AP - 007

# ANNUAL MONITORING REPORT

YEAR(S):
2004

# 2004
# ANNUAL MONITORING REPORT

AP-1

## DARR ANGELL 2
**SW ¼, SE ¼ SECTION 11, TOWNSHIP 15 SOUTH, RANGE 37 EAST**
**NW ¼, NE ¼ SECTION 14, TOWNSHIP 15 SOUTH, RANGE 37 EAST**
**LEA COUNTY, NEW MEXICO**
**PLAINS MARKETING, L.P. EMS NUMBER: LF-1999-62**

Prepared For:

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

NOVA
safety and environmental

Prepared By:

NOVA Safety and Environmental
2057 Commerce Street
Midland, Texas 79703

**April, 2005**

Rebecca Haskell
Project Manager

for. Todd K. Choban
Vice-President Technical Services

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## 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, having previously been managed by Environmental Technology Group, Inc. (ETGI). The Darr Angel #2 release site, formally the responsibility of Enron Oil Trading and Transportation (EOTT) is now the responsibility of Plains. This report is intended to be viewed as a complete document with figures, attachments, tables and text. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2004 only. For reference, the Site Location Map is provided as Figure 1. Cumulative tables and laboratory data are provided on the attached compact disk.

Groundwater monitoring was conducted during four (4) quarterly events in calendar year 2004 to assess the levels and extent of dissolved phase and Phase-Separated Hydrocarbon (PSH) constituents. 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 approximately 11.2 miles east of the town of Lovington, New Mexico near State Highway 82 in the SW ¼ of the SE ¼ Section 11, Township 15 South, Range 37 East and the NW ¼ of the NE ¼ Section 14, Township 15 South, Range 37 East. The on-site crude oil release was attributed to structural failure due to external corrosion on the 8-inch steel pipeline currently operated by Plains Marketing, L.P. The release was reported to the New Mexico Oil Conservation Division (NMOCD) on July 29, 1999.

Currently there are ten monitor wells (MW-1 through MW-10) and seven recovery wells (RW-1 and RW-7) onsite. An automated product recovery system is operating onsite incorporating one monitor well (MW-2) and six recovery wells (RW-1, RW-3, RW-4, RW-5, RW-6 and RW-7). Manual product recovery has also been conducted at recovery wells RW-1, RW-3, RW-4, RW-5, RW-6, and RW-7 during the 2004 calendar year.

## FIELD ACTIVITIES

Quarterly monitoring events for the reporting period were performed according to the following reduced sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004:

| NMOCD APPROVED SAMPLING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Location** | **Schedule** | **Location** | **Schedule** | **Location** | **Schedule** |
| MW-1 | Annually | MW-7 | Annually | RW-3 | Quarterly |
| MW-2 | Quarterly | MW-8 | Annually | RW-4 | Quarterly |
| MW-3 | Semi-Annually | MW-9 | Annually | RW-5 | Quarterly |
| MW-4 | Semi-Annually | MW-10 | Annually | RW-6 | Quarterly |
| MW-5 | Annually | RW-1 | Quarterly | RW-7 | Quarterly |
| MW-6 | Annually | RW-2 | Quarterly | | |

The site monitor wells were gauged and sampled on March 02, June 02, September 02, and December 11, 2004. During each sampling event the monitor wells were purged of approximately 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 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 the four (4) quarterly monitoring events, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Maps. Groundwater elevation data for 2004 is provided as Table 1. Historic groundwater elevation data beginning at project inception is enclosed on the attached data disk.

The most recent Groundwater Gradient map, Figure 2D, indicates a general gradient of approximately 0.002 ft./ft. to the southeast. This is consistent with data presented on Figures 2A through 2C from the earlier quarters. The corrected groundwater elevations ranged between 3724.87 to 3734.71 feet above mean sea level, in RW-7 on August 05, 2004 and in RW-5 on December 30, 2004, respectively.

A measurable thickness of PSH was measured in eight (8) monitor wells and recovery wells during the reporting period. The average thickness of PSH in monitor wells and recovery wells during the first, second, third and fourth quarters of 2004 were 5.80 feet, 5.10 feet, 7.10 feet, and 7.30 feet, respectively. The maximum thickness of PSH in monitor wells and recovery wells during the first, second, third and fourth quarters of 2004 were 9.63 feet, 9.63 feet, 8.99 feet, and 7.30 feet, respectively. PSH data for the 2004 gauging events can be found in Table 1. Approximately 5,871 gallons of PSH have been recovered from the site utilizing manual recovery methods and an automated recovery system since project inception. During this reporting period, approximately 800 gallons of PSH were recovered from the site. Recovered PSH was reintroduced into the Plains transportation system at the Lea Station Facility, Monument, New Mexico.

## LABORATORY RESULTS

Groundwater samples collected during the first three quarterly monitoring events were delivered to AnalySys Inc., Austin, Texas for determination of Benzene, Toluene, Ethylbenzene and

Xylene (BTEX) constituent concentrations by EPA Method SW846-8260b. Fourth quarter sample analysis was performed by Trace Analysis, Inc., of Lubbock, Texas for determination of BTEX constituent concentrations by EPA Method SW846-8021b. The 2004 BTEX constituent concentrations are summarized on Table 2. Historical BTEX constituent concentrations and copies of the laboratory reports for 2004 are provided on the attached data disk. The quarterly groundwater sample results for benzene and BTEX concentrations are depicted on Figures 3A-3D.

Review of laboratory analytical results of the groundwater samples obtained during the 2004 monitoring period indicate that benzene and BTEX concentrations were below NMOCD regulatory standards in nine (9) monitor wells. Eight (8) monitor wells and recovery wells contained measurable thicknesses of PSH during the annual monitoring period and were not sampled for at least one quarterly sampling event.

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 2004 annual monitoring period. Currently, there are 10 groundwater monitor wells (MW-1 through MW-10) and seven (7) product recovery wells (RW-1 through RW-7) on-site. Manual product recovery occurs on a weekly schedule. Groundwater elevation contours generated from water level measurements acquired during the most recent quarter indicated a general gradient of approximately 0.002 ft/ft to the southeast.

As discussed above, nine (9) monitor wells and recovery wells contained measurable PSH thicknesses in 2004. Approximately 800 gallons of PSH was recovered from the site during the 2004 reporting period. A total of approximately 5,871 gallons of PSH has been recovered since the start of product inception. The average thickness of PSH in monitor wells and recovery wells during the first, second, third and fourth quarters of 2004 were 5.80 feet, 5.10 feet, 7.10 feet, and 7.30 feet, respectively. Throughout 2004 PSH amounts have fluctuated at the site with no obvious increases or decreases.

Review of laboratory analytical results of the groundwater samples obtained during the 2004 monitoring period indicate that benzene and BTEX concentrations were below NMOCD regulatory standards in nine (9) monitor wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10). Eight (8) monitor wells and recovery wells contained measurable thicknesses of PSH during the annual monitoring period and were not sampled for at least one quarterly sampling event.

The Release Notification and Corrective Action Form (C-141) is provided as Appendix A.

## ANTICIPATED ACTIONS

Plains is requesting permission from the NMOCD to plug and abandon monitor well MW-5 due to the following conditions.

- Up gradient control along the northern perimeter of the leak zone is provided by MW-1, MW-6, and MW-9.

- MW-5 has not displayed concentrations of dissolved phase impact above the NMOCD Regulatory Limit in twelve (12) consecutive quarters since 2001.

Quarterly monitoring and sampling will continue in 2005. Manual product recovery and gauging will continue on a weekly schedule and will be adjusted according to site conditions. The recovery system will be monitored and adjusted by adding or relocating pumps to maximize efficiency in product removal and gradient control.

A plan will be developed to address the impacted and/or excavated soil remaining on site. Any soil proposals will be addressed under separate cover from this report.

## 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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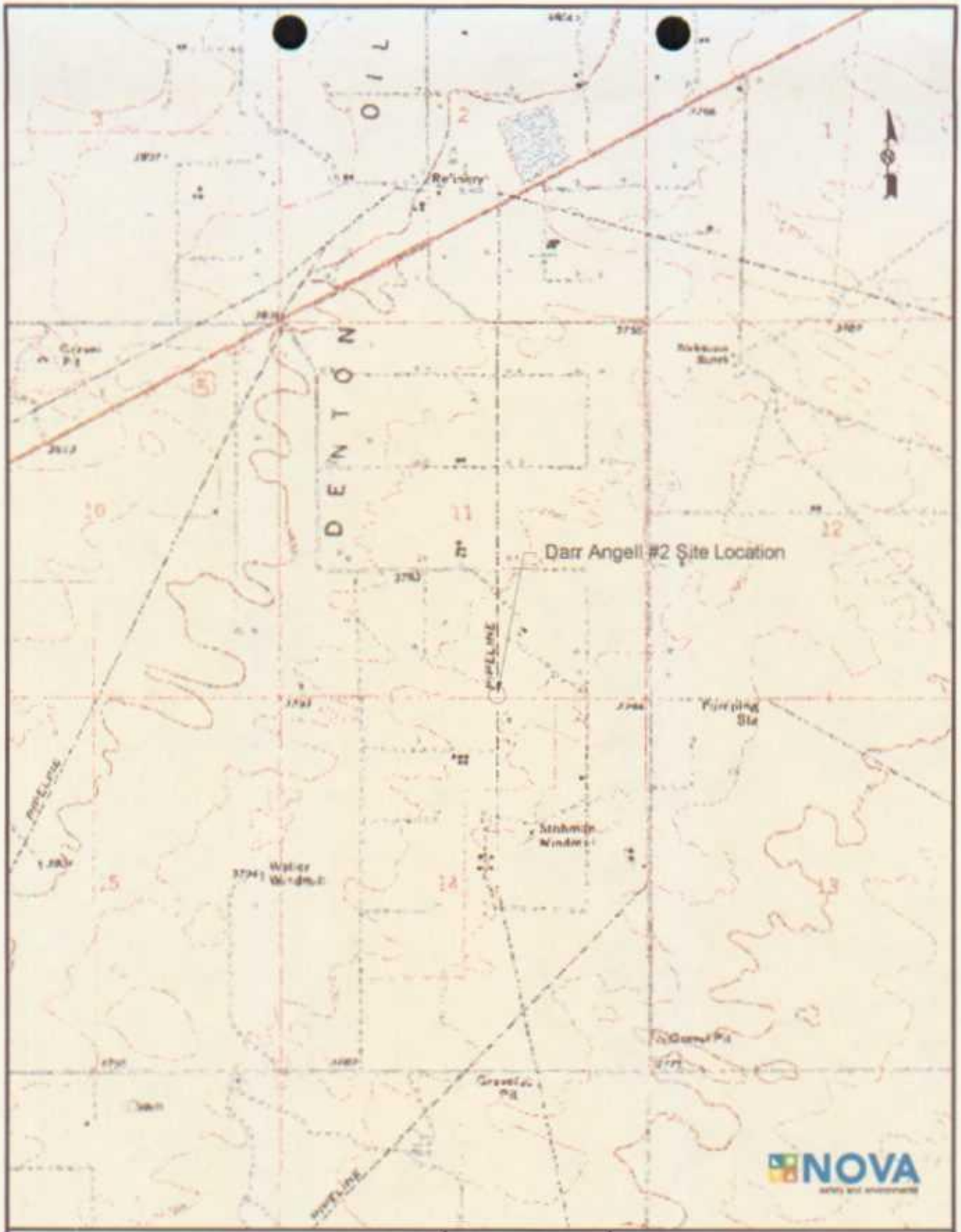
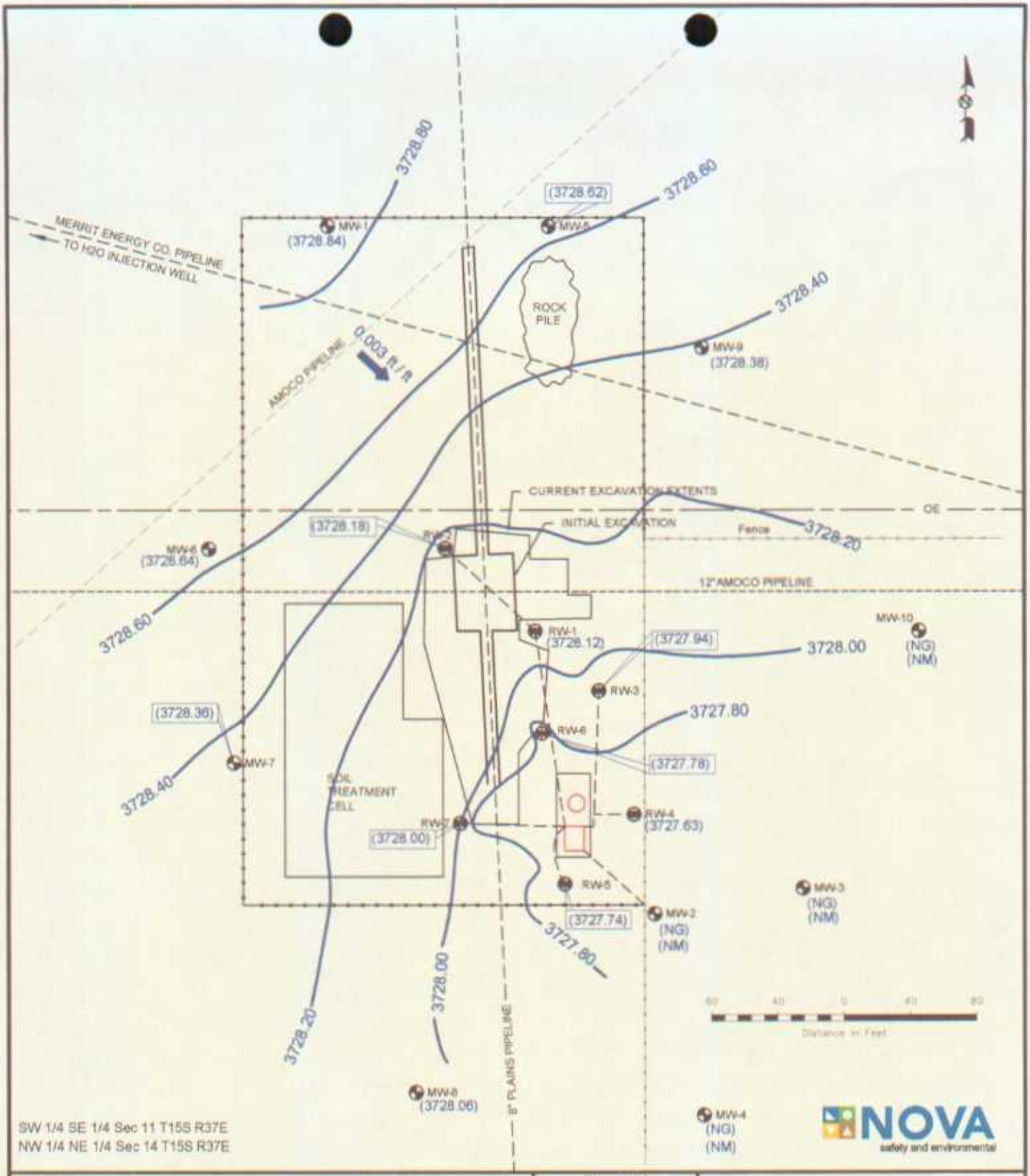
# Figures




| | | |
|---|---|---|
| Site Location<br>33° 01' 47.0" N 103° 10' 10.5" W<br><br>SW 1/4 of SE1/4 of Sec 11 T15S R37E<br>NW 1/4 of NE 1/4 of Sec 14 T15S R37E | Figure 1<br>Site Location Map<br><br>Plains Marketing, L.P.<br>Darr Angell # 2<br>Lea County, NM | NOVA Safety and Environmental<br>Scale: 1"=2000 \| Prep By: CDB \| Checked By: TKC<br>February 20, 2005 |


MERRIT ENERGY CO. PIPELINE
TO H2O INJECTION WELL
AMOCO PIPELINE
0.003 ft / ft
ROCK PILE
MW-1 (3728.84)
MW-5 (3728.62)
MW-9 (3728.38)
MW-6 (3728.84)
(3728.18)
RW-2
CURRENT EXCAVATION EXTENTS
INITIAL EXCAVATION
OE
Fence
12" AMOCO PIPELINE
RW-1 (3728.12)
(3727.94)
MW-10 (NG) (NM)
RW-3
RW-6
(3728.36)
MW-7
(3727.78)
SOIL TREATMENT CELL
RW-4 (3727.63)
RW-7
(3728.00)
RW-5
(3727.74)
MW-2 (NG) (NM)
MW-3 (NG) (NM)
MW-8 (3728.06)
MW-4 (NG) (NM)
8" PLAINS PIPELINE
3728.80
3728.60
3728.40
3728.20
3728.00
3727.80
3727.60
Distance in Feet
SW 1/4 SE 1/4 Sec 11 T15S R37E
NW 1/4 NE 1/4 Sec 14 T15S R37E
NOVA safety and environmental
LEGEND:
Monitor Well Location
Recovery Well Location
(3728.84) Groundwater Elevation (In Feet)
Groundwater Gradient Contour Line
Groundwater Gradient Direction and Magnitude
Excavation
Bermed Containment Area
NM Access Denied By Landowner
Lat 33° 01' 47.0"N Lon. 103° 10' 10.5"W
Figure 2A
Inferred Groundwater Gradient Map
(3/2/04)
Plains Marketing, L.P.
Darr Angell # 2
Lea County, NM
NOVA Safety and Environmental
Scale: 1"=80'
Prep By: DFM
Checked By: LDH
February 16, 2005

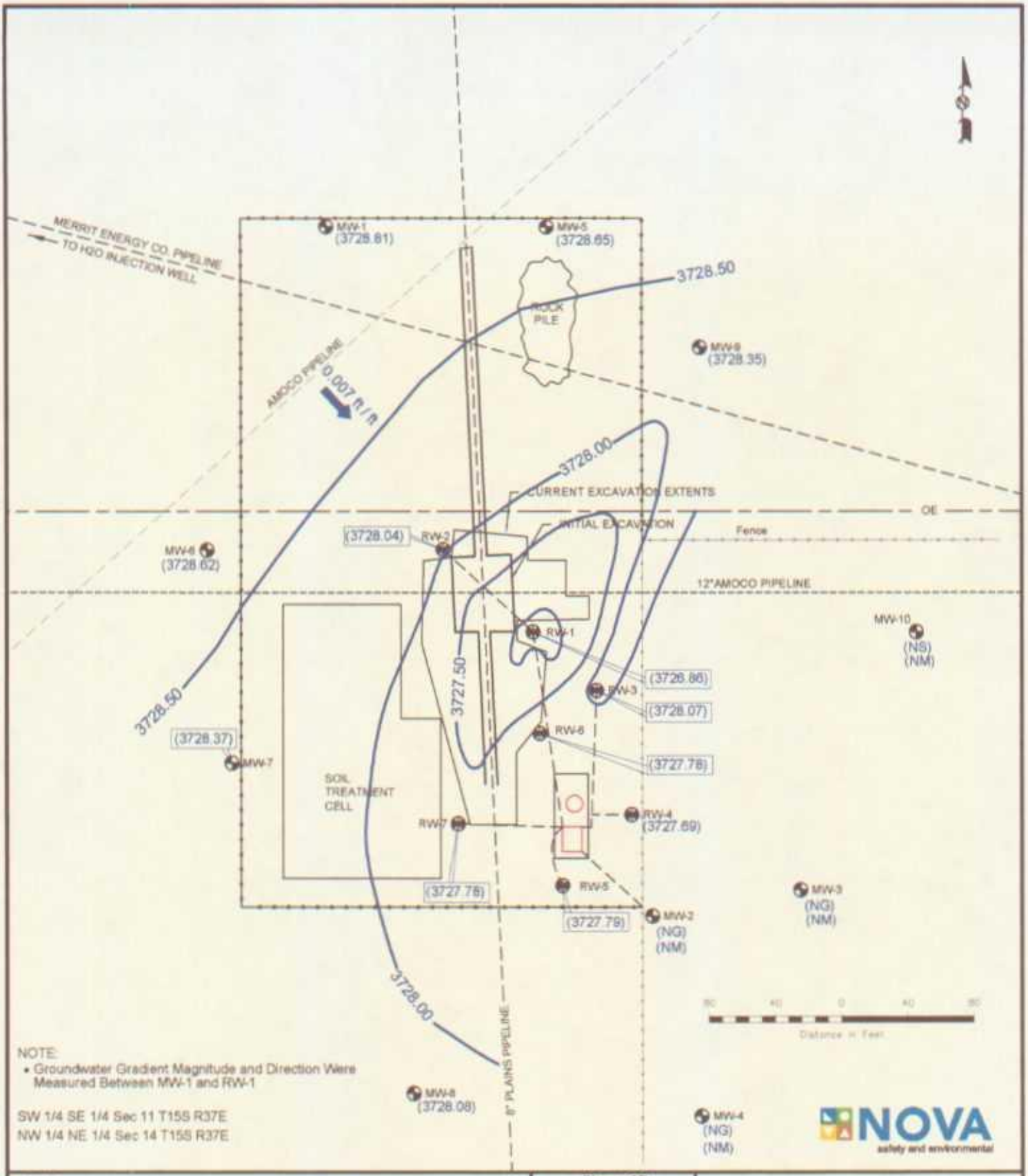



**Figure 2B**
**Inferred Groundwater Gradient Map**
**(6/2/04)**

**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

**NOVA Safety and Environmental**

| Scale: 1"=80' | Prep By: DPM | Checked By: LDH |
|---|---|---|
| February 21, 2005 | | |

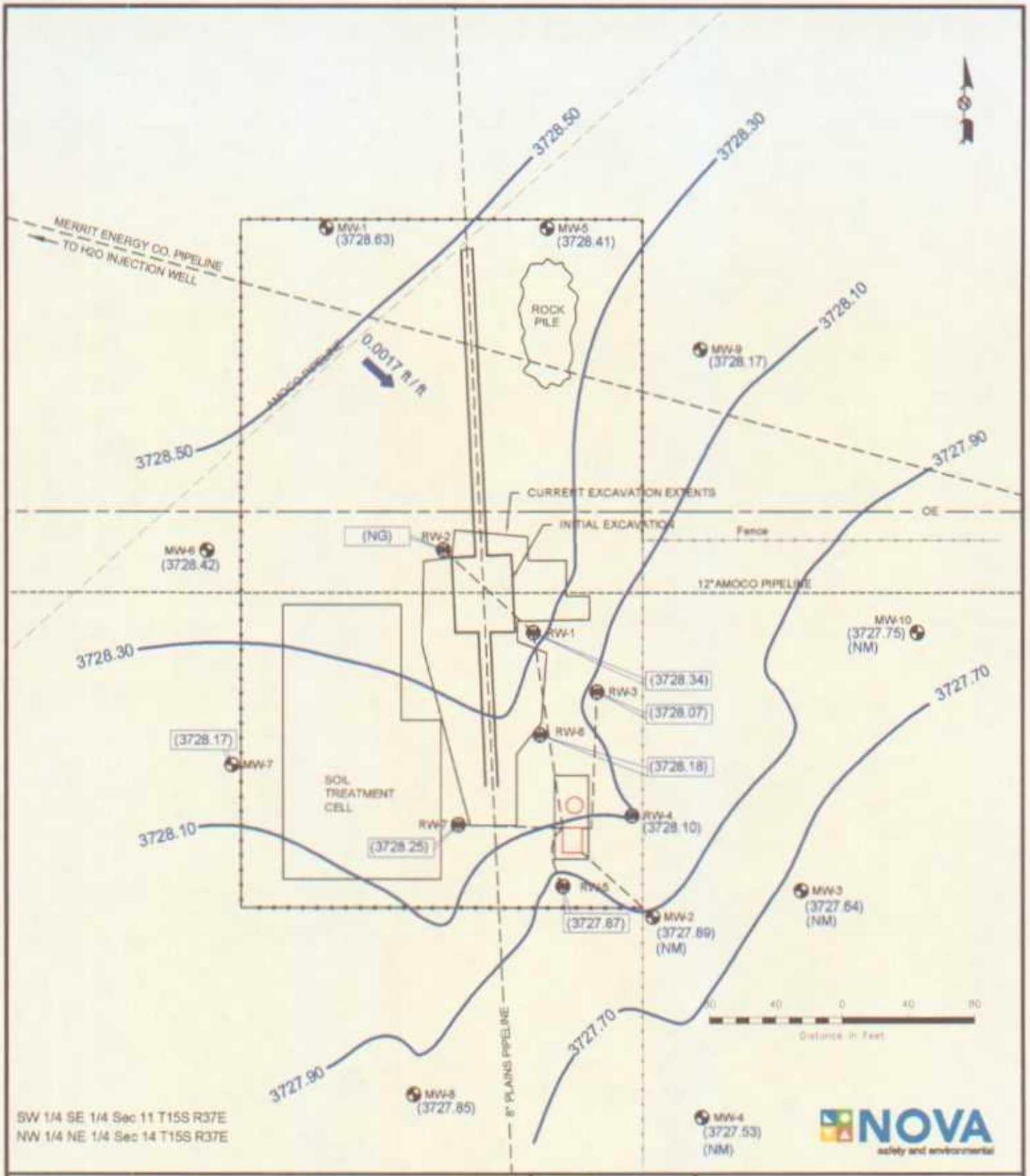
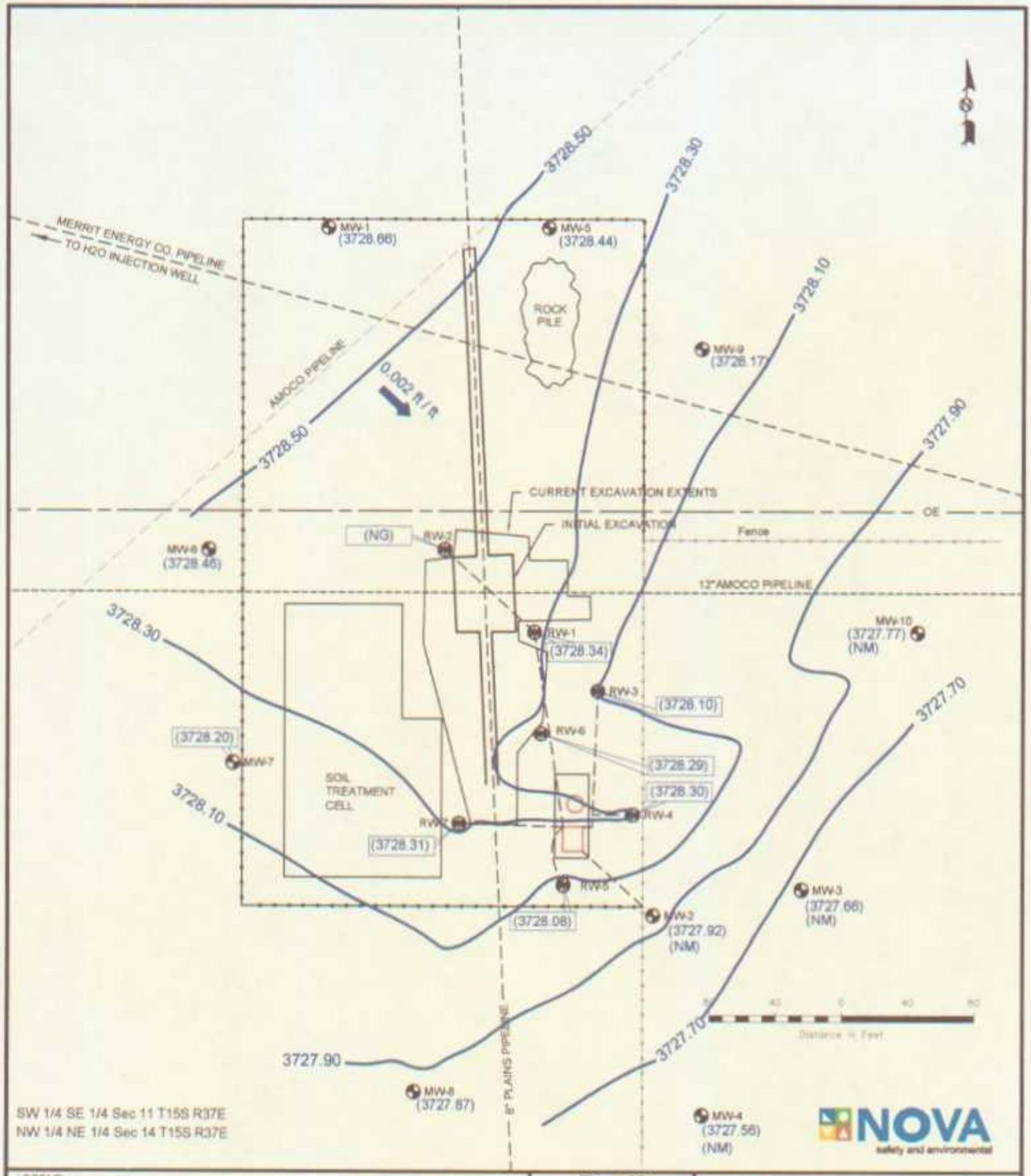



Figure 2C
Inferred Groundwater Gradient Map
(9/2/04)

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

NOVA Safety and Environmental

| Scale: 1"=80' | Prep By: DPM | Checked By: LDH |
|---|---|---|
| February 21, 2005 | | |




LEGEND:

- Monitor Well Location
- Recovery Well Location
- (3728.84) Groundwater Elevation (in Feet)
- Groundwater Gradient Contour Line
- 0.002 ft/ft Groundwater Gradient Direction and Magnitude
- Excavation
- Bermed Containment Area
- NM Access Denied By Landowner

Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W

Figure 2D
Inferred Groundwater Gradient Map
(12/11/04)

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

NOVA Safety and Environmental

| Scale: 1"=80' | Prep By: DFM | Checked By: LDH |
|---|---|---|
| February 21, 2005 | | |

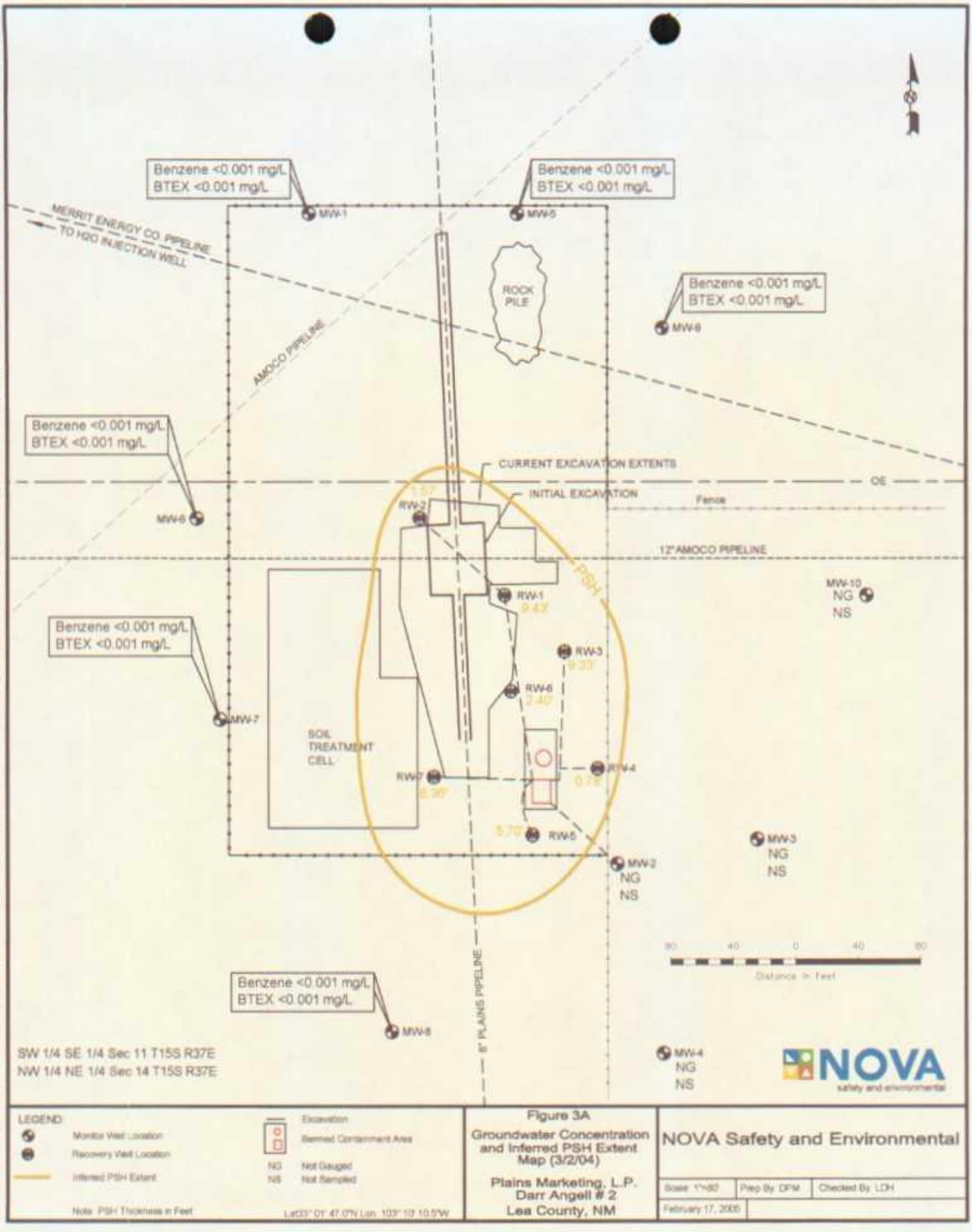



Figure 3A
Groundwater Concentration and Inferred PSH Extent Map (3/2/04)
Plains Marketing, L.P.
Darr Angell # 2
Lea County, NM

NOVA Safety and Environmental

| Scale: 1"=80 | Prep By: DFM | Checked By: LDH |
|---|---|---|
| February 17, 2005 | | |

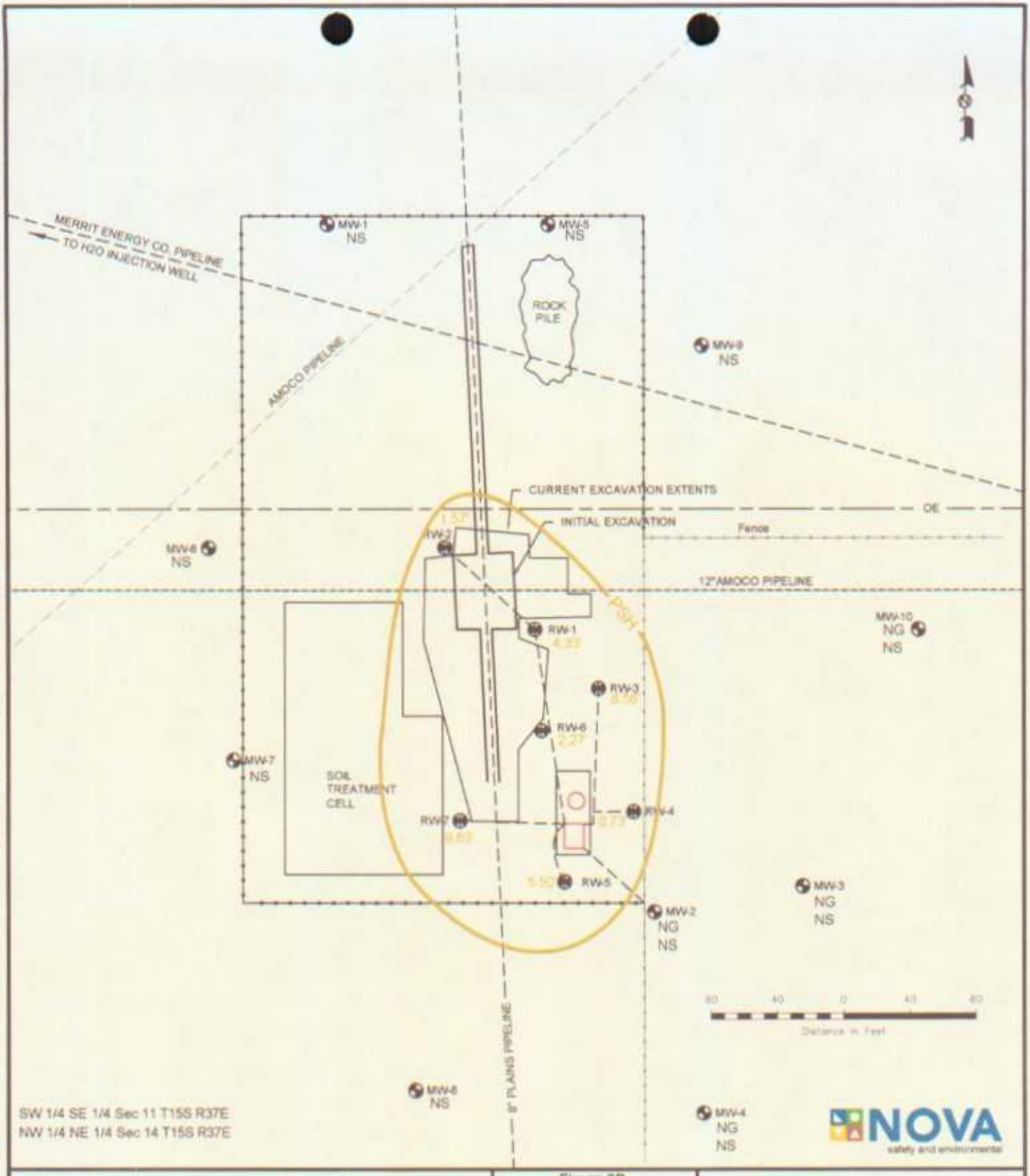
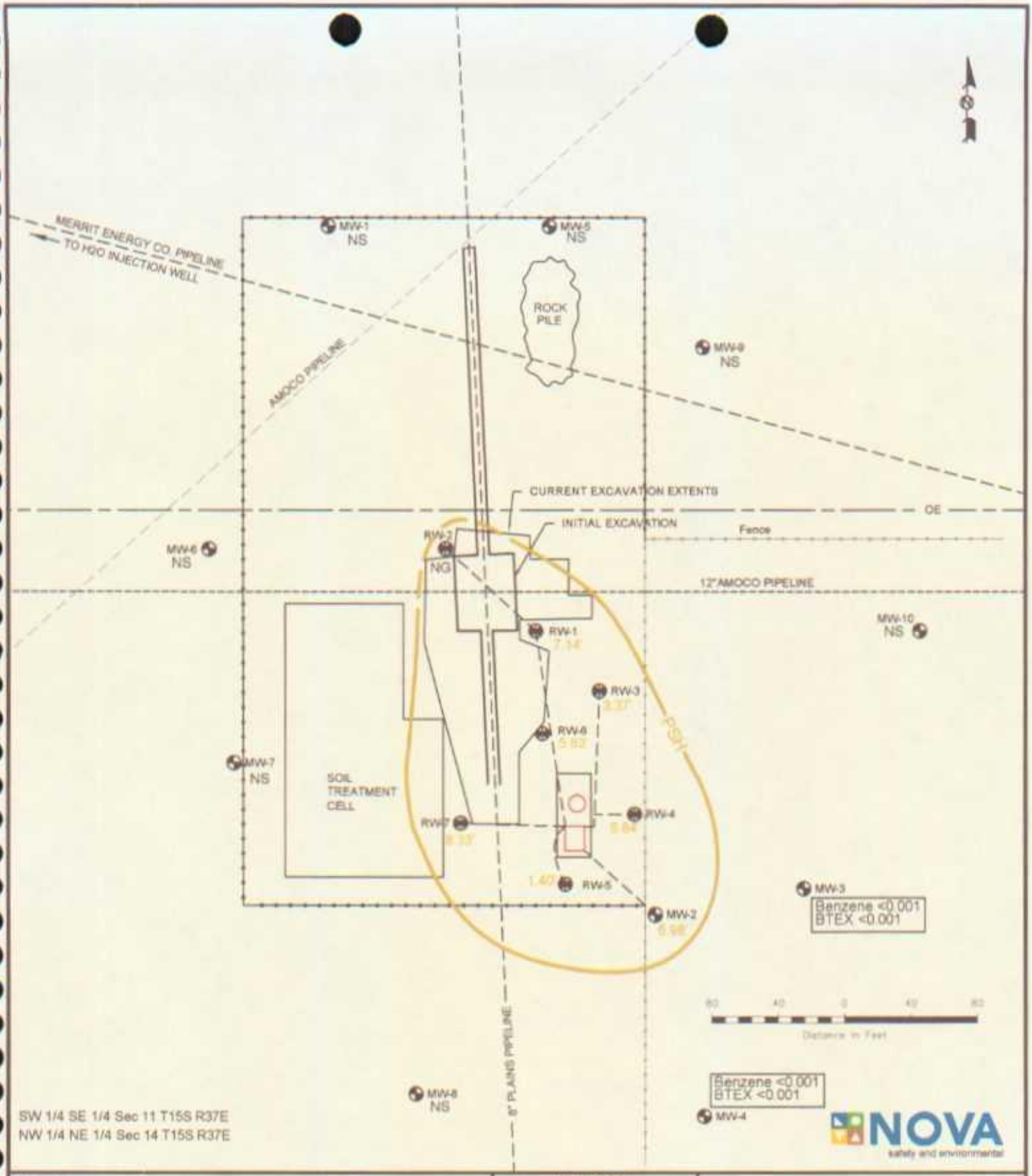



**Figure 3B**
**Groundwater Concentration and Inferred PSH Extent Map (6/2/04)**
**Plains Marketing, L.P.**
**Darr Angell # 2**
**Lea County, NM**

**NOVA Safety and Environmental**

| Scale: 1"=80' | Prep By: DFM | Checked By: LDH |
|---|---|---|
| February 17, 2005 | | |




LEGEND:

- Monitor Well Location
- Recovery Well Location
- Inferred PSH Extent
- Excavation
- Bermed Containment Area
- NG: Not Gauged
- NS: Not Sampled

Note: PSH Thickness in Feet

Lat33° 01' 47.0"N Lon. 103° 10' 10.5"W

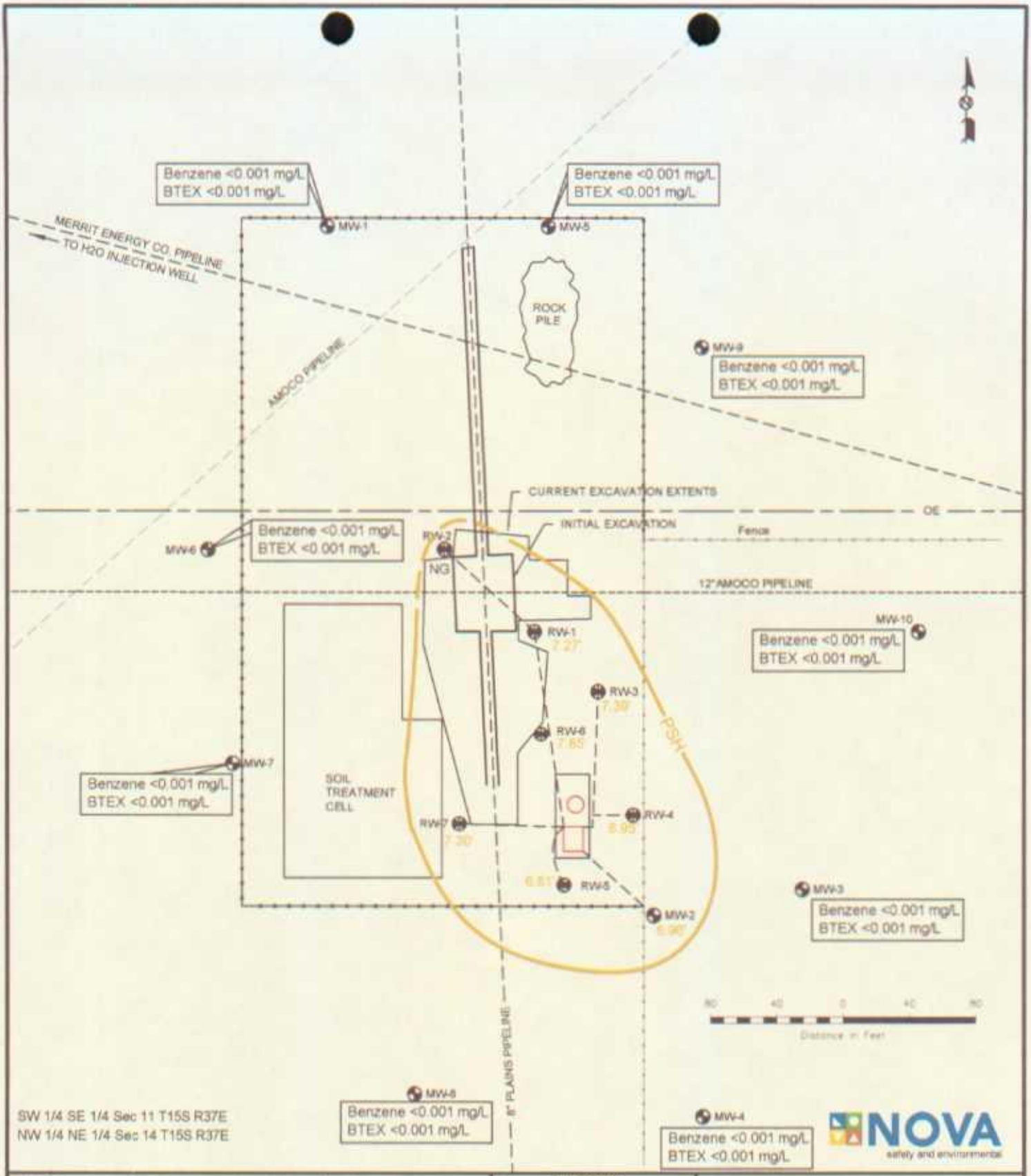
Figure 3C

Groundwater Concentration and Inferred PSH Extent Map (9/2/04)

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

NOVA Safety and Environmental

| Scale: 1"=80' | Prep By: DFM | Checked By: LDH |
|---|---|---|
| March 25, 2005 | | |


Benzene <0.001 mg/L
BTEX <0.001 mg/L
MW-1
MW-5
MERRIT ENERGY CO. PIPELINE
TO H2O INJECTION WELL
ROCK PILE
AMOCO PIPELINE
MW-9
Benzene <0.001 mg/L
BTEX <0.001 mg/L
CURRENT EXCAVATION EXTENTS
OE
INITIAL EXCAVATION
Fence
MW-6
RW-2
NG
12" AMOCO PIPELINE
MW-10
RW-1
RW-3
RW-6
PSH
MW-7
SOIL TREATMENT CELL
RW-7
RW-4
RW-5
MW-2
MW-3
Distance in Feet
8" PLAINS PIPELINE
MW-8
MW-4
SW 1/4 SE 1/4 Sec 11 T15S R37E
NW 1/4 NE 1/4 Sec 14 T15S R37E
NOVA
safety and environmental
LEGEND:
Monitor Well Location
Recovery Well Location
Inferred PSH Extent
Excavation
Bermed Containment Area
NG Not Gauged
Note: PSH Thickness in Feet
Lat33° 01' 47.07N Lon. 103° 12' 10.5"W
Figure 3D
Groundwater Concentration and Inferred PSH Extent Map (12/11/04)
Plains Marketing, L.P.
Darr Angell # 2
Lea County, NM
NOVA Safety and Environmental
Scale: 1"=80'
Prep By: DFM
CDS
February 21, 2005

# Tables

**TABLE 1**

**GROUNDWATER ELEVATION DATA**
**FOR 2004**

**PLAINS MARKETING, LP**
**DARR ANGELL 2**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| MW - 1 | 03/02/04 | 3,788.04 | - | 59.20 | 0.00 | 3728.84 |
| | 06/02/04 | 3,788.04 | - | 59.23 | 0.00 | 3728.81 |
| | 08/03/04 | 3,788.04 | - | 59.37 | 0.00 | 3728.67 |
| | 09/02/04 | 3,788.04 | - | 59.41 | 0.00 | 3728.63 |
| | 12/11/04 | 3,788.04 | - | 59.38 | 0.00 | 3728.66 |
| MW-2 | 03/02/04 | 3,788.41 | No Access to well | | | |
| | 09/02/03 | 3,788.41 | 58.49 | 60.38 | 1.89 | 3729.64 |
| | 06/02/04 | 3,788.41 | No Access to well | | | |
| | 09/02/04 | 3,788.41 | 59.47 | 66.45 | 6.98 | 3727.89 |
| | 09/14/04 | 3,788.41 | 59.45 | 66.55 | 7.10 | 3727.90 |
| | 09/23/04 | 3,788.41 | 59.50 | 66.35 | 6.85 | 3727.88 |
| | 11/13/04 | 3,788.41 | 59.40 | 66.10 | 6.70 | 3728.01 |
| | 12/11/04 | 3,788.41 | 59.44 | 66.40 | 6.96 | 3727.93 |
| | 12/17/04 | 3,788.41 | 59.64 | 66.35 | 6.71 | 3727.76 |
| | 12/30/04 | 3,788.41 | 59.53 | 66.53 | 7.00 | 3727.83 |
| MW - 3 | 03/02/04 | 3,787.94 | No Access to well | | | |
| | 06/02/04 | 3,787.94 | No Access to well | | | |
| | 09/02/04 | 3,787.94 | - | 60.30 | 0.00 | 3727.64 |
| | 12/11/04 | 3,787.94 | - | 60.28 | 0.00 | 3727.66 |
| MW - 4 | 03/02/04 | 3,787.76 | No Access to well | | | |
| | 06/02/04 | 3,787.76 | No Access to well | | | |
| | 09/02/04 | 3,787.76 | - | 60.23 | 0.00 | 3727.53 |
| | 12/11/04 | 3,787.76 | - | 60.20 | 0.00 | 3727.56 |
| MW - 5 | 03/02/04 | 3,787.73 | - | 59.11 | 0.00 | 3728.62 |
| | 06/02/04 | 3,787.73 | - | 59.08 | 0.00 | 3728.65 |
| | 08/03/04 | 3,787.73 | - | 59.28 | 0.00 | 3728.45 |
| | 09/02/04 | 3,787.73 | - | 59.32 | 0.00 | 3728.41 |
| | 12/11/04 | 3,787.73 | - | 59.29 | 0.00 | 3728.44 |
| MW-6 | 03/02/04 | 3,788.31 | - | 59.67 | 0.00 | 3728.64 |
| | 06/02/04 | 3,788.31 | - | 59.69 | 0.00 | 3728.62 |
| | 08/03/04 | 3,788.31 | - | 59.82 | 0.00 | 3728.49 |
| | 09/02/04 | 3,788.31 | - | 59.89 | 0.00 | 3728.42 |
| | 12/11/04 | 3,788.31 | - | 59.85 | 0.00 | 3728.46 |
| MW-7 | 03/02/04 | 3,788.65 | - | 60.29 | 0.00 | 3728.36 |
| | 06/02/04 | 3,788.65 | - | 60.28 | 0.00 | 3728.37 |
| | 08/03/04 | 3,788.65 | - | 60.43 | 0.00 | 3728.22 |
| | 09/02/04 | 3,788.65 | - | 60.48 | 0.00 | 3728.17 |
| | 12/11/04 | 3,788.65 | - | 60.45 | 0.00 | 3728.20 |
| MW-8 | 03/02/04 | 3,787.60 | - | 59.54 | 0.00 | 3728.06 |
| | 06/02/04 | 3,787.60 | - | 59.52 | 0.00 | 3728.08 |
| | 08/03/04 | 3,787.60 | - | 59.71 | 0.00 | 3727.89 |

**TABLE 1**

**GROUNDWATER ELEVATION DATA**
**FOR 2004**

**PLAINS MARKETING, LP**
**DARR ANGELL 2**
**LEA COUNTY, NEW MEXICO**

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| | 09/02/04 | 3,787.60 | - | 59.75 | 0.00 | 3727.85 |
| | 12/11/04 | 3,787.60 | - | 59.73 | 0.00 | 3727.87 |
| MW-9 | 03/02/04 | 3,787.27 | - | 58.89 | 0.00 | 3728.38 |
| | 06/02/04 | 3,787.27 | - | 58.92 | 0.00 | 3728.35 |
| | 08/03/04 | 3,787.27 | - | 59.07 | 0.00 | 3728.20 |
| | 09/02/04 | 3,787.27 | - | 59.10 | 0.00 | 3728.17 |
| | 12/11/04 | 3,787.27 | - | 59.10 | 0.00 | 3728.17 |
| MW - 10 | 06/02/04 | 3,787.50 | No Access to well | | | |
| | 03/02/04 | 3,787.50 | No Access to well | | | |
| | 09/02/04 | 3,787.50 | - | 59.75 | 0.00 | 3727.75 |
| | 12/11/04 | 3,787.50 | - | 59.73 | 0.00 | 3727.77 |
| RW - 1 | 01/08/04 | 3,787.45 | 57.97 | 66.27 | 8.30 | 3728.24 |
| | 01/21/04 | 3,787.45 | 57.96 | 67.10 | 9.14 | 3728.12 |
| | 02/17/04 | 3,787.45 | 57.91 | 66.82 | 8.91 | 3728.20 |
| | 03/02/04 | 3,787.45 | 57.92 | 67.35 | 9.43 | 3728.12 |
| | 03/18/04 | 3,787.45 | 58.01 | 67.09 | 9.08 | 3728.08 |
| | 04/08/04 | 3,787.45 | 57.58 | 66.40 | 8.82 | 3728.55 |
| | 04/12/04 | 3,787.45 | 57.57 | 66.79 | 9.22 | 3728.50 |
| | 04/19/04 | 3,787.45 | 57.59 | 66.37 | 8.78 | 3728.54 |
| | 06/02/04 | 3,787.45 | 59.94 | 64.27 | 4.33 | 3726.86 |
| | 06/15/04 | 3,787.45 | 57.63 | 66.27 | 8.64 | 3728.52 |
| | 06/21/04 | 3,787.45 | 57.63 | 66.26 | 8.63 | 3728.53 |
| | 06/28/04 | 3,787.45 | 57.65 | 66.27 | 8.62 | 3728.51 |
| | 07/08/04 | 3,787.45 | 57.64 | 66.28 | 8.64 | 3728.51 |
| | 07/12/04 | 3,787.45 | 57.67 | 66.30 | 8.63 | 3728.49 |
| | 08/03/04 | 3,787.45 | 57.68 | 66.30 | 8.62 | 3728.48 |
| | 08/05/04 | 3,787.45 | 57.68 | 66.30 | 8.62 | 3728.48 |
| | 08/10/04 | 3,787.45 | 57.75 | 66.35 | 8.60 | 3728.41 |
| | 08/18/04 | 3,787.45 | 57.74 | 66.25 | 8.51 | 3728.43 |
| | 08/24/04 | 3,787.45 | 57.80 | 66.32 | 8.52 | 3728.37 |
| | 09/01/04 | 3,787.45 | 57.81 | 66.30 | 8.49 | 3728.37 |
| | 09/02/04 | 3,787.45 | 58.04 | 65.18 | 7.14 | 3728.34 |
| | 09/08/04 | 3,787.45 | 58.20 | 65.91 | 7.71 | 3728.09 |
| | 09/14/04 | 3,787.45 | 57.95 | 66.15 | 8.20 | 3728.27 |
| | 09/23/04 | 3,787.45 | 57.93 | 66.07 | 8.14 | 3728.30 |
| | 10/13/04 | 3,787.45 | 57.09 | 64.90 | 7.81 | 3729.19 |
| | 11/13/04 | 3,787.45 | 58.00 | 65.00 | 7.00 | 3728.40 |
| | 12/11/04 | 3,787.45 | 58.02 | 65.29 | 7.27 | 3728.34 |
| | 12/17/04 | 3,787.45 | 58.20 | 65.10 | 6.90 | 3728.22 |
| | 12/30/04 | 3,787.45 | 58.11 | 65.58 | 7.47 | 3728.22 |
| RW - 2 | 02/17/04 | 3,787.83 | 59.81 | 61.34 | 1.53 | 3727.79 |
| | 03/02/04 | 3,787.83 | 59.52 | 61.09 | 1.57 | 3728.07 |
| | 04/08/04 | 3,787.83 | 58.14 | 64.18 | 6.04 | 3728.78 |
| | 04/12/04 | 3,787.83 | 59.54 | 60.30 | 0.76 | 3728.18 |
| | 04/19/04 | 3,787.83 | 58.16 | 63.13 | 4.97 | 3728.92 |

TABLE 1

GROUNDWATER ELEVATION DATA
FOR 2004

PLAINS MARKETING, LP
DARR ANGELL 2
LEA COUNTY, NEW MEXICO

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| | 06/02/04 | 3,787.83 | 59.55 | 61.12 | 1.57 | 3728.04 |
| | 06/15/04 | 3,787.83 | 58.62 | float in well | | |
| | 06/21/04 | 3,787.83 | 57.93 | float in well | | |
| | 06/28/04 | 3,787.83 | 57.90 | 62.18 | 4.28 | 3729.29 |
| | 07/08/04 | 3,787.83 | 57.91 | float in well | | |
| | 07/12/04 | 3,787.83 | 57.90 | float in well | | |
| | 08/03/04 | 3,787.83 | 57.90 | float in well | | |
| | 08/05/04 | 3,787.83 | 57.90 | float in well | | |
| | 08/10/04 | 3,787.83 | 57.97 | float in well | | |
| | 08/18/04 | 3,787.83 | float in well | | | |
| | 09/02/04 | 3,787.83 | 58.00 | float in well | | |
| | 12/11/04 | 3,787.83 | float in well | | | |
| | | | | | | |
| RW-3 | 01/08/04 | 3,787.81 | 58.30 | 67.18 | 8.88 | 3728.18 |
| | 01/21/04 | 3,787.81 | 58.34 | 67.97 | 9.63 | 3728.03 |
| | 02/17/04 | 3,787.81 | 59.68 | 60.59 | 0.91 | 3727.99 |
| | 03/02/04 | 3,787.81 | 58.47 | 67.80 | 9.33 | 3727.94 |
| | 03/18/04 | 3,787.81 | 58.79 | 66.37 | 7.58 | 3727.88 |
| | 04/08/04 | 3,787.81 | 59.40 | 62.18 | 2.78 | 3727.99 |
| | 04/12/04 | 3,787.81 | 59.50 | 61.70 | 2.20 | 3727.98 |
| | 04/19/04 | 3,787.81 | 59.16 | 60.23 | 1.07 | 3728.49 |
| | 06/02/04 | 3,787.81 | 58.46 | 67.02 | 8.56 | 3728.07 |
| | 06/15/04 | 3,787.81 | 58.72 | 64.28 | 5.56 | 3728.26 |
| | 06/21/04 | 3,787.81 | 58.30 | 66.04 | 7.74 | 3728.35 |
| | 06/28/04 | 3,787.81 | 58.26 | 66.16 | 7.90 | 3728.37 |
| | 07/08/04 | 3,787.81 | 58.28 | 66.10 | 7.82 | 3728.36 |
| | 07/12/04 | 3,787.81 | 58.29 | 66.13 | 7.84 | 3728.34 |
| | 08/03/04 | 3,787.81 | 58.30 | 66.13 | 7.83 | 3728.34 |
| | 08/05/04 | 3,787.81 | 58.03 | 66.13 | 8.10 | 3728.57 |
| | 08/10/04 | 3,787.81 | 58.32 | 66.56 | 8.24 | 3728.25 |
| | 08/18/04 | 3,787.81 | 58.37 | 66.20 | 7.83 | 3728.27 |
| | 08/24/04 | 3,787.81 | 58.45 | 66.18 | 7.73 | 3728.20 |
| | 09/01/04 | 3,787.81 | 58.45 | 66.21 | 7.76 | 3728.20 |
| | 09/02/04 | 3,787.81 | 59.23 | 62.60 | 3.37 | 3728.07 |
| | 09/08/04 | 3,787.81 | 58.73 | 64.93 | 6.20 | 3728.15 |
| | 09/14/04 | 3,787.81 | 58.63 | 65.73 | 7.10 | 3728.12 |
| | 09/23/04 | 3,787.81 | 58.58 | 65.50 | 6.92 | 3728.19 |
| | 10/13/04 | 3,787.81 | 57.79 | 65.32 | 7.53 | 3728.89 |
| | 11/13/04 | 3,787.81 | 59.19 | 62.05 | 2.86 | 3728.19 |
| | 12/11/04 | 3,787.81 | 58.60 | 65.99 | 7.39 | 3728.10 |
| | 12/17/04 | 3,787.81 | 58.70 | 65.88 | 7.18 | 3728.03 |
| | 12/30/04 | 3,787.81 | 58.63 | 66.12 | 7.49 | 3728.06 |
| | | | | | | |
| RW-4 | 01/08/04 | 3,787.74 | 59.77 | 61.54 | 1.77 | 3727.70 |
| | 01/21/04 | 3,787.74 | 59.69 | 61.99 | 2.30 | 3727.71 |
| | 02/17/04 | 3,787.74 | 59.81 | 60.32 | 0.51 | 3727.85 |
| | 03/02/04 | 3,787.74 | 59.99 | 60.77 | 0.78 | 3727.63 |
| | 03/18/04 | 3,787.74 | 60.00 | 61.03 | 1.03 | 3727.59 |
| | 04/08/04 | 3,787.74 | 59.70 | 60.14 | 0.44 | 3727.97 |

TABLE 1

GROUNDWATER ELEVATION DATA
FOR 2004

PLAINS MARKETING, LP
DARR ANGELL 2
LEA COUNTY, NEW MEXICO

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| | 04/12/04 | 3,787.74 | 59.80 | 60.41 | 0.61 | 3727.85 |
| | 04/19/04 | 3,787.74 | 59.83 | 60.52 | 0.69 | 3727.81 |
| | 06/02/04 | 3,787.74 | 59.94 | 60.67 | 0.73 | 3727.69 |
| | 06/15/04 | 3,787.74 | 59.20 | 62.26 | 3.06 | 3728.08 |
| | 06/21/04 | 3,787.74 | 58.65 | 64.69 | 6.04 | 3728.18 |
| | 06/28/04 | 3,787.74 | 58.53 | 65.30 | 6.77 | 3728.19 |
| | 07/08/04 | 3,787.74 | 58.60 | 64.98 | 6.38 | 3728.18 |
| | 07/12/04 | 3,787.74 | 58.58 | 65.11 | 6.53 | 3728.18 |
| | 08/03/04 | 3,787.74 | 58.59 | 65.11 | 6.52 | 3728.17 |
| | 08/05/04 | 3,787.74 | 58.59 | 65.11 | 6.52 | 3728.17 |
| | 08/10/04 | 3,787.74 | 58.55 | 65.70 | 7.15 | 3728.12 |
| | 08/18/04 | 3,787.74 | 58.60 | 65.35 | 6.75 | 3728.13 |
| | 08/24/04 | 3,787.74 | 58.71 | 65.18 | 6.47 | 3728.06 |
| | 09/01/04 | 3,787.74 | 58.65 | 65.40 | 6.75 | 3728.08 |
| | 09/02/04 | 3,787.74 | 58.61 | 65.45 | 6.84 | 3728.10 |
| | 09/08/04 | 3,787.74 | 58.73 | 65.50 | 6.77 | 3727.99 |
| | 09/14/04 | 3,787.74 | 58.80 | 65.05 | 6.25 | 3728.00 |
| | 09/23/04 | 3,787.74 | 58.78 | 65.15 | 6.37 | 3728.00 |
| | 10/13/04 | 3,787.74 | 58.81 | 64.10 | 5.29 | 3728.14 |
| | 11/13/04 | 3,787.74 | 59.14 | 62.92 | 3.78 | 3728.03 |
| | 12/11/04 | 3,787.74 | 58.40 | 65.35 | 6.95 | 3728.30 |
| | 12/17/04 | 3,787.74 | 58.49 | 65.29 | 6.80 | 3728.23 |
| | | | | | | |
| RW - 5 | 01/08/04 | 3,787.38 | 58.57 | 61.81 | 3.24 | 3728.32 |
| | 01/21/04 | 3,787.38 | 58.19 | 65.73 | 7.54 | 3728.06 |
| | 02/17/04 | 3,787.38 | 58.75 | 62.18 | 3.43 | 3728.12 |
| | 03/02/04 | 3,787.38 | 58.79 | 64.49 | 5.70 | 3727.74 |
| | 03/18/04 | 3,787.38 | 58.62 | 65.62 | 7.00 | 3727.71 |
| | 04/08/04 | 3,787.38 | 59.02 | 60.01 | 0.99 | 3728.21 |
| | 04/12/04 | 3,787.38 | 59.45 | 60.33 | 0.88 | 3727.80 |
| | 04/19/04 | 3,787.38 | 58.85 | 62.95 | 4.10 | 3727.92 |
| | 06/02/04 | 3,787.38 | 58.77 | 64.27 | 5.50 | 3727.79 |
| | 06/15/04 | 3,787.38 | 58.15 | 65.26 | 7.11 | 3728.16 |
| | 06/21/04 | 3,787.38 | 58.10 | 65.42 | 7.32 | 3728.18 |
| | 06/28/04 | 3,787.38 | 58.11 | 65.46 | 7.35 | 3728.17 |
| | 07/08/04 | 3,787.38 | 58.12 | 65.45 | 7.33 | 3728.16 |
| | 07/12/04 | 3,787.38 | 58.14 | 65.46 | 7.32 | 3728.14 |
| | 08/03/04 | 3,787.38 | 58.15 | 65.46 | 7.31 | 3728.13 |
| | 08/05/04 | 3,787.38 | 58.15 | 65.46 | 7.31 | 3728.13 |
| | 08/10/04 | 3,787.38 | 58.31 | 65.00 | 6.69 | 3728.07 |
| | 08/18/04 | 3,787.38 | 58.48 | 64.10 | 5.62 | 3728.06 |
| | 08/24/04 | 3,787.38 | 58.63 | 63.73 | 5.10 | 3727.99 |
| | 09/01/04 | 3,787.38 | 58.60 | 63.98 | 5.38 | 3727.97 |
| | 09/02/04 | 3,787.38 | 59.30 | 60.70 | 1.40 | 3727.87 |
| | 09/08/04 | 3,787.38 | 58.80 | 63.30 | 4.50 | 3727.91 |
| | 09/14/04 | 3,787.38 | 58.84 | 63.25 | 4.41 | 3727.88 |
| | 09/23/04 | 3,787.38 | 58.75 | 63.55 | 4.80 | 3727.91 |
| | 10/13/04 | 3,787.38 | 58.05 | 63.78 | 5.73 | 3728.47 |
| | 11/13/04 | 3,787.38 | 58.31 | 64.50 | 6.19 | 3728.14 |

TABLE 1

GROUNDWATER ELEVATION DATA
FOR 2004

PLAINS MARKETING, LP
DARR ANGELL 2
LEA COUNTY, NEW MEXICO

| WELL NUMBER | DATE MEASURED | TOP OF CASING ELEVATION | DEPTH TO PRODUCT | DEPTH TO WATER | PSH THICKNESS | CORRECTED GROUND WATER ELEVATION |
|---|---|---|---|---|---|---|
| | 12/11/04 | 3,787.38 | 58.28 | 65.09 | 6.81 | 3728.08 |
| | 12/17/04 | 3,787.38 | 58.39 | 65.04 | 6.65 | 3727.99 |
| | 12/30/04 | 3,787.38 | 50.46 | 65.20 | 14.74 | 3734.71 |
| | | | | | | |
| RW-6 | 01/08/04 | 3,787.22 | 58.64 | 63.52 | 4.88 | 3727.85 |
| | 01/21/04 | 3,787.22 | 57.98 | 66.18 | 8.20 | 3728.01 |
| | 02/17/04 | 3,787.22 | 57.62 | 66.52 | 8.90 | 3728.27 |
| | 03/02/04 | 3,787.22 | 59.08 | 61.48 | 2.40 | 3727.78 |
| | 03/18/04 | 3,787.22 | 57.89 | 67.05 | 9.16 | 3727.96 |
| | 04/08/04 | 3,787.22 | 57.55 | 58.21 | 0.66 | 3729.57 |
| | 04/12/04 | 3,787.22 | 57.70 | 67.00 | 9.30 | 3728.13 |
| | 04/19/04 | 3,787.22 | 57.77 | 57.81 | 0.04 | 3729.44 |
| | 06/02/04 | 3,787.22 | 59.10 | 61.37 | 2.27 | 3727.78 |
| | 06/15/04 | 3,787.22 | 58.07 | 64.00 | 5.93 | 3728.26 |
| | 06/21/04 | 3,787.22 | 57.59 | 65.94 | 8.35 | 3728.38 |
| | 06/28/04 | 3,787.22 | 57.65 | 66.12 | 8.47 | 3728.30 |
| | 07/08/04 | 3,787.22 | 57.64 | 66.03 | 8.39 | 3728.32 |
| | 07/12/04 | 3,787.22 | 57.66 | 66.05 | 8.39 | 3728.30 |
| | 08/03/04 | 3,787.22 | 57.67 | 66.05 | 8.38 | 3728.29 |
| | 08/05/04 | 3,787.22 | 57.67 | 66.05 | 8.38 | 3728.29 |
| | 08/10/04 | 3,787.22 | 57.75 | 66.30 | 8.55 | 3728.19 |
| | 08/18/04 | 3,787.22 | 57.15 | 66.14 | 8.99 | 3728.72 |
| | 08/24/04 | 3,787.22 | 57.80 | 66.26 | 8.46 | 3728.15 |
| | 09/01/04 | 3,787.22 | 57.72 | 66.14 | 8.42 | 3728.24 |
| | 09/02/04 | 3,787.22 | 58.17 | 64.00 | 5.83 | 3728.18 |
| | 09/08/04 | 3,787.22 | 57.85 | 66.03 | 8.18 | 3728.14 |
| | 09/14/04 | 3,787.22 | 57.78 | 65.95 | 8.17 | 3728.21 |
| | 09/23/04 | 3,787.22 | 57.82 | 66.00 | 8.18 | 3728.17 |
| | 10/13/04 | 3,787.22 | 57.00 | 65.45 | 8.45 | 3728.95 |
| | 11/13/04 | 3,787.22 | 57.81 | 65.47 | 7.66 | 3728.26 |
| | 12/11/04 | 3,787.22 | 57.75 | 65.60 | 7.85 | 3728.29 |
| | 12/17/04 | 3,787.22 | 57.86 | 65.68 | 7.82 | 3728.19 |
| | 12/30/04 | 3,787.22 | 57.97 | 65.70 | 7.73 | 3728.09 |
| | | | | | | |
| RW-7 | 01/08/04 | 3,787.40 | 58.21 | 66.50 | 8.29 | 3727.95 |
| | 01/21/04 | 3,787.40 | 58.50 | 66.88 | 8.38 | 3727.64 |
| | 02/17/04 | 3,787.40 | 59.32 | 60.48 | 1.16 | 3727.91 |
| | 03/02/04 | 3,787.40 | 58.15 | 66.51 | 8.36 | 3728.00 |
| | 03/18/04 | 3,787.40 | 58.21 | 66.75 | 8.54 | 3727.91 |
| | 04/08/04 | 3,787.40 | 57.90 | 58.62 | 0.72 | 3729.39 |
| | 04/12/04 | 3,787.40 | 57.96 | 66.82 | 8.86 | 3728.11 |
| | 04/19/04 | 3,787.40 | 58.07 | 59.16 | 1.09 | 3729.17 |
| | 06/02/04 | 3,787.40 | 58.18 | 67.81 | 9.63 | 3727.78 |
| | 06/15/04 | 3,787.40 | 58.18 | 64.25 | 6.07 | 3728.31 |
| | 06/21/04 | 3,787.40 | 57.82 | 63.83 | 6.01 | 3728.68 |
| | 06/28/04 | 3,787.40 | 57.79 | 66.01 | 8.22 | 3728.38 |
| | 07/08/04 | 3,787.40 | 57.81 | 64.45 | 6.64 | 3728.59 |
| | 07/12/04 | 3,787.40 | 57.81 | 64.98 | 7.17 | 3728.51 |
| | 08/03/04 | 3,787.40 | 57.82 | 64.98 | 7.16 | 3728.51 |

## TABLE 2

## CONCENTRATIONS OF BTEX IN GROUNDWATER

## PLAINS MARKETING, L.P.
## DARR ANGELL 2
## LEA COUNTY, NEW MEXICO

*Results are reported in mg/L.*

| SAMPLE LOCATION | SAMPLE DATE | SW 846-8021B, 5030,8260b BTEX | | | | |
|---|---|---|---|---|---|---|
| | | BENZENE | TOLUENE | ETHYL-BENZENE | m, p - XYLENES | o - XYLENE |
| MW-1 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-3 | 09/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-4 | 09/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-5 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-6 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-7 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW - 8 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-9 | 03/02/04 | <0.001 | <0.001 | <0.001 | <0.002 | <0.001 |
| | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| MW-10 | 12/11/04 | <0.001 | <0.001 | <0.001 | <0.001 | |
| EB - 1 | | | | | | |

Note: N.S. denotes that well was not sampled due to landowner denying access.

# Appendices

# Appendix A
# Notification of Release and Corrective Action

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

Darr Angell #2

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

## Release Notification and Corrective Action

### OPERATOR

☑ Initial Report ☐ Final Report

| | |
|---|---|
| Name: EOTT Energy Pipeline | Contact: Lennah FROST |
| Address: PO Box 4666 Midland Tx 79702 | Telephone No: 915/6843467 |
| Facility Name: Denton Gathering | Facility Type: Pipeline |

| Surface Owner | Mineral Owner | Lease No. |
|---|---|---|
| Darr Angell | | |

### LOCATION OF RELEASE

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

### NATURE OF RELEASE

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

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/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 these operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Lennah Frost | OIL CONSERVATION DIVISION |
| Printed Name: Lennah FROST | Approved by District Supervisor: |
| Title: Sr Envir. Engineer | Approval Date: / Expiration Date: |
| Date: 8-3-99 Phone: 915/6843467 | Conditions of Approval: / Attached ☐ |