

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	PO Box 1849, Eunice, NM 88231	Telephone No.	(432) 631-6982
Facility Name	Seven Rivers Queen #426	Facility Type	

Surface Owner	State	Mineral Owner		Lease No.	30-025-09042
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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	26	22S	36E	1970'	FSL	650'	FEL	Lea

Latitude 32°21'39.7"N Longitude 103°13'46.175"W

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	Unknown	Volume Recovered	0
Source of Release	Line release	Date and Hour of Occurrence	4/1/13	Date and Hour of Discovery	4/1/13
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.* A total of 4,539 sq ft of pad and pasture was affected. On April 1st, 2013, RECS personnel responded to an Apache produced water release. Surface samples were taken throughout the release and field tested for chlorides and hydrocarbons. The samples were then taken to a commercial laboratory for analysis which returned evidence of elevated chlorides and variable GRO and DRO readings. To determine the depth of constituents at the site, four verticals were installed by backhoe. Samples were taken every six inches and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. Based on the analysis of the vertical data, on May 2nd, 2013, NMOCD - District 1 verbally approved installing a 20-mil reinforced poly liner over the most heavily contaminated areas and by scraping the area around Pt. 5 down six inches. The liner would provide a barrier that would inhibit the downward migration of constituents through the vadose zone to groundwater. On May 7th, 2013, excavation for liner installation began at the site. The release area was excavated to 4.5 ft bgs except around Pt. 5 where the surface was scraped down six inches. A total of 992 yards of excavated material was taken to a NMOCD facility for disposal. After the site was excavated down 4.5 ft bgs, a 20-mil reinforced poly liner was installed and properly seated into the excavation. A six inch sand pad was installed over the liner to protect the liner from punctures. Clean, imported caliche was used to backfill the site to two ft bgs and the remainder of the excavation was backfilled with clean, imported topsoil. The area around Pt. 5 was backfilled with six inches of clean, imported topsoil. A total of 996 yards of clean caliche and topsoil were imported to the site to serve as backfill.

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

Signature: <u>Bruce Baker</u>	<div>Oil Conservation Division</div> <div>APPROVED</div> <div><u>02/08/16</u></div> <div>Conditions of Approval:</div> <div>Attached <input type="checkbox"/> <u>1RP 4159</u></div>
Printed Name: Bruce Baker	
Title: Environmental Tech	
E-mail Address: larry.baker@apachecorp.com	
Date: <u>8-30-13</u> Phone: (432) 631-6982	

* Attach Additional Sheets If Necessary



EXPLORING WHAT'S POSSIBLE

HOBBS OCD

FEB 06 2014

RECEIVED

APACHE CORPORATION

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

Seven Rivers Queen #426

Closure Report

API 30-025-09042

Release Date: April 1st, 2013

Unit Letter I, Section 26, Township 22S, Range 36E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

June 27th, 2013

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 – Seven Rivers Queen #426

UL/I sec. 26 T22S R36E

API No. 30-025-09042

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 6.5 miles southwest of Eunice, New Mexico at UL/I sec. 26 T22S R37E. NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 180 +/- feet.

On April 1st, 2013, RECS personnel responded to an Apache produced water release. Surface samples were taken throughout the release and field tested for chlorides and hydrocarbons (Figure 1). The samples were then taken to a commercial laboratory for analysis which returned evidence of elevated chlorides and variable GRO and DRO readings (Appendix A). To determine the depth of constituents at the site, four verticals were installed by backhoe (Figure 2). Samples were taken every six inches and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis of chlorides and hydrocarbons (Appendix B). Pt. 2 Vertical was dug to a depth of 12 ft bgs and the bottom two samples returned chloride results of 176 mg/kg and GRO and DRO readings of non-detect. Pt. 3 Vertical was dug to 14 ft bgs and the laboratory chloride reading returned a result of 272 mg/kg with GRO and DRO readings of non-detect. Pt. 4 Vertical was dug to 14 ft bgs and the laboratory chloride reading returned a result of 96 mg/kg with GRO and DRO readings of non-detect. Pt. 5 Vertical was dug to 1 ft and both the six inch and 1 ft samples were taken to a commercial laboratory for analysis. The six inch sample returned a laboratory chloride result of 160 mg/kg and the 1 ft sample returned a chloride result of 144 mg/kg. The GRO readings in both samples returned results of non-detect. The DRO reading in the six inch sample returned a result of 116 mg/kg and in the 1 ft sample of 197 mg/kg.

Based on the analysis of the vertical data, on May 2nd, 2013, NMOCD – District 1 verbally approved installing a 20-mil reinforced poly liner over the most heavily

contaminated areas and by scraping the area around Pt. 5 down six inches (Figure 3). The liner would provide a barrier that would inhibit the downward migration of constituents through the vadose zone to groundwater.

On May 7th, 2013, excavation for liner installation began at the site (Figure 4). The release area was excavated to 4.5 ft bgs except around Pt. 5 where the surface was scraped down six inches. A total of 992 yards of excavated material was taken to a NMOCD facility for disposal. After the site was excavated down 4.5 ft bgs, a 20-mil reinforced poly liner was installed and properly seated into the excavation. A six inch sand pad was installed over the liner to protect the liner from punctures. Clean, imported caliche was used to backfill the site to two ft bgs and the remainder of the excavation was backfilled with clean, imported topsoil. The area around Pt. 5 was backfilled with six inches of clean, imported topsoil. A total of 996 yards of clean caliche and topsoil were imported to the site to serve as backfill. Photo documentation of these activities can be found in Appendix C.

Given that there is an installed a 20-mil poly liner throughout the most heavily contaminated portions of the release and the remainder of the release has been scraped to six inches bgs, RECS on behalf of Apache respectfully requests 'remediation termination' or similar closure status of this regulatory file. A final C-141 is provided in Appendix D.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 631-6432 or me if you have any questions or wish to discuss the site.

Sincerely,

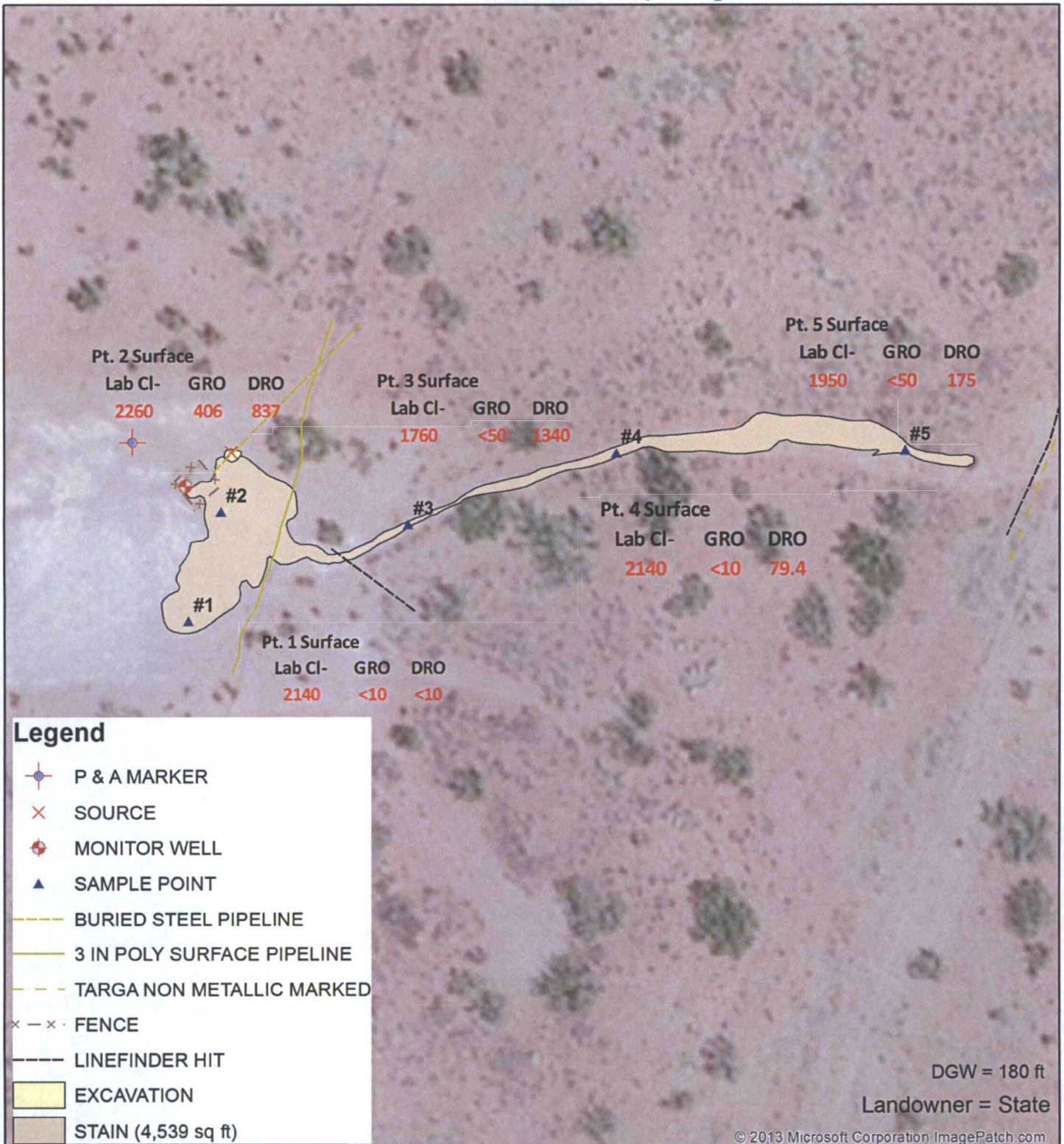


Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

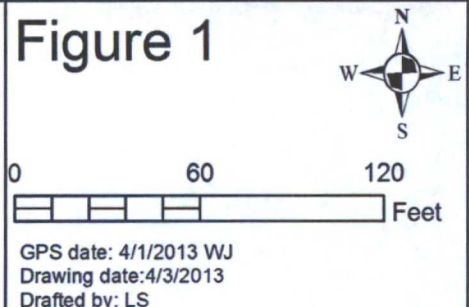
- Figure 1 – Initial Lab Sampling
- Figure 2 – Vertical Sampling
- Figure 3 – NMOCD Approved Liner
- Figure 4 – Excavations
- Appendix A – Initial Laboratory Sampling
- Appendix B – Vertical Laboratory Sampling
- Appendix C – Photo Documentation
- Appendix D – Final C-141

Initial Lab Sampling



**APACHE
SEVEN RIVERS
QUEEN #426**
LEGALS: UL/I SEC 26
T22S-R36E
LEA COUNTY, NM

Figure 1



Vertical Sampling

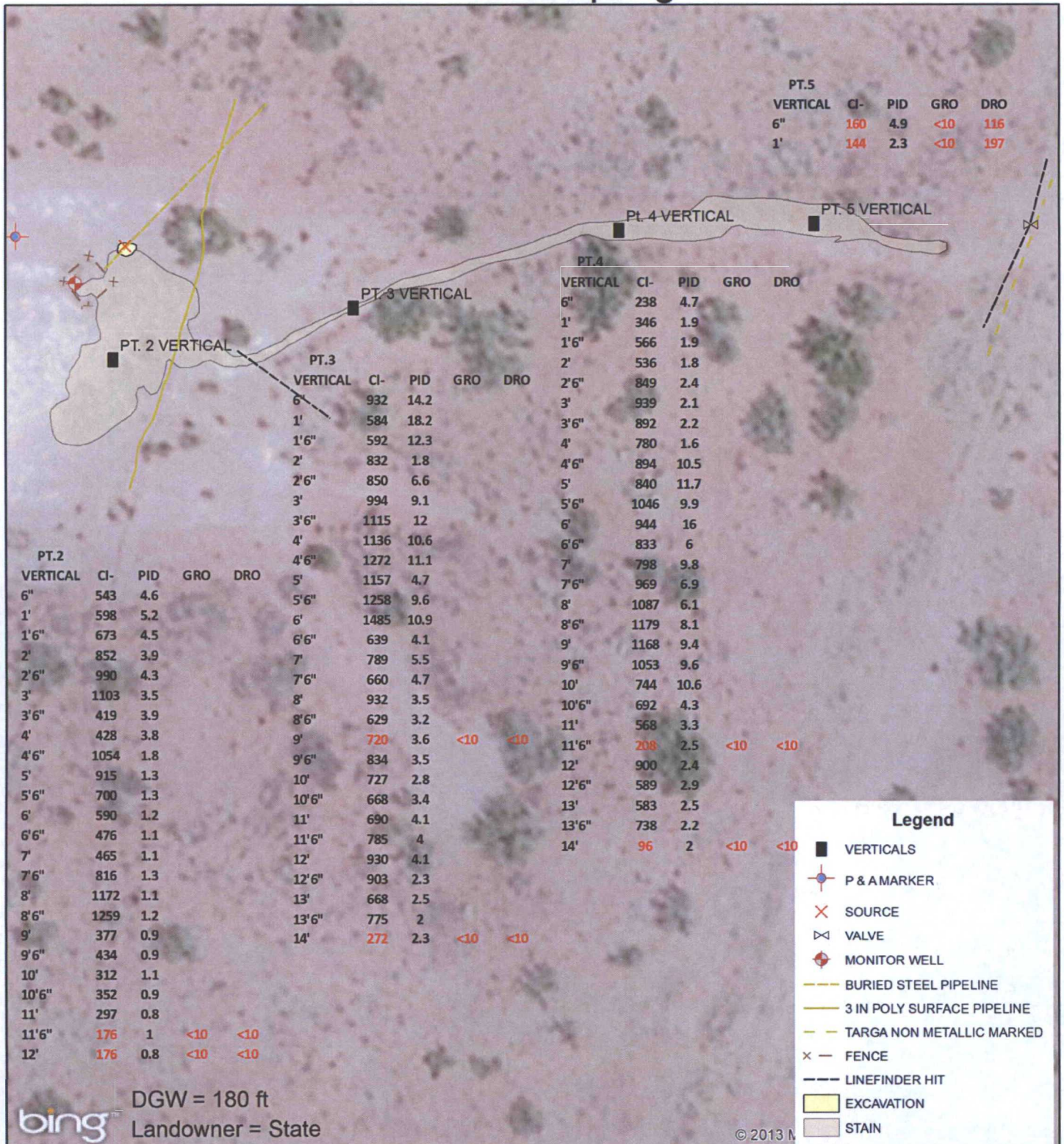


Figure 2

0 25 50
Feet

GPS date: 4/1/2013 WJ,
4/2/2013 TG, 4/17/13 EC
Drawing date: 4/30/2013
Drafted by: T. Grieco, LS



**APACHE
SEVEN RIVERS
QUEEN #426 AD**
UL I SECTION 26
T-22-S R-36-E
LEA COUNTY, NM

NMOCD Approved Liner



**APACHE
SEVEN RIVERS
QUEEN #426 AD**
UL I SECTION 26
T-22-S R-36-E
LEA COUNTY, NM

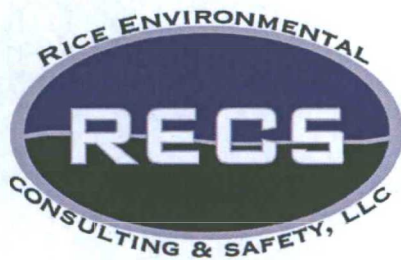
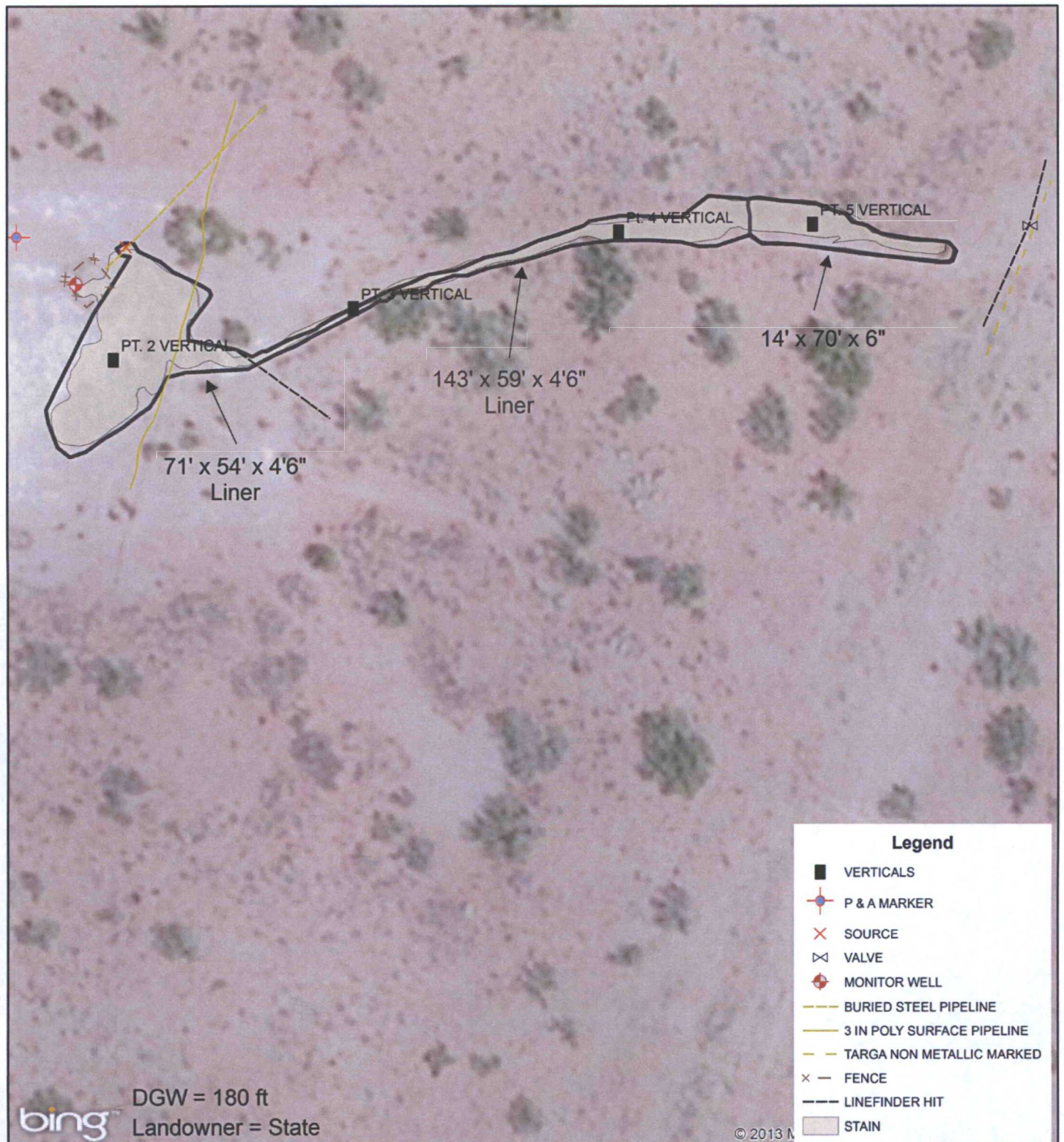
Figure 3

0 25 50
Feet



GPS date: 4/1/2013 WJ,
4/2/2013 TG, 4/17/13 EC
Drawing date: 5/1/13
Drafted by: L. Weinheimer

Excavations



**APACHE
SEVEN RIVERS
QUEEN #426 AD**
UL I SECTION 26
T-22-S R-36-E
LEA COUNTY, NM

Figure 4

0 25 50
Feet



GPS date: 4/1/2013 WJ,
4/2/2013 TG, 4/17/13 EC
Drawing date: 4/30/2013
Drafted by: T. Grieco, LS



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

April 05, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: SEVEN RIVERS QUEEN #426

Enclosed are the results of analyses for samples received by the laboratory on 04/03/13 8:50.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" being more prominent.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 04/03/2013
 Reported: 04/05/2013
 Project Name: SEVEN RIVERS QUEEN #426
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/01/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 1 (H300781-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2140	16.0	04/03/2013	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	04/03/2013	ND	189	94.6	200	0.711	
DRO >C10-C28	<10.0	10.0	04/03/2013	ND	188	93.9	200	0.621	
Surrogate: 1-Chlorooctane		94.0 %	65.2-140						
Surrogate: 1-Chlorooctadecane		112 %	63.6-154						

Sample ID: POINT 2 (H300781-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2260	16.0	04/03/2013	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	406	50.0	04/03/2013	ND	189	94.6	200	0.711	
DRO >C10-C28	837	50.0	04/03/2013	ND	188	93.9	200	0.621	
Surrogate: 1-Chlorooctane		97.4 %	65.2-140						
Surrogate: 1-Chlorooctadecane		120 %	63.6-154						

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

 Received: 04/03/2013
 Reported: 04/05/2013
 Project Name: SEVEN RIVERS QUEEN #426
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/01/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 3 (H300781-03)

Chloride, SM4500CI-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	04/03/2013	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	<50.0	50.0	04/03/2013	ND	189	94.6	200	0.711	
DRO >C10-C28	1340	50.0	04/03/2013	ND	188	93.9	200	0.621	

Surrogate: 1-Chlorooctane 91.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 144 % 63.6-154

Sample ID: POINT 4 (H300781-04)

Chloride, SM4500CI-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2140	16.0	04/03/2013	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	04/04/2013	ND	189	94.6	200	0.711	
DRO >C10-C28	79.4	10.0	04/04/2013	ND	188	93.9	200	0.621	


Surrogate: 1-Chlorooctane 94.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 04/03/2013
 Reported: 04/05/2013
 Project Name: SEVEN RIVERS QUEEN #426
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/01/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 5 (H300781-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1950	16.0	04/03/2013	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	04/04/2013	ND	189	94.6	200	0.711		
DRO >C10-C28	175	50.0	04/04/2013	ND	188	93.9	200	0.621		
Surrogate: 1-Chlorooctane		49.2 %	65.2-140							
Surrogate: 1-Chlorooctadecane		119 %	63.6-154							

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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

Company Name: Apache Corp. Project Manager:		P.O. #: Company:		ANALYSIS REQUEST					
Address: City: State: Zip:		Attn: Address:							
Phone #: Project #:		City: State: Zip:							
Project Name:		Phone #:							
Project Location: <i>Seven Rivers Over # 4726</i>		Fax #:							
Sampler Name: <i>Willie Jenkins</i>									

FOR LAB USE ONLY	Lab I.D.	Sample I.D.	MATRIX					PRESERV			SAMPLING		DATE	TIME
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:			
	47200781												4-1-13	2:40
	1 Point 1													
	2 Point 2													
	3 Point 3													
	4 Point 4													
	5 Point 5													

Relinquished By: <i>[Signature]</i>		Received By: <i>Jodi Benson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Relinquished By: <i>[Signature]</i>		Received By: <i>[Signature]</i>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
REMARKS: email results Zcorder@rice-ecs.com; Bbaker@rice-ecs.com; hcorder@rice-ecs.com; Lweinheimer@rice-ecs.com							

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 that be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable services. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of data, 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.

+ Cardinal cannot accept verbal changes. Please fax written changes to 505-393-62476



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

April 24, 2013

STEVEN FLEMING

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: SEVEN RIVERS QUEEN #426

Enclosed are the results of analyses for samples received by the laboratory on 04/19/13 16:00.

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
 STEVEN FLEMING
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

 Received: 04/19/2013
 Reported: 04/24/2013
 Project Name: SEVEN RIVERS QUEEN #426
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/18/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PT. 2 VERT @ 11.5' (H300935-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	04/22/2013	ND	432	108	400	3.77		
TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/22/2013	ND	217	109	200	1.23		
DRO >C10-C28	<10.0	10.0	04/22/2013	ND	211	106	200	0.242		
Surrogate: 1-Chlorooctane	78.3 %	65.2-140								
Surrogate: 1-Chlorooctadecane	80.6 %	63.6-154								

Sample ID: PT. 2 VERT @ 12' (H300935-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	04/22/2013	ND	432	108	400	3.77		
TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/22/2013	ND	217	109	200	1.23		
DRO >C10-C28	<10.0	10.0	04/22/2013	ND	211	106	200	0.242		
Surrogate: 1-Chlorooctane	72.3 %	65.2-140								
Surrogate: 1-Chlorooctadecane	97.9 %	63.6-154								

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 04/19/2013
 Reported: 04/24/2013
 Project Name: SEVEN RIVERS QUEEN #426
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/18/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PT. 5 VERT @ 6' (H300935-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/22/2013	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2013	ND	217	109	200	1.23	
DRO >C10-C28	116	10.0	04/22/2013	ND	211	106	200	0.242	
Surrogate: 1-Chlorooctane		74.0 %	65.2-140						
Surrogate: 1-Chlorooctadecane		120 %	63.6-154						

Sample ID: PT. 5 VERT @ 1' (H300935-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/22/2013	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2013	ND	217	109	200	1.23	
DRO >C10-C28	197	10.0	04/22/2013	ND	211	106	200	0.242	
Surrogate: 1-Chlorooctane		66.5 %	65.2-140						
Surrogate: 1-Chlorooctadecane		114 %	63.6-154						

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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

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

[illegible]

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

#54



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

April 29, 2013

STEVEN FLEMING

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: SEVEN RIVERS QUEEN #426

Enclosed are the results of analyses for samples received by the laboratory on 04/24/13 8:25.

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,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is fluid and cursive, with the first name "Coley" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 04/24/2013
Reported: 04/29/2013
Project Name: SEVEN RIVERS QUEEN #426
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 04/18/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 3 VERT @ 9' (H300962-01)

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	04/26/2013	ND	432	108	400	3.77		
TPH 8015M			mg/kg Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/25/2013	ND	221	110	200	0.0421		
DRO >C10-C28	<10.0	10.0	04/25/2013	ND	215	107	200	0.553		
Surrogate: 1-Chlorooctane	103 %	65.2-140								
Surrogate: 1-Chlorooctadecane	107 %	63.6-154								

Sample ID: PT. 3 VERT @ 14' (H300962-02)

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	04/26/2013	ND	432	108	400	3.77		
TPH 8015M			mg/kg Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/25/2013	ND	221	110	200	0.0421		
DRO >C10-C28	<10.0	10.0	04/25/2013	ND	215	107	200	0.553		
Surrogate: 1-Chlorooctane	103 %	65.2-140								
Surrogate: 1-Chlorooctadecane	105 %	63.6-154								

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 04/24/2013
Reported: 04/29/2013
Project Name: SEVEN RIVERS QUEEN #426
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 04/18/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 4 VERT @ 11.5' (H300962-03)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/26/2013	ND	432	108	400	3.77	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/25/2013	ND	221	110	200	0.0421	
DRO >C10-C28	<10.0	10.0	04/25/2013	ND	215	107	200	0.553	
Surrogate: 1-Chlorooctane	102 %	65.2-140							
Surrogate: 1-Chlorooctadecane	104 %	63.6-154							

Sample ID: PT. 4 VERT @ 14' (H300962-04)

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	04/26/2013	ND	432	108	400	3.77	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/25/2013	ND	221	110	200	0.0421	
DRO >C10-C28	<10.0	10.0	04/25/2013	ND	215	107	200	0.553	
Surrogate: 1-Chlorooctane	102 %	65.2-140							
Surrogate: 1-Chlorooctadecane	103 %	63.6-154							

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Celey D. Keene, Lab Director/Quality Manager


Notes and Definitions

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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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Celest D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

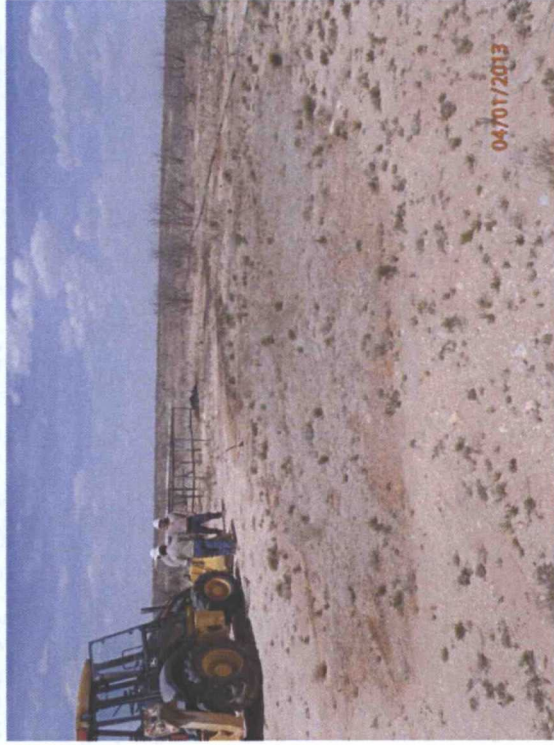
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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Company Name: Apache Corp.		P.O. #:		ANALYSIS REQUEST																																			
Project Manager: Steve Henss		Company:																																					
Address:		Attn:																																					
City:		Address:																																					
Phone #:		City:																																					
Project #:		State:																																					
Project Name:		Zip:																																					
Project Location: 7 Rivers Queen H426		Phone #:																																					
Sampler Name: JKAMPLAIN		Fax #:																																					
FOR LAB USE ONLY		MATRIX		PRESERV.		SAMPLING																																	
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME		Chlorides		TPH 8015 M		BTX		Texas TPH		Complete Cations/Anions		TDS	
H300962		1 PT 3 vert @ 9'		9 1		1		1		1		1		1		1		1		1		1		4-18-13		7:10		1											
		2 PT 3 vert @ 14'		9 1		1		1		1		1		1		1		1		1		1		2:05		1													
		3 PT 4 vert @ 11.5'		9 1		1		1		1		1		1		1		1		1		1		2:10		1													
		4 PT 4 vert @ 14'		9 1		1		1		1		1		1		1		1		1		1		2:15		1													

Apache Seven Rivers Queen #426

Unit Letter I, Section 26, T22S, R36E



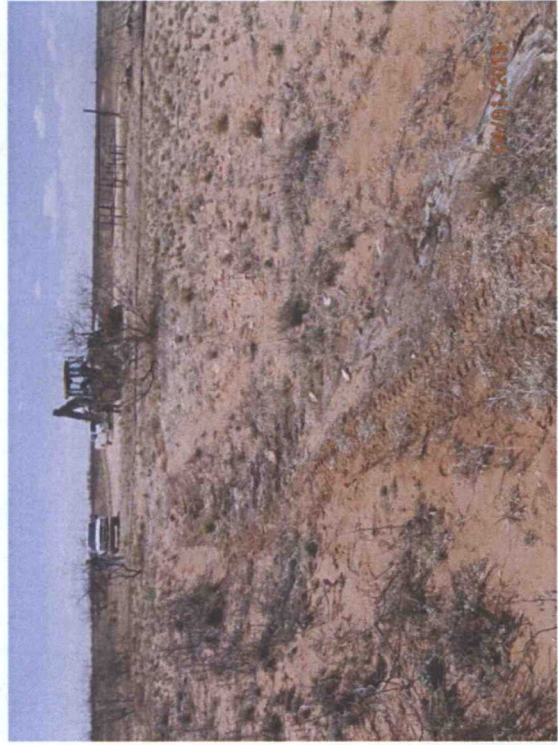
Initial release area, facing north

4/1/13



Initial release area, facing southeast

4/1/13



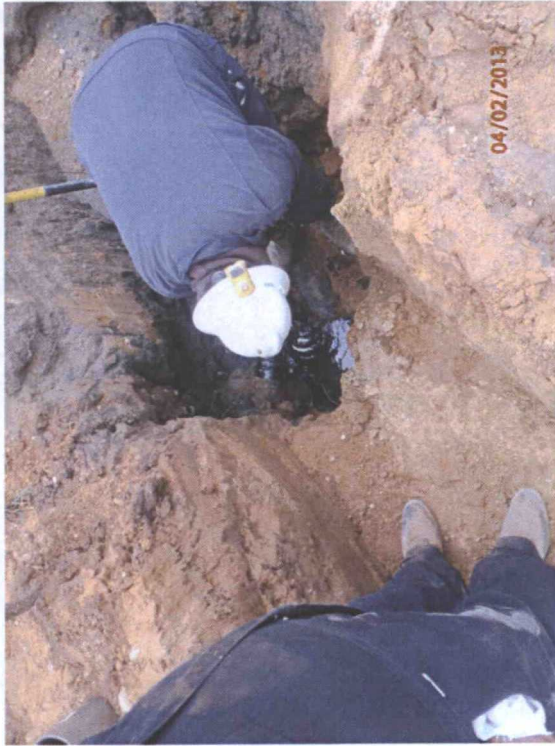
Initial release area, facing southwest

4/1/13



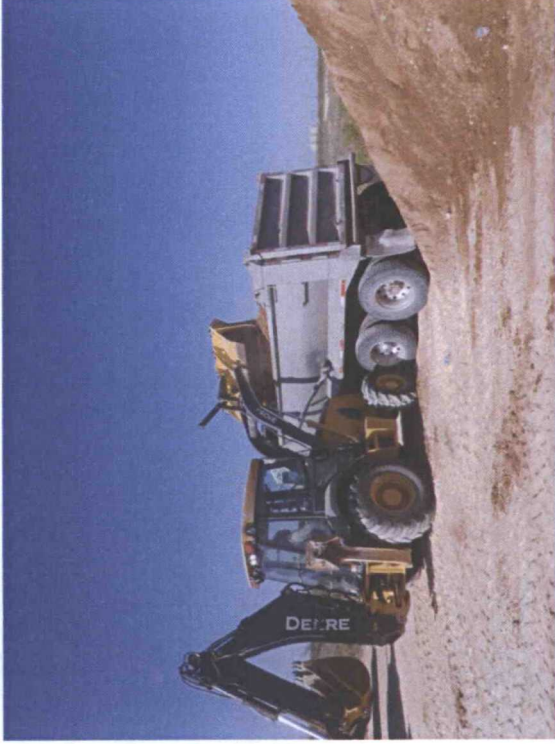
Spotting lines, facing northeast

4/2/13



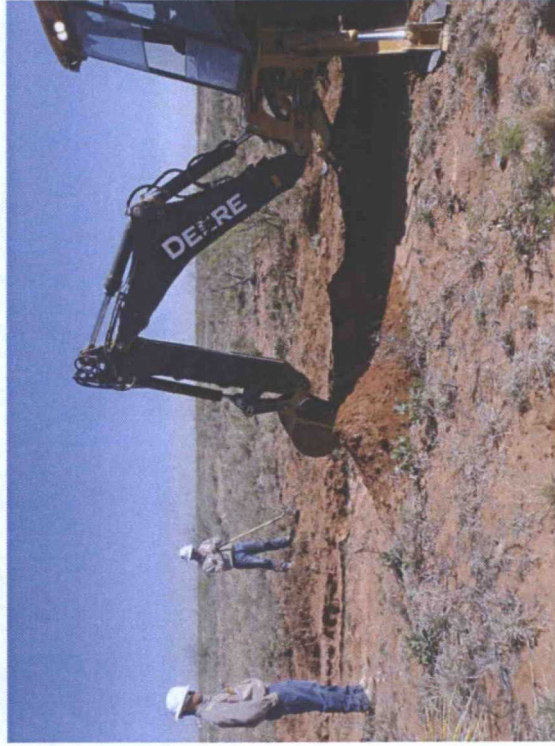
Repairing line, facing northeast

4/2/13



Exporting soil, facing west

4/17/13



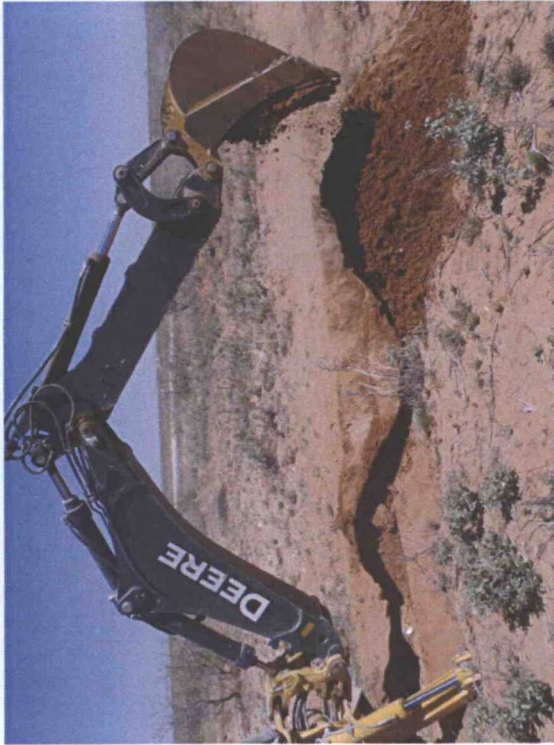
Digging Pt. 5 vertical, facing north

4/17/13



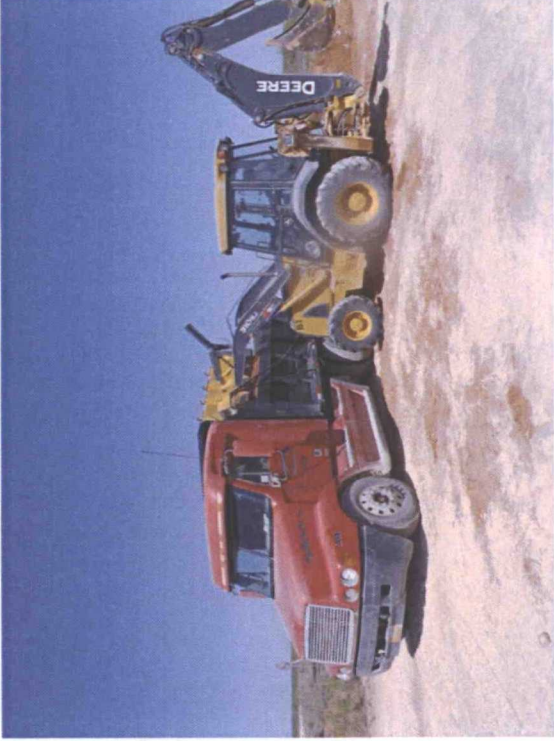
Digging Pt. 4 vertical, facing west

4/17/13



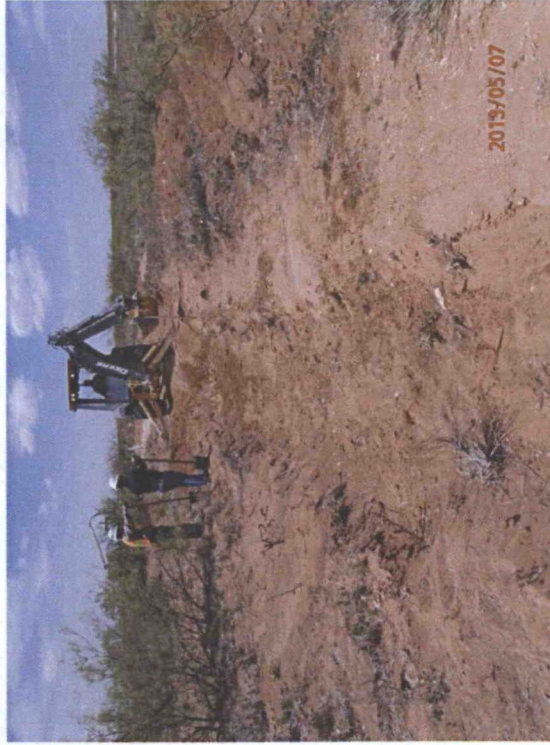
Digging Pt. 3 vertical, facing north

4/17/13



Exporting soil, facing west

4/19/13



Scraping 6" at Pt. 5 to Pt. 4, facing west

5/7/13



Excavating for liner installation, facing west

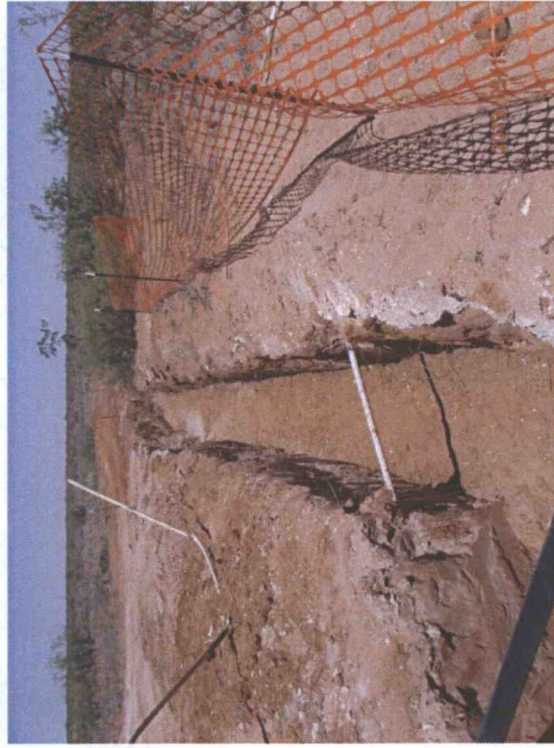
5/8/13



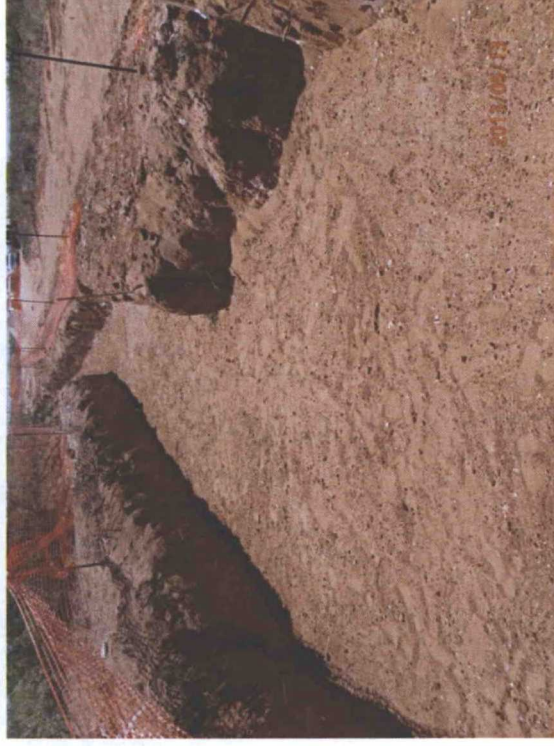
Excavation completed at Pt. 1, facing south 5/13/13



Excavation completed at Pt. 2, facing north 5/13/13



Excavation completed at Pt. 3, facing east 5/13/13

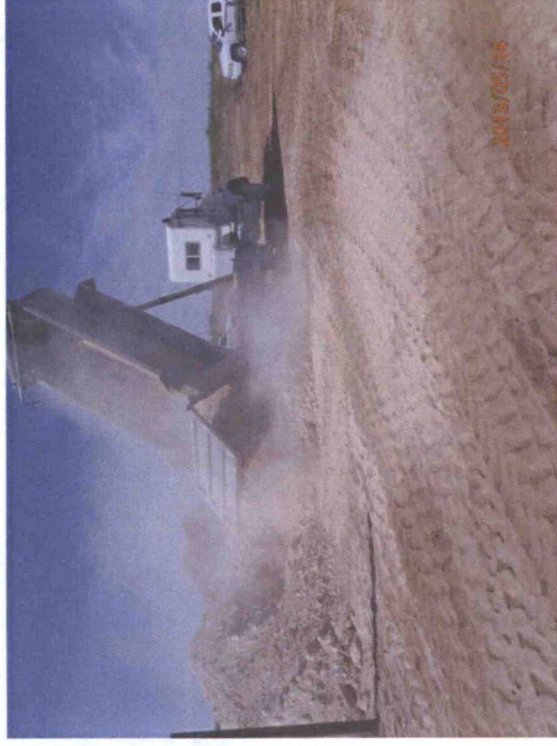


Excavation completed at Pt. 4, facing west 5/13/13



Installing liner, facing east

5/14/13



Importing caliche, facing southwest

5/14/13



Liner installation completed, facing north

5/14/13



Installing 6 inch sand pad, facing east

5/14/13



Road maintenance, facing north

5/15/13



6 inch sand pad completed, facing east

5/15/13



Backfilling the site with caliche, facing east

5/15/13



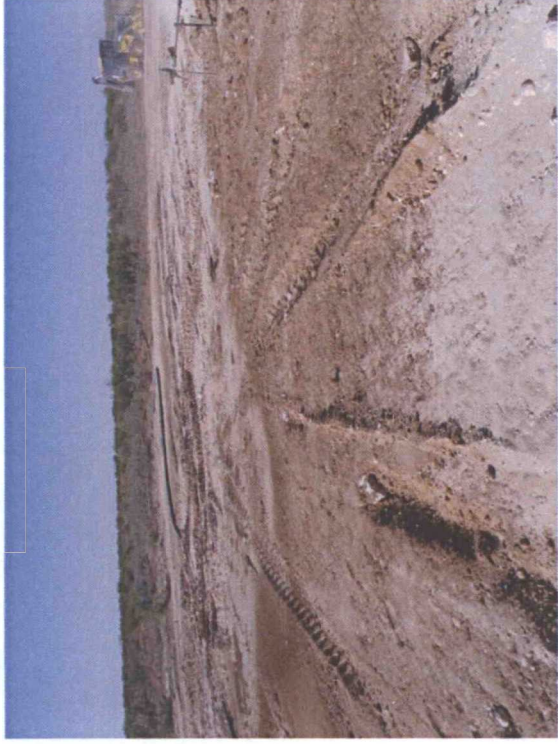
Backfilling the site with topsoil, facing east

5/16/13



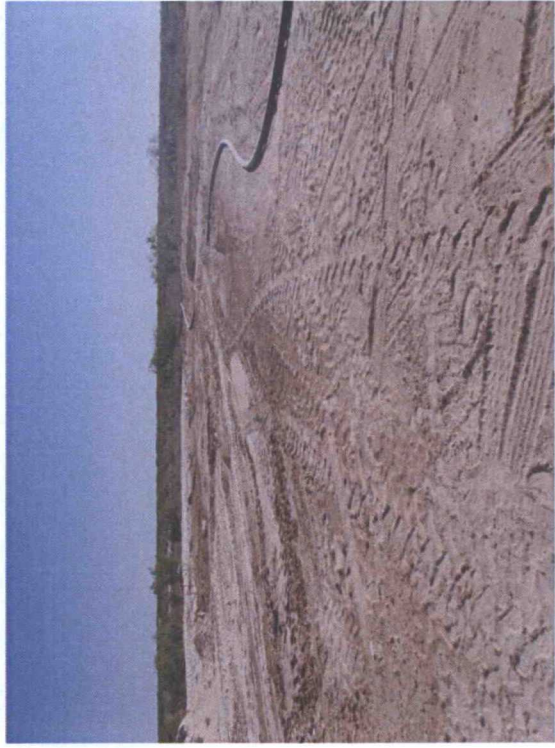
Importing topsoil, facing southwest

5/16/13



Pt. 1 zone completed, facing south

5/17/13



Pt. 2 zone completed, facing north

5/17/13



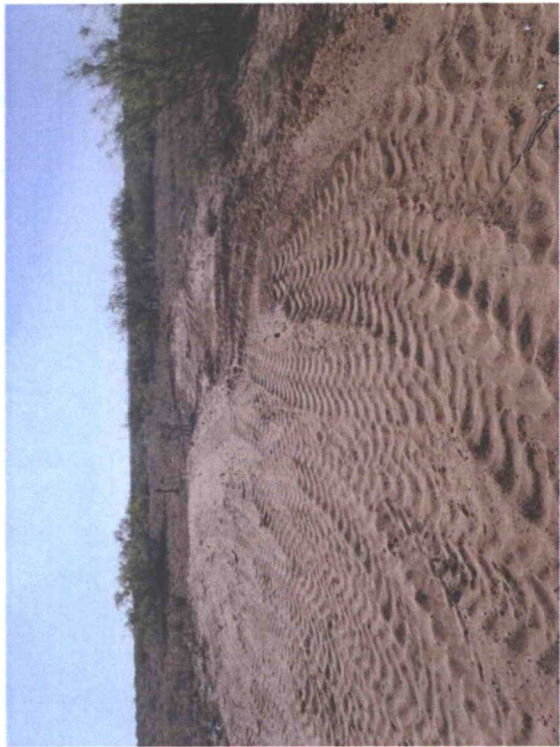
Pt. 3 zone completed, facing east

5/17/13



Pt. 4 zone completed, facing east

5/17/13



Pt. 5 zone completed, facing east

5/17/13