



## **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**

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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.



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**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.



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**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.



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**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 <sub>6</sub> -C <sub>10</sub> (mg/kg) | DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg) | GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg) | ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg) | TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg) | Chloride (mg/kg) |
|------------------------|---------|------------|-------------|-----------------|--------------|---|--|---|--|---|------------------|
| SP2                    | 7/24/24 | Surf       | Excavated   | <0.050          | 0.371        | 27.8  | 3,570  | 3,597.8   | 722  | <b>4,319.8</b>                              | <b>1,920</b>     |
|                        | 7/24/24 | 1          | Excavated   | <0.050          | 0.457        | 15.4  | 1,870  | 1,885.4   | 422  | <b>2,307.4</b>                              | <b>1,520</b>     |
|                        | 7/24/24 | 2          | Excavated   | <0.050          | <0.300       | <10.0                                       | 496  | 496   | 173  | <b>669</b>                                  | <b>800</b>       |
|                        | 7/24/24 | 3          | Excavated   | <0.050          | <0.300       | <10.0                                       | 89.0   | 89.0  | 33.3   | <b>122.3</b>                                | 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   | <b>214.1</b>                                | 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   | <b>116.6</b>                                | 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   | <b>105.2</b>                                | 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  | <b>12,590</b>                               | 16.0             |
|                        | 7/25/24 | 1          | Excavated   | <0.050          | 5.45         | 244   | 4,050  | 4,294   | 977  | <b>5,271</b>                                | 48.0             |
|                        | 7/25/24 | 2          | Excavated   | <0.050          | <0.300       | <10.0                                       | 547  | 547   | 205  | <b>752</b>                                  | 80.0             |
|                        | 7/25/24 | 3          | Excavated   | <0.050          | <0.300       | <10.0                                       | 18.9   | <20.0   | <10.0  | <30.0                                       | <b>704</b>       |
|                        | 7/25/24 | 4          | Excavated   | <0.050          | <0.300       | <10.0                                       | 37.2   | 37.2  | <10.0  | 37.2  | <b>640</b>       |
| 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  | <b>854</b>                                  | 32.0             |
|                        | 7/25/24 | 1          | Excavated   | <0.050          | <0.300       | <10.0                                       | 96.7   | 96.7  | 55.1   | <b>151.8</b>                                | 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                                       | <b>560</b>       |
|                        | 7/25/24 | 4          | Excavated   | <0.050          | <0.300       | <10.0                                       | <10.0  | <20.0   | <10.0  | <30.0                                       | <b>640</b>       |
| NMOCD Closure Criteria |         |            |             | <b>10</b>       | <b>50</b>    | -   | -  | N/A   | -  | <b>100</b>                                  | <b>600</b>       |

**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 <sub>6</sub> -C <sub>10</sub> (mg/kg) | DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg) | GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg) | ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg) | TPH C <sub>6</sub> -C <sub>36</sub> (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   | <b>174.9</b>                                | 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   | <b>163.6</b>                                | 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  | <b>253</b>                                  | 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  | <b>277</b>                                  | 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  | <b>334</b>                                  | 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             |
| <b>NMOCD Closure Criteria</b> |          |            |             | <b>10</b>       | <b>50</b>    | -   | -  | <b>N/A</b>  | -  | <b>100</b>                                  | <b>600</b>       |

**NOTES:**

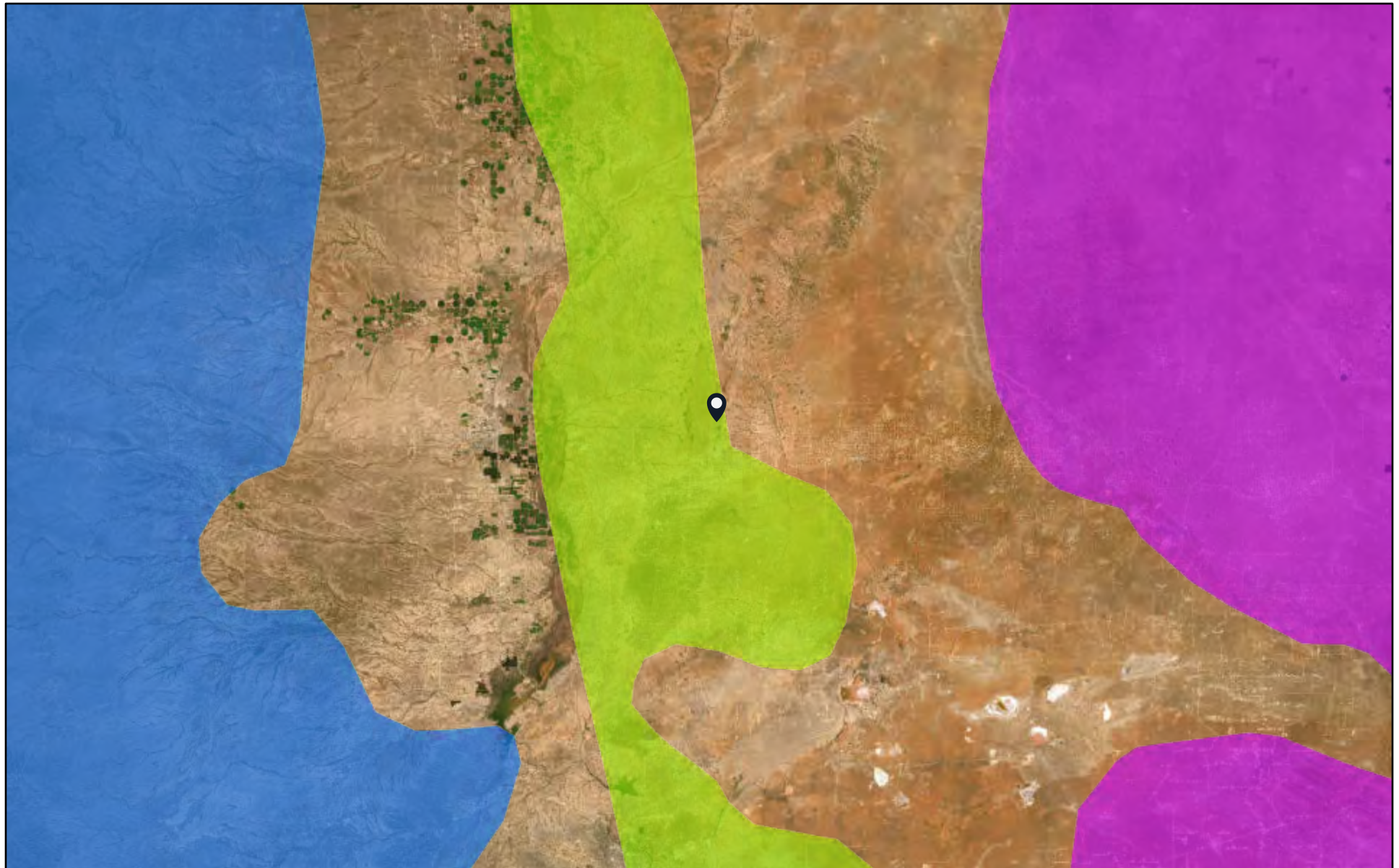
- = Sample not analyzed for that constituent.

**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

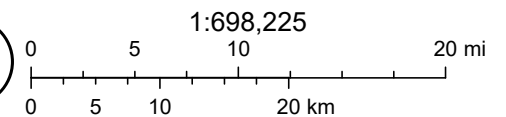
Low Resolution 15m Imagery

High Resolution 60cm Imagery

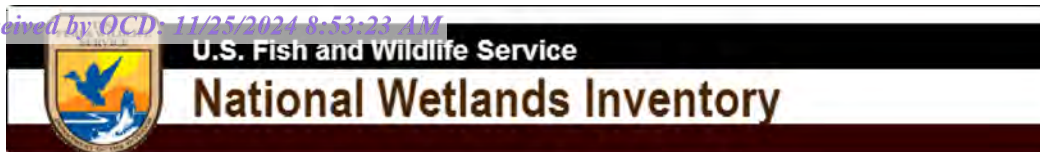
High Resolution 30cm Imagery

Citations

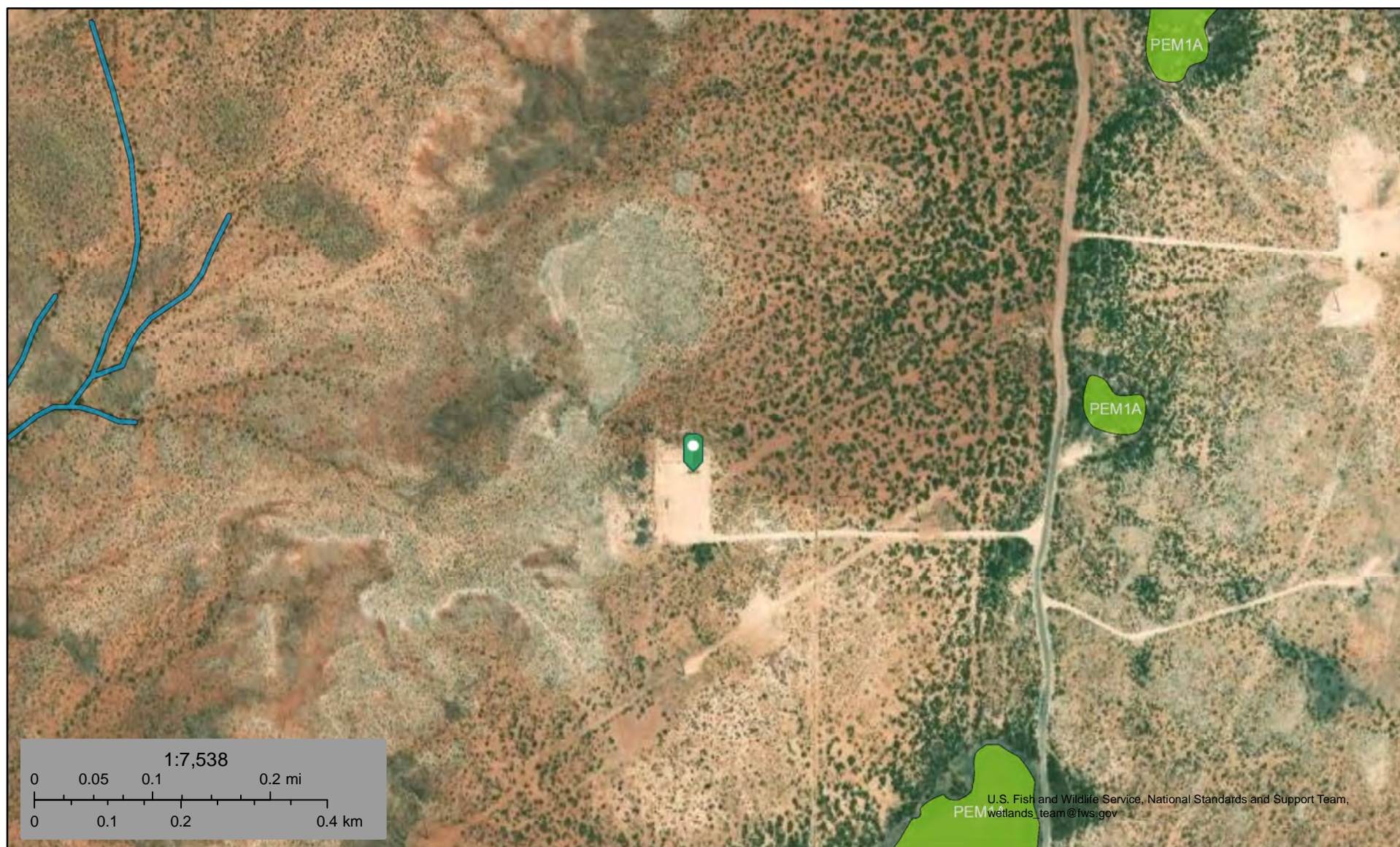
150m Resolution Metadata



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
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

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

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

32° 51' 46" N

104° 9' 42" W

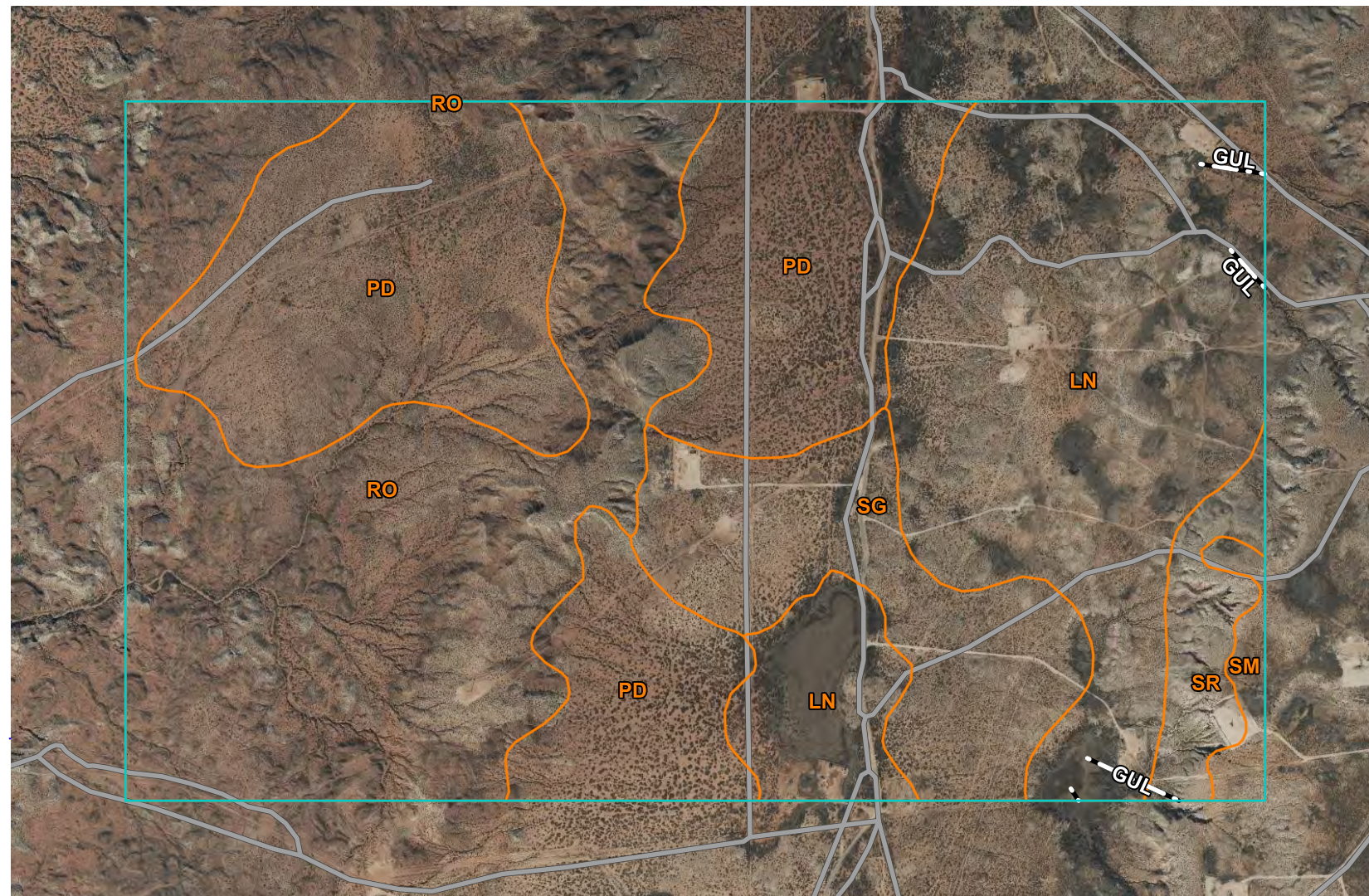
104° 7' 38" W

32° 51' 46" N

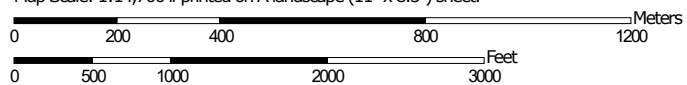
32° 50' 38" N

104° 9' 42" W

104° 7' 38" W



Map Scale: 1:14,700 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84

Natural Resources  
Conservation ServiceWeb Soil Survey  
National Cooperative Soil Survey11/21/2024  
Page 1 of 3

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**

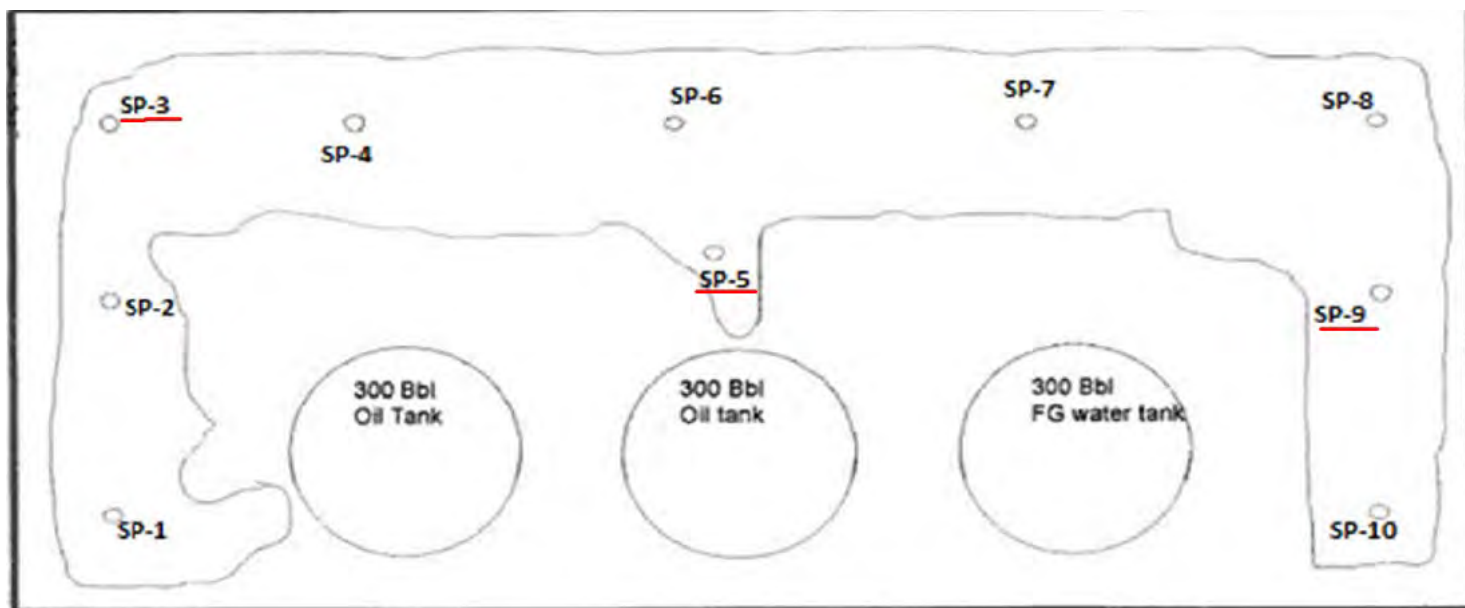
**Cindy Cottrell**

**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](mailto: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 EMNRD 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](mailto: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](mailto:tknight@slo.state.nm.us)>

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

**To:** Kristin Pope <[kristin@rthicksconsult.com](mailto:kristin@rthicksconsult.com)>; 'Cindy Cottrell' <[ccottrell@jdmii.com](mailto:ccottrell@jdmii.com)>

**Cc:** 'Greg Boans' <[gboans@jdmii.com](mailto:gboans@jdmii.com)>; 'Rusty Cooper' <[rcooper@jdmii.com](mailto:rcooper@jdmii.com)>; [r@rthicksconsult.com](mailto:r@rthicksconsult.com); Barnes, Will <[wbarnes@slo.state.nm.us](mailto:wbarnes@slo.state.nm.us)>; Griffin, Becky R. <[bgriffin@slo.state.nm.us](mailto:bgriffin@slo.state.nm.us)>; David, Deon W. <[ddavid@slo.state.nm.us](mailto:ddavid@slo.state.nm.us)>; Elliott, April L. <[aelliott@slo.state.nm.us](mailto:aelliott@slo.state.nm.us)>; Biernoff, Ari <[abiernoff@slo.state.nm.us](mailto:abiernoff@slo.state.nm.us)>; Heltman, Elaine G. <[eheltman@slo.state.nm.us](mailto: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](mailto: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:absolutely;mso-position-horizontal-relative:text;mso-position-vertical:absolutely;mso-position-vertical-relative:text;mso-width-percent:0;mso-height-percent:0;mso-width-

relative:page;mso-height-relative:page' o:button="t"> <https://www.nmstatelands.org/top-workplaces/>  
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**Tami Knight, CHMM**

*Environmental Specialist*

*NMSLO SRD-ECO*

505.670.1638

[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)

[nmstatelands.org](http://nmstatelands.org)

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---

**From:** Kristin Pope <[kristin@rthicksconsult.com](mailto:kristin@rthicksconsult.com)>

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

**To:** [Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov); SLO Spills <[spills@slo.state.nm.us](mailto:spills@slo.state.nm.us)>

**Cc:** 'Greg Boans' <[gboans@jdmii.com](mailto:gboans@jdmii.com)>; 'Rusty Cooper' <[rcooper@jdmii.com](mailto:rcooper@jdmii.com)>; 'Cindy Cottrell' <[ccottrell@jdmii.com](mailto:ccottrell@jdmii.com)>; [r@rthicksconsult.com](mailto: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](mailto:Brittany.Hall@emnrd.nm.gov)>

**Sent:** Tuesday, May 7, 2024 12:28 PM

**To:** Cindy Cottrell <[ccottrell@jdmii.com](mailto:ccottrell@jdmii.com)>

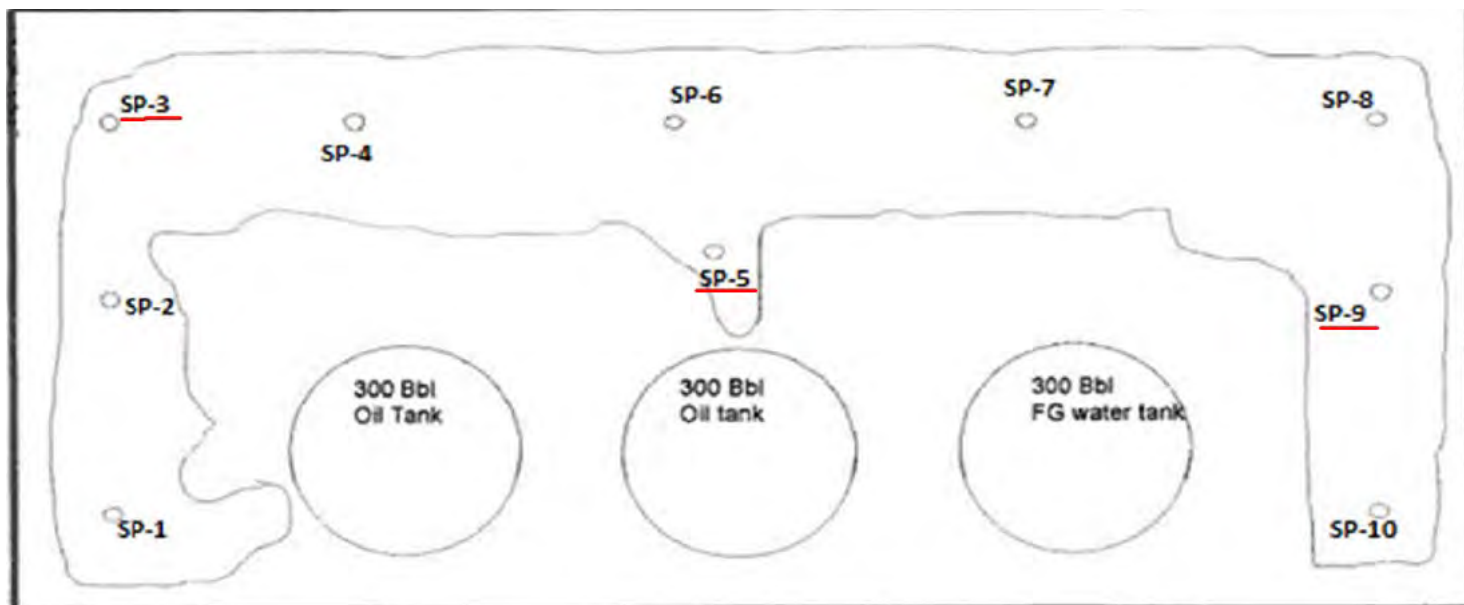
**Cc:** Smith, Cory, EMNRD <[cory.smith@emnrd.nm.gov](mailto:cory.smith@emnrd.nm.gov)>; Moander, Chris, EMNRD <[Chris.Moander@emnrd.nm.gov](mailto:Chris.Moander@emnrd.nm.gov)>; Powell, Brandon, EMNRD <[Brandon.Powell@emnrd.nm.gov](mailto:Brandon.Powell@emnrd.nm.gov)>; Romero, Rosa, EMNRD <[RosaM.Romero@emnrd.nm.gov](mailto:RosaM.Romero@emnrd.nm.gov)>; Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>

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

Cindy,

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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  
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 1000 Rio Brazos Road | Aztec, NM 87110  
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**From:** Cindy Cottrell <[ccottrell@jdmii.com](mailto:ccottrell@jdmii.com)>  
**Sent:** Tuesday, May 7, 2024 9:33 AM  
**To:** Hall, Brittany, EMNRD <[Brittany.Hall@emnrd.nm.gov](mailto: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:<br>Murchison Oil and Gas, LLC<br>7250 Dallas Parkway<br>Plano, TX 75024 | OGRID:<br>15363  |
|   | Action Number:<br>365685                                   |
|   | Action Type:<br>[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:<br>Murchison Oil and Gas, LLC<br>7250 Dallas Parkway<br>Plano, TX 75024 | OGRID:<br>15363  |
|   | Action Number:<br>365685                                   |
|   | Action Type:<br>[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**  
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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:<br>Murchison Oil and Gas, LLC<br>7250 Dallas Parkway<br>Plano, TX 75024 | OGRID:<br>15363  |
|   | Action Number:<br>389982                                   |
|   | Action Type:<br>[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  | 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**  
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 389982

CONDITIONS

|   |  |
|---|--|
| Operator:<br>Murchison Oil and Gas, LLC<br>7250 Dallas Parkway<br>Plano, TX 75024 | OGRID:<br>15363  |
|   | Action Number:<br>389982                                   |
|   | Action Type:<br>[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  
**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 395561

QUESTIONS

|  |  |
|--|--|
| Operator:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569   |
|  | Action Number:<br>395561                                   |
|  | Action Type:<br>[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  |                               |
| Please answer all the questions in this group.  |                               |
| 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  
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 395561

CONDITIONS

|  |  |
|--|--|
| Operator:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569   |
|  | Action Number:<br>395561                                   |
|  | Action Type:<br>[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**

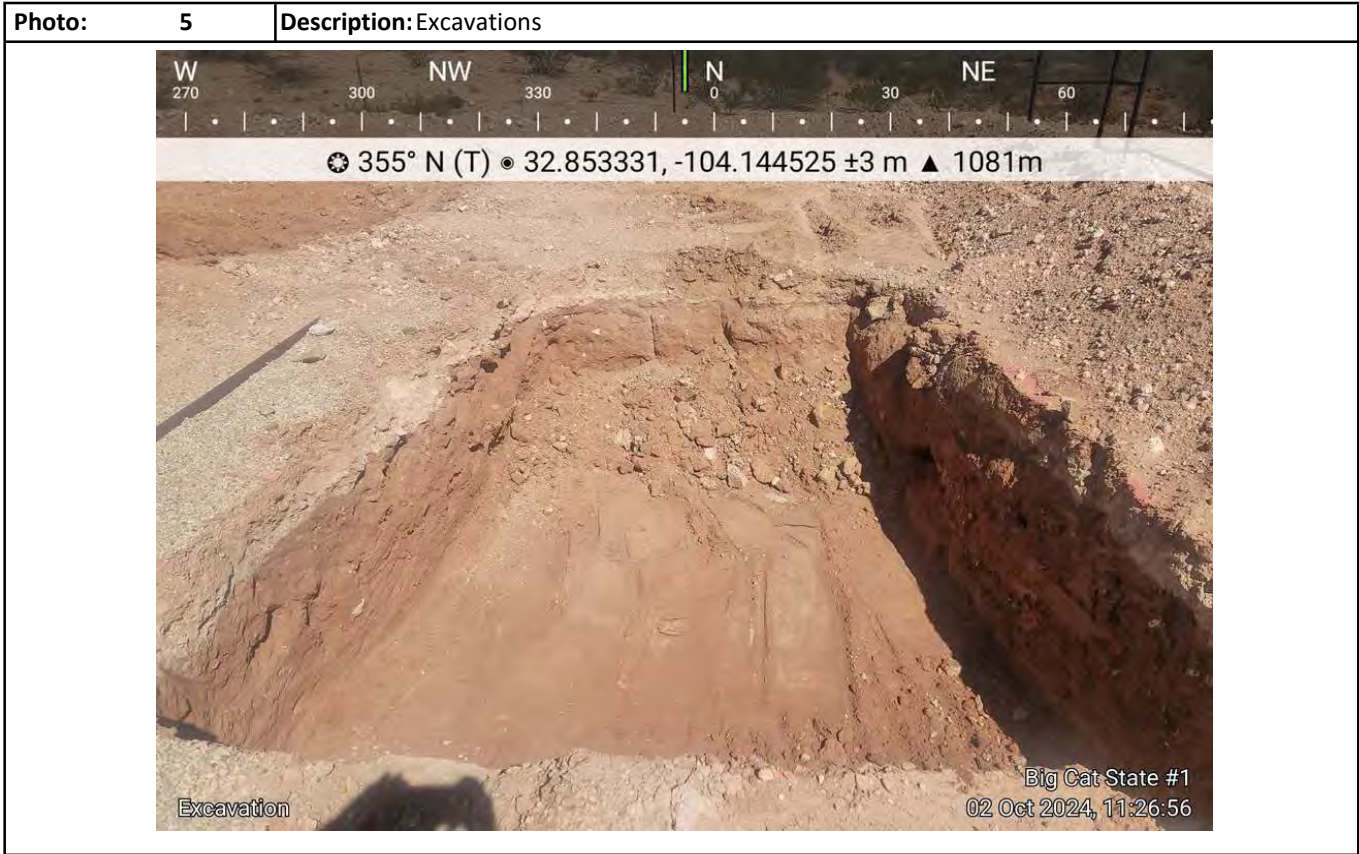
## Photographs



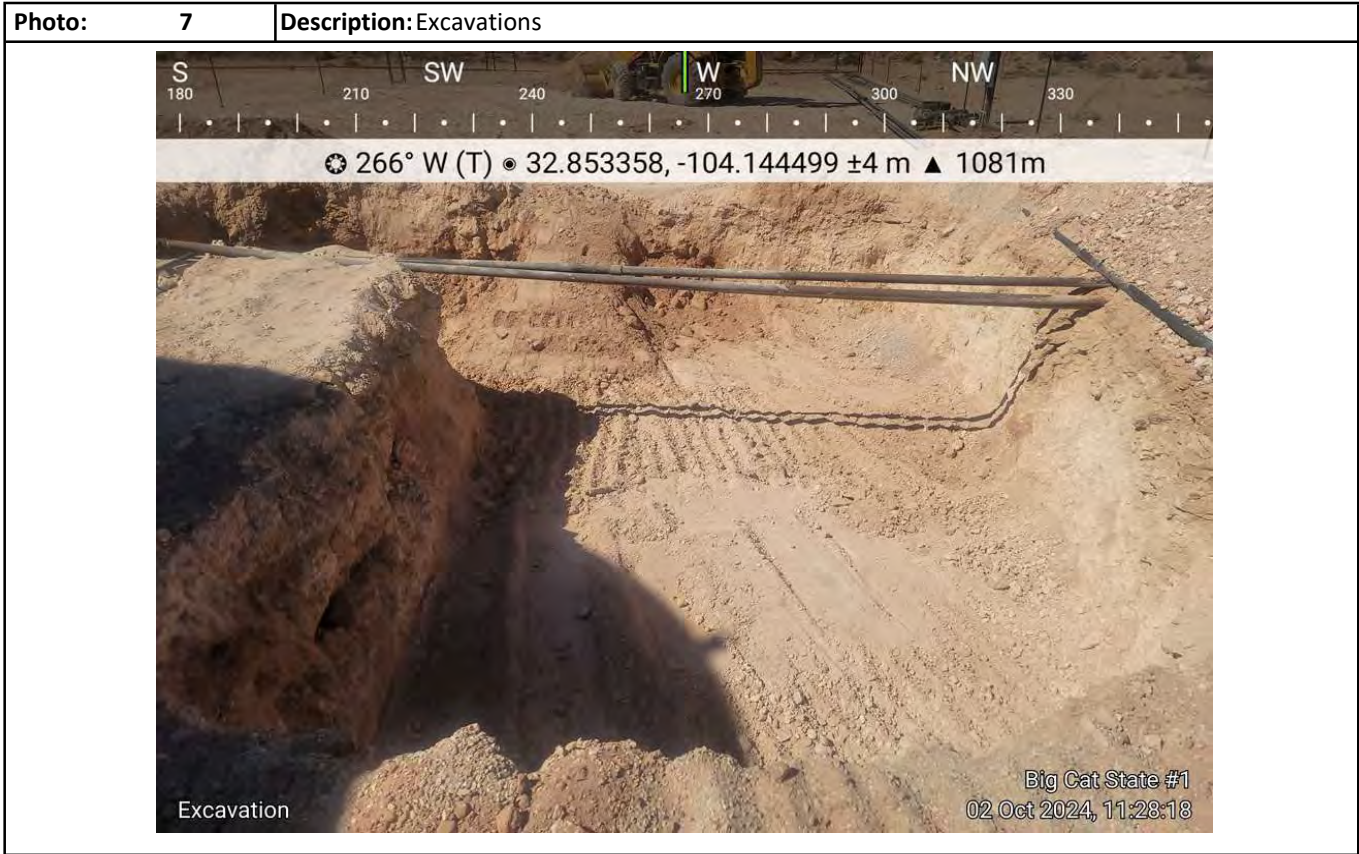
## Photographs



## Photographs



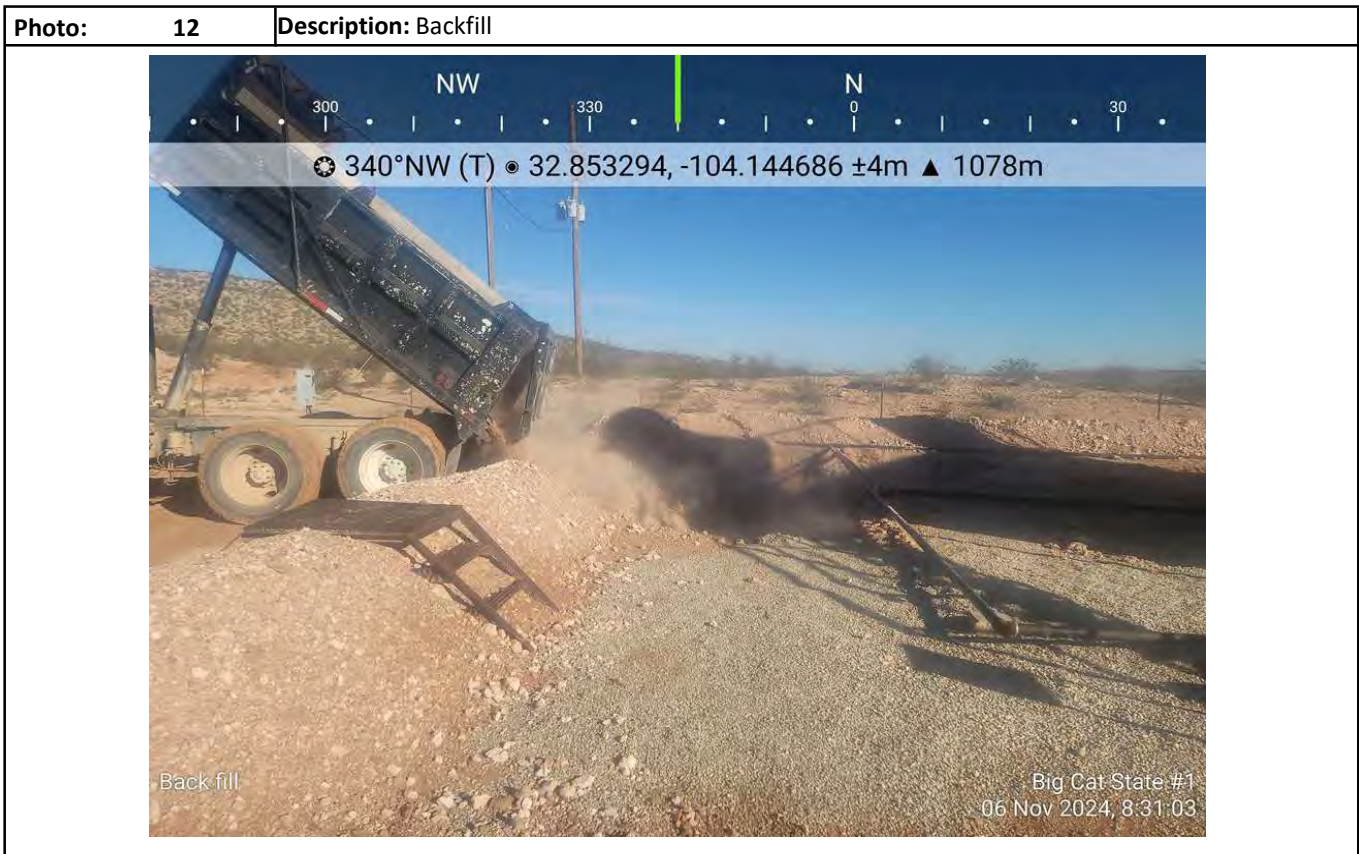
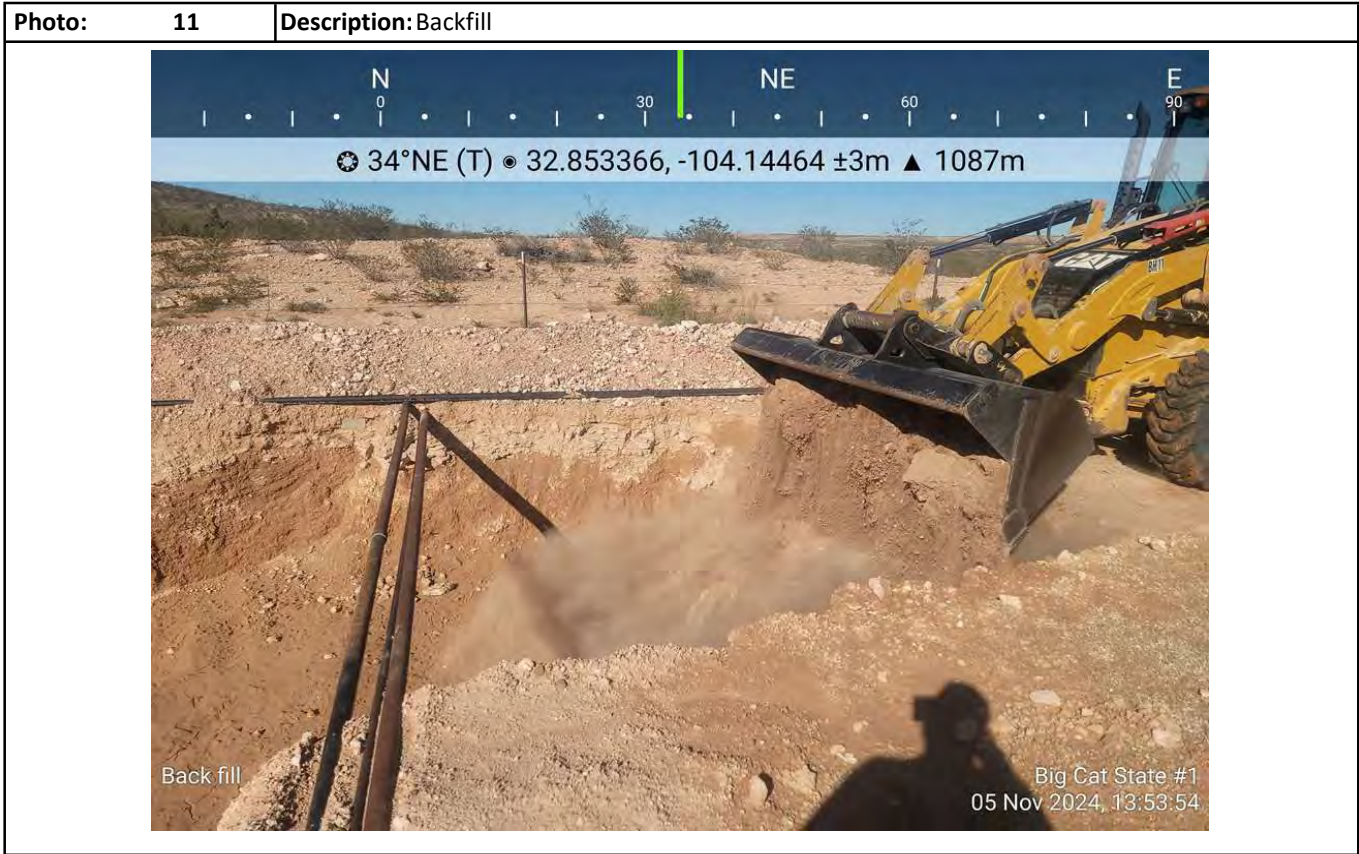
Photographs



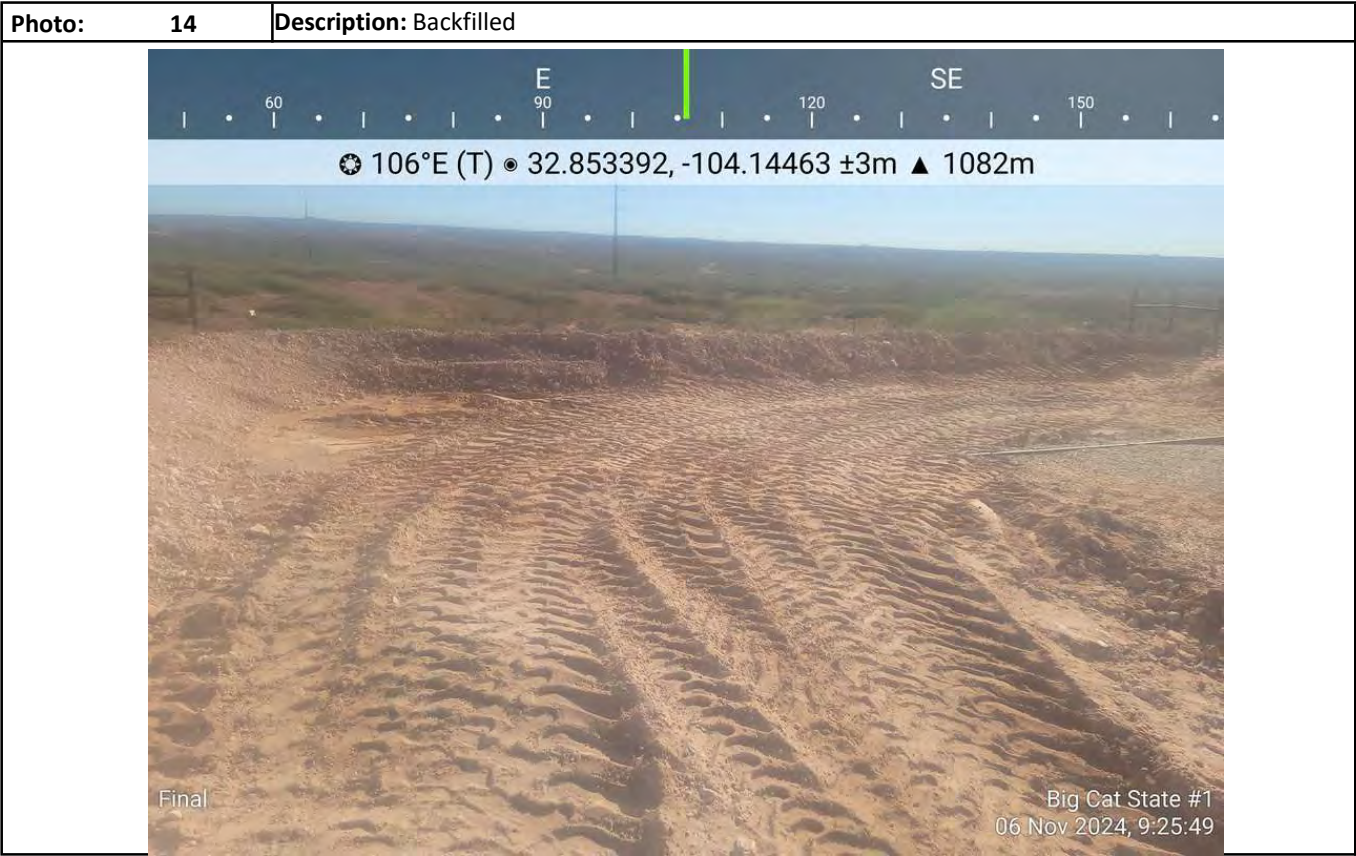
## Photographs



Photographs



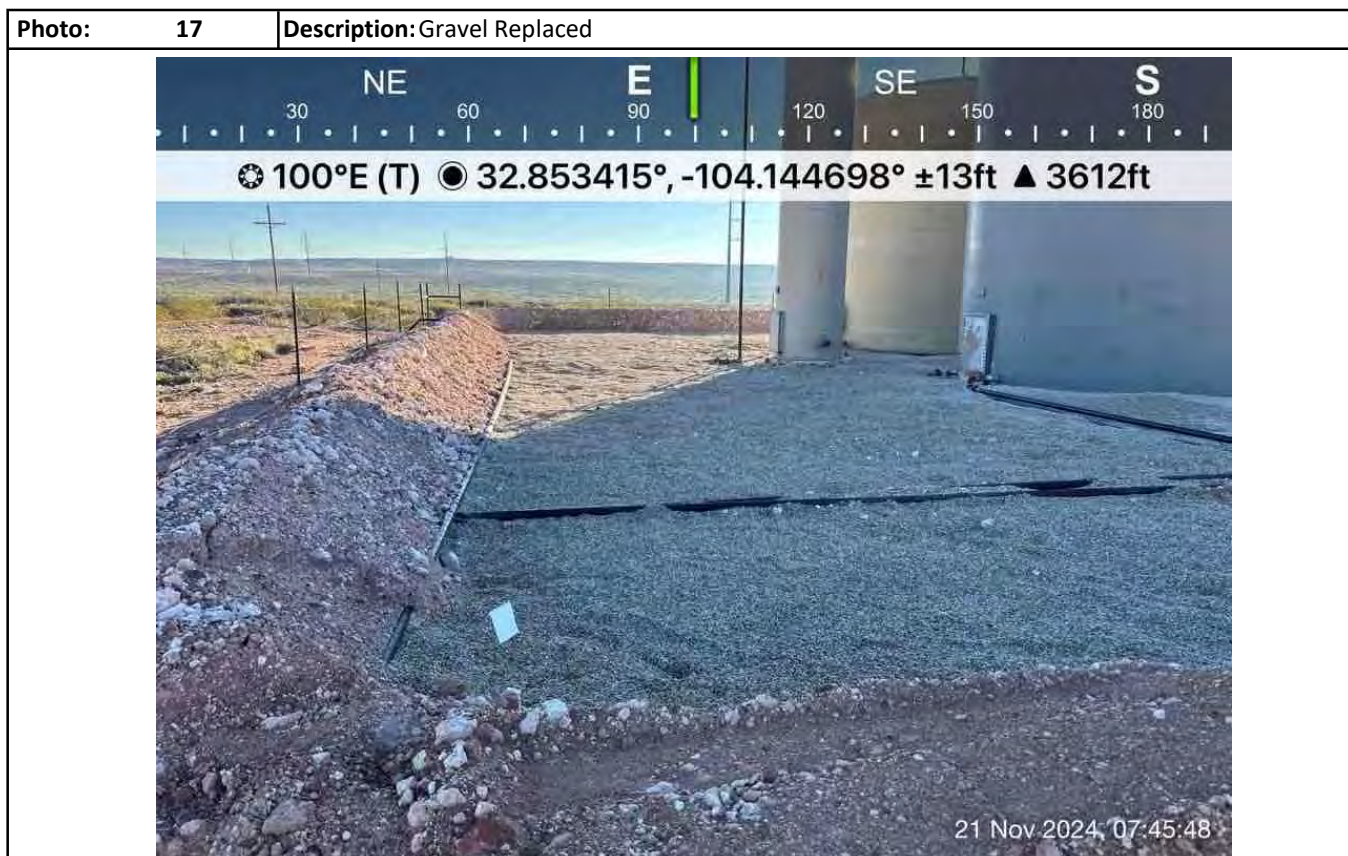
Photographs



## 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**

**Hungry Horse, LLC**

## Sample Log

Project: Big Cat State Com #1

Date:

|       |     |       |          |
|-------|-----|-------|----------|
| Karst | Yes | Water | 50'-100' |
|-------|-----|-------|----------|

GPS: 32.853361, -104.144585

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

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           | +2'                   |
| <del>SSW</del> |       |          |                       |                       |
| SP-5 B         | 4'    |          | 96x4 = 384            |                       |
| NSW            |       |          | 118x4 = 472           |                       |
| SSW            |       |          | 218x4 = 872           |                       |
| ESW            |       |          | 118x4 = 472           | B = Bottom            |
| WSW            |       |          | 118x4 = 472           | NSW = North Side Wall |
| SP-4 B         | 4'    |          | 130x4 = 520           | SSW = South Side Wall |
| NSW            |       |          | 118x4 = 472           | ESW = East Side Wall  |
| ESW            |       |          | 107x4 = 428           | WSW = West Side Wall  |
| WSW            |       |          |                       |                       |
| SSW            |       |          | 130x4 = 520           |                       |
| SP-3 B         | 3'    |          | 218x4 = 872           |                       |
| NSW            |       |          | 96x4 = 384            |                       |
| ESW            |       |          |                       |                       |
| WSW            |       |          | 107x4 = 428           |                       |
| SSW            |       |          |                       |                       |
| B              | 4'    |          | 96x4 = 384            |                       |
| SP-2 B         | 4'    |          | 40x4 = 160            |                       |
| NSW            |       |          | <del>40x4 = 160</del> |                       |
| ESW            |       |          | 40x4 = 160            |                       |
| WSW            |       |          | 47x4 = 188            |                       |
| SSW            |       |          | 107x4 = 428           |                       |

Sample Point = SP1 @ ## etc

Horizontal = HZ1 etc

Test Trench = TT1 @ ##

Floor = FL1 etc

Refusal = SP1 @ 4'-R

Resamples= SP1b @ 5' or SW #1b

Sidewall = SW1 etc

GPS Sample Points, Center of Comp Areas

**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](http://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". The signature is written in a cursive, flowing style.

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)**

| BTX 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*         | <b>0.098</b> | 0.050           | 07/26/2024 | ND              | 1.96 | 97.9       | 2.00          | 2.94 | GC-NC1    |
| <b>Total Xylenes*</b> | <b>0.273</b> | 0.150           | 07/26/2024 | ND              | 5.80 | 96.7       | 6.00          | 2.31 | GC-NC1    |
| <b>Total BTX</b>      | <b>0.371</b> | 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 |
| <b>Chloride</b>      | <b>1920</b> | 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 |      |
| <b>GRO C6-C10*</b>         | <b>27.8</b> | 10.0            | 07/26/2024 | ND              | 195 | 97.7       | 200           | 0.931 |           |      |
| <b>DRO &gt;C10-C28*</b>    | <b>3570</b> | 10.0            | 07/26/2024 | ND              | 184 | 91.8       | 200           | 1.59  |           |      |
| <b>EXT DRO &gt;C28-C36</b> | <b>722</b>  | 10.0            | 07/26/2024 | ND              |     |            |               |       |           |      |

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 163 % 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: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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\*=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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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

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: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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\*=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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500Cl-B |        | mg/kg           |            | Analyzed By: HM |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 96.0   | 16.0            | 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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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              | 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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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 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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.1 % 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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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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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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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*    | 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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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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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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

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

| BTX 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 BTX      | 5.45   | 0.300           | 07/26/2024      | ND           |      |            |               |      | GC-NC1    |

Surrogate: 4-Bromofluorobenzene (PID) 182 % 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 |              |     |            |               | 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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\*=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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500Cl-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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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 97.9 % 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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

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

| BTX 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 BTX      | <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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\*=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  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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*    | 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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 416    | 16.0            | 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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 07/25/2024  
 Reported: 07/29/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 07/25/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 640    | 16.0            | 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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|        |  |
|--------|--|
| 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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "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. #:                      |                            | BILL TO |  | ANALYSIS REQUEST |  |
| Project Manager: Daniel Dominguez         |                                    | Company: Murchison Oil & Gas |                            |         |  |                  |  |
| Address: 4024 Plains Hwy                  |                                    | Attn: Greg Boans             |                            |         |  |                  |  |
| City: Lovington                           | State: NM                          | Zip: 88260                   | Address: 5325 Sierra Vista |         |  |                  |  |
| Phone #: 575 393-3386                     | Fax #:                             | City: Carlsbad               |                            |         |  |                  |  |
| Project #:                                | Project Owner: Murchison Oil & Gas | State: NM                    | Zip: 88230                 |         |  |                  |  |
| Project Name: Big Cat State Corn #1       |                                    | Phone #: 575 706-0667        |                            |         |  |                  |  |
| Project Location: UL/G Sec 11 T17S - R28E |                                    | Fax #:                       |                            |         |  |                  |  |
| Sampler Name: Roy Bell                    |                                    | FOR LAB USE ONLY             |                            |         |  |                  |  |
| Lab I.D.                                  |                                    | Sample I.D.                  |                            | Depth   |  |                  |  |
| H244446                                   |                                    |                              |                            |         |  |                  |  |
| 1 SP2                                     |                                    | Surf                         |                            | G 1     |  | 7/24/24          |  |
| 2 SP2                                     |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 3 SP2                                     |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 4 SP2                                     |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 5 SP2                                     |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 6 SP3                                     |                                    | Surf                         |                            | G 1     |  | 7/24/24          |  |
| 7 SP3                                     |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 8 SP3                                     |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 9 SP3                                     |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 10 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 11 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 12 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 13 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 14 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 15 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 16 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 17 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 18 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 19 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 20 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 21 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 22 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 23 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 24 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 25 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 26 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 27 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 28 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 29 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 30 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 31 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 32 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 33 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 34 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 35 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 36 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 37 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 38 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 39 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 40 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 41 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 42 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 43 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 44 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 45 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 46 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 47 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 48 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 49 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 50 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 51 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 52 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 53 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 54 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 55 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 56 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 57 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 58 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 59 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 60 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 61 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 62 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 63 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 64 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 65 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
| 66 SP3                                    |                                    | 4                            |                            | G 1     |  | 7/24/24          |  |
| 67 SP3                                    |                                    | 1                            |                            | G 1     |  | 7/24/24          |  |
| 68 SP3                                    |                                    | 2                            |                            | G 1     |  | 7/24/24          |  |
| 69 SP3                                    |                                    | 3                            |                            | G 1     |  | 7/24/24          |  |
|   |                                    |                              |                            |         |  |                  |  |



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

| FOR LAB USE ONLY |             |       |                                  |   |                                       |                  |
|------------------|-------------|-------|----------------------------------|---|---------------------------------------|------------------|
| Lab I.D.         | Sample I.D. | Depth | (G)RAB OR (C)OMP<br># CONTAINERS | MATRIX  | PRESERV.                              | SAMPLING         |
|                  |             |       |                                  | GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL<br>SLUDGE<br>OTHER : | ACID/BASE:<br>ICE / COOL ✓<br>OTHER : | DATE<br><br>TIME |
| <b>H244446</b>   |             |       |                                  |   |                                       |                  |
| 11               | SP4         | Surf  | G 1                              | X   | X                                     | 7/24/24          |
| 12               | SP4         | 1     | G 1                              | X   | X                                     | 7/24/24          |
| 13               | SP4         | 2     | G 1                              | X   | X                                     | 7/24/24          |
| 14               | SP4         | 3     | G 1                              | X   | X                                     | 7/24/24          |
| 15               | SP4         | 4     | G 1                              | X   | X                                     | 7/24/24          |
| 16               | SP5         | Surf  | G 1                              | X   | X                                     | 7/25/24          |
| 17               | SP5         | 1     | G 1                              | X   | X                                     | 7/25/24          |
| 18               | SP5         | 2     | G 1                              | X   | X                                     | 7/25/24          |
| 19               | SP5         | 3     | G 1                              | X   | X                                     | 7/25/24          |
| 20               | SP5         | 4     | G 1                              | X   | X                                     | 7/25/24          |

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

|                    |         |              |                                       |                              |                             |                |
|--------------------|---------|--------------|---------------------------------------|------------------------------|-----------------------------|----------------|
| Relinquished By:   | Date:   | Received By: | Phone Result:                         | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Add'l Phone #: |
| <i>[Signature]</i> | 7-25-24 |              | Fax Result:                           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Add'l Fax #:   |
| Time:              |         |              | REMARKS: <b>48 hr RUSH!</b>           |                              |                             |                |
| 10:24              |         |              | Email results to: pm@hungry-horse.com |                              |                             |                |
| Date:              |         | Received By: | gboans@jdmii.com                      |                              |                             |                |
|                    |         |              |                                       |                              |                             |                |
| Time:              |         |              |                                       |                              |                             |                |

|                              |  |             |
|------------------------------|--|-------------|
| Delivered By: (Circle One)   | Sample Condition   | CHECKED BY: |
| Sampler - UPS - Bus - Other: | Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> | (Initials)  |
|                              | Yes <input type="checkbox"/> No <input type="checkbox"/>                 |             |



101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

|  |                                    |                       |                            |                     |  |                  |  |
|--|------------------------------------|-----------------------|----------------------------|---------------------|--|------------------|--|
| Company Name: Hungry Horse LLC             |                                    | P.O. #:               |                            | BILL TO             |  | ANALYSIS REQUEST |  |
| Project Manager: Daniel Dominguez          |                                    | Company:              |                            | Murchison Oil & Gas |  |                  |  |
| Address: 4024 Plains Hwy                   |                                    | Attn: Greg Boans      |                            |                     |  |                  |  |
| City: Lovington                            | State: NM                          | Zip: 88260            | Address: 5325 Sierra Vista |                     |  |                  |  |
| Phone #: 575 393-3386                      | Fax #:                             | City: Carlsbad        |                            |                     |  |                  |  |
| Project #:                                 | Project Owner: Murchison Oil & Gas |                       | State: NM                  | Zip: 88230          |  |                  |  |
| Project Name: Big Cat State Com #1         |                                    | Phone #: 575 706-0667 |                            |                     |  |                  |  |
| Project Location: U/L G Sec 11 T17S - R28E |                                    | Fax #:                |                            |                     |  |                  |  |
| Sampler Name: Roy Bell                     |                                    | PRESERV.              |                            | SAMPLING            |  |                  |  |
| FOR LAB USE ONLY                           |                                    | MATRIX                |                            |                     |  |                  |  |
| Lab I.D.                                   |                                    | Sample I.D.           |                            | Depth               |  |                  |  |
| H244446                                    |                                    | H244446               |                            | H244446             |  |                  |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Surf                  |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 1                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 2                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 3                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | 4                     |                            | G 1                 |  | 7/25/24          |  |
| SP6  |                                    | Sur                   |                            |                     |  |                  |  |



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](http://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". The signature is written in a cursive, flowing style.

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



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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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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            | 10/10/2024 | 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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**Analytical Results For:**

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

Received: 10/09/2024  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, 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            | 10/10/2024 | 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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**Analytical Results For:**

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

Received: 10/09/2024  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 10/09/2024  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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**Analytical Results For:**

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

Received: 10/09/2024  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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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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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

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

| BTX 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 BTX      | <0.300 | 0.300           | 10/09/2024 | ND              |      |            |               |      |           |

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

| 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            | 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



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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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

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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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |

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A handwritten signature in black ink, appearing to read "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

[illegible]



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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](http://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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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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\*=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  
 Reported: 10/10/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: MURCHINSON  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**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, SM4500CI-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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### 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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager



## Page 5 of 5

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



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

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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](http://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". The signature is written in a cursive, flowing style.

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  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

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

| BTX 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 BTX      | <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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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  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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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**Analytical Results For:**

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

Received: 10/29/2024  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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, 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 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 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: 10/29/2024  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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, 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 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  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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, 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 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 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: 10/29/2024  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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



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  
 Reported: 10/31/2024  
 Project Name: BIG CAT STATE COM #1  
 Project Number: NONE GIVEN  
 Project Location: UL/ G SEC 11 T17S R28E

Sampling Date: 10/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**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, 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 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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

---

### 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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

|                 |                            |
|-----------------|----------------------------|
| <b>BILL TO</b>  |                            |
| <b>P.O. #:</b>  |                            |
| <b>Company:</b> | Runner Resources Operating |
| <b>Attn:</b>    | Brad Grandstaff            |
| <b>Address:</b> | 5325 Sierra Vista          |
| <b>City:</b>    | Carlsbad                   |
| <b>State:</b>   | NM Zip: 88230              |
| <b>Phone #:</b> | 972-977-9221               |
| <b>Fax #:</b>   |                            |
| <b>PRESERV.</b> | <b>SAMPLING</b>            |

[illegible]

The client for the completion of the applicable  
its subsidiaries,  
or otherwise.

|  |                              |                             |               |
|--|------------------------------|-----------------------------|---------------|
| Phone Result:  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Add'l Phone # |
| Fax Result:  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Add'l Fax #:  |
| <b>REMARKS:</b> 48 hr RUSH!<br>Email results to: pm@hungry-horse.com<br>bggrandstaff@3roperating |                              |                             |               |

[bgrandstaff@3roperating.com](mailto:bgrandstaff@3roperating.com)

CHECKED BY:  
(Initials)

**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 Kenaf<sup>1</sup> 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

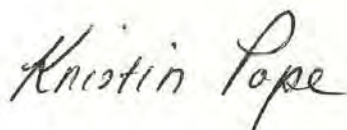
collected at the previously-established sample points at a depth of six inches below the gravel surface. Laboratory analysis of these samples yielded hydrocarbon concentrations presented in the table below and on Plate 1:

| 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

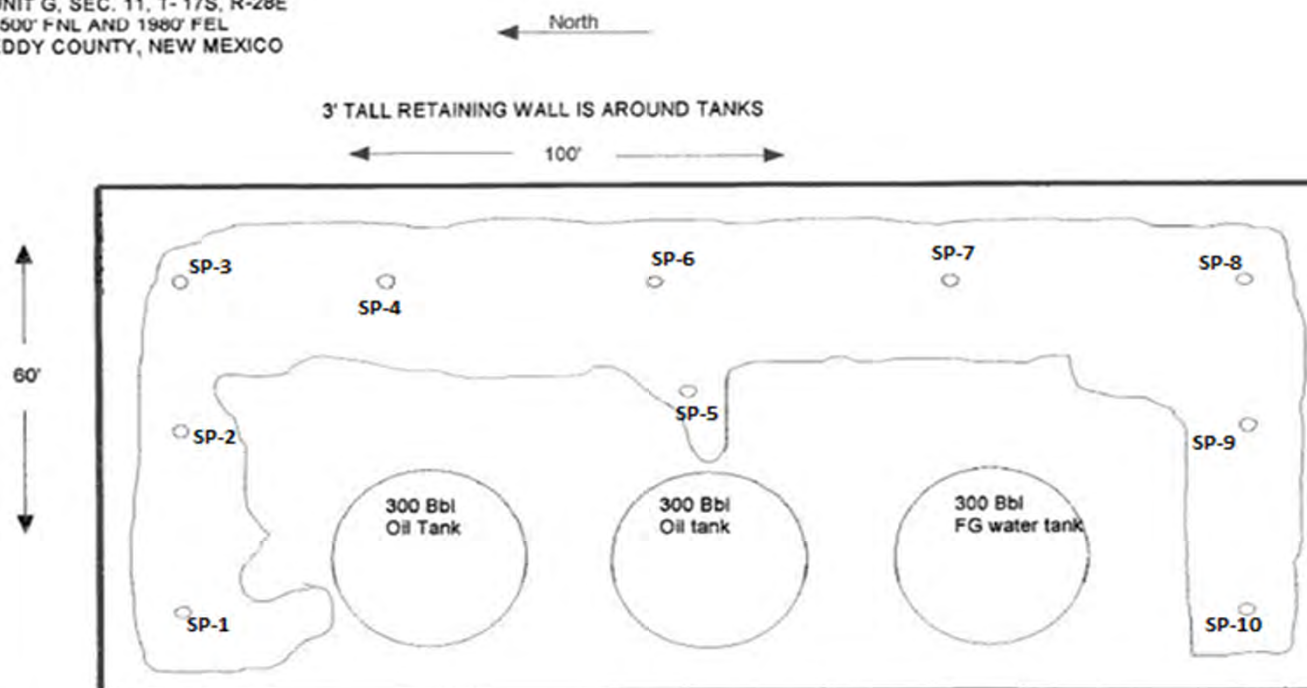
Enclosures: Plate 1, Figures 1-2 (groundwater information), laboratory report, remediation plan, NMOCD approval

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

<sup>i</sup> 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

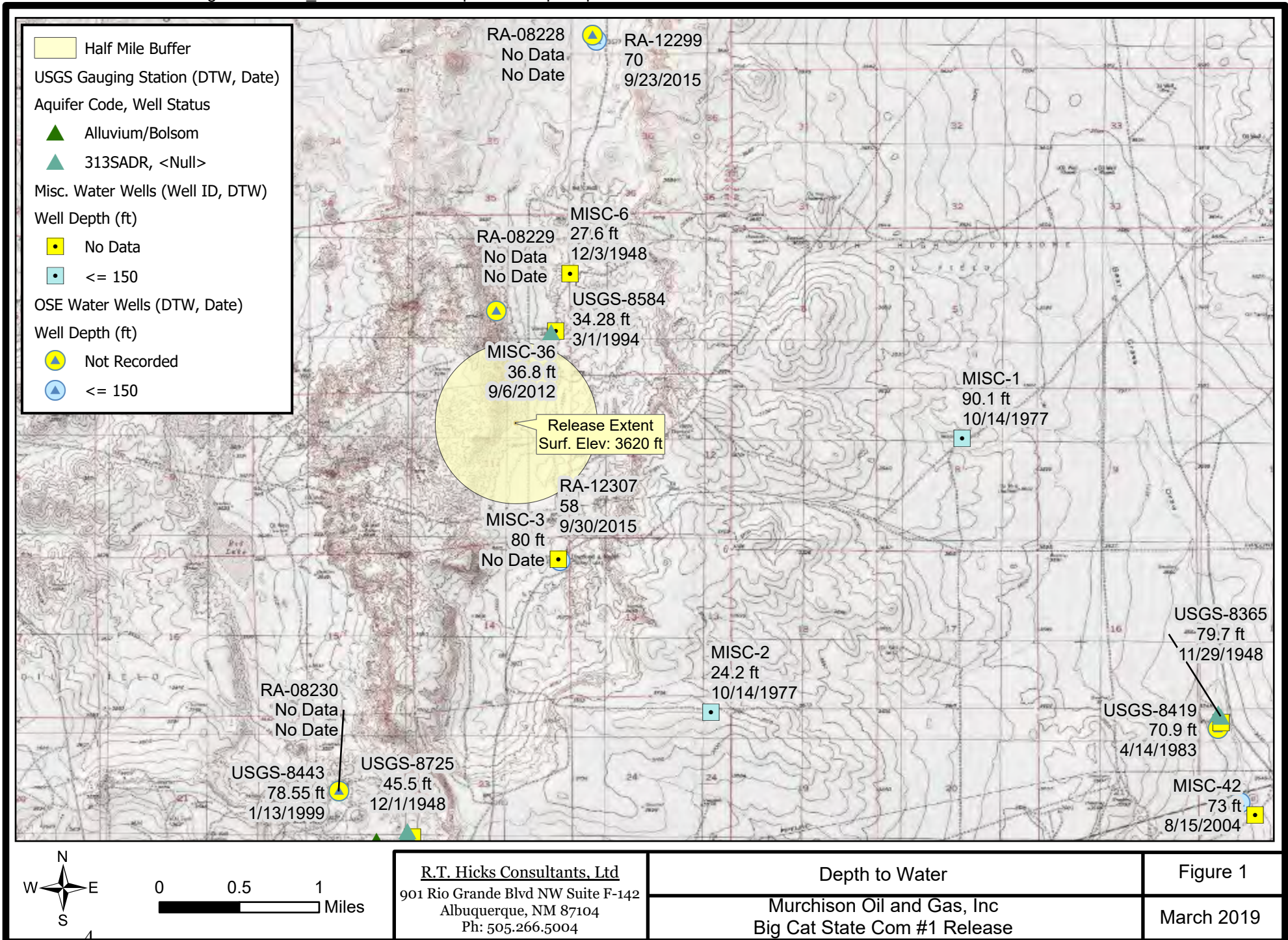
| Sample ID | Date       | Depth (ft) | In Use? | Chloride   | GRO+DRO | TPHext | BTEX   | Benzene |
|-----------|------------|------------|---------|------------|---------|--------|--------|---------|
| SP-1      | 01/10/2019 | 0.5        | Yes     | avg. 67.6* | <20.0   | <30.0  | <0.300 | <0.050  |
| 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

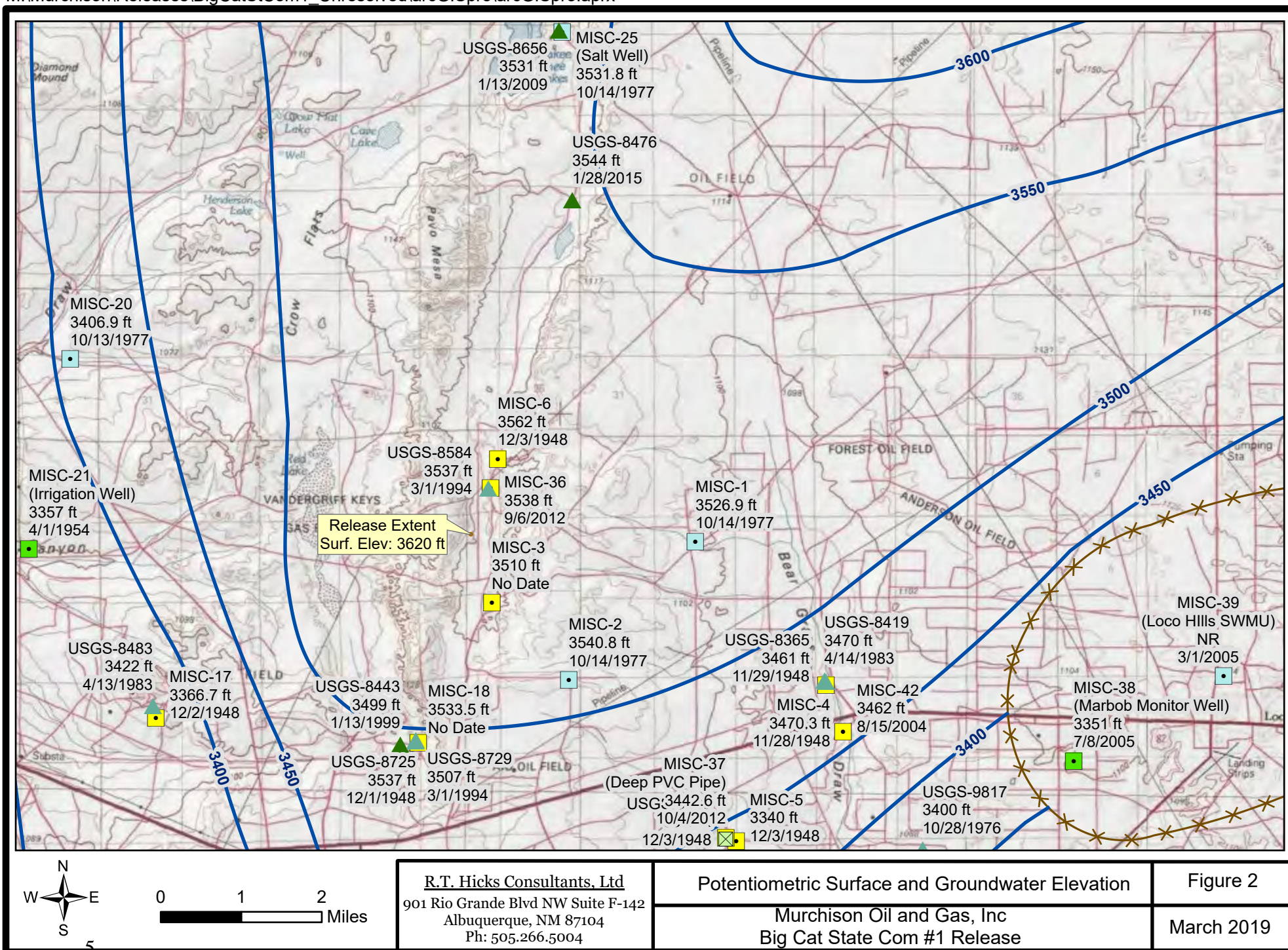
\* Average of ten 0.5 ft deep samples collected on 9/17/2004

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

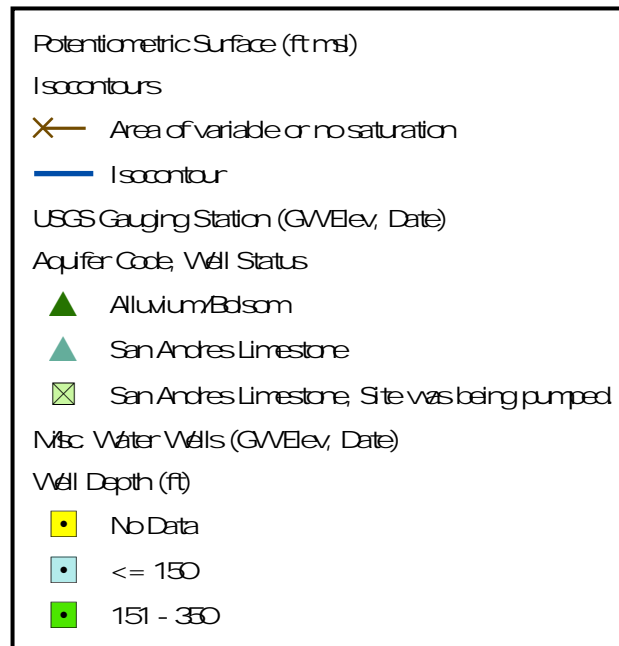
M:\Murchison\Releases\BigCatStCom1\_Unresolved\arcGISpro\arcGISpro.aprx



M:\Murchison\Releases\BigCatStCom1\_Unresolved\arcGISpro\arcGISpro.aprx



M:\Murchison\Releases\BigCatStCom1\_Unresolved\arcGISPro\arcGISPro.aprx



|   |  |                    |
|---|--|--------------------|
| R.T. Hicks Consultants Ltd<br>901 Rio Grande Blvd NW Suite F-142<br>Albuquerque, NM 87104<br>Ph: 505.266.5004 | Potentiometric Surface and Groundwater Elevation           | LEGEND<br>Figure 2 |
|   | Murchison Oil and Gas, Inc<br>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](http://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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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



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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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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\*=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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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

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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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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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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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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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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 - 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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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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\*=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  
Reported: 01/17/2019  
Project Name: BIG CAT ST. COM #1 RELEASE  
Project Number: NONE GIVEN  
Project Location: MURCHISON - EDDY CO NM

Sampling Date: 01/10/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**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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Celey D. Keene, Lab Director/Quality Manager



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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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*Coley D. Keene*

Coley 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: <b>RT Hicks Consultants</b>        |             | P.O. #:                  |              | <b>BILL TO</b> |            | ANALYSIS REQUEST |     |       |      |      |                         |
| Project Manager: <b>Kristin Pope</b>             |             | Company: <b>RT Hicks</b> |              |                |            |                  |     |       |      |      |                         |
| Address: <b>901 Rio Grande Blvd NW, E-142</b>    |             | Attn:                    |              |                |            |                  |     |       |      |      |                         |
| City: <b>Albuquerque</b>                         |             | Address:                 |              |                |            |                  |     |       |      |      |                         |
| Phone #: <b>505-266-5004</b>                     |             | City:                    |              |                |            |                  |     |       |      |      |                         |
| Fax #: <b>505-266-5004</b>                       |             | State:                   |              |                |            |                  |     |       |      |      |                         |
| Project #: <b>Project Owner: Marchison</b>       |             | Zip:                     |              |                |            |                  |     |       |      |      |                         |
| Project Name: <b>Big Cat St. Conn #1 Release</b> |             | Phone #:                 |              |                |            |                  |     |       |      |      |                         |
| Project Location: <b>Eddy County</b>             |             | Fax #:                   |              |                |            |                  |     |       |      |      |                         |
| Sampler Name: <b>K. Pope</b>                     |             |                          |              |                |            |                  |     |       |      |      |                         |
| FOR LAB USE ONLY                                 |             |                          |              |                |            |                  |     |       |      |      |                         |
| Lab I.D.   | Sample I.D. | (G)RAB OR (C)OMP.        | # CONTAINERS | MATRIX         |            |                  |     | DATE  | TIME | BTEX | TPH (GRO, DRO, DRO ext) |
|  |             |                          |              | GROUNDWATER    | WASTEWATER | SOIL             | OIL |       |      |      |                         |
| H900094  | SP-1 @ 6"   | G                        | 1            |                |            |                  |     |       |      |      |                         |
|  | SP-2 @ 6"   |                          |              |                |            |                  |     | 11-19 | 1330 |      |                         |
|  | SP-3 @ 6"   |                          |              |                |            |                  |     |       | 1333 |      |                         |
|  | SP-4 @ 6"   |                          |              |                |            |                  |     |       | 1339 |      |                         |
|  | SP-5 @ 6"   |                          |              |                |            |                  |     |       | 1340 |      |                         |
|  | SP-6 @ 6"   |                          |              |                |            |                  |     |       | 1342 |      |                         |
|  | SP-7 @ 6"   |                          |              |                |            |                  |     |       | 1343 |      |                         |
|  | SP-8 @ 6"   |                          |              |                |            |                  |     |       | 1345 |      |                         |
|  | SP-9 @ 6"   |                          |              |                |            |                  |     |       | 1347 |      |                         |
|  | SP-10 @ 6"  |                          |              |                |            |                  |     |       | 1349 |      |                         |
|  |             |                          |              |                |            |                  |     |       | 1350 |      |                         |

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Relinquished By: **Kristin Pope** Date: **11-19** Received By: **Patricia Alvarado**

Relinquished By: **Kristin Pope** Date: **12:12** Received By: **Patricia Alvarado**

Delivered By: (Circle One) **UPS** **5:46 #97** Sample Condition ☒ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No **70** CHECKED BY: (Initials)

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 NMOCDD 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 &amp; 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<br>(C <sub>6</sub> -C <sub>10</sub> )<br>(mg/Kg) | DRO<br>(>C <sub>10</sub> -C <sub>28</sub> )<br>(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. Clarke*  
Chemist

9/28/04  
Date

H9162A.XLS

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PHONE (818) 678-7001 • 2111 BEECHWOOD • ASHLENE, TX 78809

PHONE (806) 393-2828 • 101 E. MARLAND • HOBBBS, NM 88240

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 <sup>+</sup><br>(mg/Kg) | BENZENE<br>(mg/Kg) | TOLUENE<br>(mg/Kg) | ETHYL<br>BENZENE<br>(mg/Kg) | TOTAL<br>XYLENES<br>(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                       | 0.966                       |
| 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                       | 0.284                       |
| 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<sup>+</sup> - Std. Methods 4500-CI<sup>+</sup>B; BTEX - EPA SW-846-8260

*Burgess J. A. Cooke, Ph. D.*  
Burgess J. A. Cooke, Ph. D.

*8/28/04*  
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](mailto: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

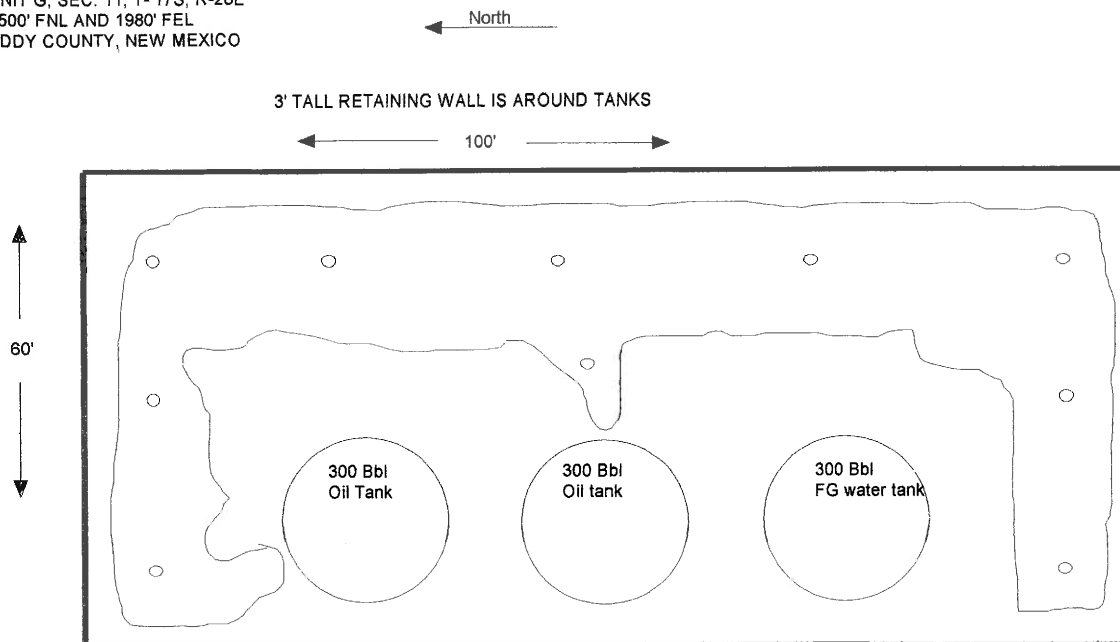
Effective area had 8 - 20# sacks of Kenaff tilled into soil per Filed C-141. A additional 10 - 20# sacks of Kenaff were tilled into the Effected area on 06/17/04. This will be allowed to set for 91 days and soil samples will be taken. (See attached drawing indicating effected area and sample points.) 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 NMOCd 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 &amp; Gas, Inc.

Att: Michael S. Daughtery

1100 Mira Blvd.

Plano, TX 75093

Re: 30-015-32091 Ut. G-11-17s-28e

Big Cat State Com. #1

Dear Mr. Michael S. Daughtery,

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](http://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](mailto: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

Page 149 of 170  
Form C-141  
Revised October 10, 2003

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

00050414928403

## OPERATOR

☒ Initial Report ☐ 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 Bbbs.   | Volume Recovered           | 60 Bbbs.        |
| 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.\*

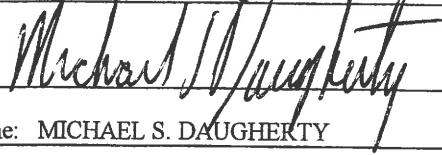
Describe Cause of Problem and Remedial Action Taken.\*

Hole developed in bottom of crude oil storage tank. Approximately 70 Bbbs. of crude was released to area around tank. Retaining wall contained spill of oil. Sixty Bbbs. were recovered with vacuum truck and returned to lease storage. Ten Bbbs. were lost.

Describe Area Affected and Cleanup Action Taken.\*

Affected area will be rototilled and mixed with 8 20# sacks of KENAFF for remediation.

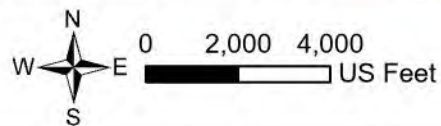
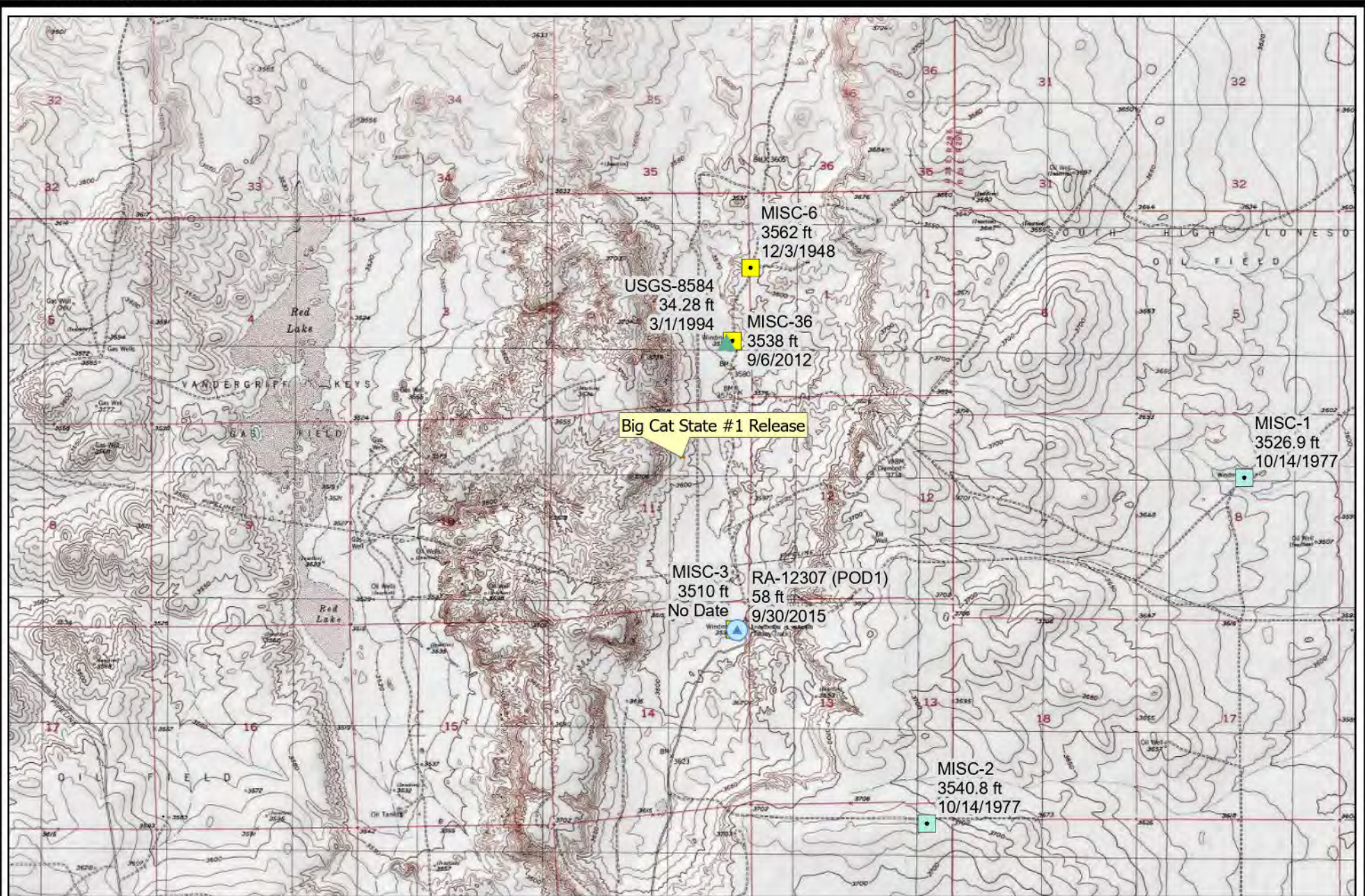
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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:          |                  | Attached <input type="checkbox"/> |
| Date: 5/18/04  | Phone: (972) 931-0700            |                  |                                   |

\* 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

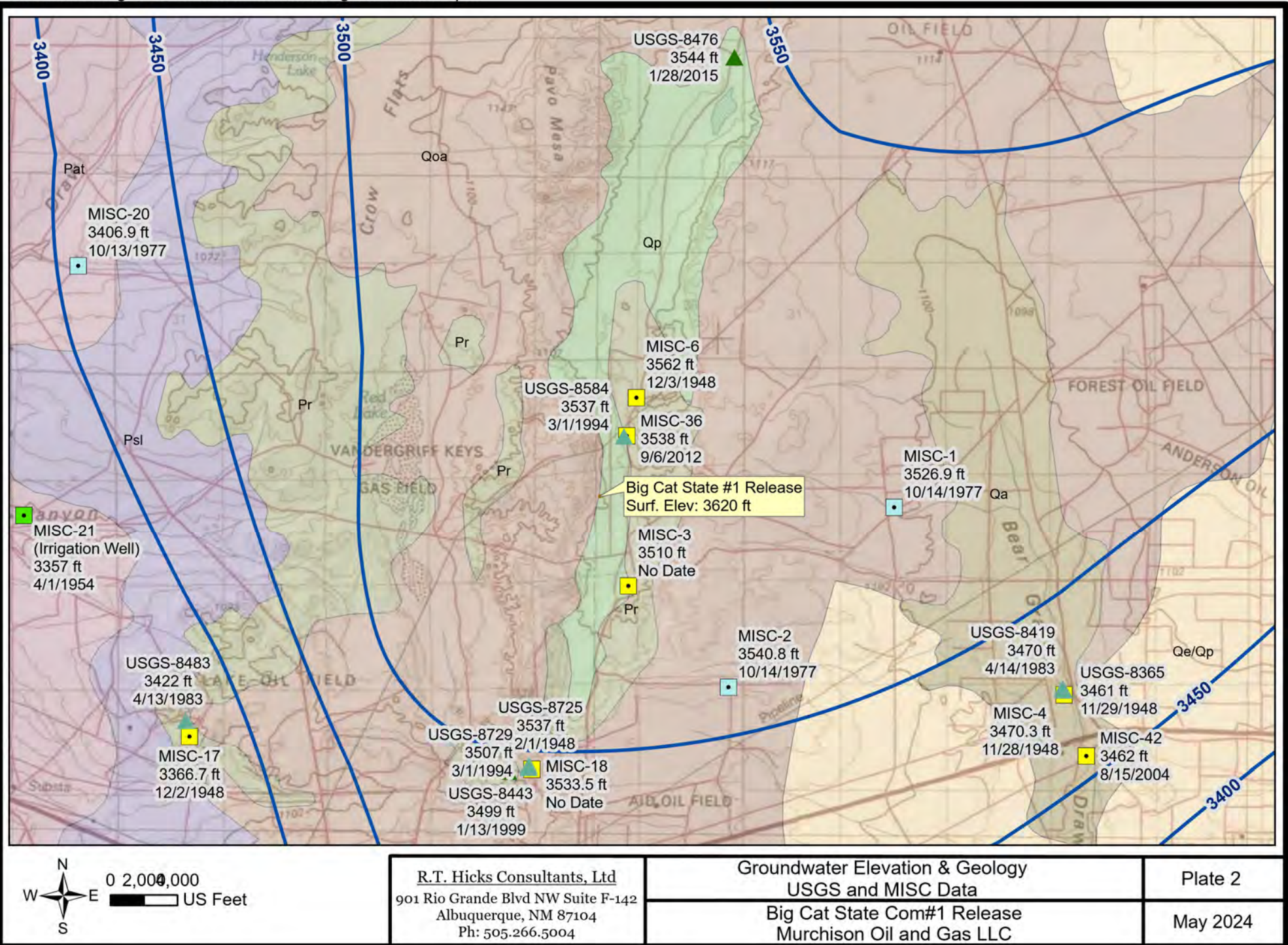
April 2024

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|   |   |
|---|---|
|    | 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       |

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

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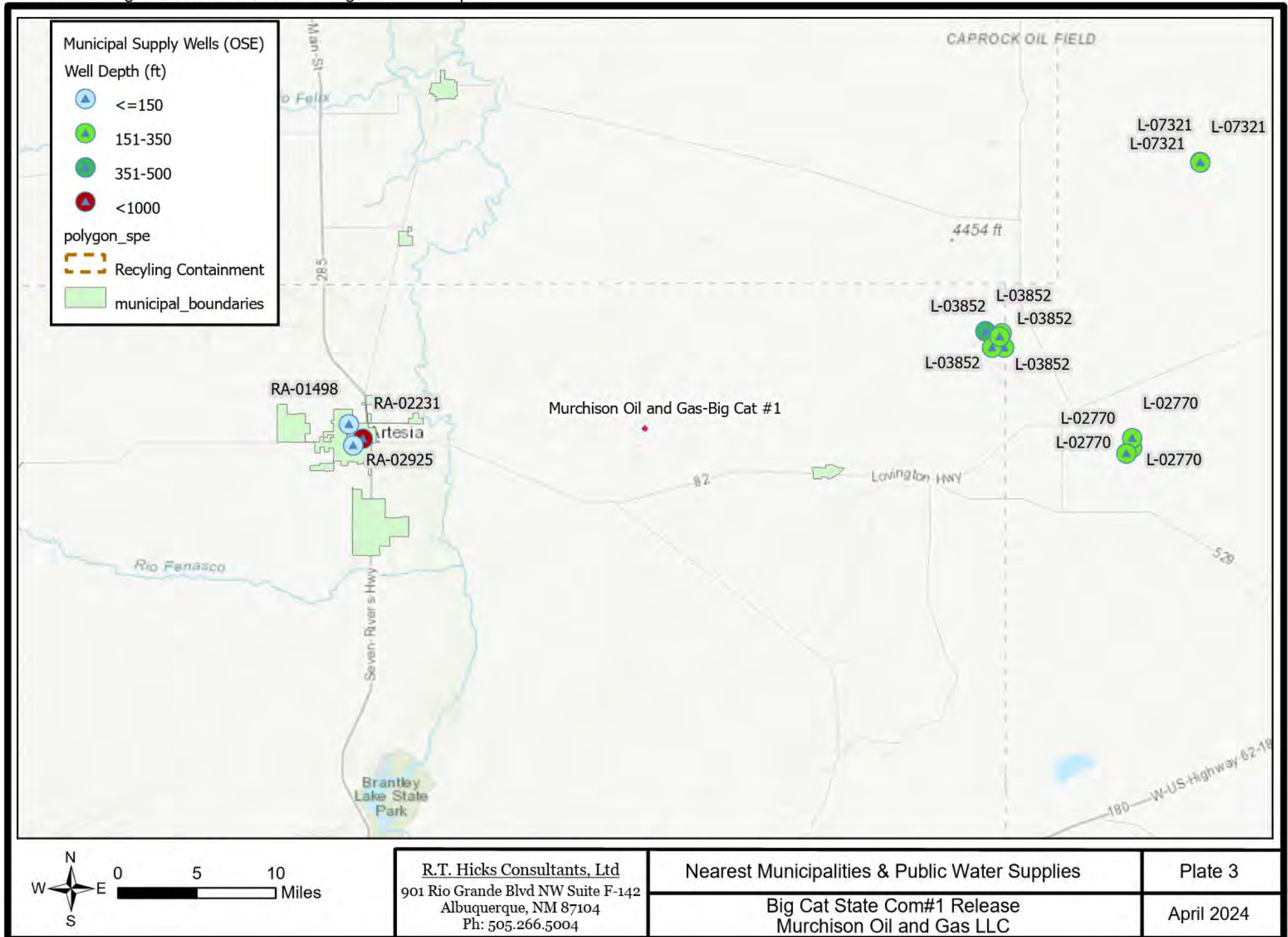
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 Albuquerque, NM 87104  
 Ph: 505.266.5004

Groundwater Elevation & Geology  
 USGS and MISC Data  
 Big Cat State Com#1 Release  
 Murchison Oil and Gas LLC

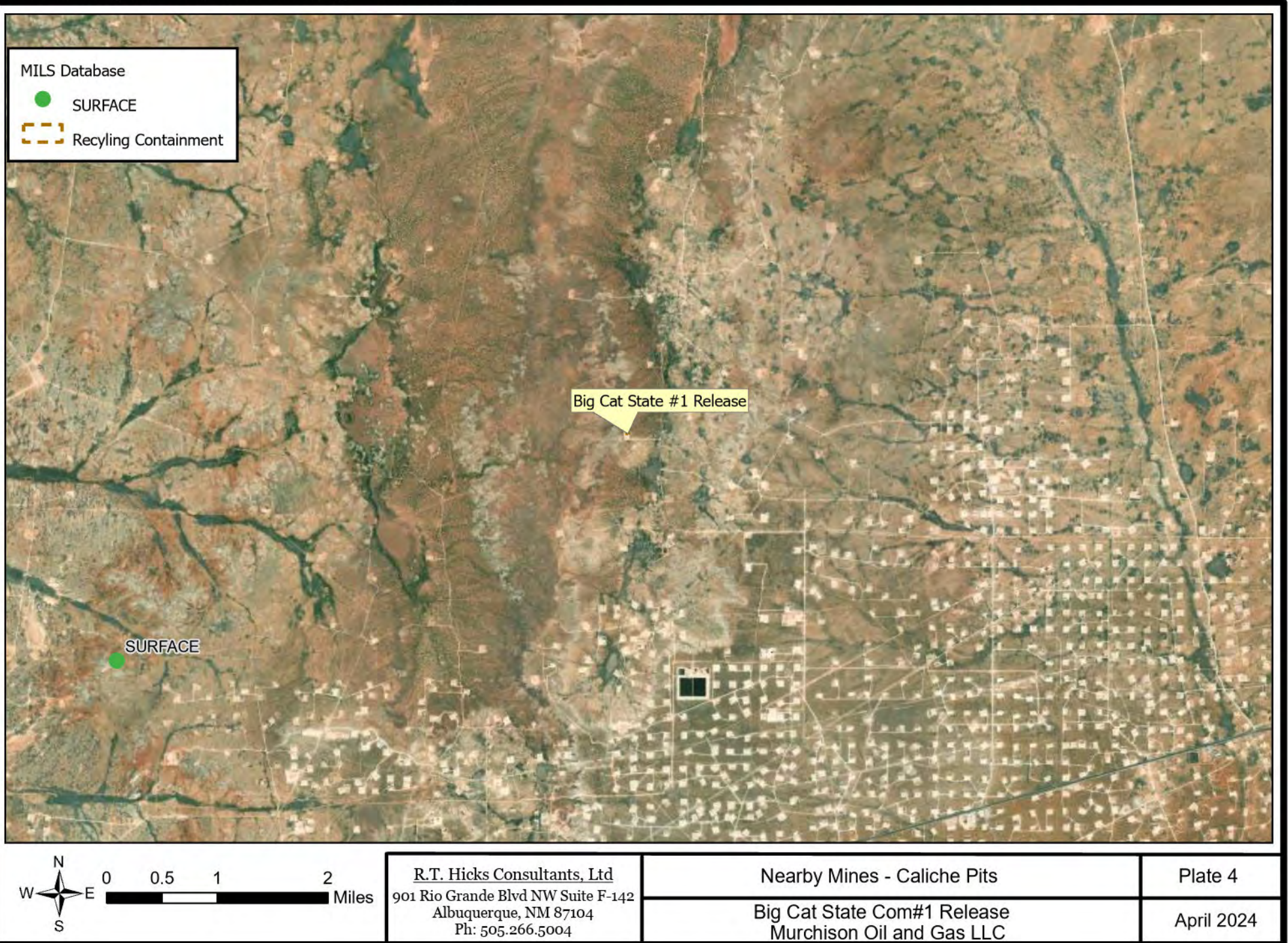
Plate 2

May 2024

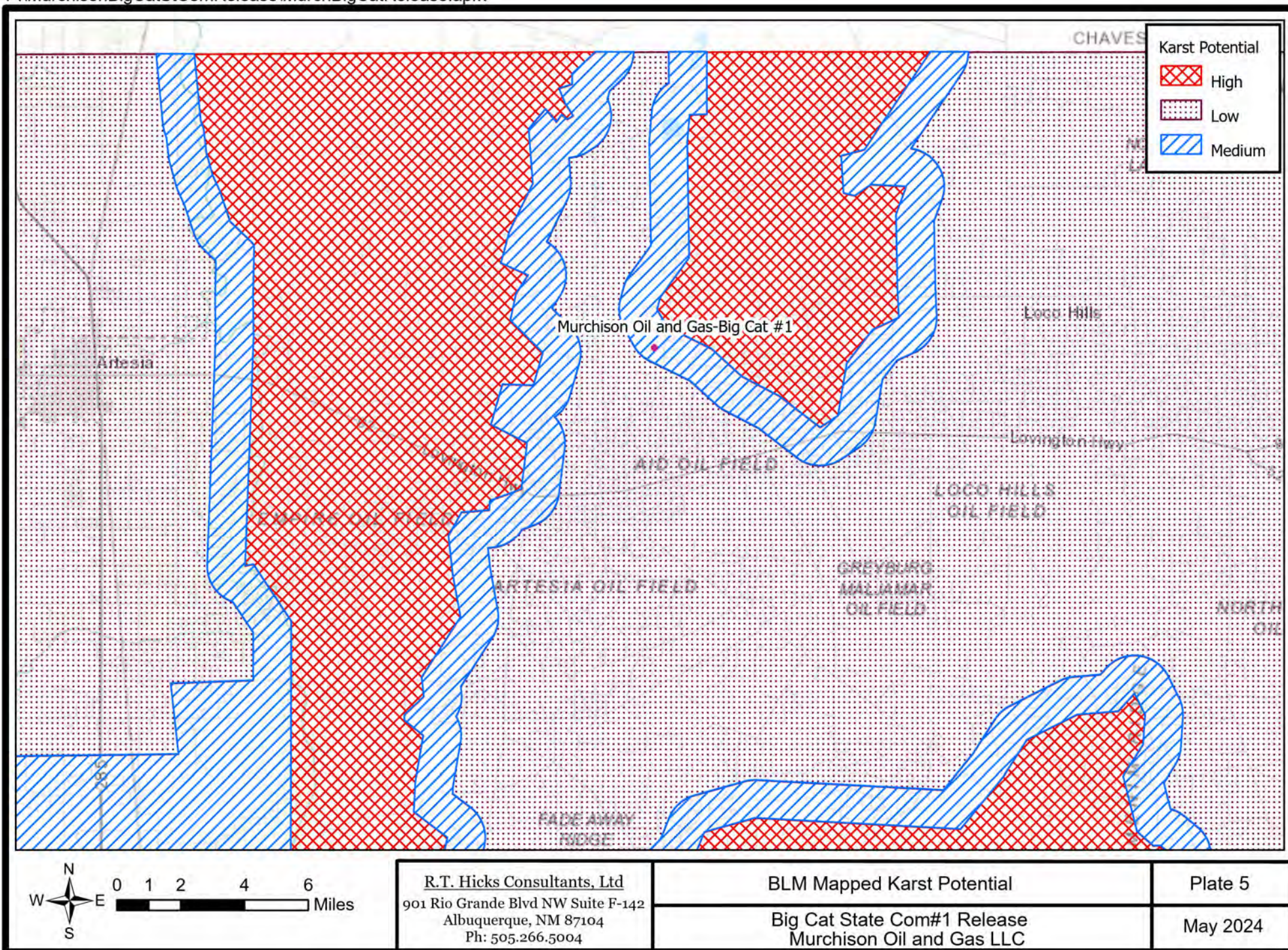
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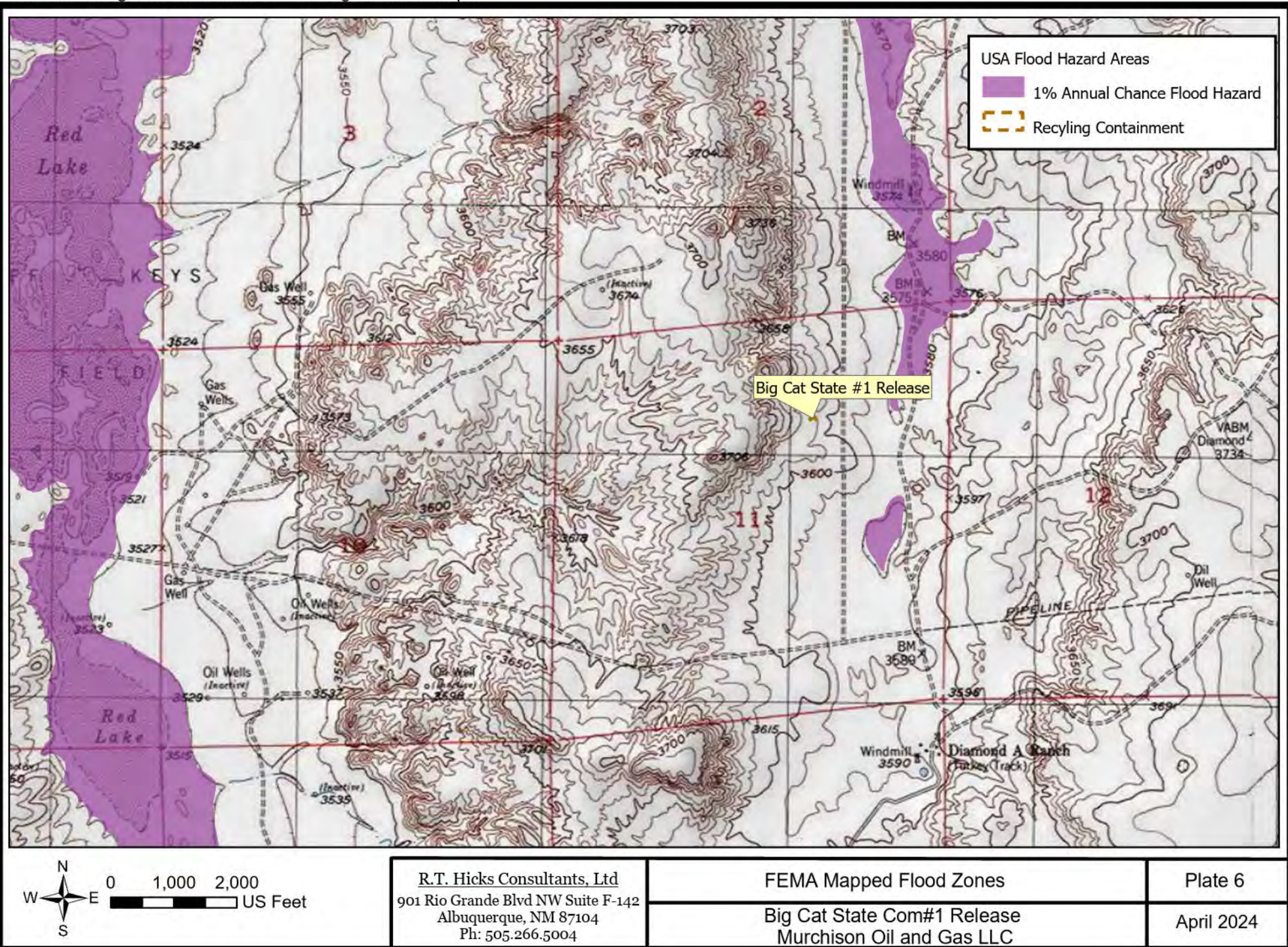
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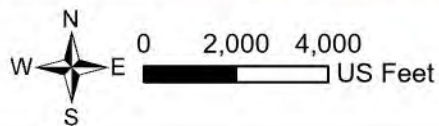
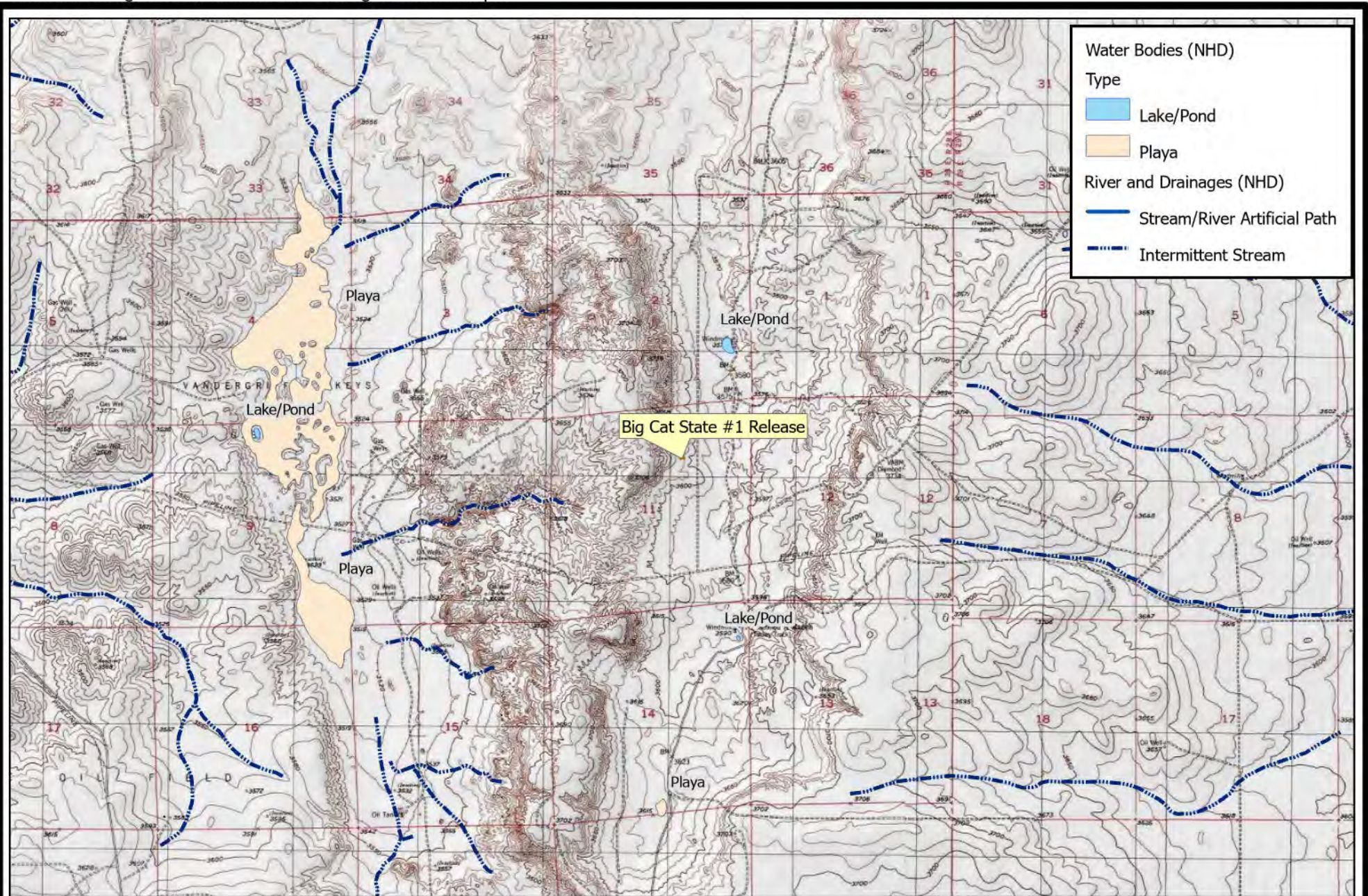
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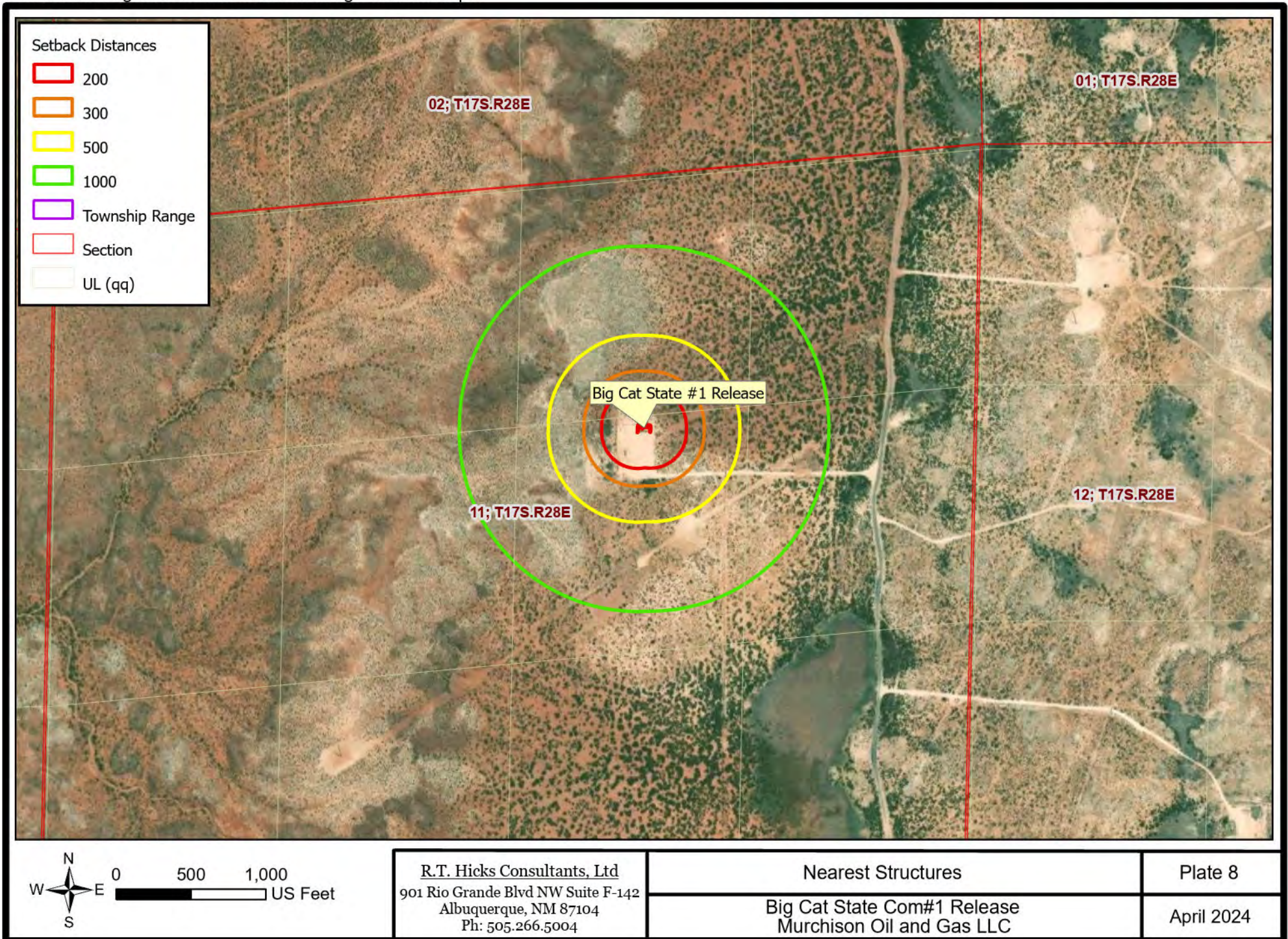


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Albuquerque, NM 87104  
Ph: 505.266.5004

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

Plate 7  
April 2024

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**Wetland Desc.**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

**Big Cat State #1 Release**

**Freshwater Emergent Wetland**

**Freshwater Forested/Shrub Wetland**

**Freshwater Pond**

**Vanderburg Keys**

**Murchison Oil and Gas LLC**

**Scale:** 0, 2,000, 4,000 US Feet

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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

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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](mailto: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/>.

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**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](mailto:ddominguez@hungry-horse.com)

Sent from my iPhone

On Nov 25, 2024, at 2:39 PM, Hall, Brittany, EMNRD  
<[Brittany.Hall@emnrd.nm.gov](mailto: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](mailto:Brittany.Hall@emnrd.nm.gov)  
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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:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569  |
|  | Action Number:<br>406118  |
|  | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

|                      |  |
|----------------------|--|
| <b>Prerequisites</b> |  |
| 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**

Please answer all the questions in this group.

|                         |                        |
|-------------------------|------------------------|
| Site Name               | BIG CAT STATE COM #001 |
| Date Release Discovered | 05/13/2004             |
| Surface Owner           | State                  |

**Incident Details**

Please answer all the questions in this group.

|  |             |
|--|-------------|
| 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**

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

|  |   |
|--|---|
| Crude Oil Released (bbls) Details  | Cause: 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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QUESTIONS, Page 2

Action 406118

**QUESTIONS (continued)**

|  |   |
|--|---|
| Operator:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569  |
|  | Action Number:<br>406118  |
|  | Action Type:<br>[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:<br>(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more. |
| With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form. |  |

**Initial Response**

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

|  |               |
|--|---------------|
| The source of the release has been stopped   | True          |
| The impacted area has been secured to protect human health and the environment                                     | True          |
| Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices | True          |
| All free liquids and recoverable materials have been removed and managed appropriately                             | True          |
| If all the actions described above have not been undertaken, explain why   | Not answered. |

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<br>Title: Enviro Manager<br>Email: bwells@hungry-horse.com<br>Date: 11/25/2024 |
|--|--|

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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
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QUESTIONS, Page 3

Action 406118

**QUESTIONS (continued)**

|  |   |
|--|---|
| Operator:<br><br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br><br>331569  |
|  | Action Number:<br><br>406118  |
|  | Action Type:<br><br>[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                             |
| <b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>   |                                |
| 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 ½ 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 ½ 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.

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QUESTIONS, Page 4

Action 406118

**QUESTIONS (continued)**

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

**QUESTIONS**

|  |   |
|--|---|
| <b>Remediation Plan (continued)</b>  |   |
| <i>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.</i>   |   |
| <b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>   |   |
| <i>(Select all answers below that apply.)</i>  |   |
| (Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)  | Yes   |
| Which OCD approved facility will be used for <b>off-site</b> disposal  | R360 ARTESIA LLC LANDFARM [EEM0112340644]   |
| <b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal  | Not answered.   |
| <b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state   | Not answered.   |
| <b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility   | Not answered.   |
| (Ex Situ) Excavation and <b>on-site</b> 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.   |
| <i>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>   |   |
| 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<br>Title: Enviro Manager<br>Email: <a href="mailto:bwells@hungry-horse.com">bwells@hungry-horse.com</a><br>Date: 11/25/2024 |
| <i>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.</i>  |   |

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, Page 5

Action 406118

QUESTIONS (continued)

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

QUESTIONS

|  |    |
|--|----|
| Deferral Requests Only   |    |
| Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation. |    |
| Requesting a deferral of the remediation closure due date with the approval of this submission   | No |

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS, Page 6

Action 406118

**QUESTIONS (continued)**

|  |   |
|--|---|
| Operator:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569  |
|  | Action Number:<br>406118  |
|  | Action Type:<br>[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<br>Title: Enviro Manager<br>Email: bwells@hungry-horse.com<br>Date: 11/25/2024 |
|--|--|

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QUESTIONS, Page 7  
  
Action 406118

QUESTIONS (continued)

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

QUESTIONS

|   |    |
|---|----|
| Reclamation Report  |    |
| Only answer the questions in this group if all reclamation steps have been completed. |    |
| Requesting a reclamation approval with this submission                                | No |

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CONDITIONS

Action 406118

**CONDITIONS**

|  |   |
|--|---|
| Operator:<br>3R Operating, LLC<br>20405 State Highway 249<br>Houston, TX 77070 | OGRID:<br>331569  |
|  | Action Number:<br>406118  |
|  | Action Type:<br>[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 reseeding 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      |