



303 Veterans Airpark Lane Midland, TX 79705

## **Remediation Plan**

July 19, 2021

Re: NMGSAU # 012

Case: nAPP211343684

### **Background:**

On 4/18/2021 a release occurred due to a steel flow line failed. The release (GPS: 32.665486, -103.282816) is located west of Monument, New Mexico in unit letter A section 18 township 19S range 37E. A groundwater survey was conducted utilizing NMOSE wells of record. The nearest well of record suggest the groundwater depth below the release to be 54 feet below ground surface.

On 5/3/2021 vertical delineation was conducted utilizing a backhoe at SP1 and SP3 to a depth of 2 feet. All vertical samples collected were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Horizontal 5 point surface field samples were collected not exceeding 200 square feet and titrated for chlorides. On 5/7/2021 vertical delineation was conducted utilizing a backhoe at SP2 to a depth of 2 feet. All samples collected were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. On 5/18/2021 SP2 was further advanced to a depth of 4 feet. All samples collected were submitted to a commercial laboratory for analysis of TPH and BTEX.

### **Remediation Plan:**

Apache Corporation purposes that the area around SP1 and SP3 be excavated to a depth of 2 feet. The area around SP2 be excavated to a depth of 4 feet. Final 5 point bottom and wall samples will be collected not to exceed 500 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All excavated material (850 yards) will be hauled to an OCD approved disposal facility. Once laboratory results confirmed table one standard for releases 51-100 feet and reclamation standards for the top four feet the release area will be backfilled with clean imported top soil to ground surface and contoured to the surrounding area. The disturbed area will be reseeded in accordance with the surface landowner. 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;

*Bruce Baker*

**Environmental Technician**

[larry.baker@apachecorp.com](mailto:larry.baker@apachecorp.com)

**Cell# 432-631-6982**

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?	<u>54</u> (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 <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input 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 ½-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 1 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

Page 4

Incident ID	
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: Larry Baker Title: Environmental Tech SR.  
Signature: Larry Baker Date: 7/19/2021  
email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
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: Larry Baker Title: Environmental Tech SR.  
Signature: Larry Baker Date: 7/19/2021  
email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: Chad Hensley Date: 08/23/2021

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

Signature: Chad Hensley Date: 08/23/2021



S NM Highway 8

SINM Highway 8

POWERED BY  
**esri**





# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)  
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
L	02996	3	3	3	08	19S	37E	661178	3615835*

Driller License:

Driller Company:

Driller Name: LAYNE TEXAS COMPANY

Drill Start Date: 09/23/1957

Drill Finish Date: 10/08/1957

Plug Date:

Log File Date: 05/28/1958

PCW Rcv Date: 05/28/1958

Source: Shallow

Pump Type: TURBIN

Pipe Discharge Size: 133

Estimated Yield:

Casing Size:

Depth Well: 142 feet

Depth Water: 54 feet

Meter Number: 16831

Meter Make: NEPTUNE

Meter Serial Number: 6868175

Meter Multiplier: 10.0000

Number of Dials: 6

Meter Type: Diversion

Unit of Measure: Cubic Feet

Return Flow Percent:

Usage Multiplier:

Reading Frequency: Quarterly

### Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
04/06/2016	2016	984538	A	RPT		0
07/08/2016	2016	40047	R	RPT	meter Rollover	17.035
10/07/2016	2016	141341	A	RPT		31.086
01/06/2017	2017	220287	A	ap		18.124
04/06/2017	2017	269314	A	ap		11.255
07/07/2017	2017	377295	A	ap		24.789
10/06/2017	2017	557921	A	ap		41.466
10/17/2017	2017	0	A	ap	meter repaired	0
01/18/2018	2018	60689	A	ap		13.932
04/11/2018	2018	129739	A	ap		15.852
07/09/2018	2018	254336	A	ap		28.604
10/15/2018	2018	254337	A	ap		0
01/19/2019	2019	427340	A	ap		39.716
03/31/2019	2019	492525	A	ap		14.964
07/10/2019	2019	625301	A	ap		30.481
10/05/2019	2019	676337	A	ap		11.716
01/08/2020	2020	714685	A	ap		8.803
03/20/2020	2020	833604	A	ap		27.300

**YTD Meter Amounts:	Year	Amount
	2016	48.121
	2017	95.634

2018	58.388
2019	96.877
2020	36.103

\*UTM location was derived from PLSS - see Help

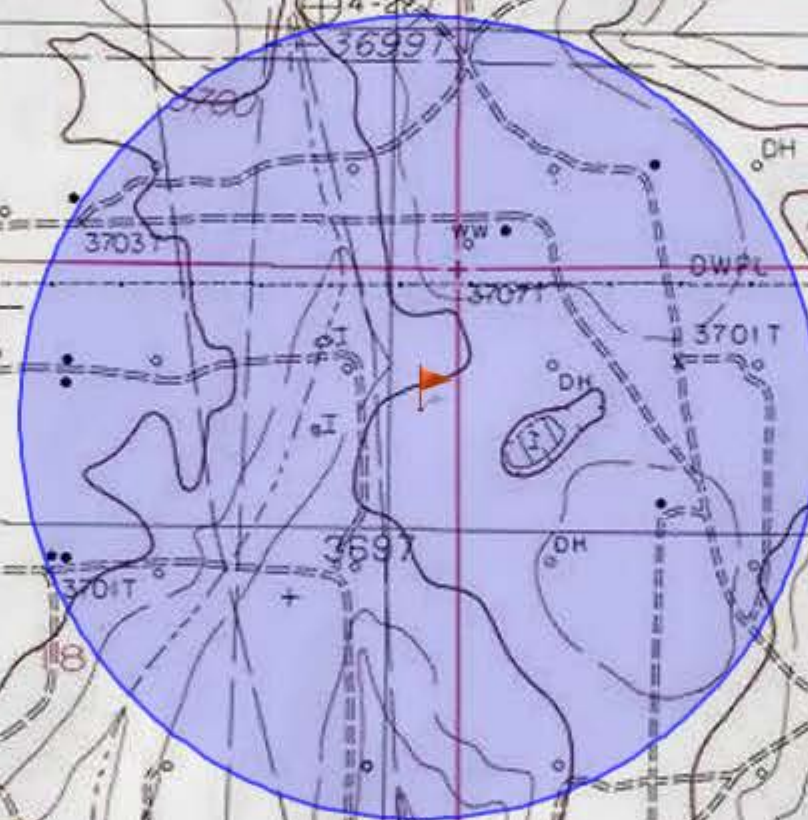
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/19/21 1:28 PM

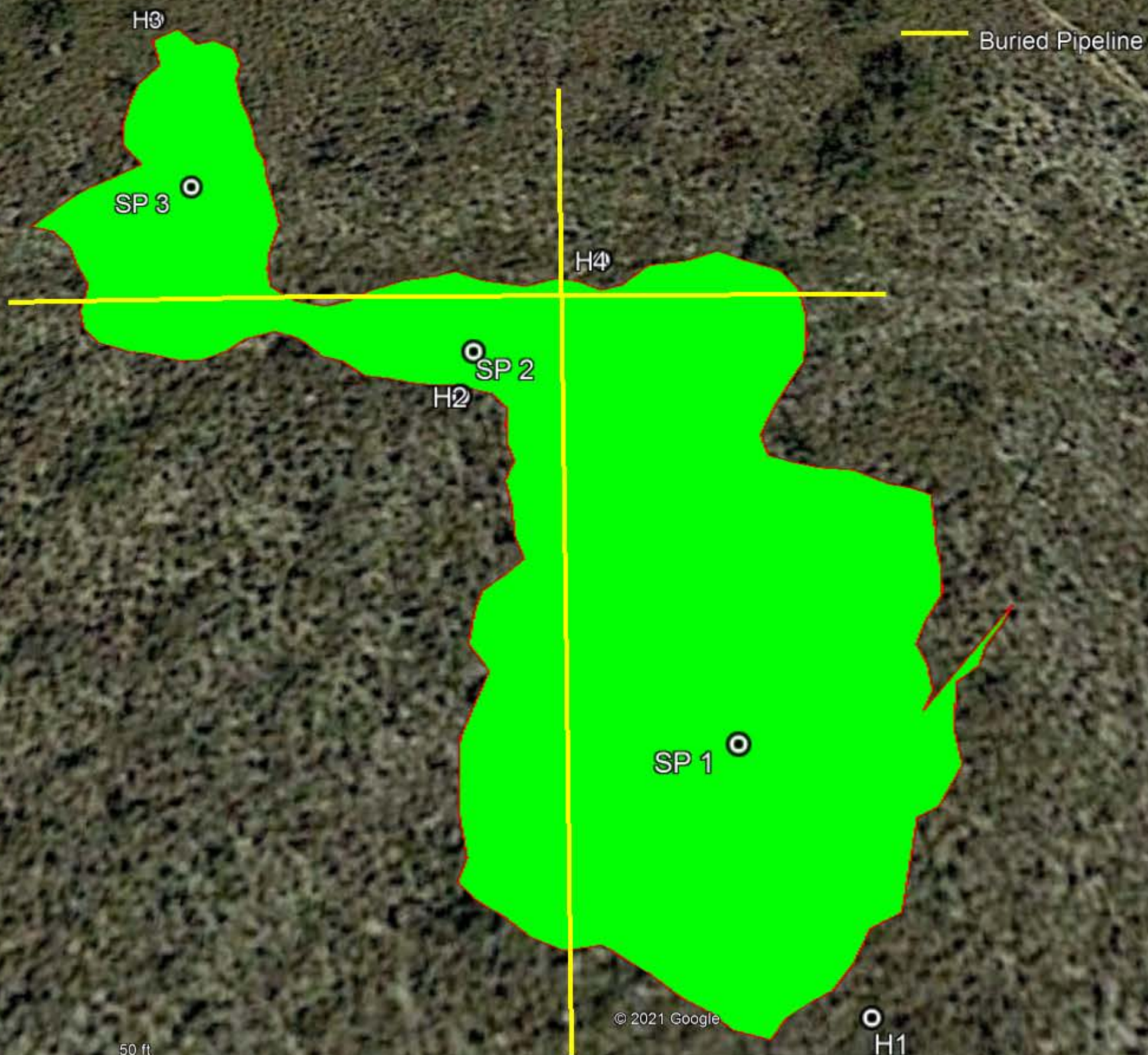
POINT OF DIVERSION SUMMARY



Show







© 2021 Google

Google Earth



## Delineation Samples

Sample Date	Sample ID	Depth	Chloride Field	Chloride Lab	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
5/3/2021	SP 1	Surface	1,814	1,250	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,140	162	32.665240, -103.282506
5/3/2021	SP 1	1'	482	368	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	80.5	<10.0	
5/3/2021	SP 1	2'		240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
5/7/2021	SP 2	Surface	715	880	<0.050	<0.050	<0.050	<0.150	<0.300	<100	38,700	10,200	32.665421, -103.282645
5/7/2021	SP 2	1'	407	304	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2,220	618	
5/7/2021	SP 2	2'	376	336	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	458	139	
5/18/2021	SP 2	3'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	151	19.7	
5/18/2021	SP 2	4'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
5/3/2021	SP 3	Surface	293	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	28200	4940	32.665534, -103.282820
5/3/2021	SP 3	1'	410	320	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13400	2070	
5/3/2021	SP 3	2'		240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	47.8	<10.0	
5/3/2021	H1	Surface	271										32.6651391, -103.2824583
5/3/2021	H2	Surface	218										32.6654349, -103.2826514
5/3/2021	H3	Surface	218										32.6657285, -103.2828710
5/3/2021	H4	Surface	269										32.6655032, -103.2825726





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

---

May 05, 2021

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU 12 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/03/21 15:30.

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,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	05/03/2021	Sampling Date:	05/03/2021
Reported:	05/05/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ SURFACE (H211119-01)**

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	05/03/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/03/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/03/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/03/2021	ND	5.68	94.7	6.00	1.77		
Total BTEX	<0.300	0.300	05/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1250	16.0	05/04/2021	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	05/04/2021	ND	204	102	200	0.721	
DRO >C10-C28*	1140	10.0	05/04/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	162	10.0	05/04/2021	ND					

Surrogate: 1-Chlorooctane 82.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 140 % 38.9-142

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





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

**Analytical Results For:**

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

Received: 05/03/2021  
 Reported: 05/05/2021  
 Project Name: NMGS AU 12 FLOWLINE  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/03/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 1' (H211119-02)**

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	05/03/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/03/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/03/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/03/2021	ND	5.68	94.7	6.00	1.77		
Total BTX	<0.300	0.300	05/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	05/04/2021	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	05/05/2021	ND	204	102	200	0.721	
DRO >C10-C28*	80.5	10.0	05/05/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	05/05/2021	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-133

Surrogate: 1-Chlorooctadecane 132 % 38.9-142

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



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

**Analytical Results For:**

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

Received: 05/03/2021  
 Reported: 05/05/2021  
 Project Name: NMGS AU 12 FLOWLINE  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/03/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 2' (H211119-03)**

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	05/03/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/03/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/03/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/03/2021	ND	5.68	94.7	6.00	1.77		
Total BTX	<0.300	0.300	05/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	05/04/2021	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	05/05/2021	ND	204	102	200	0.721	
DRO >C10-C28*	<10.0	10.0	05/05/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	05/05/2021	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 99.6 % 38.9-142

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





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

**Analytical Results For:**

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

Received:	05/03/2021	Sampling Date:	05/03/2021
Reported:	05/05/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 3 @ SURFACE (H211119-04)**

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	05/04/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/04/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/04/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/04/2021	ND	5.68	94.7	6.00	1.77		
Total BTX	<0.300	0.300	05/04/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	05/04/2021	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*	<50.0	50.0	05/04/2021	ND	204	102	200	0.721	
DRO >C10-C28*	28200	50.0	05/04/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	4940	50.0	05/04/2021	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-133

Surrogate: 1-Chlorooctadecane 1060 % 38.9-142

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



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

**Analytical Results For:**

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

Received:	05/03/2021	Sampling Date:	05/03/2021
Reported:	05/05/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 3 @ 1' (H211119-05)**

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	05/04/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/04/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/04/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/04/2021	ND	5.68	94.7	6.00	1.77		
Total BTX	<0.300	0.300	05/04/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	05/04/2021	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*	<50.0	50.0	05/04/2021	ND	204	102	200	0.721	
DRO >C10-C28*	13400	50.0	05/04/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	2070	50.0	05/04/2021	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-133

Surrogate: 1-Chlorooctadecane 530 % 38.9-142

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





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

**Analytical Results For:**

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

Received: 05/03/2021  
 Reported: 05/05/2021  
 Project Name: NMGS AU 12 FLOWLINE  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/03/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 2' (H211119-06)**

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	05/03/2021	ND	1.99	99.3	2.00	4.00		
Toluene*	<0.050	0.050	05/03/2021	ND	1.94	97.0	2.00	3.88		
Ethylbenzene*	<0.050	0.050	05/03/2021	ND	1.90	95.2	2.00	2.42		
Total Xylenes*	<0.150	0.150	05/03/2021	ND	5.68	94.7	6.00	1.77		
Total BTX	<0.300	0.300	05/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	05/04/2021	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	05/04/2021	ND	204	102	200	0.721	
DRO >C10-C28*	47.8	10.0	05/04/2021	ND	200	99.8	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	05/04/2021	ND					

Surrogate: 1-Chlorooctane 80.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 87.5 % 38.9-142

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



---

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

---

### 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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>BILL TO</b>							<b>ANALYSIS REQUEST</b>									
Company Name: <u>Aperine</u>							P.O. #:									
Project Manager: <u>Jeff Brown</u>							Company:									
Address:							Attn:									
City: <u>Hiddos</u>							Address:									
Phone #: _____							City: _____									
Fax #: _____							State: _____ Zip: _____									
Project Owner:							Phone #: _____									
Project Name:							Fax #: _____									
Project Location: <u>DWESSA 12 Flowline</u>																
Sample Name: <u>See Attached</u>																
FOR LAB USE ONLY																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	PRESERV. ACID/BASE: ICE / COOL OTHER:	SAMPLING DATE TIME	<input type="checkbox"/>	<input checked="" type="checkbox"/> Ext TPH	<input checked="" type="checkbox"/> BTEX							
<u>#211119</u>	<u>SP1 Surface</u>	<u>G</u>	<u>1</u>			<u>5/3</u> <u>2:00</u>	<u>X</u>	<u>X</u>	<u>X</u>							
	<u>SP1 @ 1'</u>					<u>2:02</u>	<u>X</u>	<u>X</u>	<u>X</u>							
	<u>SP1 @ 2'</u>					<u>2:04</u>	<u>X</u>	<u>X</u>	<u>X</u>							
	<u>SP3 Surface</u>					<u>2:06</u>	<u>X</u>	<u>X</u>	<u>X</u>							
	<u>SP3 @ 1'</u>					<u>2:08</u>	<u>X</u>	<u>X</u>	<u>X</u>							
	<u>SP3 @ 2'</u>					<u>2:10</u>	<u>X</u>	<u>X</u>	<u>X</u>							
<b>PLEASE NOTE: Liability and Damages.</b> Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																
Relinquished By: _____		Date: <u>5/3</u>	Received By: _____													
Reinquinshed By: _____		Date: _____	Received By: _____													
Delivered By: (Circle One)		Observed Temp. °C <u>5.9</u>	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) <u>T.P.</u>		Turnaround Time:		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Observed Temp. °C		Corrected Temp. °C	
Sampler - UPS - Bus - Other:		Corrected Temp. °C	<input type="checkbox"/> Yes <input type="checkbox"/> No				Thermometer ID #113				<input type="checkbox"/> Yes <input type="checkbox"/> No				Corrected Temp. °C	
REMARKS:																
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:																
All Results are emailed. Please provide Email address:																





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

---

May 12, 2021

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU 12 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/07/21 15:35.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	05/07/2021	Sampling Date:	05/07/2021
Reported:	05/12/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 2 @ SURFACE (H211185-01)**

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	05/10/2021	ND	2.07	104	2.00	1.52	
Toluene*	<0.050	0.050	05/10/2021	ND	2.02	101	2.00	0.192	
Ethylbenzene*	<0.050	0.050	05/10/2021	ND	1.97	98.3	2.00	1.17	
Total Xylenes*	<0.150	0.150	05/10/2021	ND	5.89	98.2	6.00	0.780	
Total BTEX	<0.300	0.300	05/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	05/11/2021	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<100	100	05/10/2021	ND	207	103	200	0.414	
DRO >C10-C28*	38700	100	05/10/2021	ND	222	111	200	1.06	
EXT DRO >C28-C36	10200	100	05/10/2021	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-133

Surrogate: 1-Chlorooctadecane 788 % 38.9-142

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



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

**Analytical Results For:**

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

Received: 05/07/2021  
 Reported: 05/12/2021  
 Project Name: NMGS AU 12 FLOWLINE  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/07/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 1' (H211185-02)**

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	05/10/2021	ND	2.07	104	2.00	1.52	
Toluene*	<0.050	0.050	05/10/2021	ND	2.02	101	2.00	0.192	
Ethylbenzene*	<0.050	0.050	05/10/2021	ND	1.97	98.3	2.00	1.17	
Total Xylenes*	<0.150	0.150	05/10/2021	ND	5.89	98.2	6.00	0.780	
Total BTX	<0.300	0.300	05/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/11/2021	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	05/10/2021	ND	207	103	200	0.414	
DRO >C10-C28*	2220	50.0	05/10/2021	ND	222	111	200	1.06	
EXT DRO >C28-C36	618	50.0	05/10/2021	ND					

Surrogate: 1-Chlorooctane 88.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 139 % 38.9-142

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





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

**Analytical Results For:**

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

Received:	05/07/2021	Sampling Date:	05/07/2021
Reported:	05/12/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 2 @ 2' (H211185-03)**

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	05/10/2021	ND	2.07	104	2.00	1.52	
Toluene*	<0.050	0.050	05/10/2021	ND	2.02	101	2.00	0.192	
Ethylbenzene*	<0.050	0.050	05/10/2021	ND	1.97	98.3	2.00	1.17	
Total Xylenes*	<0.150	0.150	05/10/2021	ND	5.89	98.2	6.00	0.780	
Total BTEx	<0.300	0.300	05/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/11/2021	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	05/10/2021	ND	207	103	200	0.414	
DRO >C10-C28*	458	10.0	05/10/2021	ND	222	111	200	1.06	
EXT DRO >C28-C36	139	10.0	05/10/2021	ND					

Surrogate: 1-Chlorooctane 88.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 108 % 38.9-142

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



---

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

---

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

FOIA b-7 - DOD K.S. 100/04/20





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

---

May 21, 2021

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU 12 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/18/21 15:33.

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,

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



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

**Analytical Results For:**

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

Received:	05/18/2021	Sampling Date:	05/18/2021
Reported:	05/21/2021	Sampling Type:	Soil
Project Name:	NMGS AU 12 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 2 @ 3' (H211293-01)**

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	05/20/2021	ND	1.97	98.7	2.00	3.65	
Toluene*	<0.050	0.050	05/20/2021	ND	2.01	100	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/20/2021	ND	1.97	98.7	2.00	3.24	
Total Xylenes*	<0.150	0.150	05/20/2021	ND	5.97	99.5	6.00	2.59	
Total BTEX	<0.300	0.300	05/20/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.9-140

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	05/20/2021	ND	211	105	200	0.316	
<b>DRO &gt;C10-C28*</b>	<b>151</b>	10.0	05/20/2021	ND	208	104	200	6.95	
<b>EXT DRO &gt;C28-C36</b>	<b>19.7</b>	10.0	05/20/2021	ND					

Surrogate: 1-Chlorooctane 94.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 96.1 % 38.9-142

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



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

**Analytical Results For:**

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

Received: 05/18/2021  
 Reported: 05/21/2021  
 Project Name: NMGS AU 12 FLOWLINE  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/18/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 4' (H211293-02)**

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	05/20/2021	ND	1.97	98.7	2.00	3.65		
Toluene*	<0.050	0.050	05/20/2021	ND	2.01	100	2.00	3.97		
Ethylbenzene*	<0.050	0.050	05/20/2021	ND	1.97	98.7	2.00	3.24		
Total Xylenes*	<0.150	0.150	05/20/2021	ND	5.97	99.5	6.00	2.59		
Total BTX	<0.300	0.300	05/20/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

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	05/20/2021	ND	211	105	200	0.316	
DRO >C10-C28*	<10.0	10.0	05/20/2021	ND	208	104	200	6.95	
EXT DRO >C28-C36	<10.0	10.0	05/20/2021	ND					

Surrogate: 1-Chlorooctane 84.0 % 44.3-133

Surrogate: 1-Chlorooctadecane 83.6 % 38.9-142

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





---

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

---

### 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

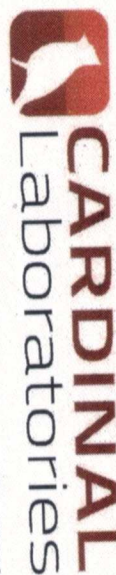
\*=Accredited Analyte

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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

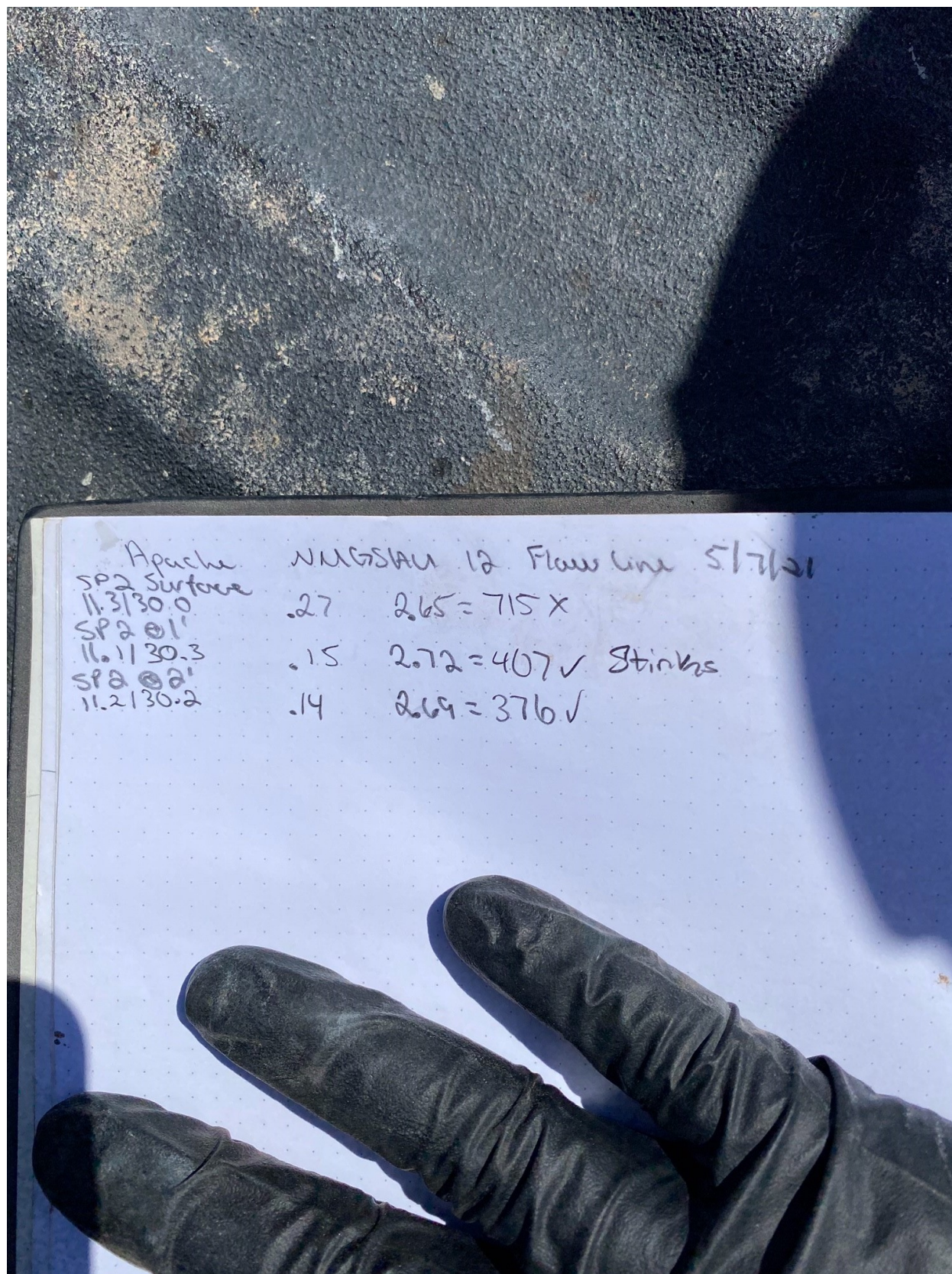
Form with multiple sections: Company Name, Project Manager, Address, City, State, Zip, Phone #, Fax #, Project #, Project Name, Project Location, Sampler Name, Lab I.D., Sample I.D., Matrix, Preserv, Sampling, Date, Time, Turnaround Time, Standard, Bacteria (only), Sample Condition, Observed Temp, Corrected Temp, Verbal Result, Remarks, and a large data table for results.



nmgsau 12 Flow line 5/3/21

H1	32.651391	-103.2824583	2.72 = 271 ✓
H2	32.654349	-103.2824514	2.73 = 218 ✓
H3	32.657245	-103.2824710	2.73 = 218 ✓
H4	32.655032	-103.2825726	2.70 = 269 ✓
SP1 @ Surface		.66	2.75 = 1,814 X
SP2 @ Surface			
SP3 @ Surface			
11.3/30.2	.11		2.67 = 293 ✓
SP1 @ 1'			
11.3/30.3	.18		2.68 = 482 ✓
SP3 @ 1'			
11.1/30.2	.15		2.74 = 410 ✓
SP1 @ 2'			
11.1/30.3	.10		2.72 = 271 ✓
SP3 @ 2'			
11.3/30.2	.11		2.67 = 293 ✓





**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 36938

**CONDITIONS**

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 36938
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
chensley	None	8/23/2021