TETRA TECH

April 20, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Remediation Workplan
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico
nAPP2205837214

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contracted by BTA Oil Producers (BTA) to compile and prepare a closure report for remediation activities conducted by RXsoil and Alves Oilfield Solutions, Inc. following a produced water release that occurred at the Chiso 14 8711 #3, Section 14, Township 22 South, Range 34 East, Lea County, New Mexico (Site). The release site coordinates are 32.38511°, -103.43594°. The site location is shown on **Figures 1 and 2**.

Background

According to the State of New Mexico C-141 Initial Report, a release at the Chiso 14 8711 #3 occurred after a plug on a jet pump manifold failed, resulting in approximately 165 barrels (bbls) of produced water to be released into an open excavation at the site. Approximately 70 bbls of produced water was recovered from the excavated area. The open excavation at the site was being conducted to investigate evidence of a suspected release that was discovered by the landowner. The jet pump release flowed onto the pad and the adjacent pasture west of the Site, impacting an area with a length of 60 feet and a maximum width of 80 feet. On February 26, 2022, the release was discovered and reported to the New Mexico Oil Conservation Division (NMOCD). The C-141 is included in **Appendix A**.

Suspected Release

BTA's subcontractor, RXsoil conducted site assessment activities from in September through November of 2021 based on evidence of a suspected release at the site. A total of seven (7) soil borings (SP1-A, SP3-A, SP4-A, and SP1 through SP4) were installed to depths ranging from ground surface to 2 ft bgs. The investigatory delineation sample locations are shown on **Figure 3.** The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for TPH by method 8015 modified, BTEX by method 8021B, and Chloride by EPA Method 4500. The analytical results are summarized in **Table 1** and the analytical laboratory reports are included in **Appendix D**.

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Site Characterization

Significant Water Features

According to the NFHL (National Flood Hazard Layer) Flood Data Application and the USGS (United States Geological Survey) National Water Information System Mapper, there are two intermittent water features located approximately 785 feet to the west and 650 feet to the east of the horizontal extent of the release. No significant watercourses were identified within 300 feet of the Site. There were no playas, lakebeds, sinkholes, springs, wetlands, subsurface mines, private domestic water wells, or floodplains located within the specified distances. Additionally, the site is located in a low karst area. The NFHL Map, USGS Mapper, and NMOSE data are shown in **Appendix B**.

Significant Boundaries

According to Google Earth US Government City Boundaries and US School Districts, the lateral extents of the release were not within incorporated municipal boundaries, defined municipal fresh water well field, or a school district. Additionally, there were no occupied permanent residences, schools, hospitals, institutions, or churches located within the specified distances of the lateral extents of the release.

Groundwater Review

Groundwater research was completed for the site through the USGS (United States Geological Survey) National Water Information System and New Mexico Office of the State Engineer (NMOSE) Water Rights Reporting System. Two Points of Diversion (POD) were identified within a 0.5-mile radius of the Site. CP-1682-POD1 South 2, an active well located approximately 0.13 miles south of the horizontal extent of the release. NMOSE records indicate the well was drilled to a total depth of 294 ft bgs on September 13, 2019, and groundwater was first encountered at 42 ft bgs. USGS well # 322231103262601 is located approximately 0.44 miles southwest of the Site. USGS records indicate the well was drilled to a total depth of 60 ft bgs on with a measured water depth of 17.39 ft bgs. POD records are presented in **Appendix B**.

POD ID	Distance from Site (Miles)	Date of Data	Resource of Information	Depth of Well	Depth to Water
CP-1682-POD1 South 2	0.13	09/13/2019	NMOSE	294’	42’
322231103262601	0.44	12/18/2015	USGS	60’	17.39’

Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to

determine the Recommended Remedial Action Levels (RRALs) for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 milligrams per kilogram (mg/kg), 50 mg/kg for total BTEX, 100 mg/kg for total TPH and 600 mg/kg for Chlorides.

Remediation Activities

Based on the results of the suspected release investigation activities, BTA's subcontractors, RXsoil and Alves Oilfield Solutions, LLC (Alves) mobilized to the site to begin remediation activities on February 23,2022. On February 26, 2022, a release caused by a plug failure on a jet pump at the site, adjacent to the excavation, spilled produced water onto the pad and into the open excavation of the suspected release area. Approximately 165 bbls of produced water was released and 70 bbls were recovered from the excavation area. The release impacted area is shown on **Figure 4**.

Between the time of the initial excavation activities and the release from the jet pump into the excavation, the excavation was dug to depths ranging from 3 to 9 ft bgs. Five bottom samples were collected along the excavation bottom (B1 through B5) to delineate to vertical extent of impact. Sample points B2 and B5 reported concentrations below NMOCD limits by laboratory analysis. Sample point B4 was confirmed below NMOCD limits at 5 ft bgs. Sample points B1 and B3 were field screened and indicated chloride concentrations of 356 ppm and non-detect, respectively. Sample points B1 and B3 were not submitted for laboratory analysis before the jet pump release into the excavated area on top of the previously sampled excavation. RXsoil's field screening data is presented in **Appendix E**.

From February 28, 2022, through June 7, 2022, following the jet pump release into the excavated area, Alves and RXsoil continued remediation activities at the site. The areas of impact were excavated to a depth ranging from 3 ft bgs to 19 ft bgs. Field screening was conducted throughout the excavation process to determine the appropriate depth for confirmation sampling. It should be noted that no delineation or confirmation samples were submitted for laboratory analysis in the release footprint around the jet pump area due to safety concerns and the inability to maneuver equipment into the area. The confirmation sample locations area shown on **Figure 5.**

A total of seven (7) confirmation bottom hole samples (BS 1 through BS 6 and SP 2) were collected and a total of eleven (11) confirmation sidewall samples (SW 1 through SW 11) were collected by Alves on February 28, 2022, and June 7, 2022. Additionally, seven (7) confirmation samples (N Wall 2, Bottom, N Wall 1, N Bottom, S Wall, bottom #2 and W Wall) were collected at the Stie from March 8, 2022, through March 10, 2022. Unfortunately, mapping data and sample locations are not available for these sample points. The confirmation soil samples were submitted to the Cardinal Laboratory in Hobbs, New Mexico to be analyzed for TPH method 8015 modified, BTEX method 8021B, and Chloride by EPA Method 4500. The analytical results are summarized in **Table 2** and the analytical laboratory reports are included in **Appendix D**.

Referring to Table 2, all final confirmation samples indicated benzene, BTEX, TPH, and chloride concentrations were below the RRALs of 100 mg/kg of Total TPH, 10 mg/kg for Benzene, 50 mg/kg for Total BTEX and 600 mg/kg for chlorides in all confirmation samples.

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A 20 ml liner was installed at 19 ft bgs into the east side of the excavation as an extra precautionary measure after confirmation sample SP 2 reported below NMOCD RRALs at 18 and 19 ft bgs. The liner area was subsequently backfilled to approximately 13 ft bgs. In the release area adjacent to the jet pump on the site, field screening was conducted which indicated elevated chloride concentrations in the top two feet bgs. Due to the equipment and power poles in this area, Alves was unable to excavate this area.

Work Plan

Based on the C-141 (nAPP2205837214) and information provided by BTA, Tetra Tech performed site characterization and groundwater research to determine groundwater depth, proximity from significant water features, and proximity from specified populated entities to determine RRALs and assess the impacted area. Based on the OCD *Guidelines for Remediation of Leaks, Spills, and Releases*, updated August 14, 2018, according to the groundwater data found during research activities, the RRALs of 600 mg/kg for chlorides and 100 mg/kg for TPH will be followed for the site. The C-141 is included in **Appendix A**.

BTA proposes to vertically and horizontally delineate the area surrounding the jet pump at the Site and between the jet pump and open excavation area by installing twelve (12) auger holes within and on the perimeter of the release impacted area. Vertical auger holes (AH-1 through AH-6) will be installed to a depth of 4 ft bgs, or feasible utilizing a hand auger, and samples will be collected at each 1-foot interval for submission to the analytical laboratory. Horizontal auger holes (H-1 through H-6) will be installed to a depth of 1 ft bgs along the perimeter of the release footprint in an attempt to achieve horizontal delineation. A deferral may be requested in these areas due to the equipment present at the Site and the safety concerns associated with excavating in these areas, pending analytical results.

Due to insufficient data regarding the confirmation samples collected at the Site, BTA proposes to re-sample the open excavation at the Site by collecting nine (9) sidewall samples and nine (9) bottom samples. The confirmation samples will be collected as a 5-point composite representative of approximately every 500 sq ft to demonstrate that the excavated area has been properly remediated. The Excavated area ranges in depth from 3 ft bgs to 19 ft bgs and covers an area of approximately 3,350 sq ft. A 20-mil liner was installed to 19 ft bgs and will be removed for the re-sampling event. A workplan sample location map is presented on **Figure 6**.

BTA requests approval of this workplan as soon as possible due to the safety concerns associated with the open excavation and landowner concerns regarding closure of the Site.

Pending analytical results, additional excavation and sampling activities may be required at the Site. If you require any additional information or have any questions or comments, please contact us at (432) 682-4559.

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Respectfully submitted,
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John Faught, G.I.T.
Project Manager

Clair Gonzales, P.G.
Senior Project Manager

Figures

Figure 1 - Site Overview Map
Figure 2 - Topographic Map
Figure 3 – Investigation Delineation Map
Figure 4 – Release Footprint Map
Figure 5 – Excavation Area and Confirmation Sample Location Map
Figure 6 – Workplan Sample Location Map

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Table 1 – Delineation Analytical Results
Table 2 – Confirmation Analytical Results

Appendices

Appendix A – C-141
Appendix B – Site Characterization
Appendix C – Photographic Documentation
Appendix D – Analytical Laboratory Reports
Appendix E – RxSoil Screening Data

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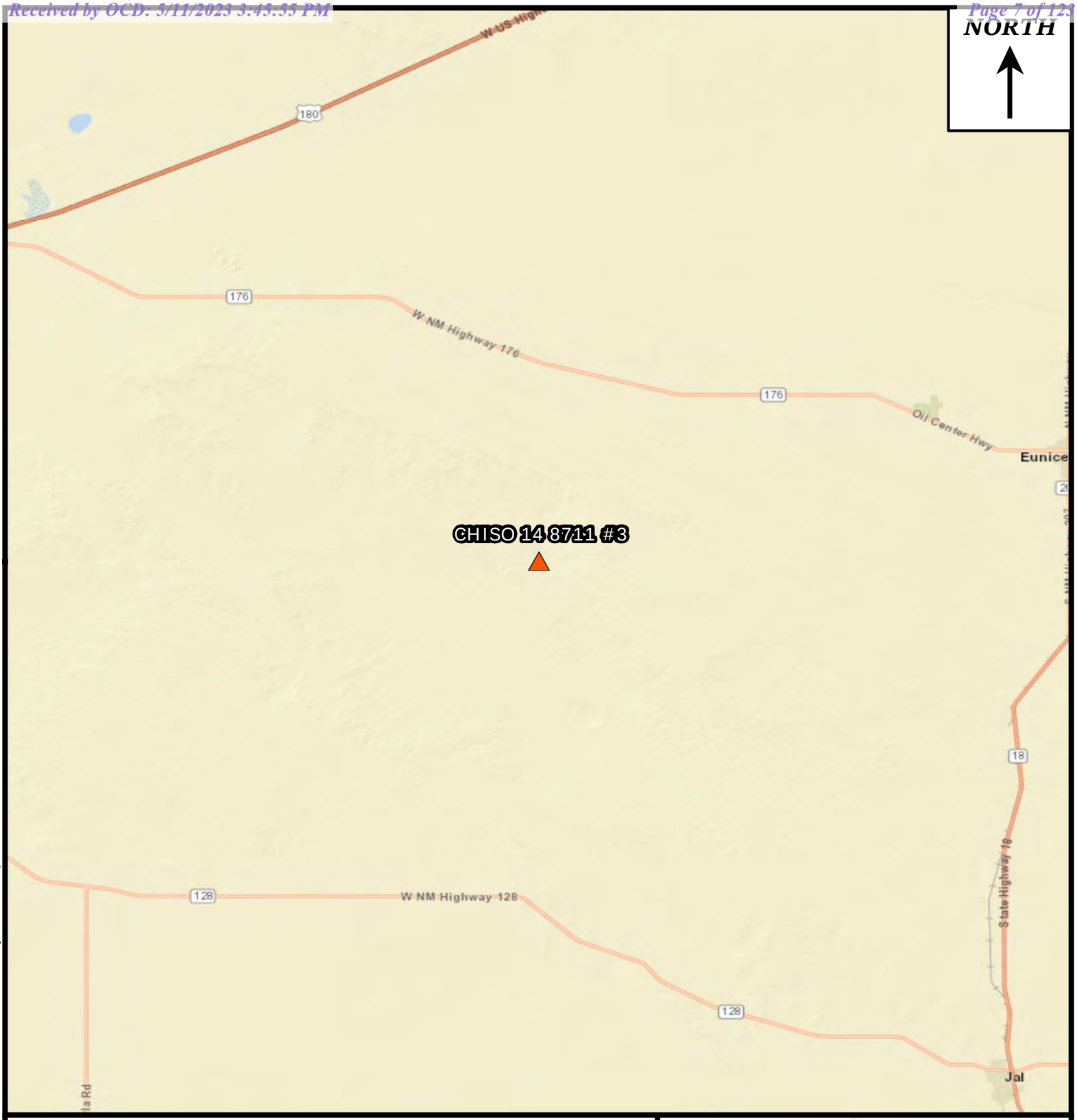
Figures



LEGEND

APPROXIMATE SITE LOCATION

0 16,000 32,000 Feet

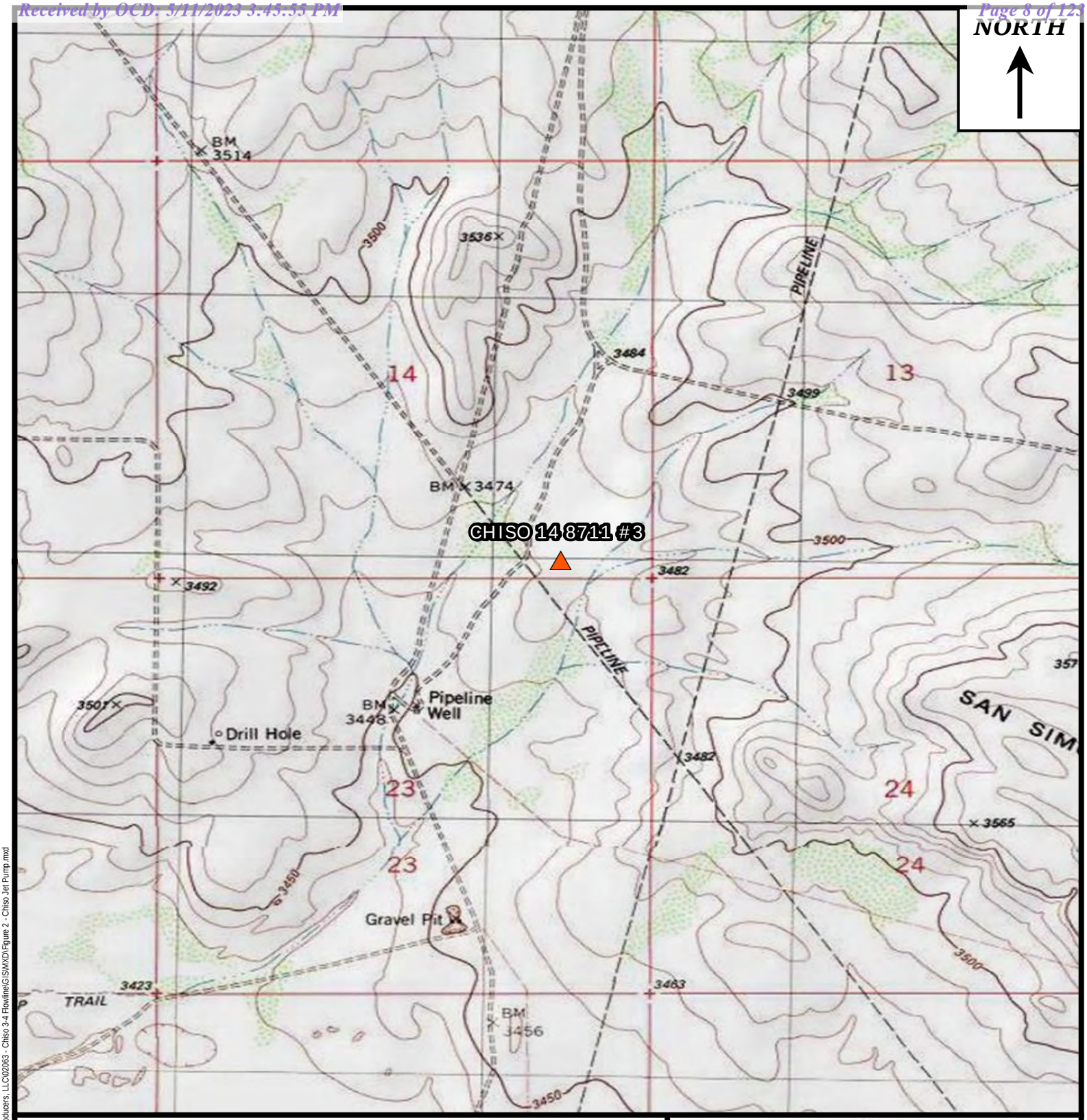
Approximate Scale

BTA

FIGURE 1
SITE FEATURE MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

Project: 212C-MD-02063	
Date: 3/14/2023	
Name: Figure 1 - Chiso 14	

Document Path: C:\Users\EMORENOFLORES\Documents\Projects\BTA Oil Producers, LLC\02063 - Chiso 3-4 Flowline\GIS\MXD\Figure 1 - Chiso Jet Pump.mxd



LEGEND

▲ APPROXIMATE SITE LOCATION

0 1,000 2,000 Feet

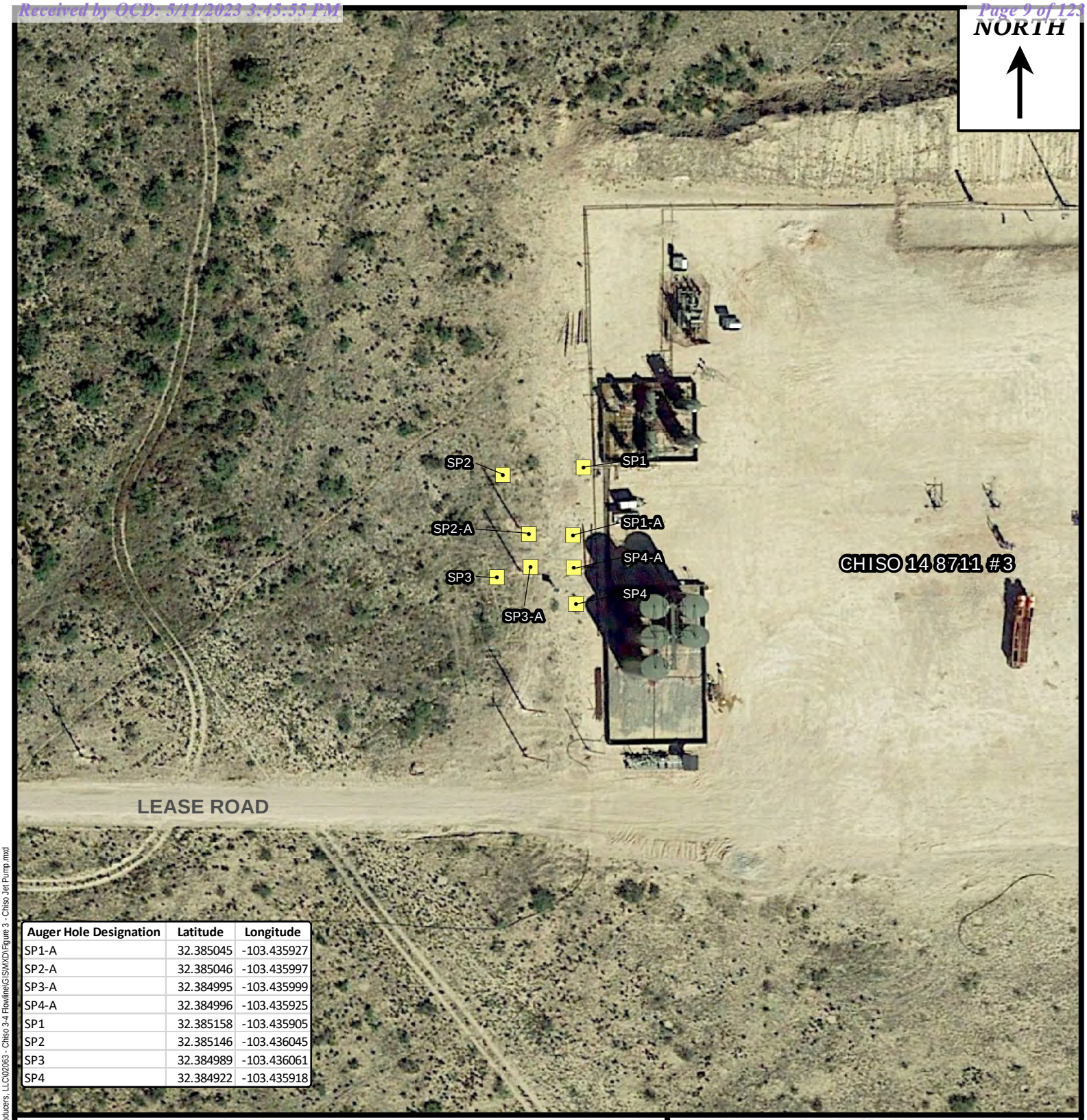
Approximate Scale

BTA

FIGURE 2
TOPOGRAPHIC MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

Project: 212C-MD-02063	
Date: 3/14/2023	
Name: Figure 1 - Chiso 14	

Document Path: C:\Users\EMORENOFLORES\Documents\Projects\BTA Oil Producers, LLC\02063 - Chiso 3-4 Flowline\GIS\MXD\Figure 2 - Chiso Jet Pump.mxd



Auger Hole Designation	Latitude	Longitude
SP1-A	32.385045	-103.435927
SP2-A	32.385046	-103.435997
SP3-A	32.384995	-103.435999
SP4-A	32.384996	-103.435925
SP1	32.385158	-103.435905
SP2	32.385146	-103.436045
SP3	32.384989	-103.436061
SP4	32.384922	-103.435918

LEGEND

- SAMPLE LOCATIONS

0 50 100 Feet

Approximate Scale

BTA

FIGURE 3
INVESTIGATION SAMPLE LOCATION MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

Project: 212C-MD-02063	
Date: 3/14/2023	
Name: Figure 3 - Chiso 14	

Document Path: C:\Users\IE.MORENOFLORES\Documents\Projects\BTA Oil Producers, LLC\02063 - Chiso 3-4 Flowline\GIS\MXD\Figure 3 - Chiso Jet Pump.mxd

Document Path: C:\Users\E.MORENOFLORES\Documents\Projects\BTA Oil Producers, LLC\03005 - Chiso 14\GIS\MXD\Figure 4 - 03005 - BTA - Chiso 14.mxd

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BTA Oil Producers

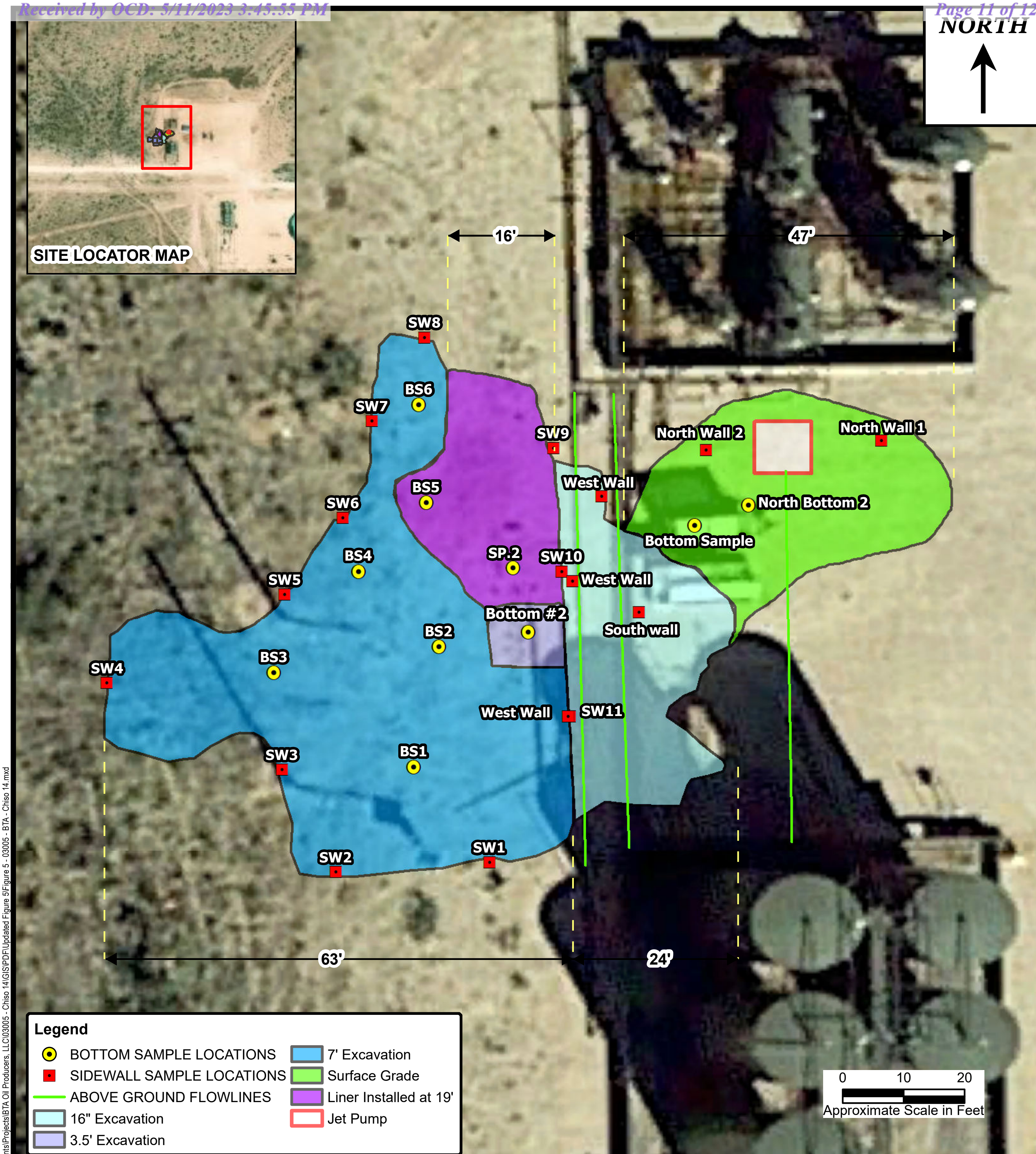
RELEASE FOOTPRINT MAP
CHISO 14 8711 #3

LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.:	212C-MD-03005
DATE:	APRIL 18, 2023
DESIGNED BY:	EMF

Figure No.
4

Basemap Layer Credits: World Street Map (ESRI)



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BTA Oil Producers

Confirmation Sample Location Map
CHISO 14 8711 #3

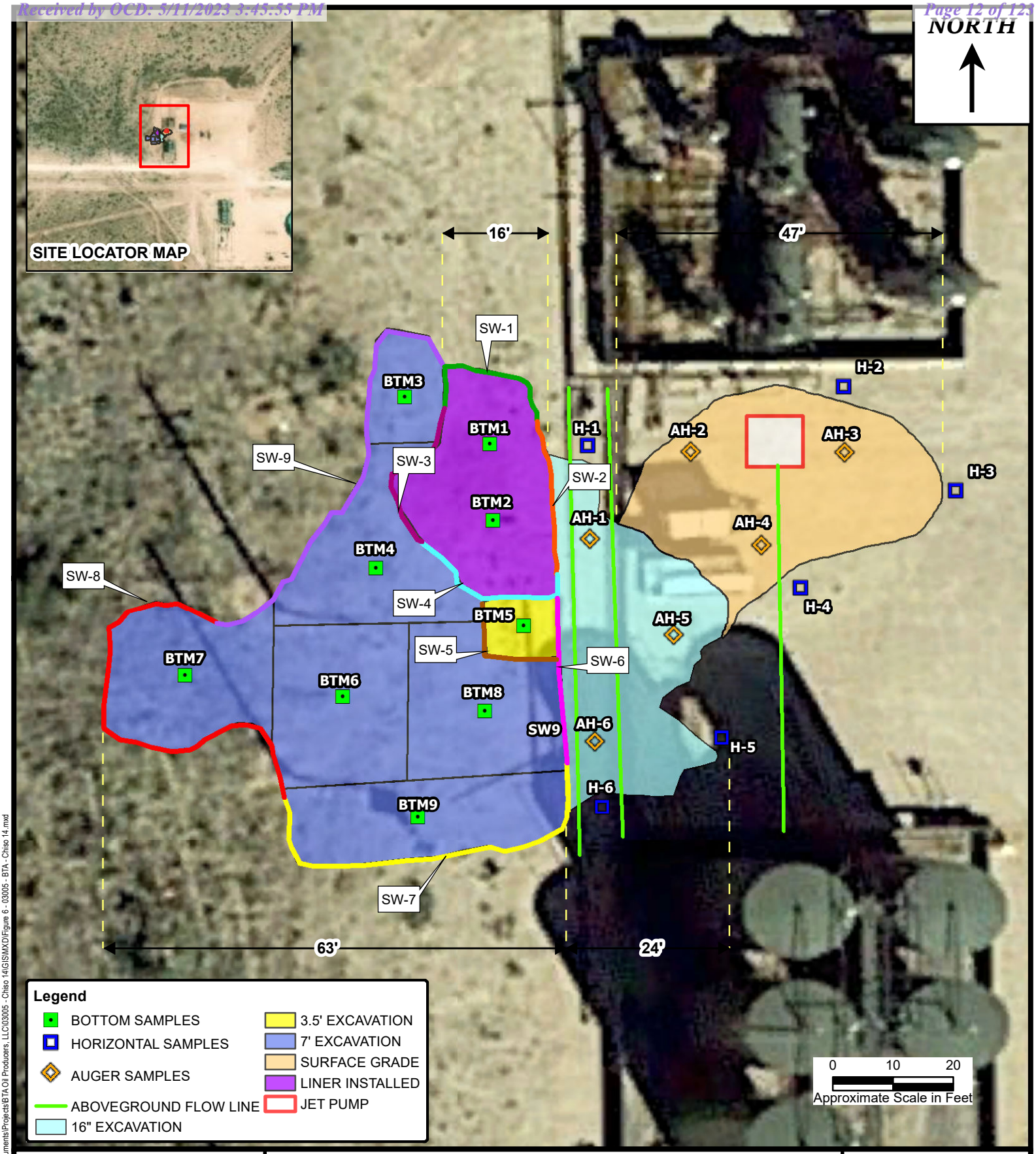
LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.:	212C-MD-03005
DATE:	MAY 9, 2023
DESIGNED BY:	EMF

Figure No.
5

Document Path: C:\Users\E.MORENOFLORES\Documents\Projects\BTA Oil Producers, LLC\03005 - Chiso 14\GIS\PDF\Updated Figure 5\Figure 5 - 03005 - BTA - Chiso 14.mxd

Service Layer Credits: Google Maps, 2023; Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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PROPOSED SAMPLE LOCATION MAP
CHISO 14 8711 #3

LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.:	212C-MD-03005
DATE:	APRIL 20, 2023
DESIGNED BY:	EMF

Figure No.

6

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Tables

Table 1
Delineation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								**100 mg/kg**	**10 mg/kg**				**50 mg/kg**	**600 mg/kg**
Surface	9/14/2022	Surface	-	X	<10.0	13	<10.0	13	<0.050	<0.050	<0.050	<0.150	<0.300	**50000**
1'	9/14/2022	1'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**2920**
2'	9/14/2022	2'	-	X	55	**3080**	**688**	**3823**	<0.050	<0.050	<0.050	<0.150	<0.300	**960**
SP1	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	48
SP2	11/15/2021	Surface	-	X	<0.10	11.1	<0.10	11.1	<0.050	<0.050	<0.050	<0.150	<0.300	368
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SP3	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	**2200**
SP4	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	48.0

ft = feet below ground surface
(-) = not analyzed for respective constituent
TPH = total petroleum hydrocarbons
BTEX = benzene, toluene, ethylbenzene, xylene
Exceedance

Table 2
Confirmation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								**100 mg/kg**	**10 mg/kg**				**50 mg/kg**	**600 mg/kg**
Confirmation Soil Samples Pre-Jet Pump Release														
B2	2/24/2022	-	X	-	<10.0	56.8	14.1	70.9	<0.050	<0.050	<0.050	<0.150	<0.300	80
B4	2/24/2022	5'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
B5	2/24/2022	-	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96
Confirmation Soil Samples Post-Jet Pump Release														
B1	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	352
B2	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	288
B4	3/3/2022	-	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**992**
B5	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
SP. 2	2/28/2022	18'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
	2/28/2022	19'	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
N Wall 2	3/8/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
Bottom	3/8/2022	7"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
N Wall 1	3/9/2022	9"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
N Bottom	3/9/2022	14"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	560
S Wall	3/9/2022	4"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
Bottom # 2	3/10/2022	6"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	448
W Wall	3/10/2022	10"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**2400**
	3/10/2022	10"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
	3/10/2022	15"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW 1 (CS 1)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 2 (CS 2)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
SW 3 (CS 3)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW 4 (CS 4)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 5 (CS 5)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 6 (CS 6)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 7 (CS 7)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 8 (CS 8)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW 9 (CS 9)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 10 (CS 10)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 11 (CS 11)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BTM1 (CBS 1)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM2 (CBS 2)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0

Table 2
Confirmation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								**100 mg/kg**	**10 mg/kg**				**50 mg/kg**	**600 mg/kg**
BTM3 (CBS 3)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM4 (CBS 4)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM5 (CBS 5)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	112.0
BTM6 (CBS 6)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0

RRALs (Recommended Remediation Action Levels) are based on NMOCD (New Mexico Oil Conservation Devision) *Guidelines for Remediation of Leaks, Spills, and Releases.*
All screening values and results are presented in milligrams per kilogram (mg/kg)
Bolded cells represent a detected concentration above the respective screening value.
< = analyte was not detected above the respective sample detection limit
ft = feet below ground surface
(-) = not analyzed for respective constituent
TPH = total petroleum hydrocarbons
BTEX = benzene, toluene, ethylbenzene, xylene
Exceedance

TETRA TECH

Appendix A

C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

Release Notification

Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # *(assigned by OCD)* nAPP2205837214
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.38511 Longitude: -103.43594
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Chiso 14 State Jet Pump and Excavation	Site Type: Tank Battery
Date Release Discovered: 2/26/2022	API# *(if applicable)* Nearest well:

Unit Letter	Section	Township	Range	County
P	14	22S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:*)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 165 BBL	Volume Recovered (bbls) 70 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Jet Pump Failure.
A plug on the manifold of a Jet Pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation being conducted to remove previously contaminated soil. The volume of recovered water was taken from the excavation. The estimate of the volume of water released was calculated from tank gauge data (attached).

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The volume of the release exceeds 25 BBL.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by filing a Notice of Release (NOR) on the NMOCD Permitting website on 2/27/2022. The Incident ID listed above was assigned after the NOR was acknowledged by the NMOCD.

Initial Response

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

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

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

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

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

Printed Name: Bob Hall Title: Environmental Manager

Signature: Bob Hall Date: 3/8/2022

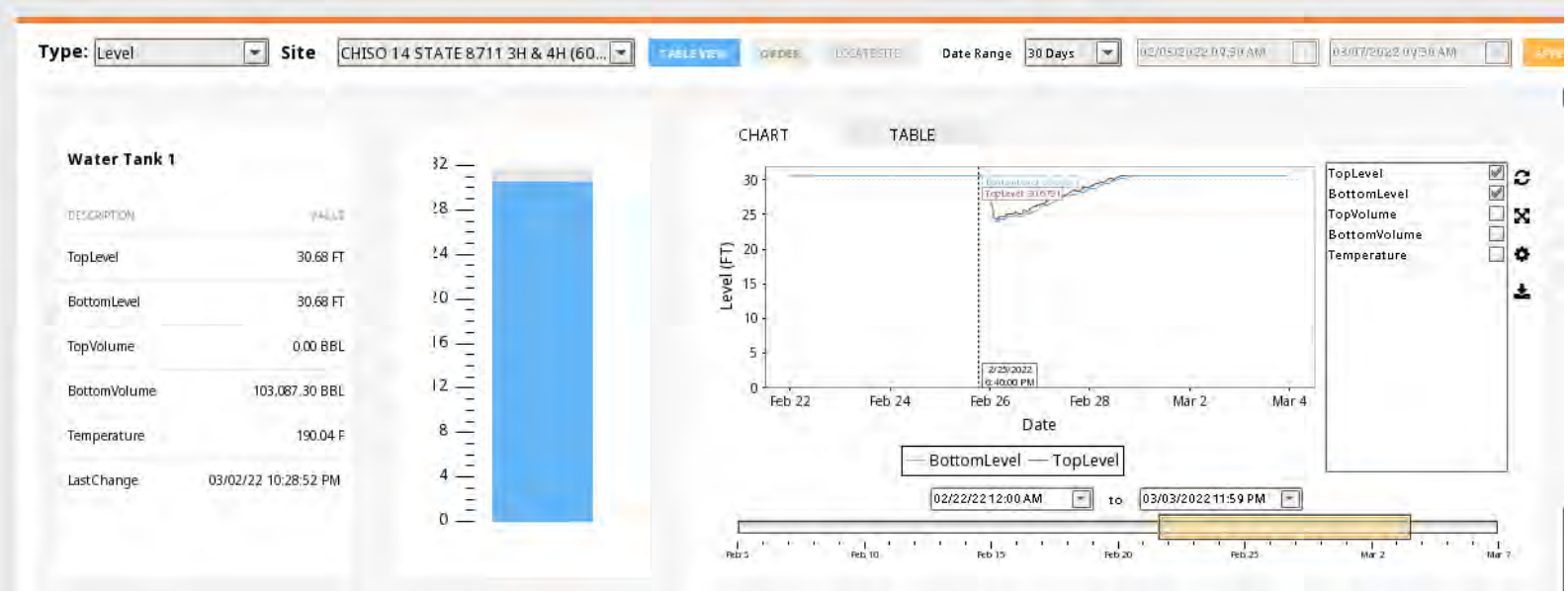
email: bhall@btaoil.com Telephone: 432-682-3753

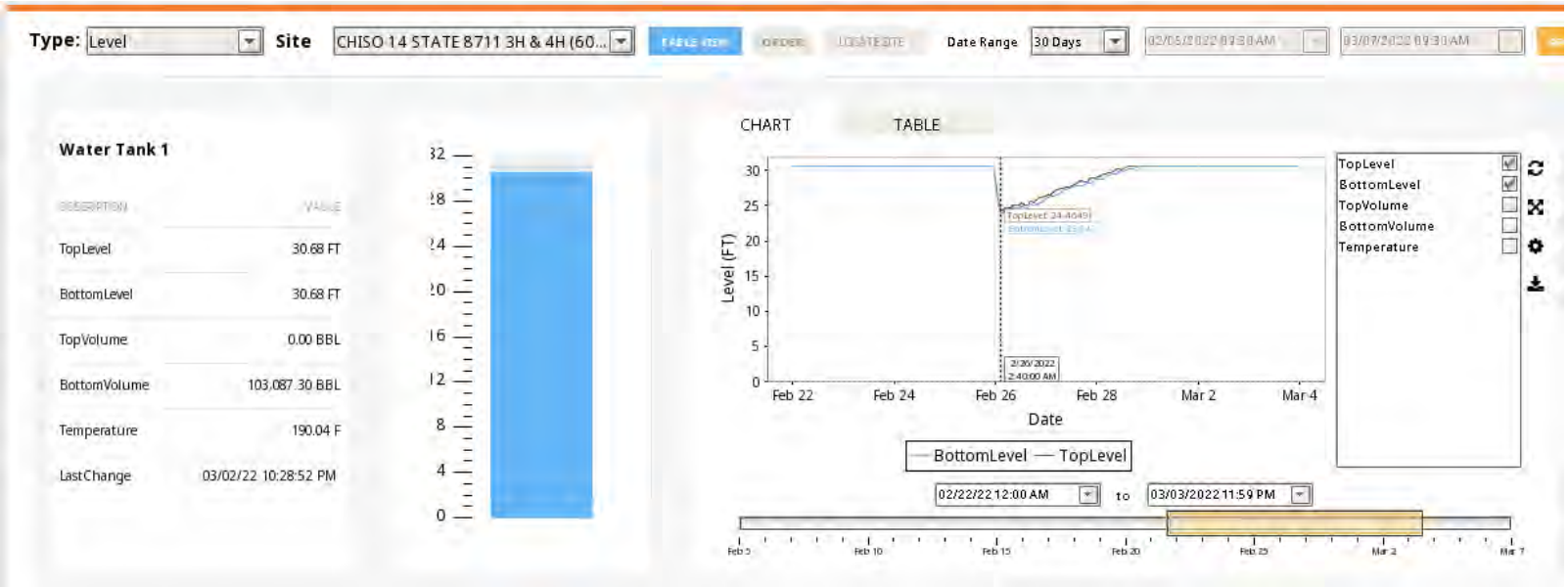
OCD Only

Received by: Ramona Marcus Date: 3/10/2022

Chiso 14 State Water Tank Gauge – 2/26/2022

NAPP2205837214





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: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 87973
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	3/10/2022

TETRA TECH

Appendix B

Site Characterization

Site Characterization Summary

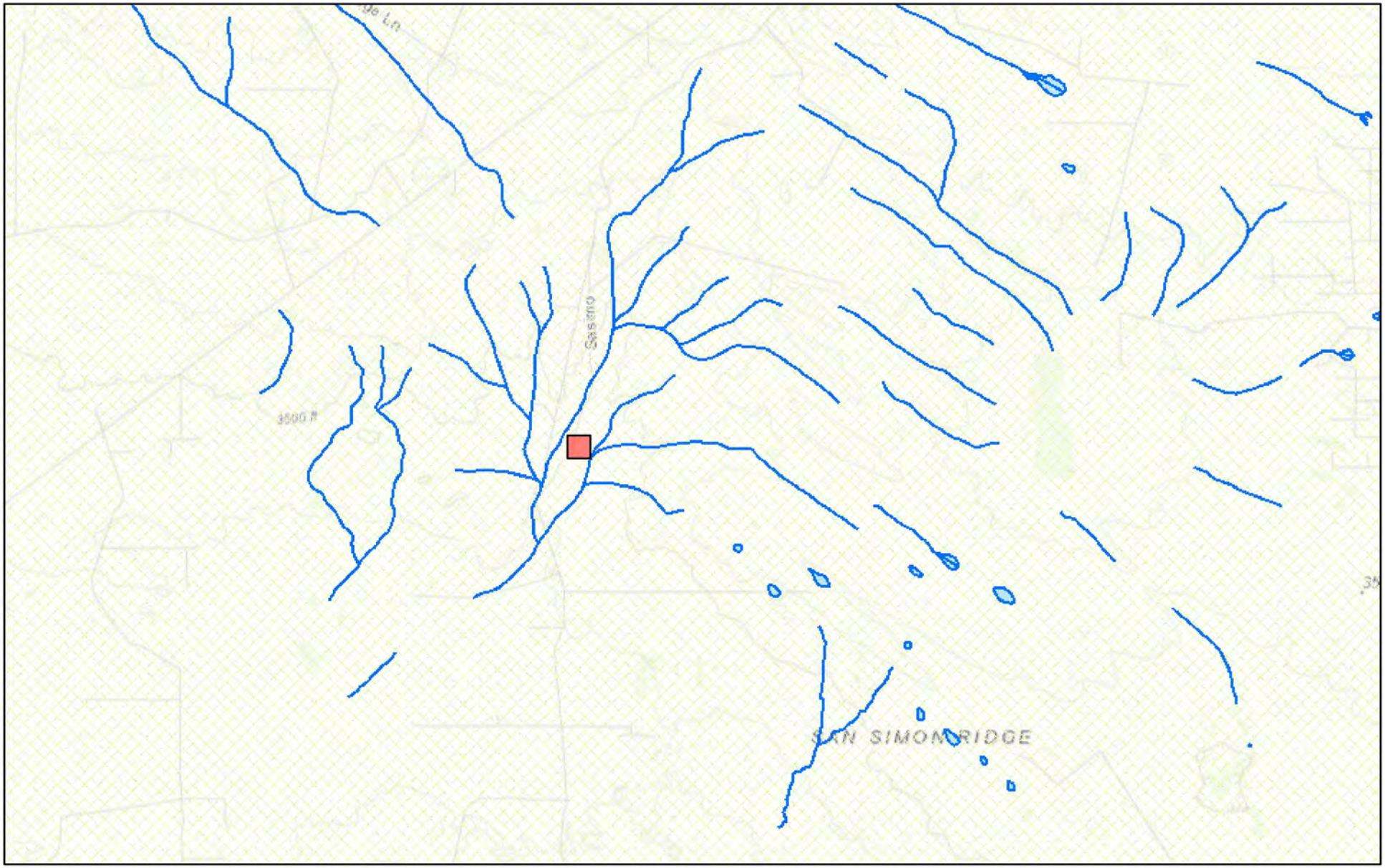
Site Information:
BTA Oil Chiso 14 8711 #3 Jet Pump Release (February 2022)
Lea County, New Mexico
T22S, R34E, Section 14
(32.38511°, -103.43594°)

Site Characterization:
-Low Karst
-No significant water features within specified distances
-Groundwater 17.39' BGS 0.44 Miles southwest of the site. (USGS, Section 23, 2015 Sample)
-Groundwater 42' BGS 0.13 Miles south of the site. (NMOSE, Section 23, 2019 sample)

RRALs:
-600 mg/kg Chlorides
-100 mg/kg Total TPH
-10 mg/kg Benzene
-50 mg/kg Total BTEX

Explanation:
Due to groundwater depth measured at less than 50 ft bgs within 0.5 miles of the site, Most stringent RRALs will be followed.

New Mexico NFHL Data



January 31, 2023

1:72,224

0 0.5 1 2 mi

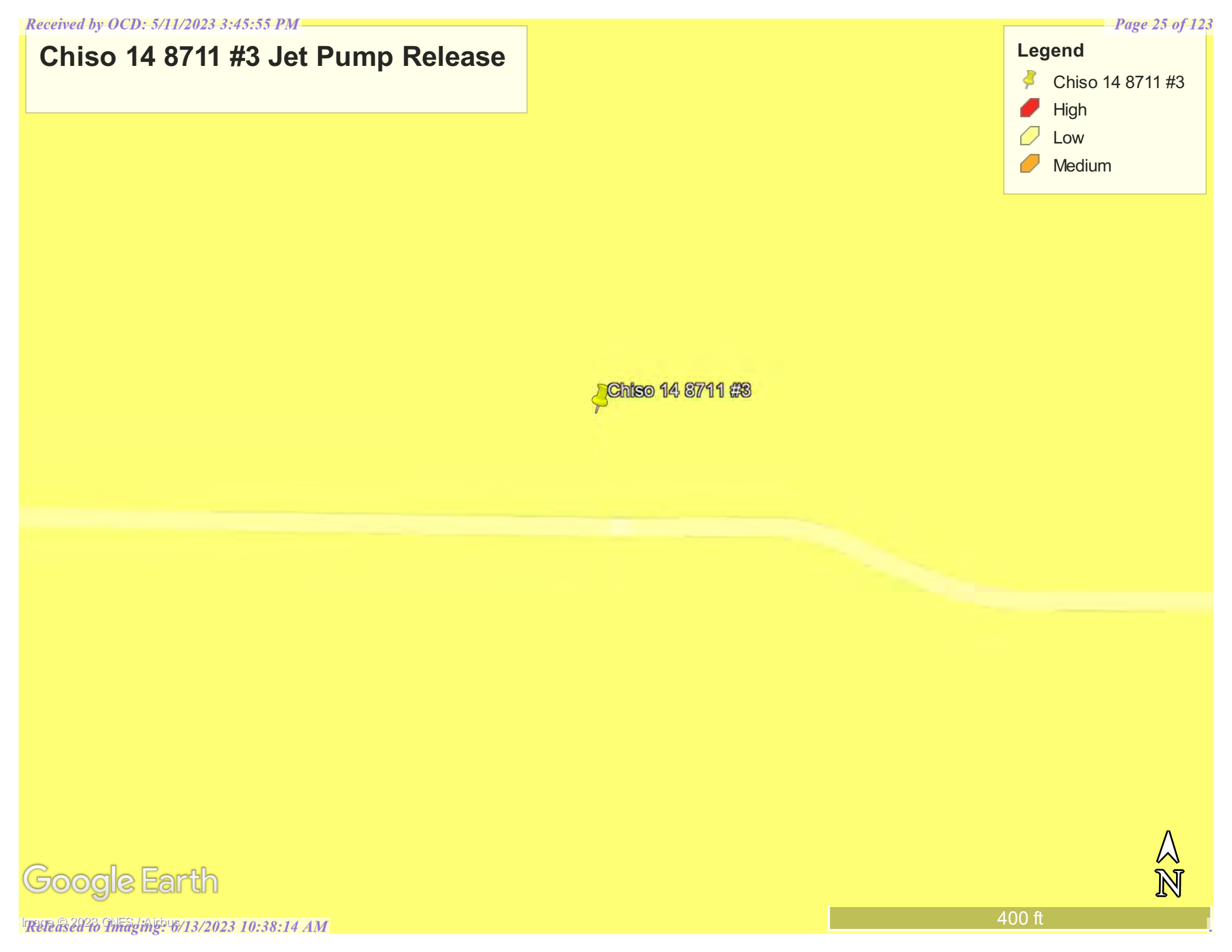
0 0.75 1.5 3 km

FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

nmflood.org is made possible through a collaboration with NMDHSEM,

This is a non-regulatory product for informational use only. Please consult your local floodplain administrator for further information.

Chiso 14 8711 #3 Jet Pump Release



USGS
science for a changing world

National Water Information System: Mapper

USGS Home
Contact USGS
Search USGS

Help Info

Site Information

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322231103262601

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 322231103262601 22S.34E.23.23131

Lea County, New Mexico
Latitude 32°22'47.6", Longitude 103°26'25.3" NAD83
Land-surface elevation 3,452 feet above NAVD88
The depth of the well is 60 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) 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 measurement	? Measuring agency	? Source of measurement	? Water-level approval status

Date	Time	Water-level date-time accuracy	? Parameter code	Water-level, feet below land surface	level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	Water-level approval status
1968-06-10		D	62610		3425.15	NGVD29	1	Z			A
1968-06-10		D	62611		3426.75	NAVD88	1	Z			A
1968-06-10		D	72019	25.25			1	Z			A
1971-09-08		D	62610		3423.42	NGVD29	P	Z			A
1971-09-08		D	62611		3425.02	NAVD88	P	Z			A
1971-09-08		D	72019	26.98			P	Z			A
1976-12-16		D	62610		3426.10	NGVD29	1	Z			A
1976-12-16		D	62611		3427.70	NAVD88	1	Z			A
1976-12-16		D	72019	24.30			1	Z			A
1981-03-18		D	62610		3427.03	NGVD29	1	Z			A
1981-03-18		D	62611		3428.63	NAVD88	1	Z			A
1981-03-18		D	72019	23.37			1	Z			A
1986-04-10		D	62610		3427.57	NGVD29	1	Z			A
1986-04-10		D	62611		3429.17	NAVD88	1	Z			A
1986-04-10		D	72019	22.83			1	Z			A
1991-05-03		D	62610		3427.87	NGVD29	1	Z			A
1991-05-03		D	62611		3429.47	NAVD88	1	Z			A
1991-05-03		D	72019	22.53			1	Z			A
1996-02-21		D	62610		3428.27	NGVD29	1	S			A
1996-02-21		D	62611		3429.87	NAVD88	1	S			A
1996-02-21		D	72019	22.13			1	S			A
2015-12-18	21:30 UTC	m	62610		3433.01	NGVD29	1	S	USGS	S	A
2015-12-18	21:30 UTC	m	62611		3434.61	NAVD88	1	S	USGS	S	A
2015-12-18	21:30 UTC	m	72019	17.39			1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet

Section	Code	Description
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	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

2019 SEP 13 ... STATE ENGR ROSWELL

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
CP-1682-POD1 South 2	2062A	CP-1682

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Merchant Livestock Company/Glenn's Water Well Service, Inc.	575-398-2424

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
PO Box 692	Tatum	NM	88267

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	22	59.66	N
	LONGITUDE	-103	26	7.87	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NW1/4 NE1/4 NE1/4 Section 23, Township 22 South, Range 34 East on Merchant Livestock Company Land

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
09/10/19	09/13/19	294	294	42

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 31

DRILLING FLUID: ☐ AIR ☑ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	22.5'	20"	Steel 12 3/4" OD	Plain End	12.25	.25	---
0	294'	20"	Steel Casing 8 5/8" / 8.625" OD	Plain End	8.125	.25	1/8"
			Bottom 252 Perforated				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	22.5'	20"	Cemented Redi Mix	Fill to Top	Top Pour
0	294'	20"	3/8" Veilmore Gravel	18.52 CY	Top Pour

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1682	POD NO. 1	TRN NO. 632044	
LOCATION 212 Sec23 T22S R34E		WELL TAG ID NO. 2062A	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	6	6	Soil	Y ✓N	
6	9	3	Soil & Sand	Y ✓N	
9	16	7	Caliche	Y ✓N	
16	20	4	Clay & Sand	Y ✓N	
20	42	22	Red Clay	Y ✓N	
42	56	14	Brown Sandrock	✓Y N	5.00
56	63	7	Red Clay	Y ✓N	
63	68	5	White & Green Clay	Y ✓N	
68	92	24	Brown Sandrock	✓Y N	9.00
92	122	30	Red Clay	Y ✓N	
122	128	6	Brown Shale	Y ✓N	
128	165	37	Red Clay with Stringers of Brown Sandrock	Y ✓N	
165	187	22	Brown Shale	Y ✓N	
187	225	38	Red Clay & Red Shale	Y ✓N	
225	242	17	Brown Shale	Y ✓N	
242	274	32	Blue Sandrock & Shale	✓Y N	1.00
274	294	20	Red Shale	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☑ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 15.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Travis Glenn License # 1719 (Glenn's Water Well Service, Inc.)

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Corky Glenn — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

9/12/19 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1682	POD NO. 1	TRN NO. 632044	
LOCATION 212 Sec 23 T22S R34E		WELL TAG ID NO. 2062A	PAGE 2 OF 2

TETRA TECH

Appendix C

Photographic Documentation

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

Photo: 1 **Description:** View of Remediation Activities – North side of the Site facing south.	

Photo: 2 **Description:** View of Remediation Activities – North side of the Site facing southeast.	

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page **1** of **5**	BTA Oil Company	Chiso 3-4 Jet Pump Release	TETRA TECH

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

Photo: 3 **Description:** View of Remediation Activities – South side of the Site facing northeast.	

Photo: 4 **Description:** View of Remediation Activities – North side of the Site facing southeast.	

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page **2** of **5**	BTA Oil Company	Chiso 3-4 Jet Pump Release	TETRA TECH

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

Photo: 5 **Description:** View of Remediation Activities – South side of the Site facing north.	

Photo: 6 **Description:** View of the excavation – North side of the site facing South.	

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page **3** of **5**	BTA Oil Company	Chiso 3-4 Jet Pump Release	TETRA TECH

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

Photo: 7 **Description:** View of the excavation adjacent to the release area.	
Photo: 8 **Description:** View of the excavation – South side of the site facing north.	

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page **4** of **5**	BTA Oil Company	Chiso 3-4 Jet Pump Release	TETRA TECH

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

Photo: 9 **Description:** View of the excavation – West side of the site facing northeast.	

Photo: 10 **Description:** View of the excavation – southeast side of the site facing northwest.	

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page **5** of **5**	BTA Oil Company	Chiso 3-4 Jet Pump Release	TETRA TECH

TETRA TECH

Appendix D

Analytical Laboratory Reports

CARDINAL Laboratories

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

September 20, 2021

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 09/15/21 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	09/15/2021	Sampling Date:	09/14/2021
Reported:	09/20/2021	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: SURFACE (H212552-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11	
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55	
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35	
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15	
Total BTEX	<0.300	0.300	09/16/2021	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**50000**	16.0	09/16/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2021	ND	225	112	200	0.847	
DRO >C10-C28*	**12.9**	10.0	09/17/2021	ND	226	113	200	1.40	
EXT DRO >C28-C36	<10.0	10.0	09/17/2021	ND					

Surrogate: 1-Chlorooctane *95.1 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *91.2 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	09/15/2021	Sampling Date:	09/14/2021
Reported:	09/20/2021	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: 1' (H212552-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11	
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55	
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35	
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15	
Total BTEX	<0.300	0.300	09/16/2021	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2920**	16.0	09/16/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2021	ND	225	112	200	0.847	
DRO >C10-C28*	<10.0	10.0	09/17/2021	ND	226	113	200	1.40	
EXT DRO >C28-C36	<10.0	10.0	09/17/2021	ND					

Surrogate: 1-Chlorooctane *88.6 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *85.6 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	09/15/2021	Sampling Date:	09/14/2021
Reported:	09/20/2021	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: 2' (H212552-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11	
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55	
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35	GC-NC
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15	
Total BTEX	<0.300	0.300	09/16/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *272 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**960**	16.0	09/16/2021	ND	432	108	400	3.77	QM-07

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**55.4**	10.0	09/18/2021	ND	190	95.2	200	0.563	
DRO >C10-C28*	**3080**	10.0	09/18/2021	ND	198	98.8	200	0.777	QM-07
EXT DRO >C28-C36	**688**	10.0	09/18/2021	ND					

Surrogate: 1-Chlorooctane *96.8 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *223 %* *38.9-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as 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 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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	RKSoil	**BILL TO**	
Project Manager:	Matt Longmire	P.O. #:	
Address:		Company:	BTA
City:	State: Zip:	Attn:	Bob Hall
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Chiso 14 State	State:	Zip:
Project Location:	Eddy New Mexico	Phone #:	
Sampler Name:	Matt Longmire	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH	BTEX
H212552																	
1	Surface					X							9/14	3:00	X	X	X
2	1ft					X							1	1	X	X	X
3	2ft					X							9/14	3:00	X	X	X

Relinquished By:	Date: 9/15	Received By:	
	Time: 0810		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -9.2c #113

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☑ Yes ☐ No	☑ Yes ☐ No	T.D.

Phone Result:	☐ Yes	☐ No	Add'l Phone #:
Fax Result:	☐ Yes	☐ No	Add'l Fax #:

REMARKS:
Bill to Bob Hall BTA
No Rush

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

CARDINAL Laboratories

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

November 19, 2021

HAYES ADAMS

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO STATE

Enclosed are the results of analyses for samples received by the laboratory on 11/16/21 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 1 SURFACE (H213274-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/18/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *103 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *101 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 1 2' (H213274-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/18/2021	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *80.1 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *78.4 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 2 SURFACE (H213274-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	**11.1**	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *86.0 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *84.0 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 2 2' (H213274-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *86.3 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *86.5 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 3 SURFACE (H213274-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.2 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *76.3 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *76.4 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 3 2' (H213274-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *89.1 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *89.6 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 4 SURFACE (H213274-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	201	101	200	2.96	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	223	111	200	0.335	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *65.7 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *62.8 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	11/16/2021	Sampling Date:	11/15/2021
Reported:	11/19/2021	Sampling Type:	Soil
Project Name:	CHISO STATE	Sampling Condition:	Cool & Intact
Project Number:	EUNICE NM	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE NM		

Sample ID: SP 4 2' (H213274-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.6 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/18/2021	ND	416	104	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	11/18/2021	ND	201	101	200	2.96	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	223	111	200	0.335	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane *53.8 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *51.3 %* *38.9-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RkSoil	**BILL TO**	
Project Manager:	Hayes	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Chriso State	State: Zip:	
Project Location:	~~Eddy~~ Eunice NM	Phone #:	
Sampler Name:	Omar	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	BTEX	Chlorides
H213274																	
1	SP1 Surface					✓							Nov. 15	9AM	✓	✓	✓
2	SP1 2'					✓											
3	Sp 2 Surface					✓											
4	Sp 2 2'					✓											
5	Sp 3 Surface					✓											
6	Sp3 2'					✓											
7	Sp 4. Surface					✓											
8	Sp 4 2'					✓											

Relinquished By:	Date: 11-16-21	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1555		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS: Bill to BOB(BTA)
	Time:		

Delivered By: (Circle One)	Observed Temp. °C -6.9	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☒ Rush ☐	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C -7.4	☑ Yes ☑ Yes ☐ No ☐ No	TO	Thermometer ID #113 Correction Factor ~~None~~ -0.5c	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

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

CARDINAL Laboratories

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

March 02, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 03/01/22 8:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	03/01/2022	Sampling Date:	02/28/2022
Reported:	03/02/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: B 1 (H220775-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43	
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02	
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94	
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18	
Total BTEX	<0.300	0.300	03/01/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	03/02/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane *91.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *93.2 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	03/01/2022	Sampling Date:	02/28/2022
Reported:	03/02/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: B 2 (H220775-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43	
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02	
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94	
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18	
Total BTEX	<0.300	0.300	03/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	03/02/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane *97.0 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *101 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	03/01/2022	Sampling Date:	02/28/2022
Reported:	03/02/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: B 5 (H220775-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43	
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02	
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94	
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18	
Total BTEX	<0.300	0.300	03/01/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	03/02/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane *92.1 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *95.7 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	03/01/2022	Sampling Date:	02/28/2022
Reported:	03/02/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: S 1 (H220775-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43	
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02	
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94	
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18	
Total BTEX	<0.300	0.300	03/01/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/02/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/02/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/02/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/02/2022	ND					

Surrogate: 1-Chlorooctane *102 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *106 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RXSoil
Project Manager:	Matt
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	Chiso 14 State
Project Location:	eunice nm
Sampler Name:	Matt

BILL TO

P.O. #:	
Company:	BTA
Attn:	Bob Hall
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H220775																	
1	B1					X							2/28	4:00	X	X	X
2	B2					X									X	X	X
3	B5					X									X	X	X
4	S1					X							2/28	4:00	X	X	X

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

Relinquished By:	Date: 3-1-22	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 0835		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C -6.2	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C -6.7	☑ Yes ☑ Yes ☐ No ☐ No	TO	Thermometer ID #113 Correction Factor ~~None~~ -0.5c

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

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

CARDINAL Laboratories

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

March 01, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 02/25/22 8:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	02/25/2022	Sampling Date:	02/24/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: B 2 (H220738-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTEX	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/26/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	**56.8**	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	**14.1**	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane *100 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *110 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	02/25/2022	Sampling Date:	02/24/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: B 4 5' (H220738-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTEX	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/26/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	<10.0	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	<10.0	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane *105 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *106 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	02/25/2022	Sampling Date:	02/24/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: B 5 (H220738-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTEX	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/26/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	<10.0	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	<10.0	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane *101 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *106 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RKSoil
Project Manager: matt
Address:
City: State: Zip:
Phone #: Fax #:
Project #: Project Owner:
Project Name: Chiso 14 State
Project Location: Eunice NM
Sampler Name: matt

BILL TO
P.O. #:
Company: BTA
Attn: Bob Hall
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	TPH	BTEX
H220738-1	B2					X							2/24	5:00pm	X	X	X
-2	B4					X									1	1	1
-3	B5					X							4/24	5:00pm	X	X	X

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

Relinquished By: Date: 2-25-22 Time: 0855 Received By:
Relinquished By: Date: Time: Received By:

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

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C -0.6
Corrected Temp. °C -1.1
Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor ~~None~~ -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

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

CARDINAL Laboratories

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

March 01, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 02/28/22 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	02/28/2022	Sampling Date:	02/28/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BTA		

Sample ID: SP. 2 @ 18' (H220769-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2022	ND	2.00	100	2.00	1.48	
Toluene*	<0.050	0.050	02/28/2022	ND	1.98	99.2	2.00	1.65	
Ethylbenzene*	<0.050	0.050	02/28/2022	ND	1.93	96.5	2.00	0.998	
Total Xylenes*	<0.150	0.150	02/28/2022	ND	6.00	100	6.00	0.601	
Total BTEX	<0.300	0.300	02/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	03/01/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/01/2022	ND	216	108	200	4.94	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	212	106	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane *113 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *129 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	02/28/2022	Sampling Date:	02/28/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BTA		

Sample ID: SP. 2 @ 19' (H220769-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2022	ND	2.00	100	2.00	1.48	
Toluene*	<0.050	0.050	02/28/2022	ND	1.98	99.2	2.00	1.65	
Ethylbenzene*	<0.050	0.050	02/28/2022	ND	1.93	96.5	2.00	0.998	
Total Xylenes*	<0.150	0.150	02/28/2022	ND	6.00	100	6.00	0.601	
Total BTEX	<0.300	0.300	02/28/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	03/01/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/01/2022	ND	216	108	200	4.94	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	212	106	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane *113 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *128 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: BTA
Project Manager: Mike Alves
Address:
City: State: Zip:
Phone #: Fax #:
Project #: Project Owner:
Project Name:
Project Location: Chizo 3-4
Sampler Name: Talon Long

BILL TO
P.O. #:
Company: BTA
Attn: Bob Hall
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	CL	TPH	B-tex
H220769																	
1	SP. 2@ 18'	G	1			X					X		2-28-22	11:30	X	X	X
2	SP. 2@ 4'	G	1			X					X		2-28-22	11:40	X	X	X

Relinquished By:
Date: 2/28/22
Time: 15:05
Received By:

Relinquished By:
Date:
Time:
Received By:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

2.1°C
-0.5°C
1.6°C

Sample Condition: Cool: Yes / No; Intact: Yes / No
CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

Rush
MichaelAlves@AlvesOilfieldSolutions.org

RX Soil

CARDINAL Laboratories

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

March 07, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 03/04/22 8:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received:	03/04/2022	Sampling Date:	03/03/2022
Reported:	03/07/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: B 4 (H220851-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/04/2022	ND	1.96	97.8	2.00	6.52	
Toluene*	<0.050	0.050	03/04/2022	ND	1.93	96.6	2.00	6.68	
Ethylbenzene*	<0.050	0.050	03/04/2022	ND	1.86	92.8	2.00	6.21	
Total Xylenes*	<0.150	0.150	03/04/2022	ND	5.81	96.9	6.00	5.66	
Total BTEX	<0.300	0.300	03/04/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	03/04/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/07/2022	ND	208	104	200	1.13	
DRO >C10-C28*	<10.0	10.0	03/07/2022	ND	200	99.8	200	3.01	
EXT DRO >C28-C36	<10.0	10.0	03/07/2022	ND					

Surrogate: 1-Chlorooctane *80.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *86.7 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Rxsoil
Project Manager: Matt
Address:
City: State: Zip:
Phone #: Fax #:
Project #: Project Owner:
Project Name: Chiso 14 State
Project Location: Eunice
Sampler Name: Matt

BILL TO
P.O. #:
Company: BTA
Attn: Bob Hall
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	BTEX	TPH	Chlorides
H220851-1	B4					X							3/3	12:00	X	X	X

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

Relinquished By: Date: 3-4-22 Time: 0825 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:

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

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C -1.6
Corrected Temp. °C -2.1
Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Turnaround Time: Standard ☐ Bacteria (only) Sample Condition ☒ Cool Intact Observed Temp. °C
Thermometer ID #113 ☐ Yes ☐ Yes
Correction Factor None -0.5°C ☐ No ☐ No Corrected Temp. °C

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

FORM-006 R 3.1 08/07/20

CARDINAL Laboratories

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

March 14, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 03/11/22 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/08/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: N WALL 2 (H220990-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *98.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *94.1 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/08/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: BOTTOM @ 7 (H220990-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *102 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *99.3 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/09/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: N WALL 1 @ 9 (H220990-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *105 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *102 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/09/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: N BOTTOM @ 14 (H220990-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *119 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *121 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/09/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: S WALL @ 4 (H220990-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *99.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *99.0 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: W WALL @ 15-3 (H220990-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	03/12/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *106 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *106 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: BOTTOM #2 @ 6 (H220990-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2022	ND	1.96	98.2	2.00	6.36	
Toluene*	<0.050	0.050	03/12/2022	ND	1.97	98.3	2.00	7.24	
Ethylbenzene*	<0.050	0.050	03/12/2022	ND	1.89	94.5	2.00	7.24	
Total Xylenes*	<0.150	0.150	03/12/2022	ND	5.88	98.0	6.00	7.39	
Total BTEX	<0.300	0.300	03/12/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	03/12/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *97.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.0 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: W WALL @ 10-4 (H220990-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2022	ND	1.96	98.2	2.00	6.36	
Toluene*	<0.050	0.050	03/12/2022	ND	1.97	98.3	2.00	7.24	
Ethylbenzene*	<0.050	0.050	03/12/2022	ND	1.89	94.5	2.00	7.24	
Total Xylenes*	<0.150	0.150	03/12/2022	ND	5.88	98.0	6.00	7.39	
Total BTEX	<0.300	0.300	03/12/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2400**	16.0	03/12/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *112 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *112 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	03/11/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: W WALL @ 10-5 (H220990-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	2.04	102	2.00	3.42	
Toluene*	<0.050	0.050	03/11/2022	ND	2.05	102	2.00	3.58	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	2.86	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.16	103	6.00	2.49	
Total BTEX	<0.300	0.300	03/11/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**976**	16.0	03/12/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane *108 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *107 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: BTA
Project Manager:
Address:
City: State: Zip:
Phone #: Fax #:
Project #: Project Owner:
Project Name:
Project Location: Chisa 3-4
Sampler Name: Miguel Gomez

BILL TO
P.O. #:
Company: BTA
Attn: Bob Hall
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	CL	TPH	BTEX
H220990-1	N wall 2	G				X					X		3-8-22	1:35	X	X	X
2	Bottom @7	G				X					X		3-8-22	3:53	X	X	X
3	N wall @9	G				X					X		3-9-22	9:15	X	X	X
4	N Bottom @14	G				X					X		3-9-22	11:40	X	X	X
5	S wall @ 4	G				X					X		3-9-22	1:51	X	X	X
6	W wall @ 5-3	G				X					X		3-10-22	11:30	X	X	X
7	Bottom #2 @6	G				X					X		3-10-22	12:09	X	X	X
8	W wall @ 10-4	G				X					X		3-10-22	1:07	X	X	X
9	W wall @ 10-5	G				X					X		3-10-22	1:10	X	X	X

Relinquished By: Date: 3-11-22 Time: 1205 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: -2.3°C) C-0.5°C -2.8°C #113
Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:
Michael Alves @ Alvesoilfieldsolutions.org
Rush! BTEX Soil

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

CARDINAL Laboratories

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

May 10, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 05/09/22 12:58.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	05/09/2022	Sampling Date:	05/09/2022
Reported:	05/10/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: SP 1 @ 4' (H221944-01)

BTEX 8021B mg/kg Analyzed By: MS\

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63	
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83	
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61	
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80	
Total BTEX	<0.300	0.300	05/10/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	05/10/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane *82.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *84.6 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	05/09/2022	Sampling Date:	05/09/2022
Reported:	05/10/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: SP 2 @ 4' (H221944-02)

BTEX 8021B mg/kg Analyzed By: MS\

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63	
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83	
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61	
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80	
Total BTEX	<0.300	0.300	05/10/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**688**	16.0	05/10/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane *98.4 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *102 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	05/09/2022	Sampling Date:	05/09/2022
Reported:	05/10/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: COMP NORTH WEST (H221944-03)

BTEX 8021B mg/kg Analyzed By: MS\

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63	
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83	
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61	
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80	
Total BTEX	<0.300	0.300	05/10/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	05/10/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane *85.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *89.7 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Alves Oil Field Solutions
Project Manager:	Bob Hall
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	Chino 3-4
Sampler Name:	Kaylee Richey

BILL TO

P.O. #:	
Company:	BTA
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CL	TPH	BTEX
H221944																	
1	SP 1 @ 4'	G	1			X					X		5-9-22	12:49	X	X	X
2	SP 2 @ 4'	G	1			X					X		5-9-22	12:49	X	X	X
3	Comp North West	G	1			X					X		5-9-22	12:49	X	X	X

Relinquished By:	Date: 5-9-22	Received By:	
Kaylee Richey	Time: 1258		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 3.3° C-0.5° (2.8° #113)
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No

CHECKED BY: (Initials) TO

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:
Michaelalves@alvesoilfieldsolutions.org
"Rush"

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

CARDINAL Laboratories

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

June 09, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 06/08/22 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 1 (H222417-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *123 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *126 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 2 (H222417-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/09/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/09/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/09/2022	ND					

Surrogate: 1-Chlorooctane *89.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *96.8 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 3 (H222417-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *115 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *117 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 4 (H222417-04)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	QM-07
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *113 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *116 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 5 (H222417-05)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.6 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *114 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *114 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 6 (H222417-06)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *118 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *119 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 7 (H222417-07)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *124 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *124 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 8 (H222417-08)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *124 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *125 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 9 (H222417-09)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *123 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *125 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 10 (H222417-10)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *109 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *112 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CS 11 (H222417-11)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *120 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *122 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 1 (H222417-12)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *122 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *122 %* *59.5-142*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 2 (H222417-13)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *115 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *115 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 3 (H222417-14)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *122 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *122 %* *59.5-142*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 4 (H222417-15)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/08/2022	ND	448	112	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *113 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *114 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 5 (H222417-16)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	06/08/2022	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *122 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *124 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
MICHAEL ALVES
2215 W BENDER
HOBBS NM, 88240
Fax To:

Received:	06/08/2022	Sampling Date:	06/07/2022
Reported:	06/09/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA		

Sample ID: CBS 6 (H222417-17)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/08/2022	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane *128 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *129 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Alves oilfield Solution	**BILL TO**	
Project Manager:	Bob Hall	P.O. #:	
Address:		Company:	BTA
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Chiso 3-4 lea	Phone #:	
Sampler Name:	Kaylee Richey	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	TBH	BTEX
H222417																	
1	CS 1	G	1			X					X		6/7	12:22	X	X	X
2	CS 2	G	1			X					X		6/7	12:24	X	X	X
3	CS 3	G	1			X					X		6/7	12:27	X	X	X
4	CS 4	G	1			X					X		6/7	12:29	X	X	X
5	CS 5	G	1			X					X		6/7	12:30	X	X	X
6	CS 6	G	1			X					X		6/7	12:31	X	X	X
7	CS 7	G	1			X					X		6/7	12:34	X	X	X
8	CS 8	G	1			X					X		6/7	12:35	X	X	X
9	CS 9	G	1			X					X		6/7	12:36	X	X	X
10	CS 10	G	1			X					X		6-7-22	12:37	X	X	X

Relinquished By: Kaylee Richey	Date: 6-8-22 Time: 0830	Received By: SRodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address:
			REMARKS: Michael@alvesoilfieldsolutions.org

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -3.3c Corrected Temp. °C -3.8c	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) SR	Turnaround Time: Standard Rush ☐ Thermometer ID #113 Correction Factor -0.5°C
				☑ Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Alves Oilfield Solutions	**BILL TO**	
Project Manager:	Bob Hall	P.O. #:	
Address:		Company:	BTA
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Chiso 3-4 Lea	Phone #:	
Sampler Name:	Kaylee Richey	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TBH	Cl
H222417																	
11	CS 11	G				X					X		6/7	12:37	X	X	X
~~12~~	~~BK H222~~												6/7				
12	CBS 1	G				X					X		6/7	12:47	X	X	X
13	CBS 2	G				X					X		6/7	12:50	X	X	X
14	CBS 3	G				X					X		6/7	12:52	X	X	X
15	CBS 4	G				X					X		6/7	12:53	X	X	X
16	CBS 5	G				X					X		6/7	12:55	X	X	X
17	CBS 6	G				X					X		6/7	12:58	X	X	X

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

Relinquished By: Kaylee Richey	Date: 6.8.22 Time: 0830	Received By: S Rodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address:
			REMARKS: michael.alves@alvesoilfieldsolutions.org

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -3.3 Corrected Temp. °C -3.8	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) SR	Turnaround Time: Standard ☐ Rush ☑ Thermometer ID #113 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

TETRA TECH

Appendix E

RxSoil Field Screening Data

Chiso 14 State Floor Samples			
Date	Sample ID	Depth	CL
24-Feb	**B1**	**3FT**	**884**
25-Feb	**B1**	**4FT**	**144**
28-Feb	**B1**	**5FT**	**>2500**
28-Feb	**B1**	**7FT**	**1256**
28-Feb	B1	9FT	356
24-Feb	B2	3FT	ND
28-Feb	**B2**	**4FT**	**1107**
28-Feb	B2	4.5 FT	252
24-Feb	**B3**	**3FT**	**1090**
25-Feb	**B3**	**4FT**	**>2500**
25-Feb	**B3**	**5FT**	**1440**
25-Feb	B3	6FT	ND
28-Feb	B3	18FT	clean
24-Feb	**B4**	**3FT**	**1176**
24-Feb	**B4**	**4FT**	**1176**
24-Feb	B4	5FT	ND
28-Feb	**B4**	**7ft**	**>2500**
24-Feb	B5	3FT	ND
28-Feb	**B5**	**4FT**	**1256**
28-Feb	B5	5FT	204
Chiso 14 State Side Wall Samples			
Date	Sample ID	Depth	CL
25-Feb	S1	SW	ND
24-Feb	**S2**	**SW**	**>2500**
25-Feb	**S2.2**	**SW**	**>2500**

Chiso 14 State Floor Samples			
Date	Sample ID	Depth	CL
24-Feb	**B1**	**3FT**	**884**
25-Feb	**B1**	**4FT**	**144**
28-Feb	**B1**	**5FT**	**>2500**
28-Feb	**B1**	**7FT**	**1256**
28-Feb	B1	9FT	356
24-Feb	B2	3FT	ND
28-Feb	**B2**	**4FT**	**1107**
28-Feb	B2	4.5 FT	252
24-Feb	**B3**	**3FT**	**1090**
25-Feb	**B3**	**4FT**	**>2500**
25-Feb	**B3**	**5FT**	**1440**
25-Feb	B3	6FT	ND
28-Feb	B3	18FT	clean
24-Feb	**B4**	**3FT**	**1176**
24-Feb	**B4**	**4FT**	**1176**
24-Feb	B4	5FT	ND
28-Feb	**B4**	**7ft**	**>2500**
3-Mar	B4	18ft	364
24-Feb	B5	3FT	ND
28-Feb	**B5**	**4FT**	**1256**
28-Feb	B5	5FT	204
2-Mar	**B6**	**3FT**	**812**
2-Mar	**B7**	**3FT**	**1432**
2-Mar	**B8**	**3FT**	**>2500**

Chiso 14 State Side Wall Samples			
Date	Sample ID	Depth	CL
25-Feb	S1	SW	ND
24-Feb	**S2**	**SW**	**>2500**
25-Feb	**S2.2**	**SW**	**>2500**
2-Mar	**S3**	**SW**	**>2500**
2-Mar	**S4**	**SW**	**>2500**

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State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☑ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☑ Field data
- ☑ Data table of soil contaminant concentration data
- ☑ Depth to water determination
- ☑ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☑ Boring or excavation logs
- ☑ Photographs including date and GIS information
- ☑ Topographic/Aerial maps
- ☑ Laboratory data including chain of custody

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

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State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

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

Printed Name: Nathan J. Sirgo Title: Operations Manager

Signature: Nathan J. Sirgo Date: 5/12/2023

email: nsirgo@btaoil.com Telephone: 432-682-3753

OCD Only

Received by: Jocelyn Harimon Date: 05/12/2023

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Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

Remediation Plan

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

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

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

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

☑ Extents of contamination must be fully delineated.

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

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

Printed Name: Nathan J. Sirgo Title: Operations Manager

Signature: Nathan J. Sirgo Date: 5/12/2023

email: nsirgo@btaoil.com Telephone: 432-682-3753

OCD Only

Received by: Jocelyn Harimon Date: 05/12/2023

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

Signature: Nelson Velez Date: 06/13/2023

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: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 216188
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Site Assessment/Characterization has been reviewed & remediation plan approved as written. Remediation Due Date is set for September 11, 2023.	6/13/2023