

1R - 380

REPORTS

DATE:

2006



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

April 11, 2006

Ms. Camille Reynolds
Plains Pipeline, L.P.
3112 West Highway 82
Lovington, NM 88260

RE: 2005 Annual Groundwater Monitoring Report
Plains Pipeline, L.P. 8" Moore to Jal #1 Site
SE/4 NW/4 Section 16, Township 17 south, Range 37 East
Lea County, New Mexico
Plains Reference #2002-10270
NMOCD File Number 1R-0380

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the above report submitted, on behalf of Plains Pipeline, L.P. (Plains) by Talon/LPE. This report is hereby accepted and approved with the following understandings and conditions:

1. Plains will vertically extend monitor well MW-1A to a level above the top of the excavation, and re-survey the top of casing. Backfilling activities may not commence until the NMOCD has received analyses results on the soil in the treatment cells that is to be used as backfill material.
2. Upon NMOCD approval, backfilling may commence. Backfilling activities will be as described in the "Recommendations" section of the above report.
3. Plains will continue to gauge the monitor wells bi-weekly to record water and PSH levels and recover PSH from the groundwater-monitoring network.
4. Plains will install eight additional groundwater recovery/monitoring wells at the site to further delineate the lateral extent of the free phase and dissolved phase groundwater impacts. Such monitor wells will be installed as shown in Figure 6 of the above report.
5. Plains will install a continuous recovery unit, utilizing a pneumatic pump, devoted to each well containing recoverable PSH.
6. Plains will submit a 2006 Annual Monitoring Report for this site, which describes the activities at the site, by April 1, 2007.

NMOCD approval of this report does not relieve Plains of liability should its operations at this site prove to have been harmful to public health or the environment. Nor does it relieve Plains of its responsibility to comply with the rules and regulations of any other governmental agency.

Plains 8" Moore to Jal #1
1R-0380
April 11, 2006
Page 2 of 2

If you have any questions, contact me at (505) 476-3492 or ed.martin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Ed Martin".

Edwin E. Martin
Environmental Bureau

Copy: NMOCD, Hobbs
Jason M. Graham, Talon/LPE



PLAINS ALL AMERICAN

March 29, 2006

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

Re: Plains All American – Annual Monitoring Reports
2 Sites in Lea County, New Mexico

Dear Mr. Martin:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

8" Moore to Jal #1
8" Moore to Jal #2

Section 16, Township 17 South, Range 37 East, Lea County
Section 16, Township 17 South, Range 37 East, Lea County

TalonLPE prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed TalonLPE in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

March 22, 2006

Mr. Edwin E. Martin
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Annual Groundwater Monitoring Report
Plains Pipeline, L.P.
8" Moore to Jal #1 (Rcf #2002-10270)
SE/4 NW/4 of Section 16, Township 17 South, Range 37 East
Lea County, New Mexico
NMOCD Ref. 1R-0380

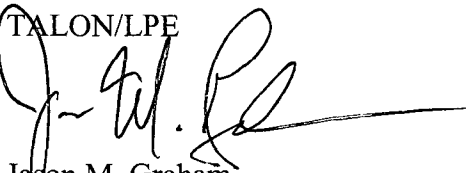
Mr. Martin:

The 8" Moore to Jal #1 release site is located approximately 9.1 miles southeast of Lovington in Lea County, New Mexico. The release occurred on property owned by the State of New Mexico and is utilized as pasture land. The site is located in a rural area within the West Lovington Oil Field, with no residences or surface water within a 1,000-foot radius of the facility.

In October 2002, a release of approximately two hundred (200) barrels of crude oil occurred at the site due to corrosion (internal and/or external) of the pipeline. Approximately eight thousand (8,000) square feet (ft²) of surface area was impacted by the release. Surficial soil saturated by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

The details of the annual groundwater monitoring, phase separated hydrocarbon recovery activities, analytical results, and remediation work plan are described in the attached 2005 Annual Groundwater Monitoring Report. If you have any questions feel free to contact me at (505) 441-4835 or by E-mail at jgraham@talonlpe.com. Thank you very much.

TALON/LPE



Jason M. Graham
Project Manager

Cc: Camille Reynolds, Plains All American Pipeline, L.P.
Jeff Dann, Plains All American Pipeline, L.P.

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806-467-0607
Fax 806-467-0622

AUSTIN
3003 Tom Gary Cove
Building C-100
Round Rock, Texas 78664
Phone 512-989-3428
Fax 512-989-3487

MIDLAND
#9 East Industrial Loop
Midland, Texas 79701
Phone 432-522-2133
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NEW BRAUNFELS
707 N. Walnut Ave.
Suite 208
New Braunfels, Texas 78130
Phone 210-579-0235
Fax 210-568-2191

TULSA
1439 East 41st Street
Tulsa, OK 74105
Phone 918-742-0871
Fax 918-742-0876

TALONLPE

8" Moore to Jal #1 Annual Groundwater Monitoring Report

Plains Ref: 2002-10272

**SE¼ of the NW¼ of Section 16, Township 17 South, Range 37 East
Lea County, New Mexico**

**~9.1 Miles Southeast (136°) of
Lovington, Lea County, New Mexico**

Latitude: N32° 50' 13.8"

Longitude: W103° 15' 25.3"

March 2006

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806-467-0607
Fax 806-467-0622

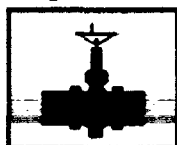
AUSTIN
3003 Tom Gary Cove
Building C-100
Round Rock, Texas 78664
Phone 512-989-3428
Fax 512-989-3487

MIDLAND
#9 East Industrial Loop
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Tulsa, OK 74105
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Fax 918-742-0876

Prepared For:



PLAINS
ALL AMERICAN
PIPELINE, L.P.

**333 Clay Street, Suite 600
Houston, TX 77002**

Prepared By:

TalonLPE

**318 East Taylor Street
Hobbs, New Mexico 88240**

Distribution List

Name	Title	Company or Agency	Mailing Address	e-mail
Ed Martin	Environmental Engineer	NMOCD	1220 South St. Francis Drive Santa Fe, NM 87505	emartin@state.nm.us
Larry Johnson	Environmental Engineer	NMOCD	1625 French Dr. Hobbs, NM 88231	lwjohnson@state.nm.us
Camille Reynolds	Remediation Coordinator	Plains All American Pipeline	3112 West U.S. Hwy 82 Lovington, NM 88260	cjreynolds@paalp.com
Jeff Dann	Senior Environmental Specialist	Plains All American Pipeline	P. O. Box 4648 Houston, TX 77210-4648	jpdann@paalp.com
Daniel Bryant	Environmental Specialist	Plains All American Pipeline	P. O. Box 3119 Midland, TX 79702-3119	dmbryant@paalp.com
File		Talon/LPE	318 East Taylor Street Hobbs, New Mexico 88240	lsanchez@lano-permian.com

NMOCD - New Mexico Oil Conservation Division

ANNUAL GROUNDWATER MONITORING REPORT

Introduction

The 8" Moore to Jal #1 release site is located approximately 9.1 miles southeast of Lovington in Lea County, New Mexico, at an elevation of approximately 3,770 feet above mean sea level (reference Figures 1 and 2). The release occurred on property owned by the State of New Mexico and is utilized as pasture land. The site is located in a rural area within the West Lovington oil field, with no residences or surface water within a 1,000-foot radius of the facility.

In October 2002, a release of approximately 200 barrels of crude oil, of which there was no recovery, occurred at the site due to corrosion (internal and/or external) of the pipeline. Approximately 8,000 square feet (ft²) of surface area was impacted by the release. Surficial soil saturated by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

In an effort to delineate the extent of impacted soil at the site, six (6) soil borings were advanced, by Environmental Plus, Inc. (EPI), at the site to depths ranging from 15 to 60 feet below ground surface (bgs) in October 2002 (Figure 2). Field analyses of soil samples collected at discreet intervals indicated organic vapor concentrations exceeded 100 parts per million (ppm) at least to a depth of 55 feet bgs in soil boring BH-1.

Excavation activities commenced at the site by EPI in June 2003 in order to remove soil impacted above the New Mexico Oil Conservation Division (NMOCD) remedial thresholds. Approximately 2,800 cubic yards of soil were excavated and run through a screener to separate the rock from the soil. After the soil and rock had been separated, the soil (approximately 950 cubic yards) was spread out into two land treatment areas (Figure 7) and the rock was stockpiled on site. Upon the completion of excavation activities, composite samples were collected from the north sidewall, south sidewall, east sidewall, west sidewall and bottom of the excavation to document the successful removal of soil impacted above NMOCD remedial thresholds (Figure 2). Laboratory analysis of the samples indicated soil impacted above the NMOCD remedial thresholds remained in all sampling locals, with the exception of the west sidewall.

Groundwater Monitoring Well Installation

One groundwater monitoring well, MW-1 was installed at the site in July 2004. This well was installed at the request of the NMOCD in order to determine if groundwater had been impacted by the release. This groundwater monitoring well was installed adjacent to the pipeline near the point of release (reference Figure 3) to a depth of 80 feet below ground surface (bgs) and screened from 60 to 80 feet bgs (reference Appendix B).

Due to the screened interval of groundwater monitoring well MW-1 being set to low (i.e., water level above the top of the screen), a second groundwater monitoring well (MW-1A) was installed at the site in September 2004. This groundwater monitoring well was installed adjacent to the pipeline near the point of release (reference Figure 3) to a depth of 75 feet bgs and screened from

55 to 75 feet bgs (reference *Appendix B*). Upon approval of the soil closure plan, MW-1 will be plugged and abandoned according to the guidelines described by Mr. Edwin Martin in his April 14, 2005 letter concerning the recommendation in the 2004 Annual Monitoring Report.

Due to the presence of phase separated hydrocarbons (PSH) in MW-1, three additional groundwater monitoring wells (MW-2, MW-3 and MW-4) were installed at the site in October 2004. These wells were installed to delineate the lateral extent of PSH and/or dissolved phase impacts to the groundwater. Groundwater monitoring well MW-2 was installed approximately 95 feet north of groundwater monitoring well MW-1 (reference *Figure 3*) to a depth of 83 feet bgs and screened from 63 to 83 feet bgs (reference *Appendix B*). Groundwater monitoring well MW-3 was installed approximately 116 feet east-southeast of groundwater monitoring well MW-1 (reference *Figure 3*) to a depth 83 feet bgs and screened from 63 to 83 feet bgs (reference *Appendix B*). Groundwater monitoring well MW-4 was installed approximately 104 feet south of groundwater monitoring well MW-1 (reference *Figure 3*) to a depth of 83 feet bgs and screened from 63 to 83 feet bgs (reference *Appendix B*).

Field and laboratory analytical results from this additional investigation are included in *Table 3* and *Appendix A*

Groundwater Gradient and PSH Thickness

The monitoring wells were gauged to determine the depth to groundwater, and the thickness of any PSH. Groundwater gradient appears to be in a southerly direction as indicated in *Figures 4a - 4d*. Except for minor fluctuations, groundwater levels and gradient have remained relatively constant shown in *Figures 4a - 4d*. PSH levels in the groundwater monitoring well MW-1 have remained consistent, but limited during 2005. This is attributed to the fact that the screen was set to low and the water table interface was located above the top of the screen; thus, allowing limited PSH to enter the well. PSH levels in the groundwater monitoring well MW-1A have remained steady through all four quarters at around the eight to ten foot thickness as indicated in *Figures 4e - 4i*. PSH levels in the groundwater monitoring well MW-2 have also remained steady through all four quarters with a thickness of seven to eight feet reference *Figures 4e - 4i*. PSH levels in the groundwater monitoring well MW-3 have also remained steady through all four quarters with a thickness of nine to ten feet indicated in *Figures 4e - 4i*. PSH levels in the groundwater monitoring well MW-4 have also remained steady through all four quarters with a thickness of eight to nine feet indicated in *Figures 4e - 4i*. The PSH plume has remained stable throughout the four quarters of 2005 a summary of groundwater elevations and PSH plume and thickness is included in (*Tables 1 and 2 and illustrated in Figures 5a - 5d*).

PSH Recovery

Recovery of the PSH in the vicinity of groundwater monitoring well network was accomplished via hand bailing by EPI, during the first four months of 2005. TalonLPE took over the project in May 2005 and with the use of a portable submersible pump recovery was enhanced. The first quarter of 2005 had total recovery of 112.00 gallons of PSH shown in *Tables 1 and 2*. It is suggested that this amount was low due to hand bailing. The second quarter of 2005 saw an increase after April, due to enhanced recovery techniques. The total amount of PSH removed in

the second quarter was 456.75 gallons shown in *Tables 1 and 2*. The third quarter had the largest recovery period for all of 2005, with a total PSH recovery of 899.50 gallons shown *Tables 1 and 2*. The last quarter of 2005 had a total recovery of 852.50 gallons of PSH shown in *Table 1 and 2*. A total of 2320.75 gallons of PSH were recovered during Fiscal Year 2005 shown in *Table 1 and 2*. Recovered PSH was placed into Plains Lovington Station sump, *FOR INJECTION INTO THE PLAINS PIPELINE SYSTEM.*

Groundwater Sampling

Per phone conversation with Camille Reynolds

Due to the presence of PSH on the water column in each of the groundwater monitoring wells, no samples were collected for laboratory analyses.

Recommendations

Prior to the initiation of the restoration activities, MW-1 will be plugged and abandoned according to the guidelines described by Mr. Edwin Martin in his April 14, 2005 letter concerning the recommendation in the 2004 Annual Monitoring Report. MW-1A will be vertically extended to a level above the top of the excavation, and the top of casing will be re-surveyed. With the monitoring well extended to a level accessible after the backfill activities, the bottom of the excavation will be filled with an even six inch (6") layer of sand. A twenty millimeter (20 mill) black-on-black rock grade polyethylene liner will then be placed on the sand covering the base of the excavation. A small hole will be cut through the liner to encompass MW-1A which will be left in the excavation. Clay packing material will be utilized to seal the opening in the liner around the monitor well casing. An additional six inch (6") layer of sand will be placed on top of the liner.

With the poly liner in place, backfill of the excavated materials will begin. A layer of the rock material will first be carefully placed back in the excavation. Then a layer of the soils from the land treatment area will be placed on top of the first rock layer. The two layers will then be properly compacted. This alternating of layers and compacting activities will continue to the top of the excavation taking great care to insure the integrity of MW-1A, the pipeline, and the poly liner. Only soils, no rock, will be place in the proximity of either the pipeline or MW-1A. Clean backfill will be used during the backfill activities as needed.

Based on field monitoring and laboratory analytical results collected during 2005, the following activities are also recommended for the site:

- 1) Continue to gauge the monitor wells on a bi-weekly basis to record water and PSH levels and recover PSH from the existing groundwater monitoring network.
- 2) Install eight additional groundwater recovery and/or monitoring wells at the site to further delineate the lateral extent of the free phase and dissolved phase groundwater impacts (reference *Figure 6*).

- 3) Upon the installation of the proposed monitoring wells, emphasizing on the complete delineation of the site, evaluate the site-specific conditions and design and install a continuous recovery unit utilizing a pneumatic pump devoted to each PSH containing well.

Signatures

Written By:



Jason M. Graham, B.S.
Project Manager
Talon/LPE

Reviewed By:



Terry James B.S., M.S.
Senior Project Manager
Talon/LPE

FIGURES

8th St
5th St
2nd St
Avenue K

18

483

Lea

Lovington Hwy

8" Moore to Jal #1



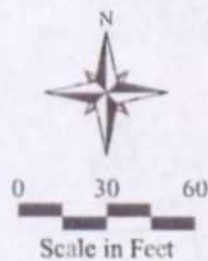
TALONLPE

Date: 03/28/2006

Scale: NTS

Drawn By: WDR

8" Moore to Jal #1
9.2 Miles SE of Lovington, NM
Lea County, New Mexico
Figure 1 - Area Map



Legend	
	- Monitor Well
	- Proposed Monitor Well
	- Soil Boring
	- Recovery Well
	- Vapor Recovery Well
	- Domestic Well
	- Plugged & Abandoned Well
	- Observation Well
	- Surface Soil Samples
	- Water Main
	- Gas Line
	- Overhead Powerline
	- Sanitary Sewer
	- Storm Sewer
	- Telephone Line
	- Fence line
	- City Utilities
	- Underground Cable
	- Railroad Tracks
	- Groundwater Gradient Contour Line
	- Groundwater Gradient Contour Elevation
	- Monitor Well Gradient Direction

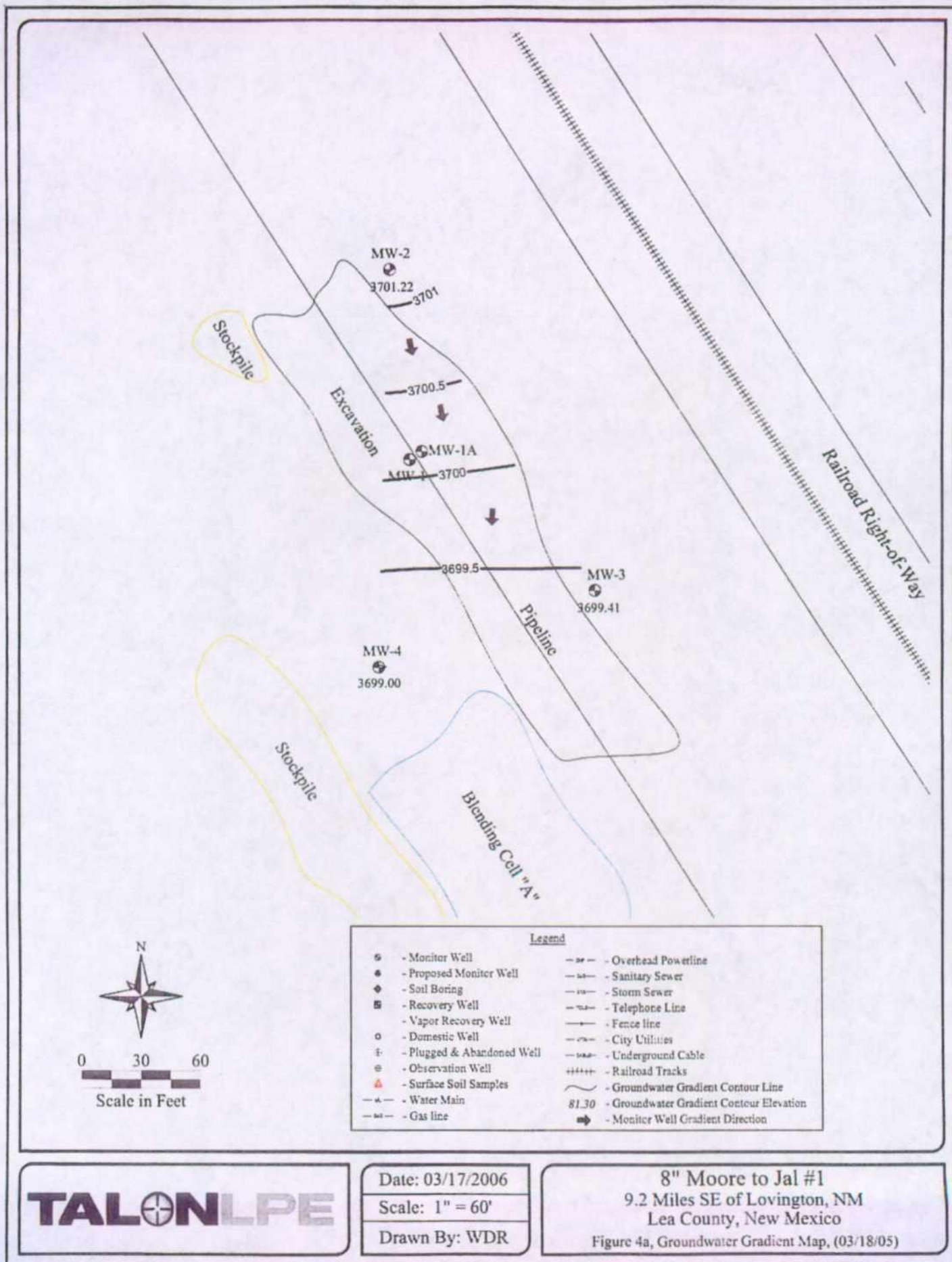
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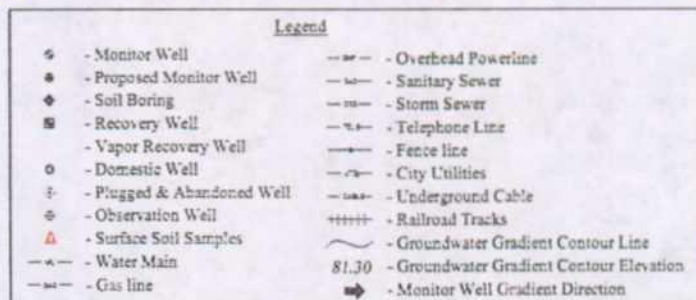
Date: 03/17/2006

Scale: 1" = 60'

Drawn By: WDR

8" Moore to Jal #1
9.2 Miles SE of Lovington, NM
Lea County, New Mexico
Figure 3, Site Plan





TALONLPE

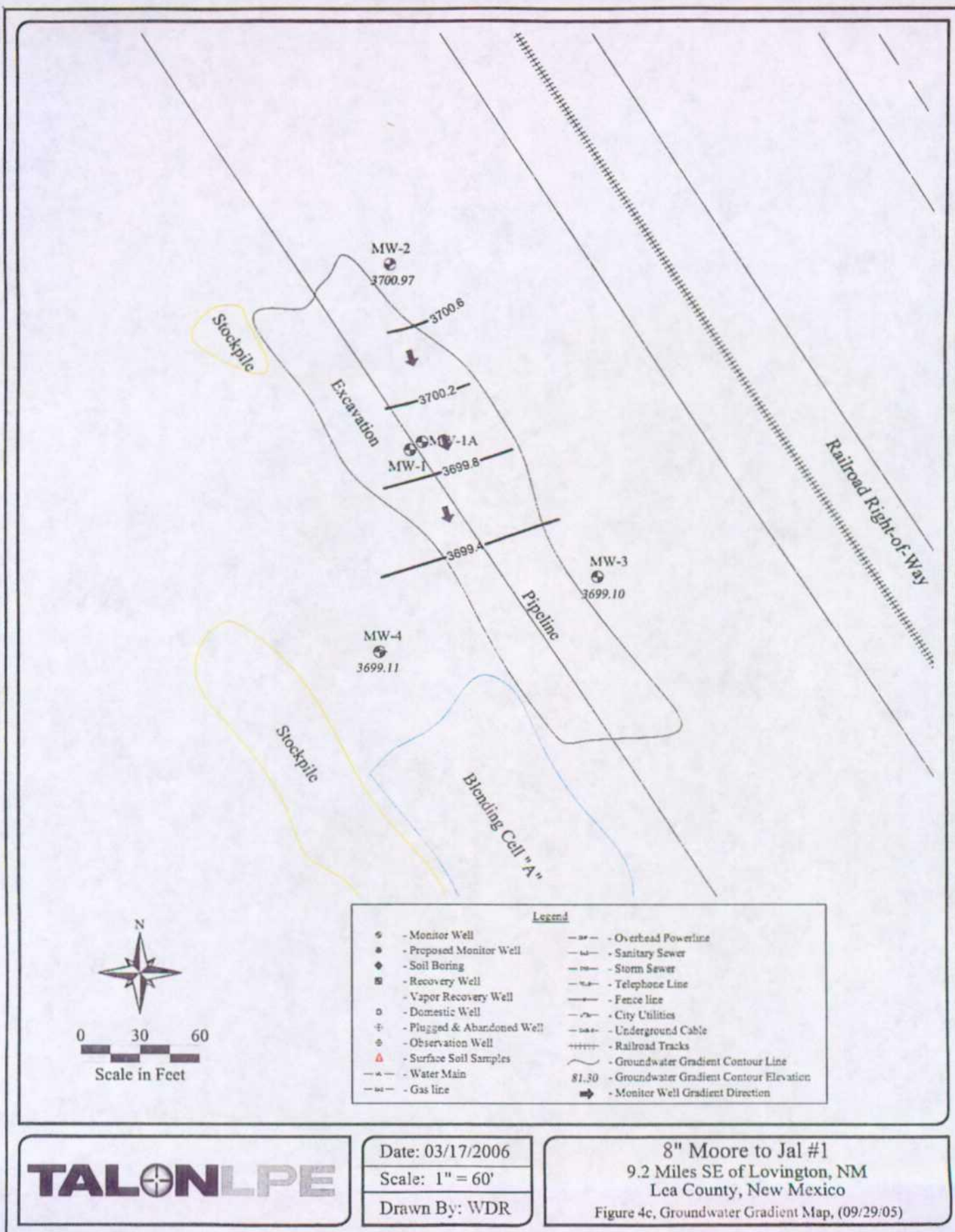
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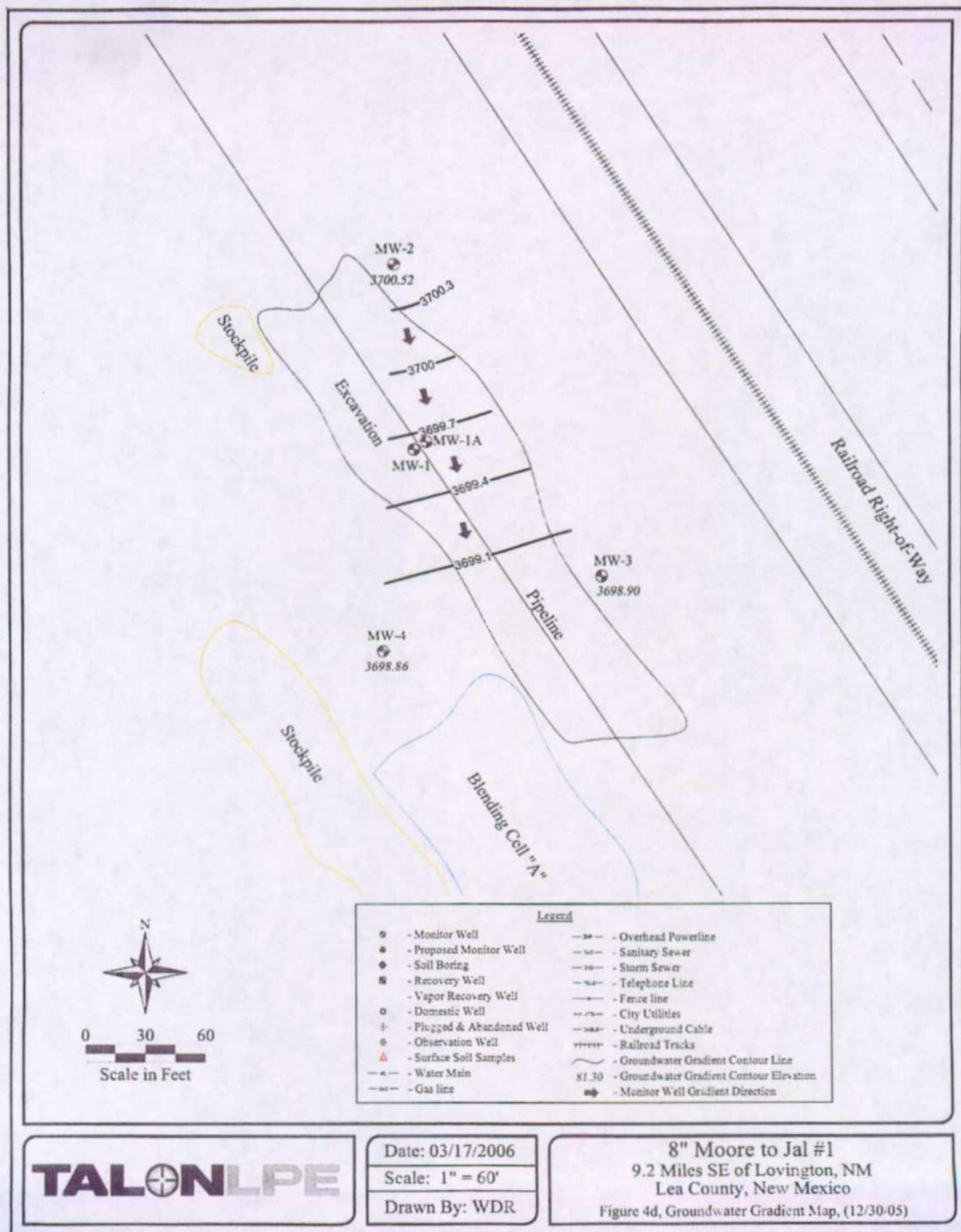
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Drawn By: WDR

8" Moore to Jal #1
9.2 Miles SE of Lovington, NM
Lea County, New Mexico

Figure 4b, Groundwater Gradient Map, (06/13/05)





TALONLPE

Date: 03/17/2006

Scale: 1" = 60'

Drawn By: WDR

8" Moore to Jal #1
9.2 Miles SE of Lovington, NM
Lea County, New Mexico

Figure 4d, Groundwater Gradient Map, (12/30/05)

Figure 4e, MW-1A 2005 PSH THICKNESS (ft)

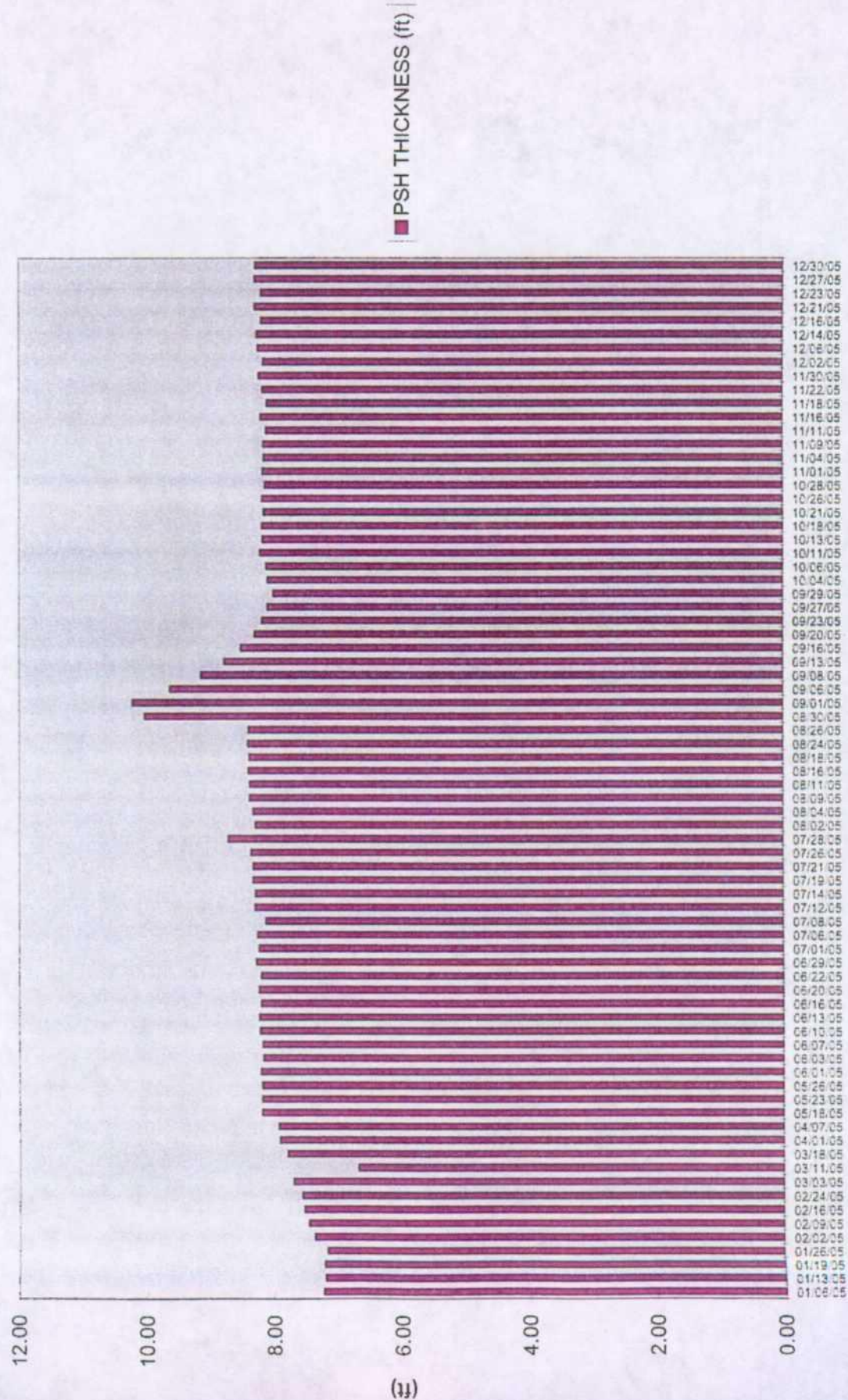


Figure 4f, MW-1 2005 PSH THICKNESS (ft)

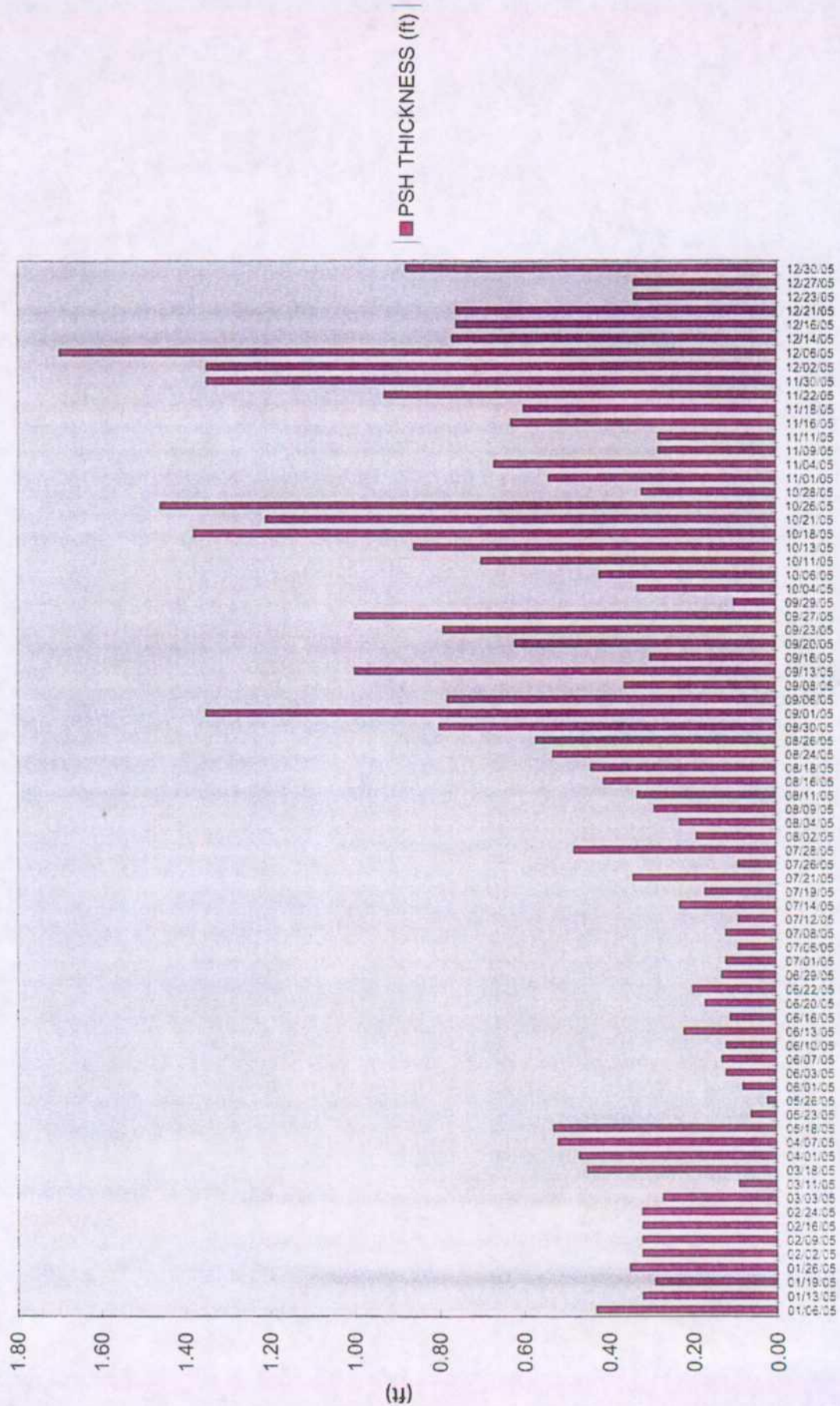


Figure 4g, MW-2 2005 PSH THICKNESS (ft)

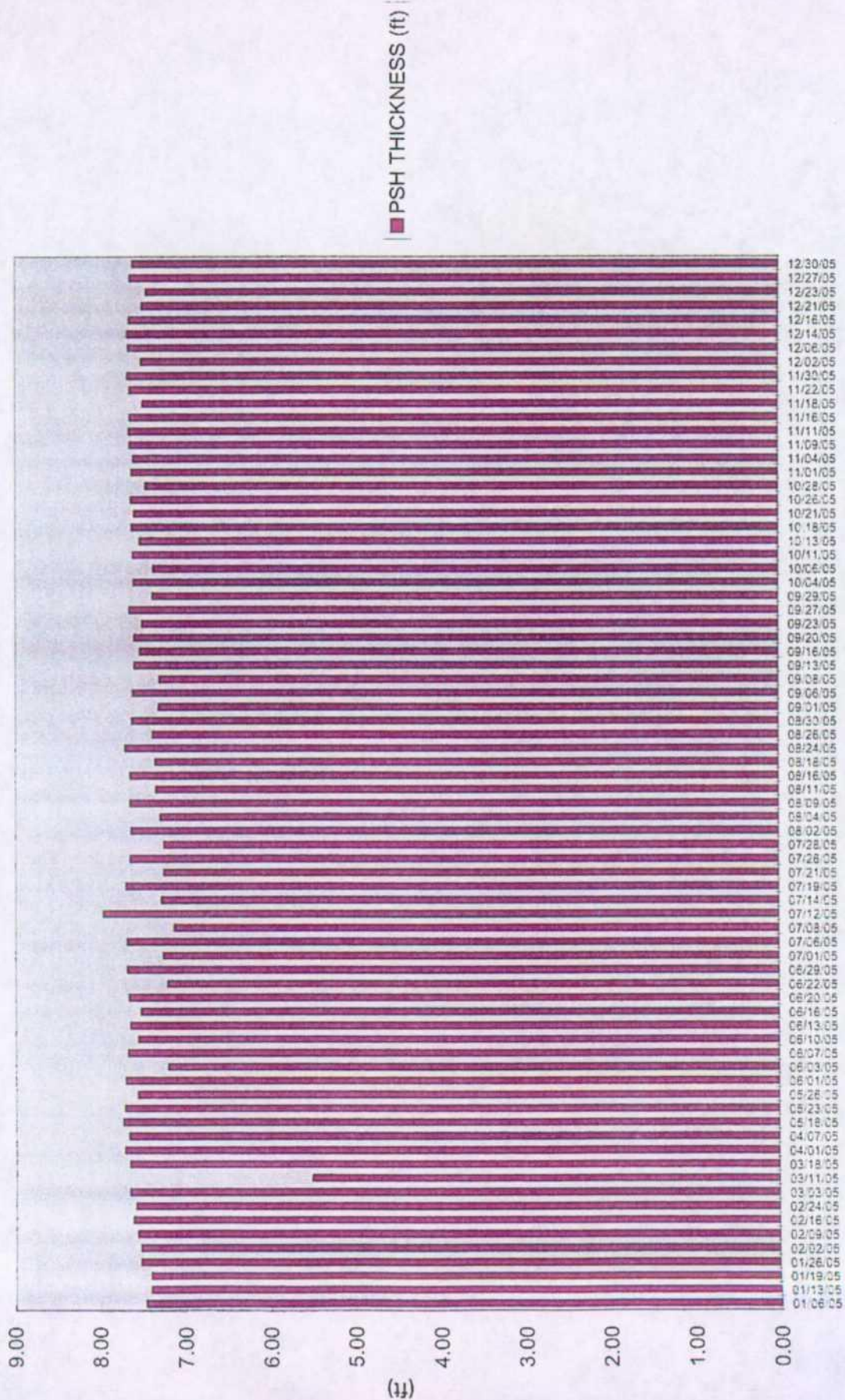


Figure 4h, MW-3 2005 PSH THICKNESS (ft)

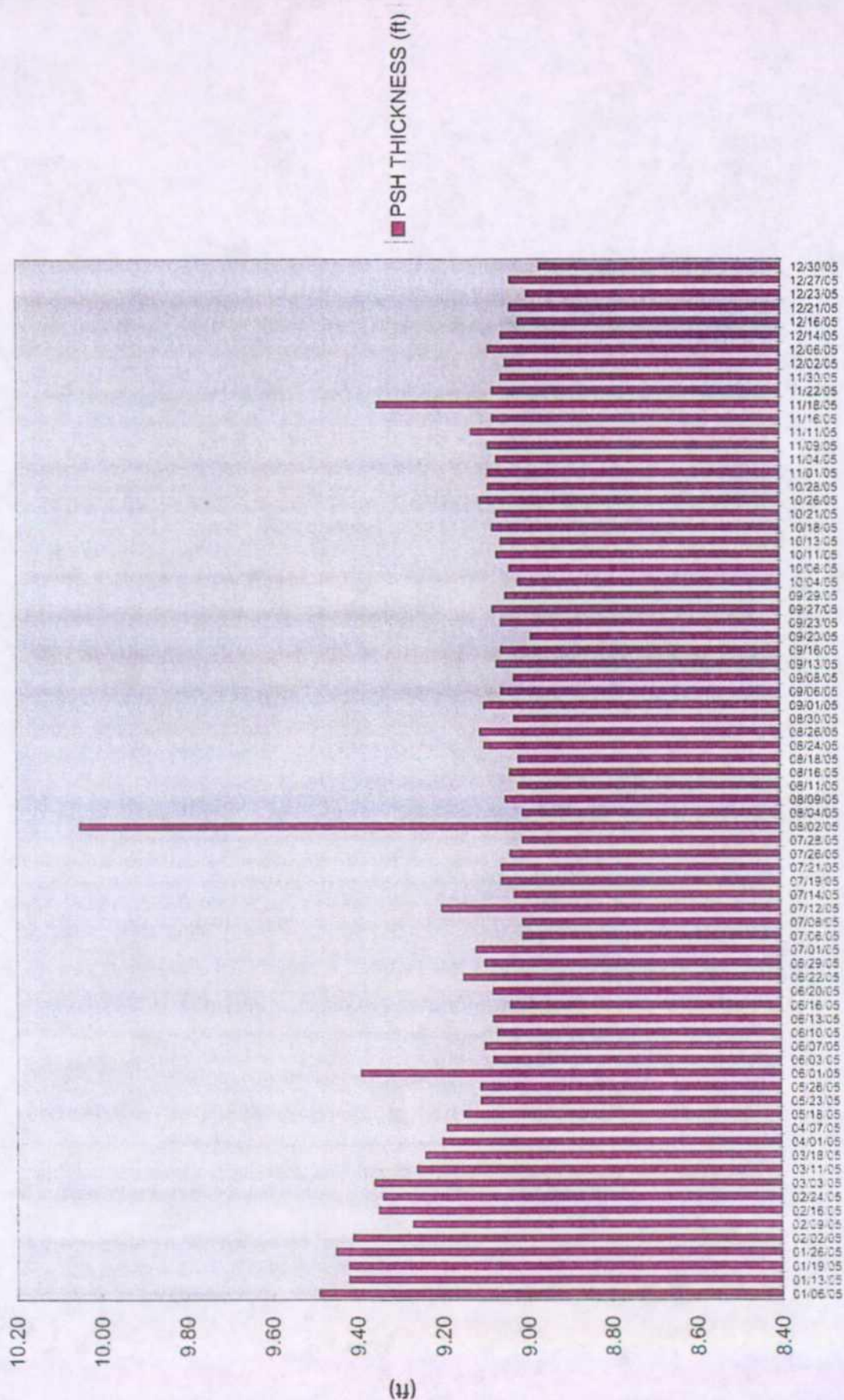
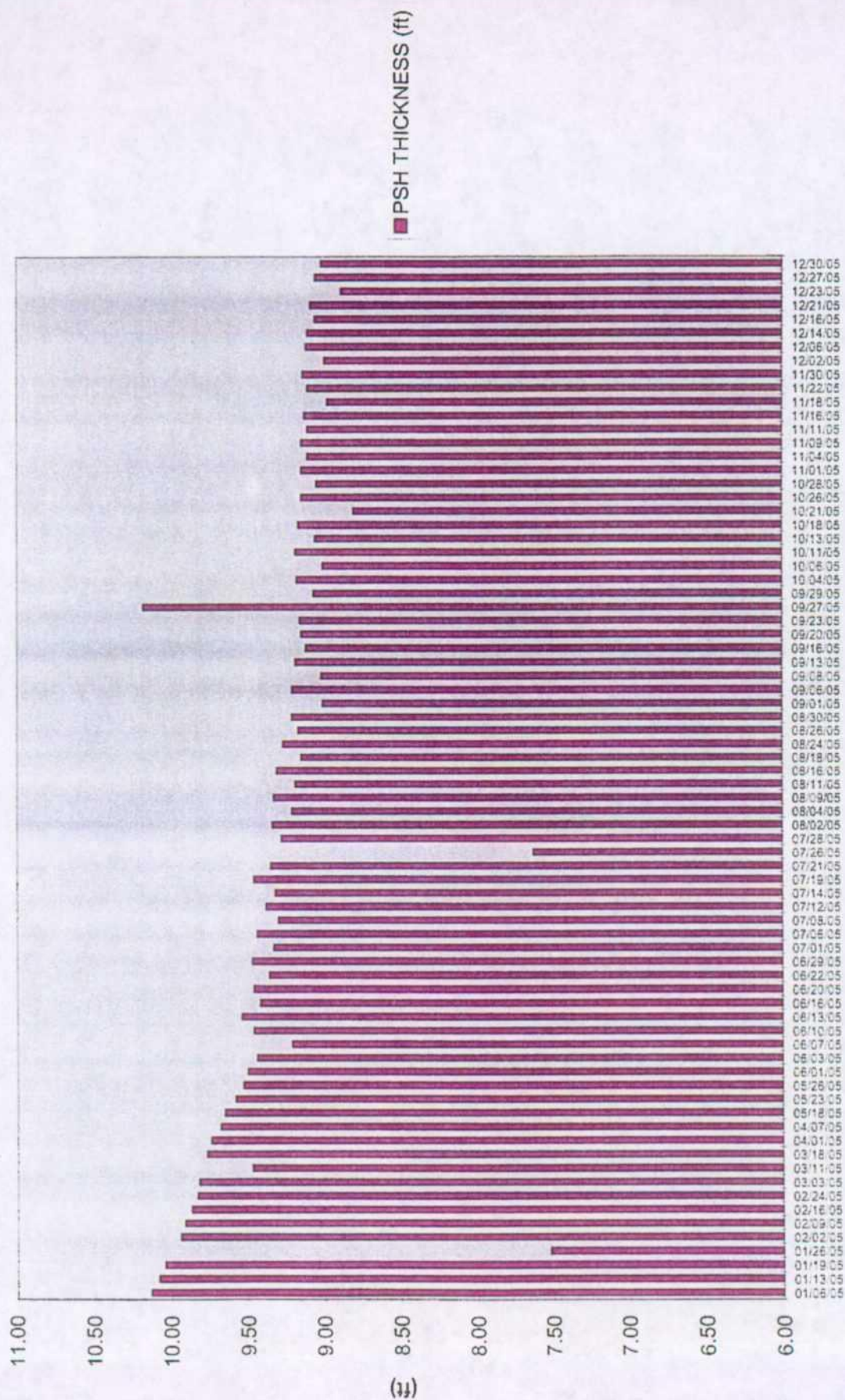
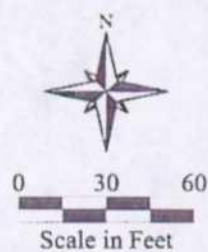


Figure 4i, MW-4 2005 PSH THICKNESS (ft)





Legend	
⊙	- Monitor Well
⊕	- Proposed Monitor Well
⬢	- Soil Boring
⊞	- Recovery Well
⊞	- Vapor Recovery Well
○	- Domestic Well
⊕	- Plugged & Abandoned Well
⊕	- Observation Well
⬢	- Surface Soil Samples
— — —	- Water Main
— — —	- Gas line
— — —	- Overhead Powerline
— — —	- Sanitary Sewer
— — —	- Storm Sewer
— — —	- Telephone Line
— — —	- Fence line
— — —	- City Utilities
— — —	- Underground Cable
+++++	- Railroad Tracks
~~~~~	- Groundwater Gradient Contour Line
81.30	- Groundwater Gradient Contour Elevation
➔	- Monitor Well Gradient Direction

**TALONLPE**

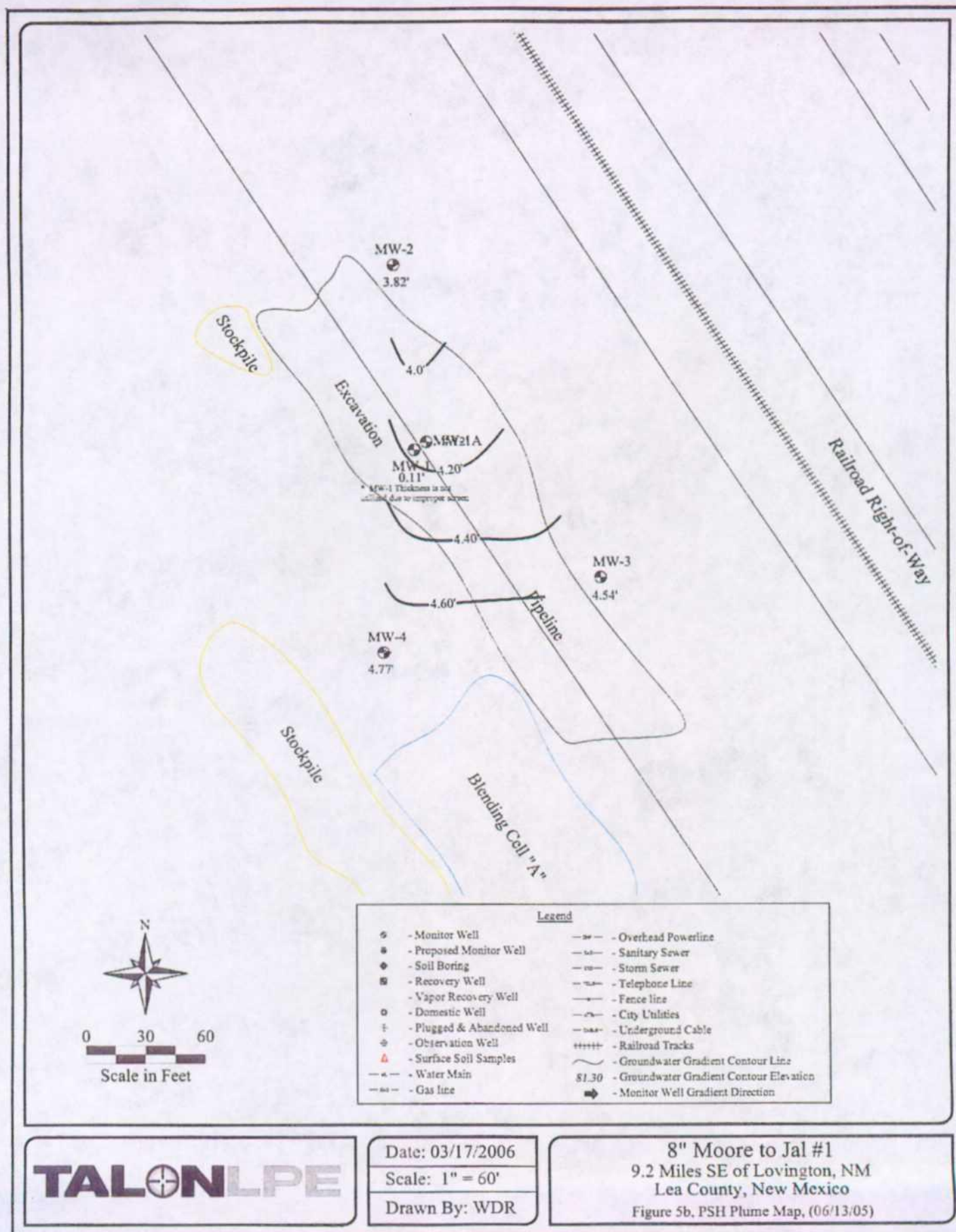
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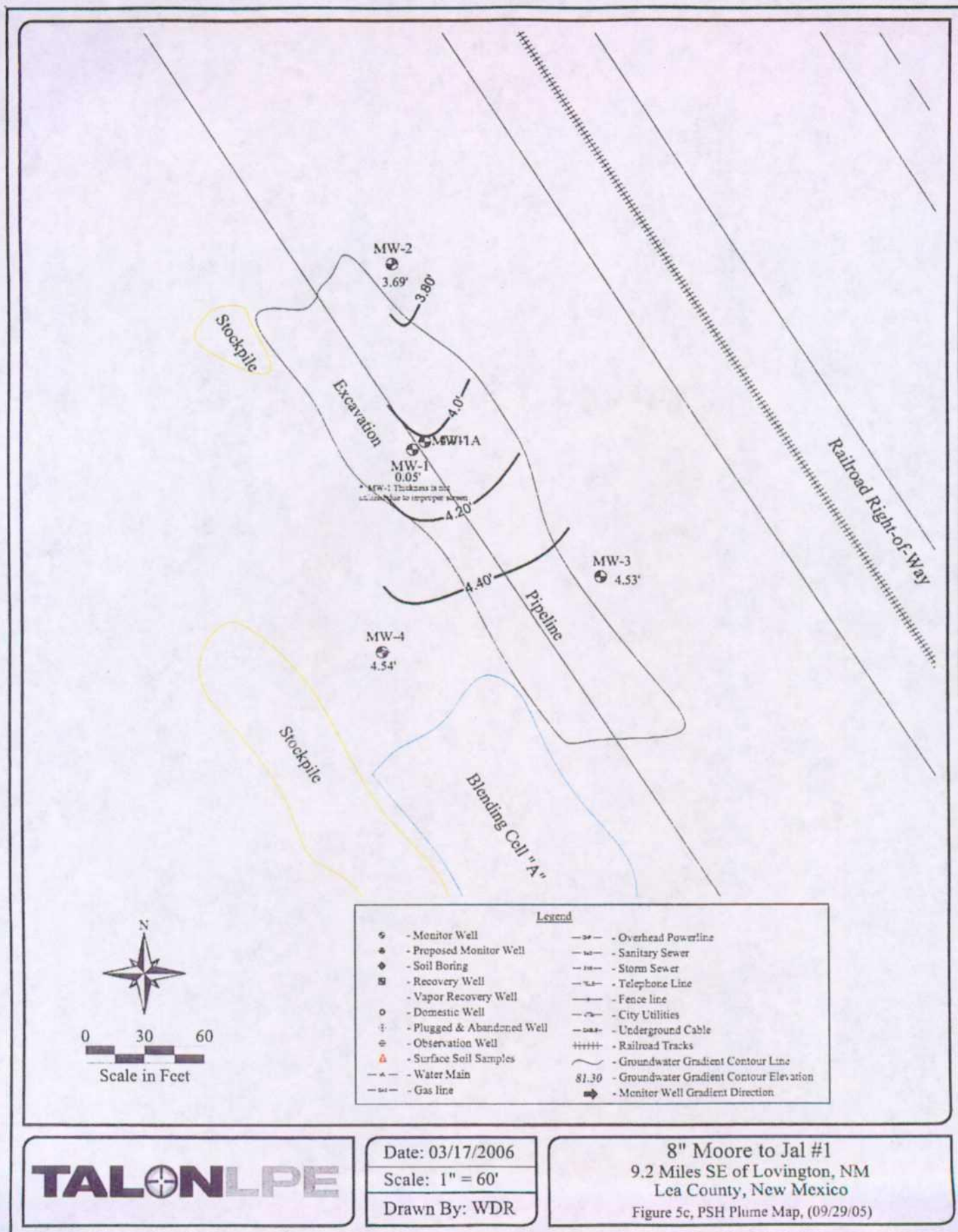
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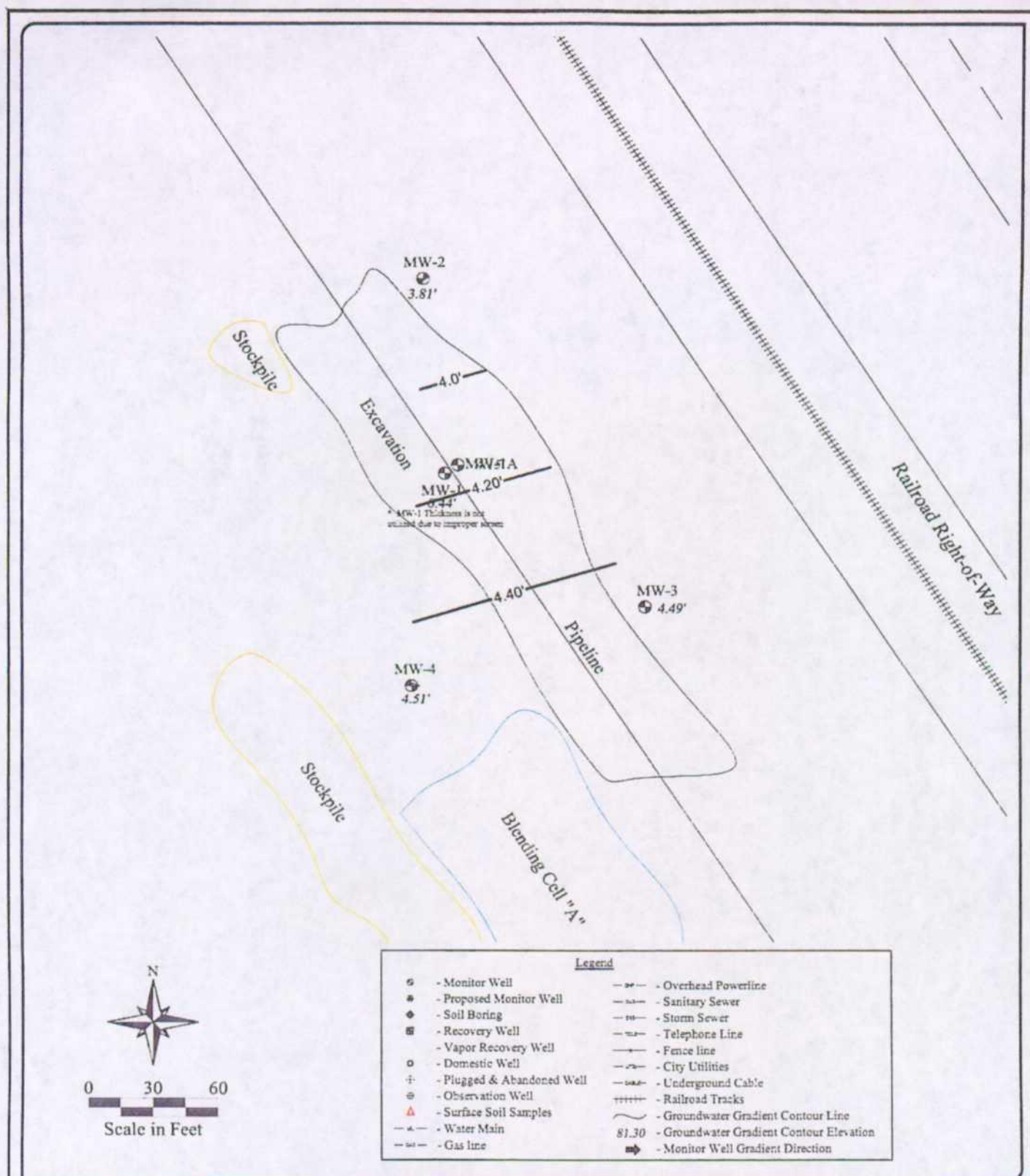
8" Moore to Jal #1  
9.2 Miles SE of Lovington, NM  
Lea County, New Mexico  
Figure 5a, PSH Plume Map, (03/18/05)











**TALONLPE**

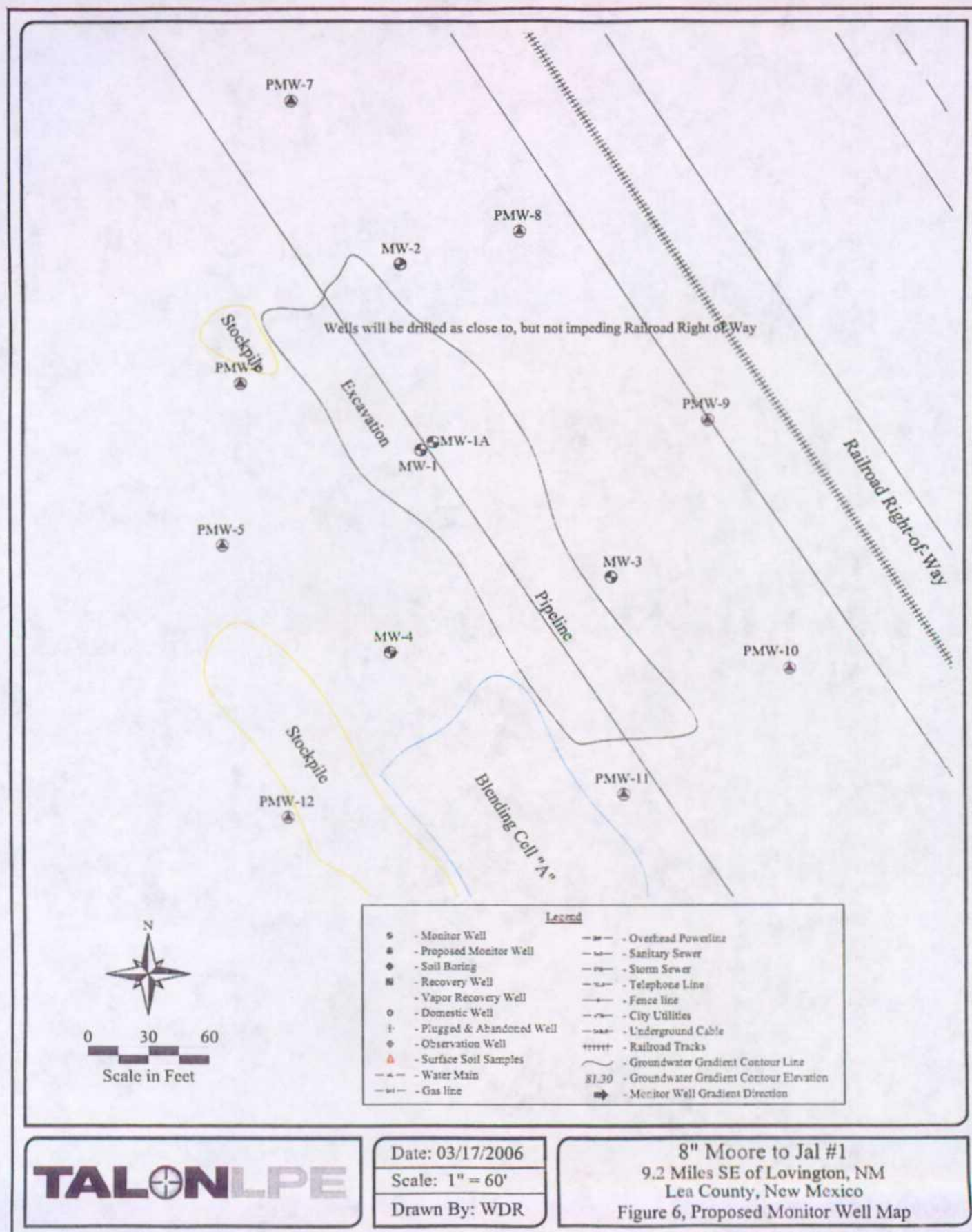
Date: 03/17/2006

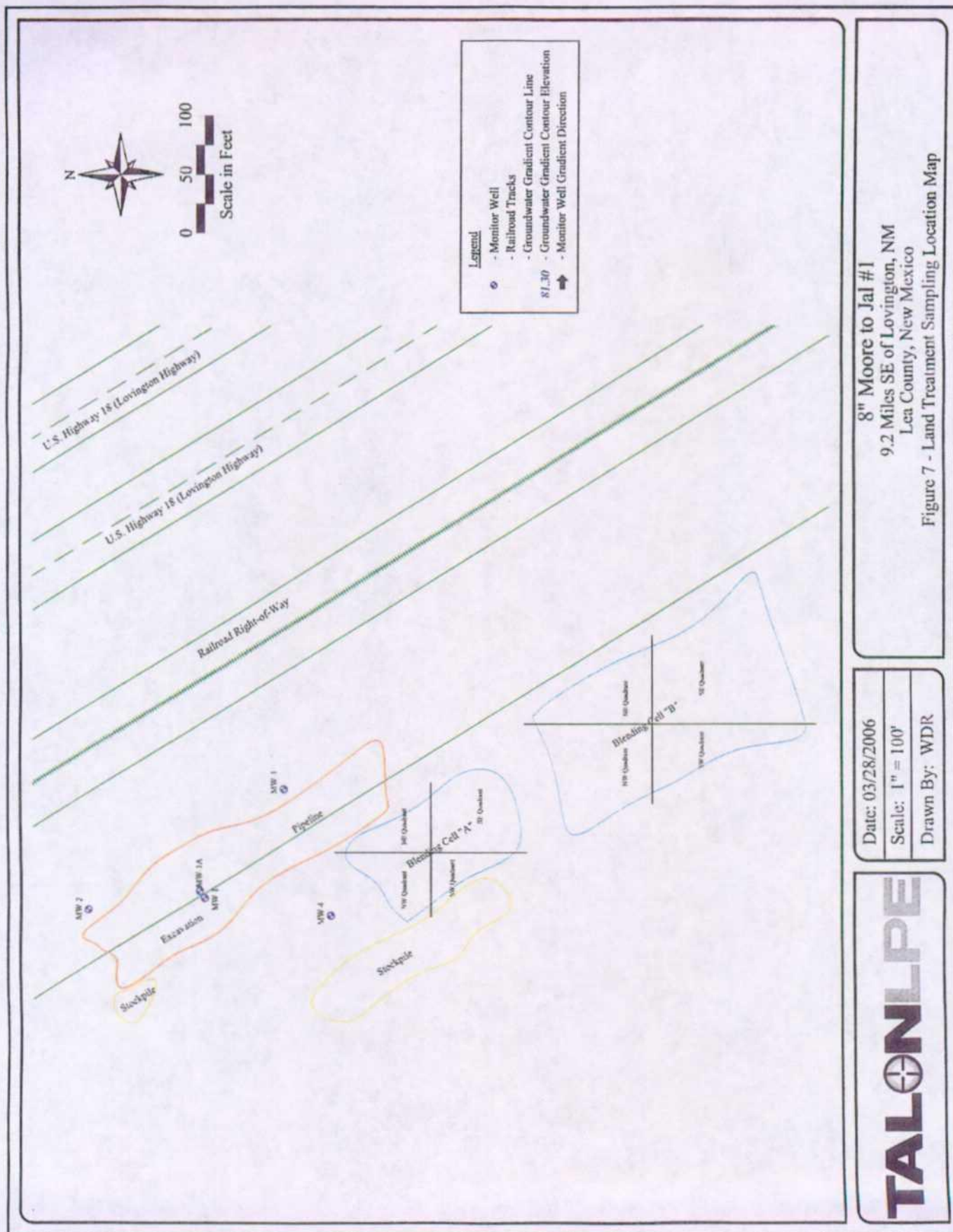
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Drawn By: WDR

8" Moore to Jal #1  
9.2 Miles SE of Lovington, NM  
Lea County, New Mexico  
Figure 5d, PSH Plume Map, (12/30/05)







Date: 03/28/2006

Scale: 1" = 100'

Drawn By: WDR

**TALONLPE**

## TABLES

Table 1  
Summary of Groundwater Elevations, and PSH Thickness & Gauging Measurements

Palmer, All American Pipeline, L.P.  
8" Measured to July 11 - 2002 - 02/2/0

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Top Groundwater Elevation (feet)*	PSH THICKNESS (ft)	PSH Volume Recovered (gallons)	PSH Cumulative Recovery (gallons)	Water Volume Recovered (gallons)	Water Cumulative Recovery (gallons)	Total Volume Recovered	Total Cumulative Recovery (gallons)
MW-1A	01/06/05	3765.34	58.41	63.64	3701.70	7.23	6.00	129.00	0.00	0.00	129.00	129.00
	01/13/05	3765.34	58.56	63.76	3701.58	7.20	8.00	136.00	0.00	0.00	136.00	136.00
	01/19/05	3765.34	58.54	63.76	3701.58	7.21	8.00	144.00	0.00	0.00	144.00	144.00
	01/26/05	3765.34	58.51	63.76	3701.56	7.17	7.50	151.50	0.00	0.00	151.50	151.50
	02/02/05	3765.34	58.63	64.00	3701.34	7.37	8.00	159.50	0.00	0.00	159.50	159.50
	02/09/05	3765.34	58.66	64.11	3701.23	7.48	7.50	167.00	0.00	0.00	167.00	167.00
	02/16/05	3765.34	58.68	64.21	3701.13	7.53	7.50	174.50	0.00	0.00	174.50	174.50
	02/24/05	3765.34	58.69	64.26	3701.09	7.58	8.00	182.50	0.00	0.00	182.50	182.50
	03/03/05	3765.34	58.71	64.41	3700.93	7.70	9.00	191.50	0.00	0.00	191.50	191.50
	03/11/05	3765.34	58.86	63.54	3701.80	8.08	10.00	201.50	0.00	0.00	201.50	201.50
	03/18/05	3765.34	58.72	64.51	3700.83	7.79	9.00	210.50	0.00	0.00	210.50	210.50
	04/01/05	3765.34	58.74	64.65	3700.69	7.91	8.00	218.50	0.00	0.00	218.50	218.50
	04/07/05	3765.34	58.75	64.68	3700.64	7.93	8.00	226.50	0.00	0.00	226.50	226.50
	05/18/05	3765.34	58.80	64.98	3700.35	8.19	10.00	236.50	0.00	0.00	236.50	236.50
	06/22/05	3765.34	58.81	65.00	3700.34	8.19	9.00	245.50	0.00	0.00	245.50	245.50
	06/29/05	3765.34	58.83	65.02	3700.32	8.19	9.00	254.50	0.25	1.25	255.75	255.75
	08/01/05	3765.34	58.82	65.03	3700.31	8.21	9.00	263.50	0.25	1.50	265.00	265.00
	08/03/05	3765.34	58.84	65.01	3700.33	8.17	6.00	269.50	0.25	1.75	271.25	271.25
	08/07/05	3765.34	58.85	65.03	3700.31	8.18	8.00	277.50	0.25	2.00	279.50	279.50
	08/10/05	3765.34	58.85	65.07	3700.27	8.22	7.00	284.50	0.25	2.25	286.75	286.75
	08/13/05	3765.34	58.87	65.10	3700.24	8.23	9.00	293.50	0.25	2.50	296.00	296.00
	08/16/05	3765.34	58.88	65.06	3700.28	8.20	8.00	301.50	0.25	2.75	304.25	304.25
	08/20/05	3765.34	58.90	65.12	3700.22	8.24	8.00	309.50	0.25	3.00	312.50	312.50
	08/22/05	3765.34	58.90	65.10	3700.24	8.20	8.00	317.50	0.25	3.25	320.75	320.75
	08/29/05	3765.34	58.91	65.17	3700.17	8.28	8.50	326.00	0.25	3.50	329.50	329.50
	09/01/05	3765.34	58.91	65.15	3700.19	8.24	8.00	334.00	0.25	3.75	337.75	337.75
	09/06/05	3765.34	58.91	65.17	3700.17	8.26	7.75	341.75	0.00	3.75	345.50	345.50
	09/08/05	3765.34	58.91	65.04	3700.30	8.13	9.00	350.75	0.00	3.75	354.50	354.50
	09/12/05	3765.34	58.95	65.25	3700.09	8.30	7.00	357.75	0.25	4.00	361.75	361.75
	09/14/05	3765.34	58.92	65.21	3700.13	8.29	8.75	366.50	0.25	4.25	370.75	370.75
	09/19/05	3765.34	58.93	65.26	3700.08	8.33	6.00	372.50	0.25	4.50	377.00	377.00
	09/21/05	3765.34	58.90	65.29	3700.05	8.35	8.00	380.50	0.25	4.75	385.25	385.25
	09/26/05	3765.34	58.95	65.31	3700.03	8.36	6.00	388.50	0.25	5.00	393.50	393.50
	09/28/05	3765.34	58.94	65.30	3700.04	8.72	6.00	397.50	0.25	5.25	402.75	402.75
	09/30/05	3765.34	58.98	65.27	3700.07	8.29	8.00	406.50	0.25	5.50	412.00	412.00
	10/04/05	3765.34	59.00	65.33	3700.01	8.33	6.00	415.50	0.25	5.75	421.25	421.25
	10/05/05	3765.34	59.00	65.38	3699.96	8.38	6.00	424.50	0.25	6.00	430.50	430.50
	10/11/05	3765.34	58.99	65.37	3699.97	8.38	6.00	433.50	0.25	6.25	439.75	439.75
	10/16/05	3765.34	58.97	65.42	3699.92	8.40	7.00	442.50	0.25	6.50	449.00	449.00
	10/18/05	3765.34	58.94	65.40	3699.94	8.39	6.00	451.50	0.25	6.75	458.25	458.25
	10/24/05	3765.34	58.93	65.44	3699.90	8.41	6.00	460.50	0.25	7.00	467.50	467.50
	10/26/05	3765.34	58.94	65.44	3699.90	8.40	6.00	469.50	0.25	7.25	476.75	476.75
	10/27/05	3765.34	58.94	65.45	3699.89	8.40	6.00	478.50	0.25	7.50	486.00	486.00
	10/30/05	3765.34	58.92	65.44	3699.90	8.40	6.00	487.50	0.25	7.75	495.25	495.25
	10/31/05	3765.34	58.95	65.46	3699.88	8.43	6.00	496.50	0.25	8.00	504.50	504.50
	11/01/05	3765.34	58.91	65.40	3699.94	8.39	6.00	505.50	0.25	8.25	513.75	513.75
	11/02/05	3765.34	58.90	65.44	3699.90	8.41	6.00	514.50	0.25	8.50	523.00	523.00
	11/03/05	3765.34	58.90	65.46	3699.88	8.42	6.00	523.50	0.25	8.75	532.25	532.25



MW-1 (con't)										MW-2											
01/14/05	3/16/03	56.99	54.27	3706.81	0.23	0.2%	94.81	0.50	4.7%	0.75	99.50	01/14/05	3/16/03	61.72	59.18	3701.73	7.46	7.00	0.00	67.00	07.00
01/19/05	3/16/03	59.01	56.18	3706.85	0.17	0.00	94.81	0.00	4.7%	0.00	99.50	01/19/05	3/16/03	61.81	59.21	3701.70	7.40	7.00	0.00	67.00	07.00
01/22/05	3/16/03	59.04	56.30	3706.85	0.34	0.00	94.81	0.00	4.7%	0.00	99.50	01/22/05	3/16/03	61.86	59.25	3701.60	7.40	7.00	0.00	67.00	07.00
01/26/05	3/16/03	59.13	56.38	3706.80	0.00	0.00	94.81	0.00	4.7%	0.00	99.50	01/26/05	3/16/03	61.93	59.33	3701.50	7.32	6.90	0.00	67.00	07.00
01/29/05	3/16/03	59.17	56.05	3706.38	0.48	0.00	94.81	0.00	4.7%	0.00	99.50	01/29/05	3/16/03	61.99	59.45	3701.40	7.32	6.90	0.00	67.00	07.00
02/02/05	3/16/03	59.04	56.23	3706.80	0.19	0.00	94.81	0.00	4.7%	0.00	99.50	02/02/05	3/16/03	61.96	59.57	3701.34	7.61	7.00	0.00	67.00	07.00
02/03/05	3/16/03	59.05	56.28	3706.75	0.23	0.00	94.81	0.00	4.7%	0.00	99.50	02/03/05	3/16/03	62.01	59.59	3701.32	7.58	6.90	0.00	67.00	07.00
02/09/05	3/16/03	59.04	56.33	3706.70	0.29	0.00	94.81	0.00	4.7%	0.00	99.50	02/09/05	3/16/03	62.00	59.65	3701.28	7.45	6.90	0.00	67.00	07.00
02/11/05	3/16/03	59.04	56.37	3706.64	0.33	0.00	94.81	0.00	4.7%	0.00	99.50	02/11/05	3/16/03	62.00	59.69	3701.27	7.45	6.90	0.00	67.00	07.00
02/14/05	3/16/03	59.05	56.46	3706.57	0.41	0.00	94.81	0.00	4.7%	0.00	99.50	02/14/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
02/16/05	3/16/03	59.04	56.48	3706.55	0.44	0.00	94.81	0.00	4.7%	0.00	99.50	02/16/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
02/24/05	3/16/03	59.03	56.54	3706.47	0.53	0.00	94.81	0.00	4.7%	0.00	99.50	02/24/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
02/26/05	3/16/03	59.04	56.61	3706.42	0.57	0.00	94.81	0.00	4.7%	0.00	99.50	02/26/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
02/29/05	3/16/03	59.04	56.71	3706.32	0.80	0.00	94.81	0.00	4.7%	0.00	99.50	02/29/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/01/05	3/16/03	59.02	56.17	3706.58	1.35	1.00	95.81	0.2%	5.00	1.25	102.00	03/01/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/06/05	3/16/03	59.03	56.63	3706.40	0.78	1.00	96.81	0.2%	5.2%	1.25	102.00	03/06/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/08/05	3/16/03	59.02	56.38	3706.65	0.36	0.00	96.81	0.00	5.2%	0.00	102.00	03/08/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/13/05	3/16/03	59.02	56.92	3706.11	1.00	1.00	97.81	0.2%	5.50	1.25	103.31	03/13/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/16/05	3/16/03	59.07	56.37	3706.68	0.30	0.00	97.81	0.00	5.50	0.00	103.31	03/16/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/22/05	3/16/03	59.05	56.67	3706.30	0.62	0.00	97.81	0.00	5.50	0.00	103.31	03/22/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/23/05	3/16/03	59.03	56.82	3706.21	0.79	0.00	97.81	0.00	5.50	0.00	103.31	03/23/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/27/05	3/16/03	59.08	56.98	3706.05	1.00	1.00	98.81	0.00	5.50	0.00	103.31	03/27/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/29/05	3/16/03	59.15	56.75	3706.78	0.60	1.00	99.81	1.2%	7.7%	2.2%	107.50	03/29/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
03/30/05	3/16/03	59.11	56.44	3706.59	0.33	0.00	99.81	0.00	7.7%	0.00	107.50	03/30/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/01/05	3/16/03	59.14	56.56	3706.47	0.42	0.00	99.81	0.00	7.7%	0.00	107.50	04/01/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/13/05	3/16/03	59.08	56.78	3706.25	0.70	0.00	99.81	0.00	7.7%	0.00	107.50	04/13/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/15/05	3/16/03	59.06	56.97	3706.11	0.66	0.00	99.81	0.00	7.7%	0.00	107.50	04/15/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/19/05	3/16/03	59.04	56.42	3705.61	1.38	0.00	99.81	0.00	7.7%	0.00	107.50	04/19/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/21/05	3/16/03	59.03	56.24	3705.79	1.21	0.00	99.81	0.00	7.7%	0.00	107.50	04/21/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/26/05	3/16/03	59.04	56.40	3705.63	1.40	1.00	100.81	0.2%	8.00	1.25	108.81	04/26/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/28/05	3/16/03	59.18	56.50	3706.33	0.32	0.00	100.81	0.00	8.00	0.00	108.81	04/28/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/29/05	3/16/03	59.16	56.70	3706.33	0.54	0.00	100.81	0.00	8.00	0.00	108.81	04/29/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
04/30/05	3/16/03	59.14	56.81	3706.22	0.67	0.50	101.31	0.40	8.50	1.00	109.81	04/30/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/04/05	3/16/03	59.26	56.54	3706.49	0.28	0.00	101.31	0.40	8.50	0.00	109.81	05/04/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/11/05	3/16/03	59.24	56.54	3706.40	0.28	0.00	101.31	0.40	8.50	0.00	109.81	05/11/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/12/05	3/16/03	59.21	56.84	3706.30	0.63	0.00	101.31	0.40	8.50	0.00	109.81	05/12/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/17/05	3/16/03	59.26	56.84	3706.17	0.60	0.00	101.31	0.40	8.50	0.00	109.81	05/17/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/20/05	3/16/03	59.17	56.10	3705.93	0.93	0.00	101.31	0.40	8.50	0.00	109.81	05/20/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/21/05	3/16/03	59.11	56.40	3705.57	1.35	0.00	101.31	0.40	8.50	0.00	109.81	05/21/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/22/05	3/16/03	59.11	56.40	3705.57	1.35	0.00	101.31	0.40	8.50	0.00	109.81	05/22/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/23/05	3/16/03	59.05	56.75	3705.28	1.70	1.00	102.31	0.2%	8.7%	1.25	111.06	05/23/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/27/05	3/16/03	59.27	56.04	3705.99	0.77	0.00	102.31	0.00	8.7%	0.00	111.06	05/27/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/28/05	3/16/03	59.28	56.04	3705.99	0.70	0.00	102.31	0.00	8.7%	0.00	111.06	05/28/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/29/05	3/16/03	59.20	56.04	3705.98	0.66	0.00	102.31	0.00	8.7%	0.00	111.06	05/29/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/30/05	3/16/03	59.19	56.53	3706.30	0.34	0.00	102.31	0.00	8.7%	0.00	111.06	05/30/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
05/31/05	3/16/03	59.19	56.53	3706.30	0.34	0.00	102.31	0.00	8.7%	0.00	111.06	05/31/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
06/01/05	3/16/03	59.03	56.91	3706.12	0.80	0.00	102.31	0.00	8.7%	0.00	111.06	06/01/05	3/16/03	62.03	59.91	3701.12	0.00	0.00	0.00	67.00	07.00
06/04/05	3/16/03	61.72	59.18	3701.73	7.46	7.00	67.00	0.00	0.00	67.00	07.00	06/04/05	3/16/03	61.72	59.18	3701.73	7.46	7.00	0.00	67.00	07.00
06/13/05	3/16/03	61.81	59.21	3701.70	7.40	7.00	67.00	0.00	0.00	67.00	07.00	06/13/05	3/16/03	61.81	59.21	3701.70	7.40	7.00	0.00	67.00	07.00
06/16/05	3/16/03	61.86	59.25	3701.60	7.40	7.00	67.00	0.00	0.00	67.00	07.00	06/16/05	3/16/03	61.86	59.25	3701.60	7.40	7.00	0.00	67.00	07.00
06/17/05	3/16/03	61.89	59.41	3701.50	7.32	6.90	67.00	0.00	0.00	67.00	07.00	06/17/05	3/16/03	61.89	59.41	3701.50	7.32	6.90	0.00	67.00	07.00
06/20/05	3/16/03	61.93	59.45	3701.40	7.32	6.90	67.00	0.00	0.00	67.00	07.00	06/20/05	3/16/03	61.93	59.45	3701.40	7.32	6.90	0.00	67.00	07.00
06/23/05	3/16/03	61.92	59.48	3701.43	7.56	6.90	67														

MW-1A (cont)												
00970005	3765.34	57.01	65.31	3766.03	8.30	7.00	499.50	0.25	0.00	7.25	508.50	
00970005	3765.34	57.04	65.23	3766.11	8.19	6.00	505.50	0.25	9.25	6.25	514.75	
00970005	3765.34	57.07	65.17	3766.17	8.10	15.00	520.50	0.25	8.50	15.25	530.00	
00970005	3765.34	57.09	65.10	3766.24	8.01	15.00	535.50	0.25	9.75	15.25	545.25	
00970005	3765.34	57.08	65.18	3766.16	8.10	9.00	544.50	0.25	10.00	9.25	554.50	
00970005	3765.34	57.09	65.21	3766.13	8.12	8.00	562.50	0.25	10.25	8.25	569.75	
00970005	3765.34	57.09	65.31	3766.03	8.22	8.00	580.50	0.25	10.50	8.25	571.00	
00970005	3765.34	57.10	65.28	3766.06	8.18	7.00	597.50	0.25	10.75	7.25	578.25	
00970005	3765.34	57.12	65.31	3766.03	8.19	10.00	577.50	0.50	11.25	10.50	588.75	
00970005	3765.34	57.13	65.29	3766.05	8.16	9.00	583.50	0.25	11.50	8.25	595.00	
00970005	3765.34	57.15	65.34	3766.00	8.19	7.00	590.50	0.50	12.00	7.50	602.50	
00970005	3765.34	57.14	65.28	3766.00	8.14	8.00	588.50	0.25	12.25	8.25	610.75	
00970005	3765.34	57.16	65.34	3766.01	8.18	8.00	606.50	0.25	12.50	8.25	619.25	
00970005	3765.34	57.17	65.33	3766.01	8.18	9.00	615.50	0.25	12.75	9.25	628.25	
00970005	3765.34	57.21	65.38	3669.98	8.17	8.00	623.50	0.25	13.00	8.25	636.50	
00970005	3765.34	57.24	65.30	3669.98	8.12	8.00	631.50	0.25	13.25	8.25	644.75	
00970005	3765.34	57.21	65.42	3669.92	8.21	7.00	630.50	0.25	13.50	7.25	652.00	
00970005	3765.34	57.25	65.38	3669.98	8.11	8.00	640.50	0.25	13.75	8.25	660.25	
00970005	3765.34	57.24	65.42	3669.92	8.18	7.00	653.50	0.25	14.00	7.25	667.50	
00970005	3765.34	57.25	65.40	3669.95	8.24	7.00	660.50	0.25	14.25	7.25	674.75	
00970005	3765.34	57.28	65.45	3669.89	8.17	7.00	667.50	0.50	14.75	7.50	682.25	
00970005	3765.34	57.27	65.52	3669.82	8.25	7.00	674.50	0.25	15.00	7.25	689.50	
00970005	3765.34	57.30	65.57	3669.77	8.27	7.00	674.50	0.50	15.25	7.50	696.75	
00970005	3765.34	57.31	65.51	3669.83	8.20	7.00	681.50	0.25	15.25	7.25	698.75	
00970005	3765.34	57.31	65.61	3669.73	8.30	7.00	681.50	0.25	15.50	7.25	699.00	
00970005	3765.34	57.33	65.53	3669.81	8.20	7.00	688.50	0.25	15.50	7.25	704.00	
00970005	3765.34	57.33	65.63	3669.71	8.30	7.00	688.50	0.25	15.75	7.25	704.25	
00970005	3765.34	57.34	65.63	3669.71	8.29	7.00	694.50	0.25	15.75	7.25	711.25	
MW-1												
01060005	3766.03	58.29	58.72	3767.31	9.43	0.13	84.58	0.00	0.00	84.58	84.58	
01060005	3766.03	58.40	58.72	3767.31	9.32	0.13	84.69	0.00	0.00	84.69	84.69	
01060005	3766.03	58.42	58.71	3767.32	9.28	0.13	84.81	0.00	0.00	84.81	84.81	
01060005	3766.03	58.48	58.83	3767.20	9.35	0.25	85.06	0.00	0.00	85.06	85.06	
01060005	3766.03	58.49	58.81	3767.22	9.32	0.25	85.31	0.00	0.00	85.31	85.31	
01060005	3766.03	58.48	58.80	3767.23	9.32	0.25	85.56	0.00	0.00	85.56	85.56	
01060005	3766.03	58.54	58.80	3767.17	9.32	0.25	85.81	0.00	0.00	85.81	85.81	
01060005	3766.03	58.57	58.89	3767.14	9.32	0.25	86.06	0.00	0.00	86.06	86.06	
01060005	3766.03	58.62	58.89	3767.14	9.27	0.25	86.31	0.00	0.00	86.31	86.31	
01060005	3766.03	58.54	58.63	3767.40	9.09	0.00	86.56	0.00	0.00	86.56	86.56	
01060005	3766.03	58.63	58.80	3766.95	9.45	0.25	86.81	0.00	0.00	86.81	86.81	
01060005	3766.03	58.60	59.07	3766.98	9.37	0.25	87.06	0.00	0.00	87.06	87.06	
01060005	3766.03	58.65	59.17	3766.98	9.52	0.25	87.31	0.00	0.00	87.31	87.31	
01060005	3766.03	58.71	59.30	3766.73	9.53	1.50	88.56	0.50	0.50	2.00	89.06	
01060005	3766.03	58.68	58.64	3767.00	9.06	0.25	88.81	0.25	0.75	0.50	89.30	
01060005	3766.03	58.83	59.01	3767.12	9.02	0.50	89.31	0.25	1.00	0.75	90.31	
01060005	3766.03	58.89	59.12	3767.06	9.18	0.50	89.81	0.25	1.25	0.75	91.06	
01060005	3766.03	58.91	59.02	3767.05	9.17	0.25	90.06	0.25	1.50	0.50	91.56	
01060005	3766.03	58.95	59.12	3767.00	9.13	0.25	90.31	0.25	1.75	0.50	92.06	
01060005	3766.03	58.98	59.02	3767.01	9.12	1.00	91.31	0.25	2.00	1.25	93.31	
01060005	3766.03	59.01	59.12	3767.01	9.22	0.50	91.81	0.25	2.25	0.75	94.06	
01060005	3766.03	59.05	59.12	3767.01	9.11	0.50	92.31	0.25	2.50	0.75	94.81	
01060005	3766.03	59.12	59.12	3766.91	9.17	0.25	92.56	0.25	2.75	0.50	95.31	
01060005	3766.03	59.14	59.14	3766.89	9.20	0.50	93.06	0.25	3.00	0.75	96.06	
01060005	3766.03	59.18	59.18	3766.85	9.13	0.25	93.51	0.25	3.25	0.50	96.50	
01060005	3766.03	59.19	59.09	3766.94	9.12	0.25	93.56	0.25	3.50	0.50	96.50	
01060005	3766.03	59.29	59.08	3766.95	9.09	0.25	94.06	0.25	3.75	0.50	97.06	
01060005	3766.03	59.30	59.02	3767.01	9.12	0.50	94.51	0.25	4.00	0.75	98.31	
01060005	3766.03	59.02	59.11	3766.92	9.09	0.25	94.56	0.25	4.25	0.50	98.81	

MW-2 (con't)

03/18/05	3/1/03	02/04	03/09	3/01/22	7.65	8.00	155.10	0.04	0.00	1.55.00	155.00
04/01/05	3/1/03	02/08	03/10	3/01/12	7.71	8.00	163.00	0.00	0.00	163.00	163.00
04/07/05	3/1/03	02/08	03/14	3/01/17	7.66	8.00	171.00	0.04	0.00	171.00	171.00
04/10/05	3/1/03	02/16	03/08	3/01/02	7.73	7.50	170.50	0.14	0.50	170.00	170.00
04/23/05	3/1/03	02/19	03/09	3/01/01	7.71	12.00	190.50	0.00	0.50	190.00	190.00
04/26/05	3/1/03	02/24	03/08	3/01/11	7.56	10.50	201.00	0.25	0.75	200.75	200.75
04/31/05	3/1/03	02/21	03/01	3/01/00	7.70	7.50	208.50	0.00	0.75	208.25	208.25
04/33/05	3/1/03	02/30	03/04	3/01/41	7.20	7.00	215.50	0.25	1.00	215.25	215.25
04/37/05	3/1/03	02/24	03/11	3/01/00	7.07	8.00	223.50	0.25	1.25	223.25	223.25
04/40/05	3/1/03	02/25	03/01	3/01/10	7.55	9.00	237.50	0.25	1.50	237.25	237.25
04/43/05	3/1/03	02/26	03/00	3/01/01	7.64	8.00	240.50	0.50	2.00	240.50	240.50
04/46/05	3/1/03	02/28	03/04	3/01/11	7.52	7.00	247.50	0.50	2.50	247.50	247.50
04/49/05	3/1/03	02/28	03/05	3/00/06	7.06	6.00	253.50	0.25	2.75	253.25	253.25
04/52/05	3/1/03	02/30	03/07	3/01/34	7.21	6.50	260.00	0.25	3.00	259.75	259.75
04/55/05	3/1/03	02/28	03/08	3/00/35	7.68	7.00	267.00	0.50	3.50	266.50	266.50
04/58/05	3/1/03	02/35	03/01	3/01/30	7.26	6.00	273.00	0.25	3.75	272.75	272.75
04/61/05	3/1/03	02/31	03/03	3/00/02	7.08	8.00	281.00	0.25	4.00	280.75	280.75
04/64/05	3/1/03	02/41	03/04	3/01/37	7.13	6.00	288.00	0.25	4.25	287.75	287.75
04/67/05	3/1/03	02/33	03/07	3/00/02	7.06	6.00	293.00	0.25	4.50	292.75	292.75
04/70/05	3/1/03	02/40	03/04	3/01/23	7.28	5.00	299.00	0.25	4.75	298.75	298.75
04/73/05	3/1/03	02/35	03/04	3/00/07	7.09	6.00	306.00	0.25	4.75	305.75	305.75
04/76/05	3/1/03	02/44	03/03	3/01/22	7.25	4.00	309.00	0.25	4.75	308.75	308.75
04/79/05	3/1/03	02/38	03/02	3/00/00	7.64	5.00	309.00	0.25	5.00	308.75	308.75
04/82/05	3/1/03	02/40	03/04	3/01/17	7.25	5.00	309.00	0.25	5.00	308.75	308.75
04/85/05	3/1/03	02/40	03/03	3/00/08	7.03	4.00	308.00	0.25	5.25	307.75	307.75
04/88/05	3/1/03	02/47	03/03	3/01/15	7.29	6.00	308.00	0.25	5.25	307.75	307.75
04/91/05	3/1/03	02/41	03/05	3/00/06	7.04	5.00	313.00	0.25	5.50	312.75	312.75
04/94/05	3/1/03	02/40	03/02	3/01/09	7.34	6.00	313.00	0.25	5.50	312.75	312.75
04/97/05	3/1/03	02/45	03/04	3/00/02	7.04	4.00	317.00	0.25	5.75	316.75	316.75
04/100/05	3/1/03	02/50	03/05	3/01/06	7.35	5.00	318.00	0.25	5.75	317.75	317.75
04/103/05	3/1/03	02/41	03/11	3/00/00	7.70	6.00	323.00	0.25	6.00	322.75	322.75
04/106/05	3/1/03	02/51	03/09	3/01/02	7.30	6.00	324.00	0.25	6.00	323.75	323.75
04/109/05	3/1/03	02/46	03/04	3/00/03	7.02	6.00	329.00	0.25	6.25	328.75	328.75
04/112/05	3/1/03	02/52	03/03	3/01/08	7.31	5.00	329.00	0.25	6.25	328.75	328.75
04/115/05	3/1/03	02/47	03/08	3/00/03	7.61	5.00	334.00	0.25	6.50	333.75	333.75
04/118/05	3/1/03	02/51	03/01	3/01/10	7.30	6.00	334.00	0.25	6.50	333.75	333.75
04/121/05	3/1/03	02/48	03/07	3/00/04	7.59	6.00	340.00	0.25	6.75	339.75	339.75
04/124/05	3/1/03	02/51	03/04	3/00/07	7.53	6.00	341.00	0.25	6.75	340.75	340.75
04/127/05	3/1/03	02/50	03/09	3/00/02	7.59	7.00	347.00	0.25	7.00	346.75	346.75
04/130/05	3/1/03	02/53	03/03	3/00/06	7.50	6.00	347.00	0.25	7.00	346.75	346.75
04/133/05	3/1/03	02/50	03/11	3/00/06	7.05	7.00	354.00	0.25	7.25	353.75	353.75
04/136/05	3/1/03	02/56	03/04	3/00/07	7.38	7.00	354.00	0.25	7.25	353.75	353.75
04/139/05	3/1/03	02/52	03/09	3/00/09	7.60	7.00	361.00	0.25	7.50	360.75	360.75
04/142/05	3/1/03	02/61	03/08	3/00/03	7.37	7.00	361.00	0.25	7.50	360.75	360.75
04/145/05	3/1/03	02/53	03/14	3/00/11	7.61	6.00	367.00	0.25	7.75	366.75	366.75
04/148/05	3/1/03	02/55	03/08	3/00/03	7.51	6.00	367.00	0.25	7.75	366.75	366.75
04/151/05	3/1/03	02/50	03/18	3/00/03	7.02	6.00	371.00	0.50	8.00	370.50	370.50
04/154/05	3/1/03	02/58	03/17	3/00/04	7.59	7.00	374.00	0.25	8.00	373.75	373.75
04/157/05	3/1/03	02/57	03/20	3/00/11	7.63	8.00	381.00	0.25	8.50	380.50	380.50
04/160/05	3/1/03	02/61	03/07	3/00/04	7.40	6.00	386.00	0.25	8.25	385.75	385.75
04/163/05	3/1/03	02/59	03/21	3/00/10	7.02	5.00	386.00	0.25	8.25	385.75	385.75
04/166/05	3/1/03	02/60	03/20	3/00/11	7.60	9.00	386.00	0.25	8.75	385.25	385.25
04/169/05	3/1/03	02/64	03/20	3/00/03	7.64	6.00	392.00	0.25	9.00	391.75	391.75
04/172/05	3/1/03	02/64	03/20	3/00/02	7.64	6.00	395.00	0.25	9.00	394.75	394.75
04/175/05	3/1/03	02/63	03/27	3/00/04	7.64	7.00	397.00	0.25	9.25	396.75	396.75
04/178/05	3/1/03	02/68	03/17	3/00/04	7.49	7.00	405.00	0.50	9.50	404.50	404.50
04/181/05	3/1/03	02/65	03/29	3/00/02	7.64	6.00	405.00	0.25	9.50	404.50	404.50
04/184/05	3/1/03	02/66	03/33	3/00/08	7.67	7.00	409.00	0.25	9.50	408.50	408.50





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MW-4 (cont)									
07/18/05	3/12/14	64.34	73.80	3688.94	9.46	10.00	1488.00	0.25	8.00
07/21/05	3/12/14	64.36	73.73	3689.01	9.35	10.00	1488.00	0.25	8.25
07/24/05	3/12/14	64.38	73.66	3689.08	9.24	11.00	1488.00	0.25	8.50
07/27/05	3/12/14	64.40	73.59	3689.15	9.13	12.00	1488.00	0.25	8.75
08/01/05	3/12/14	64.42	73.52	3689.22	9.02	13.00	1488.00	0.25	9.00
08/04/05	3/12/14	64.44	73.45	3689.29	8.91	14.00	1488.00	0.25	9.25
08/07/05	3/12/14	64.46	73.38	3689.36	8.80	15.00	1488.00	0.25	9.50
08/10/05	3/12/14	64.48	73.31	3689.43	8.69	16.00	1488.00	0.25	9.75
08/13/05	3/12/14	64.50	73.24	3689.50	8.58	17.00	1488.00	0.25	10.00
08/16/05	3/12/14	64.52	73.17	3689.57	8.47	18.00	1488.00	0.25	10.25
08/19/05	3/12/14	64.54	73.10	3689.64	8.36	19.00	1488.00	0.25	10.50
08/22/05	3/12/14	64.56	73.03	3689.71	8.25	20.00	1488.00	0.25	10.75
08/25/05	3/12/14	64.58	72.96	3689.78	8.14	21.00	1488.00	0.25	11.00
08/28/05	3/12/14	64.60	72.89	3689.85	8.03	22.00	1488.00	0.25	11.25
09/01/05	3/12/14	64.62	72.82	3689.92	7.92	23.00	1488.00	0.25	11.50
09/04/05	3/12/14	64.64	72.75	3690.00	7.81	24.00	1488.00	0.25	11.75
09/07/05	3/12/14	64.66	72.68	3690.07	7.70	25.00	1488.00	0.25	12.00
09/10/05	3/12/14	64.68	72.61	3690.14	7.59	26.00	1488.00	0.25	12.25
09/13/05	3/12/14	64.70	72.54	3690.21	7.48	27.00	1488.00	0.25	12.50
09/16/05	3/12/14	64.72	72.47	3690.28	7.37	28.00	1488.00	0.25	12.75
09/19/05	3/12/14	64.74	72.40	3690.35	7.26	29.00	1488.00	0.25	13.00
09/22/05	3/12/14	64.76	72.33	3690.42	7.15	30.00	1488.00	0.25	13.25
09/25/05	3/12/14	64.78	72.26	3690.49	7.04	31.00	1488.00	0.25	13.50
09/28/05	3/12/14	64.80	72.19	3690.56	6.93	32.00	1488.00	0.25	13.75
10/01/05	3/12/14	64.82	72.12	3690.63	6.82	33.00	1488.00	0.25	14.00
10/04/05	3/12/14	64.84	72.05	3690.70	6.71	34.00	1488.00	0.25	14.25
10/07/05	3/12/14	64.86	71.98	3690.77	6.60	35.00	1488.00	0.25	14.50
10/10/05	3/12/14	64.88	71.91	3690.84	6.49	36.00	1488.00	0.25	14.75
10/13/05	3/12/14	64.90	71.84	3690.91	6.38	37.00	1488.00	0.25	15.00
10/16/05	3/12/14	64.92	71.77	3690.98	6.27	38.00	1488.00	0.25	15.25
10/19/05	3/12/14	64.94	71.70	3691.05	6.16	39.00	1488.00	0.25	15.50
10/22/05	3/12/14	64.96	71.63	3691.12	6.05	40.00	1488.00	0.25	15.75
10/25/05	3/12/14	64.98	71.56	3691.19	5.94	41.00	1488.00	0.25	16.00
10/28/05	3/12/14	65.00	71.49	3691.26	5.83	42.00	1488.00	0.25	16.25
10/31/05	3/12/14	65.02	71.42	3691.33	5.72	43.00	1488.00	0.25	16.50
11/03/05	3/12/14	65.04	71.35	3691.40	5.61	44.00	1488.00	0.25	16.75
11/06/05	3/12/14	65.06	71.28	3691.47	5.50	45.00	1488.00	0.25	17.00
11/09/05	3/12/14	65.08	71.21	3691.54	5.39	46.00	1488.00	0.25	17.25
11/12/05	3/12/14	65.10	71.14	3691.61	5.28	47.00	1488.00	0.25	17.50
11/15/05	3/12/14	65.12	71.07	3691.68	5.17	48.00	1488.00	0.25	17.75
11/18/05	3/12/14	65.14	71.00	3691.75	5.06	49.00	1488.00	0.25	18.00
11/21/05	3/12/14	65.16	70.93	3691.82	4.95	50.00	1488.00	0.25	18.25
11/24/05	3/12/14	65.18	70.86	3691.89	4.84	51.00	1488.00	0.25	18.50
11/27/05	3/12/14	65.20	70.79	3691.96	4.73	52.00	1488.00	0.25	18.75
11/30/05	3/12/14	65.22	70.72	3692.03	4.62	53.00	1488.00	0.25	19.00
12/03/05	3/12/14	65.24	70.65	3692.10	4.51	54.00	1488.00	0.25	19.25
12/06/05	3/12/14	65.26	70.58	3692.17	4.40	55.00	1488.00	0.25	19.50
12/09/05	3/12/14	65.28	70.51	3692.24	4.29	56.00	1488.00	0.25	19.75
12/12/05	3/12/14	65.30	70.44	3692.31	4.18	57.00	1488.00	0.25	20.00
12/15/05	3/12/14	65.32	70.37	3692.38	4.07	58.00	1488.00	0.25	20.25
12/18/05	3/12/14	65.34	70.30	3692.45	3.96	59.00	1488.00	0.25	20.50
12/21/05	3/12/14	65.36	70.23	3692.52	3.85	60.00	1488.00	0.25	20.75
12/24/05	3/12/14	65.38	70.16	3692.59	3.74	61.00	1488.00	0.25	21.00
12/27/05	3/12/14	65.40	70.09	3692.66	3.63	62.00	1488.00	0.25	21.25
12/30/05	3/12/14	65.42	70.02	3692.73	3.52	63.00	1488.00	0.25	21.50
12/31/05	3/12/14	65.44	69.95	3692.80	3.41	64.00	1488.00	0.25	21.75
12/31/05	3/12/14	65.46	69.88	3692.87	3.30	65.00	1488.00	0.25	22.00
12/31/05	3/12/14	65.48	69.81	3692.94	3.19	66.00	1488.00	0.25	22.25
12/31/05	3/12/14	65.50	69.74	3693.01	3.08	67.00	1488.00	0.25	22.50
12/31/05	3/12/14	65.52	69.67	3693.08	2.97	68.00	1488.00	0.25	22.75
12/31/05	3/12/14	65.54	69.60	3693.15	2.86	69.00	1488.00	0.25	23.00
12/31/05	3/12/14	65.56	69.53	3693.22	2.75	70.00	1488.00	0.25	23.25
12/31/05	3/12/14	65.58	69.46	3693.29	2.64	71.00	1488.00	0.25	23.50
12/31/05	3/12/14	65.60	69.39	3693.36	2.53	72.00	1488.00	0.25	23.75
12/31/05	3/12/14	65.62	69.32	3693.43	2.42	73.00	1488.00	0.25	24.00
12/31/05	3/12/14	65.64	69.25	3693.50	2.31	74.00	1488.00	0.25	24.25
12/31/05	3/12/14	65.66	69.18	3693.57	2.20	75.00	1488.00	0.25	24.50
12/31/05	3/12/14	65.68	69.11	3693.64	2.09	76.00	1488.00	0.25	24.75
12/31/05	3/12/14	65.70	69.04	3693.71	1.98	77.00	1488.00	0.25	25.00
12/31/05	3/12/14	65.72	68.97	3693.78	1.87	78.00	1488.00	0.25	25.25
12/31/05	3/12/14	65.74	68.90	3693.85	1.76	79.00	1488.00	0.25	25.50
12/31/05	3/12/14	65.76	68.83	3693.92	1.65	80.00	1488.00	0.25	25.75
12/31/05	3/12/14	65.78	68.76	3693.99	1.54	81.00	1488.00	0.25	26.00
12/31/05	3/12/14	65.80	68.69	3694.06	1.43	82.00	1488.00	0.25	26.25
12/31/05	3/12/14	65.82	68.62	3694.13	1.32	83.00	1488.00	0.25	26.50
12/31/05	3/12/14	65.84	68.55	3694.20	1.21	84.00	1488.00	0.25	26.75
12/31/05	3/12/14	65.86	68.48	3694.27	1.10	85.00	1488.00	0.25	27.00
12/31/05	3/12/14	65.88	68.41	3694.34	0.99	86.00	1488.00	0.25	27.25
12/31/05	3/12/14	65.90	68.34	3694.41	0.88	87.00	1488.00	0.25	27.50
12/31/05	3/12/14	65.92	68.27	3694.48	0.77	88.00	1488.00	0.25	27.75
12/31/05	3/12/14	65.94	68.20	3694.55	0.66	89.00	1488.00	0.25	28.00
12/31/05	3/12/14	65.96	68.13	3694.62	0.55	90.00	1488.00	0.25	28.25
12/31/05	3/12/14	65.98	68.06	3694.69	0.44	91.00	1488.00	0.25	28.50
12/31/05	3/12/14	66.00	67.99	3694.76	0.33	92.00	1488.00	0.25	28.75
12/31/05	3/12/14	66.02	67.92	3694.83	0.22	93.00	1488.00	0.25	29.00
12/31/05	3/12/14	66.04	67.85	3694.90	0.11	94.00	1488.00	0.25	29.25
12/31/05	3/12/14	66.06	67.78	3694.97	0.00	95.00	1488.00	0.25	29.50
12/31/05	3/12/14	66.08	67.71	3695.04	-0.11	96.00	1488.00	0.25	29.75
12/31/05	3/12/14	66.10	67.64	3695.11	-0.22	97.00	1488.00	0.25	30.00
12/31/05	3/12/14	66.12	67.57	3695.18	-0.33	98.00	1488.00	0.25	30.25
12/31/05	3/12/14	66.14	67.50	3695.25	-0.44	99.00	1488.00	0.25	30.50
12/31/05	3/12/14	66.16	67.43	3695.32	-0.55	100.00	1488.00	0.25	30.75
12/31/05	3/12/14	66.18	67.36	3695.39	-0.66	101.00	1488.00	0.25	31.00
12/31/05	3/12/14	66.20	67.29	3695.46	-0.77	102.00	1488.00	0.25	31.25
12/31/05	3/12/14	66.22	67.22	3695.53	-0.88	103.00	1488.00	0.25	31.50
12/31/05	3/12/14	66.24	67.15	3695.60	-0.99	104.00	1488.00	0.25	31.75
12/31/05	3/12/14	66.26	67.08	3695.67	-1.10	105.00	1488.00	0.25	32.00
12/31/05	3/12/14	66.28	67.01	3695.74	-1.21	106.00	1488.00	0.25	32.25
12/31/05	3/12/14	66.30	66.94	3695.81	-1.32	107.00	1488.00	0.25	32.50
12/31/05	3/12/14	66.32	66.87	3695.88	-1.43	108.00	1488.00	0.25	32.75
12/31/05	3/12/14	66.34	66.80	3695.95	-1.54	109.00	1488.00	0.25	33.00
12/31/05	3/12/14	66.36	66.73	3696.02	-1.65	110.00	1488.00	0.25	33.25
12/31/05	3/12/14	66.38	66.66	3696.09	-1.76	111.00	1488.00	0.25	33.50
12/31/05	3/12/14	66.40	66.59	3696.16	-1.87	112.00	1488.00	0.25	33.75
12/31/05	3/12/14	66.42	66.52	3696.23	-1.98	113.00	1488.00	0.25	34.00
12/31/05	3/12/14	66.44	66.45	3696.30	-2.09	114.00	1488.00	0.25	34.25
12/31/05	3/12/14	66.46	66.38	3696.37	-2.20	115.00	1488.00	0.25	34.50
12/31/05	3/12/14	66.48	66.31	3696.44	-2.31	116.00	1488.00	0.25	34.75



**Talon/LPE**

318 East Taylor Street, Hobbs, New Mexico 88240

Phone: 505/393-4261, FAX: 505/393-4658

**Table 2**

Plains All American Pipeline, L.P.  
8" Moore to Jal #1 - 2002-10270

**Quarterly Summary of Hydrocarbon Recovery**

Date	Monthly Hydrocarbons Recovered (gallons)	Monthly Water Recovered (gallons)	Monthly Total Fluids Recovered (gallons)
January 2005	38.00	0.00	38.00
February 2005	37.00	0.00	37.00
March 2005	37.00	0.00	37.00
Quarterly Total	112.00	0.00	112.00
April 2005	8.00	0.00	8.00
May 2005	136.75	5.50	142.25
June 2005	312.00	14.75	326.75
Quarterly Total	456.75	20.25	477.00
Total Six Months	568.75	20.25	589.00
July 2005	291.50	10.00	301.50
August 2005	278.00	9.50	287.50
September 2005	330.00	16.50	346.50
Quarterly Total	899.50	36.00	935.50
October 2005	287.00	11.75	298.75
November 2005	280.50	11.25	291.75
December 2005	285.00	11.25	296.25
Quarterly Total	852.50	34.25	886.75
Total Six Months	1752.00	70.25	1822.25
Total FY 2005	2320.75	90.50	2411.25



**Table 3**
**SUMMARY OF ENVIRONMENTAL BORING RESULTS (SOIL)**
**Plains All American Pipeline, L.P. - 8" Moore to Jal #1 - Ref #2002-10270**

Sample ID	Sample Date	Soil Boring	PID Readings (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	m,p-Xylenes (mg/kg)	o-Xylene (mg/kg)	Total BTEX (mg/kg)	TPH (as gas) (mg/kg)	TPH (as diesel) (mg/kg)	Total TPH (mg/kg)
SE8M102302BH1 (5-7)	23-Oct-02	BH-1	695	29.7	168	88.6	151	59.2	497	6810	5950	12760
SE8M102302BH1 (10-12)			505	35.9	256	142	227	89.1	750	11400	9960	21360
SE8M102302BH1 (15-17)			306	19.8	241	165	225	92.1	743	9000	9220	18220
SE8M102302BH1 (20-22)			1,350	38.7	290	150	217	85.2	781	9450	8140	17590
SE8M102302BH1 (25-27)			1,223	94.6	500	251	359	142	1,347	14400	13400	27800
SE8M102302BH1 (30-32)			682	114	342	174	285	109	1024	16600	10400	27000
SE8M102302BH1 (35-37)			510	65.9	302	157	292	113	929.9	16800	17400	34200
SE8M102302BH1 (40-42)			1,583	32	153	86.5	164	68.7	504.2	8440	11500	19940
SE8M102302BH1 (45-47)			384	30.2	210	118	207	82.2	647.4	8900	8180	17080
SE8M102302BH1 (50-52)			559	159	572	255	429	169	1,584	20800	12700	33500
SE8M102302BH1 (55-57)			485	285	509	341	563	223	2,221	40400	25200	65600
SE8M102302BH1 (60-62)			NA	449	1300	689	1180	496	4,114	103000	79500	182500
SE8M102402BH2 (5-7)	24-Oct-02	BH-2	1.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH2 (10-12)			2.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH2 (15-17)			3.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (5-7)	24-Oct-02	BH-3	1.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (10-12)			2.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (15-17)			1.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH4 (5-7)	24-Oct-02	BH-4	46.4	191	628	300	374	151	1,644	17100	10900	28000
SE8M102402BH4 (10-12)			225	175	494	270	395	160	1,494	22800	11900	34700
SE8M102402BH4 (15-17)			3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (20-22)			NA	76.2	296	135	262	100	869.2	14700	10400	25100
SE8M102402BH4 (25-27)			3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (30-32)			NA	140	442	228	420	163	1,393	20600	15900	36400
SE8M102402BH4 (35-37)			1.7	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (50-52)			NA	118	291	93.6	157	55.5	715.1	9040	6700	15740
SE8M102502BH5 (5-7)	25-Oct-02	BH-5	3.0	224	749	344	486	196	1,999	29500	18000	47500
SE8M102502BH5 (10-12)			1.3	70.6	347	176	347	136	1,076.6	15100	14900	30000
SE8M102502BH5 (15-17)			0.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102502BH5 (25-27)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102502BH5 (35-37)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102502BH6 (5-7)	25-Oct-02	BH-6	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102502BH6 (10-12)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102502BH6 (15-17)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
2002-10270 (10-12)	26-Jul-04	MW-1	2,982	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (15-17)			2,565	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (20-22)			1,574	14.6	43.6	23.3	34.3	15.4	131	4,210	3,950	8,160
2002-10270 (25-27)			1,558	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (30-32)			1,160	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (35-37)			1,049	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (40-42)			927	80.0	144	74.1	94.5	45.5	438	7,710	6,450	14,200
2002-10270 (45-47)			1,125	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (50-52)			1,227	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (55-57)			2,124	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (60-62)			710	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (65-67)			906	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (70-72)			1,543	11.6	25.1	13.9	20.0	9.56	80.2	2,280	2,870	5,150
MW-2 (20-25)	23-Oct-04	MW-2	62.2	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	<10.0	<10.0	<10.0
MW-2 (25-30)			59.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (30-35)			68.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (35-40)			53.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (40-45)			73.3	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	<10.0	6.59*	<10.0
MW-2 (45-50)			224	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (50-55)			1,838	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (55-60)			875	139	434	155	308	105	1,140	8,550	9,390	17,900
MW-2 (60-65)			800	NA	NA	NA	NA	NA	NA	NA	NA	NA



MW-3 (15-20)	24-Oct-04	MW-3	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (20-25)			100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	6.86 ⁴	17.4	17.4
MW-3 (25-30)			40.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (30-35)			75.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (35-40)			144	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (40-45)	24-Oct-04	MW-3 con't	216	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (45-50)			350	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (50-55)			1,653	0.226	2.97	2.97	6.64	2.59	15.4	481	1,100	1,580
MW-3 (55-60)			534	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (60-65)			740	139	252	107	159	58	715	4,930	5,790	10,720
MW-4 (15-20)	22-Oct-04	MW-4	153	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	<10.0	7.84 ⁴	<10.0
MW-4 (20-25)			18.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (25-30)			155	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (30-35)			120	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (35-40)			67.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (40-45)			254	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (45-50)			186	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (50-55)			249	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (55-60)			820	205	460	187	328	127	1,310	9,970	11,100	21,100
MW-4 (60-65)			596	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4 (65-70)			447	0.295	0.253	0.0567	0.115	0.0419	0.762	81.9	165	247
NMOCD Remedial Thresholds				10				50			100	

¹ **Bolded** values are in excess of the NMOCD Remediation Thresholds

² NA = Not Analyzed

³ NS = No Sample Recovery

⁴ Detected, but Below the Reporting Limit, therefore, result is an estimated concentration (CLP-J Flag).

## APPENDICES

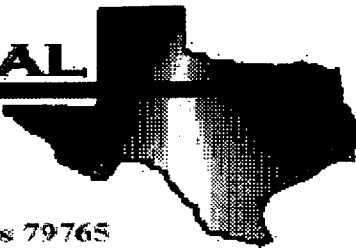
APPENDIX A

SOIL LABORATORY ANALYTICAL RESULTS

AND

CHAIN-OF-CUSTODY  
FORMS

# **E** NVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Jimmy Bryant

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: 8 inch Moore to Jal #1

Project Number: 2002-10270

Location: UL-F, Section 6 T17S, R37E

Lab Order Number: 4G29005

Report Date: 08/04/04



Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2002-10270 MW-1 (20')	4G29005-01	Soil	07/26/04 10:40	07/29/04 10:50
2002-10270 MW-1 (40')	4G29005-02	Soil	07/26/04 11:05	07/29/04 10:50
2002-10270 MW-1 (70')	4G29005-03	Soil	07/26/04 12:07	07/29/04 10:50

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>2002-10270 MW-1 (20') (4G29005-01) Soil</b>									
Benzene	14.6	0.0250	mg/kg dry	25	EH40207	07/30/04	07/30/04	EPA 8021B	
Toluene	43.6	0.0250	"	"	"	"	"	"	
Ethylbenzene	23.3	0.0250	"	"	"	"	"	"	
Xylene (p/m)	34.3	0.0250	"	"	"	"	"	"	
Xylene (o)	15.4	0.0250	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		2160 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		83.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	4210	10.0	mg/kg dry	1	EG42903	07/29/04	08/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	3950	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	8160	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		156 %	70-130		"	"	"	"	S-04
Surrogate: 1-Chlorooctadecane		121 %	70-130		"	"	"	"	
<b>2002-10270 MW-1 (40') (4G29005-02) Soil</b>									
Benzene	80.0	0.100	mg/kg dry	100	EH40207	07/30/04	07/30/04	EPA 8021B	
Toluene	144	0.100	"	"	"	"	"	"	
Ethylbenzene	74.1	0.100	"	"	"	"	"	"	
Xylene (p/m)	94.5	0.100	"	"	"	"	"	"	
Xylene (o)	45.5	0.100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		1660 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		135 %	80-120		"	"	"	"	S-04
Gasoline Range Organics C6-C12	7710	50.0	mg/kg dry	5	EG42903	07/29/04	08/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	6450	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	14200	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		34.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		27.2 %	70-130		"	"	"	"	S-06
<b>2002-10270 MW-1 (70') (4G29005-03) Soil</b>									
Benzene	11.6	0.0250	mg/kg dry	25	EH40207	07/30/04	07/30/04	EPA 8021B	
Toluene	25.1	0.0250	"	"	"	"	"	"	
Ethylbenzene	13.9	0.0250	"	"	"	"	"	"	
Xylene (p/m)	20.0	0.0250	"	"	"	"	"	"	
Xylene (o)	9.56	0.0250	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		1010 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		140 %	80-120		"	"	"	"	S-04
Gasoline Range Organics C6-C12	2280	10.0	mg/kg dry	1	EG42903	07/29/04	08/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	2870	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	5150	10.0	"	"	"	"	"	"	

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>2002-10270 MW-1 (70") (4G29005-03) Soil</b>									
Surrogate: 1-Chlorooctane		130 %	70-130		EG42903	07/29/04	08/03/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		97.8 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>2002-10270 MW-1 (20') (4G29005-01) Soil</b>									
% Solids	93.0		%	1	EG43009	07/29/04	07/29/04	% calculation	
<b>2002-10270 MW-1 (40') (4G29005-02) Soil</b>									
% Solids	94.0		%	1	EG43009	07/29/04	07/29/04	% calculation	
<b>2002-10270 MW-1 (70') (4G29005-03) Soil</b>									
% Solids	82.0		%	1	EG43009	07/29/04	07/29/04	% calculation	

Environmental Lab of Texas

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1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EG42903 - Solvent Extraction (GC)**

**Blank (EG42903-BLK1)**

Prepared: 07/29/04 Analyzed: 08/02/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	70-130			
Surrogate: 1-Chlorooctadecane	37.2		"	50.0		74.4	70-130			

**Blank (EG42903-BLK2)**

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	52.8		mg/kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	36.8		"	50.0		73.6	70-130			

**LCS (EG42903-BS1)**

Prepared: 07/29/04 Analyzed: 08/02/04

Gasoline Range Organics C6-C12	25.7	10.0	mg/kg wet	25.0		103	75-125			
Diesel Range Organics >C12-C35	27.6	10.0	"	25.0		110	75-125			
Total Hydrocarbon C6-C35	53.3	10.0	"	50.0		107	75-125			
Surrogate: 1-Chlorooctane	37.4		mg/kg	50.0		74.8	70-130			
Surrogate: 1-Chlorooctadecane	37.5		"	50.0		75.0	70-130			

**LCS (EG42903-BS2)**

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	27.9	10.0	mg/kg wet	25.0		112	75-125			
Diesel Range Organics >C12-C35	27.9	10.0	"	25.0		112	75-125			
Total Hydrocarbon C6-C35	55.8	10.0	"	50.0		112	75-125			
Surrogate: 1-Chlorooctane	53.1		mg/kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	35.4		"	50.0		70.8	70-130			

**Calibration Check (EG42903-CCV1)**

Prepared: 07/29/04 Analyzed: 08/02/04

Gasoline Range Organics C6-C12	43.3		mg/kg	50.0		86.6	80-120			
Diesel Range Organics >C12-C35	45.6		"	50.0		91.2	80-120			
Total Hydrocarbon C6-C35	88.9		"	100		88.9	80-120			
Surrogate: 1-Chlorooctane	40.5		"	50.0		81.0	70-130			
Surrogate: 1-Chlorooctadecane	35.4		"	50.0		70.8	70-130			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EG42903 - Solvent Extraction (GC)**

**Calibration Check (EG42903-CCV2)**

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	54.0		mg/kg	50.0		108	80-120			
Diesel Range Organics >C12-C35	52.2		"	50.0		104	80-120			
Total Hydrocarbon C6-C35	106		"	100		106	80-120			
Surrogate: 1-Chlorooctane	51.9		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	35.1		"	50.0		70.2	70-130			

**Matrix Spike (EG42903-MS1)**

Source: 4G29002-09

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	478	10.0	mg/kg dry	532	ND	89.8	75-125			
Diesel Range Organics >C12-C35	491	10.0	"	532	13.7	89.7	75-125			
Total Hydrocarbon C6-C35	969	10.0	"	1060	13.7	90.1	75-125			
Surrogate: 1-Chlorooctane	63.9		mg/kg	50.0		128	70-130			
Surrogate: 1-Chlorooctadecane	35.1		"	50.0		70.2	70-130			

**Matrix Spike (EG42903-MS2)**

Source: 4G29007-02

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	605	10.0	mg/kg dry	568	ND	107	75-125			
Diesel Range Organics >C12-C35	558	10.0	"	568	ND	98.2	75-125			
Total Hydrocarbon C6-C35	1160	10.0	"	1140	ND	102	75-125			
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	38.2		"	50.0		76.4	70-130			

**Matrix Spike Dup (EG42903-MSD1)**

Source: 4G29002-09

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	568	10.0	mg/kg dry	532	ND	107	75-125	17.2	20	
Diesel Range Organics >C12-C35	568	10.0	"	532	13.7	104	75-125	14.5	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1060	13.7	106	75-125	16.2	20	
Surrogate: 1-Chlorooctane	64.4		mg/kg	50.0		129	70-130			
Surrogate: 1-Chlorooctadecane	47.7		"	50.0		95.4	70-130			

**Matrix Spike Dup (EG42903-MSD2)**

Source: 4G29007-02

Prepared: 07/29/04 Analyzed: 08/03/04

Gasoline Range Organics C6-C12	536	10.0	mg/kg dry	568	ND	94.4	75-125	12.1	20	
Diesel Range Organics >C12-C35	576	10.0	"	568	ND	101	75-125	3.17	20	
Total Hydrocarbon C6-C35	1110	10.0	"	1140	ND	97.4	75-125	4.41	20	
Surrogate: 1-Chlorooctane	60.5		mg/kg	50.0		121	70-130			
Surrogate: 1-Chlorooctadecane	37.5		"	50.0		75.0	70-130			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EH40207 - EPA 5030C (GC)**

**Blank (EH40207-BLK1)**

Prepared & Analyzed: 07/30/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	89.2		ug/kg	100		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	90.6		"	100		90.6	80-120			

**LCS (EH40207-BS1)**

Prepared & Analyzed: 07/30/04

Benzene	106		ug/kg	100		106	80-120			
Toluene	102		"	100		102	80-120			
Ethylbenzene	99.7		"	100		99.7	80-120			
Xylene (p/m)	210		"	200		105	80-120			
Xylene (o)	107		"	100		107	80-120			
Surrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			

**Calibration Check (EH40207-CCV1)**

Prepared: 07/30/04 Analyzed: 07/31/04

Benzene	104		ug/kg	100		104	80-120			
Toluene	101		"	100		101	80-120			
Ethylbenzene	95.4		"	100		95.4	80-120			
Xylene (p/m)	203		"	200		102	80-120			
Xylene (o)	106		"	100		106	80-120			
Surrogate: a,a,a-Trifluorotoluene	93.2		"	100		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	92.1		"	100		92.1	80-120			

**Matrix Spike (EH40207-MS1)**

Source: 4G29006-03

Prepared & Analyzed: 07/30/04

Benzene	102		ug/kg	100	ND	102	80-120			
Toluene	98.2		"	100	ND	98.2	80-120			
Ethylbenzene	95.6		"	100	ND	95.6	80-120			
Xylene (p/m)	206		"	200	ND	103	80-120			
Xylene (o)	104		"	100	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	99.4		"	100		99.4	80-120			
Surrogate: 4-Bromofluorobenzene	101		"	100		101	80-120			

Environmental Lab of Texas

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914  
Reported:  
08/04/04 12:22

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EH40207 - EPA 5030C (GC)**

**Matrix Spike Dup (EH40207-MSD1)**

**Source: 4G29006-03**

**Prepared & Analyzed: 07/30/04**

Benzene	106		ug/kg	100	ND	106	80-120	3.85	20	
Toluene	102		"	100	ND	102	80-120	3.80	20	
Ethylbenzene	99.9		"	100	ND	99.9	80-120	4.40	20	
Xylene (p/m)	213		"	200	ND	106	80-120	2.87	20	
Xylene (o)	108		"	100	ND	108	80-120	3.77	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	98.9		"	100		98.9	80-120			
Surrogate: 4-Bromofluorobenzene	96.6		"	100		96.6	80-120			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore to Jal #1  
Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:  
08/04/04 12:22

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EG43009 - General Preparation (Prep)**

**Blank (EG43009-BLK1)**

Prepared & Analyzed: 07/29/04

% Solids	100	%
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**Duplicate (EG43009-DUP1)**

Source: 4G29001-01

Prepared & Analyzed: 07/29/04

% Solids	87.0	%	87.0	0.00	20
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1301 S. County Road 1150  
Midland TX, 79706-4476

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Project Number: 2002-10270  
Project Manager: Jimmy Bryant

Fax: (432) 687-4914  
**Reported:**  
08/04/04 12:22

### Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

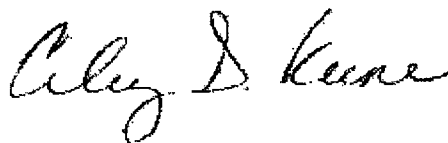
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: _____



Date: 08/04/04 12:22

Raland K. Tuttle, QA Officer  
Caley D. Keene, Lab Director, Org. Tech Director  
Jeanne Mc Murrey, Inorg. Tech Director

James L. Hawkins, Chemist/Geologist  
Sara Molina, Chemist  
Sandra Biezugbe, Lab Tech.

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Fax: (432) 687-4914

**Reported:**  
08/04/04 12:22

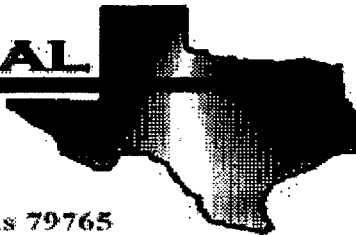
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# **E** NVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

### Prepared for:

Daniel Bryant

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: 8 inch Moore #1

Project Number: 2002-10270

Location: None Given

Lab Order Number: 4J29002

Report Date: 11/04/04

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2 (20-25)	4J29002-01	Soil	10/23/04 08:27	10/29/04 11:03
MW-2 (45-50)	4J29002-02	Soil	10/23/04 09:27	10/29/04 11:03
MW-2 (55-60)	4J29002-03	Soil	10/23/04 09:46	10/29/04 11:03
MW-3 (20-25)	4J29002-04	Soil	10/24/04 09:23	10/29/04 11:03
MW-3 (50-55)	4J29002-05	Soil	10/24/04 10:09	10/29/04 11:03
MW-3 (60-65)	4J29002-06	Soil	10/24/04 10:34	10/29/04 11:03
MW-4 (15-20)	4J29002-07	Soil	10/22/04 09:23	10/29/04 11:03
MW-4 (55-60)	4J29002-08	Soil	10/22/04 10:21	10/29/04 11:03
MW-4 (65-70)	4J29002-09	Soil	10/22/04 10:51	10/29/04 11:03

Plains All American EH & S  
1301 S. County Road 1150  
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Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (20-25) (4J29002-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40203	10/29/04	11/01/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		86.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		123 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		125 %	70-130		"	"	"	"	
<b>MW-2 (45-50) (4J29002-02) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40203	10/29/04	11/01/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		84.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	J [6.59]	10.0	"	"	"	"	"	"	J
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		92.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	
<b>MW-2 (55-60) (4J29002-03) Soil</b>									
Benzene	139	1.00	mg/kg dry	1000	EK40203	10/29/04	11/02/04	EPA 8021B	
Toluene	434	1.00	"	"	"	"	"	"	
Ethylbenzene	158	1.00	"	"	"	"	"	"	
Xylene (p/m)	308	1.00	"	"	"	"	"	"	
Xylene (o)	105	1.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		416 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		122 %	80-120		"	"	"	"	S-04
Gasoline Range Organics C6-C12	8550	50.0	mg/kg dry	5	EJ42907	10/29/04	11/01/04	EPA 8015M	
Diesel Range Organics >C12-C35	9390	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	17900	50.0	"	"	"	"	"	"	

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (55-60) (4J29002-03) Soil</b>									
Surrogate: 1-Chlorooctane		35.8 %	70-130		EJ42907	10/29/04	11/01/04	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		15.6 %	70-130		"	"	"	"	S-06
<b>MW-3 (20-25) (4J29002-04) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40306	11/02/04	11/02/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		93.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	J [6.86]	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	J
Diesel Range Organics >C12-C35	17.4	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	17.4	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		164 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		187 %	70-130		"	"	"	"	S-06
<b>MW-3 (50-55) (4J29002-05) Soil</b>									
Benzene	0.226	0.0250	mg/kg dry	25	EK40306	11/02/04	11/02/04	EPA 8021B	
Toluene	2.97	0.0250	"	"	"	"	"	"	
Ethylbenzene	2.97	0.0250	"	"	"	"	"	"	
Xylene (p/m)	6.64	0.0250	"	"	"	"	"	"	
Xylene (o)	2.59	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		171 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		123 %	80-120		"	"	"	"	S-04
Gasoline Range Organics C6-C12	481	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	1100	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1580	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		104 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		114 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (60-65) (4J29002-06) Soil</b>									
Benzene	139	0.200	mg/kg dry	200	EK40306	11/02/04	11/02/04	EPA 8021B	
Toluene	252	0.200	"	"	"	"	"	"	
Ethylbenzene	107	0.200	"	"	"	"	"	"	
Xylene (p/m)	159	0.200	"	"	"	"	"	"	
Xylene (o)	58.4	0.200	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		976 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		120 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	4930	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	5790	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	10700	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		124 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		86.2 %	70-130		"	"	"	"	
<b>MW-4 (15-20) (4J29002-07) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40306	11/02/04	11/03/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		91.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	J [7.84]	10.0	"	"	"	"	"	"	J
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		104 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		125 %	70-130		"	"	"	"	
<b>MW-4 (55-60) (4J29002-08) Soil</b>									
Benzene	205	0.500	mg/kg dry	500	EK40306	11/02/04	11/02/04	EPA 8021B	
Toluene	460	0.500	"	"	"	"	"	"	
Ethylbenzene	187	0.500	"	"	"	"	"	"	
Xylene (p/m)	328	0.500	"	"	"	"	"	"	
Xylene (o)	127	0.500	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		900 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		113 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	9970	50.0	mg/kg dry	5	EJ42907	10/29/04	11/01/04	EPA 8015M	
Diesel Range Organics >C12-C35	11100	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	21100	50.0	"	"	"	"	"	"	

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (55-60) (4J29002-08) Soil</b>									
Surrogate: 1-Chlorooctane		38.2 %	70-130		EJ42907	10/29/04	11/01/04	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		20.4 %	70-130		"	"	"	"	S-06
<b>MW-4 (65-70) (4J29002-09) Soil</b>									
Benzene	0.295	0.0250	mg/kg dry	25	EK40306	11/02/04	11/03/04	EPA 8021B	
Toluene	0.253	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0567	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.115	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0419	0.0250	"	"	"	"	"	"	
Surrogate: <i>a, a, a</i> -Trifluorotoluene		90.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	81.9	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	165	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	247	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		95.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		115 %	70-130		"	"	"	"	

Environmental Lab of Texas

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (20-25) (4J29002-01) Soil									
% Moisture	8.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-2 (45-50) (4J29002-02) Soil									
% Moisture	21.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-2 (55-60) (4J29002-03) Soil									
% Moisture	10.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-3 (20-25) (4J29002-04) Soil									
% Moisture	5.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-3 (50-55) (4J29002-05) Soil									
% Moisture	7.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-3 (60-65) (4J29002-06) Soil									
% Moisture	15.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-4 (15-20) (4J29002-07) Soil									
% Moisture	11.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-4 (55-60) (4J29002-08) Soil									
% Moisture	7.0		%	1	EK40102	11/01/04	11/01/04	% calculation	
MW-4 (65-70) (4J29002-09) Soil									
% Moisture	16.0		%	1	EK40102	11/01/04	11/01/04	% calculation	

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42907 - Solvent Extraction (GC)**

**Blank (EJ42907-BLK1)**

Prepared & Analyzed: 10/29/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	44.5		mg/kg	50.0		89.0	70-130			
Surrogate: 1-Chlorooctadecane	48.5		"	50.0		97.0	70-130			

**Blank (EJ42907-BLK2)**

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	48.1		mg/kg	50.0		96.2	70-130			
Surrogate: 1-Chlorooctadecane	48.8		"	50.0		97.6	70-130			

**LCS (EJ42907-BS1)**

Prepared & Analyzed: 10/29/04

Gasoline Range Organics C6-C12	473	10.0	mg/kg wet	500		94.6	75-125			
Diesel Range Organics >C12-C35	518	10.0	"	500		104	75-125			
Total Hydrocarbon C6-C35	991	10.0	"	1000		99.1	75-125			
Surrogate: 1-Chlorooctane	51.4		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	46.5		"	50.0		93.0	70-130			

**LCS (EJ42907-BS2)**

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	518	10.0	mg/kg wet	500		104	75-125			
Diesel Range Organics >C12-C35	540	10.0	"	500		108	75-125			
Total Hydrocarbon C6-C35	1060	10.0	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.9		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	60.2		"	50.0		120	70-130			

**LCS Dup (EJ42907-BSD2)**

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	502	10.0	mg/kg wet	500		100	75-125	3.14	20	
Diesel Range Organics >C12-C35	551	10.0	"	500		110	75-125	2.02	20	
Total Hydrocarbon C6-C35	1050	10.0	"	1000		105	75-125	0.948	20	
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	58.8		"	50.0		118	70-130			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

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11/04/04 16:47

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42907 - Solvent Extraction (GC)**

**Calibration Check (EJ42907-CCV1)**

Prepared & Analyzed: 10/29/04

Gasoline Range Organics C6-C12	492		mg/kg	500		98.4	80-120			
Diesel Range Organics >C12-C35	506		"	500		101	80-120			
Total Hydrocarbon C6-C35	998		"	1000		99.8	80-120			
Surrogate: 1-Chlorooctane	50.0		"	50.0		100	70-130			
Surrogate: 1-Chlorooctadecane	48.0		"	50.0		96.0	70-130			

**Calibration Check (EJ42907-CCV2)**

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	500		mg/kg	500		100	80-120			
Diesel Range Organics >C12-C35	559		"	500		112	80-120			
Total Hydrocarbon C6-C35	1060		"	1000		106	80-120			
Surrogate: 1-Chlorooctane	57.4		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	60.6		"	50.0		121	70-130			

**Matrix Spike (EJ42907-MS1)**

Source: 4J29003-04

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	571	10.0	mg/kg dry	526	ND	109	75-125			
Diesel Range Organics >C12-C35	597	10.0	"	526	ND	113	75-125			
Total Hydrocarbon C6-C35	1170	10.0	"	1050	ND	111	75-125			
Surrogate: 1-Chlorooctane	57.9		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	61.9		"	50.0		124	70-130			

**Matrix Spike Dup (EJ42907-MSD1)**

Source: 4J29003-04

Prepared: 10/29/04 Analyzed: 10/30/04

Gasoline Range Organics C6-C12	566	10.0	mg/kg dry	526	ND	108	75-125	0.880	20	
Diesel Range Organics >C12-C35	548	10.0	"	526	ND	104	75-125	8.56	20	
Total Hydrocarbon C6-C35	1110	10.0	"	1050	ND	106	75-125	5.26	20	
Surrogate: 1-Chlorooctane	54.7		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	53.5		"	50.0		107	70-130			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EK40203 - EPA 5030C (GC)**

**Blank (EK40203-BLK1)**

Prepared & Analyzed: 10/29/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	84.5		ug/kg	100		84.5	80-120			
Surrogate: 4-Bromofluorobenzene	88.5		"	100		88.5	80-120			

**LCS (EK40203-BS1)**

Prepared & Analyzed: 10/29/04

Benzene	89.4		ug/kg	100		89.4	80-120			
Toluene	91.6		"	100		91.6	80-120			
Ethylbenzene	96.7		"	100		96.7	80-120			
Xylene (p/m)	217		"	200		108	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	95.9		"	100		95.9	80-120			
Surrogate: 4-Bromofluorobenzene	108		"	100		108	80-120			

**Calibration Check (EK40203-CCV1)**

Prepared: 10/29/04 Analyzed: 11/02/04

Benzene	91.0		ug/kg	100		91.0	80-120			
Toluene	95.1		"	100		95.1	80-120			
Ethylbenzene	93.1		"	100		93.1	80-120			
Xylene (p/m)	204		"	200		102	80-120			
Xylene (o)	94.5		"	100		94.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	109		"	100		109	80-120			

**Matrix Spike (EK40203-MS1)**

Source: 4J28003-01

Prepared: 10/29/04 Analyzed: 11/02/04

Benzene	2370		ug/kg	2500	ND	94.8	80-120			
Toluene	2520		"	2500	20.4	100	80-120			
Ethylbenzene	2450		"	2500	ND	98.0	80-120			
Xylene (p/m)	5350		"	5000	32.5	106	80-120			
Xylene (o)	2410		"	2500	ND	96.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	100		"	100		100	80-120			
Surrogate: 4-Bromofluorobenzene	105		"	100		105	80-120			

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EK40203 - EPA 5030C (GC)**

**Matrix Spike Dup (EK40203-MSD1)**

Source: 4J28003-01

Prepared: 10/29/04 Analyzed: 11/02/04

Benzene	2290		ug/kg	2500	ND	91.6	80-120	3.43	20	
Toluene	2380		"	2500	20.4	94.4	80-120	5.76	20	
Ethylbenzene	2270		"	2500	ND	90.8	80-120	7.63	20	
Xylene (p/m)	4950		"	5000	32.5	98.4	80-120	7.44	20	
Xylene (o)	2210		"	2500	ND	88.4	80-120	8.66	20	
Surrogate: a,a,a-Trifluorotoluene	102		"	100		102	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			

**Batch EK40306 - EPA 5030C (GC)**

**Blank (EK40306-BLK1)**

Prepared & Analyzed: 11/02/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	85.1		ug/kg	100		85.1	80-120			
Surrogate: 4-Bromofluorobenzene	95.3		"	100		95.3	80-120			

**LCS (EK40306-BS1)**

Prepared & Analyzed: 11/02/04

Benzene	95.3		ug/kg	100		95.3	80-120			
Toluene	99.5		"	100		99.5	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	228		"	200		114	80-120			
Xylene (o)	107		"	100		107	80-120			
Surrogate: a,a,a-Trifluorotoluene	105		"	100		105	80-120			
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 10 of 13



Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EK40306 - EPA 5030C (GC)**

**Calibration Check (EK40306-CCV1)**

Prepared: 11/02/04 Analyzed: 11/03/04

Benzene	93.8		ug/kg	100		93.8	80-120			
Toluene	95.6		"	100		95.6	80-120			
Ethylbenzene	89.3		"	100		89.3	80-120			
Xylene (p/m)	197		"	200		98.5	80-120			
Xylene (o)	92.9		"	100		92.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			

**Matrix Spike (EK40306-MS1)**

Source: 4K01005-01

Prepared: 11/02/04 Analyzed: 11/03/04

Benzene	92.0		ug/kg	100	ND	92.0	80-120			
Toluene	93.6		"	100	ND	93.6	80-120			
Ethylbenzene	97.3		"	100	ND	97.3	80-120			
Xylene (p/m)	217		"	200	ND	108	80-120			
Xylene (o)	104		"	100	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	102		"	100		102	80-120			
Surrogate: 4-Bromofluorobenzene	116		"	100		116	80-120			

**Matrix Spike Dup (EK40306-MSD1)**

Source: 4K01005-01

Prepared: 11/02/04 Analyzed: 11/03/04

Benzene	93.1		ug/kg	100	ND	93.1	80-120	1.19	20	
Toluene	96.4		"	100	ND	96.4	80-120	2.95	20	
Ethylbenzene	98.0		"	100	ND	98.0	80-120	0.717	20	
Xylene (p/m)	218		"	200	ND	109	80-120	0.922	20	
Xylene (o)	103		"	100	ND	103	80-120	0.966	20	
Surrogate: a,a,a-Trifluorotoluene	97.9		"	100		97.9	80-120			
Surrogate: 4-Bromofluorobenzene	112		"	100		112	80-120			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 11 of 13

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EK40102 - General Preparation (Prep)**

**Blank (EK40102-BLK1)**

Prepared & Analyzed: 11/01/04

% Moisture	0.0	%
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**Duplicate (EK40102-DUP1)**

Source: 4J29002-01

Prepared & Analyzed: 11/01/04

% Moisture	8.0	%	8.0	0.00	20
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Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 12 of 13

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: 8 inch Moore #1  
Project Number: 2002-10270  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
11/04/04 16:47

### Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

*Raland K. Tuttle*

Date:

11/4/2004

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Biezugbe, Lab Tech

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 13 of 13

## Chain of Custody Form

**(915) 563-1800 FAX: (915) 563-1713**

63

E-mail results to: [lolness@hotmail.com](mailto:lolness@hotmail.com) and [enviplot@aol.com](mailto:enviplot@aol.com)

3.5°C  
4oz glass on ice



# Environmental Lab of Texas

## Variance / Corrective Action Report – Sample Log-In

Client: Plains P/L

Date/Time: 10-29-04 @ 1115

Order #: 4J29002

Initials: JMM

### Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	No	3.5	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	<input checked="" type="checkbox"/> Not present	
Custody Seals intact on sample bottles?	Yes	No	<input checked="" type="checkbox"/> Not present	
Chain of custody present?	<input checked="" type="checkbox"/> Yes	No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	No		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	No		
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	No		
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	No		
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No		
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	No		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No		
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	

Other observations:

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### Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____  
Regarding: _____

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Corrective Action Taken:

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**APPENDIX B**

**SOIL BORING LOGS**

**AND**

**WELL CONSTRUCTION**  
**DIAGRAMS**

## Log Of Test Borings

(NOTE - Page 1 of 3)

## ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICESEUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1

Surface Elevation: 3,762.04'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>07/26/04</u> Time: <u>1015</u> Completion Date: <u>07/26/04</u> Time: <u>1555</u> Description
						5	CALICHE, White to Tan, Soft to Indurated
1032	SS	24	Moist	2,982	-	10	
						15	
1033	Cuttings	NA	Damp	2,565	-	20	
						25	
1040	SS	22	Damp	1,574	-	30	
						35	Tan to Red Brown, Soft, Fine to Medium-Grained SAND with some trace SILT, CLAY and PEBBLES  some CALICHE FRAGMENTS present
1041	Cuttings	NA	Damp	1,558	SP		
1051	SS	24	Damp	1,160	SP		

## Log Of Test Borings

(NOTE - Page 2 of 3)

## ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1

Surface Elevation: 3,762.04'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>07/26/04</u> Time: <u>1015</u> Completion Date: <u>07/26/04</u> Time: <u>1555</u> Description
1053	Cuttings	NA	Damp	1,049	SP		
						40	
1105	SS	24	Damp	927	SP		some SANDSTONE FRAGMENTS present
						45	
1106	Cuttings	NA	Damp	1,125	SP		
						50	
1120	SS	24	Damp	1,227	SP		some SANDSTONE FRAGMENTS Present
						55	
1122	Cuttings	NA	Damp	2,124	SP		some PEBBLES present
						60	
1135	SS	24	Wet	710	SP		Oil present on sample
						65	
1145	Cuttings	NA	Wet	906	SP		Oil present on sample
						70	

## Log Of Test Borings

(NOTE - Page 3 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1

Surface Elevation: 3,762.04

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>07/26/04</u> Time: <u>1015</u> Completion Date: <u>07/26/04</u> Time: <u>1555</u> Description
1207	SS	24	Wet	1,543	SP		Oil present on sample
						75	
						80	
						85	
							End of Boring at 85'
						90	
						95	
						100	

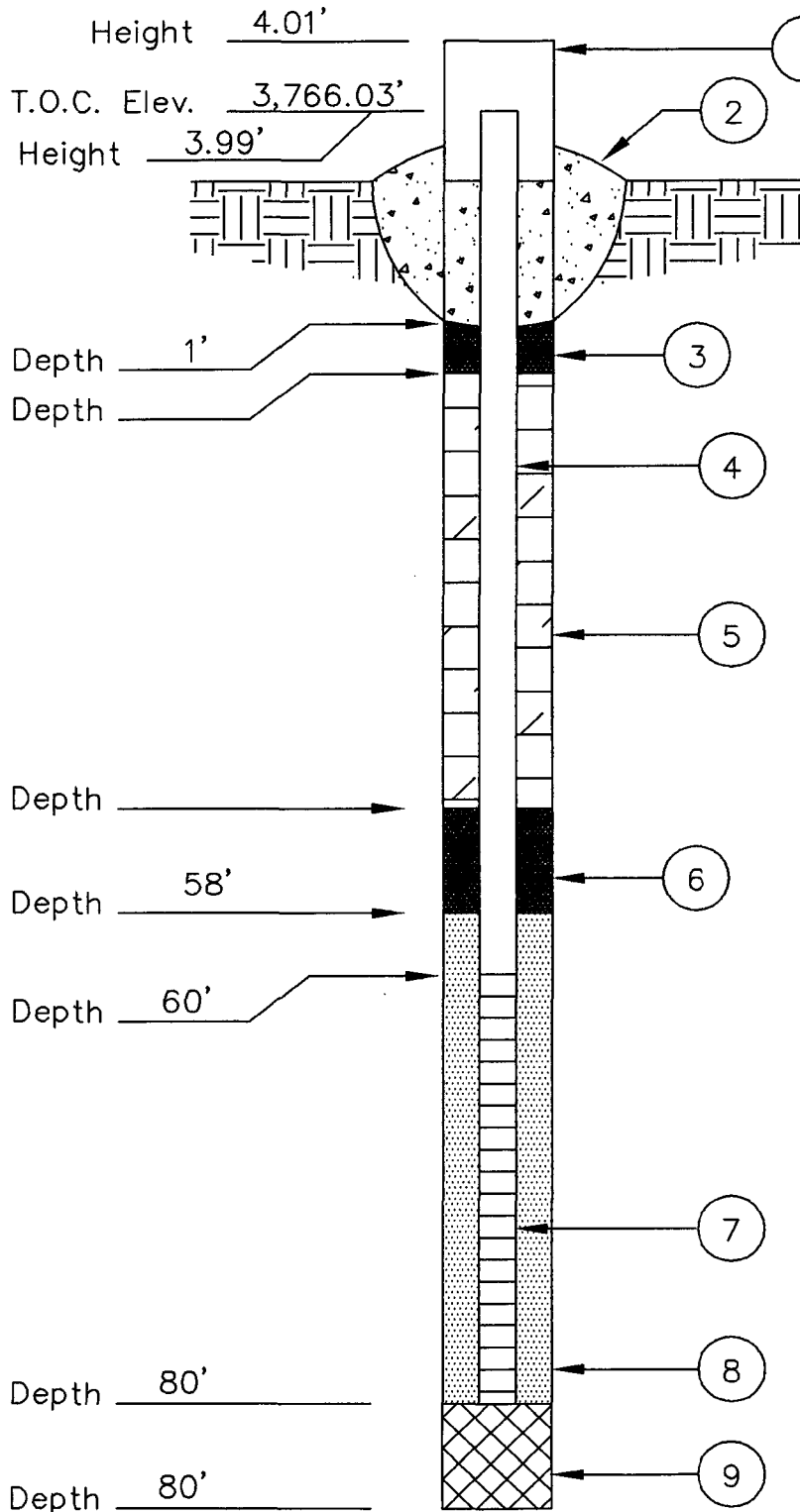
Water Level Measurements (feet)						Drilling Method: Air Rotary 8.5" OD
Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level	Backfill Method: MW-1 Installed
07/26/04	-	-	-	-	-	Field Representative: JR
11/04/04	-	-	-	-	58.46	



# Monitoring Well Construction Information

Standard Well

Job No.: 2002-10270 Job Name: 8-Inch Moore to Jal #1 Boring / Well No. MW-1  
Date: 07/26/04 Field Representative: JR State Unique Well No. NA



- 1) Protective Casing 

Locking	<input checked="" type="checkbox"/> Yes	No
Protective Posts	<input checked="" type="checkbox"/> Yes	No
Concrete Pyramid	Yes	<input checked="" type="checkbox"/> No
- 2) Concrete Seal 

	<input checked="" type="checkbox"/> Yes	No
--	-----------------------------------------	----
- 3) Type of Surface Seal if Installed 19 bags of Bentonite Plug
- 4) Solid Pipe Type PVC  
Solid Pipe Length 65 ft.  
Joint Type Slip/Glued or Threaded
- 5) Type of Backfill Bentonite Plug
- 6) Type of Lower Seal if Installed Bentonite Plug
- 7) Screen Type P.V.C.  
Screen Length 20 ft.  
Slot Size .010"  
Length 20 ft.  
Screen Diameter 4 in.
- 8) Type of Backfill around Screen 9 bags of 12/20 sand
- 9) Type of Backfill Native Soils
- 10) Drilling Method Air Rotary
- 11) Additives Used if any None
- 12) Borehole Diameter 8.5" in.

## Log Of Test Borings

(NOTE - Page 1 of 3)

ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1A

Surface Elevation: 3,761.80'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>09/29/04</u> Time: _____ Completion Date: <u>09/29/04</u> Time: _____ Description
						5	A SOIL BORING LOG WAS NOT COMPLETED AS THIS WELL WAS INSTALLED ADJACENT TO MW-1
						10	
						15	
						20	
						25	
						30	
						35	

## Log Of Test Borings

(NOTE - Page 2 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1A

Surface Elevation: 3,761.80'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>09/29/04</u> Time: _____ Completion Date: <u>09/29/04</u> Time: _____ Description
						40	A SOIL BORING LOG WAS NOT COMPLETED AS THIS WELL WAS INSTALLED ADJACENT TO MW-1
						45	
						50	
						55	
						60	
						65	
						70	

# Log Of Test Borings

(NOTE - Page 3 of 3)

**ENVIRONMENTAL PLUS, INC.**  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-1A

Surface Elevation: 3,761.80'

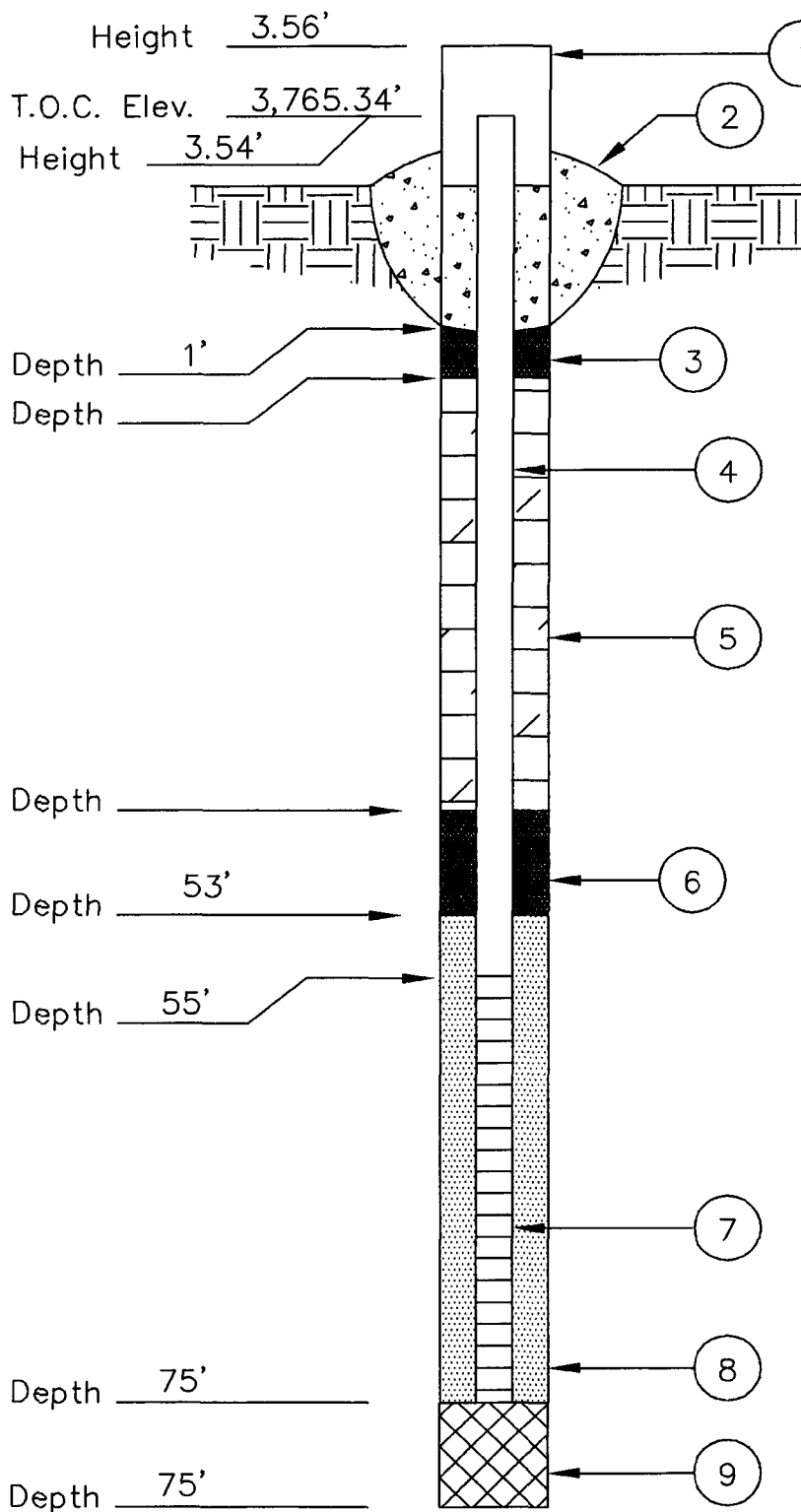
Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
						75	End of Boring at 75'
						80	A SOIL BORING LOG WAS NOT COMPLETED AS THIS WELL WAS INSTALLED ADJACENT TO MW-1
						85	
						90	
						95	
						100	

Water Level Measurements (feet)						Drilling Method: Air Rotary 8.5" OD
Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level	Backfill Method: MW-1A Installed
10/23/04	-	-	-	-	-	Field Representative: JR
11/04/04	-	-	-	-	63.71	

# Monitoring Well Construction Information

Standard Well

Job No.: 2002-10270 Job Name: 8-Inch Moore to Jal #1 Boring / Well No. MW-1A  
Date: 09/29/04 Field Representative: JR State Unique Well No. NA



- 1) Protective Casing ☒ Yes ☐ No  
Locking ☒ Yes ☐ No  
Protective Posts ☐ Yes ☒ No  
Concrete Pyramid ☐ Yes ☒ No
- 2) Concrete Seal ☒ Yes ☐ No
- 3) Type of Surface Seal if Installed Bentonite Plug
- 4) Solid Pipe Type PVC  
Solid Pipe Length 58 ft.  
Joint Type Slip/Glued or Threaded
- 5) Type of Backfill Bentonite Plug
- 6) Type of Lower Seal if Installed Bentonite Plug
- 7) Screen Type P.V.C.  
Screen Length 20 ft.  
Slot Size .020"  
Length 20 ft.  
Screen Diameter 4 in.
- 8) Type of Backfill around Screen 14 bags of 12/20 sand
- 9) Type of Backfill Native Soils
- 10) Drilling Method 6.25" I.D. H.S.A.
- 11) Additives Used if any Water
- 12) Borehole Diameter 10.25" O.D. in.

## Log Of Test Borings

(NOTE - Page 1 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-2

Surface Elevation: 3,767.90'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/23/04</u> Time: <u>0745</u> Completion Date: <u>10/23/04</u> Time: <u>1830</u> Description
							0.5' Sandy Loam Topsoil
						5	CALICHE, White to Tan, Soft to Indurated
						10	
						15	
						20	
						25	
0827	CS	24	Dry	62.2	SP		Intermix of CALICHE and underlying SAND
						30	
0835	CS	36	Dry	59.8	SP		Tan to Red Brown, Soft, Fine to Medium-Grained SAND with some trace SILT, CLAY and PEBBLES
						35	



## Log Of Test Borings

(NOTE - Page 2 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-2

Surface Elevation: 3,767.90'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/23/04</u> Time: <u>0745</u> Completion Date: <u>10/23/04</u> Time: <u>1830</u> Description
0853	CS	53	Dry	68.4	SP	40	SAND is indurated
0902	CS	28	Damp	53.7	SP	45	
0920	CS	60	Damp	73.3	SP	50	
0927	CS	54	Damp	224	SP	55	SAND is indurated
0936	CS	50	Damp	1,838	SP	60	Bottom 6" of sample had a HYDROCARBON ODOR
0946	CS	60	Moist	875	SP	65	Strong HYDROCARBON ODOR
0958	CS	48	Wet	800	SP	70	Saturated with PSH and Water

## Log Of Test Borings

(NOTE - Page 3 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-2

Surface Elevation: 3,767.90'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/23/04</u> Time: <u>0745</u> Completion Date: <u>10/23/04</u> Time: <u>1830</u> Description
						75	
						80	End of Boring at 83'
						85	
						90	
						95	
						100	

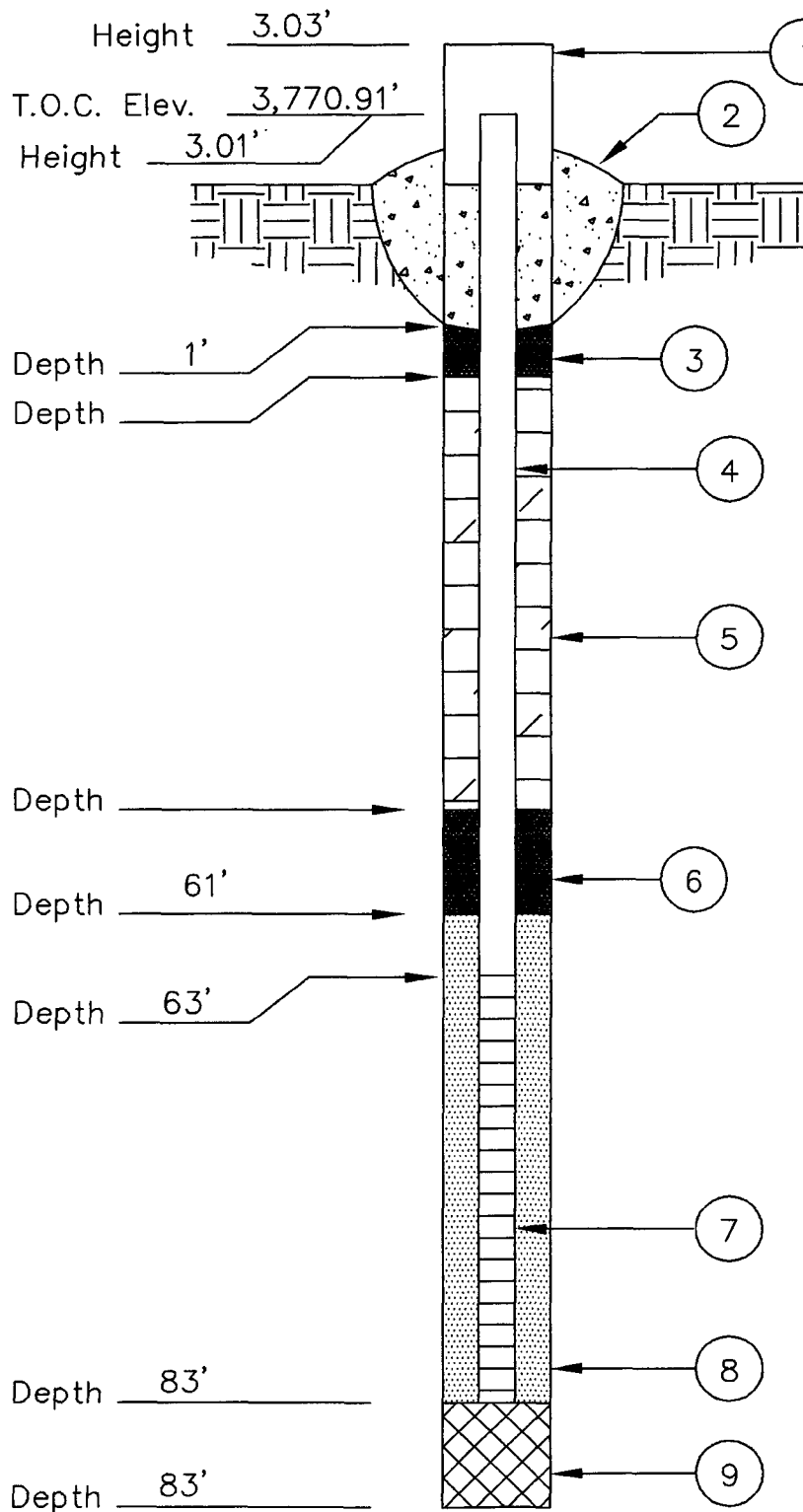
Water Level Measurements (feet)						Drilling Method: Air Rotary 10.25" OD
Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level	Backfill Method: MW-2 Installed
10/23/04	1500	-	-	-	-	Field Representative: JR
11/04/04	-	-	-	-	65.44	

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

# Monitoring Well Construction Information

Standard Well

Job No.: 2002-10270 Job Name: 8-Inch Moore to Jal #1 Boring / Well No. MW-2  
Date: 10/23/04 Field Representative: JR State Unique Well No. NA



- 1) Protective Casing  
Locking ☒ Yes ☐ No  
Protective Posts ☒ Yes ☐ No  
Concrete Pyramid ☒ Yes ☐ No
- 2) Concrete Seal ☒ Yes ☐ No
- 3) Type of Surface Seal if Installed 36 bags of Bentonite Plug
- 4) Solid Pipe Type PVC  
Solid Pipe Length 63 ft.  
Joint Type Slip/Glued or Threaded
- 5) Type of Backfill Bentonite Plug
- 6) Type of Lower Seal if Installed Bentonite Plug
- 7) Screen Type P.V.C.  
Screen Length 20 ft.  
Slot Size .020"  
Length 20 ft.  
Screen Diameter 4 in.
- 8) Type of Backfill around Screen 14 bags of 12/20 sand
- 9) Type of Backfill Native Soils
- 10) Drilling Method 6.25" I.D. H.S.A.
- 11) Additives Used if any Water
- 12) Borehole Diameter 10.25" O.D. in.

## Log Of Test Borings

(NOTE - Page 1 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-3

Surface Elevation: 3,767.18'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/24/04</u> Time: <u>0800</u> Completion Date: <u>10/24/04</u> Time: <u>1800</u> Description
							0.5' Sandy Loam Topsoil
						5	CALICHE, White to Tan, Soft to Indurated
						10	
						15	
						20	
0918	CS	24	Dry	12.1	SP	25	Intermix of CALICHE and underlying SAND
0923	CS	36	Dry	100	SP	30	Tan to Red Brown, Soft, Fine to Medium-Grained SAND with some trace SILT, CLAY and PEBBLES
0928	CS	36	Dry	40.3	SP	35	

## Log Of Test Borings

(NOTE - Page 2 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-3

Surface Elevation: 3,767.18

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/24/04</u> Time: <u>0800</u> Completion Date: <u>10/24/04</u> Time: <u>1800</u> Description
0936	CS	48	Dry	75.4	SP	40	Bottom 12" is indurated, tan SAND
0949	CS	24	Dry/ Damp	144	SP	45	
0954	CS	60	Dry/ Damp	216	SP	50	
1000	CS	60	Dry/ Damp	350	SP	55	Slight HYDROCARBON ODOR
1009	CS	60	Dry/ Damp	1,653	SP	60	Slight HYDROCARBON ODOR
1019	CS	60	Wet	534	SP	65	Strong HYDROCARBON ODOR, slight hydrocarbon sheen on probe surface
1034	CS	48	Wet	740	SP	70	Saturated with PSH and Water

## Log Of Test Borings

(NOTE - Page 3 of 3)

ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND

ENVIRONMENTAL SERVICES

EUNICE, NM

505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-3

Surface Elevation: 3,767.18

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
						75	
						80	
						85	End of Boring at 83'
						90	
						95	
						100	

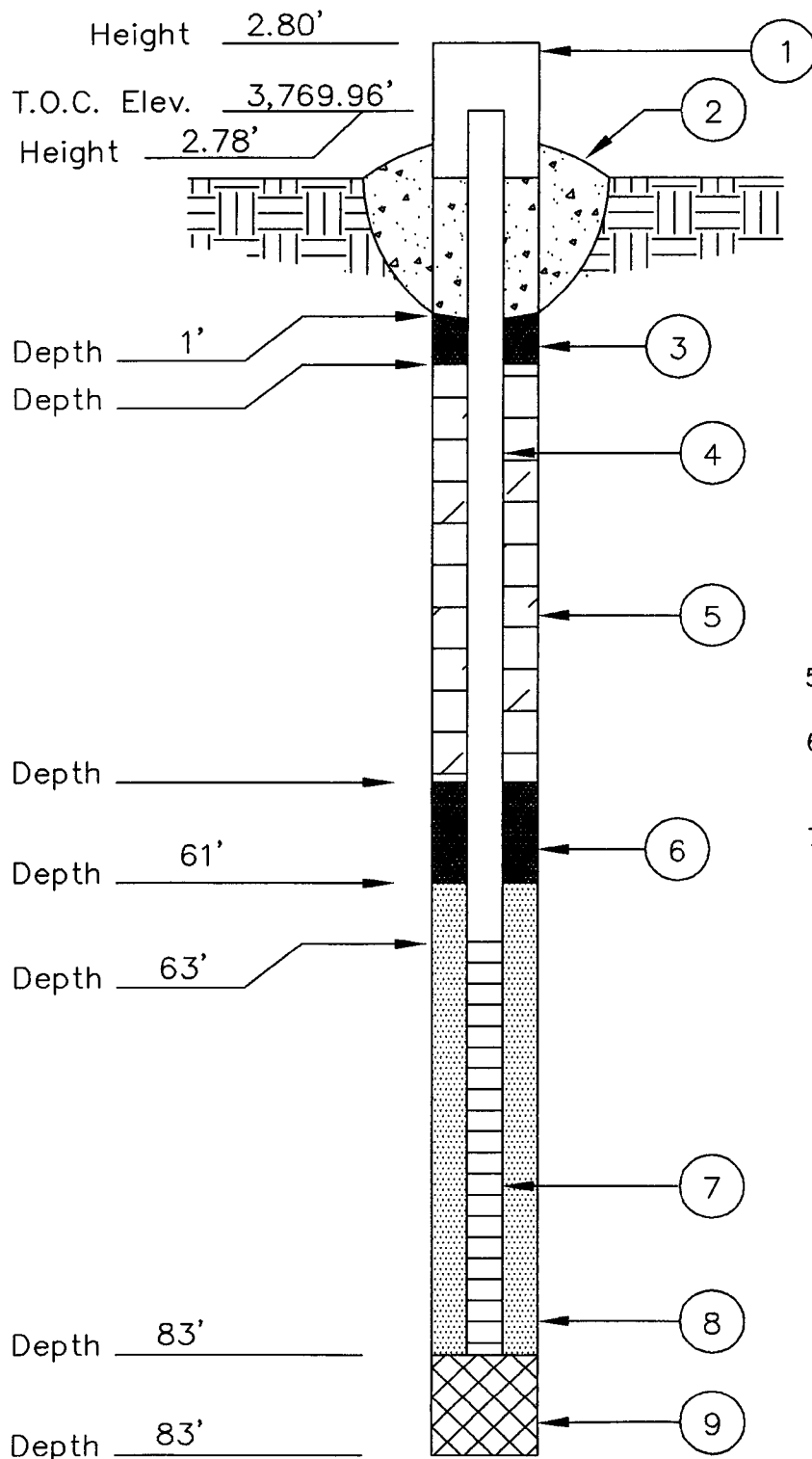
  

Water Level Measurements (feet)						Drilling Method: Air Rotary 10.25" OD
Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level	Backfill Method: MW-3 Installed
10/24/04	1500	-	-	-	-	
10/29/04	-	-	-	-	72.15	Field Representative: JR



# Monitoring Well Construction Information Standard Well

Job No.: 2002-10270 Job Name: 8-Inch Moore to Jal #1 Boring / Well No. MW-3  
Date: 10/23/04 Field Representative: JR State Unique Well No. NA



- 1) Protective Casing ☒ Yes ☐ No  
Locking ☒ Yes ☐ No  
Protective Posts ☒ Yes ☐ No  
Concrete Pyramid ☒ Yes ☐ No
- 2) Concrete Seal ☒ Yes ☐ No
- 3) Type of Surface Seal if Installed 28 bags of Bentonite Plug
- 4) Solid Pipe Type PVC  
Solid Pipe Length 63 ft.  
Joint Type Slip/Glued or Threaded
- 5) Type of Backfill Bentonite Plug
- 6) Type of Lower Seal if Installed Bentonite Plug
- 7) Screen Type P.V.C.  
Screen Length 20 ft.  
Slot Size .020"  
Length 20 ft.  
Screen Diameter 4 in.
- 8) Type of Backfill around Screen 15.5 bags of 12/20 sand
- 9) Type of Backfill Native Soils
- 10) Drilling Method 6.25" I.D. H.S.A.
- 11) Additives Used if any Water
- 12) Borehole Diameter 10.25" O.D. in.

## Log Of Test Borings

(NOTE - Page 1 of 3)

ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICESEUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-4

Surface Elevation: 3,770.00'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/22/04</u> Time: <u>0850</u> Completion Date: <u>10/22/04</u> Time: <u>1745</u> Description
							0.5' Sandy Loam Topsoil
						5	CALICHE, White to Tan, Soft to Indurated
						10	
						15	
						20	
0923	CS	24	Dry	153	SP	25	Tan to Red Brown, Soft, Fine to Medium-Grained SAND with some trace SILT, CLAY and PEBBLES
0933	CS	24	Dry	18.3	SP	30	
0944	CS	36	Dry	155	SP	35	

## Log Of Test Borings

(NOTE - Page 2 of 3)

ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-4

Surface Elevation: 3,770.00'

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/22/04</u> Time: <u>0850</u> Completion Date: <u>10/22/04</u> Time: <u>1745</u> Description
0949	CS	36	Dry	120	SP	40	Middle 15" indurated
0956	CS	60	Dry	67.3	SP	45	
1003	CS	36	Dry	254	SP	50	
1009	CS	48	Dry	186	SP	55	Sandstone fragments present
1021	CS	53	Dry	249	SP	60	
1029	CS	60	Moist	820	SP	65	Bottom 1' has a Strong HYDROCARBON ODOR
1040	CS	50	Moist	596	SP	70	Strong HYDROCARBON ODOR

## Log Of Test Borings

(NOTE - Page 3 of 3)

## ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE, NM  
505-394-3481

Project Number: Plains All American Pipeline - 2002-10270

Project Name: 8-Inch Moore to Jal #1

Location: UL-F of Section 16, Township 17 South, Range 37 East

Boring Number: MW-4

Surface Elevation: 3,770.00'

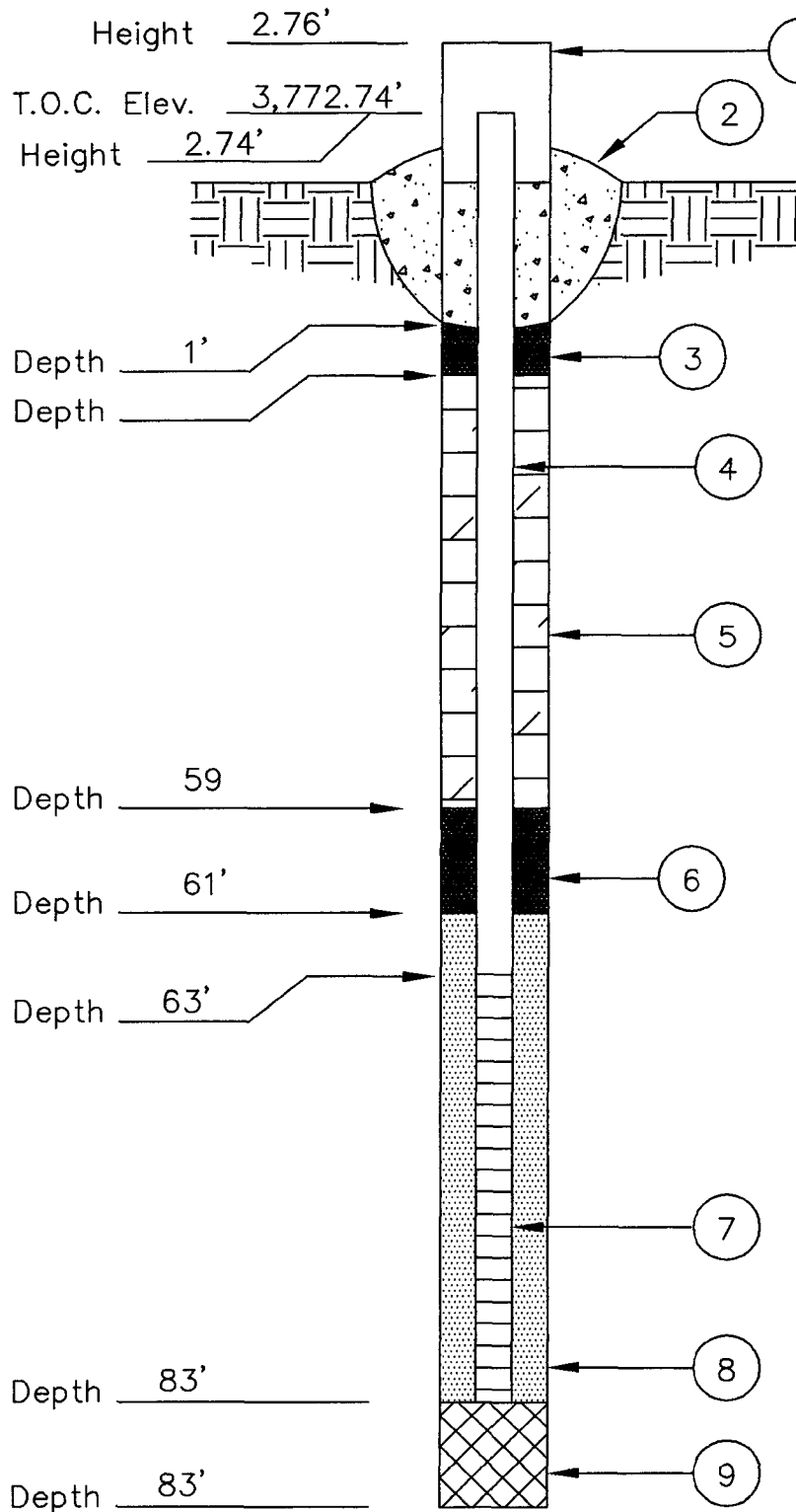
Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Start Date: <u>10/22/04</u> Time: <u>0850</u> Completion Date: <u>10/22/04</u> Time: <u>1745</u> Description
1051	CS	36	Wet	447	SP	75	Slight HYDROCARBON ODOR
						80	
						85	End of Boring at 83'
						90	
						95	
						100	

Water Level Measurements (feet)						Drilling Method: Air Rotary 10.25" OD
Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level	Backfill Method: MW-4 Installed
10/22/04	1500	-	-	-	-	Field Representative: JR
10/29/04	-	-	-	-	71.07	

# Monitoring Well Construction Information

Standard Well

Job No.: 2002-10270 Job Name: 8-Inch Moore to Jal #1 Boring / Well No. MW-4  
Date: 10/23/04 Field Representative: JR State Unique Well No. NA



- 1) Protective Casing Locking ☒ Yes ☐ No  
Protective Posts ☒ Yes ☐ No  
Concrete Pyramid ☒ Yes ☐ No
- 2) Concrete Seal ☒ Yes ☐ No
- 3) Type of Surface Seal if Installed 32 bags of Bentonite Plug
- 4) Solid Pipe Type PVC  
Solid Pipe Length 63 ft.  
Joint Type Slip/Glued or Threaded
- 5) Type of Backfill Bentonite Plug
- 6) Type of Lower Seal if Installed Sluffed Off Sand
- 7) Screen Type P.V.C.  
Screen Length 20 ft.  
Slot Size .020"  
Length 20 ft.  
Screen Diameter 4 in.
- 8) Type of Backfill around Screen 21 bags of 12/20 sand
- 9) Type of Backfill Native Soils
- 10) Drilling Method 6.25" I.D. H.S.A.
- 11) Additives Used if any Water
- 12) Borehole Diameter 10.25" O.D. in.

APPENDIX C

INFORMATIONAL COPIES OF

SITE INFORMATION AND METRICS FORM

AND INITIAL C-141

<b>EOTT Site Information and Metrics</b>	<b>Incident Date:</b> 10-18-02 @ 10:00 AM	<b>NMOCD Notified:</b> 10-18-02 @ 11:00 AM Pat McCasland EPI left message with Paul Sheeley and sent page to the "ON-CALL" representative	
<b>SITE:</b> 8" Moore to Jal #1 <b>Assigned Site Reference #:</b> 2002-10270			
<b>Company:</b> EOTT			
<b>Street Address:</b> PO Box 1660			
<b>Mailing Address:</b> 5805 East Highway 80			
<b>City, State, Zip:</b> Midland, Texas 79702			
<b>Representative:</b> Frank Hernandez			
<b>Representative Telephone:</b> 915.638.3799			
<b>Telephone:</b>			
<b>Fluid volume released (bbls):</b> 200 bbls		<b>Recovered (bbls):</b> 0 bbls	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
<b>Leak, Spill, or Pit (LSP) Name:</b> 8" Moore to Jal #1			
<b>Source of contamination:</b> 8" Steel Pipeline			
<b>Land Owner, i.e., BLM, ST, Fee, Other:</b> State of New Mexico			
<b>LSP Dimensions:</b> ~200' x 40'			
<b>LSP Area:</b> 8,000 sqft ft ²			
<b>Location of Reference Point (RP):</b>			
<b>Location distance and direction from RP:</b>			
<b>Latitude:</b> 32° 50' 12.36"N			
<b>Longitude:</b> 103° 15' 26.234"W			
<b>Elevation above mean sea level:</b>			
<b>Feet from South Section Line:</b>			
<b>Feet from West Section Line:</b>			
<b>Location- Unit or ¼:</b> SE¼ of the NW¼		<b>Unit Letter:</b> F	
<b>Location- Section:</b> 16			
<b>Location- Township:</b> T17S			
<b>Location- Range:</b> R37E			
<b>Surface water body within 1000' radius of site:</b> none			
<b>Surface water body within 1000' radius of site:</b>			
<b>Domestic water wells within 1000' radius of site:</b> none			
<b>Domestic water wells within 1000' radius of site:</b>			
<b>Agricultural water wells within 1000' radius of site:</b> none			
<b>Agricultural water wells within 1000' radius of site:</b>			
<b>Public water supply wells within 1000' radius of site:</b> none			
<b>Public water supply wells within 1000' radius of site:</b>			
<b>Depth from land surface to ground water (DG):</b> ~66 feet			
<b>Depth of contamination (DC):</b> ?			
<b>Depth to ground water (DG - DC = DtGW):</b> <50 feet			
<b>1. Ground Water</b>	<b>2. Wellhead Protection Area</b>	<b>3. Distance to Surface Water Body</b>	
If Depth to GW <50 feet: <i>20 points</i>	If <1000' from water source, or, <200' from private domestic water source: <i>20 points</i>	<200 horizontal feet: <i>20 points</i>	
If Depth to GW 50 to 99 feet: <i>10 points</i>		200-100 horizontal feet: <i>10 points</i>	
If Depth to GW >100 feet: <i>0 points</i>	If >1000' from water source, or, >200' from private domestic water source: <i>0 points</i>	>1000 horizontal feet: <i>0 points</i>	
<b>Ground water Score = 10</b>	<b>Wellhead Protection Area Score = 0</b>	<b>Surface Water Score = 0</b>	
<b>Site Rank (1+2+3) = 10</b>			
<b>Total Site Ranking Score and Acceptable Concentrations</b>			
Parameter	>19	10-19	0-9
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1,000 ppm	5,000 ppm

¹100 ppm field VOC headspace measurement may be substituted for lab analysis



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

☒ Initial Report ☐ Final Report

<b>Name of Company:</b> Plains All American Pipeline, L. P. (formerly Link Energy and EOTT)	<b>Contact:</b> Frank Hernandez
<b>Address:</b> PO Box 1660 5805 East Highway 80 Midland, Texas 79702	<b>Telephone No.:</b> 915.638.3799
<b>Facility Name:</b> 8" Moore to Jal #1	<b>Facility Type:</b> 8" Steel Pipeline

<b>Surface Owner:</b> State of New Mexico	<b>Mineral Owner:</b>	<b>Lease No.:</b>
----------------------------------------------	-----------------------	-------------------

#### LOCATION OF RELEASE

<b>Unit Letter</b> 16	<b>Section</b> 16	<b>Township</b> T17S	<b>Range</b> R37E	<b>Feet from the</b>	<b>North/South Line</b>	<b>Feet from the</b>	<b>East/West Line</b>	<b>County:</b> Lea <b>Lat.</b> 32° 50' 12.36"N <b>Lon.</b> 103° 15' 26.234"W
--------------------------	----------------------	-------------------------	----------------------	----------------------	-------------------------	----------------------	-----------------------	------------------------------------------------------------------------------------

#### NATURE OF RELEASE

<b>Type of Release:</b> Crude Oil	<b>Volume of Release:</b> 200 bbls barrels	<b>Volume Recovered:</b> 0 bbls barrels
<b>Source of Release:</b> 8" Steel Pipeline	<b>Date and Hour of Occurrence:</b> EOTT	<b>Date and Hour of Discovery:</b> 10-18-02 @ 8:00 AM
<b>Was Immediate Notice Given?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required		<b>If YES, To Whom?</b> Paul Sheeley
<b>By Whom?</b> Pat McCasland, EPI		<b>Date and Hour</b> 10-18-02 @ 11:00 AM Pat McCasland EPI left message with Paul Sheeley and sent page to the "ON-CALL" representative
<b>Was a Watercourse Reached?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>If YES, Volume Impacting the Watercourse:</b> NA

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

**Describe Cause of Problem and Remedial Action Taken.*** 8" Steel Pipeline Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of.

**Describe Area Affected and Cleanup Action Taken.*** 8,000 sqft ~200' x 40' Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of. Remedial Goals: TPH 8015m = 1000 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.

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:** Frank Hernandez

**Approved by District Supervisor:**

**Title:** District Environmental Supervisor

**Approval Date:**

**Expiration Date:**

**Date:** October 23, 2003

**Phone:** 915.638.3799

**Conditions of Approval:**

Attached ☐

* Attach Additional Sheets If Necessary



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

October 16, 2005

Ms. Camille Reynolds  
Plains All American Pipeline, L.P.  
3112 West U.S. Highway 82  
Lovington, NM 88260

Re: Soil Remediation Work Plan Dated June 24, 2005  
Plains Pipeline, L.P. 8" Moore to Jal #1 Site (Ref. 2002-10270)  
SE/4 NW/4 of Sec. 16, Twp 17 South, Rng 37 East  
Lea County, New Mexico  
NMOCD Ref. 1R-0380

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the work plan shown above prepared for Plains All American Pipeline, L.P. (Plains) by Llano-Permian Environmental. The work plan is approved with the following understandings and conditions:

1. Activities described under the heading "Sampling Activities" of the plan are acceptable to the NMOCD.
2. Prior to backfilling and subsequent restoration activities a report will be submitted to the NMOCD showing all sampling analyses results and modeling results described under the heading "Modeling Activities" of the plan.
3. Restoration activities will be expanded upon in the future report.
4. Aeration of the soils in the stockpile will continue in the interim.

If you have any questions, contact me at (505) 476-3492 or [ed.martin@state.nm.us](mailto:ed.martin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin  
Environmental Bureau

Copy: Larry Johnson, NMOCD, Hobbs

**LPE**  
**LLANO-PERMIAN**  
**ENVIRONMENTAL**

June 24, 2005

**AMARILLO, TX**

921 North Bivins  
Amarillo, TX 79107  
806-467-0607  
FAX: 806-467-0622

**AUSTIN, TX**

13009 Dessau Road  
Suite A  
Austin, TX 78754  
512-989-3428  
FAX: 512-989-3487

**MIDLAND, TX**

#9 East Industrial Loop  
Midland, TX 79701  
432-522-2133  
FAX: 432-522-2180

**NEW BRAUNFELS, TX**

707 N. Walnut Ave., Suite 208  
New Braunfels, TX 78130  
210-579-0235  
FAX: 210-568-2191

**TULSA, OK**

1439 East 41st Street  
Tulsa, OK 74105  
918-742-0871  
FAX: 918-742-0876

**HOBBS, NM**

318 East Taylor Street  
Hobbs, NM 88240  
505-393-4261  
FAX: 505-393-4658

Environmental  
Biologists  
Chemists  
Corrective Action  
Project Managers

Engineers

Geologists

Scientists

Toll Free: 866-742-0742

www.llano-permian.com

Mr. Edwin E. Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Soil Remediation Work Plan  
Plains Pipeline, L.P.  
8" Moore to Jal #1 (Rcf #2002-10270)  
SE/4 NW/4 of Section 16, Township 17 South, Range 37 East  
Lea County, New Mexico  
NMOCD Ref. 1R-0380

Mr. Martin:

The 8" Moore to Jal #1 release site is located approximately 9.1 miles southeast of Lovington in Lea County, New Mexico, at an elevation of approximately 3,770 feet above mean sea level. The release occurred on property owned by the State of New Mexico and is utilized as pasture land. The site is located in a rural area within the West Lovington Oil Field, with no residences or surface water within a 1,000-foot radius of the facility.

In October 2002, a release of approximately 200 barrels of crude oil, of which there was no recovery, occurred at the site due to corrosion (internal and/or external) of the pipeline. Approximately 8,000 square feet (ft²) of surface area was impacted by the release. Surficial soil saturated by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

The details of the soil remediation and sampling activities are described in the attached Soil Remediation Work Plan. If you have any questions feel free to contact me at (505) 441-4835 or by E-mail at lsanchez@llano-permian.com. Thank you very much.

LLANO-PERMIAN ENVIRONMENTAL

*Louis B. Sanchez*

Louis B. Sanchez  
Project Manager

Cc: Camille Reynolds, Plains All American Pipeline, L.P.  
Jeff Dann, Plains All American Pipeline, L.P.

RECEIVED

JUN 27 2005  
OIL CONSERVATION  
DIVISION

**AMARILLO, TX**

921 North Bivins  
Amarillo, TX 79107  
806-467-0607  
FAX: 806-467-0622

**AUSTIN, TX**

13009 Dessau Road  
Suite A  
Austin, TX 78754  
512-989-3428  
FAX: 512-989-3487

**MIDLAND, TX**

#9 East Industrial Loop  
Midland, TX 79701  
432-522-2133  
FAX: 432-522-2180

**NEW BRAUNFELS, TX**

707 N. Walnut Ave., Suite 208  
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**TULSA, OK**

1439 East 41st Street  
Tulsa, OK 74105  
918-742-0871  
FAX: 918-742-0876

**HOBBS, NM**

318 East Taylor Street  
Hobbs, NM 88240  
505-393-4261  
FAX: 505-393-4658

**Environmental:**

**Biologists**

**Chemists**

**Corrective Action**  
**Project Managers**

**Engineers**

**Geologists**

**Scientists**

Toll Free: 866-742-0742

www.llano-permian.com

## 8" Moore to Jal #1 Soil Remediation Work Plan

Plains Ref: 2002-10270

SE¼ of the NW¼ of Section 16, Township 17 South, Range 37 East  
Lea County, New Mexico

~9.1 Miles Southeast (136°) of

Lovington, Lea County, New Mexico

Latitude: N32° 50' 13.8"

Longitude: W103° 15' 25.3"

June 2005

Prepared For:



**PLAINS**  
**ALL AMERICAN**  
**PIPELINE, L.P.**

333 Clay Street, Suite 600  
Houston, TX 77002

Prepared By:

Llano-Permian Environmental  
318 East Taylor Street  
Hobbs, New Mexico 88240

## Distribution List

Name	Title	Company or Agency	Mailing Address	e-mail
Ed Martin	Environmental Engineer	NMOCD	1220 South St. Francis Drive Santa Fe, NM 87505	emartin@state.nm.us
Larry Johnson	Environmental Engineer	NMOCD	1625 French Dr. Hobbs, NM 88231	lwjohnson@state.nm.us
Camille Reynolds	Remediation Coordinator	Plains All American Pipeline	3112 West U.S. Hwy 82 Lovington, NM 88260	cjreynolds@paalp.com
Jeff Dann	Senior Environmental Specialist	Plains All American Pipeline	P. O. Box 4648 Houston, TX 77210-4648	jpdann@paalp.com
Daniel Bryant	Environmental Specialist	Plains All American Pipeline	P. O. Box 3119 Midland, TX 79702-3119	dmbryant@paalp.com
File		LPE	318 East Taylor Street Hobbs, New Mexico 88240	lsanchez@llano-permian.com

NMOCD - New Mexico Oil Conservation Division  
LPE - Llano-Permian Environmental

## **SOILS REMEDIATION WORK PLAN**

### **Introduction**

The 8" Moore to Jal #1 release site is located approximately 9.1 miles southeast of Lovington in Lea County, New Mexico, at an elevation of approximately 3,770 feet above mean sea level. The release occurred on property owned by the State of New Mexico and is utilized as pasture land. The site is located in a rural area within the West Lovington Oil Field, with no residences or surface water within a 1,000-foot radius of the facility (Figure 1).

In October 2002, a release of approximately 200 barrels of crude oil, of which there was no recovery, occurred at the site due to corrosion (internal and/or external) of the pipeline. Approximately 8,000 square feet (ft²) of surface area was impacted by the release. Surficial soil saturated by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

In an effort to delineate the extent of impacted soil at the site, six (6) soil borings were advanced, by Environmental Plus, Inc. (EPI), at the site to depths ranging from 15 to 60 feet below ground surface (bgs) in October 2002 (Figure 2). Field analysis of soil samples collected at discreet intervals indicated organic vapor concentrations exceeded 100 parts per million (ppm) at least to a depth of 55 feet bgs in soil boring BH-1 (Table 1).

Excavation activities commenced at the site by EPI in June 2003 in order to remove soil impacted above the New Mexico Oil Conservation Division (NMOCD) remedial thresholds. Approximately 2,800 cubic yards of soil were excavated and run through a screener to separate the rock from the soil. After the soil and rock had been separated, the soil (approximately 950 cubic yards) was spread out into two land treatment areas and the rock was stockpiled on site. Upon the completion of excavation activities, composite samples were collected from the north sidewall, south sidewall, east sidewall, west sidewall and bottom of the excavation to document the successful removal of soil impacted above NMOCD remedial thresholds (Figure 2). Laboratory analysis of the samples indicated soil impacted above the NMOCD remedial thresholds remained in all sampling locals, with the exception of the west sidewall (Table 2).

EPI installed one (1) monitor well in July of 2004, one (1) monitor well in September of 2004, and three (3) monitoring wells in October of 2004 (Figure 2). Soil samples were collected from MW-1, 2, 3 and 4 at various horizons during the boring process of the well installation. No soil samples were collected during the boring of MW-1A due to its close proximity to MW-1. The majority of the samples collected exceeded the NMOCD thresholds for the various analytes (Table 1).

As a result of the presence of phase separated hydrocarbons (PSH) in each monitoring well EPI performed PSH recovery activities from September of 2004 to April of 2005. In May of 2005, Llano-Permian Environmental (LPE) took over the PSH recovery activities. In an effort to accelerate the PSH recovery at the 8" Moore to Jal #1 site, LPE began bi-weekly PSH recovery upon commencement of PSH recovery activities in May. Approximately seventy (70) gallons of PSH has been recovered on a weekly basis since the middle of May 2005.

The land treatment areas were sampled by EPI on December 15, 2004, in conjunction with the weekly site visit. Sampling results indicated contaminant levels in the land treatment area soil were above the NMOCD remedial thresholds for this site (Table 3). The land treatment areas have been turned to aerate the soils and accelerate the TPH degradation since the last sampling event and will continue until the implementation of the restoration activities that are generally described in the "Restoration Activities" section of this work plan. Sampling of the land treatment areas is slated for late June of 2005.

### **Excavation Activities**

Due to the evidence of the excavation confirmation composite sampling (Table 2), the east sidewall of the excavation will be cut back an additional two feet (2'), and the north and south sidewalls will be cut back an additional one foot (1') (Figure 4). At that point a photo ionization detector (PID) will be used to determine if any portion of the three (3) sidewalls have remaining contaminated soil that requires excavation. If and when areas of concern are identified with the PID, they will be excavated until an acceptable PID reading (<100 ppm) is established in that area. The soils removed from the excavation will be placed in one of the land treatment areas. Large rocks removed from the east sidewall will be placed in the on-site rock pile.

Once no areas of concern are detected with the PID on the excavated sidewalls, then grab confirmation samples will be collected as outlined in the "Sampling Activities" section of this work plan. No excavation will be performed on the excavation floor or west side wall. Prior sampling activities have shown the west sidewall to be below the NMOCD Remedial Threshold of 100 mg/kg. Additional grab confirmation samples will be collected on the excavation floor as outlined in the "Sampling Activities" section of this work plan.

### **Sampling Activities**

Confirmation grab samples will be collected on the east, north and south sidewalls, as well as the excavation floor after the completion of excavation activities on the east, north and south sidewalls (Figure 3). The confirmation samples on the excavation floor will be grab samples collected from a predetermined grid. The grid will be laid out as two (2) rows of six (6) samples running the length of the excavation. The samples in each row will be fifty feet (50') apart. The end samples will be thirty-five feet (35') from the north and south sidewalls.

The confirmation samples collected from the north, east, and south sidewalls will also be grab samples. On the east sidewall, four (4) grab confirmation samples will be collected along the length of the excavation. The sampling locations will be approximately one hundred and fifteen feet (115') apart with the first and last samples being collected at the corner of the north and south sidewalls respectively. The general sampling locations along the east sidewall will be screened in the field with the PID. Following the field screening activities the east sidewall samples will be collected from the location of the maximum PID reading or at the base of the excavation wall if no PID readings are detected.

The north and south sidewalls will each have one (1) grab confirmation sample collected in addition to the first and last sample of the east sidewall. The north and south sidewalls will be



screened in the field with the PID. Following the field screening activities the additional north and south sidewall samples will be collected from the location of the maximum PID readings or on the west end at the base of the excavation sidewall if no PID readings are detected.

A total of eighteen (18) confirmation grab samples will be collected throughout the excavation. Each sample collected will be analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by SW-846 method 8021, and total petroleum hydrocarbons (TPH) by SW-846 method 8015. Each sample will be collected using new disposable sampling equipment for each sample to prevent cross contamination. Any non-disposable sampling equipment that is used will be stainless steel, and will be decontaminated using a phosphate free surfactant and de-ionized water before the collection of each sample.

This section is submitted as a finalized sampling plan following the excavation activities, contingent on the approval of the NMOCD. Any changes requested by the NMOCD will be incorporated into the sampling activities of this work plan prior to implementation.

### **Soil Disposal Activities**

No disposal activities are proposed at this time. All soils onsite will be placed back in the excavation, on top of the twelve millimeter (12 mill) black-on-black rock grade poly ethylene liner, as backfill. These activities are outlined in the "Restoration Activities" section of this work plan.

### **Modeling Activities**

Prior to backfill activities a soil migration model will be run to evaluate the migration characteristics of the soils underneath the proposed liner. The installation of the liner is described in the "Restoration Activities" section of this work plan for illustration purposes. Current, historical, and the new data collected as part of this work plan will be utilized and evaluated in the model.

A seasonal compartment model, which simulates long-term pollutant fate and migration in the unsaturated soil zone, will be utilized to describe the following components of the site specific soil column which extends from the ground surface to the ground-water table.

- Pollutant concentrations and masses in the soil
- Pollutant migration to ground water.

The model will estimate all the above components on a monthly basis for 999 years of simulation time to perform a long-term leaching study. The following pollutant fate processes will be accounted for: Volatilization, Adsorption, Cation Exchange, Biodegradation, Hydrolysis, and Complexation.

### **Restoration Activities**

Prior to the initiation of the restoration activities, MW-1 will be plugged and abandoned according to the guidelines described by Mr. Edwin Martin in his April 14, 2005 letter concerning the recommendation in the 2004 Annual Monitoring Report. MW-1A will be extended to a level above the top of the excavation, and the top of casing will be re-surveyed. With the monitoring well extended to a level accessible after the backfill activities, the bottom of the excavation will be filled with an even six inch (6") layer of sand. A twelve millimeter (12 mill) black-on-black rock grade polyethylene liner will then be placed on the sand covering the base of the excavation. A small hole will be cut through the poly to encompass MW-1A which will be left in the excavation. Clay packing material will be utilized to seal the opening in the poly around the monitor well casing. An additional six inch (6") layer of sand will be placed on top of the poly.

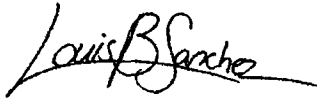
With the poly liner in place, backfill of the excavated materials will begin. A layer of the rock material will first be carefully placed back in the excavation. Then a layer of the soils from the land treatment area will be placed on top of the first rock layer. The two layers will then be properly compacted. This alternating of layers and compacting activities will continue to the top of the excavation taking great care to insure the integrity of MW-1A and the pipeline. Only soils, no rock, will be place in the proximity of either the pipeline or MW-1A. Clean backfill will be used in during the backfill activities as needed.

### **Conclusion**

Prior to any site restoration activities, the results of the additional excavation activities and confirmation soil sampling activities, as well as the modeling exercise will be presented to the NMOCD. Upon concurrence from the NMOCD that all soils activities are complete, a more detailed site restoration plan will be prepared and submitted to the NMOCD. The restoration activities presented in this plan are for informational purposes only. Soil aeration activities in the land treatment areas will continue until such time that the restoration activities commence.

**Signatures**

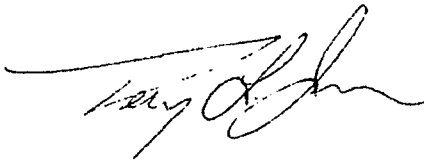
Written By:



---

Louis B. Sanchez Jr. B.S  
Project Manager  
Llano-Permian Environmental

Reviewed By:



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Terry James B.S., M.S.  
Senior Project Manager  
Llano-Permian Environmental

## Figures

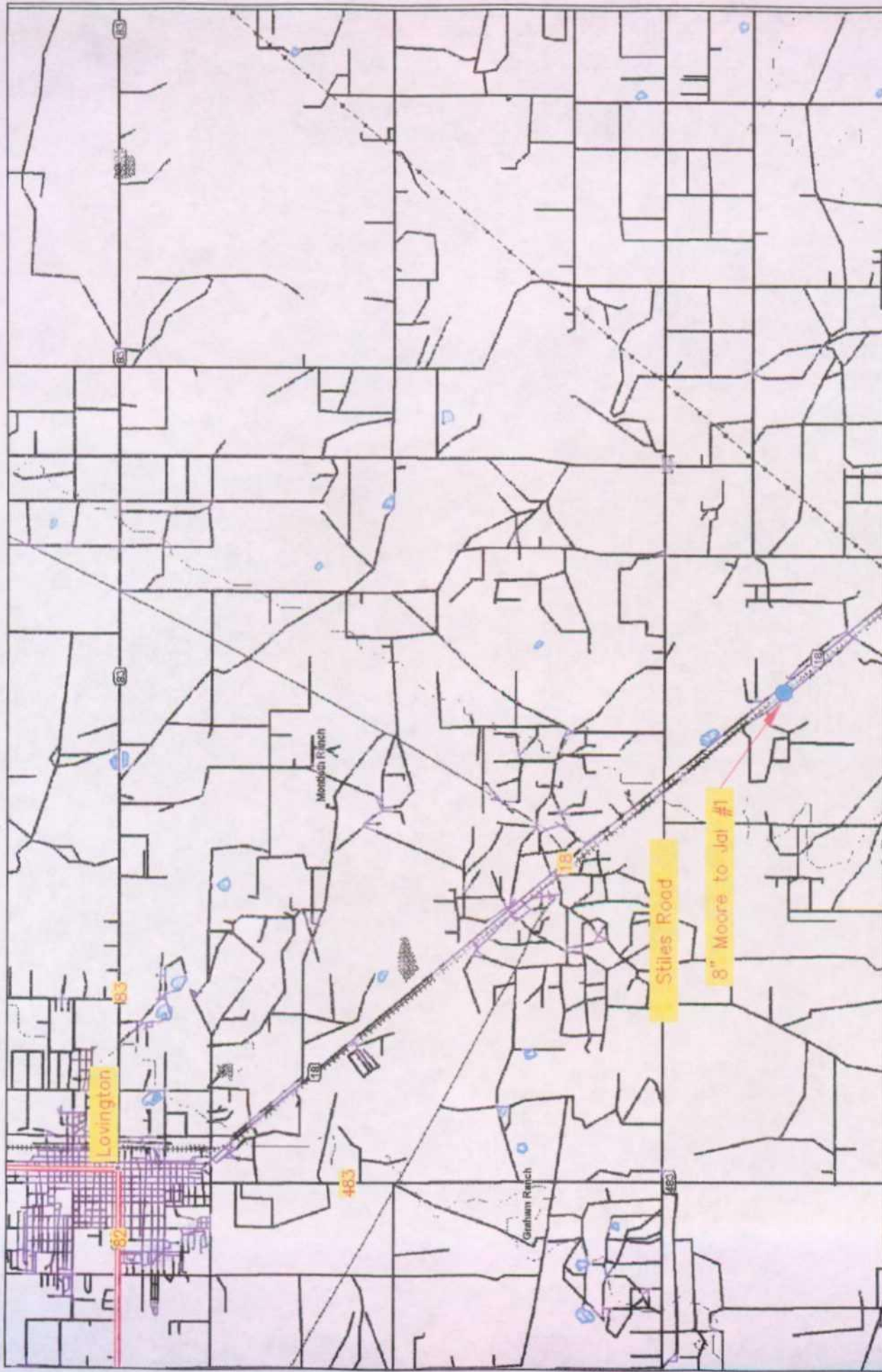


Figure 1

Area Map  
Plains Pipeline, L.P.  
8" Moore to Jal #1

Lea County, New Mexico

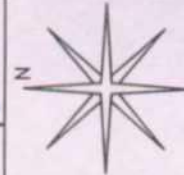
SE 1/4 of the NW 1/4, Sec. 16, T17S, R37E  
N 32° 50' 13.8" W 103° 15' 25.3"  
Elevation: 3,770 feet amsl

DWG Date:  
March 2005

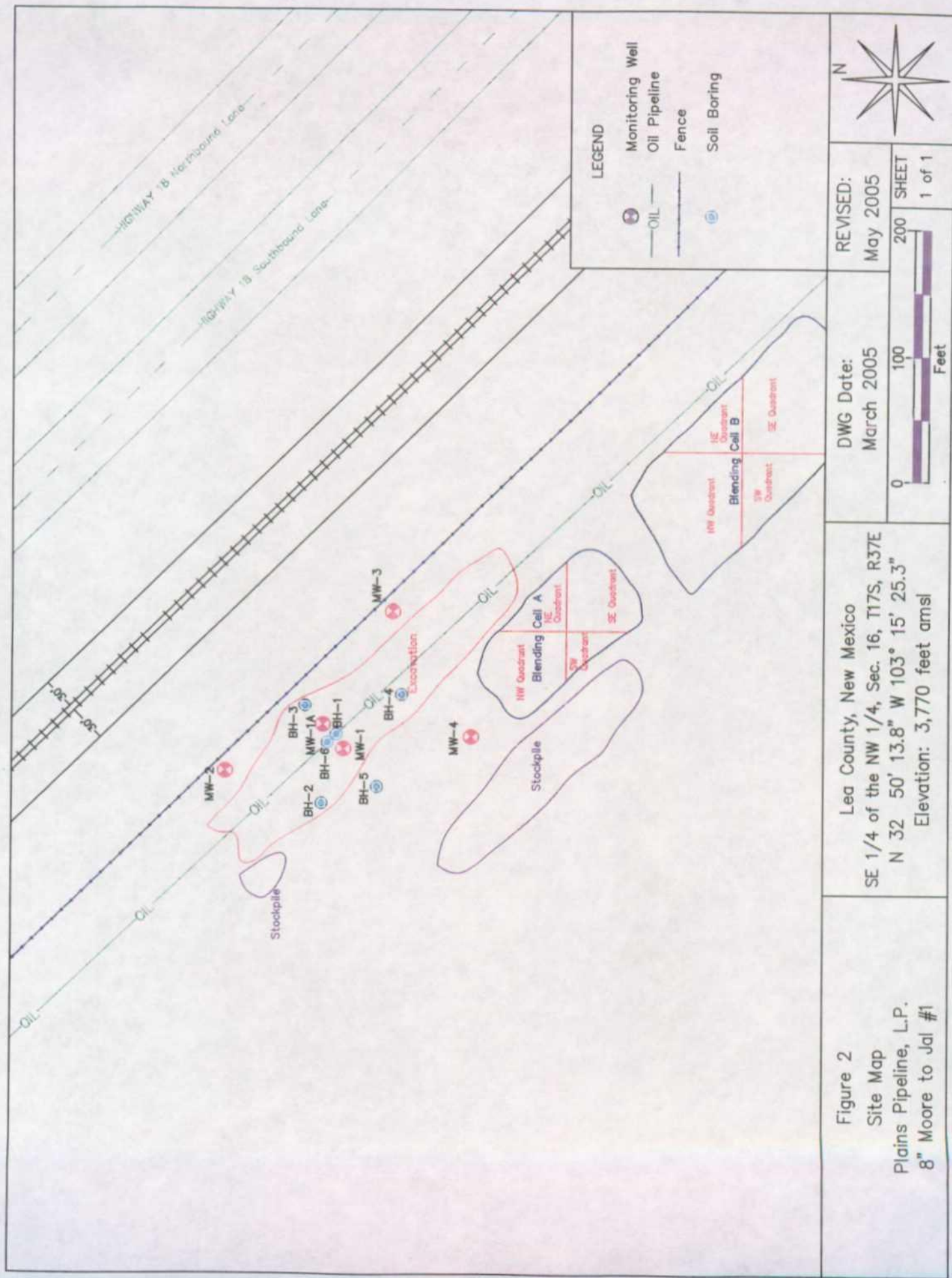
REVISED:  
June 2005



SHEET  
1 of 1



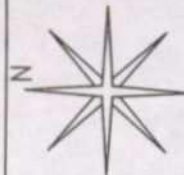




Lea County, New Mexico  
 SE 1/4 of the NW 1/4, Sec. 16, T17S, R37E  
 N 32° 50' 13.8" W 103° 15' 25.3"  
 Elevation: 3,770 feet amsl

DWG Date:  
 March 2005

REVISED:  
 May 2005



# Sidewall Sampling Locations

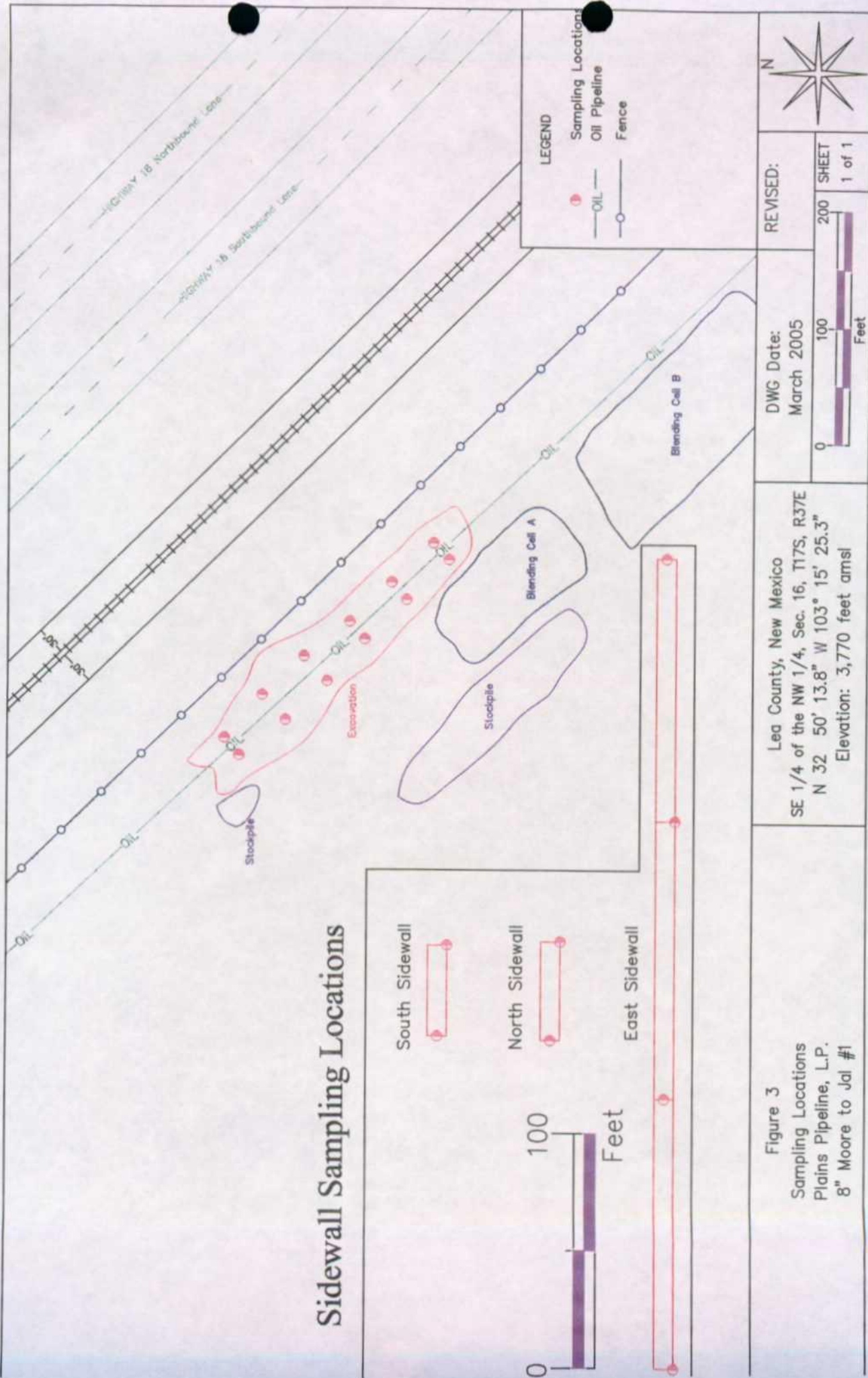
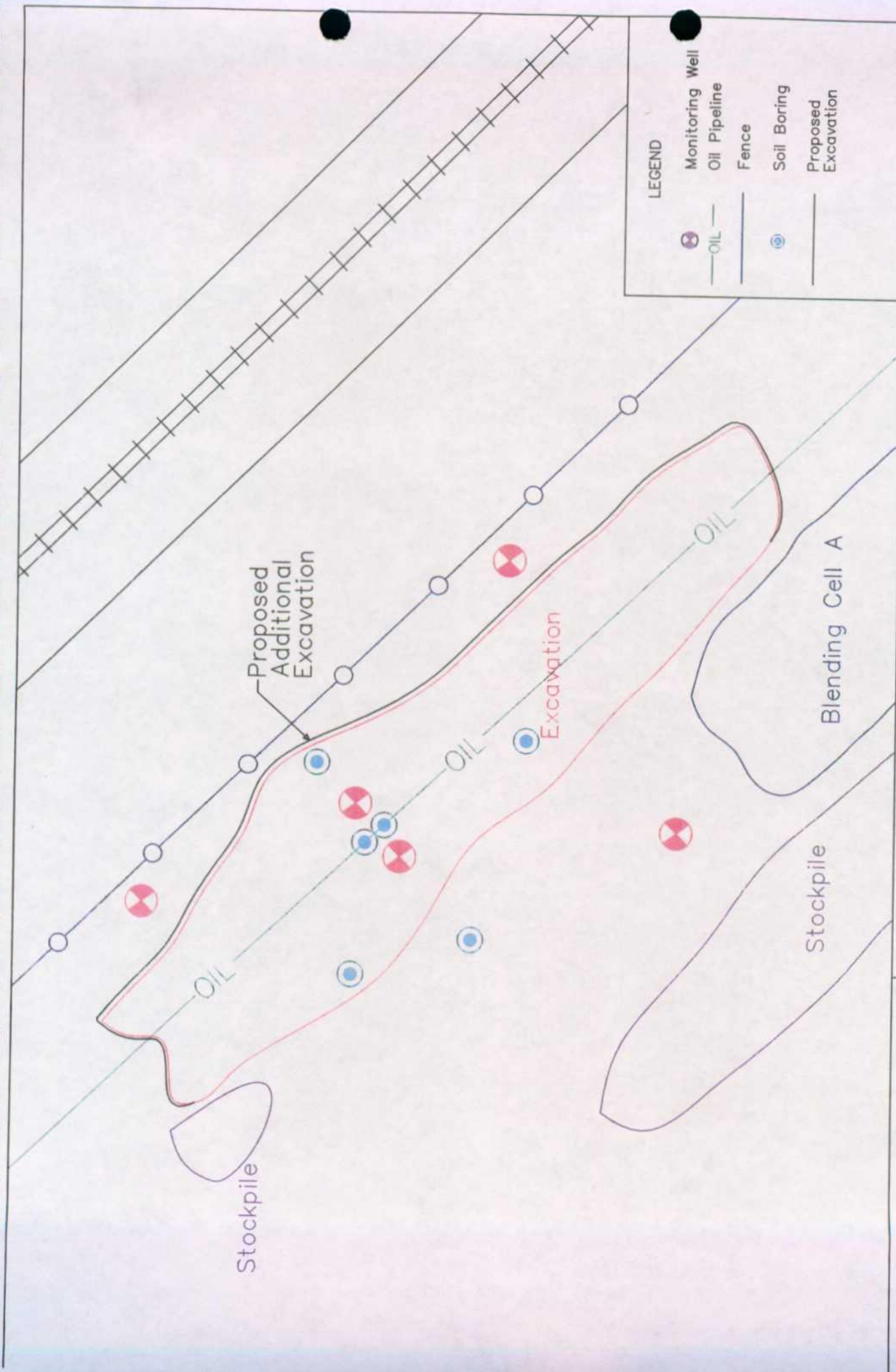


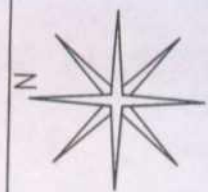
Figure 3  
Sampling Locations  
Plains Pipeline, L.P.  
8" Moore to Jal #1





LEGEND

- Monitoring Well
- Oil Pipeline
- Fence
- Soil Boring
- Proposed Excavation



REVISED:

DWG Date:  
June 2005

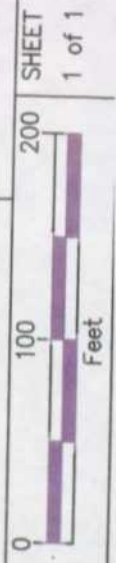


Figure 4  
Proposed Excavation Locations  
Plains Pipeline, L.P.  
8" Moore to Jal #1

Lea County, New Mexico  
SE 1/4 of the NW 1/4, Sec. 16, T17S, R37E  
N 32° 50' 13.8" W 103° 15' 25.3"  
Elevation: 3,770 feet amsl

## Tables



Llano-Permian Environmental

318 East Taylor Street, Hobbs, New Mexico 88240

Phone: 505/393-4261, FAX: 505/393-4658

Table 1

**SUMMARY OF ENVIRONMENTAL BORING RESULTS (SOIL)**

Plains All American Pipeline, LP. - 8" Moore to Jal #1 - Ref #2002-10270

Sample ID	Sample Date	Soil Boring	PID Readings (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-Xylenes (mg/Kg)	o-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gas) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)
SE8M102302BH1 (5-7)	23-Oct-02	BH-1	695	29.7	168	88.6	151	59.2	497	6810	5950	12760
SE8M102302BH1 (10-12)			505	35.9	256	142	227	89.1	750	11400	9960	21360
SE8M102302BH1 (15-17)			306	19.8	241	165	225	92.1	743	9000	9220	18220
SE8M102302BH1 (20-22)			1,350	38.7	290	150	217	85.2	781	9450	8140	17590
SE8M102302BH1 (25-27)			1,223	94.6	500	251	359	142	1,347	14400	13400	27800
SE8M102302BH1 (30-32)			682	114	342	174	285	109	1024	16600	10400	27000
SE8M102302BH1 (35-37)			510	65.9	302	157	292	113	929.9	16800	17400	34200
SE8M102302BH1 (40-42)			1,583	32	153	86.5	164	68.7	504.2	8440	11500	19940
SE8M102302BH1 (45-47)			384	30.2	210	118	207	82.2	647.4	8900	8180	17080
SE8M102302BH1 (50-52)			589	159	572	255	429	169	1584	20800	12700	33500
SE8M102302BH1 (55-57)	24-Oct-02	BH-2	485	285	809	341	563	223	2221	40400	25200	65600
SE8M102302BH1 (60-62)			NA	449	1300	689	1180	496	4114	103000	79500	182500
SE8M102402BH2 (5-7)			1.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH2 (10-12)			2.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH2 (15-17)			3.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (5-7)			1.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (10-12)			2.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH3 (15-17)			1.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10
SE8M102402BH4 (5-7)		BH-4	46.4	191	628	300	374	151	1644	17100	10900	28000
SE8M102402BH4 (10-12)			225	175	494	270	395	160	1494	22800	11900	34700
SE8M102402BH4 (15-17)			3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (20-22)			NA	76.2	296	135	262	100	869.2	14700	10400	25100
SE8M102402BH4 (25-27)			3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (30-32)			NA	140	442	228	420	163	1393	20600	15800	36400



SE8M102402BH4 (35-37)	24-Oct-02	BH-4 con't	1.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE8M102402BH4 (50-52)			NA	118	291	93.6	157	55.5	715.1	9040	6700	15740	
SE8M102502BH5 (5-7)			3.0	224	749	344	486	196	1999	29500	18000	47500	
SE8M102502BH5 (10-12)			1.3	70.6	347	176	347	136	1076.6	15100	14900	30000	
SE8M102502BH5 (15-17)	25-Oct-02	BH-5	0.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
SE8M102502BH5 (25-27)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
SE8M102502BH5 (35-37)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
SE8M102502BH6 (5-7)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
SE8M102502BH6 (10-12)	25-Oct-02	BH-6	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
SE8M102502BH6 (15-17)			NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<5	<5	<10	
2002-10270 (10-12)			2,982	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (15-17)			2,565	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (20-22)			1,574	14.6	43.6	23.3	34.3	15.4	131	4,210	3,950	8,160	
2002-10270 (25-27)			1,558	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (30-32)			1,160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (35-37)			1,049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (40-42)	26-Jul-04	MW-1	927	80.0	144	74.1	94.5	45.5	438	7,710	6,450	14,200	
2002-10270 (45-47)			1,125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (50-52)			1,227	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (55-57)			2,124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (60-62)			710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (65-67)			906	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002-10270 (70-72)			1,543	11.6	25.1	13.9	20.0	9.56	80.2	2,280	2,870	5,150	
MW-2 (20-25)			62.2	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	<10.0	<10.0	<10.0	
MW-2 (25-30)			59.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (30-35)			68.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (35-40)			53.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (40-45)	23-Oct-04	MW-2	73.3	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	<10.0	6.59 ⁴	<10.0	
MW-2 (45-50)			224	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (50-55)			1,838	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (55-60)			875	139	434	158	308	105	1,140	8,550	9,390	17,900	
MW-2 (60-65)			800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (15-20)			12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (20-25)			100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.125	6.86 ⁴	17.4	17.4	
MW-3 (25-30)	24-Oct-04	MW-3	40.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (30-35)			75.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (35-40)			144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







**Llano-Permian Environmental**  
318 East Taylor Street, Hobbs, New Mexico 88240  
Phone: 505/393-4261, FAX: 505/393-4658

Table 2  
**SUMMARY OF EXCAVATION ANALYTICAL RESULTS (SOIL)**

Plains All American Pipeline, L.P. - 8" Moore to Jal #1 - Ref #2002-10270

Sample ID	Sample Date	Sample Location	Field PID Analysis (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	m,p-Xylenes (mg/kg)	o-Xylene (mg/kg)	Total BTEX (mg/kg)	TPH (as gasoline) (mg/kg)	TPH (as diesel) (mg/kg)	Total TPH (mg/kg)
SEMR31302NSW	13-Mar-02	North Sidewall		<2.5	937	3,590	4,410	2,140	11,077	224	545	769
SEMR31302RAMP	13-Mar-02	Ramp		<2.5	<2.5	<2.5	<2.5	<2.5	<12.5	<10	<10	<10
SEMR51302SP	13-May-02	Stockpile		<1	<1	<1	<1	<1	NA	NA	NA	NA
SEMR51702BCC3'	17-May-02	Bottom -3'		<2.5	<2.5	<2.5	<2.5	<2.5	<12.5	<10	<10	<10
SE8M1112503WSW	25-Nov-03	West Sidewall Composite	NA	<0.025	<0.025	<0.025	0.040	<0.025	0.040	<10.0	74.2	74.2
SE8M1112503ESW	25-Nov-03	East Sidewall Composite	NA	0.082	0.679	0.558	1.14	0.423	2.88	144	2,420	2,564
SE8M1112503SSW	25-Nov-03	South Sidewall Composite	NA	<0.025	<0.025	<0.025	0.078	<0.025	0.078	<10.0	144	144
SE8M1112503NSW	25-Nov-03	North Sidewall Composite	NA	<0.025	0.179	0.197	0.577	0.230	1.18	49.1	317	366
SE8M1112503BH	25-Nov-03	Bottomhole Composite	NA	0.235	0.992	0.500	1.15	0.543	3.42	175	9,240	9,415
<b>NMOCD Remedial Thresholds</b>				<b>10</b>					<b>50</b>			<b>100</b>

¹ **Italicized** values are in excess of the NMOCD Remediation Thresholds

² NA : Not Analyzed

³ NS : Not Sampled

⁴ Detected, but below the Reporting Limit; therefore, result is an estimated concentration (CLP-J Flag).

**Table 3**  
**Summary of Land Treatment Analytical Results (Soil)**  
**8" Moore to Jal #1 - Ref #2002-10270**

Sample ID	Sample Location	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-Xylenes (mg/Kg)	o-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)
NE-A	Northeast Quadrant of Cell A	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	1,310	1,310
SE-A	Southeast Quadrant of Cell A	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	664	664
SW-A	Southwest Quadrant of Cell A	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	542	542
NW-A	Northwest Quadrant of Cell A	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	987	987
SE-B	Southeast Quadrant of Cell B	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	1,140	1,140
SW-B	Southwest Quadrant of Cell B	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	1,470	1,470
NE-B	Northeast Quadrant of Cell B	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	1,240	1,240
NW-B	Northwest Quadrant of Cell B	15-Dec-04	NA	NA	NA	NA	NA	NA	<5	1,170	1,170
<b>NMOCD Remedial Thresholds</b>			<b>10</b>					<b>50</b>			<b>100</b>

¹ Bolded values are in excess of the NMOCD Remediation Thresholds

³ NS : Not Sampled

² NA : Not Analyzed

⁴ Detected, but below the Reporting Limit; therefore, result is an estimated concentration (CLP-J Flag).



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**

☒ Initial Report ☐ Final Report

Name of Company <b>EOTT</b>	Contact <b>Frank Hernandez</b>
Address PO Box 1660 5805 East Highway 80 Midland, Texas 79702	Telephone No. 915.638.3799
Facility Name 8" Moore to Jal #1	Facility Type 8" Steel Pipeline

Surface Owner State of New Mexico	Mineral Owner	Lease No.
--------------------------------------	---------------	-----------

**LOCATION OF RELEASE**

Unit Letter 16	Section 16	Township T17S	Range R37E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea Lat. 32° 50' 12.36"N Lon. 103° 15' 26.234"W.
-------------------	---------------	------------------	---------------	---------------	------------------	---------------	----------------	----------------------------------------------------------------

**NATURE OF RELEASE**

Type of Release Crude Oil	Volume of Release 200 bbls barrels	Volume Recovered 0 bbls barrels
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence EOTT	Date and Hour of Discovery 10-18-02 @ 8:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Paul Sheeley	
By Whom? Pat McCasland, EPI	Date and Hour 10-18-02 @ 11:00 AM Pat McCasland EPI left message with Paul Sheeley and sent page to the "ON-CALL" representative	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.*  
NA

Describe Cause of Problem and Remedial Action Taken.*  
8" Steel Pipeline Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of.

Describe Area Affected and Cleanup Action Taken.*  
8,000 sqft ~200' x 40' Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of. Remedial Goals: TPH 8015m = 1000 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.

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:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Frank Hernandez	Approved by District Supervisor:	
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: October 23, 2003 Phone: 915.638.3799	Conditions of Approval:	Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary