

Release Notification and Corrective Action

OPERATOR

☐ Initial Report
☒ Final Report

Name of Company	Apache Corporation	Contact	Natalie Gladden
Address	P.O. Box 1849	Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name	State O #12	Facility Type	Oil Well

Surface Owner	Municipal - City of Lovington	Mineral Owner	State of NM	API No.	30-025-05368
---------------	-------------------------------	---------------	-------------	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from East Line	Longitude-W	Latitude-N	County
J	31	16S	37E	1650	2310	103.2886	32.8759	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Crude Oil and Produced Water	Less than 5 bbl	0 bbl
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Wellhead	9/27/07 10:00 AM	9/27/07 10:00 AM
Was Immediate Notice Given?	If YES, To Whom?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required	NMOCD - Hobbs - Larry Johnson	
By Whom?	Date and Hour	
Guinn Burks	9/27/07 2:30 PM	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	NA	

If a Watercourse was Impacted, Describe Fully*

RECEIVED

Describe Cause of Problem and Remedial Action Taken. *

Stuffing box blew out spraying oil into air and onto location.

FEB 26 2008

HOBBS OCD

Describe Area Affected and Cleanup Action Taken. *

Approximately 4500-ft² on the caliche well pad was affected. Vegetation NW of the well was affected by overspray and was cleansed with a mild detergent from a pressure washer. Hydrocarbon contaminated soil was excavated from the well pad and disposed of at the J-Dan Landfarm. The excavation was backfilled with clean caliche. Remediation was performed by Elke Environmental - Hobbs. Remedial Action Levels achieved by removal and blending of low-level chloride remnants.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	<i>Natalie Gladden</i>	OIL CONSERVATION DIVISION	
Printed Name:	Natalie Gladden	Approved by District Supervisor:	<i>ENVIRO ENGR</i> <i>[Signature]</i>
Title:	Environmental Tech - Permian Basin	Approval Date:	2-26-08
E-Mail Address:	Natalie.Gladden@usa.apachecorp.com	Expiration Date:	4-26-08
Date:	2/25/2008	Phone:	575-390-4186
		Conditions of Approval:	RP# 1602
		<input type="checkbox"/> Attached	



STATE O #12 WELL C141 CLOSURE REPORT

API 30-025-05368

UL-J (NW¼ OF THE SE¼) OF SECTION 31 T16S R37E
LATITUDE: N 32° 52.5510' LONGITUDE: W 103° 17.3184'
~5.9 MILES SE (BEARING 141.2°) OF LOVINGTON
LEA COUNTY, NEW MEXICO

NMOCD RP #1602

February 25, 2008

PREPARED FOR APACHE CORPORATION BY:

ELKE ENVIRONMENTAL, INC.	
Pit Closures • Site Remediation Site Reclamation • Consulting	PO Box 1830
	3506 West County Rd
	Hobbs, NM 88241
	Office: 575-738-0138
	Cell: 575-631-3277
	Fax: 575-738-0140
	E-mail: jcgood4614@aol.com
JOHN GOOD	
PROJECT MANAGER—CONSULTANT	

A detailed black and white illustration of a buck deer, shown in profile facing left, with its antlers partially visible.

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1.0 Project Summary

Release Site Name: State O #12
Operating Company: Apache Corporation
Company Representative: Natalie Gladden, Environmental Tech Phone: 575-390-4186
Address: PO Box 1849, Eunice, NM 88231 Email: Natalie.Gladden@usa.apachecorp.com
Remediation Company: ELKE Environmental, Inc. - Hobbs Phone: 575-738-0138

SITE SPECIFIC DATA:

Legal Description: Lea County, New Mexico UL-J Section 31 T16S R37E
General Location: 5.9 miles SE (141.2°) of Lovington, NM.
Latitude: N32° 52.5510' Longitude: W103° 17.3184' Elevation: 3,830-ft amsl
Land Ownership: Municipal – City of Lovington
Ground Water Elevation: ~60' bgs (based on Chevron/Texaco contour map)
Water Wells within 1000-ft: none Surface Water within 1000-ft: none

RELEASE SPECIFIC DATA:

Date and Time of Release(s): 10:00 AM - - 9/27/07
Material Released: Crude Oil and Produced Water
Volume Released: <5-bbl Volume Recovered: 0-bbl
Cause of Release: Well head packing
Release Affected Area: ~6,500-ft²
Depth of Contamination: 8-ft
NMOCD Site Ranking: 10 (ground water >50'; <100' below lowest contamination)

Remediation Action Levels: TPH: 1000-ppm; Benzene: 10-ppm; BTEX: 50-ppm; Cl – 250-ppm

REMEDIATION:

1160-yd³ of contaminated soil was excavated from the north and south sides of the well location and disposed of at the J-Dan Landfarm located west of Lovington. Each truck brought back a load of clean caliche from a caliche pit owned by Danny Watson east of the landfarm. The clean material was stockpiled on the NW corner of the pad area. The north and south excavations were initially extended to 6-ft bgs. At that point, the bottom and sides were field-analyzed for chloride levels. Results indicated that the south excavation was nearly clean except to two spots; and the north side needed further excavation to obtain clean sides and bottom. The material removed from the areas requiring additional excavation was blended with the clean caliche stockpiled for backfill.

The bottoms and sides were sampled at 22 sampling points, field analyzed and submitted to Cardinal Laboratories for confirmation. The blended backfill was sampled at three levels as each excavation was backfilled.

2.0 Detailed Site Description

2.1 Geological Description

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as "an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil." The release site is located in the High Plains physiographic subdivision (more commonly referred to as the Llano Estacado), described by Nicholson & Clebsch as "a flat, gently sloping plain, treeless, and marred only by slight undulations and covered with short prairie grass."

2.2 Ecological Description

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (*Quercus harvardi*) interspersed with Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses, flowering annuals and flowering perennials. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, Amphibians, and Birds are numerous and typical of the area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 Area Ground Water

Based on the most current available evidence (*Chevron-Texaco contour map, Plate 4 of Attachments*), depth to ground water is projected to be 60-ft below ground surface (bgs).

2.4 Area Water Wells

There are no recorded or observed water wells within 1000 horizontal feet of the site.

2.5 Area Surface Water Features

No permanent surface water bodies exist within 1000 horizontal feet of the site.

3.0 Contaminant and Size of Area

The primary Contaminants of Concern (COCs) were petroleum hydrocarbons and total chlorides resulting from the accumulated well head releases over time. Hydrocarbon contamination was limited to the top 12-in of the area. The contaminated area was ~6,500-ft² on the north and south sides of the pumpjack.

4.0 NMOCD Site Ranking

Contaminant delineation and site evaluation work done at this site indicate that the chemical parameters of the soil and the physical parameters of the ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the following New Mexico Oil Conservation Division (NMOCD) publications:

➤ *Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)*

➤ *Unlined Surface Impoundment Closure Guidelines (February 1993)*

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH^{8015m}, Benzene, and the mass sum of Benzene, Toluene, Ethyl Benzene, and total Xylenes (BTEX⁸²⁶⁰), was determined based on the NMOCD Ranking Criteria as follows:

- *Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.*
- *Wellhead Protection Area, i.e., distance from fresh water supply wells.*
- *Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.*

Based on the proximity of the site to area water wells, surface water bodies, and depth to ground water from the lower most contamination, the NMOCD ranking score for the site is 10 points with the soil remedial goals highlighted in the Site Ranking Table.

SITE RANKING TABLE

1. GROUND WATER	2. WELLHEAD PROTECTION	3. DISTANCE TO SURFACE WATER	
DEPTH TO GW <50 FEET: 20 POINTS	IF <1000' FROM WATER SOURCE, OR; <200' FROM PRIVATE DOMESTIC WATER SOURCE: 20 POINTS	<200 HORIZONTAL FEET: 20 POINTS	
DEPTH TO GW 50 TO 99 FEET: 10 POINTS		200-1000 HORIZONTAL FEET: 10 POINTS	
DEPTH TO GW >100 FEET: 0 POINTS	IF >1000' FROM WATER SOURCE, OR; >200' FROM PRIVATE DOMESTIC WATER SOURCE: 0 POINTS	>1000 HORIZONTAL FEET: 0 POINTS	
GROUND WATER SCORE = 10	WELLHEAD PROTECTION SCORE= 0	SURFACE WATER SCORE= 0	
SITE RANK (1+2+3) = 0 + 0 + 0 = 10 POINTS			
TOTAL SITE RANKING SCORE AND ACCEPTABLE REMEDIAL GOAL CONCENTRATIONS			
PARAMETER	20+	10	0
BENZENE	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	100 PPM	1000 PPM	5000 PPM

5.0 Remediation Process

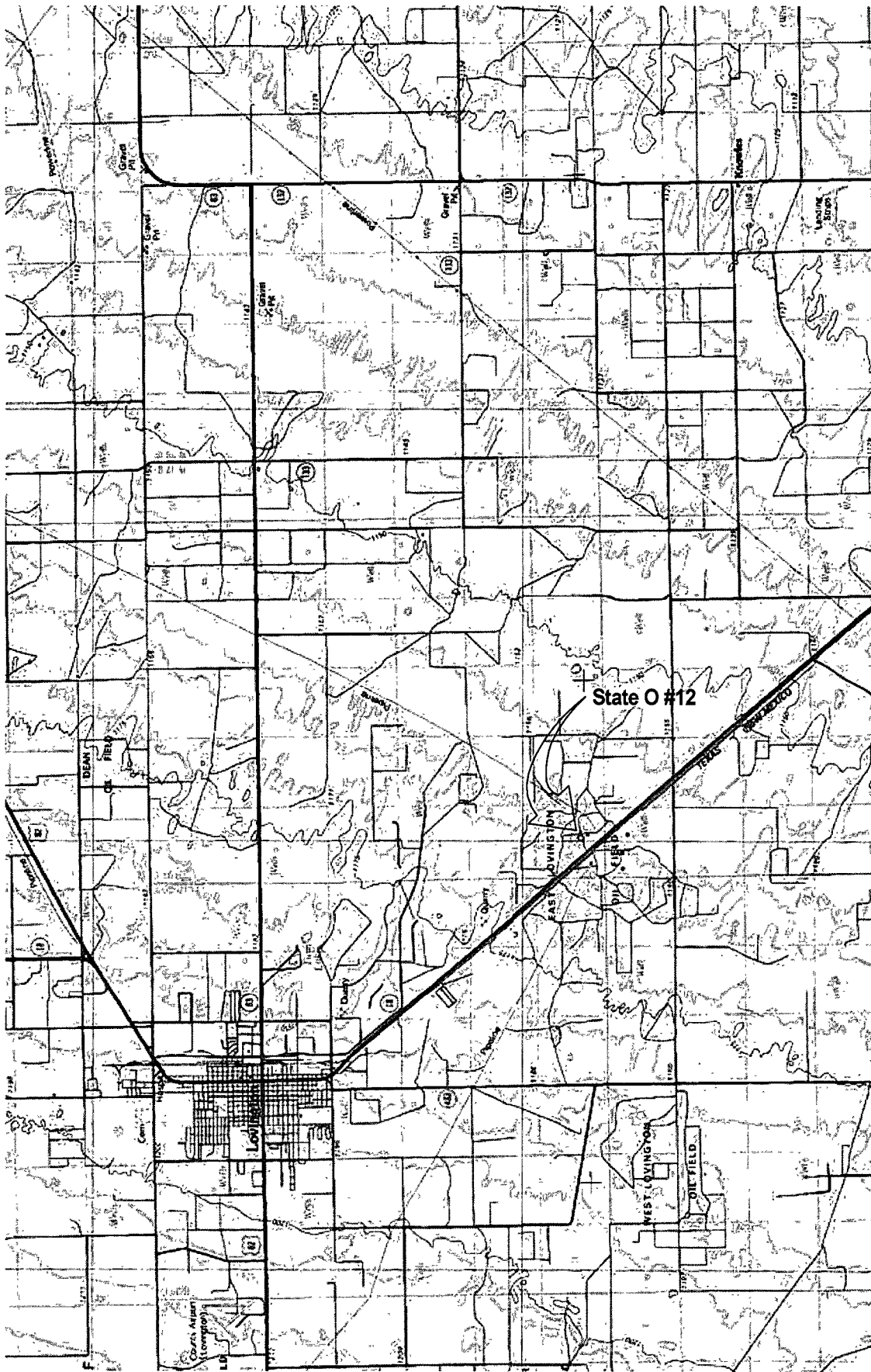
1160-yd³ of contaminated soil was excavated from the north and south sides of the well location and disposed of at the J-Dan Landfarm located west of Lovington. Each truck brought back a load of clean caliche from a caliche pit owned by Danny Watson east of the landfarm. The clean material was stockpiled on the NW corner of the pad area. The north and south excavations were initially extended to 6-ft bgs. At that point, the bottom and sides were field-analyzed for chloride levels. Results indicated that the south excavation was nearly clean except to two spots; and the north side needed further excavation to obtain clean sides and bottom. The material removed from the areas requiring additional excavation was blended with the clean caliche stockpiled for backfill.

The bottoms and sides were sampled at 22 sampling points, field analyzed and submitted to Cardinal Laboratories for confirmation. The blended backfill was sampled at three levels as each excavation was backfilled.

Based upon the information and data presented within this C141 Closure Document, Apache Corporation requests that NMOCD require “no further action” regarding the September 27, 2007 produced water and hydrocarbon release at the State O #12 well location.

ATTACHMENTS

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Plate 2: Site Topography Map	8
Plate 3: Site Aerial Photograph	9
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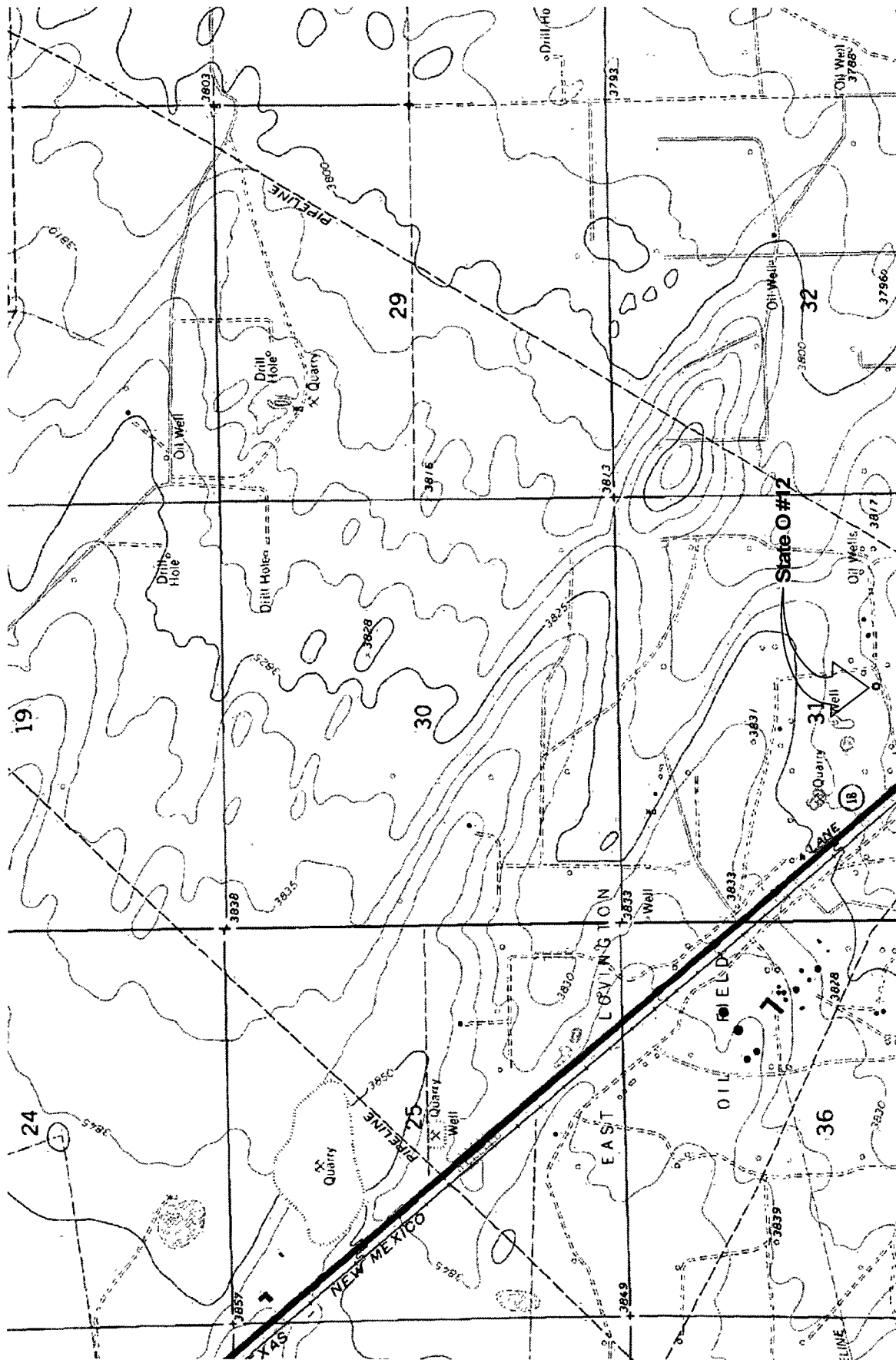
Drawing by: John Good
February - 2008

Rev. 1

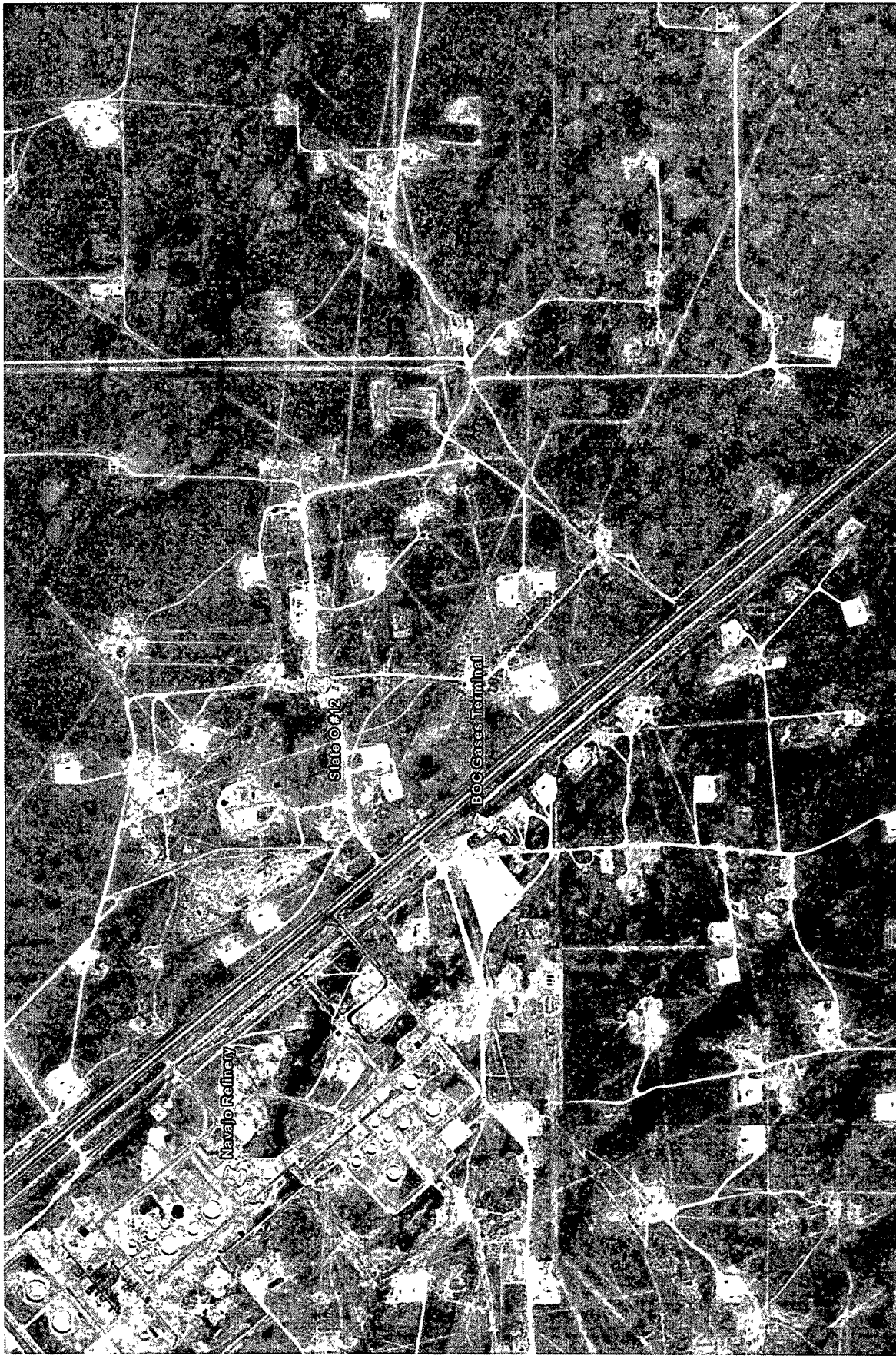
SCALE:
0 4
Miles

Lea County, New Mexico
UL-J SECTION 31 T16S R37E
N 32° 52.55', W 103° 17.318'
Elevation: ~3830-ft amsl

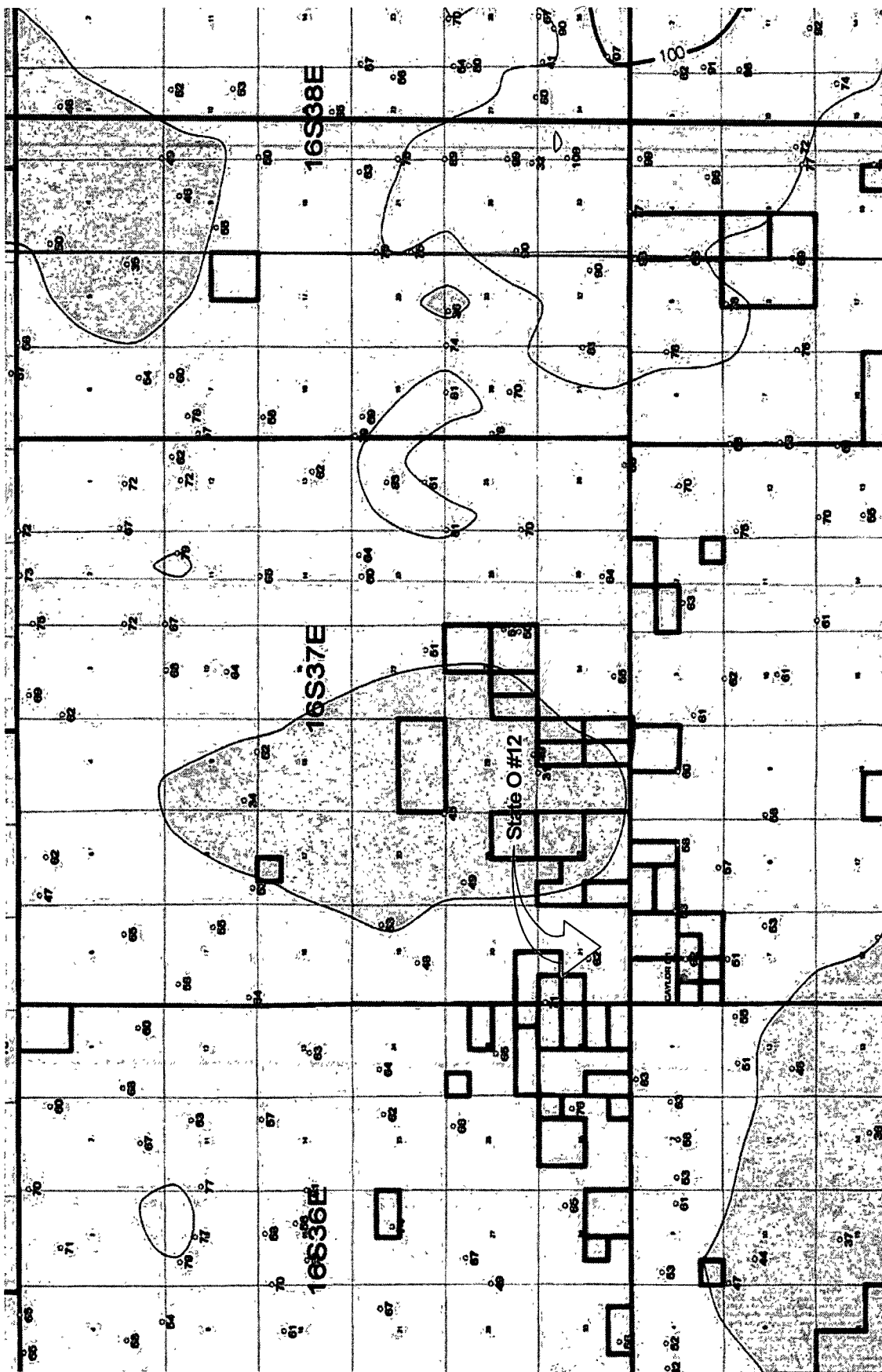
Plate 1
Site Location
Apache Corporation
State O #12



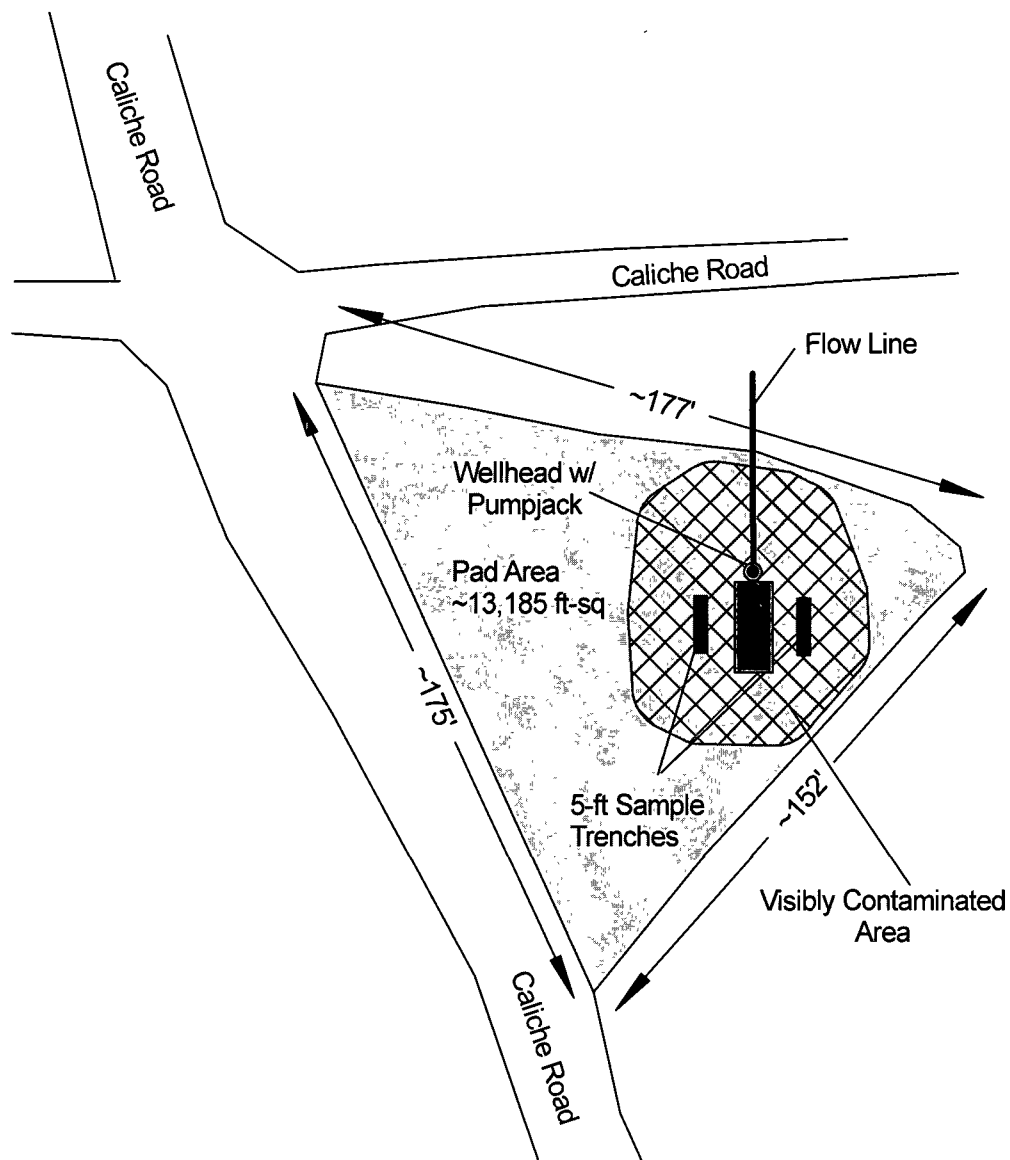
<p>Plate 2</p> <p>Site Topography</p> <p>Apache Corporation</p> <p>State O #12</p>	<p>Lea County, New Mexico</p> <p>UL-J SECTION 31 T16S R37E</p> <p>N 32° 52.551', W 103° 17.318'</p> <p>Elevation: ~3830-ft amsl</p>	<p>Drawing by: John Good</p> <p>February - 2008</p> <p>Rev: 1</p>
<p>SCALE:</p> <p>0 4000</p> <p>Feet</p>	<p>State O #12</p>	<p>North Arrow</p>



<p>Plate 3</p> <p>Site Vicinity Aerial Photo</p> <p>Apache Corporation</p> <p>State O #12</p>	<p>Lea County, New Mexico</p> <p>UL-J SECTION 31 T16S R37E</p> <p>N 32° 52' 55" W 103° 17' 31"</p> <p>Elevation: ~3830-ft amsl</p>		<p>SCALE:</p> <p>0 2000 Feet</p>	
	<p>Drawing by: John Good</p> <p>February - 2008</p>	<p>Rev:</p> <p>1</p>		



<p>Plate 4</p> <p>Area Water Table Contour Map</p> <p>Apache Corporation</p> <p>State O #12</p>	<p>Lea County, New Mexico</p> <p>UL-J SECTION 31 T16S R37E</p> <p>N 32° 52' 55" W 103° 17' 31" E</p> <p>Elevation: ~3830-ft amsl</p>	<p>Drawing by: John Good</p> <p>February - 2008</p>	<p>Rev: 1</p> <p>SCALE: 0 3 Miles</p> <p>N</p>
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HYDROCARBON & CHLORIDE ANALYTICAL RESULTS					
Sample Location	Sample Depth ¹	GRO ² mg/Kg	DRO ³ mg/Kg	TPH ⁴ mg/Kg	Chlorides mg/Kg
South	1-ft	10	10	20	2270
South	3-ft	10	10	20	1460
South	5-ft	10	10	20	480
North	1-ft	10	10	20	1920
North	3-ft	10	10	20	800
North	5-ft	10	10	20	608

¹bgs (below ground surface); ²Gasoline Range Organics (detection limit = 10 mg/Kg); ³Diesel Range Organics (detection limit = 10 mg/Kg); ⁴TPH = sum of GRO-DRO. Note: Detection limits are considered "de minimus" values and are included in TPH and BTEX summations.

Plate 5

Site Detail and Delineation Results

Apache Corporation

State O Paddock #12

Lea County, New Mexico

UL-J SECTION 31 T16S R37E

N 32° 52.573', W 103° 17.324'

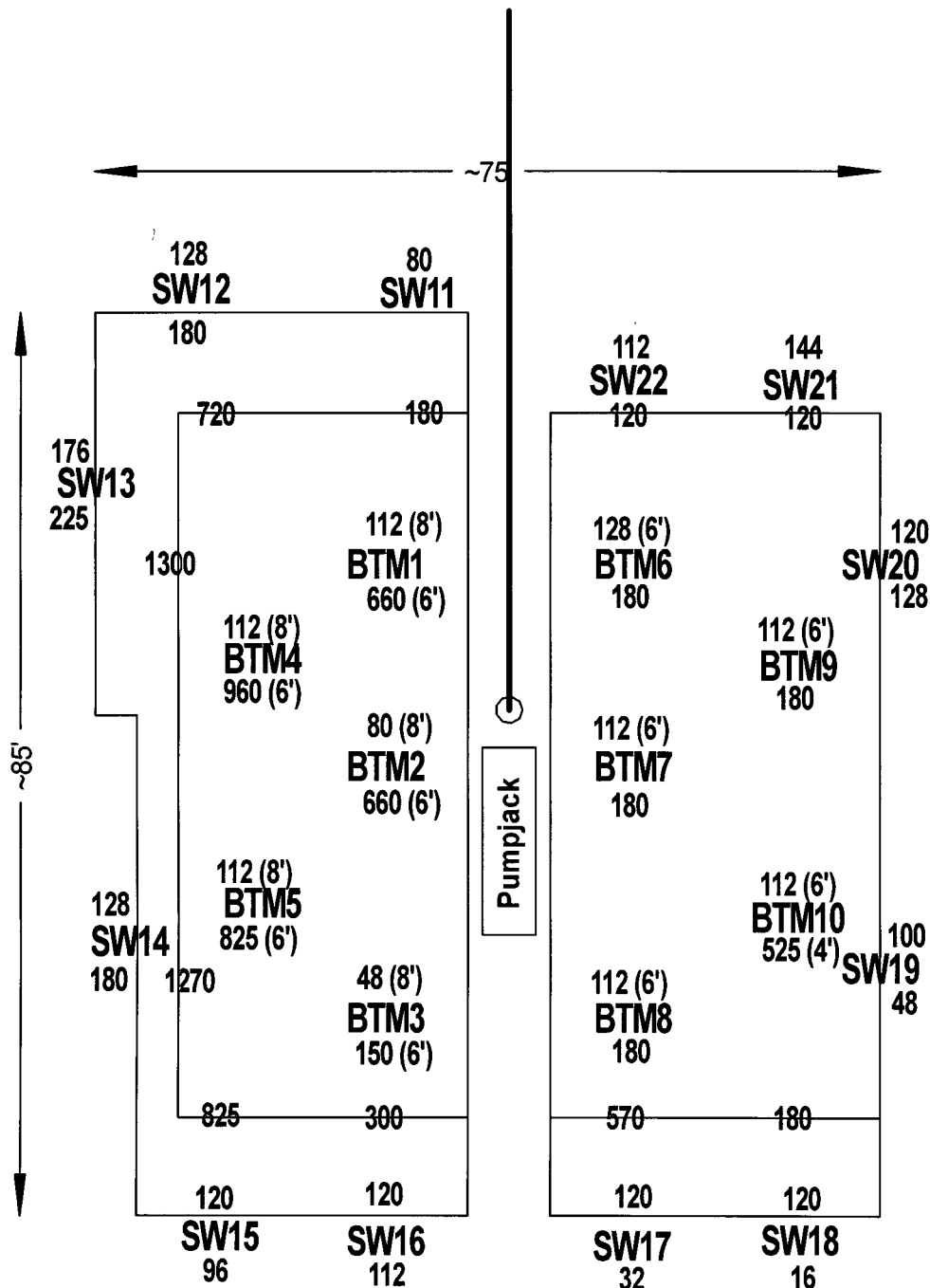
Elevation: ~3817-ft amsl

Drawing by: John Good

November - 2007

Rev: 2


SCALE: 0 100 Feet



= Sidewalls extended to achieve <250-ppm Cl

Field Analyses - Chlorides (ppm)

Lab Analyses - Chlorides (ppm)

	
Rev: 1	
Drawing by: John Good February - 2008	SCALE:
Lea County, New Mexico UL-J SECTION 31 T16S R37E N 32° 52.573', W 103° 17.324' Elevation: ~3817-ft amsl	
Plate 6	Site Excavation - Sampling Results Apache Corporation State O #12

TPH and CHLORIDE DELINEATION RESULTS					
Sample Location	Sample Depth ¹	GRO ² mg/Kg	DRO ³ mg/Kg	TPH ⁴ mg/Kg	Chlorides mg/Kg
South	1-ft	10	10	20	2270
South	3-ft	10	10	20	1460
South	5-ft	10	10	20	480
North	1-ft	10	10	20	1920
North	3-ft	10	10	20	800
North	5-ft	10	10	20	608
CHLORIDE FINAL EXCAVATION RESULTS					
BTM-1	8-ft				112
BTM-2	8-ft				80
BTM-3	8-ft				48
BTM-4	8-ft				112
BTM-5	8-ft				112
BTM-6	6-ft				128
BTM-7	6-ft				112
BTM-8	6-ft				112
BTM-9	6-ft				112
BTM-10	6-ft				112
SW-11	4-ft				80
SW-12	4-ft				128
SW-13	4-ft				176
SW-14	4-ft				128
SW-15	4-ft				96
SW-16	4-ft				112
SW-17	4-ft				32
SW-18	4-ft				16
SW-19	4-ft				48
SW-20	4-ft				128
SW-21	4-ft				144
SW-22	4-ft				112
N BKFILL-1	8-ft				64
N BKFILL-2	6-ft				96
N BKFILL-3	3-ft				128
S BKFILL-1	6-ft				96
S BKFILL-2	4-ft				224
S BKFILL-3	2-ft				96
¹ bgs (below ground surface); ² Gasoline Range Organics (detection limit = 10 mg/Kg); ³ Diesel Range Organics (detection limit = 10 mg/Kg); ⁴ TPH = sum of GRO-DRO. Note: Detection limits are considered "de minimus" values and are included in TPH and BTEX summations.					



ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ELKE ENVIRONMENTAL
ATTN: JOHN GOOD
3506 N. WEST COUNTY RD.
HOBBS, NM 88240
Fax: (575) 738-0140

Receiving Date: 10/16/07
Reporting Date: 10/18/07
Project Owner: APACHE
Project Name: STATE O #12
Project Location: NOT GIVEN

Sampling Date: 10/16/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: SB
Analyzed By: CK/HM

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₂) (mg/kg)	DRO (>C ₁₂ -C ₂₈) (mg/kg)	Cl ⁻ (mg/kg)
		10/16/07	10/16/07	10/16/07
H13516-1	SOUTH - 1	<10.0	<10.0	2270
H13516-2	SOUTH - 3	<10.0	<10.0	1460
H13516-3	SOUTH - 5	<10.0	<10.0	480
H13516-4	NORTH - 1	<10.0	<10.0	1920
H13516-5	NORTH - 3	<10.0	<10.0	800
H13516-6	NORTH - 5	<10.0	<10.0	608
Quality Control		473	533	500
True Value QC		500	500	500
% Recovery		94.6	107	100
Relative Percent Difference		11.8	14.6	<0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Std. Methods 4500-Cl⁻B

*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

Date

H13516TCL ELKE



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: ELKE ENVIRONMENTAL				BILL TO				ANALYSIS REQUEST																				
Project Manager: JOHN GOOD				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">51015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH 8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chlorides</div> </div>																				
Address: 3506 N. WEST COUNTY RD				Company:																								
City: HOBBS State: NM Zip: 88241				Attn:																								
Phone #: Fax #:				Address:																								
Project #: Project Owner: APACHE				City:																								
Project Name: STATE O #12				State: Zip:																								
Project Location:				Phone #:																								
Sampler Name: JOHN GOOD				Fax #:																								
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																		
Lab I.D.	Sample I.D.	(G)RABOR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:	DATE	TIME														
H-13516-1	SOUTH - 1	G	1			X				X			10/16	9:00	X	X												
-2	SOUTH - 3																											
-3	SOUTH - 5																											
-4	NORTH - 1																											
-5	NORTH - 3																											
-6	NORTH - 5													9:30														

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for moderate or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>John Good</i>	Date: <i>10/14/07</i>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
	Time: <i>10:40</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:	<i>Due Banner 10/16/07 10:40am</i>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sampler: <u>UPS</u> - Bus - Other:	Cool Intact	(Initials)	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>SB</i>	

Cardinal cannot accept verbal changes. Please fax written changes to 505.393.2476

ELKE ENVIRONMENTAL, INC.

15

Apache State O #12



Analysis Date: 02/18/08
Sampling Date: 02/10/08-02/12/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/kg)
H14265-1	BTM-1	112
H14265-2	BTM-2	80
H14265-3	BTM-3	48
H14265-4	BTM-4	112
H14265-5	BTM-5	112
H14265-6	BTM-6	128
H14265-7	BTM-7	112
H14265-8	BTM-8	112
H14265-9	BTM-9	112
H14265-10	BTM-10	112
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0

4500-CIB

Note: Analyses performed on 1:4 w:v aqueous extracts.

02/18/08
Date

PLEASE NOTE. **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Result relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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ANALYTICAL RESULTS FOR
ELKE ENVIRONMENTAL, INC.
ATTN: JOHN GOOD
P.O. BOX 1830
HOBBS, NM 88241
FAX TO: (575) 738-0140

Receiving Date: 02/15/08
Reporting Date: 02/18/08
Project Owner: APACHE CORP.
Project Name: STATE O PADDOCK #12
Project Location: UL-J S31 T16S R37E

Analysis Date: 02/18/08
Sampling Date: 02/10/08-02/12/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/kg)
H14265-11	SW-11	80
H14265-12	SW-12	128
H14265-13	SW-13	176
H14265-14	SW-14	128
H14265-15	SW-15	96
H14265-16	SW-16	112
H14265-17	SW-17	32
H14265-18	SW-18	16
H14265-19	SW-19	48
H14265-20	SW-20	128
H14265-21	SW-21	144
H14265-22	SW-22	112
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		2.0

METHOD: Standard Methods 4500-ClB

Note: Analyses performed on 1:4 w:v aqueous extracts.

Krista Supers
Chemist

02/18/08
Date

H14265 ELKE

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**ARDINAL
LABORATORIES**

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

CHAIN OF CUSTODY AND ANALYSIS REQUEST

Company Name: ELKE ENVIRONMENTAL, INC.		BILL TO		ANALYSIS REQUEST											
Project Manager: JOHN GOOD		P.O. #:													
Address: 3506 WEST COUNTY RD		Company: Apache Corp													
City: HOBBS State: NM Zip: 88241		Attn: Natalie Gladden													
Phone #: 575-738-0138 Fax #: 575-738-0140		Address: PO Box 1849													
Project #: _____ Project Owner: APACHE CORP		City: Eunice													
Project Name: STATE O PADDOCK #12		State: NM Zip: 88231													
Project Location: UL-J S31 T16S R37E		Phone #: 575-390-4186													
Sampler Name: JOHN GOOD		Fax #: _____													

Lab I.D.	Sample I.D.	(C)RAB OR (C)OMF # CONTAINERS	MATRIX					PRESERV		SAMPLING		TPH ⁸⁰¹⁵	BTEX	Chlorides										
			GROUND WATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER:	DATE	TIME												
H 142621	BTM-1	G 1			X			X			12-Feb	3:00			X									
H -2	BTM-2	G 1			X			X			12-Feb	3:05			X									
H -3	BTM-3	G 1			X			X			10-Feb	10:00			X									
H -4	BTM-4	G 1			X			X			12-Feb	3:30			X									
H -5	BTM-5	G 1			X			X			12-Feb	3:35			X									
H -6	BTM-6	G 1			X			X			10-Feb	10:03			X									
H -7	BTM-7	G 1			X			X			10-Feb				X									
H -8	BTM-8	G 1			X			X			10-Feb	↓			X									
H -9	BTM-9	G 1			X			X			10-Feb	10:15			X									
H -10	BTM-10	G 1			X			X			11-Feb	4:00			X									
H -11	SW-11	G 1			X			X			10-Feb	10:00			X									
H -12	SW-12	G 1			X			X			12-Feb	3:40			X									
H -13	SW-13	G 1			X			X			12-Feb				X									
H -14	SW-14	G 1			X			X			12-Feb				X									
H -15	SW-15	G 1			X			X			12-Feb	↓			X									
H -16	SW-16	G 1			X			X			12-Feb	3:55			X									
H -17	SW-17	G 1			X			X			11-Feb	4:05			X									
H -18	SW-18	G 1			X			X			10-Feb	10:18			X									
H -19	SW-19	G 1			X			X			10-Feb				X									
H -20	SW-20	G 1			X			X			10-Feb	↓			X									
H -21	SW-21	G 1			X			X			10-Feb	↓			X									
H -22	SW-22	G 1			X			X			10-Feb	10:30			X									

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Relinquished by:	Date: 2/15/08	Received By:	Phone Result: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone#: 631-3277 (J. Good)
	Time: 2:40p		Fax Result: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Relinquished by:	Date:	Received By:	Remarks: Do Not mail originals! Call John + he will come get them!
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: (Initials)	Note: Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

ELKE ENVIRONMENTAL, INC.

18

Apache State O #12



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ELKE ENVIRONMENTAL, INC.
ATTN: JOHN GOOD
P.O. BOX 1830
HOBBS, NM 88241
FAX TO: (575) 738-0140

Receiving Date: 02/18/08
Reporting Date: 02/18/08
Project Owner: APACHE CORP.
Project Name: STATE O PADDOCK #12
Project Location: UL-J S31 T16S R37E

Analysis Date: 02/18/08
Sampling Date: 02/12/08 & 02/13/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: CK
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/kg)
H14269-1	N BKFILL-1	64
H14269-2	N BKFILL-2	96
H14269-3	N BKFILL-3	128
H14269-4	S BKFILL-1	96
H14269-5	S BKFILL-2	224
H14269-6	S BKFILL-3	96
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		2.0

METHOD: Standard Methods 4500-ClB

Note: Analyses performed on 1:4 w:v aqueous extracts.


Chemist

02/18/08
Date

H14269 ELKE

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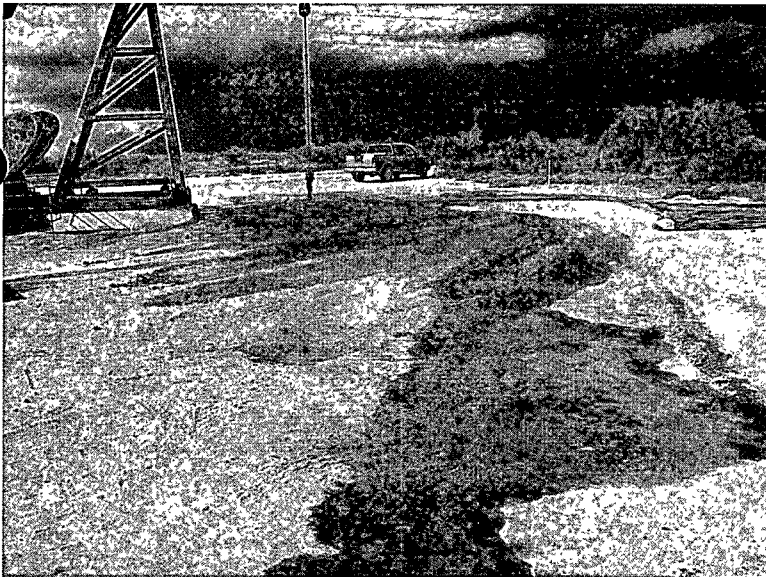
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ELKE ENVIRONMENTAL, INC.

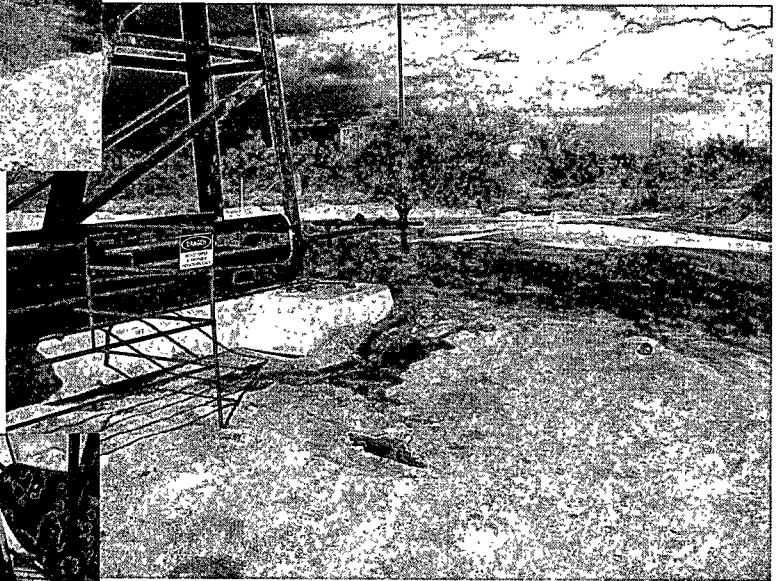
20

Apache State O #12

[illegible]



Day of release – 9-27-07 –
around 3:40 PM – SE
corner of pad



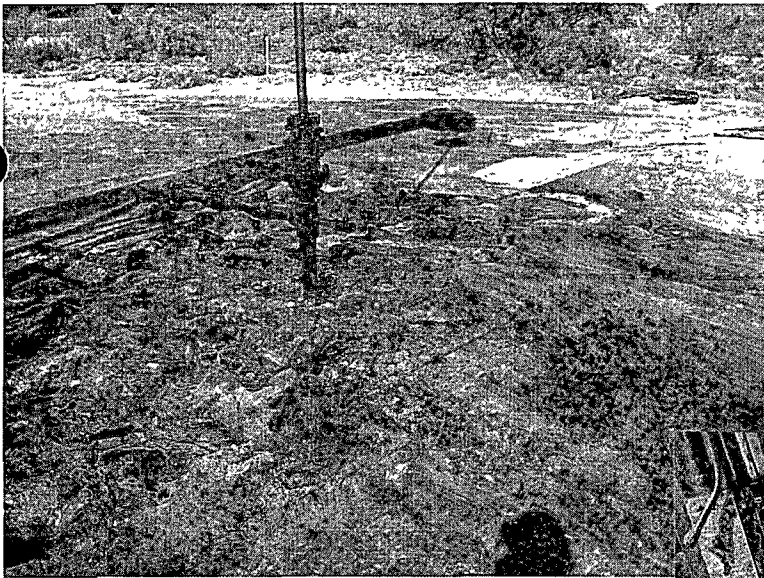
Day of release – 9-27-07 –
around 3:40 PM – south
side of pad



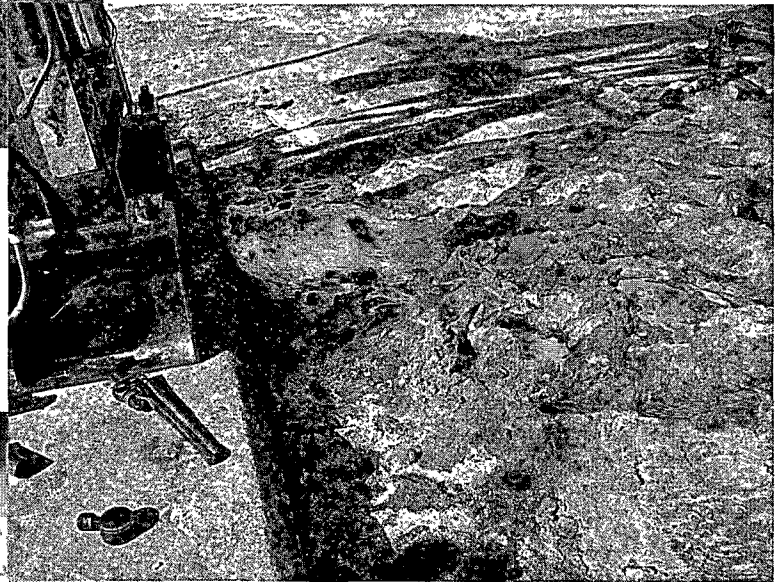
Day of release – 9-27-07 – around
3:40 PM – north side of pad



Note salt crystallization
from release



Day of release – 9-27-07 –
around 3:40 PM – immediate to
well head.



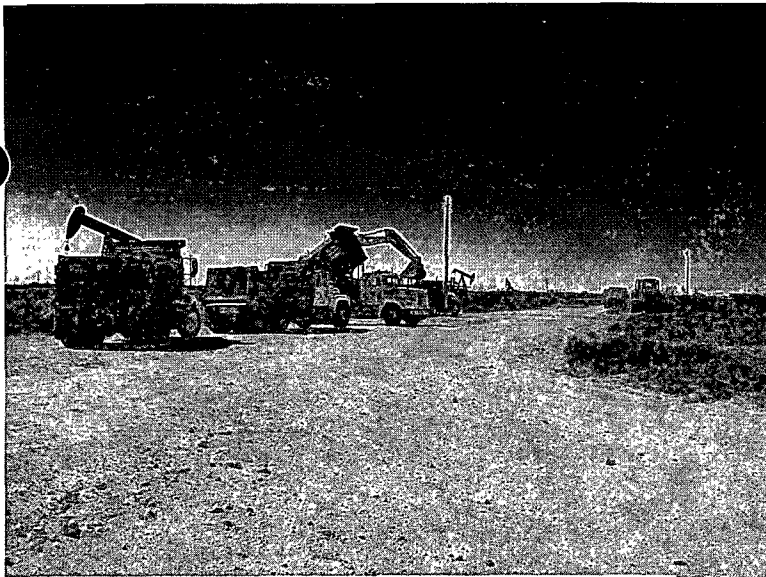
Day of release – 9-27-07 – around
3:40 PM – immediate to well head.



2-6-08 – commencing
excavation of north side.

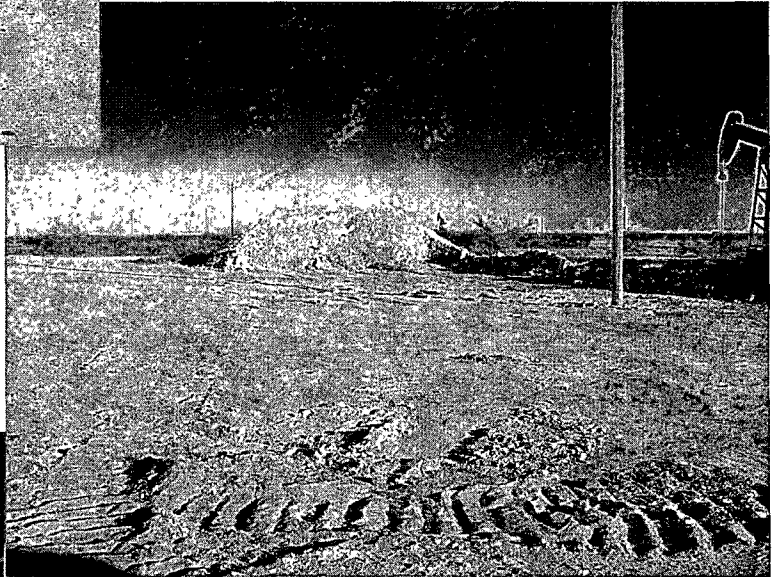


2-6-08 – continuing
excavation of north side.



2-7-08 – Hauling contaminated soil to J-Dan LF west of Lovington.

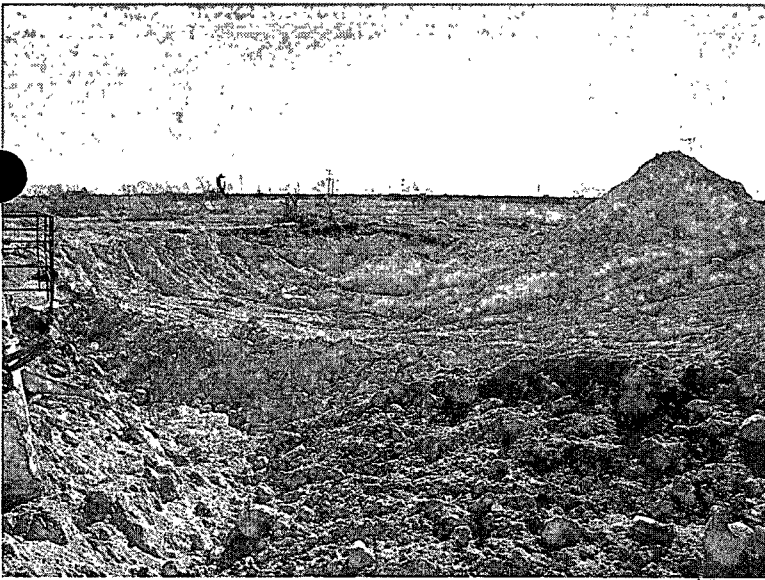
2-7-08 – Stockpiling clean caliche obtained from Danny Watson at the Landfarm location



2-8-08 - South side excavated to 6-ft.

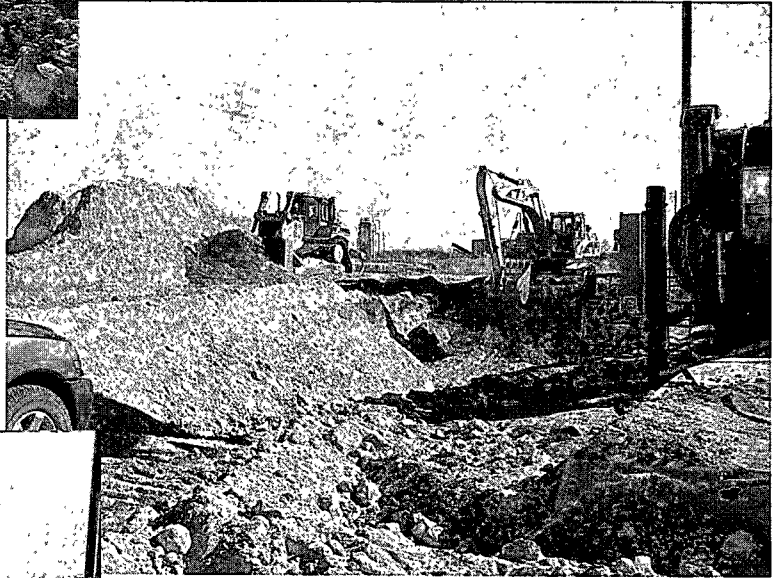
2-8-08 North side excavated to 6-ft.





2-13-08 – Moving some stockpiled caliche to south side to make room for sidewall excavation on north side.

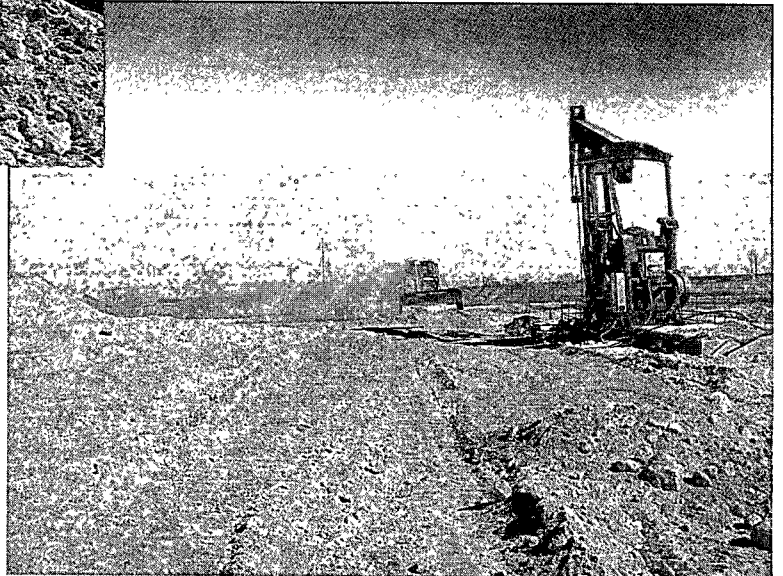
Excavating contaminated area at NW corner of north excavation.

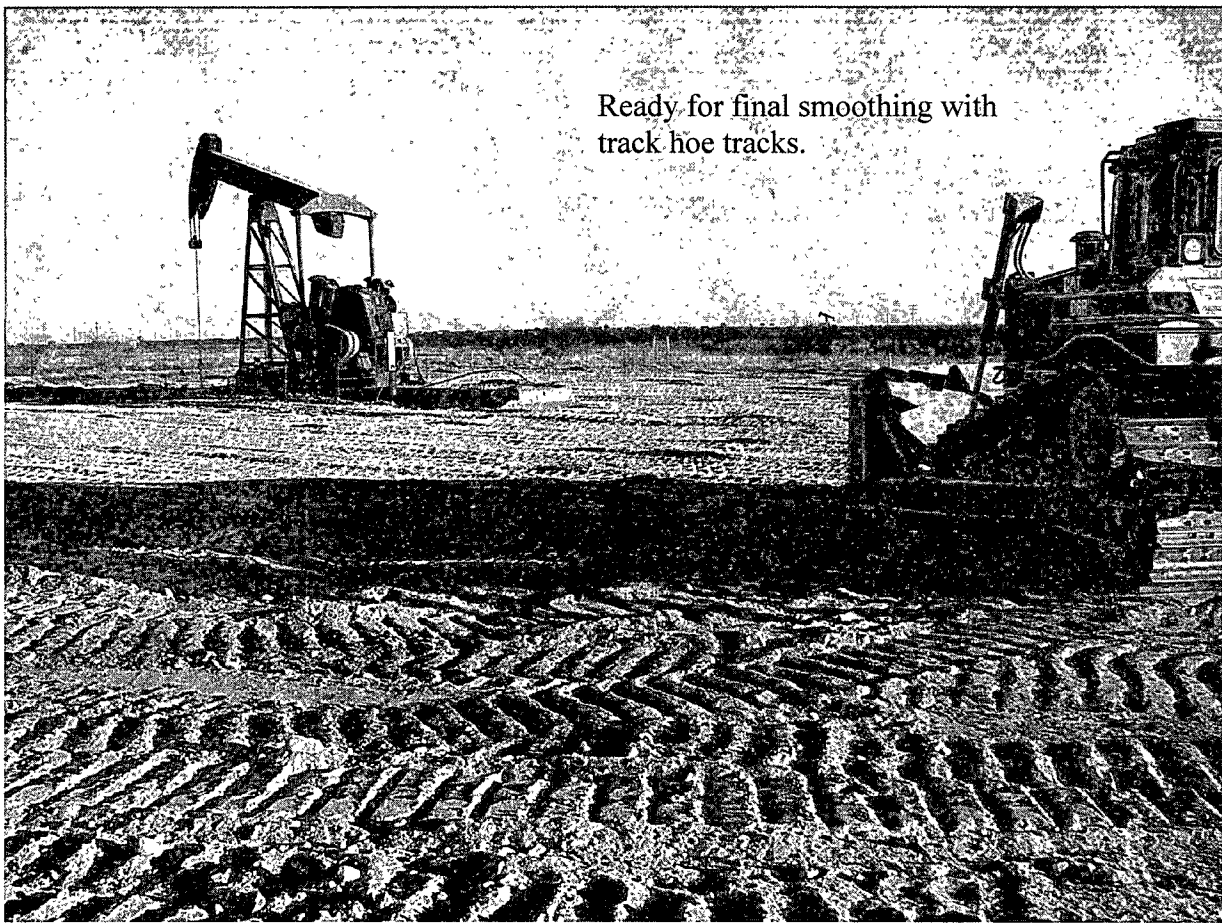


NW corner and W wall extended.

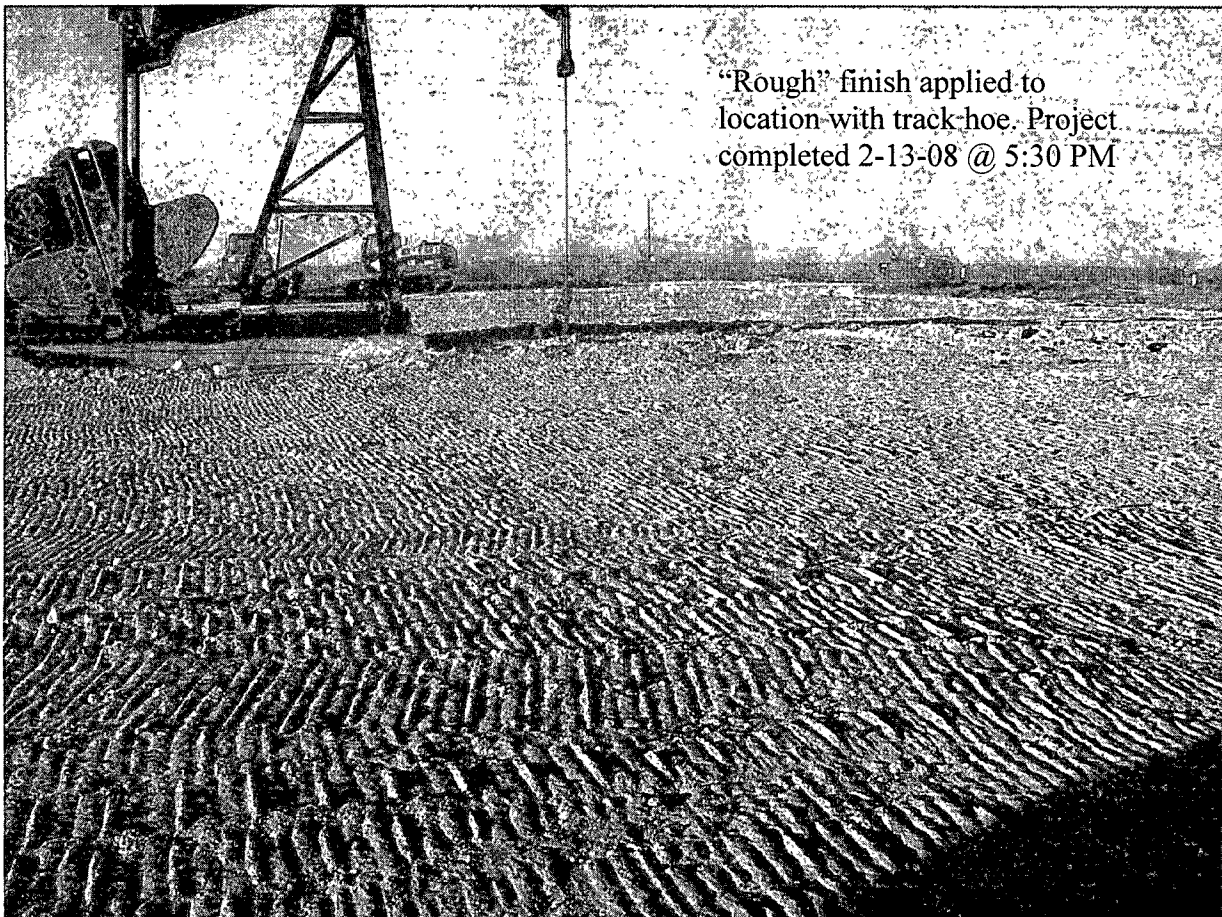


Excavation was backfilled after the caliche was blended with the material removed from the west side of the excavated area.





Ready for final smoothing with
track hoe tracks.



"Rough" finish applied to
location with track hoe. Project
completed 2-13-08 @ 5:30 PM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87501

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Oil Conservation Division
1120 South St. Francis Dr.
Santa Fe, NM 97505

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Apache Corporation	Contact	Guinn Burks
Address	P. O. Box 728 Crane, TX 79731	Telephone No.	432-556-9143
Facility Name	State "O" Paddock #12	Facility Type	Pumping well

Surface Owner	City of Lovington	Mineral Owner	NM State	API #	30-025-05368
---------------	-------------------	---------------	----------	-------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	31	16S	37E					Lea

Latitude 32°52.573 Longitude 103°17.324

NATURE OF RELEASE

Type of Release	Oil	Volume of Release	1-1.5 bbls	Volume Recovered	0 bbls
Source of Release	Wellhead	Date/Hour of Occurrence	9-27-07 1000	Date /Hour of Discovery	9-27-07 1000
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If Yes, To Whom?	Larry Johnson, Hobbs OCD Office		
By Whom?	Guinn Burks	Date and Hour	9-27-07 1430		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, describe Fully*					
NA					
Describe Cause of Problem and Remedial Action Taken.*					
Stuffing box blew out spraying oil into the air and on the ground.					
Describe Area Affected and Cleanup Action Taken.*					
This spray covered an area approximately 75' x 50' irregular on the location and approximately 200 sq ft of mesquite vegetation across the lease road due to winds. We will spray the affected vegetation with a mild surfactant to try and save the vegetation now and dig and haul any contaminated soils to disposal. John Good is project manager.					

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Guinn Burks</i>	Oil Conservation Division	
Printed Name: Guinn Burks	Approved by the District Supervisor: <i>L. Johnson</i> ENVIRONMENTAL ENGINEER	
Title: Permian Basin Environmental Tech.	Approval Date: 10.1.07	Expiration Date: 12.3.07
Email: guinn.burks@usa.apachecorp.com	Conditions of Approval:	Attached
Date: 9/27/2007 Phone: 432-556-9143	Submit Final Report	

*Attach Additional Sheets if Necessary

W/ DOCUMENTATION BY

RP# 1602



Incident Date: 9/27/07 NMOCD Notified: 9/27/07

SITE: State O #12 API No. 30-025-05368

Company: Apache Corporation

Street Address:

Mailing Address: P.O. Box 1849

City, State, Zip: Eunice, NM 88231

Representative: Natalie Gladden

Representative Telephone: 575-390-4186

Telephone:

Fluid Volume Released (bbl): < 5 Volume Recovered (bbl): 0 Net Release: < 5

>25 bbl: Notify NMOCD verbally within 24 hours and submit C-141 within 15 days.

5-25 bbl: Submit Form C-141 within 15 days (Also applies to unauthorized release of >50 mcf Natural Gas).

Leak, Spill, or Pit (LSP) Name: State O #12

Source of Contamination: Wellhead

Land Owner, i.e. BLM, ST, Fee, Other: Municipal - City of Lovington

LSP Dimensions: ~ 75' X 85' around pumpjack

LSP Area ~ 6375 -ft²

Location of Reference Point (RP):

Location distance and direction from RP:

Latitude: North 32 52.551

Longitude: West 103 17.3184

Elevation above mean sea level (amsl): 3830 feet 1167 meters

Distance from South Section Line (feet): 1650

Distance from East Section Line (feet): 2310

Location - Unit Letter and 1/4 1/4: UL- J NW 1/4 of SE 1/4

Location - Section 31

Location - Township 16S

Location - Range 37E

Location - County Lea

Surface water body within 1000' radius of site: 0

Surface water body within 1000' radius of site: 0

Domestic water wells within 1000' radius of site: 0

Domestic water wells within 1000' radius of site: 0

Agricultural water wells within 1000' radius of site: 0

Agricultural water wells within 1000' radius of site: 0

Public water supply wells within 1000' radius of site: 0

Public water supply wells within 1000' radius of site: 0

Depth (feet) from land surface to Ground Water (DG): ~ 60

Depth (feet) of lowest contamination (DC): 8

Depth (feet) to Ground Water (DG - DC = DtGW): ~ 52

1. Ground Water**2. Wellhead Protection Area****3. Distance to Surface Water**

If Depth to GW <50-feet: 20 points

If <1000' from water source, or, <200' from private domestic water source: 20 points

<200 horizontal feet: 20 points

If Depth to GW 50 to 100-feet: 10 points

If >1000' from water source, or, >200' from private domestic water source: 0 points

200-1000 horizontal feet: 10 points

If Depth to GW >100-feet: 0 points

>1000 horizontal feet: 0 points

Ground Water Score: 10

Wellhead Protection Score: 0

Surface Water Score: 0

Site Ranking (1 + 2 + 3): 10

Total Site Ranking Score and Acceptable Concentrations

Parameter	20 or >	10	0
Benzene ¹	10-ppm	10-ppm	10-ppm
BTEX ¹	50-ppm	50-ppm	50-ppm
TPH	100-ppm	1000-ppm	5000-ppm

District I
1625 N French Dr, Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised June 10, 2003

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Natalie Gladden
Address	P.O. Box 1849	Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name	State O #12	Facility Type	Oil Well

Surface Owner	Municipal - City of Lovington	Mineral Owner	State of NM	API No.	30-025-05368
---------------	-------------------------------	---------------	-------------	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from East Line	Longitude-W	Latitude-N	County
J	31	16S	37E	1650	2310	103.2886	32.8759	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Crude Oil and Produced Water	Less than 5 bbl	0 bbl
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Wellhead	9/27/07 10:00 AM	9/27/07 10:00 AM
Was Immediate Notice Given?	If YES, To Whom?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required	NMOCD - Hobbs - Larry Johnson	
By Whom?	Date and Hour	
Guinn Burks	9/27/07 2:30 PM	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	NA	

If a Watercourse was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken. *

Stuffing box blew out spraying oil into air and onto location.

Describe Area Affected and Cleanup Action Taken. *

Approximately 4500-ft² on the caliche well pad was affected. Vegetation NW of the well was affected by overspray and was cleansed with a mild detergent from a pressure washer. Hydrocarbon contaminated soil was excavated from the well pad and disposed of at the J-Dan Landfarm. The excavation was backfilled with clean caliche. Remediation was performed by Elke Environmental - Hobbs. Remedial Action Levels achieved by removal and blending of low-level chloride remnants.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION		
Printed Name:	Natalie Gladden		
Title:	Environmental Tech - Permian Basin		
E-Mail Address:	Natalie.Gladden@usa.apachecorp.com		
Date:	2/25/2008	Phone:	575-390-4186
Approved by District Supervisor:		Approval Date:	Expiration Date:
Conditions of Approval:		RP# 1602	<input type="checkbox"/> Attached