

# 2006
# ANNUAL MONITORING REPORT

## TNM SPS-11

NW ¼ SE ¼ of SECTION 18, TOWNSHIP 18 SOUTH, RANGE 36 EAST
LEA COUNTY, NEW MEXICO
PLAINS EMS NUMBER: TNM-SPS-11
NMOCD Reference GW-0140

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 2007**

Curt D. Stanley
Project Manager

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

## 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 were assumed by NOVA. The TNM SPS-11 site (the site), which was formerly the responsibility of Texas New Mexico Pipeline Company (TNM) and EOTT Energy Corporation (EOTT) which became Link Energy, 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 2006 only. However, historical data tables as well as 2006 laboratory analytical reports are included on the enclosed data disk. Historic information prior to August 19, 1999 does not appear on the enclosed data disk because this data is unavailable. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2006 to assess the extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). Each groundwater monitor event consisted of measuring static water levels in the monitor wells, checking for the presence of PSH on the water column and the 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 approximately 15 miles west of the town of Hobbs, New Mexico in the NW ¼ of the SE ¼ of Section 18, Township 18 South, Range 36 East. Observations in the field indicate the surface topography in the area of the site to be nearly flat. Ground cover consists of low grasses with few mesquite bushes. The predominant land usage is in the production of oil and gas and as livestock pasture.

According to the Site Investigation and Remedial Action Plan prepared by TNM and dated January 25, 1993, water from a utility well (SPS-11) belonging to Southwestern Public Service Company (SPS) was sampled on April 2, 1991. The analytical results indicated benzene concentrations were above the Environmental Protection Agency (EPA) drinking water standards. The water well was taken out of service in April 1991. A TNM pipeline adjacent to the water well was identified and a hydrocarbon surface stain was observed in the vicinity of utility well SPS-11. The staining was reportedly the result of a pipeline release prior to 1975. No detailed information from the previous pipeline owners or consultants with respect to the release date, volume of crude oil released, or pipeline repair is available, at this time. The Release Notification and Corrective Action (Form C-141) is provided as Appendix B.

Initial site investigation actions were performed for TNM and EOTT by previous consultants. A total of twenty-five (25) soil borings/groundwater monitoring wells (MW-1 through MW-25) were installed prior to October 1999 and six (6) monitor wells were installed between May 2000

and December 2001, to further delineate the down gradient extent of impact at the site. Two (2) additional monitor wells (MW-32 and MW-33) were installed in 2004.

In March 2006, one (1) soil boring (SB-106) was advanced and two (2) monitor wells (MW-34 and MW-35) were installed. In September 2006, one (1) soil boring (SB-206) was advanced and three (3) additional monitor wells (MW-36, MW-37, and MW-38) were installed. Analytical results of the soil samples collected during the installation of the monitor wells and the advancement of the soil boring, during the 2006 reporting period are provided in Table 3, Concentrations of TPH and BTEX in Soil. Boring logs and monitor well details are provided in Appendix A.

Of the thirty-eight (38) monitor wells installed at the site since project inception, data on two (2) monitor wells (MW-5 and MW-8) could not be located in the available historic data. Monitor wells MW-20, MW-22, and MW-27 were plugged and abandoned September 14, 2005 after review of relevance and approval from the NMOCD.

There are currently thirty three (33) monitor wells on site.

## FIELD ACTIVITIES

Based on gauging data collected during the reporting period, a measurable thickness of PSH was detected in monitor well MW-1 only. PSH thicknesses ranged from a 0.01 to 1.0 feet during the reporting period, with an average of 0.30 feet. In comparison, the average thickness during the 2005 reporting period was 0.45 feet. A maximum PSH thickness of 1.0 feet was recorded on March 31, 2006 and is shown on Table 1. PSH recovery is performed on a weekly schedule by manual recovery methods.

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 correspondences dated June 22, 2005 and May 2, 2006.

| NMOCD Approved Sampling Schedule | | | | | |
|---|---|---|---|---|---|
| MW-1 | Quarterly | MW-14 | Quarterly | MW-27 | Plugged and Abandoned |
| MW-2 | Annually | MW-15 | Quarterly | MW-28 | Quarterly |
| MW-3 | Annually | MW-16 | Quarterly | MW-29 | Quarterly |
| MW-4 | Quarterly | MW-17 | Quarterly | MW-30 | Annually |
| MW-5 | - | MW-18 | Semi-Annually | MW-31 | Annually |
| MW-6 | Quarterly | MW-19 | Annually | MW-32 | Quarterly |
| MW-7 | Quarterly | MW-20 | Plugged and Abandoned | MW-33 | Quarterly |
| MW-8 | - | MW-21 | Annually | MW-34 | Quarterly |
| MW-9 | Quarterly | MW-22 | Plugged and Abandoned | MW-35 | Quarterly |
| MW-10 | Quarterly | MW-23 | Quarterly | MW-36 | Quarterly |
| MW-11 | Quarterly | MW-24 | Quarterly | MW-37 | Quarterly |
| MW-12 | Quarterly | MW-25 | Annually | MW-38 | Quarterly |
| MW-13 | Annually | MW-26 | Quarterly | | |

The site monitor wells were gauged and sampled on March 15, June 14, September 13, and December 5-6, 2006. During each sampling event, monitor wells were purged of approximately three well volumes of water or until the wells failed to produce water. Purging was performed using disposable polyethylene bailer for each well or electrical Grundfos pump and dedicated tubing. 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 by Key Energy utilizing a licensed disposal facility (NMOCD AO SWD-730).

Locations of the monitor wells and the inferred groundwater gradient, which were constructed from measurements collected during quarterly sampling events performed in 2006, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Maps. Groundwater elevation data for 2006 is provided as Table 1. Historic groundwater elevation data beginning August 19, 1999 is provided on the enclosed data disk.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0039 feet/foot to the southeast as measured between monitor wells MW-3 and MW-33. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,795.12 and 3,806.60 feet above mean sea level, in monitor well MW-1 on December 6, 2006 and in monitor well MW-25 on March 15, 2006, respectively. PSH data for the 2006 gauging events can be found in Table 1 and on Figures 3A through 3D.

## LABORATORY RESULTS

Monitor well MW-1 contained PSH during all four (4) quarters of the 2006 reporting period and was not sampled.

Groundwater samples obtained during the each quarterly monitoring event were delivered to TraceAnalysis, Inc. in Lubbock, Texas for analysis of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021b. BTEX constituent concentrations for 2006 are summarized in Table 2. Copies of the laboratory reports for 2006 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 monitored on a quarterly schedule. Monitor well MW-1 was not sampled during any of the four (4) quarters of the reporting period, due to the presence of PSH in the recovery well. PSH thicknesses of 0.91 feet, 0.09 feet, 0.42 feet, and 0.14 feet were reported during the 1$^{st}$, 2$^{nd}$, 3$^{rd}$ and 4$^{th}$ quarter of 2006, respectively.

**Monitor well MW-2** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards of 0.01 mg/L for benzene, 0.75 mg/L for toluene, 0.75 mg/L for ethylbenzene and 0.62 mg/L for xylene, for each BTEX constituent during the 4$^{th}$ quarter sampling event.

**Monitor well MW-3** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event.

**Monitor well MW-4** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.0449 mg/L during the 3rd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 2nd and 3rd quarters of the reporting period. Toluene concentrations were below laboratory method detection limits (MDL) and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 4th quarters to 0.007 mg/L during the 3rd quarter of 2006. Ethylbenzene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-6** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st 2nd and 4th quarters to 2.69 mg/L during the 3rd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 3rd quarter of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 4th quarters to 0.236 mg/L during the 3rd quarter of 2006. Ethylbenzene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-7** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.583 mg/L during the 4th quarter to 1.48 mg/L during the 1st quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.457 mg/L during the 4th quarter to 1.08 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were above NMOCD regulatory standards during the 1st quarter of the reporting period. Xylene concentrations ranged from <0.02 mg/L during the 3rd quarter to 0.152 mg/L during the 1st quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-9** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 3rd quarter to 3.13 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 1st, 2nd, and 4th quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.0354 mg/L during the 4th quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.52 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.0406 mg/L during the 4th quarter of 2006.

Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-10** is currently sampled on a NMOCD approved quarterly schedule (in reporting year 2005 and 1st quarter 2006, MW-10 was previously on an NMOCD approved semi-annual schedule). Analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 3rd and 4th quarters to 0.0014 mg/L during the 2nd quarter of 2006. Benzene concentrations were below the NMOCD regulatory standards during the 2nd, 3rd and 4th quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 3rd and 4th quarters to 0.0057 mg/L during the 2nd quarter of 2006. Ethylbenzene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.0406 mg/L during the 4th quarter of 2006. Xylene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-11** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.672 mg/L during the 4th quarter to 1.130 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.161 mg/L during the 4th quarter to 0.425 mg/L during the 2nd quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.02 mg/L during the 1st and 3rd quarters to 0.0505 mg/L during the 2nd quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-12** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0037 mg/L during the 4th quarter to 0.0297 mg/L during the 1st quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 1st, 2nd, and 3rd quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 2nd and 4th quarters to 0.0012 mg/L during the 3rd quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.171 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.0026 mg/L during the 3rd quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-13** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event.

**Monitor well MW-14** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 3.66 mg/L during the 1st quarter to 4.96 mg/L during the 3rd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.960 mg/L during the 1st quarter to 1.210 mg/L during the 3rd quarter of 2006. Ethylbenzene concentrations were above the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-15** is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the reporting period.

**Monitor well MW-16** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.025 mg/L during the 4th quarter to 0.193 mg/L during the 1st quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.113 mg/L during the 1st quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0063 mg/L during the 4th quarter to 0.065 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from 0.0013 mg/L during the 4th quarter to 0.0347 mg/L during the 1st quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-17** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0086 mg/L during the 4th quarter to 0.0224 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 1st, 2nd, and 3rd quarters of the reporting period. Toluene concentrations ranged from 0.0047 mg/L during the 4th quarter to 0.0158 mg/L during the 1st quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.002 mg/L during the 4th quarter to 0.0077 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from 0.0048 mg/L during the 4th quarter to 0.0137 mg/L during the 2nd quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-18** is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 2nd and 4th quarter sampling events.

**Monitor well MW-19** is sampled on a annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each

BTEX constituent during the 4th quarter of the reporting period, with the exception the xylene constituent which exhibited a concentration of 0.0024 mg/L, this concentration is below the NMOCD regulatory standards.

**Monitor well MW-21** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event.
Monitor well MW-23 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the reporting period.

**Monitor well MW-24** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.105 mg/L during the 4th quarter to 0.339 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.0215 mg/L during the 2nd quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0023 mg/L during the 4th quarter to 0.0261 mg/L during the 2nd quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.022 mg/L during the 2nd quarter of 2006. Ethylbenzene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-25** is sampled on a annual schedule and analytical results indicate benzene concentrations were below MDL and the NMOCD regulatory standard during the 4th quarter of the reporting period. The 4th quarter toluene concentration was 0.0016 mg/L, this concentration is below the NMOCD regulatory standards. The 4th quarter ethylbenzene concentration was below MDL and the NMOCD regulatory standards. The 4th quarter xylene concentration was 0.0017 mg/L, this concentration is below the NMOCD regulatory standards.

**Monitor well MW-26** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.014 mg/L during the 3rd quarter to 0.73 mg/L during the 1st quarter of 2006. Benzene concentrations were above NMOCD regulatory standards all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.01 mg/L during the 3rd quarter to 0.464 mg/L during the 1st quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.01 mg/L during the 3rd quarter to 0.27 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.01 mg/L during the 3rd quarter to 0.223 mg/L during the 1st quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-28** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 1.820 mg/L during the 3rd quarter to 3.090 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all

four (4) quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.165 mg/L during the 3rd quarter to 0.589 mg/L during the 2nd quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.05 mg/L during the 3rd quarter to 0.16 mg/L during the 2nd quarter of 2006. Xylene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-29** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 1.300 mg/L during the 4th quarter to 1.690 mg/L during the 2nd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during all four (4) quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.02 mg/L during the 2nd and 3rd quarters to 0.0161 mg/L during the 4th quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-31** is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event.

**Monitor well MW-32** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 3.14 mg/L during the 4th quarter to 5.14 mg/L during the 1st quarter of 2006. Benzene concentrations were above NMOCD regulatory standards all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.02 mg/L during the 1st quarter to 0.0592 mg/L during the 3rd quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0521 mg/L during the 4th quarter to 0.586 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from <0.2 mg/L during the 1st and 2nd quarters to 0.0428 mg/L during the 4th quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-33** is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the reporting period.

**Monitor well MW-34** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0847 mg/L during the 1st quarter to 0.733 mg/L during the 3rd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards all four (4) quarters of the reporting period. Toluene, ethylbenzene and xylene concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the reporting period.

**Monitor well MW-35** is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.168 mg/L during the 4th quarter to 0.685 mg/L during the 3rd quarter of 2006. Benzene concentrations were above NMOCD regulatory standards all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.01 mg/L during the 3rd quarter to 0.667 mg/L during the 1st quarter of 2006. Toluene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from 0.04 mg/L during the 4th quarter to 0.154 mg/L during the 1st quarter of 2006. Ethylbenzene concentrations were below the NMOCD regulatory standards during all four (4) quarters of the reporting period. Xylene concentrations ranged from 0.0421 mg/L during the 4th quarter to 0.186 mg/L during the 1st quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during all four (4) quarters of the reporting period.

**Monitor well MW-36** (installed September 2006) is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.593 mg/L during the 3rd quarter to 1.12 mg/L during the 4th quarter of 2006. Benzene concentrations were above NMOCD regulatory standards during the 3rd and 4th quarters of the reporting period. Toluene and ethylbenzene concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 3rd and 4th quarters of the reporting period. Xylene concentrations ranged from <0.01 mg/L during the 4th quarter to 0.102 mg/L during the 3rd quarter of 2006. Xylene concentrations were below NMOCD regulatory standards during the 3rd and 4th quarters of the reporting period.

**Monitor well MW-37** (installed September 2006) is sampled on a quarterly schedule and analytical results indicate benzene concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 3rd and 4th quarters of the reporting period.

**Monitor well MW-38** (installed September 2006) is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below MDL and the NMOCD regulatory standard for each BTEX constituent during the 3rd and 4th 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 during the annual reporting period of 2006. Currently, there are thirty three (33) groundwater monitor wells (MW-1 through MW-38, excluding MW-5, MW-8, MW-20, MW-22, and MW-27) on site. The most recent Groundwater Gradient Map indicates a general gradient of approximately 0.0039 feet/foot to the southeast.

During the reporting period, a measurable thickness of PSH was detected in monitor well MW-1. PSH thicknesses ranged from a 0.01 to 1.0 feet during the 2006 reporting period, with an average of 0.30 feet. In comparison, the average thickness during the 2005 reporting period was 0.45 feet.

A maximum PSH thickness of 1.0 feet was recorded on March 31, 2006 PSH recovery is performed on a weekly schedule by manual recovery methods.

Review of laboratory analytical results of groundwater samples collected during the 2006 reporting period, indicates BTEX constituent concentrations are below NMOCD regulatory standards in fifteen (15) on site monitor wells. PSH thicknesses observed in monitor well MW-1 have decreased from the levels observed during the 2005 reporting period.

## ANTICIPATED ACTIONS

Groundwater monitoring and weekly PSH recovery will continue in 2007. An Annual Monitoring Report will be submitted to the NMOCD before April 1, 2008.

The need for additional down gradient horizontal site delineation will likely require the installation of additional monitor wells east of monitor well MW-11 and east of the monitor well MW-34 / MW-36 area.

## 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
Ben Stone
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

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

Copy 3:
Camille Reynolds
Plains Marketing, L.P.
3112 Highway 82
Lovington, NM
cjreynolds@paalp.com

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

Copy 5:
Barry Andrews
Excel Energy
P.O. Box 1650
Hobbs, New Mexico 88241

Copy 6:
NOVA Safety and Environmental
2057 Commerce Street
Midland, TX 79703
cstanley@novatraining.cc

# FIGURES

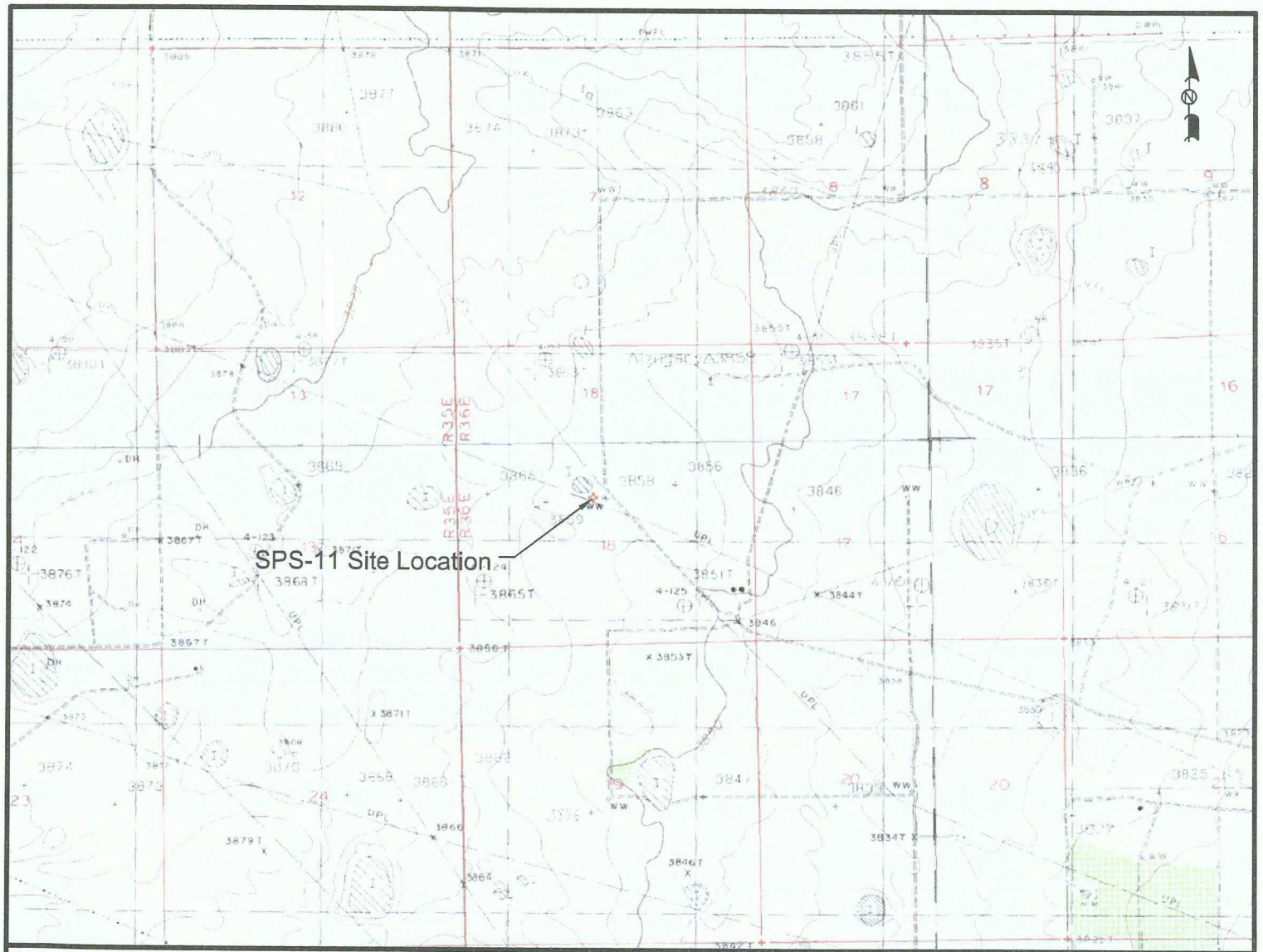
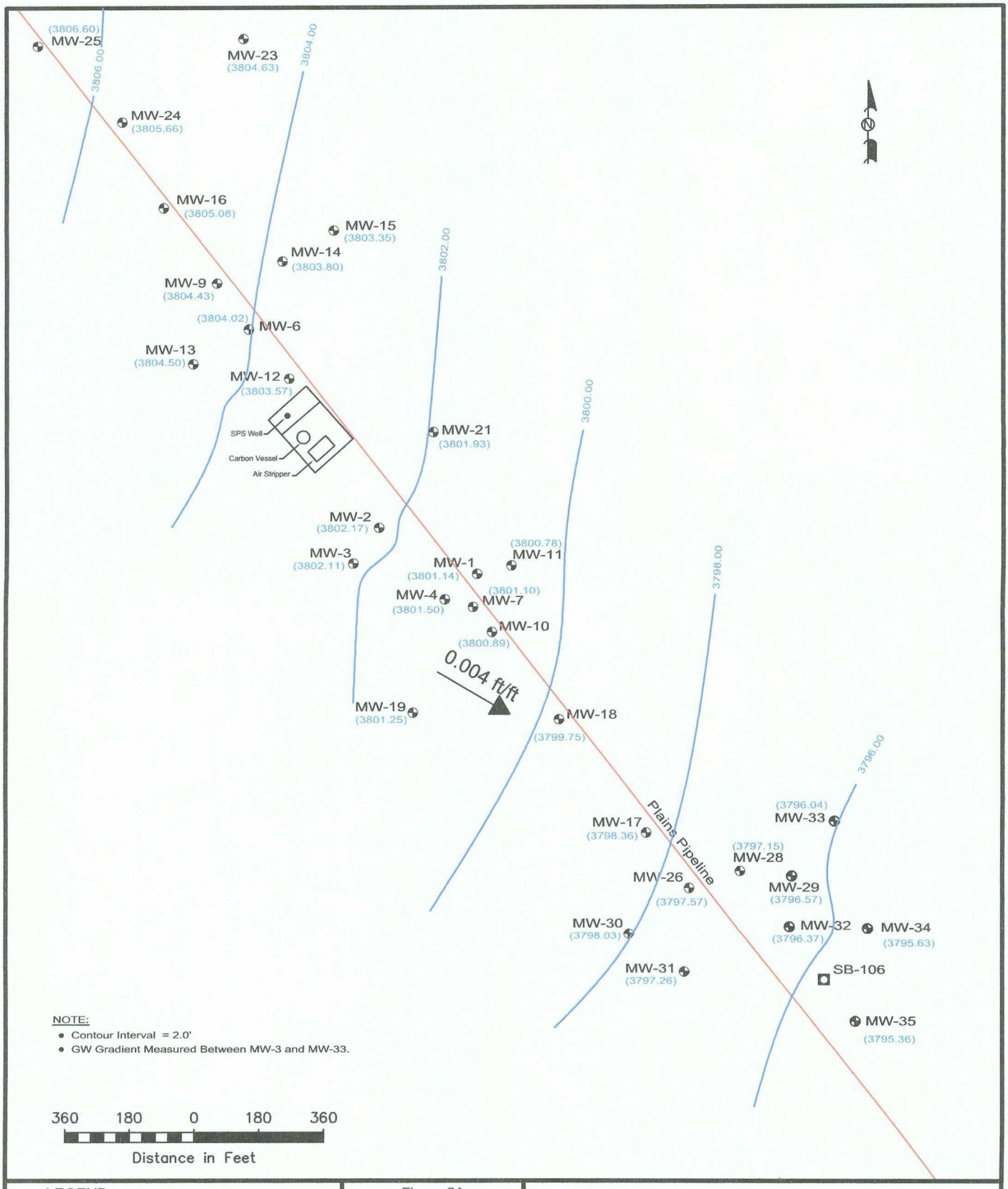



Figure 1
Site Location Map

Plains Marketing, L.P.
SPS-11
Lea County, NM

NOVA Safety and Environmental

| | | |
|---|---|---|
| Scale: NTS | Prep By: CDS | Checked By: TKC |
| February 20, 2005 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 36.5" | |




LEGEND:

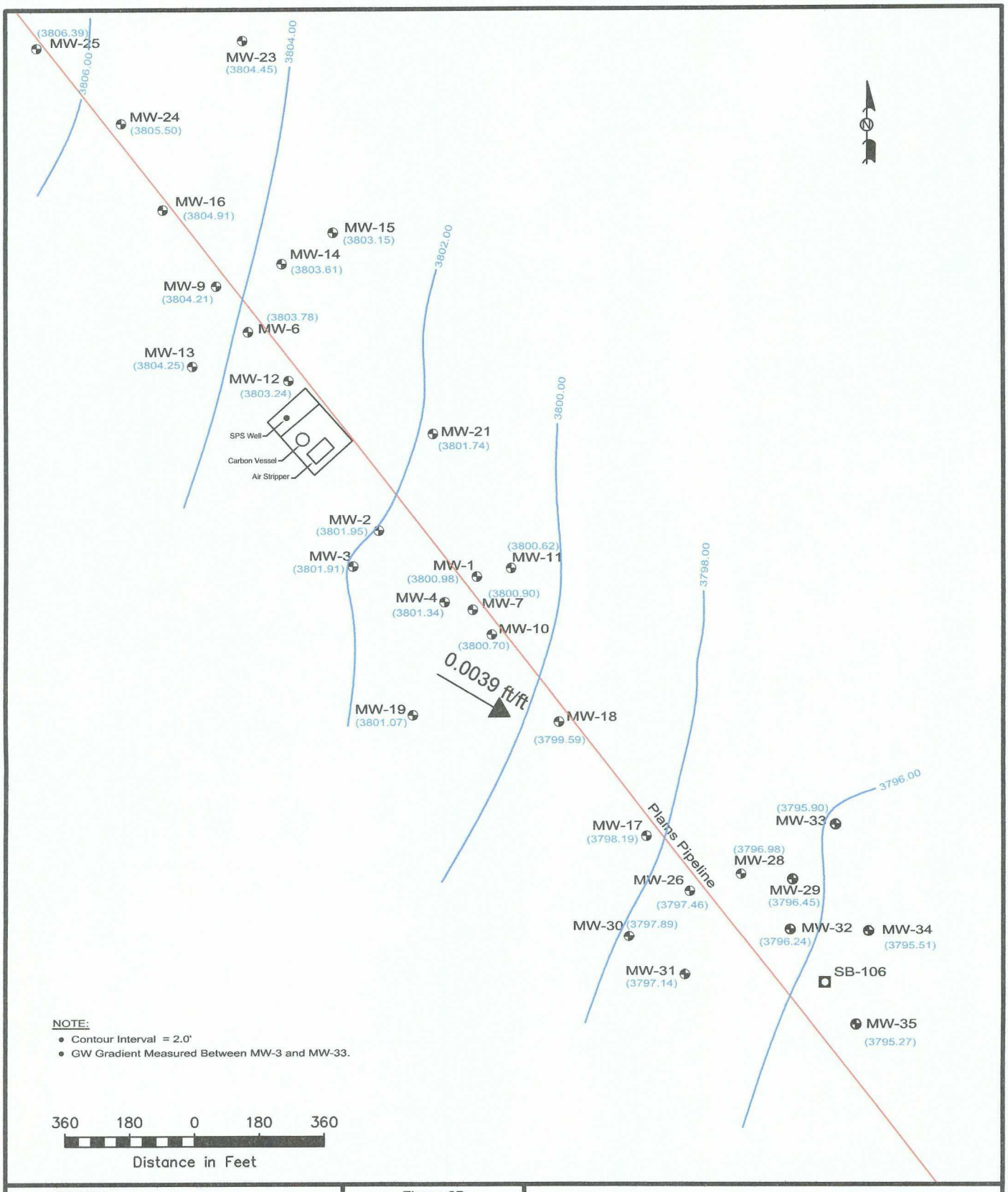
- Monitor Well Location
- Soil Boring Location
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2A
Inferred Groundwater Gradient Map
(03/15/06)
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| July 24, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




LEGEND:

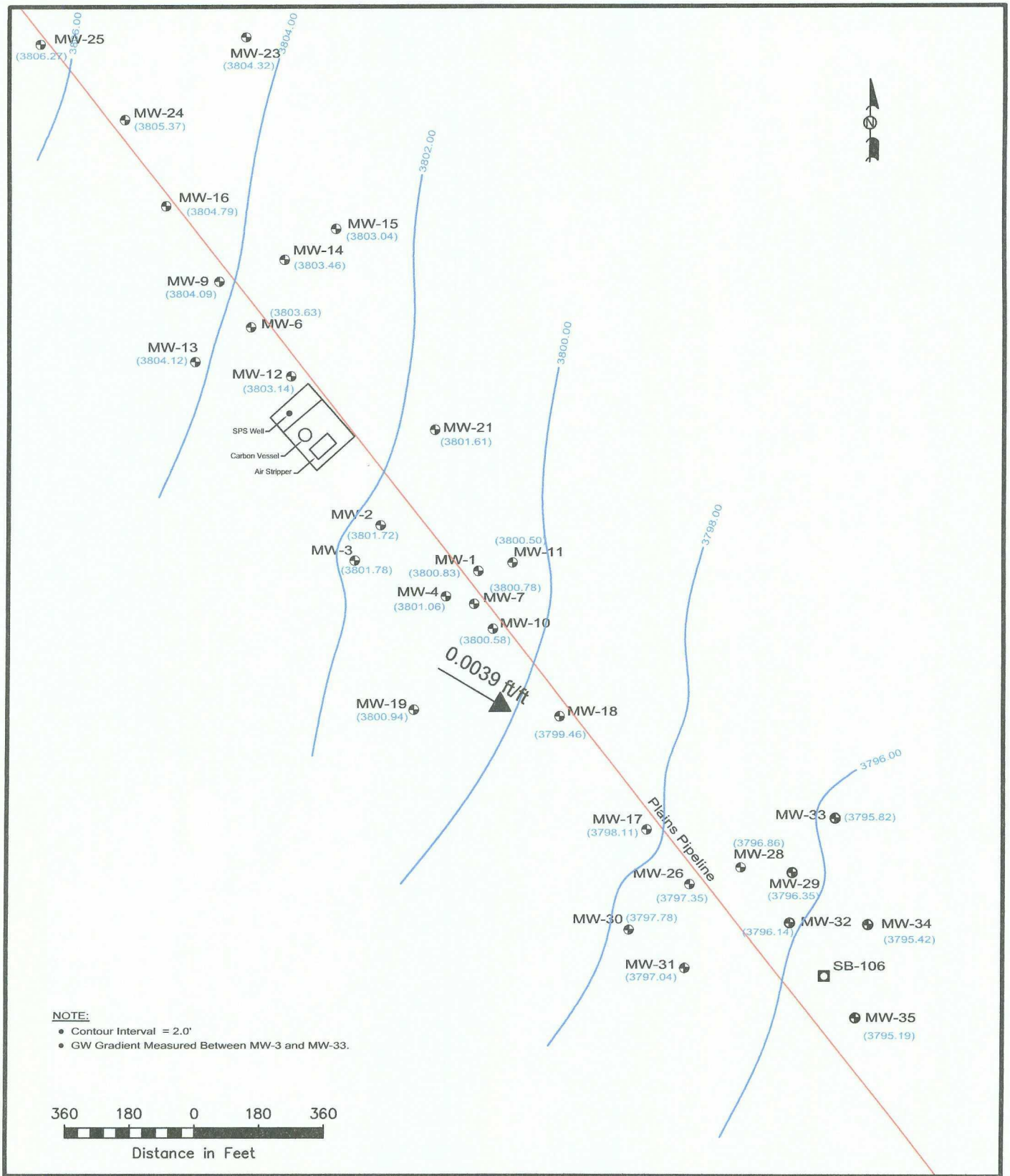
- Monitor Well Location
- Soil Boring Location
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2B
Inferred Groundwater Gradient Map
(06/14/06)
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| July 24, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




LEGEND:

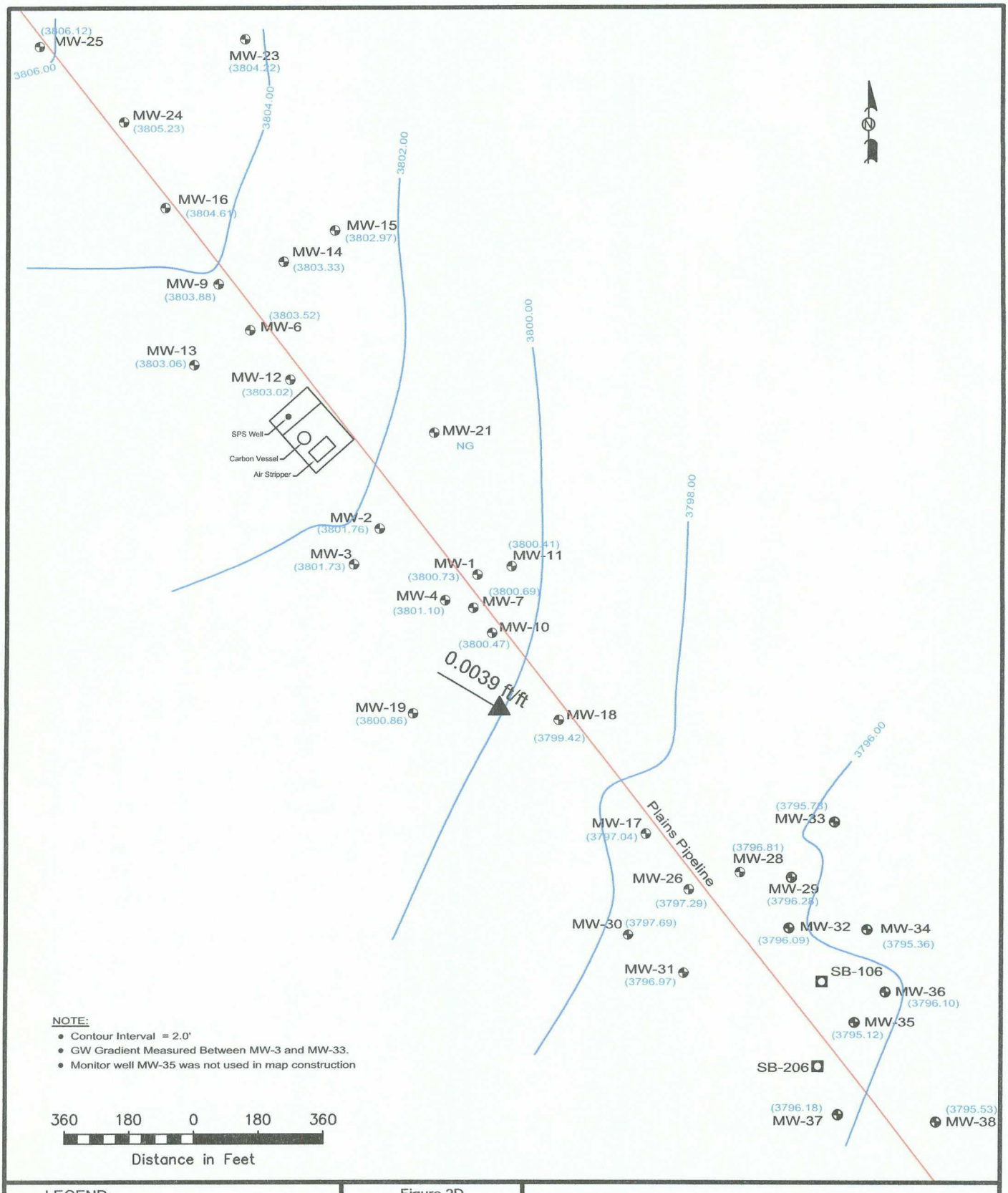
- Monitor Well Location
- Soil Boring Location
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2C
Inferred Groundwater Gradient Map
(09/13/06)
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| March 23, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




NOTE:

- Contour Interval = 2.0'
- GW Gradient Measured Between MW-3 and MW-33.
- Monitor well MW-35 was not used in map construction

LEGEND:

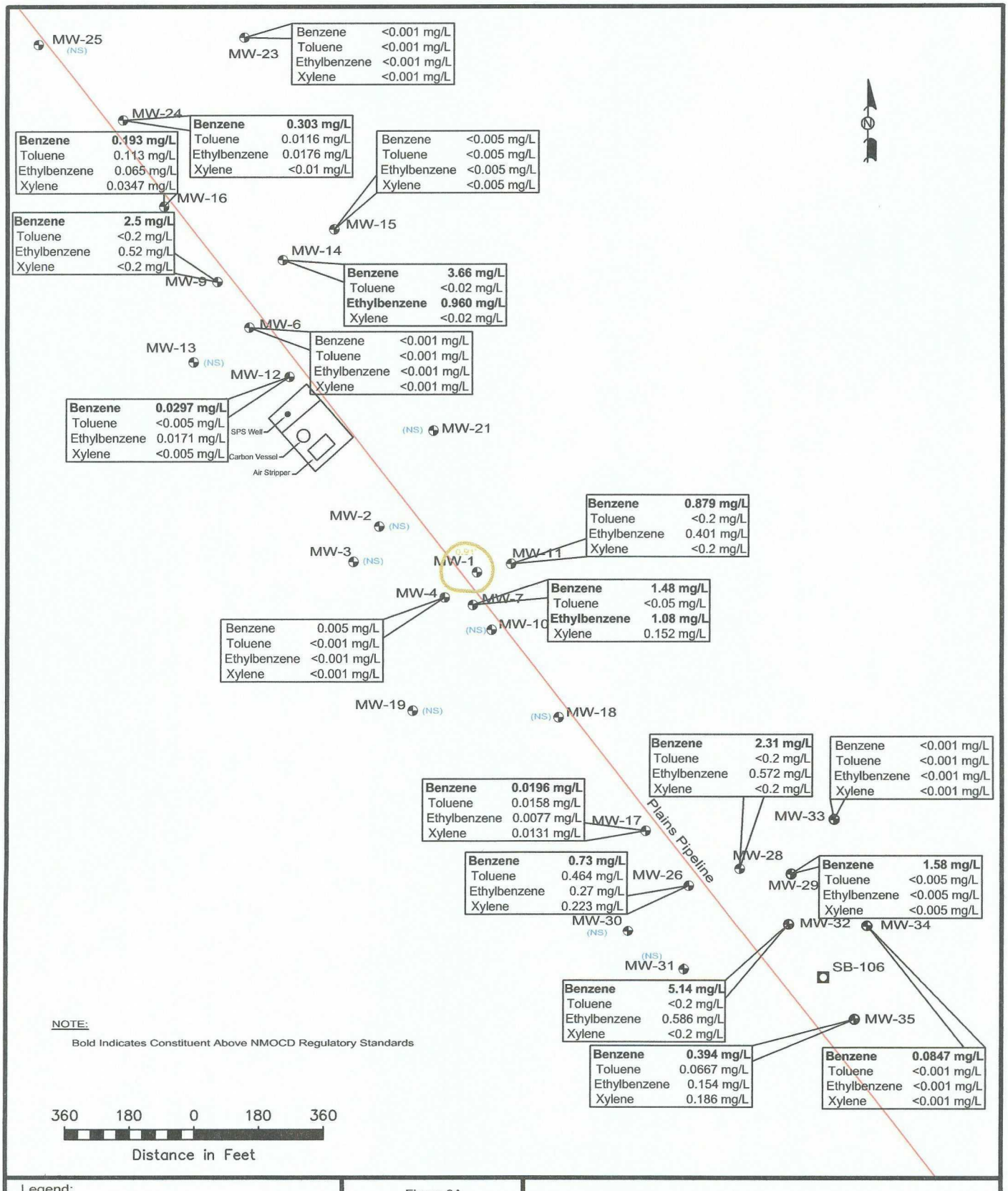
- Monitor Well Location
- Soil Boring Location
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2D
Inferred Groundwater Gradient Map
(12/05-06/06)
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| January 9, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




Legend:

- Monitoring Well Location
- Soil Boring Location
- Pipeline
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 0.91' PSH Thickness (Feet)
- (NS) Not Sampled

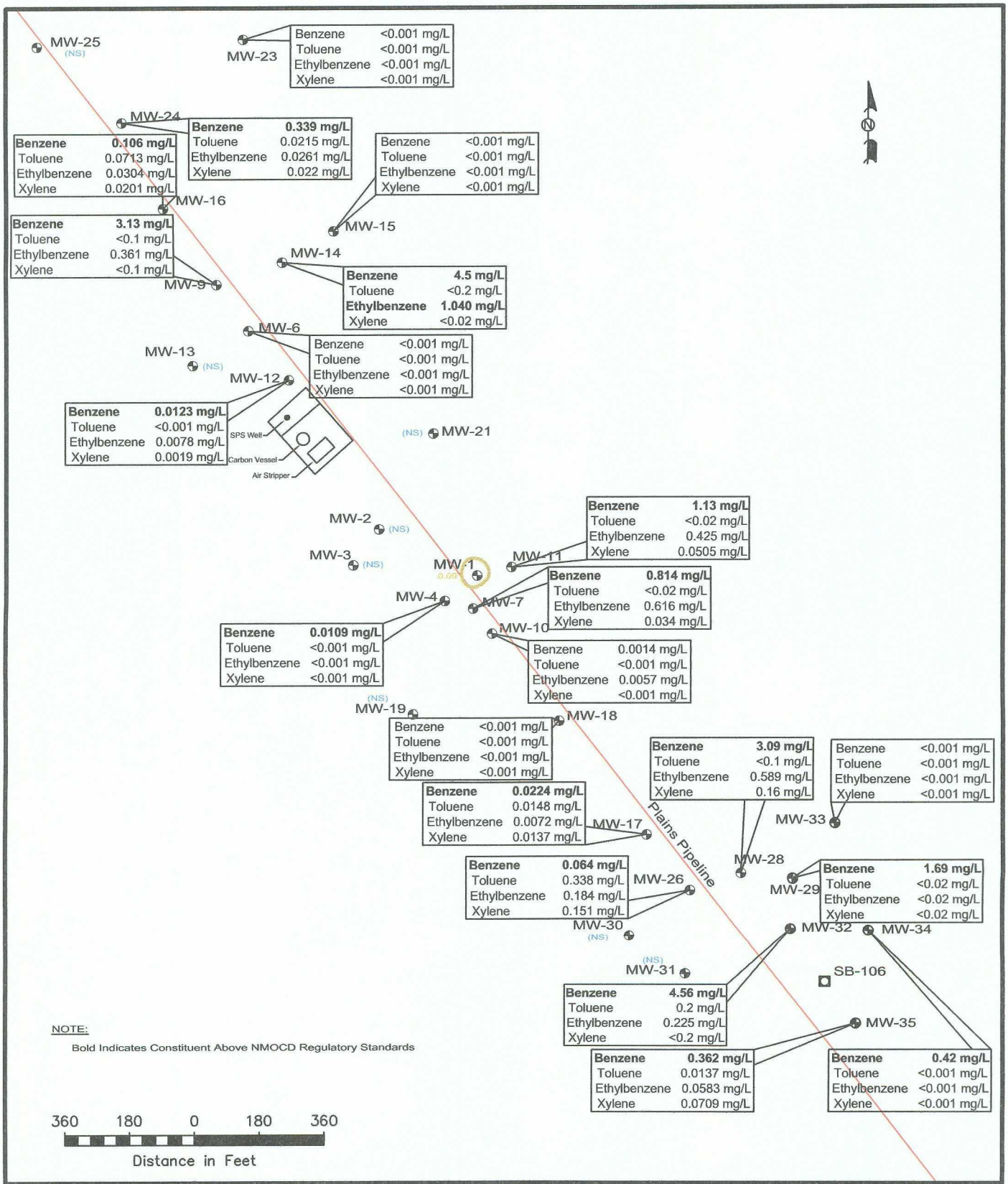
Figure 3A
Groundwater Concentration and Inferred PSH Extent Map (03/15/06)

Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| July 24, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




Legend:

- Monitoring Well Location
- (NS) Not Sampled
- Soil Boring Location
- Pipeline
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 0.01' PSH Thickness (Feet)

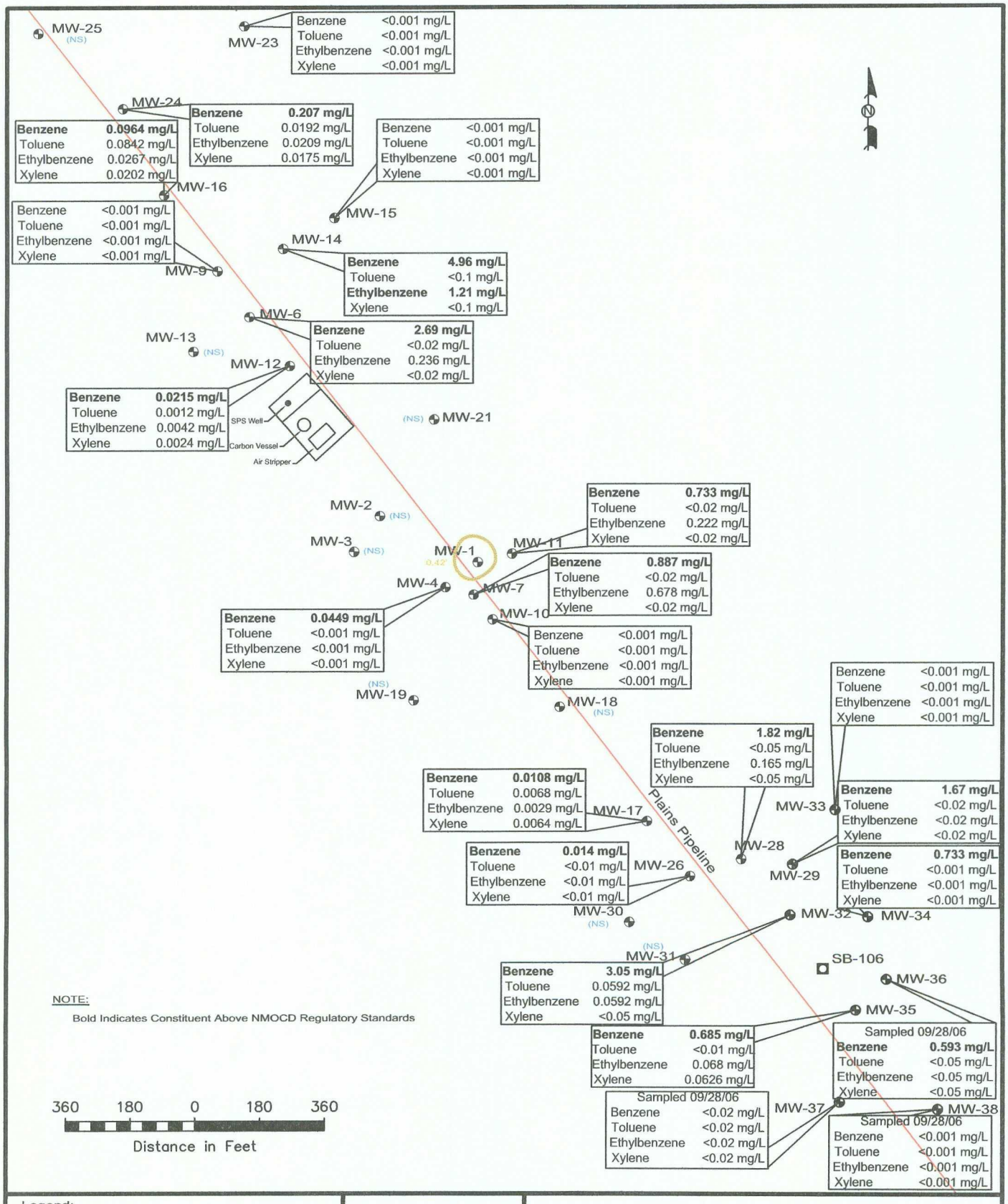
Figure 3B
Groundwater Concentration and Inferred PSH Extent Map (06/14/06)

Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| July 24, 2006 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




Legend:

- Monitoring Well Location
- (NS) Not Sampled
- Soil Boring Location
- Pipeline
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 0.01' PSH Thickness (Feet)

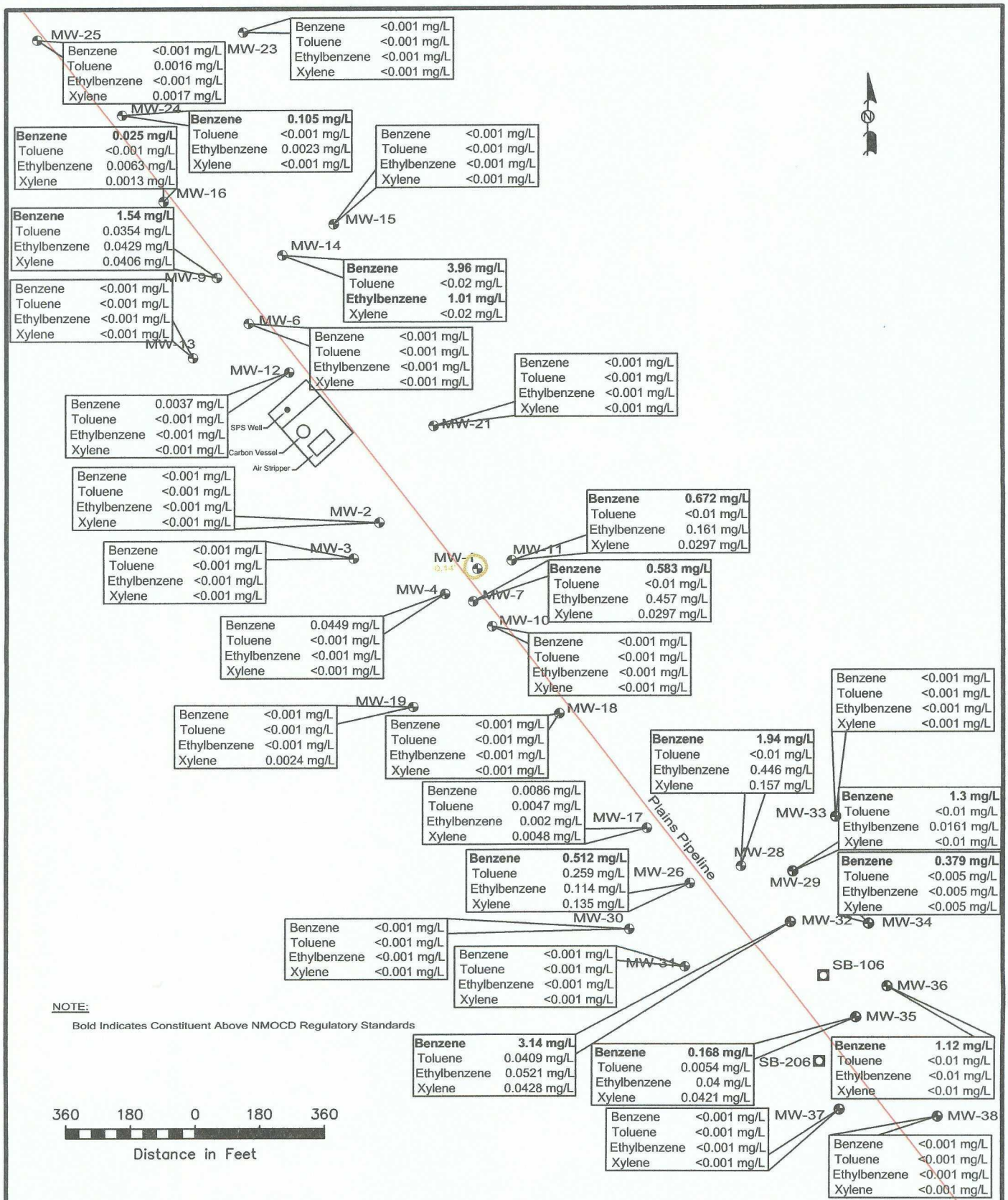
Figure 3C
Groundwater Concentration and Inferred PSH Extent Map (09/13/06)

Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| February 1, 2007 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |




Legend:

- Monitoring Well Location
- (NS) Not Sampled
- Soil Boring Location
- Pipeline
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 0.01' PSH Thickness (Feet)

Figure 3D
Groundwater Concentration and Inferred PSH Extent Map (12/05-06/06)

Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

| | | |
|---|---|---|
| Scale: 1" = 360' | CAD By: DGC | Checked By: CDS |
| February 2, 2007 | NW1/4 SE1/4 Sec 18 T18S R36E | |
| | Lat. N32° 44' 50.3" Long. W103° 23' 38.5" | |

# TABLES

**TABLE 1**

**2006 GROUNDWATER ELEVATION DATA**
**PLAINS MARKETING, L.P.**

**SPS - 11**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | CASING WELL ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-1 | 01/13/06 | 3859.08 | 57.73 | 58.51 | 0.78 | 3801.23 |
| | 01/27/06 | 3859.08 | 57.80 | 58.35 | 0.55 | 3801.20 |
| | 02/24/06 | 3859.08 | 57.83 | 58.60 | 0.77 | 3801.13 |
| | 03/08/06 | 3859.08 | 57.86 | 58.51 | 0.65 | 3801.12 |
| | *03/15/06* | 3859.08 | 57.80 | 58.71 | 0.91 | 3801.14 |
| | 03/24/06 | 3859.08 | 57.80 | 58.64 | 0.84 | 3801.15 |
| | 03/31/06 | 3859.08 | 57.85 | 58.85 | 1.00 | 3801.08 |
| | 05/04/06 | 3859.08 | 57.93 | 58.69 | 0.76 | 3801.04 |
| | 05/09/06 | 3859.08 | 58.01 | 58.21 | 0.20 | 3801.04 |
| | 05/10/06 | 3859.08 | 58.03 | 58.12 | 0.09 | 3801.04 |
| | 05/15/06 | 3859.08 | 58.08 | 58.17 | 0.09 | 3800.99 |
| | 05/17/06 | 3859.08 | 58.05 | 58.11 | 0.06 | 3801.02 |
| | 05/24/06 | 3859.08 | 58.09 | 58.11 | 0.02 | 3800.99 |
| | 05/31/06 | 3859.08 | 58.07 | 58.23 | 0.16 | 3800.99 |
| | 06/02/06 | 3859.08 | 58.08 | 58.13 | 0.05 | 3800.99 |
| | 06/05/06 | 3859.08 | 58.08 | 58.17 | 0.09 | 3800.99 |
| | 06/12/06 | 3859.08 | 58.08 | 58.26 | 0.18 | 3800.97 |
| | *06/14/06* | 3859.08 | 58.09 | 58.18 | 0.09 | 3800.98 |
| | 06/15/06 | 3859.08 | 58.10 | 58.21 | 0.11 | 3800.96 |
| | 06/19/06 | 3859.08 | 58.10 | 58.23 | 0.13 | 3800.96 |
| | 07/10/06 | 3859.08 | 58.11 | 58.44 | 0.33 | 3800.92 |
| | 07/12/06 | 3859.08 | 58.14 | 58.29 | 0.15 | 3800.92 |
| | 07/14/06 | 3859.08 | 58.12 | 58.38 | 0.26 | 3800.92 |
| | 07/20/06 | 3859.08 | 58.02 | 58.33 | 0.31 | 3801.01 |
| | 07/31/06 | 3859.08 | 58.16 | 58.46 | 0.30 | 3800.88 |
| | 08/08/06 | 3859.08 | 58.20 | 58.48 | 0.28 | 3800.84 |
| | 08/10/06 | 3859.08 | 58.17 | 58.44 | 0.27 | 3800.87 |
| | 08/17/06 | 3859.08 | 58.21 | 58.59 | 0.38 | 3800.81 |
| | 08/21/06 | 3859.08 | 58.39 | 58.86 | 0.47 | 3800.62 |
| | 08/23/06 | 3859.08 | 58.20 | 58.38 | 0.18 | 3800.85 |
| | *09/13/06* | 3859.08 | 58.19 | 58.61 | 0.42 | 3800.83 |
| | 09/18/06 | 3859.08 | 58.17 | 58.69 | 0.52 | 3800.83 |
| | 10/03/06 | 3859.08 | 58.20 | 58.40 | 0.20 | 3800.85 |
| | 10/04/06 | 3859.08 | 58.28 | 58.56 | 0.28 | 3800.76 |
| | 10/06/06 | 3859.08 | 58.25 | 58.72 | 0.47 | 3800.76 |
| | 10/10/06 | 3859.08 | 58.26 | 58.59 | 0.33 | 3800.77 |
| | 10/11/06 | 3859.08 | 58.25 | 58.56 | 0.31 | 3800.78 |
| | 10/20/06 | 3859.08 | 58.27 | 58.50 | 0.23 | 3800.78 |
| | 10/26/06 | 3859.08 | 58.28 | 58.58 | 0.30 | 3800.76 |
| | 10/30/06 | 3859.08 | 58.29 | 58.55 | 0.26 | 3800.75 |
| | 11/06/06 | 3859.08 | 58.29 | 58.55 | 0.26 | 3800.75 |
| | 11/07/06 | 3859.08 | 58.29 | 58.40 | 0.11 | 3800.77 |

**TABLE 1**

**2006 GROUNDWATER ELEVATION DATA**
**PLAINS MARKETING, L.P.**

**SPS - 11**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | CASING WELL ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-1 | 11/09/06 | 3859.08 | 58.30 | 58.31 | 0.01 | 3800.78 |
| | 11/17/06 | 3859.08 | 58.32 | 58.43 | 0.11 | 3800.74 |
| | 11/20/06 | 3859.08 | 58.30 | 58.44 | 0.14 | 3800.76 |
| | 11/22/06 | 3859.08 | 58.31 | 58.45 | 0.14 | 3800.75 |
| | 11/27/06 | 3859.08 | 58.28 | 58.48 | 0.20 | 3800.77 |
| | 11/29/06 | 3859.08 | 58.31 | 58.48 | 0.17 | 3800.74 |
| | 12/01/06 | 3859.08 | 58.34 | 58.46 | 0.12 | 3800.72 |
| | 12/04/06 | 3859.08 | 58.35 | 58.50 | 0.15 | 3800.71 |
| | *12/06/06* | 3859.08 | 58.33 | 58.47 | 0.14 | 3800.73 |
| | 12/08/06 | 3859.08 | 58.33 | 58.47 | 0.14 | 3800.73 |
| | 12/13/06 | 3859.08 | 58.32 | 58.57 | 0.25 | 3800.72 |
| | 12/18/06 | 3859.08 | 58.34 | 58.60 | 0.26 | 3800.70 |
| | | | | | | |
| MW-2 | *03/15/06* | 3860.76 | - | 58.59 | 0.00 | 3802.17 |
| | *06/14/06* | 3860.76 | - | 58.81 | 0.00 | 3801.95 |
| | *09/13/06* | 3860.76 | - | 59.04 | 0.00 | 3801.72 |
| | *12/05/06* | 3860.76 | - | 59.00 | 0.00 | 3801.76 |
| | | | | | | |
| MW-3 | *03/15/06* | 3861.15 | - | 59.04 | 0.00 | 3802.11 |
| | *06/14/06* | 3861.15 | - | 59.24 | 0.00 | 3801.91 |
| | *09/13/06* | 3861.15 | - | 59.37 | 0.00 | 3801.78 |
| | *12/05/06* | 3861.15 | - | 59.42 | 0.00 | 3801.73 |
| | | | | | | |
| MW-4 | *03/15/06* | 3859.62 | - | 58.12 | 0.00 | 3801.50 |
| | *06/14/06* | 3859.62 | - | 58.28 | 0.00 | 3801.34 |
| | *09/13/06* | 3859.62 | - | 58.56 | 0.00 | 3801.06 |
| | *12/06/06* | 3859.62 | - | 58.52 | 0.00 | 3801.10 |
| | | | | | | |
| MW-6 | *03/15/06* | 3862.47 | - | 58.45 | 0.00 | 3804.02 |
| | *06/14/06* | 3862.47 | - | 58.69 | 0.00 | 3803.78 |
| | *09/13/06* | 3862.47 | - | 58.84 | 0.00 | 3803.63 |
| | *12/06/06* | 3862.47 | - | 58.95 | 0.00 | 3803.52 |
| | | | | | | |
| MW-7 | *03/15/06* | 3859.31 | - | 58.21 | 0.00 | 3801.10 |
| | *06/14/06* | 3859.31 | - | 58.40 | 0.00 | 3800.91 |
| | *09/13/06* | 3859.31 | - | 58.53 | 0.00 | 3800.78 |
| | *12/06/06* | 3859.31 | - | 58.62 | 0.00 | 3800.69 |
| | | | | | | |
| MW-9 | *03/15/06* | 3861.88 | - | 57.45 | 0.00 | 3804.43 |
| | *06/14/06* | 3861.88 | - | 57.67 | 0.00 | 3804.21 |
| | *09/13/06* | 3861.88 | - | 57.79 | 0.00 | 3804.09 |
| | *12/06/60* | 3861.88 | - | 58.00 | 0.00 | 3803.88 |

**TABLE 1**

**2006 GROUNDWATER ELEVATION DATA**
**PLAINS MARKETING, L.P.**

**SPS - 11**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | CASING WELL ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-10 | *03/15/06* | 3860.58 | - | 59.69 | 0.00 | 3800.89 |
| | *06/14/06* | 3860.58 | - | 59.88 | 0.00 | 3800.70 |
| | *09/13/06* | 3860.58 | - | 60.00 | 0.00 | 3800.58 |
| | *12/06/06* | 3860.58 | - | 60.11 | 0.00 | 3800.47 |
| MW-11 | *03/15/06* | 3860.00 | - | 59.22 | 0.00 | 3800.78 |
| | *06/14/06* | 3860.00 | - | 59.38 | 0.00 | 3800.62 |
| | *09/13/06* | 3860.00 | - | 59.50 | 0.00 | 3800.50 |
| | *12/06/06* | 3860.00 | - | 59.59 | 0.00 | 3800.41 |
| MW-12 | *03/15/06* | 3863.10 | - | 59.53 | 0.00 | 3803.57 |
| | *06/14/06* | 3863.10 | - | 59.86 | 0.00 | 3803.24 |
| | *09/13/06* | 3863.10 | - | 59.96 | 0.00 | 3803.14 |
| | *12/06/06* | 3863.10 | - | 60.08 | 0.00 | 3803.02 |
| MW-13 | *03/15/06* | 3862.44 | - | 57.94 | 0.00 | 3804.50 |
| | *06/14/06* | 3862.44 | - | 58.19 | 0.00 | 3804.25 |
| | *09/13/06* | 3862.44 | - | 58.32 | 0.00 | 3804.12 |
| | *12/05/06* | 3862.44 | - | 59.38 | 0.00 | 3803.06 |
| MW-14 | *03/15/06* | 3862.95 | - | 59.15 | 0.00 | 3803.80 |
| | *06/14/06* | 3862.95 | - | 59.34 | 0.00 | 3803.61 |
| | *09/13/06* | 3862.95 | - | 59.49 | 0.00 | 3803.46 |
| | *12/06/06* | 3862.95 | - | 59.62 | 0.00 | 3803.33 |
| MW-15 | *03/15/06* | 3861.70 | - | 58.35 | 0.00 | 3803.35 |
| | *06/14/06* | 3861.70 | - | 58.55 | 0.00 | 3803.15 |
| | *09/13/06* | 3861.70 | - | 58.66 | 0.00 | 3803.04 |
| | *12/05/06* | 3861.70 | - | 58.73 | 0.00 | 3802.97 |
| MW-16 | *03/15/06* | 3863.15 | - | 58.07 | 0.00 | 3805.08 |
| | *06/14/06* | 3863.15 | - | 58.24 | 0.00 | 3804.91 |
| | *09/13/06* | 3863.15 | - | 58.36 | 0.00 | 3804.79 |
| | *12/06/06* | 3863.15 | - | 58.54 | 0.00 | 3804.61 |
| MW-17 | *03/15/06* | 3859.17 | - | 60.81 | 0.00 | 3798.36 |
| | *06/14/06* | 3859.17 | - | 60.98 | 0.00 | 3798.19 |
| | *09/13/06* | 3859.17 | - | 61.06 | 0.00 | 3798.11 |
| | *12/06/06* | 3858.17 | - | 61.13 | 0.00 | 3797.04 |
| MW-18 | *03/15/06* | 3859.98 | - | 60.23 | 0.00 | 3799.75 |

**TABLE 1**

**2006 GROUNDWATER ELEVATION DATA**
**PLAINS MARKETING, L.P.**

**SPS - 11**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | CASING WELL ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| | *06/14/06* | 3859.98 | - | 60.39 | 0.00 | 3799.59 |
| | *09/13/06* | 3859.98 | - | 60.52 | 0.00 | 3799.46 |
| | *12/05/06* | 3859.98 | - | 60.56 | 0.00 | 3799.42 |
| | | | | | | |
| MW-19 | *03/15/06* | 3862.30 | - | 61.05 | 0.00 | 3801.25 |
| | *06/14/06* | 3862.30 | - | 61.23 | 0.00 | 3801.07 |
| | *09/13/06* | 3862.30 | - | 61.36 | 0.00 | 3800.94 |
| | *12/06/06* | 3862.30 | - | 61.44 | 0.00 | 3800.86 |
| | | | | | | |
| MW-21 | *03/15/06* | 3862.30 | - | 60.37 | 0.00 | 3801.93 |
| | *06/14/06* | 3862.30 | - | 60.56 | 0.00 | 3801.74 |
| | *09/13/06* | 3862.30 | - | 60.69 | 0.00 | 3801.61 |
| | | | | | | |
| MW-23 | *03/15/06* | 3862.44 | - | 57.81 | 0.00 | 3804.63 |
| | *06/14/06* | 3862.44 | - | 57.99 | 0.00 | 3804.45 |
| | *09/13/06* | 3862.44 | - | 58.12 | 0.00 | 3804.32 |
| | *12/05/06* | 3862.44 | - | 58.22 | 0.00 | 3804.22 |
| | | | | | | |
| MW-24 | *03/15/06* | 3864.36 | - | 58.70 | 0.00 | 3805.66 |
| | *06/14/06* | 3864.36 | - | 58.86 | 0.00 | 3805.50 |
| | *09/13/06* | 3864.36 | - | 58.99 | 0.00 | 3805.37 |
| | *12/06/06* | 3864.36 | - | 59.13 | 0.00 | 3805.23 |
| | | | | | | |
| MW-25 | *03/15/06* | 3864.16 | - | 57.56 | 0.00 | 3806.60 |
| | *06/14/06* | 3864.16 | - | 57.77 | 0.00 | 3806.39 |
| | *09/13/06* | 3864.16 | - | 57.89 | 0.00 | 3806.27 |
| | *12/06/06* | 3864.16 | - | 58.04 | 0.00 | 3806.12 |
| | | | | | | |
| MW-26 | *03/15/06* | 3858.79 | - | 61.22 | 0.00 | 3797.57 |
| | *06/14/06* | 3858.79 | - | 61.33 | 0.00 | 3797.46 |
| | *09/13/06* | 3858.79 | - | 61.44 | 0.00 | 3797.35 |
| | *12/06/06* | 3858.79 | - | 61.50 | 0.00 | 3797.29 |
| | | | | | | |
| MW-28 | *03/15/06* | 3858.60 | - | 61.45 | 0.00 | 3797.15 |
| | *06/14/06* | 3858.60 | - | 61.62 | 0.00 | 3796.98 |
| | *09/13/06* | 3858.60 | - | 61.74 | 0.00 | 3796.86 |
| | *12/06/06* | 3858.60 | - | 61.79 | 0.00 | 3796.81 |
| | | | | | | |
| MW-29 | *03/15/06* | 3858.54 | - | 61.97 | 0.00 | 3796.57 |
| | *06/14/06* | 3858.54 | - | 62.09 | 0.00 | 3796.45 |
| | *09/13/06* | 3858.54 | - | 62.19 | 0.00 | 3796.35 |
| | *12/06/06* | 3858.54 | - | 62.26 | 0.00 | 3796.28 |

**TABLE 1**

**2006 GROUNDWATER ELEVATION DATA**
**PLAINS MARKETING, L.P.**

**SPS - 11**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | CASING WELL ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW-30 | *03/15/06* | 3858.35 | - | 60.32 | 0.00 | 3798.03 |
| | *06/14/06* | 3858.35 | - | 60.46 | 0.00 | 3797.89 |
| | *09/13/06* | 3858.35 | - | 60.57 | 0.00 | 3797.78 |
| | *12/06/06* | 3858.35 | - | 60.66 | 0.00 | 3797.69 |
| MW-31 | *03/15/06* | 3858.52 | - | 61.26 | 0.00 | 3797.26 |
| | *06/14/06* | 3858.52 | - | 61.38 | 0.00 | 3797.14 |
| | *09/13/06* | 3858.52 | - | 61.48 | 0.00 | 3797.04 |
| | *12/06/06* | 3858.52 | - | 61.55 | 0.00 | 3796.97 |
| MW-32 | *03/15/06* | 3858.07 | - | 61.70 | 0.00 | 3796.37 |
| | *06/14/06* | 3858.07 | - | 61.83 | 0.00 | 3796.24 |
| | *09/13/06* | 3858.07 | - | 61.93 | 0.00 | 3796.14 |
| | *12/06/06* | 3858.07 | - | 61.98 | 0.00 | 3796.09 |
| MW-33 | *03/15/06* | 3858.36 | - | 62.32 | 0.00 | 3796.04 |
| | *06/14/06* | 3858.36 | - | 62.46 | 0.00 | 3795.90 |
| | *09/13/06* | 3858.36 | - | 62.54 | 0.00 | 3795.82 |
| | *12/05/06* | 3858.36 | - | 62.58 | 0.00 | 3795.78 |
| MW-34 | *03/15/06* | 3857.91 | - | 62.28 | 0.00 | 3795.63 |
| | *06/14/06* | 3857.91 | - | 62.40 | 0.00 | 3795.51 |
| | *09/13/06* | 3857.91 | - | 62.49 | 0.00 | 3795.42 |
| | *12/06/26* | 3857.91 | - | 62.55 | 0.00 | 3795.36 |
| MW-35 | *03/15/06* | 3857.16 | - | 61.80 | 0.00 | 3795.36 |
| | *06/14/06* | 3857.16 | - | 61.89 | 0.00 | 3795.27 |
| | *09/13/06* | 3857.16 | - | 61.97 | 0.00 | 3795.19 |
| | *12/06/06* | 3857.16 | - | 62.04 | 0.00 | 3795.12 |
| MW-36 | *12/06/06* | 3858.80 | - | 62.70 | 0.00 | 3796.10 |
| MW-37 | *12/06/06* | 3857.69 | - | 61.51 | 0.00 | 3796.18 |
| MW-38 | *12/06/06* | 3855.95 | - | 60.42 | 0.00 | 3795.53 |

*lorth America Vertical Datum of 1929.*

**TABLE 2**
**2006 CONCENTRATIONS OF BTEX IN GROUNDWATER**
**PLAINS MARKETING, L.P.**

**SPS 11**
**LEA COUNTY, NEW MEXICO**

*All concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8260b | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-1 | 03/15/06 | Not Sampled Due to PSH in Well | | | | |
| | 06/14/06 | Not Sampled Due to PSH in Well | | | | |
| | 09/13/06 | Not Sampled Due to PSH in Well | | | | |
| | 12/05/06 | Not Sampled Due to PSH in Well | | | | |
| MW-2 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-3 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-4 | 03/15/06 | 0.0050 | <0.001 | <0.001 | <0.001 | |
| | 06/14/06 | **0.0109** | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | **0.0449** | <0.001 | 0.007 | <0.001 | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-6 | 03/15/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 06/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | **2.69** | <0.02 | 0.236 | <0.02 | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-7 | 03/15/06 | **1.48** | <0.050 | **1.08** | 0.152 | |
| | 06/14/06 | **0.814** | <0.02 | 0.616 | 0.034 | |
| | 09/14/06 | **0.887** | <0.02 | 0.678 | <0.02 | |
| | 12/06/06 | **0.583** | <0.01 | 0.457 | 0.0297 | |
| MW-9 | 03/15/06 | **2.5** | <0.2 | 0.52 | <0.2 | |
| | 06/14/06 | **3.13** | <0.1 | 0.361 | <0.1 | |
| | 09/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/06/06 | **1.54** | 0.0354 | 0.0429 | 0.0406 | |
| MW-10 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |

**TABLE 2**
**2006 CONCENTRATIONS OF BTEX IN GROUNDWATER**
**PLAINS MARKETING, L.P.**

**SPS 11**
**LEA COUNTY, NEW MEXICO**

*All concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8260b | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-10 | 06/14/06 | 0.0014 | <0.001 | 0.0057 | <0.001 | |
| | 09/13/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-11 | 03/15/06 | **0.879** | <0.02 | 0.401 | <0.02 | |
| | 06/14/06 | **1.130** | <0.02 | 0.425 | 0.0505 | |
| | 09/14/06 | **0.733** | <0.02 | 0.222 | <0.02 | |
| | 12/06/06 | **0.672** | <0.01 | 0.161 | 0.0294 | |
| MW-12 | 03/15/06 | **0.0297** | <0.005 | 0.0171 | <0.005 | |
| | 06/14/06 | **0.0123** | <0.001 | 0.0078 | 0.0019 | |
| | 09/13/06 | **0.0215** | 0.0012 | 0.0042 | 0.0026 | |
| | 12/06/06 | 0.0037 | <0.001 | <0.001 | <0.001 | |
| MW-13 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-14 | 03/15/06 | **3.66** | <0.2 | **0.960** | <0.2 | |
| | 06/14/06 | **4.5** | <0.2 | **1.040** | <0.2 | |
| | 09/14/06 | **4.96** | <0.1 | **1.210** | <0.1 | |
| | 12/06/06 | **3.96** | <0.02 | **1.010** | <0.02 | |
| MW-15 | 03/15/06 | <0.005 | <0.005 | <0.005 | <0.005 | |
| | 06/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-16 | 03/15/06 | **0.193** | 0.113 | 0.065 | 0.0347 | |
| | 06/14/06 | **0.106** | 0.0713 | 0.0304 | 0.0201 | |
| | 09/13/06 | **0.0964** | 0.0842 | 0.0267 | 0.0202 | |
| | 12/06/06 | **0.025** | <0.001 | 0.0063 | 0.0013 | |
| MW-17 | 03/15/06 | **0.0196** | 0.0158 | 0.0077 | 0.0131 | |
| | 06/14/06 | **0.0224** | 0.0148 | 0.0072 | 0.0137 | |

**TABLE 2**
**2006 CONCENTRATIONS OF BTEX IN GROUNDWATER**
**PLAINS MARKETING, L.P.**

**SPS 11**
**LEA COUNTY, NEW MEXICO**

*All concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8260b | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-17 | 09/13/06 | **0.0108** | 0.0068 | 0.0029 | 0.0064 | |
| | 12/06/06 | 0.0086 | 0.0047 | 0.002 | 0.0048 | |
| MW-18 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-19 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | 0.0024 | |
| MW-21 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 01/03/07 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-23 | 03/15/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 06/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-24 | 03/15/06 | **0.303** | 0.0116 | 0.0176 | <0.01 | |
| | 06/14/06 | **0.339** | 0.0215 | 0.0261 | 0.022 | |
| | 09/13/06 | **0.207** | 0.0192 | 0.0209 | 0.0175 | |
| | 12/06/06 | **0.105** | <0.001 | 0.0023 | <0.001 | |
| MW-25 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/13/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/06/06 | <0.001 | 0.0016 | <0.001 | 0.0017 | |
| MW - 26 | 03/15/06 | **0.73** | 0.464 | 0.27 | 0.223 | |
| | 06/14/06 | **0.064** | 0.338 | 0.184 | 0.151 | |
| | 09/14/06 | **0.014** | <0.01 | <0.01 | <0.01 | |

**TABLE 2**
**2006 CONCENTRATIONS OF BTEX IN GROUNDWATER**
**PLAINS MARKETING, L.P.**

**SPS 11**
**LEA COUNTY, NEW MEXICO**

*All concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8260b | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-26 | 12/06/06 | **0.512** | 0.259 | 0.114 | 0.135 | |
| MW - 28 | 03/15/06 | **2.310** | <0.2 | 0.572 | <0.2 | |
| | 06/14/06 | **3.090** | <0.1 | 0.589 | 0.16 | |
| | 09/14/06 | **1.820** | <0.05 | 0.165 | <0.05 | |
| | 12/06/06 | **1.940** | <0.01 | 0.446 | 0.157 | |
| MW - 29 | 03/15/06 | **1.580** | <0.05 | <0.05 | <0.05 | |
| | 06/14/06 | **1.690** | <0.02 | <0.02 | <0.02 | |
| | 09/14/06 | **1.670** | <0.02 | <0.02 | <0.02 | |
| | 12/06/06 | **1.300** | <0.01 | 0.0161 | <0.01 | |
| MW - 30 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-31 | 03/15/06 | Not Sampled on Current Sample Schedule | | | | |
| | 06/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 09/14/06 | Not Sampled on Current Sample Schedule | | | | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-32 | 03/15/06 | **5.14** | <0.2 | 0.586 | <0.2 | |
| | 06/14/06 | **4.56** | 0.2 | 0.225 | <0.2 | |
| | 09/14/06 | **3.05** | 0.0592 | 0.0778 | <0.05 | |
| | 12/06/06 | **3.14** | 0.0409 | 0.0521 | 0.0428 | |
| MW-33 | 03/15/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 06/14/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 09/13/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/05/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-34 | 03/15/06 | **0.0847** | <0.001 | <0.001 | <0.001 | |
| | 06/14/06 | **0.42** | <0.001 | <0.001 | <0.001 | |
| | 09/14/06 | **0.733** | <0.001 | <0.001 | <0.001 | |
| | 12/06/06 | **0.379** | <0.005 | <0.005 | <0.005 | |

**TABLE 2**
**2006 CONCENTRATIONS OF BTEX IN GROUNDWATER**
**PLAINS MARKETING, L.P.**

**SPS 11**
**LEA COUNTY, NEW MEXICO**

*All concentrations are reported in mg/L*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8260b | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| **NMOCD Regulatory Limit** | | **0.01** | **0.75** | **0.75** | **0.62** | |
| MW-35 | 03/15/06 | **0.394** | 0.0667 | 0.154 | 0.186 | |
| | 06/14/06 | **0.362** | 0.0137 | 0.0583 | 0.0709 | |
| | 09/14/06 | **0.685** | <0.01 | 0.068 | 0.0626 | |
| | 12/06/06 | **0.168** | 0.0054 | 0.04 | 0.0421 | |
| MW-36 | 09/28/06 | **0.593** | <0.05 | <0.05 | 0.102 | |
| | 12/06/06 | **1.12** | <0.01 | <0.01 | <0.01 | |
| MW-37 | 09/28/06 | <0.02 | <0.02 | <0.02 | <0.02 | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-38 | 09/28/06 | <0.001 | <0.001 | <0.001 | <0.001 | |
| | 12/06/06 | <0.001 | <0.001 | <0.001 | <0.001 | |

*Note: m,p and o Xylenes combined when analyzed by Trace Laboratories, Inc. only.*

TABLE 3
2006 CONCENTRATIONS OF TPH AND BTEX IN SOIL
PLAINS MARKETING, L.P.

SPS 11
LEA COUNTY, NEW MEXICO

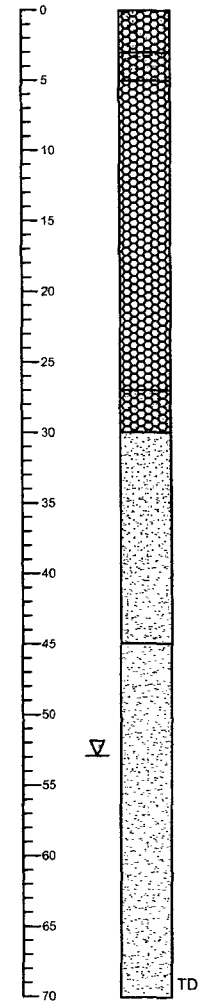
*All concentrations are reported in mg/kg*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8015M | | | | | TOTAL HYDROCARBONS | SW 846-8021b | | | | | BTEX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TPH DRO | TPH GRO | C6-C12 | C12-C28 | C28-C35 | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE | |
| **NMOCD Regulatory Limit** | | | | | | | **100** | **10** | | | | | **50** |
| MW-34 20-25' | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| MW-34 45-50' | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| MW-34 55-60 | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| SP-106 25-30 | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| SP-106 45-50 | 03/02/06 | **774** | **193** | | | | | <0.01 | <0.01 | 0.143 | 0.451 | | 0.594 |
| SB-106 55-60 | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| MW-35 30-35 | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| MW-35 45-50 | 03/02/06 | **246** | **35.9** | | | | | <0.01 | <0.01 | <0.01 | <0.01 | | <0.01 |
| MW-35 55-60 | 03/02/06 | <50.0 | <1 | | | | | | | | | | |
| | | | | | | | | | | | | | |
| MW-36 @ 20' | 09/14/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-36 @ 40' | 09/14/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-36 @ 55' | 09/14/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| SB206 @ 20' | 09/14/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| SB206 @ 40' | 09/14/06 | | | 108 | 544 | 74 | **726** | | | | | | |
| SB206 @ 50' | 09/14/06 | | | 10.5 | 114 | 20.8 | **145** | | | | | | |
| MW-37 @ 15' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-37 @ 35' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-37 @ 50' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-38 @ 20' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-38 @ 40' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |
| MW-38 @ 55' | 09/15/06 | | | <10 | <10 | <10 | <10 | | | | | | |

# APPENDICES

# APPENDIX A:
# Boring Logs and Monitor Well Details

# Soil Boring SB-106




| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| | 3.9 | None | None | 0 - 3' - Caliche, sand buff<br>3 - 5' - Sand, brown with some greyish white *caliche fragments* |
| | | None | None | |
| | 1.4 | None | None | |
| | | None | None | 5 - 27' - Caliche, greyish white |
| | 2.5 | None | None | |
| | (3.3) | None | None | 27 - 30' - Sand, brown, dry with few caliche fragments |
| | 1.2 | Slight | None | |
| | 176 | Moderate | None | 30 - 45' - Sand, brown, very fine grain, dry |
| | 112 | Heavy | None | |
| | (198) | Moderate | None | |
| ▽ | 6.9 | Slight | None | |
| | (19.3) | Moderate | None | 45 - 70' - Sand, brown, very fine grain, moist to wet |
| | 4.6 | Slight | None | |
| | | Slight | None | |

## Soil Boring Details

Date Drilled 3-2-06
Thickness of Bentonite Seal 70 Ft
Depth of Exploratory Well 70 Ft
Depth to Groundwater 53 Ft
Ground Water Elevation

▽ Indicates the PSH level measured on 11/2/04

▽ *Indicates the groundwater level measured on* 3/2/06

(○) Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The soil boring was advanced on date using air rotary drilling techniques.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

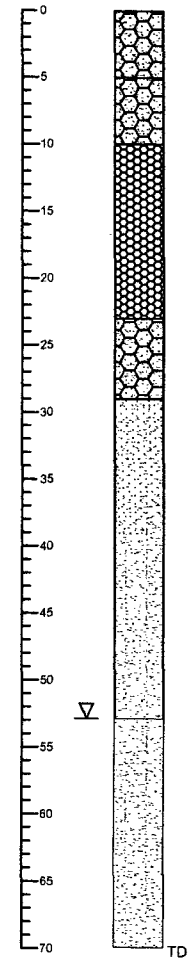
Boring Log Details
Soil Boring SB-106
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

NOVA safety and environmental

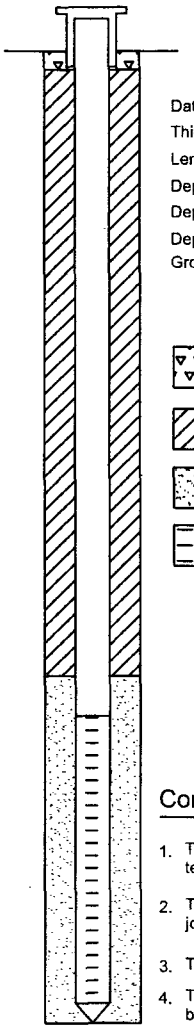
NOVA Safety and Environmental

| Prep By: CDS | Checked By: TKC |
|---|---|
| June 20, 2006 | |

# Monitor Well MW-34




| PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|
| 9.4 | None | None | 0 - 5' - Caliche, greyish white, sandy |
| | | | 5 - 10' - Sand, brown, caliche, greyish white |
| 1.2 | None | None | |
| | | | 15 - 23' - Caliche, greyish white, dense |
| (1.5) | None | None | |
| 5.1 | None | None | 23 - 29' - Sand, brown with some caliche fragments |
| 1.4 | None | None | |
| 4.1 | None | None | |
| 1.7 | None | None | 29 - 53' - Sand, brown, very fine grained |
| (5.1) | None | None | |
| 2.1 | None | None | |
| (2.6) | None | None | |
| 2.0 | None | None | 53 - 70' - Sand, brown, very fine grained, moist to wet with depth |



## Monitor Well Details

Date Drilled 3-2-06
Thickness of Bentonite Seal 45 Ft
Length of PVC Well Screen 20 Ft
Depth of PVC Well 70 Ft
Depth of Exploratory Well 70 Ft
Depth to Groundwater 53 Ft
Ground Water Elevation

Grout Surface Seal
Bentonite Pellet Seal
Sand Pack
Screen

Indicates the PSH level measured on 3/2/06
Indicates the groundwater level measured on 3/02/06
Indicates samples selected for Laboratory Analysis.
PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Boring Log And Monitor Well Details
Monitor Well MW-34
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

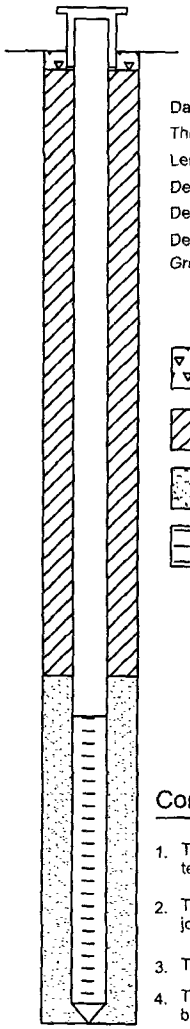
NOVA safety and environmental

NOVA Safety and Environmental

| Prep By: CDS | Checked By: TKC |
|---|---|
| June 20, 2006 | |

# Monitor Well MW-35

| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| 0 | 1.6 | None | None | 0 - 8' - Caliche, greyish white, sandy |
| 5 | | None | None | |
| 10 | 4.2 | None | None | 8 - 15' - Sand, brown, caliche, greyish white |
| 15 | | None | None | |
| 20 | 2.8 | None | None | 15 - 26' - Caliche, greyish white, dense |
| 25 | | None | None | 26 - 30' - Sand, brown, fine grained, caliche fragments, greyish white |
| 30 | (5.8) | Moderate | None | |
| 35 | 80.4 | Moderate | None | |
| 40 | 105 | Moderate | None | |
| 45 | (118) | Heavy | None | |
| 50 | | | | 30 - 70' - Sand, brown, very fine grained |
| 55 | 4.1 | Moderate | None | |
| 60 | (2.7) | Moderate | None | |
| 65 | | Moderate | None | |
| 70 | | | | TD |



## Monitor Well Details

Date Drilled 3-2-06
Thickness of Bentonite Seal 45 Ft
Length of PVC Well Screen 20 Ft
Depth of PVC Well 70 Ft
Depth of Exploratory Well 70 Ft
Depth to Groundwater
Ground Water Elevation

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates the PSH level measured on 3/2/06

Indicates the groundwater level measured on 3/02/06

(oval) Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Boring Log And Monitor Well Details
Monitor Well MW-35
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

NOVA safety and environmental

NOVA Safety and Environmental

| Prep By: CDS | Checked By: TKC |
|---|---|
| June 20, 2006 | |

# Soil Boring SB-206

| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| 0 | 2.2 | None | None | |
| 5 | 2.3 | None | None | |
| 10 | 2.3 | None | None | 0 - 26' - Caliche, white, soft |
| 15 | 0.9 | None | None | |
| 20 | 1.7 | None | None | |
| 25 | | | | 26 - 27' - Sand, brown, very fine grained.<br>27 - 29' - Caliche, white. |
| 30 | 2.8 | None | None | 29 - 30' - Sand, brown, very fine grained. |
| | 1.5 | Slight | None | 30 - 35' - Sand, red to brown, very fine grained, moist. |
| 35 | 304 | Moderate | None | |
| 40 | 44.8 | Moderate | None | |
| 45 | 11.4 | Slight | None | |
| 50 | 4.2 | Slight | None | 35 - 70' - Sand, brown, very fine grained. |
| 55 | 6.9 | NA | None | |
| 60 | 2.8 | NA | None | |
| 65 | 4.9 | NA | None | |
| 70 | | | | TD |

## Soil Boring Details

Date Drilled 09-14-06
Thickness of Bentonite Seal 70 Ft
Depth of Exploratory Well 70 Ft

⬭ Indicates samples selected for Laboratory Analysis.
PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The soil boring was advanced on date using air rotary drilling techniques.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Boring Log Details
Soil Boring SB-206
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

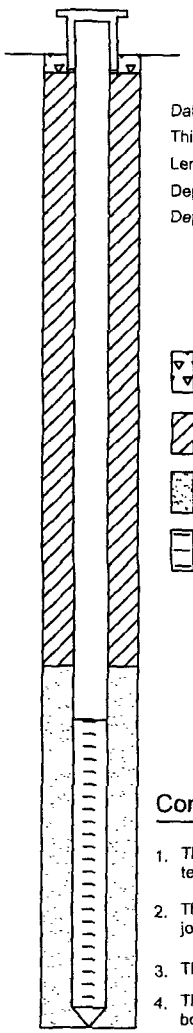
NOVA safety and environmental

NOVA Safety and Environmental

| CAD By: DGC | Checked By: CDS |
|---|---|
| March 25, 2007 | |

# Monitor Well MW-36

| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| 0 | 6.8 | None | None | |
| 5 | 48.9 | None | None | 0 - 17' - Caliche, white, soft, sandy, brown. |
| 10 | 32.9 | None | None | |
| 15 | 45.1 | None | None | 17 - 23' - Sand, brown, very fine grained, some caliche fragments, white. |
| 20 | 35.7 | None | None | |
| 25 | 24.9 | None | None | 23 - 30' - Caliche, white and sand, brown, fine grained. |
| 30 | 9.8 | None | None | |
| 35 | 24.8 | None | None | 30 - 41' - Sand, brown, some caliche and sandstone fragments. |
| 40 | 8.2 | None | None | 41 - 45' - Caliche, white, sand, brown, very fine grained. |
| 45 | 7.8 | None | None | 45 - 51' - Sand, brown, very fine grained. |
| 50 | | None | None | 51 - 53' - Sandstone, hard, brown. |
| 55 | 35.3 | None | None | |
| 60 | 10.6 | None | None | 53 - 60' - Sand, brown, fine grained with sandstone, moist. |
| 65 | 44.8 | None | None | 60 - 70' - Clay, brown, clayey, moist. |
| 70 | 33.3 | None | None | |
| TD | | | | |



## Monitor Well Details

| | |
|---|---|
| Date Drilled | 09-14-06 |
| Thickness of Bentonite Seal | 45 Ft |
| Length of PVC Well Screen | 20 Ft |
| Depth of PVC Well | 70 Ft |
| Depth of Exploratory Well | 70 Ft |

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Boring Log And Monitor Well Details
Monitor Well MW-36
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

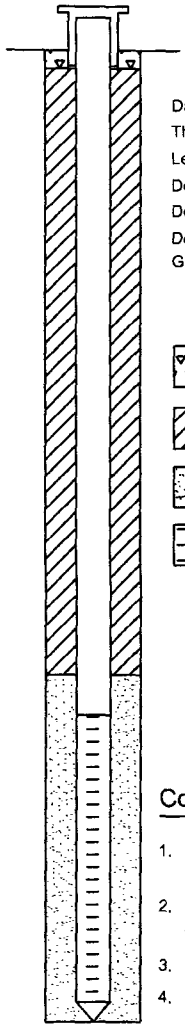
NOVA safety and environmental

NOVA Safety and Environmental

| | |
|---|---|
| CAD By: DGC | Checked By: CDS |
| March 25, 2007 | |

# Monitor Well MW-37

| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| 0 | 3.7 | None | None | 0 - 5' - Sand, brown, medium grained. |
| 5 | 8.3 | None | None | 5 - 11' - Sand, brown and caliche, white, soft, slightly moist. |
| 10 | 9.8 | None | None | 11 - 15' - Caliche, brown, soft sand. |
| 15 | 11.2 | None | None | |
| 20 | 20.8 | None | None | 15 - 27' - Caliche, white, soft, sandy, brown. |
| 25 | | None | None | 27 - 29' - Sand, brown. |
| 30 | 20.8 | None | None | 29 - 30' - Caliche, white. |
| | 29.8 | None | None | |
| 35 | 11.7 | None | None | 30 - 45' - Sand, brown, very fine grained. |
| 40 | 33.9 | None | None | |
| 45 | 32.5 | None | None | |
| 50 | 19.3 | None | None | 45 - 60' - Sand, brown, very fine grained, moist. |
| 55 | 33.8 | None | None | |
| 60 | 8.4 | None | None | |
| 65 | 46.9 | None | None | 60 - 70' - Clay, red to brown, sandy, wet |
| 70 | | | | TD |



## Monitor Well Details

Date Drilled 09-15-06
Thickness of Bentonite Seal 46 Ft
Length of PVC Well Screen 20 Ft
Depth of PVC Well 70 Ft
Depth of Exploratory Well 70 Ft
*Depth to Groundwater* _____
Ground Water Elevation _____

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

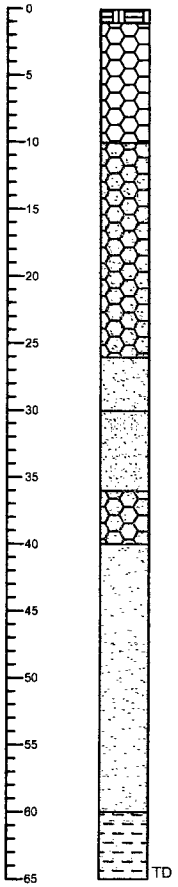
Boring Log And Monitor Well Details
Monitor Well MW-37
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

NOVA safety and environmental

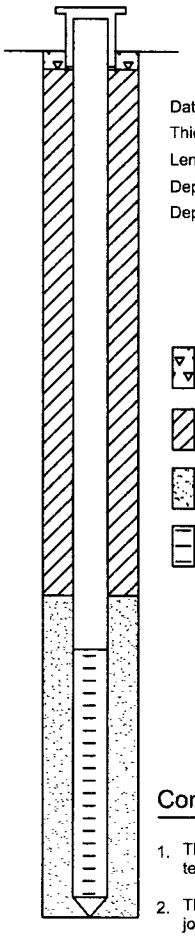
NOVA Safety and Environmental

| CAD By: DGC | Checked By: CDS |
|---|---|
| March 25, 2007 | |

# Monitor Well MW-38




| Depth (feet) | PID Reading | Petroleum Odor | Petroleum Stain | Soil Description |
|---|---|---|---|---|
| | | None | None | 0 - 1' - Topsoil, black, organic. |
| | 19.7 | None | None | |
| | 29.5 | None | None | 1 - 10' - Caliche, white, soft. |
| | 22.6 | None | None | |
| | 37.3 | None | None | 10 - 26' - Caliche, white, soft and sand, brown. |
| | 24.1 | None | None | |
| | 7.5 | None | None | 26 - 30' - Sand, brown, very fine grained. |
| | 1.1 | None | None | 30 - 36' - Sand, red to brown, very fine grained. |
| | 5.0 | None | None | 36 - 40' - Sand, red to brown, very fine grained, some caliche fragments. |
| | 6.8 | None | None | |
| | 7.5 | None | None | 40 - 60' - Sand, red, very fine grained. |
| | 28.0 | None | None | |
| | 32.0 | None | None | |
| | 37.8 | None | None | 60 - 65' - Sandstone, brown. |



## Monitor Well Details

| | |
|---|---|
| Date Drilled | 09-15-06 |
| Thickness of Bentonite Seal | 40 Ft |
| Length of PVC Well Screen | 20 Ft |
| Depth of PVC Well | 65 Ft |
| Depth of Exploratory Well | 65 Ft |

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Boring Log And Monitor Well Details
Monitor Well MW-38
TNM SPS-11 Lea County, New Mexico
Plains Marketing, L.P.

NOVA safety and environmental

NOVA Safety and Environmental

| | |
|---|---|
| CAD By: DGC | Checked By: CDS |
| March 25, 2007 | |

# APPENDIX B:
# Release Notification and Corrective Action
# (Form C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

# Release Notification and Corrective Action

## OPERATOR

x Initial Report ☐ Final Report

| | | | |
|---|---|---|---|
| Name of Company | Plains Pipeline, LP | Contact: | Camille Reynolds |
| Address: | 3705 E. Hwy 158, Midland, TX 79706 | Telephone No. | 505-441-0965 |
| Facility Name | SPS #11 | Facility Type: | Pipeline |

| Surface Owner: | Mineral Owner | Lease No. |
|---|---|---|
| New Mexico State Land Office | | |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| F | 18 | 18S | 36E | | | | | Lea |

**Latitude** 32 degrees 44' 50.3" **Longitude** 103 degrees 23' 36.5"

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: | Volume of Release: | Volume Recovered |
| Source of Release: | Date and Hour of Occurrence Unknown | Date and Hour of Discovery |
| Was Immediate Notice Given? Yes ☐ No ☐ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

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

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

| | | |
|---|---|---|
| Signature: | OIL CONSERVATION DIVISION | |
| Printed Name: Camille Reynolds | Approved by District Supervisor: | |
| Title: Remediation Coordinator | Approval Date: | Expiration Date: |
| E-mail Address: cjreynolds@paalp.com | Conditions of Approval: | Attached ☐ |
| Date: 3/21/2005 Phone: (505)441-0965 | | |

* Attach Additional Sheets If Necessary