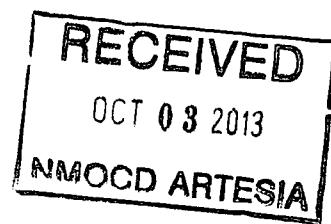




EXPLORING WHAT'S POSSIBLE



# APACHE CORPORATION

P.O.Box 1849  
Eunice, NM 88231  
Phone 575.394.3159

## NB Tween #029

---

## Closure Report

2RP-1098

API 30-015-39747

Release Date: March 23, 2012

Unit Letter F, Section 25, Township 17S, Range 28E

# Rice Environmental Consulting & Safety

P.O. Box 2948 Hobbs, NM 88241

Phone 575.393.2967

**May 23<sup>rd</sup>, 2013**

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau – District 2

811 S. First St.

Artesia, NM 88210

**RE: TERMINATION REQUEST**

**Apache – NB Tween #29 AD**

**UL/F sec. 25 T17S R28E**

**API No. 30-015-39747**

**2RP-1098**

Mr. Bratcher:

Apache Corporation has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the site referenced above.

## **Background and Previous Work**

The site is an accidental discharge of brine water associated with the NB Tween #29. During drilling activities, a transport filling the frac tanks overflowed the tanks and fluids were released onto the well pad. An initial form C-141 was submitted by Apache Corporation on April 2, 2012 (Appendix A). The site is located approximately 3 miles west of Loco Hills, in unit letter 'F' of section 25, T17S, R28E in Eddy County, New Mexico.

During construction of the well pad, a reinforced plastic liner was placed approximately 2 ft. below ground surface (bgs) to mitigate possible environmental impacts of drilling activities. On April 4, 2012, RECS personnel initiated work at the NB Tween #29 (Figure 1). Surface soil samples were collected from the impacted areas as per post-drilling methods. Most of the impacted soils remained in the soils above the liner. The samples were field tested for chloride. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were submitted to a commercial laboratory for chloride, TPH, and BTEX analyses (Appendix C).

The leak area outside the northeast edge of the liner was excavated to 1 ft. bgs (Figure 2). On June 22, 2012, RECS personnel collected and field tested representative wall grab samples and a composite bottom sample from the excavation. The samples were submitted to a laboratory for chloride analysis and did not exceed 80 mg/kg (Appendix C).

The leak areas outside the liner to the west, south, and southwest were also excavated to 1 ft. bgs (Figure 2). On June 25, 2012, RECS personnel collected and field tested representative wall grab samples and composite bottom samples from each excavation. The samples were submitted to a laboratory for chloride analysis and did not exceed 144 mg/kg (Appendix C).

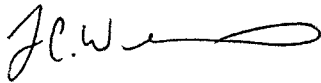
Excavated soils were removed to a NMOCD approved disposal facility. The excavations were backfilled with clean caliche and leveled. See Appendix B for photographs of field activities.

## **Conclusion**

Due to the complete removal of impacted soils, Apache submits the final C-141 (Appendix D) and respectfully requests the closure of the regulatory file for this site.

Apache Corporation appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 631-6432 if you have any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'J.C.W.' followed by a long, horizontal, wavy line.

Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

## **Attachments:**

- Figure 1: Site Plat with Initial Lab Sampling Data
- Figure 2: Site Plat with Final Lab Sampling Data
- Appendix A: Initial Form C-141
- Appendix B: Site Photographs
- Appendix C: Laboratory Results
- Appendix D: Final Form C-141

# Figures

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

# Site Plat

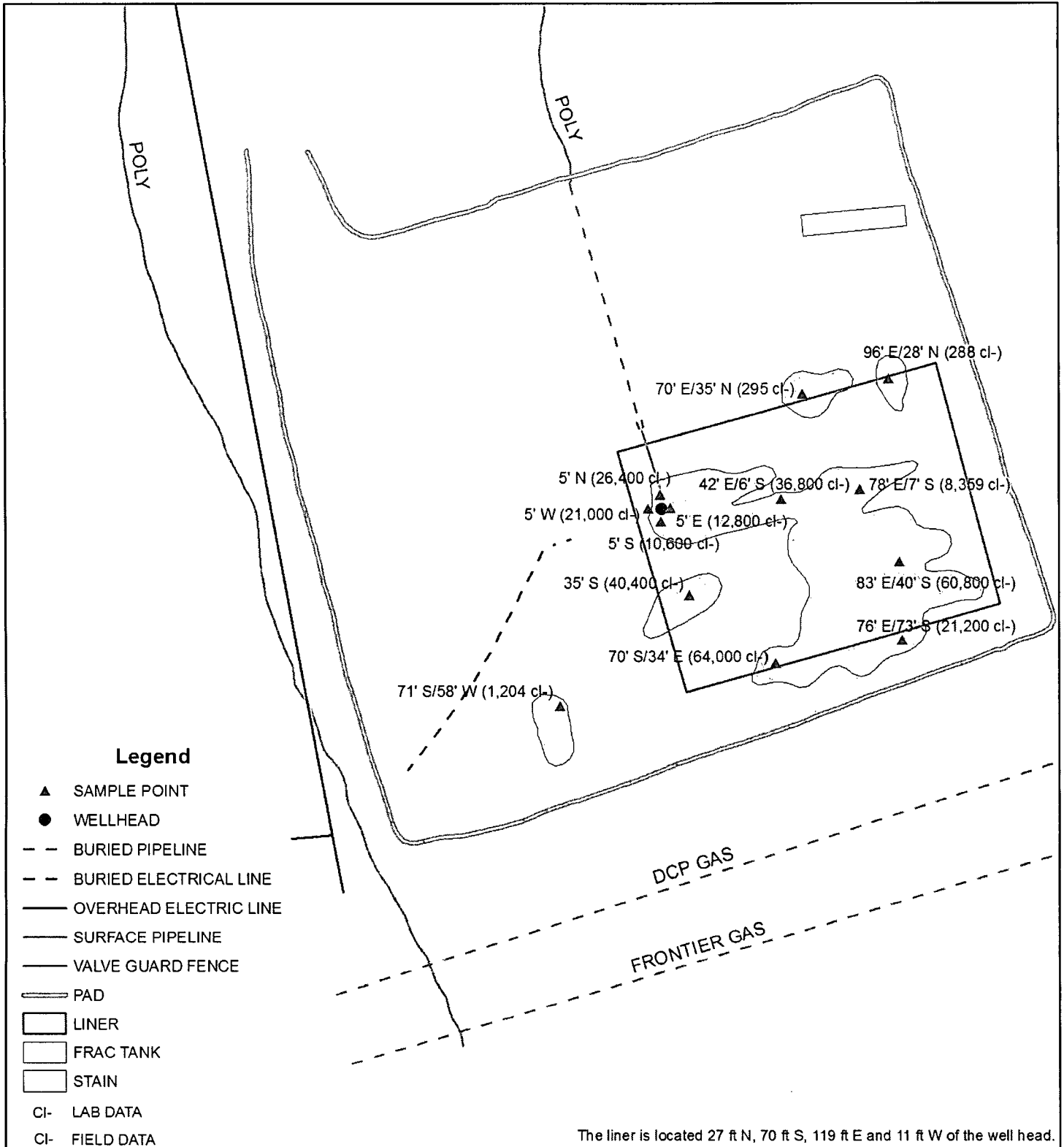


Figure 1



0 30 60  
Feet

GPS date: 4/4/12 by DH  
Drawing date: 10/23/12  
Drafted by: A.C. Ruth



**APACHE**  
**N. B. TWEEN**  
**STATE #029**  
UL/F SECTION 25  
T-17-S R-28-E  
EDDY COUNTY, NM

# Site Plat

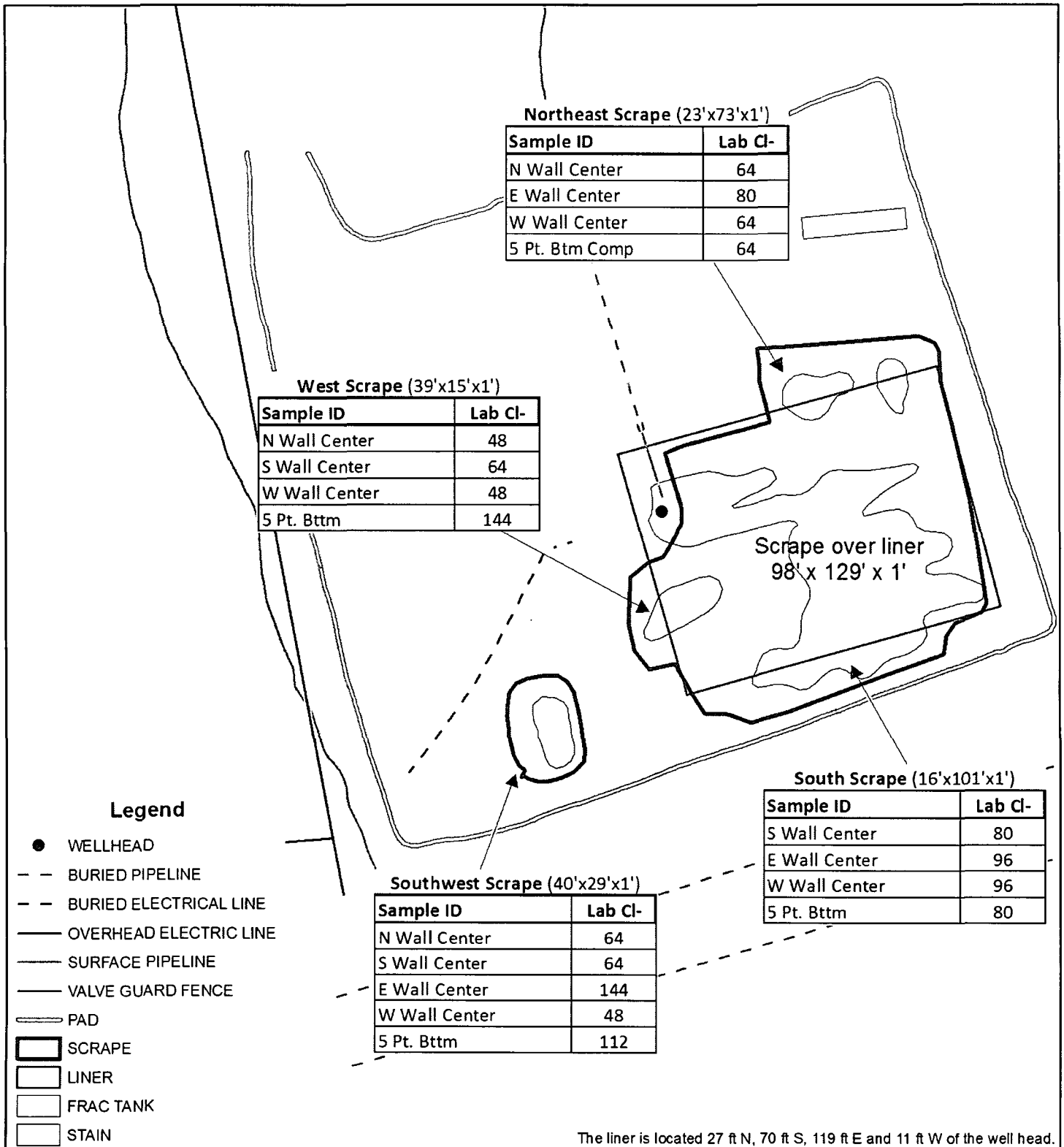


Figure 2



0 30 60  
 Feet

GPS date: 4/4/12 by DH  
 Drawing date: 10/23/12  
 Drafted by: A.C. Ruth



**APACHE**  
**N. B. TWEEN**  
**STATE #029**  
 UL/F SECTION 25  
 T-17-S R-28-E  
 EDDY COUNTY, NM

# Appendix A

Initial Form C-141

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NMLB 1211138800 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	Apache Corporation	873	Contact	Natalie Gladden
Address	PO Box 1849 Eunice NM 88231		Telephone No.	575-390-4186
Facility Name	NB Tween #29		Facility Type	Production well

Surface Owner State	Mineral Owner	Unknown	API No.	30-015-39747
---------------------	---------------	---------	---------	--------------

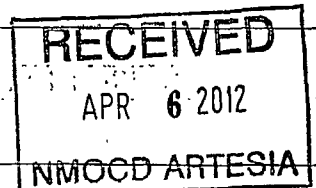
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	25	17S	28E	1525'	FNL	1670'	FEL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release	Brine	Volume of Release	20	Volume Recovered	0
Source of Release	Overfilled frac tanks	Date and Hour of Occurrence	3/23/12 0300	Date and Hour of Discovery	03/23/12 0300
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.* Transport driver fell asleep while unloaded his truck into the frac tanks on location, when the tanks overflowed onto the location pad.					
Describe Area Affected and Cleanup Action Taken.* Site will be remediated to NMOCD Standards after the well is drilled and completed.					



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: <u>Natalie Gladden</u>	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	Approved by Environmental Specialist: <u>Mike Benavides</u>	
Title: EHS Environmental Tech	Approval Date: <u>APR 20 2012</u>	Expiration Date:
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval: Remediation per OCD Rules & Guidelines. <b>SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:</b>	Attached <input type="checkbox"/>
Date: 4/02/12 Phone: 575-390-4186	<u>5/20/2012</u>	<u>2RP-1098</u>

\* Attach Additional Sheets If Necessary ..



# Appendix B

## Site Photographs

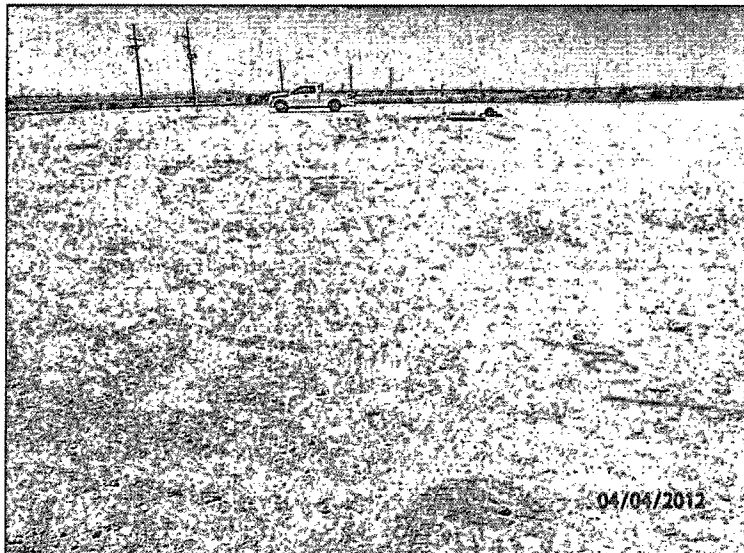
**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

**NB Tween #029**  
Unit F, Section 25, T17S, R28E



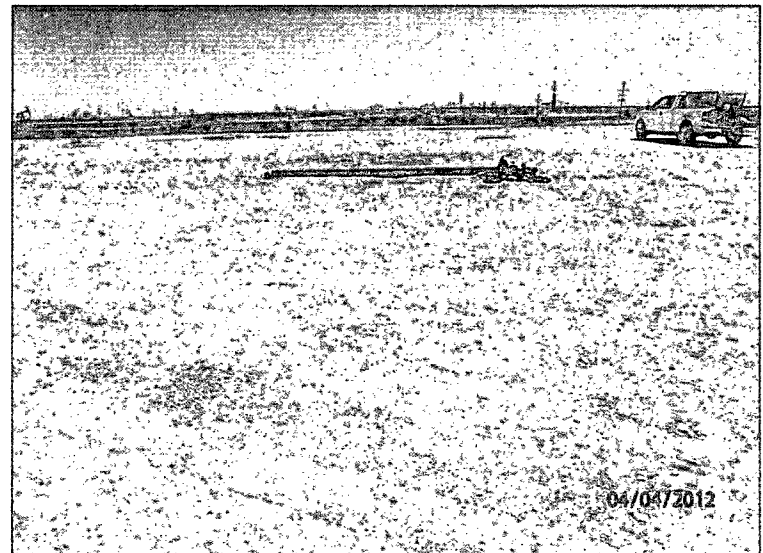
Prior to excavation, facing north

4/4/2012



Prior to excavation, facing west

4/4/2012



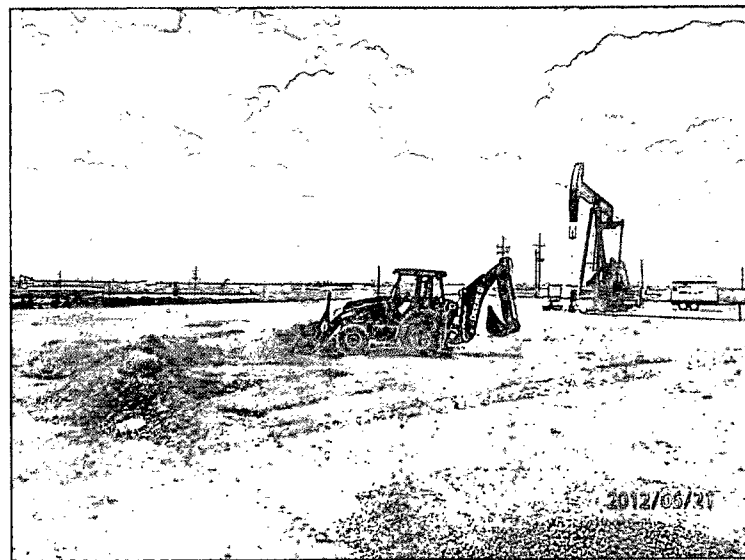
Prior to excavation, facing south

4/4/2012



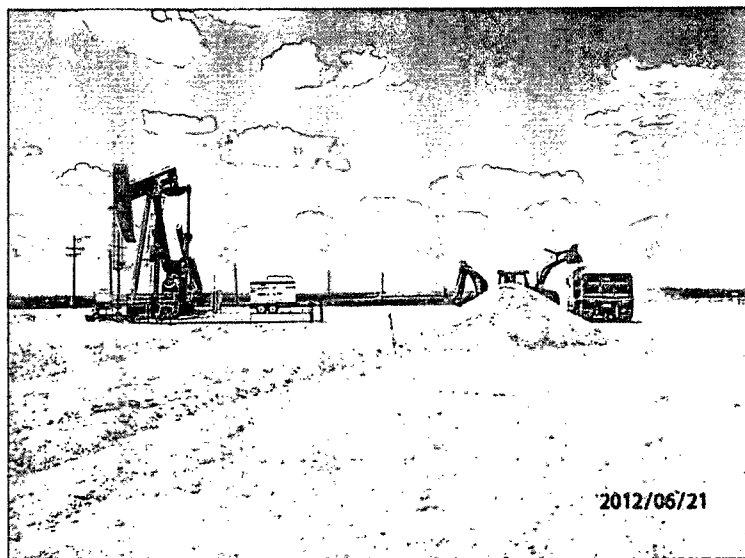
Prior to excavation, facing east

4/4/2012



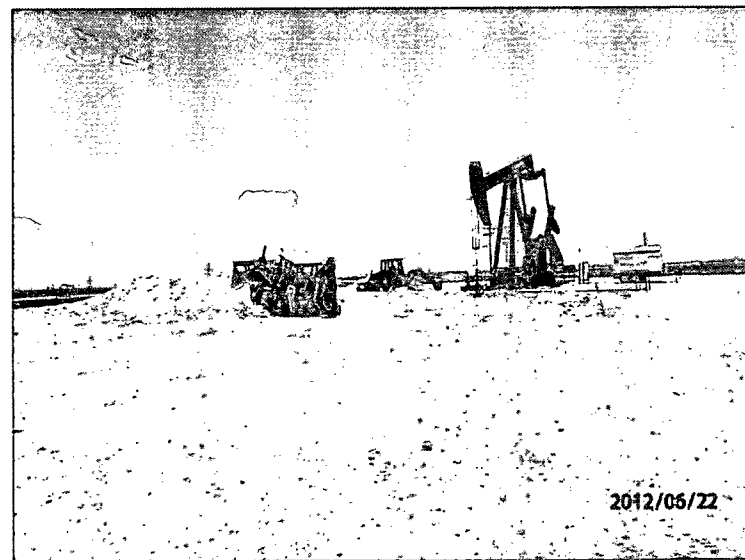
Excavating, facing southwest

6/21/2012



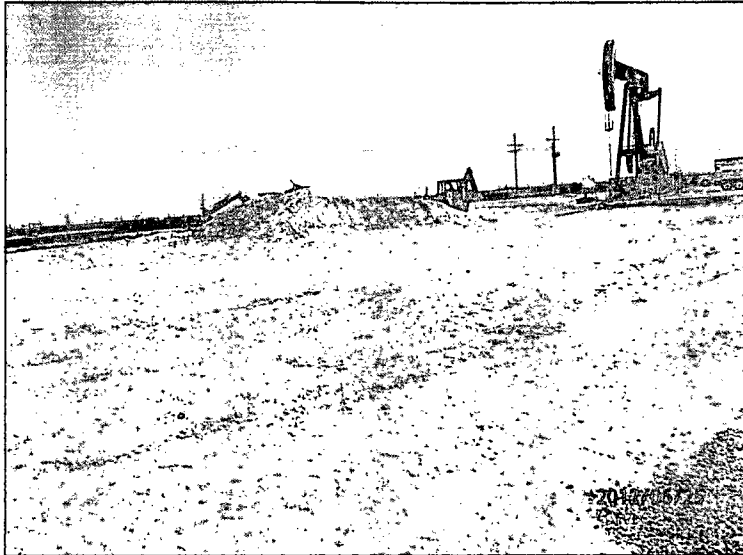
Exporting soil, facing southwest

6/21/2012

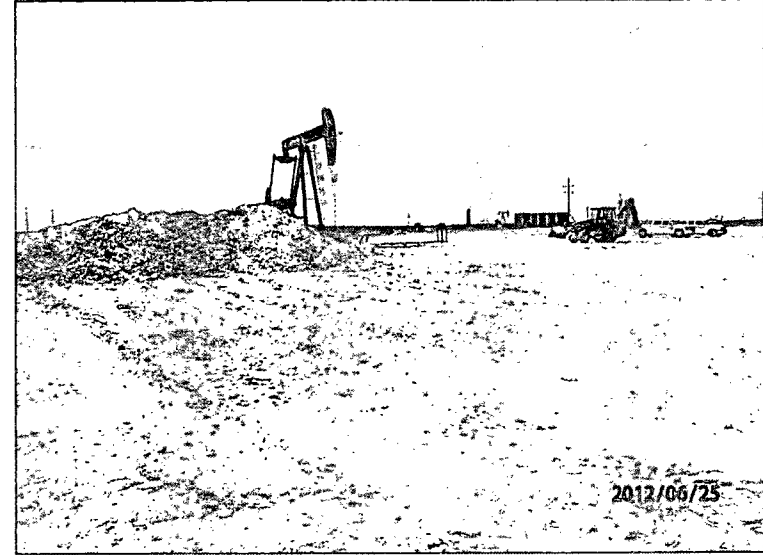


Excavating, facing southwest

6/22/2012



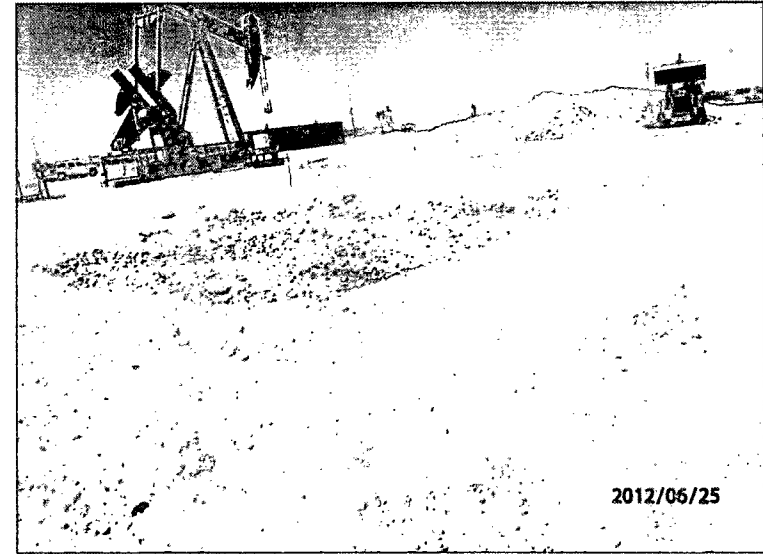
Final excavation, facing southwest 6/25/2012



Final excavation, facing northwest 6/25/2012



Final excavation, facing northeast 6/25/2012



Final excavation, facing northeast 6/25/2012

# Appendix C

## Laboratory Results

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

April 10, 2012

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: N B TWEEN STATE #029

Enclosed are the results of analyses for samples received by the laboratory on 04/05/12 9:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

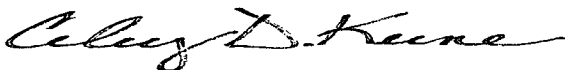
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 APACHE - EUNICE  
 NATALIE GLADDEN  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 04/05/2012  
 Reported: 04/10/2012  
 Project Name: N B TWEEN STATE #029  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/04/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: 5' NORTH (H200789-01)**

BTEX 8021B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99		
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78		
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56		
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30		

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26400	16.0	04/09/2012	ND	384	96.0	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/05/2012	ND	230	115	200	4.71	
DRO >C10-C28	241	10.0	04/05/2012	ND	235	117	200	4.62	

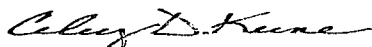
Surrogate: 1-Chlorooctane 101 % 55.5-154

Surrogate: 1-Chlorooctadecane 109 % 57.6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
NATALIE GLADDEN  
P. O. BOX 1849  
EUNICE NM, 88231  
Fax To: 394-2425

Received: 04/05/2012  
Reported: 04/10/2012  
Project Name: N B TWEEN STATE #029  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/04/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: 5' EAST (H200789-02)**

BTEX 8021B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99		
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78		
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56		
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30		

Surrogate: 4-Bromofluorobenzene (PIL) 100 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12800	16.0	04/09/2012	ND	384	96.0	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/05/2012	ND	230	115	200	4.71	
DRO >C10-C28	38.3	10.0	04/05/2012	ND	235	117	200	4.62	

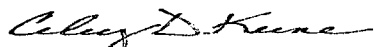
Surrogate: 1-Chlorooctane 104 % 55.5-154

Surrogate: 1-Chlorooctadecane 129 % 57.6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 APACHE - EUNICE  
 NATALIE GLADDEN  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 04/05/2012  
 Reported: 04/10/2012  
 Project Name: N B TWEEN STATE #029  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/04/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: 5' SOUTH (H200789-03)**

BTEX 8021B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99	
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78	
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56	
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30	

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 64.4-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10600	16.0	04/09/2012	ND	384	96.0	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/05/2012	ND	230	115	200	4.71	
DRO >C10-C28	15.3	10.0	04/05/2012	ND	235	117	200	4.62	


Surrogate: 1-Chlorooctane 107 % 55.5-154

Surrogate: 1-Chlorooctadecane 130 % 57.6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 APACHE - EUNICE  
 NATALIE GLADDEN  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 04/05/2012  
 Reported: 04/10/2012  
 Project Name: N B TWEEN STATE #209  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/04/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: 5' WEST (H200789-04)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99		
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78		
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56		
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30		

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	21000	16.0	04/09/2012	ND	384	96.0	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/05/2012	ND	230	115	200	4.71		
DRO >C10-C28	<10.0	10.0	04/05/2012	ND	235	117	200	4.62		

Surrogate: 1-Chlorooctane 107 % 55.5-154

Surrogate: 1-Chlorooctadecane 130 % 57.6-158

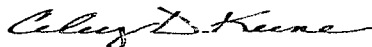
**Sample ID: 35' SOUTH (H200789-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	40400	16.0	04/09/2012	ND	384	96.0	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 APACHE - EUNICE  
 NATALIE GLADDEN  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 04/05/2012  
 Reported: 04/10/2012  
 Project Name: N B TWEEN STATE #029  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/04/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: 70' SOUTH / 34' EAST (H200789-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64000	16.0	04/09/2012	ND	384	96.0	400	0.00		

**Sample ID: 42' EAST / 6' SOUTH (H200789-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	36800	16.0	04/09/2012	ND	384	96.0	400	0.00		

**Sample ID: 83' EAST / 40' SOUTH (H200789-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	60800	16.0	04/09/2012	ND	384	96.0	400	0.00	

**Sample ID: 76' EAST / 73' SOUTH (H200789-09)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	21200	16.0	04/09/2012	ND	384	96.0	400	0.00		

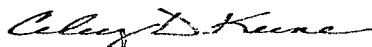
**Sample ID: 96' EAST / 28' NORTH (H200789-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/09/2012	ND	384	96.0	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

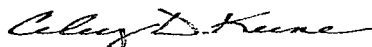
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																			
Address:				Company:																							
City: State: NM Zip:				Attn:																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name: NB Tneen #089				State: Zip:																							
Project Location:				Phone #:																							
Sampler Name: Dakston Harris				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP. # CONTAINERS		MATRIX														PRESERV.		SAMPLING					
						GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER		ACID/BASE: ICE / COOL OTHER		DATE TIME																	
H200789				G 1		✓		✓		4-4-12 2:00		✓															
1 5' North				G 1		✓		✓		4-4-12 2:05		✓															
2 5' East				G 1		✓		✓		4-4-12 2:10		✓															
3 5' South				G 1		✓		✓		4-4-12 2:15		✓															
4 5' West				G 1		✓		✓		4-4-12 2:20		✓															
5 35' South				G 1		✓				4-4-12 2:25		✓															
6 20'S 34'E				G 1		✓				4-4-12 2:30		✓															
7 42'E 6'S				G 1		✓				4-4-12 2:35		✓															
8 83'E 40'S				G 1		✓				4-4-12 2:40		✓															
9 76'E 73'S				G 1		✓				4-4-12 2:45		✓															
10 96'E 88'N				G 1		✓																					

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Relinquished By: <i>Dakston Harris</i>	Date: 4-5-12 Time: 0715	Received By: <i>Natalie Gladden</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
Relinquished By: <i>Natalie Gladden</i>	Date: 4-5-12 Time: 0745	Received By: <i>Jodi Benson</i>	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:			REMARKS: email results Natalie.Gladden@usa.apachecorp.com  Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: <i>JTB</i> (Initials)	

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

4/26

June 27, 2012

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: N B TWEEN STATE #029

Enclosed are the results of analyses for samples received by the laboratory on 06/22/12 14:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 APACHE - EUNICE  
 NATALIE GLADDEN  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 06/22/2012  
 Reported: 06/27/2012  
 Project Name: N B TWEEN STATE #029  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 06/21/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: N E SCRAPE N WALL CENTER (H201430-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/25/2012	ND	432	108	400	3.77	

**Sample ID: E WALL CENTER (H201430-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/25/2012	ND	432	108	400	3.77	

**Sample ID: W WALL CENTER (H201430-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/25/2012	ND	432	108	400	3.77	

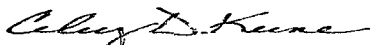
**Sample ID: 5 PT BTM COMP (H201430-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/25/2012	ND	432	108	400	3.77	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

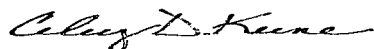
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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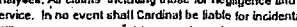
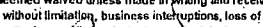

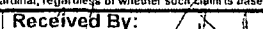

Celest D. Keene, Lab Director/Quality Manager





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: 	Date: 6-21-12 Time: 0730	Received By: 	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #: Add'l Fax #:
Relinquished By: 	Date: 6-22-12 Time: 1440	Received By: 	REMARKS: email results natalie.gladden@apachecorp.com Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com ; jkamplain@rice-ecs.com	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No -80		CHECKED BY: (Initials) 	

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

#26

June 27, 2012

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: N B TWEEN STATE #029

Enclosed are the results of analyses for samples received by the laboratory on 06/25/12 16:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

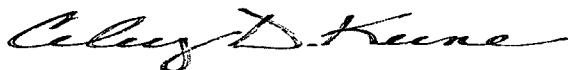
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**APACHE - EUNICE  
NATALIE GLADDEN  
P. O. BOX 1849  
EUNICE NM, 88231  
Fax To: 394-2425Received: 06/25/2012  
Reported: 06/27/2012  
Project Name: N B TWEEN STATE #029  
Project Number: NONE GIVEN  
Project Location: NOT GIVENSampling Date: 06/25/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson**Sample ID: S SCRAPE S WALL CENTER (H201436-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/26/2012	ND	432	108	400	3.77	

**Sample ID: S SCRAPE E WALL CENTER (H201436-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/26/2012	ND	432	108	400	3.77	

**Sample ID: S SCRAPE W WALL CENTER (H201436-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/26/2012	ND	432	108	400	3.77	

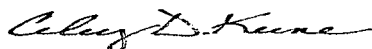
**Sample ID: S SCRAPE 5 PT BTM (H201436-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/26/2012	ND	432	108	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
NATALIE GLADDEN  
P. O. BOX 1849  
EUNICE NM, 88231  
Fax To: 394-2425

Received: 06/25/2012  
Reported: 06/27/2012  
Project Name: N B TWEEN STATE #029  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 06/25/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: W SCRAPE N WALL CENTER (H201436-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/26/2012	ND	432	108	400	3.77		

**Sample ID: W SCRAPE S WALL CENTER (H201436-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/26/2012	ND	432	108	400	3.77		

**Sample ID: W SCRAPE W WALL CENTER (H201436-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/26/2012	ND	432	108	400	3.77	

**Sample ID: W SCRAPE 5 PT BTM (H201436-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/26/2012	ND	432	108	400	3.77	

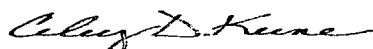
**Sample ID: SW SCRAPE N WALL CENTER (H201436-09)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/26/2012	ND	432	108	400	3.77		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
NATALIE GLADDEN  
P. O. BOX 1849  
EUNICE NM, 88231  
Fax To: 394-2425

Received: 06/25/2012  
Reported: 06/27/2012  
Project Name: N B TWEEN STATE #029  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 06/25/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW SCRAPE S WALL CENTER (H201436-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/26/2012	ND	432	108	400	3.77	

**Sample ID: SW SCRAPE E WALL CENTER (H201436-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/26/2012	ND	432	108	400	3.77	

**Sample ID: SW SCRAPE W WALL CENTER (H201436-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/26/2012	ND	416	104	400	0.00	

**Sample ID: SW SCRAPE 5 PT BTM (H201436-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/26/2012	ND	416	104	400	0.00	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

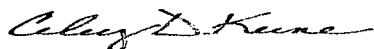
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# **CARDINAL LABORATORIES**

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Apache Corp.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>															
Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>															
Address:				Company:																			
City:		State:		Zip:		Attn:																	
Phone #:		Fax #:		Address:																			
Project #:		Project Owner:		City:																			
Project Name: NB Tween St #029				State:																Zip:			
Project Location:				Phone #:																			
Sampler Name: J Kamplain				Fax #:																			
FOR LAB USE ONLY																							
Lab I.D.		Sample I.D.		(GRAB OR COMPOUND)		# CONTAINERS		MATRIX				PRESERV		SAMPLING									
								GROUNDWATER															
								WASTEWATER															
								SOIL															
								OIL															
								SLUDGE															
								OTHER:															
								ACID/BASE:															
								ICE / COOL															
								OTHER:															
								DATE				TIME											
H201436																							
1 S-Scrape South Wall Cate		3		1								6-25-12		9:30									
2 E Wall Cate		3		1										9:35									
3 W. Wall Cate		3		1										9:40									
4 Spt Bottom		3		1										9:45									
5 W-Scrape N. Wall Cate		3		1										10:15									
6 South Wall Cate		3		1										10:20									
7 W. Wall Cate		3		1										10:25									
8 Spt Bottom		3		1										10:30									

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Relinquished By: <i>Kamplain</i>		Date: 6-25-12		Received By: <i>Jodi Benson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Relinquished By:		Time: 4:41		Received By:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Delivered By: (Circle One)		Date:		Sample Condition		CHECKED BY: (Initials)		REMARKS:	
Sampler - UPS - Bus - Other:		Time:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		50		email results	
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				natalie.gladden@apachecorp.com	
				<input type="checkbox"/> No <input checked="" type="checkbox"/> No				Zconder@rice-ecs.com; Bbaker@rice-ecs.com;	
								hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;	
								jkamplain@rice-ecs.com	

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

#216



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Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																			
Address:				Company:																							
City: State: Zip:				Attn:																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name: <i>B. Green St #029</i>				State: Zip:																							
Project Location:				Phone #:																							
Sampler Name: <i>J. Kamplain</i>				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		GIRAB OR (C)OMP.		# CONTAINERS		MATRIX				PRESERV.		SAMPLING													
								GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				ACID/BASE: ICE / COOL OTHER:		DATE TIME													
H201436		S. Sample		9		1								6-25-12 3:30													
9		N. Wall Cate		9		1								3:35													
10		S. Wall Cate		9		1								3:40													
11		E. Wall Cate		9		1								3:45													
12		W. Wall Cate		9		1								3:50													
13		S. Bottom		9		1								3:50													

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Relinquished By: <i>[Signature]</i>		Date: <i>6-25-12</i>		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
		Time: <i>4:41</i>				Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:  email results natalie.gladden@apachecorp.com Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com ; jkamplain@rice-ecs.com			
		Time:							
Delivered By: (Circle One)				Sample Condition		CHECKED BY: (Initials)			
Sampler - UPS - Bus - Other: <i>50</i>				<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		<i>[Signature]</i>			

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

*#26*

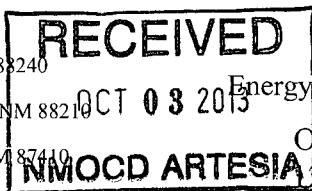


# Appendix D

Final Form C-141

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

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  
220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	PO BOX 1849, Eunice, NM 88231	Telephone No.	(575) 394-1503
Facility Name	NB Tween #029	Facility Type	Production Well
Surface Owner	State	Mineral Owner	Unknown
		API No.	30-015-39747

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	25	17S	28E	1525	FNL	1670	FEL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

### NATURE OF RELEASE

Type of Release	Brine	Volume of Release	20 bbls	Volume Recovered	0 bbls
Source of Release	Overfilled frac tanks	Date and Hour of Occurrence	3/23/2012 0300	Date and Hour of Discovery	3/23/2012 0300
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?	Date and Hour				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Transport driver fell asleep while unloaded his truck into the frac tanks on location, when the tanks overflowed onto the location pad.

Describe Area Affected and Cleanup Action Taken.\*

The leak affected the caliche pad surrounding the wellhead. The impacted areas were excavated to 1 ft. below ground surface. Representative grab samples were collected from the excavation, field tested, and sent to a commercial laboratory for chloride analysis. Impacted soils were removed to a NMOC D approved disposal facility. The excavations were backfilled with clean imported caliche and leveled.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC D 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 NMOC D 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, NMOC D acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Bruce Baker</i>		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Bruce Baker		Approved by District Supervisor:	
Title: <i>environmental Tech</i>	Approval Date:	Expiration Date:	
E-mail Address: <i>larry.baker@apachecorp.com</i>	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <i>8-30-13</i>	Phone: (575) 394-1503		

\* Attach Additional Sheets If Necessary