



November 25, 2025

**New Mexico Oil Conservation Division**

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

**Re: Remediation Work Plan Addendum  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
Eddy County, New Mexico**

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Devon Energy Production Company, LP (Devon), has prepared this *Remediation Work Plan Addendum* (RWPA) to document assessment and soil sampling activities performed at the Pipeline 800 Feet NW of Yukon Gold 31 CTB 2 (Site) and to address concern held by the New Mexico Oil Conservation Division (NMOCD) regarding the original *Remediation Work Plan* submitted on March 12, 2025. Devon is submitting this RWPA, describing analytical results from soil sampling activities and karst survey results associated with Incident Number nAPP2422256945 and proposing excavation of the subject matter release to the maximum extent practicable (MEP) prior to submitting a *Closure Request*.

**BACKGROUND**

The Site is located in Unit B, Section 31, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.265278°, -103.917778°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 8, 2024, a blown gasket on a blind flange resulted in the release of approximately 4 barrels (bbls) of produced water into a pipeline right-of-way (ROW). Devon reported the release to the NMOCD via email on August 9, 2024, and submitted a Release Notification Form C-141 (Form C-141) on August 15, 2024. The release was assigned Incident Number nAPP2422256945.

On May 07, 2025, NMOCD denied the *Remediation Work Plan* for Incident Number nAPP2422256945 for the following reasons:

- 1) *The ephemeral stream within 200 feet of the release has a defined bed & bank and is identified by a dashed blue line on a standard USGS topographic map. The National Wetland Inventory Mapper lists this as a wetland (riverine). Impacts go down to 41' and Devon says they will only excavate to a depth of 10 feet where practicable. In addition, this release is in an area of high karst, which may cause an imminent risk to ground water and as such must be remediated to the strictest Closure Criteria.*
- 2) *The reported volume of fluids released is 4 BBL. In Google Earth imagery from 8/21/2024, a 75' x 31' stain can be seen. Chlorides extend to 41 ft below ground surface. Update the volume of produced water released to reflect the amount of contamination found during delineation.*

- 3) *Include pertinent information regarding the pipelines including the owners/operators, the depths and what types of lines.*
- 4) *Under the Site Characterization portion of the C-141 application the following minimum distances should be updated as they are incorrect: any playa lake (1000ft-1/2 mi N) and a wetland (100-200 feet to west).*

In order to address NMOCD's concerns regarding spill volume, Ensolum, personnel will use a saturation depth of 3 inches based on the original spill volume calculation completed by Devon and increase the release footprint to 2,983 square feet based on laboratory analytical results. The estimated volume lost is approximately 70.8 bbls of produced water.

On September 03, 2025, NMOCD approved the Remediation Work Plan for Incident Number nAPP2422256945. The following is a condition listed in the approval:

- 1) *The requested variance to apply depth to groundwater Closure Criteria below 10' is denied. Excavation must be to the maximum extent practicable. Once that depth has been achieved, then OCD must be consulted and reasons for why the excavation can't be furthered must be provided. At that point, site conditions will be taken into consideration and a variance may be requested to leave the chloride contamination in place and the use of the Bentomat ST clay liner will be considered.*

In order to address NMOCD's concerns regarding the 10-foot excavation depth, Ensolum has provided an Excavation Guidance Document listing the safety concerns for an excavation deeper than 10 feet below ground surface (bgs). The Excavation Guidance Document is included in Appendix A.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Site Assessment/Characterization is described below. Potential Site receptors are identified on Figure 1.

The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-04905 POD1, located approximately 2,141 feet southwest of the Site. The well had a reported depth to groundwater greater than 105 feet below ground surface (bgs) and a total depth of 105 feet bgs. There are no regional or Site-specific hydrogeological conditions, such as shallow surface water, known karst features, wetlands, or vegetation to suggest the Site is conducive to shallower groundwater. All wells used for depth to groundwater determination are presented in Figure 1. The referenced well record is included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is an ephemeral stream, located approximately 217 feet west of the Site. The ephemeral stream measures approximately 25 feet wide and 7 to 10 feet in depth. The ephemeral stream remains dry and only flows as a direct result of precipitation. Based on a reported depth to groundwater south of the Site that is greater than 105 feet bgs, the ephemeral stream is not directly supplied with ground water (losing stream) and cannot sustain flow itself. The ephemeral stream is truncated approximately 1,500 feet north and downgradient of the Site by a lease road, which interrupts the feature and alters the natural flow of water, indicating ties to a significant water nexus based on the Clean Water Act has been interrupted. As such, the ephemeral stream does not meet the requirements of a watercourse within 300 feet of the Site; however, the

ephemeral stream does have defined bed and bank and as such, meets the NMAC definition of a watercourse.

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, and church, though the water course is also defined as a riverine, which is a category of a wetland, and it is within 300 feet of the release. 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 potentially underlain by unstable geology (high potential karst designation area). Site receptors are identified on Figure 1.

Advanced Geophysics, a BLM approved third-party cave and karst contractor, conducted a desktop survey, aerial survey, and geophysical survey of the Site. In summary, the aerial and geophysical karst surveys did not identify any karst features within 200 meters of the release extent. Results of the geophysical study indicated a well-layered geologic system and no anomalies, consistent with air-filled subsurface voids, were found within the survey area, indicating stable ground that would not pose a safety concern or act as an immediate conduit to groundwater. Based on the results of the karst and geophysical surveys, the Site does not appear to be underlain by unstable geology. The detailed report provided by Advanced Geophysics is included in Appendix C.

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): 100 mg/kg
- Chloride: 600 mg/kg

## SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

Beginning on August 15, 2024, Ensolum personnel were onsite to delineate the lateral extent of the release as indicated by field observations and information provided in the C-141. Four lateral soil samples (SS01 through SS04) were collected at ground surface just beyond the edge of the observed release extent. On September 24, 2024, four boreholes (BH01 through BH04) were advanced via hand auger within the release extent to assess the vertical extent of the release. Boreholes BH01 through BH03 were advanced to a terminal depth of 2 feet bgs and borehole BH04 was advanced to a terminal depth of 16 feet bgs.

Ensolum personnel returned to the Site on October 29, 2024, to collect two additional lateral delineation soil samples (SS05 and SS06) at ground surface and to advance borehole BH04 to a terminal depth of 21 feet bgs. On January 28, 2025, Ensolum contracted Cascade Environmental to advance borehole BH04 to a terminal depth of 45 feet bgs with a Terrasonic 150CC drilling rig. All delineation soil samples were field screened for chloride using Hach® chloride QuanTab® test strips. During drilling activities, Ensolum observed soil conditions for indications of karst features (i.e. voids, recalcification, perched water, or other features) since the Site is located within a BLM-designated high potential karst location. Ensolum observed silty sand from the ground surface to a depth of approximately 33 feet bgs where it transitioned into a silt with gravel for approximately 4 feet. Fat clay was observed at 37 feet bgs until the terminus of the boring at 45 feet bgs. Ensolum did not observe any karst features beneath the Site.

Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Appendix D. Photographic documentation of delineation activities is included in Appendix E.

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-gasoline range organics (GRO), TPH-diesel range organics (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 SS06) were all in compliance with the strictest Closure Criteria at ground surface. Boreholes BH01 and BH03 were all in compliance with the strictest Closure Criteria at ground surface to a terminal depth of 2 feet bgs. Laboratory analytical results for boreholes BH02 indicated concentrations of TPH exceeded the Site Closure Criteria at ground surface and in compliance at a depth of 1-foot and 2 feet bgs. Borehole BH04 contained concentrations of TPH and chloride that exceeded the Site Closure Criteria at ground surface and concentrations of chloride that exceeded the Site Closure Criteria at depths ranging from 2 feet to 43 feet bgs. Laboratory results are summarized in Table 1 and laboratory analytical reports are included in Appendix F.

## PROPOSED REMEDIATION WORK PLAN

Results of assessment and delineation activities indicated the presence of limited TPH-impacted soil at ground surface near the point of release and chloride-impacted soil in a footprint of approximately 2,983 square feet to a maximum depth of 43 feet bgs in one location (BH04). The Site Closure Criteria is defined by the presence of an ephemeral stream, located approximately 217 feet west of the Site, which meets the NMOCD definition of a significant watercourse and wetland (designated as a riverine). Groundwater has been reasonably assessed to be greater than 105 feet bgs beneath the Site. While the watercourse/riverine is considered a sensitive receptor as it relates to the Site, the potential to have existing impacts migrate to the ephemeral stream appears to be low, especially if proper remedial actions are taken to mitigate lateral migration of impacts. As such, Devon respectfully requests a variance in the Site Closure Criteria to apply the current one (strictest Closure Criteria) based on the nearby sensitive receptor (watercourse and riverine) but apply the appropriate Closure Criteria based on the depth to groundwater determination (greater than 100 feet bgs) to soil below 10 feet bgs. This depth was determined based on the elevation of the base of the watercourse in relation to the Site.

Devon proposes to complete excavation activities at the Site according to the following actions:

- Excavate to the depth of the ephemeral stream to prevent possible run-off and the lateral/downstream movements of COCs from the release area or until the MEP within the pipeline ROW. Devon recognizes the ephemeral stream is considered a significant watercourse and wetland per NMOCD and it has the potential to transport contaminants and as such, excavation of impacted to the base depth of the ephemeral stream will reduce potential COC transport. Since the ephemeral stream is a losing stream, recharge of the stream is from upgradient water sources and potential seepage of the higher sidewalls through precipitation migrating through the loose subsurface and collecting in the watercourse. By removing impacted soil to the depth of the watercourse, any potential seepage through the subsurface towards the

ephemeral stream would be absent of COCs, thus protecting surface and groundwater. This approach is equally protective of human health, the environment, and groundwater. The reported depth to ground water greater than 105 feet bgs, which provides at least 62 feet of distance between the chloride impacted soil (43 feet bgs) to the groundwater table, which should be sufficient distance to be protective, especially with the fat clay encountered at depth acting as a retardant of further migration. Devon believes these actions will be equally protective of human health, the environment, and groundwater.

- There are three major pipelines, one DCP high pressure gas line, one Enlink oil transfer line and one Devon Energy produced water line, which run the extent of the excavation area where significant hazards are associated with excavation via mechanical means. Devon intends to excavate to a depth of 10 feet bgs where practicable; however, NMOCD will be notified if significant structural or safety concerns arise during excavation, the lines are approximately 4-5 feet bgs.
- The excavation will be completed with mechanical equipment, and the proposed excavation extent and depths are depicted on Figure 3.
- The impacted areas measure approximately 1,479 square feet (Area 1) and 1,504 square feet (Area 2) in size and an estimated 815 cubic yards of impacted soil will require excavation. This work will include addressing the TPH impacted soil in boreholes BH02 and BH04 at ground surface, see Figure 3.
- A Bentomat ST clay liner will be installed in the 10-foot excavation area (Area 1) to prevent chloride from migrating vertically toward the surface or laterally to the nearby ephemeral stream, which will add additional protection to surface and groundwater (Figure 4).
- Impacted soil and waste containing soil will be transferred to an approved landfill facility for disposal.
- The excavation will be backfilled and recontoured to match pre-existing conditions and the off-pad areas will be reseeded with a seed mixture approved by the BLM.
- A karst survey was completed by Advanced Geophysics and no anomalies, consistent with air-filled subsurface voids, were found within the survey area, indicating stable ground that would not pose a safety concern or act as an immediate conduit to groundwater.

Devon will complete the proposed excavation and soil sampling activities within 180 days of the date of approval of this RWP by the NMOCD and update the volume lost via the NMOCD website at the time of submission.

If you have any questions or comments, please contact Mrs. Ashley Urzedo at (575) 988-0055 or [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Ashley Urzedo  
 Associate Principal



Daniel R. Moir, PG (licensed in WY & TX)  
 Senior Managing Geologist

cc: Jim Raley, Devon

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**Appendices:**

Figure 1      Site Receptor Map  
Figure 2      Delineation Soil Sample Locations  
Figure 3      Proposed Excavation Extent

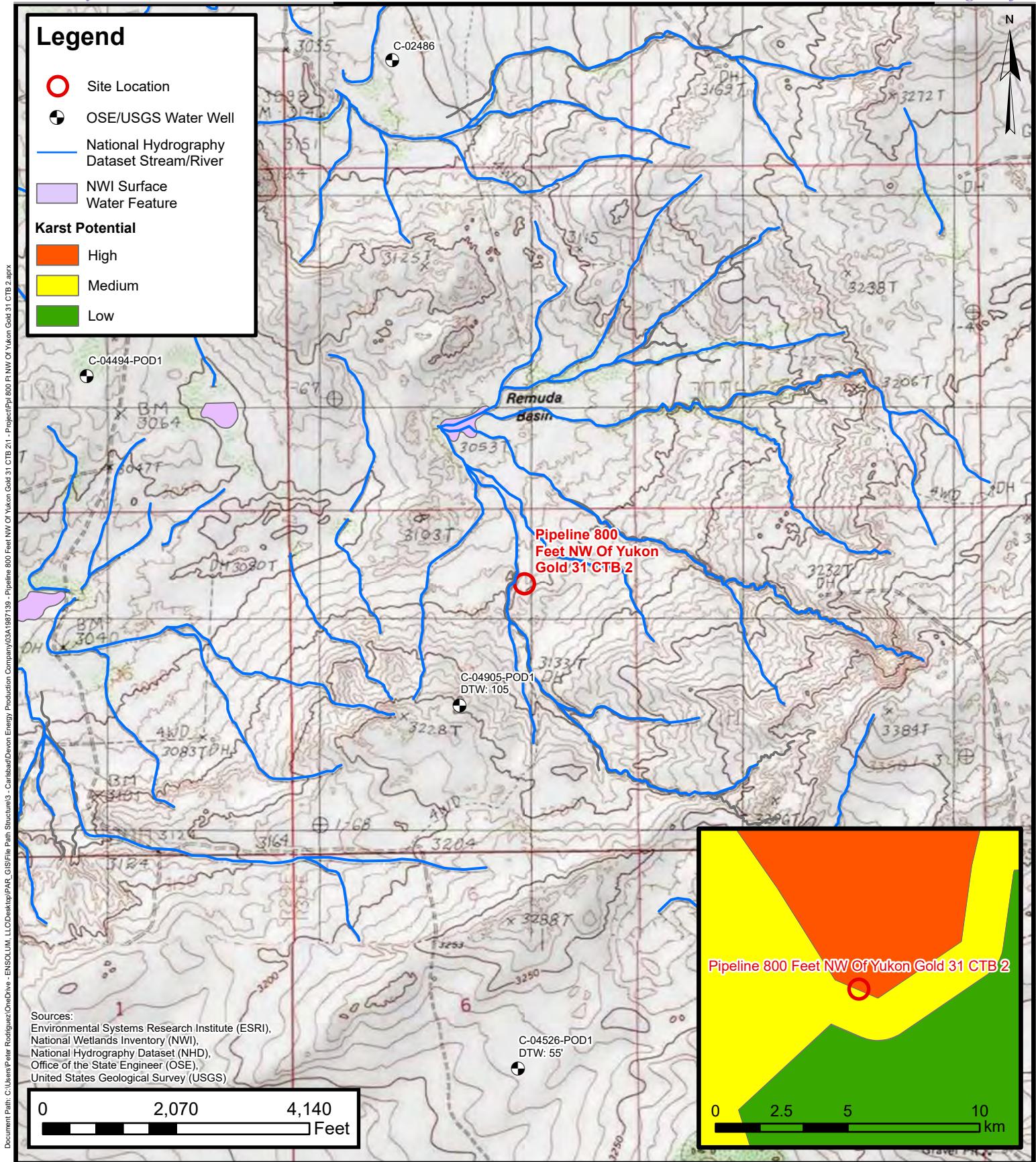
Table 1      Soil Sample Analytical Results (Delineation Soil Samples)

Appendix A    Excavation Guidance Document  
Appendix B    Well Record and Log  
Appendix C    Karst Survey  
Appendix D    Lithologic Soil Sampling Logs  
Appendix E    Photographic Log  
Appendix F    Laboratory Analytical Reports & Chain-of-Custody Documentation  
Appendix G    NMOCD Correspondence



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## FIGURES



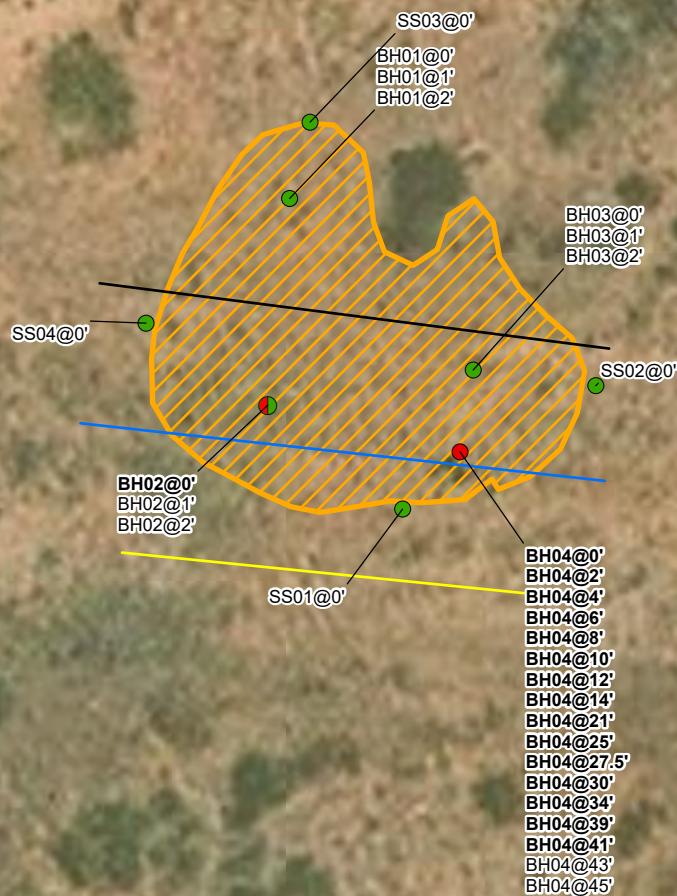
**Site Receptor Map**  
Devon Energy Production Company, LP  
Pipeline 800 Feet NW Of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
Unit B, Sec. 31, T23S, R30E  
Eddy County, New Mexico

**FIGURE**  
**1**



## Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Exceeding Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Enlink Delaware Crude Pipeline LLC
- DCP Midstream High Pressure Gas line
- Devon Energy Produced Water Line
- Release Extent
- Dry Wash



Notes:  
Sample ID @ Depth Below Ground Surface.  
Samples in bold indicate sample exceeded applicable closure criteria.

0 10 20 40 60 80  
Feet

Sources: Environmental Systems Research Institute (ESRI)

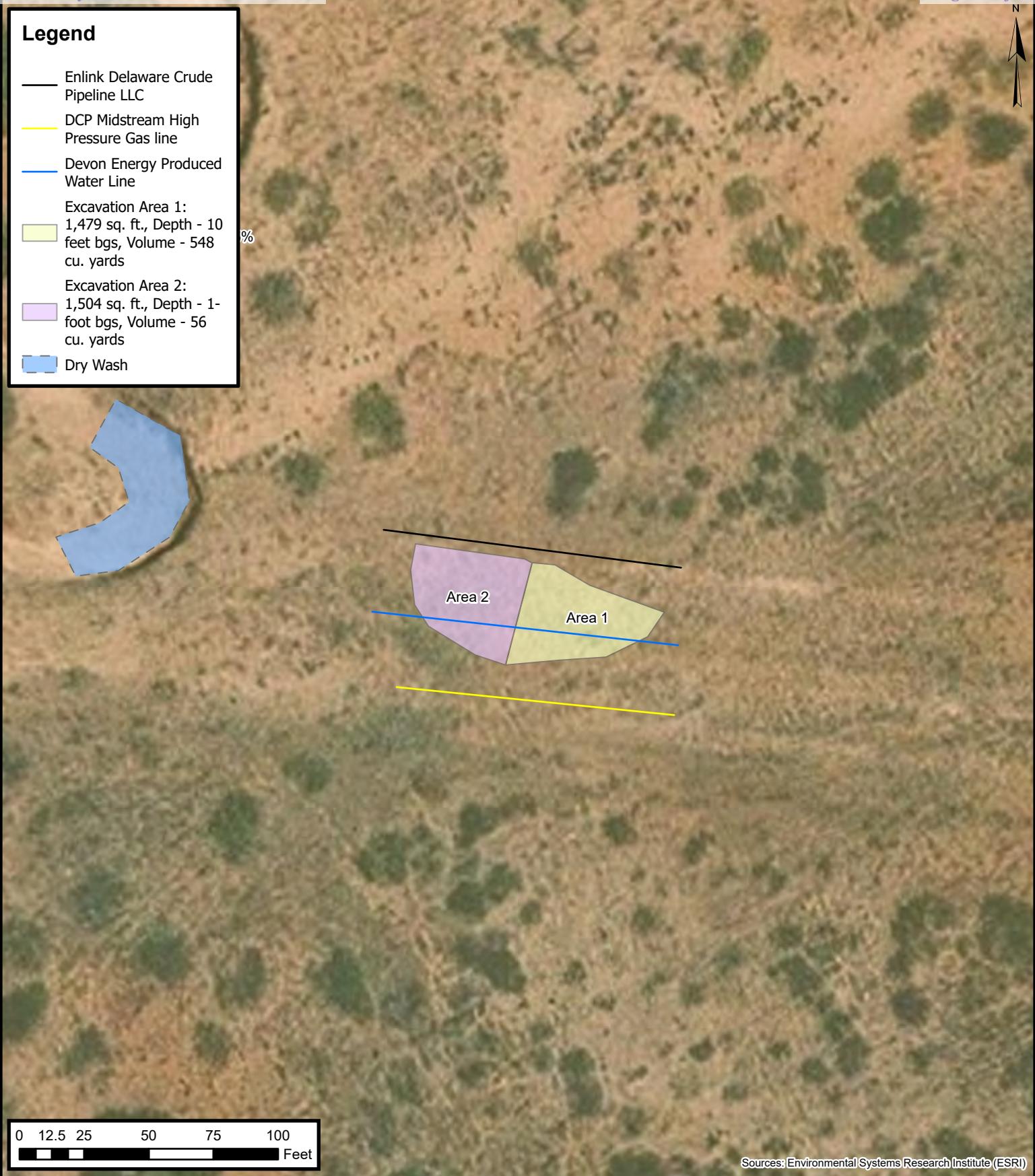


Environmental, Engineering and Hydrogeologic Consultants

## Delineation Soil Sample Locations

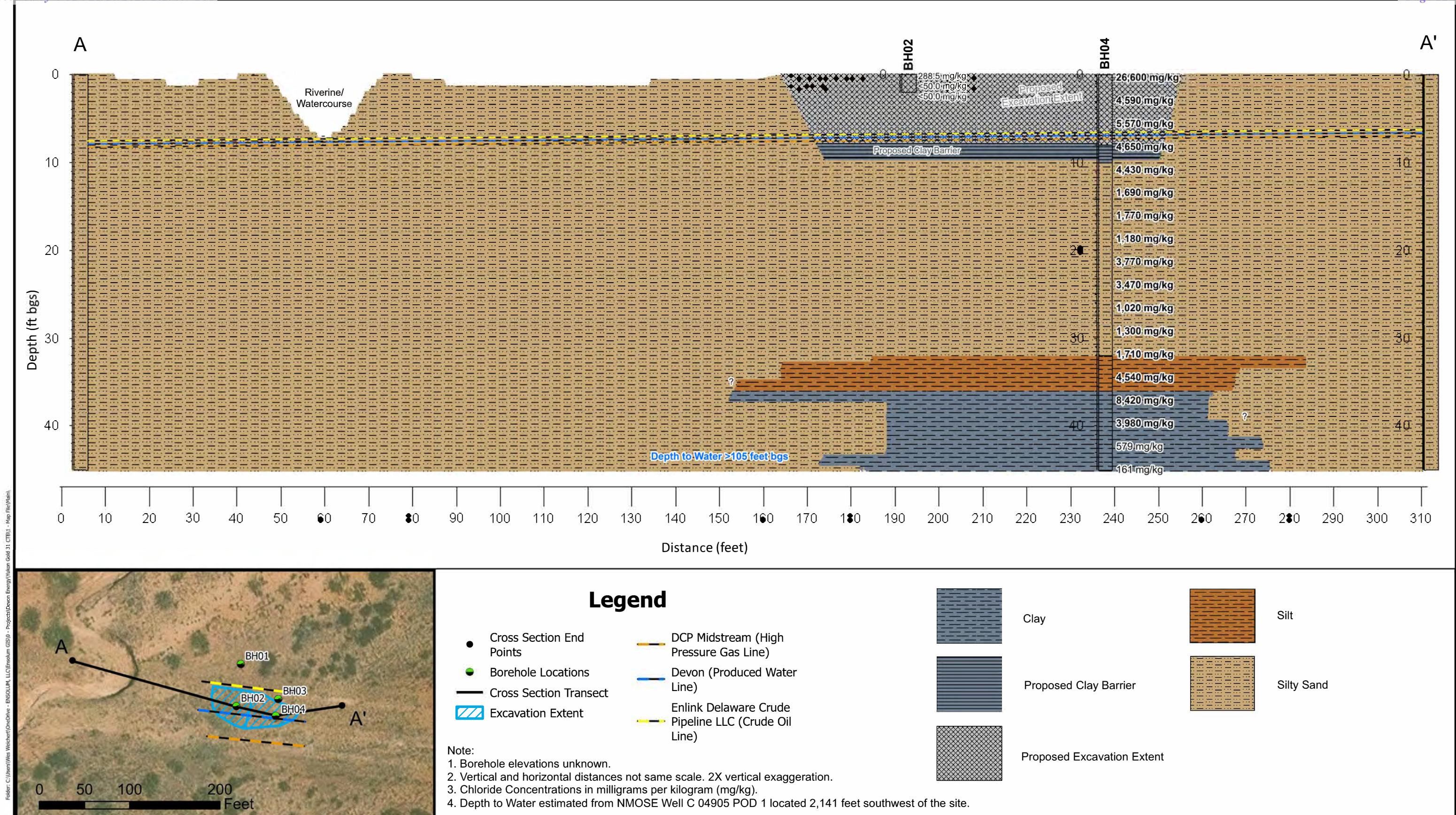
Devon Energy Production Company, LP  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
NWNE, Sec 31, T23W, R30N  
Eddy County, New Mexico

FIGURE  
2



**Proposed Excavation Extent**  
Devon Energy Production Company, LP  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
NWNE, Sec 31, T23W, R30N  
Eddy County, New Mexico

**FIGURE  
3**



**Cross Section A-A'**  
Devon Energy Production Company, LP  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
NWNE, Sec 31, T23W, R30N  
Eddy County, New Mexico

**FIGURE**  
**4**



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## TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Pipeline 800 Feet NW of Yukon Gold 31 CTB 2**  
**Devon Energy Production Company, LP**  
**Eddy 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	NE	NE	100	600
<b>Delineation Soil Samples</b>										
SS01	8/15/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	48.0
SS02	8/15/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS03	8/15/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS04	8/15/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
SS05	10/29/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	25.5
SS06	10/29/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	44.6
BH01	9/24/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH01	9/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH01	9/24/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH02	9/24/2024	0	<0.0250	<0.0500	<20.0	194	94.5	194	<b>288.5</b>	370
BH02	9/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	43.7
BH02	9/24/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	98.5
BH03	9/24/2024	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH03	9/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	82.0
BH03	9/24/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0

**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

&lt;: 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 1 - Continued**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Pipeline 800 Feet NW of Yukon Gold 31 CTB 2**  
**Devon Energy Production Company, LP**  
**Eddy 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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
<b>Delineation Soil Samples</b>										
BH04	9/24/2024	0	<0.0250	<0.0500	<20.0	1,560	1,350	1,560	<b>2,910</b>	<b>26,600</b>
BH04	9/24/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>4,590</b>
BH04	9/24/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>5,570</b>
BH04	9/24/2024	6	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>4,650</b>
BH04	9/24/2024	8	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>4,430</b>
BH04	9/24/2024	10	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,690</b>
BH04	9/24/2024	12	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,770</b>
BH04	9/24/2024	14	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,180</b>
BH04	9/24/2024	16	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>3,770</b>
BH04	10/29/2024	21	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>3,470</b>
BH04	1/28/2025	25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,020</b>
BH04	1/28/2025	27.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,300</b>
BH04	1/28/2025	30	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>1,710</b>
BH04	1/28/2025	34	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>4,540</b>
BH04	1/28/2025	39	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>8,420</b>
BH04	1/28/2025	41	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<b>3,980</b>
BH04	1/28/2025	43	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	579
BH04	1/28/2025	45	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	161

**Notes:**

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ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



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## APPENDIX A

### Excavation Guidance Document

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November 6, 2025

**New Mexico Oil Conservation Division**

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

**Re: Excavation Guidance Document**  
**Pipeline 800 Feet NW of Yukon Gold 31 CTB 2**  
**Incident Number: nAPP2422256945**  
**Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) has prepared this document on behalf of Devon Energy, Inc (Devon), to provide guidance on safety precautions related to the proposed excavation near existing production equipment. This guidance applies to the proposed excavation and applies only to the Pipeline 800 Feet NW of Yukon Gold 31 CTB 2 (Site), for which a Site Map is attached as Figure 1.

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Excavation Standard 29 Code of Federal Regulations (CFR) Part 1926 Sub-part P Section 1926.652(i) and 1926.652(j) and under the consultation of a Registered Professional Engineer (RPE). The document includes a review of the stability of adjacent structures and protection of employees from loose rocks, soil, and equipment and analysis of the following parameters:

- Soil types and conditions leading to cave-ins;
- Stability of engineered facility equipment with requested excavation;
- Protection of employees from materials and equipment that could fall or roll into an excavation; and
- Other hazardous conditions, including confined spaces.

This guidance document must be reviewed before starting any proposed excavation activities and kept on site if excavation activities are occurring. In addition, a copy of the OSHA Excavation Standard 29 CFR Part 1926 Sub-part P will be kept on site.

Review of OSHA Excavation Standards indicates the following guidance for general excavation activities:

- The walls of any excavated areas must be sloped to a maximum of 1.5 horizontal to 1.0 vertical for Type C soils.
- OSHA Excavation Standard 29 CFR Part 1926 Sub-part P indicates the following:
  - Excavation below the level of the subsurface pipelines, base or footing of any foundation, or retaining wall poses a reasonable hazard to employees and should not be conducted without the removal of equipment adjacent to the proposed excavation and/or installation of physical safety measures such as shoring or other protective structures to prevent structural failure of the equipment foundation and to ensure safety to employees working near the proposed excavation.

Devon Energy, Inc  
Excavation Guidance Document  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2

- Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into any excavation. Protection shall be provided by placing and keeping such materials or equipment at least two feet (0.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.
- When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a Competent Person shall determine the degree to which the actual slope must be reduced below the maximum allowable slope and shall assure that such a reduction is achieved. Surcharge loads from adjacent structures shall be evaluated in accordance with § 1926.651(i).

## EXCAVATION ANALYSIS PARAMETERS

The following findings were observed at the Site:

- Soil type C was observed in the Site visit. Type C soil will be utilized for the recommendation. In the event of excavation activities, a competent person will inspect the site daily and note any changes in soil type. If type A or B soil is identified the excavation slope will be modified to account for this change.
- The area in question entails a polygon with maximum dimensions of 50 feet by 25 feet directly adjacent to and beneath subsurface production lines as shown on Figure 2.
- Directly through the proposed excavation area is one subsurface produced water line at a depth of four feet bgs. The subsurface produced water pipeline is estimated to be eight inches in diameter and constructed of high density polyethylene (HDPE).
- To the north of the proposed excavation area is one subsurface crude oil pipeline at a depth of four feet bgs. The subsurface crude oil pipeline is estimated to be eight inches in diameter and is constructed of steel.
- To the south of the proposed excavation area is one subsurface natural gas pipeline at a depth of four feet bgs. The subsurface natural gas pipeline is estimated to be eight inches in diameter and is constructed of steel.
- A cross section of the proposed excavation shows the approximate position of the existing subsurface lines in relation to the excavation depth and the sloped walls. The excavation cross section is shown on Figure 3.

## ENGINEER RECOMMENDATIONS

Review of the above-mentioned parameters, OSHA regulations, and Site conditions observed during Site visits were completed and the following RPE recommendations were reached:

- The subsurface pipelines are located over the proposed excavation area and are buried at a depth of approximately four feet bgs. The three lines running east-west, utilizing Boussineq's strip footing equation, could be undermined with slopes beginning less than 3.33 feet from the center of each pipe. Review of the potential pipe stress and deflection during an excavation directly below pipelines, the pipelines can experience increased tension and compression causing increased hoop stress. Even if additional supports are installed in the process of excavation, the brief time they remain unsupported can cause pipe fatigue and eventually pipe failure. It is reasonable to assume that an increase in hoop stress and increase of pipe fatigue on the pipeline system can exceed the engineered parameters and lead to pipeline failure resulting in an additional release. It is not recommended to excavate directly below any of the pipelines.

Devon Energy, Inc  
Excavation Guidance Document  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2

- Due to the presence of active subsurface lines within and adjacent to the proposed excavation area, excavation directly below or adjacent to these lines is not recommended and would require substantial deconstruction and/or additional support for the equipment.

## CONCLUSIONS

Based on the dimensions of the requested excavation and presence of active subsurface utilities, there is inadequate structural support to conduct an excavation adjacent to and/or below the underground utilities in a manner that both protects personnel health and equipment stability.

Sincerely,

**Ensolum, LLC**

*Brian Sulzberger*  
11/25/2025

Brian Sulzberger, P.E.  
Senior Engineer



cc: New Mexico State Land Office

Appendices:

Figure 1 Site Map  
Figure 2 Area of Interest Diagram  
Appendix A Engineering Models



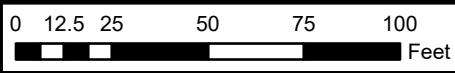
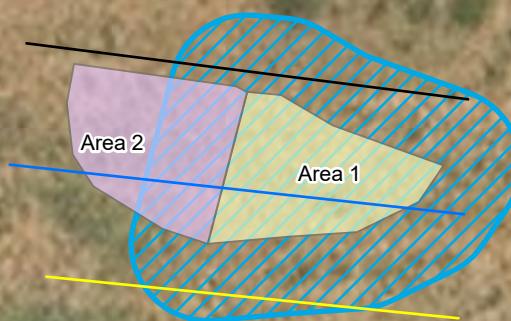
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## FIGURES

## Legend

- Enlink Delaware Crude Pipeline LLC
- DCP Midstream High Pressure Gas line
- Devon Energy Produced Water Line
- Excavation Area 1: 1,479 sq. ft.,  
Depth - 10 feet bgs, Volume - 548 cu. yards
- Excavation Area 2: 1,504 sq. ft.,  
Depth - 1-foot bgs, Volume - 56 cu. yards
- Top of Excavation Slope

Total Volume - 604 cu. yards w/ 35% expansion and sloping factor added 815 cu. yards



Sources: Environmental Systems Research Institute (ESRI)

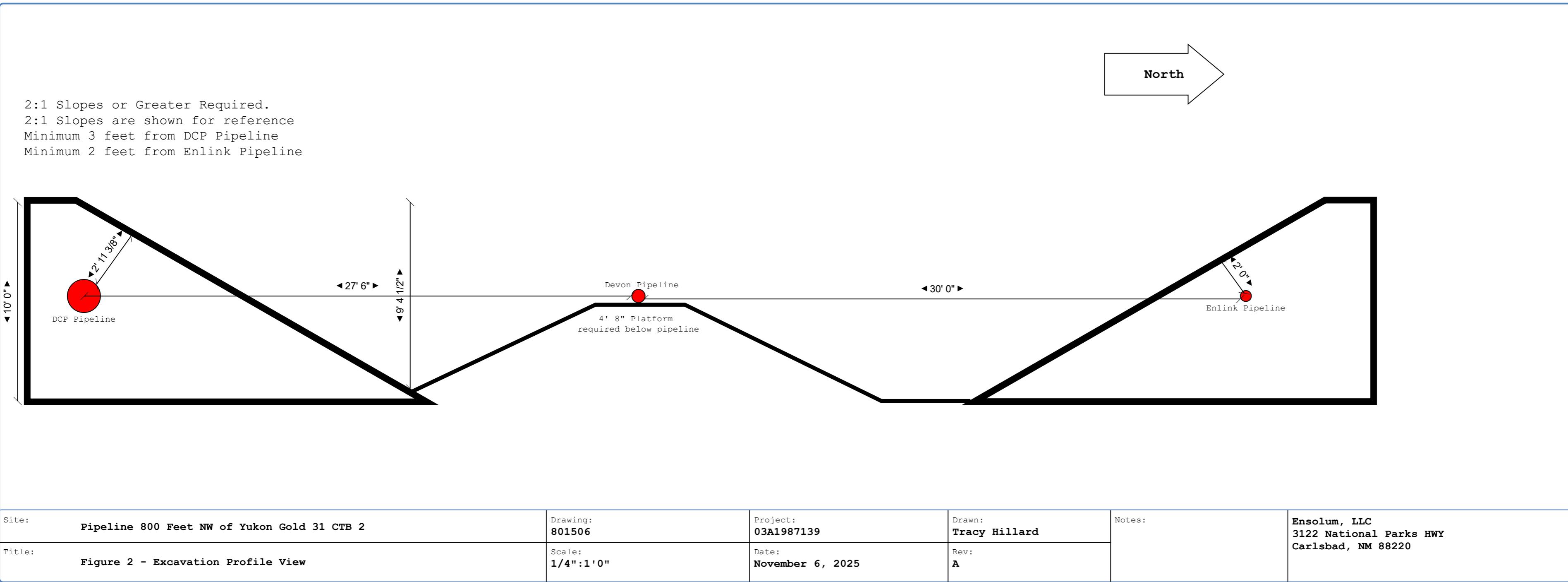


Environmental, Engineering and Hydrogeologic Consultants

## Area of Interest Diagram

Devon Energy Production Company, LP  
Pipeline 800 Feet NW of Yukon Gold 31 CTB 2  
Incident Number: nAPP2422256945  
Unit B, Section 31, T 23S, R 30E  
Eddy County, New Mexico

**FIGURE**  
**1**

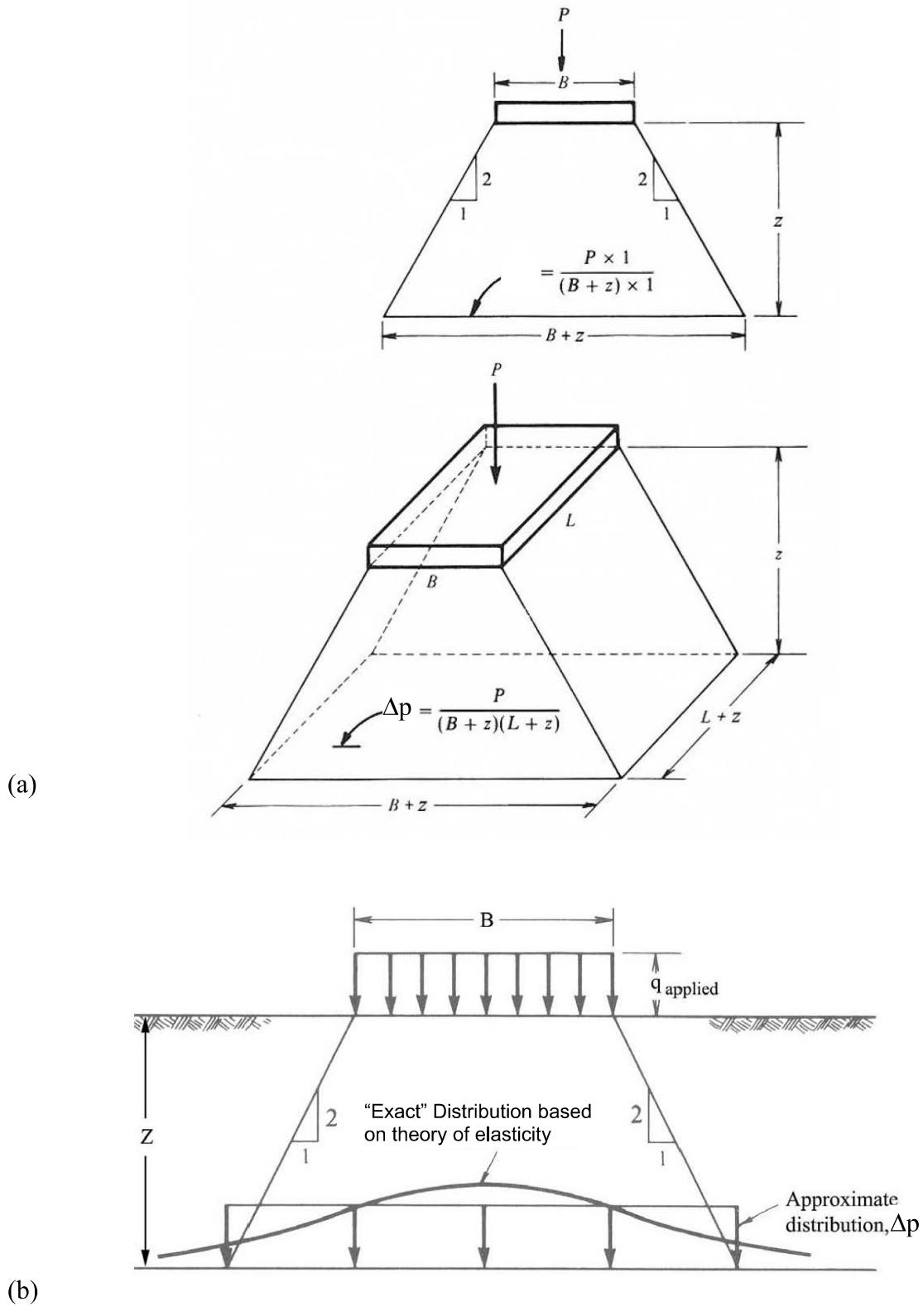




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## APPENDIX A

### Engineering Models



**Figure 2-10. Distribution of vertical stress by the 2:1 method (after Perloff and Baron, 1976).**

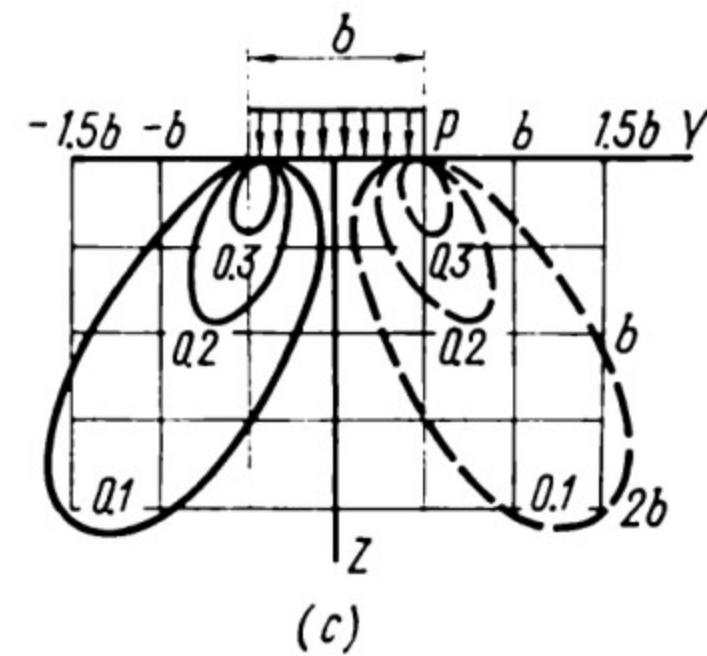
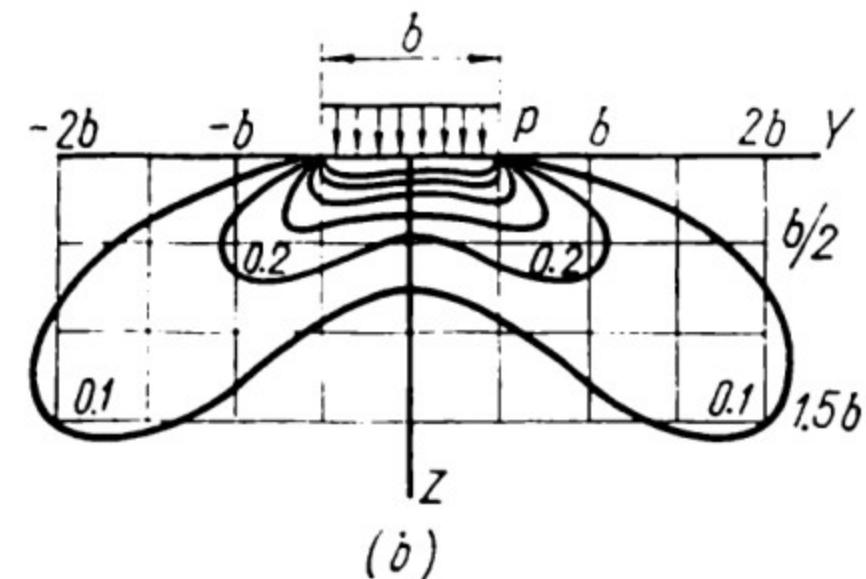
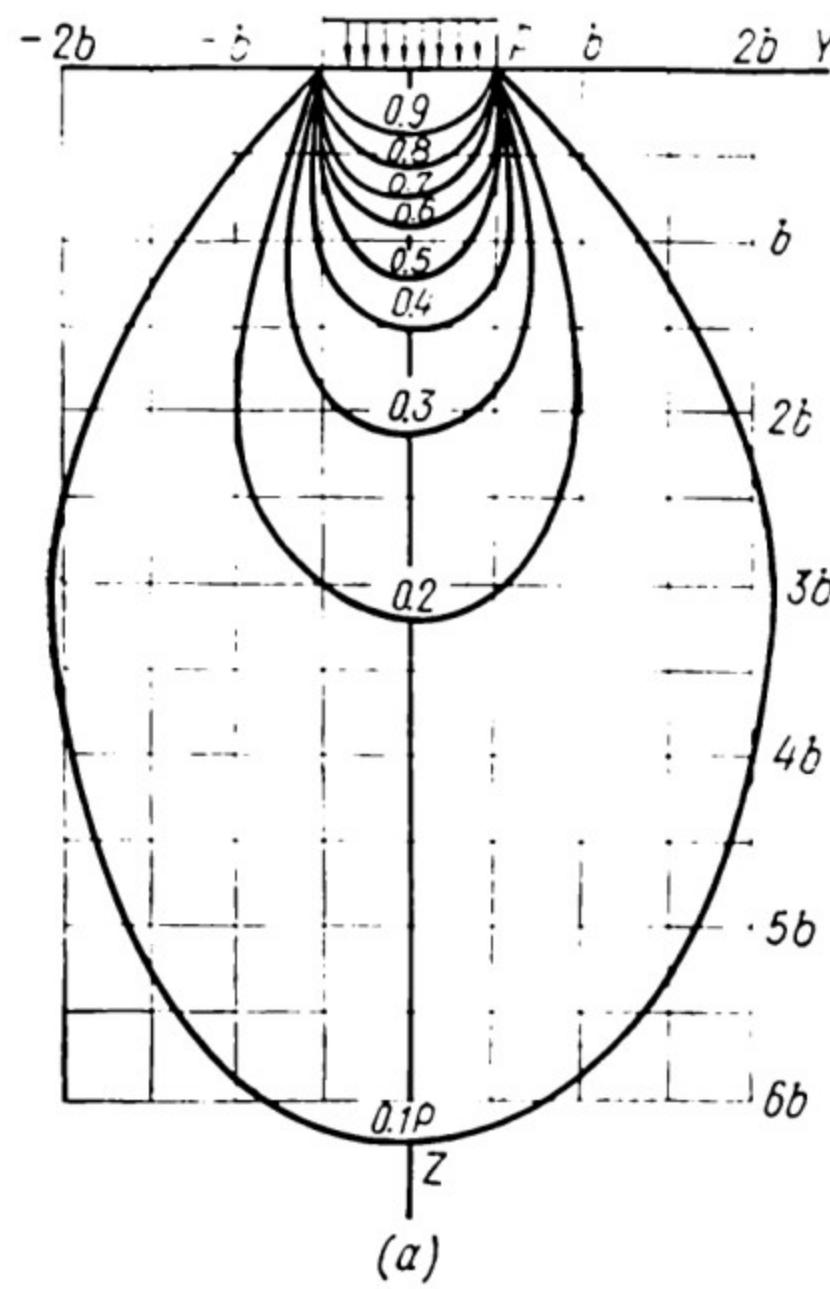
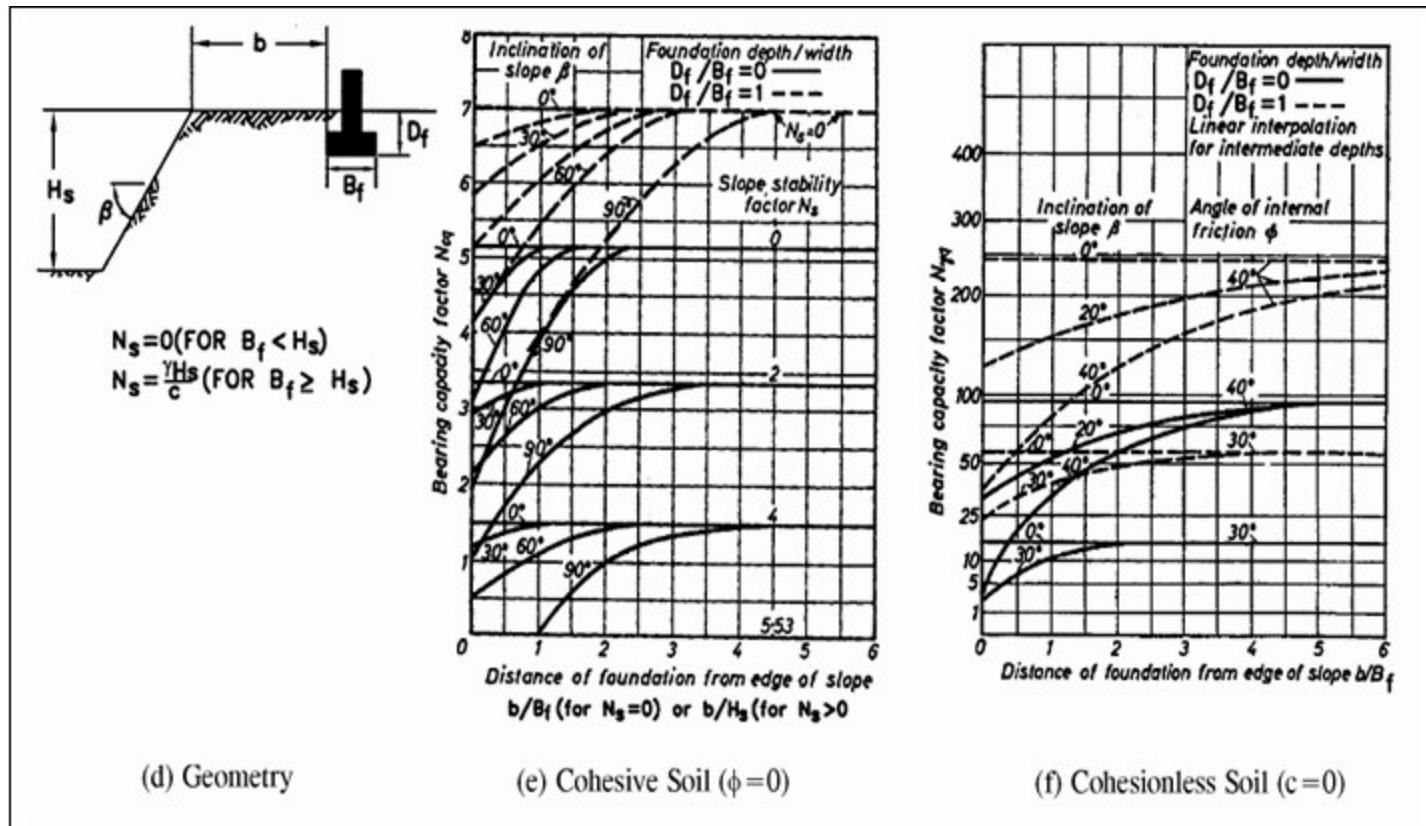


Fig. 49. Lines of equal stresses in a linearly deformable massif for the planar problem

(a) isobars  $\sigma_z$ ; (b) lateral pressure  $\sigma_y$ ; (c) shears  $\tau_{zx}$



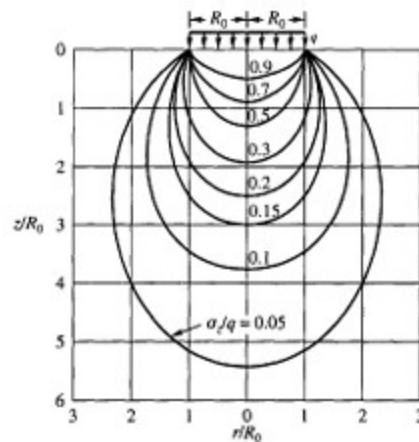


Figure 6.22 Pressure isobars based on Boussinesq equation for uniformly loaded circular footings



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## APPENDIX B

### Well Record and Log

---



2904 W 2nd St.  
Roswell, NM 88201  
voice: 575.624.2420  
fax: 575.624.2421  
[www.atkinseng.com](http://www.atkinseng.com)

February 10, 2025

DII-NMOSE  
1900 W 2<sup>nd</sup> Street  
Roswell, NM 88201

*Hand Delivered to the DII Office of the State Engineer*

Re: Well Record C-04905 Pod-1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, C-04905 Pod-1.

If you have any questions, please contact me at 575.499.9244 or [lucas@atkinseng.com](mailto:lucas@atkinseng.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton

Enclosures: as noted above

DSE DM ROSWELL  
10 FEB 25 PM 2025



# WELL RECORD & LOG

## OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)			WELL TAG ID NO. N/A		OSE FILE NO(S). C-04905			
	WELL OWNER NAME(S) XTO Energy, Inc.			PHONE (OPTIONAL)					
	WELL OWNER MAILING ADDRESS 3104 E. Greene St.			CITY Carlsbad		STATE NM	ZIP 88220		
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	32	MINUTES 15	SECONDS 36.40	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
		LONGITUDE	103	55	16.09	W			
	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE NE SW Sec. 31, T23S, R30E, NMMP								
	LICENSE NO. 1249	NAME OF LICENSED DRILLER Jackie D. Atkins				NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.			
	DRILLING STARTED 01/13/2025	DRILLING ENDED 01/13/2025	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 *add <input checked="" type="checkbox"/> DRY HOLE <small>Centralizer info below</small>			STATIC WATER LEVEL IN COMPLETED WELL (FT)		N/A	DATE STATIC MEASURED 1/13/25, 1/24/25	
	DRILLING FLUID:	<input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD		ADDITIVES - SPECIFY:		CHECK HERE IF PITLESS ADAPTER IS <input type="checkbox"/> INSTALLED			
DRILLING METHOD:	<input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL		<input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger						
DEPTH (feet bgl)	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)		
FROM		TO	0	105	±6.25	Soil Boring	--	--	--
DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL <small>*if using Centralizers for Artesian wells- indicate the spacing below)</small>			AMOUNT (cubic feet)	METHOD OF PLACEMENT		
FROM	TO		N/A						
3. ANNULAR MATERIAL									

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2



# PLUGGING RECORD

**NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-04905-POD-1  
 Well owner: XTO Energy, Inc. Phone No.: \_\_\_\_\_  
 Mailing address: 3104 E. Greene St.  
 City: Carlsbad State: New Mexico Zip code: 88220

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins ( Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/25
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Lucas Middleton
- 4) Date well plugging began: 01/24/2025 Date well plugging concluded: 01/24/2025
- 5) GPS Well Location: Latitude: 32 deg, 15 min, 36.40 sec  
 Longitude: 103 deg, 55 min, 16.09 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl),  
 by the following manner: water level probe
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 11/07/2024
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

OSE DII ROSWELL NM  
 10 FEB 25 PM 1:44

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15 gallons	15 gallons	Boring	
10'-105'	Drill Cuttings	Approx. 152 gallons	152 gallons	Boring	

OSE DI ROSWELL NM  
10 FEB 25 PM 1:44

MULTIPLY  BY  AND OBTAIN  
 cubic feet  x  = gallons  
 cubic yards  x  = gallons

### III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

  
Jackie Atkins (Feb 10, 2025 10:09 MST)

02/10/2025

Signature of Well Driller

Date

# C-4905-WR-20 Well Record and Log-packet-forsign-Remuda

Final Audit Report

2025-02-10

Created:	2025-02-10
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAfw844kgxDWuG6fKEWiGE6yy_sKeUcVh

## "C-4905-WR-20 Well Record and Log-packet- forsign-Remuda" History

- 📄 Document created by Lucas Middleton (lucas@atkinseng.com)  
2025-02-10 - 4:59:26 PM GMT
- ✉️ Document emailed to Jack Atkins (jack@atkinseng.com) for signature  
2025-02-10 - 5:01:24 PM GMT
- ✉️ Email viewed by Jack Atkins (jack@atkinseng.com)  
2025-02-10 - 5:06:09 PM GMT
- 🔗 Document e-signed by Jack Atkins (jack@atkinseng.com)  
Signature Date: 2025-02-10 - 5:09:27 PM GMT - Time Source: server
- ✓ Agreement completed.  
2025-02-10 - 5:09:27 PM GMT

OSE DII ROSWELL NM  
10 FEB '25 PM11:44

Adobe Acrobat Sign



---

## APPENDIX C

### Karst Survey

# **Aerial and Geophysical Cave and Karst Investigation: Pipeline 800 ft. NW of Yukon Gold 31 CTB 2**

**Report Delivered: 07/16/2025**

**Prepared for:  
Ensolum, LLC  
3122 National Parks HWY  
Carlsbad, NM 88220**

**Prepared By:  
Advanced Geophysics, LLC  
2821 White Plains Dr.  
Midlothian, Texas 76065**



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# Executive Summary

## Introduction

**Ensolum, LLC** requested an aerial and geophysical karst survey following a release along a pipeline 800 feet northwest of Yukon Gold 31 CTB 2, located at 32.265278, -103.917778. The objective of the surveys was to assess the stability of the site by investigating surface and subsurface conditions for the presence of potential karst features.

## Findings

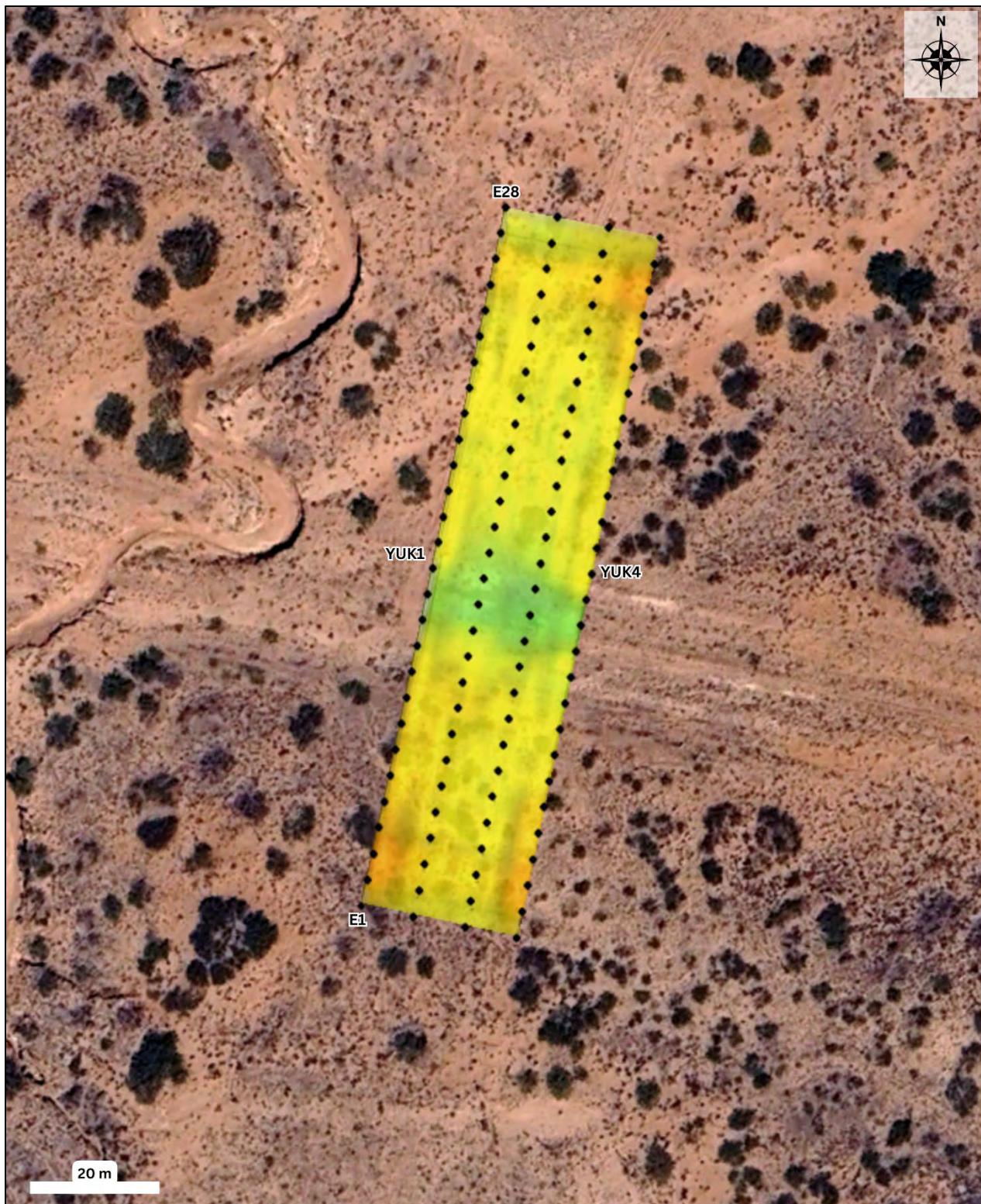
- The aerial survey revealed:
  - **No anomalies** were identified within the 200-meter (656 ft) buffer of the release.
- The geophysical survey revealed:
  - **No anomalies** that could be interpreted as areas of increased porosity or air-filled voids/conduits were identified.

## Recommendations

- **Mitigation Planning:**
  - Any subsurface voids encountered during construction, or any phase of the remediation process must be reported to the Bureau of Land Management Karst Division or the New Mexico State Lands Office Resource Division.
  - Mitigation measures should align with guidelines in the **Bureau of Land Management Cave and Karst Management Handbook (H-8380-1)** or the **Natural Resources Conservation Service Conservation Practice Standard for Karst Sinkhole Treatment (Code 527)**.

## Conclusions

The aerial and geophysical surveys conducted in the vicinity of a release that occurred along a pipeline 800 feet northwest of Yukon Gold 31 CTB 2 did not reveal any surface or subsurface anomalies indicative of karst features. In the absence of such features, both at and below the surface, the site is characterized as stable.



**Figure A.** Aerial view of the location of the release with integrated geophysical overlay, illustrating the results of the electrical resistivity survey.

## 1.0 INTRODUCTION

The following report has been prepared for Ensolum, LLC, to determine the presence or absence of surface and subsurface voids surrounding a release along a pipeline 800 feet northwest of Yukon Gold 31 CTB 2, located at 32.265278, -103.917778, within Eddy County, New Mexico (**Figure 1**). To delineate the subsurface features, a geophysical survey (electrical resistivity tomography) was conducted, processed, and interpreted by Kaleb Henry of Advanced Geophysics, LLC. The aerial karst survey was conducted and processed by SWCA Environmental Consultants. The aerial data was then reviewed and interpreted by Kaleb Henry of Advanced Geophysics, LLC.

The aerial and electrical resistivity surveys were requested by Ensolum, LLC on June 23, 2025. Upon the request, the client provided coordinates (listed above) for the well pad, as well as a Google Earth shape file (**Output.kmz**) to ensure the survey encompassed the entire release.

### 1.1 Summary of Results

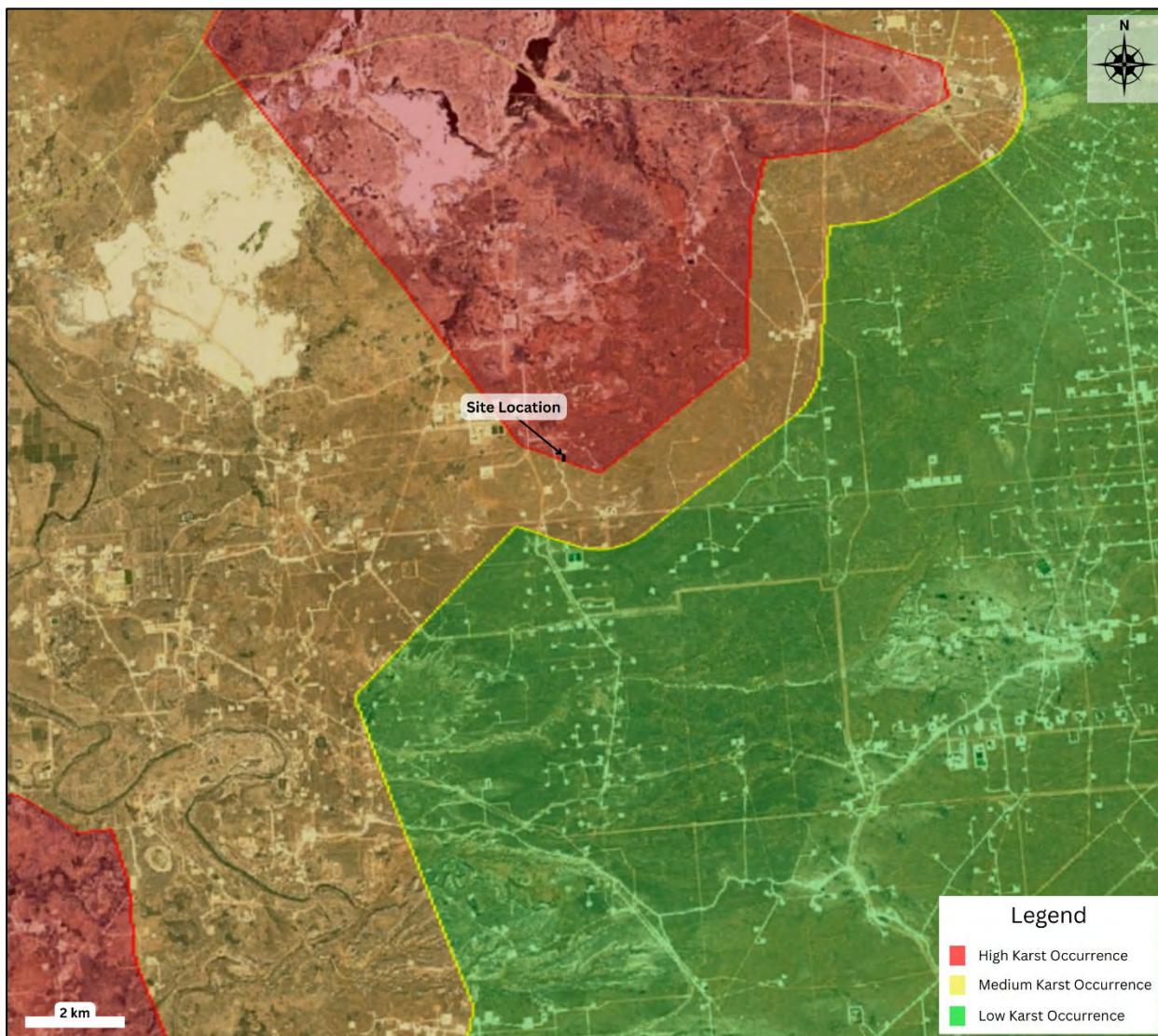
Aerial and geophysical surveys conducted at the location of a release along a pipeline 800 feet northwest of Yukon Gold 31 CTB 2 did not identify any surface or subsurface anomalies indicative of karst features. However, due to the resolution limitations, smaller fractures and voids/conduits may be present but went undetected. Given the absence of definitive karst features in both the aerial and geophysical surveys, the site is characterized as stable.

### 1.2 Site Location

The site is located approximately 17.42 kilometers (10.83 miles) southeast of Loving, New Mexico, and approximately 16.63 kilometers (10.33 miles) east of US Highway 285, within the NWNE quarters of Section 31, Township 23 South, Range 30 East, in Eddy County, New Mexico. The release occurred on the Bureau of Land Management land.

### 1.3 Bureau of Land Management Characterization

The BLM have identified four divisions of karst potential: low, medium, high, and critical. These regions are characterized based on the known occurrence of karst features, underlying geologic formations, and potential impacts to freshwater aquifers. The survey was conducted within an area characterized as high karst occurrence zone by the (BLM) – Carlsbad Office<sup>[1]</sup>.



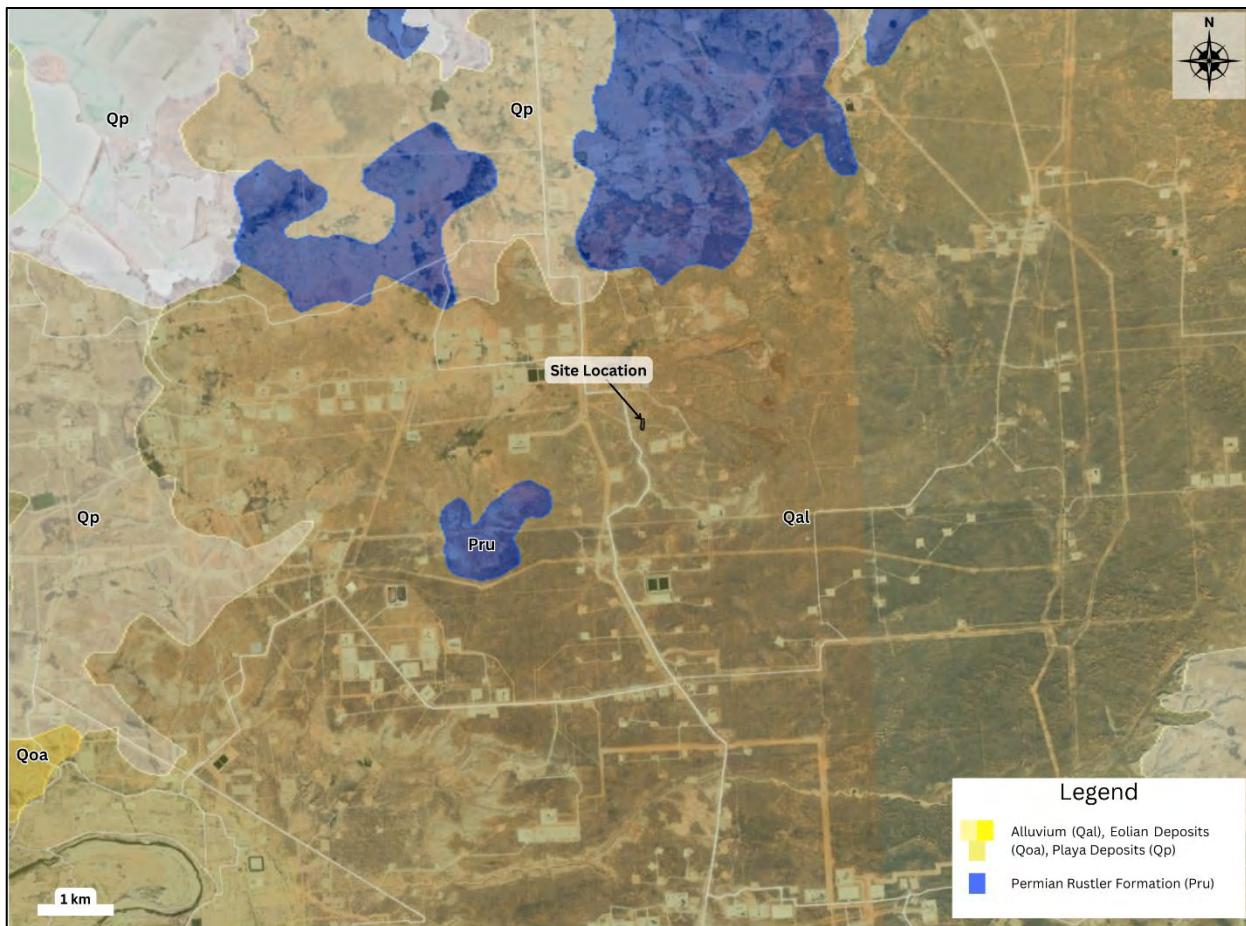
**Figure 1.** Aerial overview of the site location, illustrating the surrounding karst occurrence zones. Map provided by Google Earth in datum WSG-84. Karst occurrence map provided by Bureau of Land Management – Carlsbad Office.

## 2.0 LOCAL GEOLOGY AND ENVIRONMENT

### 2.1 Geologic Setting

The site is located within a region known for its extensive karst development, due to the underlying Rustler Formation. The Rustler Formation was deposited during the mid-to-late Ochoan, as the Delaware Basin transitioned from a hypersaline sea to a terrestrial environment<sup>[2][3]</sup>. This transition led to a complex array of depositional environments, resulting in the formation of five distinct members within the Rustler Formation: Los Medaños, Culebra Dolomite, Tamarisk, Magenta Dolomite, and Forty-niner, listed in ascending order. The Tamarisk and Forty-niner Members, in particular, exhibit the most diverse salt pan to mudflat facies within the Rustler Formation, comprising mudstone, halite, and gypsum<sup>[9]</sup>. These evaporite facies are highly prone to dissolution by downward-migrating meteoric waters, which can create various karst features such as conduits, sinkholes, and cavernous porosity. Once initiated, these features can expand rapidly due to the high solubility of halite and gypsum/anhydrite. Halite, with a solubility rate of 360 g/L at 77°F, is approximately two orders of magnitude more soluble than gypsum<sup>[8]</sup>. Gypsum, in turn, has a solubility rate of approximately 2.531 g/L at 68°F, which is around four orders of magnitude higher than that of limestone (calcium carbonate)<sup>[4]</sup>.

The high solubility of these evaporite facies facilitates the rapid development of complex cave systems, which can form within days, weeks, or years, depending on the surrounding hydrogeologic conditions<sup>[6]</sup>. These cave systems serve as preferential flow paths for shallow groundwater recharge, creating a dynamic and continuously evolving karst-aquifer system<sup>[5]</sup>.



**Figure 2.** Geologic formations surrounding the site location. Permian Rustler Formation (Pr), Quaternary alluvial, eolian, and playa deposits (Qal, Qoa, Qp). Background image provided by Google Earth in datum WSG-84. Geologic unit overlay provided by the United State Geologic Society (USGS) and the Bureau of Economic Geology, UT-Austin.

## 2.2 Environmental Setting

The site is located within an area known as the Chihuahuan Desert Thornscrub, where vegetation is sparse. Vegetation surrounding the surveyed location primarily consists of grass with few creosote bushes. The site is mantled by a soil series classified as Kermit-Berino, characterized by fine sandy textures and a profile depth reaching up to 203.2 centimeters (80 inches)<sup>[7]</sup>. These soils are described as excessively well-drained, primarily due to their high transmissivity rates<sup>[7]</sup>.

The environment surrounding the survey has been characterized as an evaporitic karst terrain, due to the underlying geologic formations. The Rustler Formation has many documented sinkholes, conduits, and caves, which are highly susceptible to enlargement by dissolution as surface water migrates downward through the formation. These conduits can facilitate the rapid recharge of the groundwater aquifers.

## 3.0 METHODOLOGY

### 3.1 Description of Geophysical Survey

This project consisted of four parallel two-dimensional (2-D) direct current (DC) resistivity survey lines. These surveys were conducted using an Advanced Geosciences' Inc. (AGI) SuperSting™ (R8/IP) multi-electrode earth resistivity meter. The lines were performed using a dipole-dipole array configuration consisting of 28 electrodes arranged southwest-to-northeast (electrodes 1 to 28), with a 5-meter (16.4 ft) electrode spacing and 10-meter (32.8 ft) line spacing oriented from northwest-to-southeast (lines 1 to 4). This set up was designed to ensure high accuracy and enhanced shallow depth resolution. Due to the electrode spacing and configuration, the near surface resolution is approximately **2.5 meters (8.2 ft)**, with the total depth of investigation ranging from **31.3 to 35.4 meters (102.6 to 116.1 ft)** below ground surface (bgs). Each electrode location was recorded using an EMLID RS3 GPS unit with an estimated horizontal location error of 5 centimeters (2 in). The KML file (**Pipeline 800 ft NW of Yukon Gold 31 CTB 2.kml**) and the corresponding raw dataset (**Pipeline 800 ft NW of Yukon Gold 31 CTB 2\_Report.csv**) produced during the data collection were submitted to Ensolum, LLC upon submission of the report.

The electrical contact resistance between the ground and each electrode was maintained below 5,000  $\Omega$ m. If initial electrode contact resistance exceeded 5,000  $\Omega$ m, then electrodes would be wetted with well water prior to the survey to lower contact resistance below 5,000  $\Omega$ m. Each electrical resistivity line was conducted using time estimates of 800 ms and cycled twice per electrode pair. The SuperSting™ (R8/IP) was set to inject a 2,000 mA current for each survey measurement and was set to reach a maximum error threshold of 2% between measurement cycles. Recorded resistivity measurements were processed with EarthImager™ 2-D/3-D inversion modeling software, produced by AGI. To improve inverted resistivity models, data outliers which account for less than 10% of total data, were removed using data misfit histograms. Terrain correction was incorporated into resistivity sections to better constrain the relationship between topography and electrical resistivity analyses.

The surveyed lines (YUK1 – YUK4) were completed by Kaleb Henry and Ralph Reyes on July 3, 2025.

### 3.2 Description of Aerial Survey

An aerial karst survey near the release along the pipeline 800 ft NW of Yukon Gold 31 CTB 2 was conducted by a Federal Aviation Administration (FAA) –licensed drone pilot affiliated with SWCA Environmental Consultants. Survey parameters were developed by Kaleb Henry of Advanced Geophysics to ensure compliance with the stringent requirements established by the Bureau of Land Management – Carlsbad Field Office (BLM-CFO), which are recognized by the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO).

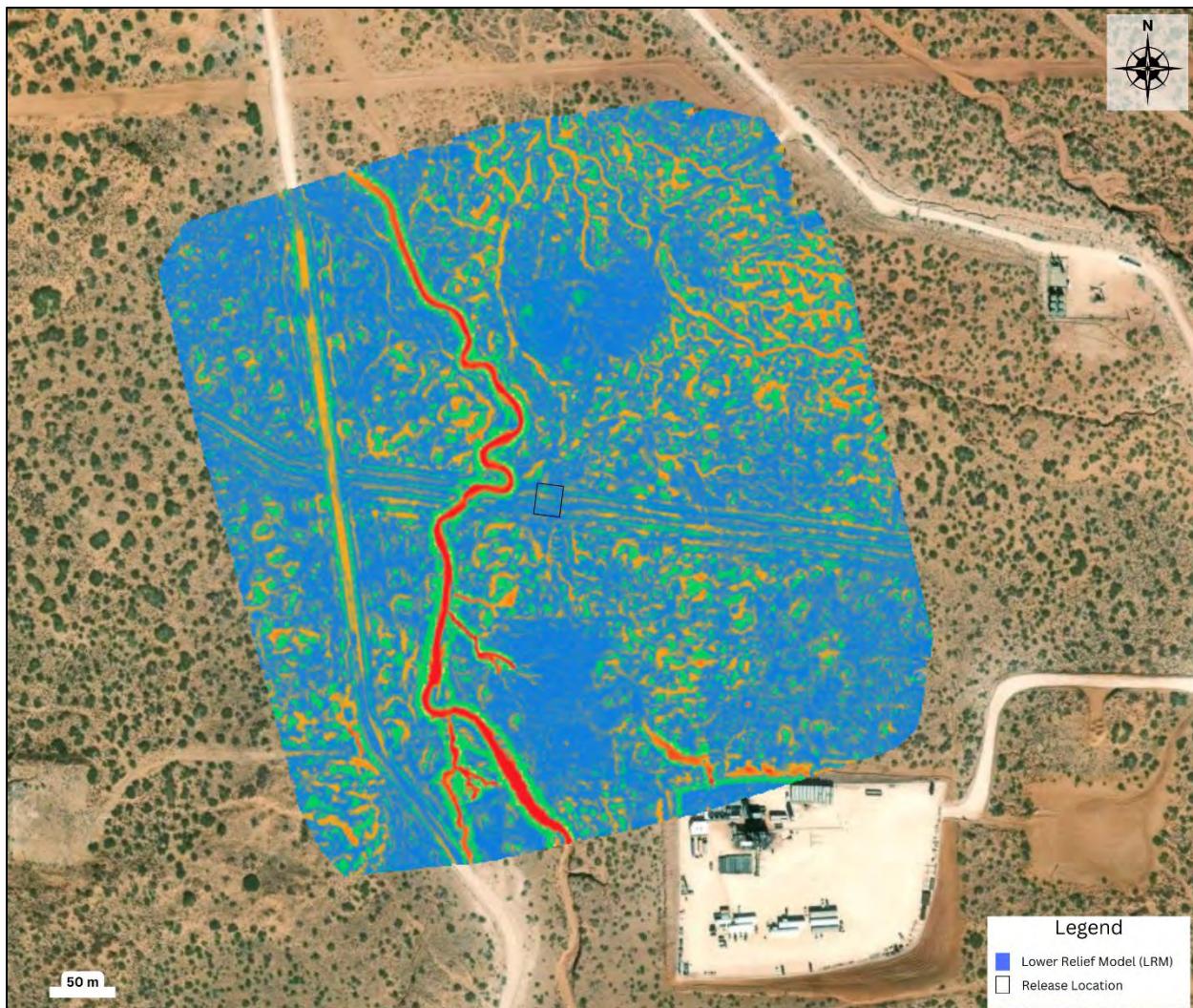
The aerial survey utilized a preplanned flight path flown at low elevations, with aerial transects spaced to achieve an estimated 70–80% imagery overlap. This overlap minimizes errors during the image-stitching process and enhances the accuracy and resolution of the final imagery products. Following data collection, the images were stitched to produce an orthomosaic image, which was then processed to generate a highly accurate Digital Elevation Model (DEM). A Local Relief Model (LRM) was subsequently derived from the DEM to highlight sharp changes in elevation (approximately 5 cm). The LRM, along with the DEM and orthomosaic imagery, was carefully examined and analyzed by an experienced cave and karst specialist.

The aerial imagery used in the survey has a resolution of approximately 5 cm (2 in), enabling a trained geologist to identify small-scale karst features with a high degree of detail. However, it is important to recognize the potential presence of artificial artifacts within the LRM, as shadowing and dense vegetation can result in the misrepresentation of topographic highs or lows.

## 4.0 SURVEY RESULTS

### 4.1 Aerial Karst Survey

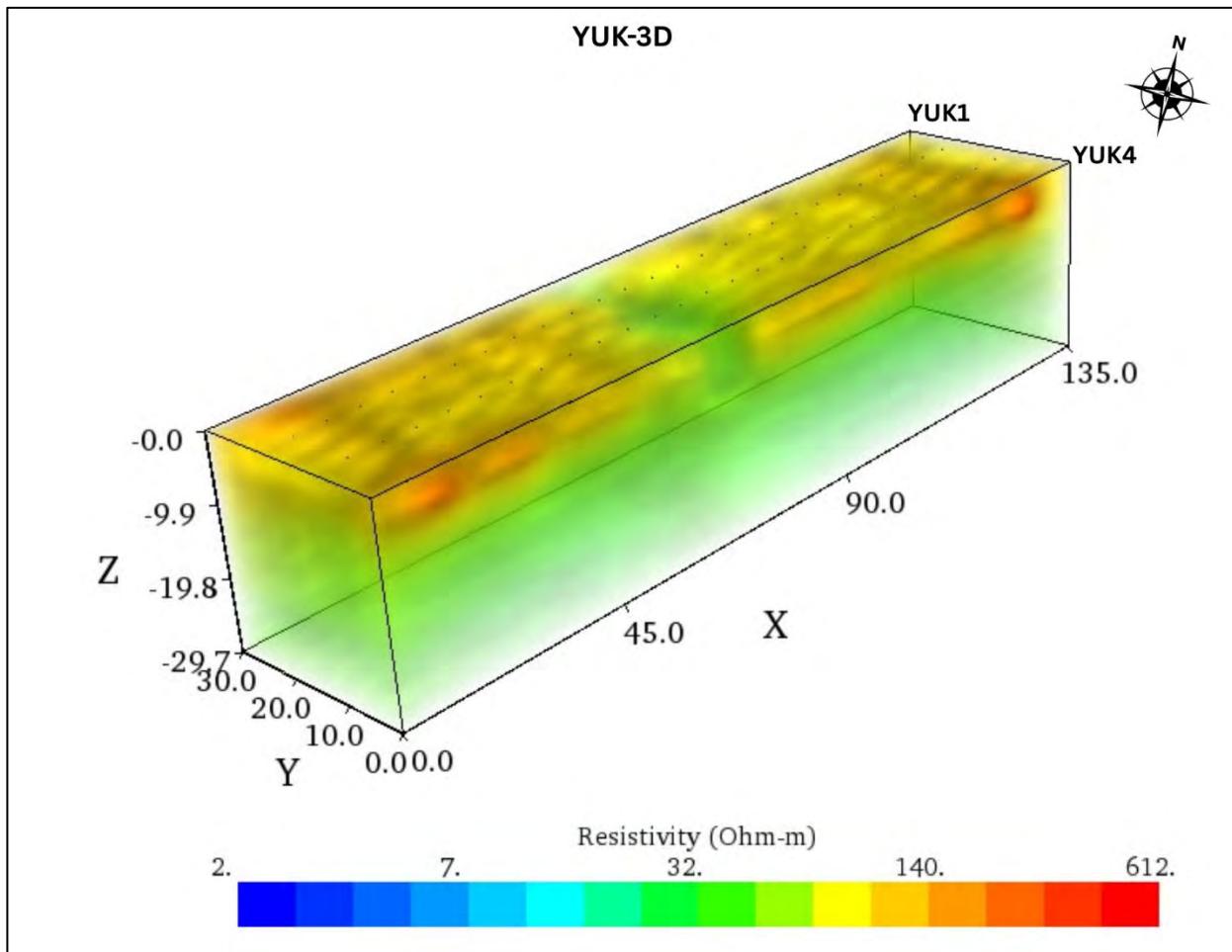
The aerial karst survey did not identify any anomalies exhibiting characteristics consistent with surficial karst features within the 200-meter (656-foot) buffer surrounding the release along the pipeline 800 ft NW of Yukon Gold 31 CTB 2 (**Figure 3**). However, any karst features that may have developed after the date of the survey are not captured in this report.



**Figure 3.** Lower Relief Model (LRM) of the area surrounding the release along the pipeline 800 ft NW of Yukon Gold 31 CTB 2, delineated by the black block. The blue gradient represents variations in surface elevation, with green indicating areas of higher elevation and orange to red denoting areas of lower elevation.

## 4.2 Geophysical Karst Survey

The geophysical survey did not identify any subsurface anomalies that could be characterized as air-filled voids or areas of increased porosity (**Figure 4**). However, due to the resolution limitations, smaller fractures and voids/conduits may be present but went undetected.



**Figure 4.** 3-D image of the subsurface surrounding the release along the pipeline 800 ft NW of Yukon Gold 31 CTB 2. This model was created by combining the 2-D resistivity lines YUK1 through YUK4.

## 5.0 SUMMARY AND RECOMMENDATIONS

Aerial and geophysical karst surveys conducted along the pipeline approximately 800 feet northwest of the Yukon Gold 31 CTB 2 site did not identify any surface or subsurface anomalies indicative of karst development. However, due to the resolution limitations of the geophysical methods employed, smaller subsurface fractures or voids/conduits may be present but went undetected. Similarly, surficial features with diameters less than one meter (3.28 feet) may not be visible in the drone imagery due to spatial resolution constraints. Additionally, any karst features, whether surface or subsurface, that may have formed after the date of the surveys are not reflected in this report.

The underlying geologic formation at the surveyed location is highly susceptible to dissolution, which facilitates the rapid development and expansion of subsurface voids and conduits, within a timescale ranging from days to a few months. The progression of these processes can be significantly accelerated in the absence of appropriate mitigation measures. Infrastructure systems that contain or transport fluids pose a heightened risk in such settings. In the event of a structural failure or unnoticed leakage, the unintended introduction of fluids into the subsurface can intensify dissolution processes, potentially triggering rapid subsidence or collapse.

Any karst features encountered during construction, drilling or remediation processes should be immediately reported to either the New Mexico State Land Office Resources Division, or the Bureau of Land Management Karst Division, in order to request a Cave and Karst Specialist. Any implemented procedures to mitigate a cave or karst feature should follow the **Bureau of Land Management Cave and Karst Management Handbook, H-8380-1**, or the **Natural Resources Conservation Service Conservation Practice Standard for Karst Sinkhole Treatment, Code 527**.

## 6.0 DISCLAIMER AND LIMITATIONS OF USE

This report has been prepared exclusively for the use of Ensolum, LLC. It is not intended for use or reliance by any third party without the prior written consent of Advanced Geophysics, LLC. Any unauthorized use or reliance upon this report by third parties is strictly prohibited and shall be at the sole risk of the user.

The findings, analyses, and interpretations contained herein are based upon the professional judgment of qualified geoscientists at Advanced Geophysics, LLC, utilizing data acquired through recognized industry-standard geophysical methods. These interpretations are inherently non-definitive and are subject to verification through appropriate field investigations.

The geological and environmental conditions described reflect the state of the site during the time of the geophysical survey, conducted on July 3, 2025. Advanced Geophysics, LLC assumes

no responsibility for any changes to site conditions that may have occurred subsequent to this time period. It is acknowledged that subsurface conditions, particularly within karst or evaporitic terrains, are inherently dynamic and subject to natural processes such as dissolution, which may result in rapid and unanticipated changes.

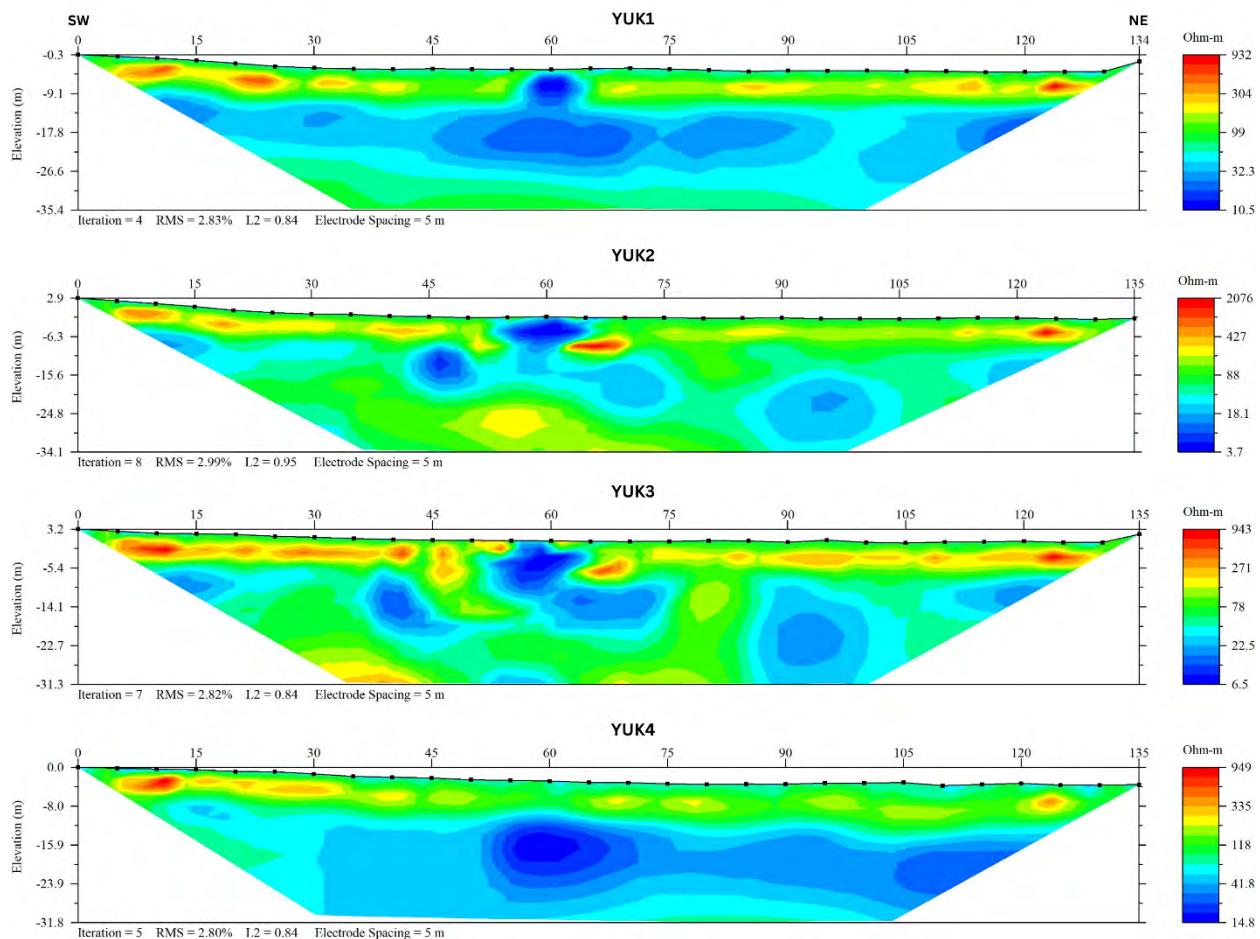
This report is further subject to limitations associated with the resolution capabilities of the geophysical methodologies employed. Certain subsurface features, including but not limited to minor voids or fractures, may exist below the detection threshold of the instruments used and, as such, may not have been identified herein. The absence of geophysical anomalies should not be construed as conclusive evidence of the absence of subsurface risks or hazards.

To the best of our knowledge and belief, the information presented in this report is accurate as of the date of issuance. No warranty, express or implied, is made as to the completeness or accuracy of the data, interpretations, or conclusions contained herein.

## 7.0 REFERENCES

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6. Stafford, K. W., Ulmer-Scholle, D., & Rosales-Largarde, L. (2008). Hypogene calcitization: Evaporite diagenesis in the western Delaware Basin. Faculty Publications, 7.
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9. Powers, D. W., Holt, R. M., Beauheim, R. L., & Richardson, R. G. (2006). *Caves and karst of southeastern New Mexico*. In L. Land, V. W. Lueth, W. Raatz, P. Boston, & D. L. Love (Eds.), New Mexico Geological Society 57th Annual Fall Field Conference Guidebook (pp. 267–276).

## 8.0 ELECTRICAL RESISTIVITY IMAGES





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## APPENDIX D

### Lithologic Soil Sampling Logs

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 <b>ENSOLUM</b>								Sample Name: BH01	Date: 9/24/2024
								Site Name: Yukon Gold Pipeline Release	
								Incident Number: nAPP2422256945	
								Job Number: 03A1987139	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Brandon Deal	Method: Hand Auger
Coordinates: 32.265448, -103.917756								Hole Diameter: 3"	Total Depth: 2'
Comments: Field screening conducted with HACH Chloride Test Strips for chloride. 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	
D			N	BH01	0	0			
D	<168		N	BH01	1	1	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive	
D	<168		N	BH01	2	2			
Total Depth = 2'									

 <b>ENSOLUM</b>								Sample Name: BH02	Date: 9/24/2024
								Site Name: Yukon Gold Pipeline Release	
								Incident Number: nAPP2422256945	
								Job Number: 03A1987139	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Brandon Deal	Method: Hand Auger
Coordinates: 32.265319, -103.917773								Hole Diameter: 3"	Total Depth: 2'
Comments: Field screening conducted with HACH Chloride Test Strips for chloride. 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	
D			Y	BH02	0	0			
D	<168		N	BH02	1	1	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive	
D	168		N	BH02	2	2			
Total Depth = 2'									

 <b>ENSOLUM</b>								Sample Name: BH03	Date: 9/24/2024
								Site Name: Yukon Gold Pipeline Release	
								Incident Number: nAPP2422256945	
								Job Number: 03A1987139	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Brandon Deal	Method: Hand Auger
Coordinates: 32.265340, -103.917623								Hole Diameter: 3"	Total Depth: 2'
Comments: Field screening conducted with HACH Chloride Test Strips for chloride. 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	
D			Y	BH03	0	0			
D	<168		N	BH03	1	1	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive	
D	<168		N	BH03	2	2			
Total Depth = 2'									

 <b>ENSOLUM</b> <b>LITHOLOGIC / SOIL SAMPLING LOG</b>							Sample Name: BH04	Date: 9/24/2024
							Site Name: Yukon Gold Pipeline Release	
							Incident Number: nAPP2422256945	
							Job Number: 03A1987139	
Coordinates: 32.265289, -103.917633					Logged By: Cole Burton		Method: Backhoe	
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.					Hole Diameter: 3'		Total Depth: 45'	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M			Y	BH04	0	0		
M	>3,427		N	BH04	1	1		
M	>3,427		N	BH04	2	2		
M	>3,427		N	BH04	3	3		
M	>3,427		N	BH04	4	4		
M	>3,427		N	BH04	5	5		
M	>3,427		N	BH04	6	6	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive
M	>3,427		N	BH04	7	7		
M	>3,427		N	BH04	8	8		
M	>3,427		N	BH04	9	9		
M	>3,427		N	BH04	10	10		
M	>3,427		N	BH04	11	11		
M	>3,427		N	BH04	12	12		

 <b>ENSOLUM</b> <b>LITHOLOGIC / SOIL SAMPLING LOG</b>							Sample Name: BH04	Date: 9/24/2024
							Site Name: Yukon Gold Pipeline Release	
							Incident Number: nAPP2422256945	
							Job Number: 03A1987139	
Coordinates: 32.265289, -103.917633					Logged By: Cole Burton		Method: Backhoe	
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.					Hole Diameter: 3'		Total Depth: 45'	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M			Y	BH04	0	0		
M	>3,427		N	BH04	1	1		
M	>3,427		N	BH04	2	2		
M	>3,427		N	BH04	3	3		
M	>3,427		N	BH04	4	4		
M	>3,427		N	BH04	5	5		
M	>3,427		N	BH04	6	6	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive
M	>3,427		N	BH04	7	7		
M	>3,427		N	BH04	8	8		
M	>3,427		N	BH04	9	9		
M	>3,427		N	BH04	10	10		
M	>3,427		N	BH04	11	11		
M	>3,427		N	BH04	12	12		

 <b>ENSOLUM</b>							Sample Name: BH04	Date: 1/28/2025
LITHOLOGIC / SOIL SAMPLING LOG							Site Name: Yukon Gold Pipeline Release	
Coordinates: 32.265289, -103.917633							Incident Number: nAPP2422256945	
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.							Job Number: 03A1987139	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	>3,427		N	BH04	13	13		
M	>3,427		N	BH04	14	14		
M	>3,427		N	BH04	15	15		
M	>3,427		N	BH04	16	16	SM	Silty Sand - Brown, Fine Grained, Poorly Graded, Moist, NonPlastic, NonCohesive
M	1200		N	BH04	25	16		
M	1300		N	BH04	27.5	27.5		
M	1600		N	BH04	30	30		
M	3600		N	BH04	33	33	ML	Silt with Gravel - White, NonCohesive, NonPlastic, Medium Gravel, Well Graded
D	3300		N	BH04	34	34		
D	3200		N	BH04	37	37		Lean Clay with Gravel - Red, Medium Gravel, Well Graded, Low Plasticity
D	450		N	BH04	39	39		
D	450		N	BH04	40	40		
D	450		N	BH04	41	41		
D	250		N	BH04	43	43	CH	Lean Clay with Gravel - Red, Small Gravel, Well Graded, Low Plasticity
Total Depth = 45'								



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## APPENDIX E

### Photographic Log



ENSOLUM

**Photographic Log**

Devon Energy Production Company, LP  
Pipeline 800 ft NW of Yukon Gold 31 CTB 2  
nAPP2422256945



Photograph 1

Date: 8/8/2024

Description: Initial Release

View: West



Photograph 2

Date: 8/8/2024

Description: Initial Release

View: Northeast



Photograph 3

Date: 8/15/2024

Description: Spill Area

View: Southeast



Photograph 4

Date: 8/15/2024

Description: Spill Area

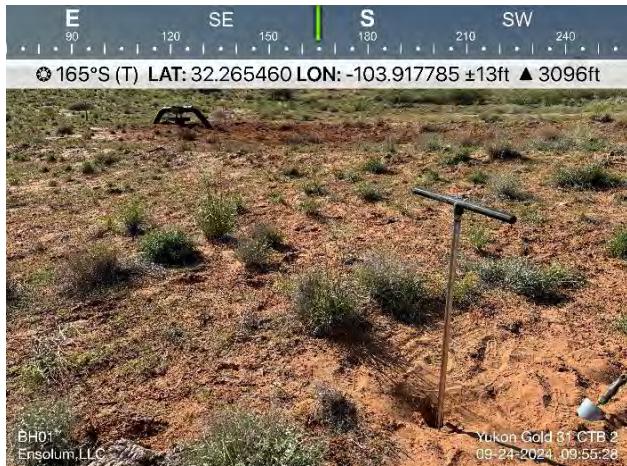
View: Northwest



**ENSOLUM**

### Photographic Log

Devon Energy Production Company, LP  
Pipeline 800 ft NW of Yukon Gold 31 CTB 2  
nAPP2422256945

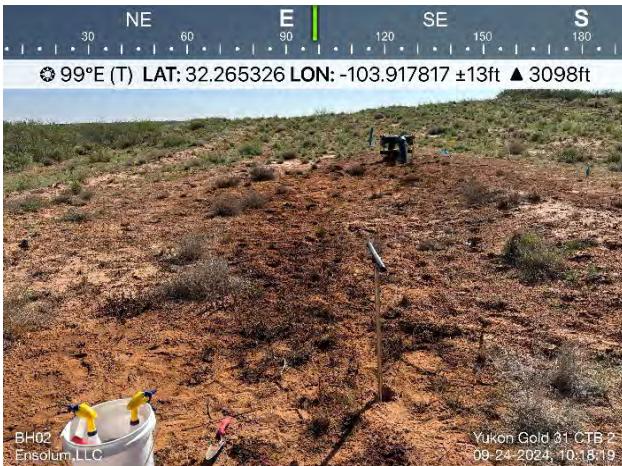


Photograph 5

Date: 9/24/2024

Description: Vertical Delineation BH01

View: South



Photograph 6

Date: 9/24/2024

Description: Vertical Delineation BH02

View: East



Photograph 7

Date: 9/24/2024

Description: Vertical Delineation BH03

View: South



Photograph 8

Date: 9/24/2024

Description: Vertical Delineation BH04

View: South



## Photographic Log

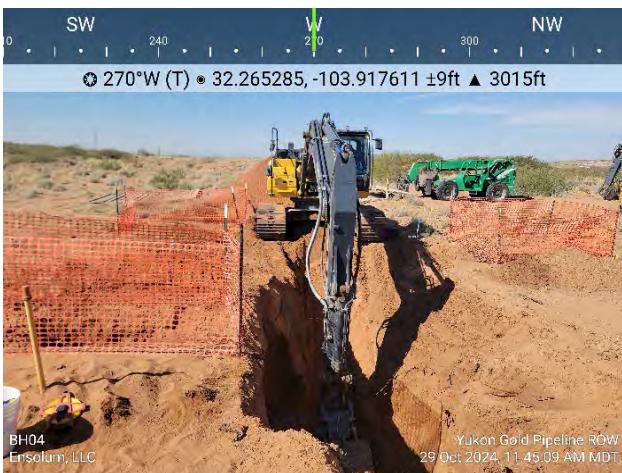
Devon Energy Production Company, LP  
Pipeline 800 ft NW of Yukon Gold 31 CTB 2  
nAPP2422256945



Photograph 9 Date: 10/29/2024  
Description: Spotting pipeline  
View: Southeast



Photograph 10 Date: 10/29/2024  
Description: BH04  
View: Northwest



Photograph 11 Date: 10/29/2024  
Description: BH04  
View: West



Photograph 12 Date: 10/29/2024  
Description: Backfill pothole  
View: West



ENSOLUM

**Photographic Log**

Devon Energy Production Company, LP  
Pipeline 800 ft NW of Yukon Gold 31 CTB 2  
nAPP2422256945



Photograph 13  
Description: BH04  
View: Southwest

Date: 1/28/2025



Photograph 14  
Description: BH04  
View: Southwest

Date: 1/28/2025



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## APPENDIX F

### Laboratory Analytical Reports & Chain-of-Custody Documentation

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Report to:

Ashley Giovengo



5796 U.S. Hwy 64  
Farmington, NM 87401

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



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Yukon Pipeline Release

Work Order: E408154

Job Number: 01058-0007

Received: 8/19/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
8/22/24

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: 8/22/24



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Yukon Pipeline Release

Workorder: E408154

Date Received: 8/19/2024 8:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 8/19/2024 8:30:00AM, under the Project Name: Yukon Pipeline Release.

The analytical test results summarized in this report with the Project Name: Yukon Pipeline Release 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](mailto:whinchman@envirotech-inc.com)

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## Sample Summary

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 08/22/24 13:54
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01 - 0'	E408154-01A	Soil	08/15/24	08/19/24	Glass Jar, 2 oz.
SS02 - 0'	E408154-02A	Soil	08/15/24	08/19/24	Glass Jar, 2 oz.
SS03 - 0'	E408154-03A	Soil	08/15/24	08/19/24	Glass Jar, 2 oz.
SS04 - 0'	E408154-04A	Soil	08/15/24	08/19/24	Glass Jar, 2 oz.

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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SS01 - 0'

E408154-01

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: RKS			Batch: 2434001
Benzene	ND	0.0250	1	08/19/24	08/19/24	
Ethylbenzene	ND	0.0250	1	08/19/24	08/19/24	
Toluene	ND	0.0250	1	08/19/24	08/19/24	
o-Xylene	ND	0.0250	1	08/19/24	08/19/24	
p,m-Xylene	ND	0.0500	1	08/19/24	08/19/24	
Total Xylenes	ND	0.0250	1	08/19/24	08/19/24	
Surrogate: Bromofluorobenzene	101 %	70-130		08/19/24	08/19/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		08/19/24	08/19/24	
Surrogate: Toluene-d8	99.2 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS			Batch: 2434001
Gasoline Range Organics (C6-C10)	ND	20.0	1	08/19/24	08/19/24	
Surrogate: Bromofluorobenzene	101 %	70-130		08/19/24	08/19/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		08/19/24	08/19/24	
Surrogate: Toluene-d8	99.2 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV			Batch: 2434003
Diesel Range Organics (C10-C28)	ND	25.0	1	08/19/24	08/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	08/19/24	08/19/24	
Surrogate: n-Nonane	98.1 %	50-200		08/19/24	08/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM			Batch: 2434006
Chloride	48.0	20.0	1	08/19/24	08/19/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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SS02 - 0'

E408154-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Benzene	ND	0.0250	1	08/19/24	08/19/24	
Ethylbenzene	ND	0.0250	1	08/19/24	08/19/24	
Toluene	ND	0.0250	1	08/19/24	08/19/24	
o-Xylene	ND	0.0250	1	08/19/24	08/19/24	
p,m-Xylene	ND	0.0500	1	08/19/24	08/19/24	
Total Xylenes	ND	0.0250	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	101 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.4 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	98.6 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Gasoline Range Organics (C6-C10)	ND	20.0	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	101 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.4 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	98.6 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2434003
Diesel Range Organics (C10-C28)	ND	25.0	1	08/19/24	08/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	08/19/24	08/19/24	
<i>Surrogate: n-Nonane</i>	102 %	50-200		08/19/24	08/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: JM		Batch: 2434006
Chloride	ND	20.0	1	08/19/24	08/19/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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SS03 - 0'

E408154-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Benzene	ND	0.0250	1	08/19/24	08/19/24	
Ethylbenzene	ND	0.0250	1	08/19/24	08/19/24	
Toluene	ND	0.0250	1	08/19/24	08/19/24	
o-Xylene	ND	0.0250	1	08/19/24	08/19/24	
p,m-Xylene	ND	0.0500	1	08/19/24	08/19/24	
Total Xylenes	ND	0.0250	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	102 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.2 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	98.5 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Gasoline Range Organics (C6-C10)	ND	20.0	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	102 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.2 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	98.5 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2434003
Diesel Range Organics (C10-C28)	ND	25.0	1	08/19/24	08/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	08/19/24	08/19/24	
<i>Surrogate: n-Nonane</i>	103 %	50-200		08/19/24	08/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: JM		Batch: 2434006
Chloride	ND	20.0	1	08/19/24	08/19/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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SS04 - 0'

E408154-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Benzene	ND	0.0250	1	08/19/24	08/19/24	
Ethylbenzene	ND	0.0250	1	08/19/24	08/19/24	
Toluene	ND	0.0250	1	08/19/24	08/19/24	
o-Xylene	ND	0.0250	1	08/19/24	08/19/24	
p,m-Xylene	ND	0.0500	1	08/19/24	08/19/24	
Total Xylenes	ND	0.0250	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	100 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.7 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	96.8 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: RKS		Batch: 2434001
Gasoline Range Organics (C6-C10)	ND	20.0	1	08/19/24	08/19/24	
<i>Surrogate: Bromofluorobenzene</i>	100 %	70-130		08/19/24	08/19/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.7 %	70-130		08/19/24	08/19/24	
<i>Surrogate: Toluene-d8</i>	96.8 %	70-130		08/19/24	08/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2434003
Diesel Range Organics (C10-C28)	ND	25.0	1	08/19/24	08/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	08/19/24	08/19/24	
<i>Surrogate: n-Nonane</i>	102 %	50-200		08/19/24	08/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: JM		Batch: 2434006
Chloride	ND	20.0	1	08/19/24	08/19/24	

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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## Volatile Organic Compounds by EPA 8260B

Analyst: RKS

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 (2434001-BLK1)

Prepared: 08/19/24 Analyzed: 08/19/24

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							
<i>Surrogate: Bromofluorobenzene</i>	0.509		0.500		102	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.475		0.500		95.0	70-130			
<i>Surrogate: Toluene-d8</i>	0.497		0.500		99.4	70-130			

## LCS (2434001-BS1)

Prepared: 08/19/24 Analyzed: 08/19/24

Benzene	2.33	0.0250	2.50	93.4	70-130				
Ethylbenzene	2.32	0.0250	2.50	92.9	70-130				
Toluene	2.18	0.0250	2.50	87.1	70-130				
o-Xylene	2.26	0.0250	2.50	90.6	70-130				
p,m-Xylene	4.54	0.0500	5.00	90.9	70-130				
Total Xylenes	6.81	0.0250	7.50	90.8	70-130				
<i>Surrogate: Bromofluorobenzene</i>	0.509		0.500	102	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.470		0.500	93.9	70-130				
<i>Surrogate: Toluene-d8</i>	0.490		0.500	98.0	70-130				

## LCS Dup (2434001-BSD1)

Prepared: 08/19/24 Analyzed: 08/19/24

Benzene	2.43	0.0250	2.50	97.4	70-130	4.19	23		
Ethylbenzene	2.46	0.0250	2.50	98.4	70-130	5.81	27		
Toluene	2.32	0.0250	2.50	92.6	70-130	6.17	24		
o-Xylene	2.43	0.0250	2.50	97.2	70-130	7.07	27		
p,m-Xylene	4.84	0.0500	5.00	96.9	70-130	6.38	27		
Total Xylenes	7.27	0.0250	7.50	97.0	70-130	6.61	27		
<i>Surrogate: Bromofluorobenzene</i>	0.506		0.500	101	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.474		0.500	94.7	70-130				
<i>Surrogate: Toluene-d8</i>	0.490		0.500	97.9	70-130				

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2434001-BLK1)

Prepared: 08/19/24 Analyzed: 08/19/24

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: Bromofluorobenzene	0.509		0.500		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		95.0	70-130		
Surrogate: Toluene-d8	0.497		0.500		99.4	70-130		

## LCS (2434001-BS2)

Prepared: 08/19/24 Analyzed: 08/19/24

Gasoline Range Organics (C6-C10)	42.8	20.0	50.0	85.7	70-130			
Surrogate: Bromofluorobenzene	0.513		0.500	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.486		0.500	97.2	70-130			
Surrogate: Toluene-d8	0.494		0.500	98.8	70-130			

## LCS Dup (2434001-BSD2)

Prepared: 08/19/24 Analyzed: 08/19/24

Gasoline Range Organics (C6-C10)	47.9	20.0	50.0	95.7	70-130	11.1	20	
Surrogate: Bromofluorobenzene	0.524		0.500	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500	94.6	70-130			
Surrogate: Toluene-d8	0.502		0.500	100	70-130			

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KH

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2434003-BLK1)

Prepared: 08/19/24 Analyzed: 08/19/24

Diesel Range Organics (C10-C28)	ND	25.0						
Oil Range Organics (C28-C36)	ND	50.0						
Surrogate: n-Nonane	53.3		50.0		107	50-200		

## LCS (2434003-BS1)

Prepared: 08/19/24 Analyzed: 08/19/24

Diesel Range Organics (C10-C28)	195	25.0	250		78.1	38-132		
Surrogate: n-Nonane	48.4		50.0		96.8	50-200		

## Matrix Spike (2434003-MS1)

Source: E408151-01

Prepared: 08/19/24 Analyzed: 08/19/24

Diesel Range Organics (C10-C28)	187	25.0	250	ND	74.7	38-132		
Surrogate: n-Nonane	46.5		50.0		93.0	50-200		

## Matrix Spike Dup (2434003-MSD1)

Source: E408151-01

Prepared: 08/19/24 Analyzed: 08/19/24

Diesel Range Organics (C10-C28)	194	25.0	250	ND	77.7	38-132	4.01	20
Surrogate: n-Nonane	50.7		50.0		101	50-200		

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 8/22/2024 1:54:31PM
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## Anions by EPA 300.0/9056A

Analyst: JM

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 (2434006-BLK1)

Prepared: 08/19/24 Analyzed: 08/19/24

Chloride	ND	20.0
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## LCS (2434006-BS1)

Prepared: 08/19/24 Analyzed: 08/19/24

Chloride	252	20.0	250	101	90-110
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## Matrix Spike (2434006-MS1)

Source: E408154-04 Prepared: 08/19/24 Analyzed: 08/19/24

Chloride	255	20.0	250	ND	102	80-120
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## Matrix Spike Dup (2434006-MSD1)

Source: E408154-04 Prepared: 08/19/24 Analyzed: 08/19/24

Chloride	254	20.0	250	ND	102	80-120	0.587	20
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## 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

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 08/22/24 13:54
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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.

Client Information				Invoice Information			Lab Use Only			TAT			State																															
Client: Devon				Company: Devon			Lab WO#		Job Number		1D	2D	3D	Std	NM	CO	UT	TX																										
Project: Yukon Pipeline Release				Address: 205 E Bender Road #150			E408154		01058-000					X																														
Project Manager: Ashley Giovengo				City, State, Zip: Hobbs NM, 88240																																								
Address: 3122 National Parks Hwy				Phone: (575)748-1838																																								
City, State, Zip: Carlsbad NM, 88220				Email: dale.woodall@dvn.com																																								
Phone: 575-988-0055				Miscellaneous: Dale Woodall																																								
Email: agiovengo@ensolum.com																																												
<b>Sample Information</b>																																												
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				BGDOC - NM				TCEQ 1005 - TX				RCRA 8 Metals				Remarks			
10:14	8/15/2024	S	1	SS01 - 0'				1																																				
10:15	8/15/2024	S	1	SS02 - 0'				2																																				
10:17	8/15/2024	S	1	SS03 - 0'				3																																				
10:19	8/15/2024	S	1	SS04 - 0'				4																																				
								</td																																				

**Additional Instructions:** Please CC: cburton@ensolum.com, agiovengo@ensolum.com, dale.woodall@dvn.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, Bowen Simmons

Relinquished by: (Signature) <u>Chad Hamilton, Bowen Simmons</u>						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		
Relinquished by: (Signature)	Date <u>8/16/24</u>	Time <u>1315</u>	Received by: (Signature) <u>Chad Hamilton</u>	Date <u>8/16/24</u>	Time <u>1315</u>	Lab Use Only		
Relinquished by: (Signature)	Date <u>8/16/24</u>	Time <u>1515</u>	Received by: (Signature) <u>Andrew Shoop</u>	Date <u>8/16/24</u>	Time <u>1745</u>	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N		
Relinquished by: (Signature) <u>Andrew Shoop</u>	Date <u>8/16/24</u>	Time <u>2400</u>	Received by: (Signature) <u>Chad Hamilton</u>	Date <u>8/19/24</u>	Time <u>8:30</u>	T1 _____ T2 _____ T3 _____		
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	AVG Temp °C <u>4</u>		
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: 8/19/2024 11:47:04AM

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:	Devon Energy - Carlsbad	Date Received:	08/19/24 08:30	Work Order ID:	E408154
Phone:	(505) 382-1211	Date Logged In:	08/16/24 16:14	Logged In By:	Noe Soto
Email:	ashley.giovengo@wescominc.com	Due Date:	08/23/24 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 Carrier: Courier  
 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.

**Comments/Resolution****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? No

**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



5796 U.S. Hwy 64  
Farmington, NM 87401

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



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Yukon Pipeline Release

Work Order: E409239

Job Number: 01058-0007

Received: 9/26/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
10/2/24

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: 10/2/24



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Yukon Pipeline Release

Workorder: E409239

Date Received: 9/26/2024 8:10:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/26/2024 8:10:00AM, under the Project Name: Yukon Pipeline Release.

The analytical test results summarized in this report with the Project Name: Yukon Pipeline Release 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](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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## Sample Summary

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/02/24 14:38
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH01-0'	E409239-01A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH01-1'	E409239-02A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH01-2'	E409239-03A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH02-0'	E409239-04A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH02-1'	E409239-05A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH02-2'	E409239-06A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH03-0'	E409239-07A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH03-1'	E409239-08A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH03-2'	E409239-09A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-0'	E409239-10A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-2'	E409239-11A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-4'	E409239-12A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-6'	E409239-13A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-8'	E409239-14A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-10'	E409239-15A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-12'	E409239-16A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-14'	E409239-17A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.
BH04-16'	E409239-18A	Soil	09/24/24	09/26/24	Glass Jar, 2 oz.

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH01-0'****E409239-01**

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG			Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
Surrogate: 4-Bromochlorobenzene-PID	86.4 %	70-130		09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG			Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.6 %	70-130		09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV			Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane	106 %	50-200		09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT			Batch: 2439087
Chloride	ND	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH01-1'****E409239-02**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
Surrogate: 4-Bromochlorobenzene-PID		86.8 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.1 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		118 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	ND	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	<b>Reported:</b> 10/2/2024 2:38:17PM
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**BH01-2'****E409239-03**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	<i>87.4 %</i>	<i>70-130</i>		<i>09/26/24</i>	<i>09/29/24</i>	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	<i>96.4 %</i>	<i>70-130</i>		<i>09/26/24</i>	<i>09/29/24</i>	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
<i>Surrogate: n-Nonane</i>	<i>116 %</i>	<i>50-200</i>		<i>09/26/24</i>	<i>10/02/24</i>	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	ND	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH02-0'****E409239-04**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	<i>87.4 %</i>	<i>70-130</i>		<i>09/26/24</i>	<i>09/29/24</i>	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	<i>96.6 %</i>	<i>70-130</i>		<i>09/26/24</i>	<i>09/29/24</i>	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	<b>194</b>	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	<b>94.5</b>	50.0	1	09/26/24	10/02/24	
<i>Surrogate: n-Nonane</i>	<i>104 %</i>	<i>50-200</i>		<i>09/26/24</i>	<i>10/02/24</i>	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>370</b>	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	<b>Reported:</b> 10/2/2024 2:38:17PM
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**BH02-1'****E409239-05**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
Surrogate: 4-Bromochlorobenzene-PID		88.3 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.7 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		103 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	43.7	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH02-2'****E409239-06**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/29/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/29/24	
Toluene	ND	0.0250	1	09/26/24	09/29/24	
o-Xylene	ND	0.0250	1	09/26/24	09/29/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/29/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/29/24	
Surrogate: 4-Bromochlorobenzene-PID		88.3 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.9 %	70-130	09/26/24	09/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		107 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>98.5</b>	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH03-0'****E409239-07**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		88.2 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		98.8 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		109 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	ND	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH03-1'****E409239-08**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		89.3 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		97.1 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		113 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>82.0</b>	20.0	1	09/26/24	09/26/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH03-2'****E409239-09**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		90.1 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.7 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		109 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	ND	20.0	1	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH04-0'****E409239-10**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		90.7 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		95.9 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	<b>1560</b>	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	<b>1350</b>	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		121 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>26600</b>	1000	50	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH04-2'****E409239-11**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.6 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.3 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		119 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>4590</b>	100	5	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH04-4'****E409239-12**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.3 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.8 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		115 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>5570</b>	100	5	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	<b>Reported:</b> 10/2/2024 2:38:17PM
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**BH04-6'****E409239-13**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.9 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		95.1 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		99.0 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>4650</b>	40.0	2	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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**BH04-8'****E409239-14**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.6 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.3 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		115 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>4430</b>	40.0	2	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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BH04-10'

E409239-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.6 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		95.6 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		116 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>1690</b>	40.0	2	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	<b>Reported:</b> 10/2/2024 2:38:17PM
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**BH04-12'****E409239-16**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		92.2 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		95.0 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		123 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>1770</b>	40.0	2	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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BH04-14'

E409239-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		92.5 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.2 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		120 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>1180</b>	20.0	1	09/26/24	09/27/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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BH04-16'

E409239-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Benzene	ND	0.0250	1	09/26/24	09/30/24	
Ethylbenzene	ND	0.0250	1	09/26/24	09/30/24	
Toluene	ND	0.0250	1	09/26/24	09/30/24	
o-Xylene	ND	0.0250	1	09/26/24	09/30/24	
p,m-Xylene	ND	0.0500	1	09/26/24	09/30/24	
Total Xylenes	ND	0.0250	1	09/26/24	09/30/24	
Surrogate: 4-Bromochlorobenzene-PID		91.9 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: CG		Batch: 2439090
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/24	09/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		94.9 %	70-130	09/26/24	09/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2439094
Diesel Range Organics (C10-C28)	ND	25.0	1	09/26/24	10/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/26/24	10/02/24	
Surrogate: n-Nonane		115 %	50-200	09/26/24	10/02/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2439087
Chloride	<b>3770</b>	40.0	2	09/26/24	09/27/24	

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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## Volatile Organics by EPA 8021B

Analyst: CG

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 (2439090-BLK1)

Prepared: 09/26/24 Analyzed: 09/29/24

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

7.27 8.00 90.9 70-130

## LCS (2439090-BS1)

Prepared: 09/26/24 Analyzed: 09/29/24

Benzene	5.01	0.0250	5.00	100	70-130				
Ethylbenzene	4.80	0.0250	5.00	96.0	70-130				
Toluene	4.91	0.0250	5.00	98.2	70-130				
o-Xylene	4.79	0.0250	5.00	95.7	70-130				
p,m-Xylene	9.74	0.0500	10.0	97.4	70-130				
Total Xylenes	14.5	0.0250	15.0	96.8	70-130				

Surrogate: 4-Bromochlorobenzene-PID

7.20 8.00 90.0 70-130

## LCS Dup (2439090-BSD1)

Prepared: 09/26/24 Analyzed: 09/29/24

Benzene	5.01	0.0250	5.00	100	70-130	0.0519	20		
Ethylbenzene	4.82	0.0250	5.00	96.4	70-130	0.394	20		
Toluene	4.93	0.0250	5.00	98.6	70-130	0.374	20		
o-Xylene	4.80	0.0250	5.00	96.0	70-130	0.245	20		
p,m-Xylene	9.79	0.0500	10.0	97.9	70-130	0.522	20		
Total Xylenes	14.6	0.0250	15.0	97.3	70-130	0.431	20		

Surrogate: 4-Bromochlorobenzene-PID

7.15 8.00 89.4 70-130

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: CG

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits	RPD	RPD Limit	Notes
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## Blank (2439090-BLK1)

Prepared: 09/26/24 Analyzed: 09/29/24

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.72		8.00		96.5	70-130		

## LCS (2439090-BS2)

Prepared: 09/26/24 Analyzed: 09/29/24

Gasoline Range Organics (C6-C10)	44.6	20.0	50.0	89.2	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.75		8.00	96.8	70-130		

## LCS Dup (2439090-BSD2)

Prepared: 09/26/24 Analyzed: 09/29/24

Gasoline Range Organics (C6-C10)	46.4	20.0	50.0	92.9	70-130	4.06	20
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		8.00	98.9	70-130		

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2439094-BLK1)

Prepared: 09/26/24 Analyzed: 10/02/24

Diesel Range Organics (C10-C28)	ND	25.0						
Oil Range Organics (C28-C36)	ND	50.0						
Surrogate: n-Nonane	57.8		50.0		116	50-200		

## LCS (2439094-BS1)

Prepared: 09/26/24 Analyzed: 10/02/24

Diesel Range Organics (C10-C28)	300	25.0	250		120	38-132		
Surrogate: n-Nonane	63.9		50.0		128	50-200		

## Matrix Spike (2439094-MS1)

Source: E409239-02

Prepared: 09/26/24 Analyzed: 10/02/24

Diesel Range Organics (C10-C28)	338	25.0	250	ND	135	38-132		M2
Surrogate: n-Nonane	64.2		50.0		128	50-200		

## Matrix Spike Dup (2439094-MSD1)

Source: E409239-02

Prepared: 09/26/24 Analyzed: 10/02/24

Diesel Range Organics (C10-C28)	301	25.0	250	ND	120	38-132	11.6	20
Surrogate: n-Nonane	63.9		50.0		128	50-200		

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/2/2024 2:38:17PM
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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 (2439087-BLK1)

Prepared: 09/26/24 Analyzed: 09/26/24

Chloride	ND	20.0
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## LCS (2439087-BS1)

Prepared: 09/26/24 Analyzed: 09/26/24

Chloride	250	20.0	250	100	90-110
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## Matrix Spike (2439087-MS1)

Source: E409239-04 Prepared: 09/26/24 Analyzed: 09/26/24

Chloride	632	20.0	250	370	105	80-120
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## Matrix Spike Dup (2439087-MSD1)

Source: E409239-04 Prepared: 09/26/24 Analyzed: 09/26/24

Chloride	654	20.0	250	370	114	80-120	3.42	20
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## 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

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 10/02/24 14:38
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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.

## Chain of Custody

Client Information				Invoice Information			Lab Use Only		TAT			State					
Client: Devon Project: Yukon Pipeline Release Project Manager: Ashley Giovengo Address: 3122 National Parks Hwy City, State, Zip: Carlsbad NM, 88220 Phone: 575-988-0055 Email: agiovengo@ensolum.com				Company: Devon Address: 205 E Bender Road #150 City, State, Zip: Hobbs NM, 88240 Phone: (575)748-1838 Email: dale.woodall@dvn.com Miscellaneous: Dale Woodall			Lab WO# <b>E409239</b>	Job Number <b>01058-0001</b>	1D	2D	3D	Std	NM	CO	UT	TX	
													x				
Analysis and Method													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	DRO/DRO by 8015	GRO/DRO by 8015	Chloride 300.0	VOC by 8260	PCDD/PCDF by 8260	TCEC by 8021	PCBS-C-NM	PCRA 8 Metals	
0948	9/24/24	Soil	1	BH01-0'				1						X			
0954	9/24/24	Soil	1	BH01-1'				2					X				
0957	9/24/24	Soil	1	BH01-2'				3					X				
1011	9/24/24	Soil	1	BH02-0'				4					X				
1014	9/24/24	Soil	1	BH02-1'				5					X				
1017	9/24/24	Soil	1	BH02-2'				6					X				
1037	9/24/24	Soil	1	BH03-0'				7					X				
1041	9/24/24	Soil	1	BH03-1'				8					X				
1044	9/24/24	Soil	1	BH03-2'				9					X				
1115	9/24/24	Soil	1	BH04-0'				10					X				
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, dale.woodall@dvn.com, iestrella@ensolum.com, bdeal@ensolum.com, chamilton@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: Brandon Deal																	
Relinquished by: (Signature) <i>MW</i>	Date 9/25/24	Time 0815	Received by: (Signature) <i>Michelle Gonzales</i>	Date 9-25-24	Time 0815	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="checkbox"/> Y / <input type="checkbox"/> N  T1 <input type="checkbox"/> T2 <input type="checkbox"/> T3  AVG Temp °C <input type="checkbox"/> 4											
Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 9-25-24	Time 1545	Received by: (Signature) <i>Leanne</i>	Date 9-25-24	Time 1730												
Relinquished by: (Signature) <i>Leanne</i>	Date 9-25-24	Time 2400	Received by: (Signature) <i>Leanne</i>	Date 9-26-24	Time 8:10												
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.																	



enviroTec

## Chain of Custody

Client Information				Invoice Information			Lab Use Only		TAT			State				
Client: Devon Project: Yukon Pipeline Release Project Manager: Ashley Giovengo Address: 3122 National Parks Hwy City, State, Zip: Carlsbad NM, 88220 Phone: 575-988-0055 Email: agiovengo@ensolum.com				Company: Devon Address: 205 E Bender Road #150 City, State, Zip: Hobbs NM, 88240 Phone: (575)748-1838 Email: dale.woodall@dvn.com Miscellaneous: Dale Woodall			Lab WO# <b>E409239</b>	Job Number <b>01058-0007</b>	1D	2D	3D	Std	NM	CO	UT	TX
											x					
Analysis and Method												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	DPO/DRO by 8015	GPO/DRO by 8015	BT/EX by 8021	VOC by 8260	Chloride 300.0	BCGDOC - NM	TCLD 1005 - TX	RCRA 8 Metals
1123	9/24/24	Soil	1	BH04-2'				11					X			
1139	9/24/24	Soil	1	BH04-4'				12					X			
1154	9/24/24	Soil	1	BH04-6'				13					X			
1200	9/24/24	Soil	1	BH04-8'				14					X			
1225	9/24/24	Soil	1	BH04-10				15					X			
1231	9/24/24	Soil	1	BH04-12'				16					X			
1249	9/24/24	Soil	1	BH04-14'				17					X			
1358	9/24/24	Soil	1	BH04-16'				18					X			
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, dale.woodall@dvn.com, iestrella@ensolum.com, bdeal@ensolum.com, chamilton@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: Brandon Deal																
Relinquished by: (Signature)		Date 9/25/24	Time 0815	Received by: (Signature)		Date 9/25/24	Time 0815	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="checkbox"/> N T1 <input type="checkbox"/> T2 <input type="checkbox"/> T3 AVG Temp °C <input type="checkbox"/> 4								
Michelle Gonzales																
Michelle Gonzales		Date 9.25.24	Time 1545	Received by: (Signature)		Date 9.25.24	Time 1730									
Relinquished by: (Signature)		Date 9.25.24	Time 2400	Received by: (Signature)		Date 9.26.24	Time 8:10	Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
Cathie Mar																
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.																



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## Envirotech Analytical Laboratory

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:	Devon Energy - Carlsbad	Date Received:	09/26/24 08:10	Work Order ID:	E409239
Phone:	(505) 382-1211	Date Logged In:	09/26/24 08:34	Logged In By:	Caitlin Mars
Email:	ashley.giovengo@wescominc.com	Due Date:	10/02/24 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 Carrier: Courier  
 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.

**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
---	------

Report to:

Ashley Giovengo



5796 U.S. Hwy 64  
Farmington, NM 87401

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



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Yukon Pipeline Release

Work Order: E410381

Job Number: 01058-0007

Received: 10/31/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
11/6/24

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: 11/6/24

Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Yukon Pipeline Release  
Workorder: E410381  
Date Received: 10/31/2024 6:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/31/2024 6:30:00AM, under the Project Name: Yukon Pipeline Release.

The analytical test results summarized in this report with the Project Name: Yukon Pipeline Release 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](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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**Southern New Mexico Area**

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[ljarboe@envirotech-inc.com](mailto:ljarboe@envirotech-inc.com)

**Michelle Gonzales**  
Client Representative  
Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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## Sample Summary

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Project Number: Project Manager:	Yukon Pipeline Release 01058-0007 Ashley Giovengo	Reported: 11/06/24 11:50
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS05-0'	E410381-01A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SS06-0'	E410381-02A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:50:09AM
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SS05-0'

E410381-01

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Benzene	ND	0.0250	1	10/31/24	11/05/24	
Ethylbenzene	ND	0.0250	1	10/31/24	11/05/24	
Toluene	ND	0.0250	1	10/31/24	11/05/24	
o-Xylene	ND	0.0250	1	10/31/24	11/05/24	
p,m-Xylene	ND	0.0500	1	10/31/24	11/05/24	
Total Xylenes	ND	0.0250	1	10/31/24	11/05/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	91.0 %	70-130		10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/31/24	11/05/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	92.8 %	70-130		10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: AF		Batch: 2444145
Diesel Range Organics (C10-C28)	ND	25.0	1	11/01/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/01/24	11/01/24	
<i>Surrogate: n-Nonane</i>	89.1 %	50-200		11/01/24	11/01/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2445020
Chloride	<b>25.5</b>	20.0	1	11/04/24	11/04/24	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	<b>Reported:</b> 11/6/2024 11:50:09AM
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SS06-0'

E410381-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Benzene	ND	0.0250	1	10/31/24	11/05/24	
Ethylbenzene	ND	0.0250	1	10/31/24	11/05/24	
Toluene	ND	0.0250	1	10/31/24	11/05/24	
o-Xylene	ND	0.0250	1	10/31/24	11/05/24	
p,m-Xylene	ND	0.0500	1	10/31/24	11/05/24	
Total Xylenes	ND	0.0250	1	10/31/24	11/05/24	
Surrogate: 4-Bromochlorobenzene-PID		91.4 %	70-130	10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/31/24	11/05/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.8 %	70-130	10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: AF		Batch: 2444145
Diesel Range Organics (C10-C28)	ND	25.0	1	11/01/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/01/24	11/01/24	
Surrogate: n-Nonane		92.1 %	50-200	11/01/24	11/01/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2445020
Chloride	<b>44.6</b>	20.0	1	11/04/24	11/04/24	

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:50:09AM
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## 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 (2444129-BLK1)

Prepared: 10/31/24 Analyzed: 11/04/24

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

7.06 8.00 88.2 70-130

## LCS (2444129-BS1)

Prepared: 10/31/24 Analyzed: 11/04/24

Benzene	5.08	0.0250	5.00	102	70-130				
Ethylbenzene	5.04	0.0250	5.00	101	70-130				
Toluene	5.11	0.0250	5.00	102	70-130				
o-Xylene	5.03	0.0250	5.00	101	70-130				
p,m-Xylene	10.2	0.0500	10.0	102	70-130				
Total Xylenes	15.3	0.0250	15.0	102	70-130				

Surrogate: 4-Bromochlorobenzene-PID

7.12 8.00 89.0 70-130

## LCS Dup (2444129-BSD1)

Prepared: 10/31/24 Analyzed: 11/04/24

Benzene	4.93	0.0250	5.00	98.5	70-130	3.01	20		
Ethylbenzene	4.91	0.0250	5.00	98.2	70-130	2.63	20		
Toluene	4.96	0.0250	5.00	99.2	70-130	2.98	20		
o-Xylene	4.91	0.0250	5.00	98.2	70-130	2.48	20		
p,m-Xylene	9.98	0.0500	10.0	99.8	70-130	2.62	20		
Total Xylenes	14.9	0.0250	15.0	99.2	70-130	2.57	20		

Surrogate: 4-Bromochlorobenzene-PID

7.24 8.00 90.5 70-130

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:50:09AM
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## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits	RPD	RPD Limit	Notes
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## Blank (2444129-BLK1)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.42		8.00		92.7	70-130		

## LCS (2444129-BS2)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	45.5	20.0	50.0	91.1	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00	94.3	70-130		

## LCS Dup (2444129-BSD2)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	43.7	20.0	50.0	87.3	70-130	4.23	20
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00	93.6	70-130		

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:50:09AM
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## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2444145-BLK1)

Prepared: 11/01/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	ND	25.0						
Oil Range Organics (C28-C36)	ND	50.0						
Surrogate: n-Nonane	45.5		50.0		91.0	50-200		

## LCS (2444145-BS1)

Prepared: 11/01/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	231	25.0	250	92.3	38-132			
Surrogate: n-Nonane	45.2		50.0	90.4	50-200			

## LCS Dup (2444145-BSD1)

Prepared: 11/01/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	251	25.0	250	100	38-132	8.23	20	
Surrogate: n-Nonane	47.3		50.0	94.6	50-200			

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:50:09AM
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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 (2445020-BLK1)

Prepared: 11/04/24 Analyzed: 11/04/24

Chloride	ND	20.0
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## LCS (2445020-BS1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	255	20.0	250	102	90-110
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## LCS Dup (2445020-BSD1)

Prepared: 11/04/24 Analyzed: 11/04/24

Chloride	254	20.0	250	101	90-110	0.497	20
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## 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

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/06/24 11:50
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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

**Additional Instructions:** Please CC: [cburton@ensolum.com](mailto:cburton@ensolum.com), [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com), [jim.raley@dvn.com](mailto:jim.raley@dvn.com), [iestrella@ensolum.com](mailto:iestrella@ensolum.com), [chamilton@ensolum.com](mailto:chamilton@ensolum.com), [bsimmons@ensolum.com](mailto: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: Cole Burton

Relinquished by: (Signature) <i>Zoe Piro</i>	Date 10/30/24	Time 7:30	Received by: (Signature) <i>Michelle Gonzales</i>	Date 10/30/24	Time 6:30	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.
Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 10-30-24	Time 1600	Received by: (Signature)	Date 10-30-24	Time 1630	Lab Use Only
Relinquished by: (Signature) <i>John X.</i>	Date 10-30-24	Time 2315	Received by: (Signature) <i>Carla Mar</i>	Date 10-31-24	Time 6:30	Received on ice: <input checked="" type="checkbox"/> N
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>

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

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:	Devon Energy - Carlsbad	Date Received:	10/31/24 06:30	Work Order ID:	E410381
Phone:	(505) 382-1211	Date Logged In:	10/30/24 14:46	Logged In By:	Noe Soto
Email:	agiovengo@ensolum.com	Due Date:	11/06/24 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 Carrier: Courier  
 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.

**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
---	------

Report to:

Ashley Giovengo



5796 U.S. Hwy 64  
Farmington, NM 87401

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



# envirotech

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## Analytical Report

Devon Energy - Carlsbad

Project Name: Yukon Pipeline Release

Work Order: E410382

Job Number: 01058-0007

Received: 10/31/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
11/6/24

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: 11/6/24



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Yukon Pipeline Release  
Workorder: E410382  
Date Received: 10/31/2024 6:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/31/2024 6:30:00AM, under the Project Name: Yukon Pipeline Release.

The analytical test results summarized in this report with the Project Name: Yukon Pipeline Release 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](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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Field Offices:

**Southern New Mexico Area**

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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

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**Sample Summary**

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/06/24 11:52
---	--	--------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH04-21'	E410382-01A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:52:36AM
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BH04-21'

E410382-01

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Benzene	ND	0.0250	1	10/31/24	11/05/24	
Ethylbenzene	ND	0.0250	1	10/31/24	11/05/24	
Toluene	ND	0.0250	1	10/31/24	11/05/24	
o-Xylene	ND	0.0250	1	10/31/24	11/05/24	
p,m-Xylene	ND	0.0500	1	10/31/24	11/05/24	
Total Xylenes	ND	0.0250	1	10/31/24	11/05/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	90.0 %	70-130		10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: SL		Batch: 2444129
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/31/24	11/05/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	92.2 %	70-130		10/31/24	11/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2444146
Diesel Range Organics (C10-C28)	ND	25.0	1	11/01/24	11/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/01/24	11/04/24	
<i>Surrogate: n-Nonane</i>	107 %	50-200		11/01/24	11/04/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: DT		Batch: 2445020
Chloride	3470	40.0	2	11/04/24	11/04/24	

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:52:36AM
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## 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 (2444129-BLK1)

Prepared: 10/31/24 Analyzed: 11/04/24

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

7.06 8.00 88.2 70-130

## LCS (2444129-BS1)

Prepared: 10/31/24 Analyzed: 11/04/24

Benzene	5.08	0.0250	5.00	102	70-130				
Ethylbenzene	5.04	0.0250	5.00	101	70-130				
Toluene	5.11	0.0250	5.00	102	70-130				
o-Xylene	5.03	0.0250	5.00	101	70-130				
p,m-Xylene	10.2	0.0500	10.0	102	70-130				
Total Xylenes	15.3	0.0250	15.0	102	70-130				

Surrogate: 4-Bromochlorobenzene-PID

7.12 8.00 89.0 70-130

## LCS Dup (2444129-BSD1)

Prepared: 10/31/24 Analyzed: 11/04/24

Benzene	4.93	0.0250	5.00	98.5	70-130	3.01	20		
Ethylbenzene	4.91	0.0250	5.00	98.2	70-130	2.63	20		
Toluene	4.96	0.0250	5.00	99.2	70-130	2.98	20		
o-Xylene	4.91	0.0250	5.00	98.2	70-130	2.48	20		
p,m-Xylene	9.98	0.0500	10.0	99.8	70-130	2.62	20		
Total Xylenes	14.9	0.0250	15.0	99.2	70-130	2.57	20		

Surrogate: 4-Bromochlorobenzene-PID

7.24 8.00 90.5 70-130

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:52:36AM
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## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2444129-BLK1)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.42		8.00		92.7	70-130		

## LCS (2444129-BS2)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	45.5	20.0	50.0	91.1	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00	94.3	70-130		

## LCS Dup (2444129-BSD2)

Prepared: 10/31/24 Analyzed: 11/04/24

Gasoline Range Organics (C6-C10)	43.7	20.0	50.0	87.3	70-130	4.23	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00	93.6	70-130			

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:52:36AM
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## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2444146-BLK1)

Prepared: 11/01/24 Analyzed: 11/04/24

Diesel Range Organics (C10-C28)	ND	25.0						
Oil Range Organics (C28-C36)	ND	50.0						
Surrogate: n-Nonane	58.8		50.0		118	50-200		

## LCS (2444146-BS1)

Prepared: 11/01/24 Analyzed: 11/04/24

Diesel Range Organics (C10-C28)	279	25.0	250	112	38-132			
Surrogate: n-Nonane	57.1		50.0	114	50-200			

## LCS Dup (2444146-BSD1)

Prepared: 11/01/24 Analyzed: 11/04/24

Diesel Range Organics (C10-C28)	272	25.0	250	109	38-132	2.53	20	
Surrogate: n-Nonane	55.7		50.0	111	50-200			

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/6/2024 11:52:36AM
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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 (2445020-BLK1)

Prepared: 11/04/24 Analyzed: 11/04/24

Chloride	ND	20.0
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## LCS (2445020-BS1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	255	20.0	250	102	90-110
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## LCS Dup (2445020-BSD1)

Prepared: 11/04/24 Analyzed: 11/04/24

Chloride	254	20.0	250	101	90-110	0.497	20
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## 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

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Pipeline Release Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 11/06/24 11:52
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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

**Additional Instructions:** Please CC: [cburton@ensolum.com](mailto:cburton@ensolum.com), [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com), [jim.raley@dvn.com](mailto:jim.raley@dvn.com), [iestrella@ensolum.com](mailto:iestrella@ensolum.com), [chamilton@ensolum.com](mailto:chamilton@ensolum.com), [bsimmons@ensolum.com](mailto: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: Cole Burton

Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 10/30/24	Time 7:30	Received by: (Signature) <i>Michelle Gonzales</i>	Date 10/30/24	Time 0730		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	
Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 10-30-24	Time 1600	Received by: (Signature) <i>Michelle Gonzales</i>	Date 10-30-24	Time 1630		Lab Use Only	
Relinquished by: (Signature) <i>John J.</i>	Date 10-30-24	Time 2315	Received by: (Signature) <i>Carth Meen</i>	Date 10-31-24	Time 06:30		Received on ice: 0/ N	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1	T2	T3
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other			Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA			AVG Temp °C	4	

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** 4000

## Envirotech Analytical Laboratory

## 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: Devon Energy - Carlsbad	Date Received: 10/31/24 06:30	Work Order ID: E410382
Phone: (505) 382-1211	Date Logged In: 10/30/24 14:53	Logged In By: Noe Soto
Email: agiovengo@ensolum.com	Due Date: 11/06/24 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 Carrier: Courier  
 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.

Comments/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? No  
 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



5796 U.S. Hwy 64  
Farmington, NM 87401

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



# envirotech

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## Analytical Report

Devon Energy - Carlsbad

Project Name: Yukon Gold 31 CTB 2

Work Order: E501221

Job Number: 01058-0007

Received: 1/30/2025

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/4/25

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: 2/4/25



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Yukon Gold 31 CTB 2  
Workorder: E501221  
Date Received: 1/30/2025 7:15:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/30/2025 7:15:00AM, under the Project Name: Yukon Gold 31 CTB 2.

The analytical test results summarized in this report with the Project Name: Yukon Gold 31 CTB 2 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](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Lynn Jarboe**  
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**Michelle Gonzales**  
Client Representative  
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Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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## Sample Summary

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 02/04/25 07:20
---	---	--------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH04-25'	E501221-01A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-27.5'	E501221-02A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-30'	E501221-03A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-34'	E501221-04A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-39'	E501221-05A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-41'	E501221-06A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-43'	E501221-07A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.
BH04-45'	E501221-08A	Soil	01/28/25	01/30/25	Glass Jar, 2 oz.

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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BH04-25'

E501221-01

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA			Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID	79.7 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA			Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.1 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV			Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane	112 %	61-141		01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: AK			Batch: 2505101
Chloride	1020	20.0	1	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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BH04-27.5'

E501221-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID	79.3 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.2 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane	106 %	61-141		01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>1300</b>	20.0	1	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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**BH04-30'****E501221-03**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID	80.4 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.6 %	70-130		01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane	108 %	61-141		01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>1710</b>	20.0	1	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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BH04-34'

E501221-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID		79.1 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.2 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane		99.9 %	61-141	01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>4540</b>	40.0	2	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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**BH04-39'****E501221-05**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID		79.5 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.6 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane		104 %	61-141	01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>8420</b>	100	5	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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BH04-41'

E501221-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID		86.0 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		94.0 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane		111 %	61-141	01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>3980</b>	40.0	2	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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BH04-43'

E501221-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID		83.8 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.2 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane		126 %	61-141	01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	<b>579</b>	20.0	1	01/30/25	01/30/25	

## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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**BH04-45'****E501221-08**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Benzene	ND	0.0250	1	01/30/25	01/31/25	
Ethylbenzene	ND	0.0250	1	01/30/25	01/31/25	
Toluene	ND	0.0250	1	01/30/25	01/31/25	
o-Xylene	ND	0.0250	1	01/30/25	01/31/25	
p,m-Xylene	ND	0.0500	1	01/30/25	01/31/25	
Total Xylenes	ND	0.0250	1	01/30/25	01/31/25	
Surrogate: 4-Bromochlorobenzene-PID		81.7 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg		Analyst: BA		Batch: 2505100
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/25	01/31/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.1 %	70-130	01/30/25	01/31/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg		Analyst: NV		Batch: 2505109
Diesel Range Organics (C10-C28)	ND	25.0	1	01/30/25	01/31/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/30/25	01/31/25	
Surrogate: n-Nonane		109 %	61-141	01/30/25	01/31/25	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg		Analyst: AK		Batch: 2505101
Chloride	161	20.0	1	01/30/25	01/30/25	

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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## 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 (2505100-BLK1)

Prepared: 01/30/25 Analyzed: 01/30/25

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

7.18 8.00 89.7 70-130

## LCS (2505100-BS1)

Prepared: 01/30/25 Analyzed: 01/31/25

Benzene	5.60	0.0250	5.00	112	70-130				
Ethylbenzene	5.33	0.0250	5.00	107	70-130				
Toluene	5.49	0.0250	5.00	110	70-130				
o-Xylene	5.31	0.0250	5.00	106	70-130				
p,m-Xylene	10.8	0.0500	10.0	108	70-130				
Total Xylenes	16.1	0.0250	15.0	107	70-130				

Surrogate: 4-Bromochlorobenzene-PID

7.11 8.00 88.9 70-130

## LCS Dup (2505100-BSD1)

Prepared: 01/30/25 Analyzed: 01/31/25

Benzene	5.12	0.0250	5.00	102	70-130	8.98	20		
Ethylbenzene	4.88	0.0250	5.00	97.5	70-130	8.91	20		
Toluene	5.02	0.0250	5.00	100	70-130	8.99	20		
o-Xylene	4.85	0.0250	5.00	97.0	70-130	9.01	20		
p,m-Xylene	9.91	0.0500	10.0	99.1	70-130	8.74	20		
Total Xylenes	14.8	0.0250	15.0	98.4	70-130	8.83	20		

Surrogate: 4-Bromochlorobenzene-PID

6.99 8.00 87.4 70-130

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2505100-BLK1)

Prepared: 01/30/25 Analyzed: 01/30/25

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.31		8.00		91.4	70-130		

## LCS (2505100-BS2)

Prepared: 01/30/25 Analyzed: 01/31/25

Gasoline Range Organics (C6-C10)	45.7	20.0	50.0	91.5	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.56		8.00	94.5	70-130		

## LCS Dup (2505100-BSD2)

Prepared: 01/30/25 Analyzed: 01/31/25

Gasoline Range Organics (C6-C10)	38.7	20.0	50.0	77.4	70-130	16.7	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.52		8.00	94.0	70-130			

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit	Notes
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## Blank (2505109-BLK1)

Prepared: 01/30/25 Analyzed: 01/30/25

Diesel Range Organics (C10-C28)	ND	25.0						
Oil Range Organics (C28-C36)	ND	50.0						
Surrogate: n-Nonane	52.1		50.0		104	61-141		

## LCS (2505109-BS1)

Prepared: 01/30/25 Analyzed: 01/30/25

Diesel Range Organics (C10-C28)	267	25.0	250		107	66-144		
Surrogate: n-Nonane	51.5		50.0		103	61-141		

## Matrix Spike (2505109-MS1)

Source: E501220-06 Prepared: 01/30/25 Analyzed: 01/30/25

Diesel Range Organics (C10-C28)	268	25.0	250	ND	107	56-156		
Surrogate: n-Nonane	50.7		50.0		101	61-141		

## Matrix Spike Dup (2505109-MSD1)

Source: E501220-06 Prepared: 01/30/25 Analyzed: 01/30/25

Diesel Range Organics (C10-C28)	265	25.0	250	ND	106	56-156	1.18	20
Surrogate: n-Nonane	46.2		50.0		92.4	61-141		

## QC Summary Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/4/2025 7:20:01AM
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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 (2505101-BLK1)

Prepared: 01/30/25 Analyzed: 01/30/25

Chloride	ND	20.0
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## LCS (2505101-BS1)

Prepared: 01/30/25 Analyzed: 01/30/25

Chloride	254	20.0	250	102	90-110
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## Matrix Spike (2505101-MS1)

Source: E501220-05 Prepared: 01/30/25 Analyzed: 01/30/25

Chloride	1110	20.0	250	669	175	80-120		M4
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## Matrix Spike Dup (2505101-MSD1)

Source: E501220-05 Prepared: 01/30/25 Analyzed: 01/30/25

Chloride	1010	20.0	250	669	138	80-120	8.85	20	M4
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## 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

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Yukon Gold 31 CTB 2 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 02/04/25 07:20
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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.

Client Information				Invoice Information			Lab Use Only			TAT			State													
Client: Devon Project: Yukon Gold 31 CTB 2 Project Manager: Ashley Giovengo Address: 3122 National Parks Hwy City, State, Zip: Carlsbad NM, 88220 Phone: 575-988-0055 Email: agiovengo@ensolum.com				Company: Devon Address: 5315 Buena Vista Dr City, State, Zip: Carlsbad NM, 88220 Phone: (575)689-7597 Email: jim.raley@dvn.com Miscellaneous: Jim Raley			Lab WO# E50221		Job Number 0058.0007		1D	2D	3D	Std	NM	CO	UT	TX								
													X													
Analysis and Method												EPA Program														
												SDWA	CWA	RCRA												
												Compliance	Y	or	N											
												PWSID #														
Remarks																										
Sample Information																										
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID			Lab Number	Field Filter	Field	VOC by 8260	BTX by 8021	Chloride 300.0	RCRA 8 Metals	RCRA 8 Metals	RCRA 8 Metals	RCRA 8 Metals										
14:24	1/28/2025	S	1	BH04 - 25'			1					X														
14:35	1/28/2025	S	1	BH04 - 27.5'			2					X														
15:09	1/28/2025	S	1	BH04 - 30'			3					X														
15:24	1/28/2025	S	1	BH04 - 34'			4					X														
15:48	1/28/2025	S	1	BH04 - 39'			5					X														
16:12	1/28/2025	S	1	BH04 - 41'			6					X														
16:12	1/28/2025	S	1	BH04 - 43'			7					X														
16:12	1/28/2025	S	1	BH04 - 45'			8					X														
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, jim.raley@dvn.com, iestrella@ensolum.com, bdeal@ensolum, chamilton@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: Bowan Simmons																										
Relinquished by: (Signature)	Date 1/29/25	Time 9:45	Received by: (Signature)	Michelle Gonzales	Date 1-29-25	Time 0945	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										
Relinquished by: (Signature)	Michelle Gonzales	1-29-25	Time 1545	Received by: (Signature)	Michelle Gonzales	1-29-25										Time 1545	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N									
Relinquished by: (Signature)	Michelle Gonzales	1-29-25	Time 2100	Received by: (Signature)	Caith Ma	1-30-25										Time 2115	T1				T2				T3	
Relinquished by: (Signature)				Received by: (Signature)		Date										Time	AVG Temp °C 4									
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

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:	Devon Energy - Carlsbad	Date Received:	01/30/25 07:15	Work Order ID:	E501221
Phone:	(505) 382-1211	Date Logged In:	01/29/25 14:15	Logged In By:	Caitlin Mars
Email:	agiovengo@ensolum.com	Due Date:	02/05/25 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 Carrier: Courier  
 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.

**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
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## APPENDIX G

### NMOCD Correspondence

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**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**

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

QUESTIONS

Action 371941

**QUESTIONS**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137  Action Number: 371941  Action Type: [NOTIFY] Notification Of Release (NOR)
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**QUESTIONS**

<b>Location of Release Source</b>	
<i>Please answer all the questions in this group.</i>	
Site Name	Pipeline 800 feet NW of Yukon Gold 31 CTB 2
Date Release Discovered	08/08/2024
Surface Owner	Federal

**Incident Details**

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

**Nature and Volume of Release**

<i>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.</i>	
Crude Oil Released (bbls) Details	<i>Not answered.</i>
Produced Water Released (bbls) Details	Cause: Equipment Failure   Gasket   Produced Water   Released: 4 BBL   Recovered: 0 BBL   Lost: 4 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	<i>Not answered.</i>
Natural Gas Vented (Mcf) Details	<i>Not answered.</i>
Natural Gas Flared (Mcf) Details	<i>Not answered.</i>
Other Released Details	<i>Not answered.</i>
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	blown paper gasket on blind flange. estimated 4.1 bbls released. 0 bbls recovered

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

QUESTIONS, Page 2

Action 371941

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137  Action Number: 371941  Action Type: [NOTIFY] Notification Of Release (NOR)
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**QUESTIONS****Nature and Volume of Release (continued)**

Is this a gas only submission (i.e. only significant Mcf values reported)	More volume information must be supplied to determine if this will be treated as a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Unavailable.
Reasons why this would be considered a submission for a notification of a major release	Unavailable.

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

**Initial Response**

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

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

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

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ACKNOWLEDGMENTS

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

Action 371941

## ACKNOWLEDGMENTS

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 371941
	Action Type: [NOTIFY] Notification Of Release (NOR)

## ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	I acknowledge that I am authorized to submit notification of a release on behalf of my operator.
<input checked="" type="checkbox"/>	I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to my operator) to track the notification(s) and corrective action(s) for a release, pursuant to NMAC 19.15.29.
<input checked="" type="checkbox"/>	I acknowledge that creating a new incident file will require my operator to file subsequent submission(s) of form "C-141, Application for administrative approval of a release notification and corrective action", pursuant to NMAC 19.15.29.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	I acknowledge the fact that the acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment.
<input checked="" type="checkbox"/>	I acknowledge the fact that, in addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

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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 371941

**CONDITIONS**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  371941
	Action Type: [NOTIFY] Notification Of Release (NOR)

**CONDITIONS**

Created By	Condition	Condition Date
wdale	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.	8/9/2024

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>

QUESTIONS

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

Action 529806

**QUESTIONS**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2422256945
Incident Name	NAPP2422256945 PIPELINE 800 FEET NW OF YUKON GOLD 31 CTB 2 @ B-31-23S-30E 140S 385E
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

*Please answer all the questions in this group.*

Site Name	PIPELINE 800 FEET NW OF YUKON GOLD 31 CTB 2
Date Release Discovered	08/08/2024
Surface Owner	Federal

**Incident Details**

*Please answer all the questions in this group.*

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

**Nature and Volume of Release**

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

Crude Oil Released (bbls) Details	<i>Not answered.</i>
Produced Water Released (bbls) Details	<i>Cause: Equipment Failure   Gasket   Produced Water   Released: 71 BBL   Recovered: 71 BBL   Lost: 0 BBL.</i>
Is the concentration of chloride in the produced water >10,000 mg/l	<i>Yes</i>
Condensate Released (bbls) Details	<i>Not answered.</i>
Natural Gas Vented (Mcf) Details	<i>Not answered.</i>
Natural Gas Flared (Mcf) Details	<i>Not answered.</i>
Other Released Details	<i>Not answered.</i>
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	<i>blown paper gasket on blind flange. estimated 71 bbls released. 0 bbls recovered</i>

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

QUESTIONS, Page 2

Action 529806

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type:  [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.

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

<b>Initial Response</b>	
<i>The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.</i>	
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	<i>Not answered.</i>

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 11/25/2025
--	--

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Phone: (505) 476-3441

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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, Page 3

Action 529806

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type:  [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**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
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 100 and 200 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 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 100 and 200 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

**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
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	26000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	2910
GRO+DRO (EPA SW-846 Method 8015M)	1560
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	01/01/2026
On what date will (or did) the final sampling or liner inspection occur	01/15/2025
On what date will (or was) the remediation complete(d)	01/15/2025
What is the estimated surface area (in square feet) that will be reclaimed	2983
What is the estimated volume (in cubic yards) that will be reclaimed	815
What is the estimated surface area (in square feet) that will be remediated	2983
What is the estimated volume (in cubic yards) that will be remediated	815

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

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

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QUESTIONS, Page 4

Action 529806

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

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

**Remediation Plan (continued)**

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

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

*(Select all answers below that apply.)*

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
OR is the <b>off-site</b> disposal site, to be used, out-of-state	No
OR is the <b>off-site</b> disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 11/25/2025
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*The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 5

Action 529806

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**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 529806

**QUESTIONS (continued)**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

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

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

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CONDITIONS

Action 529806

**CONDITIONS**

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  529806
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**CONDITIONS**

Created By	Condition	Condition Date
scwells	Remediation plan approved with the same conditions as its approval on 9/3/25 which include:	1/5/2026
scwells	1) The requested variance to apply depth to groundwater Closure Criteria below 10' is denied due to this release occurring in a sensitive location. Excavation must be to the maximum extent practicable. Once that depth has been achieved, then OCD must be consulted prior to backfilling and reasons for why the excavation can't be furthered must be provided. At that point, site conditions will be taken into consideration and a variance may be requested to leave the chloride contamination in place and the use of the Bentomat ST clay liner will be considered.	1/5/2026
scwells	2) Due to the proximity of a significant watercourse and a wetland riverine, all sidewall and bottom confirmation samples must be five-point composite samples representative of no more than 200 square feet.	1/5/2026
scwells	In addition, the following condition is given:	1/5/2026
scwells	3) Due to this release occurring 8/8/24, remediation must begin immediately and a report is due to the OCD by 3/6/26.	1/5/2026