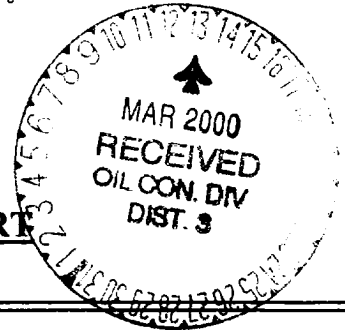


State of New Mexico  
Energy, Minerals and Natural Resources Department

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



**PIT REMEDIATION AND CLOSURE REPORT**

Operator: Dugan Petroleum (Williams Field Services) Telephone: (801) 584-6361  
Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900  
WellName: SHERMAN #2 MV ( 86944 )  
Location: Unit or Qtr/Qtr Sec E Sec <sup>3</sup> T 29N R 5W County Rio Arriba  
PitType Dehydrator  
LandType: BLM

Pit Location: Pit dimensions: length 17 ft., width 19 ft., depth 13 ft.  
(Attach diagram)

Reference: Wellhead

Footage from reference: 53 ft.

Direction from reference: 122 Degrees East of North

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

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

Distance To Surface Water: Less than 200 feet (20 points)  
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) 200 feet to 1,000 feet (10 points)  
Greater than 1,000 feet (0 points) 0

Ranking Score (TOTAL POINTS): 20

Date Remediation Started: 9/17/98

Date Completed: 9/17/98

Remediation Method: Excavation ☒  
(check all appropriate  
sections)

Approx. Cubic Yard 155

Landfarmed ☒

Insitu Bioremediation

Other Landfarmed soil after mechanical aeration. LF Headspace 11ppm

Remediation Location: Onsite ☒ Offsite(ie. landfarmed onsite,  
name and location of  
offsite facility)

## General Description Of Remedial Action:

The pit was excavated to remove gross petroleum contamination. The excavated material was mechanically aerated and placed into an onsite landfarm. Returned to site on 2/15/00 and advanced sampling probe to 16' to collect sample. Results: TPH ND BTEX .09

Ground Water Encountered: No

Final Pit:

Sample location SHERMAN#2MV-V-EXFL-01

Closure Sampling:

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

Two samples were collected, one sample from the excavation bottom and the second sample was made up of 4 points from each excavation wall.

Sample depth 13 feet

Sample date 9/18/98

Sample time 10:05

Sample Result

Benzene (ppm) &lt;0.050

Total BTEX (ppm) &lt;0.050

Field Headspace (ppm)

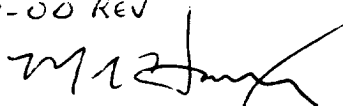
TPH (ppm) &lt;40.0

Ground Water Sample: No

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

DATE 3-7-00 Rev

SIGNATURE



PRINTED NAME Mark Harvey for Williams Field Services  
AND TITLE

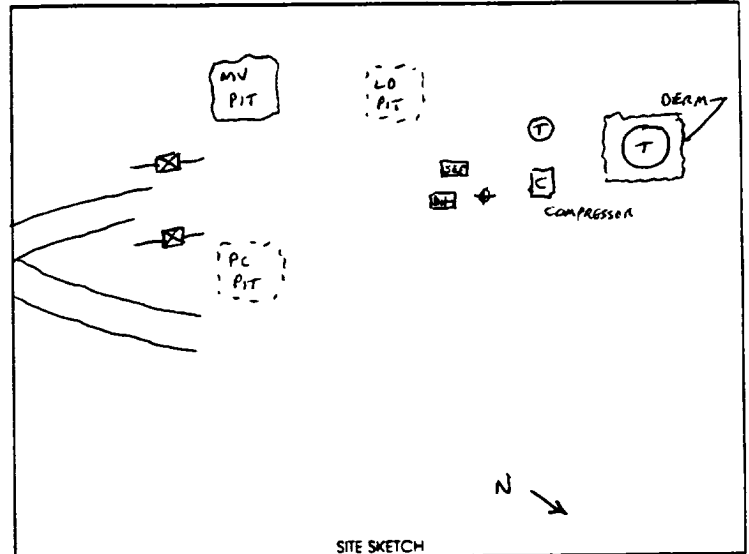
# PIT RETIREMENT FORM

Date: 9/17/98 86944 Weather SUNNY - 75°  
 Well Name SHERMAN #2 MV Operator BUGAN Sec 3 T29N R5W UL E  
 Land Type: BLM STATE FEE INDIAN County RIO ARriba  
 One Call Made (505-765-1234)? (Y) N  
 Line Marking Evident? (Y) N

## Pit Location:

Reference Wellhead X Other \_\_\_\_\_  
 Distance from: 53'  
 Direction: 122 Degrees X E N X  
 of  
 W S

Starting Pit Dimensions 14 x 15 x 3  
 Final Pit Dimensions 17 x 19 x 13



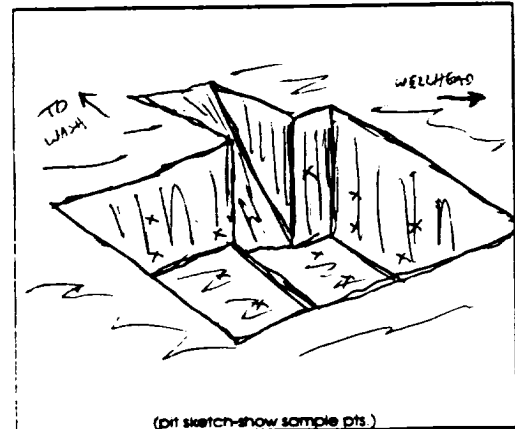
Organic Vapor Readings: Start \_\_\_\_\_ Soil Description: SILTY SAND  
 @ 2' \_\_\_\_\_  
 @ 4' \_\_\_\_\_  
 @ 6' \_\_\_\_\_  
 @ 8' \_\_\_\_\_  
 @ 10 \_\_\_\_\_  
 @ 13 \_\_\_\_\_

Well Proximity To: Residence, Domestic Water Well, Stock Well ~ 350 YDS SOUTH  
 Arroyo, Wash, Lake, Stream LA JARA WASH ~ 150 YDS WEST  
 Estimated or Known Distance to Ground Water 15-25'

Source of Backfill (If other than processed material) \_\_\_\_\_

Samples collected: Type Progress: Verification: ID SHERMAN #2 MV-V-EXWA-01 SOIL / water  
 Progress: Verification: ID SHERMAN #2 MV-V-EXFL-01 SOIL / water  
 Progress: Verification: ID \_\_\_\_\_ soil / water

Sample sent to Lab Via: Courier Hand Carried Other \_\_\_\_\_ Preservative: ICE Other \_\_\_\_\_



Comments: ONE OF 3 PITS ON LOCATION - OIL STAINED SOIL @ SURFACE -  
NEAR SURFACE - REMOVE BY EXCAVATING - CUT OUT SIDEWALL STAINS -  
ODOR DIMINISHES @ ~ 9' - FLOOR CLEAN @ 12' - CUT BECH + RAMP  
STACKPILE SOIL FOR SHREDDING - APPLY FERTILIZER - SHRED + LANDFARM -

Soil Shipped to: ON-SITE LE  
 Prepared by: CM. [Signature]

# PIT RETIREMENT FORM

86944

Date: 9/17/98

Weather SUNNY - 75°

Well Name SHIRMAN #2 MV Operator DUGAN

Sec 3 T 29N R 5W UL E

Land Type: BLM STATE FEE INDIAN

County RIO ARriba

One Call Made (505-765-1234)? ☒ Y ☐ N

Line Marking Evident? ☒ Y ☐ N

## Pit Location:

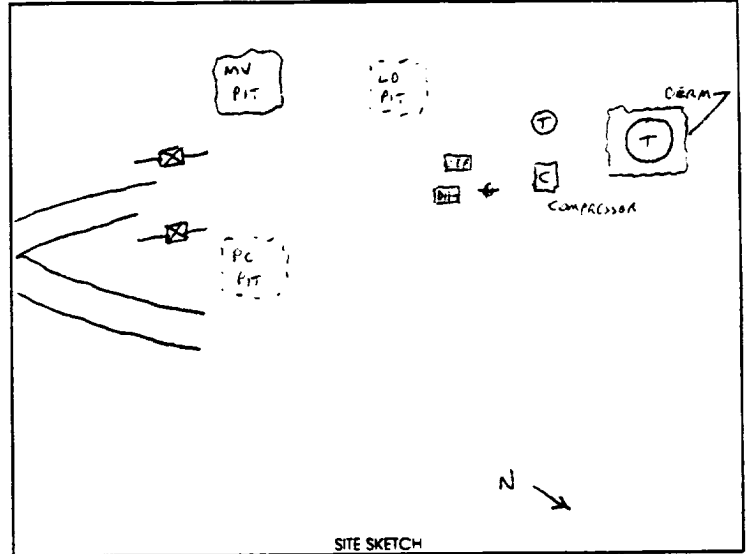
Reference Wellhead ☒ Other ☐

Distance from: 53'

Direction: 122 Degrees ☒ E ☐ N ☒ S  
of  
W S

Starting Pit Dimensions 14 x 15 x 3

Final Pit Dimensions 17 x 19 x 13



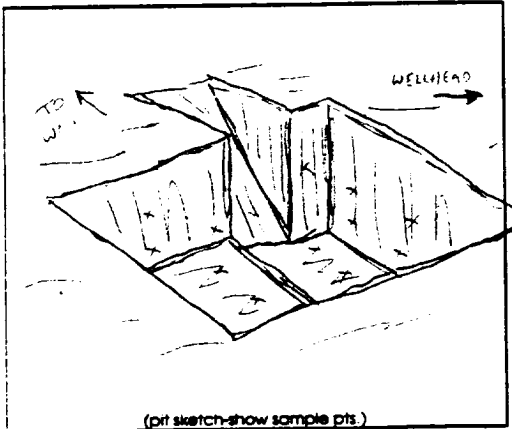
Organic Vapor Readings:	Start	Soil Description:
@ 2'	<u>Wavy line</u>	<u>SILT SAND</u>
@ 4'	<u>Wavy line</u>	<u>" "</u>
@ 6'	<u>Wavy line</u>	<u>" "</u>
@ 8'	<u>Wavy line</u>	<u>" " L/SAT</u>
@ 10'	<u>Wavy line</u>	<u>" " "</u>
@ 13'	<u>Wavy line</u>	<u>" " "</u>

Well Proximity To: Residence, Domestic Water Well, Stock Well ~ 350 YDS SOUTH  
Arroyo, Wash, Lake, Stream LA JARA WASH ~ 150 YDS WEST  
Estimated or Known Distance to Ground Water 15-25'

Source of Backfill (if other than processed material) \_\_\_\_\_

Samples collected:	Type	Progress:	Verification:	ID	soil/ water
				<u>SHIRMAN #2 MV - U-F-XWA-01</u>	<u>soil/ water</u>
				<u>SHIRMAN #2 MV - V-F-EX-FL-01</u>	<u>soil/ water</u>
				_____	<u>soil / water</u>

Sample sent to Lab Via: Courier Hand Carried ☐ Other \_\_\_\_\_ Preservative: ICE Other \_\_\_\_\_



Comments: ONE OF 3 PITS ON LOCATION - OIL STAINED SOIL @ SURFACE & NEAR SURFACE - REMOVE BY EXCAVATING - CUT OUT SIDEWALL STAINS - ODOOR DIMINISHES @ ~ 9' - FLOOR CLEAN @ 12' - CUT BECH + RAMP - STOCKPILE SOIL FOR SHREDDING - APPLY FERTILIZER - SHRED + LANDFARM -

Soil Shipped to: ON-SITE LF

Prepared by: M. [Signature]

## QWAL LABORATORIES, INC.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 8402596

SENT WILLIAMS FIELD SERVICE  
TO: 295 CHIPETA WAY  
SALT LAKE CITY, UTAH 84158  
MARK HARVEY  
PROJECT: WFS/NM-PITS

DATE REPORTED: 02/23/00  
DATE COLLECTED: 02/15/00  
DATE RECEIVED: 02/18/00

Reference Fraction: 8402596-02A  
Sample ID: SHERM#2 MV-EX-RS-01(86944)  
Sample Date Collected: 02/15/00 11:32:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	ND	MG/KG	2	02/22/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		0.094	MG/KG	0.050	02/21/00	KKL
TOLUENE		ND	MG/KG	0.050	02/21/00	KKL
ETHYLBENZENE		ND	MG/KG	0.050	02/21/00	KKL
TOTAL XYLENES		ND	MG/KG	0.050	02/21/00	KKL
BFB (SURROGATE)		106	125	75		

ND-NONE DETECTED

PQL-PRACTICAL QUANTITATION LIMIT

SU-STANDARD UNITS

B-DETECTED IN METHOD BLANK

APPROVED BY: TKOESTER, s

TERRY KOESTER  
LABORATORY DIRECTOR

Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #: 9809684

SENT WILLIAMS FIELD SERVICE-MS4JI  
TO: P.O. BOX 58900  
SALT LAKE CITY, UTAH 84108  
MARK HARVEY  
PROJECT: CRZ DISTRICT 98

DATE REPORTED: 09/28/98  
DATE COLLECTED: 09/18/98  
DATE RECEIVED: 09/22/98

Reference Fraction: 9809684-03A

Sample ID: SHERMAN#2MV-V-EXFL-01 / 86944

Sample Matrix: SOIL

Sample Date Collected: 09/18/98 10:05:00

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	ND	MG/KG	40.0	09/25/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	0.050	09/23/98	JLO
TOLUENE		ND	MG/KG	0.050	09/23/98	JLO
ETHYLBENZENE		ND	MG/KG	0.050	09/23/98	JLO
TOTAL XYLENES		ND	MG/KG	0.050	09/23/98	JLO
BFB (SURROGATE)		89	125	75		

NONE DETECTED  
DL=DETECTION LIMIT  
SU=STANDARD UNITS  
B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #: 9809684

SENT WILLIAMS FIELD SERVICE-MS4JI  
TO: P.O. BOX 58900  
SALT LAKE CITY, UTAH 84108  
MARK HARVEY  
PROJECT: CRZ DISTRICT 98

DATE REPORTED: 09/28/98  
DATE COLLECTED: 09/18/98  
DATE RECEIVED: 09/22/98

Reference Fraction: 9809684-04A  
Sample ID: SHERMAN#2MV-V-EXWA-01  
Sample Date Collected: 09/18/98 10:05:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	13.1	MG/KG	2.0	09/25/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	0.050	09/23/98	JLO
TOLUENE		ND	MG/KG	0.050	09/23/98	JLO
ETHYLBENZENE		ND	MG/KG	0.050	09/23/98	JLO
TOTAL XYLENES		ND	MG/KG	0.050	09/23/98	JLO
BFB (SURROGATE)		103	125	75		

:NONE DETECTED  
DL=DETECTION LIMIT  
SU=STANDARD UNITS  
B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

**QWAL LABORATORIES, INC.**

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

**LABORATORY REPORT:****REFERENCE #:** 9905122

**SENT WILLIAMS FIELD SERVICE**  
**TO: 295 CHIPETA WAY**  
**SALT LAKE CITY, UTAH 84158**  
**MARK HARVEY**  
**PROJECT: NM PITS**

**DATE REPORTED: 05/19/99**  
**DATE COLLECTED: 04/29/99**  
**DATE RECEIVED: 05/05/99**

**Reference Fraction: 9905122-03A**  
**Sample ID: SHERM #2(MV) 86944-LF 86744**  
**Sample Date Collected: 04/29/99 10:30:00**

**Sample Matrix: SOIL**

TEST	METHOD	RESULT	UNITS	PQL	ANALYSED BY
TPH	SW846-8015	84.0	MG/KG	2	05/10/99 KKL

**ND=NONE DETECTED**  
**PQL=PRACTICAL QUANTITATION LIMIT**  
**SU=STANDARD UNITS**  
**B=DETECTED IN METHOD BLANK**

**APPROVED BY:**

  
**TERRY KOESTER**  
**LABORATORY DIRECTOR**