

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

HOBBS OCD

Form C-141
APR 03 2014 Revised August 8, 2011

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

RECEIVED

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	8 Ellison Lane, Eunice, NM 88231	Telephone No.	(432) 631-6982
Facility Name	NMGSAU 1114	Facility Type	Injection Well

Surface Owner	Betty Long	Mineral Owner		API No.	30-025-05726
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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
N	29	19S	37E	600'	FSL	1980'	FWL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	Unknown	Volume Recovered	0
Source of Release	Fiberglass injection line	Date and Hour of Occurrence	10-8-13 at 12:00 a.m.	Date and Hour of Discovery	10-8-13 at 12:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mr. Leking		
By Whom?	Bruce Baker	Date and Hour	10-8-2013 at 11:01 a.m.		
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.*

A split in the fiberglass collar. The line was shut in and the line will be repaired once remediation is complete.

Describe Area Affected and Cleanup Action Taken.* A total of 16,603 square feet of pasture land was affected by the release. On October 8th, 2013, RECS personnel were on site to assess the release. Surface soil samples were taken from six points within the release area and field tested for chlorides and organic vapors. Verticals were installed at the site at 5 points within the release area. The vertical samples were field tested for chlorides and organic vapors and representative samples were taken to a commercial laboratory for analysis. Verticals 1, 3 and 4 returned laboratory chloride readings below regulatory standards at all depths. Vertical 2 returned laboratory chloride readings below regulatory standards at 2 ft bgs and Vertical 5 returned laboratory chloride readings below regulatory standards at 3.5 ft bgs. Gasoline Range Organics (GRO) readings and Diesel Range Organics (DRO) readings returned values of non-detect in all verticals at all depths. Based on the laboratory sampling data, the east side of the release was scraped to a depth of 3.5 ft bgs and the west side of the release was scraped to a depth of 2 ft bgs. The excavated soil was taken to a NMOCD approved facility for disposal. At the base of the scrape, a 5 point bottom composite sample was taken to a commercial laboratory for analysis and returned a chloride result of 160 mg/kg. On November 12th, 2013, Apache asked NMOCD for permission to backfill the site, and NMOCD verbally agreed. A total of 1,332 yards of soil was imported to the site to serve as backfill. A sample of the backfill was taken to a commercial laboratory for analysis and returned a chloride result of non-detect. The site was backfilled with the imported material and contoured to the surrounding location. On February 3rd, 2014, the site was seeded with a blend of native vegetation.

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>Bruce Baker</i>	OIL CONSERVATION DIVISION <i>Bruce Baker</i> Environmental Specialist		
Printed Name: Bruce Baker	Approved by Environmental Specialist:		
Title: Environmental Technician	Approval Date: 4/03/14	Expiration Date: -	
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: -	Attached <input type="checkbox"/>	
Date: 2-5-14	Phone: (432) 631-6982	IRP-11-13-2992	

Attach Additional Sheets If Necessary

JUN 17 2014

NSAD 1416 434 773



EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION

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

NMGSAU 1114
(1RP-11-13-2992)

Termination Request

approved
Jeffrey LeKing
Environmental Specialist
NMOC-DIST 1
4/03/14

API 30-025-05726

Release Date: October 8th, 2013

Unit Letter N, Section 29, Township 19S, Range 37E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

February 4th, 2014

Geoffrey Leking

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau – District 1

1625 N. French Dr.

Hobbs, NM 88240-9273

RE: Termination Request

Apache Corporation – NMGSAU 1114 (1RP-11-13-2992)

UL/N sec. 29 T19S R37E

API No. 30-025-05726

Mr. Leking:

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

Background and Previous Work

The site is located approximately 0.6 miles northwest of Monument, New Mexico at UL/N sec. 29 T19S R37E. NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 23 +/- feet.

On October 8th, 2013, Apache discovered a produced water release from a fiberglass injection line. A split in the fiberglass collar released an unknown number of barrels of produced water over 16,603 square feet of pasture land. None of this fluid was recovered. NMOCD was notified of the release on October 8th, 2013 and an initial C-141 was submitted to NMOCD for their approval (Appendix A).

On October 8th, 2013, RECS personnel were on site to assess the release. Surface soil samples were taken from six points within the release area and field tested for chlorides and organic vapors (Figure 1). Verticals were installed at the site at 5 points within the release area (Figure 2). The vertical samples were field tested for chlorides and organic vapors and representative samples were taken to a commercial laboratory for analysis (Appendix B). Verticals 1, 3 and 4 returned laboratory chloride readings below regulatory standards at all depths. Vertical 2 returned laboratory chloride readings below regulatory standards at 2 ft bgs and Vertical 5 returned laboratory chloride readings below regulatory standards at 3.5 ft bgs. Gasoline Range Organics (GRO) readings and Diesel Range Organics (DRO) readings returned values of non-detect in all verticals at all depths.

Based on the laboratory sampling data, the east side of the release was scraped to a depth of 3.5 ft bgs and the west side of the release was scraped to a depth of 2 ft bgs. The excavated soil was taken to a NMOCD approved facility for disposal. At the base of the

scrape, a 5 point bottom composite sample was taken to a commercial laboratory for analysis and returned a chloride result of 160 mg/kg (Figure 3). On November 12th, 2013, Apache asked NMOCD for permission to backfill the site and NMOCD verbally agreed.

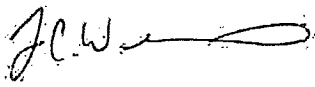
A total of 1,332 yards of soil was imported to the site to serve as backfill. A sample of the backfill was taken to a commercial laboratory for analysis and returned a chloride result of non-detect. The site was backfilled with the imported material and contoured to the surrounding location. On February 3rd, 2014, the site was seeded with a blend of native vegetation. Vegetation also provides a natural infiltration barrier for the site since plants capture water through their roots thereby reducing the volume of water moving through the vadose zone to groundwater.

Photo documentation of these activities can be found in Appendix C.

Given the Apache has removed the contaminated soil and replaced it with clean, imported soil, Apache respectfully requests 'remediation termination' and closure status for the site. The final C-141 can be found in Appendix D.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read 'LW' followed by a stylized flourish.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

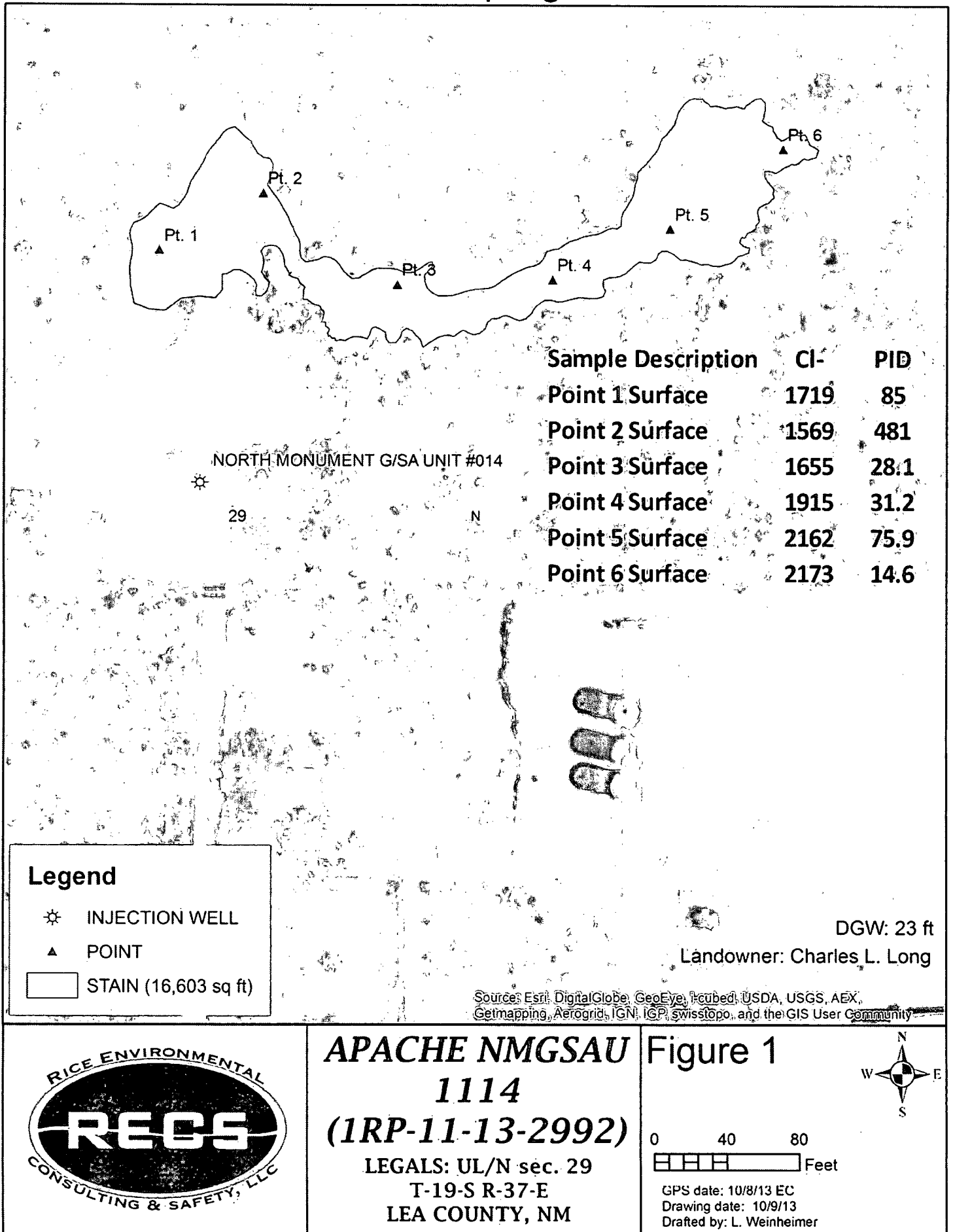
Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Vertical Data
- Figure 3 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – Laboratory Analyses
- Appendix C – Photo Documentation
- Appendix D – Final C-141

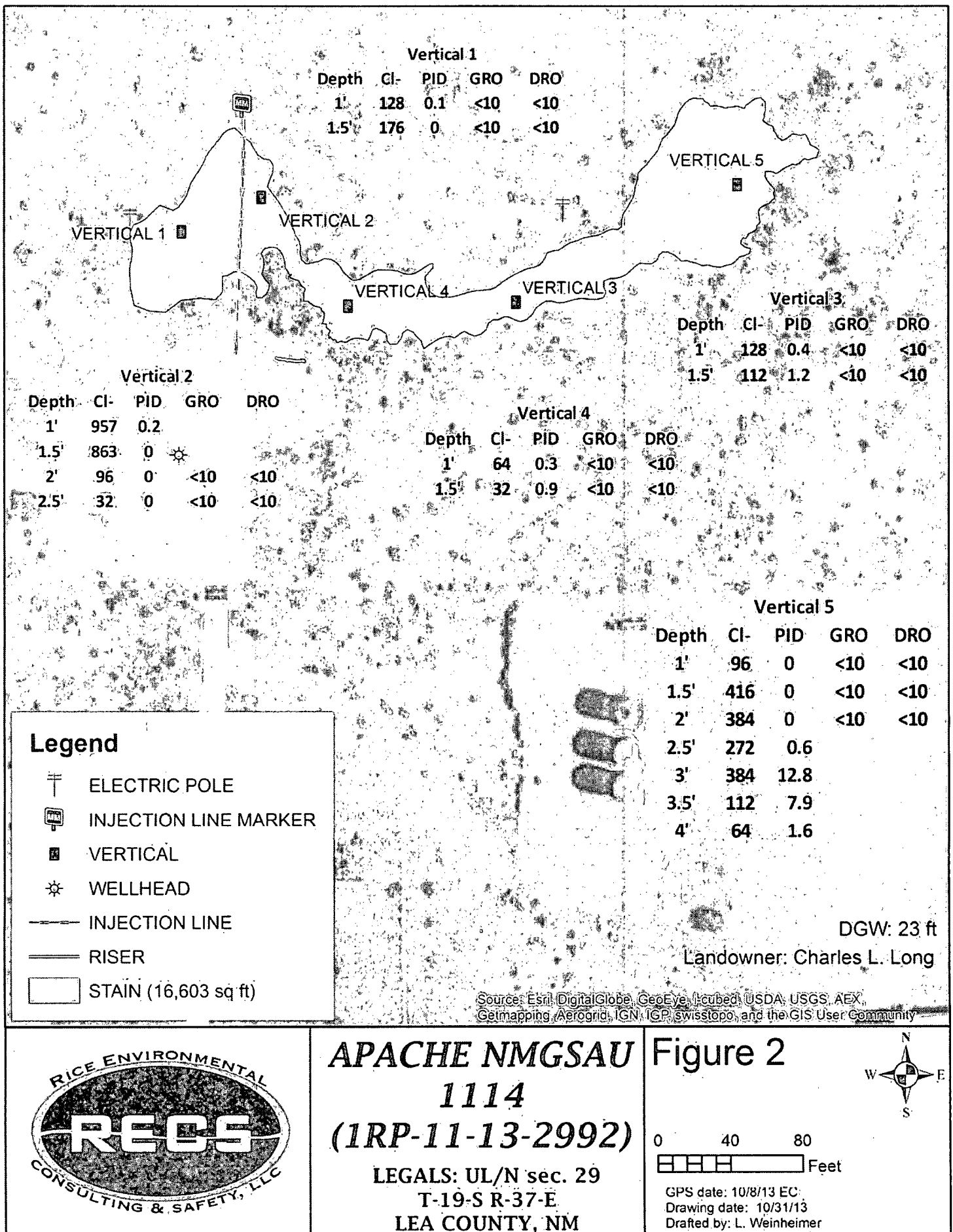
Figures

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

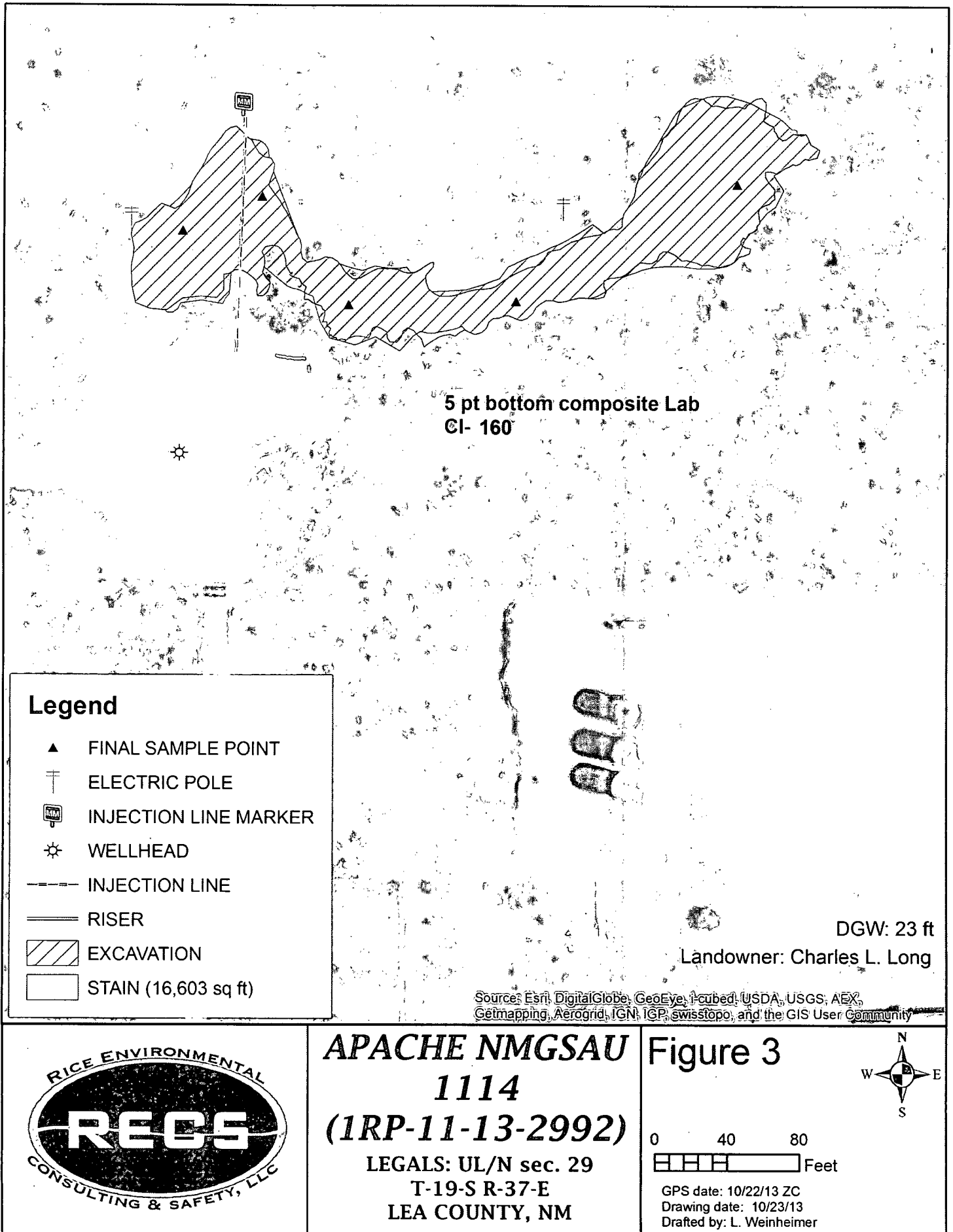
Initial Sampling Data



Vertical Data



Excavation Data



Appendix A

Initial C-141

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

District I
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
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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 Bruce Baker	
Address 8 Ellison Lane Eunice, NM 88231	Telephone No. (432) 631-6982	
Facility Name NMGSAU 1114	Facility Type Injection Well	
Surface Owner Betty Long	Mineral Owner	API No. 30-025-05726

LOCATION OF RELEASE

Unit Letter N	Section 29	Township 19S	Range 37E	Feet from the 600'	North/South Line FSL	Feet from the 1980'	East/West Line FWL	County Lea
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release Unknown	Volume Recovered 0
Source of Release Fiberglass injection line	Date and Hour of Occurrence 10-8-13 at 12:00 a.m.	Date and Hour of Discovery 10-8-13 at 12:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mr. Leking	
By Whom? Bruce Baker	Date and Hour 10-8-2013 at 11:01 a.m.	
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.*

A split in the fiberglass collar. The line was shut in and the line will be repaired once remediation is complete.

Describe Area Affected and Cleanup Action Taken.*

The release affected 16,875 square feet of pasture. The wet area has been scraped up and the site will be delineated.

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>Bruce Baker</i>		OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker		Approved by Environmental Specialist:	
Title: Environmental Technician		Approval Date:	Expiration Date:
E-mail Address: larry.baker@apachecorp.com		Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10-15-13 Phone: (432) 631-6982			

* Attach Additional Sheets If Necessary

Appendix B

Laboratory Analyses

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

October 21, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU BLK 11 WELL 14

Enclosed are the results of analyses for samples received by the laboratory on 10/18/13 10:00.

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.

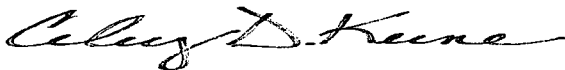
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 10/18/2013
Reported: 10/21/2013
Project Name: NMGS AU BLK 11 WELL 14
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/14/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: VERTICAL #1 @ 1' (H302520-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	10/21/2013	ND	432	108	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	10/18/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	186	93.2	200	8.87	
<i>Surrogate: 1-Chlorooctane</i>			<i>115 %</i>	<i>65.2-140</i>					
<i>Surrogate: 1-Chlorooctadecane</i>			<i>120 %</i>	<i>63.6-154</i>					

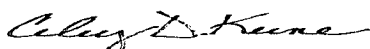
Sample ID: VERTICAL #1 @ 1.5' (H302520-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/21/2013	ND	432	108	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	10/18/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	186	93.2	200	8.87	
<i>Surrogate: 1-Chlorooctane</i>			<i>108 %</i>	<i>65.2-140</i>					
<i>Surrogate: 1-Chlorooctadecane</i>			<i>111 %</i>	<i>63.6-154</i>					

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 10/18/2013
 Reported: 10/21/2013
 Project Name: NMGSAU BLK 11 WELL 14
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/14/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: VERTICAL #2 @ 2' (H302520-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/21/2013	ND	432	108	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	10/18/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	186	93.2	200	8.87	
Surrogate: 1-Chlorooctane		103 %	65.2-140						
Surrogate: 1-Chlorooctadecane		110 %	63.6-154						

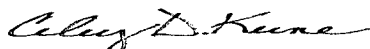
Sample ID: VERTICAL #2 @ 2.5' (H302520-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/21/2013	ND	432	108	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	10/18/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/18/2013	ND	186	93.2	200	8.87	
Surrogate: 1-Chlorooctane		99.0 %	65.2-140						
Surrogate: 1-Chlorooctadecane		105 %	63.6-154						

Cardinal Laboratories

* = Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 10/18/2013
 Reported: 10/21/2013
 Project Name: NMGS AU BLK 11 WELL 14
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/14/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: VERTICAL #3 @ 1' (H302520-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	10/21/2013	ND	432	108	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	
Surrogate: 1-Chlorooctane	109 %	65.2-140							
Surrogate: 1-Chlorooctadecane	119 %	63.6-154							

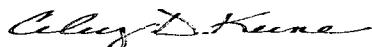
Sample ID: VERTICAL #3 @ 1.5' (H302520-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	10/21/2013	ND	432	108	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	10/19/2013	ND	197	98.5	200	4.29		
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87		
Surrogate: 1-Chlorooctane		106 %	65.2-140							
Surrogate: 1-Chlorooctadecane		107 %	63.6-154							

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 10/18/2013
 Reported: 10/21/2013
 Project Name: NMGS AU BLK 11 WELL 14
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/14/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: VERTICAL #4 @ 1' (H302520-07)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/21/2013	ND	432	108	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

Sample ID: VERTICAL #4 @ 1.5' (H302520-08)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/21/2013	ND	432	108	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	

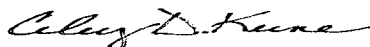
Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

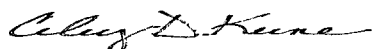
Notes and Definitions

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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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 7 of 7

Company Name: <u>Apache</u>		BILL TO		ANALYSIS REQUEST															
Project Manager:		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: Hobbs State: NM Zip: 88240		Attn:																	
Phone #: Fax #:		Address:																	
Project #: Project Owner:		City:																	
Project Name:		State: Zip:																	
Project Location: <u>NM GSAU BLK 11 Well 14</u>		Phone #:																	
Sampler Name: <u>Zach Conder</u>		Fax #:																	
FOR LAB USE ONLY																			
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					
<u>4130252D</u>																			
	1 Vertical #1 @ 1'	G	1			✓				✓			10-19-13		✓	✓			
	2 Vertical #1 @ 1.5'	G	1			✓				✓			-		✓	✓			
	3 Vertical #2 @ 2'	G	1			✓				✓			-		✓	✓			
	4 Vertical #2 @ 2.5'	G	1			✓				✓			-		✓	✓			
	5 Vertical #3 @ 1'	G	1			✓				✓			-		✓	✓			
	6 Vertical #3 @ 1.5'	G	1			✓				✓			-		✓	✓			
	7 Vertical #4 @ 1'	G	1			✓				✓			-		✓	✓			
	8 Vertical #4 @ 1.5'	G	1			✓				✓			-		✓	✓			

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.

Relinquished By:	Date: <u>10/18/13</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	REMARKS: email results Bruce Baker Kyle Norman Laura Weinheimer Zach Conder
Sampler - UPS - Bus - Other:	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No		

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

#54

October 21, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU BLK 11 WELL 14

Enclosed are the results of analyses for samples received by the laboratory on 10/18/13 10:00.

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.

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
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

 Received: 10/18/2013
 Reported: 10/21/2013
 Project Name: NMGS AU BLK 11 WELL 14
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/15/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: VERTICAL #5 @ 1' (H302522-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/21/2013	ND	416	104	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	
<i>Surrogate: 1-Chlorooctane</i>			<i>108 %</i>	<i>65.2-140</i>					
<i>Surrogate: 1-Chlorooctadecane</i>			<i>118 %</i>	<i>63.6-154</i>					

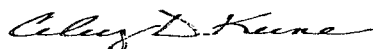
Sample ID: VERTICAL #5 @ 1.5' (H302522-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	10/21/2013	ND	416	104	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	
<i>Surrogate: 1-Chlorooctane</i>			<i>112 %</i>	<i>65.2-140</i>					
<i>Surrogate: 1-Chlorooctadecane</i>			<i>120 %</i>	<i>63.6-154</i>					

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/18/2013
Reported: 10/21/2013
Project Name: NMGS AU BLK 11 WELL 14
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/15/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

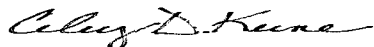
Sample ID: VERTICAL #5 @ 2' (H302522-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	10/21/2013	ND	416	104	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	10/19/2013	ND	197	98.5	200	4.29	
DRO >C10-C28	<10.0	10.0	10/19/2013	ND	186	93.2	200	8.87	
Surrogate: 1-Chlorooctane		110 %	65.2-140						
Surrogate: 1-Chlorooctadecane		121 %	63.6-154						

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

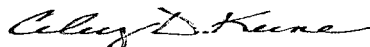
Notes and Definitions

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

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Celest D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 5

[illegible]

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#54

October 31, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU #14

Enclosed are the results of analyses for samples received by the laboratory on 10/25/13 11:30.

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.

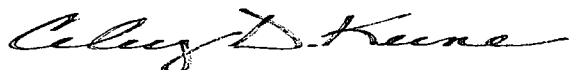
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 10/25/2013
Reported: 10/31/2013
Project Name: NMGS AU #14
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/24/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: VERT 5 @ 2.5' (H302598-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	10/28/2013	ND	400	100	400	3.92	

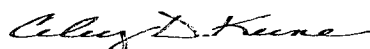
Sample ID: VERT 5 @ 3' (H302598-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	10/28/2013	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

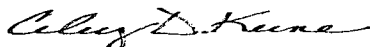
Notes and Definitions

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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Celest D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apache</u>				BILL TO				ANALYSIS REQUEST																			
Project Manager: <u>Boyle Norman</u>				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: Hobbs State: NM Zip: 88240				Attn:																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name:				State: Zip:																							
Project Location: <u>11 MGSAU#14</u>				Phone #:																							
Sampler Name: Kyle Schnaidt				Fax #:																							
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																			
Lab I.D.	Sample I.D.	(GRAB OR C/COMP.)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME													
<u>H302598</u>																											
	<u>1 Vert 5 @ 2.5'</u>	<u>6</u>	<u>1</u>			<u>X</u>					<u>X</u>		<u>10-24-13</u>	<u>11:00</u>	<u>X</u>												
	<u>2 Vert 5 @ 3'</u>	<u>6</u>	<u>1</u>			<u>X</u>					<u>X</u>		<u>10-24-13</u>	<u>11:05</u>	<u>X</u>												

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.

Relinquished By:		Date:	Received By:		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:
<u>Kyle Schnaidt</u>		<u>10-24-13</u>	<u>Jodi Hanson</u>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:
Relinquished By:		Date:	Received By:		REMARKS:		
					kschnaidt@rice-ecs.com		
					Knorman@rice-ecs.com		
					Kjones@riceswd.com; jkamplain@rice-ecs.com		
					hconder@rice-ecs.com; Lweinheimer@rice-ecs.com		
Delivered By: (Circle One)			Sample Condition		CHECKED BY:		
Sampler - UPS - Bus - Other:			Cool Intact		<u>[Signature]</u>		
			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes				
			<input type="checkbox"/> No <input type="checkbox"/> No				

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

#54

October 31, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU #14

Enclosed are the results of analyses for samples received by the laboratory on 10/30/13 14:45.

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.

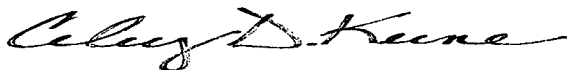
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 10/30/2013
Reported: 10/31/2013
Project Name: NMGS AU #14
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/24/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: VERT 5 @ 3.5' (H302642-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/31/2013	ND	400	100	400	0.00	

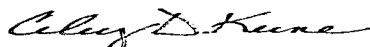
Sample ID: VERT 5 @ 4' (H302642-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/31/2013	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

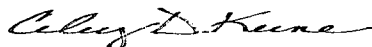
Notes and Definitions

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

RUSH

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

Company Name: <u>Apache</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Bruce Baker</u>				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: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>				Attn:															
Phone #:				Address:															
Project #:				City:															
Project Name:				State: Zip:															
Project Location: <u>NM 65 AU #14</u>				Phone #:															
Sampler Name: <u>Kyle Schnaidt</u>				Fax #:															
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		GRAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV		SAMPLING					
										GROUNDWATER									
										WASTEWATER									
										SOIL									
										OIL									
										SLUDGE									
										OTHER:									
										ACID/BASE:									
										ICE/COOL									
										OTHER:									
										DATE		TIME							
										6-24-13		11:10							
										10-24-15		11:15							

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Relinquished By:	Date:	Received By:	Phone Result:	Yes	No	Add'l Phone #:
<u>Kyle Schnaidt</u>	<u>10-30-13</u>	<u>Adi Henson</u>	Fax Result:	Yes	No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:			
			kschnaidt@rice-ecs.com.			
			Knorman@rice-ecs.com			
			Kjones@riceswd.com; jkamplain@rice-ecs.com			
			hconder@rice-ecs.com; Lweinheimer@rice-ecs.com			
			larrybaker@afchecorp.com			
Delivered By: (Circle One)	Sample Condition	CHECKED BY:				
Sampler - UPS - Bus - Other:	Cool Intact	(Initials)				
	Yes Yes					
	No No					

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

#54

November 01, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU BLK 11 WELL 14

Enclosed are the results of analyses for samples received by the laboratory on 10/31/13 16:20.

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.

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,



Caley D. Keene

Lab Director/Quality Manager

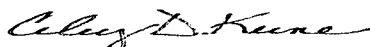
Analytical Results For:APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425Received: 10/31/2013
Reported: 11/01/2013
Project Name: NMGS AU BLK 11 WELL 14
Project Number: NONE GIVEN
Project Location: NOT GIVENSampling Date: 10/31/2013
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson**Sample ID: 5 PT. BOTTOM COMP (H302665-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/01/2013	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

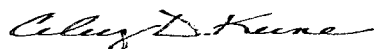
Notes and Definitions

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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Celestine D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

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8 505-393-24
#54



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

January 10, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NMGSAU #14

Enclosed are the results of analyses for samples received by the laboratory on 01/07/14 16:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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/ga/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
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 01/07/2014
Reported: 01/10/2014
Project Name: NMGSAU #14
Project Number: NONE GIVEN
Project Location: T19S R37E

Sampling Date: 01/07/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

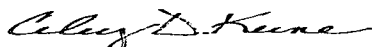
Sample ID: IMPORTED BACKFILL (H400047-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/09/2014	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

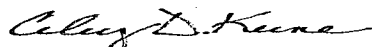
Notes and Definitions

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: <u>Apache</u>		BILL TO		ANALYSIS REQUEST																				
Project Manager: <u>Bruce Baker</u>		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: <u>Larry Baker @ apache corp.com</u>		Company:																						
City: Hobbs State: NM Zip: 88240		Attn:																						
Phone #: Fax #:		Address:																						
Project #: Project Owner:		City:																						
Project Name: <u>NMGS AU well #14</u>		State: Zip:																						
Project Location: <u>T19S R37E</u>		Phone #:																						
Sampler Name: <u>Kyle Humphrey</u>		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										
H400047	1 Imported Backfill	G	1			✓							1-7-14	8:00										

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Relinquished By:	Date: <u>1-7-14</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
<u>Kyle Humphrey</u>	Time: <u>4:07</u>	<u>Jodi Benson</u>	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		email results	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	knorman@rice-ecs.com hconder@rice-ecs.com;	
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	<u>[Signature]</u>	Lweinheimer@rice-ecs.com; kjones@riceswd.com;	
	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>		Lpena@riceswd.com; sedwards@rice-ecs.com	
			agroves@rice-ecs.com	

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

#54

Appendix C

Photo Documentation

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

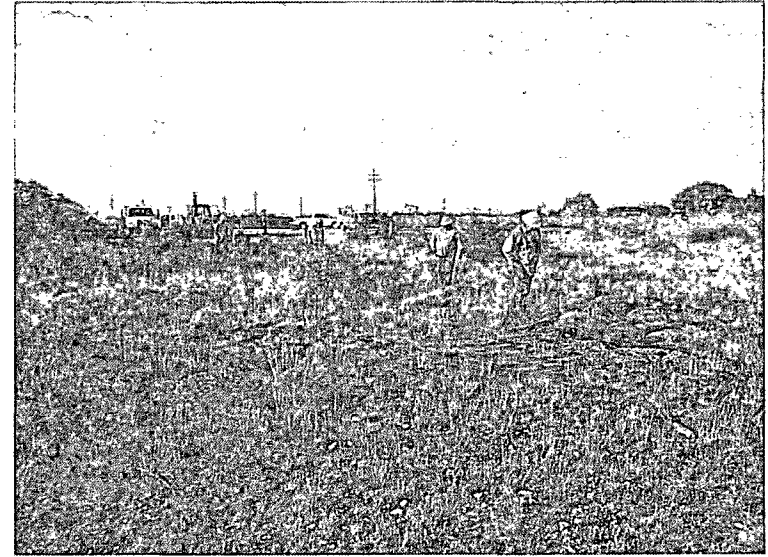
Apache NMGSAU 1114

Unit Letter N, Section 29, T19S, R37E



Source of release

10/8/13



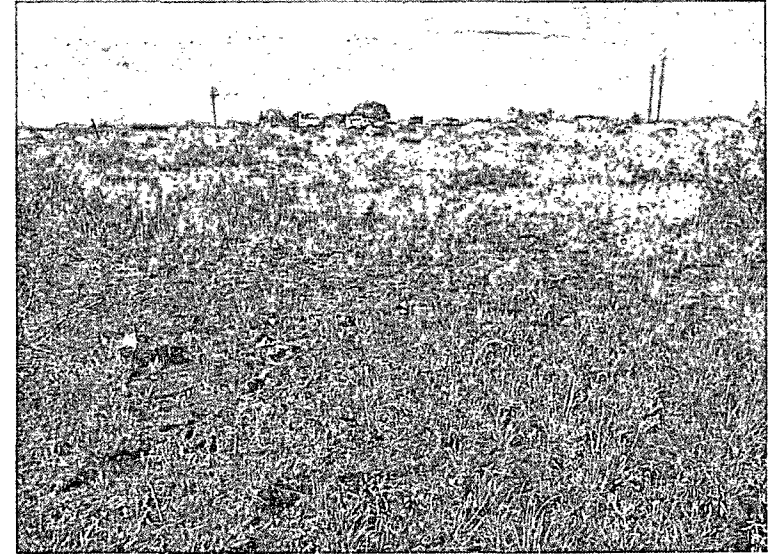
Initial release area, facing southwest

10/8/13



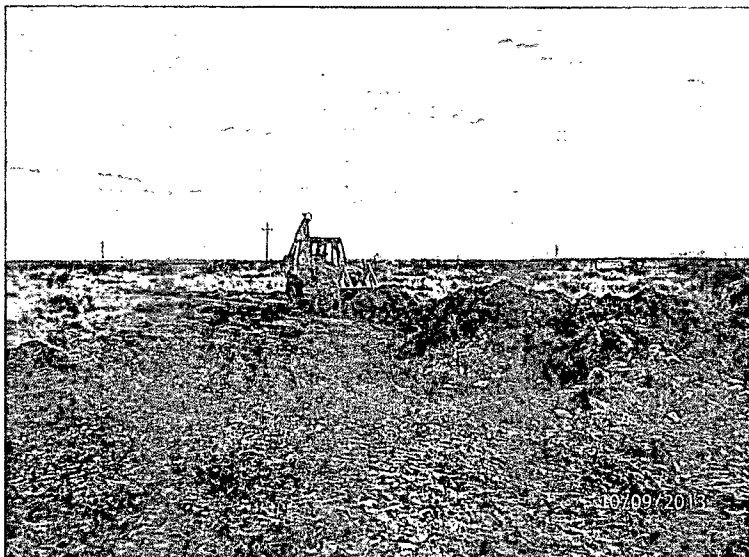
Initial release area, facing northeast

10/8/13



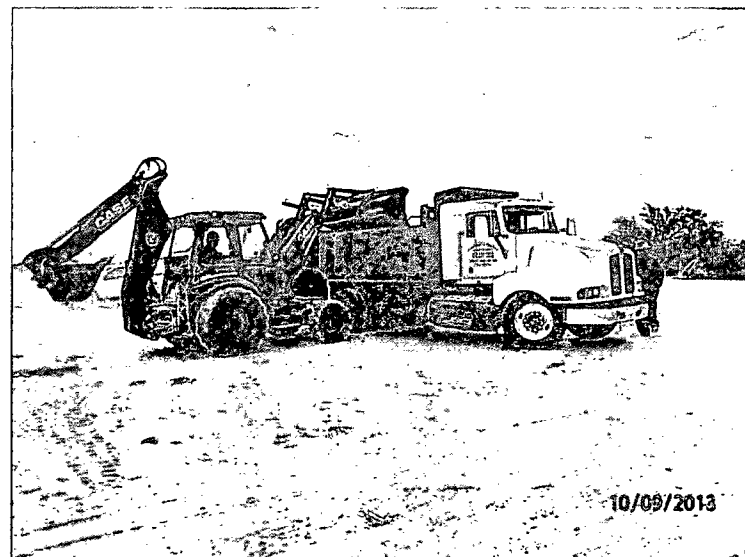
Initial release area, facing west

10/8/13



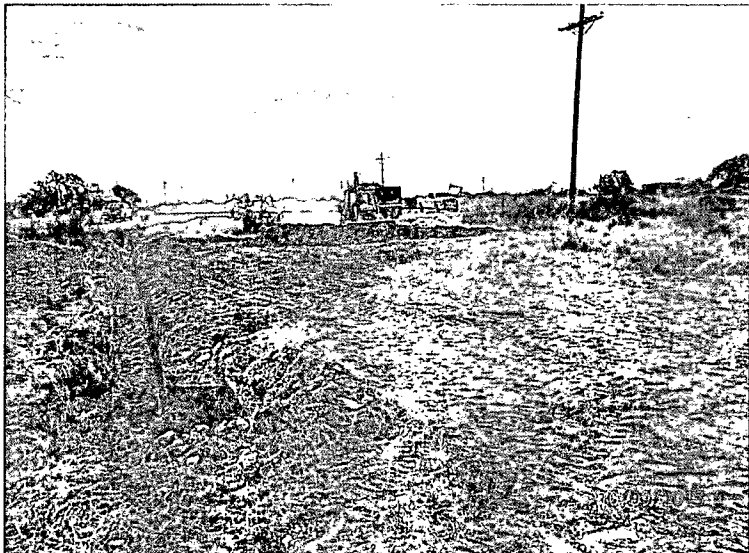
Scraping release area, facing north

10/9/13



Exporting soil, facing south

10/9/13



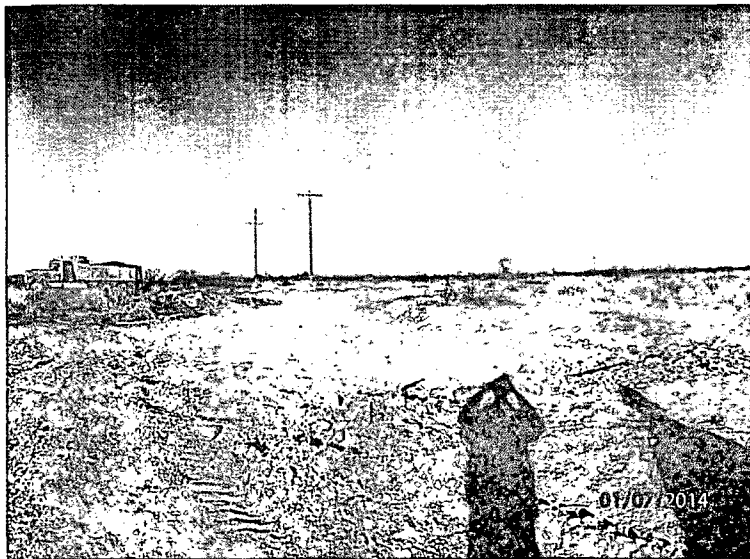
Scraping release, facing south

10/9/13



Installing vertical, facing southeast

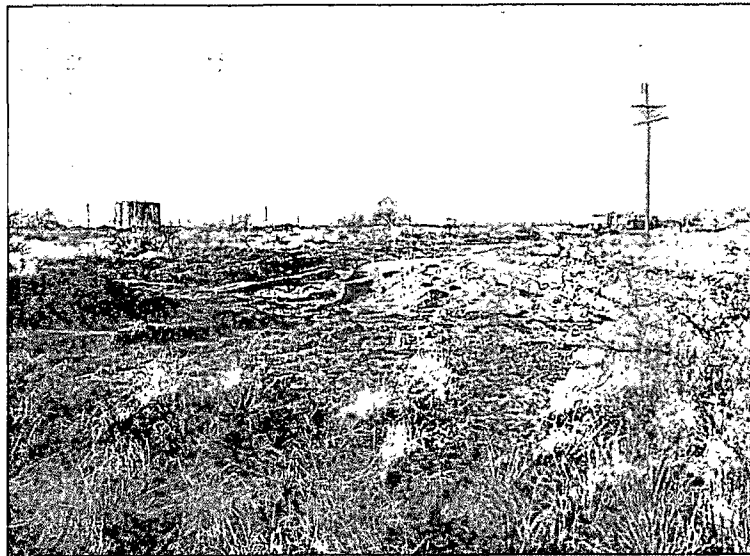
10/24/13



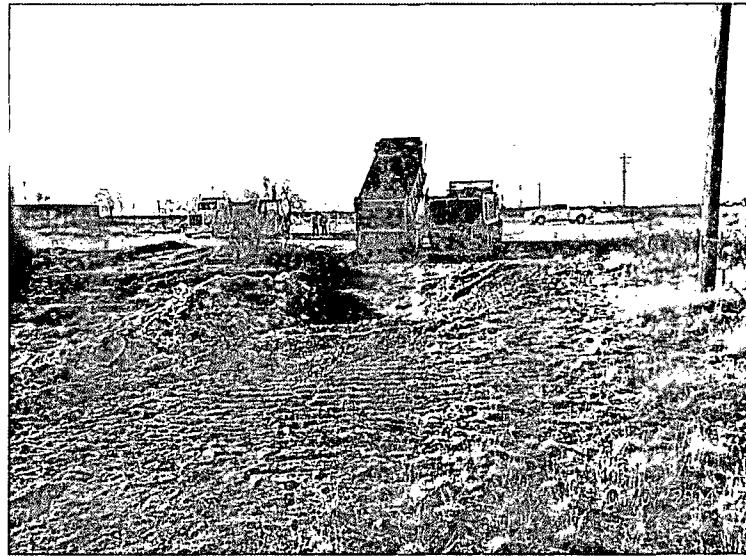
Excavation completed, facing west 1/7/14



Excavation completed, facing northeast 1/7/14



Excavation completed, facing southwest 1/7/14

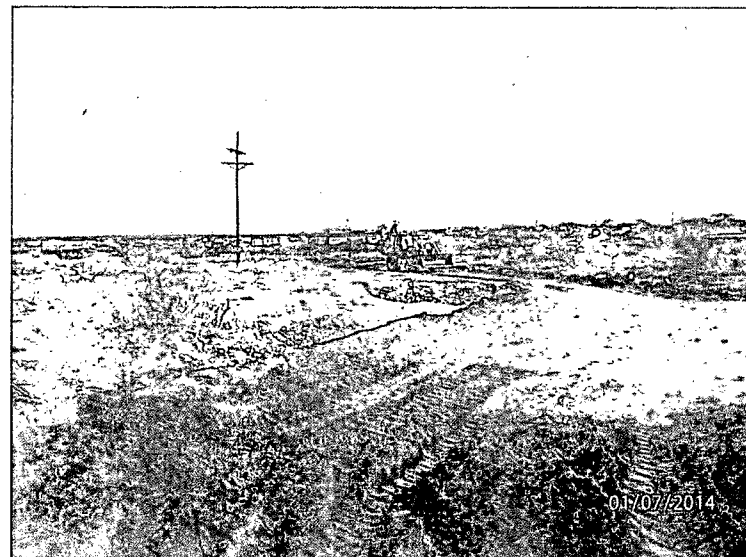


Importing soil for backfill, facing southeast 1/7/14



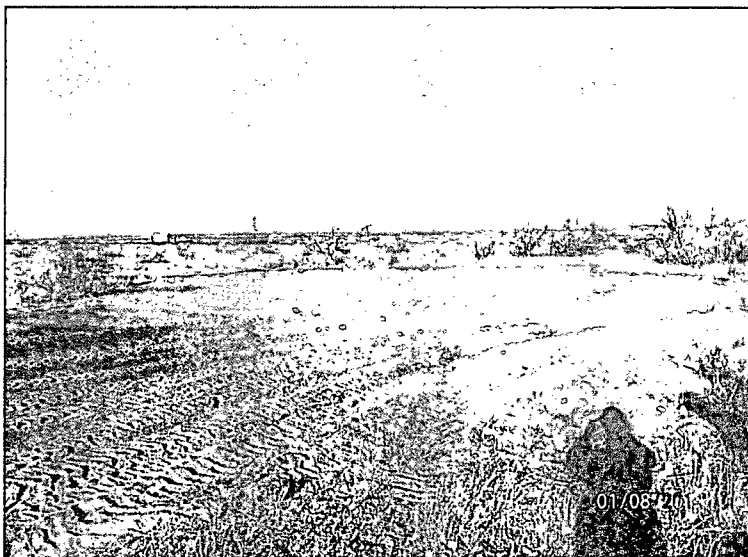
Sampling imported backfill, facing east

1/7/14



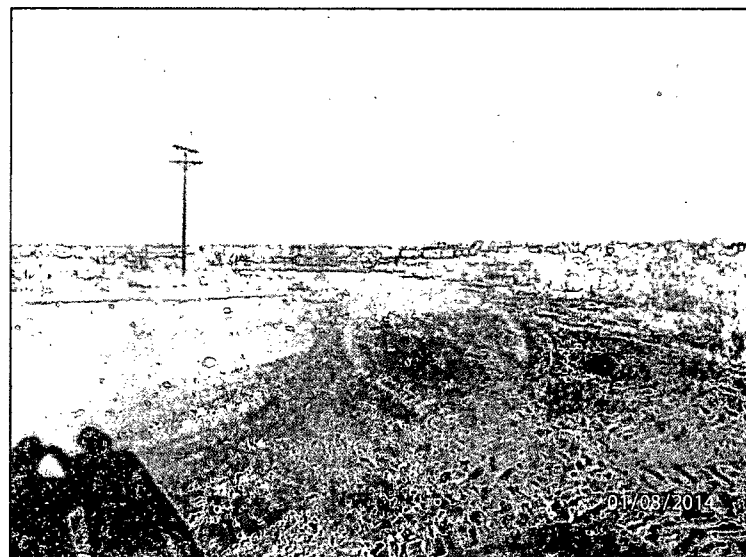
Backfilling site, facing southeast

1/7/14



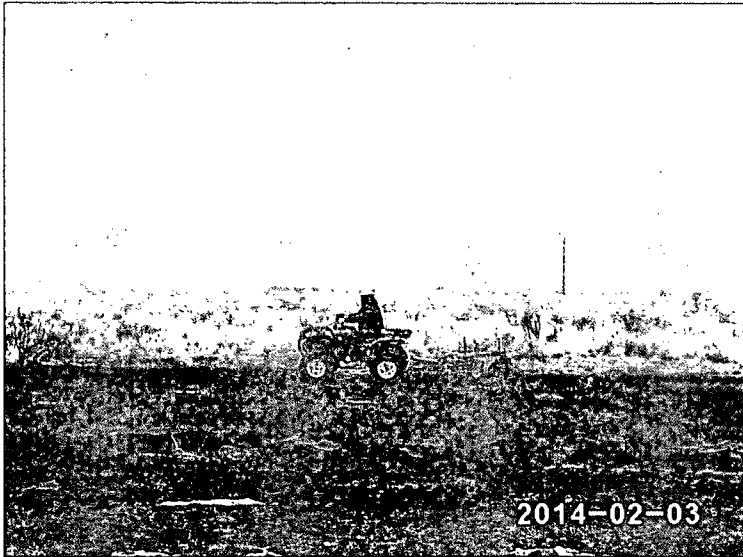
Site completed, facing northeast

1/8/14

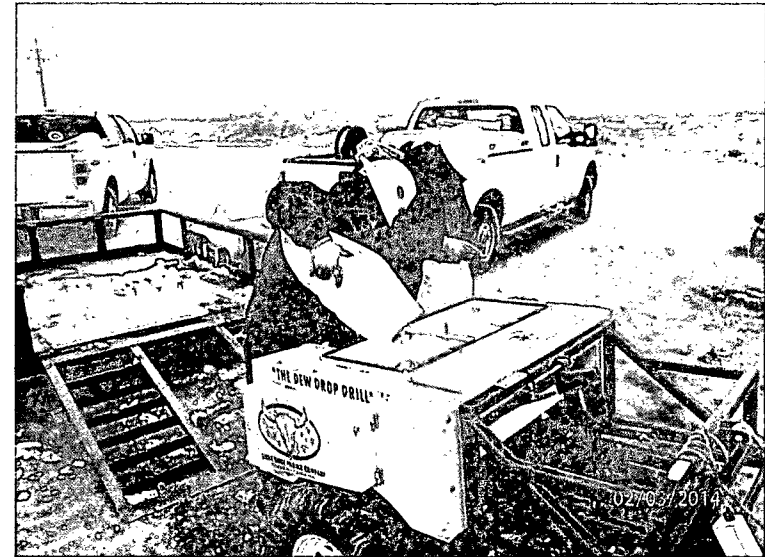


Site completed, facing east

1/8/14



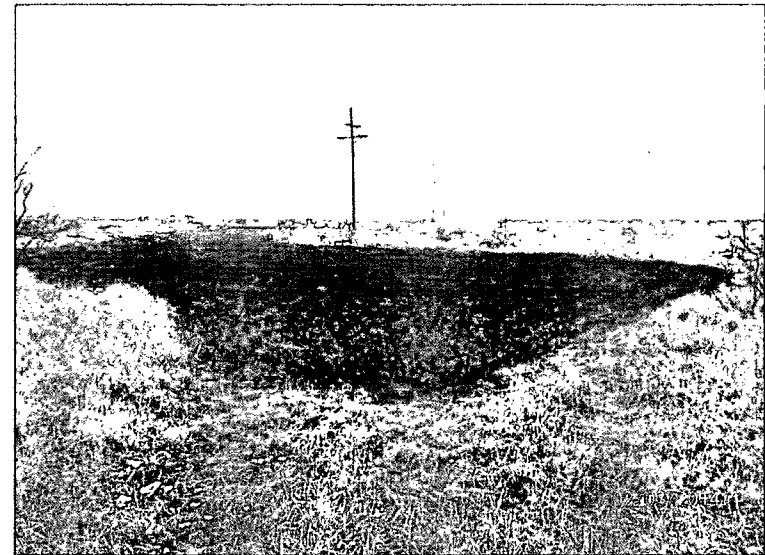
Discing site prior to seeding, facing north 2/3/14



Loading seeder with blue grama, facing southwest 2/3/14



Seeding site, facing northeast 2/3/14



Site completed, facing west 2/3/14

Appendix D

Final 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

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	8 Ellison Lane, Eunice, NM 88231	Telephone No.	(432) 631-6982
Facility Name	NMGSAU 1114	Facility Type	Injection Well
Surface Owner	Betty Long	Mineral Owner	
		API No.	30-025-05726

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	29	19S	37E	600'	FSL	1980'	FWL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	Unknown	Volume Recovered	0
Source of Release	Fiberglass injection line	Date and Hour of Occurrence	10-8-13 at 12:00 a.m.	Date and Hour of Discovery	10-8-13 at 12:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mr. Leking		
By Whom?	Bruce Baker	Date and Hour	10-8-2013 at 11:01 a.m.		
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.*

A split in the fiberglass collar. The line was shut in and the line will be repaired once remediation is complete.

Describe Area Affected and Cleanup Action Taken.* A total of 16,603 square feet of pasture land was affected by the release. On October 8th, 2013, RECS personnel were on site to assess the release. Surface soil samples were taken from six points within the release area and field tested for chlorides and organic vapors. Verticals were installed at the site at 5 points within the release area. The vertical samples were field tested for chlorides and organic vapors and representative samples were taken to a commercial laboratory for analysis. Verticals 1, 3 and 4 returned laboratory chloride readings below regulatory standards at all depths. Vertical 2 returned laboratory chloride readings below regulatory standards at 2 ft bgs and Vertical 5 returned laboratory chloride readings below regulatory standards at 3.5 ft bgs. Gasoline Range Organics (GRO) readings and Diesel Range Organics (DRO) readings returned values of non-detect in all verticals at all depths. Based on the laboratory sampling data, the east side of the release was scraped to a depth of 3.5 ft bgs and the west side of the release was scraped to a depth of 2 ft bgs. The excavated soil was taken to a NMOCD approved facility for disposal. At the base of the scrape, a 5 point bottom composite sample was taken to a commercial laboratory for analysis and returned a chloride result of 160 mg/kg. On November 12th, 2013, Apache asked NMOCD for permission to backfill the site and NMOCD verbally agreed. A total of 1,332 yards of soil was imported to the site to serve as backfill. A sample of the backfill was taken to a commercial laboratory for analysis and returned a chloride result of non-detect. The site was backfilled with the imported material and contoured to the surrounding location. On February 3rd, 2014, the site was seeded with a blend of native vegetation.

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>Bruce Baker</i>	OIL CONSERVATION DIVISION <i>[Signature]</i> Environmental Specialist	
Printed Name: Bruce Baker		
Title: Environmental Technician	Approval Date: 4/03/14	Expiration Date: —
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: —	Attached <input type="checkbox"/>
Date: 2-5-14 Phone: (432) 631-6982	MRP-11-13-2992	

* Attach Additional Sheets If Necessary