Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2231370856
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: Clinton Talley Title: RES Specialist

Signature: Clint Talley Date: 01/12/2023

email: clinton.talley@matadorresources.com Telephone: 337-319-8398

OCD Only

Received by: Jocelyn Harimon Date: 01/12/2023

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

Closure Approved by: Robert Hamlet Date: 4/13/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

November 30, 2022 Vertex Project #: 22E-03903

Spill Closure Report: Hudson 11 Federal #002
Section 11, Township 18 South, Range 31 East
API: 30-015-25740
County: Eddy
Incident Report: nAPP2231370856

Prepared For: **Matador Production Company**
One Lincoln Centre
Dallas, Texas 75240

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

Matador Production Company (Matador) retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment for a release of produced water within the earthen bermed containment at Hudson 11 Federal #002, API 30-015-25740, Incident nAPP2231370856 (hereafter referred to as "Hudson"). This letter provides a description of the Spill Assessment and Remediation and includes a request for Spill Closure. The spill area is located at N 32.7640, W -103.8338.

Background

The site is located approximately 9.34 miles southeast of Loco Hills, New Mexico (Google Inc., 2022). The legal location for the site is Section 11, Township 18 South and Range 31 East in Eddy County, New Mexico. The spill area is located on Bureau of Land Management (BLM) property. An aerial photograph and site schematic are included on Figure 1 (Attachment 1).

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 Qep – eolian and piedmont deposits that include eolian sand interaid with piedmont-slope deposits (New Mexico Bureau of Geology and Mineral Resources, 2022). The Natural Resources Conservation Service *Web Soil Survey* characterizes the predominant soil texture on the site as Kermit-Berino fine sands. It tends to be excessively drained with negligible runoff and low available moisture levels in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2022).

The surrounding landscape is associated with plains, dune sands, and alluvial fans at elevations of 3,100 to 4,200 feet above sea level. The climate is semi-arid, with an annual precipitation ranging between 10 to 14 inches. Historically, the plant community was dominated by giant dropseed and other dropseeds with scattered shinnery oak and soapweed yucca. Other herbaceous species include threeawns, bluestems, and annual and perineal forbs distributed relative to precipitation occurrences (United States Department of Agriculture, Natural Resources Conservation Service, 2022).

There is no surface water located at Hudson. The nearest significant watercourse, as defined in Subsection P of

19.15.17.7 Mexico Administrative Code (NMAC; New Mexico Oil Conservation Division, 2018), is the Pecos River located approximately 28.8 miles west and a lakebed 6.36 miles northwest of the site (Google Inc., 2022). There are no continuous 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.

Incident Description

The spill occurred on November 9, 2022, due to a frac tank failure. The spill was reported on November 10, 2022, and involved the release of approximately 137 barrels (bbl.) of produced water into the earthen bermed containment on the engineered pad. Approximately 40 bbl. of free fluid was removed during initial spill clean-up. Field screening and laboratory analysis is included in Table 2 (Attachment 2). The New Mexico Oil Conservation Division (NMOCD) C-141 Report: nAPP2231370856 is included in Attachment 3. The daily field reports (DFRs) and site photographs are included in Attachment 4.

Closure Criteria Determination

The depth to groundwater was determined using information from the United States Department of the Interior, United States Geological Survey (2022) National Water Information Mapping System and New Mexico Office of the State Engineer (2022) Water Rights Reporting System. A 0.5-mile search radius was used to determine groundwater depth. The closest recorded depth to groundwater was determined to be 430 feet below ground surface (bgs) and 2.07 miles from the site (New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2022). Documentation used in Closure Criteria Determination research is included in Attachment 5.

Closure Criteria Worksheet			
Site Name: Hudson 11 Federal #002			
Spill Coordinates:		**X: 32.7640**	**Y: -103.8338**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**430**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	151,857	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	33,582	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	46,836	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	10,943	feet
	ii) Within 1000 feet of any fresh water well or spring	10,943	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	9,378	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Kermit-Berino fine sands	
12	Ecological Classification	Deep sand	
13	Geology	Qep	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

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 Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	**Constituent**	**Limit**
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS - Total dissolved solids, TPH - Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO), BTEX - Benzene, toluene, ethylbenzene, and xylenes

Remedial Actions Taken

An initial site inspection of the spill area was completed on November 10, 2022, which identified the area of the spill specified in the initial C-141 Report, estimated the approximate volume of the spill and white lined the area required for the 811 One Call request, which was completed by the dirt contractor. The impacted area was determined to be approximately 152 feet long and 29 feet wide; the total affected area was determined to be 3,271 square feet. Field screening and laboratory analysis results from delineation are included in Table 2 (Attachment 2). The DFRs associated with the site inspection are included in Attachment 4.

Remediation efforts began on November 14, 2022 and were completed on November 22, 2022. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on multiple sample points and consisted of analysis using a photo ionization detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and electroconductivity meter (chlorides). Field screening results were used to identify areas requiring further remediation from those areas showing concentrations below determined closure criteria levels. Soils were removed to a depth of three feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Field screening results are included in Table 3 (Attachment 2).

Notification that confirmatory samples were being collected was provided to the NMOCD on November 17, 2022, and is included in Attachment 6. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 28 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Hall Environmental Analysis Laboratory under chain-of-custody (COC) 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 results are presented in Table 3 (Attachment 2) and the laboratory data report is included in Attachment 7. All confirmatory samples collected and analyzed were below closure criteria for the site.

Closure Request

The spill area was fully delineated, remediated and backfilled with local soils. The Confirmatory Sample Notification email is included in Attachment 6. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release locations “under 50 feet to groundwater”. Based on these findings, Matador Production Company respectfully requests that this spill be closed.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at 575.361.9880 or mpeppin@vertex.ca.

December 8, 2022

Monica Peppin, A.Sc.
PROJECT MANAGER, REPORTING

Date

Attachments

Attachment 1. Figures
Attachment 2. Tables
Attachment 3. NMOCD C-141 Report
Attachment 4. Daily Field Reports with Photographs
Attachment 5. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
Attachment 6. Confirmatory Sample Notification
Attachment 7. Laboratory Data Reports and Chain of Custody Forms

References

Google Inc. (2022). *Google Earth Pro* (Version 7.3.4) [Software]. Retrieved from http://www.google.com/earth on September 10, 2022.

New Mexico Bureau of Geology and Mineral Resources. (2022). *Interactive Geologic Map.* Retrieved from http://geoinfo.nmt.edu.

New Mexico Mining and Minerals Division. (2022). *Coal Mine Resources in New Mexico*. Retrieved from http://www.emnrd.state.nm.us/MMD/gismapminedata.html

New Mexico Oil Conservation Division. (2018). N*ew Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.

New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2022). *Water Column/Average Depth to Water Report.* Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html

United States Department of Agriculture, Natural Resources Conservation Service. (2022). *Web Soil Survey.* Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

United States Department of Homeland Security, FEMA Flood Map Service Center. (2020). *Flood Map 35015C0450D*. Retrieved from https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

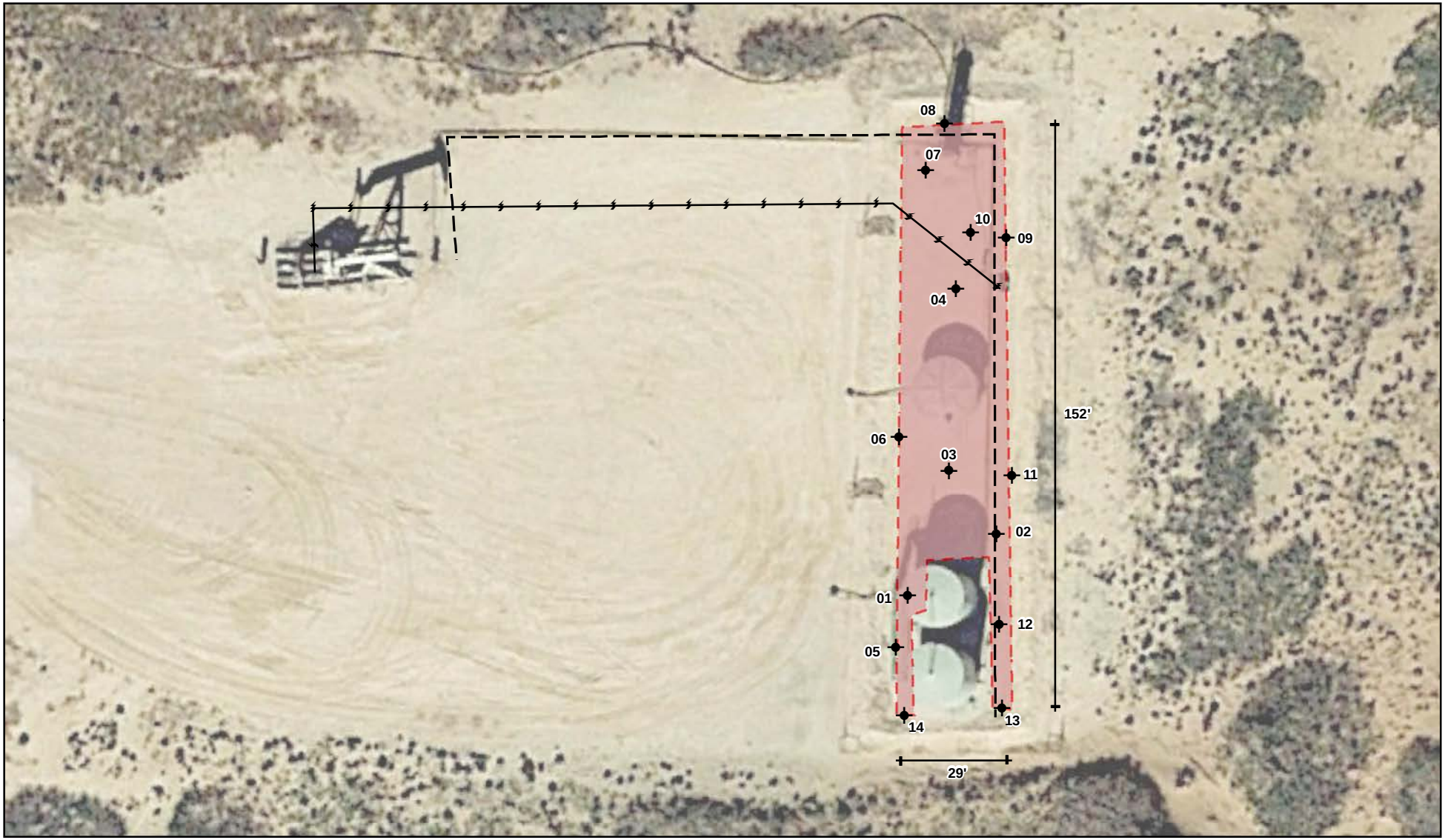
United States Fish and Wildlife Service. (2022). *National Wetlands Inventory Surface Waters and Wetland*. Retrieved from https://www.fws.gov/ wetlands/data/Mapper.html.

Limitations

This report has been prepared for the sole benefit of Matador Production Company. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division and Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and Matador Production Company. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

ATTACHMENT 1



Testpit (Prefixed by "TP22-")

Electrical Line

Aboveground Pipeline

Approximate Release Area (~3,271 sq. ft.)

VERTEX

0 12.5 25 feet

Map Center:
Lat/Long: 32.763890, -103.833660

NAD 1983 UTM Zone 13N

Date: Nov 18/22

N

Characterization Schematic
Hudson 11 Federal #002

FIGURE:
1

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 imagery from Google Earth, 2019. Features from GPS. Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

Document Path: \\vtx-s-fs01.corp.internal\shared\vps\04 - Geomatics\1-Projects_US PROJECTS\Matador Resources\22E-03903\Hudson 11 Federal #002\Figure 1 Characterization Schematic Hudson 11 Federal #002.mxd

● Base Sample (Prefixed by "WS22-")
▲ Wall Sample (Prefixed by "BS22-")
Aboveground Pipeline
Electrical Line
Approximate Lease Boundary
Excavation to 1.5' (~3,288 sq. ft.)
Excavation to 3' (~376 sq. ft.)

VERTEX

0 5 10 20 ft.

NAD 1983 UTM Zone 13N
Date: Dec 06/22

Map Center:
Lat: 32.763881,
Long:-103.833464

N

Confirmatory Schematic
Hudson 11 Federal #002

FIGURE: 2

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 imagery from Google Earth, 2022 and Vertex, 2022. Features from GPS. Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Matador Resources\22E-03903\Hudson 11 Federal #002\Figure 2 Confirmatory Schematic Hudson 11 Federal #002.mxd

ATTACHMENT 2

Client Name: Matador Resources
Site Name: Hudson 11 Federal #002
NMOCD Tracking #: Napp2231370856
Project #: 22E-03903
Lab Report: 2211892

Table 2. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 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)
TP22-01	2'	2022-11-14	-	907	559	ND	3.81	34	**600**	**240**	**634**	**874**	ND
	3'	2022-11-14	-	25	160	ND	ND	ND	ND	ND	ND	ND	110
TP22-02	1'	2022-11-14	-	27	943	ND	ND	ND	ND	ND	ND	ND	380
TP22-03	1'	2022-11-14	-	12	632	ND	ND	ND	ND	ND	ND	ND	280
TP22-04	1'	2022-11-14	-	65	418	-	-	-	-	-	-	-	-
TP22-05	0-3'	2022-11-14	-	10	113	ND	ND	ND	ND	ND	ND	ND	ND
TP22-06	0-1'	2022-11-14	-	13	106	ND	ND	ND	ND	ND	ND	ND	ND
TP22-07	1'	2022-11-14	-	19	216	-	-	-	-	-	-	-	-
TP22-08	0-1'	2022-11-14	-	14	370	ND	ND	ND	ND	ND	ND	ND	200
TP22-09	0-1'	2022-11-14	-	10	330	-	-	-	-	-	-	-	-
TP22-10	1'	2022-11-14	-	9	124	ND	ND	ND	ND	ND	ND	ND	ND
TP22-11	0-1'	2022-11-14	-	10	310	-	-	-	-	-	-	-	-
TP22-12	1'	2022-11-14	-	11	688	ND	ND	ND	ND	ND	ND	ND	380
TP22-13	0-1'	2022-11-14	-	2	93	ND	ND	ND	ND	ND	ND	ND	ND
TP22-14	0-2'	2022-11-14	-	53	155	ND	ND	ND	18	ND	18	18	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

Client Name: Matador Resources
Site Name: Hudson 11 Federal #002
NMOCD Tracking #: nAPP2231370856
Project #: 22E-03903
Lab Report: 2211D96

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater <50 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)
BS22-01	1.5'	2022-11-21	-	26	63	ND	ND	ND	ND	ND	ND	ND	ND
BS22-02	1.5'	2022-11-21	-	42	476	ND	ND	ND	ND	ND	ND	ND	430
BS22-03	1.5'	2022-11-21	-	7	72	ND	ND	ND	ND	ND	ND	ND	ND
BS22-04	1.5'	2022-11-21	-	11	432	ND	ND	ND	ND	ND	ND	ND	200
BS22-05	1.5'	2022-11-21	-	9	428	ND	ND	ND	ND	ND	ND	ND	200
BS22-06	1.5'	2022-11-21	-	21	359	ND	ND	ND	ND	ND	ND	ND	170
BS22-07	1.5'	2022-11-21	-	28	265	ND	ND	ND	ND	ND	ND	ND	120
BS22-08	1.5'	2022-11-21	-	37	135	ND	ND	ND	ND	ND	ND	ND	68
BS22-09	1.5'	2022-11-21	-	44	274	ND	ND	ND	ND	ND	ND	ND	ND
BS22-10	1.5'	2022-11-21	-	36	441	ND	ND	ND	ND	ND	ND	ND	230
BS22-11	1.5'	2022-11-21	-	17	425	ND	ND	ND	ND	ND	ND	ND	210
BS22-12	1.5'	2022-11-21	-	35	555	ND	ND	ND	ND	ND	ND	ND	400
BS22-13	1.5'	2022-11-21	-	9	408	ND	ND	ND	ND	ND	ND	ND	130
BS22-14	1.5'	2022-11-21	-	4	339	ND	ND	ND	ND	ND	ND	ND	120
BS22-15	1.5'	2022-11-21	-	14	229	ND	ND	ND	ND	ND	ND	ND	240
BS22-16	1.5'	2022-11-21	-	10	456	ND	ND	ND	ND	ND	ND	ND	220
BS22-17	3'	2022-11-21	-	6	59	ND	ND	ND	ND	ND	ND	ND	ND
BS22-18	3'	2022-11-21	-	2	148	ND	ND	ND	ND	ND	ND	ND	ND
WS22-01	0-1.5'	2022-11-22	-	24	37	ND	ND	ND	ND	ND	ND	ND	ND
WS22-02	0-1.5'	2022-11-22	-	12	18	ND	ND	ND	ND	ND	ND	ND	ND
WS22-03	0-1.5'	2022-11-22	-	19	62	ND	ND	ND	ND	ND	ND	ND	ND
WS22-04	0-1.5'	2022-11-22	-	17	63	ND	ND	ND	ND	ND	ND	ND	ND
WS22-05	0-3'	2022-11-22	-	4	49	ND	ND	ND	ND	ND	ND	ND	ND
WS22-06	0-3'	2022-11-22	-	5	8	ND	ND	ND	ND	ND	ND	ND	ND
WS22-07	0-1.5'	2022-11-22	-	8	37	ND	ND	ND	ND	ND	ND	ND	ND
WS22-08	0-1.5'	2022-11-22	-	30	132	ND	ND	ND	ND	ND	ND	ND	ND
WS22-09	0-1.5'	2022-11-22	-	14	131	ND	ND	ND	ND	ND	ND	ND	ND
WS22-10	1.5-3'	2022-11-22	-	35	108	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	nAPP2231370856
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Production Company	OGRID 228937
Contact Name Clinton Talley	Contact Telephone 337-319-8398
Contact email clinton.talley@matadorresources.com	Incident # *(assigned by OCD)* nAPP2231370856
Contact mailing address One Lincoln Centre Dallas, Texas 75240	

Location of Release Source

Latitude 32.7640 Longitude -103.8338
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hudson 11 Federal #002	Site Type Oil
Date Release Discovered 11/09/2022	API# *(if applicable)* 30-015-25740

Unit Letter	Section	Township	Range	County
H	11	18S	31E	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) 137 bbls	Volume Recovered (bbls) 40 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Frac tank failure

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2231370856
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? >25 bbls

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

NOR submitted by Arsenio Jones via NMOCD website

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: Clinton Talley Title: RES Specialist

Signature: Clint Talley Date: 01/12/2023

email: clinton.talley@matadorresources.com Telephone: 337-319-8398

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2231370856
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	430 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2231370856
District RP	
Facility ID	
Application ID	

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

Printed Name: Clinton Talley Title: RES Specialist

Signature: Clint Talley Date: 01/12/2023

email: clinton.talley@matadorresources.com Telephone: 337-319-8398

OCD Only

Received by: Jocelyn Harimon Date: 01/12/2023

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2231370856
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: Clinton Talley Title: RES Specialist

Signature: Clint Talley Date: 01/12/2023

email: clinton.talley@matadorresources.com Telephone: 337-319-8398

OCD Only

Received by: Jocelyn Harimon Date: 01/12/2023

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 4

Daily Site Visit Report

Client:	Matador Resources	Inspection Date:	11/10/2022
Site Location Name:	Hudson 11 Federal #002	Report Run Date:	11/11/2022 12:18 AM
Client Contact Name:	Arsenio Jones	API #:	30-015-25740
Client Contact Phone #:	(575)361-4333		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/10/2022 3:16 PM
Departed Site	11/10/2022 3:45 PM

Daily Site Visit Report

Field Notes

15:16 Completed safety paperwork.

15:32 Picture documentation of release

15:32 Topography of site slants North so most fluid seems to have pooled on North end.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: North
	
POR, tank, spray over	West side of water tank
Viewing Direction: North	**Viewing Direction**: North
	
Sample point from Monica Peppin on 11-09-22. Approximately 6” deep.	East side of containment

Daily Site Visit Report

Viewing Direction: West

North side of water tank

Viewing Direction: Northwest

Middle area between water tank and heater treater

Viewing Direction: South

Northeast corner of containment looking South down East wall berm

Viewing Direction: West

Far North end of containment

Daily Site Visit Report

Viewing Direction: East

Far North end of containment

Viewing Direction: South

Northwest corner of containment looking South down West wall of berm

Viewing Direction: South

Middle area between water tank and heater treater

Viewing Direction: North

Southwest corner of release inside berm containment

Daily Site Visit Report

Viewing Direction: Northeast

Middle area between water tank and heater treater

Viewing Direction: Northeast

Base of tank at POR

Viewing Direction: North

West side berm with small amount of residual fluid

Viewing Direction: South

North base of tank below POR

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
East side of tank, below POR	East side of berm, staining <6” up berm
Viewing Direction: Northwest	**Viewing Direction**: North
	
Middle of containment between tanks and water tank	West side berm staining all over and outside fence

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Austin Harris

Signature: 

Signature

Daily Site Visit Report

Client:	Matador Resources	Inspection Date:	11/22/2022
Site Location Name:	Hudson 11 Federal #002	Report Run Date:	11/28/2022 3:50 PM
Client Contact Name:	Arsenio Jones	API #:	30-015-25740
Client Contact Phone #:	(575)361-4333		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/22/2022 8:20 AM
Departed Site	11/22/2022 4:00 PM

Field Notes

14:21 Arrived on site and filled out safety paperwork

14:21 Began collecting wall samples for confirmation

14:21 Collected samples for WS22-01 through WS22-10

14:21 All samples clean on field screens

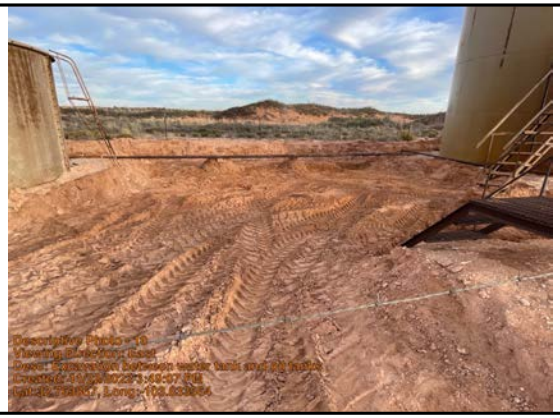
14:22 Jarred samples to be sent to lab and photographed site

Next Steps & Recommendations

1 Send samples to lab for confirmation

Daily Site Visit Report

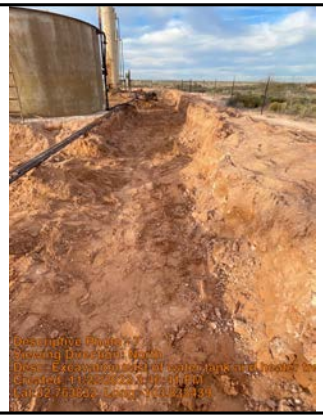
Site Photos

Viewing Direction: East	**Viewing Direction**: East
	
Northern end of excavation	Excavation between water tank and oil tanks
Viewing Direction: South	**Viewing Direction**: North
	
Excavation north of water tank	Excavation west of heater

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: West
	
Northeastern portion of excavation	North central portion of excavation
Viewing Direction: West	**Viewing Direction**: West
	
South central portion of excavation	Area north of tank battery

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: North
	
Excavation east of tank battery	Excavation east of water tank and heater treater

Viewing Direction: North	**Viewing Direction**: North
	
Excavation west of tank battery at 3’ BGS	Excavation at 3’ BGS northwest of tank battery

Daily Site Visit Report

Daily Site Visit Signature

Inspector: McKitric Wier

Signature: 
Signature

ATTACHMENT 5

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	Tws	Rng	X	Y
	CP 00672		4	4	07	18S	32E	612475	3624947*

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: ABBOTT, MURRELL

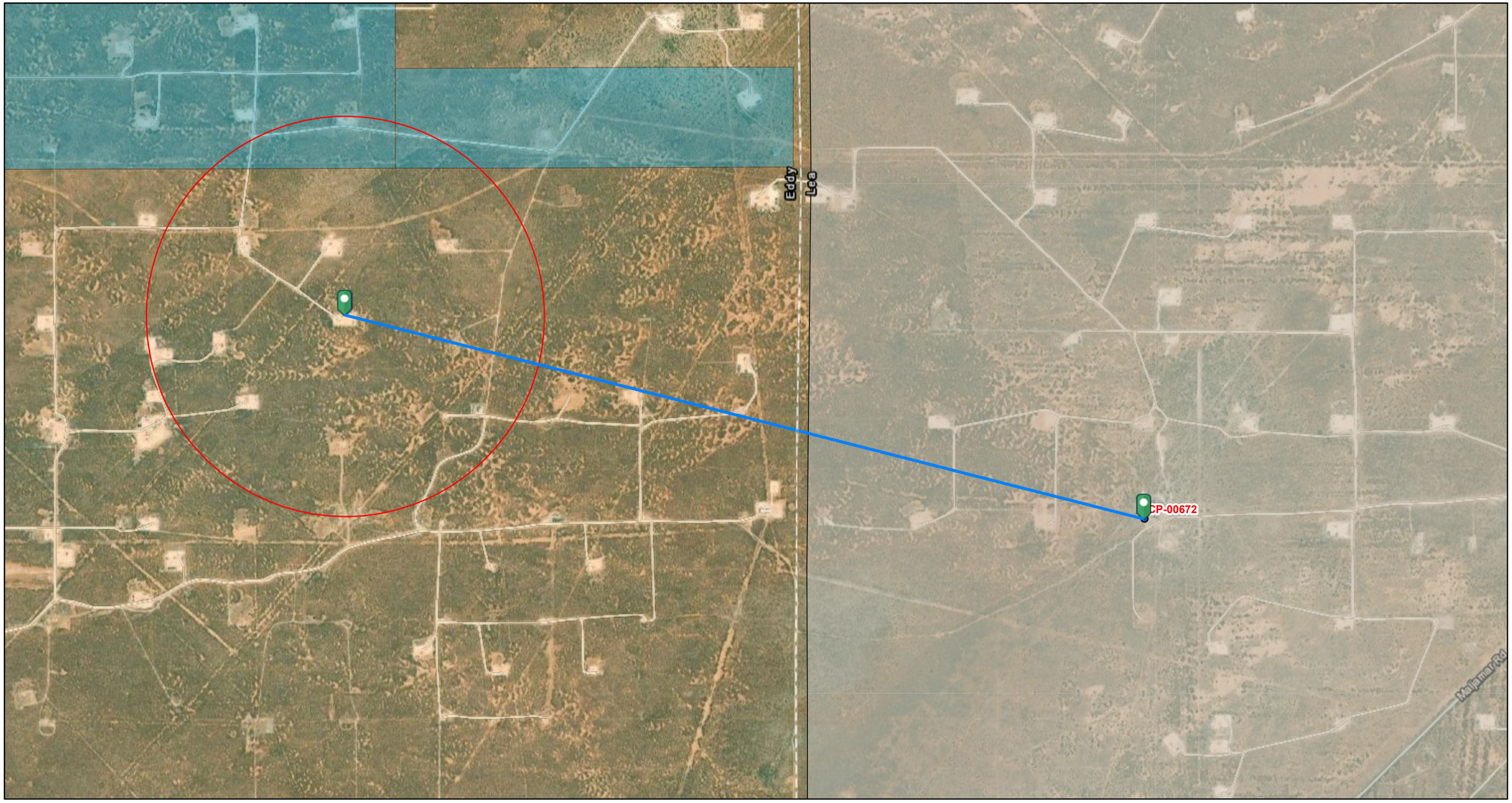
Drill Start Date:	07/17/1992	**Drill Finish Date:**	08/07/1992	**Plug Date:**	
Log File Date:	08/12/1992	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	5.50	**Depth Well:**	524 feet	**Depth Water:**	430 feet

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**

Hudson 11 Federal #002



11/10/2022, 12:18:34 PM

Override 1

GIS WATERS PODs

Active

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

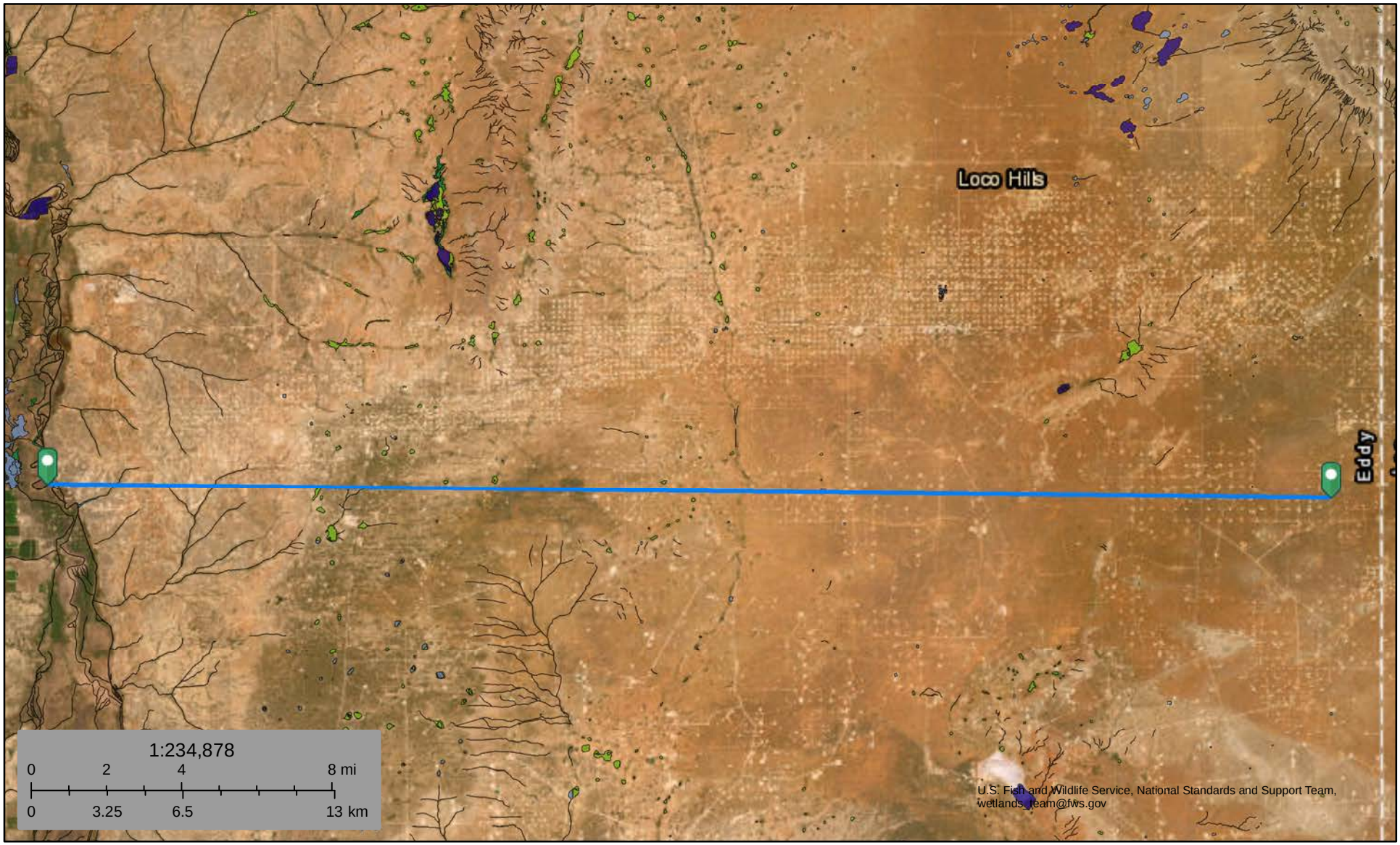
0 0.3 0.6 1.2 km

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

Web Generated Map
Map is generated by web users.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Hudson 11 Federal #002



November 10, 2022

Wetlands

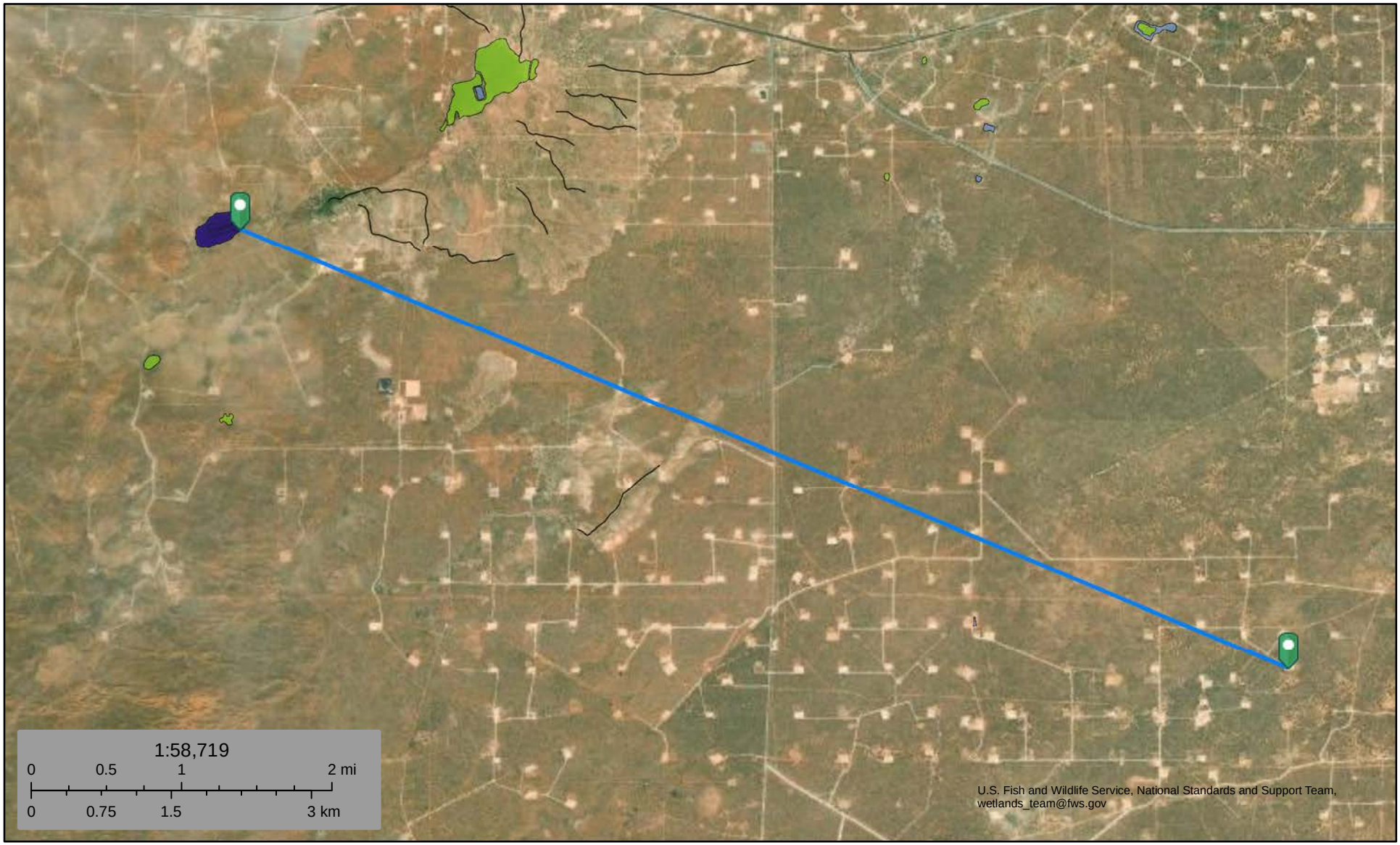
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

Hudson 11 Federal #002



November 10, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
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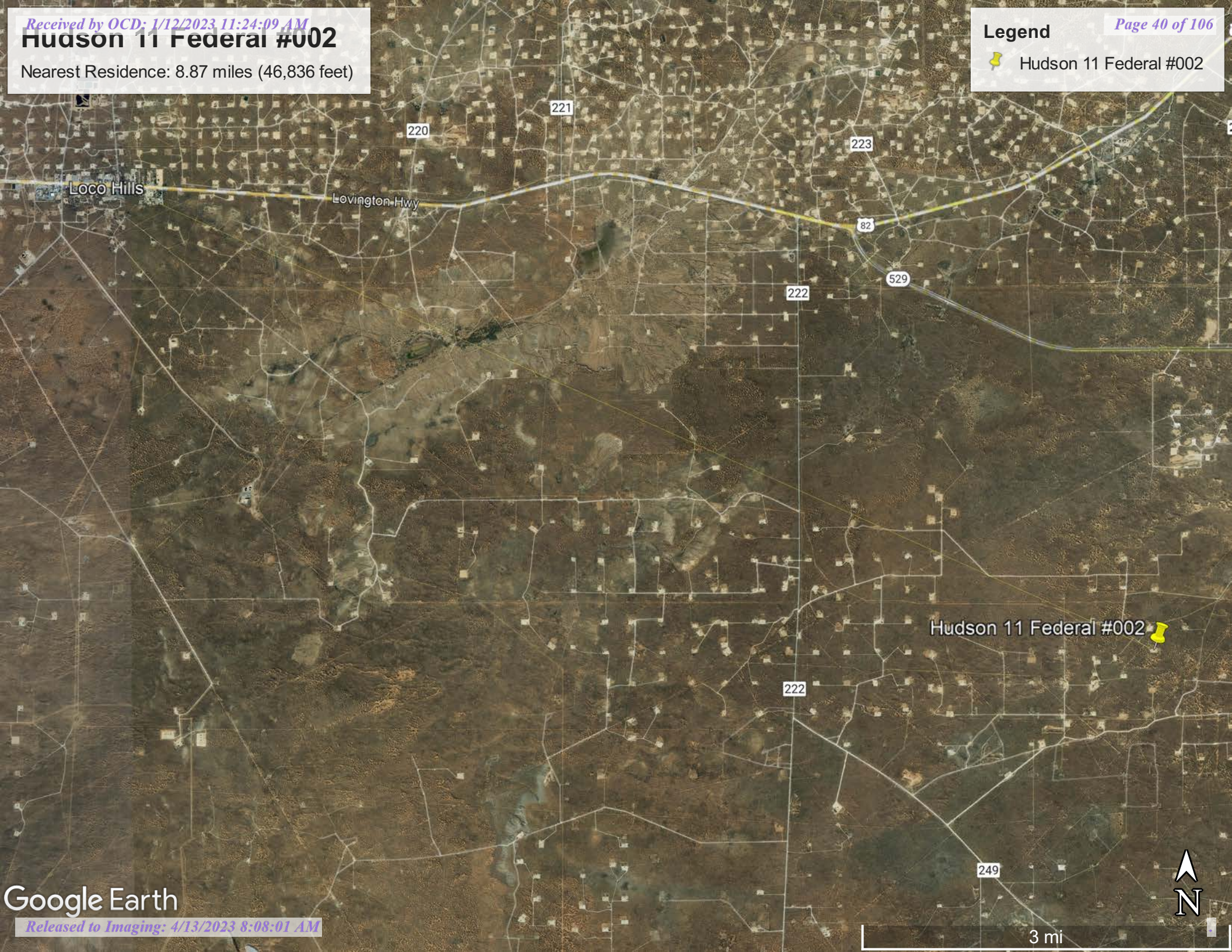
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Hudson 11 Federal #002

Nearest Residence: 8.87 miles (46,836 feet)



New Mexico Office of the State Engineer

Water Right Summary

get image list

WR File Number: CP 00672 **Subbasin:** CP **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: VIRGIL LINAM ESTATE

Contact: FAYE KLEIN

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	475398	72121	1992-08-04	PMT	LOG	CP 00672	T		3	
get images	475397	72121	1985-01-31	PMT	LOG	CP 00672	T		3	

Current Points of Diversion

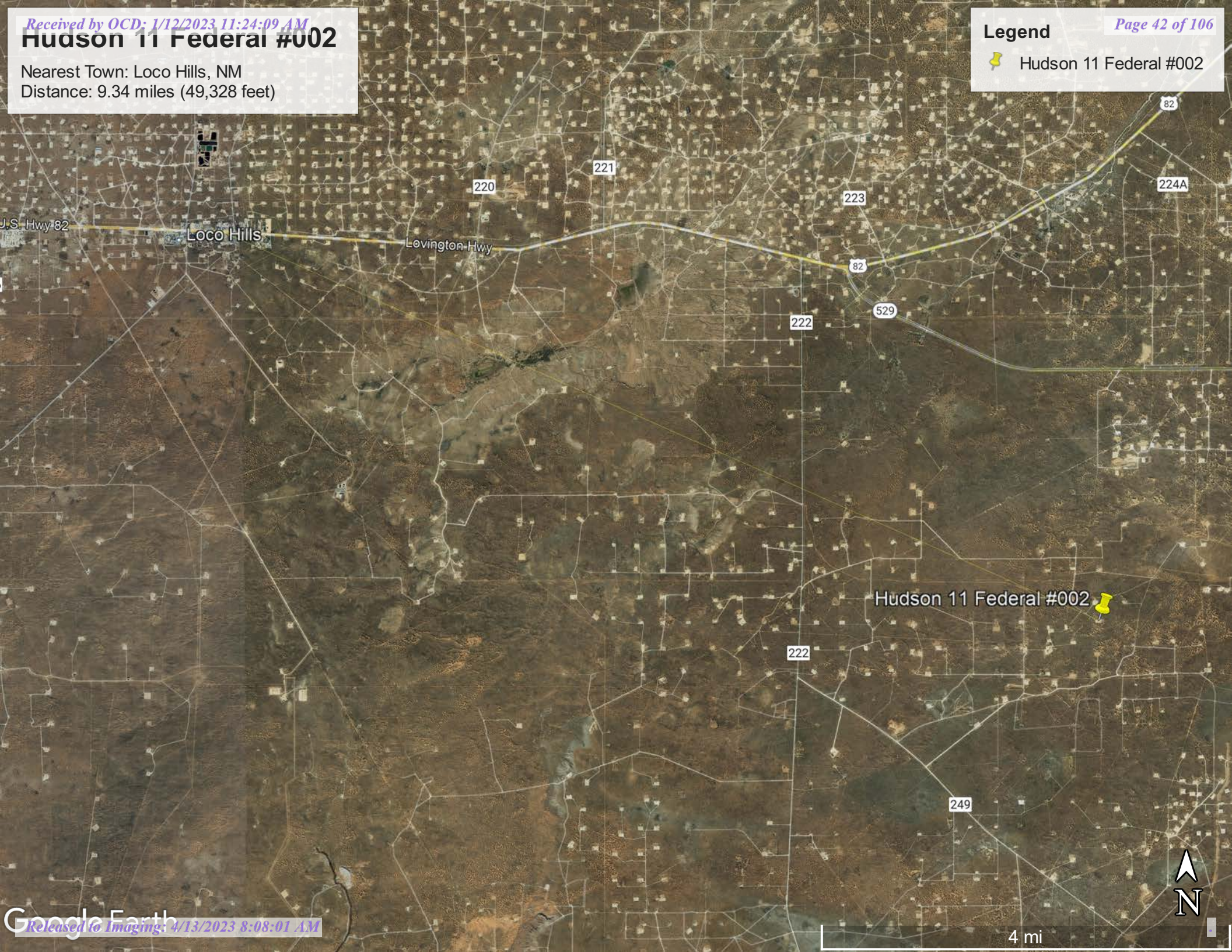
(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
CP 00672		Shallow		4	4	07	18S	32E	612475	3624947*	

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Hudson 11 Federal #002

Nearest Town: Loco Hills, NM
Distance: 9.34 miles (49,328 feet)



U.S. Fish and Wildlife Service
National Wetlands Inventory

Hudson 11 Federal #002

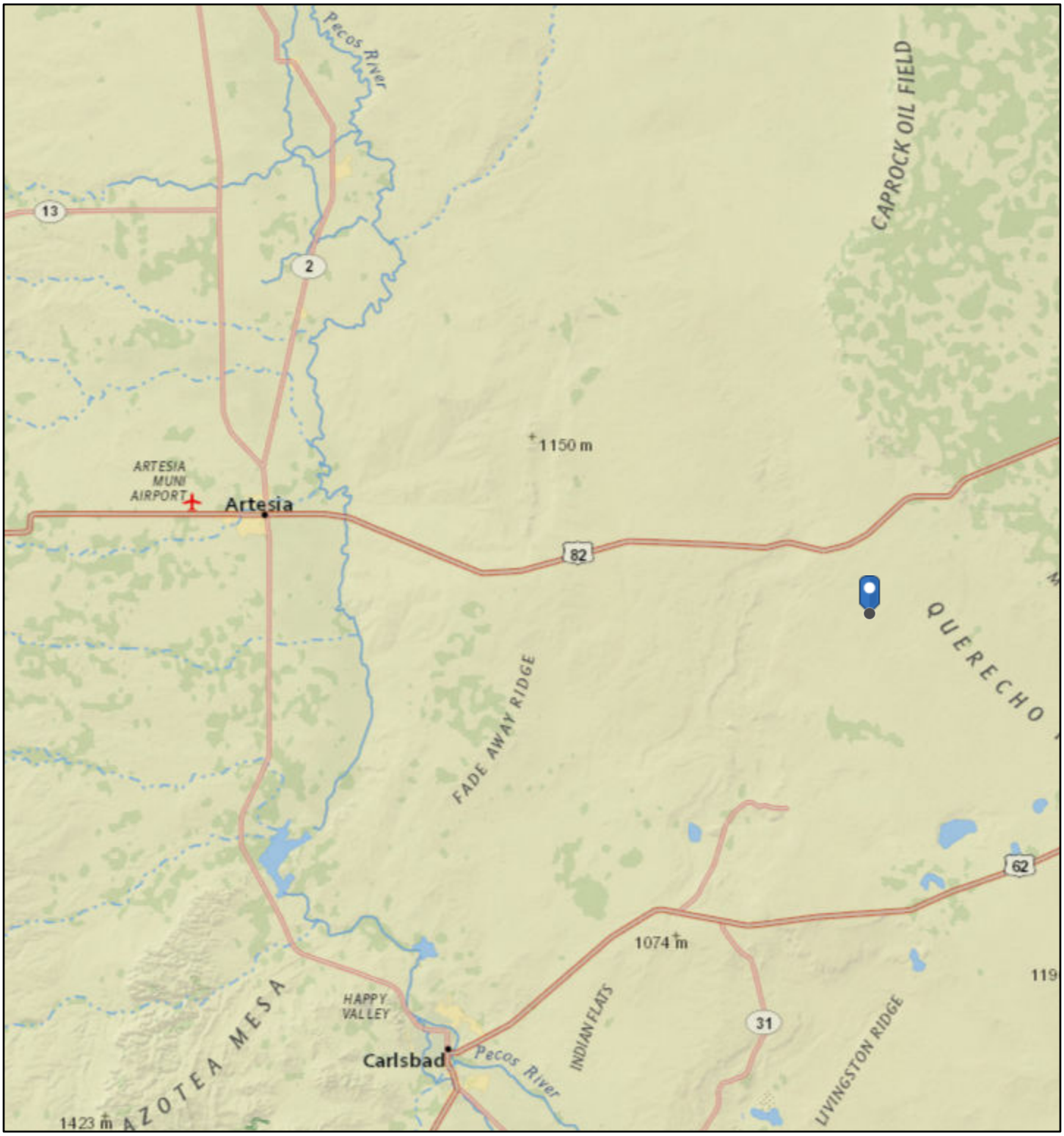
November 10, 2022

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.

Hudson 11 Federal #002



11/10/2022, 11:46:26 AM

1:577,791

0 4.25 8.5 17 mi

0 5 10 20 km

National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

EMNRD MMD GIS Coordinator

New 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°50'20"W 32°46'6"N

103°49'43"W 32°45'35"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 11/10/2022 at 1:38 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—Eddy Area, New Mexico

Map Scale: 1:827 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

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
KM	Kermit-Berino fine sands, 0 to 3 percent slopes	3.3	100.0%
Totals for Area of Interest		**3.3**	**100.0%**

Eddy Area, New Mexico

KM—Kermit-Berino fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4q
Elevation: 3,100 to 4,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 50 percent
Berino and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 7 inches: fine sand
H2 - 7 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD005NM - Deep Sand
Hydric soil rating: No

Description of Berino

Setting

Landform: Plains, fan piedmonts
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 50 inches: fine sandy loam
H3 - 50 to 58 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Active dune land

Percent of map unit: 15 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

USDA Natural Resources Conservation Service

Ecological site R070BD005NM
Deep Sand

Accessed: 11/10/2022

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on terraces, Piedmonts, dunes fields, or upland plains. Parent material consists of eolian deposits and alluvium derived from sandstone. Slopes range from 0 to 15 percent, usually less than 5 percent. Low, stabilized hummocks or dunes frequently occur. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Dune (2) Parna dune (3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	0–15%
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 is in late March or early April, and the first killing frost is in late October or early November.

Both temperature and moisture favor warm season perennial plant growth. During years of abundant winter and early spring moisture, cool season growth and annual forbs, make up an important component of this site. Strong winds blow from the west 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)	13 in

Influencing water features

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

Soil features

Soils are deep or very deep. Surface textures are sand loam, fine sand or loamy fine sand, Underlying material textures are loamy fine sand, fine sand, sand or fine sandy loam. Because of the coarse textures and rapid drying of the surface, the soil, if unprotected by plant cover and organic residue, becomes windblown and low hummocks or dunes are formed around shrubs.

Characteristic soils are:
Anthony
Aguena
Kermit
Likes
Pintura
Bluepoint

Table 4. Representative soil features

Surface texture	(1) Sand (2) Fine sand (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Moderate to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–5 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–7.8

Subsurface fragment volume <=3" (Depth not specified)	5–10%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview

The Deep Sand site occurs adjacent to and/or intergraded with the Sandhills and Sandy sites (SD-3). The Deep Sand site can be distinguished by slopes less than eight percent (approximately five percent) and textural changes at depths greater than 40 inches. The Deep Sand site has well drained soils with a surface texture of sand or loamy fine sand. The Sandhills site has slopes greater than eight percent and textural depths greater than 60 inches. Conversely, the Sandy site has slopes less than five percent and depths to textural change commonly around 20 inches. The historic plant community of the Deep Sand site is dominated primarily by giant dropseed (*Sporobolus giganteus*) and other dropseeds (*S. flexuosus*, *S. contractus*, *S. cryptandrus*), with scattered shinnery oak (*Quercus havardii*) and soapweed yucca (*Yucca glauca*). Other herbaceous species include threeawns (Aristida spp.), bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), and annual and perennial forbs distributed relative to precipitation occurrences. Bare ground and litter compose a significant proportion of ground cover while grasses are the remainder. Shinnery oak will increase with an associated decrease in dropseed and bluestem abundance possibly due to climatic change, fire suppression, interspecific competition, and excessive grazing. Continued grass cover loss may result in a transition to a shinnery oak dominated state with increases in sand sage (*Artemisia filifolia*) and honey mesquite (*Prosopis glandulosa*). However, brush management may restore the grassland component and reverse the shinnery oak state back toward the historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram)

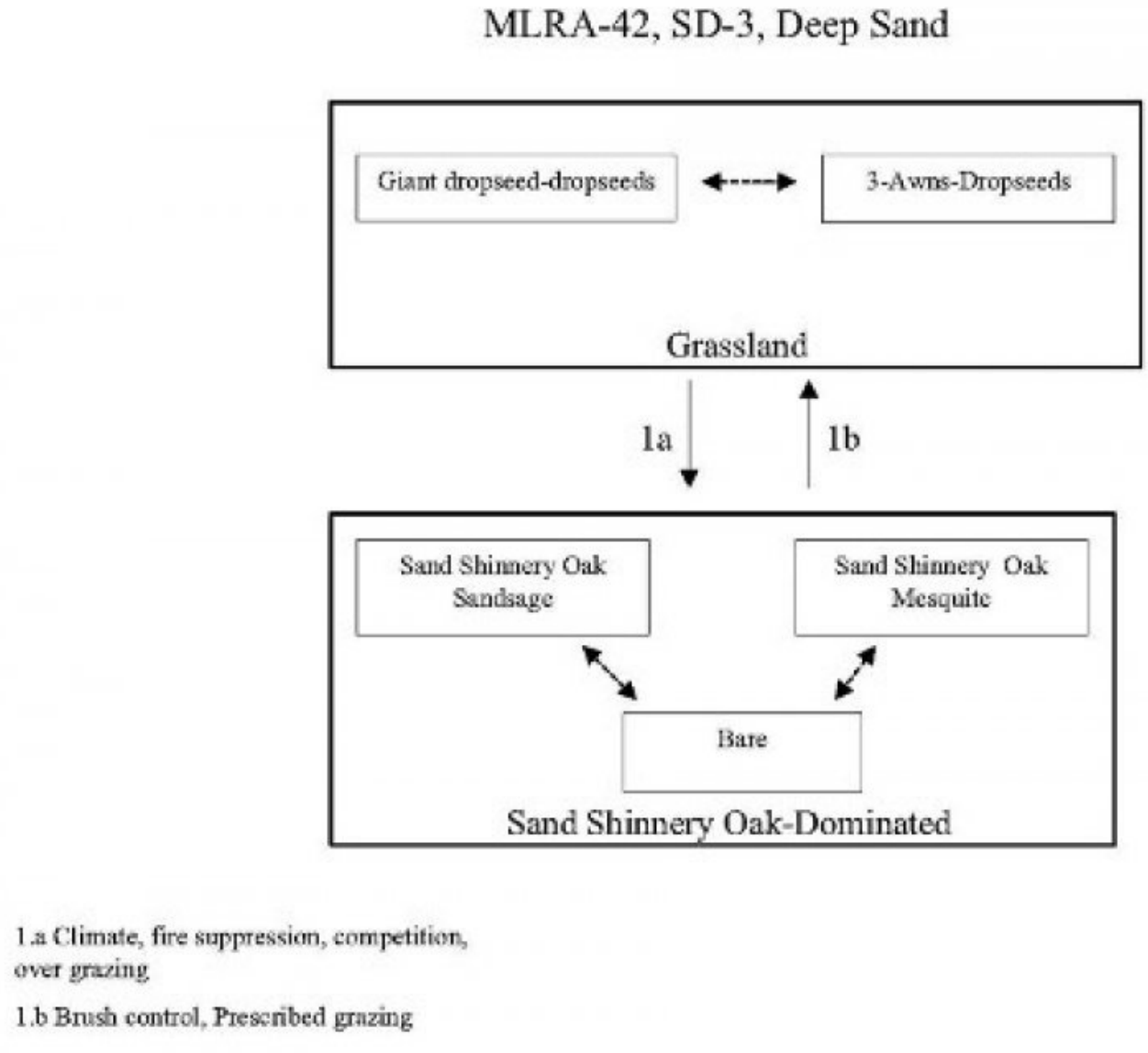


Figure 4.

State 1

Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

State Containing Historic Plant Community Grassland: The historic plant community is dominated by giant dropseed, other dropseeds, threeawns, and bluestems. Dominant woody plants include shinnery oak and soapweed yucca. Forb abundance and distribution varies and is dependent on annual rainfall. The Deep Sand site typically exists in sandy plains and dunes (Sosebee 1983). Grass dominance stabilizes the potentially erosive sandy soils. Historical fire suppression, however, may have contributed to increased woody plant abundance, which has reduced grass species. Further, drought conditions compounded with excessive grazing likely has driven most grass species out of competition with shrubs which has resulted in a shinnery oak dominated state with sand sage and mesquite (Young et al. 1948). Diagnosis: Grassland dominated by dropseeds, threeawns, and bluestems. Small shrubs, such as shinnery oak and soapweed yucca, and subshrubs are dispersed throughout the grassland. Other grasses that could appear on this site would include: flatsedge, almejita signalgrass, big bluestem, Indiangrass, fall witchgrass, hairy grama and red lovegrass Other shrubs include: fourwing saltbush, mesquite, ephedra and broom snakeweed. Other forbs include: wooly and scarlet gaura, wooly dalea, phlox heliotrope, scorpionweed, deerstongue, fleabane, nama, hoffmanseggia, lemon beebalm and stickleaf.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	396	858	1320
Shrub/Vine	108	234	360
Forb	96	208	320
Total	**600**	**1300**	**2000**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-20%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	35-40%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	35-40%

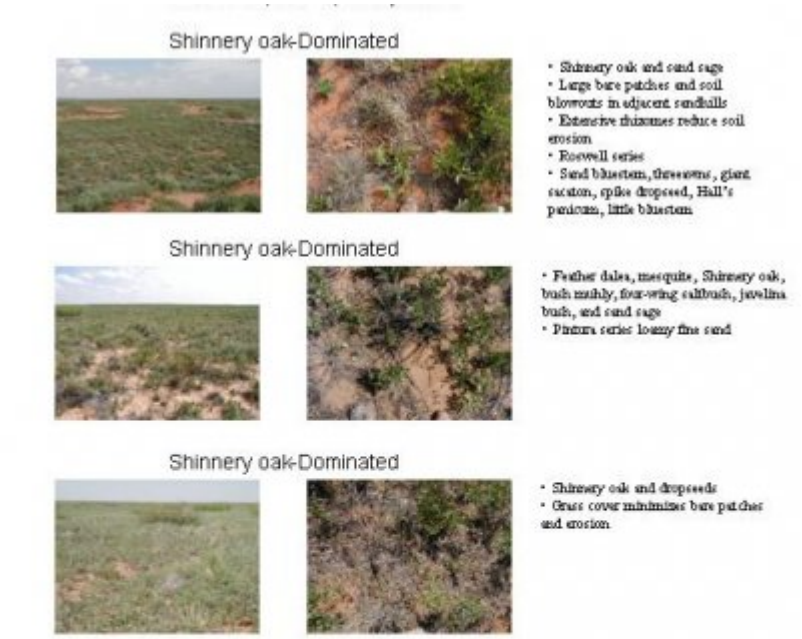
Figure 6. Plant community growth curve (percent production by month). NM2805, HCPC. SD-3 Deep Sand - Warm season plant community .

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
Shinnery Oak Dominated

Community 2.1

Shinnery Oak Dominated



Shinnery Oak Dominated: This state is dominated by shinnery oak with subdominants of sand sage or mesquite. Bare ground is a significant component in this state as well. shinnery oak is characterized by dense stands in sandy soils; however, as clay percentage increases, shinnery oak decreases. Shinnery oak abundance and distribution increase with disturbances, such as excessive grazing and fire, due to an aggressive rhizome system. As shinnery oak abundance increases, an associated increase of mesquite, sand sage, and soapweed yucca also occurs. Shinnery oak's extensive root system allows the oak to competitively exclude grasses and forbs. Sand sage, however, stabilizes light sandy soils from wind erosion and can co-exist with herbaceous species by protecting them in heavily grazed conditions (Davis and Bonham 1979). Shinnery oak has been found primarily in very deep, excessively drained, and rapidly permeable soils. Shinnery oak is associated with landforms which are gently undulating to rolling uplands, very gently sloping to moderately steep slopes, and upland plains, alluvial fans and valley sideslopes. Shinnery oak and sand sage can be controlled with herbicide if applied in the spring with a subsequent rest from grazing (Herbel et al. 1979, Pettit 1986). In addition, repetitive seasons of goat browsing can also reduce shinnery oak abundance. Patches should be maintained during brush control, however, to prevent erosion and to provide wildlife cover and forage. Further, as shinnery oak and other shrubs increase, bare patches and erosion will increase due to a lack of herbaceous ground cover. Diagnosis: Shinnery oak dominated with subdominant sand sage, honey mesquite, and soapweed yucca with increasing frequency and size of bare patches. Transition to Shinnery oak dominated state (1a): The historic plant community begins to shift toward the shinnery oak dominated state as drivers such as climate change, 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 an increase of shrub species abundance and bare patch expansion. Key indicators of approach to transition: • Loss of grass and forb cover • Surface soil erosion • Bare patch expansion • Increased shrub species abundance and composition Transition to Historic Plant Community (1b): The shinnery oak dominated state may transition back toward the historic plant community as new drivers are introduced such as prescribed grazing, brush control, and discontinued drought conditions.

Additional community tables

Table 7. Community 1.1 plant community composition

				Annual Production	Foliar Cover

Group	Common Name	Symbol	Scientific Name	(Lb/Acre)	(%)
Grass/Grasslike					
1	**Warm Season**			450–585	
	spike dropseed	SPCO4	*Sporobolus contractus*	450–585	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	450–585	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	450–585	–
	giant dropseed	SPGI	*Sporobolus giganteus*	450–585	–
2	**Warm Season**			65–104	
	sand bluestem	ANHA	*Andropogon hallii*	65–104	–
	little bluestem	SCSC	*Schizachyrium scoparium*	65–104	–
3	**Warm Season**			39–91	
	threeawn	ARIST	*Aristida*	39–91	–
4	**Warm Season**			13–39	
	thin paspalum	PASE5	*Paspalum setaceum*	13–39	–
5	**Warm Season**			13–39	
	black grama	BOER4	*Bouteloua eriopoda*	13–39	–
6	**Warm Season**			13–39	
	mat sandbur	CELO3	*Cenchrus longispinus*	13–39	–
7	**Warm Season**			13–39	
	Havard's panicgrass	PAHA2	*Panicum havardii*	13–39	–
8	**Warm Season**			13–65	
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	13–65	–
9	**Other Annual Grasses**			13–65	
	Grass, annual	2GA	*Grass, annual*	13–65	–
Shrub/Vine					
10	**Shrub**			65–130	
	Havard oak	QUHA3	*Quercus havardii*	65–130	–
11	**Shrub**			13–39	
	sand sagebrush	ARFI2	*Artemisia filifolia*	13–39	–
12	**Shrub**			65–130	
	yucca	YUCCA	*Yucca*	65–130	–
13	**Shrub**			13–39	
	rabbitbrush	CHRYS9	*Chrysothamnus*	13–39	–
14	**Other Shrubs**			13–39	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	13–39	–
Forb					
15	**Forb**			39–91	
	croton	CROTO	*Croton*	39–91	–
	Indian blanket	GAPU	*Gaillardia pulchella*	39–91	–
16	**Forb**			39–91	
	aster	ASTER	*Aster*	39–91	–
	whitest evening primrose	OEAL	*Oenothera albicaulis*	39–91	–
	beardtongue	PENST	*Penstemon*	39–91	–
17	**Forb**			39–91	

	touristplant	DIWI2	*Dimorphocarpa wislizeni*	39–91	–
	buckwheat	ERIOG	*Eriogonum*	39–91	–
	sunflower	HELIA3	*Helianthus*	39–91	–
	spiny false fiddleleaf	HYSP	*Hydrolea spinosa*	39–91	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	39–91	–
18	**Other Forbs**			13–65	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	13–65	–

Animal community

This site provides habitat which supports a resident animal population characterized by pronghorn, antelope, black-tailed jackrabbit, spotted ground squirrel, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, meadowlark, roadrunner, white-necked raven, cactus wren, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake and ornate box turtle. In the area called Mescalero Sands, there are white-tailed and mule deer.

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
Anthony B
Bluepoint A
Kermit A
Aguena A
Likes A
Pintura A

Recreational uses

This site offers limited recreation potential for hiking, horseback riding, nature observation and photography; game bird, predator, antelope, and deer hunting.

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 during all seasons of the year. Shinnery oak is toxic in the late bud or early leaf stage. Shinnery oak will increase, as will sand sagebrush following drought. Changes in the fire return interval have also favored an increase in shrub cover. The dropseeds and bluestem will decrease. This site responds very well to brush manangement and deferment. This site is well suited to a grazing system that rotates the season of use. Nesting habitat for lesser prairie chicken can be improved by providing residual cover that is at least 14 inches high.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM
100 - 76 2.0 – 3.8

75 – 51 3.0 – 6.0
50 – 26 5.0 – 10.0
25 – 0 10.1 +

Inventory data references

Other 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

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.

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.

Sosebee, Ronald E. 1983. Physiological, phenological, and environmental considerations in brush and weed control. In: McDaniel, Kirk C., ed. Proceedings--brush management symposium; 1983 February 16; Albuquerque, NM. Denver, CO: Society for Range Management: 27-43.

Young, Vernon A., Anderwald, Frank R.,McCully, Wayne G. 1948. Brush problems on Texas ranges. Miscellaneous Publication 21. College Station, TX: Texas Agricultural Experiment Station. 19 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):**

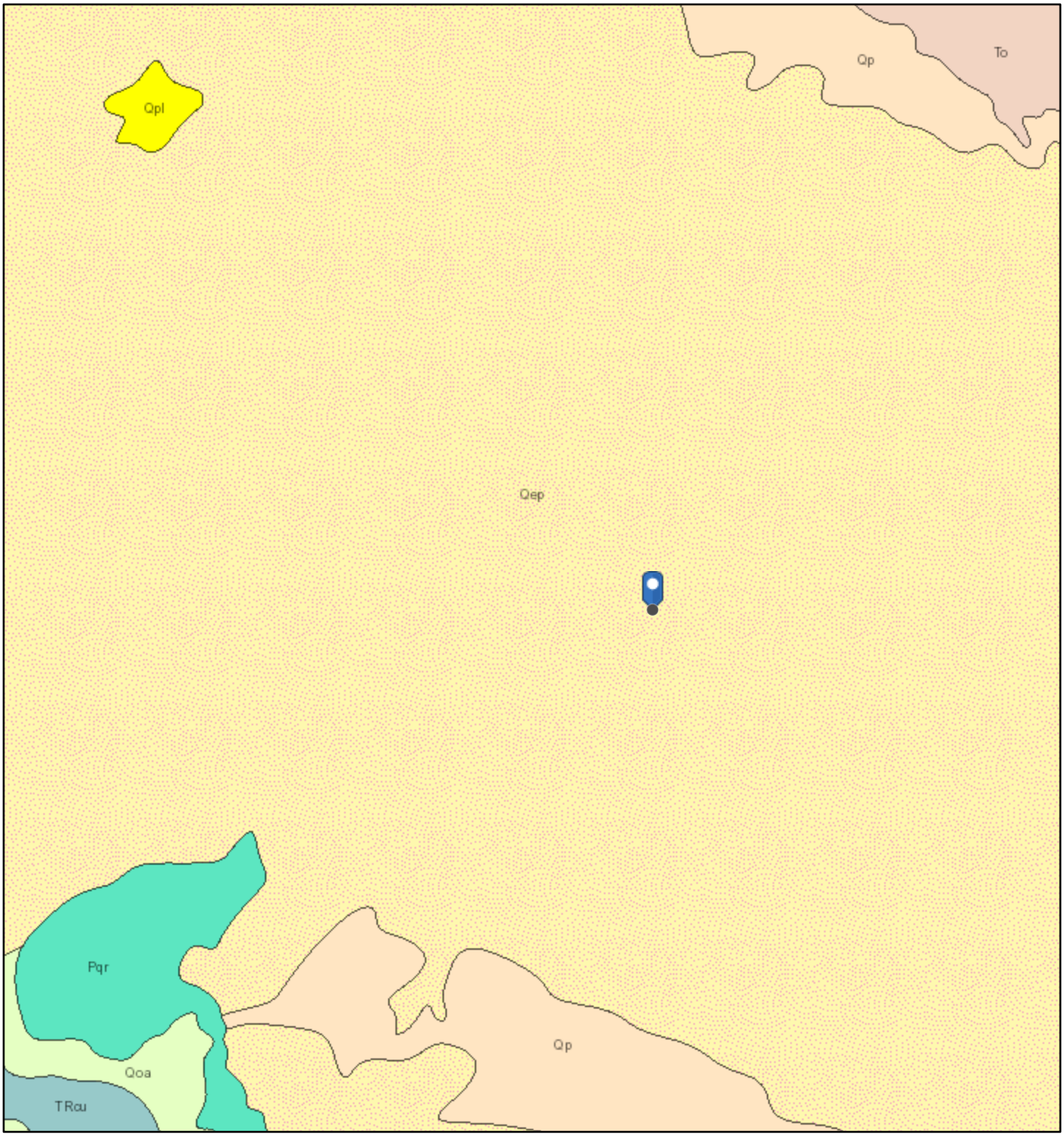
---

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:**

Hudson 11 Federal #002



11/10/2022, 2:06:45 PM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perenial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)

Esri, NASA, NGA, USGS, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data;

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National

ATTACHMENT 6

Monica Peppin

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: November 17, 2022 7:10 AM
To: CFO_Spill, BLM_NM; Enviro, OCD, EMNRD
Cc: Monica Peppin; Arsenio Jones; Clinton Talley; Casey Snow
Subject: 48 HR Confirmation Sample Notification Hudson 11 Fed 2

All,

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

nAPP2231370856 DOR: 11/9/2022 Site Name: Hudson 11 Federal #002

This work will be completed on behalf of Matador Production Company

On Monday, November 21 through Wednesday November 23, 2022, at approximately 8:00 a.m., McKitric Wier will be on site to conduct confirmatory sampling. He can be reached at 575-361-9639. 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 575-361-9880.

Thank you,

Monica Peppin, A.S.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 Ext. 711
C 575.361.9880
F

www.vertex.ca

ATTACHMENT 7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 07, 2022

Monica Peppin

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Hudson 11 Federal 002 OrderNo.: 2211D96

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 28 sample(s) on 11/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-01 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:00:00 AM
Lab ID: 2211D96-001 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 5:56:40 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2022 5:56:40 PM
Surr: DNOP	132	21-129	S	%Rec	1	12/1/2022 5:56:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2022 6:50:01 PM
Surr: BFB	89.4	37.7-212		%Rec	1	12/1/2022 6:50:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/1/2022 6:50:01 PM
Toluene	ND	0.048		mg/Kg	1	12/1/2022 6:50:01 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2022 6:50:01 PM
Xylenes, Total	ND	0.096		mg/Kg	1	12/1/2022 6:50:01 PM
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	12/1/2022 6:50:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 3:35:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-02 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:10:00 AM
Lab ID: 2211D96-002 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/1/2022 6:37:17 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/1/2022 6:37:17 PM
Surr: DNOP	98.3	21-129		%Rec	1	12/1/2022 6:37:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2022 8:00:39 PM
Surr: BFB	90.1	37.7-212		%Rec	1	12/1/2022 8:00:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/1/2022 8:00:39 PM
Toluene	ND	0.048		mg/Kg	1	12/1/2022 8:00:39 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2022 8:00:39 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/1/2022 8:00:39 PM
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	12/1/2022 8:00:39 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	430	60		mg/Kg	20	12/5/2022 3:47:51 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-03 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:20:00 AM
Lab ID: 2211D96-003 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/5/2022 9:32:00 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/5/2022 9:32:00 AM
Surr: DNOP	107	21-129		%Rec	1	12/5/2022 9:32:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2022 9:11:01 PM
Surr: BFB	91.4	37.7-212		%Rec	1	12/1/2022 9:11:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 9:11:01 PM
Toluene	ND	0.050		mg/Kg	1	12/1/2022 9:11:01 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2022 9:11:01 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/1/2022 9:11:01 PM
Surr: 4-Bromofluorobenzene	92.6	70-130		%Rec	1	12/1/2022 9:11:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	61		mg/Kg	20	12/5/2022 4:00:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-04 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:30:00 AM
Lab ID: 2211D96-004 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/1/2022 7:04:04 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/1/2022 7:04:04 PM
Surr: DNOP	95.9	21-129		%Rec	1	12/1/2022 7:04:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2022 10:21:42 PM
Surr: BFB	89.0	37.7-212		%Rec	1	12/1/2022 10:21:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 10:21:42 PM
Toluene	ND	0.050		mg/Kg	1	12/1/2022 10:21:42 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2022 10:21:42 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2022 10:21:42 PM
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	12/1/2022 10:21:42 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	200	60		mg/Kg	20	12/5/2022 4:12:41 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-05 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:40:00 AM
Lab ID: 2211D96-005 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/5/2022 9:55:38 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/5/2022 9:55:38 AM
Surr: DNOP	115	21-129		%Rec	1	12/5/2022 9:55:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2022 10:45:14 PM
Surr: BFB	91.2	37.7-212		%Rec	1	12/1/2022 10:45:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 10:45:14 PM
Toluene	ND	0.050		mg/Kg	1	12/1/2022 10:45:14 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2022 10:45:14 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2022 10:45:14 PM
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	12/1/2022 10:45:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	200	60		mg/Kg	20	12/5/2022 4:25:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-06 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 10:50:00 AM
Lab ID: 2211D96-006 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 7:30:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/1/2022 7:30:52 PM
Surr: DNOP	101	21-129		%Rec	1	12/1/2022 7:30:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2022 11:08:50 PM
Surr: BFB	91.7	37.7-212		%Rec	1	12/1/2022 11:08:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 11:08:50 PM
Toluene	ND	0.050		mg/Kg	1	12/1/2022 11:08:50 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2022 11:08:50 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/1/2022 11:08:50 PM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	12/1/2022 11:08:50 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	170	60		mg/Kg	20	12/5/2022 4:37:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-07 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:00:00 AM
Lab ID: 2211D96-007 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/1/2022 7:44:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/1/2022 7:44:14 PM
Surr: DNOP	99.7	21-129		%Rec	1	12/1/2022 7:44:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2022 11:32:19 PM
Surr: BFB	91.5	37.7-212		%Rec	1	12/1/2022 11:32:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 11:32:19 PM
Toluene	ND	0.050		mg/Kg	1	12/1/2022 11:32:19 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2022 11:32:19 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2022 11:32:19 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	12/1/2022 11:32:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	120	60		mg/Kg	20	12/5/2022 4:49:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-08 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:10:00 AM
Lab ID: 2211D96-008 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 7:57:30 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2022 7:57:30 PM
Surr: DNOP	127	21-129		%Rec	1	12/1/2022 7:57:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/1/2022 11:55:54 PM
Surr: BFB	90.7	37.7-212		%Rec	1	12/1/2022 11:55:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/1/2022 11:55:54 PM
Toluene	ND	0.049		mg/Kg	1	12/1/2022 11:55:54 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2022 11:55:54 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/1/2022 11:55:54 PM
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	12/1/2022 11:55:54 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	68	60		mg/Kg	20	12/5/2022 5:51:59 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-09 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:20:00 AM
Lab ID: 2211D96-009 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 8:24:01 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2022 8:24:01 PM
Surr: DNOP	133	21-129	S	%Rec	1	12/1/2022 8:24:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 12:19:31 AM
Surr: BFB	93.3	37.7-212		%Rec	1	12/2/2022 12:19:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 12:19:31 AM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 12:19:31 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 12:19:31 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 12:19:31 AM
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	12/2/2022 12:19:31 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 6:29:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-10 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:30:00 AM
Lab ID: 2211D96-010 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/1/2022 8:37:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2022 8:37:14 PM
Surr: DNOP	104	21-129		%Rec	1	12/1/2022 8:37:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 12:43:06 AM
Surr: BFB	89.7	37.7-212		%Rec	1	12/2/2022 12:43:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 12:43:06 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 12:43:06 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 12:43:06 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/2/2022 12:43:06 AM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	12/2/2022 12:43:06 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	230	60		mg/Kg	20	12/5/2022 7:06:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-11 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:40:00 AM
Lab ID: 2211D96-011 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 8:50:45 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2022 8:50:45 PM
Surr: DNOP	118	21-129		%Rec	1	12/1/2022 8:50:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 1:06:34 AM
Surr: BFB	90.1	37.7-212		%Rec	1	12/2/2022 1:06:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 1:06:34 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 1:06:34 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 1:06:34 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/2/2022 1:06:34 AM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	12/2/2022 1:06:34 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	210	60		mg/Kg	20	12/5/2022 7:18:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-12 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 11:50:00 AM
Lab ID: 2211D96-012 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 9:04:54 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2022 9:04:54 PM
Surr: DNOP	108	21-129		%Rec	1	12/1/2022 9:04:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 1:30:07 AM
Surr: BFB	90.0	37.7-212		%Rec	1	12/2/2022 1:30:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 1:30:07 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 1:30:07 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 1:30:07 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 1:30:07 AM
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	12/2/2022 1:30:07 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	400	60		mg/Kg	20	12/5/2022 7:31:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-13 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:00:00 PM
Lab ID: 2211D96-013 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 9:18:31 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/1/2022 9:18:31 PM
Surr: DNOP	112	21-129		%Rec	1	12/1/2022 9:18:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 1:53:40 AM
Surr: BFB	91.2	37.7-212		%Rec	1	12/2/2022 1:53:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 1:53:40 AM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 1:53:40 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 1:53:40 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/2/2022 1:53:40 AM
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	12/2/2022 1:53:40 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	130	60		mg/Kg	20	12/5/2022 7:43:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-14 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:10:00 PM
Lab ID: 2211D96-014 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/1/2022 9:32:25 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2022 9:32:25 PM
Surr: DNOP	105	21-129		%Rec	1	12/1/2022 9:32:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 2:40:41 AM
Surr: BFB	90.6	37.7-212		%Rec	1	12/2/2022 2:40:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 2:40:41 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 2:40:41 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 2:40:41 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 2:40:41 AM
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	12/2/2022 2:40:41 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	120	60		mg/Kg	20	12/5/2022 8:20:56 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-15 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:20:00 PM
Lab ID: 2211D96-015 **Matrix:** SOIL **Received Date:** 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 9:46:29 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2022 9:46:29 PM
Surr: DNOP	102	21-129		%Rec	1	12/1/2022 9:46:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 3:04:15 AM
Surr: BFB	90.7	37.7-212		%Rec	1	12/2/2022 3:04:15 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 3:04:15 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 3:04:15 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 3:04:15 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/2/2022 3:04:15 AM
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	12/2/2022 3:04:15 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	240	61		mg/Kg	20	12/5/2022 8:33:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-16 1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:30:00 PM
Lab ID: 2211D96-016 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 10:00:32 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2022 10:00:32 PM
Surr: DNOP	110	21-129		%Rec	1	12/1/2022 10:00:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 3:27:48 AM
Surr: BFB	91.7	37.7-212		%Rec	1	12/2/2022 3:27:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 3:27:48 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 3:27:48 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 3:27:48 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/2/2022 3:27:48 AM
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	12/2/2022 3:27:48 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	220	61		mg/Kg	20	12/5/2022 8:45:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-17 3'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:40:00 PM
Lab ID: 2211D96-017 **Matrix:** SOIL **Received Date:** 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/1/2022 10:14:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2022 10:14:36 PM
Surr: DNOP	115	21-129		%Rec	1	12/1/2022 10:14:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 3:51:18 AM
Surr: BFB	90.0	37.7-212		%Rec	1	12/2/2022 3:51:18 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 3:51:18 AM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 3:51:18 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 3:51:18 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 3:51:18 AM
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	1	12/2/2022 3:51:18 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 8:58:10 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-18 3'
Project: Hudson 11 Federal 002
Collection Date: 11/21/2022 12:50:00 PM
Lab ID: 2211D96-018 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/1/2022 10:28:28 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2022 10:28:28 PM
Surr: DNOP	120	21-129		%Rec	1	12/1/2022 10:28:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/2/2022 4:14:53 AM
Surr: BFB	90.7	37.7-212		%Rec	1	12/2/2022 4:14:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 4:14:53 AM
Toluene	ND	0.050		mg/Kg	1	12/2/2022 4:14:53 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/2/2022 4:14:53 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 4:14:53 AM
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	12/2/2022 4:14:53 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 9:10:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-01 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:00:00 AM
Lab ID: 2211D96-019 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/1/2022 10:42:03 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/1/2022 10:42:03 PM
Surr: DNOP	119	21-129		%Rec	1	12/1/2022 10:42:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 4:38:25 AM
Surr: BFB	89.4	37.7-212		%Rec	1	12/2/2022 4:38:25 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 4:38:25 AM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 4:38:25 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 4:38:25 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 4:38:25 AM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	12/2/2022 4:38:25 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 9:22:59 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-02 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:10:00 AM
Lab ID: 2211D96-020 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/1/2022 10:55:46 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/1/2022 10:55:46 PM
Surr: DNOP	111	21-129		%Rec	1	12/1/2022 10:55:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 5:02:01 AM
Surr: BFB	90.6	37.7-212		%Rec	1	12/2/2022 5:02:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 5:02:01 AM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 5:02:01 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 5:02:01 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/2/2022 5:02:01 AM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	12/2/2022 5:02:01 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 9:35:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-03 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:20:00 AM
Lab ID: 2211D96-021 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/3/2022 5:29:29 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/3/2022 5:29:29 AM
Surr: DNOP	115	21-129		%Rec	1	12/3/2022 5:29:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2022 12:13:00 PM
Surr: BFB	94.4	37.7-212		%Rec	1	12/1/2022 12:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	12/2/2022 9:42:00 PM
Toluene	ND	0.048		mg/Kg	1	12/2/2022 9:42:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/2/2022 9:42:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/2/2022 9:42:00 PM
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	12/2/2022 9:42:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	61		mg/Kg	20	12/5/2022 9:47:49 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-04 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:30:00 AM
Lab ID: 2211D96-022 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/3/2022 5:42:35 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/3/2022 5:42:35 AM
Surr: DNOP	125	21-129		%Rec	1	12/3/2022 5:42:35 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2022 1:13:00 PM
Surr: BFB	94.1	37.7-212		%Rec	1	12/1/2022 1:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	12/2/2022 10:02:00 PM
Toluene	ND	0.047		mg/Kg	1	12/2/2022 10:02:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	12/2/2022 10:02:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	12/2/2022 10:02:00 PM
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	12/2/2022 10:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 10:00:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-05 0-3'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:40:00 AM
Lab ID: 2211D96-023 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/3/2022 5:55:52 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/3/2022 5:55:52 AM
Surr: DNOP	106	21-129		%Rec	1	12/3/2022 5:55:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2022 2:12:00 PM
Surr: BFB	97.6	37.7-212		%Rec	1	12/1/2022 2:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	12/2/2022 11:01:00 PM
Toluene	ND	0.047		mg/Kg	1	12/2/2022 11:01:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	12/2/2022 11:01:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	12/2/2022 11:01:00 PM
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	12/2/2022 11:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 10:12:38 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-06 0-3'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 10:50:00 AM
Lab ID: 2211D96-024 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/3/2022 6:09:29 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/3/2022 6:09:29 AM
Surr: DNOP	111	21-129		%Rec	1	12/3/2022 6:09:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2022 2:31:00 PM
Surr: BFB	94.0	37.7-212		%Rec	1	12/1/2022 2:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	12/2/2022 11:20:00 PM
Toluene	ND	0.047		mg/Kg	1	12/2/2022 11:20:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	12/2/2022 11:20:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	12/2/2022 11:20:00 PM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	12/2/2022 11:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 10:49:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-07 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 11:00:00 AM
Lab ID: 2211D96-025 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/3/2022 6:23:24 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/3/2022 6:23:24 AM
Surr: DNOP	113	21-129		%Rec	1	12/3/2022 6:23:24 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/1/2022 2:51:00 PM
Surr: BFB	91.2	37.7-212		%Rec	1	12/1/2022 2:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 11:40:00 PM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 11:40:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 11:40:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/2/2022 11:40:00 PM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	12/2/2022 11:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 11:02:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-08 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 11:10:00 AM
Lab ID: 2211D96-026 **Matrix:** SOIL **Received Date:** 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/3/2022 6:37:28 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/3/2022 6:37:28 AM
Surr: DNOP	126	21-129		%Rec	1	12/3/2022 6:37:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/1/2022 3:11:00 PM
Surr: BFB	93.7	37.7-212		%Rec	1	12/1/2022 3:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	12/3/2022
Toluene	ND	0.046		mg/Kg	1	12/3/2022
Ethylbenzene	ND	0.046		mg/Kg	1	12/3/2022
Xylenes, Total	ND	0.091		mg/Kg	1	12/3/2022
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	12/3/2022
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/5/2022 11:14:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-09 0-1.5'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 11:20:00 AM
Lab ID: 2211D96-027 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/3/2022 6:52:22 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/3/2022 6:52:22 AM
Surr: DNOP	114	21-129		%Rec	1	12/3/2022 6:52:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2022 3:30:00 PM
Surr: BFB	91.6	37.7-212		%Rec	1	12/1/2022 3:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	12/3/2022 12:19:00 AM
Toluene	ND	0.047		mg/Kg	1	12/3/2022 12:19:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	12/3/2022 12:19:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	12/3/2022 12:19:00 AM
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	12/3/2022 12:19:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	61		mg/Kg	20	12/5/2022 11:27:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2211D96**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-10 1.5-3'
Project: Hudson 11 Federal 002
Collection Date: 11/22/2022 11:30:00 AM
Lab ID: 2211D96-028 **Matrix:** SOIL
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/3/2022 7:06:11 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/3/2022 7:06:11 AM
Surr: DNOP	126	21-129		%Rec	1	12/3/2022 7:06:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2022 3:50:00 PM
Surr: BFB	99.3	37.7-212		%Rec	1	12/1/2022 3:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	12/3/2022 12:39:00 AM
Toluene	ND	0.047		mg/Kg	1	12/3/2022 12:39:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	12/3/2022 12:39:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	12/3/2022 12:39:00 AM
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	12/3/2022 12:39:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	61		mg/Kg	20	12/6/2022 12:04:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **MB-71842** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **71842** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350435** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-71842** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **71842** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350436** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Sample ID: **MB-71858** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **71858** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350466** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-71858** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **71858** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350467** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.9	90	110			

Sample ID: **MB-71860** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **71860** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350498** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-71860** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **71860** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350499** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **MB-71813**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **71813**	RunNo: **92982**							
Prep Date: **12/2/2022**	Analysis Date: **12/2/2022**	SeqNo: **3348099**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.3	21	129			

Sample ID: **LCS-71813**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **71813**	RunNo: **92982**							
Prep Date: **12/2/2022**	Analysis Date: **12/2/2022**	SeqNo: **3348100**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.2	21	129			

Sample ID: **MB-71783**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **71783**	RunNo: **93000**							
Prep Date: **11/30/2022**	Analysis Date: **12/1/2022**	SeqNo: **3348734**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		116	21	129			

Sample ID: **LCS-71783**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **71783**	RunNo: **93000**							
Prep Date: **11/30/2022**	Analysis Date: **12/1/2022**	SeqNo: **3348735**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	15	50.00	0	109	64.4	127			
Surr: DNOP	5.9		5.000		117	21	129			

Sample ID: **2211D96-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BS22-01 1.5'**	Batch ID: **71783**	RunNo: **93000**							
Prep Date: **11/30/2022**	Analysis Date: **12/1/2022**	SeqNo: **3348737**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	15	48.59	0	112	36.1	154			
Surr: DNOP	5.5		4.859		114	21	129			

Sample ID: **2211D96-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BS22-01 1.5'**	Batch ID: **71783**	RunNo: **93000**							
Prep Date: **11/30/2022**	Analysis Date: **12/1/2022**	SeqNo: **3348738**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	14	46.73	0	112	36.1	154	3.60	33.9	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **2211D96-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BS22-01 1.5'** Batch ID: **71783** RunNo: **93000**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3348738** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		4.673		116	21	129	0	0	

Sample ID: **MB-71809** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **71809** RunNo: **92982**
Prep Date: **12/1/2022** Analysis Date: **12/3/2022** SeqNo: **3349706** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		105	21	129			

Sample ID: **LCS-71809** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **71809** RunNo: **92982**
Prep Date: **12/1/2022** Analysis Date: **12/3/2022** SeqNo: **3349707** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	95.5	64.4	127			
Surr: DNOP	5.0		5.000		99.1	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **mb-71769** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346938** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		89.8	37.7	212			

Sample ID: **lcs-71769** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346939** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.3	72.3	137			
Surr: BFB	1800		1000		184	37.7	212			

Sample ID: **2211d96-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BS22-01 1.5'** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346941** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.15	0	102	70	130			
Surr: BFB	1900		966.2		198	37.7	212			

Sample ID: **2211d96-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BS22-01 1.5'** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346942** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.08	0	99.4	70	130	3.15	20	
Surr: BFB	1900		963.4		198	37.7	212	0	0	

Sample ID: **lcs-71774** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **71774** RunNo: **92967**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3347464** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.8	72.3	137			
Surr: BFB	2100		1000		205	37.7	212			

Sample ID: **mb-71774** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **71774** RunNo: **92967**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3347465** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **mb-71774** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **71774** RunNo: **92967**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3347465** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.4	37.7	212			

Sample ID: **2211D96-021ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-03 0-1.5'** Batch ID: **71774** RunNo: **92967**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3347467** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	23.83	0	93.8	70	130			
Surr: BFB	2000		953.3		213	37.7	212			S

Sample ID: **2211D96-021amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-03 0-1.5'** Batch ID: **71774** RunNo: **92967**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3347468** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	23.83	0	92.7	70	130	1.20	20	
Surr: BFB	2000		953.3		214	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **mb-71769** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346984** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	70	130			

Sample ID: **LCS-71769** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346985** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.0	80	120			
Toluene	0.98	0.050	1.000	0	97.8	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.2	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		92.7	70	130			

Sample ID: **2211d96-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-02 1.5'** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346988** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.024	0.9747	0	98.7	68.8	120			
Toluene	0.99	0.049	0.9747	0	102	73.6	124			
Ethylbenzene	1.0	0.049	0.9747	0	103	72.7	129			
Xylenes, Total	3.0	0.097	2.924	0.01795	103	75.7	126			
Surr: 4-Bromofluorobenzene	0.91		0.9747		93.6	70	130			

Sample ID: **2211d96-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-02 1.5'** Batch ID: **71769** RunNo: **92955**
Prep Date: **11/30/2022** Analysis Date: **12/1/2022** SeqNo: **3346989** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.024	0.9625	0	101	68.8	120	1.00	20	
Toluene	1.0	0.048	0.9625	0	104	73.6	124	0.416	20	
Ethylbenzene	1.0	0.048	0.9625	0	104	72.7	129	0.369	20	
Xylenes, Total	3.0	0.096	2.887	0.01795	103	75.7	126	0.817	20	
Surr: 4-Bromofluorobenzene	0.90		0.9625		93.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211D96**
07-Dec-22

Client: Vertex Resources Services, Inc.
Project: Hudson 11 Federal 002

Sample ID: **lcs-71774**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **71774**	RunNo: **93006**
Prep Date: **11/30/2022**	Analysis Date: **12/2/2022**	SeqNo: **3349376** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.1	80	120			
Toluene	0.97	0.050	1.000	0	97.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.6	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.5	70	130			

Sample ID: **mb-71774**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **71774**	RunNo: **93006**
Prep Date: **11/30/2022**	Analysis Date: **12/2/2022**	SeqNo: **3349377** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	70	130			

Sample ID: **2211D96-022ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WS22-04 0-1.5'**	Batch ID: **71774**	RunNo: **93006**
Prep Date: **11/30/2022**	Analysis Date: **12/2/2022**	SeqNo: **3349380** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9381	0	96.5	68.8	120			
Toluene	0.91	0.047	0.9381	0	97.3	73.6	124			
Ethylbenzene	0.91	0.047	0.9381	0	96.8	72.7	129			
Xylenes, Total	2.7	0.094	2.814	0	96.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.93		0.9381		98.8	70	130			

Sample ID: **2211D96-022amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WS22-04 0-1.5'**	Batch ID: **71774**	RunNo: **93006**
Prep Date: **11/30/2022**	Analysis Date: **12/2/2022**	SeqNo: **3349381** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9434	0	97.5	68.8	120	1.58	20	
Toluene	0.94	0.047	0.9434	0	99.5	73.6	124	2.79	20	
Ethylbenzene	0.93	0.047	0.9434	0	99.1	72.7	129	2.85	20	
Xylenes, Total	2.8	0.094	2.830	0	98.8	75.7	126	2.85	20	
Surr: 4-Bromofluorobenzene	0.91		0.9434		96.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2211D96

RcptNo: 1

Received By: Juan Rojas 11/29/2022 7:25:00 AM

Completed By: Tracy Casarrubias 11/29/2022 8:59:06 AM

Reviewed By: JN 11/29/22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?			

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JN 11-29-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: Vertex

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name:
Hudson 11 Federal #002

Project #:
22E-03903

Project Manager:
Monica Peppin

Sampler: M. Wier

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.3+0.1=1.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211D96	(BTEX) MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/21	10:00	Soil	BS22-01 1.5'	4oz	ice	001	✓	✓					✓			
	10:10		BS22-02 1.5'			002										
	10:20		BS22-03 1.5'			003										
	10:30		BS22-04 1.5'			004										
	10:40		BS22-05 1.5'			005										
	10:50		BS22-06 1.5'			006										
	11:00		BS22-07 1.5'			007										
	11:10		BS22-08 1.5'			008										
	11:20		BS22-09 1.5'			009										
	11:30		BS22-10 1.5'			010										
	11:40		BS22-11 1.5'			011										
	11:50		BS22-12 1.5'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/28/22	1100
11/28/22	1900			courier	11/29/22	7:25

Remarks: Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Vertex

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush 5 Day

Project Name: Hudson 11 Federal #002

Project #: 22E-03903

Project Manager: Monica Peppin

Sampler: M. Wier

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.3+0.1=1.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211096	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/21	12:00	Soil	BS22-13 1.5'	4 oz	ice	013	✓	✓					✓			
	12:10		BS22-14 1.5'			014										
	12:20		BS22-15 1.5'			015										
	12:30		BS22-16 1.5'			016										
	12:40		BS22-17 3'			017										
	12:50		BS22-18 3'			018										
11/22	10:00		WS22-01 0-1.5'			019										
	10:10		WS22-02 0-1.5'			020										
	10:20		WS22-03 0-1.5'			021										
	10:30		WS22-04 0-1.5'			022										
	10:40		WS22-05 0-3'			023										
	10:50		WS22-06 0-3'			024										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/28/22	1100
11/28/22	1900		courier		11/29/22	7:25

Remarks: Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Vertex

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Hudson 11 Federal #002

Project #: 22E-03903

Project Manager: Monica Peppin

Sampler: M. Wiles

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.3+0.1 = 1.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211096	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/22	11:00	Soil	WS22-07 0-1.5	4oz	ice	025	✓	✓					✓			
"	11:10	"	WS22-08 0-1.5	"	"	026	"	"					"			
"	11:20	"	WS22-09 0-1.5	"	"	027	"	"					"			
"	11:30	"	WS22-10 1.5-3	"	"	028	"	"					"			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/28/22	1100
Date: 11/28/22	Time: 1900	Relinquished by:	Received by:	Via:	Date	Time
				carrier	11/29/22	7:25

Remarks: Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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 175465

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 175465
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2231370856 HUDSON 11 FEDERAL #002, thank you. This closure is approved.	4/13/2023