

## Environmental Site Remediation Work Plan



## General Information

NMOCD District:	District 2 – Artesia	RP Reference:	2RP-3233, 2RP-4414, 2RP-4741, 2RP-4971 nAB1524531624, nAB1727057447, nAB1813442138, nMAP1826042805, nAPP2106151044
Landowner:	Bureau of Land Management	Incident ID:	
Client:	Devon Energy Production Company, LP	Site Location:	North Pure Gold 8 Federal #011
Date:	April 28, 2025	Project #:	25A-02298
Client Contact:	Jim Raley	Phone #:	575.689.7587
Vertex PM:	Kent Stallings	Phone #:	364.814.1413

## Objective

The objective of this Environmental Site Remediation Work Plan is to identify areas of exceedance for constituents of concern found during spill assessment and site characterization activities, and propose appropriate remediation techniques to address the five open releases at North Pure Gold 8 Federal #011 (hereafter referred to as “site”). All five releases involved produced water and were caused by a hole in the high pressure line on the H pump (2RP-3233); a ½-inch bull plug washing out (2RP-4414); an underground injection line that developed a leak (2RP-4741); a mechanical failure involving a flex hose from the charge pump to the H pump blowing off the connector (2RP-4971); and a failed ball valve on the liquid gauge. Devon Energy Production Company, LP provided notification of the releases to New Mexico Oil Conservation Division District 2. and the Bureau of Land Management, who own the property, via initial C-141 Release Notifications submitted on September 1, 2015, September 26, 2017, May 11, 2018, September 14, 2018, and March 2, 2021. An aerial photograph of the site with the cumulative impact area of these five releases is presented on Figure 1 (Attachment 1). Areas of concern identified and delineated include most of the facility pad radiating north, northeast, and east of the tank battery in the southeast corner of the site. Closure criteria have been selected as per New Mexico Administrative Code 19.15.29.12 and are presented below (Table 1).

Table 1. Closure Criteria for Soils Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
> 100 feet	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – Total dissolved solids

TPH – Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX - Benzene, toluene, ethylbenzene, and xylenes

## Characterization and Initial Remediation

The site characterization was completed on July 17, 2023. A total of 42 sample points were established across the release areas and samples were collected from these locations at various depths for field screening. In total, 91 samples were submitted to Hall Environmental Analysis Laboratory, Albuquerque, New Mexico, for analysis. The sample locations are presented on Figure 1 (Attachment 1). Laboratory analysis results were compared to the above noted closure criteria and the results from the characterization activity are presented in Table 2 (Attachment 2). Exceedances to reclamation and remediation criteria are identified in the table in bold with green or grey background, respectively. Daily field reports and laboratory data reports are included in Attachments 3 and 4,

VERSATILITY. EXPERTISE.

## Environmental Site Remediation Work Plan

respectively. All applicable research as it pertains to closure criteria selection is presented in Attachment 5. The combined NMCOD C-141 Report for the site is included in Attachment 6.

## Remedial Activities

### General

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. The soil will be excavated to the extent of the known contamination or in 2-foot increments, whichever is less. Field screening will be utilized to confirm the removal of contaminated soil below the applicable closure criteria. Contaminated soils will be stored on a 30mil liner prior to disposal at an approved facility. Once the excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally. Upon approval, remediation efforts will be completed within 90 days.

### **Pad From Tank Battery to North and East edges of pad – nAB1524531624, nAB1727057447, nAB1813442138, nMAP1826042805, nAPP2106151044**

Samples were collected at a total of 42 points on the pad and into the pasture north of the pad to characterize the area to be excavated. Exceedances to closure criteria were found at one sample point (BH21-04). The soil will be excavated from the impact area at the tank battery to a planned depth of 3 feet below ground surface. The proposed excavation area is shown on Figure 2 (Attachment 1). A hand crew and/or hydrovac truck will be utilized to remove contaminated soil in close proximity to the wellhead, underground flowlines, and remaining equipment. Heavy equipment will be used to complete excavation in the release area not conflicting with equipment. Field screening will be utilized to find the horizontal and vertical extents of the impacted area. The estimated volume to be excavated is 22 cubic yards.

Confirmation sampling of the excavation base and wall areas will utilize five-point composite samples each representative of no more than 200 square feet. All confirmation samples will be submitted for laboratory analysis of all applicable parameters. Excavation is planned to be completed within 90 days of approval of this Environmental Site Remediation Work Plan.

Sample Point	Excavation Depth	Remediation Method
BH21-04	3'	Excavator/ Handcrew/ Hydrovac

Environmental Site Remediation Work Plan



Should you have any questions or concerns, please do not hesitate to contact Project Manager Kent Stallings at 346.814.1413 or kstallings@vertexresource.com.

*Riley Arnold*

Riley Arnold, B.Sc.  
ENVIRONMENTAL TECHNICIAN, REPORTING

May 9, 2025

Date

*Kent Stallings, P.G.*

Kent Stallings, P.G.  
PROJECT MANAGER, REPORT REVIEW

May 9, 2025

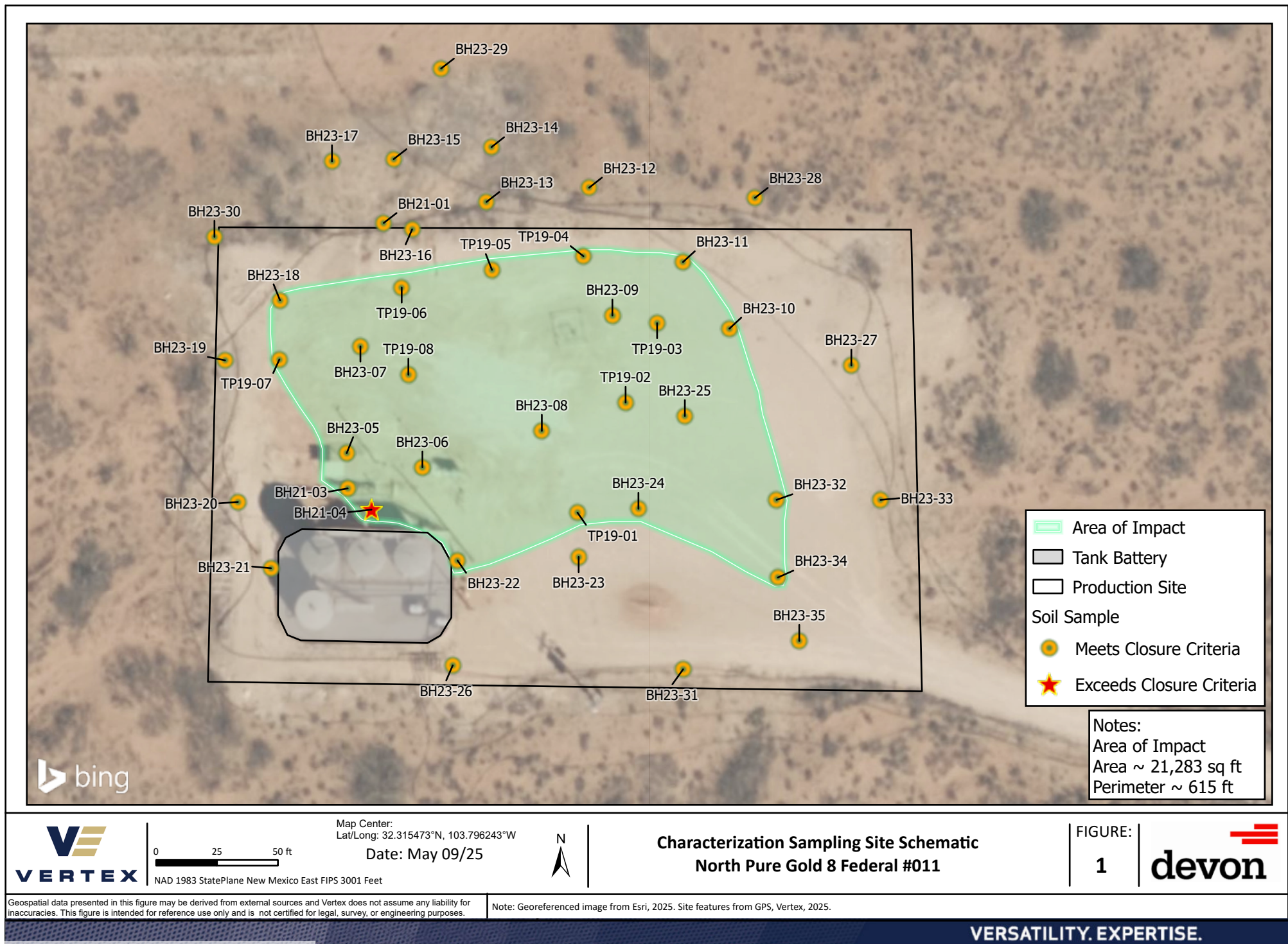
Date

**Attachments**

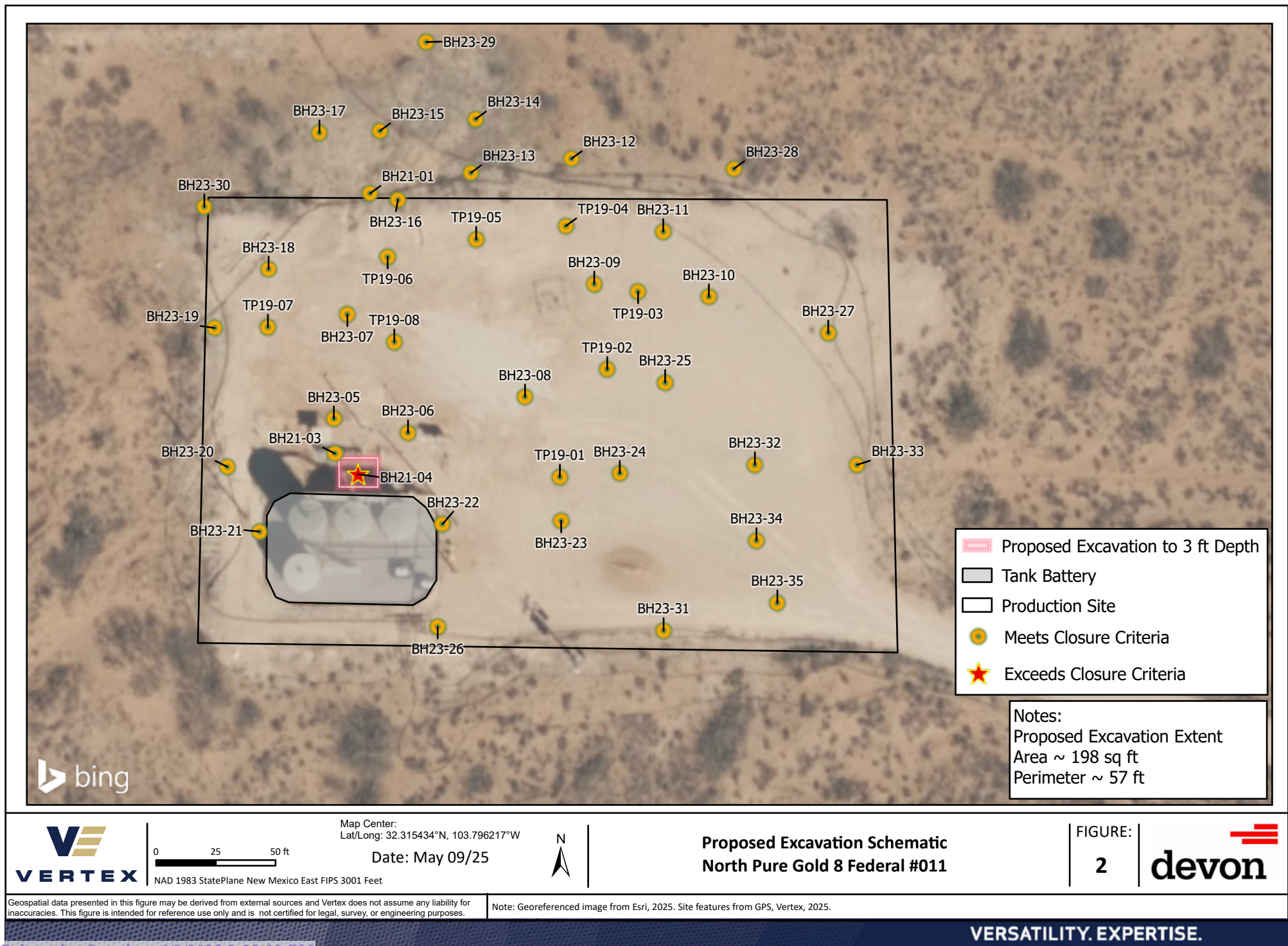
- Attachment 1. Site Sampling Schematic and Proposed Excavation Schematic
- Attachment 2. Field Screening and Laboratory Results Table
- Attachment 3. Daily Field Reports with Photographs
- Attachment 4. Laboratory Data Reports
- Attachment 5. Closure Criteria Research

## Attachment 1.









## Attachment 2.

Client Name: Devon Energy Production Company, LP

Site Name: North Pure Gold 8 Federal #011

NMOCD Tracking #: nAB1524531624, nAB1727057447, nAB1813442138, nMAP1826042805, nAPP2106151044

Project #: 25A-02298

Lab Report(sX): P905060, 2108E74, 2307707, 2307708, 2307747, and 2307825

Table 2. Initial Characterization Laboratory Results										
Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene  (mg/kg)	BTEX (Total)  (mg/kg)	Gasoline Range Organics (GRO)  (mg/kg)	Diesel Range Organics (DRO)  (mg/kg)	Motor Oil Range Organics (MRO)  (mg/kg)	(GRO + DRO)  (mg/kg)	Total Petroleum Hydrocarbons (TPH)  (mg/kg)	
Depth to Groundwater >100										
TP19-01	0	May 14, 2019	ND	ND	ND	356	642	356	998	1,240
	2	May 14, 2019	ND	ND	ND	29.4	ND	29	ND	294
TP19-02	0	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	2,810
TP19-03	0	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	2,520
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	754
TP19-04	0	May 14, 2019	ND	ND	ND	25.2	ND	25	ND	4,100
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	94
TP19-05	0	May 14, 2019	ND	ND	ND	37.7	ND	38	ND	6,650
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	365
TP19-06	0	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	1,440
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	1,410
TP19-07	0	May 14, 2019	ND	ND	ND	36.9	ND	37	ND	1,980
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	634
TP19-08	0	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	16,600
	2	May 14, 2019	ND	ND	ND	ND	ND	ND	ND	54
BH21-01	0.5	August 24, 2021	ND	ND	ND	ND	ND	ND	ND	ND
BH21-03	0.5	August 24, 2021	ND	ND	ND	ND	ND	ND	ND	8,900
	2	August 24, 2021	ND	ND	ND	ND	ND	ND	ND	1,200
BH21-04	0.5	August 24, 2021	ND	ND	ND	16	84	16	100	3,500
	2	August 24, 2021	ND	ND	ND	890	2,600	890	3,490	410
	4	August 24, 2021	ND	ND	ND	47	180	47	227	370
BH23-05	0	July 13, 2023	ND	ND	ND	28	58	28	86	8,100
	2	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	840
	4	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	720
BH23-06	0	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	7,400
	2	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	410
	4	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	460
BH23-07	0	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	13,000
	2	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	4,000
	4	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	2,600
BH23-08	0	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	9,000
	2	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	850
	4	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	2,400
	6	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	270

Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene  (mg/kg)	BTEX (Total)  (mg/kg)	Gasoline Range Organics (GRO)  (mg/kg)	Diesel Range Organics (DRO)  (mg/kg)	Motor Oil Range Organics (MRO)  (mg/kg)	(GRO + DRO)  (mg/kg)	Total Petroleum Hydrocarbons (TPH)  (mg/kg)	
Depth to Groundwater >100										
BH23-09	0	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	1,900
	2	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	2,300
	4	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	1,200
BH23-10	0	July 14, 2023	ND	ND	ND	13	ND	13	13	2,900
	2	July 14, 2023	ND	ND	ND	13	ND	13	13	550
BH23-11	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	16,000
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	630
BH23-12	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	71
BH23-13	0	July 14, 2023	ND	ND	ND	26	ND	26	26	110
	2	July 14, 2023	ND	ND	ND	18	ND	18	18	200
BH23-14	0	July 14, 2023	ND	ND	ND	15	ND	15	15	ND
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-15	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	520
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	360
BH23-16	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-17	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	67
BH23-18	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	7,800
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	1,400
BH23-19	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	290
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-20	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	170
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	160
BH23-21	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	300
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-21	0	July 14, 2023	ND	ND	ND	120	51	120	171	1,800
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	1,800
BH23-23	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	440
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	220
BH23-24	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	3,600
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	210

Sample Description			Petroleum Hydrocarbons							Inorganic						
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable											
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration						
											(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
											Depth to Groundwater >100					
BH23-25	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	990						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	110						
BH23-26	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	350						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	150						
BH23-27	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	92						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
BH23-28	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
BH23-29	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
BH23-30	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	240						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	89						
BH23-31	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	210						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	100						
BH23-32	0	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	1,200						
	2	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	86						
BH23-33	0	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
	2	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
BH23-34	0	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	730						
	2	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND						
BH23-35	0	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	89						
	2	July 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND						

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

**Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)**

## Attachment 3.



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	5/14/2019
Site Location Name:	North Pure Gold 8 Federal 11	Report Run Date:	6/24/2019 7:02 PM
Project Owner:	Amanda Davis	File (Project) #:	19E-00575
Project Manager:	Dennis Williams	API #:	30-015-32619
Client Contact Name:	Amanda Davis	Reference	Historic Spills
Client Contact Phone #:	(575) 748-0176		

### Summary of Times

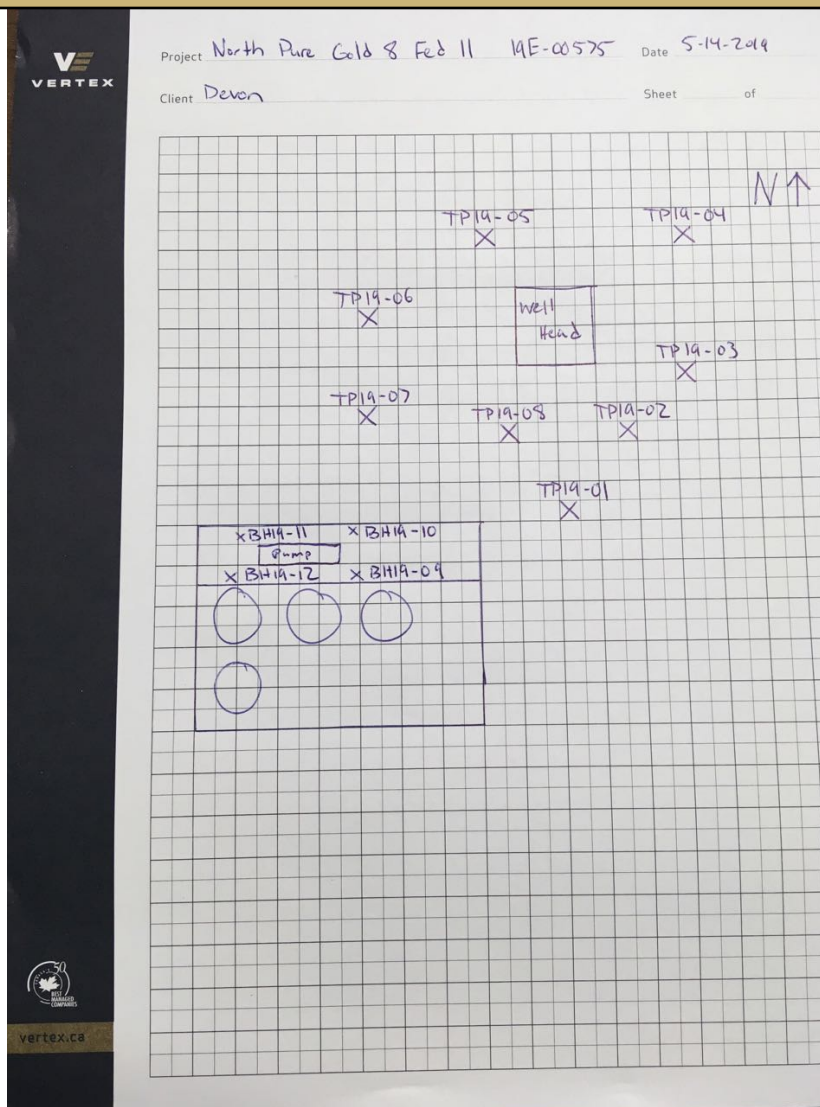
Left Office	5/14/2019 6:30 AM
Arrived at Site	5/14/2019 7:30 AM
Departed Site	5/14/2019 12:26 PM
Returned to Office	5/14/2019 1:15 PM



## Daily Site Visit Report



## Site Sketch



## Daily Site Visit Report



### Summary of Daily Operations

**11:44** Fill out arrival, safety, and ground disturbance forms  
Tailgate safety meeting  
Field screen and collect samples  
Take pictures  
Fill out DFR  
Demobilize

### Next Steps & Recommendations

1

# Daily Site Visit Report



## Site Photos

Viewing Direction: West



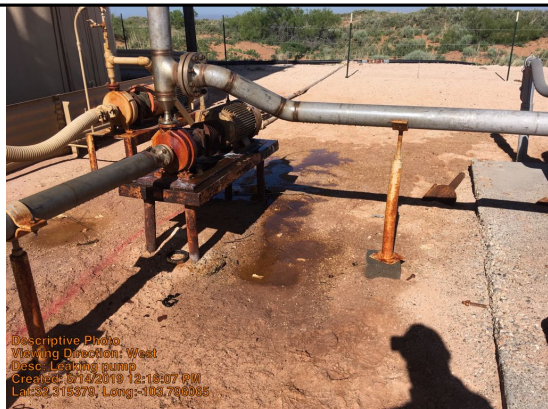
Injection line spill area

Viewing Direction: West



Hand dig instructions

Viewing Direction: West



Leaking pump

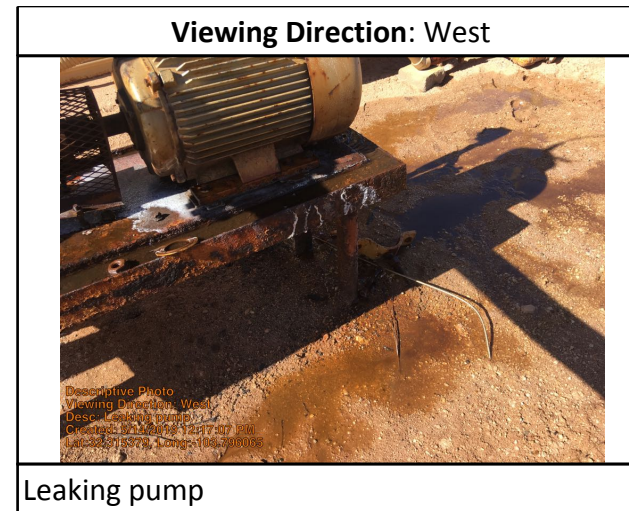
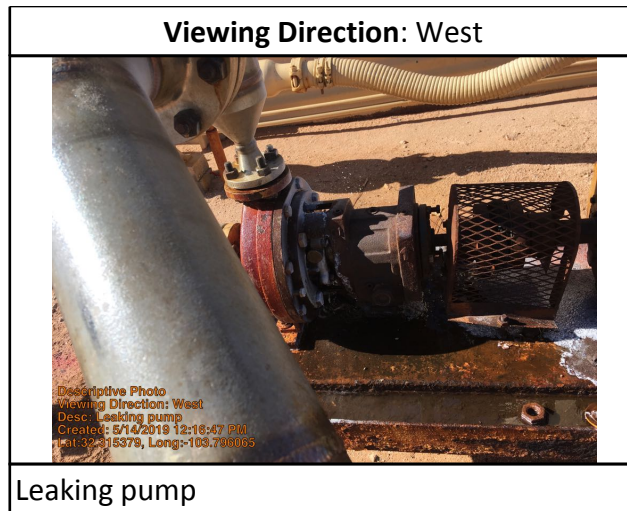
Viewing Direction: West



Leaking pump



## Daily Site Visit Report





# Daily Site Visit Report



## Depth Sample Photos

Sample Point ID: TP19-01



Depth: 0ft.

Sample Point ID: TP19-01



Depth: 2ft.

Sample Point ID: TP19-02



Depth: 0ft.

Sample Point ID: TP19-02



Depth: 2ft.



## Daily Site Visit Report

Sample Point ID: TP19-03



Depth: 0ft.

Sample Point ID: TP19-03



Depth: 2ft.

Sample Point ID: TP19-04



Depth: 0ft.

Sample Point ID: TP19-04



Depth: 2ft.



## Daily Site Visit Report

Sample Point ID: TP19-05



Depth: 0ft.

Sample Point ID: TP19-05



Depth: 2ft.

Sample Point ID: TP19-06



Depth: 0ft.

Sample Point ID: TP19-06



Depth: 2ft.





## Daily Site Visit Report

Sample Point ID: TP19-07



Depth: 0ft.

Sample Point ID: TP19-07



Depth: 2ft.

Sample Point ID: TP19-07



Depth: 0ft.

Sample Point ID: TP19-07



Depth: 2ft.





## Daily Site Visit Report

Sample Point ID: TP19-08



Depth: 0ft.

Sample Point ID: TP19-08



Depth: 2ft.

Sample Point ID: BH19-09



Depth: 1ft.

Sample Point ID: BH19-10



Depth: 1ft.



## Daily Site Visit Report

Sample Point ID: BH19-11



Depth: 1ft.

Sample Point ID: BH19-12



Depth: 1ft.

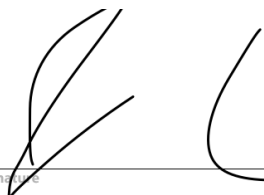
## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Jason Crabtree

**Signature:**

  
Signature



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/24/2021
Site Location Name:	North Pure Gold 8 Federal 11	Report Run Date:	8/24/2021 7:24 PM
Client Contact Name:	Wes Matthews	API #:	30-015-32619
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site 8/24/2021 7:26 AM

Departed Site 8/24/2021 1:00 PM

### Field Notes

**7:28** Arrived on site, began dfr and filling out safety paperwork to begin horizontal delineation on spills.

**8:14** Collecting sample between SS03 and the edge of pad to check for clean.

**8:47** Taking a BH02 on pad

**13:22** BH21-03 and 04 maxed out at 8' and still not getting clean.

### Next Steps & Recommendations

1



# Daily Site Visit Report



## Site Photos

Viewing Direction: North



Descriptive Photo - 1  
Viewing Direction: North  
Desc: North edge of pad between SS03  
Created: 8/24/2021 8:38:10 AM

North edge of pad between SS03

Viewing Direction: Northwest



Descriptive Photo - 2  
Viewing Direction: Northwest  
Desc: BH21-02 on pad, finding vertical delineation  
Created: 8/24/2021 8:47:47 AM

BH21-02 on pad, finding vertical delineation

Viewing Direction: Southeast



Descriptive Photo - 3  
Viewing Direction: Southeast  
Desc: Collection of BH03, inside fenced area just north of pumps  
Created: 8/24/2021 9:28:51 AM

Collection of BH03, inside fenced area just North of pumps.

Viewing Direction: North



Descriptive Photo - 4  
Viewing Direction: North  
Desc: Collection of BH04  
Created: 8/24/2021 10:58:14 AM

Collection of BH04

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** John Ramirez

**Signature:**

Signature 



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	7/13/2023
Site Location Name:	North Pure Gold 8 Federal 11	Report Run Date:	7/14/2023 12:43 AM
Client Contact Name:	Dale Woodall	API #:	30-015-32619
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site	7/13/2023 12:10 PM
Departed Site	7/13/2023 3:30 PM

### Field Notes

- 12:37** On site. Completed JSAs and line sweep of delineation area
- 12:37** Collecting delineation samples
- 12:38** Locating and painting borehole locations for today and tomorrow

### Next Steps & Recommendations

- 1 Continue delineation

# Daily Site Visit Report



## Site Photos

Viewing Direction: West



Descriptive Photo - 1  
Viewing Direction: West  
Desc: Placard  
Created: 7/13/2023 12:48:29 PM  
Lat:32.315410, Long:-103.796523

Placard

Viewing Direction: West



Descriptive Photo - 2  
Viewing Direction: West  
Desc: BH23-06  
Created: 7/13/2023 2:00:28 PM  
Lat:32.315383, Long:-103.796507

BH23-06

Viewing Direction: West



Descriptive Photo - 3  
Viewing Direction: West  
Desc: BH23-05  
Created: 7/13/2023 2:00:54 PM  
Lat:32.315425, Long:-103.796615

BH23-05

Viewing Direction: South



Descriptive Photo - 4  
Viewing Direction: North  
Desc: BH23-07  
Created: 7/13/2023 2:02:02 PM  
Lat:32.315555, Long:-103.796645

BH23-07





## Daily Site Visit Report

Viewing Direction: Southeast



SWD battery and containment

Viewing Direction: Southwest



SWD battery and containment

Viewing Direction: Northwest



SWD and containment

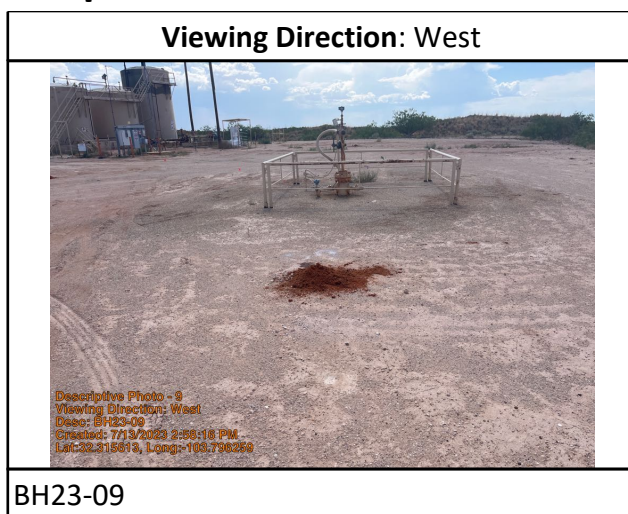
Viewing Direction: North



BH23-08



## Daily Site Visit Report



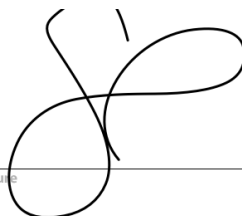
## Daily Site Visit Report



Daily Site Visit Signature

Inspector: Sally Carttar

Signature:

  
Signature



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	7/14/2023
Site Location Name:	North Pure Gold 8 Federal 11	Report Run Date:	7/14/2023 11:04 PM
Client Contact Name:	Dale Woodall	API #:	30-015-32619
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site	7/14/2023 7:30 AM
Departed Site	7/14/2023 4:00 PM

### Field Notes

**7:52** On site. Completed safety meeting, beginning line sweep of borehole areas

**7:56** Beginning sample collection at BH23-10 and BH23-11

### Next Steps & Recommendations

**1** Complete delineation

## Daily Site Visit Report



## Site Photos

Viewing Direction: West



Placard

Viewing Direction: West



BH23-17 0ft, 2ft

Viewing Direction: West



BH23-18 0ft, 2ft

Viewing Direction: North



BH23-19 0ft, 2ft









## Daily Site Visit Report

<p><b>Viewing Direction: South</b></p>  <p>Descriptive Photo - 13 Viewing Direction: South Date: 7/14/2023 12:06:51 PM Created: 7/14/2023 12:06:51 PM Lat:32.315400, Long:-103.796754</p> <p>BH23-20 and 21 0ft, 2ft</p>	<p><b>Viewing Direction: West</b></p>  <p>Descriptive Photo - 14 Viewing Direction: West Date: 7/14/2023 12:09:50 PM Created: 7/14/2023 12:09:50 PM Lat:32.315349, Long:-103.796455</p> <p>BH23-22 0 ft, 2 ft</p>
<p><b>Viewing Direction: West</b></p>  <p>Descriptive Photo - 15 Viewing Direction: West Date: 7/14/2023 12:10:10 PM Created: 7/14/2023 12:10:10 PM Lat:32.315328, Long:-103.796313</p> <p>BH23-23 0ft, 2ft</p>	<p><b>Viewing Direction: East</b></p>  <p>Descriptive Photo - 16 Viewing Direction: East Date: 7/14/2023 12:11:36 PM Created: 7/14/2023 12:11:36 PM Lat:32.315367, Long:-103.796256</p> <p>BH23-24 0ft, 2ft</p>







## Daily Site Visit Report

<p><b>Viewing Direction: North</b></p>  <p><small>Descriptive Photo - 18 Viewing Direction: North Desc: BH23-25 0 ft, 2ft Created: 7/14/2023 3:09:14 PM Lat:32.315504, Long:-103.796177</small></p>	<p><b>Viewing Direction: South</b></p>  <p><small>Descriptive Photo - 18 Viewing Direction: South Desc: BH23-26 0 ft, 2ft Created: 7/14/2023 3:10:33 PM Lat:32.315241, Long:-103.796459</small></p>
BH23-25 0 ft, 2ft	BH23-26 0 ft, 2ft
<p><b>Viewing Direction: East</b></p>  <p><small>Descriptive Photo - 19 Viewing Direction: East Desc: BH23-32 0 ft, 2ft Created: 7/14/2023 3:11:59 PM Lat:32.315421, Long:-103.796100</small></p>	<p><b>Viewing Direction: East</b></p>  <p><small>Descriptive Photo - 2 Viewing Direction: East Desc: Pasture sampling area north of pad Created: 7/14/2023 3:10:43 AM Lat:32.315261, Long:-103.796703</small></p>
BH23-32 0 ft, 2ft	Pasture sampling area north of pad







## Daily Site Visit Report

<p><b>Viewing Direction: East</b></p>  <p>Descriptive Photo - 20 Viewing Direction: East Desc: BH23-27 0 ft, 2ft Created: 7/14/2023 3:19:31 PM Lat:32.315613, Long:-103.795968</p>	<p><b>Viewing Direction: North</b></p>  <p>Descriptive Photo - 21 Viewing Direction: North Desc: BH23-28 0 ft, 2ft Created: 7/14/2023 3:19:39 PM Lat:32.315769, Long:-103.796109</p>
BH23-27 0 ft, 2ft	BH23-28 0 ft, 2ft
<p><b>Viewing Direction: South</b></p>  <p>Descriptive Photo - 22 Viewing Direction: South Desc: BH23-29 0 ft, 2ft Created: 7/14/2023 3:19:43 PM Lat:32.315943, Long:-103.796314</p>	<p><b>Viewing Direction: East</b></p>  <p>Descriptive Photo - 23 Viewing Direction: East Desc: BH23-30 0 ft, 2ft Created: 7/14/2023 3:19:41 PM Lat:32.315889, Long:-103.796754</p>
BH23-29 0 ft, 2ft	BH23-30 0 ft, 2ft





## Daily Site Visit Report

<p><b>Viewing Direction: West</b></p>  <p>Descriptive Photo - 24 Viewing Direction: West Date: 5/13/2023 9:52:13 PM Created: 7/14/2023 9:52:13 PM Lat: 32.915241, Long: -103.796136</p>	<p><b>Viewing Direction: North</b></p>  <p>Descriptive Photo - 3 Viewing Direction: North Date: 5/13/2023 9:48:48 AM Created: 7/14/2023 9:48:48 AM Lat: 32.915578, Long: -103.796125</p>
BH23-31 0 ft, 2ft	BH23-10 0ft, 2ft
<p><b>Viewing Direction: Northwest</b></p>  <p>Descriptive Photo - 4 Viewing Direction: Northwest Date: 5/13/2023 9:52:28 AM Created: 7/14/2023 9:52:28 AM Lat: 32.915328, Long: -103.796179</p>	<p><b>Viewing Direction: West</b></p>  <p>Descriptive Photo - 5 Viewing Direction: West Date: 5/13/2023 9:52:26 AM Created: 7/14/2023 9:52:26 AM Lat: 32.915745, Long: -103.796329</p>
BH23-11 0ft, 2ft	BH23-12 0ft, 2ft



## Daily Site Visit Report

Viewing Direction: West



BH23-13 0ft, 2ft

Viewing Direction: West



BH23-14 0ft, 2ft

Viewing Direction: West



BH23-15 0ft, 2ft

Viewing Direction: West



BH23-16 0ft, 2ft

## Daily Site Visit Report



Daily Site Visit Signature

Inspector: Sally Carttar

Signature:

  
Signature



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	7/17/2023
Site Location Name:	North Pure Gold 8 Federal 11	Report Run Date:	7/17/2023 9:45 PM
Client Contact Name:	Jim Raley	API #:	30-015-32619
Client Contact Phone #:	575-748-0176		
Unique Project ID	-North Pure Gold 8 Federal 11	Project Owner:	Amanda Davis
Project Reference #	Historic Spills	Project Manager:	Dennis Williams

### Summary of Times

Arrived at Site 7/17/2023 8:30 AM

Departed Site 7/17/2023 2:33 PM

### Field Notes

- 14:24** Completed safety paperwork and initial line locator upon arrival
- 14:24** On site to complete horizontal delineation of release
- 14:25** Obtained BH23-33, 34, 35 at 0' and 2' depths.
- 14:26** BH23-34 was hot at surface, so stepped out to BH23-35.
- 14:26** BH23-33 and 35 are extents of contamination in Southeast portion of site.
- 14:27** All samples jarred and will be sent to lab for analysis.

### Next Steps & Recommendations

- 1 Send samples to lab.  
Create work plan for future excavation.



## Daily Site Visit Report



## Site Photos

## Viewing Direction: North



BH23-33 on far east edge of site

## Viewing Direction: Northwest



BH23-34 in Southeast corner of site near access road

## Viewing Direction: West



BH23-35 on far Southeast edge of site near access road

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Austin Harris

**Signature:**

A handwritten signature in black ink, appearing to be 'AH' with a long horizontal stroke extending to the right.

Signature

## Attachment 4.



## Analytical Report

### Report Summary

Client: Devon Energy - Carlsbad

Samples Received: 5/20/2019

Job Number: 19031-0001

Work Order: P905060

Project Name/Location: North Pure Gold 8 Fed 11

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a light blue rectangular background.

Date: 5/24/19

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.  
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.  
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.





Devon Energy - Carlsbad  
6488 7 Rivers Hwy  
Artesia NM, 88210

Project Name: North Pure Gold 8 Fed 11  
Project Number: 19031-0001  
Project Manager: Dennis Williams

**Reported:**  
05/24/19 11:04

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
TP19-01 0'	P905060-01A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-01 2'	P905060-02A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-02 0'	P905060-03A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-03 0'	P905060-04A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-03 2'	P905060-05A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-04 0'	P905060-06A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-04 2'	P905060-07A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-05 0'	P905060-08A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-05 2'	P905060-09A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-06 0'	P905060-10A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-06 2'	P905060-11A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-07 0'	P905060-12A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-07 2'	P905060-13A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-08 0'	P905060-14A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-08 2'	P905060-15A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
BH19-09 1'	P905060-16A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
BH19-10 1'	P905060-17A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
BH19-11 1'	P905060-18A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
BH19-12 1'	P905060-19A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.
TP19-02 2'	P905060-20A	Soil	05/14/19	05/20/19	Glass Jar, 4 oz.

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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-01 0'**  
**P905060-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.3 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	<b>356</b>	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	<b>642</b>	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.4 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		117 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	<b>1240</b>	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-01 2'**  
**P905060-02 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.6 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	29.4	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.1 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		118 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	294	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-02 0'**  
**P905060-03 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.1 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.2 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		87.1 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	2810	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-03 0'**  
**P905060-04 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.9 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.0 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		94.7 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	2520	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	<b>Reported:</b> 05/24/19 11:04
6488 7 Rivers Hwy	Project Number:	19031-0001	
Artesia NM, 88210	Project Manager:	Dennis Williams	

**TP19-03 2'**  
**P905060-05 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.6 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		119 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	754	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-04 0'**  
**P905060-06 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		98.9 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	25.2	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.1 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		117 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	4100	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-04 2'**  
**P905060-07 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.9 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.4 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		117 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	93.8	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-05 0'**  
**P905060-08 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.1 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	37.7	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.7 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		117 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	6650	40.0	mg/kg	2	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-05 2'**  
**P905060-09 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		98.7 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.5 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		116 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	365	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-06 0'**  
**P905060-10 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		96.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.2 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		116 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	1440	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-06 2'**  
**P905060-11 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.0 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		116 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	1410	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-07 0'**  
**P905060-12 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.7 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	36.9	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		115 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	1980	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-07 2'**  
**P905060-13 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		96.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/21/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.5 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		118 %		50-200	1921010	05/21/19	05/21/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	634	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-08 0'**  
**P905060-14 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.9 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.0 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		113 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	16600	100	mg/kg	5	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-08 2'**  
**P905060-15 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.0 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.4 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		111 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	54.4	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**BH19-09 1'**  
**P905060-16 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.9 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	<b>225</b>	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	<b>383</b>	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.7 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		122 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	<b>1230</b>	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**BH19-10 1'**  
**P905060-17 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.6 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.7 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		124 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	1960	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**BH19-11 1'**  
**P905060-18 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		98.3 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.3 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		119 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	3880	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**BH19-12 1'**  
**P905060-19 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		100 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.8 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		117 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	4310	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**TP19-02 2'**  
**P905060-20 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.4 %		50-150	1921012	05/20/19	05/23/19	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1921012	05/20/19	05/23/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1921010	05/21/19	05/22/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.2 %		50-150	1921012	05/20/19	05/23/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		120 %		50-200	1921010	05/21/19	05/22/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	176	20.0	mg/kg	1	1921013	05/21/19	05/22/19	EPA 300.0/9056A	
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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

### Volatile Organics by EPA 8021 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1921012 - Purge and Trap EPA 5030A

##### Blank (1921012-BLK1)

Prepared: 05/20/19 1 Analyzed: 05/23/19 2

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	8.00		"	8.00		100	50-150			

##### LCS (1921012-BS1)

Prepared: 05/20/19 1 Analyzed: 05/23/19 2

Benzene	4.55	0.0250	mg/kg	5.00		91.0	70-130			
Toluene	4.93	0.0250	"	5.00		98.6	70-130			
Ethylbenzene	4.90	0.0250	"	5.00		98.1	70-130			
p,m-Xylene	10.1	0.0500	"	10.0		101	70-130			
o-Xylene	4.90	0.0250	"	5.00		98.1	70-130			
Total Xylenes	15.0	0.0250	"	15.0		99.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.03		"	8.00		100	50-150			

##### Matrix Spike (1921012-MS1)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/24/19 0

Benzene	4.53	0.0250	mg/kg	5.00	ND	90.5	54.3-133			
Toluene	4.91	0.0250	"	5.00	ND	98.2	61.4-130			
Ethylbenzene	4.89	0.0250	"	5.00	ND	97.7	61.4-133			
p,m-Xylene	10.0	0.0500	"	10.0	ND	100	63.3-131			
o-Xylene	4.86	0.0250	"	5.00	ND	97.3	63.3-131			
Total Xylenes	14.9	0.0250	"	15.0	ND	99.3	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	7.99		"	8.00		99.8	50-150			

##### Matrix Spike Dup (1921012-MSD1)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/24/19 0

Benzene	4.65	0.0250	mg/kg	5.00	ND	93.1	54.3-133	2.75	20	
Toluene	5.05	0.0250	"	5.00	ND	101	61.4-130	2.72	20	
Ethylbenzene	5.02	0.0250	"	5.00	ND	100	61.4-133	2.76	20	
p,m-Xylene	10.3	0.0500	"	10.0	ND	103	63.3-131	2.70	20	
o-Xylene	5.00	0.0250	"	5.00	ND	100	63.3-131	2.77	20	
Total Xylenes	15.3	0.0250	"	15.0	ND	102	63.3-131	2.72	20	
Surrogate: 4-Bromochlorobenzene-PID	8.01		"	8.00		100	50-150			

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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

### Nonhalogenated Organics by 8015 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1921010 - DRO Extraction EPA 3570

##### Blank (1921010-BLK1)

Prepared: 05/20/19 1 Analyzed: 05/21/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	56.2		"	50.0		112	50-200			

##### LCS (1921010-BS1)

Prepared: 05/20/19 1 Analyzed: 05/21/19 1

Diesel Range Organics (C10-C28)	480	25.0	mg/kg	500		95.9	38-132			
Surrogate: n-Nonane	57.4		"	50.0		115	50-200			

##### Matrix Spike (1921010-MS1)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/21/19 1

Diesel Range Organics (C10-C28)	697	25.0	mg/kg	500	356	68.2	38-132			
Surrogate: n-Nonane	59.7		"	50.0		119	50-200			

##### Matrix Spike Dup (1921010-MSD1)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/21/19 1

Diesel Range Organics (C10-C28)	654	25.0	mg/kg	500	356	59.5	38-132	6.46	20	
Surrogate: n-Nonane	60.2		"	50.0		120	50-200			

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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

### Nonhalogenated Organics by 8015 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1921012 - Purge and Trap EPA 5030A

##### Blank (1921012-BLK1)

Prepared: 05/20/19 1 Analyzed: 05/23/19 2

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.76		"	8.00		97.0	50-150			

##### LCS (1921012-BS2)

Prepared: 05/20/19 1 Analyzed: 05/23/19 2

Gasoline Range Organics (C6-C10)	52.4	20.0	mg/kg	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		"	8.00		98.9	50-150			

##### Matrix Spike (1921012-MS2)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/24/19 0

Gasoline Range Organics (C6-C10)	53.3	20.0	mg/kg	50.0	ND	107	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.85		"	8.00		98.1	50-150			

##### Matrix Spike Dup (1921012-MSD2)

Source: P905060-01

Prepared: 05/20/19 1 Analyzed: 05/24/19 0

Gasoline Range Organics (C6-C10)	52.8	20.0	mg/kg	50.0	ND	106	70-130	1.04	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.90		"	8.00		98.7	50-150			

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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

**Anions by 300.0/9056A - Quality Control****Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1921013 - Anion Extraction EPA 300.0/9056A****Blank (1921013-BLK1)**

Prepared: 05/21/19 0 Analyzed: 05/21/19 2

Chloride ND 20.0 mg/kg

**LCS (1921013-BS1)**

Prepared: 05/21/19 0 Analyzed: 05/21/19 2

Chloride 270 20.0 mg/kg 250 108 90-110

**Matrix Spike (1921013-MS1)****Source: P905060-01**

Prepared: 05/21/19 0 Analyzed: 05/22/19 0

Chloride 1670 20.0 mg/kg 250 1240 172 80-120 SPK1

**Matrix Spike Dup (1921013-MSD1)****Source: P905060-01**

Prepared: 05/21/19 0 Analyzed: 05/22/19 0

Chloride 1600 20.0 mg/kg 250 1240 142 80-120 4.60 20 SPK1

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Devon Energy - Carlsbad	Project Name:	North Pure Gold 8 Fed 11	
6488 7 Rivers Hwy	Project Number:	19031-0001	<b>Reported:</b>
Artesia NM, 88210	Project Manager:	Dennis Williams	05/24/19 11:04

Notes and Definitions

SPK1	The spike recovery is outside of quality control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

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Released to Imaging: 6/9/2025 2:25:32 PM

Received by OCD: 5/14/2025 2:04:25 PM

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Project Information

Client: Dawn Energy

Project: North Pine Gold 8 Feb 11

Project Manager: Dennis Williams

Address: 6488 7 Rivers HWY

City, State, Zip: Artesia, NM 88221

Phone: 505-350-1336

Email: Permian@Vertex.ca

Chain of Custody

Report Attention

Report due by:

Attention:

Address:

City, State, Zip:

Phone:

Email:

Lab Use Only

Lab WO# P905060

Job Number 19031-0001

TAT

1D

3D

EPA Program

RCRA

CWA

SDWA

Analysis and Method

DRO/ORO by 8015

GRO/DRO by 8015

BTEX by 8021

VOC by 8260

Metals 6010

Chloride 300.0

TPH 400.0

GPO, DRO, 25

4.11.19

5.16.19

State

NM

CO

UT

AZ

Remarks

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 400.0	GPO, DRO, 25	4.11.19	5.16.19	State	NM	CO	UT	AZ	Remarks
10:00	5-14-19	S	1	TP19-01 0'	1			X			X	X									
10:05	5-14-19	S	1	TP19-01 2'	2			X			X	X									
10:10	5-14-19	S	1	TP19-02 0'	3			X			X	X									
10:15	5-14-19	S	1	TP19-03 0'	4			X			X	X									
10:20	5-14-19	S	1	TP19-03 2'	5			X			X	X									
10:25	5-14-19	S	1	TP19-04 0'	6			X			X	X									
10:30	5-14-19	S	1	TP19-04 2'	7			X			X	X									
10:35	5-14-19	S	1	TP19-05 0'	8			X			X	X									
10:40	5-14-19	S	1	TP19-05 2'	9			X			X	X									
10:45	5-14-19	S	1	TP19-06 0'	10			X			X	X									

Additional Instructions:

Bill Vertex - Per Client JDM

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

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

Relinquished by: (Signature)

Date

Time

Received by: (Signature)

Date

Time

Lab Use Only

Received on ice: Y / N

T1

T2

T3

AVG Temp °C

Relinquished by: (Signature)

Date

Time

Received by: (Signature)

Date

Time

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

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

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

<b>Project Information</b> Client: <u>Devon Energy</u> Project: <u>North Pine Gold # Fed II</u> Project Manager: <u>Dennis Williams</u> Address: <u>6488 7 Rivers Hwy</u> City, State, Zip: <u>Artesia, NM 88221</u> Phone: <u>505-350-1336</u> Email: <u>Permian@Vertex.ca</u>		<b>Chain of Custody</b> <b>Report Attention</b> Report due by: _____ Attention: _____ Address: _____ City, State, Zip: _____ Phone: _____ Email: _____		<b>Lab Use Only</b> Lab WO# <u>P 905060</u> Job Number <u>19031-0001</u> Analysis and Method DRO/ORO by 8015 _____ GRO/DRO by 8015 _____ BTEX by 8021 _____ VOC by 8260 _____ Metals 6010 _____ Chloride 300.0 _____ TPH 418.1 _____ <u>BCDOC</u>				<b>TAT</b> 1D _____ 3D _____		<b>EPA Program</b> RCRA _____ CWA _____ SDWA _____ State NM _____ CO _____ UT _____ AZ _____		
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Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	BCDOC	1D	3D	RCRA	CWA	SDWA	Remarks
10:50	5-14-19	S	1	TP19-06 2'	11								X						
10:55	5-14-19	S	1	TP19-07 0'	12								X						
11:00	5-14-19	S	1	TP19-07 2'	13								X						
11:05	5-14-19		1	TP19-08 0'	14														
11:10	5-14-19		1	TP19-08 2'	15														
11:15	5-14-19		1	BH19-09 1'	16														
11:20	5-14-19		1	BH19-10 1'	17														
11:25	5-14-19		1	BH19-11 1'	18														
11:30	5-14-19		1	BH19-12 1'	19														
	5-14-19	S	1	TP19-02 2' Per Client	20														

**Additional Instructions:** Bill Vertex - Per Client Jan 5/20/19

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

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

Relinquished by: (Signature) _____	Date <u>5-16-2019</u>	Time <u>8:25pm</u>	Received by: (Signature) _____	Date <u>5-16-19</u>	Time <u>8:25pm</u>	<b>Lab Use Only</b> Received on ice: <u>Y</u> / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <u>Fed Ex</u>	Date <u>5/20/19</u>	Time <u>8:00</u>	Received by: (Signature) <u>Jessica H. Nuff</u>	Date <u>5/20/19</u>	Time <u>8:00</u>	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

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







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

September 13, 2021

Wesley Mathews

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX

RE: North Pure Gold 8 Fed 11

OrderNo.: 2108E74

Dear Wesley Mathews:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/26/2021 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 02, 2021.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-01 0.5

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 8:25:00 AM

Lab ID: 2108E74-001

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2021 6:28:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2021 6:28:09 PM
Surr: DNOP	103	70-130		%Rec	1	8/30/2021 6:28:09 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/30/2021 4:34:41 PM
Surr: BFB	108	70-130		%Rec	1	8/30/2021 4:34:41 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	8/30/2021 4:34:41 PM
Toluene	ND	0.050		mg/Kg	1	8/30/2021 4:34:41 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/30/2021 4:34:41 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/30/2021 4:34:41 PM
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	8/30/2021 4:34:41 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	8/30/2021 9:04:11 PM

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

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

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## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-03 0.5

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 9:30:00 AM

Lab ID: 2108E74-002

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2021 10:33:43 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2021 10:33:43 AM
Surr: DNOP	121	70-130		%Rec	1	8/28/2021 10:33:43 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/30/2021 4:58:34 PM
Surr: BFB	109	70-130		%Rec	1	8/30/2021 4:58:34 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/30/2021 4:58:34 PM
Toluene	ND	0.048		mg/Kg	1	8/30/2021 4:58:34 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/30/2021 4:58:34 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/30/2021 4:58:34 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/30/2021 4:58:34 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	8900	300		mg/Kg	100	8/31/2021 8:18:57 AM

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

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

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## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-04 0.5

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 11:00:00 AM

Lab ID: 2108E74-003

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	8/28/2021 10:57:33 AM
Motor Oil Range Organics (MRO)	84	46		mg/Kg	1	8/28/2021 10:57:33 AM
Surr: DNOP	126	70-130		%Rec	1	8/28/2021 10:57:33 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/30/2021 5:22:24 PM
Surr: BFB	109	70-130		%Rec	1	8/30/2021 5:22:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	8/30/2021 5:22:24 PM
Toluene	ND	0.046		mg/Kg	1	8/30/2021 5:22:24 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/30/2021 5:22:24 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/30/2021 5:22:24 PM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	8/30/2021 5:22:24 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	3500	150		mg/Kg	50	8/31/2021 8:31:21 AM

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

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

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## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-03 2'

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 11:05:00 AM

Lab ID: 2108E74-004

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2021 11:21:24 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2021 11:21:24 AM
Surr: DNOP	125	70-130		%Rec	1	8/28/2021 11:21:24 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/30/2021 5:46:19 PM
Surr: BFB	109	70-130		%Rec	1	8/30/2021 5:46:19 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	8/30/2021 5:46:19 PM
Toluene	ND	0.049		mg/Kg	1	8/30/2021 5:46:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/30/2021 5:46:19 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/30/2021 5:46:19 PM
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	8/30/2021 5:46:19 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	1200	60		mg/Kg	20	8/30/2021 10:06:14 PM

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

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



## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-04 2'

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 11:15:00 AM

Lab ID: 2108E74-005

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	890	99		mg/Kg	10	8/28/2021 11:45:13 AM
Motor Oil Range Organics (MRO)	2600	500		mg/Kg	10	8/28/2021 11:45:13 AM
Surr: DNOP	0	70-130	S	%Rec	10	8/28/2021 11:45:13 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/30/2021 10:31:02 PM
Surr: BFB	104	70-130		%Rec	1	8/30/2021 10:31:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	8/30/2021 10:31:02 PM
Toluene	ND	0.050		mg/Kg	1	8/30/2021 10:31:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/30/2021 10:31:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/30/2021 10:31:02 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	8/30/2021 10:31:02 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	410	60		mg/Kg	20	8/30/2021 10:18:38 PM

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

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

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## Analytical Report

Lab Order 2108E74

Date Reported: 9/13/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH21-04 4'

Project: North Pure Gold 8 Fed 11

Collection Date: 8/24/2021 11:20:00 AM

Lab ID: 2108E74-006

Matrix: SOIL

Received Date: 8/26/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	47	9.1	H	mg/Kg	1	9/9/2021 7:25:05 PM
Motor Oil Range Organics (MRO)	180	46	H	mg/Kg	1	9/9/2021 7:25:05 PM
Surr: DNOP	103	70-130	H	%Rec	1	9/9/2021 7:25:05 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9	H	mg/Kg	1	9/9/2021 3:52:07 PM
Surr: BFB	102	70-130	H	%Rec	1	9/9/2021 3:52:07 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.025	H	mg/Kg	1	9/9/2021 3:52:07 PM
Toluene	ND	0.049	H	mg/Kg	1	9/9/2021 3:52:07 PM
Ethylbenzene	ND	0.049	H	mg/Kg	1	9/9/2021 3:52:07 PM
Xylenes, Total	ND	0.098	H	mg/Kg	1	9/9/2021 3:52:07 PM
Surr: 4-Bromofluorobenzene	91.5	70-130	H	%Rec	1	9/9/2021 3:52:07 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>VP</b>
Chloride	370	60		mg/Kg	20	9/8/2021 10:12:14 PM

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

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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>MB-62268</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62268</b>	RunNo: <b>80882</b>								
Prep Date: <b>8/30/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855267</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-62268</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62268</b>	RunNo: <b>80882</b>								
Prep Date: <b>8/30/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855268</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Sample ID: <b>MB-62447</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62447</b>	RunNo: <b>81123</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/8/2021</b>	SeqNo: <b>2863436</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-62447</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62447</b>	RunNo: <b>81123</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/8/2021</b>	SeqNo: <b>2863437</b> Units: <b>mg/Kg</b>								
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			

**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 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 12

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>MB-62246</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62246</b>	RunNo: <b>80889</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/28/2021</b>	SeqNo: <b>2854737</b> Units: <b>mg/Kg</b>								
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	13		10.00		128	70	130			

Sample ID: <b>LCS-62246</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62246</b>	RunNo: <b>80889</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/28/2021</b>	SeqNo: <b>2854738</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.4	68.9	141			
Surr: DNOP	5.0		5.000		101	70	130			

Sample ID: <b>LCS-62465</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62465</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2864692</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.2	70	130			

Sample ID: <b>MB-62465</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62465</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2864694</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	14		10.00		135	70	130			S

Sample ID: <b>LCS-62445</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62445</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865704</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.3	68.9	135			
Surr: DNOP	3.6		5.000		72.6	70	130			

Sample ID: <b>LCS-62457</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62457</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865705</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.8	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 Quantitative 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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>MB-62445</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62445</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865706</b> Units: <b>mg/Kg</b>								
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		90.1	70	130			

Sample ID: <b>MB-62457</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62457</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865707</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		109	70	130			

Sample ID: <b>2108E74-006AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH21-04 4'</b>	Batch ID: <b>62445</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865709</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.56	46.61	-6.08	39.3	155			SH
Surr: DNOP	4.5		5.056		89.5	70	130			H

Sample ID: <b>2108E74-006AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH21-04 4'</b>	Batch ID: <b>62445</b>	RunNo: <b>81156</b>								
Prep Date: <b>9/8/2021</b>	Analysis Date: <b>9/9/2021</b>	SeqNo: <b>2865710</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	9.4	46.99	46.61	36.6	39.3	155	37.8	23.4	RSH
Surr: DNOP	5.8		4.699		124	70	130	0	0	H

**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 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



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy  
**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>mb-62243</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>62243</b>		RunNo: <b>80896</b>							
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>		SeqNo: <b>2855152</b>		Units: <b>mg/Kg</b>					
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		111	70	130			

Sample ID: <b>lcs-62243</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>62243</b>		RunNo: <b>80896</b>							
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>		SeqNo: <b>2855153</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	78.6	131			
Surr: BFB	1200		1000		120	70	130			

Sample ID: <b>mb-62435</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>62435</b>		RunNo: <b>81171</b>							
Prep Date: <b>9/7/2021</b>	Analysis Date: <b>9/9/2021</b>		SeqNo: <b>2865211</b>		Units: <b>mg/Kg</b>					
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: <b>lcs-62435</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>62435</b>		RunNo: <b>81171</b>							
Prep Date: <b>9/7/2021</b>	Analysis Date: <b>9/9/2021</b>		SeqNo: <b>2865212</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	78.6	131			
Surr: BFB	1100		1000		110	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 Quantitative 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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>mb-62243</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>62243</b>	RunNo: <b>80896</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855200</b>			Units: <b>mg/Kg</b>					
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: <b>LCS-62243</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>62243</b>	RunNo: <b>80896</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855201</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.6	80	120			
Toluene	0.96	0.050	1.000	0	96.3	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: <b>2108e74-001ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>BH21-01 0.5</b>	Batch ID: <b>62243</b>	RunNo: <b>80896</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855204</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9737	0	96.3	80	120			
Toluene	0.94	0.049	0.9737	0	96.9	80	120			
Ethylbenzene	0.95	0.049	0.9737	0	97.1	80	120			
Xylenes, Total	2.8	0.097	2.921	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		0.9737		103	70	130			

Sample ID: <b>2108e74-001amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>BH21-01 0.5</b>	Batch ID: <b>62243</b>	RunNo: <b>80896</b>								
Prep Date: <b>8/27/2021</b>	Analysis Date: <b>8/30/2021</b>	SeqNo: <b>2855205</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9794	0	92.8	80	120	3.08	20	
Toluene	0.92	0.049	0.9794	0	94.4	80	120	2.01	20	
Ethylbenzene	0.92	0.049	0.9794	0	93.5	80	120	3.21	20	
Xylenes, Total	2.7	0.098	2.938	0	92.6	80	120	2.99	20	
Surr: 4-Bromofluorobenzene	0.99		0.9794		102	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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2108E74

13-Sep-21

**Client:** Devon Energy**Project:** North Pure Gold 8 Fed 11

Sample ID: <b>mb-62435</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>62435</b>			RunNo: <b>81171</b>						
Prep Date: <b>9/7/2021</b>	Analysis Date: <b>9/9/2021</b>			SeqNo: <b>2865252</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	70	130			

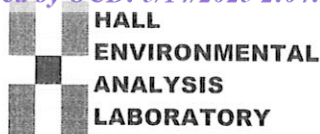
Sample ID: <b>LCS-62435</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>62435</b>			RunNo: <b>81171</b>						
Prep Date: <b>9/7/2021</b>	Analysis Date: <b>9/9/2021</b>			SeqNo: <b>2865253</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.2	80	120			
Toluene	0.90	0.050	1.000	0	90.0	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.9	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.3	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.6	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 Quantitative 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

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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: **Devon Energy**Work Order Number: **2108E74**

RcptNo: 1

Received By: **Cheyenne Cason**

8/26/2021 7:30:00 AM

*Chad*Completed By: **Isaiah Ortiz**

8/26/2021 8:54:10 AM

*IOX*

Reviewed By:

*JR 8/26/21*

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by: *KPG 8/26/21*

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Not Present			



Released to Imaging: 6/9/2025 2:25:32 PM

Date	Time	Matrix	Sample Name
8-24	8:25	soi-1	BH21-01 0.5
	9:30		BH21-03 0.5
	11:00		BH21-04 0.5
	11:05		BH21-03 2'
	11:15		BH21-04 2'
	11:20		BH21-04 4'
	11:25		BH21-03 5'
	11:35		BH21-03 8'
	11:45		BH21-04 8'

Container Type and #	Preservative Type	HEAL No.
402	ice	2108E74
		001
		002
		003
		004
		005
		006
		007
		008
		009

[illegible]

Received by:	Via:	Date	Time
<i>W. W. W.</i>		3/25/21	9:15
Received by:	Via:	Date	Time
<i>See</i>	<i>See</i>	8/26/21	9:30

Remarks: Please hold  
BH4-4' / BH3-5' / BH3+4-8'  
C' Brandon Schaefer  
for Brandon analyze  
BH21-04e  
only  
4/9/14



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

July 24, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: North Pure Gold 8 Federal 011

OrderNo.: 2307707

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 16 sample(s) on 7/15/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-05 0'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 12:30:00 PM

Lab ID: 2307707-001

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	28	9.7		mg/Kg	1	7/18/2023 9:53:40 PM
Motor Oil Range Organics (MRO)	58	49		mg/Kg	1	7/18/2023 9:53:40 PM
Surr: DNOP	92.8	69-147		%Rec	1	7/18/2023 9:53:40 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	8100	300		mg/Kg	100	7/20/2023 12:43:36 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	7/18/2023 4:10:20 PM
Toluene	ND	0.047		mg/Kg	1	7/18/2023 4:10:20 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/18/2023 4:10:20 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/18/2023 4:10:20 PM
Surr: 1,2-Dichloroethane-d4	117	64.8-147		%Rec	1	7/18/2023 4:10:20 PM
Surr: 4-Bromofluorobenzene	89.8	62.1-144		%Rec	1	7/18/2023 4:10:20 PM
Surr: Dibromofluoromethane	120	73-145		%Rec	1	7/18/2023 4:10:20 PM
Surr: Toluene-d8	93.8	70-130		%Rec	1	7/18/2023 4:10:20 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/18/2023 4:10:20 PM
Surr: BFB	85.9	70-130		%Rec	1	7/18/2023 4:10:20 PM

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

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

Page 1 of 23

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-05 2'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 12:35:00 PM

Lab ID: 2307707-002

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/18/2023 10:17:31 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/18/2023 10:17:31 PM
Surr: DNOP	89.4	69-147		%Rec	1	7/18/2023 10:17:31 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	840	60		mg/Kg	20	7/19/2023 4:07:47 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 4:37:56 PM
Toluene	ND	0.047		mg/Kg	1	7/18/2023 4:37:56 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/18/2023 4:37:56 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/18/2023 4:37:56 PM
Surr: 1,2-Dichloroethane-d4	125	64.8-147		%Rec	1	7/18/2023 4:37:56 PM
Surr: 4-Bromofluorobenzene	94.0	62.1-144		%Rec	1	7/18/2023 4:37:56 PM
Surr: Dibromofluoromethane	125	73-145		%Rec	1	7/18/2023 4:37:56 PM
Surr: Toluene-d8	99.6	70-130		%Rec	1	7/18/2023 4:37:56 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/18/2023 4:37:56 PM
Surr: BFB	92.4	70-130		%Rec	1	7/18/2023 4:37:56 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-05 4'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 12:40:00 PM

Lab ID: 2307707-003

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/18/2023 10:41:22 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/18/2023 10:41:22 PM
Surr: DNOP	88.7	69-147		%Rec	1	7/18/2023 10:41:22 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	720	60		mg/Kg	20	7/19/2023 4:20:08 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 5:05:31 PM
Toluene	ND	0.048		mg/Kg	1	7/18/2023 5:05:31 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/18/2023 5:05:31 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/18/2023 5:05:31 PM
Surr: 1,2-Dichloroethane-d4	112	64.8-147		%Rec	1	7/18/2023 5:05:31 PM
Surr: 4-Bromofluorobenzene	92.3	62.1-144		%Rec	1	7/18/2023 5:05:31 PM
Surr: Dibromofluoromethane	117	73-145		%Rec	1	7/18/2023 5:05:31 PM
Surr: Toluene-d8	97.9	70-130		%Rec	1	7/18/2023 5:05:31 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/18/2023 5:05:31 PM
Surr: BFB	93.2	70-130		%Rec	1	7/18/2023 5:05:31 PM

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

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

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## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-06 0'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 12:55:00 PM

Lab ID: 2307707-004

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/18/2023 11:05:08 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/18/2023 11:05:08 PM
Surr: DNOP	90.8	69-147		%Rec	1	7/18/2023 11:05:08 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	7400	300		mg/Kg	100	7/20/2023 12:56:00 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	7/18/2023 5:33:03 PM
Toluene	ND	0.047		mg/Kg	1	7/18/2023 5:33:03 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/18/2023 5:33:03 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/18/2023 5:33:03 PM
Surr: 1,2-Dichloroethane-d4	124	64.8-147		%Rec	1	7/18/2023 5:33:03 PM
Surr: 4-Bromofluorobenzene	96.2	62.1-144		%Rec	1	7/18/2023 5:33:03 PM
Surr: Dibromofluoromethane	126	73-145		%Rec	1	7/18/2023 5:33:03 PM
Surr: Toluene-d8	99.7	70-130		%Rec	1	7/18/2023 5:33:03 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/18/2023 5:33:03 PM
Surr: BFB	91.7	70-130		%Rec	1	7/18/2023 5:33:03 PM

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

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

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## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-06 2'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:00:00 PM

Lab ID: 2307707-005

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	7/18/2023 11:28:50 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	7/18/2023 11:28:50 PM
Surr: DNOP	88.4	69-147		%Rec	1	7/18/2023 11:28:50 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	410	60		mg/Kg	20	7/19/2023 4:44:48 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	7/18/2023 6:00:31 PM
Toluene	ND	0.046		mg/Kg	1	7/18/2023 6:00:31 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/18/2023 6:00:31 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/18/2023 6:00:31 PM
Surr: 1,2-Dichloroethane-d4	120	64.8-147		%Rec	1	7/18/2023 6:00:31 PM
Surr: 4-Bromofluorobenzene	93.8	62.1-144		%Rec	1	7/18/2023 6:00:31 PM
Surr: Dibromofluoromethane	123	73-145		%Rec	1	7/18/2023 6:00:31 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	7/18/2023 6:00:31 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/18/2023 6:00:31 PM
Surr: BFB	89.3	70-130		%Rec	1	7/18/2023 6:00:31 PM

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

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

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## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-06 4'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:05:00 PM

Lab ID: 2307707-006

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/19/2023 12:16:21 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 12:16:21 AM
Surr: DNOP	88.2	69-147		%Rec	1	7/19/2023 12:16:21 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	460	60		mg/Kg	20	7/19/2023 4:57:09 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 6:28:00 PM
Toluene	ND	0.047		mg/Kg	1	7/18/2023 6:28:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/18/2023 6:28:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/18/2023 6:28:00 PM
Surr: 1,2-Dichloroethane-d4	121	64.8-147		%Rec	1	7/18/2023 6:28:00 PM
Surr: 4-Bromofluorobenzene	93.4	62.1-144		%Rec	1	7/18/2023 6:28:00 PM
Surr: Dibromofluoromethane	122	73-145		%Rec	1	7/18/2023 6:28:00 PM
Surr: Toluene-d8	100	70-130		%Rec	1	7/18/2023 6:28:00 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/18/2023 6:28:00 PM
Surr: BFB	90.5	70-130		%Rec	1	7/18/2023 6:28:00 PM

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

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

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## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-07 0'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:25:00 PM

Lab ID: 2307707-007

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/19/2023 12:40:06 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 12:40:06 AM
Surr: DNOP	91.0	69-147		%Rec	1	7/19/2023 12:40:06 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>RBC</b>
Chloride	13000	600		mg/Kg	200	7/19/2023 3:26:20 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/18/2023 6:55:23 PM
Toluene	ND	0.049		mg/Kg	1	7/18/2023 6:55:23 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/18/2023 6:55:23 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/18/2023 6:55:23 PM
Surr: 1,2-Dichloroethane-d4	110	64.8-147		%Rec	1	7/18/2023 6:55:23 PM
Surr: 4-Bromofluorobenzene	93.8	62.1-144		%Rec	1	7/18/2023 6:55:23 PM
Surr: Dibromofluoromethane	121	73-145		%Rec	1	7/18/2023 6:55:23 PM
Surr: Toluene-d8	102	70-130		%Rec	1	7/18/2023 6:55:23 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/18/2023 6:55:23 PM
Surr: BFB	92.1	70-130		%Rec	1	7/18/2023 6:55:23 PM

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

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

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## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-07 2'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:30:00 PM

Lab ID: 2307707-008

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/19/2023 1:03:47 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/19/2023 1:03:47 AM
Surr: DNOP	90.0	69-147		%Rec	1	7/19/2023 1:03:47 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	4000	150		mg/Kg	50	7/20/2023 8:10:21 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	7/18/2023 7:22:47 PM
Toluene	ND	0.046		mg/Kg	1	7/18/2023 7:22:47 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/18/2023 7:22:47 PM
Xylenes, Total	ND	0.092		mg/Kg	1	7/18/2023 7:22:47 PM
Surr: 1,2-Dichloroethane-d4	119	64.8-147		%Rec	1	7/18/2023 7:22:47 PM
Surr: 4-Bromofluorobenzene	94.5	62.1-144		%Rec	1	7/18/2023 7:22:47 PM
Surr: Dibromofluoromethane	126	73-145		%Rec	1	7/18/2023 7:22:47 PM
Surr: Toluene-d8	97.0	70-130		%Rec	1	7/18/2023 7:22:47 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/18/2023 7:22:47 PM
Surr: BFB	89.4	70-130		%Rec	1	7/18/2023 7:22:47 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-07 4'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:35:00 PM

Lab ID: 2307707-009

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2023 1:27:33 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2023 1:27:33 AM
Surr: DNOP	90.3	69-147		%Rec	1	7/19/2023 1:27:33 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	2600	150		mg/Kg	50	7/20/2023 8:22:46 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/18/2023 7:50:07 PM
Toluene	ND	0.049		mg/Kg	1	7/18/2023 7:50:07 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/18/2023 7:50:07 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/18/2023 7:50:07 PM
Surr: 1,2-Dichloroethane-d4	126	64.8-147		%Rec	1	7/18/2023 7:50:07 PM
Surr: 4-Bromofluorobenzene	93.4	62.1-144		%Rec	1	7/18/2023 7:50:07 PM
Surr: Dibromofluoromethane	132	73-145		%Rec	1	7/18/2023 7:50:07 PM
Surr: Toluene-d8	99.0	70-130		%Rec	1	7/18/2023 7:50:07 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/18/2023 7:50:07 PM
Surr: BFB	90.1	70-130		%Rec	1	7/18/2023 7:50:07 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-08 0'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:00:00 PM

Lab ID: 2307707-010

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/19/2023 1:51:16 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 1:51:16 AM
Surr: DNOP	94.0	69-147		%Rec	1	7/19/2023 1:51:16 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	9000	300		mg/Kg	100	7/20/2023 8:35:11 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 8:17:29 PM
Toluene	ND	0.048		mg/Kg	1	7/18/2023 8:17:29 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/18/2023 8:17:29 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/18/2023 8:17:29 PM
Surr: 1,2-Dichloroethane-d4	129	64.8-147		%Rec	1	7/18/2023 8:17:29 PM
Surr: 4-Bromofluorobenzene	97.7	62.1-144		%Rec	1	7/18/2023 8:17:29 PM
Surr: Dibromofluoromethane	132	73-145		%Rec	1	7/18/2023 8:17:29 PM
Surr: Toluene-d8	98.5	70-130		%Rec	1	7/18/2023 8:17:29 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/18/2023 8:17:29 PM
Surr: BFB	88.5	70-130		%Rec	1	7/18/2023 8:17:29 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-08 2'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:05:00 PM

Lab ID: 2307707-011

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/19/2023 2:14:59 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/19/2023 2:14:59 AM
Surr: DNOP	93.8	69-147		%Rec	1	7/19/2023 2:14:59 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	850	60		mg/Kg	20	7/19/2023 1:10:57 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 8:44:48 PM
Toluene	ND	0.048		mg/Kg	1	7/18/2023 8:44:48 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/18/2023 8:44:48 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/18/2023 8:44:48 PM
Surr: 1,2-Dichloroethane-d4	128	64.8-147		%Rec	1	7/18/2023 8:44:48 PM
Surr: 4-Bromofluorobenzene	89.2	62.1-144		%Rec	1	7/18/2023 8:44:48 PM
Surr: Dibromofluoromethane	130	73-145		%Rec	1	7/18/2023 8:44:48 PM
Surr: Toluene-d8	102	70-130		%Rec	1	7/18/2023 8:44:48 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/18/2023 8:44:48 PM
Surr: BFB	87.8	70-130		%Rec	1	7/18/2023 8:44:48 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-08 4'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:10:00 PM

Lab ID: 2307707-012

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/19/2023 2:38:41 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 2:38:41 AM
Surr: DNOP	84.2	69-147		%Rec	1	7/19/2023 2:38:41 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	2400	150		mg/Kg	50	7/20/2023 8:47:35 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/18/2023 9:12:03 PM
Toluene	ND	0.049		mg/Kg	1	7/18/2023 9:12:03 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/18/2023 9:12:03 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/18/2023 9:12:03 PM
Surr: 1,2-Dichloroethane-d4	123	64.8-147		%Rec	1	7/18/2023 9:12:03 PM
Surr: 4-Bromofluorobenzene	93.4	62.1-144		%Rec	1	7/18/2023 9:12:03 PM
Surr: Dibromofluoromethane	132	73-145		%Rec	1	7/18/2023 9:12:03 PM
Surr: Toluene-d8	103	70-130		%Rec	1	7/18/2023 9:12:03 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/18/2023 9:12:03 PM
Surr: BFB	89.6	70-130		%Rec	1	7/18/2023 9:12:03 PM

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

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



## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-08 6'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:15:00 PM

Lab ID: 2307707-013

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/19/2023 3:02:25 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 3:02:25 AM
Surr: DNOP	84.6	69-147		%Rec	1	7/19/2023 3:02:25 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	270	60		mg/Kg	20	7/19/2023 2:00:35 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 9:39:15 PM
Toluene	ND	0.048		mg/Kg	1	7/18/2023 9:39:15 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/18/2023 9:39:15 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/18/2023 9:39:15 PM
Surr: 1,2-Dichloroethane-d4	127	64.8-147		%Rec	1	7/18/2023 9:39:15 PM
Surr: 4-Bromofluorobenzene	95.5	62.1-144		%Rec	1	7/18/2023 9:39:15 PM
Surr: Dibromofluoromethane	135	73-145		%Rec	1	7/18/2023 9:39:15 PM
Surr: Toluene-d8	105	70-130		%Rec	1	7/18/2023 9:39:15 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/18/2023 9:39:15 PM
Surr: BFB	91.6	70-130		%Rec	1	7/18/2023 9:39:15 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-09 0'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:25:00 PM

Lab ID: 2307707-014

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/19/2023 3:26:09 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 3:26:09 AM
Surr: DNOP	84.0	69-147		%Rec	1	7/19/2023 3:26:09 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	1900	60		mg/Kg	20	7/19/2023 2:13:00 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/18/2023 10:06:24 PM
Toluene	ND	0.049		mg/Kg	1	7/18/2023 10:06:24 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/18/2023 10:06:24 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/18/2023 10:06:24 PM
Surr: 1,2-Dichloroethane-d4	124	64.8-147		%Rec	1	7/18/2023 10:06:24 PM
Surr: 4-Bromofluorobenzene	92.0	62.1-144		%Rec	1	7/18/2023 10:06:24 PM
Surr: Dibromofluoromethane	129	73-145		%Rec	1	7/18/2023 10:06:24 PM
Surr: Toluene-d8	106	70-130		%Rec	1	7/18/2023 10:06:24 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 1:52:16 PM
Surr: BFB	84.0	70-130		%Rec	1	7/19/2023 1:52:16 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-09 2'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:30:00 PM

Lab ID: 2307707-015

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/19/2023 3:49:51 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2023 3:49:51 AM
Surr: DNOP	84.8	69-147		%Rec	1	7/19/2023 3:49:51 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	2300	60		mg/Kg	20	7/19/2023 2:25:24 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	7/18/2023 10:33:35 PM
Toluene	ND	0.047		mg/Kg	1	7/18/2023 10:33:35 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/18/2023 10:33:35 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/18/2023 10:33:35 PM
Surr: 1,2-Dichloroethane-d4	125	64.8-147		%Rec	1	7/18/2023 10:33:35 PM
Surr: 4-Bromofluorobenzene	98.2	62.1-144		%Rec	1	7/18/2023 10:33:35 PM
Surr: Dibromofluoromethane	133	73-145		%Rec	1	7/18/2023 10:33:35 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	7/18/2023 10:33:35 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 2:19:45 PM
Surr: BFB	85.7	70-130		%Rec	1	7/19/2023 2:19:45 PM

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

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

## Analytical Report

Lab Order 2307707

Date Reported: 7/24/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-09 4'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 2:35:00 PM

Lab ID: 2307707-016

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/19/2023 8:32:24 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 8:32:24 PM
Surr: DNOP	96.2	69-147		%Rec	1	7/19/2023 8:32:24 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 11:28:56 AM
Surr: BFB	88.8	15-244		%Rec	1	7/19/2023 11:28:56 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 11:28:56 AM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 11:28:56 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 11:28:56 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/19/2023 11:28:56 AM
Surr: 4-Bromofluorobenzene	97.4	39.1-146		%Rec	1	7/19/2023 11:28:56 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	1200	60		mg/Kg	20	7/19/2023 2:37:49 PM

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307707

24-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>MB-76308</b>	SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76308</b>		RunNo: <b>98334</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>		SeqNo: <b>3578775</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76308</b>	SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76308</b>		RunNo: <b>98334</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>		SeqNo: <b>3578776</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Sample ID: <b>MB-76320</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76320</b>		RunNo: <b>98352</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3580011</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76320</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76320</b>		RunNo: <b>98352</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3580012</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	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  
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 17 of 23

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307707

24-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>MB-76296</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76296</b>	RunNo: <b>98287</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3577902</b> Units: <b>mg/Kg</b>								
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	8.4		10.00		84.2	69	147			

Sample ID: <b>LCS-76296</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76296</b>	RunNo: <b>98287</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3577903</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.2	61.9	130			
Surr: DNOP	4.1		5.000		81.3	69	147			

Sample ID: <b>2307707-015AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH23-09 2'</b>	Batch ID: <b>76296</b>	RunNo: <b>98287</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3577925</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.8	48.92	0	88.1	54.2	135			
Surr: DNOP	4.1		4.892		83.9	69	147			

Sample ID: <b>2307707-015AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH23-09 2'</b>	Batch ID: <b>76296</b>	RunNo: <b>98287</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3577926</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.9	49.31	0	88.5	54.2	135	1.26	29.2	
Surr: DNOP	4.1		4.931		82.9	69	147	0	0	

Sample ID: <b>MB-76297</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76297</b>	RunNo: <b>98349</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579967</b> Units: <b>mg/Kg</b>								
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	9.1		10.00		90.8	69	147			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307707  
24-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold 8 Federal 011

Sample ID: LCS-76297	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76297	RunNo: 98349								
Prep Date: 7/18/2023	Analysis Date: 7/19/2023	SeqNo: 3579968	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: 2307707-016AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-09 4'	Batch ID: 76297	RunNo: 98349								
Prep Date: 7/18/2023	Analysis Date: 7/20/2023	SeqNo: 3579989	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	8.8	44.25	0	110	54.2	135			
Surr: DNOP	4.4		4.425		99.0	69	147			

Sample ID: 2307707-016AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-09 4'	Batch ID: 76297	RunNo: 98349								
Prep Date: 7/18/2023	Analysis Date: 7/20/2023	SeqNo: 3579990	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.2	45.96	0	107	54.2	135	1.17	29.2	
Surr: DNOP	4.7		4.596		102	69	147	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 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

J

Analyte detected below quantitation limits

P

Sample pH Not In Range

RL

Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307707

24-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>lcs-76285</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578519</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	70	130			
Surr: BFB	1900		1000		187	15	244			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578520</b>		Units: <b>mg/Kg</b>					
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		91.4	15	244			

Sample ID: <b>lcs-76287</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76287</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579552</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		189	15	244			

Sample ID: <b>mb-76287</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76287</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579553</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	900		1000		89.9	15	244			

Sample ID: <b>2307707-016ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BH23-09 4'</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579633</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.53	0	95.4	70	130			
Surr: BFB	2000		981.4		201	15	244			

Sample ID: <b>2307707-016amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BH23-09 4'</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579634</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.61	0	93.2	70	130	2.04	20	
Surr: BFB	1900		984.3		196	15	244	0	0	

**Qualifiers:**

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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307707

24-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>LCS-76285</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578524</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	70	130			
Toluene	0.86	0.050	1.000	0	86.3	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.9	70	130			
Xylenes, Total	2.7	0.10	3.000	0	88.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	39.1	146			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578525</b>			Units: <b>mg/Kg</b>			
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	0.99		1.000		99.1	39.1	146			

Sample ID: <b>LCS-76287</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76287</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3579575</b>			Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	39.1	146			

Sample ID: <b>mb-76287</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76287</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3579576</b>			Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307707

24-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>ics-76270</b>	SampType: <b>LCS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>76270</b>	RunNo: <b>98320</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3578345</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.6	80	120			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.4	80	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	64.8	147			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	62.1	144			
Surr: Dibromofluoromethane	0.54		0.5000		108	73	145			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Sample ID: <b>mb-76270</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76270</b>	RunNo: <b>98320</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3578346</b>	Units: <b>mg/Kg</b>							
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: 1,2-Dichloroethane-d4	0.54		0.5000		108	64.8	147			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	62.1	144			
Surr: Dibromofluoromethane	0.56		0.5000		111	73	145			
Surr: Toluene-d8	0.50		0.5000		100	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 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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307707  
24-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold 8 Federal 011

Sample ID: <b>lcs-76270</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76270</b>			RunNo: <b>98320</b>						
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/18/2023</b>			SeqNo: <b>3578322</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.9	70	130			
Surr: BFB	490		500.0		99.0	70	130			

Sample ID: <b>mb-76270</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76270</b>			RunNo: <b>98320</b>						
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/18/2023</b>			SeqNo: <b>3578323</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	470		500.0		94.4	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 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

J Analyte detected below quantitation limits

P Sample pH Not In Range

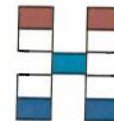
RL Reporting Limit

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[illegible]

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975      Fax 505-345-4107

## Analysis Request

[illegible]

Remarks: Direct bill to Devon, Dale Woodall Harvard Divest Site – North Pure Gold 8 Federal 011 GL Account 7700100 CC 1007884901 cc. kstallings@vertex.ca for Final Report
--

 $\frac{2}{2}$ 

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



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

July 21, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: North Pure Gold 8 Federal 011

OrderNo.: 2307708

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/15/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 2307708

Date Reported: 7/21/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-06 6'

Project: North Pure Gold 8 Federal 011

Collection Date: 7/13/2023 1:15:00 PM

Lab ID: 2307708-001

Matrix: SOIL

Received Date: 7/15/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/19/2023 8:53:57 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 8:53:57 PM
Surr: DNOP	95.6	69-147		%Rec	1	7/19/2023 8:53:57 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/19/2023 11:52:32 AM
Surr: BFB	89.8	15-244		%Rec	1	7/19/2023 11:52:32 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 11:52:32 AM
Toluene	ND	0.048		mg/Kg	1	7/19/2023 11:52:32 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/19/2023 11:52:32 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/19/2023 11:52:32 AM
Surr: 4-Bromofluorobenzene	98.3	39.1-146		%Rec	1	7/19/2023 11:52:32 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	400	60		mg/Kg	20	7/19/2023 2:50:13 PM

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

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

Page 1 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307708  
21-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold 8 Federal 011

Sample ID: MB-76320		SampType: MBLK		TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch ID: 76320		RunNo: 98352						
Prep Date: 7/19/2023		Analysis Date: 7/19/2023		SeqNo: 3580011			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76320		SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 76320		RunNo: 98352						
Prep Date: 7/19/2023		Analysis Date: 7/19/2023		SeqNo: 3580012			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	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

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 5

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307708

21-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>MB-76297</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76297</b>		RunNo: <b>98349</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579967</b>		Units: <b>mg/Kg</b>					
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	9.1		10.00		90.8	69	147			

Sample ID: <b>LCS-76297</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76297</b>		RunNo: <b>98349</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579968</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

Page 3 of 5



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307708

21-Jul-23

Client: Vertex Resources Services, Inc.

Project: North Pure Gold 8 Federal 011

Sample ID: <b>lcs-76285</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578519</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	70	130			
Surr: BFB	1900		1000		187	15	244			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578520</b>		Units: <b>mg/Kg</b>				
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		91.4	15	244			

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

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 4 of 5

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307708

21-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 011

Sample ID: <b>LCS-76285</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578524</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	70	130			
Toluene	0.86	0.050	1.000	0	86.3	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.9	70	130			
Xylenes, Total	2.7	0.10	3.000	0	88.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	39.1	146			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578525</b>		Units: <b>mg/Kg</b>					
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	0.99		1.000		99.1	39.1	146			

Sample ID: <b>2307708-001ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-06 6'</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579625</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9625	0	94.0	70	130			
Toluene	0.94	0.048	0.9625	0	97.5	70	130			
Ethylbenzene	0.96	0.048	0.9625	0	100	70	130			
Xylenes, Total	2.9	0.096	2.887	0	101	70	130			
Surr: 4-Bromofluorobenzene	1.0		0.9625		105	39.1	146			

Sample ID: <b>2307708-001amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-06 6'</b>	Batch ID: <b>76285</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579627</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9718	0	89.7	70	130	3.73	20	
Toluene	0.91	0.049	0.9718	0	93.4	70	130	3.38	20	
Ethylbenzene	0.92	0.049	0.9718	0	94.6	70	130	4.61	20	
Xylenes, Total	2.8	0.097	2.915	0	96.1	70	130	4.07	20	
Surr: 4-Bromofluorobenzene	1.0		0.9718		107	39.1	146	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 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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



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

## Sample Log-In Check List

Client Name: Vertex Resources  
Services, Inc.

Work Order Number: 2307708

RcptNo: 1

Received By: Juan Rojas 7/15/2023 7:30:00 AM

Completed By: Juan Rojas 7/15/2023 8:18:53 AM

Reviewed By: SCM 07/17/23 @ 0734

*Juan Rojas*

*Juan Rojas*

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: ju 7/15/23

### 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:

Client missing mailing address, phone number and email address. JR 7/15/23

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	No	Morty		





4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975      Fax 505-345-4107

## Analysis Request

received by OCD: 5/14/2025 2:04:25 PM <b>Chain of Custody Record</b>		Turn-Around Time: <input type="checkbox"/> Standard <input checked="" type="checkbox"/> <b>Rush</b> <u>3-day</u>
Client: <b>Vertex</b>	Project Name:	
(direct bill to Devon-Harvard Divest, see Remarks)	<b>North Pure Gold 8 Federal 011</b>	
Mailing Address:	Project #:	
	<b>22E-02816-09</b>	
Phone #:	Project Manager:	
email or Fax#:	Kent Stallings	
QA/QC Package:	<a href="mailto:kstallings@vertex.ca">kstallings@vertex.ca</a>	
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	Sampler: L. Pullman	
Accreditation: <input type="checkbox"/> Az Compliance	On Ice: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> NELAC <input type="checkbox"/> Other _____	# of Coolers: 1	
<input type="checkbox"/> EDD (Type) _____	worst	

[illegible]

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-4-23	07:00				7/4/23	7:00
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/4/23	19:00				7/15/23	7:53

Remarks: Direct bill to Devon, Dale Woodall  
Harvard Divest Site – North Pure Gold 8 Federal 011  
GL Account 7700100  
CC 1007884901  
Cc. kstallings@vertex.ca for Final Report

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



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

July 28, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: North Pure Gold Federal 011

OrderNo.: 2307747

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 46 sample(s) on 7/18/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-10 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:00:00 AM

Lab ID: 2307747-001

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	13	8.9		mg/Kg	1	7/19/2023 9:14:53 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/19/2023 9:14:53 PM
Surr: DNOP	93.7	69-147		%Rec	1	7/19/2023 9:14:53 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/19/2023 12:16:08 PM
Surr: BFB	91.8	15-244		%Rec	1	7/19/2023 12:16:08 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 12:16:08 PM
Toluene	ND	0.048		mg/Kg	1	7/19/2023 12:16:08 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/19/2023 12:16:08 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/19/2023 12:16:08 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	7/19/2023 12:16:08 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	2900	150		mg/Kg	50	7/20/2023 9:00:00 PM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-10 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:25:00 AM

Lab ID: 2307747-002

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	13	9.6		mg/Kg	1	7/19/2023 9:36:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 9:36:00 PM
Surr: DNOP	96.0	69-147		%Rec	1	7/19/2023 9:36:00 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 12:39:46 PM
Surr: BFB	96.8	15-244		%Rec	1	7/19/2023 12:39:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/19/2023 12:39:46 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 12:39:46 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 12:39:46 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/19/2023 12:39:46 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	7/19/2023 12:39:46 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	550	60		mg/Kg	20	7/19/2023 3:15:02 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-11 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 7:55:00 AM

Lab ID: 2307747-003

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/19/2023 9:57:12 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2023 9:57:12 PM
Surr: DNOP	92.0	69-147		%Rec	1	7/19/2023 9:57:12 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 1:03:28 PM
Surr: BFB	93.2	15-244		%Rec	1	7/19/2023 1:03:28 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 1:03:28 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 1:03:28 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 1:03:28 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/19/2023 1:03:28 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/19/2023 1:03:28 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	16000	610		mg/Kg	200	7/20/2023 9:12:25 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-11 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:00:00 AM

Lab ID: 2307747-004

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/19/2023 10:17:31 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/19/2023 10:17:31 PM
Surr: DNOP	95.3	69-147		%Rec	1	7/19/2023 10:17:31 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 1:27:14 PM
Surr: BFB	95.2	15-244		%Rec	1	7/19/2023 1:27:14 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/19/2023 1:27:14 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 1:27:14 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 1:27:14 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/19/2023 1:27:14 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	7/19/2023 1:27:14 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	630	60		mg/Kg	20	7/19/2023 3:39:52 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-12 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:15:00 AM

Lab ID: 2307747-005

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/19/2023 10:38:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2023 10:38:27 PM
Surr: DNOP	95.0	69-147		%Rec	1	7/19/2023 10:38:27 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/19/2023 1:50:58 PM
Surr: BFB	96.2	15-244		%Rec	1	7/19/2023 1:50:58 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 1:50:58 PM
Toluene	ND	0.048		mg/Kg	1	7/19/2023 1:50:58 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/19/2023 1:50:58 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/19/2023 1:50:58 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	7/19/2023 1:50:58 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	ND	60		mg/Kg	20	7/19/2023 4:17:05 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-12 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:20:00 AM

Lab ID: 2307747-006

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/19/2023 10:59:03 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 10:59:03 PM
Surr: DNOP	96.8	69-147		%Rec	1	7/19/2023 10:59:03 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 2:14:47 PM
Surr: BFB	95.3	15-244		%Rec	1	7/19/2023 2:14:47 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 2:14:47 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 2:14:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 2:14:47 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 2:14:47 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	7/19/2023 2:14:47 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	71	60		mg/Kg	20	7/19/2023 4:29:29 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-13 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:30:00 AM

Lab ID: 2307747-007

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	26	9.7		mg/Kg	1	7/19/2023 11:20:08 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 11:20:08 PM
Surr: DNOP	99.1	69-147		%Rec	1	7/19/2023 11:20:08 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 2:38:33 PM
Surr: BFB	96.8	15-244		%Rec	1	7/19/2023 2:38:33 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 2:38:33 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 2:38:33 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 2:38:33 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/19/2023 2:38:33 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/19/2023 2:38:33 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	110	60		mg/Kg	20	7/19/2023 4:41:54 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-13 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:35:00 AM

Lab ID: 2307747-008

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	18	9.6		mg/Kg	1	7/19/2023 11:40:45 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 11:40:45 PM
Surr: DNOP	97.3	69-147		%Rec	1	7/19/2023 11:40:45 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 3:02:26 PM
Surr: BFB	95.6	15-244		%Rec	1	7/19/2023 3:02:26 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/19/2023 3:02:26 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 3:02:26 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 3:02:26 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/19/2023 3:02:26 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	7/19/2023 3:02:26 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	200	60		mg/Kg	20	7/19/2023 4:54:19 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-14 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:50:00 AM

Lab ID: 2307747-009

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	15	9.8		mg/Kg	1	7/20/2023 12:22:44 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 12:22:44 AM
Surr: DNOP	95.5	69-147		%Rec	1	7/20/2023 12:22:44 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 3:50:11 PM
Surr: BFB	94.4	15-244		%Rec	1	7/19/2023 3:50:11 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 3:50:11 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 3:50:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 3:50:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/19/2023 3:50:11 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/19/2023 3:50:11 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	ND	60		mg/Kg	20	7/19/2023 5:06:44 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-14 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:00:00 AM

Lab ID: 2307747-010

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/20/2023 12:43:11 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/20/2023 12:43:11 AM
Surr: DNOP	100	69-147		%Rec	1	7/20/2023 12:43:11 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/19/2023 4:14:07 PM
Surr: BFB	97.9	15-244		%Rec	1	7/19/2023 4:14:07 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 4:14:07 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2023 4:14:07 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2023 4:14:07 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 4:14:07 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	7/19/2023 4:14:07 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	ND	60		mg/Kg	20	7/19/2023 5:19:08 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-15 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 8:50:00 AM

Lab ID: 2307747-011

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/20/2023 1:03:34 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 1:03:34 AM
Surr: DNOP	98.7	69-147		%Rec	1	7/20/2023 1:03:34 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 4:38:00 PM
Surr: BFB	96.7	15-244		%Rec	1	7/19/2023 4:38:00 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/19/2023 4:38:00 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 4:38:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 4:38:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/19/2023 4:38:00 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	7/19/2023 4:38:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	520	60		mg/Kg	20	7/20/2023 1:58:04 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-15 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:00:00 AM

Lab ID: 2307747-012

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/20/2023 1:23:47 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 1:23:47 AM
Surr: DNOP	104	69-147		%Rec	1	7/20/2023 1:23:47 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 5:01:49 PM
Surr: BFB	95.3	15-244		%Rec	1	7/19/2023 5:01:49 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 5:01:49 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 5:01:49 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 5:01:49 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 5:01:49 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	7/19/2023 5:01:49 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	360	60		mg/Kg	20	7/20/2023 2:35:17 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-16 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:05:00 AM

Lab ID: 2307747-013

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/20/2023 1:44:09 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/20/2023 1:44:09 AM
Surr: DNOP	87.6	69-147		%Rec	1	7/20/2023 1:44:09 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 5:25:34 PM
Surr: BFB	92.5	15-244		%Rec	1	7/19/2023 5:25:34 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 5:25:34 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 5:25:34 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 5:25:34 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/19/2023 5:25:34 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	7/19/2023 5:25:34 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/20/2023 3:37:20 PM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-16 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:20:00 AM

Lab ID: 2307747-014

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/20/2023 7:46:32 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/20/2023 7:46:32 PM
Surr: DNOP	89.1	69-147		%Rec	1	7/20/2023 7:46:32 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/19/2023 5:49:21 PM
Surr: BFB	94.9	15-244		%Rec	1	7/19/2023 5:49:21 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 5:49:21 PM
Toluene	ND	0.048		mg/Kg	1	7/19/2023 5:49:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/19/2023 5:49:21 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/19/2023 5:49:21 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	7/19/2023 5:49:21 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/20/2023 3:49:44 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-17 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:05:00 AM

Lab ID: 2307747-015

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/20/2023 2:24:16 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 2:24:16 AM
Surr: DNOP	96.6	69-147		%Rec	1	7/20/2023 2:24:16 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/19/2023 6:13:09 PM
Surr: BFB	95.6	15-244		%Rec	1	7/19/2023 6:13:09 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 6:13:09 PM
Toluene	ND	0.048		mg/Kg	1	7/19/2023 6:13:09 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/19/2023 6:13:09 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/19/2023 6:13:09 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	7/19/2023 6:13:09 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/20/2023 4:02:08 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-17 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 9:20:00 AM

Lab ID: 2307747-016

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/20/2023 2:44:10 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 2:44:10 AM
Surr: DNOP	94.5	69-147		%Rec	1	7/20/2023 2:44:10 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/19/2023 6:36:57 PM
Surr: BFB	94.2	15-244		%Rec	1	7/19/2023 6:36:57 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 6:36:57 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2023 6:36:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2023 6:36:57 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 6:36:57 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/19/2023 6:36:57 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	67	60		mg/Kg	20	7/20/2023 4:14:33 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-18 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:10:00 AM

Lab ID: 2307747-017

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/20/2023 3:03:51 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/20/2023 3:03:51 AM
Surr: DNOP	86.8	69-147		%Rec	1	7/20/2023 3:03:51 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2023 7:00:47 PM
Surr: BFB	94.5	15-244		%Rec	1	7/19/2023 7:00:47 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/19/2023 7:00:47 PM
Toluene	ND	0.047		mg/Kg	1	7/19/2023 7:00:47 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2023 7:00:47 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/19/2023 7:00:47 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	7/19/2023 7:00:47 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JTT
Chloride	7800	300		mg/Kg	100	7/21/2023 10:37:17 AM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-18 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:15:00 AM

Lab ID: 2307747-018

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/20/2023 3:23:41 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/20/2023 3:23:41 AM
Surr: DNOP	94.6	69-147		%Rec	1	7/20/2023 3:23:41 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/19/2023 7:24:35 PM
Surr: BFB	95.9	15-244		%Rec	1	7/19/2023 7:24:35 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/19/2023 7:24:35 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2023 7:24:35 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2023 7:24:35 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 7:24:35 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	7/19/2023 7:24:35 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	1400	60		mg/Kg	20	7/20/2023 4:39:22 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-19 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:25:00 AM

Lab ID: 2307747-019

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/19/2023 5:58:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2023 5:58:37 PM
Surr: DNOP	60.8	69-147	S	%Rec	1	7/19/2023 5:58:37 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/19/2023 11:20:31 PM
Surr: BFB	91.5	15-244		%Rec	1	7/19/2023 11:20:31 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/19/2023 11:20:31 PM
Toluene	ND	0.049		mg/Kg	1	7/19/2023 11:20:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/19/2023 11:20:31 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/19/2023 11:20:31 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	7/19/2023 11:20:31 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	290	60		mg/Kg	20	7/20/2023 4:51:47 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-19 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:30:00 AM

Lab ID: 2307747-020

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/19/2023 6:23:24 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/19/2023 6:23:24 PM
Surr: DNOP	83.9	69-147		%Rec	1	7/19/2023 6:23:24 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 12:30:58 AM
Surr: BFB	90.0	15-244		%Rec	1	7/20/2023 12:30:58 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 12:30:58 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 12:30:58 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 12:30:58 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 12:30:58 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/20/2023 12:30:58 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/20/2023 5:04:11 PM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-20 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:45:00 AM

Lab ID: 2307747-021

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/19/2023 6:48:17 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/19/2023 6:48:17 PM
Surr: DNOP	82.5	69-147		%Rec	1	7/19/2023 6:48:17 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 1:41:17 AM
Surr: BFB	89.6	15-244		%Rec	1	7/20/2023 1:41:17 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 1:41:17 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 1:41:17 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 1:41:17 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 1:41:17 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/20/2023 1:41:17 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	170	60		mg/Kg	20	7/20/2023 5:41:25 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-20 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:55:00 AM

Lab ID: 2307747-022

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/19/2023 7:13:08 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/19/2023 7:13:08 PM
Surr: DNOP	85.6	69-147		%Rec	1	7/19/2023 7:13:08 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 2:04:38 AM
Surr: BFB	88.8	15-244		%Rec	1	7/20/2023 2:04:38 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 2:04:38 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 2:04:38 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 2:04:38 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 2:04:38 AM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	7/20/2023 2:04:38 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	160	60		mg/Kg	20	7/20/2023 5:53:50 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-21 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 10:50:00 AM

Lab ID: 2307747-023

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/19/2023 7:37:50 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/19/2023 7:37:50 PM
Surr: DNOP	84.6	69-147		%Rec	1	7/19/2023 7:37:50 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2023 2:28:02 AM
Surr: BFB	88.8	15-244		%Rec	1	7/20/2023 2:28:02 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/20/2023 2:28:02 AM
Toluene	ND	0.050		mg/Kg	1	7/20/2023 2:28:02 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2023 2:28:02 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 2:28:02 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/20/2023 2:28:02 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	300	60		mg/Kg	20	7/20/2023 6:06:15 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-21 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 11:00:00 AM

Lab ID: 2307747-024

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2023 8:02:35 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2023 8:02:35 PM
Surr: DNOP	84.3	69-147		%Rec	1	7/19/2023 8:02:35 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 2:51:27 AM
Surr: BFB	90.8	15-244		%Rec	1	7/20/2023 2:51:27 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 2:51:27 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 2:51:27 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 2:51:27 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 2:51:27 AM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	7/20/2023 2:51:27 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	200	60		mg/Kg	20	7/20/2023 6:18:40 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-22 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 11:30:00 AM

Lab ID: 2307747-025

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	120	9.9		mg/Kg	1	7/19/2023 8:27:13 PM
Motor Oil Range Organics (MRO)	51	49		mg/Kg	1	7/19/2023 8:27:13 PM
Surr: DNOP	89.6	69-147		%Rec	1	7/19/2023 8:27:13 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 3:14:50 AM
Surr: BFB	88.6	15-244		%Rec	1	7/20/2023 3:14:50 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/20/2023 3:14:50 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 3:14:50 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 3:14:50 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 3:14:50 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/20/2023 3:14:50 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	1800	60		mg/Kg	20	7/20/2023 6:31:04 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-22 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 11:35:00 AM

Lab ID: 2307747-026

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/19/2023 8:51:54 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2023 8:51:54 PM
Surr: DNOP	88.9	69-147		%Rec	1	7/19/2023 8:51:54 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 3:38:09 AM
Surr: BFB	89.5	15-244		%Rec	1	7/20/2023 3:38:09 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 3:38:09 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 3:38:09 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 3:38:09 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 3:38:09 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	7/20/2023 3:38:09 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	1800	60		mg/Kg	20	7/20/2023 6:43:28 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-23 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 11:50:00 AM

Lab ID: 2307747-027

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/19/2023 9:16:36 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/19/2023 9:16:36 PM
Surr: DNOP	88.5	69-147		%Rec	1	7/19/2023 9:16:36 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 4:01:31 AM
Surr: BFB	90.0	15-244		%Rec	1	7/20/2023 4:01:31 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 4:01:31 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 4:01:31 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 4:01:31 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 4:01:31 AM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	7/20/2023 4:01:31 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	440	60		mg/Kg	20	7/20/2023 6:55:53 PM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-23 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 11:55:00 AM

Lab ID: 2307747-028

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2023 9:41:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2023 9:41:18 PM
Surr: DNOP	82.0	69-147		%Rec	1	7/19/2023 9:41:18 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 4:24:55 AM
Surr: BFB	92.6	15-244		%Rec	1	7/20/2023 4:24:55 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 4:24:55 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 4:24:55 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 4:24:55 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 4:24:55 AM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	7/20/2023 4:24:55 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	220	60		mg/Kg	20	7/20/2023 7:08:18 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-24 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:00:00 PM

Lab ID: 2307747-029

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/19/2023 10:30:36 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/19/2023 10:30:36 PM
Surr: DNOP	74.1	69-147		%Rec	1	7/19/2023 10:30:36 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 10:19:12 AM
Surr: BFB	95.0	15-244		%Rec	1	7/20/2023 10:19:12 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 10:19:12 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 10:19:12 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 10:19:12 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 10:19:12 AM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	7/20/2023 10:19:12 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	3600	150		mg/Kg	50	7/21/2023 10:49:42 AM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-24 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:05:00 PM

Lab ID: 2307747-030

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/19/2023 10:55:08 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2023 10:55:08 PM
Surr: DNOP	84.0	69-147		%Rec	1	7/19/2023 10:55:08 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 10:42:38 AM
Surr: BFB	91.3	15-244		%Rec	1	7/20/2023 10:42:38 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 10:42:38 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 10:42:38 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 10:42:38 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 10:42:38 AM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	7/20/2023 10:42:38 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	210	60		mg/Kg	20	7/20/2023 9:48:59 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-25 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:10:00 PM

Lab ID: 2307747-031

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/19/2023 11:19:38 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/19/2023 11:19:38 PM
Surr: DNOP	88.5	69-147		%Rec	1	7/19/2023 11:19:38 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 11:06:08 AM
Surr: BFB	91.3	15-244		%Rec	1	7/20/2023 11:06:08 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 11:06:08 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 11:06:08 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 11:06:08 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 11:06:08 AM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	7/20/2023 11:06:08 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	990	60		mg/Kg	20	7/20/2023 10:01:24 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-25 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:15:00 PM

Lab ID: 2307747-032

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: mb
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2023 11:44:19 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2023 11:44:19 PM
Surr: DNOP	82.1	69-147		%Rec	1	7/19/2023 11:44:19 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 11:29:36 AM
Surr: BFB	92.7	15-244		%Rec	1	7/20/2023 11:29:36 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/20/2023 11:29:36 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 11:29:36 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 11:29:36 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 11:29:36 AM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	7/20/2023 11:29:36 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	110	60		mg/Kg	20	7/20/2023 10:13:48 PM

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-26 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:20:00 PM

Lab ID: 2307747-033

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/20/2023 12:08:57 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/20/2023 12:08:57 AM
Surr: DNOP	85.8	69-147		%Rec	1	7/20/2023 12:08:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 11:53:10 AM
Surr: BFB	95.2	15-244		%Rec	1	7/20/2023 11:53:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/20/2023 11:53:10 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 11:53:10 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 11:53:10 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 11:53:10 AM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/20/2023 11:53:10 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	350	60		mg/Kg	20	7/20/2023 10:26:12 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-26 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:25:00 PM

Lab ID: 2307747-034

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/20/2023 12:33:30 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/20/2023 12:33:30 AM
Surr: DNOP	91.8	69-147		%Rec	1	7/20/2023 12:33:30 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 12:16:41 PM
Surr: BFB	93.6	15-244		%Rec	1	7/20/2023 12:16:41 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 12:16:41 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 12:16:41 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 12:16:41 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 12:16:41 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	7/20/2023 12:16:41 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	150	60		mg/Kg	20	7/20/2023 10:38:36 PM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:50:00 PM

Lab ID: 2307747-035

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	7/20/2023 12:58:01 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/20/2023 12:58:01 AM
Surr: DNOP	105	69-147		%Rec	1	7/20/2023 12:58:01 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 12:40:18 PM
Surr: BFB	93.0	15-244		%Rec	1	7/20/2023 12:40:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 12:40:18 PM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 12:40:18 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 12:40:18 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 12:40:18 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	7/20/2023 12:40:18 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	92	60		mg/Kg	20	7/20/2023 11:15:49 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 12:55:00 PM

Lab ID: 2307747-036

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: mb
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	7/20/2023 1:22:34 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/20/2023 1:22:34 AM
Surr: DNOP	98.6	69-147		%Rec	1	7/20/2023 1:22:34 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2023 1:03:57 PM
Surr: BFB	96.6	15-244		%Rec	1	7/20/2023 1:03:57 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/20/2023 1:03:57 PM
Toluene	ND	0.050		mg/Kg	1	7/20/2023 1:03:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2023 1:03:57 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 1:03:57 PM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/20/2023 1:03:57 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	ND	59		mg/Kg	20	7/20/2023 11:28:14 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:10:00 PM

Lab ID: 2307747-037

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/20/2023 1:47:12 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 1:47:12 AM
Surr: DNOP	101	69-147		%Rec	1	7/20/2023 1:47:12 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 1:27:36 PM
Surr: BFB	96.1	15-244		%Rec	1	7/20/2023 1:27:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 1:27:36 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 1:27:36 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 1:27:36 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 1:27:36 PM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	7/20/2023 1:27:36 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	ND	60		mg/Kg	20	7/20/2023 11:40:39 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:15:00 PM

Lab ID: 2307747-038

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: mb
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	7/20/2023 2:11:47 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/20/2023 2:11:47 AM
Surr: DNOP	89.3	69-147		%Rec	1	7/20/2023 2:11:47 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 1:51:15 PM
Surr: BFB	93.8	15-244		%Rec	1	7/20/2023 1:51:15 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/20/2023 1:51:15 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 1:51:15 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 1:51:15 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 1:51:15 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	7/20/2023 1:51:15 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	ND	60		mg/Kg	20	7/20/2023 11:53:04 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-29 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:20:00 PM

Lab ID: 2307747-039

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/20/2023 5:02:34 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 5:02:34 AM
Surr: DNOP	103	69-147		%Rec	1	7/20/2023 5:02:34 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 1:03:00 AM
Surr: BFB	79.3	15-244		%Rec	1	7/20/2023 1:03:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	7/20/2023 1:03:00 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 1:03:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 1:03:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 1:03:00 AM
Surr: 4-Bromofluorobenzene	76.3	39.1-146		%Rec	1	7/20/2023 1:03:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	ND	60		mg/Kg	20	7/21/2023 12:05:28 AM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-29 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:25:00 PM

Lab ID: 2307747-040

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/20/2023 5:26:40 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/20/2023 5:26:40 AM
Surr: DNOP	97.1	69-147		%Rec	1	7/20/2023 5:26:40 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 2:08:00 AM
Surr: BFB	75.4	15-244		%Rec	1	7/20/2023 2:08:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.024		mg/Kg	1	7/20/2023 2:08:00 AM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 2:08:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 2:08:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 2:08:00 AM
Surr: 4-Bromofluorobenzene	75.1	39.1-146		%Rec	1	7/20/2023 2:08:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	ND	60		mg/Kg	20	7/21/2023 12:17:52 AM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-30 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:35:00 PM

Lab ID: 2307747-041

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/24/2023 11:16:10 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/24/2023 11:16:10 PM
Surr: DNOP	90.6	69-147		%Rec	1	7/24/2023 11:16:10 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 3:13:00 AM
Surr: BFB	79.3	15-244		%Rec	1	7/20/2023 3:13:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/20/2023 3:13:00 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 3:13:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 3:13:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 3:13:00 AM
Surr: 4-Bromofluorobenzene	76.7	39.1-146		%Rec	1	7/20/2023 3:13:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	240	60		mg/Kg	20	7/21/2023 12:30:17 AM

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

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



## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-30 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:40:00 PM

Lab ID: 2307747-042

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>mb</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/20/2023 6:14:56 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/20/2023 6:14:56 AM
Surr: DNOP	80.6	69-147		%Rec	1	7/20/2023 6:14:56 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2023 3:35:00 AM
Surr: BFB	77.2	15-244		%Rec	1	7/20/2023 3:35:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	7/20/2023 3:35:00 AM
Toluene	ND	0.050		mg/Kg	1	7/20/2023 3:35:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2023 3:35:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 3:35:00 AM
Surr: 4-Bromofluorobenzene	76.6	39.1-146		%Rec	1	7/20/2023 3:35:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	89	60		mg/Kg	20	7/21/2023 12:42:42 AM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-31 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:40:00 PM

Lab ID: 2307747-043

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	7/24/2023 11:34:35 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/24/2023 11:34:35 PM
Surr: DNOP	95.3	69-147		%Rec	1	7/24/2023 11:34:35 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 3:56:00 AM
Surr: BFB	78.7	15-244		%Rec	1	7/20/2023 3:56:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	7/20/2023 3:56:00 AM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 3:56:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 3:56:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 3:56:00 AM
Surr: 4-Bromofluorobenzene	76.1	39.1-146		%Rec	1	7/20/2023 3:56:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	210	60		mg/Kg	20	7/20/2023 9:49:38 PM

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

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

## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-31 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:45:00 PM

Lab ID: 2307747-044

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	7/20/2023 4:41:51 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	7/20/2023 4:41:51 AM
Surr: DNOP	106	69-147		%Rec	1	7/20/2023 4:41:51 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/20/2023 4:18:00 AM
Surr: BFB	78.9	15-244		%Rec	1	7/20/2023 4:18:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/20/2023 4:18:00 AM
Toluene	ND	0.047		mg/Kg	1	7/20/2023 4:18:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/20/2023 4:18:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	7/20/2023 4:18:00 AM
Surr: 4-Bromofluorobenzene	76.5	39.1-146		%Rec	1	7/20/2023 4:18:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	100	60		mg/Kg	20	7/20/2023 10:02:02 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-32 0'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 1:55:00 PM

Lab ID: 2307747-045

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/20/2023 5:00:46 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 5:00:46 AM
Surr: DNOP	70.0	69-147		%Rec	1	7/20/2023 5:00:46 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/20/2023 5:01:00 AM
Surr: BFB	79.2	15-244		%Rec	1	7/20/2023 5:01:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/20/2023 5:01:00 AM
Toluene	ND	0.047		mg/Kg	1	7/20/2023 5:01:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/20/2023 5:01:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	7/20/2023 5:01:00 AM
Surr: 4-Bromofluorobenzene	77.6	39.1-146		%Rec	1	7/20/2023 5:01:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	1200	60		mg/Kg	20	7/20/2023 11:28:55 PM

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

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

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## Analytical Report

Lab Order 2307747

Date Reported: 7/28/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-32 2'

Project: North Pure Gold Federal 011

Collection Date: 7/14/2023 2:00:00 PM

Lab ID: 2307747-046

Matrix: SOIL

Received Date: 7/18/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/20/2023 5:19:38 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/20/2023 5:19:38 AM
Surr: DNOP	109	69-147		%Rec	1	7/20/2023 5:19:38 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/20/2023 5:23:00 AM
Surr: BFB	79.3	15-244		%Rec	1	7/20/2023 5:23:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/20/2023 5:23:00 AM
Toluene	ND	0.047		mg/Kg	1	7/20/2023 5:23:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/20/2023 5:23:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/20/2023 5:23:00 AM
Surr: 4-Bromofluorobenzene	75.8	39.1-146		%Rec	1	7/20/2023 5:23:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	86	60		mg/Kg	20	7/20/2023 11:41:21 PM

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

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

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>MB-76320</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76320</b>		RunNo: <b>98352</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3580011</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76320</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76320</b>		RunNo: <b>98352</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3580012</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID: <b>MB-76359</b>	SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76359</b>		RunNo: <b>98399</b>							
Prep Date: <b>7/20/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581706</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76359</b>	SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76359</b>		RunNo: <b>98399</b>							
Prep Date: <b>7/20/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581707</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.5	90	110			

Sample ID: <b>MB-76371</b>	SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76371</b>		RunNo: <b>98399</b>							
Prep Date: <b>7/20/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581746</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76371</b>	SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76371</b>		RunNo: <b>98399</b>							
Prep Date: <b>7/20/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581747</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	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 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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307747  
28-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold Federal 011

Sample ID: MB-76366		SampType: MBLK		TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch ID: 76366		RunNo: 98371						
Prep Date: 7/20/2023		Analysis Date: 7/20/2023		SeqNo: 3581841			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76366		SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 76366		RunNo: 98371						
Prep Date: 7/20/2023		Analysis Date: 7/20/2023		SeqNo: 3581842			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.9	90	110			

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

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>LCS-76306</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76306</b>		RunNo: <b>98345</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3579452</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.6	61.9	130			
Surr: DNOP	4.0		5.000		80.0	69	147			

Sample ID: <b>2307747-019AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>BH23-19 0'</b>	Batch ID: <b>76306</b>		RunNo: <b>98345</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579474</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.9	49.70	0	76.6	54.2	135			
Surr: DNOP	3.2		4.970		63.4	69	147			S

Sample ID: <b>2307747-019AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>BH23-19 0'</b>	Batch ID: <b>76306</b>		RunNo: <b>98345</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579475</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.3	46.55	0	96.4	54.2	135	16.4	29.2	
Surr: DNOP	4.0		4.655		85.5	69	147	0	0	

Sample ID: <b>MB-76310</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76310</b>		RunNo: <b>98345</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579477</b>		Units: <b>mg/Kg</b>					
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	11		10.00		112	69	147			

Sample ID: <b>LCS-76310</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76310</b>		RunNo: <b>98345</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579478</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	61.9	130			
Surr: DNOP	4.8		5.000		95.5	69	147			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>MB-76306</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76306</b>	RunNo: <b>98345</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>	SeqNo: <b>3579485</b> Units: <b>mg/Kg</b>								
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	9.8		10.00		98.4	69	147			

Sample ID: <b>MB-76297</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76297</b>	RunNo: <b>98349</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579967</b> Units: <b>mg/Kg</b>								
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	9.1		10.00		90.8	69	147			

Sample ID: <b>LCS-76297</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76297</b>	RunNo: <b>98349</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579968</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: <b>MB-76333</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76333</b>	RunNo: <b>98368</b>								
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>	SeqNo: <b>3581346</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	69	147			

Sample ID: <b>LCS-76333</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76333</b>	RunNo: <b>98368</b>								
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/21/2023</b>	SeqNo: <b>3581347</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.4	69	147			

Sample ID: <b>MB-76380</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76380</b>	RunNo: <b>98457</b>								
Prep Date: <b>7/21/2023</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>3584256</b> Units: <b>mg/Kg</b>								
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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>MB-76380</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76380</b>	RunNo: <b>98457</b>								
Prep Date: <b>7/21/2023</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>3584256</b> Units: <b>mg/Kg</b>								
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	8.9		10.00		89.2	69	147			

Sample ID: <b>LCS-76380</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76380</b>	RunNo: <b>98457</b>								
Prep Date: <b>7/21/2023</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>3584257</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	44	10	50.00	0	87.3	61.9	130			
Surr: DNOP	4.1		5.000		81.0	69	147			

Sample ID: <b>2307747-043AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH23-31 0'</b>	Batch ID: <b>76380</b>	RunNo: <b>98457</b>								
Prep Date: <b>7/21/2023</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>3584260</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	51	9.6	48.22	0	105	54.2	135			
Surr: DNOP	4.7		4.822		97.7	69	147			

Sample ID: <b>2307747-043AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH23-31 0'</b>	Batch ID: <b>76380</b>	RunNo: <b>98457</b>								
Prep Date: <b>7/21/2023</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>3584261</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	53	8.7	43.67	0	121	54.2	135	3.89	29.2	B
Surr: DNOP	4.3		4.367		99.1	69	147	0	0	

**Qualifiers:**

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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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>lcs-76285</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578519</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	70	130			
Surr: BFB	1900		1000		187	15	244			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578520</b>		Units: <b>mg/Kg</b>				
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		91.4	15	244			

Sample ID: <b>lcs-76293</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3579525</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.9	70	130			
Surr: BFB	1800		1000		178	15	244			

Sample ID: <b>mb-76293</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3579526</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		84.4	15	244			

Sample ID: <b>2307747-039ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH23-29 0'</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3579528</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.58	0	90.2	70	130			
Surr: BFB	1900		983.3		190	15	244			

Sample ID: <b>2307747-039amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH23-29 0'</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3579529</b>		Units: <b>mg/Kg</b>				
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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>2307747-039amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>BH23-29 0'</b>	Batch ID: <b>76293</b>	RunNo: <b>98347</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>	SeqNo: <b>3579529</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.70	0	91.0	70	130	1.33	20	
Surr: BFB	1900		988.1		194	15	244	0	0	

Sample ID: <b>lcs-76287</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76287</b>	RunNo: <b>98328</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579552</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.2	70	130			
Surr: BFB	1900		1000		189	15	244			

Sample ID: <b>mb-76287</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76287</b>	RunNo: <b>98328</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579553</b>	Units: <b>mg/Kg</b>							
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		89.9	15	244			

Sample ID: <b>2307747-019ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>BH23-19 0'</b>	Batch ID: <b>76287</b>	RunNo: <b>98328</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579564</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.93	0	85.5	70	130			
Surr: BFB	1800		997.0		184	15	244			

Sample ID: <b>2307747-019amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>BH23-19 0'</b>	Batch ID: <b>76287</b>	RunNo: <b>98328</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>	SeqNo: <b>3579565</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.83	0	89.2	70	130	3.82	20	
Surr: BFB	1900		993.0		189	15	244	0	0	

Sample ID: <b>lcs-76322</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76322</b>	RunNo: <b>98353</b>								
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>	SeqNo: <b>3580780</b>	Units: <b>%Rec</b>							
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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307747  
28-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold Federal 011

Sample ID: <b>lcs-76322</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580780</b>		Units: <b>%Rec</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		197	15	244			

Sample ID: <b>mb-76322</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580811</b>		Units: <b>%Rec</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.4	15	244			

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

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 54 of 57

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>LCS-76285</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578524</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	70	130			
Toluene	0.86	0.050	1.000	0	86.3	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.9	70	130			
Xylenes, Total	2.7	0.10	3.000	0	88.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	39.1	146			

Sample ID: <b>mb-76285</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76285</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3578525</b>		Units: <b>mg/Kg</b>				
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	0.99		1.000		99.1	39.1	146			

Sample ID: <b>LCS-76287</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76287</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3579575</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.1	70	130			
Toluene	0.87	0.050	1.000	0	86.6	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.8	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.1	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	39.1	146			

Sample ID: <b>mb-76287</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76287</b>			RunNo: <b>98328</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>			SeqNo: <b>3579576</b>		Units: <b>mg/Kg</b>				
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	39.1	146			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>2307747-020ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-19 2'</b>	Batch ID: <b>76287</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579588</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9643	0	85.7	70	130			
Toluene	0.87	0.048	0.9643	0	90.4	70	130			
Ethylbenzene	0.89	0.048	0.9643	0	92.6	70	130			
Xylenes, Total	2.7	0.096	2.893	0	93.3	70	130			
Surr: 4-Bromofluorobenzene	1.0		0.9643		107	39.1	146			

Sample ID: <b>2307747-020amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-19 2'</b>	Batch ID: <b>76287</b>		RunNo: <b>98328</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579589</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9718	0	88.8	70	130	4.27	20	
Toluene	0.91	0.049	0.9718	0	94.1	70	130	4.79	20	
Ethylbenzene	0.94	0.049	0.9718	0	96.3	70	130	4.67	20	
Xylenes, Total	2.8	0.097	2.915	0	97.2	70	130	4.87	20	
Surr: 4-Bromofluorobenzene	1.0		0.9718		104	39.1	146	0	0	

Sample ID: <b>lcs-76293</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76293</b>		RunNo: <b>98347</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579615</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.5	70	130			
Toluene	0.84	0.050	1.000	0	84.1	70	130			
Ethylbenzene	0.85	0.050	1.000	0	85.3	70	130			
Xylenes, Total	2.6	0.10	3.000	0	85.2	70	130			
Surr: 4-Bromofluorobenzene	0.78		1.000		78.2	39.1	146			

Sample ID: <b>mb-76293</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76293</b>		RunNo: <b>98347</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3579616</b>		Units: <b>mg/Kg</b>					
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	0.77		1.000		76.7	39.1	146			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307747

28-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold Federal 011

Sample ID: <b>2307747-040ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>BH23-29 2'</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3579619</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9625	0	88.0	70	130			
Toluene	0.88	0.048	0.9625	0	91.5	70	130			
Ethylbenzene	0.90	0.048	0.9625	0	93.4	70	130			
Xylenes, Total	2.7	0.096	2.887	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.74		0.9625		77.4	39.1	146			

Sample ID: <b>2307747-040amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>BH23-29 2'</b>	Batch ID: <b>76293</b>			RunNo: <b>98347</b>						
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3579620</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9579	0	85.1	70	130	3.86	20	
Toluene	0.85	0.048	0.9579	0	89.1	70	130	3.14	20	
Ethylbenzene	0.87	0.048	0.9579	0	91.0	70	130	3.06	20	
Xylenes, Total	2.6	0.096	2.874	0	90.9	70	130	3.01	20	
Surr: 4-Bromofluorobenzene	0.73		0.9579		76.4	39.1	146	0	0	

Sample ID: <b>LCS-76322</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580804</b>		Units: <b>%Rec</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		114	39.1	146			

Sample ID: <b>mb-76322</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580812</b>		Units: <b>%Rec</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		117	39.1	146			

**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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



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

## Sample Log-In Check List

Client Name: Vertex Resources  
Services, Inc.

Work Order Number: 2307747

RcptNo: 1

Received By: Tracy Casarrubias 7/18/2023 7:10:00 AM

Completed By: Tracy Casarrubias 7/18/2023 7:22:37 AM

Reviewed By: *Tracy 7/18/23*

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by: *SCM 07/18/23*

### 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: Mailing address, phone number and Email/Fax are missing on COC - TMC 7/18/23

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes	Yogi		

[www.hallenvironmental.com](http://www.hallenvironmental.com)

Tel. 505-345-3975      Fax 505-345-4107

[illegible]

Date	Time	Matrix	Sample Name	Cooler Temp (including CF): 3.9-Ø = 3.9°		
				Container Type and #	Preservative Type	HEAL No. 2307747
07/14/23	08:00	Soil	BH23-10 0'	1, 4oz jar		001
07/14/23	08:25	Soil	BH23-10 2'	1, 4oz jar		002
07/14/23	07:55	Soil	BH23-11 0'	1, 4oz jar		003
07/14/23	08:00	Soil	BH23-11 2'	1, 4oz jar		004
07/14/23	08:15	Soil	BH23-12 0'	1, 4oz jar		005
07/14/23	08:20	Soil	BH23-12 2'	1, 4oz jar		006
07/14/23	08:30	Soil	BH23-13 0'	1, 4oz jar		007
07/14/23	08:35	Soil	BH23-13 2'	1, 4oz jar		008
07/14/23	08:50	Soil	BH23-14 0'	1, 4oz jar		009
07/14/23	09:00	Soil	BH23-14 2'	1, 4oz jar		010
07/14/23	08:50	Soil	BH23-15 0'	1, 4oz jar		011
07/14/23	09:00	Soil	BH23-15 2'	1, 4oz jar		012

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-17-23	07:00	<i>[Signature]</i>	<i>[Signature]</i>		7/17/23	7:00
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/17/23	1900	<i>[Signature]</i>	<i>[Signature]</i>	Carrie	7/18/23	7:10





Remarks: Direct bill to Devon, Dale Woodall  
Harvard Divest Site – North Pure Gold 8 Federal 011  
GL Account 7700100  
CC 1007884901  
cc. kstallings@vertex.ca for Final Report

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.

Cooler Temp (including CF): 2.00 (checklist)

Tel. 505-345-3975      Fax 505-345-4107

## Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Remarks: Direct bill to Devon, Dale Woodall Harvard Divest Site – North Pure Gold 8 Federal 011 GL Account 7700100 CC 1007884901 cc. kstallings@vertex.ca for Final Report
7-17-23	07:00				7/17/23	7:00	
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	
7/17/23	19:00				7/18/23	7:10	2/4

Released to Imaging: 6/9/2025 2:25:32 PM



## Chain-of-Custody Record

Client: **Vertex**

(direct bill to Devon-Harvard Divest, see Remarks)

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other \_\_\_\_\_

☐ EDD (Type) \_\_\_\_\_

Turn-Around Time:

☐ Standard ☒ Rush 3-day

Project Name:

**North Pure Gold 8 Federal 011**

Project #:

**22E-02816-09**

Project Manager:

Kent Stallings

[kstallings@vertex.ca](mailto:kstallings@vertex.ca)

Sampler: L.Pullman

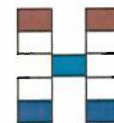
On Ice: ☐ Yes ☐ No

# of Coolers:

Cooler Temp (including CF): See Checklist

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
07/14/23	11:30	Soil	BH23-22 0'	1, 4oz jar		025
07/14/23	11:35	Soil	BH23-22 2'	1, 4oz jar		026
07/14/23	11:50	Soil	BH23-23 0'	1, 4oz jar		027
07/14/23	11:55	Soil	BH23-23 2'	1, 4oz jar		028
07/14/23	12:00	Soil	BH23-24 0'	1, 4oz jar		029
07/14/23	12:05	Soil	BH23-24 2'	1, 4oz jar		030
07/14/23	12:10	Soil	BH23-25 0'	1, 4oz jar		031
07/14/23	12:15	Soil	BH23-25 2'	1, 4oz jar		032
07/14/23	12:20	Soil	BH23-26 0'	1, 4oz jar		033
07/14/23	12:25	Soil	BH23-26 2'	1, 4oz jar		034
07/14/23	12:50	Soil	BH23-27 0'	1, 4oz jar		035
07/14/23	12:55	Soil	BH23-27 2'	1, 4oz jar		036

Date: 7-17-23	Time: 07:00	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Via: <i>[Signature]</i>	Date: 7/17/23	Time: 7:00
Date: 7/17/23	Time: 19:00	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Via: <i>[Signature]</i>	Date: 7/18/23	Time: 7:10



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)										
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													
X	X					X													

Remarks: Direct bill to Devon, Dale Woodall  
 Harvard Divest Site - North Pure Gold 8 Federal 011  
 GL Account 7700100  
 CC 1007884901  
 cc. kstallings@vertex.ca for Final Report

3/4

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

Tel. 505-345-3975      Fax 505-345-4107

[illegible]

Remarks: Direct bill to Devon, Dale Woodall  
Harvard Divest Site – North Pure Gold 8 Federal 011  
GL Account 7700100  
CC 1007884901  
cc. kstallings@vertex.ca for Final Report

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





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

July 25, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: North Pure Gold 8 Federal 001

OrderNo.: 2307825

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/19/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-33 0.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 9:00:00 AM

Lab ID: 2307825-001

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/21/2023 2:58:08 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/21/2023 2:58:08 AM
Surr: DNOP	76.6	69-147		%Rec	1	7/21/2023 2:58:08 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 3:49:48 PM
Surr: BFB	97.3	15-244		%Rec	1	7/20/2023 3:49:48 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/20/2023 3:49:48 PM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 3:49:48 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 3:49:48 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2023 3:49:48 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/20/2023 3:49:48 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/21/2023 12:06:10 AM

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

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

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-33 2.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 9:10:00 AM

Lab ID: 2307825-002

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/21/2023 3:22:00 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/21/2023 3:22:00 AM
Surr: DNOP	93.7	69-147		%Rec	1	7/21/2023 3:22:00 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 4:13:36 PM
Surr: BFB	97.5	15-244		%Rec	1	7/20/2023 4:13:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/20/2023 4:13:36 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 4:13:36 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 4:13:36 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/20/2023 4:13:36 PM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/20/2023 4:13:36 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/21/2023 12:18:35 AM

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

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

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-34 0.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 9:50:00 AM

Lab ID: 2307825-003

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/21/2023 3:45:48 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/21/2023 3:45:48 AM
Surr: DNOP	89.1	69-147		%Rec	1	7/21/2023 3:45:48 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2023 4:37:21 PM
Surr: BFB	98.3	15-244		%Rec	1	7/20/2023 4:37:21 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/20/2023 4:37:21 PM
Toluene	ND	0.049		mg/Kg	1	7/20/2023 4:37:21 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2023 4:37:21 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/20/2023 4:37:21 PM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/20/2023 4:37:21 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	730	60		mg/Kg	20	7/21/2023 12:30:59 AM

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

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

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-34 2.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 10:00:00 AM

Lab ID: 2307825-004

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	7/21/2023 4:33:10 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/21/2023 4:33:10 AM
Surr: DNOP	96.2	69-147		%Rec	1	7/21/2023 4:33:10 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2023 5:01:13 PM
Surr: BFB	96.6	15-244		%Rec	1	7/20/2023 5:01:13 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/20/2023 5:01:13 PM
Toluene	ND	0.050		mg/Kg	1	7/20/2023 5:01:13 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2023 5:01:13 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/20/2023 5:01:13 PM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/20/2023 5:01:13 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/21/2023 1:08:13 AM

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

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

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-35 0.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 9:30:00 AM

Lab ID: 2307825-005

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	7/21/2023 6:56:45 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/21/2023 6:56:45 PM
Surr: DNOP	56.2	69-147	S	%Rec	1	7/21/2023 6:56:45 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 5:25:01 PM
Surr: BFB	97.0	15-244		%Rec	1	7/20/2023 5:25:01 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/20/2023 5:25:01 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 5:25:01 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 5:25:01 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/20/2023 5:25:01 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/20/2023 5:25:01 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	89	60		mg/Kg	20	7/21/2023 1:20:38 AM

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

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

Page 5 of 10

## Analytical Report

Lab Order 2307825

Date Reported: 7/25/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-35 2.0'

Project: North Pure Gold 8 Federal 001

Collection Date: 7/17/2023 9:40:00 AM

Lab ID: 2307825-006

Matrix: SOIL

Received Date: 7/19/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/21/2023 5:20:33 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/21/2023 5:20:33 AM
Surr: DNOP	91.0	69-147		%Rec	1	7/21/2023 5:20:33 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2023 5:48:48 PM
Surr: BFB	97.2	15-244		%Rec	1	7/20/2023 5:48:48 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/20/2023 5:48:48 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2023 5:48:48 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2023 5:48:48 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2023 5:48:48 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/20/2023 5:48:48 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JMT
Chloride	ND	60		mg/Kg	20	7/21/2023 1:33:02 AM

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

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



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307825

25-Jul-23

Client: Vertex Resources Services, Inc.

Project: North Pure Gold 8 Federal 001

Sample ID: MB-76371		SampType: mblk		TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch ID: 76371		RunNo: 98399						
Prep Date: 7/20/2023		Analysis Date: 7/20/2023		SeqNo: 3581746		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76371		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 76371		RunNo: 98399						
Prep Date: 7/20/2023		Analysis Date: 7/20/2023		SeqNo: 3581747		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	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 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

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 7 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307825  
25-Jul-23

Client: Vertex Resources Services, Inc.  
Project: North Pure Gold 8 Federal 001

Sample ID: MB-76333	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76333	RunNo: 98368								
Prep Date: 7/19/2023	Analysis Date: 7/20/2023	SeqNo: 3581346	Units: mg/Kg							
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	10		10.00		101	69	147			

Sample ID: LCS-76333	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76333	RunNo: 98368								
Prep Date: 7/19/2023	Analysis Date: 7/21/2023	SeqNo: 3581347	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	43	10	50.00	0	86.6	61.9	130			
Surr: DNOP	4.4		5.000		88.4	69	147			

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

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 10

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307825

25-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 001

Sample ID: <b>ics-76322</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580780</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.0	70	130			
Surr: BFB	2000		1000		197	15	244			

Sample ID: <b>mb-76322</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3580811</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.4	15	244			

Sample ID: <b>2307825-001ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH23-33 0.0'</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3581479</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.75	0	94.3	70	130			
Surr: BFB	2000		990.1		202	15	244			

Sample ID: <b>2307825-001amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH23-33 0.0'</b>	Batch ID: <b>76322</b>			RunNo: <b>98353</b>						
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>			SeqNo: <b>3581480</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.58	0	94.9	70	130	0.0563	20	
Surr: BFB	2000		983.3		201	15	244	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 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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307825

25-Jul-23

**Client:** Vertex Resources Services, Inc.**Project:** North Pure Gold 8 Federal 001

Sample ID: <b>LCS-76322</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76322</b>		RunNo: <b>98353</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3580804</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	70	130			
Toluene	1.0	0.050	1.000	0	104	70	130			
Ethylbenzene	1.1	0.050	1.000	0	105	70	130			
Xylenes, Total	3.2	0.10	3.000	0	107	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	39.1	146			

Sample ID: <b>mb-76322</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76322</b>		RunNo: <b>98353</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3580812</b>		Units: <b>mg/Kg</b>					
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	1.2		1.000		117	39.1	146			

Sample ID: <b>2307825-002ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-33 2.0'</b>	Batch ID: <b>76322</b>		RunNo: <b>98353</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581517</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9497	0	114	70	130			
Toluene	1.1	0.047	0.9497	0	115	70	130			
Ethylbenzene	1.1	0.047	0.9497	0	117	70	130			
Xylenes, Total	3.4	0.095	2.849	0	118	70	130			
Surr: 4-Bromofluorobenzene	1.1		0.9497		118	39.1	146			

Sample ID: <b>2307825-002amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH23-33 2.0'</b>	Batch ID: <b>76322</b>		RunNo: <b>98353</b>							
Prep Date: <b>7/19/2023</b>	Analysis Date: <b>7/20/2023</b>		SeqNo: <b>3581518</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9488	0	113	70	130	0.695	20	
Toluene	1.1	0.047	0.9488	0	114	70	130	0.971	20	
Ethylbenzene	1.1	0.047	0.9488	0	117	70	130	0.591	20	
Xylenes, Total	3.4	0.095	2.846	0	118	70	130	0.399	20	
Surr: 4-Bromofluorobenzene	1.1		0.9488		116	39.1	146	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 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  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



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

## Sample Log-In Check List

Client Name: Vertex Resources  
Services, Inc.

Work Order Number: 2307825

RcptNo: 1

Received By: Juan Rojas

7/19/2023 7:30:00 AM

Completed By: Cheyenne Cason

7/19/2023 7:42:58 AM

Reviewed By:

JA 7/19/23

*[Signature]*

*[Signature]*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace  $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by

SCM 07/19/23

### 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Not Present	Morty		



## Attachment 5.

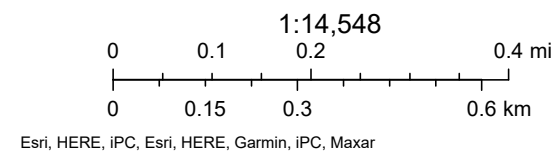


Closure Criteria Determination			
Site Name: North Pure Gold 8 Federal #011			
Spill Coordinates: 32.315451,-103.796570		X: 613304	Y: 3576049
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>100	feet
	Distance between release and nearest DTGW reference	2,541	feet
		0.48	miles
	Date of nearest DTGW reference measurement	1.25.24	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	5,650	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	6,891	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	5,429	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, <b>or</b>	5,246	feet
	ii) Within 1000 feet of any fresh water well or spring	5,246	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	6,386	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	9,562	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest High Karst	10,109	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	36,298	feet
11	Soil Type	Fine sand, fine sandy loam	
12	Ecological Classification	Deep Sand	
13	Geology	Eolian and piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

# North Pure Gold 8 Fed 11 - 0.48 miles away from DTGW




1/25/2024, 8:42:03 AM





# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)		(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04776 POD1	3	3	3	09	23S	31E	613953	3575651 
<hr/>									
<b>Driller License:</b> 1833		<b>Driller Company:</b> VISION RESOURCES, INC							
<b>Driller Name:</b> JASON MALEY									
<b>Drill Start Date:</b> 12/13/2023		<b>Drill Finish Date:</b> 12/13/2023				<b>Plug Date:</b> 12/18/2023			
<b>Log File Date:</b> 01/12/2024		<b>PCW Rcv Date:</b>				<b>Source:</b>			
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>				<b>Estimated Yield:</b>			
<b>Casing Size:</b> 2.00		<b>Depth Well:</b>				<b>Depth Water:</b> 105 feet			

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/25/24 8:42 AM

POINT OF DIVERSION SUMMARY





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tw	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C 04712 POD6</a>		CUB	ED	3	3	4	08	23S	31E	613147	3575740	346	55		
<a href="#">C 04776 POD1</a>		CUB	ED	3	3	3	09	23S	31E	613953	3575651	760			105
<a href="#">C 04712 POD5</a>		CUB	ED	4	4	3	09	23S	31E	614393	3575754	1128	55		
<a href="#">C 02492</a>		CUB	ED	4	4	4	06	23S	31E	612056	3577320*	1781	135	85	50
<a href="#">C 02865</a>		CUB	ED	4	4	4	06	23S	31E	612056	3577320*	1781	174		
<a href="#">C 02774</a>		CUB	ED	3	1	3	04	23S	31E	613857	3577745*	1783	1660		
<a href="#">C 02492 POD2</a>		C	ED	3	2	2	07	23S	31E	611767	3576996	1805	400	125	275

Average Depth to Water: **105 feet**

Minimum Depth: **85 feet**

Maximum Depth: **125 feet**

**Record Count:** 7

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 613304

**Northing (Y):** 3576049

**Radius:** 2000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/25/24 8:35 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



U.S. Fish and Wildlife Service

# National Wetlands Inventory

NPG 8 Fed 011, Intermittent 5650 ft



July 28, 2021

## Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

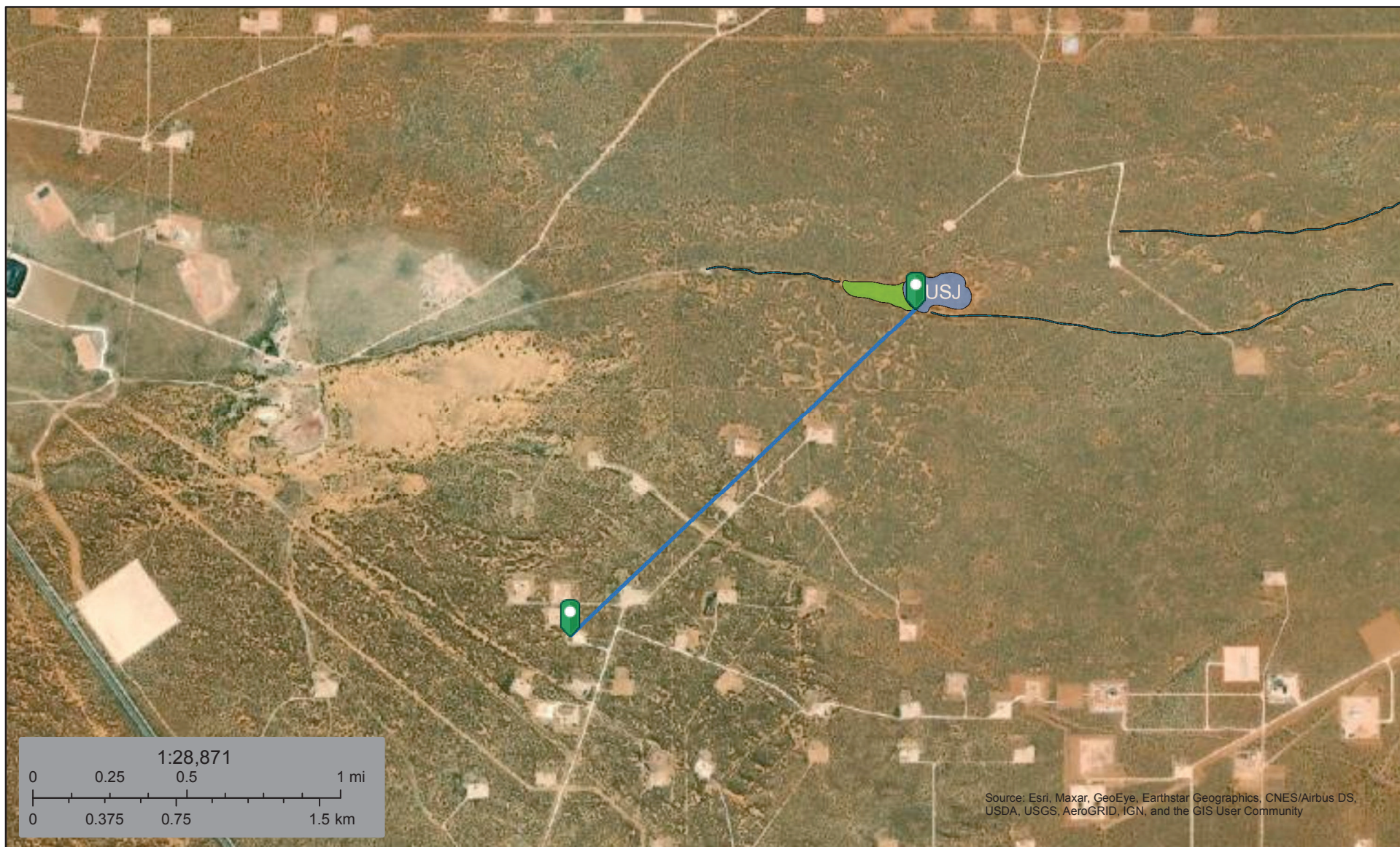
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.





U.S. Fish and Wildlife Service  
National Wetlands Inventory

NPG 8 Fed 011, Pond 6891 ft



July 28, 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.




# N Pure Gold 8 Fed 11

Neared Resident 1 mile, 5429 ft

## Legend

 Feature 1

 Residence

 N Pure Gold 8 Fed 11 32.31545, -




3000 ft





# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)		(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04200 POD3		2	2	07	23S	31E	612130	3577147 

Driller License:	Driller Company:	
Driller Name:		
Drill Start Date:	Drill Finish Date:	Plug Date:
Log File Date:	PCW Rcv Date:	Source:
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size:	Depth Well:	Depth Water:

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/3/23 6:31 PM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Water Right Summary



[get image list](#)

**WR File Number:** C 04200      **Subbasin:** CUB      **Cross Reference:** -

**Primary Purpose:** EXP      EXPLORATION

**Primary Status:** PMT      PERMIT

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

**Total Diversion:** 0      **Cause/Case:** -

**Agent:** ATKINS ENGR ASSOC INC

**Contact:** CHRIS CORTEZ (STACY MILLS)


**Owner:** JIMMY MILLS 2005 GST TRUST

**Contact:** FRANKIE JO MILLS, TRUSTEE






**Owner:** JIMMY MILLS GST TRUST

**Contact:** FRANKIE JO MILLS, TRUSTEE

### Documents on File

Trn #	Doc	File/Act	Status			Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2						
 <a href="#">get images</a>	619310	EXPL	2018-01-30	PMT	APR	C 04200 POD1-5	T	0	0	

### Current Points of Diversion

POD Number	Well Tag	Source	Q						(NAD83 UTM in meters)		Other Location Desc
			64	Q16	Q4	Sec	Tws	Rng	X	Y	
<a href="#">C 04200 POD1</a>	NA		2	2	07	23S	31E		611803	3577058	
<a href="#">C 04200 POD2</a>	NA		2	2	07	23S	31E		611893	3577123	
<a href="#">C 04200 POD3</a>	NA		2	2	07	23S	31E		612130	3577147	
<a href="#">C 04200 POD4</a>	NA		4	4	06	23S	31E		611996	3577521	
<a href="#">C 04200 POD5</a>	NA		4	4	06	23S	31E		612139	3577393	

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**(with Ownership Information)**

(NAD83 UTM in me

13

**UTMNAD83 Radius Search (in meters):**

**Radius:** 2000

**Sorted by:** Distance

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for purpose of the data.

ACTIVE &amp; INACTIVE POINTS OF D





U.S. Fish and Wildlife Service

# National Wetlands Inventory

NPG 8 Fed 011, Wetland 6386 ft



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

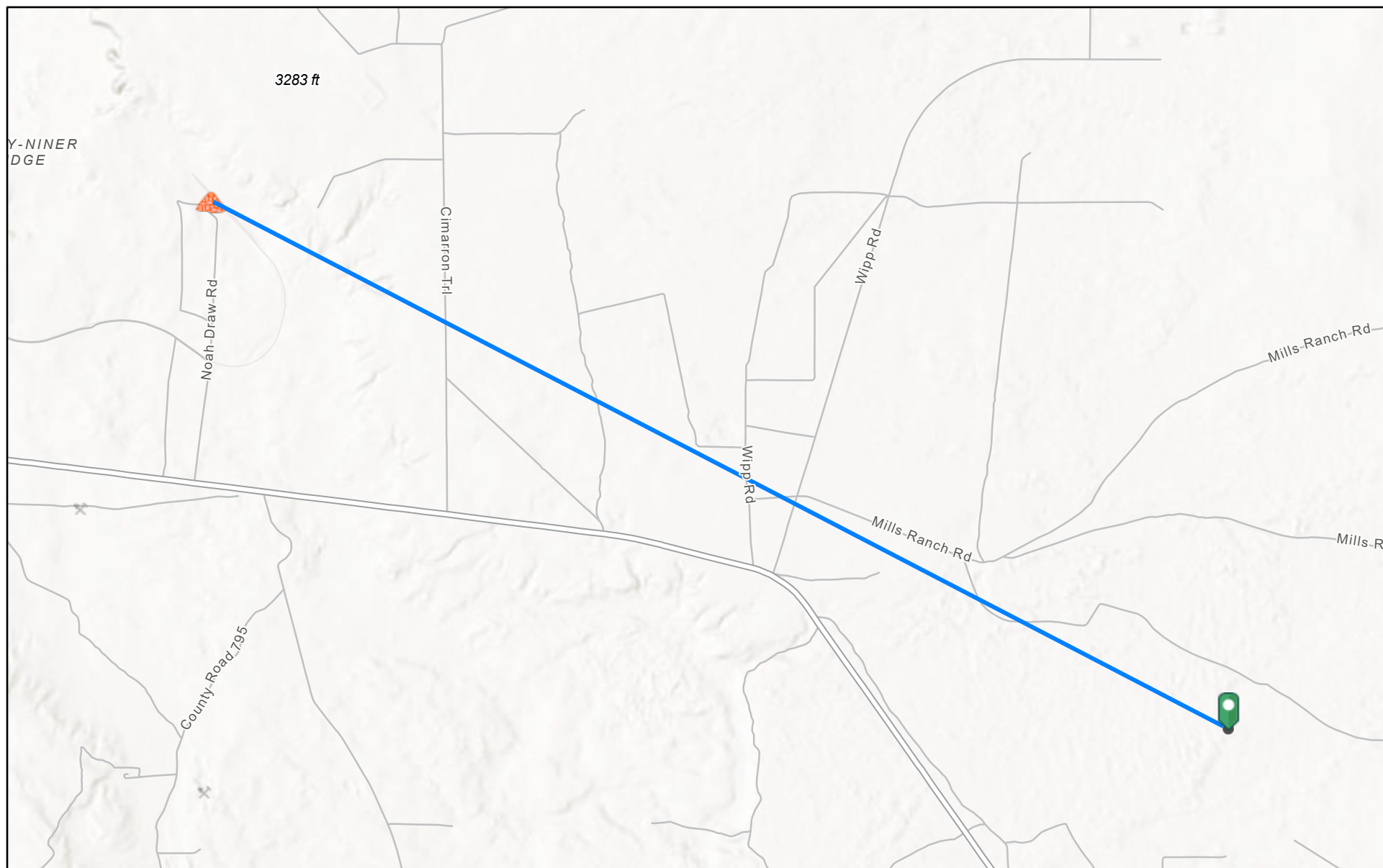
July 28, 2021

## Wetlands

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

## North Pure Gold 9 Federal #001 - 34,074 feet from mine



1/26/2024, 7:31:01 AM

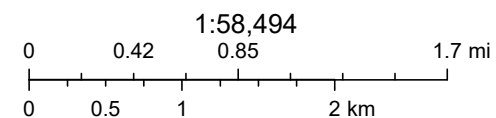
Registered Mines



Potash



Aggregate, Stone etc.

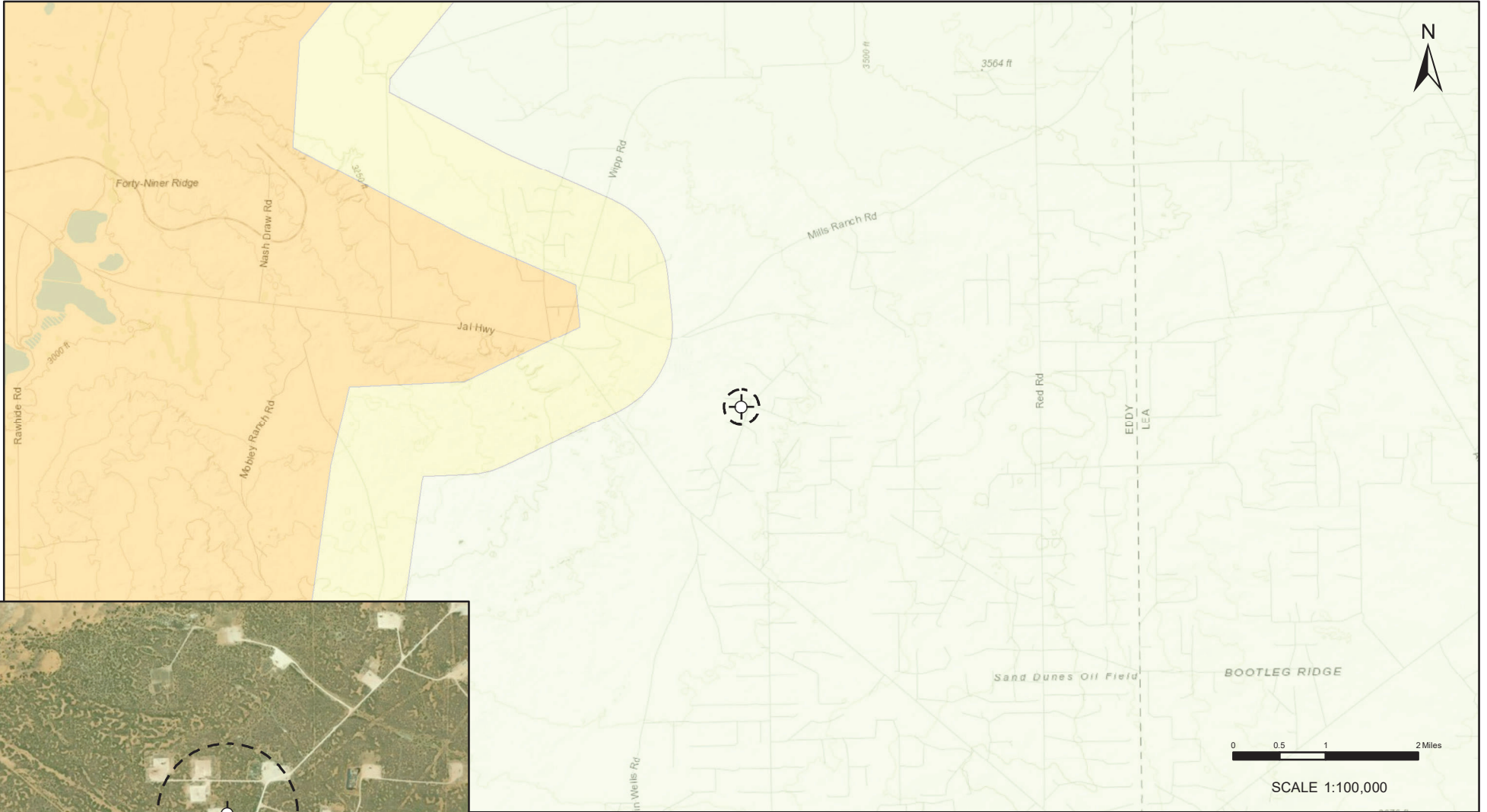


Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph,  
GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri,

EMNRD MMD GIS Coordinator

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











Notes: Aerial Image from ESRI Digital Globe 2017

LEGEND

-  SITE
-  1000 FT BUFFER

KARST POTENTIAL

-  CRITICAL
-  HIGH
-  MEDIUM
-  LOW

 	Karst Potential North Pure Gold 8 Federal #011	
	DRAWN: NM	FIGURE:
	APPROVED: KM	1
	DATE: APR 15/19	



Ruler

Path Polygon Circle 3D path 3D polygon

Measure the distance between two points on the ground

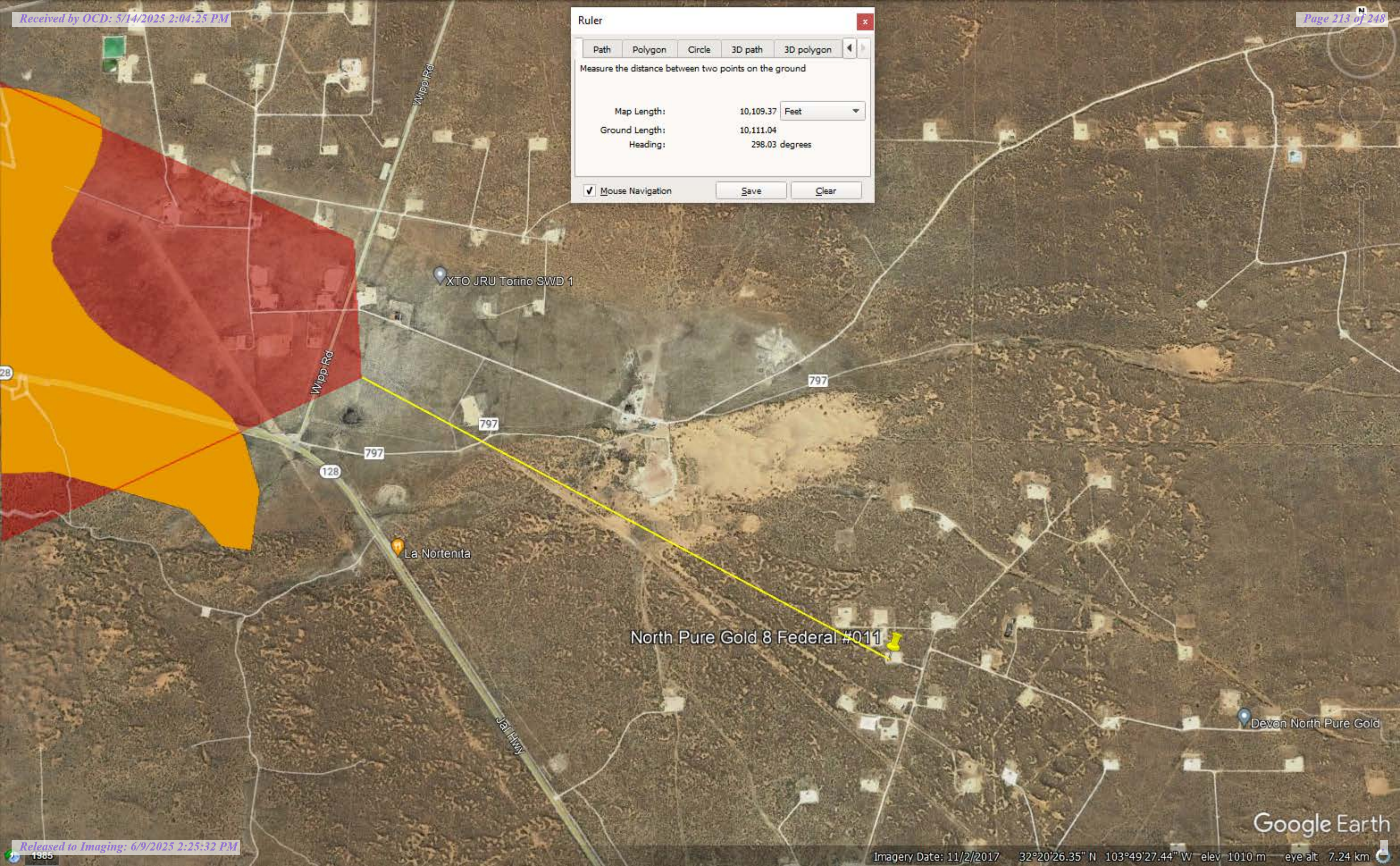
Map Length: 10,109.37 Feet

Ground Length: 10,111.04

Heading: 298.03 degrees

☒ Mouse Navigation

Save Clear



North Pure Gold 8 Federal #011



Ruler

Path Polygon Circle 3D path 3D polygon

Measure the distance between two points on the ground

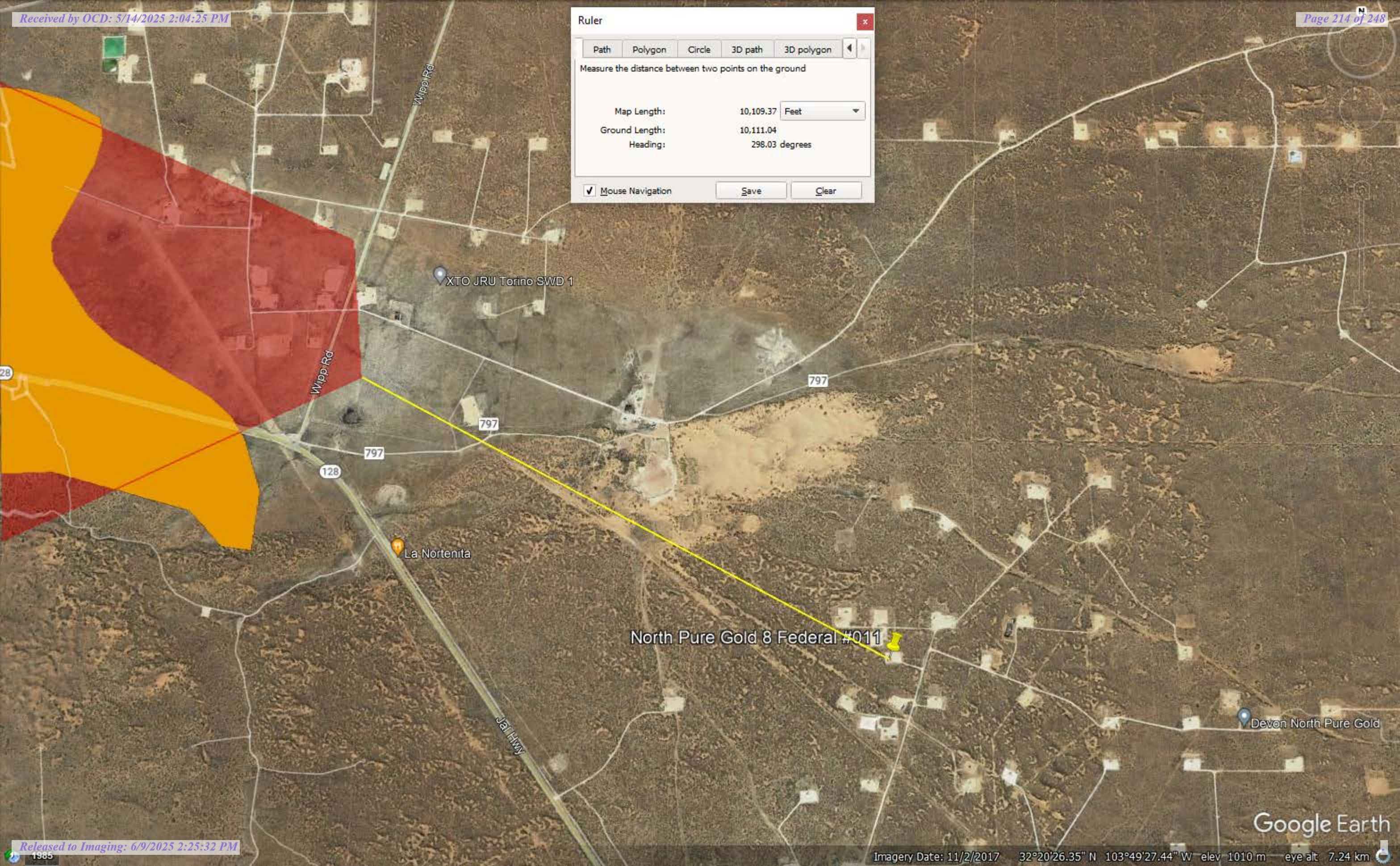
Map Length: 10,109.37 Feet

Ground Length: 10,111.04

Heading: 298.03 degrees

☒ Mouse Navigation

Save Clear

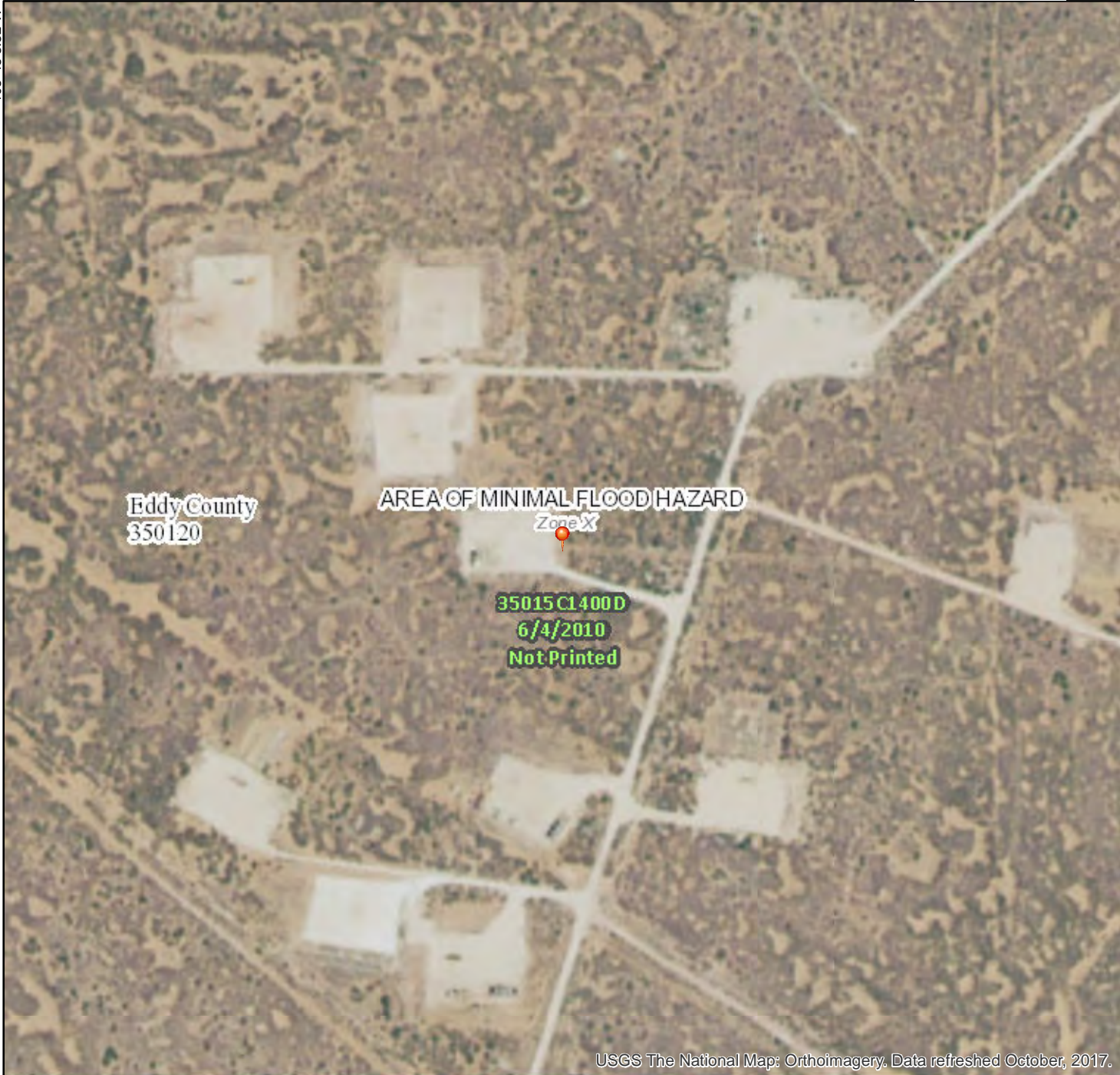




# National Flood Hazard Layer FIRMette



32°19'10.82"N



USGS The National Map: Orthoimagery. Data refreshed October, 2017. 1:6,000 32°18'40.42"N

## Legend

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

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

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

OTHER AREAS		Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

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

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

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/15/2019 at 12:28:49 AM 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.



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

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

# Custom Soil Resource Report for Eddy Area, New Mexico



July 28, 2021



# 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](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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        KM—Kermit-Berino fine sands, 0 to 3 percent slopes.....10

**References**..... 12

## Soil Map

---

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


# Custom Soil Resource Report Soil Map



## Custom Soil Resource Report

## MAP LEGEND

## Area of Interest (AOI)

 Area of Interest (AOI)


## Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

## Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

## Water Features

 Streams and Canals


## Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

## Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 16, 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: Feb 7, 2020—May 12, 2020

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

## Custom Soil Resource Report

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit-Berino fine sands, 0 to 3 percent slopes	2.2	100.0%
<b>Totals for Area of Interest</b>		<b>2.2</b>	<b>100.0%</b>

## 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.



## Custom Soil Resource Report

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.

## Custom Soil Resource Report

**Eddy Area, New Mexico****KM—Kermit-Berino fine sands, 0 to 3 percent slopes****Map Unit Setting**

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

**Map Unit Composition**

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

**Description of Kermit****Setting**

*Landform:* Alluvial fans, plains  
*Landform position (three-dimensional):* Rise, talf  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

**Typical profile**

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

**Properties and qualities**

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

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A  
*Ecological site:* R042XC005NM - Deep Sand  
*Hydric soil rating:* No

**Description of Berino****Setting**

*Landform:* Fan piedmonts, plains  
*Landform position (three-dimensional):* Riser

## Custom Soil Resource Report

*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

**Typical profile**

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

**Properties and qualities**

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

**Interpretive groups**

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* R042XC003NM - Loamy Sand  
*Hydric soil rating:* No

**Minor Components****Active dune land**

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

# References

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- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_054262](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262)
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053577](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577)
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053580](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580)
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

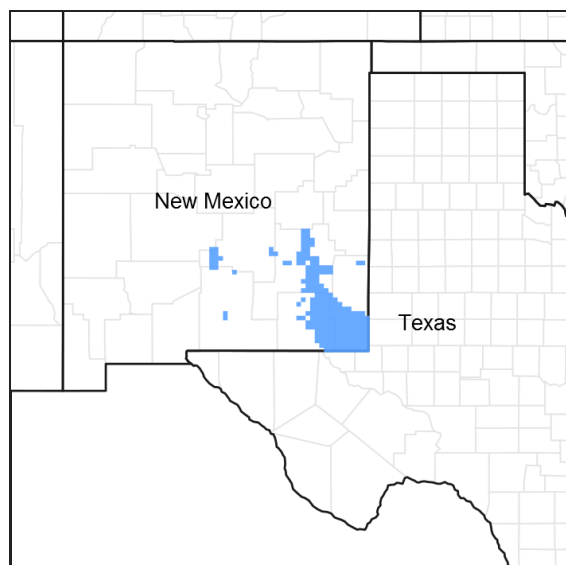
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)

## Ecological site R042XC005NM Deep Sand

Accessed: 07/28/2021

### 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.

**Table 1. Dominant plant species**

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

### Physiographic features

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

**Table 2. Representative physiographic features**

Landforms	(1) Dune (2) Parna dune (3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft



Slope	0–15%
Aspect	Aspect is not a significant factor

## Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

Both temperature and moisture favor warm season perennial plant growth. During years of abundant winter and early spring moisture, cool season growth and annual forbs, make up an important component of this site. Strong winds blow from the west from January through June, which accelerates soil drying during a critical period for cool season plant growth.

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

**Table 3. Representative climatic features**

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

## Influencing water features

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

## Soil features

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

Characteristic soils are:

Anthony  
Aguena  
Kermit  
Likes  
Pintura  
Bluepoint

**Table 4. Representative soil features**

Surface texture	(1) Sand (2) Fine sand (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained

Permeability class	Moderate to very rapid
Soil depth	60–72 in
Surface fragment cover ≤3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0–40in)	3–5 in
Calcium carbonate equivalent (0–40in)	5–15%
Electrical conductivity (0–40in)	0–4 mmhos/cm
Sodium adsorption ratio (0–40in)	0–2
Soil reaction (1:1 water) (0–40in)	6.6–7.8
Subsurface fragment volume ≤3" (Depth not specified)	5–10%
Subsurface fragment volume >3" (Depth not specified)	0%

## Ecological dynamics

### Overview

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

### State and transition model

Plant Communities and Transitional Pathways (diagram)

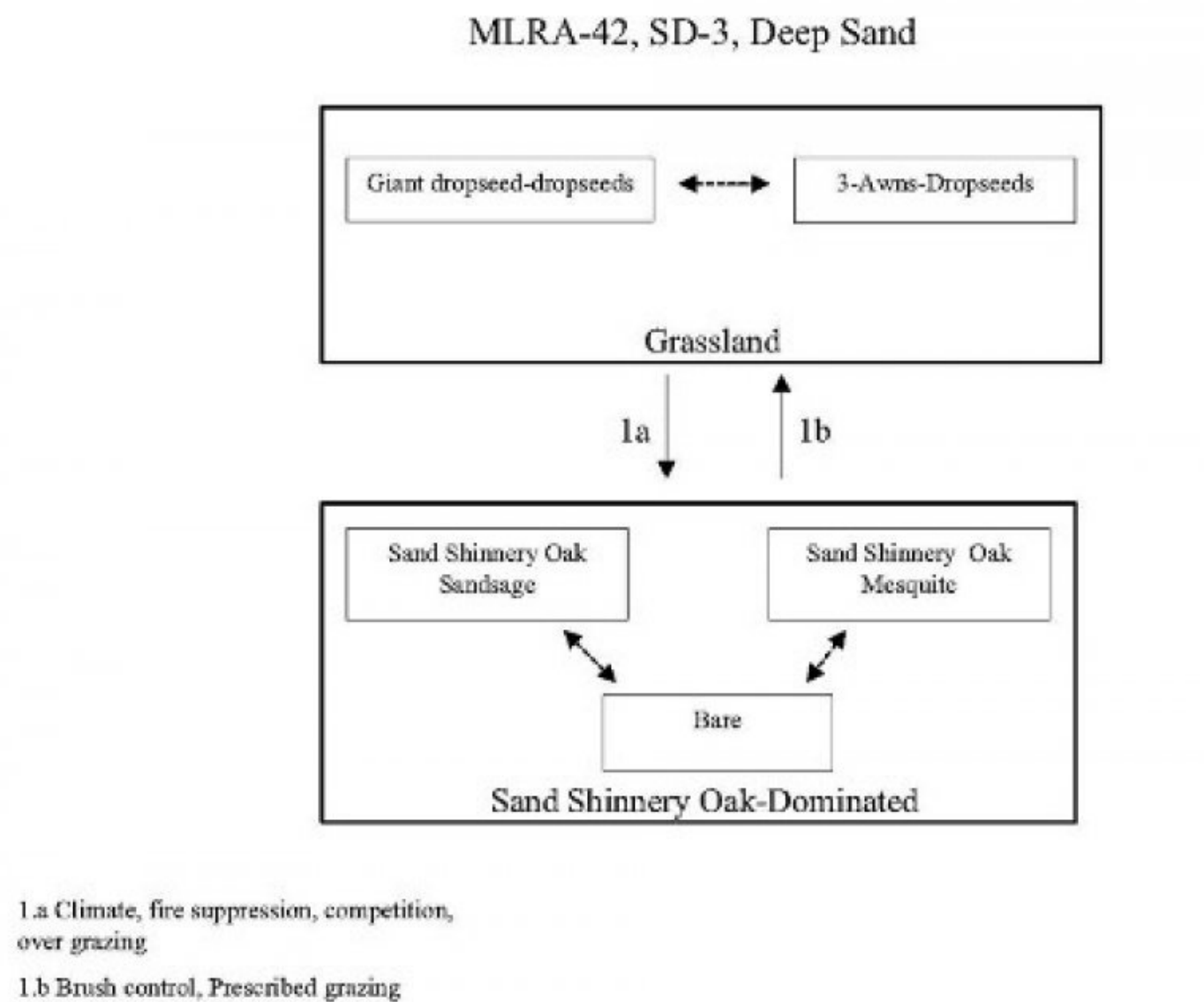


Figure 4.

State 1

Historic Climax Plant Community

Community 1.1  
Historic Climax Plant Community

State Containing Historic Plant Community

Grassland: The historic plant community is dominated by giant dropseed, other dropseeds, threeawns, and bluestems. Dominant woody plants include shinnery oak and soapweed yucca. Forb abundance and distribution varies and is dependent on annual rainfall. The Deep Sand site typically exists in sandy plains and dunes (Sosebee 1983). Grass dominance stabilizes the potentially erosive sandy soils. Historical fire suppression, however, may have contributed to increased woody plant abundance, which has reduced grass species. Further, drought conditions compounded with excessive grazing likely has driven most grass species out of competition with shrubs which has resulted in a shinnery oak dominated state with sand sage and mesquite (Young et al. 1948).

Diagnosis: Grassland dominated by dropseeds, threeawns, and bluestems. Small shrubs, such as shinnery oak and soapweed yucca, and subshrubs are dispersed throughout the grassland.

Other grasses that could appear on this site would include: flatsedge, almejita signalgrass, big bluestem, Indiangrass, fall witchgrass, hairy grama and red lovegrass

Other shrubs include: fourwing saltbush, mesquite, ephedra and broom snakeweed.

Other forbs include: wooly and scarlet gaura, wooly dalea, phlox heliotrope, scorpionweed, deerstongue, fleabane, nama, hoffmanseggia, lemon beebalm and stickleaf.

Table 5. Annual production by plant type

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

Table 6. Ground cover

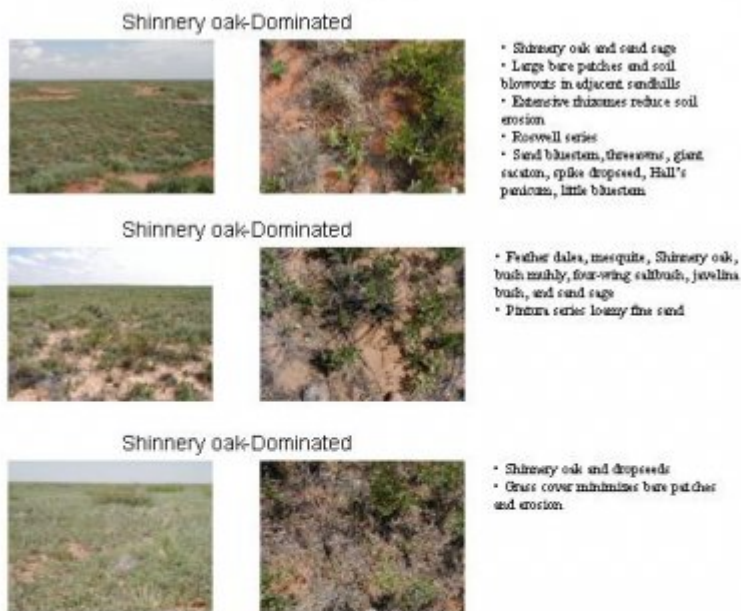
Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-20%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	35-40%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	35-40%

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

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

## State 2 Shinnery Oak Dominated

### Community 2.1 Shinnery Oak Dominated



**Shinnery Oak Dominated:** This state is dominated by shinnery oak with subdominants of sand sage or mesquite. Bare ground is a significant component in this state as well. Shinnery oak is characterized by dense stands in sandy soils; however, as clay percentage increases, shinnery oak decreases. Shinnery oak abundance and distribution increase with disturbances, such as excessive grazing and fire, due to an aggressive rhizome system. As shinnery oak abundance increases, an associated increase of mesquite, sand sage, and soapweed yucca also occurs. Shinnery oak's extensive root system allows the oak to competitively exclude grasses and forbs. Sand sage, however, stabilizes light sandy soils from wind erosion and can co-exist with herbaceous species by protecting them in heavily grazed conditions (Davis and Bonham 1979). Shinnery oak has been found primarily in very deep, excessively drained, and rapidly permeable soils. Shinnery oak is associated with landforms which are gently undulating to rolling uplands, very gently sloping to moderately steep slopes, and upland plains, alluvial fans and valley sideslopes. Shinnery oak and sand sage can be controlled with herbicide if applied in the spring with a subsequent rest from grazing (Herbel et al. 1979, Pettit 1986). In addition, repetitive seasons of goat browsing can also reduce shinnery oak abundance. Patches should be maintained during brush control, however, to prevent erosion and to provide wildlife cover and forage. Further, as shinnery oak and other shrubs increase, bare patches and erosion will increase due to a lack of herbaceous ground cover.

**Diagnosis:** Shinnery oak dominated with subdominant sand sage, honey mesquite, and soapweed yucca with increasing frequency and size of bare patches.

Transition to Shinnery oak dominated state (1a): The historic plant community begins to shift toward the shinnery oak dominated state as drivers such as climate change, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by an increase of shrub species abundance and bare patch expansion.

Key indicators of approach to transition:

- Loss of grass and forb cover
- Surface soil erosion
- Bare patch expansion
- Increased shrub species abundance and composition

Transition to Historic Plant Community (1b): The shinnery oak dominated state may transition back toward the historic plant community as new drivers are introduced such as prescribed grazing, brush control, and discontinued drought conditions.

## Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
<b>Grass/Grasslike</b>					
1	<b>Warm Season</b>			450–585	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	450–585	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	450–585	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	450–585	–
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	450–585	–
2	<b>Warm Season</b>			65–104	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	65–104	–
	little bluestem	SCSC	<i>Schizachyrium scoparium</i>	65–104	–
3	<b>Warm Season</b>			39–91	
	threeawn	ARIST	<i>Aristida</i>	39–91	–
4	<b>Warm Season</b>			13–39	
	thin paspalum	PASE5	<i>Paspalum setaceum</i>	13–39	–
5	<b>Warm Season</b>			13–39	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	13–39	–
6	<b>Warm Season</b>			13–39	
	mat sandbur	CELO3	<i>Cenchrus longispinus</i>	13–39	–
7	<b>Warm Season</b>			13–39	
	Havard's panicgrass	PAHA2	<i>Panicum havardii</i>	13–39	–
8	<b>Warm Season</b>			13–65	
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	13–65	–
9	<b>Other Annual Grasses</b>			13–65	
	Grass, annual	2GA	<i>Grass, annual</i>	13–65	–
<b>Shrub/Vine</b>					
10	<b>Shrub</b>			65–130	
	Havard oak	QUHA3	<i>Quercus havardii</i>	65–130	–
11	<b>Shrub</b>			13–39	



	sand sagebrush	ARFI2	<i>Artemisia filifolia</i>	13–39	–
12	<b>Shrub</b>			65–130	
	yucca	YUCCA	<i>Yucca</i>	65–130	–
13	<b>Shrub</b>			13–39	
	rabbitbrush	CHRY9	<i>Chrysothamnus</i>	13–39	–
14	<b>Other Shrubs</b>			13–39	
	Shrub (>.5m)	2SHRUB	<i>Shrub (&gt;.5m)</i>	13–39	–
<b>Forb</b>					
15	<b>Forb</b>			39–91	
	croton	CROTO	<i>Croton</i>	39–91	–
	Indian blanket	GAPU	<i>Gaillardia pulchella</i>	39–91	–
16	<b>Forb</b>			39–91	
	aster	ASTER	<i>Aster</i>	39–91	–
	whitest evening primrose	OEAL	<i>Oenothera albicaulis</i>	39–91	–
	beardtongue	PENST	<i>Penstemon</i>	39–91	–
17	<b>Forb</b>			39–91	
	touristplant	DIWI2	<i>Dimorphocarpa wislizeni</i>	39–91	–
	buckwheat	ERIOG	<i>Eriogonum</i>	39–91	–
	sunflower	HELIA3	<i>Helianthus</i>	39–91	–
	spiny false fiddleleaf	HYSP	<i>Hydrolea spinosa</i>	39–91	–
	threadleaf ragwort	SEFLF	<i>Senecio flaccidus var. flaccidus</i>	39–91	–
18	<b>Other Forbs</b>			13–65	
	Forb (herbaceous, not grass nor grass-like)	2FORB	<i>Forb (herbaceous, not grass nor grass-like)</i>	13–65	–

## Animal community

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

## Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series Hydrologic Group

Anthony B

Bluepoint A

Kermit A

Aguena A

Likes A

Pintura A

## Recreational uses

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

## Wood products

This site has no potential for wood products.

## Other products

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

## Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

100 - 76 2.0 – 3.8

75 – 51 3.0 – 6.0

50 – 26 5.0 – 10.0

25 – 0 10.1 +

## Inventory data references

Other References:

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

## Other references

Literature Cited

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

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

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

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

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

## Contributors

Don Sylvester

Quinn Hodgson

## Rangeland health reference sheet

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

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

## Indicators

### 1. Number and extent of rills:

---

### 2. Presence of water flow patterns:

---

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

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

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

Dominant:

Sub-dominant:

Other:

Additional:

---

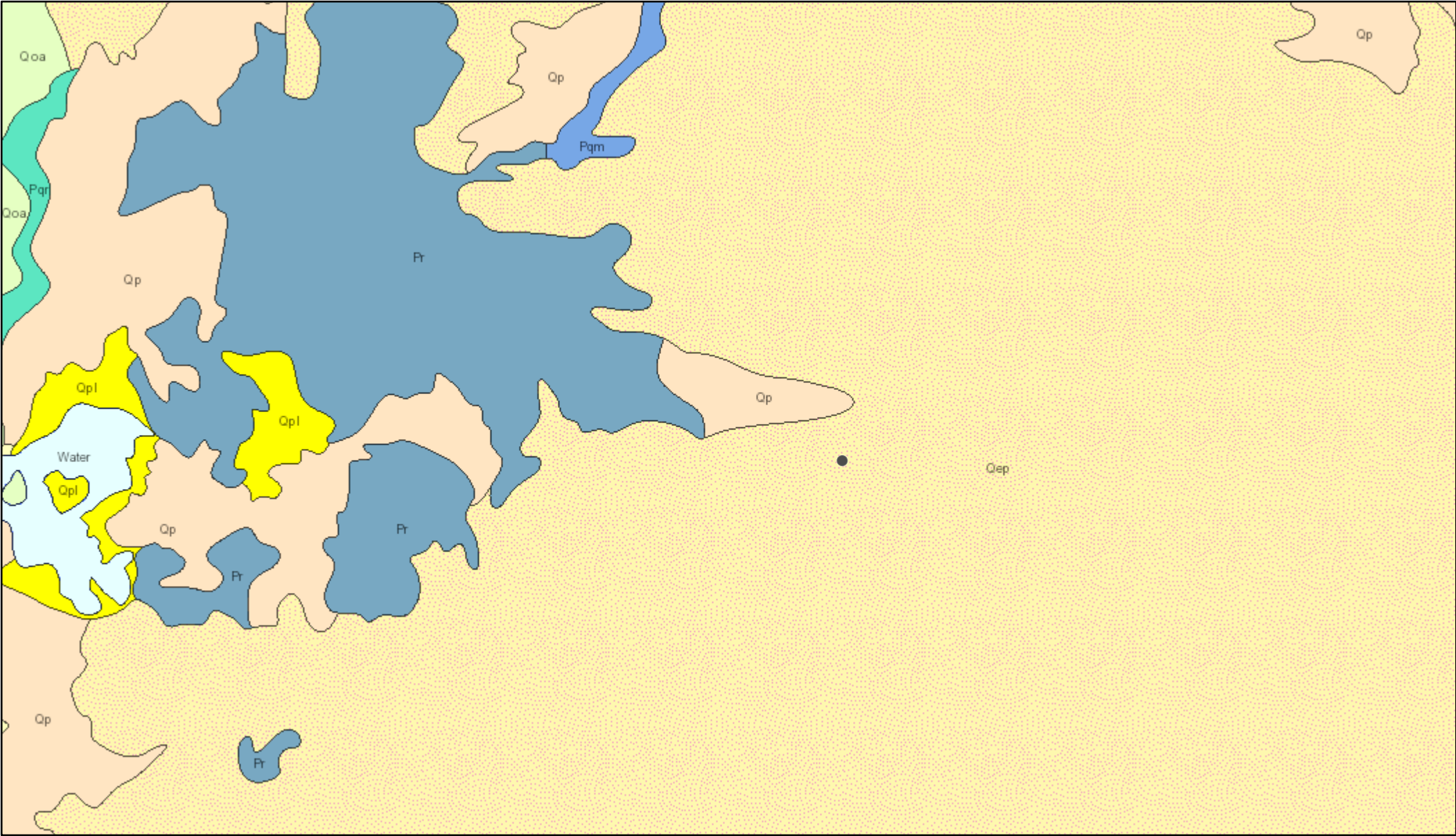
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**
- 

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

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

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

17. **Perennial plant reproductive capability:**
-



7/28/2021, 4:13:38 PM

Lithologic Contacts

Contact, Exposed

Contact, Gradational

Map Boundary

Faults

Fault, Exposed

Fault, Concealed

Shere Zone

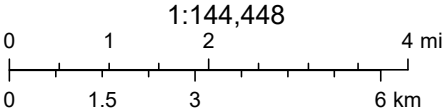
Dikes

Dike

Dike intruding fault

Volcanic Vents

Intermittent <all other values>



NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S.



- AE
- AH
- AO
- County

Ruler

Path Polygon Circle 3D path 3D polygon

Measure the distance between two points on the ground

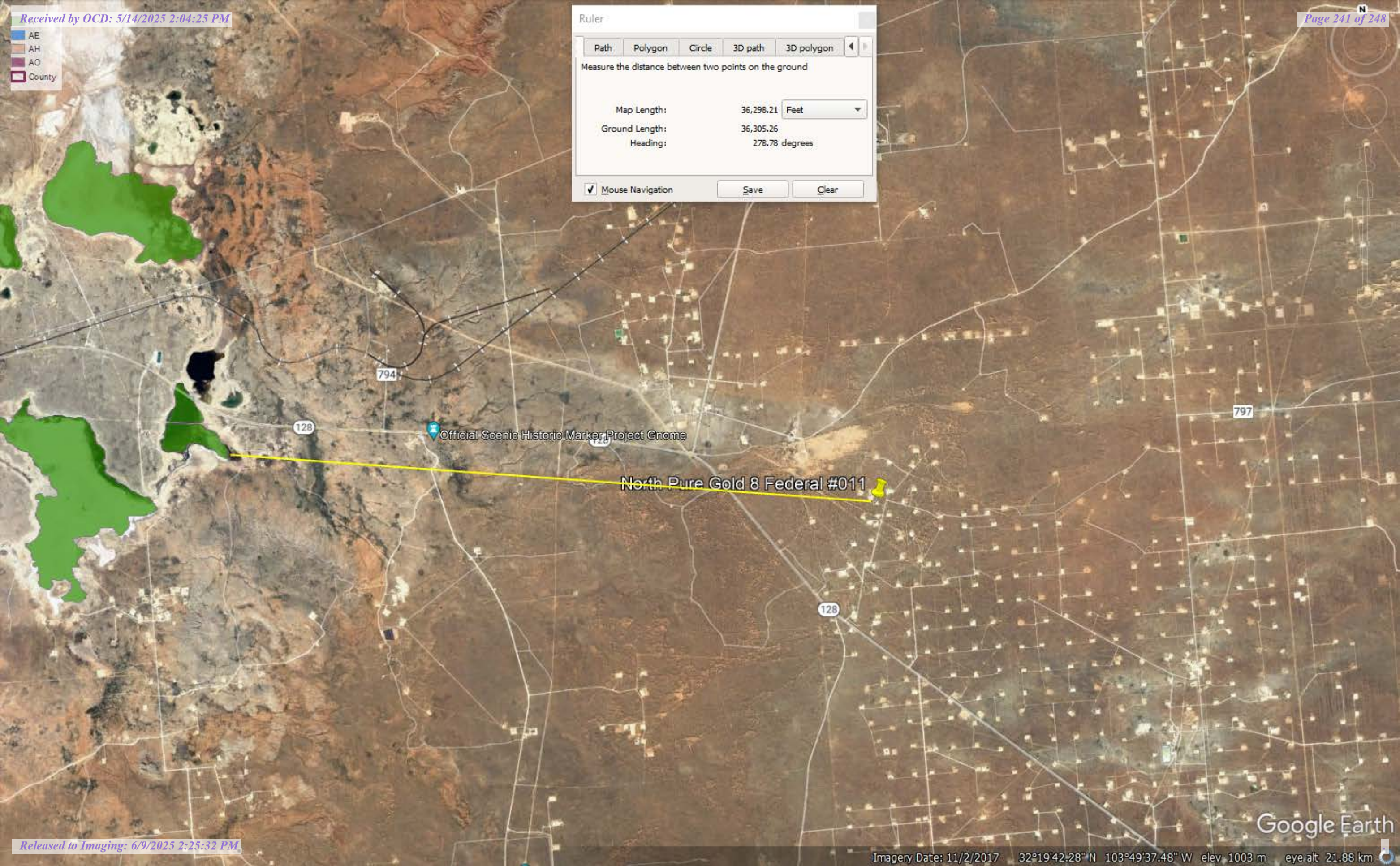
Map Length: 36,298.21 Feet

Ground Length: 36,305.26

Heading: 278.78 degrees

☒ Mouse Navigation

Save Clear





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

QUESTIONS

Action 460703

**QUESTIONS**

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAB1727057447
Incident Name	NAB1727057447 NORTH PURE GOLD 8 FEDERAL #011 @ 30-015-32619
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Well	[30-015-32619] NORTH PURE GOLD 8 FEDERAL #011

**Location of Release Source**

Please answer all the questions in this group.

Site Name	NORTH PURE GOLD 8 FEDERAL #011
Date Release Discovered	09/12/2017
Surface Owner	Federal

**Incident Details**

Please answer all the questions in this group.

Incident Type	Produced Water 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	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Fitting   Produced Water   Released: 5 BBL   Recovered: 2 BBL   Lost: 3 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 460703

**QUESTIONS (continued)**

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>More info needed to determine if this will be treated as a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>No</b>
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

**Initial Response**

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

The source of the release has been stopped	<b>True</b>
The impacted area has been secured to protect human health and the environment	<b>True</b>
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	<b>True</b>
All free liquids and recoverable materials have been removed and managed appropriately	<b>True</b>
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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

I hereby agree and sign off to the above statement	Name: Roni Kidd Title: Business Manager Email: rkidd@buckhornproduction.com Date: 05/11/2025
--	---

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QUESTIONS, Page 3

Action 460703

**QUESTIONS (continued)**

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Site Characterization</b>	
<i>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.</i>	
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	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (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	Between 1 and 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

<b>Remediation Plan</b>	
<i>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.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>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.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	16600
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3490
GRO+DRO (EPA SW-846 Method 8015M)	890
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>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>	
On what estimated date will the remediation commence	05/12/2025
On what date will (or did) the final sampling or liner inspection occur	07/14/2025
On what date will (or was) the remediation complete(d)	07/14/2025
What is the estimated surface area (in square feet) that will be reclaimed	36918
What is the estimated volume (in cubic yards) that will be reclaimed	6300
What is the estimated surface area (in square feet) that will be remediated	198
What is the estimated volume (in cubic yards) that will be remediated	22
<i>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.</i>	
<i>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.</i>	

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QUESTIONS, Page 4

Action 460703

**QUESTIONS (continued)**

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	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>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.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	OWL LANDFILL JAL [JEG1635837366]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> 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.
<i>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>	
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: Roni Kidd Title: Business Manager Email: rkidd@buckhornproduction.com Date: 05/11/2025
<i>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.</i>	

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QUESTIONS, Page 5

Action 460703

QUESTIONS (continued)

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	Action Number:  460703
	Action Type:  [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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



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QUESTIONS, Page 6

Action 460703

**QUESTIONS (continued)**

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

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	No

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CONDITIONS

Action 460703

**CONDITIONS**

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 460703
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**CONDITIONS**

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Floor confirmation samples should be delineated/excavated to meet closure criteria standards from Table 1 of the OCD Spill Rule for site assessment/characterization/proven depth to water determination. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. Please, make sure sidewall samples are taken up against the edge of the tank battery to ensure fluids didn't go under the tank battery. The release area will need confirmation samples representing no more than 200 ft2. All off-pad areas must meet reclamation standards in the OCD Spill Rule. The work will need to be completed in 90 days after the report has been reviewed.	6/9/2025