TETRA TECH

May 27, 2021

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
Warren Unit 134 Flowline Release
Unit Letter L, Section 27, Township 20 South, and Range 38 East
Lea County, New Mexico
Incident ID# NAPP2107046560

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a flowline of the Warren Unit 134 well (API #30-025-33487) at a point approximately 1,500 feet (ft) southeast of the well. The release footprint is located in Public Land Survey System (PLSS) Unit Letter L, Section 27, Township 20 South and Range 38 East, Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.542155°, -103.144711°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on March 2, 2021. The release occurred as the result of a flowline rupture and encompasses an estimated area of 600 square ft. Approximately 6 (bbls) of produced water and 0.5 bbls of oil were reported released, of which 0 bbls of fluid were recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on March 12, 2021. The NMOCD Incident ID for this release is NAPP2107046560.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within ½ mile (800 meters) of the Site. The search radius was expanded and based on available data from one (1) water well located within 2,500 meters (approximately 1.55 miles) of the Site, the average depth to groundwater is 65 ft below ground surface (bgs). The well was drilled in June of 1978.

As the available water level information was from a well further than ½ mile away from the site and the data was more than 25 years old, COP elected to drill a boring to depth for groundwater verification. On May 12, 2021, a licensed well drilling subcontractor was onsite to a drill a groundwater determination borehole to 55 ft bgs and within a ½ mile radius of the release location. The borehole was temporarily set, screened and sealed using 2-inch PVC casing; 35 feet of solid riser and 20 feet of .010” slotted screen. The borehole

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901 West Wall St., Suite 100, Midland, TX 79701
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was left for 72 hours and checked for the presence of groundwater. No water was detected, and the borehole was dry. The screen and riser were removed, and the borehole was plugged with 3/8" bentonite chips on May 18, 2021. The borehole coordinates are 32.120658°, -103.563616° and the location is indicated on Figure 3. The Site characterization data, boring log, and borehole figure are included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data and the depth to water boring determination was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRAL
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule (19.15.29 NMAC)* (September 6, 2019), the following reclamation requirements for surface soils (0-4 ft bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg

SITE ASSESSMENT ACTIVITIES

The release footprint is located in an off-pad area. In order to achieve horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling on March 18, 2021, on behalf of ConocoPhillips. A total of six borings (AH-1 through AH-6) were installed with a hand auger. A total of nineteen (19) soil samples were collected from the six (6) locations within and surrounding the release extent. These soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method SM45000Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. Boring locations are shown in Figure 3. Copies of the analytical laboratory reports and chain-of-custody documentation are included in Appendix C. Boring logs, included as Appendix E, present soil descriptions, sample depths, and field screening data from the 2021 assessment activities at AH-5 and AH-6. Photographic documentation of the Site is included in Appendix D.

SUMMARY OF SAMPLING RESULTS

Results from the March 2021 soil sampling event are summarized in Table 1. The boring locations are shown in Figure 3. The analytical results associated with the AH-5 and AH-6 boring locations exceeded the Site chloride reclamation requirement of 600 mg/kg in the upper four feet. Analytical results associated with the AH-5 boring location below four feet did not exceed the proposed RRAL of 10,000 mg/kg. There were no other analytical results which exceeded the chloride reclamation requirement (600 mg/kg) during the assessment.

The analytical results associated with the AH-5 and AH-6 boring locations exceeded the reclamation concentration for TPH (100 mg/kg) down to 2 ft bgs and 4 ft bgs, respectively. The analytical results

associated with AH-6 boring locations exceeded the reclamation requirement for BTEX (50 mg/kg) down to 4 ft bgs. The remainder of the samples analyzed were below the BTEX or TPH Site RRALs of 50 mg/kg and 100 mg/kg, respectively. Horizontal and vertical delineation was achieved during this assessment.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove the impacted material as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 ft below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The southern area of the release extent that contains surface flowlines will be hand-dug to a maximum depth of 4 ft or the maximum extent practicable and heavy equipment will come no more than 3 ft from any pressurized lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 140 cubic yards.

CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 4. Five (5) confirmation floor samples and eight (8) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 870 square ft.

These confirmation sidewall and floor samples will be representative of no more than approximately 200 square feet of excavated area. Confirmation samples will be sent to an accredited laboratory for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0). Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade.

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in the first favorable growing season to aid in revegetation. Based on the soils at the site as determined the USDA Web Soil Survey, the New Mexico State Land Office (NMSLO) Sandy Loam (SL) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix F.

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CONCLUSION

This site assessment and characterization information has been provided to the appropriate district office within 90 days of the release discovery date. ConocoPhillips proposes to begin remediation activities at the Site within 90 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Project Manager

cc:
Ms. Kelsy Waggaman, GPBU – ConocoPhillips

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LIST OF ATTACHMENTS

Figures:

Figure 1 – Overview Map
Figure 2 – Topographic Map
Figure 3 – Approximate Release Extent and Site Assessment
Figure 4 – Proposed Remediation Extent and Confirmation Sampling Locations

Tables:

Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

Appendix A – C-141 Forms
Appendix B – Site Characterization Data
Appendix C – Laboratory Analytical Data
Appendix D – Photographic Documentation
Appendix E – Boring Logs
Appendix F – NMSLO Seed Mixture

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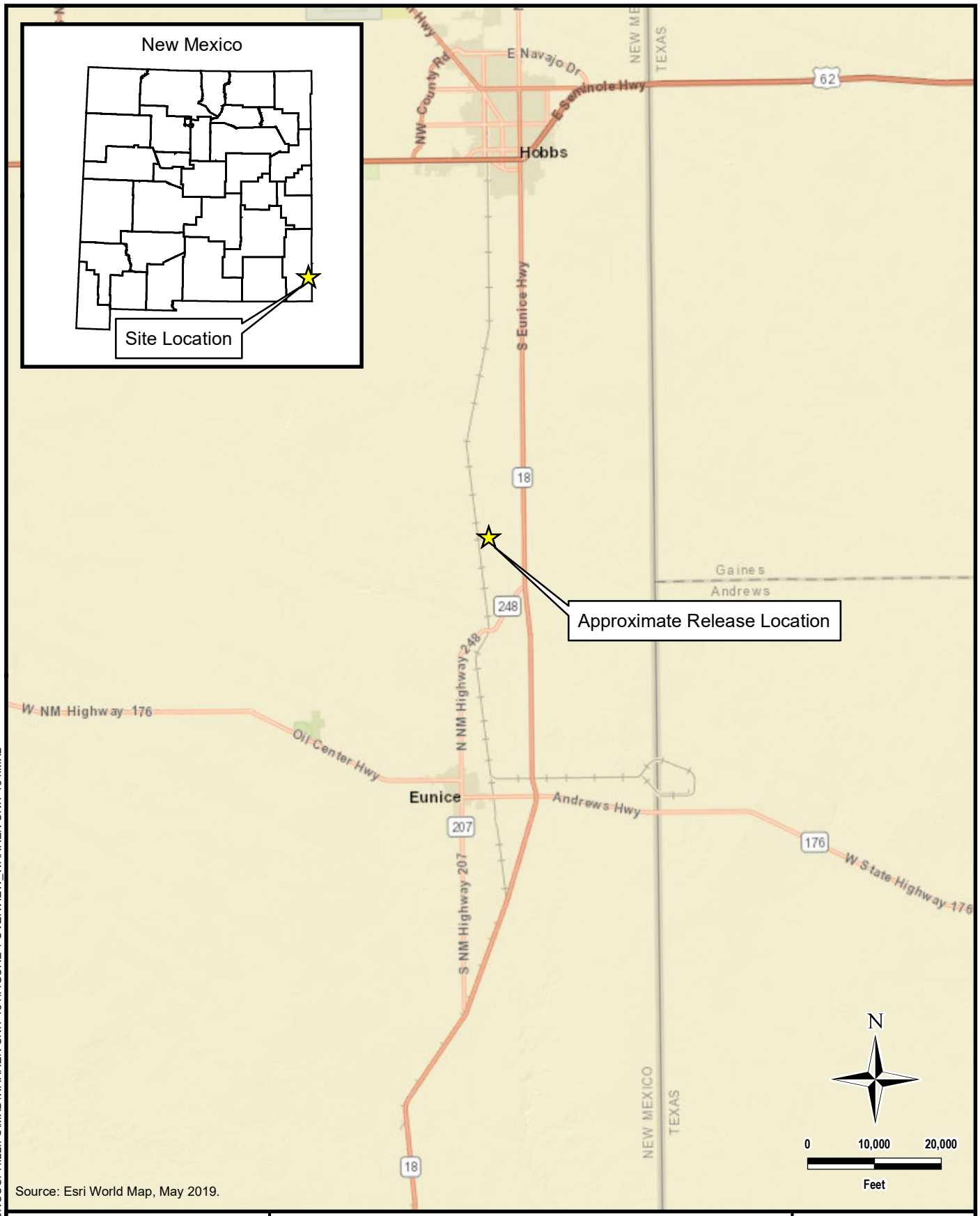
FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 1 OVERVIEW_WARREN UNIT 134.MXD

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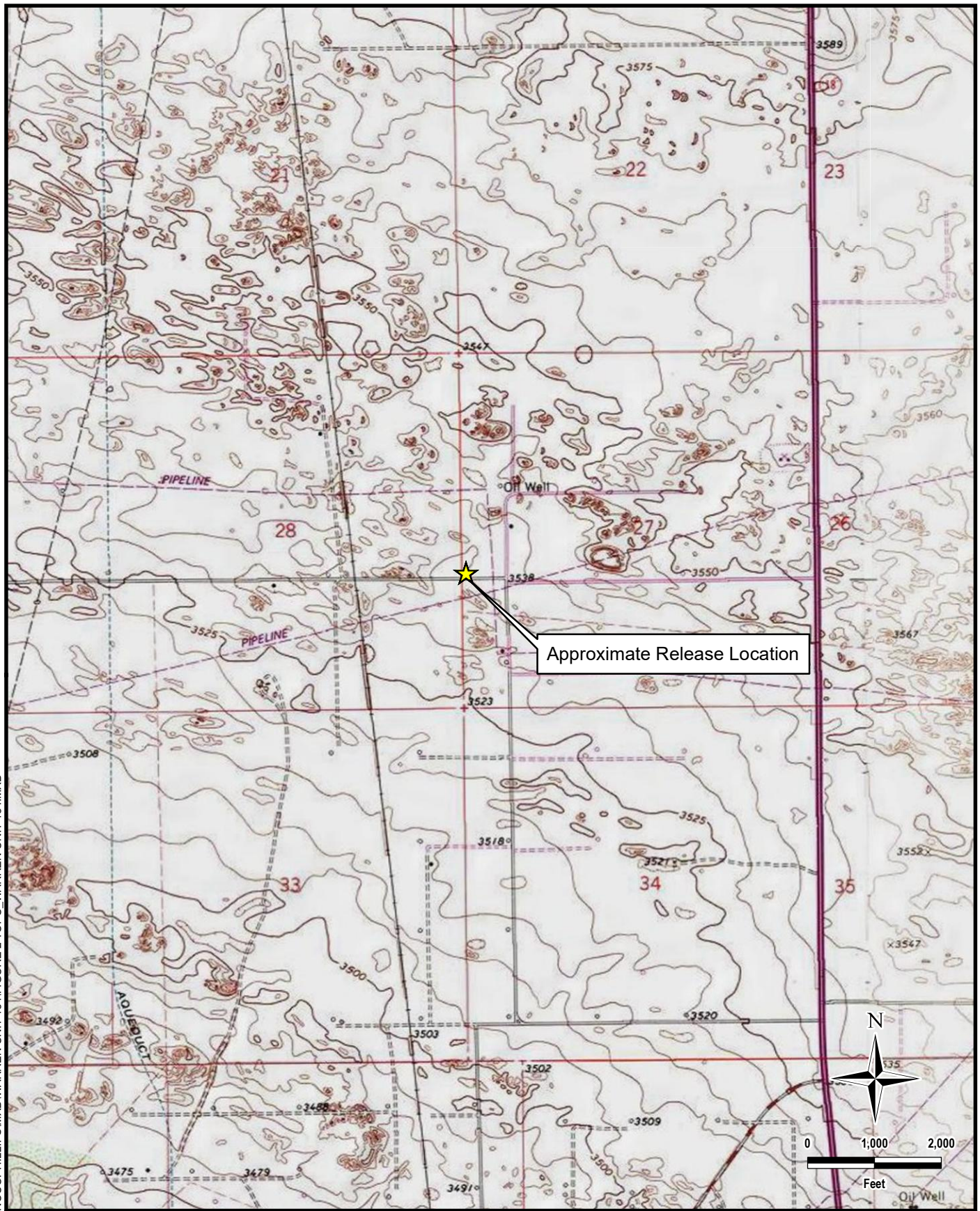
CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 2 TOPO_WARREN UNIT 134.MXD

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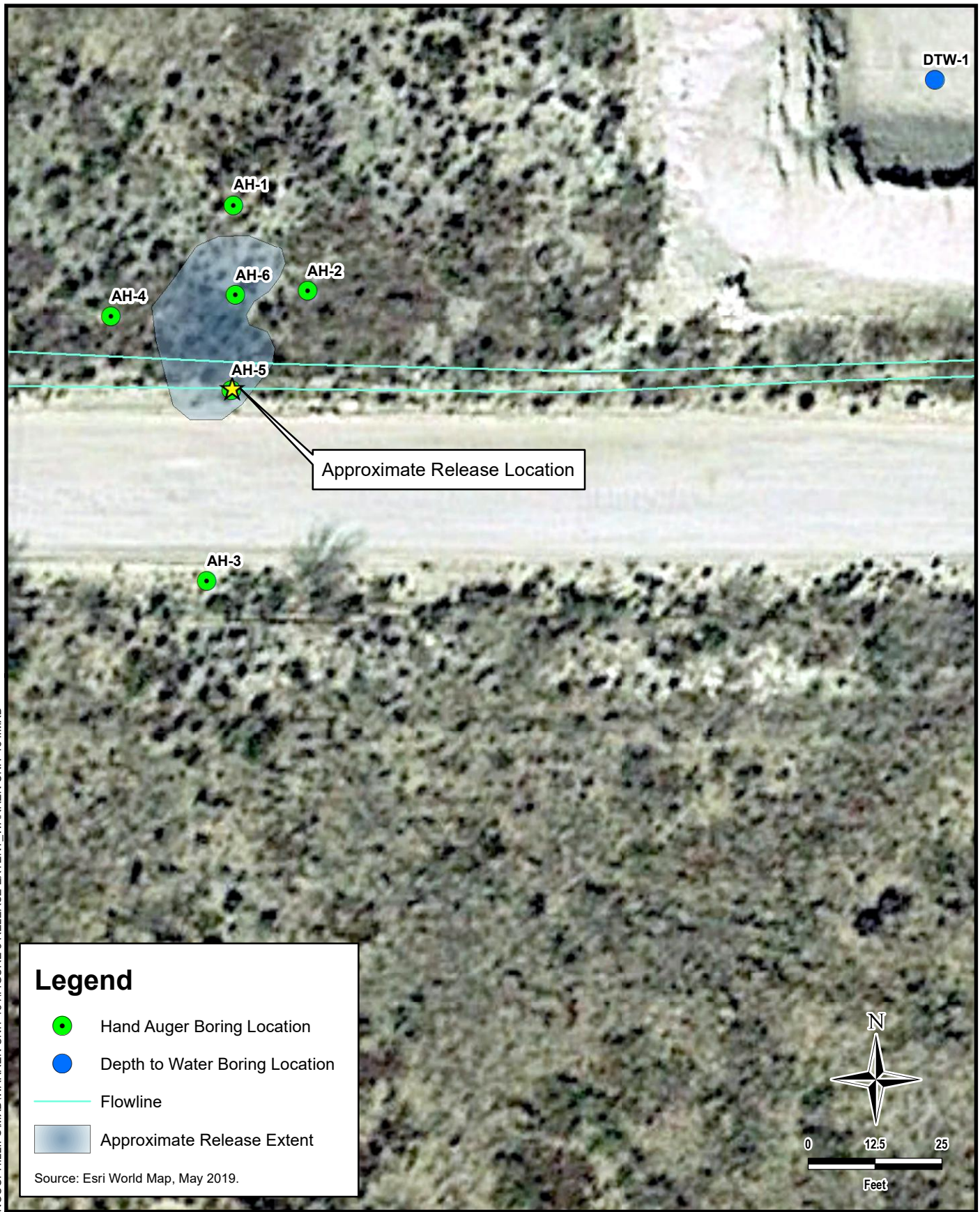
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 3 RELEASE EXTENT_WARREN UNIT 134.MXD

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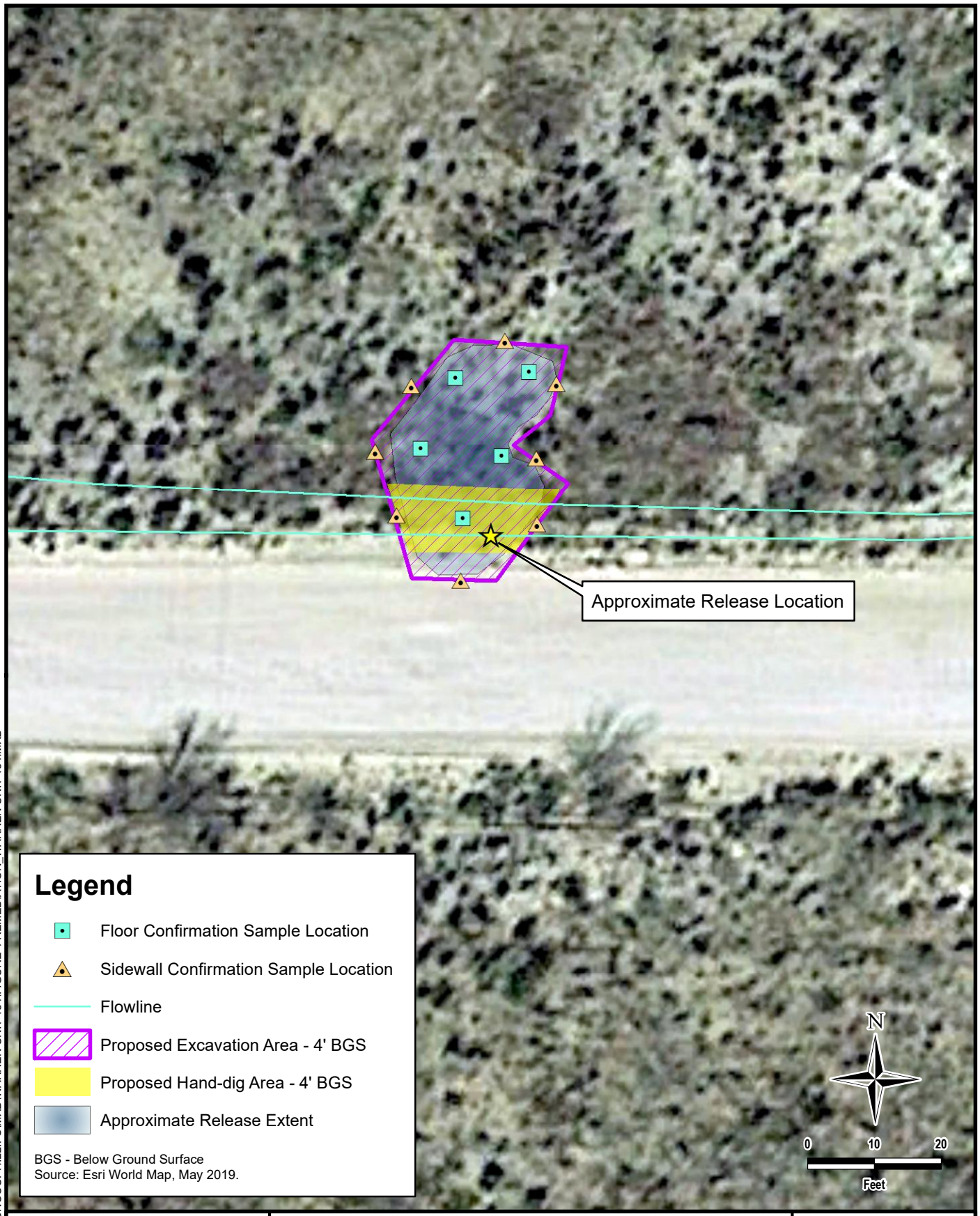
CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND SITE ASSESSMENT

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 4 REMEDIATION_WARREN UNIT 134.MXD

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CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
REMEDIATION EXTENT AND CONFIRMATION SAMPLING LOCATIONS

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
4

TABLES

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TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT
CONOCOPHILLIPS
WARREN UNIT 134 FLOWLINE RELEASE
NAPP2107046560
LEA COUNTY, NM

Sample ID	Sample Date	Sampled Depth	Chloride[1]		BTEX[2]										TPH[3]							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_6 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{36}		Total TPH	
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
AH-1	3/18/2021	(0'-1')	16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
AH-2	3/18/2021	(0'-1')	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
AH-3	3/18/2021	(0'-1')	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
AH-4	3/18/2021	(0'-1')	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
AH-5	3/18/2021	(0'-1')	***3,160***		< 0.050		0.068		0.751		3.82		4.64		***357***		***20,300***		***4,330***		***24,987***	
	3/18/2021	(1'-2')	***1,230***		< 0.050		0.050		0.102		0.242		0.394		< 10.0		***146***		***28.8***		***175***	
	3/18/2021	(2'-3')	***1,320***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
	3/18/2021	(3'-4')	***1,880***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
	3/18/2021	(4'-5')	***2,440***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		14.4		< 10.0		14.4	
	3/18/2021	(5'-6')	***1,870***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		***174***		***26.9***		***201***	
	3/18/2021	(6'-7')	***1,100***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		35.7		< 10.0		< 10.0	
	3/18/2021	(7'-8')	400		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		57.8		< 10.0		< 10.0	
	3/18/2021	(8'-9')	544		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		***113***		***17.3***		***130***	
	3/18/2021	(9'-10')	256		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		***134***		***20.8***		***155***	
AH-6	3/18/2021	(0'-1')	***2,200***		2.27		***47.3***		***62.9***		***96.0***		***208***		***2,610***		***7,990***		***1,260***		***11,860***	
	3/18/2021	(1'-2')	***672***		0.570		***15.9***		***25.6***		***41.1***		***83.2***		***1,410***		***5,360***		***837***		***7,607***	
	3/18/2021	(2'-3')	***672***		0.365		***12.0***		***22.6***		***38.1***		***73.0***		***1,190***		***5,350***		***845***		***7,385***	
	3/18/2021	(3'-4')	***752***		0.415		***15.1***		***31.4***		***53.5***		***100***		***1,480***		***6,820***		***1,150***		***9,450***	
	3/18/2021	(4'-5')	48.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		84.2		12.1		96.3	

NOTES:

Bold and italicized values indicate exceedance of proposed RRALs based on the region's depth to groundwater and the sampled depths bgs.

ft.	Feet
bgs	Below ground surface
ppm	Parts per million
mg/kg	Milligrams per kilogram
NS	Not sampled
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
ORO	Oil range organics
1	Method SM4500Cl-B
2	EPA Method 8021M
3	EPA Method 8015M
4	EPA Method 8015D/GRO

QUALIFIERS:

APPENDIX A
C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District HI
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2107046560
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party ConocoPhillips Company	OGRID 217817
Contact Name Kelsy Waggaman	Contact Telephone 505-577-9071
Contact email kelsy.waggaman@conocophillips.com	Incident # *(assigned by OCD)* *NAPP2107046560*
Contact mailing address 29 Vacuum Complex Lane, Lovington, NM 88260	

Location of Release Source

Latitude: 32.542158 Longitude: -103.144728
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Warren Unit 134 Flowline off-location	Site Type: Flowline - off location
Date Release Discovered 3/2/2021	API# *(if applicable): N/A*

Unit Letter	Section	Township	Range	County
L	27	20S	38E	Lea

Surface Owner: State X Federal Tribal Private *(Name:*)

Nature and Volume of Release

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

[X Crude Oil	Volume Released (bbls) 0.5 Barrels	Volume Recovered (bbls) 0
[X Produced Water	Volume Released (bbls) 6 BBls	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	X! Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release - Equipment Failure, Flowline Leak

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107046560
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: __Kelsy Waggaman_____ Title: Environmental Coordinator

Signature: _____ Date: _3/11/21_____

email: __kelsy.waggaman@conocophillips.com_____Telephone: 505-577-9071_____

OCD Only

Received by: Cristina Eads Date: 03/11/2021

State of New Mexico
Oil Conservation Division

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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ 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)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ 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?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 5/28/2021

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: Ramona Marcus _____ Date: 5/28/2021

APPENDIX B
Site Characterization Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 09918	L	LE		4	2	21	20S	38E	673954	3604063*	2025	135		
L 13546 POD1	L	LE	4	4	3	34	20S	38E	675011	3600037	2168	88		
L 07980	L	LE		4	3	26	20S	38E	676412	3601687*	2226	130	65	65

Average Depth to Water: **65 feet**

Minimum Depth: **65 feet**

Maximum Depth: **65 feet**

Record Count: 3

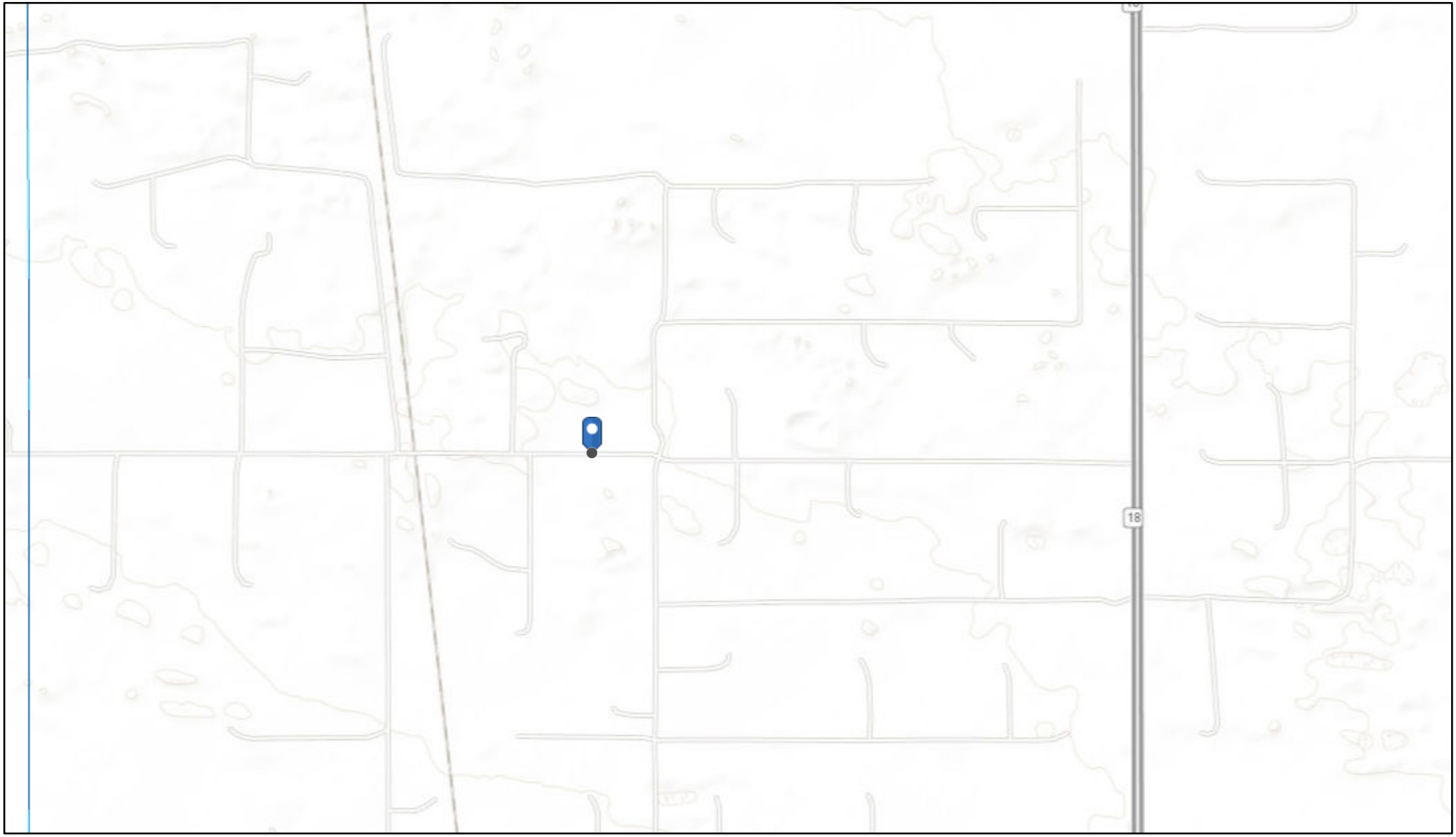
UTMNAD83 Radius Search (in meters):

Easting (X): 674216 **Northing (Y):** 3602054.96 **Radius:** 2500

***UTM location was derived from PLSS - see Help**

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

OCD Hydrology - Warren Unit 134 Release



5/24/2021, 10:46:39 AM

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

Received by OCD: 5/27/2021 12:41:38 PM

Warren Unit 134 Flowline Release

Karst Potential Map

Legend

Release Point

Released to Imaging: 8/6/2021 10:38:24 AM

212C-MD-02377 | TETRA TECH | **LOG OF BORING DTW-1** | Page 1 of 2

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542309°, -103.144283° | Surface Elevation: 3548'

Borehole Number: **DTW-1** | Borehole Diameter (in.): 6" | Date Started: 5/12/2021 | Date Finished: 5/12/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry 24 Hours After Completion of Drilling ▽ Dry

Remarks:

DEPTH (ft)	OPERATION TYPES	SAMPLE	CHLORIDE CONCENTRATION (ppm) ExStik	VOC CONCENTRATION (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	WELL DIAGRAM
5												**-SP-** SAND: Light brown, dry, loose, non-cemented, with no staining, with no odor. --Caliche Pad Material - 0-1'	5	
10												**-SC-** CLAYEY SAND: Light brown to reddish brown, dry, loose, non-cemented, with no staining, with no odor.		
15												**-SP-** SAND: Tan, dry, loose, non-cemented, with no staining, with no odor.	15	
20												**-SP-** SAND: Light tan, dry, loose, non-cemented, with no staining, with no odor.	20	
25												**-SP-** SAND: Reddish-brown, dry, loose, non-cemented, with no staining, with no odor.	25	
30													30	2" Schedule 40 PVC Casing

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Hollow Stem Auger, Continuous Flight Auger, Mud Rotary, Auger, Air Rotary, Direct Push, Drive Casing

Notes:
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

WARREN UNIT 134.GPJ ' 5-24-21 ' ' TT_AUSTIN_GEOTECH_WELL3 ' '2015 TT TEMPLATE DECEMBER WELL.GDT ' Revised 5-16-12 (RHM)

Received by OCD: 5/27/2021 12:41:38 PM

212C-MD-02377 | TETRA TECH | **LOG OF BORING DTW-1** | Page 2 of 2

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542309°, -103.144283° | Surface Elevation: 3548'

Borehole Number: **DTW-1** | Borehole Diameter (in.): 8" | Date Started: 5/12/2021 | Date Finished: 5/12/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry | 24 Hours After Completion of Drilling ▼ Dry

Remarks:

DEPTH (ft)	OPERATION TYPES	SAMPLE	CHLORIDE CONCENTRATION (ppm) ExStik	VOC CONCENTRATION (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	WELL DIAGRAM
35												**-SM-** SILTY SAND: Reddish-brown, dry, loose, non-cemented, with no staining, with no odor.		
40														
45														0.010" Slotted Screen
50														
55													55	

Bottom of borehole at 55.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Auger, Hollow Stem Auger, Air Rotary, Continuous Flight Auger, Direct Push, Mud Rotary, Drive Casing

Notes:
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

Released to Imaging: 8/6/2021 10:38:24 AM

APPENDIX C
Laboratory Analytical Data

CARDINAL Laboratories

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

March 23, 2021

JOE TYLER

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: WARREN UNIT #134 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/18/21 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 1 (0-1) (H210690-01)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	03/19/2021	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	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *86.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.8 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 2 (0-1) (H210690-02)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	03/19/2021	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	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *83.1 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *80.7 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 3 (0-1) (H210690-03)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/19/2021	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	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *83.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.0 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 4 (0-1) (H210690-04)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/19/2021	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	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *78.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *75.4 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (0-1) (H210690-05)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/19/2021	ND	2.04	102	2.00	6.82	
Toluene*	**0.068**	0.050	03/19/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	**0.751**	0.050	03/19/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	**3.82**	0.150	03/19/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	**4.64**	0.300	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *207 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3160**	16.0	03/19/2021	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**357**	100	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	**20300**	100	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	**4330**	100	03/18/2021	ND					

Surrogate: 1-Chlorooctane *155 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *674 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (1-2) (H210690-06)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	**0.050**	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	**0.102**	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	**0.242**	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	**0.394**	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1230**	16.0	03/19/2021	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	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	**146**	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	**28.8**	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *87.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *90.3 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (2-3) (H210690-07)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1320**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *81.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.4 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (3-4) (H210690-08)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1880**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	<10.0	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *84.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.3 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (4-5) (H210690-09)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2440**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/18/2021	ND	205	102	200	7.69	
DRO >C10-C28*	**14.4**	10.0	03/18/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/18/2021	ND					

Surrogate: 1-Chlorooctane *81.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.7 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (5 - 6) (H210690-10)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1870**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	205	102	200	7.69	
DRO >C10-C28*	**174**	10.0	03/19/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	**26.9**	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *80.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.4 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (6-7) (H210690-11)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1100**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	205	102	200	7.69	
DRO >C10-C28*	**35.7**	10.0	03/19/2021	ND	214	107	200	8.61	
EXT DRO >C28-C36	<10.0	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *86.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.5 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (7-8) (H210690-12)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**57.8**	10.0	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	<10.0	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *83.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *80.6 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (8-9) (H210690-13)

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	03/18/2021	ND	2.04	102	2.00	6.82	
Toluene*	<0.050	0.050	03/18/2021	ND	1.96	98.1	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/18/2021	ND	1.93	96.3	2.00	7.21	
Total Xylenes*	<0.150	0.150	03/18/2021	ND	5.72	95.4	6.00	6.43	
Total BTEX	<0.300	0.300	03/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**113**	10.0	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**17.3**	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *85.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *87.4 %* *42.2-156*

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Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 5 (9-10) (H210690-14)

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	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	<0.050	0.050	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	<0.050	0.050	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	<0.150	0.150	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	<0.300	0.300	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**134**	10.0	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**20.8**	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *80.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.1 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 6 (0-1) (H210690-15)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.27**	0.500	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	**47.3**	0.500	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	**62.9**	0.500	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	**96.0**	1.50	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	**208**	3.00	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *152 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2610**	100	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**7990**	100	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**1260**	100	03/19/2021	ND					

Surrogate: 1-Chlorooctane *190 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *262 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 6 (1-2) (H210690-16)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.570**	0.200	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	**15.9**	0.200	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	**25.6**	0.200	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	**41.1**	0.600	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	**83.2**	1.20	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *166 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**672**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1410**	100	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**5360**	100	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**837**	100	03/19/2021	ND					

Surrogate: 1-Chlorooctane *155 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *210 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 6 (2-3) (H210690-17)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.365**	0.200	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	**12.0**	0.200	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	**22.6**	0.200	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	**38.1**	0.600	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	**73.0**	1.20	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *169 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**672**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1190**	100	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**5350**	100	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**845**	100	03/19/2021	ND					

Surrogate: 1-Chlorooctane *157 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *211 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 6 (3-4) (H210690-18)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.415**	0.200	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	**15.1**	0.200	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	**31.4**	0.200	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	**53.5**	0.600	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	**100**	1.20	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *192 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**752**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1480**	100	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**6820**	100	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**1150**	100	03/19/2021	ND					

Surrogate: 1-Chlorooctane *171 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *239 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs
JOE TYLER
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	03/18/2021	Sampling Date:	03/18/2021
Reported:	03/23/2021	Sampling Type:	Soil
Project Name:	WARREN UNIT #134 FLOWLINE RELEAS	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02377	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY		

Sample ID: AH - 6 (4-5) (H210690-19)

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	03/19/2021	ND	2.18	109	2.00	1.24	
Toluene*	<0.050	0.050	03/19/2021	ND	2.13	106	2.00	0.385	
Ethylbenzene*	<0.050	0.050	03/19/2021	ND	2.07	103	2.00	0.918	
Total Xylenes*	<0.150	0.150	03/19/2021	ND	6.09	102	6.00	0.690	
Total BTEX	<0.300	0.300	03/19/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	03/19/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2021	ND	212	106	200	4.82	
DRO >C10-C28*	**84.2**	10.0	03/19/2021	ND	227	114	200	2.82	
EXT DRO >C28-C36	**12.1**	10.0	03/19/2021	ND					

Surrogate: 1-Chlorooctane *80.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *82.2 %* *42.2-156*

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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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page 1 of 2

Company Name: ConocoPhillips	**BILL TO**
Project Manager: Joe Tyler with Tetra Tech	P.O. #:
Address: joe.tyler@tetratech.com	Company: ConocoPhillips
City: State: Zip:	Attn: Brent Swimmer
Phone #: (432) 210-6952 Fax #: NA	Address: brent.w.swimmer
Project #: 212C-MD-02377 Project Owner:	City: @ conocophillips.com
Project Name: COP Warren Unit 134 Flowline Release	State: Zip:
Project Location: Warren Unit 134 Flowline	Phone #:
Sampler Name: Joe Tyler	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	BTEX	Chlorides		Hold							
H210690																									
1	AH-1 (0-1)	G	1			X					X		3-18-21		X	X	X								
2	AH-2 (0-1)																								
3	AH-3 (0-1)																								
4	AH-4 (0-1)																								
5	AH-5 (0-1)																								
6	(1-2)																								
7	(2-3)																								
8	(3-4)																								
9	(4-5)																								
10	(5-6)																								

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Relinquished By: Joe Tyler	Date: 3-18-21 Time: 1410	Received By: Jamara Oldaker	Phone Results: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Results: ☐ Yes ☐ No Add'l Fax #:
			Email Results to: Joe Tyler and Brent Swimmer
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 30.4°C #113	Sample Condition Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) JT	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 5/27/2021 12:41:38 PM

Released to Imaging: 8/6/2021 10:38:24 AM

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page 2 of 2

Company Name: ConocoPhillips
Project Manager: Joe Tyler with Tetra Tech
Address: joe.tyler@tetratech.com
City: State: Zip:
Phone #: (432) 210-6952 Fax #: NA
Project #: 212C-MD-02377 Project Owner:
Project Name: COP Warren Unit 134 Flowline Release
Project Location: Warren Unit 134 Flowline
Sampler Name: Joe Tyler

BILL TO
P.O. #:
Company: ConocoPhillips
Attn: Brent Swanner
Address: "
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides	Hold
H210690																		
11	AH-5 (6-7)	G	1			X					X		3-18-21		X	X	X	
12	(7-8)																	
13	(8-9)																	
14	(9-10)																	
15	AH-6 (0-1)																	
16	(1-2)																	
17	(2-3)																	
18	(3-4)																	
19	(4-5)																	

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Relinquished By: Joe Tyler Date: 3-18-21 Time: 1410 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 30.4° #113

Sample Condition: Cool ☐ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

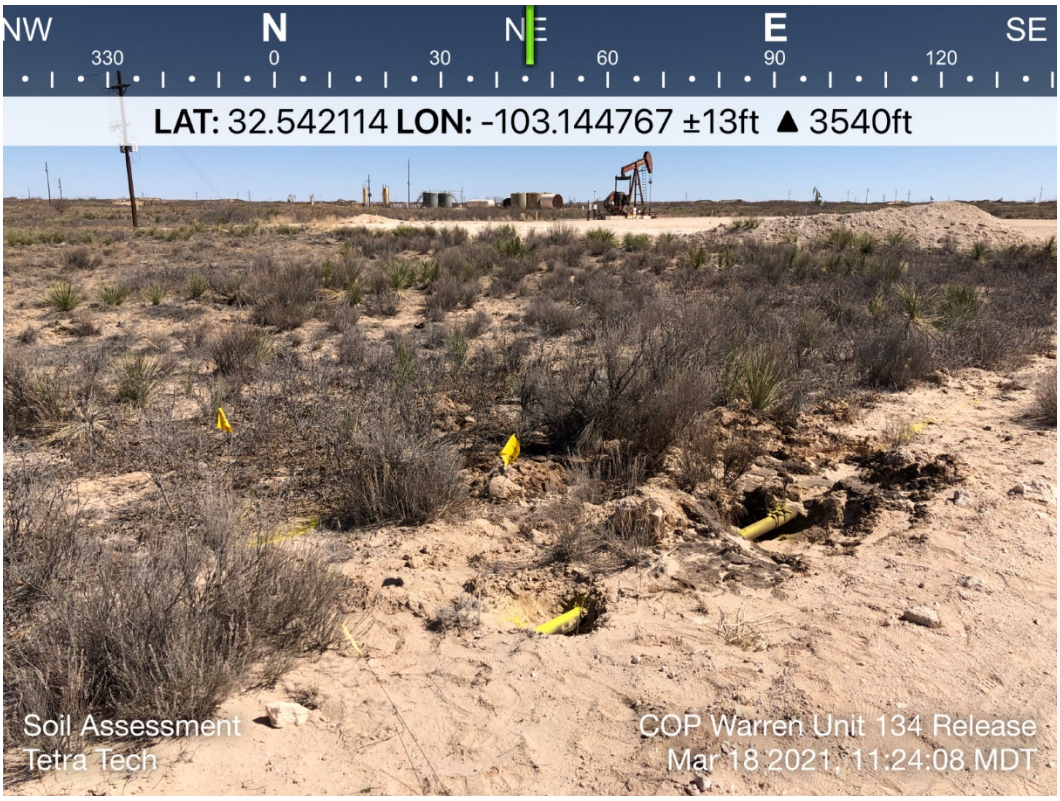
Phone Results: ☐ Yes ☐ No Add'l Phone #:
Fax Results: ☐ Yes ☐ No Add'l Fax #:
Email Results to:
See page 1 of 2

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

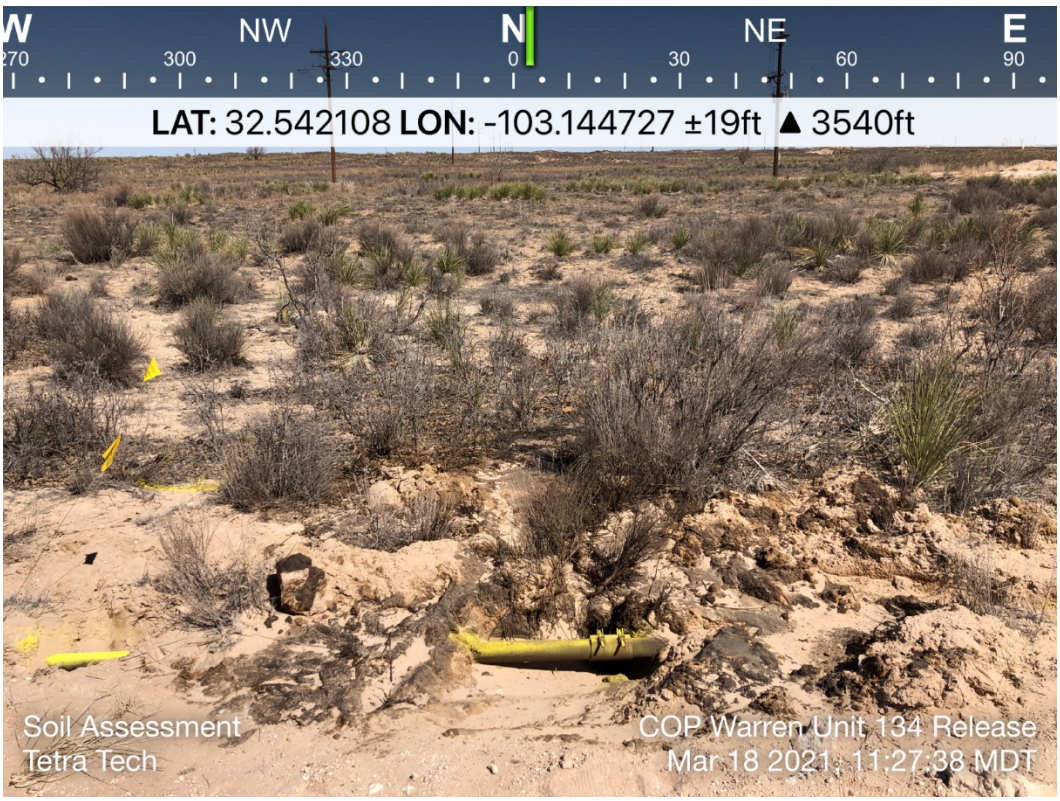
Received by OCD: 5/27/2021 12:41:38 PM

Released to Imaging: 8/6/2021 10:38:24 AM

APPENDIX D
Photographic Documentation



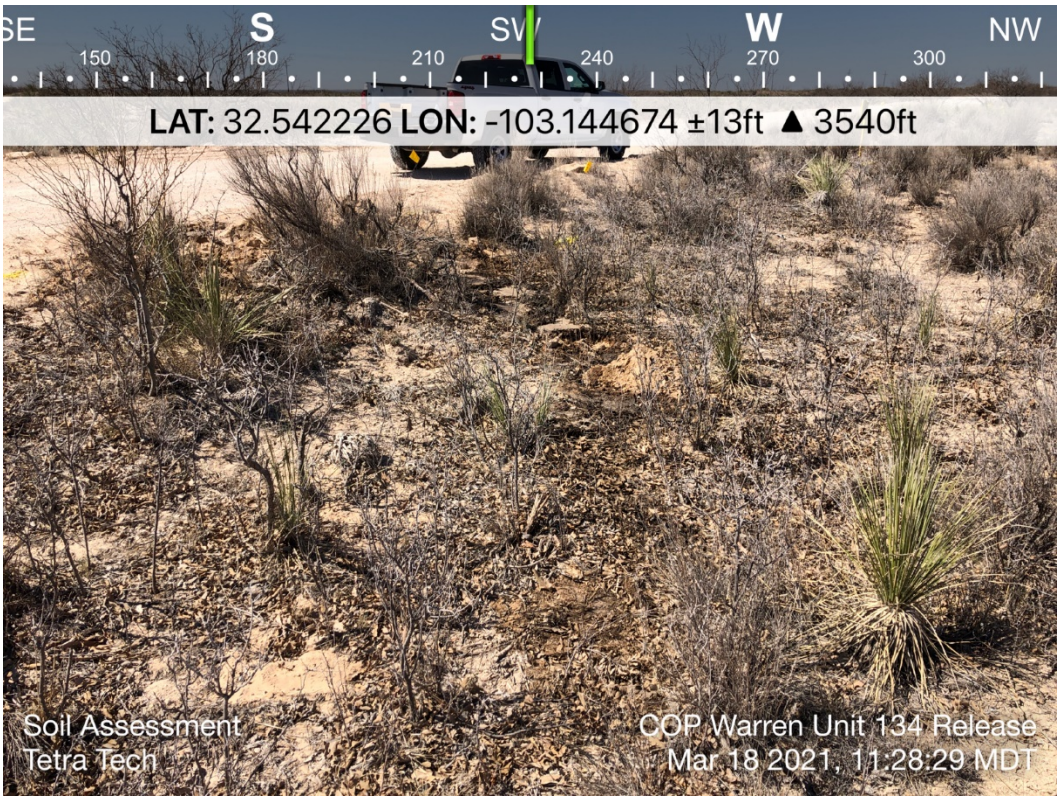
TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View northeast towards pad of the release point and area.	1
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View north of the release point and area.	2
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

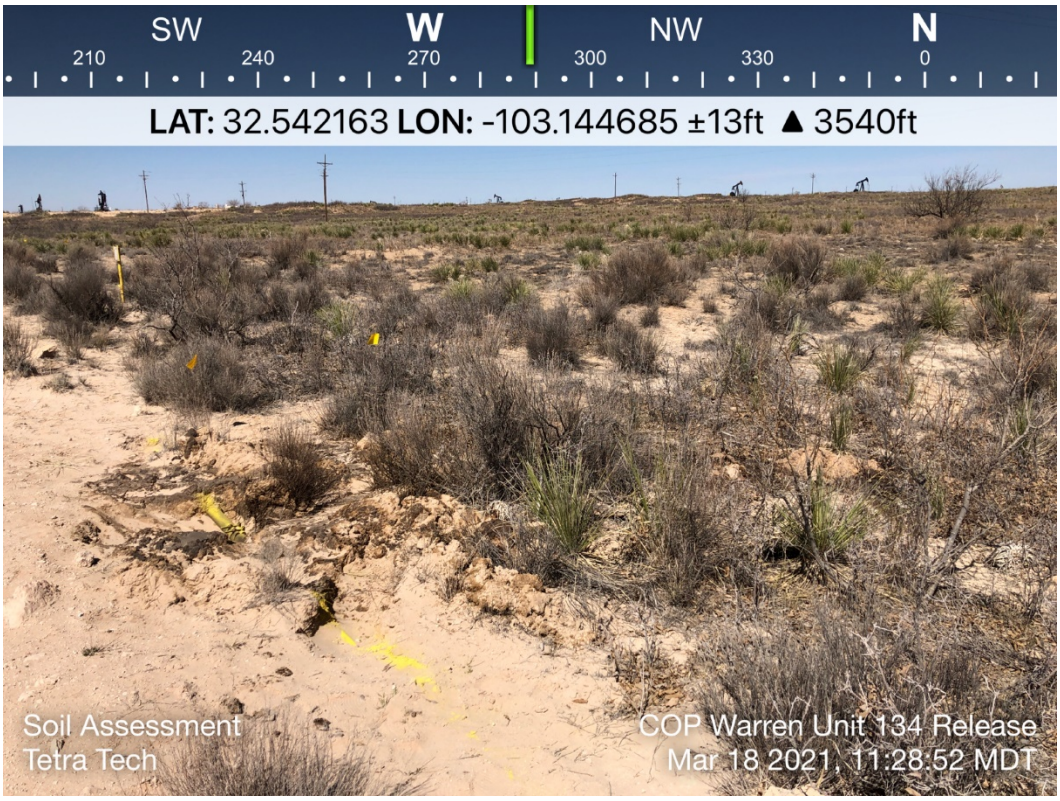
TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View southeast of the release area and lease road	3
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View east southeast of the release area and lease road..	4
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021



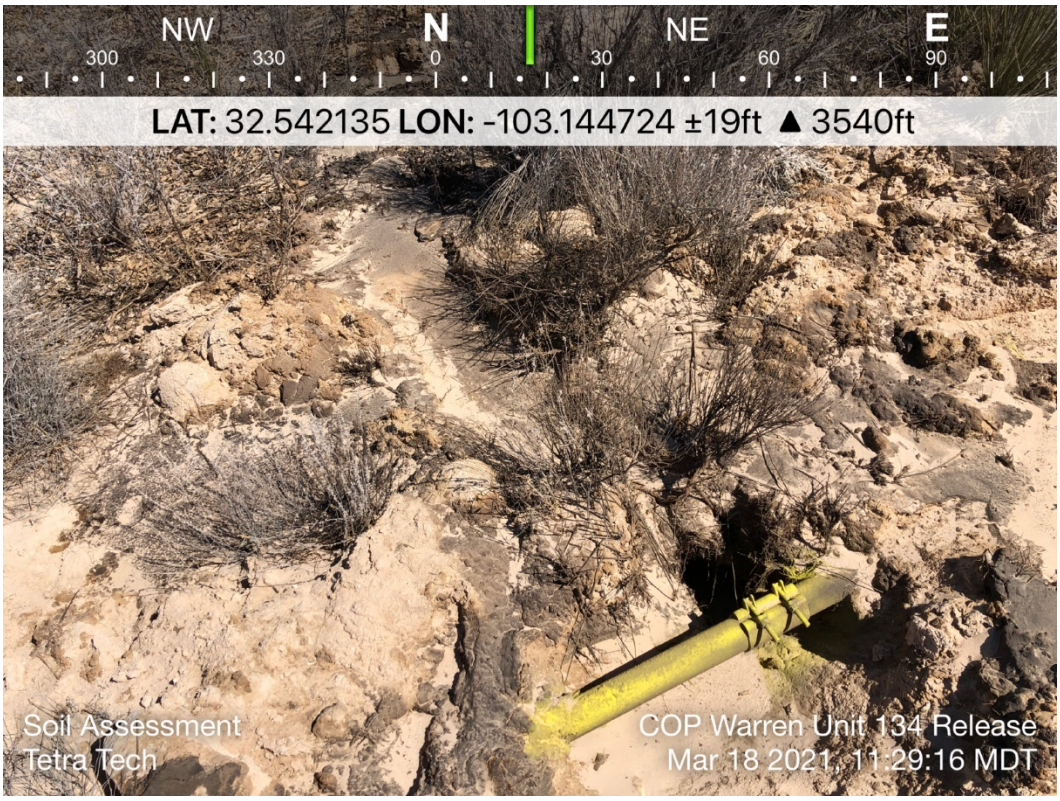
TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View southwest of the release area and lease road.	5
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View west of the release area and lease road.	6
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

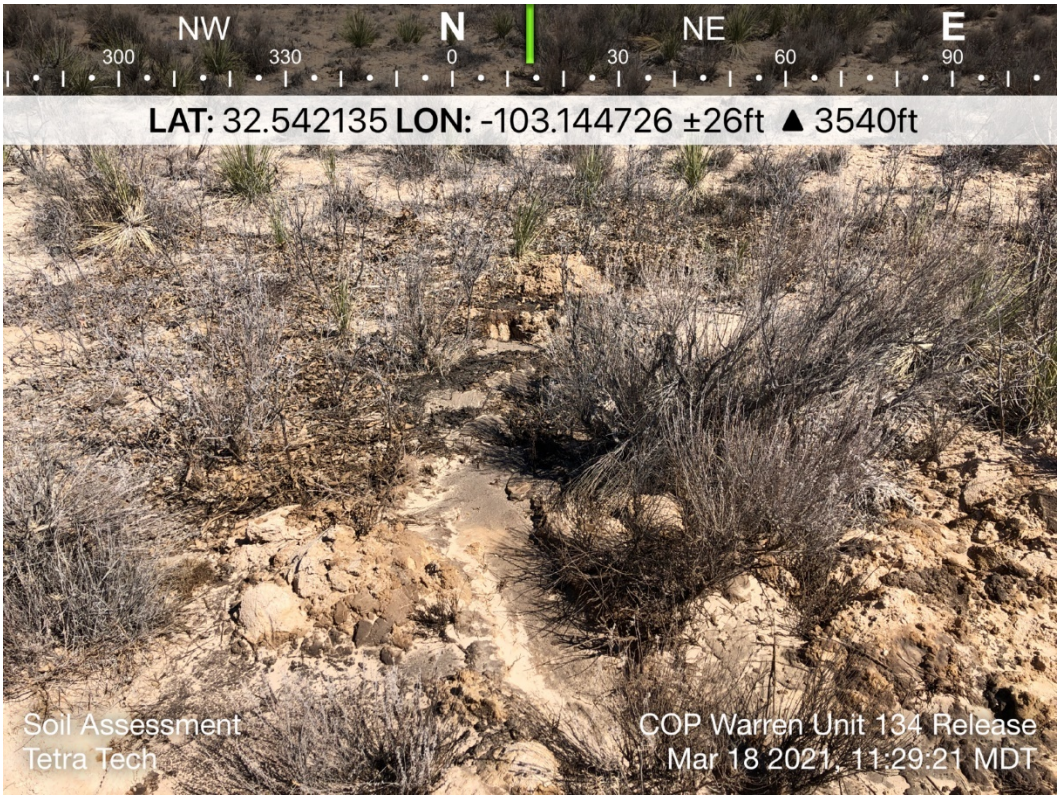


TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View west northwest of the release area.	7
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View northwest of the release area.	8
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the release point.	9
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View north of the release area.	10
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	3/18/2021

APPENDIX E
Boring Logs

212C-MD-02377	TETRA TECH	**LOG OF BORING AH-5**	Page 1 of 1

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542154°, -103.144711 | Surface Elevation: 3543 ft

Borehole Number: AH-5 | Borehole Diameter (in.): 4 | Date Started: 3/18/2021 | Date Finished: 3/18/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry ft Upon Completion of Drilling ▼ Dry ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5												**-SP-** SAND: Light brown, dry, loose, non-cemented, with no staining, with no odor.	5	AH-5 (0-1') AH-5 (1-2') AH-5 (2-3') AH-5 (3-4') AH-5 (4-5')
10												**-SC-** CLAYEY SAND: Light brown to reddish brown, dry, loose, non-cemented, with no staining, with no odor.	10	AH-5 (5-6') AH-5 (6-7') AH-5 (7-8') AH-5 (8-9') AH-5 (9-10')

Bottom of borehole at 10.0 feet.

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:
Analytical samples are shown in the remarks column above.
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Scarborough Drilling

Released to Imaging: 8/6/2021 10:38:24 AM

212C-MD-02377 | TETRA TECH | **LOG OF BORING AH-6** | Page 1 of 1

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542203°, -103.144708 | Surface Elevation: 3543 ft

Borehole Number: AH-6 | Borehole Diameter (in.): 4 | Date Started: 3/18/2021 | Date Finished: 3/18/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry ft Upon Completion of Drilling ▼ Dry ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
												-SP- SAND: Light brown, dry, loose, non-cemented, with no staining, with no odor.		AH-6 (0-1')
														AH-6 (1-2')
														AH-6 (2-3')
														AH-6 (3-4')
														AH-6 (4-5')
5													5	

Bottom of borehole at 5.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Analytical samples are shown in the remarks column above.
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Hand Auger | Driller: Scarborough Drilling

Released to Imaging: 8/6/2021 10:38:24 AM

APPENDIX F
NMSLO Seed Mixture Details

NMSLO Seed Mix Sandy Loam (SL)

SANDY LOAM (SL) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Galleta grass	Viva, VNS, So.	2.5	F
Little bluestem	Cimmaron, Pastura	2.5	F
Blue grama	Hachita, Lovington	2.0	D
Sideoats grama	Vaughn, El Reno	2.0	F
Sand dropseed	VNS, Southern	1.0	S
Forbs:			
Indian blanketflower	VNS, Southern	1.0	D
Parry penstemon	VNS, Southern	1.0	D
Blue flax	Appar	1.0	D
Desert globemallow	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	VNS, Southern	2.0	D
Common winterfat	VNS, Southern	1.0	F
Apache plume	VNS, Southern	0.75	F
	Total PLS/acre	**17.75**	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry penstemon is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.

Released to Imaging: 8/6/2021 10:38:24 AM

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lea County, New Mexico

WARREN UNIT 134

May 24, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 17, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 18, 2020—Feb 17, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	7.0	100.0%
Totals for Area of Interest		**7.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lea County, New Mexico

KM—Kermit soils and Dune land, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 46 percent
Dune land: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Palomas

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Pyote

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

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

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 29749
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	8/6/2021