Form C-141
Page 6

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nRM2022644767 |
| 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: Laci Luig Date: 10/26/2022

email: laci.luig@coterra.com Telephone: (432) 208-3035

**OCD Only**

Received by: Jocelyn Harimon Date: 11/03/2022

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: Robert Hamlet Date: 1/13/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

CARMONA RESOURCES

# SITE INFORMATION

---

**Closure Report**
**Riverboat 12-1 W0PA & WOMD Battery (08.08.2020)**
**Incident ID: nRM2022644767**
**Eddy County, New Mexico**
**Unit P Sec 12 T24S R26E**
**32.226418°, -104.239252°**

**Produced Water Release**
**Point of Release: Ball valve developed a hole due to corrosion on the suction side of the transfer pump**
**Release Date: 08/08/2020**
**Volume Released: 16 Barrels of Produced Water**
**Volume Recovered: 8 Barrels of Produced Water**

CARMONA RESOURCES

**Prepared for:**
**Cimarex Energy Co.**
**600 N. Marienfeld Street**
**Suite 600**
**Midland, Texas 79701**

**Prepared by:**
**Carmona Resources, LLC**
**310 West Wall Street**
**Suite 415**
**Midland, Texas 79701**

310 West Wall Street, Suite 415
Midland TX, 79701
432.813.1992

CARMONA RESOURCES

# TABLE OF CONTENTS



310 West Wall Street, Suite 415
Midland TX, 79701
432.813.1992

CARMONA RESOURCES

November 3, 2022

Mike Bratcher
District Supervisor
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

**Re: Closure Report**
**Riverboat 12-1 W0PA & WOMD Battery**
**Cimarex Energy Co.**
**Site Location: Unit P, S12, T24S, R26E**
**(Lat 32.226418º, Long -104.239252°)**
**Eddy County, New Mexico**

Mr. Bratcher:

On behalf of Cimarex Energy Co. (Cimarex), Carmona Resources, LLC has prepared this letter to document site activities for Riverboat 12-1 W0PA & WOMD Battery. The site is located at 32.226418º, -104.239252º within Unit P, S12, T24S, R26E, in Eddy County, New Mexico (Figures 1 and 2).

## 1.0 Site information and Background

Based on the initial C-141 obtained from the New Mexico Oil Conservation Division (NMOCD), the leak was discovered on August 8, 2020, due to a corroded ball valve on the suction side of the transfer pump. It resulted in approximately sixteen (16) barrels of produced water, and eight (8) barrels of produced water were recovered. The impacted area is located on the pad and is shown on Figure 3. The initial C-141 form is attached in Appendix C.

## 2.0 Site Characterization and Groundwater

The site is located within a high karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, no known water sources are within a 0.50-mile radius of the location. The nearest well is located approximately 1.02 miles Southeast of the site in S18, T24S, R27E and was drilled in 1963. The well has a reported depth to groundwater of 35’ feet below ground surface (ft bgs). A copy of the summary report is attached in Appendix D.

## 3.0 NMAC Regulatory Criteria

Per the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following criteria were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.

310 West Wall Street, Suite 415
Midland TX, 79701
432.813.1992

CARMONA RESOURCES

- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride: 600 mg/kg

## 4.0 Remediation Activities

Carmona Resources personnel were onsite on October 13, 2022, to supervise the remediation activities and collect confirmation samples. Before collecting composite confirmation samples, the NMOCD division office was notified via email on October 11, 2022, per Subsection D of 19.15.29.12 NMAC. See Appendix D. The areas of CS-1 through CS-2 were excavated to a depth 1.5' below the surface to remove all impacted soils. A total of two (2) confirmation floor samples were collected (CS-1 through CS-2), and four (4) sidewall samples (SW-1 through SW-4), were collected every 200 square feet to ensure the proper removal of the contaminated soils. All collected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The excavation depths and confirmation sample locations are shown in Figure 3.

All final confirmation samples were below the regulatory requirements for TPH, BTEX, and chloride. Refer to Table 1.

Once the remediation activities were completed, the excavated areas were backfilled with clean material to surface grade. Approximately 7 cubic yards of material were excavated and transported offsite for proper disposal.

## 5.0 Conclusion

Based on the assessment results and the analytical data, no further actions are required at the site. The final C-141 is attached, and Cimarex formally requests closure of the spill. If you have any questions regarding this report or need additional information, please get in touch with us at 432-813-1992.

Sincerely,
**Carmona Resources, LLC**

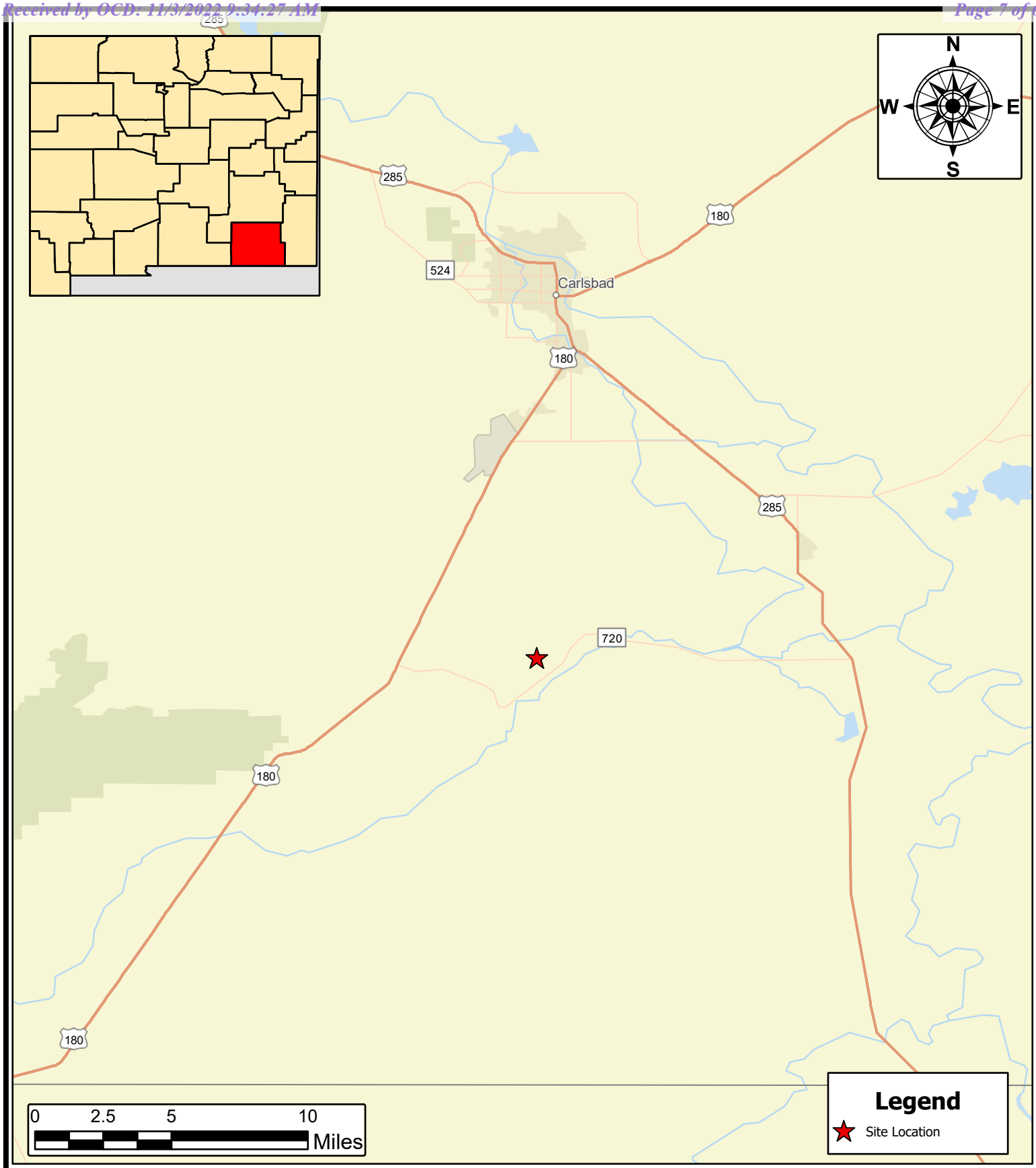
Mike Carmona
Environmental Manager

Ashton Thielke
Sr. Project Manager

310 West Wall Street, Suite 415
Midland TX, 79701
432.813.1992

# FIGURES

CARMONA RESOURCES




**OVERVIEW MAP**
**CIMAREX ENERGY CO.**
RIVERBOAT 12-1 WOPA & WOMD FED COM 1
EDDY COUNTY, NEW MEXICO
32.226418, -104.239252

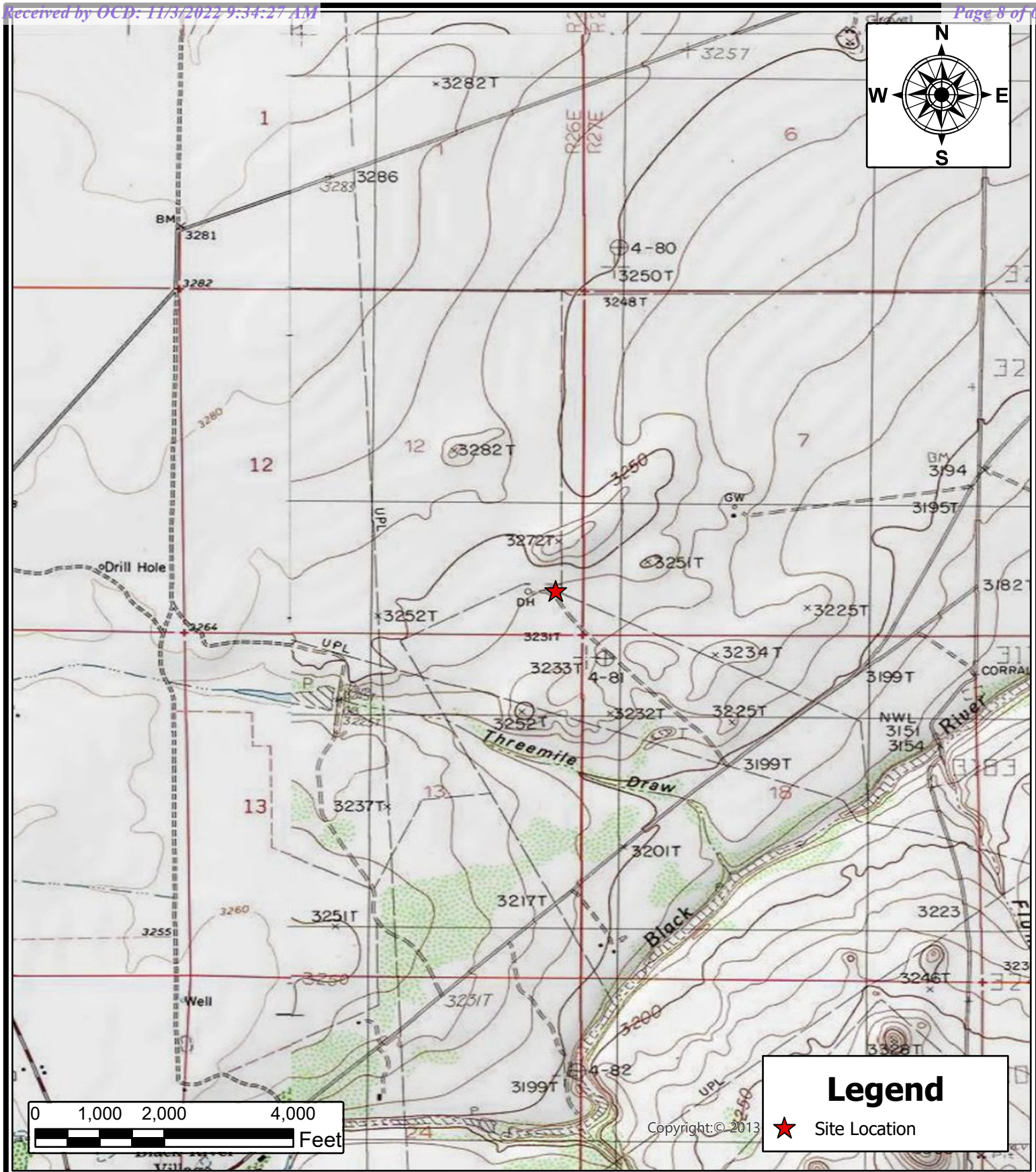
SCALE: As Shown | Date: 10/19/2022

CARMONA RESOURCES

**Carmona Resources**
310 West Wall Street, Suite 415
Midland, Texas 79701

NOTES:
1. Base Image: ESRI Maps & Data 2022
2. Map Projection: WGS84

DRAWING NUMBER:
**FIGURE 1**
SHEET NUMBER:
**1 of 1**




**TOPOGRAPHIC MAP**
**CIMAREX ENERGY CO.**
RIVERBOAT 12-1 WOPA & WOMD FED COM 1
EDDY COUNTY, NEW MEXICO
32.226418, -104.239252

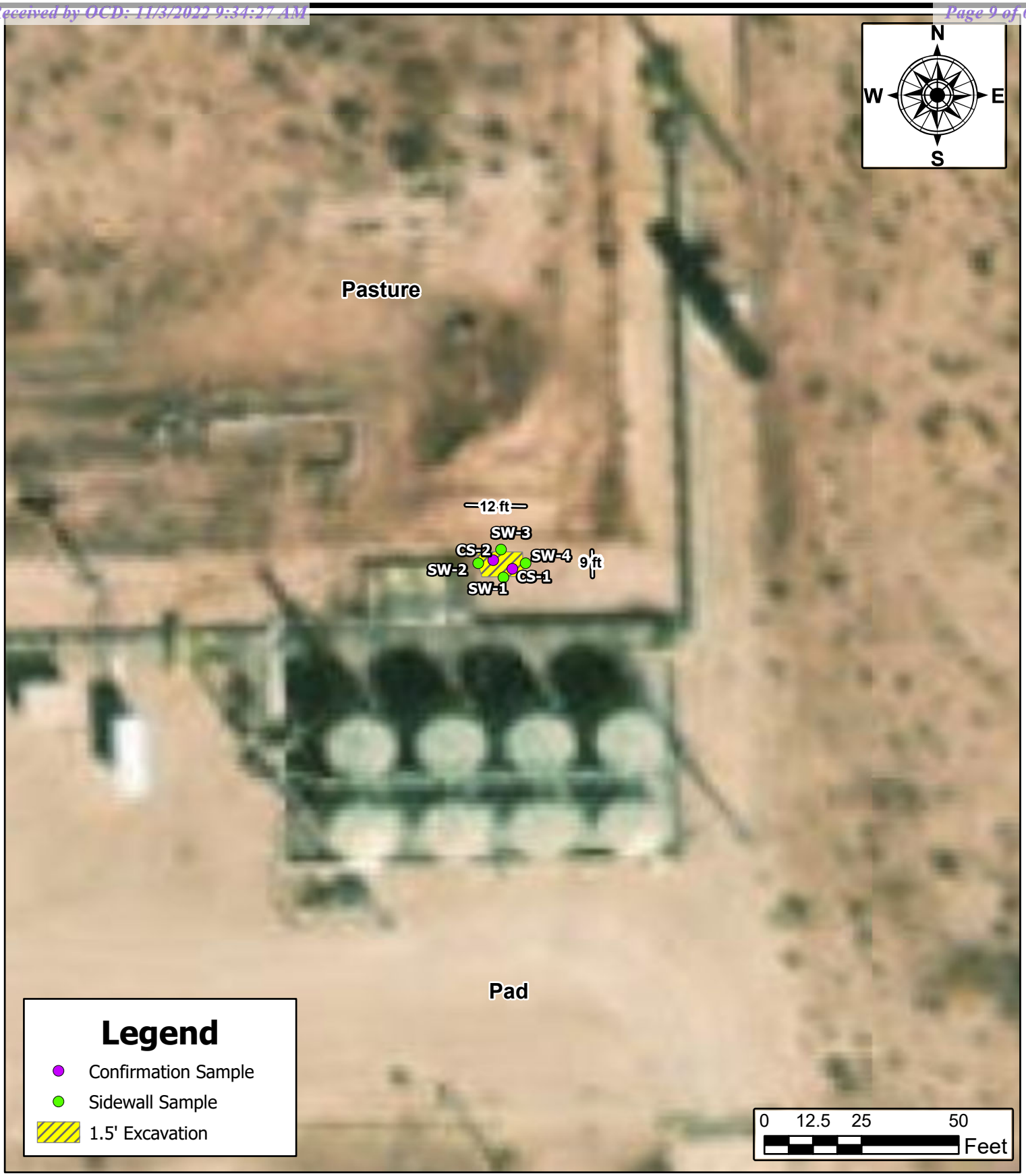
SCALE: As Shown | Date: 10/19/2022

CARMONA RESOURCES

**Carmona Resources**
310 West Wall Street, Suite 415
Midland, Texas 79701

NOTES:
1. Base Image: ESRI Maps & Data 2022
2. Map Projection: WGS84

DRAWING NUMBER:
**FIGURE 2**
SHEET NUMBER:
**1 of 1**




**EXCAVATION DEPTH MAP**
**CIMAREX ENERGY CO.**
RIVERBOAT 12-1 WOPA & WOMD FED COM 1
EDDY COUNTY, NEW MEXICO
32.226418, -104.239252

SCALE: As Shown | Date: 10/19/2022

CARMONA RESOURCES

**Carmona Resources**
310 West Wall Street, Suite 415
Midland, Texas 79701

NOTES:
1. Base Image: ESRI Maps & Data 2022
2. Map Projection: WGS84

DRAWING NUMBER:
**FIGURE 3**
SHEET NUMBER:
**1 of 1**

# APPENDIX A

CARMONA RESOURCES

**Table 1**
**Cimarex Energy Co.**
**Riverboat 12-1 W0MD & W0PA 1H Battery (08.08.2020)**
**Eddy County, New Mexico**

| Sample ID | Date | Depth (ft) | TPH (mg/kg) | | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethlybenzene (mg/kg) | Xylene (mg/kg) | Total BTEX (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | GRO | DRO | MRO | Total | | | | | | |
| **CS-1** | 10/13/2022 | 1.5 | <49.9 | <49.9 | <49.9 | <49.9 | <0.00198 | <0.00198 | <0.00198 | <0.00396 | <0.00396 | 76.7 |
| **CS-2** | 10/13/2022 | 1.5 | <49.9 | <49.9 | <49.9 | <49.9 | <0.00200 | <0.00200 | <0.00200 | <0.00401 | <0.00401 | 51.5 |
| **SW-1** | 10/13/2022 | 1.5 | <49.8 | <49.8 | <49.8 | <49.8 | <0.00200 | <0.00200 | <0.00200 | <0.00401 | <0.00401 | 134 |
| **SW-2** | 10/13/2022 | 1.5 | <49.9 | <49.9 | <49.9 | <49.9 | <0.00200 | <0.00200 | <0.00200 | <0.00401 | <0.00401 | 41.5 |
| **SW-3** | 10/13/2022 | 1.5 | <49.8 | <49.8 | <49.8 | <49.8 | <0.00201 | <0.00201 | <0.00201 | <0.00402 | <0.00402 | 50.5 |
| **SW-4** | 10/13/2022 | 1.5 | <49.9 | <49.9 | <49.9 | <49.9 | <0.00201 | <0.00201 | <0.00201 | <0.00402 | <0.00402 | 62.8 |
| ***Regulatory Criteria*** [A] | | | | | | **100 mg/kg** | **10 mg/kg** | - | - | - | **50 mg/kg** | **600 mg/kg** |

(-) Not Analyzed
[A] – Table 1 - 19.15.29 NMAC
mg/kg - milligram per kilogram
TPH - Total Petroleum Hydrocarbons
ft - feet
(CS) Confirmation Sample
(SW) Sidewall Sample

# APPENDIX B

CARMONA RESOURCES

# PHOTOGRAPHIC LOG

**Cimarex**

**Photograph No. 1**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View north, location sign.


**Photograph No. 2**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View east, area of impact after recent rains.


**Photograph No. 3**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View northwest, area of impact after recent rains.

# PHOTOGRAPHIC LOG

**Cimarex**

**Photograph No. 4**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View southeast, area of confirmation sample (CS-1 and CS-2).


**Photograph No. 5**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View northwest, area of confirmation sample (CS-1 and CS-2).


**Photograph No. 6**

**Facility:** Riverboat 12-1 WOPA & WOMD Battery (08.08.2020)

**County:** Eddy County, New Mexico

**Description:**
View west, area of confirmation sample (CS-1 and CS-2).

# APPENDIX C

CARMONA RESOURCES

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 | NRM2022644767 |
| 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: lluig@cimarex.com | Incident # *(assigned by OCD)* |
| Contact mailing address: 600 N Marienfeld Street, Ste. 600<br>Midland, TX 79701 | |

## Location of Release Source

Latitude 32.226418 Longitude -104.239252

*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name: Riverboat 12-1 W0PA & WOMD Battery | Site Type: Battery |
| Date Release Discovered: 8/8/2020 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| P | 12 | 24S | 26E | Eddy |

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

## Nature and Volume of Release

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

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Produced Water | Volume Released (bbls) 16 | Volume Recovered (bbls) 8 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release: Corrosion
The carbon steel ball valve developed a hole due to corrosion on the suction side of the transfer pump. Produced water was released onto the pumps secondary spill containment that only holds 8 barrels. The containment filled up and an additional 8 barrels of produced water were released outside of the containment. We released 16 barrels and recovered 8. A hydrovac was called out to remove impacted soil. The valve will be replaced with a stainless steel ball valve and the containment will be cleaned after the repairs are completed.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NRM2022644767 |
| District RP | |
| Facility ID | |
| Application ID | |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release? |

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: Mike Bratcher, Robert Hamlet, Victoria Venegas and BLM NM CFO Spill
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*

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

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

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

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

Printed Name: Laci Luig Title: Engineer Tech.

Signature: Laci Luig Date: 8/11/2020

email: lluig@cimarex.com Telephone: (432) 571-7810

**OCD Only**

Received by: Ramona Marcus Date: 8/13/2020

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nRM2022644767 |
| 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? | 35 (ft bgs) |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☒ Yes ☐ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☐ Yes ☒ No |

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nRM2022644767 |
| 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: 10/18/2022

email: laci.luig@coterra.com Telephone: (432) 208-3035

**OCD Only**

Received by: Jocelyn Harimon Date: 11/03/2022

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nRM2022644767 |
| 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: Laci Luig Date: 10/26/2022

email: laci.luig@coterra.com Telephone: (432) 208-3035

**OCD Only**

Received by: Jocelyn Harimon Date: 11/03/2022

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: _____

Printed Name: _____ Title: _____

## Ashton Thielke

**From:** Ashton Thielke
**Sent:** Tuesday, October 11, 2022 8:14 AM
**To:** NMOCD Spill Notifications (OCD.Enviro@emnrd.nm.gov); OCD.Enviro@state.nm.us
**Cc:** Laci Luig
**Subject:** nrm2022644767 - Riverboat 12-1 W0MD W0PA 1H Battery 8.8.2020

This email serves as a 48-hour notification for confirmation sampling on the above mentioned site.
Sampling is scheduled to begin as early as October 13, 2022, weather and soil conditions permitting.
Carmona Resources will be onsite for confirmation sampling.

Site Coordinates:
32.226418, -104.239252

Thank you,

**Ashton Thielke** | PBU - Environmental Consultant
T: 432.813.5347 | M: 281.753.5659 | ashton.thielke@coterra.com | 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.

# APPENDIX D

CARMONA RESOURCES

# Nearest Water Well

Cimarex Energy Co.

**Legend**

- 0.50 Mile Radius
- 1.02 Miles
- 1.03 Miles
- 1.06 Miles
- 1.06 Miles
- 1.35 Miles
- 1.36 Miles
- 1.36 Miles
- 1.37 Miles
- NMSEO Water Well
- RIVERBOAT 12-1 W0PA & WOMD FED COM 1 (8.8.20)
- USGS Water Well

37' - Drilled 2004

23' - Drilled 2011

RIVERBOAT 12-1 W0PA & WOMD FED COM 1 (8.8.20)

32' - Drilled 2012

60' - Drilled 2010

35' - Drilled 1963

33' - Drilled 1959

30.29' - Drilled 1998

40' - Drilled 2019

Google Earth

N

1 mi

# High Karst

Cimarex Energy Co.

**Legend**

- High
- Medium
- RIVERBOAT 12-1 W0PA & WOMD FED COM 1 (8.8.20)

RIVERBOAT 12-1 W0PA & WOMD FED COM 1 (8.8.20)

Josey W

N

1 mi

Google Earth

# 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 | | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 03192 | | C | ED | 1 | 2 | 1 | 13 | 24S | 26E | 570697 | 3565474* | 988 | 200 | | |
| C 01169 | | C | ED | 1 | 4 | 3 | 18 | 24S | 27E | 572282 | 3564261* | 1644 | 55 | 35 | 20 |
| C 00929 | | C | ED | | 3 | 3 | 18 | 24S | 27E | 572013 | 3564159* | 1658 | 54 | 33 | 21 |
| C 03560 POD1 | | C | ED | 2 | 3 | 3 | 18 | 24S | 27E | 572009 | 3564150 | 1665 | 68 | 28 | 40 |
| C 04360 POD1 | | C | ED | 3 | 3 | 3 | 18 | 24S | 27E | 571910 | 3564085 | 1711 | 72 | 40 | 32 |
| C 03092 | | C | ED | 4 | 3 | 1 | 08 | 24S | 27E | 573678 | 3566501* | 2164 | 54 | 37 | 17 |
| C 03490 POD1 | | CUB | ED | 3 | 4 | 3 | 08 | 24S | 27E | 573812 | 3565709 | 2173 | 140 | 23 | 117 |
| C 02043 | | C | ED | | 2 | 1 | 24 | 24S | 26E | 570805 | 3563758* | 2182 | 42 | 28 | 14 |
| C 03414 POD2 | | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569509 | 3565257 | 2191 | 100 | 32 | 68 |
| C 03414 POD1 | | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569513 | 3565188 | 2205 | 80 | 60 | 20 |
| C 03414 POD1 | R | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569513 | 3565188 | 2205 | 80 | 60 | 20 |
| C 00516 POD10 | | CUB | ED | 3 | 4 | 3 | 08 | 24S | 27E | 573875 | 3565722 | 2236 | 160 | 45 | 115 |
| C 00516 POD6 | | CUB | ED | 1 | 4 | 3 | 08 | 24S | 27E | 573885 | 3565895* | 2249 | 78 | 17 | 61 |
| C 03777 POD1 | | C | ED | 3 | 1 | 2 | 24 | 24S | 26E | 571120 | 3563571 | 2263 | 55 | 28 | 27 |
| C 00683 | | C | ED | | 4 | 3 | 08 | 24S | 27E | 573986 | 3565796* | 2347 | 50 | 17 | 33 |
| C 01187 | | C | ED | | 4 | 3 | 08 | 24S | 27E | 573986 | 3565796* | 2347 | 108 | 17 | 91 |
| C 03675 | | C | ED | 2 | 2 | 2 | 23 | 24S | 26E | 570134 | 3563860 | 2435 | 59 | 38 | 21 |
| C 03489 POD1 | | CUB | ED | 2 | 4 | 3 | 08 | 24S | 27E | 574153 | 3565939 | 2519 | 200 | | |
| C 04365 POD1 | | C | ED | 4 | 2 | 4 | 14 | 24S | 26E | 569455 | 3564422 | 2569 | | | |
| C 00396 | C | CUB | ED | | 2 | 2 | 23 | 24S | 26E | 570003 | 3563758* | 2596 | 2032 | | |
| C 00631 | | C | ED | 3 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565701* | 2650 | 50 | 24 | 26 |
| C 00516 | | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 105 | 36 | 69 |
| C 00516 CLW201016 | O | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 62 | | |
| C 00516 CLW308590 | O | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 105 | 36 | 69 |
| C 00516 S | | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901 | 2651 | 50 | 17 | 33 |
| C 00262 | R | C | ED | 4 | 3 | 1 | 24 | 24S | 26E | 570481 | 3563253* | 2774 | 50 | | |

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

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(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 | POD Code | Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 00692 | | C | ED | 3 | 3 | 1 | 24 | 24S | 26E | 570281 | 3563253* | 2864 | 50 | 42 | 8 |
| C 01085 | | C | ED | | 4 | 2 | 23 | 24S | 26E | 569990 | 3563356* | 2927 | 127 | 60 | 67 |
| C 01366 | | CUB | ED | | | 4 | 08 | 24S | 27E | 574590 | 3566003* | 2959 | 60 | 35 | 25 |
| C 00100 A | | CUB | ED | 1 | 1 | 3 | 24 | 24S | 26E | 570284 | 3563053 | 3040 | 51 | 26 | 25 |
| C 00949 | | C | ED | 1 | 1 | 3 | 24 | 24S | 26E | 570284 | 3563053* | 3040 | 62 | 35 | 27 |
| C 00517 | | C | ED | 1 | 3 | 2 | 23 | 24S | 26E | 569498 | 3563456* | 3156 | 80 | 31 | 49 |
| C 00369 | C | CUB | ED | | 2 | 1 | 23 | 24S | 26E | 569207 | 3563757* | 3160 | | | |
| C 01616 | | C | ED | | 2 | 4 | 23 | 24S | 26E | 569988 | 3562956* | 3266 | 84 | 84 | 0 |
| C 00690 | | C | ED | 1 | 3 | 3 | 24 | 24S | 26E | 570288 | 3562653* | 3401 | 30 | 10 | 20 |
| C 00883 | | C | ED | 3 | 2 | 4 | 23 | 24S | 26E | 569887 | 3562855* | 3405 | 60 | 14 | 46 |
| C 00928 | | C | ED | | 1 | 1 | 23 | 24S | 26E | 568806 | 3563757* | 3478 | 91 | 7 | 84 |
| C 00829 | | C | ED | | 1 | 4 | 23 | 24S | 26E | 569591 | 3562957* | 3483 | 50 | 19 | 31 |
| C 03110 | | C | ED | 4 | 1 | 4 | 23 | 24S | 26E | 569690 | 3562856* | 3509 | 35 | 12 | 23 |
| C 03526 POD1 | | C | ED | 1 | 4 | 4 | 23 | 24S | 26E | 569788 | 3562666 | 3618 | 200 | | |
| C 01869 | R | C | ED | 2 | 3 | 4 | 23 | 24S | 26E | 569753 | 3562679 | 3624 | 110 | 30 | 80 |
| C 01869 POD2 | | C | ED | 2 | 3 | 4 | 23 | 24S | 26E | 569753 | 3562679 | 3624 | 111 | 50 | 61 |
| C 02174 | | C | ED | | | 2 | 10 | 24S | 26E | 568143 | 3566804* | 3644 | 263 | 233 | 30 |
| C 00262 POD2 | | C | ED | 4 | 3 | 1 | 24 | 24S | 26E | 570234 | 3562337 | 3713 | 45 | 18 | 27 |
| C 00850 | | C | ED | | 2 | 3 | 09 | 24S | 27E | 575595 | 3566223* | 3981 | 108 | 35 | 73 |

Average Depth to Water: **37 feet**
Minimum Depth: **7 feet**
Maximum Depth: **233 feet**

**Record Count:** 45

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

**Easting (X):** 571639 **Northing (Y):** 3565774.71 **Radius:** 4000

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

*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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 03414 POD2 | 3 | 1 | 2 | 14 | 24S | 26E | 569509 | 3565257 |

**Driller License:** 1348 **Driller Company:** TAYLOR WATER WELL SERVICE

**Driller Name:** TAYLOR, CLINTON E.

| | | | | | |
|---|---|---|---|---|---|
| **Drill Start Date:** | 02/27/2012 | **Drill Finish Date:** | 02/28/2012 | **Plug Date:** | |
| **Log File Date:** | 07/16/2012 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | 2 GPM |
| **Casing Size:** | 4.50 | **Depth Well:** | 100 feet | **Depth Water:** | 32 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 61 | 96 | Shale/Mudstone/Siltstone |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 52 | 92 |

*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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 03414 POD1 | 3 | 1 | 2 | 14 | 24S | 26E | 569513 | 3565188 |

**Driller License:** 1541 **Driller Company:** CROCKETT TRUCKING LLC ET AL

**Driller Name:** TRAVIS MANN

| | | | | | |
|---|---|---|---|---|---|
| **Drill Start Date:** | 04/26/2010 | **Drill Finish Date:** | 04/28/2010 | **Plug Date:** | |
| **Log File Date:** | 04/30/2010 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | 15 GPM |
| **Casing Size:** | 4.00 | **Depth Well:** | 80 feet | **Depth Water:** | 60 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 60 | 75 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 30 | 50 |

# *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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 03490 POD1 | 3 | 4 | 3 | 08 | 24S | 27E | 573812 | 3565709 |

**Driller License:** 1690 **Driller Company:** VISION RESOURCES, INC

**Driller Name:** JASON MALEY (LD)

| | | | | | |
|---|---|---|---|---|---|
| **Drill Start Date:** | 06/29/2011 | **Drill Finish Date:** | 06/30/2011 | **Plug Date:** | |
| **Log File Date:** | 06/18/2012 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | SUBMER | **Pipe Discharge Size:** | | **Estimated Yield:** | 150 GPM |
| **Casing Size:** | 8.00 | **Depth Well:** | 140 feet | **Depth Water:** | 23 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 80 | 140 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 80 | 140 |

# *New Mexico Office of the State Engineer*
# Point of Diversion Summary

| Well Tag | POD Number | (quarters are 1=NW 2=NE 3=SW 4=SE) Q64 | Q16 | Q4 | (quarters are smallest to largest) Sec | Tws | Rng | (NAD83 UTM in meters) X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 00929 | 3 | 3 | | 18 | 24S | 27E | 572013 | 3564159* |

| | | | | | |
|---|---|---|---|---|---|
| **Driller License:** | 30 | **Driller Company:** | BARRON, EMMETT | | |
| **Driller Name:** | BARRON, EMMETT | | | | |
| **Drill Start Date:** | 05/12/1959 | **Drill Finish Date:** | 05/15/1959 | **Plug Date:** | |
| **Log File Date:** | 06/07/1960 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | |
| **Casing Size:** | 7.00 | **Depth Well:** | 54 feet | **Depth Water:** | 33 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 34 | 50 | Sandstone/Gravel/Conglomerate |

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

*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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 01169 | 1 | 4 | 3 | 18 | 24S | 27E | 572282 | 3564261* |

| | | | | | |
|---|---|---|---|---|---|
| **Driller License:** | 30 | **Driller Company:** | BARRON, EMMETT | | |
| **Driller Name:** | BARRON, EMMETT | | | | |
| **Drill Start Date:** | 09/21/1963 | **Drill Finish Date:** | 09/23/1963 | **Plug Date:** | |
| **Log File Date:** | 02/25/1964 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | |
| **Casing Size:** | 7.00 | **Depth Well:** | 55 feet | **Depth Water:** | 35 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 35 | 50 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 21 | 55 |

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

*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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 03092 | 4 | 3 | 1 | 08 | 24S | 27E | 573678 | 3566501* |

**Driller License:** 1348 **Driller Company:** TAYLOR WATER WELL SERVICE

**Driller Name:**

**Drill Start Date:** 05/17/2004 **Drill Finish Date:** 05/18/2004 **Plug Date:**

**Log File Date:** 07/16/2004 **PCW Rcv Date:** **Source:** Shallow

**Pump Type:** **Pipe Discharge Size:** **Estimated Yield:** 60 GPM

**Casing Size:** 6.63 **Depth Well:** 54 feet **Depth Water:** 37 feet

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 43 | 49 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 34 | 54 |

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

*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)

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Twn | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| 22503 | C 04360 POD1 | 3 | 3 | 3 | 18 | 24S | 27E | 571910 | 3564085 |

**Driller License:** 1348 **Driller Company:** TAYLOR WATER WELL SERVICE

**Driller Name:** TAYLOR, CLINTON E.E.ENER

| | | | | | |
|---|---|---|---|---|---|
| **Drill Start Date:** | 11/01/2019 | **Drill Finish Date:** | 11/04/2019 | **Plug Date:** | |
| **Log File Date:** | 11/18/2019 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | 100 GPM |
| **Casing Size:** | 4.50 | **Depth Well:** | 72 feet | **Depth Water:** | 40 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 40 | 54 | Limestone/Dolomite/Chalk |
| | 54 | 60 | Sandstone/Gravel/Conglomerate |
| | 60 | 72 | Other/Unknown |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 39 | 72 |

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

Groundwater levels for New Mexico

Click to hide state-specific text

Important: Next Generation Monitoring Location Page

## Search Results -- 1 sites found

**Agency code =** usgs
**site_no list =**
- 321242104140301

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

## USGS 321242104140301 24S.27E.18.33332

Eddy County, New Mexico
Latitude 32°12'42", Longitude 104°14'03" NAD27
Land-surface elevation 3,189 feet above NAVD88
The depth of the well is 35 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

| Table of data |
|---|
| Tab-separated data |
| Graph of data |
| Reselect period |

| Date | Time | ? Water-level date-time accuracy | ? Parameter code | Water level, feet below land surface | Water level, feet above specific vertical datum | Referenced vertical datum | ? Status | ? Method of measurement | ? Measuring agency | ? Source measu |
|---|---|---|---|---|---|---|---|---|---|---|
| 1955-07-13 | | D | 62610 | | 3159.06 | NGVD29 | 1 | Z | | |
| 1955-07-13 | | D | 62611 | | 3160.73 | NAVD88 | 1 | Z | | |
| 1955-07-13 | | D | 72019 | 28.27 | | | 1 | Z | | |
| 1978-01-25 | | D | 62610 | | 3157.58 | NGVD29 | 1 | Z | | |
| 1978-01-25 | | D | 62611 | | 3159.25 | NAVD88 | 1 | Z | | |
| 1978-01-25 | | D | 72019 | 29.75 | | | 1 | Z | | |
| 1983-01-27 | | D | 62610 | | 3157.92 | NGVD29 | 1 | Z | | |
| 1983-01-27 | | D | 62611 | | 3159.59 | NAVD88 | 1 | Z | | |
| 1983-01-27 | | D | 72019 | 29.41 | | | 1 | Z | | |
| 1988-02-10 | | D | 62610 | | 3158.99 | NGVD29 | 1 | Z | | |
| 1988-02-10 | | D | 62611 | | 3160.66 | NAVD88 | 1 | Z | | |
| 1988-02-10 | | D | 72019 | 28.34 | | | 1 | Z | | |
| 1992-11-12 | | D | 62610 | | 3158.16 | NGVD29 | 1 | S | | |
| 1992-11-12 | | D | 62611 | | 3159.83 | NAVD88 | 1 | S | | |

| Date | Time | ? Water-level date-time accuracy | ? Parameter code | Water level, feet below land surface | Water level, feet above specific vertical datum | Referenced vertical datum | ? Status | ? Method of measurement | ? Measuring agency | ? Source measu |
|---|---|---|---|---|---|---|---|---|---|---|
| 1992-11-12 | | D | 72019 | 29.17 | | | 1 | S | | |
| 1998-01-07 | | D | 62610 | | 3157.04 | NGVD29 | 1 | S | | |
| 1998-01-07 | | D | 62611 | | 3158.71 | NAVD88 | 1 | S | | |
| 1998-01-07 | | D | 72019 | 30.29 | | | 1 | S | | |

**Explanation**

| Section | Code | Description |
|---|---|---|
| Water-level date-time accuracy | D | Date is accurate to the Day |
| Parameter code | 62610 | Groundwater level above NGVD 1929, feet |
| Parameter code | 62611 | Groundwater level above NAVD 1988, feet |
| Parameter code | 72019 | Depth to water level, feet below land surface |
| Referenced vertical datum | NAVD88 | North American Vertical Datum of 1988 |
| Referenced vertical datum | NGVD29 | National Geodetic Vertical Datum of 1929 |
| Status | 1 | Static |
| Method of measurement | S | Steel-tape measurement. |
| Method of measurement | Z | Other. |
| Measuring agency | | Not determined |
| Source of measurement | | Not determined |
| Water-level approval status | A | Approved for publication -- Processing and review completed. |

Questions about sites/data?
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Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

**Title: Groundwater for New Mexico: Water Levels**
**URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?**

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2022-10-11 11:54:05 EDT
0.28 0.24 nadww01

# 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 | | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 03192 | | C | ED | 1 | 2 | 1 | 13 | 24S | 26E | 570697 | 3565474* | 988 | 200 | | |
| C 01169 | | C | ED | 1 | 4 | 3 | 18 | 24S | 27E | 572282 | 3564261* | 1644 | 55 | 35 | 20 |
| C 00929 | | C | ED | | 3 | 3 | 18 | 24S | 27E | 572013 | 3564159* | 1658 | 54 | 33 | 21 |
| C 03560 POD1 | | C | ED | 2 | 3 | 3 | 18 | 24S | 27E | 572009 | 3564150 | 1665 | 68 | 28 | 40 |
| C 04360 POD1 | | C | ED | 3 | 3 | 3 | 18 | 24S | 27E | 571910 | 3564085 | 1711 | 72 | 40 | 32 |
| C 03092 | | C | ED | 4 | 3 | 1 | 08 | 24S | 27E | 573678 | 3566501* | 2164 | 54 | 37 | 17 |
| C 03490 POD1 | | CUB | ED | 3 | 4 | 3 | 08 | 24S | 27E | 573812 | 3565709 | 2173 | 140 | 23 | 117 |
| C 02043 | | C | ED | | 2 | 1 | 24 | 24S | 26E | 570805 | 3563758* | 2182 | 42 | 28 | 14 |
| C 03414 POD2 | | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569509 | 3565257 | 2191 | 100 | 32 | 68 |
| C 03414 POD1 | | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569513 | 3565188 | 2205 | 80 | 60 | 20 |
| C 03414 POD1 | R | C | ED | 3 | 1 | 2 | 14 | 24S | 26E | 569513 | 3565188 | 2205 | 80 | 60 | 20 |
| C 00516 POD10 | | CUB | ED | 3 | 4 | 3 | 08 | 24S | 27E | 573875 | 3565722 | 2236 | 160 | 45 | 115 |
| C 00516 POD6 | | CUB | ED | 1 | 4 | 3 | 08 | 24S | 27E | 573885 | 3565895* | 2249 | 78 | 17 | 61 |
| C 03777 POD1 | | C | ED | 3 | 1 | 2 | 24 | 24S | 26E | 571120 | 3563571 | 2263 | 55 | 28 | 27 |
| C 00683 | | C | ED | | 4 | 3 | 08 | 24S | 27E | 573986 | 3565796* | 2347 | 50 | 17 | 33 |
| C 01187 | | C | ED | | 4 | 3 | 08 | 24S | 27E | 573986 | 3565796* | 2347 | 108 | 17 | 91 |
| C 03675 | | C | ED | 2 | 2 | 2 | 23 | 24S | 26E | 570134 | 3563860 | 2435 | 59 | 38 | 21 |
| C 03489 POD1 | | CUB | ED | 2 | 4 | 3 | 08 | 24S | 27E | 574153 | 3565939 | 2519 | 200 | | |
| C 04365 POD1 | | C | ED | 4 | 2 | 4 | 14 | 24S | 26E | 569455 | 3564422 | 2569 | | | |
| C 00396 | C | CUB | ED | | 2 | 2 | 23 | 24S | 26E | 570003 | 3563758* | 2596 | 2032 | | |
| C 00631 | | C | ED | 3 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565701* | 2650 | 50 | 24 | 26 |
| C 00516 | | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 105 | 36 | 69 |
| C 00516 CLW201016 | O | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 62 | | |
| C 00516 CLW308590 | O | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901* | 2651 | 105 | 36 | 69 |
| C 00516 S | | CUB | ED | 1 | 3 | 4 | 08 | 24S | 27E | 574288 | 3565901 | 2651 | 50 | 17 | 33 |
| C 00262 | R | C | ED | 4 | 3 | 1 | 24 | 24S | 26E | 570481 | 3563253* | 2774 | 50 | | |

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

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

| POD Number | POD Sub-Code | basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 00692 | | C | ED | 3 | 3 | 1 | 24 | 24S | 26E | 570281 | 3563253* | 2864 | 50 | 42 | 8 |
| C 01085 | | C | ED | | 4 | 2 | 23 | 24S | 26E | 569990 | 3563356* | 2927 | 127 | 60 | 67 |
| C 01366 | | CUB | ED | | | 4 | 08 | 24S | 27E | 574590 | 3566003* | 2959 | 60 | 35 | 25 |
| C 00100 A | | CUB | ED | 1 | 1 | 3 | 24 | 24S | 26E | 570284 | 3563053 | 3040 | 51 | 26 | 25 |
| C 00949 | | C | ED | 1 | 1 | 3 | 24 | 24S | 26E | 570284 | 3563053* | 3040 | 62 | 35 | 27 |
| C 00517 | | C | ED | 1 | 3 | 2 | 23 | 24S | 26E | 569498 | 3563456* | 3156 | 80 | 31 | 49 |
| C 00369 | C | CUB | ED | | 2 | 1 | 23 | 24S | 26E | 569207 | 3563757* | 3160 | | | |
| C 01616 | | C | ED | | 2 | 4 | 23 | 24S | 26E | 569988 | 3562956* | 3266 | 84 | 84 | 0 |
| C 00690 | | C | ED | 1 | 3 | 3 | 24 | 24S | 26E | 570288 | 3562653* | 3401 | 30 | 10 | 20 |
| C 00883 | | C | ED | 3 | 2 | 4 | 23 | 24S | 26E | 569887 | 3562855* | 3405 | 60 | 14 | 46 |
| C 00928 | | C | ED | | 1 | 1 | 23 | 24S | 26E | 568806 | 3563757* | 3478 | 91 | 7 | 84 |
| C 00829 | | C | ED | | 1 | 4 | 23 | 24S | 26E | 569591 | 3562957* | 3483 | 50 | 19 | 31 |
| C 03110 | | C | ED | 4 | 1 | 4 | 23 | 24S | 26E | 569690 | 3562856* | 3509 | 35 | 12 | 23 |
| C 03526 POD1 | | C | ED | 1 | 4 | 4 | 23 | 24S | 26E | 569788 | 3562666 | 3618 | 200 | | |
| C 01869 | R | C | ED | 2 | 3 | 4 | 23 | 24S | 26E | 569753 | 3562679 | 3624 | 110 | 30 | 80 |
| C 01869 POD2 | | C | ED | 2 | 3 | 4 | 23 | 24S | 26E | 569753 | 3562679 | 3624 | 111 | 50 | 61 |
| C 02174 | | C | ED | | | 2 | 10 | 24S | 26E | 568143 | 3566804* | 3644 | 263 | 233 | 30 |
| C 00262 POD2 | | C | ED | 4 | 3 | 1 | 24 | 24S | 26E | 570234 | 3562337 | 3713 | 45 | 18 | 27 |
| C 00850 | | C | ED | | 2 | 3 | 09 | 24S | 27E | 575595 | 3566223* | 3981 | 108 | 35 | 73 |

Average Depth to Water: **37 feet**

Minimum Depth: **7 feet**

Maximum Depth: **233 feet**

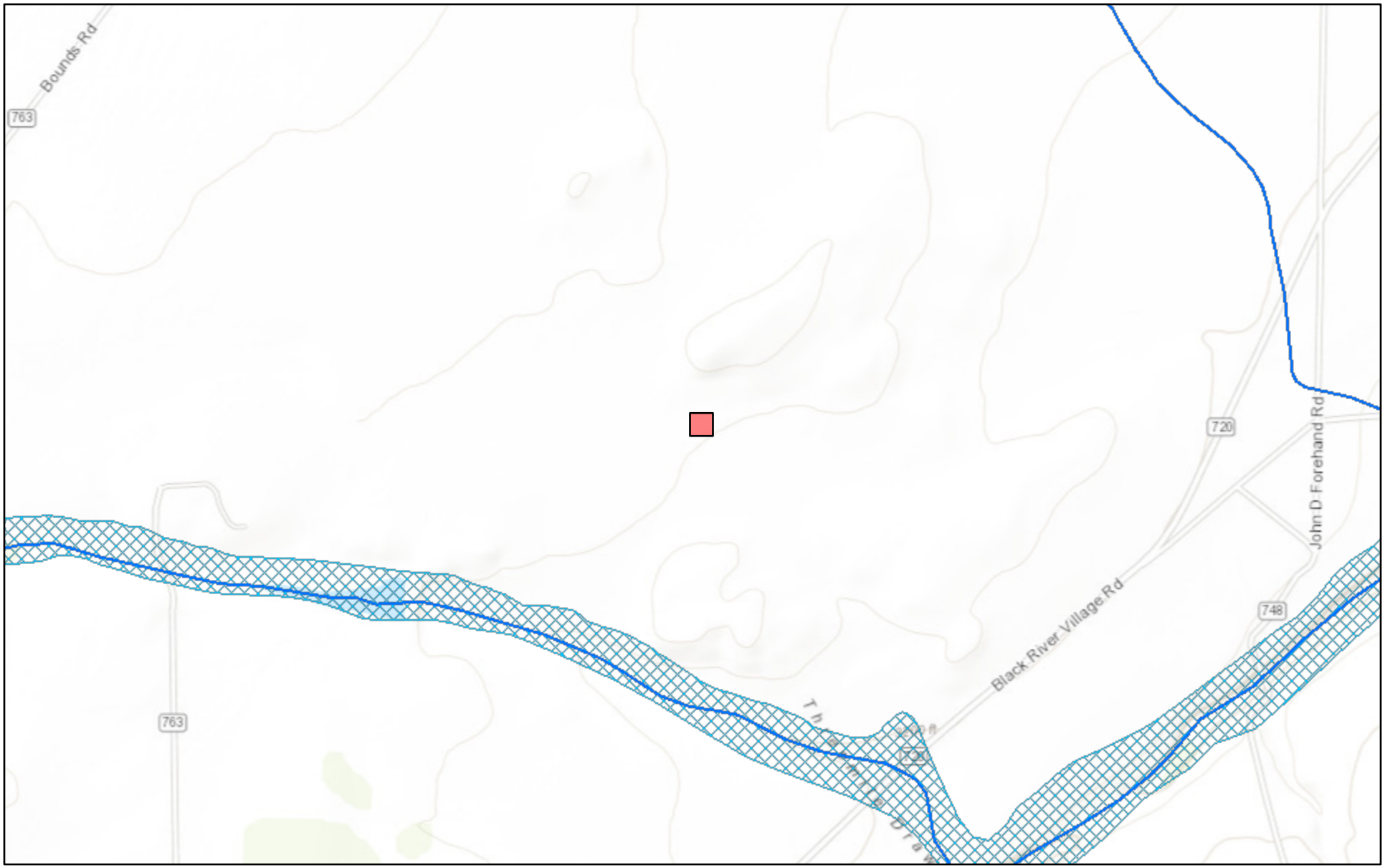
**Record Count:** 45

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

**Easting (X):** 571639 **Northing (Y):** 3565774.71 **Radius:** 4000

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

# New Mexico NFHL Data




October 11, 2022

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

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

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# APPENDIX E

CARMONA RESOURCES

eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-20369-1
Laboratory Sample Delivery Group: Eddy Co, NM
Client Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

For:
Carmona Resources
310 W Wall St
Ste 415
Midland, Texas 79701

Attn: Ashton Thielke

JKramer

*Authorized for release by:*
*10/17/2022 11:20:58 AM*

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com



This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Laboratory Job ID: 880-20369-1
SDG: Eddy Co, NM

# Table of Contents

# Definitions/Glossary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Qualifiers

### GC VOA

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD recovery exceeds control limits. |
| U | Indicates the analyte was analyzed for but not detected. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| S1- | Surrogate recovery exceeds control limits, low biased. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Job ID: 880-20369-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-20369-1**

**Receipt**
The samples were received on 10/14/2022 8:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: SW-1 (1.5') (880-20369-1), SW-2 (1.5') (880-20369-2), SW-3 (1.5') (880-20369-3), SW-4 (1.5') (880-20369-4), CS-1 (1.5') (880-20369-5) and CS-2 (1.5') (880-20369-6).

**GC VOA**
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-36942 and analytical batch 880-36933 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-36939 and analytical batch 880-36918 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-36939/2-A) and (LCSD 880-36939/3-A). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**HPLC/IC**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Client Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: SW-1 (1.5')

**Lab Sample ID: 880-20369-1**
**Date Collected: 10/13/22 00:00**
**Matrix: Solid**
**Date Received: 10/14/22 08:30**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F1 | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |
| o-Xylene | <0.00200 | U F1 | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 13:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 13:01* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 13:01* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 11:00 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 11:00 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 11:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *108* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 11:00* | *1* |
| *o-Terphenyl* | *109* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 11:00* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 134 | | 5.04 | | mg/Kg | | | 10/14/22 15:58 | 1 |

## Client Sample ID: SW-2 (1.5')

**Lab Sample ID: 880-20369-2**
**Date Collected: 10/13/22 00:00**
**Matrix: Solid**
**Date Received: 10/14/22 08:30**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 15:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 15:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *99* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 15:04* | *1* |

# Client Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: SW-2 (1.5')

**Lab Sample ID: 880-20369-2**
**Date Collected: 10/13/22 00:00**
**Matrix: Solid**
**Date Received: 10/14/22 08:30**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *101* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:05* | *1* |
| *o-Terphenyl* | *105* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:05* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | **41.5** | | 5.00 | | mg/Kg | | | 10/14/22 16:13 | 1 |

## Client Sample ID: SW-3 (1.5')

**Lab Sample ID: 880-20369-3**
**Date Collected: 10/13/22 00:00**
**Matrix: Solid**
**Date Received: 10/14/22 08:30**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 20:37* | *1* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 20:37* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:26 | 1 |

# Client Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: SW-3 (1.5')

**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

**Lab Sample ID: 880-20369-3**
**Matrix: Solid**

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:26 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *114* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:26* | *1* |
| *o-Terphenyl* | *118* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:26* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | **50.5** | | 5.00 | | mg/Kg | | | 10/14/22 16:18 | 1 |

## Client Sample ID: SW-4 (1.5')

**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

**Lab Sample ID: 880-20369-4**
**Matrix: Solid**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |
| m-Xylene & p-Xylene | <0.00402 | U | 0.00402 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 20:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 20:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 20:58* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:48 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:48 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 12:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *102* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:48* | *1* |
| *o-Terphenyl* | *106* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 12:48* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | **62.8** | | 5.01 | | mg/Kg | | | 10/14/22 16:23 | 1 |

# Client Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: CS-1 (1.5')

**Lab Sample ID: 880-20369-5**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |
| m-Xylene & p-Xylene | <0.00396 | U | 0.00396 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 21:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 21:18* | *1* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 21:18* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:09 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:09 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *111* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 13:09* | *1* |
| *o-Terphenyl* | *115* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 13:09* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | **76.7** | | 5.02 | | mg/Kg | | | 10/14/22 16:28 | 1 |

## Client Sample ID: CS-2 (1.5')

**Lab Sample ID: 880-20369-6**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

### Method: SW846 8021B - Volatile Organic Compounds (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |
| o-Xylene | **0.00208** | | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 18:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 18:14* | *1* |
| *1,4-Difluorobenzene (Surr)* | *115* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 18:14* | *1* |

# Client Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: CS-2 (1.5')

**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

## Lab Sample ID: 880-20369-6

**Matrix: Solid**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 10/14/22 15:08 | 1 |

### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 10/17/22 09:58 | 1 |

### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:31 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:31 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 13:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *102* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 13:31* | *1* |
| *o-Terphenyl* | *107* | | *70 - 130* | *10/14/22 09:07* | *10/14/22 13:31* | *1* |

### Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | **51.5** | | 5.01 | | mg/Kg | | | 10/14/22 16:42 | 1 |

# Surrogate Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Method: 8021B - Volatile Organic Compounds (GC)

**Matrix: Solid** | **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | BFB1 (70-130) | DFBZ1 (70-130) |
| 880-20369-1 | SW-1 (1.5') | 100 | 105 |
| 880-20369-1 MS | SW-1 (1.5') | 100 | 106 |
| 880-20369-1 MSD | SW-1 (1.5') | 95 | 99 |
| 880-20369-2 | SW-2 (1.5') | 94 | 99 |
| 880-20369-3 | SW-3 (1.5') | 107 | 104 |
| 880-20369-4 | SW-4 (1.5') | 101 | 107 |
| 880-20369-5 | CS-1 (1.5') | 103 | 101 |
| 880-20369-6 | CS-2 (1.5') | 90 | 115 |
| LCS 880-36942/1-A | Lab Control Sample | 96 | 104 |
| LCSD 880-36942/2-A | Lab Control Sample Dup | 94 | 105 |
| MB 880-36942/5-A | Method Blank | 90 | 111 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

**Matrix: Solid** | **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-20369-1 | SW-1 (1.5') | 108 | 109 |
| 880-20369-1 MS | SW-1 (1.5') | 81 | 80 |
| 880-20369-1 MSD | SW-1 (1.5') | 82 | 81 |
| 880-20369-2 | SW-2 (1.5') | 101 | 105 |
| 880-20369-3 | SW-3 (1.5') | 114 | 118 |
| 880-20369-4 | SW-4 (1.5') | 102 | 106 |
| 880-20369-5 | CS-1 (1.5') | 111 | 115 |
| 880-20369-6 | CS-2 (1.5') | 102 | 107 |
| LCS 880-36939/2-A | Lab Control Sample | 64 S1- | 79 |
| LCSD 880-36939/3-A | Lab Control Sample Dup | 65 S1- | 81 |
| MB 880-36939/1-A | Method Blank | 134 S1+ | 140 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

# QC Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Method: 8021B - Volatile Organic Compounds (GC)

**Lab Sample ID: MB 880-36942/5-A**
**Matrix: Solid**
**Analysis Batch: 36933**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 36942**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |
| m-Xylene & p-Xylene | <0.00400 | U | 0.00400 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 10/14/22 10:06 | 10/14/22 12:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 12:32* | *1* |
| *1,4-Difluorobenzene (Surr)* | *111* | | *70 - 130* | *10/14/22 10:06* | *10/14/22 12:32* | *1* |

**Lab Sample ID: LCS 880-36942/1-A**
**Matrix: Solid**
**Analysis Batch: 36933**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 36942**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09576 | | mg/Kg | | 96 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1035 | | mg/Kg | | 104 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.08995 | | mg/Kg | | 90 | 70 - 130 | | |
| m-Xylene & p-Xylene | | | 0.200 | 0.1839 | | mg/Kg | | 92 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.08924 | | mg/Kg | | 89 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: LCSD 880-36942/2-A**
**Matrix: Solid**
**Analysis Batch: 36933**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 36942**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09562 | | mg/Kg | | 96 | 70 - 130 | 0 | 35 |
| Toluene | | | 0.100 | 0.09982 | | mg/Kg | | 100 | 70 - 130 | 4 | 35 |
| Ethylbenzene | | | 0.100 | 0.08730 | | mg/Kg | | 87 | 70 - 130 | 3 | 35 |
| m-Xylene & p-Xylene | | | 0.200 | 0.1781 | | mg/Kg | | 89 | 70 - 130 | 3 | 35 |
| o-Xylene | | | 0.100 | 0.08645 | | mg/Kg | | 86 | 70 - 130 | 3 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* |

**Lab Sample ID: 880-20369-1 MS**
**Matrix: Solid**
**Analysis Batch: 36933**

**Client Sample ID: SW-1 (1.5')**
**Prep Type: Total/NA**
**Prep Batch: 36942**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F1 | 0.0998 | 0.07558 | | mg/Kg | | 76 | 70 - 130 | | |

# QC Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Method: 8021B - Volatile Organic Compounds (GC) (Continued)

**Lab Sample ID: 880-20369-1 MS** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36933** — **Prep Batch: 36942**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | <0.00200 | U | 0.0998 | 0.07935 | | mg/Kg | | 80 | 70 - 130 |
| Ethylbenzene | <0.00200 | U | 0.0998 | 0.07020 | | mg/Kg | | 70 | 70 - 130 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.200 | 0.1412 | | mg/Kg | | 71 | 70 - 130 |
| o-Xylene | <0.00200 | U F1 | 0.0998 | 0.06915 | F1 | mg/Kg | | 69 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *106* | | *70 - 130* |

**Lab Sample ID: 880-20369-1 MSD** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36933** — **Prep Batch: 36942**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F1 | 0.0990 | 0.06869 | F1 | mg/Kg | | 69 | 70 - 130 | 10 | 35 |
| Toluene | <0.00200 | U | 0.0990 | 0.07904 | | mg/Kg | | 80 | 70 - 130 | 0 | 35 |
| Ethylbenzene | <0.00200 | U | 0.0990 | 0.07128 | | mg/Kg | | 72 | 70 - 130 | 2 | 35 |
| m-Xylene & p-Xylene | <0.00401 | U | 0.198 | 0.1419 | | mg/Kg | | 72 | 70 - 130 | 0 | 35 |
| o-Xylene | <0.00200 | U F1 | 0.0990 | 0.06914 | F1 | mg/Kg | | 69 | 70 - 130 | 0 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *99* | | *70 - 130* |

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 880-36939/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 09:55 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 09:55 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 10/14/22 09:07 | 10/14/22 09:55 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane* | *134* | *S1+* | *70 - 130* | *10/14/22 09:07* | *10/14/22 09:55* | *1* |
| *o-Terphenyl* | *140* | *S1+* | *70 - 130* | *10/14/22 09:07* | *10/14/22 09:55* | *1* |

**Lab Sample ID: LCS 880-36939/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 837.6 | | mg/Kg | | 84 | 70 - 130 |

Eurofins Midland

# QC Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: LCS 880-36939/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1058 | | mg/Kg | | 106 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *64* | *S1-* | *70 - 130* |
| *o-Terphenyl* | *79* | | *70 - 130* |

**Lab Sample ID: LCSD 880-36939/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 805.3 | | mg/Kg | | 81 | 70 - 130 | 4 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1053 | | mg/Kg | | 105 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *65* | *S1-* | *70 - 130* |
| *o-Terphenyl* | *81* | | *70 - 130* |

**Lab Sample ID: 880-20369-1 MS** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 793.6 | | mg/Kg | | 78 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 960.1 | | mg/Kg | | 96 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *81* | | *70 - 130* |
| *o-Terphenyl* | *80* | | *70 - 130* |

**Lab Sample ID: 880-20369-1 MSD** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 36918** — **Prep Batch: 36939**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 814.4 | | mg/Kg | | 80 | 70 - 130 | 3 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 982.2 | | mg/Kg | | 98 | 70 - 130 | 2 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane* | *82* | | *70 - 130* |
| *o-Terphenyl* | *81* | | *70 - 130* |

# QC Sample Results

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-36938/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 36946**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 10/14/22 15:44 | 1 |

**Lab Sample ID: LCS 880-36938/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 36946**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 259.8 | | mg/Kg | | 104 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-36938/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 36946**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 261.1 | | mg/Kg | | 104 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 880-20369-1 MS** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 36946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 134 | | 252 | 380.2 | | mg/Kg | | 98 | 90 - 110 | | |

**Lab Sample ID: 880-20369-1 MSD** — **Client Sample ID: SW-1 (1.5')**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 36946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 134 | | 252 | 381.4 | | mg/Kg | | 98 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## GC VOA

### Analysis Batch: 36933

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | 8021B | 36942 |
| MB 880-36942/5-A | Method Blank | Total/NA | Solid | 8021B | 36942 |
| LCS 880-36942/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 36942 |
| LCSD 880-36942/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 36942 |
| 880-20369-1 MS | SW-1 (1.5') | Total/NA | Solid | 8021B | 36942 |
| 880-20369-1 MSD | SW-1 (1.5') | Total/NA | Solid | 8021B | 36942 |

### Prep Batch: 36942

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | 5035 | |
| MB 880-36942/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-36942/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-36942/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-20369-1 MS | SW-1 (1.5') | Total/NA | Solid | 5035 | |
| 880-20369-1 MSD | SW-1 (1.5') | Total/NA | Solid | 5035 | |

### Analysis Batch: 36989

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | Total BTEX | |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | Total BTEX | |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | Total BTEX | |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | Total BTEX | |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | Total BTEX | |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 36918

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| MB 880-36939/1-A | Method Blank | Total/NA | Solid | 8015B NM | 36939 |
| LCS 880-36939/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 36939 |
| LCSD 880-36939/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-1 MS | SW-1 (1.5') | Total/NA | Solid | 8015B NM | 36939 |
| 880-20369-1 MSD | SW-1 (1.5') | Total/NA | Solid | 8015B NM | 36939 |

# QC Association Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## GC Semi VOA

### Prep Batch: 36939

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | 8015NM Prep | |
| MB 880-36939/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-36939/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-36939/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-20369-1 MS | SW-1 (1.5') | Total/NA | Solid | 8015NM Prep | |
| 880-20369-1 MSD | SW-1 (1.5') | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 37097

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Total/NA | Solid | 8015 NM | |
| 880-20369-2 | SW-2 (1.5') | Total/NA | Solid | 8015 NM | |
| 880-20369-3 | SW-3 (1.5') | Total/NA | Solid | 8015 NM | |
| 880-20369-4 | SW-4 (1.5') | Total/NA | Solid | 8015 NM | |
| 880-20369-5 | CS-1 (1.5') | Total/NA | Solid | 8015 NM | |
| 880-20369-6 | CS-2 (1.5') | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 36938

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-2 | SW-2 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-3 | SW-3 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-4 | SW-4 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-5 | CS-1 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-6 | CS-2 (1.5') | Soluble | Solid | DI Leach | |
| MB 880-36938/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-36938/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-36938/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-20369-1 MS | SW-1 (1.5') | Soluble | Solid | DI Leach | |
| 880-20369-1 MSD | SW-1 (1.5') | Soluble | Solid | DI Leach | |

### Analysis Batch: 36946

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-2 | SW-2 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-3 | SW-3 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-4 | SW-4 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-5 | CS-1 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-6 | CS-2 (1.5') | Soluble | Solid | 300.0 | 36938 |
| MB 880-36938/1-A | Method Blank | Soluble | Solid | 300.0 | 36938 |
| LCS 880-36938/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 36938 |
| LCSD 880-36938/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 36938 |
| 880-20369-1 MS | SW-1 (1.5') | Soluble | Solid | 300.0 | 36938 |
| 880-20369-1 MSD | SW-1 (1.5') | Soluble | Solid | 300.0 | 36938 |

# Lab Chronicle

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: SW-1 (1.5')

**Lab Sample ID: 880-20369-1**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 13:01 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 11:00 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 15:58 | CH | EET MID |

## Client Sample ID: SW-2 (1.5')

**Lab Sample ID: 880-20369-2**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 15:04 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 12:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 16:13 | CH | EET MID |

## Client Sample ID: SW-3 (1.5')

**Lab Sample ID: 880-20369-3**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 20:37 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 12:26 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 16:18 | CH | EET MID |

## Client Sample ID: SW-4 (1.5')

**Lab Sample ID: 880-20369-4**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 20:58 | MNR | EET MID |

Eurofins Midland

# Lab Chronicle

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Client Sample ID: SW-4 (1.5')

**Lab Sample ID: 880-20369-4**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 12:48 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 16:23 | CH | EET MID |

## Client Sample ID: CS-1 (1.5')

**Lab Sample ID: 880-20369-5**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.05 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 21:18 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 13:09 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 16:28 | CH | EET MID |

## Client Sample ID: CS-2 (1.5')

**Lab Sample ID: 880-20369-6**
**Matrix: Solid**
**Date Collected: 10/13/22 00:00**
**Date Received: 10/14/22 08:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 36942 | 10/14/22 10:06 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 36933 | 10/14/22 18:14 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 36989 | 10/14/22 15:08 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 37097 | 10/17/22 09:58 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 36939 | 10/14/22 09:07 | DM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 36918 | 10/14/22 13:31 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 36938 | 10/14/22 09:05 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 36946 | 10/14/22 16:42 | CH | EET MID |

**Laboratory References:**

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# Accreditation/Certification Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

## Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-24 | 06-30-23 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 300.0 | | Solid | Chloride |
| 8015 NM | | Solid | Total TPH |
| 8015B NM | 8015NM Prep | Solid | Diesel Range Organics (Over C10-C28) |
| 8015B NM | 8015NM Prep | Solid | Gasoline Range Organics (GRO)-C6-C10 |
| 8015B NM | 8015NM Prep | Solid | OII Range Organics (Over C28-C36) |
| 8021B | 5035 | Solid | Benzene |
| 8021B | 5035 | Solid | Ethylbenzene |
| 8021B | 5035 | Solid | m-Xylene & p-Xylene |
| 8021B | 5035 | Solid | o-Xylene |
| 8021B | 5035 | Solid | Toluene |
| 8021B | 5035 | Solid | Xylenes, Total |
| Total BTEX | | Solid | Total BTEX |

# Method Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8021B | Volatile Organic Compounds (GC) | SW846 | EET MID |
| Total BTEX | Total BTEX Calculation | TAL SOP | EET MID |
| 8015 NM | Diesel Range Organics (DRO) (GC) | SW846 | EET MID |
| 8015B NM | Diesel Range Organics (DRO) (GC) | SW846 | EET MID |
| 300.0 | Anions, Ion Chromatography | MCAWW | EET MID |
| 5035 | Closed System Purge and Trap | SW846 | EET MID |
| 8015NM Prep | Microextraction | SW846 | EET MID |
| DI Leach | Deionized Water Leaching Procedure | ASTM | EET MID |

**Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# Sample Summary

Client: Carmona Resources
Project/Site: Riverboat 12-1 WOPA & WOMD FED COM 1 (08.08.2020)

Job ID: 880-20369-1
SDG: Eddy Co, NM

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-20369-1 | SW-1 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |
| 880-20369-2 | SW-2 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |
| 880-20369-3 | SW-3 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |
| 880-20369-4 | SW-4 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |
| 880-20369-5 | CS-1 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |
| 880-20369-6 | CS-2 (1.5') | Solid | 10/13/22 00:00 | 10/14/22 08:30 |

Chain of Custody

**Work Order No:** 203609

Page 1 of 1

| | | | |
|---|---|---|---|
| Project Manager | Ashton Thielke | Bill to (if different) | Laci Luig |
| Company Name | Carmona Resources | Company Name. | Cimarex Energy |
| Address | 310 West Wall Ste 415 | Address | 600 N Marienfield St, Suite 600 |
| City, State ZIP | Midland, TX 79701 | City, State ZIP | Midland TX 79701 |
| Phone | 432-813-5347 | Email | laci.luig@coterra.com & ashton thielke@coterra.com |

**Work Order Comments**

Program. UST/PST ☐ PRP ☐ rownfields ☐ RC ☐ perfund ☐

State of Project

Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables EDD ☐ ADaPT ☐ Other

| | | | |
|---|---|---|---|
| Project Name | Riverboat 12-1 WOPA & WOMD FED COM 1 (08 08 2020) | Turn Around | |
| Project Number | 1136 | ☐ Routine ☑ Rush | |
| Project Location | Eddy Co, NM | Due Date | 24 Hr |
| Sampler's Name | AT | TAT starts the day received by the lab if received by 4 30pm | |
| PO #: | | | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank | Yes (No) | Wet Ice | (Yes) No |
| Received Intact. | (Yes) No | Thermometer ID | IR8 |
| Cooler Custody Seals | Yes No (N/A) | Correction Factor | .20 |
| Sample Custody Seals | Yes No (N/A) | Temperature Reading | 2.3 |
| Total Containers | | Corrected Temperature | 2.5 |

**ANALYSIS REQUEST**

**Preservative Codes**

None NO DI Water $H_2O$

Cool Cool MeOH Me

HCL HC $HNO_3$ HN

$H_2S0_4$ $H_2$ NaOH Na

$H_3PO_4$ HP

$NaHSO_4$ NABIS

$Na_2S_2O_3$ $NaSO_3$

Zn Acetate+NaOH Zn

NaOH+Ascorbic Acid SAPC

| Sample Identification | Date | Time | Soil | Water | Grab/ Comp | # of Cont | Pres. Code | BTEX 8021B | TPH 8015M ( GRO + DRO + MRO) | Chloride 300 0 | HOLD | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW-1 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |
| SW-2 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |
| SW-3 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |
| SW-4 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |
| CS-1 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |
| CS-2 (1 5') | 10/13/2022 | | X | | | 1 | | X | X | X | | |

880-20369 Chain of Custody

Please send results to cmoehring@carmonaresources.com and mcarmona@carmonaresources.com

| Relinquished by (Signature) | Received by (Signature) | Date/Time | Relinquished by (Signature) | Received by (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 10/14/22 830 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date 05012020 Rev 2020 1

# Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 880-20369-1
SDG Number: Eddy Co, NM

**Login Number: 20369**
**List Number: 1**
**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**

| Question | Answer | Comment |
|---|---|---|
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |

**District I**
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
**District II**
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
**District III**
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
**District IV**
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 155915

## CONDITIONS

| | |
|---|---|
| Operator:<br>CIMAREX ENERGY CO.<br>600 N. Marienfeld Street<br>Midland, TX 79701 | OGRID:<br>215099 |
| | Action Number:<br>155915 |
| | Action Type:<br>[C-141] Release Corrective Action (C-141) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| rhamlet | We have received your closure report and final C-141 for Incident #NRM2022644767 RIVERBOAT 12-1 W0PA & WOMD BATTERY, thank you. This closure is approved. | 1/13/2023 |