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Oil Conservation Division

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Incident ID	nAPP2319833354
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>60</u> (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

Page 3

- Data table of soil contaminant concentration data
- \checkmark Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- ✓ Topographic/Aerial maps
- ✓ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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regulations all operators ar public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations. Printed Name: Signature:	formation given above is true and complete to the l re required to report and/or file certain release notif nment. The acceptance of a C-141 report by the O igate and remediate contamination that pose a three of a C-141 report does not relieve the operator of	fications and perform c ICD does not relieve th at to groundwater, surfa responsibility for comp Title: Date:	orrective actions for rele e operator of liability sho ace water, human health liance with any other feo	ases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only				
Received by:		Date:		

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Oil Conservation Division

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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)

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

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

Extents of contamination must be fully delineated.

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

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

Printed Name:	Title:
Signature:	Date:
email:	Telephone:
OCD Only	
Received by:	Date:
Approved	Approved with Attached Conditions of Approval Denied Deferral Approved
Signature:	Date:

Remediation Summary & Deferral Request

Mewbourne Oil Company Charolais Frac – North Fork Toro

Lea County, New Mexico Unit Letter "J", Section 21, Township 19 South, Range 35 East Latitude 32.644939 North, Longitude 103.460810 West NMOCD Reference No. nAPP2319833354

Prepared By:

Etech Environmental & Safety Solutions, Inc. 6309 Indiana Ave, Ste. D Lubbock, Texas 79413

n J. Arguijo

Lance Crenshaw

Environmental & Safety Solutions, Inc.

Midland • San Antonio • Lubbock • Hobbs • Lafayette

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- Appendix A Depth to Groundwater Information
- Appendix B Field Data
- Appendix C Photographic Log
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1.0 **PROJECT INFORMATION**

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this Remediation Summary & Deferral Request for the release site known as the Charolais Frac – North Fork Toro (henceforth, "Charolais Frac"). Details of the release are summarized below:

_atitude:	32.64	14939	Longitude:		-103.460810
		Provid	ed GPS are in WGS84 forr	nat.	
Site Name:		rolais Frac – North I		Site Type:	Tank Battery
Date Release Discovere	d:	7/3/2023	API # (if applied	cable):	30-025-35788
Unit Letter Sec	ction	Township	Range	County	7
"J"	21	198	35E	Lea]
Surface Owner: Sta	ate	Federal Tribal	X Private (Na	me	L&K Ranch, LLC
		Natura a	 nd Volume of 1	Dolooso	
		nature a	nd volume of	Nelease	
X Crude Oil	Volum	e Released (bbls)	Unknown	Volume Recove	ored (bbls) 0
X Produced Water	Volum	e Released (bbls)	Unknown	Volume Recove	ered (bbls) 4,320
	Is the co	oncentration of total	dissolved solids	X Yes	No N/A
	(TDS) i	n the produced water	r > 10,000 mg/L?		
Condensate Volume Released (bbls) Volume Recovered (bbls)					ered (bbls)
Natural Gas	Volum	e Released (Mcf)		Volume Recove	ered (Mcf)
Other (describe)	Volume	/Weight Released		Volume/Weight	Recovered
Cause of Release:					
Mewbourne offset frac					
from the target format					ne offset well was producing er treater vessel and
overflowing of produc	tion fron	n the tanks. Mewbou	rne contacted North	Fork to assist with	well control and cleanup,
but North Fork decline cleanup operations. Ra		~			th Fork wellsite and began
cleanup operations. Ra	unwater	was present and was	some portion of the	recovered nuld.	

Initial Response

X The source of the release has been stopped.

X The impacted area has been secured to protect human health and the environment.

X Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices

X All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the New Mexico Oil Conservation Division (NMOCD) Form C-141 are available in the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

Searches of databases maintained by the NMOCD, New Mexico Office of the State Engineer (NMOSE), and United States Geological Survey (USGS) were conducted in an effort to determine the horizontal distance to known water sources within a halfmile radius of the Charolais Frac release site.

Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. In addition, on September 21, 2023, an investigative soil boring (BH-1) was drilled at the site in an effort to determine if shallow groundwater is present in the area. The soil boring was advanced to a total depth of approximately 60 feet below ground surface (bgs) and left open for over 72 hours. No indications of inflow and/or accumulation of water were noted during the advancement of the soil boring or prior to plugging and abandonment. The location of the investigative soil bore is depicted in Figure 2. A drilling log is provided in Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	>60'
Did the release impact groundwater or surface water?	Yes X No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes X 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 X No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	Yes X 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 X No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	Yes X No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	Yes X No
Are the lateral extents of the release within 300 feet of a wetland?	Yes X No
Are the lateral extents of the release overlying a subsurface mine?	Yes X No
Are the lateral extents of the release overlying an unstable area such as karst geology?	Yes X No
Are the lateral extents of the release within a 100-year floodplain?	Yes X No
Did the release impact areas not on an exploration, development, production or storage site?	X Yes No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Charolais Frac release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	10,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
>60'	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 **REMEDIATION ACTIVITIES SUMMARY**

On August 8, 2023, remediation activities commenced at the release site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. Olfactory/visual senses and/or a chloride test kit were utilized to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. The sidewalls and floor of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis.

On January 12, 2023, a series of hand-augered soil bores (SP1 through SP11) were advanced within the release margins and at the inferred edges of the affected area in an effort to determine the horizontal and vertical extent of impacted soil. During the advancement of the hand-augered soil bores, soil samples were collected and field-screened for concentrations of chloride utilizing a Hach Quantab ® chloride test kit and/or the presence of Volatile Organic Compounds (VOCs) utilizing olfactory/visual senses.

Based on field observations and field test data, five (5) delineation soil samples (SP5 @ 1, SP6 @ Sur, SP7 @ Sur, SP8 @ Sur, and SP9 @ Sur) were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory method detection limit (MDL). Chloride concentrations ranged from 64.0 mg/kg in soil sample SP6 @ Sur to 352 mg/kg in soil sample SP9 @ Sur.

Based on laboratory analytical results and field screens, the areas defined by sample points SP5 through SP9 were not impacted above NMOCD Closure Criteria or NMOCD Reclamation Standards. However, additional delineation and/or excavation was required in the areas characterized by sample points SP1 through SP4, SP10, SP11, and SP12.

On August 9, 2023, Etech collected 11 confirmation soil samples (FL 1 @ 6 in through FL 11 @ 6 in) from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL, with the exception of soil sample FL 9 @ 6 in, which exhibited a TPH concentration of 2,940 mg/kg and exceeded the NMOCD Closure Criterion. Chloride concentrations ranged from 16.0 mg/kg in soil samples FL 1 @ 6 in, FL 2 @ 6 in, and FL 6 @ 6 in to 272 mg/kg in soil sample FL 8 @ 6 in.

On August 10, 2023, Etech advanced a test trench in the area characterized by sample point SP12 to further investigate the vertical extent of impacted soil. During the advancement of the test trench, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses.

Based on field observations and field test data, seven (7) delineation soil samples (SP12 @ Sur, SP12 @ 1, SP12 @ 2, SP12 @ 3, SP12 @ 4, SP12 @ 6, and SP12 @ 8) were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX concentrations ranged from less than the laboratory MDL in soil samples SP12 @ 2, SP12 @ 3, SP12 @ 4, SP12 @ 6, and SP12 @ 8 to 60.9 mg/kg in soil sample SP12 @ 1, which exceeded the NMOCD Closure Criterion. TPH concentrations ranged from less than the laboratory MDL in soil samples SP12 @ 6, and SP12 @ 8 to 21,967 mg/kg in soil sample SP12 @ Sur. The TPH concentrations in soil samples SP12 @ Sur, SP12 @ 1, SP12 @ 2, and SP12 @ 3 exceeded the NMOCD Closure Criterion and/or NMOCD Reclamation Standard. Chloride concentrations ranged from 176 mg/kg in soil sample SP12 @ 8 to 2,560 mg/kg in soil sample SP12 @ 4. The chloride concentrations in soil samples SP12 @ 1, SP12 @ 1, SP12 @ 1, SP12 @ 2, SP12 @ 2, SP12 @ 2, SP12 @ 2, SP12 @ 3 exceeded the NMOCD Reclamation Standard. Based on these laboratory analytical results, the vertical extent of impacted soil was adequately defined in the area characterized by sample point SP12 and did not extend beyond three (3) feet bgs.

On August 10, 2023, Etech collected 10 confirmation soil samples (FL 12 @ 6 in through FL 21 @ 1) from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL, with the exception of soil sample FL 20 @ 6 in, which exhibited a TPH concentration of 14.2 mg/kg. Chloride concentrations ranged from 16.0 mg/kg in soil sample FL 12 @ 6 in to 400 mg/kg in soil sample FL 21 @ 1.

On August 11, 2023, Etech collected 29 confirmation soil samples (NW1, NW2, NW3, EW1 through EW5, SW1 through SW5, WW1, WW2, WW3, and FL 22 @ 6 in through FL 34 @ 6 in) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil sample NW1 to 416 mg/kg in soil sample FL 25 @ 6 in.

On August 14, 2023, Etech collected 39 confirmation soil samples (NW4, NW5, NW6, EW6 through EW9, SW6, SW7, and FL 35 @ 6 in through FL 64 @ 6 in) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL in each of the submitted soil samples. Chloride concentrations ranged from less than the laboratory MDL in soil samples EW6, EW7, EW8, FL 52 @ 6 in, FL 55 @ 6 in, and FL 62 @ 6 in to 752 mg/kg in soil sample FL 38 @ 6 in. The chloride concentrations in soil samples FL 38 @ 6 in and FL 39 @ 6 in exceeded the NMOCD Reclamation Standard.

On August 17, 2023, based on laboratory analytical results, the excavation was further advanced in the area characterized by soil sample FL 9 @ 6 in. Etech collected one (1) confirmation soil sample (FL 9 @ 1) from the floor of the excavated area. The soil sample was submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that the BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL.

On August 22, 2023, based on laboratory analytical results, the excavation was further advanced in the areas characterized by soil samples FL 38 @ 6 in and FL 39 @ 6 in. Etech collected two (2) confirmation soil samples (FL 38 @ 1 and FL 39 @ 1) from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated that the chloride concentrations were less than the laboratory MDL in soil sample FL 39 @ 1 and 112 mg/kg in soil sample FL 38 @ 1, which were below the NMOCD Closure Criterion and NMOCD Reclamation Standard.

On October 5, 2023, Etech advanced two (2) additional hand-augered soil bores (NH and WH) to further characterize the affected area adjacent to and/or beneath the on-site containment area, storage tanks, and associated piping, appurtenances, and electrical facilities requiring deferral of remediation (henceforth, "Deferral Area"). During the advancement of the hand-augered soil bores, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses. The soil bores were advanced in one (1) foot increments until field observations and field test results suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

Based on field observations and field test data, four (4) delineation/deferral characterization soil samples (NH @ 1', NH @ Surface, WH @ 1', and WH @ Surface) were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil sample WH @ 1' to 448 mg/kg in soil sample NH @ Surface. Based on these laboratory analytical results, the horizontal extent of impacted soil in the Deferral Area was adequately defined.

The final dimensions of the excavated area were approximately 184 to 286 feet in length, eight (8) to 110 feet in width, and six (6) inches to one (1) foot in depth. During the course of remediation activities, Etech transported approximately 712 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 816 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

The extents of the excavated area and the Deferral Area, as well as the locations of the hand-augered soil borings, test trench, and confirmation soil samples, are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data is provided in Appendix B. General photographs of the site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix E.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site.

6.0 DEFERRAL REQUEST

Remediation activities were conducted in accordance with NMOCD regulatory guidelines. Impacted soil remaining in-situ in the Deferral Area (characterized by sample point SP12) is adjacent to and/or underneath permanent storage tanks and associated pipes, appurtenances, and/or electrical facilities. Mewbourne Oil Company affirms that excavation of the Deferral Area would require the disconnection and removal of the storage tanks, pipes, permanent fencing, etc., which qualifies as "a major facility deconstruction", pursuant to Subsection 19.15.29.12 C.(2) NMAC.

The Deferral Area has been fully delineated, and laboratory analytical results from delineation/deferral characterization soil samples and excavation confirmation soil samples confirm that the in-situ contamination does not extend beyond the boundaries of the tank battery containment. Based on the relatively shallow depth of impacted soil (3 to 3.5 feet bgs), the depth to groundwater (>60 feet bgs), and the presence of a naturally occurring clay layer underlying the site beginning at approximately 15 feet bgs (see drilling log in Appendix A), leaving the contamination in-situ "does not cause an imminent risk to human health, the environment, or ground water", pursuant to Subsection 19.15.29.12 C.(2) NMAC. Final remediation and reclamation of the affected area will be conducted upon decommissioning and abandonment of the facility, in accordance with Sections 19.15.29.12 and 19.15.29.13 NMAC.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Mewbourne Oil Company provide copies of this *Remediation Summary & Deferral Request* to the appropriate agencies and request deferral be granted to the Charolais Frac site.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Deferral Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Mewbourne Oil Company. Use of the information contained in this report is prohibited without the consent of Etech and/or Mewbourne Oil Company.

8.0 **DISTRIBUTION**

Mewbourne Oil Company

4801 Business Park Blvd. Hobbs, NM 88240

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 1 1220 South St. Francis Drive Santa Fe, NM 87505

(Electronic Submission)

Figure 1 Topographic Map

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Figure 2 Site Characterization Map



Figure 3 Site & Sample Location Map

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Table 1Concentrations of BTEX, TPH & Chloride in Soil

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company											
			(Mewbo Charolais I		· ·	oro				
				MOCD R							
NM	IOCD Closure (Criteria	-	10	50	N/A	N/A	1,000	N/A	2,500	10,000
NMO	CD Reclamation	n Standard	l	10	50	N/A	N/A	N/A	N/A	100	600
				SW 84	6 8021B		SW	846 8015M	Ext.		4500 Cl
	D (Depth	Soil			GRO	DRO	GRO +	ORO	ТРН	
Sample ID	Date	(Feet)	Status	Benzene (mg/kg)	BTEX (mg/kg)	C6-C10	C10-C28	DRO C ₆ -C ₂₈	C ₂₈ -C ₃₆	C6-C36	Chloride (mg/kg)
				(mg/kg)	(ing/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ing/kg)
				neation & De	eferral Chara		amples				-
SP5 @ 1	8/9/2023	1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	320
SP6 @ Sur	8/9/2023	0	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	64.0
SP7 @ Sur	8/9/2023	0	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	256
SP8 @ Sur	8/9/2023	0	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	144
SP9 @ Sur	8/9/2023	0	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	352
SP12 @ Sur	8/10/2023	0	Deferral	< 0.050	1.34	76.7	16,900	17,000	4,990	22,000	400
SP12 @ 1	8/10/2023	1	Deferral	1.07	60.9	267	2,150	2,420	523	2,940	640
SP12 @ 2	8/10/2023	2	Deferral	< 0.050	< 0.300	<50.0	1,810	1,810	988	2,800	1,250
SP12 @ 3	8/10/2023	3	Deferral	< 0.050	< 0.300	<10.0	222	222	168	390	2,400
SP12 @ 4	8/10/2023	4	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,560
SP12 @ 6	8/10/2023	6	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,020
SP12 @ 8	8/10/2023	8	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
NH @ Surface	10/5/2023	0	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
NH @ 1'	10/5/2023	1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
WH @ Surface	10/5/2023	0	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
WH @ 1'	10/5/2023	1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
NW1	8/11/2023	0-0.5	In-Situ	<0.025	cavation San <0.275	<25.0	<25.0	<25.0	<25.0	<25.0	<16.0
NW2	8/11/2023	0-0.5	In-Situ	<0.023	<0.275	<25.0	<25.0	<25.0	<25.0	<25.0	272
NW3	8/11/2023	0-0.5	In-Situ	<0.023	<0.275	<25.0	<25.0	<25.0	<25.0	<25.0	336
NW4	8/14/2023	0-0.5	In-Situ	<0.023	<0.275	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
NW5	8/14/2023	0-0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
NW6	8/14/2023	0-0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
EW1	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
EW2	8/11/2023		In-Situ	< 0.025		<25.0	<25.0	<25.0	<25.0	<25.0	176
EW3	8/11/2023	0-0.5	In-Situ	< 0.025	<0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
EW4	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
EW5	8/11/2023	0-1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
EW6	8/14/2023	0-1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
EW7	8/14/2023	0-0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
EW8	8/14/2023	0-1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
EW9	8/14/2023	0-0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SW1	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
SW2	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	224
SW3	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
SW4	8/11/2023	0-1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	128
SW5	8/11/2023	0-1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	80.0
SW6	8/14/2023	0-1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW7	8/14/2023	0-0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
WW1	8/11/2023	0-1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
WW2	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	160
WW3	8/11/2023	0-0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	48.0
FL 1 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0

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Page	<i>22</i>	of	` <i>201</i>	
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Table 1 Concentrations of BTEX, TPH & Chloride in Soil											
				Mewbo	ourne Oil	Company					
			C	Charolais I	Frac – Nor	th Fork T	oro				
			N	MOCD R	ef. #: nAP	P2319833	354				
NN	IOCD Closure	Criteria		10	50	N/A	N/A	1,000	N/A	2,500	10,000
NMO	CD Reclamation	n Standaro	1	10	50	N/A	N/A	N/A	N/A	100	600
				SW 84	6 8021B		SW	846 8015M	Ext.		4500 Cl
Sample ID	Date	Depth	Soil	Benzene	BTEX	GRO	DRO	GRO + DRO	ORO	ТРН	Chloride
Sumple 12	Dutt	(Feet)	Status	(mg/kg)	(mg/kg)	C ₆ -C ₁₀	C ₁₀ -C ₂₈	C_6-C_{28}	C ₂₈ -C ₃₆	C ₆ -C ₃₆	(mg/kg)
						(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
FL 2 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
FL 3 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	192
FL 4 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	80.0
FL 5 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	80.0
FL 6 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
FL 7 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	80.0
FL 8 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	272
FL 9 @ 6 in	8/9/2023	0.5	Excavated	< 0.025	< 0.275	129	2,340	2,470	467	2,940	128
FL 9 @ 1	8/17/2023	1	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	<16.0
FL 10 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	48.0
FL 11 @ 6 in	8/9/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	64.0
FL 12 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FL 13 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FL 14 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FL 15 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FL 16 @ 1	8/10/2023	1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FL 17 @ 1	8/10/2023	1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FL 18 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FL 19 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FL 20 @ 6 in	8/10/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	14.2	14.2	<10.0	14.2	144
FL 21 @ 1	8/10/2023	1	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
FL 22 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
FL 23 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
FL 24 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
FL 25 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	416
FL 26 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	128
FL 27 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	48.0
FL 28 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
FL 29 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	32.0
FL 30 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	128
FL 31 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	16.0
FL 32 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	48.0
FL 33 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	96.0
FL 34 @ 6 in	8/11/2023	0.5	In-Situ	< 0.025	< 0.275	<25.0	<25.0	<25.0	<25.0	<25.0	128
FL 35 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FL 36 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FL 37 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FL 38 @ 6 in	8/14/2023	0.5	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	752
FL 38 @ 1	8/22/2023	1	In-Situ	-	-	-	-	-	-	-	112
FL 39 @ 6 in	8/14/2023	0.5	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	688
FL 39 @ 1	8/22/2023	1	In-Situ	-	-	-	-	-	-	-	<16.0
FL 40 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
FL 41 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FL 42 @ 6 in	8/14/2023		In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352

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Table 1															
Concentrations of BTEX, TPH & Chloride in Soil															
	Mewbourne Oil Company														
Charolais Frac – North Fork Toro															
NMOCD Ref. #: nAPP2319833354 NMOCD Closure Criteria 10 50 N/A 1.000 N/A 2.500 1															
NMOO															
				SW 84	6 8021B		SW		Ext.		4500 Cl				
Sample ID	Date	Depth (Feet)	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)				
FL 43 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0				
FL 44 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 45 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0				
FL 46 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400				
FL 47 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 48 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0				
FL 49 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	416				
FL 50 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176				
FL 51 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 52 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0				
FL 53 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0				
FL 54 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368				
FL 55 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0				
FL 56 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0				
FL 57 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 58 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208				
FL 59 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 60 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128				
FL 61 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
FL 62 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0				
FL 63 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0				
FL 64 @ 6 in	8/14/2023	0.5	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				

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Appendix A Depth to Groundwater Information



Site: (NMOC Locati	Charo D Re on: L	lais Frac - ference # ₋ea Co., N	ne Oil Company - North Fork Toro t: nAPP2319833354 IM 21, T19S, R35E	Well/Borehole ID: BH-1 Coordinates (NAD 83): 32.645029,-103.461725 Drilling Date: 9/21/2023 Depth of Boring (ft): 60 Depth to Groundwater (ft): >60 Plugging Date: 9/25/2023	Drilling Loggec Drafted	Method	chael Colli Arguijo	ary	
Comp	letior	1: N/A		Casing: N/A	Screen	: N/A			
Comm	ents	: N/A							
Depth (ft)	Groundwater	Lithology		Material Description		Petroleum Odor	Petroleum Stain	PID Reading	Well Construction
0 			50%-Red Sand 50%-Caliche 95%-Red Sand			-	-	-	
_ _ _ 10		0. 0. 	5%-Caliche			-	-	-	
 15		 				-	-	-	
_ _ _			100%-Red Clay			-	-	-	
- 20 - - -						-	-	-	
- 25 - - -						-	-	-	Hole
30 						-	-	-	
35 						-	-	-	
40 						-	-	-	
45 						-	-	-	
50 						-	-	-	
- 55 - -						-	-	-	
- 60 - - - - - - - - - - - - -			may be gradual. • The exploratory soil be	al types represent approximate boundaries. Actual trans oring was left open for over 72 hours. No indications of i water were noted during the advancement of the soil bo	inflow				

Disclaimer This bore log is intended for environmental not geotechnical purposes.





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	(R=POE been rej O=orpha	placed,		,		_									
serves a water right file.)	C=the fi closed)	e is		Ì	qua	arter	rs ar		IW 2=N allest to		,				
liic.j	ciosed)			k	arg	est)				(N	IAD83 UTM in r	neters)	(In feet)		
		POD Sub-		~	Q	~								147	
POD Number	Code		County				Sec	Twe	Rna	х	Y	DistanceDept	hWellDenthM		ater umn
L 02250	oode	L	LE	1				19S		645137	-	863	50	20	30
<u>L 03844</u>		L	LE		1	3	22	19S	35E	645232	3612891* 🌍	870	71	27	44
L 12473 POD1		L	LE	2	1	2	27	19S	38E	643913	3612109 🌍	974	105	60	45
L 12746 POD1		L	LE	4	2	4	27	19S	38E	643913	3612109 🌍	974	128	58	70
<u>L 03843</u>		L	LE		3	3	22	19S	35E	645238	3612487* 🌍	998	73	27	46
<u>L 04101</u>		L	LE		3	3	22	19S	35E	645238	3612487* 🌍	998	50	35	15
											Aver	age Depth to Wat	ter:	37 fee	t
												Minimum Dept	th:	20 fee	t
												Maximum Dept	h:	60 fee	t
Record Count:6															
UTMNAD83 Radiu	us Search	(in mete	ers):												
Easting (X): 64	4365.17		Norti	hing) (Y): 3	3612	2972.1	3		Radius: 1000				
*UTM location was deriv	ed from PL	SS - see	Help												
The data is furnished by the												OSE/ISC make no	warranties, expre	essed or in	nplied,
concerning the accuracy, o	completenes	s, reliabil	lity, usabilit	y, oi	r sui	tabi	lity fo	or any	particula	ar purpose c	of the data.				
												WATER COLL	IMN/ AVERAGE	- пертн	TO

9/11/23 3:56 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



				ers are 1=N ters are sma						
Well Tag	POD	Number	Q64	Q16 Q4	Sec	Tws	Rng	Х	Y	
	L 02	2250	1	3 3	22	19S	35E	645137	3612586*)
Driller Lic	ense:	144	Driller	Compan	y:	QU	ARLES	DRILLING	G COMPANY	
Driller Na	me:	QUARLES, O.L.								
Drill Start	Date:	04/01/1954	Drill Fi	inish Dat	e:	04	4/01/195	54 Pl	ug Date:	
Log File D	ate:	04/13/1954	PCW F	Rev Date:	:			Se	ource:	Shallow
Pump Typ	e:		Pipe Di	ischarge	Size:			E	stimated Yield	l :
Casing Siz	e:	6.00	Depth '	Well:		50) feet	D	epth Water:	20 feet
ĸ	Wate	er Bearing Stratific	ations:	То	p l	Bottom	Desci	ription		
				2	20	40	Sands	stone/Grave	l/Conglomerat	e
				4	10	49	Sands	stone/Grave	l/Conglomerat	e
X		Casing Perfo	rations:	Тс	p I	Bottom				
				2	20	48				

*UTM location was derived from PLSS - see Help

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8/3/23 12:50 PM



			(quarters a	re 1=N	W 2=N	E 3=SW	4=SE)			
			(quarters	are sma	illest to	o largest)		(NAD83 U	TM in meters)	
Well Tag	POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng	Х	Y	
	L 03	3844	1	3	22	19S	35E	645232	3612891*)
x Driller Lic	ense:	111	Driller Co	ompan	ıy:	BU	RKE, E	DWARD B.		
Driller Nai	me:									
Drill Start	Date:	04/23/1958	Drill Fini	sh Dat	e:	04	4/23/195	58 Pl	ug Date:	05/27/1958
Log File D	ate:	04/30/1958	PCW Rev	Date	:			So	urce:	Shallow
Pump Type	e:		Pipe Disc	harge	Size:			Es	timated Yield	l:
Casing Size	e:	7.00	Depth We	ll:		7	l feet	De	epth Water:	27 feet
х	Wate	er Bearing Stratif	fications:	То	p I	Bottom	Desci	ription		
				4	55	59	Sands	stone/Grave	l/Conglomerat	te
X		Casing Per	forations:	То	op I	Bottom	l			

*UTM location was derived from PLSS - see Help

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		(quarters	are 1=ľ	VW 2=	=NE 3=8	E)					
		(quarters	s are sn	nalles	t to larg	est)	(NAD	83 UT	M in meters)		
POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng		Х	Y		
L 12	2473 POD1	2 1	2	27	19S	38E	643	913	3612109 🍯		
ense:	1607	Driller Co	ompai	ny:	DU	RAN D	RILLIN	١G			
me:	DURAN, LUIS (LD)									
Date:	10/01/2009	Drill Fini	sh Da	te:	1)/05/20	009	Pl	ug Date:		
Date:	10/21/2009	PCW Rev	/ Date	:				Sc	ource:	Shallow	
be:		Pipe Dise	Pipe Discharge Size: Estimated Yield: 200								
ze:	5.00	Depth W	ell:		10	05 feet		De	pth Water:	60 feet	
Wate	r Bearing Strat	fications:	То	рΒ	ottom	Des	criptio	n			
			6	0	83	Sand	dstone/	/Grav	vel/Conglome	rate	
	Casing Pe	rforations:	То	рΒ	ottom						
			e	5	105						
	L 12 ense: me: Date: Date: Date: ze:	Date: 10/01/2009 Date: 10/21/2009 De: ze: 5.00 Water Bearing Strati	POD NumberQ64 Q1L12473 POD12ense:1607Driller Come:DURAN, LUIS (LD)Drill FinisDate:10/01/2009Drill FinisDate:10/21/2009PCW RownDe:Pipe Disc	POD Number Q64 Q16 Q4 L 12473 POD1 2 1 2 ense: 1607 Driller Compare me: DURAN, LUIS (LD) Date: 10/01/2009 Drill Finish Da Date: 10/21/2009 PCW Rcv Date De: Pipe Discharge ze: 5.00 Depth Well: Water Bearing Stratifications: To Casing Perforations: To	POD Number Q64 Q16 Q4 Sec L 12473 POD1 2 1 2 27 ense: 1607 Driller Company: me: DURAN, LUIS (LD) Date: 10/01/2009 Drill Finish Date: Date: 10/21/2009 PCW Rcv Date: pe: Pipe Discharge Siz ze: 5.00 Depth Well: Vater Bearing Stratifications: Top B 60	POD Number Q64 Q16 Q4 Sec Tws L 12473 POD1 2 1 2 27 195 ense: 1607 Driller Company: DUI me: DURAN, LUIS (LD) Date: 10/01/2009 Drill Finish Date: 10 Date: 10/21/2009 PCW Rcv Date: 10 pe: Pipe Discharge Size: 10 ze: 5.00 Depth Well: 10 Water Bearing Stratifications: Top Bottom 60 83 Casing Perforations: Top Bottom	POD NumberQ64 Q16 Q4 Sec Tws RngL12473 POD12122719S38Eense:1607Driller Company:DURAN Dme:DURAN, LUIS (LD)Date:10/05/20Date:10/01/2009Drill Finish Date:10/05/20Date:10/21/2009PCW Rcv Date:pe:Pipe Discharge Size:ze:5.00Depth Well:105 feetWater Bearing Stratifications:Top Bottom Desc 6083 SandCasing Perforations:Top Bottom	POD NumberQ64 Q16 Q4 Sec Tws RngL12473 POD12122719S38E643ense:1607Driller Company:DURAN DRILLINme:DURAN, LUIS (LD)Date:10/01/2009Drill Finish Date:10/05/2009Date:10/21/2009PCW Rcv Date:pe:Pipe Discharge Size:ze:5.00Depth Well:105 feetWater Bearing Stratifications:Top Bottom Descriptio6083Sandstone/Casing Perforations:Top Bottom	Image: Pod Number Q64 Q16 Q4 Sec Tws Rng X L 12473 POD1 2 1 2 27 19S 38E 643913 ense: 1607 Driller Company: DURAN DRILLING me: DURAN, LUIS (LD) Date: 10/05/2009 Plue Date: 10/21/2009 Drill Finish Date: 10/05/2009 Plue Date: 10/21/2009 PCW Rcv Date: Sc Sc Dee: Pipe Discharge Size: Es Es ze: 5.00 Depth Well: 105 feet De Water Bearing Stratifications: Top Bottom Description 60 83 Sandstone/Grav Casing Perforations:	POD Number Q64 Q16 Q4 Sec Tws Rng X Y L 12473 POD1 2 1 2 27 19S 38E 643913 3612109 ense: 1607 Driller Company: DURAN DRILLING me: DURAN, LUIS (LD) Date: 10/05/2009 Plug Date: Date: 10/21/2009 PCW Rcv Date: Source: Source: pe: Pipe Discharge Size: Estimated Yield ze: 5.00 Depth Well: 105 feet Depth Water: Water Bearing Stratifications: Top Bottom Description 60 83 Sandstone/Gravel/Conglome Casing Perforations:	

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9/11/23 3:57 PM



		(quarters	are 1=NV	V 2=NE 3=8	SW 4=SE)		
		(quarter	s are sma	llest to large	est) (N	AD83 UTM in meters	6)
Well Tag F	POD Number	Q64 Q1	6 Q4 S	ec Tws	Rng	X Y	Y
L	_ 12746 POD1	4 2	2 4 2	27 19S	38E 64	43913 361210	9 🌍
Driller Licen	se: 1626	Driller Co	ompany	י: דאי	LOR DRIL	LING	
Driller Name	TAYLOR, ROY	ALLEN					
Drill Start Da	ate: 04/06/1977	Drill Fini	sh Date	e: 04	4/08/2011	Plug Date:	
Log File Dat	e: 05/02/2011	PCW Rev	v Date:			Source:	Shallow
Pump Type:	SUBMER	Pipe Dise	charge	Size:		Estimated `	Yield: 30 GPM
Casing Size	: 6.00	Depth W	ell:	12	28 feet	Depth Wate	er: 58 feet
v	Water Bearing Strati	fications:	Тор	Bottom	Descript	tion	
			59	66	Other/Ur	ıknown	
			66	125	Sandstor	ne/Gravel/Congle	omerate
	Casing Per	forations:	Тор	Bottom			
			68	128			

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9/11/23 3:57 PM



Well Tag	POD	Number	(quarters 064 Q1			0		TM in meters) Y		
	L 03	3843	3	-	22	19S	0	645238	3612487* 🧧	
Driller Lic Driller Na		111	Driller Co	mpa	ny:	BU	RKE, El	DWARD B		
Drill Start	Date:	04/22/1958	Drill Finis	h Da	te:	0	4/22/195	58 PI	ug Date:	
Log File D	ate:	04/30/1958	PCW Rcv	Date	:			Se	ource:	Shallow
Pump Typ	e:		Pipe Disch	arge	Size:			Es	timated Yield	:
Casing Siz	e:	7.00	Depth We	11:		7	3 feet	D	epth Water:	27 feet

*UTM location was derived from PLSS - see Help

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8/3/23 12:50 PM



			(quarters	s are 1=N	W 2=N	JE 3=SW	4=SE)			
			(quarte	rs are sma	allest to	o largest)		(NAD83 U	TM in meters)	
Well Tag	POE) Number	Q64 Q	216 Q4	Sec	Tws	Rng	Χ	Y	
	L 0	4101		3 3	22	19S	35E	645238	3612487* 🧧	
x Driller Lice	ense:	205	Driller (Compar	ny:	WR	IGHT, V	WILLIAM (С.	
Driller Nan	ne:									
Drill Start]	Date:	12/10/1959	Drill Fin	nish Dat	te:	12	2/11/195	59 Pl	ug Date:	
Log File Da	ate:	12/18/1959	PCW Ro	ev Date	:			So	urce:	Shallow
Pump Type	e:		Pipe Dis	charge	Size:			Es	timated Yield	:
Casing Size	e:	6.63	Depth W	Vell:		50) feet	De	epth Water:	35 feet
Х	Wate	er Bearing Stratif	ications:	То	op l	Bottom	Desci	ription		
				-	38	48	Sands	stone/Grave	l/Conglomerate	e
Х		Casing Per	forations:	То	op l	Bottom				
					30	50	1			
x										

*UTM location was derived from PLSS - see Help

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Legend	Figure 5			100-500
Site Location	USGS Well Proximity Map	P	FEOL	ala
O Well - USGS	Mewbourne Oil Company	C	IECH	P
500-Ft Radius	Charolais Frac – North Fork Toro		Environmental & Safety	Solutions, Inc.
1,000-Ft Radius	GPS: 32.644939, -103.460810			
🗖 0.5-Mi Radius	Lea County			
		Drafted: bia	Checked: lc	Date: 8/5/

Released to Imaging: 2/6/2024 2:48:01 PM

Drafted: bja

Checked: lc

Date: 8/5/23



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Search Results -- 1 sites found

Agency code = usgs

site_no list =

323857103265901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 323857103265901 19S.35E.15.33434

Lea County, New Mexico Latitude 32°38'57", Longitude 103°26'59" NAD27 Land-surface elevation 3,752 feet above NAVD88 This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

	Culput Ionnut
Table of data	
Tab-separated data	
<u>Graph of data</u>	
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	? \$tatus	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status
1966-02-09		D	72019	18.22			Р	Z			А
1971-01-27		D	72019	16.29			1	Z			А

Received by OCD: 10/26/2023 8:01:32 AM

Explanation		
Section \$	Code \$	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	Р	Pumping
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	А	Approved for publication Processing and review completed.

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Search Results -- 1 sites found

Agency code = usgs site_no list =

• 323856103265801

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 323856103265801 19S.35E.15.334424

Lea County, New Mexico Latitude 32°38'56", Longitude 103°26'58" NAD27 Land-surface elevation 3,751 feet above NAVD88 This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. 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	

eselect 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	? Measuring agency	? Source of measurement	? Water- level approval status
1961-03-03		D	72019	14.73			1	Z			
1966-02-09		D	72019	14.66			1	Z			
1966-03-18		D	72019	14.70			1	Z			
1971-01-27		D	72019	14.47			1	Z			
1976-01-29		D	72019	14.35			1	Z			
1981-01-23		D	72019	14.45			1	Z			
1986-02-04		D	72019	14.48			1	Z			
1991-04-17		D	72019	14.59			1	Z			

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Received by OCD: 10/26/2023 8:01:32 AM

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	? Measuring agency	? Source of measurement	? Water- level approval status
1996-01-25		D	72019	14.60			1	S			A
2001-01-31		D	72019	14.81			1	S			A

Explanation Section Code Description D Date is accurate to the Day Water-level date-time accuracy Parameter code 62610 Groundwater level above NGVD 1929, feet Parameter code 62611 Groundwater level above NAVD 1988, feet 72019 Parameter code Depth to water level, feet below land surface Referenced vertical datum NAVD88 North American Vertical Datum of 1988 Referenced vertical datum NGVD29 National Geodetic Vertical Datum of 1929 Status 1 Static Method of measurement S Steel-tape measurement. Method of measurement Ζ Other. Measuring agency Not determined Source of measurement Not determined Water-level approval status А Approved for publication -- Processing and review completed.

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Search Results -- 1 sites found

Agency code = usgs site_no list =

• 323832103264901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 323832103264901 19S.35E.22.14341

Lea County, New Mexico Latitude 32°38'32", Longitude 103°26'49" NAD27 Land-surface elevation 3,742 feet above NAVD88 The depth of the well is 45 feet below land surface. This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. 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 the surement	? Measuring agency	? Source of the source of the	? Water- level approval status
1963-03-19		D	72019	16.50			1	Z			А
1966-03-18		D	72019	17.01			1	Z			А
1971-01-27		D	72019	16.68			1	Z			А
1976-01-29		D	72019	16.27			1	Z			А
1981-01-23		D	72019	16.54			1	Z			А
1986-02-04		D	72019	16.54			1	Z			А
1991-04-17		D	72019	16.82			1	Z			А

Released to Imaging: 2/6/2024 2:48:01 PM

Section \$	Code \$	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	А	Approved for publication Processing and review completed.

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Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2023-09-11 17:04:02 EDT 0.29 0.25 nadww02 USA.gov

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Appendix B Field Data

Received by OCD: 10/26/2023 8:01:32 AM



Sample Log

Date:

Project:	Charolais	s Frac North Fork					
Project Num	ber:	18548	Latitude:	32.64475	Longitude:	-103.46106	
							_

Sample ID	1	PID/Odor	Chloride Conc.	GPS
SPS @ Sur	6.0			
(76 P SVV	1 4			
SP7 P Sur	7.0			
SP8 P SUT	7.8			
SP9 8 SUR	3.4			
FLIDGIN	2.0		-	
FLielin	1.4			
FLBESIN	30			
FLUEGin	2.0			
FLSQGin	1.4	-		-
FL 6 C 6 in	2.4-		-	
FLIPEin	1.4			
EL B C 6 ja	2.4			
FL 9 @6 in	20			
FLIO ELin	2.0			
FLILEGIN	2.2			
SPINQ SUR	3.6		*	
SP12 @1	3.2	Hish		
511202	7.6	High		
(P12 @ 3	7.8	High	No.	-
Spize4	8.0	Lisht		
511286	5.2	NUME		
SPIZEB	24	None		
FLIZEGin	20			
F/ 13 26:4	2.0			
F114 86:00	1.6			
ELIS Clin	2.2	1.2		
FLIG EI	2.4			
FLIZEI	2.0			
FLIB OCH	3.0			
FIIA EGIN	7.6			
FLID Chin	2.2			
FLUEI	2.0			
FL 22 @ 6in	3.0			
F123 P Gin	1.4			

Floor = FL #1 etc

Refusal = SP #1 @ 4'-R

Stockpile = Stockpile #1

Sidewall = SW #1 etc

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

GPS Sample Points, Center of Comp Areas

Received by OCD: 10/26/2023 8:01:32 AM



Sample Log

Date:

Project:	Charolais Fra	ac North Fork					
Project Num	ber:	18548	Latitude:	32.64475	Longitude:	-103.46106	_

Sample ID		PID/Odor	Chloride Conc.	GPS
FLZ4 @ Gin	2.8		320	
FL 25 @ 6 in	3.0		356	
FZ Z6 EGin	1.8		164	
FLZZ @6 in	1.4	-	117	
F128 @6 in	2.0		192	
FL29 @ 6 in	1.8	No. of Concession, Name	164	
FL30 @ 6 in	18		164	
FL31 @ 6 in	1.6	West day - W. C.	136	
FL 32 @ 6 in	1.4		112	
FL 33 @ 6 in	20		112	
FL 34 @ 6 in	1.8		164	
WWI -	1.4-		112 -	-
WWI	2.0		112	
WW3	1.6		136	
Nul	1.4		112	
NW2	30		356	
NW3	2.2	-	220	
EWI	1-4			
EW2	2.0		142	
EW3	1.4	Angle and a second seco	112	
EWY	3.4	and the second second	436	
EW5	1.4	Successive States of State	112	
SWI	1.4	· MARK ARTICLES	1/2	
SW2	26		284	
5W3	1.4	A CONTRACT OF A	112	
SWY	1.6	All and a second second second	136	
5W/5	1.4	Approximation	1/2	
FL35 ebin	1.8		164	-
F236 C2	2.0	- Aller and a second se	112	
FL37 CGin	22	and the second designed to be a second designed as a second designed as a second designed as a second designed	270	
FL38 C 6in	1.4	-	//2	
FL34 @ 611	1.4	- State -	112	
FL40 CGin	3.0		352	
FL 41 @ bin	7.0		354	
FL 42 @ 6 11	1:4		117	
FL 43 Clin	1.6	-	136	

Floor = FL #1 etc

Refusal = SP #1 @ 4'-R

Stockpile = Stockpile #1

Sidewall = 5W #1 etc

GPS Sample Points, Center of Comp Areas

Received by OCD: 10/26/20	023 8:01:3.	2 AM			d		Page 44 of 20 2
etech	5	× .		Sample	Log		
Environmental & Safety Solutions	, Inc.				Date:		
Project: Platended							
Project Number:	-	101	Latitude:		Longitude:	Tom	
Sample ID		PID/Odor		Chloride Conc.		G	PS
FLULLebin	2.2	-	220				
FL 45 C 6 in	2.4		252			······································	
FL 46 C tin	3.0		356				
FL 47 C big	2.0		192				
EWB	2.0		192				
EW7	2.4	and the Balancia and Ar	252				
EY8	3.0		356				
NWU	5.8	141. · · · · · · · · · · · · · · · · · · ·	320				
NWS	1.8	And the second designment of the second design	164				
SWB	1.4		112				
SW7 -	20	Nonmonitative in statistics	192		-		
FLUBREGIN	1.4	and the second designed to a second designed to a second designed as a second designed as a second designed as	112	-		-	
FL4966in	3.0		356				
FLSOCHin	1.8	- and the second second second	164	1			
FLSICLin	1.4		112				
Flsz Pbin	1.4		רוו				
1653 2654	2.0		142	1			
F' SY C bin-	3.0		356	2 2			-
FL55@6 in	1.4	And and the second design of	112				
FL56 Q6 in	1.6		136				
FL5706ih =	1.8	v Allegad (Longord Car	164		*		
6158 06in	2.0	- The second second	192	*			
FL 59 QG:M	1.4		112				
NUG	1.8		164				
EWA	1.6		136				
FL60@ Cin	1.4		112				
FL61 8 6:1			192				P).
FLG2C6:11	2.2		220			•	
FLESC Gin	3.0		356				L
FL 38 P 1	1.4		112				
TL SX W I	7.7-		220				

Sample Point = SP #1 @ ## etc

Test Trench = TT #1 @ ## Refusal = SP #1 @ 4'-R

Resamples= SP #1 @ 5b or SW #1b

Floor = FL #1 etc

38

39

PI 01

7

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Stockpile = Stockpile #1 GPS Sample Points, Center of Comp Areas

Sidewall = SW #1 etc

192

SAND CHUTE FRAC (PASTURE SAMPLES) NORTH FORK 15-13 60 10 1' - 32 64516 103 46065 32. 64462, -103. 46116 |0,4|/30.1 = 2.88 = .22 = 633 x 58102' 10.1/30.1 = 2.98 = .18 = 536 / 1.6-23 5P2 01' - 32.64516, -103.46065 10.4/30.0= 2.88=.05 = 143 / 5P202' 10.4/30.0 = 2.88 = N/A = N/A 58301'- 32.64504, -103.46061 10.6/30.0=2.83=.05 =141/ 59302' 10.6/30.0= Z.83 = N/A. = ~ N/A SP401' - 32. 64492, -103. 46045 11.0/30.1=2.73=.19 = 5181 5P4102' 16.5/30.3=2.88= N/A = N/A SP4 @ 3' 10.4/30.0= 2.88 = N/A = N/A SP501'- 32.64477, -103.46022 10.4/30, 1= 2.89 = .10 = 2881 54502' NA 58601' - 32. 644059, -103. 45994



5P70 1' - 32.644149, -103.45967 11.0/30.0=2.72 = .17 = 4621 5P801' - 32. 644126, -103. 45911 $10.1/30.3=3=.28=839 \times$ 50901'- 32.64398, -103.45835 10.7/30.0=2.80=.08 = 2231 51802' 10.8/30.2= 2.99= .35 = 139/



North FORK SAND CHUTE 7-27-23 North Jon - 32.64481, -103, 46089 W 10.4/30.3-2.91 = .91 = 2,647 X - and - 100 Lodin -32 191 25 / alferdin 10 SP10004" = 150 / -> NU SMELL OF TPH. 10.0/30.1 = 3.01 =.05 Denstrun - 252 / outring 51001' Aisur - 161 - 10 10.1/30.3 2 = N/A 2 CANCON - CIPFOLDISTIVE A 5910@ 2' 10.0/30.1= = N/A30 - 63R SHORT Mith - Kind Lake - Isral Heater SPILO Surface - 32. 64506, -103. 46110 10.5/30.2 = 2.87 = 1.10 = 03,156 X5P1101' 10.3/30.2=2.93 =,42 = 6,230 X 8/11@2' 10.1/30.3 = 3 =.07 = 209 / -> NO SMELL OF TPH. 5P11 @ 3' 10.1 / 30.3 = = N/A Tenes 500 Surface - clay 01' roybe 6"



Appendix C Photographic Log

Photographic Log

Photo Number:		
1		
Photo Direction:		
Southeast	♀ ^{WGS84} 32.64483, -103.46145	 ¥ ^{∗,⊤} SE145
Photo Description:		
View of the affected area.	Aspess 08:10: MOC Charolais North Fork Hobbs NM 88240, United States e 13-Sep-23 08:10:08	

Photo Number: 2						
Photo Direction:						
West	♥ ^{WGS84} 32.64483,	, -103.46102	M ^{ft} ≞11R	3768	<₽ ^{°,T} ±17	W270
Photo Description:						
View of the affected area.	13Sep23 08:09 MOC Charola Hobbs NM 88240, United State	ais North Fork se e 13-Sep-23 08:09:23				

Photo Number:							
3							
Photo Direction:							
East	♥ WG584 32.644	68, -103.46124		₩ ⁿ	3776	• 17 111	E101
Photo Description:		- All Mary - And And					
View of the affected area.	OSJULIZ3 10:23 MOC Sand Hebbe NM BB210, United	d Chute Frag States is ob-Jul-23 10:23:3	38				



•

Photo Number:					
5					
Photo Direction:					
South-Southwest	Q ₩6584 32.6447	0, -103.46096	M	3773	SW202
Photo Description:	al.		M Stor A sun	ma and a	 N. M.
View of the affected area.	05Jul23 10:24. MOC Sand Hobbs NM 88240, United St	Chute Fre ates of 05 VIH23 10 24 80			

Photo Number: 6						
Photo Direction:	-					
Northwest	0 WGS84 32 64484	, -103.46043		X T 3771		NW309
Photo Description:			at Eller	AVenin 3771	100 414	T
View of the affected area.	05.Jul23 10:25 MOC Sand C Hobbs NM 38240, United Stat	nuto Frac- es o de Jul-23 102 5/43				

•

Dhata Numharr	
Photo Number:	
7	
Photo Direction:	
Southeast	♥ #6584 32.64482, -103.46033
Photo Description:	
View of the affected area.	Source And Constant Protections

Photo Number: 8						
Photo Direction:						
Southwest	♥ ^{WG564} 32.64473, -103	3.46046	M ^{fl} ion	3766	4	SW230
Photo Description:	Conception of the				and with store	and and the set
View of the affected area.	OSJUI23 10:42 MOC: Sand Chute Frac Hobbs NM 98240, United States e oc					

Photo Number:	
9	
Photo Direction:	
South-Southeast	E SE SW
Photo Description:	
View of soil boring BH-1.	Charlais Exploratory Water Bore



















Appendix D Laboratory Analytical Reports



August 16, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/09/23 16:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 1 @ 6 IN. (H234274-01)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 9	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/10/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	78.6	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	77.8	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 2 @ 6 IN. (H234274-02)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 %	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	75.3	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	74.3	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 3 @ 6 IN. (H234274-03)

BTEX 8021B	mg,	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg,	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	76.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	76.1	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 4 @ 6 IN. (H234274-04)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	69.7	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	68.2	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 5 @ 6 IN. (H234274-05)

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	'kg	Analyze	alyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	72.8	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	71.6	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 6 @ 6 IN. (H234274-06)

BTEX 8021B	mg	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	16.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg	/kg	Analyze	zed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	78.5	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	78.0	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 7 @ 6 IN. (H234274-07)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	166	83.2	200	0.359	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	150	74.8	200	1.33	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	318	79.5	400	0.888	
Surrogate: 1-Chlorooctane	73.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	71.2	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 9 @ 6 IN. (H234274-08)

BTEX 8021B	mg/kg		Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 %	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/10/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	129	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	2340	25.0	08/10/2023	ND	187	93.3	200	16.3	QM-07
DRO >C28-C35	467	25.0	08/10/2023	ND					
Total TPH C6-C35*	2940	25.0	08/10/2023	ND	365	91.2	400	17.1	QM-07
Surrogate: 1-Chlorooctane	90.9 9	6 44.9-13	4						
Surrogate: 1-Chlorooctadecane	96.3 9	6 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 10 @ 6 IN. (H234274-09)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 %	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	82.2 9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	93.4 9	% 41.4-16	1						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 8 @ 6 IN. (H234274-10)

BTEX 8021B	mg/kg		Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	90.5	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	103 9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 11 @ 6 IN. (H234274-11)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	64.0	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	85.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	96.9	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager


Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP5 @ 1 (H234274-12)

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	ne* <0.025 0.025		08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275	0.275	08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	08/10/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	86.6	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP6 @ SUR (H234274-13)

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275 0.275		08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/10/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	78.4	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	89.1	% 41.4-16	51						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP7 @ SUR (H234274-14)

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023 ND		5.37	89.5	6.00	2.04	
Total BTEX	<0.275 0.275		08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/10/2023 ND		416	104	400	0.00	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/10/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/10/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/10/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/10/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	86.0	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	97.5	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP8 @ SUR (H234274-15)

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023 ND		5.37	89.5	6.00	2.04	
Total BTEX	<0.275 0.275		08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank BS		% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/10/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	87.0	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	98.9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/09/2023	Sampling Date:	08/09/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP9 @ SUR (H234274-16)

BTEX 8021B	mg	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/12/2023	ND	1.92	95.9	2.00	2.40	
Toluene*	<0.050	0.050	08/12/2023	ND	1.82	90.9	2.00	6.79	
Ethylbenzene*	<0.050	0.050	08/12/2023	ND	1.85	92.4	2.00	0.000219	
Total Xylenes*	<0.150	0.150	08/12/2023	ND	5.37	89.5	6.00	2.04	
Total BTEX	<0.275 0.275		08/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank BS		% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	08/10/2023 ND		416	104	400	0.00	
TPH TX1005	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/11/2023	ND	176	88.1	200	18.9	
DRO >C12-C28	<25.0	25.0	08/11/2023	ND	187	93.3	200	16.3	
DRO >C28-C35	<25.0	25.0	08/11/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/11/2023	ND	365	91.2	400	17.1	
Surrogate: 1-Chlorooctane	87.4	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	100	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 10/26/2023 8:01:32 AM



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

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

Company Name	: Mewbourne Oil Company		-				F		B	ILL TO						ANALYSI	S RE	QUES	T		
Project Manage	r: Lance Crenshaw						P.C). #:								TT					
Address: 261	7 W Marland Blvd						Co	mpa	ny:	Membourne		1			1						
City: Hobbs	State: NM	Zip:	8	38240			Att	n: (Conno	w Walker		1									
Phone #: 575	-396-2378 Fax #: 575-396-14	129				1	Ad	dres	s :							1 1					
Project #: 185	548 Project Owner:	Men	wbou	me Oil	Comp	pany	Cit	y:							1						
Project Name:	Charolais Frac North Fork						Sta	te:		Zip:					1			1			
Project Location	n: UL/ J Sec 21 T19S - R35E				_		Ph	one	#:												
Sampler Name:	1	541	ve	2		Å	Fax	c #:													
FOR LAB USE ONLY			T	1	AATR	NXII		PRE	SER	. SAMPL	ING	1'									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	CE / COOL	DATE	TIME	Chloride	Hat	BKEX 8021							
DC 1	Fliebin	C	T		V				V	8-9		V	TV	11	T		T				
Z	FLZEGin	1	1		1				1	1		1	1	1							
3	FL3@6in								1								_	-			
4	FLYEGIN	Ш	1		11				11			++-	\downarrow		-		-	-	-		
5	FLSCOM	Ш	11		11				11					+ +	+		-	-	-		
6	FL 6 @ 6:1	Ш	41		4	-			44			11	++	++	-		-	-	-		
7	FL706:1	111	4	-		-		\vdash	1	11		++	11	+	+		+	-	-	++	_
8	EL 92,6.1	111			++	+				++-		11-	++-	++	-		+	+	-	++	
9	FLIDEGin	1	+		1	+			M	14		11	1	0	-	++	-	-			
enelyses. Al claims Includ envice. Is no event shall of affiliates or successors are Relinquished B Relinquished B	v: V: V: V: V: V: V: V: V: V: V	without li indinar, re Rec	elved u imitation genetic eive	ad By: Sam	in in well a interrup her social and and and and and and and and and and	ing and ptions, is retain is a constant of the second seco	incution based to based	ad by C see, or fopun a	and mail in the second	white 30 days after wrotte incurred by d a above stated rear	completion of the lent, its subsidieri	ult:		s	I No No Its to	Add'l Phone Add'l Fax #: PM@etec		com			
Sampler - UPS	- Bus - Other: - 4,9 c				Yes	Yes No	5	0	(m)	itiais)						-					

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476 FORM-006 R 2.0



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

li €

101 East Marland, Hobbs, NM 88240

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

Time:

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476 FORM-006 R 2.0

90

H140

Company Name: Mewbourne Oil Company	BILL TO	ANALYSIS REQUEST
Project Manager: Lance Crenshaw	P.O. #:	
Address: 2617 W Marland Blvd	Company: Membourne	
City: Hobbs State: NM Zip: 88240	Attn: Connor Walker	
Phone #: 575-396-2378 Fax #: 575-396-1429	Address:	
Project #: 18548 Project Owner: Mewbourne Oil	Company City:	
Project Name: Charolais Frac North Fork	State: Zip:	
Project Location: UL/ J Sec 21 T19S - R35E	Phone #:	
Sampler Name: Dominic Casarez	Fax #:	
	AATRIX PRESERV. SAMPLING	
Tap I'D' Samble I'D' CONTAINERS GROUNDWATER WASTEWATER	ONL OTHER : OTHER : ACID/BASE: ACID/BASE: ACID/BASE: ACID/BASE: ACID/BASE:	Chloride
OC ILFLIGGIN CI	8-9	
12 5PS@ 1 11		
OC // FL 11@ 6 . n C 1 12 SPS@ 1 13 SP6@ SUr 14 SP7@ SUr 15 SP8@ SUr 15 SP8@ SUr		
14 5P7@SUr		
15 5 78 @ 507		
16 589@ Sur VV		
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim anising whether ba enalyses. All claims including those for negligence and any other course whetheover chell be deamed walved untern mode		
aervice. In no event shall Cardhel be liable for incidential or consequential damages, including without limitation, business affiliates or successors ansing out of or related to the performance of pervices hereunder by Cardinal, regardless of wheth Relinquished By: Date: O M Received, By:	er such claim is based upon any of the above stated revisions or otherwise	Result: D Yes D No Add'I Phone #:
Relinquished By: Date: Received By:	ra liter Rema	ult: ¹ , D Yes D No ^o Add'l Fax #: ARKS: Email results to <u>PM@etechenv.com</u>

er limited to the amount of Conditud within 30 days a loss of profits incurred to any of the above stated with above stated CHECKED BY: (Inftiafs)

Sample Condition Cool Intact Yes Yes No No No

#: henv Released to Imaging: 2/6/2024 2:48:01 PM

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:



August 16, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/10/23 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 12 @ 6 IN (H234326-01)

BTEX 8021B	mg/kg		Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	159	79.5	200	0.686	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	173	86.3	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	97.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 13 @ 6 IN (H234326-02)

BTEX 8021B	mg/kg		Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	86.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.8	% 49.1-14	8						

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 14 @ 6 IN (H234326-03)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	81.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.3	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 15 @ 6 IN (H234326-04)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	81.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.6	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 16 @ 1 (H234326-05)

BTEX 8021B	mg/kg		Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	80.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.6	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 17 @ 1 (H234326-06)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	86.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.9	% 49.1-14	8						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 18 @ 6 IN (H234326-07)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	90.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 19 @ 6 IN (H234326-08)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	82.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.1	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 20 @ 6 IN (H234326-09)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	14.2	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	85.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.8	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: FL 21 @ 1 (H234326-10)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	83.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.6	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 1 (H234326-11)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.07	0.500	08/16/2023	ND	2.04	102	2.00	1.76	
Toluene*	17.1	0.500	08/16/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	16.2	0.500	08/16/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	26.6	1.50	08/16/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	60.9	3.00	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	267	50.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	2150	50.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	523	50.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	108	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	114	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 2 (H234326-12)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	1810	50.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	988	50.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	103 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	197 9	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 3 (H234326-13)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	222	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	168	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	88.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.3	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 4 (H234326-14)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	84.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.7	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 6 (H234326-15)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.04	102	2.00	1.76	
Toluene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	0.763	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.97	98.6	2.00	3.06	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.91	98.5	6.00	3.75	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.5	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	85.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ 8 (H234326-16)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.00	99.8	2.00	1.06	
Toluene*	<0.050	0.050	08/15/2023	ND	1.88	93.8	2.00	0.484	QR-03
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.85	92.6	2.00	0.232	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.40	90.0	6.00	0.616	
Total BTEX	<0.300	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	<10.0	10.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	<10.0	10.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	77.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.3	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/10/2023	Sampling Date:	08/10/2023
Reported:	08/16/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19 - R35E		

Sample ID: SP 12 @ SUR (H234326-17)

BTEX 8021B	mg/	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2023	ND	2.00	99.8	2.00	1.06	
Toluene*	<0.050	0.050	08/15/2023	ND	1.88	93.8	2.00	0.484	
Ethylbenzene*	0.333	0.050	08/15/2023	ND	1.85	92.6	2.00	0.232	
Total Xylenes*	1.01	0.150	08/15/2023	ND	5.40	90.0	6.00	0.616	
Total BTEX	1.34	0.300	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	129 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/14/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10*	76.7	50.0	08/14/2023	ND	170	84.8	200	1.69	
DRO >C10-C28*	16900	50.0	08/14/2023	ND	179	89.4	200	6.01	
EXT DRO >C28-C36	4990	50.0	08/14/2023	ND					
Surrogate: 1-Chlorooctane	110 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	366 9	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

AM

Received by OCD: 10/26/2023 8:01:32

FORM-006 R 2.0



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

A . F

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476 **Company Name:** Mewbourne Oil Company BILL TO ANALYSIS REQUEST **Project Manager:** Lance Crenshaw P.O. #: Address: 2617 W Marland Blvd Company: Mewbourne State: NM 88240 City: Hobbs Zip: Attn: Connor Walker Address: Phone #: 575-396-2378 Fax #: 575-396-1429 Project #: 18548 **Project Owner:** Mewbourne Oil Company City: Project Name: Charolais Frac North Fork State: Zip: Project Location: UL/ J Sec 21 T19S - R35E Phone #: Dominic Casaver Sampler Name: Fax #: MATRIX PRESERV. SAMPLING FOR LAB USE ONLY G)RAB OR (C)OMF **GROUNDWATER** ERS VASTEWATER 8021 ACID/BASE: Sample I.D. Lab I.D. CE / COOL AIN Chloride SLUDGE TNO OTHER NHER BTEX TPH SOL 73437 TIME DATE C 8-10 L V L 12 612 0 6 11 6.0 6 0 6 6.1 01 6 DEGin 15 CN. PLEASE NOTE: Liability and De al's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause wheteoever shall be deemed waived unless made in willing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be fields for incidential or consequential demages, including without limitation, business interruptions, loss of use, or loss of profile incurred by client, its subsidiaries, nal, regardless of whether such claim is based upon any of the above stated rea affiliates or successors ansing out of or related to the performance of services hereunder by Card Phone Result: Add'l Phone #: Relinguished By: Date: 8 Received By: O Yes D No -10 O Yes O No Add'I Fax #: Fax Result: m Time: 35 **REMARKS:** Email results to ADADOR PM@etechenv.com **Received By: Relinguished By:** Date: Time: Delivered By: (Circle One) Sample Condition CHECKED BY: 3. Gool Intact (Initials) De Yes Yes Sampler - UPS - Bus - Other: † Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476 Company Name: Mewbourne Oil Company	BILL TO	ANALYSIS REQUEST
Project Manager: Lance Crenshaw	P.O. #:	
Address: 2617 W Marland Blvd	Company: Membourne	
City: Hobbs State: NM Zip: 88240	Attn: Connor Walker	
Phone #: 575-396-2378 Fax #: 575-396-1429	Address:	
Project #: 18548 Project Owner: Mewbourne Oil	ompany City:	
Project Name: Charolais Frac North Fork	State: Zip:	
Project Location: UL/ J Sec 21 T19S - R35E	Phone #:	
Sampler Name: DoWinic Cascrel	Fax #:	
FOR LAB USE ONLY	TRIX PRESERV. SAMPLING	
Tap I.D. Sample I.D. #CONTAINERS #CONTAINERS GROUNDWATER MASTEWATER	OIL SLUDGE OTHER : ACID/BASE: DTHER : DTHER :	Chloride BTEX 8021 BIEX 8021
NC // SP 12 P 1 G	8-10	
12 SP12@2 13 SP12@3 14 SP12@U 15 SP12@6 14 SP12@8 17 SP12@Sur #Isc		
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether be analyses. All claims including those for negligence and any other cause whethcover shall be deemed waived unless me service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, busines affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whet Relinguished By:	writing and received by Cardinal within 30 days effer complet exuptions, toos of use, or toos of profite incurred by client, its e such claim is based upon any of the above stated reasons or o	atelion of the applicable is subsidiarias, ar otherwise hone Result: Ves No Add'I Phone #:
Relinquished By:		Image: Note of the second s
Delivered Bv: (Circle One) Sampler - UPS - Bus - Other: -3.0°C #140	CUIIIIIIiion CHECKED BY: Intact (Initials)	added. SC 8/10/23

Page 21 of 22

Shalyn Rodriguez

From: Sent: To: Subject: Lance Crenshaw <lance@etechenv.com> Thursday, August 10, 2023 4:21 PM Shalyn Rodriguez; PM Re: MISSING SAMPLE

Yes please test for all three

Get Outlook for iOS

From: Shalyn Rodriguez <Shalyn.Rodriguez@cardinallabsnm.com> Sent: Thursday, August 10, 2023 4:52:10 PM To: PM <PM@etechenv.com> Subject: MISSING SAMPLE

. . . .

THE MISSING SAMPLE IS "SP 12 SUR"



August 17, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/11/23 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 1 (H234359-01)

BTEX 8021B	mg	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg,	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	95.0	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	106	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 2 (H234359-02)

BTEX 8021B	mg	mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/15/2023	ND	416	104	400	0.00	
TPH TX1005	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	88.8	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	100	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 3 (H234359-03)

BTEX 8021B	mg/	mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/15/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	94.7	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	107 9	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: WW 1 (H234359-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	89.2	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	99.7	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: WW 2 (H234359-05)

BTEX 8021B	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	93.6	% 44.9-13	4						

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Celey D. Keene, Lab Director/Quality Manager


Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: WW 3 (H234359-06)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 %	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	97.3 9	<i>44.9-13</i>	4						
Surrogate: 1-Chlorooctadecane	111 %	6 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 25 @ 6IN. (H234359-07)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	97.8	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 26 @ 6IN. (H234359-08)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	96.1	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	108	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 27 @ 6IN. (H234359-09)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	90.2	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 28 @ 6IN. (H234359-10)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/15/2023	ND	2.04	102	2.00	2.21	
Toluene*	<0.050	0.050	08/15/2023	ND	1.94	96.9	2.00	1.18	
Ethylbenzene*	<0.050	0.050	08/15/2023	ND	1.95	97.6	2.00	0.263	
Total Xylenes*	<0.150	0.150	08/15/2023	ND	5.87	97.8	6.00	1.04	
Total BTEX	<0.275	0.275	08/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg,	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	95.5	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	109	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 1 (H234359-11)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	88.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	100 \$	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 2 (H234359-12)

BTEX 8021B	mg,	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.4	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	96.0	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	109	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 3 (H234359-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	95.2	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	107 9	6 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 4 (H234359-14)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.5	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	93.8	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	106 9	6 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 5 (H234359-15)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.5 9	71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	91.4 9	44.9-13	4						
Surrogate: 1-Chlorooctadecane	102 %	6 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 1 (H234359-16)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	92.3	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	105 9	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 2 (H234359-17)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.3	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	93.2	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	105 9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 3 (H234359-18)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	157	78.6	200	0.678	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	171	85.4	200	12.0	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	328	82.0	400	6.42	
Surrogate: 1-Chlorooctane	85.5	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	96.4	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 4 (H234359-19)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	86.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	95.5	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 5 (H234359-20)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH TX1005	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	91.9	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 41.4-16	1						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 29 @ 6IN (H234359-21)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	96.7	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	106	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 30 @ 6IN (H234359-22)

BTEX 8021B	mg	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	92.6	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	102	% 41.4-16	1						

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 31 @ 6IN (H234359-23)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	432	108	400	3.77	
ТРН ТХ1005	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	89.5	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	98.1	% 41.4-16	51						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 32 @ 6IN (H234359-24)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH TX1005	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	96.4	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	107	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 33 @ 6IN (H234359-25)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH TX1005	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	96.1	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	103 9	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 34 @ 6IN (H234359-26)

BTEX 8021B	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/15/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	92.0	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	98.1	% 41.4-16							

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 22 @ 6IN (H234359-27)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH TX1005	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	90.1	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	96.8	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 23 @ 6IN (H234359-28)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
ТРН ТХ1005	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	99.8	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	106	% 41.4-16	1						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/11/2023	Sampling Date:	08/11/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 24 @ 6IN (H234359-29)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/16/2023	ND	2.14	107	2.00	2.38	
Toluene*	<0.050	0.050	08/16/2023	ND	2.07	103	2.00	2.90	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	2.58	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.93	98.9	6.00	2.65	
Total BTEX	<0.275	0.275	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH TX1005	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/15/2023	ND	167	83.3	200	1.48	
DRO >C12-C28	<25.0	25.0	08/15/2023	ND	187	93.3	200	5.42	
DRO >C28-C35	<25.0	25.0	08/15/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/15/2023	ND	353	88.3	400	3.54	
Surrogate: 1-Chlorooctane	83.6	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	89.6	% 41.4-16	1						

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

BS-	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	D Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

4.1

101 East Marland, Hobbs, NM 88240

		-	4.000	
(575) 393-2326	FAX	(575)	393-2476

Project Manager:	1 Ourstand						_	- PI	LL TO						ANA	LYSIS	REC	TOE21			
	Lance Crenshaw					Ρ.	0. #:														
Address: 2617	W Marland Blvd					C	ompa	ny:	Mewbourne												
City: Hobbs	State: NM	Zi	p:	88240)	At	ttn: (Connor	Walker												
Phone #: 575-3	96-2378 Fax #: 575-39	6-1429				A	ddres	s:	-		1										
Project #: 18548	8 Project Owner	N	lewb	ourne Oi	Company	Ci	ity:				1										
Project Name: C	charolais Frac North Fork					St	tate:		Zip:												
Project Location:				_		PI	hone	#:	_	Call Street	1			r -					- 1		
Sampler Name:	Dominic Casarl	2	_	_		Fa	ax #:	12			1										
FOR LAB USE ONLY					MATRIX	-	PRE	SERV.	SAMPLI	NG											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	AIN	GROUNDWATER WASTEWATER	Soil	SLUDGE OTHER :	ACID/BASE:	DTHER :	DATE	TIME	Chloride 🗯	трн	BTEX 8021								
	WWI	C	l					V	8-11		V	V	V	1							
	NW2	1	1		1			1	1		1	11	1								
3 1	VIW 3										11	1		-	-	-	-			_	-
	WWI		111			_		1			\square	++	11	-	-	-				_	-
	h/w2										++	11	$\downarrow \downarrow$	-	-	+	-			-	-
	4/1/2	\rightarrow	4			+		++-				++	11	-		+				_	+
	12 25 8 6.11	-	44		+	-		1-			++	++		-	-	+	-			-+-	+
	FL 26 6 617		44		+	-	++	1-			++	++	++-	-	-	-	1	-		-+-	+
9 F	EL 27 C 1.n	0	1.1		1.0	-	+	11	1			11/	V	+	+	+	+	-			+
PLEASE NOTE: Liability and	C CB C 611		_	ing whether I	based in contra	ct or tor	rt, shall be	limited to	the amount paid	by the client for th			10			1	-				
analyses. All claims including	those for negligence and any other cause wheteoever shi deal be liable for incidental or consequental damages, inc	l be deem	ed week	ved unless m	ade in writing a	ind rece	ived by C	ardinal wi	hin 30 days after	completion of the	e applicabi	le									
affiliates or successors ansing Relinquished By	Lout of or related to the performance of services hereunds	R R	at rega	ived By	ether such clai	m is bas	sed upon	any of the	above stated reas	Phone Re Fax Resu REMA	esult: It:	Ye Ye Emai	s C	No No ts to	Add'l	Phone Fax #:		om			
Relinquished By:	Date: Time:	R	ece	ived By	<u>u (</u>	e	JVC		<u> </u>		1										
Delivered Bv: Sampler - UPS -	=1.10	#14	0	Sar	npie Control ol Intac Yes I	litican res			(ED BY: ials)		*			ī.							

Page 32 of 34

Received by OCD: 10/26/2023 8:01:32 AM



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Company Name	: Mewbourne Oi	I Company								BI	LL TO		1				ANA	LYSIS	S REC	QUES	Т		
Project Manage	r: Lance Crensha	W						P.0). #:														Τ
Address: 261	7 W Marland Blvd							Cor	mpan	y:	Mewbourne												
City: Hobbs		State: NM	Zip	:	8824	0		Att	n: C	onnor	Walker					1							- 1
Phone #: 575	-396-2378	Fax #: 575-396-1	429					Add	dress	:		_				E							
Project #: 185	548	Project Owner:	M	ewbo	ume (Dil Com	pany	City	y:				1										
	Charolais Frac Nor	th Fork					4	Sta	te:		Zip:	1	1										
Project Location								Pho	one #			79,000	1					1					
Sampler Name:	Dom.n.	(Casavez	-					Fax	c#:				1									- 1	
FOR LAB USE ONLY						MATE	XIX		PRES	ERV.	SAMPL	ING	1								1		
Lab I.D. #없3년399	Samp	le I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER MASTEWATER	Solt	SLUDGE	OTHER :	ACID/BASE:	OXHER : -	DATE	TIME	Chloride	Hat	BTEX 8021								
DCII	SWI		C	2		1			1		8-11		IV	V	V								
12	SWZ		i	X		11					1		11	1	1				-				\square
13	543		4	$\downarrow \downarrow$			-			-		-	4	11	\square	-	-		-				\rightarrow
	544		44	\downarrow			-			-			11	++	++	1	-	-	-	-			\rightarrow
15	SWS		++	H	\vdash	+++	-	\square					11	++	++	-	-		-				-
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11	EW2		H	H	+		-	-	\vdash				11		H	-	+	+	+	+			\rightarrow
18	EW3 EW4		+	ŧ£.	\vdash		+	\vdash	\vdash		++-	-	H.	++-	++	1	+	-	+	-	-		-
17	EWS		V	K	\vdash		-	+		4	V		1	V	Y	1	+	+	+	1			-
LEASE NOTE: Liability a	and Damages. Cardinal's liability	and client's exclusive remedy for	any clain	n arisin	g whethe	based in	contract of	or tort, :	shall be i	mited to	the amount paid	by the client for t	the	-	-	1	-	-	-	1			
envice. In no event shall C	Cardinal be liable for incidental of	y other cause whatsoever shall be r consequental damages includ r	a withou	rt limita	tion busi	ness intern	upbolis k	oss of a	use, or lo	is of pro	fits incurred by c	hent, its subsidiar	les	le									
Affiliates or successors ans Relinquished B Dow Relinquished B	A	Time:	Re	h	ved B	×.		- W	<u>n</u>	N	above stated rea	Phone Re Fax Resu REMA	esuit: lit:	Emai	s C	No No No	Add'l	Phone Fax #: Detect	#: henv.c	om			
Delivered By Sampler - UPS	- Bus - Other:	-7.1° #1	46		C	mple C ool Ir Yes	tact		0		(ED BY:												



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Company Name	: Mewbourne Oil C	ompany								BI	LL TO						ANA	LYSIS	RE	QUES	T		
Project Manage	r: Lance Crenshaw							P.	0. #:														
Address: 261	7 W Marland Blvd							C	ompa	ny:	Meubourne												
City: Hobbs		State: NM	Zip	:	8824	0		A	ttn:	Connor	Walker												
Phone #: 575	-396-2378	Fax #: 575-396-14	429					A	ddres	SS:											1		
Project #: 185	48	Project Owner:	Me	wbo	ume C)il Con	npan	y C	ity:								1	1					
Project Name:	Charolais Frac North	Fork						S	tate:		Zip:	1											
Project Location	n: UL/ J Sec 21 T19	S - R35E						P	hone	#:											1		
Sampler Name:	Domin	· L Cusar	22					Fa	ax #:				1										
FOR LAB USE ONLY				Π	-	MAT	RIX		PR	ESERV.	SAMPL	NG											
Lab I.D.	Sample	I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	ACID/BASE:	ICE / COOL	DATE	TIME	Chloride	нян	BTEX 8021								
	FL 29 @ 6	in.	e	1		12			T	V	8-11		V	V	V	1		T					
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29	FL 32 Q 6		\downarrow	Ц			1					-				-	-	-	-	-	-		
25	FL 33 @ 6	in	44	\square			-	-	+				11		$ \rightarrow $	-	-	+	-	-	-		-
26		¹ A	++	H		++		-	+				11		+	-	-	-	-	+	+	+	-
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21	FL 24 E 6	14	1	1	+	9		+	+	0	1	-	U	1	V	+	+	+	-	-	+		-
PLEASE NOTE: Liability a	nd Demeges. Cardinel's liebility and	client's exclusive remedy for a	ny claim	arising	whether	based in	n contra	act or to	rt, shall l	e limited to	the amount paid	by the client for t	he			-	-	-	-		-		
service. In no event shall C	ing those for negligence and any off Cardinal be table for incidental or co ang out of or related to the performa	neequental demages, including	without	t limitet	ion, busic	ness inte	muption	ns, loss (of use, o	r loss of pro	dits incurred by cl	ient, its subsidiari	ios,										
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Sampler - UPS	- Bus - Other:	1.10			6	Yes No	P	Yes		DC			1										

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† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2470 FORM-006 R 2.0



August 17, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/14/23 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 35 @ 6 IN (H234372-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	161	80.5	200	4.69	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	156	78.2	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	93.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 36 @ 6 IN (H234372-02)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	161	80.5	200	4.69	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	156	78.2	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	93.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.6	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 37 @ 6 IN (H234372-03)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	161	80.5	200	4.69	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	156	78.2	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	87.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.1	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 38 @ 6 IN (H234372-04)

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	08/15/2023	ND	432	108	400	3.77	QM-07
TPH 8015M	mg/	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	161	80.5	200	4.69	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	156	78.2	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	95.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 39 @ 6 IN (H234372-05)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	86.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 40 @ 6 IN (H234372-06)

BTEX 8021B	mg/	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	82.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.7	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 41 @ 6 IN (H234372-07)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	88.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.2	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager


Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 42 @ 6 IN (H234372-08)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	76.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	80.2	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 43 @ 6 IN (H234372-09)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	83.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	87.5	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 44 @ 6 IN (H234372-10)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	182	91.2	200	4.80	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	184	92.2	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	80.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.9	% 49.1-14	8						

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Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 45 @ 6 IN (H234372-11)

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	101 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8						

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Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 46 @ 6 IN (H234372-12)

BTEX 8021B	mg,	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	102	48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	49.1-14	8						

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Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 47 @ 6 IN (H234372-13)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	99.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 48 @ 6 IN (H234372-14)

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	117 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	129 9	% 49.1-14	8						

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Celeg D. Keine

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Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 49 @ 6 IN (H234372-15)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	117 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	130	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 50 @ 6 IN (H234372-16)

BTEX 8021B	mg/	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.98	98.9	2.00	0.423	
Toluene*	<0.050	0.050	08/16/2023	ND	1.83	91.7	2.00	1.17	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.78	89.1	2.00	1.48	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.15	85.9	6.00	2.82	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	116 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	132 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 51 @ 6 IN (H234372-17)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	109	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	122	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 7 (H234372-18)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	108	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	119 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: SW 6 (H234372-19)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	121	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	134	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 4 (H234372-20)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	110 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	122	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 52 @ 6 IN (H234372-21)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	110 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	123	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 53 @ 6 IN (H234372-22)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	114 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	128	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 54 @ 6 IN (H234372-23)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/15/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	124 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	140 \$	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 55 @ 6 IN (H234372-24)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	127	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	145	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 56 @ 6 IN (H234372-25)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	130	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	147	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 57 @ 6 IN (H234372-26)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	114 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	127 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 58 @ 6 IN (H234372-27)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	114 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 59 @ 6 IN (H234372-28)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	122 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	135 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 60 @ 6 IN (H234372-29)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	115 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	128	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 61 @ 6 IN (H234372-30)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	203	102	200	2.91	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	207	103	200	4.13	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	107	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	120	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 62 @ 6 IN (H234372-31)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	86.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.9	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 63 @ 6 IN (H234372-32)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	91.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 64 @ 6 IN (H234372-33)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	96.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109 9	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 6 (H234372-34)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	89.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 9 (H234372-35)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	106 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	121 9	49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NW 5 (H234372-36)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	2.01	100	2.00	2.42	
Toluene*	<0.050	0.050	08/16/2023	ND	1.92	95.8	2.00	2.28	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.95	97.4	2.00	3.08	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.80	96.6	6.00	4.06	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/15/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/15/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/15/2023	ND					
Surrogate: 1-Chlorooctane	86.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.4	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 8 (H234372-37)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.97	98.7	2.00	3.64	
Toluene*	<0.050	0.050	08/16/2023	ND	1.91	95.3	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.90	95.0	2.00	4.94	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.71	95.2	6.00	4.20	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	94.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 7 (H234372-38)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.97	98.7	2.00	3.64	
Toluene*	<0.050	0.050	08/16/2023	ND	1.91	95.3	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.90	95.0	2.00	4.94	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.71	95.2	6.00	4.20	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	93.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/14/2023	Sampling Date:	08/14/2023
Reported:	08/17/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: EW 6 (H234372-39)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2023	ND	1.97	98.7	2.00	3.64	
Toluene*	<0.050	0.050	08/16/2023	ND	1.91	95.3	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/16/2023	ND	1.90	95.0	2.00	4.94	
Total Xylenes*	<0.150	0.150	08/16/2023	ND	5.71	95.2	6.00	4.20	
Total BTEX	<0.300	0.300	08/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2023	ND	184	91.8	200	5.20	
DRO >C10-C28*	<10.0	10.0	08/16/2023	ND	188	94.0	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/16/2023	ND					
Surrogate: 1-Chlorooctane	93.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
A-01	Ending CCV failed high for DRO. All samples ND.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 42 of 45

Company Name: Etech Environmental & Safety Sol	utions, Inc.	BILL TO	1	ANALYSIS REQUEST								
Project Manager:		P.O. #:										
Address: 2617 West Marland		Company Merburn										
City: Hobbs State: NM	Zip: 88240	Attn: Jeff Broom										
Phone #: (575) 264-9884 Fax #:	Address:											
Project #: 18548 Project Own	City:											
Project Name: Chavolais Fran Ma	th fork	State: Zip:	6 Ng	18								
Project #: 18548 Project Own Project Name: Chavolais Frac No. Project Location: Rural Hobb Sampler Name: Dominic Co	5	Phone #:	Chloride- TPH (8015M)	BTEX (8021B)								
Sampler Name: Drim and Ch	Savez	Fax #:	H CHIC	X								
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	−	BT								
Lab I.D. Sample I.D. <i>H</i> 734372		WITHER : ACID/BASE: ICE / COOL OTHER ; MIT BITYO										
DC 1 FL35 & bin	CI	1 914	VU	14								
Z FL 36 e 6 in 3 FL 37 e 6 in	111		111			+ $+$ $+$						
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5 FL 39 8 6 in			1/41		++							
7 FL 41 P 6 in			++++	+++-	+-+-							
SFL42 Q IN				+++-								
9 CLUTE GIA			111	111-	1							
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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for analyses. All claims including those for negligence and any other cause wheteoever shall			t for the		1 1							
anaryses. An create including industrial registration and any devict calcely window with a second service. In no event shall Cardinal be liable for incidental or consequential damages, inclu affiliates or successors arising out of or related to the performance of services hereunder to	ing without limitation, business interruption	ns, lossed of use, or loss of profils incurred by client, its sub										
Relinquished By: Date 9 - 14 Time: 11040 Date:	Received By:			Yes INO Yes No	Add'l Phon Add'l Fax #							
Time:	(()) Sample Cone	Pleas	e email copy	of COC an	d results to	pm@etechenv.	com.					
Delivered Bv: (Circle One) Sampler - UPS - Bus - Other: /.4c	H 140 Sample Cond Cool mtac	t (Initials)										

Page 178 of 201

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ompany Name: roject Manager	Etech Environmental & Safety Sol	UTIONS	s. In	C.					21	11	10							NAL	YSP	5 KI		- 5								
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ddress: 2617	West Marland						c	omp	any M	1	1bou	m					1													
ity: Hobbs	State: NM	Zip	: 88	240			-				Bro																			
hone #: (575	575) 264-9884 Fax #: Address:									4 1																				
roject #: 196	9 Project Own	er: p	Mewbourn					Mewbourn				c	ity:						-											
roject Name:	ne: Charolais Frax North fork State: Zip: nation: RURA(Hobbs NM Phone #: me: Downing Casater Z Fax #:								State: Zip:			e	5M)																	
roject Location	: RURL HOBBS N	m					P	hone	e #:				Chloride	FPH (8015M)	1000/ ATC	nol														
ampler Name:	Dominic Cabart	2			_		F	ax #		_			Ch	H																
FOR LAB USE ONLY					M	ATRIX	11	PR	ESERV.	-	SAMPLI	NG		F	6								1							
		IMO(S	E.	04			4					140																	
Lab I.D.	Sample I.D.	GIRAB OR (C)OMP	CONTAINERS	GROUNDWATER	NASTEWATER		4	ij	5		. 1													1						
	oumpro not	A3 0	NTA	N	TEW		SLUDGE	ACID/BASE	CE / COOL																					
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

	575) 393-2326 FAX (575) 393-24 Mewbourne Oil Company		BILL TO	1	٨	-	1	ANALYSIS	REQUEST
Project Manager:	Lance Crenshaw		P.O. #:				T		
Address: 2617 W	Marland Blvd	٨	Company: Membourne				1		
City: Hobbs	State: NM	Zip: 88240	Attn: Connor Walker		1				
Phone #: 575-396	-2378 Fax #: 575-396-14	29	Address:						
Project #: 18548	Project Owner:	Mewbourne Oil Company	City:	-					
Project Name: Cha	rolais Frac North Fork		State: Zip:	1.7					
Project Location:	UL/ J Sec 21 T19S - R35E		Phone #:	Ote (
Sampler Name:	pominic Euscie	Ł	Fax #:	3100-1					
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPL	NG					
Lab I.D.	Sample I.D.			TIME	Chloride	TPH BTEX 8021			
DL 2 PL	52 66 14	CIV	1 8 14	-	V		7.		
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24 FL	55 e 6 in				+++	++	-		
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36 91	St a lin						1		
87 FL	-58 C. bin								
38 FL	59 @6 in	6							
29 FL	60 C 6.n	dill.		A	11	41	1		
30 FL	-61 8 6:0		- O	the strend for the	Ur		/		
analyses. All claims including those	lages. Cardinal's liability and client's exclusive remedy for an ie for negligence and any other cause whateoever shall be d be liable for incidental or consequental damages, including	emed welved unless made in writing and	received by Cerdinal within 30 days after	completion of the	applicable				
affiliates or successors ansing out of	of or related to the performance of services herounder by Ga	rdinal, regardless of whether such claim is		ons or otherwise		1 Vac	No	Add'l Phone #	e.
Relinquished By:	Date: 8-14 Time: 140 Date:	Received By:	Ildebyn	Phone Res Fax Result REMAR	t: [□ No	Add'l Phone # Add'l Fax #: PM@etech	
	Time:								
Delivered By: (C	ircle One)	#140 Sample Condit Cool Intact	tion CHECKED BY: (Initials)						
Sampler - UPS - B	us - Other: 1.4c		s v.		1				

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† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476 FORM-006 R 2.0

Page 44 of 45

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Company Name	Mewbourne Oil Company						T		8	BI	LL TO					1	ANA	LYSI	S RE	QUE	ST			
Project Manager	: Lance Crenshaw						P	.0.	\$:	F			1			T		T		T	T	T		
Address: 261	7 W Marland Blvd						С	om	pany	1:	Mewbourne													
City: Hobbs	State: NM	Zip:		8824	0		A	ttn:	Co	nnor	Walker													
Phone #: 575	-396-2378 Fax #: 575-396-1	429					A	ddn	ess:					-		10								
Project #: 185	48 Project Owner:	Me	wboi	ume C	Dil Cor	npan	y C	ity:					1											
Project Name:	Charolais Frac North Fork					1	S	tate	:		Zip:		1					1.1						
Project Location	: UL/ J Sec 21 T19S - R35E					-	P	hon	e #:			Cine and	1					1						
Sampler Name:	Dominic Casava	23	-				F	ax I	k:			102	1											1
FOR LAB USE ONLY			Т		MAT	RIX	_	P	RES	ERV.	SAMPLI	NG	1											
Lab I.D. Hz34372	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	SOIL	ØIL	SLUDGE OTHER ·	ACID/BASE:	ICE / COOL	DTHER :	DATE	TIME	Chloride	ТРН	BTEX 8021									
DL 31	FL62 E 6.n	C	1		V			Т	1	7	8-14		V	IV	V					T				
37	FL63 2 6:1	1	1		1				1		1			1	1									
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37	EW8	111		+	++		-	╋	-11	1			14	\square	\square	-	-	-	-	+	-	-		
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service. In no event shall C	g those for negligence and any other cause whatsoever shall be ardinal be liable for incidental or consequental damages, including	without i	imitati	on, busir	nees into	ruption	as, loss (of use,	or loss	of pro	its incurred by cite	nt, its subsidiari	ies,	le										
Afflindes or successors areas Relinquished By Relinquished By	dt2 Time: 40		-	ed B	_					of the	bove stated reason	Phone Re Fax Resu REMA	sult: It: ⁷	Email	8	□ No □ No ults to	Add'	I Phone I Fax #: @etec	-	<u>com</u>				
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Page 45 of 45



August 24, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/17/23 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/17/2023	Sampling Date:	08/17/2023
Reported:	08/24/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 9 @ 1 (H234483-01)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	08/23/2023	ND	1.99	99.7	2.00	7.96	
Toluene*	<0.050	0.050	08/23/2023	ND	1.97	98.5	2.00	8.94	
Ethylbenzene*	<0.050	0.050	08/23/2023	ND	2.03	101	2.00	6.43	
Total Xylenes*	<0.150	0.150	08/23/2023	ND	6.12	102	6.00	7.41	
Total BTEX	<0.275	0.275	08/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/22/2023	ND	416	104	400	3.92	
ТРН ТХ1005	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	08/22/2023	ND	190	95.0	200	3.72	
DRO >C12-C28	<25.0	25.0	08/22/2023	ND	209	104	200	3.86	
DRO >C28-C35	<25.0	25.0	08/22/2023	ND					
Total TPH C6-C35*	<25.0	25.0	08/22/2023	ND	399	99.8	400	3.82	
Surrogate: 1-Chlorooctane	76.1	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	80.5	% 41.4-16	1						

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*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and clent's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose of use, or loss of profits incurred by client, its subsidiaries, affiliates or successor arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environm	FAX (575) 393-24 ental & Safety Solut		Inc						B	ILL						A	NALY	SIS	REQ	JEST		
Project Manager: Lync	Wenshaw		_				P	0.1	¥:													
Address: 2617 West Marland							C	omp	oany /	ne	W bu	vry										
City: Hobbs	State: NM	Zip:	882	40		_	A	ttn:	T	eff	Br	oom										
Phone #: (575) 264-9884	Fax #:	0		_	_			ddre		:6		-	1									
Project #: 18 54 8	Project Owner	: po	124	bur	n				Ho													
Project Name: Chavelars	Frac Nort Hob 65 A	h	fo	rK			s	tate	Nm	Zip	o:		ę	15M	21E				i i i			
Project Location: Fruch	Hobbs 1	1.1	4				Р	hon	e #:			1	Chloride	(801	(80							
Sampler Name: Dom	in: L Cas	41	82	/			F	ax #	_				ธ	FPH (8015M)	ВТЕХ (8021В)							
FOR LAB USE ONLY		a.			MAT	RIX	i	PR	RESER	V. 3	SAMPL	ING		F	Ξ							
Lab I.D. Sample <u>H234488</u> $\overrightarrow{r_{8/n/23}}$ D(0124 FL 9 e i	• I.D.	G)RAB OR (C)OMP	- # CONTAINERS	GROUNDWATER WASTEWATER	SolL	OIL	SLUDGE	ACID/BASE:	C ICE / COOL	-	DATE	TIME			0							
DCOI # FL 9 e 1		`	1	-	-		+			5	-17						•	+	+	+-	+	-
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LEASE NOTE: Liability and Damages. Cardinal's liability an nalyses. All claims including those for negligence and any or														yle .								
ervice. In no event shall Cardinal be liable for incidental or c filiates or successors arising out of or related to the perform Relinquished By: Relinquished By: Delivered By: (Circle One)	Date: Time: Time:	Re	eeiv	ion, busin tess of w ed By	ness inter thether thether thether thether thether thether thether the thether the thether the thether the thether the	muption	is, loss tim is b	of use, hased up	or loss of	profits in the above	ncurred by c rve stated re	client, its subsidia	ries, se sult: It: S:	Ye Ye	s []	No A	dd'l Pho dd'l Fax	:#:	Detect	henv.cc	om.	
Sampler - UPS - Bus - Other:	4,80	HK	0	Co	Yes	Intact				itials))		. 1									



August 28, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 08/22/23 16:28.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: FL 38 @ 1 (H234575-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/24/2023	ND	416	104	400	3.77	

Sample ID: FL 39 @ 1 (H234575-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	3.77	

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*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES

Page 189 of 201

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Page 4 of 4

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

	tech Environmental & Safety Solu	tions	, Inc	.				Bl	LL TO					A	ALYS	IS RI	EQUE	ST		
Project Manager:	and Crenshaw					-	P.0.	_	F										T	
Address: 2617 Wes	st Marland						Con	npany M	ecroon	wn										
City: Hobbs	State: NM	Zip	: 88	240			Attn	: Je	ff Br	room										
Phone #: (575) 264	-9884 Fax #:						Add	ress:												
Project #: 18548	Project Owne	r: /	ler	1bou	rn		City	Hobe	55		1	-								
Project Name: C	harolais B.Fr	ne	No	rth	GORK		Stat	e: Nir	Zip:	1		EM)	21B							
Project Location:	Harolais B. Fri Burg Hobbs Dominic Cascille							ne #:			Chloride	TPH (8015M)	BTEX (8021B)							
Sampler Name:	Dominic Casever	~					Fax	#:			E.	H	X							
FOR LAB USE ONLY					MATRI	x	F	RESERV.	SAMPL	ING	1	H I	19							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER WASTEWATER	Soil	SLUDGE	GTHER :	ACIU/BASE: ICE / COOL OTHER :	DATE	TIME										
UCIFL	38@1	C	1		V,			/	8 22	-	1									
ZFL	39@1	C	1		V			/	8.22		V					-				
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analyses. All claims including those fo service. In no event shall Cardinal be	de le	deeme o withos Cardinal Re	d waiw at limits ceiv	ed uniters in attorn, bundles indices of with ved By ved By San Coo	ende in write nes interrup wither such sollier such	ing and flore, to claim is 22 (inditionant act Yes	necelve es of es based	d by Cardinal w se, or loss of pr	Whin 30 days all offic incurred by a s above stated re ED BY:	er completion of the	he applications, se. esult: It: S:	C Ye	is 🗆	No Ac	Id'l Phor Id'l Fax i sults to	ŧ:	eteche	nv.cor	n.	

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October 11, 2023

LANCE CRENSHAW Etech Environmental & Safety Solutions 2617 W MARLAND HOBBS, NM 88240

RE: CHAROLAIS FRAC NORTH FORK

Enclosed are the results of analyses for samples received by the laboratory on 10/06/23 12:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	10/06/2023	Sampling Date:	10/05/2023
Reported:	10/11/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NH @ SURFACE (H235466-01)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/09/2023	ND	2.04	102	2.00	5.14	
Toluene*	<0.050	0.050	10/09/2023	ND	2.01	100	2.00	5.50	
Ethylbenzene*	<0.050	0.050	10/09/2023	ND	2.10	105	2.00	5.31	
Total Xylenes*	<0.150	0.150	10/09/2023	ND	6.18	103	6.00	5.62	
Total BTEX	STEX <0.275 0.275		10/09/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	10/10/2023	ND	448	112	400	0.00	
ТРН ТХ1005	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	10/09/2023	ND	187	93.6	200	4.94	
DRO >C12-C28	<25.0	25.0	10/09/2023	ND	220	110	200	5.42	
DRO >C28-C35	<25.0	25.0	10/09/2023	ND					
Total TPH C6-C35*	<25.0	25.0	10/09/2023	ND	407	102	400	5.20	
Surrogate: 1-Chlorooctane	84.3	% 44.9-13	4						
Surrogate: 1-Chlorooctadecane	80.8	% 41.4-16	1						

Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	10/06/2023	Sampling Date:	10/05/2023
Reported:	10/11/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: NH @ 1' (H235466-02)

BTEX 8021B	mg,	′kg	Analyze	d By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025 0.025		10/09/2023	ND	2.04	102	2.00	5.14		
Toluene*	<0.050	0.050	10/09/2023	ND	2.01	100	2.00	5.50		
Ethylbenzene*	<0.050	0.050	10/09/2023	ND	2.10	105	2.00	5.31		
Total Xylenes*	<0.150	0.150	10/09/2023	ND	6.18	103	6.00	5.62		
Total BTEX		0.275	10/09/2023	ND						
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4							
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/10/2023 ND		448	112	400	0.00		
TPH TX1005	mg,	′kg	Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C12	<25.0	25.0	10/09/2023	ND	187	93.6	200	4.94		
DRO >C12-C28	<25.0	25.0	10/09/2023	ND	220	110	200	5.42		
DRO >C28-C35	<25.0	25.0	10/09/2023	ND						
Total TPH C6-C35*	<25.0	25.0	10/09/2023	ND	407	102	400	5.20		
Surrogate: 1-Chlorooctane	77.7	% 44.9-13	4							
Surrogate: 1-Chlorooctadecane	74.5 % 41.4-16		1							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	10/06/2023	Sampling Date:	10/05/2023
Reported:	10/11/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: WH @ SURFACE (H235466-03)

BTEX 8021B	mg/	kg	Analyze	d By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie	
Benzene*	<0.025 0.025		10/09/2023	ND	2.04	102	2.00	5.14		
Toluene*	<0.050	0.050	10/09/2023	ND	2.01	100	2.00	5.50		
Ethylbenzene*	<0.050	0.050	10/09/2023	ND	2.10	105	2.00	5.31		
Total Xylenes*	<0.150	0.150	10/09/2023	ND	6.18	103	6.00	5.62		
Fotal BTEX <0.275		0.275	10/09/2023	ND						
Surrogate: 4-Bromofluorobenzene (PID 10		6 71.5-13	4							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	10/10/2023	ND	448	112	400	0.00		
TPH TX1005	mg/	kg	Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C12	<25.0	25.0	10/09/2023	ND	187	93.6	200	4.94		
DRO >C12-C28	<25.0	25.0	10/09/2023	ND	220	110	200	5.42		
DRO >C28-C35	<25.0	25.0	10/09/2023	ND						
Total TPH C6-C35*	<25.0	25.0	10/09/2023	ND	407	102	400	5.20		
Surrogate: 1-Chlorooctane	77.3 9	<i>44.9-13</i>	4							
Surrogate: 1-Chlorooctadecane	74.3 9	6 41.4-16	1							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Etech Environmental & Safety Solutions LANCE CRENSHAW 2617 W MARLAND HOBBS NM, 88240 Fax To:

Received:	10/06/2023	Sampling Date:	10/05/2023
Reported:	10/11/2023	Sampling Type:	Soil
Project Name:	CHAROLAIS FRAC NORTH FORK	Sampling Condition:	Cool & Intact
Project Number:	18548	Sample Received By:	Shari Cisneros
Project Location:	MEWBOURNE UL/ J SEC 21 T19S - R35E		

Sample ID: WH @ 1' (H235466-04)

BTEX 8021B	mg/	/kg	Analyze	d By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025 0.025		10/09/2023	ND	2.04	102	2.00	5.14		
Toluene*	<0.050	0.050	10/09/2023	ND	2.01	100	2.00	5.50		
Ethylbenzene*	<0.050	0.050	10/09/2023	ND	2.10	105	2.00	5.31		
Total Xylenes*	<0.150	0.150	10/09/2023	ND	6.18	103	6.00	5.62		
Total BTEX	<0.275	0.275	10/09/2023	ND						
Surrogate: 4-Bromofluorobenzene (PID	97.8	% 71.5-13	4							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/10/2023	ND	416	104	400	3.77		
TPH TX1005	mg,	/kg	Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C12	<25.0	25.0	10/09/2023	ND	187	93.6	200	4.94		
DRO >C12-C28	<25.0	25.0	10/09/2023	ND	220	110	200	5.42		
DRO >C28-C35	<25.0	25.0	10/09/2023	ND						
Total TPH C6-C35*	<25.0	25.0	10/09/2023	ND	407	102	400	5.20		
Surrogate: 1-Chlorooctane	81.6	% 44.9-13	4							
Surrogate: 1-Chlorooctadecane	78.5 % 41.4-16		1							

Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX	(575)	393-2476
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Company Name	Manager: Lance Crenshaw ss: 2617 W Marland Blvd Hobbs State: NM Zip: 88240 #: 575-396-2378 Fax #: 575-396-1429						2		B	ILL TO		18	ANALYSIS REQUEST							
Project Manage	r: Lance Crenshaw						Ρ.	0. #:												T
Address: 26	17 W Marland Blvd						C	ompa	iny:	Mewbourne	1									
City: Hobbs	State: NN	A Zij):	8824	0		A	tn:	Conno	r Walker										
Phone #: 57	5-396-2378 Fax #: 57	5-396-1429				_	A	dres	si	1										
Project #: 18	548 Project Ow	vner: M	ewb	ourne (Dil Co	mpan	y Ci	ty:												
Project Name:	Charolais Frac - North Fork Tor	0	_	_			St	ate:		Zip:	5									
Project Locatio	ect Manager: Lance Crenshaw ress: 2617 W Marland Blvd : Hobbs State: NM Zip: 8824 ne #: 575-396-2378 Fax #: 575-396-1429 ect #: 18548 Project Owner: Mewbourne G ect Name: Charolais Frac – North Fork Toro ect Location: Rural Lea npler Name: David Robinson						PI	Phone #:				4						1		
Sampler Name:	David	d Robinson					Fa	x #:	_		treat.		0.0							
FOR LAB USE ONLY		0	Γ		MAT	RIX	-	PRI	SERV	SAMPLI	NG	1								
Lab I.D.	Sample I.D.	AB OR	# CONTAINERS	GROUNDWATER MASTEMATER	SOIL	OIL	SLUDGE OTHER :	ACID/BASE:	ICE / COOL OTHER :	DATE	TIME	Chloride	ТРН	BTEX 8021	0					
1	NH @ Surface	G	1		X				X	10/5/23		X	X	X	1					
2	NH @ 1'	G	1		X				X	10/5/23		X	X	X		1				
-	WH @ Surface	G	1		X		_		X	10/5/23		X	X	X				_		_
4	WH @ 1'	G	1	\vdash	X	1	1		X	10/5/23	11.9	X	X	X				_		-
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		-	+		-				-			1	-	-				-		+
	and Damages. Cardinal's liability and client's exclusive in ting those for negligence and any other cause whatsoe												-	-	-			_		_

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ervice. In no event shall Cardinal be lisble for incidential or consequential damages, including without limitation, business interruptions, loss of use, or loss of profils incurred by client, its subsidiar

Relinquished By: Tamarah Kendrick	Date: 10/6/2023	Received By:	1	Phone Result: Fax Result:	□ Yes □ Yes	No No	Add'l Phone #: Add'l Fax #:	
Relinguished By:	Time: .40 12:40 Date:	Received By:	news	REMARKS:	Email re	sults to	PM@etechenv.com	
	Time:		E.	1 .		1.0		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-3.8	C Sample Condition Cool Intact Yes Yes No No	CHECKED BY: (Initials)	6				

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476 / FORM-006 R 2.0

Page 7 of 7

Appendix E Regulatory Correspondence

From:	Lance Crenshaw
To:	Enviro, OCD, EMNRD
Cc:	Ben Arguijo; Connor Walker; jbroom@mewbourne.com
Subject:	FW: [EXT] Confirmation Sampling Notice
Date:	Thursday, August 10, 2023 3:31:06 PM

Please disregard my previous email, we had the wrong incident number and project name. Here is the correct one.

This email serves as notice that Etech intends to collect excavation confirmation soil samples on August 15, 2023, from the following locations/reportable release sites:

Mewbourne Oil Co – nAPP2319833354 - TORO 21 #002

If you have any questions or need any additional information, please contact Lance Crenshaw by phone (575-631-2532) or email <u>lance@etechenv.com</u>

Lance Crenshaw Etech Environmental & Safety Solutions 575-631-2532

Connor Walker

From: Sent:	Velez, Nelson, EMNRD <nelson.velez@emnrd.nm.gov> Friday, September 29, 2023 8:55 AM</nelson.velez@emnrd.nm.gov>
То:	Lance Crenshaw
Cc:	marka@northforkland.com; Connor Walker; Jeff Broom; Ben Arguijo; Bratcher, Michael, EMNRD
Subject:	[EXT] Re: [EXTERNAL] Extension request

Some people who received this message don't often get email from nelson.velez@emnrd.nm.gov. Learn why this is important

Good morning Lance,

Your 45-day time extension request is approved. Remediation Due date has been updated to November 15, 2023 within the incident page.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/



From: Rodgers, Scott, EMNRD <Scott.Rodgers@emnrd.nm.gov>
Sent: Friday, September 29, 2023 8:35 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Bratcher, Michael, EMNRD
<mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] Extension request

Scott Rodgers • Environmental Specialist

Environmental Bureau EMNRD - Oil Conservation Division 8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113 505.469.1830 | <u>scott.rodgers@emnrd.nm.gov</u> <u>http://www.emnrd.nm.gov/ocd</u>



From: Lance Crenshaw <lance@etechenv.com>
Sent: Friday, September 29, 2023 7:20 AM
To: dave.bolton@northforkland.com; marka@northforkland.com; Connor Walker <cwalker@mewbourne.com>;
jbroom@mewbourne.com; Ben Arguijo <bena@etechenv.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Extension request

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

I apologize, there were some cut and paste edits in the last email. This is the correct email for the extension

Dear NMOCD Environmental Bureau,

Mewbourne Oil Company (Mewbourne) has contracted Etech Environmental & Safety Solutions, Inc. (Etech), to conduct remediation activities for the release known as the North Fork Toro - Charolais Frac (NMOCD Incident # nAPP2319833354). The site is located in Lea County. Pursuant to NMOCD regulations, a work plan or closure report is due for the release on **September 30, 2023**. Etech has started excavation activities at the site but needs more time to complete the remediation. We are also working another release for Mewbourne, the Delaware Ranch, which most of our crews are dedicated to. We just want to make sure we get everything done in a timely manner and are able to meet deadlines, with multiple crews working.

In consideration of this, Etech, on behalf of Mewbourne, requests a 45 **day extension** until Wednesday, **November 15**, **2023**, to allow us to fully excavate the site, gather excavation confirmation samples, backfill the site and prepare a site closure request.

If you have any questions or need any additional information, please do not hesitate to contact me by phone or email.

Thank you for your time and consideration.

Lance Crenshaw Etech Environmental & Safety Solutions 575-631-2532

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

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

District III

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

District IV

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

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

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	279468
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Deferral is approved. Remediation Due date will be left open until the site has been plugged and abandoned or a major facility deconstruction takes place.	2/6/2024

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Action 279468