

*Denny E. Faust*  
**DEPUTY OIL & GAS INSPECTOR**

**DEC 22 1997**

*Approved*

**Meter Number: 89890**  
**Location Name: GARTNER A #1A**  
**Location: TN-30 RG-08**  
**SC-28 UL-C**  
**2 - Federal**  
**NMOCD Zone: OUTSIDE**  
**Hazard Ranking Score: 00**

**RECEIVED**  
APR 14 1997  
**OIL CON. DIV.**  
DIST. 3

**RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS  
LOCATED OUTSIDE OF THE VULNERABLE ZONE  
IN THE SAN JUAN BASIN**

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	$10^{-9}$ to $10^{-13}$ cm/sec
Shale	$10^{-12}$ to $10^{-16}$ cm/sec
Clay	$10^{-12}$ to $10^{-15}$ cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

## FIELD PIT SITE ASSESSMENT FORM

**GENERAL**

Meter: 89890 Location: GARTNER A# 1A  
 Operator #: 0203 Operator Name: Amoco P/L District: Bloomfield  
 Coordinates: Letter: C Section 28 Township: 30 Range: 8  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator ☒ Location Drip: \_\_\_\_\_ Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 4-28-94 Area: 10 Run: 22 41  
4-28-94  
RT

**SITE ASSESSMENT**

**NMOCD Zone:**

(From NMOCD  
Maps)

Inside

Outside

**Land Type:**

BLM

State

Fee

Indian

☒ (1)

☐ (2)

☐ (3)

**Depth to Groundwater**

Less Than 50 Feet (20 points)

50 Ft to 99 Ft (10 points)

Greater Than 100 Ft (0 points)

☐ (1)

☐ (2)

☒ (3)

**Wellhead Protection Area :**

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

**Horizontal Distance to Surface Water Body**

Less Than 200 Ft (20 points)

200 Ft to 1000 Ft (10 points)

Greater Than 1000 Ft (0 points)

☐ (1)

☐ (2)

☒ (3)

Name of Surface Water Body \_\_\_\_\_

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)

☐ (2) > 100'

**TOTAL HAZARD RANKING SCORE:** 0 POINTS

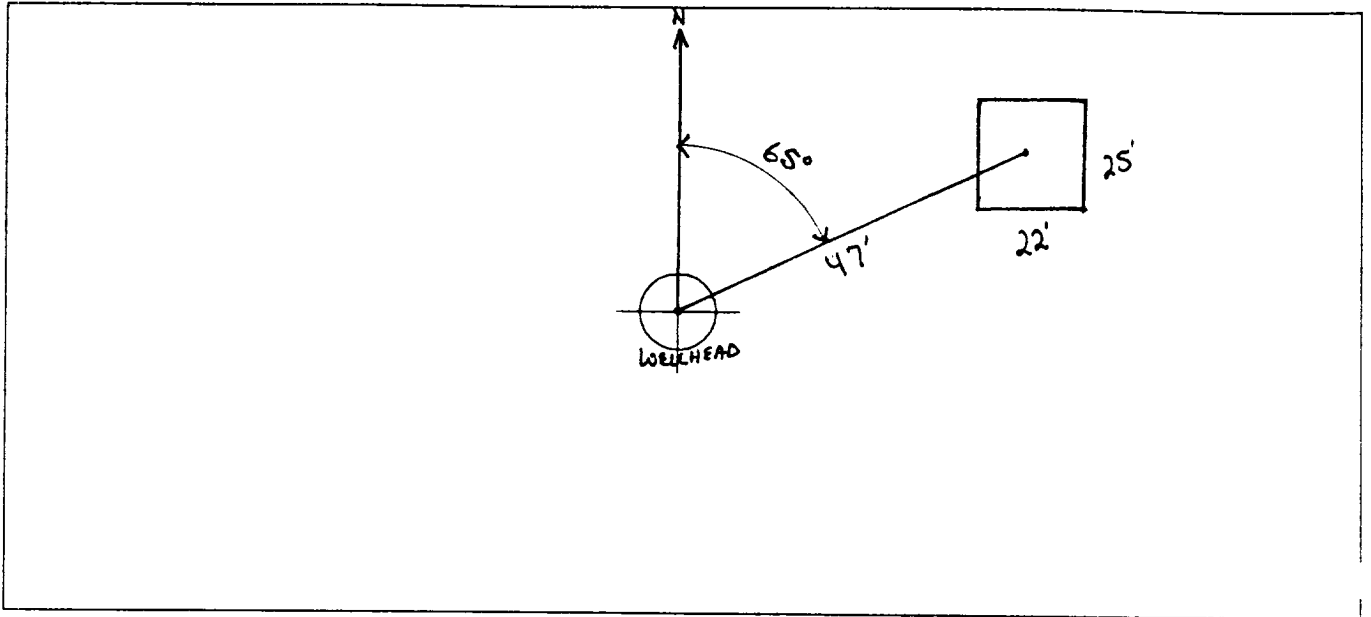
**REMARKS**

Remarks : FOUR PITS ON LOCATION. WILL CLOSE ONLY ONE. PIT IS DRY.  
LOCATION IS WAY UP ON TOP OF A MESA. REDLINE AND TOPO CONFIRMED LOCATION TO  
BE OUTSIDE THE V.Z.

**PUSH IN**

### ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 65° Footage from Wellhead 47'  
b) Length : 25' Width : 22' Depth : 3'



Remarks :

TOOK PICTURES AT 1:51 P.M.

END DUMP

Completed By:

Paul Thompson

Signature

4-28-94

Date

## GENERAL

Meter: 89890 Location: Gartner A #1A  
Coordinates: Letter: C Section 28 Township: 30 Range: 8  
Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Date Started : 5-20-94 Area: 10 Run: 46

## FIELD OBSERVATIONS

Sample Number(s): VW129  
Sample Depth: 6' Feet  
Final PID Reading 213 PID Reading Depth 6' Feet  
Yes No  
Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth \_\_\_\_\_ Feet

## CLOSURE

Remediation Method :  
Excavation ☐ (1) Approx. Cubic Yards \_\_\_\_\_  
Onsite Bioremediation ☐ (2)  
Backfill Pit Without Excavation ☒ (3)  
Soil Disposition:  
Envirotech ☐ (1) ☐ (3) Tierra  
Other Facility ☐ (2) Name: \_\_\_\_\_  
Pit Closure Date: 5-20-94 Pit Closed By: BEI

## REMARKS

Remarks : Line markers 6' hit rock

Signature of Specialist: Vale Wilson



## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

### PIT CLOSURE PROJECT - Soil

#### SAMPLE IDENTIFICATION

SAMPLE NUMBER:

Field ID

Lab ID

MTR CODE SITE NAME:

SAMPLE DATE TIME (Hrs):

SAMPLED BY:

N/A

DATE OF TPH EXT. ANAL:

DATE OF BTEX EXT. ANAL:

TYPE DESCRIPTION:

REMARKS:

#### RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE		MG/KG				
TOLUENE		MG/KG				
ETHYL BENZENE		MG/KG				
TOTAL XYLENES		MG/KG				
TOTAL BTEX		MG/KG				
TPH (418.1)	1140	MG/KG			2.03	28
HEADSPACE PID	213	PPM				
PERCENT SOLIDS	91.6	%				

- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 -

Surrogate Recovery was at N/A % for this sample All QA/QC was acceptable.  
Narrative:

F = Dilution Factor Used

Approved By: John L. Linder

Date: 6/16/94

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*****; *****
      Test Method for
Oil and Grease and Petroleum Hydrocarbons
      in Water and Soil

      Perkin-Elmer Model 1600 FT-IR
      Analysis Report
*****

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04/05/24 10:40

Sample identification  
145263

Initial mass of sample, g  
1.000

Volume of sample after extraction, ml  
13.000

Petroleum hydrocarbons, ppm  
125.752

Net absorbance of hydrocarbons (2930 cm<sup>-1</sup>)  
1.141

