State of New Mexico
Oil Conservation Division

Incident ID	nAPP2207746767
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amber Groves Title: Sr. Environmental Specialist

Signature: Amber Groves Date: 12/20/2022

email: agroves@durangomidstream.com Telephone: (575)703-7992

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Jennifer Nobui Date: 01/18/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

December 2022

Frontier Field Services, LLC
Devon Continental to Lusk Groundwater Test Bore Summary
UL-M, Sec 5, T19S, R32E
32.683400, -103.795621

The following summary serves as a condensed update on field activities undertaken at the afore referenced groundwater test bore location. The groundwater test bore is located on BLM property.

This groundwater test bore was drilled in association with the Devon Continental 6" Poly Line to Lusk, incident nAPP2207756767 (reference Figure 1). As there are no water wells within a half mile of the release location and per NMOCD guidance, a groundwater test bore was drilled to an approximate depth of fifty-five feet bgs in an effort to determine depth of groundwater as deeper than fifty feet bgs. After drilling of the groundwater test bore, the bore was left open for a period of at least seventy-two hours and then gauged for the presence of water.

If water was present the NMOSE and NMOCD would be notified for guidance on possible conversion to monitor well. If no water was present the well would be plugged according to NMOSE Well Plugging Handbook, Appendix A, Permit Condition 6E.

On December 9, 2022, the groundwater test bore was drilled, via air rotary drill rig, to a depth of approximately fifty-five feet bgs. As the soil is predominantly loamy sand, the bore was cased with three-inch schedule 40 pvc pipe in an effort to prevent bore collapse.

On December 13, 2022, the groundwater test bore was gauged for the presence of water (reference Photograph). No water was present in the bore. On December 15, 2022, the bore was plugged according to the NMOSE approved Plugging Plan. NMOSE approved permit to drill is attached for reference.

Respectfully,

Daniel Dominguez
Environmental Manager
Hungry Horse, LLC
(575) 408-3134
ddominguez@hungry-horse.com

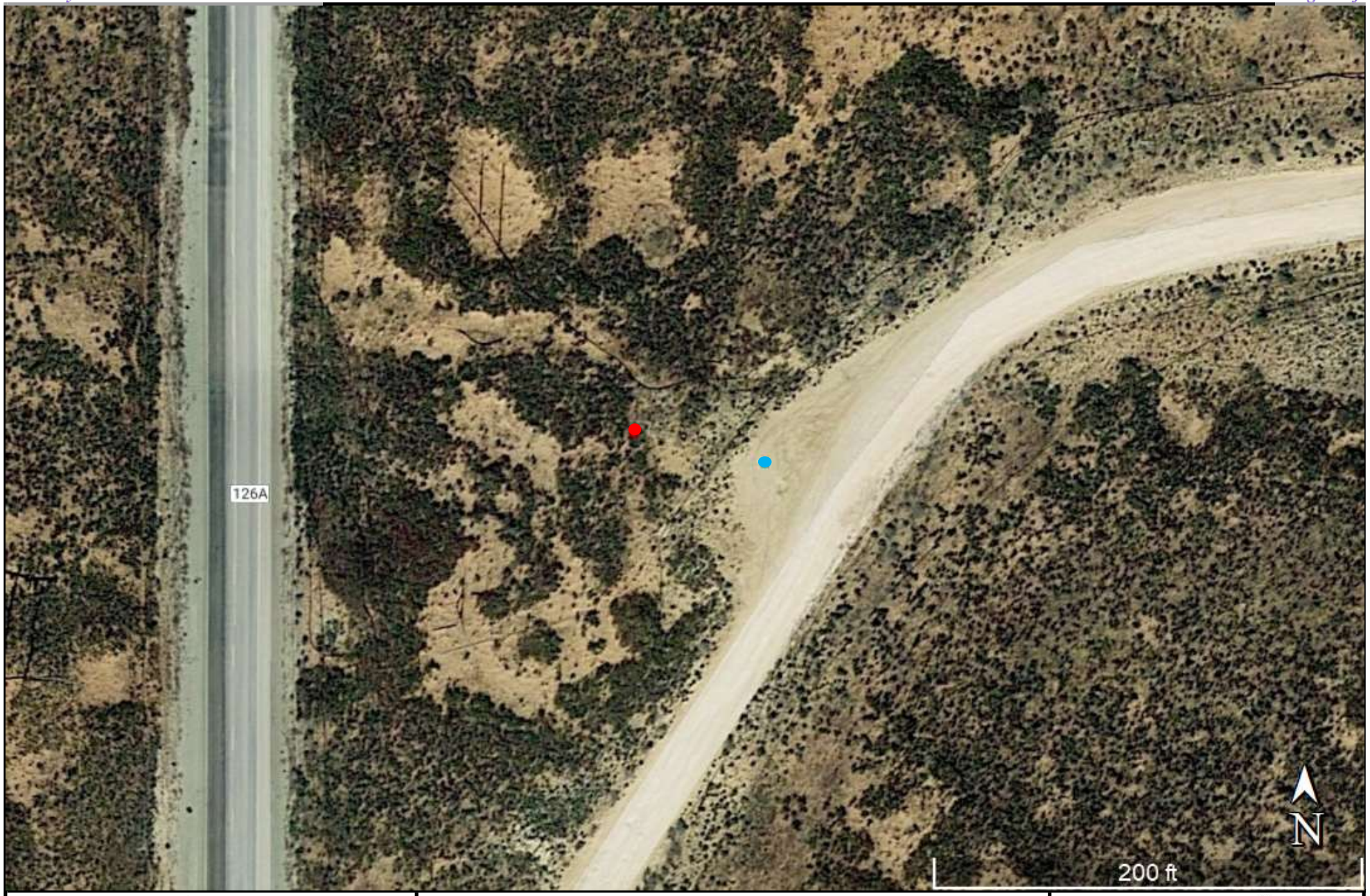


Figure 1
Groundwater Test Bore Location Map
Frontier Field Services, LLC
Continental to Lusk Bore
GPS: 32.6834, -103.795621
Lea County

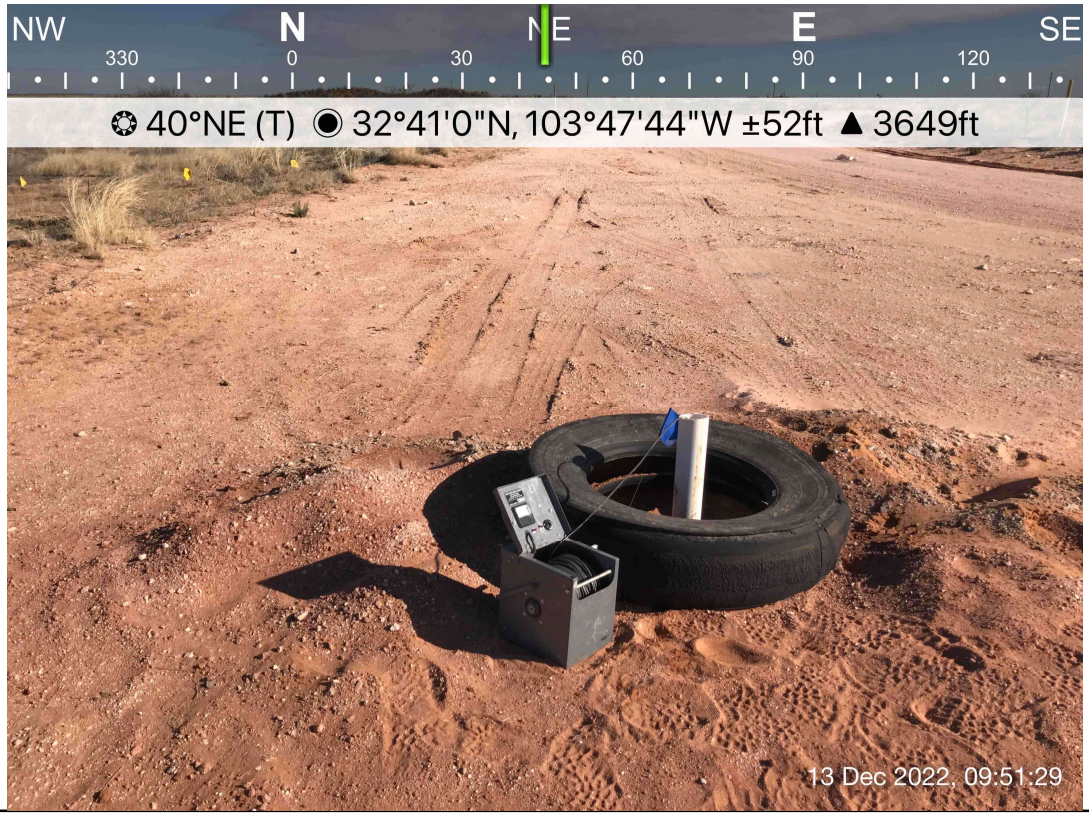
Legend:
- Devon Continental to Lusk Location
- Groundwater Test Bore Location

Drafted: dd
Checked: bw
Date: 12/8/22

HUNGRY HORSE ENVIRONMENTAL & CONSTRUCTION

Photographs

Photo: 1	Description: Gauging groundwater test bore



Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 737692
File Nbr: L 15415

Nov. 17, 2022

AMBER GROVES
FRONTIER FIELD SERVICES
47 CONOCO RD
MALJAMAR, NM 88264

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements

Vanessa Clements
(575)622-6521

Enclosure

explore

File No. L-15415

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL
A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well*(Pump test)	☐ Construction Site/Public Works Dewatering	☐ Other(Describe):
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

*New Mexico Environment Department-Drinking Water Bureau (NMED-DWB) will be notified if a proposed exploratory well is used for public water supply.

☒ Temporary Request - Requested Start Date: 10/03/2022 Requested End Date: 11/03/2022

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: Frontier Field Services	Name:
Contact or Agent: check here if Agent ☐ Amber Groves	Contact or Agent: check here if Agent ☐
Mailing Address: 47 Conoco Rd	Mailing Address:
City: Maljamar	City:
State: NM Zip Code: 88264	State: Zip Code:
Phone: 575-703-7992 ☐ Home ☒ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): agroves@durangomidstream.com	E-mail (optional):

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2022 SEP 26 AM

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 07/12/22

File No.: L-15415	Trn. No.: 737692	Receipt No.: 6-49040
Trans Description (optional): MON		
Sub-Basin: L	PCW/LOG Due Date: 11-17-2023	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
Pod 1	-103.795621	32.683400	Unit Letter "M", Section 5, T19S, R32E

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:

Well is on land owned by: BLM

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 55'	Outside diameter of well casing (inches): N/A
Driller Name: Hungry Horse, LLC	Driller License Number: 1755

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

The borehole will be drilled according to NMOCD as there are no wells within a half mile of the location. As per NMOCD, drill a 55' borehole, wait 72 hrs, and check for presence of water. If water is present driller will notify NMOSE and NMOCD for guidance on possibly converting the well to a monitoring well. If no water is present the well will be plugged.

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FOR OSE INTERNAL USE Application for Permit, Form WR-07 Version 07/12/22

File No.: L-1545	Trn No.: 737692

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
Is proposed well a future public water supply well? ☐ Yes ☒ NO If Yes, an application must be filed with NMED-DWB, concurrently. ☐ Include a description of the requested pump test if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge. ☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring ☒ The reason and duration of the monitoring is required.		**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Amber Groves
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Amber Groves
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 17th day of November 20 22, for the State Engineer,

Mike Hamman P.E., State Engineer

By: K. Parekh
Signature

Kashyap Parekh
Print

OSE DII SEP 30 2022 PM2:58

Title: Water Resources Manager I
Print

FOR OSE INTERNAL USE Application for Permit, Form WR-07 Version 07/12/22

File No.: L-15415	Trn No.: 737692

Page 3 of 3

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1B Depth of the well shall not exceed the thickness of the Ogallala formation.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: L 15415 POD1

File Number: L 15415
Trn Number: 737692

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

Trn Desc: L 15415 POD1 File Number: L 15415
Trn Number: 737692

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion L 15415 must be completed and the Well Log filed on or before 11/17/2023.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACITIVITES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 11/11/2022 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 17 day of Nov A.D., 2022

Mike A. Hamman, P.E., State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: L 15415 POD1 File Number: L 15415
Trn Number: 737692

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION – SANTA FE OFFICE

OFFICIAL RECEIPT NUMBER: 6 - 49040 DATE: 9/26/22 FILE NO.: TBD

TOTAL: $ 5.00 RECEIVED: Five & 00/100 DOLLARS CHECK NO.: 43977 CASH: N/A

PAYOR: Hungry Horse, LLC ADDRESS: PO Box 1058 CITY: Hobbs STATE: NM

ZIP: 88241 RECEIVED BY: Jacob Romero

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. **Original** to payor; **pink** copy to Program Support/ASD; and **yellow** copy for Water Rights. If a mistake is made, void the original and all copies and submit to Program Support/ASD as part of your daily deposit.

A. Ground Water Filing Fees

___	1. Change of Ownership of Water Right	$ 2.00
___	2. Application to Appropriate or Supplement Domestic 72-12-1 Well	$ 125.00
___	3. Application to Repair or Deepen 72-12-1 Well	$ 75.00
___	4. Application for Replacement 72-12-1 Well	$ 75.00
___	5. Application to Change Purpose of Use 72-12-1 Well	$ 75.00
___	6. Application for Stock Well	$ 5.00
___	7. Application to Appropriate Irrigation, Municipal, or Commercial Use	$ 25.00
___	8. Declaration of Water Right	$ 1.00
___	9. Application for Supplemental Non 72-12-1 Well	$ 25.00
___	10. Application to Change Place or Purpose of Use Non 72-12-1 Well	$ 25.00
___	11. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Ground Water	$ 50.00
___	12. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water	$ 50.00
___	13. Application to Change Point of Diversion of Non 72-12-1 Well	$ 25.00
___	14. Application to Repair or Deepen Non 72-12-1 Well	$ 5.00
1	15. Application for Test, Expl. Observ. Well	$ 5.00
___	16. Application for Extension of Time	$ 25.00
___	17. Proof of Application to Beneficial Use	$ 25.00
___	18. Notice of Intent to Appropriate	$ 25.00

B. Surface Water Filing Fees

___	1. Change of Ownership of a Water Right	$ 5.00
___	2. Declaration of Water Right	$ 10.00
___	3. Amended Declaration	$ 25.00
___	4. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Surface Water	$ 200.00
___	5. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Surface Water	$ 200.00
___	6. Application to Change Point of Diversion	$ 100.00
___	7. Application to Change Place and/or Purpose of Use	$ 100.00
___	8. Application to Appropriate	$ 25.00
___	9. Notice of Intent to Appropriate	$ 25.00
___	10. Application for Extension of Time	$ 50.00
___	11. Supplemental Well to a Surface Right	$ 100.00
___	12. Return Flow Credit	$ 100.00
___	13. Proof of Completion of Works	$ 25.00
___	14. Proof of Application of Water to Beneficial Use	$ 25.00
___	15. Water Development Plan	$ 100.00
___	16. Declaration of Livestock Water Impoundment	$ 10.00
___	17. Application for Livestock Water Impoundment	$ 10.00

C. Well Driller Fees

___	1. Application for Well Driller's License	$ 50.00
___	2. Application for Renewal of Well Driller's License	$ 50.00
___	3. Application to Amend Well Driller's License	$ 50.00

D. Reproduction of Documents

___ @ 0.25¢ $_____

___ Map(s) $_____

E. Certification $_____

F. Other $_____

G. Comments:

All fees are non-refundable.

July 29, 2022

Spill Closure Report: Devon Continental 6" Poly Line to Lusk
Section 5, Township 19 South, Range 32 East
API: N/A
County: Eddy
Incident Report: nAPP2207746767

Prepared For: **Durango Midstream, LLC**
300, 10077 Grogans Mill Road
The Woodlands, Texas 77380

New Mexico Oil Conservation Division – District 2 – Artesia
811 South 1st Street
Artesia, New Mexico 88210

Durango Midstream, LLC (Durango) retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment for a release of natural gas condensate due to internal and external corrosion of the Devon Continental 6" Poly Line to Lusk, incident nAPP2207756767 (hereafter referred to as "Devon Continental"). Durango provided spill notification to the New Mexico Oil Conservation District (NMOCD) District 2, via submission of an initial C-141 Release Notification (Attachment 1). This letter provides a description of the spill assessment and includes a request for spill closure. The spill area is located at N 32.683440, W -103.795819.

Background

The site is located approximately 11.75 miles south of Maljamar, New Mexico (Google Inc., 2022). The legal location for the site is Section 5, Township 19 South and Range 32 East in Eddy County, New Mexico. The spill area is located on Bureau of Land Management (BLM) property. Satellite images of the site are included in Attachment 2.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2022) indicates the site's surface geology is comprised primarily of PU – Pyote and Maljamar fine sands and is characterized as sandy eolian deposits from sedimentary rock. The Natural Resources Conservation Service *Web Soil Survey* characterizes the predominant soil texture on the site as Loamy Sand. It tends to be well to somewhat excessively drained with high runoff and very low available moisture levels in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2022).

The surrounding landscape is associated with ridges and fans at elevations of 2,800 to 5,000 feet above sea level. The climate is semi-arid, with an annual precipitation ranging between 8 to 13 inches. Historically, the plant community has a grassland aspect, dominated by black grama, dropseeds, and bluestems. Shrubs such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability. Shinnery oak, sand sage, and mesquite are the greatest threat to dominate this site in the long term after disturbance.

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7

New Mexico Administrative Code (NMAC), is the Pecos River located approximately 29.31 miles west of the site (United States Fish and Wildlife Service, 2022). There are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC (New Mexico Oil Conservation Division, 2018).

Incident Description

The initial release occurred on January 3, 2022, due to internal and external corrosion of the line. The initial release was found to be less than 5 bbls and nonreportable. Pipeline replacement began prior to remediation efforts. Upon delineation and excavation, historical impact was encountered and determined to be of a reportable volume. The spill was reported to NMOCD on March 18, 2022. Approximately 1.81 Mcf of natural gas and an unknown amount of condensate was released; no fluids were recovered. The NMOCD C-141 Report: nAPP2207746767 is included in Attachment 1. The Daily Field Report (DFRs) and site photographs are included in Attachment 3.

Closure Criteria Determination

The depth to groundwater was determined using information from the Office of the State Engineers Water Rights Database. The closest recorded depth to groundwater was determined to be 430 feet below ground surface (bgs) (New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2022a). Documentation used in Closure Criteria Determination research is included in Attachment 4.

Closure Critera Worksheet			
Site Name: Devon Continental to Lusk Fed Com 1			
Spill Coordinates: 32.683440, -103.795819			
		Value	Unit
1	Depth to Groundwater	430	Feet
2	Within 300 feet of any lakebed, sink hole, or playa lake (measured from the ordinary high-water mark)	154,765	Feet
3	Within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	32,476	Feet
4	Within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	33,826	Feet
5	Within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	8,392	Feet
	Within 1000 feet of any frest water well or spring	8,392	Feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water well field?	No	(Y/N)
7	Witin 300 feet of a wetland	13,704	Feet
8	within the area overlying a subsurface mine	No	(Y/N)
9	Witin an unstable Karst area	Low	
10	Withing a 100 year floodplain	500	Year
11	Soil Type	Pyote & Maljamar Fine sands	
12	Ecological Classification	Loamy Sant	
13	Geology	Qep	
	NMAC 19.15.29.12 E Table 1 Closure Criteria	>100'	

Based on data included in the closure criteria determination worksheet, the release at Devon Continental would not be subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC and the closure criteria for the site would be determined to be associated with the following constituent concentration limits based on depth to groundwater. The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 1.

Table 1. Closure Criteria for Soils to Remediation & Reclamation Standards

	Constituent	Limit
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW > 100 feet (19.15.29.12)	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

[1]Total Dissolved Solids (TDS)
[2]Total petroleum hydrocarbons (TPH) = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)
[3]Benzene, toluene, ethylbenzene, and xylenes (BTEX)

Remedial Actions Taken

On March 17, 2022, Vertex conducted an initial site inspection and began delineation of the release area. Upon delineation, it was determined that the impact of the release was far greater than originally reported and a C141 was submitted on March 18, 2022 (Attachment 3). Field screening was completed on a total of 12 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Silver Nitrate Titration (chlorides). Field screening results were used to identify areas requiring further remediation from those areas showing concentrations above determined closure criteria levels. Field screening results are presented in Attachment 6, as well as in the DFRs in Attachment 4.

A new remediation plan was drawn up and efforts resumed between June 9, 2022 and June 29, 2022. Vertex collected a total of 26 five-point composite samples from the base and side walls of the excavation in 200 square foot increments at depths ranging between ground surface and 14 feet bgs. Characterization sample points are denoted in Figure 1 & Table 1 and confirmation sampling denoted in Figure 2 & Table 2 in the attachments.

48-hour Notification of Confirmation Sampling (Attachment 5) was sent to NMOCD on June 14, 2022. Confirmation sampling was completed on June 16, 2022. The samples were submitted to Envirotech under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), Total Petroleum Hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and Total Chlorides (EPA Method 300.0). Laboratory data results are presented in Attachment 6 and the laboratory data report is included in Attachment 7.

Remediation was completed once laboratory data results confirmed all confirmatory samples were below closure criteria for the site and any further remediation efforts were deemed unnecessary. The site was backfilled with locally sourced material on June 29, 2022.

Closure Request

Durango requests that incident nAPP2207746767 be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Durango certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the open release at Devon Continental 6" Poly Line to Lusk.

Should you have any questions or concerns, please do not hesitate to contact Amber Groves at (575)703-7992

Signature

8/30/2022
Date

Attachments

References

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ATTACHMENT 1

Borehole

VERTEX

0 2.5 5 ft.

NAD 1983 UTM Zone 13N
Date: Jul 28/22

Map Center:
Lat: 32.683567,
Long:-103.795846

N

Characterization Sample Points
Devon-Continental 6" Poly Line to Lusk

FIGURE: **1**

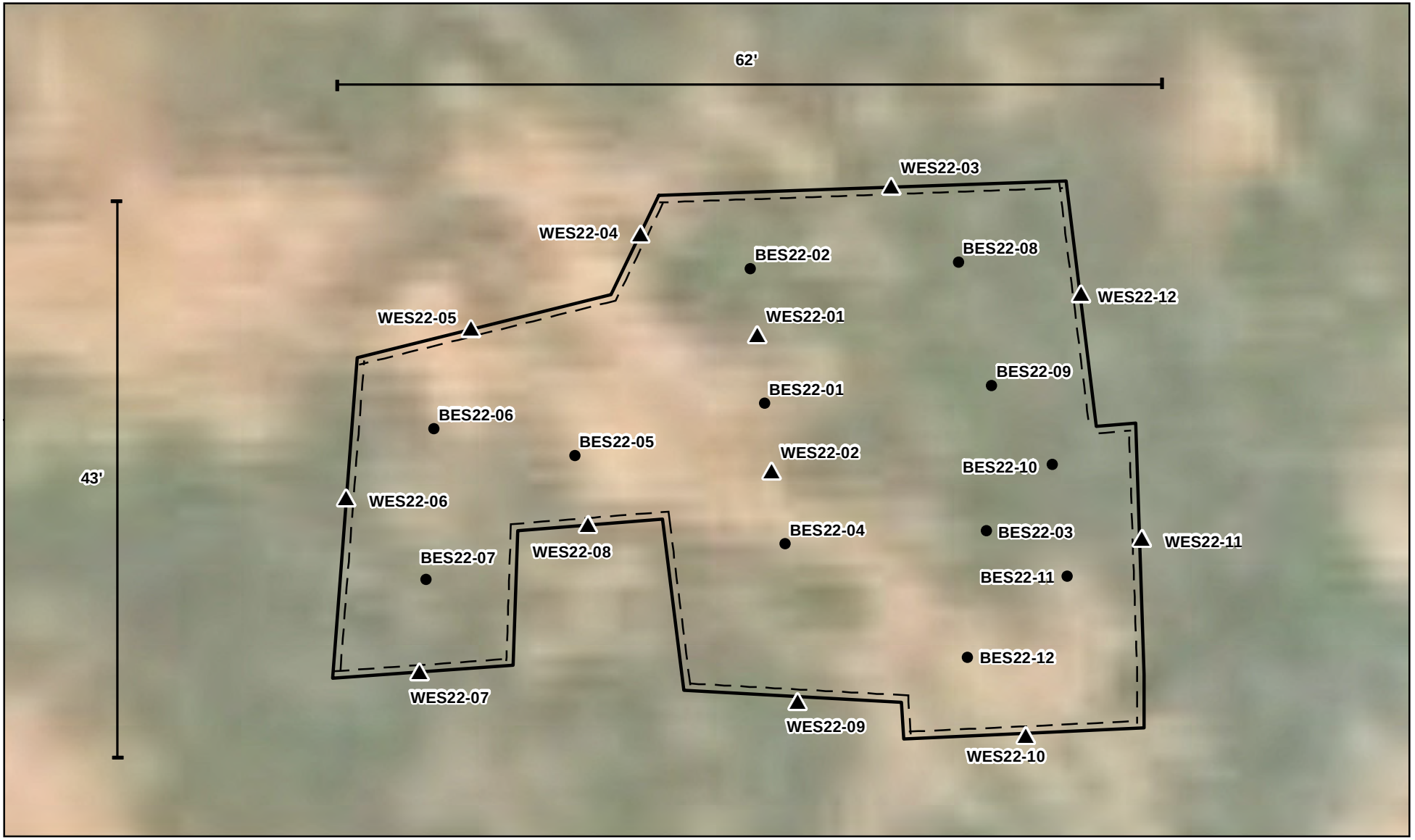
DURANGO MIDSTREAM

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Background image from Maxar, 2020. Feature locations from GPS, Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Durango Midstream LLC\22E-01024 - Devon-Continental Lusk\Figure 1 Characterization Sample Points Continental Lusk.mxd



● Base Sample ▲ Wall Sample Excavation Area (~171 sq. ft.)

VERTEX

0 3.75 7.5 15 ft.

Map Center:
Lat/Long: 32.683543, -103.795858

NAD 1983 UTM Zone 13N
Date: Jul 28/22

N

Confirmation Sample Points
Devon-Continental 6" Poly Line to Lusk

FIGURE: **2**

DURANGO MIDSTREAM

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Background image from Maxar, 2020. Feature locations from GPS, Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Durango Midstream LLC\22E-01024 - Devon-Continental Lusk\Figure 2 Confirmation Sample Points Continental Lusk.mxd

ATTACHMENT 2

Client Name: Durango Midstream
Site Name: Devon Continental 6" Poly Line to Lusk
NM OCD Tracking #: nAPP2207746767
Project #: 22E-01024
Lab Report(s): E206069

Table 01. Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH22-01	10	June 9, 2022	0.2	-	**4,949**	-	-	-	-	-	-	-	-
	14	June 9, 2022	0.0	-	**3,133**	ND	ND	ND	ND	ND	ND	ND	**2110**
	18	June 9, 2022	0.0	-	108	ND	ND	ND	ND	ND	ND	ND	106
	20	hold at lab	0.0	-	115	-	-	-	-	-	-	-	-
BH22-02	0	June 9, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	June 9, 2022	0.0	-	ND	-							
	6	June 9, 2022	0.0	-	ND	ND	ND	ND	56.7	66.4	56.7	123.1	93.4
BH22-03	0	June 9, 2022	0.9	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	June 9, 2022	0.0	-	ND	-	-	-	-	-	-	-	-
	6	June 9, 2022	0.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH22-04	0	June 9, 2022	0.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	June 9, 2022	0.1	-	ND	-	-	-	-	-	-	-	-
	6	June 9, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	94.5
BH22-05	0	June 9, 2022	4.6	-	ND	ND	ND	ND	157	137	157	294	ND
	2	June 9, 2022	0.0	-	ND	-	-	-	-	-	-	-	-
	6	June 9, 2022	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed assessed
Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria (on-pad)
Bold and green shaded indicates exceedance outside of NM OCD Reclamation Criteria (off-pad)

Client Name: Durango Midstream LLC
Site Name: Devon Continental 6" Poly Line to Lusk
NM OCD Tracking #: nAPP2207746767
Project #: 22E-01024
Lab Report: E206148, E206069

Table 2. Initial Characterization/Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater 51-100 feet bg

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
WES22-01	5-14'	06.16.22	0	193	458	ND	ND	ND	27.2	ND	27.2	27.2	270
WES22-02	5-14'	06.16.22	0	130	5,296	ND	ND	ND	ND	ND	ND	ND	2410
WES22-03	0-5'	06.16.22	0	8	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-04	0-5'	06.16.22	0	0	0	ND	ND	ND	61.2	ND	61.2	61.2	ND
WES22-05	0-5'	06.16.22	0	16	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-06	0-5'	06.16.22	0	14	0	ND	ND	ND	36.1	ND	36.1	36.1	31.9
WES22-07	0-5'	06.16.22	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-08	0-5'	06.16.22	0	28	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-09	0-5'	06.16.22	0	16	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-10	0-5'	06.16.22	0	0	0	ND	ND	ND	84.4	ND	84.4	84.4	61.6
WES22-11	0-5'	06.16.22	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-12	0-5'	06.16.22	0	31	0	ND	ND	ND	ND	ND	ND	ND	ND
BES22-01	14'	06.16.22	0	100	3,339	ND	ND	ND	ND	ND	ND	ND	1620
BES22-02	5'	06.16.22	0	79	0	ND	ND	ND	ND	ND	ND	ND	122
BES22-03	5'	06.16.22	0	560	0	ND	ND	ND	145	137	145	282	ND
BES22-04	5'	06.16.22	0	73	0	ND	ND	ND	ND	ND	ND	ND	ND
BES22-05	5'	06.16.22	0	174	0	ND	ND	ND	78.5	55.5	78.5	134	ND
BES22-06	5'	06.16.22	0	154	0	ND	ND	ND	82.4	ND	82.4	82.4	40.7
BES22-07	5'	06.16.22	0	318	0	ND	ND	ND	151	63.6	151	214.6	52.5
BES22-08	5'	06.16.22	0	529	0	ND	ND	ND	207	150	207	357	22.8
BES22-09	5'	06.16.22	0	31	0	ND	ND	ND	ND	ND	ND	ND	ND
BES22-10	5'	06.16.22	0	100	0	ND	ND	ND	33.4	ND	ND	33.4	ND
BES22-11	5'	06.16.22	0	1,230	0	ND	ND	ND	647	569	647	1216	ND
BES22-12	5'	06.16.22	0	982	0	ND	ND	ND	373	332	373	705	23.8
BH22-06	0'	06.16.22	0	33	0	ND	ND	ND	ND	ND	ND	ND	ND
BH22-06	2'	06.16.22	0	34	0	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed

ATTACHMENT 3

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2207746767
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Frontier Field Services, LLC	OGRID 221115
Contact Name Amber Groves	Contact Telephone 575-703-7992
Contact email agroves@durangomidstream.com	Incident # *(assigned by OCD)*
Contact mailing address 47 Conoco Rd, Maljamar NM 88264	

Location of Release Source

Latitude 32.683440 Longitude -103.795819
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Devon Continental 6" Poly Line to Lusk	Site Type Pipeline
Date Release Discovered 1/3/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	5	19S	32E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) Unknown	Volume Recovered (bbls) 0
☒ Natural Gas	Volume Released (Mcf) 1.81	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Internal and external corrosion. Initial less than 5 bbl release occurred on 1/3/2022. Pipeline replacement commenced prior to remediation efforts. Upon initial site delineation and excavation historical impact was encountered and determined to be of a reportable volume. NOR was initiated as soon as deemed reportable.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2207746767
District RP	
Facility ID	
Application ID	

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

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Upon determination of reportable historical volume determined on 3/18/2022, immediate notification sent to Robert Hamlet, Chad Hensley, Jennifer Nobui, Nelson Velez, Mike Bratcher and Bradford Billings by Amber Groves.

Initial Response

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

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

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

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

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

Printed Name: Amber Groves Title: Remediation Specialist

Signature: Amber Groves Date: 3/18/2022

email: agroves@durangomidstream.com Telephone: (575)703-7992

OCD Only

Received by: Jocelyn Harimon Date: 03/18/2022

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

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

CONDITIONS

Operator: FRONTIER FIELD SERVICES, LLC 10077 Grogans Mill Rd. The Woodlands, TX 77380	OGRID: 221115
	Action Number: 91338
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141	3/18/2022

ATTACHMENT 4

Daily Site Visit Report

Client:	Frontier Field Services	Inspection Date:	3/17/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	3/17/2022 9:45 PM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:			
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/17/2022 7:20 AM
Departed Site	3/17/2022 3:00 PM

Field Notes

8:36 Flow line release where excavation is being completed to remove contamination. Field screening of walls and base to be completed

9:47 Samples collected from bottom of excavation area are high with voc readings. Having operator take walls further out to prevent collapse and deeper to find bottom of contamination

10:55 Wall samples on south wall are clean. North wall to be re-sampled after further excavation along with going deeper on the base

11:35 Bottom hole sample cleaning up for tph and voc but going up in chlorides. Going down an additional two feet to sample again. Bottom sample to be collected at 10 foot

13:36 10 ft sample has higher elevated level of chlorides. Directed by client to go to 13 ft and test again. Base and wall samples to be mapped out after walls are fully excavated. Due to the potential of the walls collapsing the operator is stair casing them and the use of the bucket on the backhoe to collect the samples.

15:18 Excavation put on hold until release area can be properly assessed for next steps. Research needed to determine closure criteria. Potential that a dtgw borehole will need to be drilled if no active well is within the 0.5 mile radius

Next Steps & Recommendations

1 Continue delineation

2 Determine plan to proceed with excavation

Daily Site Visit Report

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest	**Viewing Direction**: West
	
Release area	Excavation area
Viewing Direction: North	**Viewing Direction**: East
	
Excavation area	Excavation area

Daily Site Visit Report

Viewing Direction: West

13 ft area

Viewing Direction: Southwest

Wall under flow lines

Viewing Direction: South

Area to be excavated

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Monica Peppin

Signature:

Daily Soil Sampling

Client: Client: Frontier Field Services

Location: Site: Devon Continental Lusk

Date: (SD: 3/17/22)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC (PID)	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BH22-01	4.0	2		0.09	21.2	23				✓	
BH22-02	4.0	14		0.07	21.3	0				✓	
BH22-03	4.0	291		0.98	20.4	1342				✓	
BH22-04	6.0	149								✓	
BH22-04	8.0	5		2.79	22.6	3859				✓	
BH22-04	10.0	1		2.98	22.9	4120				✓	
BH22-04	13.0	202		1.73	20.1	2437				✓	

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/9/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/9/2022 11:41 PM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/9/2022 7:32 AM
Departed Site	6/9/2022 4:37 PM

Field Notes

7:50 Completed safety paperwork on arrival and organized safety meeting with Standard Safety once they arrived. Previous excavation partially filled in with sand.

16:16 Investigated existing excavation and swept potential borehole areas with magnetic locator. Collected surface samples from potential test pit locations.

16:20 Cleared BH22-01 location with Durango locator and excavated 4 feet west of release point to complete vertical delineation. Field screening results for chloride at 18 feet were below NMOCD strictest criteria.

16:21 Met with client and determined that horizontal delineation would start just off of the current excavation boundaries.

16:25 Excavated BH22-02, BH22-03, BH22-04, and BH22-05 east, north, west, and south of existing excavation, respectively. Boreholes were sampled as depths of 0, 2, and 6 feet. Field screening results for chloride and VOCs were below NMOCD strictest criteria.

16:26 Packaged samples for submission to laboratory.

16:28 Arranged with Standard Safety and Supply to plan for excavation the following day. The existing excavation will be cleaned out and the surfaces samples to determine scope of additional excavation.

16:36 Durango locator arrived in afternoon to inform us about the location of the pipes coming off of the manifold west of the excavation.

Next Steps & Recommendations

Daily Site Visit Report

1

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: South
	
West of excavation facing east. Beginning of day.	North of release area facing south. BH22-03 north of existing excavation.
Viewing Direction: East	**Viewing Direction**: North
	
Southeast of release area facing northwest. BH22-04 west of existing excavation.	South release area facing north. BH22-05 south of existing excavation.

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: Northwest
	
Northeast of excavation facing southwest. End of day.	Southeast of excavation facing northwest. End of day.
Viewing Direction: Northeast	**Viewing Direction**: Southeast
	
Southwest of excavation facing northeast. End of day.	Northwest of excavation facing southeast. End of day.

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: Northwest
	
Southwest of excavation facing northeast. Beginning of day.	Southeast of excavation facing northwest. Beginning of day.
Viewing Direction: Southwest	**Viewing Direction**: Southeast
	
Northeast of excavation facing southwest. Beginning of day.	North of excavation facing southeast. Beginning of day.

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: North
	
North of excavation facing southwest. Beginning of day.	South of release point facing north. Collected surface samples to determine where to start boreholes.

Viewing Direction: Southwest	**Viewing Direction**: Northwest
	
Northeast of release point facing southwest. Dug BH22-01 for vertical delineation within feet of release point.	Southeast of release area facing northwest. BH22-02 east of southeast corner of existing excavation.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

Daily Soil Sampling

Client: Client: Durango Midstream LLC

Location: Site: Devon Continental Lusk

Date: (SD: 6/9/22)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC (PID)	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BH22-01	10.0	0		3.80	31.1	4949				✓	
BH22-01	14.0	0		2.53	30.7	3133		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-01	18.0	0		0.50	32.9	108		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-02	0.0	0		0.08	38.6	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-02	2.0	0		0.40	38.5	0				✓	
BH22-02	6.0	0		0.36	36.8	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-03	0.0	1		0.07	32.6	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-03	2.0	0		0.03	34.5	0				✓	
BH22-03	6.0	0		0.07	35.6	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-04	0.0	0		0.05	34.5	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	
BH22-04	2.0	0		0.03	39.4	0				✓	
BH22-04	6.0	0		0.02	38.8	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	✓	✓	

Daily Soil Sampling

BH22-05	0.0	5		0.23	32.1	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	√	√	
BH22-05	2.0	0		0.03	39.4	0				✓	
BH22-05	6.0	0		0.42	35.4	0		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (SW-4500 Cl), TPH (EPA SW-846 Method 8015M)	√	√	
SS22-02	0.0	1		0.04	32.1	0				✓	
SS22-03	0.0	0		0.03	32	0				✓	
SS22-05	0.0	0		0.04	32.5	0				✓	

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/10/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/11/2022 12:24 AM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/10/2022 7:06 AM
Departed Site	6/10/2022 5:22 PM

Field Notes

7:11 Completed safety paperwork and organized safety meeting on arrival.

7:50 Plan of day to clean up existing excavation and place all contaminated material on liner. Liner placed south of excavation on area clear of lines. Excavation area swept with magnetic locator prior to work.

9:25 North side of excavation was extended north at 5 feet bgs around internal excavation to stabilize north wall.

16:43 Excavated south, west, and east sidewalls 1-2 feet and removed material from base of excavation to provide fresh sampling surfaces. The 5-feet base excavation sample field screening results were below DTGW 50-100 feet bgs criteria for TPH and chloride.

16:47 Field screening results for 0-5 foot wall samples exceeded NMOCD strictest criteria for TPH on the northwest edge and southeast edges. Further excavation of the southeast edges has not returned clean samples yet.

16:47 Further excavation of the surface 5 feet is required in the northwest and southeast corners.

16:49 Cleaned and squared the internal excavation to 14 feet bgs. Excavation base and wall samplesl results were below DTGW 50-100 feet bgs criteria.

Next Steps & Recommendations

1 Continue horizontal excavation of northwest and southeast corners. Clean up loose material in base of excavation on west and east ends.

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest

Southeast of excavation near road facing northwest. Beginning of day.

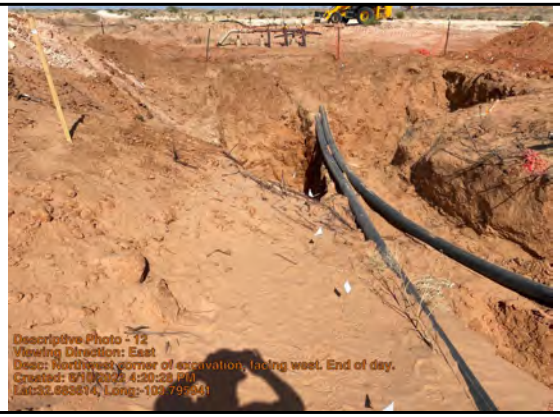
Viewing Direction: Southwest

Northeast corner of excavation, facing southwest. End of day.

Viewing Direction: West

East edge of excavation, facing west. Cleaned interior excavation to 14 feet bgs.

Viewing Direction: East



Northwest corner of excavation, facing east. End of day.

Daily Site Visit Report

Viewing Direction: Southeast

Northwest corner of excavation, facing southeast. End of day.

Viewing Direction: South

Northwest corner of excavation, facing south. End of day.

Viewing Direction: North

Southwest corner of excavation, facing north. End of day.

Viewing Direction: Northeast

Southwest corner of excavation, facing northeast. End of day.

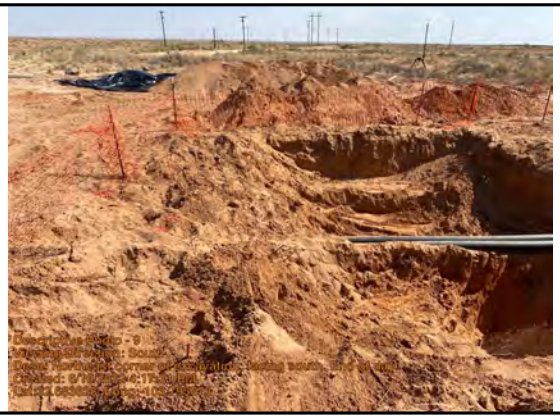
Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Northeast
	
Southwest corner of excavation, facing east. End of day.	West of excavation facing northeast. Beginning of day.
Viewing Direction: Southeast	**Viewing Direction**: Southwest
	
West of excavation facing east. Beginning of day.	East of manifold facing southwest. Moved contaminated material onto liner.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: West
	
Southeast of site facing northwest. Excavated bench on north side of excavation for stability.	Southeast corner of excavation, facing west. End of day.
Viewing Direction: Northwest	**Viewing Direction**: North
	
Southeast corner of excavation, facing northwest. End of day.	Southeast corner of excavation, facing north. End of day.

Daily Site Visit Report

Viewing Direction: South

Northeast corner of excavation, facing south. End of day.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

Daily Soil Sampling

Client: Client: Durango Midstream LLC

Location: Site: Devon Continental Lusk

Date: (SD: 6/10/22)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC (PID)	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BES22-01	14.0	0	100	2.91	38.6	3339			✓	✓	
BES22-02	5.0	0	108	0.33	39.9	0			✓	✓	
BES22-03	5.0	1	351	0.18	45.5	0			✓	✓	
BES22-04	5.0	1	382	0.38	44.4	0			✓	✓	
BES22-05	5.0	1	64	0.06	44.3	0			✓	✓	
BES22-06	5.0	32	1097	0.30	41.8	0			✓	✓	
BES22-07	5.0	2000	48	0.09	41.6	0			✓	✓	
BES22-08	5.0	1	39	0.15	44.5	0			✓	✓	
WES22-01	14.0	0	193	0.98	40.8	458			✓	✓	
WES22-02	14.0	0	130	4.17	35.4	5296			✓	✓	
WES22-03	5.0	0	19	0.03	41.3	0			✓	✓	
WES22-04	5.0	0	19	0.03	41.3	0			✓	✓	
WES22-05	5.0	0	410	0.03	45.7	0			✓	✓	
WES22-06	5.0	0	27	0.04	44.7	0			✓	✓	
WES22-07	5.0	0	26	0.04	44.6	0			✓	✓	
WES22-08	5.0	1	15	0.04	43.3	0			✓	✓	
WES22-09	5.0	1	30	0.05	42.3	0			✓	✓	
WES22-10	5.0	703	1142	1.21	42.7	708			✓	✓	
WES22-11	5.0	1	170	0.07	44.2	0			✓	✓	
WES22-12	5.0	3	799	0.06	43.6	0			✓	✓	
WES22-13	5.0	1	54	0.08	42.9	0			✓	✓	

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/14/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/14/2022 11:12 PM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/14/2022 9:30 AM
Departed Site	6/14/2022 4:01 PM

Field Notes

15:15 Continue horizontal excavation of northwest and south east corners of site

15:15 Completed safety paperwork and organized safety meeting

15:21 Excavated southeast and northwest sidewalls 2 feet and level with existing 5’ deep base. This soil was stockpiled from these areas.

15:22 Collected Wall samples and base samples from newly excavated areas.

15:24 Field screening results for 0-5 feet Wall samples were within acceptable levels in accordance to NMOCD for both TPH and Chlorides.

15:24 Field screening results for 5 feet Base samples were within acceptable levels in accordance to NMOCD for both TPH and Chlorides.

Next Steps & Recommendations

1 Remove all contaminated stockpiled soil and remove all fluff sand/soil from excavation base in preparation for Confirmation Sampling.

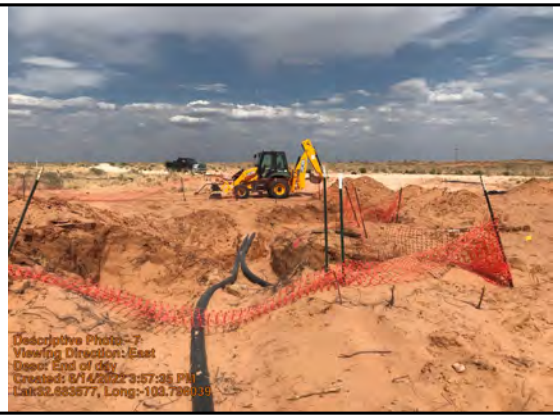
Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: South
	
Site arrival	Site Arrival
Viewing Direction: Southwest	**Viewing Direction**: Southwest
	
Site arrival	Excavation

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: North
	
Excavation	End of day

Viewing Direction: East	**Viewing Direction**: South
	
End of day	End of day

Daily Site Visit Report

Viewing Direction: West

End of day

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jarod Florez

Signature:

Daily Soil Sampling

Client: Client: Durango Midstream LLC

Location: Site: Devon Continental Lusk

Date: (SD: 6/15/22)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC (PID)	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BES22-08	5.0	0	536	0.04	29.9	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-09	5.0	0	153	0.05	29.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-10	5.0	0	24	0.02	31.2	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-11	5.0	0	34	0.02	28.6	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-14	5.0	0	142	0.01	29.1	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-15	5.0	0	16	0.02	31.7	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

WES22-16	5.0	0	19	0.02	28.1	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-17	5.0	0	8	0.01	27.6	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/15/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/18/2022 12:13 AM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/15/2022 7:15 AM
Departed Site	6/15/2022 3:30 PM

Field Notes

7:50 Upon arrival, completed site walk through, completed safety paperwork, conducted tailgate safety meeting with Standard Safety personnel

7:51 Standard Safety will use 2 belly dump trucks for hauling off Contaminated soil Stockpiles. Estimated turn around time from disposal site is 2 hours.

18:09 6 belly dumps @ 20 sq yards each of contaminated soil was hauled off from site for disposal for a total of 120 sq yards. Approximately 1 more load remains on site.

Next Steps & Recommendations

1 Remove the remainder of Contaminated Soil for site

2 Collect, and field screen and prepare Confirmation Samples. Send these samples to Lab for lab results.

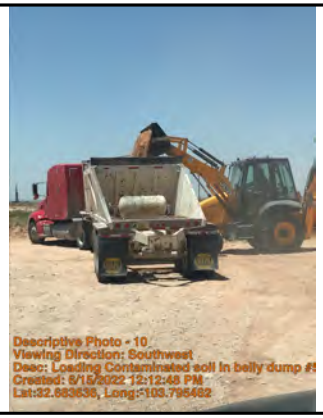
Daily Site Visit Report

Site Photos

Viewing Direction: West

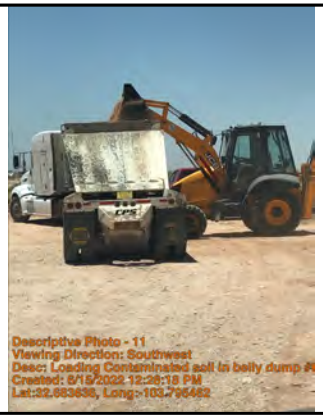
Arrival to site

Viewing Direction: Southwest



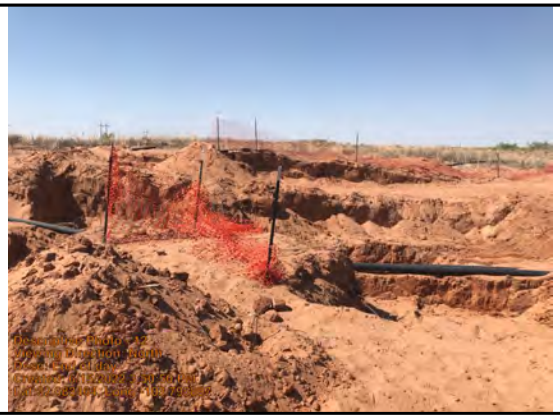
Loading Contaminated soil in belly dump #5

Viewing Direction: Southwest



Loading Contaminated soil in belly dump #6

Viewing Direction: North



End of day

Daily Site Visit Report

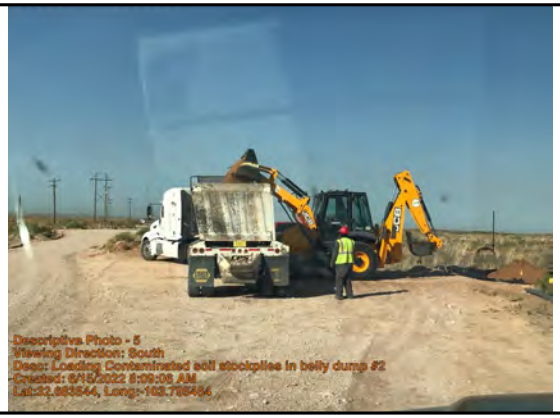
Viewing Direction: West	**Viewing Direction**: Southwest
	
End of day	End of day
Viewing Direction: South	**Viewing Direction**: Southwest
	
Arrival to site	Loading Contaminated soil stockpiles in belly dump #1

Daily Site Visit Report

Viewing Direction: West

Loading Contaminated soil stockpiles in belly dump #1

Viewing Direction: Southwest

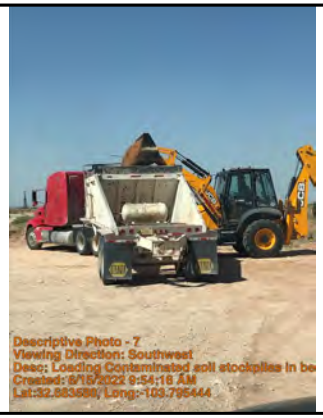


Loading Contaminated soil stockpiles in belly dump #2

Viewing Direction: Southwest

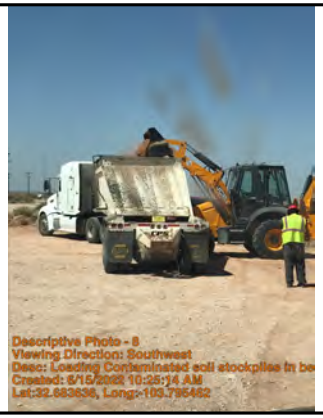
Contaminated Soil Haul off progress

Viewing Direction: Southwest



Loading Contaminated soil stockpiles in belly dump #3

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: West
	
Loading Contaminated soil stockpiles in belly dump #4	Contaminated Soil Haul off progress

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jarod Florez

Signature: 

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/16/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/18/2022 12:26 AM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/16/2022 9:15 AM
Departed Site	6/16/2022 4:30 PM

Field Notes

16:23 Arrived on site and did site walk through and conducted safety meeting with Standard Safety Personnel

16:23 Collect Confirmation Base Samples

16:24 Collect Confirmation Wall Samples

16:24 Field screened All Confirmation Samples Collected

16:25 All Confirmation Samples met criterium set forth by NMOCD.

8:53 One more belly dump of Contaminated soil was removed from site. This completes all contaminated soil removal.

8:55 5 feet was stepped off from Bore Hole 2 location and Bore Hole 6 was completed. Soil Samples were collected at 0’ and 6’. Field screening determined these met NMOCD criterium

Next Steps & Recommendations

1 Staging of backfill material

2 Await lab results on Confirmation Samples

Daily Site Visit Report

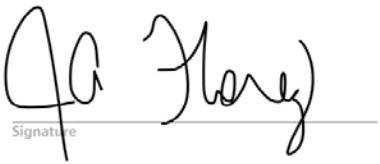
Site Photos

Viewing Direction: South	**Viewing Direction**: West
	
Confirmation Samples Collected	Packaged Samples
Viewing Direction: Northwest	**Viewing Direction**: Southwest
	
Site upon departure	Site upon departure

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jarod Florez

Signature: 

Daily Soil Sampling

Client: Client: Durango Midstream LLC

Location: Site: Devon Continental Lusk

Date: (SD: 6/17/22)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC (PID)	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BES22-01	14.0	0	100	2.91	38.6	3339		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-02	5.0	0	79	0.16	27	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-03	5.0	0	560	0.05	27	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-04	5.0	0	73	0.04	26.9	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-05	5.0	0	174	0.03	27	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-06	5.0	0	154	0.08	27	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

BES22-07	5.0	0	318	0.03	27.2	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-08	5.0	0	529	0.07	27.3	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-09	5.0	0	31	0.04	27.2	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-10	5.0	0	100	0.04	27.2	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-11	5.0	0	1230	0.04	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BES22-12	5.0	0	982	0.07	27.6	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BH22-06	0.0	0	33	0.03	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BH22-06	2.0	0	34	0.02	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-01	14.0	0	193	0.98	40.8	458		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

WES22-02	14.0	0	130	4.17	35.4	5296		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-03	5.0	0	8	0.02	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-04	5.0	0	0	0.02	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-05	5.0	0	16	0.04	27.4	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-06	5.0	0	14	0.01	27.9	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-07	5.0	0	0	0.02	27.1	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-08	5.0	0	28	0.02	27.1	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-09	5.0	0	16	0.02	27.7	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-10	5.0	0	0	0.10	27.7	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

WES22-11	5.0	0	0	0.03	27.5	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WES22-12	5.0	0	31	0.02	27.2	0		Benzene (EPA SW-846 Method 8021B/8260B), BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/17/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	6/18/2022 12:04 AM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/17/2022 8:30 AM
Departed Site	6/17/2022 3:45 PM

Field Notes

8:58 Upon arrival I did a walk through of the site, conducted Safety meeting with Standard Safety personnel on site, and took photos

9:02 Backfill material will be staged to the southeast of excavation site, between Lease Road and Excavation, utilizing 2 dump trucks hauling 12 sq yards of soil per load. It is estimated a total of 20 loads or 240 Sq yards of material will be needed for backfill.

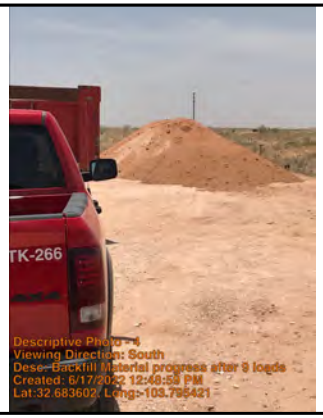
15:46 A total of 16 loads of backfill material was delivered and stock piled during the day. 16 loads at 12 sq yards a piece for a total of 192 sq yards delivered.

Next Steps & Recommendations

1 Excavation backfill upon return of lab results and approval of NMOCD.

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: South
	
Site upon arrival	Backfill Material being staged
Viewing Direction: South	**Viewing Direction**: South
	
Backfill Load #9	Backfill Material progress after 9 loads

Daily Site Visit Report

Viewing Direction: South

End of day

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jarod Florez

Signature: 

Daily Site Visit Report

Client:	Durango Midstream LLC	Inspection Date:	6/29/2022
Site Location Name:	Devon Continental Lusk	Report Run Date:	7/1/2022 4:19 PM
Client Contact Name:	Amber Groves	API #:	
Client Contact Phone #:	346-351-2786		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/29/2022 8:00 AM
Departed Site	6/29/2022 5:30 PM

Field Notes

17:30 Arrived on site and did walkthrough. Conducted Tailgate safety meeting with Standard Safety personnel.

17:30 Backfill operations began with material that had been stockpiled on site.

17:32 2 dump trucks delivered 12 additional loads of backfill material to the site as Project was under way.

Next Steps & Recommendations

1 None

Daily Site Visit Report

Site Photos

Viewing Direction: West

Site on arrival

Viewing Direction: West

Completed Backfill and clean up

Viewing Direction: East

Completed Backfill and clean up

Viewing Direction: Northwest

Completed Backfill and clean up

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Northwest
	
Staged backfill material	Site on arrival
Viewing Direction: Northeast	**Viewing Direction**: West
	
Site on arrival	Backfill in progress

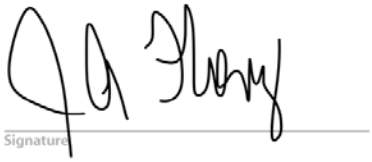
Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: West
	
Backfill in progress	Backfill in progress
Viewing Direction: West	**Viewing Direction**: West
	
Backfill progress	Backfill progress

Daily Site Visit Report

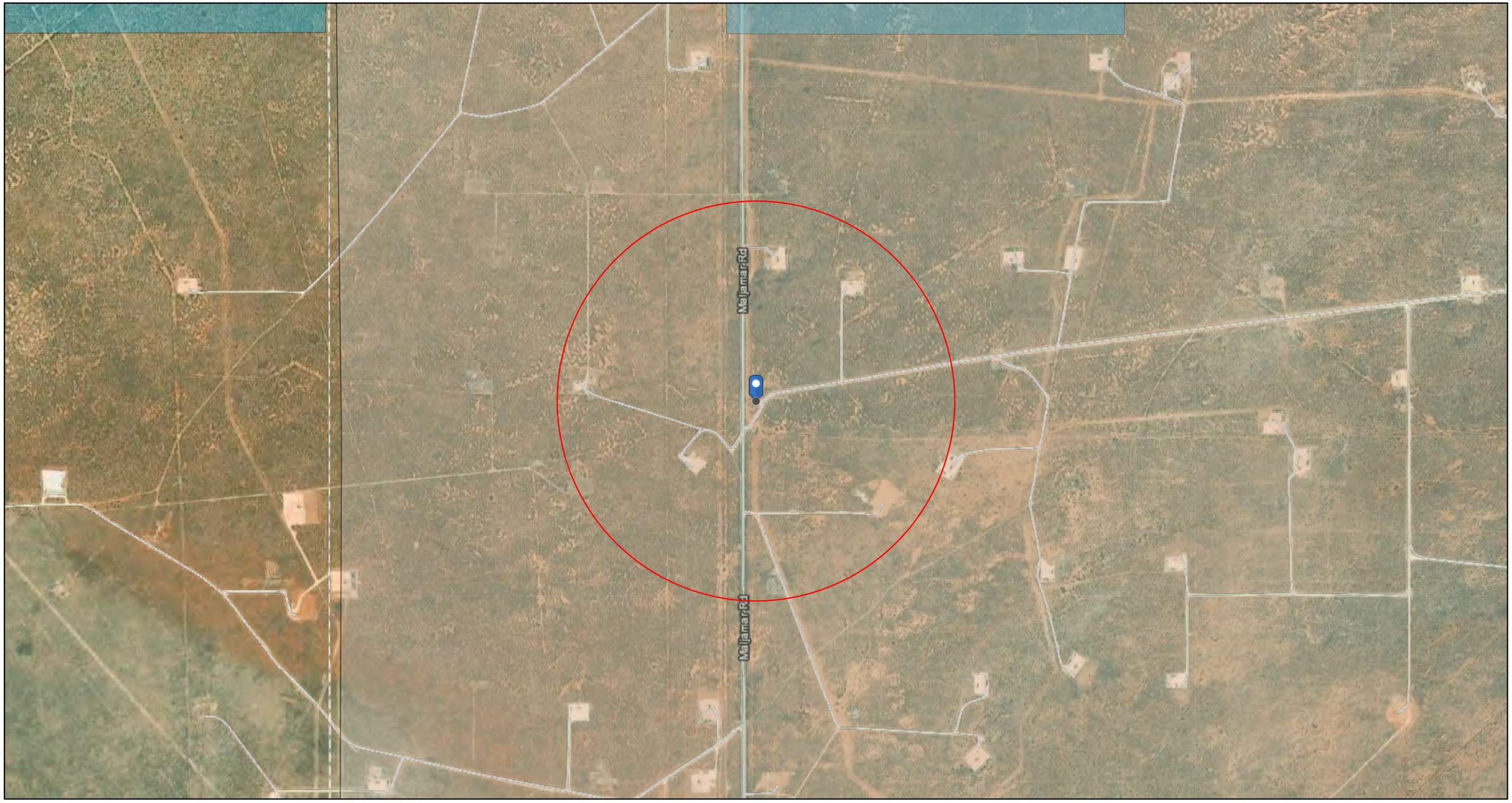
Daily Site Visit Signature

Inspector: Jarod Florez

Signature: 

ATTACHMENT 5

Devon Continental Fed Com 1



3/17/2022, 5:04:22 PM

OSE District Boundary

Water Right Regulations

Closure Area

New Mexico State Trust Lands

Both Estates

SiteBoundaries

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

Esri, HERE, GeoTechnologies, Inc., Esri, HERE, Garmin, GeoTechnologies, Inc., U.S. Department of Energy Office of Legacy Management, Maxar

Unofficial Online Map

These maps are distributed “as is” without warranty of any kind.

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	CP 00672	4	4		07	18S	32E	612475	3624947*

Driller License:	46	**Driller Company:**	ABBOTT BROTHERS COMPANY		
Driller Name:	ABBOTT, MURRELL				
Drill Start Date:	07/17/1992	**Drill Finish Date:**	08/07/1992	**Plug Date:**	
Log File Date:	08/12/1992	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	5.50	**Depth Well:**	524 feet	**Depth Water:**	430 feet

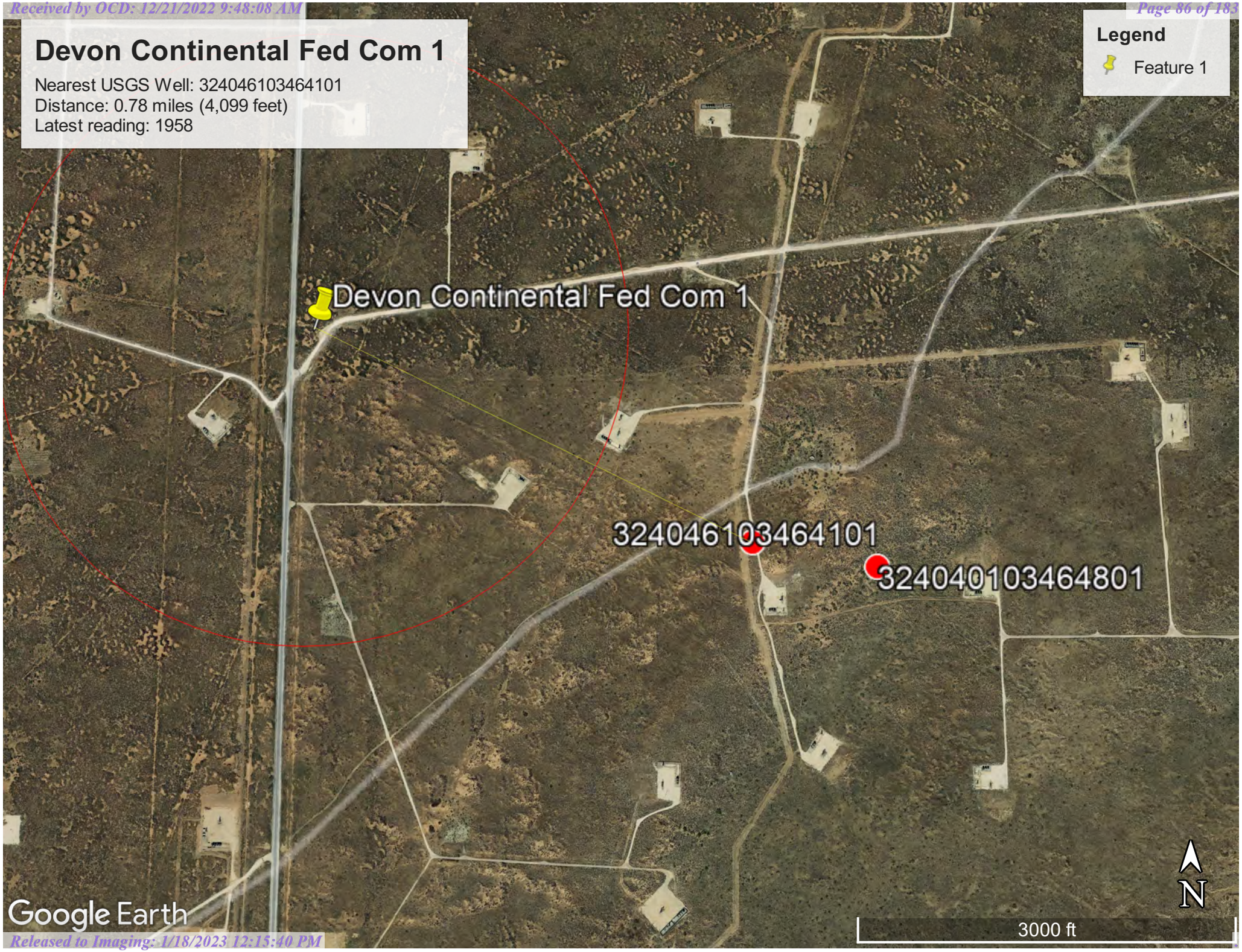
Water Bearing Stratifications:	Top	Bottom	Description
	460	517	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	459	524

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

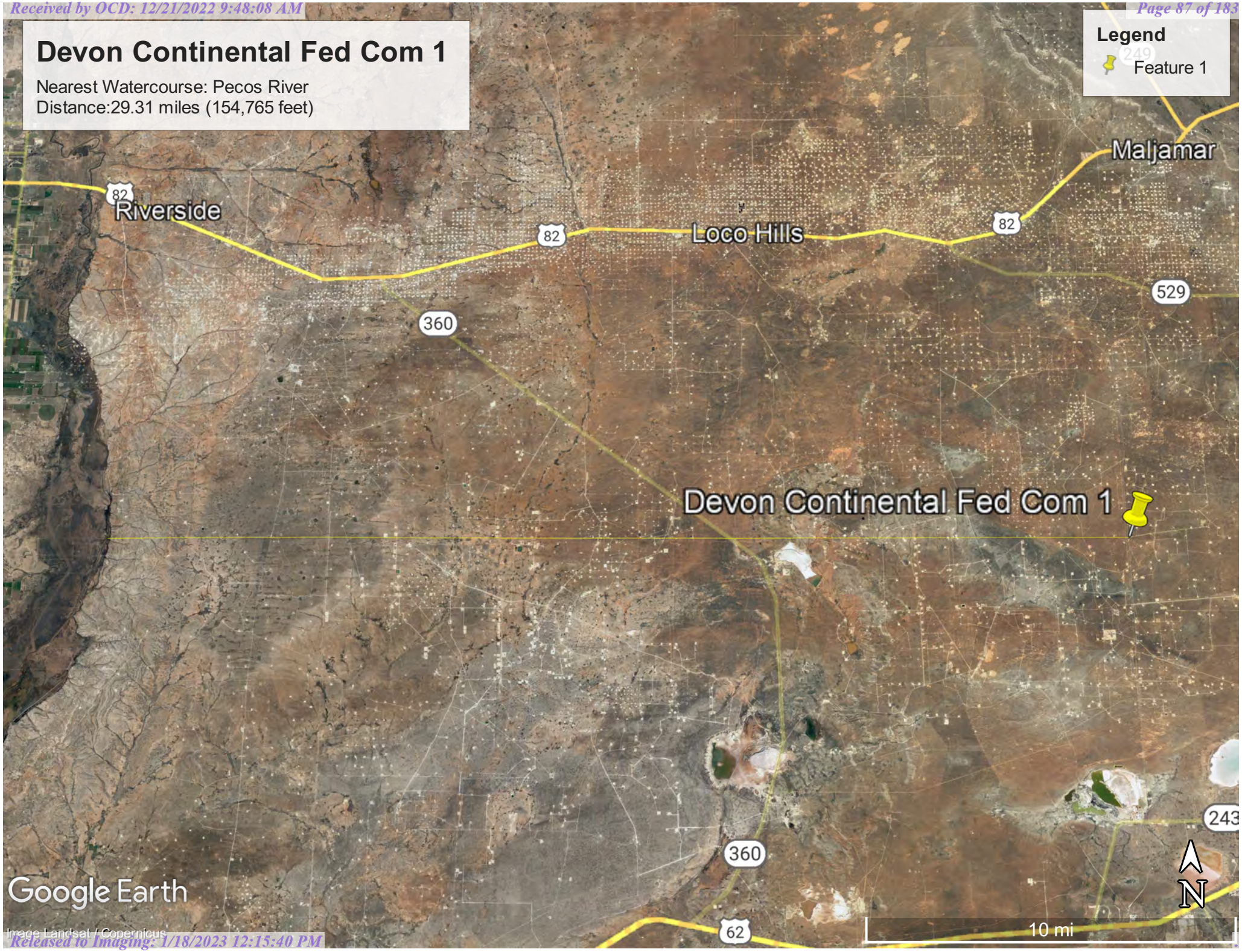
Devon Continental Fed Com 1

Nearest USGS Well: 324046103464101
Distance: 0.78 miles (4,099 feet)
Latest reading: 1958



Devon Continental Fed Com 1

Nearest Watercourse: Pecos River
Distance:29.31 miles (154,765 feet)



U.S. Fish and Wildlife Service
National Wetlands Inventory

Devon Continental Fed Com 1

March 18, 2022

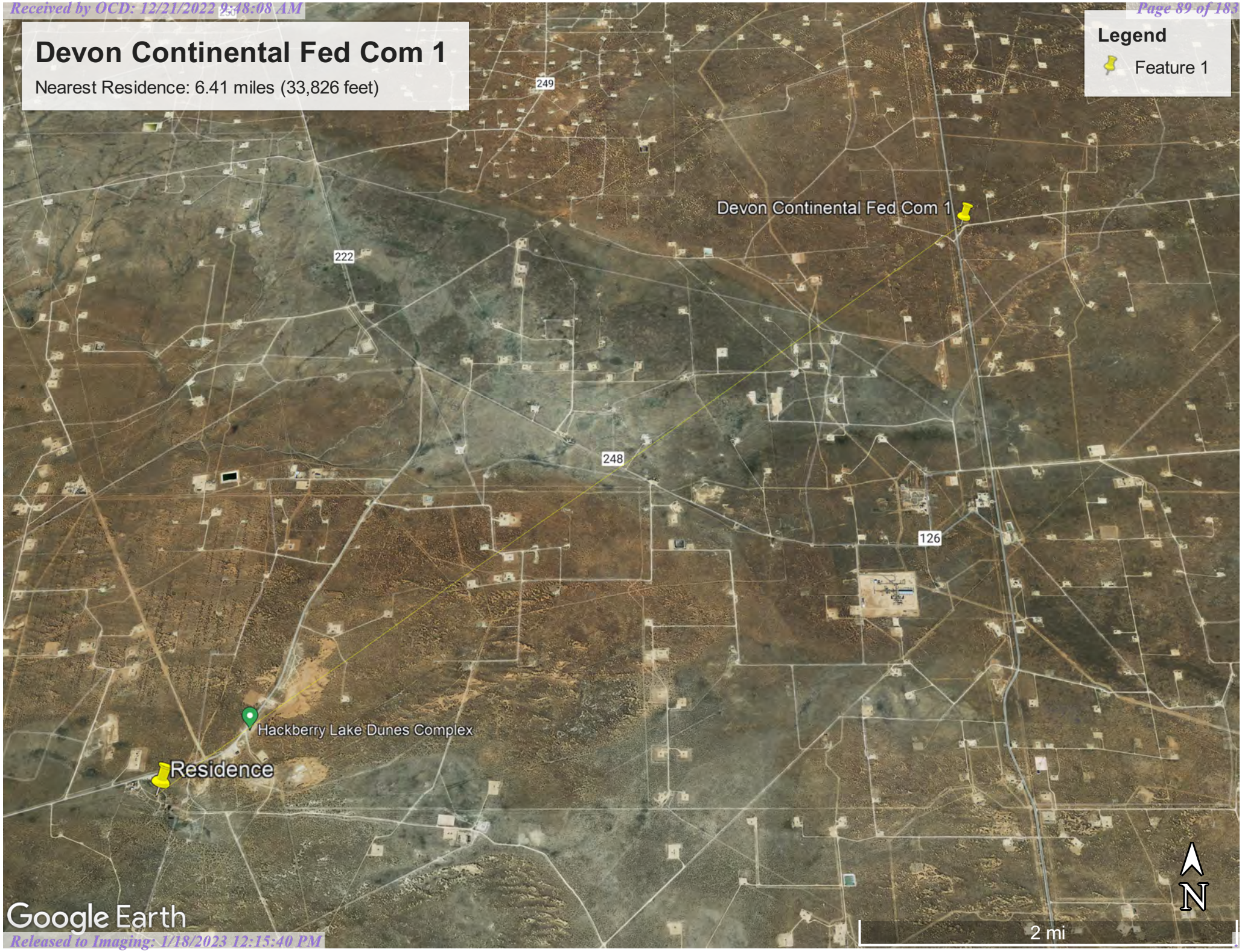
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

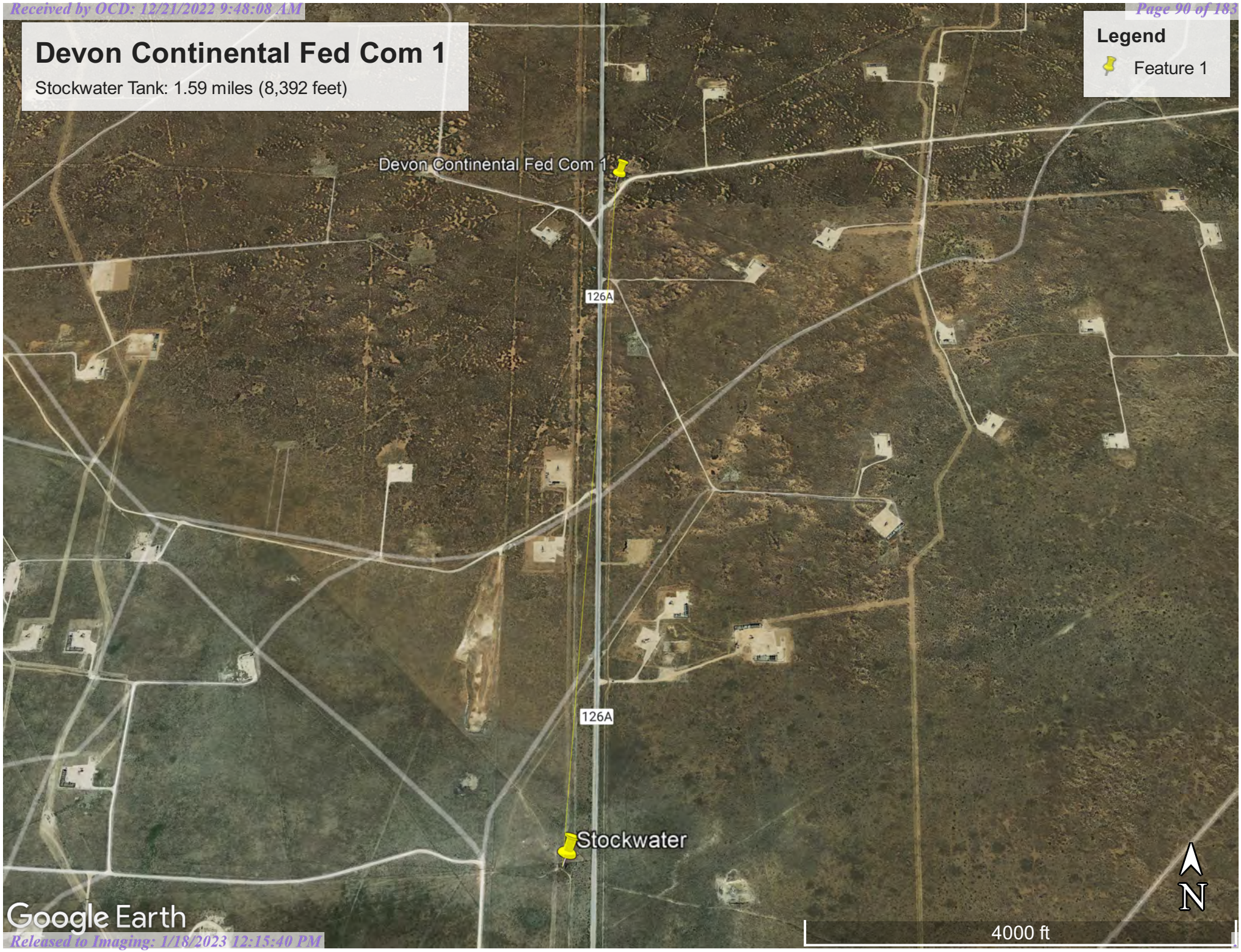
Devon Continental Fed Com 1

Nearest Residence: 6.41 miles (33,826 feet)



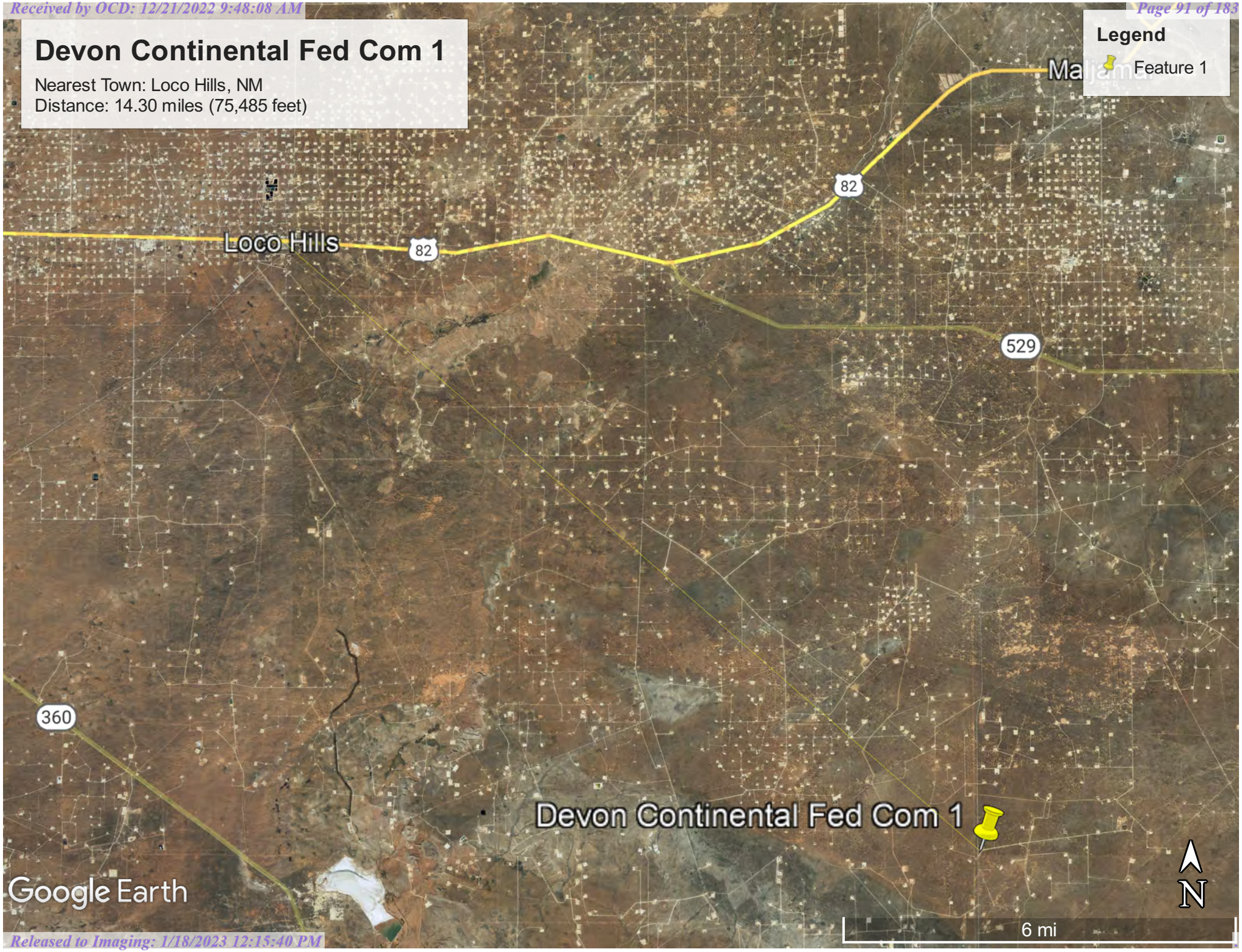
Devon Continental Fed Com 1

Stockwater Tank: 1.59 miles (8,392 feet)



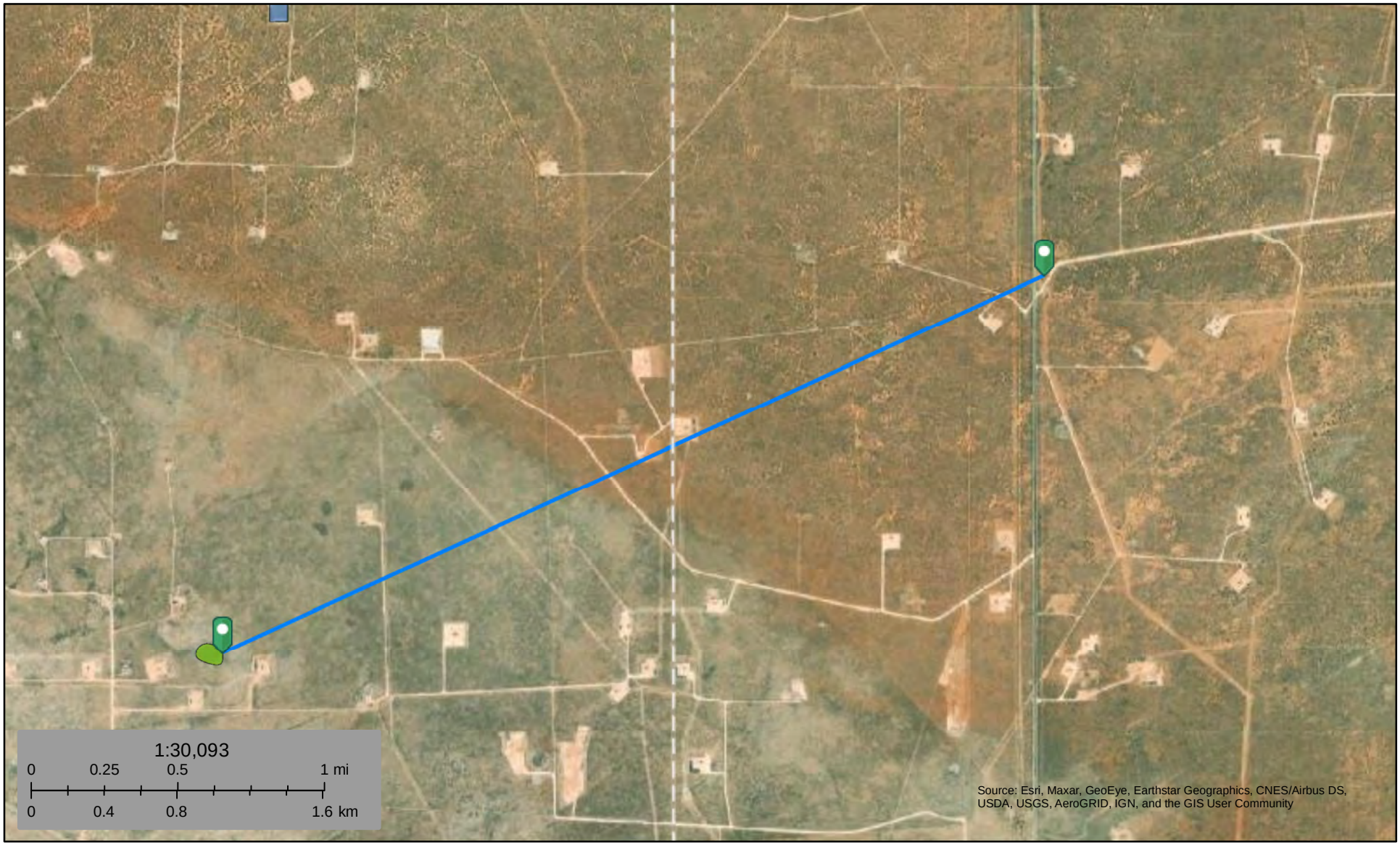
Devon Continental Fed Com 1

Nearest Town: Loco Hills, NM
Distance: 14.30 miles (75,485 feet)



U.S. Fish and Wildlife Service
National Wetlands Inventory

Devon Continental Fed Com 1



March 18, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Devon Continental

3/18/2022, 2:28:45 PM

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Maxar, New Mexico State University, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappbuilder/index.html?id=7ebfa3c432db42978d66c99a9cc8311a)

National Flood Hazard Layer FIRMette

FEMA

103°48'4"W 32°41'16"N

103°47'26"W 32°40'45"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

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

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

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

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

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

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

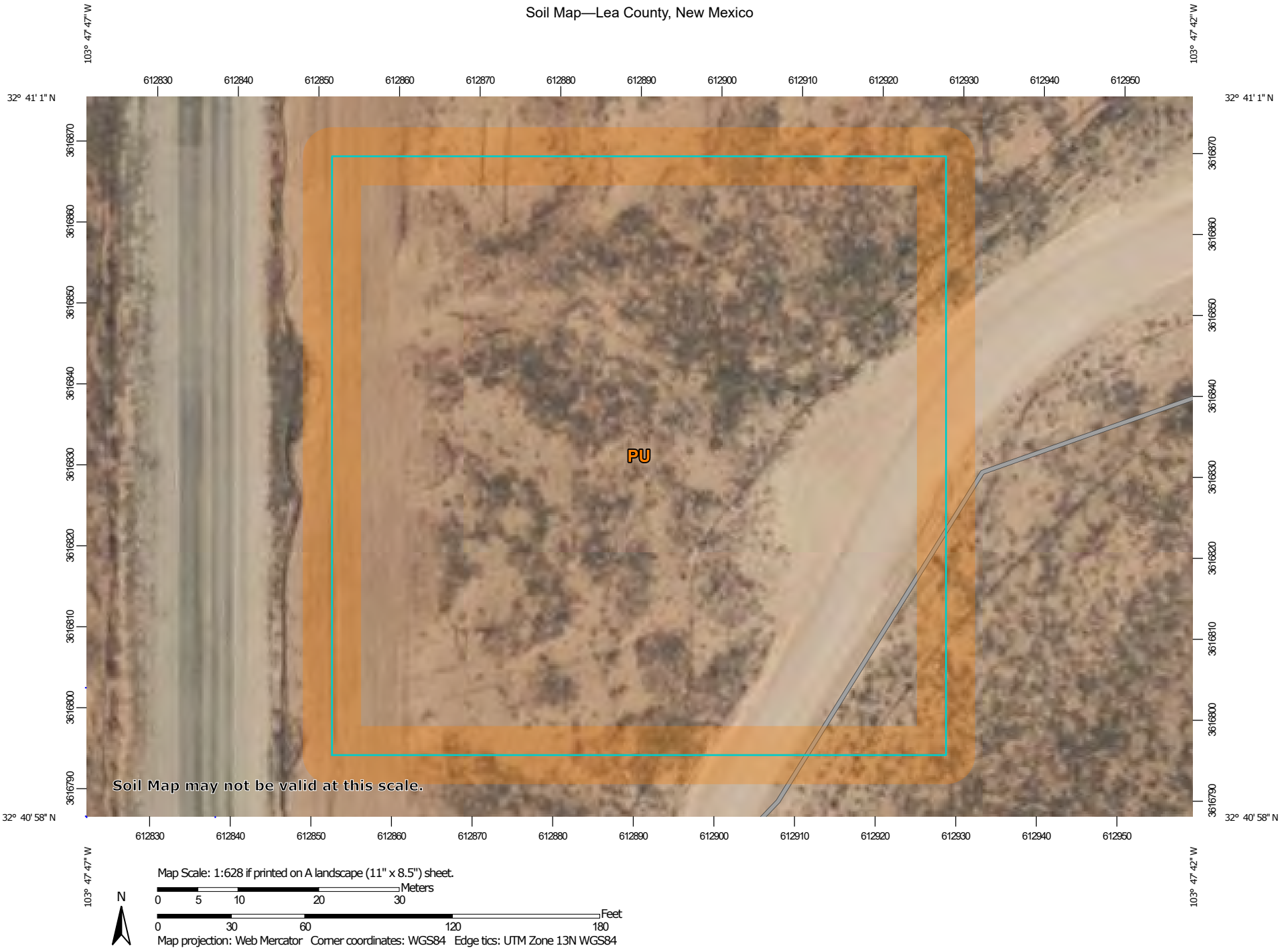
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/18/2022 at 3:24 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Soil Map—Lea County, New Mexico



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PU	Pyote and Maljamar fine sands	1.4	100.0%
Totals for Area of Interest		**1.4**	**100.0%**

Lea County, New Mexico

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Pyote and similar soils: 46 percent
Maljamar and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand
Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent
Ecological site: R042XC022NM - Sandhills

Hydric soil rating: No

Data Source Information

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

USDA Natural Resources Conservation Service

Ecological site R042XC003NM
Loamy Sand

Accessed: 03/18/2022

General information

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Associated sites

R042XC004NM	**Sandy** Sandy
R042XC005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	853–1,524 m
Slope	0–9%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	330 mm

Influencing water features

This site is not influenced from water from wetlands or streams.

Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:
Maljamar
Berino

Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid
Soil depth	102–183 cm
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0-101.6cm)	12.7–17.78 cm
Calcium carbonate equivalent (0-101.6cm)	3–40%
Electrical conductivity (0-101.6cm)	2–4 mmhos/cm
Sodium adsorption ratio (0-101.6cm)	0–2
Soil reaction (1:1 water) (0-101.6cm)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview

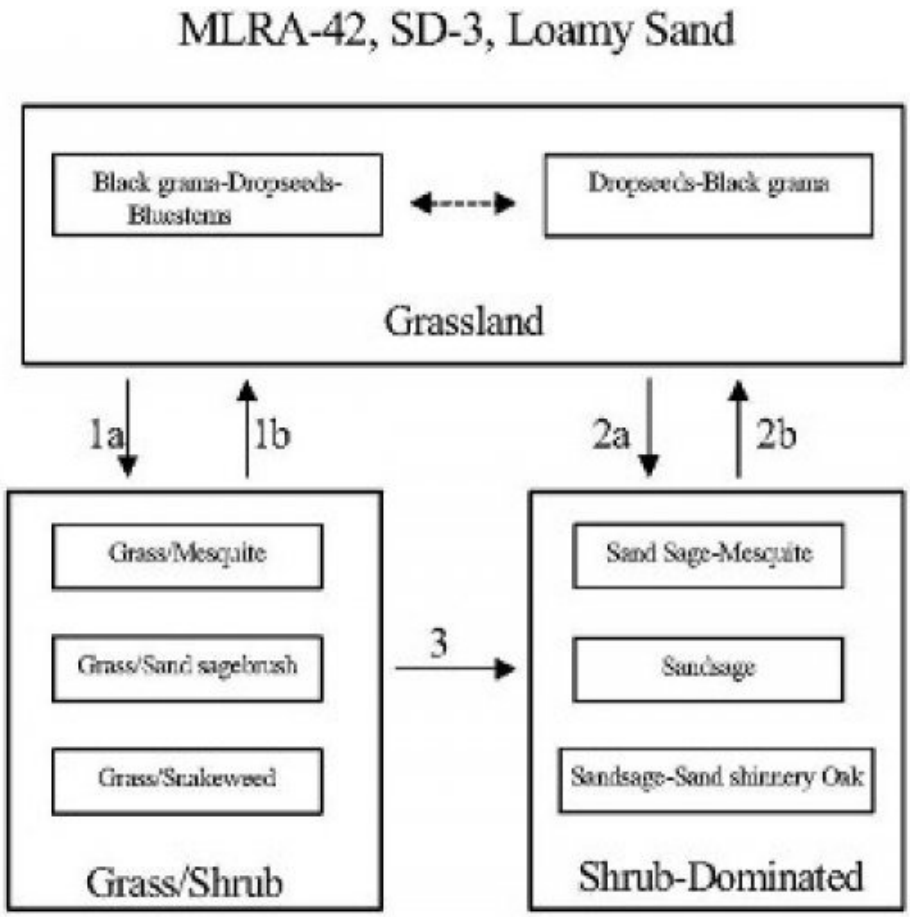
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-

dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):



1a. Drought, over grazing, fire suppression.
1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.
2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

Figure 4.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species.

Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Kg/Hectare)	Representative Value (Kg/Hectare)	High (Kg/Hectare)
Grass/Grasslike	495	934	1372
Forb	123	233	343
Shrub/Vine	110	206	303
Total	**728**	**1373**	**2018**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 6. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971).

Diagnosis: This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution.

Transition to Grass/Shrub State (1a): The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984).
Key indicators of approach to transition:
• Loss of black grama cover
• Surface soil erosion
• Bare patch expansion
• Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances

Transition to Historic Plant Community (1b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986).

Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state.

Key indicators of approach to transition:

• Severe loss of grass species cover
• Surface soil erosion
• Bare patch expansion
• Increased sand sage, shinnery oak, and mesquite abundance

Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state.

Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite.

Key indicators of approach to transition:

• Continual loss of dropseeds/threeawns cover
• Surface soil erosion
• Bare patch expansion
• Increased sand sage, shinnery oak, and mesquite/dropseed/threeawn and mesquite/snakeweed abundance

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Kg/Hectare)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			68–138	
	little bluestem	SCSC	*Schizachyrium scoparium*	68–138	–
2	**Warm Season**			41–68	
	sand bluestem	ANHA	*Andropogon hallii*	41–68	–
3	**Warm Season**			41–68	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	41–68	–
	silver bluestem	BOSA	*Bothriochloa saccharoides*	41–68	–
4	**Warm Season**			138–206	
	black grama	BOER4	*Bouteloua eriopoda*	138–206	–
	bush muhly	MUPO2	*Muhlenbergia porteri*	138–206	–
5	**Warm Season**			138–206	
	thin paspalum	PASE5	*Paspalum setaceum*	138–206	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	138–206	

	plains bristlegrass	SEVU2	*Setaria vulpiseta*	138–206	–
	fringed signalgrass	URCI	*Urochloa ciliatissima*	138–206	–
6	**Warm Season**			138–206	
	spike dropseed	SPCO4	*Sporobolus contractus*	138–206	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	138–206	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	138–206	–
7	**Warm Season**			68–138	
	hooded windmill grass	CHCU2	*Chloris cucullata*	68–138	–
	Arizona cottontop	DICA8	*Digitaria californica*	68–138	–
9	**Other Perennial Grasses**			41–68	
	Grass, perennial	2GP	*Grass, perennial*	41–68	–
Shrub/Vine					
8	**Warm Season**			41–68	
	New Mexico feathergrass	HENE5	*Hesperostipa neomexicana*	41–68	–
	giant dropseed	SPGI	*Sporobolus giganteus*	41–68	–
10	**Shrub**			68–138	
	sand sagebrush	ARFI2	*Artemisia filifolia*	68–138	–
	Havard oak	QUHA3	*Quercus havardii*	68–138	–
11	**Shrub**			38–68	
	fourwing saltbush	ATCA2	*Atriplex canescens*	41–68	–
	featherplume	DAFO	*Dalea formosa*	41–68	–
12	**Shrub**			41–68	
	jointfir	EPHED	*Ephedra*	41–68	–
	littleleaf ratany	KRER	*Krameria erecta*	41–68	–
13	**Other Shrubs**			41–68	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	41–68	–
Forb					
14	**Forb**			68–138	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	68–138	–
	Indian blanket	GAPU	*Gaillardia pulchella*	68–138	–
	globemallow	SPHAE	*Sphaeralcea*	68–138	–
15	**Forb**			13–41	
	woolly groundsel	PACA15	*Packera cana*	13–41	–
16	**Forb**			68–138	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	68–138	–
	woolly plantain	PLPA2	*Plantago patagonica*	68–138	–
17	**Other Forbs**			41–68	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	41–68	–

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched

lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.
Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.
Hydrologic Interpretations
Soil Series Hydrologic Group
Berino B
Kinco A
Maljamar B
Pajarito B
Palomas B
Wink B
Pyote A

Recreational uses

This site offers recreation potential for hiking, borseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

Wood products

This site has no potential for wood products.

Other products

This site is suitable for grazing by all kinds and classes of livestock at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, blsck grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shinery oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.3 – 3.5
75 – 51 3.0 – 4.5
50 – 26 4.6 – 9.0
25 – 0 9.1 +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited:

Ansley, R. J.; Jacoby, P. W. 1998. Manipulation of fire intensity to achieve mesquite management goals in north Texas. In: Pruden, Teresa L.; Brennan, Leonard A., eds. Fire in ecosystem management: shifting the paradigm from suppression to prescription: Proceedings, Tall Timbers fire ecology conference; 1996 May 7-10; Boise, ID. No. 20. Tallahassee, FL: Tall Timbers Research Station: 195-204.

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Britton, Carlton M.; Wright, Henry A. 1971. Correlation of weather and fuel variables to mesquite damage by fire. Journal of Range Management 24:136-141.

Davis, Joseph H., III and Bonham, Charles D. 1979. Interference of sand sagebrush canopy with needleandthread. Journal of Range Management 32(5):384-386.

Herbel, C. H, Steger, R, Gould, W. L. 1974. Managing semidesert ranges of the Southwest Circular 456. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 48 p.

McDaniel, Kirk C.; Pieper, Rex D.; Loomis, Lyn E.; Osman, Abdelgader A. 1984. Taxonomy and ecology of perennial snakeweeds in New Mexico. Bulletin 711. Las Cruces, NM: New Mexico State University, Agricultural Experiment Station. 34 p.

McPherson, Guy R. 1995. The role of fire in the desert grasslands. In: McClaran, Mitchel P.; Van Devender, Thomas R., eds. The desert grassland. Tucson, AZ: The University of Arizona Press: 130-151.

Pettit, Russell D. 1986. Sand shinnery oak: control and management. Management Note 8. Lubbock, TX: Texas Tech University, College of Agricultural Sciences, Department of Range and Wildlife Management. 5 p.

Contributors

Don Sylvester
Quinn Hodgson

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant:

    Sub-dominant:

    Other:

    Additional:

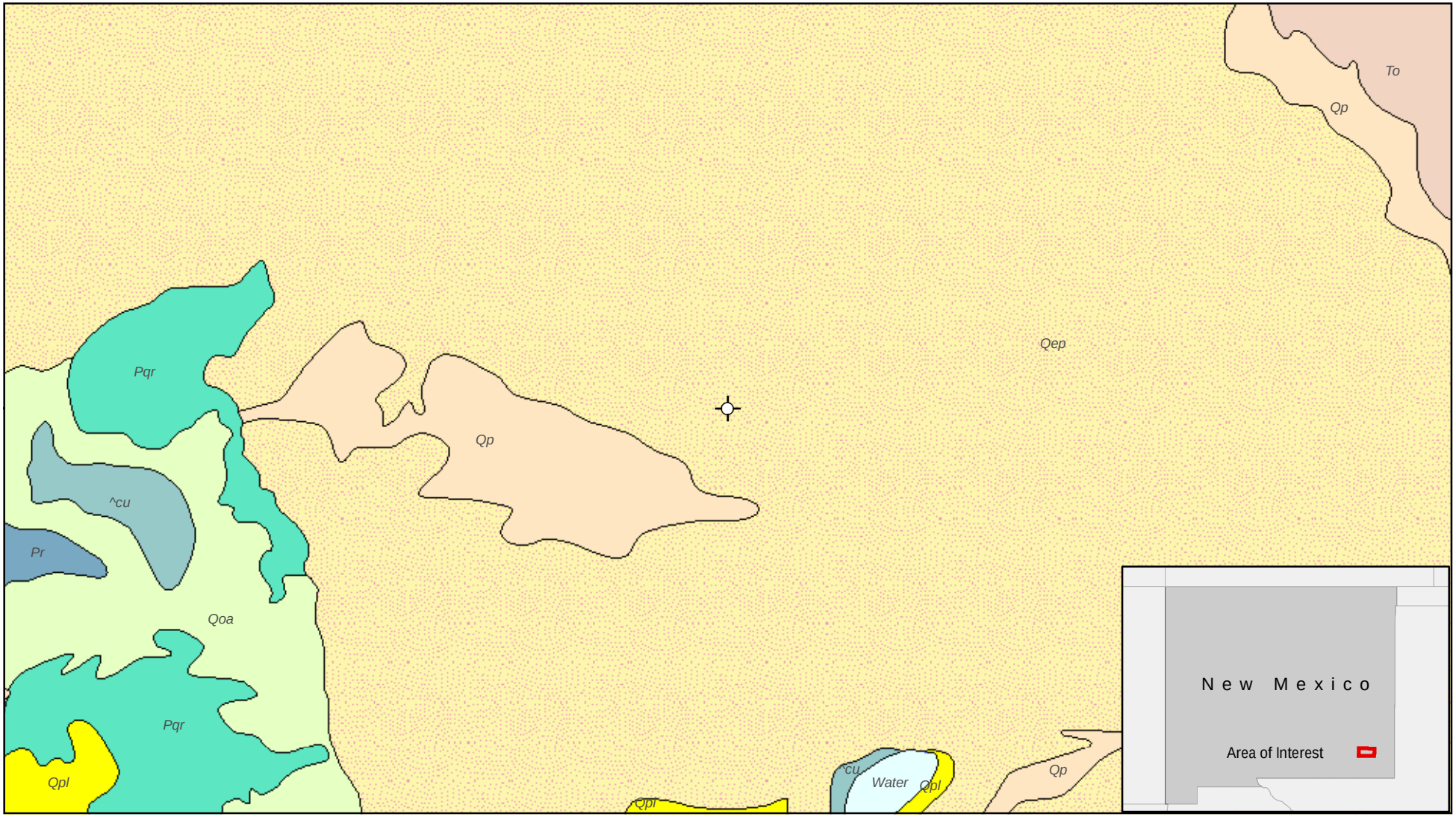
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:**

17. **Perennial plant reproductive capability:**



Site Location

Lithologic Contacts

[contact] lithologic

Lithologic Units

^cu
Pqr
Pr
Qep
Qoa
Qp
Qpl
To
Water

VERTEX

0 1.25 2.5 Miles

Map Center:
Lat/Long: 32.683480, -103.795844

NAD 1983 UTM Zone 13N
Date: Mar 30/22

N

New Mexico Geology
Devon Continental Fed Com 1

FIGURE:
G

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Geology data sourced from New Mexico Bureau of Geology & Mineral Resources, Bureau of Land Management.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\22E-01024 - Devon Continental Fed Com 1\Figure G Geologic Potential Map Devon Continental Fed Com 1.mxd

ATTACHMENT 6

48 Hr Notification of Confirmation Sampling - nAPP2207746767 DOR: 1/03/2022 Site Name: Devon Continental 6" Poly Line to Lusk

Jason Crabtree <jcrabtree@vertex.ca>
To OCD.Enviro@state.nm.us
Cc Amber Groves; Jarod Florez

Reply | Reply All | Forward | ...
Tue 2022-06-14 2:42 PM

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted for the following releases:

nAPP2207746767 DOR: 1/03/2022 Site Name: Devon Continental 6" Poly Line to Lusk

This work will be completed on behalf of Frontier Field Services, LLC.

On Thursday, June 16th, 2022 at approximately 8:00 a.m., Jarod Florez will be on site to conduct confirmatory sampling and will go into Monday, June 20th, 2022. If you need directions to the site, please do not hesitate to contact him. If you have any questions or concerns regarding this notification, please give me a call at 432-250-3456.

Thank you

ATTACHMENT 7

Report to:

Jason Crabtree

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex

Project Name:	Devon Continental Lusk 22E-01024
Work Order:	E206069
Job Number:	21080-0001
Received:	6/14/2022

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
6/14/22

Date Reported: 6/14/22

Jason Crabtree
161, 2055 Premier Way
Sherwood Park, AB T8H 0G2

Project Name: Devon Continental Lusk 22E-01024
Workorder: E206069
Date Received: 6/14/2022 9:50:00AM

Jason Crabtree,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/14/2022 9:50:00AM, under the Project Name: Devon Continental Lusk 22E-01024.

The analytical test results summarized in this report with the Project Name: Devon Continental Lusk 22E-01024 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 reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

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

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

Respectfully,

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

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

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Field Offices:

Southern New Mexico Area
Lynn Jarboe
Technical Representative/Client Services
Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Vertex	Project Name:	Devon Continental Lusk 22E-01024	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	06/14/22 17:56

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH22-01 14'	E206069-01A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-01 18'	E206069-02A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-01 20' ---> Hold	E206069-03A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-02 0'	E206069-04A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-02 6'	E206069-05A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-03 0'	E206069-06A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-03 6'	E206069-07A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-04 0'	E206069-08A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-04 6'	E206069-09A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-05 0'	E206069-10A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.
BH22-05 6'	E206069-11A	Soil	06/09/22	06/14/22	Glass Jar, 4 oz.

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-01 14'

E206069-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*93.9 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.9 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*94.2 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	**2110**	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-01 18'

E206069-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*92.4 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.8 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	**106**	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-02 0'

E206069-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.3 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.9 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*83.8 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-02 6'

E206069-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*93.1 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.5 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	**56.7**	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	**66.4**	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*90.5 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	**93.4**	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-03 0'

E206069-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*92.7 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.0 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*91.2 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-03 6'

E206069-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.0 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.5 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*90.0 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-04 0'

E206069-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.3 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.5 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*93.6 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-04 6'

E206069-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*81.8 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.1 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*93.2 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	**94.5**	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-05 0'

E206069-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*84.1 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.2 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	**157**	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	**137**	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*94.8 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

BH22-05 6'

E206069-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Benzene	ND	0.0250	1	06/14/22	06/14/22	
Ethylbenzene	ND	0.0250	1	06/14/22	06/14/22	
Toluene	ND	0.0250	1	06/14/22	06/14/22	
o-Xylene	ND	0.0250	1	06/14/22	06/14/22	
p,m-Xylene	ND	0.0500	1	06/14/22	06/14/22	
Total Xylenes	ND	0.0250	1	06/14/22	06/14/22	
Surrogate: 4-Bromochlorobenzene-PID		*83.8 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2225012
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/14/22	06/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.0 %*	*70-130*	*06/14/22*	*06/14/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2225014
Diesel Range Organics (C10-C28)	ND	25.0	1	06/14/22	06/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/14/22	06/14/22	
Surrogate: n-Nonane		*93.6 %*	*50-200*	*06/14/22*	*06/14/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2225011
Chloride	ND	20.0	1	06/14/22	06/14/22	

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

Volatile Organics by EPA 8021B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2225012-BLK1)									Prepared: 06/14/22 Analyzed: 06/14/22
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	*7.36*		*8.00*		*92.0*	*70-130*			
LCS (2225012-BS1)									Prepared: 06/14/22 Analyzed: 06/14/22
Benzene	4.55	0.0250	5.00		91.0	70-130			
Ethylbenzene	4.17	0.0250	5.00		83.3	70-130			
Toluene	4.41	0.0250	5.00		88.1	70-130			
o-Xylene	4.32	0.0250	5.00		86.5	70-130			
p,m-Xylene	8.59	0.0500	10.0		85.9	70-130			
Total Xylenes	12.9	0.0250	15.0		86.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.49*		*8.00*		*93.6*	*70-130*			
LCS Dup (2225012-BSD1)									Prepared: 06/14/22 Analyzed: 06/14/22
Benzene	4.90	0.0250	5.00		98.1	70-130	7.49	20	
Ethylbenzene	4.49	0.0250	5.00		89.8	70-130	7.47	20	
Toluene	4.75	0.0250	5.00		95.0	70-130	7.48	20	
o-Xylene	4.66	0.0250	5.00		93.1	70-130	7.41	20	
p,m-Xylene	9.26	0.0500	10.0		92.6	70-130	7.47	20	
Total Xylenes	13.9	0.0250	15.0		92.8	70-130	7.45	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.51*		*8.00*		*93.9*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2225012-BLK1)									Prepared: 06/14/22 Analyzed: 06/14/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.27*		*8.00*		*90.9*	*70-130*			
LCS (2225012-BS2)									Prepared: 06/14/22 Analyzed: 06/14/22
Gasoline Range Organics (C6-C10)	48.9	20.0	50.0		97.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.32*		*8.00*		*91.5*	*70-130*			
LCS Dup (2225012-BSD2)									Prepared: 06/14/22 Analyzed: 06/14/22
Gasoline Range Organics (C6-C10)	49.8	20.0	50.0		99.6	70-130	1.95	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.36*		*8.00*		*92.0*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2225014-BLK1)									Prepared: 06/14/22 Analyzed: 06/14/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*44.0*		*50.0*		*88.0*	*50-200*			
LCS (2225014-BS1)									Prepared: 06/14/22 Analyzed: 06/14/22
Diesel Range Organics (C10-C28)	492	25.0	500		98.3	38-132			
Surrogate: n-Nonane	*42.1*		*50.0*		*84.2*	*50-200*			
Matrix Spike (2225014-MS1)				**Source: E206069-02**					Prepared: 06/14/22 Analyzed: 06/14/22
Diesel Range Organics (C10-C28)	496	25.0	500	ND	99.2	38-132			
Surrogate: n-Nonane	*44.9*		*50.0*		*89.8*	*50-200*			
Matrix Spike Dup (2225014-MSD1)				**Source: E206069-02**					Prepared: 06/14/22 Analyzed: 06/14/22
Diesel Range Organics (C10-C28)	498	25.0	500	ND	99.6	38-132	0.451	20	
Surrogate: n-Nonane	*44.1*		*50.0*		*88.1*	*50-200*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk 22E-01024	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/14/2022 5:56:58PM

Anions by EPA 300.0/9056A

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2225011-BLK1)									Prepared: 06/14/22 Analyzed: 06/14/22
Chloride	ND	20.0							
LCS (2225011-BS1)									Prepared: 06/14/22 Analyzed: 06/14/22
Chloride	249	20.0	250		99.7	90-110			
LCS Dup (2225011-BSD1)									Prepared: 06/14/22 Analyzed: 06/14/22
Chloride	250	20.0	250		99.8	90-110	0.144	20	

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

Definitions and Notes

Vertex	Project Name:	Devon Continental Lusk 22E-01024	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	06/14/22 17:56

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

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: Vertex (Durango direct bill)
Project: Devon Continental Lusk 22E-01024
Sampler: L. Pullman
Phone: 701-495-1722
Email(s): LPullman@vertex.ca, JCrabtree@vertex.ca
Project Manager: Jason Crabtree

RUSH? [X] 1d [ ] 3d

Lab Use Only
Lab WO# PE2060069
Job Number 21080-0001

Page 1 of 2

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Lab Number	Correct Cont/Prsrv (s) Y/N
BH22-01 14'	6-9-2022	11:50	Soil	1 Jar 4oz	X	X	X	X		
BH22-01 18'	6-9-2022	12:00	Soil	1 Jar 4oz	X	X	X	X		
BH22-01 20' → Hold		12:15								
BH22-02 0'		11:10			X	X	X	X		
BH22-02 6'		13:40			X	X	X	X		
BH22-03 0'		10:40								
BH22-03 6'		13:55								
BH22-04 0'		11:00								
BH22-04 6'		14:35								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jake Pullman	6-10-2022	06:30		6-10-22	11:20
	6-10-22	4:15		6/14/22	9:50

Lab Use Only
**Received on Ice (Y) N
T1____ T2____ T3____
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
**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.

[ ] Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:
Project owner: Amber Groves, Durango

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81303 Ph (970) 259-0615 Fx (800) 362-1879

Client: Vertex (Durango direct Bill)
Project: Devon Continental Lusk
Sampler: L. Pullman
Phone: 701-495-1722
Email(s): LPullman@vertex.ca, JCrabtree@vertex.ca
Project Manager:

RUSH? [X] 1d [ ] 3d

Lab Use Only
Lab WO# E206009
Job Number 21080-0001

Page 2 of 2

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Lab Number	Correct Cont/Prsrv (s) Y/N
BH22-05 0'	6-9-2022	10:05	Soil	1 Jar, 4oz	X	X	X	X		
BH22-05 6'	6-9-2022	14:15	Soil	1 Jar, 4oz	X	X	X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jake Pullman	6-10-2022	08:30		6-10-22	11:20
	6-10-22	4:15			

Lab Use Only
**Received on Ice Y / N
T1_____ T2_____ T3_____
AVG Temp °C_____

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

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

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

[ ] Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:
Project owner: Amber Groves, Durango

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81303 Ph (970) 259-0615 Fx (800) 362-1879

Envirotech Analytical Laboratory

Printed: 6/14/2022 5:27:56PM

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:	Vertex	Date Received:	06/14/22 09:50	Work Order ID:	E206069
Phone:	(575) 748-0176	Date Logged In:	06/14/22 09:50	Logged In By:	Alexa Michaels
Email:	jcrabtree@vertex.ca	Due Date:	06/14/22 17:00 (0 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: UPS
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

Comments/Resolution

Sample (BH22-01 20) is on hold per COC, Sample will expire on June 23rd 2022 at 12:14pm

Client Instruction

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

Date

envirotech Inc.

Report to:

Jason Crabtree

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex

Project Name:	Devon Continental Lusk
Work Order:	E206148
Job Number:	21080-0001
Received:	6/20/2022

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
6/27/22

Date Reported: 6/27/22

Jason Crabtree
161, 2055 Premier Way
Sherwood Park, AB T8H 0G2

Project Name: Devon Continental Lusk
Workorder: E206148
Date Received: 6/20/2022 8:15:00AM

Jason Crabtree,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/20/2022 8:15:00AM, under the Project Name: Devon Continental Lusk.

The analytical test results summarized in this report with the Project Name: Devon Continental Lusk 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 reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

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

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

Respectfully,

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

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

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Field Offices:

Southern New Mexico Area
Lynn Jarboe
Technical Representative/Client Services
Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

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Sample Summary

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	06/27/22 14:42

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BS22-01 14'	E206148-01A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-02 5'	E206148-02A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-03 5'	E206148-03A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-04 5'	E206148-04A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-05 5'	E206148-05A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-06 5'	E206148-06A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-07 5'	E206148-07A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-08 5'	E206148-08A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-09 5'	E206148-09A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-10 5'	E206148-10A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-11 5'	E206148-11A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BS22-12 5'	E206148-12A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-01 5' - 14'	E206148-13A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-02 5' - 14'	E206148-14A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-03 0 - 5'	E206148-15A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-04 0 - 5'	E206148-16A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-05 0 - 5'	E206148-17A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-06 0 - 5'	E206148-18A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-07 0 - 5'	E206148-19A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-08 0 - 5'	E206148-20A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-09 0 - 5'	E206148-21A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-10 0 - 5'	E206148-22A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-11 0 - 5'	E206148-23A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
WS22-12 0 - 5'	E206148-24A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BH22-06 0'	E206148-25A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.
BH22-06 2'	E206148-26A	Soil	06/16/22	06/20/22	Glass Jar, 4 oz.

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-01 14'

E206148-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.8 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.8 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*123 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**1620**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-02 5'

E206148-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.8 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*121 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**122**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-03 5'

E206148-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.7 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.4 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**145**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**137**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*115 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-04 5'

E206148-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*85.8 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.6 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*121 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-05 5'

E206148-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*85.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*82.2 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**78.5**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**55.5**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*104 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-06 5'

E206148-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*85.5 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.0 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**82.4**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*110 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**40.7**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-07 5'

E206148-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.2 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*82.8 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**151**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**63.6**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*109 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**52.5**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-08 5'

E206148-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*84.2 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.5 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**207**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**150**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*103 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**22.8**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-09 5'

E206148-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*84.7 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.0 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*112 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-10 5'

E206148-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.3 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.5 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**33.4**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*128 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-11 5'

E206148-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.3 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*82.9 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**647**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**569**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*130 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BS22-12 5'

E206148-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*82.4 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.3 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**373**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	**332**	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*141 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**23.8**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-01 5' - 14'

E206148-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.3 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*82.7 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**27.2**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*112 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**270**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-02 5' - 14'

E206148-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*92.0 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*90.8 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**2410**	20.0	1	06/21/22	06/24/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-03 0 - 5'

E206148-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*85.5 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.9 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*106 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-04 0 - 5'

E206148-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*86.6 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.0 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**61.2**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*107 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-05 0 - 5'

E206148-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*89.9 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*85.4 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-06 0 - 5'

E206148-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*91.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.4 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	**36.1**	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	**31.9**	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-07 0 - 5'

E206148-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*91.0 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*91.3 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-08 0 - 5'

E206148-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Benzene	ND	0.0250	1	06/21/22	06/23/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/23/22	
Toluene	ND	0.0250	1	06/21/22	06/23/22	
o-Xylene	ND	0.0250	1	06/21/22	06/23/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/23/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/23/22	
Surrogate: 4-Bromochlorobenzene-PID		*91.9 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226048
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/23/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*85.1 %*	*70-130*	*06/21/22*	*06/23/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226052
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/23/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/23/22	
Surrogate: n-Nonane		*107 %*	*50-200*	*06/21/22*	*06/23/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226035
Chloride	ND	20.0	1	06/21/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-09 0 - 5'

E206148-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*99.7 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*99.7 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*122 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	ND	20.0	1	06/22/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-10 0 - 5'

E206148-22

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.1 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*93.5 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.1 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*93.5 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	**84.4**	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*123 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	**61.6**	20.0	1	06/22/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-11 0 - 5'

E206148-23

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.9 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.9 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*119 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	ND	20.0	1	06/22/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

WS22-12 0 - 5'

E206148-24

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*123 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	ND	20.0	1	06/22/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BH22-06 0'

E206148-25

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*97.3 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*97.3 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*121 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	ND	20.0	1	06/22/22	06/25/22	

Sample Data

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

BH22-06 2'

E206148-26

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Benzene	ND	0.0250	1	06/21/22	06/24/22	
Ethylbenzene	ND	0.0250	1	06/21/22	06/24/22	
Toluene	ND	0.0250	1	06/21/22	06/24/22	
o-Xylene	ND	0.0250	1	06/21/22	06/24/22	
p,m-Xylene	ND	0.0500	1	06/21/22	06/24/22	
Total Xylenes	ND	0.0250	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.1 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*97.6 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2226049
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/21/22	06/24/22	
Surrogate: Bromofluorobenzene		*98.1 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: 1,2-Dichloroethane-d4		*97.6 %*	*70-130*	*06/21/22*	*06/24/22*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*06/21/22*	*06/24/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2226044
Diesel Range Organics (C10-C28)	ND	25.0	1	06/21/22	06/22/22	
Oil Range Organics (C28-C36)	ND	50.0	1	06/21/22	06/22/22	
Surrogate: n-Nonane		*128 %*	*50-200*	*06/21/22*	*06/22/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2226066
Chloride	ND	20.0	1	06/22/22	06/25/22	

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226049-BLK1)									Prepared: 06/21/22 Analyzed: 06/23/22
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	*0.491*		*0.500*		*98.1*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.494*		*0.500*		*98.7*	*70-130*			
Surrogate: Toluene-d8	*0.511*		*0.500*		*102*	*70-130*			
LCS (2226049-BS1)									Prepared: 06/21/22 Analyzed: 06/23/22
Benzene	2.23	0.0250	2.50		89.3	70-130			
Ethylbenzene	2.19	0.0250	2.50		87.4	70-130			
Toluene	2.10	0.0250	2.50		83.9	70-130			
o-Xylene	2.08	0.0250	2.50		83.3	70-130			
p,m-Xylene	4.15	0.0500	5.00		83.0	70-130			
Total Xylenes	6.23	0.0250	7.50		83.1	70-130			
Surrogate: Bromofluorobenzene	*0.499*		*0.500*		*99.7*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.515*		*0.500*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.491*		*0.500*		*98.1*	*70-130*			
LCS Dup (2226049-BSD1)									Prepared: 06/21/22 Analyzed: 06/23/22
Benzene	2.22	0.0250	2.50		89.0	70-130	0.404	23	
Ethylbenzene	2.24	0.0250	2.50		89.5	70-130	2.31	27	
Toluene	2.17	0.0250	2.50		86.6	70-130	3.17	24	
o-Xylene	2.11	0.0250	2.50		84.4	70-130	1.38	27	
p,m-Xylene	4.23	0.0500	5.00		84.6	70-130	1.91	27	
Total Xylenes	6.34	0.0250	7.50		84.5	70-130	1.73	27	
Surrogate: Bromofluorobenzene	*0.499*		*0.500*		*99.7*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.502*		*0.500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.510*		*0.500*		*102*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226048-BLK1)									Prepared: 06/21/22 Analyzed: 06/24/22
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	*6.97*		*8.00*		*87.1*	*70-130*			
LCS (2226048-BS1)									Prepared: 06/21/22 Analyzed: 06/24/22
Benzene	5.66	0.0250	5.00		113	70-130			
Ethylbenzene	5.60	0.0250	5.00		112	70-130			
Toluene	5.97	0.0250	5.00		119	70-130			
o-Xylene	5.49	0.0250	5.00		110	70-130			
p,m-Xylene	11.3	0.0500	10.0		113	70-130			
Total Xylenes	16.8	0.0250	15.0		112	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.04*		*8.00*		*88.0*	*70-130*			
LCS Dup (2226048-BSD1)									Prepared: 06/21/22 Analyzed: 06/24/22
Benzene	5.70	0.0250	5.00		114	70-130	0.706	20	
Ethylbenzene	5.65	0.0250	5.00		113	70-130	0.960	20	
Toluene	6.03	0.0250	5.00		121	70-130	0.897	20	
o-Xylene	5.55	0.0250	5.00		111	70-130	1.08	20	
p,m-Xylene	11.4	0.0500	10.0		114	70-130	1.03	20	
Total Xylenes	17.0	0.0250	15.0		113	70-130	1.05	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.01*		*8.00*		*87.6*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226048-BLK1)									Prepared: 06/21/22 Analyzed: 06/24/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.74*		*8.00*		*84.3*	*70-130*			
LCS (2226048-BS2)									Prepared: 06/21/22 Analyzed: 06/24/22
Gasoline Range Organics (C6-C10)	44.6	20.0	50.0		89.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.57*		*8.00*		*82.1*	*70-130*			
LCS Dup (2226048-BSD2)									Prepared: 06/21/22 Analyzed: 06/24/22
Gasoline Range Organics (C6-C10)	43.9	20.0	50.0		87.8	70-130	1.57	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.75*		*8.00*		*84.4*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226049-BLK1)									Prepared: 06/21/22 Analyzed: 06/23/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.491*		*0.500*		*98.1*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.494*		*0.500*		*98.7*	*70-130*			
Surrogate: Toluene-d8	*0.511*		*0.500*		*102*	*70-130*			
LCS (2226049-BS2)									Prepared: 06/21/22 Analyzed: 06/23/22
Gasoline Range Organics (C6-C10)	58.5	20.0	50.0		117	70-130			
Surrogate: Bromofluorobenzene	*0.494*		*0.500*		*98.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.495*		*0.500*		*98.9*	*70-130*			
Surrogate: Toluene-d8	*0.508*		*0.500*		*102*	*70-130*			
LCS Dup (2226049-BSD2)									Prepared: 06/21/22 Analyzed: 06/23/22
Gasoline Range Organics (C6-C10)	57.2	20.0	50.0		114	70-130	2.24	20	
Surrogate: Bromofluorobenzene	*0.500*		*0.500*		*100*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.486*		*0.500*		*97.2*	*70-130*			
Surrogate: Toluene-d8	*0.518*		*0.500*		*104*	*70-130*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AK

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226044-BLK1)									Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*64.3*		*50.0*		*129*	*50-200*			
LCS (2226044-BS1)									Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	504	25.0	500		101	38-132			
Surrogate: n-Nonane	*58.6*		*50.0*		*117*	*50-200*			
Matrix Spike (2226044-MS1)				**Source: E206132-25**					Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	520	25.0	500	ND	104	38-132			
Surrogate: n-Nonane	*64.7*		*50.0*		*129*	*50-200*			
Matrix Spike Dup (2226044-MSD1)				**Source: E206132-25**					Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	529	25.0	500	ND	106	38-132	1.79	20	
Surrogate: n-Nonane	*55.5*		*50.0*		*111*	*50-200*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226052-BLK1)									Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*60.8*		*50.0*		*122*	*50-200*			
LCS (2226052-BS1)									Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	497	25.0	500		99.5	38-132			
Surrogate: n-Nonane	*56.8*		*50.0*		*114*	*50-200*			
Matrix Spike (2226052-MS1)				**Source: E206148-08**					Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	700	25.0	500	207	98.6	38-132			
Surrogate: n-Nonane	*60.3*		*50.0*		*121*	*50-200*			
Matrix Spike Dup (2226052-MSD1)				**Source: E206148-08**					Prepared: 06/21/22 Analyzed: 06/22/22
Diesel Range Organics (C10-C28)	676	25.0	500	207	93.9	38-132	3.37	20	
Surrogate: n-Nonane	*59.7*		*50.0*		*119*	*50-200*			

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Anions by EPA 300.0/9056A

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226035-BLK1)									Prepared: 06/21/22 Analyzed: 06/24/22
Chloride	ND	20.0							
LCS (2226035-BS1)									Prepared: 06/21/22 Analyzed: 06/24/22
Chloride	250	20.0	250		99.9	90-110			
Matrix Spike (2226035-MS1)				**Source: E206148-01**					Prepared: 06/21/22 Analyzed: 06/24/22
Chloride	1580	20.0	250	1620	NR	80-120			M4
Matrix Spike Dup (2226035-MSD1)				**Source: E206148-01**					Prepared: 06/21/22 Analyzed: 06/24/22
Chloride	1850	20.0	250	1620	90.7	80-120	16.1	20	

QC Summary Data

Vertex	Project Name:	Devon Continental Lusk	**Reported:**
161, 2055 Premier Way	Project Number:	21080-0001	
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	6/27/2022 2:42:58PM

Anions by EPA 300.0/9056A

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2226066-BLK1)									Prepared: 06/22/22 Analyzed: 06/22/22
Chloride	ND	20.0							
LCS (2226066-BS1)									Prepared: 06/22/22 Analyzed: 06/22/22
Chloride	245	20.0	250		97.9	90-110			
LCS Dup (2226066-BSD1)									Prepared: 06/22/22 Analyzed: 06/22/22
Chloride	266	20.0	250		106	90-110	8.33	20	

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

Definitions and Notes

Vertex	Project Name:	Devon Continental Lusk	
161, 2055 Premier Way	Project Number:	21080-0001	**Reported:**
Sherwood Park AB, T8H 0G2	Project Manager:	Jason Crabtree	06/27/22 14:42

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

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

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

Job# 21080-0001 6/20/22 CC

Client: Vertex (Durango Direct Bill)
Project: Devon Continental Lusk
Sampler: J. Florez
Phone: 505-506-0040
Email(s): jflorez@vertex.ca, jcrabtree@vertex.ca
Project Manager: ~~Jarod~~ Jason Crabtree

RUSH? ☐ 1d ☐ 3d

Lab Use Only	
Lab WO#	PE2206148
Job Number	~~19034-0001~~

Page 1 of 3

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Lab Number	Correct Cont/Prsrv (s) Y/N
BS22-01 ~~S~~ Surf 14'	06/16/2022	9:25	Soil	1 Glass Jar, 4oz.	X	X	X	X	1	
BS22-02 5'		9:30							2	
BS22-03 5'		9:35							3	
BS22-04 5'		9:40							4	
BS22-05 5'		9:45							5	
BS22-06 5'		9:50							6	
BS22-07 5'		9:55							7	
BS22-08 5'		10:00							8	
BS22-09 5'		10:05							9	
BS22-10 5'		10:10							10	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
David A. Florez	06/17/2022	07:30 am	[signature]	6-17-22	1:30
[signature]	6-17-22	4:15P	[signature]	6/20/22	8:15

Lab Use Only
**Received on Ice Y / N
T1____ T2____ T3____
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

**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.

☐ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:
Project Owner: Amber Groves, Durango Midstream

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879
envirotech-inc.com laboratory@envirotech-inc.com

Job# 21080-0001 6/20/22 CC

Client: Vertex (Durango Direct Bill)
Project: Devon Continental Lusk
Sampler: J. Florez
Phone: 505-506-0040
Email(s): jflorez@vertex.ca, jcrabtree@vertex.ca
Project Manager: Jason Crabtree

RUSH? [ ] 1d [ ] 3d

Lab Use Only — Lab WO#: E206148
Job Number: ~~19034-0001~~

Page 2 of 3

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0						Lab Number	Correct Cont/Prsrv (s) Y/N
BS22-11 5'	06/16/2022	10:15	Soil	1 Glass Jar 4 oz.	X	X	X	X						11	
BS22-12 5'	06/16/2022	10:20	↓	↓	↓	↓	↓	↓						12	
WS22-01 ~~0-5'~~ 5'-14' gat	06/16/2022	10:40	↓	↓	↓	↓	↓	↓						13	
WS22-02 ~~0-5'~~ 5'-14' gat	06/16/2022	10:45	↓	↓	↓	↓	↓	↓						14	
WS22-03 0-5'	06/16/2022	10:50	↓	↓	↓	↓	↓	↓						15	
WS22-04 0-5'	06/16/2022	10:55	↓	↓	↓	↓	↓	↓						16	
WS22-05 0-5'	06/16/2022	11:00	↓	↓	↓	↓	↓	↓						17	
WS22-06 0-5'	06/16/2022	11:05	↓	↓	↓	↓	↓	↓						18	
WS22-07 0-5'	06/16/2022	11:10	↓	↓	↓	↓	↓	↓						19	
WS22-08 0-5'	06/16/2022	11:15	↓	↓	↓	↓	↓	↓						20	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only
Jarod A. Florez	06/17/2022	07:30 am	Jequiree Marsh	6-17-22	1:13	**Received on Ice (Y) / N
Jequiree Marsh	6-17-22	4:15	[signature]	6/20/22	8:15	T1_____ T2_____ T3_____ 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

**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.

[ ] Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info: Project Owner: Amber Groves, Durango Midstream

envirotech Analytical Laboratory

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com laboratory@envirotech-inc.com

Job #21080-0001 6/20/22 cc

Client: Vertex (Durango Direct Bill)
Project: Devon Continental Lurk
Sampler: J. Flores
Phone: 505-506-0040
Email(s): jflores@vertex.ca, jcrabtree@vertex.ca
Project Manager: Jason Crabtree

RUSH? ☐ 1d ☐ 3d

Lab Use Only
Lab WO# PE2206148
Job Number ~~19034-0001~~

Page 3 of 3

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Lab Number	Correct Cont/Prsrv (s) Y/N
WS22-09 0-5'	06/16/2022	11:20	Soil	1 Glass Jar, 4oz.	X	X	X	X	21	
WS22-10 0-5'	06/16/2022	11:25							22	
WS22-11 0-5'	06/16/2022	11:30							23	
WS22-12 0-5'	06/16/2022	11:35							24	
BH22-06 0'	06/16/2022	12:00							25	
BH22-06 2'	06/16/2022	12:05							26	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jason A Jay	06/17/2022	07:30 am	Teagan Man	6-17-22	1:14
Teagan Man	6-17-22	4:14	Peter Chate	6/20/22	8:15

Lab Use Only
**Received on Ice (Y) N
T1____ T2____ T3____
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

**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.

☐ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:
Project Owner: Amber Groves, Durango Midstream

envirotech Analytical Laboratory
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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com laboratory@envirotech-inc.com

Envirotech Analytical Laboratory

Printed: 6/20/2022 12:24:27PM

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:	Vertex	Date Received:	06/20/22 08:15	Work Order ID:	E206148
Phone:	(575) 748-0176	Date Logged In:	06/20/22 09:28	Logged In By:	Caitlin Christian
Email:	jcrabtree@vertex.ca	Due Date:	06/24/22 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: UPS
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

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

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

CONDITIONS

Action 169275

CONDITIONS

Operator: FRONTIER FIELD SERVICES, LLC 10077 Grogans Mill Rd. The Woodlands, TX 77380	OGRID: 221115
	Action Number: 169275
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	1/18/2023