Soil Type	Porosity	Length	Width	Depth (.083 per inch)	Cubic Feet	Estimated Barrels	Soil Type
Clay	0.15	10	10	0.083	8.3	0.22	Clay
Peat	0.40	10	10	0.083	8.3	0.59	Peat
Glacial Sediments	0.13	10	10	0.083	8.3	0.19	Glacial Sediments
Sandy Clay	0.12	10	10	0.083	8.3	0.18	Sandy Clay
Silt	0.16	10	10	0.083	8.3	0.24	Silt
Loess	0.25	10	10	0.083	8.3	0.37	Loess
Fine Sand	0.16	10	10	0.083	8.3	0.24	Fine Sand
Medium Sand	0.25	100	20	0.083	166	7.40	Medium Sand
Coarse Sand	0.26	10	10	0.083	8.3	0.38	Coarse Sand
Gravely Sand	0.26	10	10	0.083	8.3	0.38	Gravely Sand
Fine Gravel	0.26	10	10	0.083	8.3	0.38	Fine Gravel
Medium Gravel	0.20	10	10	0.083	8.3	0.30	Medium Gravel
Coarse Gravel	0.18	10	10	0.083	8.3	0.27	Coarse Gravel
Sandstone	0.25	10	10	0.083	8.3	0.37	Sandstone
Siltstone	0.18	10	10	0.083	8.3	0.27	Siltstone
Shale	0.05	10	10	0.083	8.3	0.07	Shale
Limestone	0.13	10	10	0.083	8.3	0.19	Limestone
Basalt	0.19	10	10	0.083	8.3	0.28	Basalt
Volcanic Tuff	0.20	10	10	0.083	8.3	0.30	Volcanic Tuff
Standing Liquids	X	10	10	0.083	8.3	1.48	Standing Liquids

1	*2*	*3*	*4*	*5*	*6*
0.083	**0.166**	**0.250**	**0.332**	**0.415**	**0.500**
7	*8*	*9*	*10*	*11*	*12*
0.581	**0.664**	**0.750**	**0.830**	**0.913**	**1.000**

NOTE: This is an **estimate** tool designed for quick field estimates of whether a C-141 should be requred *(I.e. a release is estimated to be greater than or less than 5 barrel volumes)*

Choose the one prevailing ground type for estimating spill volumes at a single location.

Note that the depth should be measured in feet and tenths of feet (1 inch = .083)

Cubic Feet = L x W x D

Estimated Barrels = ((Cubic Feet x Porosity) / 5.61)

Site Ranking score	Depth to ground water (*GW*)		
GW + WPA + SWB =	Less Than 50 feet	50-99 feet	Greater Than 100 feet
	20	**10**	**0**

Remediation Action Levels	Total Ranking Score		
	>19	10 – 19	0 – 9
Benzene (ppm)	10	10	
BTEX (ppm)	50	50	
TPH (ppm)	100	1000	

Contaminated soils must be remediated until the contaminants are to the parts per million listed above.

Other contaminants, not listed, must be remediated to WQCC, EPA, RCRA or other standards for those specific contaminants.

Wellhead protection area (*WPA*)		
Less Than 1000 feet from a water source, or; Less Than 200 feet from private domestic water source		
Yes		No
20		**0**

Distance to nearest surface water body (*SWB*)		
Less Than 200 Horizontal Feet	200-1000 Horizontal Feet	Greater Than 1000 Horizontal Feet
20	**10**	**0**

Contaminant Dileneation by observation

Provide brief label for each area (i.e. wellhead, SE corner, inside berm, pasture, etc.)	Length times Width = Square Feet	Highly Contaminated / Saturated Soils	Unsaturated Contaminated Soils
Area 1_____	Approximate area:	L w sq ft	L w sq ft
Area 2_____	Approximate area:	L w sq ft	L w sq ft
Area 3_____	Approximate area:	L w sq ft	L w sq ft
Area 4_____	Approximate area:	L w sq ft	L w sq ft

Estimate of Volume of impacted Soils and liquid volume

Provide total square feet for each area, multiply by average detph and fill in cubic feet	Square Feet times Average Depth = Cubic Feet **1 inch = 0.083 feet**	Highly Contaminated / Saturated Soils	Unsaturated Contaminated Soils
Area 1: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 2: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 3: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 4: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET

To calculate an estimate of liquid volume released use the following formula

(Note: This formula does not calculate free-standing liquids and is based on unsaturated, contaminated soils. Highly saturated soils may be higher volumes. However, use the sum af all soils that are visibly contaminated, whether saturated or unsaturated to obtain the low-end estimate.)

Square Feet times Average Depth equals Cubic Feet times Porosity divided by 5.61 equals estimated volume (bbl) of spill.

Area No.	Square Feet	X	Average Depth	=	Cubic Feet	X	Porosity	/	5.61	=	Volume (bbl)
1									5.61		bbl
2									5.61		bbl
3									5.61		bbl
4									5.61		bbl

(Note: Releases greater than 5 bbl must be reported using Form C-141) ***Total Estimated Volume*** =

Example	*300*	*0.5 (6 inches)*	*150*	*0.2*	*5.61*	*5.35 bbl*

Soil Types & Porosity Values:

High Clay Content Soils = 0.15 | Silty Soils and Fine Sand = 0.16 | Sand/Sandy Soils = 0.26 | Gravel = 0.26 | Rocky Soils = 0.4

Areas on a well maintained, hard packed caliche location should use porosity value of 0.18.

Use only one value for the predominate soil type in each area. Local variations may apply (sinkholes, crevices, caves, steep slope…)

You are encouraged to use the OCD publication entitled "Remediation of Leaks, Spills and Releases" as a guide during remediation operations. This guide contains a full discussion of site assessment and required remediation action levels and can be found on the OCD website at http://www.emnrd.state.nm.us/emnrd/ocd/EH-MiscGuidelines.htm

Soil	Dry Bulk Density	Total Porosity	Effective Porosity
Clay	1.00-2.40	0.34-0.60	0.01-0.2
Peat	x	x	0.3-0.5
Glacial Sediments	1.15-2.10	x	0.05-0.2
Sandy Clay	x	x	0.03-0.2
Silt	x	0.34-0.61	0.01-0.3
Loess	0.75-1.60	x	0.15-0.35
Fine Sand	1.37-1.81	0.26-0.53	0.01-0.3
Medium Sand	1.37-1.81	x	0.15-0.3
Coarse Sand	1.37-1.81	0.31-0.46	0.2-0.35
Gravely Sand	1.37-1.81	x	0.2-0.35
Fine Gravel	1.36-2.19	0.25-0.38	0.2-0.35
Medium Gravel	1.36-2.19	x	0.15-0.25
Coarse Gravel	1.36-2.19	0.24-0.36	0.1-0.25
Sandstone	1.60-2.68	0.05-0.30	0.1-0.4
Sitstone	x	0.21-0.41	0.01-0.35
Shale	1.54-3.17	0.0-0.10	x
Limestone	1.74-2.79	0.0-0.50	0.01-0.24
Granite	2.24-2.46	x	x
Basalt	2.00-2.70	0.03-0.35	x
Volcanic Tuff	x	x	0.02-0.35

OREGON STATE #1
CLOSURE REQUEST

API NO. 30-025-40882
Unit Letter M, Section 18, Township 18 South, Range 37 East
LEA COUNTY, NEW MEXICO

DATE OF RELEASE: 01/04/2022
INCIDENT NO. NAPP2200543737

1/22/25
Prepared by:

2724 NW COUNTY ROAD
HOBBS, NM 88240

January 22, 2025

State of New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division – District II
C/O Mike Bratcher, Robert Hamlet & Jennifer Nobui
811 S. First Street
Artesia, NM 88210

Mack Energy Corporation
11344 Lovington Hwy
Artesia, NM 88210

Subject: Closure Request for Mack Energy Corporation – Oregon State #1

API No. 30-025-40882
Incident No. NAPP2200543737
U/L M, Section 18, Township 18 South, Range 37 East
Lea County, New Mexico

To Whom it May Concern:

Mack Energy Corporation retained Energy Staffing Services, LLC (ESS) to conduct a spill assessment for the Oregon State #1 (hereafter referred to as the "Oregon") for an oil release that occurred on January 4th, 2022. On January 5th, ESS provided the immediate notification of the release to the New Mexico Oil Conservation Division (NMOCD), District II Office, via email at 11:55 AM. (Notification Attached). On behalf of Mack Energy, ESS also submitted the initial C141 Release Notification, along with the spill calculator used to determine the volume of the release (attached) on January 5th at 12:26 PM. The NMOCD accepted the C141 as record on same said date. The incident number assigned to the release is NAPP2200543737. (Notification of correspondence is attached).

This report provides a detailed description of the spill assessment, delineation, and remedial activities, which demonstrate that the closure criteria has been established in the 19.15.29.12 *New Mexico Administrative Code (NMAC: New Mexico Oil Conservation Division, 2018)* have been met and all applicable regulations have been followed. This document is intended to serve as the final report to obtain approval from the NMOCD for the closure of the above-mentioned release.

Incident Description

On January 4th, 2022, a flowline busted due to freezing weather. Fluid was released onto the pad and pasture area. By the time the release was discovered, fluid had soaked into the ground therefore there was no recovery of fluids.

ESS was dispatched to the site and conducted an environmental site assessment of the release. It was determined after measuring the area of impact that approximately 8bbls was released onto the pad and pasture area. Measuring of the impacted area was conducted. Due to the time that has occurred since the release, there are no initial site photos available to provide in this report.

Site Characterization

The release at the Oregon occurred on state land and is located at 32.741803 latitude and -103.298714000 longitude, 13 miles northwest of Hobbs, New Mexico. The legal description of the site is Unit Letter M, Section 18, Township 18 South and Range 37 East. The site is located in Lea County, New Mexico. Please see site schematic attached.

The Oregon consists of production lines and is near production facilities and well pads. The area of the release was on the pad and pasture area only. The elevation is 3,762 ft. The area is historically or has primarily been dominated by black grama, sideoats grama, little bluestem, and other perennial forms. Please find attached the Rangeland and Vegetation Classification information attached.

The *United States Department of Agriculture Natural Resources Conservation Services* indicates that the soil type in the area of the Oregon consists of 97.1% Kimbrough-Lea complex and 2.9% Portales-Stegall loams. (Please see soil map attached) In the area of the Oregon the *FEMA National Flood Hazard Layer* indicates that there is 0.2% annual chance of a flood-hazard with 0.1% chance of a flood with an average depth of one foot or with drainage areas of less than one square mile. (See map attached).

There is “low potential” for Karst Geology to be present near the Oregon site, according to the *United States Department of the Interior, Bureau of Land Management*. Please find the Karst Map attached herein.

There is no surface water located near or around the Oregon. The site is not near a continuously flowing watercourse and or lakebed within ½ a mile from the release. No other critical or community features were found at the Oregon site. (Attached Watercourse Map)

The nearest and most recent water well to the site according to the *New Mexico Office of the State Engineer* is L05396, drilled in 1964 with a well depth of 100’ and a groundwater depth of 32’. This well is located 1,049 yards from the site. The second well is L05200 X-3, drilled in 1965 with a well depth of 215’ and a groundwater depth of 55’, 1,065 yards from the site. The third well is L05176 X-7, drilled in 1965 with a well depth of 204’ and a groundwater depth of 50’. This well is located 1,145 yards from the site. The fourth well is L04559, drilled in 1962 with a well depth of 106’ and a groundwater depth of 40’, 1,531 yards from the site. The fifth well is L12480 POD1, drilled in 2009 with a well depth of 60’ and a groundwater depth of 50’. This well is located 1,913 yards from the site. An extended groundwater search was conducted using the *OSE POD Location Mapping System* and it has been determined that, no other wells were found

within a ½ a mile radius of the Oregon release. Please find the NMOSE, OSE POD and groundwater map attached to this report.

Closure Criteria Determination

The Closure Criteria for Soils impacted by a Release is shown in the chart below. No groundwater data was found within a ½ mile radius from the release point, being on State Land and with having "low karst potential", the site fell under <50' to ground water.

DGW	Constituent	Method	Limit
≤ 50'	Chloride	EPA 300.0 OR SM4500 CLB	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 METHOD 8015M	100 mg/kg
	GRO + DRO	EPA SW-846 METHOD 8015M	50 mg/kg
	BTEX	EPA SW-846 METHOD 8021B OR 8260B	10 mg/kg
	Benzene	EPA SW-846 METHOD 8021B OR 8260B	10 mg/kg

Soil Remediation Action Levels

ESS has provided sufficient data that this release has impacted the soil at the Oregon and that the protocol is consistent with the remediation/abatement goals and objectives set forth in the *NMOCD Closure Criteria for Soils Impacted by a Release, dated August 14, 2018.* The guidance document provides direction for Mack Energy's initial response actions, site assessment and sample procedures conducted by ESS Staff. We would like to present to you the following information concerning the delineation process for the release detailed herein.

Soil Sampling Procedures

Soil sampling for laboratory analysis was conducted according to the NMOCD – approved industry standards. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect clean samples in airtight glass jars supplied by laboratory to conduct the analysis.
- Each sample jar was labelled with site and sample information.
- Samples were kept in and stored in a cool place and packed on ice.
- Promptly ship sample to the lab for analysis following the chain of custody procedures

The following lab analysis method was used for reaching bottom hole (vertical) and sidewall sample (horizontal) was submitted to Envirotech Analytical Laboratory:

Volatile Organics by EPA 8021B

- Benzene, Toluene, Ethylbenzene, p.m. Xylene, o-Xylene and Total Xylenes

Nonhalogenated Organics by EPA 8015D – GRO

- Gasoline Range Organics (C6-C10)

Nonhalogenated Organics by EPA 8015D – DRO/ORO

- Diesel Range Organics (C10-C28)
- Oil Range Organics (C28-C40)

Anions by EPA 300.0/9056A

- Chloride

Release Investigation Data Evaluation

On January 13th, 2022, ESS arrived on the site, set the delineation sample points, GPS'd each sample point and began to obtain surface samples. Each surface sample was field tested, logged, then submitted to Envirotech Laboratory for confirmation. A total of 2 vertical sample points were placed along with 4 horizontal sample points. Each sample point was then sampled by use of hand auger and backhoe in 1' and 2' intervals. Bottom hole samples were then submitted to the lab for confirmation. Please see the delineation sample data below, with the lab data indicated in yellow. Attached to this report you will find the sample data, delineation sample map and lab analysis.

SP ID	Depth	Titr	PID	L-BTEX	L-GRO	L-DRO	L-ORO	L-TPH	L-CHL
SP1	SURF	2400	L	ND	ND	ND	ND	ND	**2380**
	2'	2400							
	4'	240							
	6'	160	L	ND	ND	ND	ND	ND	ND
SP2	SURF	1440	L	ND	ND	ND	ND	ND	**1970**
	2'	1440							
	4'	320							
	6'	320	L	ND	ND	ND	ND	ND	ND
SW1	SURF	2400	H	**4.64**	**93.4**	**9900**	**3010**	**13008**	**2650**
	1'	2400							
	2'	1600							
	3'	960							
	4'	400							
	5'	400							
	6'	240	L	ND	ND	ND	ND	ND	175
SW2	SURF	2800	L	ND	ND	ND	ND	ND	**1690**
	1'	2800							
	2'	800							

	3'	400							
	4'	400	L	ND	ND	ND	ND	ND	175
SW3	SURF	960	L	ND	ND	ND	ND	ND	**939**
	1'	720							
	2'	480							
	3'	240	L	ND	ND	ND	ND	ND	484
SW4	SURF	1600	L	ND	ND	ND	ND	ND	**1980**
	1'	960							
	2'	720							
	3'	480							
	4'	400	L	ND	ND	ND	ND	ND	221

Due to the time that has occurred since the release, there are no delineation photos available to provide in this report.

On March 30th, 2022, ESS submitted the composite notification to the OCD. The OCD accepted this notification on the same said date. (Email correspondence attached).

On April 1st, 2022, ESS crews began obtaining 200 sq. ft. composites from the excavation area. A total of 16 bottom hole composites were obtained, field tested and submitted to the lab for confirmation. Please find the composite sample data below as well as attached to this report followed by the lab confirmation data.

SP ID	Depth	Titr	PID	L-BTEX	L-GRO	L-DRO	L-ORO	L-TPH	L-CHL
COMP 1	4	320	L	ND	ND	ND	ND	ND	40.4
COMP 2	4	80	L	ND	ND	ND	ND	ND	43.8
COMP 3	4	240	L	ND	ND	ND	ND	ND	48.3
COMP 4	4	240	L	ND	ND	ND	ND	ND	ND
COMP 5	4	320	L	ND	ND	ND	ND	ND	ND
COMP 6	4	400	L	ND	ND	ND	ND	ND	36.7
COMP 7	4	400	L	ND	ND	ND	ND	ND	38.1
COMP 8	4	80	L	ND	ND	ND	ND	ND	39.6
COMP 9	4	240	L	ND	ND	ND	ND	ND	34.7
COMP 10	4	160	L	ND	ND	ND	ND	ND	35.6
SWCOMP 1	4	320	L	ND	ND	ND	ND	ND	47.2
SWCOMP 2	4	320	L	ND	ND	ND	ND	ND	33.9
SWCOMP 3	4	400	L	ND	ND	ND	ND	ND	35.2
SWCOMP 4	4	160	L	ND	ND	ND	ND	ND	42.3
SWCOMP 5	2	240	L	ND	ND	ND	ND	ND	43.6

SWCOMP 6	2	320	L	ND	ND	ND	ND	ND	51.7

Attached are the remediation photos for your reference. Due to the time that has passed since the release, only a limited number of remediation photos are available for inclusion in this report. Unfortunately, there are no photos of backfilling or seeding to provide.

The total impacted area of the Oregon site was 2,042 sq. ft. A total of 317 CY of contaminated soil was excavated and transported to Lea-land. Additionally, 308 CY of topsoil was hauled from Lea-land, stockpiled on-site, and staged on the production pad of the Oregon. The backfill was then transferred to the impacted pasture area, where the site was backfilled to 4 feet below ground surface (bgs). The site was seeded using BLM #3 seed and broadcasted. Backfilling and seeding were completed on May 21, 2022. The Oregon site was plugged and reclaimed by Mack Energy, not ESS, on October 10, 2023, before the attached final photos were taken. Given the time that has passed since the release, a current employee was sent on November 15, 2024, to capture final photos of the site after it had already been reclaimed.

Closure Request

On behalf of Mack Energy, ESS request that the incident (NAPP2200543737), be closed for the release that occurred on the pad and pasture of the Oregon State #1. Mack Energy and ESS certifies that all the information provided and that is detailed in this report is true and correct. We have also complied with all of the applicable closure requirements for the release that occurred on the Oregon site.

After review of this report if you have any questions or concerns regarding this closure request, please do not hesitate to contact the undersigned at (575) 390-6397 or (575) 393-9048. You may also email any issues to natalie@energystaffingllc.com.

Sincerely,

Natalie Gladden

Director of Environmental and Regulatory Services
Energy Staffing Services, LLC.
2724 NW County Road
Hobbs, NM 88240
Cell: 575-390-6397
Office: 575-393-9048
Email: natalie@energystaffingllc.com


ESS

Attachments

Release Notification
Initial C141
Spill Calculator Form
Impact Map
Site Map
Rangeland and Vegetation Classification
Soil Map
FEMA National Flood Hazard Layer Map
Karst Geology Map
Watercourse Map
Groundwater Information
Groundwater Map
OSE POD Map
Delineation Sample Data
Delineation Map
Delineation GPS Log
Lab Analysis
Composite Notification Email
Reclamation Site Map
Composite Sample Data
Composite Map
Sidewall Composite Map
Composite GPS Log
Lab Analysis
Remediation Site Photos
Final C141

From: Natalie Gladden
To: "ocdonline, emnrd, EMNRD"; Bratcher, Mike, EMNRD; "Hensley, Chad, EMNRD"; robert.hamlet@state.nm.us
Cc: mattbuckles@mec.com; Dakoatah Montanez
Subject: Release Notification - Mack Energy - Oregon State #1
Date: Wednesday, January 5, 2022 11:55:25 AM
Attachments: image003.png
Importance: High

All,

On behalf of Mack Energy, ESS would like to inform you that a release has occurred on the Oregon State #1. Please find the information below:

Site Name: Oregon State #1
API NO. 30-025-40882
Legal: U/L M, Section 18, Township 18S, Range 37E
Lea County, New Mexico
Cause of Release: Flowline busted due to freezing weather
Released: 8bbls of oil, no recovery.

ESS will upload the initial C141 momentarily. Sincerely,

Natalie Gladden

Director of Environmental and Regulatory Services
Energy Staffing Services, LLC.
2724 NW County Road
Hobbs, NM 88240
Cell: 575-390-6397
Email: natalie@energystaffingllc.com

ESS

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party **MACK ENERGY CORP**	OGRID **013837**
Contact Name **MATT BUCKLES**	Contact Telephone **575-703-1958**
Contact email **mattbuckles@mec.com**	Incident # *(assigned by OCD)*
Contact mailing address **11344 Lovington Highway, Artesia NM 88210**	

Location of Release Source

Latitude **32.741803** Longitude **103.298714**
(NAD 83 in decimal degrees to 5 decimal places)

Site Name **OREGON STATE #1**	Site Type **PRODUCTION**
Date Release Discovered **1/4/22**	API# *(if applicable)* ***30-025-40882***

Unit Letter	Section	Township	Range	County
M	**18**	**18S**	**37E**	**LEA COUNTY**

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) **8BBLS**	Volume Recovered (bbls) **0BBLS**
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	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
Flowline busted due to freezing weather. Fluid was released onto the pad and pasture area. Fluid soaked in therefore no recovery of fluids occurred.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? **EMAIL WAS SENT TO OCD ON 1/5/22 AT 11:55 A.M.**	

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: **NATALIE GLADDEN** Title: **DIRECTOR OF ENVIRONMENTAL AND REGULATORY**

Signature: Natalie Gladden Date: 1/5/22

email: **natalie@energystaffingllc.com** Telephone: **575-390-6397**

OCD Only

Received by: _____ Date: _____

Soil Type	Porosity	Length	Width	Depth (.083 per inch)	Cubic Feet	Estimated Barrels	Soil Type
Clay	0.15	10	10	0.083	8.3	0.22	Clay
Peat	0.40	10	10	0.083	8.3	0.59	Peat
Glacial Sediments	0.13	10	10	0.083	8.3	0.19	Glacial Sediments
Sandy Clay	0.12	10	10	0.083	8.3	0.18	Sandy Clay
Silt	0.16	10	10	0.083	8.3	0.24	Silt
Loess	0.25	10	10	0.083	8.3	0.37	Loess
Fine Sand	0.16	10	10	0.083	8.3	0.24	Fine Sand
Medium Sand	0.25	100	20	0.083	166	7.40	Medium Sand
Coarse Sand	0.26	10	10	0.083	8.3	0.38	Coarse Sand
Gravely Sand	0.26	10	10	0.083	8.3	0.38	Gravely Sand
Fine Gravel	0.26	10	10	0.083	8.3	0.38	Fine Gravel
Medium Gravel	0.20	10	10	0.083	8.3	0.30	Medium Gravel
Coarse Gravel	0.18	10	10	0.083	8.3	0.27	Coarse Gravel
Sandstone	0.25	10	10	0.083	8.3	0.37	Sandstone
Siltstone	0.18	10	10	0.083	8.3	0.27	Siltstone
Shale	0.05	10	10	0.083	8.3	0.07	Shale
Limestone	0.13	10	10	0.083	8.3	0.19	Limestone
Basalt	0.19	10	10	0.083	8.3	0.28	Basalt
Volcanic Tuff	0.20	10	10	0.083	8.3	0.30	Volcanic Tuff
Standing Liquids	X	10	10	0.083	8.3	1.48	Standing Liquids

1	*2*	*3*	*4*	*5*	*6*
0.083	**0.166**	**0.250**	**0.332**	**0.415**	**0.500**
7	*8*	*9*	*10*	*11*	*12*
0.581	**0.664**	**0.750**	**0.830**	**0.913**	**1.000**

NOTE: This is an **estimate** tool designed for quick field estimates of whether a C-141 should be requred *(I.e. a release is estimated to be greater than or less than 5 barrel volumes)*

Choose the one prevailing ground type for estimating spill volumes at a single location.

Note that the depth should be measured in feet and tenths of feet (1 inch = .083)

Cubic Feet = L x W x D

Estimated Barrels = ((Cubic Feet x Porosity) / 5.61)

Site Ranking score	Depth to ground water (*GW*)		
GW + WPA + SWB =	Less Than 50 feet	50-99 feet	Greater Than 100 feet
	20	**10**	**0**

Remediation Action Levels	Total Ranking Score		
	>19	10 – 19	0 – 9
Benzene (ppm)	10	10	
BTEX (ppm)	50	50	
TPH (ppm)	100	1000	

Contaminated soils must be remediated until the contaminants are to the parts per million listed above.

Other contaminants, not listed, must be remediated to WQCC, EPA, RCRA or other standards for those specific contaminants.

Wellhead protection area (*WPA*)		
Less Than 1000 feet from a water source, or; Less Than 200 feet from private domestic water source		
Yes		No
20		**0**

Distance to nearest surface water body (*SWB*)		
Less Than 200 Horizontal Feet	200-1000 Horizontal Feet	Greater Than 1000 Horizontal Feet
20	**10**	**0**

Contaminant Dileneation by observation

Provide brief label for each area (i.e. wellhead, SE corner, inside berm, pasture, etc.)	Length times Width = Square Feet	Highly Contaminated / Saturated Soils	Unsaturated Contaminated Soils
Area 1 _____	Approximate area:	L w sq ft	L w sq ft
Area 2 _____	Approximate area:	L w sq ft	L w sq ft
Area 3 _____	Approximate area:	L w sq ft	L w sq ft
Area 4 _____	Approximate area:	L w sq ft	L w sq ft

Estimate of Volume of impacted Soils and liquid volume

Provide total square feet for each area, multiply by average detph and fill in cubic feet	Square Feet times Average Depth = Cubic Feet **1 inch = 0.083 feet**	Highly Contaminated / Saturated Soils	Unsaturated Contaminated Soils
Area 1: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 2: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 3: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET
Area 4: _____ Sq Ft	_____ Ft Avg Depth	CUBIC FEET	CUBIC FEET

To calculate an estimate of liquid volume released use the following formula

(Note: This formula does not calculate free-standing liquids and is based on unsaturated, contaminated soils. Highly saturated soils may be higher volumes. However, use the sum af all soils that are visibly contaminated, whether saturated or unsaturated to obtain the low-end estimate.)

Square Feet times Average Depth equals Cubic Feet times Porosity divided by 5.61 equals estimated volume (bbl) of spill.

Area No.	Square Feet	X	Average Depth	=	Cubic Feet	X	Porosity	/	5.61	=	Volume (bbl)
1									5.61		bbl
2									5.61		bbl
3									5.61		bbl
4									5.61		bbl

(Note: Releases greater than 5 bbl must be reported using Form C-141) ***Total Estimated Volume =***

Example	*300*	*0.5 (6 inches)*	*150*	*0.2*	*5.61*	*5.35 bbl*

Soil Types & Porosity Values:

High Clay Content Soils = 0.15 | Silty Soils and Fine Sand = 0.16 | Sand/Sandy Soils = 0.26 | Gravel = 0.26 | Rocky Soils = 0.4

Areas on a well maintained, hard packed caliche location should use porosity value of 0.18.

Use only one value for the predominate soil type in each area. Local variations may apply (sinkholes, crevices, caves, steep slope…)

You are encouraged to use the OCD publication entitled "Remediation of Leaks, Spills and Releases" as a guide during remediation operations. This guide contains a full discussion of site assessment and required remediation action levels and can be found on the OCD website at http://www.emnrd.state.nm.us/emnrd/ocd/EH-MiscGuidelines.htm

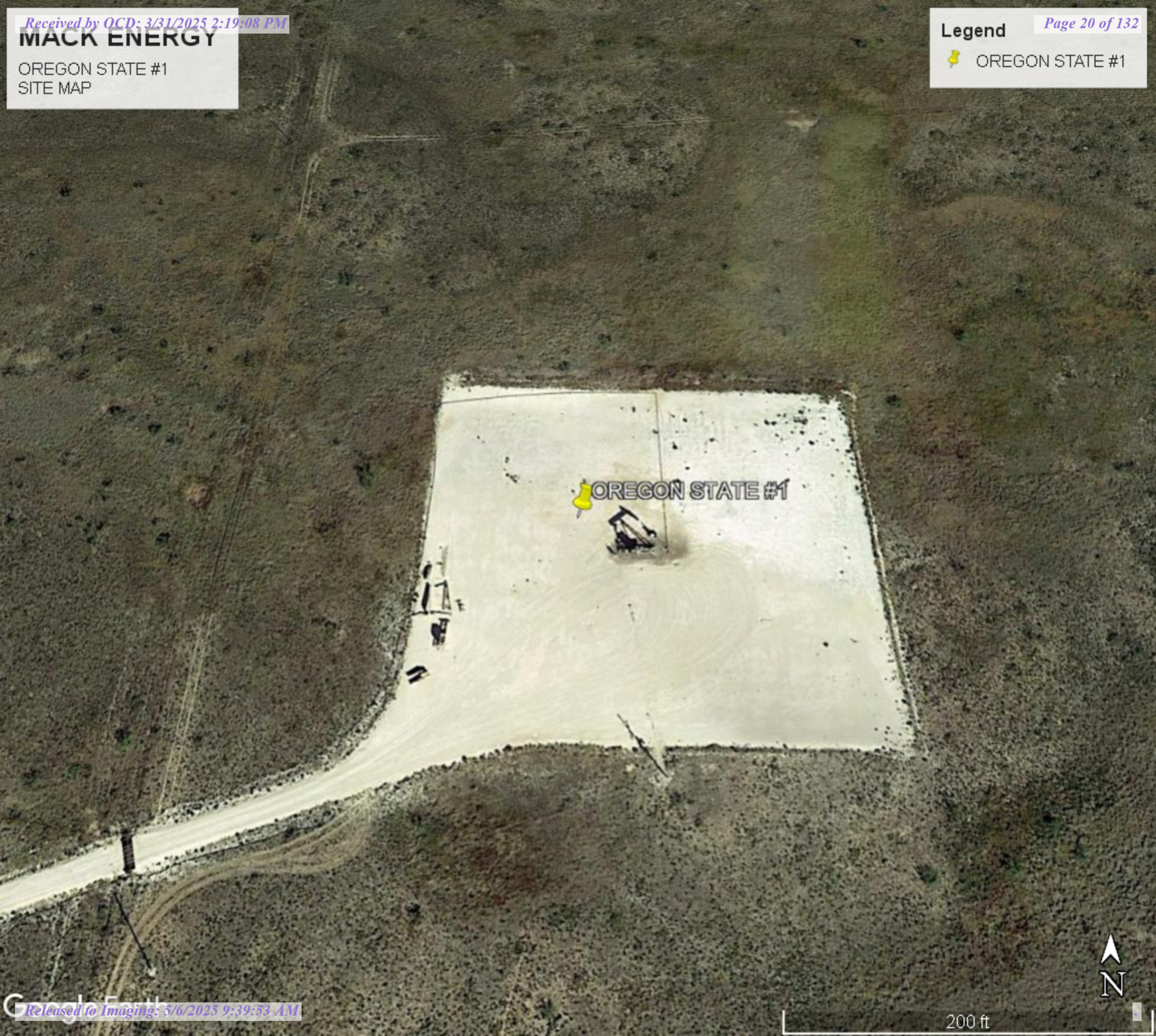
Soil	Dry Bulk Density	Total Porosity	Effective Porosity
Clay	1.00-2.40	0.34-0.60	0.01-0.2
Peat	x	x	0.3-0.5
Glacial Sediments	1.15-2.10	x	0.05-0.2
Sandy Clay	x	x	0.03-0.2
Silt	x	0.34-0.61	0.01-0.3
Loess	0.75-1.60	x	0.15-0.35
Fine Sand	1.37-1.81	0.26-0.53	0.01-0.3
Medium Sand	1.37-1.81	x	0.15-0.3
Coarse Sand	1.37-1.81	0.31-0.46	0.2-0.35
Gravely Sand	1.37-1.81	x	0.2-0.35
Fine Gravel	1.36-2.19	0.25-0.38	0.2-0.35
Medium Gravel	1.36-2.19	x	0.15-0.25
Coarse Gravel	1.36-2.19	0.24-0.36	0.1-0.25
Sandstone	1.60-2.68	0.05-0.30	0.1-0.4
Sitstone	x	0.21-0.41	0.01-0.35
Shale	1.54-3.17	0.0-0.10	x
Limestone	1.74-2.79	0.0-0.50	0.01-0.24
Granite	2.24-2.46	x	x
Basalt	2.00-2.70	0.03-0.35	x
Volcanic Tuff	x	x	0.02-0.35

MACK ENERGY

OREGON STATE #1
SITE IMPACT MAP

MACK ENERGY

OREGON STATE #1
SITE MAP



Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

This table shows, for each soil that supports vegetation, the ecological site, plant association, or habitat type; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in the table follows.

An *ecological site, plant association, or habitat type* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site, plant association, or habitat type is typified by an association of species that differs from that of other ecological sites, plant associations, or habitat types in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service (NRCS). Descriptions of plant associations or habitat types are available from local U.S. Forest Service offices.

Total dry-weight production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic vegetation (the grasses, forbs, shrubs, and understory trees that make up most of the potential natural plant community on each soil) is listed by common name. Under *rangeland composition and forest understory*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The percentages are by dry weight for rangeland. Percentages for forest understory are by either dry weight or canopy cover. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in the "National Range and Pasture Handbook," which is available in local offices of NRCS or on the Internet.

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service, National range and pasture handbook.

Report—Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition

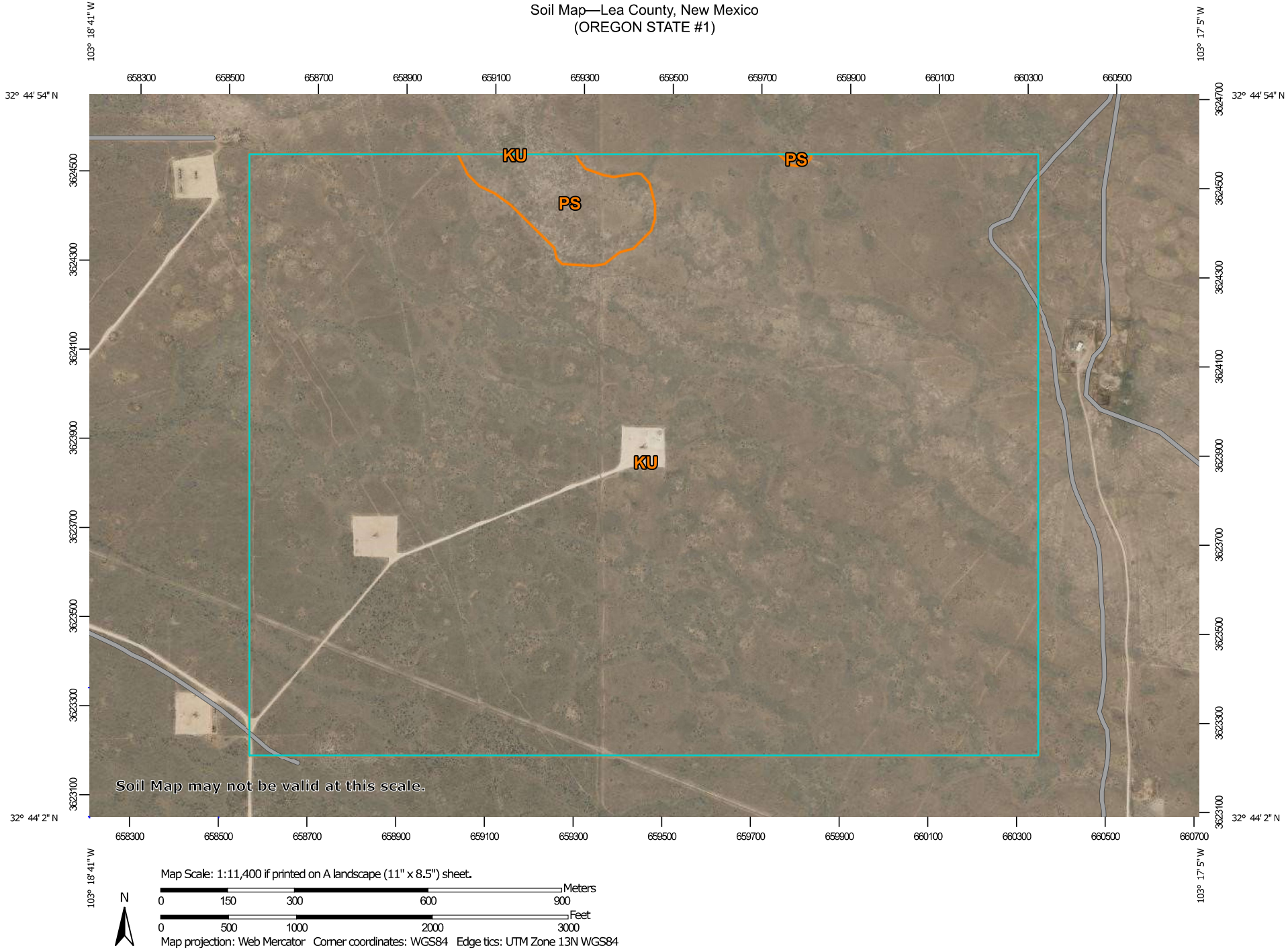
Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lea County, New Mexico								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes								
Kimbrough	Very Shallow 12-17" PZ (R077DY049TX)	1,300	900	600	black grama	20		
					sideoats grama	20		
					threeawn	20		
					broom snakeweed	10		
					cane bluestem	10		
					hairy grama	10		
					Hesperostipa neomexicana	10		
Lea	Sandy Loam 12-17" PZ (R077DY047TX)	1,000	700	400	sideoats grama	25		
					black grama	15		
					little bluestem	15		
					other perennial forbs	10		
					blue grama	5		
					buffalograss	5		
					hairy grama	5		
					other shrubs	5		
					other perennial grasses	5		
					sand dropseed	5		
					New Mexico Feathergrass	3		
					yucca	2		

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lea County, New Mexico								
Map unit symbol and soil name	Ecological Site, Plant Association, or Habitat Type	Total dry-weight production			Characteristic rangeland or forest understory vegetation	Composition		
		Favorable year	Normal year	Unfavorable year			Rangeland	Forest understory
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
PS—Portales-Stegall loams								
Portales	Limy Upland 12-17" PZ (R077DY042TX)	—	—	—	—			
Stegall	Limy Upland 12-17" PZ (R077DY042TX)	—	—	—	—			

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

Soil Map—Lea County, New Mexico
(OREGON STATE #1)



Map Scale: 1:11,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 150 300 600 900

Feet
0 500 1000 2000 3000

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: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

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.

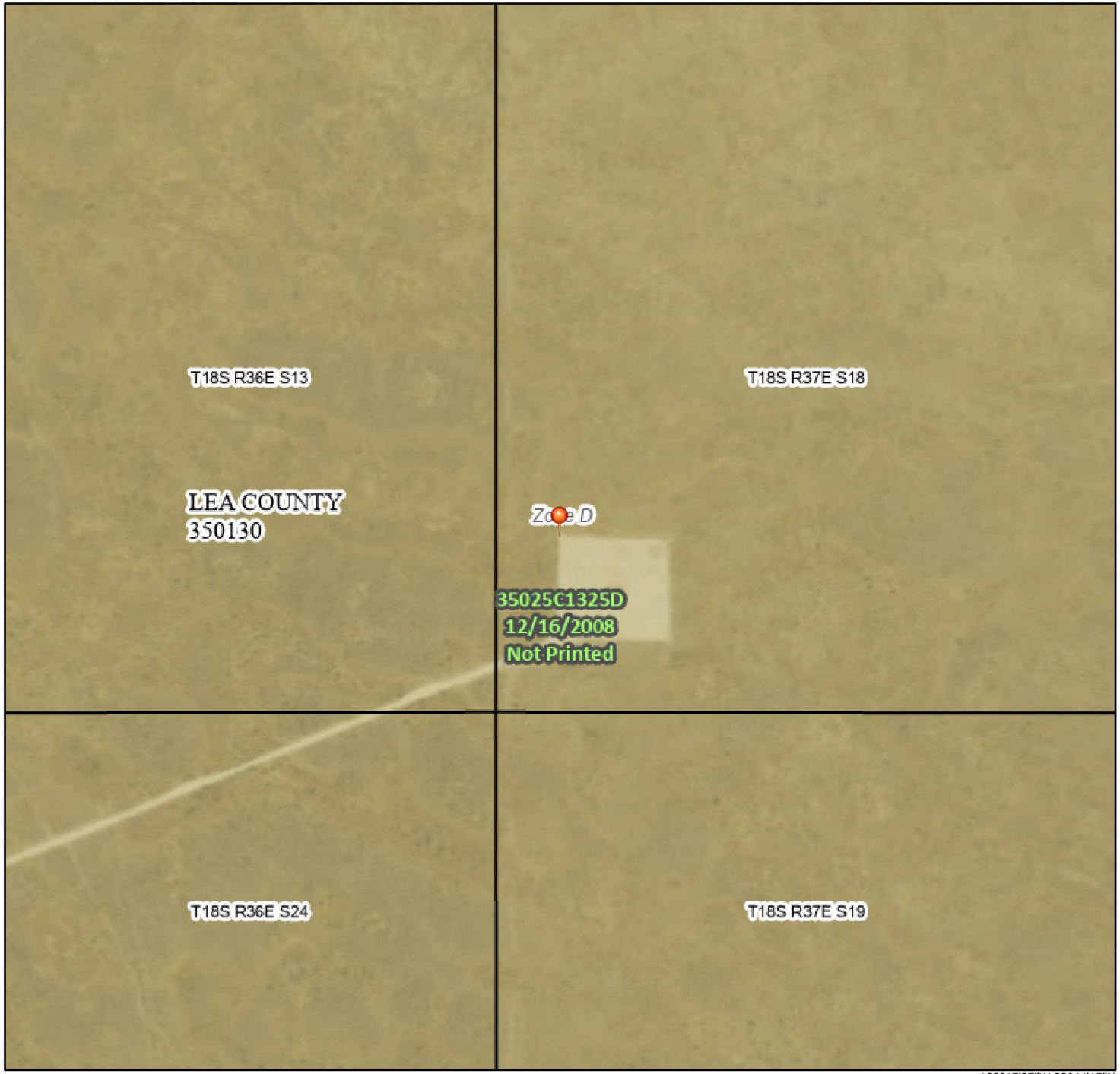
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	578.0	97.1%
PS	Portales-Stegall loams	17.2	2.9%
Totals for Area of Interest		**595.1**	**100.0%**

National Flood Hazard Layer FIRMette

FEMA

103°18'14"W 32°44'46"N



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

1:6,000

103°17'37"W 32°44'15"N

Basemap Imagery Source: USGS National Map 2023

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 / 17.5 Cross Sections with 1% Annual Chance / 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.

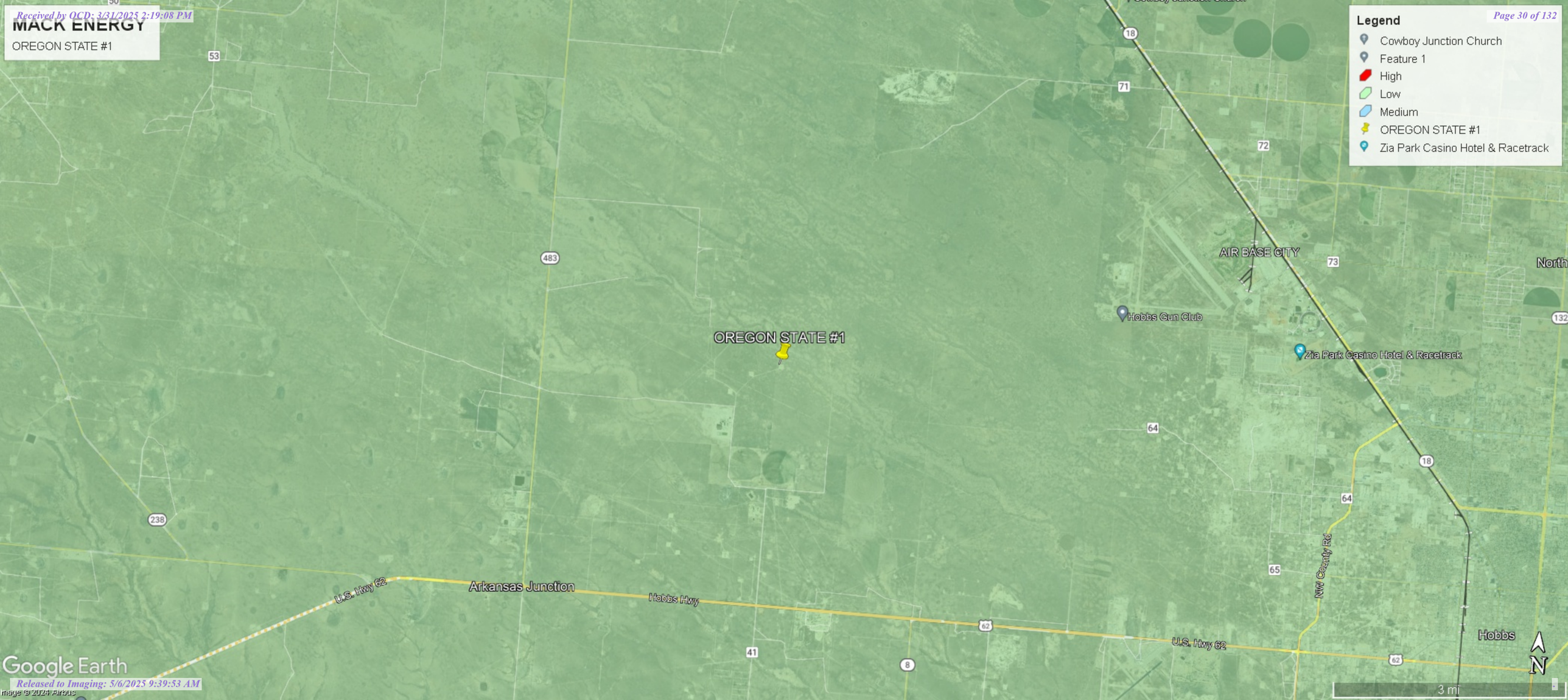
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/3/2024 at 12:35 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.

MACK ENERGY

OREGON STATE #1



MACK ENERGY

OREGON ST #1
WATERCOURSE MAP

Legend
OREGON ST 1

OREGON ST 1

N

2000 ft

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-basin Code	County	Source	q 6416	q 4	q	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 05396	L	LE	Shallow	1	4		18	18S	37E	660339	3624410*	1049	09/08/1964	12/30/1955	10/05/1964	100	32	PRUETT, OTIS H.	281
L 05200 X-3	L	LE	Shallow				13	18S	36E	658535	3624569*	1065	04/28/1965	05/04/1965	05/07/1965	215	55	ABBOTT, FLOYD	46
L 05176 X7	L	LE	Shallow	3	3	2	24	18S	36E	658651	3623075*	1145	06/01/1965	06/07/1965	07/23/1965	204	50	MURRELL ABBOTT	46
L 04559	L	LE	Shallow		1	3	13	18S	36E	657926	3624368*	1531	09/28/1962	09/28/1962	10/05/1962	106	40		111
L 12480 POD1	L	LE	Shallow	1	1	2	25	18S	36E	658752	3622142	1913	10/30/2009	10/30/2009	11/09/2009	60	50	RONNY KEITH	1184
L 12480 POD6	L	LE	Shallow	2	1	2	25	18S	36E	658742	3622137	1921	08/24/2021	09/08/2021	10/04/2021	98	63	AINSWORTH, RYAN. LEE.NER	1708
L 06856	L	LE	Shallow		1	1	30	18S	37E	659579	3621982*	1970	03/20/1972	03/23/1972	03/27/1972	156	42	MURRELL ABBOTT	46
L 05251	L	LE	Shallow		1	3	07	18S	37E	659511	3626011*	2070	09/16/1963	09/16/1963	10/03/1963	91	37	BURKE, EDWARD B.	111
L 04662	L	LE	Shallow	3	2	2	25	18S	36E	659075	3621874*	2095	06/29/1964	07/06/1964	07/20/1964	182	35	ROBERTS, GRADY	137
L 06856 POD4	L	LE	Shallow	4	2	1	25	18S	36E	658546	3621792	2313	01/12/2011	01/15/2011	01/20/2011	204	85	DURAN, LUIS (LD)	1607
L 04478	L	LE	Shallow	4	4	4	11	18S	36E	657602	3625468*	2355	07/06/1960	07/08/1960	08/15/1961	85	42		137
L 06856 S	L	LE	Shallow		3	1	30	18S	37E	659586	3621580*	2371	12/02/1974	12/02/1974	09/26/1975	185	70	MURRELL ABBOTT	46
L 10145	L	LE	Shallow			3	20	18S	37E	661381	3622608*	2390	09/26/1990	09/26/1990	10/23/1990	120	90	EADES, GENE	982
L 13585 POD1	L	LE	Shallow	3	3	2	12	18S	36E	658616	3626226	2413	05/26/2014	05/27/2014	06/11/2014	210	60	TAYLOR, ROY A.	1626
L 12480 POD3	L	LE	Shallow	3	4	1	30	18S	37E	659878	3621567	2424	10/29/2009	10/29/2009	11/09/2009	60	50	RONNY KEITH	1184
L 12480 POD7	L	LE	Shallow	3	4	2	25	18S	36E	659075	3621536	2428	08/24/2021	09/08/2021	10/04/2021	100	65	AINSWORTH, RYAN. LEE.NER	1708

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-basin Code	County	Source	q 6416	q 4	q	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 15420 POD3	L	LE	Shallow	3	4	1	30	18S	37E	659837	3621551	2432	12/14/2022	12/14/2022	01/03/2023	110		KENNY COOPER	1731
L 04665	L	LE	Shallow		3	2	25	18S	36E	658779	3621565*	2458	06/23/1961	06/23/1961	06/29/1961	125	60	ABBOTT, MURRELL	46
L 12480 POD2	L	LE	Shallow	3	4	2	25	18S	36E	659035	3621493	2476	10/30/2009	10/30/2009	11/09/2009	60	50	RONNY KEITH	1184
L 05176 X6	L	LE	Shallow	3	3	2	23	18S	36E	657039	3623044*	2524	06/07/1965	06/10/1965	07/23/1965	203	65	MURRELL ABBOTT	46
L 04848	L	LE	Shallow		3	2	12	18S	36E	658698	3626398*	2551	03/26/1962	03/31/1962	05/18/1962	75	40	VAN NOY, W.L.	208
L 04686	L	LE	Shallow		1	4	17	18S	37E	661950	3624431*	2597	07/25/1961	07/25/1961	08/03/1961	125	40	HALL, NEIL	298
L 01540	L	LE	Shallow	2	2	3	14	18S	36E	656817	3624445*	2629	12/30/1960	01/06/1961	01/26/1961	220	55	MURRELL ABBOTT	46
L 12889 POD1	L	LE	Shallow	3	3	2	25	18S	36E	658686	3621385	2656	07/19/2010	07/19/2010	11/18/2011	124	50	SCARBOROUGH, SCOTT	1188
L 01538	L	LE	Shallow	1	1	3	12	18S	36E	657798	3626079*	2668	12/10/1960	12/21/1960	01/26/1961	221	55	MURRELL ABBOTT	46
L 12373 POD1	L	LE	Shallow	4	2	4	36	18S	36E	659078	3621289	2673	10/26/2009	10/26/2009	11/09/2009	80	60	RONNY KEITH	1184
L 12480 POD5	L	LE	Shallow	3	2	4	25	18S	36E	659118	3621119	2838	10/28/2009	10/28/2009	11/09/2009	68	50	RONNY KEITH	1184
L 12289 POD1	L	LE	Shallow	3	1	3	30	18S	37E	659398	3621041	2902	10/24/2008	11/03/2008	11/13/2008	270	120	DAVID GANN	1184
L 15439 POD5	L	LE	Shallow	1	3	3	30	18S	37E	659566	3620952	2995	02/27/2023	02/27/2023	05/30/2023	110		KENNY COOPER	1731
L 12480 POD8	L	LE	Shallow	3	1	4	25	18S	36E	658677	3620984	3046	08/24/2021	09/08/2021	10/04/2021	103	68	AINSWORTH, RYAN. LEE.NER	1708
L 12480 POD4	L	LE	Shallow	3	1	4	25	18S	36E	658677	3620972	3057	10/29/2009	10/29/2009	11/09/2009	62	50	RONNY KEITH	1184
L 13457 POD1	L	LE	Shallow	1	2	4	06	18S	37E	660412	3626884	3110	04/07/2014	04/07/2014	04/15/2014	195		ALAN G EADES	1044
L 12197 POD1	L	LE	Shallow	1	4	4	25	18S	36E	659067	3620842	3118	04/10/2008	04/11/2008	04/28/2008	200	63	WHITE, JOHN (LD)	1456
L 05176	L	LE	Shallow		4	4	25	18S	36E	659196	3620767*	3183	02/01/1965	02/10/1965	02/26/1965	206	84	MURRELL ABBOT	46
L 05509	L	LE	Shallow		4	4	25	18S	36E	659196	3620767*	3183	12/04/1964	12/05/1964	12/16/1964	103	45	MURRELL ABBOTT	46
L 05176 X5	L	LE	Shallow	1	1	1	23	18S	36E	656227	3623631*	3186	06/09/1965	06/15/1965	07/23/1965	205	50	MURRELL ABBOTT	46

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(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Sub-basin	County	Source	q 6416	q 4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 09935		L	LE	Shallow	1 3	4	30	18S	37E	660302	3620883*	3191	08/04/1987	08/06/1987	08/11/1987	50	42	SELMAN, VIRLA	764
L 09046		L	LE	Shallow		4	30	18S	37E	660604	3620985*	3195	03/25/1983	03/29/1983	04/06/1983	122	42	ABBOTT, MURRELL	46
L 01537		L	LE	Shallow	1 1	4	11	18S	36E	656992	3626064*	3206	12/22/1960	12/29/1960	01/29/1961	219	55	MURRELL ABBOTT	46
L 12480 POD10		L	LE	Shallow	4 4	4	25	18S	36E	659207	3620683	3266	08/25/2021	09/08/2021	10/04/2021	99	64	AINSWORTH, RYAN. LEE.NER	1708
L 04663		L	LE	Shallow	3 1	3	29	18S	37E	661101	3621097*	3317	07/10/1964	07/16/1964	07/20/1964	166	35	ROBERTS, GRADY	137
L 15439 POD6		L	LE	Shallow	2 3	3	25	18S	36E	658035	3620912	3324	02/27/2023	02/27/2023	05/30/2023	110		KENNY COOPER	1731
L 15420 POD4		L	LE	Shallow	4 4	4	25	18S	36E	659366	3620612	3331	12/14/2022	12/14/2022	01/03/2023	110		KENNY COOPER	1731
L 13584 POD1		L	LE	Shallow	2 1	1	14	18S	36E	656314	3625327	3380	05/22/2014	05/23/2014	06/11/2014	210	65	TAYLOR, ROY A.	1626
L 04386		L	LE	Shallow	2	2	11	18S	36E	657483	3626779*	3421	01/28/1960	01/29/1960	08/15/1961	90	38		137
L 05176 X		L	LE	Shallow	3 3	2	26	18S	36E	657065	3621434*	3426	03/01/1965	03/06/1965	07/23/1965	198	55	MURRELL ABBOTT	46
L 05917		L	LE	Shallow	2	3	29	18S	37E	661604	3621203*	3518	04/23/1966	04/25/1966	04/27/1966	153	45	MUSSELWHITE, O.R.	99
L 11573		L	LE	Shallow	2 2	1	31	18S	37E	660108	3620475*	3540	02/04/2004	02/04/2004	03/02/2004	150		EADES, ALAN	1044
L 05189		L	LE	Shallow	1	1	31	18S	37E	659606	3620371*	3579	07/12/1963	07/13/1963	08/27/1964	120	65		46
L 09554		L	LE	Shallow	1	1	16	18S	37E	662741	3625247*	3587	08/30/1984	08/30/1984	09/05/1984	160	46	GLENN, CLARK A."CORKY" (LD)	421
L 07680		L	LE	Shallow	2 2	2	29	18S	37E	662494	3622118*	3594	08/02/1977	08/10/1977	08/29/1977	199		MURRELL ABBOTT	46
L 07680 POD2		L	LE	Shallow	2 2	2	29	18S	37E	662494	3622118*	3594	08/24/1977	09/08/1977	09/23/1977	200	55	MURRELL ABBOTT	46
L 04533		L	LE	Shallow	2	4	01	18S	36E	659081	3627614*	3683	09/29/1960	10/03/1960	06/13/1961	70	30	ROBERTS, GRADY	137
L 10146		L	LE	Shallow		1	16	18S	37E	662949	3625045*	3717	09/27/1990	09/27/1990	10/23/1990	120	90	EADES, GENE	982
L 02448		L	LE	Shallow	4	3	29	18S	37E	661611	3620800*	3844	12/30/1953	12/31/1953	01/22/1954	103	30	MUSSELWHITE, O.R.	99
L 01473	R	L	LE	Shallow	1 1	1	32	18S	37E	661115	3620491*	3856	01/28/1956	01/29/1956	02/02/1956	134	40	BURKE, EDWARD B.	111

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(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-basin Code	County	Source	q 6416	q 4	q 2	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 01108 POD3	L	LE	Shallow	2	4	2	36	18S	36E	659309	3620060*	3884	02/17/1965	02/25/1965	03/01/1965	181	70	MUSSELWHITE, O.R.	99
L 12480 POD9	L	LE	Shallow	3	2	4	25	18S	36E	662287	3621203	3981	08/20/2021	09/08/2021	10/04/2021	105	70	AINSWORTH, RYAN. LEE.NER	1708
L 03166	L	LE	Shallow		4	1	31	18S	37E	660016	3619973*	4018	04/08/1956	04/09/1956	04/25/1956	108	35	MUSSELWHITE, O.R.	99
L 03118	L	LE	Shallow	1	1	4	15	18S	36E	655406	3624422*	4020	03/01/1960	03/08/1960	04/01/1960	222	50	ABBOTT, MURRELL	46
L 13357 POD2	L	LE	Shallow		3	2	36	18S	36E	658688	3619931	4074	07/10/2013	07/10/2013	07/10/2013	70		NORRIS, JOHN D.	1682
L 11582	L	LE	Shallow	1	2	2	08	18S	37E	662209	3626952*	4116	02/27/2004	02/28/2004	03/26/2004	210		EADES, ALAN	1044
L 07843	L	LE	Shallow	3	3	2	36	18S	36E	658705	3619852*	4150	07/25/1978	08/01/1978	08/09/1978	181	55		46
L 15439 POD7	L	LE	Shallow	2	1	2	35	18S	36E	657285	3620343	4175	02/28/2023	02/28/2023	05/30/2023	110		KENNY COOPER	1731
L 05200 X-4	L	LE	Shallow				22	18S	36E	655336	3622898*	4194	03/19/1965	03/27/1965	05/07/1965	200	60	ABBOTT, FLOYD	46
L 05200 X-2	L	LE	Shallow		1	1	11	18S	36E	656274	3626757*	4203	04/15/1965	04/20/1965	05/07/1965	225	55	ABBOTT, FLOYD	46
L 10031	L	LE	Shallow		4	2	31	18S	37E	660821	3619984*	4207	10/17/1988	10/19/1988	11/14/1988	55	20	SELMAN, VIRLA	764
L 03153	L	LE	Shallow				31	18S	37E	660229	3619765*	4260	03/29/1956	03/30/1956	05/09/1956	140	70	MUSSELWHITE, O.R.	99
L 01108 POD2	L	LE	Shallow	2	2	4	36	18S	36E	659315	3619657*	4287	07/25/1954	07/25/1954	08/09/1954	175	50	MUSSELWHITE, O.R.	99
L 13361 POD1	L	LE	Shallow	4	1	2	27	18S	36E	655625	3621795	4342	06/25/2013	06/27/2013	08/13/2013	83	71	SHANE CURRIE	1575
L 02009	L	LE	Shallow	2	1	2	32	18S	37E	662120	3620501*	4388	12/04/1958	12/14/1958	12/22/1958	130	37	VAN NOY, W.L.	208
L 02647	L	LE	Shallow	3	3	1	32	18S	37E	661123	3619888*	4407	08/30/1955	08/31/1955	09/08/1955	130	35	BURKE, EDWARD B.	111
L 11598	L	LE	Shallow	4	2	1	06	18S	37E	659967	3628330*	4422	03/06/2004	03/06/2004	03/17/2004	216		EADES, ALAN	1044
L 03079	L	LE	Shallow		1	4	36	18S	36E	658813	3619550*	4432	01/10/1956	01/11/1956	02/08/1956	122	65	MURRELL ABBOTT	46
L 04670	L	LE	Shallow		3	3	02	18S	36E	656267	3627160*	4488			09/04/1962			ROBERTS, GRADY	137
L 15201 POD1	L	LE	Shallow	2	2	1	08	16S	37E	661713	3627835	4527	12/16/2021	12/16/2021	01/18/2022	170	110	JACOB FRIESSEN	1753

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(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-basin Code	County	Source	q 6416	q	q 4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 01536	L	LE	Shallow	1	1	4	10	18S	36E	655379	3626034*	4530	07/31/1955	07/31/1955	08/04/1955	223		BOB BOYD & SON	
L 06664	L	LE	Shallow	2	2	3	02	18S	36E	656762	3627669*	4563	05/15/1970	05/16/1970	05/21/1970	130	60	MURRELL ABBOTT	46
L 08680	L	LE	Shallow	2	2	2	01	18S	36E	659166	3628517*	4578	03/08/1982	03/14/1982	03/18/1982	120	70	OWENS, JIMMY D.	814
L 05571	L	LE	Shallow	2	1	1	06	18S	37E	659569	3628524*	4583		03/11/1968	03/11/1968	120	40		322
L 13361 POD2	L	LE	Shallow	1	3	2	27	18S	36E	655450	3621614	4583	06/25/2013	06/27/2013	08/08/2013	85	68	SHANE CURRIE	1575
L 10077	L	LE	Shallow			4	21	18S	37E	663796	3622639*	4587	05/18/1989	05/19/1989	07/25/1989	117	90	EADES, GENE	982
L 13459	L	LE	Shallow	3	1	1	05	18S	37E	660945	3628359	4678	12/30/2013	12/31/2013	01/07/2014	180	50	ROY A. TAYLOR	1626
L 15439 POD1	L	LE	Shallow	4	2	1	27	18S	36E	655198	3621871	4683	03/01/2023	03/01/2023	05/30/2023	120		KENNY COOPER	1731
L 01383	L	LE	Shallow	2	4	4	36	18S	36E	659322	3619253*	4691	08/04/1952	08/14/1952	09/11/1952	176			35
L 05176 X2	L	LE	Shallow	3	3	2	27	18S	36E	655453	3621403*	4692	02/20/1965	02/26/1965	07/23/1965	164	55	MURRELL ABBOTT	46
L 03211	L	LE	Shallow			1	05	18S	37E	661283	3628247*	4697	06/08/1956	06/09/1956	08/01/1956	75	36	TATUM, CLAUDE E.	33
L 15420 POD1	L	LE	Shallow	2	3	3	22	18S	36E	654925	3622489	4704	12/13/2022	12/13/2022	01/03/2023	120		KENNY COOPER	1731
L 03928	L	LE	Shallow	1	1	1	22	18S	36E	654611	3623602*	4799	07/17/1958	07/18/1958	07/23/1958	115	60		46
L 01473 POD3	L	LE	Shallow				32	18S	37E	661842	3619786*	4822	12/03/1984	12/08/1984	12/28/1984	148	60	ABBOTT, FLOYD (LD)	46
L 05176 X4	L	LE	Shallow				35	18S	36E	657003	3619706*	4867	02/06/1965	02/11/1965	02/26/1965	177	70	MURRELL ABBOTT	46
L 01108	L	LE	Shallow	4	4	4	36	18S	36E	659322	3619053*	4891	02/22/1951	03/15/1951	04/20/1951	176		TATUM, ROY	33
L 12921 POD1	L	LE	Shallow				02	18S	36E	657642	3628549	4928	02/12/2012	02/15/2012	02/22/2012	222	58	EADES, ALAN	1044

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

Record Count: 93

UTMNAD83 Radius Search (in meters):

Easting (X): 659398.13 **Northing (Y):** 3623943.96 **Radius:** 5000

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	Twns	Rng	X	Y
	L 05396		1	4	18	18S	37E	660339	3624410*

Driller License: 281 **Driller Company:** PRUETT, OTIS H.
Driller Name: PRUETT, OTIS H.

Drill Start Date: 09/08/1964 **Drill Finish Date:** 12/30/1955 **Plug Date:**
Log File Date: 10/05/1964 **PCW Rcv Date:** **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:**
Casing Size: **Depth Well:** 100 feet **Depth Water:** 32 feet

Water Bearing Stratifications:	Top	Bottom	Description
	32	44	Sandstone/Gravel/Conglomerate
	60	100	Sandstone/Gravel/Conglomerate

Meter Number: 20697 **Meter Make:** MCCRO0METER
Meter Serial Number: 21-6-1014 **Meter Multiplier:** 0.0010
Number of Dials: 6 **Meter Type:** Diversion
Unit of Measure: Acre-Feet **Return Flow Percent:**
Usage Multiplier: **Reading Frequency:** Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
11/10/2023	2023	0	A	ga	Initial reading	0	
12/31/2023	2023	0	A	WEB		0	X

**YTD Meter Amounts:	Year	Amount
	2023	0

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

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
	L 05200 X-3				13	18S	36E	658535	3624569*

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY
Driller Name: ABBOTT, FLOYD

Drill Start Date: 04/28/1965 **Drill Finish Date:** 05/04/1965 **Plug Date:**
Log File Date: 05/07/1965 **PCW Rcv Date:** 12/23/1965 **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:**
Casing Size: 12.00 **Depth Well:** 215 feet **Depth Water:** 55 feet

Water Bearing Stratifications:	Top	Bottom	Description
	55	208	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	65	208

Meter Number: 8766 **Meter Make:** BADGER
Meter Serial Number: NOT PROVIDED **Meter Multiplier:** 1000.0000
Number of Dials: 8 **Meter Type:** Diversion
Unit of Measure: Gallons **Return Flow Percent:**
Usage Multiplier: **Reading Frequency:** Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
01/01/2005	2005	511054	A	jw		0	
04/18/2005	2005	560442	A	jw		0.152	
07/15/2005	2005	649373	A	jw		0.273	
10/04/2021	2021	219933	A	WEB		0	X
11/12/2021	2021	0	A	dd		0	
01/01/2022	2021	0	A	dd		0	
03/31/2022	2022	0	A	dd		0	
07/01/2022	2022	4255	A	WEB		13.058	X
10/01/2022	2022	30251	A	WEB		79.779	X
01/01/2023	2022	30251	A	WEB		0	X
04/01/2023	2023	32272	A	WEB		6.202	X
07/01/2023	2023	34516	A	WEB		6.887	X
10/01/2023	2023	34633	A	WEB		0.359	X
12/31/2023	2023	35220	A	WEB		1.801	X
04/01/2024	2024	35444	A	WEB		0.687	X

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

**YTD Meter Amounts:	Year	Amount
	2005	0.425
	2020	0
	2021	0
	2022	92.837
	2023	15.249
	2024	0.687

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	L 05176 X7	3	3	2	24	18S	36E	658651	3623075*

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

Drill Start Date: 06/01/1965 **Drill Finish Date:** 06/07/1965 **Plug Date:**
Log File Date: 07/23/1965 **PCW Rcv Date:** 10/13/1967 **Source:** Shallow
Pump Type: TURBIN **Pipe Discharge Size:** **Estimated Yield:**
Casing Size: 14.00 **Depth Well:** 204 feet **Depth Water:** 50 feet

Water Bearing Stratifications:	Top	Bottom	Description
	55	194	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	72	194

Meter Number: 19683 **Meter Make:** BADGER
Meter Serial Number: NOT PROVIDED **Meter Multiplier:** 1000.0000
Number of Dials: 8 **Meter Type:** Diversion
Unit of Measure: Gallons **Return Flow Percent:**
Usage Multiplier: **Reading Frequency:** Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
01/01/2021	2020	532531	A	dd		0	
03/31/2021	2021	537459	A	dd		15.123	
06/30/2021	2021	544318	A	dd		21.049	
09/30/2021	2021	549040	A	dd		14.491	
01/01/2022	2021	562491	A	dd		41.280	
03/31/2022	2022	565925	A	dd		10.539	
05/17/2022	2022	565925	A	dd		0	
07/01/2022	2022	0	A	dd	METER RESET TO ZERO	0	
07/01/2022	2022	1100	A	dd		3.376	
10/01/2022	2022	14022	A	WEB		39.656	X
01/01/2023	2022	26335	A	WEB		37.787	X
04/01/2023	2023	42039	A	WEB		48.194	X
07/01/2023	2023	61552	A	WEB		59.883	X
12/31/2023	2023	73079	A	WEB		35.375	X
04/01/2024	2024	102379	A	WEB		89.918	X

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

**YTD Meter Amounts:	Year	Amount
	2020	0
	2021	91.943
	2022	91.358
	2023	143.452
	2024	89.918

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	L 04559	1	3		13	18S	36E	657926	3624368*

Driller License:	111	**Driller Company:**	BURKE, EDWARD B.		
Driller Name:					
Drill Start Date:	09/28/1962	**Drill Finish Date:**	09/28/1962	**Plug Date:**	10/09/1963
Log File Date:	10/05/1962	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.00	**Depth Well:**	106 feet	**Depth Water:**	40 feet

Water Bearing Stratifications:	Top	Bottom	Description
	40	60	Sandstone/Gravel/Conglomerate
	90	106	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	67	89

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New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
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Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	L 12480 POD1	1	1	2	25	18S	36E	658752	3622142

Driller License:	1184	**Driller Company:**	WEST TEXAS WATER WELL SERVICE		
Driller Name:	RONNY KEITH				
Drill Start Date:	10/30/2009	**Drill Finish Date:**	10/30/2009	**Plug Date:**	08/13/2021
Log File Date:	11/09/2009	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	4.50	**Depth Well:**	60 feet	**Depth Water:**	50 feet

Water Bearing Stratifications:	Top	Bottom	Description
	50	60	Sandstone/Gravel/Conglomerate

MACK ENERGY

OREGON STATE #1

Legend

- DGW
- Lea Power PARTNERS
- Lea Power Partners LLC - Hobbs?

L 05200 X-3 - 1065' FROM WELL - 55' DGW

L 04559 - 1531' FROM WELL - 40' DGW

L 05396 - 1049' FROM WELL- 32' DGW

OREGON STATE #1

L 05176 X7 - 1145' FROM WELL - 50' DGW

Lea Power PARTNERS

L 12480 POD 1 - 1913' FROM WELL - 50' DGW

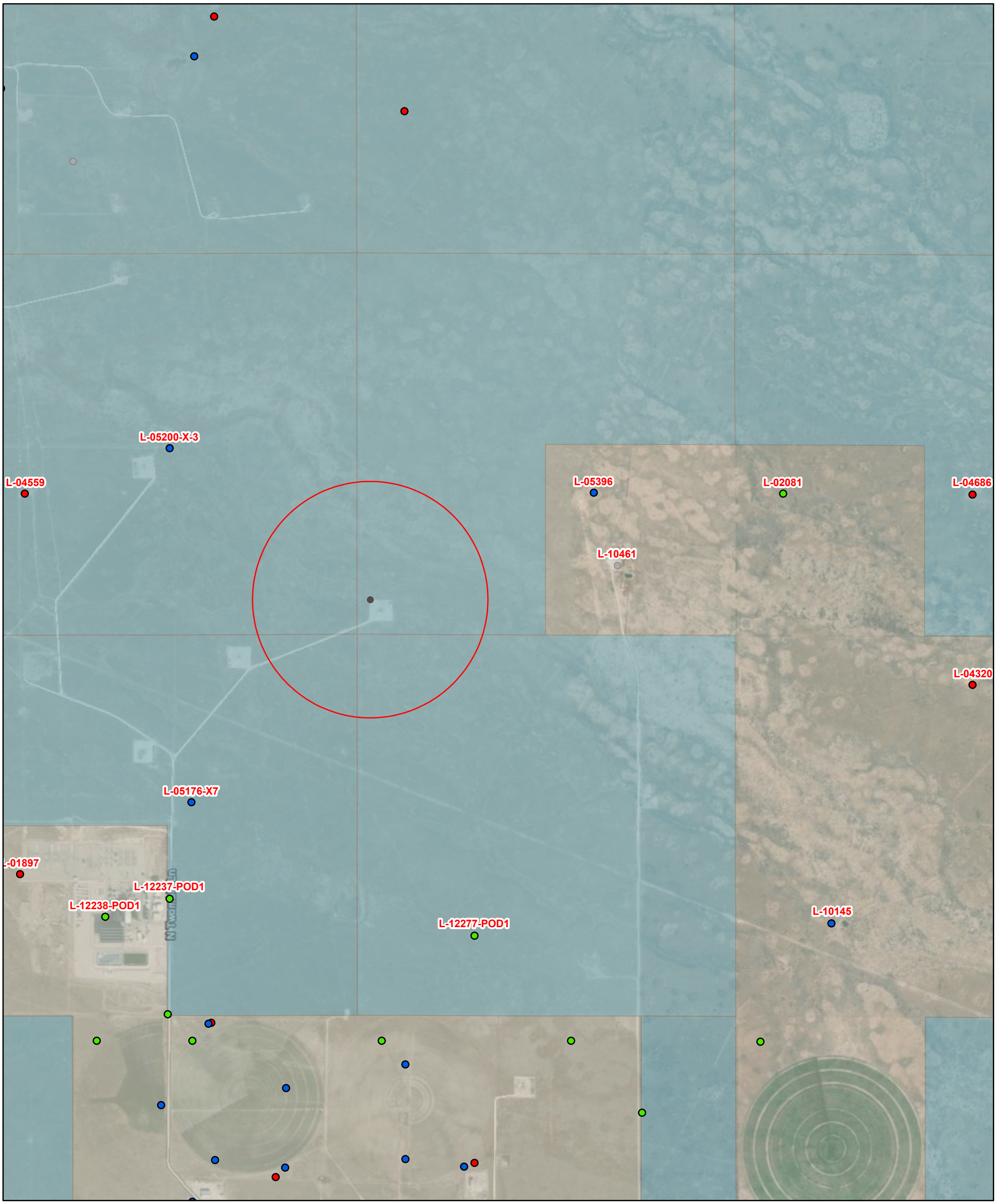
32.725653, -103.305919

Google Earth

N

1 mi

OSE POD Location Map



11/15/2024, 9:18:02 AM

GIS WATERS PODs

- Active
- Pending
- Plugged

OSE District Boundary

Water Right Regulations

- Closure Area
- Artesian Planning Area

New Mexico State Trust Lands

- Both Estates

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar

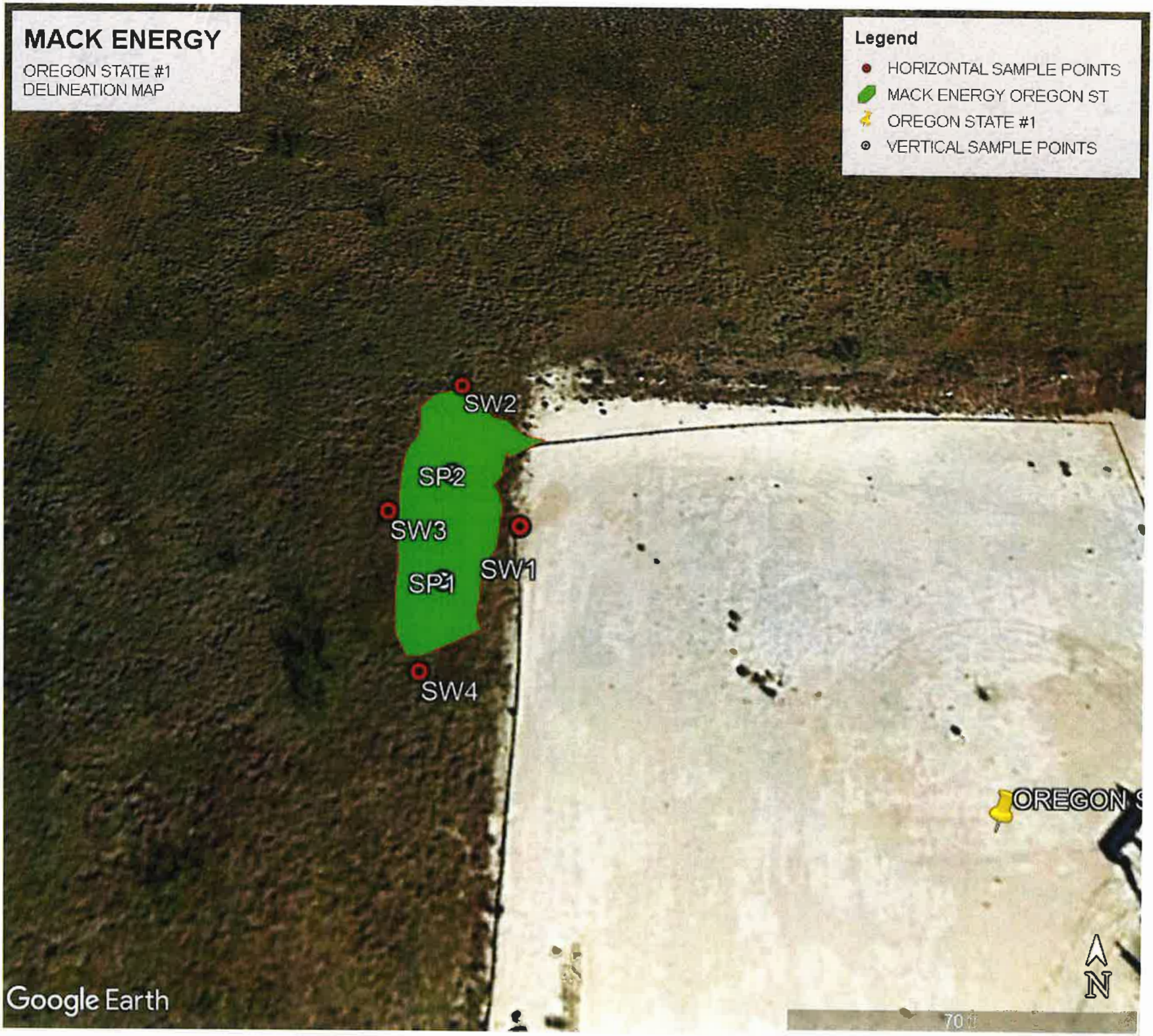
Online web user

This is an unofficial map from the OSE's online application.

Company Name: MACK ENERGY **Location Name:** OREGON STATE #1 **Release Date:** 1/4/2022

SP ID	Depth	Titr	PID	L-BTEX	L-GRO	L-DRO	L-ORO	L-TPH	L-CHL	Soil	Notes
SP1	SURF	2400	L	ND	ND	ND	ND	ND	2380		
	2'	2400									
	4'	240									
	6'	160	L	ND	ND	ND	ND	ND	ND		
SP2	SURF	1440	L	ND	ND	ND	ND	ND	1970		
	2'	1440									
	4'	320									
	6'	320	L	ND	ND	ND	ND	ND	ND		
SW1	SURF	2400	H	4.64	93.4	9900	3010	13008	2650		
	1'	2400									
	2'	1600									
	3'	960									
	4'	400									
	5'	400									
	6'	240	L	ND	ND	ND	ND	ND	175		
SW2	SURF	2800	L	ND	ND	ND	ND	ND	1690		
	1'	2800									
	2'	800									
	3'	400									
	4'	400	L	ND	ND	ND	ND	ND	175		
SW3	SURF	960	L	ND	ND	ND	ND	ND	939		
	1'	720									
	2'	480									
	3'	240	L	ND	ND	ND	ND	ND	484		
SW4	SURF	1600	L	ND	ND	ND	ND	ND	1980		
	1'	960									

	2'	720									
	3'	480									
	4'	400	L	ND	ND	ND	ND	ND	221		



COMPANY: MACK ENERGY **LOCATION:** OREGON ST #1

POINT	LATITUDE	LONGITUDE
SP1	32.741650°	-103.298809°
SP2	32.741743°	-103.298806°
SW1	32.741681°	-103.298760°
SW2	32.741818°	-103.298808°
SW3	32.741697°	-103.298849°
SW4	32.741580°	-103.298825°

Report to:

Natalie Gladden

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Mack Energy

Project Name:	Oregon St. #1 Release
Work Order:	E201070
Job Number:	20046-0001
Received:	1/18/2022

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
1/19/22

Date Reported: 1/19/22

Natalie Gladden
7 W. Compress Road
Artesia, NM 88210

Project Name: Oregon St. #1 Release
Workorder: E201070
Date Received: 1/18/2022 8:15:00AM

Natalie Gladden,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/18/2022 8:15:00AM, under the Project Name: Oregon St. #1 Release.

The analytical test results summarized in this report with the Project Name: Oregon St. #1 Release apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

Walter Hinchman
Laboratory Director
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Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Mack Energy	Project Name:	Oregon St. #1 Release	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	01/19/22 14:41

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW1- Surface	E201070-01A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW1-6'	E201070-02A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW2-Surface	E201070-03A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW2-4'	E201070-04A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW3- Surface	E201070-05A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW3-3'	E201070-06A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW4- Surface	E201070-07A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SW4-4'	E201070-08A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SP1- Surface	E201070-09A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SP1-6'	E201070-10A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SP2- Surface	E201070-11A	Soil	01/13/22	01/18/22	Glass Jar, 4 oz.
SP2-6'	E201070-12A	Solid	01/13/22	01/18/22	Glass Jar, 4 oz.

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW1- Surface

E201070-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	**1.22**	0.0250	1	01/18/22	01/18/22	
Toluene	**0.166**	0.0250	1	01/18/22	01/18/22	
o-Xylene	**1.27**	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	**3.37**	0.0500	1	01/18/22	01/18/22	
Total Xylenes	**4.64**	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*120 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	**93.4**	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*106 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	**9900**	1250	50	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	**3010**	2500	50	01/18/22	01/18/22	
Surrogate: n-Nonane		*%*	*50-200*	*01/18/22*	*01/18/22*	*S6*
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**2650**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW1-6'

E201070-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*108 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*100 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*101 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**175**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW2-Surface

E201070-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.5 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*101 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**1690**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW2-4'

E201070-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*99.5 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.7 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*98.2 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**175**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW3- Surface

E201070-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*99.2 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.7 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*109 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**939**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW3-3'

E201070-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*98.3 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.9 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*106 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**484**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW4- Surface

E201070-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*96.8 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*103 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**1980**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SW4-4'

E201070-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*96.7 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*102 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*88.8 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**221**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SP1- Surface

E201070-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*98.3 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*103 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*102 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**2380**	40.0	2	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SP1-6'

E201070-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*96.2 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*105 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	ND	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SP2- Surface

E201070-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*95.7 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*105 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*103 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	**1970**	20.0	1	01/18/22	01/18/22	

Sample Data

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

SP2-6'

E201070-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Benzene	ND	0.0250	1	01/18/22	01/18/22	
Ethylbenzene	ND	0.0250	1	01/18/22	01/18/22	
Toluene	ND	0.0250	1	01/18/22	01/18/22	
o-Xylene	ND	0.0250	1	01/18/22	01/18/22	
p,m-Xylene	ND	0.0500	1	01/18/22	01/18/22	
Total Xylenes	ND	0.0250	1	01/18/22	01/18/22	
Surrogate: 4-Bromochlorobenzene-PID		*95.1 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2204016
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/18/22	01/18/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*102 %*	*70-130*	*01/18/22*	*01/18/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2204019
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/22	01/18/22	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/22	01/18/22	
Surrogate: n-Nonane		*108 %*	*50-200*	*01/18/22*	*01/18/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2204018
Chloride	ND	20.0	1	01/18/22	01/18/22	

QC Summary Data

Mack Energy	Project Name:	Oregon St. #1 Release	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

Volatile Organics by EPA 8021B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2204016-BLK1)									Prepared: 01/18/22 Analyzed: 01/18/22
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*7.63*		*8.00*		*95.4*	*70-130*			
LCS (2204016-BS1)									Prepared: 01/18/22 Analyzed: 01/18/22
Benzene	4.70	0.0250	5.00		94.0	70-130			
Ethylbenzene	4.66	0.0250	5.00		93.2	70-130			
Toluene	4.81	0.0250	5.00		96.3	70-130			
o-Xylene	4.79	0.0250	5.00		95.7	70-130			
p,m-Xylene	9.49	0.0500	10.0		94.9	70-130			
Total Xylenes	14.3	0.0250	15.0		95.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.95*		*8.00*		*99.4*	*70-130*			
Matrix Spike (2204016-MS1)				**Source: E201068-01**					Prepared: 01/18/22 Analyzed: 01/18/22
Benzene	4.80	0.0250	5.00	ND	96.0	54-133			
Ethylbenzene	4.78	0.0250	5.00	ND	95.5	61-133			
Toluene	4.93	0.0250	5.00	ND	98.6	61-130			
o-Xylene	4.89	0.0250	5.00	ND	97.8	63-131			
p,m-Xylene	9.72	0.0500	10.0	ND	97.2	63-131			
Total Xylenes	14.6	0.0250	15.0	ND	97.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.82*		*8.00*		*97.7*	*70-130*			
Matrix Spike Dup (2204016-MSD1)				**Source: E201068-01**					Prepared: 01/18/22 Analyzed: 01/18/22
Benzene	4.38	0.0250	5.00	ND	87.7	54-133	9.04	20	
Ethylbenzene	4.35	0.0250	5.00	ND	87.0	61-133	9.33	20	
Toluene	4.49	0.0250	5.00	ND	89.8	61-130	9.36	20	
o-Xylene	4.46	0.0250	5.00	ND	89.2	63-131	9.19	20	
p,m-Xylene	8.85	0.0500	10.0	ND	88.5	63-131	9.44	20	
Total Xylenes	13.3	0.0250	15.0	ND	88.7	63-131	9.36	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.80*		*8.00*		*97.5*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	Oregon St. #1 Release	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2204016-BLK1)									Prepared: 01/18/22 Analyzed: 01/18/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.96*		*8.00*		*99.5*	*70-130*			
LCS (2204016-BS2)									Prepared: 01/18/22 Analyzed: 01/18/22
Gasoline Range Organics (C6-C10)	48.6	20.0	50.0		97.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.03*		*8.00*		*100*	*70-130*			
Matrix Spike (2204016-MS2)				**Source: E201068-01**					Prepared: 01/18/22 Analyzed: 01/18/22
Gasoline Range Organics (C6-C10)	54.6	20.0	50.0	ND	109	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.05*		*8.00*		*101*	*70-130*			
Matrix Spike Dup (2204016-MSD2)				**Source: E201068-01**					Prepared: 01/18/22 Analyzed: 01/18/22
Gasoline Range Organics (C6-C10)	55.5	20.0	50.0	ND	111	70-130	1.57	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.04*		*8.00*		*100*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	Oregon St. #1 Release	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2204019-BLK1)									Prepared: 01/18/22 Analyzed: 01/18/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*51.5*		*50.0*		*103*	*50-200*			
LCS (2204019-BS1)									Prepared: 01/18/22 Analyzed: 01/18/22
Diesel Range Organics (C10-C28)	514	25.0	500		103	38-132			
Surrogate: n-Nonane	*52.1*		*50.0*		*104*	*50-200*			
Matrix Spike (2204019-MS1)				**Source: E201070-04**					Prepared: 01/18/22 Analyzed: 01/18/22
Diesel Range Organics (C10-C28)	539	25.0	500	ND	108	38-132			
Surrogate: n-Nonane	*54.4*		*50.0*		*109*	*50-200*			
Matrix Spike Dup (2204019-MSD1)				**Source: E201070-04**					Prepared: 01/18/22 Analyzed: 01/18/22
Diesel Range Organics (C10-C28)	563	25.0	500	ND	113	38-132	4.40	20	
Surrogate: n-Nonane	*53.2*		*50.0*		*106*	*50-200*			

QC Summary Data

Mack Energy	Project Name:	Oregon St. #1 Release	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	1/19/2022 2:41:08PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2204018-BLK1)									Prepared: 01/18/22 Analyzed: 01/18/22
Chloride	ND	20.0							
LCS (2204018-BS1)									Prepared: 01/18/22 Analyzed: 01/18/22
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2204018-MS1)				**Source: E201068-03**					Prepared: 01/18/22 Analyzed: 01/18/22
Chloride	299	20.0	250	41.4	103	80-120			
Matrix Spike Dup (2204018-MSD1)				**Source: E201068-03**					Prepared: 01/18/22 Analyzed: 01/18/22
Chloride	297	20.0	250	41.4	102	80-120	0.694	20	

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

Definitions and Notes

Mack Energy	Project Name:	Oregon St. #1 Release	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	01/19/22 14:41

S6	Surrogate was diluted out due to high concentrations of target and/or non-target analytes and does not provide useful information. The associated LCS spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

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

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

Project Information | Chain of Custody | Page 1 of 2

Client:	Merit Energy
Project:	Oregon St. #1 Release
Project Manager:	
Address:	
City, State, Zip	
Phone:	
Email:	
Report due by:	

Bill To

Attention: ESS
Address: 3724 N West Co Rd
City, State, Zip Hobbs NM 88240
Phone:
Email: natalie@energystaffingllc.com
Dakotah@energystaffingllc.com

Lab Use Only

Lab WO# E201070 | Job Number 200416-0001

TAT: 1D | 2D (X) | 3D | Standard

EPA Program: CWA | SDWA | RCRA

State: NM (X) | CO | UT | AZ | TX

Analysis and Method

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM	BGDOC TX			Remarks
	1-13-22	S	1	SW1 - Surface	1									/				
			1	SW1 - 6'	2									/				
			1	SW2 - Surface	3									/				
			1	SW2 - 4'	4									/				
			1	SW3 - Surface	5									/				
			1	SW3 - 3'	6									/				
			1	SW4 - Surface	7									/				
			1	SW4 - 4'	8									/				
			1	SP1 - Surface	9									/				
			1	SP1 - 6'	10									/				

Additional Instructions:

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

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1-17-22	1145		1.17.22	1145
	1.17.22	1400	Caitlin Christian	1/18/22	8:15

Lab Use Only

Received on ice: (Y) / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4

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

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

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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Project Information | Chain of Custody | Page 2 of 2

Client: Mack Energy	**Bill To**
Project: Oregon St #1 Release	Attention: ESS
Project Manager:	Address: 3724 N West Co Rd
Address:	City, State, Zip Hobbs NM 88240
City, State, Zip	Phone:
Phone:	Email: natalie@energystaffingllc.com
Email:	Dakotah@energystaffingllc.com
Report due by:	

Lab Use Only

Lab WO# E 201070 | Job Number 20046-0001

TAT: 1D | 2D ✓ | 3D | Standard

EPA Program: CWA | SDWA | RCRA

State: NM ✓ | CO | UT | AZ | TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM ✓	BGDOC TX			Remarks
	1/13/22	S	1	SP2 - Surface	11									✓				
	"	"	"	SP2 - 6'	12									✓				

Additional Instructions:

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

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1-17-22	1145		1145	1.17.22
	1.17.22	1400	Caitlin Christian	1/18/22	8:15

Lab Use Only

Received on ice: (Y) / N

T1 _____ T2 _____ T3 _____

AVG Temp °C 4

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

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

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 1/18/2022 9:07:09AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Mack Energy	Date Received:	01/18/22 08:15	Work Order ID:	E201070
Phone:	(575) 390-6397	Date Logged In:	01/17/22 14:09	Logged In By:	Caitlin Christian
Email:	Natalie@energystaffingllc.com	Due Date:	01/18/22 17:00 (0 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courrier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

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

Sample Cooler

7. Was a sample cooler received?	Yes	
8. If yes, was cooler received in good condition?	Yes	
9. Was the sample(s) received intact, i.e., not broken?	Yes	
10. Were custody/security seals present?	No	
11. If yes, were custody/security seals intact?	NA	
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
13. If no visible ice, record the temperature. Actual sample temperature: 4°C		

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:		
Sample ID?	Yes	
Date/Time Collected?	No	
Collectors name?	No	

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date

envirotech Inc.

From: Natalie Gladden
To: ocdonline, emnrd, EMNRD; Bratcher, Mike, EMNRD; Hensley, Chad, EMNRD; Hamlet, Robert, EMNRD
Cc: mattbuckles@mec.com; Dakoatah Montanez
Subject: Mack Energy - Composite notification - Oregon State #1
Date: Wednesday, March 30, 2022 7:14:00 AM
Attachments: image001.png
Importance: High

All,

Please find this email as the official notification to conduct final composite sampling for the Oregon State #1:

Oregon State #1
DOR: 1/4/22
API No. 30-025-40882
NAPP200543737

If you have any questions or concerns, please let me know.

Natalie Gladden
Director of Environmental and Regulatory Services
Energy Staffing Services, LLC.
2724 NW County Road
Hobbs, NM 88240
Cell: 575-390-6397
Office: 575-393-9048
Email: natalie@energystaffingllc.com

ESS

From: Hensley, Chad, EMNRD
To: Natalie Gladden; ocdonline, emnrd, EMNRD; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: mattbuckles@mec.com; Dakoatah Montanez
Subject: RE: [EXTERNAL] Mack Energy - Composite notification - Oregon State #1
Date: Wednesday, March 30, 2022 7:50:37 AM
Attachments: image001.png

Good morning, Natalie.

The OCD has received your message.

NOTE: The OCD requires a copy of all correspondence relative to remedial projects be included in all proposal and/or final closure reports. Correspondence required to be included in reports may include, but not necessarily limited to, extension requests, liner inspection notifications, sample event notifications, spill/release/fire notifications, and variance requests. This will allow for notifications and requests to become a documented part of the incident file.

Cheers,

Chad Hensley ● Environmental Science & Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
811 First St. | Artesia, NM 88210
Office: 575.748.1283 | Cell: 575-703-1723
chad.hensley@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Natalie Gladden <natalie@energystaffingllc.com>
Sent: Wednesday, March 30, 2022 7:15 AM
To: ocdonline, emnrd, EMNRD <EMNRD.OCDOnline@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hensley, Chad, EMNRD <Chad.Hensley@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: mattbuckles@mec.com; Dakoatah Montanez <dakoatah@energystaffingllc.com>
Subject: [EXTERNAL] Mack Energy - Composite notification - Oregon State #1
Importance: High

All,

Please find this email as the official notification to conduct final composite sampling for the Oregon State #1:

Oregon State #1
DOR: 1/4/22
API No. 30-025-40882
NAPP200543737

If you have any questions or concerns, please let me know.

Natalie Gladden
Director of Environmental and Regulatory Services
Energy Staffing Services, LLC.
2724 NW County Road
Hobbs, NM 88240
Cell: 575-390-6397
Office: 575-393-9048
Email: natalie@energystaffingllc.com

ESS

MACK ENERGY

RECLAMATION SITE MAP

Legend

- MACK ENERGY OREGON ST - 2042 SQ. FT.
- OREGON STATE #1

OREGON STATE #1

N

100 ft

Company Name: MACK **Location Name:** OREGON ST #1

SP ID	Depth	Titr	PID	L-BTEX	L-GRO	L-DRO	L-ORO	L-TPH	L-CHL
COMP 1	4	320	L	ND	ND	ND	ND	ND	40.4
COMP 2	4	80	L	ND	ND	ND	ND	ND	43.8
COMP 3	4	240	L	ND	ND	ND	ND	ND	48.3
COMP 4	4	240	L	ND	ND	ND	ND	ND	ND
COMP 5	4	320	L	ND	ND	ND	ND	ND	ND
COMP 6	4	400	L	ND	ND	ND	ND	ND	36.7
COMP 7	4	400	L	ND	ND	ND	ND	ND	38.1
COMP 8	4	80	L	ND	ND	ND	ND	ND	39.6
COMP 9	4	240	L	ND	ND	ND	ND	ND	34.7
COMP 10	4	160	L	ND	ND	ND	ND	ND	35.6
SWCOMP 1	4	320	L	ND	ND	ND	ND	ND	47.2
SWCOMP 2	4	320	L	ND	ND	ND	ND	ND	33.9
SWCOMP 3	4	400	L	ND	ND	ND	ND	ND	35.2
SWCOMP 4	4	160	L	ND	ND	ND	ND	ND	42.3
SWCOMP 5	2	240	L	ND	ND	ND	ND	ND	43.6
SWCOMP 6	2	320	L	ND	ND	ND	ND	ND	51.7

MACK ENERGY

OREGON ST #1
COMPOSITE MAP

Legend

- COMPOSITES
- MACK ENERGY OREGON ST - 2042 SQ. FT.
- OREGON ST 1

OREGON ST 1
C10
C9
C8
C7
C6
C5
C4
C3
C2
C1

N

50 ft

MACK ENERGY

OREGON ST #1
SIDEWALL COMPOSITE MAP

Legend
- MACK ENERGY OREGON ST - 2042 SQ. FT.
- OREGON ST 1
- SIDEWALL COMPOSITES

OREGON ST 1
CSW1
CSW6
CSW2
CSW5
CSW3
CSW4

Google Earth

60 ft

N

COMPANY: MACK ENERGY

LOCATION: OREGON ST #1

POINT	LATITUDE	LONGITUDE
C1	32.741605°	-103.298812°
C2	32.741627°	-103.298811°
C3	32.741647°	-103.298807°
C4	32.741667°	-103.298807°
C5	32.741687°	-103.298804°
C6	32.741709°	-103.298804°
C7	32.741730°	-103.298804°
C8	32.741750°	-103.298804°
C9	32.741775°	-103.298806°
C10	32.741801°	-103.298811°
CSW1	32.741791°	-103.298771°
CSW2	32.741693°	-103.298760°
CSW3	32.741603°	-103.298769°
CSW4	32.741590°	-103.298832°
CSW5	32.741671°	-103.298846°
CSW6	32.741751°	-103.298850°

Report to:

Natalie Gladden

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Mack Energy

Project Name:	OREGON STATE 1 RELEASE
Work Order:	E204012
Job Number:	20046-0001
Received:	4/4/2022

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/5/22

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

Date Reported: 4/5/22

Natalie Gladden
7 W. Compress Road
Artesia, NM 88210

Project Name: OREGON STATE 1 RELEASE
Workorder: E204012
Date Received: 4/4/2022 10:00:00AM

Natalie Gladden,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/4/2022 10:00:00AM, under the Project Name: OREGON STATE 1 RELEASE.

The analytical test results summarized in this report with the Project Name: OREGON STATE 1 RELEASE apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

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

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

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Office: 505-632-1881
labadmin@envirotech-inc.com

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Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

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

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

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Sample Summary

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	04/05/22 17:28

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Comp - 1	E204012-01A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 2	E204012-02A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 3	E204012-03A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 4	E204012-04A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 5	E204012-05A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 6	E204012-06A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 7	E204012-07A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 8	E204012-08A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 9	E204012-09A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
Comp - 10	E204012-10A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp - 1	E204012-11A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp -2	E204012-12A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp - 3	E204012-13A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp - 4	E204012-14A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp - 5	E204012-15A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.
SW Comp - 6	E204012-16A	Soil	04/01/22	04/02/22	Glass Jar, 4 oz.

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 1

E204012-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*93.7 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.9 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**40.4**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 2

E204012-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*93.4 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*99.5 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*93.4 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*99.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*99.5 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*108 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**43.8**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 3

E204012-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*95.2 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.4 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*109 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**48.3**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 4

E204012-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*97.5 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.1 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*125 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	ND	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 5

E204012-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*98.6 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.9 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*125 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	ND	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 6

E204012-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*92.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*98.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.9 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*92.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*98.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.9 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**36.7**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 7

E204012-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.8 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*99.1 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.8 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*99.1 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*107 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**38.1**	20.0	1	04/02/22	04/05/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 8

E204012-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*96.7 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.0 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/05/22	04/05/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/05/22	04/05/22	
Surrogate: n-Nonane		*99.2 %*	*50-200*	*04/05/22*	*04/05/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**39.6**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 9

E204012-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*95.7 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.1 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*111 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**34.7**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Comp - 10

E204012-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.2 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*98.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.2 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*98.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*110 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**35.6**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp - 1

E204012-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.8 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.8 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*108 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**47.2**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp -2

E204012-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.0 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*98.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*91.0 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*98.6 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*109 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**33.9**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp - 3

E204012-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*94.6 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.7 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*110 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**35.2**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp - 4

E204012-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Total Xylenes	ND	125	1	04/02/22	04/04/22	
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*92.4 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*92.4 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.7 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*105 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**42.3**	20.0	1	04/02/22	04/02/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp - 5

E204012-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Benzene	ND	0.0250	1	04/04/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/04/22	04/04/22	
Toluene	ND	0.0250	1	04/04/22	04/04/22	
o-Xylene	ND	0.0250	1	04/04/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/04/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/04/22	04/04/22	
Surrogate: 4-Bromochlorobenzene-PID		*95.5 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2215008
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/04/22	04/04/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.0 %*	*70-130*	*04/04/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2215005
Diesel Range Organics (C10-C28)	ND	25.0	1	04/04/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/04/22	04/04/22	
Surrogate: n-Nonane		*112 %*	*50-200*	*04/04/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2215011
Chloride	**43.6**	20.0	1	04/04/22	04/04/22	

Sample Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

SW Comp - 6

E204012-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Benzene	ND	0.0250	1	04/02/22	04/04/22	
Ethylbenzene	ND	0.0250	1	04/02/22	04/04/22	
Toluene	ND	0.0250	1	04/02/22	04/04/22	
o-Xylene	ND	0.0250	1	04/02/22	04/04/22	
p,m-Xylene	ND	0.0500	1	04/02/22	04/04/22	
Total Xylenes	ND	0.0250	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*93.3 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.2 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2214094
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/02/22	04/04/22	
Surrogate: Bromofluorobenzene		*93.3 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*04/02/22*	*04/04/22*	
Surrogate: Toluene-d8		*97.2 %*	*70-130*	*04/02/22*	*04/04/22*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2214091
Diesel Range Organics (C10-C28)	ND	25.0	1	04/01/22	04/04/22	
Oil Range Organics (C28-C36)	ND	50.0	1	04/01/22	04/04/22	
Surrogate: n-Nonane		*106 %*	*50-200*	*04/01/22*	*04/04/22*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS			Batch: 2214097
Chloride	**51.7**	20.0	1	04/02/22	04/02/22	

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2214094-BLK1)									Prepared: 04/02/22 Analyzed: 04/04/22
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	*0.446*		*0.500*		*89.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.497*		*0.500*		*99.3*	*70-130*			
Surrogate: Toluene-d8	*0.487*		*0.500*		*97.3*	*70-130*			
LCS (2214094-BS1)									Prepared: 04/02/22 Analyzed: 04/04/22
Benzene	2.74	0.0250	2.50		109	70-130			
Ethylbenzene	2.76	0.0250	2.50		110	70-130			
Toluene	2.76	0.0250	2.50		110	70-130			
o-Xylene	2.68	0.0250	2.50		107	70-130			
p,m-Xylene	5.41	0.0500	5.00		108	70-130			
Total Xylenes	8.09	0.0250	7.50		108	70-130			
Surrogate: Bromofluorobenzene	*0.488*		*0.500*		*97.6*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.501*		*0.500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.517*		*0.500*		*103*	*70-130*			
LCS Dup (2214094-BSD1)									Prepared: 04/02/22 Analyzed: 04/04/22
Benzene	2.86	0.0250	2.50		114	70-130	4.29	23	
Ethylbenzene	2.92	0.0250	2.50		117	70-130	5.69	27	
Toluene	2.91	0.0250	2.50		117	70-130	5.35	24	
o-Xylene	2.86	0.0250	2.50		114	70-130	6.38	27	
p,m-Xylene	5.69	0.0500	5.00		114	70-130	5.00	27	
Total Xylenes	8.55	0.0250	7.50		114	70-130	5.46	27	
Surrogate: Bromofluorobenzene	*0.487*		*0.500*		*97.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.504*		*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.513*		*0.500*		*103*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2215008-BLK1)									Prepared: 04/04/22 Analyzed: 04/04/22
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.35*		*8.00*		*104*	*70-130*			
LCS (2215008-BS1)									Prepared: 04/04/22 Analyzed: 04/04/22
Benzene	4.64	0.0250	5.00		92.8	70-130			
Ethylbenzene	4.52	0.0250	5.00		90.4	70-130			
Toluene	4.69	0.0250	5.00		93.9	70-130			
o-Xylene	4.74	0.0250	5.00		94.9	70-130			
p,m-Xylene	9.33	0.0500	10.0		93.3	70-130			
Total Xylenes	14.1	0.0250	15.0		93.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.48*		*8.00*		*106*	*70-130*			
LCS Dup (2215008-BSD1)									Prepared: 04/04/22 Analyzed: 04/04/22
Benzene	4.84	0.0250	5.00		96.8	70-130	4.25	20	
Ethylbenzene	4.72	0.0250	5.00		94.5	70-130	4.41	20	
Toluene	4.90	0.0250	5.00		97.9	70-130	4.24	20	
o-Xylene	4.94	0.0250	5.00		98.8	70-130	4.06	20	
p,m-Xylene	9.74	0.0500	10.0		97.4	70-130	4.29	20	
Total Xylenes	14.7	0.0250	15.0		97.9	70-130	4.21	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.44*		*8.00*		*106*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2214094-BLK1)									Prepared: 04/02/22 Analyzed: 04/04/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.446*		*0.500*		*89.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.497*		*0.500*		*99.3*	*70-130*			
Surrogate: Toluene-d8	*0.487*		*0.500*		*97.3*	*70-130*			
LCS (2214094-BS2)									Prepared: 04/02/22 Analyzed: 04/04/22
Gasoline Range Organics (C6-C10)	51.1	20.0	50.0		102	70-130			
Surrogate: Bromofluorobenzene	*0.472*		*0.500*		*94.3*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.485*		*0.500*		*97.0*	*70-130*			
Surrogate: Toluene-d8	*0.512*		*0.500*		*102*	*70-130*			
LCS Dup (2214094-BSD2)									Prepared: 04/02/22 Analyzed: 04/04/22
Gasoline Range Organics (C6-C10)	52.3	20.0	50.0		105	70-130	2.29	20	
Surrogate: Bromofluorobenzene	*0.462*		*0.500*		*92.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.504*		*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.503*		*0.500*		*101*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2215008-BLK1)									Prepared: 04/04/22 Analyzed: 04/04/22
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.36*		*8.00*		*92.0*	*70-130*			
LCS (2215008-BS2)									Prepared: 04/04/22 Analyzed: 04/05/22
Gasoline Range Organics (C6-C10)	48.0	20.0	50.0		96.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.50*		*8.00*		*93.8*	*70-130*			
LCS Dup (2215008-BSD2)									Prepared: 04/04/22 Analyzed: 04/05/22
Gasoline Range Organics (C6-C10)	51.9	20.0	50.0		104	70-130	7.74	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.50*		*8.00*		*93.7*	*70-130*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2214091-BLK1)									Prepared: 04/01/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*55.8*		*50.0*		*112*	*50-200*			
LCS (2214091-BS1)									Prepared: 04/01/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	516	25.0	500		103	38-132			
Surrogate: n-Nonane	*53.5*		*50.0*		*107*	*50-200*			
Matrix Spike (2214091-MS1)				**Source: E204015-01**					Prepared: 04/01/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	481	25.0	500	ND	96.3	38-132			
Surrogate: n-Nonane	*53.8*		*50.0*		*108*	*50-200*			
Matrix Spike Dup (2214091-MSD1)				**Source: E204015-01**					Prepared: 04/01/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	563	25.0	500	ND	113	38-132	15.7	20	
Surrogate: n-Nonane	*52.9*		*50.0*		*106*	*50-200*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2215005-BLK1)									Prepared: 04/04/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*53.0*		*50.0*		*106*	*50-200*			
LCS (2215005-BS1)									Prepared: 04/04/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	425	25.0	500		85.0	38-132			
Surrogate: n-Nonane	*51.2*		*50.0*		*102*	*50-200*			
Matrix Spike (2215005-MS1)				**Source: E204012-15**					Prepared: 04/04/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	429	25.0	500	ND	85.7	38-132			
Surrogate: n-Nonane	*52.5*		*50.0*		*105*	*50-200*			
Matrix Spike Dup (2215005-MSD1)				**Source: E204012-15**					Prepared: 04/04/22 Analyzed: 04/05/22
Diesel Range Organics (C10-C28)	434	25.0	500	ND	86.8	38-132	1.28	20	
Surrogate: n-Nonane	*52.4*		*50.0*		*105*	*50-200*			

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2214097-BLK1)									Prepared: 04/02/22 Analyzed: 04/02/22
Chloride	ND	20.0							
LCS (2214097-BS1)									Prepared: 04/02/22 Analyzed: 04/02/22
Chloride	254	20.0	250		102	90-110			
Matrix Spike (2214097-MS1)				**Source: E204012-02**					Prepared: 04/02/22 Analyzed: 04/02/22
Chloride	304	20.0	250	43.8	104	80-120			
Matrix Spike Dup (2214097-MSD1)				**Source: E204012-02**					Prepared: 04/02/22 Analyzed: 04/02/22
Chloride	299	20.0	250	43.8	102	80-120	1.54	20	

QC Summary Data

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	**Reported:**
7 W. Compress Road	Project Number:	20046-0001	
Artesia NM, 88210	Project Manager:	Natalie Gladden	4/5/2022 5:28:15PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2215011-BLK1)									Prepared: 04/04/22 Analyzed: 04/04/22
Chloride	ND	20.0							
LCS (2215011-BS1)									Prepared: 04/04/22 Analyzed: 04/04/22
Chloride	247	20.0	250		98.9	90-110			
Matrix Spike (2215011-MS1)				**Source: E204012-01**					Prepared: 04/04/22 Analyzed: 04/04/22
Chloride	280	20.0	250	40.4	96.0	80-120			
Matrix Spike Dup (2215011-MSD1)				**Source: E204012-01**					Prepared: 04/04/22 Analyzed: 04/04/22
Chloride	268	20.0	250	40.4	91.0	80-120	4.57	20	

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

Definitions and Notes

Mack Energy	Project Name:	OREGON STATE 1 RELEASE	
7 W. Compress Road	Project Number:	20046-0001	**Reported:**
Artesia NM, 88210	Project Manager:	Natalie Gladden	04/05/22 17:28

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

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

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

Project Information | Chain of Custody | Page 1 of 2

Client:	MACK ENERGY
Project:	OREGON STATE 1 RELEASE
Project Manager:	
Address:	
City, State, Zip	
Phone:	
Email:	
Report due by:	

Bill To

Attention:	ESS
Address:	2427 W COUNTY RD
City, State, Zip	HOBBS NM 88240
Phone:	575 3608297
Email:	NATALIE GLADDEN

Lab Use Only

Lab WO#	Job Number
E204012	20240000001

TAT

1D	2D	3D	Standard
X			

EPA Program

CWA	SDWA	RCRA

State

NM	CO	UT	AZ	TX	
X					

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM	BGDOC TX			Remarks
	4-1-22	S	1	COMP - 1	1									X				
				COMP. 2	2													
				COMP - 3	3													
				COMP - 4	4													
				COMP - 5	5													
				COMP - 6	6													
				COMP - 7	7													
				COMP 8	8													
				COMP 9	9													
				COMP 10	10													

Additional Instructions:

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

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scotch Montag	4-1-22	3:03	J.R. Bradley	4/1/22	15:03
J.R. Bradley	4-1-22	16:15	[signature]	4/4/22	10:00
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

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

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

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Project Information

Chain of Custody

Client: MACK ENERGY
Project: OREGON STATE / RELEASE
Project Manager:
Address:
City, State, Zip
Phone:
Email:
Report due by:

Bill To
Attention: ESS
Address: 2427 W COUNTY RD
City, State, Zip HOBBS NM 88240
Phone: 575 360-6397
Email: NATALIE GLADDEN

Lab Use Only — Lab WO#: E204012 — Job Number: 20046-0001

TAT: 1D X | 2D | 3D | Standard

EPA Program: CWA | SDWA | RCRA

State: NM X | CO | UT | AZ | TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM	BGDOC TX			Remarks
	4-1-22	S	1	SW COMP-1	11									X				
	〃	〃	〃	SW COMP-2	12									〃				
	〃	〃	〃	SW COMP-3	13									〃				
	〃	〃	〃	SW COMP-4	14									〃				
	〃	〃	〃	SW COMP-5	15									〃				
	〃	〃	〃	SW COMP6	16									〃				

Additional Instructions:

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

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	4-1-22	3:03	[signature]	4/1/22	15:05
[signature]	4-1-22	16:15	[signature]	4/4/22	10:00

Lab Use Only
Received on ice: (Y) / N
T1 ____ T2 ____ T3 ____
AVG Temp °C 4

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

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

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 4/5/2022 10:25:45AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Mack Energy	Date Received:	04/04/22 10:00	Work Order ID:	E204012
Phone:	(575) 390-6397	Date Logged In:	04/01/22 16:32	Logged In By:	Caitlin Christian
Email:	Natalie@energystaffingllc.com	Due Date:	04/04/22 17:00 (0 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: UPS
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	No	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Sample Turn Around Time (TAT)

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

Sample Cooler

7. Was a sample cooler received?	Yes	
8. If yes, was cooler received in good condition?	Yes	
9. Was the sample(s) received intact, i.e., not broken?	Yes	
10. Were custody/security seals present?	No	
11. If yes, were custody/security seals intact?	NA	
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
13. If no visible ice, record the temperature. Actual sample temperature: 4°C		

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:		
Sample ID?	Yes	
Date/Time Collected?	No	
Collectors name?	No	

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Comments/Resolution

Sample times not provided on COC.

Client Instruction

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

Date

envirotech Inc.

MACK ENERGY: OREGON STATE #1

REMEDIATION SITE PHOTOS


Mar 23, 2022 at 6:55:27 AM
+32.741728, -103.298726
Hobbs NM 88240
United States
Mack Energy
Oregon State #1 Release


Mar 23, 2022 at 6:55:39 AM
+32.741827, -103.298736
Hobbs NM 88240
United States
Mack Energy
Oregon State #1 Release


Mar 23, 2022 at 6:55:51 AM
+32.741857,-103.298856
Hobbs NM 88240
United States
Mack Energy
Oregon State #1 Release

MACK ENERGY: OREGON STATE #1

FINAL SITE PHOTOS


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1147.0meter
Speed:0.0km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1147.0meter
Speed:0.0km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1146.1meter
Speed:0.1km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1147.0meter
Speed:0.0km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:16
+32.740914,-103.298763
Lea County
Altitude:1146.9meter
Speed:3.1km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:16
+32.740914,-103.298763
Lea County
Altitude:1146.9meter
Speed:3.1km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1147.0meter
Speed:0.0km/h
Mack Energy
Oregon State #01
Closure pics


11/15/2024 16:14
+32.740817,-103.299297
Lea County
Altitude:1147.0meter
Speed:0.0km/h
Mack Energy
Oregon State #01
Closure pics

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

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

QUESTIONS

Action 425131

QUESTIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 425131
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2200543737**
Incident Name	**NAPP2200543737 OREGON STATE #1 @ 30-025-40882**
Incident Type	**Oil Release**
Incident Status	**Reclamation Report Received**
Incident Well	**[30-025-40882] OREGON STATE #001**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	OREGON STATE #1
Date Release Discovered	01/04/2022
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Freeze | Flow Line - Production | Crude Oil | Released: 8 BBL | Recovered: 0 BBL | Lost: 8 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

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QUESTIONS

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

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	False
If all the actions described above have not been undertaken, explain why	FLUIDS HAD ALREADY SOAKED IN UPON ARRIVAL OF THE RELEASE.
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Natalie Gladden Title: Environmental Email: natalie@energystaffingllc.com Date: 01/27/2025

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QUESTIONS (continued)

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QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2650
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	13008
GRO+DRO (EPA SW-846 Method 8015M)	9993.4
BTEX (EPA SW-846 Method 8021B or 8260B)	4.7
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	03/15/2022
On what date will (or did) the final sampling or liner inspection occur	04/01/2022
On what date will (or was) the remediation complete(d)	05/30/2022
What is the estimated surface area (in square feet) that will be reclaimed	2000
What is the estimated volume (in cubic yards) that will be reclaimed	296.3
What is the estimated surface area (in square feet) that will be remediated	2042
What is the estimated volume (in cubic yards) that will be remediated	317
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Natalie Gladden Title: Environmental Email: natalie@energystaffingllc.com Date: 03/31/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**447301**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**03/30/2022**
What was the (estimated) number of samples that were to be gathered	**15**
What was the sampling surface area in square feet	**2000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	2000
What was the total volume (cubic yards) remediated	317
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	2000
What was the total volume (in cubic yards) reclaimed	317
Summarize any additional remediation activities not included by answers (above)	SITE WAS EXCAVATED, BACKFILL USING THE 4' VADOSE ZONE RECLAMATION.

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

I 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.

I hereby agree and sign off to the above statement	Name: Natalie Gladden Title: Environmental Email: natalie@energystaffingllc.com Date: 03/31/2025

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QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	2000
What was the total volume of replacement material (in cubic yards) for this site	308
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	05/21/2022
Summarize any additional reclamation activities not included by answers (above)	4' OF VADOZE ZONE WAS BACKFILLED WITH CLEAN TOPSOIL, SEEDED WITH BLM #3 SEED. The well was plugged after this remediation and has been reclaimed from another contractor than ESS. ESS only reclaimed the pasture area where the release occurred.
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.	
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.	
I hereby agree and sign off to the above statement	Name: Natalie Gladden Title: Environmental Email: natalie@energystaffingllc.com Date: 03/31/2025

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QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

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CONDITIONS

Action 425131

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CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your reclamation/remediation closure report for Incident #NAPP2200543737 OREGON STATE #1, thank you. The reclamation/remediation closure report is approved. For future reference, the reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical.	5/6/2025