



303 Veterans Airpark Lane Midland, TX 79705

## **Closure Report**

February 28, 2022

Re: Lusk South 28 Federal CTB  
Case # nAPP2133448368

On 11/18/2021 a release occurred due to a heater treater manway gasket failed. The release (GPS: 32.626526, -103.777292) is located west of Hobbs, New Mexico in unit letter M section 28 township 19S range 32E. A groundwater survey was conducted utilizing NMOSE wells of record. The nearest well suggest that groundwater is 51-100 feet.

On 1/11/2022 vertical delineation was conducted utilizing a backhoe with samples collected in 1-foot intervals to depths ranging from surface to 5 feet. All samples were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. The release area was excavated to depths ranging from 1 to 3 feet. Final 5- point bottom and wall composite samples were collected not exceeding 200 square feet. All samples collected were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. The overspray on vegetation was washed with Dawn dishwashing soap approved by BLM. All excavated soil (240 yards) was hauled to an OCD approved disposal facility. The pasture area was backfilled with clean imported topsoil to ground surface and contoured to the surrounding area. The pasture area was reseeded with BLM # 2. The excavation inside the secondary containment was backfilled with caliche to restore the pad.

Apache Corporation has completed remediation to below table one standards and respectfully request that event be closed.

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

Submitted by;

*Bruce Baker*

**Environmental Technician**  
larry.baker@apachecorp.com  
**Cell# 432-215-2284**

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>51-100</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

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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: 2/21/2022  
email: larry.baker@apachecorp.com Telephone: 432-215-2284

**OCD Only**

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

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Larry Baker

Title: Environmental Tech SR.

Signature: Larry Baker

Date: 2/21/2022

email: larry.baker@apachecorp.com

Telephone: 432-215-2284

**OCD Only**

Received by: Chad Hensley

Date: 03/25/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Chad Hensley

Date: 03/25/2022

Printed Name: Chad Hensley

Title: Environmental Specialist Advanced





Show search results for 32.626...


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# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64</b>	<b>Q16</b>	<b>Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
	CP 01656 POD2	3	4	3	17	19S	32E	613364	3613648 

<b>Driller License:</b>	1711	<b>Driller Company:</b>	STRAUB CORPORATION	
<b>Driller Name:</b>	BRYAN, EDWARD			
<b>Drill Start Date:</b>	03/28/2017	<b>Drill Finish Date:</b>	03/28/2017	<b>Plug Date:</b> 03/28/2017
<b>Log File Date:</b>	05/05/2017	<b>PCW Rcv Date:</b>		<b>Source:</b>
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>		<b>Estimated Yield:</b>
<b>Casing Size:</b>		<b>Depth Well:</b>	70 feet	<b>Depth Water:</b>

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.

2/21/22 11:15 AM

POINT OF DIVERSION SUMMARY




# 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
	CP 01656 POD1	3	4	3	17	19S	32E	613368	3613646 

**Driller License:** 1711**Driller Company:** STRAUB CORPORATION**Driller Name:** EDWARD BRYAN**Drill Start Date:** 03/28/2017**Drill Finish Date:** 03/28/2017**Plug Date:** 03/28/2017**Log File Date:** 05/05/2017**PCW Rcv Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:** 70 feet**Depth Water:**

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.

2/21/22 11:16 AM

POINT OF DIVERSION SUMMARY



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD 2) LUSK DEEP UNIT A #19 SB-2				OSE FILE NUMBER(S) CP-1656			
	WELL OWNER NAME(S) TETRA TECH				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 4000 N.BIG SPRING ST, STE 401				CITY Midland		STATE Tx	ZIP 79705
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 39	SECONDS 16.7	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	47	28.1	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 OF SECTION 17, TOWNSHIP 19S, RANGE 32E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1711		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 3-28-17	DRILLING ENDED 3-28-17	DEPTH OF COMPLETED WELL (FT) 70'		BORE HOLE DEPTH (FT) 70'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	70'	6"	N/A	N/A	N/A	N/A	N/A
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL		AMOUNT (cubic feet)	METHOD OF PLACEMENT	
	0	2'	6"	.5 CEMENT			TOPLOAD	
	2	70'	6"	21 BAGS OF 3/8 HOLEPLUG			TOPLOAD	

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1656	POD NUMBER	2	TRN NUMBER	606732
LOCATION	19S.32E.17.343				

PAGE 1 OF 2

#### 4. HYDROGEOLOGIC LOG OF WELL

## 5. TEST; RIG SUPERVISION

## 6. SIGNATURE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION			PAGE 2 OF 2



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD 1) LUSK DEEP UNIT A #19 <b>SB-T2</b>				OSE FILE NUMBER(S) CP-1656			
	WELL OWNER NAME(S) TETRA TECH				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 4000 N.BIG SPRING ST, STE 401				CITY Midland		STATE Tx	ZIP 79705
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 39	SECONDS 16.7	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	47	28.1	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 OF SECTION 17, TOWNSHIP 19S, RANGE 32E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1711		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 3-28-17	DRILLING ENDED 3-28-17	DEPTH OF COMPLETED WELL (FT) 70'	BORE HOLE DEPTH (FT) 70'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	70'	6"	N/A	N/A	N/A	N/A	N/A
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	2'	6"	.5 CEMENT		TOPLOAD		
	2	70'	6"	21 BAGS OF 3/8 HOLEPLUG		TOPLOAD		

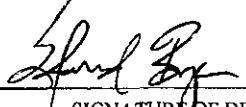
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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1656	POD NUMBER	1	TRN NUMBER	603806
LOCATION	19S.32E.17.3.4.3				OPBS

PAGE 1 OF 2



4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	1'	1'	TAN FINE SAND	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	1'	7'	6'	RED FINE SAND	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	7'	9'	2'	RED FINE SAND - GYPSUM	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	9'	12'	3'	TAN FINE SAND SILICEOUS SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	12'	14'	2'	TAN FINE SAND - CEMENT SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	14'	22'	8'	TAN VERY FINE SAND - CEMENT SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	22'	25'	3'	RED VERY FINE SAND & SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	25'	28'	3'	TAN VERY FINE SAND - SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	28'	41'	13'	RED VERY FINE SAND	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	41'	49'	8'	RED SANDY CLAY	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	49'	56'	7'	RED SILTY SAND WITH CLAY	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	56'	66'	10'	RED SILTY SAND - SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	66'	70'	4'	RED SILTY SAND - SILTY CLAY	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
	TD	70'			<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
					<input type="radio"/> Y <input type="radio"/> N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="radio"/> PUMP					TOTAL ESTIMATED	
<input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input type="radio"/> OTHER - SPECIFY:					WELL YIELD (gpm):	
5. TEST; RIG SUPERVISION	WELL TEST TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.					
	MISCELLANEOUS INFORMATION:					
	SOIL BORING ONLY - SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING. LEA COUNTY, NM					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:						
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:					
	 <u>EDWARD BRYAN</u> <u>3-29-17</u> SIGNATURE OF DRILLER / PRINT SIGNEE NAME DATE					

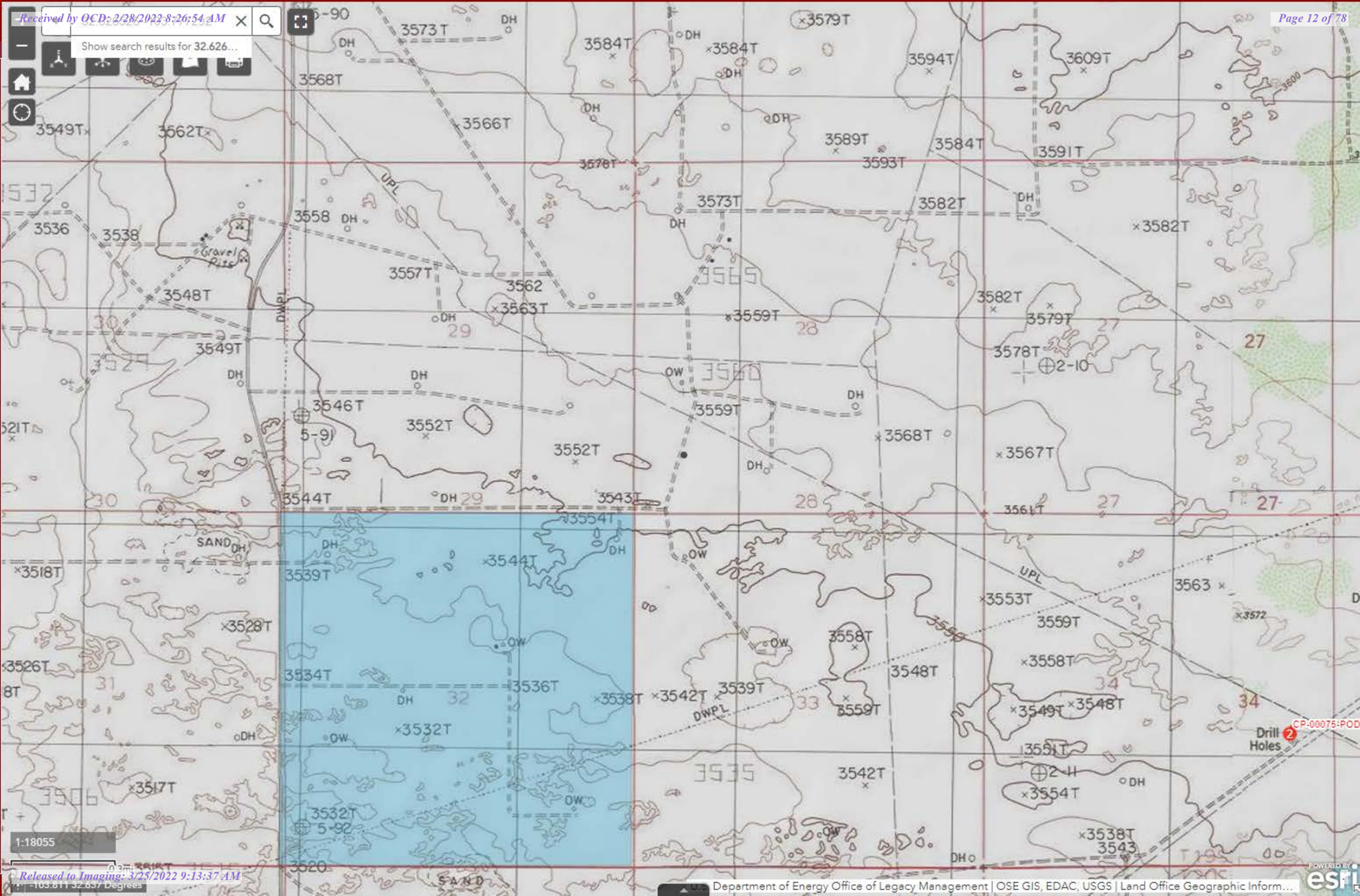
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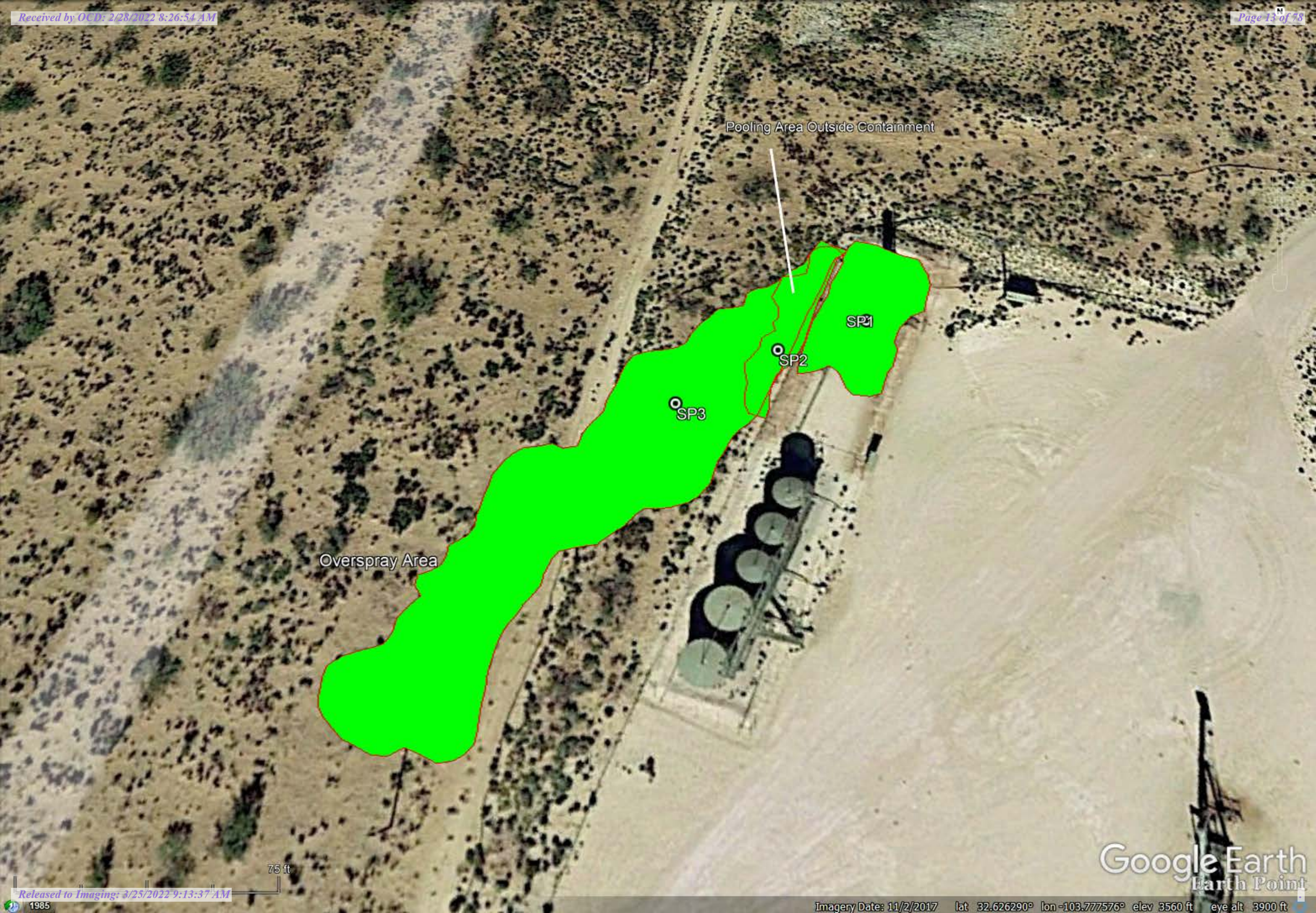
FILE NUMBER	CP-1656	POD NUMBER	TRN NUMBER
LOCATION	195.32E, 17.3-4.3		
			PAGE 2 OF 2



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Pooling Area Outside Containment

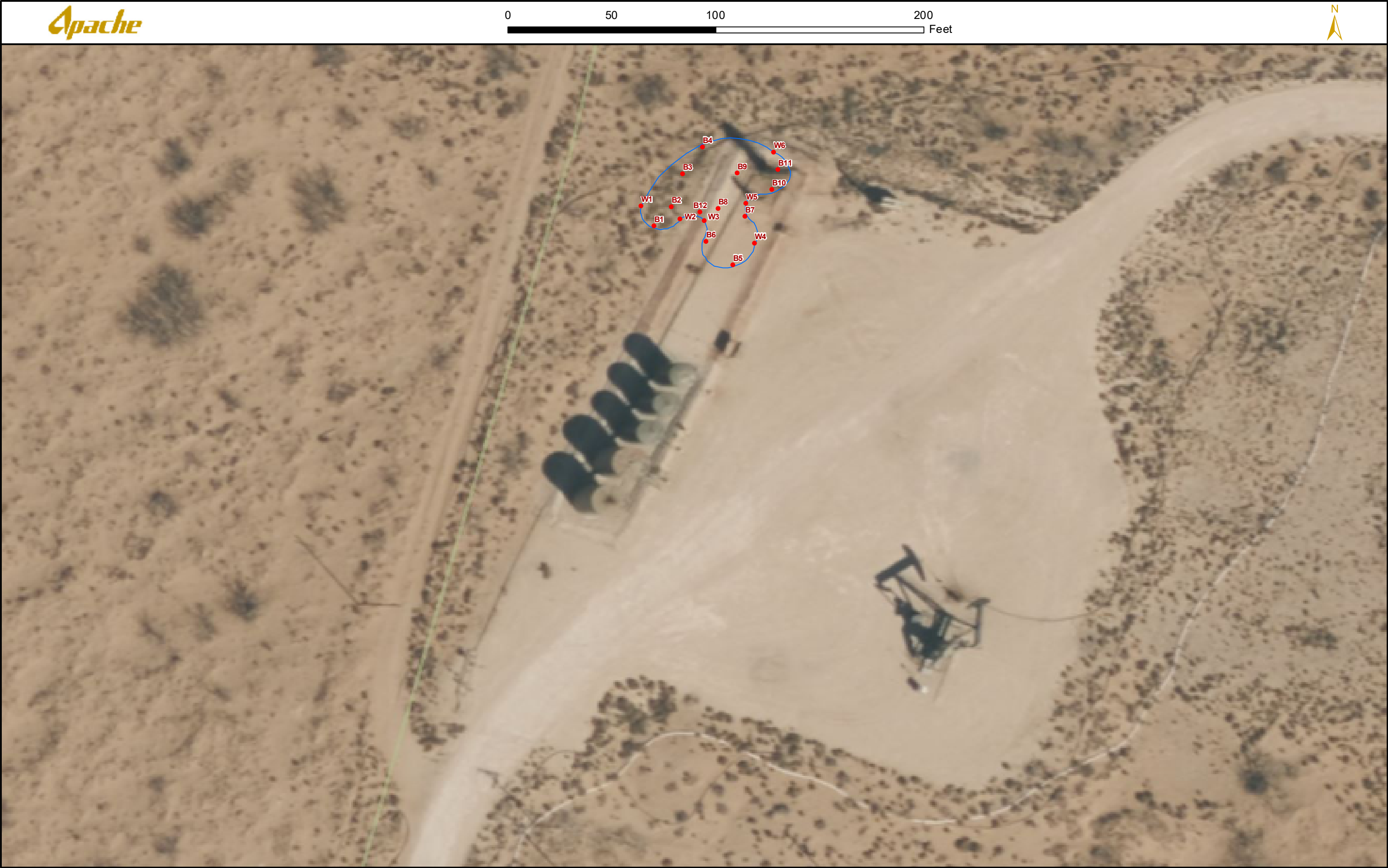
SP1

SP2

SP3

Overspray Area

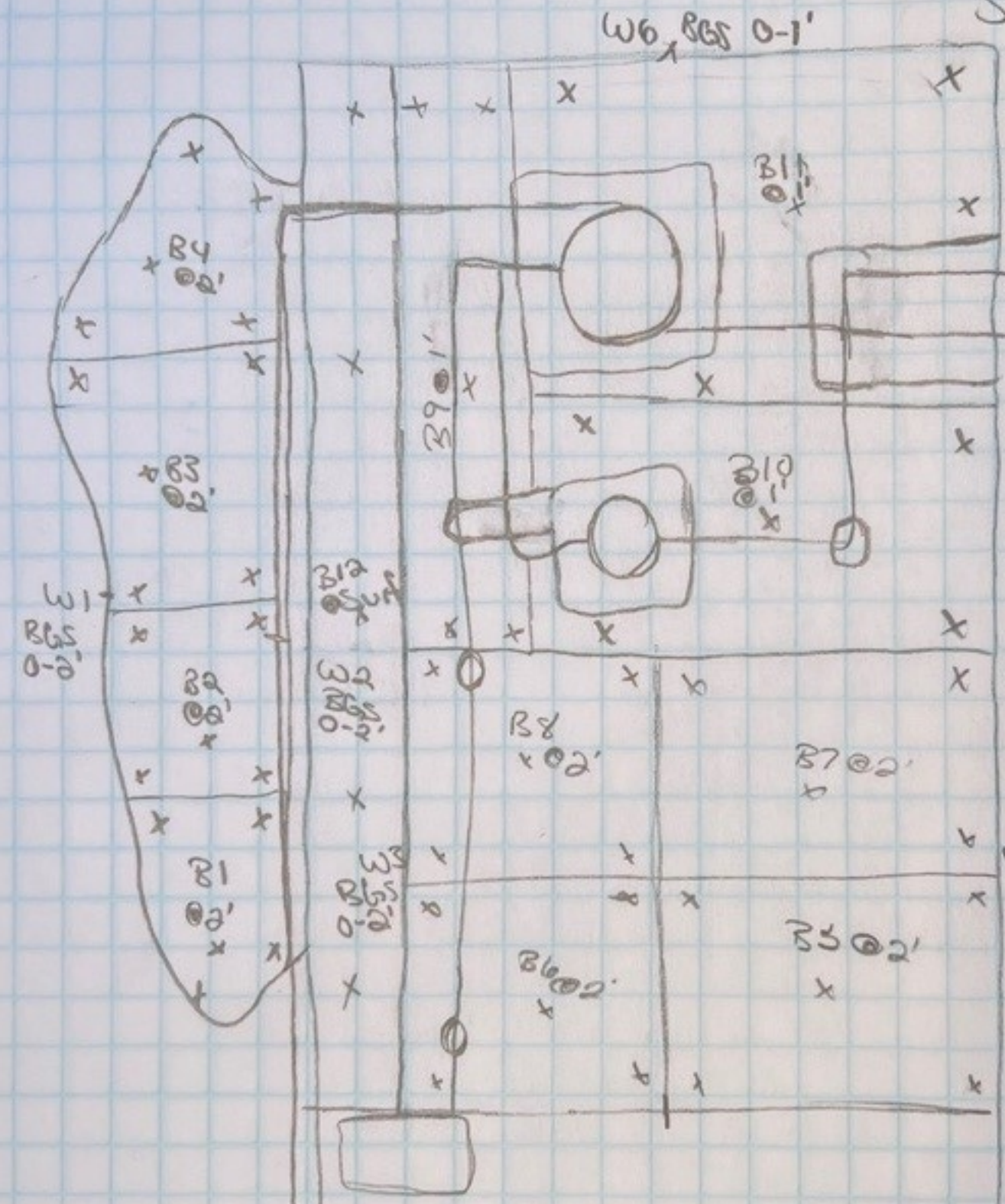
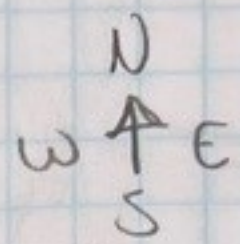






Apache

South Lusk 28  
Feb 1-H



Wall GPS

	GPS	RGS
w1	32.6264706 -103.7774516	0-2'
w2	32.6264542 -103.7774003	0-2'
w3	32.6264520 -103.7773688	0-2'
w4	32.6264218 -103.7773021	0-2'
w5	32.6264743 -103.7773138	1-2'
w6	32.6265421 -103.7772766	0-1'

Bottoms GPS

	GPS	RGS
w4 02' B1	32.6264446	-103.7774345
02' B2	32.6264701	-103.7774117
02' B3	32.6265135	-103.7773969
02' B4	32.6265491	-103.7773701
02' B5	32.6263932	-103.7773302
02' B6	32.6264240	-103.7773661
02' B7	32.6264573	-103.7773148
02' B8	32.6264681	-103.7773497
01' B9	32.6265149	-103.7773252
01' B10	32.6264932	-103.7772796
01' B11	32.6265195	-103.7772715
05 B12	32.6264633	-103.7773735

evidence  
I-PAD



## Delineation Samples

Sample Date	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
1/11/2022	SP1	S	2,640	0.239	5.45	4.11	12.6	22.4	227	3,220	369	32.62644559 -103.7773259
		1'	32	<0.050	0.117	0.198	0.845	1.16	10.9	138	<10.0	
		2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	67.6	<10.0	
		3'	<16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
1/12/2022		4'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		5'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
1/12/2022	SP2	S	560	0.556	22.8	20.6	68.3	112	1310	8740	1240	32.6264108 -103.7774352
		1'	80	<0.050	<0.050	<0.050	0.217	<0.300	10.5	115	<10.0	
		2'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		3'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		4'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	18	<10.0	
1/12/2022	SP3	S	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6263537 -103.7775569

## Final Samples

Sample Date	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
1/21/2022	B1	2'	<16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.7	<10.0	32.6264446 -103.7774345
1/21/2022	B2	2'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	56	<10.0	32.6264701 -103.7774117
1/21/2022	B3	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	19.1	<10.0	32.6265135 -103.7773969
1/21/2022	B4	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	93.8	34.5	32.6265491 -103.7773701
1/25/2022	B4	3'	<16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
1/21/2022	B5	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6263932 -103.7773302
1/21/2022	B6	2'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264240 -103.7773661

1/21/2022	B7	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	34.6	<10.0	32.6264573 -103.7773148
1/21/2022	B8	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	27.8	<10.0	32.6264681 -103.7773497
1/25/2022	B9	1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6265149 -103.7773252
1/25/2022	B10	1'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264932 -103.7772796
1/25/2022	B11	1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.5	<10.0	32.6265195 -103.7772715
1/21/2022	B12	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	55.8	10.6	32.6264633 -103.7773735
1/21/2022	W1	0-2'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264706 -103.7774516
1/21/2022	W2	0-2'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264542 -103.7774003
1/21/2022	W3	0-2'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264520 - 103.7773688
1/21/2022	W4	0-2'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	121	26.8	32.6264218 - 103.7773021
2/8/2022	W4	0-2'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
1/25/2022	W5	1-2'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6264743 - 103.7773138
1/25/2022	W6	0-1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.6265421 - 103.7772766



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

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January 14, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/11/22 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	01/11/2022	Sampling Date:	01/11/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ SURFACE (H220110-01)**

BTX 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.239</b>	0.050	01/13/2022	ND	2.05	102	2.00	3.25	
<b>Toluene*</b>	<b>5.45</b>	0.050	01/13/2022	ND	1.93	96.4	2.00	3.42	
<b>Ethylbenzene*</b>	<b>4.11</b>	0.050	01/13/2022	ND	1.93	96.3	2.00	3.87	
<b>Total Xylenes*</b>	<b>12.6</b>	0.150	01/13/2022	ND	6.00	100	6.00	3.81	
<b>Total BTX</b>	<b>22.4</b>	0.300	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 163 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2640</b>	16.0	01/13/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>227</b>	10.0	01/13/2022	ND	196	97.8	200	0.476	
<b>DRO &gt;C10-C28*</b>	<b>3220</b>	10.0	01/13/2022	ND	197	98.7	200	6.06	
<b>EXT DRO &gt;C28-C36</b>	<b>369</b>	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 123 % 66.9-136

Surrogate: 1-Chlorooctadecane 184 % 59.5-142

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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:	01/11/2022	Sampling Date:	01/11/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ 1' (H220110-02)**

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	01/13/2022	ND	2.05	102	2.00	3.25		
Toluene*	0.117	0.050	01/13/2022	ND	1.93	96.4	2.00	3.42		
Ethylbenzene*	0.198	0.050	01/13/2022	ND	1.93	96.3	2.00	3.87		
Total Xylenes*	0.845	0.150	01/13/2022	ND	6.00	100	6.00	3.81		
Total BTX	1.16	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/13/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	10.9	10.0	01/13/2022	ND	196	97.8	200	0.476		
DRO >C10-C28*	138	10.0	01/13/2022	ND	197	98.7	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND						

Surrogate: 1-Chlorooctane 99.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 103 % 59.5-142

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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:	01/11/2022	Sampling Date:	01/11/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ 2' (H220110-03)**

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	01/13/2022	ND	2.05	102	2.00	3.25	
Toluene*	<0.050	0.050	01/13/2022	ND	1.93	96.4	2.00	3.42	
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.93	96.3	2.00	3.87	
Total Xylenes*	<0.150	0.150	01/13/2022	ND	6.00	100	6.00	3.81	
Total BTEx	<0.300	0.300	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/13/2022	ND	416	104	400	3.92	

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	01/13/2022	ND	196	97.8	200	0.476	
DRO >C10-C28*	67.6	10.0	01/13/2022	ND	197	98.7	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 97.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 101 % 59.5-142

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:	01/11/2022	Sampling Date:	01/11/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ 3' (H220110-04)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12		
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81		
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61		
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42		
Total BTEx	<0.300	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-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	01/13/2022	ND	416	104	400	3.92		

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	01/13/2022	ND	196	97.8	200	0.476	
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	197	98.7	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 95.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 98.5 % 59.5-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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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-006 R-3.2 10/07/21

(575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Company Name: **Apace**

Project Manager: **Bruce Reber**

Address:

City: **Hobbs**

State: **NM** Zip: **88001**

Phone #:

Fax #:

Project #:

Project Owner:

Project Name:

Project Location: **Lusk South AS**

Sampler Name: **Joe Casaccia Jr**

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

**H220110**

**1 SPI Surface  
2 SPI 0.1'  
3 SPI 0.2'  
4 SPI 0.3'**

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

**1-11 11:02  
1-11 11:04  
1-11 11:06  
1-11 11:08**

**X X X X  
X X X X  
X X X X  
X X X X**

**CX TPH  
BTEX**

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date:

Time: **1-11-02**

Relinquished By:

Date:

Time:

Received By:

Received By:

Relinquished By:

Date:

Time:

Delivered By: (Circle One)

Observed Temp. °C **5.1**

Sample Condition Cool Intact ☒ Yes ☐ No

CHECKED BY: (Initials)

Sampler - UPS - Bus - Other:

Corrected Temp. °C **4.6**

☐ Yes ☐ No

**T-C**

Turnaround Time:

Standard Rush ☒

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ No

Thermometer ID #113 Correction Factor -0.5°C

☐ Yes ☐ No

Corrected Temp. °C

+ Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

---

January 14, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/12/22 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	01/12/2022	Sampling Date:	01/12/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ 4' (H220126-01)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12	
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81	
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61	
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42	
Total BTX	<0.300	0.300	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	01/13/2022	ND	400	100	400	7.69	

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	01/13/2022	ND	198	98.8	200	1.82	
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	180	90.2	200	2.89	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 74.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 75.3 % 59.5-142

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:	01/12/2022	Sampling Date:	01/12/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: SP 1 @ 5' (H220126-02)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12		
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81		
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61		
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42		
Total BTX	<0.300	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/13/2022	ND	400	100	400	7.69		

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	01/13/2022	ND	198	98.8	200	1.82	
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	180	90.2	200	2.89	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 74.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 73.3 % 59.5-142

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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: 01/12/2022  
 Reported: 01/14/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: NONE GIVEN  
 Project Location: EUNICE, NM

Sampling Date: 01/12/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 @ SURFACE (H220126-03)**

BTX 8021B		mg/kg	Analyzed By: MS/					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.556</b>	0.200	01/13/2022	ND	1.97	98.4	2.00	7.12	
<b>Toluene*</b>	<b>22.8</b>	0.200	01/13/2022	ND	1.90	95.1	2.00	7.81	
<b>Ethylbenzene*</b>	<b>20.6</b>	0.200	01/13/2022	ND	1.92	96.1	2.00	7.61	
<b>Total Xylenes*</b>	<b>68.3</b>	0.600	01/13/2022	ND	5.83	97.2	6.00	7.42	
<b>Total BTX</b>	<b>112</b>	1.20	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 206 % 69.9-140

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>560</b>	16.0	01/13/2022	ND	400	100	400	7.69	

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>1310</b>	10.0	01/13/2022	ND	198	98.8	200	1.82	
<b>DRO &gt;C10-C28*</b>	<b>8740</b>	10.0	01/13/2022	ND	180	90.2	200	2.89	
<b>EXT DRO &gt;C28-C36</b>	<b>1240</b>	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 224 % 66.9-136

Surrogate: 1-Chlorooctadecane 197 % 59.5-142

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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: 01/12/2022  
 Reported: 01/14/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: NONE GIVEN  
 Project Location: EUNICE, NM

Sampling Date: 01/12/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 @ 1' (H220126-04)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12	
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81	
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61	
<b>Total Xylenes*</b>	<b>0.217</b>	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42	
Total BTEx	<0.300	0.300	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/13/2022	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.5	10.0	01/13/2022	ND	198	98.8	200	1.82	
DRO >C10-C28*	115	10.0	01/13/2022	ND	180	90.2	200	2.89	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 83.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 85.6 % 59.5-142

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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:	01/12/2022	Sampling Date:	01/12/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: SP 2 @ 2' (H220126-05)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12		
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81		
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61		
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42		
Total BTX	<0.300	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/13/2022	ND	400	100	400	7.69		

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	01/13/2022	ND	198	98.8	200	1.82		
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	180	90.2	200	2.89		
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND						

Surrogate: 1-Chlorooctane 76.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 79.0 % 59.5-142

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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:	01/12/2022	Sampling Date:	01/12/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: SP 2 @ 3' (H220126-06)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12		
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81		
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61		
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42		
Total BTEx	<0.300	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-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	01/13/2022	ND	400	100	400	7.69		

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	01/13/2022	ND	198	98.8	200	1.82	
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	180	90.2	200	2.89	
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND					

Surrogate: 1-Chlorooctane 79.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 79.6 % 59.5-142

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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:	01/12/2022	Sampling Date:	01/12/2022
Reported:	01/14/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: SP 2 @ 4' (H220126-07)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12	
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81	
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61	
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42	
Total BTEX	<0.300	0.300	01/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

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	01/13/2022	ND	400	100	400	3.92		

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	01/14/2022	ND	198	98.8	200	1.82	
DRO >C10-C28*	18.0	10.0	01/14/2022	ND	180	90.2	200	2.89	
EXT DRO >C28-C36	<10.0	10.0	01/14/2022	ND					

Surrogate: 1-Chlorooctane 69.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 67.8 % 59.5-142

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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: 01/12/2022  
 Reported: 01/14/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: NONE GIVEN  
 Project Location: EUNICE, NM

Sampling Date: 01/12/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 @ SURFACE (H220126-08)**

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	01/13/2022	ND	1.97	98.4	2.00	7.12		
Toluene*	<0.050	0.050	01/13/2022	ND	1.90	95.1	2.00	7.81		
Ethylbenzene*	<0.050	0.050	01/13/2022	ND	1.92	96.1	2.00	7.61		
Total Xylenes*	<0.150	0.150	01/13/2022	ND	5.83	97.2	6.00	7.42		
Total BTX	<0.300	0.300	01/13/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/13/2022	ND	400	100	400	3.92		

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	01/13/2022	ND	198	98.8	200	1.82		
DRO >C10-C28*	<10.0	10.0	01/13/2022	ND	180	90.2	200	2.89		
EXT DRO >C28-C36	<10.0	10.0	01/13/2022	ND						

Surrogate: 1-Chlorooctane 81.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 81.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

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### Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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

Company Name: <u>Acquity</u>		P.O. #:		BILL TO				ANALYSIS REQUEST			
Project Manager: <u>Rene Baker</u>		Company:									
Address:		Attn:									
City: <u>Hobbs</u>		Address:									
State: <u>NM</u> Zip: <u>88240</u>		City:									
Phone #:		State:									
Project #:		Zip:									
Project Name:		Phone #:									
Project Location: <u>Light South St</u>		Fax #:									
Sampler Name: <u>Joe Schneider Jr.</u>		PRESERV									
FOR LAB USE ONLY		SAMPLING									

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	C/	Ext TPH	BTEX	ANALYSIS REQUEST			
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						ACID/BASE:	ICE / COOL	OTHER :	
<u>H20126</u>	<u>1 SP1 @ 3'4'</u>		1	/	/	/	/	/	/	1-12	9:34	X	X	X				
	<u>2 SP1 @ 5'</u>		1	/	/	/	/	/	/	1-12	9:36	X	X	X				
	<u>3 SP2 @ Surface</u>		1	/	/	/	/	/	/	1-12	10:18	X	X	X				
	<u>4 SP2 @ 1'</u>		1	/	/	/	/	/	/	1-12	10:22	X	X	X				
	<u>5 SP2 @ 2'</u>		1	/	/	/	/	/	/	1-12	10:24	X	X	X				
	<u>6 SP2 @ 3'</u>		1	/	/	/	/	/	/	1-12	10:26	X	X	X				
	<u>7 SP2 @ 4'</u>		1	/	/	/	/	/	/	1-12	10:28	X	X	X				
	<u>8 SP3 @ Surface</u>		1	/	/	/	/	/	/	1-12	10:28	X	X	X				

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Relinquished By: <u>[Signature]</u>	Date: <u>1-12-22</u>	Received By: <u>[Signature]</u>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By: <u>[Signature]</u>	Date: <u>1-12-22</u>	Received By: <u>[Signature]</u>	All Results are emailed. Please provide Email address:
REMARKS: <u>Rene Baker</u>			

Delivered By: (Circle One)	Observed Temp. °C <u>10.1</u>	Sample Condition	CHECKED BY: <u>[Signature]</u>	Turnaround Time:	Standard	Bacteria (only)
Sampler - UPS - Bus - Other:	Corrected Temp. °C <u>5.10</u>	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Initials)	Thermometer ID #113	<input checked="" type="checkbox"/> Rush	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No
				Correction Factor -0.5°C		Observed Temp. °C
						Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

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January 27, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/21/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 1 @ 2' (H220252-01)**

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	01/26/2022	ND	2.10	105	2.00	1.49	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	101	2.00	1.69	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.05	102	2.00	1.67	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.19	103	6.00	1.37	
Total BTX	<0.300	0.300	01/26/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
<b>DRO &gt;C10-C28*</b>	<b>10.7</b>	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 104 % 66.9-136

Surrogate: 1-Chlorooctadecane 103 % 59.5-142

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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 2 @ 2' (H220252-02)**

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	01/26/2022	ND	2.10	105	2.00	1.49	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	101	2.00	1.69	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.05	102	2.00	1.67	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.19	103	6.00	1.37	
Total BTX	<0.300	0.300	01/26/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	56.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 98.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 97.9 % 59.5-142

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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 3 @ 2' (H220252-03)**

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	01/26/2022	ND	2.10	105	2.00	1.49	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	101	2.00	1.69	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.05	102	2.00	1.67	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.19	103	6.00	1.37	
Total BTX	<0.300	0.300	01/26/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	19.1	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 97.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.1 % 59.5-142

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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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 4 @ 2' (H220252-04)**

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	01/26/2022	ND	2.10	105	2.00	1.49	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	101	2.00	1.69	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.05	102	2.00	1.67	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.19	103	6.00	1.37	
Total BTX	<0.300	0.300	01/26/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	93.8	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	34.5	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 95.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.5 % 59.5-142

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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: 01/21/2022  
 Reported: 01/27/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: SOUTH LUSK 28  
 Project Location: EUNICE, NM

Sampling Date: 01/21/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 5 @ 2' (H220252-05)**

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	01/26/2022	ND	2.10	105	2.00	1.49	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	101	2.00	1.69	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.05	102	2.00	1.67	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.19	103	6.00	1.37	
Total BTEx	<0.300	0.300	01/26/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 96.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.4 % 59.5-142

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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 6 @ 2' (H220252-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616		
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43		
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00		
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76		
Total BTEx	<0.300	0.300	01/26/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 99.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 98.3 % 59.5-142

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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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 7 @ 2' (H220252-07)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616	
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76	
Total BTEx	<0.300	0.300	01/26/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	34.6	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 101 % 66.9-136

Surrogate: 1-Chlorooctadecane 99.5 % 59.5-142

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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: B 8 @ 2' (H220252-08)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616		
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43		
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00		
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76		
Total BTEx	<0.300	0.300	01/26/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	27.8	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 97.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.5 % 59.5-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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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

Company Name: **Apacut**

Project Manager: **Bruce Baker**

Address:

City: **Hobbs** State: **NM** Zip: **88240**

Phone #: **505-251-1111** Fax #: **505-251-1111**

Project #:

Project Name:

Project Location: **South West 38**

Sampler Name: **Joe Guadalupe**

FOR LAB USE ONLY

**BILL TO**

P.O. #:

Company:

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

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Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	Ext TPH	BTEX	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							ACID/BASE:
1	B1 @ 2'	C	1									1-21	9:42	X	X	
2	B2 @ 2'	C	1									1-21	9:44	X	X	
3	B3 @ 2'	C	1									1-21	9:46	X	X	
4	B4 @ 2'	C	1									1-21	9:48	X	X	
5	B5 @ 2'	C	1									1-21	2:48	X	X	
6	B6 @ 2'	C	1									1-21	2:50	X	X	
7	B7 @ 2'	C	1									1-21	2:52	X	X	
8	B8 @ 2'	C	1									1-21	2:54	X	X	

Relinquished By: **Joe Guadalupe** Date: **1-21** Time: **10-15**

Received By: **John Anderson**

Relinquished By: **Joe Guadalupe** Date: **1-21** Time: **10-15**

Received By: **John Anderson**

REMARKS:

Turnaround Time: **Standard** ☒ **Rush** ☐

Thermometer ID #113 ☒ Bacteria (only) ☐

Correction Factor -0.5°C ☐ Cool Intact ☐ Observed Temp. °C ☐

Corrected Temp. °C ☐



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

---

January 27, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/21/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 style with a large, stylized 'C' and 'K'.

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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: W 1 BGS 0-2' (H220253-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616	
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76	
Total BTEX	<0.300	0.300	01/26/2022	ND					

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

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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 93.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.1 % 59.5-142

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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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: W 2 BGS 0-2' (H220253-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616		
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43		
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00		
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76		
Total BTX	<0.300	0.300	01/26/2022	ND						

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

Chloride, SM4500CI-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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 94.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.2 % 59.5-142

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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: 01/21/2022  
 Reported: 01/27/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: SOUTH LUSK 28  
 Project Location: EUNICE, NM

Sampling Date: 01/21/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W 3 BGS 0-2' (H20253-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616	
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76	
Total BTEx	<0.300	0.300	01/26/2022	ND					

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

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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 97.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.7 % 59.5-142

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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:	01/21/2022	Sampling Date:	01/21/2022
Reported:	01/27/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Jodi Henson
Project Location:	EUNICE, NM		

**Sample ID: W 4 BGS 0-2' (H220253-04)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2022	ND	2.12	106	2.00	0.616	
Toluene*	<0.050	0.050	01/26/2022	ND	2.24	112	2.00	1.43	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.11	105	2.00	1.00	
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.65	111	6.00	1.76	
Total BTX	<0.300	0.300	01/26/2022	ND					

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

Chloride, SM4500CI-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	01/26/2022	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	01/26/2022	ND	173	86.7	200	6.76	
DRO >C10-C28*	121	10.0	01/26/2022	ND	226	113	200	3.26	
EXT DRO >C28-C36	26.8	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 98.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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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

Company Name: <u>Apurva</u>		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: <u>Bruce Baker</u>		Company:					
Address:		Attn:					
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Address:					
Phone #: _____ Fax #: _____		City:					
Project #: _____ Project Owner:		State:					
Project Name:		Zip:					
Project Location: <u>South Lush 28</u>		Phone #:					
Sampler Name: <u>Joel Muscarello</u>		Fax #:					
FOR LAB USE ONLY		PRESERV		SAMPLING			
Lab I.D.		(G)RAB OR (C)OMP.		# CONTAINERS			
Sample I.D.		GROUNDWATER		WASTEWATER			
		SOIL		OIL			
		SLUDGE		OTHER :			
		ACID/BASE:		ICE / COOL			
		OTHER :					
		DATE		TIME			
<u>H20253</u>		<u>1-21</u>		<u>9:38</u>		<u>C1</u>	
<u>1 W1 BGS 0-2'</u>		<u>1-21</u>		<u>9:40</u>		<u>EXT TH</u>	
<u>2 W2 BGS 0-2'</u>		<u>1-21</u>		<u>2:56</u>		<u>BTEX</u>	
<u>3 W3 BGS 0-2'</u>		<u>1-21</u>		<u>2:58</u>			
<u>4 W4 BGS 0-2'</u>							

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. 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: Joel Muscarello Date: 1-21 Time: 10:15  
Received By: Joel Muscarello  
Date: 1-21 Time: 10:15  
Received By: Joel Muscarello

Delivered By: (Circle One) Observed Temp. °C 63 Sample Condition: Intact CHECKED BY: (Initials)  
Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No  
Sampler - UPS - Bus - Other: Corrected Temp. °C 58 Thermometer ID #113 Standard ☒ Add'l Phone #: \_\_\_\_\_  
Correction Factor -0.5°C Bacteria (only) Sample Condition: Intact  
Cool ☒ Yes ☐ No Observed Temp. °C \_\_\_\_\_  
Corrected Temp. °C \_\_\_\_\_

REMARKS: Base line

Verbal Result: ☐ Yes ☐ No Add'l Phone #: \_\_\_\_\_  
All Results are emailed. Please provide Email address: \_\_\_\_\_

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

---

January 31, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/25/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 style with a large, stylized 'C' and 'K'.

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:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: B 9 @ 1' (H220291-01)**

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	01/29/2022	ND	2.08	104	2.00	4.39	
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42	
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77	
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49	
Total BTX	<0.300	0.300	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/27/2022	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	01/27/2022	ND	212	106	200	0.983	
DRO >C10-C28*	<10.0	10.0	01/27/2022	ND	204	102	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 114 % 66.9-136

Surrogate: 1-Chlorooctadecane 118 % 59.5-142

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

Received:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: B 10 @ 1' (H220291-02)**

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	01/29/2022	ND	2.08	104	2.00	4.39	
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42	
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77	
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49	
Total BTEx	<0.300	0.300	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/27/2022	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	01/27/2022	ND	212	106	200	0.983	
DRO >C10-C28*	<10.0	10.0	01/27/2022	ND	204	102	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 111 % 66.9-136

Surrogate: 1-Chlorooctadecane 113 % 59.5-142

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:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: B 11 @ 1' (H220291-03)**

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	01/29/2022	ND	2.08	104	2.00	4.39	
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42	
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77	
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49	
Total BTEx	<0.300	0.300	01/29/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/27/2022	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	01/27/2022	ND	212	106	200	0.983	
DRO >C10-C28*	10.5	10.0	01/27/2022	ND	204	102	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 110 % 66.9-136

Surrogate: 1-Chlorooctadecane 113 % 59.5-142

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:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: B 12 @ SURFACE (H220291-04)**

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	01/29/2022	ND	2.08	104	2.00	4.39		
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49		
Total BTEx	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 69.9-140

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	01/27/2022	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	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	55.8	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	10.6	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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

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

---

Cardinal Laboratories

\*=Accredited Analyte

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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

Company Name: <u>Apache</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>													
Project Manager: <u>Bruce Baker</u>		P.O. #:															
Address:		Company:															
City: <u>Hobbs</u>		Attn:															
State: <u>NM</u> Zip: <u>88240</u>		Address:															
Phone #:		City:															
Project #:		State:															
Project Name:		Zip:															
Project Location: <u>South Lick</u>		Phone #:															
Sampler Name: <u>Jack Schneider</u>		Fax #:															
FOR LAB USE ONLY																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING						
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME			
<u>H226291</u>	<u>1 RA 0.1</u>	<u>C</u>	<u>1</u>										<u>1-25</u>	<u>10:42</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>2 RA 0.1</u>	<u>C</u>	<u>1</u>										<u>1-25</u>	<u>10:44</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>3 RA 0.1</u>	<u>C</u>	<u>1</u>										<u>1-25</u>	<u>10:46</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>4 RA 0.1</u>	<u>C</u>	<u>1</u>										<u>1-25</u>	<u>10:48</u>	<u>X</u>	<u>X</u>	<u>X</u>
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Relinquished By: <u>Doan Russell</u>		Date: <u>1-25</u>		Received By: <u>Bruce Baker</u>		Date: <u>1-25</u>											
Relinquished By: <u>Doan Russell</u>		Time: <u>1:35</u>		Received By: <u>Bruce Baker</u>		Time: <u>1:35</u>											
Delivered By: (Circle One)		Observed Temp. °C <u>0.4</u>		Sample Condition		CHECKED BY: (Initials)											
Sampler - UPS - Bus - Other:		Corrected Temp. °C <u>-0.1</u>		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Turnaround Time:		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Bacteria (only) <input type="checkbox"/>		Sample Condition											
Thermometer ID #113		Correction Factor -0.5°C		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		Observed Temp. °C											
				Cool <input type="checkbox"/> Intact <input type="checkbox"/>		Corrected Temp. °C											

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

January 31, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 01/25/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: W 5 BGS 1-2' (H220292-01)**

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	01/29/2022	ND	2.08	104	2.00	4.39	
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42	
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77	
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49	
Total BTEX	<0.300	0.300	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

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	01/27/2022	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	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 106 % 66.9-136

Surrogate: 1-Chlorooctadecane 105 % 59.5-142

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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:	01/25/2022	Sampling Date:	01/25/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	SOUTH LUSK 28	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: W 6 BGS 0-1' (H220292-02)**

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	01/29/2022	ND	2.08	104	2.00	4.39		
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49		
Total BTEx	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-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	01/27/2022	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	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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-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.
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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Cardinal Laboratories

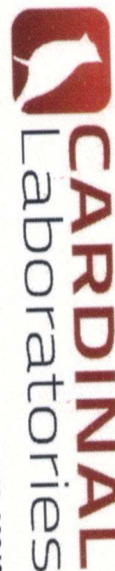
\*=Accredited Analyte

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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

[illegible]



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

February 09, 2022

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LUSK SOUTH 28

Enclosed are the results of analyses for samples received by the laboratory on 02/08/22 15:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 style with a large, stylized 'C' and 'K'.

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:	02/08/2022	Sampling Date:	02/08/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	LUSK SOUTH 28	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EUNICE, NM		

**Sample ID: W 4 BGS 0-2' (H220486-01)**

BTEX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2022	ND	2.03	102	2.00	6.67	
Toluene*	<0.050	0.050	02/09/2022	ND	1.98	99.0	2.00	7.69	
Ethylbenzene*	<0.050	0.050	02/09/2022	ND	1.90	95.0	2.00	8.46	
Total Xylenes*	<0.150	0.150	02/09/2022	ND	5.90	98.4	6.00	8.39	
Total BTEX	<0.300	0.300	02/09/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

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	02/09/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2022	ND	212	106	200	1.75	
DRO >C10-C28*	<10.0	10.0	02/09/2022	ND	225	112	200	0.235	
EXT DRO >C28-C36	<10.0	10.0	02/09/2022	ND					

Surrogate: 1-Chlorooctane 91.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 103 % 59.5-142

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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: 02/08/2022  
 Reported: 02/09/2022  
 Project Name: LUSK SOUTH 28  
 Project Number: NOT GIVEN  
 Project Location: EUNICE, NM

Sampling Date: 02/08/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 4 @ 3' (H220486-02)**

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2022	ND	2.03	102	2.00	6.67	
Toluene*	<0.050	0.050	02/09/2022	ND	1.98	99.0	2.00	7.69	
Ethylbenzene*	<0.050	0.050	02/09/2022	ND	1.90	95.0	2.00	8.46	
Total Xylenes*	<0.150	0.150	02/09/2022	ND	5.90	98.4	6.00	8.39	
Total BTX	<0.300	0.300	02/09/2022	ND					

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

Chloride, SM4500CI-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	02/09/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2022	ND	212	106	200	1.75	
DRO >C10-C28*	<10.0	10.0	02/09/2022	ND	225	112	200	0.235	
EXT DRO >C28-C36	<10.0	10.0	02/09/2022	ND					

Surrogate: 1-Chlorooctane 90.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 101 % 59.5-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

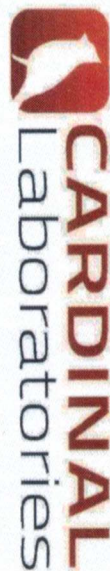
\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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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

[illegible]





















***Lusk South 28 Federal CTB  
nAPP21133448368  
Revegetation  
And  
Noxious Weed Plan***

**Revegetation Plan:**

All the disturbed area in the pasture will be properly prepared and reseeded with BLM # 2. The disturbed area will be monitored to ensure successful revegetation is achieved. If revegetation is not successful after a couple of growing seasons the site will be reseeded.

**Noxious Weed Plan:**

Apache Corporation will treat noxious weeds if they become established within the area of remediation. Weed control will be maintained on the disturbed land where noxious weeds exist both prior to remediation and restoration. Apache Corporation will consult with the Authorized Officer for acceptable weed control methods.

**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 84578

CONDITIONS

Operator:  APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID:  873
	Action Number:  84578
	Action Type:  [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Closure report approved.	3/25/2022