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## Remediation and Closure Report

Mesquite Vaca Draw Battery ROW Spill  
Incident# nAPP2212661694  
Lea County, New Mexico

### Prepared For:

Cimarex Energy Co.  
600 Marienfeld St.  
Midland, TX 79701

### Prepared By:

H&R Enterprises, LLC  
5120 W. Kansas St.  
Hobbs, New Mexico 88242

**June 17, 2022**

Mrs. Shelly Tucker  
**Bureau of Land Management**  
602 E. Green St.  
Carlsbad, NM 88240

Mrs. Jennifer Nobui  
**New Mexico Oil Conservation Division**  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

Subject: **Remediation and Closure Report**  
Mesquite Vaca Draw ROW Spill  
Lea County, NM

Cimarex Energy Co. has contracted H&R Enterprises (H&R) to perform site assessment and remediation services at the above-referenced location. The results of our site assessment and remediation activities are contained herein.

### **Site Information**

The Mesquite Vaca Draw ROW Spill is located approximately 31.5 miles West of Jal, New Mexico. The latitude and longitude for the release are 32.108733 North and -103.567512 West. Site plans are presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Pyote and Maljamar fine sands, 0 to 3 percent slopes. The referenced soil data is attached in [Appendix II](#). Drainage courses in this area are typically dry. The project site is located in a low Karst potential area (Karst Map, [Appendix I](#)).

### Groundwater and Site Characterization

The New Mexico Office of the State Engineer web site indicates that the nearest reported depth to groundwater is 280-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29, NMAC.

<b>Approximate Depth to Groundwater</b>	<b>280 Feet/BGS</b>
---	---------------------

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 200 feet of any lakebed, sinkhole, or a playa lake
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 300 feet from an occupied permanent residence, school, hospital, institution, or church
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 1000 feet of any freshwater well or spring
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within 300 feet of a wetland
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within the area overlying a subsurface mine
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within an unstable area
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Within a 100-year floodplain

Although depth to groundwater data is current, it is outside of the recommended distance 0.5 miles. On June 14, 2022 an exploratory water bore was completed to 55-feet BGS on Cascade 28 Federal #85H well pad. The latitude and longitude for this location are 32.108115 North and -103.572759 West. The latitude and longitude of the water bore are 32.1081149 North and 103.5727772 West which is within the recommended 0.5-miles distance of the spill area. Initial gauging indicated no presence of groundwater. Gauging was performed on June 17, 2022, 72-hours after bore was completed and no groundwater was detected.

Due to the absence of groundwater at less than or equal to 50-feet BGS, the closure criteria for this release are as follows:

Table I			
Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
51 feet-100 feet	Chloride **	EPA 300.0 or SM4500 CIB	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

## Site Assessment and Remediation Activities

On May 24, 2022, H&R mobilized personnel to begin site assessment, sampling, and remediation activities of the spill area. Site assessment samples were collected by way of test trenching. Field chloride titrations were performed to determine vertical delineation. Samples were then transported to Cardinal Laboratories to confirm vertical delineation. Laboratory results are presented in the following data table. Initial site assessment sample locations are illustrated on Delineation Trench Map, [Appendix I](#). After vertical delineation was complete, excavation commenced. Horizontal delineation was achieved during excavation by way of composite samples as well as background samples taken after excavation was complete. Those samples as well as composite samples taken of the bottom of the excavation were sent to Cardinal Laboratory to confirm NMOCD closure criteria had been met. Confirmation sample locations are presented on Confirmation Sample Map in [Appendix I](#). Photographic documentation is presented in [Appendix IV](#). Complete laboratory reports can be found in [Appendix V](#).

Table 1: Delineation Trench Soil Samples Analysis

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	1000 mg/kg		2500 mg/kg	2500 mg/kg	10,000 mg/kg
DT-1	5/24/2022	0-1'	ND	ND	ND	ND	ND	0	32
		2'	ND	ND	ND	ND	ND	0	32
		3'	ND	ND	ND	ND	ND	0	160
		4'	ND	ND	ND	ND	ND	0	32
DT-2	5/24/2022	0-1'	ND	ND	ND	ND	ND	0	64
		2'	ND	ND	ND	ND	ND	0	32
		3'	ND	ND	ND	ND	ND	0	32
		4'	ND	ND	ND	ND	ND	0	48
DT-3	5/24/2022	0-1'	ND	ND	ND	ND	ND	0	3040
		2'	ND	ND	ND	ND	ND	0	3120
		3'	ND	ND	ND	ND	ND	0	6800
		4'	ND	ND	ND	ND	ND	0	5460
		6'	ND	ND	ND	ND	ND	0	4660
		8'	ND	ND	ND	ND	ND	0	10000
		10'	ND	ND	ND	15	ND	15	3200
	12'	ND	ND	ND	ND	ND	0	4160	
	5/31/2022	13.5'	ND	ND	ND	ND	ND	0	160

ND = Analyte Not Detected DT = Delineation Trench

Based on the results of our site assessment and upon client authorization, further excavation activities of the spill area took place. Confirmation samples were collected to confirm that NMOCD closure criteria had been met, the results of which can be found in the following data table. Confirmation sample locations and excavation dimensions can be found on Confirmation Sample Map in [Appendix I](#). Complete laboratory reports are attached in [Appendix V](#).

Table 2: Confirmation Soil Sample Analysis

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
<b>NMOCD Table 1 Closure Criteria 19.15.29 NMAC</b>			<b>50 mg/kg</b>	<b>10 mg/kg</b>	<b>1000 mg/kg</b>		<b>2500 mg/kg</b>	<b>2500 mg/kg</b>	<b>10,000mg/kg</b>
S-1	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	224
S-2	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	224
S-3	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	160
S-4	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	112
S-5	5/31/2022	4'	ND	ND	ND	ND	ND	0	3680
S-6	5/31/2022	4'	ND	ND	ND	ND	ND	0	2880
S-7	5/31/2022	4'	ND	ND	ND	ND	ND	0	4280
S-8	5/31/2022	4'	ND	ND	ND	ND	ND	0	4960
S-9	5/31/2022	4'	ND	ND	ND	ND	ND	0	2760
N.SW	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	48
S.SW	5/31/2022	4'	ND	ND	ND	ND	ND	0	144
E.SW-1	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	48
E.SW-2	5/31/2022	4'	ND	ND	ND	ND	ND	0	256
W.SW-1	5/31/2022	1-1.5'	ND	ND	ND	ND	ND	0	176
W.SW-2	5/31/2022	4'	ND	ND	ND	ND	ND	0	240
BG-1	5/31/2022	0-1'	ND	ND	ND	ND	ND	0	48
BG-2	5/31/2022	0-1'	ND	ND	ND	ND	ND	0	48
BG-3	5/31/2022	0-1'	ND	ND	ND	ND	ND	0	16
BG-4	5/31/2022	0-1'	ND	ND	ND	ND	ND	0	48

ND = Analyte Not Detected SW = Sidewall BG = Background

## Remedial Actions

- The impacted areas in the vicinity of sample points S-1 through S-4 were excavated to a total depth of 1-1.5 feet BGS.
- The areas near sample points S-5 through S-9 were excavated to 4-feet BGS.
- Composite confirmation samples were obtained from the sidewalls and bottoms of the excavated areas to verify that all contaminants above closure criteria had been removed.
- All the excavated material (128 yds) was hauled to Lea Land, a NMOCD approved solid waste disposal facility.
- The excavated area will be backfilled with clean topsoil and contoured to match the surrounding location.
- Area will be seeded with approved BLM seed mixture in accordance with the monsoon season to ensure proper seed germination and vegetation growth.
- The Final C-141 formally documenting the remedial actions is attached in [Appendix III](#).

## Backfill Request

Due to 3 major pipelines within the spill/excavation area which create extensive safety issues when excavating, on behalf of Cimarex Energy Co. we request that backfilling and photographic documentation of backfill be completed once closure is approved.

## Closure

Based on the site assessment, remedial actions and confirmation sampling results completed for this project, on behalf of Cimarex Energy Co. we request that no further actions be required, and that closure of this incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-909-0326.

Respectfully submitted,

H&R Enterprises, LLC



Michael Collier  
Environmental Project Manager

### Attachments:

Appendix I Site Maps

Appendix II Soil Survey, Groundwater Data, FEMA Flood Zone, Water Bore Location Map

Appendix III Initial and Final C-141, NMOCD and BLM Correspondence

Appendix IV Photographic Documentation

Appendix V Laboratory Data Reports

# APPENDIX I

## SITE MAPS

## KARST MAP

## TOPOGRAPHIC MAP

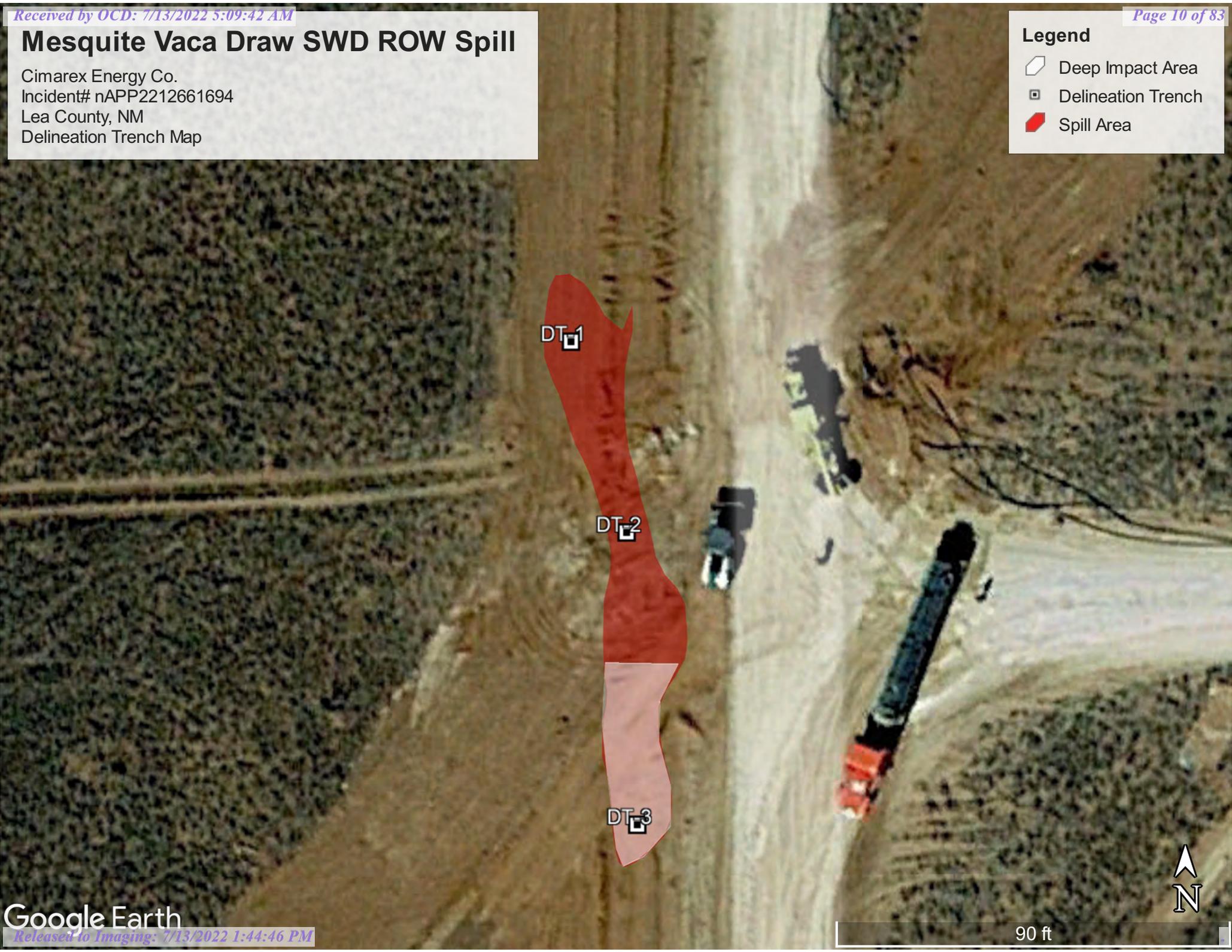
## LOCATOR MAP

# Mesquite Vaca Draw SWD ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Delineation Trench Map

**Legend**

-  Deep Impact Area
-  Delineation Trench
-  Spill Area



# Mesquite Vaca Draw SWD ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Confirmation Sample Map

## Legend

-  1-1.5ft Excavation
-  4ft. Excavation
-  Confirmation Composite Sample Zone



# Mesquite Vaca Draw SWD ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Karst Map

## Legend

-  High
-  Low
-  Medium
-  Mesquite Vaca Draw Battery Release

Mesquite Vaca Draw Battery Release 



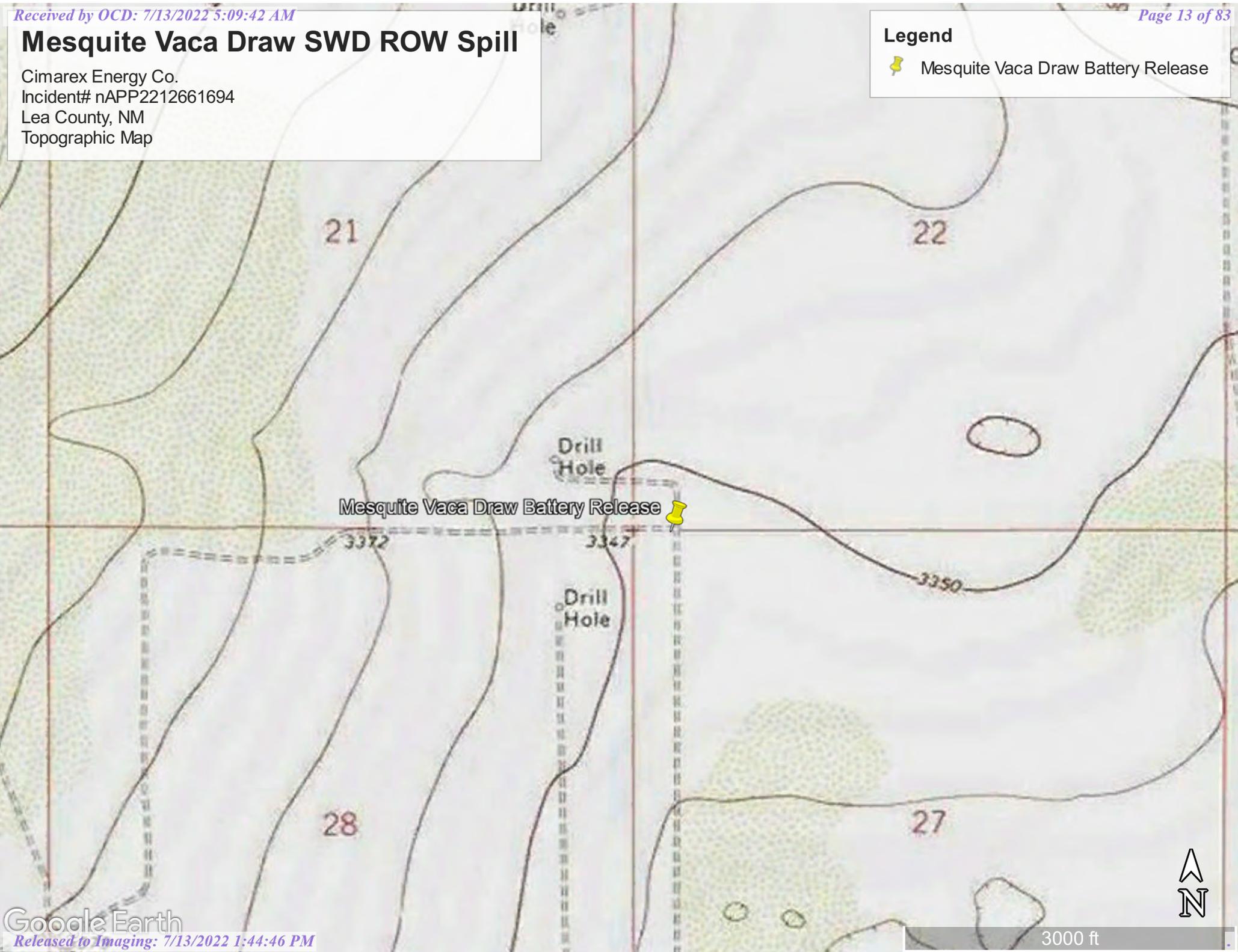
1 mi

# Mesquite Vaca Draw SWD ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Topographic Map

## Legend

 Mesquite Vaca Draw Battery Release



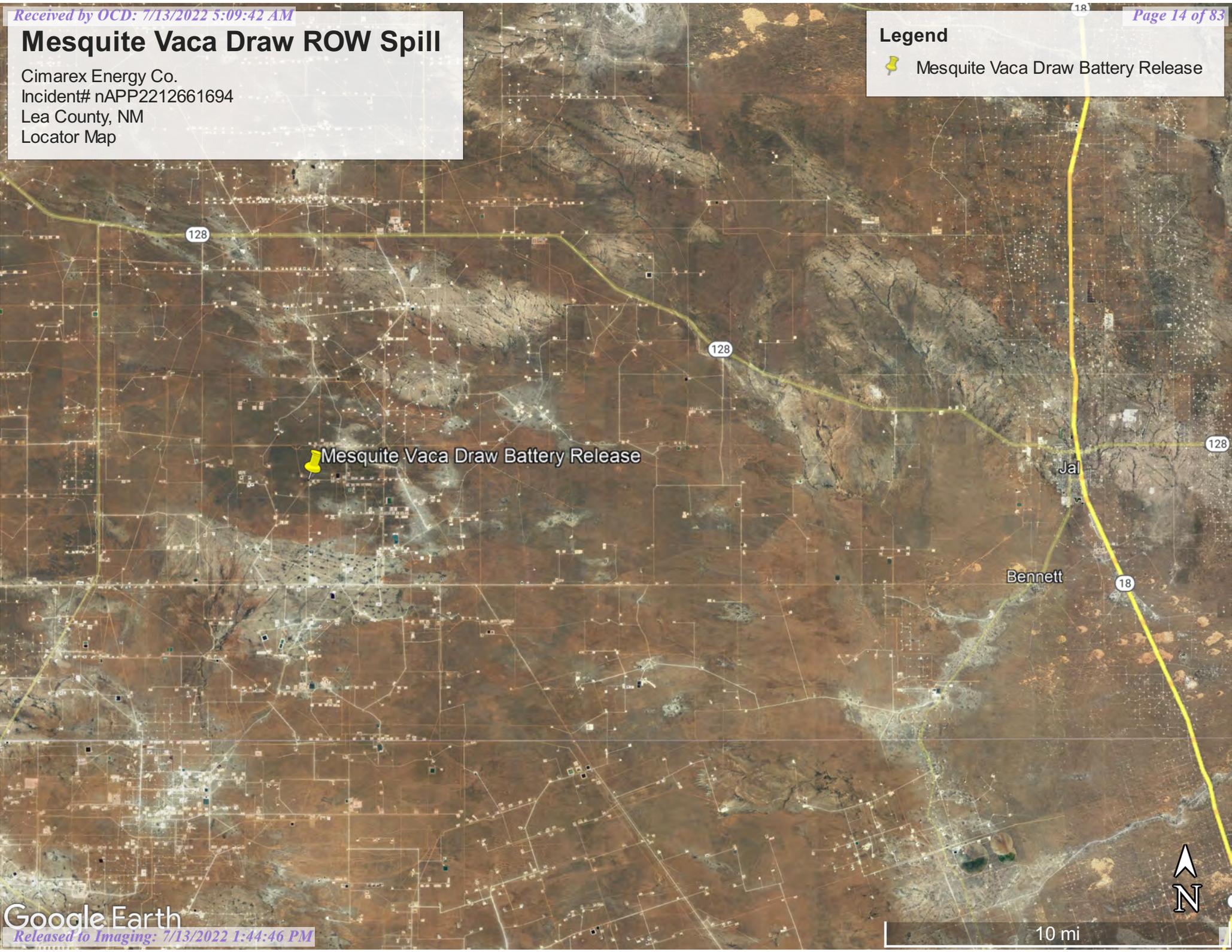
3000 ft

# Mesquite Vaca Draw ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Locator Map

## Legend

 Mesquite Vaca Draw Battery Release



# APPENDIX II

## GROUNDWATER DATA

## SOIL SURVEY

## FEMA FLOOD ZONE

## WATER BORE LOCATION MAP



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C_02313</a>		CUB	LE	2	3	3	26	25S	33E	636971	3552098*	2236	150	110	40
<a href="#">C_04537</a> POD1		C	LE	4	4	4	31	25S	33E	631847	3550243	4554	500	280	220
<a href="#">C_02373</a> CLW317846	O	CUB	LE	2	1	1	13	25S	33E	638518	3556544*	4622	625	185	440
<a href="#">C_02285</a> POD1		CUB	LE	1	4	4	03	26S	33E	636613	3548855	4763	220	220	0
<a href="#">C_02373</a> S		CUB	LE	1	2	1	13	25S	33E	638721	3556549*	4775	625	185	440
<a href="#">C_02290</a>		CUB	LE	4	4	4	03	26S	33E	636538	3548770	4821	200	160	40
<a href="#">C_02287</a>		C	LE	3	4	4	03	26S	33E	636427	3548708	4851	220		
<a href="#">C_02286</a>		CUB	LE	3	4	4	03	26S	33E	636470	3548714	4855	220	175	45
<a href="#">C_02288</a>		CUB	LE	4	4	4	03	26S	33E	636646	3548758	4865	220	180	40
<a href="#">C_02289</a>		CUB	LE	4	4	4	03	26S	33E	636612	3548675*	4934	200	160	40

Average Depth to Water: **183 feet**  
 Minimum Depth: **110 feet**  
 Maximum Depth: **280 feet**

**Record Count:** 10

**Basin/County Search:**

**County:** Lea

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 635143

**Northing (Y):** 3553386

**Radius:** 5000

\*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.

5/26/22 10:38 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)  
 (quarters are smallest to largest) (NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64</b>	<b>Q16</b>	<b>Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
20E6C	C 04537 POD1	4	4	4	31	25S	33E	631847	3550243

<b>Driller License:</b> 1706	<b>Driller Company:</b> ELITE DRILLERS CORPORATION	
<b>Driller Name:</b> WALLACE, BRYCE J.LEE.NER		
<b>Drill Start Date:</b> 06/11/2021	<b>Drill Finish Date:</b> 06/12/2021	<b>Plug Date:</b>
<b>Log File Date:</b> 06/21/2021	<b>PCW Rev Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b> 5 GPM
<b>Casing Size:</b> 4.00	<b>Depth Well:</b> 500 feet	<b>Depth Water:</b> 280 feet

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	220	340	Sandstone/Gravel/Conglomerate

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	300	500

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.

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POINT OF DIVERSION SUMMARY

# Mesquite Vaca Draw Battery ROW Spill

Cimarex Energy Co. of Colorado

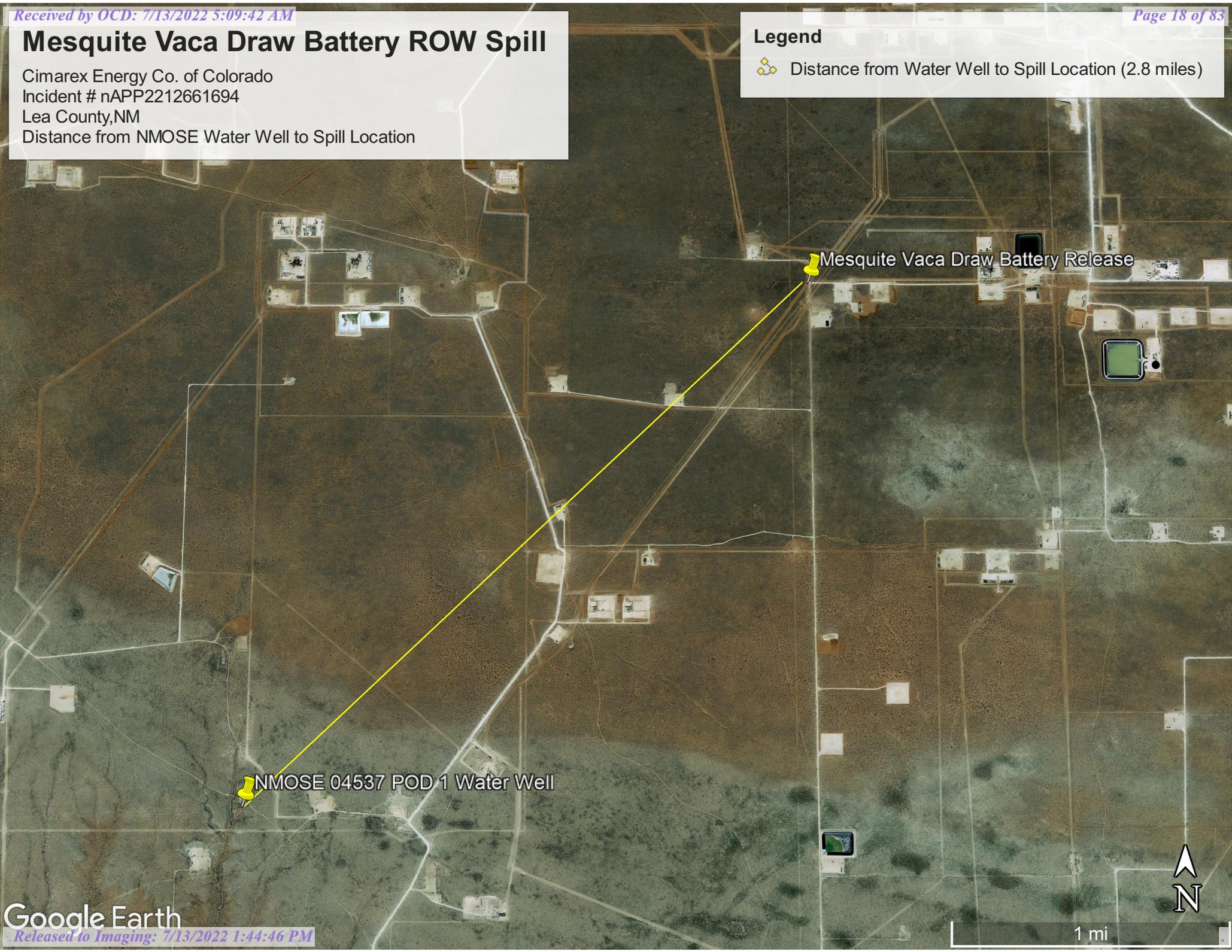
Incident # nAPP2212661694

Lea County, NM

Distance from NMOSE Water Well to Spill Location

## Legend

 Distance from Water Well to Spill Location (2.8 miles)



Mesquite Vaca Draw Battery Release

NMOSE 04537 POD 1 Water Well



Map Unit Description: Pyote loamy fine sand---Lea County, New Mexico

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## Lea County, New Mexico

### PT—Pyote loamy fine sand

#### Map Unit Setting

*National map unit symbol:* dmqp

*Elevation:* 3,000 to 3,900 feet

*Mean annual precipitation:* 10 to 12 inches

*Mean annual air temperature:* 60 to 62 degrees F

*Frost-free period:* 190 to 200 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Pyote and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Pyote

##### Setting

*Landform:* Plains

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy eolian deposits derived from sedimentary rock

##### Typical profile

*A - 0 to 25 inches:* loamy fine sand

*Bt - 25 to 60 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water (Ksat):* High  
(2.00 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 5 percent

*Gypsum, maximum content:* 1 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 2.0

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 6e

*Land capability classification (nonirrigated):* 7s

Map Unit Description: Pyote loamy fine sand---Lea County, New Mexico

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*Hydrologic Soil Group: A*  
*Ecological site: R042XC003NM - Loamy Sand*  
*Hydric soil rating: No*

**Minor Components**

**Maljamar**

*Percent of map unit: 8 percent*  
*Ecological site: R042XC003NM - Loamy Sand*  
*Hydric soil rating: No*

**Palomas**

*Percent of map unit: 7 percent*  
*Ecological site: R042XC003NM - Loamy Sand*  
*Hydric soil rating: No*

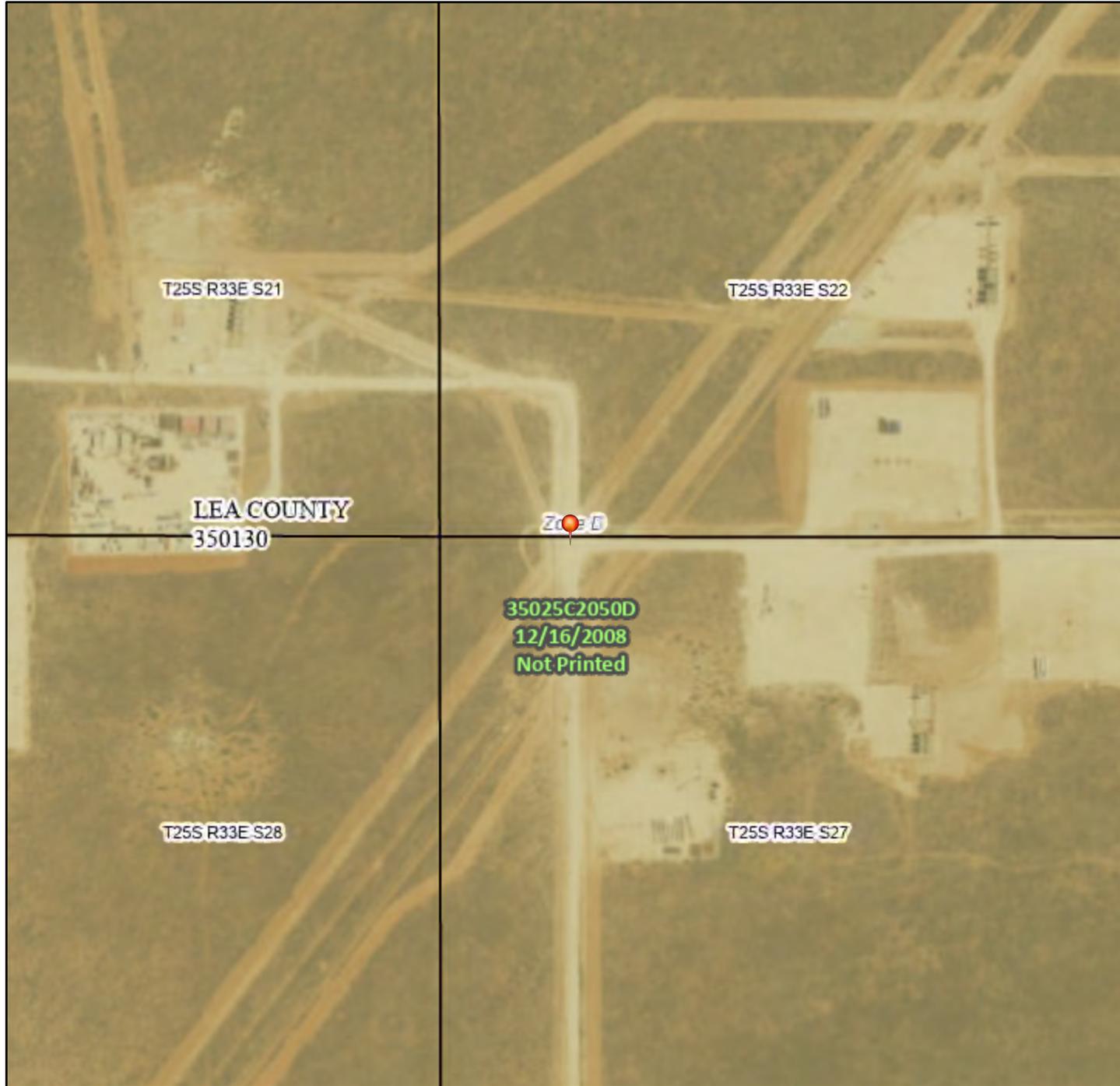
**Data Source Information**

Soil Survey Area: Lea County, New Mexico  
Survey Area Data: Version 18, Sep 10, 2021

# National Flood Hazard Layer FIRMette



103°34'22"W 32°6'47"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

**OTHER AREAS**

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

**GENERAL STRUCTURES**

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**

- 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
- 17.5 Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/9/2022 at 11:18 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

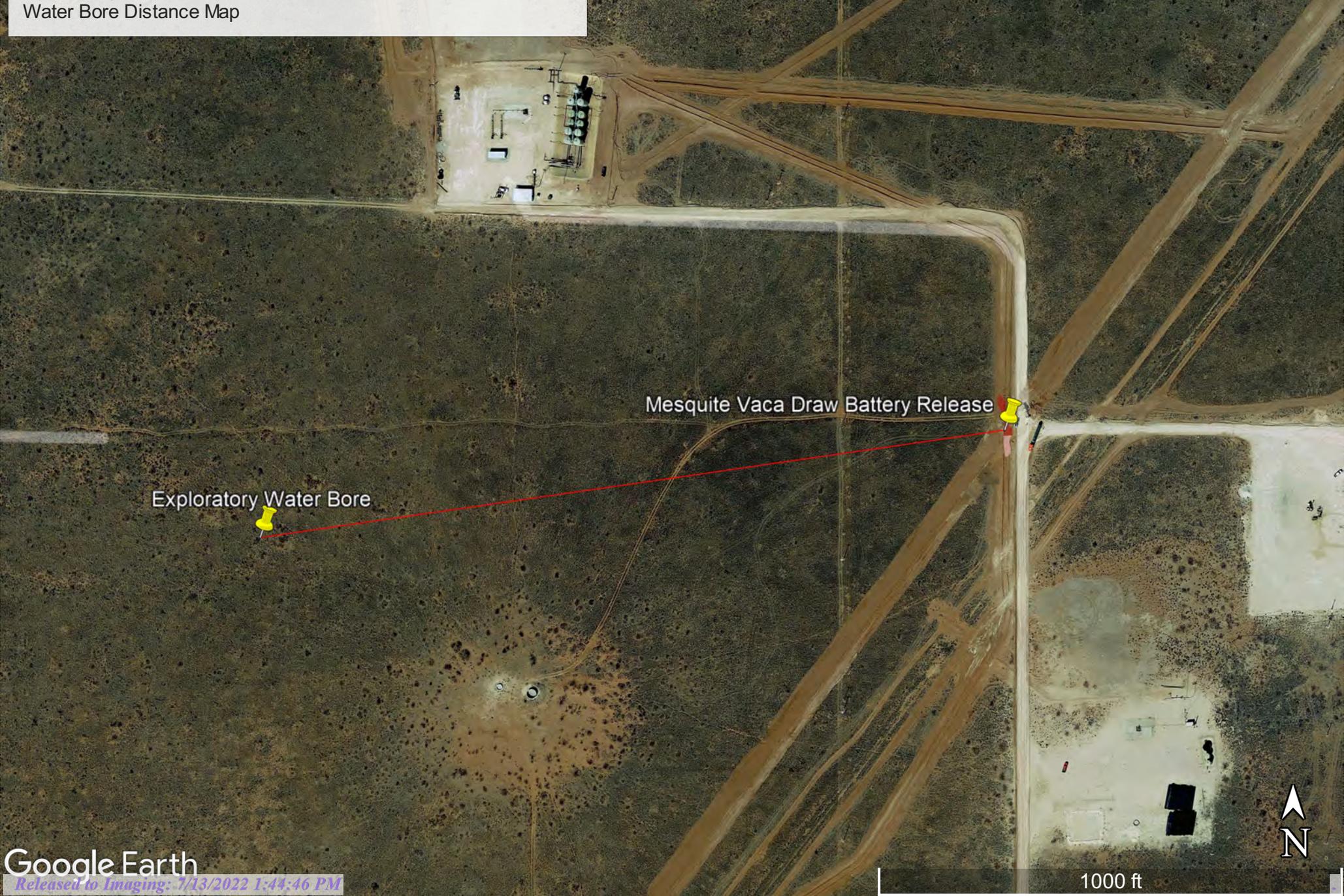
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# Mesquite Vaca Draw SWD ROW Spill

Cimarex Energy Co.  
Incident# nAPP2212661694  
Lea County, NM  
Water Bore Distance Map

## Legend

-  Distance from Water Bore to Spill Area. 0.3 miles
-  Spill Area



Exploratory Water Bore

Mesquite Vaca Draw Battery Release





# APPENDIX III

**INITIAL C-141**

**FINAL C-141**

**NMOCD AND BLM  
CORRESPONDENCE**

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

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

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

Incident ID	nAPP2212661694
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: Cimarex Energy Co.	OGRID: 215099
Contact Name: Laci Luig	Contact Telephone: (432) 571-7800
Contact email: laci.luig@coterra.com	Incident # (assigned by OCD) nAPP2212661694
Contact mailing address: 600 N Marienfeld Street, Ste. 600 Midland, TX 79701	

### Location of Release Source

Latitude 32.108734 \_\_\_\_\_ Longitude -103.567515 \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesquite-Vaca Draw SWD ROW	Site Type: Right-of-Way
Date Release Discovered: 5/6/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
D	27	25S	33E	Lea

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 45	Volume Recovered (bbls) 10
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Other

A Swift Water employee was driving out our 12" lay flat transfer frac line when he noticed a leak and immediately applied pinchers to both sides of the leak to contain it. We called a vacuum truck out to recover fluid, and during repairs of the line, we found the cause of the release. We found an old lease sign lying on the Right-of-way covered with dirt that was not visible when we laid the line down.

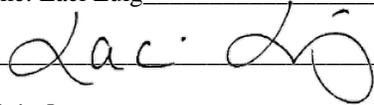
State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2212661694
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Amount of release greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By: Gloria Garza To: OCD Enviro, Jim Griswold, BLM By: Email	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:   
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: Laci Luig _____ Title: ESH Specialist _____ Signature:  _____ Date: 5/6/2022 _____ email: laci.luig@coterra.com _____ Telephone: (432) 208-3035 _____
<b><u>OCD Only</u></b> Received by: Jocelyn Harimon _____ Date: 07/13/2022 _____

Incident ID	nAPP2212661694
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>280</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	nAPP2212661694
District RP	
Facility ID	
Application ID	

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

Printed Name: Laci Luig \_\_\_\_\_ Title: ESH Specialist \_\_\_\_\_  
 Signature: Laci Luig \_\_\_\_\_ Date: 6/17/2022 \_\_\_\_\_  
 email: laci.luig@coterra.com \_\_\_\_\_ Telephone: (432) 208-3035 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nAPP2212661694
District RP	
Facility ID	
Application ID	

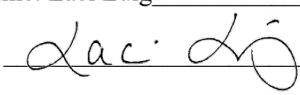
## Closure

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 (electronic submittals in .pdf format are preferred) 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.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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.

Printed Name: Laci Luig \_\_\_\_\_ Title: ESH Specialist \_\_\_\_\_  
 Signature:  \_\_\_\_\_ Date: 6/17/2022 \_\_\_\_\_  
 email: laci.luig@coterra.com \_\_\_\_\_ Telephone: (432) 208-3035 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  \_\_\_\_\_ Date: 07/13/2022 \_\_\_\_\_  
 Printed Name: Jennifer Nobui \_\_\_\_\_ Title: Environmental Specialist A \_\_\_\_\_

## Michael Collier

---

**From:** Laci Luig <Laci.Luig@coterra.com>  
**Sent:** Thursday, May 19, 2022 6:41 PM  
**To:** NMOCD Spill Notifications; Shelly Tucker - NM BLM; BLM NM CFO Spill  
**Cc:** Jim Hawley; Michael Collier  
**Subject:** nAPP2212661694 - Mesquite-Vaca Draw SWD ROW sampling notification

This email serves as notification for excavation and confirmation sampling on the Mesquite-Vaca Draw SWD ROW. Excavation and sampling is scheduled to begin May 24<sup>th</sup> at 9:00am (MST). H&R Enterprises will be onsite for field and confirmation sampling.

Thank you,



**Laci Luig** | Environmental Safety & Health Specialist  
T: 432.571.7810 | M: 432.208.3035 | [laci.luig@coterra.com](mailto:laci.luig@coterra.com) | [www.coterra.com](http://www.coterra.com)  
Coterra Energy Inc. | 600 N. Marienfeld Street, Suite 600 | Midland, TX 79701

Coterra Energy Inc. is the result of the merger of Cimarex Energy Co. and Cabot Oil & Gas Corporation on October 1, 2021.

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# APPENDIX IV

# PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPHIC DOCUMENTATION



PHOTOGRAPHIC DOCUMENTATION



# APPENDIX V

## LABORATORY REPORTS



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

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May 31, 2022

MICHAEL COLLIER  
H & R ENTERPRISES  
1010 GAMBLIN ROAD  
HOBBS, NM 88240

RE: MESQUITE VACA DRAW ROW SPILL

Enclosed are the results of analyses for samples received by the laboratory on 05/26/22 13:52.

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

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 1 0-1' (H222251-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 104 % 66.9-136

Surrogate: 1-Chlorooctadecane 117 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 1 2' (H222251-02)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 103 % 66.9-136

Surrogate: 1-Chlorooctadecane 117 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 1 3' (H222251-03)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/31/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/31/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/31/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/31/2022	ND					

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

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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 103 % 66.9-136

Surrogate: 1-Chlorooctadecane 117 % 59.5-142

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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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 1 4' (H222251-04)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 105 % 66.9-136

Surrogate: 1-Chlorooctadecane 117 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 2 0-1' (H222251-05)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 105 % 66.9-136

Surrogate: 1-Chlorooctadecane 118 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 2 2' (H222251-06)**

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83		
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78		
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96		
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27		
Total BTEX	<0.300	0.300	05/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 69.9-140

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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60		
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57		
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND						

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 120 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 2 3' (H222251-07)**

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83		
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78		
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96		
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27		
Total BTEX	<0.300	0.300	05/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 69.9-140

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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60		
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57		
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND						

Surrogate: 1-Chlorooctane 110 % 66.9-136

Surrogate: 1-Chlorooctadecane 123 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 2 4' (H222251-08)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-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	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 123 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 0-1' (H222251-09)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 117 % 66.9-136

Surrogate: 1-Chlorooctadecane 135 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 2' (H222251-10)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 120 % 59.5-142

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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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 3' (H222251-11)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 111 % 66.9-136

Surrogate: 1-Chlorooctadecane 124 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 4' (H222251-12)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5460	16.0	05/31/2022	ND	432	108	400	3.64	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 110 % 66.9-136

Surrogate: 1-Chlorooctadecane 124 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 6' (H222251-13)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4660	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 112 % 66.9-136

Surrogate: 1-Chlorooctadecane 126 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 8' (H222251-14)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 114 % 66.9-136

Surrogate: 1-Chlorooctadecane 129 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 10' (H222251-15)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3200</b>	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
<b>DRO &gt;C10-C28*</b>	<b>15.0</b>	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 123 % 66.9-136

Surrogate: 1-Chlorooctadecane 142 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	05/26/2022	Sampling Date:	05/24/2022
Reported:	05/31/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW ROW SPILL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 12' (H222251-16)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/28/2022	ND	2.05	102	2.00	9.83	
Toluene*	<0.050	0.050	05/28/2022	ND	1.99	99.6	2.00	3.78	
Ethylbenzene*	<0.050	0.050	05/28/2022	ND	1.96	98.0	2.00	5.96	
Total Xylenes*	<0.150	0.150	05/28/2022	ND	5.81	96.8	6.00	6.27	
Total BTEX	<0.300	0.300	05/28/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	05/31/2022	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	05/27/2022	ND	188	93.9	200	1.60	
DRO >C10-C28*	<10.0	10.0	05/27/2022	ND	195	97.5	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	05/27/2022	ND					

Surrogate: 1-Chlorooctane 112 % 66.9-136

Surrogate: 1-Chlorooctadecane 127 % 59.5-142

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: H&R Enterprises

BILL TO

ANALYSIS REQUEST

Project Manager: Michael Collier  
Address:  
City: State: Zip:  
Phone #: Fax #:  
Project Owner: Cimarex Energy  
Project #: State: Zip:  
Project Name: Mesquite Vaca Draw ROW Spill  
Project Location: Lea County, NM  
Phone #: Fax #:  
Sampler Name: M. Collier

P.O. #:  
Company: Cimarex Energy  
Attn: Laci Luitg  
Address:  
City: State: Zip:  
Phone #: Fax #:

FOR LAB USE ONLY  
Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTX	TPH	Chlorides
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER : ACID/BASE:	ICE / COOL					
H22251	11 DT-3 3'		1			X					5-24-22	X	X	X	
	12 DT-3 4'														
	13 DT-3 6'														
	14 DT-3 8'														
	15 DT-3 10'														
	16 DT-3 12'														

PLEASE NOTE: Labels and Damages: Cardinal's liability and claims exclusion remedy for any claim arising whether based in contract or tort, shall be limited to the amount actually paid for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless noted in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of profits or loss of data, or any other loss of profits incurred by client, its subsidiaries, affiliates or associated entities and/or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *M. Collier* Date: 5-26-22 Received By: *Maura W...* Date: 5-24-22

Time: 1:52 PM

Observed Temp. °C: 10.0°C  
Corrected Temp. °C: 0.5°C

Sample Condition: Cool Inlet  Yes  No

Checked By: *MC*

Turnaround Time: Standard  Cool Inlet  Backlog (only) Sample Condition

Thermometer ID #113  
Correction Factor -0.5°C

Remarks: Pg 2 of 2  
72hr RUSH  
34hrs added 5/24/22

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

FORM-006 R 3.2 10/07/21

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



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

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June 02, 2022

MICHAEL COLLIER  
H & R ENTERPRISES  
1010 GAMBLIN ROAD  
HOBBS, NM 88240

RE: MESQUITE VACA DRAW BATTERY ROW

Enclosed are the results of analyses for samples received by the laboratory on 06/01/22 14:35.

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

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/02/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: DT - 3 13.5' (H222318-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2022	ND	2.04	102	2.00	0.0351	
Toluene*	<0.050	0.050	06/01/2022	ND	2.05	103	2.00	0.572	
Ethylbenzene*	<0.050	0.050	06/01/2022	ND	1.91	95.6	2.00	0.138	
Total Xylenes*	<0.150	0.150	06/01/2022	ND	5.94	98.9	6.00	0.457	
Total BTEX	<0.300	0.300	06/01/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/02/2022	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	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 80.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 89.3 % 59.5-142

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

**Notes and Definitions**

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

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Celey D. Keene, Lab Director/Quality Manager





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

---

June 03, 2022

MICHAEL COLLIER  
H & R ENTERPRISES  
1010 GAMBLIN ROAD  
HOBBS, NM 88240

RE: MESQUITE VACA DRAW BATTERY ROW

Enclosed are the results of analyses for samples received by the laboratory on 06/01/22 14:35.

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

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 1 1-1.5' (H222319-01)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	06/02/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 82.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.6 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 2 1-1.5' (H222319-02)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	06/02/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 79.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 87.7 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 3 1-1.5' (H222319-03)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/02/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 79.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 89.0 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 4 1-1.5' (H222319-04)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	06/02/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 81.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 90.6 % 59.5-142

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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 5 4' (H222319-05)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	06/02/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 76.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 6 4' (H222319-06)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	06/02/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 77.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.7 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 7 4' (H222319-07)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4280	16.0	06/02/2022	ND	432	108	400	7.69	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 76.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 85.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 8 4' (H222319-08)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 72.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 82.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S - 9 4' (H222319-09)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2760	16.0	06/02/2022	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 76.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 85.7 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: N.SW 1-1.5' (H222319-10)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 74.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 83.4 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: S.SW 4' (H222319-11)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	06/02/2022	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 73.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 82.4 % 59.5-142

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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:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: E.SW - 1 1-1.5' (H222319-12)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/02/2022	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 75.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 84.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: E.SW - 2 4' (H222319-13)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	06/02/2022	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 74.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 83.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: W.SW-1 1-1.5' (H222319-14)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 75.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 84.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: W.SW-2 4' (H222319-15)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50	
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53	
Total BTEX	<0.300	0.300	06/02/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/02/2022	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358	
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588	
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 78.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 88.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: BG - 1 0-1' (H222319-16)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 77.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.9 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: BG - 2 0-1' (H222319-17)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 76.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 85.8 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: BG - 3 0-1' (H222319-18)**

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	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 81.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

H & R ENTERPRISES  
 MICHAEL COLLIER  
 1010 GAMBLIN ROAD  
 HOBBS NM, 88240  
 Fax To: NONE

Received:	06/01/2022	Sampling Date:	05/31/2022
Reported:	06/03/2022	Sampling Type:	Soil
Project Name:	MESQUITE VACA DRAW BATTERY ROW	Sampling Condition:	Cool & Intact
Project Number:	( M.V.D.B. )	Sample Received By:	Tamara Oldaker
Project Location:	CIMAREX - LEA CO NM		

**Sample ID: BG - 4 0-1' (H222319-19)**

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	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEX	<0.300	0.300	06/02/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/02/2022	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2022	ND	191	95.3	200	0.358		
DRO >C10-C28*	<10.0	10.0	06/02/2022	ND	204	102	200	0.588		
EXT DRO >C28-C36	<10.0	10.0	06/02/2022	ND						

Surrogate: 1-Chlorooctane 81.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.0 % 59.5-142

Cardinal Laboratories

\*=Accredited Analyte

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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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: H&R Enterprises  
 101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Project Manager: Michael Collier	P.O. #:
Address:	Company: Cimarex Energy
City:	Attn: Laci Lujig
State:	Address:
Zip:	City:
Project #:	State:
Fax #:	Zip:
Project Name: Mesquite Vaca Draw Battery ROW (M.V.D.B.)	Project Owner: Cimarex Energy
Project Location: Lea County, NM	Phone #:
Sampler Name: M.Collier	Fax #:

Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	DATE	TIME	BTEX	TPH	Chlorides
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE						
1 S-1 1-1.5'	C	1								X	X	X	
2 S-2 1-1.5'													
3 S-3 1-1.5'													
4 S-4 1-1.5'													
5 S-5 4'													
6 S-6 4'													
7 S-7 4'													
8 S-8 4'													
9 S-9 4'													
10 NSW 1-1.5'													

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Relinquished By: <u>M.Collier</u>	Date: <u>7-1-22</u>	Received By: <u>Maura Blakely</u>	Date: <u>7-1-22</u>
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C: <u>30</u>	Corrected Temp. °C: <u>25.5</u>	Sample Condition Cool <input checked="" type="checkbox"/> Moist <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>
Checked By: <u>AO</u>	Thermometer ID #113	Correction Factor -0.5°C	Standard <input type="checkbox"/> Observed Temp. °C <input type="checkbox"/> Bacteria (only) Sample Condition <input type="checkbox"/> Cool <input checked="" type="checkbox"/> Moist <input type="checkbox"/>
Remarks: PAGE 1 of 2	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:	Thermometer ID #113

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

FORM-906 R 3.2 10/07/21



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: H&R Enterprises  
 101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Project Manager: Michael Collier		P.O. #:	
Address:		Company: Cimarex Energy	
City:	State:	Zip:	Attn: Laci Luig
Phone #:	Fax #:	Address:	
Project #:	Project Owner: Cimarex Energy		
Project Name: Mesquite Vaca Draw Battery ROW (M.V.D.B.)		City:	State:
Project Location: Lea County, NM		Phone #:	Zip:
Sampler Name: M. Collier		Fax #:	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING	DATE	TIME	BTEX	TPH	Chlorides
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE							
H22319	11 S.S.W 4'	C	1							5-31-22		X	X	X	
	12 E.S.W-1 1-1.5'			X											
	13 E.S.W-2 4'			X											
	14 W.S.W-1 1-1.5'			X											
	15 W.S.W-2 4'			X											
	16 BG-1 0-1'			X											
	17 BG-2 0-1'			X											
	18 BG-3 0-1'			X											
	19 BG-4 0-1'			X											

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Relinquished By: <i>M. Collier</i>	Date: 7-1-22	Received By: <i>M. Collier</i>	Date: 7-1-22
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C: 30	Corrected Temp. °C: 29.5	Sample Condition Cool / Filled: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Checked By: <i>AP</i>	Thermometer ID #113	Correction Factor -0.5°C	Thermometer ID #113
Remarks: PAGE 2 of 2	REMARKS: PAGE 2 of 2	REMARKS: PAGE 2 of 2	REMARKS: PAGE 2 of 2

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinalabstnm.com

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**District II**  
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**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**

COMMENTS  
 Action 124824

**COMMENTS**

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 124824
	Action Type: [C-141] Release Corrective Action (C-141)

**COMMENTS**

Created By	Comment	Comment Date
jharimon	Initial to Closure	7/13/2022

**District I**  
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CONDITIONS  
 Action 124824

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Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
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**CONDITIONS**

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	7/13/2022