

District I  
P.O. Box 1980, Hobbs, NM  
District II  
P.O. Drawer DD, Artesia, NM 88211  
District III  
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

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

PIT REMEDIATION AND CLOSURE REPORT

RECEIVED  
AUG 18 1999  
OIL CON. DIV.  
DIST. 3

Operator: Amoco Production Company Telephone: (505) - 326-9200  
Address: 200 Amoco Court, Farmington, New Mexico 87401  
Facility Or: LOWLAND GC #1E  
Well Name  
Location: Unit or Qtr/Qtr Sec M Sec 25 T30N R12W County SAN JUAN  
Pit Type: Separator Dehydrator Other PRODUCTION TANK  
Land Type: BLM, State, Fee X, Other

Pit Location: Pit dimensions: length 10', width 10', depth 30'  
(Attach diagram) Reference: wellhead X, other  
Footage from reference: 75'  
Direction from reference: 10 Degrees East North  
X West South X

Depth To Ground Water:  
(Vertical distance from  
contaminants to seasonal  
high water elevation of  
ground water)

Less than 50 feet (20 points)  
50 feet to 99 feet (10 points)  
Greater than 100 feet (0 Points) 0

Wellhead Protection Area:  
(Less than 200 feet from a private  
domestic water source, or; less than  
1000 feet from all other water sources)

Yes (20 points) 0  
No (0 points)

Distance To Surface Water:  
(Horizontal distance to perennial  
lakes, ponds, rivers, streams, creeks,  
irrigation canals and ditches)

Less than 200 feet (20 points)  
200 feet to 1000 feet (10 points) 0  
Greater than 1000 feet (0 points)

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: \_\_\_\_\_ Date Completed: 8/3/93

Remediation Method: Excavation ☒ Approx. cubic yards 100  
 (Check all appropriate sections) Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_  
 Other \_\_\_\_\_

Remediation Location: Onsite \_\_\_\_\_ Offsite ☒ Amoco Crouch Mesa Facility  
 (ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: \_\_\_\_\_  
Excavation . LSK ASSESSED.

Ground Water Encountered: No ☒ Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit: Sample location see Attached Documents

Closure Sampling:  
 (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth 30' (PIT BOTTOM)

Sample date 8/2/93 Sample time 1500

#### Sample Results

Benzene(ppm) \_\_\_\_\_

Total BTEX(ppm) \_\_\_\_\_

Field headspace(ppm) 1054

TPH 5,300 ppm

Ground Water Sample: Yes \_\_\_\_\_ No ☒ (If yes, attach sample results)

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

DATE 8/3/93

SIGNATURE

B. Shaw

PRINTED NAME  
AND TITLE

Buddy D. Shaw  
ENVIRONMENTAL COORDINATOR

5798 US HWY. 64, FARMINGTON, NM 87401  
(505) 632-0615

C 4926  
94926

JOB No: 92140  
PAGE No: 1 of 1

LOCATION: LEASE: ROLAND WELL: GC 1E QD: (M) SW/4 SW/4  
SEC: 25 TWP: 30N RNG: 12W BM: NM CNTY: SAR JUD: ST NM PIT: PROD  
CONTRACTOR: BILL MOSS  
EQUIPMENT USED: TRACKHOE

DATE STARTED: 8/2/93  
DATE FINISHED: 8/2/93

ENVIRONMENTAL SPECIALIST: *NV*

DISPOSAL FACILITY: CROUCH MESA COMPOST

LAND USE: RANGE

SURFACE CONDITIONS: unknown

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 25 YARDS 510°W FROM WELLHEAD.

DEPTH TO GROUNDWATER: ~~50-100 FT.~~ 100 FT.  
NEAREST WATER SOURCE: > 1000 FT. GWS 5/25/98  
NEAREST SURFACE WATER: > 1000 FT.

DR. YELLOWISH ORANGE TO GRAYISH BROWN SAND, NON TO SLIGHTLY COHESIVE,  
DRY TO MOIST, LOOSE TO HARD. PIT BOTTOM CONSIST OF SOIL W/ STRONG  
HYDROCARBON ODOR, MOIST, & SLIGHTLY PLASTIC CLAYEY SAND.

## RISK ASSESSED

## FIELD 418.1 CALCULATIONS

| SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
|-------------|---------|------------|-----------|----------|---------|-----------|
|             |         |            |           |          |         |           |
|             |         |            |           |          |         |           |
|             |         |            |           |          |         |           |

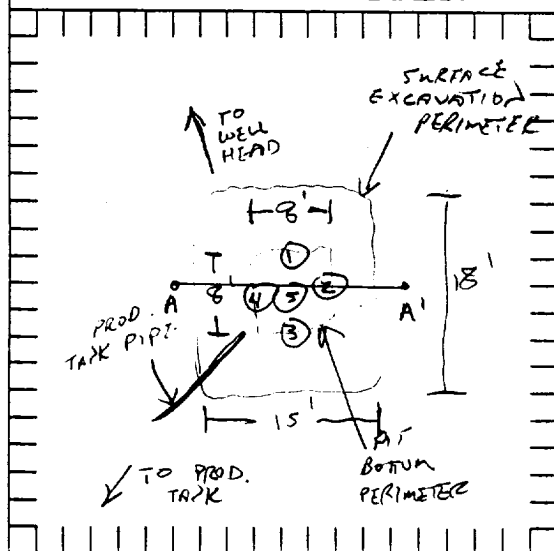
### SCALE

11/11/2016

**FEET**

42

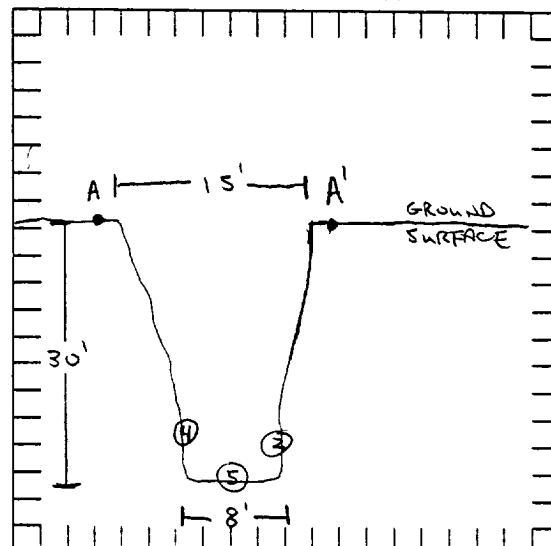
# PIT PERIMETER



## OVM RESULTS

[illegible]

## PIT PROFILE



TRAVEL NOTES: CALLOUT: 7/31/93 ONSITE: 8/2/93

**Well Name:**

**Well Site location:**

**Pit Type:**

**Producing Formation:**

**Pit Category:**

**Horizontal Distance to Surface Water:**

**Vicinity Groundwater Depth:**

**Rowland GC #1E**

Unit M, Sec. 25, T30N, R12W

Production Tank Pit

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

## **RISK ASSESSMENT (non-vulnerable area)**

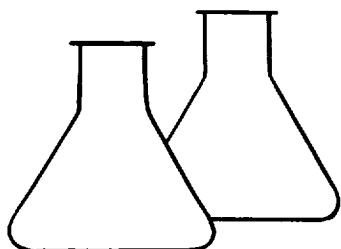
Pit remediation activities were terminated when trackhoe reached practical extent for abandoned pit at 30 ft. below grade and for safety concerns (underground piping and surface equipment).

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shallow sandstone bedrock (based on formal site observation of on-site separator pit located approximately southeast, 95 lateral feet from pit center to pit center).
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located within the **non-vulnerable area** and is approximately 0.08 miles southwest of the nearest vulnerable area boundary (Jones Arroyo).

**(Refer to Flora Vista Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1979, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).**

Based upon the information given, we conclude that the subsurface vertical and lateral contamination is limited and impact to groundwater is very unlikely. AMOCO requests pit closure approval on this location.



# ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401

PHONE: (505) 632-0615 • FAX: (505) 632-1865

## EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

|                    |               |                  |          |
|--------------------|---------------|------------------|----------|
| Client:            | Amoco         | Project #:       | 92140    |
| Sample ID:         | 5 @ 30'       | Date Sampled:    | 08-02-93 |
| Laboratory Number: | 5818          | Date Received:   | 08-02-93 |
| Sample Matrix:     | Soil          | Date Analyzed:   | 08-03-93 |
| Preservative:      | Cool          | Date Reported:   | 08-03-93 |
| Condition:         | Cool & Intact | Analysis Needed: | TPH      |

| Parameter<br>-----              | Concentration<br>(mg/kg)<br>----- | Det.<br>Limit<br>(mg/kg)<br>----- |
|---------------------------------|-----------------------------------|-----------------------------------|
| Total Petroleum<br>Hydrocarbons | 5,300                             | 50.0                              |

ND = Parameter not detected at the stated detection limit.  
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Roland GC #1E, Production Pit, C4926.

A. Chaharbay  
Analyst

Maris D. Young  
Review



C4975

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AND 1 COPY TO  
SANTA FE OFFICE

## PIT REMEDIATION AND CLOSURE REPORT

**Operator:** Amoco Production Company **Telephone:** (505) - 326-9200  
**Address:** 200 Amoco Court, Farmington, New Mexico 87401  
**Facility Or:** Rowland GC #1E  
**Well Name**  
**Location:** Unit or Qtr/Qtr Sec M Sec 25 T 30N R 12W County SAN JUAN  
**Pit Type:** Separator ☒ Dehydrator ☐ Other ☐  
**Land Type:** BLM ☐, State ☐, Fee ☒, Other ☐

**Pit Location:** Pit dimensions: length 27', width 32', depth 22'  
(Attach diagram) **Reference:** wellhead ☒, other ☐  
**Footage from reference:** 165'  
**Direction from reference:** 25 Degrees ☐ East North ☐  
of ☒ West South ☒

**Depth To Ground Water:** Less than 50 feet (20 points)  
(Vertical distance from 50 feet to 99 feet (10 points)  
contaminants to seasonal Greater than 100 feet (0 Points) 0  
high water elevation of  
ground water)

**Wellhead Protection Area:** Yes (20 points)  
(Less than 200 feet from a private No (0 points) 0  
domestic water source, or; less than  
1000 feet from all other water sources)

**Distance To Surface Water:** Less than 200 feet (20 points)  
(Horizontal distance to perennial 200 feet to 1000 feet (10 points)  
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 0  
irrigation canals and ditches)

**RANKING SCORE (TOTAL POINTS):** 0

Date Remediation Started: \_\_\_\_\_ Date Completed: 8/19/93

Remediation Method: Excavation ☒ Approx. cubic yards 600  
(Check all appropriate sections) Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_

Remediation Location: Onsite \_\_\_\_\_ Offsite ☒ Amoco Crounch Mesa Facility.  
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: \_\_\_\_\_

Excavation. RISK ASSESSED. (BEDROCK BOTTOM)Ground Water Encountered: No ☒ Yes \_\_\_\_\_ Depth \_\_\_\_\_Final Pit: Sample location see Attached Documents

Closure Sampling:  
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth 22' (PIT BOTTOM)

Sample date 8/2/93 Sample time \_\_\_\_\_

## Sample Results

Benzene(ppm) \_\_\_\_\_

Total BTEX(ppm) \_\_\_\_\_

Field headspace(ppm) 1283TPH 4,100 ppmGround Water Sample: Yes \_\_\_\_\_ No ☒ (If yes, attach sample results)

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

DATE 8/19/93SIGNATURE Buddy D. ShawPRINTED NAME  
AND TITLEBuddy D. Shaw  
ENVIRONMENTAL COORDINATOR



5796 US HWY. 64, FARMINGTON, NM 87401  
(505) 632-0615

94925

JOB No. 92140  
PAGE No: 1 of 1

DATE STARTED: 8/2/93  
DATE FINISHED: 8/2/93

ENVIRONMENTAL  
SPECIALIST: NV

SURFACE CONDITIONS: UNKNOWN

DEPTH TO GROUNDWATER: ~~50-100~~ <sup>>100</sup> FT.  
NEAREST WATER SOURCE: >1000 FT.  
NEAREST SURFACE WATER: >1000 FT.

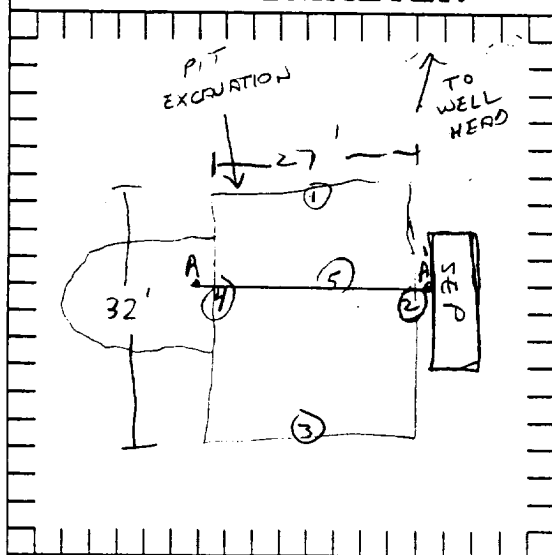
OK. YELLOWISH ORANGE TO LIGHT GRAY SAND, NON-COHESIVE, DRY TO SLIGHTLY MOIST, LOOSE TO HARD. PIT BOTTOM CONSIST OF SOIL W/ (STRONG HYDROCARBON) OOR, SLIGHTLY MOIST, LIGHT TO MEDIUM GRAY COLOR. BEDROCK ENCOUNTERED APPROXIMATELY 1 TO 1 1/2 FT. BELOW PIT BOTTOM AS WELL.

## FIELD 418.1 CALCULATIONS

| SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
|-------------|---------|------------|-----------|----------|---------|-----------|
| ⑤ @ 22'     | GAC0175 | 10.21      | 20 mL     | 10:1     | 209     | 4094 ✓    |
|             |         |            |           |          |         |           |
|             |         |            |           |          |         |           |

1000

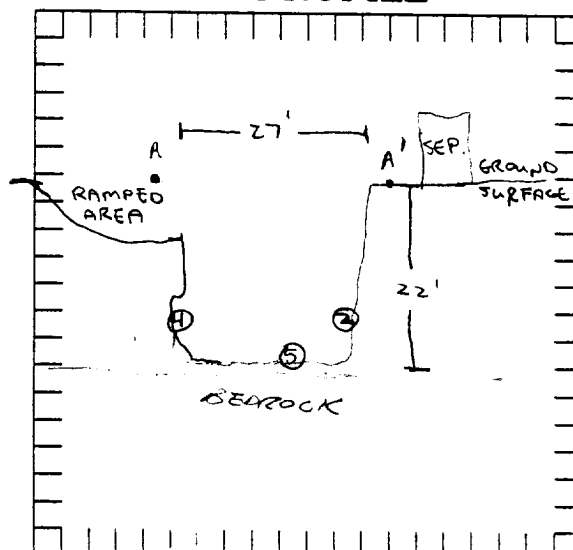
FEET  
PIT PERIMETER



## OVM RESULTS

[illegible]

## PIT PROFILE



TRAVEL NOTES:    CALLOUT: \_\_\_\_\_    ONSITE: \_\_\_\_\_

**Well Name:**

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

**Rowland GC #1E**

Unit M, Sec. 25, T30N, R12W

Separator Pit

Basin Dakota

Non Vulnerable

&gt; 1000 ft.

&gt; 100 ft.

**RISK ASSESSMENT (non-vulnerable area)**

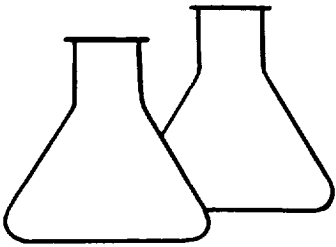
Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 22 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 22 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located within the **non-vulnerable area** and is approximately 0.08 miles southwest of the nearest vulnerable area boundary (Jones Arroyo).

**(Refer to Flora Vista Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1979, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).**

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.



# ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401  
PHONE: (505) 632-0615 • FAX: (505) 632-1865

## FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Amoco  
Sample ID: 5 @ 22'  
Project Location: Roland GC 1E  
Laboratory Number: GAC0175

Project #: 92140  
Date Analyzed: 08-02-93  
Date Reported: 08-19-93  
Sample Matrix: Soil

| <u>Parameter</u>       | <u>Result, mg/kg</u> | <u>Detection<br/>Limit, mg/kg</u> |
|------------------------|----------------------|-----------------------------------|
| Petroleum Hydrocarbons | 4100                 | 100                               |

| <u>Quality Assurance:</u> | <u>Original<br/>TPH mg/kg</u> | <u>Duplicate<br/>TPH mg/kg</u> | <u>%<br/>Diff.</u> |
|---------------------------|-------------------------------|--------------------------------|--------------------|
|                           | 44200                         | 36500                          | 19                 |

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Separator Pit. C4925.

Alison Velez  
Analyst

Morris D. Young  
Review