

Empire Abo Unit #402

Eddy County

Unit I, 32, 17S, 28E

2410' FSL and 245' FEL

API #30-015-39019

Release date: 10/29/11

Prepared by Natalie Gladden

Apache Corporation

Dear Mark,

Attached you will find a copy of the original C141, Final C141, a diagram of the initial samples with sample points and final analyticals taken from this site.

With this information that is provided, Apache Corporation respectfully requests your review and approval of the Closure Document for the brine water release that occurred at the Apache Empire Abo Unit #402.

If you have any questions or concerns, please feel free to contact me at any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Gladden". The signature is fluid and cursive, with the first name "Natalie" and last name "Gladden" clearly distinguishable.

Natalie Gladden

EH&S Environmental Tech

Permian New Mexico District

The purpose of this report is to document the remediation activities and present supporting analytical data to the NMOCD, requesting closure of the referenced brine water release incident in accordance with the Guidelines for Remediation of Leaks, Spills and Releases.

On October 29<sup>th</sup> 2011, while drilling the well during the grave yard shift, the Qmax hand was not paying attention to the levels in the shaker machine, which caused the fluid to overflow onto the drilling location pad. 10bbls of brine was released and 5bbls of brine was recovered. Once the well was drilled and completed the remediation began. As you are aware the locations at that time had poly liners installed 2' below the surface to cover the area the drilling rig was sitting on.

Initial samples were taken, which you can see attached. The contaminated soil on the surface of the liner was excavated and hauled to disposal as well as the area's outside the liner area, which where remediated to reach <250-ppm chlorides. 340 cubic yards of contaminated material was hauled to CRI and 456 cubic yards of backfill was purchased from the State of NM Pit 391.

Based on the analytical results of the confirmation soil samples collected which show in the last diagram, no drawing included, which confirmed that the soil was less than 250-ppm chlorides. Consequently, no further action is recommended or planned for this site at this time and on behalf of Apache Corporation we respectfully request that the NMOCD grant closure for the Empire Abo Unit #402.

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  
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**

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company	Apache Corporation	Contact	Natalie Gladden
Address	PO Box 1849 Eunice, NM 88231	Telephone No.	575-390-4186
Facility Name	Empire Abo Unit #402	Facility Type	Production well

Surface Owner	Unknown	Mineral Owner	State	API No.	30-015-39019
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	32	17S	28E	2410'	FSL	245'	FEL	Lea Eddy

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

**NATURE OF RELEASE**

Type of Release	Brine water	Volume of Release	10	Volume Recovered	5
Source of Release	Shaker	Date and Hour of Occurrence	10/29/11	Date and Hour of Discovery	10/29/11 1245am
Was Immediate Notice Given?	If YES, To Whom?				
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required				
By Whom?	Date and Hour				
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.				
	<input type="checkbox"/> Yes <input type="checkbox"/> No				

Watercourse was Impacted, Describe Fully.\*

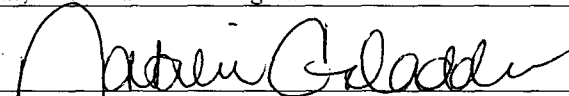
**Describe Cause of Problem and Remedial Action Taken.\***

at 12:45 on 10/29/11 the drilling crew switched to light plants and did not restart the shale shaker, causing the fluid to overflow onto the drilling pad.

**Describe Area Affected and Cleanup Action Taken.\***

Once the well is completed the drilling site remediation will be completed to NMOCD Standards

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: Natalie Gladden	Approved by Environmental Specialist:	
Title: EHS Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
11/4/11 Phone: 575-390-4186		

\* Attach Additional Sheets If Necessary



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

February 8, 2012

Natalie Gladden  
Apache Corporation  
P.O. Box 1849  
Eunice, NM 88231

Re: Empire ABO Unit #402

Enclosed are the results of analyses for samples received by the laboratory on 01/31/12 8:37.

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 524.2	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.

Thank you,

Celey D. Keene  
Laboratory Director/Quality Manager



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

ANALYTICAL RESULTS FOR  
APACHE CORPORATION  
ATTN: NATALIE GLADDEN  
P.O. BOX 1849  
EUNICE, NM 88231

Receiving Date: 01/31/12  
Reporting Date: 02/08/12  
Project Owner: NOT GIVEN  
Project Name: EMPIRE ABO UNIT #402  
Project Location: NOT GIVEN

Sampling Date: 01/30/12  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ -13°C  
Sample Received By: JH  
Analyzed By: AP/MS

LAB NO.	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	BENZENE* (mg/kg)	TOLUENE* (mg/kg)	ETHYL BENZENE* (mg/kg)	TOTAL XYLENES* (mg/kg)
ANALYSIS DATE:		02/02/12	02/02/12	02/03/12	02/03/12	02/03/12	02/03/12
H200223-01	5' NORTH	<10.0	221	<0.050	<0.050	<0.050	<0.150
H200223-02	5' EAST	<10.0	76.4	<0.050	<0.050	<0.050	<0.150
H200223-03	5' SOUTH	<10.0	90.3	<0.050	<0.050	<0.050	<0.150
H200223-04	5' WEST	<10.0	213	<0.050	<0.050	<0.050	<0.150
Quality Control		182	213	1.76	2.20	2.36	7.31
True Value QC		200	200	2.00	2.00	2.00	6.00
% Recovery		91.0	107	88.0	110	118	122
Relative Percent Difference		1.7	0.9	11.4	13.4	12.9	11.2

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8021B.

TEXAS NELAP CERTIFICATE T104704398-11-3 FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Chemist

Date

H200223BT2 APACHE

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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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ANALYTICAL RESULTS FOR  
APACHE CORPORTATION  
ATTN: NATALIE GLADDEN  
P.O. BOX 1849  
EUNICE, NM 88231

Receiving Date: 01/31/12  
Reporting Date: 02/08/12  
Project Owner: NOT GIVEN  
Project Name: EMPIRE ABO UNIT #402  
Project Location: NOT GIVEN

Analysis Date: 02/01/12  
Sampling Date: 01/30/12  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ -13°C  
Sample Received By: JH  
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H200223-01	5' NORTH	3,840
H200223-02	5' EAST	1,680
H200223-03	5' SOUTH	2,480
H200223-04	5' WEST	3,200
H200223-05	70' SOUTH 57' EAST	2,600
H200223-06	25' SOUTH 55' EAST	25,200
H200223-07	50' SOUTH 39' EAST	9,600
H200223-08	45' SOUTH 78' EAST	3,560
H200223-09	34' WEST	2,640
H200223-10	76' WEST 9' SOUTH	8,100
Quality Control		416
True Value QC		400
% Recovery		104
Relative Percent Difference		<0.1

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

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

  
Chemist

  
Date

H200223 APACHE

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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



**(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020**

Company Name: Apache				BILL TO				ANALYSIS REQUEST																													
Project Manager: Natalie Gladden				P.O. #:				Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS																								
Address:				Company:																																	
City: State: NM Zip:				Attn:																																	
Phone #: Fax #:				Address:																																	
Project #: Project Owner:				City:																																	
Project Name: Empire Abo Unit #402				State: Zip:																																	
Project Location:				Phone #:																																	
Sampler Name: Dakston Harris				Fax #:																																	
FOR LAB USE ONLY				MATRIX				PRESERV.				SAMPLING																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:	DATE	TIME																					
H2DD0223																																					
1	5' north			G	1			✓							1-30-12	11:00	✓	✓	✓																		
2	5' east			G	1			✓							1-30-12	11:05	✓	✓	✓																		
3	5' south			G	1			✓							1-30-12	11:10	✓	✓	✓																		
4	5' west			G	1			✓							1-30-12	11:15	✓	✓	✓																		
5	70' south 57' east			G	1			✓							1-30-12	11:20	✓																				
6	25' south 55' east			G	1			✓							1-30-12	11:25	✓																				
7	50' south 39' east			G	1			✓							1-30-12	11:30	✓																				
8	45' south 78' east			G	1			✓							1-30-12	11:35	✓																				
9	34' west			G	1			✓							1-30-12	11:40	✓																				
10	76' west 9' south			G	1			✓							1-30-12	11:45	✓																				

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Relinquished By: <i>Dakston Harris</i>	Date: <i>1/31/12</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Time: <i>1:30</i>			Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>[Signature]</i>	Date: <i>1/31/12</i>	Received By: <i>Jodi Henson</i>	REMARKS:	
Time: <i>6:37</i>			email results	
Delivered By: (Circle One)		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/>	Natalie.Gladden@usa.apachecorp.com;	
Sampler - UPS - Bus - Other:		-13°C <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;	
		CHECKED BY: <i>[Signature]</i>	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2876

#26





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

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February 01, 2012

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: EMPIRE ABO UNIT #402

Enclosed are the results of analyses for samples received by the laboratory on 01/31/12 16:20.

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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:	01/31/2012	Sampling Date:	01/31/2012
Reported:	02/01/2012	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #402	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

**Sample ID: SCRAPE UNDER FT N WALL W END (H200234-01)**

Chloride, SM4500Cl-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	02/01/2012	ND	432	108	400	0.00	

**Sample ID: SCRAPE UNDER FT E WALL CENTER (H200234-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2012	ND	432	108	400	0.00	

**Sample ID: SCRAPE UNDER FT S WALL E END (H200234-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2012	ND	432	108	400	0.00	

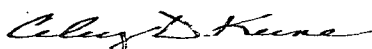
**Sample ID: SCRAPE UNDER FT S WALL W END (H200234-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/01/2012	ND	432	108	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:	01/31/2012	Sampling Date:	01/31/2012
Reported:	02/01/2012	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #402	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

**Sample ID: SCRAPE UNDER FT W WALL CENTER (H200234-05)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/01/2012	ND	432	108	400	0.00	

**Sample ID: SCRAPE UNDER FT SPT BTM COMP @ 1' (H200234-06)**

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	02/01/2012	ND	432	108	400	0.00	

**Sample ID: W SCRAPE @ 1' N WALL W END (H200234-07)**

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	02/01/2012	ND	432	108	400	0.00	

**Sample ID: W SCRAPE @ 1' N WALL E END (H200234-08)**

Chloride, SM4500Cl-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	02/01/2012	ND	432	108	400	0.00	

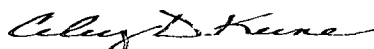
**Sample ID: W SCRAPE @ 1' S WALL E END (H200234-09)**

Chloride, SM4500Cl-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	02/01/2012	ND	432	108	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:	01/31/2012	Sampling Date:	01/31/2012
Reported:	02/01/2012	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #402	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

**Sample ID: W SCRAPE @ 1' S WALL W END (H200234-10)**

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	02/01/2012	ND	432	108	400	0.00	

**Sample ID: W SCRAPE @ 1' W WALL CENTER (H200234-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2012	ND	432	108	400	0.00	

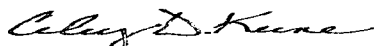
**Sample ID: W SCRAPE @ 1' 5 PT BTTM COMP @ 1' (H200234-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2012	ND	432	108	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

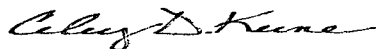
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received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

---

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2

Page 6 of 7

Company Name: Apache				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																	
Project Manager: Natalie Gladden				P.O. #:				<div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div>																	
Address:				Company:																					
City: State: NM Zip:				Attn:																					
Phone #: Fax #:				Address:																					
Project #: Project Owner:				City:																					
Project Name: <i>Empire abo unit #402</i>				State: Zip:																					
Project Location:				Phone #:																					
Sampler Name: <i>Dakston Harris</i>				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													
H200234		Scrape under frac tank se		G 1																					
1		N. Wall W. End		G 1								1-31-12 10:00													
2		E. Wall Center		G 1								1-31-12 10:05													
3		S. Wall E. End		G 1								1-31-12 10:10													
4		S. Wall W. End		G 1								1-31-12 10:15													
5		W. Wall Center		G 1								1-31-12 10:20													
6		5pt. btm Comp @ 1'		C 1								1-31-12 10:25													

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Relinquished By: <i>Dakston Harris</i>		Date: <i>3/1/12</i>		Received By: <i>Yodi Benson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Time: <i>6:00</i>		Date:		Received By:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:  email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com			
Time:		Date:		Received By:					
Delivered By: (Circle One)				Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other:				Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<i>Yodi Benson</i>			

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

#26



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

















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#26

## Legend

-  ELECTRICAL POLE
-  SAMPLE POINTS
-  ELECTRICAL PANEL
-  WELLHEAD
-  ELECTRICAL LINE
-  BURIED ELECTRICAL LINE
-  BURIED PIPELINE
-  ELECTRICAL LINE SURFACE
-  FLOW LINE
-  POLY LINE
-  WELL PAD
-  SCRAPES selection
-  PUMP JACK
-  LINER
-  FRAC TANK
-  STAIN
- CI- LAB DATA

West scrape  
27' x 73' x 1'

5'W (3,200 cl-)  
34'W (2,640 cl-)  
76'W/9'S (8,100 cl-)  
5'N (3,840 cl-)  
5'E (1,680 cl-)  
5'S (2,480 cl-)  
55'S/92'E (271 cl-)  
25'S/55'E (25,200 cl-)  
45'S/78'E (3,560 cl-)  
70'S/57'E (2,600 cl-)  
50'S/39'E (9,600 cl-)

Scrape above liner  
89' x 98' x 1'

Scrape under frac tanks  
29' x 137' x 1'

The liner is located 33' ft NNW, 61' ft SSE, 105' ft ENE and 17' ft WSW of the well head.

The frac tanks are located 64' ft SSE, then 44' ft SSW and 96' ft ENE of the well head.



## APACHE EMPIRE ABO UNIT #402

LEGALS: UL/I sec. 32  
T 17 S R28 E  
EDDY COUNTY, NM

0 15 30 60  
Feet  
GPS date: 1/31/12 DH  
Drawing date: 2/1/12  
Drafted by: L. Weinheimer





## EXCAVATION SAMPLES

Sample Description	Water	Soil		AGNO3	Cl-
<u>Scrape above liner (89' x 98' x 1')</u>					
ne corner bttm @ 1'	30.5	11.1	2.75	0.08	220
nw corner bttm	30.4	10.6	2.87	0.06	172
se corner bttm	30.5	10.8	2.82	0.1	282
sw corner bttm	31.1	10.4	2.99	0.35	1046
center bttm	30.5	10.4	2.93	1.6	4691
n. wall center	30.8	10.3	2.99	0.06	179
e wall center	30.1	11	2.74	0.05	137
w.wall center	30.6	10.5	2.91	0.06	175
s.wall center	30	10.1	2.97	0.05	148
<u>Scrape under frac tanks (29' x 137' x 1')</u>					
ne corner bttm	30	10.5	2.86	0.05	143
nw corner bttm	30.5	10.3	2.96	0.04	118
se corner bttm	30.2	11.1	2.72	0.05	136
sw corner bttm	30.1	10.5	2.87	0.04	115
center bttm	30.1	10.2	2.95	0.05	148
5pt. bttm comp @ 1'	30.2	10.6	2.85	0.05	142
n wall w end	30.7	11.3	2.72	0.05	136
e wall center	30.7	10.7	2.87	0.04	115
s wall e. end	30.3	11.1	2.73	0.05	136
s wall w end	30.4	10.1	3.01	0.05	150
w wall center	30.5	10.8	2.82	0.05	141
n wall e end	n wall e end runs into liner				
<u>W scrape (27' x 73' x 1')</u>					
ne corner bttm	30.4	11	2.76	0.06	166
nw corner bttm	30.4	10.5	2.90	0.04	116
se corner bttm	30.1	10.7	2.81	0.04	112
sw corner bttm	30.4	10.6	2.87	0.05	143
center bttm	31.1	10.5	2.96	0.05	148
5pt. bttm comp @ 1'	30.7	11.1	2.77	0.04	111
n wall w end	30.9	11.3	2.73	0.05	137
n wall e end	30.4	11.4	2.67	0.05	133
s wall e. end	30.5	10.5	2.90	0.05	145
s wall w end	30.3	11.2	2.71	0.05	135
w wall center	30.6	10.5	2.91	0.04	117
e wall runs into liner					

## **SURFACE SAMPLES**

<b>Sample Description</b>	<b>Water</b>	<b>Soil</b>		<b>AGNO3</b>	<b>Cl-</b>
<b>5'n</b>	<b>30</b>	<b>11.2</b>	<b>2.68</b>	<b>0.79</b>	<b>2115</b>
<b>5'e</b>	<b>30.6</b>	<b>11.4</b>	<b>2.68</b>	<b>0.53</b>	<b>1422</b>
<b>5's</b>	<b>30.4</b>	<b>11.1</b>	<b>2.74</b>	<b>0.59</b>	<b>1615</b>
<b>5'w</b>	<b>30.3</b>	<b>10.3</b>	<b>2.94</b>	<b>0.88</b>	<b>2588</b>
<b>70 s 57e</b>	<b>30</b>	<b>11.2</b>	<b>2.68</b>	<b>0.62</b>	<b>1660</b>
<b>55s 92e</b>	<b>30.1</b>	<b>10</b>	<b>3.01</b>	<b>0.09</b>	<b>271</b>
<b>25s 55e</b>	<b>30</b>	<b>10.3</b>	<b>2.91</b>	<b>6.49</b>	<b>18897</b>
<b>50s 39e</b>	<b>30.6</b>	<b>11.3</b>	<b>2.71</b>	<b>2.45</b>	<b>6632</b>
<b>45s 78e</b>	<b>30.6</b>	<b>10.6</b>	<b>2.89</b>	<b>0.86</b>	<b>2482</b>
<b>34w</b>	<b>30.4</b>	<b>10.3</b>	<b>2.95</b>	<b>0.64</b>	<b>1888</b>
<b>76w 9s</b>	<b>30.2</b>	<b>11.1</b>	<b>2.72</b>	<b>1.74</b>	<b>4733</b>

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  
S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company Apache Corporation	Contact Natalie Gladden	
Address PO Box 1849 Eunice, NM 88231	Telephone No. 575-390-4186	
Facility Name Empire Abo Unit #402	Facility Type Production well	
Surface Owner Unknown	Mineral Owner State	API No. 30-015-39019

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	32	17S	28E	2410'	FSL	245'	FEL	Lea <i>Eddy</i>

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

**NATURE OF RELEASE**

Type of Release Brine water	Volume of Release 10	Volume Recovered 5
Source of Release Shaker	Date and Hour of Occurrence 10/29/11	Date and Hour of Discovery 10/29/11 1245am
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.\*

At 12:45 on 10/29/11 the drilling crew switched to light plants and did not restart the shale shaker, causing the fluid to overflow onto the drilling pad.

Describe Area Affected and Cleanup Action Taken.\*

The well was completed and the drilling site remediation was completed to meet NMOCD Standards

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

Signature: <i>Natalie Gladden</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Natalie Gladden	Approved by Environmental Specialist:	
Title: EHS Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 07/25/12 Phone: 575-390-4186		

\* Attach Additional Sheets If Necessary