



April 23, 2025

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Closure Request
Firethorn CTB
Incident Number NAPP2503441044
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Matador Production Company (Matador), has prepared this *Closure Request* to document assessment and soil sampling activities performed at the Firethorn CTB (Site) in Unit C, Section 04, Township 26 South, Range 36 East, in Lea County, New Mexico (Figure 1). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of crude oil, which impacted the lined secondary containment as well as just beyond the containment walls at the Site. Based on field observations, field screening activities, and laboratory analytical results, Matador is submitting this *Closure Request* and requesting closure for Incident Number NAPP2503441044.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Lea County, New Mexico (32.07774°, -103.27376°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On February 02, 2025, a pipeline ruptured due to flowback operations and fluid from the release impacted a lined secondary containment at the Site. The pipeline rupture resulted in the release of approximately 14 barrels (bbls) of crude oil; 2 bbls of crude oil were recovered via vacuum truck. Matador reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on February 17, 2025. The release was assigned Incident Number NAPP2503441044. A 48-hour advance notice of a liner inspection was provided via email to the NMOCD office on February 12, 2025. A liner integrity inspection was conducted by Ensolum personnel on February 14, 2025, and the liner was determined to be insufficient to contain the release in question. The Form C-141 can be referenced within the NMOCD Incident Portal.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

According to the New Mexico Office of the State Engineer (NMOSE), the closest permitted groundwater well with depth to groundwater data is CP 01952 POD1, located approximately 328 feet east of the

release area. CP 01952 POD1 was a monitoring well drilled to establish depth to groundwater at the Site. The well had a reported depth to groundwater greater than 101 feet below ground surface (bgs) and a total depth of 101 feet bgs. There are no regional or Site-specific hydrogeological conditions, such as shallow surface water, karst features, wetlands, or vegetation to suggest the Site is conducive to shallow groundwater. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 479 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

On February 07, 2025, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Ensolum personnel mapped the release extent and collected two lateral delineation soil samples (SS02 and SS04) on the south and north sides of the release extent, respectively, at ground surface and 1-foot bgs. On February 14, 2025, Ensolum personnel completed a liner integrity inspection, and four holes were identified in the lined secondary containment. Two additional lateral delineation samples (SS01 and SS03) were collected on the east and west sides of the release extent, respectively, at ground surface and 1-foot bgs to verify the lateral extent of impacted soil. Ensolum personnel advanced two boreholes (BH01 and BH02) via hand auger to a depth of 5 feet and 4 feet bgs, respectively, within the release extent to verify the vertical extent of impacted soil. Soil from the lateral delineation samples (SS02 and SS04) were field screened for TPH utilizing a calibrated PetroFLAG® soil analyzer system and chloride using Hach® chloride QuanTab® test strips. Soil from the additional lateral delineation soil samples (SS01 and SS03) and from vertical delineation soil samples (BH01 and BH02) were field screened for volatile organic compounds (VOCs) utilizing a calibrated Photoionization Detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Ensolum personnel returned to the Site on February 20, 2025, to advance two boreholes (BH03 and BH04) via hand auger to a depth of 4 feet bgs in borehole BH03 and to a depth of 1-foot bgs in borehole BH04; borehole BH04 was advanced inside the lined secondary containment. On February 25, 2025, Ensolum personnel advanced three additional boreholes inside the lined secondary containment via hand auger to a depth of 2 feet bgs in borehole BH05 and 1-foot bgs in boreholes BH06 and BH07. Soil from borehole samples BH03 through BH07 were field screened for TPH utilizing a calibrated PetroFLAG® soil analyzer system and chloride using Hach® chloride QuanTab® test strips.

The delineation soil sample locations are depicted on Figure 2. Lithologic Sample Logs are included as Appendix B. Photographs were taken during the liner integrity inspection and during soil sampling activities and a photographic log is included in Appendix C.

All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech Analytical Laboratory (Envirotech) in Farmington, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for lateral delineation soil samples (SS01 through SS04), collected around the release extent, were compliant with the Site Closure criteria and with the strictest Closure Criteria per NMOCD Table I. Laboratory analytical results from delineation boreholes BH01 and BH02 collected from the on-pad release extent exceeded the Site Closure Criteria at ground surface but were in compliance with the Site Closure Criteria and strictest Closure Criteria at a terminal depth of 1-foot bgs. Borehole BH03 collected from the release area on the north side of the lined secondary containment was in compliance with the Site Closure Criteria at ground surface and with the strictest Closure Criteria at a terminal depth of 1-foot bgs. Boreholes (BH04 through BH07) collected from inside the lined secondary containment, were all in compliance with the Site Closure Criteria at ground surface and with the strictest Closure Criteria at a terminal depth of 1-foot bgs. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Appendix D.

EXCAVATION AND CONFIRMATION SOIL SAMPLING ACTIVITIES

From March 25 through March 28, 2025, impacted soil was excavated via hydrovac from the release extent outside of containment as indicated by visible staining and delineation soil sampling results. The excavation occurred on the north, west, and south sides of the lined secondary tank containment and around associated production equipment. To direct excavation activities, Ensolum personnel screened soil for chloride and TPH. On March 26, 2025, one additional lateral delineation soil sample (SS01A) was collected at ground surface.

Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing at least 200 square feet from the floor of the scrape. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples (FS01 through FS15) were collected from the floor of the excavation at depths ranging from 0.5 feet to 1-foot bgs. One confirmation sidewall soil sample (SW01) was collected from the 1-foot excavation area on the south side of the containment wall. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The final excavation extent measured approximately 2,829 square feet. A total of approximately 105 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for lateral delineation soil sample SS01A collected at ground surface was in compliance with the Site Closure Criteria and with the strictest Closure Criteria. Laboratory analytical results for excavation floor samples (FS01 through FS15), collected from the floor of the release extent, were compliant with the Site Closure criteria and with the strictest Closure Criteria per NMOCD Table I at depths ranging from ground surface to 1-foot bgs. Laboratory analytical results from confirmation sidewall soil sample SW01, collected from ground surface to 1-foot bgs, was in compliance with the Site Closure Criteria and with the strictest Closure Criteria. Laboratory analytical results are summarized in Table 2 and the complete laboratory analytical report is included as Appendix D.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 2025 release of crude oil at the Site. A liner integrity inspection was performed and vertical delineation sampling beneath the containment liner was completed; Ensolum personnel immediately patched the holes in the liner once delineation soil sampling was completed. Laboratory analytical results from vertical delineation samples (BH04 through BH07) indicated all COCs were in compliance with the Site Closure Criteria at ground surface. The release area has been laterally and vertically defined in accordance with the strictest Closure Criteria per NMOCD Table I criteria. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were in compliance with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of impacted and waste-containing soil has mitigated adverse conditions at this Site. Depth to groundwater has been estimated to be greater than 101 feet bgs and no other sensitive receptors were identified near the release extent. Matador believes these remedial actions are protective of human health, the environment, and groundwater. As such, Matador respectfully requests closure for Incident Number nAPP2503441044.

If you have any questions or comments, please contact Ms. Ashley Giovengo at (575) 988-0055 or agiovengo@ensolum.com.

Sincerely,
Ensolum, LLC



Ashley Giovengo
Associate Principal



Daniel R. Moir, PG
Senior Managing Geologist

cc: Jason Touchet, Matador

Appendices:

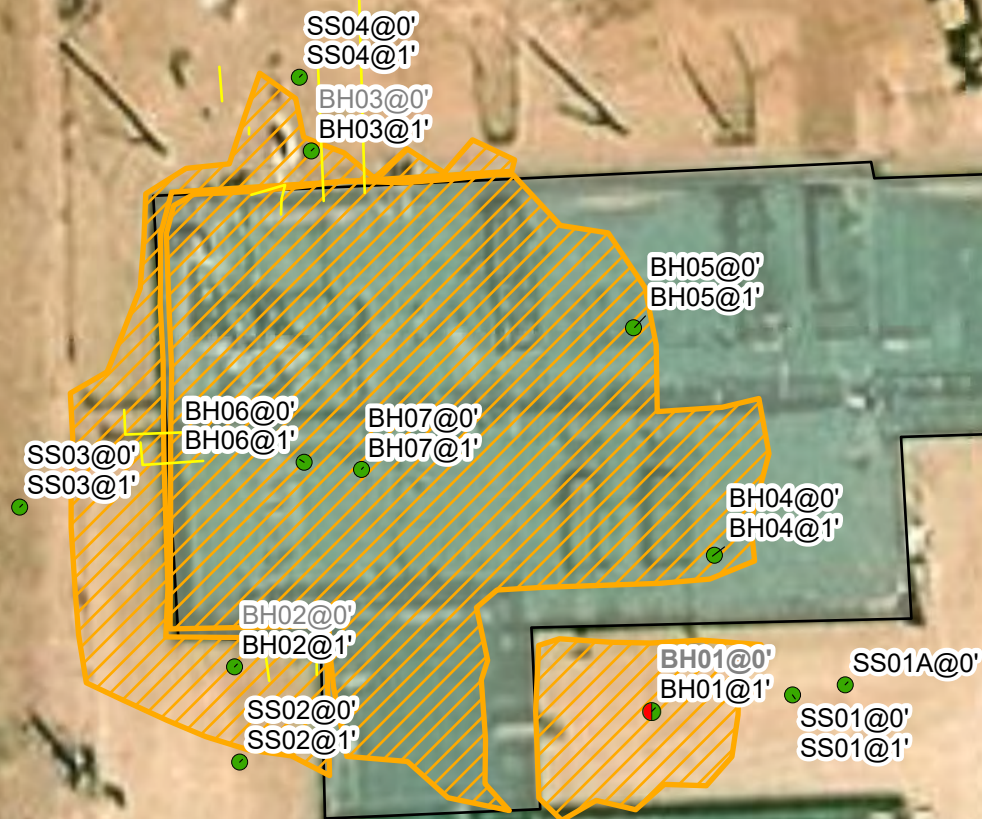
Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Delineation Soil Sample Analytical Results
Table 2	Excavation Soil Sample Analytical Results
Appendix A	Well Record and Log
Appendix B	Lithologic Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Correspondence



FIGURES

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- ▨ Release Extent
- ▭ Liner Containment Area



Notes:

Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable closure criteria.
 Grey text indicate soil sample was removed during excavation activities.

0 5 10 20 30 40
 Feet

Sources: Environmental Systems Research Institute (ESRI)



Delineation Soil Sample Locations

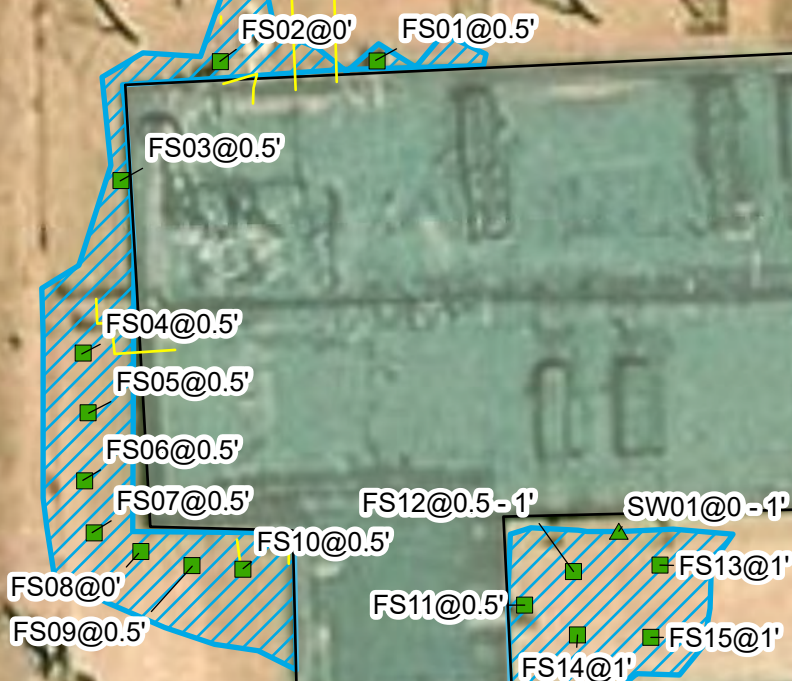
Matador Production Company
 Firethorn CTB
 Incident Number: nAPP2503441044
 Unit C, Section 04, T 26S, R 36E
 Lea County, New Mexico

FIGURE

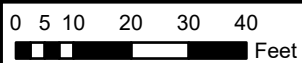
2

Legend

- Excavation Floor Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- Oil and Gas Utility Line
- ▨ Excavation Extent
- Liner Containment Area



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)

**Excavation Soil Sample Locations**

Matador Production Company
Firethorn CTB
Incident Number: nAPP2503441044
Unit C, Section 04, T 26S, R 36E
Lea County, New Mexico

FIGURE**3**



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Firethorn CTB
 Matador Resources, LLC.
 Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Samples										
SS01	2/14/2025	0	<0.0250	<0.0500	<20.0	539	837	539	1,376	483
SS01	2/14/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS01A	3/26/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	476
SS02	2/7/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS02	2/7/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS03	2/14/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	27.3
SS03	2/14/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS04	2/7/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	29.3
SS04	2/7/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	41.4
BH01	2/14/2025	0	<0.0250	0.0445	27.1	2,600	976	2,627	3,603	2,810
BH01	2/14/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH02	2/14/2025	0	<0.0250	<0.0500	<20.0	850	352	850	1,202	679
BH02	2/14/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH03	2/20/2025	0	<0.0250	<0.0500	<20.0	323	200	323	523	223
BH03	2/20/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH04	2/20/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	820
BH04	2/20/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH05	2/25/2025	0	<0.0250	<0.0500	<20.0	116	89.6	116	206	616
BH05	2/25/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	250
BH06	2/25/2025	0	<0.0250	0.1738	<20.0	<25.0	<50.0	<25.0	<50.0	421
BH06	2/25/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	43.1
BH07	2/25/2025	0	<0.0250	0.0788	<20.0	115	56.8	115	172	1,070
BH07	2/25/2025	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	28.9

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Grey text represents samples that have been excavated

<": Laboratory Analytical result is less than reporting limit

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

* Indicates sample was collected in area to be reclaimed after remediation is complete; reclamation for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
 Firethorn CTB
 Matador Resources, LLC.
 Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Excavation Floor Soil Samples										
FS01	3/26/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	53.4
FS02	3/26/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	73.2
FS03	3/26/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	116
FS04	3/26/2025	0.5	<0.0250	<0.0500	<20.0	115	73.3	115	188.3	157
FS05	3/26/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	44.7
FS06	3/26/2025	0.5	<0.0250	<0.0500	<20.0	33.8	<50.0	33.8	33.8	311
FS07	3/27/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	502
FS08	3/27/2025	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	249
FS09	3/27/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
FS10	3/27/2025	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
FS11	3/27/2025	0.5	<0.0250	<0.0500	<20.0	486	347.0	486	833	698
FS12	3/27/2025	0.5 - 1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	249
FS13	3/31/2025	1	<0.0250	<0.0500	<20.0	61	<50.0	61	61	533
FS14	3/27/2025	1	<0.0250	0.0330	<20.0	39.6	<50.0	39.6	39.6	111
FS15	3/31/2025	1	<0.0250	0.929	<20.0	103	<50.0	103	103	246
Excavation Sidewall Soil Samples										
SW01	3/31/2025	0-1	<0.0250	0.0255	<20.0	138	74.8	138	213	519

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Grey text represents samples that have been excavated

<: Laboratory Analytical result is less than reporting limit

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

* Indicates sample was collected in area to be reclaimed after remediation is complete; reclamation for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



APPENDIX A

Well Log and Record



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD-1		WELL TAG ID NO. n/a		OSE FILE NO(S). CP-1952			
	WELL OWNER NAME(S) Ameredev Operating, LLC				PHONE (OPTIONAL) 737-300-4700			
	WELL OWNER MAILING ADDRESS 2901 Via Fortuna Suite 600				CITY Austin	STATE TX	ZIP 78746	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 4	SECONDS 39.88	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	16	21.73	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW NE NW Sec.4 T26S R36E NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 2/9/23	DRILLING ENDED 2/9/23	DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) ±101	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a	DATE STATIC MEASURED 2/13/23		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	101	6.25"	Soil Boring	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. CP-1952-POD 1	POD NO. 1	TRN NO. 740834
LOCATION Mon 26.36.04.321	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	12	12	Sand, fine-grained, poorly graded, unconsolidated, Brown	Y <input checked="" type="checkbox"/> N	
	12	19	7	Caliche, consolidated, off white	Y <input checked="" type="checkbox"/> N	
	19	50	31	Sand, fine-grained, poorly graded, Tan	Y <input checked="" type="checkbox"/> N	
	50	65	15	Sand, fine-grained, poorly graded, with clay Tan	Y <input checked="" type="checkbox"/> N	
	65	70	5	Sand, fine-grained, poorly graded, consolidated, Tan	Y <input checked="" type="checkbox"/> N	
	70	74	4	Sand, fine-grained, poorly graded, slightly consolidated, Tan	Y <input checked="" type="checkbox"/> N	
	74	101	27	Sand, very fine-grained, poorly graded, unconsolidated, Tan/Gray	Y <input checked="" type="checkbox"/> N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION: Removed temporary well material from soil boring, backfilled with drill cutting from total depth to 10 feet below ground surface, then placed hydrated bentonite from 10 feet to ground surface. See attached plugging record. DTW-13	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt	

6. SIGNATURE
<p>THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:</p> <p><i>Jackie D. Atkins</i> Jackie D. Atkins 3/9/2023</p> <p>SIGNATURE OF DRILLER / PRINT SIGNEE NAME DATE</p>

FOR USE INTERNAL USE


WR-20 WELL RECORD & LOG (Version 01/28/2022)


FILE NO. CP-1952-P001	POD NO. 1	TRN NO. 740834
LOCATION Mon 26.36.04.321	WELL TAG ID NO.	PAGE 2 OF 2





APPENDIX B


Lithologic Soil Sampling Logs


								Sample Name: BH01		Date: 2/14/2025			
								Site Name: Firethorn CTB					
								Incident Number: nAPP2503441044					
								Job Number: 03A2270069					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Chad Hamilton		Method: Hand Auger			
Coordinates: 32.077738, -103.273726								Hole Diameter: 3"		Total Depth: 5'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
M			Y	BH01	0	0	CCHE	Pad Caliche					
M		19.2	N	BH01	0.5								
M	ND	12.9	N	BH01	1	1							
M	ND	4.6	N	BH01	2	2							
M	ND	3.8	N	BH01	3	3	SC	Clayey Sand - Loose, Red to medium brown, Coarse to very fine grained, Moist, Non-Plastic, Noncohesive, Massive, Non-Uniform					
M	ND	3.7	N	BH01	4	4							
M	ND	2.0	N	BH01	5	5							
Total Depth @ 5 feet bgs													


								Sample Name: BH02		Date: 2/14/2025			
								Site Name: Firethorn CTB					
								Incident Number: nAPP2503441044					
								Job Number: 03A2270069					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Chad Hamilton		Method: Hand Auger			
Coordinates: 32.077763, -103.273959								Hole Diameter: 3"		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
M			Y	BH02	0	0	CCHE	Pad Caliche					
M	319	18.6	N	BH02	0.5		SC	Clayey Sand - Loose, Red to medium brown, Coarse to very fine grained, Moist, Non-Plastic, Noncohesive, Massive, Non-Uniform					
M	ND	4.5	N	BH02	1	1							
M	ND	4.9	N	BH02	2	2							
M	ND	4.6	N	BH02	3	3							
M	ND	1.5	N	BH02	4	4							
Total Depth @ 4 feet bgs													

		Sample Name: BH03		Date: 02/20/2025				
		Site Name: Firethorn CTB						
		Incident Number: nAPP2503441044						
		Job Number: 03A2270069						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.0780074, -103.2739111			Logged By: H.Gonzalez		Method: Hand Auger			
			Hole Diameter: 3"		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PetroFlag for chloride and TPH, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.								
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D			N	BH03	0	0	SW-SM	Silty sand, well graded, low plasticity, noncohesive, very loose, dry, no staining.
M	ND	3	N	BH03	1	1	SW-SC	Silty sand with gravel, well graded, low plasticity, cohesive, dense, moist, no staining.
M	ND	3			2	2	SW-SM	Silty sand, well graded, low plasticity, cohesive, dense, moist, no staining.
M	ND				3	3		
M	ND				4	4		
Total Depth @ 4 feet bgs								

		Sample Name: BH04		Date: 02/20/2025				
		Site Name: Firethorn CTB						
		Incident Number: nAPP2503441044						
		Job Number: 03A2270069						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.07781, -103.27367			Logged By: H.Gonzalez		Method: Hand Auger			
			Hole Diameter: 3"		Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PetroFlag for chloride and TPH, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.								
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	767		N	BH04 0'	0	0	CCHE	Caliche pad material with sand, white with light brown tint, coarse gravel, no staining.
M	ND	3	N	BH04 1'	1	1	SW-SM	Sand with silt, well graded, low plasticity, reddish brown, no staining.
Total Depth @ 1 foot bgs								

								Sample Name: BH05		Date: 2/25/25	
								Site Name: Firethorn CTB			
								Incident Number: nAPP2503441044			
								Job Number: 03A2270069			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Oluwale Aderinto		Method: Hand auger	
Coordinates: 32.077920, -103.273716								Hole Diameter: 3"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips, and PetroFlag Soil Analyzer System. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M			Y	BH05	0	0	CCHE	Pad Caliche			
M	1,842		N	BH05	1	1	SP-SM	Brown, poorly graded sand with silt, non-pliable, non-plastic.			
M	319	52	N	BH05	2	2					
Total depth @ 2 feet bgs											

								Sample Name: BH06		Date: 2/25/25					
								Site Name: Firethorn CTB							
								Incident Number: nAPP2503441044							
								Job Number: 03A2270069							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Oluwale Aderinto		Method: Hand auger					
Coordinates: 32.077860, -103.273918								Hole Diameter: 3"		Total Depth: 1'					
Comments: Field screening conducted with HACH Chloride Test Strips, and PetroFlag Soil Analyzer System. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.															
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
M	515		Y	BH06	0	0	CCHE	Pad Caliche							
M	ND	14	N	BH06	1	1	SP-SM	Brown, poorly graded sand with silt, non-pliable, non-plastic.							
Total depth @ 1 foot bgs															

								Sample Name: BH07		Date: 2/25/25	
								Site Name: Firethorn CTB			
								Incident Number: nAPP2503441044			
								Job Number: 03A2270069			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Oluwale Aderinto		Method: Hand auger	
Coordinates: 32.077856, -103.273886								Hole Diameter: 3"		Total Depth: 1'	
Comments: Field screening conducted with HACH Chloride Test Strips, and PetroFlag Soil Analyzer System. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M			Y	BH07	0	0	CCHE	Pad Caliche			
M	ND	47	N	BH07	1	1	SP-SM	Brown, poorly graded sand with silt, non-pliable, non-plastic.			
Total depth @ 1 foot bgs											



APPENDIX C

Photographic Log



Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044



Photograph 1

Date: 2/3/2025

Description: Initial/Mapping

View: North



Photograph 2

Date: 2/3/2025

Description: Initial/Mapping

View: Northwest

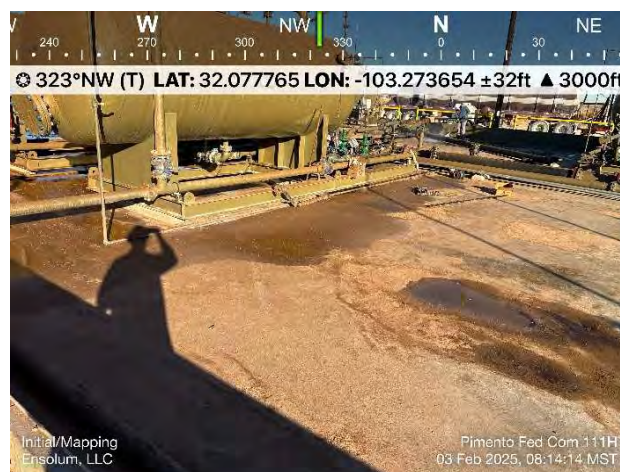


Photograph 3

Date: 2/3/2025

Description: Point of Release

View: North



Photograph 4

Date: 2/3/2025

Description: Initial/Mapping

View: Northwest



Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044



Photograph 5

Date: 2/3/2025

Description: Initial/Mapping

View: Northwest



Photograph 6

Date: 2/3/2025

Description: Initial/Mapping

View: Northwest

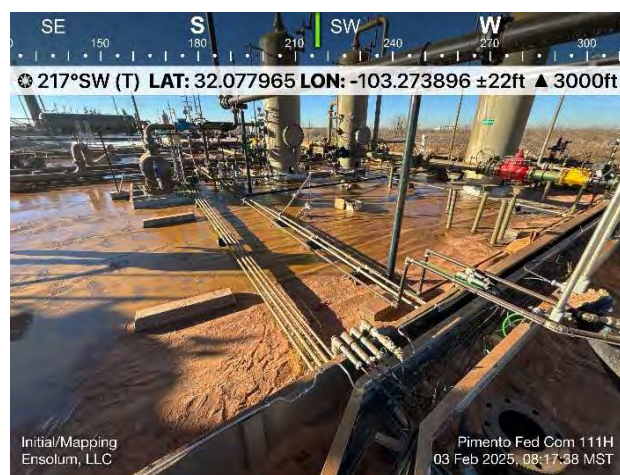


Photograph 7

Date: 2/3/2025

Description: Initial/Mapping

View: Southwest



Photograph 8

Date: 2/3/2025

Description: Initial/Mapping

View: Southwest



Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044



Photograph 9

Date: 2/7/2025

Description: SS01

View: Northwest

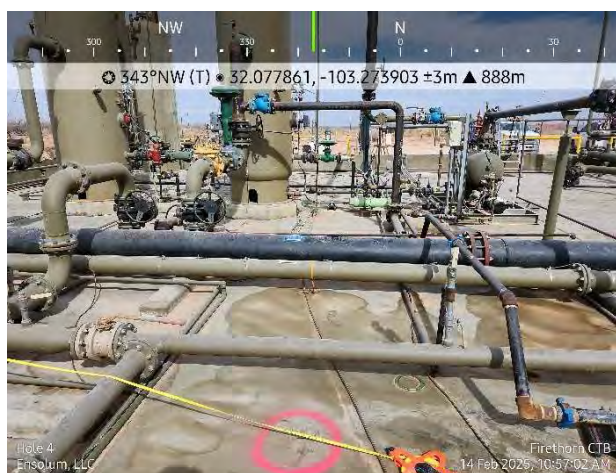


Photograph 10

Date: 2/7/2025

Description: SS02

View: Northeast



Photograph 11

Date: 2/14/2025

Description: Hole 4

View: North



Photograph 12

Date: 2/14/2025

Description: Hole 3

View: South



Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044

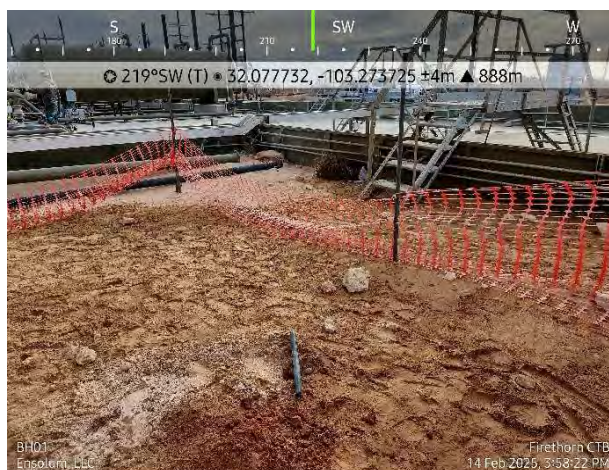


Photograph 13

Date: 2/14/2025

Description: SS01

View: West

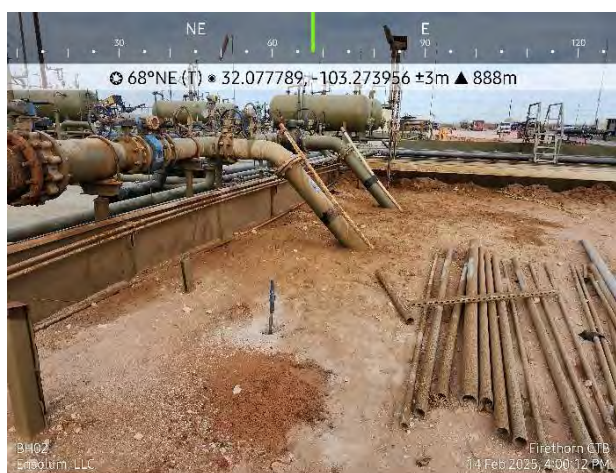


Photograph 14

Date: 2/14/2025

Description: BH01

View: Southwest



Photograph 15

Date: 2/14/2025

Description: BH02

View: East



Photograph 16

Date: 2/14/2025

Description: Delineation

View: Southwest



Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044



Photograph 17
Description: Delineation
View: Northwest

Date: 2/20/2025



Photograph 18
Description: BH05
View: Southeast

Date: 2/25/2025



Photograph 19
Description: BH06
View: East

Date: 2/25/2025



Photograph 20
Description: BH07
View: Northeast

Date: 2/25/2025

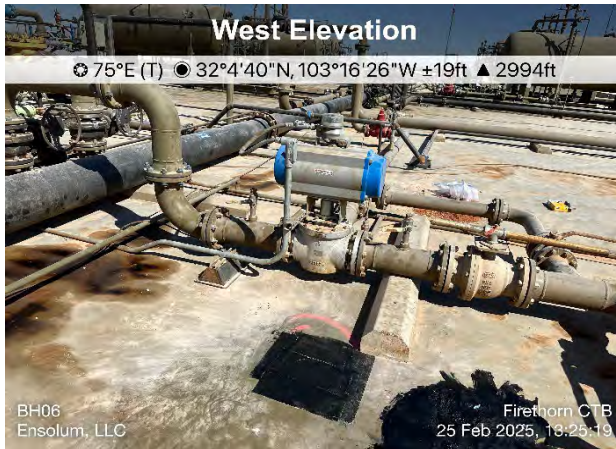


Photographic Log

Matador Production Company

Firethorn CTB

nAPP2503441044



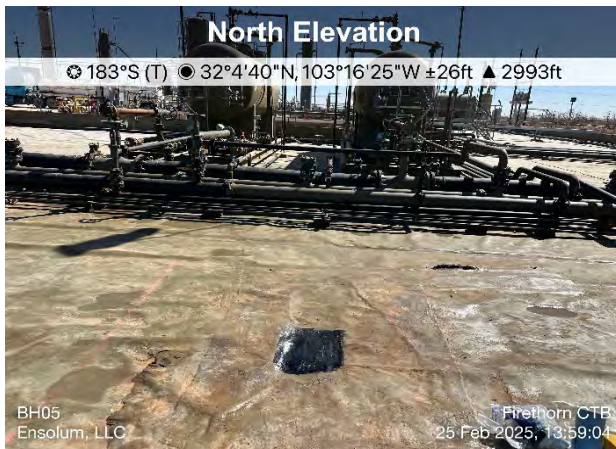
Photograph 21
Description: Liner Patch
View: East

Date: 2/25/2025



Photograph 22
Description: Liner Patch
View: Northeast

Date: 2/25/2025



Photograph 23
Description: Liner Patch
View: South

Date: 2/25/2025



Photograph 24
Description: Excavation
View: Southwest

Date: 3/25/2025



Photographic Log

Matador Production Company

Firehorn CTB

nAPP2503441044



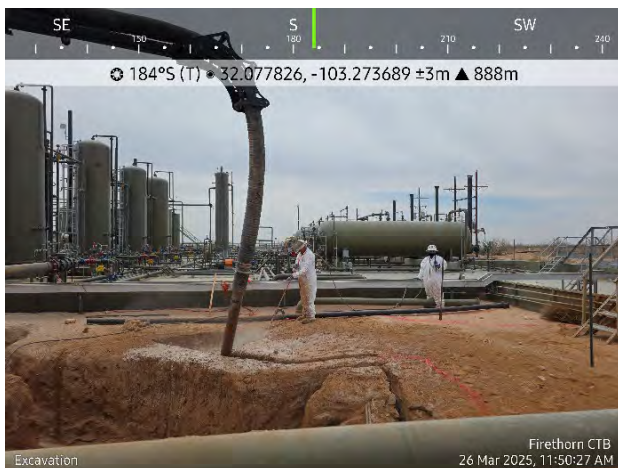
Photograph 25
Description: Excavation
View: South

Date: 2/26/2025



Photograph 26
Description: Excavation
View: South

Date: 2/26/2025



Photograph 27
Description: Excavation
View: South

Date: 2/26/2025



Photograph 27
Description: Excavation
View: West

Date: 2/28/2025



APPENDIX D

Laboratory Analytical Reports & Chain-of-Custody Documentation

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502074

Job Number: 23003-0002

Received: 2/11/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/17/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/17/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502074
Date Received: 2/11/2025 7:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/11/2025 7:30:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
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Cell: 775-287-1762
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 02/17/25 09:40
---	---	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS02-0'	E502074-01A	Soil	02/07/25	02/11/25	Glass Jar, 2 oz.
SS02-1'	E502074-02A	Soil	02/07/25	02/11/25	Glass Jar, 2 oz.
SS04-0'	E502074-03A	Soil	02/07/25	02/11/25	Glass Jar, 2 oz.
SS04-1'	E502074-04A	Soil	02/07/25	02/11/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/17/2025 9:40:11AM

SS02-0'

E502074-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Benzene	ND	0.0250	1	02/11/25	02/11/25	
Ethylbenzene	ND	0.0250	1	02/11/25	02/11/25	
Toluene	ND	0.0250	1	02/11/25	02/11/25	
o-Xylene	ND	0.0250	1	02/11/25	02/11/25	
p,m-Xylene	ND	0.0500	1	02/11/25	02/11/25	
Total Xylenes	ND	0.0250	1	02/11/25	02/11/25	
<i>Surrogate: Bromofluorobenzene</i>		103 %	70-130	02/11/25	02/11/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %	70-130	02/11/25	02/11/25	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/11/25	02/11/25	
<i>Surrogate: Bromofluorobenzene</i>		103 %	70-130	02/11/25	02/11/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %	70-130	02/11/25	02/11/25	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2507030
Diesel Range Organics (C10-C28)	ND	25.0	1	02/11/25	02/11/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/11/25	02/11/25	
<i>Surrogate: n-Nonane</i>		114 %	61-141	02/11/25	02/11/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2507032
Chloride	ND	20.0	1	02/11/25	02/11/25	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/17/2025 9:40:11AM
---	---	---

SS02-1'

E502074-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Benzene	ND	0.0250	1	02/11/25	02/11/25	
Ethylbenzene	ND	0.0250	1	02/11/25	02/11/25	
Toluene	ND	0.0250	1	02/11/25	02/11/25	
o-Xylene	ND	0.0250	1	02/11/25	02/11/25	
p,m-Xylene	ND	0.0500	1	02/11/25	02/11/25	
Total Xylenes	ND	0.0250	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		98.4 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		98.4 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2507030
Diesel Range Organics (C10-C28)	ND	25.0	1	02/11/25	02/12/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/11/25	02/12/25	
Surrogate: n-Nonane		108 %	61-141	02/11/25	02/12/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2507032
Chloride	ND	20.0	1	02/11/25	02/11/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/17/2025 9:40:11AM

SS04-0'

E502074-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Benzene	ND	0.0250	1	02/11/25	02/11/25	
Ethylbenzene	ND	0.0250	1	02/11/25	02/11/25	
Toluene	ND	0.0250	1	02/11/25	02/11/25	
o-Xylene	ND	0.0250	1	02/11/25	02/11/25	
p,m-Xylene	ND	0.0500	1	02/11/25	02/11/25	
Total Xylenes	ND	0.0250	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2507030
Diesel Range Organics (C10-C28)	ND	25.0	1	02/11/25	02/12/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/11/25	02/12/25	
Surrogate: n-Nonane		110 %	61-141	02/11/25	02/12/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2507032
Chloride	29.3	20.0	1	02/11/25	02/11/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/17/2025 9:40:11AM

SS04-1'

E502074-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Benzene	ND	0.0250	1	02/11/25	02/11/25	
Ethylbenzene	ND	0.0250	1	02/11/25	02/11/25	
Toluene	ND	0.0250	1	02/11/25	02/11/25	
o-Xylene	ND	0.0250	1	02/11/25	02/11/25	
p,m-Xylene	ND	0.0500	1	02/11/25	02/11/25	
Total Xylenes	ND	0.0250	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2507026
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/11/25	02/11/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/11/25	02/11/25	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	02/11/25	02/11/25	
Surrogate: Toluene-d8		105 %	70-130	02/11/25	02/11/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2507030
Diesel Range Organics (C10-C28)	ND	25.0	1	02/11/25	02/12/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/11/25	02/12/25	
Surrogate: n-Nonane		108 %	61-141	02/11/25	02/12/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2507032
Chloride	41.4	20.0	1	02/11/25	02/11/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/17/2025 9:40:11AM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2507026-BLK1)

Prepared: 02/11/25 Analyzed: 02/11/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.542		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		96.9	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

LCS (2507026-BS1)

Prepared: 02/11/25 Analyzed: 02/11/25

Benzene	2.16	0.0250	2.50		86.4	70-130			
Ethylbenzene	2.30	0.0250	2.50		92.2	70-130			
Toluene	2.37	0.0250	2.50		94.8	70-130			
o-Xylene	2.26	0.0250	2.50		90.5	70-130			
p,m-Xylene	4.75	0.0500	5.00		94.9	70-130			
Total Xylenes	7.01	0.0250	7.50		93.4	70-130			
Surrogate: Bromofluorobenzene	0.488		0.500		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.502		0.500		100	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

Matrix Spike (2507026-MS1)

Source: E502074-02

Prepared: 02/11/25 Analyzed: 02/11/25

Benzene	2.19	0.0250	2.50	ND	87.4	48-131			
Ethylbenzene	2.36	0.0250	2.50	ND	94.5	45-135			
Toluene	2.42	0.0250	2.50	ND	96.9	48-130			
o-Xylene	2.35	0.0250	2.50	ND	93.8	43-135			
p,m-Xylene	4.94	0.0500	5.00	ND	98.8	43-135			
Total Xylenes	7.28	0.0250	7.50	ND	97.1	43-135			
Surrogate: Bromofluorobenzene	0.494		0.500		98.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.519		0.500		104	70-130			

Matrix Spike Dup (2507026-MSD1)

Source: E502074-02

Prepared: 02/11/25 Analyzed: 02/11/25

Benzene	2.11	0.0250	2.50	ND	84.4	48-131	3.54	23	
Ethylbenzene	2.23	0.0250	2.50	ND	89.2	45-135	5.77	27	
Toluene	2.34	0.0250	2.50	ND	93.6	48-130	3.44	24	
o-Xylene	2.28	0.0250	2.50	ND	91.4	43-135	2.66	27	
p,m-Xylene	4.80	0.0500	5.00	ND	96.0	43-135	2.87	27	
Total Xylenes	7.08	0.0250	7.50	ND	94.4	43-135	2.80	27	
Surrogate: Bromofluorobenzene	0.506		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.482		0.500		96.3	70-130			
Surrogate: Toluene-d8	0.522		0.500		104	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/17/2025 9:40:11AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2507026-BLK1)

Prepared: 02/11/25 Analyzed: 02/11/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.542		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		96.9	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

LCS (2507026-BS2)

Prepared: 02/11/25 Analyzed: 02/11/25

Gasoline Range Organics (C6-C10)	59.0	20.0	50.0		118	70-130			
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		96.9	70-130			
Surrogate: Toluene-d8	0.535		0.500		107	70-130			

Matrix Spike (2507026-MS2)

Source: E502074-02

Prepared: 02/11/25 Analyzed: 02/11/25

Gasoline Range Organics (C6-C10)	57.9	20.0	50.0	ND	116	70-130			
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.488		0.500		97.5	70-130			
Surrogate: Toluene-d8	0.531		0.500		106	70-130			

Matrix Spike Dup (2507026-MSD2)

Source: E502074-02

Prepared: 02/11/25 Analyzed: 02/11/25

Gasoline Range Organics (C6-C10)	60.3	20.0	50.0	ND	121	70-130	4.03	20	
Surrogate: Bromofluorobenzene	0.535		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.494		0.500		98.7	70-130			
Surrogate: Toluene-d8	0.544		0.500		109	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/17/2025 9:40:11AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KH

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2507030-BLK1)					Prepared: 02/11/25 Analyzed: 02/11/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	53.2		50.0		106	61-141			

LCS (2507030-BS1)					Prepared: 02/11/25 Analyzed: 02/11/25				
Diesel Range Organics (C10-C28)	268	25.0	250		107	66-144			
Surrogate: n-Nonane	53.1		50.0		106	61-141			

Matrix Spike (2507030-MS1)					Source: E502073-02		Prepared: 02/11/25 Analyzed: 02/11/25		
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	56-156			
Surrogate: n-Nonane	55.0		50.0		110	61-141			

Matrix Spike Dup (2507030-MSD1)					Source: E502073-02		Prepared: 02/11/25 Analyzed: 02/11/25		
Diesel Range Organics (C10-C28)	267	25.0	250	ND	107	56-156	3.86	20	
Surrogate: n-Nonane	54.6		50.0		109	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/17/2025 9:40:11AM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2507032-BLK1)					Prepared: 02/11/25 Analyzed: 02/11/25				
Chloride	ND	20.0							
LCS (2507032-BS1)					Prepared: 02/11/25 Analyzed: 02/11/25				
Chloride	258	20.0	250		103	90-110			
Matrix Spike (2507032-MS1)					Source: E502073-03		Prepared: 02/11/25 Analyzed: 02/11/25		
Chloride	704	20.0	250	515	75.4	80-120			M2
Matrix Spike Dup (2507032-MSD1)					Source: E502073-03		Prepared: 02/11/25 Analyzed: 02/11/25		
Chloride	726	20.0	250	515	84.4	80-120	3.13	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/17/25 09:40

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





Envirotech Analytical Laboratory

Printed: 2/11/2025 9:24:36AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/11/25 07:30	Work Order ID:	E502074
Phone:	(972) 371-5200	Date Logged In:	02/10/25 15:47	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	02/17/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502155

Job Number: 23003-0002

Received: 2/18/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/21/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/21/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502155
Date Received: 2/18/2025 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/18/2025 8:00:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
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Cell: 775-287-1762
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 02/21/25 13:44
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01-0'	E502155-01A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
SS01-1'	E502155-02A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/21/2025 1:44:06PM

SS01-0'

E502155-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2508035	
Benzene	ND	0.0250	1	02/18/25	02/18/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/18/25	
Toluene	ND	0.0250	1	02/18/25	02/18/25	
o-Xylene	ND	0.0250	1	02/18/25	02/18/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/18/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/18/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	86.5 %	70-130		02/18/25	02/18/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2508035	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/18/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	92.8 %	70-130		02/18/25	02/18/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2508042	
Diesel Range Organics (C10-C28)	539	25.0	1	02/18/25	02/18/25	
Oil Range Organics (C28-C36)	837	50.0	1	02/18/25	02/18/25	
<i>Surrogate: n-Nonane</i>	133 %	61-141		02/18/25	02/18/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2508048	
Chloride	483	20.0	1	02/18/25	02/18/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/21/2025 1:44:06PM

SS01-1'

E502155-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2508035	
Benzene	ND	0.0250	1	02/18/25	02/18/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/18/25	
Toluene	ND	0.0250	1	02/18/25	02/18/25	
o-Xylene	ND	0.0250	1	02/18/25	02/18/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/18/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/18/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	85.6 %	70-130		02/18/25	02/18/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2508035	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/18/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	92.4 %	70-130		02/18/25	02/18/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2508042	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/18/25	02/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/18/25	02/18/25	
<i>Surrogate: n-Nonane</i>	117 %	61-141		02/18/25	02/18/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2508048	
Chloride	ND	20.0	1	02/18/25	02/18/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:44:06PM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508035-BLK1)

Prepared: 02/17/25 Analyzed: 02/17/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.14		8.00		89.2	70-130			

LCS (2508035-BS1)

Prepared: 02/17/25 Analyzed: 02/17/25

Benzene	5.16	0.0250	5.00		103	70-130			
Ethylbenzene	4.93	0.0250	5.00		98.6	70-130			
Toluene	5.06	0.0250	5.00		101	70-130			
o-Xylene	4.95	0.0250	5.00		99.0	70-130			
p,m-Xylene	10.0	0.0500	10.0		100	70-130			
Total Xylenes	15.0	0.0250	15.0		99.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.09		8.00		88.6	70-130			

LCS Dup (2508035-BSD1)

Prepared: 02/17/25 Analyzed: 02/17/25

Benzene	5.19	0.0250	5.00		104	70-130	0.496	20	
Ethylbenzene	4.96	0.0250	5.00		99.1	70-130	0.565	20	
Toluene	5.09	0.0250	5.00		102	70-130	0.576	20	
o-Xylene	4.98	0.0250	5.00		99.6	70-130	0.606	20	
p,m-Xylene	10.1	0.0500	10.0		101	70-130	0.542	20	
Total Xylenes	15.0	0.0250	15.0		100	70-130	0.564	20	
Surrogate: 4-Bromochlorobenzene-PID	7.06		8.00		88.2	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:44:06PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508035-BLK1) Prepared: 02/17/25 Analyzed: 02/17/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.55		8.00		94.4	70-130			

LCS (2508035-BS2) Prepared: 02/17/25 Analyzed: 02/17/25

Gasoline Range Organics (C6-C10)	40.7	20.0	50.0		81.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.60		8.00		95.1	70-130			

LCS Dup (2508035-BSD2) Prepared: 02/17/25 Analyzed: 02/18/25

Gasoline Range Organics (C6-C10)	41.4	20.0	50.0		82.8	70-130	1.77	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.57		8.00		94.6	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:44:06PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508042-BLK1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.7		50.0		115	61-141			

LCS (2508042-BS1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Diesel Range Organics (C10-C28)	294	25.0	250		118	66-144			
Surrogate: n-Nonane	58.4		50.0		117	61-141			

Matrix Spike (2508042-MS1)					Source: E502154-05		Prepared: 02/18/25 Analyzed: 02/18/25		
Diesel Range Organics (C10-C28)	288	25.0	250	ND	115	56-156			
Surrogate: n-Nonane	60.9		50.0		122	61-141			

Matrix Spike Dup (2508042-MSD1)					Source: E502154-05		Prepared: 02/18/25 Analyzed: 02/18/25		
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	56-156	3.71	20	
Surrogate: n-Nonane	64.5		50.0		129	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/21/2025 1:44:06PM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508048-BLK1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	ND	20.0							
LCS (2508048-BS1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2508048-MS1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	266	20.0	250	ND	106	80-120			
Matrix Spike Dup (2508048-MSD1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	261	20.0	250	ND	104	80-120	1.87	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/21/25 13:44

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Chain of Custody

Client Information				Invoice Information				Lab Use Only						TAT				State					
Client: Matador Production Company				Company: Ensolum LLC				Lab WO# E502155		Job Number B3003-0002				1D	2D	3D	Std	NM	CO	UT	TX		
Project: Firethorn CTB				Address: 3122 National Parks Hwy													X	X					
Project Manager: Ashley Giovenego				City, State, Zip: Carlsbad NM, 88220																			
Address: 3122 National Parks Hwy				Phone: 575-988-0055																			
City, State, Zip: Carlsbad NM, 88220				Email: agiovenego@ensolum.com																			
Phone: 575-988-0055				Miscellaneous:																			
Email: agiovenego@ensolum.com																							
Sample Information										Analysis and Method										EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field	Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA					
1300	2/14/25	S	1	SSO1-0'			1						X										
1407	2/14/25	S	1	SSO1-1'			2						X										
Additional Instructions: Please CC: cburton@ensolum.com, agiovenego@ensolum.com, chamilton@ensolum.com, iestrella@ensolum.com, bdeal@ensolum.com, bsimmons@ensolum.com																							
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																							
Sampled by: Chad Hamilton, Jessa Hinkle																							
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: Y / N T1 _____ T2 _____ T3 _____ AVG Temp °C 4															
Relinquished by: (Signature) Michelle Gonzales		Date	Time	Received by: (Signature) Michelle Gonzales		Date	Time																
Relinquished by: (Signature) John M.		Date	Time	Received by: (Signature) John M.		Date	Time																
Relinquished by: (Signature) Caitlin Mann		Date	Time	Received by: (Signature) Caitlin Mann		Date	Time																
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other																							
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																							



envirotech

Envirotech Analytical Laboratory

Printed: 2/18/2025 8:50:15AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/18/25 08:00	Work Order ID:	E502155
Phone:	(972) 371-5200	Date Logged In:	02/17/25 15:04	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	02/24/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502156

Job Number: 23003-0002

Received: 2/18/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/21/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/21/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502156
Date Received: 2/18/2025 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/18/2025 8:00:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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Sample Summary

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/21/25 13:42

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS03-0'	E502156-01A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
SS03-1'	E502156-02A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/21/2025 1:42:33PM

SS03-0'

E502156-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	ND	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/19/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/19/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	02/18/25	02/19/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.9 %	70-130	02/18/25	02/19/25	
<i>Surrogate: Toluene-d8</i>		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/19/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	02/18/25	02/19/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.9 %	70-130	02/18/25	02/19/25	
<i>Surrogate: Toluene-d8</i>		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2508042
Diesel Range Organics (C10-C28)	ND	25.0	1	02/18/25	02/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/18/25	02/18/25	
<i>Surrogate: n-Nonane</i>		105 %	61-141	02/18/25	02/18/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2508048
Chloride	27.3	20.0	1	02/18/25	02/18/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/21/2025 1:42:33PM

SS03-1'

E502156-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	ND	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/19/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		101 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		101 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2508042
Diesel Range Organics (C10-C28)	ND	25.0	1	02/18/25	02/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/18/25	02/18/25	
Surrogate: n-Nonane		107 %	61-141	02/18/25	02/18/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2508048
Chloride	ND	20.0	1	02/18/25	02/18/25	



Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:42:33PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2508040-BLK1)					Prepared: 02/18/25 Analyzed: 02/19/25				
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.4	70-130			
Surrogate: Toluene-d8	0.504		0.500		101	70-130			

LCS (2508040-BS1)					Prepared: 02/18/25 Analyzed: 02/19/25				
Benzene	2.22	0.0250	2.50		88.9	70-130			
Ethylbenzene	2.26	0.0250	2.50		90.3	70-130			
Toluene	2.33	0.0250	2.50		93.3	70-130			
o-Xylene	2.35	0.0250	2.50		93.9	70-130			
p,m-Xylene	4.84	0.0500	5.00		96.7	70-130			
Total Xylenes	7.18	0.0250	7.50		95.8	70-130			
Surrogate: Bromofluorobenzene	0.509		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.517		0.500		103	70-130			
Surrogate: Toluene-d8	0.503		0.500		101	70-130			

Matrix Spike (2508040-MS1)					Source: E502158-02	Prepared: 02/18/25 Analyzed: 02/19/25			
Benzene	2.33	0.0250	2.50	ND	93.3	48-131			
Ethylbenzene	2.38	0.0250	2.50	ND	95.3	45-135			
Toluene	2.47	0.0250	2.50	ND	98.9	48-130			
o-Xylene	2.51	0.0250	2.50	ND	100	43-135			
p,m-Xylene	5.17	0.0500	5.00	ND	103	43-135			
Total Xylenes	7.68	0.0250	7.50	ND	102	43-135			
Surrogate: Bromofluorobenzene	0.520		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.513		0.500		103	70-130			
Surrogate: Toluene-d8	0.505		0.500		101	70-130			

Matrix Spike Dup (2508040-MSD1)					Source: E502158-02	Prepared: 02/18/25 Analyzed: 02/19/25			
Benzene	2.24	0.0250	2.50	ND	89.5	48-131	4.11	23	
Ethylbenzene	2.36	0.0250	2.50	ND	94.3	45-135	1.08	27	
Toluene	2.41	0.0250	2.50	ND	96.3	48-130	2.70	24	
o-Xylene	2.43	0.0250	2.50	ND	97.3	43-135	3.02	27	
p,m-Xylene	4.98	0.0500	5.00	ND	99.6	43-135	3.77	27	
Total Xylenes	7.42	0.0250	7.50	ND	98.9	43-135	3.52	27	
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.515		0.500		103	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.5	70-130			

QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:42:33PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508040-BLK1)

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.4	70-130			
Surrogate: Toluene-d8	0.504		0.500		101	70-130			

LCS (2508040-BS2)

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	51.6	20.0	50.0		103	70-130			
Surrogate: Bromofluorobenzene	0.508		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.493		0.500		98.6	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			

Matrix Spike (2508040-MS2)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	50.7	20.0	50.0	ND	101	70-130			
Surrogate: Bromofluorobenzene	0.516		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.501		0.500		100	70-130			
Surrogate: Toluene-d8	0.508		0.500		102	70-130			

Matrix Spike Dup (2508040-MSD2)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	48.3	20.0	50.0	ND	96.5	70-130	5.03	20	
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.511		0.500		102	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/21/2025 1:42:33PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508042-BLK1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.7		50.0		115	61-141			

LCS (2508042-BS1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Diesel Range Organics (C10-C28)	294	25.0	250		118	66-144			
Surrogate: n-Nonane	58.4		50.0		117	61-141			

Matrix Spike (2508042-MS1)					Source: E502154-05		Prepared: 02/18/25 Analyzed: 02/18/25		
Diesel Range Organics (C10-C28)	288	25.0	250	ND	115	56-156			
Surrogate: n-Nonane	60.9		50.0		122	61-141			

Matrix Spike Dup (2508042-MSD1)					Source: E502154-05		Prepared: 02/18/25 Analyzed: 02/18/25		
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	56-156	3.71	20	
Surrogate: n-Nonane	64.5		50.0		129	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/21/2025 1:42:33PM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508048-BLK1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	ND	20.0							
LCS (2508048-BS1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2508048-MS1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	266	20.0	250	ND	106	80-120			
Matrix Spike Dup (2508048-MSD1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	261	20.0	250	ND	104	80-120	1.87	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/21/25 13:42

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

[illegible]

envirotech

Envirotech Analytical Laboratory

Printed: 2/18/2025 8:51:18AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/18/25 08:00	Work Order ID:	E502156
Phone:	(972) 371-5200	Date Logged In:	02/17/25 15:06	Logged In By:	Caitlin Mars
Email:	agiovengo@ensolum.com	Due Date:	02/24/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

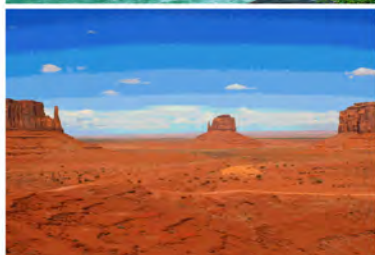
Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502158

Job Number: 23003-0002

Received: 2/18/2025

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/24/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/24/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502158
Date Received: 2/18/2025 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/18/2025 8:00:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 02/24/25 13:08
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH01-0'	E502158-01A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH01-1'	E502158-02A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH01-2'	E502158-03A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH01-3'	E502158-04A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH01-4'	E502158-05A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH01-5'	E502158-06A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH02-0'	E502158-07A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH02-1'	E502158-08A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH02-2'	E502158-09A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH02-3'	E502158-10A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.
BH02-4'	E502158-11A	Soil	02/14/25	02/18/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/24/2025 1:08:25PM

BH01-0'

E502158-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2508040	
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	0.0445	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	0.139	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	0.204	0.0500	1	02/18/25	02/19/25	
Total Xylenes	0.342	0.0250	1	02/18/25	02/19/25	
<i>Surrogate: Bromofluorobenzene</i>		105 %	70-130	02/18/25	02/19/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	70-130	02/18/25	02/19/25	
<i>Surrogate: Toluene-d8</i>		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2508040	
Gasoline Range Organics (C6-C10)	27.1	20.0	1	02/18/25	02/19/25	
<i>Surrogate: Bromofluorobenzene</i>		105 %	70-130	02/18/25	02/19/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	70-130	02/18/25	02/19/25	
<i>Surrogate: Toluene-d8</i>		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: HM		Batch: 2508044	
Diesel Range Organics (C10-C28)	2600	25.0	1	02/18/25	02/19/25	
Oil Range Organics (C28-C36)	976	50.0	1	02/18/25	02/19/25	
<i>Surrogate: n-Nonane</i>		112 %	61-141	02/18/25	02/19/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: AK		Batch: 2508048	
Chloride	2810	40.0	2	02/18/25	02/18/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/24/2025 1:08:25PM

BH01-1'

E502158-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	ND	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/19/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		97.3 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		103 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		97.3 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: HM		Batch: 2508044
Diesel Range Organics (C10-C28)	ND	25.0	1	02/18/25	02/19/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/18/25	02/19/25	
Surrogate: n-Nonane		112 %	61-141	02/18/25	02/19/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2508048
Chloride	ND	20.0	1	02/18/25	02/18/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/24/2025 1:08:25PM

BH02-0'

E502158-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	ND	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/19/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		105 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		105 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		101 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: HM		Batch: 2508044
Diesel Range Organics (C10-C28)	850	25.0	1	02/18/25	02/19/25	
Oil Range Organics (C28-C36)	352	50.0	1	02/18/25	02/19/25	
Surrogate: n-Nonane		114 %	61-141	02/18/25	02/19/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2508048
Chloride	679	20.0	1	02/18/25	02/19/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/24/2025 1:08:25PM

BH02-1'

E502158-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Benzene	ND	0.0250	1	02/18/25	02/19/25	
Ethylbenzene	ND	0.0250	1	02/18/25	02/19/25	
Toluene	ND	0.0250	1	02/18/25	02/19/25	
o-Xylene	ND	0.0250	1	02/18/25	02/19/25	
p,m-Xylene	ND	0.0500	1	02/18/25	02/19/25	
Total Xylenes	ND	0.0250	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		102 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2508040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/18/25	02/19/25	
Surrogate: Bromofluorobenzene		102 %	70-130	02/18/25	02/19/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	02/18/25	02/19/25	
Surrogate: Toluene-d8		102 %	70-130	02/18/25	02/19/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: HM		Batch: 2508044
Diesel Range Organics (C10-C28)	ND	25.0	1	02/18/25	02/19/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/18/25	02/19/25	
Surrogate: n-Nonane		109 %	61-141	02/18/25	02/19/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2508048
Chloride	ND	20.0	1	02/18/25	02/19/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/24/2025 1:08:25PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508040-BLK1)

Prepared: 02/18/25 Analyzed: 02/19/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.4	70-130			
Surrogate: Toluene-d8	0.504		0.500		101	70-130			

LCS (2508040-BS1)

Prepared: 02/18/25 Analyzed: 02/19/25

Benzene	2.22	0.0250	2.50		88.9	70-130			
Ethylbenzene	2.26	0.0250	2.50		90.3	70-130			
Toluene	2.33	0.0250	2.50		93.3	70-130			
o-Xylene	2.35	0.0250	2.50		93.9	70-130			
p,m-Xylene	4.84	0.0500	5.00		96.7	70-130			
Total Xylenes	7.18	0.0250	7.50		95.8	70-130			
Surrogate: Bromofluorobenzene	0.509		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.517		0.500		103	70-130			
Surrogate: Toluene-d8	0.503		0.500		101	70-130			

Matrix Spike (2508040-MS1)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Benzene	2.33	0.0250	2.50	ND	93.3	48-131			
Ethylbenzene	2.38	0.0250	2.50	ND	95.3	45-135			
Toluene	2.47	0.0250	2.50	ND	98.9	48-130			
o-Xylene	2.51	0.0250	2.50	ND	100	43-135			
p,m-Xylene	5.17	0.0500	5.00	ND	103	43-135			
Total Xylenes	7.68	0.0250	7.50	ND	102	43-135			
Surrogate: Bromofluorobenzene	0.520		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.513		0.500		103	70-130			
Surrogate: Toluene-d8	0.505		0.500		101	70-130			

Matrix Spike Dup (2508040-MSD1)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Benzene	2.24	0.0250	2.50	ND	89.5	48-131	4.11	23	
Ethylbenzene	2.36	0.0250	2.50	ND	94.3	45-135	1.08	27	
Toluene	2.41	0.0250	2.50	ND	96.3	48-130	2.70	24	
o-Xylene	2.43	0.0250	2.50	ND	97.3	43-135	3.02	27	
p,m-Xylene	4.98	0.0500	5.00	ND	99.6	43-135	3.77	27	
Total Xylenes	7.42	0.0250	7.50	ND	98.9	43-135	3.52	27	
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.515		0.500		103	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.5	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/24/2025 1:08:25PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508040-BLK1)

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.4	70-130			
Surrogate: Toluene-d8	0.504		0.500		101	70-130			

LCS (2508040-BS2)

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	51.6	20.0	50.0		103	70-130			
Surrogate: Bromofluorobenzene	0.508		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.493		0.500		98.6	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			

Matrix Spike (2508040-MS2)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	50.7	20.0	50.0	ND	101	70-130			
Surrogate: Bromofluorobenzene	0.516		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.501		0.500		100	70-130			
Surrogate: Toluene-d8	0.508		0.500		102	70-130			

Matrix Spike Dup (2508040-MSD2)

Source: E502158-02

Prepared: 02/18/25 Analyzed: 02/19/25

Gasoline Range Organics (C6-C10)	48.3	20.0	50.0	ND	96.5	70-130	5.03	20	
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.511		0.500		102	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/24/2025 1:08:25PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: HM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508044-BLK1)					Prepared: 02/18/25 Analyzed: 02/19/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.6		50.0		115	61-141			

LCS (2508044-BS1)					Prepared: 02/18/25 Analyzed: 02/19/25				
Diesel Range Organics (C10-C28)	287	25.0	250		115	66-144			
Surrogate: n-Nonane	56.2		50.0		112	61-141			

Matrix Spike (2508044-MS1)					Source: E502158-08		Prepared: 02/18/25 Analyzed: 02/19/25		
Diesel Range Organics (C10-C28)	286	25.0	250	ND	114	56-156			
Surrogate: n-Nonane	54.9		50.0		110	61-141			

Matrix Spike Dup (2508044-MSD1)					Source: E502158-08		Prepared: 02/18/25 Analyzed: 02/19/25		
Diesel Range Organics (C10-C28)	300	25.0	250	ND	120	56-156	4.86	20	
Surrogate: n-Nonane	58.4		50.0		117	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/24/2025 1:08:25PM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508048-BLK1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	ND	20.0							
LCS (2508048-BS1)					Prepared: 02/18/25 Analyzed: 02/18/25				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2508048-MS1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	266	20.0	250	ND	106	80-120			
Matrix Spike Dup (2508048-MSD1)					Source: E502155-02		Prepared: 02/18/25 Analyzed: 02/18/25		
Chloride	261	20.0	250	ND	104	80-120	1.87	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/24/25 13:08

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Client Information				Invoice Information		Lab Use Only		TAT				State						
Client: Matador Production Company				Company: Ensolum LLC		Lab WO# E502158		Job Number 23103-0002				1D 2D 3D Std X						
Project: Firethorn CTB				Address: 3122 National Parks Hwy								NM CO UT TX X						
Project Manager: Ashley Giovengo				City, State, Zip: Carlsbad NM, 88220														
Address: 3122 National Parks Hwy				Phone: 575-988-0055														
City, State, Zip: Carlsbad NM, 88220				Email: agiovengo@ensolum.com														
Phone: 575-988-0055				Miscellaneous:														
Email: agiovengo@ensolum.com																		
Sample Information										Analysis and Method				EPA Program				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BiDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
1141	2/14/25	S	1	BH01 - 0'		1						X						
1151				BH01 - 1'		2												
1153				BH01 - 2'		3												
1156				BH01 - 3'		4												
1158				BH01 - 4'		5												
1234				BH01 - 5'		6												
1250				BH02 - 0'		7												
1257				BH02 - 1'		8												
1259				BH02 - 2'		9												
1303				BH02 - 3'		10												
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, iestrella@ensolum.com, bdeal@ensolum.com, bsimmons@ensolum.com																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																		
Sampled by: Chad Hamilton, Jesse Hinkle																		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: Y/ N T1 T2 T3 AVG Temp °C 4										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other																		
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA																		
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																		



envirotech

[illegible]

Envirotech Analytical Laboratory

Printed: 2/18/2025 8:53:28AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/18/25 08:00	Work Order ID:	E502158
Phone:	(972) 371-5200	Date Logged In:	02/17/25 15:11	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	02/24/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Client Remarks for samples 2,3,4,9 & 11. stating do not run for BGDOC if previous sample is >100TPH or >600Cl.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502208

Job Number: 23003-0002

Received: 2/22/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/27/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/27/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502208
Date Received: 2/22/2025 5:00:10AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/22/2025 5:00:10AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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mgonzaless@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 02/27/25 09:14
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH03-0'	E502208-01A	Soil	02/20/25	02/22/25	Glass Jar, 2 oz.
BH03-1'	E502208-02A	Soil	02/20/25	02/22/25	Glass Jar, 2 oz.
BH04-0'	E502208-03A	Soil	02/20/25	02/22/25	Glass Jar, 2 oz.
BH04-1'	E502208-04A	Soil	02/20/25	02/22/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/27/2025 9:14:35AM

BH03-0'

E502208-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Benzene	ND	0.0250	1	02/22/25	02/22/25	
Ethylbenzene	ND	0.0250	1	02/22/25	02/22/25	
Toluene	ND	0.0250	1	02/22/25	02/22/25	
o-Xylene	ND	0.0250	1	02/22/25	02/22/25	
p,m-Xylene	ND	0.0500	1	02/22/25	02/22/25	
Total Xylenes	ND	0.0250	1	02/22/25	02/22/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	99.5 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/22/25	02/22/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	86.5 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2508137	
Diesel Range Organics (C10-C28)	323	25.0	1	02/22/25	02/24/25	
Oil Range Organics (C28-C36)	200	50.0	1	02/22/25	02/24/25	
<i>Surrogate: n-Nonane</i>	99.9 %	61-141		02/22/25	02/24/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2509002	
Chloride	223	20.0	1	02/23/25	02/23/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/27/2025 9:14:35AM

BH03-1'

E502208-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Benzene	ND	0.0250	1	02/22/25	02/22/25	
Ethylbenzene	ND	0.0250	1	02/22/25	02/22/25	
Toluene	ND	0.0250	1	02/22/25	02/22/25	
o-Xylene	ND	0.0250	1	02/22/25	02/22/25	
p,m-Xylene	ND	0.0500	1	02/22/25	02/22/25	
Total Xylenes	ND	0.0250	1	02/22/25	02/22/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	98.2 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/22/25	02/22/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	86.3 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2508137	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/22/25	02/24/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/22/25	02/24/25	
<i>Surrogate: n-Nonane</i>	100 %	61-141		02/22/25	02/24/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2509002	
Chloride	ND	20.0	1	02/23/25	02/23/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/27/2025 9:14:35AM

BH04-0'

E502208-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Benzene	ND	0.0250	1	02/22/25	02/22/25	
Ethylbenzene	ND	0.0250	1	02/22/25	02/22/25	
Toluene	ND	0.0250	1	02/22/25	02/22/25	
o-Xylene	ND	0.0250	1	02/22/25	02/22/25	
p,m-Xylene	ND	0.0500	1	02/22/25	02/22/25	
Total Xylenes	ND	0.0250	1	02/22/25	02/22/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.1 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/22/25	02/22/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	86.3 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2508137	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/22/25	02/24/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/22/25	02/24/25	
<i>Surrogate: n-Nonane</i>						
	105 %	61-141		02/22/25	02/24/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2509002	
Chloride	820	40.0	2	02/23/25	02/23/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
2/27/2025 9:14:35AM

BH04-1'

E502208-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Benzene	ND	0.0250	1	02/22/25	02/22/25	
Ethylbenzene	ND	0.0250	1	02/22/25	02/22/25	
Toluene	ND	0.0250	1	02/22/25	02/22/25	
o-Xylene	ND	0.0250	1	02/22/25	02/22/25	
p,m-Xylene	ND	0.0500	1	02/22/25	02/22/25	
Total Xylenes	ND	0.0250	1	02/22/25	02/22/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.0 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2508126	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/22/25	02/22/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	86.3 %	70-130		02/22/25	02/22/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2508137	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/22/25	02/24/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/22/25	02/24/25	
<i>Surrogate: n-Nonane</i>						
	102 %	61-141		02/22/25	02/24/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2509002	
Chloride	ND	20.0	1	02/23/25	02/23/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/27/2025 9:14:35AM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508126-BLK1)

Prepared: 02/22/25 Analyzed: 02/22/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.89		8.00		98.7	70-130			

LCS (2508126-BS1)

Prepared: 02/22/25 Analyzed: 02/22/25

Benzene	5.27	0.0250	5.00		105	70-130			
Ethylbenzene	5.15	0.0250	5.00		103	70-130			
Toluene	5.24	0.0250	5.00		105	70-130			
o-Xylene	5.21	0.0250	5.00		104	70-130			
p,m-Xylene	10.5	0.0500	10.0		105	70-130			
Total Xylenes	15.7	0.0250	15.0		105	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.02		8.00		100	70-130			

Matrix Spike (2508126-MS1)

Source: E502205-05

Prepared: 02/22/25 Analyzed: 02/22/25

Benzene	5.28	0.0250	5.00	ND	106	54-133			
Ethylbenzene	5.15	0.0250	5.00	ND	103	61-133			
Toluene	5.24	0.0250	5.00	ND	105	61-130			
o-Xylene	5.22	0.0250	5.00	ND	104	63-131			
p,m-Xylene	10.5	0.0500	10.0	ND	105	63-131			
Total Xylenes	15.7	0.0250	15.0	ND	105	63-131			
Surrogate: 4-Bromochlorobenzene-PID	8.12		8.00		102	70-130			

Matrix Spike Dup (2508126-MSD1)

Source: E502205-05

Prepared: 02/22/25 Analyzed: 02/22/25

Benzene	5.62	0.0250	5.00	ND	112	54-133	6.28	20	
Ethylbenzene	5.49	0.0250	5.00	ND	110	61-133	6.47	20	
Toluene	5.58	0.0250	5.00	ND	112	61-130	6.32	20	
o-Xylene	5.54	0.0250	5.00	ND	111	63-131	5.89	20	
p,m-Xylene	11.2	0.0500	10.0	ND	112	63-131	6.25	20	
Total Xylenes	16.7	0.0250	15.0	ND	111	63-131	6.13	20	
Surrogate: 4-Bromochlorobenzene-PID	8.19		8.00		102	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/27/2025 9:14:35AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508126-BLK1) Prepared: 02/22/25 Analyzed: 02/22/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.79		8.00		84.9	70-130			

LCS (2508126-BS2) Prepared: 02/22/25 Analyzed: 02/22/25

Gasoline Range Organics (C6-C10)	41.9	20.0	50.0		83.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.96		8.00		87.0	70-130			

Matrix Spike (2508126-MS2) Source: E502205-05 Prepared: 02/22/25 Analyzed: 02/22/25

Gasoline Range Organics (C6-C10)	41.1	20.0	50.0	ND	82.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.89		8.00		86.1	70-130			

Matrix Spike Dup (2508126-MSD2) Source: E502205-05 Prepared: 02/22/25 Analyzed: 02/22/25

Gasoline Range Organics (C6-C10)	41.6	20.0	50.0	ND	83.2	70-130	1.22	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.82		8.00		85.3	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/27/2025 9:14:35AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2508137-BLK1)					Prepared: 02/22/25 Analyzed: 02/23/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	51.3		50.0		103	61-141			

LCS (2508137-BS1)					Prepared: 02/22/25 Analyzed: 02/23/25				
Diesel Range Organics (C10-C28)	253	25.0	250		101	66-144			
Surrogate: n-Nonane	51.6		50.0		103	61-141			

Matrix Spike (2508137-MS1)					Source: E502207-05		Prepared: 02/22/25 Analyzed: 02/23/25		
Diesel Range Organics (C10-C28)	266	25.0	250	ND	106	56-156			
Surrogate: n-Nonane	52.9		50.0		106	61-141			

Matrix Spike Dup (2508137-MSD1)					Source: E502207-05		Prepared: 02/22/25 Analyzed: 02/23/25		
Diesel Range Organics (C10-C28)	238	25.0	250	ND	95.2	56-156	11.0	20	
Surrogate: n-Nonane	55.3		50.0		111	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 2/27/2025 9:14:35AM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2509002-BLK1)					Prepared: 02/23/25 Analyzed: 02/23/25				
Chloride	ND	20.0							
LCS (2509002-BS1)					Prepared: 02/23/25 Analyzed: 02/23/25				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2509002-MS1)					Source: E502205-11		Prepared: 02/23/25 Analyzed: 02/23/25		
Chloride	1560	20.0	250	1370	77.5	80-120			M4
Matrix Spike Dup (2509002-MSD1)					Source: E502205-11		Prepared: 02/23/25 Analyzed: 02/23/25		
Chloride	1580	20.0	250	1370	86.8	80-120	1.47	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/27/25 09:14

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



[illegible]

Envirotech Analytical Laboratory

Printed: 2/24/2025 3:02:50PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/22/25 05:00	Work Order ID:	E502208
Phone:	(972) 371-5200	Date Logged In:	02/21/25 16:08	Logged In By:	Noe Soto
Email:	agiovento@ensolum.com	Due Date:	02/28/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E502270

Job Number: 23003-0002

Received: 2/27/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
3/5/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 3/5/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E502270
Date Received: 2/27/2025 4:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/27/2025 4:30:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 03/05/25 08:30
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH07-0'	E502270-01A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.
BH07-1'	E502270-02A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.
BH06-0'	E502270-03A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.
BH06-1'	E502270-04A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.
BH05-0'	E502270-05A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.
BH05-2'	E502270-06A	Soil	02/25/25	02/27/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH07-0'

E502270-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/03/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/03/25	
Toluene	0.0788	0.0250	1	02/27/25	03/03/25	
o-Xylene	ND	0.0250	1	02/27/25	03/03/25	
p,m-Xylene	ND	0.0500	1	02/27/25	03/03/25	
Total Xylenes	ND	0.0250	1	02/27/25	03/03/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		102 %	70-130	02/27/25	03/03/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/03/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		92.5 %	70-130	02/27/25	03/03/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	115	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	56.8	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>						
		88.5 %	61-141	02/27/25	02/27/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	1070	40.0	2	02/27/25	02/27/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH07-1'

E502270-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/01/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/01/25	
Toluene	ND	0.0250	1	02/27/25	03/01/25	
o-Xylene	ND	0.0250	1	02/27/25	03/01/25	
p,m-Xylene	ND	0.0500	1	02/27/25	03/01/25	
Total Xylenes	ND	0.0250	1	02/27/25	03/01/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	87.0 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/01/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.0 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>						
	85.6 %	61-141		02/27/25	02/27/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	28.9	20.0	1	02/27/25	02/27/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH06-0'

E502270-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/01/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/01/25	
Toluene	0.0728	0.0250	1	02/27/25	03/01/25	
o-Xylene	ND	0.0250	1	02/27/25	03/01/25	
p,m-Xylene	0.101	0.0500	1	02/27/25	03/01/25	
Total Xylenes	0.101	0.0250	1	02/27/25	03/01/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	84.8 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/01/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	93.4 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>	89.5 %	61-141		02/27/25	02/27/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	421	20.0	1	02/27/25	02/27/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH06-1'

E502270-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/01/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/01/25	
Toluene	ND	0.0250	1	02/27/25	03/01/25	
o-Xylene	ND	0.0250	1	02/27/25	03/01/25	
p,m-Xylene	ND	0.0500	1	02/27/25	03/01/25	
Total Xylenes	ND	0.0250	1	02/27/25	03/01/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	84.4 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/01/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.6 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>						
	89.7 %	61-141		02/27/25	02/27/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	43.1	20.0	1	02/27/25	02/27/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH05-0'

E502270-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/01/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/01/25	
Toluene	ND	0.0250	1	02/27/25	03/01/25	
o-Xylene	ND	0.0250	1	02/27/25	03/01/25	
p,m-Xylene	ND	0.0500	1	02/27/25	03/01/25	
Total Xylenes	ND	0.0250	1	02/27/25	03/01/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	89.0 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/01/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.5 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	116	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	89.6	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>						
	87.2 %	61-141		02/27/25	02/27/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	616	20.0	1	02/27/25	02/27/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
3/5/2025 8:30:00AM

BH05-2'

E502270-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Benzene	ND	0.0250	1	02/27/25	03/01/25	
Ethylbenzene	ND	0.0250	1	02/27/25	03/01/25	
Toluene	ND	0.0250	1	02/27/25	03/01/25	
o-Xylene	ND	0.0250	1	02/27/25	03/01/25	
p,m-Xylene	ND	0.0500	1	02/27/25	03/01/25	
Total Xylenes	ND	0.0250	1	02/27/25	03/01/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	85.1 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2509099	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/27/25	03/01/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	92.6 %	70-130		02/27/25	03/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KH		Batch: 2509096	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/27/25	02/27/25	
Oil Range Organics (C28-C36)	ND	50.0	1	02/27/25	02/27/25	
<i>Surrogate: n-Nonane</i>	87.1 %	61-141		02/27/25	02/27/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2509102	
Chloride	250	20.0	1	02/27/25	02/27/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	3/5/2025 8:30:00AM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2509099-BLK1)

Prepared: 02/27/25 Analyzed: 02/28/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.6	70-130			

LCS (2509099-BS1)

Prepared: 02/27/25 Analyzed: 02/28/25

Benzene	5.75	0.0250	5.00		115	70-130			
Ethylbenzene	5.62	0.0250	5.00		112	70-130			
Toluene	5.70	0.0250	5.00		114	70-130			
o-Xylene	5.59	0.0250	5.00		112	70-130			
p,m-Xylene	11.4	0.0500	10.0		114	70-130			
Total Xylenes	17.0	0.0250	15.0		113	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.38		8.00		92.2	70-130			

Matrix Spike (2509099-MS1)

Source: E502264-06

Prepared: 02/27/25 Analyzed: 02/28/25

Benzene	5.31	0.0250	5.00	ND	106	54-133			
Ethylbenzene	5.20	0.0250	5.00	ND	104	61-133			
Toluene	5.27	0.0250	5.00	ND	105	61-130			
o-Xylene	5.17	0.0250	5.00	ND	103	63-131			
p,m-Xylene	10.6	0.0500	10.0	ND	106	63-131			
Total Xylenes	15.7	0.0250	15.0	ND	105	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.48		8.00		93.5	70-130			

Matrix Spike Dup (2509099-MSD1)

Source: E502264-06

Prepared: 02/27/25 Analyzed: 02/28/25

Benzene	5.63	0.0250	5.00	ND	113	54-133	5.78	20	
Ethylbenzene	5.51	0.0250	5.00	ND	110	61-133	5.86	20	
Toluene	5.59	0.0250	5.00	ND	112	61-130	5.86	20	
o-Xylene	5.50	0.0250	5.00	ND	110	63-131	6.18	20	
p,m-Xylene	11.2	0.0500	10.0	ND	112	63-131	5.84	20	
Total Xylenes	16.7	0.0250	15.0	ND	111	63-131	5.95	20	
Surrogate: 4-Bromochlorobenzene-PID	7.50		8.00		93.8	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	3/5/2025 8:30:00AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2509099-BLK1) Prepared: 02/27/25 Analyzed: 02/28/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.26		8.00		90.8	70-130			

LCS (2509099-BS2) Prepared: 02/27/25 Analyzed: 02/28/25

Gasoline Range Organics (C6-C10)	47.8	20.0	50.0		95.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.46		8.00		93.3	70-130			

Matrix Spike (2509099-MS2) Source: E502264-06 Prepared: 02/27/25 Analyzed: 02/28/25

Gasoline Range Organics (C6-C10)	46.5	20.0	50.0	ND	93.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.44		8.00		93.1	70-130			

Matrix Spike Dup (2509099-MSD2) Source: E502264-06 Prepared: 02/27/25 Analyzed: 02/28/25

Gasoline Range Organics (C6-C10)	45.5	20.0	50.0	ND	91.0	70-130	2.17	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	3/5/2025 8:30:00AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KH

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2509096-BLK1)					Prepared: 02/27/25 Analyzed: 02/27/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	42.6		50.0		85.1	61-141			

LCS (2509096-BS1)					Prepared: 02/27/25 Analyzed: 02/27/25				
Diesel Range Organics (C10-C28)	197	25.0	250		78.7	66-144			
Surrogate: n-Nonane	43.3		50.0		86.6	61-141			

Matrix Spike (2509096-MS1)					Source: E502271-05		Prepared: 02/27/25 Analyzed: 02/27/25		
Diesel Range Organics (C10-C28)	215	25.0	250	ND	85.8	56-156			
Surrogate: n-Nonane	46.1		50.0		92.1	61-141			

Matrix Spike Dup (2509096-MSD1)					Source: E502271-05		Prepared: 02/27/25 Analyzed: 02/27/25		
Diesel Range Organics (C10-C28)	204	25.0	250	ND	81.5	56-156	5.23	20	
Surrogate: n-Nonane	44.0		50.0		88.1	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 3/5/2025 8:30:00AM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2509102-BLK1)					Prepared: 02/27/25 Analyzed: 02/27/25				
Chloride	ND	20.0							
LCS (2509102-BS1)					Prepared: 02/27/25 Analyzed: 02/27/25				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2509102-MS1)					Source: E502264-04		Prepared: 02/27/25 Analyzed: 02/27/25		
Chloride	254	20.0	250	ND	102	80-120			
Matrix Spike Dup (2509102-MSD1)					Source: E502264-04		Prepared: 02/27/25 Analyzed: 02/27/25		
Chloride	254	20.0	250	ND	102	80-120	0.0185	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	03/05/25 08:30

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Client Information								
Company: Ensolum LLC Address: 3122 National Parks Hwy City, State, Zip: Carlsbad NM, 88220 Phone: 575-988-0055 Email: agiovengo@ensolum.com								
Miscellaneous:								
Lab Use Only								
TAT								
State								
NM CO UT TX								
x x x x x								
Analysis and Method								
DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	EPA Program
SDWA CWA RCRA								
Compliance Y or N								
PWSID #								
Remarks								
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number		
10:13	2/25/2025	S	1	BH07 - 0'		1	X	
10:18	2/25/2025	S	1	BH07 - 1'		2	X	
10:52	2/25/2025	S	1	BH06 - 0'		3	X	
10:57	2/25/2025	S	1	BH06 - 1'		4	X	
11:36	2/25/2025	S	1	BH05 - 0'		5	X	
11:45	2/25/2025	S	1	BH05 - 2'		6	X	
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, iestrella@ensolum.com, chamilton@ensolum.com, bsimmons@ensolum.com,								
oaderinto@ensolum.com								
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.								
Sampled by: Oluwale Aderinto								
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: Y / N T1 T2 T3 AVG Temp °C 4
Oluwale Aderinto		2/26/25	08:15	Michelle Gonzales		2-26-25	0815	
Michelle Gonzales		2-26-25	1520	Richard Gonzalez		2-26-25	1520	
Richard Gonzalez		2-26-25	2130	Hugh R Hill		2-27-25	0430	
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other								
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.								

Envirotech Analytical Laboratory

Printed: 2/27/2025 9:55:21AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/27/25 04:30	Work Order ID:	E502270
Phone:	(972) 371-5200	Date Logged In:	02/26/25 14:47	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	03/05/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

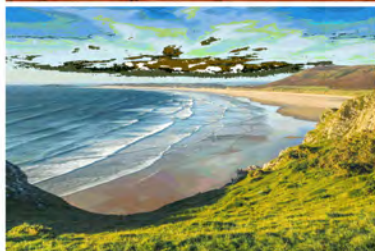
Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E503234

Job Number: 23003-0002

Received: 3/28/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/3/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 4/3/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E503234
Date Received: 3/28/2025 4:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/28/2025 4:00:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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Sample Summary

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	04/03/25 09:46

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01A-0'	E503234-01A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:46:33AM

SS01A-0'

E503234-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	95.2 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	104 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>	106 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	476	20.0	1	03/28/25	03/28/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/3/2025 9:46:33AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513095-BLK1)

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.69		8.00		96.2	70-130			

LCS (2513095-BS1)

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.33	0.0250	5.00		86.6	70-130			
Ethylbenzene	4.17	0.0250	5.00		83.3	70-130			
Toluene	4.28	0.0250	5.00		85.6	70-130			
o-Xylene	4.19	0.0250	5.00		83.7	70-130			
p,m-Xylene	8.36	0.0500	10.0		83.6	70-130			
Total Xylenes	12.5	0.0250	15.0		83.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.78		8.00		97.2	70-130			

Matrix Spike (2513095-MS1)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.44	0.0250	5.00	ND	88.8	70-130			
Ethylbenzene	4.27	0.0250	5.00	ND	85.4	70-130			
Toluene	4.38	0.0250	5.00	ND	87.7	70-130			
o-Xylene	4.27	0.0250	5.00	ND	85.5	70-130			
p,m-Xylene	8.56	0.0500	10.0	ND	85.6	70-130			
Total Xylenes	12.8	0.0250	15.0	ND	85.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.60		8.00		95.0	70-130			

Matrix Spike Dup (2513095-MSD1)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.06	0.0250	5.00	ND	81.2	70-130	8.91	27	
Ethylbenzene	3.92	0.0250	5.00	ND	78.4	70-130	8.51	26	
Toluene	4.02	0.0250	5.00	ND	80.4	70-130	8.67	20	
o-Xylene	3.92	0.0250	5.00	ND	78.5	70-130	8.50	25	
p,m-Xylene	7.88	0.0500	10.0	ND	78.8	70-130	8.27	23	
Total Xylenes	11.8	0.0250	15.0	ND	78.7	70-130	8.35	26	
Surrogate: 4-Bromochlorobenzene-PID	7.58		8.00		94.8	70-130			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 4/3/2025 9:46:33AM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513095-BLK1)

Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.50		8.00		106	70-130			

LCS (2513095-BS2)

Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	49.8	20.0	50.0		99.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.62		8.00		108	70-130			

Matrix Spike (2513095-MS2)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	51.1	20.0	50.0	ND	102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.44		8.00		106	70-130			

Matrix Spike Dup (2513095-MSD2)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	49.6	20.0	50.0	ND	99.2	70-130	3.07	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.65		8.00		108	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/3/2025 9:46:33AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513090-BLK1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	51.5		50.0		103	61-141			

LCS (2513090-BS1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Diesel Range Organics (C10-C28)	259	25.0	250		104	66-144			
Surrogate: n-Nonane	51.0		50.0		102	61-141			

Matrix Spike (2513090-MS1)					Source: E503233-05		Prepared: 03/28/25 Analyzed: 03/28/25		
Diesel Range Organics (C10-C28)	261	25.0	250	ND	104	56-156			
Surrogate: n-Nonane	51.7		50.0		103	61-141			

Matrix Spike Dup (2513090-MSD1)					Source: E503233-05		Prepared: 03/28/25 Analyzed: 03/28/25		
Diesel Range Organics (C10-C28)	274	25.0	250	ND	110	56-156	4.94	20	
Surrogate: n-Nonane	52.1		50.0		104	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 4/3/2025 9:46:33AM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513092-BLK1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Chloride	ND	20.0							
LCS (2513092-BS1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2513092-MS1)					Source: E503233-06		Prepared: 03/28/25 Analyzed: 03/28/25		
Chloride	1360	20.0	250	1080	113	80-120			
Matrix Spike Dup (2513092-MSD1)					Source: E503233-06		Prepared: 03/28/25 Analyzed: 03/28/25		
Chloride	1360	20.0	250	1080	116	80-120	0.500	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	04/03/25 09:46

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Page 1 of 1



envirotech

Envirotech Analytical Laboratory

Printed: 3/28/2025 8:37:45AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	03/28/25 04:00	Work Order ID:	E503234
Phone:	(972) 371-5200	Date Logged In:	03/27/25 13:55	Logged In By:	Caitlin Mars
Email:	agiovengo@ensolum.com	Due Date:	04/03/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E503235

Job Number: 23003-0002

Received: 3/28/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/3/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 4/3/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E503235
Date Received: 3/28/2025 4:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/28/2025 4:00:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 04/03/25 09:32
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01-0.5'	E503235-01A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.
FS02-0'	E503235-02A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.
FS03-0.5'	E503235-03A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.
FS04-0.5'	E503235-04A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.
FS05-0.5'	E503235-05A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.
FS06-0.5'	E503235-06A	Soil	03/26/25	03/28/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS01-0.5'

E503235-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	<i>96.4 %</i>	<i>70-130</i>		<i>03/28/25</i>	<i>03/28/25</i>	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	<i>105 %</i>	<i>70-130</i>		<i>03/28/25</i>	<i>03/28/25</i>	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>	<i>97.4 %</i>	<i>61-141</i>		<i>03/28/25</i>	<i>03/28/25</i>	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	53.4	20.0	1	03/28/25	03/28/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS02-0'

E503235-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	97.3 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	103 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>	103 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	73.2	20.0	1	03/28/25	03/28/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS03-0.5'

E503235-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.5 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	102 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>						
	108 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	116	20.0	1	03/28/25	03/28/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS04-0.5'

E503235-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.7 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	104 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	115	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	73.3	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>						
	108 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	157	20.0	1	03/28/25	03/28/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS05-0.5'

E503235-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.3 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	101 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>						
	106 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	44.7	40.0	2	03/28/25	03/28/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/3/2025 9:32:53AM

FS06-0.5'

E503235-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Benzene	ND	0.0250	1	03/28/25	03/28/25	
Ethylbenzene	ND	0.0250	1	03/28/25	03/28/25	
Toluene	ND	0.0250	1	03/28/25	03/28/25	
o-Xylene	ND	0.0250	1	03/28/25	03/28/25	
p,m-Xylene	ND	0.0500	1	03/28/25	03/28/25	
Total Xylenes	ND	0.0250	1	03/28/25	03/28/25	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	97.6 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2513095	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/28/25	03/28/25	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	97.9 %	70-130		03/28/25	03/28/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2513090	
Diesel Range Organics (C10-C28)	33.8	25.0	1	03/28/25	03/28/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/28/25	03/28/25	
<i>Surrogate: n-Nonane</i>	105 %	61-141		03/28/25	03/28/25	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: AK		Batch: 2513092	
Chloride	311	20.0	1	03/28/25	03/28/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/3/2025 9:32:53AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513095-BLK1)

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.69		8.00		96.2	70-130			

LCS (2513095-BS1)

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.33	0.0250	5.00		86.6	70-130			
Ethylbenzene	4.17	0.0250	5.00		83.3	70-130			
Toluene	4.28	0.0250	5.00		85.6	70-130			
o-Xylene	4.19	0.0250	5.00		83.7	70-130			
p,m-Xylene	8.36	0.0500	10.0		83.6	70-130			
Total Xylenes	12.5	0.0250	15.0		83.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.78		8.00		97.2	70-130			

Matrix Spike (2513095-MS1)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.44	0.0250	5.00	ND	88.8	70-130			
Ethylbenzene	4.27	0.0250	5.00	ND	85.4	70-130			
Toluene	4.38	0.0250	5.00	ND	87.7	70-130			
o-Xylene	4.27	0.0250	5.00	ND	85.5	70-130			
p,m-Xylene	8.56	0.0500	10.0	ND	85.6	70-130			
Total Xylenes	12.8	0.0250	15.0	ND	85.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.60		8.00		95.0	70-130			

Matrix Spike Dup (2513095-MSD1)

Source: E503235-04

Prepared: 03/28/25 Analyzed: 03/28/25

Benzene	4.06	0.0250	5.00	ND	81.2	70-130	8.91	27	
Ethylbenzene	3.92	0.0250	5.00	ND	78.4	70-130	8.51	26	
Toluene	4.02	0.0250	5.00	ND	80.4	70-130	8.67	20	
o-Xylene	3.92	0.0250	5.00	ND	78.5	70-130	8.50	25	
p,m-Xylene	7.88	0.0500	10.0	ND	78.8	70-130	8.27	23	
Total Xylenes	11.8	0.0250	15.0	ND	78.7	70-130	8.35	26	
Surrogate: 4-Bromochlorobenzene-PID	7.58		8.00		94.8	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/3/2025 9:32:53AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513095-BLK1) Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.50		8.00		106	70-130			

LCS (2513095-BS2) Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	49.8	20.0	50.0		99.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.62		8.00		108	70-130			

Matrix Spike (2513095-MS2) Source: E503235-04 Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	51.1	20.0	50.0	ND	102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.44		8.00		106	70-130			

Matrix Spike Dup (2513095-MSD2) Source: E503235-04 Prepared: 03/28/25 Analyzed: 03/28/25

Gasoline Range Organics (C6-C10)	49.6	20.0	50.0	ND	99.2	70-130	3.07	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.65		8.00		108	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/3/2025 9:32:53AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513090-BLK1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	51.5		50.0		103	61-141			

LCS (2513090-BS1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Diesel Range Organics (C10-C28)	259	25.0	250		104	66-144			
Surrogate: n-Nonane	51.0		50.0		102	61-141			

Matrix Spike (2513090-MS1)					Source: E503233-05		Prepared: 03/28/25 Analyzed: 03/28/25		
Diesel Range Organics (C10-C28)	261	25.0	250	ND	104	56-156			
Surrogate: n-Nonane	51.7		50.0		103	61-141			

Matrix Spike Dup (2513090-MSD1)					Source: E503233-05		Prepared: 03/28/25 Analyzed: 03/28/25		
Diesel Range Organics (C10-C28)	274	25.0	250	ND	110	56-156	4.94	20	
Surrogate: n-Nonane	52.1		50.0		104	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 4/3/2025 9:32:53AM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2513092-BLK1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Chloride	ND	20.0							
LCS (2513092-BS1)					Prepared: 03/28/25 Analyzed: 03/28/25				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2513092-MS1)					Source: E503233-06		Prepared: 03/28/25 Analyzed: 03/28/25		
Chloride	1360	20.0	250	1080	113	80-120			
Matrix Spike Dup (2513092-MSD1)					Source: E503233-06		Prepared: 03/28/25 Analyzed: 03/28/25		
Chloride	1360	20.0	250	1080	116	80-120	0.500	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	04/03/25 09:32

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Page 1 of 1

Client Information				Invoice Information				Lab Use Only				TAT				State						
Client: Matador Production Company				Company: Ensolum LLC				Lab WO#		Job Number		1D	2D	3D	Std	NM	CO	UT	TX			
Project: Firethorn CTB				Address: 3122 National Parks Hwy				E503235		23003-0002					X	X						
Project Manager: Ashley Giovengo				City, State, Zip: Carlsbad NM, 88220																		
Address: 3122 National Parks Hwy				Phone: 575-988-0055																		
City, State, Zip: Carlsbad NM, 88220				Email: agiovengo@ensolum.com																		
Phone: 575-988-0055				Miscellaneous:																		
Email: agiovengo@ensolum.com																						
Sample Information										Analysis and Method								EPA Program				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA					
0941	3/26/25	S	1	FS01-0.5'		1						X										
0951	3/26/25	S	1	FS02-0.5' CH		2						X										
0957	3/26/25	S	1	FS03-0.5'		3						X										
1029	3/26/25	S	1	FS04-0.5'		4						X										
1314	3/26/25	S	1	FS05-0.5'		5						X										
1459	3/26/25	S	1	FS06-0.5'		6						X										
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, iestrella@ensolum.com, jgonzalez@ensolum.com, bmoir@ensolum.com, oaderinto@ensolum.com, ihinkle@ensolum.com																						
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																						
Sampled by: Chad Hamilton																						
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4														
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time															
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time															
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time															
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA _____																						
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																						



envirotech

Envirotech Analytical Laboratory

Printed: 3/28/2025 8:38:28AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	03/28/25 04:00	Work Order ID:	E503235
Phone:	(972) 371-5200	Date Logged In:	03/27/25 13:57	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	04/03/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E503251

Job Number: 23003-0002

Received: 3/31/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/4/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 4/4/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E503251
Date Received: 3/31/2025 7:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/31/2025 7:30:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 04/04/25 13:36
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS07-0.5'	E503251-01A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS08-0'	E503251-02A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS09-0.5'	E503251-03A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS10-0.5'	E503251-04A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS11-0.5'	E503251-05A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS12-0.5'-1'	E503251-06A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.
FS14-1'	E503251-07A	Soil	03/27/25	03/31/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS07-0.5'

E503251-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2514007	
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	03/31/25	04/01/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	03/31/25	04/01/25	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2514007	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	03/31/25	04/01/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	03/31/25	04/01/25	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KH		Batch: 2514021	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
<i>Surrogate: n-Nonane</i>		99.3 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2514034	
Chloride	502	20.0	1	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS08-0'

E503251-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		103 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		106 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		103 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		106 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		91.9 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	249	40.0	2	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS09-0.5'

E503251-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		101 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		101 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		75.9 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	ND	20.0	1	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS10-0.5'

E503251-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		103 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		103 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		96.9 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	ND	20.0	1	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS11-0.5'

E503251-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		102 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		104 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		102 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		104 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	486	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	347	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		95.0 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	698	40.0	2	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS12-0.5'-1'

E503251-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	ND	0.0250	1	03/31/25	04/01/25	
Toluene	ND	0.0250	1	03/31/25	04/01/25	
o-Xylene	ND	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	ND	0.0500	1	03/31/25	04/01/25	
Total Xylenes	ND	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		102 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		103 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		102 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		103 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		91.5 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	249	20.0	1	03/31/25	04/01/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/4/2025 1:36:49PM

FS14-1'

E503251-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Benzene	ND	0.0250	1	03/31/25	04/01/25	
Ethylbenzene	0.116	0.0250	1	03/31/25	04/01/25	
Toluene	0.110	0.0250	1	03/31/25	04/01/25	
o-Xylene	0.223	0.0250	1	03/31/25	04/01/25	
p,m-Xylene	0.480	0.0500	1	03/31/25	04/01/25	
Total Xylenes	0.703	0.0250	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		106 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		98.7 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2514007
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/31/25	04/01/25	
Surrogate: Bromofluorobenzene		106 %	70-130	03/31/25	04/01/25	
Surrogate: 1,2-Dichloroethane-d4		98.7 %	70-130	03/31/25	04/01/25	
Surrogate: Toluene-d8		105 %	70-130	03/31/25	04/01/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KH		Batch: 2514021
Diesel Range Organics (C10-C28)	103	25.0	1	03/31/25	04/01/25	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/25	04/01/25	
Surrogate: n-Nonane		104 %	61-141	03/31/25	04/01/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2514034
Chloride	246	20.0	1	03/31/25	04/01/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/4/2025 1:36:49PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514007-BLK1)

Prepared: 03/31/25 Analyzed: 03/31/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.518		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.479		0.500		95.7	70-130			
Surrogate: Toluene-d8	0.529		0.500		106	70-130			

LCS (2514007-BS1)

Prepared: 03/31/25 Analyzed: 03/31/25

Benzene	2.24	0.0250	2.50		89.5	70-130			
Ethylbenzene	2.32	0.0250	2.50		92.8	70-130			
Toluene	2.43	0.0250	2.50		97.1	70-130			
o-Xylene	2.46	0.0250	2.50		98.4	70-130			
p,m-Xylene	5.10	0.0500	5.00		102	70-130			
Total Xylenes	7.56	0.0250	7.50		101	70-130			
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.529		0.500		106	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

Matrix Spike (2514007-MS1)

Source: E503247-05

Prepared: 03/31/25 Analyzed: 03/31/25

Benzene	2.29	0.0250	2.50	ND	91.5	48-131			
Ethylbenzene	2.37	0.0250	2.50	ND	94.7	45-135			
Toluene	2.46	0.0250	2.50	ND	98.3	48-130			
o-Xylene	2.50	0.0250	2.50	ND	99.9	43-135			
p,m-Xylene	5.19	0.0500	5.00	ND	104	43-135			
Total Xylenes	7.69	0.0250	7.50	ND	103	43-135			
Surrogate: Bromofluorobenzene	0.519		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.492		0.500		98.4	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

Matrix Spike Dup (2514007-MSD1)

Source: E503247-05

Prepared: 03/31/25 Analyzed: 03/31/25

Benzene	2.14	0.0250	2.50	ND	85.7	48-131	6.53	23	
Ethylbenzene	2.24	0.0250	2.50	ND	89.7	45-135	5.40	27	
Toluene	2.33	0.0250	2.50	ND	93.0	48-130	5.58	24	
o-Xylene	2.37	0.0250	2.50	ND	94.7	43-135	5.39	27	
p,m-Xylene	4.94	0.0500	5.00	ND	98.9	43-135	4.93	27	
Total Xylenes	7.31	0.0250	7.50	ND	97.5	43-135	5.08	27	
Surrogate: Bromofluorobenzene	0.518		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.507		0.500		101	70-130			
Surrogate: Toluene-d8	0.524		0.500		105	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported: 4/4/2025 1:36:49PM
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514007-BLK1) Prepared: 03/31/25 Analyzed: 03/31/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.518		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.479		0.500		95.7	70-130			
Surrogate: Toluene-d8	0.529		0.500		106	70-130			

LCS (2514007-BS2) Prepared: 03/31/25 Analyzed: 03/31/25

Gasoline Range Organics (C6-C10)	45.1	20.0	50.0		90.3	70-130			
Surrogate: Bromofluorobenzene	0.515		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.503		0.500		101	70-130			
Surrogate: Toluene-d8	0.534		0.500		107	70-130			

Matrix Spike (2514007-MS2) Source: E503247-05 Prepared: 03/31/25 Analyzed: 03/31/25

Gasoline Range Organics (C6-C10)	48.8	20.0	50.0	ND	97.6	70-130			
Surrogate: Bromofluorobenzene	0.528		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		99.0	70-130			
Surrogate: Toluene-d8	0.539		0.500		108	70-130			

Matrix Spike Dup (2514007-MSD2) Source: E503247-05 Prepared: 03/31/25 Analyzed: 03/31/25

Gasoline Range Organics (C6-C10)	48.2	20.0	50.0	ND	96.5	70-130	1.19	20	
Surrogate: Bromofluorobenzene	0.539		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.491		0.500		98.2	70-130			
Surrogate: Toluene-d8	0.531		0.500		106	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/4/2025 1:36:49PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KH

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514021-BLK1)					Prepared: 03/31/25 Analyzed: 04/01/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	50.3		50.0		101	61-141			

LCS (2514021-BS1)					Prepared: 03/31/25 Analyzed: 04/01/25				
Diesel Range Organics (C10-C28)	236	25.0	250		94.6	66-144			
Surrogate: n-Nonane	46.5		50.0		93.1	61-141			

Matrix Spike (2514021-MS1)					Source: E503251-03		Prepared: 03/31/25 Analyzed: 04/01/25		
Diesel Range Organics (C10-C28)	238	25.0	250	ND	95.4	56-156			
Surrogate: n-Nonane	46.5		50.0		93.0	61-141			

Matrix Spike Dup (2514021-MSD1)					Source: E503251-03		Prepared: 03/31/25 Analyzed: 04/01/25		
Diesel Range Organics (C10-C28)	238	25.0	250	ND	95.4	56-156	0.00621	20	
Surrogate: n-Nonane	47.2		50.0		94.3	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 4/4/2025 1:36:49PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514034-BLK1)					Prepared: 03/31/25 Analyzed: 04/01/25				
Chloride	ND	20.0							
LCS (2514034-BS1)					Prepared: 03/31/25 Analyzed: 04/01/25				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2514034-MS1)					Source: E503251-02		Prepared: 03/31/25 Analyzed: 04/01/25		
Chloride	510	40.0	250	249	104	80-120			
Matrix Spike Dup (2514034-MSD1)					Source: E503251-02		Prepared: 03/31/25 Analyzed: 04/01/25		
Chloride	501	40.0	250	249	101	80-120	1.83	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	04/04/25 13:36

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Chain of Custody

Page 1 of 1

Client Information				Invoice Information				Lab Use Only				TAT				State											
Client: Matador Production Company				Company: Ensolum LLC				Lab WO#		Job Number		1D		2D		3D		Std		NM		CO		UT		TX	
Project: Firethorn CTB				Address: 3122 National Parks Hwy				F503251		23003-0002								X		X							
Project Manager: Ashley Giovengo				City, State, Zip: Carlsbad NM, 88220																							
Address: 3122 National Parks Hwy				Phone: 575-988-0055																							
City, State, Zip: Carlsbad NM, 88220				Email: agiovengo@ensolum.com																							
Phone: 575-988-0055				Miscellaneous:																							
Email: agiovengo@ensolum.com																											

Sample Information																	PWSID #		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Meta					Remarks
0816	3/27/25	S	1	FS07 - 0.5'		1						X							
0817	3/27/25	S	1	FS08 - 0.5'		2						X							
0819	3/27/25	S	1	FS09 - 0.5'		3						X							
0821	3/27/25	S	1	FS10 - 0.5'		4						X							
0838	3/27/25	S	1	FS11 - 0.5'		5						X							
0839	3/27/25	S	1	FS12 - 0.5'-1'		6						X							
0843	3/27/25	S	1	FS14 - 1'		7						X							

Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, iestrella@ensoulm.com, jgonzalez@ensolum.com, bmoir@ensolum.com, oaderinto@ensolum.com, ihinkle@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Chad Hamilton

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	5/28/25	1022	Michelle Gonzales	3-28-25	1022
Michelle Gonzales	3-28-25	1022	Marissa Gonzales	3-28-25	1022
Marissa Gonzales	3-28-25	2100	Richard Gonzales	3-28-25	2100
Richard Gonzales	3-28-25	2300	Caitlynn	3-31-25	730

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Received on ice: ☒ Y ☐ N

T1 T2 T3

AVG Temp °C 4

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech

Envirotech Analytical Laboratory

Printed: 3/31/2025 11:21:36AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	03/31/25 07:30	Work Order ID:	E503251
Phone:	(972) 371-5200	Date Logged In:	03/31/25 07:54	Logged In By:	Caitlin Mars
Email:	agiovento@ensolum.com	Due Date:	04/04/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name: Firethorn CTB

Work Order: E504005

Job Number: 23003-0002

Received: 4/2/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/8/25

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 4/8/25

Ashley Giovengo
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240



Project Name: Firethorn CTB
Workorder: E504005
Date Received: 4/2/2025 4:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/2/2025 4:30:00AM, under the Project Name: Firethorn CTB.

The analytical test results summarized in this report with the Project Name: Firethorn CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
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mgonzaless@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 04/08/25 10:52
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS13-1'	E504005-01A	Soil	03/31/25	04/02/25	Glass Jar, 2 oz.
FS14-1'	E504005-02A	Soil	03/31/25	04/02/25	Glass Jar, 2 oz.
SW01-0-1'	E504005-03A	Soil	03/31/25	04/02/25	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/8/2025 10:52:42AM

FS13-1'

E504005-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Benzene	ND	0.0250	1	04/02/25	04/03/25	
Ethylbenzene	ND	0.0250	1	04/02/25	04/03/25	
Toluene	ND	0.0250	1	04/02/25	04/03/25	
o-Xylene	ND	0.0250	1	04/02/25	04/03/25	
p,m-Xylene	ND	0.0500	1	04/02/25	04/03/25	
Total Xylenes	ND	0.0250	1	04/02/25	04/03/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	04/02/25	04/03/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	04/02/25	04/03/25	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/25	04/03/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	04/02/25	04/03/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	04/02/25	04/03/25	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2514064
Diesel Range Organics (C10-C28)	61.0	25.0	1	04/02/25	04/03/25	
Oil Range Organics (C28-C36)	ND	50.0	1	04/02/25	04/03/25	
<i>Surrogate: n-Nonane</i>		100 %	61-141	04/02/25	04/03/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2514075
Chloride	533	40.0	2	04/02/25	04/03/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/8/2025 10:52:42AM

FS14-1'

E504005-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Benzene	ND	0.0250	1	04/02/25	04/03/25	
Ethylbenzene	ND	0.0250	1	04/02/25	04/03/25	
Toluene	0.0330	0.0250	1	04/02/25	04/03/25	
o-Xylene	ND	0.0250	1	04/02/25	04/03/25	
p,m-Xylene	ND	0.0500	1	04/02/25	04/03/25	
Total Xylenes	ND	0.0250	1	04/02/25	04/03/25	
Surrogate: Bromofluorobenzene		104 %	70-130	04/02/25	04/03/25	
Surrogate: 1,2-Dichloroethane-d4		99.8 %	70-130	04/02/25	04/03/25	
Surrogate: Toluene-d8		105 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/25	04/03/25	
Surrogate: Bromofluorobenzene		104 %	70-130	04/02/25	04/03/25	
Surrogate: 1,2-Dichloroethane-d4		99.8 %	70-130	04/02/25	04/03/25	
Surrogate: Toluene-d8		105 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2514064
Diesel Range Organics (C10-C28)	39.6	25.0	1	04/02/25	04/03/25	
Oil Range Organics (C28-C36)	ND	50.0	1	04/02/25	04/03/25	
Surrogate: n-Nonane		106 %	61-141	04/02/25	04/03/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2514075
Chloride	111	20.0	1	04/02/25	04/03/25	



Sample Data

Matador Resources, LLC.
5400 LBJ Freeway, Suite 1500
Dallas TX, 75240

Project Name: Firethorn CTB
Project Number: 23003-0002
Project Manager: Ashley Giovengo

Reported:
4/8/2025 10:52:42AM

SW01-0-1'

E504005-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Benzene	ND	0.0250	1	04/02/25	04/03/25	
Ethylbenzene	ND	0.0250	1	04/02/25	04/03/25	
Toluene	0.0255	0.0250	1	04/02/25	04/03/25	
o-Xylene	ND	0.0250	1	04/02/25	04/03/25	
p,m-Xylene	ND	0.0500	1	04/02/25	04/03/25	
Total Xylenes	ND	0.0250	1	04/02/25	04/03/25	
Surrogate: Bromofluorobenzene		106 %	70-130	04/02/25	04/03/25	
Surrogate: 1,2-Dichloroethane-d4		99.3 %	70-130	04/02/25	04/03/25	
Surrogate: Toluene-d8		105 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2514063
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/25	04/03/25	
Surrogate: Bromofluorobenzene		106 %	70-130	04/02/25	04/03/25	
Surrogate: 1,2-Dichloroethane-d4		99.3 %	70-130	04/02/25	04/03/25	
Surrogate: Toluene-d8		105 %	70-130	04/02/25	04/03/25	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2514064
Diesel Range Organics (C10-C28)	138	25.0	1	04/02/25	04/03/25	
Oil Range Organics (C28-C36)	74.8	50.0	1	04/02/25	04/03/25	
Surrogate: n-Nonane		102 %	61-141	04/02/25	04/03/25	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: AK		Batch: 2514075
Chloride	519	20.0	1	04/02/25	04/03/25	



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/8/2025 10:52:42AM

Volatile Organic Compounds by EPA 8260B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514063-BLK1)

Prepared: 04/02/25 Analyzed: 04/02/25

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.522		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.472		0.500		94.4	70-130			
Surrogate: Toluene-d8	0.529		0.500		106	70-130			

LCS (2514063-BS1)

Prepared: 04/02/25 Analyzed: 04/02/25

Benzene	2.63	0.0250	2.50		105	70-130			
Ethylbenzene	2.73	0.0250	2.50		109	70-130			
Toluene	2.76	0.0250	2.50		110	70-130			
o-Xylene	2.97	0.0250	2.50		119	70-130			
p,m-Xylene	5.89	0.0500	5.00		118	70-130			
Total Xylenes	8.86	0.0250	7.50		118	70-130			
Surrogate: Bromofluorobenzene	0.536		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		94.9	70-130			
Surrogate: Toluene-d8	0.529		0.500		106	70-130			

Matrix Spike (2514063-MS1)

Source: E504004-05

Prepared: 04/02/25 Analyzed: 04/02/25

Benzene	2.66	0.0250	2.50	ND	106	48-131			
Ethylbenzene	2.72	0.0250	2.50	ND	109	45-135			
Toluene	2.75	0.0250	2.50	ND	110	48-130			
o-Xylene	2.91	0.0250	2.50	ND	116	43-135			
p,m-Xylene	5.79	0.0500	5.00	ND	116	43-135			
Total Xylenes	8.70	0.0250	7.50	ND	116	43-135			
Surrogate: Bromofluorobenzene	0.524		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.496		0.500		99.1	70-130			
Surrogate: Toluene-d8	0.524		0.500		105	70-130			

Matrix Spike Dup (2514063-MSD1)

Source: E504004-05

Prepared: 04/02/25 Analyzed: 04/02/25

Benzene	2.37	0.0250	2.50	ND	94.8	48-131	11.5	23	
Ethylbenzene	2.46	0.0250	2.50	ND	98.3	45-135	10.2	27	
Toluene	2.47	0.0250	2.50	ND	98.7	48-130	10.7	24	
o-Xylene	2.72	0.0250	2.50	ND	109	43-135	6.70	27	
p,m-Xylene	5.35	0.0500	5.00	ND	107	43-135	7.90	27	
Total Xylenes	8.07	0.0250	7.50	ND	108	43-135	7.49	27	
Surrogate: Bromofluorobenzene	0.537		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.496		0.500		99.1	70-130			
Surrogate: Toluene-d8	0.522		0.500		104	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/8/2025 10:52:42AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514063-BLK1)

Prepared: 04/02/25 Analyzed: 04/02/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.522		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.472		0.500		94.4	70-130			
Surrogate: Toluene-d8	0.529		0.500		106	70-130			

LCS (2514063-BS2)

Prepared: 04/02/25 Analyzed: 04/02/25

Gasoline Range Organics (C6-C10)	51.7	20.0	50.0		103	70-130			
Surrogate: Bromofluorobenzene	0.526		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		94.9	70-130			
Surrogate: Toluene-d8	0.536		0.500		107	70-130			

Matrix Spike (2514063-MS2)

Source: E504004-05

Prepared: 04/02/25 Analyzed: 04/02/25

Gasoline Range Organics (C6-C10)	56.5	20.0	50.0	ND	113	70-130			
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		99.0	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			

Matrix Spike Dup (2514063-MSD2)

Source: E504004-05

Prepared: 04/02/25 Analyzed: 04/02/25

Gasoline Range Organics (C6-C10)	55.0	20.0	50.0	ND	110	70-130	2.57	20	
Surrogate: Bromofluorobenzene	0.539		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.477		0.500		95.3	70-130			
Surrogate: Toluene-d8	0.538		0.500		108	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Firethorn CTB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	4/8/2025 10:52:42AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514064-BLK1)					Prepared: 04/02/25 Analyzed: 04/03/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	48.8		50.0		97.5	61-141			

LCS (2514064-BS1)					Prepared: 04/02/25 Analyzed: 04/03/25				
Diesel Range Organics (C10-C28)	250	25.0	250		100	66-144			
Surrogate: n-Nonane	51.7		50.0		103	61-141			

Matrix Spike (2514064-MS1)					Source: E504001-01		Prepared: 04/02/25 Analyzed: 04/03/25		
Diesel Range Organics (C10-C28)	261	25.0	250	ND	104	56-156			
Surrogate: n-Nonane	49.7		50.0		99.3	61-141			

Matrix Spike Dup (2514064-MSD1)					Source: E504001-01		Prepared: 04/02/25 Analyzed: 04/03/25		
Diesel Range Organics (C10-C28)	261	25.0	250	ND	105	56-156	0.0221	20	
Surrogate: n-Nonane	51.8		50.0		104	61-141			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Firethorn CTB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 4/8/2025 10:52:42AM
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Anions by EPA 300.0/9056A

Analyst: AK

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2514075-BLK1)					Prepared: 04/02/25 Analyzed: 04/02/25				
Chloride	ND	20.0							
LCS (2514075-BS1)					Prepared: 04/02/25 Analyzed: 04/02/25				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2514075-MS1)					Source: E504004-08		Prepared: 04/02/25 Analyzed: 04/02/25		
Chloride	257	40.0	250	ND	103	80-120			
Matrix Spike Dup (2514075-MSD1)					Source: E504004-08		Prepared: 04/02/25 Analyzed: 04/02/25		
Chloride	248	40.0	250	ND	99.2	80-120	3.59	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Firethorn CTB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	04/08/25 10:52

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Page 1 of 1

Client Information				Invoice Information		Lab Use Only		TAT				State					
Client: Matador				Company: Ensolum LLC		Lab WO#		1D 2D 3D Std				NM CO UT TX					
Project: Firethorn CTB				Address: 3122 National Parks Hwy		E 504005 230030002		x				x					
Project Manager: Ashley Giovengo				City, State, Zip: Carlsbad NM, 88220													
Address: 3122 National Parks Hwy				Phone: 575-988-0055													
City, State, Zip: Carlsbad NM, 88220				Email: agiovengo@ensolum.com													
Phone: 575-988-0055				Miscellaneous:													
Email: agiovengo@ensolum.com																	
Sample Information						Analysis and Method								EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA
1005	3/31/25	soil	1	FS13-1'		1						X					
1008				↓ 14 ↓		2						X					
1010				SWOL-0-1'		3						X					
												X					
												X					
												X					
												X					
												X					
												X					
												X					
												X					
												X					
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, iestrella@ensolum.com																	
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																	
Sampled by: Israel Estrella																	
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: <input checked="" type="radio"/> Y / N T1 _____ T2 _____ T3 _____ AVG Temp °C 4									
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time										
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other										Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA							
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																	



Envirotech Analytical Laboratory

Printed: 4/2/2025 9:26:44AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	04/02/25 04:30	Work Order ID:	E504005
Phone:	(972) 371-5200	Date Logged In:	04/01/25 15:27	Logged In By:	Noe Soto
Email:	agiovengo@ensolum.com	Due Date:	04/08/25 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? No
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



APPENDIX E

NMOCD Correspondence

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 430987

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 430987
	Action Type: [NOTIFY] Notification Of Liner Inspection (C-141L)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Liner Inspection Event Information	
Please answer all the questions in this group.	
What is the liner inspection surface area in square feet	13,356
Have all the impacted materials been removed from the liner	Yes
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	02/14/2025
Time liner inspection will commence	09:00 AM
Please provide any information necessary for observers to liner inspection	Separators Containment
Please provide any information necessary for navigation to liner inspection site	32.07774, -103.27376

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Phone: (505) 476-3441

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

CONDITIONS

Action 430987

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 430987
	Action Type: [NOTIFY] Notification Of Liner Inspection (C-141L)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of liner inspections including any changes in date/time per the requirements of 19.15.29.11.A(5)(a)(ii) NMAC, may result in the inspection not being accepted.	2/12/2025

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

QUESTIONS

Action 444536

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 444536
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,821
What is the estimated number of samples that will be gathered	17
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/25/2025
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Isreal Estrella (575) 291-9537
Please provide any information necessary for navigation to sampling site	32.0774,-103.27376

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Phone: (505) 476-3441

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

CONDITIONS

Action 444536

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 444536
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/21/2025

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

QUESTIONS

Action 444551

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 444551
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,821
What is the estimated number of samples that will be gathered	17
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/26/2025
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Isreal Estrella (575) 291-9537
Please provide any information necessary for navigation to sampling site	32.0774,-103.27376

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Oil Conservation Division
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CONDITIONS

Action 444551

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 444551
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/21/2025

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

QUESTIONS

Action 445623

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 445623
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,821
What is the estimated number of samples that will be gathered	15
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/27/2025
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Isreal Estrella (575) 291-9537
Please provide any information necessary for navigation to sampling site	32.0774,-103.27376

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

General Information
Phone: (505) 629-6116

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

CONDITIONS

Action 445623

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 445623
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/25/2025

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS

Action 446101

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 446101
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	2,821
What is the estimated number of samples that will be gathered	15
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/31/2025
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Isreal Estrella (575) 291-9537
Please provide any information necessary for navigation to sampling site	32.0774,-103.27376

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

CONDITIONS

Action 446101

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 446101
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/27/2025

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QUESTIONS

Action 455260

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2503441044
Incident Name	NAPP2503441044 FIRETHORN CTB @ 0
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received

Location of Release Source

Please answer all the questions in this group.

Site Name	FireThorn CTB
Date Release Discovered	02/02/2025
Surface Owner	Private

Incident Details

Please answer all the questions in this group.

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

Nature and Volume of Release

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

Crude Oil Released (bbls) Details	Cause: Human Error Flow Line - Production Crude Oil Released: 14 BBL Recovered: 2 BBL Lost: 12 BBL.
Produced Water Released (bbls) Details	Not answered.
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)	Not answered.

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State of New Mexico
Energy, Minerals and Natural Resources
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Santa Fe, NM 87505

QUESTIONS, Page 2

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	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: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 04/24/2025
--	--

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

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Phone: (505) 629-6116

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

QUESTIONS, Page 3

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (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	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride (EPA 300.0 or SM4500 Cl B)	2810
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3603
GRO+DRO (EPA SW-846 Method 8015M)	2627
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	03/25/2025
On what date will (or did) the final sampling or liner inspection occur	03/31/2025
On what date will (or was) the remediation complete(d)	03/31/2025
What is the estimated surface area (in square feet) that will be reclaimed	2222
What is the estimated volume (in cubic yards) that will be reclaimed	86
What is the estimated surface area (in square feet) that will be remediated	600
What is the estimated volume (in cubic yards) that will be remediated	19

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

QUESTIONS, Page 4

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	<i>Not answered.</i>
OR which OCD approved well (API) will be used for off-site disposal	<i>Not answered.</i>
OR is the off-site disposal site, to be used, out-of-state	<i>Not answered.</i>
OR is the off-site disposal site, to be used, an NMED facility	Yes
What is the name of the NMED facility	R360 Hobbs NM
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	<i>Not answered.</i>
(In Situ) Soil Vapor Extraction	<i>Not answered.</i>
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<i>Not answered.</i>
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<i>Not answered.</i>
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<i>Not answered.</i>
Ground Water Abatement pursuant to 19.15.30 NMAC	<i>Not answered.</i>
OTHER (Non-listed remedial process)	<i>Not answered.</i>
<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: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 04/24/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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QUESTIONS, Page 6

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	446101
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/31/2025
What was the (estimated) number of samples that were to be gathered	15
What was the sampling surface area in square feet	2821

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	600
What was the total volume (cubic yards) remediated	19
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	2222
What was the total volume (in cubic yards) reclaimed	86
Summarize any additional remediation activities not included by answers (above)	N/A
<p><i>The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.</i></p>	
<p>I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.</p>	
I hereby agree and sign off to the above statement	Name: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 04/24/2025

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QUESTIONS, Page 7

Action 455260

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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CONDITIONS

Action 455260

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 455260
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2503441044 FIRETHORN CTB, thank you. This Remediation Closure Report is approved.	4/25/2025