



## SITE INFORMATION

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**Deferral Request**  
**Southern Comfort 5 6 10 12**  
**Eddy County, New Mexico**  
**Incident ID: nAPP2423226373**  
**Unit J Sec 25 T24S R28E**  
**32.1876931°, -104.0373727°**

**Produced Water**  
**Point of Release: 90° elbow water leg of separator**  
**Release Date: 8/17/24**  
**Volume Released: 20 Barrels of Produced Water**  
**Volume Recovered: 20 Barrels of Produced Water**

CARMONA RESOURCES



**Prepared for:**  
**Marathon Oil Corporation**  
**990 Town and Country Blvd,**  
**Houston, Texas 77024**

**Prepared by:**  
**Carmona Resources, LLC**  
**310 West Wall Street**  
**Suite 500**  
**Midland, Texas 79701**



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September 9, 2024

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

**Re: Deferral Request  
Southern Comfort 5 6 10 12  
Marathon Oil Corporation  
Incident ID: nAPP2423226373  
Site Location: Unit J, S25, T24S, R28E  
(Lat 32.1876931°, Long -104.0373727°)  
Eddy County, New Mexico**

Mr. Bratcher:

On behalf of Marathon Oil Company, Carmona Resources, LLC has prepared this letter to document site activities for the Southern Comfort 5 6 10 12. The site is located at 32.1876931°, -104.0373727° within Unit J, S25, T24S, R28E, 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 release was discovered on August 17, 2024, caused by a hole that developed on a 90° elbow of the water line on a separator. The incident resulted in the release of twenty-point-four-eight (24.48) barrels of produced water, with twenty-point-four-eight (23.48) barrels recovered. The initial C-141 form is attached in Appendix C.

### **2.0 Site Characterization and Groundwater**

The site is located within a medium 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 identified well is located approximately 0.51 miles northwest of the site in S25, T24S, R28E, and was drilled in 2017. The well has a reported depth to groundwater of 90' below ground surface (ft bgs). A copy of the associated 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.
- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride: 600 mg/kg.

310 West Wall Street, Suite 500  
Midland, Texas 79701  
432.813.1992



#### **4.0 Site Assessment Activities**

On August 26, 2024, Carmona Resources, LLC was onsite to perform an initial assessment of the secondary containment after the standing fluid was recovered. There was evidence that the release resulted in a breach of the structural integrity of the liner, directly underneath the separator. This opening was utilized to investigate any potential impact to the engineered pad underneath the containment itself.

There was a total of five sample locations established within and surrounding the impact underneath the liner. As seen in Figure 3, sample point S-1 established vertical delineation within the release area from surface to 5' bgs. Four horizontal samples (H-1 through H-4) were established to investigate any lateral impact that resulted from the release.

The soil samples were collected and placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins Laboratories in Midland, Texas. The samples were analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015, modified benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA method 300.0. The laboratory reports, including analytical methods, results, and chain-of-custody documents, are attached in Appendix E.

As seen on Table 1, the analytical results show vertical delineation was achieved at 5' bgs for the release area that is represented by S-1. All horizontal locations (H1-H4) were below the regulatory limits for benzene, total BTEX, TPH, and chloride concentrations.

#### **5.0 Conclusions**

Based on the results of the analytical data, the investigated area beneath the lined, secondary containment that was impacted by approximately 1 bbl. of fluid that was unaccounted for during recovered (~ 4% of total volume). This makes up roughly fifty (50) square feet of area with a depth of 4.5' of impact, a total 10 cubic yards of contaminated material. Marathon is formally requesting the deferral of this yardage underneath the lined, secondary containment and the separator itself until the facility is decommissioned. The deferral area was vertically and horizontally delineated during the initial site assessment. The liner has since been repaired and cleaned to maintain its integrity in the event of another release. If you have any questions regarding this report or need additional information, please contact us at 432-813-1992.

Sincerely,  
**Carmona Resources, LLC**

Clinton Merritt  
Sr. Project Manager

Devin Dominguez  
Sr. Project Manager


# FIGURES

CARMONA RESOURCES

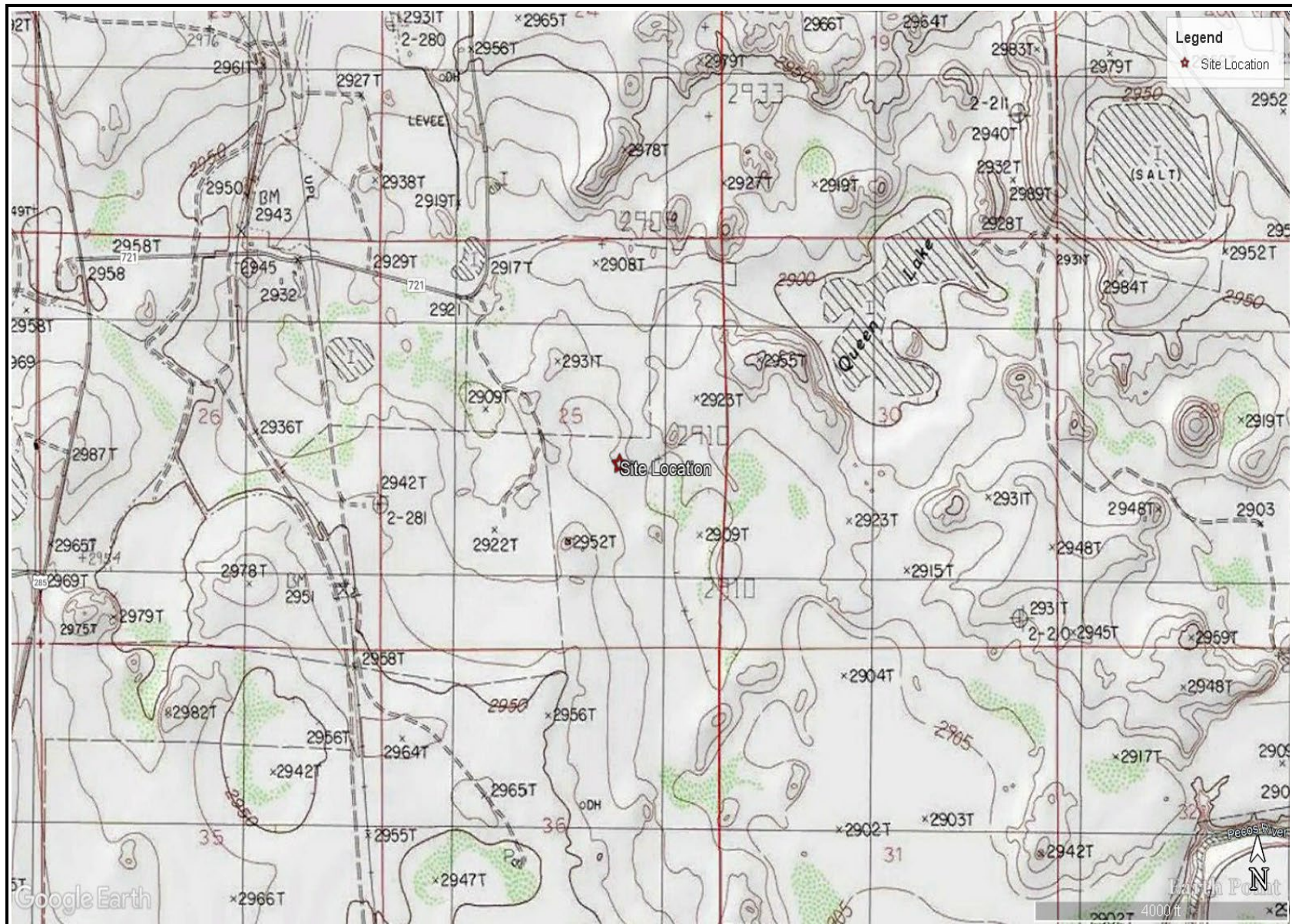






<p>OVERVIEW MAP MARATHON OIL CORPORATION SOUTHERN COMFORT 5 6 10 12 EDDY COUNTY, NEW MEXICO 32.18769371°, -104.0373727°</p>	<p>CARMONA RESOURCES </p>	<p>FIGURE 1</p>
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TOPOGRAPHIC MAP  
MARATHON OIL CORPORATION  
SOUTHERN COMFORT 5 6 10 12  
EDDY COUNTY, NEW MEXICO  
32.18769371°, -104.0373727°



FIGURE 2





<p>SAMPLE LOCATION MAP MARATHON OIL CORPORATION SOUTHERN COMFORT 5 6 10 12 EDDY COUNTY, NEW MEXICO 32.18769371°, -104.0373727°</p>	<p>CARMONA RESOURCES </p>	<p>FIGURE 3</p>
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# APPENDIX A

CARMONA RESOURCES



**Table 1**  
**Marathon Oil Corporation**  
**Southern Comfort 5 6 10 12**  
**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						
<b>S-1</b>	8/26/2024	0-1'	<50.0	<b>434</b>	<50.0	<b>434</b>	<0.00201	0.0460	<0.00201	0.00843	0.0544	<b>2,280</b>
	"	2.0'	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<b>9,510</b>
	"	3.0'	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<b>4,430</b>
	"	4.0'	<49.7	<49.7	<49.7	<49.7	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<b>4,390</b>
	"	5.0'	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<5.05
<b>Refusal</b>												
<b>H-1</b>	8/26/2024	0-6"	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<5.05
<b>H-2</b>	8/26/2024	0-6"	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<4.98
<b>H-3</b>	8/26/2024	0-6"	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<5.04
<b>H-4</b>	8/26/2024	0-6"	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<4.98
<i>Regulatory Criteria</i> <sup>A</sup>						<b>100 mg/kg</b>	<b>10 mg/kg</b>				<b>50 mg/kg</b>	<b>600 mg/kg</b>

(-) Not Analyzed

<sup>A</sup> – Table 1 - 19.15.29 NMAC

mg/kg - milligram per kilogram

TPH - Total Petroleum Hydrocarbons

ft - feet

(S) Sample Point

(H) Horizontal Point

 Exceeds

## APPENDIX B

CARMONA RESOURCES





# PHOTOGRAPHIC LOG

## Marathon Oil Corporation

### Photograph No. 1

Facility: Southern Comfort 5 6 10 12

County: Eddy County, New Mexico

Description:  
View East of facility sign.

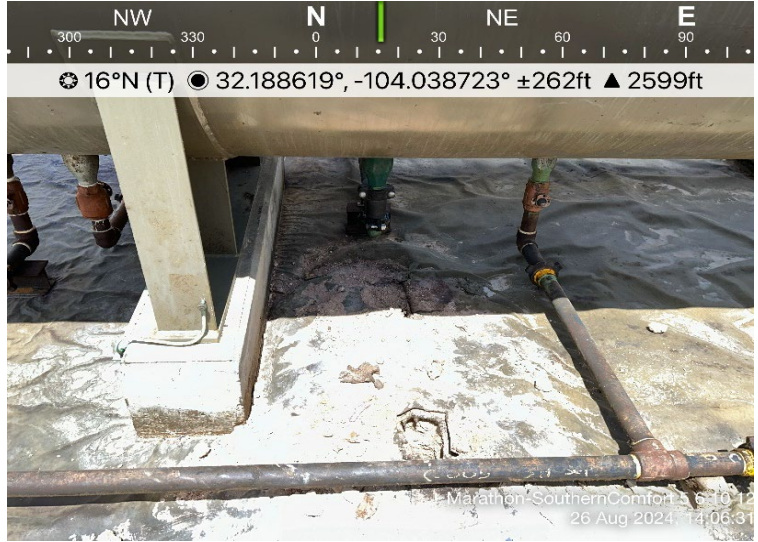


### Photograph No. 2

Facility: Southern Comfort 5 6 10 12

County: Eddy County, New Mexico

Description:  
View North of liner breach and sample point S-1 and H-4.

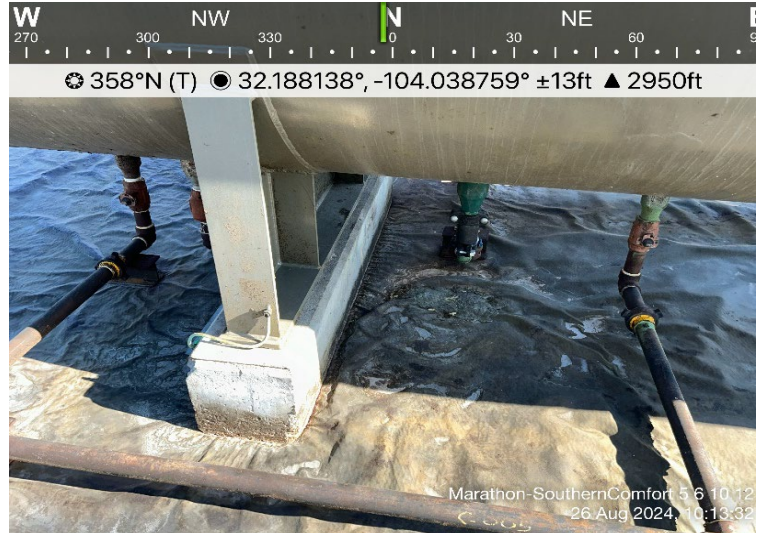


### Photograph No. 3

Facility: Southern Comfort 5 6 10 12

County: Eddy County, New Mexico

Description:  
View North of liner breach repaired.





# PHOTOGRAPHIC LOG

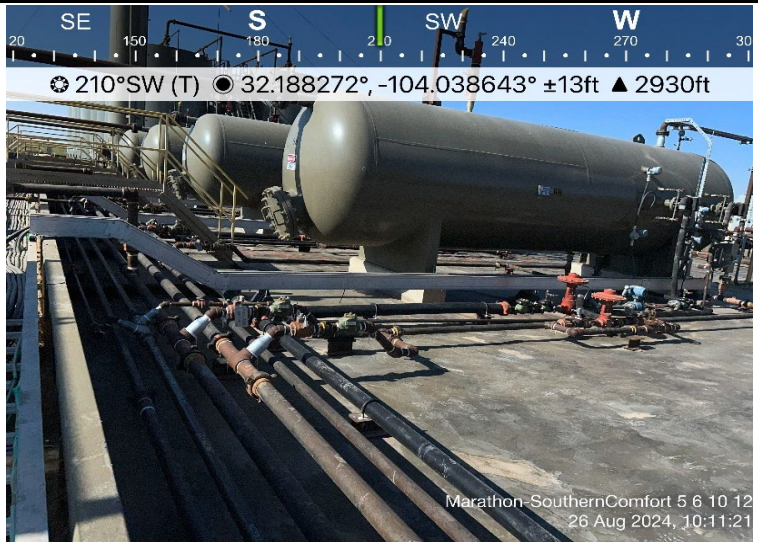
## Marathon Oil Corporation

### Photograph No. 4

**Facility:** Southern Comfort 5 6 10 12

**County:** Eddy County, New Mexico

**Description:**  
View Southwest of separators inside lined facility.

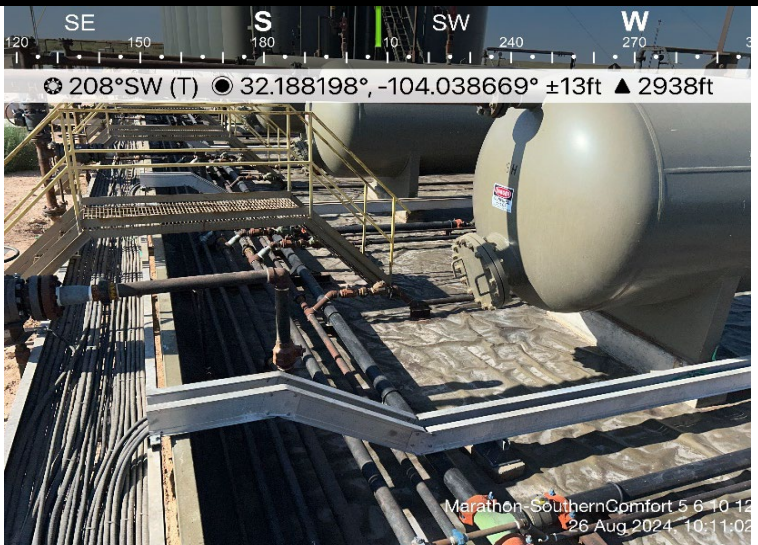


### Photograph No. 5

**Facility:** Southern Comfort 5 6 10 12

**County:** Eddy County, New Mexico

**Description:**  
View Southwest of separators inside lined facility.



### Photograph No. 6

**Facility:** Southern Comfort 5 6 10 12

**County:** Eddy County, New Mexico

**Description:**  
View South of separators inside lined facility.



# PHOTOGRAPHIC LOG

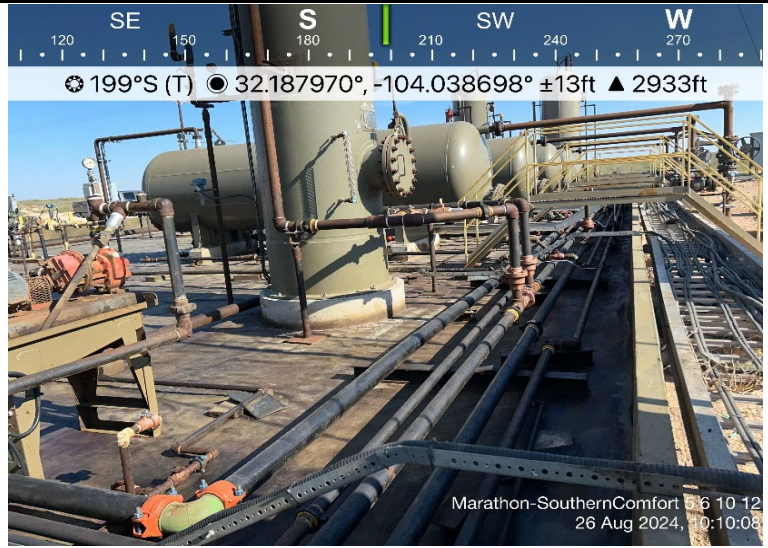
Marathon Oil Corporation

**Photograph No. 7**

**Facility:** Southern Comfort 5 6 10 12

**County:** Eddy County, New Mexico

**Description:**  
View South of separators inside lined facility.





## APPENDIX C

CARMONA RESOURCES



# OCD Permitting

Home Operator Data Action Status Action Search Results Action Status Item Details

## [NOTIFY] Notification Of Release (NOR) Application

### Submission Information

Submission ID:	374838	Districts:	Artesia
Operator:	[372098] MARATHON OIL PERMIAN LLC	Counties:	Eddy
Description:	MARATHON OIL PERMIAN LLC [372098] , SOUTHERN COMFORT 561012 TB , nAPP2423226373		
Status:	APPROVED		
Status Date:	08/19/2024		
References (2):	fAPP2126039206, nAPP2423226373		

### Forms

This application type does not have attachments.

### Questions

#### Location of Release Source

Please answer all the questions in this group.

Site Name	SOUTHERN COMFORT 561012 TB
Date Release Discovered	08/17/2024
Surface Owner	State

#### Incident Details

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

#### Nature and Volume of Release

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

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Fitting   Produced Water   Released: 20 BBL   Recovered: 20 BBL   Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A 90 degree elbow on the water leg of the separator developed a hole resulting in 20.48 bbl to be released into lined secondary containment. All standing fluid was recovered. Remediation work is ongoing.

Reasons why this would be considered a submission for a notification of a major release **Unavailable.**

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

**Initial Response**

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

The source of the release has been stopped **True**

The impacted area has been secured to protect human health and the environment **True**

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices **True**

All free liquids and recoverable materials have been removed and managed appropriately **True**

If all the actions described above have not been undertaken, explain why **Not answered.**

Per Paragraph 4 of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

**Acknowledgments**

- I acknowledge that I am authorized to submit notification of a release on behalf of my operator.
- I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to my operator) to track the notification(s) and corrective action(s) for a release, pursuant to NMAC 19.15.29.
- I acknowledge that creating a new incident file will require my operator to file subsequent submission(s) of form "C-141, Application for administrative approval of a release notification and corrective action", pursuant to NMAC 19.15.29.
- 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.
- I acknowledge the fact that 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.
- I acknowledge the fact that, 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.

**Comments**

No comments found for this submission.

**Conditions**

**Summary:** cswansonsteege (8/19/2024). When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.

**Reasons**

No reasons found for this submission.

**Fees**

No fees found for this submission.

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CMERRITT (AGENT FOR MARATHON OIL PERMIAN LLC) SIGN OUT HELP

Searches Operator Data Submissions Administration

EMNRD Home OCD Main Page OCD Rules Help

# OCD Permitting

Home Operator Data Action Status Action Search Results Action Status Item Details

## [C-141] Initial C-141 (C-141-V-INITIAL) Application

### Submission Information

Submission ID:	378093	Districts:	Artesia
Operator:	[372098] MARATHON OIL PERMIAN LLC	Counties:	Eddy
Description:	MARATHON OIL PERMIAN LLC [372098] , SOUTHERN COMFORT 561012 TB , nAPP2423226373		
Status:	APPROVED		
Status Date:	08/27/2024		
References (2):	fAPP2126039206, nAPP2423226373		

### Forms

Attachments:	<a href="#">Volume Calculation</a>
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### Questions

#### Prerequisites

Incident ID (n#)	nAPP2423226373
Incident Name	NAPP2423226373 SOUTHERN COMFORT 561012 TB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Received
Incident Facility	[fAPP2126039206] SOUTHERN COMFORT 561012 TB

#### Location of Release Source

Please answer all the questions in this group.

Site Name	SOUTHERN COMFORT 561012 TB
Date Release Discovered	08/17/2024
Surface Owner	State

#### Incident Details

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

#### Nature and Volume of Release

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

Crude Oil Released (bbls) Details	Not answered.
-----------------------------------	---------------

Other Released Details **Not answered.**

Are there **additional details** for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts) **A 90 degree elbow on the water leg of the separator developed a hole resulting in 20.48 bbl to be released into lined secondary containment. All standing fluid was recovered. Remediation work is ongoing.**

**Nature and Volume of Release (continued)**

Is this a gas only submission (i.e. only significant Mcf values reported) **No, according to supplied volumes this does not appear to be a "gas only" report.**

Was this a major release as defined by Subsection A of 19.15.29.7 NMAC **No**

Reasons why this would be considered a submission for a notification of a major release **Unavailable.**

*With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.*

**Initial Response**

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

The source of the release has been stopped **True**

The impacted area has been secured to protect human health and the environment **True**

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices **True**

All free liquids and recoverable materials have been removed and managed appropriately **True**

If all the actions described above have not been undertaken, explain why **Not answered.**

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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

I hereby agree and sign off to the above statement **Name: Cody Swanson Steege**  
**Title: Compliance Supervisor**  
**Email: swansonste@marathonoil.com**  
**Date: 08/27/2024**

**Site Characterization**

*Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs) **Not answered.**

What method was used to determine the depth to ground water **Not answered.**

Did this release impact groundwater or surface water **Not answered.**

**What is the minimum distance, between the closest lateral extents of the release and the following surface areas:**

A continuously flowing watercourse or any other significant watercourse **Not answered.**

Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) **Not answered.**

An occupied permanent residence, school, hospital, institution, or church **Not answered.**

A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes **Not answered.**

Any other fresh water well or spring **Not answered.**

Incorporated municipal boundaries or a defined municipal fresh water well field **Not answered.**

A wetland **Not answered.**

A subsurface mine **Not answered.**

An (non-karst) unstable area **Not answered.**

Categorize the risk of this well / site being in a karst geology **Not answered.**

A 100-year floodplain **Not answered.**

Did the release impact areas not on an exploration, development, production, or storage site **Not answered.**

**Remediation Plan**

*Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

Requesting a remediation plan approval with this submission **No**



This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

Summary: nvezex (8/27/2024), None

Reasons

No reasons found for this submission.

Fees

Summary:		Created	Type	Amount	Status	Saved
L5VJ1-240827-C-1410	Fee	8/27/2024	SB553 A.(2) [ADMIN]	\$150.00	Paid [PAID]	8/27/2024
	Payment	8/27/2024	Credit Card [CC]	\$150.00	Paid [PAID]	8/27/2024

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## APPENDIX D

CARMONA RESOURCES





### Nearest water well

Marathon Oil Permian LLC

**Legend**

- 0.50 Mile Radius
- 0.52 Miles
- 1.13 Miles
- 1.16 Miles
- NMSEO Water Well
- SOUTHERN COMFORT 561012 TB (08.17.2024)
- USGS Water Well

58' - Drilled 2018

90' - Drilled 2017

45.02' - Drilled 2013

SOUTHERN COMFORT 561012 TB (08.17.2024)




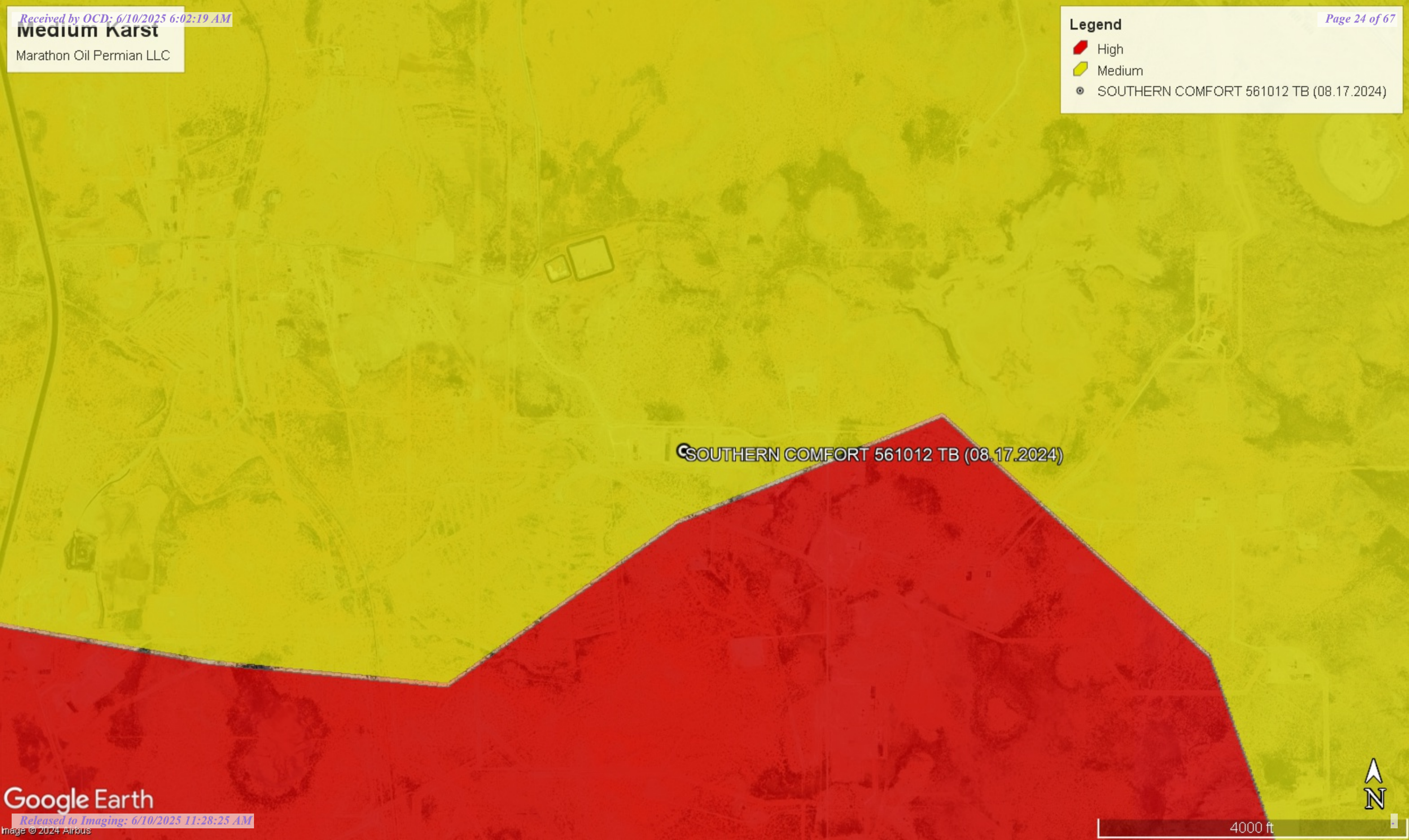


# Medium Karst

Marathon Oil Permian LLC

**Legend**

-  High
-  Medium
-  SOUTHERN COMFORT 561012 TB (08.17.2024)



SOUTHERN COMFORT 561012 TB (08.17.2024)







# 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-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 04026 POD1</a>	CUB	ED	3	2	1	25	24S	28E	590148	3562290		822	190	90	100
<a href="#">C 00857</a>	CUB	ED	3	1	4	30	24S	29E	592135	3561440*		1472	306		
<a href="#">C 04180 POD1</a>	CUB	ED	2	1	2	26	24S	28E	589055	3562502		1828	160	58	102
<a href="#">C 00856</a>	CUB	ED	1	2	4	30	24S	29E	592538	3561644*		1859	380		
<a href="#">C 00862</a>	CUB	ED	1	2	4	30	24S	29E	592538	3561644*		1859	155		
<a href="#">C 03833 POD1</a>	C	ED	2	1	2	26	24S	28E	589014	3562545		1884	96	55	41
<a href="#">C 03423</a>	CUB	ED	2	4	1	26	24S	28E	588786	3561952		1914	126		

Average Depth to Water: **67 feet**  
 Minimum Depth: **55 feet**  
 Maximum Depth: **90 feet**

**Record Count: 7**

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

**Easting (X):** 590679

**Northing (Y):** 3561662

**Radius:** 2000

\*UTM location was derived from PLSS - see Help

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



# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						
<b>Well Tag</b>	<b>POD Number</b>	(quarters are smallest to largest)	(NAD83 UTM in meters)					
		<b>Q64 Q16 Q4 Sec Tws Rng</b>	<b>X Y</b>					
C	04026 POD1	3 2 1 25 24S 28E	590148 3562290					

<b>Driller License:</b> 331	<b>Driller Company:</b> SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.	
<b>Driller Name:</b>		
<b>Drill Start Date:</b> 04/25/2017	<b>Drill Finish Date:</b> 04/26/2017	<b>Plug Date:</b>
<b>Log File Date:</b> 05/16/2017	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b>
<b>Casing Size:</b> 8.60	<b>Depth Well:</b> 190 feet	<b>Depth Water:</b> 90 feet

Water Bearing Stratifications:	Top	Bottom	Description
	120	190	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	88	190

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

10/23/23 2:07 PM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)						(NAD83 UTM in meters)	
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64</b>	<b>Q16</b>	<b>Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
NA	C 04180 POD1	2	1	2	26	24S	28E	589055	3562502

x

<b>Driller License:</b>	1706	<b>Driller Company:</b>	ELITE DRILLERS CORPORATION		
<b>Driller Name:</b>	WALLACE, BRYCE J.				
<b>Drill Start Date:</b>	01/08/2018	<b>Drill Finish Date:</b>	01/10/2018	<b>Plug Date:</b>	
<b>Log File Date:</b>	01/31/2018	<b>PCW Rcv Date:</b>		<b>Source:</b>	Shallow
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>		<b>Estimated Yield:</b>	100 GPM
<b>Casing Size:</b>	9.00	<b>Depth Well:</b>	160 feet	<b>Depth Water:</b>	58 feet

x

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	20	100	Limestone/Dolomite/Chalk
	100	160	Limestone/Dolomite/Chalk

x

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	40	160

x


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

10/25/23 9:24 AM

POINT OF DIVERSION SUMMARY

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	? S	
						Groundwater	New Mexico	GO

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- [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** = 

- 321126104032101

**Minimum number of levels** = 1  
[Save file of selected sites](#) to local disk for future upload

**USGS 321126104032101 24S.28E.26.23133**

Eddy County, New Mexico  
 Latitude 32°11'25.8", Longitude 104°03'27.0" NAD83  
 Land-surface elevation 2,944.90 feet above NGVD29  
 The depth of the well is 126 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**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

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 measur
1978-02-21			D 62610		2917.33	NGVD29	1	Z		
1978-02-21			D 62611		2918.89	NAVD88	1	Z		
1978-02-21			D 72019	27.57			1	Z		
1983-01-31			D 62610		2923.07	NGVD29	1	Z		
1983-01-31			D 62611		2924.63	NAVD88	1	Z		
1983-01-31			D 72019	21.83			1	Z		
1987-10-16			D 62610		2923.07	NGVD29	1	Z		
1987-10-16			D 62611		2924.63	NAVD88	1	Z		
1987-10-16			D 72019	21.83			1	Z		
1988-02-10			D 62610		2923.01	NGVD29	1	Z		
1988-02-10			D 62611		2924.57	NAVD88	1	Z		
1988-02-10			D 72019	21.89			1	Z		
1992-10-20			D 62610		2922.57	NGVD29	1	S		
1992-10-20			D 62611		2924.13	NAVD88	1	S		

Date	Time	?	?	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	?
		Water-level date-time accuracy	Parameter code				S
1992-10-20		D	72019	22.33			S
1998-01-23		D	62610		2917.92	NGVD29	S
1998-01-23		D	62611		2919.48	NAVD88	S
1998-01-23		D	72019	26.98			S
2003-02-04		D	62610		2907.65	NGVD29	S USGS
2003-02-04		D	62611		2909.21	NAVD88	S USGS
2003-02-04		D	72019	37.25			S USGS
2013-01-10	21:50 UTC	m	62610		2899.88	NGVD29	S USGS
2013-01-10	21:50 UTC	m	62611		2901.44	NAVD88	S USGS
2013-01-10	21:50 UTC	m	72019	45.02			S USGS

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
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
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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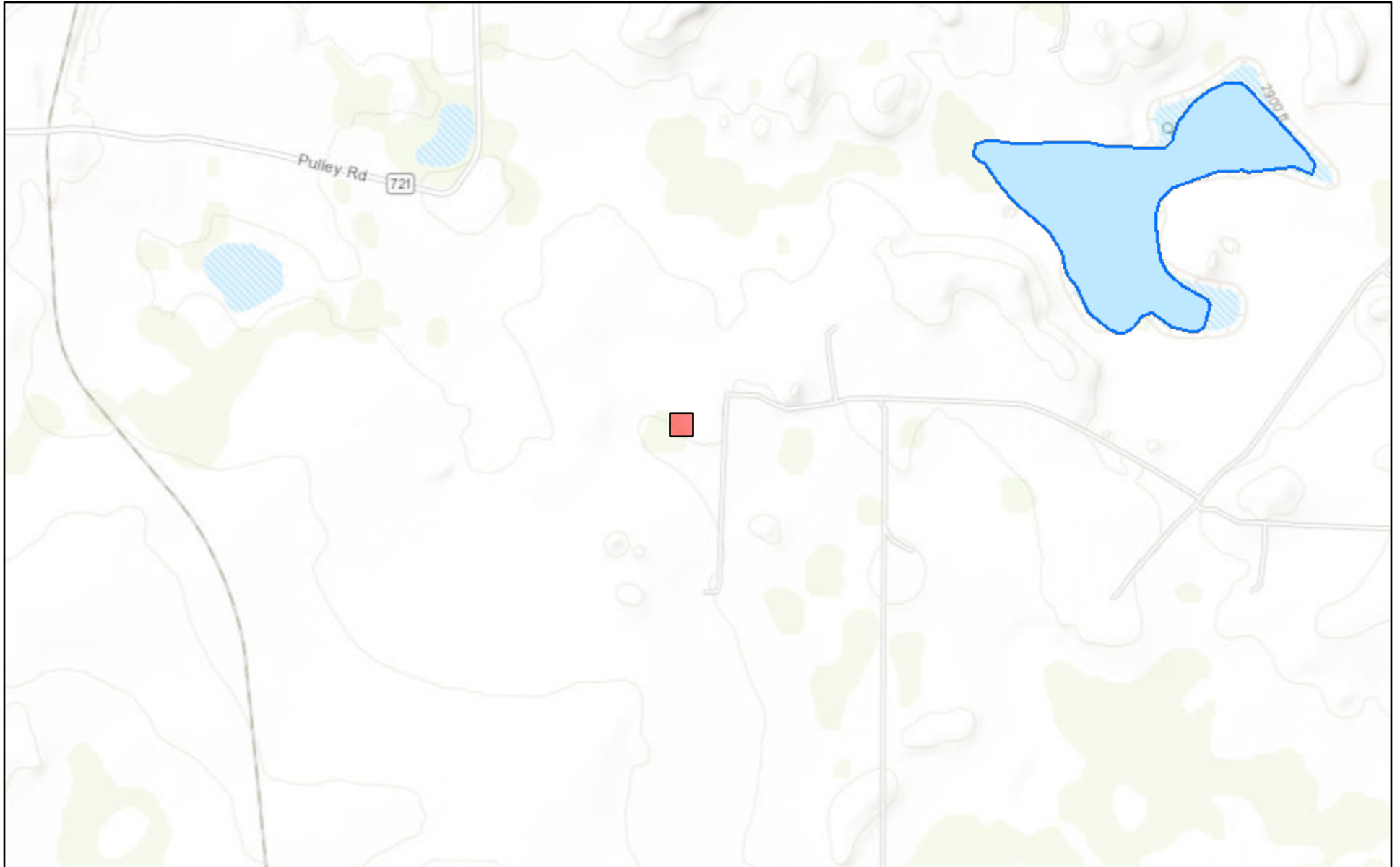
**Title: Groundwater for New Mexico: Water Levels**  
**URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**



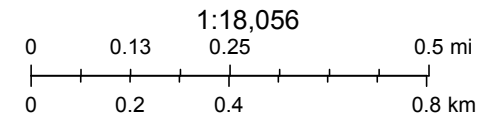
Page Contact Information: [New Mexico Water Data Maintainer](#)  
 Page Last Modified: 2023-10-25 11:26:42 EDT  
 0.29 0.25 nadww01



# New Mexico NFHL Data



October 23, 2023



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

[nmflood.org](http://nmflood.org) is made possible through a collaboration with NMDHSEM,

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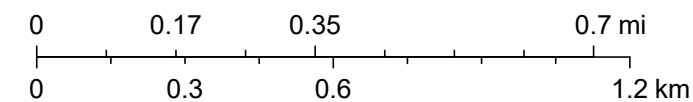
# SOUTHERN COMFORT 561012 TB (08.17.2024)



8/20/2024, 9:59:03 AM

- OSW Water Bodys
- OSE Streams

1:18,056



Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, NM OSE

## APPENDIX E

CARMONA RESOURCES





Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mike Carmona  
 Carmona Resources  
 310 W Wall St  
 Ste 500  
 Midland, Texas 79701

Generated 8/30/2024 12:44:19 PM

## JOB DESCRIPTION

Southern Comfort 5 6 10 12  
 Eddy County, New Mexico

## JOB NUMBER

880-47791-1

Eurofins Midland  
 1211 W. Florida Ave  
 Midland TX 79701



# Eurofins Midland

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
8/30/2024 12:44:19 PM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

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Client: Carmona Resources  
Project/Site: Southern Comfort 5 6 10 12

Laboratory Job ID: 880-47791-1  
SDG: Eddy County, New Mexico

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## Definitions/Glossary

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

### 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
F1	MS and/or MSD recovery exceeds control limits.
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.
α	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: Southern Comfort 5 6 10 12

Job ID: 880-47791-1

**Job ID: 880-47791-1**

**Eurofins Midland**

### Job Narrative 880-47791-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/27/2024 3:40 PM. 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 2.1°C.

#### Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: S-1 (0-1') (880-47791-1), S-1 (1.5') (880-47791-2), S-1 (2') (880-47791-3), S-1 (3') (880-47791-4), S-1 (4') (880-47791-5), S-1 (5') (880-47791-6), H-1 (0-6") (880-47791-7), H-2 (0-6") (880-47791-8), H-3 (0-6") (880-47791-9) and H-4 (0-6") (880-47791-10).

The following samples were listed on the Chain of Custody (COC); however, no samples were received: S-1 (0-1') (880-47791-1), S-1 (1.5') (880-47791-2), S-1 (2') (880-47791-3), S-1 (3') (880-47791-4), S-1 (4') (880-47791-5), S-1 (5') (880-47791-6), H-1 (0-6") (880-47791-7), H-2 (0-6") (880-47791-8), H-3 (0-6") (880-47791-9) and H-4 (0-6") (880-47791-10).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-89559 and analytical batch 880-89543 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

#### Diesel Range Organics

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-89557 and analytical batch 880-89669 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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.

Eurofins Midland

### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (0-1')**

**Lab Sample ID: 880-47791-1**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/28/24 23:00	1
<b>Toluene</b>	<b>0.0460</b>	<b>F1</b>	0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:00	1
Ethylbenzene	<0.00201	U F1	0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:00	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.00513</b>	<b>F1</b>	0.00402		mg/Kg		08/28/24 10:28	08/28/24 23:00	1
<b>o-Xylene</b>	<b>0.00330</b>		0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:00	1
<b>Xylenes, Total</b>	<b>0.00843</b>		0.00402		mg/Kg		08/28/24 10:28	08/28/24 23:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	08/28/24 10:28	08/28/24 23:00	1
1,4-Difluorobenzene (Surr)	102		70 - 130	08/28/24 10:28	08/28/24 23:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total BTEX</b>	<b>0.0544</b>		0.00402		mg/Kg			08/28/24 23:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>434</b>		50.0		mg/Kg			08/29/24 11:53	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	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 11:53	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>434</b>		50.0		mg/Kg		08/28/24 10:25	08/29/24 11:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	08/28/24 10:25	08/29/24 11:53	1
o-Terphenyl	102		70 - 130	08/28/24 10:25	08/29/24 11:53	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2280</b>		99.8		mg/Kg			08/28/24 15:37	20

**Client Sample ID: S-1 (2')**

**Lab Sample ID: 880-47791-3**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/28/24 23:20	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/28/24 23:20	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/28/24 23:20	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/28/24 10:28	08/28/24 23:20	1
<b>o-Xylene</b>	<b>0.00374</b>		0.00199		mg/Kg		08/28/24 10:28	08/28/24 23:20	1
<b>Xylenes, Total</b>	<b>&lt;0.00398</b>	<b>U</b>	<b>0.00398</b>		<b>mg/Kg</b>		<b>08/28/24 10:28</b>	<b>08/28/24 23:20</b>	<b>1</b>

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	08/28/24 10:28	08/28/24 23:20	1
1,4-Difluorobenzene (Surr)	101		70 - 130	08/28/24 10:28	08/28/24 23:20	1

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (2')**

**Lab Sample ID: 880-47791-3**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/28/24 23:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/24 12:09	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	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 12:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 12:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 12:09	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctane	106		70 - 130				08/28/24 10:25	08/29/24 12:09	1
o-Terphenyl	96		70 - 130				08/28/24 10:25	08/29/24 12:09	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9510		250		mg/Kg			08/28/24 15:44	50

**Client Sample ID: S-1 (3')**

**Lab Sample ID: 880-47791-4**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/28/24 23:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/28/24 23:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/28/24 23:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/28/24 23:40	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	113		70 - 130				08/28/24 10:28	08/28/24 23:40	1
1,4-Difluorobenzene (Surr)	98		70 - 130				08/28/24 10:28	08/28/24 23:40	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			08/28/24 23:40	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			08/29/24 12:26	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		08/28/24 10:25	08/29/24 12:26	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 12:26	1

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (3')**

**Lab Sample ID: 880-47791-4**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130				08/28/24 10:25	08/29/24 12:26	1
o-Terphenyl	104		70 - 130				08/28/24 10:25	08/29/24 12:26	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4430		50.0		mg/Kg			08/28/24 16:05	10

**Client Sample ID: S-1 (4')**

**Lab Sample ID: 880-47791-5**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/29/24 00:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 00:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 00:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/29/24 00:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 00:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/29/24 00:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				08/28/24 10:28	08/29/24 00:01	1
1,4-Difluorobenzene (Surr)	97		70 - 130				08/28/24 10:28	08/29/24 00:01	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			08/29/24 00:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/29/24 12:42	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	<49.7	U	49.7		mg/Kg		08/28/24 10:25	08/29/24 12:42	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/28/24 10:25	08/29/24 12:42	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/28/24 10:25	08/29/24 12:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				08/28/24 10:25	08/29/24 12:42	1
o-Terphenyl	94		70 - 130				08/28/24 10:25	08/29/24 12:42	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4390		50.3		mg/Kg			08/28/24 16:12	10

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (5')**

**Lab Sample ID: 880-47791-6**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/29/24 00:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/28/24 10:28	08/29/24 00:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/28/24 10:28	08/29/24 00:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	08/28/24 10:28	08/29/24 00:21	1
1,4-Difluorobenzene (Surr)	97		70 - 130	08/28/24 10:28	08/29/24 00:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/29/24 00:21	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			08/29/24 12:59	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		08/28/24 10:25	08/29/24 12:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 12:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	08/28/24 10:25	08/29/24 12:59	1
o-Terphenyl	85		70 - 130	08/28/24 10:25	08/29/24 12:59	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			08/28/24 17:24	1

**Client Sample ID: H-1 (0-6")**

**Lab Sample ID: 880-47791-7**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/29/24 00:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/28/24 10:28	08/29/24 00:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 00:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/28/24 10:28	08/29/24 00:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	08/28/24 10:28	08/29/24 00:42	1
1,4-Difluorobenzene (Surr)	97		70 - 130	08/28/24 10:28	08/29/24 00:42	1

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: H-1 (0-6")**

**Lab Sample ID: 880-47791-7**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/29/24 00:42	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			08/29/24 13:15	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		08/28/24 10:25	08/29/24 13:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/28/24 10:25	08/29/24 13:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/28/24 10:25	08/29/24 13:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	08/28/24 10:25	08/29/24 13:15	1
o-Terphenyl	93		70 - 130	08/28/24 10:25	08/29/24 13:15	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			08/28/24 16:41	1

**Client Sample ID: H-2 (0-6")**

**Lab Sample ID: 880-47791-8**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/29/24 01:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/29/24 01:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/29/24 01:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/28/24 10:28	08/29/24 01:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/28/24 10:28	08/29/24 01:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/28/24 10:28	08/29/24 01:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	08/28/24 10:28	08/29/24 01:02	1
1,4-Difluorobenzene (Surr)	96		70 - 130	08/28/24 10:28	08/29/24 01:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/29/24 01:02	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			08/29/24 13:32	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		08/28/24 10:25	08/29/24 13:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 13:32	1

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: H-2 (0-6")**

**Lab Sample ID: 880-47791-8**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 13:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				08/28/24 10:25	08/29/24 13:32	1
o-Terphenyl	92		70 - 130				08/28/24 10:25	08/29/24 13:32	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			08/28/24 16:48	1

**Client Sample ID: H-3 (0-6")**

**Lab Sample ID: 880-47791-9**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/29/24 01:22	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 01:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 01:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/29/24 01:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/28/24 10:28	08/29/24 01:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/28/24 10:28	08/29/24 01:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				08/28/24 10:28	08/29/24 01:22	1
1,4-Difluorobenzene (Surr)	98		70 - 130				08/28/24 10:28	08/29/24 01:22	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			08/29/24 01:22	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			08/29/24 13:48	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		08/28/24 10:25	08/29/24 13:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 13:48	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/28/24 10:25	08/29/24 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				08/28/24 10:25	08/29/24 13:48	1
o-Terphenyl	81		70 - 130				08/28/24 10:25	08/29/24 13:48	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.04	U	5.04		mg/Kg			08/28/24 17:31	1

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### Client Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: H-4 (0-6")**

**Lab Sample ID: 880-47791-10**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

**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		08/28/24 10:28	08/29/24 01:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 01:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 01:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/28/24 10:28	08/29/24 01:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/29/24 01:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/28/24 10:28	08/29/24 01:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	08/28/24 10:28	08/29/24 01:43	1
1,4-Difluorobenzene (Surr)	97		70 - 130	08/28/24 10:28	08/29/24 01:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/29/24 01:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/24 14:21	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	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 14:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 14:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	08/28/24 10:25	08/29/24 14:21	1
o-Terphenyl	81		70 - 130	08/28/24 10:25	08/29/24 14:21	1

**Method: EPA 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			08/28/24 17:02	1



## Surrogate Summary

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
880-47791-1	S-1 (0-1')	119	102
880-47791-1 MS	S-1 (0-1')	118	107
880-47791-1 MSD	S-1 (0-1')	121	102
880-47791-3	S-1 (2')	121	101
880-47791-4	S-1 (3')	113	98
880-47791-5	S-1 (4')	111	97
880-47791-6	S-1 (5')	111	97
880-47791-7	H-1 (0-6")	108	97
880-47791-8	H-2 (0-6")	113	96
880-47791-9	H-3 (0-6")	113	98
880-47791-10	H-4 (0-6")	113	97
LCS 880-89559/1-A	Lab Control Sample	105	99
LCSD 880-89559/2-A	Lab Control Sample Dup	104	98
MB 880-89553/5-A	Method Blank	109	91
MB 880-89559/5-A	Method Blank	109	92

**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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
880-47791-1	S-1 (0-1')	106	102
880-47791-3	S-1 (2')	106	96
880-47791-4	S-1 (3')	117	104
880-47791-5	S-1 (4')	105	94
880-47791-6	S-1 (5')	98	85
880-47791-7	H-1 (0-6")	108	93
880-47791-8	H-2 (0-6")	107	92
880-47791-9	H-3 (0-6")	94	81
880-47791-10	H-4 (0-6")	93	81
890-7042-A-2-B MS	Matrix Spike	87	82
890-7042-A-2-C MSD	Matrix Spike Duplicate	86	82
LCS 880-89557/2-A	Lab Control Sample	129	130
LCSD 880-89557/3-A	Lab Control Sample Dup	125	124
MB 880-89557/1-A	Method Blank	87	81

**Surrogate Legend**  
 1CO = 1-Chlorooctane  
 OTPH = o-Terphenyl

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### QC Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

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

Lab Sample ID: MB 880-89553/5-A  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 89553

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/28/24 09:33	08/28/24 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/28/24 09:33	08/28/24 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/28/24 09:33	08/28/24 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/28/24 09:33	08/28/24 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/28/24 09:33	08/28/24 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/28/24 09:33	08/28/24 11:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	08/28/24 09:33	08/28/24 11:41	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/28/24 09:33	08/28/24 11:41	1

Lab Sample ID: MB 880-89559/5-A  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/28/24 22:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/28/24 22:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/28/24 22:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/28/24 10:28	08/28/24 22:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/28/24 10:28	08/28/24 22:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/28/24 10:28	08/28/24 22:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	08/28/24 10:28	08/28/24 22:38	1
1,4-Difluorobenzene (Surr)	92		70 - 130	08/28/24 10:28	08/28/24 22:38	1

Lab Sample ID: LCS 880-89559/1-A  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1093		mg/Kg		109	70 - 130
Toluene	0.100	0.1057		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2198		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1114		mg/Kg		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-89559/2-A  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1128		mg/Kg		113	70 - 130	3	35

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### QC Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

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

Lab Sample ID: LCSD 880-89559/2-A  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Toluene	0.100	0.1094		mg/Kg		109	70 - 130	3	35	
Ethylbenzene	0.100	0.1056		mg/Kg		106	70 - 130	3	35	
m-Xylene & p-Xylene	0.200	0.2261		mg/Kg		113	70 - 130	3	35	
o-Xylene	0.100	0.1145		mg/Kg		115	70 - 130	3	35	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-47791-1 MS  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: S-1 (0-1')  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Benzene	<0.00201	U	0.100	0.1103		mg/Kg		110	70 - 130			
Toluene	0.0460	F1	0.100	0.2079	F1	mg/Kg		162	70 - 130			
Ethylbenzene	<0.00201	U F1	0.100	0.07973		mg/Kg		80	70 - 130			
m-Xylene & p-Xylene	0.00513	F1	0.200	0.1772		mg/Kg		86	70 - 130			
o-Xylene	0.00330		0.100	0.09040		mg/Kg		87	70 - 130			

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 880-47791-1 MSD  
 Matrix: Solid  
 Analysis Batch: 89543

Client Sample ID: S-1 (0-1')  
 Prep Type: Total/NA  
 Prep Batch: 89559

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Benzene	<0.00201	U	0.100	0.1114		mg/Kg		111	70 - 130	1	35	
Toluene	0.0460	F1	0.100	0.1644		mg/Kg		118	70 - 130	23	35	
Ethylbenzene	<0.00201	U F1	0.100	0.06114	F1	mg/Kg		61	70 - 130	26	35	
m-Xylene & p-Xylene	0.00513	F1	0.200	0.1395	F1	mg/Kg		67	70 - 130	24	35	
o-Xylene	0.00330		0.100	0.1024		mg/Kg		99	70 - 130	12	35	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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

Lab Sample ID: MB 880-89557/1-A  
 Matrix: Solid  
 Analysis Batch: 89669

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 89557

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 03:43	1

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### QC Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

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

**Lab Sample ID: MB 880-89557/1-A**  
**Matrix: Solid**  
**Analysis Batch: 89669**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 89557**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 03:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/28/24 10:25	08/29/24 03:43	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	87		70 - 130	08/28/24 10:25	08/29/24 03:43	1
o-Terphenyl	81		70 - 130	08/28/24 10:25	08/29/24 03:43	1

**Lab Sample ID: LCS 880-89557/2-A**  
**Matrix: Solid**  
**Analysis Batch: 89669**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 89557**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	1000	1277		mg/Kg		128	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	129		70 - 130
o-Terphenyl	130		70 - 130

**Lab Sample ID: LCSD 880-89557/3-A**  
**Matrix: Solid**  
**Analysis Batch: 89669**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 89557**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1069		mg/Kg		107	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1239		mg/Kg		124	70 - 130	3	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1-Chlorooctane	125		70 - 130
o-Terphenyl	124		70 - 130

**Lab Sample ID: 890-7042-A-2-B MS**  
**Matrix: Solid**  
**Analysis Batch: 89669**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 89557**

Analyte	Sample	Sample	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	755.7		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	734.1	F1	mg/Kg		69	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	87		70 - 130
o-Terphenyl	82		70 - 130

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### QC Sample Results

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

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

Lab Sample ID: 890-7042-A-2-C MSD  
 Matrix: Solid  
 Analysis Batch: 89669

Client Sample ID: Matrix Spike Duplicate  
 Prep Type: Total/NA  
 Prep Batch: 89557

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	<49.9	U	999	752.4		mg/Kg		75	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	715.6	F1	mg/Kg		67	70 - 130	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>		<b>MSD</b>						<b>Limits</b>	
1-Chlorooctane	86									70 - 130	
o-Terphenyl	82									70 - 130	

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

Lab Sample ID: MB 880-89572/1-A  
 Matrix: Solid  
 Analysis Batch: 89599

Client Sample ID: Method Blank  
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/28/24 13:42	1

Lab Sample ID: LCS 880-89572/2-A  
 Matrix: Solid  
 Analysis Batch: 89599

Client Sample ID: Lab Control Sample  
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	233.3		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-89572/3-A  
 Matrix: Solid  
 Analysis Batch: 89599

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	234.0		mg/Kg		94	90 - 110	0	20

Lab Sample ID: 880-47791-3 MS  
 Matrix: Solid  
 Analysis Batch: 89599

Client Sample ID: S-1 (2')  
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	9510		12500	22590		mg/Kg		105	90 - 110

Lab Sample ID: 880-47791-3 MSD  
 Matrix: Solid  
 Analysis Batch: 89599

Client Sample ID: S-1 (2')  
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	9510		12500	22590		mg/Kg		105	90 - 110	0	20

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### QC Association Summary

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

#### GC VOA

##### Analysis Batch: 89543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	8021B	89559
880-47791-3	S-1 (2')	Total/NA	Solid	8021B	89559
880-47791-4	S-1 (3')	Total/NA	Solid	8021B	89559
880-47791-5	S-1 (4')	Total/NA	Solid	8021B	89559
880-47791-6	S-1 (5')	Total/NA	Solid	8021B	89559
880-47791-7	H-1 (0-6")	Total/NA	Solid	8021B	89559
880-47791-8	H-2 (0-6")	Total/NA	Solid	8021B	89559
880-47791-9	H-3 (0-6")	Total/NA	Solid	8021B	89559
880-47791-10	H-4 (0-6")	Total/NA	Solid	8021B	89559
MB 880-89553/5-A	Method Blank	Total/NA	Solid	8021B	89553
MB 880-89559/5-A	Method Blank	Total/NA	Solid	8021B	89559
LCS 880-89559/1-A	Lab Control Sample	Total/NA	Solid	8021B	89559
LCSD 880-89559/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	89559
880-47791-1 MS	S-1 (0-1')	Total/NA	Solid	8021B	89559
880-47791-1 MSD	S-1 (0-1')	Total/NA	Solid	8021B	89559

##### Prep Batch: 89553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-89553/5-A	Method Blank	Total/NA	Solid	5035	

##### Prep Batch: 89559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	5035	
880-47791-3	S-1 (2')	Total/NA	Solid	5035	
880-47791-4	S-1 (3')	Total/NA	Solid	5035	
880-47791-5	S-1 (4')	Total/NA	Solid	5035	
880-47791-6	S-1 (5')	Total/NA	Solid	5035	
880-47791-7	H-1 (0-6")	Total/NA	Solid	5035	
880-47791-8	H-2 (0-6")	Total/NA	Solid	5035	
880-47791-9	H-3 (0-6")	Total/NA	Solid	5035	
880-47791-10	H-4 (0-6")	Total/NA	Solid	5035	
MB 880-89559/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-89559/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-89559/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-47791-1 MS	S-1 (0-1')	Total/NA	Solid	5035	
880-47791-1 MSD	S-1 (0-1')	Total/NA	Solid	5035	

##### Analysis Batch: 89717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	Total BTEX	
880-47791-3	S-1 (2')	Total/NA	Solid	Total BTEX	
880-47791-4	S-1 (3')	Total/NA	Solid	Total BTEX	
880-47791-5	S-1 (4')	Total/NA	Solid	Total BTEX	
880-47791-6	S-1 (5')	Total/NA	Solid	Total BTEX	
880-47791-7	H-1 (0-6")	Total/NA	Solid	Total BTEX	
880-47791-8	H-2 (0-6")	Total/NA	Solid	Total BTEX	
880-47791-9	H-3 (0-6")	Total/NA	Solid	Total BTEX	
880-47791-10	H-4 (0-6")	Total/NA	Solid	Total BTEX	

### QC Association Summary

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

#### GC Semi VOA

##### Prep Batch: 89557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-47791-3	S-1 (2')	Total/NA	Solid	8015NM Prep	
880-47791-4	S-1 (3')	Total/NA	Solid	8015NM Prep	
880-47791-5	S-1 (4')	Total/NA	Solid	8015NM Prep	
880-47791-6	S-1 (5')	Total/NA	Solid	8015NM Prep	
880-47791-7	H-1 (0-6")	Total/NA	Solid	8015NM Prep	
880-47791-8	H-2 (0-6")	Total/NA	Solid	8015NM Prep	
880-47791-9	H-3 (0-6")	Total/NA	Solid	8015NM Prep	
880-47791-10	H-4 (0-6")	Total/NA	Solid	8015NM Prep	
MB 880-89557/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-89557/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-89557/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-7042-A-2-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-7042-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

##### Analysis Batch: 89669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	8015B NM	89557
880-47791-3	S-1 (2')	Total/NA	Solid	8015B NM	89557
880-47791-4	S-1 (3')	Total/NA	Solid	8015B NM	89557
880-47791-5	S-1 (4')	Total/NA	Solid	8015B NM	89557
880-47791-6	S-1 (5')	Total/NA	Solid	8015B NM	89557
880-47791-7	H-1 (0-6")	Total/NA	Solid	8015B NM	89557
880-47791-8	H-2 (0-6")	Total/NA	Solid	8015B NM	89557
880-47791-9	H-3 (0-6")	Total/NA	Solid	8015B NM	89557
880-47791-10	H-4 (0-6")	Total/NA	Solid	8015B NM	89557
MB 880-89557/1-A	Method Blank	Total/NA	Solid	8015B NM	89557
LCS 880-89557/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	89557
LCSD 880-89557/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	89557
890-7042-A-2-B MS	Matrix Spike	Total/NA	Solid	8015B NM	89557
890-7042-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	89557

##### Analysis Batch: 89790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Total/NA	Solid	8015 NM	
880-47791-3	S-1 (2')	Total/NA	Solid	8015 NM	
880-47791-4	S-1 (3')	Total/NA	Solid	8015 NM	
880-47791-5	S-1 (4')	Total/NA	Solid	8015 NM	
880-47791-6	S-1 (5')	Total/NA	Solid	8015 NM	
880-47791-7	H-1 (0-6")	Total/NA	Solid	8015 NM	
880-47791-8	H-2 (0-6")	Total/NA	Solid	8015 NM	
880-47791-9	H-3 (0-6")	Total/NA	Solid	8015 NM	
880-47791-10	H-4 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

##### Leach Batch: 89572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Soluble	Solid	DI Leach	
880-47791-3	S-1 (2')	Soluble	Solid	DI Leach	
880-47791-4	S-1 (3')	Soluble	Solid	DI Leach	

Eurofins Midland

### QC Association Summary

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

#### HPLC/IC (Continued)

##### Leach Batch: 89572 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-5	S-1 (4')	Soluble	Solid	DI Leach	
880-47791-6	S-1 (5')	Soluble	Solid	DI Leach	
880-47791-7	H-1 (0-6")	Soluble	Solid	DI Leach	
880-47791-8	H-2 (0-6")	Soluble	Solid	DI Leach	
880-47791-9	H-3 (0-6")	Soluble	Solid	DI Leach	
880-47791-10	H-4 (0-6")	Soluble	Solid	DI Leach	
MB 880-89572/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-89572/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-89572/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-47791-3 MS	S-1 (2')	Soluble	Solid	DI Leach	
880-47791-3 MSD	S-1 (2')	Soluble	Solid	DI Leach	

##### Analysis Batch: 89599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-47791-1	S-1 (0-1')	Soluble	Solid	300.0	89572
880-47791-3	S-1 (2')	Soluble	Solid	300.0	89572
880-47791-4	S-1 (3')	Soluble	Solid	300.0	89572
880-47791-5	S-1 (4')	Soluble	Solid	300.0	89572
880-47791-6	S-1 (5')	Soluble	Solid	300.0	89572
880-47791-7	H-1 (0-6")	Soluble	Solid	300.0	89572
880-47791-8	H-2 (0-6")	Soluble	Solid	300.0	89572
880-47791-9	H-3 (0-6")	Soluble	Solid	300.0	89572
880-47791-10	H-4 (0-6")	Soluble	Solid	300.0	89572
MB 880-89572/1-A	Method Blank	Soluble	Solid	300.0	89572
LCS 880-89572/2-A	Lab Control Sample	Soluble	Solid	300.0	89572
LCSD 880-89572/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	89572
880-47791-3 MS	S-1 (2')	Soluble	Solid	300.0	89572
880-47791-3 MSD	S-1 (2')	Soluble	Solid	300.0	89572

### Lab Chronicle

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (0-1')**

**Lab Sample ID: 880-47791-1**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/28/24 23:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/28/24 23:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 11:53	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 11:53	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	89599	08/28/24 15:37	SMC	EET MID

**Client Sample ID: S-1 (2')**

**Lab Sample ID: 880-47791-3**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/28/24 23:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/28/24 23:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 12:09	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 12:09	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	89599	08/28/24 15:44	SMC	EET MID

**Client Sample ID: S-1 (3')**

**Lab Sample ID: 880-47791-4**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/28/24 23:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/28/24 23:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 12:26	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 12:26	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	89599	08/28/24 16:05	SMC	EET MID

**Client Sample ID: S-1 (4')**

**Lab Sample ID: 880-47791-5**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 00:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 00:01	SM	EET MID

Eurofins Midland



### Lab Chronicle

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: S-1 (4')**

**Lab Sample ID: 880-47791-5**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			89790	08/29/24 12:42	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 12:42	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	89599	08/28/24 16:12	SMC	EET MID

**Client Sample ID: S-1 (5')**

**Lab Sample ID: 880-47791-6**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 00:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 00:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 12:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 12:59	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	89599	08/28/24 17:24	SMC	EET MID

**Client Sample ID: H-1 (0-6")**

**Lab Sample ID: 880-47791-7**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 00:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 00:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 13:15	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 13:15	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	89599	08/28/24 16:41	SMC	EET MID

**Client Sample ID: H-2 (0-6")**

**Lab Sample ID: 880-47791-8**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 01:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 01:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 13:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 13:32	TKC	EET MID

Eurofins Midland

### Lab Chronicle

Client: Carmona Resources  
 Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
 SDG: Eddy County, New Mexico

**Client Sample ID: H-2 (0-6")**

**Lab Sample ID: 880-47791-8**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	89599	08/28/24 16:48	SMC	EET MID

**Client Sample ID: H-3 (0-6")**

**Lab Sample ID: 880-47791-9**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

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	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 01:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 01:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 13:48	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 13:48	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	89599	08/28/24 17:31	SMC	EET MID

**Client Sample ID: H-4 (0-6")**

**Lab Sample ID: 880-47791-10**

Date Collected: 08/26/24 00:00

Matrix: Solid

Date Received: 08/27/24 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	89559	08/28/24 10:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	89543	08/29/24 01:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			89717	08/29/24 01:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			89790	08/29/24 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	89557	08/28/24 10:25	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	89669	08/29/24 14:21	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	89572	08/28/24 11:18	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	89599	08/28/24 17:02	SMC	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: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
SDG: Eddy County, New Mexico

#### 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	06-30-25												
<p>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.</p> <table border="1"> <thead> <tr> <th>Analysis Method</th> <th>Prep Method</th> <th>Matrix</th> <th>Analyte</th> </tr> </thead> <tbody> <tr> <td>8015 NM</td> <td></td> <td>Solid</td> <td>Total TPH</td> </tr> <tr> <td>Total BTEX</td> <td></td> <td>Solid</td> <td>Total BTEX</td> </tr> </tbody> </table>				Analysis Method	Prep Method	Matrix	Analyte	8015 NM		Solid	Total TPH	Total BTEX		Solid	Total BTEX
Analysis Method	Prep Method	Matrix	Analyte												
8015 NM		Solid	Total TPH												
Total BTEX		Solid	Total BTEX												

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### Method Summary

Client: Carmona Resources  
Project/Site: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
SDG: Eddy County, New Mexico

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	EPA	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
- EPA = US Environmental Protection Agency
- 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: Southern Comfort 5 6 10 12

Job ID: 880-47791-1  
SDG: Eddy County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-47791-1	S-1 (0-1')	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-3	S-1 (2')	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-4	S-1 (3')	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-5	S-1 (4')	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-6	S-1 (5')	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-7	H-1 (0-6")	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-8	H-2 (0-6")	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-9	H-3 (0-6")	Solid	08/26/24 00:00	08/27/24 15:40
880-47791-10	H-4 (0-6")	Solid	08/26/24 00:00	08/27/24 15:40

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880-47791 Chain of Custody

Project Manager: Clinton Merritt  
 Company Name: Carmona Resources  
 Address: 310 W Wall St Ste 500  
 City, State ZIP: Midland, TX 79701  
 Phone:   
 Bill to: (if different) Cody Swanson Steege  
 Company Name: Marathon Oil Corporation  
 Address: 990 Town and Country Blvd  
 City, State ZIP: Houston, TX 77024  
 Email: swansonste@marathonoil.com

Work Order Comments  
 Program: UST/PST PRP Brownfields JRC perfund   
 State of Project:   
 Reporting: Level II  Level III  ST/UST  RRP  Level IV   
 Deliverables: EDD  ADaPT  Other:

Project Name:	Turn Around		Pres. Code	ANALYSIS REQUEST										Preservative Codes								
	Yes (No)	Wet Ice:		Parameters																		
Project Number:	Yes	No	Thermometer ID:											None: NO								
Project Location	Yes	No	Correction Factor:											Cool: Cool								
Sampler's Name:	Yes	No	Temperature Reading:											HCL: HC								
PO #:	Yes	No	Corrected Temperature:											H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>								
SAMPLE RECEIPT			Tergo Blank:		Yes (No)		Wet Ice:		Yes		No											
Received Intact:	Yes	No	Thermometer ID:																			
Cooler Custody Seals:	Yes	No	M/A																			
Sample Custody Seals:	Yes	No	N/A																			
Total Containers:	Yes	No	N/A																			
Sample Identification	Date	Time	Soil	Water	Grab/Comp	# of Cont							Sample Comments									
S-1 (0-1')	8/26/2024		X		G	1	BTX 8021B															
S-1 (1.5')	8/26/2024		X		G	1	TPH 8015M (GRO + DRO + MRO)															
S-1 (2')	8/26/2024		X		G	1	Chloride 300.0															
S-1 (3')	8/26/2024		X		G	1																
S-1 (4')	8/26/2024		X		G	1																
S-1 (5')	8/26/2024		X		G	1																
H-1 (0-6")	8/26/2024		X		G	1																
H-2 (0-6")	8/26/2024		X		G	1																
H-3 (0-6")	8/26/2024		X		G	1																
H-4 (0-6")	8/26/2024		X		G	1																

Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.com, Clint Merritt merrittc@carmonaresources.com

Relinquished by: (Signature) Date/Time 8/30/2024 5:40  
 Received by: (Signature) Date/Time 8/27/2024 5:40



### Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 880-47791-1  
SDG Number: Eddy County, New Mexico

**Login Number: 47791**

**List Number: 1**

**Creator: Vasquez, Julisa**

**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.	False	Refer to Job Narrative for details.
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	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS

Action 459388

**QUESTIONS**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2423226373
Incident Name	NAPP2423226373 SOUTHERN COMFORT 561012 TB @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received
Incident Facility	[fAPP2126039206] SOUTHERN COMFORT 561012 TB

**Location of Release Source**

Please answer all the questions in this group.

Site Name	SOUTHERN COMFORT 561012 TB
Date Release Discovered	08/17/2024
Surface Owner	State

**Incident Details**

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

**Nature and Volume of Release**

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

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Fitting   Produced Water   Released: 20 BBL   Recovered: 20 BBL   Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A 90 degree elbow on the water leg of the separator developed a hole resulting in 20.48 bbl to be released into lined secondary containment. All standing fluid was recovered. Remediation work is ongoing.



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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 2

Action 459388

**QUESTIONS (continued)**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>No</b>
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

**Initial Response**

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

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

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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

I hereby agree and sign off to the above statement	Name: Cody Swanson Steege Title: Compliance Supervisor Email: swansonste@marathonoil.com Date: 08/27/2024
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Action 459388

**QUESTIONS (continued)**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

**Site Characterization**  
*Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

**Remediation Plan**

*Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	9510
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	434
GRO+DRO (EPA SW-846 Method 8015M)	434
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

*Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.*

On what estimated date will the remediation commence	10/11/2034
On what date will (or did) the final sampling or liner inspection occur	10/11/2034
On what date will (or was) the remediation complete(d)	10/11/2034
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	50
What is the estimated volume (in cubic yards) that will be remediated	10

*These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.*

*The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*

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QUESTIONS, Page 4

Action 459388

**QUESTIONS (continued)**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

**Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Cody Swanson Steege Title: Compliance Supervisor Email: swansonste@marathonoil.com Date: 06/10/2025
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The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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Action 459388

**QUESTIONS (continued)**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Deferral Requests Only</b>	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	The release occurred under a main separator inside the facility. Remediation would cause the facility to be shut in entirely.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	0
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	0
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (f#) on which this deferral should be granted	SOUTHERN COMFORT 561012 TB [fAPP2126039206]
Enter the well API (30-) on which this deferral should be granted	30-015-44332 SOUTHERN COMFORT 25 36 STATE X #001H
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Cody Swanson Steege Title: Compliance Supervisor Email: swansonste@marathonoil.com Date: 06/10/2025



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Action 459388

**QUESTIONS (continued)**

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	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 459388

**CONDITIONS**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 459388
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**CONDITIONS**

Created By	Condition	Condition Date
michael.buchanan	Deferral approved. Deferral of S-1 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	6/10/2025