

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 Department

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: Apache Corporation	OGRID 873
Contact Name: Bruce Baker	Contact Telephone: (432) 631-6982
Contact email: Larry.Baker@apachecorp.com	Incident # (assigned by OCD)
Contact Mailing Address: 2350 W. Marland Blvd, Hobbs, NM 88240	

### Location of Release Source

Latitude: W 32.48397 Longitude: N -103.18335

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: WBDU 144H	Site Type: Well
Date Release Discovered: 09/30/2020	API # 30-025-40429

Unit Letter	Section	Township	Range	County
B	17	21S	37E	LEA

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Chevron USA)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (3 Barrels)	Volume Recovered (1/2 Barrels)
<input checked="" type="checkbox"/> Produced Water	Volume Released (3 Barrels)	Volume Recovered (0 Barrels)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release


Packing failure.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Jeff Broom</u>	Title: <u>Environmental Technician</u>
Signature: <u></u>	Date: <u>10/6/2020</u>
Email: <u>Jeffrey.Broom@apachecorp.com</u>	Telephone: <u>(432) 664-4677</u>
<b><u>OCD Only</u></b>	
Received by: _____ Date: _____	

**Volume Calculation**

95.30 cubic feet of soil contamination X 7.48 gallons per cubic foot = 712 gallons/42 gallons to a barrel=16.97 barrels X .33 soil porosity= 5.50 barrels fluid in soil + .50 barrels recovered = 6 barrels total loss.



303 Veterans Airpark Lane Midland, TX 79705

## **Remediation Plan**

December 30, 2020

Re: WBDU 144H  
Case #NRM2028760472

### **Background:**

On 09/30/2020 a release occurred due to a packing failure. The release (GPS: 32.48397, -103.18335) is located north of Eunice, New Mexico in unit letter B section 17 township 21S range 37E. A groundwater survey was conducted utilizing NMOSE and USGS. The nearest well of record suggest the groundwater depth below the release to be 70 feet below ground surface.

On 12/10/2020 a vertical (SP1) was conducted utilizing a hand auger with samples collected in one-foot intervals to a depth of 1 foot. All samples were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Horizontal 5-point surface composite samples were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX.

On 12/28/2020 horizontal 5-point surface composite samples were collected at H 2 and H 4 and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All Laboratory results meet table one standards for releases 51-100 feet to groundwater.

### **Remediation Plan:**

Apache Corporation proposes that the release area be excavated to a depth of 6 inches to 1 foot. Final 5-point bottom and wall composite samples will be collected not exceeding 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All excavated soil (50 yards) will be hauled to an OCD approved disposal facility. Once laboratory results are all below table one standards for releases 51-100 feet to groundwater the excavation will be backfilled with clean imported caliche and the pad restored. The remediation will be completed within 90 days of OCD approval of the plan.

Enclosed: C-141, Groundwater Data, Maps, Sample Data, Laboratory Results, and Field Notes.

Submitted by;

A handwritten signature in black ink that reads "Jeff Broom".

**Environmental Technician III**  
Jeffrey.Broom@apachecorp.com  
**Cell# 432-664-4677**

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	70' (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** Each of the following items must be included in the report.

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table I of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Incident ID	NRM2028760472
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Jeff BroomTitle: Environmental Technician IIISignature: Jeff BroomDate: 12/30/2020email: Jeffrey.Broom@apachecorp.comTelephone: 432-664-4677**OCD Only**Received by: Cristina EadsDate: 12/10/2020

Incident ID	NRM2028760472
District RP	
Facility ID	
Application ID	

## Remediation Plan

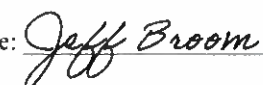
**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

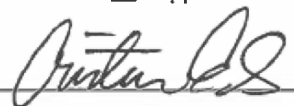
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public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

Printed Name: Jeff Broom Title: Environmental Tech III  
Signature:  Date: 12/30/2020  
email: Jeffrey.Broom@apachecorp.com Telephone: 432-664-4677

**OCD Only**

Received by: Cristina Eads Date: 12/10/2020

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 02/04/2021







# Groundwater levels for the Nation

## Search Results -- 1 sites found

site\_no list =

• 32283810311201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

**USGS 32283810311201 21S.37E.17.144111**

Available data for this site: Groundwater Field measurements

GO

### Output formats

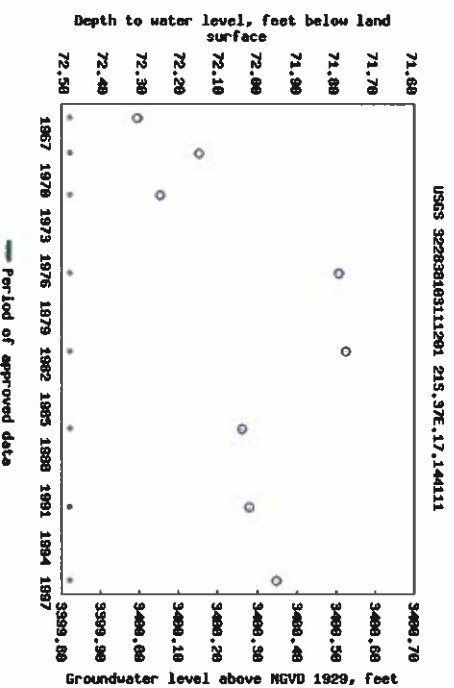
Table of data

Tab-separated data

Graph of data

Reset/period

Lea County, New Mexico  
Hydrologic Unit Code 13070007  
Latitude 32°28'50", Longitude 103°11'14" NAD27  
Land-surface elevation 3,472.30 feet above NGVD29  
The depth of the well is 96 feet below land surface.  
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.



Breaks in the plot represent a gap of at least one year between field measurements

[https://nwis.waterdata.usgs.gov/nwis/gwlevel?site\\_no=32283810311201&begin\\_date=&end\\_date=&format=png&submitted\\_form=&prec\\_qual=y](https://nwis.waterdata.usgs.gov/nwis/gwlevel?site_no=32283810311201&begin_date=&end_date=&format=png&submitted_form=&prec_qual=y)



## New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag: POD Number: CP 01026 POD1

(quarters are 1/4-W, 2/4-NE, 3/4-SW, 4/4-SE)  
(quarters are smaller to larger)  
Q64 Q16 Q4 Sec Twp Rng X Y  
1 1 3 17 21S 37E 669809 3594958

Driller License: 1626 Driller Company: TAYLOR, ROY ALLEN

Driller Name: TAYLOR, ROY ALLEN

Drill Start Date: 10-12-2009 Drill Finish Date: 10-14-2009 Plug Date:

Log File Date: 10-23-2009 PCW Rec Date: Source: Shallow

Pump Type: Pipe Discharge Size: Estimated Yield: 35 GPM

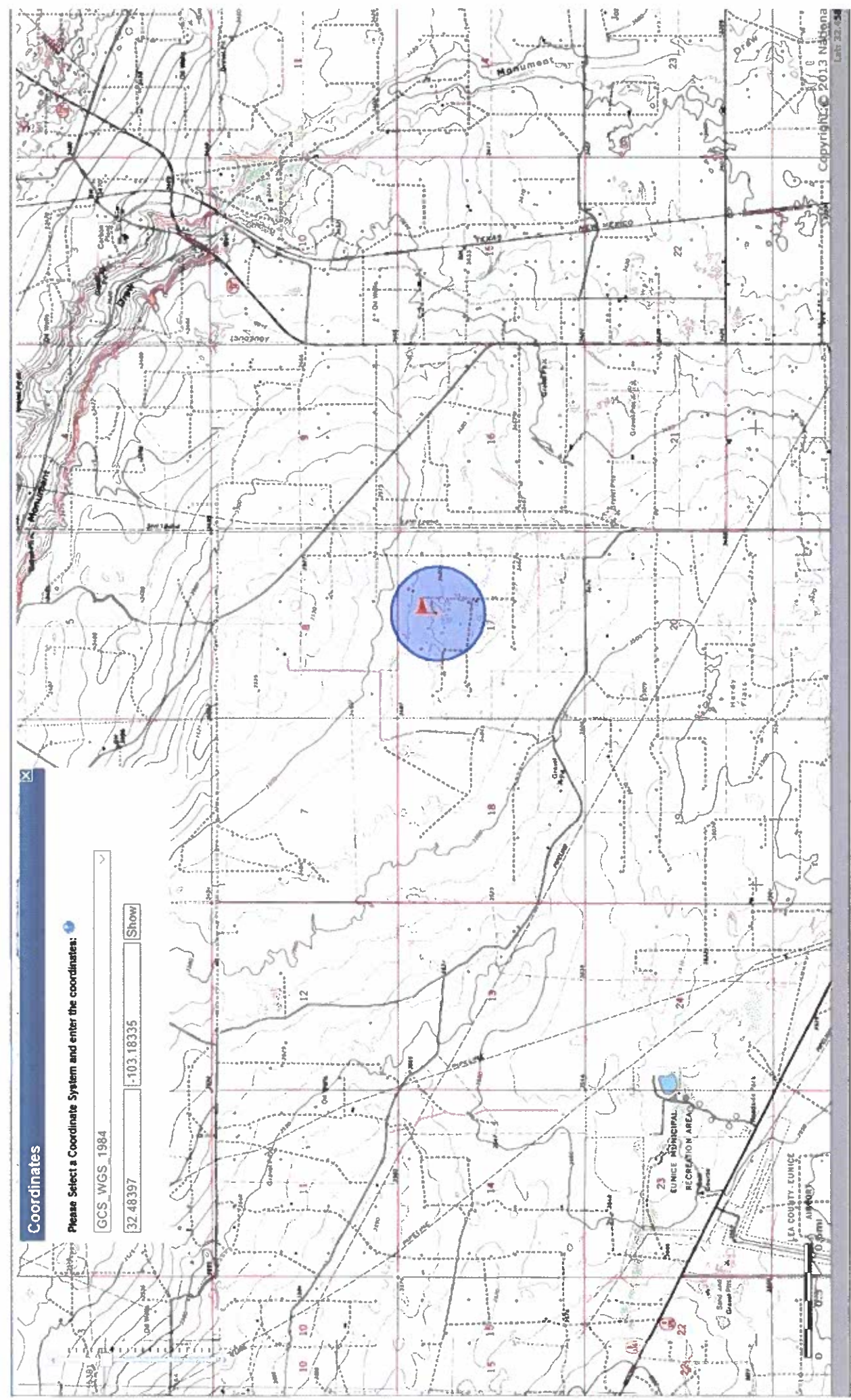
Casting Size: 5.14 Depth Well: 167 feet Depth Water: 93 feet

Water Bearing Stratifications: Top Bottom Description  
93 167 Sandstone Gravel Conglomerate

The data is furnished by the NMOSE ISC and is accepted by the recipient with the expressed understanding that the OSE ISC makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or timeliness for any particular purpose of the data.

POINT OF DIVERSION SUMMARY

12/30/20 7:33 AM







## Delineation Samples

Sample Date	Sample ID	Depth	Chloride Field	Chloride Lab	Benzene	Toulene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
12/10/2020	SP 1	S	10,286	14,000	<0.050	0.421	0.467	1.53	2.41	10	890	205	32.484055 -103.183244
12/10/2020		1'	2,230	960	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.6	<10.0	
Horizontal Samples													
12/10/20020	H1	S	227	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	59.7	12.6	32.483942 -103.183470
12/28/2020	H2	S	145	16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.484070 -103.183306
12/10/2020	H3	S	145	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.484159 -103.183094
12/28/2020	H4	S	150	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.484028 -103.183264





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

December 14, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU 144H

Enclosed are the results of analyses for samples received by the laboratory on 12/10/20 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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



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

**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ SURFACE (H003236-01)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05	
Toluene*	<b>0.421</b>	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75	
Ethylbenzene*	<b>0.467</b>	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56	
Total Xylenes*	<b>1.53</b>	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59	
Total BTEX	<b>2.41</b>	0.300	12/11/2020	ND					

Surrogate: 4-Bromofluorobenzene (PH) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>14000</b>	16.0	12/14/2020	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*	<b>10.0</b>	10.0	12/11/2020	ND	244	122	200	1.35	
DRO >C10-C28*	<b>890</b>	10.0	12/11/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	<b>205</b>	10.0	12/11/2020	ND					

Surrogate: 1-Chlorooctane 99.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 119 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 1' (H003236-02)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05	
Toluene*	<0.050	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75	
Ethylbenzene*	<0.050	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56	
Total Xylenes*	<0.150	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59	
Total BTEX	<0.300	0.300	12/11/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	12/14/2020	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	12/14/2020	ND	244	122	200	1.35	
DRO >C10-C28*	17.6	10.0	12/14/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	12/14/2020	ND					

Surrogate: 1-Chlorooctane 81.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 77.0 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- 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

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Maryland, Hobbs, NM 88240  
(505) 383-2325 FAX (505) 383-2476

BILL TO

ANALYSIS REQUEST

Company Name: Apache Corporation  
Project Manager: Bruce Baker

P.O. #:  
Company:

Address:  
City: State: Zip:

Attn:  
Address:

Phone #: Fax #:  
Project Owner:

City: State: Zip:  
Phone #:

Project Name: WBDU 144H  
Project Location: WBDU 144H

Sample Name: Left Room

Phone #:

FOR LAB USE ONLY

MATRIX

PRESENCE

SAMPLING

Lab I.D. Sample I.D.

H003336

SP20 Surface  
SP20 1'

(GYRAB OR (C)OMP.  
# CONTAINERS  
GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER:  
ACID/BASE:  
ICE / COOL  
OTHER:

DATE TIME  
12/16/20 1520  
12/16/20 1520

CL-  
BTEx  
EXT. TH

Requisitioned By: Jeff Ryan  
Date: 12/16/20  
Received By: J. Baker  
Time: 1605  
Remarks: Email Bruce + Jeff Results

Requisitioned By: Jeff Ryan

Date: 12/16/20  
Time: 1605

Received By: J. Baker

Remarks: Email Bruce + Jeff Results

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

3.00 241/2

Sample Condition  
Cool Intact  
Pres No Pres No

CHECKED BY: (initials)  
V.D.





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

December 14, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU 144H

Enclosed are the results of analyses for samples received by the laboratory on 12/10/20 16:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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



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

**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H 1 @ SURFACE (H003235-01)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05	
Toluene*	<0.050	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75	
Ethylbenzene*	<0.050	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56	
Total Xylenes*	<0.150	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59	
Total BTEX	<0.300	0.300	12/11/2020	ND					

Surrogate: 4-Bromofluorobenzene (PHE) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/14/2020	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	12/11/2020	ND	244	122	200	1.35	
DRO >C10-C28*	59.7	10.0	12/11/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	12.6	10.0	12/11/2020	ND					

Surrogate: 1-Chlorooctane 84.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 80.8 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H 2 @ SURFACE (H003235-02)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05		
Toluene*	<0.050	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75		
Ethylbenzene*	<0.050	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56		
Total Xylenes*	<0.150	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59		
Total BTEX	<0.300	0.300	12/11/2020	ND						

Surrogate: 4-Bromofluorobenzene (PHE) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7360	16.0	12/14/2020	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	12/11/2020	ND	244	122	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/11/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	12/11/2020	ND					

Surrogate: 1-Chlorooctane 81.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 76.2 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H 3 @ SURFACE (H003235-03)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05	
Toluene*	<0.050	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75	
Ethylbenzene*	<0.050	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56	
Total Xylenes*	<0.150	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59	
Total BTEX	<0.300	0.300	12/11/2020	ND					

Surrogate: 4-Bromofluorobenzene (PH) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/14/2020	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	12/11/2020	ND	244	122	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/11/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	12/11/2020	ND					

Surrogate: 1-Chlorooctane 91.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 86.4 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/10/2020  
 Reported: 12/14/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/10/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H 4 @ SURFACE (H003235-04)**

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	12/11/2020	ND	1.93	96.6	2.00	8.05	
Toluene*	<0.050	0.050	12/11/2020	ND	1.85	92.4	2.00	7.75	
Ethylbenzene*	<0.050	0.050	12/11/2020	ND	1.92	95.8	2.00	8.56	
Total Xylenes*	<0.150	0.150	12/11/2020	ND	5.47	91.1	6.00	8.59	
Total BTEX	<0.300	0.300	12/11/2020	ND					

Surrogate: 4-Bromofluorobenzene (PHE) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	12/14/2020	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	12/11/2020	ND	244	122	200	1.35	
DRO >C10-C28*	82.9	10.0	12/11/2020	ND	235	118	200	1.05	
EXT DRO >C28-C36	31.2	10.0	12/11/2020	ND					

Surrogate: 1-Chlorooctane 78.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 76.9 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

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

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

December 29, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU 144H

Enclosed are the results of analyses for samples received by the laboratory on 12/28/20 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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,

Celest D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/28/2020  
 Reported: 12/29/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/28/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: H2 (H003341-01)**

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	12/28/2020	ND	2.05	102	2.00	2.61	QR-03
Toluene*	<0.050	0.050	12/28/2020	ND	1.95	97.4	2.00	1.19	QR-03
Ethylbenzene*	<0.050	0.050	12/28/2020	ND	2.03	102	2.00	2.50	
Total Xylenes*	<0.150	0.150	12/28/2020	ND	5.79	96.5	6.00	2.12	
Total BTX	<0.300	0.300	12/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PHL) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/28/2020	ND	400	100	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	12/28/2020	ND	209	105	200	3.42	
DRO >C10-C28*	<10.0	10.0	12/28/2020	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	12/28/2020	ND					

Surrogate: 1-Chlorooctane 81.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 75.2 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/28/2020  
 Reported: 12/29/2020  
 Project Name: WBDU 144H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 12/28/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: H4 (H003341-02)**

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	12/28/2020	ND	2.05	102	2.00	2.61	
Toluene*	<0.050	0.050	12/28/2020	ND	1.95	97.4	2.00	1.19	
Ethylbenzene*	<0.050	0.050	12/28/2020	ND	2.03	102	2.00	2.50	
Total Xylenes*	<0.150	0.150	12/28/2020	ND	5.79	96.5	6.00	2.12	
Total BTEX	<0.300	0.300	12/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PHE) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/28/2020	ND	400	100	400	11.3		

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	12/28/2020	ND	209	105	200	3.42	
DRO >C10-C28*	<10.0	10.0	12/28/2020	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	12/28/2020	ND					

Surrogate: 1-Chlorooctane 83.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 77.2 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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



**101 East Maryland, Hobbs, NM 88240**

**(575) 393-2328 FAX (575) 393-2478**

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

WBDU 144H Delineation 12/10/20

SP1 @ Surface - 32.484055, -103.183244

10.1/30.3 = 3 = 3.61 = 10,286

SP1 @ 1'

10.5/30.1 = 2.86 = .78 = 2,230

H1 - 32.483942, -103.183770

10.6/30.3 = 2.85 = .08 = 227

H2 - 32.48412, -103.18329

10.6/30.3 = 2.85 = .04 = 113

H3 - 32.482159, -103.183097

10.4/30.3 = 2.91 = .05 = 145

H4 - 32.48706, -103.18322

10.0/30.1 = 3.01 = .20 = 601

12/28/20 - Horizontal H2 & H4

H2 - 32.487070, -103.183306

10.3/30.0 = 2.91 = .05 = 145

H4 - 32.487028, -103.183267

10.0/30.2 = 3.02 = .05 = 150

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 11730

CONDITIONS OF APPROVAL

Operator:		OGRID:	Action Number:	Action Type:
#1000	APACHE CORPORATION Midland, TX79705	303 Veterans Airpark Ln 873	11730	C-141
OCD Reviewer	Condition			
ceads	None			