

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

NAB1435357240 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company Apache Corporation <u>873</u>	Contact Bruce Baker
Address 2350 W Marland Blvd Hobbs NM 88240	Telephone No. (432) 631-6982
Facility Name Crow Federal 35H	Facility Type well

Surface Owner BLM	Mineral Owner	API No. 30-015-42140
-------------------	---------------	----------------------

LOCATION OF RELEASE

Unit Letter M	Section 3	Township 17S	Range 31E	Feet from the 930'	North/South Line FSL	Feet from the 557'	East/West Line FWL	County Eddy
------------------	--------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	----------------

Latitude 32.858878 Longitude 103.864409

NATURE OF RELEASE

Type of Release Oil	Volume of Release 200 barrels of oil	Volume Recovered 180 barrels of oil
Source of Release Frac Tank	Date and Hour of Occurrence 12/14/2014	Date and Hour of Discovery 12/14/2014 at 10:06 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher NMOCD and Jeffery Robertson BLM via email	
By Whom? Bruce Baker	Date and Hour 12-14-2014 at 9:27 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION

If a Watercourse was Impacted, Describe Fully.\*

ARTESIA DISTRICT

DEC 19 2014

Describe Cause of Problem and Remedial Action Taken.\*

RECEIVED

A frac tank overflowed being utilized in conjunction with tester. Well was taken out of test and vacuum trucks were dispatched to pick up standing fluid.

Describe Area Affected and Cleanup Action Taken.\*

The release area was on lease pad and approximately 1500 square feet of pasture south of the lease pad. The area was mapped and surface samples were collected.

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.

OIL CONSERVATION DIVISION

Signature: <u>Bruce Baker</u>	Approved by Environmental Specialist: <u>[Signature]</u>	
Printed Name: Bruce Baker	Approval Date: <u>12/19/14</u>	Expiration Date: <u>N/A</u>
Title: Environmental Technician	Conditions of Approval:	
E-mail Address: <u>larry.baker@apachecorp.com</u>	Attached <input type="checkbox"/>	
Date: 12/19/2014 Phone: (432) 631-6982	Remediation per O.C.D. Rules & Guidelines	

SUBMIT REMEDIATION PROPOSAL NO  
LATER THAN: 1/14/15

2RP-2677

\* Attach Additional Sheets If Necessary



Sampling Data

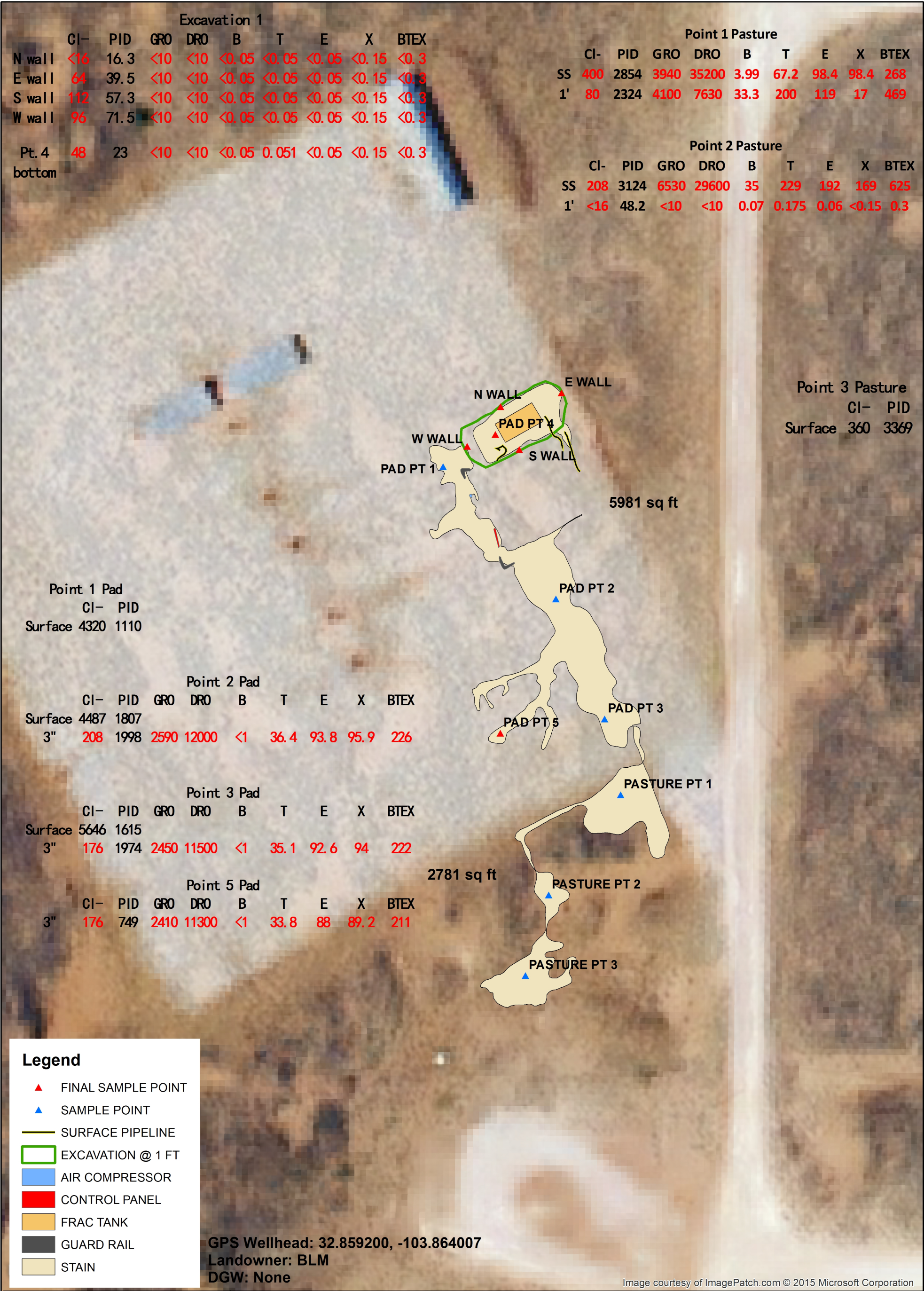


Image courtesy of ImagePatch.com © 2015 Microsoft Corporation





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

---

February 05, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CROW FED #35

Enclosed are the results of analyses for samples received by the laboratory on 02/04/15 11:45.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/05/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/03/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: PAD PT. 4 @ 1' (H500314-01)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	0.051	0.050	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	<0.050	0.050	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTX	<0.300	0.300	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/05/2015	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	02/04/2015	ND	206	103	200	8.01	
DRO >C10-C28	<10.0	10.0	02/04/2015	ND	222	111	200	14.3	

Surrogate: 1-Chlorooctane 87.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 88.2 % 52.1-176

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

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

**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**

Company Name:				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																	
Project Manager: <i>Bruce Baker</i>				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																	
Address:				Company:																					
City:		State:		Zip:		Attn:																			
Phone #:		Fax #:		Address:																					
Project #:		Project Owner:		City:																					
Project Name:				State:																Zip:					
Project Location: <i>Crow Fed #35</i>				Phone #:																					
Sampler Name:				Fax #:																					
FOR LAB USE ONLY																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING													
<i>H500314</i>		<i>Pad #4 @ 1'</i>		<i>91</i>		<i>1</i>		GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		ACID/BASE: ICE / COOL OTHER:		DATE <i>2/3/15</i> TIME <i>2:30</i>													

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: <i>[Signature]</i>	Date: <i>2/4/15</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>[Signature]</i>	Date: <i>2/4/15</i>	Received By: <i>[Signature]</i>	REMARKS:	
	Time: <i>11:45</i>		email results: <i>Bruce Baker</i>	
Delivered By: (Circle One)		Sample Condition	environmental tech: <i>Kyle H. @rice-ecs.com</i>	
Sampler - UPS - Bus - Other:	<i>-1.60</i>	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		
		CHECKED BY: <i>[Signature]</i>		

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

*#54*



February 09, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CROW FED #35

Enclosed are the results of analyses for samples received by the laboratory on 02/04/15 13:15.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	02/04/2015	Sampling Date:	02/04/2015
Reported:	02/09/2015	Sampling Type:	Soil
Project Name:	CROW FED #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: EX. 1 NORTH WALL (H500317-01)**

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	<0.050	0.050	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	<0.050	0.050	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTEX	<0.300	0.300	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	02/05/2015	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	02/04/2015	ND	206	103	200	8.01	
DRO >C10-C28	<10.0	10.0	02/04/2015	ND	222	111	200	14.3	

Surrogate: 1-Chlorooctane 107 % 47.2-157

Surrogate: 1-Chlorooctadecane 119 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: EX. 1 EAST WALL (H500317-02)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	<0.050	0.050	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	<0.050	0.050	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTX	<0.300	0.300	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

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	02/05/2015	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	02/04/2015	ND	206	103	200	8.01	
DRO >C10-C28	<10.0	10.0	02/04/2015	ND	222	111	200	14.3	

Surrogate: 1-Chlorooctane 100 % 47.2-157

Surrogate: 1-Chlorooctadecane 88.5 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: EX. 1 SOUTH WALL (H500317-03)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	<0.050	0.050	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	<0.050	0.050	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTEx	<0.300	0.300	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/05/2015	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	02/04/2015	ND	206	103	200	8.01	
DRO >C10-C28	<10.0	10.0	02/04/2015	ND	222	111	200	14.3	

Surrogate: 1-Chlorooctane 101 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: EX. 1 WEST WALL (H500317-04)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	<0.050	0.050	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	<0.050	0.050	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTX	<0.300	0.300	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-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	02/05/2015	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	02/04/2015	ND	206	103	200	8.01	
DRO >C10-C28	<10.0	10.0	02/04/2015	ND	222	111	200	14.3	

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 94.3 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/03/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: PAD PT. 2 (H500317-05)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	36.4	1.00	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	93.8	1.00	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	95.9	3.00	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTX	226	6.00	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	02/05/2015	ND	432	108	400	3.77		

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	2590	50.0	02/05/2015	ND	182	91.2	200	12.8	
DRO >C10-C28	12000	50.0	02/05/2015	ND	179	89.7	200	0.285	

Surrogate: 1-Chlorooctane 307 % 47.2-157

Surrogate: 1-Chlorooctadecane 210 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/03/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: PAD PT. 3 (H500317-06)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	35.1	1.00	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	92.6	1.00	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	94.0	3.00	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTEX	222	6.00	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 61-154

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	02/05/2015	ND	432	108	400	3.77		

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	2450	50.0	02/05/2015	ND	182	91.2	200	12.8	
DRO >C10-C28	11500	50.0	02/05/2015	ND	179	89.7	200	0.285	

Surrogate: 1-Chlorooctane 173 % 47.2-157

Surrogate: 1-Chlorooctadecane 201 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/04/2015  
Reported: 02/09/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/04/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: PAD PT. 5 (H500317-07)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	02/04/2015	ND	1.72	85.8	2.00	11.5	
Toluene*	33.8	1.00	02/04/2015	ND	1.62	81.2	2.00	12.8	
Ethylbenzene*	88.0	1.00	02/04/2015	ND	1.57	78.7	2.00	12.1	
Total Xylenes*	89.2	3.00	02/04/2015	ND	4.69	78.1	6.00	12.5	
Total BTEX	211	6.00	02/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	02/05/2015	ND	432	108	400	3.77	

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	2410	50.0	02/05/2015	ND	182	91.2	200	12.8	
DRO >C10-C28	11300	50.0	02/05/2015	ND	179	89.7	200	0.285	

Surrogate: 1-Chlorooctane 178 % 47.2-157

Surrogate: 1-Chlorooctadecane 195 % 52.1-176

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

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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

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



# 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: <b>APACHE</b>		BILL TO		ANALYSIS REQUEST												
Project Manager: <b>Bruce Baker</b>		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>RUSH</div> </div>												
Address:		Company:														
City: Hobbs State: NM Zip: 88240		Attn:														
Phone #: Fax #:		Address:														
Project #: Project Owner:		City:														
Project Name:		State: Zip:														
Project Location: <b>Crow Fed. #35</b>		Phone #:														
Sampler Name: Kyle Humphrey		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	
	<b>H500317</b>															
	<b>1</b>	<b>Ex 1 Northwell</b>	<b>6</b>	<b>1</b>										<b>2-4-15</b>	<b>9:00</b>	
	<b>2</b>	<b>Ex 1 East well</b>	<b>6</b>	<b>1</b>										<b>2-4-15</b>	<b>9:05</b>	
	<b>3</b>	<b>Ex 1 South well</b>	<b>6</b>	<b>1</b>										<b>2-4-15</b>	<b>9:10</b>	
	<b>4</b>	<b>Ex 1 WPST well</b>	<b>6</b>	<b>1</b>										<b>2-4-15</b>	<b>9:15</b>	
	<b>5</b>	<b>pad pt. 2</b>	<b>6</b>	<b>1</b>										<b>2-3-15</b>	<b>10:00</b>	
	<b>6</b>	<b>pad pt. 3</b>	<b>6</b>	<b>1</b>										<b>2-3-15</b>	<b>10:05</b>	
	<b>7</b>	<b>pad pt. 5</b>	<b>6</b>	<b>1</b>										<b>2-4-15</b>	<b>10:00</b>	

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: <b>R. [Signature]</b>	Date: <b>2/4/15</b>	Received By: <b>Jodi Benson</b>	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 #:
Time:	Time:		REMARKS:	
Delivered By: (Circle One)		Sample Condition	email results	
Sampler - UPS - Bus - Other:	<b>5.00</b>	Cool Intact	Knorman@rice-ecs.com	
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com;	
			Lweinheimer@rice-ecs.com	
			Khumphrey@rice-ecs.com	
			sedwards@rice-ecs.com, lflores@rice-ecs.com	

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

**#54**





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

---

February 11, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CROW FED #35

Enclosed are the results of analyses for samples received by the laboratory on 02/05/15 14:40.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/05/2015  
Reported: 02/11/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/05/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: VERTICAL 1 @ SURFACE (H500335-01)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>3.99</b>	1.00	02/07/2015	ND	1.73	86.7	2.00	10.8	
<b>Toluene*</b>	<b>67.2</b>	1.00	02/07/2015	ND	1.66	83.2	2.00	11.2	
<b>Ethylbenzene*</b>	<b>98.4</b>	1.00	02/07/2015	ND	1.59	79.6	2.00	11.4	
<b>Total Xylenes*</b>	<b>98.4</b>	3.00	02/07/2015	ND	4.74	79.0	6.00	12.6	
<b>Total BTX</b>	<b>268</b>	6.00	02/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>400</b>	16.0	02/06/2015	ND	416	104	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	
<b>GRO C6-C10</b>	<b>3940</b>	100	02/06/2015	ND	195	97.3	200	2.01		
<b>DRO &gt;C10-C28</b>	<b>35200</b>	100	02/06/2015	ND	193	96.3	200	9.21		

Surrogate: 1-Chlorooctane 224 % 47.2-157

Surrogate: 1-Chlorooctadecane 692 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/05/2015  
Reported: 02/11/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/05/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: VERTICAL 1 @ 1' (H500335-02)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	33.3	2.00	02/10/2015	ND	1.73	86.7	2.00	10.8	
Toluene*	200	2.00	02/10/2015	ND	1.66	83.2	2.00	11.2	
Ethylbenzene*	119	2.00	02/10/2015	ND	1.59	79.6	2.00	11.4	
Total Xylenes*	117	6.00	02/10/2015	ND	4.74	79.0	6.00	12.6	
Total BTX	469	12.0	02/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/06/2015	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	4100	50.0	02/06/2015	ND	195	97.3	200	2.01	
DRO >C10-C28	7630	50.0	02/06/2015	ND	193	96.3	200	9.21	

Surrogate: 1-Chlorooctane 154 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/05/2015  
Reported: 02/11/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/05/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: VERTICAL 2 @ SURFACE (H500335-03)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	35.0	5.00	02/09/2015	ND	1.72	85.8	2.00	7.05	
Toluene*	229	5.00	02/09/2015	ND	1.67	83.4	2.00	7.12	
Ethylbenzene*	192	5.00	02/09/2015	ND	1.58	79.2	2.00	8.12	
Total Xylenes*	169	15.0	02/09/2015	ND	4.70	78.3	6.00	9.45	
Total BTX	625	30.0	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	02/06/2015	ND	416	104	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	6530	100	02/06/2015	ND	195	97.3	200	2.01		
DRO >C10-C28	29600	100	02/06/2015	ND	193	96.3	200	9.21		

Surrogate: 1-Chlorooctane 241 % 47.2-157

Surrogate: 1-Chlorooctadecane 572 % 52.1-176

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 CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 02/05/2015  
Reported: 02/11/2015  
Project Name: CROW FED #35  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/05/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: VERTICAL 2 @ 1' (H500335-04)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.067	0.050	02/09/2015	ND	1.72	85.8	2.00	7.05	
Toluene*	0.175	0.050	02/09/2015	ND	1.67	83.4	2.00	7.12	
Ethylbenzene*	0.059	0.050	02/09/2015	ND	1.58	79.2	2.00	8.12	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	4.70	78.3	6.00	9.45	
Total BTX	0.301	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-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	02/06/2015	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	02/06/2015	ND	195	97.3	200	2.01	
DRO >C10-C28	<10.0	10.0	02/06/2015	ND	193	96.3	200	9.21	

Surrogate: 1-Chlorooctane 104 % 47.2-157

Surrogate: 1-Chlorooctadecane 79.8 % 52.1-176

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

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



---

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>		Project Manager: <u>Bruce Baker</u>		Address:		City: Hobbs State: NM Zip: 88240		Phone #: Fax #:		Project #: Project Owner:		Project Name:		Project Location: <u>Crow Fed. #35</u>		Sampler Name: <u>Kyle Humphrey</u>		P.O. #:		Company:		Attn:		Address:		City:		State: Zip:		Phone #: Fax #:	
FOR LAB USE ONLY		Lab I.D. <u>H500335</u>		Sample I.D.		GRAB OR (COMP. #) CONTAINERS		MATRIX		PRESERV		SAMPLING		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS			
		1		VER+1 @ Surface		6		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME			
		2		VER+1 @ 1 Foot		6																									
		3		VER+2 @ Surface		6																									
		4		VER+2 @ 1 Foot		6																									

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: <u>[Signature]</u>		Date: <u>2/5/15</u>		Received By: <u>[Signature]</u>		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)		Time: <u>2:40</u>		Sample Condition		CHECKED BY: <u>[Signature]</u>		email results	
Sampler - UPS - Bus - Other:				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>				Knorman@rice-ecs.com	
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com;	
								Lweinheimer@rice-ecs.com	
								Khumphrey@rice-ecs.com	
								sedwards@rice-ecs.com, lflores@rice-ecs.com	

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



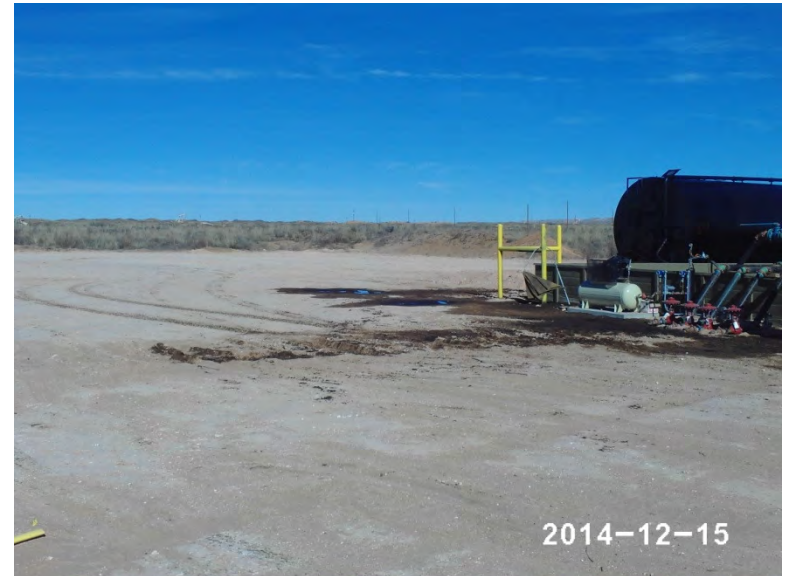
# Apache Crow Federal 35H

Unit Letter M, Section 3, T17S, R31E



Initial release area, facing east

12/15/14



Initial release area, facing northeast

12/15/14



Initial release area, facing east

12/15/14



Initial release area, facing south

12/15/14





Initial release area, facing northeast 12/15/14



Scraping release, facing northeast 2/3/15



Exporting soil, facing southeast 2/3/15



Scraping release, facing southwest 2/3/15