Spill Dimensions to Volume of Release			
Input	**volume of affected soil**	**[feet^3]**	264440.00
Input	Porosity: typically is .35 to .40 for most soils	[-]	0.35
Input	Proportion of porosity filled with release fluid [0,1]	[-]	0.10
Output	volume of fluid	[feet^3]	**9255.4**
		[gal]	**69235.2**
		Barrels	1648.5

From GIS	
Sq. Ft	132220
Depth (ft)	2
Cu. Ft	264440

Site Assessment and Remediation Work Plan

Murchison Oil & Gas, LLC
Ogden State #4
Eddy County, New Mexico
Unit Letter "P", Section 2, Township 25 South, Range 26 East
Latitude 32.153883 North, Longitude 104.259282 West
NMOCD Incident # nAPP2424335058

Prepared For:

Murchison Oil & Gas
5325 Sierra Vista
Carlsbad, NM 88230

Prepared By:

Hungry Horse, LLC
4024 Plains Hwy
Lovington, NM 88260
Office: (575) 393-3386

October 2024

Bradley Wells
Project Manager
bwells@hungry-horse.com

Daniel Dominguez
Environmental Manager
ddominguez@hungry-horse.com

Table Of Contents

The following *Site Assessment and Remediation Work Plan* serves as a condensed update on proposed reclamation activities at the afore referenced Site.

Background:

The site is located in Unit Letter P (SE/SE), Section 2, Township 25 South, Range 26 East, approximately seven miles East of Whites City, in Eddy County, New Mexico. The property is located on New Mexico State Trust Land. Topographic Map, OSE POD Locations Map, and USGS Well Locations Map are included as Figure 1, Figure 2, and Figure 3, respectively.

The area of interest is located just North of an active well pad; Latitude 32.153883 North, Longitude 104.259282 West. The Area of Interest was first identified by the NMSLO in June of 2024, as an area of little to no vegetative growth with signs of potential chloride impacts. Subsequently an NMOCD Notification of Release Form was submitted on August 30, 2024, indicating the possibility of a historic release in the area. Previously submitted NMOCD Notification of Release Form are available on the NMOCD Permitting Portal.

NMOCD Site Classification:

A search of the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) groundwater databases was completed in an effort to determine the horizontal distance to known water sources within a half mile radius of the Release Site. Approximate depth to groundwater was determined using maintained and published water well data. Karst mapping indicates the site is located in a Gypsum Karst designated area. Depth to groundwater information is provided as Attachment II and the results are depicted on Figures 2 and 3.

No water wells were located within a half mile of the site. On 8/23/2023, a sampling bore hole, SB-1, was installed approximately 1,200 feet west of the area of concern. The bore was drilled to 106 feet bgs; no groundwater was encountered at any point. Soil boring log is provided in Attachment V. However, as the site is located in a Gypsum Karst designated area, the site will be remediated according to the strictest NMOCD Closure Criteria. Utilizing this information, the NMOCD Closure Criteria for the Site were determined as follows:

Depth to Groundwater	Constituent	Method	Limit
>106’	Chloride	EPA 300.0 or SM4500 CLB	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg
	BTEX	EPA SW-846 Methods 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Methods 8021B or 8260B	10 mg/kg

A United States Department of Agriculture (USDA) Web Soil Survey was completed to determine soil types in the area of remediation. Web Soil Survey indicates the area is located in the Reeves-Gypsum land complex comprised of loam and clay loam soils with 0 to 3 percent slopes. The affected area located off pad will be seeded with NMSLO Gypsum Sites Seed Mixture after reclamation activities are complete. Karst, Wetland, and Soil Maps are provided as Attachment I.

Initial Site Assessment and Delineation:

On June 25, 2024, Hungry Horse, LLC conducted an initial sampling event to assess the area of interest identified by the NMSLO. On August 14, 2024, McNabb Partners conducted additional sampling of the area. These two sampling events included an area of interest identified by NMSLO around the tank battery on the Ogden State #5A well pad, located just West of the Ogden State #4 Area of Interest. This reclamation work plan covers delineation samples collected at the Ogden State #4. Any sample data omitted from this report is covered in the work plan for the Ogden State #5A.

On September 17, 2024, a Site Characterization and Remediation Work Plan Proposal was submitted to NMOCD for approval. On September 19, 2024, the Work Plan was denied citing incomplete delineation. NMOCD comments regarding the Site Characterization and Remediation Work Plan Proposal are available on the NMOCD Permitting Portal.

On September 27, 2024, Hungry Horse, LLC conducted delineation sampling in the area of interest. During sampling, sample test trenches were advanced throughout the area of interest in an effort to determine the vertical extent of contamination. These sample locations are identified by SP designation. In addition, a sample test trench was advanced at the east edge of the area of interest in an effort to determine the horizontal extent of contamination. This sample location is identified by HZ designation. McNabb Partners sample locations CS-04 H244986 25-29, CS-05 H244986 30-39, and CS-07 H244986 44-48 were also re-entered to complete delineation. During the advancement of sample test trenches, soil samples were collected and field screened for the presence of chloride concentrations utilizing a Hach Quantab® chloride test kit.

Based on field observations and field test data noted above and provided in Attachment III, twenty-six representative soil samples were selected for laboratory analysis. Delineation soil samples SP4 through SP15, HZ4, CS-04, CS-05, and CS-07, (H245923 1-26), were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated contaminant concentrations were below the NMOCD Closure Criteria in each of the submitted samples, with the exception of SP7 H245923 23, SP8 H245923 25, SP9 H245923 01, SP11 H245923 05, SP14 H245923 11, and SP15 H245923 13, each at Surface, which exhibited chloride concentrations in excess of the NMOCD Closure Criteria.

A Delineation Sample Map and Proposed Excavation Map are provided as Figure 4 and Figure 5, respectively. Laboratory Analytical Reports are provided as Attachment VI.

Proposed Remediation Activities:

In accordance with NMOCD Regulations, NMSLO Reclamation and Remediation Guidelines and Procedures, and based upon laboratory analytical results, site characteristics, and field observations made during the initial site assessment, the following remediation activities are proposed as a variance to NMOCD Regulations, and in an effort to advance the site toward approved closure.

- Based upon laboratory analytical results received from McNabb Partners sampling activities and Hungry Horse delineation sampling, the area of interest will be excavated to approximate depths ranging from four to ten feet bgs.
- During excavation activities the excavation will be regularly field screened in an effort to prevent excavating clean soil. Excavation activities will cease when field screening indicates contaminate concentrations are below NMOCD Closure Criteria.
- The area of interest and remediation extent, approximately 167,400 sq. ft., is depicted on Figure 4. Proposed excavation areas are depicted on Figure 5.
- The areas shaded in grey, approximately 16,600 square feet, will be excavated to an approximate depth of four feet bgs.
- The areas shaded in yellow, approximately 19,400 square feet, will be excavated to an approximate depth of six feet bgs.
- The area shaded in orange, approximately 31,500 square feet, will be excavated to an approximate depth of eight feet bgs.
- The areas shaded in red, approximately 27,900 square feet, will be excavated to an approximate depth of ten feet bgs.
- Excavation to ten feet bgs in these areas will not remove all impacted soil, as analytical data indicates impacted soil extends to approximately twenty feet bgs. Due to the depth of contamination, the inherent danger associated with an excavation that deep, and considering groundwater depth over 106 feet bgs, it is proposed to install 20-mil Geosynthetic Clay liners over the excavation floor, at these sample locations, in an effort to isolate chloride impacts left in-situ. A similar request was proposed and approved at the Grizzly Bear State Com #2H, nAPP2335450194.
- The area will be handled in like manner as the Grizzly location. The excavated area at these sample locations will be closure sampled, with samples analyzed for BTEX, TPH, and chloride.
- Upon receipt of laboratory analytical results from confirmation soil samples, demonstrating constituent contaminant levels are below 10,000 mg/kg for chloride and 100 mg/kg for TPH, 20-mil Geosynthetic Clay liners will be installed in the excavation floor at sample locations with constituent contaminant levels in excess of NMOCD Closure Criteria. Proposed liner locations depicted in Figure 5.
- Delineation sample locations located outside the grey, yellow, orange, and red shaded areas will not be excavated as field data and laboratory analytical data indicate contaminate concentrations are below the NMOCD Closure Criteria.
- Excavated contaminated soil, approximately 26,700 cy, will be temporarily stockpiled onsite, within the excavation, before transport to an NMOCD approved disposal facility.
- Upon completion of excavation activities, five-point composite confirmation samples will be collected from the excavation floor and sidewalls; each sample representing no more than 200 square feet. Confirmation soil samples will be submitted to the laboratory for analysis of BTEX, TPH, and chloride.

- Upon receipt of laboratory analytical results from confirmation soil samples, demonstrating constituent contaminant levels are in excess of the strictest NMOCD Closure Criteria in the excavation floor and/or sidewalls, the area will be further excavated, vertically and/or horizontally, until laboratory analytical data indicates constituent contaminant levels are equal to or below the strictest NMOCD Closure Criteria in the excavation floor and sidewalls.
- Upon receiving laboratory analytical results from confirmation soil samples, demonstrating constituent contaminant levels are equal to or below NMOCD Closure Criteria, the excavation will be backfilled with locally sourced, clean, non-impacted, material, of the same soil type as was excavated.
- Remediation and reclamation activities are expected to be completed within 45 days of receiving NMOCD and NMSLO approval of this Site Assessment and Remediation Work Plan.

Cultural Properties and Special Status Plant Species:

Archaeological Survey, NMCRIS Activity Number 156186, was completed on July 21, 2024. No cultural resources eligible for listing to the National Register of Historic Places were found within the survey area. If cultural materials are encountered during the remediation process, work will be halted, and NMSLO archaeologists notified.

CEHMM conducted a Special Status Plant Species (SSPS) survey on July 25, 2024 and found no protected species within the spill footprint and 100-meter buffer. The reports, indicating negative findings are provided as Attachment V.

A second Archaeological Survey, NMCRIS Activity Number 156697, was completed on September 26, 2024. This expanded the survey area to the east side of the lease road to allow collection of horizontal sample location HZ4. No cultural resources eligible for listing to the National Register of Historic Places were found within the survey area. If cultural materials are encountered during the remediation process, work will be halted, and NMSLO archaeologists notified.

Sampling Plan:

Upon completion of excavation activities, NMOCD will be notified via C-141N (Notification of Sampling) two business days prior to collection of confirmation samples. Confirmation five-point composite soil samples will then be collected from the excavation floor and sidewalls, with each sample representing no more than 200 square feet. Confirmation soil samples will be submitted to the laboratory for analysis of BTEX, TPH, and chloride.

Restoration, Reclamation, and Re-Vegetation:

Based upon laboratory analytical results from confirmation soil samples, the excavation within the well pad area will be backfilled with locally sourced, clean, non-impacted material, of the same soil type as was excavated. The area will be contoured to achieve erosion control and

preserve surface water flow. As this portion of the affected area is located on an active well pad and reasonably needed for production operations, no re-seeding will be required.

As a portion of the area of interest is not reasonably needed for production operations, the area will be reclaimed according to 19.15.29.13 NMAC. Based upon laboratory analytical results from confirmation soil samples, this portion of the excavation will be backfilled with locally sourced, clean, non-impacted soil, of the same soil type as was excavated.

The soil backfill will included a cover top layer, which matches observable surrounding top layer thickness, backfilled with locally sourced, clean, non-impacted topsoil to provide suitable material to establish vegetative growth. The area will then be contoured the site's existing grade to prevent ponding of water and erosion of the cover material. The affected area will then be tracked utilizing a dozer to ripple the soil to prepare the seed bed for seeding.

The affected area will then be seeded, via drill seeder at double the recommended rate, with NMSLO approved Gypsum Sites Seed Mixture, free of noxious weeds, within 30 days following completion of these remediation activities. Site will also be monitored for growth and noxious weed management on a semi-annual basis until desired vegetation is achieved. NMSLO approved Gypsum Sites Seed Mixture is provided as Attachment VIII.

Limitations:

Hungry Horse, LLC, has prepared this *Site Assessment and Remediation Work Plan* to the best of its ability. No other warranty, expressed or implied, is made or intended. Hungry Horse has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Hungry Horse has not conducted an independent examination of the facts contained in referenced materials and statements. Hungry Horse has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Hungry Horse notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

Distribution:

Murchison Oil & Gas
5325 Sierra Vista
Carlsbad, NM 88230

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First St.
Artesia, NM 88210

New Mexico State Land Office
602 N. Canal. Suite B
Carlsbad, NM 88220

Figures

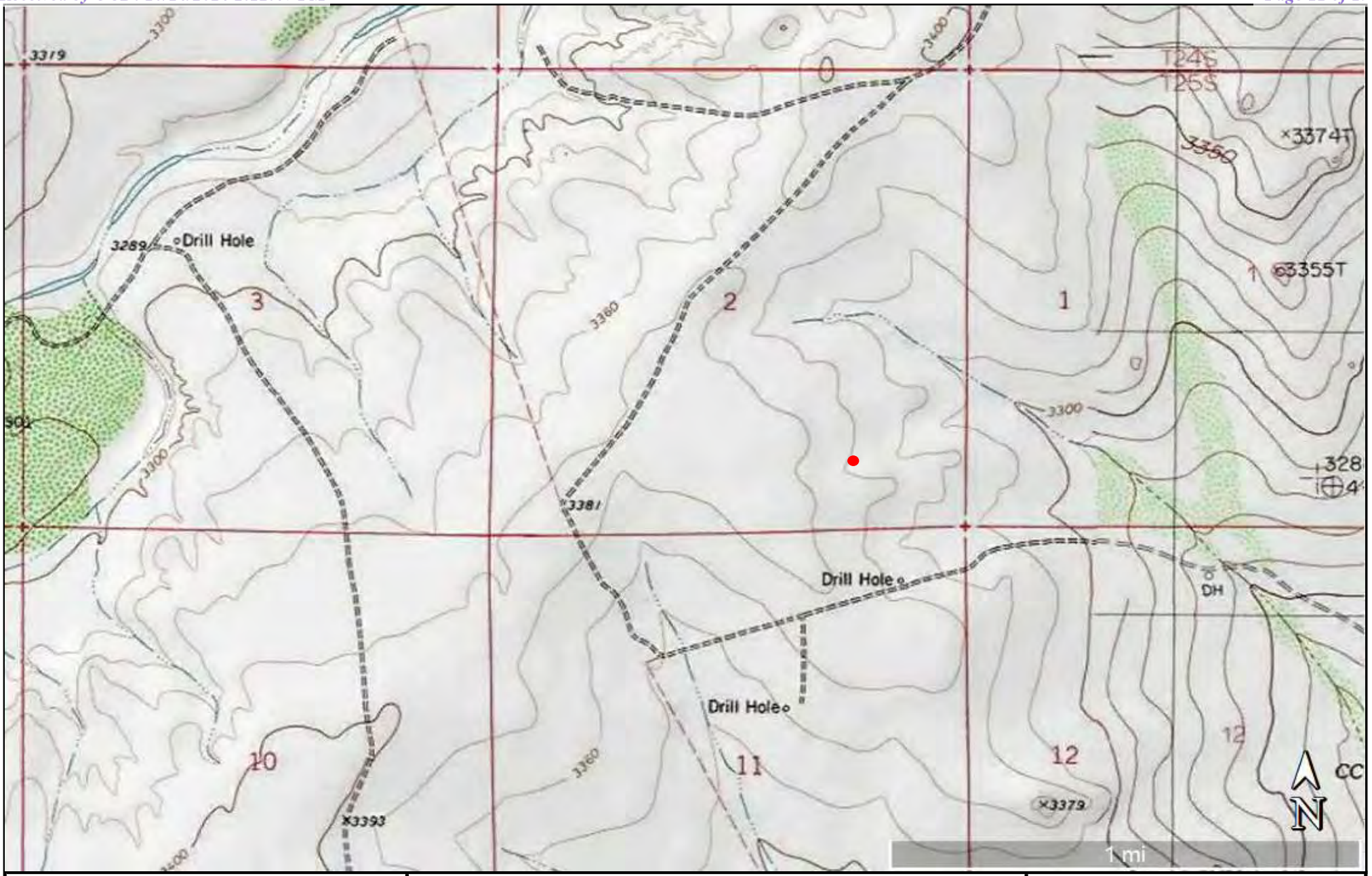


Figure 1
Topographic Map
Murchison Oil & Gas
Ogden State #4
GPS: 32.153883, -104.259282
Eddy County

Legend:
- Ogden State #4 Location

Drafted: dd
Checked: bw
Date: 10/1/24

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

Figure 2
OSE POD Locations Map
Murchison Oil & Gas
Ogden State #4
GPS: 32.153883, -104.259282
Eddy County

Legend:
- Ogden State #4 Location

Drafted: dd
Checked: bw
Date: 10/1/24

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

Figure 3
USGS Well Locations Map
Murchison Oil & Gas
Ogden State #4
GPS: 32.153883, -104.259282
Eddy County

Legend:
- Ogden State #4 Location

Drafted: dd
Checked: bw
Date: 10/1/24

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

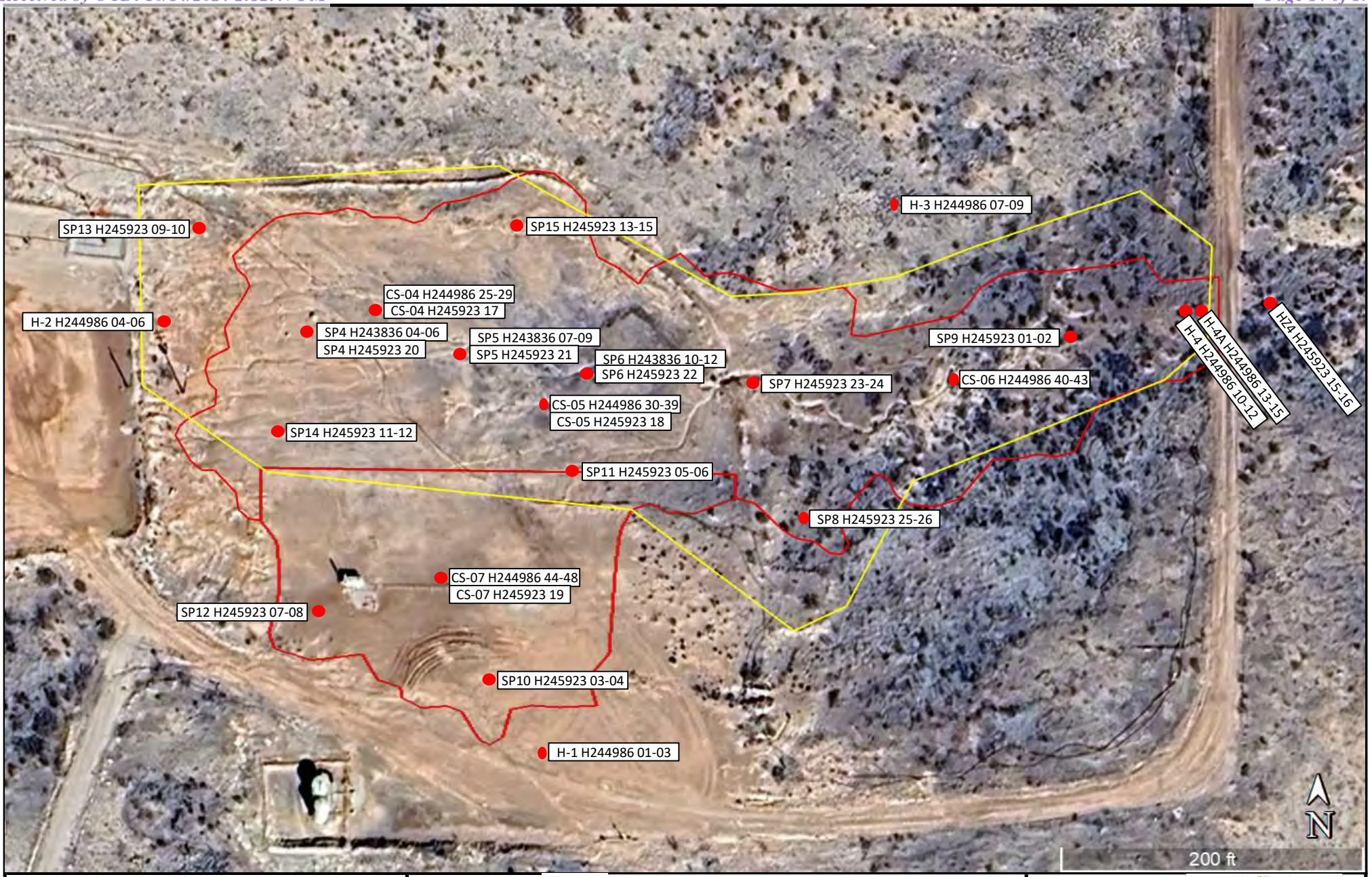


Figure 4

Delineation Sample Map

Murchison Oil & Gas

Ogden State #4

GPS: 32.153883, -104.259282

Eddy County

Legend:

- Delineation Sample Locations
- Area of Interest Identified By NMSLO
- Remediation Extent Identified By McNabb Partners

Drafted: dd

Checked: bw

Date: 9/26/24

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

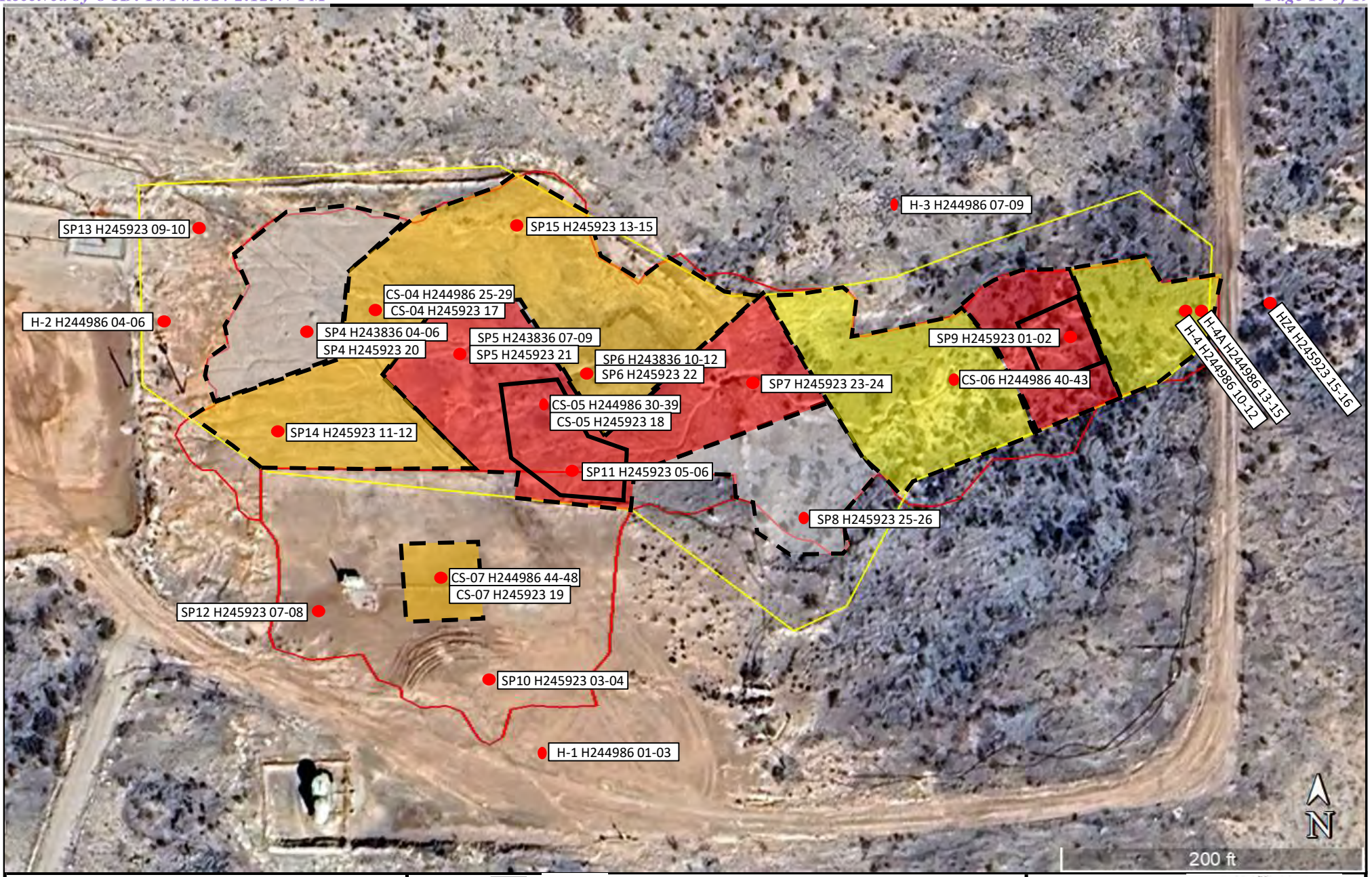


Figure 5
Proposed Excavation Map
Murchison Oil & Gas
Ogden State #4
GPS: 32.153883, -104.259282
Eddy County

Legend:
- Proposed Liner Locations
- Delineation Sample Locations
- Excavation to 4' bgs - Approx 16,600 sq ft / 2,500 cy
- Excavation to 6' bgs - Approx 19,400 sq ft / 4,400 cy
- Excavation to 8' bgs - Approx 31,500 sq ft / 9,400 cy
- Excavation to 10' bgs - Approx 27,900 sq ft / 10,400 cy

Drafted: dd
Checked: bw
Date: 10/3/24

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

Tables

TABLE 1
Summary of Soil Sample Laboratory Analytical Results
Murchison Oil & Gas
Ogden State #4
NMOCD Ref. #: nAPP2424335058

Sample ID	Date	Depth (ft)	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{36} (mg/kg)	TPH C_6-C_{36} (mg/kg)	Chloride (mg/kg)
SP4 H242836 04	6/25/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**52,000**
SP4 H242836 05	6/25/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**16,000**
SP4 H242836 06	6/25/24	2	In-Situ	<0.050	<0.300	<10.0	18.7	<20.0	<10.0	<30.0	**14,000**
SP4 H245923 20	9/27/24	4	In-Situ	<0.050	<0.300	<10.0	13.9	<20.0	22.4	36.3	176
SP5 H242836 07	6/25/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**40,800**
SP5 H242836 08	6/25/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**16,600**
SP5 H242836 09	6/25/24	2	In-Situ	<0.050	<0.300	<10.0	15.2	<20.0	<10.0	<30.0	**12,600**
SP5 H245923 21	9/27/24	12	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
SP6 H242836 10	6/25/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**11,400**
SP6 H242836 11	6/25/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**10,000**
SP6 H242836 12	6/25/24	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**7,460**
SP6 H245923 22	9/27/24	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
SP7 H245923 23	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**6,560**
SP7 H245923 24	9/27/24	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
SP8 H245923 25	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**28,000**
SP8 H245923 26	9/27/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
SP9 H245923 01	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**7,760**
SP9 H245923 02	9/27/24	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
SP10 H245923 03	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	368
SP10 H245923 04	9/27/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
SP11 H245923 05	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**18,000**
SP11 H245923 06	9/27/24	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
SP12 H245923 07	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SP12 H245923 08	9/27/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SP13 H245923 09	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
SP13 H245923 10	9/27/24	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
SP14 H245923 11	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**26,800**
SP14 H245923 12	9/27/24	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
SP15 H245923 13	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**800**
SP15 H245923 14	9/27/24	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.3	<30.0	256
CS-04 H245923 17	9/27/24	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
CS-05 H245923 18	9/27/24	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
CS-07 H245923 19	9/27/24	12	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
HZ4 H245923 15	9/27/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
HZ4 H245923 16	9/27/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NMOCD Closure Criteria				**10**	**50**	**-**	**-**	**N/A**	**-**	**100**	**600**

NOTES:
- = Sample not analyzed for that constituent.
Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Table A. Analytical Summary
Ogden State 4

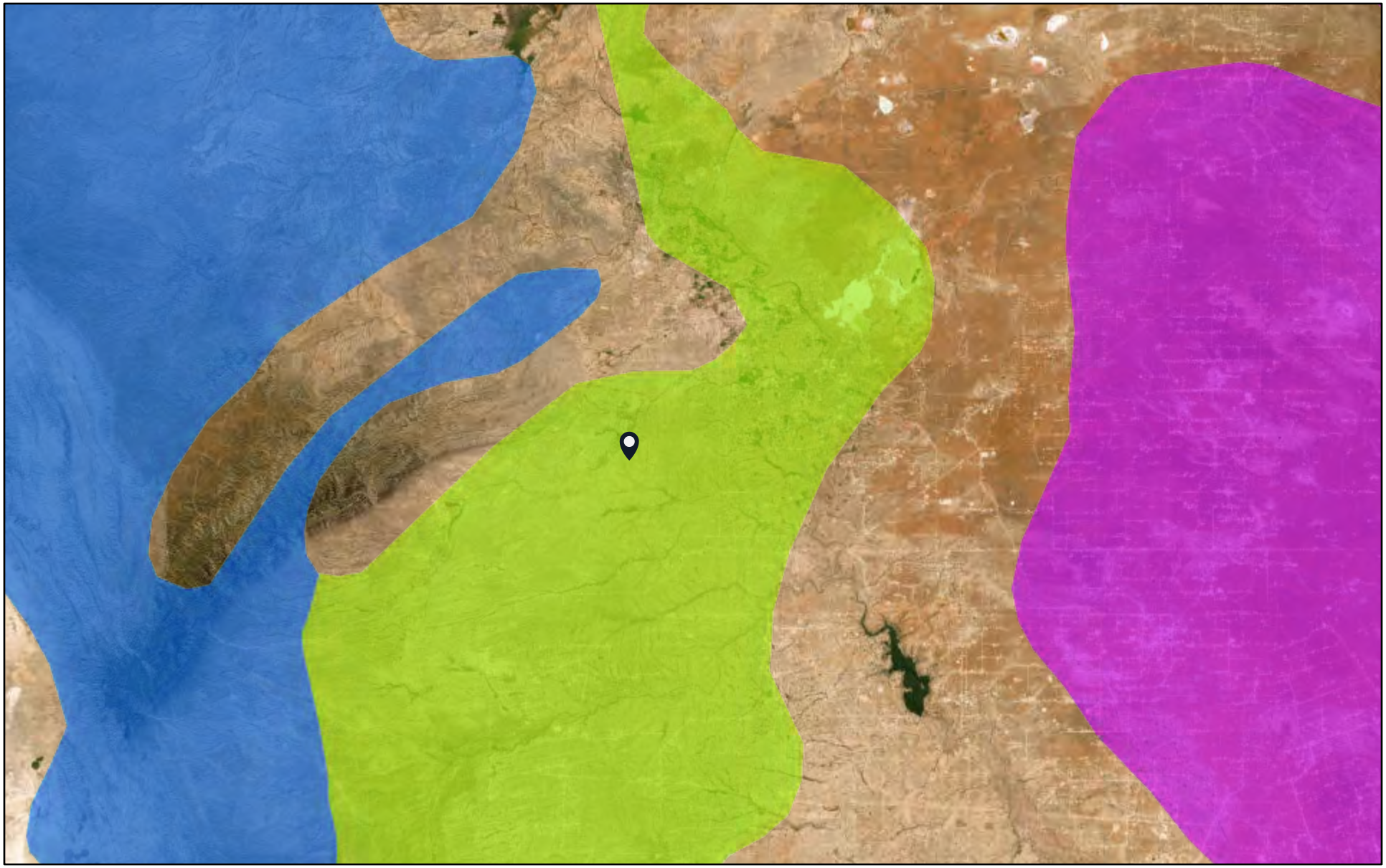
Sample ID	Date	Discrete Depth (Feet)	Location	Chloride (mg/kg)	GRO+DRO (mg/kg)	TPH Ext. (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Comments	Lab (Hall/Cardinal)	Lab #
NMOCD Closure Criteria											
0 - 4 feet & "not in-use"				600	--	100	10	50			
> 4 ft or "in-use"				600	--	100	10	50			
H-1	8/14/2024	0.5	onsite	528	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-01
H-1	8/14/2024	2	onsite	208	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-02
H-1	8/14/2024	4	onsite	208	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-03
H-2	8/14/2024	0.5	onsite	64	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-04
H-2	8/14/2024	2	onsite	96	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-05
H-2	8/14/2024	4	onsite	80	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-06
H-3	8/14/2024	0.5	onsite	48	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-07
H-3	8/14/2024	2	onsite	16	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-08
H-3	8/14/2024	4	onsite	48	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-09
H-4	8/14/2024	0.5	onsite	3,320	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-10
H-4	8/14/2024	2	onsite	2,800	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-11
H-4	8/14/2024	4	onsite	2,640	<20.0	<30.0	<0.050	<0.300	horizontal delineation	Cardinal	H244986-12
H-4A	8/14/2024	0.5	onsite	1,840	<20.0	<30.0	<0.050	<0.300	edge of arc survey area	Cardinal	H244986-13
H-4A	8/14/2024	2	onsite	2,040	<20.0	<30.0	<0.050	<0.300	edge of arc survey area	Cardinal	H244986-14
H-4A	8/14/2024	4	onsite	1,880	<20.0	<30.0	<0.050	<0.300	edge of arc survey area	Cardinal	H244986-15
CS-04	8/14/2024	0.5	onsite	22,800	23.3	23.3	<0.050	<0.300	vertical delineation	Cardinal	H244986-25
CS-04	8/14/2024	2	onsite	2,520	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-26
CS-04	8/14/2024	4	onsite	3,680	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-27
CS-04	8/14/2024	5	onsite	4,240	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-28
CS-04	8/14/2024	7	onsite	2,240	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-29
CS-05	8/14/2024	0.5	onsite	16,800	67.5	67.5	<0.050	<0.300	vertical delineation	Cardinal	H244986-30
CS-05	8/14/2024	2	onsite	9,600	1,870	2,014	<0.050	<0.300	vertical delineation	Cardinal	H244986-31
CS-05	8/14/2024	4	onsite	10,800	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-32
CS-05	8/14/2024	6	onsite	12,000	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-33
CS-05	8/14/2024	8	onsite	8,660	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-34
CS-05	8/14/2024	10	onsite	5,330	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-35
CS-05	8/14/2024	12	onsite	7,920	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-36
CS-05	8/14/2024	14	onsite	7,920	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-37
CS-05	8/14/2024	16	onsite	7,920	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-38
CS-05	8/14/2024	18	onsite	2,600	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-39
CS-06	8/14/2024	0.5	onsite	5,520	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-40
CS-06	8/14/2024	2	onsite	3,520	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-41
CS-06	8/14/2024	4	onsite	1,220	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-42
CS-06	8/14/2024	6	onsite	112	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-43
CS-07	8/14/2024	0.5	onsite	9,400	24.7	24.7	<0.050	<0.300	vertical delineation	Cardinal	H244986-44
CS-07	8/14/2024	2	onsite	1,230	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-45
CS-07	8/14/2024	4	onsite	624	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-46
CS-07	8/14/2024	6	onsite	736	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-47

Table A. Analytical Summary
Ogden State 4

Sample ID	Date	Discrete Depth (Feet)	Location	Chloride (mg/kg)	GRO+DRO (mg/kg)	TPH Ext. (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Comments	Lab (Hall/Cardinal)	Lab #
NMOCD Closure Criteria											
0 - 4 feet & "not in-use"				600	--	100	10	50			
> 4 ft or "in-use"				600	--	100	10	50			
CS-07	8/14/2024	8	onsite	608	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H244986-48
SP4	6/25/2024	Surface	onsite	52,000	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-04
SP4	6/25/2024	1	onsite	16,000	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-05
SP4	6/25/2024	2	onsite	14,000	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-06
SP5	6/25/2024	Surface	onsite	40,800	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-07
SP5	6/25/2024	1	onsite	16,600	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-08
SP5	6/25/2024	2	onsite	12,600	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-09
SP6	6/25/2024	Surface	onsite	11,400	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-10
SP6	6/25/2024	1	onsite	1,000	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-11
SP6	6/25/2024	2	onsite	7,460	<20.0	<30.0	<0.050	<0.300	vertical delineation	Cardinal	H243836-12
Sample exceeds NMOCD Closure Criteria											

Attachment I
Karst, Wetland, and Soil Maps

Ogden State #4



10/3/2024

Karst Type

- Carbonate
- Erosional
- Gypsum
- Volcanic

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

150m Resolution Metadata

1:715,559

0 5 10 20 mi

0 5 10 20 km

U.S. Geological Survey Open-File Report 2004-1352, Caves and Karst in the U.S. National Park Service, AGI Karst Map of the US., Earthstar Geographics

U.S. Fish and Wildlife Service
National Wetlands Inventory

Ogden State #4

October 3, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Eddy Area, New Mexico
(Ogden State #4)

104° 16' 35" W

104° 14' 31" W

32° 9' 48" N

32° 8' 39" N

Map Scale: 1:15,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 200 400 800 1200

Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 20, Sep 3, 2024

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

Date(s) aerial images were photographed: Nov 12, 2022—Dec 2, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GC	Gypsum land-Cottonwood complex, 0 to 3 percent slopes	133.7	12.1%
RG	Reeves-Gypsum land complex, 0 to 3 percent slopes	946.8	85.6%
RM	Reeves-Reagan loams, 0 to 3 percent slopes	25.7	2.3%
Totals for Area of Interest		**1,106.2**	**100.0%**

Eddy Area, New Mexico

RG—Reeves-Gypsum land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5f
Elevation: 1,250 to 5,000 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 190 to 235 days
Farmland classification: Not prime farmland

Map Unit Composition

Reeves and similar soils: 55 percent
Gypsum land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reeves

Setting

Landform: Ridges, plains, hills
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 32 inches: clay loam
H3 - 32 to 60 inches: gypsiferous material

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 80 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Description of Gypsum Land

Setting

Landform: Ridges, plains, hills
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Largo

Percent of map unit: 5 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Reagan

Percent of map unit: 5 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Cottonwood

Percent of map unit: 5 percent
Ecological site: R070BC033NM - Salty Bottomland
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 20, Sep 3, 2024

Attachment II
Depth to Groundwater

New Mexico Office of the State Engineer

Wells With Well Log Information

No report data available.

UTM Filters (in meters):

Easting: 569848.52

Northing: 3557732.96

Radius: 805

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

Attachment III
Field Data

Sample Log

Hungry Horse, LLC

Project: Ogden State 4

Karst: Yes Water: <50'

Standard: TPH 100mg/kg, Chloride 600mg/kg

Date: 9-26-24

GPS: 32.153549, -104.259293

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
HZ HA	Surf	ND	1.6@ 35x4 = 140	
	1'	ND	0.7@ > 100	
SP4	3'		3.4@ 113x4=452	
	4'	Little	2.0@ 49x4=198	
	6'			
	8'			
	10'			
	12'			
	14'			
	16'			
	18'			
	20'			
CS-04	8'	ND	3.6@ 125x4= 500	
	10'		3.4@ 114x4= 456	
	12'		3.0@ 92x4 = 368	
	14'	ND	3.1@ 125x4= 500	
	16'		[illegible]	
	18'			
	20'			
	22'			
	24			
SP5	3'	ND	[illegible]	
	4'	ND	[illegible]	
	6'	ND	[illegible]	
	8'	ND	[illegible]	
	10'	ND	[illegible]	
	12'	ND	[illegible]	
	14'	ND	[illegible]	
	16'	ND	[illegible]	
	18'			
	20'			
	22'			
CS-05	20'	ND	[illegible]	
	22'	ND	2.0@ 49x4=196	
	24'			
	26'			

Sample Point = SP1 @ 88 etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

[illegible]

Sample Log

Hungry Horse, LLC

Project: Ogden State 4

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date: 9-26-24

GPS: 32.153549, -104.259293

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
SP6	3'	Yes	5.2@ 305x4= 1,220	
	4'	NO	5.6@ 234x4= 1,136	
	6'	NO	5.4@ 264x4= 1,056	
	8'	NO	2.6@ 73x4=292	
	10'	NO	3.0@ 92x4= 368	
	12'			
	14'			
	16'			
	18'			
	20'			
	22'			
SP7	Surf	YES	Greater than 8.0	
	1'	Like	" "	
	2'	Like	7.0@ 465x4= 1,860	
	3'	Like	6.4@ 367x4= 1,468	
	4'	Like	7.0@ 465x4= 1,860	
	6'	NO	5.0@ 224x4=968	
	8'	NO	4.6@ 192x4=768	
	10'	NO	3.8@ 137x4=548	
	12'	NO	3.4@ 113x4=452	
	14'			
	16'			
	18'			
	20'			
	22'			
	24'			
SP8	Surf	NO	Greater than 8.0	
	1'	NO	Greater than 8.0	
	2'	NO	7.8@ 620x4=	
	3'	NO	4.0@ 151x4= 604	
	4'	NO	3.0@ 92x4= 368	
	6'			
	8'			
	10'		3.8	
	12'			
	14'			

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ [illegible]

GPS Sample Points, Center of Comp Areas

Test Trench = [illegible]

Resamples= SP1a @ [illegible]

Stockpile = [illegible]

Sample Log

Hungry Horse, LLC

Project: Ogden State 4

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date: 9-26-24

GPS: 32.153549, -104.259293

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
SP8	16'			
	18'			
	20'			
	22'			
	24'			
SP9	Surf	NO	Greater than 8.0	
	1'		Greater than 8.0	
	2'		Greater than 8.0	
	3'		7.8@ 620x4=2,480	
	4'		6.2@ 352x4=1,408	
	6'		6.2@ 352x4=1,408	
	8'		Greater than 8.0	
	10'		Greater than 8.0	
	12'		Greater than 8.0	
	14'		Greater than 8.0	
	16'		Greater than 8.0	
	18'		6.7@ 377x4=1,508	
	20'		4.2@ 165x4=660	
	22'		3.8@ 138x4=552	
	24'			
SP10	Surf	NO	3.8@ 138x4=552	
	1'	NO	4.2@ 165x4=660	
	2'	NO	3.4@ 114x4=456	
SP11	Surf	NO	Greater than 8.0	12' 6.4@ 377x4=1,508
	1'	NO	7.2@ 498x4=1,992	14' 5.6@ 287x4=1,148
	2'	NO	6.4@ 377x4=1,508	16' 5.4@ 267x4=1,068
	3'	NO	6.4@ 377x4=1,508	18' 6.8@ 421x4=1,684
	4'	NO	6.2@ 352x4=1,408	20' 3.6@ 125x4=500
	6'	NO	6.0@ 328x4=1,312	22'
	8'	NO	6.0@ 328x4=1,312	24'
	10	NO	5.8@ 305x4=1,220	26'
SP12	Surf	NO	2.2@ 57x4=228	
	1'	NO	2.4@ 65x4=260	
	2'	NO	3.4@ 114x4=456	
	3'			
	4'			

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

Test Trench = TT1 @ ##

Resamples= SP1b @ 5' or SW #2b

Stockpile = Stockpile #1

Sample Log

Hungry Horse, LLC

Project: Ogden State 4

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date:

GPS: 32.153549, -104.259293

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
SP12	0'			
	8'			
	10'			
	12'			
	14'			
	16'			
	18'			
	20'			
	22'			
	24'			
SP13	Surf	NO	2.6@ 73X4= 292	
	1'	NO	3.4@ 113X4=452	
	2'	NO	2.0@ 49X4=198	
	3'			
	4'			
	6'			
	8'			
	10'			
	12'			
	14'			
	16'			
	18'			
	20'			
	22'			
	24'			
SP14	Surf	Little	Greater than 8.0	
	1'	Yes	" "	
	2'	Yes	" "	
	3'	Little	Greater than 8.0	
	4'	NO	5.6@ 279X4= 1.116	
	5'		6.8@ 421X4= 1.684	
	6'		3.8@ 137X4= 548	
	10'	NO	3.8@ 137X4= 548	
	12'			
	14'			
	16'			

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

Test Trench = TT1 @ ##

Resample= SP12 @ 5' or SW #2a

Stockpile = Stockpile #1

Sample Log

Hungry Horse, LLC

Project: Ogden State 4

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date:

GPS: 32.153549, -104.259293

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
SP14	18'			
	20'			
	22'			
	24'			
SP15	Surf	Yes	46@194X4=776	
	1'	Yes	Greater Than 8.0	
	2'	Yes	" "	
	3'	Little	7.8@620X4=2,480	
	4'	NO	6.6@404X4=1,616	
	6'	NO	6.8@433X4=1,732	
	8'	NO	2.8@83X4=332	
	10'	NO	2.6@73X4=292	
	12'			
	14'			
	16'			
	18'			
	20'			
	22'			
	24'			
CS-07	12'	NO	3.4@114X4=456	

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

[illegible] = [illegible]

[illegible] = [illegible]

[illegible] = [illegible]

Attachment IV
McNabb Partners Site Photographs

Incident ID: nAPP2424335058
Ogden State 4 Legacy Release
Project ID: 20030828-murchison-ogdenState4

Figure 1. Area of Interest.

Figure 2. Area of Interest.

Figure 3. Area of Interest. .

Figure 4. Area of Interest.

Figure 5. Sampling activities.

Figure 6. Sampling activities.

Attachment V
R.T. Hicks Soil Boring Log

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

Memorandum

From: Kristin Pope

Date: September 11, 2023

RE: Murchison-Ogden St. 5A release, Characterization Soil Boring
Lat./long.: 32.15434, -104.26397

The subject site is located approximately 12 miles south of Carlsbad city limits, with a surface elevation of approximately 3,390 feet asl. On August 23, 2023, I met the client Greg Boans (Murchison), Dr. David Decker (Southwest Geophysical Consulting), and representatives of Ready Drill LLC on site to install an investigative soil boring nearest the release origin. To maintain a safe distance from active, underground pipelines, the soil boring was located approximately 20 feet northwest of the junction, or "tee" as shown on the adjacent image. The location was within the berms surrounding the release footprint.

2023 Google Earth satellite image

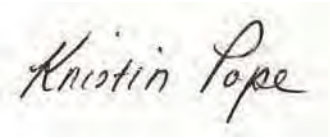
Weather conditions were cloudy with moderate-light but steady rain. Drilling began at 9:20 a.m. MST with instructions to the driller to proceed at a consistent rate and pressure. I continuously monitored the cuttings during each trip while regularly communicating with the driller as to the "feel" of the drilling, with instructions to inform Dr. Decker and me if any moisture was suspected or voids were encountered. I recorded the lithology and moisture content with each trip out of the hole. If any appreciable moisture would have been indicated, the operation would have been suspended to allow the water to accumulate and then measured.

Drilling steadily advanced at a rate of approximately 0.75 feet per minute until 23 feet, when heavy rain precluded inspection of cuttings and drilling ceased until the rain let up at 10:28 a.m. Hard dolomitic and gyppy rock in a matrix of silt and clay caused the need for a bit change at 38 feet. After this depth, drilling slowed to a rate of approximately 0.2 feet per minute. Hard drilling continuing from 52 feet until the remainder of the hole. Dr. Decker also inspected cuttings and communicated with the driller regarding karst considerations until 12:21 p.m. when he departed; we discussed the remainder of the soil boring conditions and lithologies later that day.

At 73 feet, the cuttings became dusty and continued until total depth was reached as planned, at 105 feet. No water or drilling fluids were used during drilling and the hole was backfilled with cuttings. I observed no water or measurable moisture in any of the cuttings I inspected, nor did the driller

indicate any conditions associated with subsoil dampness or saturation. The experienced driller stated that he did not observe or feel any instances of the bit dropping which indicate the presence of voids.

Representative samples were submitted for laboratory analysis of chloride. Chloride concentrations, drilling conditions, and lithologies are summarized in the enclosed boring log. Based on my observations, I am certain that no groundwater is present below the surface of this well site to 105 feet (3,285 feet asl).



Logger:	Kristin Pope	**Client:**		**Well ID:**
Driller:	Ready Drill LLC	Murchision Oil & Gas		**SB-1** (appox. 20 ft NW of pipeline tee)
Drilling Method:	CZM EK125 auger	**Project Name:**		
Start Date:	8/23/2023	Ogden 5A release		
End Date:	8/23/2023	**Location:**	Eddy County	
moderate and steady rain		32.15434, -104.26397	Sec. 2, T25S, R26E	

Depth (feet BGS)	Description	Time MST	Remarks	Lithology	Completion	Sample ID (chloride mg/kg)	Depth (feet BGS)
0	Surface	0920	*Samples collected from auger bit; all samples were dry*			*Lab Analysis*	0
2	Green-gray silty clay					SB @ 3 ft = 2600	2
4							4
6		0923				SB @ 6 ft = 1460	6
8	Red clay with gray-green silt						8
10	Red clay with 15% dark gray dolomite	0931				SB @ 10 ft = 544	10
12							12
14	Red & gray silt with 15% gray-white gypsum						14
16		0948				SB @ 16 ft = 336	16
18	Red silt with gray & white, vitreous gypsum flakes; 20% dark gray dolomite						18
20		0952	*20 ft - heavy rain delay*			SB @ 20 ft = 432	20
22							22
24	Gray-white gypsum/dolomitic layers with tan silt						24
26							26
28							28
30		1028				SB @ 30 ft = 192	30
32							32
34							34
36							36
38			*38 ft - Heavy rain delay; bit change*				38
40							40
42		1110				SB @ 42.5 ft = 288	42
44	Gray silt with dark gray-white dolomite						44
46							46
48							48
50	Tan-light gray silt with 40% hard, gray limestone or dolostone layers or lenses						50
52		1135	*52-90 ft - hard drilling*			SB @ 52 ft = 208	52
54							54
56							56
58							58
60		1200	*At 60 ft, calcite or gypsum crystals appear until TD*				60
62							62
64							64
66		1221					66
68							68
70							70
72							72
74		1240				SB @ 73 ft = 352	74
76							76
78							78
80			*At 79 ft, becomes dusty (finer, less consolidated)*				80
82							82
84							84
86							86
88							88
90		1352				SB @ 73 ft = 384	90
92							92
94							94
96							96
98							98
100							100
102							102
104							104
TD 105		1447	***TD = 105 ft***			SB @ 73 ft = 576	TD 105

Borehole backfilled with cuttings

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104	**Murchison Oil & Gas**	**Plate #**
	Ogden 5A Release: Soil Boring Log	**Sept 2023**

3-ft sample: demonstration of plasticity

6-ft sample: appearance of red clay at bottom of auger

10-ft sample: auger (right), dolomite (bottom)

16-ft sample: Silt with gypsum or dolomite

20-ft sample: Auger (left) and vitreous gypsum shown (bottom)

30-ft sample: Dolomite or gypsum with silt

42.5 ft-sample: Silt with dolomite

52-ft sample: hard limestone or dolomite in silt (left), auger(right)

60-ft sample

73-ft sample: auger (left), silt with limestone or dolomite (above)

90-ft sample: returns have become dusty

Hard dolomite or limestone at 95 ft

Hard dolomite at 99 ft

105-ft sample from TD (above); spin of final TOOH (left)

Attachment VI
Laboratory Analytical Reports

CARDINAL Laboratories

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

July 03, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: OGDEN STATE 4

Enclosed are the results of analyses for samples received by the laboratory on 06/26/24 14:52.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 1 - SURF (H243836-01)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6260**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	**40.1**	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *96.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 2 - SURF (H243836-02)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16000**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	**108**	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	**62.7**	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *122 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 3 - SURF (H243836-03)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9200**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	**1060**	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	**583**	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *81.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 4 - SURF (H243836-04)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**52000**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *88.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 4 - 1' (H243836-05)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16000**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *93.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 4 - 2' (H243836-06)

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	07/02/2024	ND	1.99	99.6	2.00	3.84	
Toluene*	<0.050	0.050	07/02/2024	ND	2.16	108	2.00	4.28	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.17	109	2.00	4.65	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	6.73	112	6.00	4.30	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *122 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14000**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	**18.7**	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *123 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 5 - SURF (H243836-07)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**40800**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *126 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 5 - 1' (H243836-08)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16600**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *87.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 5 - 2' (H243836-09)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12600**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	**15.2**	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *90.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 6 - SURF (H243836-10)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11400**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *97.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 6 - 1' (H243836-11)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.2 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10000**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *92.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *112 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	06/26/2024	Sampling Date:	06/25/2024
Reported:	07/03/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 6 - 2' (H243836-12)

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	07/02/2024	ND	1.91	95.4	2.00	5.30	
Toluene*	<0.050	0.050	07/02/2024	ND	1.91	95.3	2.00	6.40	
Ethylbenzene*	<0.050	0.050	07/02/2024	ND	2.04	102	2.00	7.16	
Total Xylenes*	<0.150	0.150	07/02/2024	ND	5.98	99.7	6.00	7.39	
Total BTEX	<0.300	0.300	07/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7460**	16.0	07/02/2024	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	07/02/2024	ND	203	101	200	1.95	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	168	84.2	200	6.19	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane *92.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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:	Hungry Horse LLC				
Project Manager:	Daniel Dominguez				
Address:	4024 Plains Hwy				
City:	Lovington	State: NM	Zip: 88260		
Phone #:	575 393-3386	Fax #:			
Project #:		Project Owner:	Murchison Oil & Gas		
Project Name:	Ogden State 4				
Project Location:	UL/ P Sec 2 T25S - R26E				
Sampler Name:	Jerry Heidelberg				

BILL TO

P.O. #:	
Company	Murchison Oil & Gas
Attn:	Greg Boans
Address:	5325 Sierra Vista
City:	Carlsbad
State: NM	Zip: 88230
Phone #:	575 706-0667
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	Chloride	TPH	BTEX 8021
H243830																	
1	SP1-Surf	G	1			X					X		6/25/24		X	X	X
2	SP2-Surf	G	1			X					X		6/25/24		X	X	X
3	SP3-Surf	G	1			X					X		6/25/24		X	X	X
4	SP4-Surf	G	1			X					X		6/25/24		X	X	X
5	SP4-1'	G	1			X					X		6/25/24		X	X	X
6	SP4-2'	G	1			X					X		6/25/24		X	X	X
7	SP5-Surf	G	1			X					X		6/25/24		X	X	X
8	SP5-1'	G	1			X					X		6/25/24		X	X	X
9	SP5-2'	G	1			X					X		6/25/24		X	X	X
10	SP6-Surf	G	1			X					X		6/25/24		X	X	X

Relinquished By: Jerry Heidelberg	Date: 6.26.24	Received By: SRodriguez	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1452		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		Email results to: pm@hungry-horse.com gboans@jdmii.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 2-2: #140

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

CHECKED BY: (Initials) RR

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Hungry Horse LLC				
Project Manager:	Daniel Dominguez				
Address:	4024 Plains Hwy				
City:	Lovington	State:	NM	Zip:	88260
Phone #:	575 393-3386	Fax #:			
Project #:		Project Owner:	Murchison Oil & Gas		
Project Name:	Ogden State 4				
Project Location:	UL/ P Sec 2 T25S - R26E				
Sampler Name:	Jerry Heidelberg				

BILL TO

P.O. #:	
Company	Murchison Oil & Gas
Attn:	Greg Boans
Address:	5325 Sierra Vista
City:	Carlsbad
State:	NM
Zip:	88230
Phone #:	575 706-0667
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: Chloride	TPH	BTEX 8021
H243536																	
11	SP6-1'	G	1			X					X		6/25/24		X	X	X
12	SP6-2'	G	1			X					X		6/25/24		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 consequental 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: Jerry Heidelberg	Date: 6-26-24	Received By: Rodriguez	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Time: 1452		Fax Result: ☐ Yes ☐ No Add'l Fax #:
	Date:	Received By:	REMARKS:
	Time:		Email results to: pm@hungry-horse.com gboans@jdmii.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2:2c #140

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

CHECKED BY: (Initials) SR

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

August 20, 2024

DIMITRY NIKANOROV

MC NABB SERVICES

P. O. BOX 5753

HOBBS, NM 88240

RE: OGDEN STATE 4

Enclosed are the results of analyses for samples received by the laboratory on 08/16/24 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 1 (0.5') (H244986-01)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	08/19/2024	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	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *95.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *115 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 1 (2') (H244986-02)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.2 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	08/19/2024	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	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *81.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 1 (4') (H244986-03)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *92.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 2 (0.5') (H244986-04)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *89.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 2 (2') (H244986-05)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *85.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 2 (4') (H244986-06)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *85.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 3 (0.5') (H244986-07)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *90.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 3 (2') (H244986-08)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *97.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 3 (4') (H244986-09)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *96.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4 (0.5') (H244986-10)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3320**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *89.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4 (2') (H244986-11)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2800**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *83.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.6 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4 (4') (H244986-12)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2640**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *66.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *78.1 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4A (0.5') (H244986-13)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1840**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *83.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.8 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4A (2') (H244986-14)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2040**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *86.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: H - 4A (4') (H244986-15)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1880**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *91.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 01 (0.5') (H244986-16)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8800**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	**1890**	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	**636**	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *88.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *115 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 01 (2') (H244986-17)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *93.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 01 (4') (H244986-18)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *118 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 02 (0.5') (H244986-19)

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	08/16/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/16/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *94.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 02 (2') (H244986-20)

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	08/17/2024	ND	2.05	103	2.00	0.466	
Toluene*	<0.050	0.050	08/17/2024	ND	1.97	98.3	2.00	1.16	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.05	103	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.10	102	6.00	1.37	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	240	120	200	2.02	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	218	109	200	3.82	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *94.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 02 (4') (H244986-21)

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	08/16/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/16/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/16/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/16/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *108 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 03 (0.5') (H244986-22)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1150**	16.0	08/19/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *88.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.0 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 03 (2') (H244986-23)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *118 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *120 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 03 (4') (H244986-24)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *116 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 04 (0.5') (H244986-25)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	GC-NC
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	GC-NC
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	GC-NC
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**22800**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	**23.3**	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *99.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.0 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 04 (2') (H244986-26)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2520**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *96.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.5 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 04 (4') (H244986-27)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3680**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *115 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *113 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 04 (5') (H244986-28)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4240**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *111 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 04 (7') (H244986-29)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2240**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *120 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (0.5') (H244986-30)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	GC-NC
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16800**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	**67.5**	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *121 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (2') (H244986-31)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	GC-NC
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	GC-NC
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *192 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9600**	16.0	08/19/2024	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*	**90.0**	10.0	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	**1780**	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	**144**	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *130 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *118 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (4') (H244986-32)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10800**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *89.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.8 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (6') (H244986-33)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12000**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *123 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (8') (H244986-34)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8660**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *124 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (10') (H244986-35)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5330**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *127 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *126 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (12') (H244986-36)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7920**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *123 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *122 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (14') (H244986-37)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7920**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *119 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (16') (H244986-38)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7920**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *120 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 05 (18') (H244986-39)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2600**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *117 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 06 (0.5') (H244986-40)

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	08/17/2024	ND	2.38	119	2.00	1.96	
Toluene*	<0.050	0.050	08/17/2024	ND	2.32	116	2.00	2.37	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.30	115	2.00	2.38	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.02	117	6.00	2.95	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5520**	16.0	08/19/2024	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	08/17/2024	ND	209	104	200	9.88	
DRO >C10-C28*	<10.0	10.0	08/17/2024	ND	202	101	200	9.61	
EXT DRO >C28-C36	<10.0	10.0	08/17/2024	ND					

Surrogate: 1-Chlorooctane *99.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.6 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 06 (2') (H244986-41)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *120 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3520**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *78.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.9 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 06 (4') (H244986-42)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1220**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *73.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.4 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 06 (6') (H244986-43)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *79.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.8 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 07 (0.5') (H244986-44)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9400**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	**24.7**	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *91.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 07 (2') (H244986-45)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *118 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1230**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *94.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *113 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 07 (4') (H244986-46)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**624**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *93.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 07 (6') (H244986-47)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**736**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *78.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.8 %* *49.1-148*

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:

MC NABB SERVICES
DIMITRY NIKANOROV
P. O. BOX 5753
HOBBS NM, 88240
Fax To: (575) 391-8484

Received:	08/16/2024	Sampling Date:	08/14/2024
Reported:	08/20/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	MURCHISON - EDDY CO., NM		

Sample ID: CS - 07 (8') (H244986-48)

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	08/17/2024	ND	2.28	114	2.00	2.05	
Toluene*	<0.050	0.050	08/17/2024	ND	2.33	117	2.00	0.624	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.40	120	2.00	0.836	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	7.23	120	6.00	0.720	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	08/19/2024	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	08/19/2024	ND	242	121	200	1.93	
DRO >C10-C28*	<10.0	10.0	08/19/2024	ND	217	108	200	1.32	
EXT DRO >C28-C36	<10.0	10.0	08/19/2024	ND					

Surrogate: 1-Chlorooctane *84.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.2 %* *49.1-148*

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

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
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:	McNabb Partners	**BILL TO**	
Project Manager:	Dimitry Nikanorov	**P.O. #:**	
Address:	5014 W Carlsbad Hwy	**Company:**	Murchison Oil & Gas
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Greg Boans
Phone #:	917-497-6890 **Fax #:**	**Address:**	5325 Sierra Vista Dr.
Project #:	**Project Owner:** Murchison Oil&Gas	**City:**	Carlsbad
Project Name:	Ogden State 4	**State:** NM **Zip:**	88220
Project Location:	Eddy Co, NM	**Phone #:**	575-706-0667
Sampler Name:	Dimitry Nikanorov, Andrew Parker	**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	Chloride	BTEX													
H241086																														
1	H-1	(0.5')	G	1			X					X		8/14/24	10:00	X	X	X												
2	H-1	(2')	G	1			X					X		8/14/24	10:05	X	X	X												
3	H-1	(4')	G	1			X					X		8/14/24	10:10	X	X	X												
4	H-2	(0.5')	G	1			X					X		8/14/24	10:15	X	X	X												
5	H-2	(2')	G	1			X					X		8/14/24	10:20	X	X	X												
6	H-2	(4')	G	1			X					X		8/14/24	10:25	X	X	X												
7	H-3	(0.5')	G	1			X					X		8/14/24	10:30	X	X	X												
8	H-3	(2')	G	1			X					X		8/14/24	10:35	X	X	X												
9	H-3	(4')	G	1			X					X		8/14/24	10:40	X	X	X												
10	H-4	(0.5')	G	1			X					X		8/14/24	10:45	X	X	X												

Relinquished By: DV	**Date:** 8.14.24 **Time:** 1205	**Received By:** APavas	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** dimitry@mcnabbpartners.com, andrew@mcnabbpartners.com, laura@mcnabbpartners.com
			REMARKS:

Delivered By: (Circle One)	**Observed Temp. °C** 1.0	**Sample Condition** Cool / Intact	**CHECKED BY: (Initials)**	**Turnaround Time:** 48 hours **Standard** RUSH	**Bacteria (only) Sample Condition** Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	**Corrected Temp. °C** 0.4	☑ Yes ☑ Yes ☐ No ☐ No		**Thermometer ID** #140 **Correction Factor** -0.6°C	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

† 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:	McNabb Partners	**BILL TO**	
Project Manager:	Dimitry Nikanorov	**P.O. #:**	
Address:	5014 W Carlsbad Hwy	**Company:**	Murchison Oil & Gas
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Greg Boans
Phone #:	917-497-6890 **Fax #:**	**Address:**	5325 Sierra Vista Dr,
Project #:	**Project Owner:** Murchison Oil&Gas	**City:**	Carlsbad
Project Name:	Ogden State 4	**State:** NM **Zip:** 88220	
Project Location:	Eddy Co, NM	**Phone #:**	575-706-0667
Sampler Name:	Dimitry Nikanorov, Andrew Parker	**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	Chloride	BTEX										
H244984																											
11	H-4	(2')	G	1			X					X		8/14/24	11:35	X	X	X									
12	H-4	(4')	G	1			X					X		8/14/24	11:40	X	X	X									
13	H-4A	(0.5')	G	1			X					X		8/14/24	11:45	X	X	X									
14	H-4A	(2')	G	1			X					X		8/14/24	11:50	X	X	X									
15	H-4A	(4')	G	1			X					X		8/14/24	11:55	X	X	X									
16	CS-01	(0.5')	G	1			X					X		8/14/24	12:00	X	X	X									
17	CS-01	(2')	G	1			X					X		8/14/24	12:05	X	X	X									
18	CS-01	(4')	G	1			X					X		8/14/24	12:10	X	X	X									
19	CS-02	(0.5')	G	1			X					X		8/14/24	12:15	X	X	X									
20	CS-02	(2')	G	1			X					X		8/14/24	12:20	X	X	X									

Relinquished By: DN	**Date:** 8.14.24 **Time:** 1305	**Received By:** apaces	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** dimitry@mcnabbpartners.com, andrew@mcnabbpartners.com, laura@mcnabbpartners.com
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 1.0 **Corrected Temp. °C** 0.4	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)** AD	**Turnaround Time:** 48 hours **Standard** MUST ☒ Thermometer ID #140 Correction Factor -0.6°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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	McNabb Partners	**BILL TO**	
Project Manager:	Dimitry Nikanorov	**P.O. #:**	
Address:	5014 W Carlsbad Hwy	**Company:**	Murchison Oil & Gas
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Greg Boans
Phone #:	917-497-6890 **Fax #:**	**Address:**	5325 Sierra Vista Dr.
Project #:	**Project Owner:** Murchison Oil&Gas	**City:**	Carlsbad
Project Name:	Ogden State 4	**State:** NM **Zip:**	88220
Project Location:	Eddy Co, NM	**Phone #:**	575-706-0667
Sampler Name:	Dimitry Nikanorov, Andrew Parker	**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	Chloride	BTEX												
1124068																													
71	CS-02	(4')	G	1			X					X		8/14/24	12:25	X	X	X											
72	CS-03	(0.5')	G	1			X					X		8/14/24	12:30	X	X	X											
73	CS-03	(2')	G	1			X					X		8/14/24	12:35	X	X	X											
74	CS-03	(4')	G	1			X					X		8/14/24	12:40	X	X	X											
75	CS-04	(0.5')	G	1			X					X		8/14/24	12:45	X	X	X											
76	CS-04	(2')	G	1			X					X		8/14/24	12:50	X	X	X											
77	CS-04	(4')	G	1			X					X		8/14/24	12:55	X	X	X											
78	CS-04	(5')	G	1			X					X		8/14/24	13:00	X	X	X											
79	CS-04	(7')	G	1			X					X		8/14/24	13:05	X	X	X											
80	CS-05	(0.5')	G	1			X					X		8/14/24	13:10	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: DN	**Date:** 8.16.24 **Time:** 1905	**Received By:**	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
			All Results are emailed. Please provide Email address: dimitry@mcnabbpartners.com, andrew@mcnabbpartners.com, laura@mcnabbpartners.com
Relinquished By:	**Date:** **Time:**	**Received By:**	**REMARKS:**

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 1.0 **Corrected Temp. °C** 0.4	**Sample Condition** Cool ☑ Yes ☐ No Intact ☐ Yes ☐ No	**CHECKED BY: (Initials)** AD	**Turnaround Time:** 48 hours Standard RUSH ☒ X	**Bacteria (only) Sample Condition** Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No **Observed Temp. °C** **Corrected Temp. °C**

Thermometer ID #140
Correction Factor -0.6°C

† 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:	McNabb Partners	BILL TO	
Project Manager:	Dimitry Nikanorov	P.O. #:	
Address:	5014 W Carlsbad Hwy	Company:	Murchison Oil & Gas
City:	Hobbs State: NM Zip: 88240	Attn:	Greg Boans
Phone #:	917-497-6890 Fax #:	Address:	5325 Sierra Vista Dr.
Project #:	Project Owner: Murchison Oil&Gas	City:	Carlsbad
Project Name:	Ogden State 4	State: NM	Zip: 88220
Project Location:	Eddy Co, NM	Phone #:	575-706-0667
Sampler Name:	Dimitry Nikanorov, Andrew Parker	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	Chloride	BTEX													
H241088-1																														
31	CS-05	(2')	G	1			X					X		8/14/24	13:15	X	X	X												
32	CS-05	(4')	G	1			X					X		8/14/24	13:20	X	X	X												
33	CS-05	(6')	G	1			X					X		8/14/24	13:25	X	X	X												
34	CS-05	(8')	G	1			X					X		8/14/24	13:30	X	X	X												
35	CS-05	(10')	G	1			X					X		8/14/24	13:35	X	X	X												
36	CS-05	(12')	G	1			X					X		8/14/24	13:40	X	X	X												
37	CS-05	(14')	G	1			X					X		8/14/24	13:45	X	X	X												
38	CS-05	(16')	G	1			X					X		8/14/24	13:50	X	X	X												
39	CS-05	(18')	G	1			X					X		8/14/24	13:55	X	X	X												
40	CS-06	(0.5')	G	1			X					X		8/14/24	14:00	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: 8.16.24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1205		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	dimitry@mcnabbpartners.com, andrew@mcnabbpartners.com, laura@mcnabbpartners.com
	Time:		REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 1.0	Sample Condition Cool ☑ Intact ☑	CHECKED BY: (Initials)	Turnaround Time: 48 hours Standard RUSH ☒	Bacteria (only) Sample Condition Cool ☐ Intact ☐ Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.4	Yes ☑ Yes ☑ No ☐ No ☐	AP	Thermometer ID #140 Correction Factor -0.6°C	Yes ☐ Yes ☐ No ☐ No ☐ Corrected Temp. °C

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	McNabb Partners	**BILL TO**	
Project Manager:	Dimitry Nikanorov	**P.O. #:**	
Address:	5014 W Carlsbad Hwy	**Company:**	Murchison Oil & Gas
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Greg Boans
Phone #:	917-497-6890 **Fax #:**	**Address:**	5325 Sierra Vista Dr,
Project #:	**Project Owner:** Murchison Oil&Gas	**City:**	Carlsbad
Project Name:	Ogden State 4	**State:** NM **Zip:** 88220	
Project Location:	Eddy Co, NM	**Phone #:**	575-706-0667
Sampler Name:	Dimitry Nikanorov, Andrew Parker	**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	Chloride	BTEX											
H24U486												✓																
41	CS-06	(2')	G	1			X					X		8/14/24	14:10	X	X	X										
42	CS-06	(4')	G	1			X					X		8/14/24	14:25	X	X	X										
43	CS-06	(6')	G	1			X					X		8/14/24	14:40	X	X	X										
44	CS-07	(0.5')	G	1			X					X		8/14/24	15:10	X	X	X										
45	CS-07	(2')	G	1			X					X		8/14/24	15:25	X	X	X										
46	CS-07	(4')	G	1			X					X		8/14/24	15:40	X	X	X										
47	CS-07	(6')	G	1			X					X		8/14/24	15:55	X	X	X										
48	CS-07	(8')	G	1			X					X		8/14/24	16:10	X	X	X										

Relinquished By: DN	**Date:** 8.16.24 **Time:** 1205	**Received By:** APaines	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** dimitry@mcnabbpartners.com, andrew@mcnabbpartners.com, laura@mcnabbpartners.com
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 1.0 **Corrected Temp. °C** 0.4	**Sample Condition** Cool ☑ Yes ☐ No Intact ☐ Yes ☐ No	**CHECKED BY: (Initials)** AD	**Turnaround Time:** 48 hours **Standard** RUSH ☒ Thermometer ID #140 Correction Factor -0.6°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

October 01, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: OGDEN STATE 4

Enclosed are the results of analyses for samples received by the laboratory on 09/30/24 13:48.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 9 (SURF) (H245923-01)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7760**	16.0	10/01/2024	ND	400	100	400	3.92	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/01/2024	ND	202	101	200	1.09	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	180	90.1	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *98.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.4 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 9 (20') (H245923-02)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/01/2024	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/01/2024	ND	202	101	200	1.09	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	180	90.1	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *99.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.2 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 10 (SURF) (H245923-03)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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	10/01/2024	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/01/2024	ND	202	101	200	1.09	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	180	90.1	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.6 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 10 (1') (H245923-04)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/01/2024	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/01/2024	ND	202	101	200	1.09	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	180	90.1	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *92.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *83.4 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 11 (SURF) (H245923-05)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**18000**	16.0	10/01/2024	ND	400	100	400	11.3	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *85.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.8 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 11 (20') (H245923-06)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *98.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 12 (SURF) (H245923-07)

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	09/30/2024	ND	1.99	99.4	2.00	5.83	
Toluene*	<0.050	0.050	09/30/2024	ND	1.94	97.2	2.00	5.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.00	100	2.00	4.76	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	5.96	99.3	6.00	4.87	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *98.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.7 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 12 (1') (H245923-08)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *94.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.6 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 13 (SURF) (H245923-09)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 13 (2') (H245923-10)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 14 (SURF) (H245923-11)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**26800**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *91.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.3 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 14 (8') (H245923-12)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 15 (SURF) (H245923-13)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**800**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 15 (8') (H245923-14)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	**12.3**	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: HZ 4 (SURF) (H245923-15)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *91.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.2 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: HZ 4 (1') (H245923-16)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *89.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.5 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: CS - 04 (8') (H245923-17)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: CS - 05 (20') (H245923-18)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *98.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.5 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: CS - 07 (12') (H245923-19)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *99.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.4 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 4 (4') (H245923-20)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	10/01/2024	ND	400	100	400	11.3	

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	09/30/2024	ND	209	105	200	4.29	
DRO >C10-C28*	**13.9**	10.0	09/30/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	**22.4**	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *94.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.8 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 5 (12') (H245923-21)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	10/01/2024	ND	400	100	400	11.3	

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	10/01/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 6 (8') (H245923-22)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/01/2024	ND	400	100	400	11.3	

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	10/01/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *97.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.1 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 7 (SURF) (H245923-23)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6560**	16.0	10/01/2024	ND	400	100	400	11.3	

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	10/01/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.2 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 7 (10') (H245923-24)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	10/01/2024	ND	400	100	400	11.3	

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	10/01/2024	ND	209	105	200	4.29	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	198	99.1	200	0.719	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 8 (SURF) (H245923-25)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**28000**	16.0	10/01/2024	ND	432	108	400	3.64	QM-07

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2024	ND	213	106	200	0.311	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	203	101	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *73.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *69.7 %* *49.1-148*

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:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received:	09/30/2024	Sampling Date:	09/27/2024
Reported:	10/01/2024	Sampling Type:	Soil
Project Name:	OGDEN STATE 4	Sampling Condition:	Cool & Intact
Project Number:	MURCHISON	Sample Received By:	Alyssa Parras
Project Location:	UL/ P SEC 2 T25S - R26E		

Sample ID: SP 8 (4') (H245923-26)

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	09/30/2024	ND	2.14	107	2.00	1.38	
Toluene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.23	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.22	111	2.00	2.20	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	7.04	117	6.00	1.22	
Total BTEX	<0.300	0.300	09/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/01/2024	ND	432	108	400	3.64	

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	09/30/2024	ND	213	106	200	0.311	
DRO >C10-C28*	<10.0	10.0	09/30/2024	ND	203	101	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	09/30/2024	ND					

Surrogate: 1-Chlorooctane *95.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.5 %* *49.1-148*

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

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, 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:	Hungry Horse LLC				
Project Manager:	Daniel Dominguez				
Address:	4024 Plains Hwy				
City:	Lovington	State: NM	Zip: 88260		
Phone #:	575 393-3386	Fax #:			
Project #:		Project Owner:	Murchison Oil & Gas		
Project Name:	Ogden State 4				
Project Location:	UL/ P Sec 2 T25S - R26E				
Sampler Name:	Hector Luna				

BILL TO

P.O. #:	
Company	Murchison Oil & Gas
Attn:	Greg Boans
Address:	5325 Sierra Vista
City:	Carlsbad
State: NM	Zip: 88230
Phone #:	575 706-0667
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D. 425923	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	Chloride	TPH	BTEX 8021
1	SP9 (Surf)	G	1			X					X		9/27/24		X	X	X
2	SP9 (20')	G	1			X					X		9/27/24		X	X	X
3	SP10 (Surf)	G	1			X					X		9/27/24		X	X	X
4	SP10 (1')	G	1			X					X		9/27/24		X	X	X
5	SP11 (Surf)	G	1			X					X		9/27/24		X	X	X
6	SP11 (20')	G	1			X					X		9/27/24		X	X	X
7	SP12 (Surf)	G	1			X					X		9/27/24		X	X	X
8	SP12 (1')	G	1			X					X		9/27/24		X	X	X
9	SP13 (Surf)	G	1			X					X		9/27/24		X	X	X
10	SP13 (2')	G	1			X					X		9/27/24		X	X	X

Relinquished By:	Date: 9/30/24	Received By:	
	Time: 13:40		
Relinquished By:	Date: 9.30.24	Received By:	
	Time: 1348		
Delivered By: (Circle One)	1.3 / C-0.6	Sample Condition: Cool Yes / Intact Yes	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	0.7 / #14	Cool No / Intact No	

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

REMARKS: **24 hr Rush!**

Email results to: pm@hungry-horse.com
gboans@jdmii.com

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Hungry Horse LLC				
Project Manager:	Daniel Dominguez				
Address:	4024 Plains Hwy				
City:	Lovington	State: NM	Zip: 88260		
Phone #:	575 393-3386	Fax #:			
Project #:		Project Owner:	Murchison Oil & Gas		
Project Name:	Ogden State 4				
Project Location:	UL/ P Sec 2 T25S - R26E				
Sampler Name:	Hector Luna				

BILL TO

P.O. #:	
Company	Murchison Oil & Gas
Attn:	Greg Boans
Address:	5325 Sierra Vista
City:	Carlsbad
State: NM	Zip: 88230
Phone #:	575 706-0667
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	Chloride	TPH	BTEX 8021
H245923																	
11	SP14 (Surf)	G	1			X					X		9/27/24		X	X	X
12	SP14 (8')	G	1			X					X		9/27/24		X	X	X
13	SP15 (Surf)	G	1			X					X		9/27/24		X	X	X
14	SP15 (8')	G	1			X					X		9/27/24		X	X	X
15	HZ4 (Surf)	G	1			X					X		9/27/24		X	X	X
16	HZ4 (1')	G	1			X					X		9/27/24		X	X	X

Relinquished By:	Date: 9/30/24	Received By:	
	Time: 1340		
Relinquished By:	Date: 09.30.24	Received By:	
	Time: 1348		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 1.3°C / C-0.6°C 0.7°C / #140

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

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

REMARKS: **24 hr Rush!**

Email results to: pm@hungry-horse.com
gboans@jdmii.com

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Hungry Horse LLC				
Project Manager:	Daniel Dominguez				
Address:	4024 Plains Hwy				
City:	Lovington	State: NM	Zip: 88260		
Phone #:	575 393-3386	Fax #:			
Project #:		Project Owner:	Murchison Oil & Gas		
Project Name:	Ogden State 4				
Project Location:	UL/ P Sec 2 T25S - R26E				
Sampler Name:	Hector Luna				

BILL TO

P.O. #:	
Company	Murchison Oil & Gas
Attn:	Greg Boans
Address:	5325 Sierra Vista
City:	Carlsbad
State: NM	Zip: 88230
Phone #:	575 706-0667
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	Chloride	TPH	BTEX 8021
H245623											✓						
17	CS-04 (8')	G	1			X					X		9/27/24		X	X	X
18	CS-05 (20')	G	1			X					X		9/27/24		X	X	X
19	CS-07 (12')	G	1			X					X		9/27/24		X	X	X
20	SP4 (4')	G	1			X					X		9/27/24		X	X	X
21	SP5 (12')	G	1			X					X		9/27/24		X	X	X
22	SP6 (8')	G	1			X					X		9/27/24		X	X	X
23	SP7 (Surf)	G	1			X					X		9/27/24		X	X	X
24	SP7 (10')	G	1			X					X		9/27/24		X	X	X
25	SP8 (Surf)	G	1			X					X		9/27/24		X	X	X
26	SP8 (4')	G	1			X					X		9/27/24		X	X	X

Relinquished By:	Date: 9/30/24	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1840		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date: 9.30.24	Received By:	REMARKS: 24 hr Rush!
	Time: 1348		Email results to: pm@hungry-horse.com gboans@jdmii.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 1-3c / 0.0c / 0.7c / #140

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

CHECKED BY: (Initials) AP

Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

Attachment VII
Archaeological and SSPS Surveys

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Registration

Lead Agency: NM State Land Office

Performing Agency: Boone Archaeological Consultants, LLC.

Activity ID: Murchison Oil and Gas, LLC Proposed Ogden 4 Cuttings Pit Leaching

Performing Agency Report No: BARC 07-24-22

Other Agencies:

Report Recipient (Your Client): Murchison Oil and Gas, LLC

Activity Types:

- ☐ Research Design
- ☑ Archaeological Survey/Inventory
- ☐ Architectural Survey/Inventory
- ☐ Test Excavation
- ☐ Monitoring
- ☐ Collections/Non-Field Study
- ☐ Compliance Decision
- ☐ Literature Review Overview
- ☐ Excavation
- ☐ Ethnographic Study
- ☐ Resource/Property Visit
- ☐ Historic Structures Report
- ☐ Other:

Total Survey Acreage: 4.65

Total Tribal Acreage: 0.00

Total Resources Visited: 0

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Associate/Register Resources

Prefix	Number	Field Site/Other Number	In GIS	Resource Type	Collections Made?	Revisit

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Report Details

Type of Report

Type of Report Negative

Lead Agency

Lead Agency: NM State Land Office

Lead Agency Report No.

Report Number:

Title of Report

Title of Report: A Class III Archaeological Survey for the Murchison Oil and Gas, LLC Proposed Ogden 4 Cuttings Pit Leaching, Eddy County, New Mexico

Authors: Galassini, Stacy K. and Dane B. Womble

Publication Type: Report, Monograph, or Book

Description of Undertaking (what does the project entail?)

Description: Murchison Oil and Gas, LLC has requested a pedestrian cultural resources survey for a potential pit leaching in Eddy County, NM, on New Mexico State Trust (NMST) land in Section 2 of T25S R26E. The area of concern totals 2.93 acres on NMST land.

Dates of Investigation

From: 21-Jul-2024 **To:** 21-Jul-2024

Report Date

Report Date: 29-Jul-2024

Performing Agency/Consultant

Name: Boone Archaeological Consultants, LLC.

Principal Investigator: Stacy K. Galassini

Field Supervisor: Sarah Griffith

Field Personnel Names: Sarah Griffith

Historian/Other

Performing Agency Report Number

Report Number: BARC 07-24-22

Client/Customer (project proponent)

Name: Murchison Oil and Gas, LLC

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Report Details

Contact: Cindy Cottrell

Address:

Phone (469) 573-6413

Client/Customer Project Number

Project Number:

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Ownership & Location

Land Ownership Status (Must be indicated on Project Map)

Owner/Manager List:

Land Owner/Manager	Protocol	Acres Surveyed	Acres in APE
NM State Land Office	Class III	4.65	4.65

Total Survey Acreage: 4.65

Total Tribal Acreage: 0.00

Record Search(es)

Date of HPD/ARMS File Review:

Date of Other Agency File Review

Survey Data

Source Graphics: NAD 83

☑ USGS 7.5' (1:24,000) topo map ☐ Other Topo Map Scale:

☑ GPS Unit <1M

☐ Aerial Photos Other Source Graphic(s):

The following tables (b,c,& e) are calculated by the NMCRIS Map Service

USGS 7.5' Topographic Map(s)

Map Name	USGS Quad Code
Black River Village, NM	32104-B3

County(ies)

County	FIPS
EDDY	35015

Legal Description

Unplatted	Township (N/S)	Range (E/W)	Section
No	T25S	R26E	2

Projected Legal Description

No

Nearest City or Town: Loving, NM

Other Description:

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Methodology

Survey Field Methods

Intensity: 100% coverage

Configuration: ☑ Block Survey Units ☐ Linear Survey Units (l x y)

Other Survey Units

Scope: All Resources

Coverage Method: ☑ Systematic Pedestrian Coverage **Other Method:**

Survey Interval (m): 15 **Crew Size** 1

Fieldwork Dates **From** 21-Jul-2024 **To** 21-Jul-2024

Survey Person Hours: 1.00 **Recording Person Hours** 0.00

Additional Narrative: The area of concern was surveyed using 50 ft. parallel transects across an irregular block survey area, including a 100 ft. buffer around the area of concern. Those portions of the area of concern that fell within disturbed spaces were excluded from the current survey. The survey area totals 4.65 acres on NMST land. The survey area falls within 500 m of one previously recorded cultural resource: LA 174754. For complete details on the cultural resource, see Table 1. The survey area falls within 500 m of nine previous archaeological surveys. For complete details on the previous surveys, see Table 1.

Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.)

Environmental Setting: According to the Natural Resources Conservation Service' Online database, the area of concern soils consists of Reeves-Gypsum land complex, loamy soil, 0 to 3 percent slopes. This soil supports tobosa, black grama, and blue grama. Grass cover is uniformly distributed with few large bare areas. Shrubs are sparse and evenly distributed. The current vegetative community consists of mesquite, broom snakeweed, creosote, desert grasses and forbs. The survey area lies on a gently rolling and rocky desert scrubland with naturally occurring gypsum exposed on the surface. The elevation ranges between 3,320 ft. to 3,330 ft. above mean sea level.

Percent Ground Visibility

Ground Visibility: 51-75%

Condition of Survey Area: Some portions of the survey area have been impacted by a well pad, buried pipelines, flowlines, lease roads, two-track roads, push piles, cattle grazing, bioturbation, water and wind erosion.

Attachments (check all appropriate boxes)

☑ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

☑ Copy of NMCRIS Map Check (required)

☐ LA Site Forms - new sites (with sketch map & topographic map) if applicable

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Methodology

- ☐ LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)
- ☐ Historic Cultural Property Inventory Forms, if applicable
- ☐ List and Description of Isolates, if applicable
- ☐ List and Description of Collections, if applicable

Other Attachments

- ☐ Photographs and Log
- ☐ Other attachments **Describe:**

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Cultural Resource Findings

Investigation Results

Archaeological Sites Discovered and Registered:	0
Archaeological Sites Discovered and NOT Registered:	0
Previously Recorded Archaeological Sites Revisited (site update form required):	0
Previously Recorded Archaeological Sites Not Relocated (site update form required):	0
Total Archaeological Sites (visited & recorded):	0
Total Isolates Recorded:	0
HCPI Properties Discovered and Registered:	0
HCPI Properties Discovered And NOT Registered:	0
Previously Recorded HCPI Properties Revisited:	0
Previously Recorded HCPI Properties NOT Relocated:	0
Total HCPI Properties (visited & recorded, including acequias):	0

If No Cultural Resources Found, Discuss Why: No cultural resources were recorded during the survey. The lack of cultural material is most likely due to the high level of disturbance, close proximity to multiple lease roads, and the relatively small area of survey coverage.

Management Summary

Summary: No cultural resources were recorded within the survey area. Completion of the proposed project will result in no effect to cultural resources which are eligible for listing to the National Register of Historic Places. The proposed project is recommended for approval as staked. If cultural materials are encountered during construction, work should be halted and archaeologists with the New Mexico State Land Office should be notified immediately.

Report run on: Jul 29, 2024 03:35 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156186 **HPD Log No(s).**

Attachments

Documents

Attachment Type	Description	Name	File Type	Upload Date	Upload By

CONTINUATION SHEET

NMCRIS Activity No.: 156186 (NMCRIS Activity Nos. assigned by ARMS staff or NMCRIS registration page; see NMCRIS User's Guide)

Table 1. Previously Recorded Cultural Resources within 500 m.

LA No.	Cultural/Temporal Affiliation	Eligibility
174754	Unknown Aboriginal (BC 9500 - AD 1800)	Undetermined

Table 2. Previously Conducted Archaeological Surveys within 500 m.

NMCRIS	Performing Organization	Lead Agency	Acres	Resources	Date
137175	Boone Archaeological Consultants, LLC.	US Bureau of Land Management Carlsbad Field Office	65.14	0	12/6/2016
143759	Lone Mountain Archaeological Services	US Bureau of Land Management Carlsbad Field Office	18.32	0	7/30/2019
148632	Boone Archaeological Consultants, LLC.	NM State Land Office	8.77	0	8/2/2021
154352	Boone Archaeological Consultants, LLC.	NM State Land Office	0	0	11/7/2023
154417	J. T. Rein Archaeology, LLC.	US Bureau of Land Management Carlsbad Field Office	0	0	11/15/2023
154763	J. T. Rein Archaeology, LLC.	US Bureau of Land Management Carlsbad Field Office	0	3	1/19/2024
155367	J. T. Rein Archaeology, LLC.	US Bureau of Land Management Carlsbad Field Office	0	0	3/14/2024
155264	Boone Archaeological Consultants, LLC.	US Bureau of Land Management Carlsbad Field Office	0	0	4/1/2024
155509	Boone Archaeological Consultants, LLC.	US Bureau of Land Management Carlsbad Field Office	0	0	4/1/2024

CONTINUATION SHEET

Photograph 1. Area of Concern Overview, View East

Photograph 2. Area of Concern Overview, View North

CONTINUATION SHEET

Photograph 3. Area of Concern Overview, View West

Photograph 4. Area of Concern Overview, View East

CONTINUATION SHEET

Photograph 5. Area of Concern Overview, View South

Table 3 Photograph Log

Photo Point	Description	Easting	Northing
PH01	Area of Concern Overview, View East	569768	3557717
PH02	Area of Concern Overview, View North	569843	3557640
PH 03	Area of Concern Overview, View West	570011	3557755
PH 04	Area of Concern Overview, View East	569835	3557750
PH 05	Area of Concern Overview, View South	569867	3557819

A Class III Archaeological Survey for the Murchison Oil and Gas, LLC Ogden 4 Cuttings Pit Leaching, Eddy County, New Mexico

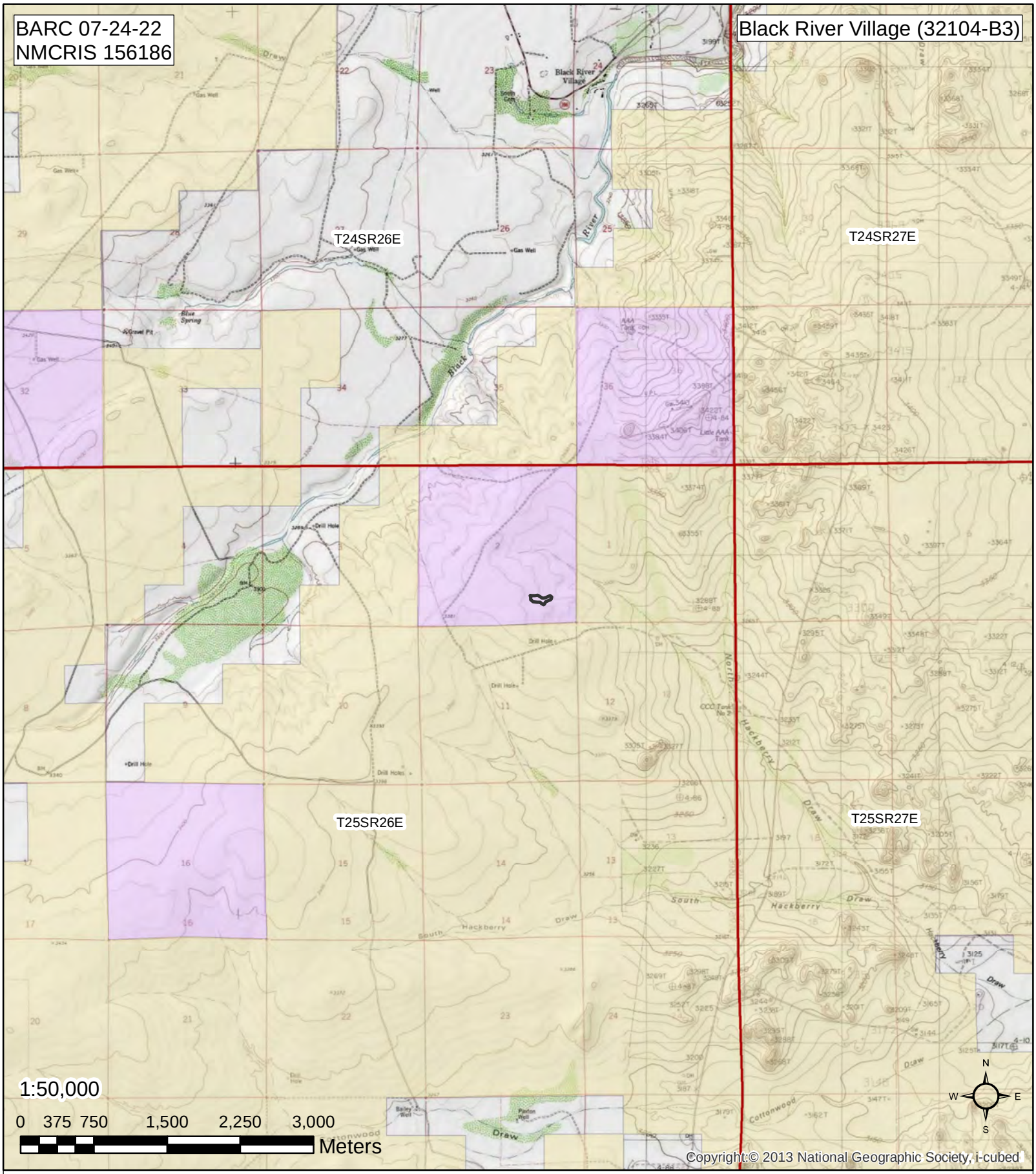


Figure 1. Project Area

Area of Concern | BLM | NM State | Private

A Class III Archaeological Survey for the Murchison Oil and Gas, LLC Ogden 4 Cuttings Pit Leaching, Eddy County, New Mexico

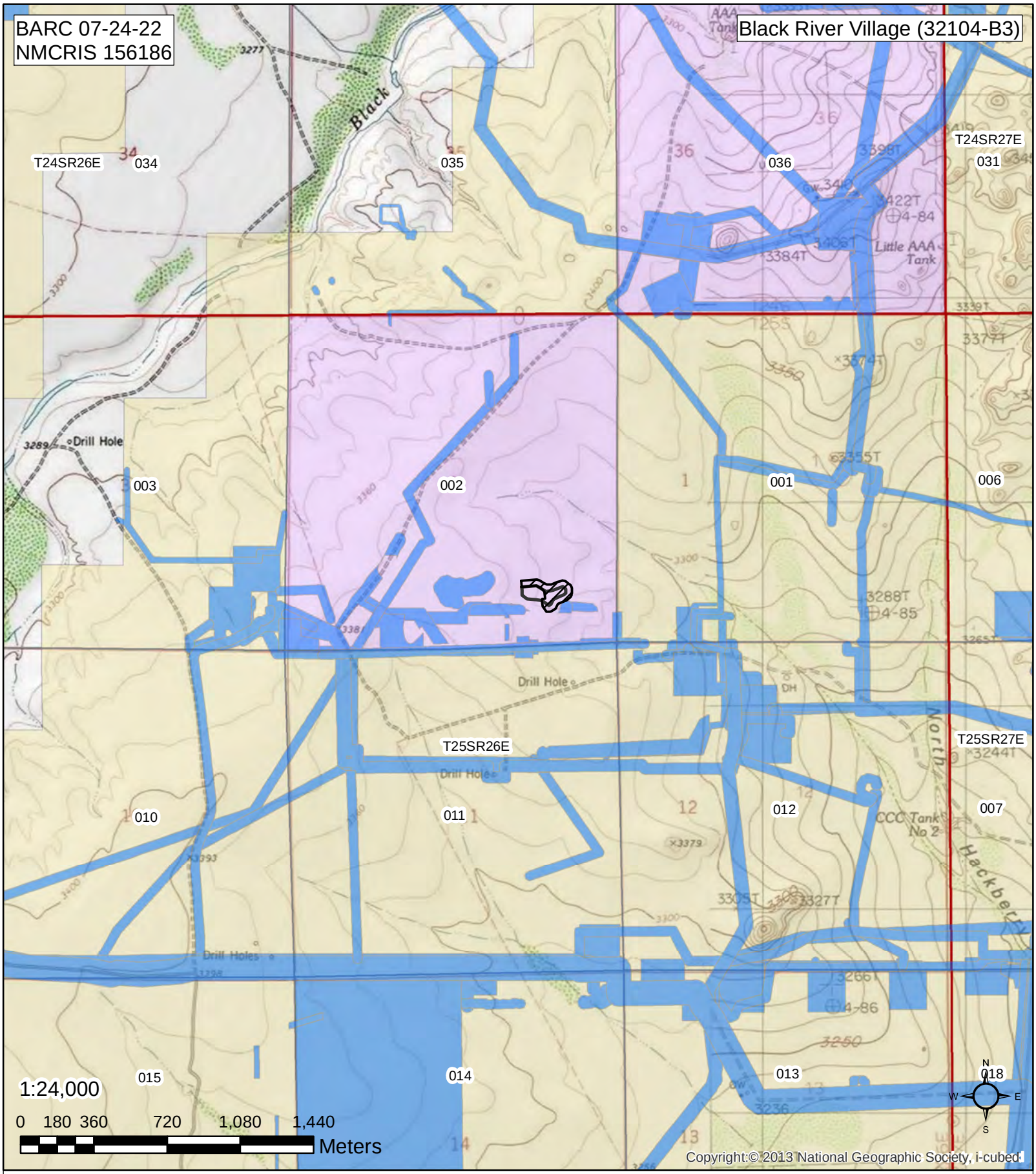


Figure 2. Current and Previous Survey

Survey Area | Area of Concern | Archaeological Survey | BLM | NM State | Private

Stephanie Garcia Richard, Commissioner of Public Lands
State of New Mexico

NMSLO Cultural Resources Cover Sheet Exhibit

NMCRIS Activity Number:
(if applicable)

Exhibit Type (select one)

ARMS Inspection/Review - Summarize the results (select one):

(A) The entire area of potential effect or project area has been previously surveyed to current standards and **no cultural properties** were found within the survey area.
(B) The entire area of potential effect or project area has been previously surveyed to current standards and **cultural properties were found** within the survey area.
(C) The entire area of potential effect or project area has **not** been previously surveyed or **has not been surveyed** to current standards. A complete archaeological survey will be conducted and submitted for review.

Archaeological Survey

Findings:

Negative - No further archaeological review is required.

Positive - Have avoidance and protection measures been devised? Select one:

Comments:

Project Details:

NMSLO Lease Number (if available):

Cultural Resources Consultant:

Project Proponent (Applicant):

Project Title/Description:

Project Location:

County(ies):

PLSS/Section/Township/Range):

For NMSLO Agency Use Only:

NMSLO Lease Number: Acknowledgment-Only:

Lease Analyst:

Date Exhibit Routed to Cultural Resources Office:

No person may alter the wording of the questions or layout of the cover sheet. The completion of this cover sheet by itself does not authorize anyone to engage in new surface disturbing activity before the review and approvals required by the Cultural Properties Protections Rule.

Form Revised 12 22

CEHMM
Conservation & Environmental Services
505 North Main Street I Carlsbad, New Mexico 88220-5875
phone: (575)885-3700 I email: info@cehmm.org

MURCHISON OIL AND GAS, LLC

OGDEN STATE #4

SPECIAL STATUS PLANT SPECIES SURVEY REPORT

08/12/2024

TABLE OF CONTENTS

SUMMARY

CEHMM conducted a Special Status Plant Species (SSPS) survey for Scheer's beehive cactus (*Coryphantha robustispina* ssp. *scheeri*). for the Murchison Oil and Gas, LLC. Ogden State #4 (Project) on July 25th, 2024. Per New Mexico State Land Office (SLO) regulations parallel transects for the SSPS survey spaced at 20 meters apart were walked, encompassing a 100-meter buffer around the Project in known habitat for Scheer's beehive on SLO land.

Field Notes from the survey indicate that no individuals of the Scheer's beehive cactus were observed within the 100-meter buffer of the project.

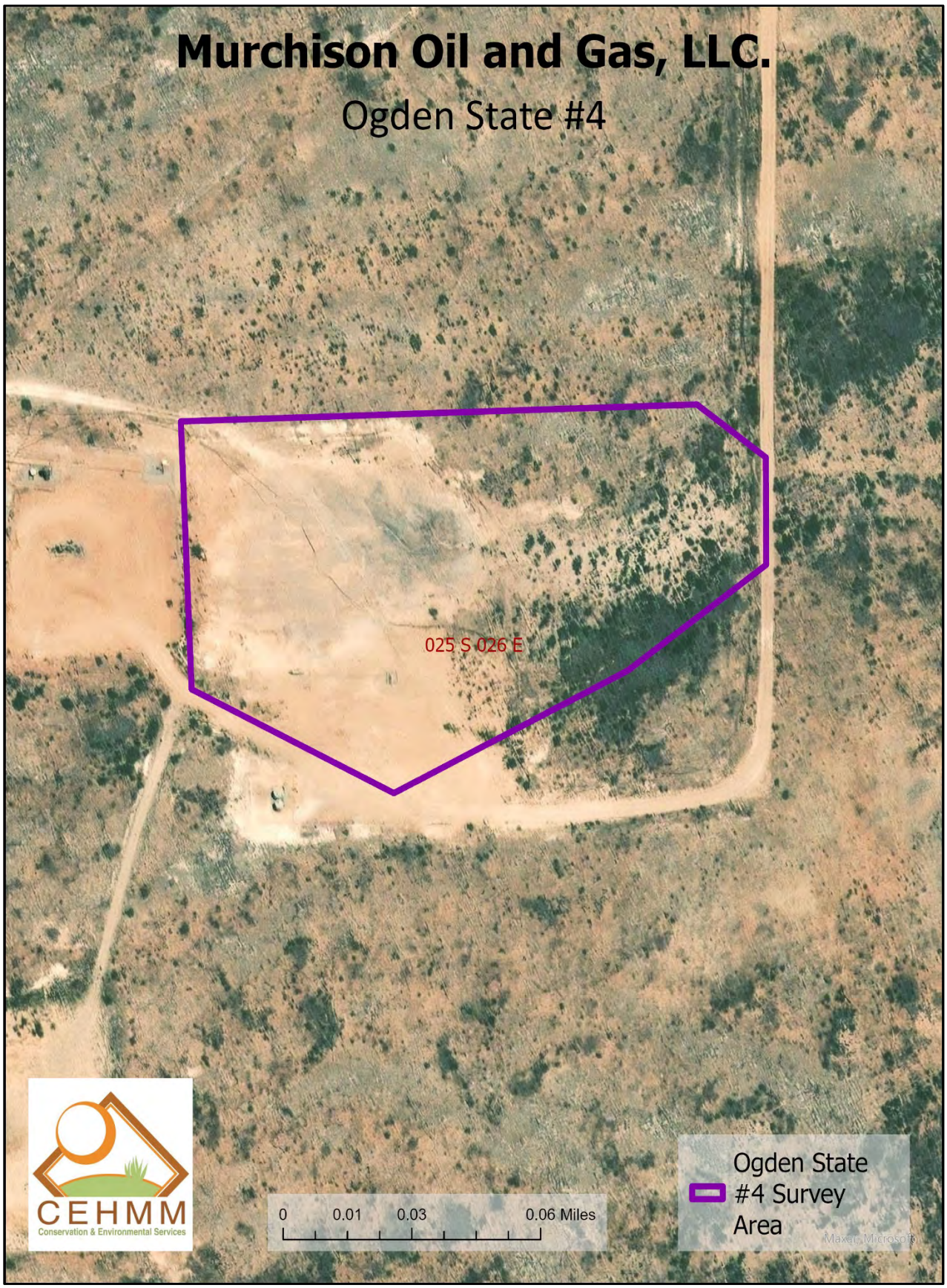


Figure 1: Overview map of the proposed project.

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Registration

Lead Agency: NM State Land Office

Performing Agency: Boone Archaeological Consultants, LLC.

Activity ID: Murchison Oil and Gas, LLC Proposed Ogden 4 Remediation Expansion

Performing Agency Report No: BARC 09-24-30

Other Agencies:

Report Recipient (Your Client): Murchison Oil and Gas, LLC

Activity Types:

- [ ] Research Design
- [x] Archaeological Survey/Inventory
- [ ] Architectural Survey/Inventory
- [ ] Test Excavation
- [ ] Monitoring
- [ ] Collections/Non-Field Study
- [ ] Compliance Decision
- [ ] Literature Review Overview
- [ ] Excavation
- [ ] Ethnographic Study
- [ ] Resource/Property Visit
- [ ] Historic Structures Report
- [ ] Other:

Total Survey Acreage: 3.82

Total Tribal Acreage: 0.00

Total Resources Visited: 0

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Associate/Register Resources

Prefix	Number	Field Site/Other Number	In GIS	Resource Type	Collections Made?	Revisit

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Report Details

Type of Report

Type of Report Negative

Lead Agency

Lead Agency: NM State Land Office

Lead Agency Report No.

Report Number:

Title of Report

Title of Report: A Class III Archaeological Survey for the Murchison Oil and Gas, LLC Proposed Ogden 4 Remediation Expansion, Eddy County, New Mexico

Authors: Galassini, Stacy K. and Dane B. Womble

Publication Type: Report, Monograph, or Book

Description of Undertaking (what does the project entail?)

Description: Murchison Oil and Gas, LLC has requested a pedestrian cultural resources survey for a remediation sampling in Eddy County, NM, on New Mexico State Trust (NMST) land in Section 2 of T25S R26E. The area of concern totals 1.98 acres on NMST land.

Dates of Investigation

From: 26-Sep-2024 **To:** 26-Sep-2024

Report Date

Report Date: 26-Sep-2024

Performing Agency/Consultant

Name: Boone Archaeological Consultants, LLC.

Principal Investigator: Stacy K. Galassini

Field Supervisor: Dane Womble

Field Personnel Names:

Historian/Other

Performing Agency Report Number

Report Number: BARC 09-24-30

Client/Customer (project proponent)

Name: Murchison Oil and Gas, LLC

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Report Details

Contact: Cindy Cottrell

Address:

Phone (469) 573-6413

Client/Customer Project Number

Project Number:

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Ownership & Location

Land Ownership Status (Must be indicated on Project Map)

Owner/Manager List:

Land Owner/Manager	Protocol	Acres Surveyed	Acres in APE
NM State Land Office	Class III	3.82	3.82

Total Survey Acreage: 3.82

Total Tribal Acreage: 0.00

Record Search(es)

Date of HPD/ARMS File Review: 25-Sep-2024

Date of Other Agency File Review

Survey Data

Source Graphics: NAD 83

☑ USGS 7.5' (1:24,000) topo map ☐ Other Topo Map Scale:

☑ GPS Unit <1M

☐ Aerial Photos Other Source Graphic(s):

The following tables (b,c,& e) are calculated by the NMCRIS Map Service

USGS 7.5' Topographic Map(s)

Map Name	USGS Quad Code
Black River Village, NM	32104-B3

County(ies)

County	FIPS
EDDY	35015

Legal Description

Unplatted	Township (N/S)	Range (E/W)	Section
No	T25S	R26E	2

Projected Legal Description

No

Nearest City or Town: Loving, NM

Other Description:

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Methodology

Survey Field Methods

Intensity: 100% coverage

Configuration: ☑ Block Survey Units ☐ Linear Survey Units (l x y)

Other Survey Units

Scope: All Resources

Coverage Method: ☑ Systematic Pedestrian Coverage **Other Method:**

Survey Interval (m): 15 **Crew Size** 1

Fieldwork Dates **From** 26-Sep-2024 **To** 26-Sep-2024

Survey Person Hours: 1.00 **Recording Person Hours** 0.00

Additional Narrative: The area of concern was surveyed using 50 ft. parallel transects across an irregular block survey area, including a 100 ft. buffer around the area of concern. Those portions of the area of concern that fell within previously surveyed spaces were excluded from the current survey. The survey area totals 3.82 acres on NMST land. The survey falls within 1 km of three previously recorded cultural resources: LAs 174753, 174754, and 204188. For complete details on the cultural resources, see Table 1. The survey area falls within 500 m of ten previous archaeological surveys. For complete details on the previous surveys, see Table 2.

Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.)

Environmental Setting: According to the Natural Resources Conservation Service' Online database, the area of concern soils consists of Reeves-Gypsum land complex, loamy soil, 0 to 3 percent slopes. This soil supports tobosa, black grama, and blue grama. Grass cover is uniformly distributed with few large bare areas. Shrubs are sparse and evenly distributed. The current vegetative community consists of mesquite, broom snakeweed, creosote, four-wing saltbush, pencil cholla, prickly pear, soapweed yucca, desert grasses and forbs. The survey area lies on a gently rolling and rocky desert scrubland with naturally occurring gypsum exposed on the surface. The elevation ranges between 3,310 ft. to 3,320 ft. above mean sea level.

Percent Ground Visibility

Ground Visibility: 51-75%

Condition of Survey Area: Some portions of the survey area have been impacted by a well pad, buried pipelines, flowlines, lease roads, two-track roads, push piles, cattle grazing, bioturbation, water and wind erosion.

Attachments (check all appropriate boxes)

☑ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

☑ Copy of NMCRIS Map Check (required)

☐ LA Site Forms - new sites (with sketch map & topographic map) if applicable

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Methodology

- ☐ LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)
- ☐ Historic Cultural Property Inventory Forms, if applicable
- ☐ List and Description of Isolates, if applicable
- ☐ List and Description of Collections, if applicable

Other Attachments

- ☐ Photographs and Log
- ☐ Other attachments **Describe:**

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Cultural Resource Findings

Investigation Results

Archaeological Sites Discovered and Registered:	0
Archaeological Sites Discovered and NOT Registered:	0
Previously Recorded Archaeological Sites Revisited (site update form required):	0
Previously Recorded Archaeological Sites Not Relocated (site update form required):	0
Total Archaeological Sites (visited & recorded):	0
Total Isolates Recorded:	0
HCPI Properties Discovered and Registered:	0
HCPI Properties Discovered And NOT Registered:	0
Previously Recorded HCPI Properties Revisited:	0
Previously Recorded HCPI Properties NOT Relocated:	0
Total HCPI Properties (visited & recorded, including acequias):	0

If No Cultural Resources Found, Discuss Why: No cultural resources were recorded during the survey. The lack of cultural material is most likely due to the high level of disturbance, close proximity to multiple lease roads, and the relatively small area of survey coverage.

Management Summary

Summary: No cultural resources were recorded within the survey area. Completion of the proposed project will result in no effect to cultural resources which are eligible for listing to the National Register of Historic Places. The proposed project is recommended for approval as staked. If cultural materials are encountered during construction, work should be halted and archaeologists with the New Mexico State Land Office should be notified immediately.

Report run on: Sep 26, 2024 03:13 PM

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 156697 **HPD Log No(s).**

Attachments

Documents

Attachment Type	Description	Name	File Type	Upload Date	Upload By

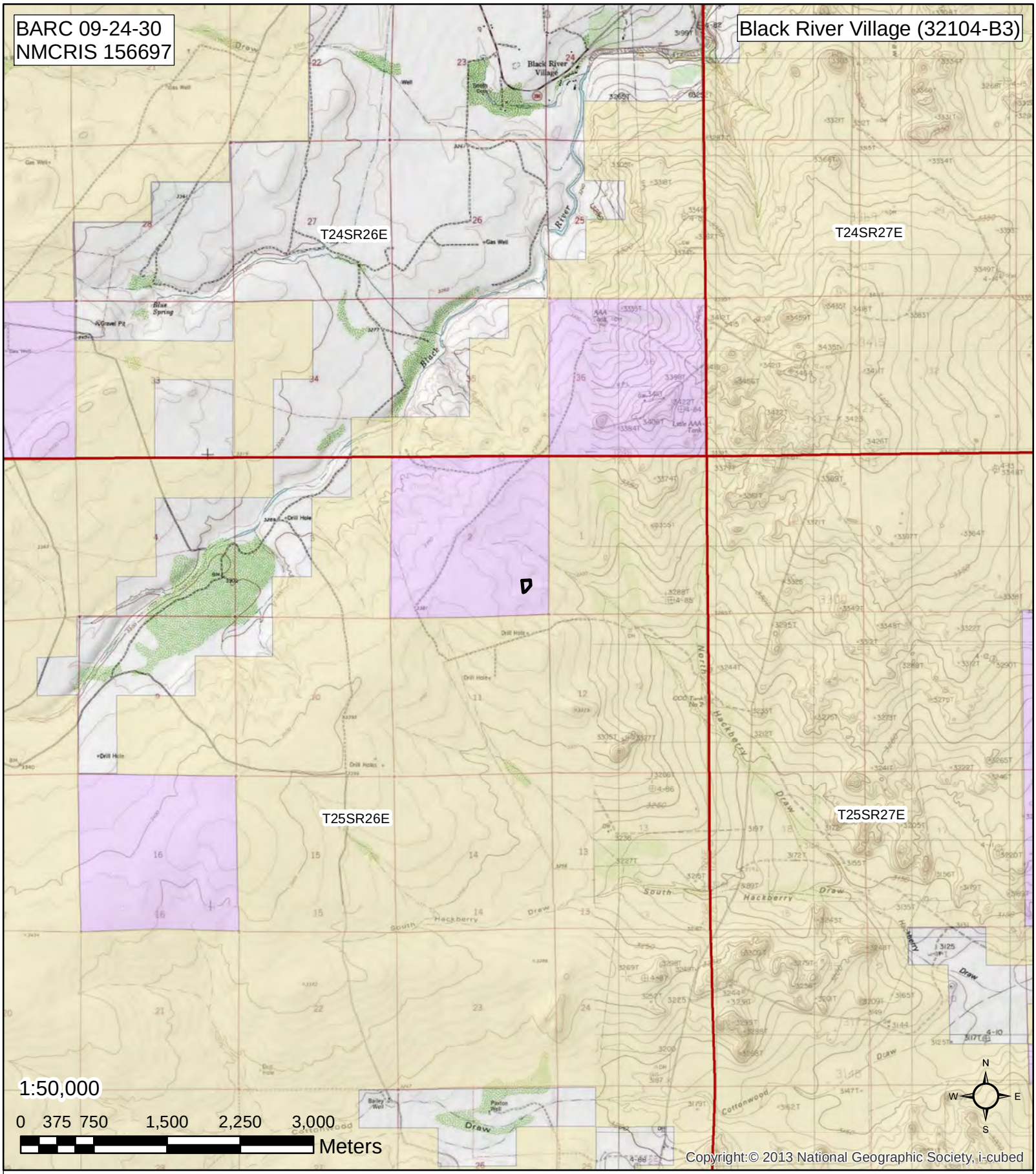


Figure 1. Remediation Area

Release Remediation Area | BLM | NM State | Private

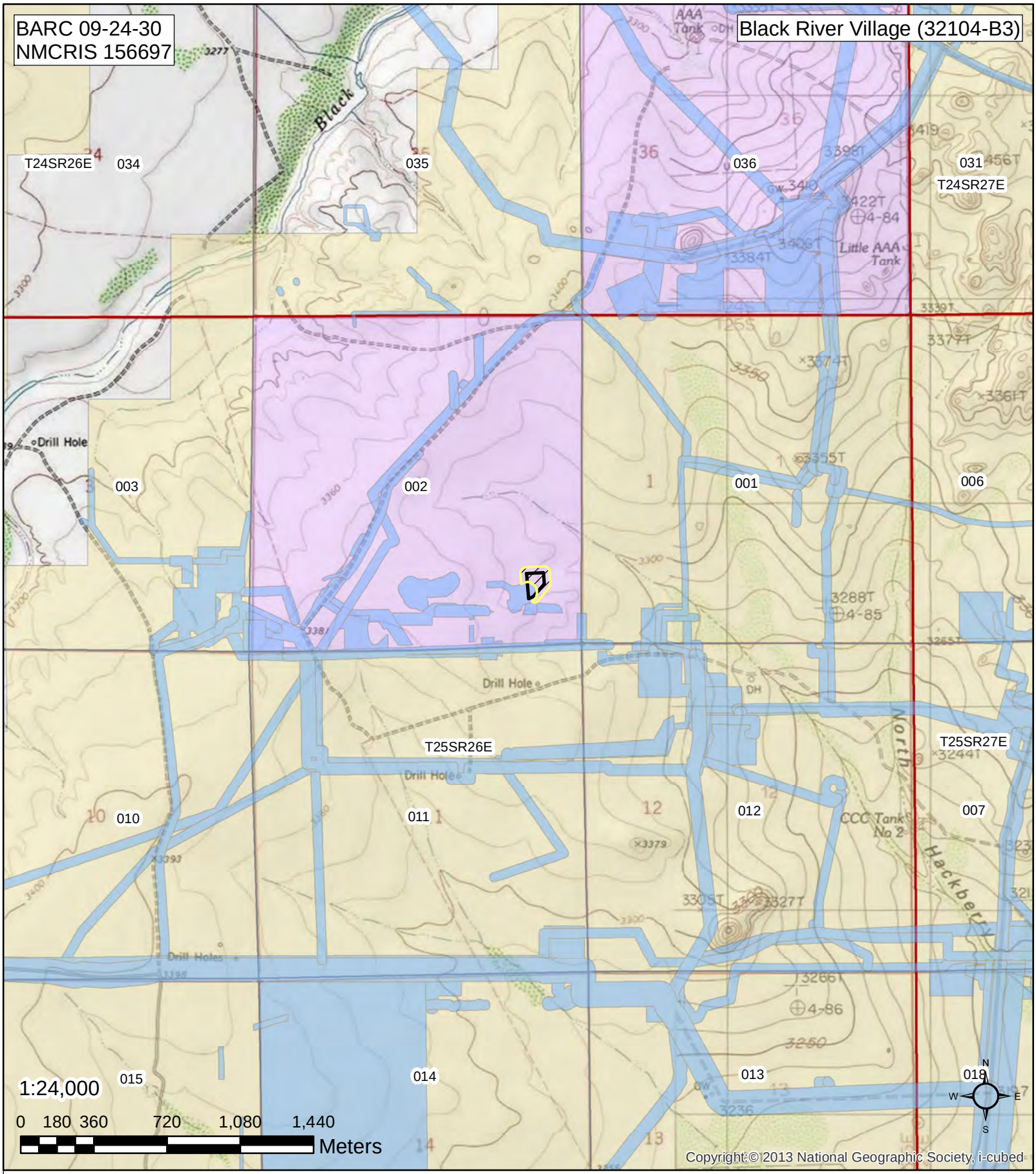


Figure 2. Current and Previous Survey

Survey Area | Release Remediation Area | Archaeological Survey | BLM | NM State | Private

CONTINUATION SHEET

Photograph 1. Remediation Area, View South

Photograph 2. Remediation Area, View South

CONTINUATION SHEET

Photograph 3. Remediation Area, View North

Photograph 4. Remediation Area, View Southwest

CONTINUATION SHEET

Table 3. Photograph Log

Photo Point	Description	Easting	Northing
PH01	Remediation Area, Face South	570006	3557855
PH02	Remediation Area, Face South	569965	3557846
PH 03	Remediation Area, Face North	570008	3557777
PH 04	Remediation Area, Face Southwest	570045	3557756

Stephanie Garcia Richard, Commissioner of Public Lands
State of New Mexico

NMSLO Cultural Resources Cover Sheet Exhibit

NMCRIS Activity Number: 156697
(if applicable)

Exhibit Type (select one)

○ **ARMS Inspection/Review** - Summarize the results (select one):

- ☐ (A) The entire area of potential effect or project area has been previously surveyed to current standards and **no cultural properties** were found within the survey area.
- ☐ (B) The entire area of potential effect or project area has been previously surveyed to current standards and **cultural properties were found** within the survey area.
- ☐ (C) The entire area of potential effect or project area has **not** been previously surveyed or **has not been surveyed** to current standards. A complete archaeological survey will be conducted and submitted for review.

◉ **Archaeological Survey**

Findings:

- ☑ **Negative** - No further archaeological review is required.
- ☐ **Positive** - Have avoidance and protection measures been devised? Select one: ☐

Comments:

Project Details:

NMSLO Lease Number (if available):

Cultural Resources Consultant: Boone Archaeological Resource Consultants LLC

Project Proponent (Applicant): Murchison Oil and Gas, LLC

Project Title/Description: A Class III Archaeological Survey for the Murchison Oil and Gas, LLC Proposed Ogden 4 Remediation Expansion, Eddy County, New Mexico

Project Location:

County(ies): Eddy County, NM

PLSS/Section/Township/Range): T25S R26E S2

For NMSLO Agency Use Only:

NMSLO Lease Number: Acknowledgment-Only: ☐

Lease Analyst:

Date Exhibit Routed to Cultural Resources Office:

No person may alter the wording of the questions or layout of the cover sheet. The completion of this cover sheet by itself does not authorize anyone to engage in new surface disturbing activity before the review and approvals required by the Cultural Properties Protections Rule.

Form Revised 12 22

Attachment VIII
NMSLO Gypsum Sites Seed Mixture

NMSLO Seed Mix Lime – Gypsum (LG)

LIME – GYPSUM (LG) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Black grama	**VNS, Southern**	**1.0**	**D**
Blue grama	**Lovington**	**1.0**	**D**
Sideoats grama	**Vaughn, El Reno**	**4.0**	**F**
Plains bristlegrass	**VNS, Southern**	**2.0**	**D**
Sand dropseed	**VNS, Southern**	**2.0**	**S**
Forbs:			
Firewheel (*Gaillardia*)	**VNS, Southern**	**1.0**	**D**
Annual Sunflower	**VNS, Southern**	**1.0**	**D**
Shrubs:			
Fourwing saltbush	**VNS, Southern**	**1.0**	**F**
	Total PLS/acre	**13.0**	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at http://plants.usda.gov.

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

QUESTIONS

Action 390284

QUESTIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2424335058**
Incident Name	**NAPP2424335058 OGDEN STATE 4 LEGACY RELEASE @ 30-015-32479**
Incident Type	**Other**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-015-32479] OGDEN STATE #004**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Ogden State 4 Legacy Release
Date Release Discovered	06/18/2024
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Other | Other (Specify) | Crude Oil | Released: 0 BBL (Unknown Released Amount) | Recovered: 0 BBL | Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Other | Other (Specify) | Produced Water | Released: 0 BBL (Unknown Released Amount) | Recovered: 0 BBL | Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Legacy release of unknown source. Release extent currently being assessed.

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

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Legacy release under investigation.
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Cindy Cottrell Title: Regulatory Coordinator Email: ccottrell@jdmii.com Date: 10/09/2024

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

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	52000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	2014
GRO+DRO (EPA SW-846 Method 8015M)	1870
BTEX (EPA SW-846 Method 8021B or 8260B)	0.3
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	10/21/2024
On what date will (or did) the final sampling or liner inspection occur	11/21/2024
On what date will (or was) the remediation complete(d)	12/21/2024
What is the estimated surface area (in square feet) that will be reclaimed	167400
What is the estimated volume (in cubic yards) that will be reclaimed	26700
What is the estimated surface area (in square feet) that will be remediated	167400
What is the estimated volume (in cubic yards) that will be remediated	26700
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	*Not answered.*
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360 Red Bluff, Orla
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	Yes
Other Non-listed Remedial Process. Please specify	Variance request for use of 20-mil Geosynthetic clay liner (see attached).
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Cindy Cottrell Title: Regulatory Coordinator Email: ccottrell@jdmii.com Date: 10/14/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**386119**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**09/26/2024**
What was the (estimated) number of samples that were to be gathered	**145**
What was the sampling surface area in square feet	**220000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 390284

CONDITIONS

Operator:	OGRID:
Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	15363
	Action Number: 390284
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation plan conditionally approved.	10/16/2024
bhall	The release is located in a High Karst Potential Occurrence Zone and must be closed to most stringent closure criteria.	10/16/2024
bhall	OCD will approve the proposed excavation depths plan with the exception of the locations of CS-07 and SP-5. The delineation data shows that these areas meet the most stringent closure criteria at 12' below ground surface (bgs). The excavation in these areas must extend past the proposed 10'.	10/16/2024
bhall	OCD will not consider a liner variance request at this time. The base will need to be reassessed with the confirmation sample data and if a liner is deemed necessary in certain areas, a variance will need to be proposed, via email, at that time. Shallower areas that have soil confirmation laboratory analytical results that meet the most stringent closure criteria will not require a variance request. Areas to be considered for a liner variance request must be analyzed for BTEX, TPH, and chloride. If contamination is above 10,000 mg/kg for chloride, 100 mg/kg for TPH, 10 mg/kg for benzene, and 50 mg/kg for BTEX additional excavation must be performed.	10/16/2024
bhall	All wall samples must meet the most stringent closure criteria found on Table I of 19.15.29 NMAC.	10/16/2024
bhall	Pursuant to 19.15.29.12D.(1)(a) NMAC, OCD must be notified at least two business days prior to collecting confirmation/final samples. All confirmation/final samples must be five-point composite samples representative of no more than 200 square feet.	10/16/2024
bhall	OCD will require approval from the surface owner (SLO) prior to considering a liner variance request.	10/16/2024
bhall	Submit a complete report through the OCD Permitting website by 1/17/2025.	10/16/2024