

District I  
P.O. Box 1980, Hobbs, NM

District II  
P.O. Drawer DD, Artesia, NM 88221

District III  
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

SUBMIT 1 COPY TO  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE

**PIT REMEDIATION AND CLOSURE REPORT**

*Risk  
Vertical  
- Only  
41 feet*  
NOV - 1 1993  
OIL CON. DIV.  
DIST. 3

Operator: PNM Gas Services ( Burlington ) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Culpepper Martin #4A

Location: Unit E Sec 28 T 32 N R 12 W County San Juan

Pit Type: Separator ☐ Dehydrator ☒ Other                     

Land Type: BLM ☐ State ☐ Fee ☒ Other                     

Pit Location: Pit dimensions: length 20 ' width 20 ' depth 3 '

(Attach diagram) Reference: wellhead ☒ other                     

Footage from reference: 125'

Direction from reference: 30 Degrees ☒ East ☒ North  
of ☐ West ☐ South

|                                                                                                                            |                       |             |          |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------|----------|
| Depth to Ground Water:<br><br>(Vertical distance from contaminants to<br>seasonal high water elevation of ground<br>water) | Less than 50 feet     | (20 points) | <u>0</u> |
|                                                                                                                            | 50 feet to 99 feet    | (10 points) |          |
|                                                                                                                            | Greater than 100 feet | ( 0 points) |          |

|                                                                                                                                                         |     |             |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|----------|
| Wellhead Protection Area:<br><br>(Less than 200 feet from a private<br>domestic water source, or; less than 1,000<br>feet from all other water sources) | Yes | (20 points) | <u>0</u> |
|                                                                                                                                                         | No  | ( 0 points) |          |

|                                                                                                                                                 |                         |             |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------|----------|
| Distance to Surface Water:<br><br>(Horizontal distance to perennial lakes,<br>ponds, rivers, streams, creeks, irrigation<br>canals and ditches) | Less than 200 feet      | (20 points) | <u>0</u> |
|                                                                                                                                                 | 200 feet to 1,000 feet  | (10 points) |          |
|                                                                                                                                                 | Greater than 1,000 feet | ( 0 points) |          |

RANKING SCORE (TOTAL POINTS): 0

Culpepper Martin #4A

Date Remediation Started: 05/05/1999

Date Completed: 05/05/1999

Remediation Method: Excavation ☒ Approx. Cubic Yard 853

(Check all appropriate sections)

Landfarmed ☒ Amount Landfarmed (cubic yds) 700

Other 153 cu yds overburden.

Remediation Location: Onsite ☒ Offsite

(i.e., landfarmed onsite, name and location of offsite facility)

Backfill Material Location:

## General Description of Remedial Action:

Excavated contaminated soil to a pit size of 32' X 36' X 20' and landfarmed soil on location within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

\*\*\*Vertical extent drilling conducted to 41'. Bottom hole results below OCD guidelines as indicated on attached lab analysis.

Ground Water Encountered: No ☒ Yes ☐ Depth

## Final Pit Closure Sampling:

Sample Location Three point composite - bottom.

(if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample depth 20'

Sample date 05/05/1999

Sample time 3:20:00 PM

## Sample Results

Benzene (ppm) 22

Total BTEX (ppm) 914 \*\*\*

Field headspace (ppm)

TPH (ppm) 1370.00 Method 8015B

Vertical Extent (ft) 41'

Risk Analysis form attached Yes ☐ No ☒

Ground Water Sample:

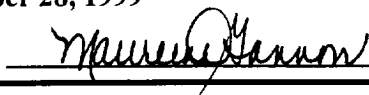
Yes ☐No ☒

(If yes, see attached Groundwater Site Summary Report)

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

DATE October 28, 1999

SIGNATURE



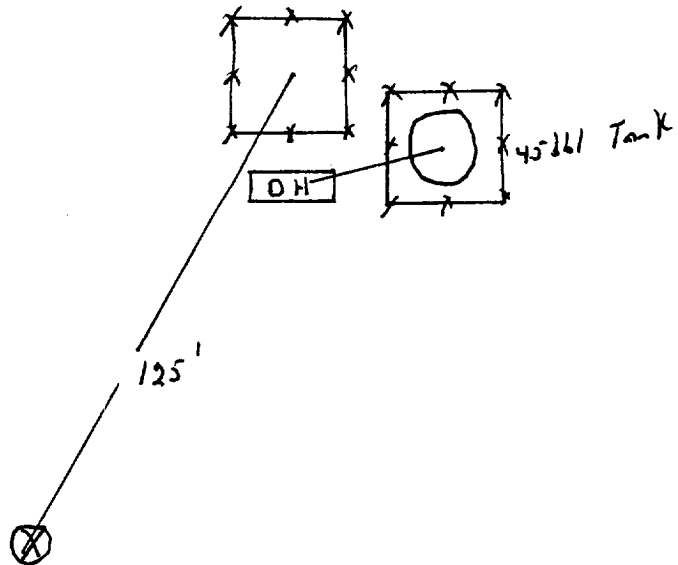
PRINTED NAME Maureen Gannon  
AND TITLE Project Manager

Culpepper Martin # 4A  
Burlington  
Sec. 28, 32N, 12W, D

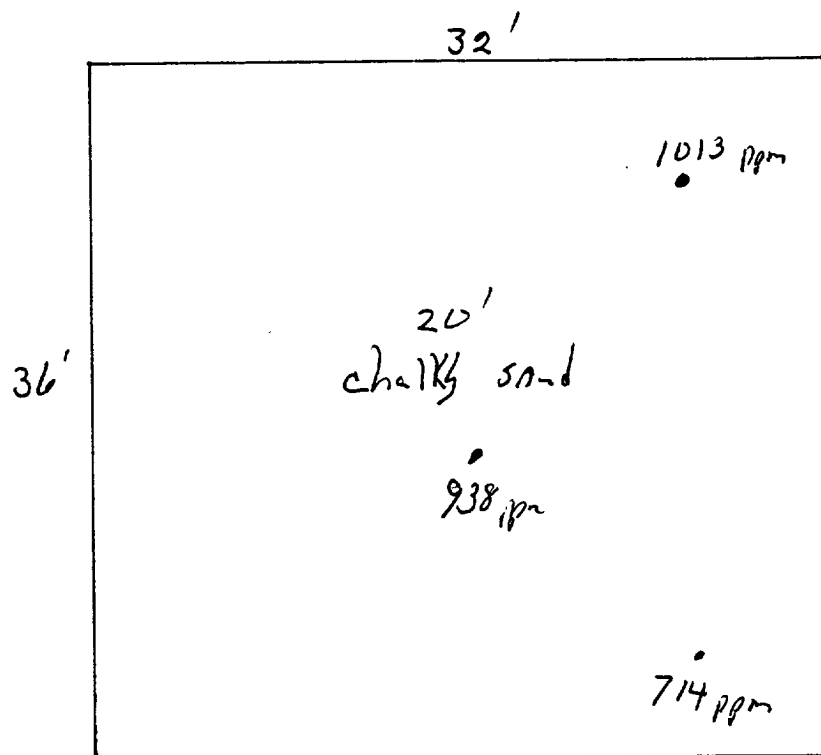
5/5/99

↑  
N)

site diagram:



End of excavation:



not to scale

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 18-May-99

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**CLIENT:** PNM - Public Service Company of NM

**Project:** Culpepper Martin #4A

**Lab Order:** 9905031

**CASE NARRATIVE**

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Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

GARY

OFF: (505) 325-5667



LAB: (505) 325-1556

# ANALYTICAL REPORT

Date: 18-May-99

|                    |                                    |                            |                                              |
|--------------------|------------------------------------|----------------------------|----------------------------------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM | <b>Client Sample Info:</b> | Culpepper Martin #4A                         |
| <b>Work Order:</b> | 9905031                            | <b>Client Sample ID:</b>   | 9905051515; Bottom @ 20ft. - 3 pt. composite |
| <b>Lab ID:</b>     | 9905031-01A                        | <b>Matrix:</b>             | SOIL                                         |
| <b>Project:</b>    | Culpepper Martin #4A               | <b>Collection Date:</b>    | 5/5/99 3:20:00 PM                            |
|                    |                                    | <b>COC Record:</b>         | 7592                                         |

| Parameter                           | Result | PQL   | Qual | Units | DF   | Date Analyzed |
|-------------------------------------|--------|-------|------|-------|------|---------------|
| <b>DIESEL RANGE ORGANICS</b>        |        |       |      |       |      |               |
| T/R Hydrocarbons: C10-C28           | 1370   | 25    |      | mg/Kg | 1    | 5/18/99       |
| <b>AROMATIC VOLATILES BY GC/PID</b> |        |       |      |       |      |               |
| Benzene                             | 22000  | 5000  |      | µg/Kg | 5000 | 5/12/99       |
| Toluene                             | 360000 | 10000 |      | µg/Kg | 5000 | 5/12/99       |
| Ethylbenzene                        | 44000  | 5000  |      | µg/Kg | 5000 | 5/12/99       |
| m,p-Xylene                          | 390000 | 10000 |      | µg/Kg | 5000 | 5/12/99       |
| o-Xylene                            | 98000  | 5000  |      | µg/Kg | 5000 | 5/12/99       |

914000  
914 ppm

|                    |                                                         |                                                     |
|--------------------|---------------------------------------------------------|-----------------------------------------------------|
| <b>Qualifiers:</b> | PQL - Practical Quantitation Limit                      | S - Spike Recovery outside accepted recovery limits |
|                    | ND - Not Detected at Practical Quantitation Limit       | R - RPD outside accepted recovery limits            |
|                    | J - Analyte detected below Practical Quantitation Limit | E - Value above quantitation range                  |
|                    | B - Analyte detected in the associated Method Blank     | Surr: - Surrogate                                   |

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 18-May-99

|                    |                                    |                            |                           |
|--------------------|------------------------------------|----------------------------|---------------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM | <b>Client Sample Info:</b> | Culpepper Martin #4A      |
| <b>Work Order:</b> | 9905031                            | <b>Client Sample ID:</b>   | 9905051520; Walls @ 15ft. |
| <b>Lab ID:</b>     | 9905031-02A                        | <b>Matrix:</b>             | SOIL                      |
| <b>Project:</b>    | Culpepper Martin #4A               | <b>Collection Date:</b>    | 5/5/99 3:20:00 PM         |
|                    |                                    | <b>COC Record:</b>         | 7592                      |

| Parameter                    | Result | PQL            | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|----------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015B</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | ND     | 25             |      | mg/Kg | 1  | 5/10/99       |

**Qualifiers:**

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 18-May-99

|                    |                                    |                            |                         |
|--------------------|------------------------------------|----------------------------|-------------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM | <b>Client Sample Info:</b> | Culpepper Martin #4A    |
| <b>Work Order:</b> | 9905031                            | <b>Client Sample ID:</b>   | 9905051522; Wall @ 15ft |
| <b>Lab ID:</b>     | 9905031-03A                        | <b>Matrix:</b>             | SOIL                    |
| <b>Project:</b>    | Culpepper Martin #4A               | <b>Collection Date:</b>    | 5/5/99 3:22:00 PM       |
|                    |                                    | <b>COC Record:</b>         | 7592                    |

| Parameter                    | Result | PQL            | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|----------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015B</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | ND     | 25             |      | mg/Kg | 1  | 5/10/99       |

**Qualifiers:**

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr - Surrogate

1 of 1

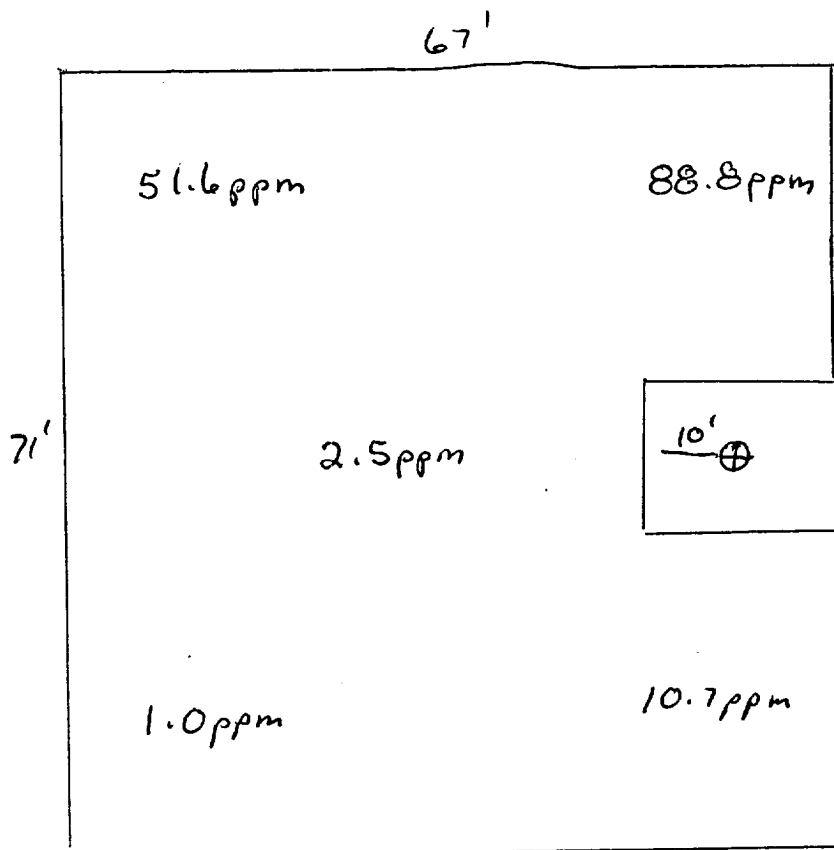
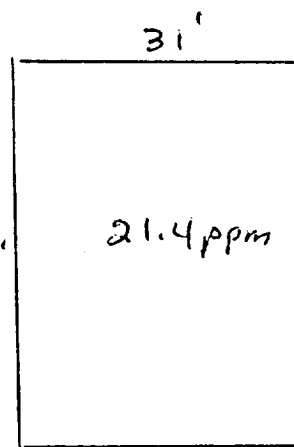
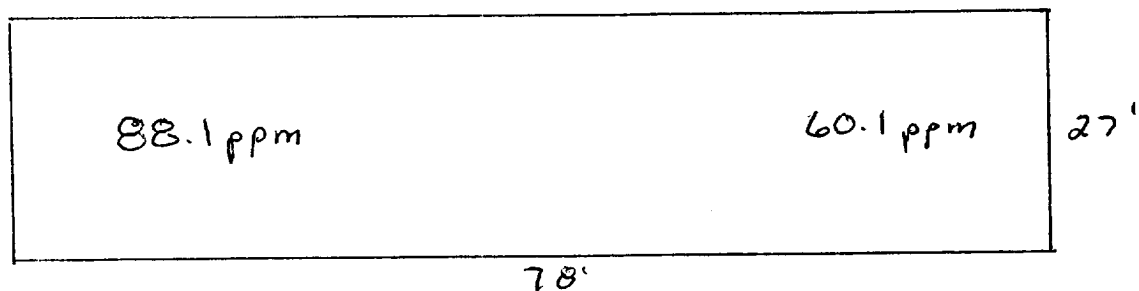
P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

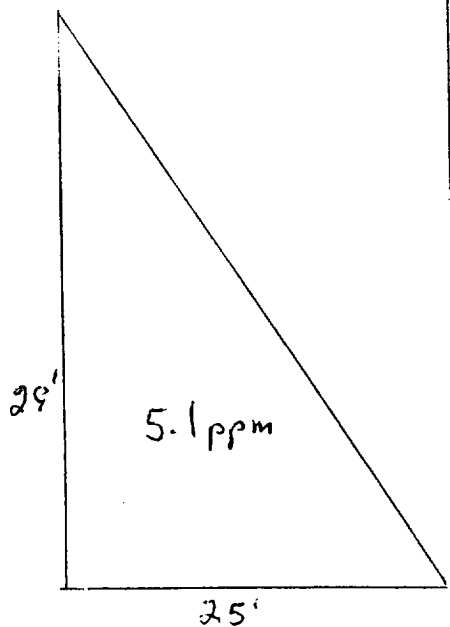
Culpepper Martin #4A  
Sec-28 T-32N R-12W UG-0  
Burlington

Land Farm Drawing

App 700 cu yds

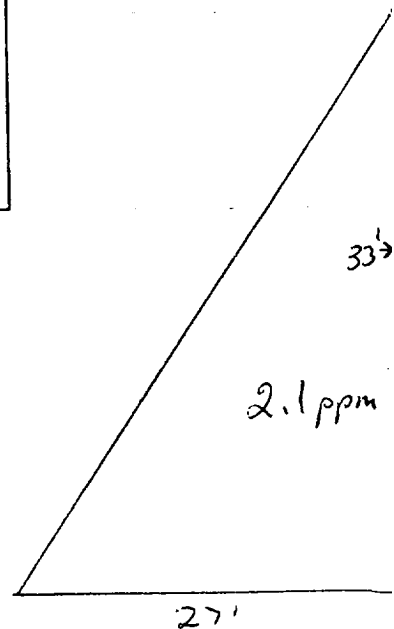


2" to 12" Depth  
Headspace  
Sample #



2" to 12" Depth  
Headspace 76.1 ppm  
Sample # 9906241023

Not to Scale



OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 07-Jul-99

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**CLIENT:** PNM - Public Service Company of NM  
**Project:** Culpepper Martin 5, 1A, 15A & 4A LF  
**Lab Order:** 9906073

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## **CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 07-Jul-99

|                    |                                     |                            |                       |
|--------------------|-------------------------------------|----------------------------|-----------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM  | <b>Client Sample Info:</b> | Culpepper Martin 4A   |
| <b>Work Order:</b> | 9906073                             | <b>Client Sample ID:</b>   | 9906241023; 10pt Comp |
| <b>Lab ID:</b>     | 9906073-04A                         | <b>Matrix:</b>             | SOIL                  |
| <b>Project:</b>    | Culpepper Martin 5, 1A, 15A & 4A LF | <b>Collection Date:</b>    | 6/24/99 10:23:00 AM   |
|                    |                                     | <b>COC Record:</b>         | 7723                  |

| Parameter                    | Result | PQL            | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|----------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015B</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | 45     | 25             |      | mg/Kg | 1  | 7/6/99        |

**Qualifiers:**

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- B - Analyte detected in the associated Method Blank

- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- Surr: - Surrogate

1 of 1

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- Treating the Groundwater Separately from the Environment -

OFF: (505) 325-5667



LAB: (505) 325-1556

## On Site Technologies, LTD.

Date: 29-Sep-99

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**CLIENT:** PNM - Public Service Company of NM

**Project:** Vertical Extent Drilling

**Lab Order:** 9909034

## CASE NARRATIVE

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Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 29-Sep-99

**Client:** PNM - Public Service Company of NM  
**Work Order:** 9909034  
**Lab ID:** 9909034-02A     **Matrix:** SOIL  
**Project:** Vertical Extent Drilling

**Client Sample Info:** Culpepper Martin #4A @ 41ft.  
**Client Sample ID:** 9909091055; Vertical Extent  
**Collection Date:** 09/09/1999 10:55:00 AM  
**COC Record:** 7759

| Parameter                           | Result | PQL            | Qual | Units | DF  | Date Analyzed |
|-------------------------------------|--------|----------------|------|-------|-----|---------------|
| <b>DIESEL RANGE ORGANICS</b>        |        | <b>SW8015B</b> |      |       |     | Analyst: DC   |
| T/R Hydrocarbons: C10-C28           | ND     | 25             |      | mg/Kg | 1   | 09/24/1999    |
| <b>AROMATIC VOLATILES BY GC/PID</b> |        | <b>SW8021B</b> |      |       |     | Analyst: DM   |
| Benzene                             | ND     | 250            |      | µg/Kg | 250 | 09/15/1999    |
| Toluene                             | 4900   | 500            |      | µg/Kg | 250 | 09/15/1999    |
| Ethylbenzene                        | 780    | 250            |      | µg/Kg | 250 | 09/15/1999    |
| m,p-Xylene                          | 5700   | 500            |      | µg/Kg | 250 | 09/15/1999    |
| o-Xylene                            | 1200   | 250            |      | µg/Kg | 250 | 09/15/1999    |

12580  
12.58 ppm

**Qualifiers:** PQL - Practical Quantitation Limit  
ND - Not Detected at Practical Quantitation Limit  
J - Analyte detected below Practical Quantitation Limit  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
Surr - Surrogate

1 of 1

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- To be used only in accordance with the ENVIRONMENT -

# RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2282 FAX (505) 326-2388

Borehole # 1  
Well #           
Page 1 of 2

Project Name PNM VERTICAL EXTENT  
Project Number 62800044 Phase 6001  
Project Location CUIPSEPER MARTIN #4A

Well Logged By C. CULLICOTT  
Personnel On-Site F. PADILLA D. PADILLA  
Contractors On-Site           
Client Personnel On-Site CARY COOK

Drilling Method AUGER  
Air Monitoring Method PID

Elevation           
Borehole Location T32N R12W S28 E  
GWL Depth NOT ENCOUNTERED  
Logged By C. CULLICOTT  
Drilled By R. PADILLA & D. PADILLA  
Date/Time Started 9/9/99 9:50am  
Date/Time Completed 9/9/99 11:15 am

| Depth<br>(Feet) | Sample<br>Interval | Sample<br>Type &<br>Recovery<br>(inches) | Sample Description<br>Classification System: USCS                                                               | USCS<br>Symbol | Depth<br>Lithology<br>Change<br>(feet) | Air Monitoring<br>Units: NDU |    |   | Drilling Conditions<br>& Blow Counts   |
|-----------------|--------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------|------------------------------|----|---|----------------------------------------|
|                 |                    |                                          |                                                                                                                 |                |                                        | BZ                           | BH | S |                                        |
| 0               |                    |                                          | 0-20'<br>CLEAN FILL                                                                                             |                |                                        |                              |    |   |                                        |
| 20              | ① 20-21½           |                                          | ① BROWN SILT w/SOME SAND. DAMP, MODERATE COHESIVENESS. GOOD NO STAIN. GOOD REC.                                 |                |                                        |                              |    |   | ① 8 BLOWS<br>SS 585 ppm<br>HS 454 ppm  |
| 25              | ② 25-26½           |                                          | ② ~6" RECOVERY<br>BROWN SILT, DRY, NO STAIN, HC ODOR                                                            |                |                                        |                              |    |   | ② 17 BLOWS<br>SS 593 ppm<br>HS 493 ppm |
| 30              | ③ 30-31½           |                                          | ③ ~6" RECOVERY<br>DRY BROWN SILT, LOOSE, w/SOME SAND. NO STAIN, HC ODOR                                         |                |                                        | 0.0                          |    |   | ③ 17 BLOWS<br>SS 581 ppm<br>HS 465 ppm |
| 35              | ④ 35-36½           |                                          | ④ ~8" RECOVERY<br>BROWN SANDY SILT/SILTSTONE DRY, <del>MODERATE</del> GOOD CONSOLIDATION. STILL ODOR w/NO STAIN |                |                                        |                              |    |   | ④ 50 BLOWS<br>HS 561 ppm<br>SS 384 ppm |
| 40              |                    |                                          |                                                                                                                 |                |                                        |                              |    |   |                                        |

Comments: SUNNY, BREEZY, COOL, CHANGING TO MOSTLY CLOUDY

Geologist Signature Cathy Cullcott

# RECORD OF SUBSURFACE EXPLORA

NAD 83

Borehole # 1  
Well #           
Page 2 of 2

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 328-2282 FAX (505) 328-2388

Project Name PNM VERTICAL EXTENT  
Project Number 62800044 Phase 6001  
Project Location CULPEPPER MARTIN #4A

Elevation           
Borehole Location T32N R12W S28 1470' ANL (E)  
GWL Depth NOT ENCOUNTERED 820' FWL (E)  
Logged By C. CULLICOTT  
Drilled By F. PADILLA & D. PADILLA  
Date/Time Started 9/9/99 9:50am  
Date/Time Completed 9/9/99 11:18am

Well Logged By C. CULLICOTT  
Personnel On-Site F. PADILLA & D. PADILLA  
Contractors On-Site           
Client Personnel On-Site GARY COOK  
Drilling Method AUGER  
Air Monitoring Method P.D.

| Depth<br>(Feet) | Sample<br>Interval | Sample<br>Type &<br>Recovery<br>(Inches) | Sample Description<br>Classification System: USCS                                                                                                                                                                                   | USCS<br>Symbol | Depth<br>Lithology<br>Change<br>(feet) | Air Monitoring<br>Units: NDU |    |   | Drilling Conditions<br>& Blow Counts |
|-----------------|--------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------|------------------------------|----|---|--------------------------------------|
|                 |                    |                                          |                                                                                                                                                                                                                                     |                |                                        | BZ                           | BH | S |                                      |
| TD 40           | ⑤ 40-41 1/2        |                                          | ⑤ 10" RECOVERY, THEN AUGER REFUSAL ON SANDSTONE- POORLY SORTED SAND, COARSE → FINE, ~50% COARSE. EXTREME END OF SPLITSPOON IS SILTSTONE WITH SCATTERED PIECES OF ORGANIC MATTER. SOME FINE SAND.<br><br>TD 40' REFUSAL ON SANDSTONE |                |                                        |                              |    |   | ⑤ 50+ BLOWS<br>SS 507ppm             |
| 5               |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 10              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 15              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 20              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 25              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 30              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 35              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |
| 40              |                    |                                          |                                                                                                                                                                                                                                     |                |                                        |                              |    |   |                                      |

Comments:

HOLE BACKFILLED W/ CUTTINGS & CLEAN FILL

Geologist Signature

Cathy Cullcott