



Remediation Summary and Closure Request

Ridge Runner Resources Operating, LLC

Big Cat State Com #1

Eddy County, New Mexico

Unit Letter "G", Section 11, Township 17 South, Range 28 East

Latitude 32.853361 North, Longitude 104.144585 West

NMOCD Incident # NMCS0414928403

Prepared For:

Ridge Runner Resources Operating, LLC
4000 N Big Spring Ste 210
Midland, TX 79705

Prepared By:

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

November 2024

A handwritten signature in black ink, appearing to read "Daniel Dominguez", is written over a horizontal line.

Daniel Dominguez
Environmental Director
ddominguez@hungry-horse.com

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HUNGRY HORSE, LLC

The following *Remediation Summary and Closure Request* serves as a condensed update on field activities undertaken at the afore referenced Site.

Background:

The site is located in Unit Letter G (SW/NE), Section 11, Township 17 South, Range 28 East, approximately fourteen miles Northwest of Loco Hills, 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 release occurred in an active tank battery; Latitude 32.868718 North, Longitude 104.060104 West. The NMOCD Form C-141 indicates that on May 13, 2004, the release of approximately seventy bbls of crude oil was caused by a hole that developed in the bottom of the tank. Approximately sixty bbls of oil was recovered via vacuum truck. Previously submitted NMOCD Form C-141 is 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 IV and the results are depicted on Figures 2 and 3.

No water wells were located within a half mile of the release area. Also, as the site is located in a Gypsum Karst designated area, the site was 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
<50'	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 Simona gravelly fine sandy loam consisting of gravelly fine sandy loam soils with 0 to 3 percent slopes. As the release occurred within an active tank battery, no seeding will be required. Karst, Wetland, and Soil Maps are provided as Attachment I.



Delineation and Remediation Activities:

The release that occurred on May 13, 2004, was subsequently remediated according to an approved work plan which was submitted on June 28, 2004. OCD approval of submitted work plan was granted on June 30, 2004. Additional correspondence in November 2004 indicated remedial work was ongoing.

In 2018, Murchison Oil and Gas contacted RT Hicks Consultants requesting a review of the unresolved 2004 release at the Big Cat facility. In January 2019, the remediated area was sampled and closure submitted to the OCD. Closure was not granted at that time. On May 7, 2024, Murchison contacted the OCD requesting a review of the associated files. On May 7, 2024, OCD indicated that without a copy of the closure sampling notification from 2019 the report would only be accepted if additional sampling was conducted at sampling locations SP3, SP5, and SP9. On May 14, 2024, the SLO also requested additional sampling be conducted at sample locations SP2, SP4, and SP6. Correspondence is provided as Attachment II.

On July 19, 2024, Hungry Horse notified OCD that sampling would occur at the Big Cat State Com #1 on July 24, 2024.

On July 24, 2024, Hungry Horse conducted requested sampling of the release area. During sampling activities, sample test trenches were advanced throughout the affected area in an effort to determine the vertical extent of contamination, if any. During advancement of the 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 V, thirty representative soil samples were selected for laboratory analysis. Delineation soil samples SP2 – SP6 and SP9, 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 SP2 at Surface through three feet bgs, SP3 at one-foot bgs, SP4 at one foot and three feet bgs, SP5 from Surface through four feet bgs, and SP9 at Surface, one foot, three feet, and four feet bgs, which exhibited TPH and/or chloride concentrations in excess of NMOCD Closure Criteria.

From September 25 through October 2, 2024, the areas characterized by sample locations SP2, SP3, SP4, SP5, and SP9 were excavated. Excavated contaminated soil was immediately loaded and transported to an NMOCD approved disposal facility. On October 4, 2024, Hungry Horse, LLC notified NMOCD that closure samples would be collected on October 9, 2024. Correspondence is provided as Attachment II.

On October 9, 2024, twelve composite confirmation soil samples were collected from the excavation floor and sidewalls, with each sample representing no more than 200 square feet. Soil samples FL1 through FL5 and SW1 through SW7, 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 FL4, SW1, SW2, SW6, and SW7, which exhibited TPH concentrations in excess of NMOCD Closure Criteria.

On October 22, 2024, the areas characterized by sample locations FL4, SW1, SW2, SW6, and SW7 were excavated. Excavated contaminated soil was immediately loaded and transported to an NMOCD approved disposal facility. On October 24, 2024, Hungry Horse, LLC notified NMOCD that closure samples would be collected on October 29, 2024. Correspondence is provided as Attachment II.

On October 29, 2024, five composite confirmation soil samples were collected from the excavation floor and sidewalls, with each sample representing no more than 200 square feet. Soil samples FL4b, SW1b, SW2b, SW6b, and SW7b, 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.

On October 29, 2024, two additional composite confirmation soil samples were collected from the FL4 excavation sidewalls from the sidewall area exposed when the excavation was deepened, with each sample representing no more than 200 square feet. Soil samples SW4b, and SW5b, 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.

As remediation activities were completed, Murchison Oil and Gas sold this location, among other assets, to Ridge Runner Resources Operating, LLC.

The affected areas totaled approximately one thousand square feet, and varied in depth from four to six feet bgs. During remediation activities approximately 200 cubic yards of impacted soil were excavated and hauled to an NMOCD approved disposal facility.

An Excavation Sample Map is provided as Figure 4. A Summary of Soil Sample Laboratory Analytical Results is provided as Table 1 and Laboratory Analytical Reports are provided as Attachment VI.

Sampling Procedure and Identification:

During confirmation sampling, five-point composite soil samples were collected from the floor of the excavation, with each collected sample representing an area no greater than 200 square feet. These sample locations are identified by FL designation. Five-point composite soil samples were also collected from the sidewalls of the excavation, with each collected sample representing an area no greater than 200 square feet. These sample locations are identified by SW designation.

Excavation sidewall samples SW1 through SW7 were collected as five-point composite samples from the excavation surface to the excavation floor. The Excavation Sample Map, provided as Figure 4, depicts sidewall sample locations.



Restoration, Reclamation, and Re-Vegetation:

Based upon laboratory analytical results from confirmation soil samples, the excavations were backfilled with locally sourced, clean, non-impacted caliche. The area was contoured to achieve erosion control and preserve surface water flow. As the release occurred within an active tank battery, no seeding will be required.

Closure Request:

Remediation activities were conducted in accordance with applicable NMOCD Regulations. Soil affected above the NMOCD Closure Criteria has been excavated and hauled to an NMOCD approved facility for disposal. Laboratory analytical results from composite confirmation samples indicate concentrations of BTEX, TPH, and chloride are below the NMOCD Closure Criteria.

Based on laboratory analytical results, Ridge Runner Resources Operating, LLC respectfully requests closure of the Big Cat State Com #1 location, NMCS0414928403.

Limitations:

Hungry Horse, LLC, has prepared this *Remediation Summary and Closure Request* 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:

Ridge Runner Resources Operating, LLC

4000 N Big Spring Ste 210

Midland, TX 79705

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

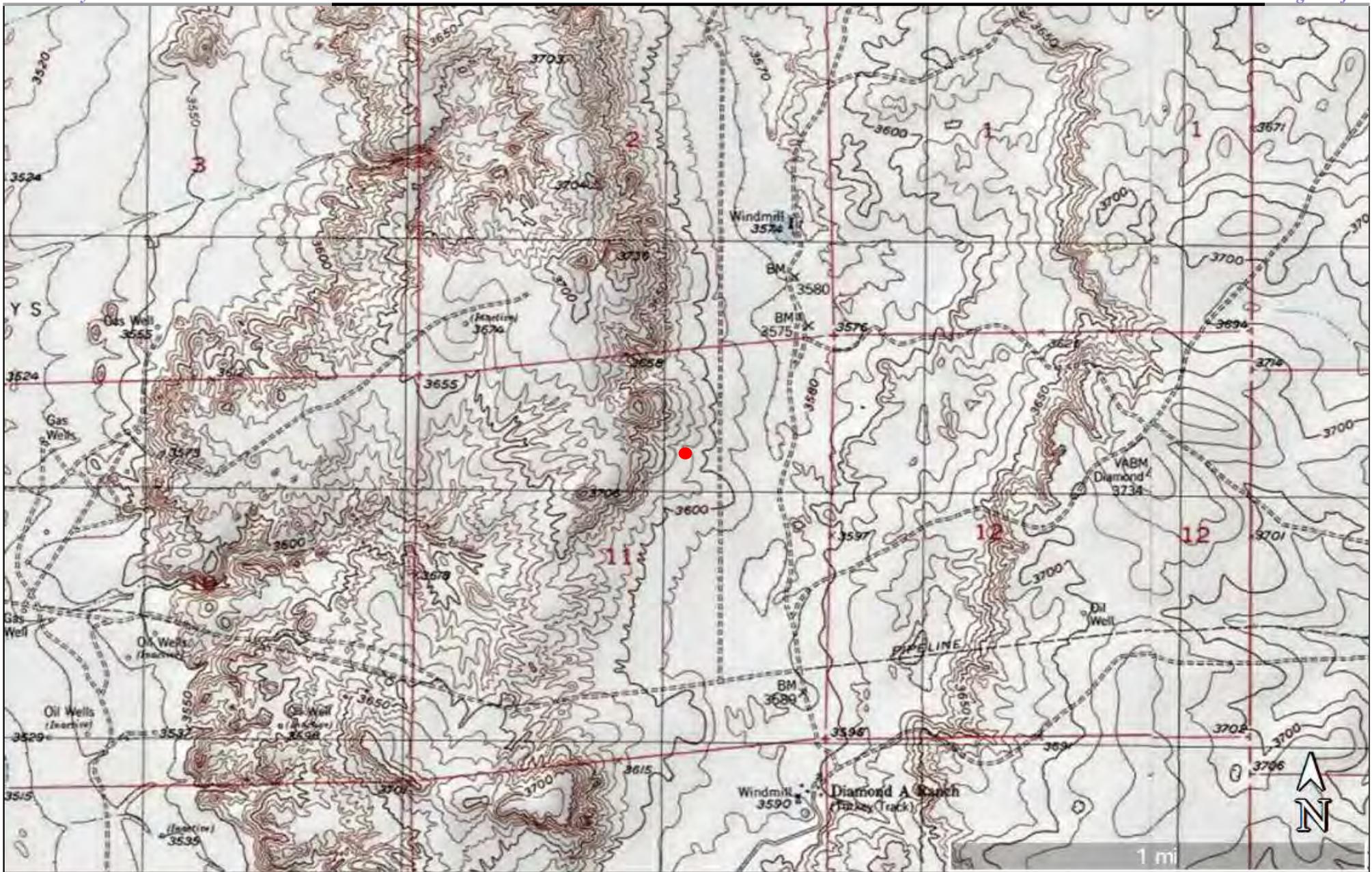


Figure 1

Topographic Map
 Ridge Runner Resources Operating, LLC
 Big Cat State Com #1
 GPS: 32.853361, -104.144585
 Eddy County

Legend:

● Big Cat State Com #1 Location

Drafted: dd
 Checked: km
 Date: 7/24/24





Figure 2

OSE POD Locations Map
Ridge Runner Resources Operating, LLC
Big Cat State Com #1
GPS: 32.853361, -104.144585
Eddy County

Legend:

- Big Cat State Com #1 Location



Drafted: dd
Checked: km
Date: 7/24/24

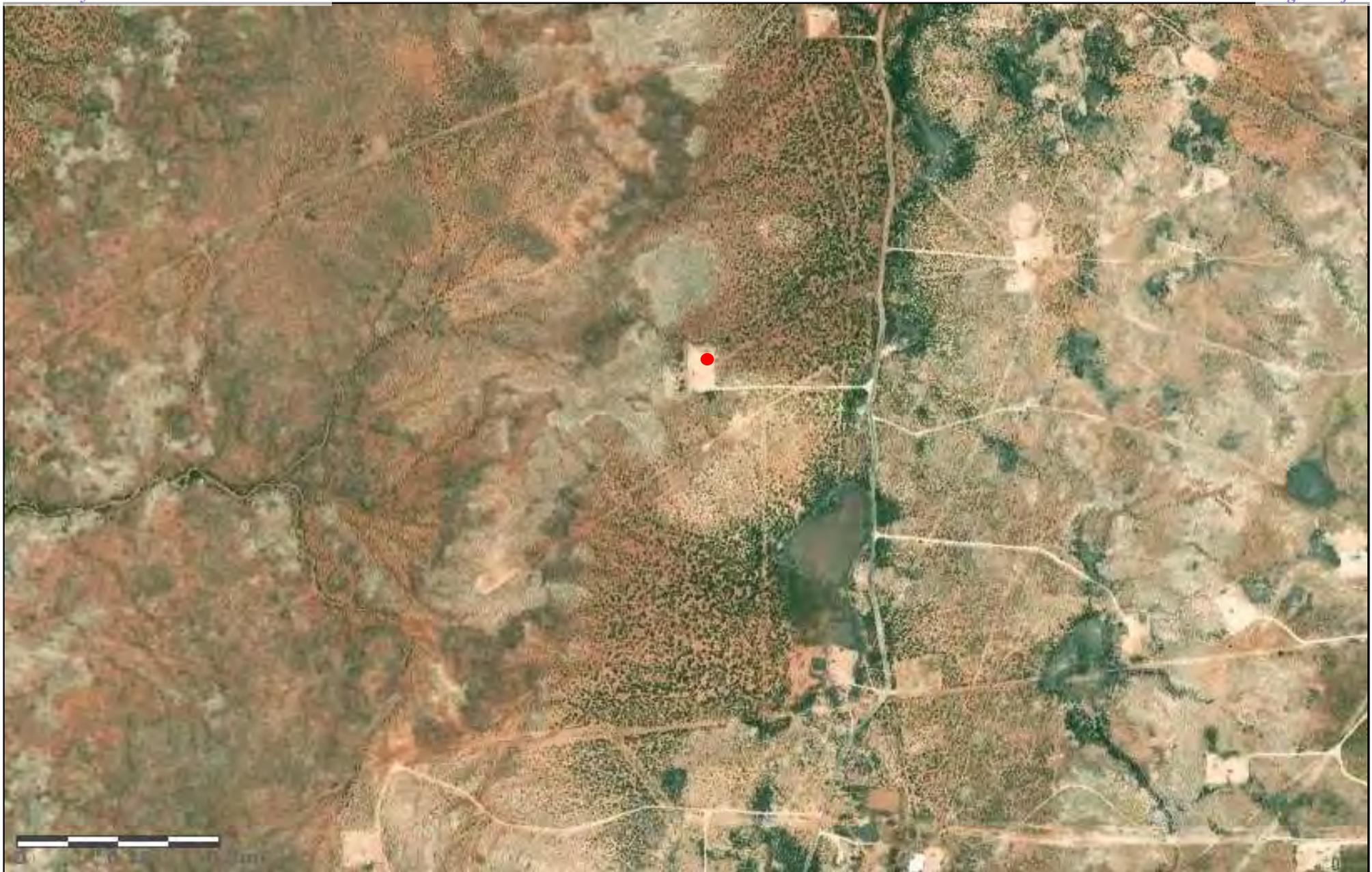


Figure 3

USGS Well Locations Map
Ridge Runner Resources Operating, LLC
Big Cat State Com #1
GPS: 32.853361, -104.144585
Eddy County

Legend:

● Big Cat State Com #1 Location

Drafted: dd
Checked: km
Date: 7/24/24





Figure 4

Excavation Sample Map
 Ridge Runner Resources Operating, LLC
 Big Cat State Com #1
 GPS: 32.853361, -104.144585
 Eddy County

Legend:

- Excavated Areas
- FL1 Composite Confirmation Sample Location

Drafted: dd
 Checked: km
 Date: 10/28/24



Table

TABLE 1
Summary of Soil Sample Laboratory Analytical Results
Ridge Runner Resources Operating, LLC
Big Cat State Com #1
NMOCD Ref. #: NMCS0414928403

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)
SP2	7/24/24	Surf	Excavated	<0.050	0.371	27.8	3,570	3,597.8	722	4,319.8	1,920
	7/24/24	1	Excavated	<0.050	0.457	15.4	1,870	1,885.4	422	2,307.4	1,520
	7/24/24	2	Excavated	<0.050	<0.300	<10.0	496	496	173	669	800
	7/24/24	3	Excavated	<0.050	<0.300	<10.0	89.0	89.0	33.3	122.3	432
	7/24/24	4	In-Situ	<0.050	<0.300	<10.0	11.1	<20.0	<10.0	<30.0	96.0
SP3	7/24/24	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
	7/24/24	1	Excavated	<0.050	<0.300	<10.0	126	126	88.1	214.1	48.0
	7/24/24	2	Excavated	<0.050	<0.300	<10.0	55.9	55.9	33.0	88.9	32.0
	7/24/24	3	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	7/24/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SP4	7/24/24	Surf	Excavated	<0.050	<0.300	<10.0	23.0	23.0	<10.0	<30.0	112
	7/24/24	1	Excavated	<0.050	<0.300	<10.0	77.2	77.2	39.4	116.6	64.0
	7/24/24	2	Excavated	<0.050	<0.300	<10.0	11.7	<20.0	<10.0	<30.0	32.0
	7/24/24	3	Excavated	<0.050	<0.300	<10.0	69.6	69.6	35.6	105.2	112
	7/24/24	4	In-Situ	<0.050	<0.300	<10.0	21.2	21.2	<10.0	<30.0	48.0
SP5	7/25/24	Surf	Excavated	<0.050	<0.300	<50.0	9,250	9,250	3,340	12,590	16.0
	7/25/24	1	Excavated	<0.050	5.45	244	4,050	4,294	977	5,271	48.0
	7/25/24	2	Excavated	<0.050	<0.300	<10.0	547	547	205	752	80.0
	7/25/24	3	Excavated	<0.050	<0.300	<10.0	18.9	<20.0	<10.0	<30.0	704
	7/25/24	4	Excavated	<0.050	<0.300	<10.0	37.2	37.2	<10.0	37.2	640
SP6	7/25/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	7/25/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
	7/25/24	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	7/25/24	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	7/25/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
SP9	7/25/24	Surf	Excavated	<0.050	<0.300	<10.0	602	602	252	854	32.0
	7/25/24	1	Excavated	<0.050	<0.300	<10.0	96.7	96.7	55.1	151.8	32.0
	7/25/24	2	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
	7/25/24	3	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	560
	7/25/24	4	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	640
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 1
Summary of Soil Sample Laboratory Analytical Results
Ridge Runner Resources Operating, LLC
Big Cat State Com #1
NMOCD Ref. #: NMCS0414928403

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)
FL1	10/9/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL2	10/9/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL3	10/9/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL4	10/9/24	5	Excavated	<0.050	<0.300	<10.0	98.9	98.9	76.0	174.9	32.0
FL4b	10/29/24	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL5	10/9/24	5	In-Situ	<0.050	<0.300	<10.0	13.5	<20.0	<10.0	<30.0	32.0
SW1	10/9/24	0-4	Excavated	<0.050	<0.300	<10.0	93.2	93.2	70.4	163.6	16.0
SW1b	10/29/24	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW2	10/9/24	0-4	Excavated	<0.050	<0.300	<10.0	142	142	111.0	253	32.0
SW2b	10/29/24	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW3	10/9/24	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW4	10/9/24	0-5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW4b	10/29/24	5-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW5	10/9/24	0-5	In-Situ	<0.050	<0.300	<10.0	39.8	39.8	21.7	61.5	16.0
SW5b	10/29/24	5-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW6	10/9/24	0-5	Excavated	<0.050	<0.300	<10.0	154	154	123.0	277	16.0
SW6b	10/29/24	0-5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW7	10/9/24	0-5	Excavated	<0.050	<0.300	<10.0	185	185	149.0	334	16.0
SW7b	10/29/24	0-5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
Topsoil	10/9/24	1	In-Situ	<0.050	<0.300	<10.0	96.5	96.5	73.3	169.8	32.0
Caliche	10/9/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
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

**Attachment I
Karst, Wetland, and Soil Maps**

Big Cat State Com #1



8/2/2024

Karst Type

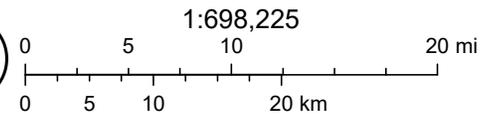
- Carbonate
- Erosional
- Gypsum

- Volcanic
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

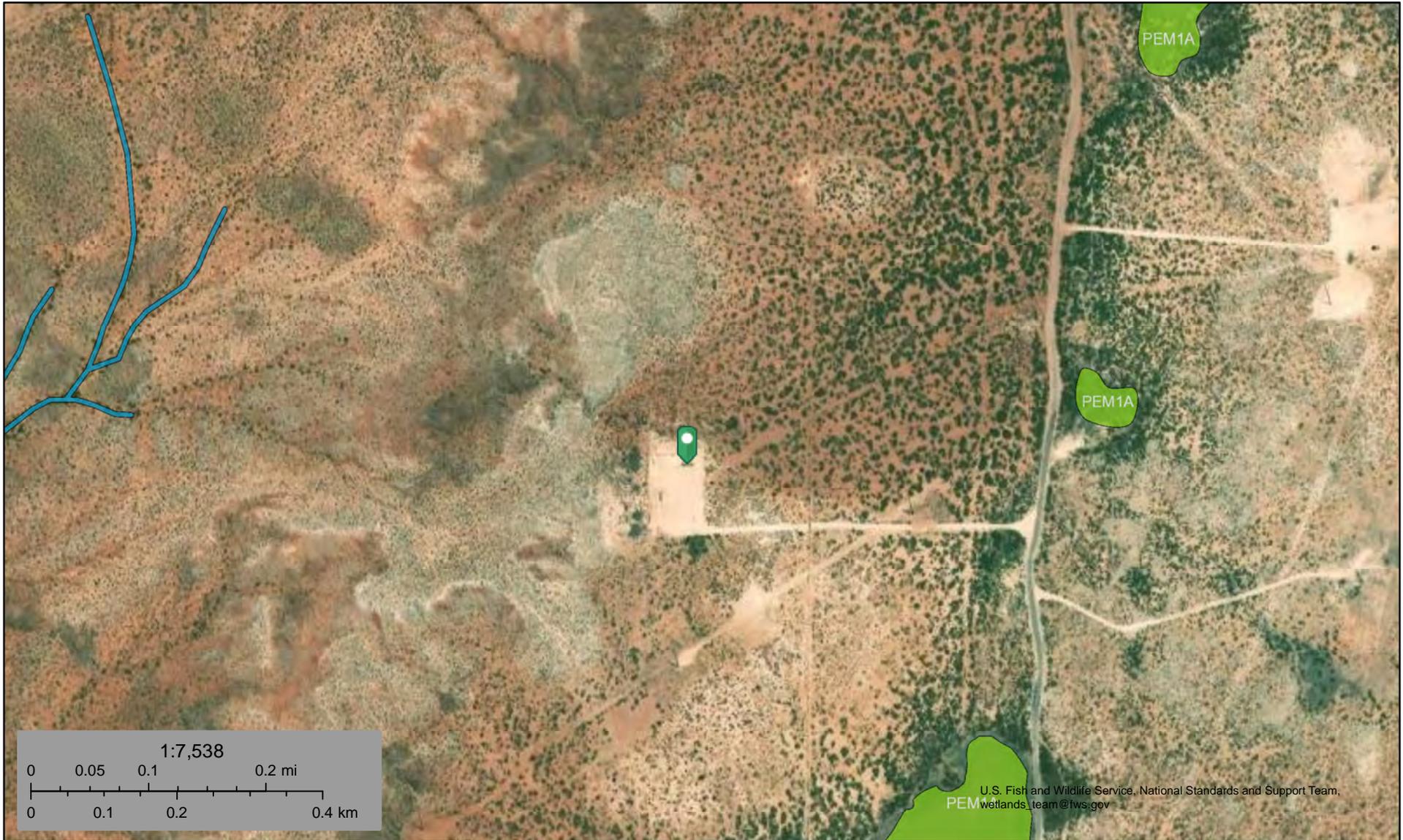
150m Resolution Metadata



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



Big Cat State Com #1



August 2, 2024

Wetlands

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

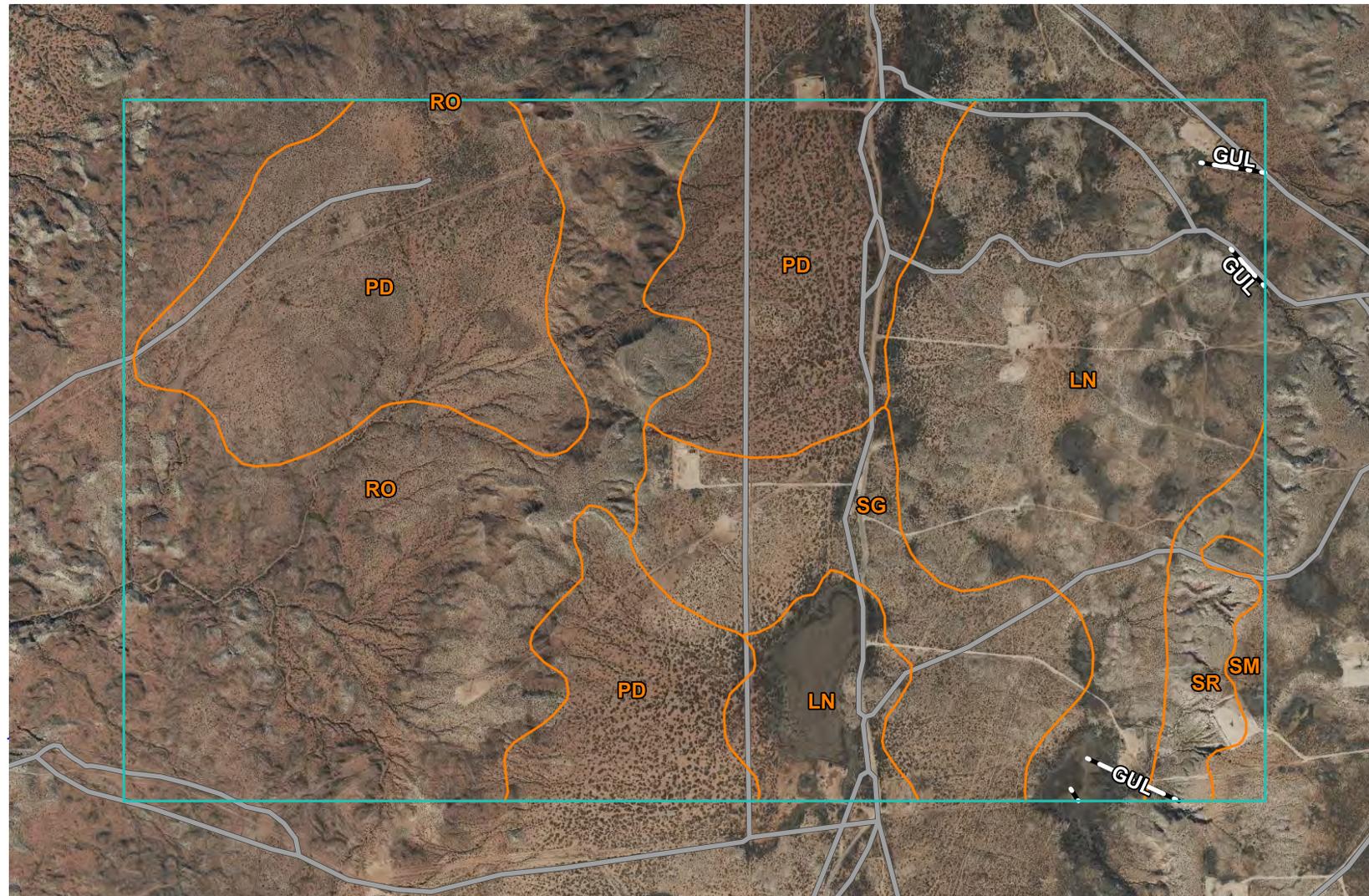
Soil Map—Eddy Area, New Mexico
(Big Cat State Com #1)

104° 9' 42" W

104° 7' 38" W

32° 51' 46" N

32° 51' 46" N

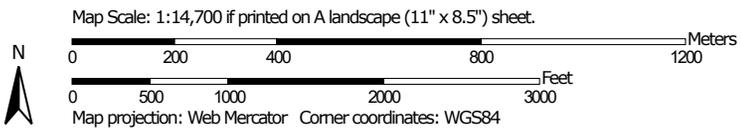


32° 50' 38" N

32° 50' 38" N

104° 9' 42" W

104° 7' 38" W



Soil Map—Eddy Area, New Mexico
(Big Cat State Com #1)

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
LN	Largo-Stony land complex, 0 to 25 percent slopes	290.3	26.8%
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	322.7	29.8%
RO	Rock land	320.5	29.6%
SG	Simona gravelly fine sandy loam, 0 to 3 percent slopes	107.3	9.9%
SM	Simona-Bippus complex, 0 to 5 percent slopes	12.0	1.1%
SR	Stony and Rough broken land	30.9	2.8%
Totals for Area of Interest		1,083.7	100.0%

Map Unit Description: Simona gravelly fine sandy loam, 0 to 3 percent slopes---Eddy Area,
New Mexico

Big Cat State Com #1

Eddy Area, New Mexico

SG—Simona gravelly fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5w
Elevation: 2,750 to 5,000 feet
Mean annual precipitation: 8 to 16 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Simona and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Simona

Setting

Landform: Plains, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 19 inches: gravelly fine sandy loam
H2 - 19 to 23 inches: indurated

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very 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: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R070BD002NM - Shallow Sandy

Map Unit Description: Simona gravelly fine sandy loam, 0 to 3 percent slopes---Eddy Area,
New Mexico

Big Cat State Com #1

Hydric soil rating: No

Minor Components

Simona

Percent of map unit: 4 percent

Ecological site: R070BD002NM - Shallow Sandy

Hydric soil rating: No

Playa

Percent of map unit: 1 percent

Landform: Playas

Landform position (three-dimensional): Talf

Down-slope shape: Concave, convex

Across-slope shape: Concave, linear

Ecological site: R070BC017NM - Bottomland

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 20, Sep 3, 2024

Attachment II
NMOCD Correspondence

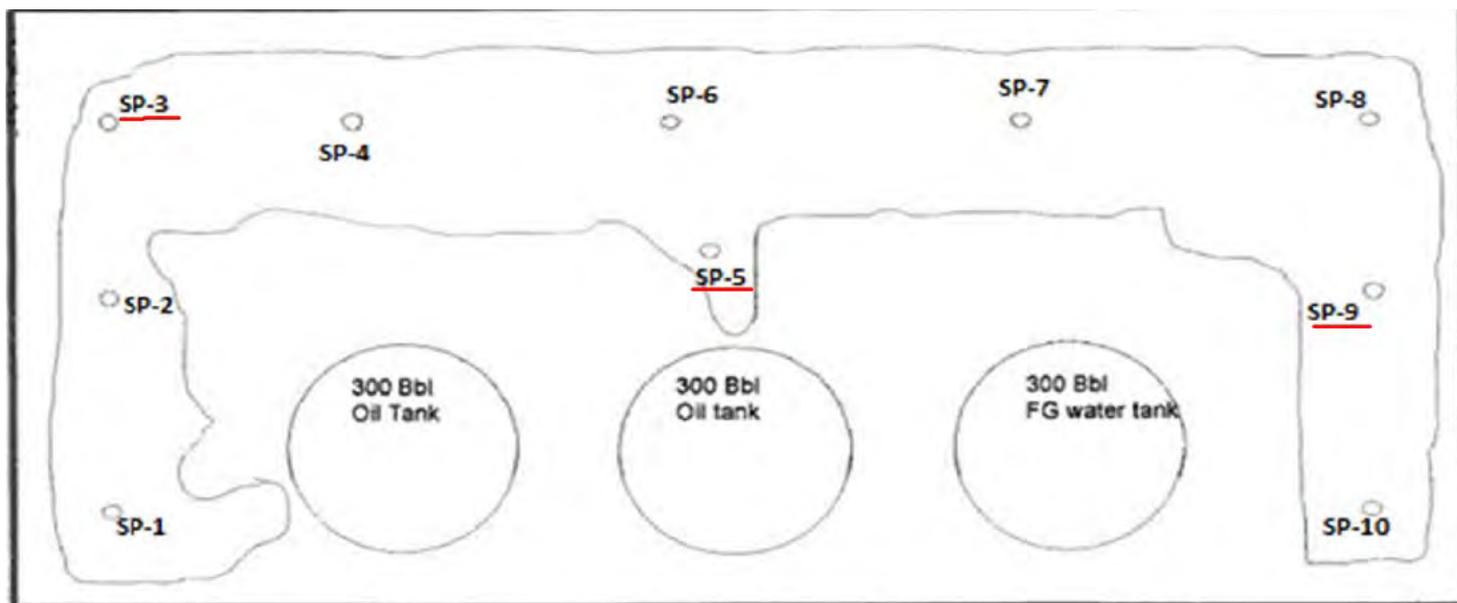
Cindy Cottrell

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Tuesday, May 7, 2024 12:28 PM
To: Cindy Cottrell
Cc: Smith, Cory, EMNRD; Moander, Chris, EMNRD; Powell, Brandon, EMNRD; Romero, Rosa, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] Big Cat nMCS0414928403 - Missing C-141N

Cindy,

Without having a copy of the sampling notice the closure report cannot be submitted. One of the conditions of approval for the workplan was to notify the OCD before soil samples are taken to give the OCD the opportunity to witness. If R.T. Hicks Consultants, LTD. does not have a copy of the sampling notification from the January 2019 sampling event, that can be provided with the closure report, the OCD will accept the following in lieu of rejecting all sampling data:

- Additional samples must be collected at SP-3, SP-5 and SP-9. Individual grab samples must be collected from surface to 4 feet below ground surface in 1-foot intervals. A sampling notice must be submitted through the OCD permitting website at least two business days prior to collecting the samples. I have included a screenshot of the map included in the report below indicating the requested sampling locations for your reference.



The analytical results of the samples, pictures of the site, and a copy of this email must be added to closure report prior to submission.

Please send me an email when you submit the sampling notification.

Please let me know if you have any questions or require additional information.

Thank you,

Brittany Hall ● Environmental Specialist
 Environmental Bureau Projects Group
 EMNRD - Oil Conservation Division
 1000 Rio Brazos Road | Aztec, NM 87110
 505.517.5333 | Brittany.Hall@emnrd.nm.gov
<http://www.emnrd.nm.gov/ocd/>

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMRND Website prior to submitting any C-141s. The guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

From: Cindy Cottrell <ccottrell@jdmii.com>
Sent: Tuesday, May 7, 2024 9:33 AM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Subject: [EXTERNAL] Big Cat nMCS0414928403 - Missing C-141N

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

Hi Brittany,

Trying to submit a Remediation Closure Request for the Big Cat release which happened in 2004, but don't have a copy of the sampling notice from 1/2019. How I can handle this?



Cindy Cottrell
Regulatory Coordinator & Corporate Secretary
7250 Dallas Parkway, Suite 1400
Plano, TX 75024
Direct Line: 469-573-6413

Cindy Cottrell

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Thursday, May 16, 2024 8:18 AM
To: Kristin Pope
Cc: Cindy Cottrell; Greg Boans; Rusty Cooper; 'Randall Hicks'; Smith, Cory, EMNRD; Bratcher, Michael, EMNRD; Romero, Rosa, EMNRD; Powell, Brandon, EMNRD; Moander, Chris, EMNRD
Subject: RE: [EXTERNAL] RE: Murchison Big Cat nMCS0414928403 - ECO Comments - Additional Work Needed

Kristin,

Thank you for the update. Please proceed with the schedule provided in the C-141N. If there are any additional changes, please let me know as soon as possible.

Please also include a copy of this email chain in the report.

Thank you,

Brittany Hall ● Environmental Specialist
 Environmental Bureau Projects Group
 EMNRD - Oil Conservation Division
 1000 Rio Brazos Road | Aztec, NM 87110
 505.517.5333 | Brittany.Hall@emnrd.nm.gov
<http://www.emnrd.nm.gov/ocd/>

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From: Kristin Pope <kristin@rthicksconsult.com>
Sent: Wednesday, May 15, 2024 2:25 PM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Cc: 'Cindy Cottrell' <ccottrell@jdmii.com>; 'Greg Boans' <gboans@jdmii.com>; 'Rusty Cooper' <rcooper@jdmii.com>; 'Randall Hicks' <r@rthicksconsult.com>
Subject: [EXTERNAL] RE: Murchison Big Cat nMCS0414928403 - ECO Comments - Additional Work Needed

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

Brittany,

FYI, we received some feedback from SLO regarding our re-sampling plan at the Big Cat site. The notice on NMOCD's Portal will not be amended but we will sample at the 3 additional locations highlighted below, addition to the sample points you have indicated. NMOCD and SLO will be provided with all analytical results in a subsequent report.

Thanks for your help.

Kristin Pope
 R.T. Hicks Consultants
 575-302-6755

From: Knight, Tami C. <tknight@slo.state.nm.us>

Sent: Tuesday, May 14, 2024 2:49 PM

To: Kristin Pope <kristin@rthicksconsult.com>; 'Cindy Cottrell' <ccottrell@jdmii.com>

Cc: 'Greg Boans' <gboans@jdmii.com>; 'Rusty Cooper' <rcooper@jdmii.com>; r@rthicksconsult.com; Barnes, Will <wbarnes@slo.state.nm.us>; Griffin, Becky R. <bgriffin@slo.state.nm.us>; David, Deon W. <ddavid@slo.state.nm.us>; Elliott, April L. <aelliott@slo.state.nm.us>; Biernoff, Ari <abiernoff@slo.state.nm.us>; Heltman, Elaine G. <eheltman@slo.state.nm.us>

Subject: Murchison Big Cat nMCS0414928403 - ECO Comments - Additional Work Needed

Cindy

ECO has reviewed the prior work completed at the subject site for the historical spill (2004) and the current sampling scope of work for the subject site. ECO has significant concerns about the operational condition of the subject location and is requesting additional work be conducted at the subject site.

1. ECO agrees with the sampling of the 3 sample points identified by NMOCD SP-3, SP-5 and SP-9. We also are looking for SP-2, SP-4 and SP-6 to be resampled with the same interval sampling NMOCD requires. All samples must be analyzed for TPH and chloride.



2. ECO will compare sampling results to current remediation and reclamation rules provided in 19.15.29 NMAC.
3. Current aerial imagery documents staining on the east side of the tank battery and along the surface lines within the facility. All releases must be remediated for facilities on State Trust Land, regardless of the volume released. For impacted soil not associated with the subject spill, these impacts must be remediated and confirmation soil samples must be collected in accordance with 19.15.29 NMAC (regardless if these are reportable volumes to NMOCD) and analyzed for BTEX, TPH, and chloride.
4. Please submit a narrative report documenting all remediation activities completed at the subject site including sampling results to eco@slo.state.nm.us.

Thank you for your cooperation

http://www.nmstatelands.org/" style='position:absolute;margin-left:255pt;margin-top:4.4pt;width:86.9pt;height:85.1pt;z-index:-251657216;visibility:visible;mso-wrap-style:square;mso-width-percent:0;mso-height-percent:0;mso-wrap-distance-left:9pt;mso-wrap-distance-top:0;mso-wrap-distance-right:9pt;mso-wrap-distance-bottom:0;mso-position-horizontal:absolut;mso-position-horizontal-relative:text;mso-position-vertical:absolut;mso-position-vertical-relative:text;mso-width-percent:0;mso-height-percent:0;mso-width-

relative:page;mso-height-relative:page' o:button=""> https://www.nmstatelands.org/top-workplaces/" style='position:absolute;margin-left:0;margin-top:0;width:102.05pt;height:135pt;z-index:251660288;visibility:visible;mso-wrap-style:square;mso-width-percent:0;mso-height-percent:0;mso-wrap-distance-left:9pt;mso-wrap-distance-top:0;mso-wrap-distance-right:9pt;mso-wrap-distance-bottom:0;mso-position-horizontal:left;mso-position-horizontal-relative:margin;mso-position-vertical:top;mso-position-vertical-relative:margin;mso-width-percent:0;mso-height-percent:0;mso-width-relative:margin;mso-height-relative:margin' o:button="t">

Tami Knight, CHMM

Environmental Specialist

NMSLO SRD-ECO

505.670.1638

tknight@slo.state.nm.us

nmstatelands.org

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From: Kristin Pope <kristin@rthicksconsult.com>

Sent: Monday, May 13, 2024 2:47 PM

To: Brittany.Hall@emnrd.nm.gov; SLO Spills <spills@slo.state.nm.us>

Cc: 'Greg Boans' <gboans@jdmii.com>; 'Rusty Cooper' <rcooper@jdmii.com>; 'Cindy Cottrell' <ccottrell@jdmii.com>; r@rthicksconsult.com

Subject: RE: [EXTERNAL] Big Cat nMCS0414928403 - Missing C-141N

Brittany,

Please find the attached closure sampling protocol for the Murchison-Big Cat release. Cindy Cottrell of Murchison has submitted the notice on the Portal today.

We have copied SLO on this email as the surface owner. Please let us know if you have any questions.

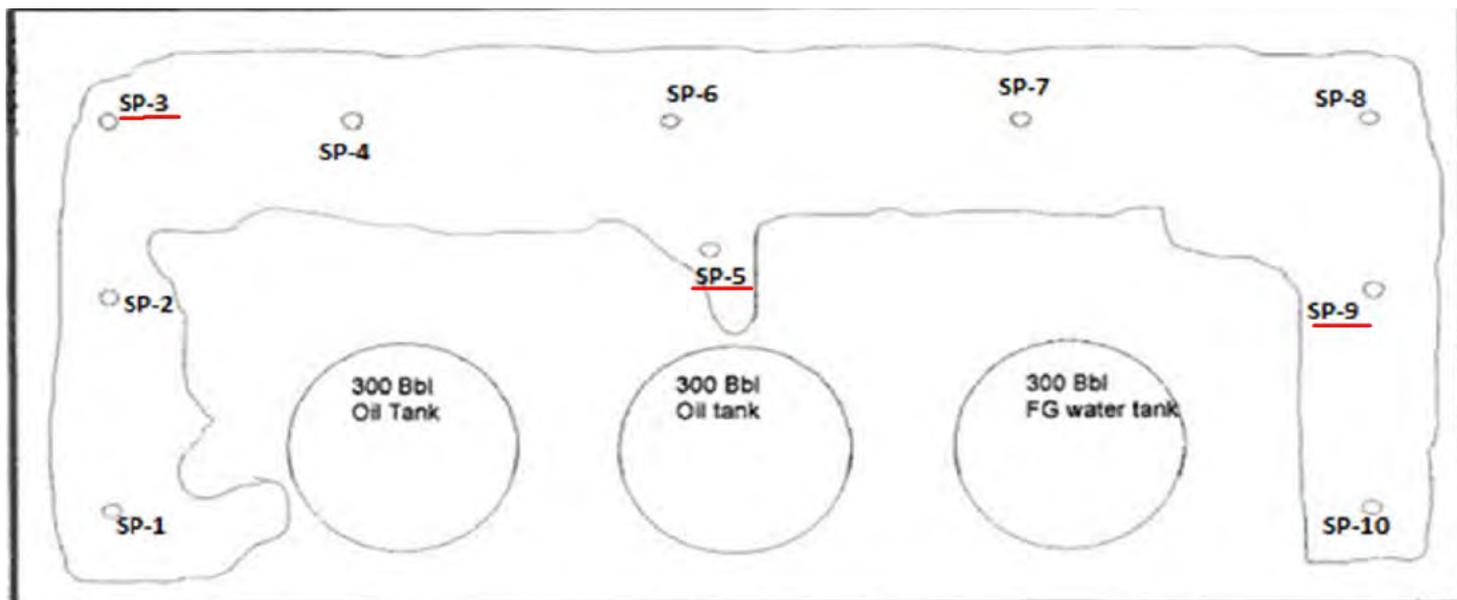
Kristin Pope
R.T. Hicks Consultants
575-302-6755

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Tuesday, May 7, 2024 12:28 PM
To: Cindy Cottrell <ccottrell@jdmii.com>
Cc: Smith, Cory, EMNRD <cory.smith@emnrd.nm.gov>; Moander, Chris, EMNRD <Chris.Moander@emnrd.nm.gov>; Powell, Brandon, EMNRD <Brandon.Powell@emnrd.nm.gov>; Romero, Rosa, EMNRD <RosaM.Romero@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: RE: [EXTERNAL] Big Cat nMCS0414928403 - Missing C-141N

Cindy,

Without having a copy of the sampling notice the closure report cannot be submitted. One of the conditions of approval for the workplan was to notify the OCD before soil samples are taken to give the OCD the opportunity to witness. If R.T. Hicks Consultants, LTD. does not have a copy of the sampling notification from the January 2019 sampling event, that can be provided with the closure report, the OCD will accept the following in lieu of rejecting all sampling data:

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The analytical results of the samples, pictures of the site, and a copy of this email must be added to closure report prior to submission.

Please send me an email when you submit the sampling notification.

Please let me know if you have any questions or require additional information.

Thank you,
Brittany Hall ● Environmental Specialist
 Environmental Bureau Projects Group
 EMNRD - Oil Conservation Division
 1000 Rio Brazos Road | Aztec, NM 87110
 505.517.5333 | Brittany.Hall@emnrd.nm.gov
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From: Cindy Cottrell <ccottrell@jdmii.com>
Sent: Tuesday, May 7, 2024 9:33 AM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Subject: [EXTERNAL] Big Cat nMCS0414928403 - Missing C-141N

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Hi Brittany,

Trying to submit a Remediation Closure Request for the Big Cat release which happened in 2004, but don't have a copy of the sampling notice from 1/2019. How I can handle this?



Cindy Cottrell
Regulatory Coordinator & Corporate Secretary
7250 Dallas Parkway, Suite 1400
Plano, TX 75024
Direct Line: 469-573-6413

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 365685

QUESTIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 365685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0414928403
Incident Name	NMCS0414928403 2004 MAJOR A OS @ 30-015-32091
Incident Type	Oil Release
Incident Status	Closure Not Approved
Incident Well	[30-015-32091] BIG CAT STATE COM #001

Location of Release Source

Site Name	Unavailable.
Date Release Discovered	05/13/2004
Surface Owner	State

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	1,637
What is the estimated number of samples that will be gathered	30
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/24/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	575-390-3639
Please provide any information necessary for navigation to sampling site	32.853381, -104.144575

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 365685

CONDITIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 365685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
ccottrell	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	7/19/2024

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

QUESTIONS

Action 389982

QUESTIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 389982
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0414928403
Incident Name	NMCS0414928403 2004 MAJOR A OS @ 30-015-32091
Incident Type	Oil Release
Incident Status	Closure Not Approved
Incident Well	[30-015-32091] BIG CAT STATE COM #001

Location of Release Source	
Site Name	Unavailable.
Date Release Discovered	05/13/2004
Surface Owner	State

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	900
What is the estimated number of samples that will be gathered	12
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/09/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Roy Bell 575-626-8959
Please provide any information necessary for navigation to sampling site	32.853361, -104.144585

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
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 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 389982

CONDITIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 389982
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
ccottrell	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	10/4/2024

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 395561

QUESTIONS

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 395561
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0414928403
Incident Name	NMCS0414928403 BIG CAT STATE COM #001 @ 30-015-32091
Incident Type	Oil Release
Incident Status	Closure Not Approved
Incident Well	[30-015-32091] BIG CAT STATE COM #001

Location of Release Source	
Site Name	BIG CAT STATE COM #001
Date Release Discovered	05/13/2004
Surface Owner	State

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	1,000
What is the estimated number of samples that will be gathered	5
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/29/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Jerry Heidelberg 575-390-3639
Please provide any information necessary for navigation to sampling site	32.853361, -104.144585

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
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1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS
 Action 395561

CONDITIONS

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 395561
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

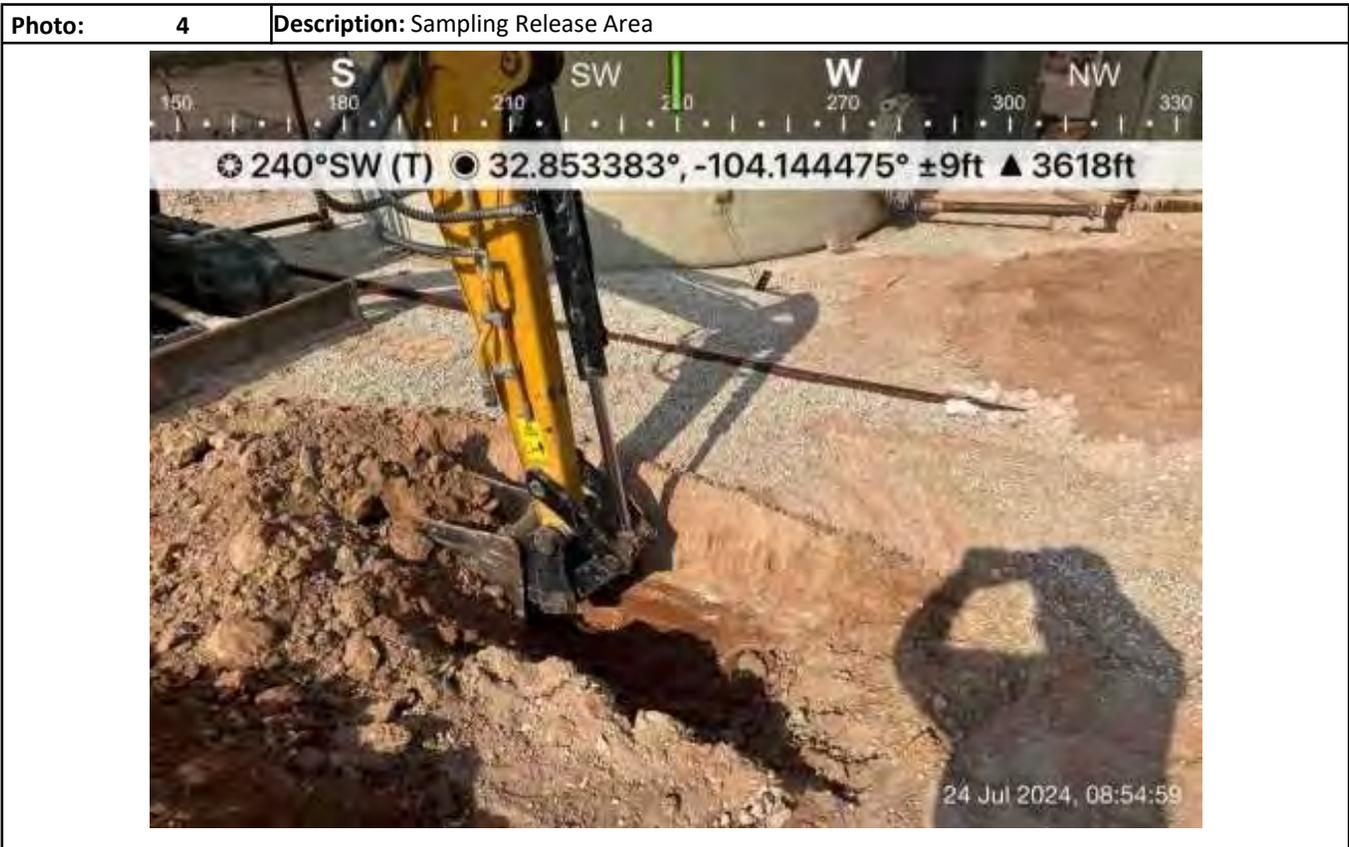
Created By	Condition	Condition Date
hungryhorse	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	10/24/2024

Attachment III Site Photographs

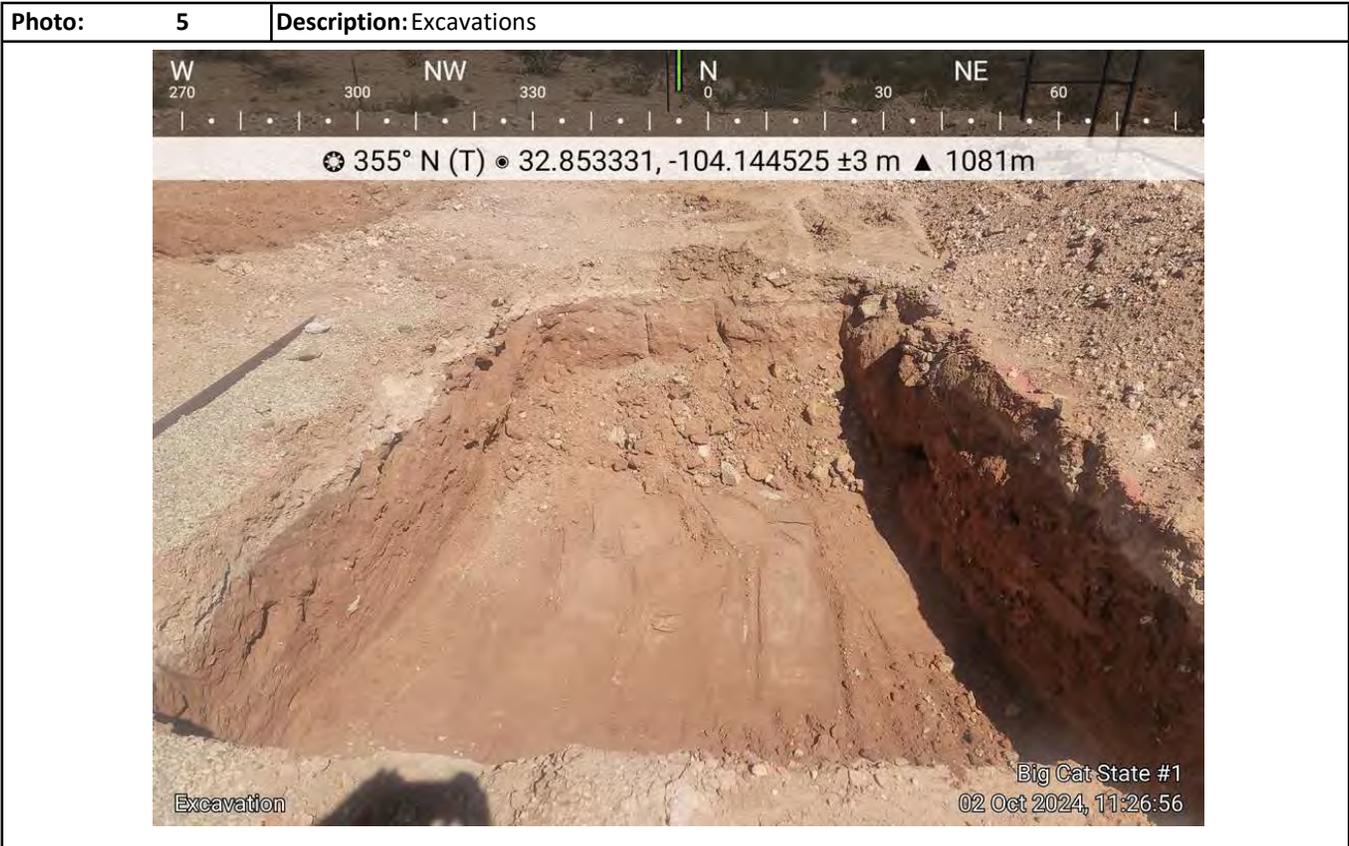
Photographs



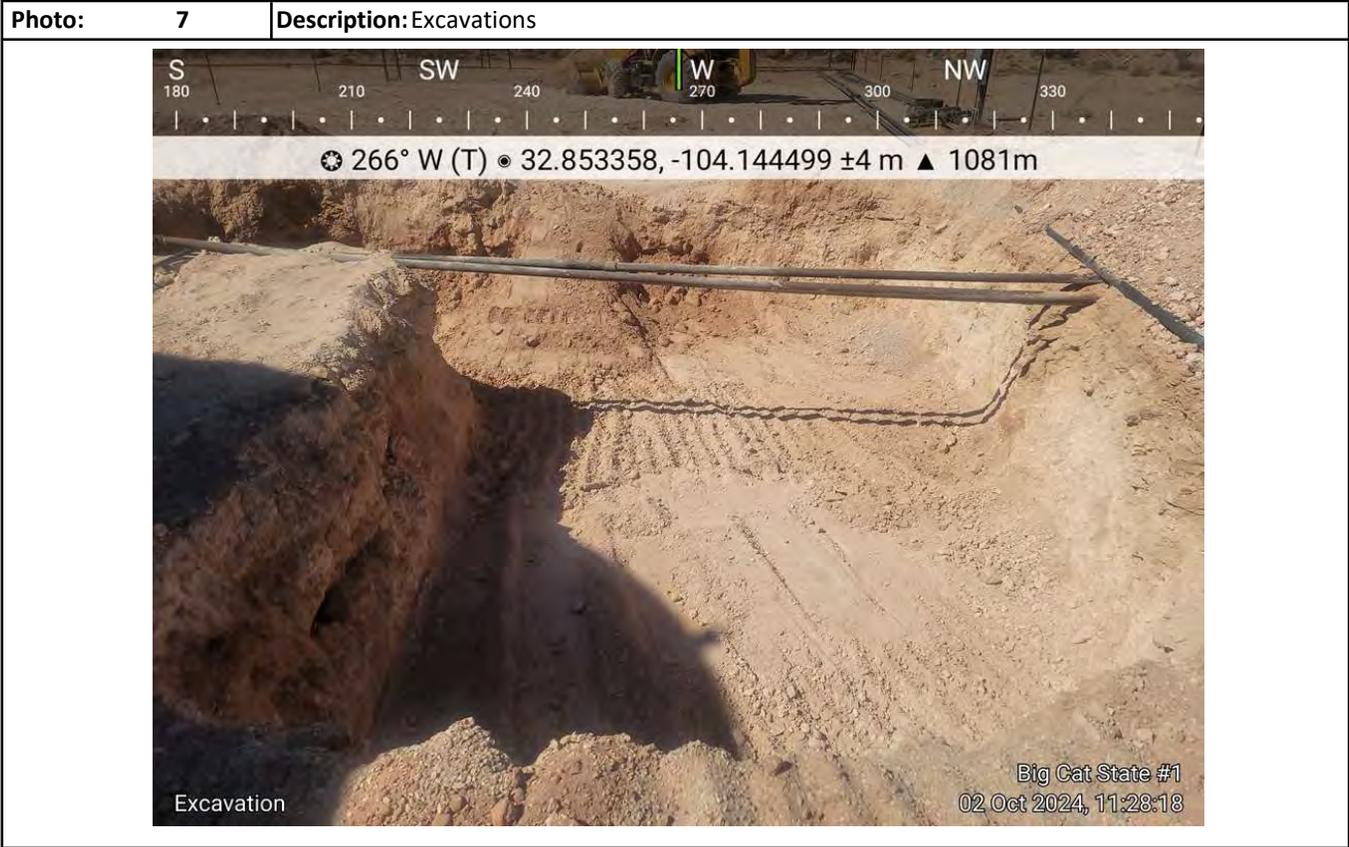
Photographs



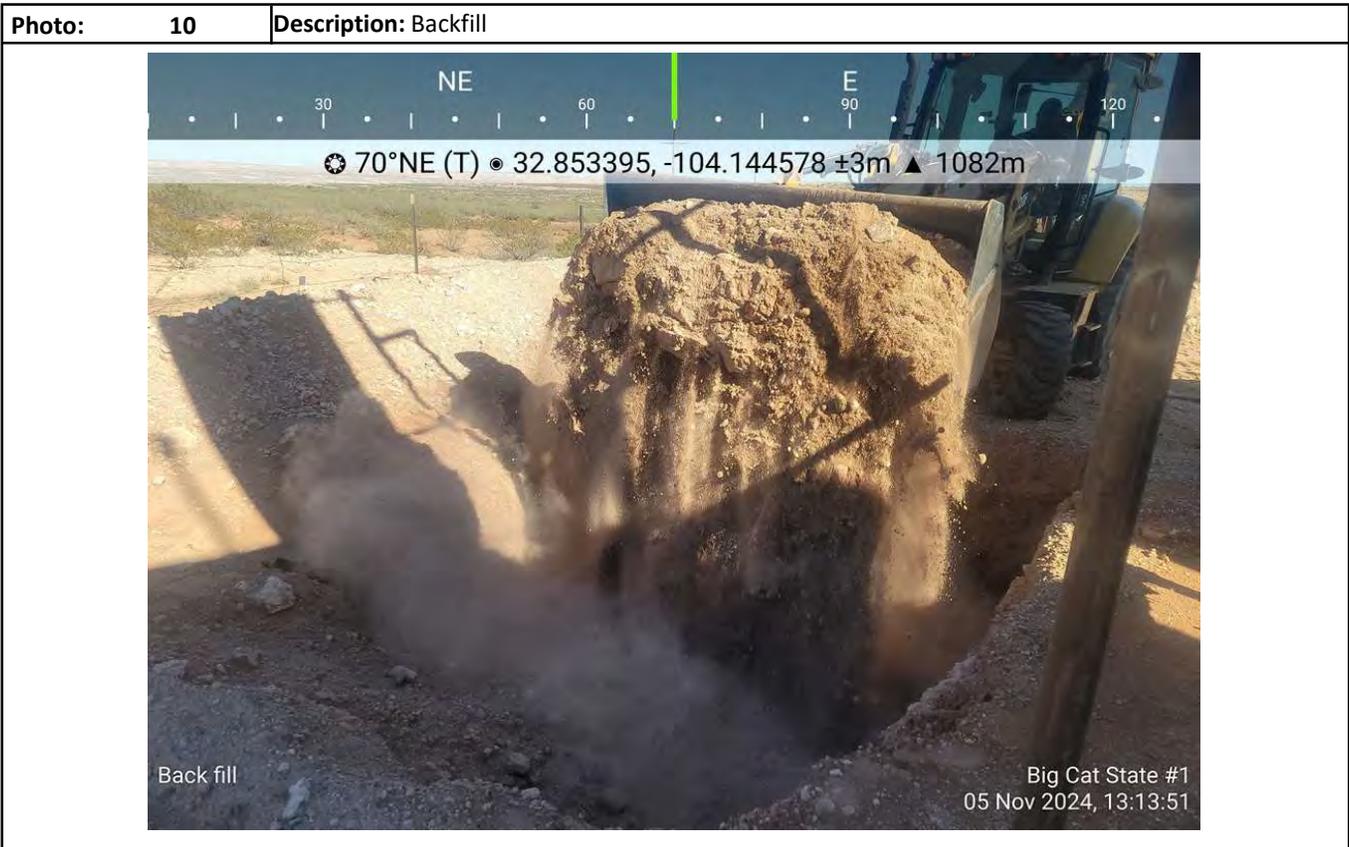
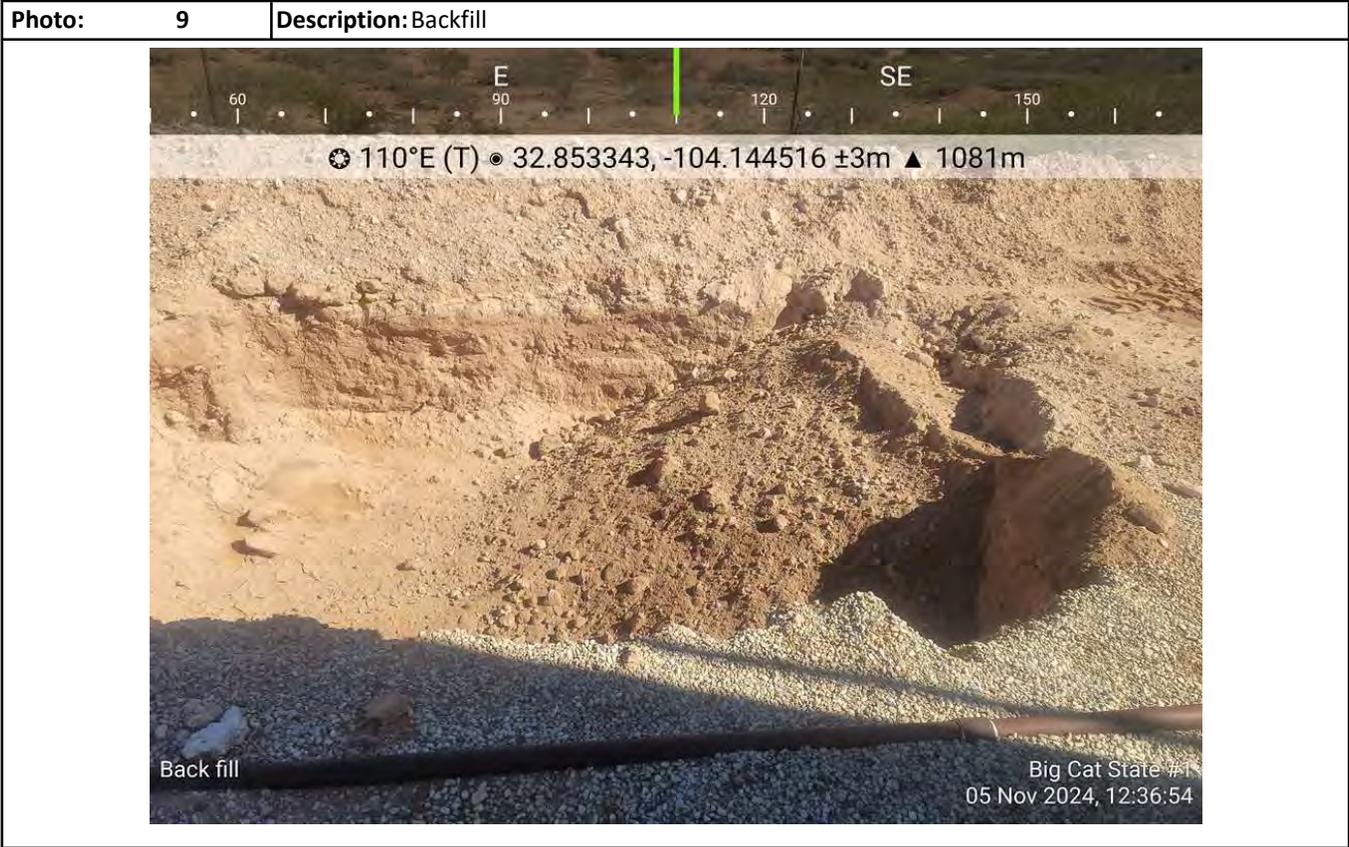
Photographs



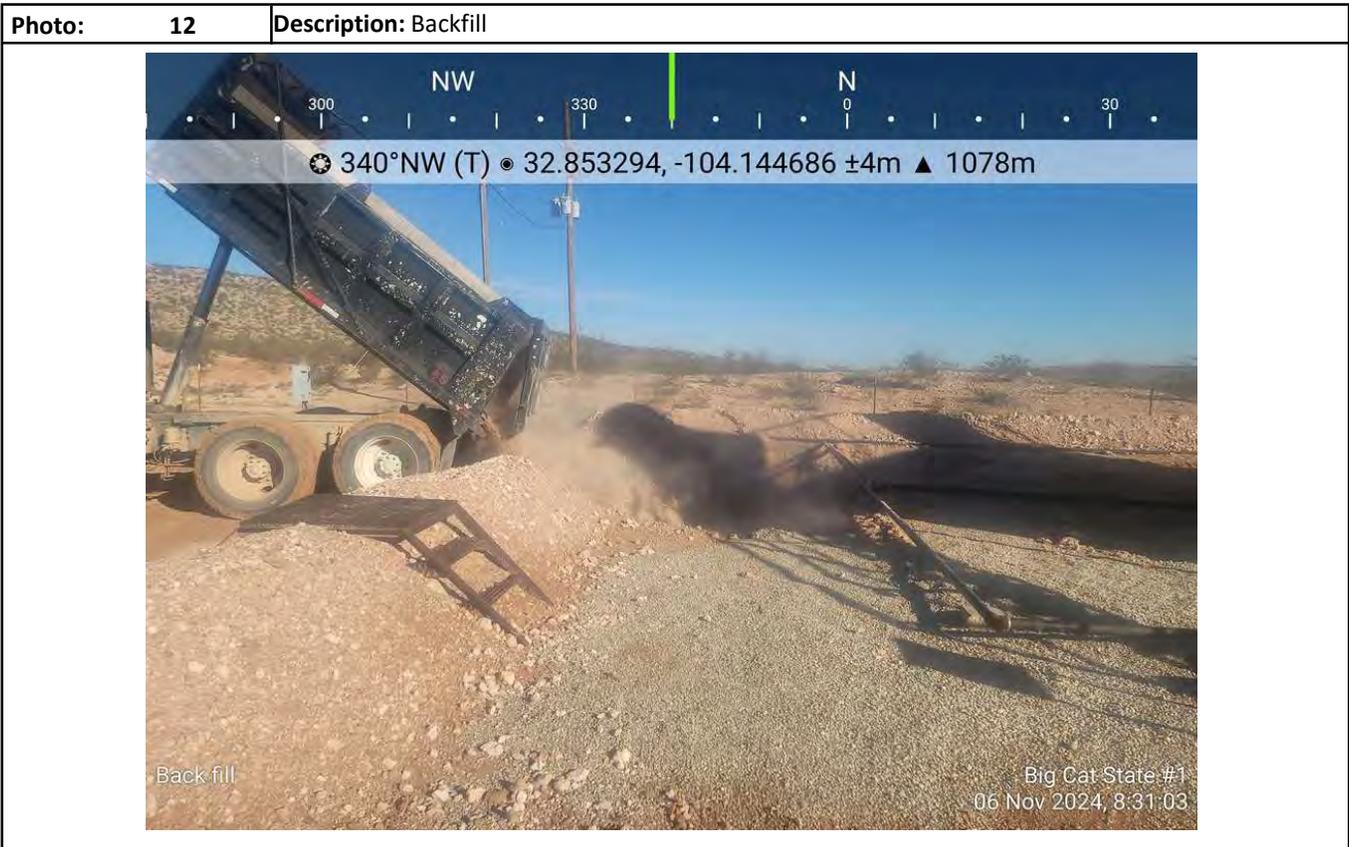
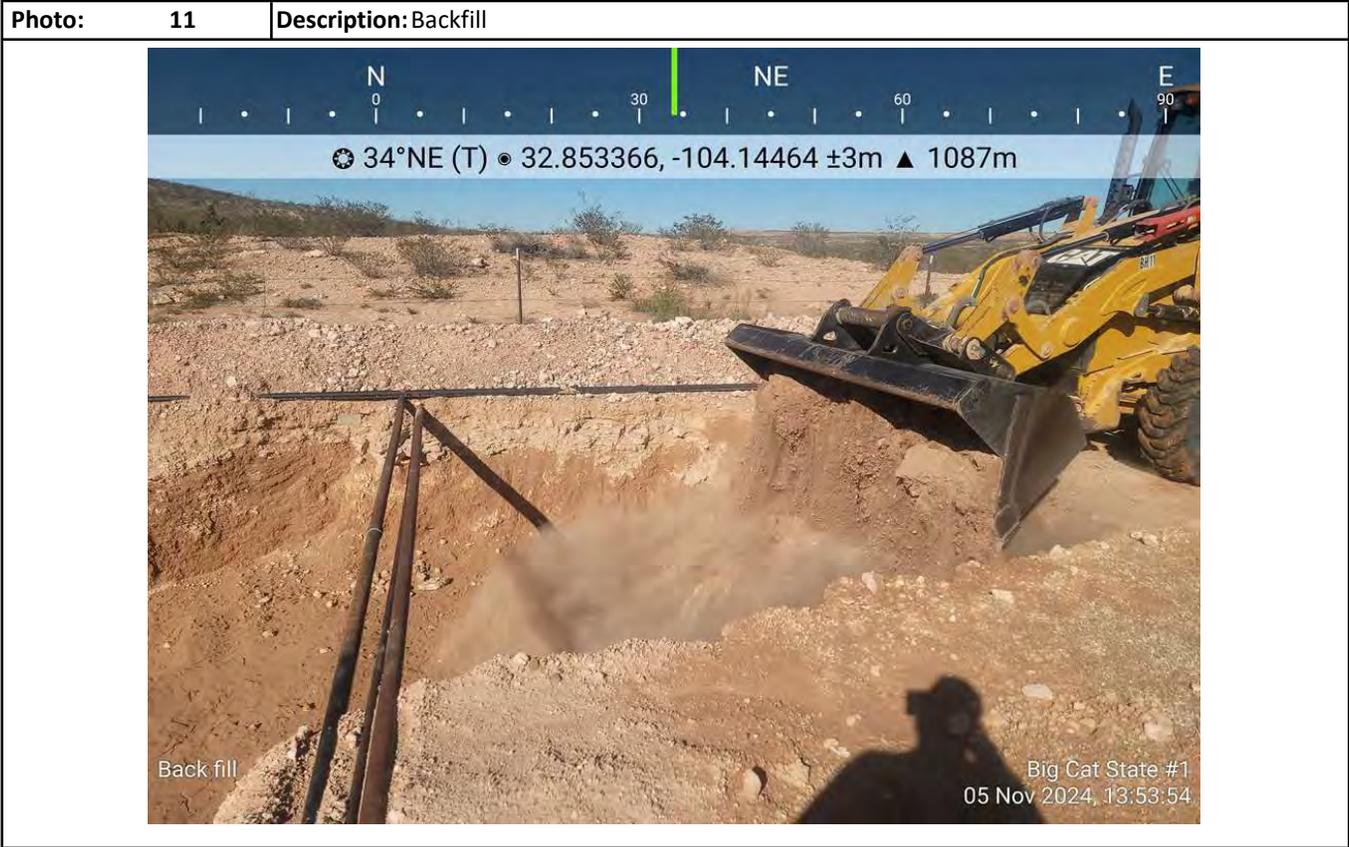
Photographs



Photographs



Photographs



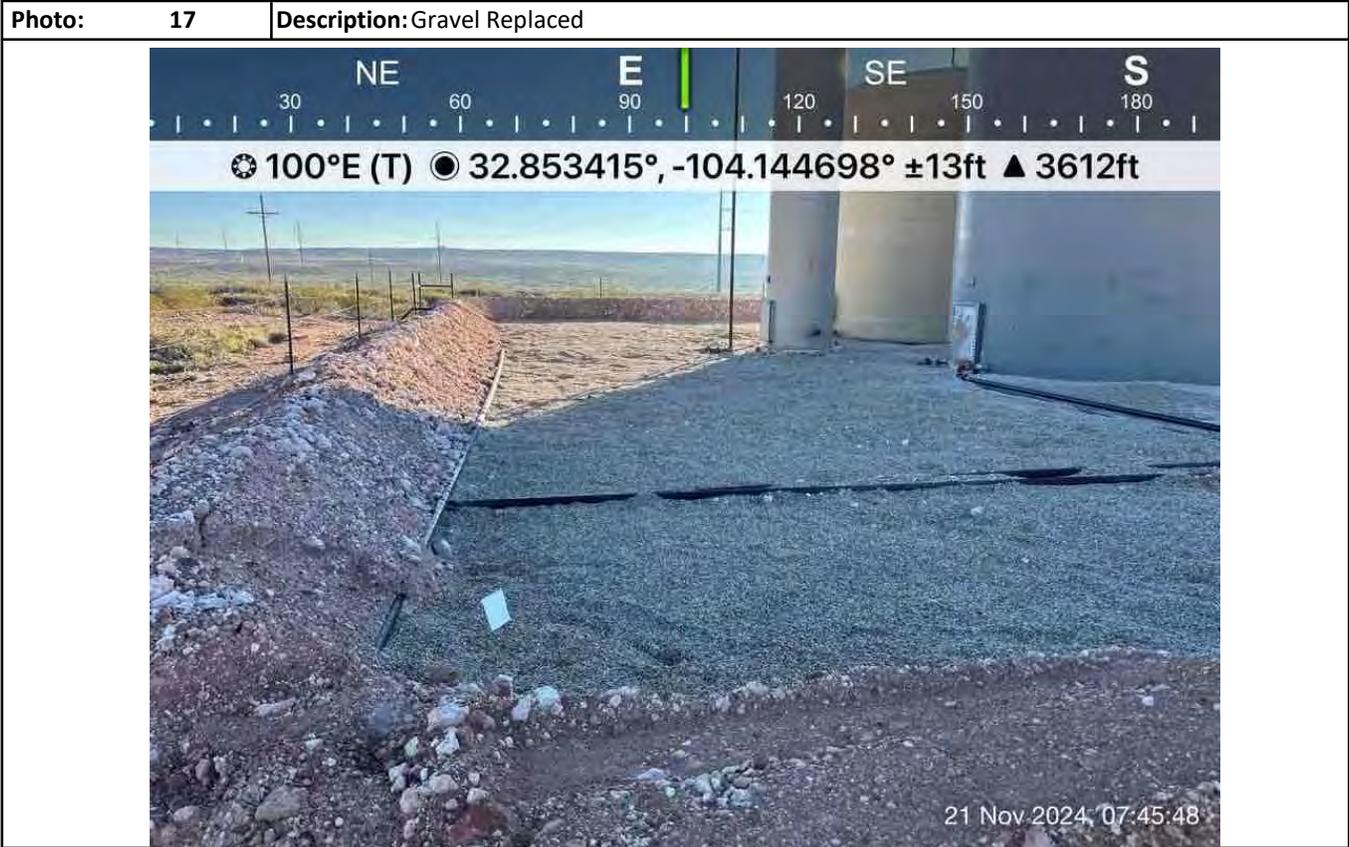
Photographs



Photographs



Photographs



Attachment IV

Depth to Groundwater



New Mexico Office of the State Engineer

Wells With Well Log Information

No report data available.

UTM Filters (in meters):

Easting: 580042.49

Northing: 3635354.90

Radius: 805

* UTM location was derived from PLSS - see Help

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

Attachment V Field Data

Sample Log

Hungry Horse, LLC

Project: Big Cat State Com #1

Karst Yes Water 50'-100'
 Standard TPH 100mg/kg, Chloride 600mg/kg

Date: _____
 GPS: 32.853361, -104.144585
 Sampler: Roy Bell

Sample ID	Depth	PID/Odor	Chloride	GPS
SP-9 B	4'		166x4 = 664	10x10
SP-9 NSW			231x4 = 924	
SSW			166x4 = 664	
ESW			102x4 = 408	
WSW			231x4 = 924	
NSW			162x4 = 408	
SP-5 B	4'		96x4 = 384	B = Bottom NSW = North Side Wall SSW = South Side Wall ESW = East Side Wall WSW = West Side Wall
NSW			118x4 = 472	
SSW			218x4 = 872	
ESW			118x4 = 472	
WSW			118x4 = 472	
SP-4 B	4'		130x4 = 520	
NSW			118x4 = 472	
ESW			107x4 = 428	
WSW			_____	
SSW			130x4 = 520	
SP-3 B	3'		218x4 = 872	
NSW			96x4 = 384	
ESW			_____	
WSW			107x4 = 428	
SSW			_____	
SP-2 B	4'		96x4 = 384	
NSW			40x4 = 160	
ESW			40x4 = 160	
WSW			40x4 = 160	
SSW			47x4 = 188	
			107x4 = 428	

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 #1b

Stockpile = Stockpile #1

Attachment VI
Laboratory Analytical Reports



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

July 29, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: BIG CAT STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/25/24 16:26.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 2 SURF. (H244446-01)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	0.098	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	GC-NC1
Total Xylenes*	0.273	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	GC-NC1
Total BTEX	0.371	0.300	07/26/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 130 % 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	1920	16.0	07/26/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	27.8	10.0	07/26/2024	ND	195	97.7	200	0.931		
DRO >C10-C28*	3570	10.0	07/26/2024	ND	184	91.8	200	1.59		
EXT DRO >C28-C36	722	10.0	07/26/2024	ND						

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 163 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 2 1' (H244446-02)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	0.092	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	GC-NC1
Total Xylenes*	0.365	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	GC-NC1
Total BTEX	0.457	0.300	07/26/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	07/26/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	15.4	10.0	07/26/2024	ND	195	97.7	200	0.931		
DRO >C10-C28*	1870	10.0	07/26/2024	ND	184	91.8	200	1.59		
EXT DRO >C28-C36	422	10.0	07/26/2024	ND						

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 180 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 2 2' (H244446-03)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	800	16.0	07/26/2024	ND	448	112	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	07/26/2024	ND	195	97.7	200	0.931	
DRO >C10-C28*	496	10.0	07/26/2024	ND	184	91.8	200	1.59	
EXT DRO >C28-C36	173	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 141 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 2 3' (H244446-04)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	432	16.0	07/26/2024	ND	448	112	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	07/26/2024	ND	195	97.7	200	0.931	
DRO >C10-C28*	89.0	10.0	07/26/2024	ND	184	91.8	200	1.59	
EXT DRO >C28-C36	33.3	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 2 4' (H244446-05)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

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

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	207	104	200	2.57	
DRO >C10-C28*	11.1	10.0	07/26/2024	ND	181	90.4	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 142 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 3 SURF. (H244446-06)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/29/2024	ND	207	104	200	2.57	
DRO >C10-C28*	<10.0	10.0	07/29/2024	ND	181	90.4	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	07/29/2024	ND					

Surrogate: 1-Chlorooctane 96.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 3 1' (H244446-07)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	207	104	200	2.57	
DRO >C10-C28*	126	10.0	07/26/2024	ND	181	90.4	200	2.44	
EXT DRO >C28-C36	88.1	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 3 2' (H244446-08)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	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	32.0	16.0	07/26/2024	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	07/26/2024	ND	207	104	200	2.57	
DRO >C10-C28*	55.9	10.0	07/26/2024	ND	181	90.4	200	2.44	
EXT DRO >C28-C36	33.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 84.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 3 3' (H244446-09)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

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

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 3 4' (H244446-10)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 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	32.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.1 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 4 SURF. (H244446-11)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	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	112	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	23.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 4 1' (H244446-12)

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	07/26/2024	ND	1.95	97.3	2.00	4.07	
Toluene*	<0.050	0.050	07/26/2024	ND	1.92	96.2	2.00	3.72	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	1.96	97.9	2.00	2.94	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	5.80	96.7	6.00	2.31	
Total BTEX	<0.300	0.300	07/26/2024	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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	77.2	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	39.4	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 4 2' (H244446-13)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	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	32.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	11.7	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 4 3' (H244446-14)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 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	112	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	69.6	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	35.6	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/24/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 4 4' (H244446-15)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	48.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	21.2	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 5 SURF. (H244446-16)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	0.124	0.050	07/26/2024	ND	2.06	103	2.00	2.26	GC-NC1
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 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	16.0	16.0	07/26/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	07/26/2024	ND	192	96.1	200	2.64		
DRO >C10-C28*	9250	50.0	07/26/2024	ND	191	95.6	200	4.62		
EXT DRO >C28-C36	3340	50.0	07/26/2024	ND						

Surrogate: 1-Chlorooctane 138 % 48.2-134

Surrogate: 1-Chlorooctadecane 324 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 5 1' (H244446-17)

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	07/26/2024	ND	2.03	101	2.00	2.25		
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	GC-NC	
Ethylbenzene*	2.74	0.050	07/26/2024	ND	2.06	103	2.00	2.26	GC-NC1	
Total Xylenes*	2.71	0.150	07/26/2024	ND	6.06	101	6.00	2.57	GC-NC1	
Total BTEX	5.45	0.300	07/26/2024	ND					GC-NC1	

Surrogate: 4-Bromofluorobenzene (PID) 182 % 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	07/26/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-06		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	244	50.0	07/26/2024	ND	192	96.1	200	2.64		
DRO >C10-C28*	4050	50.0	07/26/2024	ND	191	95.6	200	4.62		
EXT DRO >C28-C36	977	50.0	07/26/2024	ND						

Surrogate: 1-Chlorooctane 138 % 48.2-134

Surrogate: 1-Chlorooctadecane 170 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 5 2' (H244446-18)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	0.081	0.050	07/26/2024	ND	2.06	103	2.00	2.26	GC-NC1
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	547	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	205	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 5 3' (H244446-19)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	704	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	18.9	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 5 4' (H244446-20)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	37.2	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 6 SURF. (H244446-21)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 93.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.4 % 49.1-148

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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 6 1' (H244446-22)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 87.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 6 2' (H244446-23)

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	07/26/2024	ND	2.03	101	2.00	2.25		
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49		
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26		
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57		
Total BTEX	<0.300	0.300	07/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	32.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64		
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62		
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND						

Surrogate: 1-Chlorooctane 97.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 6 3' (H244446-24)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500CI-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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

Hungry Horse Environmental
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 Fax To: (505) 391-4585

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 6 4' (H244446-25)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 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	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 9 SURF. (H244446-26)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	602	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	252	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 138 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 9 1' (H244446-27)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 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	32.0	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	96.7	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	55.1	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 9 2' (H244446-28)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	07/26/2024	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	07/26/2024	ND	192	96.1	200	2.64	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	191	95.6	200	4.62	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 9 3' (H244446-29)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	07/26/2024	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	07/26/2024	ND	183	91.7	200	0.648	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	178	88.9	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 82.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	07/25/2024	Sampling Date:	07/25/2024
Reported:	07/29/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SP 9 4' (H244446-30)

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	07/26/2024	ND	2.03	101	2.00	2.25	
Toluene*	<0.050	0.050	07/26/2024	ND	1.97	98.4	2.00	2.49	
Ethylbenzene*	<0.050	0.050	07/26/2024	ND	2.06	103	2.00	2.26	
Total Xylenes*	<0.150	0.150	07/26/2024	ND	6.06	101	6.00	2.57	
Total BTEX	<0.300	0.300	07/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	07/26/2024	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	07/26/2024	ND	183	91.7	200	0.648	
DRO >C10-C28*	<10.0	10.0	07/26/2024	ND	178	88.9	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	07/26/2024	ND					

Surrogate: 1-Chlorooctane 85.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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: Big Cat State Com #1
 Project Location: U/L G Sec 11 T17S - R28E
 Sampler Name: Roy Bell
 P.O. #:
 Company: Murchison Oil & Gas
 Attn: Greg Boans
 Address: 5325 Sierra Vista
 City: Carlsbad
 State: NM Zip: 88230
 Phone #: 575 706-0667
 Fax #:
BILL TO

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	Chloride	TPH	BTEX 8021
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
H249446		Surf	G	1	X							7/24/24		X	X	X
11	SP4	Surf	G	1	X							7/24/24		X	X	X
12	SP4	1	G	1	X							7/24/24		X	X	X
13	SP4	2	G	1	X							7/24/24		X	X	X
14	SP4	3	G	1	X							7/24/24		X	X	X
15	SP4	4	G	1	X							7/24/24		X	X	X
16	SP5	Surf	G	1	X							7/25/24		X	X	X
17	SP5	1	G	1	X							7/25/24		X	X	X
18	SP5	2	G	1	X							7/25/24		X	X	X
19	SP5	3	G	1	X							7/25/24		X	X	X
20	SP5	4	G	1	X							7/25/24		X	X	X

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Relinquished By: *[Signature]* Date: 7-25-24
 Time: 10:24
 Received By: *[Signature]*
 Date:
 Time:
 Sample Condition:
 Cool Intact
 Yes No
 Yes No

Phone Result: Yes No
 Add'l Phone #:
 Fax Result: Yes No
 Add'l Fax #:
REMARKS: 48 hr RUSH!
 Email results to: pm@hungry-horse.com
 gboans@jdmii.com

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:
 U.I.C.
 #142

CHECKED BY: *[Signature]*
 (Initials)



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name:	Hungry Horse LLC	P.O. #:	
Project Manager:	Daniel Dominguez	Company:	Murchison Oil & Gas
Address:	4024 Plains Hwy	Attn:	Greg Boans
City:	Livingston	State:	NM
Phone #:	575 393-3386	Zip:	88260
Project #:		Address:	5325 Sierra Vista
Project Name:	Big Cat State Com #1	City:	Carlsbad
Project Location:	UL/ G Sec 11 T17S - R28E	State:	NM
Sampler Name:	Roy Bell	Zip:	88230
		Phone #:	575 706-0667
		Fax #:	

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	Chloride	TPH	BTEX 8021
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					
H244446	21	Surf	G	1	X						7/25/24		X	X	X
	22	SP6	G	1	X						7/25/24		X	X	X
	23	SP6	G	1	X						7/25/24		X	X	X
	24	SP6	G	1	X						7/25/24		X	X	X
	25	SP6	G	1	X						7/25/24		X	X	X
	26	SP9	Surf	G	1	X					7/25/24		X	X	X
	27	SP9	G	1	X						7/25/24		X	X	X
	28	SP9	G	1	X						7/25/24		X	X	X
	29	SP9	G	1	X						7/25/24		X	X	X
	30	SP9	G	1	X						7/25/24		X	X	X

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Relinquished By: *[Signature]* Date: 7-25-24
 Received By: *[Signature]* Date: 7-25-24

Delivered By: (Circle One) 4-1'e
 Sampler - UPS - Bus - Other: 4-1'UD

Sample Condition: Cool Intact
 Yes No

Checked By: *[Signature]*

REMARKS: 48 hr RUSH!
 Email results to: pm@hungry-horse.com
 gboans@jdmii.com

Phone Result: Yes No
 Fax Result: Yes No

Add'l Phone #: _____
 Add'l Fax #: _____

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



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

October 10, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: BIG CAT STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/09/24 14:49.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 1 4 (H246145-01)

BTEX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44		
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71		
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42		
Total BTEX	<0.300	0.300	10/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/10/2024	ND	480	120	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	10/09/2024	ND	219	109	200	3.44		
DRO >C10-C28*	<10.0	10.0	10/09/2024	ND	232	116	200	5.26		
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND						

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 2 4 (H246145-02)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/10/2024	ND	480	120	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	<10.0	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 71.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.5 % 49.1-148

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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 3 4 (H246145-03)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/10/2024	ND	480	120	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	<10.0	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 88.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 4 5 (H246145-04)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/10/2024	ND	480	120	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	98.9	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	76.0	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 5 5 (H246145-05)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/10/2024	ND	480	120	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	13.5	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 79.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 1 0-4 (H246145-06)

BTEX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44		
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71		
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42		
Total BTEX	<0.300	0.300	10/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

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	10/10/2024	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	10/09/2024	ND	219	109	200	3.44		
DRO >C10-C28*	93.2	10.0	10/09/2024	ND	232	116	200	5.26		
EXT DRO >C28-C36	70.4	10.0	10/09/2024	ND						

Surrogate: 1-Chlorooctane 96.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 2 0-4 (H246145-07)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

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	10/10/2024	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	142	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	111	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.9 % 49.1-148

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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 3 0-4 (H246145-08)

BTEX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44		
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71		
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42		
Total BTEX	<0.300	0.300	10/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

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	10/10/2024	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	10/09/2024	ND	219	109	200	3.44		
DRO >C10-C28*	<10.0	10.0	10/09/2024	ND	232	116	200	5.26		
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND						

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 4 0-5 (H246145-09)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

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	10/10/2024	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	10/09/2024	ND	219	109	200	3.44	
DRO >C10-C28*	<10.0	10.0	10/09/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	<10.0	10.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 5 0-5 (H246145-10)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

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	10/10/2024	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	10/10/2024	ND	219	109	200	3.44	
DRO >C10-C28*	39.8	10.0	10/10/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	21.7	10.0	10/10/2024	ND					

Surrogate: 1-Chlorooctane 88.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 6 0-5 (H246145-11)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

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	10/10/2024	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	10/10/2024	ND	219	109	200	3.44	
DRO >C10-C28*	154	10.0	10/10/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	123	10.0	10/10/2024	ND					

Surrogate: 1-Chlorooctane 79.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 7 0-5 (H246145-12)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

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	10/10/2024	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	10/10/2024	ND	219	109	200	3.44	
DRO >C10-C28*	185	10.0	10/10/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	149	10.0	10/10/2024	ND					

Surrogate: 1-Chlorooctane 81.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Hungry Horse LLC		P.O. #: _____	
Project Manager: Daniel Dominguez		Company: Murchison Oil & Gas	
Address: 4024 Plains Hwy		Attn: Greg Boans	
City: Lovington	State: NM	Address: 5325 Sierra Vista	
Phone #: 575 393-3386	Fax #: _____	City: Carlsbad	State: NM
Project #: _____	Project Owner: Murchison Oil & Gas	State: NM	Zip: 88230
Project Name: Big Cat State Com #1	Project Location: U/L G Sec 11 T17S - R28E	Phone #: 575 706-0667	Fax #: _____
Sampler Name: Jerry Heidelberg	FOR LAB USE ONLY		

BILL TO

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV	DATE	TIME	Chloride	TPH	BTEX 8021
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						
12345	FL1	4	C	1	X							10/9/24	X	X	X	
	FL2	4	C	1	X							10/9/24	X	X	X	
	FL3	4	C	1	X							10/9/24	X	X	X	
	FL4	5	C	1	X							10/9/24	X	X	X	
	FL5	5	C	1	X							10/9/24	X	X	X	
	SW1	0.4	C	1	X							10/9/24	X	X	X	
	SW2	0.4	C	1	X							10/9/24	X	X	X	
	SW3	0.4	C	1	X							10/9/24	X	X	X	
	SW4	0.5	C	1	X							10/9/24	X	X	X	
	SW5	0.5	C	1	X							10/9/24	X	X	X	

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Relinquished By: _____	Date: 10/24	Received By: _____	Date: 10/24
Time: _____	Time: _____	Time: _____	Time: _____

Delivered By: (Circle One) UPS - Bus - Other: _____	1.8c / G.O.V. 120 / #140	Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) _____
--	-----------------------------	---	------------------------------------

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

REMARKS: 24 hr RUSH!
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 Email results to: pm@hungry-horse.com
 gboans@jdmii.com



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: Big Cat State Cor #1
Project Location: U/G Sec 11 T17S - R28E
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 #:

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	Chloride	TPH	BTEX 8021
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
11	SW6	0-5	C	1	X							10/9/24		X		
12	SW7	0-5	C	1	X							10/9/24		X		

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Relinquished By: [Signature] **Date:** 10/9/24
Relinquished By: [Signature] **Date:** 10/9/24
Received By: [Signature] **Date:** 10/9/24

Sample Condition: Cool Yes No
 Intact Yes No
REMARKS: 24 hr RUSHI
 Email results to: pm@hungry-horse.com
 gboans@jdmii.com

Delivered By: (Circle One) 1.8.c/c-o.u.
Sampler - UPS - Bus - Other: 1.3.c/#140
Checked By: [Signature]

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



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

October 10, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: BIG CAT STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/09/24 14:49.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: TOPSOIL 1 (H246146-01)

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44	
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71	
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42	
Total BTEX	<0.300	0.300	10/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

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	10/10/2024	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	10/10/2024	ND	219	109	200	3.44	
DRO >C10-C28*	96.5	10.0	10/10/2024	ND	232	116	200	5.26	
EXT DRO >C28-C36	73.3	10.0	10/10/2024	ND					

Surrogate: 1-Chlorooctane 67.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/09/2024	Sampling Date:	10/09/2024
Reported:	10/10/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	MURCHINSON	Sample Received By:	Alyssa Parras
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: CALICHE 1 (H246146-02)

BTEX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2024	ND	2.10	105	2.00	3.44		
Toluene*	<0.050	0.050	10/09/2024	ND	2.03	101	2.00	2.71		
Ethylbenzene*	<0.050	0.050	10/09/2024	ND	2.04	102	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/09/2024	ND	6.06	101	6.00	2.42		
Total BTEX	<0.300	0.300	10/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

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	10/10/2024	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	10/10/2024	ND	219	109	200	3.44		
DRO >C10-C28*	<10.0	10.0	10/10/2024	ND	232	116	200	5.26		
EXT DRO >C28-C36	<10.0	10.0	10/10/2024	ND						

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

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 #: 88260
 Project #: Project Owner: Murchison Oil & Gas
 Project Name: Big Cat State Com #1
 Project Location: UL/ G Sec 11 T17S - R28E
 Sampler Name: Jerry Heidelberg
 P.O. #: Murchison Oil & Gas
 Company: Murchison Oil & Gas
 Attn: Greg Boans
 Address: 5325 Sierra Vista
 City: Carlsbad
 State: NM Zip: 88230
 Phone #: 575 706-0667
 Fax #:

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	Chloride	TPH	BTEX 8021
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
124014	Topsoil	1	C	1	X							10/9/24		X	X	X
2	Caliche	1	C	1	X							10/9/24		X	X	X

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Relinquished By: [Signature] Date: 10/9/24
 Received By: [Signature] Date: 10/9/24
 Delivered By: (Circle One) 1-800-GO-0-0-0
 Sampler - UPS - Bus - Other: [Signature] #124014
 Sample Condition: Cool Intact
 Yes No

REMARKS: 24 hr RUSH!
 Email results to: pm@hungry-horse.com
 gboans@jdmii.com
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:

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



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

October 31, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: BIG CAT STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/29/24 16:10.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: FL 4B 6' (H246583-01)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	32.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 1B 0-4' (H246583-02)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	16.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 92.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 2B 0-4' (H246583-03)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 4B 5-6' (H246583-04)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 5B 5-6' (H246583-05)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 6B 0-5' (H246583-06)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 96.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/29/2024	Sampling Date:	10/29/2024
Reported:	10/31/2024	Sampling Type:	Soil
Project Name:	BIG CAT STATE COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	UL/ G SEC 11 T17S R28E		

Sample ID: SW 7B 0-5' (H246583-07)

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	10/30/2024	ND	2.00	100	2.00	4.73	
Toluene*	<0.050	0.050	10/30/2024	ND	2.12	106	2.00	5.86	
Ethylbenzene*	<0.050	0.050	10/30/2024	ND	2.23	112	2.00	7.05	
Total Xylenes*	<0.150	0.150	10/30/2024	ND	6.71	112	6.00	7.38	
Total BTEX	<0.300	0.300	10/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/30/2024	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	10/30/2024	ND	224	112	200	2.75	
DRO >C10-C28*	<10.0	10.0	10/30/2024	ND	224	112	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	10/30/2024	ND					

Surrogate: 1-Chlorooctane 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Attachment VII
May 6, 2024 RT Hicks Consultants Report

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

May 6, 2024

Mr. Mike Bratcher
NMOCD, District II

RE: Murchison – Big Cat State Com #1 Unresolved Release
Closure Request, API #30-015-32091
Unit G, Section 11, T17S, R28E, Eddy County

Mr. Bratcher:

In late 2018, Murchison Oil & Gas asked R.T. Hicks Consultants to review the file associated with the 2004 release referenced above. We concluded that the Murchison staff did not complete post-remediation sampling as outlined in corrective action plan (page 20 of the attached 4/15/19 Closure Request). OCD approved the plan with stipulations (page 23 of attachment). The Murchison file is not clear about the how many remediation campaigns occurred per the plan.

On January 10, 2019, we sampled the remediated area in accordance with the plan. Note that page 22 of the attachment documents chloride concentrations are near or at background, which obviated the need for testing chloride at closure. Laboratory analyses yielded TPH concentrations that meet the approved target concentrations in accordance with the approved work plan (5000 mg/kg TPH).

Due to limited staff at NM OCD and an avalanche of submitted closure plans, we believe the April 15, 2019 Closure Request was never reviewed by OCD and we know that closure was not granted. Today, staffing at OCD is more robust.

We respectfully request that OCD review 2019 Closure Request and grant closure of this release for the following reasons:

1. The 2019 closure request met closure standards of the approved plan.
2. We believe Rule 29 Transitional Provisions (reproduced below) apply to this release and the 2019 Closure Request.

19.15.29.16 TRANSITIONAL PROVISIONS:

A. Responsible parties with current ongoing corrective actions/remediation with approved plans and timelines as of August 14, 2018 do not have to submit revised plans.

3. As shown in the attached 2024 Plates, the site characteristics are
 - a. depth to groundwater is (3620-3525=) 95 feet
 - b. within medium karst potential,
 - c. No public water supply wells, churches, schools, stock wells, wetlands or surface water are within current setbacks

- d. Floodplains and underground mines are not beneath the site
 - e. 100% of the former spill footprint lies within the existing and active tank battery firewall
4. As shown in the 2019 Closure Request
- a. No evidence exists of chloride concentrations above limits that would impair vegetation at plugging and abandonment of this well
 - b. The average GRO+DRO of the six samples within the spill footprint taken in 2019 is less than 355 mg/kg.
 - c. Average BTEX of the 2019 samples is less than 0.3 mg/kg and
 - d. Average benzene is less than 0.05 mg/kg

If you have any questions concerning this submittal, please contact me or Greg Boans of Murchison. Thank you for your consideration.

Regards,

R.T. Hicks Consultants

Randall T. Hicks PG
Principal

Copy: Murchison, BLM

2019 Closure Request

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

April 15, 2019

Bradford Billings
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
VIA EMAIL

RE: Murchison – Big Cat State Com #1 Unresolved Release
Closure Request, API #30-015-32091
Unit G, Section 11, T17S, R28E, Eddy County

Dear Mr. Billings:

On behalf of Murchison Oil and Gas, Inc., R. T. Hicks Consultants provides NMOCD with confirmation laboratory analyses as confirmation of remediation of the above-referenced release. A corrective action plan was submitted by Murchison and approved by District II in 2004 that involved the incorporation of Kenaf¹ for the remediation of hydrocarbon-impacted soil. The approved plan described the following actions in response to the May 13, 2004 release of 70 barrels of crude oil to the containment:

- Stained gravel and standing fluid (rainwater) were removed from the containment surrounding the tanks
- Samples were collected with NMOCD witness for laboratory analysis
- 300 pounds of Kenaf material was tilled into the affected soils on September 20, 2004

The plan stated that “the area will be reviewed” and the “process will be repeated until TPH is lower than 5,000 ppm.” We found no files on NMOCD’s website which indicated additional sampling was conducted. Hicks Consultants inspected the location on January 10, 2019 and found that the surface surrounding the tanks consists of relatively new and unstained gravel. Current site condition is exemplified in the adjacent photograph.

Using the map included in the approved plan, samples were



1/10/2019: view north; samples locations visible inside containment

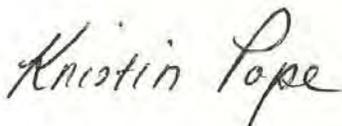
collected at the previously-established sample points at a depth of six inches below the gravel surface. Laboratory analysis of these samples yielded hydrocarbon concentrations presented in the table below and on Plate 1:

Sample ID	Date	Depth (ft)	GRO+DRO	TPHext	BTEX	Benzene
SP-1	01/10/2019	0.5	<20.0	<30.0	<0.300	<0.050
SP-2	01/10/2019	0.5	<86.8	<117.0	<0.300	<0.050
SP-3	01/10/2019	0.5	<248.0	<401.0	<0.300	<0.050
SP-4	01/10/2019	0.5	<302.0	<496.0	<0.300	<0.050
SP-5	01/10/2019	0.5	<696.0	<950.0	<0.300	<0.050
SP-6	01/10/2019	0.5	<85.4	<136.6	<0.300	<0.050

These analyses confirm that target concentrations set in the 2004 approved remediation plan have been met and closure of the regulatory file associated with this release is respectfully requested. Please note a copy of this transmission is provided to the State Land Office as the surface owner. Thank you for your consideration of this remediation report/closure request.

Regards,

R.T. Hicks Consultants



Kristin Pope
Senior Project Geologist

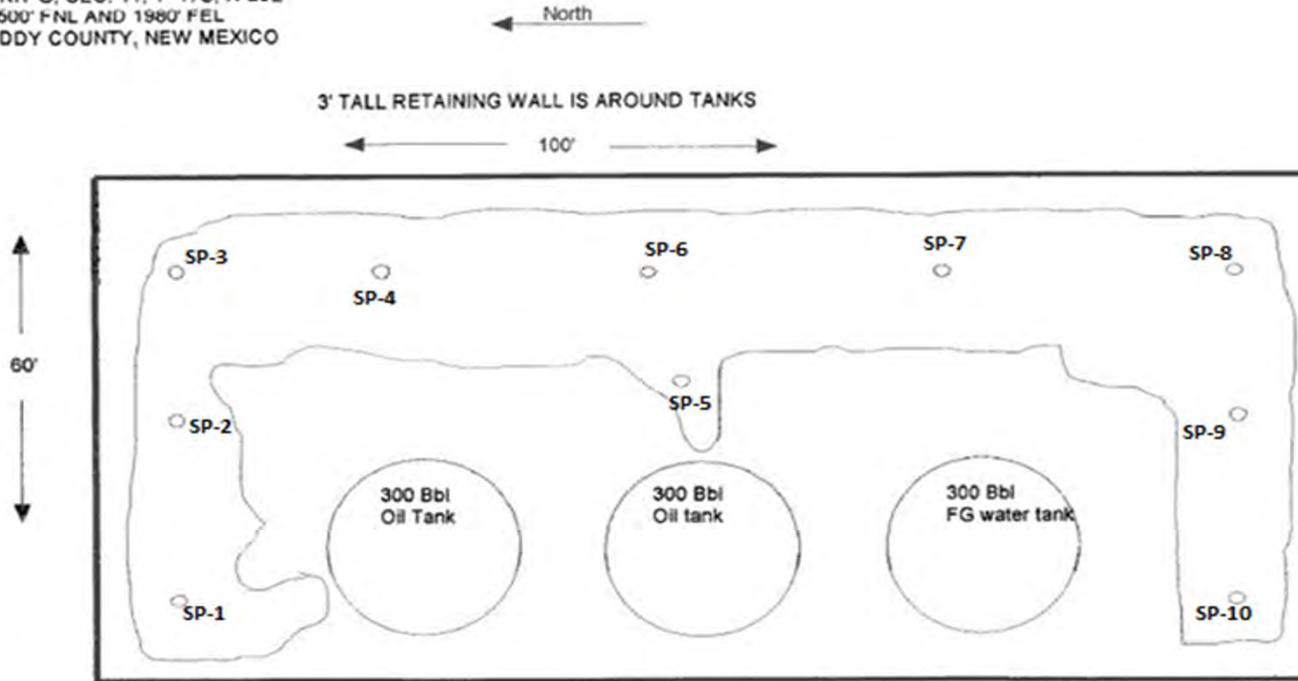
Enclosures: Plate 1, Figures 1-2 (groundwater information), laboratory report, remediation plan, NMOCD approval

Copy: Murchison, Ryan Mann (SLO-rmann@slo.state.nm.us)

ⁱ Hydrocarbon degradation potential of some hydrocarbon-utilizing bacterial species associated with Kenaf (*Hibiscus cannabinus* L.) plant <http://isca.in/IJBS/Archive/v8/i1/2.ISCA-IRJBS-2018-075.pdf>

MURCHISON OIL AND GAS, INC.
 BIG CAT STATE COM #1
 UNIT G, SEC. 11, T- 17S, R-28E
 1500' FNL AND 1980' FEL
 EDDY COUNTY, NEW MEXICO

ATTACHMENT TO CORRECTIVE ACTION WORK PLAN
 BIG CAT STATE COM #1



Plat originally included in 2004 submission to NMOCD, establishing 10 monitoring points after remediation using Kenaf; Labels added for 1/10/2019 sample identification

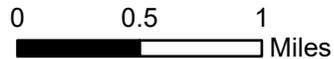
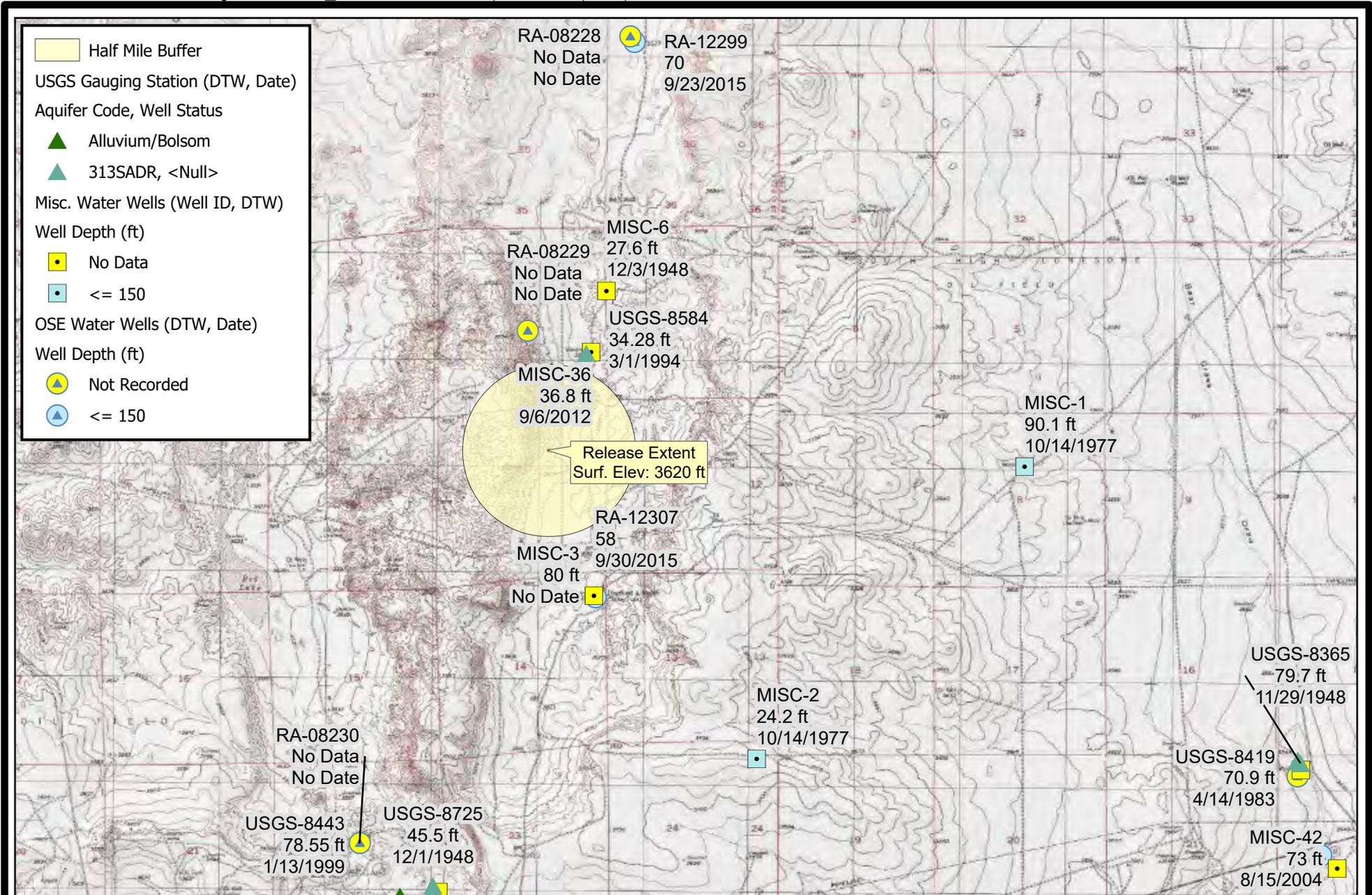
Sample ID	Date	Depth (ft)	In Use?	Chloride	GRO+DRO	TPHext	BTEX	Benzene
SP-1	01/10/2019	0.5	Yes	avg. 67.6*	<20.0	<30.0	<0.300	<0.050
SP-2	01/10/2019	0.5	Yes		<86.8	<117.0	<0.300	<0.050
SP-3	01/10/2019	0.5	Yes		<248.0	<401.0	<0.300	<0.050
SP-4	01/10/2019	0.5	Yes		<302.0	<496.0	<0.300	<0.050
SP-5	01/10/2019	0.5	Yes		<696.0	<950.0	<0.300	<0.050
SP-6	01/10/2019	0.5	Yes		<85.4	<136.6	<0.300	<0.050

All concentrations mg/kg

* Average of ten 0.5 ft deep samples collected on 9/17/2004

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 505-266-5004	Murchison Oil and Gas, Inc.	Plate 1
	Confirmation Sample Locations & Analyses	April 2019

M:\Murchison\Releases\BigCatStCom1_Unresolved\larcGISpro\larcGISpro.aprx

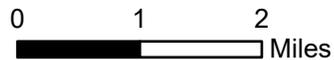
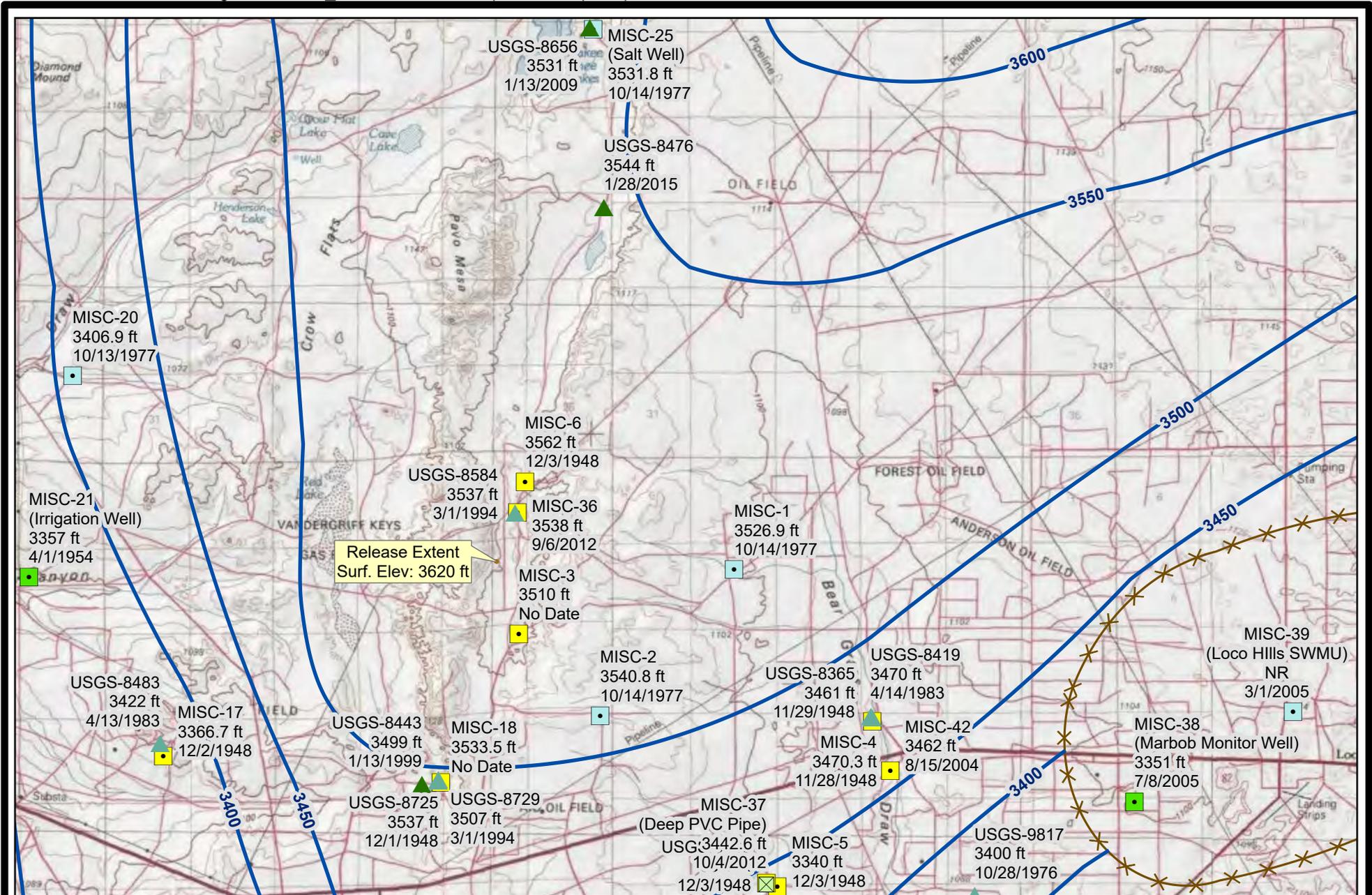


R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Depth to Water
 Murchison Oil and Gas, Inc
 Big Cat State Com #1 Release

Figure 1
 March 2019

M:\Murchison\Releases\BigCatStCom1_Unresolved\larcGISpro\larcGISpro.aprx



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Potentiometric Surface and Groundwater Elevation
 Murchison Oil and Gas, Inc
 Big Cat State Com #1 Release

Figure 2
 March 2019

M:\Murchison\Releases\BigCatStCom1_Unresolved\arcGISpro\arcGISpro.aprx

Potentiometric Surface (ft msl)	
Isocontours	
	Area of variable or no saturation
	Isocontour
USGS Gauging Station (GWElev, Date)	
Aquifer Code, Well Status	
	Alluvium/Bdsom
	San Andres Limestone
	San Andres Limestone, Site was being pumped
Misc Water Wells (GWElev, Date)	
Well Depth (ft)	
	No Data
	<= 150
	151 - 350

R.T. Hicks Consultants Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Potentiometric Surface and Groundwater Elevation	LEGEND Figure 2
	Murchison Oil and Gas, Inc Big Cat State Com #1 Release	March 2019



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

January 17, 2019

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: BIG CAT ST. COM #1 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 01/11/19 12:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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 accredited 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



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

Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 1 @ 6" (H900094-01)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609	
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288	
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03	
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47	
Total BTEX	<0.300	0.300	01/16/2019	ND					

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

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	01/14/2019	ND	202	101	200	3.67	
DRO >C10-C28*	<10.0	10.0	01/14/2019	ND	183	91.7	200	2.94	
EXT DRO >C28-C36	<10.0	10.0	01/14/2019	ND					

Surrogate: 1-Chlorooctane 78.3 % 41-142

Surrogate: 1-Chlorooctadecane 73.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 2 @ 6" (H900094-02)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/14/2019	ND	202	101	200	3.67		
DRO >C10-C28*	76.8	10.0	01/14/2019	ND	183	91.7	200	2.94		
EXT DRO >C28-C36	30.2	10.0	01/14/2019	ND						

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 79.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 3 @ 6" (H900094-03)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	238	10.0	01/15/2019	ND	210	105	200	1.44	QM-07	
EXT DRO >C28-C36	153	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 69.4 % 41-142

Surrogate: 1-Chlorooctadecane 75.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 4 @ 6" (H900094-04)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	292	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	194	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 71.8 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 5 @ 6" (H900094-05)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	686	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	254	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 125 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 6 @ 6" (H900094-06)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	75.4	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	51.2	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 7 @ 6" (H900094-07)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	52.6	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	13.1	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.7 % 37.6-147

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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 8 @ 6" (H900094-08)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	166	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	87.9	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 81.6 % 41-142

Surrogate: 1-Chlorooctadecane 84.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 9 @ 6" (H900094-09)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	199	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	84.9	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 84.9 % 41-142

Surrogate: 1-Chlorooctadecane 89.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received:	01/11/2019	Sampling Date:	01/10/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	BIG CAT ST. COM #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON - EDDY CO NM		

Sample ID: SP - 10 @ 6" (H900094-10)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2019	ND	2.22	111	2.00	0.609		
Toluene*	<0.050	0.050	01/16/2019	ND	2.13	107	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/16/2019	ND	2.07	103	2.00	1.03		
Total Xylenes*	<0.150	0.150	01/16/2019	ND	6.31	105	6.00	1.47		
Total BTEX	<0.300	0.300	01/16/2019	ND						

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

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	01/15/2019	ND	209	105	200	4.61		
DRO >C10-C28*	<10.0	10.0	01/15/2019	ND	210	105	200	1.44		
EXT DRO >C28-C36	<10.0	10.0	01/15/2019	ND						

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 72.9 % 37.6-147

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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

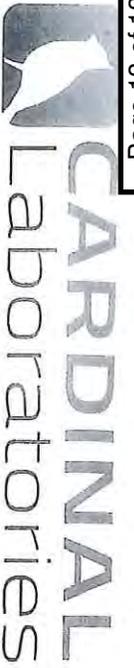
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: RT Hicks Consultants
 Project Manager: Kristin Pope
 Address: 901 Rio Grande Blvd NW, E-142
 City: Albuquerque State: NM Zip: 87104
 Phone #: 505-266-5004 Fax #:
 Project #:
 Project Name: Big Cat St. Com #1 Release
 Project Location: Eddy County
 Project Owner: Marchison
 City: State: Zip:
 Phone #: Fax #:
 Sampler Name: K. Pope

BILL TO P.O. #:
 Company: RT Hicks
 Attn:
 Address:
 City: State: Zip:
 Phone #: Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
H900094	SP-1 @ 6"	G	1			X				11-19	1330	BTEX
	SP-2 @ 6"					X					1333	TPH (GRO, DRO, DRO ext)
	SP-3 @ 6"					X					1339	
	SP-4 @ 6"					X					1340	
	SP-5 @ 6"					X					1342	
	SP-6 @ 6"					X					1343	
	SP-7 @ 6"					X					1345	
	SP-8 @ 6"					X					1347	
	SP-9 @ 6"					X					1349	
	SP-10 @ 6"					X					1350	

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Relinquished By: Kristin Pope
 Date: 11-19
 Time: 12:12
 Received By: Pamela Adams
 Date: 11-19
 Time: 12:12

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: 5:46 #97

Sample Condition
 Cool Intact
 Yes No
 Checked By: (Initials) JA

Phone Result: Yes No
 Fax Result: Yes No
 Add'l Phone #:
 Add'l Fax #:
 REMARKS: email to kristin@rthicksconsult.com

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

Murchison Oil and Gas , Inc.
1100 Mira Vista Blvd
Plano, TX 75093

11/12/04

To: State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
Artesia, New Mexico 88210

Re: Work Plan Approval for Big Cat State Com. #1
Ut. G, Sec. 11, T-17S, R-28E API # 30-015-32091

Attn.: Mike Bratcher

Dear Mike Bratcher,

We met with you on 9/10/04 and reviewed the spill area on the Big Cat State Com. #1. We collected twenty (20) soil samples 10 from surface and 10 from 6" deep representing the spill area. The samples were sent to Cardinal Laboratories the TPH exceeded 5000 PPM on all but two samples. (Copy of soil samples is attached.) We discussed and you approved the continued Remediation/ cleanup work plan. We have continued, and will continue the work plan as follows.

1. An area was selected outside the spill area and a 10 Mill plastic was laid out.
2. Gravel was removed from the surface of spill area and stored on plastic.
3. The spill area which was inside the containment wall held rain water. The water was pulled off and disposed at an approved disposal.
4. We rototilled in 15 - 20# sacks of Kenaff on 9/20/04
5. The area will be reviewed on 01/05/05
6. If the reviewed area appears to need additional remediation, more Kenaff will be tilled into soil. The Kenaff will be allowed to remediate the soil, and a new review time will be established.
7. When review area appears to be remediated additional soil samples will be taken and sent to lab.
8. This process will be repeated until the TPH is lower than 5000 ppm.
9. The NMOCD will be notified of all potential reviews and soil sample dates.

Sincerely,



Tommy W. Folsom
Production Manager



PHONE (915) 678-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 993-2326 • 101 E. MARLAND • HOBBS, NM 88240

**ANALYTICAL RESULTS FOR
ROADRUNNER ENVIRONMENTAL**

ATTN: ANGIE DAVIS

P.O. BOX 1238

CARLSBAD, NM 88220

FAX TO: (505) 887-2057

Sampling Date: 09/17/04

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: GP

Analyzed By: BC

Receiving Date: 09/17/04

Reporting Date: 09/28/04

Project Owner: MURCHINSON

Project Name: NOT GIVEN

Project Location: BIG CAT STATE #1

LAB NUMBER	SAMPLE ID	GRO (C ₉ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₀) (mg/Kg)
ANALYSIS DATE:		09/27/04	09/27/04
H9162-1	A-1	532	10300
H9162-2	A-2 6"	4970	12300
H9162-3	B-1	109	18400
H9162-4	B-2 6"	1290	8020
H9162-5	C-1	342	14300
H9162-6	C-2 6"	3280	11800
H9162-7	D-1	608	17200
H9162-8	D-2 6"	3120	13400
H9162-9	E-1	1770	19300
H9162-10	E-2 6"	3970	12000
H9162-11	F-1	316	16700
H9162-12	F-2 6"	1440	7920
H9162-13	G-1	183	18200
H9162-14	G-2 6"	475	4170
H9162-15	H-1	40.1	11200
H9162-16	H-2 6"	998	5090
H9162-17	I-1	510	9380
H9162-18	I-2 6"	85.0	1050
H9162-19	J-1	1820	7830
H9162-20	J-2 6"	1250	6820
Quality Control		751	778
True Value QC		800	800
% Recovery		93.9	97.3
Relative Percent Difference		1.3	4.7

METHOD: SW-846 8015 M

Bryan J. Blake
Chemist

9/28/04
Date

H9162A.XLS

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**ANALYTICAL RESULTS FOR
 ROADRUNNER ENVIRONMENTAL
 ATTN: ANGIE DAVIS
 P.O. BOX 1238
 CARLSBAD, NM 88220
 FAX TO: (505) 887-2057**

Receiving Date: 09/17/04
 Reporting Date: 09/28/04
 Project Owner: MURCHINSON
 Project Name: NOT GIVEN
 Project Location: BIG CAT STATE #1

Sampling Date: 09/17/04
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: GP
 Analyzed By: AH/BC

LAB NO.	SAMPLE ID	CI ⁻ (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		09/20/04	09/21/04	09/21/04	09/21/04	09/21/04
H9162-1	A-1	48	1.20	6.25	2.93	6.11
H9162-2	A-2 6"	96	10.6	98.5	86.2	202
H9162-3	B-1	64	0.029	0.296	0.187	0.654
H9162-4	B-2 6"	80	1.27	15.3	16.8	52.4
H9162-5	C-1	64	0.010	0.193	0.121	0.848
H9162-6	C-2 6"	64	1.66	51.6	60.9	171
H9162-7	D-1	48	0.063	0.469	0.114	1.74
H9162-8	D-2 6"	64	2.64	34.6	24.6	62.4
H9162-9	E-1	64	0.186	15.4	23.9	90.0
H9162-10	E-2 6"	48	2.55	48.8	18.7	185
H9162-11	F-1	80	<0.005	0.159	0.238	0.968
H9162-12	F-2 6"	48	0.123	6.66	9.66	36.9
H9162-13	G-1	80	0.005	0.302	0.240	0.860
H9162-14	G-2 6"	64	0.036	2.83	1.19	31.6
H9162-15	H-1	80	<0.005	0.029	0.079	0.262
H9162-16	H-2 6"	64	0.044	10.9	9.46	63.9
H9162-17	I-1	64	0.670	2.67	5.16	16.4
H9162-18	I-2 6"	48	0.104	2.92	2.49	8.72
H9162-19	J-1	112	0.170	0.476	0.108	52.3
H9162-20	J-2 6"	80	0.702	1.06	0.810	24.5
Quality Control		970	0.094	0.091	0.094	0.264
True Value QC		1000	0.100	0.100	0.100	0.300
% Recovery		97.0	94.4	90.6	93.6	94.6
Relative Percent Difference		6.2	1.6	1.5	2.6	2.0

METHODS: CI⁻ - Std. Methods 4500-CI⁻B; BTEX - EPA SW-846-8260

Burgess J. A. Coock
 Burgess J. A. Coock, Ph. D.

9/28/04
 Date

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

Joanna Prukop
Cabinet Secretary
Acting Director
Oil Conservation Division

6/30/2004

Murchison Oil And Gas, Inc.
1100 Mira Vista Blvd
Plano, TX 75093

Re: Work plan approval for the Big Cat State Com. #1
Ut. G sec. 11-17s-28e 30-015-32091

Dear Michael S. Daugherty,

The Oil Conservation Division has received the Remediation/Cleanup work plan as Presented by Murchison Oil and Gas, Inc.

The remediation work plan as submitted is approved with the follow stipulations added:

1. The RRAL of 5000 ppm is accepted for the correction of the TPH in the area of the release.
2. The work plan as approved by O.C.D. shall begin corrective actions no later than 7/30/2004.
3. The confirmation soil sampling dates 9/19/2004 as provided by your work plan is approved.
4. Please notify the Oil Conservation Division before corrective actions or soils samples are taken
For analytical therefore giving O.C.D. the opportunity to witness.

If I can be of assistance in this matter please do not hesitate to contact me at 505-748-1283 or E-Mail me at mstubblefield@state.nm.us.

Sincerely,

Mike Stubblefield
Environ. Eng. Spec.
E.M.N.R. D./O.C.D.

Cc Mike Bratcher

Murchison Oil and Gas, Inc.
1100 Mira Vista Blvd
Plano, Tx 75093

Big Cat State Com #1
Unit G, Sec. 11, T-17S, R-28E
1500' FNL & 1980' FEL
Eddy County, New Mexico

Corrective Action Work Plan

The Big Cat State Com #1 had a spill that occurred 5/13/04, and was reported by Phone to Mike Stubblefield on 5/13/04. A C-141 was filed dated 5/18/04 the corrective Action Plan was not attached. This is the corrective action work plan that was requested by Mike Stubblefield in letter and apart of the C -141 filed (Copy attached)

Ranking Criteria

Depth to ground water is expected to be > 100'	Ranking Score 0
This is no water source or body within 1 mile radius Private or Domestic	Ranking Score 0
There is no surface body of water < 1000' horizontal	Ranking Score 0

Recommended Remediation Action Level

Total ranking score 0 - 9
Benzene (ppm) - 10, BTEX (ppm) - 50, TPH (PPM) - 5000

Impacted soil contamination appeared to be shallow.

Corrective Action Taken for Remediation

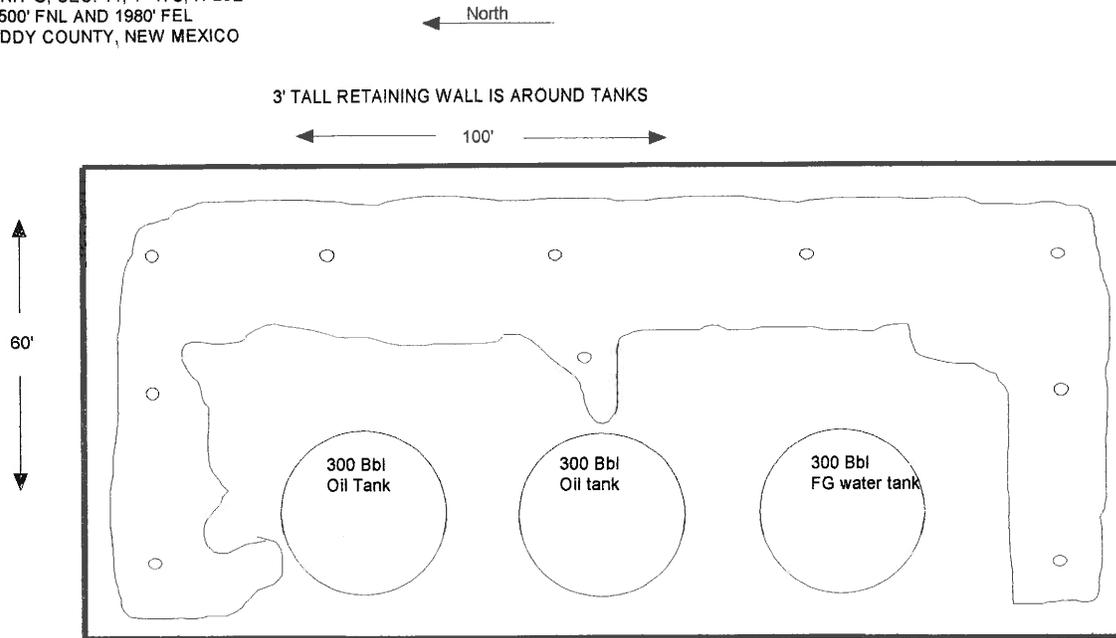
Effective area had 8 - 20# sacks of Kenaff tilled into soil per Filed C-141. A additional 10 - 20# sacks of Kenaff were tilled into the Effected area on 06/17/04. This will be allowed to set for 91 days and soil samples will be taken. (See attached drawing indicating effected area and sample points.) If the effected area is not with in the excepted limits additional treatments will be conducted or additional Remediation will be conducted. The NMOCD (Mike Stubblefield) will receive additional reports on Remediation until the acceptable test levels are obtained.

Proposed sample test date 08/19/04

Tommy submitted this letter to NMOCG on 6/28/04
to satisfy their letter dated 5/28/04

ATTACHMENT TO CORRECTIVE ACTION WORK PLAN
BIG CAT STATE COM #1

MURCHISON OIL AND GAS, INC.
BIG CAT STATE COM #1
UNIT G, SEC. 11, T- 17S, R-28E
1500' FNL AND 1980' FEL
EDDY COUNTY, NEW MEXICO



There will be 10 sample sites the samples sites are indicating in drawing with a ○
The 5 sample sites across the back of tanks will be 8' off of back retaining wall, and 5' off end retaining walls and spaced 30' apart.
The sample sites in North end of the retaining wall will be 5' off of retaining wall and 30' apart
The sample sites in South end of the retaining wall will be 5' off of retaining wall and 30' apart
The sample site at the back of middle tank will be 8' off tank and on edge of tank pad.

Sample Date 08/19/04



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop
Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

5/28/2004

Murchinson Oil & Gas, Inc.
Att: Michael S. Daugherty
1100 Mira Blvd.
Plano, TX 75093

Re: 30-015-32091 Ut. G-11-17s-28e
Big Cat State Com. #1

Dear Mr. Michael S. Daugherty,

The Artesia Oil Conservation Division is in receipt of the initial C-141 form (copy included) dated 5/13.2004 from Murchison Oil & Gas, Inc.

Please submit a Corrective Action work plan to the Artesia O.C.D. for correction of this release. Please use the "Guidelines For Remediation of leaks, spills, and releases" as your guide.

A copy of the Guidelines for Remediation of Leaks, Spills, and Releases, published 1993, can be found at the O.C.D. web address WWW.EMNRD.STATE.NM.US/OCD. The published document can be found on the O.C.D. web page under Publications/Environmental Handbook/Miscellaneous Guidelines/Spill Prevention Clean up.

The work plan presented to the O.C.D. must include general site characteristics, soil remediation action levels, soil remediation methods, and planned analytical, which will require testing for TPH, B-Tex.

A Final C-141 form is required for closure of the initial C-141 form filed. The Final C-141 Form filed must include a report of remediation actions taken with analytical results attached

Please have the requested work plan in the Artesia office on or before 6/28/2004.

The Artesia O.C.D. must be notified 24 hours prior to any remediation actions and/or subsequent soil samples taken for analytical.

In the event that a satisfactory response is not received to this letter further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe. Such a hearing may result in imposition of **CIVIL PENALTIES** for your violation of OCD rules.

If I can be of assistance in this matter please do not hesitate to contact me at 505-748-1283
Or E-mail me at MSTUBBLEFIELD@STATE.NM.US.

Sincerely,

Mike Stubblefield

Environ. Eng. Spec.

N.M.O.C.D.

Oil Conservation Division * 1301 West Grand Ave. * Artesia, New Mexico 88210
Phone: (505) 748-1283* Fax (505) 748-9720 * <http://www.emnrd.state.nm.us>

District I
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED

MAY 21 2004

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

30-015-32091

Release Notification and Corrective Action

NAME 0150414928403		OPERATOR		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company MURCHISON OIL & GAS, INC.		Contact MICHAEL DAUGHERTY			
Address 1100 MIRA VISTA BLVD., PLANO, TX. 75093		Telephone No. (972) 931-0700			
Facility Name BIG CAT ST. COM. #1		Facility Type OIL WELL			
Surface Owner ST. OF NM.		Mineral Owner ST. OF NM.		Lease No. VO-4990	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	11	17S	28E	1500	NORTH	1980	EAST	EDDY

Latitude _____ Longitude _____

NATURE OF RELEASE

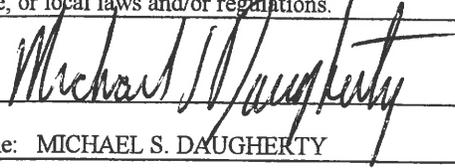
Type of Release Hole in Bottom of Tank	Volume of Release 70 Bbls.	Volume Recovered 60 Bbls.
Source of Release Storage Tank	Date and Hour of Occurrence 5/13/04	Date and Hour of Discovery 5/13/04 9:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Stublefield	
By Whom? Tommy Folsom	Date and Hour 5/13/04 5:00 PM left message Called again 5/14/04 9:00AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole developed in bottom of crude oil storage tank. Approximately 70 Bbls. of crude was released to area around tank. Retaining wall contained spill of oil. Sixty Bbls. were recovered with vacuum truck and returned to lease storage. Ten Bbls. were lost.

Describe Area Affected and Cleanup Action Taken.*
Affected area will be rototilled and mixed with 8 20# sacks of KENAFF for remediation.

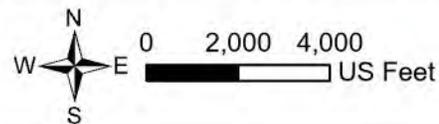
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: MICHAEL S. DAUGHERTY	Approved by District Supervisor:	
Title: VICE PRESIDENT OPERATIONS	Approval Date:	Expiration Date:
E-mail Address: mdaugherty@jdmii.com or tracy@jdmii.com	Conditions of Approval:	
Date: 5/18/04 Phone: (972) 931-0700	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

2024 Plates

P:\MurchisonBigCatStComRelease\MurchBigCatRelease.aprx



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Nearby Wells and Borings with Depth to Water
 Big Cat State Com#1 Release
 Murchison Oil and Gas LLC

Plate 1
 April 2024

P:\MurchisonBigCatStComRelease\MurchBigCatRelease.aprx

 Recycling Containment

USGS Gauging Station (GW Elev, Date)

Aquifer Code, Well Status

 San Andres Limestone

OSE Water Wells (DTW/Date)

Well Depth (ft)

 <= 150

Misc. Water Wells (GW Elev, Date)

Well Depth (ft)

 No Data

 <= 150

NM_Geology

Map Unit,Description

 Pr, Paleozoic-Ruster Formation; siltstone, gypsum, sandstone, and dolomite; Upper Permian

 Psl, Paleozoic-Salado Formation; evaporite sequence; Upper Permian

 Qa, Quaternary Alluvium, Qa, Quaternary Alluvium

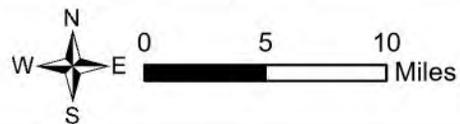
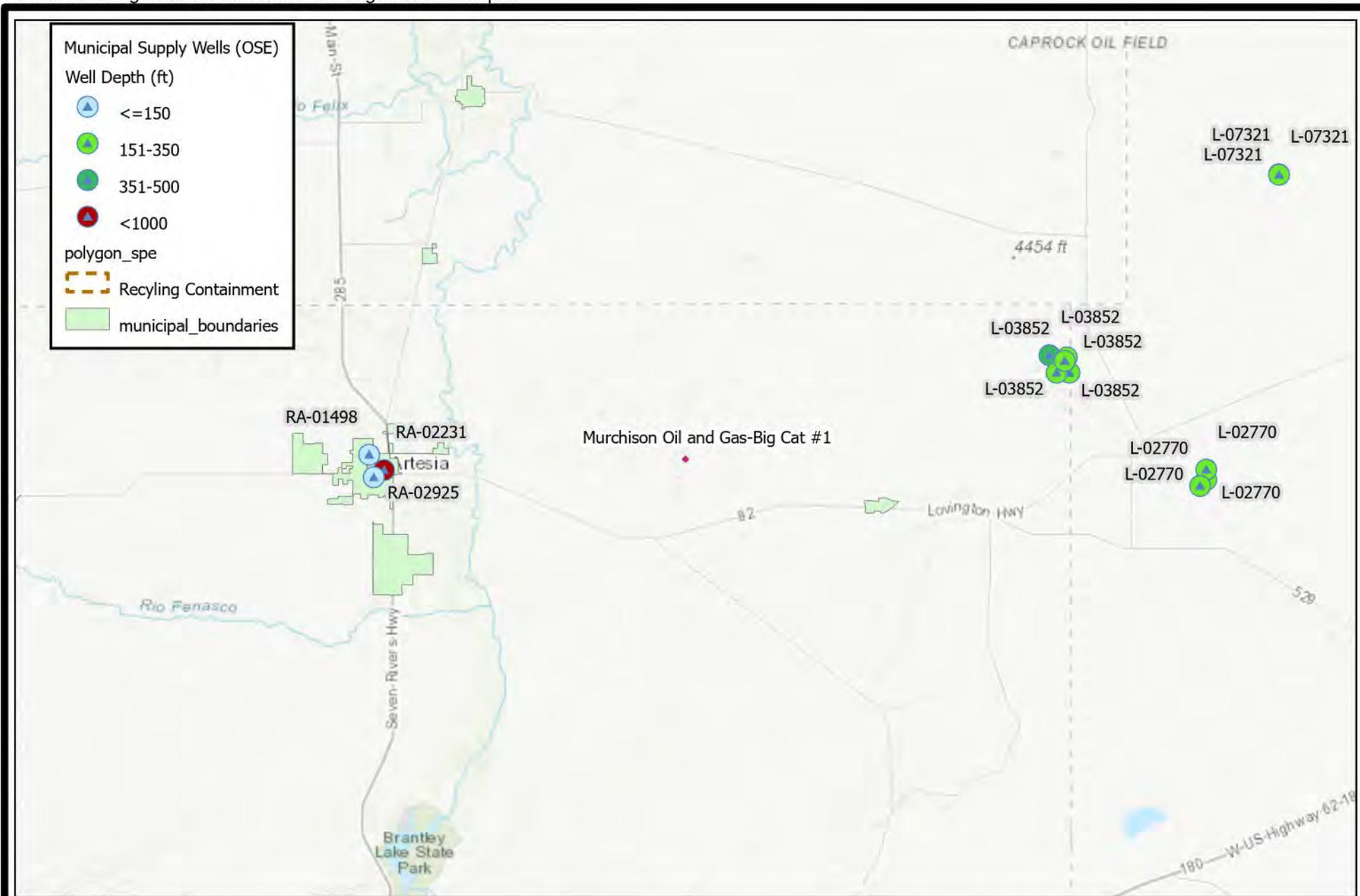
 Qe/Qp, Quaternary-Eolian Piedmont Deposits

 Qoa, Quaternary-Older Alluvial Deposits, Qoa, Quaternary-Older Alluvial Deposits

 Qp, Quaternary-Piedmont Alluvial Deposits, Qp, Quaternary-Piedmont Alluvial Deposits

<p>R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004</p>	Plates 1 & 2 Legend	
	<p>Big Cat State Com#1 Release Murchison Oil and Gas LLC</p>	<p>April 2024</p>

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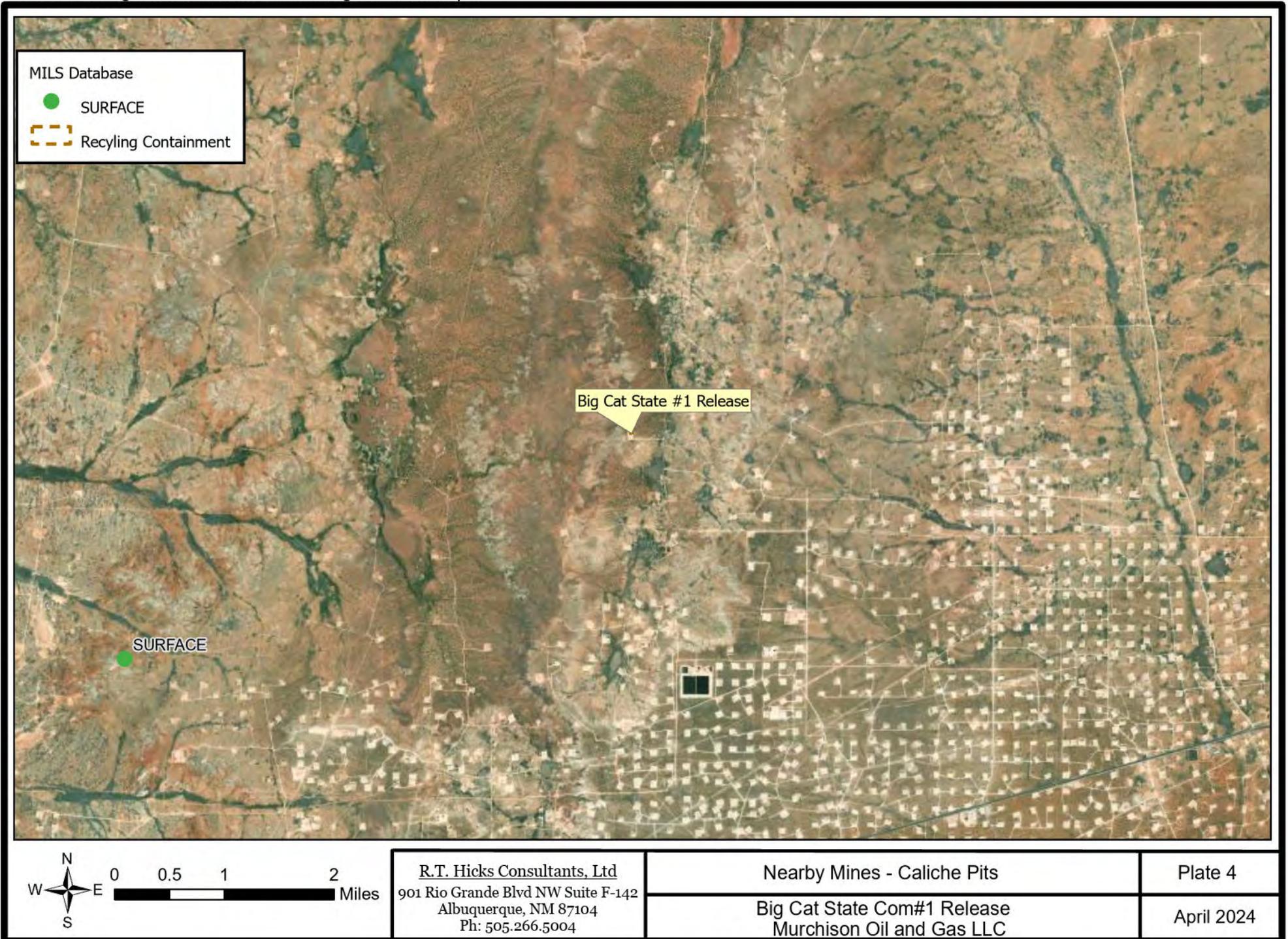


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 Albuquerque, NM 87104
 Ph: 505.266.5004

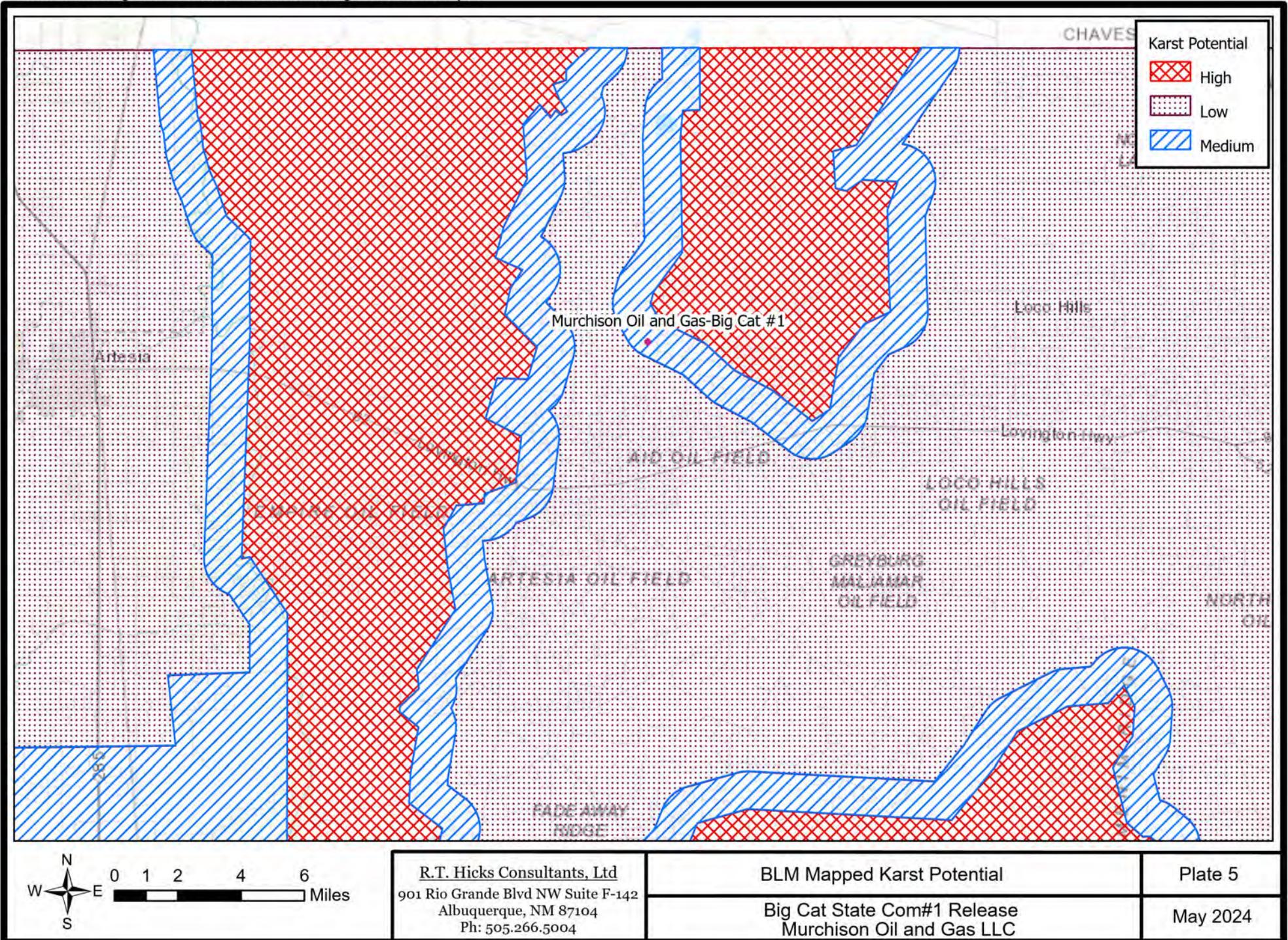
Nearest Municipalities & Public Water Supplies
 Big Cat State Com#1 Release
 Murchison Oil and Gas LLC

Plate 3
 April 2024

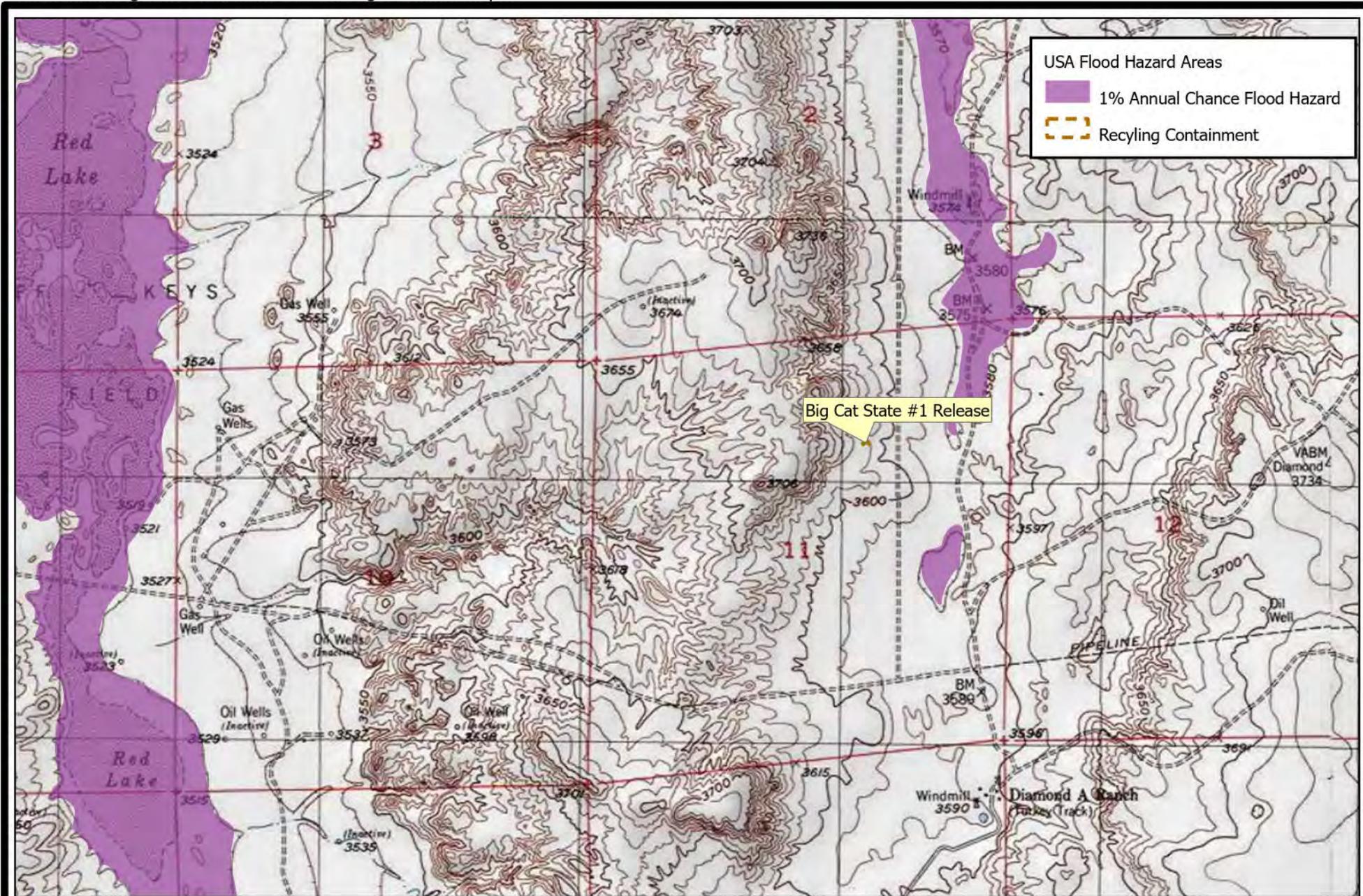
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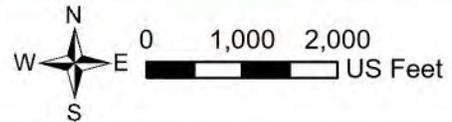


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USA Flood Hazard Areas

- 1% Annual Chance Flood Hazard
- Recycling Containment

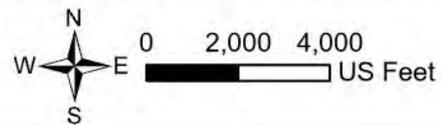
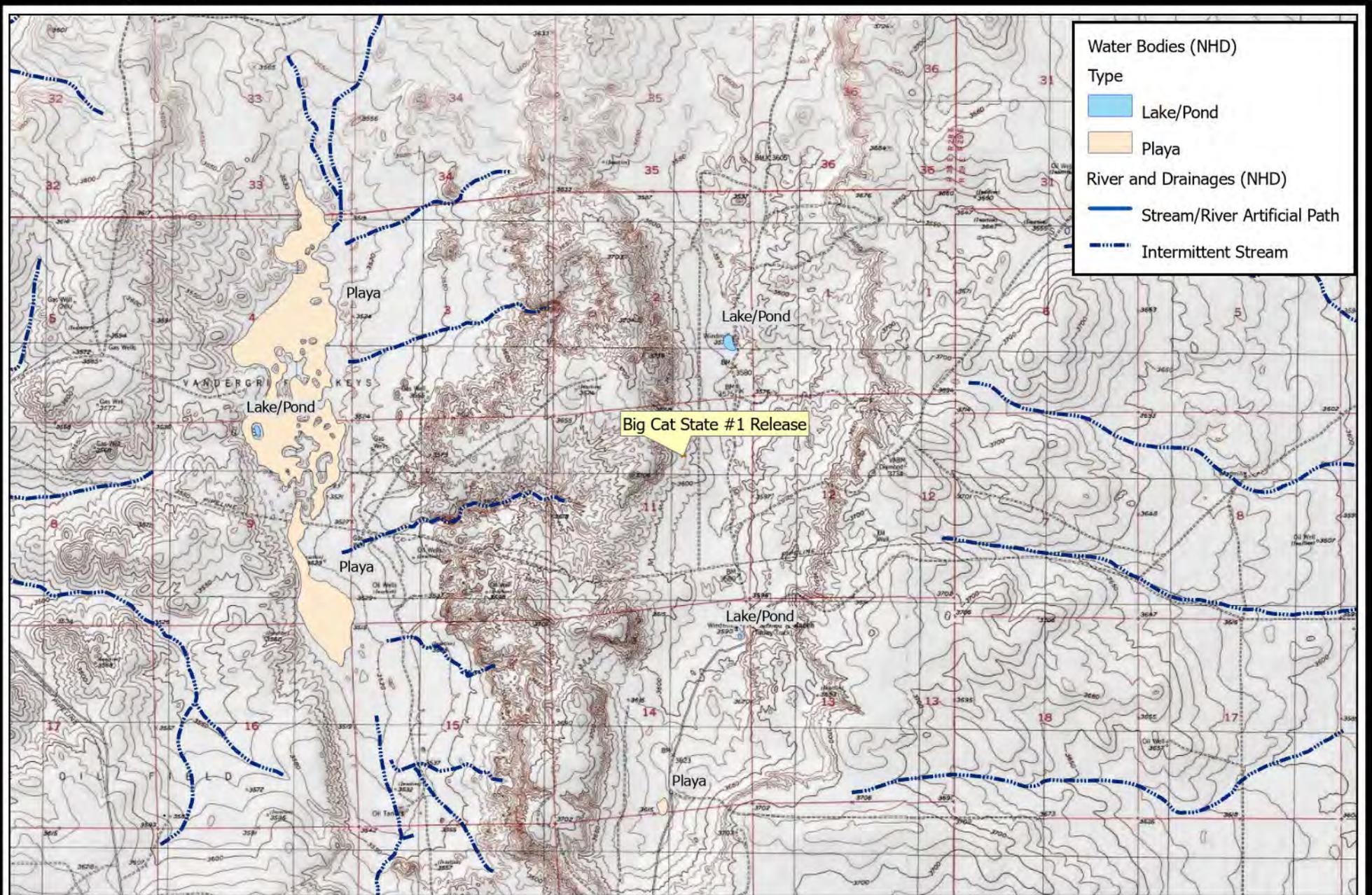


R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

FEMA Mapped Flood Zones
 Big Cat State Com#1 Release
 Murchison Oil and Gas LLC

Plate 6
 April 2024

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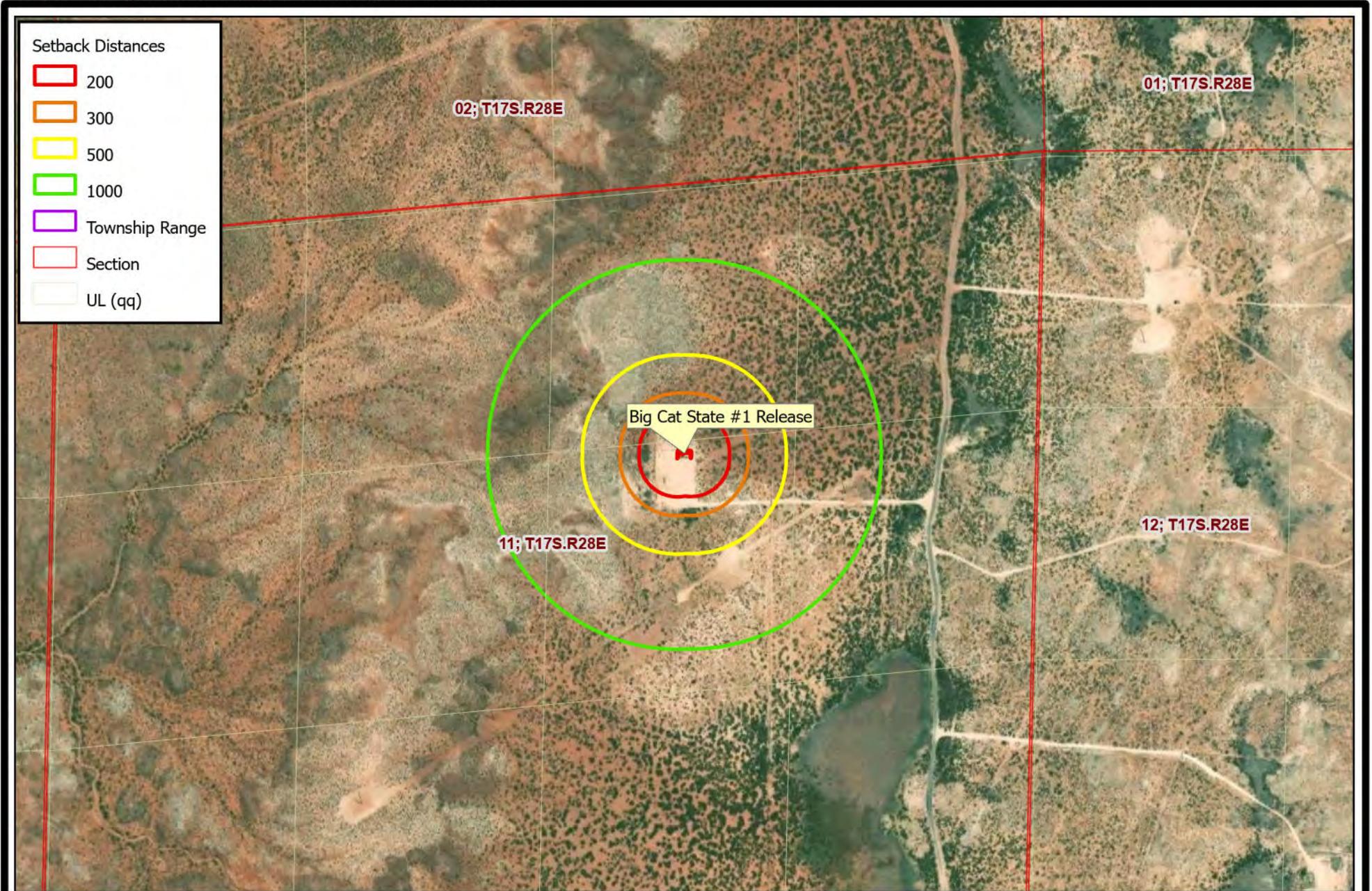


R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Mapped Surface Water
 Big Cat State Com#1 Release
 Murchison Oil and Gas LLC

Plate 7
 April 2024

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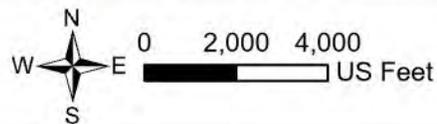
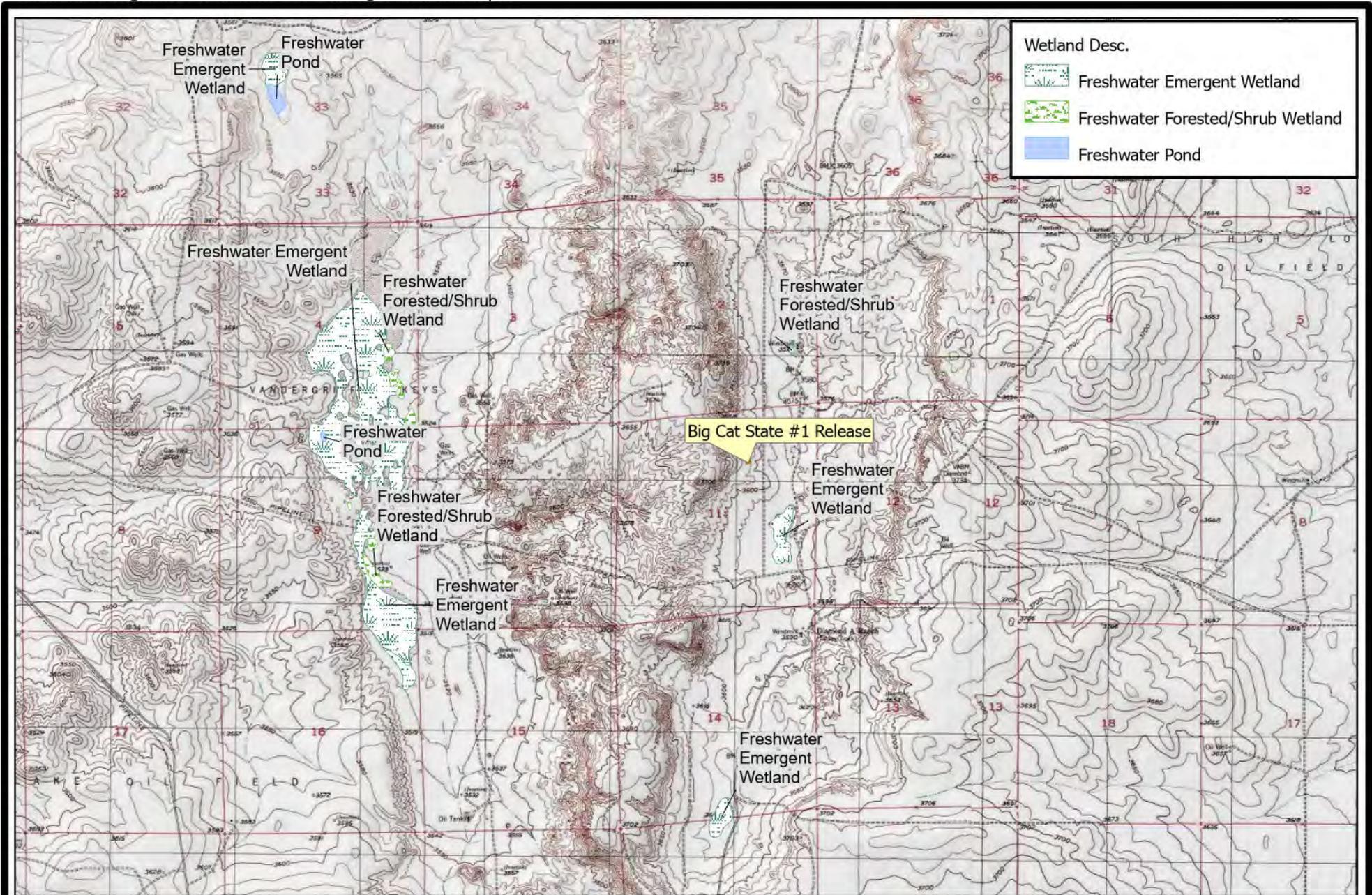


R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Nearest Structures
Big Cat State Com#1 Release Murchison Oil and Gas LLC

Plate 8
 April 2024

P:\MurchisonBigCatStComRelease\MurchBigCatRelease.aprx



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Mapped NM Wetlands
 Big Cat State Com#1 Release
 Murchison Oil and Gas LLC

Plate 9
 April 2024

From: [Hall, Brittany, EMNRD](#)
To: [Daniel Dominguez](#)
Subject: RE: [EXTERNAL] Re: NMCS0414928403 BIG CAT STATE COM #001 (application ID: 406118)
Date: Monday, December 2, 2024 10:31:00 AM

Thank you Daniel,

I am going to include a PDF version of this email chain with the remediation closure report C-141 so that it is documented that the contaminated backfill sample was not used as backfill at this site.

OCD would highly recommend not using any of the topsoil sampled and submitted with this report as backfill in any OCD regulated excavation as it is not non-waste containing soil.

Thank you,

Brittany Hall ● Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.517.5333 | Brittany.Hall@emnrd.nm.gov
<http://www.emnrd.nm.gov/ocd/>

Effective 12/1/2024: OCD has updated guidance on karst potential occurrence zones. This notice can be found at: <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> under “2024 OCD ANNOUNCEMENTS AND NOTIFICATIONS”.

The Digital C-141 guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

From: Daniel Dominguez <ddominguez@hungry-horse.com>
Sent: Tuesday, November 26, 2024 8:46 AM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Subject: [EXTERNAL] Re: NMCS0414928403 BIG CAT STATE COM #001 (application ID: 406118)

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

Brittany,

Topsoil was not used for anything on this location. We backfilled entirely with caliche.

The topsoil sample came from a pit we were looking at for a different location and different company. It was mistakenly sent in with our caliche sample. Sorry for the confusion.

I can get you the gps of the pit next week if you'd like. I'm off this week and Bradley no longer

works for us.

Thank you,

Daniel Dominguez
Environmental Director
Hungry Horse, LLC
(m) 575-408-3134
ddominguez@hungry-horse.com

Sent from my iPhone

On Nov 25, 2024, at 2:39 PM, Hall, Brittany, EMNRD
<Brittany.Hall@emnrd.nm.gov> wrote:

Bradley and Daniel,

The abovementioned application for the closure report for the Big Cat State Com #001 (incident # NMCS0414928403) was submitted today.

Can you please let me know what the “topsoil” was used for and where it came from?

Thank you,
Brittany Hall ● Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.517.5333 | Brittany.Hall@emnrd.nm.gov
<http://www.emnrd.nm.gov/ocd/>

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<https://www.emnrd.nm.gov/ocd/ocd-forms/>.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 406118

QUESTIONS

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0414928403
Incident Name	NMCS0414928403 BIG CAT STATE COM #001 @ 30-015-32091
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-32091] BIG CAT STATE COM #001

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	BIG CAT STATE COM #001
Date Release Discovered	05/13/2004
Surface Owner	State

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Oil Release
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	
<i>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.</i>	
Crude Oil Released (bbls) Details	Cause: Corrosion Production Tank Crude Oil Released: 70 BBL Recovered: 60 BBL Lost: 10 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
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)	Not answered.

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

QUESTIONS, Page 2

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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.
<i>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.</i>	

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	<i>Not answered.</i>

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: Bradley Wells Title: Enviro Manager Email: bwells@hungry-horse.com Date: 11/25/2024
--	--

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

QUESTIONS, Page 3

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
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	Greater than 5 (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 1/2 and 1 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1/2 and 1 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 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	Medium
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

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
<i>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.</i>	
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)	1920
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	12590
GRO+DRO (EPA SW-846 Method 8015M)	9250
BTEX (EPA SW-846 Method 8021B or 8260B)	0.5
Benzene (EPA SW-846 Method 8021B or 8260B)	0

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	09/25/2024
On what date will (or did) the final sampling or liner inspection occur	10/29/2024
On what date will (or was) the remediation complete(d)	11/06/2024
What is the estimated surface area (in square feet) that will be reclaimed	1000
What is the estimated volume (in cubic yards) that will be reclaimed	200
What is the estimated surface area (in square feet) that will be remediated	1000
What is the estimated volume (in cubic yards) that will be remediated	200

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.

Sante Fe Main Office
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General Information
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Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 4

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	R360 ARTESIA LLC LANDFARM [FEEM0112340644]
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	Not answered.
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)	Not answered.

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: Bradley Wells Title: Enviro Manager Email: bwells@hungry-horse.com Date: 11/25/2024
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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.

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QUESTIONS, Page 5

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	395561
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/29/2024
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	1000

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1000
What was the total volume (cubic yards) remediated	200
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	Remediation activities were conducted in accordance with applicable NMOCD Regulations. Soil affected above the NMOCD Closure Criteria has been excavated and hauled to an NMOCD approved facility for disposal. Laboratory analytical results from composite confirmation samples indicate concentrations of BTEX, TPH, and chloride are below the NMOCD Closure Criteria.

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Bradley Wells Title: Enviro Manager Email: bwells@hungry-horse.com Date: 11/25/2024
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QUESTIONS, Page 7

Action 406118

QUESTIONS (continued)

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 406118

CONDITIONS

Operator: 3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	OGRID: 331569
	Action Number: 406118
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation closure approved.	12/2/2024
bhall	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	12/2/2024
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	12/2/2024
bhall	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	12/2/2024
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeded activities, inspections, and final pictures when revegetation is achieved.	12/2/2024
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	12/2/2024