

SITE INFORMATION

Report Type: Work Plan

General Site Information:

Site:	Freedom 36 State SWD 1					
Company:	Cimarex Energy					
Section, Township and Range	Unit M	Sec. 36	T 24S	R 26E		
Lease Number:	API No.					
County:	Eddy County					
GPS:	32.169928° N			104.252560° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From intersection of 748 & 720, head south on 748 for 3.89 miles. Turn right onto lease road, follow for 0.87 miles. Turn left onto lease road, follow for 1.23 miles. Location on right.					

Release Data:

Date Released:	5/26/2020
Type Release:	Produced Water
Source of Contamination:	Pinhole Leak in Pump
Fluid Released:	15 bbls
Fluids Recovered:	10 bbls

Official Communication:

Name:	Gloria Garza		Brittany Long
Company:	Cimarex Energy		Tetra Tech
Address:	600 N. Marienfield St.		901 W. Wall St.
	Ste 600		Ste 100
City:	Midland Texas, 79701		Midland, Texas, 79701
Phone number:	(432) 234-3204		(432) 682-4559
Fax:			
Email:	ggarza@cimarex.com		Brittany.Long@TetraTech.com

Site Characterization

Depth to Groundwater:	Less than 50' below surface
Karst Potential:	High

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	100 mg/kg	100 mg/kg	600 mg/kg



February 24, 2021

Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Work Plan for the Cimarex Energy, Freedom 36 State SWD #1, Unit M, Section 36, Township 24 South, Range 26 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by Cimarex Energy to assess a release that occurred at the Freedom 36 State SWD #1, Unit M, Section 36, Township 24 South, Range 26 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.169928°, W 104.252560°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on May 26, 2020, due to a pinhole leak in a charge pump of an SWD injection pump. A total of 15 barrels of produced water was released, and approximately 10 barrels of the produced water were recovered. The release impacted an area measuring approximately 195' x 63'. The C-141 Form is included in Appendix A.

Site Characterization

A site characterization was performed for the site, and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. However, the site is in a high karst potential area.

The nearest well is listed in the USGS National Water Information Database website in Section 26, approximately 1.96 miles northwest of the site, and has a reported depth to groundwater of 16.03 feet below ground surface. Site characterization data is included in Appendix B.

Tetra Tech

901 West Wall, Suite 100, Midland, TX 79701

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based on the site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

On December 20, 2020, Tetra Tech personnel were on site to evaluate and sample the release area. Seven auger holes (AH-1 through AH-7) were installed in the spill area to assess and define the extents of the release. Additionally, nine horizontals (Horizontal-1 through Horizontal 9) were installed to delineate the area. Select samples were submitted to Xenco Laboratory and analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, none of the submitted samples reported benzene, BTEX, or TPH concentrations above laboratory reporting limits. However, in the areas of auger holes (AH-2 through AH-5), chloride concentrations above RRALs were detected at depths from surface to 6.5' below surface, with reported concentration highs of 2,120 mg/kg, 11,500 mg/kg, 9,540 mg/kg, and 1,800 mg/kg, respectively. Additionally, chloride concentrations showed decreasing trends with depth. The spill area surrounding the pumps (AH-2 through AH-4) was not vertically defined by the installed auger holes. The area of auger hole (AH-5) showed vertical delineation at 1.0' below surface. Additionally, the remaining auger holes (AH-1, AH-6, and AH-7) and all horizontal samples (Horizontal-1 through Horizontal-9) reported chloride concentrations below RRALs.

Work Plan

Based on the laboratory results, Cimarex proposes to remove the pumps, vertically delineate the area of auger holes (AH-2 through AH-4), and remove the impacted soil. Additionally, the area of auger hole (AH-5) will be remediated to 1.0' below surface as shown on Figure 4 and highlighted (green) on Table 1. Approximately 600 cubic yards of impacted soil will be removed, and will be transported offsite for proper disposal. The excavated areas will then be backfilled with clean material to surface grade.

The removal of pumps will begin on April 26th, 2021, the vertical delineation and subsequent remediation will begin once the pumps are removed and the area is clear of equipment. Once excavated, five-point composite confirmation bottom hole and sidewall samples will be collected every 200 square feet to ensure proper removal of the impacted



soils. Cimarex plans to submit a closure report on the remediations activities by May 17, 2021, given no weather or equipment delays occur during the remediation.

Conclusion

Upon completion, a final report detailing the remediation activities will be submitted to the NMOCD and SLO. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

A handwritten signature in black ink, appearing to read 'Brittany Long'.

Brittany Long,
Project Manager

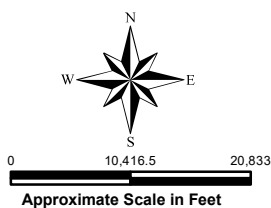
A handwritten signature in blue ink, appearing to read 'Clair Gonzales'.

Clair Gonzales,
Senior Project Manager

Figures



 SITE LOCATION

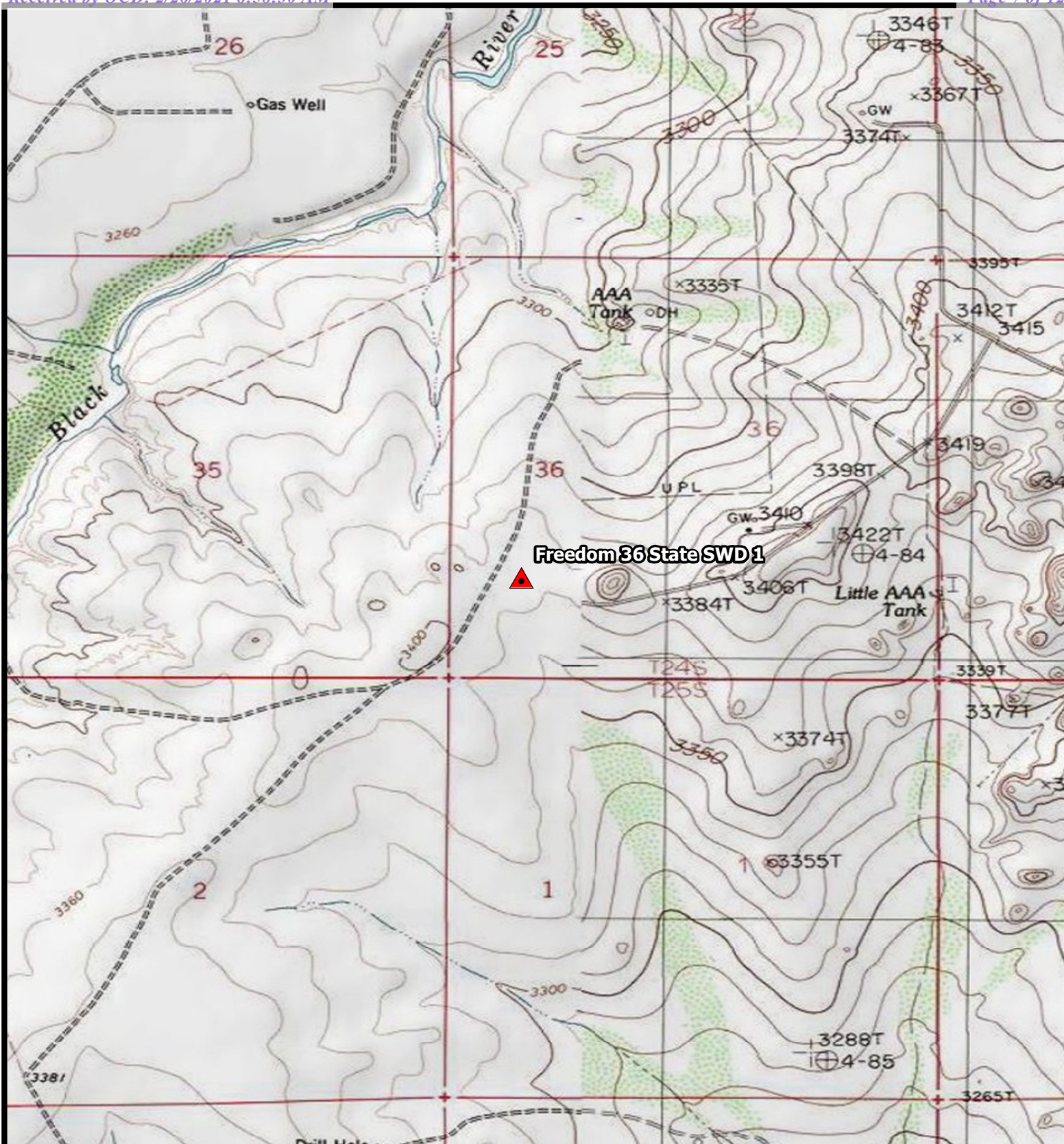


OVERVIEW MAP
 FREEDOM 36 STATE SWD 1
 Property located at coordinates 32.169928°, -104.252560°
 EDDY COUNTY, NEW MEXICO

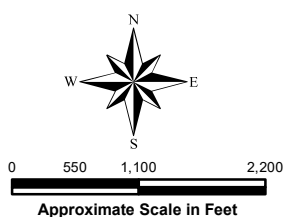


Project #: 212C-MD-02375
 Date: 01-19-2021
 Drawn By: Ezequiel Moreno

FIGURE
 1



SITE LOCATION

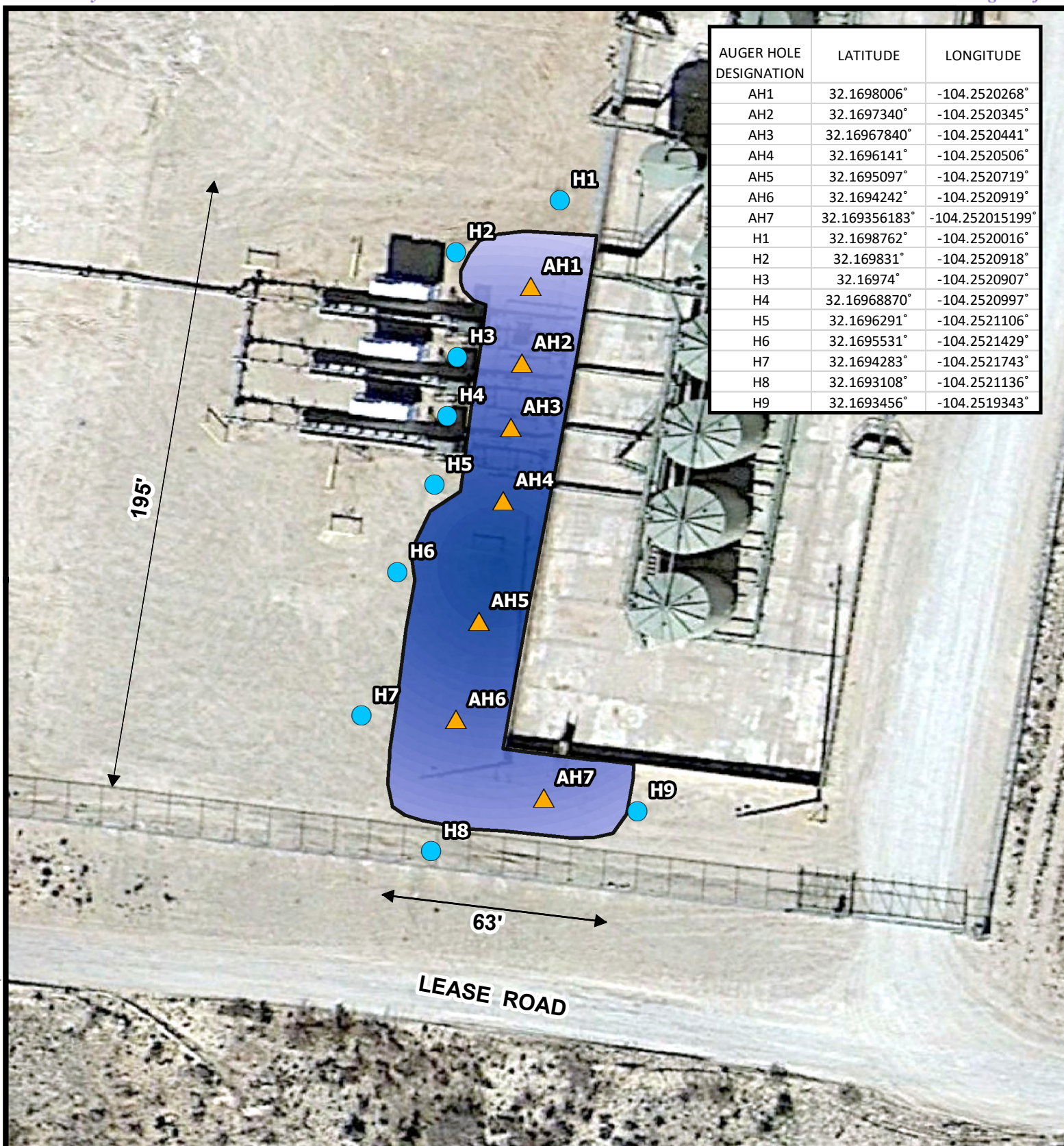


TOPOGRAPHIC MAP
 FREEDOM 36 STATE SWD 1
 Property located at coordinates 32.169928°, -104.252560°
 EDDY COUNTY, NEW MEXICO

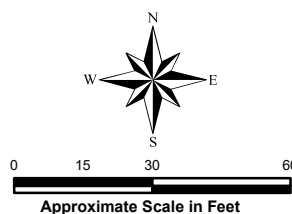


Project #: 212C-MD-02375
 Date: 01-19-2021
 Drawn By: Ezequiel Moreno

FIGURE
 2



- HORIZONTAL SAMPLE LOCATIONS
- ▲ AUGER HOLE SAMPLE LOCATIONS
- SPILL EXTENT

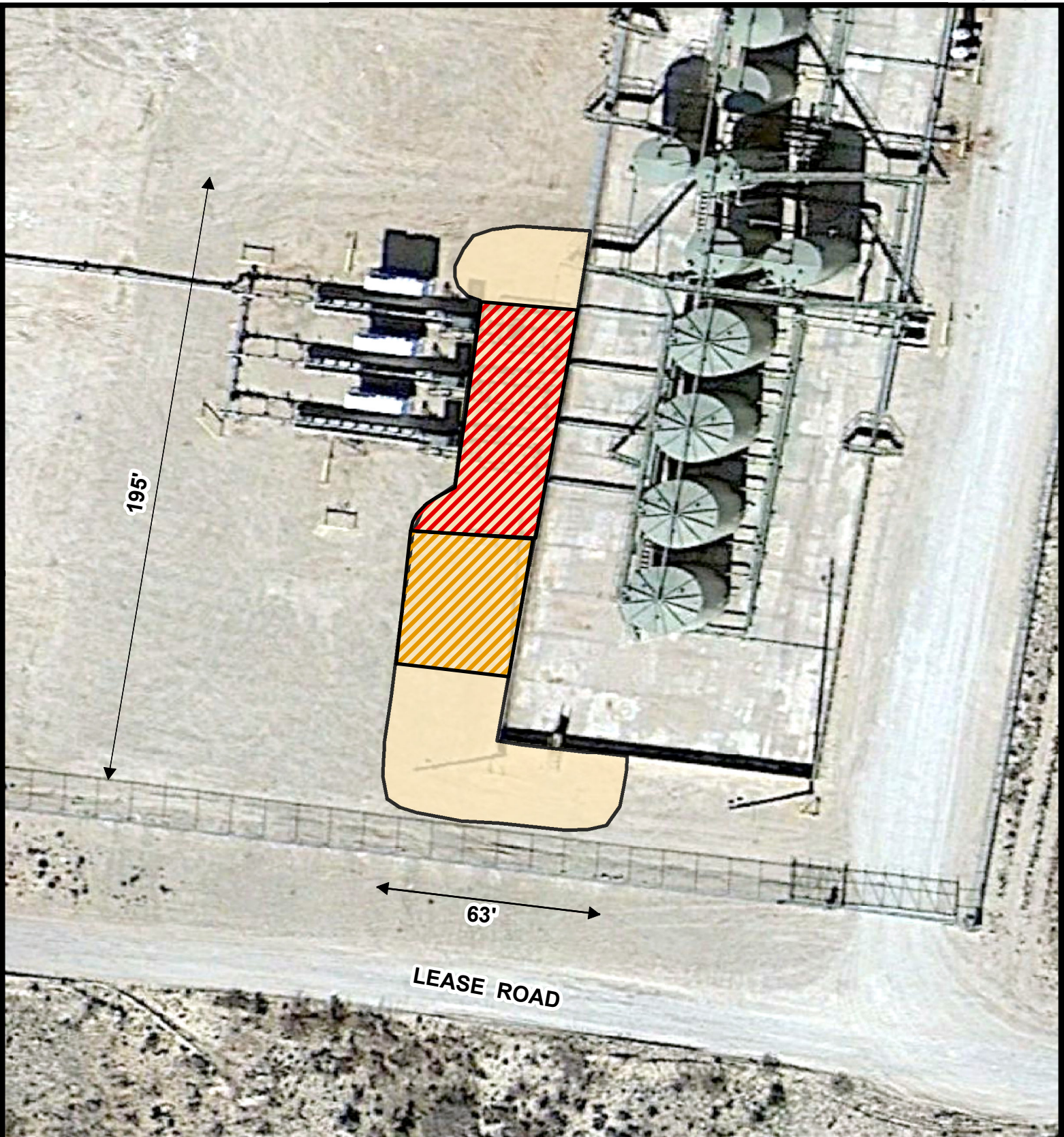


SPILL ASSESSMENT MAP
FREEDOM 36 STATE SWD 1
Property located at coordinates 32.169928°, -104.252560°
EDDY COUNTY, NEW MEXICO

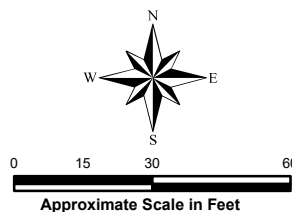


Project #: 212C-MD-02375
Date: 01-19-2021
Drawn By: Ezequiel Moreno

FIGURE
3



-  VERTICAL DELINEATION WITH PUMP REMOVAL
-  1' PROPOSED EXCAVATION
-  SPILL EXTENT



PROPOSED EXCAVATION MAP
 FREEDOM 36 STATE SWD 1
 Property located at coordinates 32.169928°, -104.252560°
 EDDY COUNTY, NEW MEXICO



Project #: 212C-MD-02375
 Date: 01-19-2021
 Drawn By: Ezequiel Moreno

FIGURE
 4

Tables

Table 1
Cimarex
Freedom 36 State SWD 1
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
AH-1	12/9/2020	0-1	X		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	181
	"	1.0-1.5	X		<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	46.3
	"	2.0-2.5	X											121
	"	3.0-3.5	X											104
AH-2	12/10/2020	0-1	X		<50.2	<50.2	<50.2	<50.2	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	2120
	"	1.0-1.5	X		<50.1	<50.1	<50.1	<50.1	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1410
	"	2.0-2.5	X											763
	"	3.0-3.5	X											538
	"	4.0-4.5	X											571
	"	5.0-5.5	X											1900
	"	6.0-6.5	X											918
AH-3	12/10/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	11500
	"	1.0-1.5	X		<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	11100
	"	2.0-2.5	X											7420
	"	3.0-3.5	X											1050
AH-4	12/10/2020	0-1	X		<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	9540
	"	1.0-1.5	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	6640
	"	2.0-2.5	X											5750
	"	3.0-3.5	X											2060
	"	4.0-4.5	X											924
	"	5.0-5.5	X											1580
	"	6.0-6.5	X											1420
AH-5	12/10/2020	0-1	X		<50.2	<50.2	<50.2	<50.2	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	1800
	"	1.0-1.5	X		<50.1	<50.1	<50.1	<50.1	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	497
	"	2.0-2.5	X											17.2
	"	3.0-3.5	X											149
	"	4.0-4.5	X											324
	"	5.0-5.5	X											105
AH-6	12/10/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	132
	"	1.0-1.5	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	144
	"	2.0-2.5	X											183
	"	3.0-3.5	X											200
	"	4.0-4.5	X											126
	"	5.0-5.5	X											140

Table 1
Cimarex
Freedom 36 State SWD 1
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
AH-7	12/10/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.001990	<0.001990	20.1
	"	1.0-1.5	X		<50.1	<50.1	<50.1	<50.1	<0.00200	<0.00200	<0.00200	<0.002000	<0.002000	20.7
	"	2.0-2.5	X											14.8
	"	3.0-3.5	X											22.3
	"	4.0-4.5	X											14.3
Horizontal-1	12/9/2020	0-1	X		<49.8	<49.8	<49.8	<49.80	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	128
Horizontal-2	12/9/2020	0-1	X		<50.3	<50.3	<50.3	<50.30	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	140
Horizontal-3	12/9/2020	0-1	X		<49.9	<49.9	<49.9	<49.90	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	209
Horizontal-4	12/9/2020	0-1	X		<49.9	<49.9	<49.9	<49.90	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	80.8
Horizontal-5	12/9/2020	0-1	X		<49.8	<49.8	<49.8	<49.80	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	110
Horizontal-6	12/9/2020	0-1	X		<49.8	<49.8	<49.8	<49.80	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	114
Horizontal-7	12/9/2020	0-1	X		<50.0	<50.0	<50.0	<50.00	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	90.6
Horizontal-8	12/9/2020	0-1	X		<50.2	<50.2	<50.2	<50.20	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	132
Horizontal-9	12/9/2020	0-1	X		<50.0	<50.0	<50.0	<50.00	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	141

(-)



Not Analyzed
Exceedances

Photos

Cimarex Energy
Freedom 36 State SWD 1
Eddy County, New Mexico



View of Pump Area— View South



View of Release Area – View Northwest

Cimarex Energy
Freedom 36 State SWD 1
Eddy County, New Mexico



View of Release Area – View North



View of Release Area – View East

Appendix A

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

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Cimarex Energy Co.	OGRID: 215099
Contact Name: Laci Luig	Contact Telephone: (432) 571-7800
Contact email: llug@cimarex.com	Incident # (assigned by OCD)
Contact mailing address: 600 N Marienfeld Street, Ste. 600 Midland, TX 79701	

Location of Release Source

Latitude 32.16977 _____ Longitude -104.25203 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Freedom 36 State SWD 1	Site Type: Battery Pad
Date Release Discovered: 5/26/2020	API# (if applicable) 30-015-44489

Unit Letter	Section	Township	Range	County
M	36	24S	26E	Eddy

Surface Owner: ☒ State ☐ 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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 15 bbls	Volume Recovered (bbls) 10 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ 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)

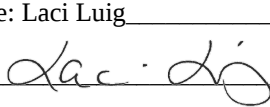
Cause of Release: Mechanical Failure

We found a pin hole in the suction side of charge pump going to the SWD injection pump. We replaced the leaking spoil piece with a plastic coated spoil piece to prevent this from happening again. We released 15 barrels of produced water outside of containment and recovered 10 barrels. We will hydrovac the impacted soil and delineate area to determine pathway forward.

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)? By Gloria Garza To Mike Bratcher, Robert Hamlet and Victoria Venegas By email	

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 <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Laci Luig_____	Title: Engineer Tech._____
Signature:  _____	Date: 5/26/2020_____
email: lluib@cimarex.com_____	Telephone: (432) 571-7810_____
<u>OCD Only</u>	
Received by: _____ Date: _____	

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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: Gloria Garza Date: 2/24/2021

email: _____ Telephone: _____

OCD Only

Received by: Cristina Eads Date: 04/04/2021

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: Georia Garza Date: 2/24/2021

email: _____ Telephone: _____

OCD OnlyReceived by: Cristina Eads Date: 04/04/2021☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature: Cristina Eads Date: 06/29/2021

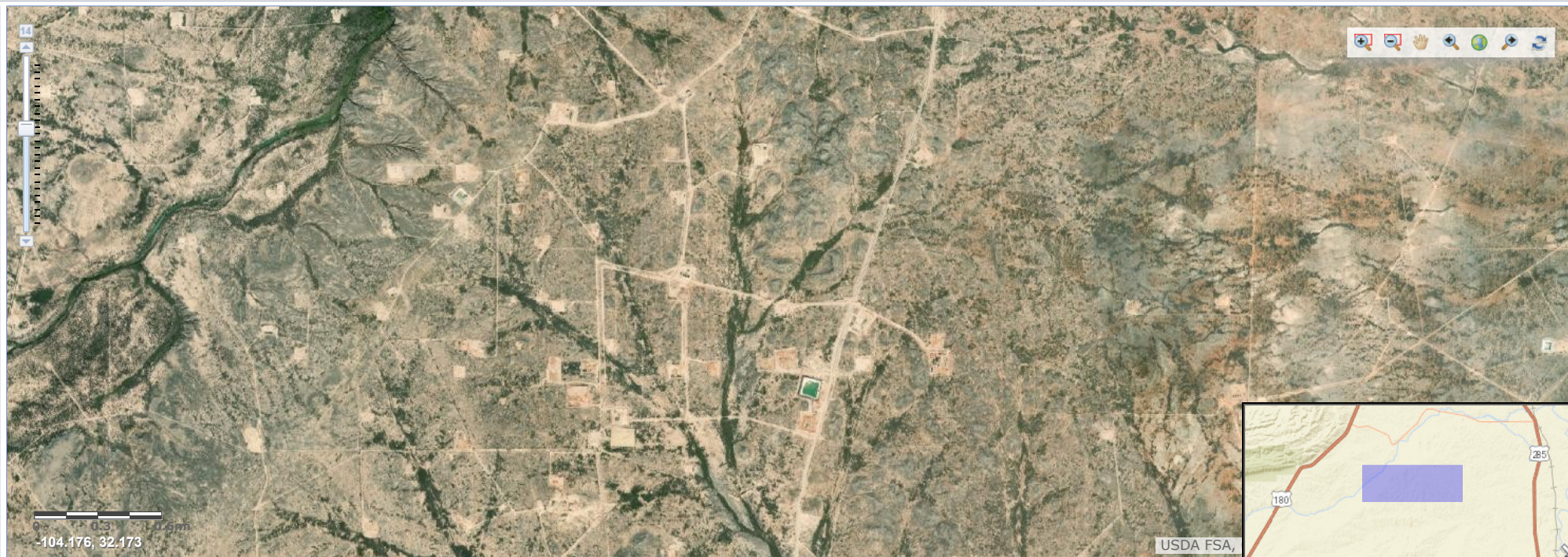
Appendix B



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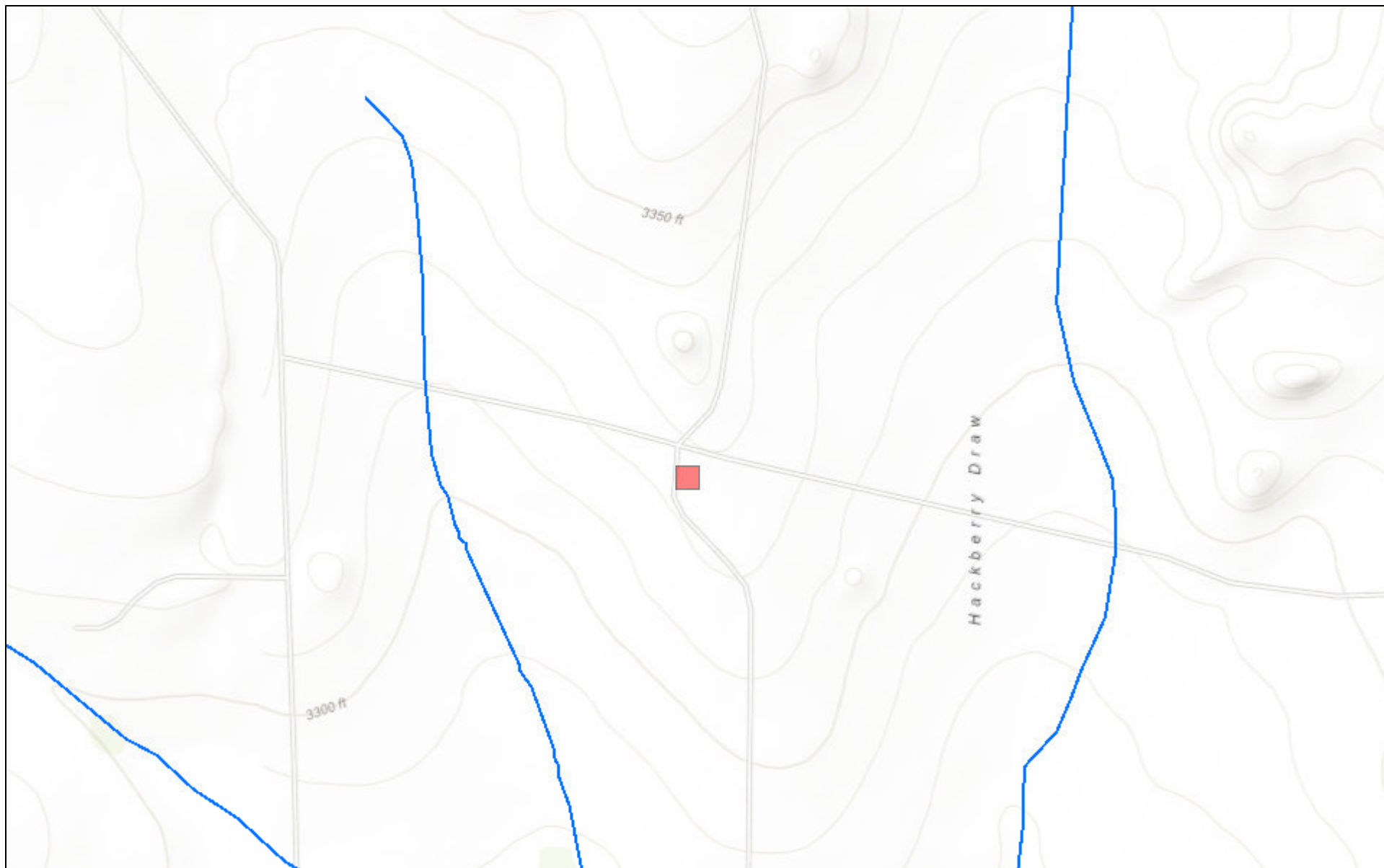
National Water Information System: Mapper

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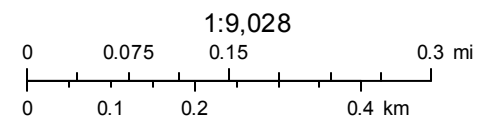


Site Information

New Mexico NFHL Data



January 5, 2021



FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater



Geographic Area:

New Mexico



GO

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Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321136104160701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321136104160701 24S.26E.26.113311

Eddy County, New Mexico

Latitude 32°11'35.3", Longitude 104°16'17.7" NAD83

Land-surface elevation 3,276.90 feet above NGVD29

The depth of the well is 60 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement
1978-01-05		D	72019	19.38				U
1983-01-24		D	72019	32.39				U
1988-02-10		D	72019	21.44				U
1992-11-13		D	72019	26.61				S
1998-01-06		D	72019	29.02				S

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement
2003-02-05		D	72019	13.80				S
2013-01-08	16:30 MST	m	72019	16.03				S

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	72019	Depth to water level, feet below land surface
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O").
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for New Mexico: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2021-01-27 00:03:02 EST

0.34 0.3 nadww01



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-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 00100 A		CUB	ED	1	1	3	24	24S	26E	570284	3563053	51	26	25
C 00262	R	C	ED	4	3	1	24	24S	26E	570481	3563253*	50		
C 00262 POD2		C	ED	4	3	1	24	24S	26E	570234	3562337	45	18	27
C 00293		C	ED	3	2	3	10	24S	26E	567445	3566100*	250		
C 00369	C	CUB	ED	2	1	23	24S	26E	569207	3563757*				
C 00396	C	CUB	ED	2	2	23	24S	26E	570003	3563758*		2032		
C 00517		C	ED	1	3	2	23	24S	26E	569498	3563456*	80	31	49
C 00669		C	ED	2	4	3	07	24S	26E	562799	3565796*	330	250	80
C 00690		C	ED	1	3	3	24	24S	26E	570288	3562653*	30	10	20
C 00692		C	ED	3	3	1	24	24S	26E	570281	3563253*	50	42	8
C 00755		C	ED	4	1	15	24S	26E	567564	3564984*		270		
C 00792		C	ED	4	2	27	24S	26E	568397	3561747*		70	30	40
C 00819		C	ED	4	4	26	24S	26E	570022	3560935*		62	42	20
C 00829		C	ED	1	4	23	24S	26E	569591	3562957*		50	19	31
C 00883		C	ED	3	2	4	23	24S	26E	569887	3562855*	60	14	46
C 00928		C	ED	1	1	23	24S	26E	568806	3563757*		91	7	84
C 00949		C	ED	1	1	3	24	24S	26E	570284	3563053*	62	35	27
C 00957		C	ED	1	4	18	24S	26E	563106	3564511*		753	650	103
C 01085		C	ED	4	2	23	24S	26E	569990	3563356*		127	60	67
C 01202		C	ED	1	29	24S	26E	564138	3561903*			75	19	56
C 01386		C	ED	3	1	29	24S	26E	563937	3561702*		84	72	12
C 01454		C	ED	1	3	20	24S	26E	563917	3562912*		87	70	17
C 01616		C	ED	2	4	23	24S	26E	569988	3562956*		84	84	0
C 01869	R	C	ED	2	3	4	23	24S	26E	569753	3562679	110	30	80
C 02043		C	ED	2	1	24	24S	26E	570805	3563758*		42	28	14
C 02174		C	ED	2	10	24S	26E	568143	3566804*			263	233	30

*UTM location was derived from PLSS - see Help

(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- Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02700	C		ED	1	1	3	29	24S	26E	563844	3561400*	180		
C 03110	C		ED	4	1	4	23	24S	26E	569690	3562856*	35	12	23
C 03192	C		ED	1	2	1	13	24S	26E	570697	3565474*	200		
C 03200 POD1	C		ED	2	3	4	34	24S	26E	568206	3559349	80	52	28
C 03414 POD1	C		ED	3	1	2	14	24S	26E	569513	3565188	80	60	20
C 03414 POD1	R	C	ED	3	1	2	14	24S	26E	569513	3565188	80	60	20
C 03414 POD2	C		ED	3	1	2	14	24S	26E	569509	3565257	100	32	68
C 03526 POD1	C		ED	1	4	4	23	24S	26E	569788	3562666	200		
C 03675	C		ED	2	2	2	23	24S	26E	570134	3563860	59	38	21
C 03777 POD1	C		ED	3	1	2	24	24S	26E	571120	3563571	55	28	27
C 04365 POD1	C		ED	4	2	4	14	24S	26E	569455	3564422			

Average Depth to Water: **73 feet**

Minimum Depth: **7 feet**

Maximum Depth: **650 feet**

Record Count: 37

Basin/County Search:

County: Eddy

PLSS Search:

Township: 24S

Range: 26E

*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.

1/26/21 9:59 PM

Page 2 of 2

WATER COLUMN/ AVERAGE
DEPTH TO WATER

High Karst

Cimarex Energy
Freedom 36 State SWD 1

Legend

-  Freedom 36 State SWD 1
-  High
-  Low
-  Medium



Whites City



Freedom 36 State SWD 1



62

720



Black River Village Rd



Water Well Data
Average Depth to Groundwater (ft)
Cimarex - Freedom 36 State SWD 1
Eddy County, New Mexico

23 South			25 East		
6	5	4	3	2	1
485					
7	8	9	10	11	12
		593	55		90
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
				511	

23 South			26 East		
6	5	4	3	2	1
			220		
7	8	267	9	10	11
18	17	16	15	14	13
19	20	21	22	224	23
30	29	28	27	26	25
31	32	223	33	34	35

23 South			27 East		
6	5	83	4	90	3
7	8		9	10	11
18	17		15	14	75
19	20		21	22	23
30	29	103	28	27	26
31	32		33	34	35

24 South			25 East		
6	5	14	4	440	3
7	8	209	44		12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
			150	500	

24 South			26 East		
6	63	5	4	3	2
7	250	8	450	9	10
18	17	16	15	14	13
19	20	21	22	23	24
30	29	46	28	27	26
31	32	111	33	34	35
		109			

24 South			27 East		
6	5	4	3	2	1
7	8	17	9	10	11
18	17	26	16	15	14
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South			25 East		
6	5	30	4	46	3
7	8		9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South			26 East		
6	5	4	3	2	1
7	8	9	45	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South			27 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
 Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

Appendix C

Certificate of Analysis Summary 680743



Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
Contact: Brittany Long
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12
Report Date: 12.16.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-001	680743-002	680743-003	680743-004	680743-005	680743-006
	<i>Field Id:</i>	H-1	H-1	H-3	H-4	H-5	H-6
	<i>Depth:</i>	0-6 ft	0-6 ft	0-6 ft	0-6 ft	0-6 ft	0-6 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.09.2020 10:25	12.09.2020 10:30	12.10.2020 09:30	12.09.2020 10:40	12.10.2020 09:40	12.09.2020 10:50
BTEX by EPA 8021B	<i>Extracted:</i>	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24
	<i>Analyzed:</i>	12.14.2020 17:36	12.14.2020 17:58	12.14.2020 18:21	12.14.2020 18:43	12.14.2020 19:06	12.14.2020 19:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00396 0.00396	<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17
	<i>Analyzed:</i>	12.12.2020 02:16	12.12.2020 02:33	12.12.2020 02:39	12.12.2020 02:44	12.12.2020 02:50	12.12.2020 03:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		128 9.90	140 49.8	209 50.5	80.8 50.1	110 49.7	114 49.9
TPH By SW8015 Mod	<i>Extracted:</i>	12.11.2020 17:00	12.11.2020 17:00	12.11.2020 17:00	12.11.2020 17:00	12.11.2020 17:00	12.11.2020 17:00
	<i>Analyzed:</i>	12.14.2020 15:43	12.14.2020 16:04	12.14.2020 16:24	12.14.2020 16:45	12.14.2020 17:05	12.14.2020 17:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.8 49.8
Diesel Range Organics (DRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.8 49.8
Total TPH		<49.80 49.80	<50.30 50.30	<49.90 49.90	<49.90 49.90	<49.80 49.80	<49.80 49.80

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 680743



Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
Contact: Brittany Long
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12
Report Date: 12.16.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-007	680743-008	680743-009	680743-010	680743-011	680743-012
	<i>Field Id:</i>	H-7	H-8	H-9	AH1	AH1	AH1
	<i>Depth:</i>	0-6 ft	0-6 ft	0-6 ft	0-1 ft	1-1.5 ft	2-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.09.2020 11:00	12.09.2020 11:10	12.09.2020 11:15	12.09.2020 11:30	12.09.2020 11:40	12.09.2020 11:50
BTEX by EPA 8021B	<i>Extracted:</i>	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24	12.14.2020 08:24	12.11.2020 17:00	
	<i>Analyzed:</i>	12.14.2020 19:51	12.14.2020 20:14	12.14.2020 20:36	12.14.2020 20:59	12.12.2020 02:29	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398	
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.001990 0.001990	
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.001990 0.001990	
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17
	<i>Analyzed:</i>	12.12.2020 03:12	12.12.2020 03:18	12.12.2020 03:23	12.12.2020 03:29	12.12.2020 03:34	12.12.2020 03:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		90.6 50.4	132 50.1	141 50.1	181 49.7	46.3 9.88	121 50.1
TPH By SW8015 Mod	<i>Extracted:</i>	12.11.2020 17:00	12.11.2020 17:00	12.11.2020 17:00	12.15.2020 11:00	12.15.2020 11:00	
	<i>Analyzed:</i>	12.14.2020 17:46	12.14.2020 18:06	12.14.2020 18:27	12.15.2020 14:53	12.15.2020 13:51	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Diesel Range Organics (DRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Total TPH		<50.00 50.00	<50.20 50.20	<50.00 50.00	<49.9 49.9	<49.8 49.8	

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 680743

Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
 Contact: Brittany Long
 Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12

Report Date: 12.16.2020 15:27

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-013	680743-014	680743-015	680743-016	680743-017	680743-018
	<i>Field Id:</i>	AH1	AH2	AH2	AH2	AH2	AH2
	<i>Depth:</i>	3-3.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft	4-4.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.09.2020 12:00	12.10.2020 11:40	12.10.2020 11:45	12.10.2020 11:50	12.10.2020 11:55	12.10.2020 12:00
BTEX by EPA 8021B	<i>Extracted:</i>		12.11.2020 17:00	12.11.2020 17:00			
	<i>Analyzed:</i>		12.12.2020 02:52	12.12.2020 03:14			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Benzene			<0.00198 0.00198	<0.00200 0.00200			
Toluene			<0.00198 0.00198	<0.00200 0.00200			
Ethylbenzene			<0.00198 0.00198	<0.00200 0.00200			
m,p-Xylenes			<0.00397 0.00397	<0.00401 0.00401			
o-Xylene			<0.00198 0.00198	<0.00200 0.00200			
Total Xylenes			<0.001980 0.001980	<0.002000 0.002000			
Total BTEX			<0.001980 0.001980	<0.002000 0.002000			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:17
	<i>Analyzed:</i>	12.12.2020 03:57	12.12.2020 04:13	12.12.2020 04:19	12.12.2020 04:25	12.12.2020 04:30	12.12.2020 04:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		104 50.2	2120 49.6	1410 49.9	763 200	538 200	571 199
TPH By SW8015 Mod	<i>Extracted:</i>		12.15.2020 11:00	12.15.2020 11:00			
	<i>Analyzed:</i>		12.15.2020 15:13	12.15.2020 15:34			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)			<50.2 50.2	<50.1 50.1			
Diesel Range Organics (DRO)			<50.2 50.2	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)			<50.2 50.2	<50.1 50.1			
Total TPH			<50.2 50.2	<50.1 50.1			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 680743



Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
Contact: Brittany Long
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12
Report Date: 12.16.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-019	680743-020	680743-021	680743-022	680743-023	680743-024
	<i>Field Id:</i>	AH2	AH2	AH3	AH3	AH3	AH3
	<i>Depth:</i>	5-5.5 ft	6-6.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 12:05	12.10.2020 12:10	12.10.2020 12:30	12.10.2020 12:35	12.10.2020 12:45	12.10.2020 12:55
BTEX by EPA 8021B	<i>Extracted:</i>			12.11.2020 17:00	12.11.2020 17:00		
	<i>Analyzed:</i>			12.12.2020 03:36	12.12.2020 03:59		
	<i>Units/RL:</i>			mg/kg RL	mg/kg RL		
Benzene				<0.00202 0.00202	<0.00202 0.00202		
Toluene				<0.00202 0.00202	<0.00202 0.00202		
Ethylbenzene				<0.00202 0.00202	<0.00202 0.00202		
m,p-Xylenes				<0.00404 0.00404	<0.00403 0.00403		
o-Xylene				<0.00202 0.00202	<0.00202 0.00202		
Total Xylenes				<0.002020 0.002020	<0.002020 0.002020		
Total BTEX				<0.002020 0.002020	<0.002020 0.002020		
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:17	12.11.2020 17:17	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20
	<i>Analyzed:</i>	12.12.2020 04:41	12.12.2020 04:47	12.12.2020 05:20	12.12.2020 05:37	12.12.2020 05:43	12.12.2020 05:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1900 200	918 200	11500 200	11100 200	7420 200	1050 49.8
TPH By SW8015 Mod	<i>Extracted:</i>			12.15.2020 11:00	12.15.2020 11:00		
	<i>Analyzed:</i>			12.15.2020 15:54	12.15.2020 16:15		
	<i>Units/RL:</i>			mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)				<50.0 50.0	<49.9 49.9		
Diesel Range Organics (DRO)				<50.0 50.0	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)				<50.0 50.0	<49.9 49.9		
Total TPH				<50.0 50.0	<49.9 49.9		

BRL - Below Reporting Limit

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Certificate of Analysis Summary 680743

Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
 Contact: Brittany Long
 Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12

Report Date: 12.16.2020 15:27

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-025	680743-026	680743-027	680743-028	680743-029	680743-030
	<i>Field Id:</i>	AH4	AH4	AH4	AH4	AH4	AH4
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft	4-4.5 ft	5-5.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 10:05	12.10.2020 10:10	12.10.2020 10:20	12.10.2020 10:25	12.10.2020 10:45	12.10.2020 10:55
BTEX by EPA 8021B	<i>Extracted:</i>	12.11.2020 17:00	12.11.2020 17:00				
	<i>Analyzed:</i>	12.12.2020 04:21	12.12.2020 04:44				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Benzene		<0.00198 0.00198	<0.00200 0.00200				
Toluene		<0.00198 0.00198	<0.00200 0.00200				
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200				
m,p-Xylenes		<0.00397 0.00397	<0.00399 0.00399				
o-Xylene		<0.00198 0.00198	<0.00200 0.00200				
Total Xylenes		<0.001980 0.001980	<0.002000 0.002000				
Total BTEX		<0.001980 0.001980	<0.002000 0.002000				
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20
	<i>Analyzed:</i>	12.12.2020 05:54	12.12.2020 06:11	12.12.2020 06:16	12.12.2020 06:22	12.12.2020 06:27	12.12.2020 06:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		9540 199	6640 201	5750 201	2060 200	924 49.9	1580 49.9
TPH By SW8015 Mod	<i>Extracted:</i>	12.15.2020 11:00	12.15.2020 11:00				
	<i>Analyzed:</i>	12.15.2020 16:36	12.15.2020 16:56				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0				
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0				
Total TPH		<49.9 49.9	<50.0 50.0				

BRL - Below Reporting Limit

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Certificate of Analysis Summary 680743

Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
 Contact: Brittany Long
 Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12

Report Date: 12.16.2020 15:27

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-031	680743-032	680743-033	680743-034	680743-035	680743-036
	<i>Field Id:</i>	AH4	AH5	AH5	AH5	AH5	AH5
	<i>Depth:</i>	6-6.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft	4-4.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 11:00	12.10.2020 09:00	12.10.2020 09:05	12.10.2020 09:10	12.10.2020 09:20	12.10.2020 09:25
BTEX by EPA 8021B	<i>Extracted:</i>		12.11.2020 17:00	12.11.2020 17:00			
	<i>Analyzed:</i>		12.12.2020 05:06	12.12.2020 05:28			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Benzene			<0.00202 0.00202	<0.00202 0.00202			
Toluene			<0.00202 0.00202	<0.00202 0.00202			
Ethylbenzene			<0.00202 0.00202	<0.00202 0.00202			
m,p-Xylenes			<0.00404 0.00404	<0.00404 0.00404			
o-Xylene			<0.00202 0.00202	<0.00202 0.00202			
Total Xylenes			<0.002020 0.002020	<0.002020 0.002020			
Total BTEX			<0.002020 0.002020	<0.002020 0.002020			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20
	<i>Analyzed:</i>	12.12.2020 06:38	12.12.2020 06:55	12.12.2020 07:01	12.12.2020 07:17	12.12.2020 07:23	12.12.2020 07:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1420 49.6	1800 202	497 50.5	17.2 10.0	149 49.6	324 49.9
TPH By SW8015 Mod	<i>Extracted:</i>		12.15.2020 11:00	12.15.2020 11:00			
	<i>Analyzed:</i>		12.15.2020 17:17	12.15.2020 17:37			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)			<50.2 50.2	<50.1 50.1			
Diesel Range Organics (DRO)			<50.2 50.2	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)			<50.2 50.2	<50.1 50.1			
Total TPH			<50.2 50.2	<50.1 50.1			

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Certificate of Analysis Summary 680743



Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
Contact: Brittany Long
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12**Report Date:** 12.16.2020 15:27**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-037	680743-038	680743-039	680743-040	680743-041	680743-042
	<i>Field Id:</i>	AH5	AH6	AH6	AH6	AH6	AH6
	<i>Depth:</i>	5-5.5 ft	0-5.5 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft	4-4.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 09:35	12.10.2020 08:30	12.10.2020 08:35	12.10.2020 08:40	12.10.2020 08:45	12.10.2020 08:50
BTEX by EPA 8021B	<i>Extracted:</i>		12.11.2020 17:00	12.11.2020 17:00			
	<i>Analyzed:</i>		12.12.2020 05:51	12.12.2020 07:08			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Benzene			<0.00198 0.00198	<0.00200 0.00200			
Toluene			<0.00198 0.00198	<0.00200 0.00200			
Ethylbenzene			<0.00198 0.00198	<0.00200 0.00200			
m,p-Xylenes			<0.00397 0.00397	<0.00399 0.00399			
o-Xylene			<0.00198 0.00198	<0.00200 0.00200			
Total Xylenes			<0.001980 0.001980	<0.002000 0.002000			
Total BTEX			<0.001980 0.001980	<0.002000 0.002000			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 17:20	12.11.2020 16:13	12.11.2020 16:13
	<i>Analyzed:</i>	12.12.2020 07:34	12.12.2020 07:40	12.12.2020 07:45	12.12.2020 07:51	12.12.2020 00:37	12.12.2020 00:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		105 50.1	132 49.8	144 49.9	183 50.1	200 49.6	126 49.9
TPH By SW8015 Mod	<i>Extracted:</i>		12.15.2020 11:00	12.15.2020 11:00			
	<i>Analyzed:</i>		12.15.2020 18:18	12.15.2020 18:39			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)			<50.0 50.0	<49.9 49.9			
Diesel Range Organics (DRO)			<50.0 50.0	<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)			<50.0 50.0	<49.9 49.9			
Total TPH			<50.0 50.0	<49.9 49.9			

BRL - Below Reporting Limit

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Certificate of Analysis Summary 680743



Tetra Tech- Midland, Midland, TX

Project Name: Cimarex Freedom 36 State SWD 1

Project Id: 212C-MD-02375
Contact: Brittany Long
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu 12.10.2020 17:12**Report Date:** 12.16.2020 15:27**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680743-043	680743-044	680743-045	680743-046	680743-047	680743-048
	<i>Field Id:</i>	AH6	AH7	AH7	AH7	AH7	AH7
	<i>Depth:</i>	5-5.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft	4-4.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 08:55	12.09.2020 09:05	12.09.2020 09:10	12.09.2020 09:30	12.09.2020 09:50	12.09.2020 10:20
BTEX by EPA 8021B	<i>Extracted:</i>		12.11.2020 17:00	12.11.2020 17:00			
	<i>Analyzed:</i>		12.12.2020 07:31	12.12.2020 07:53			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Benzene			<0.00199 0.00199	<0.00200 0.00200			
Toluene			<0.00199 0.00199	<0.00200 0.00200			
Ethylbenzene			<0.00199 0.00199	<0.00200 0.00200			
m,p-Xylenes			<0.00398 0.00398	<0.00401 0.00401			
o-Xylene			<0.00199 0.00199	<0.00200 0.00200			
Total Xylenes			<0.001990 0.001990	<0.002000 0.002000			
Total BTEX			<0.001990 0.001990	<0.002000 0.002000			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	12.11.2020 16:13	12.11.2020 16:13	12.11.2020 16:13	12.11.2020 16:13	12.11.2020 16:13	12.11.2020 16:13
	<i>Analyzed:</i>	12.12.2020 00:57	12.12.2020 01:13	12.12.2020 01:18	12.12.2020 01:23	12.12.2020 01:28	12.12.2020 01:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		140 49.7	20.1 10.1	20.7 10.1	14.8 10.0	22.3 9.92	14.3 9.98
TPH By SW8015 Mod	<i>Extracted:</i>		12.15.2020 11:00	12.15.2020 11:00			
	<i>Analyzed:</i>		12.15.2020 19:00	12.15.2020 19:20			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)			<50.0 50.0	<50.1 50.1			
Diesel Range Organics (DRO)			<50.0 50.0	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)			<50.0 50.0	<50.1 50.1			
Total TPH			<50.0 50.0	<50.1 50.1			

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Analytical Report 680743

for

Tetra Tech- Midland

Project Manager: Brittany Long

Cimarex Freedom 36 State SWD 1

212C-MD-02375

12.16.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



12.16.2020

Project Manager: **Brittany Long**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **680743**

Cimarex Freedom 36 State SWD 1

Project Address: Eddy County, New Mexico

Brittany Long:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680743. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 680743 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
H-1	S	12.09.2020 10:25	0 - 6 ft	680743-001
H-1	S	12.09.2020 10:30	0 - 6 ft	680743-002
H-3	S	12.10.2020 09:30	0 - 6 ft	680743-003
H-4	S	12.09.2020 10:40	0 - 6 ft	680743-004
H-5	S	12.10.2020 09:40	0 - 6 ft	680743-005
H-6	S	12.09.2020 10:50	0 - 6 ft	680743-006
H-7	S	12.09.2020 11:00	0 - 6 ft	680743-007
H-8	S	12.09.2020 11:10	0 - 6 ft	680743-008
H-9	S	12.09.2020 11:15	0 - 6 ft	680743-009
AH1	S	12.09.2020 11:30	0 - 1 ft	680743-010
AH1	S	12.09.2020 11:40	1 - 1.5 ft	680743-011
AH1	S	12.09.2020 11:50	2 - 2.5 ft	680743-012
AH1	S	12.09.2020 12:00	3 - 3.5 ft	680743-013
AH2	S	12.10.2020 11:40	0 - 1 ft	680743-014
AH2	S	12.10.2020 11:45	1 - 1.5 ft	680743-015
AH2	S	12.10.2020 11:50	2 - 2.5 ft	680743-016
AH2	S	12.10.2020 11:55	3 - 3.5 ft	680743-017
AH2	S	12.10.2020 12:00	4 - 4.5 ft	680743-018
AH2	S	12.10.2020 12:05	5 - 5.5 ft	680743-019
AH2	S	12.10.2020 12:10	6 - 6.5 ft	680743-020
AH3	S	12.10.2020 12:30	0 - 1 ft	680743-021
AH3	S	12.10.2020 12:35	1 - 1.5 ft	680743-022
AH3	S	12.10.2020 12:45	2 - 2.5 ft	680743-023
AH3	S	12.10.2020 12:55	3 - 3.5 ft	680743-024
AH4	S	12.10.2020 10:05	0 - 1 ft	680743-025
AH4	S	12.10.2020 10:10	1 - 1.5 ft	680743-026
AH4	S	12.10.2020 10:20	2 - 2.5 ft	680743-027
AH4	S	12.10.2020 10:25	3 - 3.5 ft	680743-028
AH4	S	12.10.2020 10:45	4 - 4.5 ft	680743-029
AH4	S	12.10.2020 10:55	5 - 5.5 ft	680743-030
AH4	S	12.10.2020 11:00	6 - 6.5 ft	680743-031
AH5	S	12.10.2020 09:00	0 - 1 ft	680743-032
AH5	S	12.10.2020 09:05	1 - 1.5 ft	680743-033
AH5	S	12.10.2020 09:10	2 - 2.5 ft	680743-034
AH5	S	12.10.2020 09:20	3 - 3.5 ft	680743-035
AH5	S	12.10.2020 09:25	4 - 4.5 ft	680743-036
AH5	S	12.10.2020 09:35	5 - 5.5 ft	680743-037
AH6	S	12.10.2020 08:30	0 - 5.5 ft	680743-038
AH6	S	12.10.2020 08:35	1 - 1.5 ft	680743-039
AH6	S	12.10.2020 08:40	2 - 2.5 ft	680743-040
AH6	S	12.10.2020 08:45	3 - 3.5 ft	680743-041
AH6	S	12.10.2020 08:50	4 - 4.5 ft	680743-042
AH6	S	12.10.2020 08:55	5 - 5.5 ft	680743-043

**Sample Cross Reference 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

AH7	S	12.09.2020 09:05	0 - 1 ft	680743-044
AH7	S	12.09.2020 09:10	1 - 1.5 ft	680743-045
AH7	S	12.09.2020 09:30	2 - 2.5 ft	680743-046
AH7	S	12.09.2020 09:50	3 - 3.5 ft	680743-047
AH7	S	12.09.2020 10:20	4 - 4.5 ft	680743-048



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Cimarex Freedom 36 State SWD 1

Project ID: 212C-MD-02375
Work Order Number(s): 680743

Report Date: 12.16.2020
Date Received: 12.10.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-1** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-001 Date Collected: 12.09.2020 10:25 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	128	9.90	mg/kg	12.12.2020 02:16		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.14.2020 15:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.14.2020 15:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.14.2020 15:43	U	1
Total TPH	PHC635	<49.80	49.80	mg/kg	12.14.2020 15:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	12.14.2020 15:43		
o-Terphenyl	84-15-1	108	%	70-135	12.14.2020 15:43		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-1**
Lab Sample Id: 680743-001

Matrix: Soil
Date Collected: 12.09.2020 10:25

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.14.2020 17:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.14.2020 17:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.14.2020 17:36		
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.14.2020 17:36		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-1** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-002 Date Collected: 12.09.2020 10:30 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	49.8	mg/kg	12.12.2020 02:33		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.14.2020 16:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.14.2020 16:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.14.2020 16:04	U	1
Total TPH	PHC635	<50.30	50.30	mg/kg	12.14.2020 16:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	118	%	70-135	12.14.2020 16:04		
o-Terphenyl	84-15-1	96	%	70-135	12.14.2020 16:04		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-1**
Lab Sample Id: 680743-002

Matrix: Soil
Date Collected: 12.09.2020 10:30

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.14.2020 17:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.14.2020 17:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.14.2020 17:58	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.14.2020 17:58	



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-3** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-003 Date Collected: 12.10.2020 09:30 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	209	50.5	mg/kg	12.12.2020 02:39		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.14.2020 16:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.14.2020 16:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.14.2020 16:24	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.14.2020 16:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	12.14.2020 16:24		
o-Terphenyl	84-15-1	101	%	70-135	12.14.2020 16:24		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-3**
Lab Sample Id: 680743-003

Matrix: Soil
Date Collected: 12.10.2020 09:30

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.14.2020 18:21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.14.2020 18:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.14.2020 18:21		
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.14.2020 18:21		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-4** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-004 Date Collected: 12.09.2020 10:40 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	80.8	50.1	mg/kg	12.12.2020 02:44		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.14.2020 16:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.14.2020 16:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.14.2020 16:45	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.14.2020 16:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	12.14.2020 16:45		
o-Terphenyl	84-15-1	102	%	70-135	12.14.2020 16:45		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-4**
Lab Sample Id: 680743-004

Matrix: Soil
Date Collected: 12.09.2020 10:40

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.14.2020 18:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.14.2020 18:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.14.2020 18:43		
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.14.2020 18:43		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-5** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-005 Date Collected: 12.10.2020 09:40 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	110	49.7	mg/kg	12.12.2020 02:50		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.14.2020 17:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.14.2020 17:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.14.2020 17:05	U	1
Total TPH	PHC635	<49.80	49.80	mg/kg	12.14.2020 17:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	12.14.2020 17:05		
o-Terphenyl	84-15-1	96	%	70-135	12.14.2020 17:05		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-5**
Lab Sample Id: 680743-005

Matrix: Soil
Date Collected: 12.10.2020 09:40

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.14.2020 19:06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.14.2020 19:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.14.2020 19:06		
4-Bromofluorobenzene	460-00-4	123	%	70-130	12.14.2020 19:06		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-6** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-006 Date Collected: 12.09.2020 10:50 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	49.9	mg/kg	12.12.2020 03:06		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.14.2020 17:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.14.2020 17:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.14.2020 17:25	U	1
Total TPH	PHC635	<49.80	49.80	mg/kg	12.14.2020 17:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	121	%	70-135	12.14.2020 17:25		
o-Terphenyl	84-15-1	108	%	70-135	12.14.2020 17:25		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-6**
Lab Sample Id: 680743-006

Matrix: Soil
Date Collected: 12.09.2020 10:50

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.14.2020 19:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.14.2020 19:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.14.2020 19:28		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.14.2020 19:28		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-7** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-007 Date Collected: 12.09.2020 11:00 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.6	50.4	mg/kg	12.12.2020 03:12		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.14.2020 17:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.14.2020 17:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.14.2020 17:46	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.14.2020 17:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	117	%	70-135	12.14.2020 17:46		
o-Terphenyl	84-15-1	90	%	70-135	12.14.2020 17:46		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-7**
Lab Sample Id: 680743-007

Matrix: Soil
Date Collected: 12.09.2020 11:00

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.14.2020 19:51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.14.2020 19:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	12.14.2020 19:51		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.14.2020 19:51		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-8** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-008 Date Collected: 12.09.2020 11:10 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	50.1	mg/kg	12.12.2020 03:18		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.14.2020 18:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.14.2020 18:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.14.2020 18:06	U	1
Total TPH	PHC635	<50.20	50.20	mg/kg	12.14.2020 18:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	116	%	70-135	12.14.2020 18:06		
o-Terphenyl	84-15-1	108	%	70-135	12.14.2020 18:06		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-8**
Lab Sample Id: 680743-008

Matrix: Soil
Date Collected: 12.09.2020 11:10

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.14.2020 20:14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.14.2020 20:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	12.14.2020 20:14	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.14.2020 20:14	



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-9** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-009 Date Collected: 12.09.2020 11:15 Sample Depth: 0 - 6 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	50.1	mg/kg	12.12.2020 03:23		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.11.2020 17:00 % Moisture:
 Seq Number: 3144878 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.14.2020 18:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.14.2020 18:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.14.2020 18:27	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.14.2020 18:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	12.14.2020 18:27		
o-Terphenyl	84-15-1	112	%	70-135	12.14.2020 18:27		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **H-9**
Lab Sample Id: 680743-009

Matrix: Soil
Date Collected: 12.09.2020 11:15

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.14.2020 20:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.14.2020 20:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.14.2020 20:36		
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.14.2020 20:36		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-010 Date Collected: 12.09.2020 11:30 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	181	49.7	mg/kg	12.12.2020 03:29		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 14:53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 14:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-135	12.15.2020 14:53		
o-Terphenyl	84-15-1	98	%	70-135	12.15.2020 14:53		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1**
Lab Sample Id: 680743-010

Matrix: Soil
Date Collected: 12.09.2020 11:30

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.14.2020 08:24

% Moisture:
Basis: Wet Weight

Seq Number: 3144882

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.14.2020 20:59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.14.2020 20:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.14.2020 20:59		
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.14.2020 20:59		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-011 Date Collected: 12.09.2020 11:40 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.3	9.88	mg/kg	12.12.2020 03:34		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.15.2020 13:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.15.2020 13:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.15.2020 13:51	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.15.2020 13:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-135	12.15.2020 13:51		
o-Terphenyl	84-15-1	106	%	70-135	12.15.2020 13:51		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1**
Lab Sample Id: 680743-011

Matrix: Soil
Date Collected: 12.09.2020 11:40

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.2020 02:29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.2020 02:29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.2020 02:29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.2020 02:29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.2020 02:29	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	mg/kg	12.12.2020 02:29	U	1
Total BTEX		<0.001990	0.001990	mg/kg	12.12.2020 02:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.12.2020 02:29		
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.12.2020 02:29		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-012 Date Collected: 12.09.2020 11:50 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	50.1	mg/kg	12.12.2020 03:51		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH1** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-013 Date Collected: 12.09.2020 12:00 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	50.2	mg/kg	12.12.2020 03:57		5



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-014 Date Collected: 12.10.2020 11:40 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2120	49.6	mg/kg	12.12.2020 04:13		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.15.2020 15:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.15.2020 15:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.15.2020 15:13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.15.2020 15:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	12.15.2020 15:13		
o-Terphenyl	84-15-1	106	%	70-135	12.15.2020 15:13		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2**
Lab Sample Id: 680743-014

Matrix: Soil
Date Collected: 12.10.2020 11:40

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.2020 02:52	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.2020 02:52	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.2020 02:52	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.2020 02:52	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.2020 02:52	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	mg/kg	12.12.2020 02:52	U	1
Total BTEX		<0.001980	0.001980	mg/kg	12.12.2020 02:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.12.2020 02:52		
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.2020 02:52		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-015 Date Collected: 12.10.2020 11:45 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
 Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1410	49.9	mg/kg	12.12.2020 04:19		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.15.2020 15:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.15.2020 15:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.15.2020 15:34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.15.2020 15:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	12.15.2020 15:34		
o-Terphenyl	84-15-1	102	%	70-135	12.15.2020 15:34		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2**
Lab Sample Id: 680743-015

Matrix: Soil
Date Collected: 12.10.2020 11:45

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.2020 03:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.2020 03:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.2020 03:14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.12.2020 03:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.2020 03:14	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.12.2020 03:14	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.12.2020 03:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.12.2020 03:14	
4-Bromofluorobenzene	460-00-4	92	%	70-130	12.12.2020 03:14	

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-016 Date Collected: 12.10.2020 11:50 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	763	200	mg/kg	12.12.2020 04:25		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-017 Date Collected: 12.10.2020 11:55 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	538	200	mg/kg	12.12.2020 04:30		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-018 Date Collected: 12.10.2020 12:00 Sample Depth: 4 - 4.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	571	199	mg/kg	12.12.2020 04:36		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-019 Date Collected: 12.10.2020 12:05 Sample Depth: 5 - 5.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1900	200	mg/kg	12.12.2020 04:41		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH2** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-020 Date Collected: 12.10.2020 12:10 Sample Depth: 6 - 6.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:17 % Moisture:
Seq Number: 3144750 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	918	200	mg/kg	12.12.2020 04:47		20



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-021 Date Collected: 12.10.2020 12:30 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11500	200	mg/kg	12.12.2020 05:20		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 15:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 15:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 15:54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 15:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	12.15.2020 15:54		
o-Terphenyl	84-15-1	106	%	70-135	12.15.2020 15:54		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3**
Lab Sample Id: 680743-021

Matrix: Soil
Date Collected: 12.10.2020 12:30

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.2020 03:36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.2020 03:36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.2020 03:36	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.12.2020 03:36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.2020 03:36	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	mg/kg	12.12.2020 03:36	U	1
Total BTEX		<0.002020	0.002020	mg/kg	12.12.2020 03:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.12.2020 03:36		
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.12.2020 03:36		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-022 Date Collected: 12.10.2020 12:35 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11100	200	mg/kg	12.12.2020 05:37		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 16:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 16:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 16:15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 16:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	12.15.2020 16:15		
o-Terphenyl	84-15-1	98	%	70-135	12.15.2020 16:15		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3**
Lab Sample Id: 680743-022

Matrix: Soil
Date Collected: 12.10.2020 12:35

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.2020 03:59	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.2020 03:59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.2020 03:59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.12.2020 03:59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.2020 03:59	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	mg/kg	12.12.2020 03:59	U	1
Total BTEX		<0.002020	0.002020	mg/kg	12.12.2020 03:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	12.12.2020 03:59		
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.2020 03:59		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-023 Date Collected: 12.10.2020 12:45 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7420	200	mg/kg	12.12.2020 05:43		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH3** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-024 Date Collected: 12.10.2020 12:55 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	49.8	mg/kg	12.12.2020 05:48		5



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-025 Date Collected: 12.10.2020 10:05 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9540	199	mg/kg	12.12.2020 05:54		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 16:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 16:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 16:36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 16:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	118	%	70-135	12.15.2020 16:36		
o-Terphenyl	84-15-1	110	%	70-135	12.15.2020 16:36		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4**
Lab Sample Id: 680743-025

Matrix: Soil
Date Collected: 12.10.2020 10:05

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.2020 04:21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.2020 04:21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.2020 04:21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.2020 04:21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.2020 04:21	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	mg/kg	12.12.2020 04:21	U	1
Total BTEX		<0.001980	0.001980	mg/kg	12.12.2020 04:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.12.2020 04:21		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.12.2020 04:21		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-026 Date Collected: 12.10.2020 10:10 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6640	201	mg/kg	12.12.2020 06:11		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 16:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 16:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 16:56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 16:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	126	%	70-135	12.15.2020 16:56		
o-Terphenyl	84-15-1	104	%	70-135	12.15.2020 16:56		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4**
Lab Sample Id: 680743-026

Matrix: Soil
Date Collected: 12.10.2020 10:10

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.2020 04:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.2020 04:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.2020 04:44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.12.2020 04:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.2020 04:44	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.12.2020 04:44	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.12.2020 04:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	12.12.2020 04:44		
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.12.2020 04:44		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-027 Date Collected: 12.10.2020 10:20 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5750	201	mg/kg	12.12.2020 06:16		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-028 Date Collected: 12.10.2020 10:25 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2060	200	mg/kg	12.12.2020 06:22		20

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-029 Date Collected: 12.10.2020 10:45 Sample Depth: 4 - 4.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	924	49.9	mg/kg	12.12.2020 06:27		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-030 Date Collected: 12.10.2020 10:55 Sample Depth: 5 - 5.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1580	49.9	mg/kg	12.12.2020 06:33		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH4** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-031 Date Collected: 12.10.2020 11:00 Sample Depth: 6 - 6.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1420	49.6	mg/kg	12.12.2020 06:38		5



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-032 Date Collected: 12.10.2020 09:00 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1800	202	mg/kg	12.12.2020 06:55		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.15.2020 17:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.15.2020 17:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.15.2020 17:17	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.15.2020 17:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	12.15.2020 17:17		
o-Terphenyl	84-15-1	96	%	70-135	12.15.2020 17:17		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5**
Lab Sample Id: 680743-032

Matrix: Soil
Date Collected: 12.10.2020 09:00

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.2020 05:06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.2020 05:06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.2020 05:06	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.12.2020 05:06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.2020 05:06	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	mg/kg	12.12.2020 05:06	U	1
Total BTEX		<0.002020	0.002020	mg/kg	12.12.2020 05:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.2020 05:06		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.12.2020 05:06		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-033 Date Collected: 12.10.2020 09:05 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	497	50.5	mg/kg	12.12.2020 07:01		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.15.2020 17:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.15.2020 17:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.15.2020 17:37	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.15.2020 17:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	12.15.2020 17:37		
o-Terphenyl	84-15-1	112	%	70-135	12.15.2020 17:37		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5**
Lab Sample Id: 680743-033

Matrix: Soil
Date Collected: 12.10.2020 09:05

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.2020 05:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.2020 05:28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.2020 05:28	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.12.2020 05:28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.2020 05:28	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	mg/kg	12.12.2020 05:28	U	1
Total BTEX		<0.002020	0.002020	mg/kg	12.12.2020 05:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.12.2020 05:28		
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.12.2020 05:28		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-034 Date Collected: 12.10.2020 09:10 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.2	10.0	mg/kg	12.12.2020 07:17		1

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-035 Date Collected: 12.10.2020 09:20 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	149	49.6	mg/kg	12.12.2020 07:23		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-036 Date Collected: 12.10.2020 09:25 Sample Depth: 4 - 4.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	324	49.9	mg/kg	12.12.2020 07:29		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH5** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-037 Date Collected: 12.10.2020 09:35 Sample Depth: 5 - 5.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	105	50.1	mg/kg	12.12.2020 07:34		5



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-038 Date Collected: 12.10.2020 08:30 Sample Depth: 0 - 5.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	49.8	mg/kg	12.12.2020 07:40		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 18:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 18:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 18:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 18:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	12.15.2020 18:18		
o-Terphenyl	84-15-1	96	%	70-135	12.15.2020 18:18		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6**
Lab Sample Id: 680743-038

Matrix: Soil
Date Collected: 12.10.2020 08:30

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.2020 05:51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.2020 05:51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.2020 05:51	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.2020 05:51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.2020 05:51	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	mg/kg	12.12.2020 05:51	U	1
Total BTEX		<0.001980	0.001980	mg/kg	12.12.2020 05:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.12.2020 05:51		
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.2020 05:51		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-039 Date Collected: 12.10.2020 08:35 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
 Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	144	49.9	mg/kg	12.12.2020 07:45		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 18:39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 18:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	12.15.2020 18:39		
o-Terphenyl	84-15-1	102	%	70-135	12.15.2020 18:39		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6**
Lab Sample Id: 680743-039

Matrix: Soil
Date Collected: 12.10.2020 08:35

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.2020 07:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.2020 07:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.2020 07:08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.12.2020 07:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.2020 07:08	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.12.2020 07:08	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.12.2020 07:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.12.2020 07:08		
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.12.2020 07:08		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-040 Date Collected: 12.10.2020 08:40 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 17:20 % Moisture:
Seq Number: 3144752 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	50.1	mg/kg	12.12.2020 07:51		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-041 Date Collected: 12.10.2020 08:45 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	200	49.6	mg/kg	12.12.2020 00:37		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-042 Date Collected: 12.10.2020 08:50 Sample Depth: 4 - 4.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	49.9	mg/kg	12.12.2020 00:52		5

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH6** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-043 Date Collected: 12.10.2020 08:55 Sample Depth: 5 - 5.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	49.7	mg/kg	12.12.2020 00:57		5



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-044 Date Collected: 12.09.2020 09:05 Sample Depth: 0 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
 Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.1	10.1	mg/kg	12.12.2020 01:13		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 19:00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 19:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	12.15.2020 19:00		
o-Terphenyl	84-15-1	108	%	70-135	12.15.2020 19:00		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7**
Lab Sample Id: 680743-044

Matrix: Soil
Date Collected: 12.09.2020 09:05

Date Received: 12.10.2020 17:12
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.2020 07:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.2020 07:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.2020 07:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.2020 07:31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.2020 07:31	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	mg/kg	12.12.2020 07:31	U	1
Total BTEX		<0.001990	0.001990	mg/kg	12.12.2020 07:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.12.2020 07:31		
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.12.2020 07:31		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7** Matrix: Soil Date Received: 12.10.2020 17:12
 Lab Sample Id: 680743-045 Date Collected: 12.09.2020 09:10 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
 Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.7	10.1	mg/kg	12.12.2020 01:18		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 12.15.2020 11:00 % Moisture:
 Seq Number: 3145054 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.15.2020 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.15.2020 19:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.15.2020 19:20	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.15.2020 19:20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	12.15.2020 19:20		
o-Terphenyl	84-15-1	110	%	70-135	12.15.2020 19:20		



Certificate of Analytical Results 680743

Tetra Tech- Midland, Midland, TX

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7**
Lab Sample Id: 680743-045

Matrix: Soil
Date Collected: 12.09.2020 09:10

Date Received: 12.10.2020 17:12
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.11.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3144738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.2020 07:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.2020 07:53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.2020 07:53	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.12.2020 07:53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.2020 07:53	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.12.2020 07:53	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.12.2020 07:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	12.12.2020 07:53		
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.12.2020 07:53		

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-046 Date Collected: 12.09.2020 09:30 Sample Depth: 2 - 2.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.8	10.0	mg/kg	12.12.2020 01:23		1

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-047 Date Collected: 12.09.2020 09:50 Sample Depth: 3 - 3.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.3	9.92	mg/kg	12.12.2020 01:28		1

**Certificate of Analytical Results 680743****Tetra Tech- Midland, Midland, TX**

Cimarex Freedom 36 State SWD 1

Sample Id: **AH7** Matrix: Soil Date Received: 12.10.2020 17:12
Lab Sample Id: 680743-048 Date Collected: 12.09.2020 10:20 Sample Depth: 4 - 4.5 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MAB
Analyst: MAB Date Prep: 12.11.2020 16:13 % Moisture:
Seq Number: 3144749 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.3	9.98	mg/kg	12.12.2020 01:33		1

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Tetra Tech- Midland
Cimarex Freedom 36 State SWD 1

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144749

Matrix: Solid

Prep Method: E300P

Date Prep: 12.11.2020

MB Sample Id: 7716954-1-BLK

LCS Sample Id: 7716954-1-BKS

LCSD Sample Id: 7716954-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	243	97	245	98	90-110	1	20	mg/kg	12.11.2020 23:16	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144750

Matrix: Solid

Prep Method: E300P

Date Prep: 12.11.2020

MB Sample Id: 7716955-1-BLK

LCS Sample Id: 7716955-1-BKS

LCSD Sample Id: 7716955-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	242	97	244	98	90-110	1	20	mg/kg	12.12.2020 02:05	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144752

Matrix: Solid

Prep Method: E300P

Date Prep: 12.11.2020

MB Sample Id: 7716956-1-BLK

LCS Sample Id: 7716956-1-BKS

LCSD Sample Id: 7716956-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	242	97	244	98	90-110	1	20	mg/kg	12.12.2020 05:09	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144749

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680640-001

MS Sample Id: 680640-001 S

MSD Sample Id: 680640-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	202	322	90	326	93	90-110	1	20	mg/kg	12.11.2020 23:31	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144749

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680743-041

MS Sample Id: 680743-041 S

MSD Sample Id: 680743-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	199	380	90	380	90	90-110	0	20	mg/kg	12.12.2020 00:42	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144750

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680743-001

MS Sample Id: 680743-001 S

MSD Sample Id: 680743-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	128.0	200	324	98	326	98	90-110	1	20	mg/kg	12.12.2020 02:22	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Tetra Tech- Midland
Cimarex Freedom 36 State SWD 1

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144750

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680743-011

MS Sample Id: 680743-011 S

MSD Sample Id: 680743-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	46.30	203	233	92	233	92	90-110	0	20	mg/kg	12.12.2020 03:40	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144752

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680743-021

MS Sample Id: 680743-021 S

MSD Sample Id: 680743-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11500	199	11700	101	11700	100	90-110	0	20	mg/kg	12.12.2020 05:26	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3144752

Matrix: Soil

Prep Method: E300P

Date Prep: 12.11.2020

Parent Sample Id: 680743-031

MS Sample Id: 680743-031 S

MSD Sample Id: 680743-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1420	199	1610	95	1610	95	90-110	0	20	mg/kg	12.12.2020 06:44	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3144878

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.11.2020

MB Sample Id: 7716952-1-BLK

LCS Sample Id: 7716952-1-BKS

LCSD Sample Id: 7716952-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1160	116	70-135	7	35	mg/kg	12.14.2020 10:38	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1110	111	70-135	3	35	mg/kg	12.14.2020 10:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		105		103		70-135	%	12.14.2020 10:38
o-Terphenyl	105		113		105		70-135	%	12.14.2020 10:38

Analytical Method: TPH By SW8015 Mod

Seq Number: 3145054

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.15.2020

MB Sample Id: 7717211-1-BLK

LCS Sample Id: 7717211-1-BKS

LCSD Sample Id: 7717211-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1180	118	70-135	8	35	mg/kg	12.15.2020 13:10	
Diesel Range Organics (DRO)	<50.0	1000	938	94	1060	106	70-135	12	35	mg/kg	12.15.2020 13:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		77		108		70-135	%	12.15.2020 13:10
o-Terphenyl	114		72		105		70-135	%	12.15.2020 13:10

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Tetra Tech- Midland

Cimarex Freedom 36 State SWD 1

Analytical Method: TPH By SW8015 Mod

Seq Number: 3144878

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.11.2020

MB Sample Id: 7716952-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

12.14.2020 10:18

Flag**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3145054

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.15.2020

MB Sample Id: 7717211-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

12.15.2020 12:49

Flag**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3144878

Matrix: Soil

Prep Method: SW8015P

Date Prep: 12.11.2020

Parent Sample Id: 680640-001

MS Sample Id: 680640-001 S

MSD Sample Id: 680640-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<49.9

**Spike
Amount**

997

**MS
Result**

989

**MS
%Rec**

99

**MSD
Result**

1070

**MSD
%Rec**

107

Limits

70-135

%RPD

8

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

12.14.2020 11:38

Flag

Diesel Range Organics (DRO)

<49.9

997

1110

111

994

100

70-135

11

35

mg/kg

12.14.2020 11:38

Surrogate

1-Chlorooctane

**MS
%Rec**

123

**MS
Flag****MSD
%Rec**

104

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

12.14.2020 11:38

o-Terphenyl

115

105

70-135

%

12.14.2020 11:38

Analytical Method: TPH By SW8015 Mod

Seq Number: 3145054

Matrix: Soil

Prep Method: SW8015P

Date Prep: 12.15.2020

Parent Sample Id: 680743-011

MS Sample Id: 680743-011 S

MSD Sample Id: 680743-011 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<50.1

**Spike
Amount**

1000

**MS
Result**

1100

**MS
%Rec**

110

**MSD
Result**

1120

**MSD
%Rec**

112

Limits

70-135

%RPD

2

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

12.15.2020 14:11

Flag

Diesel Range Organics (DRO)

<50.1

1000

999

100

1050

105

70-135

5

35

mg/kg

12.15.2020 14:11

Surrogate

1-Chlorooctane

**MS
%Rec**

114

**MS
Flag****MSD
%Rec**

105

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

12.15.2020 14:11

o-Terphenyl

106

112

70-135

%

12.15.2020 14:11

 MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

 $[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

 LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

 MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Tetra Tech- Midland
Cimarex Freedom 36 State SWD 1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3144738

Matrix: Solid

Prep Method: SW5035A

Date Prep: 12.11.2020

MB Sample Id: 7716960-1-BLK

LCS Sample Id: 7716960-1-BKS

LCSD Sample Id: 7716960-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.0937	94	70-130	8	35	mg/kg	12.12.2020 00:27	
Toluene	<0.00200	0.100	0.0980	98	0.0917	92	70-130	7	35	mg/kg	12.12.2020 00:27	
Ethylbenzene	<0.00200	0.100	0.0906	91	0.0855	86	71-129	6	35	mg/kg	12.12.2020 00:27	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.174	87	70-135	6	35	mg/kg	12.12.2020 00:27	
o-Xylene	<0.00200	0.100	0.0930	93	0.0869	87	71-133	7	35	mg/kg	12.12.2020 00:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		96		91		70-130	%	12.12.2020 00:27
4-Bromofluorobenzene	85		88		79		70-130	%	12.12.2020 00:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3144882

Matrix: Solid

Prep Method: SW5035A

Date Prep: 12.14.2020

MB Sample Id: 7717019-1-BLK

LCS Sample Id: 7717019-1-BKS

LCSD Sample Id: 7717019-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.002000	0.1000	0.09333	93	0.09553	96	70-130	2	35	mg/kg	12.14.2020 10:42	
Toluene	<0.002000	0.1000	0.08951	90	0.09126	91	70-130	2	35	mg/kg	12.14.2020 10:42	
Ethylbenzene	<0.002000	0.1000	0.09599	96	0.09781	98	71-129	2	35	mg/kg	12.14.2020 10:42	
m,p-Xylenes	<0.004000	0.2000	0.1943	97	0.2027	101	70-135	4	35	mg/kg	12.14.2020 10:42	
o-Xylene	<0.002000	0.1000	0.09415	94	0.09977	100	71-133	6	35	mg/kg	12.14.2020 10:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		99		99		70-130	%	12.14.2020 10:42
4-Bromofluorobenzene	115		110		109		70-130	%	12.14.2020 10:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3144738

Matrix: Soil

Prep Method: SW5035A

Date Prep: 12.11.2020

Parent Sample Id: 680743-011

MS Sample Id: 680743-011 S

MSD Sample Id: 680743-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0978	98	0.103	103	70-130	5	35	mg/kg	12.12.2020 01:12	
Toluene	<0.00200	0.0998	0.100	100	0.0992	99	70-130	1	35	mg/kg	12.12.2020 01:12	
Ethylbenzene	<0.00200	0.0998	0.0963	96	0.0912	91	71-129	5	35	mg/kg	12.12.2020 01:12	
m,p-Xylenes	<0.00399	0.200	0.197	99	0.185	93	70-135	6	35	mg/kg	12.12.2020 01:12	
o-Xylene	<0.00200	0.0998	0.0981	98	0.0931	93	71-133	5	35	mg/kg	12.12.2020 01:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		93		70-130	%	12.12.2020 01:12
4-Bromofluorobenzene	94		85		70-130	%	12.12.2020 01:12

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 1680743

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Corsland, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager:	Brittany Long	Bill to: (if different)	Georgia Garza
Company Name:	Tetra Tech	Company Name:	Cimarex
Address:	901 West Wall Street Ste 100	Address:	606 N Marientfield St
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-741-5813	Email:	Brittany.Long@tetatech.com

Program: ☐ UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: ☐ EDD ☐ ADAPT ☐ Other:

Project Name:	Cimarex Freedom 36 state 5N2	Turn Around	☒ Routine
Project Number:	212C-MD-02375	Rush:	
Project Location:	Eddy County	Due Date:	
Sampler's Name:	Ezequiel Moreno	Quote #:	
PO #:			

SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
Temperature (°C):	0.8/0.6	Thermometer ID		1-NM-007		
Received Intact:	☒ Yes	☐ No	Correction Factor:		-0.7	
Cooler Custody Seals:	☒ Yes	☐ No	Total Containers:		48	
Sample Custody Seals:	☒ Yes	☐ No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Preservative Codes
H1	S		12/09/20	1025	0-6"	1	MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn
H2			12/9/20	1030		X	BTEX
H3			12/10/20	0930		X	TPH
H4			12/9/20	1040		X	Chloride
H5			12/10/20	0940			
H6			12/9/20	1050			
H7				1100			
H8				1110			
H9				1115			
AH1				1130	6-1'		

Run 22

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Ezequiel Moreno</i>	<i>Cae Clifton</i>	12-10-20 1712			



Chain of Custody

Work Order No: 1686743

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Crystalad, NM (432) 704-5440
 Phoenix, AZ (480) 365-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager: Brittany Long		Bill to: (if different) Gloria Garza	
Company Name: Tetra Tech		Company Name: Cimarex	
Address: 961 West Main Street St. 100		Address: 600 N Marlenfield	
City, State ZIP: Midland, TX 79701		City, State ZIP: Midland, TX 79701	
Phone: 432-741-5813		Email: Brittany.Long@tetratech.com	

Program: ☐ PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Reporting Level: ☐ EDD ☐ ADAPT ☐ Other: ☐	

Project Name: Cimarex Freedom 36 State SWD	Turn Around
Project Number: 212C-MD-02375	Routine ☒
Project Location: Eddy County	Rush: ☐
Sampler's Name: Ezequiel Moreno	Due Date: ☐
PO #: ☐	Quote #: ☐

SAMPLE RECEIPT	
Temperature (°C):	Temp Blank: Yes ☐ No ☐
Received Intact: Yes ☐ No ☐	Thermometer ID: ☐
Cooler Custody Seals: Yes ☐ No ☐ N/A ☐	Correction Factor: ☐
Sample Custody Seals: Yes ☐ No ☐ N/A ☐	Total Containers: ☐

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes	Sample Comments
AH1	↓	S	12/9/20	1140	1-1.5'	1	BTEX	MeOH: Me	↓
					2-2.5'		TPH	None: NO	↓
					3-3.5'		Chloride	HNO3: HN	↓
					0-1'			H2SO4: H2	↓
					1-1.5'			HCL: HL	↓
					2-2.5'			NaOH: Na	↓
					3-3.5'			Zn Acetate+ NaOH: Zn	↓
					4-4.5'			TAT starts the day received by the lab, if received by 4:00pm	↓
					5-5.5'				↓
					6-6.5'				↓

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Handwritten Signature</i>	<i>Handwritten Signature</i>	12-10-20 17:12			



Chain of Custody

Work Order No: 1680743

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Corsado, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 889-6701

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Project Manager:	Brittany Long	Bill to: (if different)	Gloria Garza
Company Name:	Tetra Tech	Company Name:	Cimarex
Address:	901 West Main St Suite 100	Address:	600 N. Marientfield
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-741-5813	Email:	Brittany.Long@tetratech.com

Program: ☐ UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	Cimarex Freedom State SWP	Turn Around	☒
Project Number:	212C-MD-02375	Routine	☒
Project Location:	Eddy County	Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):				Thermometer ID		
Received Intact:	Yes	No				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		
Sample Custody Seals:	Yes	No	N/A	Total Containers:		

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
	AH3	S	12/10/20	1230	0-1'	1	X BTEX		PUN 302
				1235	1-1.5'		X TPH		PUN 302
				1245	2-2.5'		X Chloride		PUN 302
				1255	3-3.5'				PUN 302
				1005	0-1'				PUN 302
				1010	1-1.5'				PUN 302
				1020	2-2.5'				PUN 302
				1025	3-3.5'				PUN 302
				1045	4-4.5'				PUN 302
				1055	5-5.5'				PUN 302

Total 200.7 / 6010 200.8 / 6020:
 Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Cu Pb Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Ezequiel Moreno	CLA Giff	12.10.20 1712			



Chain of Custody

Work Order No: 6080743

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 866-0000

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Project Manager:	Brittany Long	Bill to: (if different)	Florida Garza
Company Name:	Tetra Tech	Company Name:	Cinmarex
Address:	901 W Wall St Ste 100	Address:	600 N. Marvenfield
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-741-5813	Email:	Brittany.long@tetratech.com
Project Name:			

1) 689-6-701 www.xenco.com Page 4 of 5

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	Complex Freedom State Sand	Turn Around
Project Number:	212C - MD-02375	Routine ☒
Project Location:	Eddy County	Rush:
Sampler's Name:	Eziqueta Moreno	Due Date:
PO #:		Quote #:

ANALYSIS REQUEST										Preservative Codes
Pres. Code										MeOH: Me None: NO HNO ₃ : HN

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):							
Received Intact:		Yes	No	Thermometer ID <u>202081</u>			
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:			
Sample Custody Seals:	Yes	No	N/A	Total Containers:			

H ₂ SO ₄ : H ₂
HCl: HL
NaOH: Na
Zn Acetate+ NaOH: Zn
TAT starts the day received by the lab if

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	BTE	TPH	Chloro	Sample Comments
	AH4	S	12/10/20	1100	6-6.5'	1	X	X	X	cl Brown soil
	AHS			900	0-1		X	X	X	cl Brown soil
				905	1-1.5		X	X	X	cl Brown soil
				910	2-2.5		X	X	X	cl Brown soil
				920	3-3.5		X	X	X	cl Brown soil
				925	4-4.5		X	X	X	cl Brown soil
				935	5-5.5		X	X	X	cl Brown soil
	AH6			830	0-1		X	X	X	cl Brown soil
				835	1-1.5		X	X	X	cl Brown soil
				840	2-2.5		X	X	X	cl Brown soil
Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al Sh As Ba Pb P Cl O S Cu Cr Ni Zn				

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

TCIP / SPI P 6010: 8BCBA Ch As B- B- Cd Cu Cu Fe Pd Inq Mn

1631 / 245.1 / 7470 / 7471 : Hc

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client. If such losses are due to circumstances beyond the control of Xenco, A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Erand Sharma</i>	<i>Alar Clifton</i>	12.10.20 1712			



Chain of Custody

Work Order No: 1686 743

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Corsland, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com Page 5 of 5

Project Manager:	Brittany Long	Bill to: (if different)	Gloria Garza
Company Name:	Tetra Tech	Company Name:	Cimarex
Address:	901 W Wall Street Suite 100	Address:	600 N Marientfield
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-741-5813	Email:	Brittany.Long@tetratech.com

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	Cimarex Freedom 3 State	Turn Around	☒
Project Number:	212C-MD-02375	Routine	☒
Project Location:	Eddy County	Rush:	
Sampler's Name:	Eddiwey Albreno	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Thermometer ID	Yes	No
Temperature (°C):						
Received Intact:	Yes	No				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		
Sample Custody Seals:	Yes	No	N/A	Total Containers:		

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
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Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres.	Code	ANALYSIS REQUEST	Preservative Codes	Sample Comments
AH6		S	9/10/20	845	3-3.5	1	X		BTEX		
				850	4-4.5		X		TPH		
				855	5-5.5		X		Chloride		
AH7			9/10/20	905	0-1						
				910	1-1.5						
				930	2-2.5						
				950	3-3.5						
				1020	4-4.5						

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Eddy Albreno	Cire Cufu	12-16-20 Fri 12			

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 19105

COMMENTS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 19105
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
ceads	Site is located within high karst potential area.	6/29/2021

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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

Action 19105

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 19105
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
ceads	If groundwater is encountered during delineation, install a monitor well and collect a groundwater sample for analysis.	6/29/2021