

April 14, 2023 Vertex Project #: 22E-00123-07

**Spill Closure Report:** Gill BGJ #1 (Section 29, Township 9 South, Range 35 East)

API: 30-025-37103

County: Lea

Incident Reports: nGRL1116854671 (1RP-2717), and nJXK1620138458

Prepared For: EOG Resources, Inc.

104 South 4th Street

Artesia, New Mexico 88210

New Mexico Oil Conservation Division - District 1

1625 North French Drive Hobbs, NM 88240

EOG Resources, Inc. (EOG) retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment for two releases at Gill BGJ #1, API 30-025-37103 (hereafter referred to as "Gill"). The first incident was a release of produced water caused by a flowline break on pad, assigned Incident number nGRL1116854671, and Administrative Work Order 1RP-2717. The second was a release of crude oil due to equipment malfunction also on pad at Gill with corresponding Incident number nJXK1620138458. This letter provides a description of the Spill Assessment and Remediation Activities supervised by Vertex. The spill area is located at N 33.50238, W 103.38888.

#### **Background**

The site is located approximately 17 miles north of Tatum, New Mexico (Google Inc., 2022). The legal location for the site is Section 29, Township 9 South and Range 35 East in Lea County, New Mexico. The spill area is located on State property. Aerial photographs and site schematics are included in Attachment 1.

The Geological Map of New Mexico indicates the site's surface geology is comprised primarily of To - Ogallala Formation (lower Pleistocene to middle Miocene; New Mexico Bureau of Geology and Mineral Resources, 2021). Predominant soil texture on the site is Loamy. The Natural Resources Conservation Service Web Soil Survey characterizes the predominant soil texture on the site is Portales Loam. It tends to be well drained with negligible runoff and moderate available moisture levels in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2021).

The surrounding landscape is associated with interdunes, playa steps, and plains at elevations of 2,750 to 5,000 feet above sea level. The climate is semi-arid, with an annual precipitation ranging between 8 to 16 inches. Historically, the plant community has grassland aspect, dominated by grasses with forbs and a few woody shrubs. Sideoats grama and blue grama are dominant with a mixture of other grasses, mesquite, and forbs. Overgrazing and extended drought can reduce grass cover (United States Department of Agriculture, Natural Resources Conservation Service, 2021).

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2023 Impact Assessment and Closure April 2023

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 Mexico Administrative Code (NMAC; New Mexico Oil Conservation Division, 2018), is the Pecos River located approximately 57 miles west of the site. There are no continuous flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

#### **Incident Description**

The first release, Incident nJXK1620138458, occurred on February 8, 2011, due to the knockout dumps not working properly causing a release from the production tanks. The spill report was received by NMOCD on February 23, 2011. The spill involved the release of approximately 20 bbl. of oil into the lined containment. Approximately 15 bbl. of free fluid was removed during initial spill clean-up.

The second release, 1RP-2717 occurred and was reported on March 29, 2011, due to a flowline break. The spill involved the release of approximately 25 barrels (bbl.) of produced water into the lined containment. Approximately 20 bbl. of free fluid was removed during initial spill clean-up.

Per the surface owner's instruction regarding incident NJXK1620138458, Micro-Blaze bio-remedial spill control liquids were applied to the overspray area at the time of the release in 2011. The overspray surface area was then fenced off to prevent disturbance from cattle grazing. During Vertex's initial on-site assessment, the area south of the tank battery was noted as having successfully revegetated. The Daily Field Report (DFR) for the initial site visit is included Attachment 3. No indications of remaining impacts were observed, and confirmation samples collected during the remedial excavation came back under reclamation closure criteria for the top 4 feet of soil.

#### **Closure Criteria Determination**

Groundwater determination was initially inferred using information from Oil and Gas Drilling records and the New Mexico Office of the State Engineer Water Column/Average Depth to Water report. The closest recorded depth to groundwater was determined to be 137 feet below ground surface (bgs) and 1.2 miles from the site (New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2022). All documentation used in Closure Criteria Determination research is included in Attachment 4. NMOCD incident records indicated that prior releases on the Gill having groundwater being accepted as greater than 100 ft.

The depth to groundwater for the site was initially confirmed on October 28, 2022, when a Vertex field technician gauged an active legacy well with the private surface owner's permission using an interface probe. This legacy water well is not found on the NMOSE database and contains no USGS measurement data, however it is on the same surface owner's property as the Gill and is within a reasonable distance (0.74 miles). Water was encountered at 148 feet below ground surface (bgs). Documentation for the site visit, gauging event, and well log can also be found in Attachment 4.

EOG received a denial for closure of this incident from NMOCD due to the groundwater data being outside of the 0.5-mile guidance requirement. In order to again affirm that groundwater is greater than 100 feet, further depth to groundwater data was collected 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 105 feet bgs and was left open as

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per requirements on the WR-07 Application for Permit to Drill a Well with No Water Right. The borehole remained open for more than 72 hours to allow for infiltration of groundwater, then an interface probe was lowered into the bottom of the borehole to investigate if groundwater had accumulated. No water was detected, thus confirming that groundwater is greater than 100 feet. 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 4.

	Criteria Worksheet			
	ne: Gill BGJ #1 rdinates:	X: 33.50238	Y: -103.38888	
-	cific Conditions	Value	Unit	Reference
1	Depth to Groundwater Within 300 feet of any continuously flowing	>105	feet	1
2	watercourse or any other significant watercourse	300,000	feet	2
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	4,203 feet		3
4	Within 300 feet from an occupied residence, school, hospital, institution or church	3,723	feet	4
<ul> <li>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</li> </ul>		3,723	feet	5
	ii) Within 1000 feet of any fresh water well or spring	3,723	feet	5
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)	6
7 Within 300 feet of a wetland		61,184	feet	7
8	Within the area overlying a subsurface mine	No	(Y/N)	8
		Low	Critical High Medium Low	9
10	Within a 100-year Floodplain	Zone D "undetermined flood risk"	year	10
11 Soil Type Portales Loam		11		
12	12 Ecological Classification Limy Upland		12	
13	Geology	1	Го	13
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'	

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The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 1.

Table 1. Closure Criteria for Soils to Remediation & Reclamation Standards			
Constituent Limit			
0.4 foot has (10.15.20.12)	Chloride	600 mg/kg	
0-4 feet bgs (19.15.29.13)	TPH (GRO+DRO+MRO)	100 mg/kg	
	Chloride	20,000 mg/kg	
	TPH (GRO+DRO+MRO)	2,500 mg/kg	
DTGW > 100 feet (19.15.29.12)	GRO+DRO	1,000 mg/kg	
	BTEX	50 mg/kg	
	Benzene	10 mg/kg	

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

#### **Remedial Actions Taken**

An initial site inspection of the spill area was completed on September 23, 2021, which identified the area of the spill specified in the initial C-141 Reports, estimated the approximate volume of the spill and white lined the area required for the 811 One Call request. The DFR associated with the site inspection is included in Attachment 3.

Site characterization was completed on November 6, 2021. A total of 18 sample points were established, and samples collected for field screening. Samples at the deepest vertical distance below closure criteria were submitted to the laboratory for analysis. In total, 38 samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The sample locations are presented in Figure 2 (Attachment 1). Laboratory analytical results are included in Table 2 (Attachment 2). The release was determined to be approximately 80 feet long and 85 feet wide; the total affected area was determined to be 4,907 square feet. The DFR associated with the site characterization is included in Attachment 4.

Remediation efforts began on October 13, 2022, and were completed on November 2, 2022. Vertex personnel supervised the excavation of impacted soils. Field screening results were used to identify areas requiring further remediation from those areas showing concentrations below determined closure criteria levels. Field screening consisted of analysis using a Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and silver nitrate titration (chlorides). Soils were removed to a depth a maximum depth of 4 to 6 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Field screening results are included in Attachment 2.

Notifications that confirmatory samples were being collected was provided to the NMOCD on October 6, 13, 20, and 31, 2022, and are included in Attachment 6. Confirmatory 5-point composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 42 samples were sent in for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Hall Environmental Analysis Laboratory in

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2023 Impact Assessment and Closure April 2023

Albuquerque, New Mexico for laboratory analysis under chain-of-custody (COC) protocols and analyzed for BTEX (EPA Method 8021B), total Petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 3 (Attachment 2) and the laboratory data reports can be found in Attachment 6. All confirmatory samples collected and analyzed were below the closure criteria for the site. The confirmatory sample locations are presented in Figure 3 (Attachment 1).

#### **Closure Request**

The spill area was fully delineated, remediated on November 2, 2022, and has been backfilled with local soils procured from the private surface owner. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the New Mexico Administrative Code (NMAC) Closure Criteria for Soils Impacted by a Release locations "greater than 100 feet to groundwater". Based on these findings, EOG Resources, Inc. requests that these incidents be closed.

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

Chance Dixon

12/5/2023

Date

Chance Dixon, B. Sc.

PROJECT MANAGER. REPORTING

Attachments

Attachment 1. C-141 Reports

Attachment 2. Figures

Attachment 3. Tables

Attachment 4. Daily Field Reports with Photographs

Attachment 5. Closure Criteria

Attachment 6. Confirmatory Sampling Notifications to NMOCD

Attachment 7. Lab Reports with COCs

2023 Impact Assessment and Closure April 2023

#### References

- Google Inc. (2022). *Google Earth Pro* (Version 7.3.4) [Software]. Retrieved from http://www.google.com/earth on September 28, 2022.
- New Mexico Bureau of Geology and Mineral Resources. (2022). *Interactive Geologic Map*. Retrieved from http://geoinfo.nmt.edu.
- New Mexico Department of Surface Water Quality Bureau. (2022). *Assessed and Impaired Waters of New Mexico Report*. Retrieved from https://gis.web.env.nm.gov/oem/?map=swqb
- New Mexico Mining and Minerals Division (2019). *Interactive Coal Mine Resources in New Mexico Map*. Retrieved from http://www.emnrd.state.nm.us/MMD/gismapminedata.html
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- United States Department of Agriculture, Natural Resources Conservation Service. (2021). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
- United States Department of Homeland Security, FEMA Flood Map Service Center. (2020). *Flood Map Number* 35025C0075D. Retrieved from https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor
- United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karsts*. Retrieved from https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico.
- United States Fish and Wildlife Service. (2022). *National Wetlands Inventory Surface Waters and Wetland*. Retrieved from https://www.fws.gov/ wetlands/data/Mapper.html.

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2023 Impact Assessment and Closure April 2023

#### 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 judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

# ATTACHMENT 1

1625 N French Dr , Hobbs, NM 88280088 OCD District II---1301 W. Grand Avenue, Artesia, NM 88210 1 4 2011 1000 Rio Brazos Road, Aztec, NM 87410

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 - Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

#### 1220 S. St. Francis Dr., Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR** Initial Report Final Report OGRID Number Name of Company Contact Yates Petroleum Corporation 25575 Robert Asher Telephone No. Address 104 S. 4<sup>TH</sup> Street 575-748-1471 API Number Facility Name Facility Type Gill BGJ #1 30-025-37103 Battery Surface Owner Mineral Owner Lease No. Fee LOCATION OF RELEASE # 1 30.025-37163-00-00 North/South Line Unit Letter Section Township Range Feet from the Feet from the East/West Line County 29 35E 1650 South 660 West L 9S Lea Latitude 33.50238 Longitude 103.38888 WATER OF 150 NATURE OF RELEASE Type of Release Volume of Release Volume Recovered Produced Water 25 B/PW 20 B/PW Source of Release Date and Hour of Occurrence Date and Hour of Discovery 3/29/201**0**, AM 3/29/2010, AM Flow line Was Immediate Notice Given? If YES, To Whom? Larry Hill/NMOCD I By Whom? Date and Hour Robert Asher/Yates Petroleum Corporation 3/29/2011, PM Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No N/A If a Watercourse was Impacted, Describe Fully.\* N/A Describe Cause of Problem and Remedial Action Taken.\* Flow line break. Vacuum truck called. Describe Area Affected and Cleanup Action Taken.\* An approximate area of 15' X 40' (south side of battery). Vacuum truck recovered remaining produced water. Vertical/horizontal delineation samples will be taken and analysis ran for TPH & BTEX, (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's a Final Report, C-141 will be submitted to the NMOCD requesting closure. Depth to Ground Water: >100' (approx. 135', per ChevronTexaco Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0. Based on enclosed analytical results (TPH & BTEX below RRAL's (Chlorides decreasing and for documentation) & impacted soils excavated, Yates Petroleum Corporation requests closure. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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. OIL CONSERVATION DIVISION Signature: FUN KNOWNERS : Approved by District Supervisor-Printed Name: Robert Asher Approval Date: oblitti Title: Environmental Regulatory Agent Expiration Date: 08 (17) 11 E-mail Address: boba@yatespetroleum.com Conditions of Approval: SUBMIT FINAL Attached | C-141 BY 08/17/11 WW-06-11-2717

1RP-06-11-2717

Date: Monday, June 13, 2011

Phone: 575-748-4217

Page 10 of 255

Incident ID	nGRL1116854671
District RP	
Facility ID	
Application ID	

### **Site Assessment/Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>105 (ft bgs)			
Did this release impact groundwater or surface water?	Yes X No			
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes X 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 X No			
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes X 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 X No			
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes X No			
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes X No			
Are the lateral extents of the release within 300 feet of a wetland?	Yes X No			
Are the lateral extents of the release overlying a subsurface mine?	Yes X 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 X No			
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	Yes X 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.

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

Received by OCD: 12/6/2023 10:28:18 AM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page 11 of 25:
Incident ID	nGRL1116854671
District RP	
Facility ID	
Application ID	

Page 12 of 255

Incident ID	nGRL1116854671
District RP	
Facility ID	
Application ID	

### Closure

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

Closure Report Attachment Checklist: Each of the following in	tems must be included in the closure report.				
X A scaled site and sampling diagram as described in 19.15.29.11 NMAC					
X Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office				
X Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)				
X Description of remediation activities					
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rer human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the coaccordance with 19.15.29.13 NMAC including notification to the O	ntions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in DCD when reclamation and re-vegetation are complete.  Title: Rep Safety & Environmental Sr				
OCD Only					
Received by:	Date:				
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.				
Closure Approved by:	Date:				
Printed Name:	Title:				

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1220 S. St. Francis Dr., Santa Fe, NM 87505

District IV

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Page 13 of 255 Form C-141 Revised October 10, 2003

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

FEB 23 2011 **HOBBSOCD**  Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

### Release Notification and Corrective Action

			Itti			TOR	TI CCLIVE A	_	nitial R	enort		Final Report
Name of Company OGRID Number Yates Petroleum Corporation 25575				Contact Robert Ash	er		iitiai N	сероп		rmar Report		
Address 104 S. 4 <sup>TH</sup> Street				Telephone 1 575-748-14								
Facility Nat Gill BGJ #1				API Number 30-025-3710		Facility Typ Battery	e					
Surface Ow Fee	ner			Mineral C	wner			Lea	se No.			
				LOCA	TIO	N OF RE	LEASE.					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West Li	ine (	County		
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				Latitude 33.	50238	_ Longitud	103.38888	-				
				NAT	URE	OF REL						
Type of Rele Oil	ease					Volume of 20 B/O	Release	Volu 15 B		covered		
Source of Re Production T						Date and F 2/8/2010, 1	Hour of Occurrence PM		and Ho	our of Disc M	covery	
Was Immedi	ate Notice (		Yes [	No Not R	equired	If YES, To Whom?						
By Whom? N/A						Date and Hour N/A						
Was a Water	course Rea		Yes 🗵	No		If YES, Vo	olume Impacting	the Watercours	se.	P		- muti
If a Waterco	urse was Im	pacted, Descr										X STA
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Describe Are	ea Affected	and Cleanup	Action Tal							truck rece	overed	oil incide
bermed/lined	l battery, be	cause of high	winds at t	ime of release app	oroxima	itely 5 B/O we	ere not recovered	and impacted a	rea sou	uth of batte	ery. Th	nose soils
additional 12	" of impact	ed soils being	excavated	NMOCD approved and taken to an l	NMOCI	D approved fa	cility. Per the fee	surface owner	, Yates	has been	instruc	eted to fence
(approx. 13	5', per Che	vronTexaco	Trend Ma	p), Wellhead Pro	otection	Area: No, D	istance to Surfa	ce Water Body	y: >100	00', SITE	RANK	
				d soils excavated								ules and
regulations a	ll operators	are required t	o report a	nd/or file certain i	elease r	notifications a	nd perform corre	ctive actions fo	r releas	ses which	may er	ndanger
				ce of a C-141 report investigate and i								
or the environment. In addition, NMOCD 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.  OIL CONSERVATION DIVISION												
Signature:	20	Ly W					012 001	021(1111)	011, 2	1,1010		
Printed Nam	e: Robert A	sher				Approved by	District Supervis	sor:				
Title: Enviro	nmental Re	gulatory Ager	nt			Approval Da	te:	Expira	Expiration Date:			
E-mail Addr	ess: boba@	yatespetroleur	n.com			Conditions of Approval:						
Date: Monday, February 21, 2011 Phone: 575-748-4217						1RP-						

<sup>\*</sup> Attach Additional Sheets If Necessary

	Page 14 of 25	5
Incident ID	NJXK1620138458	
District RP		
Facility ID		
Application ID		

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Received by OCD: 12/6/2023 10:28:18 AM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page 15 of 2	<i>55</i>
Incident ID	NJXK1620138458	
District RP		
Facility ID		
Application ID		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.				
Printed Name: Chase Settle	Title: Rep Safety & Environmental Sr			
Signature: Chase Settle	Date: _12/6/2023_			
email: Chase_Settle@eogresources.com	Telephone: 575-703-6537			
OCD Only				
Received by:	Date:			

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

Page 16 of 255

Incident ID	NJXK1620138458
District RP	
Facility ID	
Application ID	

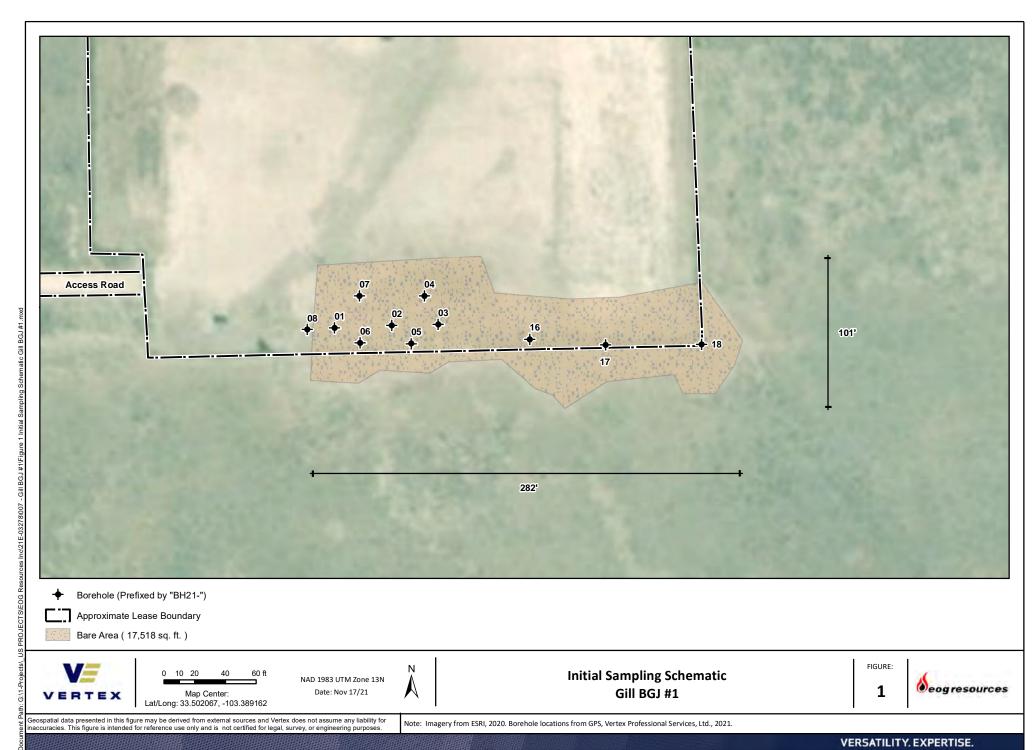
### Closure

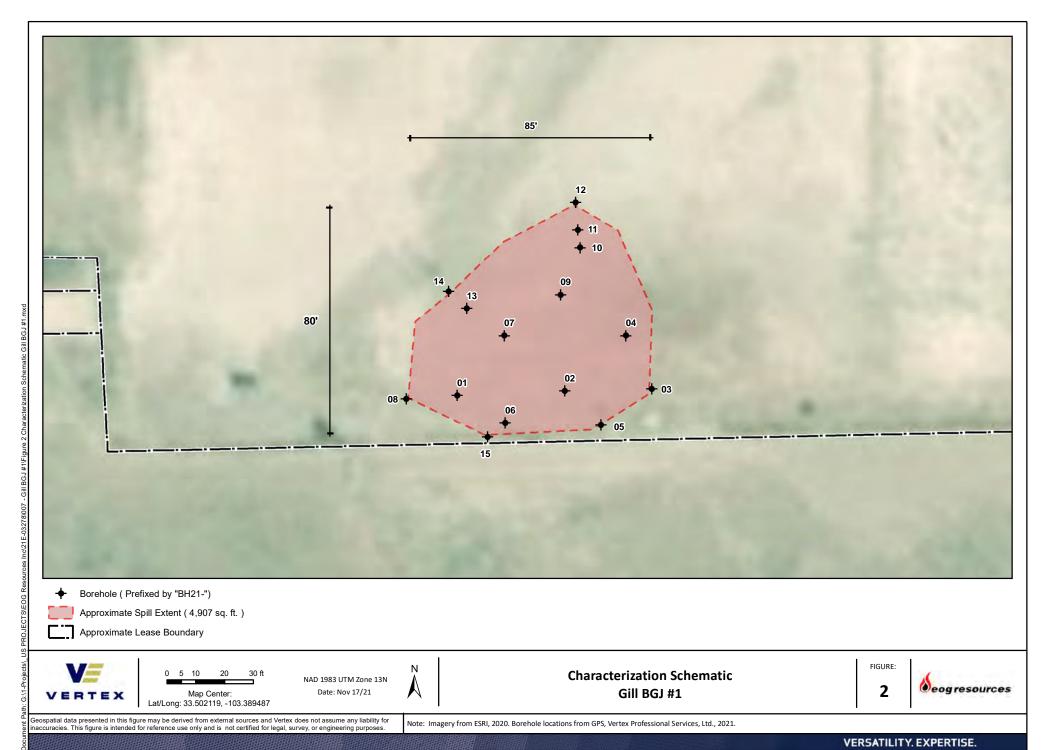
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

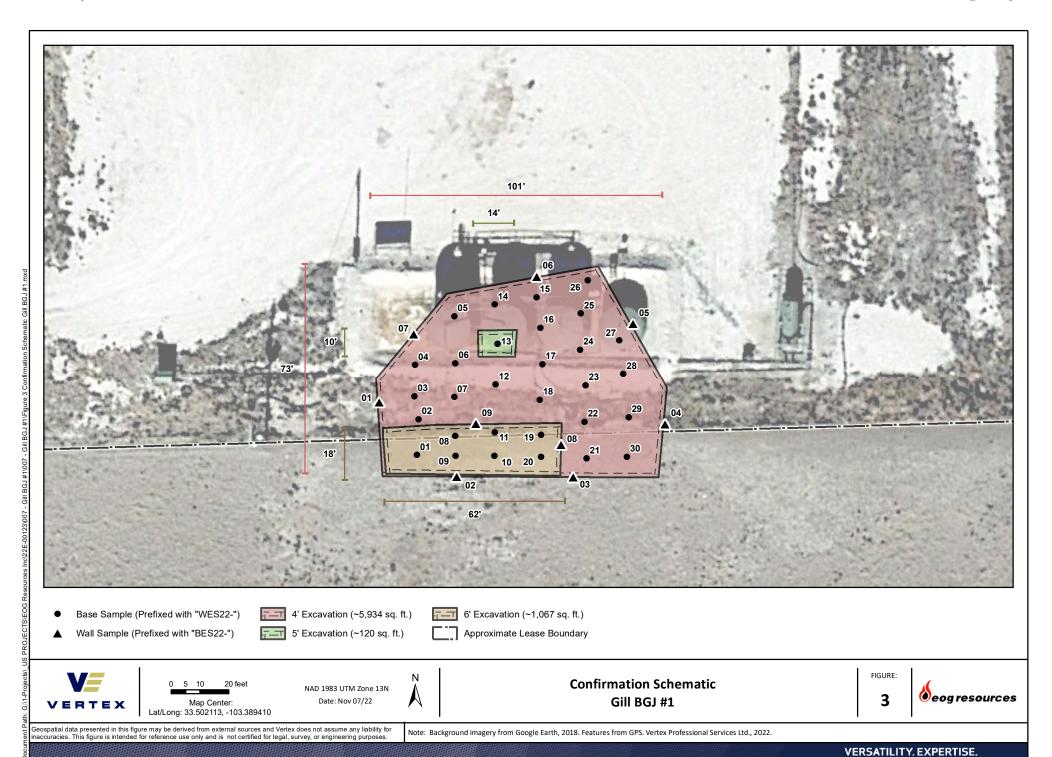
Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

$\overline{X}$ 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)							
X Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)							
$\overline{X}$ Description of remediation activities							
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	ntions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in						
Printed Name: Chase Settle	Title: Rep Safety & Environmental Sr						
Signature: Chase Settle	Date: 12/6/2023						
email: Chase_Settle@eogresources.com	Telephone: <u>575-703-6537</u>						
OCD Only							
Received by:	Date:						
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.						
Closure Approved by:	Date:						
Printed Name:	Title:						

### **ATTACHMENT 2**







### **ATTACHMENT 3**

Client Name: EOG Resources, Inc.

Site Name: Gill BGJ #1

NM OCD Tracking #: nGRL1116854671, nJXK1620138458

Project #: 22E-00123-07

Lab Reports: 2109D89, 2110611, 2111430

Table 2. Initial Characterization Sample Field Screen and La												
Sample Description			Field Screening		Petroleum Hydrocarbons							
			S			Vola	atile		Extra	ctable		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds	Extractable Organic  Compounds (PetroFlag)	(Alloride Concentration	Benzene (mg/kg)	BTEX (Total)	a Basoline Range Organics স (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	Total Petroleum  Hydrocarbons (TPH)	공 작 (영 (영
	0	2021-09-24	(PP)	-	1,847	ND	ND	ND	35	ND	35	1500
	0.5	2021-09-24	-	-	1,610	-	-	-	-	-	-	-
BH21-01	1	2021-09-24	_	_	1,150	ND	ND	ND	19	ND	19	750
	2	2021-09-24	-	-	1,580	ND	ND	ND	ND	ND	ND	610
	2.5	2021-10-11	1	23	147	ND	ND	ND	ND	ND	ND	74
	0	2021-09-24	-	-	2,075	ND	ND	ND	120	150	270	1400
	0.5	2021-09-24	-	_	972	-	-	-	-	-	-	-
	1	2021-09-24	_	_	1,195	ND	ND	ND	14	ND	14	780
BH21-02	2	2021-09-24	_	_	1,305	ND	ND	ND	ND	ND	ND	720
	3	2021-10-11	0	9	580	ND	ND	ND	ND	ND	ND	330
	4	2021-10-11	0	13	475	-	-	-	-	-	-	-
	0	2021-09-24	_	_	522	ND	ND	ND	88	93	181	270
BH21-03	0.5	2021-09-24	_	_	490	_	-	-	-	-	-	_
	1	2021-09-24	-	-	740	ND	ND	ND	46	ND	46	470
	0	2021-09-24	_	_	2,475	ND	ND	ND	86	110	196	1400
	0.5	2021-09-24	-	-	797	-	-	-	-	-	-	-
	1	2021-09-24	_	_	1,257	ND	ND	ND	61	80	141	580
	2	2021-09-24	-	-	1,937	ND	ND	ND	29	ND	29	1100
BH21-04	3	2021-10-11	396	550	4,477	-	-	-	-	-	-	-
	4	2021-10-11	279	290	1,242	ND	46.2	1700	620	58	2378	890
	5	2021-10-11	319	250	830	-	-	-	-	-	-	-
	6	2021-10-11	19	340	767	_	_	_	_	_	-	_
	6.5	2021-10-11	11	100	571	ND	ND	ND	ND	ND	ND	330
	0	2021-09-24	_	_	280	ND	ND	ND	ND	ND	ND	ND
BH21-05	0.5	2021-09-24	_	_	252	-	_	-	_	_	-	_
	1	2021-09-24	-	-	242	ND	ND	ND	ND	ND	ND	ND
	0	2021-09-24	-	-	235	ND	ND	ND	ND	ND	ND	ND
DUDA OS	0.5	2021-09-24	-	-	297	-	-	-	-	-	-	-
BH21-06	1	2021-09-24	-	-	232	ND	ND	ND	ND	ND	ND	ND
	1.5	2021-09-24	-	-	120	ND	ND	ND	56	98	154	ND
	0	2021-09-24	-	-	97	ND	ND	ND	65	75	140	ND
DU24 07	0.5	2021-09-24	-	-	125	_	-	-	-	-	-	-
BH21-07	1	2021-09-24	-	-	97	ND	ND	ND	86	110	196	ND
	2	2021-09-24	-	-	142	ND	ND	ND	ND	ND	ND	ND
	0	2021-09-24	-	-	225	ND	ND	ND	ND	ND	ND	ND
BH21-08	0.5	2021-09-24	-	-	200	-	-	-	-	-	-	-
<u> </u>	1	2021-09-24	-	1	245	ND	ND	ND	ND	ND	ND	78
	0	2021-10-11	0	566	177	ND	ND	ND	100	85	185	66
BH34 00	1	2021-10-11	0	31	277	ND	ND	ND	ND	ND	ND	87
BH21-09	2	2021-10-11	0	24	172	-	-	-	-	-	-	-
	3	2021-10-11	0	18	210	-	-	-	-	-	-	-



						aboratory Results - Depth to Groundwater >100 feet bgs						ī
	Sample Description		Field Screening			Petroleum Hydrocarbons  Volatile Extractable						<b>-</b>
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 of (MRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg
	0	2021-10-11	1	518	527	-	-	-	-	-	-	-
	1	2021-10-11	1	485	512	-	-	-	-	-	-	-
BH21-10	2	2021-10-11	1	385	525	-	-	-	-	-	-	-
	3	2021-10-11	0	86	362	-	-	-	-	-	-	-
	4	2021-10-11	0	9	117	-	-	-	-	-	-	-
BH21-11	0	2021-10-11	1	316	285	ND	ND	ND	33	ND	33	ND
	1	2021-10-11	1	12	257	ND	ND	ND	ND	ND	ND	68
	2	2021-10-11	1	11	540	-	-	-	-	-	-	-
	3	2021-10-11	0	47	552	-	-	-	-	-	-	-
	4	2021-10-11	0	28	260	-	-	-	-	-	-	-
	0	2021-10-12	1	25	247	ND	ND	ND	ND	ND	ND	82
	1	2021-10-12	0	17	260	-	-	-	-	-	-	-
BH21-12	2	2021-10-12	0	16	352	ND	ND	ND	ND	ND	ND	140
	3	2021-10-12	0	8	325	-	-	-	-	-	-	-
	4	2021-10-12	0	33	347	-	-	-	-	-	-	-
	0	2021-10-12	0	337	110	-	-	-	-	-	-	-
BH21-13	1	2021-10-12	0	23	67	-	-	-	-	-	-	-
D1121-13	2	2021-10-12	0	18	110	-	-	-	-	-	-	-
	3	2021-10-12	0	10	95	-	-	-	-	-	-	-
	0	2021-10-12	1	124	105	ND	ND	ND	ND	ND	ND	73
BH21-14	1	2021-10-12	0	17	345	-	-	-	-	-	-	-
БП21-14	2	2021-10-12	0	15	320	ND	ND	ND	ND	ND	ND	150
	3	2021-10-12	0	6	315	-	-	-	-	-	-	-
BH21-15	0	2021-10-12	1	30	557	-	-	-	-	-	-	250
	1	2021-10-12	0	47	375	-	-	-	-	-	-	-
	2	2021-10-12	0	114	482	ND	ND	ND	27	ND	27	460
BH21-16	0.5	2021-11-06	1	86	0	ND	ND	ND	ND	ND	ND	ND
BH21-17	0.5	2021-11-06	1	74	0	ND	ND	ND	ND	ND	ND	ND
BH21-18	0.5	2021-11-06	1	91	421	ND	ND	ND	ND	ND	ND	220

<sup>&</sup>quot;ND" Not Detected at the Reporting Limit

Bold and grey shaded indicates exceedance outside of NMOCD Reclamation Closure Criteria



<sup>&</sup>quot;-" indicates not analyzed/assessed

Client Name: EOG Resources, Inc.

Site Name: Gill BGJ #1

NMOCD Tracking #: nGRL1116854671, nJXK1620138458

Project #: 22E-00123-07

Lab Reports: 2210929, 2210B02, 2210C44, 2210C45, 2210D54, 2211147

, ,					and Laboratory Results - Depth to Groundwater >100 feet bgs							
Sample Description						Petrole						
					Vol	atile			Extractable			Inorganic
Sample ID	Depth (ft)	Sample Date	Extractable Organic	Chloride Concentration	Benzene (mg/kg)	ය කී කී කී	යි Gasoline Range Organics සූ (GRO)	ച്ച Diesel Range Organics ജ (DRO)	ച്ച Motor Oil Range Organics ജ (MRO)	(gRO + DRO)	ට Total Petroleum සි Hydrocarbons (TPH)	ය ශී (සි රිකි
	0-4'	10/17/22	165	245	ND	ND	ND	84	ND	84	84	210
WES22-01	4-6'	10/25/22	352	195	ND	ND	ND	76	52	76	128	380
	0-4'	10/17/22	84	130	ND	ND	ND	ND	ND	ND	ND	84
WES22-02	4-6'	10/25/22	160	185	ND	ND	ND	59	ND	59	59	150
WES22-03	0-4'	10/17/22	111	75	ND	ND	ND	ND	ND	ND	ND	ND
WES22-04	0-4'	10/17/22	185	165	ND	ND	ND	57	ND	57	57	120
WES22-05	0-4'	10/19/22	151	308	ND	ND	ND	53	ND	53	53	320
WES22-06	0-4'	10/24/22	12	150	ND	ND	ND	ND	ND	ND	ND	89
WES22-07	0-4'	10/19/22-	41	113	ND	ND	ND	ND	ND	ND	ND	68
WES22-08	4-6'	10/25/22	206	100	ND	ND	ND	36	ND	36	36	150
WES22-09	4-6'	10/25/22	192	205	ND	ND	ND	51	ND	51	51	68
BES22-01	6'	10/24/22	687	245	ND	ND	ND	210	91	210	301	250
BES22-02	4'	10/20/22	68	50	ND	ND	ND	ND	ND	ND	ND	ND
BES22-03	4'	10/20/22	43	50	ND	ND	ND	ND	ND	ND	ND	ND
BES22-04	4'	10/20/22	57	150	ND	ND	ND	ND	ND	ND	ND	100
BES22-05	4'	10/24/22	539	113	ND	ND	ND	530	110	530	640	200
BES22-06	4'	10/20/22	134	60	ND	ND	ND	130	63	130	193	ND
BES22-07	4'	10/20/22	156	50	ND	ND	ND	61	ND	60	60	ND
BES22-08	6'	10/24/22	266	280	ND	ND	ND	70	ND	70	70	ND
BES22-09	6'	10/24/22	499	300	ND	ND	ND	340	140	340	480	510
BES22-10	6'	10/24/22	135	300	ND	ND	ND	59	ND	59	59	510
BES22-11	6'	10/24/22	0	478	ND	ND	ND	68	ND	68	68	180
BES22-12	4'	10/20/22	25	370	ND	ND	ND	ND	ND	ND	ND	360
BES22-13	5'	11/02/22	269	330	ND	ND	ND	340	540	340	880	230
BES22-14	4'	10/24/22	192	453	ND	ND	28	700	100	728	828	390
BES22-15	4'	10/24/22	459	480	ND	ND	ND	630	150	630	780	380
BES22-16	4'	10/24/22	258	505	ND	ND	ND	200	84	200	284	170
BES22-17	4'	10/24/22	87	425	ND	ND	ND	87	ND	87	87	490
BES22-18	4'	10/24/22	150	310	ND	ND	ND	120	51	120	171	470
BES22-19	6'	10/24/22	218	180	ND	ND	ND	150	68	150	218	76
BES22-20	6'	10/24/22	55	195	ND	ND	ND	19	ND	19	19	340
BES22-21	4'	10/25/22	171	150	ND	ND	ND	37	ND	37	37	150
BES22-22	4'	10/25/22	326	295	ND	ND	ND	89	49	89	138	390
BES22-23	4'	10/25/22	382	355	ND	ND	ND	130	96	130	226	280
BES22-24	4'	10/25/22	233	340	ND	ND	ND	49	ND	49	49	200
BES22-25	4'	10/25/22	455	400	ND	ND	ND	730	120	730	850	240
BES22-26	4'	10/25/22	430	370	ND	ND	ND	380	130	380	510	230
BES22-27	4'	10/25/22	207	225	ND	ND	ND	140	ND	140	140	330
BES22-28	4'	10/25/22	314	333	ND	ND	ND	57	ND	57	57	770
BES22-29	4'	10/25/22	348	313	ND	ND	ND	49	ND	49	49	300
BES22-30	4'	10/25/22	47	220	ND	ND	ND	ND	ND	ND	ND	120

<sup>&</sup>quot;ND" Not Detected at the Reporting Limit



<sup>&</sup>quot;-" indicates not analyzed/assessed

### **ATTACHMENT 4**



Client:	EOG Resources Inc.	Inspection Date:	9/23/2021
Site Location Name:	Gill BGJ #1	Report Run Date:	9/24/2021 4:23 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	9/23/2021 7:35 AM		
Departed Site	9/23/2021 3:57 PM		
		Field Not	es

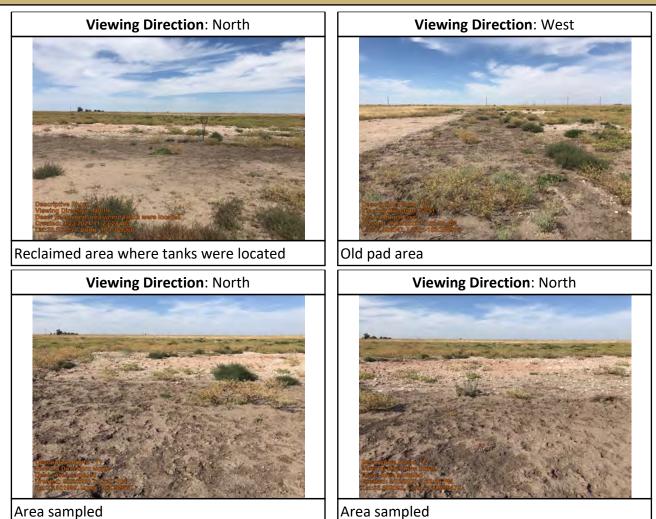
- 7:36 Site has been reclaimed. Vegetation has come back. Site does have a few bare spots. South area where tank battery was located will be sampled for potential contamination
- 11:28 Dark loamy type soil. No odors. Area in front of pad contains more rock that was turned over and a right of way is behind where containment was located
- 13:50 Hard layer being hit with hand auger at 2 ft. Potential to use geoprobe to break through and sample deeper
- 14:01 Samples at 2 feet are lighter in color and very sticky and clay like mixed with cobbles
- 15:40 Mapped out the area that has minimal vegetation or bare. Sending samples to lab to get idea of the area and potential contamination

#### **Next Steps & Recommendations**

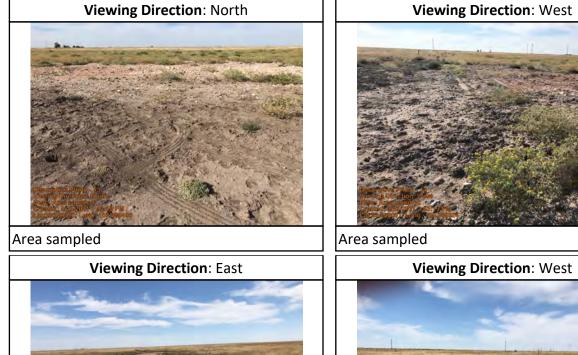
- 1 Send samples for lab analysis
- 2 Determine sampling plan with geoprobe



#### **Site Photos**









Reclaimed area







Reclaimed area north of tanks





Reclaimed area pictured is South of former TB

Reclaimed area









### **Daily Site Visit Signature**

**Inspector:** Monica Peppin

Signature:



Client:	EOG Resources Inc.	Inspection Date:	10/25/2022
Site Location Name:	Gill BGJ #1	Report Run Date:	10/25/2022 10:40 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537	_	
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	
		Summary of <sup>*</sup>	Times
Arrived at Site	10/25/2022 9:15 AM		
Departed Site	10/25/2022 1:30 PM		

#### **Field Notes**

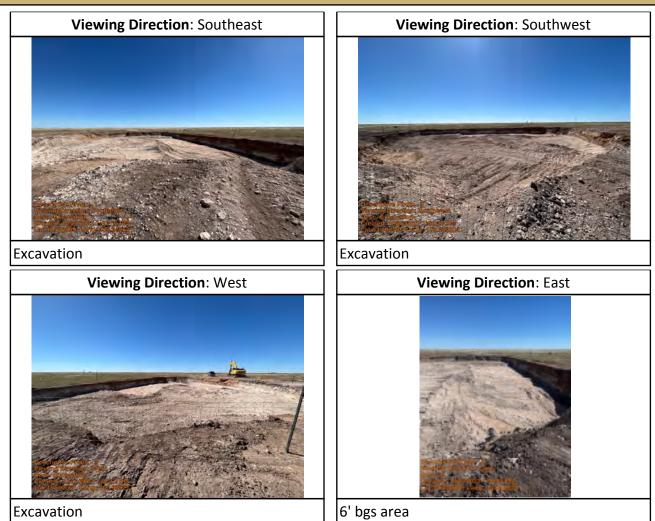
- 9:27 On site, safety meeting complete. Gathering sampling materials and mapping sample points
- 9:49 Re-mapped polygon
- 9:50 Beginning sample collection with WES22-01 4-6'
- 12:04 Completed field screens on all samples. Preparing them for lab

#### **Next Steps & Recommendations**

1 Send all confirmation samples to lab



#### **Site Photos**









Excavation

Viewing Direction: East

Excavation with capped line



### **Daily Site Visit Signature**

**Inspector:** Sally Carttar

Signature:



Client:	EOG Resources Inc.	Inspection Date:	3/30/2023
Site Location Name:	Gill BGJ #1	Report Run Date:	4/13/2023 4:19 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537	_	
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	
		Summary of <sup>*</sup>	Times
Arrived at Site	3/30/2023 11:30 AM		
Departed Site	3/30/2023 12:30 PM		

Field Notes

11:41 Arrived on site to gauge the DTGW borehole.

11:43 Borehole has been gauged at 105' with no water detected. Borehole is not as deep as before due to sand caving in at the

bottom

### **Next Steps & Recommendations**

1 Put bore logs into closure report

# **Daily Site Visit Report**



#### **Site Photos**



Borehole gauged



Borehole has been backfilled with bentonite

# **Daily Site Visit Report**



#### **Daily Site Visit Signature**

**Inspector:** Chance Dixon

Signature:

### **ATTACHMENT 5**



# **Depth to Ground Water Determination Well Log**

		Depth to Ground Water Determination Wen Log	
Client Name: I	EOG Resources	, Inc. Exploratory Borehole Location: 33.504322°, -103.391452°	Borehole Diameter (in): 8 inches
Project Number: 22E-00123-07		Instrument used to determine DTGW: Solinst Interface Probe	Depth to Water (ft): N/A
Project Name: Gill BGJ #1		Checked by: Chance Dixon	Elevation (ft): 4,165 Feet
Project Location	on: Lea County	Drill Date: March 21, 2023 Plug Date: March 30, 2023	Elevation of Water (ft):
Top of Well and Depth in Ft (Below)	8 inch Well Diameter	Notes and Pictures	
		No water was encountered at 105 feet bgs. All drilling and plugging activities we	ere consistent with the approved plans
0-4 Ft	Brown Topsoil		
4-18 Ft	White Caliche		
18-35 Ft	White Hard Caliche		
35-70 Ft	Brown Fine Sand		
70-80 Ft	Red Clay		
80-105 Ft	Brown Sandstone		



# PLUGGING RECORD



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

Well owner: EOG Resources  Mailing address:  Mailing address:  Mailing address:  Mailing address:  Mailing address:  Mailing address:  May Mexico  Zip code:  88210   Expiration Date:  88210   Base10  And Intervision Date:  May Mexico  Mailing address:  May Mexico  Zip code:  88210   Base10  And Intervision Date:  May Mexico  Zip code:  88210  And Intervision Date:  88210  May Mexico  And Intervision Date:  88210  May Mexico  Mailing address:  May Mexico  Zip code:  88210  And Intervision Date:  88210  May Mexico  May Mexico  Zip code:  88210  And Intervision Date:  88210  May Mexico  May Mexico  Zip code:  88210  And Intervision Date:  88210  May Mexico  May Mexico  Zip code:  88210  And Intervision Date:  88210  May Mexico  May Mexico  May Mexico  Zip code:  88210  And Intervision Date:  88210  And Intervision Date:  88210  May Mexico  May									
State:   New Mexico   Zip code: 88210					-3	Phone	No.:		
Name of well drilling company that plugged well:   Vision Resources	g address: 104 South 4th	Street							
Name of well drilling company that plugged well:    Vision Resources	Artesia		State:		New	Mexico		_ Zip coo	le: 88210
Name of well drilling company that plugged well:    Vision Resources									
New Mexico Well Driller License No.: 1833 Expiration Date: 88210  Well plugging activities were supervised by the following well driller(s)/rig supervisor(s):									
Well plugging activities were supervised by the following well driller(s)/rig supervisor(s):  Jason Maley  Date well plugging began: 3-30-23  Date well plugging concluded: 3-30-23  OPS Well Location:  Latitude: 33 deg, 30 min, 15.55 sec Longitude: 103 deg, 23 min, 29.24 sec, WGS 84  Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl), by the following manner: Tape  Tape  Tape  Table  Date well plugging plan of operations was approved by the State Engineer: 3/21/2023  Were all plugging activities consistent with an approved plugging plan? Yes If not, please descrii	Name of well drilling co	ompany that plug	ged well:	Vision Re	sources				
Date well plugging began: 3-30-23  Date well plugging concluded: 3-30-23  Date well plugging concluded: 3-30-23  GPS Well Location: Latitude: 33 deg, 30 min, 15.55 sec Longitude: 103 deg, 23 min, 29.24 sec, WGS 84  Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl), by the following manner: Tape  Tape  The plugging plan of operations was approved by the State Engineer: 3/21/2023  Were all plugging activities consistent with an approved plugging plan? Yes If not, please descril	New Mexico Well Drill	er License No.:	1833				Expira	ation Date:	88210
GPS Well Location: Latitude: 33 deg, 30 min, 15.55 sec Longitude: 103 deg, 23 min, 29.24 sec, WGS 84  6) Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl), by the following manner: Tape  7) Static water level measured at initiation of plugging: NA ft bgl  8) Date well plugging plan of operations was approved by the State Engineer: 3/21/2023  Were all plugging activities consistent with an approved plugging plan? Yes If not, please descri	Well plugging activities  Jason Maley	were supervised	by the follo	owing we	ll driller	(s)/rig su	pervisor(s	):	
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by the following manner: <a href="Tape">Tape</a> 7) Static water level measured at initiation of plugging: <a href="NA">NA</a> ft bgl 8) Date well plugging plan of operations was approved by the State Engineer: <a href="3/21/2023">3/21/2023</a> 9) Were all plugging activities consistent with an approved plugging plan? <a href="Yes">Yes</a> If not, please described.	GPS Well Location:	Latitude: Longitude:	33 103	_deg, _deg,	30 23		15.55 29.24		S 84
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9) Were all plugging activities consistent with an approved plugging plan?Yes If not, please descrii	Static water level measur	red at initiation of	of plugging	NA NA	ft bg	gl			*
	Date well plugging plan	of operations wa	as approved	by the St	ate Engi	ineer: 3	/21/2023	_	
		Name of well drilling or New Mexico Well Drilling of Well plugging activities Jason Maley  Date well plugging began GPS Well Location:  Depth of well confirmed by the following manner Static water level measure Date well plugging plan Were all plugging activity	Name of well drilling company that plug New Mexico Well Driller License No.: Well plugging activities were supervised Jason Maley  Date well plugging began:  GPS Well Location: Latitude: Longitude: Depth of well confirmed at initiation of by the following manner: Tape  Static water level measured at initiation of Date well plugging plan of operations were all plugging plan of operations were all plugging activities consistent were supervised.	Name of well drilling company that plugged well:  New Mexico Well Driller License No.: 1833  Well plugging activities were supervised by the followason Maley  Date well plugging began: 3-30-23  GPS Well Location: Latitude: 33 Longitude: 103  Depth of well confirmed at initiation of plugging as: by the following manner: Tape  Static water level measured at initiation of plugging Date well plugging plan of operations was approved Were all plugging activities consistent with an approved	Name of well drilling company that plugged well:  New Mexico Well Driller License No.:  Well plugging activities were supervised by the following we Jason Maley  Date well plugging began:  3-30-23  Date  GPS Well Location:  Latitude:  33  deg, Longitude:  103  deg,  Depth of well confirmed at initiation of plugging as: by the following manner:  Tape  Static water level measured at initiation of plugging:  NA  Date well plugging plan of operations was approved by the St  Were all plugging activities consistent with an approved plug.	Name of well drilling company that plugged well:  New Mexico Well Driller License No.:  Well plugging activities were supervised by the following well driller Jason Maley  Date well plugging began:  Date well plugging began:  Jason Maley  Date well plugging began:  Latitude:  Jason Maley  Date well plugging began:  Latitude:  Jason Maley  Date well plugging as:  Longitude:  Jason Maley  Date well plugging as:  Maley  Aft by  Date well plugging plan of operations was approved by the State Engitude:  Were all plugging activities consistent with an approved plugging plan	Name of well drilling company that plugged well:  New Mexico Well Driller License No.: 1833  Well plugging activities were supervised by the following well driller(s)/rig su Jason Maley  Date well plugging began: 3-30-23  Date well plugging began: 4-30 deg, 30 min, Longitude: 103 deg, 23 min, 105 ft below group by the following manner: 12pe  Static water level measured at initiation of plugging: NA ft bgl  Date well plugging plan of operations was approved by the State Engineer: 3  Were all plugging activities consistent with an approved plugging plan?	Name of well drilling company that plugged well:  New Mexico Well Driller License No.: 1833 Expira  Well plugging activities were supervised by the following well driller(s)/rig supervisor(s  Jason Maley  Date well plugging began: 3-30-23 Date well plugging concluded:  GPS Well Location: Latitude: 33 deg, 30 min, 15.55  Longitude: 103 deg, 23 min, 29.24  Depth of well confirmed at initiation of plugging as: 105 ft below ground level (by the following manner: Tape  Static water level measured at initiation of plugging: NA ft bgl  Date well plugging plan of operations was approved by the State Engineer: 3/21/2023  Were all plugging activities consistent with an approved plugging plan?	Name of well drilling company that plugged well:  New Mexico Well Driller License No.: 1833

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 <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
_	0	155	155	Open Hole	
-	Bentonite Chips				
_	105				
_					
_					
-					
-					
		MULTIPLY E cubic feet x 7.4 cubic yards x 201.9	3Y AND OBTAIN 805 = gallons 17 = gallons		

#### III. SIGNATURE:

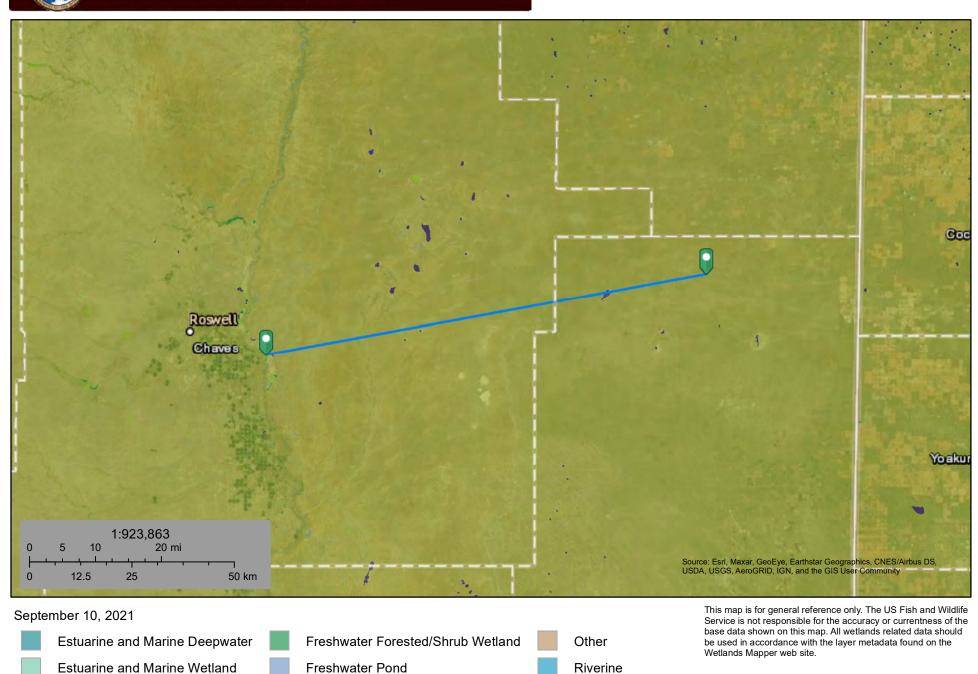
I, Jason Maley	, say that I am familiar with the rules of	the Office of the State
	lls and that each and all of the statements in this Plugging	
are true to the best of my knowledge and b	ellel.	
		3-31-2023
	Signature of Well Driller	Date

Version: September 8, 2009 Page 2 of 2





# Gill Watercourse 300,000ft



Freshwater Emergent Wetland

Lake

# Gill Lake 4,203ft



September 10, 2021

#### Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Pond

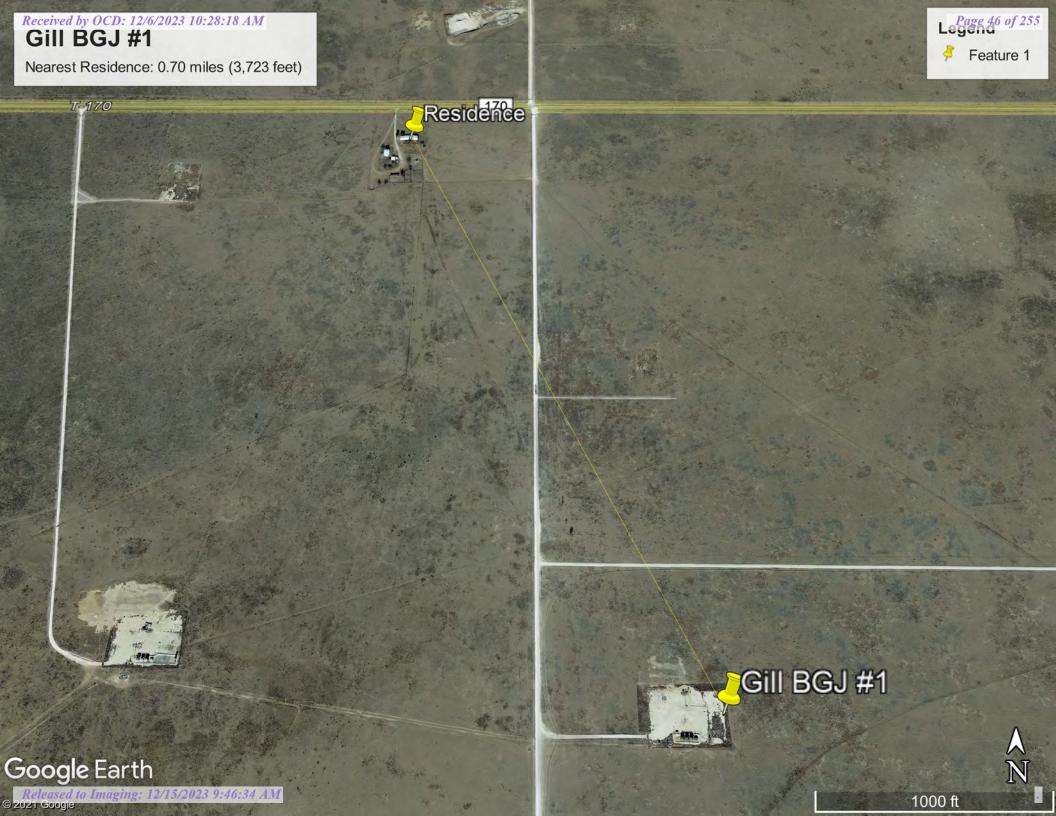
and Lake

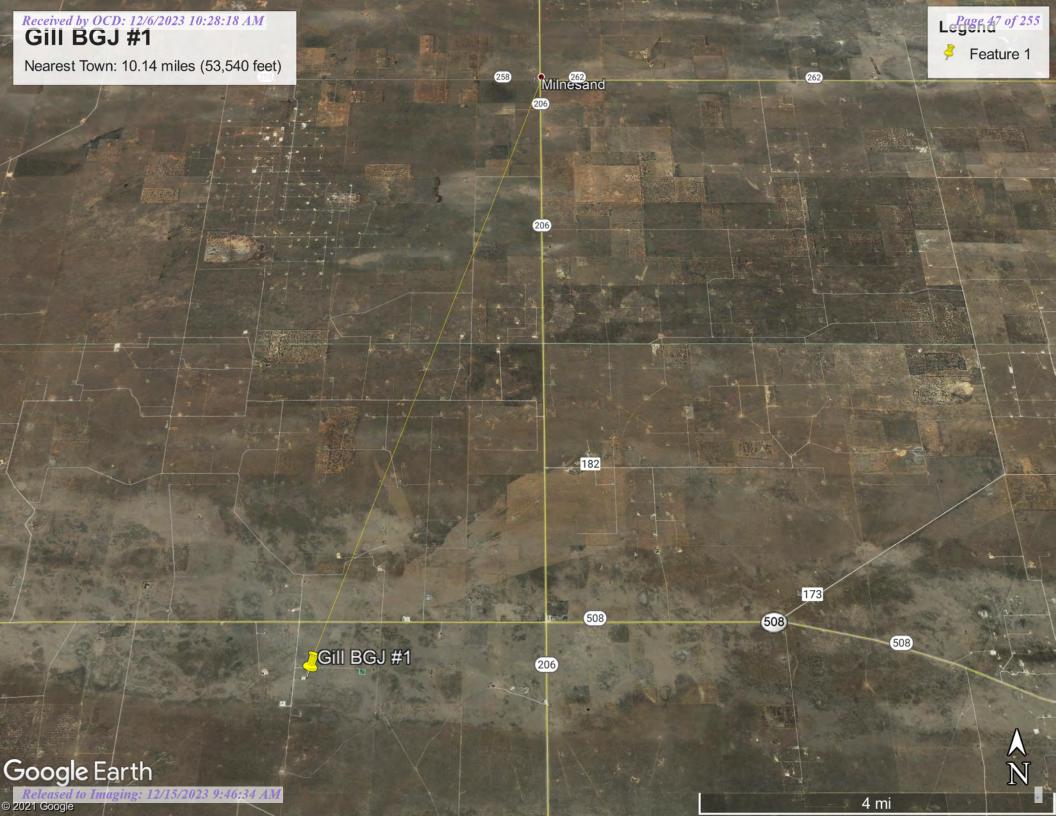
O Wetland Other

Freshwater Forested/Shrub Wetland

Riverine

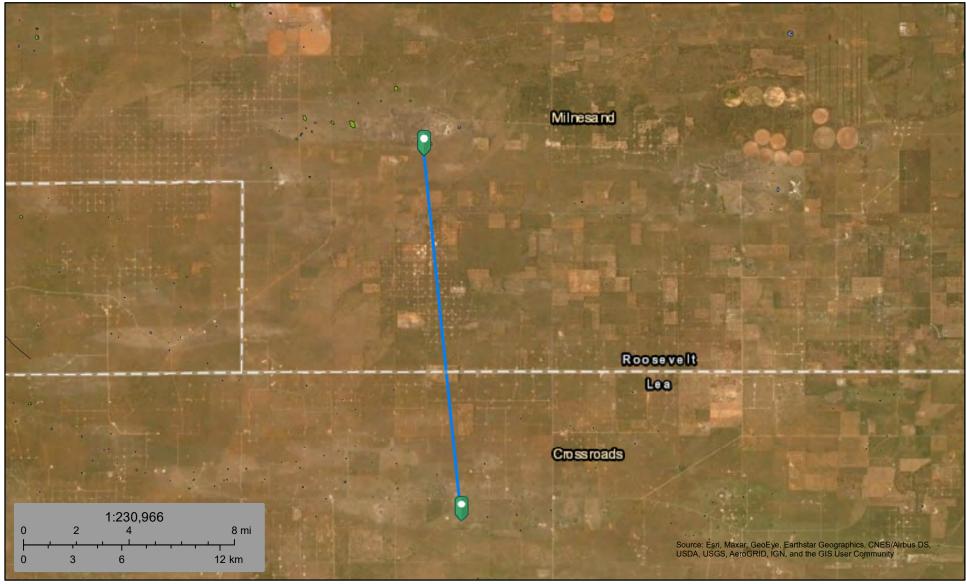
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.







# Gill Wetland 61,184ft



September 10, 2021

#### Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

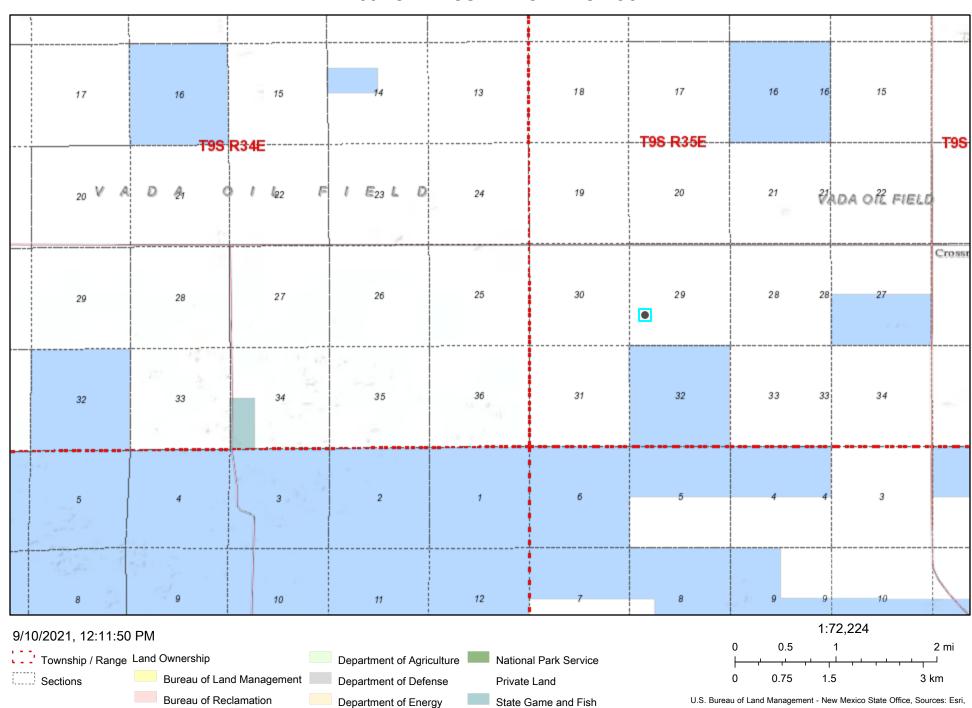
Riverine

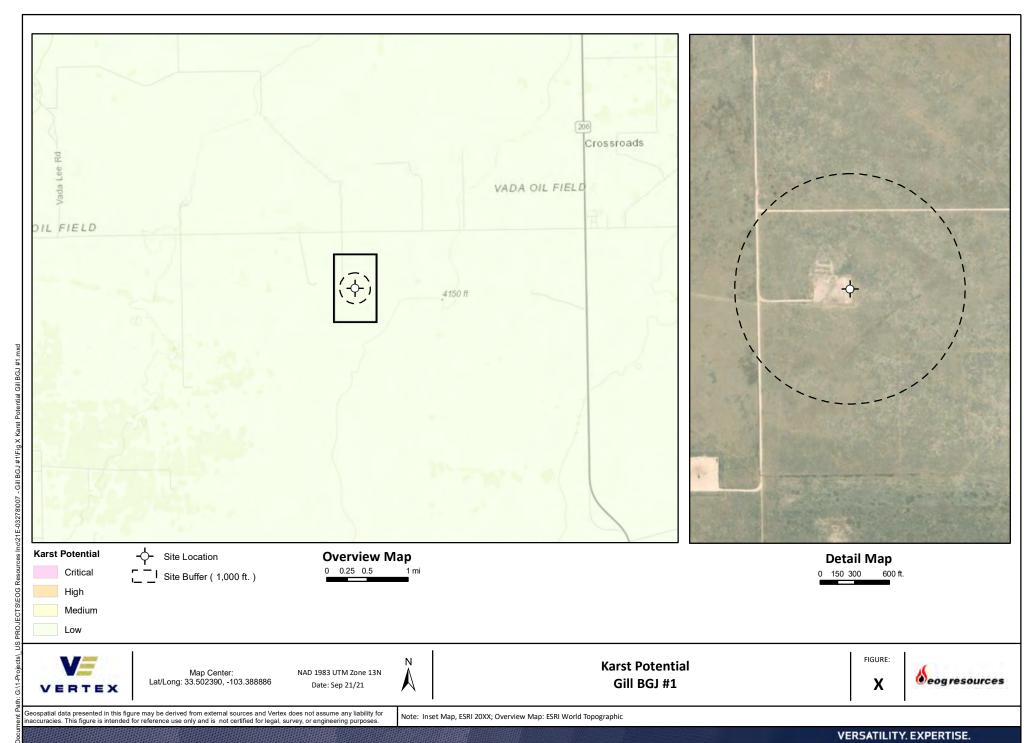


This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Released to Imaging: 12/15/2023 9:46:34 AM

## **Active Mines in New Mexico**



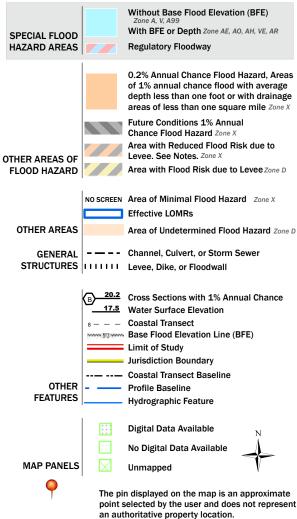


# Received by OCD: 12/6/2023 10:28:18 AM National Flood Hazard Layer FIRMette





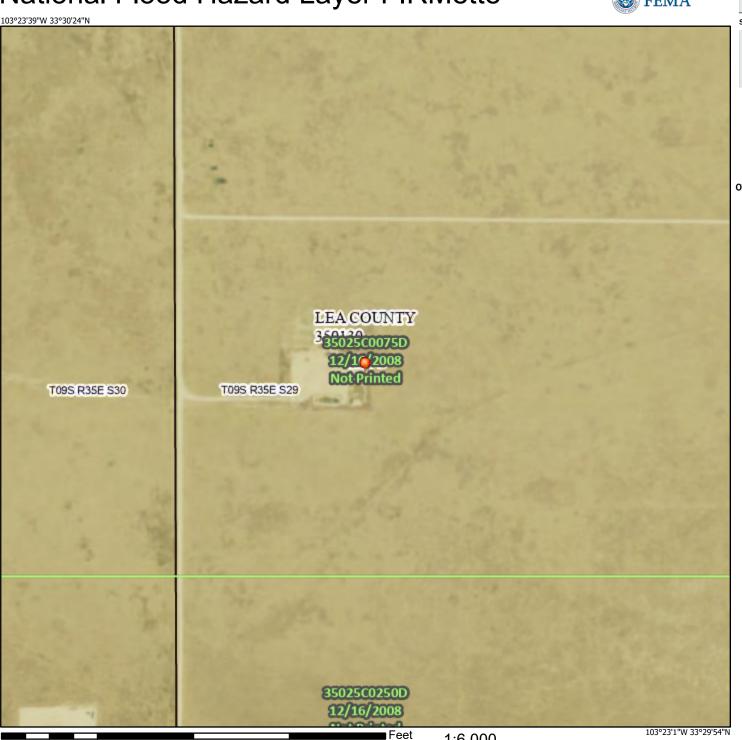
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



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 9/10/2021 at 1:31 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.



2.000



**VRCS** 

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 Lea County, New Mexico



# **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**

Preface	2
How Soil Surveys Are Made	
Soil Map	8
Soil Map	
Legend	10
Map Unit Legend	
Map Unit Descriptions	11
Lea County, New Mexico	13
Le—Lea loam	13
Ph—Portales loam, 0 to 1 percent slopes	14
References	16

# **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.



#### 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

ဖ

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

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Very Stony Spot

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Wet Spot Other

Δ

Special Line Features

**Water Features** 

Streams and Canals

#### Transportation

Rails

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Interstate Highways

**US Routes** 

Major Roads

00

Local Roads

Background

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20.000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Lea County, New Mexico Survey Area Data: Version 17, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Mar 13, 2017—Nov 20. 2017

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		
Le	Lea loam	0.3	9.7%		
Ph	Portales loam, 0 to 1 percent slopes	2.8	90.3%		
Totals for Area of Interest		3.0	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.

#### Lea County, New Mexico

#### Le-Lea loam

#### **Map Unit Setting**

National map unit symbol: dmq9 Elevation: 2,500 to 4,400 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 57 to 64 degrees F

Frost-free period: 195 to 230 days

Farmland classification: Prime farmland if irrigated

#### **Map Unit Composition**

Lea and similar soils: 85 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Lea**

#### Setting

Landform: Plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Loamy alluvium derived from sedimentary rock

#### **Typical profile**

A - 0 to 4 inches: loam Bk - 4 to 26 inches: loam

Bkm - 26 to 36 inches: cemented material

#### **Properties and qualities**

Slope: 0 to 1 percent

Depth to restrictive feature: 20 to 40 inches to petrocalcic

Drainage class: Well drained Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately

low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Low (about 4.6 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4c

Hydrologic Soil Group: C

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

#### **Minor Components**

#### Kimbrough

Percent of map unit: 6 percent

Ecological site: R077CY037TX - Very Shallow 16-21" PZ

Hydric soil rating: No

#### Stegall, loam

Percent of map unit: 5 percent

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

#### Arvana

Percent of map unit: 4 percent

Ecological site: R077CY035TX - Sandy 16-21" PZ

Hydric soil rating: No

#### Ph—Portales loam, 0 to 1 percent slopes

#### **Map Unit Setting**

National map unit symbol: f5t2 Elevation: 2,600 to 5,300 feet

Mean annual precipitation: 16 to 21 inches
Mean annual air temperature: 57 to 63 degrees F

Frost-free period: 185 to 220 days

Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Portales and similar soils: 85 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Portales**

#### Settina

Landform: Interdunes, playa steps, plains Down-slope shape: Linear, convex, concave

Across-slope shape: Linear

Parent material: Calcareous loamy eolian deposits and/or lacustrine deposits

#### Typical profile

Ap - 0 to 15 inches: loam

Bk1 - 15 to 35 inches: clay loam

Bk2 - 35 to 43 inches: loam

Bkk - 43 to 80 inches: clay loam

#### **Properties and qualities**

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.57 to 1.98 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 3.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

#### Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

#### **Minor Components**

#### Midessa

Percent of map unit: 10 percent

Landform: Plains

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

#### Posey

Percent of map unit: 3 percent

Landform: Plains

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

#### Acuff

Percent of map unit: 2 percent

Landform: Plains

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: R077CY022TX - Deep Hardland 16-21" PZ

Hydric soil rating: No

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## Ecological site R077CY028TX Limy Upland 16-21" PZ

Accessed: 09/14/2021

#### **General information**

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



Figure 1. Mapped extent

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

#### **MLRA** notes

Major Land Resource Area (MLRA): 077C-Southern High Plains, Southern Part

This unit is characterized by nearly level plains with numerous playa depressions, moderately sloping breaks along drainageways, and a steep escarpment along the eastern margin. From southwest to northeast, soils grade from coarse-textured to fine-textured. Soils are generally deep and occur in a thermic soil temperature regime and ustic soil moisture regime bordering on aridic. Current land use is dominantly cropland.

#### Classification relationships

This ecological site is correlated to soil components at the Major Land Resource Area (MLRA) level which is further described in USDA Ag Handbook 296.

#### **Ecological site concept**

This site occurs on calcareous loamy soils on uplands. Reference vegetation includes midgrasses, shortgrasses, forbs and few woody species. Abusive grazing practices can lead to a shift in the plant community. Without fire or other brush management, woody species may increase across the site.

#### **Associated sites**

R077CY022TX	Deep Hardland 16-21" PZ
	The Limy Upland site is associated with Deep Hardland sites in MLRA-77C, occurring as upland convex
	ridge tops and slopes. The Deep Hardland sites occur on level topography adjacent to the Limy Upland
	sites.

#### Similar sites

R077CY028TX	Limy Upland 16-21" PZ
	Loamy sites are similar to Limy Upland sites but generally have more blue grama and less sideoats grama. The limy upland site has a high calcium and lime content and will have yucca where as the loamy site will not. Production similar.

#### Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	<ul><li>(1) Bouteloua curtipendula</li><li>(2) Schizachyrium scoparium</li></ul>

#### Physiographic features

The site occurs as nearly level to strongly sloping plains, slightly concave plains associated with playa lake basins, slightly convex playa terraces, and adjacent to draws or escarpments. It is an upland plains site with slopes ranging from nearly level to strongly sloping.

Exposures are not well defined due to minimal relief.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Draw (3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,400–4,600 ft
Slope	0–12%
Aspect	Aspect is not a significant factor

#### **Climatic features**

Climate is semi-arid dry steppe. Summers are hot with winters being generally mild with numerous cold fronts that drop temperatures into the single digits for 24 to 48 hours. Temperature extremes are the rule rather than the exception. Humidity is generally low and evaporation high. Wind speeds are highest in the spring and are generally southwesterly. Canadian and Pacific cold fronts come through the region in fall, winter and spring with predictability and temperature changes can be rapid. Most of the precipitation comes in the form of rain and during the period from May through October. Snowfall averages around 15 inches but may be as little as 8 inches or as much as 36 inches. Rainfall in the growing season often comes as intense showers of relatively short duration. Long-term droughts occur on the average of once every 20 years and may last as long as five to six years (during these drought years moisture during the growing season is from 50 to 60 percent of the mean). Based on long term records, approximately 60 percent of years are below the mean rainfall and approximately 40 percent are above the mean. May, June and July are the main growth months for perennial warm-season grasses. Forbs make their growth somewhat earlier.

Table 3. Representative climatic features

Frost-free period (average)	188 days
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Freeze-free period (average)	204 days
Precipitation total (average)	20 in

#### Climate stations used

- (1) PORTALES [USC00297008], Portales, NM
- (2) BIG SPRING [USW00023041], Big Spring, TX
- (3) AMARILLO [USW00023047], Amarillo, TX
- (4) DENVER CITY [USC00412408], Denver City, TX
- (5) FLOYDADA [USC00413214], Floydada, TX
- (6) CAMERON [USC00291332], Grady, NM

#### Influencing water features

Some surface runoff to draws below. Moderate rate of infiltration with good cover.

Stream Type: No perennial streams are associated with this site.

#### Soil features

These soils have disseminated secondary calcium carbonates present throughout the soil profile. Some have argillic subsurface horizons and all have calcic horizons. Subsurface carbonates are in the form of films, threads, concretions, masses, and nodules.

Major Soil Taxonomic Units correlated to this site include: Bovina clay loam, Bovina loam, Mansker loam, Midessa fine sandy loam, Pep clay loam, Portales loam, Posey fine sandy loam, and Tulia loam.

Table 4. Representative soil features

Surface texture	(1) Clay loam (2) Loam (3) Fine sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderate
Soil depth	60 in
Surface fragment cover <=3"	0–20%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	4–7.2 in
Calcium carbonate equivalent (0-40in)	5–65%
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	5–60%
Subsurface fragment volume >3" (Depth not specified)	0–1%

#### **Ecological dynamics**

The Reference Plant Community consists of mid and shortgrasses with few tallgrasses. Some perennial forbs are present with small numbers of annual forbs and a few scattered woody shrubs. Productivity is moderate with most of the production coming from sideoats grama (*Bouteloua curtipendula*) and blue grama (*Bouteloua gracilis*). Lesser amounts of buffalograss (*Bouteloua dactyloides*), hairy grama (*Bouteloua hirsuta*), sand dropseed (*Sporobolus cryptandrus*), and perennial three-awn (Aristida wrightii) are found on the site. Vine mesquite (*Panicum obtusum*) and western wheatgrass (*Pascopyrum smithii*) are found growing in depressional areas. Small pockets of sand bluestem (*Andropogon hallii*) and Indiangrass (*Sorghastrum nutans*) may be found scattered throughout the site. Little bluestem (*Schizachyrium scoparium*) will occur in small amounts where the soil becomes shallower. The more commonly found forbs are dotted gayfeather (*Liatris punctata*), scarlet globemallow (*Sphaeralcea coccinea*), Engelmann's daisy (*Engelmannia peristenia*), baby white aster (*Chaetopappa ericoides*), halfshrub sundrop (Calyophus serrulatus), trailing ratany (*Krameria lanceolata*) and annual forbs. The primary woody species found are yucca (*Yucca glauca*) and broom snakeweed (*Gutierrezia sarothrae*), with an occasional catclaw mimosa (*Mimosa aculeaticarpa* var. biuncifera) and plains pricklypear (Opuntia polycantha); however, trees are seldom found on this site.

The site occurs on slightly to moderately sloping areas on upland plains where some small amount of geologic erosion may have occurred and the soils are somewhat "thinner" than those of the associated Deep Hardland ecological site that occurs on the more level terrain. Higher calcium carbonate content throughout the soil profile accounts for the amount of sideoats grama growing on this site. This differs from the closely associated Deep Hardland site that is dominated by blue grama. The forb component is more apparent in years of above average rainfall. Pronghorn favor this site because of the variety of forbs present. Cryptogamic crusts are more common on this site than on nearby Deep Hardland sites. Production on this site is quite close to that of the Deep Hardland sites. The two main indicator plants on the Limy Upland ecological site are sideoats grama and yucca. Yucca has a tendency to increase on limy upland sites that have had regular spring and early summer deferment for many years with good yucca seed production. Yucca blooms are very palatable to deer, pronghorn and cattle.

Fire played a role in the ecology of this site as well as all other high plains sites. The general role of fire was to sustain natural grassland and suppress shrubby species. Fire helped to keep a balance between the grasses, forbs and shrubs. However, in the shortgrass region, fire was probably secondary to climate in promoting the historic vegetative state. A drier climate (<20 inches annual precipitation) creates a situation where the subsoil is dry more often than it is wet. Plant roots grow in response to moisture and this dryer climate favors shortgrasses with fibrous root systems or short rhizomatous grasses. Yucca is a major increaser on this site and natural fire no doubt kept yucca suppressed significantly. Annual forbs are stimulated by fire and diversity is generally increased. Heavy grazing after a fire can have a negative effect if conditions are dry and remain so for an extended period.

Periodic overgrazing and trampling by migrating herds of bison and elk as well as resident herds of pronghorn antelope occurred during drought periods. Bison moved about in large herds over the region somewhat regulated by water sources and fire frequency. However, long rest periods followed once the large herds of bison moved out of the area, allowing the resilient grassland to re-establish and maintain its reference community structure.

Variations in climatic factors, especially the amount and timing of precipitation, greatly influence the productivity of ecological sites and are largely responsible for the fluctuations in the amount of vegetative growth from one season to the next. It is not unusual for fluctuations of greater than 50 percent to occur from one year to another. These types of climatic variation are part of the overall environment in which the reference plant community developed. However, it needs to be pointed out that long-term drought (4 to 6 years of rainfall 50 percent below the mean) can act in concert with other forces to affect changes in plant communities. For instance, extended drought weakens plants and makes them more susceptible to the effects of overgrazing. Drought conditions coupled with fire can be damaging and need long periods of time to fully recover. Extremely dry summers followed by wet winters can favor cool-season annual grasses at the expense of perennial warm-season species. A well-adapted, healthy community could better withstand such rigors of drought. However, even they experience damage that would result in some departure from the former stable state. Usually, the departure would be temporary.

When domestic livestock were brought to the plains in the 1870's, it was largely an open range situation. By 1890, however, most of the area had been fenced and livestock were confined to theses areas continually.

The major forces influencing the transition to the Shrub/Shortgrass community is continued over-grazing by

livestock and the decrease in the frequency and intensity of fire. As livestock and wildlife numbers increase and grazing use exceeds a plants ability to sustain defoliation, the more palatable and generally more productive species decline in stature, productivity and density. Early day settlers often had little information upon which to base stocking rates. In many cases, more animals were grazed than the grassland resources could safely support. The tendency of this site is to become a shortgrass dominant site if long-term grazing abuse occurs. This will lead to a decline in the vigor of sideoats grama and other desirable mid and tallgrass species. Blue grama and buffalograss will increase because they are better able to withstand grazing pressure. With constant grazing pressure, the blue grama will eventually become sod bound and lose its bunch grass appearance.

Yucca will increase on the site if the grass cover is weakened and the yucca makes seed for several years. With the weakened grass cover, broom snakeweed will often gain a major foothold on the site. On some of the western portions of MLRA 77C, cholla cactus (*Cylindropuntia imbricata*) has increased on some deep hardland and limy upland sites. The decrease in density and stature of the mid and tallgrasses, an increase in shortgrasses, and an increase of yucca and other woody vegetation brings about a new plant community, the Midgrass/Shortgrass/Shrub Community (1.2).

In the Midgrass/Shortgrass/Shrub Community (1.2), the transition back to the reference community is possible with proper grazing management and chemical brush and pest management. Prescribed burning could be used if the conditions allow. The production of vegetation has shifted from mostly herbaceous vegetation to increasing amounts of woody shrubs. Herbaceous vegetation is still the largest production in this phase. Nutrient cycling, the water cycle, watershed protection and biological functions have changed little.

If heavy grazing continues with no form of brush and pest management, a threshold will be crossed to a Shortgrass/Shrub Community (2.1). In this state, typical vegetation will be low vigor, blue grama with increasing amounts of low quality shortgrasses. Bare areas will increase with annuals filling the voids. Perennial three-awn will invade this site when the more desirable grasses are weakened and/or removed. Yucca, and occasionally broom snakeweed, will increase dramatically. Nutrient cycling, the water cycle, watershed protection and biological functions have been severely reduced. The plant community is so degraded that it cannot reverse retrogression without extensive energy and management inputs. Restoration of the Shortgrass/Shrub Community (2.1) will require prescribed grazing with rest periods during the growing season, re-seeding bare areas with adapted native grass species, chemical and/or mechanical brush management, and some form of pest management. With the reduced amounts of grass fuel, prescribed burning is usually not an option in this phase.

When long-term, continuous heavy grazing occurs, this site will regress to the Shrub/ Shortgrass/Annuals Community (3.1). In this degraded state, yucca and broom snakeweed will dominate the site (>50 percent). Typical herbaceous vegetation will be perennial three-awn, low quality shortgrasses, and low vigor, sod bound blue grama. The large, connected bare areas will have numerous annual species present. The loss of herbaceous cover and increased bare ground encourages accelerated erosion. Nutrient cycling, the water cycle, watershed protection and biological functions are not functioning well in this phase. Restoration of the Shortgrass/Annuals Community (3.1) to reference conditions will require major energy, economic and management inputs. Conservation practices required include prescribed grazing with several consecutive (3-4 years) rest periods during the growing season, re-seeding bare areas with adapted native grass species, and chemical brush and pest management. Prescribed burning is not an option in this phase. Full recovery and maintenance of the reference community requires continued proper grazing management as well as occasional brush and pest management.

NOTE: Rangeland Health Reference Worksheets have been posted for this site on the Texas NRCS website (www.tx.nrcs.usda.gov) in Section II of the eFOTG under (F) Ecological Site Descriptions.

#### STATE AND TRANSITIONAL PATHWAYS: (DIAGRAM)

The following diagram suggests some pathways that the vegetation on this site might take in response to various treatment or natural stimuli over time. There may be other states not shown on the diagram. Those shown are some of the most commonly seen. This information is intended to illustrate the changes in vegetative states that can occur in a given set of circumstances, and may not happen this way in all cases. Local professional guidance should be sought when making plans to manipulate plant communities for specific purposes.

As a site changes in the structure and makeup of the plant community, the changes may be due to management or due to natural occurrences or both. At some point in time thresholds are crossed. Once changes have progressed to a certain point, the balance of the community has been altered to the extent that a return to the former state is

generally not possible. Some form of energy must be applied in order to make the community respond in that direction. These changes in plant communities occur on all ecological sites with some sites being more resistant to change than others. Also, some sites seem to be more resilient being able to heal or restore more easily than other sites. Usually, changes in management practices alone, such as different grazing methods, will not result in restoration of former vegetative states. An example of an energy input that might be necessary to effect change might be the implementation of chemical brush management and complete growing season rest to reduce domination of woody shrubs and promote more perennial grasses and forbs. This might have to be done more than once and could take several years. Such a vegetative shift could not be accomplished by regulation of grazing alone. The amount of energy required to effect a change would depend on the present vegetative state and the desired state.

### State and transition model

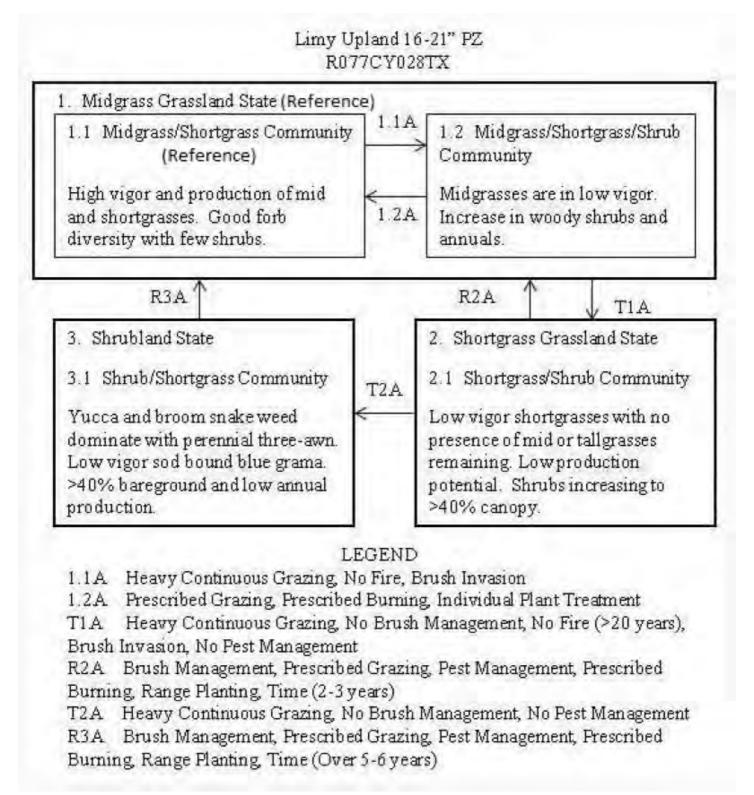


Figure 6. R077CY028TX

## State 1 Midgrass Grassland State

The Midgrass/Shortgrass Community consists of mid and shortgrasses with few tallgrasses. Productivity is moderate with most of the production coming from sideoats grama and blue grama. Lesser amounts of buffalograss, hairy grama, sand dropseed, and perennial three-awn are found on the site. Vine mesquite and western wheatgrass are found growing in depressional areas. Small pockets of sand bluestem and Indiangrass may be found scattered throughout the site. Little bluestem will occur in small amounts where the soil becomes shallower. Some perennial forbs are present with small numbers of annual forbs and a few scattered woody shrubs. The primary woody species found are yucca and broom snakeweed, with an occasional catclaw mimosa and plains pricklypear; however, trees are seldom found on this site.

The tendency of this site is to become a shortgrass dominant site if long-term grazing abuse occurs. This will lead to a decline in the vigor of sideoats grama and other desirable mid and tallgrass species. Blue grama and buffalograss will increase because they are better able to withstand grazing pressure. Cholla, yucca and broom snakeweed will increase due to weakened grass cover and produces seed for several yearsThe decrease in density and stature of the mid and tallgrasses, an increase in shortgrasses, and an increase of yucca and other woody vegetation brings about a new plant community, the Midgrass/Shortgrass/Shrub Community (1.2).

# Community 1.1 Midgrass/Shortgrass Community



Figure 7. 1.1 Midgrass/Shortgrass Community

The interpretive or "reference" plant community for this site is a good mixture of highly productive and high vigor midgrasses, shortgrasses along with small amounts of tallgrasses to make up approximately 90 percent of the plant community. Midgrasses tend to dominate over most of the site with sideoats grama being the overall dominant species. Blue grama is the dominant shortgrass species. There is a good variety of perennial forbs making up 3–5 percent of the total plant community. Yucca and broom snakeweed are the primary woody species. Generally these woody species are lightly scattered across the site and make up less than 5 percent of the total annual production. The plant community's ecological processes are in balance with the environment. Most energy and nutrient cycling is contained in the narrow grass/soil interface and evapo-transpiration is minimal. Maintenance of the this community requires continued proper grazing management as well as occasional brush and pest management.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	1100	1450	1800
Forb	60	115	170
Shrub/Vine	30	45	60
Tree	0	0	0
Microbiotic Crusts	0	0	0
Total	1190	1610	2030

Figure 9. Plant community growth curve (percent production by month). TX1015, Shortgrass/Midgrass Community. Shortgrasses and midgrasses with majority of growh in May, June and July with lesser amounts in August, September and October..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	3	5	8	23	25	12	5	10	5	3	1

# Community 1.2 Midgrass/Shortgrass/Shrub Community



Figure 10. 1.2 Midgrass/Shortgrass/Shrub Community

Some woody shrub encroachment is beginning. As retrogression occurs, the tendency of this site is to become a shortgrass dominant site. Sideoats grama has entered a low vigor state and decreasing. Blue grama and low quality shortgrasses are beginning to increase. There has been an increase in low value perennial and annual forbs, with increasing amounts of yucca and broom snakeweed. The production of vegetation has shifted from mostly herbaceous vegetation to more yucca and woody, although the herbaceous vegetation biomass is still the largest amount. Nutrient cycling, the water cycle, watershed protection, and biological functions have changed some. The transition back to the reference community is reversible with proper grazing management, brush and pest management.

Table 6. Annual production by plant type

Plant Torre	Low	Representative Value	
Plant Type	(Lb/Acre)	(Lb/Acre)	(Lb/Acre)
Grass/Grasslike	1000	1300	1600
Shrub/Vine	150	225	300
Forb	70	125	180
Tree	0	0	0
Microbiotic Crusts	0	0	0
Total	1220	1650	2080

Figure 12. Plant community growth curve (percent production by month). TX1016, Midgrass/Shortgrass/Shrubs Community. Warm-season mid and shortgrasses, increase of forbs and shrubs, grasses in lower vigor and production..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2	5	9	23	24	12	7	10	5	2	1

### Pathway 1.1A Community 1.1 to 1.2



With heavy continuous grazing, no fires, and brush invasion, the Midgrass/Shortgrass Community (1.1) will shift to the Midgrass/Shortgrass/Shrub Community (1.2).

## State 2 Shortgrass Grassland State

If heavy grazing continues with no form of brush and pest management, a threshold will be crossed to a Shortgrass/Shrub State. Typical vegetation will be low vigor, blue grama with increasing amounts of low quality shortgrasses. Bare areas will increase with annuals filling the voids. Perennial three-awn will invade this site when the more desirable grasses are weakened and/or removed. Yucca, and occasionally broom snakeweed, will increase dramatically. Nutrient cycling, the water cycle, watershed protection and biological functions have been severely reduced.

# Community 2.1 Shortgrass/Shrub Community



Figure 13. 2.1 Shortgrass/Shrub Community

In this phase of retrogression a threshold has been crossed to the Shortgrass/Shrub Community. In this degraded state, mid and tallgrasses have been replaced with low vigor blue grama, perennial three-awn and low quality shortgrasses. Bare areas have increased with exposed mineral soil having low quality annuals filling the voids. Yucca and broom snakeweed will increase dramatically (>40 percent canopy). On some of the western portions of MLRA 77C, cholla has invaded the limey upland and deep hardland sites to the point of domination. The loss of herbaceous cover and increased bare ground encourages accelerated erosion. Nutrient cycling, the water cycle, watershed protection, and biological functions have been severely reduced. The plant community is so degraded that it cannot reverse retrogression without extensive energy and management inputs. Restoration of Shortgrass/Shrub Community (2.1) will require prescribed grazing with rest periods during the growing season, re-

seeding bare areas with adapted native grass species, and chemical and/or mechanical brush management and some form of pest management. With the reduced amounts of grass fuel, prescribed burning is usually not an option in this phase.

Table 7. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	
Grass/Grasslike	400	550	700
Shrub/Vine	300	400	500
Forb	30	55	80
Microbiotic Crusts	0	3	5
Tree	0	0	0
Total	730	1008	1285

Figure 15. Plant community growth curve (percent production by month). TX1017, Shortgrass/Shrub Community. Warm-season shortgrasses with increased shrubs and annuals..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3	5	15	30	20	5	5	8	5	2	1

# State 3 Shrubland State

When long-term, continuous heavy grazing occurs, this site will regress to the Shrub/ Shortgrass/Annuals Community (3.1). In this degraded state, yucca and broom snakeweed will dominate the site (>50 percent). Typical herbaceous vegetation will be perennial three-awn, low quality shortgrasses, and low vigor, sod bound blue grama. The large, connected bare areas will have numerous annual species present. The loss of herbaceous cover and increased bare ground encourages accelerated erosion.

## Community 3.1 Shrub/Shortgrass Community



Figure 16. 3.1 Shrub/Shortgrass Community

In this degraded state, yucca and broom snakeweed will dominate the site (>50 percent). Typical herbaceous vegetation will be perennial three-awn, low quality shortgrasses, and low vigor, sod bound blue grama. The large, connected bare areas will have numerous annual species present. The loss of herbaceous cover and increased bare ground encourages accelerated erosion. Nutrient cycling, the water cycle, watershed protection, and biological functions are not functioning well in this phase. Restoration of phase (3.1) to the reference state will require major energy, economic and management inputs. Conservation practices required include prescribed grazing with several consecutive (3-4 years) rest periods during the growing season, re-seeding bare areas with adapted native grass

species, and chemical brush and pest management. Prescribed burning is not often an option in this phase due to lack of fuel. Full recovery and maintenance of the reference community requires continued proper grazing management as well as occasional brush and pest management.

Table 8. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Shrub/Vine	400	500	600
Grass/Grasslike	300	400	500
Forb	40	65	90
Microbiotic Crusts	13	21	28
Tree	0	0	0
Total	753	986	1218

Figure 18. Plant community growth curve (percent production by month). TX1042, Shrub/Shortgrass Community. Growth is predominantly shrubs and shortgrasses from April through October with peak growth from May through July..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	1	3	8	16	25	5	5	10	16	8	3

# Transition T1A State 1 to 2

With heavy continuous grazing, no brush management, no fires (periods greater than twenty years between fires), brush invasion of yucca, pricklypear, and cholla, and no pest management, the Midgrass Grassland State will transition to the Shortgrass/Shrub Community.

# Restoration pathway R2A State 2 to 1

With the application of various conservation practices for rangeland including Brush Management, Prescribed Grazing, Pest Management, Prescribed Burning over a two to three year period, the Shortgrass/Shrub State can be restored to the Midgrass Grassland State.

#### **Conservation practices**

Brush Management	
Prescribed Burning	
Prescribed Grazing	
Integrated Pest Management (IPM)	_

# Transition T2A State 2 to 3

With heavy continuous grazing pressure by livestock and wildlife, no brush management, and no pest management, the Shortgrass Grassland State will transition to the Shrubland State.

# Restoration pathway R3A State 3 to 2

Conservation practices required include prescribed grazing with several consecutive (3-4 years) rest periods during the growing season, re-seeding bare areas with adapted native grass species, and chemical brush and pest management. Prescribed burning is not an option in this phase.

### **Conservation practices**

**Brush Management** Prescribed Grazing Range Planting

## Additional community tables

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cove (%
Grass	/Grasslike	•		•	
1	Midgrass/Shortgrass			800–1300	
	sideoats grama	BOCU	Bouteloua curtipendula	400–650	_
	blue grama	BOGR2	Bouteloua gracilis	400–650	_
2	Midgrasses	•		240–380	
	Wright's threeawn	ARPUW	Aristida purpurea var. wrightii	240–380	_
	little bluestem	scsc	Schizachyrium scoparium	50–150	_
	large-spike bristlegrass	SEMA5	Setaria macrostachya	25–100	_
	buffalograss	BODA2	Bouteloua dactyloides	25–100	_
	Arizona cottontop	DICA8	Digitaria californica	25–100	_
	vine mesquite	PAOB	Panicum obtusum	25–100	_
	sand dropseed	SPCR	Sporobolus cryptandrus	25–75	_
	slim tridens	TRMU	Tridens muticus	25–50	_
	hairy grama	BOHI2	Bouteloua hirsuta	25–50	_
	silver beardgrass	BOLAT	Bothriochloa laguroides ssp. torreyana	25–50	-
	hooded windmill grass	CHCU2	Chloris cucullata	25–50	_
	tumble windmill grass	CHVE2	Chloris verticillata	25–50	_
	ear muhly	MUAR	Muhlenbergia arenacea	25–50	_
3	Cool-season grasses		30–60		
	Canada wildrye	ELCA4	Elymus canadensis	20–50	_
	squirreltail	ELELE	Elymus elymoides ssp. elymoides	25–50	_
	western wheatgrass	PASM	Pascopyrum smithii	25–50	_
4	tallgrasses			30–60	
	sand bluestem	ANHA	Andropogon hallii	30–60	_
	Indiangrass	SONU2	Sorghastrum nutans	30–60	_
Forb					
5	Forbs			60–170	
	Cuman ragweed	AMPS	Ambrosia psilostachya	15–40	_
	white sagebrush	ARLU	Artemisia ludoviciana	15–40	_
	lyreleaf greeneyes	BELY	Berlandiera lyrata	15–40	-
	yellow sundrops	CASE12	Calylophus serrulatus	15–40	-
	rose heath	CHER2	Chaetopappa ericoides	15–40	-
	golden prairie clover	DAAU	Dalea aurea	15–40	_

	Engelmann's daisy	ENPE4	Engelmannıa peristenia	15–40	-
	buckwheat	ERIOG	Eriogonum	15–40	-
	trailing krameria	KRLA	Krameria lanceolata	15–40	_
	dotted blazing star	LIPU	Liatris punctata	15–40	-
	plains blackfoot	MELE2	Melampodium leucanthum	15–40	-
	Nuttall's sensitive-briar	MINU6	Mimosa nuttallii	15–40	-
	James' holdback	POJA5	Pomaria jamesii	15–40	_
	slimflower scurfpea	PSTE5	Psoralidium tenuiflorum	15–40	_
	upright prairie coneflower	RACO3	Ratibida columnifera	15–40	-
	scarlet globemallow	SPCO	Sphaeralcea coccinea	15–40	_
	stemmy four-nerve daisy	TESC2	Tetraneuris scaposa	15–40	_
	stiff greenthread	THFI	Thelesperma filifolium	15–30	_
	white milkwort	POAL4	Polygala alba	15–30	_
	shaggy dwarf morning- glory	EVNU	Evolvulus nuttallianus	15–30	_
	Forb, annual	2FA	Forb, annual	0–25	_
Shru	ub/Vine	•			
6	Shrubs			30–60	
	tree cholla	CYIMI	Cylindropuntia imbricata var. imbricata	20–30	_
	broom snakeweed	GUSA2	Gutierrezia sarothrae	20–30	-
	catclaw mimosa	MIACB	Mimosa aculeaticarpa var. biuncifera	20–30	_
	plains pricklypear	OPPO	Opuntia polyacantha	20–30	_
	soapweed yucca	YUGL	Yucca glauca	20–30	_
		*	•		

### **Animal community**

The Limey Upland site is habitat for a variety of plains grassland birds and mammals. Some animals commonly seen on the site include pronghorn, scaled quail, prairie dogs, coyotes, various raptors, and songbirds. These include meadowlark, Texas horned lizard, jackrabbit, and other species that prefer an open plains grassland habitat.

### **Animal Preferences:**

This rating system provides general guidance as to animal preference for plant species. It also suggests possible competition between kinds of herbivores for various plants. Grazing preference changes between seasons, and between animal kinds and classes. Grazing preference does not necessarily reflect the ecological status of the plant within the plant community. For wildlife, plant preferences for food and plant suitability for cover are rated separately.

Preferred (P) – Percentage of plant in animal diet is greater than it occurs on the land

Desirable (D) – Percentage of plant in animal diet is similar to the percentage composition on the land

Undesirable (U) – Percentage of plant in animal diet is less than it occurs on the land

Not Consumed (N) – Plant would not be eaten under normal conditions. It is only consumed when other forages not available.

Toxic (T) – Rare occurrence in diet and, if consumed in any tangible amounts results in death or severe illness in animal

### **Hydrological functions**

This site contributes runoff to draws and larger watercourses lower on the landscape. Runoff is reduced and

infiltration is increased with good vegetative cover. Good vegetative cover also results in cleaner runoff and minimal sedimentation the plains region. When cover is poor and sites are ecologically degraded, runoff can be as much as 70 percent. With little infiltration occurring, the soil becomes artificially shallow and production potential is very limited.

#### Recreational uses

Hunting, Camping, Bird watching, Hiking, Horseback riding

### **Wood products**

None.

### Other products

Sometimes native plant species seed are collected for planting materials.

#### Other information

None.

### Inventory data references

NRCS FOTG – Section II of the FOTG Range Site Descriptions and numerous historical accounts of vegetative conditions at the time of

early settlement in the area were used in the development of this site description. Vegetative inventories were made at several site locations

for support documentation.

Inventory Data References (documents):

NRCS FOTG – Section II - Range Site Descriptions

NRCS Clipping Data summaries over a 20 year period

#### Other references

- 1. Archer S. 1994. Woody plant encroachment into southwestern grasslands and savannas: rates, patterns and proximate causes. In Ecological implications of livestock herbivory in the West, Ed M Vavra, W Laycock, R Pieper, pp13-68, Denver, CO: society for Range Management
- 2. Gould F. 1978. Common Texas Grasses: an illustrated guide. College Station, TX: Texas A & M Press.
- 3. Hatch, Brown and Ghandi, Vascular Plants of Texas (An Ecological Checklist)
- 4. Heischmidt RK, Stuth, Eds. 1991 Grazing Management: an ecological perspective. Portland OR: Timberline Press
- 5. North Rolling Plains RC&D, NRCS, and GLCI. 2006 edition. Common Rangeland Plants of the Texas Panhandle.
- 6. Scifres CJ, Hamilton WT. 1993. Prescribed burning for brushland management: the South Texas example. College Station, TX: Texas A & M Press.
- 7. Natural Resources Conservation Service Range Site Descriptions
- 8. USDA-Natural Resources Conservation Service Soil Surveys & Website soil database

The following individuals assisted with the development of this site description:

Clint Rollins –Rangeland Management Specialist- NRCS; Amarillo, Texas

Justin Clary - Rangeland Management Specialist - NRCS; Temple, Texas

Kelly Attebury - Resource Soil Scientist - NRCS, Lubbock, Texas

### **Contributors**

Duckworth-Cole, Inc, Bryan Texas J.R. Bell, SCS, Amarillo, Texas

### **Acknowledgments**

Site Development and Testing Plan

Future work, as described in a Project Plan, to validate the information in this Provisional Ecological Site Description is needed. This will include field activities to collect low, medium and high intensity sampling, soil correlations, and analysis of that data. Annual field reviews should be done by soil scientists and vegetation specialists. A final field review, peer review, quality control, and quality assurance reviews of the ESD will be needed to produce the final document.

Annual reviews of the Project Plan are to be conducted by the Ecological Site Technical Team.

### Rangeland health reference sheet

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

Author(s)/participant(s)	Stan Bradbury, Zone RMS, NRCS, Lubbock, Texas
Contact for lead author	806-791-0581
Date	09/04/2007
Approved by	Mark Moseley, RMS, NRCS, San Antonio, Texas
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

#### Indicators

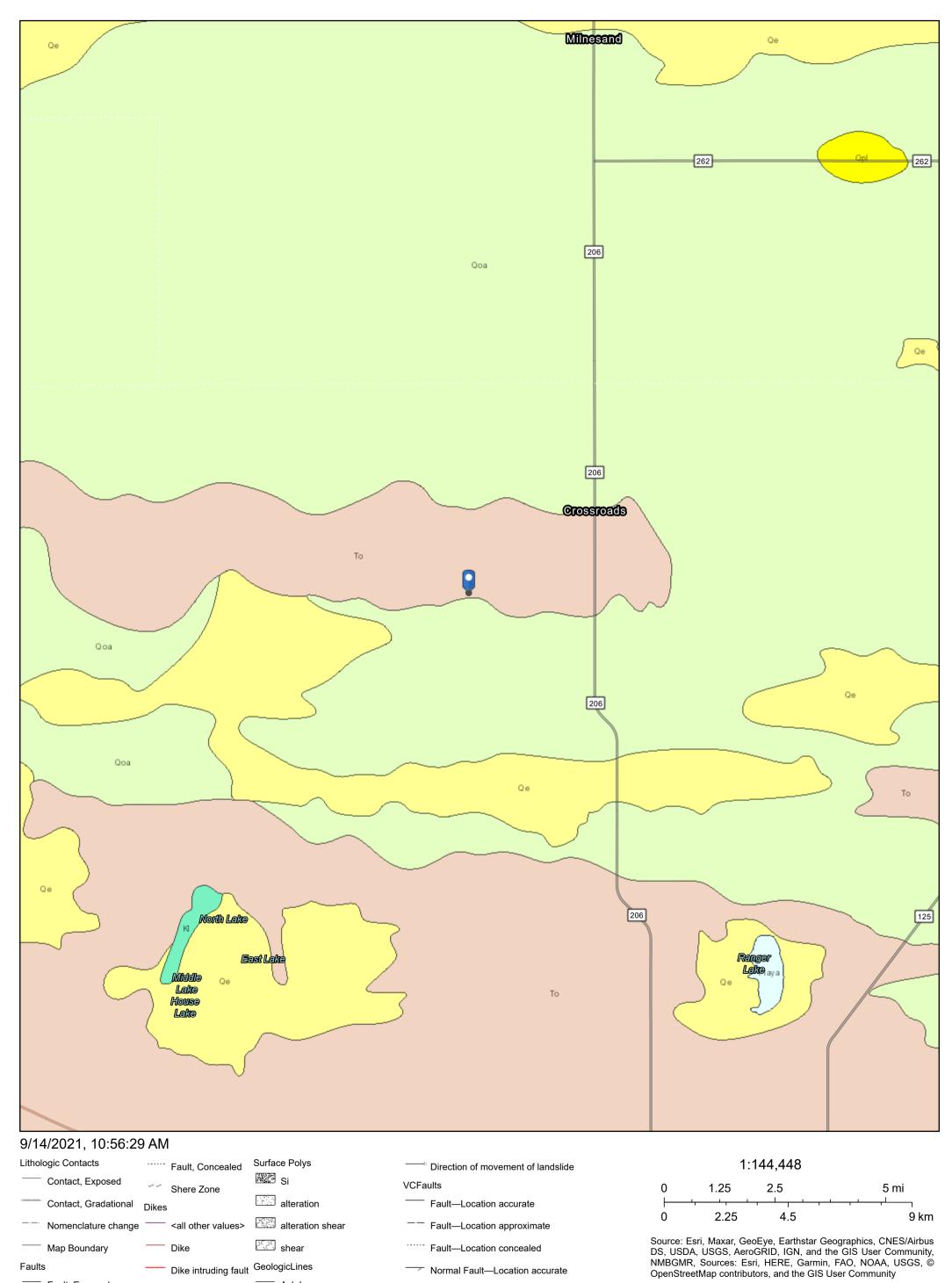
1.	Number and extent of rills: None to slight.
2.	Presence of water flow patterns: None to slight.
3.	Number and height of erosional pedestals or terracettes: None to slight.
4.	Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground): 20-25%.
5.	Number of gullies and erosion associated with gullies: None to slight.
6.	Extent of wind scoured, blowouts and/or depositional areas: Slight to moderate.

7. Amount of litter movement (describe size and distance expected to travel): None to slight.

8.	Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values): Moderate resistance to surface erosion.
9.	Soil surface structure and SOM content (include type of structure and A-horizon color and thickness): Loamy friable surface and medium SOM.
10.	Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff: Basal cover and density with moderate interspaces should make rainfall impact minimal. This site has moderate permeable soil, runoff is slow to medium and available water holding capacity is medium.
11.	Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None.
12.	Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):
	Dominant: Warm-season shortgrasses >
	Sub-dominant: Warm-season midgrasses >
	Other: Cool-season midgrasses > Warm-season tallgrasses > Forbs > Shrubs/Vines
	Additional:
13.	Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Grasses due to their growth habit will exhibit some mortality and decadence, though minimal.
14.	Average percent litter cover (%) and depth ( in): Litter is dominantly herbaceous.
15.	Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production): 1,400 to 1,900 pounds per acre.
16.	Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site: Yucca, Cholla, Catclaw, and Pricklypear can become invasive.

17. **Perennial plant reproductive capability:** All plant species should be capable of reproduction except during periods of prolonged drought conditions, heavy natural herbivory or intense wildfires.

# Gill BGJ #1



Dike intruding fault GeologicLines Normal Fault—Location accurate Fault, Exposed Ash Layer Normal Fault—Location approximate Volcanic Vents -- Fault, Intermittent Shoreline—Identity accurate

Faults

## **ATTACHMENT 6**

### **Monica Peppin**

From: Chase Settle < Chase\_Settle@eogresources.com>

**Sent:** October 6, 2022 11:03 AM **To:** Michael Moffitt; Monica Peppin

**Subject:** FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

From: Tina Huerta < Tina\_Huerta@eogresources.com >

Sent: Thursday, October 6, 2022 11:02 AM

To: Artesia S&E Spill Remediation < Artesia\_S&E\_Spill\_Remediation@eogresources.com>

Cc: Artesia Regulatory < Artesia\_Regulatory@eogresources.com>

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

FYI

From: Nobui, Jennifer, EMNRD < Jennifer. Nobui@emnrd.nm.gov >

Sent: Thursday, October 6, 2022 8:56 AM

To: Tina Huerta < Tina Huerta@eogresources.com >

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

#### 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.

Thanks,

Jennifer Nobui

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Thursday, October 6, 2022 8:08 AM

To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD

<<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>; Hamlet, Robert,

EMNRD < Robert. Hamlet@emnrd.nm.gov >; Velez, Nelson, EMNRD < Nelson. Velez@emnrd.nm.gov >

Subject: Fw: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

From: Tina Huerta < Tina Huerta@eogresources.com >

Sent: Thursday, October 6, 2022 8:07 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov >

Cc: Artesia S&E Spill Remediation < Artesia S&E Spill Remediation@eogresources.com >; Artesia Regulatory

<a href="mailto:</a> <a href="mailto:Artesia">Artesia</a> Regulatory@eogresources.com>

Subject: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) 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 of sampling to be conducted at the below location.

Gill BGJ 1 L-29-9S-35E Lea County, NM 1RP-2717 and 1RP-4046

Sampling will begin at 8:00 a.m. on Monday, October 10, 2022 and continue through Friday, October 14, 2022.

Thank you,

Tina Hverta Regulatory Specialist Direct: 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com

**eog resources** 

**Artesia Division** 

### **Lakin Pullman**

From: Michael Moffitt

**Sent:** October 29, 2022 2:31 PM

To: Lakin Pullman

**Subject:** Fwd: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

FYI

Get Outlook for Android

From: Chase Settle < Chase\_Settle@eogresources.com>

**Sent:** Thursday, October 13, 2022 11:23:54 AM **To:** Michael Moffitt < MMoffitt@vertex.ca>

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

From: Tina Huerta <Tina\_Huerta@eogresources.com>

Sent: Thursday, October 13, 2022 10:58 AM

To: Artesia S&E Spill Remediation < Artesia\_S&E\_Spill\_Remediation@eogresources.com>

Cc: Artesia Regulatory < Artesia\_Regulatory@eogresources.com>

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

FYI

From: Enviro, OCD, EMNRD < OCD.Enviro@emnrd.nm.gov>

Sent: Thursday, October 13, 2022 8:45 AM

To: Tina Huerta < Tina Huerta@eogresources.com>

Cc: Artesia S&E Spill Remediation < <a href="mailto:Sweenergy"><u>Artesia S&E Spill Remediation@eogresources.com</u></a>; Artesia Regulatory

<a href="mailto:Artesia Regulatory@eogresources.com">Artesia Regulatory@eogresources.com</a>; Harimon, Jocelyn, EMNRD < Jocelyn. Harimon@emnrd.nm.gov</a>; Bratcher,

Michael, EMNRD < mike.bratcher@emnrd.nm.gov >

Subject: Re: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

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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.

Thanks,

Jocelyn Harimon

From: Tina Huerta <Tina Huerta@eogresources.com>

Sent: Thursday, October 13, 2022 8:25 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

**Cc:** Artesia S&E Spill Remediation < <u>Artesia S&E Spill Remediation@eogresources.com</u>>; Artesia Regulatory < <u>Artesia Regulatory@eogresources.com</u>>

Subject: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) 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 of sampling to be conducted at the below location.

Gill BGJ 1 L-29-9S-35E Lea County, NM 1RP-2717 and 1RP-4046

Sampling will begin at 8:30 a.m. on Monday, October 17, 2022 and continue through Friday, October 21, 2022.

Thank you,

Tina Huerta

Regulatory Specialist

Direct. 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com

**eog resources** 

**Artesia Division** 

#### **Lakin Pullman**

From: Chase Settle < Chase\_Settle@eogresources.com>

**Sent:** October 20, 2022 7:31 PM **To:** Michael Moffitt; Monica Peppin

Subject: Fwd: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

### Get Outlook for iOS

From: Tina Huerta <Tina\_Huerta@eogresources.com>

Sent: Thursday, October 20, 2022 4:29:28 PM

To: Artesia S&E Spill Remediation <Artesia\_S&E\_Spill\_Remediation@eogresources.com>

Cc: Artesia Regulatory < Artesia\_Regulatory@eogresources.com>

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

FYI

From: Billings, Bradford, EMNRD < Bradford. Billings@emnrd.nm.gov>

Sent: Thursday, October 20, 2022 3:09 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>

Cc: Tina Huerta <Tina\_Huerta@eogresources.com>

Subject: RE: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Thank you for the notification. Please include copy of this communication in allied report(S).

Bradford Billings EMNRD/OCD

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Thursday, October 20, 2022 1:11 PM

To: Billings, Bradford, EMNRD < <a href="mailto:Bradford.Billings@emnrd.nm.gov">Bratcher, Michael, EMNRD</a>

<mike.bratcher@emnrd.nm.gov>

Subject: FW: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) Sampling Notification

Jocelyn Harimon • Environmental Specialist

Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@state.nm.us

#### http:// www.emnrd.nm.gov



From: Tina Huerta < Tina Huerta@eogresources.com>

Sent: Thursday, October 20, 2022 10:15 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Cc: Artesia S&E Spill Remediation < <a href="mailto:Artesia\_S&E\_Spill\_Remediation@eogresources.com">Artesia\_S&E\_Spill\_Remediation@eogresources.com</a>; Artesia Regulatory

<a href="mailto:</a> <a href="mailto:Artesia Regulatory@eogresources.com">Artesia Regulatory@eogresources.com</a>

Subject: [EXTERNAL] Gill BGJ 1 (1RP-2717 and 1RP-4046) 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 of sampling to be conducted at the below location.

Gill BGJ 1 L-29-9S-35E Lea County, NM 1RP-2717 and 1RP-4046

Sampling will begin at 8:30 a.m. on Monday, October 24, 2022 and continue through Friday, October 28, 2022.

Thank you,

Tina Huerta

Regulatory Specialist

Direct: 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com



**Artesia Division** 

### **Sally Carttar**

**From:** Chase Settle < Chase\_Settle@eogresources.com>

**Sent:** October 31, 2022 10:34 AM

To: Michael Moffitt
Cc: Sally Carttar

**Subject:** FW: Gill BGJ 1 (1RP-2717 and nJXK1620138458) Sampling Notification

From: Tina Huerta <Tina\_Huerta@eogresources.com>

Sent: Monday, October 31, 2022 10:11 AM

To: ocd.enviro@emnrd.nm.gov

Cc: Artesia S&E Spill Remediation <Artesia\_S&E\_Spill\_Remediation@eogresources.com>; Artesia Regulatory

<Artesia\_Regulatory@eogresources.com>

Subject: Gill BGJ 1 (1RP-2717 and nJXK1620138458) Sampling Notification

Good Morning,

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

Gill BGJ 1 L-29-9S-35E Lea County, NM 1RP-2717 and nJXK1620138458

Sampling will begin at 11:00 a.m. on Wednesday, November 2, 2022 and continue through Thursday, November 3, 2022.

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 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

October 06, 2021

Chase Settle
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX

RE: Gill BGJ 1 OrderNo.: 2109D89

#### Dear Chase Settle:

Hall Environmental Analysis Laboratory received 21 sample(s) on 9/24/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-01 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:00:00 AM

 Lab ID:
 2109D89-001
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	1500	60	mg/Kg	20	9/30/2021 1:23:43 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	35	9.2	mg/Kg	1	9/30/2021 12:25:31 PM	62840
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	9/30/2021 12:25:31 PM	62840
Surr: DNOP	70.9	70-130	%Rec	1	9/30/2021 12:25:31 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 4:56:25 PM	62834
Surr: BFB	103	70-130	%Rec	1	9/28/2021 4:56:25 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 4:56:25 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 4:56:25 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 4:56:25 PM	62834
Xylenes, Total	ND	0.097	mg/Kg	1	9/28/2021 4:56:25 PM	62834
Surr: 4-Bromofluorobenzene	89.6	70-130	%Rec	1	9/28/2021 4:56:25 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-01 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:05:00 AM

 Lab ID:
 2109D89-002
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	750	60	mg/Kg	20	9/30/2021 2:00:56 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: SB
Diesel Range Organics (DRO)	19	10	mg/Kg	1	9/28/2021 3:17:20 PM	62840
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/28/2021 3:17:20 PM	62840
Surr: DNOP	90.9	70-130	%Rec	1	9/28/2021 3:17:20 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 5:19:57 PM	62834
Surr: BFB	103	70-130	%Rec	1	9/28/2021 5:19:57 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/28/2021 5:19:57 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 5:19:57 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 5:19:57 PM	62834
Xylenes, Total	ND	0.098	mg/Kg	1	9/28/2021 5:19:57 PM	62834
Surr: 4-Bromofluorobenzene	88.1	70-130	%Rec	1	9/28/2021 5:19:57 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 25

Date Reported: 10/6/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-01 2'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:10:00 AM

 Lab ID:
 2109D89-003
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	610	60	mg/Kg	20	9/30/2021 2:13:21 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	9/28/2021 2:52:36 PM	62840
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	9/28/2021 2:52:36 PM	62840
Surr: DNOP	92.8	70-130	%Rec	1	9/28/2021 2:52:36 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/28/2021 5:43:31 PM	62834
Surr: BFB	105	70-130	%Rec	1	9/28/2021 5:43:31 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 5:43:31 PM	62834
Toluene	ND	0.048	mg/Kg	1	9/28/2021 5:43:31 PM	62834
Ethylbenzene	ND	0.048	mg/Kg	1	9/28/2021 5:43:31 PM	62834
Xylenes, Total	ND	0.096	mg/Kg	1	9/28/2021 5:43:31 PM	62834
Surr: 4-Bromofluorobenzene	91.4	70-130	%Rec	1	9/28/2021 5:43:31 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 25

Date Reported: 10/6/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-02 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:20:00 AM

 Lab ID:
 2109D89-004
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	1400	61	mg/Kg	20	9/30/2021 2:25:46 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: JME
Diesel Range Organics (DRO)	120	18	mg/Kg	2	9/30/2021 3:48:28 PM	62840
Motor Oil Range Organics (MRO)	150	88	mg/Kg	2	9/30/2021 3:48:28 PM	62840
Surr: DNOP	77.5	70-130	%Rec	2	9/30/2021 3:48:28 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 6:07:12 PM	62834
Surr: BFB	104	70-130	%Rec	1	9/28/2021 6:07:12 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 6:07:12 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 6:07:12 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 6:07:12 PM	62834
Xylenes, Total	ND	0.097	mg/Kg	1	9/28/2021 6:07:12 PM	62834
Surr: 4-Bromofluorobenzene	90.4	70-130	%Rec	1	9/28/2021 6:07:12 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-02 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:25:00 AM

 Lab ID:
 2109D89-005
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	780	60	mg/Kg	20	9/30/2021 2:38:11 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	14	9.8	mg/Kg	1	9/28/2021 3:42:31 PM	62840
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/28/2021 3:42:31 PM	62840
Surr: DNOP	83.7	70-130	%Rec	1	9/28/2021 3:42:31 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 6:30:48 PM	62834
Surr: BFB	105	70-130	%Rec	1	9/28/2021 6:30:48 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/28/2021 6:30:48 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 6:30:48 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 6:30:48 PM	62834
Xylenes, Total	ND	0.098	mg/Kg	1	9/28/2021 6:30:48 PM	62834
Surr: 4-Bromofluorobenzene	90.8	70-130	%Rec	1	9/28/2021 6:30:48 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-02 2'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:30:00 AM

 Lab ID:
 2109D89-006
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	720	60	mg/Kg	20	9/30/2021 2:50:36 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	9/28/2021 4:07:35 PM	62840
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	9/28/2021 4:07:35 PM	62840
Surr: DNOP	99.7	70-130	%Rec	1	9/28/2021 4:07:35 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/28/2021 6:54:24 PM	62834
Surr: BFB	109	70-130	%Rec	1	9/28/2021 6:54:24 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 6:54:24 PM	62834
Toluene	ND	0.048	mg/Kg	1	9/28/2021 6:54:24 PM	62834
Ethylbenzene	ND	0.048	mg/Kg	1	9/28/2021 6:54:24 PM	62834
Xylenes, Total	ND	0.096	mg/Kg	1	9/28/2021 6:54:24 PM	62834
Surr: 4-Bromofluorobenzene	94.4	70-130	%Rec	1	9/28/2021 6:54:24 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-03 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:40:00 AM

 Lab ID:
 2109D89-007
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	270	60	mg/Kg	20	9/30/2021 3:27:50 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: JME
Diesel Range Organics (DRO)	88	9.7	mg/Kg	1	10/1/2021 10:35:12 AM	62840
Motor Oil Range Organics (MRO)	93	48	mg/Kg	1	10/1/2021 10:35:12 AM	62840
Surr: DNOP	82.9	70-130	%Rec	1	10/1/2021 10:35:12 AM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/28/2021 7:17:52 PM	62834
Surr: BFB	109	70-130	%Rec	1	9/28/2021 7:17:52 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/28/2021 7:17:52 PM	62834
Toluene	ND	0.050	mg/Kg	1	9/28/2021 7:17:52 PM	62834
Ethylbenzene	ND	0.050	mg/Kg	1	9/28/2021 7:17:52 PM	62834
Xylenes, Total	ND	0.10	mg/Kg	1	9/28/2021 7:17:52 PM	62834
Surr: 4-Bromofluorobenzene	94.1	70-130	%Rec	1	9/28/2021 7:17:52 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-03 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:45:00 AM

 Lab ID:
 2109D89-008
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	470	60	mg/Kg	20	9/30/2021 3:40:15 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	: JME
Diesel Range Organics (DRO)	46	9.8	mg/Kg	1	9/30/2021 1:13:22 PM	62840
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/30/2021 1:13:22 PM	62840
Surr: DNOP	82.2	70-130	%Rec	1	9/30/2021 1:13:22 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/28/2021 7:41:22 PM	62834
Surr: BFB	107	70-130	%Rec	1	9/28/2021 7:41:22 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/28/2021 7:41:22 PM	62834
Toluene	ND	0.050	mg/Kg	1	9/28/2021 7:41:22 PM	62834
Ethylbenzene	ND	0.050	mg/Kg	1	9/28/2021 7:41:22 PM	62834
Xylenes, Total	ND	0.099	mg/Kg	1	9/28/2021 7:41:22 PM	62834
Surr: 4-Bromofluorobenzene	92.1	70-130	%Rec	1	9/28/2021 7:41:22 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-04 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 8:55:00 AM

 Lab ID:
 2109D89-009
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	1400	60	mg/Kg	20	9/30/2021 3:52:40 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	86	19	mg/Kg	2	9/30/2021 4:12:13 PM	62840
Motor Oil Range Organics (MRO)	110	94	mg/Kg	2	9/30/2021 4:12:13 PM	62840
Surr: DNOP	92.4	70-130	%Rec	2	9/30/2021 4:12:13 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 8:04:53 PM	62834
Surr: BFB	104	70-130	%Rec	1	9/28/2021 8:04:53 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 8:04:53 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 8:04:53 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 8:04:53 PM	62834
Xylenes, Total	ND	0.097	mg/Kg	1	9/28/2021 8:04:53 PM	62834
Surr: 4-Bromofluorobenzene	90.3	70-130	%Rec	1	9/28/2021 8:04:53 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 9 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-04 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:00:00 AM

 Lab ID:
 2109D89-010
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	580	60	mg/Kg	20	9/30/2021 4:05:05 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	: JME
Diesel Range Organics (DRO)	61	10	mg/Kg	1	10/1/2021 10:58:38 AM	62840
Motor Oil Range Organics (MRO)	80	50	mg/Kg	1	10/1/2021 10:58:38 AM	62840
Surr: DNOP	86.7	70-130	%Rec	1	10/1/2021 10:58:38 AM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/28/2021 9:15:25 PM	62834
Surr: BFB	106	70-130	%Rec	1	9/28/2021 9:15:25 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 9:15:25 PM	62834
Toluene	ND	0.048	mg/Kg	1	9/28/2021 9:15:25 PM	62834
Ethylbenzene	ND	0.048	mg/Kg	1	9/28/2021 9:15:25 PM	62834
Xylenes, Total	ND	0.096	mg/Kg	1	9/28/2021 9:15:25 PM	62834
Surr: 4-Bromofluorobenzene	91.6	70-130	%Rec	1	9/28/2021 9:15:25 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 10 of 25

Date Reported: 10/6/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-04 2'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:05:00 AM

 Lab ID:
 2109D89-011
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	1100	60	mg/Kg	20	9/30/2021 4:17:30 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	29	9.6	mg/Kg	1	9/30/2021 12:49:24 PM	62840
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/30/2021 12:49:24 PM	62840
Surr: DNOP	94.2	70-130	%Rec	1	9/30/2021 12:49:24 PM	62840
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 9:39:03 PM	62834
Surr: BFB	110	70-130	%Rec	1	9/28/2021 9:39:03 PM	62834
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/28/2021 9:39:03 PM	62834
Toluene	ND	0.049	mg/Kg	1	9/28/2021 9:39:03 PM	62834
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 9:39:03 PM	62834
Xylenes, Total	ND	0.099	mg/Kg	1	9/28/2021 9:39:03 PM	62834
Surr: 4-Bromofluorobenzene	92.9	70-130	%Rec	1	9/28/2021 9:39:03 PM	62834

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 11 of 25

Date Reported: 10/6/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-05 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:15:00 AM

 Lab ID:
 2109D89-012
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 4:29:55 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/28/2021 5:41:39 PM	62841
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/28/2021 5:41:39 PM	62841
Surr: DNOP	75.5	70-130	%Rec	1	9/28/2021 5:41:39 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/28/2021 10:02:36 PM	62835
Surr: BFB	108	70-130	%Rec	1	9/28/2021 10:02:36 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/28/2021 10:02:36 PM	62835
Toluene	ND	0.049	mg/Kg	1	9/28/2021 10:02:36 PM	62835
Ethylbenzene	ND	0.049	mg/Kg	1	9/28/2021 10:02:36 PM	62835
Xylenes, Total	ND	0.098	mg/Kg	1	9/28/2021 10:02:36 PM	62835
Surr: 4-Bromofluorobenzene	93.7	70-130	%Rec	1	9/28/2021 10:02:36 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 12 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-05 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:20:00 AM

 Lab ID:
 2109D89-013
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	61		mg/Kg	20	9/30/2021 4:42:19 PM	62931
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/28/2021 7:19:01 PM	62841
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/28/2021 7:19:01 PM	62841
Surr: DNOP	63.7	70-130	S	%Rec	1	9/28/2021 7:19:01 PM	62841
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/28/2021 11:12:58 PM	62835
Surr: BFB	109	70-130		%Rec	1	9/28/2021 11:12:58 PM	62835
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	9/28/2021 11:12:58 PM	62835
Toluene	ND	0.050		mg/Kg	1	9/28/2021 11:12:58 PM	62835
Ethylbenzene	ND	0.050		mg/Kg	1	9/28/2021 11:12:58 PM	62835
Xylenes, Total	ND	0.099		mg/Kg	1	9/28/2021 11:12:58 PM	62835
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	9/28/2021 11:12:58 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 13 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-06 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:30:00 AM

 Lab ID:
 2109D89-014
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 5:44:24 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/28/2021 7:43:19 PM	62841
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/28/2021 7:43:19 PM	62841
Surr: DNOP	82.1	70-130	%Rec	1	9/28/2021 7:43:19 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/29/2021 2:16:03 PM	62835
Surr: BFB	106	70-130	%Rec	1	9/29/2021 2:16:03 PM	62835
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/29/2021 2:16:03 PM	62835
Toluene	ND	0.049	mg/Kg	1	9/29/2021 2:16:03 PM	62835
Ethylbenzene	ND	0.049	mg/Kg	1	9/29/2021 2:16:03 PM	62835
Xylenes, Total	ND	0.098	mg/Kg	1	9/29/2021 2:16:03 PM	62835
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	1	9/29/2021 2:16:03 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 14 of 25

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/6/2021

CLIENT: EOG Client Sample ID: BH21-06 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:35:00 AM

 Lab ID:
 2109D89-015
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 6:21:38 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/28/2021 8:07:43 PM	62841
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/28/2021 8:07:43 PM	62841
Surr: DNOP	75.2	70-130	%Rec	1	9/28/2021 8:07:43 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/29/2021 2:39:35 PM	62835
Surr: BFB	106	70-130	%Rec	1	9/29/2021 2:39:35 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.024	mg/Kg	1	9/29/2021 2:39:35 PM	62835
Toluene	ND	0.048	mg/Kg	1	9/29/2021 2:39:35 PM	62835
Ethylbenzene	ND	0.048	mg/Kg	1	9/29/2021 2:39:35 PM	62835
Xylenes, Total	ND	0.097	mg/Kg	1	9/29/2021 2:39:35 PM	62835
Surr: 4-Bromofluorobenzene	91.4	70-130	%Rec	1	9/29/2021 2:39:35 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 15 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-06 1.5'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 9:40:00 AM

 Lab ID:
 2109D89-016
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 6:58:53 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	56	9.7	mg/Kg	1	9/30/2021 1:37:18 PM	62841
Motor Oil Range Organics (MRO)	98	49	mg/Kg	1	9/30/2021 1:37:18 PM	62841
Surr: DNOP	87.4	70-130	%Rec	1	9/30/2021 1:37:18 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/29/2021 3:02:59 PM	62835
Surr: BFB	105	70-130	%Rec	1	9/29/2021 3:02:59 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/29/2021 3:02:59 PM	62835
Toluene	ND	0.049	mg/Kg	1	9/29/2021 3:02:59 PM	62835
Ethylbenzene	ND	0.049	mg/Kg	1	9/29/2021 3:02:59 PM	62835
Xylenes, Total	ND	0.097	mg/Kg	1	9/29/2021 3:02:59 PM	62835
Surr: 4-Bromofluorobenzene	91.6	70-130	%Rec	1	9/29/2021 3:02:59 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 16 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-07 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 11:30:00 AM

 Lab ID:
 2109D89-017
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 7:11:18 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	65	9.4	mg/Kg	1	9/30/2021 2:01:20 PM	62841
Motor Oil Range Organics (MRO)	75	47	mg/Kg	1	9/30/2021 2:01:20 PM	62841
Surr: DNOP	86.3	70-130	%Rec	1	9/30/2021 2:01:20 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/29/2021 4:37:01 PM	62835
Surr: BFB	105	70-130	%Rec	1	9/29/2021 4:37:01 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/29/2021 4:37:01 PM	62835
Toluene	ND	0.048	mg/Kg	1	9/29/2021 4:37:01 PM	62835
Ethylbenzene	ND	0.048	mg/Kg	1	9/29/2021 4:37:01 PM	62835
Xylenes, Total	ND	0.097	mg/Kg	1	9/29/2021 4:37:01 PM	62835
Surr: 4-Bromofluorobenzene	90.8	70-130	%Rec	1	9/29/2021 4:37:01 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 17 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-07 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 11:35:00 AM

 Lab ID:
 2109D89-018
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 7:23:43 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	86	9.3	mg/Kg	1	9/30/2021 2:25:16 PM	62841
Motor Oil Range Organics (MRO)	110	47	mg/Kg	1	9/30/2021 2:25:16 PM	62841
Surr: DNOP	93.2	70-130	%Rec	1	9/30/2021 2:25:16 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/29/2021 5:00:32 PM	62835
Surr: BFB	107	70-130	%Rec	1	9/29/2021 5:00:32 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/29/2021 5:00:32 PM	62835
Toluene	ND	0.049	mg/Kg	1	9/29/2021 5:00:32 PM	62835
Ethylbenzene	ND	0.049	mg/Kg	1	9/29/2021 5:00:32 PM	62835
Xylenes, Total	ND	0.097	mg/Kg	1	9/29/2021 5:00:32 PM	62835
Surr: 4-Bromofluorobenzene	93.1	70-130	%Rec	1	9/29/2021 5:00:32 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 18 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-07 2'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 11:40:00 AM

 Lab ID:
 2109D89-019
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	9/30/2021 7:36:07 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	7.8	mg/Kg	1	9/28/2021 8:31:56 PM	62841
Motor Oil Range Organics (MRO)	ND	39	mg/Kg	1	9/28/2021 8:31:56 PM	62841
Surr: DNOP	80.5	70-130	%Rec	1	9/28/2021 8:31:56 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/29/2021 5:24:07 PM	62835
Surr: BFB	110	70-130	%Rec	1	9/29/2021 5:24:07 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	9/29/2021 5:24:07 PM	62835
Toluene	ND	0.049	mg/Kg	1	9/29/2021 5:24:07 PM	62835
Ethylbenzene	ND	0.049	mg/Kg	1	9/29/2021 5:24:07 PM	62835
Xylenes, Total	ND	0.098	mg/Kg	1	9/29/2021 5:24:07 PM	62835
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec	1	9/29/2021 5:24:07 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 19 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-08 0'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 12:00:00 PM

 Lab ID:
 2109D89-020
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	59		mg/Kg	20	9/30/2021 8:13:22 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/28/2021 8:56:22 PM	62841
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/28/2021 8:56:22 PM	62841
Surr: DNOP	64.0	70-130	S	%Rec	1	9/28/2021 8:56:22 PM	62841
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/29/2021 5:47:51 PM	62835
Surr: BFB	105	70-130		%Rec	1	9/29/2021 5:47:51 PM	62835
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 5:47:51 PM	62835
Toluene	ND	0.048		mg/Kg	1	9/29/2021 5:47:51 PM	62835
Ethylbenzene	ND	0.048		mg/Kg	1	9/29/2021 5:47:51 PM	62835
Xylenes, Total	ND	0.097		mg/Kg	1	9/29/2021 5:47:51 PM	62835
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	9/29/2021 5:47:51 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 20 of 25

Date Reported: 10/6/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-08 1'

 Project:
 Gill BGJ 1
 Collection Date: 9/23/2021 12:05:00 PM

 Lab ID:
 2109D89-021
 Matrix: SOIL
 Received Date: 9/24/2021 7:25:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	78	60	mg/Kg	20	9/30/2021 8:25:46 PM	62935
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/28/2021 9:20:30 PM	62841
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	9/28/2021 9:20:30 PM	62841
Surr: DNOP	72.0	70-130	%Rec	1	9/28/2021 9:20:30 PM	62841
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/29/2021 6:11:19 PM	62835
Surr: BFB	106	70-130	%Rec	1	9/29/2021 6:11:19 PM	62835
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/29/2021 6:11:19 PM	62835
Toluene	ND	0.048	mg/Kg	1	9/29/2021 6:11:19 PM	62835
Ethylbenzene	ND	0.048	mg/Kg	1	9/29/2021 6:11:19 PM	62835
Xylenes, Total	ND	0.096	mg/Kg	1	9/29/2021 6:11:19 PM	62835
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	1	9/29/2021 6:11:19 PM	62835

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 21 of 25

#### Hall Environmental Analysis Laboratory, Inc.

06-Oct-21

2109D89

WO#:

Client: EOG
Project: Gill BGJ 1

Sample ID: MB-62931 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **62931** RunNo: **81698** 

Prep Date: 9/30/2021 Analysis Date: 9/30/2021 SeqNo: 2888474 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-62931 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 62931 RunNo: 81698

Prep Date: 9/30/2021 Analysis Date: 9/30/2021 SeqNo: 2888475 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 94.9 90 110

Sample ID: MB-62935 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 62935 RunNo: 81698

Prep Date: 9/30/2021 Analysis Date: 9/30/2021 SeqNo: 2888516 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-62935 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 62935 RunNo: 81698

Prep Date: 9/30/2021 Analysis Date: 9/30/2021 SeqNo: 2888517 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.2 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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 22 of 25

### Hall Environmental Analysis Laboratory, Inc.

4.2

#: 2109D89 06-Oct-21

WO#:

Client: EOG
Project: Gill BGJ 1

Sample ID: MB-62840	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batcl	n ID: <b>62</b>	840	F	RunNo: 8	1609				
Prep Date: 9/27/2021	Analysis D	Date: 9/	28/2021	9	SeqNo: 2	886147	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		94.9	70	130			
Sample ID: LCS-62840	SampT	ype: <b>LC</b>	s	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batcl	n ID: <b>62</b>	840	F	RunNo: 8	1609				
Prep Date: 9/27/2021	Analysis D	Date: 9/	28/2021	5	SeqNo: 2	886148	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte Diesel Range Organics (DRO)	Result 44	PQL 10	SPK value 50.00	SPK Ref Val	%REC 87.2	LowLimit 68.9	HighLimit 135	%RPD	RPDLimit	Qual
,								%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44 4.6		50.00 5.000	0	87.2 92.4	68.9 70	135			Qual
Diesel Range Organics (DRO) Surr: DNOP	44 4.6 SampT	10	50.00 5.000	0 Tes	87.2 92.4	68.9 70 PA Method	135 130			Qual
Diesel Range Organics (DRO) Surr: DNOP  Sample ID: LCS-62841	44 4.6 SampT	10 Type: <b>LC</b>	50.00 5.000	0 Tes	87.2 92.4 tCode: <b>E</b>	68.9 70 PA Method 1656	135 130	esel Range		Qual
Diesel Range Organics (DRO) Surr: DNOP  Sample ID: LCS-62841 Client ID: LCSS	44 4.6 SampT Batcl	10 Type: <b>LC</b>	50.00 5.000 SS 841 (28/2021	0 Tes	87.2 92.4 tCode: <b>E</b> RunNo: <b>8</b>	68.9 70 PA Method 1656	135 130 <b>8015M/D: Di</b> e	esel Range		Qual

Sample ID: MB-62841	SampT	SampType: MBLK TestCode: EPA Method 80					8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: <b>62</b> 8	841	F	RunNo: 8	1656				
Prep Date: 9/27/2021	Analysis D	ate: 9/	28/2021	9	SeqNo: 2	888241	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.8	70	130			

84.6

70

130

5.000

#### Qualifiers:

Surr: DNOP

- 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

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 23 of 25

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2109D89 06-Oct-21** 

Client: EOG
Project: Gill BGJ 1

Sample ID: mb-62834 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 62834 RunNo: 81634

Prep Date: 9/25/2021 Analysis Date: 9/28/2021 SeqNo: 2885069 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 1000 1000 104 70 130

Sample ID: Ics-62834 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 62834 RunNo: 81634

Prep Date: 9/25/2021 Analysis Date: 9/28/2021 SeqNo: 2885070 Units: mg/Kg

**RPDLimit** Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Qual Gasoline Range Organics (GRO) 5.0 25.00 O 117 78.6 131 Surr: BFB 1100 1000 114 70 130

Sample ID: mb-62835 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 62835 RunNo: 81634

Prep Date: 9/26/2021 Analysis Date: 9/29/2021 SeqNo: 2885093 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 1100 1000 110 70 130

Sample ID: Ics-62835 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 62835 RunNo: 81634

Prep Date: 9/26/2021 Analysis Date: 9/29/2021 SeqNo: 2885094 Units: mg/Kg

SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 28 5.0 25.00 111 78.6 131 n Surr: BFB 1200 1000 120 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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 24 of 25

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2109D89** 

06-Oct-21

Client: EOG
Project: Gill BGJ 1

Sample ID: mb-62834 Client ID: PBS	•	Гуре: <b>МЕ</b> h ID: <b>62</b> 8			tCode: E		8021B: Vola	tiles		
Prep Date: 9/25/2021		Analysis Date: 9/28/2021 SeqNo: 2885119 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		89.8	70	130			
0 1 10 100 0001			_							

Sample ID: LCS-62834	Samp1	Гуре: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: <b>62</b> 8	834	F	RunNo: 8	1634				
Prep Date: 9/25/2021	Analysis D	Date: 9/	28/2021	8	SeqNo: 2	885120	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.1	80	120			
Toluene	0.99	0.050	1.000	0	98.7	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.5	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	70	130			

Sample ID: <b>mb-62835</b>	SampT	ype: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	n ID: <b>62</b> 8	835	F	RunNo: 8	1634				
Prep Date: 9/26/2021	Analysis D	Date: 9/	29/2021	8	SeqNo: 2	885143	Units: mg/K	(g		
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	0.96		1.000		96.0	70	130			

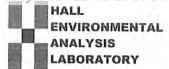
Sample ID: LCS-62835	SampT	ype: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: <b>62</b> 8	335	F	RunNo: 8	1634				
Prep Date: 9/26/2021	Analysis D	oate: <b>9/</b> 2	29/2021	8	SeqNo: 2	885144	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.0	80	120			
Toluene	0.99	0.050	1.000	0	98.9	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.1	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	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

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 25 of 25



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

## Sample Log-In Check List

Client Name: EOG	Work Order Numbe	r: 2109D89		RcptNo: 1
Received By: Cheyenne Cason	9/24/2021 7:25:00 AM	1	Chul	
Completed By: Isaiah Ortiz	9/24/2021 8:13:32 AN	1	Chul	2_6
Reviewed By: UPG 9/21	1/21			
Chain of Custody				
1. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present
2. How was the sample delivered?		Courier		
<u>Log In</u>				
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	y 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 broker	n?	Yes	No 🗸	# of preserved
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No 🗆	bottles checked for pH:
12. Are matrices correctly identified on Chain of 0	Custody?	Yes 🗸	No 🗆	Adjusted?
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 🗌	Checked by: THE 9-24-21
Special Handling (if applicable)				
15. Was client notified of all discrepancies with t	his order?	Yes	No 🗌	NA 🗹
Person Notified:	Date:			
By Whom:	Via:	_ eMail _	Phone Fax	In Person
Regarding:				
Client Instructions:				
16. Additional remarks:				
The state of the s	eal Intact Seal No S	Seal Date	Signed By	

ENTAL Paris	OCD:			10:	28:1	8 AM	1																	Page Swell 3	e 123 (	
HALL ENVIRONMENTAL ANALYSIS LABORATOR	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	Þ	os '	bO⁴¹	Σ80 (1. )ΣΣ8 , <sub>s</sub> ΟΙ	8/80 604; 60 8 or 8 8 , 10	ebication of the state of the s	estices of the section of the sectio	8081 Pa PAHs b RCRA 8 (C) F, E 8250 (V 8270 (S	) >												CC: M. Peppin D.	1	1900 4 July Con cours 912419 0725 Wirect 13:11 EOG
		4								TM	X3T8	>											-	Remarks:	Ť.	DIC &
5 Day	1#					SWS		oN □		+0-1=0.9 (°C)	HEAL No. 9	100	200	500	1700	900	900	100	800	500	010	110	210	Pate Time		9/24/4 0725
ime:	367	)	03278	i	Jel.	ر	47	⅓ Yes		roluding CF): 0.8	Preservative Type	105	/							/	/	_		Via:	Via:	course 9
I urn-Around Time:	Project Name:	7	Project #: - 3 \ E - €	Oroio A Aorioa	rioject Maliagel	Single	Sampler: M	On Ice:	# of Coolers: (	Cooler Temp(including CF): 0.8+0.1	Container Type and #													Received by:	Received by:	Cmc co
ord						alidation)						-0	Į,	6	O	11,	7	Ó	).	Ó	VI.	ō	0	1		
Chain-of-Custody Record E 下oら Acsources						☐ Level 4 (Full Validation)	☐ Az Compliance				Sample Name	BH31-01	10-1648	10-18H8	BHaloa	BH21-02	BHA1-02	BH31-03	BHQLO3	BHalok	13H21-04	BHALOY	BH31-05	Jan	ed by:	L.
マ マ マ マ マ							0.00				Matrix	1.08	_											Relihquished	Relinquished by:	77.77
FOG F	7	Malling Address.	#	omoil or Eac#:	OA/OC Package.	rachage	itation:	□ NELAC	(Type)		Time		8:05	8:10	8:30	8,35	8:30	8,40	3:45	8:55	0016	91,05	9:15	Time:	Time:	25/21/100
Client:	S. S	Mailing	Phone #:	olicado	OA/OC	☐ Standard	Accreditation:	□ NEL			Date	9/33	•											Date:	Date:	0/60

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109	Fax 505-345-4107	s s, NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> (Present/Absent)	TPH:8015D(G) 8081 Pesticide PAHs by 8310 RCRA 8 Metal CDF, Br, NO					\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Time: Relinquished by: Received by: Via: Date Time Remarks: C., M. P. P. D. W.
Turn-Around Time: 50ay	Project #: 03278	Project Manager:  Dennis William?  Sampler: MJP On Ice: A Yes D No	# of Coolers: ( Cooler Temp(including cF): Ø. \$740.1 = 0.9 (°C)  Container Preservative Type Type		SIO	010 C10	5100	120	Received by: Via: Date Time Received by: Via: Date Time  This serves as notice of this
Client: EOG Presources  Client: EOG Presources  Chase Stile	12/15/3	e:  ☐ Level 4 (Full Validation)  ☐ Az Compliance  ☐ Other	Time Matrix Sample Name	973 9:30 SO: 18H31-05 05:9	8H31-06 1		10.40 BHA1-01		Date: Time: Relinquished by:  Date: Time: Relinquished by:  Ine: Relinquished by:  Inecessary, samples submitted to Hall Environmental may be subco



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

October 29, 2021

Dennis Williams
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX:

RE: Gill BGJ 1 OrderNo.: 2110611

#### Dear Dennis Williams:

Hall Environmental Analysis Laboratory received 16 sample(s) on 10/13/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-01 2.5'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 11:00:00 AM

 Lab ID:
 2110611-001
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batc	:h
EPA METHOD 300.0: ANIONS					Analyst: <b>VP</b>	
Chloride	74	59	mg/Kg	20	10/19/2021 8:18:00 AM 6338	34
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB	
Diesel Range Organics (DRO)	ND	8.5	mg/Kg	1	10/15/2021 3:00:19 PM 6328	88
Motor Oil Range Organics (MRO)	ND	43	mg/Kg	1	10/15/2021 3:00:19 PM 6328	88
Surr: DNOP	123	70-130	%Rec	1	10/15/2021 3:00:19 PM 6328	88
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB	j.
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/16/2021 11:56:12 AM 6327	'8
Surr: BFB	108	70-130	%Rec	1	10/16/2021 11:56:12 AM 6327	'8
EPA METHOD 8021B: VOLATILES					Analyst: NSB	}
Benzene	ND	0.025	mg/Kg	1	10/16/2021 11:56:12 AM 6327	'8
Toluene	ND	0.050	mg/Kg	1	10/16/2021 11:56:12 AM 6327	'8
Ethylbenzene	ND	0.050	mg/Kg	1	10/16/2021 11:56:12 AM 6327	'8
Xylenes, Total	ND	0.099	mg/Kg	1	10/16/2021 11:56:12 AM 6327	'8
Surr: 4-Bromofluorobenzene	93.0	70-130	%Rec	1	10/16/2021 11:56:12 AM 6327	'8

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-02 3'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 11:15:00 AM

 Lab ID:
 2110611-002
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	VP
Chloride	330	60	mg/Kg	20	10/19/2021 8:55:13 AM	63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	SB
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	10/15/2021 3:11:15 PM	63288
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	10/15/2021 3:11:15 PM	63288
Surr: DNOP	73.1	70-130	%Rec	1	10/15/2021 3:11:15 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/16/2021 12:19:47 PN	A 63278
Surr: BFB	110	70-130	%Rec	1	10/16/2021 12:19:47 PN	A 63278
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	10/16/2021 12:19:47 PN	A 63278
Toluene	ND	0.047	mg/Kg	1	10/16/2021 12:19:47 PN	A 63278
Ethylbenzene	ND	0.047	mg/Kg	1	10/16/2021 12:19:47 PN	A 63278
Xylenes, Total	ND	0.094	mg/Kg	1	10/16/2021 12:19:47 PN	A 63278
Surr: 4-Bromofluorobenzene	94.9	70-130	%Rec	1	10/16/2021 12:19:47 PN	A 63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT: EOG** Client Sample ID: BH21-04 4'

Gill BGJ 1 Project: Collection Date: 10/11/2021 12:30:00 PM 2110611-004 Lab ID: Matrix: SOIL Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	890	60		mg/Kg	20	10/19/2021 9:07:38 AM	63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	SB
Diesel Range Organics (DRO)	620	9.0		mg/Kg	1	10/15/2021 3:22:12 PM	63288
Motor Oil Range Organics (MRO)	58	45		mg/Kg	1	10/15/2021 3:22:12 PM	63288
Surr: DNOP	94.8	70-130		%Rec	1	10/15/2021 3:22:12 PM	63288
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	1700	93		mg/Kg	20	10/18/2021 10:28:43 AM	A 63278
Surr: BFB	291	70-130	S	%Rec	20	10/18/2021 10:28:43 AM	A 63278
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	10/16/2021 1:30:05 PM	63278
Toluene	1.6	0.046		mg/Kg	1	10/16/2021 1:30:05 PM	63278
Ethylbenzene	4.6	0.93		mg/Kg	20	10/18/2021 10:28:43 AM	A 63278
Xylenes, Total	40	1.9		mg/Kg	20	10/18/2021 10:28:43 AM	A 63278
Surr: 4-Bromofluorobenzene	457	70-130	S	%Rec	1	10/16/2021 1:30:05 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

Page 3 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT: EOG** Client Sample ID: BH21-04 6.5'

Gill BGJ 1 Project: Collection Date: 10/11/2021 12:45:00 PM 2110611-005 Lab ID: Matrix: SOIL Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	VP
Chloride	330	60	mg/Kg	20	10/19/2021 9:44:52 AM	63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	SB
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/15/2021 3:43:46 PM	63288
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/15/2021 3:43:46 PM	63288
Surr: DNOP	112	70-130	%Rec	1	10/15/2021 3:43:46 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/18/2021 10:52:20 AM	1 63278
Surr: BFB	116	70-130	%Rec	1	10/18/2021 10:52:20 AM	1 63278
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	10/16/2021 1:53:26 PM	63278
Toluene	ND	0.047	mg/Kg	1	10/16/2021 1:53:26 PM	63278
Ethylbenzene	ND	0.047	mg/Kg	1	10/16/2021 1:53:26 PM	63278
Xylenes, Total	ND	0.095	mg/Kg	1	10/16/2021 1:53:26 PM	63278
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	10/16/2021 1:53:26 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

Page 4 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-09 0'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 1:30:00 PM

 Lab ID:
 2110611-006
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	66	60	mg/Kg	20	10/19/2021 9:57:16 AM	63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	SB
Diesel Range Organics (DRO)	100	9.3	mg/Kg	1	10/18/2021 1:17:53 PM	63288
Motor Oil Range Organics (MRO)	85	46	mg/Kg	1	10/18/2021 1:17:53 PM	63288
Surr: DNOP	92.1	70-130	%Rec	1	10/18/2021 1:17:53 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/16/2021 2:16:43 PM	63278
Surr: BFB	120	70-130	%Rec	1	10/16/2021 2:16:43 PM	63278
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	10/16/2021 2:16:43 PM	63278
Toluene	ND	0.049	mg/Kg	1	10/16/2021 2:16:43 PM	63278
Ethylbenzene	ND	0.049	mg/Kg	1	10/16/2021 2:16:43 PM	63278
Xylenes, Total	ND	0.099	mg/Kg	1	10/16/2021 2:16:43 PM	63278
Surr: 4-Bromofluorobenzene	94.3	70-130	%Rec	1	10/16/2021 2:16:43 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-09 1'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 1:35:00 PM

 Lab ID:
 2110611-007
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	: VP
Chloride	87	60	mg/Kg	20	10/19/2021 10:09:40 AM	A 63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	SB
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	10/15/2021 4:05:35 PM	63288
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	10/15/2021 4:05:35 PM	63288
Surr: DNOP	113	70-130	%Rec	1	10/15/2021 4:05:35 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/16/2021 2:39:55 PM	63278
Surr: BFB	104	70-130	%Rec	1	10/16/2021 2:39:55 PM	63278
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	10/16/2021 2:39:55 PM	63278
Toluene	ND	0.048	mg/Kg	1	10/16/2021 2:39:55 PM	63278
Ethylbenzene	ND	0.048	mg/Kg	1	10/16/2021 2:39:55 PM	63278
Xylenes, Total	ND	0.097	mg/Kg	1	10/16/2021 2:39:55 PM	63278
Surr: 4-Bromofluorobenzene	87.1	70-130	%Rec	1	10/16/2021 2:39:55 PM	63278

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-11 0'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 2:30:00 PM

 Lab ID:
 2110611-009
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	61		mg/Kg	20	10/19/2021 10:22:04 Al	M 63384
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: SB
Diesel Range Organics (DRO)	33	9.4		mg/Kg	1	10/19/2021 4:29:15 PM	63288
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/19/2021 4:29:15 PM	63288
Surr: DNOP	131	70-130	S	%Rec	1	10/19/2021 4:29:15 PM	63288
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/16/2021 3:03:10 PM	63278
Surr: BFB	107	70-130		%Rec	1	10/16/2021 3:03:10 PM	63278
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	10/16/2021 3:03:10 PM	63278
Toluene	ND	0.048		mg/Kg	1	10/16/2021 3:03:10 PM	63278
Ethylbenzene	ND	0.048		mg/Kg	1	10/16/2021 3:03:10 PM	63278
Xylenes, Total	ND	0.096		mg/Kg	1	10/16/2021 3:03:10 PM	63278
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	10/16/2021 3:03:10 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-11 1'

 Project:
 Gill BGJ 1
 Collection Date: 10/11/2021 2:35:00 PM

 Lab ID:
 2110611-010
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	68	60		mg/Kg	20	10/19/2021 10:34:28 AM	M 63384
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/15/2021 4:27:20 PM	63288
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/15/2021 4:27:20 PM	63288
Surr: DNOP	133	70-130	S	%Rec	1	10/15/2021 4:27:20 PM	63288
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/16/2021 3:26:25 PM	63278
Surr: BFB	107	70-130		%Rec	1	10/16/2021 3:26:25 PM	63278
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	10/16/2021 3:26:25 PM	63278
Toluene	ND	0.048		mg/Kg	1	10/16/2021 3:26:25 PM	63278
Ethylbenzene	ND	0.048		mg/Kg	1	10/16/2021 3:26:25 PM	63278
Xylenes, Total	ND	0.097		mg/Kg	1	10/16/2021 3:26:25 PM	63278
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	10/16/2021 3:26:25 PM	63278

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-12 0'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 9:30:00 AM

 Lab ID:
 2110611-011
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	82	59	mg/Kg	20	10/19/2021 10:46:53 AM	Л 63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	10/15/2021 4:38:14 PM	63288
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/15/2021 4:38:14 PM	63288
Surr: DNOP	114	70-130	%Rec	1	10/15/2021 4:38:14 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/16/2021 3:50:05 PM	63278
Surr: BFB	106	70-130	%Rec	1	10/16/2021 3:50:05 PM	63278
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	10/16/2021 3:50:05 PM	63278
Toluene	ND	0.047	mg/Kg	1	10/16/2021 3:50:05 PM	63278
Ethylbenzene	ND	0.047	mg/Kg	1	10/16/2021 3:50:05 PM	63278
Xylenes, Total	ND	0.094	mg/Kg	1	10/16/2021 3:50:05 PM	63278
Surr: 4-Bromofluorobenzene	89.5	70-130	%Rec	1	10/16/2021 3:50:05 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 9 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-12 2'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 9:40:00 AM

 Lab ID:
 2110611-012
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed Bate	ch
EPA METHOD 300.0: ANIONS						Analyst: <b>VP</b>	
Chloride	140	60		mg/Kg	20	10/19/2021 10:59:17 AM 6338	84
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst: SB	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/15/2021 4:49:00 PM 6328	.88
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/15/2021 4:49:00 PM 6328	88
Surr: DNOP	170	70-130	S	%Rec	1	10/15/2021 4:49:00 PM 6328	88
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSE	В
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/16/2021 4:13:38 PM 6327	78
Surr: BFB	106	70-130		%Rec	1	10/16/2021 4:13:38 PM 6327	78
EPA METHOD 8021B: VOLATILES						Analyst: NSE	В
Benzene	ND	0.024		mg/Kg	1	10/16/2021 4:13:38 PM 6327	78
Toluene	ND	0.048		mg/Kg	1	10/16/2021 4:13:38 PM 6323	78
Ethylbenzene	ND	0.048		mg/Kg	1	10/16/2021 4:13:38 PM 6323	78
Xylenes, Total	ND	0.096		mg/Kg	1	10/16/2021 4:13:38 PM 6327	78
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	10/16/2021 4:13:38 PM 6327	78

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 10 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-14 0'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 10:00:00 AM

 Lab ID:
 2110611-013
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	73	60	mg/Kg	20	10/19/2021 11:11:41 AM	Л 63384
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	SB
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	10/15/2021 4:59:50 PM	63288
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	10/15/2021 4:59:50 PM	63288
Surr: DNOP	75.9	70-130	%Rec	1	10/15/2021 4:59:50 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/16/2021 4:36:57 PM	63278
Surr: BFB	103	70-130	%Rec	1	10/16/2021 4:36:57 PM	63278
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	10/16/2021 4:36:57 PM	63278
Toluene	ND	0.050	mg/Kg	1	10/16/2021 4:36:57 PM	63278
Ethylbenzene	ND	0.050	mg/Kg	1	10/16/2021 4:36:57 PM	63278
Xylenes, Total	ND	0.099	mg/Kg	1	10/16/2021 4:36:57 PM	63278
Surr: 4-Bromofluorobenzene	87.1	70-130	%Rec	1	10/16/2021 4:36:57 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 11 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-14 2'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 10:15:00 AM

 Lab ID:
 2110611-014
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	150	60		mg/Kg	20	10/19/2021 11:24:05 AM	M 63384
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/15/2021 5:10:37 PM	63288
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/15/2021 5:10:37 PM	63288
Surr: DNOP	135	70-130	S	%Rec	1	10/15/2021 5:10:37 PM	63288
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/16/2021 5:00:14 PM	63278
Surr: BFB	107	70-130		%Rec	1	10/16/2021 5:00:14 PM	63278
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	10/16/2021 5:00:14 PM	63278
Toluene	ND	0.048		mg/Kg	1	10/16/2021 5:00:14 PM	63278
Ethylbenzene	ND	0.048		mg/Kg	1	10/16/2021 5:00:14 PM	63278
Xylenes, Total	ND	0.096		mg/Kg	1	10/16/2021 5:00:14 PM	63278
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	10/16/2021 5:00:14 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 12 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-15 0'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 11:30:00 AM

 Lab ID:
 2110611-015
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	250	60	mg/Kg	20	10/19/2021 11:36:30 AM	M 63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/15/2021 5:21:23 PM	63288
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/15/2021 5:21:23 PM	63288
Surr: DNOP	82.1	70-130	%Rec	1	10/15/2021 5:21:23 PM	63288
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/16/2021 5:46:43 PM	63278
Surr: BFB	108	70-130	%Rec	1	10/16/2021 5:46:43 PM	63278
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	10/16/2021 5:46:43 PM	63278
Toluene	ND	0.049	mg/Kg	1	10/16/2021 5:46:43 PM	63278
Ethylbenzene	ND	0.049	mg/Kg	1	10/16/2021 5:46:43 PM	63278
Xylenes, Total	ND	0.097	mg/Kg	1	10/16/2021 5:46:43 PM	63278
Surr: 4-Bromofluorobenzene	93.2	70-130	%Rec	1	10/16/2021 5:46:43 PM	63278

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 13 of 20

Date Reported: 10/29/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-15 2'

 Project:
 Gill BGJ 1
 Collection Date: 10/12/2021 11:40:00 AM

 Lab ID:
 2110611-016
 Matrix: SOIL
 Received Date: 10/13/2021 7:20:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	460	59	mg/Kg	20	10/19/2021 12:13:42 PM	Л 63384
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	SB
Diesel Range Organics (DRO)	27	9.8	mg/Kg	1	10/15/2021 7:41:03 PM	63319
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/15/2021 7:41:03 PM	63319
Surr: DNOP	109	70-130	%Rec	1	10/15/2021 7:41:03 PM	63319
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/18/2021 9:48:12 PM	63285
Surr: BFB	109	70-130	%Rec	1	10/18/2021 9:48:12 PM	63285
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	10/18/2021 9:48:12 PM	63285
Toluene	ND	0.049	mg/Kg	1	10/18/2021 9:48:12 PM	63285
Ethylbenzene	ND	0.049	mg/Kg	1	10/18/2021 9:48:12 PM	63285
Xylenes, Total	ND	0.098	mg/Kg	1	10/18/2021 9:48:12 PM	63285
Surr: 4-Bromofluorobenzene	91.1	70-130	%Rec	1	10/18/2021 9:48:12 PM	63285

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 14 of 20

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2110611** 

29-Oct-21

Client: EOG
Project: Gill BGJ 1

Sample ID: MB-63384 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 63384 RunNo: 82148

Prep Date: 10/19/2021 Analysis Date: 10/19/2021 SeqNo: 2911697 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-63384 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 63384 RunNo: 82148

Prep Date: 10/19/2021 Analysis Date: 10/19/2021 SeqNo: 2911698 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 92.8 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 range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 15 of 20

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2110611** 

29-Oct-21

Client: EOG
Project: Gill BGJ 1

Sample ID: LCS-63288	SampType: L	CS	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 63	h ID: <b>63288</b> RunNo: <b>82083</b>							
Prep Date: 10/14/2021	Analysis Date: 1	0/15/2021	S	SeqNo: <b>29</b>	07358	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62 10	50.00	0	124	68.9	135			
Surr: DNOP	6.3	5.000		126	70	130			
Sample ID: <b>MB-63288</b>	SampType: M	BLK	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 63	3288	F	RunNo: <b>82</b>	083				
Prep Date: 10/14/2021	Analysis Date: 1	0/15/2021	9	SeqNo: <b>29</b>	07359	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Motor Oil Range Organics (MRO)	ND 50			404	70	400			
Surr: DNOP	10	10.00		101	70	130			
Sample ID: LCS-63319	SampType: <b>L</b>	pType: LCS TestCode: EPA Method 8				l 8015M/D: Diesel Range Organics			
Client ID: LCSS	Batch ID: 6:	3319	F	RunNo: <b>82</b>	083				
Prep Date: 10/14/2021	Analysis Date: 1	0/15/2021	\$	SeqNo: <b>29</b>	09090	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50 10		0	99.8	68.9	135			
Surr: DNOP	5.8	5.000		115	70	130			
Sample ID: <b>MB-63319</b>	SampType: <b>M</b>	BLK	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 63	3319	F	RunNo: <b>82</b>	083				
Prep Date: 10/14/2021	Analysis Date: 1	0/15/2021	9	SeqNo: <b>29</b>	09091	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10	)							
Motor Oil Range Organics (MRO)	ND 50								
Surr: DNOP	12	10.00		119	70	130			
Sample ID: <b>MB-63472</b>	SampType: M	BLK	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 63	3472	F	RunNo: <b>82</b>	268				
Prep Date: 10/21/2021	Analysis Date: 1	0/22/2021	5	SeqNo: 29	16562	Units: %Red	;		
1			SPK Ref Val				%RPD	RPDLimit	Qual

#### Qualifiers:

Surr: DNOP

- 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 Quantitative Limit

B Analyte detected in the associated Method Blank

93.5

70

130

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

10.00

Page 16 of 20

9.3

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 2110611

29-Oct-21

**Client: EOG Project:** Gill BGJ 1

Sample ID: LCS-63472 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 63472 RunNo: 82268

Prep Date: 10/21/2021 Analysis Date: 10/22/2021 SeqNo: 2916563 Units: %Rec

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

Surr: DNOP 4.6 5.000 92 4 70 130

Sample ID: MB-63472 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 82270 Client ID: PBS Batch ID: 63472

Prep Date: 10/21/2021 Analysis Date: 10/22/2021 SeqNo: 2916723

Units: %Rec

SPK value SPK Ref Val %REC %RPD Analyte Result PQL LowLimit HighLimit **RPDLimit** Qual Surr: DNOP 9.2 10.00 91.9 130

Sample ID: LCS-63439 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 63439

Prep Date: 10/20/2021 Analysis Date: 10/22/2021 SeqNo: 2918149 Units: %Rec

Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDI imit Qual

Surr: DNOP 5.000 108 70

Sample ID: MB-63472 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 63472 RunNo: 82269

Analysis Date: 10/22/2021 Prep Date: 10/21/2021 SeqNo: 2918150 Units: %Rec

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

Surr: DNOP 9.3 10.00 93 1 70 130

TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID: MB-63472 SampType: MBLK

Client ID: PBS Batch ID: 63472 RunNo: 82321

Prep Date: 10/21/2021 Analysis Date: 10/25/2021 SegNo: 2918845 Units: %Rec

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

Surr: DNOP 10.00 70 8.8 88.1 130

Sample ID: MB-63618 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 63618 RunNo: 82385

Prep Date: 10/27/2021 Analysis Date: 10/27/2021 SeqNo: 2922649 Units: %Rec

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

Surr: DNOP 10.00 70

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 17 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2110611 29-Oct-21

Qual

WO#:

**RPDLimit** 

Client: EOG
Project: Gill BGJ 1

Analyte

Sample ID: LCS-63618 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

SPK value SPK Ref Val

%REC

LowLimit

HighLimit

%RPD

Client ID: LCSS Batch ID: 63618 RunNo: 82385

Prep Date: 10/27/2021 Analysis Date: 10/27/2021 SeqNo: 2922650 Units: %Rec

Surr: DNOP 4.7 5.000 93.2 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

PQL Practical Quanitative Limit

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 18 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2110611

WO#:

29-Oct-21

**Client:** EOG **Project:** Gill BGJ 1

Sample ID: mb-63278 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 63278 RunNo: 82076

Prep Date: 10/13/2021 Analysis Date: 10/15/2021 SeqNo: 2908287 Units: mq/Kq

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1000 1000 104 70 130

Sample ID: Ics-63278 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 63278 RunNo: 82076

Prep Date: 10/13/2021 Analysis Date: 10/15/2021 SeqNo: 2908288 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 O 104 78.6 131 Surr: BFB 1100 1000 113 70 130

Sample ID: mb-63285 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 63285 RunNo: 82119

Prep Date: 10/13/2021 Analysis Date: 10/19/2021 SeqNo: 2909641 Units: mg/Kg

Result SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte PQL HighLimit Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 107 70 130

Sample ID: Ics-63285 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 63285 RunNo: 82119

Prep Date: 10/13/2021 Analysis Date: 10/18/2021 SeqNo: 2909642 Units: mg/Kg

SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 29 5.0 25.00 115 78.6 131 Surr: BFB 1200 1000 125 70 130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 19 of 20

# Hall Environmental Analysis Laboratory, Inc.

WO#: **2110611 29-***Oct-21* 

Client: EOG
Project: Gill BGJ 1

Sample ID: <b>mb-63278</b>	Samp1	Гуре: <b>МЕ</b>	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles			
Client ID: PBS	Batc	h ID: <b>63</b>	278	F	RunNo: 8	2076					
Prep Date: 10/13/2021	Analysis [	Date: 10	)/15/2021	S	SeqNo: 2	908369	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		87.3	70	130				

Sample ID: LCS-63278	S	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Client ID: LCSS Batch ID: 63278				RunNo: 8	2076				
Prep Date: 10/13/2021	S	SeqNo: 29	908370	Units: mg/K	g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	84.3	80	120			
Toluene	0.87	0.050	1.000	0	86.9	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.9	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.5	80	120			
Surr: 4-Bromofluorobenzene	0.88		1.000		87.9	70	130			

Sample ID: mb-63285	ample ID: mb-63285 SampType: MBLK					TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch	n ID: <b>63</b> 2	285	R	RunNo: 8	2119						
Prep Date: 10/13/2021	Analysis D	ate: 10	/19/2021	S	SeqNo: 29	909690	Units: mg/K	g				
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		89.8	70	130					

Sample ID: LCS-63285	s	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	285	F	RunNo: 8	2119						
Prep Date: 10/13/2021	9	SeqNo: 2	909691	Units: mg/K	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.9	80	120			
Toluene	0.98	0.050	1.000	0	98.2	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.7	80	120			
Xylenes, Total	2.9 0.10 3.000			0	95.3	80	120			
Surr: 4-Bromofluorobenzene 0.90 1.000				90.2 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
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 20 of 20



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

# Sample Log-In Check List

Website: clients.hallenvironmental.com Client Name: **EOG** Work Order Number: 2110611 RcptNo: 1 Received By: Cheyenne Cason 10/13/2021 7:20:00 AM Completed By: 10/13/2021 9:07:34 AM Sean Livingston Reviewed By: 10/13/21 9:43 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  $\square$ 4. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 No 🗌 NA 🗌 Sample(s) in proper container(s)? Yes 🗸 No  $\square$ 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? No 🗸 Yes NA  $\square$ 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No 🗌 NA 🗸 Yes 10. Were any sample containers received broken? No 🗸 # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗸 No 🗌 for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) 12. Are matrices correctly identified on Chain of Custody? Adjusted? Yes 🗸 No 🗌 13. Is it clear what analyses were requested? Yes 🗸 No 🗌 14. Were all holding times able to be met? Checked by: No 🗌 Yes 🗸 (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes No 🗌 NA V 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	2.8	Good				

Recei	ved l	by C	OCD:	12/	6/202	3 10	0:28	:18 /	4 <i>M</i>	-					Г	Г									П	-	Page	147 of	7255
	HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis Request	†O9	s'ac sMi sMi s, s	DG :	7 DF 1082 1082 1082 1083	OF 502 3 3, 1	od :  NO3  NO3  NO3  NO3	astide etho y 83 yr, 1 oAO	BTEX / 8081 P6 8081 P6 PAHs b RCRA 8 CJ, F, E 8250 (V 8250 (S	)?	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	OLEASEHOLO	>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			PLEASEHOLD		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Remarks: CC: M. Puppin	シンドニンナッと	f 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.
-		☑ Standard □ Rush	Project Name:	200	Project #:	Q-1- (0 & -C)		Denzis Williams		MTP	On Ice: W Yes		Cooler Temp(including cF): 2, 9-6,1 = 2.8 (°C)	Container Preservative HEAL No.	100	700			500	<i>√</i> 200	√ <del>2</del> ∞	1 YCC	7	5)9			Via: Date Time VOLO 1400	iby: Via: V	contracted to other accredited laboratories. This serves as notice of this p
Chain-of-Clietony Poord	Client:	なせるへのの	ナトレ	Mailing Address:		Phone #:	email or Fax#:	ige:	☐ Standard ☐ Level 4 (Full Validation)	on: 🗆 Az Compliance	□ Other	□ EDD (Type)		Date Time Matrix Sample Name	10/11 11:00 50:1 BH21-01 2.5"		11:20   BH21-02 41	BH21-	12:45 BH21-04 6.5"	1:30 BH31-09 O'	BH21-09	1:40 BH21-09 01	BH21-11	1 3:35 BH21-11 11	- man		Time:  24   1400	Date: Time: Relinquished by:	If necessary, samples submitted to Hall Environmental may be subc

decerved by Och. 12/0/2020 1	0:28:18 AM			Page 148 of 255
NVIRONMENTAL SIS LABORATORY vironmental.com buquerque, NM 87109 Fax 505-345-4107 ysis Request	PAHs by 8310 or 8270SIMS  PCRA 8 Metals  R260 (VOA)  8270 (Semi-VOA)  Total Coliform (Present/Absent)			Time: Relinquished by: Via: Date Time Remarks: CC: M. Popin Time: Relinquished by: Via: Date Time Object Time Received by: Via: Date Time Object O
<b>⊢</b> v v 1awkir	EDB (Method 504.1)			To-contre
Tel. 5	TPH:8015D(GRO / DRO / MRO) 8081 Pesticides/8082 PCB's			rks:
	BTEX MTBE / TMB's (8021)	> / / / /	, , ,	Remarks:  Dica
1 Rush 1	ager:  is Williams  ATP  Weservative HEAL No. Type	10 201 500 610	910	Via: Date Time Fig. 19/2/14/00 Via: Date Time Fiew LOII3   24 O.720 Stocked laboratories. This serves as notice of this proceed the proceeding the procedure of this procedure.
Turn-Around Time:  (CStandard Project Name: Project #: Project #:	Project Manager:    Dennis   Manager:	707		Received by: Received by:  M. COU  ontracted to other 8
	alidation)	00000		al may be subco
Chain-of-Custody Record E C C / しん **  C - Sed + l-c ig Address:	☐ Level 4 (Full Validation) ☐ Az Compliance ☐ Other	Sol 1842 - 12 842 - 14 1842 - 14 1842 - 14	3HQ1-15	Relinquished by: Relinquished by: samples submitted to Hall Environmenta
Client: EOB AMailing Address:	email or Fax#:  QA/QC Package:   Standard  Accreditation:  NELAC  EDD (Type)	94:30 94:40 94:40 96:30 96:31	11:40	Date: Time: II Date: Time: II ONA (GOD



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

November 12, 2021

Dennis Williams
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX

RE: Gill BGJ 1 OrderNo.: 2111430

### Dear Dennis Williams:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/9/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 11/12/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-16 0-0.5

 Project:
 Gill BGJ 1
 Collection Date: 11/6/2021 12:00:00 PM

 Lab ID:
 2111430-001
 Matrix: SOIL
 Received Date: 11/9/2021 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: LRN
Chloride	ND	61	mg/Kg	20	11/11/2021 9:46:52 AM 63887
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	11/10/2021 12:06:53 PM 63848
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/10/2021 12:06:53 PM 63848
Surr: DNOP	80.5	70-130	%Rec	1	11/10/2021 12:06:53 PM 63848
EPA METHOD 8015D: GASOLINE RANGE					Analyst: mb
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/10/2021 6:53:00 PM 63831
Surr: BFB	100	70-130	%Rec	1	11/10/2021 6:53:00 PM 63831
EPA METHOD 8021B: VOLATILES					Analyst: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	11/10/2021 6:53:00 PM 63831
Toluene	ND	0.048	mg/Kg	1	11/10/2021 6:53:00 PM 63831
Ethylbenzene	ND	0.048	mg/Kg	1	11/10/2021 6:53:00 PM 63831
Xylenes, Total	ND	0.095	mg/Kg	1	11/10/2021 6:53:00 PM 63831
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	11/10/2021 6:53:00 PM 63831

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 7

Date Reported: 11/12/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-17 0-0.5

 Project:
 Gill BGJ 1
 Collection Date: 11/6/2021 12:15:00 PM

 Lab ID:
 2111430-002
 Matrix: SOIL
 Received Date: 11/9/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: LRN
Chloride	ND	60		mg/Kg	20	11/11/2021 9:59:17 AM	63887
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/10/2021 12:30:57 PI	M 63848
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/10/2021 12:30:57 Pf	M 63848
Surr: DNOP	64.8	70-130	S	%Rec	1	11/10/2021 12:30:57 PI	M 63848
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/10/2021 7:13:00 PM	63831
Surr: BFB	104	70-130		%Rec	1	11/10/2021 7:13:00 PM	63831
EPA METHOD 8021B: VOLATILES						Analyst	: mb
Benzene	ND	0.024		mg/Kg	1	11/10/2021 7:13:00 PM	63831
Toluene	ND	0.048		mg/Kg	1	11/10/2021 7:13:00 PM	63831
Ethylbenzene	ND	0.048		mg/Kg	1	11/10/2021 7:13:00 PM	63831
Xylenes, Total	ND	0.096		mg/Kg	1	11/10/2021 7:13:00 PM	63831
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	11/10/2021 7:13:00 PM	63831

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 7

Date Reported: 11/12/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BH21-18 0-0.5

 Project:
 Gill BGJ 1
 Collection Date: 11/6/2021 12:30:00 PM

 Lab ID:
 2111430-003
 Matrix: SOIL
 Received Date: 11/9/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS						Analyst: <b>LRN</b>
Chloride	220	60		mg/Kg	20	11/11/2021 10:11:41 AM 63887
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst: SB
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/10/2021 12:55:26 PM 63848
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/10/2021 12:55:26 PM 63848
Surr: DNOP	51.2	70-130	S	%Rec	1	11/10/2021 12:55:26 PM 63848
EPA METHOD 8015D: GASOLINE RANGE						Analyst: mb
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/10/2021 7:32:00 PM 63831
Surr: BFB	102	70-130		%Rec	1	11/10/2021 7:32:00 PM 63831
EPA METHOD 8021B: VOLATILES						Analyst: mb
Benzene	ND	0.024		mg/Kg	1	11/10/2021 7:32:00 PM 63831
Toluene	ND	0.047		mg/Kg	1	11/10/2021 7:32:00 PM 63831
Ethylbenzene	ND	0.047		mg/Kg	1	11/10/2021 7:32:00 PM 63831
Xylenes, Total	ND	0.095		mg/Kg	1	11/10/2021 7:32:00 PM 63831
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/10/2021 7:32:00 PM 63831

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2111430** *12-Nov-21* 

Client: EOG
Project: Gill BGJ 1

Sample ID: MB-63887 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 63887 RunNo: 82780

Prep Date: 11/11/2021 Analysis Date: 11/11/2021 SeqNo: 2939352 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-63887 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 63887 RunNo: 82780

Prep Date: 11/11/2021 Analysis Date: 11/11/2021 SeqNo: 2939353 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 90.5 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 7

### Hall Environmental Analysis Laboratory, Inc.

WO#: 2111430 12-Nov-21

**Client: EOG Project:** Gill BGJ 1

Sample ID: LCS-63848 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 63848 RunNo: 82730 Prep Date: 11/9/2021 Analysis Date: 11/10/2021 SeqNo: 2938565 Units: mg/Kg PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 10 44 50.00 0 88.0 68.9 135 Surr: DNOP 4.8 5.000 96.4 130

Sample ID: MB-63848 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MBLK Client ID: PBS Batch ID: 63848 RunNo: 82730 Prep Date: 11/9/2021 Analysis Date: 11/10/2021 SeqNo: 2938566 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Diesei Range Organics (DRO)	ND	10				
Motor Oil Range Organics (MRO)	ND	50				
Surr: DNOP	11		10.00	11	0 70	130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 5 of 7

## Hall Environmental Analysis Laboratory, Inc.

2111430 12-Nov-21

WO#:

Client: EOG
Project: Gill BGJ 1

Surr: BFB

Sample ID: mb-63831 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 63831 RunNo: 82754

Prep Date: 11/9/2021 Analysis Date: 11/10/2021 SeqNo: 2937702 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 1000 1000 100 70 130

Sample ID: Ics-63831 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 63831 RunNo: 82754

1200

Prep Date: 11/9/2021 Analysis Date: 11/10/2021 SeqNo: 2937703 Units: mg/Kg

1000

Qual Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Gasoline Range Organics (GRO) 27 5.0 25.00 0 108 78.6 131

116

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 7

## Hall Environmental Analysis Laboratory, Inc.

1.1

WO#: **2111430** *12-Nov-21* 

Client: EOG
Project: Gill BGJ 1

Surr: 4-Bromofluorobenzene

Sample ID: mb-63831 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 63831 RunNo: 82754

Prep Date: 11/9/2021 Analysis Date: 11/10/2021 SeqNo: 2937731 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 1.0 1.000 104 70 130

1.000

Sample ID: Ics-63831	Samp	Гуре: <b>LC</b>	s	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batc	h ID: <b>63</b> 8	831	F	RunNo: 8							
Prep Date: 11/9/2021	Analysis [	Date: 11	I/10/2021	5	SeqNo: 2	937733	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.0	0.025	1.000	0	103	80	120					
Toluene	1.1	0.050	1.000	0	105	80	120					
Ethylbenzene	1.1	0.050	1.000	0	107	80	120					
Xvlenes Total	3.2	0.10	3 000	0	108	80	120					

70

130

107

### 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 7

Hall Environmental Analysis Laboratory 4901 Hawkins NE

Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Wahsita eliente hellemineren d'

# Sample Log-In Check List

Website: clients.hallenvironmental.com Client Name: EOG Work Order Number: 2111430 RcptNo: 1 Received By: Isaiah Ortiz 11/9/2021 8:00:00 AM Completed By: Tracy Casarrubias 11/9/2021 8:36:07 AM 11/9/4 Reviewed By: 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 V No 🗌 NA 🗌 4. Were all samples received at a temperature of >0° C to 6.0°C No T Yes V NA T Sample(s) in proper container(s)? Yes V 6. Sufficient sample volume for indicated test(s)? Yes V No 7. Are samples (except VOA and ONG) properly preserved? Yes V No 8. Was preservative added to bottles? Yes 🗌 No V NA 🗍 Received at least 1 vial with headspace <1/4" for AQ VOA?</li> Yes NA V No 🗌 10. Were any sample containers received broken? Yes 🗌 No V # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗸 No L for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) 12. Are matrices correctly identified on Chain of Custody? Adjusted? ~ No 🗍 Yes 13. Is it clear what analyses were requested? Yes 🗸 No 🗌 Checked by: The 11/0/21 14. Were all holding times able to be met? Yes V No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes 🗌 NA V Person Notified Date: By Whom: Via: eMail Phone Fax Regarding: Client Instructions: Additional remarks: 17. Cooler Information Cooler No. Temp °C Condition Seal Intact Seal No Seal Date Signed By

Page 1 of 1

3.3

Good

Not Present

AF	D N		0:28:18 AM	1											Page	158 of 2
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AL	www.h	Tel. 505-345-3975	SWIS	0728 7			PAHs I								す	-0
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		Tel. 50					1808								127	2
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Rush_	1# 12	94	er: Usilliams	CN.	2	Cooler Temp(including CF): 3.4 -0.1 ((r.f.) 3.3 (°C)	HEAL No.	100	200	003					Pate Time	Date Time
<u> </u>	3	132	iger:	J C	-	(including CF)	Preservative Type	)c.	1						Via:	Via:
✓ Standard	Project Name:	Project #: 21E - 03278	Project Manager:	Sampler: M	# of Coolers:	Cooler Temp	Container Type and #	1 34							Received by:	Received by:
מומ			lidation)					0.05	5.0.5	0-05					1	
EOG/Vertex	Settle		□ Level 4 (Full Validation)	☐ Az Compliance ☐ Other			Sample Name	BH31-16	BH21-17	BH21-18					, ad b	
ر ا ا	7			☐ Az Co☐ Other			Matrix	-ios		_					Relinquished by	Commodulished by:
EOG	Mailing Address:	#	email or Fax#: QA/QC Package: □ Standard	Accreditation:	□ EDD (Type)		Time	19:00	12:15	13.30					10	1900  900
Client:	Mailing	Phone #:	email or Fax QA/QC Packa □ Standard	Accreditati			Date	11/10							5	118



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

October 27, 2022

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

FAX:

RE: GIII BGJ 1 OrderNo.: 2210929

#### Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/19/2022 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

Anded

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/27/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-01 0-4'

 Project:
 GIll BGJ 1
 Collection Date: 10/17/2022 1:00:00 PM

 Lab ID:
 2210929-001
 Matrix: SOIL
 Received Date: 10/19/2022 7:40:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	84	15	mg/Kg	1	10/21/2022 11:37:42 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/21/2022 11:37:42 AM
Surr: DNOP	88.1	21-129	%Rec	1	10/21/2022 11:37:42 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/20/2022 8:39:28 AM
Surr: BFB	89.0	37.7-212	%Rec	1	10/20/2022 8:39:28 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	10/20/2022 8:39:28 AM
Toluene	ND	0.050	mg/Kg	1	10/20/2022 8:39:28 AM
Ethylbenzene	ND	0.050	mg/Kg	1	10/20/2022 8:39:28 AM
Xylenes, Total	ND	0.10	mg/Kg	1	10/20/2022 8:39:28 AM
Surr: 4-Bromofluorobenzene	95.5	70-130	%Rec	1	10/20/2022 8:39:28 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	210	61	mg/Kg	20	10/21/2022 3:08:37 AM

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

Qualifiers:

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

Page 1 of 8

Date Reported: 10/27/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-02 0-4'

 Project:
 GIll BGJ 1
 Collection Date: 10/17/2022 1:10:00 PM

 Lab ID:
 2210929-002
 Matrix: SOIL
 Received Date: 10/19/2022 7:40:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	10/21/2022 10:54:09 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	10/21/2022 10:54:09 AM
Surr: DNOP	76.1	21-129	%Rec	1	10/21/2022 10:54:09 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/20/2022 9:02:50 AM
Surr: BFB	93.0	37.7-212	%Rec	1	10/20/2022 9:02:50 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/20/2022 9:02:50 AM
Toluene	ND	0.049	mg/Kg	1	10/20/2022 9:02:50 AM
Ethylbenzene	ND	0.049	mg/Kg	1	10/20/2022 9:02:50 AM
Xylenes, Total	ND	0.098	mg/Kg	1	10/20/2022 9:02:50 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	10/20/2022 9:02:50 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	84	60	mg/Kg	20	10/21/2022 3:20:59 AM

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

Qualifiers:

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

Page 2 of 8

Date Reported: 10/27/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-03 0-4'

 Project:
 GIll BGJ 1
 Collection Date: 10/17/2022 1:20:00 PM

 Lab ID:
 2210929-003
 Matrix: SOIL
 Received Date: 10/19/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	10/21/2022 11:04:40 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/21/2022 11:04:40 AM
Surr: DNOP	88.9	21-129	%Rec	1	10/21/2022 11:04:40 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/20/2022 9:26:18 AM
Surr: BFB	94.2	37.7-212	%Rec	1	10/20/2022 9:26:18 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/20/2022 9:26:18 AM
Toluene	ND	0.048	mg/Kg	1	10/20/2022 9:26:18 AM
Ethylbenzene	ND	0.048	mg/Kg	1	10/20/2022 9:26:18 AM
Xylenes, Total	ND	0.096	mg/Kg	1	10/20/2022 9:26:18 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	10/20/2022 9:26:18 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	61	mg/Kg	20	10/21/2022 3:57:59 AM

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

Qualifiers:

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

Page 3 of 8

Date Reported: 10/27/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-04 0-4'

 Project:
 GIll BGJ 1
 Collection Date: 10/17/2022 1:40:00 PM

 Lab ID:
 2210929-004
 Matrix: SOIL
 Received Date: 10/19/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	57	14	mg/Kg	1	10/21/2022 11:15:15 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	10/21/2022 11:15:15 AM
Surr: DNOP	86.6	21-129	%Rec	1	10/21/2022 11:15:15 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/20/2022 9:49:57 AM
Surr: BFB	90.3	37.7-212	%Rec	1	10/20/2022 9:49:57 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/20/2022 9:49:57 AM
Toluene	ND	0.048	mg/Kg	1	10/20/2022 9:49:57 AM
Ethylbenzene	ND	0.048	mg/Kg	1	10/20/2022 9:49:57 AM
Xylenes, Total	ND	0.096	mg/Kg	1	10/20/2022 9:49:57 AM
Surr: 4-Bromofluorobenzene	97.2	70-130	%Rec	1	10/20/2022 9:49:57 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	120	60	mg/Kg	20	10/21/2022 9:27:52 AM

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

Qualifiers:

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

Page 4 of 8

### Hall Environmental Analysis Laboratory, Inc.

2210929 27-Oct-22

WO#:

**Client:** Vertex Resources Services, Inc.

**Project:** GIII BGJ 1

Chloride

Sample ID: MB-70971 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 70971 RunNo: 91958

Prep Date: 10/20/2022 Analysis Date: 10/20/2022 SeqNo: 3299575 Units: mg/Kg

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

ND 1.5 Chloride

Sample ID: LCS-70971 TestCode: EPA Method 300.0: Anions SampType: LCS

Client ID: LCSS Batch ID: 70971 RunNo: 91958

Prep Date: Analysis Date: 10/20/2022 SeqNo: 3299576 10/20/2022 Units: mg/Kg

Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Lowl imit Analyte 0

95.3

90

Sample ID: MB-70978 SampType: MBLK TestCode: EPA Method 300.0: Anions

15.00

Client ID: PBS Batch ID: 70978 RunNo: 92015

1.5

14

Prep Date: 10/21/2022 Analysis Date: 10/21/2022 SeqNo: 3301674 Units: mg/Kg

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

Chloride ND

Sample ID: LCS-70978 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 70978 RunNo: 92015

Prep Date: 10/21/2022 Analysis Date: 10/21/2022 SeqNo: 3301675 Units: mg/Kg

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

Chloride 1.5 15.00 96.6 110

#### Qualifiers:

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

Page 5 of 8

# Hall Environmental Analysis Laboratory, Inc.

WO#: **2210929 27-Oct-22** 

Client: Vertex Resources Services, Inc.

**Project:** GIII BGJ 1

Sample ID: LCS-70979	SampT	ype: <b>LC</b>	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: <b>70</b> 9	979	R	RunNo: 9	1980				
Prep Date: 10/21/2022	Analysis D	ate: 10	/21/2022	S	SeqNo: 3	300147	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	15	50.00	0	103	64.4	127		•	
Surr: DNOP	3.8		5 000		75.6	21	129			

Sample ID: <b>MB-70979</b>	SampT	ype: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	ID: <b>70</b> 9	979	F	tunNo: 9	1980				
Prep Date: 10/21/2022	Analysis D	ate: 10	/21/2022	8	SeqNo: 3	300148	Units: mg/K	(g		
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	6.9		10.00		69.0	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

Page 6 of 8

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2210929 27-Oct-22** 

Client: Vertex Resources Services, Inc.

**Project:** GIll BGJ 1

Sample ID: mb-70915 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 70915 RunNo: 91963

Prep Date: 10/19/2022 Analysis Date: 10/20/2022 SeqNo: 3298961 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 910 1000 91.1 37.7 212

Sample ID: Ics-70915 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 70915 RunNo: 91963

Prep Date: 10/19/2022 Analysis Date: 10/20/2022 SeqNo: 3298962 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 108 72.3 Gasoline Range Organics (GRO) 27 5.0 25.00 137 Surr: BFB 2000 1000 196 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

Page 7 of 8

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2210929** 

27-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** GIll BGJ 1

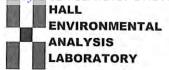
Sample ID: mb-70915 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 70915 RunNo: 91963 Prep Date: 10/19/2022 Analysis Date: 10/20/2022 SeqNo: 3299008 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual ND 0.025 Benzene Toluene ND 0.050 0.050 Ethylbenzene ND Xylenes, Total ND 0.10 1.000 97.9 130 Surr: 4-Bromofluorobenzene 0.98 70

Sample ID: LCS-70915	Sampl	Type: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: <b>70</b> 9	915	F	RunNo: 9	1963				
Prep Date: 10/19/2022	Analysis [	Date: 10	/20/2022	\$	SeqNo: 3	299009	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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

Page 8 of 8



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Website: www.hallenvironmental.com

Sample Log-In Check List Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Client Name:	Vertex Resources Services, Inc.	Work Order Num	ber: 221	0929			RcptN	o: 1
Received By:	Juan Rojas	10/19/2022 7:40:00	) AM		Hear	Eng.		
Completed By:	Tracy Casarrubias	10/19/2022 7:55:23	3 AM					
Reviewed By:	KPG 10	19.22						
Chain of Cust	ody							
1. Is Chain of Cu	stody complete?		Yes	V	No		Not Present	
2. How was the s	sample delivered?		Cou	rier				
Log In								
3. Was an attemp	ot made to cool the sampl	es?	Yes	V	No		NA 🗆	
4. Were all sampl	les received at a temperat	ture of >0° C to 6.0°C	Yes	V	No		NA 🗆	
5. Sample(s) in p	roper container(s)?		Yes	V	No			
6. Sufficient samp	ole volume for indicated te	st(s)?	Yes	V	No			
7. Are samples (e	xcept VOA and ONG) pro	perly preserved?	Yes	<b>V</b>	No			
8. Was preservati	ve added to bottles?		Yes		No	V	NA 🗆	
9. Received at lea	st 1 vial with headspace <	<1/4" for AQ VOA?	Yes		No		NA 🗸	
10. Were any sam	ple containers received br	roken?	Yes		No	V	# of preserved	
	k match bottle labels? ncies on chain of custody)		Yes	V	No		bottles checked for pH:	or >12 unless noted)
	rrectly identified on Chain		Yes	<b>V</b>	No		Adjusted?	or - 12 dilicos flotegy
	analyses were requested?		Yes	<b>V</b>				
	g times able to be met? stomer for authorization.)		Yes	A STATE OF	No		Checked by:	In what 2
	ng (if applicable)					1		
	fied of all discrepancies w	rith this order?	Yes		No		NA 🗹	
Person N	lotified:	Date:				_		
By Whon	n:	Via:	☐ eM	ail 🔲	Phone _	Fax	In Person	
Regardin	g:							
Client Ins	structions:							
16. Additional rem	arks:							
17. Cooler Inform	ation							
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal D	ate	Signed I	Ву		
1	2.6 Good	Yes						

Chain-of-Custody Record	Turn-Around Time:	HALL FNVTRONMENTAL
Vertix (EOG)	□ Standard Frush 49 how	YSTS I ABORATORY
	Project Name:	
Mailing Address: On Lille	GII BGJ #/	www.nailenvironmental.com 4901 Hawkins NE - Albuquerque NM 87109
		Eav 506 346 4407
	226-00123-07	Analysis Request
	Project Manager:	(1)
☐ Level 4 (Full Validation)	Michael Mobilit	
□ Az Compliance	Sampler	0R(8)
	On Ice:	\ (\rangle 08\rangle \)
	olers: (	O3; q 20 q 20 q 20
	Cooler Temp(including CF): 2-1+ (*) -2. ( (*C)	ATEMOTE SED (SED (SED (SED (SED (SED (SED (SED
Matrix Sample Name	Container Preservative HEAL No.	108:14 108:14 108:16 10
Soil WES 22-01 0-4"	ice	3 3 4 4 1 1 1 3
WES22-01 0-4"	,	
WES22-03 0-4"	003	
WES 22-04 0-4"	700	
witten	و ا	
Relinquished by:	Via: Date	direct bill 209



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

October 28, 2022

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

FAX

RE: Gill BGJ 1 OrderNo.: 2210B02

### Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/21/2022 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

# Analytical Report Lab Order 2210B02

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-05 0-4'

 Project:
 Gill BGJ 1
 Collection Date: 10/19/2022 1:15:00 PM

 Lab ID:
 2210B02-001
 Matrix: MEOH (SOIL)
 Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	53	15	mg/Kg	1	10/21/2022 1:47:37 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/21/2022 1:47:37 PM
Surr: DNOP	91.3	21-129	%Rec	1	10/21/2022 1:47:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	10/22/2022 3:44:23 AM
Surr: BFB	88.4	37.7-212	%Rec	1	10/22/2022 3:44:23 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.019	mg/Kg	1	10/22/2022 3:44:23 AM
Toluene	ND	0.039	mg/Kg	1	10/22/2022 3:44:23 AM
Ethylbenzene	ND	0.039	mg/Kg	1	10/22/2022 3:44:23 AM
Xylenes, Total	ND	0.077	mg/Kg	1	10/22/2022 3:44:23 AM
Surr: 4-Bromofluorobenzene	92.6	70-130	%Rec	1	10/22/2022 3:44:23 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JMT</b>
Chloride	320	60	mg/Kg	20	10/24/2022 5:20:23 PM

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

Qualifiers:

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

Page 1 of 6

# Analytical Report Lab Order 2210B02

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-07 0-4'

 Project:
 Gill BGJ 1
 Collection Date: 10/19/2022 1:20:00 PM

 Lab ID:
 2210B02-002
 Matrix: MEOH (SOIL)
 Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	10/21/2022 12:40:54 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/21/2022 12:40:54 PM
Surr: DNOP	86.0	21-129	%Rec	1	10/21/2022 12:40:54 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	10/22/2022 4:07:58 AM
Surr: BFB	87.6	37.7-212	%Rec	1	10/22/2022 4:07:58 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.020	mg/Kg	1	10/22/2022 4:07:58 AM
Toluene	ND	0.040	mg/Kg	1	10/22/2022 4:07:58 AM
Ethylbenzene	ND	0.040	mg/Kg	1	10/22/2022 4:07:58 AM
Xylenes, Total	ND	0.081	mg/Kg	1	10/22/2022 4:07:58 AM
Surr: 4-Bromofluorobenzene	92.2	70-130	%Rec	1	10/22/2022 4:07:58 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JMT</b>
Chloride	68	60	mg/Kg	20	10/24/2022 5:32:48 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$ 

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

Page 2 of 6

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210B02 28-Oct-22** 

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: MB-71027 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71027 RunNo: 92018

Prep Date: 10/24/2022 Analysis Date: 10/24/2022 SeqNo: 3302974 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-71027 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71027 RunNo: 92018

Prep Date: 10/24/2022 Analysis Date: 10/24/2022 SeqNo: 3302975 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 98.2 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

Page 3 of 6

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210B02 28-Oct-22** 

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: LCS-70979 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 70979 RunNo: 91980

Prep Date: 10/21/2022 Analysis Date: 10/21/2022 SeqNo: 3300147 Units: mg/Kg

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 15 0 51 50.00 103 64.4 127

Surr: DNOP 3.8 5.000 75.6 21 129

Sample ID: MB-70979 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 70979 RunNo: 91980

Prep Date: 10/21/2022 Analysis Date: 10/21/2022 SeqNo: 3300148 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 6.9 10.00 69.0 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

Page 4 of 6

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2210B02** 

28-Oct-22

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Surr: BFB

Sample ID: mb-70932 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 70932 RunNo: 92004

Prep Date: 10/19/2022 Analysis Date: 10/22/2022 SeqNo: 3300881 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 89.6 37.7 212

Sample ID: Ics-70932 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 70932 RunNo: 92004

2000

Prep Date: 10/19/2022 Analysis Date: 10/22/2022 SeqNo: 3300882 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 72.3 Gasoline Range Organics (GRO) 26 5.0 25.00 0 106 137

196

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

Page 5 of 6

## Hall Environmental Analysis Laboratory, Inc.

0.96

WO#: **2210B02** 

28-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Surr: 4-Bromofluorobenzene

Sample ID: mb-70932 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 70932 RunNo: 92004 Prep Date: 10/19/2022 Analysis Date: 10/22/2022 SeqNo: 3300943 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result Benzene ND 0.025 Toluene ND 0.050 Ethylbenzene ND 0.050 Xylenes, Total ND 0.10

95.5

70

130

1.000

Sample ID: LCS-70932	Samp	Гуре: <b>LC</b>	s	Tes	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batc	h ID: <b>70</b>	932	F	RunNo: 9							
Prep Date: 10/19/2022	Analysis [	Date: 10	0/22/2022	\$	SeqNo: 3	300944	Units: mg/k	ίg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.0	0.025	1.000	0	101	80	120					
Toluene	1.0	0.050	1.000	0	102	80	120					
Ethylbenzene	1.0	0.050	1.000	0	101	80	120					
Xylenes, Total	3.0	0.10	3.000	0	102	80	120					
Surr: 4-Bromofluorobenzene	0.96		1.000		96.5	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

Page 6 of 6



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

	ertex Resources ervices, Inc.	Work Order Nur	mber: 221	0B02		RcptNo	o: 1
Received By: J	uan Rojas	10/21/2022 7:20:0	00 AM		Guaran &		
Completed By: T	racy Casarrubias	10/21/2022 7:40:4	MA O				
Reviewed By:	mc	10/21/22	(1) Table				
Chain of Custoo	dy						
1. Is Chain of Custo			Yes	V	No 🗆	Not Present	
2. How was the san	nple delivered?		Cou	rier			
Log In							
	made to cool the samp	bles?	Yes	V	No 🗌	NA 🗆	
4. Were all samples	received at a tempera	ature of >0° C to 6.0°C	Yes	<b>V</b>	No 🗆	NA 🗆	
5. Sample(s) in prop	per container(s)?		Yes	V	No 🗆		
6. Sufficient sample	volume for indicated t	est(s)?	Yes	V	No 🗆		
7. Are samples (exce	ept VOA and ONG) pr	operly preserved?	Yes	<b>V</b>	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 🗹	
0. Were any sample	containers received b	oroken?	Yes		No 🔽	# of preserved	
1. Does paperwork r	natch bottle labels?		Yes	~	No 🗆	bottles checked for pH:	
	es on chain of custody	<i>(</i> )					or >12 unless noted)
2. Are matrices corre	ectly identified on Cha	in of Custody?	Yes	<b>V</b>	No 🗌	Adjusted?	
	alyses were requested	1?	Yes	~	No 🗌		
<ol><li>Were all holding ti (If no, notify custo</li></ol>	mes able to be met? mer for authorization.)		Yes	<b>V</b>	No 🗆	Checked by:	Ju 10/21/2
Special Handling	(if applicable)						
15. Was client notifie	d of all discrepancies	with this order?	Yes		No. 🗆	NA 🗹	
Person Not	ified:	Date	e: [				
By Whom:		Via:	□eM	ail 🗍	Phone   Fax	☐ In Person	
Regarding:					7 0 Mg 1977		
Client Instru	uctions:						
16. Additional remark	ks:						
17. Cooler Informat	ion						
The state of the s	Temp °C Condition	Seal Intact Seal No	Seal D	ate	Signed By		
1 0.	property for the second detailed the second decrease of the second d	Yes	Jour D		oignou by		

	.>		): 12/	/6/20	02.3	10:2	8:18 A	1 <i>M</i>												Pag	e 178 of
	HALL ENVIRONMENTAL		www.nallenvironmental.com	- Albuqu	1el. 505-545-5975 Fax 505-345-4107	tialysis redu	O¢' ac IMS	)d	280 (1) (2)	)8\2 .40 .3 10 N	des des des cov	ortice 88 / 98 Me 7, N (AC)	18081 Pe 19081 Pe 1908 Se 1908 (Ve 1908 (Ve 1908 (Se 1908 (Se	3 3 3 3	>						direct bill EOG
			¥	ř -							-		<b>(</b> ₹∃18)	10.00	>					Remarks	
I urn-Around Time:	□ Standard NRush 24 Moll		Gill 86) #1	Project #:	22E-00123-07	)	Michael Moskitt		Sampler: SPC	On Ice: A Yes	lers: i	Cooler Temp(including cF): U.2+42=0.4 (°C)	Container Preservative HEAL No.	1 toy jar ice	=					Received by: Via: Date Time	Date T
Chain-or-Custody Record	(CHEX CEOG)	,	: my lite		>			☐ Level 4 (Full Validation)	☐ Az Compliance	□ Other_			Matrix Sample Name		WES 22.03					Relinquished by:	Relinquished by:
CLAIL	Client: Ver		Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	□ Standard	Accreditation:	JELAC	☐ EDD (Type)_		Time	113:15	13:20					Time: 9 [7:0]	
	ö		Ma		Ph	e	8		Acc				Date	10	72	Ш				Date: 10//9	Date 10



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

October 28, 2022

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

FAX:

RE: Gill BGJ 1 OrderNo.: 2210C44

#### Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/26/2022 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

Anded

4901 Hawkins NE

Albuquerque, NM 87109

# Analytical Report Lab Order 2210C44

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-02 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 9:15:00 AM

 Lab ID:
 2210C44-001
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	10/26/2022 1:19:31 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/26/2022 1:19:31 PM
Surr: DNOP	97.6	21-129	%Rec	1	10/26/2022 1:19:31 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	10/26/2022 9:08:55 AM
Surr: BFB	97.2	37.7-212	%Rec	1	10/26/2022 9:08:55 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/26/2022 9:08:55 AM
Toluene	ND	0.044	mg/Kg	1	10/26/2022 9:08:55 AM
Ethylbenzene	ND	0.044	mg/Kg	1	10/26/2022 9:08:55 AM
Xylenes, Total	ND	0.089	mg/Kg	1	10/26/2022 9:08:55 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	10/26/2022 9:08:55 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	10/26/2022 6:07:40 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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
  - Reporting Limit Page 1 of 10

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-03 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 9:20:00 AM

 Lab ID:
 2210C44-002
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	10/26/2022 2:32:05 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/26/2022 2:32:05 PM
Surr: DNOP	95.9	21-129	%Rec	1	10/26/2022 2:32:05 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	10/26/2022 9:32:32 AM
Surr: BFB	96.8	37.7-212	%Rec	1	10/26/2022 9:32:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 9:32:32 AM
Toluene	ND	0.042	mg/Kg	1	10/26/2022 9:32:32 AM
Ethylbenzene	ND	0.042	mg/Kg	1	10/26/2022 9:32:32 AM
Xylenes, Total	ND	0.084	mg/Kg	1	10/26/2022 9:32:32 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	10/26/2022 9:32:32 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	10/26/2022 7:09:45 PM

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

Qualifiers:

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

Page 2 of 10

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-04 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 9:25:00 AM

 Lab ID:
 2210C44-003
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	10/26/2022 2:56:22 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/26/2022 2:56:22 PM
Surr: DNOP	101	21-129	%Rec	1	10/26/2022 2:56:22 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	10/26/2022 9:55:52 AM
Surr: BFB	98.9	37.7-212	%Rec	1	10/26/2022 9:55:52 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.017	mg/Kg	1	10/26/2022 9:55:52 AM
Toluene	ND	0.035	mg/Kg	1	10/26/2022 9:55:52 AM
Ethylbenzene	ND	0.035	mg/Kg	1	10/26/2022 9:55:52 AM
Xylenes, Total	ND	0.070	mg/Kg	1	10/26/2022 9:55:52 AM
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	10/26/2022 9:55:52 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	100	60	mg/Kg	20	10/26/2022 7:22:10 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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
- L Reporting Limit

Page 3 of 10

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-06 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 9:35:00 AM

 Lab ID:
 2210C44-004
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: SB
Diesel Range Organics (DRO)	130	14	mg/Kg	1	10/26/2022 5:21:42 PM
Motor Oil Range Organics (MRO)	63	47	mg/Kg	1	10/26/2022 5:21:42 PM
Surr: DNOP	104	21-129	%Rec	1	10/26/2022 5:21:42 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	10/26/2022 10:19:27 AM
Surr: BFB	97.5	37.7-212	%Rec	1	10/26/2022 10:19:27 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/26/2022 10:19:27 AM
Toluene	ND	0.044	mg/Kg	1	10/26/2022 10:19:27 AM
Ethylbenzene	ND	0.044	mg/Kg	1	10/26/2022 10:19:27 AM
Xylenes, Total	ND	0.088	mg/Kg	1	10/26/2022 10:19:27 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	10/26/2022 10:19:27 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	ND	60	mg/Kg	20	10/26/2022 7:34:35 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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
- 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
- L Reporting Limit

Page 4 of 10

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-07 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 9:40:00 AM

 Lab ID:
 2210C44-005
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: SB
Diesel Range Organics (DRO)	61	15	mg/Kg	1	10/26/2022 3:20:27 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/26/2022 3:20:27 PM
Surr: DNOP	103	21-129	%Rec	1	10/26/2022 3:20:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	10/26/2022 10:43:00 AM
Surr: BFB	95.7	37.7-212	%Rec	1	10/26/2022 10:43:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 10:43:00 AM
Toluene	ND	0.042	mg/Kg	1	10/26/2022 10:43:00 AM
Ethylbenzene	ND	0.042	mg/Kg	1	10/26/2022 10:43:00 AM
Xylenes, Total	ND	0.084	mg/Kg	1	10/26/2022 10:43:00 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	10/26/2022 10:43:00 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	ND	60	mg/Kg	20	10/26/2022 7:46:59 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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
  - Reporting Limit Page 5 of 10

Date Reported: 10/28/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-12 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/20/2022 12:25:00 PM

 Lab ID:
 2210C44-006
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	10/26/2022 4:08:52 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	10/26/2022 4:08:52 PM
Surr: DNOP	102	21-129	%Rec	1	10/26/2022 4:08:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	10/26/2022 11:06:28 AM
Surr: BFB	97.8	37.7-212	%Rec	1	10/26/2022 11:06:28 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/26/2022 11:06:28 AM
Toluene	ND	0.044	mg/Kg	1	10/26/2022 11:06:28 AM
Ethylbenzene	ND	0.044	mg/Kg	1	10/26/2022 11:06:28 AM
Xylenes, Total	ND	0.088	mg/Kg	1	10/26/2022 11:06:28 AM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	10/26/2022 11:06:28 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	360	60	mg/Kg	20	10/26/2022 7:59:23 PM

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

Qualifiers:

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

Page 6 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#: 2210C44

28-Oct-22

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Chloride

Sample ID: MB-71081 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71081 RunNo: 92082

Prep Date: 10/26/2022 Analysis Date: 10/26/2022 SeqNo: 3306598 Units: mg/Kg

Analyte SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual

Chloride ND 1.5

Sample ID: LCS-71081 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71081 RunNo: 92082

14

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3306599 Units: mg/Kg 10/26/2022

15.00

Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 0

95.1

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

Е Above Quantitation Range/Estimated Value

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Limit

Page 7 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C44** 

28-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: 2210C44-001AMS	SampT	уре: <b>М</b> S	3	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-02 4'	Batch	ID: <b>71</b> 0	073	F	RunNo: 9	2104				
Prep Date: 10/26/2022	Analysis D	ate: 10	)/26/2022	S	SeqNo: 3	306216	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	15	49.80	0	105	36.1	154			
Surr: DNOP	4.8		4.980		96.4	21	129			
Sample ID: 2210C44-001AMSI	<b>D</b> SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	

- · ·   · ·		,, ,							3	
Client ID: BES22-02 4'	Batch	ID: <b>71</b> 0	073	F	RunNo: 9	2104				
Prep Date: 10/26/2022	Analysis D	ate: 10	)/26/2022	8	SeqNo: 3	306217	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	14	46.95	0	125	36.1	154	12.0	33.9	
Surr: DNOP	4.5		4.695		94.9	21	129	0	^	

Sample ID: LCS-71073	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	1D: <b>71</b>	073	F	RunNo: 9	2104				
Prep Date: 10/26/2022	Analysis D	ate: 10	0/26/2022	8	SeqNo: 3	306238	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	85.3	64.4	127			
Surr: DNOP	4.4		5.000		87.1	21	129			

Sample ID: MB-71073	SampT	ype: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	ID: <b>71</b> 0	073	F	RunNo: 9	2104				
Prep Date: 10/26/2022	Analysis D	ate: 10	)/26/2022	5	SeqNo: 3	306239	Units: mg/K	(g		
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	9.4		10.00		94.0	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

Page 8 of 10

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C44** 

28-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Surr: BFB

Sample ID: mb SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: A92099 RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305883 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 960 1000 96.3 37.7 212

Sample ID: 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: A92099 RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305884 Units: mg/Kg

Frep Date. Analysis Date. 10/20/2022 Sequit. 3503004 Units. Ing/kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 72.3 27 5.0 25.00 107 137

204

37.7

212

Sample ID: 2210c44-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: **BES22-02 4'** Batch ID: **A92099** RunNo: **92099** 

2000

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305905 Units: mg/Kg

Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte **PQL** LowLimit 23 Gasoline Range Organics (GRO) 0 104 70 4 4 22.20 130 Surr: BFB 195 1700 888.1 37.7 212

Sample ID: 2210c44-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: BES22-02 4' Batch ID: A92099 RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305906 Units: mg/Kg

%REC %RPD Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit **RPDLimit** Qual Gasoline Range Organics (GRO) 22 4.4 22.20 101 70 130 20 2.89 1700 Surr: BFB 888.1 192 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

Page 9 of 10

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C44** 

28-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: **D92099** RunNo: 92099 Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305932 Units: mg/Kg Analyte **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 1.0 1.000 102 70 130

Sample ID: 100ng btex Ics TestCode: EPA Method 8021B: Volatiles SampType: LCS Client ID: LCSS Batch ID: **D92099** RunNo: 92099 Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305933 Units: ma/Ka SPK value %RPD **RPDLimit** SPK Ref Val %REC HighLimit Analyte Result POL LowLimit Qual Benzene 1.0 0.025 1.000 n 105 80 120 0 Toluene 0.050 1.000 105 80 120 1.0 Ethylbenzene 1.0 0.050 1.000 0 104 80 120 0.10 n 104 80 Xylenes, Total 3.1 3.000 120 Surr: 4-Bromofluorobenzene 1.0 1.000 102 70 130

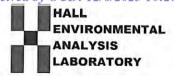
TestCode: EPA Method 8021B: Volatiles Sample ID: 2210c44-002ams SampType: MS BES22-03 4' Client ID: Batch ID: **D92099** RunNo: 92099 Units: mg/Kg Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305954 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.021 98.9 68.8 120 Benzene 0.83 0.8375 0 Toluene 0.82 0.042 0.8375 0 98.4 73.6 124 Ethylbenzene 0.82 0.042 0.8375 0 98.2 72.7 129 2.5 0.084 2.513 0 97.8 75.7 126 Xylenes, Total Surr: 4-Bromofluorobenzene 0.84 0.8375 101 70 130

Sample ID: 2210c44-002amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: BES22-03 4' Batch ID: **D92099** RunNo: 92099 Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305955 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.90 0.021 0.8375 108 68.8 8.79 20 n 120 Benzene 0.90 0.042 0.8375 0 107 73.6 124 8.65 20 Toluene 0 0.8375 107 72 7 129 8.68 20 Ethylbenzene 0.90 0.042 0 107 Xylenes, Total 2.7 0.084 2.513 75.7 126 8.77 20 Surr: 4-Bromofluorobenzene 0.82 0.8375 98.2 70 130 n n

#### 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

Page 10 of 10



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 Num	nber: 221	0C44		R	cptNo: 1
Received By: Juan Rojas	10/26/2022 7:10:0	0 AM		Glanca	9	
Completed By: Juan Rojas Reviewed By: 10-76-77	10/26/2022 7:34:1			gleaning bearing	4)	
Chain of Custody						
Is Chain of Custody complete?		Yes	~	No [	Not Present	6
2. How was the sample delivered?		Cou				
Landa						
Log In  3. Was an attempt made to cool the samples	?	Yes	V	No 🗆	] NA	
Were all samples received at a temperature	e of >0° C to 6.0°C	Yes	<b>V</b>	No 🗆	l NA	
5. Sample(s) in proper container(s)?		Yes	<b>V</b>	No 🗆	]	
6. Sufficient sample volume for indicated test(	s)?	Yes	~	No 🗆		
7. Are samples (except VOA and ONG) prope	rly 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	✓
0. Were any sample containers received broken	en?	Yes		No 🗸	# of preserved	
Does paperwork match bottle labels?     (Note discrepancies on chain of custody)		Yes	~	No 🗆	bottles checke for pH:	d (<2 or >12 unless noted)
2. Are matrices correctly identified on Chain of	Custody?	Yes	~	No 🗌	Adjusted	
3. Is it clear what analyses were requested?		Yes	~	No 🗌		1
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	<b>V</b>	No 🗆	Checked	by: Jin 10/26/2
pecial Handling (if applicable)				-		
15. Was client notified of all discrepancies with	this order?	Yes		No 🗆	l NA	<b>~</b>
Person Notified:	Date				-	
By Whom:	Via:	eM	ail 🔲	Phone Fa	x In Person	
Regarding:	-0/30					- 1
Client Instructions:						-
6. Additional remarks:						
7. Cooler Information	eal Intact Seal No	Seal D	727	Signed By		

							F		(		2
Client: [/W.fc.k.(fc.fc.)	☐ Standard	Rush	24 hr		V	Z Z			RON	HALL ENVIRONMENTAL ANALYSTS LABODATODY	۾ پ
	Project Name:										-
Mailing Address:	GII B	# (B)	1	4	www.hall	www A scriptor	.nallen F _ ∆I	Vironm	www.nallenvironmental.com	87100	
	Project #:				Tel 505	505-345-3975	7.5	Fax 5	Saquel que, INIM 67 Fax 505-345-4107	67 103	
Phone #:	-an	2100	3-07	H			Ana	Analysis R	Request		N
email or Fax#;	Project Manager	er:			10	-	<sup>†</sup> C		(11		
QA/QC Package:   □ Standard  □ Level 4 (Full Validation)	TY TON	4		1208) s 5AM \ C		SWIS	PO4, S(		nəsdA\t		
n: 🗆 Az Con	Sampler	SP			Z8C		' <sup>2</sup> O		uəse		
* 1		Z-Yes	oN 🗆		)8/s						
□ EDD (Type)	# of Coolers:				əpi		_				
	Cooler Temp(including cF);	0	14-0-125-3 (°C)		estic			(AO\			
Date Time Matrix Sample Name	Container F	Preservative Type	HEAL No.		□ 1808	EDB (N	RCRA Cl.)F, I	v) 09Z8	8270 (S Total C		
10/20 9:15 Soil BES22-028 4"	1	150	- 001	7	_						
1 9:20 1 BES22-03 41	N		nor	_			-				
9.15   BES22-04 41			-003								
9:35   BES22-06 41			7007								
9:40 BES 22-07 4'			-000}								
12:25   BES22-12 4"			200-				_				
						Ţ					
Date: Time: Relinquished by: 10/24 17:42 Sally Canton	Received by: Vi	ä: 2.	10 Date Time	Remarks:							
Date: Time: Relinquished by:	Received by:	a:			Q	in	4	nili	Wirect hill EOG		



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

October 31, 2022

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

FAX:

RE: Gill BGJ 1 OrderNo.: 2210C45

#### Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 15 sample(s) on 10/26/2022 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

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-06 0-4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:05:00 AM

 Lab ID:
 2210C45-001
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	10/26/2022 4:33:10 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/26/2022 4:33:10 PM
Surr: DNOP	92.8	21-129	%Rec	1	10/26/2022 4:33:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	10/26/2022 11:53:38 AM
Surr: BFB	91.7	37.7-212	%Rec	1	10/26/2022 11:53:38 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 11:53:38 AM
Toluene	ND	0.041	mg/Kg	1	10/26/2022 11:53:38 AM
Ethylbenzene	ND	0.041	mg/Kg	1	10/26/2022 11:53:38 AM
Xylenes, Total	ND	0.082	mg/Kg	1	10/26/2022 11:53:38 AM
Surr: 4-Bromofluorobenzene	96.2	70-130	%Rec	1	10/26/2022 11:53:38 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	89	60	mg/Kg	20	10/26/2022 8:11:48 PM

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

Qualifiers:

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

Page 1 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-01 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:30:00 AM

 Lab ID:
 2210C45-002
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	210	15	mg/Kg	1	10/26/2022 6:10:23 PM
Motor Oil Range Organics (MRO)	91	50	mg/Kg	1	10/26/2022 6:10:23 PM
Surr: DNOP	101	21-129	%Rec	1	10/26/2022 6:10:23 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	23	mg/Kg	5	10/26/2022 12:17:16 PM
Surr: BFB	92.3	37.7-212	%Rec	5	10/26/2022 12:17:16 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.12	mg/Kg	5	10/26/2022 12:17:16 PM
Toluene	ND	0.23	mg/Kg	5	10/26/2022 12:17:16 PM
Ethylbenzene	ND	0.23	mg/Kg	5	10/26/2022 12:17:16 PM
Xylenes, Total	ND	0.46	mg/Kg	5	10/26/2022 12:17:16 PM
Surr: 4-Bromofluorobenzene	96.7	70-130	%Rec	5	10/26/2022 12:17:16 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	250	60	mg/Kg	20	10/26/2022 8:49:02 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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

Page 2 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-05 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:35:00 AM

 Lab ID:
 2210C45-003
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	530	15	mg/Kg	1	10/26/2022 6:59:25 PM
Motor Oil Range Organics (MRO)	110	49	mg/Kg	1	10/26/2022 6:59:25 PM
Surr: DNOP	106	21-129	%Rec	1	10/26/2022 6:59:25 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	21	mg/Kg	5	10/26/2022 12:40:56 PM
Surr: BFB	98.2	37.7-212	%Rec	5	10/26/2022 12:40:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.11	mg/Kg	5	10/26/2022 12:40:56 PM
Toluene	ND	0.21	mg/Kg	5	10/26/2022 12:40:56 PM
Ethylbenzene	ND	0.21	mg/Kg	5	10/26/2022 12:40:56 PM
Xylenes, Total	ND	0.42	mg/Kg	5	10/26/2022 12:40:56 PM
Surr: 4-Bromofluorobenzene	97.9	70-130	%Rec	5	10/26/2022 12:40:56 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	200	60	mg/Kg	20	10/26/2022 9:01:27 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 3 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-08 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:40:00 AM

 Lab ID:
 2210C45-004
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	70	15	mg/Kg	1	10/26/2022 7:48:01 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/26/2022 7:48:01 PM
Surr: DNOP	99.9	21-129	%Rec	1	10/26/2022 7:48:01 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	10/26/2022 1:04:39 PM
Surr: BFB	93.0	37.7-212	%Rec	1	10/26/2022 1:04:39 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/26/2022 1:04:39 PM
Toluene	ND	0.044	mg/Kg	1	10/26/2022 1:04:39 PM
Ethylbenzene	ND	0.044	mg/Kg	1	10/26/2022 1:04:39 PM
Xylenes, Total	ND	0.089	mg/Kg	1	10/26/2022 1:04:39 PM
Surr: 4-Bromofluorobenzene	94.1	70-130	%Rec	1	10/26/2022 1:04:39 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	10/26/2022 9:38:41 PM

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

Qualifiers:

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

Page 4 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-09 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:45:00 AM

 Lab ID:
 2210C45-005
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	<b>Date Analyzed</b>
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	340	15	mg/Kg	1	10/26/2022 8:36:43 PM
Motor Oil Range Organics (MRO)	140	49	mg/Kg	1	10/26/2022 8:36:43 PM
Surr: DNOP	103	21-129	%Rec	1	10/26/2022 8:36:43 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	10/26/2022 3:49:43 PM
Surr: BFB	91.5	37.7-212	%Rec	1	10/26/2022 3:49:43 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.020	mg/Kg	1	10/26/2022 3:49:43 PM
Toluene	ND	0.040	mg/Kg	1	10/26/2022 3:49:43 PM
Ethylbenzene	ND	0.040	mg/Kg	1	10/26/2022 3:49:43 PM
Xylenes, Total	ND	0.080	mg/Kg	1	10/26/2022 3:49:43 PM
Surr: 4-Bromofluorobenzene	95.9	70-130	%Rec	1	10/26/2022 3:49:43 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	510	60	mg/Kg	20	10/26/2022 9:51:06 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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

Page 5 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-10 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:50:00 AM

 Lab ID:
 2210C45-006
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	59	14	mg/Kg	1	10/26/2022 4:57:21 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	10/26/2022 4:57:21 PM
Surr: DNOP	96.8	21-129	%Rec	1	10/26/2022 4:57:21 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	10/26/2022 4:13:24 PM
Surr: BFB	93.3	37.7-212	%Rec	1	10/26/2022 4:13:24 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.020	mg/Kg	1	10/26/2022 4:13:24 PM
Toluene	ND	0.040	mg/Kg	1	10/26/2022 4:13:24 PM
Ethylbenzene	ND	0.040	mg/Kg	1	10/26/2022 4:13:24 PM
Xylenes, Total	ND	0.079	mg/Kg	1	10/26/2022 4:13:24 PM
Surr: 4-Bromofluorobenzene	97.8	70-130	%Rec	1	10/26/2022 4:13:24 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	510	60	mg/Kg	20	10/26/2022 10:03:31 PM

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

Qualifiers:

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

Page 6 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-11 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 9:55:00 AM

 Lab ID:
 2210C45-007
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR		Analyst: SB			
Diesel Range Organics (DRO)	68	15	mg/Kg	1	10/26/2022 9:25:20 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/26/2022 9:25:20 PM
Surr: DNOP	98.5	21-129	%Rec	1	10/26/2022 9:25:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	10/26/2022 4:36:59 PM
Surr: BFB	94.5	37.7-212	%Rec	1	10/26/2022 4:36:59 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 4:36:59 PM
Toluene	ND	0.042	mg/Kg	1	10/26/2022 4:36:59 PM
Ethylbenzene	ND	0.042	mg/Kg	1	10/26/2022 4:36:59 PM
Xylenes, Total	ND	0.083	mg/Kg	1	10/26/2022 4:36:59 PM
Surr: 4-Bromofluorobenzene	98.4	70-130	%Rec	1	10/26/2022 4:36:59 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	180	60	mg/Kg	20	10/26/2022 10:15:56 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

porting Limit Page 7 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-13 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:00:00 AM

 Lab ID:
 2210C45-008
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	1600	29	mg/Kg	2	10/27/2022 10:28:25 AM
Motor Oil Range Organics (MRO)	240	97	mg/Kg	2	10/27/2022 10:28:25 AM
Surr: DNOP	121	21-129	%Rec	2	10/27/2022 10:28:25 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	34	21	mg/Kg	5	10/26/2022 5:00:35 PM
Surr: BFB	162	37.7-212	%Rec	5	10/26/2022 5:00:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.11	mg/Kg	5	10/26/2022 5:00:35 PM
Toluene	ND	0.21	mg/Kg	5	10/26/2022 5:00:35 PM
Ethylbenzene	ND	0.21	mg/Kg	5	10/26/2022 5:00:35 PM
Xylenes, Total	ND	0.42	mg/Kg	5	10/26/2022 5:00:35 PM
Surr: 4-Bromofluorobenzene	99.7	70-130	%Rec	5	10/26/2022 5:00:35 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	360	60	mg/Kg	20	10/26/2022 10:28:22 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-14 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:05:00 AM

 Lab ID:
 2210C45-009
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	700	15	mg/Kg	1	10/26/2022 11:26:40 PM
Motor Oil Range Organics (MRO)	100	48	mg/Kg	1	10/26/2022 11:26:40 PM
Surr: DNOP	107	21-129	%Rec	1	10/26/2022 11:26:40 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	28	22	mg/Kg	5	10/26/2022 5:24:17 PM
Surr: BFB	149	37.7-212	%Rec	5	10/26/2022 5:24:17 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.11	mg/Kg	5	10/26/2022 5:24:17 PM
Toluene	ND	0.22	mg/Kg	5	10/26/2022 5:24:17 PM
Ethylbenzene	ND	0.22	mg/Kg	5	10/26/2022 5:24:17 PM
Xylenes, Total	ND	0.44	mg/Kg	5	10/26/2022 5:24:17 PM
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec	5	10/26/2022 5:24:17 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	390	60	mg/Kg	20	10/26/2022 10:40:46 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

ple pH Not In Range
outing Limit Page 9 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-15 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:10:00 AM

 Lab ID:
 2210C45-010
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	630	14	mg/Kg	1	10/27/2022 12:15:05 AM
Motor Oil Range Organics (MRO)	150	48	mg/Kg	1	10/27/2022 12:15:05 AM
Surr: DNOP	108	21-129	%Rec	1	10/27/2022 12:15:05 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	10/26/2022 5:47:57 PM
Surr: BFB	124	37.7-212	%Rec	1	10/26/2022 5:47:57 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.019	mg/Kg	1	10/26/2022 5:47:57 PM
Toluene	ND	0.038	mg/Kg	1	10/26/2022 5:47:57 PM
Ethylbenzene	ND	0.038	mg/Kg	1	10/26/2022 5:47:57 PM
Xylenes, Total	ND	0.076	mg/Kg	1	10/26/2022 5:47:57 PM
Surr: 4-Bromofluorobenzene	98.0	70-130	%Rec	1	10/26/2022 5:47:57 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	380	61	mg/Kg	20	10/26/2022 10:53:10 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 10 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-16 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:15:00 AM

 Lab ID:
 2210C45-011
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	200	15	mg/Kg	1	10/27/2022 1:03:27 AM
Motor Oil Range Organics (MRO)	84	48	mg/Kg	1	10/27/2022 1:03:27 AM
Surr: DNOP	101	21-129	%Rec	1	10/27/2022 1:03:27 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	10/26/2022 6:11:35 PM
Surr: BFB	92.4	37.7-212	%Rec	1	10/26/2022 6:11:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.017	mg/Kg	1	10/26/2022 6:11:35 PM
Toluene	ND	0.034	mg/Kg	1	10/26/2022 6:11:35 PM
Ethylbenzene	ND	0.034	mg/Kg	1	10/26/2022 6:11:35 PM
Xylenes, Total	ND	0.068	mg/Kg	1	10/26/2022 6:11:35 PM
Surr: 4-Bromofluorobenzene	94.1	70-130	%Rec	1	10/26/2022 6:11:35 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	170	60	mg/Kg	20	10/26/2022 11:05:34 PM

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

Qualifiers:

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

ple pH Not In Range Page 11 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-17 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:20:00 AM

 Lab ID:
 2210C45-012
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	87	14	mg/Kg	1	10/27/2022 1:51:47 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/27/2022 1:51:47 AM
Surr: DNOP	101	21-129	%Rec	1	10/27/2022 1:51:47 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	10/26/2022 6:35:16 PM
Surr: BFB	95.2	37.7-212	%Rec	1	10/26/2022 6:35:16 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 6:35:16 PM
Toluene	ND	0.041	mg/Kg	1	10/26/2022 6:35:16 PM
Ethylbenzene	ND	0.041	mg/Kg	1	10/26/2022 6:35:16 PM
Xylenes, Total	ND	0.083	mg/Kg	1	10/26/2022 6:35:16 PM
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	1	10/26/2022 6:35:16 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	490	60	mg/Kg	20	10/26/2022 11:17:59 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 12 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-18 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:25:00 AM

 Lab ID:
 2210C45-013
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	120	14	mg/Kg	1	10/27/2022 2:40:06 AM
Motor Oil Range Organics (MRO)	51	46	mg/Kg	1	10/27/2022 2:40:06 AM
Surr: DNOP	102	21-129	%Rec	1	10/27/2022 2:40:06 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	10/26/2022 6:58:58 PM
Surr: BFB	88.7	37.7-212	%Rec	1	10/26/2022 6:58:58 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.020	mg/Kg	1	10/26/2022 6:58:58 PM
Toluene	ND	0.039	mg/Kg	1	10/26/2022 6:58:58 PM
Ethylbenzene	ND	0.039	mg/Kg	1	10/26/2022 6:58:58 PM
Xylenes, Total	ND	0.078	mg/Kg	1	10/26/2022 6:58:58 PM
Surr: 4-Bromofluorobenzene	93.1	70-130	%Rec	1	10/26/2022 6:58:58 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	470	60	mg/Kg	20	10/26/2022 11:30:24 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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

Page 13 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-19 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:30:00 AM

 Lab ID:
 2210C45-014
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: <b>SB</b>
Diesel Range Organics (DRO)	150	14	mg/Kg	1	10/27/2022 3:28:19 AM
Motor Oil Range Organics (MRO)	68	48	mg/Kg	1	10/27/2022 3:28:19 AM
Surr: DNOP	104	21-129	%Rec	1	10/27/2022 3:28:19 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	10/26/2022 7:22:35 PM
Surr: BFB	90.2	37.7-212	%Rec	1	10/26/2022 7:22:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/26/2022 7:22:35 PM
Toluene	ND	0.043	mg/Kg	1	10/26/2022 7:22:35 PM
Ethylbenzene	ND	0.043	mg/Kg	1	10/26/2022 7:22:35 PM
Xylenes, Total	ND	0.086	mg/Kg	1	10/26/2022 7:22:35 PM
Surr: 4-Bromofluorobenzene	92.9	70-130	%Rec	1	10/26/2022 7:22:35 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	76	60	mg/Kg	20	10/27/2022 12:07:38 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 14 of 20

Date Reported: 10/31/2022

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-20 6'

 Project:
 Gill BGJ 1
 Collection Date: 10/24/2022 10:35:00 AM

 Lab ID:
 2210C45-015
 Matrix: MEOH (SOIL)
 Received Date: 10/26/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	19	14	mg/Kg	1	10/27/2022 11:10:36 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/27/2022 11:10:36 AM
Surr: DNOP	94.6	21-129	%Rec	1	10/27/2022 11:10:36 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/26/2022 10:30:56 PM
Surr: BFB	96.0	37.7-212	%Rec	1	10/26/2022 10:30:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/26/2022 10:30:56 PM
Toluene	ND	0.048	mg/Kg	1	10/26/2022 10:30:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	10/26/2022 10:30:56 PM
Xylenes, Total	ND	0.097	mg/Kg	1	10/26/2022 10:30:56 PM
Surr: 4-Bromofluorobenzene	94.7	70-130	%Rec	1	10/26/2022 10:30:56 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	340	60	mg/Kg	20	10/27/2022 12:44:53 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

rting Limit Page 15 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2210C45

WO#:

31-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: MB-71081 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71081 RunNo: 92082

Prep Date: 10/26/2022 Analysis Date: 10/26/2022 SeqNo: 3306598 Units: mq/Kg

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

Chloride ND 1.5

Sample ID: LCS-71081 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71081 RunNo: 92082

Prep Date: 10/26/2022 Analysis Date: 10/26/2022 SeqNo: 3306599 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.1 90 110

Sample ID: MB-71096 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71096 RunNo: 92082

Prep Date: 10/26/2022 Analysis Date: 10/27/2022 SeqNo: 3306630 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-71096 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71096 RunNo: 92082

Prep Date: 10/26/2022 Analysis Date: 10/27/2022 SeqNo: 3306631 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 96.4 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 Quantitative Limit
- 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

Page 16 of 20

### Hall Environmental Analysis Laboratory, Inc.

2210C45 31-Oct-22

WO#:

**Client:** Vertex Resources Services, Inc.

Cill DCI 1

Project: Gill BG.	J 1						
Sample ID: LCS-71073	SampType:	LCS	Tes	tCode: EPA Method	8015M/D: Diesel Ran	ge Organics	
Client ID: LCSS	Batch ID:	71073	F	RunNo: <b>92104</b>			
Prep Date: 10/26/2022	Analysis Date:	10/26/2022	9	SeqNo: <b>3306238</b>	Units: mg/Kg		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RPI	O RPDLimit	Qual
Diesel Range Organics (DRO)	43	15 50.00	0	85.3 64.4	127		
Surr: DNOP	4.4	5.000		87.1 21	129		
Sample ID: <b>MB-71073</b>	SampType:	MBLK	Tes	tCode: <b>EPA Method</b>	8015M/D: Diesel Ran	ge Organics	
Client ID: PBS	Batch ID:	71073	F	RunNo: <b>92104</b>			
Prep Date: 10/26/2022	Analysis Date:	10/26/2022	9	SeqNo: <b>3306239</b>	Units: mg/Kg		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RPI	O RPDLimit	Qual
Diesel Range Organics (DRO)		15					
Motor Oil Range Organics (MRO)		50					
Surr: DNOP	9.4	10.00		94.0 21	129		
Sample ID: LCS-71099	SampType:	LCS	Tes	tCode: EPA Method	8015M/D: Diesel Ran	ge Organics	
Client ID: LCSS	Batch ID:	71099	F	RunNo: <b>92135</b>			
Prep Date: 10/26/2022	Analysis Date:	10/27/2022	5	SeqNo: <b>3307451</b>	Units: mg/Kg		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RPI	O RPDLimit	Qual
Diesel Range Organics (DRO)	45	15 50.00	0	90.6 64.4	127		
Surr: DNOP	4.9	5.000		98.8 21	129		
Sample ID: <b>MB-71099</b>	SampType:	MBLK	Tes	tCode: <b>EPA Method</b>	8015M/D: Diesel Ran	ge Organics	
Client ID: PBS	Batch ID:	71099	F	RunNo: <b>92135</b>			
Prep Date: 10/26/2022	Analysis Date:	10/27/2022	5	SeqNo: <b>3307453</b>	Units: mg/Kg		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RPI	O RPDLimit	Qual
Diesel Range Organics (DRO)		15					
Motor Oil Range Organics (MRO)		50					
Surr: DNOP	9.4	10.00		93.5 21	129		

#### Qualifiers:

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

Page 17 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2210C45

WO#:

31-Oct-22

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb-II

Sample ID: mb SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

PBS Client ID: Batch ID: A92099 RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305883 Units: mq/Kq

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 960 1000 96.3 37.7 212

Sample ID: 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: A92099 RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305884 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC I owl imit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 25.00 0 107 72.3 137

TestCode: EPA Method 8015D: Gasoline Range

Surr: BFB 2000 1000 204 37.7 212

SampType: MBLK Client ID: Batch ID: **B92099** RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305907 Units: mg/Kg

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

Gasoline Range Organics (GRO) 5.0 Surr: BFB 910 1000 90.7 37.7 212

Sample ID: 2.5ug gro Ics-II SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: **B92099** RunNo: 92099

Prep Date: Analysis Date: 10/26/2022 SeqNo: 3305908 Units: mg/Kg

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

Gasoline Range Organics (GRO) 24 5.0 25.00 95.8 72.3 137 Surr: BFB 1900 1000 192 37.7 212

#### Qualifiers:

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

Page 18 of 20

### Hall Environmental Analysis Laboratory, Inc.

2210C45

WO#:

31-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb	Samp <sup>1</sup>	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batc	h ID: <b>D9</b> :	2099	F	RunNo: 92	2099				
Prep Date:	Analysis [	Date: 10	/26/2022	9	SeqNo: 33	305932	Units: mg/K	g		
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	1.0		1.000		102	70	130			

Sample ID: 100ng btex lcs	Samp	ype: <b>LC</b> :	s	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batcl	n ID: <b>D9</b> 2	2099	F	RunNo: 92	2099				
Prep Date:	Analysis [	Date: 10	/26/2022	5	SeqNo: 33	305933	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: mb-II	SampT	уре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batch	n ID: <b>E9</b> 2	2099	F	RunNo: 92	2099				
Prep Date:	Analysis D	Date: 10	/26/2022	5	SeqNo: 33	305956	Units: mg/K	g		
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	0.95		1.000		95.3	70	130			

Sample ID: 100ng btex Ics-II	Samp <sup>1</sup>	Гуре: <b>LC</b>	s	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batc	h ID: <b>E9</b> 2	2099	F	RunNo: 92	2099				
Prep Date:	Analysis [	Date: 10	/26/2022	5	SeqNo: 33	305957	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.2	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
- 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

Page 19 of 20

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C45** 

31-Oct-22

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: 2210c45-015ams	Samp	Туре: <b>м</b> S	3	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: BES22-20 6'	Batc	h ID: <b>E9</b> 2	2099	F	RunNo: 92	2099				
Prep Date:	Analysis [	Date: <b>10</b>	/26/2022	5	SeqNo: 3	305959	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9690	0	94.6	68.8	120			
Toluene	0.91	0.048	0.9690	0	94.3	73.6	124			
Ethylbenzene	0.91	0.048	0.9690	0.01260	92.8	72.7	129			
Xylenes, Total	2.7	0.097	2.907	0.01793	92.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.89		0.9690		92.3	70	130			

Sample ID: 2210c45-015ams	d Samp	Туре: МЅ	SD	Tes	tCode: EF	PA Method	8021B: Volati	iles		
Client ID: <b>BES22-20 6'</b>	Bato	h ID: <b>E9</b> :	2099	F	RunNo: 92	2099				
Prep Date:	Analysis	Date: 10	/26/2022	(	SeqNo: 3	305960	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.024	0.9690	0	91.9	68.8	120	2.88	20	
Toluene	0.90	0.048	0.9690	0	92.6	73.6	124	1.85	20	
Ethylbenzene	0.91	0.048	0.9690	0.01260	92.5	72.7	129	0.351	20	
Xylenes, Total	2.7	0.097	2.907	0.01793	92.5	75.7	126	0.0967	20	
Surr: 4-Bromofluorobenzene	0.92		0.9690		95.2	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

Page 20 of 20



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 Nur	mber: 2210C45		RcptNo	: 1
Received By: Juan Rojas	10/26/2022 7:10:0	00 AM	Glansay		
Completed By: Juan Rojas	10/26/2022 7:37:2	27 AM	Guarang		
Reviewed By: 10-26-77					
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present	
2. How was the sample delivered?		Courier			
<u>Log In</u>					
3. Was an attempt made to cool the samples	?	Yes 🗸	No 🗌	NA $\square$	
4. Were all samples received at a temperature	e of >0° C to 6.0°C	Yes 🔽	No 🗌	NA $\square$	
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) prope	rly 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 brok	en?	Yes	No 🗸	# of preserved	
11. Does paperwork match bottle labels?		Yes 🗸	No 🗆	bottles checked for pH:	
(Note discrepancies on chain of custody)			(2		>12 unless noted)
12. Are matrices correctly identified on Chain or	f Custody?	Yes 🔽	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes 🗸	No 🗌		20 10/01/2
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗸	No 🗆	Checked by:	Ja 10/26/2
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 S 1 2.3 Good	Seal Intact   Seal No	Seal Date	Signed By		

Cha	in-of-C	Chain-of-Custody Record		Turn-Around Time:	Lime:											Receiv
Client:	Vertex (EDG	29)		□ Standard	Rush	24 hr			I	HALL ENVI Anai ysts	E S		ROI	ENVIRONMENTAL YSTS I AROPATOP	TAL	ed by
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email or Fax#:	:#:			Project Manager:	jer:			(0		_	<sup>†</sup> O	9	(ţu			0:28
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☐ EDD (Type)	(əc			# of Coolers:	1						O1					
				Cooler Temp(including CF):	~	.4-6-1-2.3 (°C)					1, 18					
Date Time	e Matrix	Sample Name		Container Type and #	Preservative Type	HEAL NO.	(X3TB	08:H9T 9 1808	EDB (V	PAHs I	(c))E' 1	7) 0828 8) 0728				
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1 9:30	30	BES22-01	0		_	700					-					
9	9:35	BES22-05	4,			-003										
9:40	40	BES72-08	10			-007										
9:45	15	BES12-09	(0,			-0005										
9:50	20	BES22- 10	0			200										
9:55	77	BES22- 11	,0)			4007										
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<u>=</u>	necessary,	samples sub	omitted to Hall Environment	al may be subo	contracted to other a	ccredited laboratorie	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.	possibili	y. Any su	ub-contrac	led data	vill be clea	arly notate	ed on the	analytical report.		<b>2</b> 55



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

November 02, 2022

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

FAX:

RE: Gill BGJ 1 OrderNo.: 2210D54

#### Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 14 sample(s) on 10/27/2022 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

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-01 4-6'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 9:45:00 AM

 Lab ID:
 2210D54-001
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	76	15	mg/Kg	1	10/28/2022 11:14:34 AM
Motor Oil Range Organics (MRO)	52	49	mg/Kg	1	10/28/2022 11:14:34 AM
Surr: DNOP	104	21-129	%Rec	1	10/28/2022 11:14:34 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	10/27/2022 9:20:42 AM
Surr: BFB	92.8	37.7-212	%Rec	1	10/27/2022 9:20:42 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/27/2022 9:20:42 AM
Toluene	ND	0.043	mg/Kg	1	10/27/2022 9:20:42 AM
Ethylbenzene	ND	0.043	mg/Kg	1	10/27/2022 9:20:42 AM
Xylenes, Total	ND	0.086	mg/Kg	1	10/27/2022 9:20:42 AM
Surr: 4-Bromofluorobenzene	97.4	70-130	%Rec	1	10/27/2022 9:20:42 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	380	60	mg/Kg	20	10/27/2022 4:28:08 PM

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

Qualifiers:

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

Page 1 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Vertex Resources Services, Inc. Client Sample ID: WES22-02 4-6'

Gill BGJ 1 **Project:** Collection Date: 10/25/2022 9:50:00 AM Lab ID: 2210D54-002 Matrix: MEOH (SOIL) **Received Date:** 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	59	15	mg/Kg	1	10/28/2022 12:01:17 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/28/2022 12:01:17 PM
Surr: DNOP	106	21-129	%Rec	1	10/28/2022 12:01:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	10/27/2022 9:44:16 AM
Surr: BFB	95.3	37.7-212	%Rec	1	10/27/2022 9:44:16 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	10/27/2022 9:44:16 AM
Toluene	ND	0.046	mg/Kg	1	10/27/2022 9:44:16 AM
Ethylbenzene	ND	0.046	mg/Kg	1	10/27/2022 9:44:16 AM
Xylenes, Total	ND	0.092	mg/Kg	1	10/27/2022 9:44:16 AM
Surr: 4-Bromofluorobenzene	99.5	70-130	%Rec	1	10/27/2022 9:44:16 AM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	150	61	mg/Kg	20	10/27/2022 4:40:29 PM

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

Qualifiers:

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

Page 2 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-08 4-6'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 9:55:00 AM

 Lab ID:
 2210D54-003
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	36	14	mg/Kg	1	10/28/2022 12:11:55 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/28/2022 12:11:55 PM
Surr: DNOP	104	21-129	%Rec	1	10/28/2022 12:11:55 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/27/2022 12:52:50 PM
Surr: BFB	92.6	37.7-212	%Rec	1	10/27/2022 12:52:50 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/27/2022 12:52:50 PM
Toluene	ND	0.048	mg/Kg	1	10/27/2022 12:52:50 PM
Ethylbenzene	ND	0.048	mg/Kg	1	10/27/2022 12:52:50 PM
Xylenes, Total	ND	0.096	mg/Kg	1	10/27/2022 12:52:50 PM
Surr: 4-Bromofluorobenzene	95.6	70-130	%Rec	1	10/27/2022 12:52:50 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	150	60	mg/Kg	20	10/27/2022 6:06:53 PM

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

Qualifiers:

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

ple pH Not In Range
outing Limit Page 3 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 4-6'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:00:00 AM

 Lab ID:
 2210D54-004
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	51	15	mg/Kg	1	10/28/2022 12:22:34 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/28/2022 12:22:34 PM
Surr: DNOP	106	21-129	%Rec	1	10/28/2022 12:22:34 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	10/27/2022 3:36:53 PM
Surr: BFB	92.4	37.7-212	%Rec	1	10/27/2022 3:36:53 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/27/2022 3:36:53 PM
Toluene	ND	0.043	mg/Kg	1	10/27/2022 3:36:53 PM
Ethylbenzene	ND	0.043	mg/Kg	1	10/27/2022 3:36:53 PM
Xylenes, Total	ND	0.086	mg/Kg	1	10/27/2022 3:36:53 PM
Surr: 4-Bromofluorobenzene	97.7	70-130	%Rec	1	10/27/2022 3:36:53 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	68	60	mg/Kg	20	10/27/2022 6:19:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 4 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-21 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:05:00 AM

 Lab ID:
 2210D54-005
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	37	15	mg/Kg	1	10/28/2022 12:33:14 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/28/2022 12:33:14 PM
Surr: DNOP	105	21-129	%Rec	1	10/28/2022 12:33:14 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	10/27/2022 4:00:14 PM
Surr: BFB	94.4	37.7-212	%Rec	1	10/27/2022 4:00:14 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/27/2022 4:00:14 PM
Toluene	ND	0.042	mg/Kg	1	10/27/2022 4:00:14 PM
Ethylbenzene	ND	0.042	mg/Kg	1	10/27/2022 4:00:14 PM
Xylenes, Total	ND	0.083	mg/Kg	1	10/27/2022 4:00:14 PM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	10/27/2022 4:00:14 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	150	60	mg/Kg	20	10/27/2022 6:31:34 PM

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

Qualifiers:

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

Page 5 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-22 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:10:00 AM

 Lab ID:
 2210D54-006
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	89	15	mg/Kg	1	10/28/2022 12:43:53 PM
Motor Oil Range Organics (MRO)	49	49	mg/Kg	1	10/28/2022 12:43:53 PM
Surr: DNOP	104	21-129	%Rec	1	10/28/2022 12:43:53 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/27/2022 4:23:43 PM
Surr: BFB	94.6	37.7-212	%Rec	1	10/27/2022 4:23:43 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	10/27/2022 4:23:43 PM
Toluene	ND	0.050	mg/Kg	1	10/27/2022 4:23:43 PM
Ethylbenzene	ND	0.050	mg/Kg	1	10/27/2022 4:23:43 PM
Xylenes, Total	ND	0.099	mg/Kg	1	10/27/2022 4:23:43 PM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	10/27/2022 4:23:43 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	390	60	mg/Kg	20	10/27/2022 6:43:54 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 6 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-23 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:15:00 AM

 Lab ID:
 2210D54-007
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR		Analyst: <b>DGH</b>			
Diesel Range Organics (DRO)	130	14	mg/Kg	1	10/28/2022 12:54:31 PM
Motor Oil Range Organics (MRO)	96	46	mg/Kg	1	10/28/2022 12:54:31 PM
Surr: DNOP	110	21-129	%Rec	1	10/28/2022 12:54:31 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	10/27/2022 4:47:18 PM
Surr: BFB	90.9	37.7-212	%Rec	1	10/27/2022 4:47:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.020	mg/Kg	1	10/27/2022 4:47:18 PM
Toluene	ND	0.041	mg/Kg	1	10/27/2022 4:47:18 PM
Ethylbenzene	ND	0.041	mg/Kg	1	10/27/2022 4:47:18 PM
Xylenes, Total	ND	0.082	mg/Kg	1	10/27/2022 4:47:18 PM
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	10/27/2022 4:47:18 PM
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	280	60	mg/Kg	20	10/27/2022 6:56:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 7 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-24 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:20:00 AM

 Lab ID:
 2210D54-008
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	49	14	mg/Kg	1	10/28/2022 1:16:27 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/28/2022 1:16:27 PM
Surr: DNOP	102	21-129	%Rec	1	10/28/2022 1:16:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg	1	10/27/2022 5:10:51 PM
Surr: BFB	93.6	37.7-212	%Rec	1	10/27/2022 5:10:51 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.026	mg/Kg	1	10/27/2022 5:10:51 PM
Toluene	ND	0.052	mg/Kg	1	10/27/2022 5:10:51 PM
Ethylbenzene	ND	0.052	mg/Kg	1	10/27/2022 5:10:51 PM
Xylenes, Total	ND	0.10	mg/Kg	1	10/27/2022 5:10:51 PM
Surr: 4-Bromofluorobenzene	98.3	70-130	%Rec	1	10/27/2022 5:10:51 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	200	60	mg/Kg	20	10/27/2022 7:08:36 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-25 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:25:00 AM

 Lab ID:
 2210D54-009
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: <b>JME</b>
Diesel Range Organics (DRO)	730	28	mg/Kg	2	10/28/2022 12:26:20 PM
Motor Oil Range Organics (MRO)	120	94	mg/Kg	2	10/28/2022 12:26:20 PM
Surr: DNOP	90.0	21-129	%Rec	2	10/28/2022 12:26:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	10/27/2022 5:34:30 PM
Surr: BFB	97.5	37.7-212	%Rec	1	10/27/2022 5:34:30 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.019	mg/Kg	1	10/27/2022 5:34:30 PM
Toluene	ND	0.039	mg/Kg	1	10/27/2022 5:34:30 PM
Ethylbenzene	ND	0.039	mg/Kg	1	10/27/2022 5:34:30 PM
Xylenes, Total	ND	0.078	mg/Kg	1	10/27/2022 5:34:30 PM
Surr: 4-Bromofluorobenzene	96.4	70-130	%Rec	1	10/27/2022 5:34:30 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	240	60	mg/Kg	20	10/27/2022 7:45:38 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 9 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-26 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:30:00 AM

 Lab ID:
 2210D54-010
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>JME</b>
Diesel Range Organics (DRO)	380	14	mg/Kg	1	10/28/2022 12:55:52 PM
Motor Oil Range Organics (MRO)	130	48	mg/Kg	1	10/28/2022 12:55:52 PM
Surr: DNOP	90.7	21-129	%Rec	1	10/28/2022 12:55:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/27/2022 5:58:03 PM
Surr: BFB	93.9	37.7-212	%Rec	1	10/27/2022 5:58:03 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	10/27/2022 5:58:03 PM
Toluene	ND	0.049	mg/Kg	1	10/27/2022 5:58:03 PM
Ethylbenzene	ND	0.049	mg/Kg	1	10/27/2022 5:58:03 PM
Xylenes, Total	ND	0.098	mg/Kg	1	10/27/2022 5:58:03 PM
Surr: 4-Bromofluorobenzene	99.7	70-130	%Rec	1	10/27/2022 5:58:03 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	230	60	mg/Kg	20	10/27/2022 7:57:58 PM

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

Qualifiers:

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

Page 10 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-27 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:35:00 AM

 Lab ID:
 2210D54-011
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>JME</b>
Diesel Range Organics (DRO)	140	14	mg/Kg	1	10/28/2022 11:02:41 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/28/2022 11:02:41 AM
Surr: DNOP	95.5	21-129	%Rec	1	10/28/2022 11:02:41 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/27/2022 6:21:39 PM
Surr: BFB	95.7	37.7-212	%Rec	1	10/27/2022 6:21:39 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	10/27/2022 6:21:39 PM
Toluene	ND	0.047	mg/Kg	1	10/27/2022 6:21:39 PM
Ethylbenzene	ND	0.047	mg/Kg	1	10/27/2022 6:21:39 PM
Xylenes, Total	ND	0.093	mg/Kg	1	10/27/2022 6:21:39 PM
Surr: 4-Bromofluorobenzene	97.5	70-130	%Rec	1	10/27/2022 6:21:39 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	330	60	mg/Kg	20	10/27/2022 8:10:20 PM

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

Qualifiers:

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

Page 11 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-28 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:40:00 AM

 Lab ID:
 2210D54-012
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O		Analyst: <b>JME</b>			
Diesel Range Organics (DRO)	57	14	mg/Kg	1	10/28/2022 11:16:49 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/28/2022 11:16:49 AM
Surr: DNOP	103	21-129	%Rec	1	10/28/2022 11:16:49 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	10/27/2022 6:45:13 PM
Surr: BFB	90.3	37.7-212	%Rec	1	10/27/2022 6:45:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	10/27/2022 6:45:13 PM
Toluene	ND	0.043	mg/Kg	1	10/27/2022 6:45:13 PM
Ethylbenzene	ND	0.043	mg/Kg	1	10/27/2022 6:45:13 PM
Xylenes, Total	ND	0.085	mg/Kg	1	10/27/2022 6:45:13 PM
Surr: 4-Bromofluorobenzene	96.5	70-130	%Rec	1	10/27/2022 6:45:13 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	770	60	mg/Kg	20	10/27/2022 8:22:41 PM

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

Qualifiers:

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

Page 12 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-29 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:45:00 AM

 Lab ID:
 2210D54-013
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: <b>JME</b>
Diesel Range Organics (DRO)	49	14	mg/Kg	1	10/28/2022 11:30:55 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	10/28/2022 11:30:55 AM
Surr: DNOP	102	21-129	%Rec	1	10/28/2022 11:30:55 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	10/27/2022 7:08:45 PM
Surr: BFB	90.2	37.7-212	%Rec	1	10/27/2022 7:08:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.022	mg/Kg	1	10/27/2022 7:08:45 PM
Toluene	ND	0.044	mg/Kg	1	10/27/2022 7:08:45 PM
Ethylbenzene	ND	0.044	mg/Kg	1	10/27/2022 7:08:45 PM
Xylenes, Total	ND	0.088	mg/Kg	1	10/27/2022 7:08:45 PM
Surr: 4-Bromofluorobenzene	96.0	70-130	%Rec	1	10/27/2022 7:08:45 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	300	60	mg/Kg	20	10/27/2022 8:35:02 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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

Page 13 of 20

Date Reported: 11/2/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-30 4'

 Project:
 Gill BGJ 1
 Collection Date: 10/25/2022 10:50:00 AM

 Lab ID:
 2210D54-014
 Matrix: MEOH (SOIL)
 Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	10/28/2022 11:45:01 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/28/2022 11:45:01 AM
Surr: DNOP	99.4	21-129	%Rec	1	10/28/2022 11:45:01 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg	1	10/27/2022 10:17:09 PM
Surr: BFB	95.7	37.7-212	%Rec	1	10/27/2022 10:17:09 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.026	mg/Kg	1	10/28/2022 9:24:14 AM
Toluene	ND	0.052	mg/Kg	1	10/28/2022 9:24:14 AM
Ethylbenzene	ND	0.052	mg/Kg	1	10/28/2022 9:24:14 AM
Xylenes, Total	ND	0.10	mg/Kg	1	10/28/2022 9:24:14 AM
Surr: 4-Bromofluorobenzene	93.2	70-130	%Rec	1	10/28/2022 9:24:14 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	120	60	mg/Kg	20	10/27/2022 8:47:24 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 14 of 20

## Hall Environmental Analysis Laboratory, Inc.

2210D54 02-Nov-22

WO#:

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: MB-71132 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71132 RunNo: 92160

Prep Date: 10/27/2022 Analysis Date: 10/27/2022 SeqNo: 3308744 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-71132 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71132 RunNo: 92160

Prep Date: 10/27/2022 Analysis Date: 10/27/2022 SeqNo: 3308745 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 96.5 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 Quantitative Limit

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

Page 15 of 20

## Hall Environmental Analysis Laboratory, Inc.

2210D54

WO#:

02-Nov-22

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: LCS-71115	SampT	ype: <b>LC</b>	s	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch	ID: <b>71</b> ′	115		RunNo: <b>92135</b>							
Prep Date: 10/27/2022	Analysis D	ate: 10	/27/2022	SeqNo: <b>3307452</b>			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	49	15	50.00	0	98.8	64.4	127					
Surr: DNOP	5.3		5.000		106	21	129					
Sample ID: <b>MB-71115</b>	SampT	уре: МЕ	BLK	Tes	tCode: <b>EF</b>	PA Method	8015M/D: Die	sel Range	Organics			
Client ID: PBS	Batch	Batch ID: <b>71115</b>			RunNo: 92	2135						
Prep Date: 10/27/2022	Analysis D	ate: 10	/27/2022	S	SeqNo: 33	307454	Units: mg/K	(g				
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	10		10.00		101	21	129					
Sample ID: 2210D54-001AMS	SampT	уре: М	5	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics			
Client ID: WES22-01 4-6'	Batch	Batch ID: <b>71115</b>			RunNo: <b>92172</b>							
Prep Date: 10/27/2022	Analysis D	ate: 10	/28/2022	5	SeqNo: 33	312607	Units: mg/K	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	110	15	49.85	75.58	76.0	36.1	154					
Surr: DNOP	5.4		4.985		109	21	129					

Sample ID:	2210D54-001AMSD	SampT	ype: MS	SD .	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	WES22-01 4-6'	Batch	ı ID: <b>71</b> 1	115	F	RunNo: <b>92172</b>					
Prep Date:	10/27/2022	Analysis Date: 10/28/2022			SeqNo: <b>3312608</b>			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	120	15	49.90	75.58	83.4	36.1	154	3.20	33.9	
Surr: DNOP		5.6		4 990		111	21	129	0	0	

#### Qualifiers:

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

Page 16 of 20

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2210D54 02-Nov-22** 

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: A92145 RunNo: 92145

Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307686 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 1000 1000 100 37.7 212

Sample ID: 2.5ug gro Ics SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: A92145 RunNo: 92145

Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307694 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC I owl imit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 25.00 110 72.3 137

 Surr. BFB
 2100
 1000
 210
 37.7
 212

Sample ID: 2210d54-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **WES22-01 4-6'** Batch ID: **A92145** RunNo: **92145** 

Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307756 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result POI LowLimit HighLimit Qual Gasoline Range Organics (GRO) 21 4.3 21.51 99.2 70 130 Surr: BFB 1600 860.6 187 37.7 212

 Sample ID:
 2210d54-001amsd
 SampType:
 MSD
 TestCode:
 EPA Method 8015D:
 Gasoline Range

 Client ID:
 WES22-01 4-6'
 Batch ID:
 A92145
 RunNo:
 92145

 Prep Date:
 Analysis Date:
 10/27/2022
 SeqNo:
 3307757
 Units:
 mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 21 98.2 70 130 20 4.3 21.51 1.01 Surr: BFB 1600 860.6 190 37.7 212 0 0

Sample ID: mb-II SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: **B92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307758 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 950 1000 95.0 37.7 212

Sample ID: 2.5ug gro Ics-II SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: B92145 RunNo: 92145

Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307759 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 Quantitative 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

Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 17 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2210D54 02-Nov-22

WO#:

Client: Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: 2.5ug gro Ics-II SampType: LCS TestCode: EPA Method 8015D: Gasoline Range LCSS Client ID: Batch ID: **B92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307759 Units: mq/Kq PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Gasoline Range Organics (GRO) 24 5.0 25.00 n 96.4 72.3 137 Surr: BFB 1900 1000 194 37.7 212

Sample ID: 2210d54-014ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: BES22-30 4' Batch ID: **B92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307761 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 26 5.2 25.80 98.9 70 Surr: BFB 2000 1032 193 37.7 212

Sample ID: 2210d54-014amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: BES22-30 4' Batch ID: **B92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307762 Units: mg/Kg %RPD SPK value SPK Ref Val %REC LowLimit HighLimit **RPDLimit** Qual Analyte Result POI Gasoline Range Organics (GRO) 25 5.2 25.80 97.0 70 130 1.88 20 Surr: BFB 2000 1032 212 0 0 194 37.7

#### 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 Quantitative Limit
- 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

Page 18 of 20

#### Hall Environmental Analysis Laboratory, Inc.

2210D54 02-Nov-22

WO#:

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: **D92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307777 Units: mg/Kg SPK Ref Val %RPD **RPDLimit** Analyte Result **PQL** SPK value %REC LowLimit HighLimit Qual Benzene ND 0.025 Toluene ND 0.050 Ethylbenzene ND 0.050

Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 1.0 1.000 104 70 130

0.9183

Sample ID: 100ng btex Ics SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: **D92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeaNo: 3307778 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.025 1.000 Benzene 1.0 n 103 80 120 Toluene 1.0 0.050 1.000 0 102 80 120 0 103 80 Ethylbenzene 1.0 0.050 1.000 120 Xylenes, Total 3.0 0.10 3.000 0 102 80 120 Surr: 4-Bromofluorobenzene 1.0 1.000 104 70 130

Sample ID: 2210d54-002ams SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: WES22-02 4-6' Batch ID: **D92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307801 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 102 68.8 0.94 0.023 0.9183 120 Benzene O 0.94 0.046 0.9183 0 102 73.6 124 Toluene 0 102 72.7 Ethylbenzene 0.93 0.046 0.9183 129 Xylenes, Total 2.8 0.092 2.755 0 101 75.7 126

Sample ID: 2210d54-002amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: WES22-02 4-6' Batch ID: **D92145** RunNo: 92145 Prep Date: Analysis Date: 10/27/2022 SeqNo: 3307802 Units: mg/Kg %REC **RPDLimit** Analyte Result PQL SPK value SPK Ref Val LowLimit HighLimit %RPD Qual Benzene 0.90 0.023 0.9183 0 98.2 68.8 120 4.01 20 Toluene 0.91 0.046 0.9183 0 98.8 73.6 124 3.59 20 Ethylbenzene 0.92 0.046 0.9183 0 100 72 7 129 1.08 20 2.8 0.092 2.755 0 100 75.7 126 0.718 20 Xylenes, Total Surr: 4-Bromofluorobenzene 0.93 0.9183 101 70 0 0 130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated.

0.91

Analyte detected in the associated Method Blank

99.3

70

130

- Е Above Quantitation Range/Estimated Value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 19 of 20

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 2210D54

02-Nov-22

**Client:** Vertex Resources Services, Inc.

**Project:** Gill BGJ 1

Sample ID: mb SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: **B92156** RunNo: 92156 Prep Date: Analysis Date: 10/28/2022 SeqNo: 3309697 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result Benzene ND 0.025 Toluene ND 0.050 Ethylbenzene ND 0.050 Xylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 0.94 1.000 93.8 70 130

Sample ID: 100ng btex lcs	Samp	SampType: LCS TestCode: EPA Method 8						les			
Client ID: LCSS	Batc	h ID: <b>B9</b> :	2156	F	RunNo: 92156						
Prep Date:	Analysis [	Date: 10	<b>10/28/2022</b> SeqNo: <b>3309698</b>				Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.0	0.025	1.000	0	101	80	120				
Toluene	1.0	0.050	1.000	0	101	80	120				
Ethylbenzene	1.0	0.050	1.000	0	101	80	120				
Xylenes, Total	3.0	0.10	3.000	0	100	80	120				
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	70	130				

#### Qualifiers:

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

Page 20 of 20



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3075 EAY: 505-345-4107

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

	Vertex Resources Services, Inc.	Work Order Num	nber: 2210D54		RcptNo	: 1
Received By:	Juan Rojas	10/27/2022 7:25:0	0 AM	Heavens	**	
Completed By:	Tracy Casarrubias	10/27/2022 7:40:3	7 AM			
Reviewed By:	KKN 10-27-					
Chain of Cust	<u>ody</u>					
1. Is Chain of Cus	stody complete?		Yes 🗸	No 🗌	Not Present	
2. How was the s	ample delivered?		Courier			
Log In						
	ot made to cool the samp	oles?	Yes 🗸	No 🗌	NA 🗆	
4. Were all sample	es received at a tempera	ature of >0° C to 6.0°C	Yes 🗸	No 🗌	na 🗆	
5. Sample(s) in pr	roper container(s)?		Yes 🗸	No 🗌		
6. Sufficient samp	le volume for indicated t	est(s)?	Yes 🗸	No 🗌		
7. Are samples (ex	xcept VOA and ONG) pr	operly preserved?	Yes 🗸	No 🗌		
8. Was preservativ	ve added to bottles?		Yes	No 🔽	NA 🗆	
9. Received at leas	st 1 vial with headspace	<1/4" for AQ VOA?	Yes	No 🗌	NA 🗹	
10. Were any samp	ole containers received b	proken?	Yes	No 🗹	# of preserved	
	k match bottle labels?	<i>(</i> )	Yes 🗸	No 🗆	bottles checked for pH:	>12 unless noted)
2. Are matrices co	rrectly identified on Cha	in of Custody?	Yes 🗸	No 🗆	Adjusted?	
	analyses were requested	1?	Yes 🗸	No 🗌		
	times able to be met? tomer for authorization.)	ŕ	Yes 🗸	No 🗆	Checked by:	JU 10/27/2
	ng (if applicable)					
	fied of all discrepancies	with this order?	Yes	No 🗌	NA 🗹	
Person N	otified:	Date:				
By Whom	n:	Via:	eMail	Phone  Fax	☐ In Person	
Regarding						
Client Ins	tructions:					
16. Additional rema	arks:					
7. Cooler Inform	ation					
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		
1	0.5 Good	Yes				

	Tim Around Time.	
Chain-or-Custody Record		I ATNI FINATED NIMENTAL
Client: Verta (EDG1)	□ Standard 14 Rush 24 M	. ≽
	Project Name:	100 100 100 100 100 100 100 100 100 100
Mailing Address: On Jill	GIM BON #1	www.naileffyironmental.com 4901 Hawkins NE - Albuquerque, NM 87109
	Project #:	Eax 505-345-4107
Phone #:	NE-00123	Analysis Request
email or Fax#:	Project Manager:	(Oq.
QA/QC Package:  □ Standard □ Level 4 (Full Validation)	Michael Moppitt	PO <sub>4</sub> , S
:uo	SPC	8082 4.1) 4.2) MO <sub>2</sub> ,
☐ NELAC ☐ Other	Un Ice: D-Yes D No	1 50.3 1 50.0 1 50.3 1 50.3
	Cooler Tempingling CE: (9, 3th 2 - / (°C)	D)(Gibbo)  thocolumns and the state of the s
Date Time Matrix Sample Name	tive HEAL No.	BTEX N 8081 Pes 8081 Pes BPHS by RCRA 8 I RCRA 8 I RCRA 8 I RCRA 8 I RCRA 8 I
5 5011	400 jar ice	>
1 9:50 1 MESST 02 4-6,	7	
9:55   WES22-08 4-6'		
10:00   WES 22-09 4-6'		
10:05 BES22-21 4'		
10:10 36522-22 41	300	
	F00	
865 12 - 24	008	
BES 22-25 4		
1 10:30 BES 22 -26 4'	010	
٠, ١		
40	210	
Relinquished by: Salay Cara	Received by: Via: Pate Time	1/2
Date: Time: Relinquis/fed by:	Via:	BOD HIG DRING
If necessary, samples submitted to Hall Environmental may be sub-	ocontracted to other aggredited laboratories. This serves as notice of this	If necessary, samples submitted to Hall Environmental may be subcontracted to other aggredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record	Turn-Around Time:	
Client: Vertus (EOG)	□ Standard ( Rush 24 NV	HALL ENVIRONMENTAL PARALYSIS I ABORATORY AND
		ental.com
Mailing Address: On Lill	Gill 1861 #	37109
0	Project #:	
Phone #:	10-871m-972	Analysis Request
email or Fax#:	Project Manager:	(O)
QA/QC Package:  □ Standard □ Level 4 (Full Validation)	" Maffitt	PO₄, S
Accreditation:   Az Compliance  NELAC  Other	Sampler: SPC On Ice: Ares No	0 / DR (1) (1) (1) (2) (2) (2) (4) (2)
□ EDD (Type)	olers:	(GR) 10 (10 (10 (10 (10 (10 (10 (10 (10 (10 (
	Cooler Temp(including CF): US+0.5-0.5 (°C)	MTD 13D 9estico 19 Method 19 Method 10 Method
Date Time Matrix Sample Name	Container Preservative HEAL No.  Type 72,0054	BTE \ TPH:80 8081 PA PAHS B RCRA 8 8250 (VA 8270 (SA 10481 CA 10481
10/25/10:45 Soil BB222-29 4'	400, jar ice	`
11 10:50 11 BEX22-30 41		\ \ \
F		
10/25 17:56 Sally Cortex Date: Relinquished by:	Received by: Via: Date Time	Nemarks:  Same 539 of 53
If necessary, samples submitted to Hail Environmental may be subcontracted to other accredited laboratories.	subcontracted to other accredited laboratories. This serves as notice of	Inis serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

November 07, 2022

Mike Moffitt
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX:

RE: Gill BGJ 1 OrderNo.: 2211147

#### Dear Mike Moffitt:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/3/2022 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

and st

4901 Hawkins NE

Albuquerque, NM 87109

# Analytical Report Lab Order 2211147

Date Reported: 11/7/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-13 5'

**Project:** Gill BGJ 1 **Collection Date:** 11/2/2022 2:45:00 PM

**Lab ID:** 2211147-001 **Matrix:** MEOH (SOIL) **Received Date:** 11/3/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: ЈМТ
Chloride	230	60	mg/Kg	20	11/3/2022 11:16:47 AM	71274
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	340	15	mg/Kg	1	11/3/2022 10:25:27 AM	71261
Motor Oil Range Organics (MRO)	540	49	mg/Kg	1	11/3/2022 10:25:27 AM	71261
Surr: DNOP	127	21-129	%Rec	1	11/3/2022 10:25:27 AM	71261
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	18	mg/Kg	5	11/3/2022 11:01:32 AM	B92307
Surr: BFB	86.5	37.7-212	%Rec	5	11/3/2022 11:01:32 AM	B92307
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.089	mg/Kg	5	11/3/2022 11:01:32 AM	D92307
Toluene	ND	0.18	mg/Kg	5	11/3/2022 11:01:32 AM	D92307
Ethylbenzene	ND	0.18	mg/Kg	5	11/3/2022 11:01:32 AM	D92307
Xylenes, Total	ND	0.36	mg/Kg	5	11/3/2022 11:01:32 AM	D92307
Surr: 4-Bromofluorobenzene	88.9	70-130	%Rec	5	11/3/2022 11:01:32 AM	D92307

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

Qualifiers:

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

Page 1 of 5

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2211147 07-Nov-22

**Client:** EOG **Project:** Gill BGJ 1

Sample ID: MB-71274 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 71274 RunNo: 92304

Prep Date: 11/3/2022 Analysis Date: 11/3/2022 SeqNo: 3316872 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-71274 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 71274 RunNo: 92304

Prep Date: 11/3/2022 Analysis Date: 11/3/2022 SeqNo: 3316873 Units: mg/Kg

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

Chloride 15 15.00 97.5 110

#### Qualifiers:

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

Page 2 of 5

## Hall Environmental Analysis Laboratory, Inc.

2211147 07-Nov-22

WO#:

Client: EOG
Project: Gill BGJ 1

Sample ID: LCS-71261 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 71261 RunNo: 92301 Units: mg/Kg Prep Date: 11/3/2022 Analysis Date: 11/3/2022 SeqNo: 3315842 PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 46 15 50.00 0 91.3 64.4 127 Surr: DNOP 5.1 5.000 102 21 129

Sample ID: MB-71261 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: Batch ID: 71261 PBS RunNo: 92301 Prep Date: Analysis Date: 11/3/2022 SeqNo: 3315843 11/3/2022 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 10 10.00 99.8 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

Page 3 of 5

## Hall Environmental Analysis Laboratory, Inc.

2211147 07-Nov-22

WO#:

Client: EOG
Project: Gill BGJ 1

Sample ID: mb SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: B92307 RunNo: 92307

Prep Date: Analysis Date: 11/3/2022 SeqNo: 3316441 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 Ics SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: B92307 RunNo: 92307

Prep Date: Analysis Date: 11/3/2022 SeqNo: 3316442 Units: mg/Kg

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

 Gasoline Range Organics (GRO)
 25
 5.0
 25.00
 0
 99.7
 72.3
 137

 Surr: BFB
 1900
 1000
 186
 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
- 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

Page 4 of 5

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2211147** 

07-Nov-22

Client: EOG
Project: Gill BGJ 1

Sample ID: mb	SampType: MBLK		Tes							
Client ID: PBS	Batcl	h ID: <b>D9</b> :	2307	RunNo: 92307						
Prep Date:	Analysis Date: 11/3/2022			SeqNo: <b>3316487</b>			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.0	70	130			

Sample ID: 100ng btex lcs	Samp	SampType: LCS TestCode: EPA Method 8					8021B: Volati	les			
Client ID: LCSS	Batc	h ID: <b>D9</b>	2307	F	RunNo: 9						
Prep Date:	Analysis [	Date: <b>11</b>	/3/2022	(	SeqNo: 3	316488	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	93.6	80	120				
Toluene	0.96	0.050	1.000	0	96.5	80	120				
Ethylbenzene	0.96	0.050	1.000	0	95.7	80	120				
Xylenes, Total	2.9	0.10	3.000	0	96.3	80	120				
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	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
- 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

Page 5 of 5



Hall Environmental Analysis Laboratory
4901 Hawkins NE

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

# Sample Log-In Check List

Released to Imaging: 12/15/2023 9:46:34 AM

				Website: www.l	allenviron	mental.com	n		
Client Name:	EOG		Work	Order Numbe	r: <b>22</b> 1114	17		RcptN	p: 1
Received By:	Juan Roja	ıs	11/3/20	22 7:30:00 AM	/I	E	Juneals		
Completed By:	Tracy Cas	arrubias	11/3/20	22 7:57:35 AN	Л				
Reviewed By:	<i>7</i> 7 .	55-							
Chain of Cus	tody								
1. Is Chain of C	ustody comp	lete?			Yes 🛭	2.	No 🗌	Not Present	
2. How was the	sample deliv	ered?			Courie				
Log In						<b>a</b>	🗆	<b>-</b>	
3. Was an atten	npt made to o	cool the samp	les?		Yes 🛂	<b>1</b>	No 🗌	NA 🗌	
4. Were all sam	ples received	at a tempera	ture of >0° C	to 6.0°C	Yes 🔽	•	No 🗌	NA 🗆	
5. Sample(s) in	proper contai	iner(s)?			Yes 🛂	•	No 🗌		
6. Sufficient sam	nple volume f	or indicated te	est(s)?		Yes 🔽	]	No 🗆		
7. Are samples (	except VOA	and ONG) pro	perly preserve	ed?	Yes 🛂		No 🗌		
8. Was preserva	tive added to	bottles?			Yes 🗆	]	No 🗹	NA 🗆	
9. Received at le	east 1 vial wit	h headspace	<1/4" for AQ V	OA?	Yes [	İ	No 🗌	NA 🗹	
10. Were any sar	nple containe	ers received b	roken?		Yes		No 🗹	# of preserved	
11. Does paperwo (Note discrepa			)		Yes 🔽	l	No 🗆	bottles checked for pH: (<2 c	or >12 unless noted)
12. Are matrices o	correctly iden	tified on Chai	n of Custody?		Yes 🗸		No 🗌	Adjusted?	
13. Is it clear wha	t analyses we	ere requested	?		Yes 🗹		No 🗌		lala
14. Were all holdi (If no, notify c	-				Yes 🔽		No 🗆	Checked by:	M 11/3/2
Special Handl	ing (if app	licable)							
15. Was client no	tified of all di	screpancies v	vith this order?	•	Yes [	]	No 🗆	NA 🗹	
Person	Notified:			Date:					
By Who				Via:	eMail	Phon	e 🔲 Fax	☐ In Person	
Regard									
	nstructions:								
16. Additional re									
17. Cooler Infor						- I		***	
Cooler No	Temp ⁰C 1.5	Condition	Seal Intact	Seal No	Seal Date	Sig	ned By		
	1.3	Good	Yes	***************************************					

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Chain-ot-Custody Record	Turn-Around Time:	
Client: EOS (Worky)	Standard WRush Strue-Class	ANALYSIS I ABORATORY
	The state of the s	www. ballanvironmental com
Mailing Address: On Lile	Giii 861#1	4901 Hawkins NE - Albuquerque, NM 87109
	Project #:	10
Phone #:	72E-00123-07	Analysis Request
email or Fax#:	Project Manager:	†O9
QA/QC Package:   Standard  Level 4 (Full Validation)	N 25-F	PO₄, S
☐ Az Con	Samp	S808/ (1.40) 7.827( 1.50N
EDD (Type)	olers:	GRG 10 G 10 G 10 G
	Cooler Temp(including oF): [, (+0.1=),(-(°C)	etho y 83 tr, <i>h</i> OA)
Date Time Matrix Sample Name	Container Preservative Type and # Type	BTEX) 8081 Pe BDB (M PPHs b: RCRA 8 (Ci.)F., B 8250 (V 8250 (V Total Co
11/2/22 14:45 Soil BESZZ-13 5'		\ \ \
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Wate: Time: Relinquished by:	Received by: Via: Date Time	Remarks: Nirect bill EDA
elimquished by:		
Value 1900 Original	2 1 25 27 2 2. 2	to ce scartarought.a
If nepessary, samples, subpitted to Hall Equiropmental may be su	ubcontracted to when accredited laboratories. This serves as notice of this	If negessary, samples, submitted to Hall Equiropmental may be subcontracted to the accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 291690

#### **QUESTIONS**

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

Prerequisites	
Incident ID (n#)	nJXK1620138458
Incident Name	NJXK1620138458 GILL BGJ #001 @ 30-025-37103
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-37103] GILL BGJ #001

Location of Release Source	
Please answer all the questions in this group.	
Site Name GILL BGJ #001	
Date Release Discovered 02/08/2010	
Surface Owner	Private

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Overflow - Tank, Pit, Etc.   Tank (Any)   Crude Oil   Released: 20 BBL   Recovered: 15 BBL   Lost: 5 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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Phone:(505) 334-6178 Fax:(505) 334-6170 **District IV** 

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

QUESTIONS, Page 2

Action 291690

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462	11 3, 1411 37 333
QUESTI	ONS (continued)
Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377 Action Number: 291690 Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)
QUESTIONS	[0]
Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e.	e. gas only) are to be submitted on the C-129 form.
Initial Response  The responsible party must undertake the following actions immediately unless they could create a s  The source of the release has been stopped	safety hazard that would result in injury.
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.
	I ation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative o ted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of valuation in the follow-up C-141 submission.
to report and/or file certain release notifications and perform corrective actions for releate the OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are required ases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or
I hereby agree and sign off to the above statement	Name: Tina Huerta Title: Regulatory Reporting Supervisor

Email: tina\_huerta@eogresources.com

Date: 12/06/2023

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

QUESTIONS, Page 3

Action 291690

#### **QUESTIONS** (continued)

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release ar	nd the following surface areas:
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between ½ and 1 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Yes		
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Yes		
No		
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
1500		
2378		
2320		
46.2		
0		
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
10/13/2022		
10/17/2022		
11/02/2022		
7121		
1055		
4907		
727		
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
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significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

District I

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1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462 State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 4

Action 291690

#### **QUESTIONS** (continued)

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

Remediation Plan (continued)			
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.			
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:			
(Select all answers below that apply.)			
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes		
Which OCD approved facility will be used for off-site disposal	GANDY MARLEY LANDFARM/LANDFILL [fEEM0112338393]		
OR which OCD approved well (API) will be used for off-site disposal	Not answered.		
OR is the off-site disposal site, to be used, out-of-state	Not answered.		
OR is the off-site disposal site, to be used, an NMED facility	Not answered.		
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.		
(In Situ) Soil Vapor Extraction	Not answered.		
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.		
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.		
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.		
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.		
OTHER (Non-listed remedial process)	Not answered.		

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

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

I hereby agree and sign off to the above statement

Name: Tina Huerta

Title: Regulatory Reporting Supervisor

Email: tina\_huerta@eogresources.com

Date: 12/06/2023

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

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

QUESTIONS, Page 5

Action 291690

**QUESTIONS** (continued)

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

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

District I

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

QUESTIONS, Page 6

Action 291690

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Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

Sampling Event Information		
Last sampling notification (C-141N) recorded 290986		
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/02/2022	
What was the (estimated) number of samples that were to be gathered	1	
What was the sampling surface area in square feet	4907	

Remediation Closure Request			
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.			
Requesting a remediation closure approval with this submission	Yes		
Have the lateral and vertical extents of contamination been fully delineated	Yes		
Was this release entirely contained within a lined containment area	No		
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes		
What was the total surface area (in square feet) remediated	4907		
What was the total volume (cubic yards) remediated	727		
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes		
What was the total surface area (in square feet) reclaimed	7121		
What was the total volume (in cubic yards) reclaimed	1055		
Summarize any additional remediation activities not included by answers (above)	Please see attached report.		

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

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

I hereby agree and sign off to the above statement

I hereby agree and sign off to the above statement

Title: Regulatory Reporting Supervisor
Email: tina\_huerta@eogresources.com
Date: 12/06/2023

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

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

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

QUESTIONS, Page 7

Action 291690

<b>QUESTIONS</b>	(continued)
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Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 291690

#### **CONDITIONS**

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	291690
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

#### CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation Closure approved. All areas not reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as practical. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete"	12/15/2023