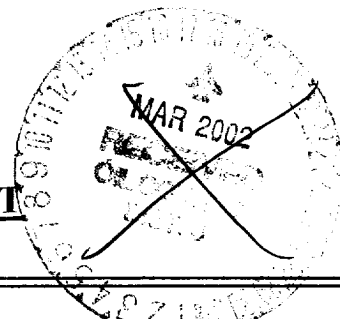


State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

PIT REMEDIATION AND CLOSURE REPORT



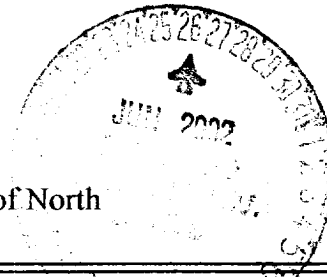
Operator: HALLADOR PETROLEUM Telephone: (801) 584-6361  
Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900  
WellName: HORTON #7 ( hort7 )  
Location: Unit or Qtr/Qtr ~~Sec~~ 0 Sec 22 T 32N R 11W County San Juan  
PitType Dehydrator  
LandType: BLM

Pit Location: Pit dimensions: length 21 ft., width 23 ft., depth 16 ft.  
(Attach diagram)

Reference: Wellhead

Footage from reference: 54 ft.

Direction from reference: 81 Degrees West of North



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) <u>10</u>

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)
No	(0 points) <u>0</u>

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 1,000 feet	(10 points)
Greater than 1,000 feet	(0 points) <u>0</u>

Ranking Score (TOTAL POINTS): 10

Date Remediation Started: 11/22/00

Date Completed: \_\_\_\_\_

Remediation Method: Excavation ☐

Approx. Cubic Yard 268

(check all appropriate  
sections)

Landfarmed ☐

Insitu Bioremediation ☐

Other

Landfarmed soil after mechanical aeration. NON-VULNERABLE

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. Return to site--expand excavation and remove additional hydrocarbon impacted soils. Resample floor/walls.

Ground Water Encountered: 0

Final Pit:

Sample location HORTON #7-V-EXFL-01

Closure Sampling:

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

Sample depth 18'

Sample date 12/22/00

Sample time 10:50

Sample Result

Benzene (ppm) ND

Total BTEX (ppm) 37.7

Field Headspace (ppm) 66

TPH (ppm) 238

Ground Water Sample: 0

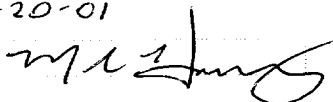
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO  
THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 12-20-01

PRINTED NAME  
AND TITLE

Mark Harvey for Williams Field Services  
Proj. Coordinato

SIGNATURE



## PIT RETIREMENT FORM

Date: 11-22-00

HORTON #

Weather SUNNY 150°Well Name HORTON #7 Operator HALLADOR PETROLEUM Sec 22 T32N R11W DLSE/4

Land Type: BLM STATE FEE INDIAN

County SAN JUANOne Call Made (505-765-1234)? ☒ Y NLine Marking Evident? ☒ Y N

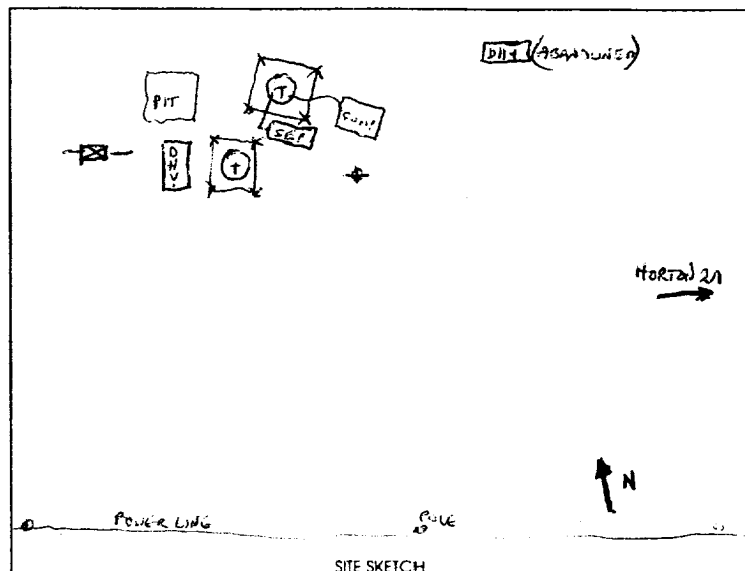
## Pit Location:

Reference Wellhead ☒ Other \_\_\_\_\_Distance from: 54Direction: 81 Degrees \_\_\_\_\_ E N ☒ X

of

☒ W S \_\_\_\_\_Starting Pit Dimensions 12 x 12 x 2

Final Pit Dimensions \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_



Organic Vapor Readings: Start \_\_\_\_\_  
 @ 2' \_\_\_\_\_  
 @ 4' \_\_\_\_\_  
 @ 6' \_\_\_\_\_  
 @ 8' \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_

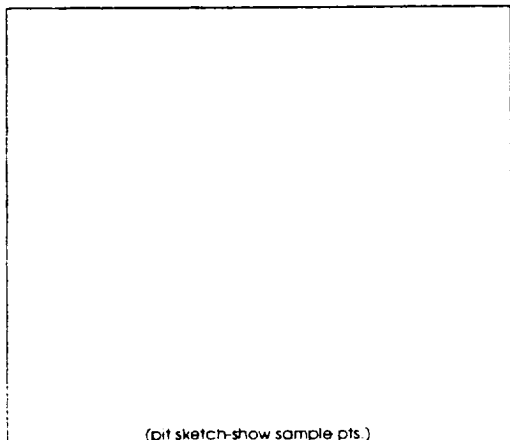
Soil Description: SILT  
CLAYEY SILT W/ SAND  
CLAYEY SILT TO SILTY CLAY  
SANDY SILT W/ CLAY  
SANDY SILT

Well Proximity To: Residence, Domestic Water Well, Stock Well NONEArroyo, Wash, Lake, Stream COX CANYON WASH ~ 2 MILES NORTHEstimated or Known Distance to Ground Water 50-100'

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

Samples collected: Type Progress: Verification ID \_\_\_\_\_ soil / water  
 Progress: Verification ID \_\_\_\_\_ soil / water  
 Progress: Verification: ID \_\_\_\_\_ soil / water

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



(pit sketch-show sample pts.)

Comments: PULL FENCE + NETTING - HAD TO CLEAR WORKING AREA ON  
NORTH SIDE OF PIT DUE TO LOCATION OF DEHY, NEW DEHY TANK + SEPARATOR.  
MATERIAL VERY MOIST W/ SLIGHT H2SO4 CARBON ODOOR - LT GREY STAINING.  
MATERIAL @ 4-5' HAS ONLY SLIGHT ODOOR - EXCAVATE TO 6' - INCREASED H2SO4 CARBON  
ODOOR - EXCAVATE TO 10' - STILL ODOOR - EXCAVATE TO 15' - PRACTICAL RECENT  
OF BACKFILL - CUT TRENCH TO 17' TO SAMPLE - ODOOR DIMINISHED -  
SOME RESIDUAL CONTAMINATION LINGERS 15'-17' - WALLS ARE GENERALLY  
LOW TO SLIGHT ODOOR -

Soil Shipped to: \_\_\_\_\_

Prepared by: M. J. [Signature]

# 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 #: 0012654

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

DATE REPORTED: 01/04/01  
DATE COLLECTED: 12/22/00  
DATE RECEIVED: 12/28/00

PROJECT: TAA PITS

Reference Fraction: 0012654-02A

Sample ID: HORTON #7-V-WA-02

Sample Date Collected: 12/22/00 10:55:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	238	MG/KG	1.0	12/30/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.050	12/29/00	KKL
TOLUENE		ND	MG/KG	0.050	12/29/00	KKL
ETHYLBENZENE		ND	MG/KG	0.050	12/29/00	KKL
TOTAL XYLENES		37.7	MG/KG	0.050	12/29/00	KKL
BFB (SURROGATE)		86	125	75		

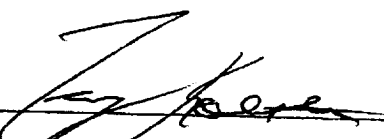
ND=NONE DETECTED

PQL=PRACTICAL QUANTITATION 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 #:** 0012654

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

DATE REPORTED: 01/04/01  
 DATE COLLECTED: 12/22/00  
 DATE RECEIVED: 12/28/00

**Reference Fraction:0012654-01A**

**Sample ID: HORTON #7-V-FL-02**

Sample Matrix: SOIL

Sample Date Collected: 12/22/0010:50:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	805	MG/KG	1.0	12/30/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.10	01/02/01	KKL
TOLUENE		2.18	MG/KG	0.10	01/02/01	KKL
ETHYLBENZENE		13.0	MG/KG	0.10	01/02/01	KKL
TOTAL XYLENES		96.1	MG/KG	0.10	01/02/01	KKL
BFB (SURROGATE)		107	125	75		

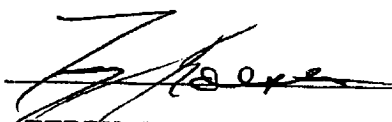
ND=NONE DETECTED

PQL=PRACTICAL QUANTITAION 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 #: 0012155

SENT WILLIAMS GAS PIPELINE  
TO: 187 COUNTY ROAD # 4980  
BLOOMFIELD, NM 87413  
MARK HARVEY  
PROJECT: TAA PITS

DATE REPORTED: 12/12/00  
DATE COLLECTED: 12/04/00  
DATE RECEIVED: 12/06/00

Reference Fraction: 0012155-05A

Sample ID: HORTON #7-V-LF-01 HORTON #7

Sample Matrix: SOIL

Sample Date Collected: 12/04/00 12:39:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED BY
TPH-DRO	SW846-8015D	381	MG/KG	2.0	12/11/00 BBT
BTEX	OA1/8021B			3.0	
BENZENE		ND	MG/KG	0.050	12/07/00 MB
TOLUENE		1.03	MG/KG	0.050	12/07/00 MB
ETHYLBENZENE		0.181	MG/KG	0.050	12/07/00 MB
TOTAL XYLENES		9.37	MG/KG	0.050	12/07/00 MB
BFB (SURROGATE)		97	125	75	

ND=NONE DETECTED

PQL=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR