District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
Distric 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

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

Form C-141
Revised June 10, 2003

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	**NEDU #247**	Facility Type	**Produced Water Injection Well**

Surface Owner **State of NM**	Mineral Owner **State of NM**	API No. **30-025-38508**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude-W	Latitude-N	County
K	**2**	**21S**	**37E**	**3465**	**1775**	**103.1361**	**32.5103**	**Lea**

NATURE OF RELEASE

Type of Release **Produced Water w/ significant hydrocarbon component**	Volume of Release **Greater than 500 bbl**	Volume Recovered **140 bbl**
Source of Release **8" Steel Injection Line (loss of integrity)**	Date and Hour of Occurrence **Subsurface before discovery**	Date and Hour of Discovery **12/27/07 8:15 AM**
Was Immediate Notice Given? ☑ YES ☐ NO ☐ Not Required	If YES, To Whom? **NMOCD - Hobbs - Gary Wink**	
By Whom? **Natalie Gladden**	Date and Hour **12/28/07 3:23 PM**	
Was a Watercourse Reached? ☐ YES ☑ NO	If YES, Volume Impacting the Watercourse **NA**	

If a Watercourse was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken. *
Loss of integrity of 8" steel Produced Water Injection Line. Line was excavated and repaired.

Describe Area Affected and Cleanup Action Taken. *
The release affected surface area comprised ~20,000-ft^2 progressing from the POR southward. Hydrocarbon contaminated soil and soil with >1000-ppm chloride concentration was excavated and disposed of at a NMOCD licensed disposal facility. Final Cl concentration <250-ppm was achieved by blending with clean soil purchased for bacfill purposes. Remediation was performed by ELKE Environmental - Hobbs.

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: Natalie Gladden	**OIL CONSERVATION DIVISION**	
Printed Name: **Natalie Gladden**	Approved by District Supervisor: D Johnson ENVIRONMENTAL ENGINEER	
Title: **Environmental Tech - Permian Basin**	Approval Date: 7.7.09	Expiration Date:
E-Mail Address: Natalie.Gladden@usa.apachecorp.com	Conditions of Approval: **1RP# 1700**	☐ Attached
Date: **5/22/2009** Phone: **575-390-4186**		

Table of Contents

1.0 Project Summary

Release Site Name: NEDU #247
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 - Hobbs Phone: 575-738-0138

SITE SPECIFIC DATA:

Legal Description: Lea County, New Mexico UL-F Section 2 T21S R37E
General Location: 5.3 miles NNE (13.0°) of Eunice, NM.
Latitude: N32° 30.619' Longitude: W103° 8.164' Elevation: 3,490-ft amsl
Land Ownership: Public – State of NM
Ground Water Elevation: 50-ft bgs (Contour Map)
Water Wells within 1000-ft: none Surface Water within 1000-ft: none

RELEASE SPECIFIC DATA:

Date and Time of Release(s): discovered at 8:15 AM - - 12/27/07
Material Released: Produced Water and Crude Oil component
Volume Released: >500-bbl Volume Recovered: 140-bbl
Cause of Release: Loss of pipe integrity – 8" Steel PW injection line
Release Affected Area: >20,000-ft^2
Depth of Contamination: 20-ft bgs
NMOCD Site Ranking: 20 (ground water <50-ft below lowest contamination)
Remediation Action Levels: TPH: 100-ppm; Benzene: 10-ppm; BTEX: 50-ppm; Cl – 250-ppm

REMEDIATION SUMMARY:

Remediation of the release affected area(s) was a three-phase process, separating the project into east, west and central areas. All three areas were remediated with a risk-based protocol incorporating excavation/disposal, blending and polyvinyl liner installations.

The east area was the most seriously contaminated area (Cl contamination >250-ppm down to 56-ft bgs). The area was excavated to 37-ft bgs leaving soil with a maximum contamination level of 9,360-ppm Cl in-place. The excavation was backfilled with blended material to 5-ft bgs and covered with a 110' X 155' 20-mil liner and covered with caliche and topsoil.

The contaminated west area was excavated to 30-ft bgs, leaving soil contaminated to ~5000-ppm Cl in-place. After blending and backfill, the north portion of the west area was covered with a plastic liner and then a 3-ft cover of clean topsoil.

Contaminated areas of the central portion were excavated to contamination levels of <1500-ppm Cl, backfilled with blended material up to 3-ft bgs and covered with plastic liners. Final cover was with clean topsoil.

Two down-gradient monitor wells were installed (SE of the east area; SE of the west area). The remediation portion(s) of the project were completed on December 18, 2008.

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 Eunice Plain physiographic subdivision, described by Nicholson & Clebsch as "covered almost entirely by reddish-brown dune sand. In some places the underlying surface consists of alluvial sediments – most commonly calcareous silt in buried valleys or Quaternary lake basins. It has a general southeast slope toward Monument Draw." The sand cover is generally 2 to 5-ft thick, but can be 20 – 30-ft thick in localized drift areas.

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 (*Querqus 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

The Chevron-Texaco water contour map (*Plate 4 of Attachments*) indicates that water in this area is 25' – 50' 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 Contaminant of Concern (COC) was total chlorides resulting from the produced water release at this location. Hydrocarbon contamination was limited to the top 5-ft of the release surface area. The areal extent of the excavated release was ~29,000-ft^2.

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 (BTEX[8260]), 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 20 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 = 20		Wellhead Protection Score= 0	Surface Water Score= 0
Site Rank (1+2+3) = 20 + 0 + 0 = 20 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

Remediation of the release affected area consisted of the excavation and disposal of approximately 12,000-yd^3 of hydrocarbon and chloride contaminated soil. All disposal was at J&L Landfarm. The excavated area was then extended laterally and vertically to achieve chloride levels less than the regulatory requirement of 250-ppm. This excavated material was stockpiled on the surface at the south end of the excavation. 9,780-yd^3 of clean caliche was purchased and transported to the location and blended with the chloride contaminated stockpile. The excavation was then backfilled with the blended material. Six samples of this blended backfill were obtained during the backfill operation (Jan-24 to Jan-30), all displaying <250-ppm chloride concentrations. 2,660-yd^3 of clean topsoil was purchased and transported to the location. This topsoil was utilized to apply an

approximate 3-ft final topsoil layer to the remediation site. Remediation of the release site was completed on January 31, 2008.

Based on the contents and data contained herein, Apache Corporation requests that NMOCD require "no further action" as regards the soil contamination resulting from the December 27, 2007 release of produced water and crude oil at this location.

ATTACHMENTS

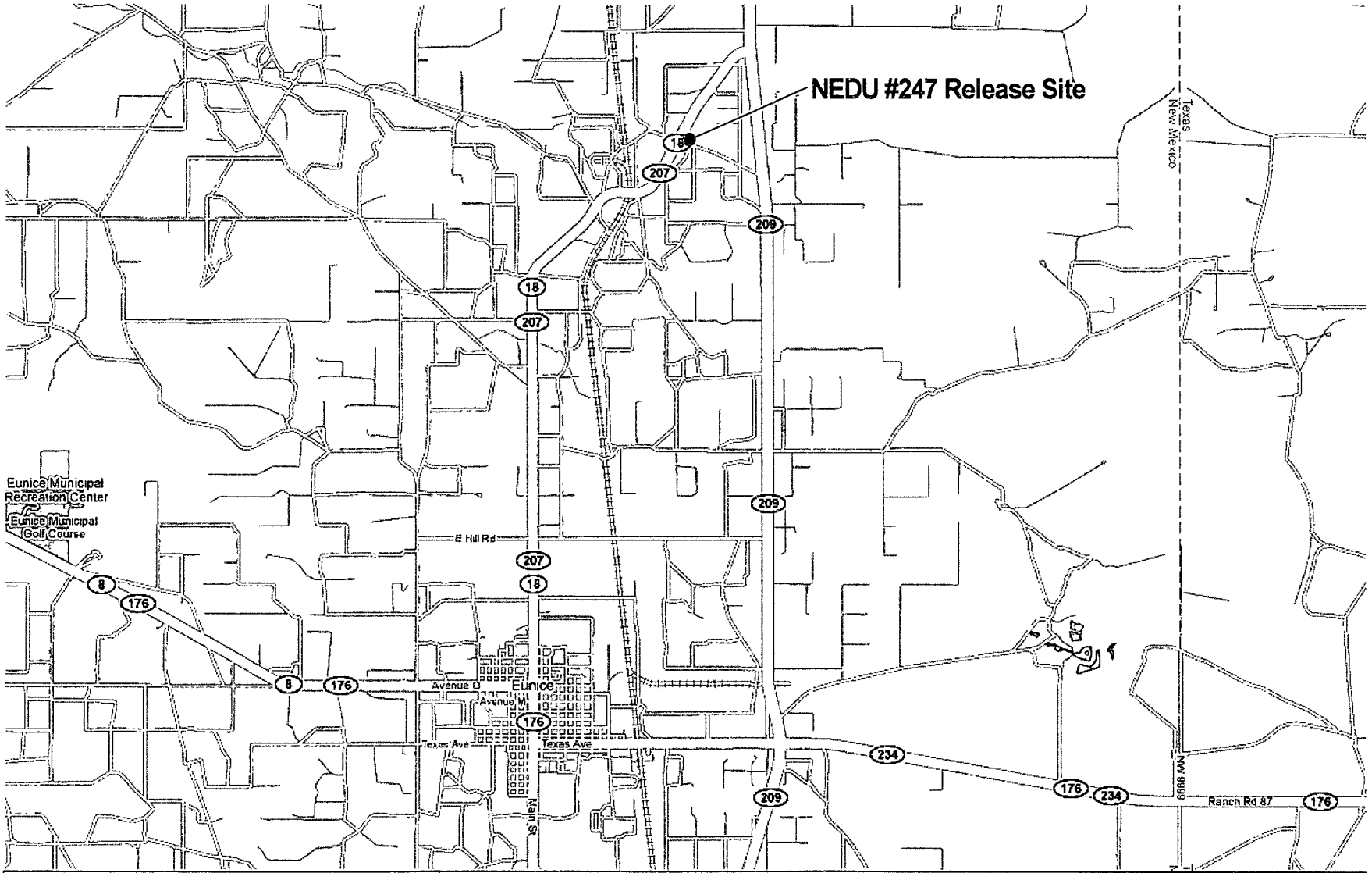


Plate 1 Release Site Location Apache Corporation NEDU #247	Lea County, New Mexico UL-K SECTION 2 T21S R37E N 32° 30.610', W 103° 8.195' Elevation: ~3490-ft amsl	Drawing by: John Good May - 2009	Rev: 1
		SCALE: Mile 0 1 2	N

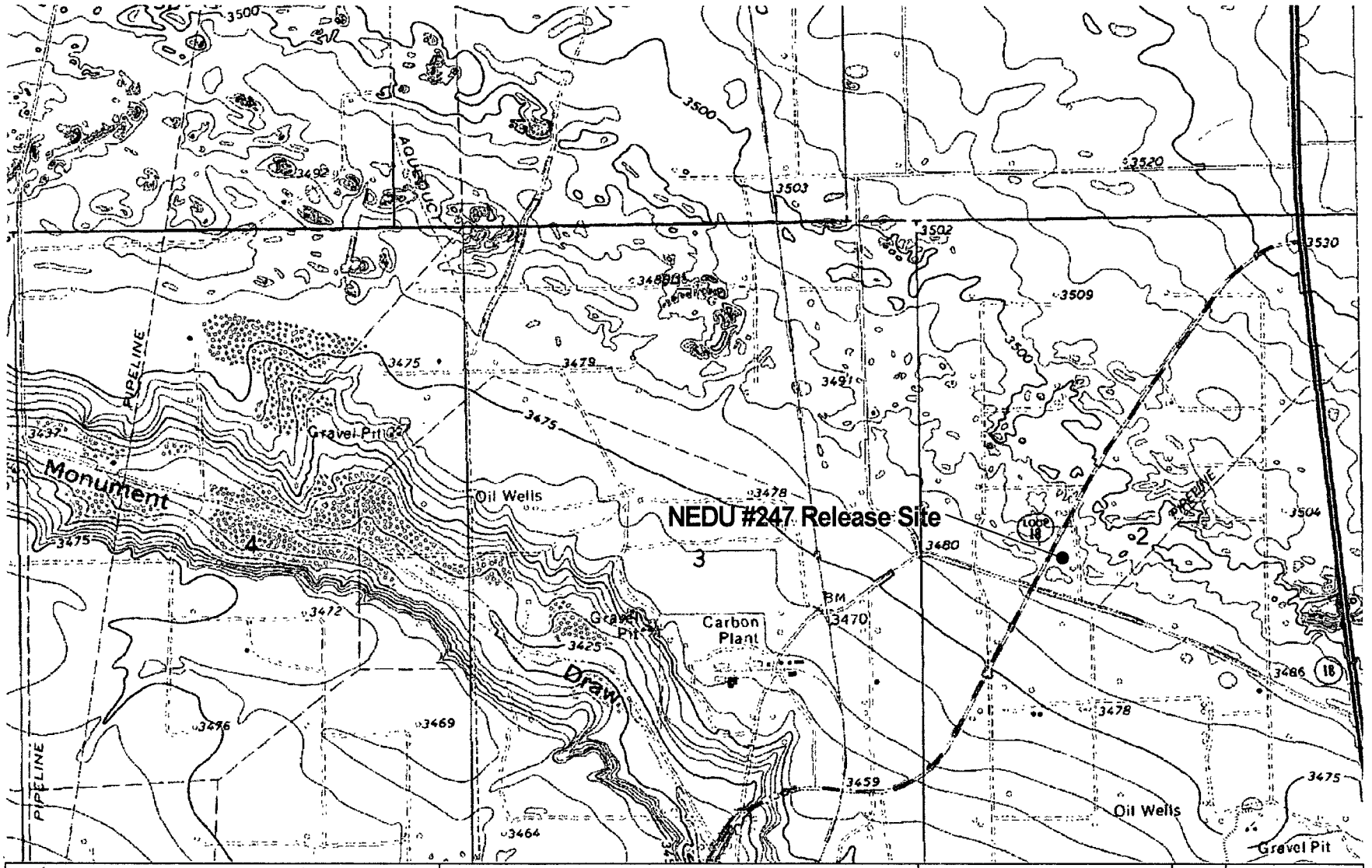


Plate 2 Release Site Topography (USGS) Apache Corporation NEDU #247	Lea County, New Mexico UL-K SECTION 2 T21S R37E N 32° 30.610', W 103° 8.195' Elevation: ~3490-ft amsl	Drawing by: John Good May - 2009	Rev: 1
		SCALE: 0 Feet 3000	

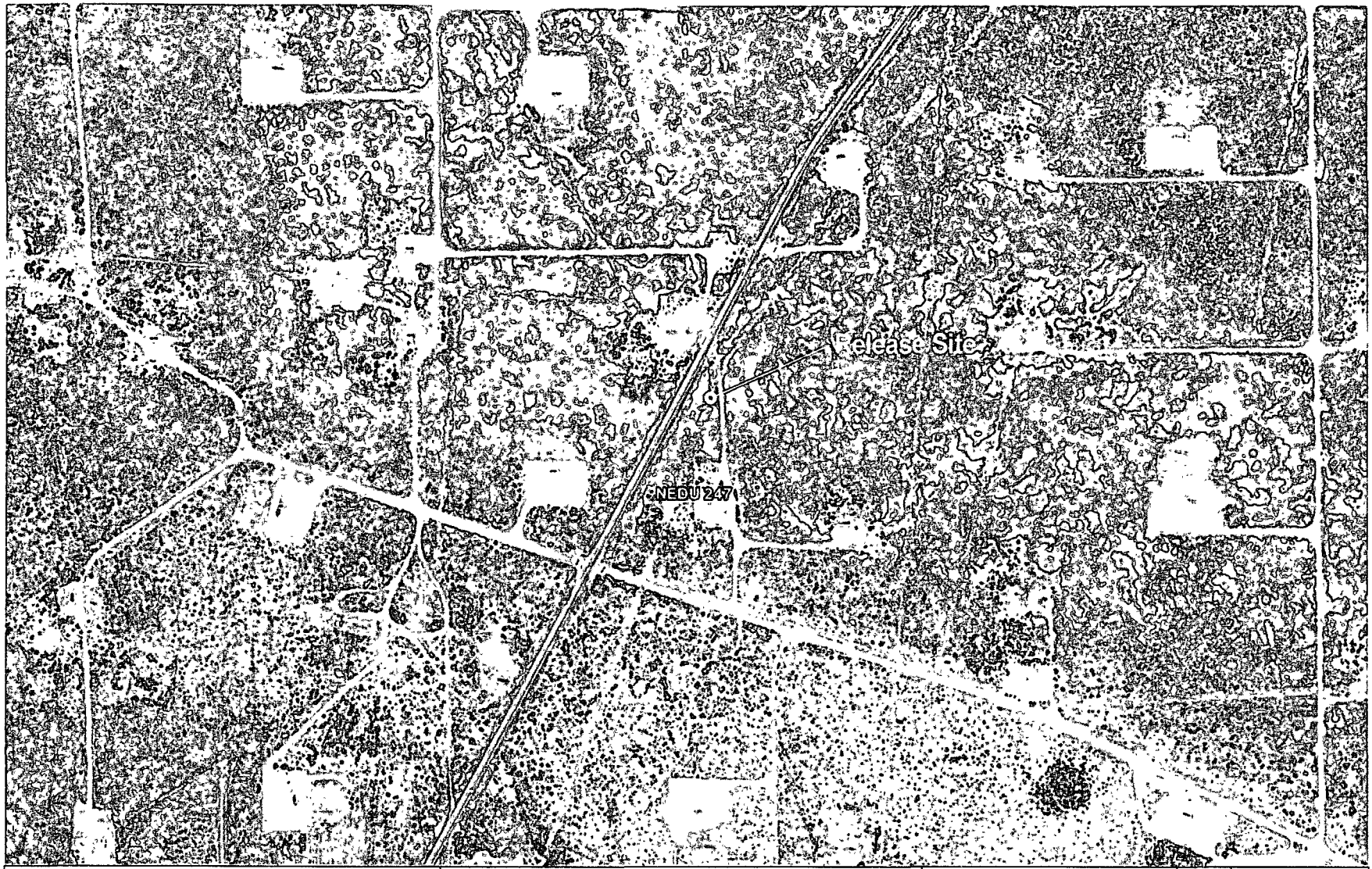


Plate 3 Release Site Aerial Photograph Apache Corporation NEDU #247	Lea County, New Mexico UL-K SECTION 2 T21S R37E N 32° 30.610', W 103° 8.195' Elevation: ~3490-ft amsl	Drawing by: John Good May - 2009	Rev: 1
		SCALE: 0 Feet 1000	N

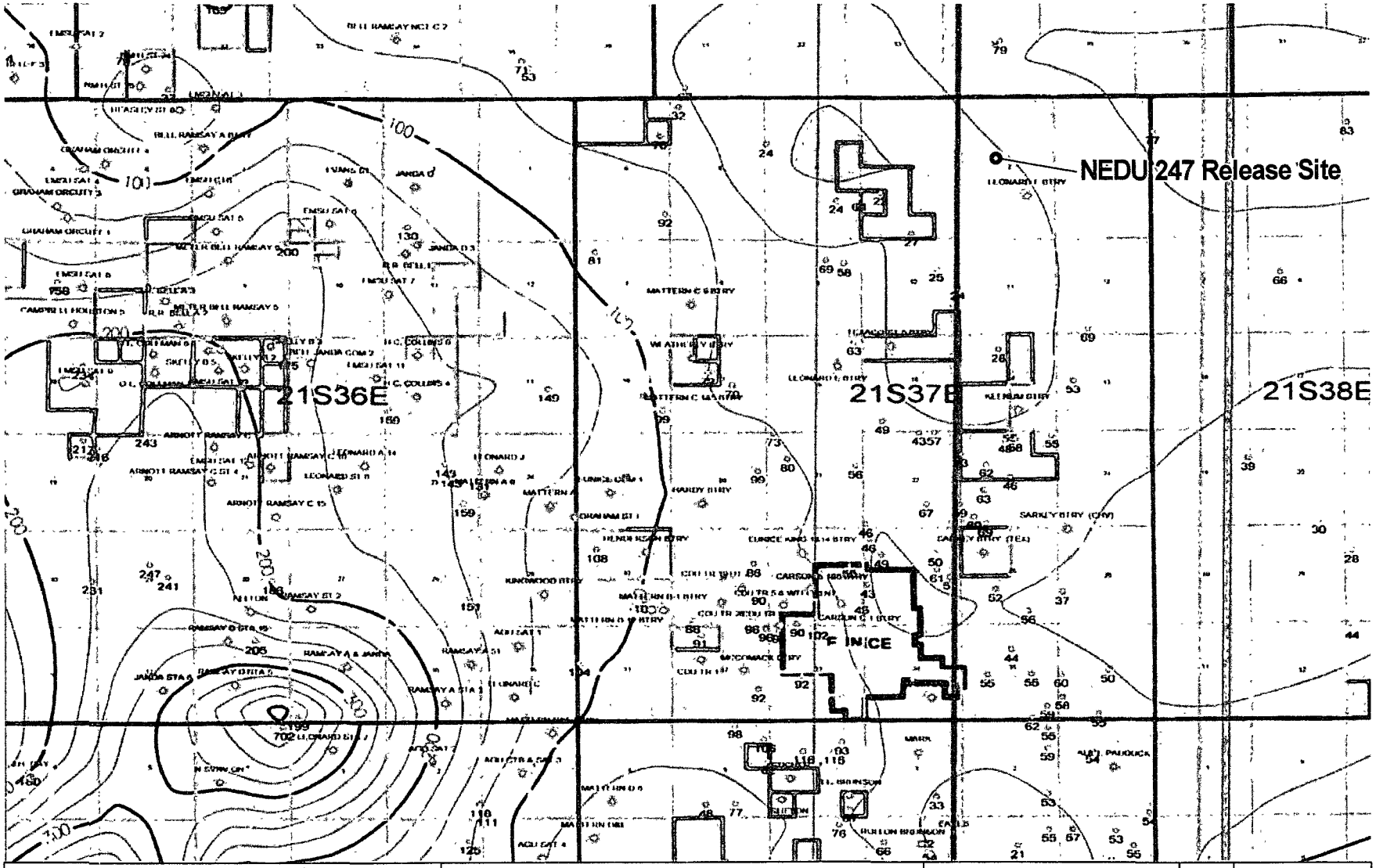
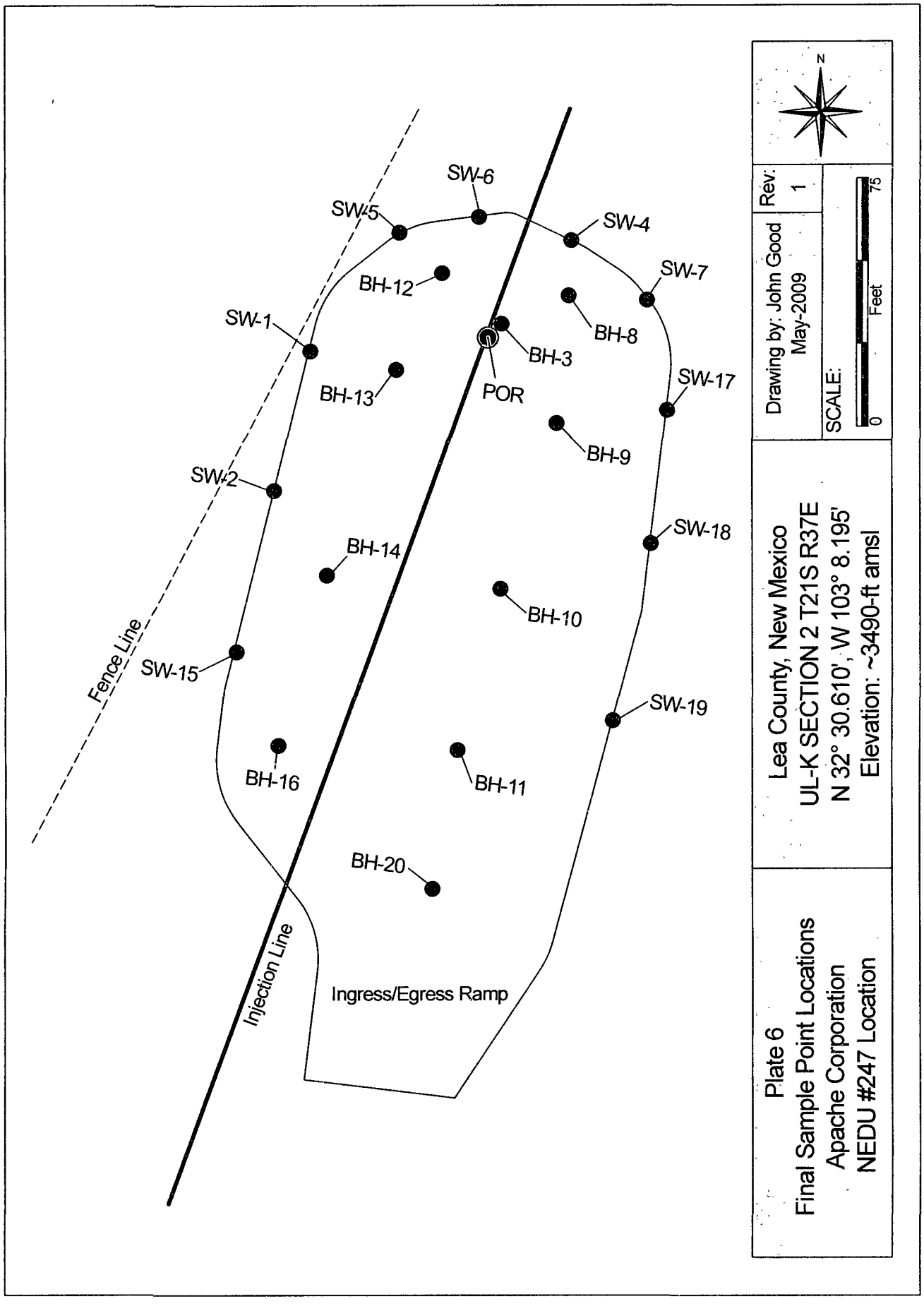


Plate 4 Release Site Water Depth Contour Apache Corporation NEDU #247	Lea County, New Mexico UL-K SECTION 2 T21S R37E N 32° 30.610', W 103° 8.195' Elevation: ~3490-ft amsl	Drawing by: John Good May - 2009	Rev: 1
		SCALE: 0 Mile 3	N

Plate 5 Release Site Diagram Apache Corporation NEDU #247 Location	Lea County, New Mexico UL-K SECTION 2 T21S R37E N 32° 30.610', W 103° 8.195' Elevation: ~3490-ft amsl	Drawing by: John Good May-2009 SCALE: 0 Feet 250	Rev: 1 N


SW-6
SW-5
SW-4
SW-7
BH-12
SW-1
BH-8
BH-3
POR
BH-13
SW-17
BH-9
SW-2
SW-18
BH-14
BH-10
Fence Line
SW-15
SW-19
BH-16
BH-11
BH-20
Injection Line
Ingress/Egress Ramp
N
Rev: 1
Drawing by: John Good
May-2009
SCALE:
0
75
Feet
Lea County, New Mexico
UL-K SECTION 2 T21S R37E
N 32° 30.610', W 103° 8.195'
Elevation: ~3490-ft amsl
Plate 6
Final Sample Point Locations
Apache Corporation
NEDU #247 Location

APACHE CORP - NEDU #247: LABORATORY ANALYTICAL RESULTS SUMMARY TABLE							
Sample Number	Sample Depth	Sample Location	Chlorides mg/Kg	Sample Number	Sample Depth	Sample Location	Chlorides mg/Kg
SW1	**15-ft**	**SideWall**	**48**	**BH14**	**20-ft**	**Bottom**	**64**
SW2	**15-ft**	**SideWall**	**48**	**SW15**	**15-ft**	**SideWall**	**80**
SW3	**15-ft**	**SideWall**	**48**	**BH16**	**20-ft**	**Bottom**	**64**
SW4	**15-ft**	**SideWall**	**48**	**SW17**	**15-ft**	**SideWall**	**80**
SW5	**15-ft**	**SideWall**	**224**	**SW18**	**15-ft**	**SideWall**	**48**
SW6	**15-ft**	**SideWall**	**48**	**SW19**	**15-ft**	**SideWall**	**64**
SW7	**15-ft**	**SideWall**	**96**	**BH20**	**20-ft**	**Bottom**	**96**
BH8	**20-ft**	**Bottom**	**48**	**BKFL-1**	**18-ft**	**Blend**	**96**
BH9	**20-ft**	**Bottom**	**64**	**BKFL-2**	**15-ft**	**Blend**	**112**
BH10	**20-ft**	**Bottom**	**48**	**BKFL-3**	**12-ft**	**Blend**	**128**
BH11	**20-ft**	**Bottom**	**64**	**BKFL-4**	**9-ft**	**Blend**	**128**
BH12	**20-ft**	**Bottom**	**16**	**BKFL-5**	**6-ft**	**Blend**	**112**
BH13	**20-ft**	**Bottom**	**80**	**BKFL-6**	**3-ft**	**Blend**	**112**

CARDINAL LABORATORIES

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: 01/24/08
Reporting Date: 01/25/08
Project Owner: APACHE CORP.
Project Name: NEDU #247
Project Location: UL-K S2 T21S R37E

Analysis Date: 01/24/08
Sampling Date: 01/23/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H14154-1	SW-1	48
H14154-2	SW-2	48
H14154-3	BH-3	48
H14154-4	SW-4	48
H14154-5	SW-5	224
H14154-6	SW-6	48
H14154-7	SW-7	96
H14154-8	BH-8	48
H14154-9	BH-9	64
H14154-10	BH-10	48
H14154-11	BH-11	64
H14154-12	BH-12	< 16
H14154-13	BH-13	80
H14154-14	BH-14	64
H14154-15	SW-15	80
H14154-16	BH-16	64
H14154-17	SW-17	48
H14154-18	SW-18	48
H14154-19	SW-19	64
H14154-20	BH-20	96
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

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

Chemist

01/25/08
Date

H14154 ELKE

APACHE CORPORATION

CARDINAL LABORATORIES

CHAIN OF CUSTODY AND ANALYSIS REQUEST

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE TX 79603
PHONE (505) 393-2326 • 101 E MARLAND • HOBBS NM 88240

Company Name:	ELKE ENVIRONMENTAL, INC.		BILL TO		
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:	NEDU #247		State: NM Zip: 88231		
Project Location:	UL-K S2 T21S R37E		Phone #: 390-4186		
Sampler Name.	JOHN GOOD		Fax #:		

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: SLUDGE	MATRIX: OTHER	PRESERV: ACID/BASE	PRESERV: ICE/COOL	PRESERV: OTHER:	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: TPH 8015	BTEX	Chlorides
H 14154 1	SW-1	G	1			X				X		23-Jan	8:00			X
-2	SW-2	G	1			X				X		23-Jan				X
-3	BH-3	G	1			X				X		23-Jan				X
-4	SW-4	G	1			X				X		23-Jan				X
-5	SW-5	G	1			X				X		23-Jan				X
-6	SW-6	G	1			X				X		23-Jan				X
-7	SW-7	G	1			X				X		23-Jan				X
-8	BH-8	G	1			X				X		23-Jan				X
-9	BH-9	G	1			X				X		23-Jan				X
-10	BH-10	G	1			X				X		23-Jan				X
-11	BH-11	G	1			X				X		23-Jan				X
-12	BH-12	G	1			X				X		23-Jan				X
-13	BH-13	G	1			X				X		23-Jan				X
-14	BH-14	G	1			X				X		23-Jan				X
-15	SW-15	G	1			X				X		23-Jan				X
-16	BH-16	G	1			X				X		23-Jan				X
-17	SW-17	G	1			X				X		23-Jan				X
-18	SW-18	G	1			X				X		23-Jan				X
-19	SW-19	G	1			X				X		23-Jan				X
-20	BH-20	G	1			X				X		23-Jan	9:30			X

Relinquished by: John Good	Date: 1/24/08	Received By: Misty LeBut	Phone Result: ☑ Yes ☐ No Add'l Phone#: 631-3277 (J. Good)
	Time: 2:30		Fax Result: ☑ Yes ☐ No Add'l Fax #:
Relinquished by:	Date	Received By:	Remarks: 20 x Cl Soil → 500
	Time:		

Delivered By: (Circle One)	Sample Condition		CHECKED BY: (Initials)
Sampler - UPS - Bus - Other	Cool	intact	MC LB
	☑ Yes ☐ No	☑ Yes ☐ No	

Note: Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

NEDU #247

CARDINAL LABORATORIES

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: 02/06/08
Reporting Date: 02/07/08
Project Owner: APACHE CORP.
Project Name: NEDU #247
Project Location: T21S R37E S2 UL-K

Analysis Date: 02/06/08
Sampling Date: 01/24/08-01/30/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H14210-1	BACKFILL-1	96
H14210-2	BACKFILL-2	112
H14210-3	BACKFILL-3	128
H14210-4	BACKFILL-4	128
H14210-5	BACKFILL-5	112
H14210-6	BACKFILL-6	112
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClB

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

Chemist

02/07/08
Date

H14210 ELKE

APACHE CORPORATION

CARDINAL LABORATORIES

CHAIN OF CUSTODY AND ANALYSIS REQUEST

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E MARLAND • HOBBS, NM 88240

Company Name:	ELKE ENVIRONMENTAL, INC.	BILL TO	
Project Manager:	JOHN GOOD	P.O. #:	
Address:	3506 WEST COUNTY RD	Company:	Apache Corporation
City:	HOBBS State: NM Zip: 88241	Attn:	Natalie Gladden
Phone #:	575-738-0138 Fax #: 575-738-0140	Address:	PO Box 1237
Project #	Project Owner: APACHE CORP	City:	Eunice
Project Name:	NEDU #247	State:	NM Zip: 88231
Project Location:	T21S R37E S2 UL-K	Phone #:	390-4186
Sampler Name:	JOHN GOOD	Fax #:	

Lab I.D	Sample I.D	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH 8015	BTEX	Chlorides
H142101	BACKFILL-1	G	1			X				X		24-Jan	3:30 PM			X
-2	BACKFILL-2	G	1			X				X		25-Jan	4:00 PM			X
-3	BACKFILL-3	G	1			X				X		28-Jan	4:00 PM			X
-4	BACKFILL-4	G	1			X				X		29-Jan	3:00 PM			X
-5	BACKFILL-5	G	1			X				X		30-Jan	9:00 AM			X
-6	BACKFILL-6	G	1			X				X		30-Jan	4:00 PM			X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based on contract or tort, shall be limited to the amount paid by the client for the 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 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.

Relinquished by	Date: 2/6/08	Received By:	
John Good	Time: 3:00	Misty L Burt	
Relinquished by	Date	Received By:	
	Time:		

Delivered By: (Circle One) — Sampler - UPS - Bus - Other

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) MLB

Phone Result: ☐ Yes ☑ No Add'l Phone#: 575-631-3277 (J. Good)

Fax Result: ☑ Yes ☐ No Add'l Fax #:

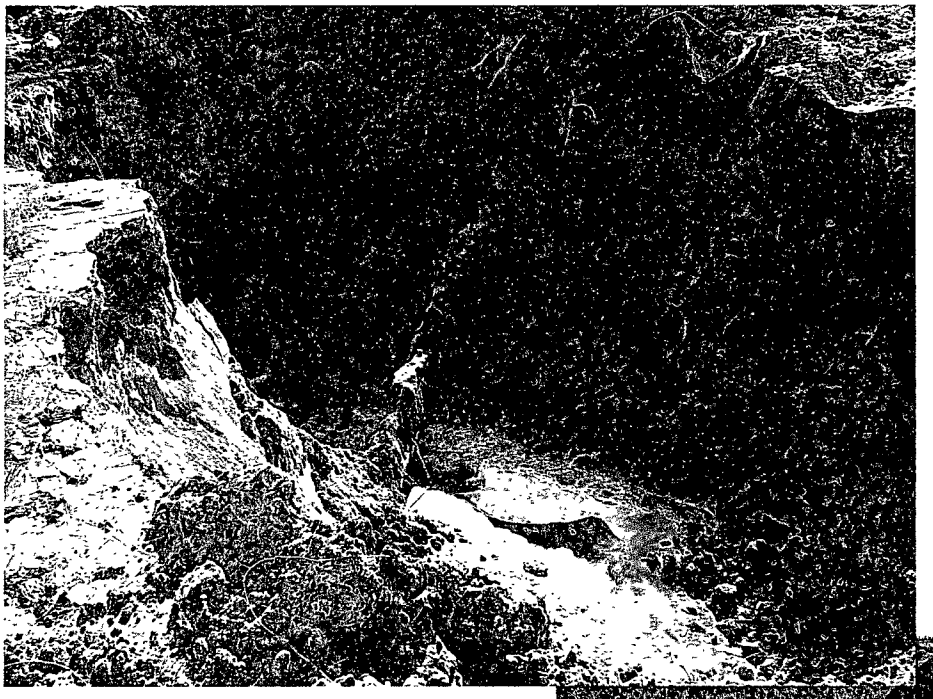
Remarks:

G CT soil - 25

→ 150 N

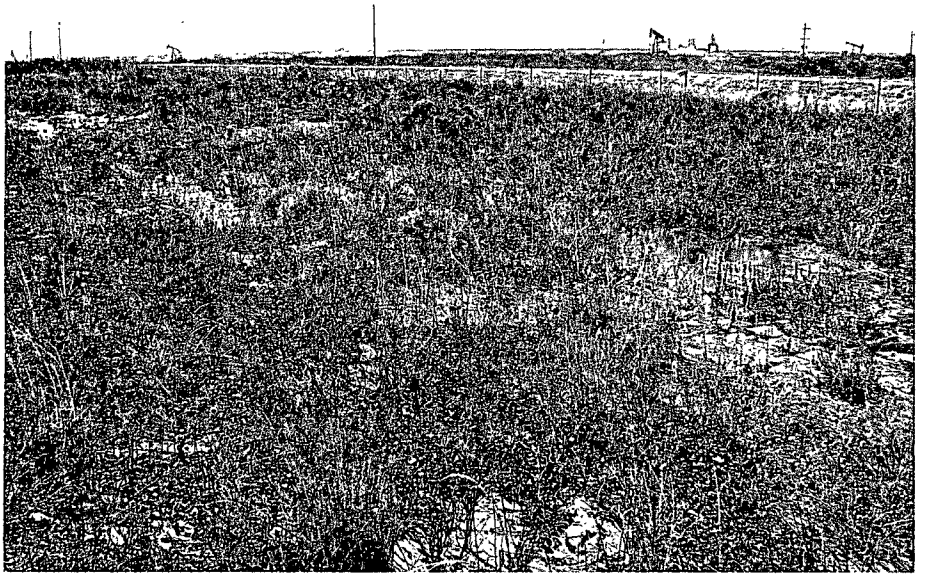
Note: Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

NEDU #247

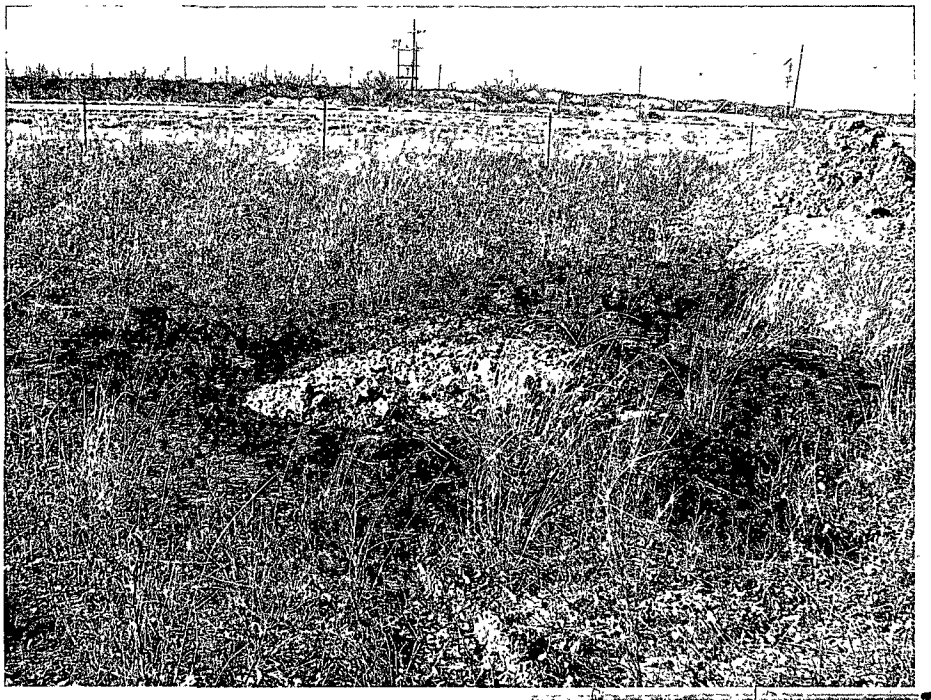


< 12/27/07 – Point of Release

Excavating for line repair >



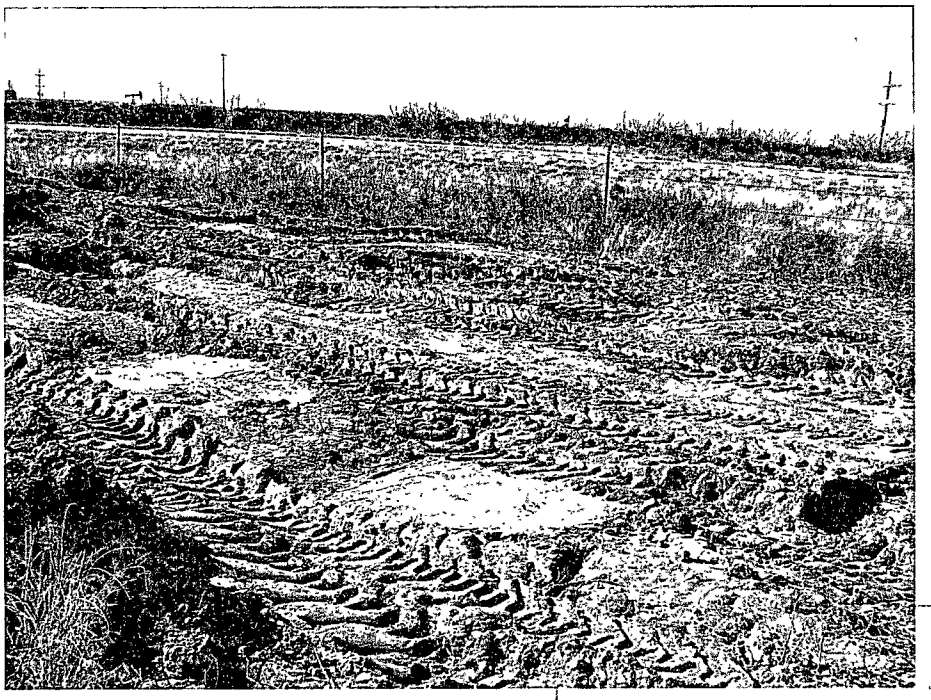
< 12/27/07 – Pasture south of release point.



< 12/27/07 – Pasture south of release point.

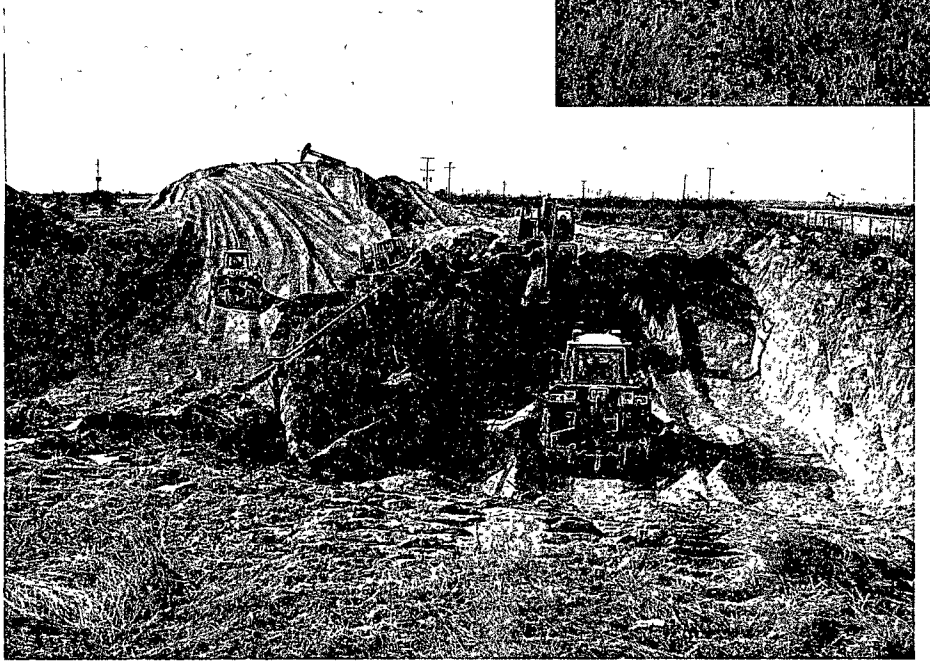
Contaminated soil awaiting disposal. >

< 12/27/07 – Pasture south of release point.

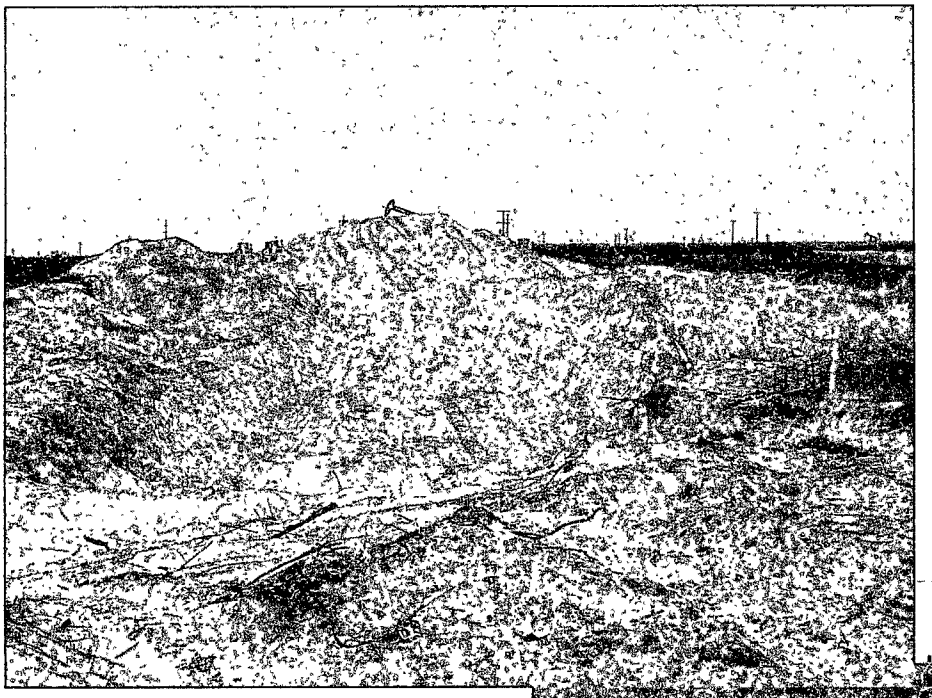


< 12/27/07 – Pasture west of release point.

1/22/08 – Excavating and stockpiling soil for blending on surface. >

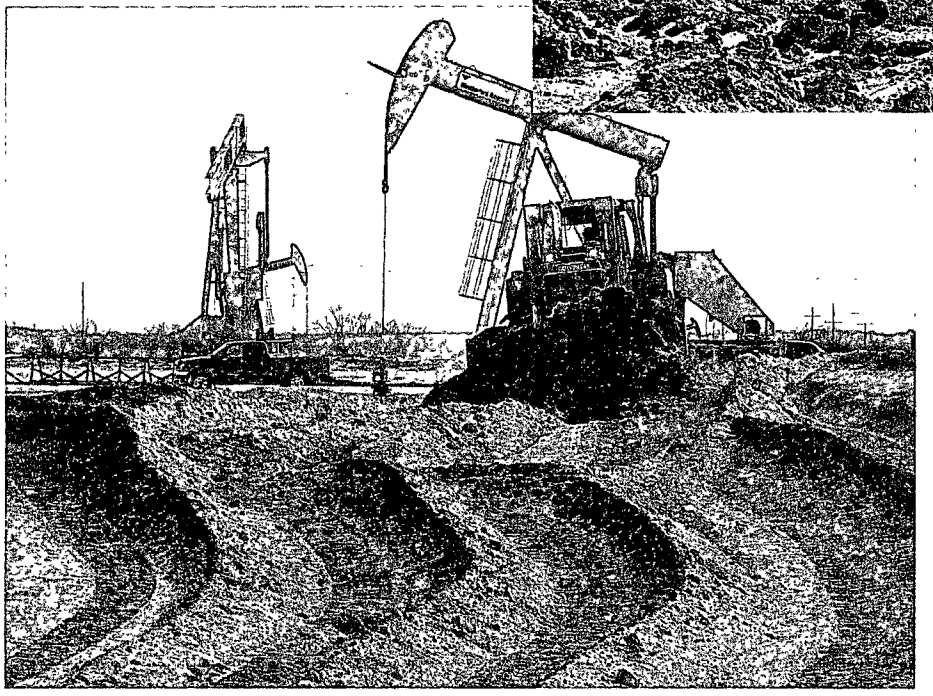


< 1/23/08 – Excavating and stockpiling soil for blending on surface.

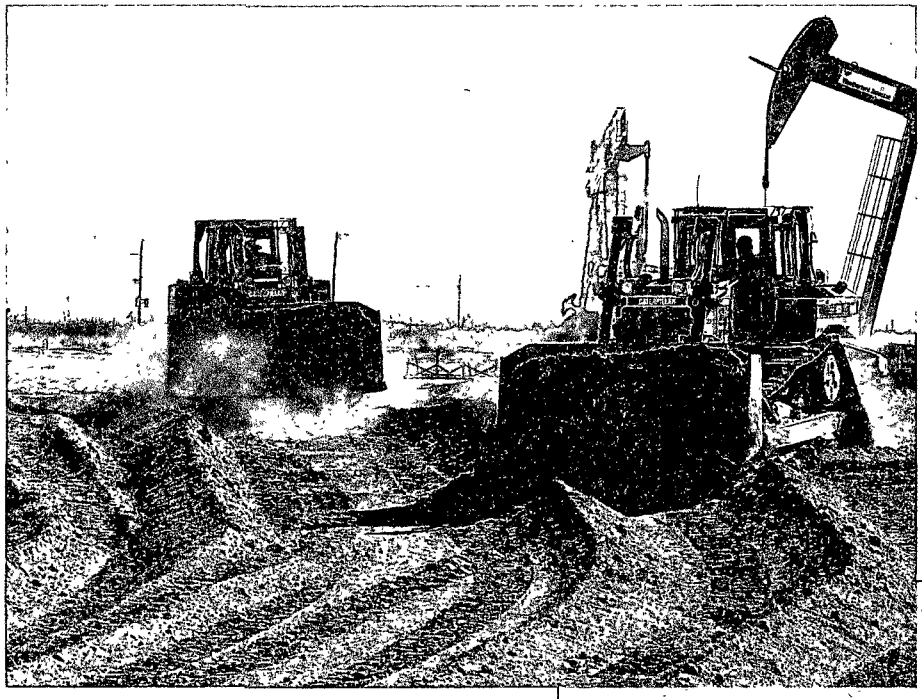


< 1/24/08 – Blending and backfilling the excavation

1/29/08 – Blending and backfilling the excavation nearly completed

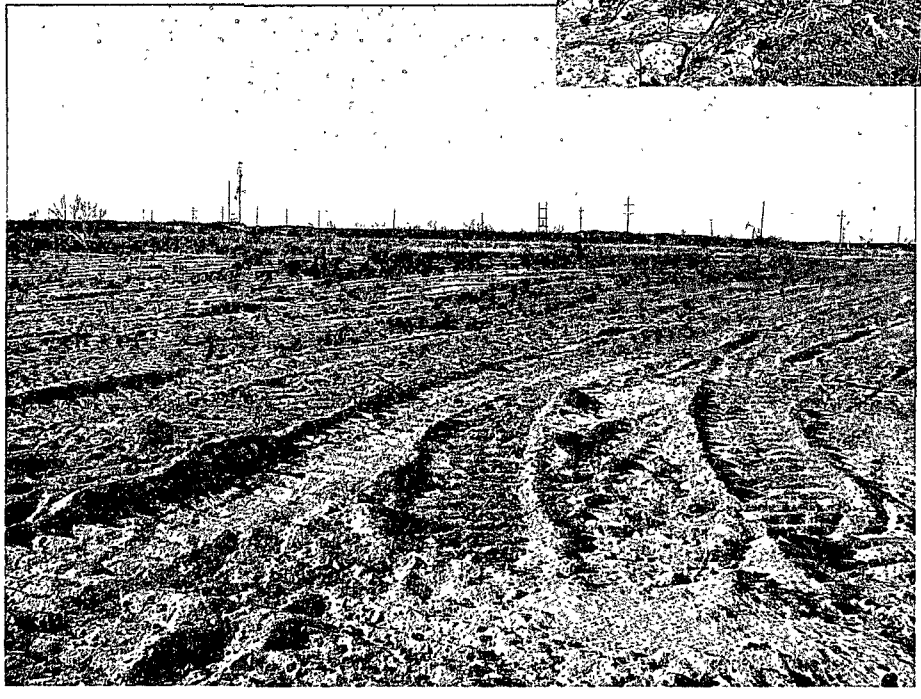


< 1/29/08 – Blending and backfilling the excavation nearly completed

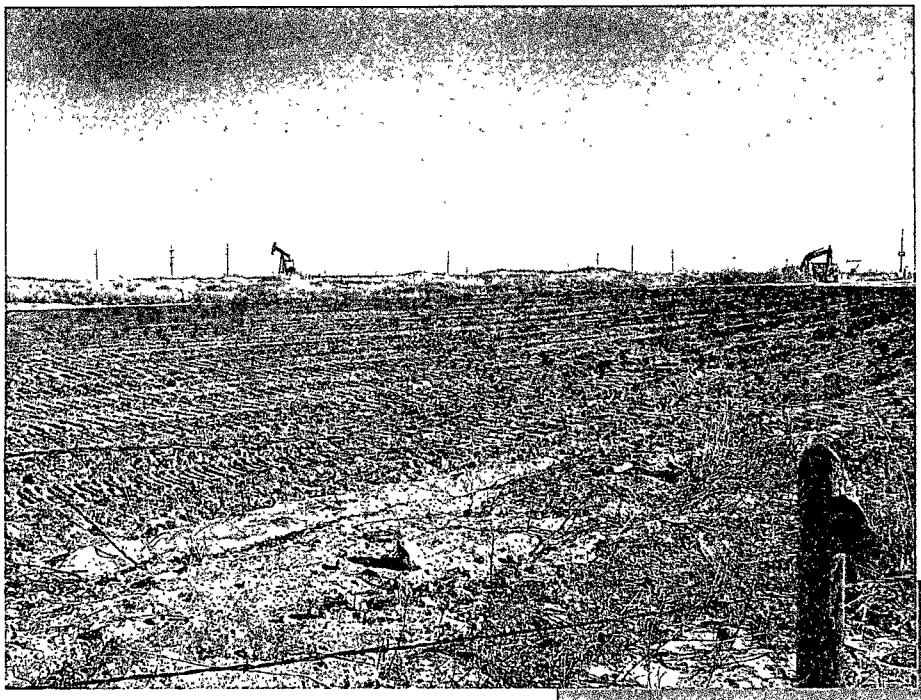


< 1/29/08 – Blending and backfilling the excavation nearly completed

1/31/08 – Topsoil applied and location contoured. >

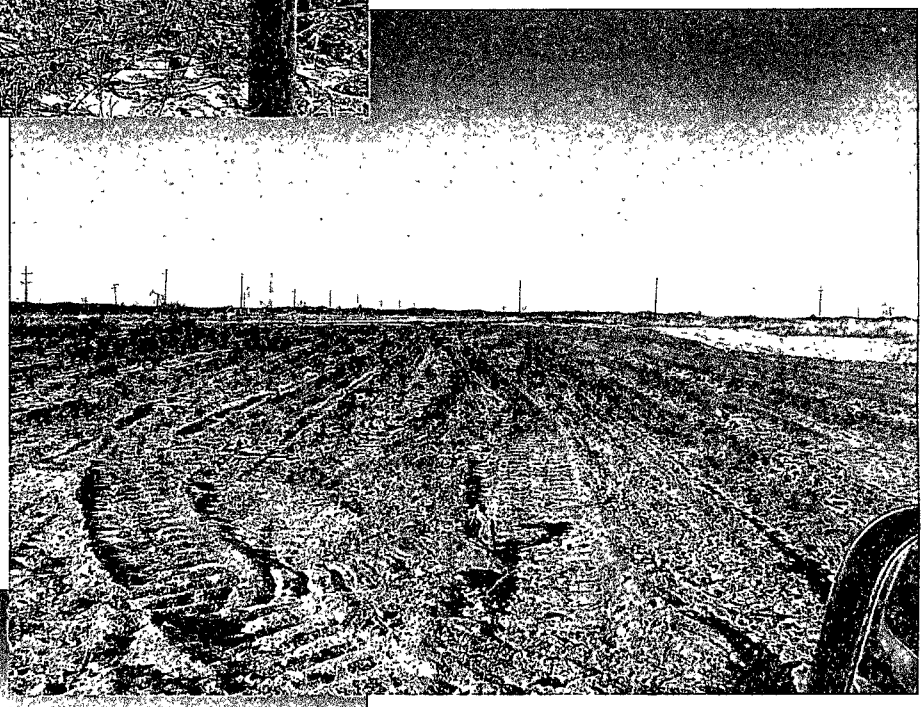


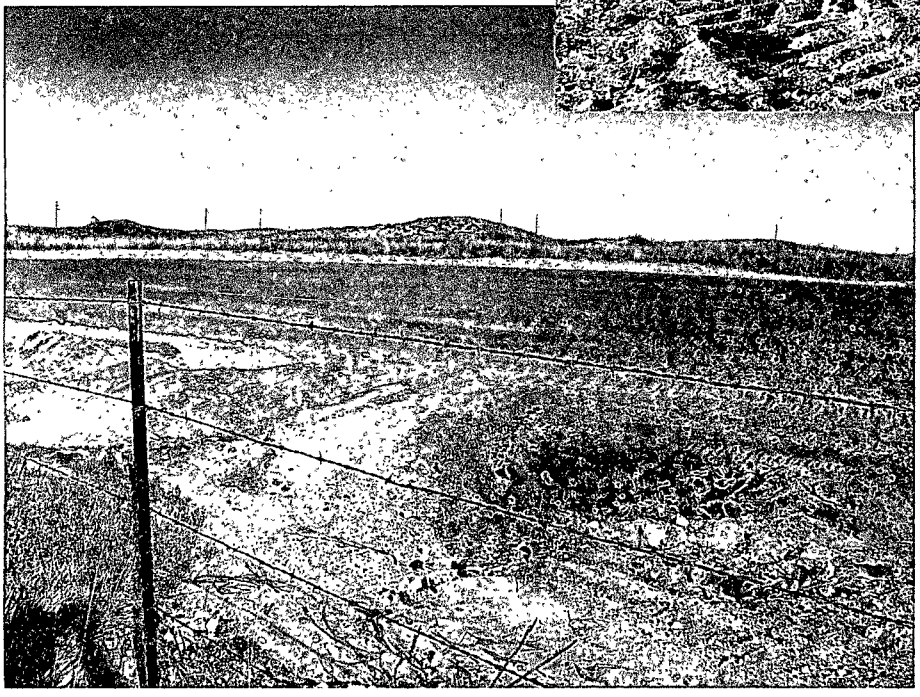
< 1/31/08 – Topsoil applied and location contoured.



< 1/31/08 – Topsoil applied and location contoured.

1/31/08 – Topsoil applied and location contoured. >





< 1/31/08 – Topsoil applied and location contoured.

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

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

Form C-141
Revised October 10, 2003

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 Billy Stockton
Address P.O. Box 1849	Telephone No. 806-893-9575
Facility Name NEDU Injection Line #247	Facility Type Injection Line

Surface Owner State of NM	Mineral Owner State of NM	~~Lease No.~~

LOCATION OF RELEASE

API 30025385080000

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	2	21S	37E					Lea

Latitude 32.510N **Longitude** 103.137W

NATURE OF RELEASE

Type of Release Injection Line Leak	Volume of Release 170	Volume Recovered 140bbls
Source of Release		Date and Hour of Discovery 12/27 8:15
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink	
By Whom? Natalie Gladden	Date and Hour 12/28/07 @ 3:23 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Internal Corrosion

Describe Area Affected and Cleanup Action Taken.*
Remediation taking place Soil is currently being hauled to Sundance Disposal. Background and Surface samples will be taken, along with 2' sample points to 250 chlorides or less.
*****Attempted notifying OCD several time on 12/28/07. Could not get through phone lines until with Gary Wink on 12/28 at 3:23pm******

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: Natalie Gladden	OIL CONSERVATION DIVISION
Printed Name: Natalie Gladden	Approved by District Supervisor: Johnson ENVIRONMENTAL ENGINEER
Title: Environmental Tech	Approval Date: 1.2.08 Expiration Date: 3.3.08
E-mail Address: Natalie.gladden@usa.apachecorp.com	Conditions of Approval: Submit Final C-141 w/ Documentation By Attached ☐
Date: 12/28/07 Phone: 806-893-9575	

* Attach Additional Sheets If Necessary

RP#1700

Apache Corporation	Incident Date: Unknown NMOCD Notified: 12/28/07

SITE: NEDU #247		API No.	30-025-38508
Company:	Apache Corporation		
Street Address:	North Eunice Loop, Hwy 207		
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): > 500	Volume Recovered (bbl): 140	Net Release: > 360	

>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:	NEDU #247
Source of Contamination:	8" Steel Injection Line (loss of integrity)
Land Owner, i.e. BLM, ST, Fee, Other:	State of NM
LSP Dimensions:	~ 100' X 200'
LSP Area	~ 20000 -ft^2
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: North	32 30.619
Longitude: West	103 8.164
Elevation above mean sea level (amsl):	3490 feet 1064 meters
Distance from South Section Line (feet):	3465
Distance from West Section Line (feet):	1775
Location - Unit Letter and 1/4 1/4:	UL- K SE 1/4 of NW 1/4
Location - Section	2
Location - Township	21S
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): <	50
Depth (feet) of lowest contamination (DC):	20
Depth (feet) to Ground Water (DG - DC = DtGW):	~ 30

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		200-1000 horizontal feet: 10 points
If 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: 20	Wellhead Protection Score: 0	Surface Water Score: 0

Site Ranking (1 + 2 + 3):	**20**

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

[1] *100-ppm field VOC headspace measurement may be substituted for lab analysis*

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Form C-141
Revised June 10, 2003

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	**NEDU #247**	Facility Type	**Produced Water Injection Well**

Surface Owner **State of NM**	Mineral Owner **State of NM**	API No. **30-025-38508**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude-W	Latitude-N	County
K	**2**	**21S**	**37E**	**3465**	**1775**	**103.1361**	**32.5103**	**Lea**

NATURE OF RELEASE

Type of Release **Produced Water w/ significant hydrocarbon component**	Volume of Release **Greater than 500 bbl**	Volume Recovered **140 bbl**
Source of Release **8" Steel Injection Line (loss of integrity)**	Date and Hour of Occurrence **Subsurface before discovery**	Date and Hour of Discovery **12/27/07 8:15 AM**
Was Immediate Notice Given? ☑ YES ☐ NO ☐ Not Required	If YES, To Whom? **NMOCD - Hobbs - Gary Wink**	
By Whom? **Natalie Gladden**	Date and Hour **12/28/07 3:23 PM**	
Was a Watercourse Reached? ☐ YES ☑ NO	If YES, Volume Impacting the Watercourse **NA**	

If a Watercourse was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken. *
Loss of integrity of 8" steel Produced Water Injection Line. Line was excavated and repaired.

Describe Area Affected and Cleanup Action Taken. *
The release affected surface area comprised ~20,000-ft^2 progressing from the POR southward. Hydrocarbon contaminated soil and soil with >1000-ppm chloride concentration was excavated and disposed of at a NMOCD licensed disposal facility. Final Cl concentration <250-ppm was achieved by blending with clean soil purchased for bacfill purposes. Remediation was performed by ELKE Environmental - Hobbs.

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**	Approved by District Supervisor:	
Title: **Environmental Tech - Permian Basin**	Approval Date:	Expiration Date:
E-Mail Address: Natalie.Gladden@usa.apachecorp.com	Conditions of Approval: **1RP# 1700**	☐ Attached
Date: **5/22/2009** Phone: **575-390-4186**		