VERTEX

January 27, 2023 Vertex Project #: 22E-03101

Spill Closure Report: Boyd X State #015H
Unit E, Section 16, Township 19 South, Range 25 East
API: 30-015-42223
County: Eddy
Incident ID: NAB1923358230
Incident Report: 2RP-5594

Prepared For: **EOG Resources, Inc.**
104 S. 4th Street
Artesia, New Mexico, 88210

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

EOG Resources, Inc. (EOG) retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment and Closure for a release that occurred on July 28, 2019, at Boyd X State #015H, API 30-015-42223 (hereafter referred to as "Boyd"). EOG submitted an initial C-141 Release Notification (Attachment 1) to New Mexico Oil Conservation Division (NMOCD) District 2 on August 9, 2019. Incident ID number NAB1923358230 was assigned to this incident.

This letter provides a description of the release assessment and remediation activities and demonstrates that closure criteria established in Table I of 19.15.29.12 *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) are being met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for the closure of this release, with the understanding that restoration of the release site will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed per 19.15.29.13.

Incident Description

On July 28, 2019, a release at EOG's Boyd site occurred when a ¼" nipple on the heater treater popped off due to corrosion. The loss of the nipple resulted in a release of approximately 5 barrels (bbls) of oil and produced water into the earthen containment. After the release, a hydrovac was brought on-site to recover the fluids. Approximately 3 bbls of produced water were recovered from the release. No oil or produced water was released into waterways.

Site Characterization

The release at Boyd occurred on state land at 32.666136° N, 104.496157° W, approximately 7.9 miles southwest of Dayton, New Mexico. The legal description for the site is Unit E, Section 16, Township 19 South, Range 25 East in Eddy County, New Mexico. This location is within the Permian Basin in southeast New Mexico and has historically been used for oil and gas exploration and production, and rangeland.

Boyd is typical of oil and gas exploration and production sites on the western portion of the Permian Basin and is currently being used for oil and gas production and storage. The following sections specifically describe the release area on the south end of the constructed pad where the earthen containment is located (Attachment 2 – Figure 1).

The surrounding landscape is associated with fan remnants, alluvial fans, ridges, and fans with elevations ranging between 1,100 and 5,400 feet. The climate is semiarid with average annual precipitation ranging between 6 and 15 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be principally side oats grama with black grama as sub-dominant vegetation (United States Department of Agriculture, Natural Resources Conservation Service, 2021). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

The Geological Map of New Mexico indicates the surface geology at Boyd is comprised primarily of Qp – Piedmont alluvial deposits from the Holocene to lower Pleistocene ages (New Mexico Bureau of Geology and Mineral Resources, 2022). The United States Department of Agriculture *Web Soil Survey* characterizes the soil at the site as Reagan-Upton association. The soil is well-drained with a low runoff and moderately high to high moisture levels in the profile. The karst geology potential for Boyd is medium (United States Department of the Interior, Bureau of Land Management, 2018).

There is no surface water located at Boyd. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is a draw located approximately 0.45 miles south of the site. The draw is not continuously flowing, but it does have the potential to intermittently flood dependent on the amount of precipitation received. The nearest continuously flowing watercourse is the Pecos River, which is located approximately 10 miles east of the site. At Boyd, there are no significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

The nearest active water borehole to Boyd is on the southeast corner of the pad for the site. It was drilled for the New Mexico Office of the State Engineer and provides a depth to groundwater reference. Data from the borehole indicates the borehole was determined to be a dry hole as there was no water discovered (New Mexico Office of the State Engineer, 2022). Information pertaining to the depth to groundwater determination is included in Attachment 4.

Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Attachment 4) was completed to determine if the remediation was subject to any of the special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Based on the data included in the closure criteria determination worksheet, the remediation area at Boyd is not subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. The nearest groundwater well was drilled on the pad for the site in the year 2022; therefore, the depth to groundwater can accurately be determined. The closure criteria for the site is determined to be associated with the following constituent concentration limits (Table 1).

Table 1. Closure Criteria for Soils Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	**Constituent**	**Limit**
51 feet - 100 feet	Chloride	10,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids, TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics, BTEX – benzene, toluene, ethylbenzene and xylenes

The depth to groundwater was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) within a 0.5-mile radius of the site. The borehole was drilled to a depth of 55 feet and was left open as per requirements on the WR-07 Application for Permit to Drill a Well with No Water Right. An interface probe was lowered into the bottom of the borehole to investigate if groundwater may have accumulated during the 72-hour waiting period. No water was found present at that time. The borehole was then plugged as per requirements on the WR-08, Well Plugging Plan of Operations. The documentation that was used is included in Attachment 1.

Remedial Actions

On September 2, 2022, EOG contracted Vertex to complete release delineation and remediation at Boyd through field screening procedures, oversight of the remediation fieldwork, and final confirmatory sampling. The initial spill inspection and site characterization activities at Boyd were completed by Vertex on September 2 to November 10, 2022. Vertical delineation was obtained during initial characterization, but horizontal delineation was not completed until the remediation due to production equipment hindering the delineation of the release area. The initial daily field reports associated with the characterization are included in Attachment 5. Initial characterization sample locations are presented in Figure 1 (Attachment 2) and laboratory results are presented in Table 2 (Attachment 3).

During excavation activities from December 10 to 28, 2022, EOG provided four 48-hour notifications of confirmation sampling to NMOCD (Attachment 6), as required by Subparagraph (a) of Paragraph (1) of Subsection D 19.15.29.12 NMAC. The release was remediated horizontally and vertically with a Vertex representative on-site to conduct field screening procedures. On December 19, 2022, excavation was completed.

Between December 10 and 27, 2022, Vertex collected a total of 37 five-point composite confirmatory samples from the base and sidewalls of the excavation, at depths ranging between the surface and 20 feet below ground surface (bgs). Each composite sample was representative of no more than 200 square feet per the alternate sampling method outlined in Subparagraph (c) of Paragraph (1) of Subsection D 19.15.29.12 NMAC. The composite samples were placed into laboratory-provided containers, preserved on ice, and submitted to a National Environmental Laboratory Accreditation Program-approved laboratory for chemical analysis. The final square footage of the excavation was 714 square feet.

Laboratory analyses included EPA Method 300.0 for chlorides, EPA Method 8021B for volatile organics, including benzene, toluene, ethylbenzene and xylenes, and EPA Method 8015 for total petroleum hydrocarbons, including

gasoline range organics, diesel range organics, and motor oil range organics. Confirmatory sample analytical data are summarized in Attachment 3. Laboratory data reports and chain of custody forms are included in Attachment 7.

A GeoExplorer 7000 Series Trimble global positioning system (GPS) unit was used to map the approximate center of each of the five-point composite samples. The confirmatory sample locations are presented on Figure 2 (Attachment 2). Relevant equipment and prominent features/reference points at the site are mapped as well.

Closure Request

Vertex recommends no additional action to address the remediation area at Boyd. Laboratory analyses of confirmation samples collected at Boyd show final confirmatory values below NMOCD closure criteria for areas where the depth to groundwater is between 51 and 100 feet bgs as presented in Table 1. There are no anticipated risks to human, ecological, or hydrological receptors at this release site.

Vertex requests that this incident (NAB1923358230) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. EOG certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the remediation area at Boyd.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or cdixon@vertex.ca.

Chance Dixon — 2/2/2023

Chance Dixon, B.Sc. — Date
SR. ENVIRONMENTAL TECHNOLOGIST, REPORTING

Michael Moffitt — 2/2/2023

Michael Moffitt, B.Sc. — Date
MANAGER OF ENVIRONMENT, REPORT REVIEW

Attachments

Attachment 1. NMOCD C-141 Reports
Attachment 2. Figures
Attachment 3. Summarized Lab Data Tables
Attachment 4. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
Attachment 5. Initial and Final Daily Field Reports with Photographs
Attachment 6. Required 48-Hour Notification of Confirmatory Sampling to Regulatory Agencies
Attachment 7. Laboratory Data Reports and Chain of Custody Forms

References

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United States Department of Agriculture, Soil Conservation Service in Cooperation with New Mexico Agricultural Experiment Station. (1971). *Soil Survey New Mexico*. Retreived from http://www.wipp.energy.gov/library/Information_Repository_A/Supplemental_Information/Chugg%20et%20al%201971%20w-map.pdf

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

Limitations

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

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

ATTACHMENT 1

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	NAB1923358230
District RP	2RP-5594
Facility ID	
Application ID	pAB1923356505

Release Notification

OH0TL-190809-C-1410

Responsible Party

Responsible Party EOG Resources, Inc.	OGRID 7377
Contact Name Robert Asher	Contact Telephone 575-748-4217
Contact email bob_asher@eogresources.com	Incident # *(assigned by OCD)* NAB1923358230
Contact mailing address 104 S. 4th Artesia, New Mexico 88210	

Location of Release Source

Latitude 32.66305 Longitude -104.49832
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Boyd X State Com #15H	Site Type: Battery
Date Release Discovered: 7/28/2019	API# 30-015-42223

Unit Letter	Section	Township	Range	County
E	16	19S	25E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 1	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 4	Volume Recovered (bbls) 3
	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

Dump on water side of heater treater, the 1/4" nipple on bottom of dump valve corroded and popped off causing release.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923358230
District RP	2RP-5594
Facility ID	
Application ID	pAB1923356505

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)?	

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: Robert Asher Title: Environmental Supervisor

Signature: Date: 8/9/2019

email: bob_asher@eogresources.com Telephone: 575-748-4217

OCD Only

Received by: Amalia Bustamante Date: 8/21/2019

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923358230
District RP	2RP-5594
Facility ID	
Application ID	pAB1923356505

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>55 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923358230
District RP	2RP-5594
Facility ID	
Application ID	pAB1923356505

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: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 2/2/2023

email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

Received by: Jocelyn Harimon Date: 02/03/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923358230
District RP	2RP-5594
Facility ID	
Application ID	pAB1923356505

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 2/2/2023

email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

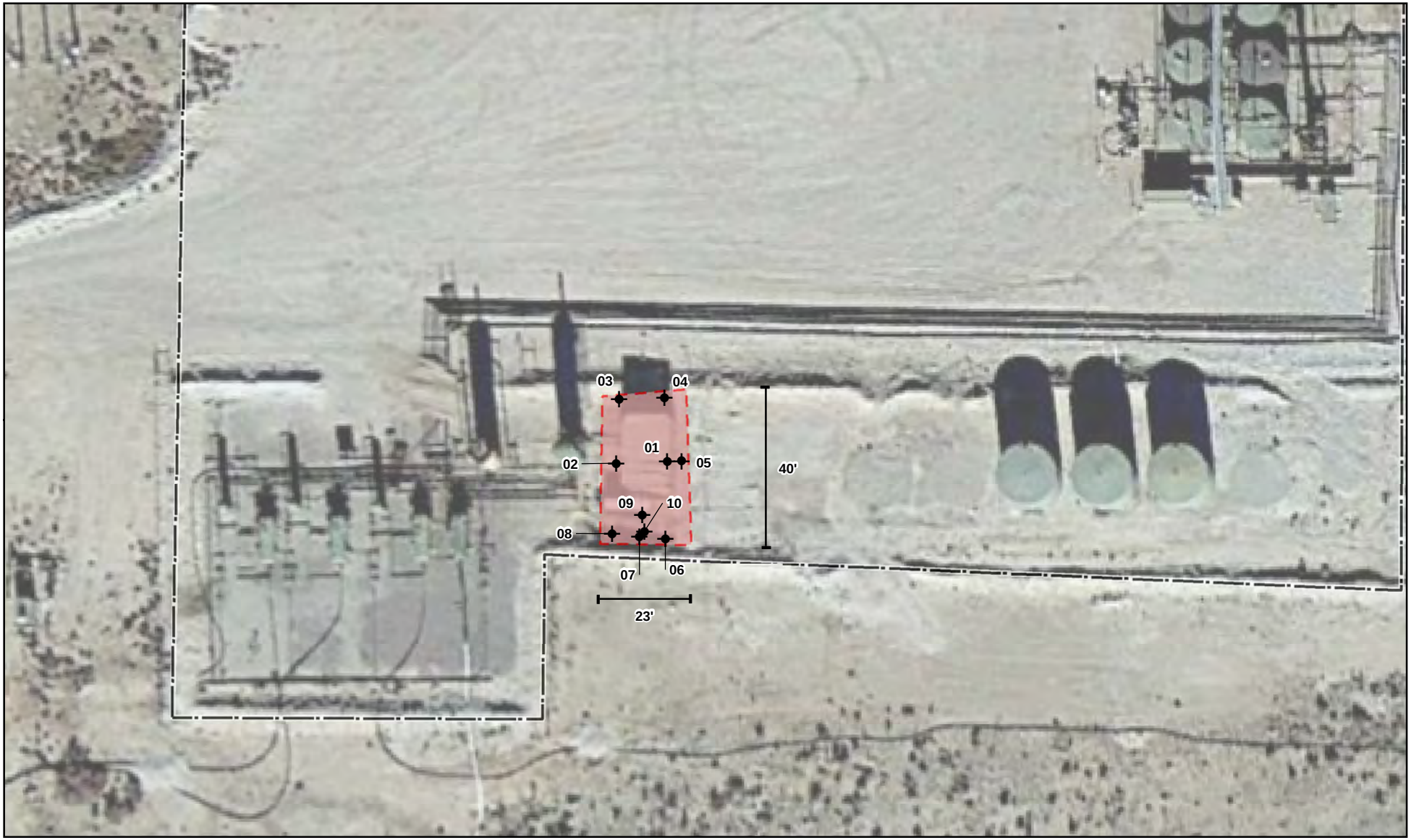
Received by: Jocelyn Harimon Date: 02/03/2023

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

Closure Approved by: Jennifer Nobui Date: 02/21/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ATTACHMENT 2



Borehole (Prefixed by "BH22-") | Approximate Lease Boundary | Approximate Release Area (~861 sq. ft.)

VERTEX

0 10 20 40 feet

Map Center:
Lat/Long: 32.666136, -104.496157

NAD 1983 UTM Zone 13N

Date: Dec 05/22

N

Characterization Schematic
For the Boyd X State #15H

FIGURE:
1

eog resources

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

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

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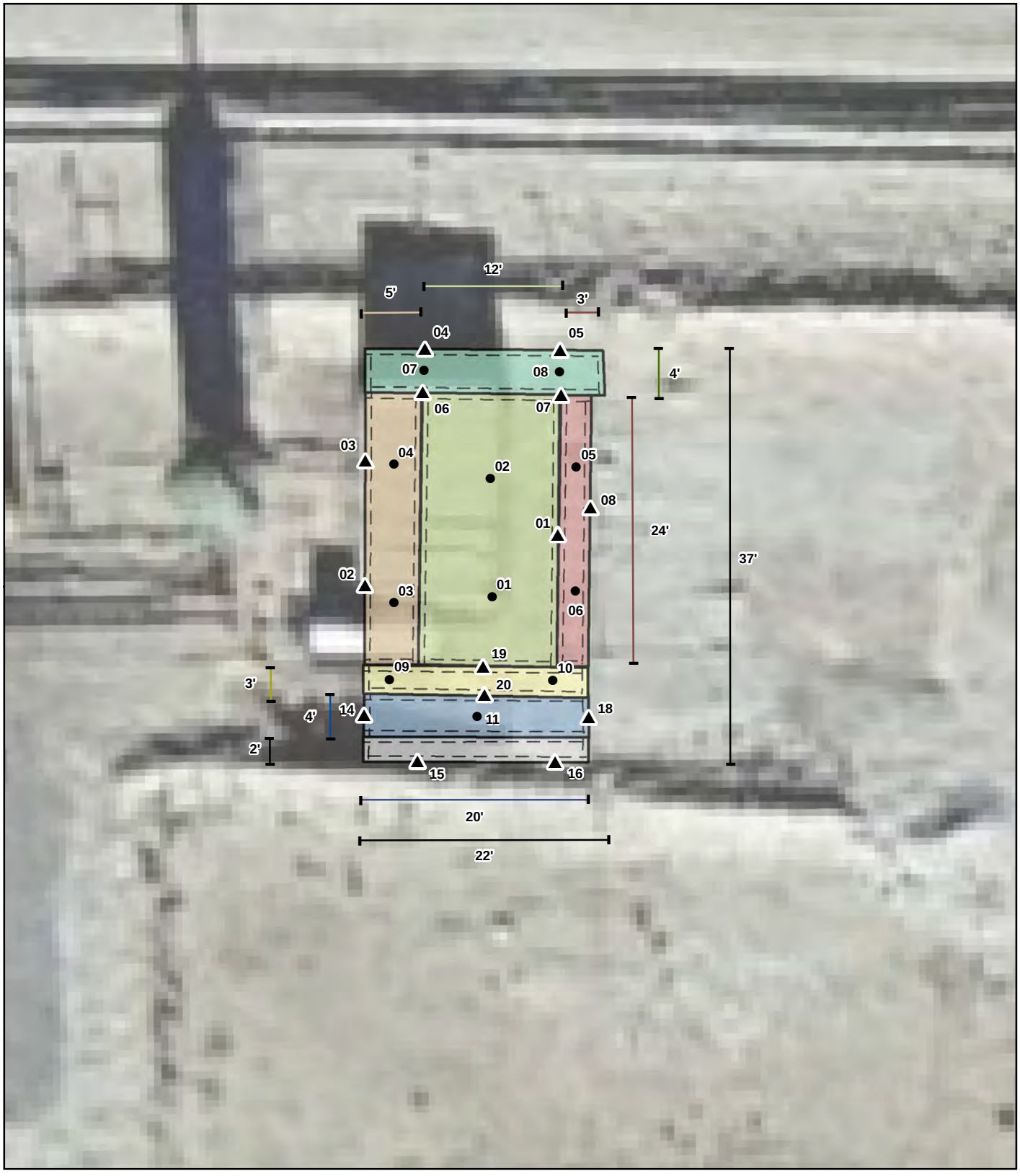
Document Path: \\vtx-s-fs01.corp.internal\shared\vps\04 - Geomatics\1-Projects_US PROJECTS\EOG Resources Inc\22E-03101\Figure 1 Characterization Schematic Boyd X State #15H (22E-03101).mxd



- ● Base Sample (Prefixed by "BES22-")
- ▲ Wall Sample (Prefixed by "WES22-")
- Bench of Pit 0-4' (~48 sq. ft.)
- Bench of Pit 0-8' (~54 sq. ft.)
- Excavation to to 1.5' (~68 sq. ft.)
- Excavation to 3' (~123 sq. ft.)
- Excavation to 4' (~ 306 sq. ft.)
- Excavation to 8' (~86 sq. ft.)
- Pit to 20' (~77 sq. ft.)

VERTEX

0 2.25 4.5 9 ft.

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

Map Center:
Lat: 32.666091,
Long:-104.496182

N

Confirmation Schematic For the Boyd X State #15H

FIGURE: 2

eog resources

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

Note: Background imagery from Google Earth, 2022. Features from GPS. Vertex Professional Services Ltd., 2022.

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Document Path: G:\1-Projects_US PROJECTS\EOG Resources Inc\22E-03101\Figure 2 Confirmation Schematic Boyd X State #15H (22E-03101).mxd

ATTACHMENT 3

Client Name: EOG Resources, Inc.
Site Name: Boyd X State #15H
NMOCD Tracking #: NAB1923358230/2RP-5594
Project #: 22E-03101
Lab Reports: 2209D37, 2211796, 2210D55

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

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH22-01	0	9/21/2022	-	1,166	85	ND	ND	ND	**1900**	**2800**	**1900**	**4700**	ND
	2	9/21/2022	-	720	165	ND	ND	ND	**270**	**520**	**270**	**790**	ND
	4	9/21/2022	-	411	55	ND	ND	ND	220	350	220	570	ND
BH22-02	0	9/21/2022	-	1,239	105	ND	ND	ND	**4400**	**4700**	**4400**	**9100**	ND
	2	9/21/2022	-	65	100	ND	ND	ND	**140**	**140**	**140**	**280**	ND
	4	9/21/2022	-	82	45	ND	ND	ND	ND	ND	ND	ND	ND
BH22-03	0	9/21/2022	-	749	45	ND	ND	ND	**13000**	**10000**	**13000**	**23000**	ND
	2	9/21/2022	-	205	75	ND	ND	ND	44	56	44	100	ND
	4	9/21/2022	-	58	90	ND	ND	ND	ND	ND	ND	ND	ND
BH22-04	0	9/21/2022	-	961	63	ND	ND	ND	**8000**	**9200**	**8000**	**17200**	ND
	2	9/21/2022	-	989	43	ND	ND	84	**1500**	**980**	**1584**	**2564**	ND
	4	9/22/2022	-	1,165	50	ND	ND	**160**	**4400**	**1500**	**4560**	**6060**	ND
	6	10/25/2022	-	1,000	115	0.18	**82.18**	490	2100	600	**2590**	**3190**	ND
	8	10/25/2022	-	851	132	-	-	-	-	-	-	-	-
	10	10/25/2022	-	72	170	ND	ND	ND	ND	ND	ND	ND	ND
	12	10/25/2022	-	38	269	-	-	-	-	-	-	-	-
BH22-05	0	9/22/2022	-	117	65	ND	ND	24	**410**	**190**	**434**	**624**	ND
	2	9/22/2022	-	88	50	ND	ND	ND	ND	ND	ND	ND	ND
	4	9/22/2022	-	34	30	ND	ND	ND	ND	ND	ND	ND	ND
	6	10/25/2022	-	50	0	ND	ND	ND	ND	ND	ND	ND	ND
BH22-06	2	9/22/2022	-	914	45	0.027	1.567	31	**4300**	**2900**	**4331**	**7231**	ND
	4	9/22/2022	-	1,150	25	0.6	29.9	890	**6800**	**3100**	**7690**	**10790**	ND
	6	9/22/2022	-	1,054	40	-	-	-	-	-	-	-	-
BH22-07	2	9/22/2022	-	611	30	ND	11.4	120	**12000**	**11000**	**12120**	**23120**	ND
	4	9/22/2022	-	1,050	55	1.3	**159.3**	**2600**	**11000**	**4100**	**13600**	**17700**	ND
	6	9/22/2022	-	1,113	75	-	-	-	-	-	-	-	-
	6	10/25/2022	-	1,277	124	1.3	**78.3**	**520**	**6100**	1700	**6620**	**8320**	ND
	8	10/25/2022	-	1,000	165	-	-	-	-	-	-	-	-
	10	10/25/2022	-	1,000	125	-	-	-	-	-	-	-	-
	12	10/25/2022	-	1,281	152	-	-	-	-	-	-	-	-
	14	10/25/2022	-	1,000	163	1.5	**58.5**	300	**1800**	730	**2100**	**2830**	ND
	16	10/25/2022	-	239	245	-	-	-	-	-	-	-	-
BH22-08	2	9/22/2022	-	845	30	0.032	10.332	110	**2600**	**4900**	**2710**	**7610**	ND
	4	9/22/2022	-	1,202	30	0.026	1.476	55	**16000**	**15000**	**16055**	**31055**	ND
	6	9/22/2022	-	1,220	25	-	-	-	-	-	-	-	-
BH22-09	2	10/25/2022	-	1,212	118	ND	ND	68	**6300**	**2900**	**6368**	**9268**	ND
	4	10/25/2022	-	**10,617**	191	ND	26.32	410	**4000**	1500	**4410**	**5910**	100
BH22-10	15	11/10/2022	-	**3,910**	284	-	-	-	-	-	-	-	-
	16	11/10/2022	-	**3,710**	427	-	-	-	-	-	-	-	-
	17	11/10/2022	-	1,210	103	-	-	-	-	-	-	-	-
	18	11/10/2022	-	220	116	ND	ND	ND	29	ND	29	29	ND
	19	11/10/2022	-	69	108	-	-	-	-	-	-	-	-
	20	11/10/2022	-	26	180	-	-	-	-	-	-	-	-

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

Client Name: EOG Resources, Inc.
Site Name: Boyd X State #015H
NMOCD Tracking #: NAB1923358230
Project #: 22E-03101
Lab Report(s): 2212A74, 2212B90, 2212A21, 2212E03

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater 51-100 feet bgs

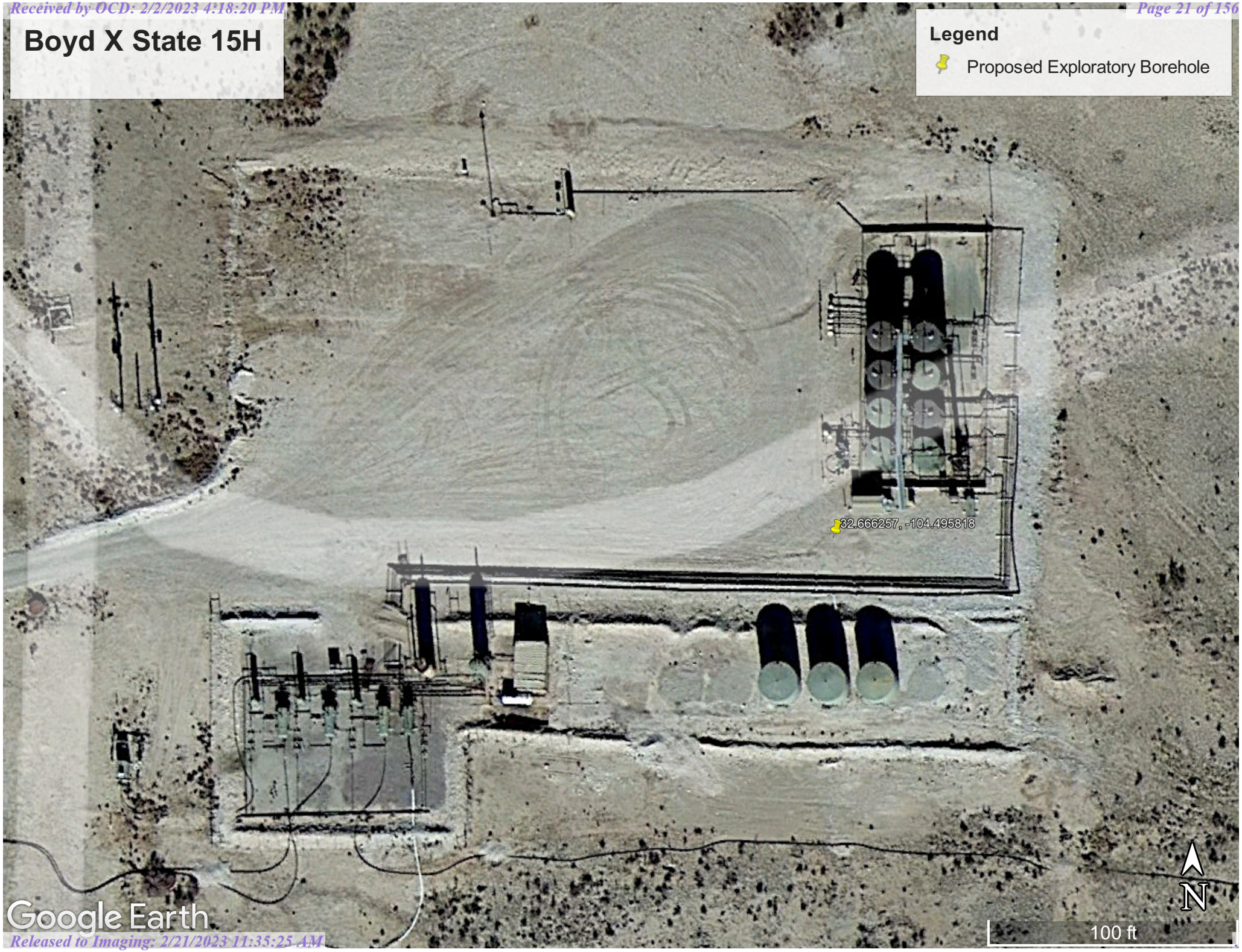
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BES22-01	4	12/14/2022	ND	43	-	ND	ND	ND	27	ND	27	27	ND
BES22-02	4	12/14/2022	ND	29	-	ND	ND	ND	ND	ND	ND	ND	ND
BES22-03	3	12/14/2022	ND	65	-	ND	ND	ND	21	ND	21	21	ND
BES22-04	3	12/14/2022	ND	25	-	ND	ND	ND	ND	ND	ND	ND	ND
BES22-05	1.5	12/14/2022	ND	28	-	ND	ND	ND	ND	ND	ND	ND	ND
BES22-06	1.5	12/14/2022	ND	33	-	ND	ND	ND	ND	ND	ND	ND	ND
BES22-07	5	12/14/2022	ND	77	-	ND	ND	ND	42	ND	42	42	79
BES22-08	8	12/14/2022	ND	86	-	ND	ND	ND	41	64	41	105	ND
BES22-09	10	12/19/2022	-	444	-	ND	1.66	23	310	210	333	553	ND
BES22-10	10	12/19/2022	-	659	-	0.044	2.794	36	540	360	576	936	ND
BES22-11	20	12/19/2022	-	434	-	ND	1.42	ND	260	270	260	530	ND
WES22-01	0-4	12/15/2022	ND	27	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-02	0-3	12/15/2022	ND	35	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-03	0-3	12/15/2022	ND	22	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-04	0-8	12/15/2022	ND	28	-	ND	ND	ND	ND	ND	ND	ND	160
WES22-05	0-8	12/15/2022	ND	25	-	ND	ND	ND	ND	ND	ND	ND	64
WES22-06	0-4	12/15/2022	ND	18	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-07	4-8	12/15/2022	ND	220	-	ND	ND	ND	110	110	110	220	100
WES22-08	0-1.5	12/15/2022	ND	61	-	ND	ND	ND	ND	ND	ND	ND	150
WES22-14	0-4	12/17/2022	-	81	-	ND	ND	ND	**1900**	**2100**	**1900**	**4000**	63
WES22-14	0-4	12/27/2022	-	123	-	ND	ND	ND	ND	80	ND	ND	ND
WES22-14	4-8	12/17/2022	-	90	-	ND	ND	ND	63	ND	63	63	ND
WES22-14	8-12	12/17/2022	-	189	-	ND	ND	ND	160	76	160	236	ND
WES22-14	12-16	12/17/2022	-	172	-	ND	ND	ND	57	ND	57	57	ND
WES22-14	16-20	12/17/2022	-	17	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-15	0-6	12/17/2022	-	19	-	ND	ND	ND	ND	ND	ND	ND	84
WES22-15	6-12	12/17/2022	-	254	-	ND	ND	ND	240	83	240	323	ND
WES22-15	12-20	12/17/2022	-	185	-	ND	ND	ND	58	ND	58	58	ND
WES22-16	0-6	12/17/2022	-	22	-	ND	ND	ND	ND	ND	ND	ND	86
WES22-16	6-12	12/17/2022	-	95	-	ND	ND	ND	100	ND	100	100	ND
WES22-16	12-20	12/17/2022	-	175	-	ND	ND	ND	16	120	16	136	ND
WES22-18	0-6	12/19/2022	-	94	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-18	6-12	12/19/2022	-	795	-	0.2	13.1	110	120	140	230	370	ND
WES22-18	12-18	12/19/2022	-	414	-	0.18	20.18	180	84	150	264	414	ND
WES22-19	0-5	12/19/2022	-	12	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-19	5-10	12/19/2022	-	299	-	ND	ND	ND	ND	ND	ND	ND	ND
WES22-20	10-15	12/19/2022	-	1,098	-	ND	2.42	ND	260	200	260	460	ND
WES22-20	15-20	12/19/2022	-	428	-	0.051	3.031	33	300	220	333	553	ND

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

ATTACHMENT 4

Closure Criteria Worksheet			
Site Name: BOYD X STATE COM #015H BATTERY			
Spill Coordinates: 32.6661206831, -104.496204496		X: 547239	Y: 3614386
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	**>51**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,376	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	2,376	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	4,594	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	3,946	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	18,004	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Upton-Reagan Complex	
12	Ecological Classification	Loamy	
13	Geology	Qp	
NMAC 19.15.29.12 E (Table 1) Closure Criteria		51-100'	<50' 51-100' >100'

Boyd X State 15H



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
RA 13269 POD 1		

WELL OWNER NAME(S)	PHONE (OPTIONAL)
EOG Resources	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
104 S. Fourth St	Artesia	NM	88210

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	39	58.525	N
LONGITUDE	104	29	44.944	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1833	Jason Maley	Vision Resources Inc

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
1/10/23	1/10/23	55	55	Dry

COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): Dry

DATE STATIC MEASURED: —

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	45	6	2" pvc sch 40	Thread	2	Sch 40	
45	55	6	2" pvc sch 40	Thread	2	Sch 40	.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			None Poited And plugged		

FOR OSE INTERNAL USE

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

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

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1	1	Caliche Pad	Y (N)	
1	55	54	~~Red~~ Light tan Caliche	Y (N)	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

J Mabry — Jason Mabry — 1/20/23

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 09/22/2022)

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

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: RA-13269 POD1

Well owner: EOG Resources Phone No.:

Mailing address: 104 S. 4th St.

City: Artesia State: NM Zip code: 88210

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Vision Resources Inc

2) New Mexico Well Driller License No.: WD1833 Expiration Date: 10/7/25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Jason Maley

4) Date well plugging began: 1/16/23 Date well plugging concluded: 1/16/23

5) GPS Well Location: Latitude: 32 deg, 39 min, 58.525 sec
Longitude: 104 deg, 29 min, 44.944 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl), by the following manner: Tape

7) Static water level measured at initiation of plugging: Dry ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 1-5-23

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

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

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
55	Bentonite Chips	81	81	open hole	

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

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

J Maley
Signature of Well Driller

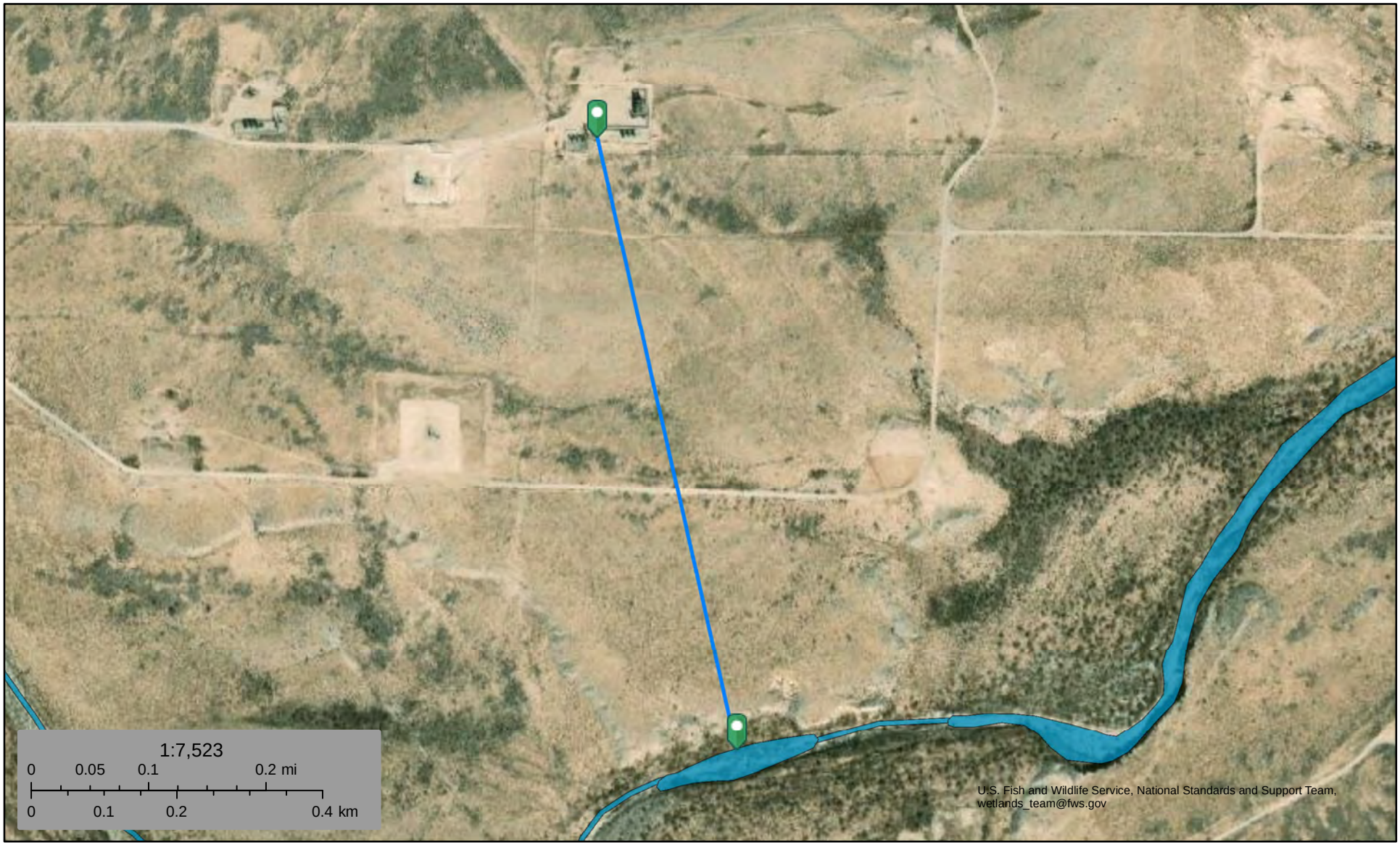
1-20-23
Date

Version: September 8, 2009
Page 2 of 2


Click to add a point
0
300
600ft
U.S. Geological Survey, National Geospatial Technical Operations Center | New Mexico Environment Department Surface Wate...
POWERED BY
esri

U.S. Fish and Wildlife Service
National Wetlands Inventory

BOYD X STATE COM #015H BATTERY La



August 31, 2022

Wetlands

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

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

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

BOYD X STATE COM #015H BATTERY

Nearest Residence: 0.87mi (4594ft)

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 6416	q 4	Sec	Tws	Rng	X	Y	Distance
RA 05900	RA	STK	3	JAMES H AND BETTY R HOWELL REVOCABLE TRUST	ED	RA 05900				Shallow	2	2	16	19S	25E	548442	3614424*	1203
RA 06418	RA	STK	3	JAMES H. & BETTY R. HOWELL REVOCABLE TRUST	ED	RA 06418				Shallow	1	2 3	17	19S	25E	545925	3613710*	1477

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 547239 **Northing (Y):** 3614386 **Radius:** 1610

Sorted by: Distance

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

BOYD X STATE COM #015H BATTERY

August 31, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
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National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

BOYD X STATE COM #015H BATTERY

8/31/2022, 12:12:31 PM

Registered Mines

Aggregate, Stone etc.

1:72,224

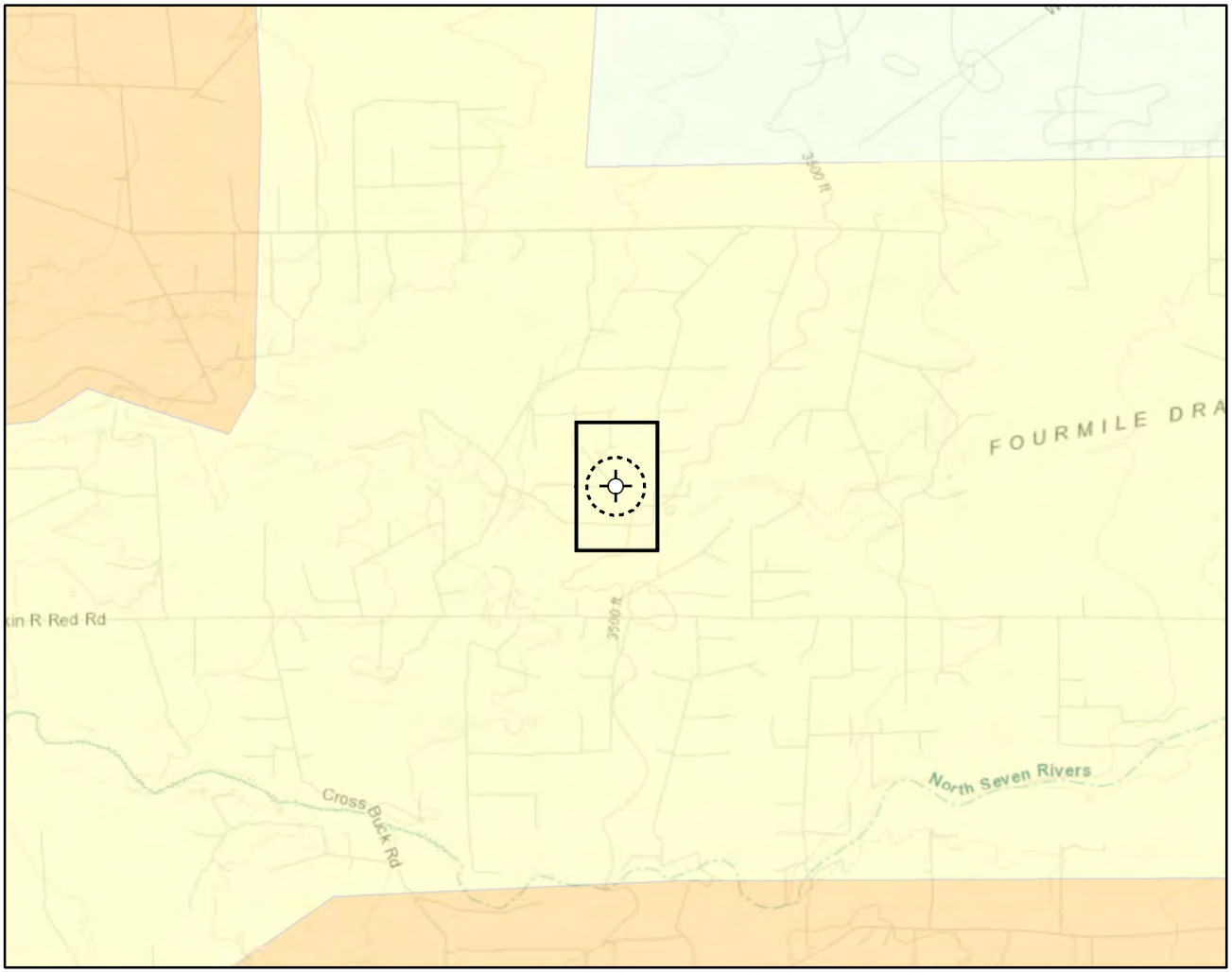
0 0.5 1 2 mi

0 0.75 1.5 3 km

Esri, HERE, Garmin, Earthstar Geographics

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)



Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Buffer

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft.

VERTEX

Map Center:
Lat/Long: 32.666095, -104.496110

NAD 1983 UTM Zone 13N
Date: Sep 09/22

N

Karst Potential:
BOYD X STATE COM #015H BATTERY

FIGURE:
X

eog resources

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

Note: Inset Map, ESRI 20XX; Overview Map: ESRI World Topographic. Karst potential data sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\EOG Resources Inc\22E-03101\Figure X Karst Potential Map (Boyd X State Com #015H Battery).mxd

National Flood Hazard Layer FIRMette

FEMA

104°30'5"W 32°40'13"N

104°29'28"W 32°39'43"N

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

1:6,000

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

Legend

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

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

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

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

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

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

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

N

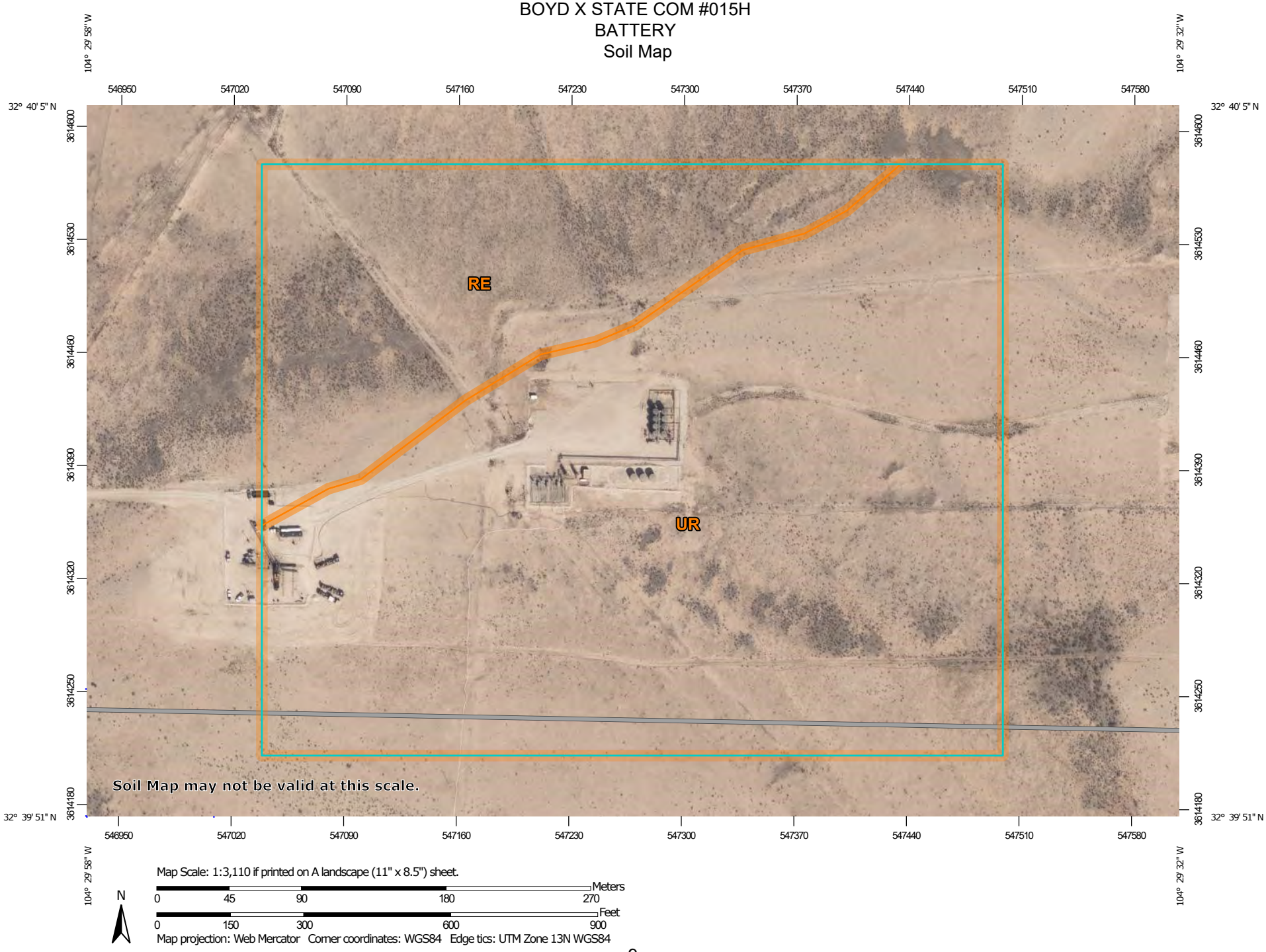
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/31/2022 at 2:15 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.

BOYD X STATE COM #015H
BATTERY
Soil Map



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico

August 31, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

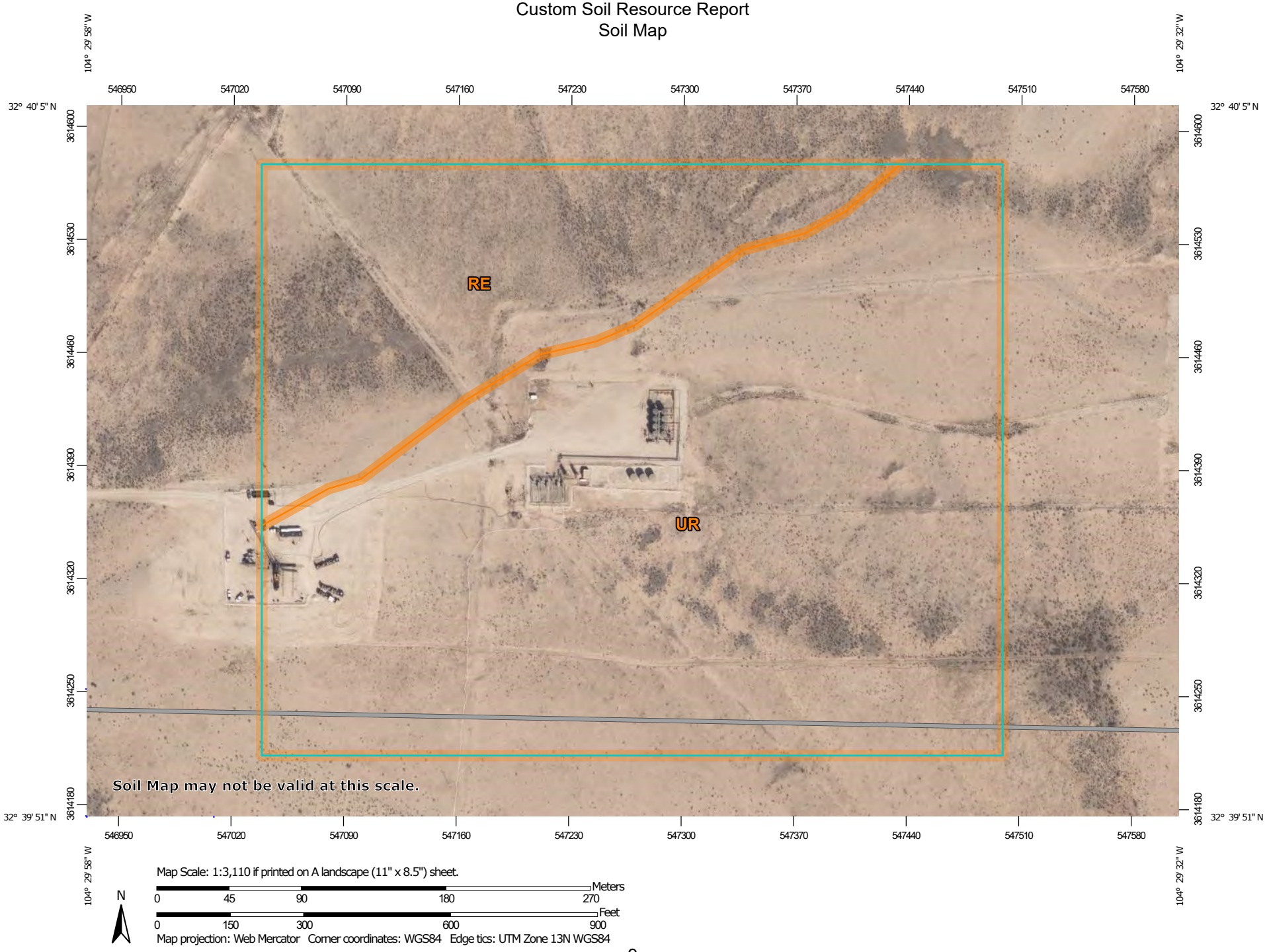
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 17, Sep 12, 2021

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

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 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
RE	Reagan-Upton association, 0 to 9 percent slopes	11.1	26.6%
UR	Upton-Reagan complex, 0 to 9 percent slopes	30.7	73.4%
Totals for Area of Interest		**41.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eddy Area, New Mexico

RE—Reagan-Upton association, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w5d
Elevation: 1,100 to 5,400 feet
Mean annual precipitation: 6 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reagan and similar soils: 70 percent
Upton and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reagan

Setting

Landform: Fan remnants, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R070DY153NM - Loamy
Hydric soil rating: No

Description of Upton

Setting

Landform: Ridges, fans
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 13 inches: gravelly loam
H3 - 13 to 21 inches: cemented
H4 - 21 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 75 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R070DY159NM - Shallow Loamy
Hydric soil rating: No

Minor Components

Atoka

Percent of map unit: 3 percent
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Pima

Percent of map unit: 2 percent
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

UR—Upton-Reagan complex, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w65
Elevation: 1,100 to 5,400 feet
Mean annual precipitation: 6 to 15 inches
Mean annual air temperature: 60 to 70 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Upton and similar soils: 55 percent
Reagan and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Upton

Setting

Landform: Ridges, fans
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 13 inches: gravelly loam
H3 - 13 to 21 inches: cemented
H4 - 21 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
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Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 75 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D
Ecological site: R042XC025NM - Shallow
Hydric soil rating: No

Description of Reagan

Setting

Landform: Fan remnants, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Minor Components

Reagan

Percent of map unit: 5 percent
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Pima

Percent of map unit: 5 percent
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

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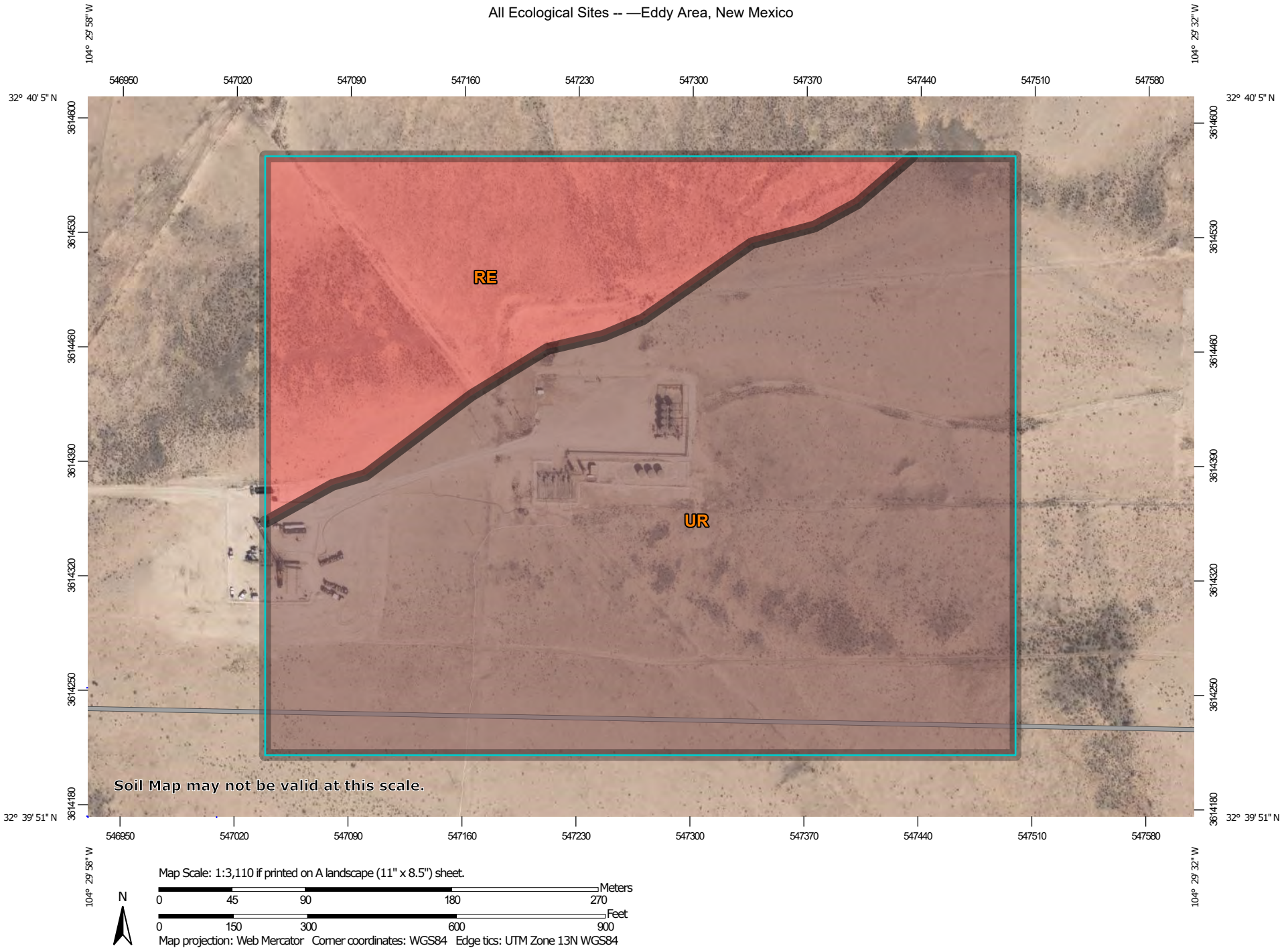
All Ecological Sites -- —Eddy Area, New Mexico



MAP LEGEND

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

Soils

Soil Rating Polygons
- R042XC025NM
- R070DY153NM
- Not rated or not available

Soil Rating Lines
- R042XC025NM
- R070DY153NM
- Not rated or not available

Soil Rating Points
- R042XC025NM
- R070DY153NM
- Not rated or not available

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.

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 17, Sep 12, 2021

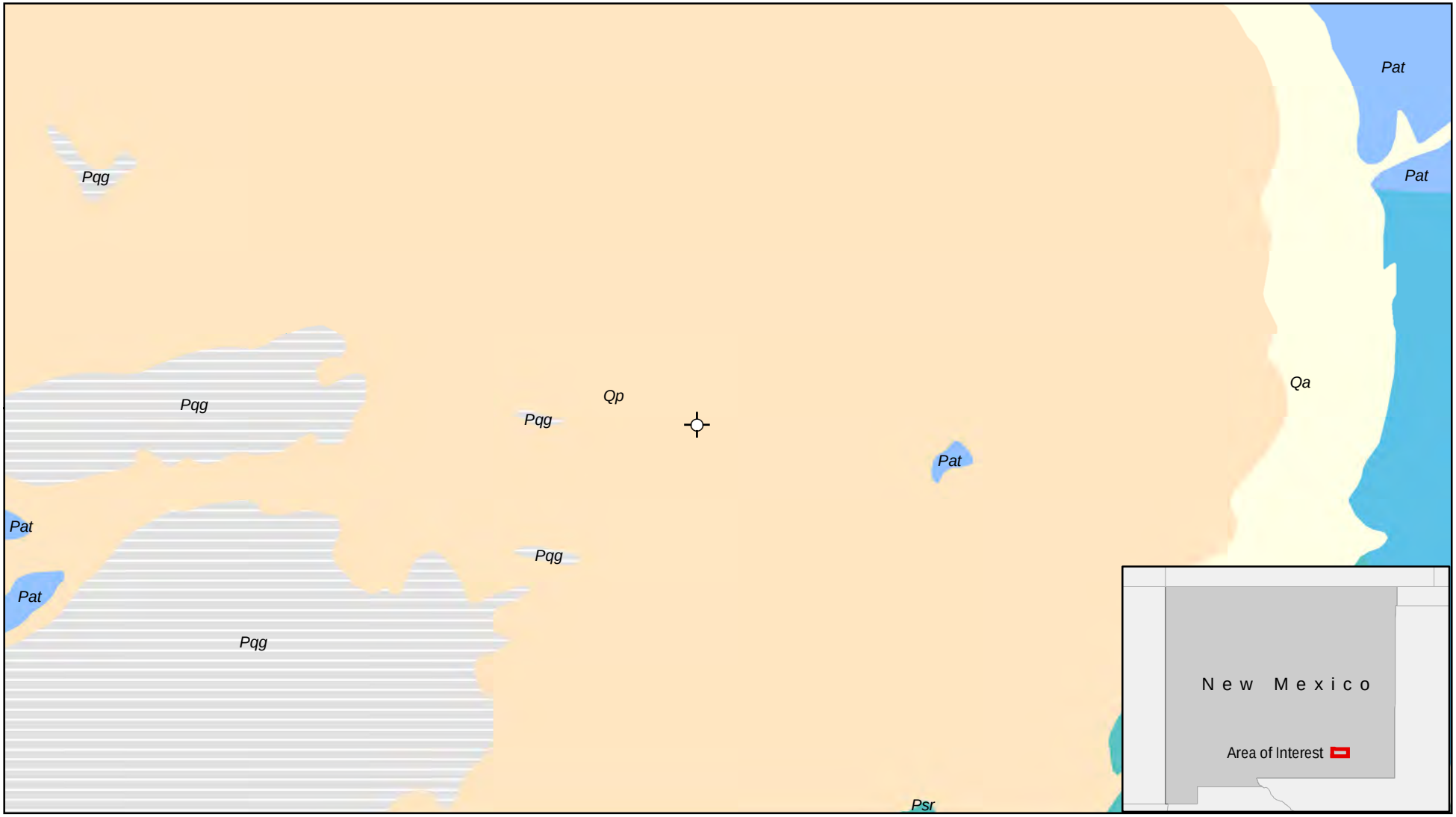
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 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.

All Ecological Sites —

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
RE	Reagan-Upton association, 0 to 9 percent slopes	Reagan (70%)	R070DY153NM — Loamy	11.1	26.6%
		Upton (25%)	R070DY159NM — Shallow Loamy		
		Atoka (3%)	R042XC007NM — Loamy		
		Pima (2%)	R042XC017NM — Bottomland		
UR	Upton-Reagan complex, 0 to 9 percent slopes	Upton (55%)	R042XC025NM — Shallow	30.7	73.4%
		Reagan (35%)	R042XC007NM — Loamy		
		Pima (5%)	R042XC017NM — Bottomland		
		Reagan (5%)	R042XC007NM — Loamy		
Totals for Area of Interest				**41.9**	**100.0%**



Site Location

Lithologic Units

Pat
Pqg
Psl
Psr
Pty
Qa
Qp

VERTEX

0 1.25 2.5 Miles

Map Center:
Lat/Long: 32.670046, -104.487504

NAD 1983 UTM Zone 13N
Date: Sep 09/22

N

New Mexico Geology
BOYD X STATE COM #015H BATTERY

FIGURE:
Y

eog resources

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

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

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\EOG Resources Inc\22E-03101\Figure Y Regional Geological Map.mxd

ATTACHMENT 5

Initial Release Photos

VERTEX

Site Photos

Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	9/16/2022
Site Location Name:	Boyd X State #15H	Report Run Date:	9/16/2022 8:53 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	9/16/2022 8:53 AM
Departed Site	9/16/2022 10:39 AM

Field Notes

8:59 Arrived at site and filled out safety paperwork.

9:03 On site to mark white line/flag for the 811 one call. Will mark a rectangle around the release area, giving enough space for confirmation sampling.

10:12 Done marking area with white line/flags. Will place 811 call and make 811 ticket request.

Next Steps & Recommendations

1 Wait until 811 ticket clears and initiate excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest

Northeast corner of white line area

Viewing Direction: Northwest

Southeast corner of white line area

Viewing Direction: Northeast

Southwest corner of white line area

Viewing Direction: Southeast

Northwest corner of white line area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature: 
Signature

Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	12/27/2022
Site Location Name:	Boyd X State #15H	Report Run Date:	12/28/2022 6:27 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	12/27/2022 10:00 AM
Departed Site	12/27/2022 10:32 AM

Field Notes

10:00 On site to collect WES22-14 at 0-4'.

10:32 WES22-14 at 0-4' field screened under criteria and will be sent to lab for analysis.

Next Steps & Recommendations

1 Send WES22-14 to lab for analysis to complete the remediation for the site.

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: West
	
Final excavation	Final excavation
Viewing Direction: South	**Viewing Direction**: West
	
Final excavation	Sample area for WES22-14

Daily Site Visit Report

Viewing Direction: West

Final excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Signature

Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	1/10/2023
Site Location Name:	Boyd X State #15H	Report Run Date:	1/10/2023 7:42 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	1/10/2023 8:01 AM
Departed Site	1/10/2023 11:02 AM

Field Notes

9:03 Arrived on site and met with contractor. Discussed work plan for the day. On site to drill bore to determine if any groundwater is present at a depth of 55ft.

9:04 Contractor started setting up core rig. Will use the Solinst Interface Meter to measure/determine if any groundwater is present at a depth of 55ft.

10:09 Finished drilling hole to a 55ft depth. Crews started demobilizing equipment. Used the meter and determined that no groundwater was detected at approximately 55ft. Will take another reading after 72hrs.

Next Steps & Recommendations

1 Take another reading after 72hrs. Plug borehole with bentonite if hole remains dry.

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: West
	
Setting up drilling rig	Demobilizing equipment
Viewing Direction: North	**Viewing Direction**: North
	
Water Depth	Water Depth

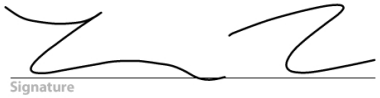
Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: West
	
Site overview	Site overview
Viewing Direction: West	**Viewing Direction**: East
	
Test well	Site overview

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature: 

Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	1/16/2023
Site Location Name:	Boyd X State #15H	Report Run Date:	1/17/2023 12:12 AM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	1/16/2023 8:03 AM
Departed Site	1/16/2023 3:38 PM

Field Notes

8:31 Arrived on site and filled out safety paperwork. On site to determine if any groundwater is present after the 72hr period of drilling. Borehole was drilled at a depth of approximately 55ft.

9:01 Done measuring borehole, it remains dry. Contractor will arrive at a later time to plug with bentonite chips and backfill.

15:35 Back at location to gather photographs of the plugged borehole.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: South
	
Borehole location	Plugged borehole
Viewing Direction: West	**Viewing Direction**: North
	
Borehole location	Borehole location

Daily Site Visit Report

Viewing Direction: East

Borehole location

Viewing Direction: West

Measuring well depth

Viewing Direction: Northwest

Well depth

Viewing Direction: Northwest

Close-up

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: North
	
Plugged borehole	Plugged borehole

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature: 
Signature

ATTACHMENT 6

From: Tina Huerta
To: ocd.enviro@emnrd.nm.gov; Griffin, Becky R.; Barnes, Will
Cc: Artesia S&E Spill Remediation; Artesia Regulatory
Subject: Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification
Date: December 12, 2022 10:45:19 AM
Attachments: image001.png

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Boyd X State Com 15H
E-16-19S-25E
Eddy County, NM
NAB1923358230/2RP-5594

Sampling will begin at 10:45 a.m. on Wednesday, December 14, 2022 and continue through Sunday, December 18, 2022.

Thank you,

Tina Huerta
Regulatory Specialist
Direct: 575.748.4168
Cell: 575.703.3121
Email: tina_huerta@eogresources.com

Artesia Division

From: Tina Huerta
To: ocd.enviro@emnrd.nm.gov; Griffin, Becky R.; Barnes, Will
Cc: Artesia S&E Spill Remediation; Artesia Regulatory
Subject: Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification
Date: December 15, 2022 8:28:43 AM
Attachments: image001.png

Good Morning,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

Boyd X State Com 15H
E-16-19S-25E
Eddy County, NM
NAB1923358230/2RP-5594

Sampling will begin at 9:00 a.m. on Monday, December 19, 2022 and continue through Saturday, December 24, 2022.

Thank you,

Tina Huerta
Regulatory Specialist
Direct: 575.748.4168
Cell: 575.703.3121
Email: tina_huerta@eogresources.com

Artesia Division

From: Amber Griffin
To: Chance Dixon
Subject: FW: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification
Date: January 17, 2023 10:56:43 AM
Attachments: image002.jpg
image003.png

Thank you,
Amber Griffin

From: Tina Huerta <Tina_Huerta@eogresources.com>
Sent: Thursday, December 22, 2022 8:48 AM
To: Artesia S&E Spill Remediation <Artesia_S&E_Spill_Remediation@eogresources.com>
Cc: Artesia Regulatory <Artesia_Regulatory@eogresources.com>
Subject: FW: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

FYI

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, December 22, 2022 8:45 AM
To: Tina Huerta <Tina_Huerta@eogresources.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Subject: RE: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

Good morning Tina,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Have a happy holiday,
Jocelyn Harimon

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Tina Huerta <Tina_Huerta@eogresources.com>
Sent: Thursday, December 22, 2022 5:20 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; wbarnes <wbarnes@slo.state.nm.us>; Griffin, Becky R. <bgriffin@slo.state.nm.us>
Cc: Artesia S&E Spill Remediation <Artesia_S&E_Spill_Remediation@eogresources.com>; Artesia Regulatory <Artesia_Regulatory@eogresources.com>
Subject: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

Boyd X State Com 15H
E-16-19S-25E
Eddy County, NM
NAB1923358230/2RP-5594

Sampling will begin at 8:00 a.m. on Tuesday, December 27, 2022 and continue through Saturday, December 31, 2022.

Thank you,

Tina Huerta
Regulatory Specialist
Direct: 575.748.4168
Cell: 575.703.3121
Email: tina_huerta@eogresources.com

Artesia Division

From: Chase Settle
To: Chance Dixon; Michael Moffitt
Subject: FW: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification
Date: December 30, 2022 12:01:39 PM
Attachments: image002.jpg
image003.png

From: Tina Huerta <Tina_Huerta@eogresources.com>
Sent: Thursday, December 29, 2022 9:03 AM
To: Artesia S&E Spill Remediation <Artesia_S&E_Spill_Remediation@eogresources.com>
Cc: Artesia Regulatory <Artesia_Regulatory@eogresources.com>
Subject: FW: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

FYI

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, December 29, 2022 9:01 AM
To: Tina Huerta <Tina_Huerta@eogresources.com>
Cc: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; abernethy, mike <mabernet@nmsu.edu>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: RE: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Tina Huerta <Tina_Huerta@eogresources.com>
Sent: Thursday, December 29, 2022 7:17 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Griffin, Becky R. <bgriffin@slo.state.nm.us>; wbarnes <wbarnes@slo.state.nm.us>

Cc: Artesia S&E Spill Remediation <Artesia_S&E_Spill_Remediation@eogresources.com>; Artesia Regulatory <Artesia_Regulatory@eogresources.com>
Subject: [EXTERNAL] Boyd X State Com 15H (NAB1923358230/2RP-5594) Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

Boyd X State Com 15H
E-16-19S-25E
Eddy County, NM
NAB1923358230/2RP-5594

Sampling will begin at 8:00 a.m. on Tuesday, January 3, 2023 and continue through Friday, January 6, 2023.

Thank you,

Tina Huerta
Regulatory Specialist
Direct: 575.748.4168
Cell: 575.703.3121
Email: tina_huerta@eogresources.com

Artesia Division

ATTACHMENT 7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 28, 2022

Chance Dixon

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

RE: Boyd X State 015H OrderNo.: 2212A21

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/16/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-01 4.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:00:00 PM
Lab ID: 2212A21-001 **Matrix:** SOIL
Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	27	14		mg/Kg	1	12/20/2022 3:37:57 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/20/2022 3:37:57 PM
Surr: DNOP	109	21-129		%Rec	1	12/20/2022 3:37:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 9:45:01 PM
Surr: BFB	86.3	37.7-212		%Rec	1	12/19/2022 9:45:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/19/2022 9:45:01 PM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 9:45:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 9:45:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/19/2022 9:45:01 PM
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	12/19/2022 9:45:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:13:02 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-02 4.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:10:00 PM
Lab ID: 2212A21-002 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/20/2022 3:48:45 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2022 3:48:45 PM
Surr: DNOP	112	21-129		%Rec	1	12/20/2022 3:48:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 10:08:19 PM
Surr: BFB	84.9	37.7-212		%Rec	1	12/19/2022 10:08:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/19/2022 10:08:19 PM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 10:08:19 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 10:08:19 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/19/2022 10:08:19 PM
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	12/19/2022 10:08:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:50:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-03 3.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:20:00 PM
Lab ID: 2212A21-003 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	21	14		mg/Kg	1	12/20/2022 3:59:28 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/20/2022 3:59:28 PM
Surr: DNOP	108	21-129		%Rec	1	12/20/2022 3:59:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 10:31:37 PM
Surr: BFB	82.3	37.7-212		%Rec	1	12/19/2022 10:31:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/19/2022 10:31:37 PM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 10:31:37 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 10:31:37 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 10:31:37 PM
Surr: 4-Bromofluorobenzene	85.4	70-130		%Rec	1	12/19/2022 10:31:37 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:02:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-04 3.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:30:00 PM
Lab ID: 2212A21-004 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/20/2022 4:10:20 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/20/2022 4:10:20 PM
Surr: DNOP	112	21-129		%Rec	1	12/20/2022 4:10:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 10:54:51 PM
Surr: BFB	84.5	37.7-212		%Rec	1	12/19/2022 10:54:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/19/2022 10:54:51 PM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 10:54:51 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 10:54:51 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/19/2022 10:54:51 PM
Surr: 4-Bromofluorobenzene	86.7	70-130		%Rec	1	12/19/2022 10:54:51 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:15:04 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-05 1.5'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:40:00 PM
Lab ID: 2212A21-005 **Matrix:** SOIL
Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/20/2022 4:21:14 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2022 4:21:14 PM
Surr: DNOP	114	21-129		%Rec	1	12/20/2022 4:21:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 11:18:06 PM
Surr: BFB	86.4	37.7-212		%Rec	1	12/19/2022 11:18:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/19/2022 11:18:06 PM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 11:18:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 11:18:06 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 11:18:06 PM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	12/19/2022 11:18:06 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:27:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-06 1.5'
Project: Boyd X State 015H
Collection Date: 12/14/2022 1:50:00 PM
Lab ID: 2212A21-006 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/20/2022 4:32:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2022 4:32:05 PM
Surr: DNOP	115	21-129		%Rec	1	12/20/2022 4:32:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 11:41:18 PM
Surr: BFB	83.8	37.7-212		%Rec	1	12/19/2022 11:41:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/19/2022 11:41:18 PM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 11:41:18 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 11:41:18 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 11:41:18 PM
Surr: 4-Bromofluorobenzene	86.0	70-130		%Rec	1	12/19/2022 11:41:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:39:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-07 5.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 2:00:00 PM
Lab ID: 2212A21-007 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	42	15		mg/Kg	1	12/21/2022 3:30:49 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2022 3:30:49 PM
Surr: DNOP	108	21-129		%Rec	1	12/21/2022 3:30:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/21/2022 9:00:00 PM
Surr: BFB	102	37.7-212		%Rec	5	12/21/2022 9:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.12		mg/Kg	5	12/21/2022 9:00:00 PM
Toluene	ND	0.25		mg/Kg	5	12/21/2022 9:00:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/21/2022 9:00:00 PM
Xylenes, Total	ND	0.50		mg/Kg	5	12/21/2022 9:00:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	5	12/21/2022 9:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	79	60		mg/Kg	20	12/22/2022 3:52:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A21**
Date Reported: **12/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES22-08 8.0'
Project: Boyd X State 015H
Collection Date: 12/14/2022 2:10:00 PM
Lab ID: 2212A21-008 **Matrix:** SOIL **Received Date:** 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	41	15		mg/Kg	1	12/21/2022 4:02:33 PM
Motor Oil Range Organics (MRO)	64	49		mg/Kg	1	12/21/2022 4:02:33 PM
Surr: DNOP	109	21-129		%Rec	1	12/21/2022 4:02:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2022 9:19:00 PM
Surr: BFB	109	37.7-212		%Rec	1	12/21/2022 9:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	12/21/2022 9:19:00 PM
Toluene	ND	0.048		mg/Kg	1	12/21/2022 9:19:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2022 9:19:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/21/2022 9:19:00 PM
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	12/21/2022 9:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	12/22/2022 4:29:28 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **MB-72277**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **72277**	RunNo: **93518**							
Prep Date: **12/22/2022**	Analysis Date: **12/22/2022**	SeqNo: **3373636**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-72277**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **72277**	RunNo: **93518**							
Prep Date: **12/22/2022**	Analysis Date: **12/22/2022**	SeqNo: **3373637**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **LCS-72175** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72175** RunNo: **93423**
Prep Date: **12/19/2022** Analysis Date: **12/20/2022** SeqNo: **3369400** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	15	50.00	0	94.1	64.4	127			
Surr: DNOP	6.2		5.000		123	21	129			

Sample ID: **MB-72175** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72175** RunNo: **93423**
Prep Date: **12/19/2022** Analysis Date: **12/20/2022** SeqNo: **3369402** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		115	21	129			

Sample ID: **LCS-72215** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72215** RunNo: **93461**
Prep Date: **12/20/2022** Analysis Date: **12/21/2022** SeqNo: **3370983** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	95.2	64.4	127			
Surr: DNOP	5.8		5.000		117	21	129			

Sample ID: **MB-72215** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72215** RunNo: **93461**
Prep Date: **12/20/2022** Analysis Date: **12/21/2022** SeqNo: **3370985** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		120	21	129			

Sample ID: **2212A21-007AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BES22-07 5.0'** Batch ID: **72215** RunNo: **93461**
Prep Date: **12/20/2022** Analysis Date: **12/21/2022** SeqNo: **3372791** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	14	47.26	41.92	45.6	36.1	154			
Surr: DNOP	5.7		4.726		121	21	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **2212A21-007AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BES22-07 5.0'**	Batch ID: **72215**	RunNo: **93461**
Prep Date: **12/20/2022**	Analysis Date: **12/21/2022**	SeqNo: **3372792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	15	49.60	41.92	29.6	36.1	154	11.5	33.9	S
Surr: DNOP	5.8		4.960		117	21	129	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **mb-72156**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **72156**	RunNo: **93392**							
Prep Date: **12/16/2022**	Analysis Date: **12/19/2022**	SeqNo: **3368393**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.2	37.7	212			

Sample ID: **lcs-72156**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **72156**	RunNo: **93392**							
Prep Date: **12/16/2022**	Analysis Date: **12/19/2022**	SeqNo: **3368394**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	72.3	137			
Surr: BFB	3800		1000		377	37.7	212			S

Sample ID: **mb-72183**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **72183**	RunNo: **93433**							
Prep Date: **12/19/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369855**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.6	37.7	212			

Sample ID: **lcs-72183**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **72183**	RunNo: **93433**							
Prep Date: **12/19/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369856**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.8	72.3	137			
Surr: BFB	1800		1000		178	37.7	212			

Sample ID: **LCS-72232**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **72232**	RunNo: **93486**							
Prep Date: **12/20/2022**	Analysis Date: **12/22/2022**	SeqNo: **3371888**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		219	37.7	212			S

Sample ID: **mb-72232**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **72232**	RunNo: **93486**							
Prep Date: **12/20/2022**	Analysis Date: **12/22/2022**	SeqNo: **3371889**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	37.7	212			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **mb-72156**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **72156**	RunNo: **93392**
Prep Date: **12/16/2022**	Analysis Date: **12/19/2022**	SeqNo: **3368422** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	70	130			

Sample ID: **LCS-72156**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **72156**	RunNo: **93392**
Prep Date: **12/16/2022**	Analysis Date: **12/19/2022**	SeqNo: **3368423** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.3	80	120			
Toluene	0.90	0.050	1.000	0	89.6	80	120			
Ethylbenzene	0.88	0.050	1.000	0	88.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.7	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	70	130			

Sample ID: **mb-72183**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **72183**	RunNo: **93433**
Prep Date: **12/19/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369901** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		89.4	70	130			

Sample ID: **LCS-72183**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **72183**	RunNo: **93433**
Prep Date: **12/19/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369902** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.6	80	120			
Toluene	0.93	0.050	1.000	0	92.6	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.1	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.9	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A21**

28-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **LCS-72232**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **72232**	RunNo: **93486**							
Prep Date: **12/20/2022**	Analysis Date: **12/22/2022**	SeqNo: **3371965**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	70	130			

Sample ID: **mb-72232**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **72232**	RunNo: **93486**							
Prep Date: **12/20/2022**	Analysis Date: **12/22/2022**	SeqNo: **3371966**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2212A21

RcptNo: 1

Received By: Tracy Casarrubias 12/16/2022 7:40:00 AM

Completed By: Tracy Casarrubias 12/16/2022 9:21:49 AM

Reviewed By: JA 12.16.22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: SL 12/16/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			

Chain-of-Custody Record

Client: Vertex

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-DAY
☑ Standard ☒ Rush

Project Name: Boyd X State #015H

Project #: 22E-03101

Project Manager: Chance Dixon

Sampler: AH

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.6 - 0.1 = 1.5 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name		Container Type and #	Preservative Type	HEAL No. 2212A21	BTEX / MTBE / TMB's (8021)	TPH: 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	$Cl, F, Br, NO_3, NO_2, PO_4, SO_4$	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-14-22	1300	Soil	BES22-01	4.0'	4oz	ICE	001										
	1310		BES22-02	4.0'			002										
	1320		BES22-03	3.0'			003										
	1330		BES22-04	3.0'			004										
	1340		BES22-05	1.5'			005										
	1350		BES22-06	1.5'			006										
	1400		BES22-07	5.0'			007										
	1410		BES22-08	8.0'			008										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					12/15/22	1000
12/15/22	1900			Courier	12/16/22	7:40

Remarks: CC: Chance Dixon
Cdixon@vertex.ca

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 23, 2022

Chance Dixon

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

RE: Boyd X State 15H OrderNo.: 2212A74

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/17/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 21, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-01 0-4'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:00:00 AM
Lab ID: 2212A74-001 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:04:10 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 3:04:10 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 3:04:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/18/2022 3:40:14 PM
Surr: BFB	85.6	37.7-212		%Rec	1	12/18/2022 3:40:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	12/18/2022 3:40:14 PM
Toluene	ND	0.046		mg/Kg	1	12/18/2022 3:40:14 PM
Ethylbenzene	ND	0.046		mg/Kg	1	12/18/2022 3:40:14 PM
Xylenes, Total	ND	0.091		mg/Kg	1	12/18/2022 3:40:14 PM
Surr: 4-Bromofluorobenzene	86.0	70-130		%Rec	1	12/18/2022 3:40:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	12/20/2022 12:14:00 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-02 0-3'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:10:00 AM
Lab ID: 2212A74-002 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:14:47 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 3:14:47 PM
Surr: DNOP	104	21-129		%Rec	1	12/18/2022 3:14:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	12/18/2022 4:03:36 PM
Surr: BFB	84.3	37.7-212		%Rec	1	12/18/2022 4:03:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.014		mg/Kg	1	12/18/2022 4:03:36 PM
Toluene	ND	0.028		mg/Kg	1	12/18/2022 4:03:36 PM
Ethylbenzene	ND	0.028		mg/Kg	1	12/18/2022 4:03:36 PM
Xylenes, Total	ND	0.055		mg/Kg	1	12/18/2022 4:03:36 PM
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	12/18/2022 4:03:36 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	59		mg/Kg	20	12/20/2022 1:15:43 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-03 0-3'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:20:00 AM
Lab ID: 2212A74-003 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:25:25 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 3:25:25 PM
Surr: DNOP	101	21-129		%Rec	1	12/18/2022 3:25:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/18/2022 4:26:58 PM
Surr: BFB	84.5	37.7-212		%Rec	1	12/18/2022 4:26:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.017		mg/Kg	1	12/18/2022 4:26:58 PM
Toluene	ND	0.033		mg/Kg	1	12/18/2022 4:26:58 PM
Ethylbenzene	ND	0.033		mg/Kg	1	12/18/2022 4:26:58 PM
Xylenes, Total	ND	0.067		mg/Kg	1	12/18/2022 4:26:58 PM
Surr: 4-Bromofluorobenzene	84.4	70-130		%Rec	1	12/18/2022 4:26:58 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	12/20/2022 1:28:04 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-04 0-8'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:30:00 AM
Lab ID: 2212A74-004 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:36:04 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 3:36:04 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 3:36:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	12/18/2022 4:50:22 PM
Surr: BFB	85.2	37.7-212		%Rec	1	12/18/2022 4:50:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.022		mg/Kg	1	12/18/2022 4:50:22 PM
Toluene	ND	0.044		mg/Kg	1	12/18/2022 4:50:22 PM
Ethylbenzene	ND	0.044		mg/Kg	1	12/18/2022 4:50:22 PM
Xylenes, Total	ND	0.088		mg/Kg	1	12/18/2022 4:50:22 PM
Surr: 4-Bromofluorobenzene	85.1	70-130		%Rec	1	12/18/2022 4:50:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	160	60		mg/Kg	20	12/20/2022 1:40:24 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-05 0-8'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:40:00 AM
Lab ID: 2212A74-005 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 3:46:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 3:46:43 PM
Surr: DNOP	110	21-129		%Rec	1	12/18/2022 3:46:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	12/18/2022 5:13:47 PM
Surr: BFB	87.5	37.7-212		%Rec	1	12/18/2022 5:13:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.022		mg/Kg	1	12/18/2022 5:13:47 PM
Toluene	ND	0.045		mg/Kg	1	12/18/2022 5:13:47 PM
Ethylbenzene	ND	0.045		mg/Kg	1	12/18/2022 5:13:47 PM
Xylenes, Total	ND	0.089		mg/Kg	1	12/18/2022 5:13:47 PM
Surr: 4-Bromofluorobenzene	86.5	70-130		%Rec	1	12/18/2022 5:13:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	64	59		mg/Kg	20	12/20/2022 1:52:45 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-06 0-4'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 10:50:00 AM
Lab ID: 2212A74-006 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 4:18:54 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2022 4:18:54 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 4:18:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/18/2022 5:37:11 PM
Surr: BFB	87.1	37.7-212		%Rec	1	12/18/2022 5:37:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.020		mg/Kg	1	12/18/2022 5:37:11 PM
Toluene	ND	0.039		mg/Kg	1	12/18/2022 5:37:11 PM
Ethylbenzene	ND	0.039		mg/Kg	1	12/18/2022 5:37:11 PM
Xylenes, Total	ND	0.078		mg/Kg	1	12/18/2022 5:37:11 PM
Surr: 4-Bromofluorobenzene	86.6	70-130		%Rec	1	12/18/2022 5:37:11 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	12/20/2022 2:05:06 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-07 4-8'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 11:00:00 AM
Lab ID: 2212A74-007 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	130	15		mg/Kg	1	12/22/2022 2:41:58 PM
Diesel Range Organics (DRO)	110	15		mg/Kg	1	12/19/2022 12:06:40 PM
Motor Oil Range Organics (MRO)	140	50		mg/Kg	1	12/22/2022 2:41:58 PM
Motor Oil Range Organics (MRO)	110	50		mg/Kg	1	12/19/2022 12:06:40 PM
Surr: DNOP	128	21-129		%Rec	1	12/22/2022 2:41:58 PM
Surr: DNOP	109	21-129		%Rec	1	12/19/2022 12:06:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/18/2022 6:00:36 PM
Surr: BFB	85.2	37.7-212		%Rec	1	12/18/2022 6:00:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/18/2022 6:00:36 PM
Toluene	ND	0.048		mg/Kg	1	12/18/2022 6:00:36 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/18/2022 6:00:36 PM
Xylenes, Total	ND	0.096		mg/Kg	1	12/18/2022 6:00:36 PM
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	12/18/2022 6:00:36 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	100	60		mg/Kg	20	12/20/2022 2:17:27 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212A74**
Date Reported: **12/23/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-08 1.5'
Project: Boyd X State 15H **Collection Date:** 12/15/2022 11:10:00 AM
Lab ID: 2212A74-008 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 4:40:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 4:40:32 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 4:40:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/18/2022 6:24:02 PM
Surr: BFB	87.3	37.7-212		%Rec	1	12/18/2022 6:24:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	12/18/2022 6:24:02 PM
Toluene	ND	0.048		mg/Kg	1	12/18/2022 6:24:02 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/18/2022 6:24:02 PM
Xylenes, Total	ND	0.096		mg/Kg	1	12/18/2022 6:24:02 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	12/18/2022 6:24:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	150	60		mg/Kg	20	12/20/2022 2:29:47 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A74**

23-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **MB-72178** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **72178** RunNo: **93415**

Prep Date: **12/19/2022** Analysis Date: **12/19/2022** SeqNo: **3368943** Units: **mg/Kg**

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

Sample ID: **LCS-72178** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **72178** RunNo: **93415**

Prep Date: **12/19/2022** Analysis Date: **12/19/2022** SeqNo: **3368944** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

Sample ID: **MB-72198** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **72198** RunNo: **93415**

Prep Date: **12/19/2022** Analysis Date: **12/20/2022** SeqNo: **3368975** Units: **mg/Kg**

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

Sample ID: **LCS-72198** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **72198** RunNo: **93415**

Prep Date: **12/19/2022** Analysis Date: **12/20/2022** SeqNo: **3368976** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A74**

23-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **2212A74-005AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES22-05 0-8'** Batch ID: **72164** RunNo: **93383**
Prep Date: **12/18/2022** Analysis Date: **12/18/2022** SeqNo: **3367586** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	49.65	0	85.6	36.1	154			
Surr: DNOP	5.6		4.965		113	21	129			

Sample ID: **2212A74-005AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES22-05 0-8'** Batch ID: **72164** RunNo: **93383**
Prep Date: **12/18/2022** Analysis Date: **12/18/2022** SeqNo: **3367587** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	50.05	0	83.8	36.1	154	1.33	33.9	
Surr: DNOP	5.5		5.005		110	21	129	0	0	

Sample ID: **LCS-72164** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72164** RunNo: **93383**
Prep Date: **12/18/2022** Analysis Date: **12/18/2022** SeqNo: **3367600** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	82.0	64.4	127			
Surr: DNOP	5.2		5.000		104	21	129			

Sample ID: **MB-72164** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72164** RunNo: **93383**
Prep Date: **12/18/2022** Analysis Date: **12/18/2022** SeqNo: **3367602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	21	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A74**

23-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **A93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367045** Units: **mg/Kg**

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

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	1900		1000		185	37.7	212			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212A74**

23-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **C93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.0	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **C93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367083** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.5	80	120			
Toluene	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.6	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.6	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.9	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Vertex Resources Services, Inc.** Work Order Number: **2212A74** RcptNo: **1**

Received By: **Desiree Dominguez** **12/17/2022 10:00:00 AM**

Completed By: **Desiree Dominguez** **12/17/2022 10:22:45 AM**

Reviewed By: CMC 12/17/22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: DAD 12/17/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good				

Chain-of-Custody Record

Client: EOG / Vertex

Mailing Address: On File

Phone #:

email or Fax#:

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

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

Turn-Around Time: 24-Hour
☐ Standard ☒ Rush

Project Name: Boyd X State #15H

Project #: 22E-03101

Project Manager: Chance Dixon

Sampler: AH

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.5-0.1=0.4 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212A74	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/15/22	10:00	Soil	WES22-01 0-4'	4oz	Ice	-001	✓	✓					✓			
	10:10		WES22-02 0-3'	Mesh		-002										
	10:20		WES22-03 0-3'			-003										
	10:30		WES22-04 0-4'			-004										
	10:40		WES22-05 0-4'			-005										
	10:50		WES22-06 4-8'			-006										
	11:00		WES22-07 4-8'			-007										
	11:10		WES22-08 1.5'			-008										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					12/16/22	945
12/16/22	1900			courier	12/17/22	10:00

Remarks: CC: Austin Harris's Direct Bill EOG

Sample WES22-04 and WES22-05 depths changed to 0-8'. Sample WES22-06 and WES22-07 depths changed to 0-8'.
As per Chance Dixon. 12/23/22 MMG

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 30, 2022

Chance Dixon

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

RE: Boyd X State 15H OrderNo.: 2212B90

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 22 sample(s) on 12/21/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 16-20'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:00:00 AM
Lab ID: 2212B90-001 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/21/2022 12:02:27 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2022 12:02:27 PM
Surr: DNOP	104	21-129		%Rec	1	12/21/2022 12:02:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	12/21/2022 3:33:24 PM
Surr: BFB	87.6	37.7-212		%Rec	1	12/21/2022 3:33:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.021		mg/Kg	1	12/21/2022 3:33:24 PM
Toluene	ND	0.043		mg/Kg	1	12/21/2022 3:33:24 PM
Ethylbenzene	ND	0.043		mg/Kg	1	12/21/2022 3:33:24 PM
Xylenes, Total	ND	0.085		mg/Kg	1	12/21/2022 3:33:24 PM
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	12/21/2022 3:33:24 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	61		mg/Kg	20	12/21/2022 11:08:32 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 0-4'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:10:00 AM
Lab ID: 2212B90-002 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	1900	140		mg/Kg	10	12/22/2022 10:18:28 AM
Motor Oil Range Organics (MRO)	2100	450		mg/Kg	10	12/22/2022 10:18:28 AM
Surr: DNOP	0	21-129	S	%Rec	10	12/22/2022 10:18:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	12/21/2022 3:56:46 PM
Surr: BFB	84.4	37.7-212		%Rec	5	12/21/2022 3:56:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.11		mg/Kg	5	12/21/2022 3:56:46 PM
Toluene	ND	0.22		mg/Kg	5	12/21/2022 3:56:46 PM
Ethylbenzene	ND	0.22		mg/Kg	5	12/21/2022 3:56:46 PM
Xylenes, Total	ND	0.44		mg/Kg	5	12/21/2022 3:56:46 PM
Surr: 4-Bromofluorobenzene	82.4	70-130		%Rec	5	12/21/2022 3:56:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	63	61		mg/Kg	20	12/21/2022 11:45:46 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 4-8'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:20:00 AM
Lab ID: 2212B90-003 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	63	15		mg/Kg	1	12/21/2022 1:38:44 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2022 1:38:44 PM
Surr: DNOP	104	21-129		%Rec	1	12/21/2022 1:38:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	12/21/2022 4:20:12 PM
Surr: BFB	88.6	37.7-212		%Rec	5	12/21/2022 4:20:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.098		mg/Kg	5	12/21/2022 4:20:12 PM
Toluene	ND	0.20		mg/Kg	5	12/21/2022 4:20:12 PM
Ethylbenzene	ND	0.20		mg/Kg	5	12/21/2022 4:20:12 PM
Xylenes, Total	ND	0.39		mg/Kg	5	12/21/2022 4:20:12 PM
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	5	12/21/2022 4:20:12 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 12:23:01 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-15 0-6'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:30:00 AM
Lab ID: 2212B90-004 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/21/2022 2:32:26 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/21/2022 2:32:26 PM
Surr: DNOP	103	21-129		%Rec	1	12/21/2022 2:32:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/21/2022 4:43:45 PM
Surr: BFB	86.9	37.7-212		%Rec	1	12/21/2022 4:43:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	12/21/2022 4:43:45 PM
Toluene	ND	0.047		mg/Kg	1	12/21/2022 4:43:45 PM
Ethylbenzene	ND	0.047		mg/Kg	1	12/21/2022 4:43:45 PM
Xylenes, Total	ND	0.094		mg/Kg	1	12/21/2022 4:43:45 PM
Surr: 4-Bromofluorobenzene	85.5	70-130		%Rec	1	12/21/2022 4:43:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	84	60		mg/Kg	20	12/22/2022 1:25:06 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-16 0-6'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:40:00 AM
Lab ID: 2212B90-005 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/21/2022 2:59:19 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/21/2022 2:59:19 PM
Surr: DNOP	108	21-129		%Rec	1	12/21/2022 2:59:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	12/21/2022 5:07:24 PM
Surr: BFB	85.6	37.7-212		%Rec	1	12/21/2022 5:07:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.022		mg/Kg	1	12/21/2022 5:07:24 PM
Toluene	ND	0.044		mg/Kg	1	12/21/2022 5:07:24 PM
Ethylbenzene	ND	0.044		mg/Kg	1	12/21/2022 5:07:24 PM
Xylenes, Total	ND	0.088		mg/Kg	1	12/21/2022 5:07:24 PM
Surr: 4-Bromofluorobenzene	84.5	70-130		%Rec	1	12/21/2022 5:07:24 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	86	61		mg/Kg	20	12/22/2022 1:37:30 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-15 6-12'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 9:50:00 AM
Lab ID: 2212B90-006 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	240	15		mg/Kg	1	12/21/2022 3:27:14 PM
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	12/21/2022 3:27:14 PM
Surr: DNOP	105	21-129		%Rec	1	12/21/2022 3:27:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	23		mg/Kg	5	12/21/2022 5:30:57 PM
Surr: BFB	98.3	37.7-212		%Rec	5	12/21/2022 5:30:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.12		mg/Kg	5	12/21/2022 5:30:57 PM
Toluene	ND	0.23		mg/Kg	5	12/21/2022 5:30:57 PM
Ethylbenzene	ND	0.23		mg/Kg	5	12/21/2022 5:30:57 PM
Xylenes, Total	ND	0.47		mg/Kg	5	12/21/2022 5:30:57 PM
Surr: 4-Bromofluorobenzene	84.7	70-130		%Rec	5	12/21/2022 5:30:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	61		mg/Kg	20	12/22/2022 1:49:55 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-16 6-12'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:00:00 AM
Lab ID: 2212B90-007 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	100	15		mg/Kg	1	12/21/2022 3:54:54 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2022 3:54:54 PM
Surr: DNOP	106	21-129		%Rec	1	12/21/2022 3:54:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	12/21/2022 5:54:31 PM
Surr: BFB	86.6	37.7-212		%Rec	5	12/21/2022 5:54:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.11		mg/Kg	5	12/21/2022 5:54:31 PM
Toluene	ND	0.21		mg/Kg	5	12/21/2022 5:54:31 PM
Ethylbenzene	ND	0.21		mg/Kg	5	12/21/2022 5:54:31 PM
Xylenes, Total	ND	0.42		mg/Kg	5	12/21/2022 5:54:31 PM
Surr: 4-Bromofluorobenzene	84.2	70-130		%Rec	5	12/21/2022 5:54:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:02:19 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 8-12'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:10:00 AM
Lab ID: 2212B90-008 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	160	13		mg/Kg	1	12/21/2022 4:22:39 PM
Motor Oil Range Organics (MRO)	76	44		mg/Kg	1	12/21/2022 4:22:39 PM
Surr: DNOP	106	21-129		%Rec	1	12/21/2022 4:22:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	12/21/2022 6:18:06 PM
Surr: BFB	85.1	37.7-212		%Rec	5	12/21/2022 6:18:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.11		mg/Kg	5	12/21/2022 6:18:06 PM
Toluene	ND	0.22		mg/Kg	5	12/21/2022 6:18:06 PM
Ethylbenzene	ND	0.22		mg/Kg	5	12/21/2022 6:18:06 PM
Xylenes, Total	ND	0.44		mg/Kg	5	12/21/2022 6:18:06 PM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	5	12/21/2022 6:18:06 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	59		mg/Kg	20	12/22/2022 2:14:44 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-15 12-20'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:30:00 AM
Lab ID: 2212B90-009 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	58	15		mg/Kg	1	12/21/2022 4:50:08 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2022 4:50:08 PM
Surr: DNOP	114	21-129		%Rec	1	12/21/2022 4:50:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	12/21/2022 6:41:31 PM
Surr: BFB	88.9	37.7-212		%Rec	5	12/21/2022 6:41:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.095		mg/Kg	5	12/21/2022 6:41:31 PM
Toluene	ND	0.19		mg/Kg	5	12/21/2022 6:41:31 PM
Ethylbenzene	ND	0.19		mg/Kg	5	12/21/2022 6:41:31 PM
Xylenes, Total	ND	0.38		mg/Kg	5	12/21/2022 6:41:31 PM
Surr: 4-Bromofluorobenzene	86.4	70-130		%Rec	5	12/21/2022 6:41:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:27:09 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 12-16'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:40:00 AM
Lab ID: 2212B90-010 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	57	14		mg/Kg	1	12/21/2022 5:16:58 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/21/2022 5:16:58 PM
Surr: DNOP	113	21-129		%Rec	1	12/21/2022 5:16:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	12/21/2022 9:02:33 PM
Surr: BFB	94.5	37.7-212		%Rec	1	12/21/2022 9:02:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.021		mg/Kg	1	12/21/2022 9:02:33 PM
Toluene	ND	0.042		mg/Kg	1	12/21/2022 9:02:33 PM
Ethylbenzene	ND	0.042		mg/Kg	1	12/21/2022 9:02:33 PM
Xylenes, Total	ND	0.083		mg/Kg	1	12/21/2022 9:02:33 PM
Surr: 4-Bromofluorobenzene	86.9	70-130		%Rec	1	12/21/2022 9:02:33 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:39:34 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-16 12-20'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:50:00 AM
Lab ID: 2212B90-011 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	16	14		mg/Kg	1	12/21/2022 5:55:10 PM
Motor Oil Range Organics (MRO)	120	48		mg/Kg	1	12/21/2022 5:55:10 PM
Surr: DNOP	112	21-129		%Rec	1	12/21/2022 5:55:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.4		mg/Kg	1	12/21/2022 10:13:04 PM
Surr: BFB	86.9	37.7-212		%Rec	1	12/21/2022 10:13:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.027		mg/Kg	1	12/21/2022 10:13:04 PM
Toluene	ND	0.054		mg/Kg	1	12/21/2022 10:13:04 PM
Ethylbenzene	ND	0.054		mg/Kg	1	12/21/2022 10:13:04 PM
Xylenes, Total	ND	0.11		mg/Kg	1	12/21/2022 10:13:04 PM
Surr: 4-Bromofluorobenzene	85.3	70-130		%Rec	1	12/21/2022 10:13:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 2:51:58 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-18 0-6'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:00:00 AM
Lab ID: 2212B90-012 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/21/2022 6:26:36 PM
Motor Oil Range Organics (MRO)	110	48		mg/Kg	1	12/21/2022 6:26:36 PM
Surr: DNOP	109	21-129		%Rec	1	12/21/2022 6:26:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	6.1		mg/Kg	1	12/21/2022 11:23:25 PM
Surr: BFB	84.3	37.7-212		%Rec	1	12/21/2022 11:23:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.031		mg/Kg	1	12/21/2022 11:23:25 PM
Toluene	ND	0.061		mg/Kg	1	12/21/2022 11:23:25 PM
Ethylbenzene	ND	0.061		mg/Kg	1	12/21/2022 11:23:25 PM
Xylenes, Total	ND	0.12		mg/Kg	1	12/21/2022 11:23:25 PM
Surr: 4-Bromofluorobenzene	84.3	70-130		%Rec	1	12/21/2022 11:23:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	61		mg/Kg	20	12/22/2022 3:29:13 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-18 6-12'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:05:00 AM
Lab ID: 2212B90-013 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	120	14		mg/Kg	1	12/21/2022 7:18:55 PM
Motor Oil Range Organics (MRO)	140	47		mg/Kg	1	12/21/2022 7:18:55 PM
Surr: DNOP	110	21-129		%Rec	1	12/21/2022 7:18:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	110	25		mg/Kg	5	12/21/2022 11:46:49 PM
Surr: BFB	199	37.7-212		%Rec	5	12/21/2022 11:46:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.20	0.12		mg/Kg	5	12/21/2022 11:46:49 PM
Toluene	3.0	0.25		mg/Kg	5	12/21/2022 11:46:49 PM
Ethylbenzene	4.5	0.25		mg/Kg	5	12/21/2022 11:46:49 PM
Xylenes, Total	5.4	0.49		mg/Kg	5	12/21/2022 11:46:49 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	5	12/21/2022 11:46:49 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:41:38 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-18 12-20'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:10:00 AM
Lab ID: 2212B90-014 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	84	14		mg/Kg	1	12/21/2022 7:50:37 PM
Motor Oil Range Organics (MRO)	150	47		mg/Kg	1	12/21/2022 7:50:37 PM
Surr: DNOP	111	21-129		%Rec	1	12/21/2022 7:50:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	180	27		mg/Kg	5	12/22/2022 12:10:13 AM
Surr: BFB	258	37.7-212	S	%Rec	5	12/22/2022 12:10:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.18	0.14		mg/Kg	5	12/22/2022 12:10:13 AM
Toluene	3.6	0.27		mg/Kg	5	12/22/2022 12:10:13 AM
Ethylbenzene	7.5	0.27		mg/Kg	5	12/22/2022 12:10:13 AM
Xylenes, Total	8.9	0.54		mg/Kg	5	12/22/2022 12:10:13 AM
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	5	12/22/2022 12:10:13 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 3:54:03 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-19 0-5'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:15:00 AM
Lab ID: 2212B90-015 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/21/2022 8:22:26 PM
Motor Oil Range Organics (MRO)	100	47		mg/Kg	1	12/21/2022 8:22:26 PM
Surr: DNOP	113	21-129		%Rec	1	12/21/2022 8:22:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/22/2022 12:33:38 AM
Surr: BFB	89.1	37.7-212		%Rec	5	12/22/2022 12:33:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.12		mg/Kg	5	12/22/2022 12:33:38 AM
Toluene	ND	0.24		mg/Kg	5	12/22/2022 12:33:38 AM
Ethylbenzene	ND	0.24		mg/Kg	5	12/22/2022 12:33:38 AM
Xylenes, Total	ND	0.47		mg/Kg	5	12/22/2022 12:33:38 AM
Surr: 4-Bromofluorobenzene	86.8	70-130		%Rec	5	12/22/2022 12:33:38 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 4:06:28 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-19 5-10'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:20:00 AM
Lab ID: 2212B90-016 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/27/2022 6:30:03 PM
Motor Oil Range Organics (MRO)	97	47		mg/Kg	1	12/27/2022 6:30:03 PM
Surr: DNOP	115	21-129		%Rec	1	12/27/2022 6:30:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/22/2022 12:57:02 AM
Surr: BFB	86.2	37.7-212		%Rec	1	12/22/2022 12:57:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	12/22/2022 12:57:02 AM
Toluene	ND	0.046		mg/Kg	1	12/22/2022 12:57:02 AM
Ethylbenzene	ND	0.046		mg/Kg	1	12/22/2022 12:57:02 AM
Xylenes, Total	ND	0.093		mg/Kg	1	12/22/2022 12:57:02 AM
Surr: 4-Bromofluorobenzene	86.0	70-130		%Rec	1	12/22/2022 12:57:02 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 4:18:53 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-20 10-15'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:25:00 AM
Lab ID: 2212B90-017 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	260	15		mg/Kg	1	12/21/2022 9:25:58 PM
Motor Oil Range Organics (MRO)	200	50		mg/Kg	1	12/21/2022 9:25:58 PM
Surr: DNOP	110	21-129		%Rec	1	12/21/2022 9:25:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	26		mg/Kg	5	12/22/2022 1:20:23 AM
Surr: BFB	110	37.7-212		%Rec	5	12/22/2022 1:20:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.13		mg/Kg	5	12/22/2022 1:20:23 AM
Toluene	0.48	0.26		mg/Kg	5	12/22/2022 1:20:23 AM
Ethylbenzene	0.84	0.26		mg/Kg	5	12/22/2022 1:20:23 AM
Xylenes, Total	1.1	0.52		mg/Kg	5	12/22/2022 1:20:23 AM
Surr: 4-Bromofluorobenzene	89.5	70-130		%Rec	5	12/22/2022 1:20:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 4:31:18 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-20 15-20'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:30:00 AM
Lab ID: 2212B90-018 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	300	14		mg/Kg	1	12/21/2022 9:57:44 PM
Motor Oil Range Organics (MRO)	220	45		mg/Kg	1	12/21/2022 9:57:44 PM
Surr: DNOP	112	21-129		%Rec	1	12/21/2022 9:57:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	33	5.0		mg/Kg	1	12/22/2022 1:43:42 AM
Surr: BFB	285	37.7-212	S	%Rec	1	12/22/2022 1:43:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.051	0.025		mg/Kg	1	12/22/2022 1:43:42 AM
Toluene	0.58	0.050		mg/Kg	1	12/22/2022 1:43:42 AM
Ethylbenzene	1.1	0.050		mg/Kg	1	12/22/2022 1:43:42 AM
Xylenes, Total	1.3	0.10		mg/Kg	1	12/22/2022 1:43:42 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	12/22/2022 1:43:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 4:43:43 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BES22-09 10'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:35:00 AM
Lab ID: 2212B90-019 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	310	14		mg/Kg	1	12/27/2022 7:01:27 PM
Motor Oil Range Organics (MRO)	210	46		mg/Kg	1	12/27/2022 7:01:27 PM
Surr: DNOP	116	21-129		%Rec	1	12/27/2022 7:01:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	23	23		mg/Kg	5	12/22/2022 2:07:01 AM
Surr: BFB	118	37.7-212		%Rec	5	12/22/2022 2:07:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.12		mg/Kg	5	12/22/2022 2:07:01 AM
Toluene	0.30	0.23		mg/Kg	5	12/22/2022 2:07:01 AM
Ethylbenzene	0.57	0.23		mg/Kg	5	12/22/2022 2:07:01 AM
Xylenes, Total	0.79	0.46		mg/Kg	5	12/22/2022 2:07:01 AM
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	5	12/22/2022 2:07:01 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	59		mg/Kg	20	12/22/2022 4:56:07 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BES22-10 10'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:40:00 AM
Lab ID: 2212B90-020 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	540	15		mg/Kg	1	12/27/2022 7:32:51 PM
Motor Oil Range Organics (MRO)	360	50		mg/Kg	1	12/27/2022 7:32:51 PM
Surr: DNOP	110	21-129		%Rec	1	12/27/2022 7:32:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	36	4.8		mg/Kg	1	12/22/2022 2:53:45 AM
Surr: BFB	310	37.7-212	S	%Rec	1	12/22/2022 2:53:45 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.044	0.024		mg/Kg	1	12/22/2022 2:53:45 AM
Toluene	0.66	0.048		mg/Kg	1	12/22/2022 2:53:45 AM
Ethylbenzene	0.79	0.048		mg/Kg	1	12/22/2022 2:53:45 AM
Xylenes, Total	1.3	0.097		mg/Kg	1	12/22/2022 2:53:45 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	12/22/2022 2:53:45 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 5:08:31 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BES22-11 20'
Project: Boyd X State 15H **Collection Date:** 12/19/2022 9:45:00 AM
Lab ID: 2212B90-021 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	360	14		mg/Kg	1	12/21/2022 11:22:25 PM
Motor Oil Range Organics (MRO)	270	47		mg/Kg	1	12/21/2022 11:22:25 PM
Surr: DNOP	111	21-129		%Rec	1	12/21/2022 11:22:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	29		mg/Kg	5	12/22/2022 3:17:00 AM
Surr: BFB	105	37.7-212		%Rec	5	12/22/2022 3:17:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.14		mg/Kg	5	12/22/2022 3:17:00 AM
Toluene	0.31	0.29		mg/Kg	5	12/22/2022 3:17:00 AM
Ethylbenzene	0.40	0.29		mg/Kg	5	12/22/2022 3:17:00 AM
Xylenes, Total	0.71	0.57		mg/Kg	5	12/22/2022 3:17:00 AM
Surr: 4-Bromofluorobenzene	86.6	70-130		%Rec	5	12/22/2022 3:17:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	12/22/2022 5:20:56 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2212B90**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES-22 8-12'
Project: Boyd X State 15H **Collection Date:** 12/17/2022 10:20:00 AM
Lab ID: 2212B90-022 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/21/2022 5:44:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/21/2022 5:44:00 PM
Surr: DNOP	112	21-129		%Rec	1	12/21/2022 5:44:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/22/2022 3:40:20 AM
Surr: BFB	87.6	37.7-212		%Rec	1	12/22/2022 3:40:20 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.019		mg/Kg	1	12/22/2022 3:40:20 AM
Toluene	ND	0.039		mg/Kg	1	12/22/2022 3:40:20 AM
Ethylbenzene	ND	0.039		mg/Kg	1	12/22/2022 3:40:20 AM
Xylenes, Total	ND	0.078		mg/Kg	1	12/22/2022 3:40:20 AM
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	12/22/2022 3:40:20 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	12/22/2022 11:56:36 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **MB-72247** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **72247** RunNo: **93460**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372197** Units: **mg/Kg**

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

Sample ID: **LCS-72247** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **72247** RunNo: **93460**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372198** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

Sample ID: **MB-72251** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **72251** RunNo: **93460**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372229** Units: **mg/Kg**

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

Sample ID: **LCS-72251** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **72251** RunNo: **93460**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372230** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Sample ID: **MB-72277** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **72277** RunNo: **93518**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3373636** Units: **mg/Kg**

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

Sample ID: **LCS-72277** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **72277** RunNo: **93518**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3373637** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **LCS-72244** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370984** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	87.2	64.4	127			
Surr: DNOP	5.9		5.000		118	21	129			

Sample ID: **MB-72244** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370986** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		116	21	129			

Sample ID: **MB-72245** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72245** RunNo: **93469**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3371220** Units: **mg/Kg**

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

Sample ID: **2212B90-003AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES22-14 4-8'** Batch ID: **72245** RunNo: **93469**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3371223** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	15	50.25	63.12	116	36.1	154			
Surr: DNOP	5.1		5.025		101	21	129			

Sample ID: **2212B90-003AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES22-14 4-8'** Batch ID: **72245** RunNo: **93469**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3371224** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	14	46.82	63.12	179	36.1	154	19.2	33.9	S
Surr: DNOP	4.6		4.682		98.7	21	129	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **LCS-72245** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72245** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3372930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	87.2	64.4	127			
Surr: DNOP	6.0		5.000		120	21	129			

Sample ID: **MB-72256** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72256** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3372932** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		118	21	129			

Sample ID: **LCS-72256** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72256** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3374250** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.8		5.000		136	21	129			S

Sample ID: **LCS-72271** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72271** RunNo: **93500**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3374252** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		117	21	129			

Sample ID: **MB-72271** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72271** RunNo: **93500**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3374254** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		111	21	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **A93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371088**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.8	37.7	212			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **A93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371089**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.5	72.3	137			
Surr: BFB	1800		1000		178	37.7	212			

Sample ID: **mb-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **B93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371107**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.2	37.7	212			

Sample ID: **2.5ug gro lcs-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **B93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371108**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.9	72.3	137			
Surr: BFB	1800		1000		182	37.7	212			

Sample ID: **2212b90-010ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **WES22-14 12-16'**	Batch ID: **B93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371216**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	20.80	0	101	70	130			
Surr: BFB	1600		832.0		190	37.7	212			

Sample ID: **2212b90-010amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **WES22-14 12-16'**	Batch ID: **B93454**	RunNo: **93454**							
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371217**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **2212b90-010amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WES22-14 12-16'**	Batch ID: **B93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371217** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	20.80	0	101	70	130	0.199	20	
Surr: BFB	1600		832.0		193	37.7	212	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **C93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371152** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		88.2	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **C93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371153** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	80	120			
Toluene	0.91	0.050	1.000	0	91.5	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.8	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.5	70	130			

Sample ID: **mb-II**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		86.8	70	130			

Sample ID: **100ng btex lcs-II**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371172** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.94	0.050	1.000	0	93.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.6	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212B90**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 15H

Sample ID: **2212b90-011ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WES22-16 12-20'**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371202** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.027	1.076	0	89.4	68.8	120			
Toluene	0.98	0.054	1.076	0	91.1	73.6	124			
Ethylbenzene	0.96	0.054	1.076	0	89.5	72.7	129			
Xylenes, Total	2.9	0.11	3.229	0.01991	88.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.95		1.076		88.6	70	130			

Sample ID: **2212b90-011amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WES22-16 12-20'**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371203** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.027	1.076	0	88.4	68.8	120	1.17	20	
Toluene	0.96	0.054	1.076	0	89.6	73.6	124	1.65	20	
Ethylbenzene	0.96	0.054	1.076	0	88.8	72.7	129	0.807	20	
Xylenes, Total	2.9	0.11	3.229	0.01991	88.4	75.7	126	0.362	20	
Surr: 4-Bromofluorobenzene	0.95		1.076		88.7	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Vertex Resources Services, Inc.** Work Order Number: **2212B90** RcptNo: **1**

Received By: **Cheyenne Cason** **12/21/2022 7:20:00 AM**

Completed By: **Cheyenne Cason** **12/21/2022 7:39:47 AM**

Reviewed By: 12.21.22

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: JR 12/21/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Not Present			
2	4.8	Good	Not Present			

Chain-of-Custody Record

Client: EOG / Vertex

Mailing Address: On File

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 24-HOUR
☐ Standard ☐ Rush

Project Name: Boyd X State #15H

Project #: 22E-03101

Project Manager: Chance Dixon

Sampler: AH

On Ice: ☒ Yes ☐ No

# of Coolers: 2 4.7-0=4.7

Cooler Temp (including CF): 4.8-0=4.8 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212B90	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/17/22	9:00	Soil	WES22-14 16-20'	4oz	ICE	001	✓	✓					✓			
	9:10		WES22-14 0-4'			002										
	9:20		WES22-14 4-8'			003										
	9:30		WES22-15 0-6'			004										
	9:40		WES22-16 0-6'			005										
	9:50		WES22-15 6-12'			006										
	10:00		WES22-16 6-12'			007										
	10:10		WES22-14 8-12'			008										
	~~10:15~~		~~WES22-~~			~~009~~										
	10:30		WES22-15 12-20'			009										
	10:40		WES22-14 12-16'			010										
	10:50		WES22-16 12-20'			011										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					12/20/22	1130
Date: 12/20/22	Time: 1900	Relinquished by:	Received by: CMC Courier	Via:	Date: 12/21/22	Time: 0720

Remarks:

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

Chain-of-Custody Record

Client: EOG / Vertex

Mailing Address: On File

Phone #:

email or Fax#:

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

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

Turn-Around Time: 24-Hour
☐ Standard ☑ Rush

Project Name: Boyd X State #151H

Project #: 22E-03101

Project Manager: Chance Dixon

Sampler: CD
On Ice: ☒ Yes ☐ No
# of Coolers: 2 4.7-0=4.7
Cooler Temp(Including CF): 4.8-0=4.8 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212B90	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/19/22	9:00	Soil	WES22-18 0-6'	4oz	ICE	012	✓	✓					✓			
	9:05		WES22-18 6-12'			013										
	9:10		WES22-18 12-20'			014										
	9:15		WES22-19 0-5'			015										
	9:20		WES22-19 5-10'			016										
	9:25		WES22-20 10-15'			017										
	9:30		WES22-20 15-20'			018										
	9:35		BES22-09 10'			019										
	9:40		BES22-10 10'			020										
	9:45		BES22-11 20'			021										
12/17/22	10:20		WES22-22 8-12'			-022										
			Per client - jn 12/21/22													

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/20					12/20/22	1230
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/20/22	1900			Courier	12/21/22	0720

Remarks: Direct Bill EOG

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 30, 2022

Chance Dixon

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

RE: Boyd X State 015H OrderNo.: 2212E03

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/28/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212E03**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES22-14 0-4'
Project: Boyd X State 015H **Collection Date:** 12/27/2022 10:00:00 AM
Lab ID: 2212E03-001 **Matrix:** MEOH (SOIL) **Received Date:** 12/28/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/28/2022 12:28:45 PM
Motor Oil Range Organics (MRO)	80	48		mg/Kg	1	12/28/2022 12:28:45 PM
Surr: DNOP	111	21-129		%Rec	1	12/28/2022 12:28:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/28/2022 9:51:53 AM
Surr: BFB	93.1	37.7-212		%Rec	1	12/28/2022 9:51:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/28/2022 9:51:53 AM
Toluene	ND	0.050		mg/Kg	1	12/28/2022 9:51:53 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/28/2022 9:51:53 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/28/2022 9:51:53 AM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	12/28/2022 9:51:53 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	12/28/2022 5:18:54 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E03**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **MB-72348**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **72348**	RunNo: **93596**							
Prep Date: **12/28/2022**	Analysis Date: **12/28/2022**	SeqNo: **3378080**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-72348**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **72348**	RunNo: **93596**							
Prep Date: **12/28/2022**	Analysis Date: **12/28/2022**	SeqNo: **3378081**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E03**
30-Dec-22

Client: Vertex Resources Services, Inc.
Project: Boyd X State 015H

Sample ID: **LCS-72338** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72338** RunNo: **93583**
Prep Date: **12/28/2022** Analysis Date: **12/28/2022** SeqNo: **3376644** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	90.0	64.4	127			
Surr: DNOP	4.6		5.000		92.9	21	129			

Sample ID: **MB-72338** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72338** RunNo: **93583**
Prep Date: **12/28/2022** Analysis Date: **12/28/2022** SeqNo: **3376646** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.4	21	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E03**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **mb-72309**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **72309**	RunNo: **93580**
Prep Date: **12/23/2022**	Analysis Date: **12/28/2022**	SeqNo: **3377237** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		96.9	37.7	212			

Sample ID: **lcs-72309**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **72309**	RunNo: **93580**
Prep Date: **12/23/2022**	Analysis Date: **12/28/2022**	SeqNo: **3377238** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	1900		1000		194	37.7	212			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R93580**	RunNo: **93580**
Prep Date:	Analysis Date: **12/28/2022**	SeqNo: **3377272** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.0	37.7	212			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R93580**	RunNo: **93580**
Prep Date:	Analysis Date: **12/28/2022**	SeqNo: **3377273** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		195	37.7	212			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E03**

30-Dec-22

Client: Vertex Resources Services, Inc.

Project: Boyd X State 015H

Sample ID: **mb-72309** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **72309** RunNo: **93580**

Prep Date: **12/23/2022** Analysis Date: **12/28/2022** SeqNo: **3377289** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	70	130			

Sample ID: **LCS-72309** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **72309** RunNo: **93580**

Prep Date: **12/23/2022** Analysis Date: **12/28/2022** SeqNo: **3377290** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.8	80	120			
Toluene	0.87	0.050	1.000	0	86.7	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.7	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.0	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.5	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **R93580** RunNo: **93580**

Prep Date: Analysis Date: **12/28/2022** SeqNo: **3377313** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	70	130			

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **R93580** RunNo: **93580**

Prep Date: Analysis Date: **12/28/2022** SeqNo: **3377314** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Vertex Resources Services, Inc.** Work Order Number: **2212E03** RcptNo: **1**

Received By: **Isaiah Ortiz** **12/28/2022 6:50:00 AM** I-OK

Completed By: **Cheyenne Cason** **12/28/2022 7:17:33 AM** Chal

Reviewed By: JR 12/28/22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: KE 12/28/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Not Present			

Chain-of-Custody Record

Client: EOG / Vertex

Mailing Address: On File

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: Same-Day
☐ Standard ☑ Rush

Project Name: Boyd X State #015H

Project #: 22E-03101

Project Manager: Chance Dixon

Sampler: CD

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (Including CF): 3.3±0 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212E03	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/27/22	10:00	Soil	WES22-14 0-4'	4oz	ICE	001	✓	✓					✓			

Analysis Request

Relinquished by:	Date	Time	Received by:	Via:	Date	Time
	12/27	1300			12/27/22	1300
	12/27/22	1900		Courier	12/28/22	0650

Remarks: Direct Bill EOG

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

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

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

CONDITIONS

Action 182225

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 182225
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	2/21/2023