



LOCKHART A 17 BATTERY C141 CLOSURE REPORT

API 30-025-06638

UL-H (SE $\frac{1}{4}$ OF THE NE $\frac{1}{4}$) OF SECTION 17 T21S R37E
LATITUDE: N 32° 28.843' LONGITUDE: W 103° 10.771'
~2.9 MILES NW (BEARING 334.6°) OF EUNICE
LEA COUNTY, NEW MEXICO

NMOCD RP #1344

December 06, 2007

PREPARED FOR APACHE CORPORATION BY:

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

Table of Contents

1.0 Project Summary.....	3
2.0 Site Description	4
2.1 Geological Description	4
2.2 Ecological Description	4
2.3 Area Ground Water	4
2.4 Area Water Wells	4
2.5 Area Surface Water Features	4
3.0 Contaminant and Size of Area	4
4.0 NMOCD Site Ranking	4
5.0 Remediation Process	5
ATTACHMENTS	7-18
Plate 1: Site Location Map	7
Plate 2: Site Topography Map	8
Plate 3: Site Aerial Photograph	9
Plate 4: Ground Water Elevation Contour Map	10
Plate 5: Battery Detail Drawing	11
Cardinal Laboratory Analytical Reports	12-17
Photographs	18-22
Initial NMOCD C-141 (05-03-07)	23
Site Metrics Information	24
Final NMOCD C141 Form	25

1.0 Project Summary

Release Site Name: Lockhart A 17 Battery
Operating Company: Apache Corporation
Company Representative: Billy Stockton, Environmental Tech Phone: 432-556-9143
Address: PO Box 728, Crane, TX 79731 Email: Billy.Stockton@apachecorp.com
Remediation Company: ELKE Environmental, Inc. - Hobbs Phone: 575-738-0138

SITE SPECIFIC DATA:

Legal Description: Lea County, New Mexico UL-H Section 17 T21S R37E
General Location: 2.9 miles NW (334.6°) of Eunice, NM.
Latitude: N32° 28.843' Longitude: W103° 10.771' Elevation: 3,475-ft amsl
Land Ownership: Private – Deck Estate (Gary Deck)
Ground Water Elevation: ~70' 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): 6:30 PM - - 5/2/07
Material Released: Crude Oil and Produced Water
Volume Released: >25-bbl Volume Recovered: 0-bbl
Cause of Release: Lightning strike and resultant battery fire
Release Affected Area: ~40,000-ft²
Depth of Contamination: 10-ft bgs (2 hotspots beneath tank area)
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:

1440-yd³ of visibly contaminated soil was excavated from the surface (6" – 12") of the release affected area and stockpiled on the north edge of the site. This surface removal process revealed two historical iron sulfide contaminated areas beneath the previous location of the battery storage tanks. These two areas were excavated to 7-ft depth and sampled. Laboratory analyses of these two 7-ft samples resulted in TPH concentrations <75-ppm; BTEX concentrations <0.3-ppm; and, total chloride concentrations of 180-ppm and 360-ppm. The 360-ppm at the one location does not pose a risk to the ground water in this area, nor will it inhibit revegetation of the site.

The stockpiled soil was sampled by combining several samples and analyzing for TPH and total chlorides. Analysis of this composite sample indicated a TPH concentration of ~250-ppm and a chloride concentration of <100-ppm. The process of pushing the charred top layer of the battery location to the north perimeter had effectively blended the soil to low contaminant levels.

The excavated surface was sampled at the center point and the 4 compass point corners (SP1 – SP5). Analyses of these samples resulted in TPH concentrations in the range 140-ppm to 660-ppm; BTEX concentrations <0.02-ppm; and total chloride concentrations <65-ppm.

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 (*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 70-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 total release of storage tank and flow line contents. The contaminated area was ~8,750-ft² within the battery containment area and ~31,000-ft² beyond on the N, W and S sides.

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

1440-yd³ of visibly contaminated soil was excavated from the surface (6" – 12") of the release affected area and stockpiled on the north edge of the site. This surface removal process revealed two historical iron sulfide contaminated areas beneath the previous location of the battery storage tanks. These two areas were excavated to 7-ft depth and sampled. Laboratory analyses of these two 7-ft samples resulted in TPH concentrations <75-ppm; BTEX concentrations <0.3-ppm; and, total chloride concentrations of 180-ppm and 360-ppm. The 360-ppm at the one location does not pose a risk to the ground water in this area, nor will it inhibit revegetation of the site.

The stockpiled soil was sampled by combining several samples and analyzing for TPH and total chlorides. Analysis of this composite sample indicated a TPH concentration of ~250-ppm and a

chloride concentration of <100-ppm. The process of pushing the charred top layer of the battery location to the north perimeter had effectively blended the soil to low contaminant levels.

The excavated surface was sampled at the center point and the 4 compass point corners (SP1 – SP5). Analyses of these samples resulted in TPH concentrations in the range 140-ppm to 660-ppm; BTEX concentrations <0.02-ppm; and total chloride concentrations <65-ppm.

In preparation for the planned March-08 seeding of the location, the north side of the location (showing higher TPH concentrations) was excavated an additional 2-ft and pushed over on top of the south side. This process was repeated with the south side being pushed to the north side. This twice blended soil was then spread over the entire location to the surrounding contour and grade. A summary table of all soil analyses conducted during this remediation project is displayed below:

HYDROCARBON & CHLORIDE ANALYTICAL RESULTS										
Sample Location	Sample Depth ¹	GRO ² mg/Kg	DRO ³ mg/Kg	TPH ⁴ mg/Kg	BTEX ⁵ mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl Benzene mg/Kg	Total Xylenes mg/Kg	Chlorides mg/Kg
Riser	7-ft	10	64	74	0.244	0.025	0.097	0.025	0.097	180
Pit 2	7-ft	10	10	20	0.006	0.001	0.001	0.001	0.003	360
Stockpile	6-in	10	250	260	0.011	0.002	0.002	0.001	0.006	96
SP1	6-in	10	174	184	0.012	0.001	0.006	0.001	0.004	64
SP2	6-in	10	160	170	0.012	0.001	0.005	0.001	0.005	64
SP3	6-in	10	133	143	0.013	0.001	0.005	0.001	0.006	16
SP4	6-in	10	281	291	0.016	0.001	0.006	0.002	0.007	64
SP5	6-in	10	652	662	0.011	0.001	0.005	0.001	0.004	16

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; ⁵BTEX = sum of Benzene, Toluene, Ethyl Benzene and Total Xylenes (detection limits = 0.025 or 0.001 mg/Kg). Note: Detection limits are considered "de minimus" values and are included in TPH and BTEX summations.

Based upon the information and data presented within this C141 Closure Document, Apache Corporation requests that NMOCD require “no further action” regarding the May 2, 2007 produced water and hydrocarbon release at the Lockhart 17 Battery.

ATTACHMENTS

Plate 1: Site Location Map	7
Plate 2: Site Topography Map	8
Plate 3: Site Aerial Photograph	9
Plate 4: Ground Water Elevation Contour Map	10
Plate 5: Battery Detail Drawing	11
Cardinal Laboratory Analytical Reports	12-17
Photographs	18-22
Initial NMOCD C-141 (05-03-07)	23
Site Metrics Information	24
Final NMOCD C141 Form	25

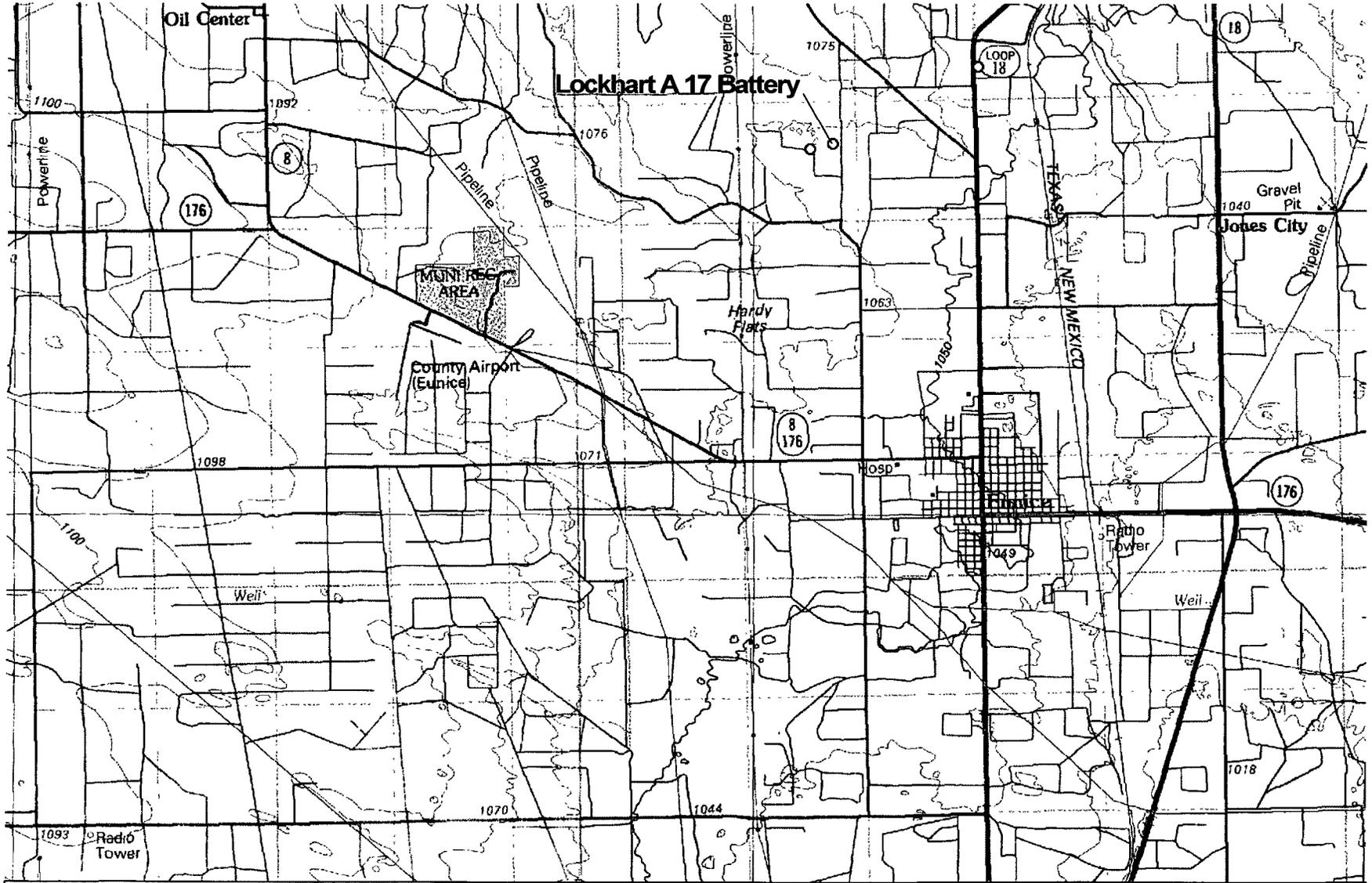
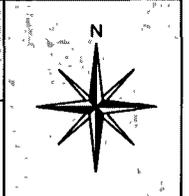
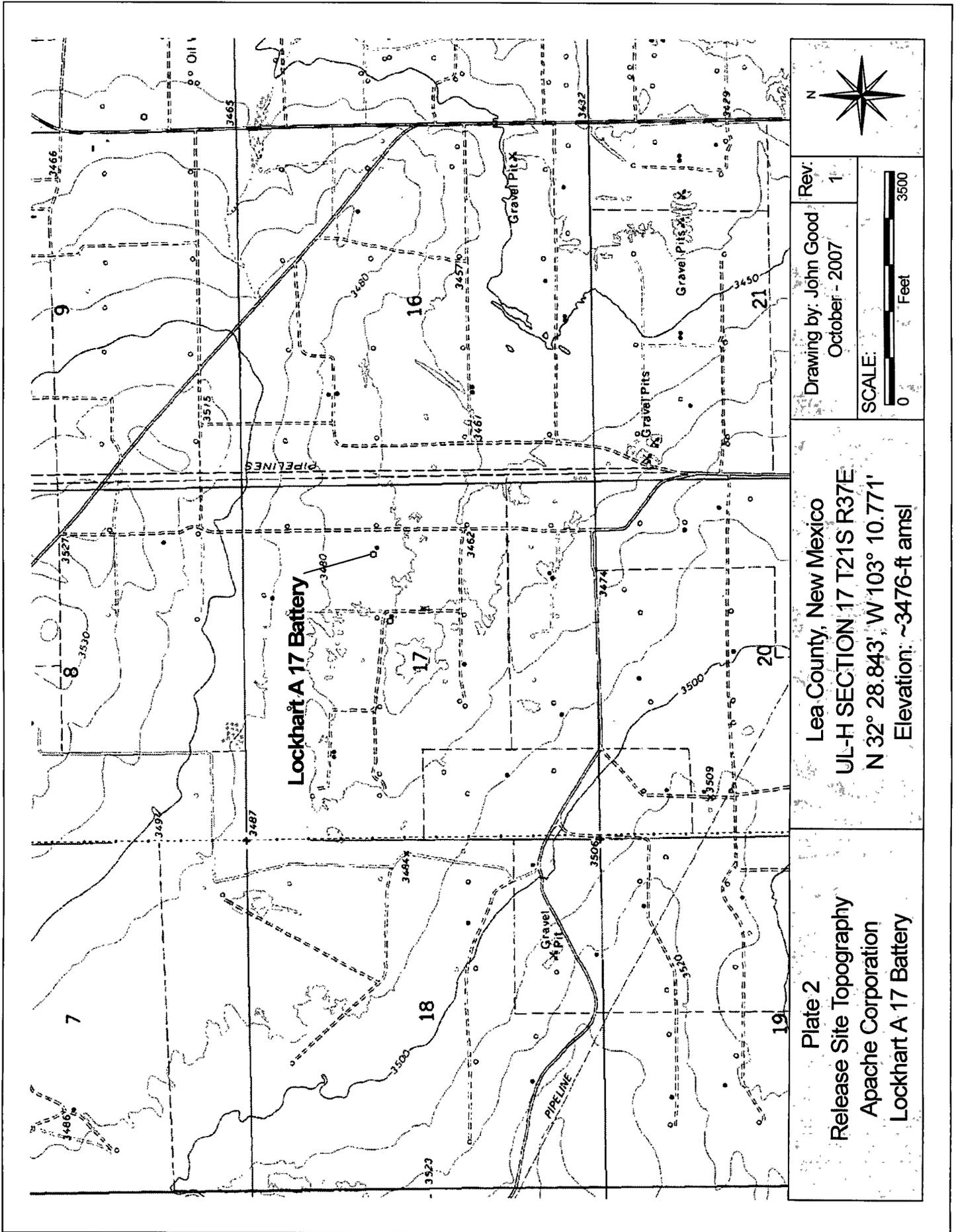


Plate 1
Release Site Location
Apache Corporation
Lockhart A 17 Battery

Lea County, New Mexico
UL-H SECTION 17 T21S R37E
N 32° 28.843', W 103° 10.771'
Elevation: ~3476-ft amsl

Drawing by: John Good
October - 2007
Rev: 1
SCALE:
0 Miles 2





Drawing by: John Good
 October - 2007
 Rev: 1
 SCALE:
 0 3500
 Feet

Lea County, New Mexico
 UL-H SECTION 17 T21S R37E
 N 32° 28.843' W 103° 10.771'
 Elevation: ~3476-ft ams!

Plate 2
 Release Site Topography
 Apache Corporation
 Lockhart A 17 Battery

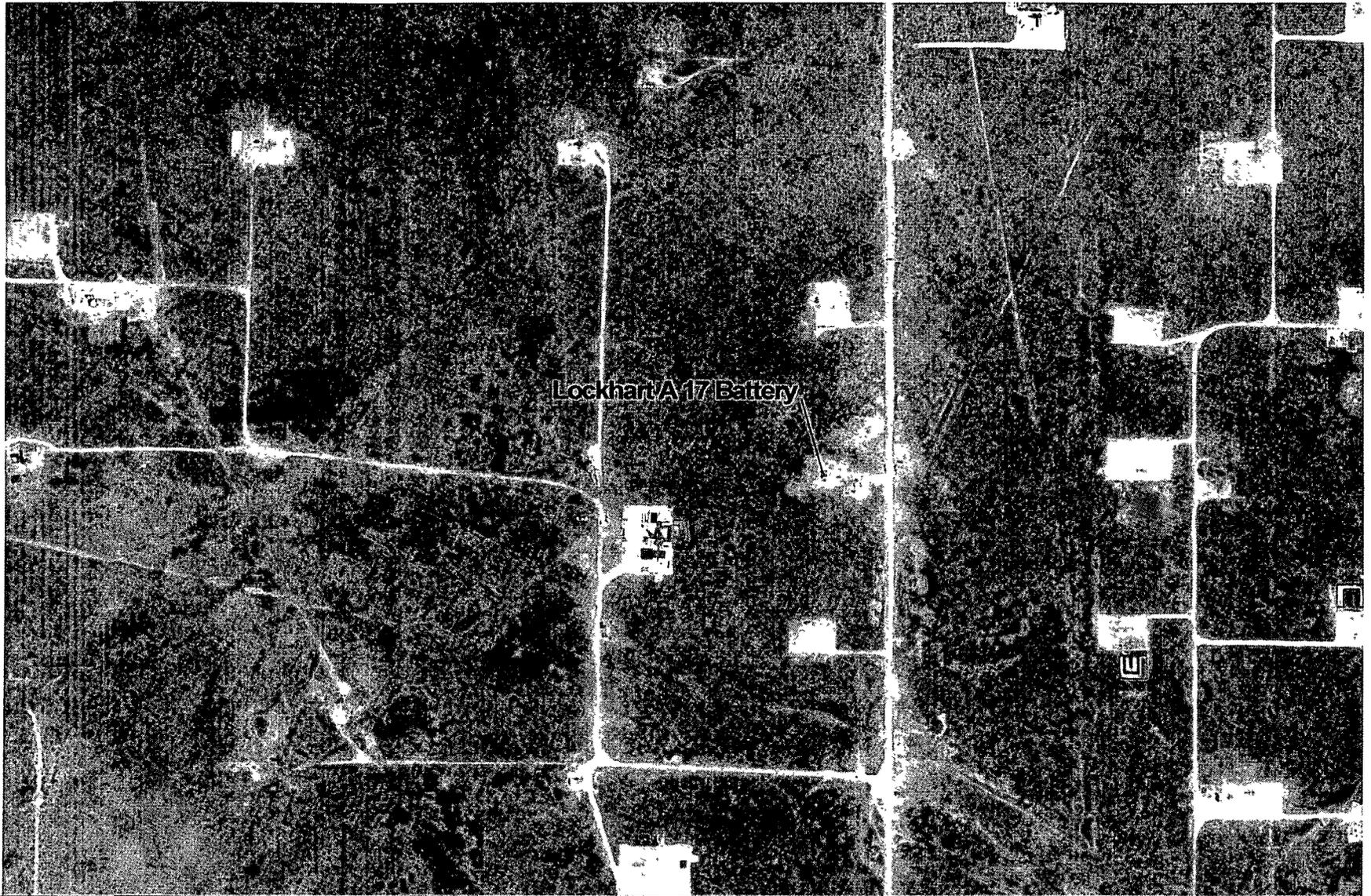


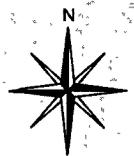
Plate 3
Release Site Aerial Photograph
Apache Corporation
Lockhart A 17 Battery

Lea County, New Mexico
UL-H SECTION 17 T21S R37E
N 32° 28.843', W 103° 10.771'
Elevation: ~3476-ft amsl

Drawing by: John Good
October - 2007

Rev:
1

SCALE:



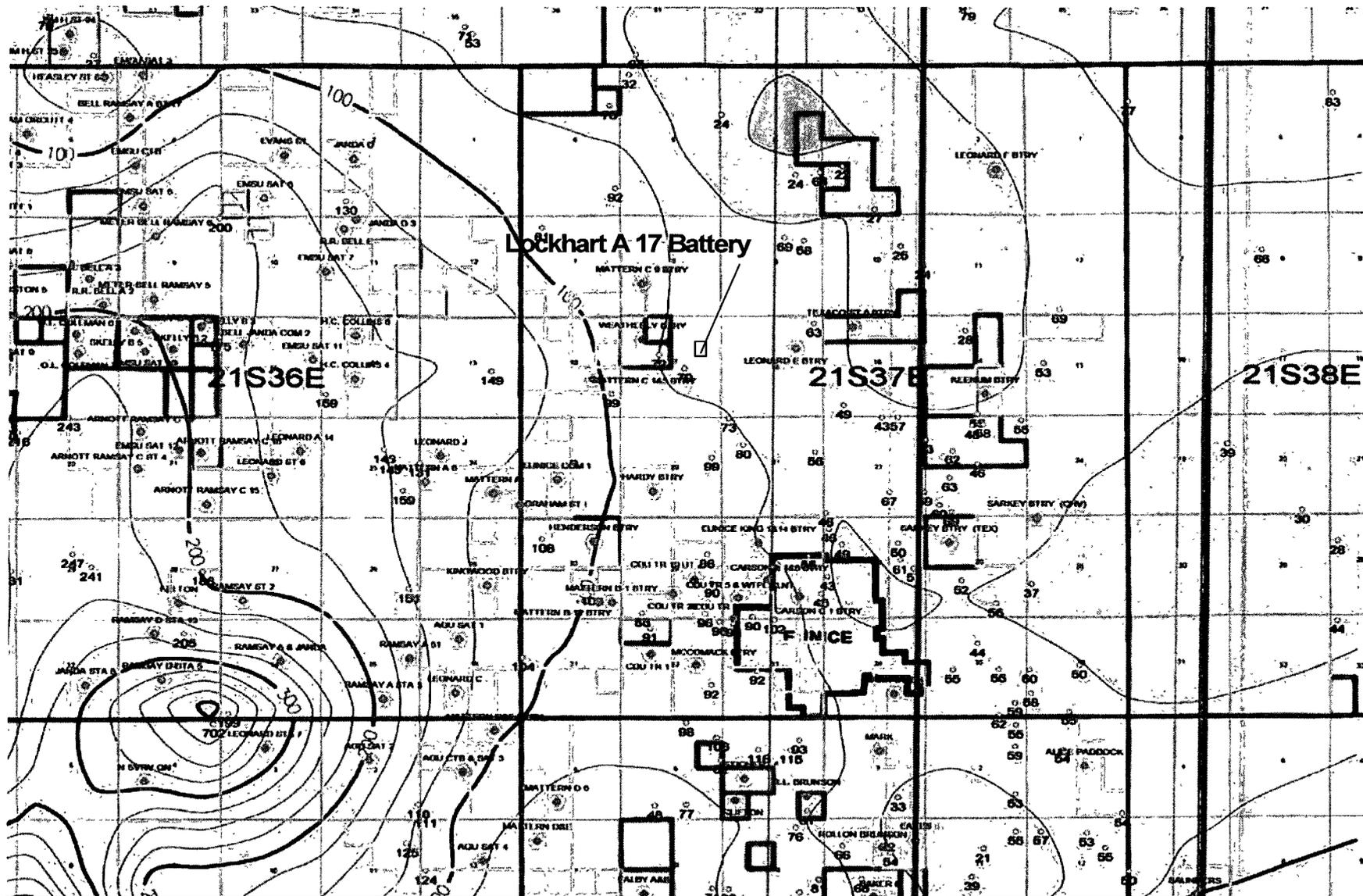


Plate 4
Release Site Water Contour Map
Apache Corporation
Lockhart A 17 Battery

Lea County, New Mexico
UL-H SECTION 17 T21S R37E
N 32° 28.843', W 103° 10.771'
Elevation: ~3476-ft amsl

Drawing by: John Good
October - 2007
SCALE:
0 Miles 3

Rev: 1
N

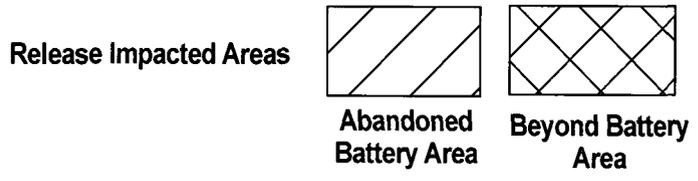
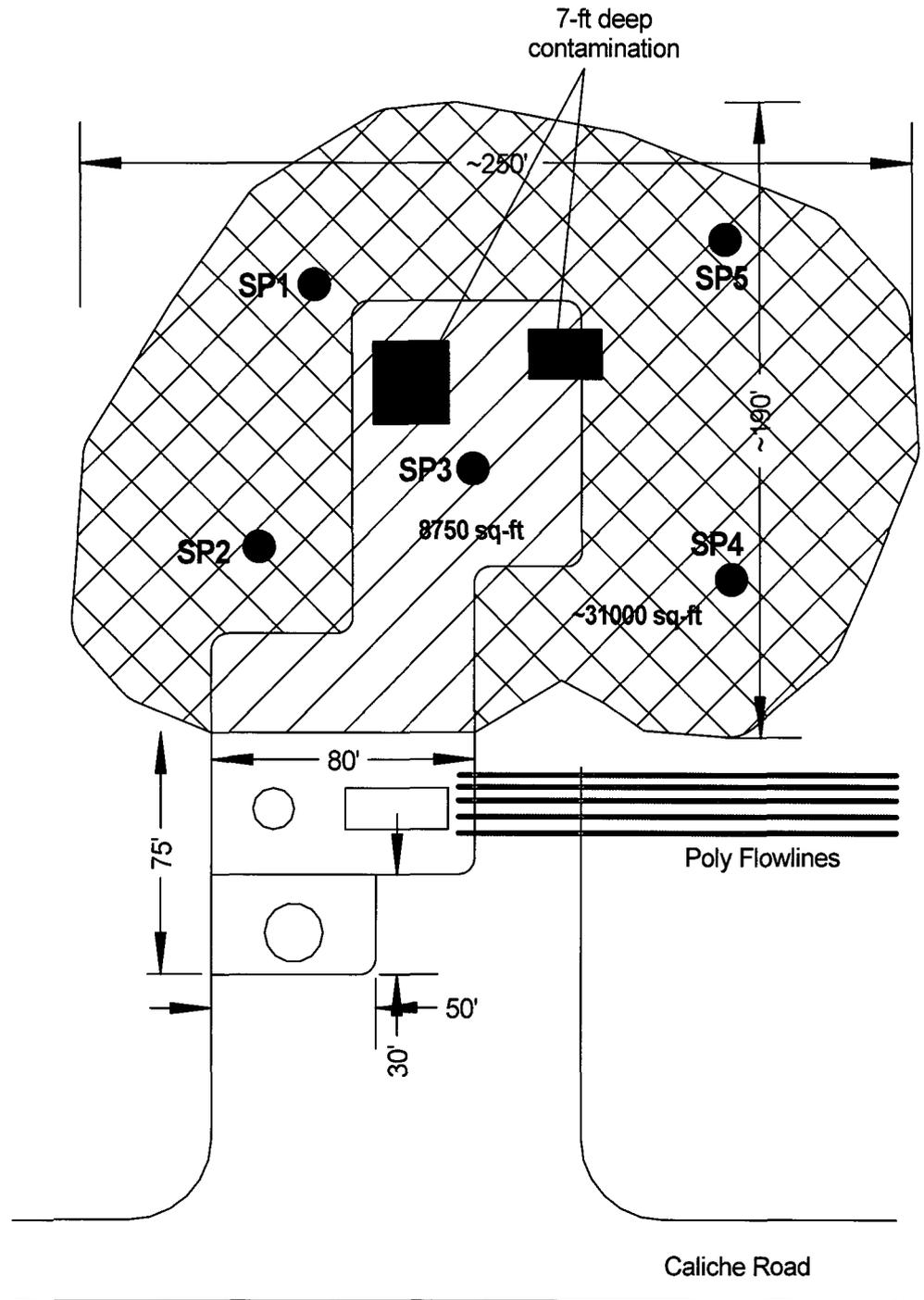


Rev. 1
Drawing by: John Good
October - 2007



Lea County, New Mexico
UL-H SECTION 17 T21S R37E
N 32° 28.843', W 103° 10.771'
Elevation: ~3476-ft amsl

Plate 5
Site Detail Drawing
Apache Corporation
Lockhart A 17 Battery





PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

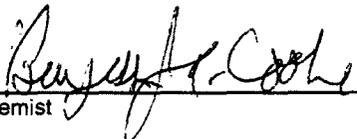
ANALYTICAL RESULTS FOR
 ELKE ENVIRONMENTAL
 ATTN: JOHN GOOD
 3506 N. WEST COUNTY RD.
 HOBBS, NM 88240
 FAX TO: (505) 738-0140

Receiving Date: 09/26/07
 Reporting Date: 09/27/07
 Project Owner: APACHE
 Project Name: LOCKHART #17
 Project Location: NOT GIVEN

Sampling Date: 09/26/07
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: SB
 Analyzed By: BC/HM/NF

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		09/26/07	09/26/07	09/27/07
H13382-1	RISER BH-7	<10.0	64	160
H13382-2	PIT 2 BH-7	<10.0	<10.0	360
H13382-3	STOCKPILE	<10.0	250	96
Quality Control		790	7428	500
True Value QC		800	800	500
% Recovery		99.5	91.1	100
Relative Percent Difference		0.6	1.5	<0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-Cl'B
 *Analyses performed on 1:4 w:v aqueous extracts.


 Chemist

9/27/07
 Date

H13382A ELKE

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.



**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 TO: (505) 738-0140

Receiving Date: 09/26/07
Reporting Date: 09/27/07
Project Owner: APACHE
Project Name: LOCKHART #17
Project Location: NOT GIVEN

Sampling Date: 09/26/07
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: SB
Analyzed By: CK

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
	ANALYSIS DATE	09/26/07	09/26/07	09/26/07	09/26/07
H13382-1	RISER BH-7	<0.025	0.097	<0.025	0.097
H13382-2	PIT 2 BH-7	<0.001	<0.001	<0.001	<0.003
	Quality Control	0.112	0.110	0.109	0.334
	True Value QC	0.100	0.100	0.100	0.300
	% Recovery	112	110	109	111
	Relative Percent Difference	7.2	7.7	7.6	7.5

METHOD: EPA SW-846 8021B



Chemist

09/27/07

Date

H13382B ELKE

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.



**ARDINAL
LABORATORIES**

PHONE (325) 873-7001 • 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: 10/08/07
Reporting Date: 10/11/07
Project Owner: APACHE
Project Name: LOCKHART A-17 BATTERY
Project Location: NOT GIVEN

Sampling Date: 10/08/07
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: KS
Analyzed By: CK/KS

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₂) (mg/Kg)	DRO (>C ₁₂ -C ₂₈) (mg/Kg)	Cl ⁻ (mg/Kg)
ANALYSIS DATE		10/10/07	10/10/07	10/09/07
H13457-1	BLEND - 1	<10.0	174	64
H13457-2	BLEND - 2	<10.0	160	64
H13457-3	BLEND - 3	<10.0	133	<16
H13457-4	BLEND - 4	<10.0	281	64
H13457-5	BLEND - 5	<10.0	652	<16
Quality Control		610	562	500
True Value QC		500	500	500
% Recovery		122	112	100
Relative Percent Difference		7.9	2.5	<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

H13457TCL ELKE

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 interruption, 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.



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 TO: (575) 738-0140

Receiving Date: 10/08/07
 Reporting Date: 10/11/07
 Project Owner: APACHE
 Project Name: LOCKHART A-17 BATTERY
 Project Location: NOT GIVEN

Sampling Date: 10/08/07
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: KS
 Analyzed By: CK

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		10/09/07	10/09/07	10/09/07	10/09/07
H13457-1	BLEND - 1	<0.001	0.006	<0.001	0.004
H13457-2	BLEND - 2	<0.001	0.005	0.001	0.005
H13457-3	BLEND - 3	<0.001	0.005	<0.001	0.006
H13457-4	BLEND - 4	<0.001	0.006	0.002	0.007
H13457-5	BLEND - 5	<0.001	0.005	<0.001	0.004
Quality Control		0.107	0.102	0.102	0.309
True Value QC		0.100	0.100	0.100	0.300
% Recovery		107	102	102	103
Relative Percent Difference		0.8	1.8	3.7	3.7

METHOD: EPA SW-846 8021B

Ally D. Keene

 Chemist

10/11/07

 Date

H13457B ELKE

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.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



CARDINAL 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

ELKE ENVIRONMENTAL, INC.

17

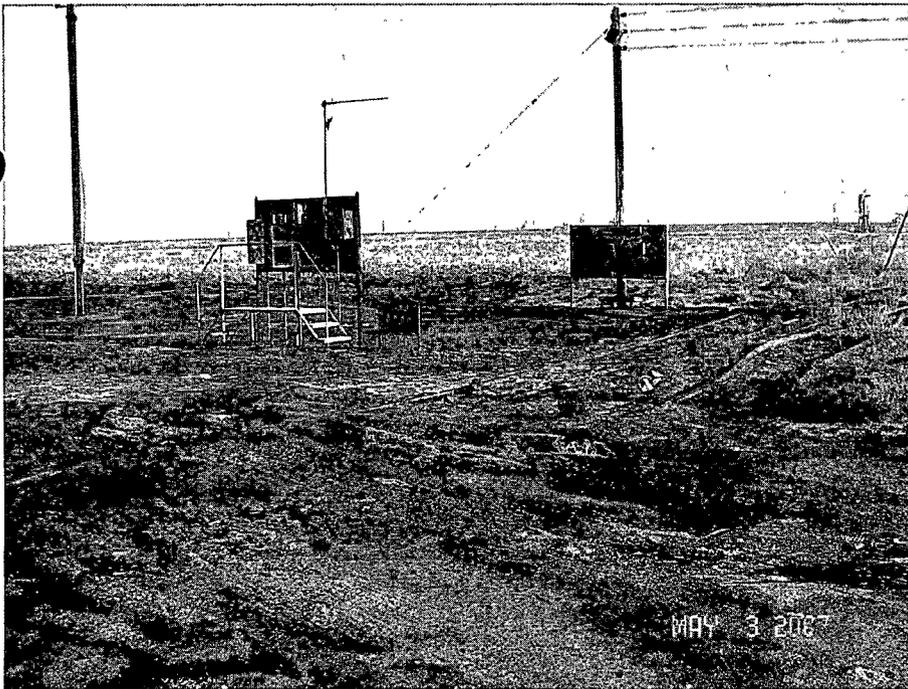
Apache Lockhart A 17 Battery

Company Name: ELKE ENVIRONMENTAL		BILL TO		ANALYSIS REQUEST																							
Project Manager: JOHN GOOD		R.O. #:		TOH 8015 BTEX Chlorides																							
Address: 3506 N. West County Rd.		Company:																									
City: Hobbs State: NM Zip: 88241		Attn: APACHE																									
Phone #: 738-0138 Fax #: 738-0140		Address:																									
Project #: _____ Project Owner: APACHE		City:																									
Project Name: Lockhart A-17 Battery		State: _____ Zip: _____																									
Project Location: _____		Phone #: _____																									
Sampler Name: JOHN GOOD		Fax #: _____																									
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(GRAB OR COMP.)	# CONTAINERS											MATRIX				PRESERV.		SAMPLING							
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME													
HI.3457-1	Blend - 1	C	1			X				X			10/8	9:00	X	X	X										
-2	Blend - 2	C	1			X				X																	
-3	Blend - 3	C	1			X				X																	
-4	Blend - 4	C	1			X				X																	
-5	Blend - 5	C	1			X				X				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 forms including those for acceptance and any other forms whatsoever that do disclose method unless made in writing and received by Cardinal within 30 days after completion of the applicable service. No amount shall constitute or serve as basis 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 requests or otherwise.

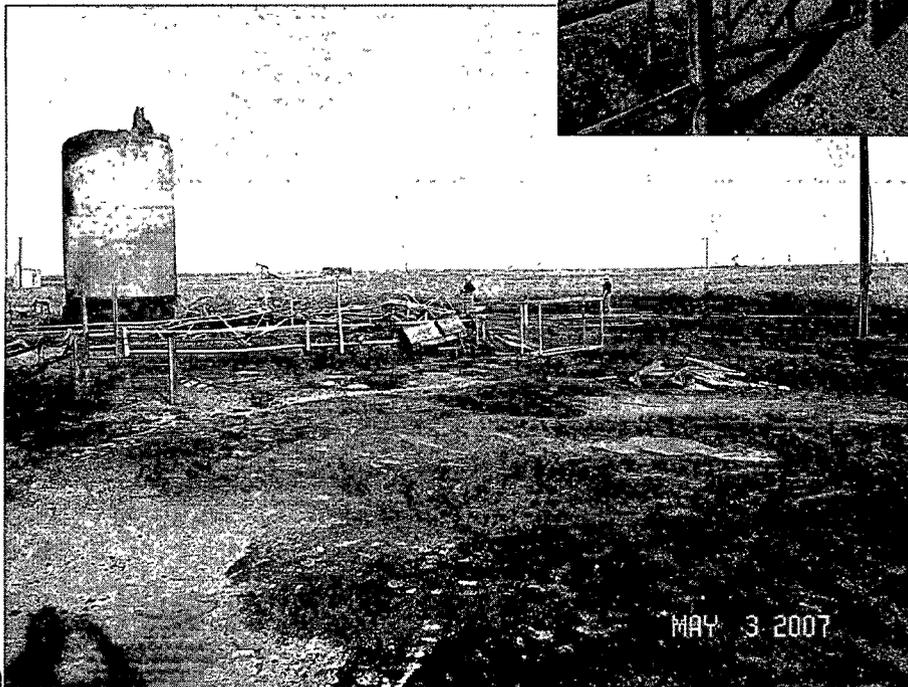
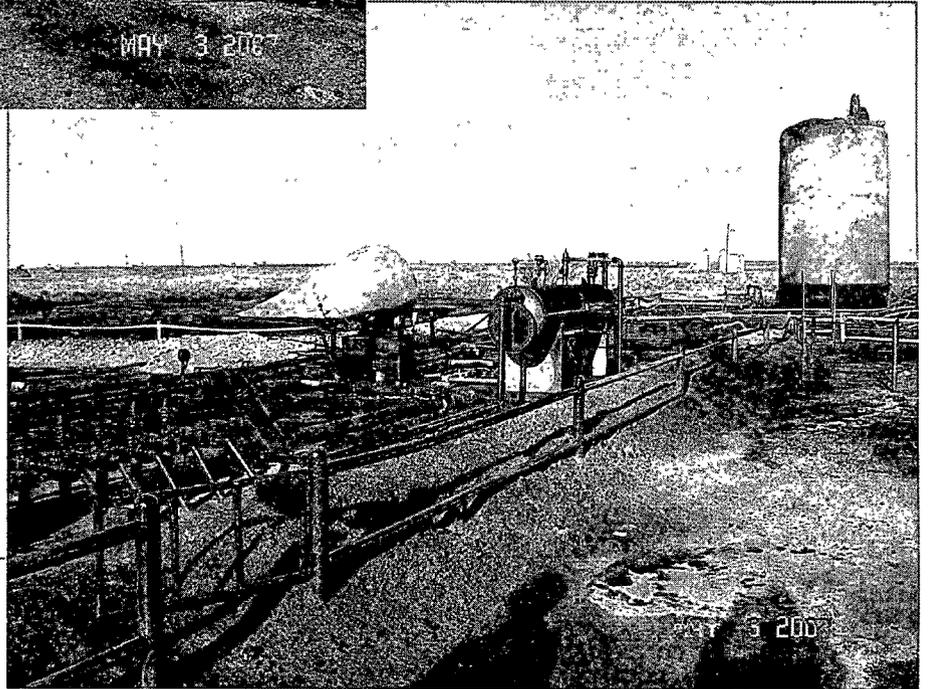
Relinquished By: <i>John Good</i>	Date: 10/8/01	Received By: <i>Kristen Supribo</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1:30		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One)	Sample Condition	Checked By: (Initials)		
Sampler - UPS - Bus - Other:	Cool Intact			
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	KS		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



Morning after the fire

Morning after the fire



Morning after the fire



Oil being removed from sump
discovered 9/25/07 AM



Riser near oil sump exposed.
Pipes were eventually removed.

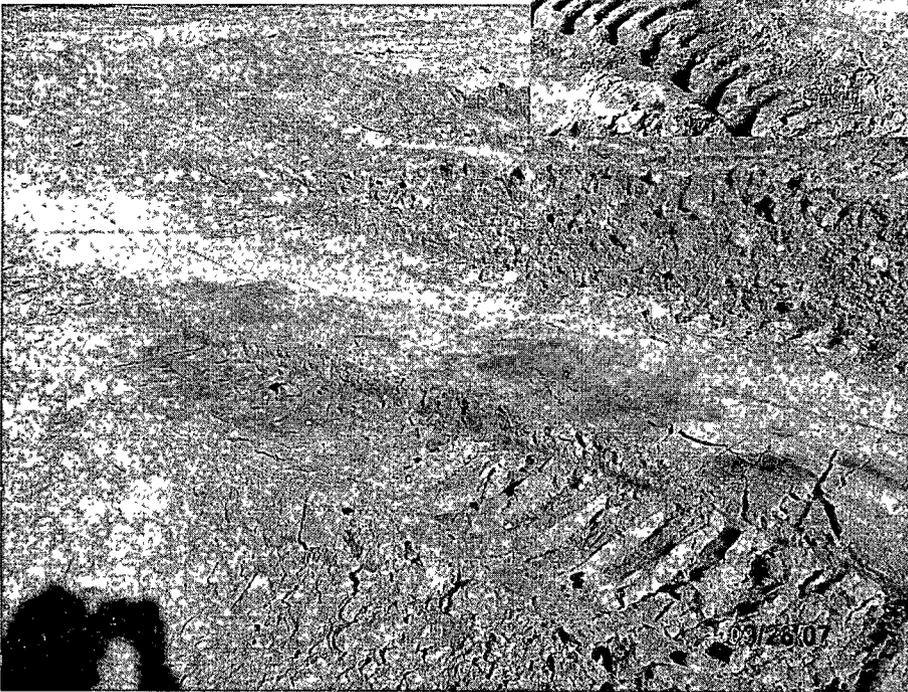


Residual oil in bottom of burned
fiberglass tank. Liquid oil was
removed by vacuum truck.



Oil contaminated soil in previous storage tank area

Removing tank pads and exposing contamination.



Exposed oil/produced water contamination



Excavating contaminated area

Excavating contaminated area

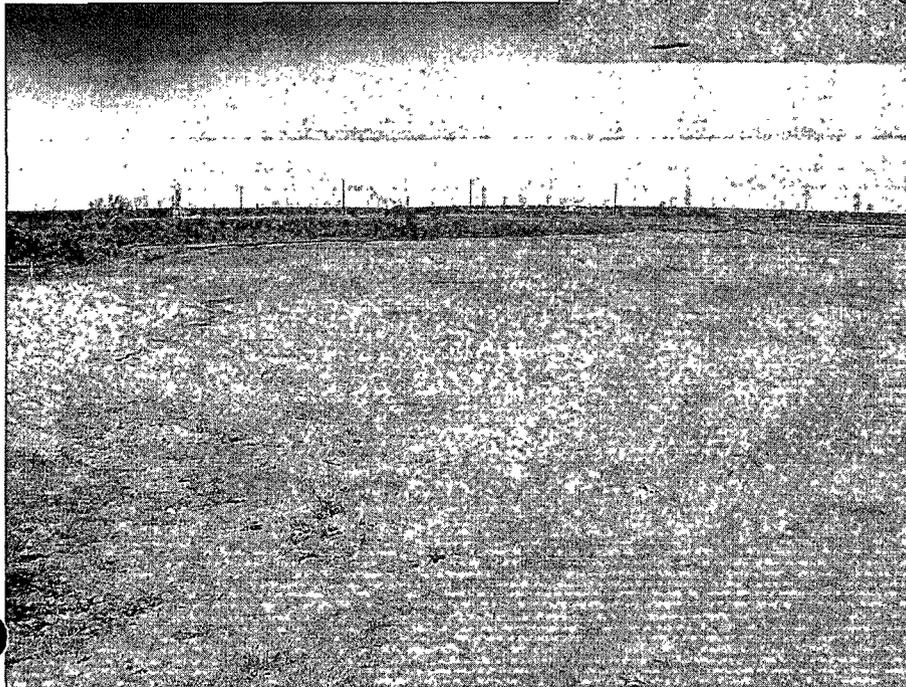
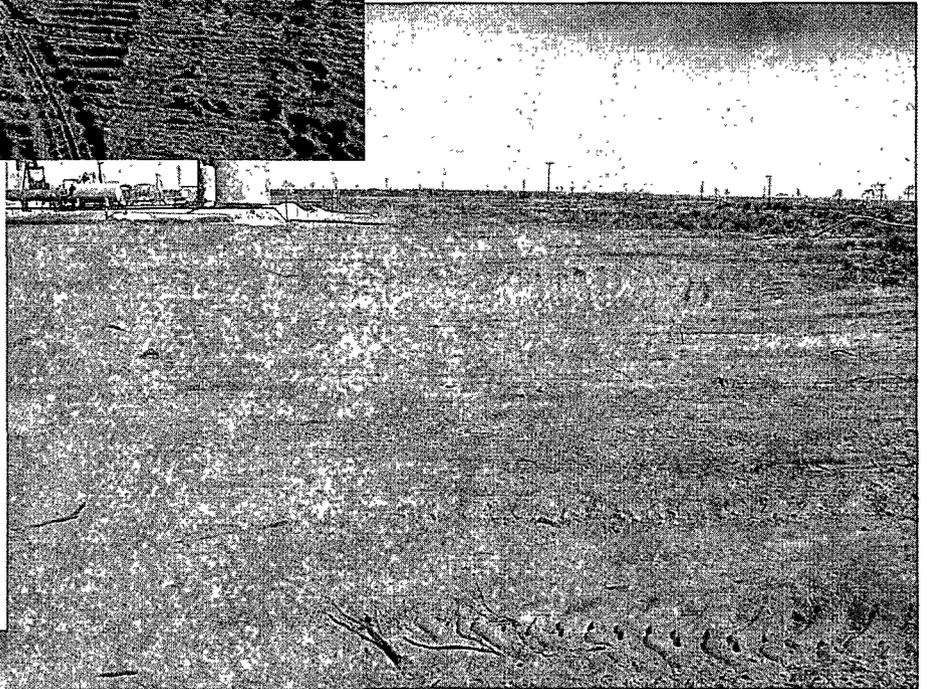


Contamination removed;
bottom was sampled for TPH
and chlorides.



Removing blended stockpile
from location

Remediated area after blending
and contouring. Area will be
seeded in April-08.



Remediated area after blending
and contouring. Area will be
seeded in April-08.

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesa, 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

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

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 Corp.	Contact	Chad Pierson
Address	8 Ellison Lane	Telephone No.	505-441-9261
Facility Name	Lockhart A-17	Facility Type	Tank Btty

Surface Owner	Mineral Owner	API #	30-025-06638
---------------	---------------	-------	---------------------

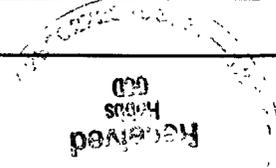
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	17	21S	37E					

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Fire	Volume of Release		Volume Recovered	
Source of Release		Date/Hour of Occurrence	5-2-07 1830	Date /Hour of Discovery	5-2-07 1830
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If Yes, To Whom?	Larry Johnson		
By Whom?	Guinn Burks	Date and Hour	1900 5-2-07		
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.*					
Lightning struck the tank battery and it was a total loss.					
Describe Area Affected and Cleanup Action Taken.*					
Tank bbtty will be wrecked out and the remediation will start. Hungry Horse Environmental has been contracted to perform the clean up.					



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: Chad L. Pierson	Approved by the District Supervisor:	
Title: Pumper 1	Approval Date: 5-18-07	Expiration Date: 7-18-07
Email Address: Chad.pierson@apachecorp.com	Conditions of Approval:	Attached
Date: 5/3/2007 Phone: 505-441-9261		

*Attach Additional Sheets if Necessary

incident - nPAC0714247966

application - nPAC0714248027 RP#1344



Incident Date: 5/2/07 NMOCD Notified: 5/2/07

SITE: Lockhart A 17 Battery	API No. 30-025-06638
Company: Apache Corporation	
Street Address:	
Mailing Address: P.O. Box 1150	
City, State, Zip: Sundown, TX 79372	
Representative: Billy Stockton	
Representative Telephone: 806-229-3010	
Telephone:	
Fluid Volume Released (bbl): > 25	Volume Recovered (bbl): 0
Net Release: > 25	

>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:	Lockhart A 17 Battery
Source of Contamination:	Tank Battery Fire
Land Owner, i.e. BLM, ST, Fee, Other:	Private - Deck Estate
LSP Dimensions:	~ 250' X 190' Battery Area and into field
LSP Area	~ 40000 -ft ²
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: North	32 28.843
Longitude: West	103 10.771
Elevation above mean sea level (amsl):	3475 feet 1059 meters
Distance from North Section Line (feet):	1980
Distance from East Section Line (feet):	660
Location - Unit Letter and 1/4 1/4:	UL- H SE 1/4 of NE 1/4
Location - Section	17
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): ~	70
Depth (feet) of lowest contamination (DC):	7
Depth (feet) to Ground Water (DG - DC = DtGW): ~	63

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 If >1000' from water source, or, >200' from private domestic water source: 0 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		>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
Benzene ¹	10-ppm	10-ppm
BTEX ¹	50-ppm	50-ppm
TPH	100-ppm	1000-ppm

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

District I
1625 N French Dr, Hobbs, NM 88240

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised June 10, 2003

District II
1301 W. Grand Avenue, Artesia, NM 88210

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

District IV
1220 S St Francis Dr, Santa Fe, NM 87505

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Apache Corporation	Contact	Billy Stockton
Address	P.O. Box 1150 Sundown, TX 79372	Telephone No.	806-229-3010
Facility Name	Lockhart A 17 Battery	Facility Type	Tank Battery

Surface Owner	Private - Deck Estate	Mineral Owner	API No.	30-025-06638
---------------	-----------------------	---------------	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from North Line	Feet from East Line	Longitude-W	Latitude-N	County
H	17	21S	37E	1980	660	103.1795	32.4807	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Crude Oil and Produced Water	Greater than 25 bbl	0 bbl
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Tank Battery Fire	5/2/07 6:30 PM	5/2/07 6:30 PM
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 phone	
By Whom?	Date and Hour	
Guinn Burks	5/2/07 7:00 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. *
Lightning strike - west portion of battery total loss - fire was allowed to burn itself out.

Describe Area Affected and Cleanup Action Taken. *
Approximately 8750-ft² within the battery was affected. Approximately 31,000-ft² beyond the battery confined area was affected on the N, W, and S sides. Remediation and abandonment performed by Elke Environmental - Hobbs. Remedial Action Levels achieved by removal and blending.

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>Billy L Stockton</i>	OIL CONSERVATION DIVISION  ENVIRONMENTAL ENGINEER... Approved by District Supervisor:			
Printed Name:	Billy Stockton				
Title:	Environmental Tech - Permian Basin	Approval Date:	12-18-07	Expiration Date:	
E-Mail Address:		Conditions of Approval:	RP# 1344	<input type="checkbox"/> Attached	
Date:	12/6/2007	Phone:	806-229-3010		