

# **HUNGRY HORSE, LLC**

## **ENVIRONMENTAL SERVICES**

January 23, 2007

Mr. Larry Johnson  
Energy, Minerals, and Natural Resources Department  
New Mexico Oil Conservation Division  
1625 N. French Drive  
Hobbs, New Mexico 88240

Subject: Apache Corporation - - North Monument Grayburg San Andres Unit 1815 - Final C-141 and Closure Documentation

Dear Mr. Johnson:

Hungry Horse, LLC, on behalf of Apache Corporation (APACHE) submits for your consideration and approval the Final C-141 and Closure Documentation for the "North Monument Grayburg San Andres Unit 1815" remediation site. This report documents the vertical and horizontal extents of chloride contamination at the site, excavation and disposal of chloride contaminated soils, risk based closure (20-mil liners placed over in-situ >250-ppm Cl<sup>-</sup> soil) of two deeply contaminated areas within the overall release affected area, and backfilling of all excavated areas with clean caliche obtained from an off-site source. This submittal is consistent with NMOCD Guidelines for remediation and closure of hydrocarbon and/or produced water releases. Therefore, on behalf of Apache Corporation, Hungry Horse LLC requests that the NMOCD consider the information provided within this documentation and require "no further action" at this site.

Questions or comments regarding this project should be directed to Mr. Jerry Brian at the Hungry Horse office, or at 505-390-6149. Mr. Mike Warren of Apache Corporation can be contacted by phone at 432-556-2184.

Please address all official correspondence regarding this release and subsequent remediation activities to Mr. Mike Warren at:

Apache Corporation  
P.O. Drawer D  
Monument, NM 88265

Sincerely,



Jerry Brian, Senior Environmental Consultant/General Manager

cc: Mike Warren, Apache Corporation, Monument, NM, w/enclosure  
Thaddeus Kostrubala, NM State Land Office  
File

*Incident - n PAC 0712951151*

**P.O. Box 1058, Hobbs, NM 88241**  
**Phone: (505) 393-3386 Fax: (505) 391-4585**

*Application - pPAC 0712951307*

*APP#  
1313*

# APACHE CORPORATION

## FINAL C-141 AND CLOSURE DOCUMENTATION

NM GRAYBURG SAN ANDRES UNIT #1815 RELEASE

UL-O (SW¼ OF THE SE¼) OF SECTION 2 T20S R36E  
LATITUDE: N32° 35.815'      LONGITUDE: 103° 19.356'  
~2.7 MILES SOUTHWEST (BEARING 224°) OF LOCO HILLS  
EDDY COUNTY, NEW MEXICO

January 23, 2007

PREPARED FOR APACHE CORPORATION BY:

**HUNGRY HORSE, LLC**  
ENVIRONMENTAL SERVICES

3709 S. Eunice Hwy, P.O. Box 1058, Hobbs, New Mexico 88241  
(505) 393-3386; Fax (505) 391-4585

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## **Project Summary**

Operating Company: Apache Corporation  
Company Representative: Mike Warren Phone: 432-556-2184  
Remediation Company: Hungry Horse, LLC Phone: 505-393-3386  
Project Consultant: Jerry Brian Phone: 505-390-6149  
Project Name: North Monument Grayburg San Andres Unit #1815  
Project Reference: NMGSAU1815

### **SITE SPECIFIC DATA:**

Legal Description: Lea County, New Mexico  
UL-O Sec 2 T20S R36E  
General Location: 3.9 miles southwest (bearing 242.3°) of Monument, NM.  
Latitude: N32° 35.815' Longitude: W103° 19.356'  
Elevation: 3,560-ft amsl  
Land Ownership: State of NM; Faye Klein  
Ground Water Elevation: ~50-ft bgs  
Water Wells within 1000-ft: none Surface Water within 1000-ft: none

### **RELEASE SPECIFIC DATA:**

Date of Release: 9/18/06  
Material Released: Produced Water  
Volume Released: ~2000-bbl Volume Recovered: ~1700-bbl  
Cause of Release: Water flood injection line failure

### **REMEDATION SPECIFIC DATA:**

Release Affected Area: ~14,800-ft<sup>2</sup> (flow path); ~6200-ft<sup>2</sup> (caliche pit)  
Contaminant(s): Produced Water  
Depth of Contamination: Maximum 42-ft. @ caliche pit 850-ft south of release point  
Remediation Option Selected: Excavation/Disposal/Plastic Liners/Backfill  
The southerly flow path was excavated to varying depths to achieve <250-ppm chloride concentrations based on vertical delineation results. One area of the flow path (centered on sample point 9) was excavated to 20-ft bgs to achieve <1000-ppm chloride concentrations, then covered with a 100' X 10' 20-mil plastic liner. The contaminated caliche pit area (76' X 82') was excavated to a depth of 21-ft bgs (10-ft below the existing excavated surface) to achieve a 1679-ppm chloride concentration. This excavated pit area was covered with a 20-mil plastic liner. All excavated material was disposed of at a facility approved by NMOCD to receive and process chloride contaminated soils. All excavations were backfilled with clean caliche obtained off-site.  
Ground Water Monitoring: Not Applicable  
Remediation Start: 9/21/06 Remediation Complete: 11-10-06  
Contaminated Soil Disposal: Sundance Land Farm; ~7700-yd<sup>3</sup>

## 1.0 Introduction and Background

This report addresses the produced water release which occurred at the Apache Corporation (APACHE) North Monument Grayburg San Andres Unit 1815 injection well site. The release occurred on September 18, 2007. The estimated total volume of the release is ~2000-bbl, with approximately 1700-bbl recovered by vacuum truck. Total surface area affected by the release is ~21,000-ft<sup>2</sup>. Site remediation was conducted by Hungry Horse, LLC – Environmental Services. Remediation activities were completed on November 10, 2006.

The release site is located on State of NM and private land in Unit Letter O, (SW¼ of the SE¼), Section 2, T20S, and R36E. The GPS coordinates are: Latitude: N32° 35.815'; Longitude: W103° 19.356'. A location map, topographical map of the site area, aerial photograph and a site detail drawing are included as Plates 1-4 in the Attachments.

The on-site remediation project commenced on 21-Sep-06 and was completed on 10-Nov-06 by Hungry Horse LLC. All laboratory analyses were conducted by Cardinal Laboratories, Hobbs, NM. Photocopies of the laboratory analytical results are attached to all printed copies of this report to substantiate the analytical results tables found on Page 13 of this report. (*Electronic copies will not have laboratory reports included due to the resulting file size; refer to the analyses summary table on Page 14 of the Attachments*).

## 2.0 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 Laguna Valley physiographic subdivision, described by Nicholson & Clebsch as "covered almost entirely by dune sand which is stable or semi-stable over most of the area, but which locally drifts. The surface is very irregular and has no drainage features except at the edges of several playas. The sand is generally underlain by recent alluvium but in several places the sand forms topographic highs where it is underlain by a caliche surface. The thickness of the sand cover ranges from a few inches to a probable maximum of 20-feet."

### 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 current available data, ground water is projected to be ~50-ft 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 surface water bodies exist within 1000 horizontal feet of the site.

## 3.0 NMOCD Site Ranking

Contaminant delineation and remedial 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<sup>8015m</sup>, Benzene, and the mass sum of Benzene, Toluene, Ethyl Benzene, and total Xylenes (BTEX<sup>8260</sup>), 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 presented below.

NMOCD Site Ranking Table

| 1. GROUND WATER  |         | 2. WELLHEAD PROTECTION  | 3. DISTANCE TO SURFACE WATER           |
|--|---------|---|--|
| DEPTH TO GW <50 FEET:<br>20 POINTS                                   |         | IF <1000' FROM WATER SOURCE, OR;<br><200' FROM PRIVATE DOMESTIC<br>WATER SOURCE:<br>20 POINTS | <200 HORIZONTAL FEET:<br>20 POINTS     |
| DEPTH TO GW 50 TO 99 FEET:<br>10 POINTS                              |         |   | 200-1000 HORIZONTAL FEET:<br>10 POINTS |
| DEPTH TO GW >100 FEET:<br>0 POINTS                                   |         | IF >1000' FROM WATER SOURCE, OR;<br>>200' FROM PRIVATE DOMESTIC<br>WATER SOURCE: 0 POINTS     | >1000 HORIZONTAL FEET:<br>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                               |

## **4.0 Subsurface Soil Investigation**

The vertical contamination extents beneath the southerly flow path, lateral ponding areas at the fence/gate area and the final flow terminus at the caliche pit were determined by trenching and sampling 15 points (14 along the flow path and 1 in the center of the caliche pit). Sampling trenches were extended until soil chloride concentrations were less than 250-ppm. Plate 5 of the Attachments displays all 15 sample points with a graphical representation of the contamination profile of each sample point. A summary table of all analytical results is contained on Page 14 of the Attachments.

## **5.0 Ground Water Investigation**

No ground water investigation was conducted, nor will be necessary as a result of this release. The sample trench within the caliche pit was extended to 43-ft bgs with no ground water encountered.

## **6.0 Remediation Process**

The initial phase of the site remediation was the excavation and installation of a 20-mil liner at the caliche pit located at the southern terminus of the contaminant flow path. The pre-existing bottom of the caliche pit was approximately 11-ft bgs. The results of the sampling protocol within the caliche pit indicated that the chloride concentration at the 21-ft bgs level was 1679-ppm. The bottom of the pit was excavated to 21-ft bgs and the walls of the pit were extended laterally to allow for a liner overlap. Excavated soil was disposed of at the Sundance Land Farm. The excavated bottom area (21-ft bgs) was then lined with a 76' X 82' 20-mil plastic liner and backfilled with a 10-ft layer of clean caliche.

The 850-ft flow path emanating from the release point and the East-West lateral ponding areas at the fence/gate area were excavated to varying depths depending on the vertical contaminant profiles determined by the 14 sample trenches along the flow extent. Excavated depth ranged from just a few feet at the sample point #8 location to 23-ft bgs at the sample point #7 location. The excavation (50-ft north and south of sample point #9) was extended to 20-ft bgs to achieve a contaminant concentration of <1000-ppm in the remaining, unexcavated soil. This area was covered with a 10' X 100' 20-mil liner. All excavated soils were disposed of at the Sundance Land Farm. All excavated flow path areas were then backfilled with clean caliche obtained from an off-site source.

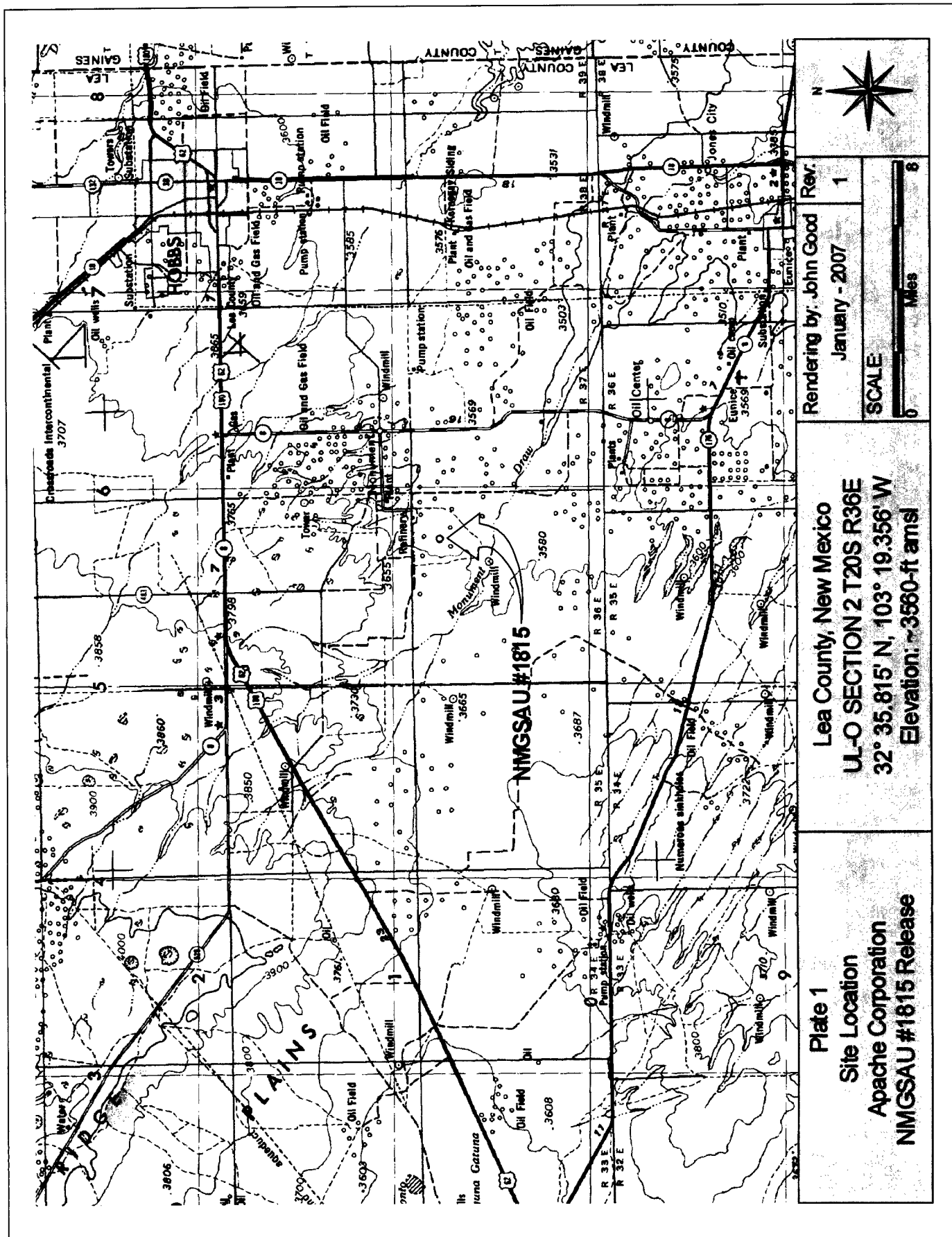
## **7.0 Closure Justification**

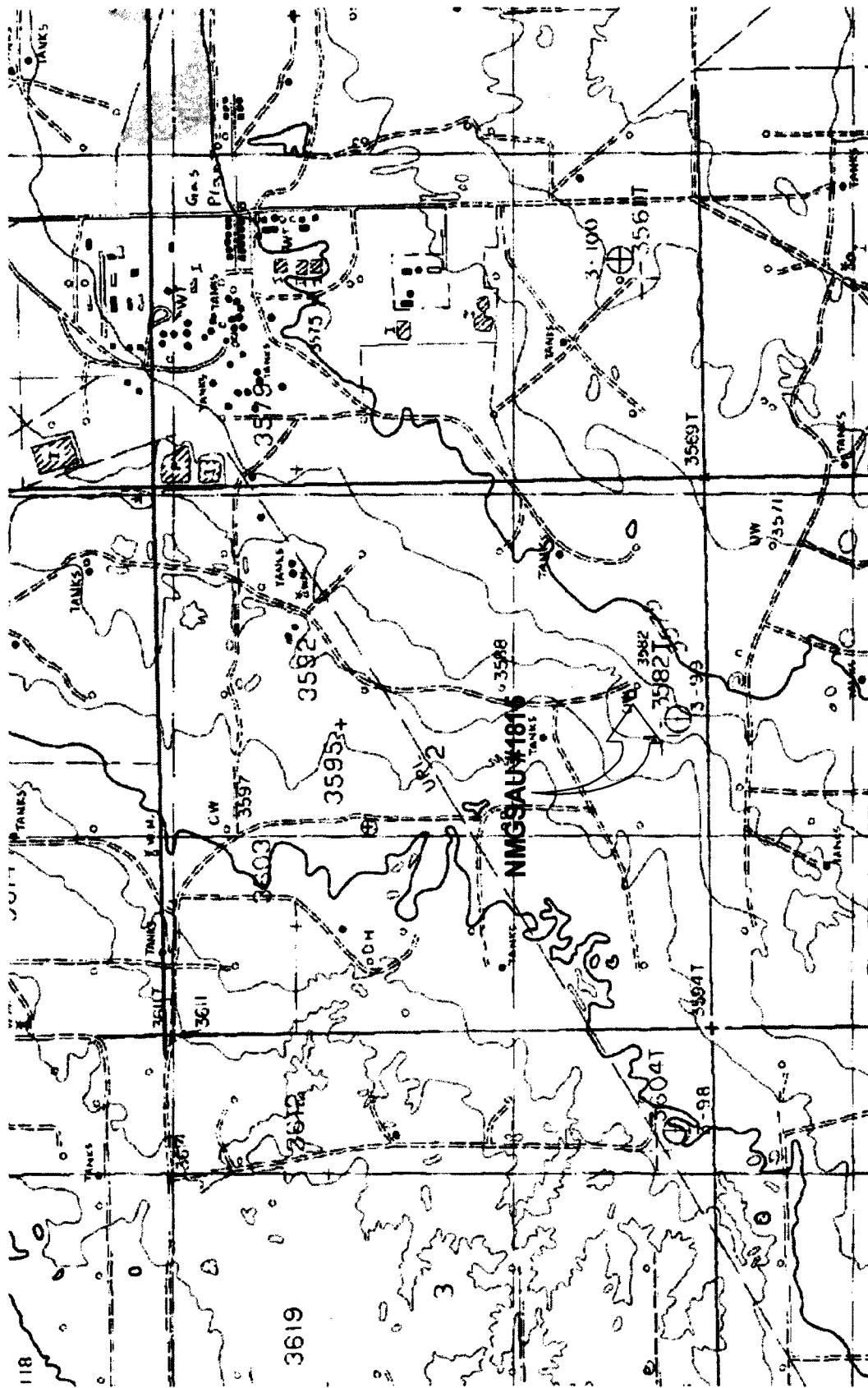
This report documents successful remediation of the Apache Corporation "North Monument Grayburg San Andres Unit #1815" release site. Contaminated soil within the affected areas, except two, was excavated to <250-ppm chloride concentration levels, and disposed of. The caliche pit was excavated to the 21-ft bgs level which displayed a chloride concentration of 1679-ppm. Soil below the 21-ft level was left in place and covered with a 76' X 82', 20-mil plastic liner. The trench area extending 50-ft on each side of sample point #9 was excavated to 20-ft bgs and then covered with a 100' X 10', 20-mil plastic liner. Soil left in-place below this liner displayed <1000-ppm chloride concentrations. Based on the information and data presented in this report, Hungry Horse LLC, on behalf of Apache Corporation, requests that the New Mexico Oil Conservation Division require "NO FURTHER ACTION" at this site in relation to the 9-18-06 release event.

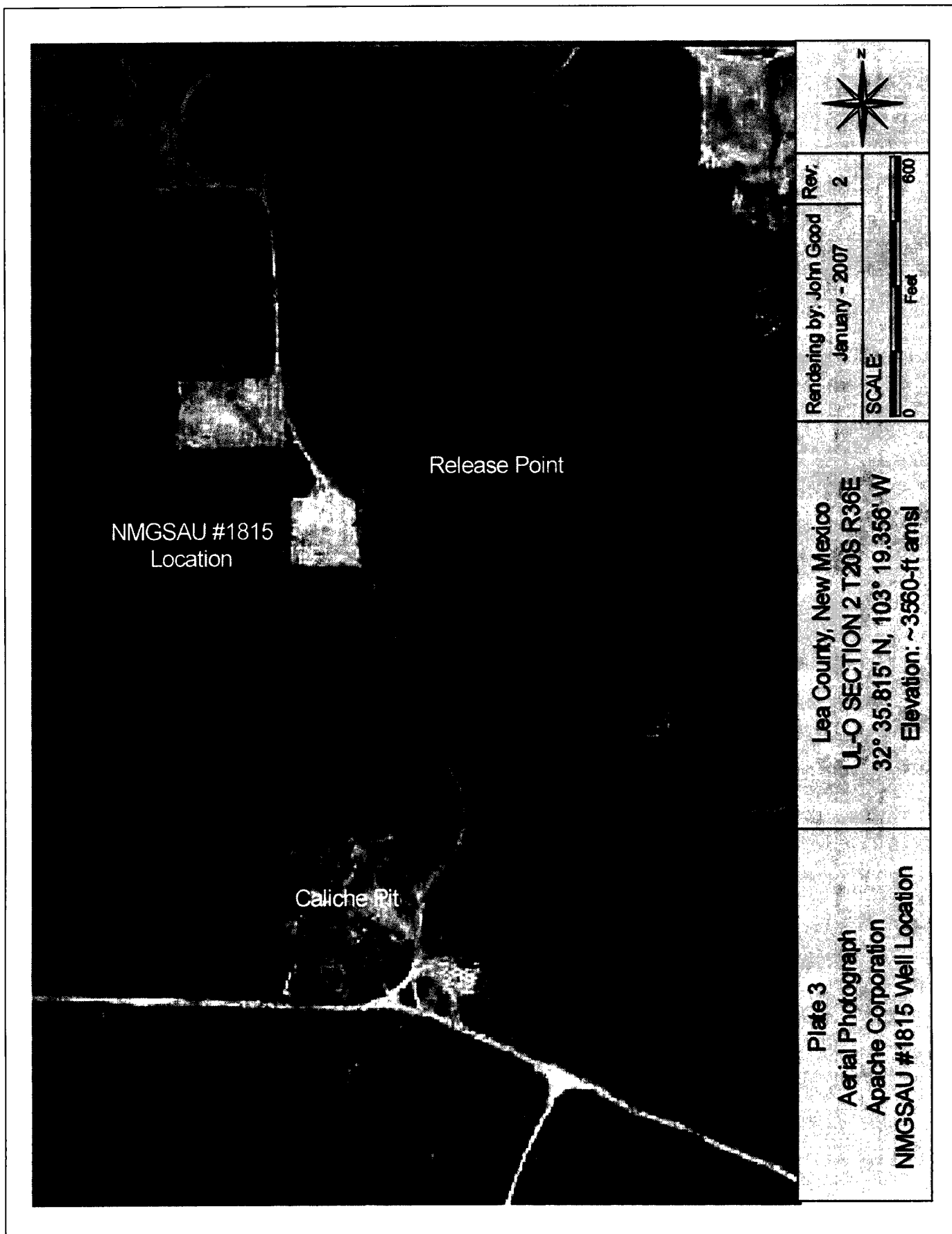
## ATTACHMENTS

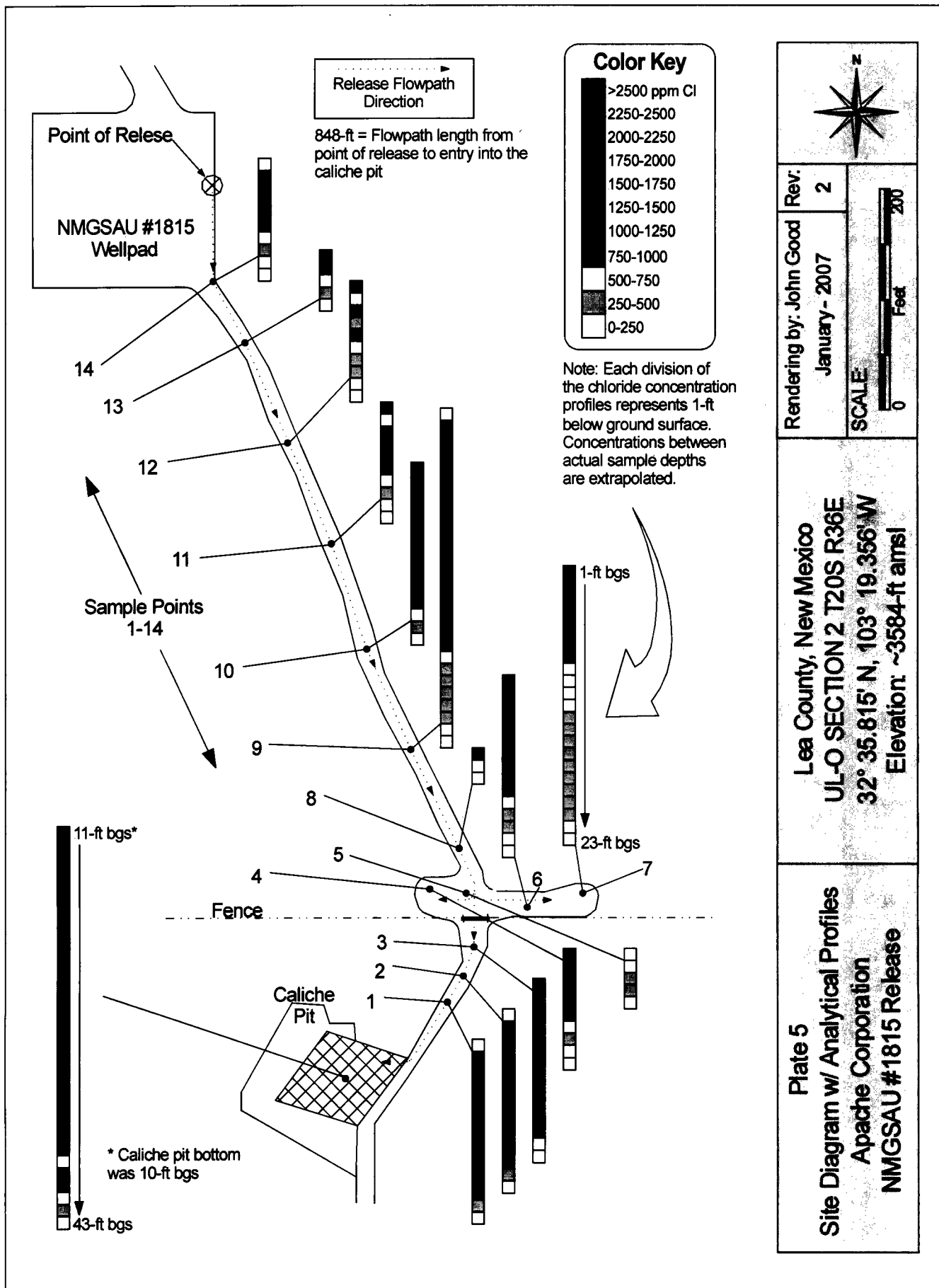
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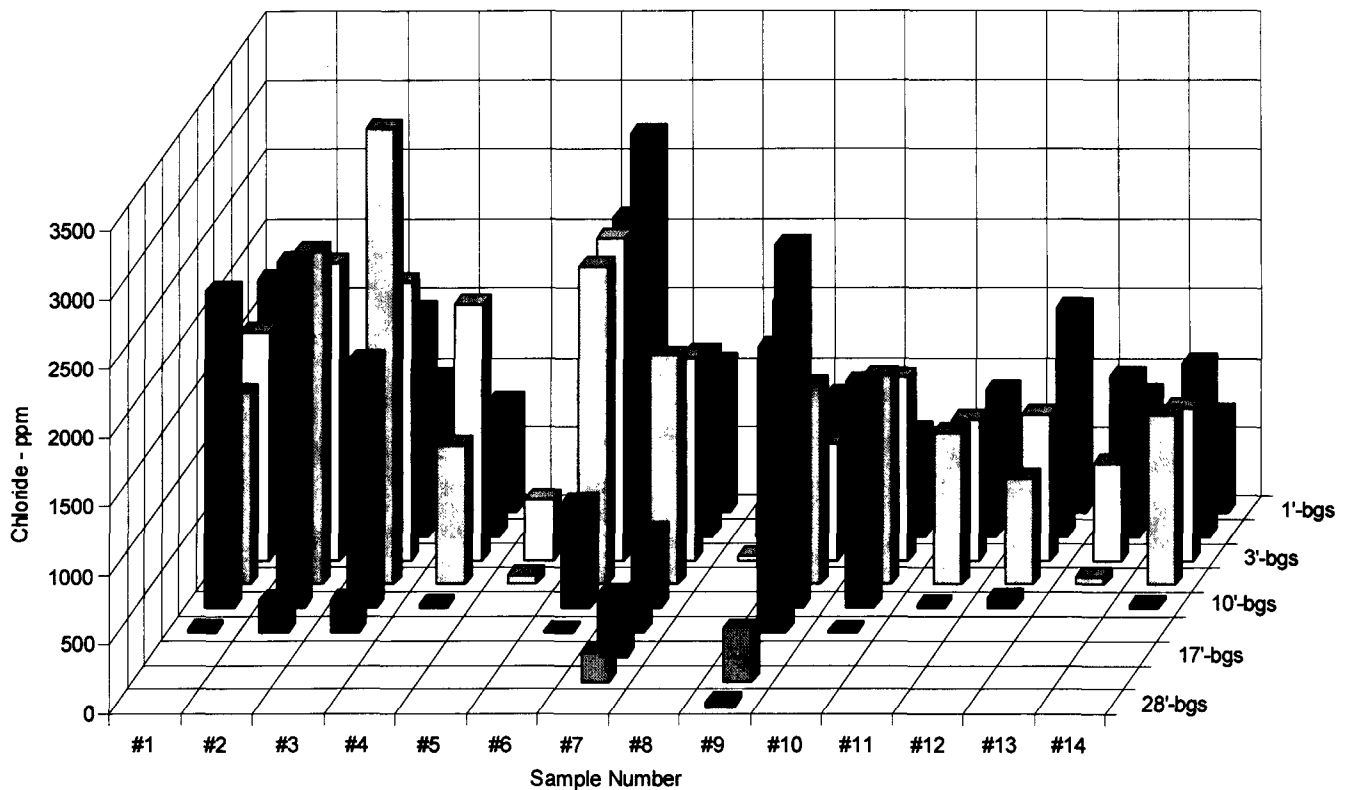




# Chloride Analyses Summary Table(s)

| ID  | Sample Depth |        |        |        |         |         |         |         |         |
|-----|--------------|--------|--------|--------|---------|---------|---------|---------|---------|
|     | 1'-bgs       | 2'-bgs | 3'-bgs | 5'-bgs | 10'-bgs | 15'-bgs | 17'-bgs | 23'-bgs | 28'-bgs |
| #1  | 720          | 1855   | 1663   | 1392   | 2303    | 32      |         |         |         |
| #2  | 672          | 1232   | 2159   | 2415   | 2511    | 240     |         |         |         |
| #3  | 976          | 1631   | 2015   | 3295   | 1807    | 240     |         |         |         |
| #4  | 800          | 928    | 1855   | 1008   | 32      |         |         |         |         |
| #5  | 32           | 16     | 448    | 64     |         |         |         |         |         |
| #6  | 2735         | 2303   | 2335   | 2303   | 768     | 15      |         |         |         |
| #7  | 1088         | 1328   | 1472   | 1663   | 560     | 272     | 464     | 208     |         |
| #8  | 1536         | 224    | 32     |        |         |         |         |         |         |
| #9  | 736          | 1024   | 848    | 1440   | 2639    | 2079    |         | 384     | 32      |
| #10 | 544          | 768    | 1328   | 1520   | 1647    | 16      |         |         |         |
| #11 | 880          | 736    | 1024   | 1104   | 32      |         |         |         |         |
| #12 | 1488         | 560    | 1056   | 768    | 80      |         |         |         |         |
| #13 | 864          | 1168   | 704    | 48     |         |         |         |         |         |
| #14 | 720          | 1264   | 1104   | 1232   | 32      |         |         |         |         |

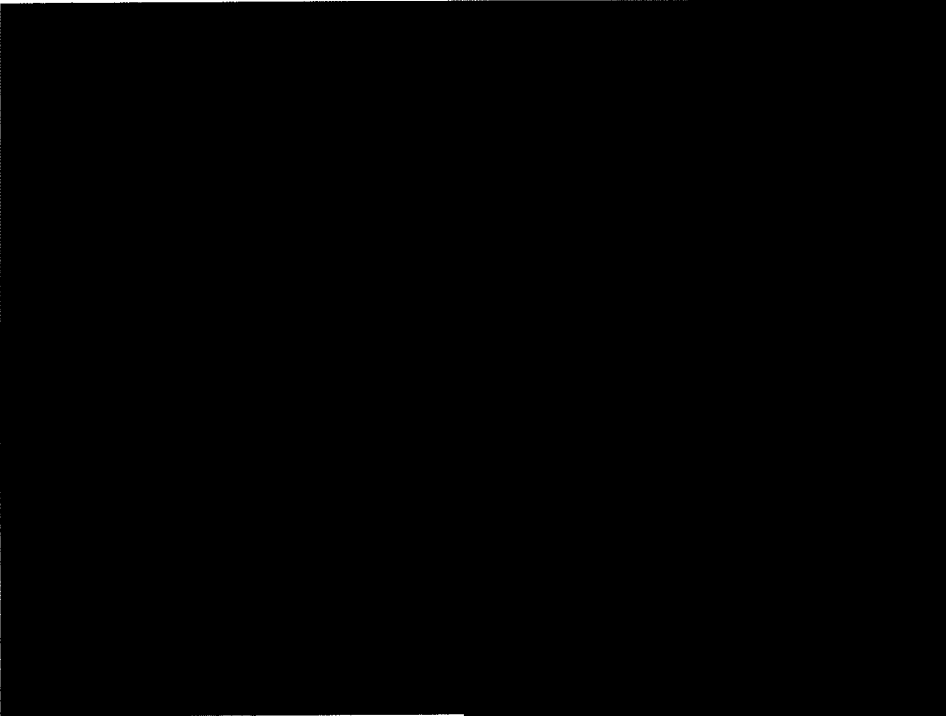
| ID  | Sample Depth |         |         |         |         |         |         |         |         |         |         |
|-----|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|     | 11'-bgs      | 16'-bgs | 21'-bgs | 26'-bgs | 31'-bgs | 34'-bgs | 36'-bgs | 38'-bgs | 40'-bgs | 42'-bgs | 43'-bgs |
| Pit | 3167         | 1839    | 1679    | 1919    | 2047    | 1216    | 1360    | 624     | 1232    | 320     | 192     |



|  |  |
|--|--|
| Incident Date: 9/18/06    NMOCD Notified: 9/18/06  |  |
| SITE: NMGSA Unit #1815   | Assigned Site Reference: AP-NMGSAU1815 |
| Company: Apache Corporation  |  |
| Street Address:  |  |
| Mailing Address: P.O. Drawer D   |  |
| City, State, Zip: Monument, NM 88265   |  |
| Representative: Mike Warren  |  |
| Representative Telephone: 432-556-2184   |  |
| Telephone:   |  |
| Fluid Volume Released (bbl): ~ 2000    Volume Recovered (bbl): ~ 1700    Net Release: ~ 300  |  |
| <i>&gt;25 bbl: Notify NMOCD verbally within 24 hours and submit C-141 within 15 days.<br/> 5-25 bbl: Submit Form C-141 within 15 days. (Also applies to unauthorized release of &gt;50 mcf Natural Gas).</i> |  |
| Leak, Spill, or Pit (LSP) Name: NMGSA Unit #1815   |  |
| Source of Contamination: Produced Water Injection Line   |  |
| Land Owner, i.e. BLM, ST, Fee, Other: State of NM; Faye Klein  |  |
| LSP Dimensions: ~ 850' X 15' flowpath; 76' X 82' @ caliche pit   |  |
| LSP Area ~ 21000 -ft <sup>2</sup>  |  |
| Location of Reference Point (RP):  |  |
| Location distance and direction from RP:   |  |
| Latitude: North 32deg 35.815'  |  |
| Longitude: West 103deg 19.356'   |  |
| Elevation above mean sea level (amsl): 3560 feet 1085 meters   |  |
| Distance from North Section Line (feet): 660   |  |
| Distance from West Section Line (feet): 1980   |  |
| Location - Unit Letter and 1/4 1/4: UL- O SW - 1/4 of SE - 1/4   |  |
| Location - Section 2   |  |
| Location - Township 20S  |  |
| Location - Range 36E   |  |
| 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): 42  |  |
| Depth (feet) to Ground Water (DG - DC = DtGW): ~ 8   |  |


| 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: 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 <sup>1</sup>                                   | 10-ppm  | 10-ppm   | 10-ppm   |
| BTEX <sup>1</sup>                                      | 50-ppm  | 50-ppm   | 50-ppm   |
| TPH  | 100-ppm | 1000-ppm | 5000-ppm |



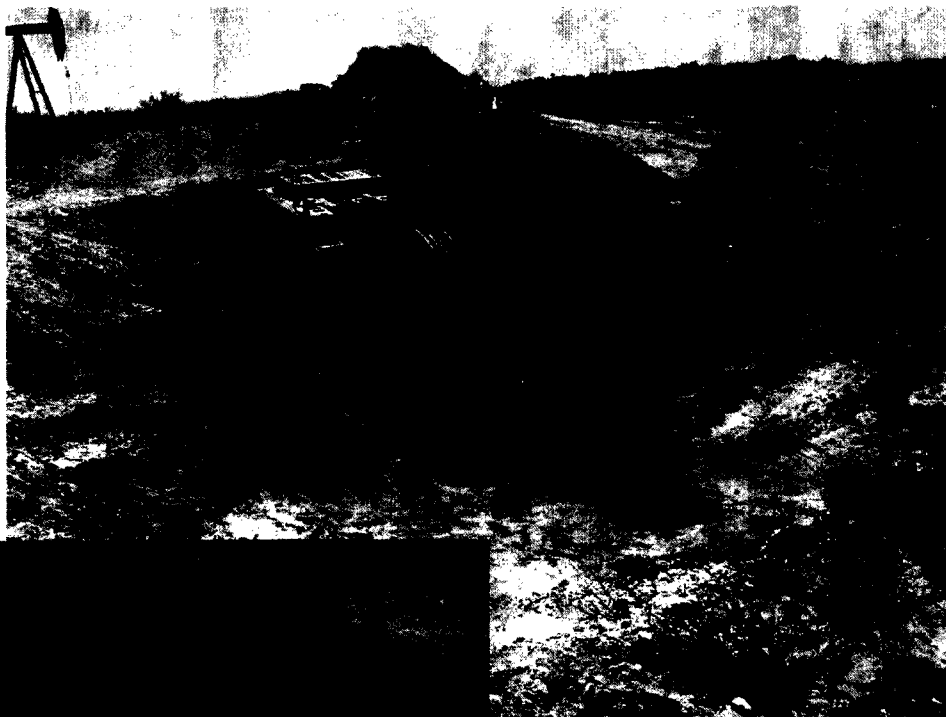
← Ponding on the caliche road extending south from the release point.

Ponding at the fence/gate area approximated 600-ft south of the wellhead area. →



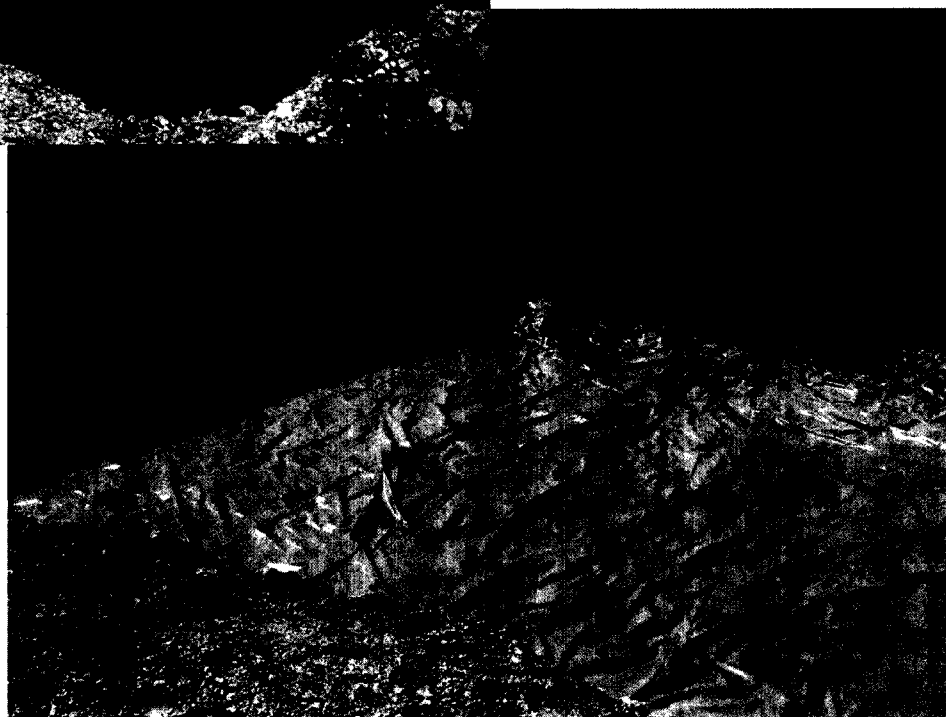
← Ponded area within the caliche pit at the southern terminus of the flow path.

Excavating the sample  
trench from the bottom  
surface (10-ft bgs) of the  
caliche pit. →

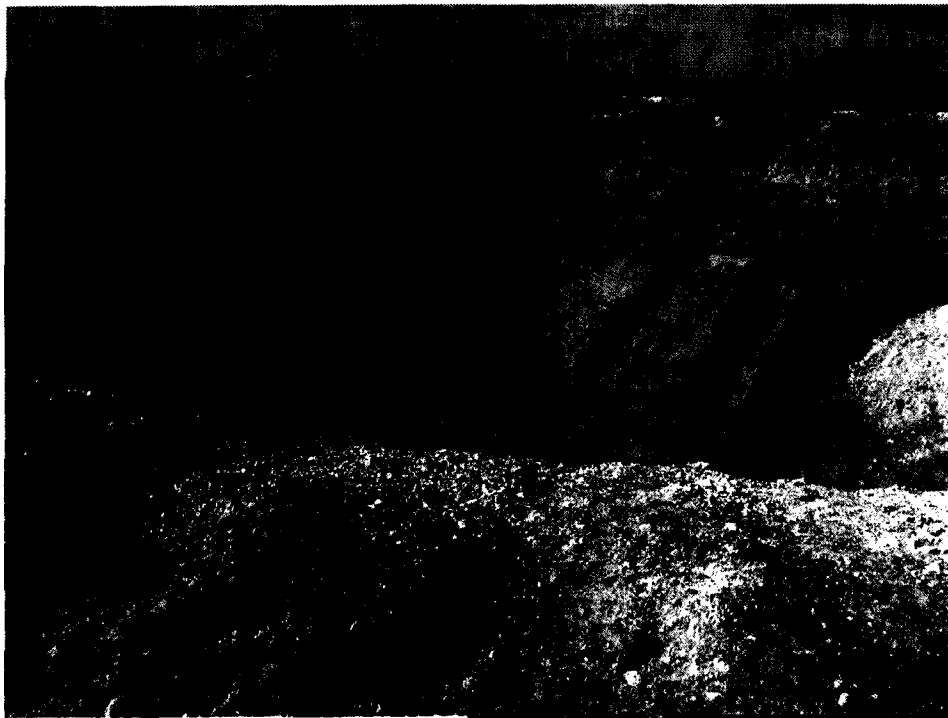


← Caliche pit excavation  
complete and ready for  
liner installation.

20-mil liner installed. →

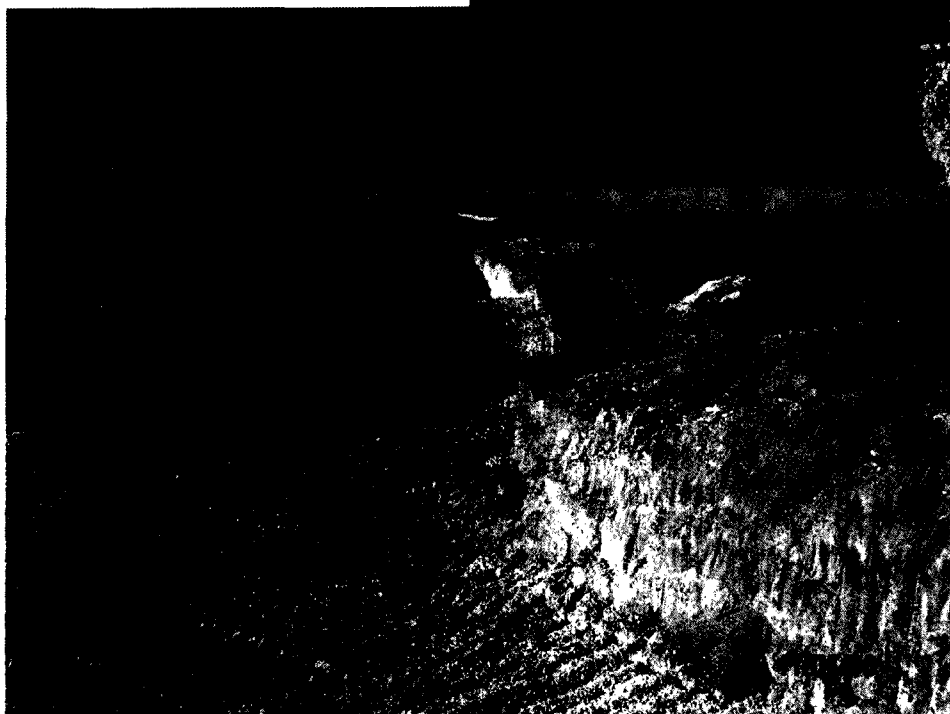






← Backfilling the excavated and lined caliche pit area with clean caliche

Plastic liner installed at Sample Point #9 area →

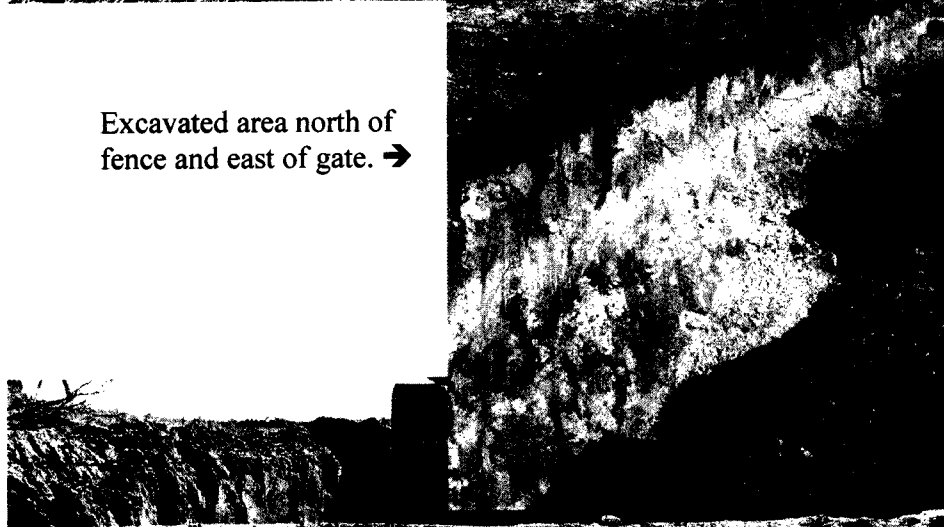


← Excavated flow path from fence/gate area north to the well pad.



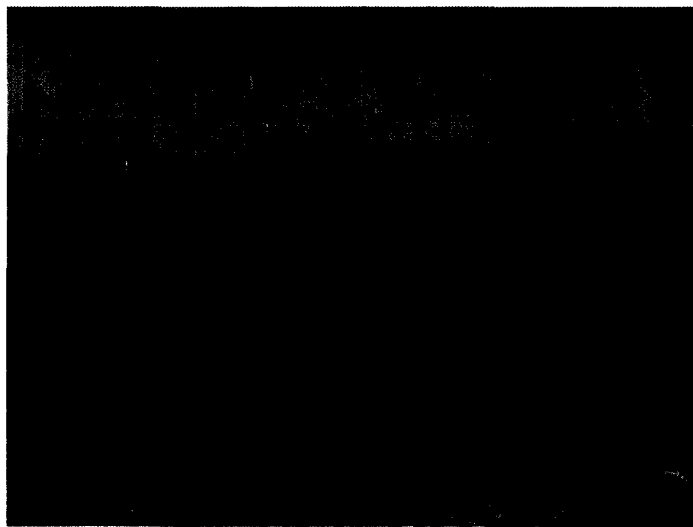
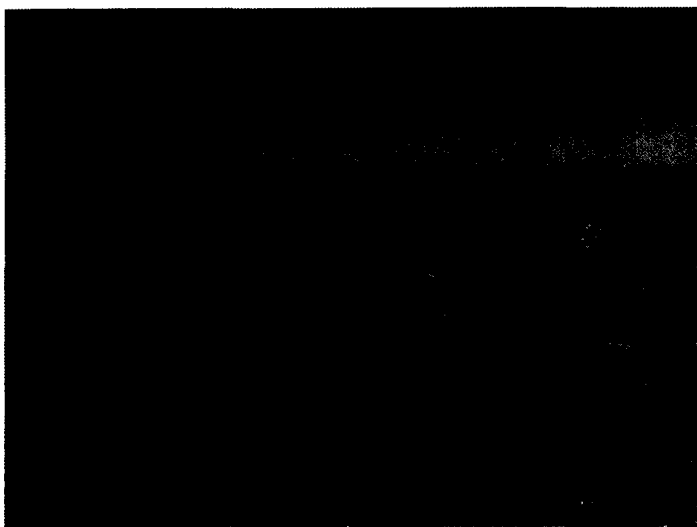
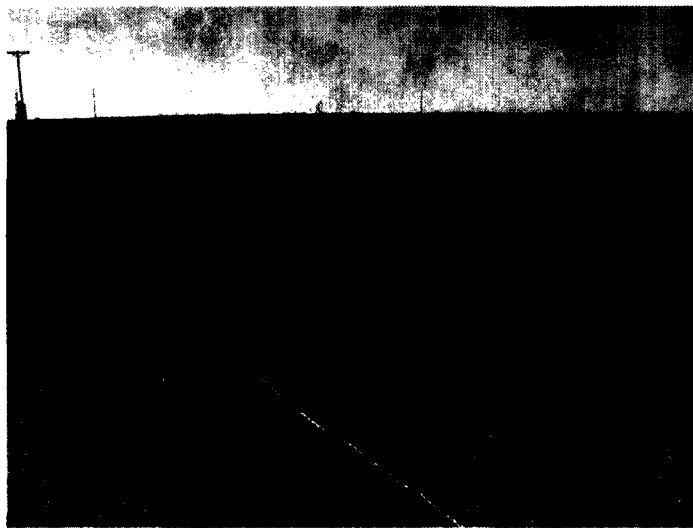
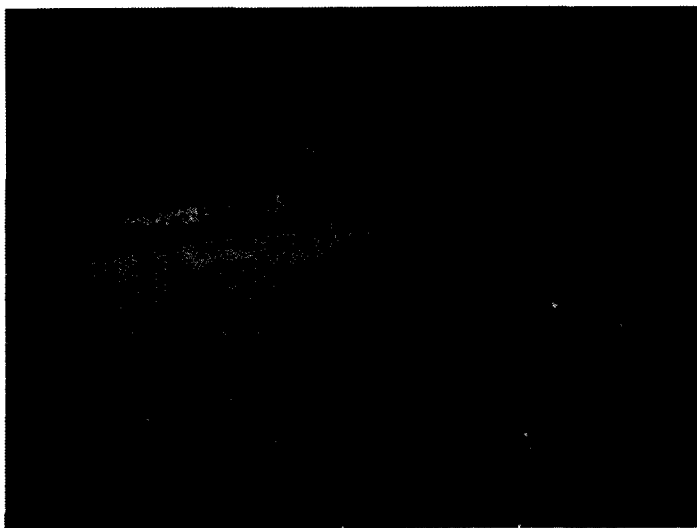
← Excavated area north of fence and west of gate.

Excavated area north of fence and east of gate. →



← Deep excavated area on south side of ponding area at the gate/fence area.

Completed Project Photographs



# Cardinal Laboratories Analytical Reports

(Photocopies attached to printed reports)



# ARDINAL LABORATORIES

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

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

ANALYTICAL RESULTS FOR  
HUNGRY HORSE  
ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 391-4585

Receiving Date: 10/25/06  
Reporting Date: 10/26/06  
Project Owner: APACHE  
Project Name: NMG SAU 1815  
Project Location: LEA COUNTY


Analysis Date: 10/25/06  
Sampling Date: 10/23/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: NF  
Analyzed By: LB


| LAB NO.        | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|----------------|-------------|----------------------------|
| ANALYSIS DATE: |             | 10/25/06                   |
| H11704-1       | S-9 28' BGS | 32                         |
|                |             |                            |
|                |             |                            |

|                             |     |
|-----------------------------|-----|
| Quality Control             | 510 |
| True Value QC               | 500 |
| % Recovery                  | 102 |
| Relative Percent Difference | 0.0 |

|                          |                        |
|--------------------------|------------------------|
| METHOD: Standard Methods | 4500-Cl <sup>-</sup> B |
|--------------------------|------------------------|

NOTE: Analysis performed on a 1:4 w:v aqueous extract.

  
Chemist

  
Date

H11704

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

Receiving Date: 10/10/06  
Reporting Date: 10/11/06  
Project Owner: APACHE  
Project Name: NMGSAU 1815  
Project Location: LEA COUNTY, NM

Analysis Date: 10/11/06  
Sampling Date: 10/10/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11639-1                    | S-7 23' BGS | 208                        |
| H11639-2                    | S-9 23' BGS | 384                        |
|                             |             |                            |
|                             |             |                            |
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|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 500                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 100                        |
| Relative Percent Difference |             | 2.0                        |

4500-CIB

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

Date \_\_\_\_\_

H11639

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

Receiving Date: 10/06/06  
Reporting Date: 10/09/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/06/06  
Sampling Date: 10/06/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: NF  
Analyzed By: NF

| LAB NO.                     | SAMPLE ID   | C <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|---------------------------|
| H11621-1                    | S-7 17' BGS | 464                       |
|                             |             |                           |
|                             |             |                           |
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|                             |             |                           |
|                             |             |                           |
|                             |             |                           |
|                             |             |                           |
| Quality Control             |             | 500                       |
| True Value QC               |             | 500                       |
| % Recovery                  |             | 100                       |
| Relative Percent Difference |             | 2.0                       |

**METHOD:** Standard Methods

4500-CI-B

**NOTE:** Analysis performed on a 1:4 w:v aqueous extract.

Chemist

Date \_\_\_\_\_

H11621

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Receiving Date: 10/06/06  
Reporting Date: 10/09/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/06/06  
Sampling Date: 10/06/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: NF

[illegible]

**METHOD:** Standard Methods

4500-CIB

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

Jose S. Moreno  
Chemist

10-09-06  
Date

H11626

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ANALYTICAL RESULTS FOR  
HUNGRY HORSE  
ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 393-3386

Receiving Date: 10/05/06  
Reporting Date: 10/05/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/05/06  
Sampling Date: 10/04/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: NF  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID    | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|--------------|----------------------------|
| H11614-1                    | S-9 10' BGS  | 2639                       |
| H11614-2                    | S-10 10' BGS | 1647                       |
| H11614-3                    | S-11 10' BGS | 32                         |
| H11614-4                    | S-12 10' BGS | 80                         |
| H11614-5                    | S-14 10' BGS | 32                         |
|                             |              |                            |
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|                             |              |                            |
|                             |              |                            |
| Quality Control             |              | 490                        |
| True Value QC               |              | 500                        |
| % Recovery                  |              | 98                         |
| Relative Percent Difference |              | 0.0                        |

|                          |          |
|--------------------------|----------|
| METHOD: Standard Methods | 4500-CIB |
|--------------------------|----------|

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

Chemist

10-06-06  
Date

H11614

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| Company Name: <u>Blumky Horse</u>   |              | P.O. #:                              |              | Project Manager: |            | Company:   |           |        |        |            |            |        |         |          |         |       |
|-------------------------------------|--------------|--------------------------------------|--------------|------------------|------------|------------|-----------|--------|--------|------------|------------|--------|---------|----------|---------|-------|
| Address: <u>Box 1058</u>            |              | State: <u>nm</u> Zip: <u>88240</u>   |              | Attn:            |            | Address:   |           |        |        |            |            |        |         |          |         |       |
| City: <u>Hobbs</u>                  |              | Phone #:                             |              | City:            |            | State:     |           |        |        |            |            |        |         |          |         |       |
| Project #:                          |              | Project Owner: <u>Apache</u>         |              | Phone #:         |            | Zip:       |           |        |        |            |            |        |         |          |         |       |
| Project Name:                       |              | Project Location: <u>WAGSAY 1815</u> |              | Fax #:           |            | Project #: |           |        |        |            |            |        |         |          |         |       |
| Sampler Name: <u>Kathleen Beard</u> |              | Date:                                |              | Time:            |            | Phone #:   |           |        |        |            |            |        |         |          |         |       |
| FOR LAB USE ONLY                    |              | Date:                                |              | Time:            |            | Fax #:     |           |        |        |            |            |        |         |          |         |       |
| Lab I.D.                            | Sample I.D.  | (G) RAB OR (C) COMP.                 | # CONTAINERS | GROUNDWATER      | WASTEWATER | SOIL       | CRUDE OIL | SLUDGE | OTHER: | ACID/BASE: | ICE / COOL | OTHER: | PRESERV | SAMPLING | DATE    | TIME  |
| 411614-1                            | 5-9 10' BGS  | ✓                                    | 1            | ✓                |            | ✓          |           |        |        |            |            |        |         |          | 10-5-06 | 8:05a |
| -2                                  | 5-10 10' BGS | ✓                                    | 1            | ✓                |            | ✓          |           |        |        |            |            |        |         |          |         |       |
| -3                                  | 5-11 10' BGS | ✓                                    | 1            | ✓                |            | ✓          |           |        |        |            |            |        |         |          |         |       |
| -4                                  | 5-12 10' BGS | ✓                                    | 1            | ✓                |            | ✓          |           |        |        |            |            |        |         |          |         |       |
| -5                                  | 5-14 10' BGS | ✓                                    | 1            | ✓                |            | ✓          |           |        |        |            |            |        |         |          |         |       |

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**Terms and Conditions:** Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

**Sampler Relinquished:** [Signature] Date: 10-5-06 Time: 10:25

**Relinquished By:** [Signature] Date: 10-5-06 Time: 10:25

**Delivered By: (Circle One)** UPS - Bus - Other:

**Received By:** [Signature] Date: 10-5-06 Time: 10:25

**Received By: (Lab Staff)** [Signature]

**Checked By: (Initials)** [Initials]

**Phone Result:** ☐ Yes ☐ No **Add'l Phone #:** \_\_\_\_\_

**Fax Result:** ☐ Yes ☐ No **Add'l Fax #:** \_\_\_\_\_

**REMARKS:**

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Receiving Date: 10/04/06  
Reporting Date: 10/05/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/05/06  
Sampling Date: 10/04/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11609-1                    | S-1 15' BGS | 32                         |
| H11609-2                    | S-2 15' BGS | 240                        |
| H11609-3                    | S-3 15' BGS | 240                        |
| H11609-4                    | S-6 15' BGS | < 16                       |
| H11609-5                    | S-7 15' BGS | 272                        |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 490                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 98                         |
| Relative Percent Difference |             | 0.0                        |

4500-CIB

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

Date \_\_\_\_\_

H11609

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**Page**        **of**       

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Receiving Date: 10/04/06  
Reporting Date: 10/04/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/04/06  
Sampling Date: 10/04/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11605-1                    | S-1 5' BGS  | 1392                       |
| H11605-2                    | S-1 10' BGS | 2303                       |
| H11605-3                    | S-2 5' BGS  | 2415                       |
| H11605-4                    | S-2 10' BGS | 2511                       |
| H11605-5                    | S-3 5' BGS  | 3295                       |
| H11605-6                    | S-3 10' BGS | 1807                       |
|                             |             |                            |
|                             |             |                            |
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|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 490                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 98                         |
| Relative Percent Difference |             | 0.0                        |

4500-CIB

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

Chemist

Date \_\_\_\_\_

H11605

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Receiving Date: 10/03/06  
Reporting Date: 10/03/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/03/06  
Sampling Date: 10/03/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11595-1                    | S-4 10' BGS | 32                         |
| H11595-2                    | S-6 10' BGS | 768                        |
| H11595-3                    | S-7 10' BGS | 560                        |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
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|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 490                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 98                         |
| Relative Percent Difference |             | 2.0                        |

**METHOD:** Standard Methods

4500-CI-B

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

Jose L. Moreno  
Chemist

10-03-06  
Date

H11595

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ANALYTICAL RESULTS FOR  
HUNGRY HORSE  
ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 393-3386

Receiving Date: 10/03/06  
Reporting Date: 10/04/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/04/06  
Sampling Date: 10/03/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11598-1                    | S-9 5' BGS  | 1440                       |
| H11598-2                    | S-10 5' BGS | 1520                       |
| H11598-3                    | S-11 5' BGS | 1104                       |
| H11598-4                    | S-12 5' BGS | 768                        |
| H11598-5                    | S-13 5' BGS | 48                         |
| H11598-6                    | S-14 5' BGS | 1232                       |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 490                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 98                         |
| Relative Percent Difference |             | 0.0                        |

**METHOD:** Standard Methods

4500-CIB

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

Chemist

Date \_\_\_\_\_

H11598

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| ANALYSIS REQUEST  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|---|-------------|------------|-----------|--------|---------|-----------|------------|--------|--|--|--------|------|--|------|---------|--|----------|------|-------------|------------|-----------|--------|--------|-----------|------------|--------|---------|--|------|------|--|--|--|--|--|------------|---|--|--|--|--|--|--|--|-------------|---|--|--|--|--|--|--|--|-------------|---|--|--|--|--|--|--|--|-------------|---|--|--|--|--|--|--|--|-------------|---|--|--|--|--|--|--|--|-------------|---|--|--|--|--|--|--|--|
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Company Name:</b> Hungry Horse</p> <p><b>Project Manager:</b> Jeff Brien</p> <p><b>Address:</b> P.O. 1058</p> <p><b>City:</b> Hobbs</p> <p><b>Phone #:</b> (505) 390-6149</p> <p><b>Project #:</b></p> <p><b>Project Name:</b></p> <p><b>Project Location:</b> NMGSAN 1815</p> <p><b>Sampler Name:</b> Kelton Reard</p> </div> <div style="width: 45%;"> <p><b>P.O. #:</b></p> <p><b>Company:</b></p> <p><b>Attn:</b></p> <p><b>Address:</b></p> <p><b>City:</b></p> <p><b>State:</b></p> <p><b>Phone #:</b></p> <p><b>Fax #:</b></p> </div> </div>  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Project Owner:</b> Apache</p> </div> <div style="width: 45%;"> <p><b>State:</b> NM Zip: 88240</p> </div> </div>  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>FOR LAB USE ONLY</b></p> </div> <div style="width: 45%;"> <p><b>Sample I.D.</b></p> </div> </div>  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">MATRIX</th> <th colspan="2">PRESERV</th> <th colspan="2">SAMPLING</th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>CRUDE OIL</th> <th>SLUDGE</th> <th>OTHER:</th> <th>ACID/BASE</th> <th>ICE / COOL</th> <th>OTHER:</th> </tr> </thead> <tbody> <tr> <td>11548-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-9 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-10 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-11 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-12 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-13 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-14 5' BGS</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |             |            |           |        |         |           |            |        |  |  | MATRIX |      |  |      | PRESERV |  | SAMPLING |      | GROUNDWATER | WASTEWATER | CRUDE OIL | SLUDGE | OTHER: | ACID/BASE | ICE / COOL | OTHER: | 11548-1 |  |      |      |  |  |  |  |  | 5-9 5' BGS | X |  |  |  |  |  |  |  | 5-10 5' BGS | X |  |  |  |  |  |  |  | 5-11 5' BGS | X |  |  |  |  |  |  |  | 5-12 5' BGS | X |  |  |  |  |  |  |  | 5-13 5' BGS | X |  |  |  |  |  |  |  | 5-14 5' BGS | X |  |  |  |  |  |  |  |
|   | MATRIX      |            |           |        | PRESERV |           | SAMPLING   |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | GROUNDWATER | WASTEWATER | CRUDE OIL | SLUDGE | OTHER:  | ACID/BASE | ICE / COOL | OTHER: |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 11548-1   |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-9 5' BGS  | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-10 5' BGS   | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-11 5' BGS   | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-12 5' BGS   | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-13 5' BGS   | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| 5-14 5' BGS   | X           |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td></td> <td>10-3</td> <td>2:45</td> </tr> <tr> <td></td> <td>10-3</td> <td>2:50</td> </tr> <tr> <td></td> <td>10-3</td> <td>2:55</td> </tr> <tr> <td></td> <td>10-3</td> <td>2:50</td> </tr> <tr> <td></td> <td>10-3</td> <td>3:00</td> </tr> <tr> <td></td> <td>10-3</td> <td>3:00</td> </tr> </tbody> </table>   |             |            |           |        |         |           |            |        |  |  | DATE   | TIME |  | 10-3 | 2:45    |  | 10-3     | 2:50 |             | 10-3       | 2:55      |        | 10-3   | 2:50      |            | 10-3   | 3:00    |  | 10-3 | 3:00 |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | DATE        | TIME       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 2:45       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 2:50       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 2:55       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 2:50       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 3:00       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
|   | 10-3        | 3:00       |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
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| <p><b>Sampler Relinquished:</b> <i>[Signature]</i> <b>Received By:</b> <i>[Signature]</i></p> <p><b>Relinquished By:</b> <i>[Signature]</i> <b>Date:</b> 10-3-06 <b>Time:</b> 3:40</p> <p><b>Delivered By:</b> <i>[Signature]</i> <b>Date:</b> 10-3-06 <b>Time:</b> 3:40</p> <p><b>Sampler - OPS - Bus - Other:</b></p>   |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <p><b>REMARKS:</b></p>  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |
| <p><b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>Additional Phone #:</b> <b>Additional Fax #:</b></p>  |             |            |           |        |         |           |            |        |  |  |        |      |  |      |         |  |          |      |             |            |           |        |        |           |            |        |         |  |      |      |  |  |  |  |  |            |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |             |   |  |  |  |  |  |  |  |

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



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### ANALYTICAL RESULTS FOR HUNGRY HORSE

ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 393-3386

Receiving Date: 10/02/06  
Reporting Date: 10/03/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/02/06  
Sampling Date: 10/02/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11594-1                    | S-8 1' BGS  | 1536                       |
| H11594-2                    | S-8 2' BGS  | 224                        |
| H11594-3                    | S-8 3' BGS  | 32                         |
| H11594-4                    | S-9 1' BGS  | 736                        |
| H11594-5                    | S-9 2' BGS  | 1024                       |
| H11594-6                    | S-9 3' BGS  | 848                        |
| H11594-7                    | S-10 1' BGS | 544                        |
| H11594-8                    | S-10 2' BGS | 768                        |
| H11594-9                    | S-10 3' BGS | 1328                       |
| H11594-10                   | S-11 1' BGS | 880                        |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 500                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 100                        |
| Relative Percent Difference |             | 2.0                        |

|                          |          |
|--------------------------|----------|
| METHOD: Standard Methods | 4500-CIB |
|--------------------------|----------|

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

*John S. Moxore*  
Chemist

10-03-06  
Date

H11594

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## ANALYTICAL RESULTS FOR HUNGRY HORSE

ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 393-3386

Receiving Date: 10/02/06  
Reporting Date: 10/03/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/02/06  
Sampling Date: 10/02/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11594-11                   | S-11 2' BGS | 736                        |
| H11594-12                   | S-11 3' BGS | 1024                       |
| H11594-13                   | S-12 1' BGS | 1488                       |
| H11594-14                   | S-12 2' BGS | 560                        |
| H11594-15                   | S-12 3' BGS | 1056                       |
| H11594-16                   | S-13 1' BGS | 864                        |
| H11594-17                   | S-13 2' BGS | 1168                       |
| H11594-18                   | S-13 3' BGS | 704                        |
| H11594-19                   | S-14 1' BGS | 720                        |
| H11594-20                   | S-14 2' BGS | 1264                       |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 500                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 100                        |
| Relative Percent Difference |             | 2.0                        |

|                          |          |
|--------------------------|----------|
| METHOD: Standard Methods | 4500-CIB |
|--------------------------|----------|

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

\_\_\_\_\_  
Chemist

10-03-06  
Date

H11594A

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.





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

Receiving Date: 10/02/06  
Reporting Date: 10/03/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMGSAU 1815

Analysis Date: 10/02/06  
Sampling Date: 10/02/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|-------------|----------------------------|
| H11594-21                   | S-14 3' BGS | 1104                       |
| H11594-22                   | S-1 1' BGS  | 720                        |
| H11594-23                   | S-1 2' BGS  | 1855                       |
| H11594-24                   | S-1 3' BGS  | 1663                       |
| H11594-25                   | S-2 1' BGS  | 672                        |
| H11594-26                   | S-2 2' BGS  | 1232                       |
| H11594-27                   | S-2 3' BGS  | 2159                       |
| H11594-28                   | S-3 1' BGS  | 976                        |
| H11594-29                   | S-3 2' BGS  | 1631                       |
| H11594-30                   | S-3 3' BGS  | 2015                       |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
|                             |             |                            |
| Quality Control             |             | 500                        |
| True Value QC               |             | 500                        |
| % Recovery                  |             | 100                        |
| Relative Percent Difference |             | 2.0                        |

4500-CIB

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

*L. S. M. ...*  
Chemist

10-03-06  
Date

H11594B

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(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page of

| ANALYSIS REQUEST   |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
|--|-------------|------------|------|-----------|---------|----------|---------|------|--|----------|--------|--|--|--|---------|----------|------|------|-------------|------------|------|-----------|---------|--|--|--|--|--|--|---------|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|----|--|--|--|--|--|--|--|------|-----|--|--|--|--|--|--|--|------|
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Company Name:</b> Hanger Horse</p> <p><b>Project Manager:</b> Jerry Brian</p> <p><b>Address:</b> PO 1058</p> <p><b>City:</b> Hobbs</p> <p><b>State:</b> NM <b>Zip:</b> 88240</p> <p><b>Phone #:</b> (505) 390-6149 <b>Fax #:</b></p> <p><b>Project #:</b></p> <p><b>Project Name:</b></p> <p><b>Project Location:</b> NMG SGA 1815</p> <p><b>Sampler Name:</b> Keltan Bend</p> </div> <div style="width: 45%;"> <p><b>P.O. #:</b></p> <p><b>Company:</b></p> <p><b>Attn:</b></p> <p><b>Address:</b></p> <p><b>City:</b></p> <p><b>State:</b> <b>Zip:</b></p> <p><b>Phone #:</b></p> <p><b>Fax #:</b></p> </div> </div>  |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Lab I.D.</th> <th colspan="4">MATRIX</th> <th rowspan="2">PRESERV</th> <th rowspan="2">SAMPLING</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>SOIL</th> <th>CRUDE OIL</th> </tr> </thead> <tbody> <tr> <td>11544-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10-2-06</td> <td>7:20</td> </tr> <tr> <td>-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:20</td> </tr> <tr> <td>-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:20</td> </tr> <tr> <td>-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:30</td> </tr> <tr> <td>-5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:30</td> </tr> <tr> <td>-6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:30</td> </tr> <tr> <td>-7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:50</td> </tr> <tr> <td>-8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:50</td> </tr> <tr> <td>-9</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7:50</td> </tr> <tr> <td>-10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8:10</td> </tr> </tbody> </table> |             |            |      |           |         |          |         |      |  | Lab I.D. | MATRIX |  |  |  | PRESERV | SAMPLING | DATE | TIME | GROUNDWATER | WASTEWATER | SOIL | CRUDE OIL | 11544-1 |  |  |  |  |  |  | 10-2-06 | 7:20 | -2 |  |  |  |  |  |  |  | 7:20 | -3 |  |  |  |  |  |  |  | 7:20 | -4 |  |  |  |  |  |  |  | 7:30 | -5 |  |  |  |  |  |  |  | 7:30 | -6 |  |  |  |  |  |  |  | 7:30 | -7 |  |  |  |  |  |  |  | 7:50 | -8 |  |  |  |  |  |  |  | 7:50 | -9 |  |  |  |  |  |  |  | 7:50 | -10 |  |  |  |  |  |  |  | 8:10 |
| Lab I.D.   | MATRIX      |            |      |           | PRESERV | SAMPLING | DATE    | TIME |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
|  | GROUNDWATER | WASTEWATER | SOIL | CRUDE OIL |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| 11544-1  |             |            |      |           |         |          | 10-2-06 | 7:20 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -2   |             |            |      |           |         |          |         | 7:20 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -3   |             |            |      |           |         |          |         | 7:20 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -4   |             |            |      |           |         |          |         | 7:30 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -5   |             |            |      |           |         |          |         | 7:30 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -6   |             |            |      |           |         |          |         | 7:30 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -7   |             |            |      |           |         |          |         | 7:50 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -8   |             |            |      |           |         |          |         | 7:50 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -9   |             |            |      |           |         |          |         | 7:50 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| -10  |             |            |      |           |         |          |         | 8:10 |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>Sample I.D.</b></p>  |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>FOR LAB USE ONLY</b></p>   |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
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| <p><b>Sampler Relinquished:</b> [Signature] <b>Date:</b> 10-2-06 <b>Time:</b> 1:30</p> <p><b>Relinquished By:</b> [Signature] <b>Date:</b> 10-2-06 <b>Time:</b> 1:30</p> <p><b>Delivered By:</b> (Circle One) [Signature] <b>Date:</b> 10-2-06 <b>Time:</b> 1:30</p>   |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>RECEIVED BY:</b> (Lab Staff) [Signature] <b>Date:</b> 10-2-06 <b>Time:</b> 1:30</p>  |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>REMARKS:</b></p>   |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b></p> <p><b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b></p>  |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |
| <p><b>TERMS AND CONDITIONS:</b> Invoiced will be charged on all accounts more than 30 days past due at the rate of 2 1/2% per annum from the original date of invoice, and all costs of collections, including attorney's fees.</p>  |             |            |      |           |         |          |         |      |  |          |        |  |  |  |         |          |      |      |             |            |      |           |         |  |  |  |  |  |  |         |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |    |  |  |  |  |  |  |  |      |     |  |  |  |  |  |  |  |      |

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



# CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

| BILL TO  |  |  |  |  |  |  |  |  |  | ANALYSIS REQUEST   |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Company Name: <u>Hunger Horse</u>  |  |  |  |  |  |  |  |  |  | P.O. #:  |  |  |  |  |  |  |  |  |  |
| Project Manager: <u>Jenny Dorian</u>   |  |  |  |  |  |  |  |  |  | Company:   |  |  |  |  |  |  |  |  |  |
| Address: <u>PO 10578</u>   |  |  |  |  |  |  |  |  |  | Attn:  |  |  |  |  |  |  |  |  |  |
| City: <u>Hobbs</u>   |  |  |  |  |  |  |  |  |  | Address:   |  |  |  |  |  |  |  |  |  |
| State: <u>NM</u> Zip: <u>88240</u>   |  |  |  |  |  |  |  |  |  | City:  |  |  |  |  |  |  |  |  |  |
| Phone #: <u>(505) 390-6149</u> Fax #: <u></u>  |  |  |  |  |  |  |  |  |  | State: Zip:  |  |  |  |  |  |  |  |  |  |
| Project #: <u></u>   |  |  |  |  |  |  |  |  |  | Phone #: Fax #:  |  |  |  |  |  |  |  |  |  |
| Project Name: <u></u>  |  |  |  |  |  |  |  |  |  | City: State: Zip:  |  |  |  |  |  |  |  |  |  |
| Project Location: <u>NM 65 AU 1815</u>   |  |  |  |  |  |  |  |  |  | Phone #: Fax #:  |  |  |  |  |  |  |  |  |  |
| Sampler Name: <u>Kelton Beaird</u>   |  |  |  |  |  |  |  |  |  | City: State: Zip:  |  |  |  |  |  |  |  |  |  |
| FOR LAB USE ONLY   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lab I.D.   |  |  |  |  |  |  |  |  |  | Sample I.D.  |  |  |  |  |  |  |  |  |  |
| 11594-11   |  |  |  |  |  |  |  |  |  | 5-11 2' BG\$   |  |  |  |  |  |  |  |  |  |
| -12  |  |  |  |  |  |  |  |  |  | 5-11 3'  |  |  |  |  |  |  |  |  |  |
| -13  |  |  |  |  |  |  |  |  |  | 5-12 1'  |  |  |  |  |  |  |  |  |  |
| -14  |  |  |  |  |  |  |  |  |  | 5-12 2'  |  |  |  |  |  |  |  |  |  |
| -15  |  |  |  |  |  |  |  |  |  | 5-12 3'  |  |  |  |  |  |  |  |  |  |
| -16  |  |  |  |  |  |  |  |  |  | 5-13 1'  |  |  |  |  |  |  |  |  |  |
| -17  |  |  |  |  |  |  |  |  |  | 5-13 2'  |  |  |  |  |  |  |  |  |  |
| -18  |  |  |  |  |  |  |  |  |  | 5-13 3'  |  |  |  |  |  |  |  |  |  |
| -19  |  |  |  |  |  |  |  |  |  | 5-14 1'  |  |  |  |  |  |  |  |  |  |
| -20  |  |  |  |  |  |  |  |  |  | 5-14 2' ✓  |  |  |  |  |  |  |  |  |  |
| Matrix: <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> CRUDE OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> WASTEWATER <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> CONTAINERS |  |  |  |  |  |  |  |  |  | PRESERV: <input type="checkbox"/> ACID/BASE: <input type="checkbox"/> ICE/COOL: <input type="checkbox"/> OTHER: <input type="checkbox"/> |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:10   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:10   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:30   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:30   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:30   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:50   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:50   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 8:50   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 9:10   |  |  |  |  |  |  |  |  |  |
| DATE: 10-2-06  |  |  |  |  |  |  |  |  |  | TIME: 9:10   |  |  |  |  |  |  |  |  |  |

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Sampler Relinquished: [Signature] Date: 10-2-06 Time: 1:30

Received By: [Signature] Date: 10-2-06 Time: 1:30

Relinquished By: [Signature] Date: 10-2-06 Time: 1:30

Delivered By: [Signature] Date: 10-2-06 Time: 1:30

Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☐ No

Checked By: [Signature] (Initials)

Sampler: ☒ UPS ☐ Bus ☐ Other: ☐

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:



# CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_\_ of \_\_\_\_\_

| Company Name: <u>Hangry Horse</u>     |  | P.O. #:                      |  | ANALYSIS REQUEST |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
|---------------------------------------|--|------------------------------|--|------------------|--|--|--|--------------------|--|-------------|--|--|--|------------|--|--|--|------|--|--|--|-----------|--|--|--|--------|--|--|--|--------|--|--|--|------------|--|------------|--|--------|--|------|--|------|--|--|--|--|--|
| Project Manager: <u>Jerry Beaton</u>  |  | Company:                     |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Address: <u>PO 1058</u>               |  | Attn:                        |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| City: <u>Hobbs</u>                    |  | Address:                     |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| State: <u>NM</u>                      |  | City:                        |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Zip: <u>88240</u>                     |  | State:                       |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Phone # <u>(505) 390-6149</u>         |  | Phone #:                     |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Fax #:                                |  | Fax #:                       |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Project #:                            |  | Project Owner: <u>Apache</u> |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Project Name:                         |  |                              |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Project Location: <u>WINGSAW 1815</u> |  |                              |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| Sampler Name: <u>Kelton Beaton</u>    |  |                              |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| FOR LAB USE ONLY                      |  |                              |  | MATRIX           |  |  |  | PRESERV            |  | SAMPLING    |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
|                                       |  |                              |  | # CONTAINERS     |  |  |  | (G) RAB OR (C) OMP |  | GROUNDWATER |  |  |  | WASTEWATER |  |  |  | SOIL |  |  |  | CRUDE OIL |  |  |  | SLUDGE |  |  |  | OTHER: |  |  |  | ACID/BASE: |  | ICE / COOL |  | OTHER: |  | DATE |  | TIME |  |  |  |  |  |
| Lab I.D.                              |  |                              |  |                  |  |  |  |                    |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| H1159421                              |  |                              |  | 5-14             |  |  |  | 3' BGS             |  | X           |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -22                                   |  |                              |  | 5-1              |  |  |  | 1'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -23                                   |  |                              |  | 5-1              |  |  |  | 2'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -24                                   |  |                              |  | 5-1              |  |  |  | 3'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -25                                   |  |                              |  | 5-2              |  |  |  | 1'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -26                                   |  |                              |  | 5-2              |  |  |  | 2'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -27                                   |  |                              |  | 5-2              |  |  |  | 3'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -28                                   |  |                              |  | 5-3              |  |  |  | 1'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -29                                   |  |                              |  | 5-3              |  |  |  | 2'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |
| -30                                   |  |                              |  | 5-3              |  |  |  | 3'                 |  |             |  |  |  |            |  |  |  |      |  |  |  |           |  |  |  |        |  |  |  |        |  |  |  |            |  |            |  |        |  |      |  |      |  |  |  |  |  |

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|  |  |                      |  |                    |  |   |  |                      |  |                    |  |  |  |                                  |  |
|--|--|----------------------|--|--------------------|--|---|--|----------------------|--|--------------------|--|--|--|----------------------------------|--|
| Sampler Relinquished By: <u>[Signature]</u>    |  | Date: <u>10-2-06</u> |  | Time: <u>9:10</u>  |  | Received By: <u>[Signature]</u>             |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No |  | Add'l Phone #: <u>          </u> |  |
| Relinquished By: <u>[Signature]</u>            |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Received By: (Lab Staff) <u>[Signature]</u> |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No |  | Add'l Phone #: <u>          </u> |  |
| Delivered By: (Circle One) <u>[Signature]</u>  |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Received By: <u>[Signature]</u>             |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No |  | Add'l Phone #: <u>          </u> |  |
| Sampler - UPS - Bus - Other: <u>          </u> |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Received By: <u>[Signature]</u>             |  | Date: <u>10-2-06</u> |  | Time: <u>12:00</u> |  | Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No |  | Add'l Phone #: <u>          </u> |  |
| REMARKS: <u>          </u>                     |  |                      |  |                    |  |   |  |                      |  |                    |  |  |  |                                  |  |

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



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

Receiving Date: 09/28/06  
Reporting Date: 09/28/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMG SA U 1815

Analysis Date: 09/28/06  
Sampling Date: 09/28/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID  | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|------------|----------------------------|
| H11588-1                    | S-4 5' BGS | 1008                       |
| H11588-2                    | S-5 5' BGS | 64                         |
| H11588-3                    | S-6 5' BGS | 2303                       |
| H11588-4                    | S-7 5' BGS | 1663                       |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
|                             |            |                            |
| Quality Control             |            | 480                        |
| True Value QC               |            | 500                        |
| % Recovery                  |            | 96                         |
| Relative Percent Difference |            | 2.0                        |

4500-CIB

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

*Hope S. Moreno*  
Chemist

09-29-06  
Date

H11588

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**2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240**  
**(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476**

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

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

ANALYTICAL RESULTS FOR  
HUNGRY HORSE, LLC  
ATTN: JERRY BRIAN  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (505) 393-3386

Receiving Date: 09/25/06  
Reporting Date: 09/25/06  
Project Owner: APACHE  
Project Name: NOT GIVEN  
Project Location: NMG SA 1815

Analysis Date: 09/25/06  
Sampling Date: 09/25/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: NF  
Analyzed By: HM

| LAB NO.   | SAMPLE ID                   | Cl <sup>-</sup><br>(mg/Kg) |
|-----------|-----------------------------|----------------------------|
| H11569-1  | S-4 1' BGS                  | 800                        |
| H11569-2  | S-4 2' BGS                  | 928                        |
| H11569-3  | S-4 3' BGS                  | 1855                       |
| H11569-4  | S-5 1' BGS                  | 32                         |
| H11569-5  | S-5 2' BGS                  | 16                         |
| H11569-6  | S-5 3' BGS                  | 448                        |
| H11569-7  | S-6 1' BGS                  | 2735                       |
| H11569-8  | S-6 2' BGS                  | 2303                       |
| H11569-9  | S-6 3' BGS                  | 2335                       |
| H11569-10 | S-7 1' BGS                  | 1088                       |
| H11569-11 | S-7 2' BGS                  | 1328                       |
| H11569-12 | S-7 3' BGS                  | 1472                       |
|           |                             |                            |
|           |                             |                            |
|           | Quality Control             | 970                        |
|           | True Value QC               | 1000                       |
|           | % Recovery                  | 97                         |
|           | Relative Percent Difference | 2.0                        |

METHOD: Standard Methods

4500-Cl<sup>-</sup>B

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

  
Chemist

09-26-06  
Date

H11569

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

## CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

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|                                     |             |                                      |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
|-------------------------------------|-------------|--------------------------------------|------------------|------------------|------------|------|-----------|--------|--------|------------|------------|--------|---------|----------|---------|-------|
| Company Name: <u>Hangry Horse</u>   |             | <b>BILL TO</b>                       |                  | ANALYSIS REQUEST |            |      |           |        |        |            |            |        |         |          |         |       |
| Project Manager: <u>Jerry Brian</u> |             | P.O. #:                              |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Address: <u>P.O. Box 1058</u>       |             | Company:                             |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| City: <u>Hobbs</u>                  |             | Attn:                                |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| State: <u>NM</u>                    |             | Address:                             |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Zip: <u>88240</u>                   |             | City:                                |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Phone #: <u>(505) 390-6149</u>      |             | State:                               |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Fax #: <u>390-6149</u>              |             | Phone #:                             |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Project #:                          |             | Project Owner: <u>Apache</u>         |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Project Name:                       |             | Project Location: <u>UMG SA 1815</u> |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Sampler Name: <u>Kelton Beard</u>   |             | Fax #:                               |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| FOR LAB USE ONLY                    |             |                                      |                  |                  |            |      |           |        |        |            |            |        |         |          |         |       |
| Lab I.D.                            | Sample I.D. | # CONTAINERS                         | (G)RAB OR (C)OMP | GROUNDWATER      | WASTEWATER | SOIL | CRUDE OIL | SLUDGE | OTHER: | ACID/BASE: | ICE / COOL | OTHER: | PRESERV | SAMPLING | DATE    | TIME  |
| H11569-1                            | S-4 1' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 9-25-06 | 12:20 |
| -2                                  | S-4 2' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 12:26   |       |
| -3                                  | S-4 3' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 12:20   |       |
| -4                                  | S-5 1' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 12:35   |       |
| -5                                  | S-5 2' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 12:35   |       |
| -6                                  | S-5 3' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 12:38   |       |
| -7                                  | S-6 1' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 11:00   |       |
| -8                                  | S-6 2' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 11:00   |       |
| -9                                  | S-6 3' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 11:04   |       |
| -10                                 | S-7 1' BGS  | 1                                    | X                | X                |            |      |           |        |        |            |            |        |         |          | 10:48   |       |

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 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

|  |                      |   |                      |
|--|----------------------|---|----------------------|
| Sampler Relinquished: <u>[Signature]</u>                               |                      | Received By: <u>[Signature]</u>   |                      |
| Date: <u>9-25-06</u>   | Time: <u>1:45 PM</u> | Date: <u>9-25-06</u>  | Time: <u>1:45 PM</u> |
| Relinquished By: <u>[Signature]</u>                                    |                      | Received By: (Lab Staff) <u>[Signature]</u>   |                      |
| Delivered By: (Circle One) <u>UPS</u>                                  |                      | Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> |                      |
| Sampler - UPS - Bus - Other:   |                      | Checked By: (Initials) <u>NA</u>  |                      |
| Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No |                      | Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No                                  |                      |
| Add'l Phone #: <u>    </u>   |                      | Add'l Fax #: <u>    </u>  |                      |
| REMARKS: <u>    </u>   |                      |   |                      |

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

Receiving Date: 09/22/06  
Reporting Date: 09/22/06  
Project Owner: APACHE  
Project Name: NMGSAU - #1815  
Project Location: LEA COUNTY, NM

Analysis Date: 09/22/06  
Sampling Date: 09/22/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID     | Cr <sup>-</sup><br>(mg/Kg) |
|-----------------------------|---------------|----------------------------|
| H11561-1                    | PIT - 42' BGS | 320                        |
| H11561-2                    | PIT - 43' BGS | 192                        |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
| Quality Control             |               | 950                        |
| True Value QC               |               | 1000                       |
| % Recovery                  |               | 95                         |
| Relative Percent Difference |               | 1.0                        |

4500-CIB

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

Date \_\_\_\_\_

H11561

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.



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

Receiving Date: 09/21/06  
Reporting Date: 09/22/06  
Project Owner: APACHE  
Project Name: NMGSAU - #1815  
Project Location: LEA COUNTY, NM

Analysis Date: 09/22/06  
Sampling Date: 09/21/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

| LAB NO.                     | SAMPLE ID     | Cl <sup>-</sup><br>(mg/Kg) |
|-----------------------------|---------------|----------------------------|
| H11560-1                    | PIT - 11' BGS | 3167                       |
| H11560-2                    | PIT - 16' BGS | 1839                       |
| H11560-3                    | PIT - 21' BGS | 1679                       |
| H11560-4                    | PIT - 26' BGS | 1919                       |
| H11560-5                    | PIT - 31' BGS | 2047                       |
| H11560-6                    | PIT - 34' BGS | 1216                       |
| H11560-7                    | PIT - 36' BGS | 1360                       |
| H11560-8                    | PIT - 38' BGS | 624                        |
| H11560-9                    | PIT - 40' BGS | 1232                       |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
|                             |               |                            |
| Quality Control             |               | 950                        |
| True Value QC               |               | 1000                       |
| % Recovery                  |               | 95                         |
| Relative Percent Difference |               | 1.0                        |

4500-C/B

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

Date \_\_\_\_\_

H11560

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.

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**2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240**  
**(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476**

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## 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 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            | Mike Warren                  |
| Address         | P.O. Drawer D      | Monument, NM 88265 | Telephone No. 432-556-2184   |
| Facility Name   | NMGSA Unit #1815   |                    | Facility Type Injection Well |

|               |                         |               |             |           |
|---------------|-------------------------|---------------|-------------|-----------|
| Surface Owner | State of NM; Faye Klein | Mineral Owner | State of NM | Lease No. |
|---------------|-------------------------|---------------|-------------|-----------|

**LOCATION OF RELEASE**

AP# 30025041360000

|             |         |          |       |                      |                     |               |               |        |
|-------------|---------|----------|-------|----------------------|---------------------|---------------|---------------|--------|
| Unit Letter | Section | Township | Range | Feet from South Line | Feet from East Line | Longitude-W   | Latitude-N    | County |
| O           | 2       | 20S      | 36E   | 660                  | 1980                | 103deg 19.35' | 32deg 35.815' | Lea    |

**NATURE OF RELEASE**

|   |  |                            |
|---|--|----------------------------|
| Type of Release   | Volume of Release                        | Volume Recovered           |
| Produced Water  | estimated 2000 bbl                       | 1700 bbl                   |
| Source of Release   | Date and Hour of Occurrence              | Date and Hour of Discovery |
| Produced Water Injection Line   | 9/18/2006                                | 09/18/06                   |
| Was Immediate Notice Given?   | If YES, To Whom?                         |                            |
| <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required | NMOCD - Hobbs Office                     |                            |
| By Whom?  | Date and Hour                            |                            |
| Mike Warren - Apache Corporation  | 09/18/06                                 |                            |
| 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. \*

Loss of integrity of produced water injection line. Free fluids vacuumed from terminal end of flowpath at caliche pit south of well pad. Hungry Horse, LLC - Environmental Services contracted to perform remediation.

Describe Area Affected and Cleanup Action Taken. \*

The area affected was approximately 21,000-ft<sup>2</sup> including the 848' flowpath and ponded area within the caliche pit. Hungry Horse LLC, Hobbs, NM conducted the site remediation. Final Closure document attached.

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:  | <b>OIL CONSERVATION DIVISION</b>   |                        |
| Printed Name: Mike Warren  | Approved by District Supervisor:  |                        |
| Title: Senior Production Foreman   | Approval Date: 5.9.07  | Expiration Date: _____ |
| E-Mail Address: Mike.Warren@Apachecorp.com   | Conditions of Approval: _____  |                        |
| Date: 1/23/2007    Phone: 432-556-2184   | <input type="checkbox"/> Attached  |                        |

**HUNGRY HORSE, LLC**

15

Apache NMGSAU1815

AP# 1313