



Volume Justification

This form is to be used to convey justification of spill volumes in the event of a release. Clearly indicate by calculations or description in the space provided below.

Justification:

Soil Type	Porosity	Length	Width	Depth (.083 per inch)	Cubic Feet	Estimated Barrels	Soil Type
Clay	0.15	10	10	0.083	8.3	0.22	Clay
Peat	0.40	10	10	0.083	8.3	0.59	Peat
Glacial Sediments	0.13	10	10	0.083	8.3	0.19	Glacial Sediments
Sandy Clay	0.12	10	10	0.083	8.3	0.18	Sandy Clay
Silt	0.16	10	10	0.083	8.3	0.24	Silt
Loess	0.25	10	10	0.083	8.3	0.37	Loess
Fine Sand	0.16	10	10	0.083	8.3	0.24	Fine Sand
Medium Sand	0.25	23	23	0.083	43.907	1.96	Medium Sand
Coarse Sand	0.26	10	10	0.083	8.3	0.38	Coarse Sand
Gravelly Sand	0.26	10	10	0.083	8.3	0.38	Gravelly Sand
Fine Gravel	0.26	10	10	0.083	8.3	0.38	Fine Gravel
Medium Gravel	0.20	10	10	0.083	8.3	0.30	Medium Gravel
Coarse Gravel	0.18	10	10	0.083	8.3	0.27	Coarse Gravel
Sandstone	0.25	10	10	0.083	8.3	0.37	Sandstone
Siltstone	0.18	10	10	0.083	8.3	0.27	Siltstone
Shale	0.05	10	10	0.083	8.3	0.07	Shale
Limestone	0.13	264.9	264.9	0.4588	32194.918	746.05	Limestone
Basalt	0.19	10	10	0.083	8.3	0.28	Basalt
Volcanic Tuff	0.20	10	10	0.083	8.3	0.30	Volcanic Tuff
Standing Liquids	X	10	10	0.083	8.3	1.48	Standing Liquids

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

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

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

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

Cubic Feet = L x W x D
 Estimated Barrels = ((Cubic Feet x Porosity) / 5.61)

~70,202sqft x 0.4588ft (5.506 in) average depth = 32,194.92cuft

Estimated Barrels Released: **746.05bbbl** = (32,194.92cuft X 0.13 / 5.61)

Approved by: Fernando Rodriguez

Date: 3/27/2026



Incident Number: nAPP2409671242

Remediation Work Plan

Mimosa Federal SWD #3Y

API: 30-015-29123

Unit P, Section 4, Township 20 South, Range 24 East

County: Eddy

Coordinates: 32.597713, -104.585894

Vertex File Number: 24E-03772

Prepared for:

Riley Permian Operating Company, LLC.

Prepared by:

Vertex Resource Services Inc.

Date:

March 2026

Riley Permian Operating Company, LLC.
Mimosa Federal SWD #3Y

Remediation Work Plan
March 2026

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Mimosa Federal SWD #3Y

API: 30-015-29123

Unit P, Section 4, Township 20 South, Range 24 East

County: Eddy

Coordinates: 32.597713, -104.585894

On behalf of:

Riley Permian Operating Company, LLC.

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Oklahoma City, Oklahoma 73104

Prepared for:

New Mexico Oil Conservation Division

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Artesia, New Mexico 88210

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3101 Boyd Drive

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Stephanie McCarty, B.Sc.

ENVIRONMENTAL SPECIALIST, REPORTING

March 25, 2026

Date



Chance Dixon, B.Sc.

PROJECT MANAGER, REPORTING

March 25, 2026

Date

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1.0 Introduction

Riley Permian Operating Company, LLC. (Riley Permian) retained Vertex Resource Services Inc. (Vertex) to complete a Remediation Work Plan for a produced water release that occurred on April 5, 2024, at Mimosa Federal SWD #3Y (hereafter referred to as the “site”). At the time of release, the location was operated by Silverback Exploration (Silverback). The site is now operated by Riley Permian. Silverback submitted an initial C-141 release notification to the New Mexico Oil Conservation Division (NMOCD) District 2 on April 5, 2024. Incident ID number nAPP2409671242 was assigned to this incident.

This report provides a description of the site assessment, proposed remediation and characterization sampling activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD will be met and all applicable regulations are being followed. This document is intended to serve as a remediation work plan to obtain approval from NMOCD, with the understanding that restoration to final land use of the production pad areas will be deferred until such time as all produced water transfer activities are terminated and the site is reclaimed as per 19.15.29.13 NMAC.

2.0 Incident Description

The release occurred on April 5, 2024, due to an overpressure on the suction hose of the water pump, which caused approximately 746 barrels (bbl.) of produced water to release onto the pad, the site’s supplementary access road, and extended down onto pasture and draw areas northwest of the site. Vacuum trucks were dispatched and removed pooled fluids. An excavation crew was brought to the site to scrape and haul off recoverable materials. Approximately 300 barrels (bbl.) of free fluids were recovered and impacted soils were hauled off to an approved disposal facility during the initial site assessment and clean-up. Areas within the impermeable asphalt road (Rock Daisy Road CR-23) were power washed of all dried mud, hydrocarbons, and salt remnants. Secondary containment earthen berms were reconstructed around the perimeter of the pad, near pump house and battery infrastructure, and along the access road to reduce the possibility of surface runoff into off-pad areas outside the lease boundary. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 19.8 miles southwest of Artesia, New Mexico (Google Inc., 2025). The legal location for the site is Unit P, Section 4, Township 20 South and Range 24 East in Eddy County, New Mexico. The release area is located on Federal land.

The location is typical of saltwater disposal sites in the Permian Basin and is currently used for produced water disposal and storage. The following sections specifically describe the release area surrounding the site and surrounding areas.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site’s surface geology primarily comprises Pqg – Queen and Grayburg Formations. The soils on this site are typically shallow over fractured limestone bedrock. Pockets of deeper soils can exist usually occurring along seams and cracks in the fractured limestone. The soils are well drained with a permeability that is moderate to moderately slow. Water-holding

capacity is low except at seams and cracks in the limestone bedrock. Surface textures are cobbly loams, stony or rocky loams and cobbly silt loams. (United States Department of Agriculture, Natural Resources Conservation Service, 2025). The karst potential for the site is characterized as high instability (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with hills, low mountains, and foot slopes with elevations ranging between 2,800 and 5,000 feet. The climate is semiarid with average annual precipitation ranging between 11 and 19 inches. The historical plant community was determined to be characterized by midgrasses such as blue grama, sideoats grama, curlyleaf muhly, and black grama and shrubs such as yuccas, sotol, ocotillo, lechuguilla. Litter and bare ground compose a significant proportion of the ground cover while grasses compose the remainder. Fire suppression, and the loss of grass cover due to overgrazing and drought may facilitate the increase and encroachment of shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2025).

4.0 Closure Criteria Determination

The nearest active New Mexico Office of the State Engineer well to the site is a livestock watering well (RA 05723) located approximately 1.01 miles north of the site with a recorded depth to groundwater of 270 feet below ground surface (bgs; New Mexico Office of the State Engineer, 2025b). Depth to groundwater was determined by referencing historical drilling activities performed by Carmona Resources, LLC (Carmona) on December 6, 2022. Carmona was on-site to drill a groundwater determination bore to 105 feet bgs and within a 0.5-mile radius of the location. The bore was located approximately 176 feet southeast of the site at 32.597410, -104.585720 in location: P, S4, T20S, R24E. The bore was left open for 72 hours and tagged with a water level meter. No indications of water were detected at a depth of 105 feet bgs. Information pertaining to the closure criteria determination is included in Appendix A.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, are features for the Dagger Draw located within the release area (United States Fish and Wildlife Service, 2025).

At the site, there are no continuously flowing watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Riley Permian Operating Company, LLC.
Mimosa Federal SWD #3Y

Remediation Work Plan
March 2026

Table 1. Closure Criteria Determination			
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>105	feet
	Distance between release and nearest DTGW reference	159	feet
		0.03	miles
	Date of nearest DTGW reference measurement	December 6, 2022	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	0	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	1,573	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	13,794	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	3,638	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	0	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	47,186	feet
9	Within an unstable area (Karst Map)	High	Critical High Medium Low
	Distance between release and nearest unstable area	0	feet
10	Within a 100-year Floodplain	100	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	0	feet
11	Soil Type	Ector extremely rocky loam and Pima silt loam	
12	Ecological Classification	R042CY151NM - Limestone Hills R070BC017NM - Bottomland	
13	Geology	Pqg - Queen and Grayburg Formations	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2.

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
Within a significant watercourse; Within high karst potential; Within 100-year floodplain	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – Total dissolved solids

TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics

BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Site Characterization Activities

Site characterization activities were conducted by Vertex on August 21, 2024, and finalized on August 23, 2024. A total of 42 sampling boreholes were established to obtain both horizontal and vertical delineation. From these boreholes, a total of 99 samples were collected at various depths and submitted to Cardinal Laboratories in Hobbs, New Mexico, under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). The release extent and the sampling locations were mapped utilizing a handheld GPS and are presented in Figure 1. The Daily Field Report with site photographs documenting site assessment activities is included in Appendix B. Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix C.

6.0 Proposed Remediation Activities

Areas identified with contaminant concentrations above closure criteria will be remediated through dig and haul methods. Laboratory results from the site characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Soil will be excavated to the extent of the known contamination outside of the applicable closure criteria. Field screening will be utilized to confirm that all areas of the excavation base and sidewalls meet the applicable closure criteria. Impacted materials will be stockpiled on a liner prior to disposal at an approved facility. Once excavation is complete, notification for confirmatory samples collection will be provided to the NMOCD two business days prior to conducting final sampling pursuant to 19.15.29.12.D(1)(a) NMAC. 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. Backfill material will be sampled and analyzed with a minimum of one five-point composite sample to confirm that it is not impacted with the same constituents labeled in Section 5.0.

Remedial efforts will begin on the areas of exceedance and will be excavated to the strictest criteria standards as outlined in Table 1 of 19.15.29.12 NMAC. Soil will be excavated at a planned depth of 0.5 to 3 feet for the areas of exceedance. Hand excavation and vacuum excavation will be utilized to remove contaminated soil within the 18-inch

tolerance zone of pipelines, and the remaining areas will be excavated using heavy equipment. The site schematic with proposed excavation depths is presented in Figure 2. Wall sampling will be conducted around the edges of material around the edges of the secondary containment of the tanks and pump house to determine if the material underneath both areas has been impacted. The proposed excavation and locations of the containment and pump house are in Figure 3.

Sample Point	Excavation Depth	Remediation Method
BH24-03	3 feet	Mechanical Equipment
BH24-06	3 feet	Mechanical Equipment
BH24-09	3 feet	Mechanical Equipment
BH24-12	0.5 feet	Mechanical Equipment
BH24-15	0.5 feet	Mechanical Equipment
BH24-17	0.5 feet	Mechanical Equipment
BH24-20	0.5 feet	Mechanical Equipment
BH24-23	0.5 feet	Mechanical Equipment
BH24-26	0.5 feet	Mechanical Equipment
BH24-30	0.5 feet	Mechanical Equipment
BH24-33	0.5 feet	Mechanical Equipment
BH24-36	3 feet	Mechanical Equipment
BH24-37	3 feet	Mechanical Equipment
BH24-38	3 feet	Mechanical Equipment
BH24-39	3 feet	Mechanical Equipment

The estimated volume to be excavated is approximately **1,967 cubic yards**; however, this figure is subject to change based on the extent of impacted material identified during remediation activities, results of confirmatory field sampling, and any additional subsurface characterization that may be required as the project progresses.

7.0 Land Reclamation Plan

7.1 Pastureland Reclamation

The land surrounding the production pad is defined as natural. A natural area is described as: away from human habitation and activities, where the primary concern is the protection of ecological receptors.

The areas of the release within pastureland and around the pad will be reclaimed so that the capability of the land will match that of the immediate surrounding areas, which consists of a water course and rangeland.

7.2 Soil Replacement

Clean natural topsoil will be imported from a local source. Local topsoil will be sourced and applied at depth of no less than 12 inches.

7.3 Contouring

The site will be contoured to match surrounding topography as near as practicable to restore natural drainage, which is generally in a south-to-north and east-to-west direction. Any compaction affecting the upper soil will be alleviated by ripping to a maximum depth of 18 inches following re-contouring. In addition, a straw layer may be incorporated into the topsoil to prevent compaction, hinder erosion, and ensure proper soil aeration. This process helps assist the development of a healthy seed bed.

7.4 Erosion Control

The application of erosion control devices (waddles) will be installed to prevent erosion and direct water to a well vegetated area when deemed necessary.

7.5 Revegetation

7.5.1 Fertilization

Soil amendments may be incorporated into the contoured topsoil and/or upper subsoil to improve soil nutrient content if required. Topsoil will be tested to determine proper if fertilization is necessary and to establish proper fertilization rates.

7.5.2 Seeding

A seed mix suitable for the site and surrounding area will be used and will be administered at an application rate of 18 PLS/acre. Seed establishment and revegetation will be monitored, bi-annually, to determine success.

BLM Seed Mix 1 will be obtained for the site and applied by Vertex personnel. In addition to the approved BLM seed mix, Vertex recommends the application of blue grama (*Bouteloua gracilis*), and black grama (*Bouteloua eriopoda*), as these species are naturally occurring in the area. Methods of seeding will be broadcast seeded followed by chain-dragging at the double application rate of PLS/acre.

8.0 Reclamation Standards

Reclamation success will meet requirements outlined in chapter 6 of The Gold Book (U.S. Department of the Interior and U.S. Department of Agriculture, 2007) which states that “a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community is established on site, with a density sufficient to control erosion and non-native plant invasion and to re-establish wildlife habitat or forage production.”

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

9.0 References

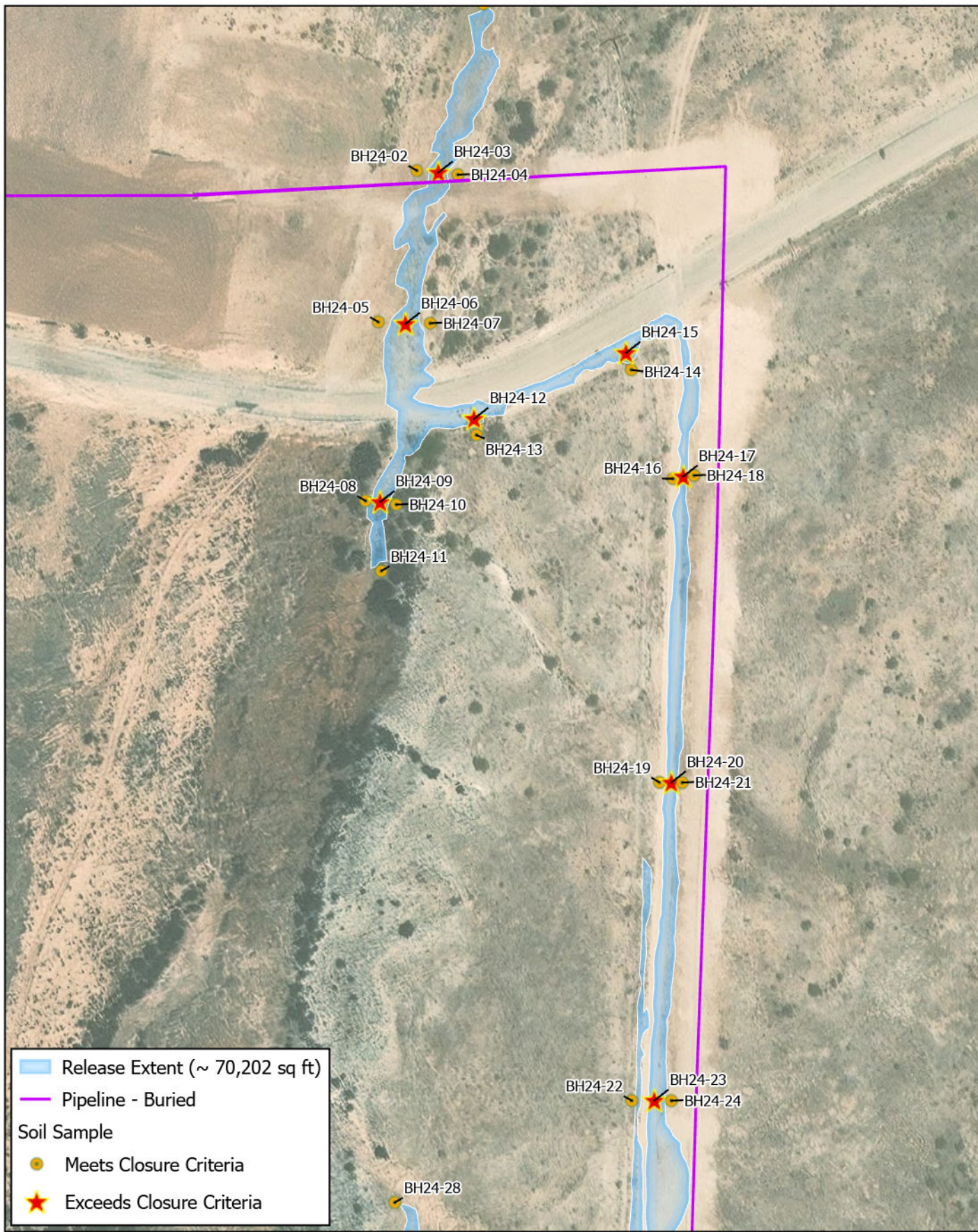
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10.0 Limitations

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

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

FIGURES



VERTEX

Map Center:
Lat: 32.600279°N,
Long: -104.366372°W

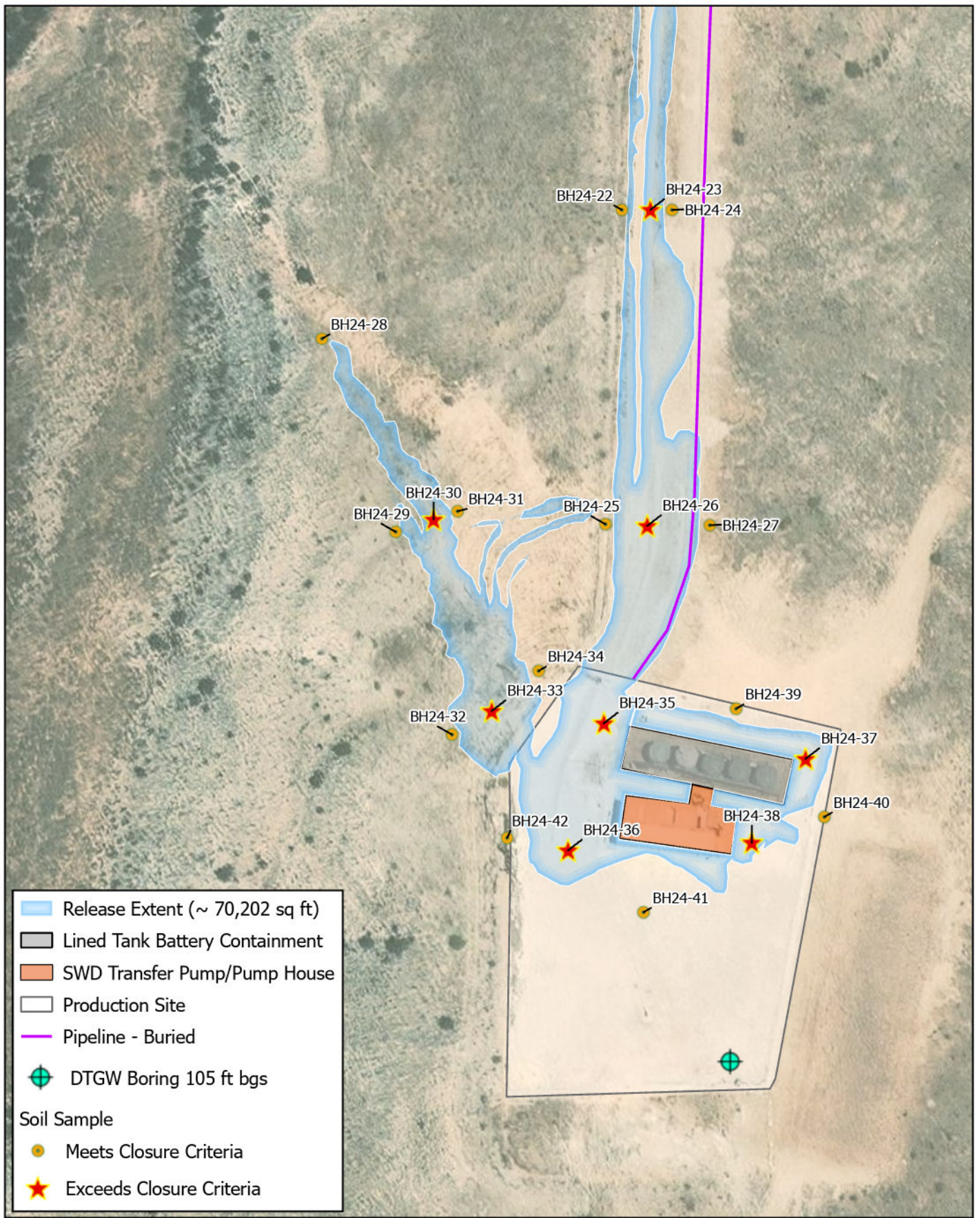
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NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Characterization Sampling Site Schematic (North)
Incident ID# nAPP2409671242
Mimosa Fed SWD #3Y

FIGURE: **1a**

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes. Note: Georeferenced image from Esri, 2025. Features from GPS. Vertex Professional Services Ltd., 2025.



VERTEX

Map Center:
 Lat: 32.598293°N
 Long: -104.366272°W

Date: Mar 20/26

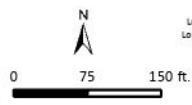
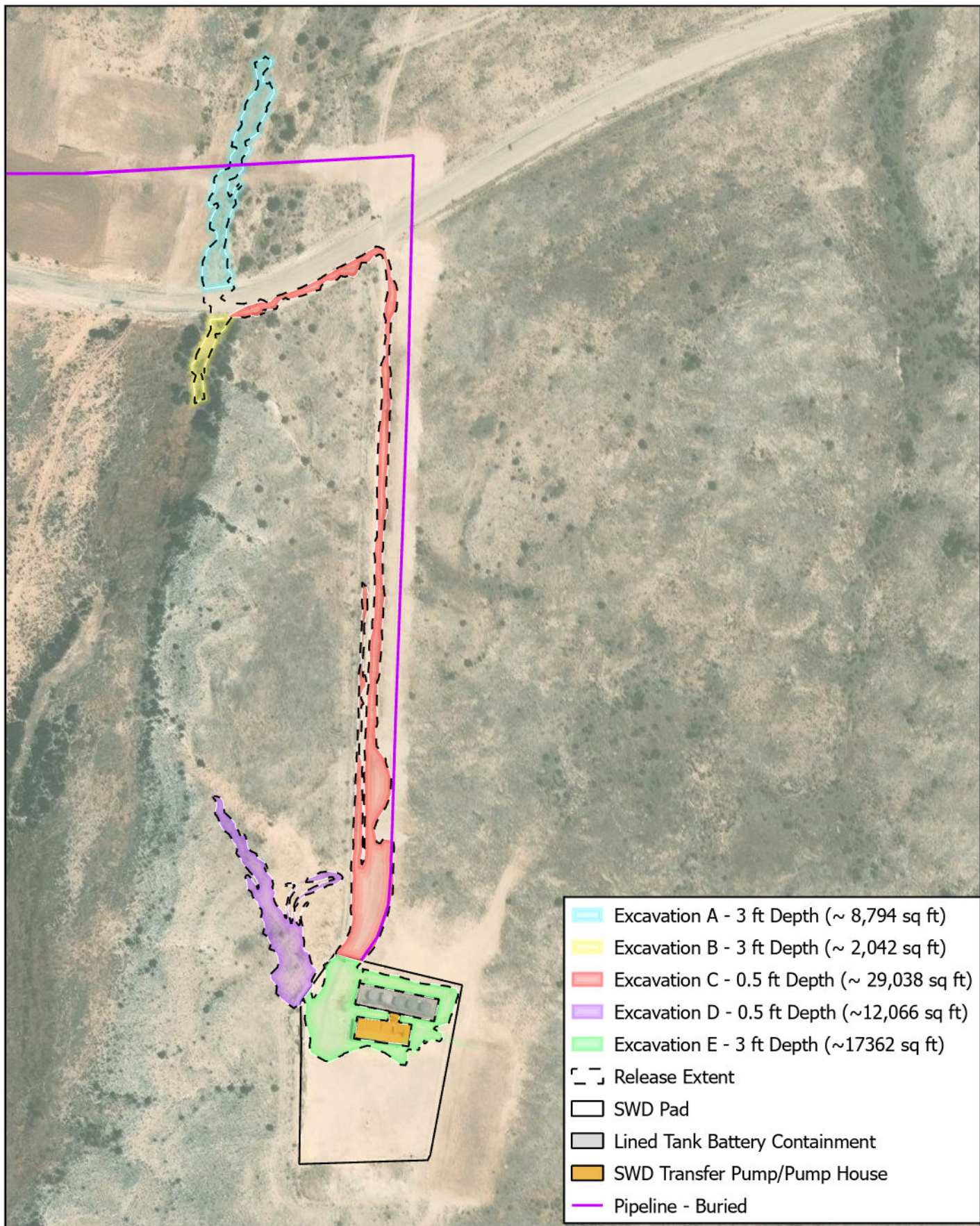
0 15 30 60 ft.

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Characterization Sampling Site Schematic
 (South)
 Incident ID# nAPP2409671242
 Mimosa Fed SWD #3Y

FIGURE:
1b

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes. Note: Georeferenced image from Esri, 2025. Features from GPS. Vertex Professional Services Ltd., 2025.



Map Center:
 Lat: 32.299548°N
 Long: 104.365313°W

Date: Mar 20/26

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

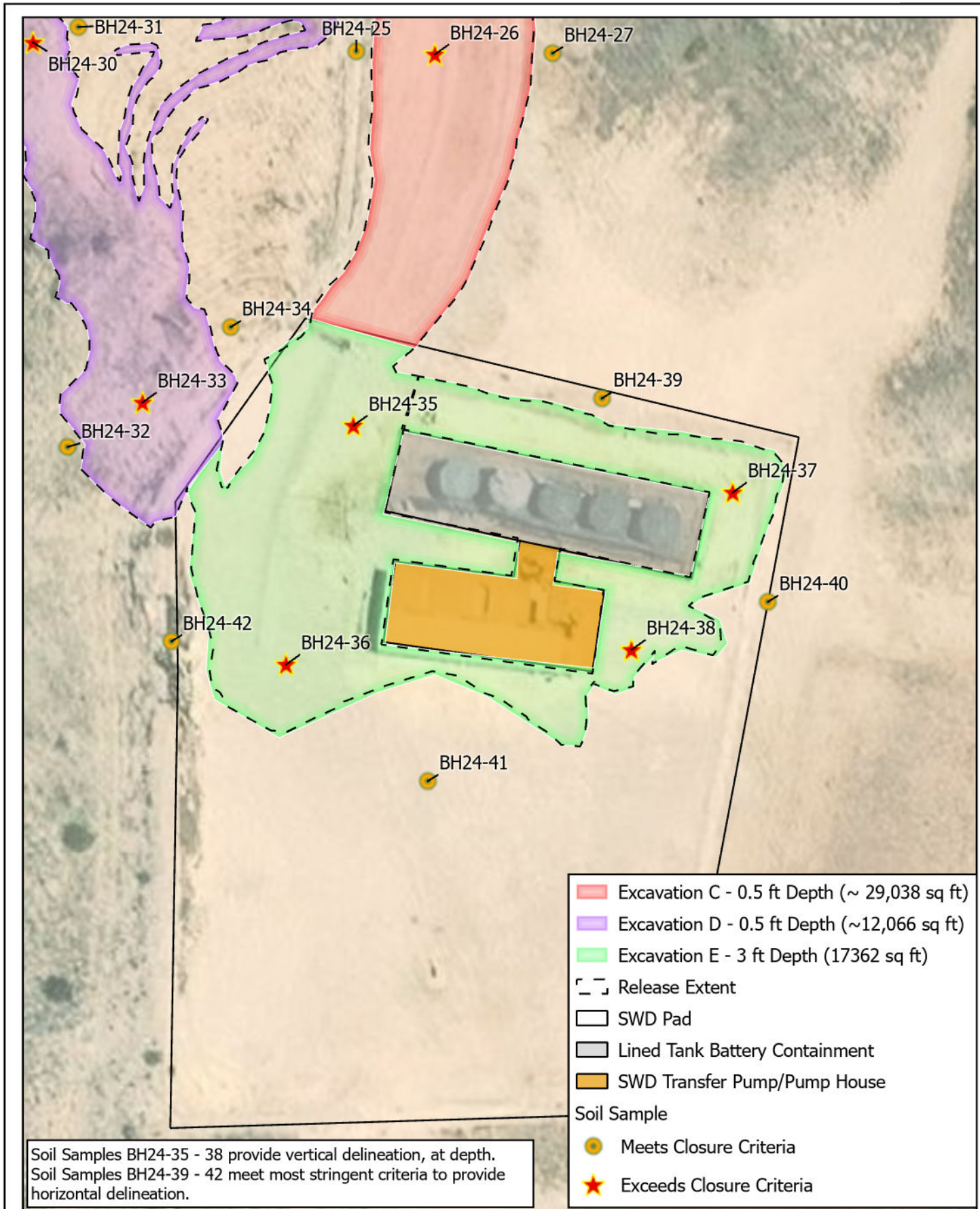
Proposed Excavation Site Schematic
 Incident ID# nAPP2409671242
 Mimosa Fed SWD #3Y

FIGURE:
 2



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

Note: Georeferenced image from Esri, 2025. Features from GPS. Vertex Professional Services Ltd., 2025.



VERTEX | 0 20 40 ft. | Date: Mar 20/26
 NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
 Map Center:
 Lat: 32.297878°N
 Long: 104.35524°W

Proposed On Pad Excavation Site Schematic | FIGURE: |
Incident ID# nAPP2409671242 | **3**
Mimosa Fed SWD #3Y



Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes. Note: Georeferenced image from Esri, 2025. Features from GPS. Vertex Professional Services Ltd., 2025.

TABLE

Client Name: Silverback Exploration
 Site Name: Mimosa Federal SWD #3Y
 NMOCD Tracking #: nAPP2409671242
 Project #: 24E-03772
 Lab Reports: H245202 and H245203

Table 4. Initial Characterization Field Screen and Laboratory Results

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						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)	
Closure Criteria for Soils Impacted by a Release - Table 1 of 19.15.29.12 NMAC													
BH24-01	0	August 21, 2024	-	-	203	ND	ND	ND	ND	ND	ND	ND	80
	2	August 21, 2024	-	-	102	ND	ND	ND	ND	ND	ND	ND	96
BH24-02	0	August 21, 2024	-	-	244	ND	ND	ND	ND	ND	ND	ND	144
	2	August 21, 2024	-	-	267	ND	ND	ND	ND	ND	ND	ND	128
BH24-03	0	August 21, 2024	-	-	8,336	ND	ND	ND	ND	ND	ND	ND	8,400
	2	August 21, 2024	-	-	1,124	ND	ND	ND	ND	ND	ND	ND	2,800
	4	August 21, 2024	-	-	400	ND	ND	ND	ND	ND	ND	ND	112
BH24-04	0	August 21, 2024	-	-	163	ND	ND	ND	ND	ND	ND	ND	144
	2	August 21, 2024	-	-	182	ND	ND	ND	ND	ND	ND	ND	16
BH24-05	0	August 21, 2024	-	-	331	ND	ND	ND	ND	ND	ND	ND	96
	2	August 21, 2024	-	-	101	ND	ND	ND	ND	ND	ND	ND	80
BH24-06	0	August 21, 2024	-	-	8,759	ND	ND	ND	ND	ND	ND	ND	8,400
	2	August 21, 2024	-	-	305	ND	ND	ND	ND	ND	ND	ND	2,880
	4	August 21, 2024	-	-	161	ND	ND	ND	ND	ND	ND	ND	128
BH24-07	0	August 21, 2024	-	-	235	ND	ND	ND	ND	ND	ND	ND	64
	2	August 21, 2024	-	-	193	ND	ND	ND	ND	ND	ND	ND	64
BH24-08	0	August 21, 2024	-	-	379	ND	ND	ND	ND	ND	ND	ND	16
	2	August 21, 2024	-	-	124	ND	ND	ND	ND	ND	ND	ND	128
BH24-09	0	August 21, 2024	-	-	7,095	ND	ND	ND	ND	ND	ND	ND	7,460
	2	August 21, 2024	-	-	316	ND	ND	ND	ND	ND	ND	ND	3,920
	4	August 21, 2024	-	-	126	ND	ND	ND	ND	ND	ND	ND	48
BH24-10	0	August 21, 2024	-	-	418	ND	ND	ND	ND	ND	ND	ND	16
	2	August 21, 2024	-	-	122	ND	ND	ND	ND	ND	ND	ND	96
BH24-11	0	August 21, 2024	-	-	239	ND	ND	ND	ND	ND	ND	ND	128
	2	August 21, 2024	-	-	129	ND	ND	ND	ND	ND	ND	ND	32
BH24-12	0	August 22, 2024	-	-	6,545	ND	ND	ND	ND	ND	ND	ND	4,160
	2	August 22, 2024	-	-	295	ND	ND	ND	ND	ND	ND	ND	96
	4	August 22, 2024	-	-	296	ND	ND	ND	ND	ND	ND	ND	112
BH24-13	0	August 22, 2024	-	-	340	ND	ND	ND	ND	ND	ND	ND	32
	2	August 22, 2024	-	-	245	ND	ND	ND	ND	ND	ND	ND	96
BH24-14	0	August 22, 2024	-	-	235	ND	ND	ND	ND	ND	ND	ND	80
	2	August 22, 2024	-	-	272	ND	ND	ND	ND	ND	ND	ND	32
BH24-15	0	August 22, 2024	-	-	8,115	ND	ND	ND	ND	ND	ND	ND	2,680
	2	August 22, 2024	-	-	450	ND	ND	ND	ND	ND	ND	ND	96
	4	August 22, 2024	-	-	451	ND	ND	ND	ND	ND	ND	ND	32
BH24-16	0	August 22, 2024	-	-	253	ND	ND	ND	ND	ND	ND	ND	80
	2	August 22, 2024	-	-	127	ND	ND	ND	ND	ND	ND	ND	48
BH24-17	0	August 22, 2024	-	-	3,621	ND	ND	ND	ND	ND	ND	ND	3,120
	2	August 22, 2024	-	-	250	ND	ND	ND	ND	ND	ND	ND	80
	4	August 23, 2024	-	-	195	ND	ND	ND	ND	ND	ND	ND	144
BH24-18	0	August 22, 2024	-	-	147	ND	ND	ND	ND	ND	ND	ND	112
	2	August 22, 2024	-	-	185	ND	ND	ND	ND	ND	ND	ND	128
BH24-19	0	August 22, 2024	-	-	177	ND	ND	ND	ND	ND	ND	ND	16
	2	August 22, 2024	-	-	135	ND	ND	ND	ND	ND	ND	ND	128
BH24-20	0	August 22, 2024	-	-	4,389	ND	ND	ND	ND	ND	ND	ND	4,480
	2	August 22, 2024	-	-	260	ND	ND	ND	ND	ND	ND	ND	96
	4	August 22, 2024	-	-	460	ND	ND	ND	ND	ND	ND	ND	96
BH24-21	0	August 22, 2024	-	-	288	ND	ND	ND	ND	ND	ND	ND	16
	2	August 22, 2024	-	-	295	ND	ND	ND	ND	ND	ND	ND	16
BH24-22	0	August 22, 2024	-	-	289	ND	ND	ND	ND	ND	ND	ND	112
	2	August 22, 2024	-	-	208	ND	ND	ND	ND	ND	ND	ND	96

"ND" Not Detected at the Reporting Limit
 "-" indicates not analyzed/assessed

Bold and grey: exceeds NMOCD Closure Criteria (on-pad)
Bold and green: exceeds NMOCD Reclamation Criteria (off-pad)



Client Name: Silverback Exploration
 Site Name: Mimosa Federal SWD #3Y
 NMOCD Tracking #: nAPP2409671242
 Project #: 24E-03772
 Lab Reports: H245202 and H245203

Table 4. Initial Characterization Field Screen and Laboratory Results

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						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)	
Closure Criteria for Soils Impacted by a Release - Table 1 of 19.15.29.12 NMAC													
BH24-23	0	August 22, 2024	-	-	8,845	ND	ND	ND	ND	ND	ND	ND	3,840
	2	August 22, 2024	-	-	249	ND	ND	ND	ND	ND	ND	ND	176
	4	August 22, 2024	-	-	239	ND	ND	ND	ND	ND	ND	ND	144
BH24-24	0	August 22, 2024	-	-	306	ND	ND	ND	ND	ND	ND	ND	96
	2	August 22, 2024	-	-	224	ND	ND	ND	ND	ND	ND	ND	112
BH24-25	0	August 22, 2024	-	-	124	ND	ND	ND	ND	ND	ND	ND	32
	2	August 22, 2024	-	-	137	ND	ND	ND	ND	ND	ND	ND	112
BH24-26	0	August 22, 2024	-	-	4,832	ND	ND	ND	ND	ND	ND	ND	4,240
	2	August 22, 2024	-	-	225	ND	ND	ND	ND	ND	ND	ND	64
	4	August 22, 2024	-	-	204	ND	ND	ND	ND	ND	ND	ND	80
BH24-27	0	August 22, 2024	-	-	239	ND	ND	ND	ND	ND	ND	ND	32
	2	August 22, 2024	-	-	287	ND	ND	ND	ND	ND	ND	ND	32
BH24-28	0	August 22, 2024	-	-	274	ND	ND	ND	ND	ND	ND	ND	80
	2	August 22, 2024	-	-	203	ND	ND	ND	ND	ND	ND	ND	32
BH24-29	0	August 22, 2024	-	-	273	ND	ND	ND	ND	ND	ND	ND	128
	2	August 22, 2024	-	-	170	ND	ND	ND	ND	ND	ND	ND	64
BH24-30	0	August 22, 2024	-	-	4,389	ND	ND	ND	ND	ND	ND	ND	4,560
	2	August 22, 2024	-	-	293	ND	ND	ND	ND	ND	ND	ND	128
	4	August 22, 2024	-	-	353	ND	ND	ND	ND	ND	ND	ND	128
BH24-31	0	August 22, 2024	-	-	279	ND	ND	ND	ND	ND	ND	ND	32
	2	August 22, 2024	-	-	245	ND	ND	ND	ND	ND	ND	ND	96
BH24-32	0	August 22, 2024	-	-	224	ND	ND	ND	ND	ND	ND	ND	80
	2	August 22, 2024	-	-	235	ND	ND	ND	ND	ND	ND	ND	32
BH24-33	0	August 23, 2024	-	-	8,727	ND	ND	ND	ND	ND	ND	ND	8,130
	2	August 23, 2024	-	-	260	ND	ND	ND	ND	ND	ND	ND	112
	4	August 23, 2024	-	-	212	ND	ND	ND	ND	ND	ND	ND	112
BH24-34	0	August 23, 2024	-	-	245	ND	ND	ND	ND	ND	ND	ND	64
	2	August 23, 2024	-	-	158	ND	ND	ND	ND	ND	ND	ND	48
BH24-35	0	August 23, 2024	-	-	17,885	ND	ND	ND	ND	ND	ND	ND	12,300
	2	August 23, 2024	-	-	3,509	ND	ND	ND	ND	ND	ND	ND	4,640
	4	August 23, 2024	-	-	129	ND	ND	ND	ND	ND	ND	ND	160
BH24-36	0	August 23, 2024	-	-	28,685	ND	ND	ND	20.9	ND	20.9	20.9	18,200
	2	August 23, 2024	-	-	6,891	ND	ND	ND	ND	ND	ND	ND	4,400
	4	August 23, 2024	-	-	150	ND	ND	ND	ND	ND	ND	ND	128
BH24-37	0	August 23, 2024	-	-	28,031	ND	ND	ND	ND	ND	ND	ND	16,400
	2	August 23, 2024	-	-	5,120	ND	ND	ND	ND	ND	ND	ND	5,040
	4	August 23, 2024	-	-	258	ND	ND	ND	ND	ND	ND	ND	96
BH24-38	0	August 23, 2024	-	-	28,685	ND	ND	ND	10.4	ND	10.4	10.4	13,200
	2	August 23, 2024	-	-	4,821	ND	ND	ND	ND	ND	ND	ND	4,640
	4	August 23, 2024	-	-	202	ND	ND	ND	ND	ND	ND	ND	128
BH24-39	0	August 23, 2024	-	-	204	ND	ND	ND	ND	ND	ND	ND	64
	2	August 23, 2024	-	-	227	ND	ND	ND	ND	ND	ND	ND	96
BH24-40	0	August 23, 2024	-	-	235	ND	ND	ND	ND	ND	ND	ND	96
	2	August 23, 2024	-	-	300	ND	ND	ND	ND	ND	ND	ND	48
BH24-41	0	August 23, 2024	-	-	245	ND	ND	ND	ND	ND	ND	ND	48
	2	August 23, 2024	-	-	195	ND	ND	ND	ND	ND	ND	ND	16
BH24-42	0	August 23, 2024	-	-	270	ND	ND	ND	ND	ND	ND	ND	112
	2	August 23, 2024	-	-	173	ND	ND	ND	ND	ND	ND	ND	32

"ND" Not Detected at the Reporting Limit
 "-" indicates not analyzed/assessed

Bold and grey: exceeds NMOCD Closure Criteria (on-pad)
Bold and green: exceeds NMOCD Reclamation Criteria (off-pad)



APPENDIX A



Project Name :	Mimosa Federal SWD 003	Date :	Tuesday, December 6, 2022
Project No. :	1148	Sampler :	Lane Scarborough
Location :	Eddy County, New Mexico	Driller :	Scarborough Drilling
Coordinates :	32.597389°, -104.586147°	Method :	Air Rotary
Elevation :	3,797'		

Depth (ft.)	WL	Soil Description	Lithology	Depth (ft.)	WL	Soil Description	Lithology
0		(0'-1') - White/Light coarse grained, well graded, angular gravel (GW).		50		(50') - White/Light coarse grained, well graded, angular gravel (GW).	
5		(5') - White/Light coarse grained, well graded, angular gravel (GW).		55		(55') - White/Light coarse grained, well graded, angular gravel (GW).	
10		(10') - White/Light coarse grained, well graded, angular gravel (GW).		60		(60') - White/Light coarse grained, well graded, angular gravel (GW).	
15		(15') - Light brown medium stiff clay with >25% coarse grained angular gravel (GC).		65		(65') - White/Light coarse grained, well graded, angular gravel (GW).	
20		(20') - Light brown medium stiff clay with >25% coarse grained angular gravel (GC).		70		(70') - White/Light grey silty sand with gypsum grains (SM).	
25		(25') - White/Light coarse grained, well graded, angular gravel (GW).		75		(75') - White/Light grey silty sand with gypsum grains (SM).	
30		(30') - White/Light coarse grained, well graded, angular gravel (GW).		80		(80') - White/Light grey silty sand with gypsum grains (SM).	
35		(35') - White/Light coarse grained, well graded, angular gravel (GW).		85		(85') - White/Light grey silty sand with gypsum grains (SM).	
40		(40') - White/Light coarse grained, well graded, angular gravel (GW).		90		(90') - Red/Light brown very loose clayey sand (SC)	
45		(45') - Red/Light brown very stiff clayey sand with >5% coarse, well cemented angular gravel (SC).		95		(95') - Red/Light brown very loose clayey sand (SC)	
50				105		(100'-105') - White/Light grey coarse grained, well graded, angular gravel (GW).	

Comments :
 Boring terminated at 105' with no presence of groundwater or moisture.

PHOTOGRAPHIC LOG

Silverback Operating II, LLC

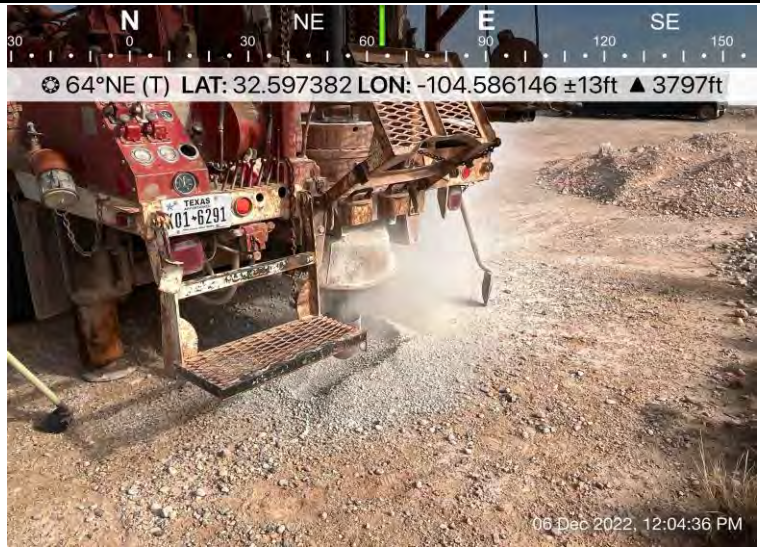
Photograph No. 1

Facility: Mimosa Fed #3 SWD

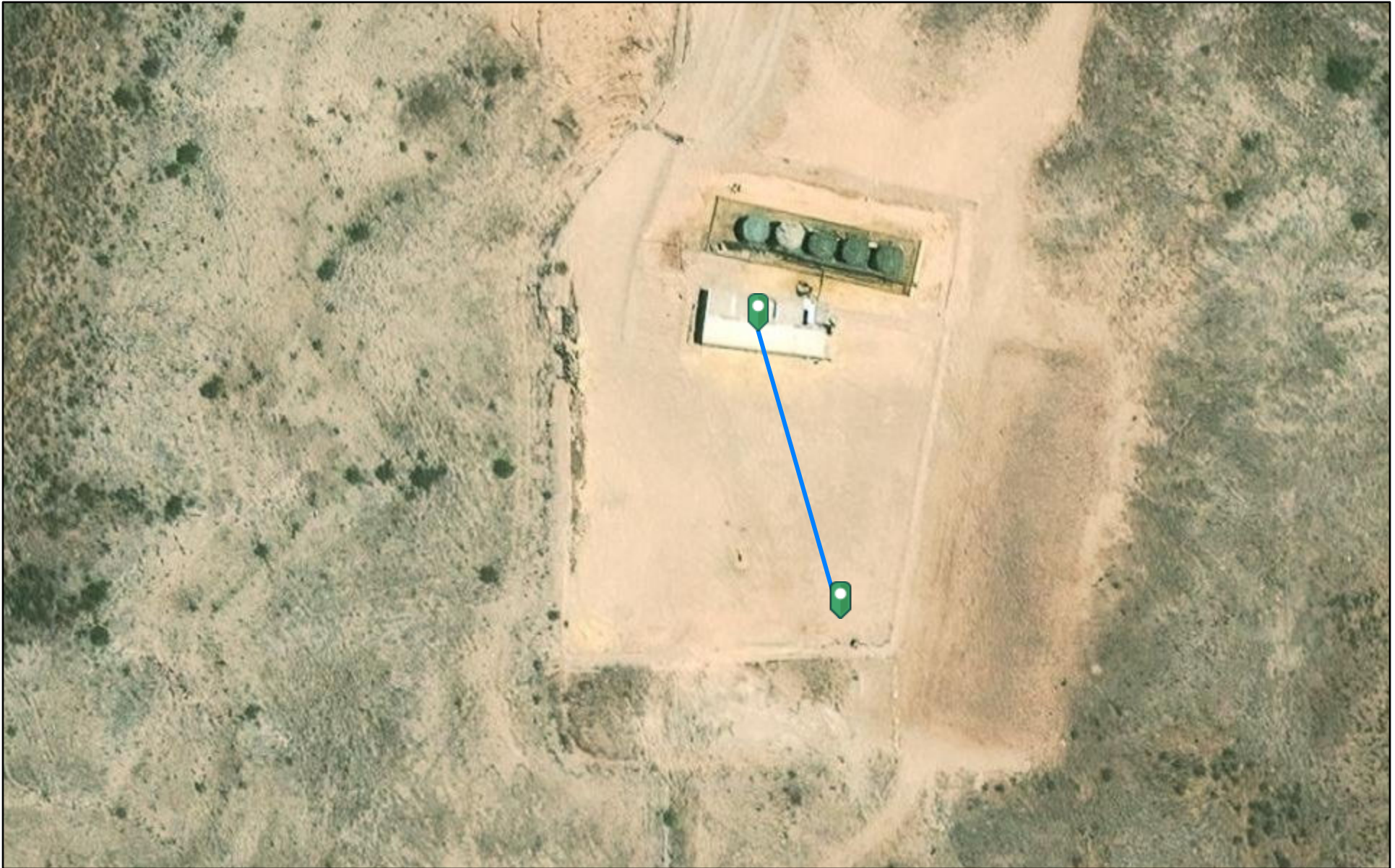
County: Eddy County, New Mexico

Description:

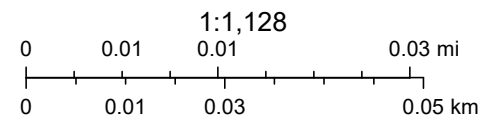
View Northeast, of installing the groundwater determination bore.



Mimosa Federal SWD #3Y - DTGW



7/1/2025, 4:00:42 PM



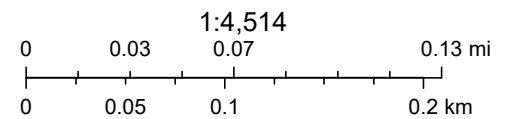
Maxar, Microsoft, Esri, HERE, Garmin, iPC

Mimosa Federal SWD #3Y - Watercourse



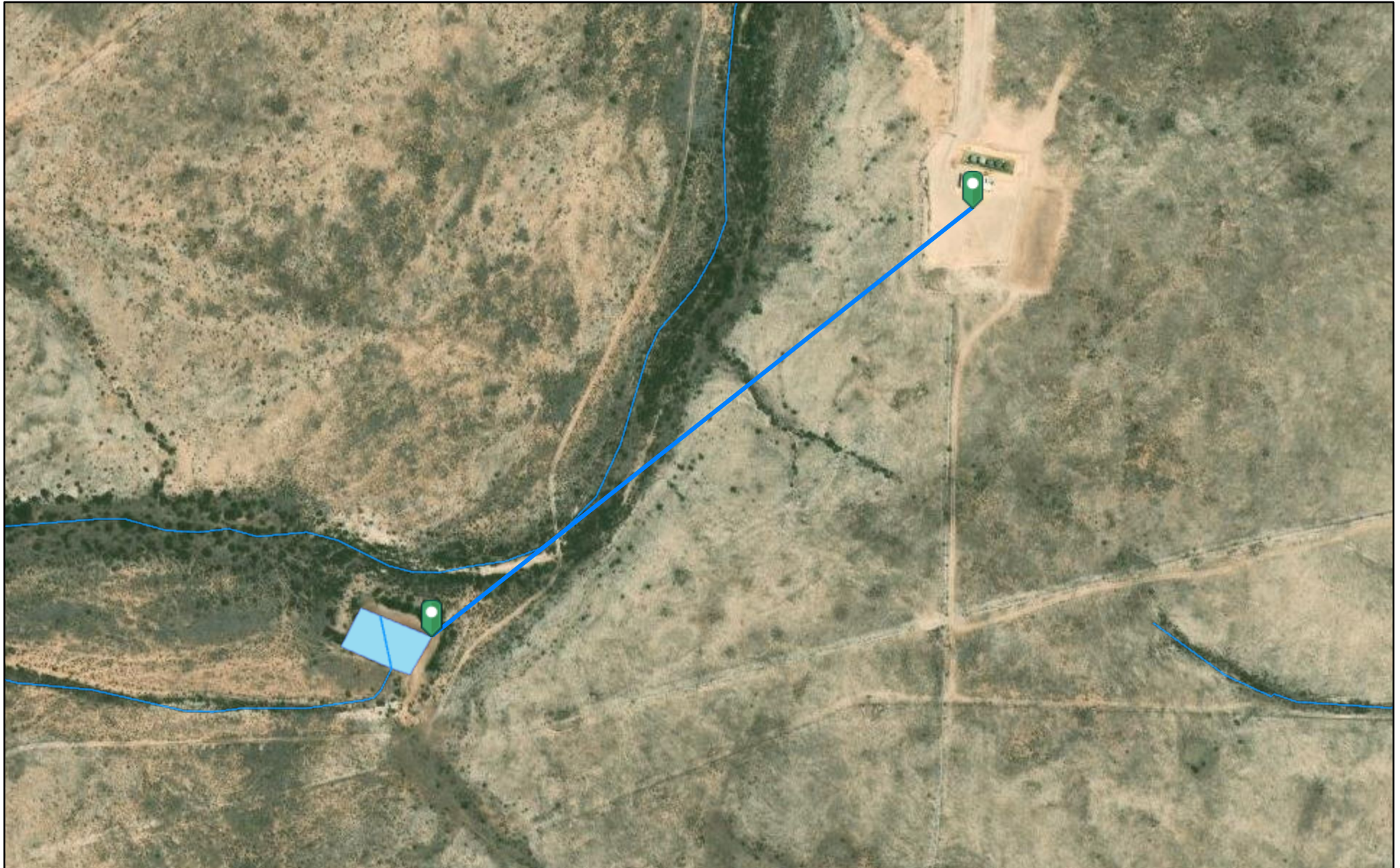
7/1/2025, 4:16:57 PM

— OSE Streams





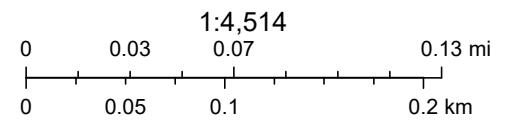
Esri, HERE, Garmin, iPC, Maxar, NM OSE

Mimosa Federal SWD #3Y - Lake



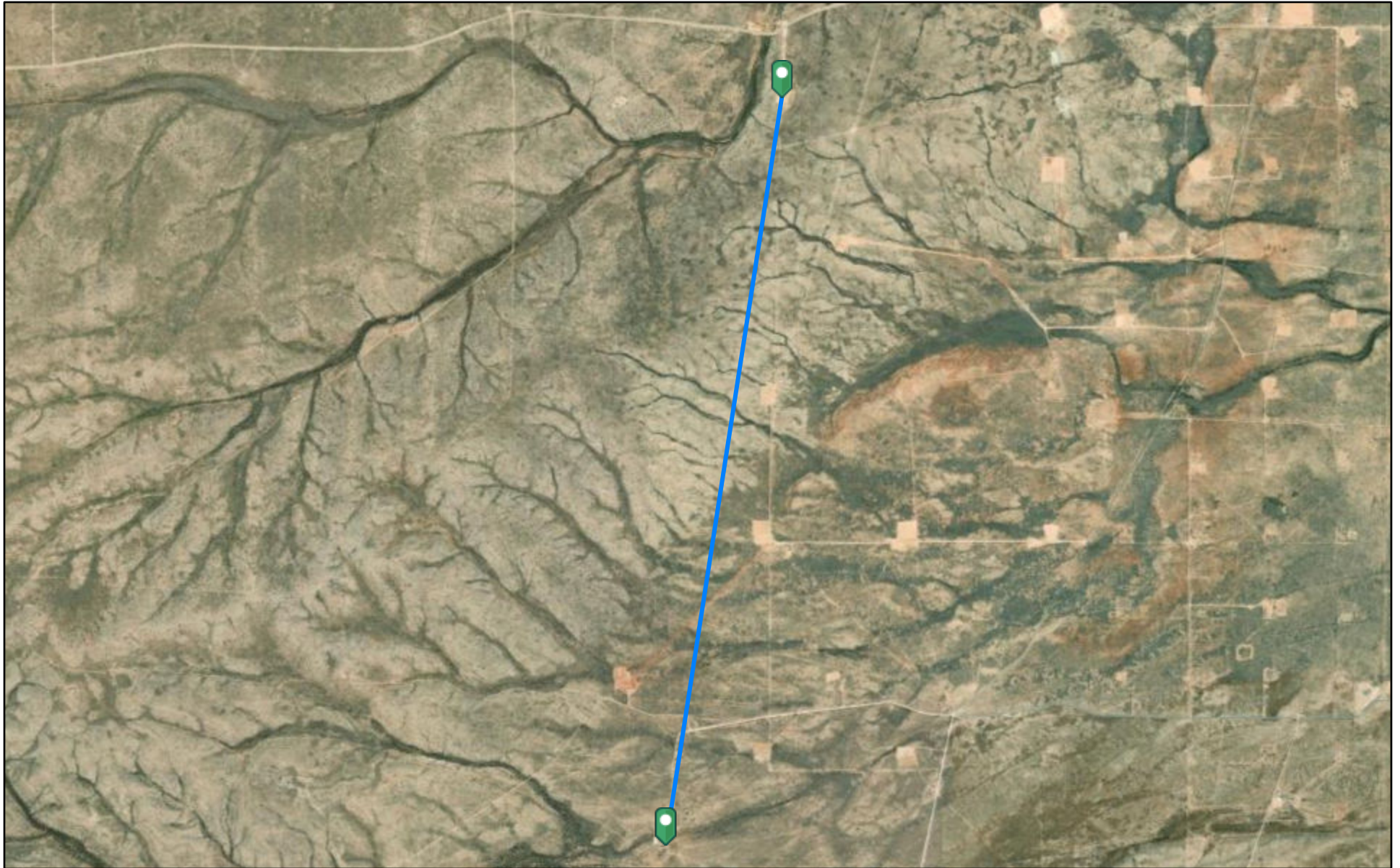
7/1/2025, 4:10:36 PM

-  OSW Water Bodys
-  OSE Streams

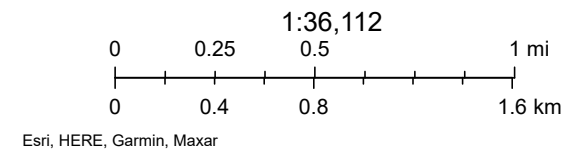


Esri, HERE, Garmin, iPC, Maxar, NM OSE

Mimosa Federal SWD #3Y - Residence



7/1/2025, 4:13:41 PM













U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



March 25, 2026

Wetlands

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

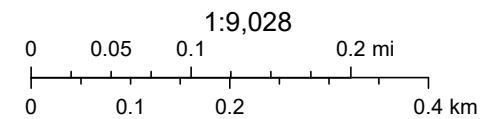
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Mimosa Federal SWD 3Y - Mine



4/10/2024, 4:57:58 PM

- PLSS Second Division
- PLSS First Division





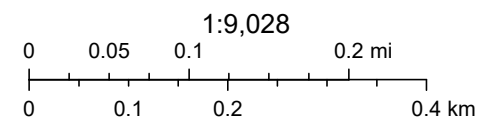
Esri, HERE, Garmin, iPC, Maxar, BLM

Mimosa Federal SWD #3Y - Karst



7/1/2025, 4:24:57 PM

Karst Occurrence Potential  Medium
 High



BLM, OCD, New Mexico Tech, Esri, HERE, Garmin, IPC, Maxar

National Flood Hazard Layer FIRMMette



104°35'28"W 32°36'7"N



1:6,000

104°34'50"W 32°35'37"N

Legend

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

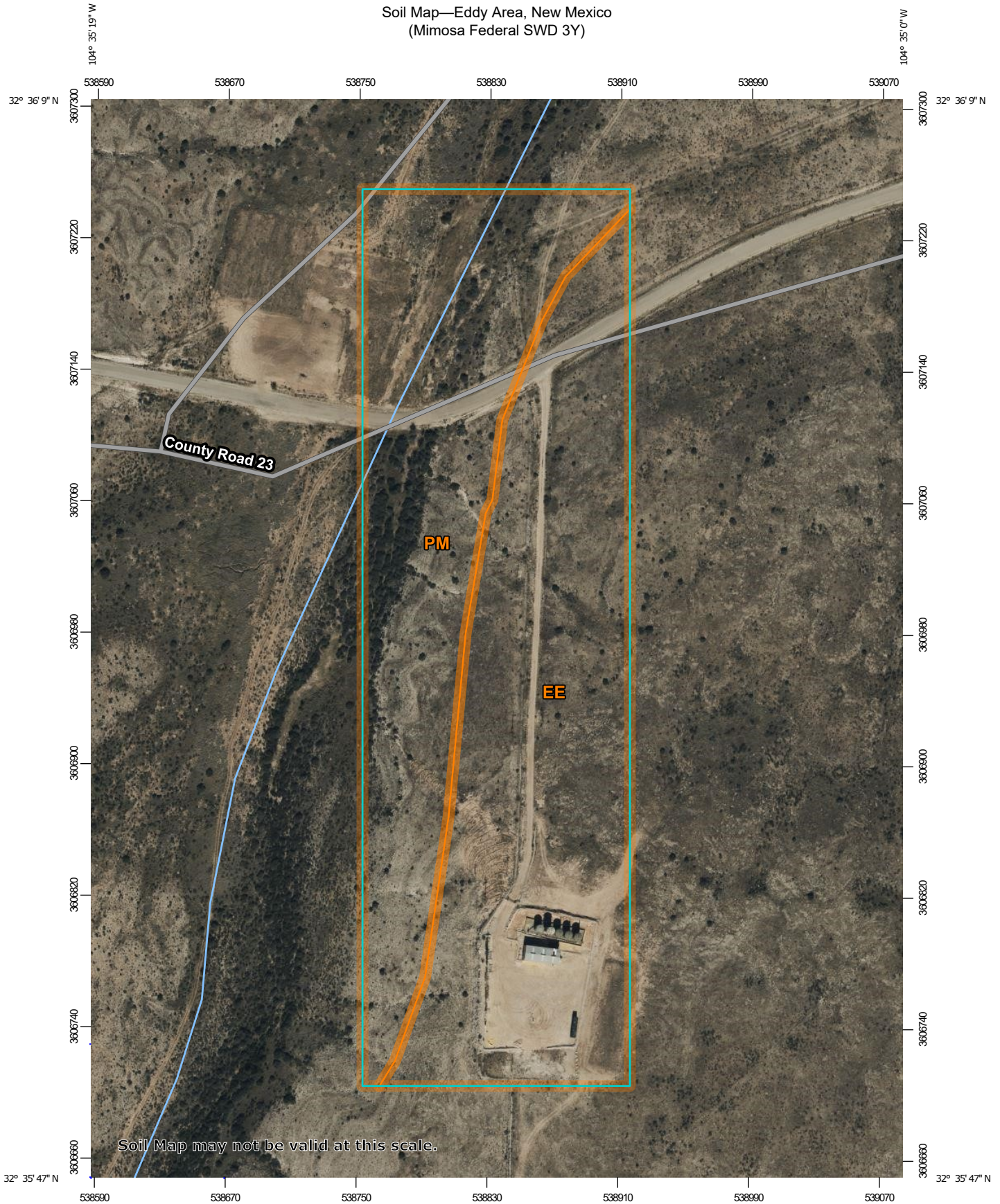
SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
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

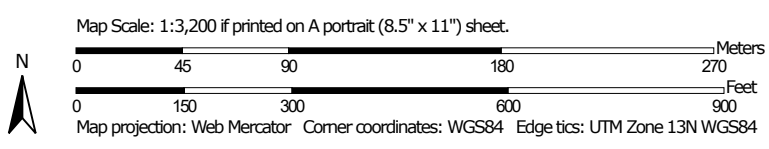
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/10/2024 at 7:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Soil Map—Eddy Area, New Mexico
(Mimosa Federal SWD 3Y)



Soil Map may not be valid at this scale.



APPENDIX B

Daily Site Visit Report



Client	Silverback Exploration	Inspection Date	_____
Site Location Name	Mimosa Federal SWD #3Y	API #	_____
Client Contact Name	Justin Carter	Project Owner	_____
Client Contact Phone #	405-286-3375	Project Manager	_____
Project Reference #	_____		
Unique Project ID	_____		

Summary of Times

Arrived at Site	_____
Departed Site	_____

Field Notes

12:00 Initial Site Scrape Photographs

Next Steps & Recommendations

1

Daily Site Visit Report



Site Photos

Viewing Direction: East



Northern extent of the release/scraped areas

Viewing Direction: Southeast



Northern extent of the release/scraped areas

Viewing Direction: North



Northern portions of the release/scraped areas

Viewing Direction: South



Northern extent of the release/scraped areas

Daily Site Visit Report



Site Photos

Viewing Direction: North



Northern extent of the release/scraped areas

Viewing Direction: North



Lease road extent of release/scraped areas

Viewing Direction: North



Lease road extent of release/scraped areas

Viewing Direction: South



Lease road extent of release/scraped areas

Daily Site Visit Report



Site Photos

Viewing Direction: Northeast



Release/scraped areas on pad

Viewing Direction: West



Release/scraped areas on pad

Viewing Direction: South



Release/scraped areas on pad

Viewing Direction: North



Release/scraped areas on pad

Daily Site Visit Report



Site Photos

Viewing Direction: Northwest



Western extent of the release/scraped areas

Viewing Direction: Northeast



Western extent of the release/scraped areas

Viewing Direction: Northwest



Western extent of the release/scraped areas

Viewing Direction: Southeast



Western extent of the release/scraped areas

Daily Site Visit Report



Site Photos

Viewing Direction: North



Lease road extent of release/scraped areas

Viewing Direction: South



Lease road extent of release/scraped areas

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature:


Signature

APPENDIX C



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 03, 2024

MICHAEL MOFFITT
VERTEX RESOURCE
3101 BOYD DRIVE
CARLSBAD, NM 88220

RE: MIMOSA FEDERAL SWD #3Y

Enclosed are the results of analyses for samples received by the laboratory on 08/27/24 13:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received:	08/27/2024	Sampling Date:	08/21/2024
Reported:	09/03/2024	Sampling Type:	Soil
Project Name:	MIMOSA FEDERAL SWD #3Y	Sampling Condition:	Cool & Intact
Project Number:	24E-03772	Sample Received By:	Shalyn Rodriguez
Project Location:	SILVERBACK - EDDY COUNTY, NM		

Sample ID: BH - 24 - 01 OFT (H245202-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	229	115	200	4.51	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	224	112	200	9.12	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 63.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 01 2FT (H245202-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	229	115	200	4.51	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	224	112	200	9.12	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 02 OFT (H245202-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 02 2FT (H245202-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 82.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 03 OFT (H245202-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 70.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 03 2FT (H245202-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 03 4FT (H245202-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 76.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.0 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 04 OFT (H245202-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 04 2FT (H245202-09)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 05 OFT (H245202-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 76.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 05 2FT (H245202-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 98.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 06 OFT (H245202-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 87.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 06 2FT (H245202-13)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 06 4FT (H245202-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.7 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 07 OFT (H245202-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 79.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.9 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 07 2FT (H245202-16)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1		
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21		
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83		
Total BTEX	<0.300	0.300	08/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	08/29/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32		
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42		
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND						

Surrogate: 1-Chlorooctane 78.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 08 OFT (H245202-17)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.73	86.5	2.00	16.1	
Toluene*	<0.050	0.050	08/29/2024	ND	1.72	85.8	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	1.80	90.2	2.00	9.21	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	5.40	90.0	6.00	8.83	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 08 2FT (H245202-18)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 68.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 09 OFT (H245202-19)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7460	16.0	08/29/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 80.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 09 2FT (H245202-20)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3920	16.0	08/28/2024	ND	448	112	400	3.64	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 83.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 09 4FT (H245202-21)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 10 OFT (H245202-22)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	236	118	200	7.32	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	233	116	200	9.42	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 73.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 10 2FT (H245202-23)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/28/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/28/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/28/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 11 OFT (H245202-24)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 72.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/21/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 11 2FT (H245202-25)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 77.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 12 OFT (H245202-26)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 77.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 12 2FT (H245202-27)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 79.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 12 4FT (H245202-28)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 71.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 13 OFT (H245202-29)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 70.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 13 2FT (H245202-30)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 14 OFT (H245202-31)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 80.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.3 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 14 2FT (H245202-32)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 70.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.6 % 49.1-148

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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 15 OFT (H245202-33)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2680	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 78.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 15 2FT (H245202-34)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 90.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 15 4FT (H245202-35)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 16 OFT (H245202-36)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 84.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 16 2FT (H245202-37)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	2.15	107	2.00	0.218	
Toluene*	<0.050	0.050	08/29/2024	ND	2.02	101	2.00	1.13	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.10	105	2.00	1.95	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.53	109	6.00	2.54	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 92.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 17 OFT (H245202-38)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 87.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 17 2FT (H245202-39)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/29/2024	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 86.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 18 OFT (H245202-40)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 18 2FT (H245202-41)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 19 OFT (H245202-42)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	223	112	200	8.09	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	232	116	200	11.0	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 95.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 19 2FT (H245202-43)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 20 OFT (H245202-44)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 20 2FT (H245202-45)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 72.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 20 4FT (H245202-46)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 68.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 21 OFT (H245202-47)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 67.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 21 2FT (H245202-48)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received:	08/27/2024	Sampling Date:	08/22/2024
Reported:	09/03/2024	Sampling Type:	Soil
Project Name:	MIMOSA FEDERAL SWD #3Y	Sampling Condition:	Cool & Intact
Project Number:	24E-03772	Sample Received By:	Shalyn Rodriguez
Project Location:	SILVERBACK - EDDY COUNTY, NM		

Sample ID: BH - 24 - 22 OFT (H245202-49)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 74.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 22 2FT (H245202-50)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 71.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE
 MICHAEL MOFFITT
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received: 08/27/2024
 Reported: 09/03/2024
 Project Name: MIMOSA FEDERAL SWD #3Y
 Project Number: 24E-03772
 Project Location: SILVERBACK - EDDY COUNTY, NM

Sampling Date: 08/22/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: BH - 24 - 23 OFT (H245202-51)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2024	ND	1.93	96.3	2.00	16.8	
Toluene*	<0.050	0.050	08/29/2024	ND	2.04	102	2.00	12.0	
Ethylbenzene*	<0.050	0.050	08/29/2024	ND	2.17	109	2.00	8.90	
Total Xylenes*	<0.150	0.150	08/29/2024	ND	6.57	110	6.00	8.19	
Total BTEX	<0.300	0.300	08/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	08/29/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2024	ND	208	104	200	4.77	
DRO >C10-C28*	<10.0	10.0	08/28/2024	ND	201	100	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	08/28/2024	ND					

Surrogate: 1-Chlorooctane 68.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QR-04 The RPD for the BS/BSD was outside of historical limits.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Form containing company information (Vertex Resource Services), project details (Mimosa Federal SWD #3Y), and a table of samples with columns for Lab I.D., Sample I.D., Matrix, Preserv, and Sampling. Includes handwritten sample IDs and depths.

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses.

Relinquished By and Received By signature blocks with handwritten names and dates.

Delivered By and Sample Condition blocks with handwritten notes and checkboxes.

Phone/Fax Result and Remarks blocks with checkboxes and contact information for Silverback Exploration.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services		BILL TO		ANALYSIS REQUEST					
Project Manager: Michael Moffitt		P.O. #:							
Address: 3101 Boyd Dr		Company: Silverback Exploration							
City: Carlsbad State: NM Zip: 88220		Attn: Rafael Alviso							
Phone #: 575-988-2681 Fax #:		Address: 108 S. 4th St.							
Project #: 24E-03772 Project Owner:		City: Artesia							
Project Name: Mimosa Federal SWD #3Y		State: NM Zip: 88210							
Project Location: Eddy County, NM		Phone #:							
Sampler Name: Fernando Rodriguez		Fax #:							

Lab I.D.	Sample I.D.	(G)IRAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING		TPH: (8015) EXT	BTEX (8021B)	Chloride (SM 4500)
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE			
H245202																
14	BH24-06 4ft	C	1			X				X		8/21/24	9:05	X	X	X
15	BH24-07 0ft	C	1			X				X		8/21/24	9:10	X	X	X
16	BH24-07 2ft	C	1			X				X		8/21/24	9:15	X	X	X
17	BH24-08 0ft	C	1			X				X		8/21/24	9:25	X	X	X
18	BH24-08 2ft	C	1			X				X		8/21/24	9:30	X	X	X
19	BH24-09 0ft	C	1			X				X		8/21/24	9:35	X	X	X
20	BH24-09 2ft	C	1			X				X		8/21/24	9:40	X	X	X
21	BH24-09 4ft	C	1			X				X		8/21/24	9:45	X	X	X
22	BH24-10 0ft	C	1			X				X		8/21/24	9:50	X	X	X
23	BH24-10 2ft	C	1			X				X		8/21/24	9:55	X	X	X
24	BH24-11 0ft	C	1			X				X		8/21/24	10:00	X	X	X
25	BH24-11 2ft	C	1			X				X		8/21/24	10:05	X	X	X

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Relinquished By:	Date: 8-27-24 Time: 7:47	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) 2.2: C-O-LL	Sample Condition	CHECKED BY: (Initials)	REMARKS:	
Sampler - UPS - Bus - Other: 1.0: #140	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Direct bill to Silverback Exploration Email results to: mmoffitt@vertex.ca & frodriguez@vertex.ca	

s. Please fax written changes to 575-393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services
Project Manager: Michael Moffitt
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-988-2681 Fax #:
Project #: 24E-03772 Project Owner:
Project Name: Mimosa Federal SWD #3Y
Project Location: Eddy County, NM
Sampler Name: Fernando Rodriguez

BILL TO
P.O. #:
Company: Silverback Exploration
Attn: Rafael Alviso
Address: 108 S. 4th St.
City: Artesia
State: NM Zip: 88210
Phone #:
Fax #:

Table with columns: ANALYSIS REQUEST, TPH: (8015) EXT, BTEX (8021B), Chloride (SM 4500), and multiple empty columns for analysis results.

Table with columns: Lab I.D., Sample I.D., G/RAB OR (C)OMP., # CONTAINERS, MATRIX (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER), PRESERV. (ACID/BASE, ICE / COOL, OTHER), SAMPLING (DATE, TIME), and checkboxes for analysis types.

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Relinquished By: [Signature] Date: 8-27-24 Time: 7:347 Received By: [Signature]

Phone Result: [] Yes [] No Add'l Phone #:
Fax Result: [] Yes [] No Add'l Fax #:
REMARKS: Direct bill to Silverback Exploration
Email results to: mmoffitt@vertex.ca & frodriguez@vertex.ca

Delivered By: (Circle One) 2.2c) C-O-UC
Sampler - UPS - Bus - Other: 1.6c) #140
Sample Condition: Cool Intact [] Yes [x] Yes [] No [] No
CHECKED BY: [Signature]

s. Please fax written changes to 575-393-2476



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 05, 2024

MICHAEL MOFFITT
VERTEX RESOURCE
3101 BOYD DRIVE
CARLSBAD, NM 88220

RE: MIMOSA FEDERAL SWD #3Y

Enclosed are the results of analyses for samples received by the laboratory on 08/27/24 13:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
3101 BOYD DRIVE
CARLSBAD NM, 88220

Project: MIMOSA FEDERAL SWD #3Y
Project Number: 24E-03772
Project Manager: MICHAEL MOFFITT
Fax To: NA

Reported:
05-Sep-24 16:34

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH - 24 - 23 2FT	H245203-01	Soil	22-Aug-24 10:10	27-Aug-24 13:47
BH - 24 - 23 4FT	H245203-02	Soil	22-Aug-24 10:15	27-Aug-24 13:47
BH - 24 - 24 0FT	H245203-03	Soil	22-Aug-24 10:20	27-Aug-24 13:47
BH - 24 - 24 2FT	H245203-04	Soil	22-Aug-24 10:25	27-Aug-24 13:47
BH - 24 - 25 0FT	H245203-05	Soil	22-Aug-24 10:30	27-Aug-24 13:47
BH - 24 - 25 2FT	H245203-06	Soil	22-Aug-24 10:35	27-Aug-24 13:47
BH - 24 - 26 2FT	H245203-07	Soil	22-Aug-24 10:40	27-Aug-24 13:47
BH - 24 - 26 0FT	H245203-08	Soil	22-Aug-24 10:45	27-Aug-24 13:47
BH - 24 - 26 4FT	H245203-09	Soil	22-Aug-24 10:50	27-Aug-24 13:47
BH - 24 - 27 0FT	H245203-10	Soil	22-Aug-24 10:55	27-Aug-24 13:47
BH - 24 - 27 2FT	H245203-11	Soil	22-Aug-24 11:00	27-Aug-24 13:47
BH - 24 - 28 0FT	H245203-12	Soil	22-Aug-24 11:05	27-Aug-24 13:47
BH - 24 - 28 2FT	H245203-13	Soil	22-Aug-24 11:10	27-Aug-24 13:47
BH - 24 - 29 0FT	H245203-14	Soil	22-Aug-24 11:15	27-Aug-24 13:47
BH - 24 - 29 2FT	H245203-15	Soil	22-Aug-24 11:20	27-Aug-24 13:47
BH - 24 - 30 0FT	H245203-16	Soil	22-Aug-24 11:25	27-Aug-24 13:47
BH - 24 - 30 2FT	H245203-17	Soil	22-Aug-24 11:30	27-Aug-24 13:47
BH - 24 - 30 4FT	H245203-18	Soil	22-Aug-24 11:35	27-Aug-24 13:47
BH - 24 - 31 0FT	H245203-19	Soil	22-Aug-24 11:40	27-Aug-24 13:47
BH - 24 - 31 2FT	H245203-20	Soil	22-Aug-24 11:45	27-Aug-24 13:47
BH - 24 - 32 0FT	H245203-21	Soil	22-Aug-24 11:50	27-Aug-24 13:47
BH - 24 - 32 2FT	H245203-22	Soil	22-Aug-24 11:55	27-Aug-24 13:47
BH - 24 - 33 0FT	H245203-23	Soil	23-Aug-24 08:00	27-Aug-24 13:47
BH - 24 - 33 2FT	H245203-24	Soil	23-Aug-24 08:05	27-Aug-24 13:47
BH - 24 - 33 4FT	H245203-25	Soil	23-Aug-24 08:10	27-Aug-24 13:47
BH - 24 - 34 0FT	H245203-26	Soil	23-Aug-24 08:15	27-Aug-24 13:47
BH - 24 - 34 2FT	H245203-27	Soil	23-Aug-24 08:20	27-Aug-24 13:47

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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BH - 24 - 35 0FT	H245203-28	Soil	23-Aug-24 08:25	27-Aug-24 13:47
BH - 24 - 35 2FT	H245203-29	Soil	23-Aug-24 08:30	27-Aug-24 13:47
BH - 24 - 35 4FT	H245203-30	Soil	23-Aug-24 08:35	27-Aug-24 13:47
BH - 24 - 36 0FT	H245203-31	Soil	23-Aug-24 08:40	27-Aug-24 13:47
BH - 24 - 36 2FT	H245203-32	Soil	23-Aug-24 08:45	27-Aug-24 13:47
BH - 24 - 36 4FT	H245203-33	Soil	23-Aug-24 08:50	27-Aug-24 13:47
BH - 24 - 37 0FT	H245203-34	Soil	23-Aug-24 08:55	27-Aug-24 13:47
BH - 24 - 37 2FT	H245203-35	Soil	23-Aug-24 09:00	27-Aug-24 13:47
BH - 24 - 37 4FT	H245203-36	Soil	23-Aug-24 09:05	27-Aug-24 13:47
BH - 24 - 38 0FT	H245203-37	Soil	23-Aug-24 09:10	27-Aug-24 13:47
BH - 24 - 38 2FT	H245203-38	Soil	23-Aug-24 09:15	27-Aug-24 13:47
BH - 24 - 38 4FT	H245203-39	Soil	23-Aug-24 09:20	27-Aug-24 13:47
BH - 24 - 39 0FT	H245203-40	Soil	23-Aug-24 09:25	27-Aug-24 13:47
BH - 24 - 39 2FT	H245203-41	Soil	23-Aug-24 09:30	27-Aug-24 13:47
BH - 24 - 40 0FT	H245203-42	Soil	23-Aug-24 09:35	27-Aug-24 13:47
BH - 24 - 40 2FT	H245203-43	Soil	23-Aug-24 09:40	27-Aug-24 13:47
BH - 24 - 41 0FT	H245203-44	Soil	23-Aug-24 09:45	27-Aug-24 13:47
BH - 24 - 41 2FT	H245203-45	Soil	23-Aug-24 09:50	27-Aug-24 13:47
BH - 24 - 42 0FT	H245203-46	Soil	23-Aug-24 09:55	27-Aug-24 13:47
BH - 24 - 42 2FT	H245203-47	Soil	23-Aug-24 10:00	27-Aug-24 13:47
BH - 24 - 17 4FT	H245203-48	Soil	23-Aug-24 10:05	27-Aug-24 13:47

09/05/24 - Client changed the sample IDs of -07 and -08 (see COC). This is the revised report and will replace the one sent on 09/03/24.

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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 23 2FT
H245203-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	176		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			121 %		71.5-134	4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			70.8 %		48.2-134	4082817	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			73.6 %		49.1-148	4082817	MS	28-Aug-24	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 23 4FT
H245203-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	144		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			118 %	71.5-134		4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			78.9 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			82.5 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 24 0FT
H245203-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			119 %	71.5-134		4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			76.7 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			79.9 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
--	--	------------------------------

**BH - 24 - 24 2FT
H245203-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			117 %	71.5-134		4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			74.4 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			77.1 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 25 0FT
H245203-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			118 %	71.5-134		4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			81.1 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			84.6 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 25 2FT
H245203-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082808	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082808	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			118 %	71.5-134		4082808	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			83.8 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			88.0 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 26 2FT
H245203-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			97.6 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			80.6 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			84.5 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 26 0FT
H245203-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4240		16.0	mg/kg	4	4082923	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.4 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			84.0 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			87.4 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 26 4FT
H245203-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.7 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			76.7 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			83.0 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 27 0FT
H245203-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			97.9 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			73.6 %	48.2-134		4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			77.8 %	49.1-148		4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 27 2FT
H245203-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			97.7 %		71.5-134	4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082817	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			70.8 %		48.2-134	4082817	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			73.0 %		49.1-148	4082817	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 28 0FT
H245203-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			97.0 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			93.3 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			91.9 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 28 2FT
H245203-13 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.4 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			111 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			108 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 29 0FT
H245203-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.9 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			111 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			108 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 29 2FT
H245203-15 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.1 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			108 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 30 0FT
H245203-16 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4560		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.0 %		71.5-134	4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			115 %		48.2-134	4082818	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			112 %		49.1-148	4082818	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 30 2FT
H245203-17 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.8 %		71.5-134	4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			120 %		48.2-134	4082818	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			118 %		49.1-148	4082818	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 30 4FT
H245203-18 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.6 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			99.2 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			96.0 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 31 0FT
H245203-19 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			97.4 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			102 %	48.2-134		4082818	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			101 %	49.1-148		4082818	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 31 2FT
H245203-20 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.6 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			113 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			111 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Celest D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 32 0FT
H245203-21 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			100 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			114 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			112 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 32 2FT
H245203-22 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.3 %		71.5-134	4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			113 %		48.2-134	4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			110 %		49.1-148	4082818	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 33 0FT
H245203-23 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	8130		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.4 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			99.1 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			95.5 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 33 2FT
H245203-24 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.5 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			104 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			102 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 33 4FT
H245203-25 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.3 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			116 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			111 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 34 0FT
H245203-26 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082836	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082836	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			98.3 %	71.5-134		4082836	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			113 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			110 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 34 2FT
H245203-27 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	48.0		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			102 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			109 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 35 0FT
H245203-28 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	12300		16.0	mg/kg	4	4082920	CT	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			113 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			110 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 35 2FT
H245203-29 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4640		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			122 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			120 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 35 4FT
H245203-30 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	160		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			105 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			114 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			109 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 36 0FT
H245203-31 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	18200		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
DRO >C10-C28*	20.9		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082818	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			104 %	48.2-134		4082818	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			104 %	49.1-148		4082818	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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BH - 24 - 36 2FT

H245203-32 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4400		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			100 %	48.2-134		4082819	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			113 %	49.1-148		4082819	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 36 4FT
H245203-33 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	

Surrogate: 1-Chlorooctane			70.5 %	48.2-134		4082819	MS	28-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			75.4 %	49.1-148		4082819	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 37 0FT
H245203-34 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16400		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			87.7 %	48.2-134		4082819	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			96.1 %	49.1-148		4082819	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 37 2FT
H245203-35 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	5040		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			95.2 %	48.2-134		4082819	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			105 %	49.1-148		4082819	MS	28-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 37 4FT
H245203-36 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			101 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	28-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			88.9 %	48.2-134		4082819	MS	28-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			99.1 %	49.1-148		4082819	MS	28-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 38 0FT
H245203-37 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	13200		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			102 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	10.4		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			88.3 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			99.5 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 38 2FT
H245203-38 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	4640		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			96.7 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			109 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 38 4FT
H245203-39 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	128		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			94.3 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			106 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 39 0FT
H245203-40 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			93.6 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			103 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 39 2FT
H245203-41 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			96.3 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 40 0FT
H245203-42 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			99.1 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			112 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 40 2FT
H245203-43 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	48.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			95.3 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			104 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 41 0FT
H245203-44 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Inorganic Compounds

Chloride	48.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			92.7 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			103 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 41 2FT
H245203-45 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			95.4 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			104 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 42 0FT
H245203-46 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082838	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082838	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5-134		4082838	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			97.3 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			105 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 42 2FT
H245203-47 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082839	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			115 %	71.5-134		4082839	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			84.4 %	48.2-134		4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			93.2 %	49.1-148		4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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**BH - 24 - 17 4FT
H245203-48 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	144		16.0	mg/kg	4	4082924	HM	29-Aug-24	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4082839	JH	29-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4082839	JH	29-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			118 %		71.5-134	4082839	JH	29-Aug-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082819	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			95.6 %		48.2-134	4082819	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			106 %		49.1-148	4082819	MS	29-Aug-24	8015B	
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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082920 - 1:4 DI Water

Blank (4082920-BLK1)				Prepared & Analyzed: 29-Aug-24						
Chloride	ND	16.0	mg/kg							
LCS (4082920-BS1)				Prepared & Analyzed: 29-Aug-24						
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (4082920-BSD1)				Prepared & Analyzed: 29-Aug-24						
Chloride	432	16.0	mg/kg	400		108	80-120	3.64	20	

Batch 4082923 - 1:4 DI Water

Blank (4082923-BLK1)				Prepared & Analyzed: 29-Aug-24						
Chloride	ND	16.0	mg/kg							
LCS (4082923-BS1)				Prepared & Analyzed: 29-Aug-24						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4082923-BSD1)				Prepared & Analyzed: 29-Aug-24						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

Batch 4082924 - 1:4 DI Water

Blank (4082924-BLK1)				Prepared & Analyzed: 29-Aug-24						
Chloride	ND	16.0	mg/kg							
LCS (4082924-BS1)				Prepared & Analyzed: 29-Aug-24						
Chloride	432	16.0	mg/kg	400		108	80-120			

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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082924 - 1:4 DI Water

LCS Dup (4082924-BSD1)

Prepared & Analyzed: 29-Aug-24

Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
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Analytical Results For:

VERTEX RESOURCE
3101 BOYD DRIVE
CARLSBAD NM, 88220

Project: MIMOSA FEDERAL SWD #3Y
Project Number: 24E-03772
Project Manager: MICHAEL MOFFITT
Fax To: NA

Reported:
05-Sep-24 16:34

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082808 - Volatiles**Blank (4082808-BLK1)**

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0569		mg/kg	0.0500		114	71.5-134			

LCS (4082808-BS1)

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	1.93	0.050	mg/kg	2.00		96.3	82.8-130			
Toluene	2.04	0.050	mg/kg	2.00		102	86-128			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	85.9-128			
m,p-Xylene	4.35	0.100	mg/kg	4.00		109	89-129			
o-Xylene	2.23	0.050	mg/kg	2.00		111	86.1-125			
Total Xylenes	6.57	0.150	mg/kg	6.00		110	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0535		mg/kg	0.0500		107	71.5-134			

LCS Dup (4082808-BSD1)

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	2.28	0.050	mg/kg	2.00		114	82.8-130	16.8	15.8	QR-04
Toluene	2.30	0.050	mg/kg	2.00		115	86-128	12.0	15.9	
Ethylbenzene	2.37	0.050	mg/kg	2.00		119	85.9-128	8.90	16	
m,p-Xylene	4.73	0.100	mg/kg	4.00		118	89-129	8.46	16.2	
o-Xylene	2.40	0.050	mg/kg	2.00		120	86.1-125	7.65	16.7	
Total Xylenes	7.13	0.150	mg/kg	6.00		119	88.2-128	8.19	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0525		mg/kg	0.0500		105	71.5-134			

Batch 4082836 - Volatiles**Blank (4082836-BLK1)**

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082836 - Volatiles

Blank (4082836-BLK1) Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		98.7	71.5-134			

LCS (4082836-BS1) Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.01	0.050	mg/kg	2.00		100	86-128			
Ethylbenzene	2.01	0.050	mg/kg	2.00		100	85.9-128			
m,p-Xylene	4.03	0.100	mg/kg	4.00		101	89-129			
o-Xylene	1.97	0.050	mg/kg	2.00		98.5	86.1-125			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0491		mg/kg	0.0500		98.1	71.5-134			

LCS Dup (4082836-BSD1) Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130	0.0363	15.8	
Toluene	2.00	0.050	mg/kg	2.00		100	86-128	0.410	15.9	
Ethylbenzene	1.99	0.050	mg/kg	2.00		99.5	85.9-128	1.03	16	
m,p-Xylene	3.98	0.100	mg/kg	4.00		99.4	89-129	1.32	16.2	
o-Xylene	1.94	0.050	mg/kg	2.00		97.2	86.1-125	1.36	16.7	
Total Xylenes	5.92	0.150	mg/kg	6.00		98.7	88.2-128	1.33	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0491		mg/kg	0.0500		98.3	71.5-134			

Batch 4082838 - Volatiles

Blank (4082838-BLK1) Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0527		mg/kg	0.0500		105	71.5-134			

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082838 - Volatiles

LCS (4082838-BS1)		Prepared: 28-Aug-24 Analyzed: 29-Aug-24								
Benzene	2.25	0.050	mg/kg	2.00		113	82.8-130			
Toluene	2.23	0.050	mg/kg	2.00		112	86-128			
Ethylbenzene	2.22	0.050	mg/kg	2.00		111	85.9-128			
m,p-Xylene	4.59	0.100	mg/kg	4.00		115	89-129			
o-Xylene	2.23	0.050	mg/kg	2.00		112	86.1-125			
Total Xylenes	6.82	0.150	mg/kg	6.00		114	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0499		mg/kg	0.0500		99.7	71.5-134			

LCS Dup (4082838-BS1)		Prepared: 28-Aug-24 Analyzed: 29-Aug-24								
Benzene	2.19	0.050	mg/kg	2.00		110	82.8-130	2.58	15.8	
Toluene	2.18	0.050	mg/kg	2.00		109	86-128	2.34	15.9	
Ethylbenzene	2.16	0.050	mg/kg	2.00		108	85.9-128	2.82	16	
m,p-Xylene	4.46	0.100	mg/kg	4.00		111	89-129	2.92	16.2	
o-Xylene	2.18	0.050	mg/kg	2.00		109	86.1-125	2.59	16.7	
Total Xylenes	6.64	0.150	mg/kg	6.00		111	88.2-128	2.81	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0503		mg/kg	0.0500		101	71.5-134			

Batch 4082839 - Volatiles

Blank (4082839-BLK1)		Prepared: 28-Aug-24 Analyzed: 29-Aug-24								
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0594		mg/kg	0.0500		119	71.5-134			

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082839 - Volatiles

LCS (4082839-BS1)

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	2.21	0.050	mg/kg	2.00		111	82.8-130			
Toluene	2.02	0.050	mg/kg	2.00		101	86-128			
Ethylbenzene	2.13	0.050	mg/kg	2.00		106	85.9-128			
m,p-Xylene	4.45	0.100	mg/kg	4.00		111	89-129			
o-Xylene	2.20	0.050	mg/kg	2.00		110	86.1-125			
Total Xylenes	6.65	0.150	mg/kg	6.00		111	88.2-128			

Surrogate: 4-Bromofluorobenzene (PID)	0.0517		mg/kg	0.0500		103	71.5-134			
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LCS Dup (4082839-BS1)

Prepared: 28-Aug-24 Analyzed: 29-Aug-24

Benzene	2.16	0.050	mg/kg	2.00		108	82.8-130	2.31	15.8	
Toluene	1.96	0.050	mg/kg	2.00		97.8	86-128	3.11	15.9	
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128	4.02	16	
m,p-Xylene	4.28	0.100	mg/kg	4.00		107	89-129	3.92	16.2	
o-Xylene	2.12	0.050	mg/kg	2.00		106	86.1-125	3.87	16.7	
Total Xylenes	6.39	0.150	mg/kg	6.00		107	88.2-128	3.90	16.3	

Surrogate: 4-Bromofluorobenzene (PID)	0.0510		mg/kg	0.0500		102	71.5-134			
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082817 - General Prep - Organics

Blank (4082817-BLK1) Prepared & Analyzed: 28-Aug-24

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	41.3		mg/kg	50.0		82.5	48.2-134			
Surrogate: 1-Chlorooctadecane	44.4		mg/kg	50.0		88.7	49.1-148			

LCS (4082817-BS1) Prepared & Analyzed: 28-Aug-24

GRO C6-C10	208	10.0	mg/kg	200		104	66.4-123			
DRO >C10-C28	201	10.0	mg/kg	200		100	66.5-118			
Total TPH C6-C28	408	10.0	mg/kg	400		102	77.6-123			
Surrogate: 1-Chlorooctane	43.9		mg/kg	50.0		87.8	48.2-134			
Surrogate: 1-Chlorooctadecane	45.5		mg/kg	50.0		90.9	49.1-148			

LCS Dup (4082817-BSD1) Prepared & Analyzed: 28-Aug-24

GRO C6-C10	198	10.0	mg/kg	200		99.0	66.4-123	4.77	17.7	
DRO >C10-C28	189	10.0	mg/kg	200		94.4	66.5-118	6.03	21	
Total TPH C6-C28	387	10.0	mg/kg	400		96.7	77.6-123	5.39	18.5	
Surrogate: 1-Chlorooctane	44.4		mg/kg	50.0		88.9	48.2-134			
Surrogate: 1-Chlorooctadecane	46.8		mg/kg	50.0		93.6	49.1-148			

Batch 4082818 - General Prep - Organics

Blank (4082818-BLK1) Prepared & Analyzed: 28-Aug-24

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	57.4		mg/kg	50.0		115	48.2-134			
Surrogate: 1-Chlorooctadecane	56.5		mg/kg	50.0		113	49.1-148			

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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082818 - General Prep - Organics

LCS (4082818-BS1)		Prepared & Analyzed: 28-Aug-24								
GRO C6-C10	214	10.0	mg/kg	200	107	66.4-123				
DRO >C10-C28	218	10.0	mg/kg	200	109	66.5-118				
Total TPH C6-C28	432	10.0	mg/kg	400	108	77.6-123				
Surrogate: 1-Chlorooctane	61.9		mg/kg	50.0	124	48.2-134				
Surrogate: 1-Chlorooctadecane	59.4		mg/kg	50.0	119	49.1-148				

LCS Dup (4082818-BSD1)		Prepared & Analyzed: 28-Aug-24								
GRO C6-C10	198	10.0	mg/kg	200	98.9	66.4-123	7.79	17.7		
DRO >C10-C28	198	10.0	mg/kg	200	98.9	66.5-118	9.88	21		
Total TPH C6-C28	395	10.0	mg/kg	400	98.9	77.6-123	8.84	18.5		
Surrogate: 1-Chlorooctane	60.8		mg/kg	50.0	122	48.2-134				
Surrogate: 1-Chlorooctadecane	58.3		mg/kg	50.0	117	49.1-148				

Batch 4082819 - General Prep - Organics

Blank (4082819-BLK1)		Prepared & Analyzed: 28-Aug-24								
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	44.0		mg/kg	50.0	87.9	48.2-134				
Surrogate: 1-Chlorooctadecane	48.2		mg/kg	50.0	96.3	49.1-148				

LCS (4082819-BS1)		Prepared & Analyzed: 28-Aug-24								
GRO C6-C10	195	10.0	mg/kg	200	97.5	66.4-123				
DRO >C10-C28	193	10.0	mg/kg	200	96.7	66.5-118				
Total TPH C6-C28	388	10.0	mg/kg	400	97.1	77.6-123				
Surrogate: 1-Chlorooctane	48.2		mg/kg	50.0	96.3	48.2-134				
Surrogate: 1-Chlorooctadecane	52.1		mg/kg	50.0	104	49.1-148				

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Analytical Results For:

VERTEX RESOURCE 3101 BOYD DRIVE CARLSBAD NM, 88220	Project: MIMOSA FEDERAL SWD #3Y Project Number: 24E-03772 Project Manager: MICHAEL MOFFITT Fax To: NA	Reported: 05-Sep-24 16:34
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4082819 - General Prep - Organics

LCS Dup (4082819-BSD1)

Prepared & Analyzed: 28-Aug-24

GRO C6-C10	197	10.0	mg/kg	200		98.6	66.4-123	1.16	17.7	
DRO >C10-C28	199	10.0	mg/kg	200		99.4	66.5-118	2.77	21	
Total TPH C6-C28	396	10.0	mg/kg	400		99.0	77.6-123	1.96	18.5	
Surrogate: 1-Chlorooctane	47.3		mg/kg	50.0		94.6	48.2-134			
Surrogate: 1-Chlorooctadecane	51.9		mg/kg	50.0		104	49.1-148			

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Notes and Definitions

- QR-04 The RPD for the BS/BSD was outside of historical limits.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services
Project Manager: Michael Moffitt
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-988-2681 Fax #:
Project #: 24E-03772 Project Owner:
Project Name: Mimosa Federal SWD #3Y
Project Location: Eddy County, NM
Sampler Name: Fernando Rodriguez

BILL TO
P.O. #:
Company: Silverback Exploration
Attn: Rafael Alviso
Address: 108 S. 4th St.
City: Artesia
State: NM Zip: 88210
Phone #:
Fax #:

ANALYSIS REQUEST table with columns for TPH, BTEX, Chloride, and various sampling parameters.

Table with columns: Lab I.D., Sample I.D., # CONTAINERS, MATRIX (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER), PRESERV. (ACID/BASE, ICE / COOL, OTHER), SAMPLING (DATE, TIME), TPH, BTEX, Chloride.

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Relinquished By: [Signature] Date: 8/21/24 Time: 1347
Received By: [Signature] Date: 8/21/24 Time: 1347

Delivered By: (Circle One) 2.2c) C.O. U.S. Sampler - UPS - Bus - Other: Tele: #140
Sample Condition: Cool Intact [X] Yes [X] Yes [] No [] No
CHECKED BY: (Initials) SR

Phone Result: [] Yes [] No Add'l Phone #:
Fax Result: [] Yes [] No Add'l Fax #:
REMARKS: * Customer requested ITD Changes. TO: 9/4/24

s. Please fax written changes to 575-393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services
Project Manager: Michael Moffitt
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-988-2681 Fax #:
Project #: 24E-03772 Project Owner:
Project Name: Mimosa Federal SWD #3Y
Project Location: Eddy County, NM
Sampler Name: Fernando Rodriguez

BILL TO
P.O. #:
Company: Silverback Exploration
Attn: Rafael Alviso
Address: 108 S. 4th St.
City: Artesia
State: NM Zip: 88210
Phone #:
Fax #:

ANALYSIS REQUEST table with columns for Lab I.D., Sample I.D., Matrix (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER), PRESERV. (ACID/BASE, ICE / COOL, OTHER), SAMPLING (DATE, TIME), and various analysis parameters (TPH, BTEX, Chloride).

Table with columns: Lab I.D. (Handwritten: H245203, 14-22), Sample I.D. (BH24-29 0ft to 2ft, BH24-30 0ft to 4ft, BH24-31 0ft to 2ft, BH24-32 0ft to 2ft), (C/RAB OR (C/OMP), # CONTAINERS, MATRIX (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER), PRESERV. (ACID/BASE, ICE / COOL, OTHER), SAMPLING (DATE, TIME), TPH, BTEX, Chloride.

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Relinquished By: [Signature] Date: 8/27/24 Time: 1347 Received By: [Signature] Date: [Blank] Time: [Blank]
Delivered By: (Circle One) 2.2c) C.O. U2 Sampler - UPS - Bus - Other: T. U2 = #140 Sample Condition: Cool Intact [Checked] Yes [] No [] No CHECKED BY: [Signature]

Phone Result: [] Yes [] No Add'l Phone #:
Fax Result: [] Yes [] No Add'l Fax #:
REMARKS:
Direct bill to Silverback Exploration
Email results to: mmoffitt@vertex.ca & frodriguez@vertex.ca

s. Please fax written changes to 575-393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services
Project Manager: Michael Moffitt
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-988-2681 Fax #:
Project #: 24E-03772 Project Owner:
Project Name: Mimosa Federal SWD #3Y
Project Location: Eddy County, NM
Sampler Name: Fernando Rodriguez

BILL TO
P.O. #:
Company: Silverback Exploration
Attn: Rafael Alviso
Address: 108 S. 4th St.
City: Artesia
State: NM Zip: 88210
Phone #:
Fax #:

Table with columns for ANALYSIS REQUEST, including TPH, BTEX, Chloride, and various matrix types (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER).

Table with columns for Lab I.D., Sample I.D., CONTAINERS, MATRIX, PRESERV., and SAMPLING. Includes handwritten sample IDs and dates.

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses.

Relinquished By: [Signature] Date: 8-27-24 Time: 1347
Received By: [Signature] Date: Time:
Delivered By: (Circle One) [Handwritten]
Sampler - UPS - Bus - Other: [Handwritten]

Phone Result: Yes No Add'l Phone #:
Fax Result: Yes No Add'l Fax #:
REMARKS:
Direct bill to Silverback Exploration
Email results to: mmoffitt@vertex.ca & frodriguez@vertex.ca

3. Please fax written changes to 575-393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services
Project Manager: Michael Moffitt
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-988-2681 Fax #:
Project #: 24E-03772 Project Owner:
Project Name: Mimosa Federal SWD #3Y
Project Location: Eddy County, NM
Sampler Name: Fernando Rodriguez

BILL TO ANALYSIS REQUEST

P.O. #:
Company: Silverback Exploration
Attn: Rafael Alviso
Address: 108 S. 4th St.
City: Artesia
State: NM Zip: 88210
Phone #:
Fax #:

Table with columns for ANALYSIS REQUEST, including TPH, BTEX, Chloride, and various sampling parameters.

Table with columns: Lab I.D., Sample I.D., (GRAB OR (C)OMP. # CONTAINERS, MATRIX (GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER), PRESERV. (ACID/BASE, ICE / COOL, OTHER), SAMPLING (DATE, TIME), TPH, BTEX, Chloride.

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses.

Relinquished By: [Signature] Date: 8-27-24 Time: 1:34 PM Received By: [Signature] Date: [] Time: []
Delivered By: (Circle One) 2-2 [Signature] Sample Condition: Cool Intact [] Yes [] No [] No

Phone Result: [] Yes [] No Add'l Phone #:
Fax Result: [] Yes [] No Add'l Fax #:
REMARKS:
Direct bill to Silverback Exploration
Email results to: mmoffitt@vertex.ca & frodriguez@vertex.ca

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General Information
Phone: (505) 629-6116

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

QUESTIONS

Action 567464

QUESTIONS

Operator: RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue Oklahoma City, OK 73104	OGRID: 372290
	Action Number: 567464
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2409671242
Incident Name	NAPP2409671242 MIMOSA FEDERAL SWD 3Y @ 30-015-29123
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Well	[30-015-29123] MIMOSA FEDERAL SWD #003Y

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	Mimosa Federal SWD 3Y
Date Release Discovered	04/05/2024
Surface Owner	Federal

Incident Details	
<i>Please answer all the questions in this group.</i>	
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	
<i>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.</i>	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure Pump Produced Water Released: 746 BBL Recovered: 300 BBL Lost: 446 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)	Release occurred due to overpressure on the suction hose of the water pump, which caused approximately 746 barrels (bbl.) of produced water to release onto the pad, the site's supplementary access road, and extended down onto pasture and draw areas northwest of the site. Vacuum trucks were dispatched and removed pooled fluids. An excavation crew was brought to the site to scrape and haul off recoverable materials. Approximately 300 barrels (bbl.) of free fluids were recovered and impacted soils were hauled off to an approved disposal facility

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QUESTIONS, Page 2

Action 567464

QUESTIONS (continued)

Operator: RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue Oklahoma City, OK 73104	OGRID: 372290
	Action Number: 567464
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	N/A

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: Fernando Rodriguez Title: SR EHS Specialist Email: fernandorodriguez@rileypermian.com Date: 03/30/2026
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QUESTIONS, Page 3

Action 567464

QUESTIONS (continued)

Operator: RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue Oklahoma City, OK 73104	OGRID: 372290
	Action Number: 567464
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Zero feet, overlying, or within area
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (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	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Zero feet, overlying, or within area
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	High
A 100-year floodplain	Zero feet, overlying, or within area
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<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

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	18200
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	20.9
GRO+DRO (EPA SW-846 Method 8015M)	20.9
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	06/01/2026
On what date will (or did) the final sampling or liner inspection occur	06/15/2026
On what date will (or was) the remediation complete(d)	07/01/2026
What is the estimated surface area (in square feet) that will be reclaimed	70500
What is the estimated volume (in cubic yards) that will be reclaimed	2000
What is the estimated surface area (in square feet) that will be remediated	70500
What is the estimated volume (in cubic yards) that will be remediated	2000

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed. The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 567464

QUESTIONS (continued)

Operator: RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue Oklahoma City, OK 73104	OGRID: 372290
	Action Number: 567464
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	FEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Fernando Rodriguez Title: SR EHS Specialist Email: fernandorodriguez@rileypermian.com Date: 03/30/2026
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 567464

QUESTIONS (continued)

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	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 567464

QUESTIONS (continued)

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	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	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 567464

CONDITIONS

Operator: RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue Oklahoma City, OK 73104	OGRID: 372290
	Action Number: 567464
	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. Due to the sensitive nature of the release location, the site will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule. Please collect confirmation closure samples, representing no more than 200 ft2. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Please make sure that the edge of the release extent is accurately defined, especially around equipment/pipelines. Contamination on roads will need to be sampled and remediated if present. 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. All off-pad areas must meet reclamation standards in the OCD Spill Rule.	4/2/2026