CLOSURE PLAN

FOUR PETE'S SAKE #1
LEA COUNTY, NEW MEXICO

OCD Incident # njxk1534849827

Prepared for:

Manzano, LLC
Roswell, New Mexico

July 10, 2024

R. MARLEY, LLC.
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1.0 Introduction

This Closure Plan ("Plan") is provided to document closure activities conducted at the active Four Pete's Sake #1 site (the "Site") in Lea County, New Mexico (Attachment A, Figure 1) and to address deficiencies identified in the March 8, 2024, Closure Report ("Report") identified by the New Mexico Oil Conservation Division ("OCD") in its April 20, 2024, rejection of the Report. This Plan replaces the Report and guides potential future closure activities at the Site under 19.15.29.12.E NMAC.

2.0 Background

On or about December 8, 2015, a release of produced water occurred from a stuffing box at the Four Pete's Sake #1 wellhead. The flowline valve was closed by an unknown person causing produced water to be emitted from the stuffing box. According to Manzano personnel, approximately ten barrels of fluid were released in the approximate direction and location shown in Figures 2 and 3. The operator (Manzano, LLC, or "Manzano") shut down the well upon discovery of the release and deployed a crew to contain and cleanup the release. Insufficient volume was released to allow vacuum of material. An unknown quantity of presumably contaminated soil was removed from the release footprint and replaced with clean fill soil.

After an OCD inspection of the Site on August 20, 2023, Manzano was notified that the release incident was not "closed" and that either supporting documentation for the 2015 cleanup efforts must be provided, or confirmation samples collected in the release footprint to confirm remediation standards in 19.15.29 NMAC have been met (see OCD correspondence in Attachment X). Manzano retained R. Marley, LLC ("R. Marley") to address the notification and achieve regulatory closure for the Site.

3.0 Physical Setting

The Site is located approximately 6.5 miles northeast of Caprock, New Mexico, in the extreme northwest corner of Lea County. The Site is east and south of the northern portion of the Caprock Escarpment (a prominent geomorphic feature in the area) which arcs to the east in the vicinity of the Site. The Site is approximately one mile south and 2.2 miles east of the Escarpment, and 1.3 miles west of Lane Salt Lake.

3.1 Geology

The Site is underlain by a stratigraphic section typical of this part of the northern Permian Basin. The surface throughout the area is likely covered by alluvial and reworked colluvial deposits nearest to the Escarpment, and lacustrine and aeolian deposits farther from the Escarpment. Both are of Quaternary age. These deposits are comprised of fine-grained, red-brown sands, interbedded with red-brown silts and clays derived from the topographically higher Tertiary Ogallala Formation that forms the Caprock to the west and north. The Ogallala unconformably overlies Triassic sediments in the project area (Stoller 1994). Water occurrence at the Site is addressed in Section 3.3 below.

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Stoller (1994) also reports Triassic sediments immediately beneath the Ogallala can be observed in several locations along the Escarpment beneath the caprock. These sediments are sometimes identified as "Undivided Triassic" or "Triassic Redbeds" but are generally formations in the Dockum Group, including the Redondo, Chinle, and Santa Rosa Formations. These rocks typically consist of nonresistant red-maroon mudstones and siltstones that dip slightly to the east. The estimated thickness in the area is up to 1,200 feet. The Santa Rosa Formation is likely not present at the Site.

Permian sediments underlying the Triassic sequence in the area are generally assigned to the Artesia Group, consisting of the Dewey Lakes, Rustler, and Yates Formations. The Dewey Lakes Redbeds are in conformable contact with the Triassic sequence, and consists of mudstones and siltstones. The Rustler Formation is marked by a bed of anhydrite the overlies a 500 ft. thick bed of halite. Underlying the Rustler, the Yates Formation is composed primarily of interbedded sandstone, with minor dolostone and limestone. The Yates marks the beginning of producing formations in the area.

3.2 Soils

As shown in Figure 4, the Site is within the mapped unit "PG," which refers to the Lovington-Delphos fine sandy loam (0 to 3 percent slope). This soil map unit is identified by USDA (2020) as being composed of 45% Lovington and similar soils, 40% Delphos and similar soils, and 15% other minor components. Soil unit PG is well drained, occurring on playa floors and playa steps, and is derived from lacustrine deposits of Quaternary age and calcareous aeolian deposits from the Blackwater Draw Formation of Pleistocene age. The soil consists of various horizons of fine sandy loam, clay loam, and sandy clay loam to depths of over 80 inches without any restrictive layer identified within the first 80 inches, and without having any regular flooding frequency (USDA 2020).

3.3 Groundwater Occurrence

The Ogallala Formation is a major aquifer in the area, also known as the High Plains Aquifer. The Santa Rosa Sandstone is also a known aquifer in east-central New Mexico, but as discussed above is likely not present at the Site.

Due to the remote nature of the site, there is no groundwater data available on or adjacent to the Site. As shown in Figure 5, the closest New Mexico Office of the State Engineer ("NMOSE") Point of Diversion ("POD") is approximately 3.2 miles east-southeast of the site, where the depth to groundwater was recorded as being 30 feet below the ground surface ("bgs") in 2017 (when the well was drilled). This well is approximately one mile from Lane Salt Lake, which likely provides local recharge to a perched and discontinuous aquifer. The second closest OSE POD is located about 3.4 miles to the west, where the depth to groundwater was 175 feet bgs when the well was drilled (date unknown), and because the well is on the Caprock is likely not representative of the depth-to-water at the Site. About 7.3 miles to the southeast is the closest well that is part of a collaborative groundwater level monitoring network (Well No. WL-0035). Water levels in this well have held stable at about 30 feet bgs from about mid-2017 to present (NMBGMR 2024).

Because of the Site's proximity to the Caprock Escarpment, its topographic position above and west (upgradient) of Lane Salt Lake, groundwater at the Site is estimated to be

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approximately 80 feet bsg. Regardless of the actual depth-to-water, the base of chloride contamination due to the release is restricted to the vadose zone. See also Section 4.0 below and Figure 8.

3.4 Flood Potential

As shown in Figure 6, the Site is within FEMA Flood Zone D, which refers to areas of undetermined flood hazard (FEMA 2009). Although flood zones have not been determined by FEMA, the flood risk on the site is low, because it is located nearly 100 feet above the surface of Lane Salt Lake at an elevation near 4,250 feet amsl, near a subtle topographic rise and not near any major watercourses. The soil unit on site is characterized by USDA (2020) as not having any flooding frequency. These factors make the risk of flood on the Site negligible.

3.5 Karst Potential

Review of karst potential layers provided by the U.S. Bureau of Land Management (BLM 2020) indicate that the Site is not within the coverage area for the "critical karst zone" layer, is not within the coverage area for the "DyeTraceAreas" layer, is in an area identified as "Low" potential for karst occurrence and is identified as having a karst depth of zero. Figure 7 shows the subject site in relation to the Karst Potential and depth layers. Based on this information, the potential for site closure activities and the post-closure condition to affect or be affected by karst geology is negligible.

3.6 Stability

The Site does not overlie a subsurface mine. The Site is located within aeolian and lacustrine/playa deposits that overlie a thick sequence of non-economic redbeds and sedimentary strata, and therefore is not a target area for mineral resource extraction. See also Section 3.1 above. Accordingly, the site is not within any mineral mining districts identified by the New Mexico Bureau of Geology and Mineral Resources (NMBGMR 2017).

The Site is not located on "unstable ground" because it is on flat to gently sloping terrain underlain by lacustrine/aeolian deposits, and not within an area prone to landslides, fissures, faulting, or differential settlement/subsidence. At an elevation of 4,249 feet above mean sea level, the subject site and surrounding area has a slope gradient of less than 3%, and therefore would not be prone to slope instabilities. As discussed above, karst geology is not an issue in terms of potentially leading to sinkholes or other subsurface instabilities. According to the U.S. Geological Survey Quaternary Fault and Fold Database, there are no Quaternary-age fault lines in or near the subject site (USGS 2006). Settlement/subsidence would not adversely affect site closure activities and the post-closure condition because it occurs uniformly across the area.

4.0 Nature and Extent of Contamination

R. Marley developed and executed a field campaign to determine what, if any, residual contamination from the 2015 release footprint was still present, and the nature, extent, and

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concentrations of contamination. Contamination above regulatory standards at 19.15.29 NMAC (see Section 4.2 below) were excavated and disposed of in an OCD-permitted facility, and confirmatory samples collected and analyzed for contaminants of concern ("COCs") by an analytical laboratory. The field campaign was conducted in early 2024.

4.1 Field Screening

A preliminary field investigation was conducted on February 14, 2024, using field screening techniques to determine where subsequent excavation and confirmatory sampling would be appropriate. Borings were advanced with a stainless steel hand auger decontaminated before each use with an Alconox® rinse followed by a deionized water rinse. Discreet samples were placed in clean (i.e., new) glass quart glass jars with equal parts sample and deionized water for approximately 30-45 seconds. The probe of a (daily) calibrated Tracer PockeTester® multimeter capable of detecting salts to approximately 10 parts per million (ppm) was immersed in the slurry and the stabilized reading recorded. Representative borings are shown in Attachment B (Photosheets).

Sample locations were chosen to confirm the presence or absence of elevated chloride within the footprint of the suspected area of the release (Figure 3) and to focus subsequent excavation actions on locations that exceeded 600 ppm. Results are shown in Table 1 below.

Table 1. Chloride concentrations at soil boring locations. Depth in feet below ground surface. Cl- concentrations in ppm.

Boring No.	Depth	Cl-
1	0.5	200
1	1	1790
1	2	4030
1	3	2500
1	4	2440
2	0.5	410
2	1	420
2	2	610
3	0.5	50
3	1	420
4	0.5	50
5	0.5	60
5	1	120
6	0.5	1790
6	1	1920
7	0.5	1580
7	1	220
8	0.5	550
8	1	340
9	0.5	1460
9	1	510

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The field screening results show exceedences above closure criteria at 19.15.29.12.E NMAC at Boring Numbers 1, 2, 6, 7, and 9. These locations were therefore targets for subsequent remediation, confirmation sampling, or both.

4.2 First Excavation and Confirmation Sampling

Remediation commenced on March 8, 2024, when R. Marley deployed an excavator to remove chloride-contaminated soil. Based on the field screening described in Section 4.1, an approximately 120 ft. by 80 ft. area was excavated to depths ranging from two to ten feet bsg. The excavation (Figures 3 and 8) extended beyond the entirety of the contaminated area identified by field screening, resulting in over-excavation both laterally and vertically with respect to the field screening results. Approximately 826 cubic yards of earth material was removed and transported for disposal at an OCD-permitted facility. Excavation photographs are presented in Attachment B.

Confirmatory sampling was conducted during excavation by retrieving discreet samples with a decontaminated stainless steel trowel from the excavator bucket during the removal for both field screening and laboratory analysis at key locations inside and outside the assumed release footprint to confirm that over-excavation achieved the closure criteria for ≤50 depth-to-water at 19.15.29.12.E NMAC.[1] Samples T-6, T-7, and T-12 are considered "base" samples, as they were located in the centroid of the excavation. All other samples are considered "sidewall" samples. As discussed above, the presumed contaminated area was over-excavated beyond the sample locations. Because the Site is active, clean soil was used to fill and level the excavated area that same day.

Field screening was conducted as described in Section 4.1 above. Samples for laboratory analysis were placed directly into laboratory-provided 4 oz. jars and placed on ice in a cooler. Samples were transported to Cardinal Laboratories in Hobbs, New Mexico, for analysis by EPA Methods 8021B (BTEX), SM4500Cl-B (Chloride), and 8015M (TPH). Results are shown in Table 2 below and sample locations are shown in Figure 3. The laboratory report is presented in Attachment C.

The results show that remediation (i.e., excavation and removal) achieved the closure criteria in all locations for hydrocarbons. The criteria were met for chloride in all locations except T-10. Crucially, all criteria were met at the locations closest to the release site (i.e., T-1, T-2, T-6, and T-8).

[1] The more conservative Table I criteria to ≤50 feet depth-to-water was used even though the water table is likely at 51-100 feet bsg. See Section 3.3 above.

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Received by OCD: 7/17/2024 1:34:17 PM

Table 2. Concentrations of constituents of concern at sample locations from first excavation. Depth in feet below ground surface. Concentrations in ppm. ND means not detected above the laboratory method detection limit. All samples are within the excavation footprint.

Sample ID	Depth	Chloride	TPH	BTEX	Benzene
T-1	2	96	ND	ND	ND
T-2	2	256	ND	ND	ND
T-3	2	432	ND	ND	ND
T-4	2	272	ND	ND	ND
T-5	2	64.0	ND	ND	ND
T-6	3	96.0	ND	ND	ND
T-7	3	80.0	ND	ND	ND
T-8	3	304	ND	ND	ND
T-9	3	368	ND	ND	ND
T-10	3	784	ND	ND	ND
T-11	3	416	ND	ND	ND
T-12	4	208	ND	ND	ND

4.3 Second Excavation and Confirmation Sampling

Due to the chloride exceedance from the T-10 confirmatory sample, a second limited removal action (i.e., excavation) was conducted on March 18, 2024, centered around T-10 (see Figures 3 and 8, and photographs in Attachment B). An excavator was used to remove soils with elevated chloride concentrations in an area of approximately five by five feet to a depth of approximately five feet. Three discreet confirmatory samples were taken from the northeast, south, and northwest excavation sidewalls in the manner as described in Section 4.2 above. Results are presented in Table 3 below. The laboratory report is presented in Attachment C.

Table 3. Concentrations of constituents of concern at soil boring locations from second excavation. Depth in feet below ground surface. Concentrations in ppm. ND means not detected above the laboratory method detection limit.

Sample ID	Depth	Chloride	TPH	BTEX	Benzene
T-10 NE	5	384	ND	ND	ND
T-10 S	5	480	ND	ND	ND
T-10 NW	2	496	ND	ND	ND

The results show that remediation achieved the closure criteria in the excavation centered around T-10 for all constituents of concern listed in 19.15.29.12.E. NMAC.

5.0 Closure Report Deficiencies

In its April 20, 2024, correspondence, the OCD cited the following deficiencies in the Closure Report. The deficiencies are listed in the order presented in the OCD correspondence with R. Marley's response shown after the deficiency:

- No scaled diagram of the site: See Figures 2 and 3.
- No determination of the depth-to-water: See Section 3.3 above and Figure 5.

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- No determination of the lateral and vertical extents of soil contamination: See Section 4.0 above and Figures 3 and 8.
- No determination of subsurface mines underlying the Site: See Section 3.6 above.
- No determination of the 100-year floodplain at the Site: See Section 3.4 above and Figure 6.
- Insufficient explanation of sampling and testing of the walls and base, including whether or not five-point composite or other appropriate method of sampling was used: See Section 4.0 above.
- No notification of final sampling: Notification is shown in Attachment D.
- No determination of karst underlying the Site: See Section 3.5 above and Figure 7.

6.0 Variance Requests

R. Marley, on behalf of Manzano, requests that the following variances be granted to allow OCD to consider this Plan as a Closure Report. In the alternative, should the OCD deem this Plan nonresponsive to the OCD deficiencies in whole or in part, granting these variances will help move the Site to closure in the future.

6.1 Five-Point Composite Sampling [19.15.29.12.D(1) NMAC]

Discreet (i.e., grab) sampling different from that called for in 19.15.29.12.D(1) NMAC was conducted during the remedial activities documented in this report. Due to the age of the release, consistency in the analytical results, and COCs, grab sampling yielded reasonably representative samples that are adequate to determine the nature and extent of contamination. The grab sampling did not cause any diminution of protection of human health and the environment due to the age of the release, excavation that has already occurred, consistency of the results between samples, and low likelihood that any residual contamination would migrate laterally or vertically in the vadose zone. R. Marley requests that the grab sampling that has already been conducted be approved, and that should OCD require additional sampling, grab sampling be further approved should additional sampling be required in the future.

6.2. Sampling Density [19.15.29.12.D(1)(c) NMAC]

The sampling reported herein utilized a density different from that called for 19.15.29.12.D(1)(c) NMAC. For the same rationale and good cause shown in Section 6.1 above, R. Marley requests that the sampling that has already been conducted be approved. Should OCD require additional sampling, it will be conducted in compliance with 19.15.29.12.D(1)(b) or (c) NMAC.

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6.3 Base Sampling [19.15.29.12.D(1) NMAC]

Base sampling different from that called for in 19.15.29.12.D(1) NMAC was conducted during the remedial activities documented in this report. Due to the age of the release, consistency in the analytical results, and COCs, base sampling yielded reasonably representative samples that are adequate to determine the nature and extent of contamination. R. Marley requests that the base sampling that has already been conducted be approved. Should OCD require additional sampling, it will be conducted in compliance with 19.15.29.12.D(1)(b) or (c) NMAC.

6.4 Analyte Suite [19.15.29.12.D(1) NMAC]

Based on the sampling described in Section 4.0 above, chlorides are the sole contaminant of concern at the Site. For the same rationale and good cause shown in Section 6.1 above, should OCD require additional sampling, we request that the analytical suite for laboratory analysis be limited to chloride.

7.0 References

S.M. Stoller Corporation. 1994. Preliminary Geologic Investigation Report: Gandy Project [Draft].

Bureau of Land Management (Carlsbad Field Office). 2020. Karst Potential Layers. Geospatial data for karst potential, critical karst areas, and karst depths. Emailed from Ellen Trautner (Natural Resource Specialist) to Austin Weyant on March 11, 2024.

New Mexico Bureau of Geology and Mineral Resources (NMBGMR). 2017. Mining Districts and Prospect Areas in New Mexico. By Virginia T. McLemore. NMBGMR Map Sheet RM-24. 2017. URL: https://geoinfo.nmt.edu/publications/maps/resource/24/ accessed 6/3/2024.
U.S. Geological Survey (and New Mexico Bureau of Geology and Mineral Resources) (USGS) 2006. Quaternary fault and fold database for the United States, accessed 6/18/2024. Accessed at: http//earthquakes.usgs.gov/regional/qfaults/.

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New Mexico Office of the State Engineer (OSE). 2024. OSE POD Locations. Web Map layer from the Water Rights Reporting System (NMWRRS). URL: https://gis.ose.state.nm.us/gisapps/ose_pod_locations/ accessed 6/3/2024.
New Mexico Bureau of Geology and Mineral Resources (NMBGMR). 2024. Collaborative Water Level Network

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA). 2020. Spatial Data for Soil Survey of Lea County, NM (NM025), Version 20, Sep 6 2023.

Federal Emergency Management Agency (FEMA). 2009. FEMA Flood Hazard Zones for Flood Insurance Rate Map Panel 3500531550D. Effective 9/25/2009.

8.0 Attachments

Attachment A – Figures

Attachment B – Photographs

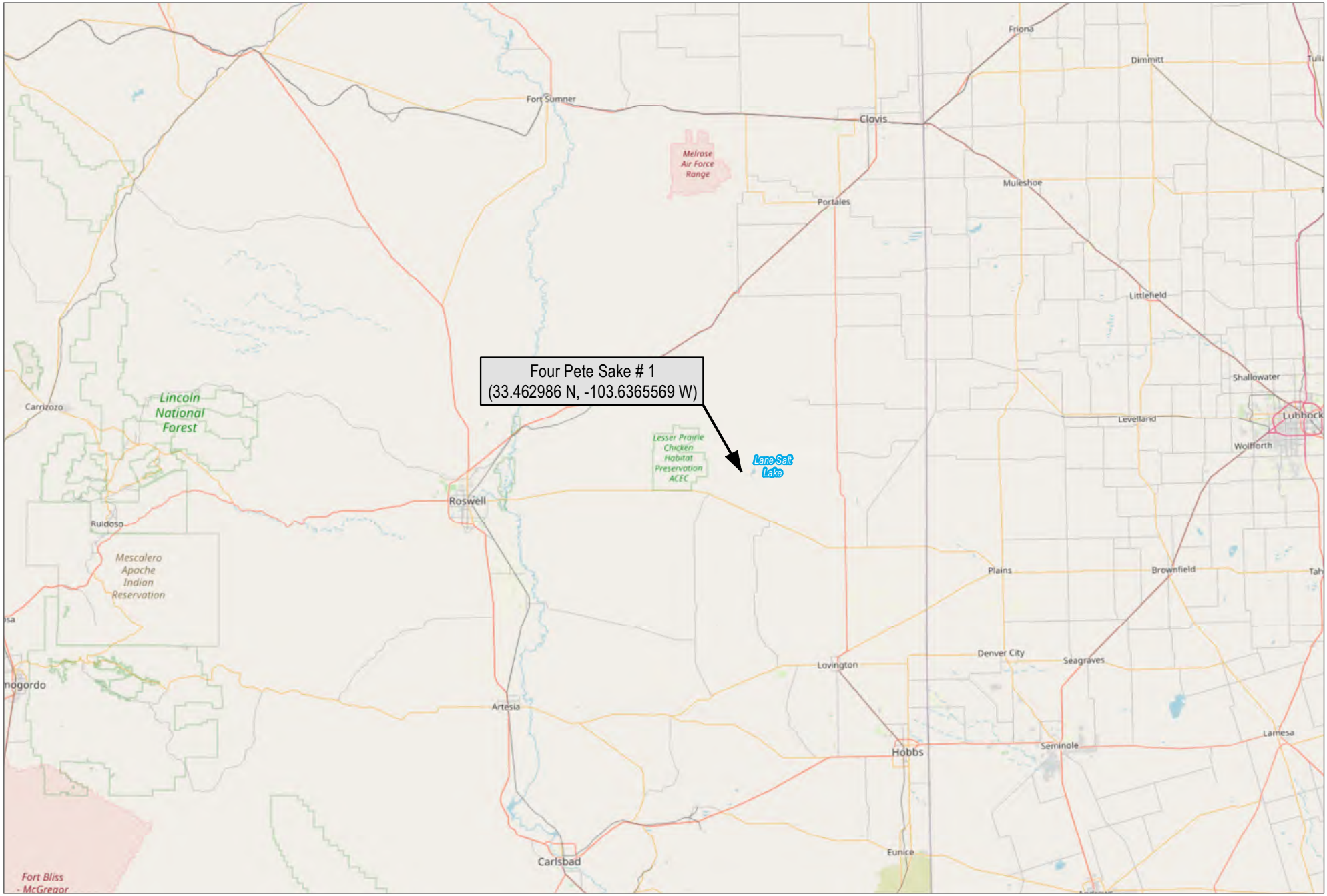
Attachment C – Laboratory Reports

Attachment D – OCD Correspondence

ATTACHMENT A

FIGURES

DISCUSSION DRAFT



SOURCE: ESRI

0 25 50 Miles

FIGURE 1

Regional Location

Four Pete Sake # 1 Closure Report (Manzano LLC)

DISCUSSION DRAFT

SOURCE: USDA Aerial (National Agricultural Imaging Program 2022)

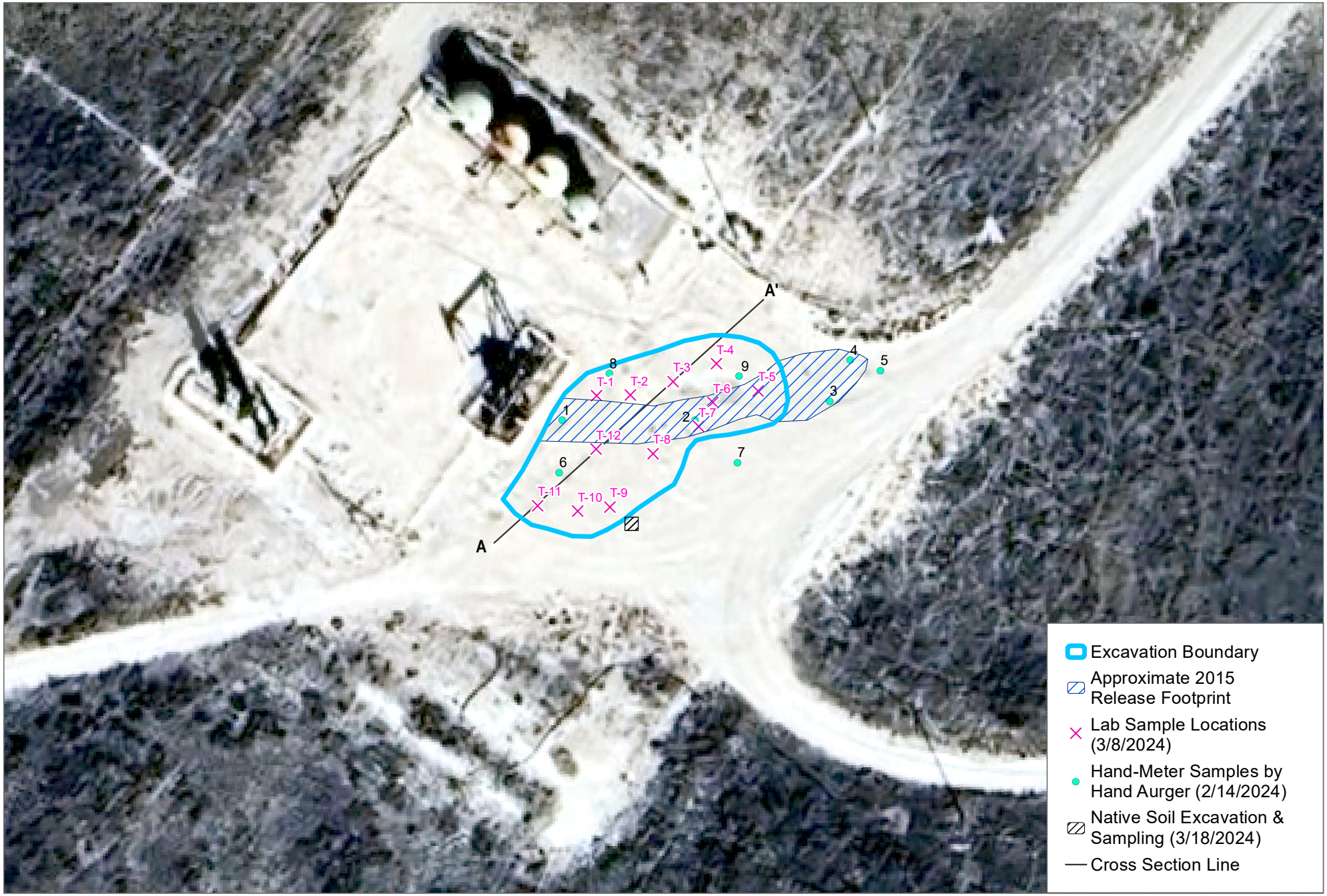
0 50 100 Feet

1 inch = 50 feet

FIGURE 2

Scaled Site Map

Four Pete Sake # 1 Closure Report (Manzano LLC)



SOURCE: Field Notes

0 50 100 Feet

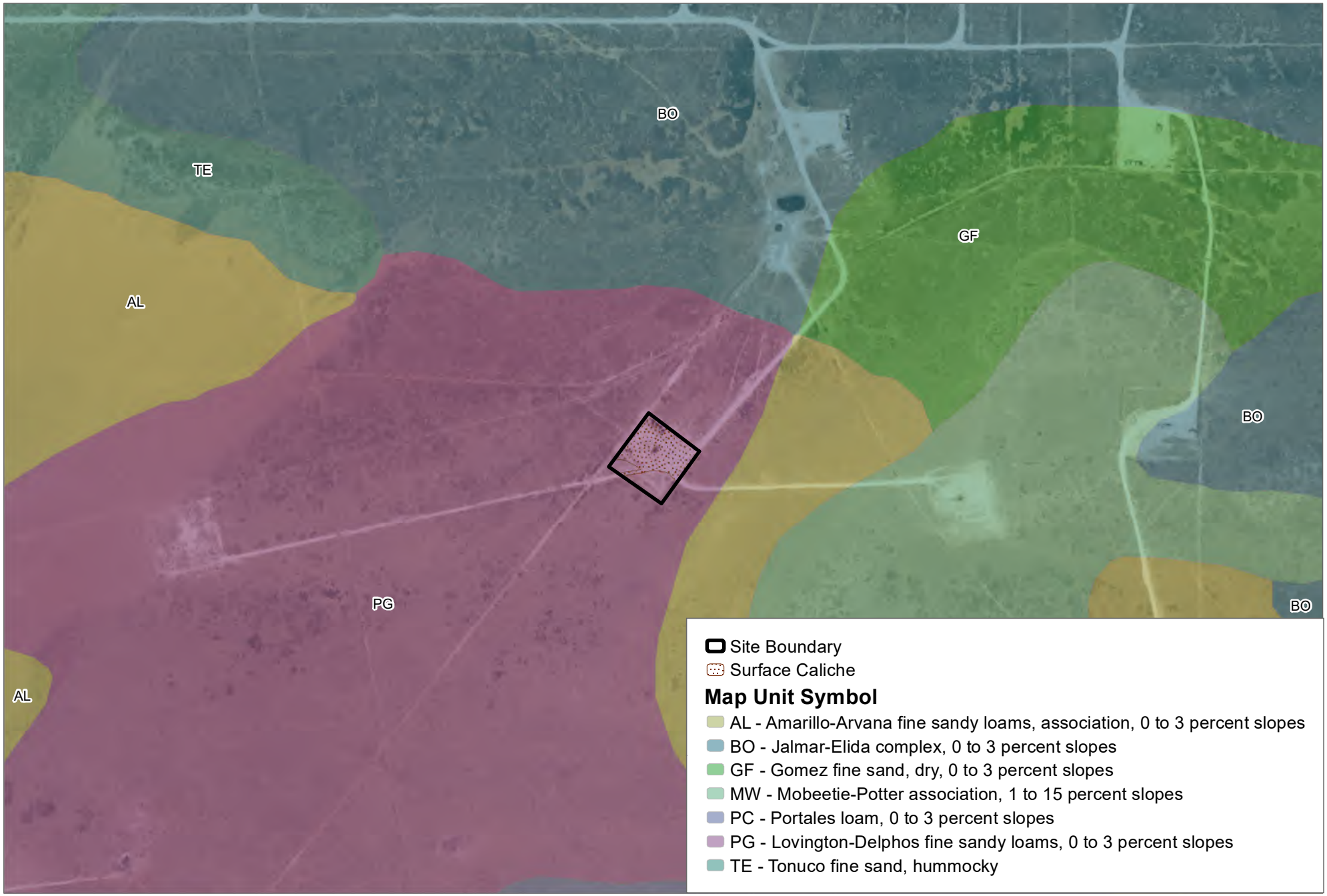
1 inch = 50 feet

FIGURE 3

Lateral Extent and Sample Locations

Four Pete Sake # 1 Closure Report (Manzano LLC)

DISCUSSION DRAFT



SOURCE: USDA 2020 (Spatial soil survey data for Lea County, New Mexico [NM025])

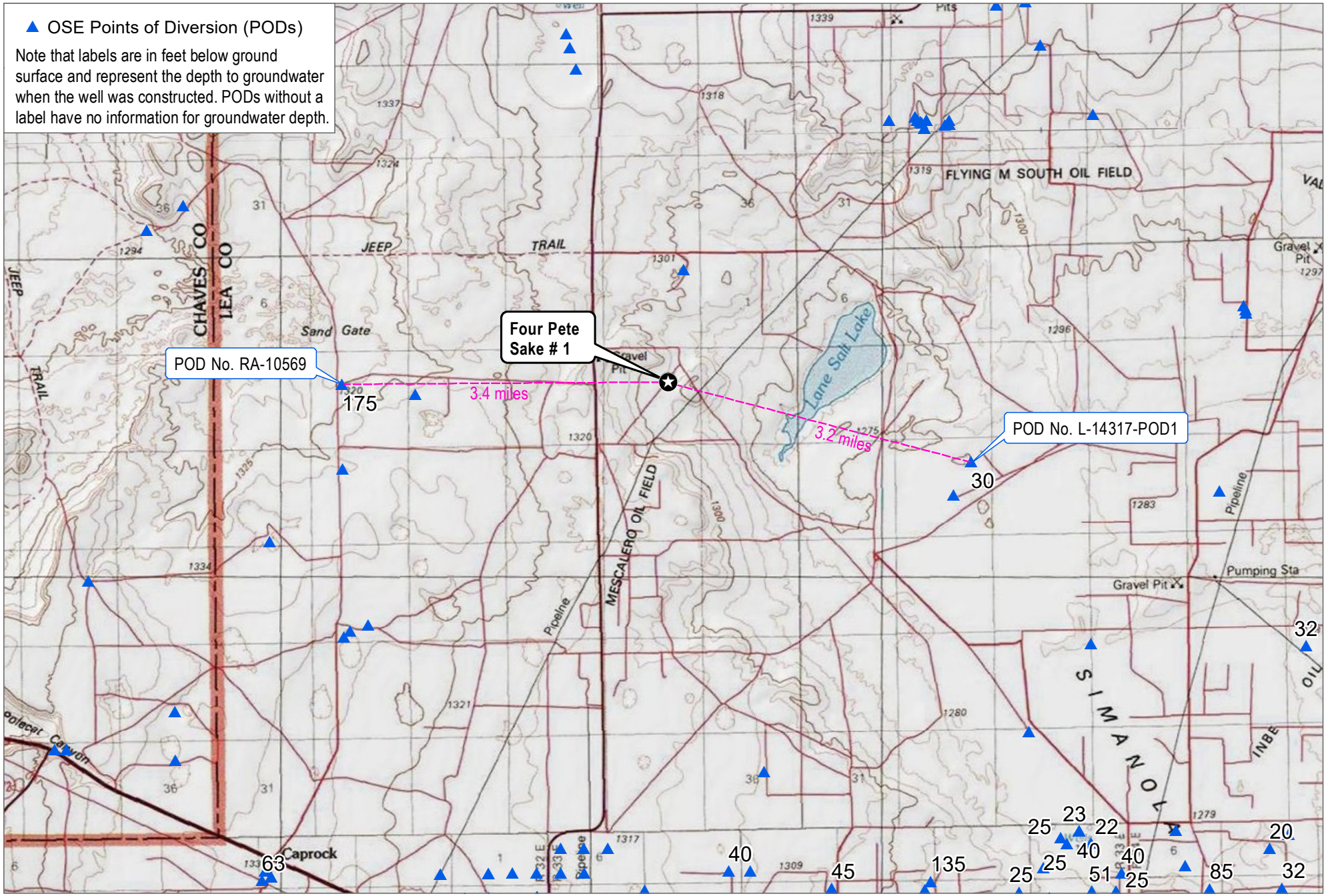
0 500 1,000 Feet

1 inch = 500 feet

FIGURE 4

Soil Map

Four Pete Sake # 1 Closure Report (Manzano LLC)



SOURCE: OSE 2023 (WATERS Database)

0 2 4 Miles

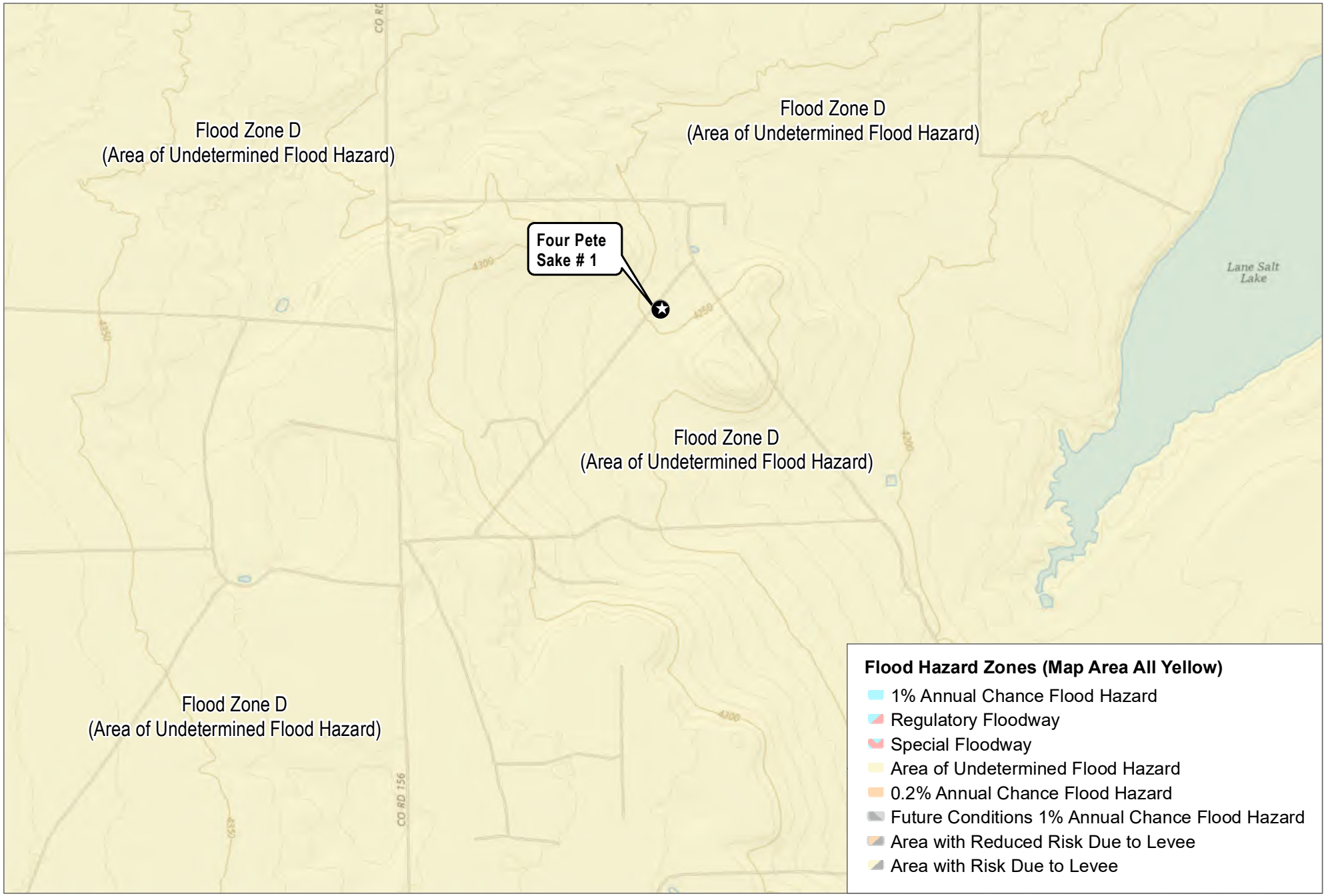
1 inch = 1 miles

FIGURE 5

Depth to Groundwater

Four Pete Sake # 1 Closure Report (Manzano LLC)

DISCUSSION DRAFT



SOURCE: FEMA 2009 (FIRM Panel No. 35005C1550D, eff. 9/25/2009)

0 0.5 1 Miles

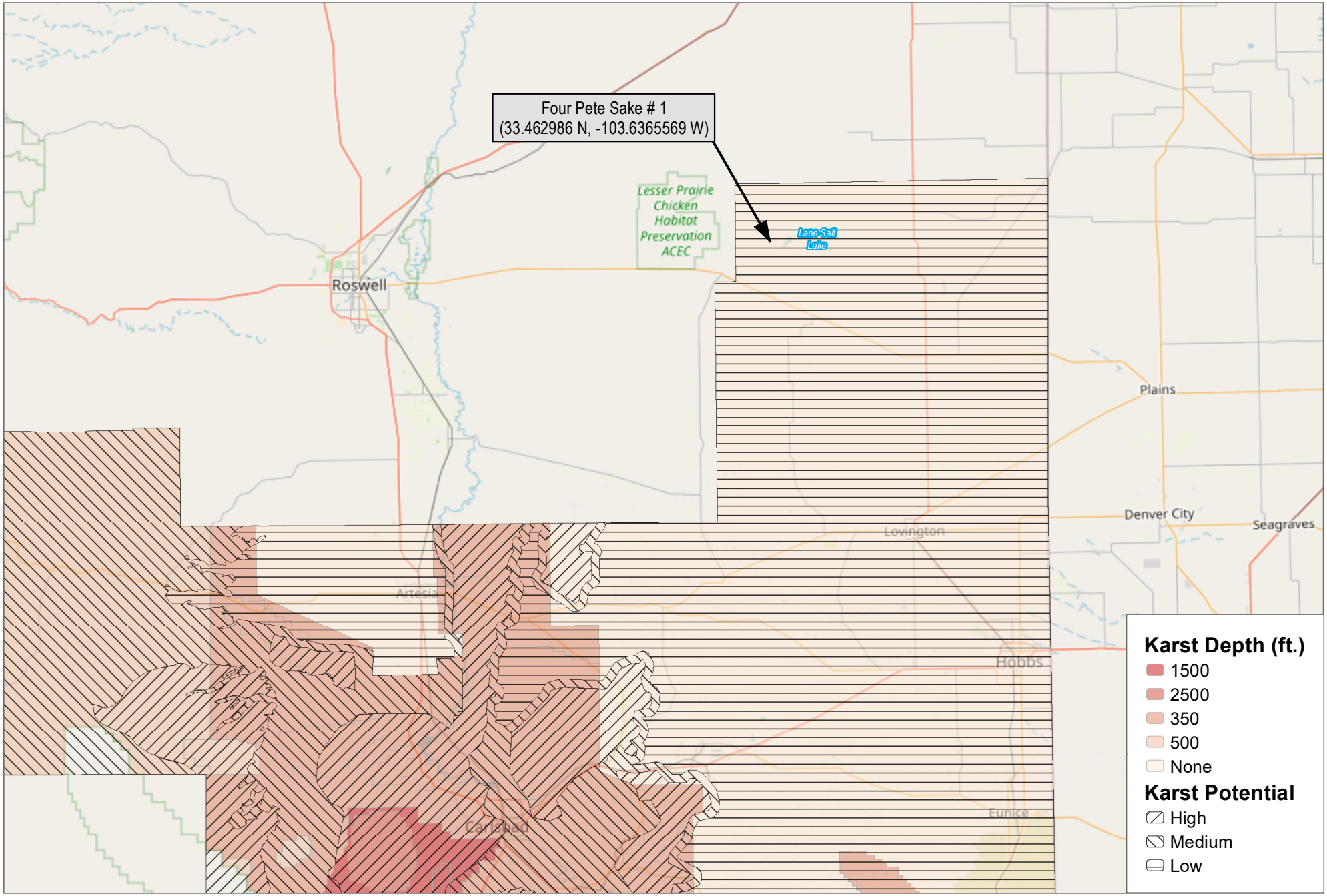
1 inch = 2,000 feet

FIGURE 6

FEMA Flood Hazard Zones

Four Pete Sake # 1 Closure Report (Manzano LLC)

DISCUSSION DRAFT



SOURCE: BLM 2020 (Karst Depth and Potential Layers)

FIGURE 7

Karst Map

Four Pete Sake # 1 Closure Report (Manzano LLC)

DISCUSSION DRAFT

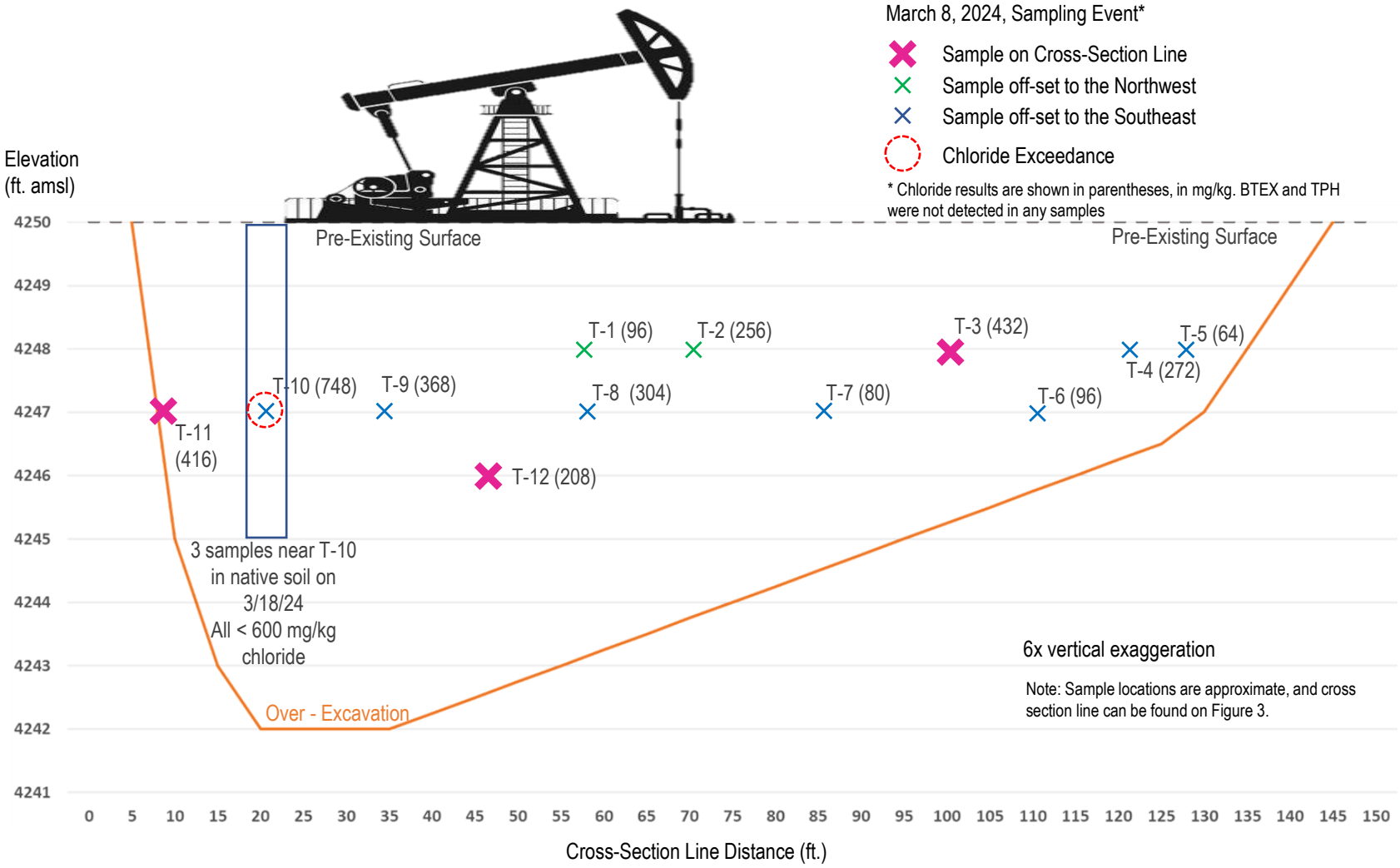


Figure 8

Cross Section A – A

Four Pete Sake # 1 Closure Report (Manzano LLC)

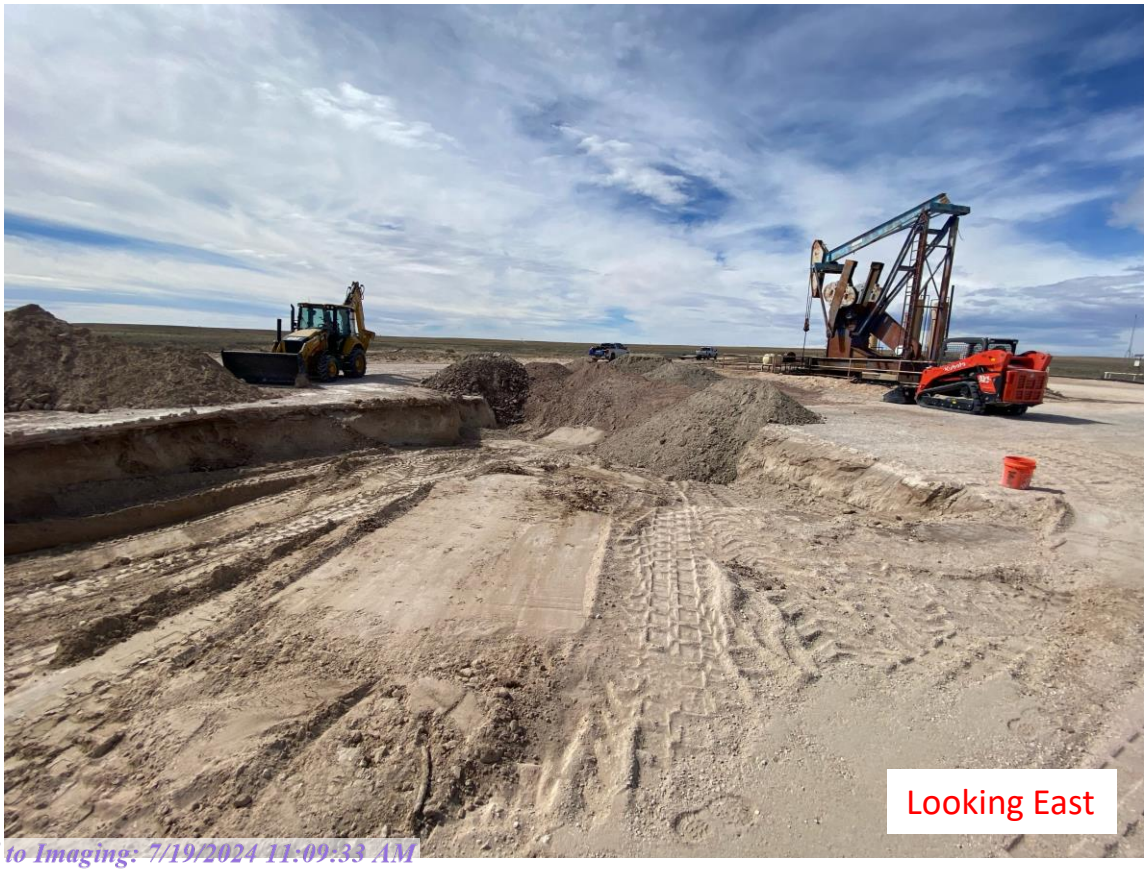
ATTACHMENT B

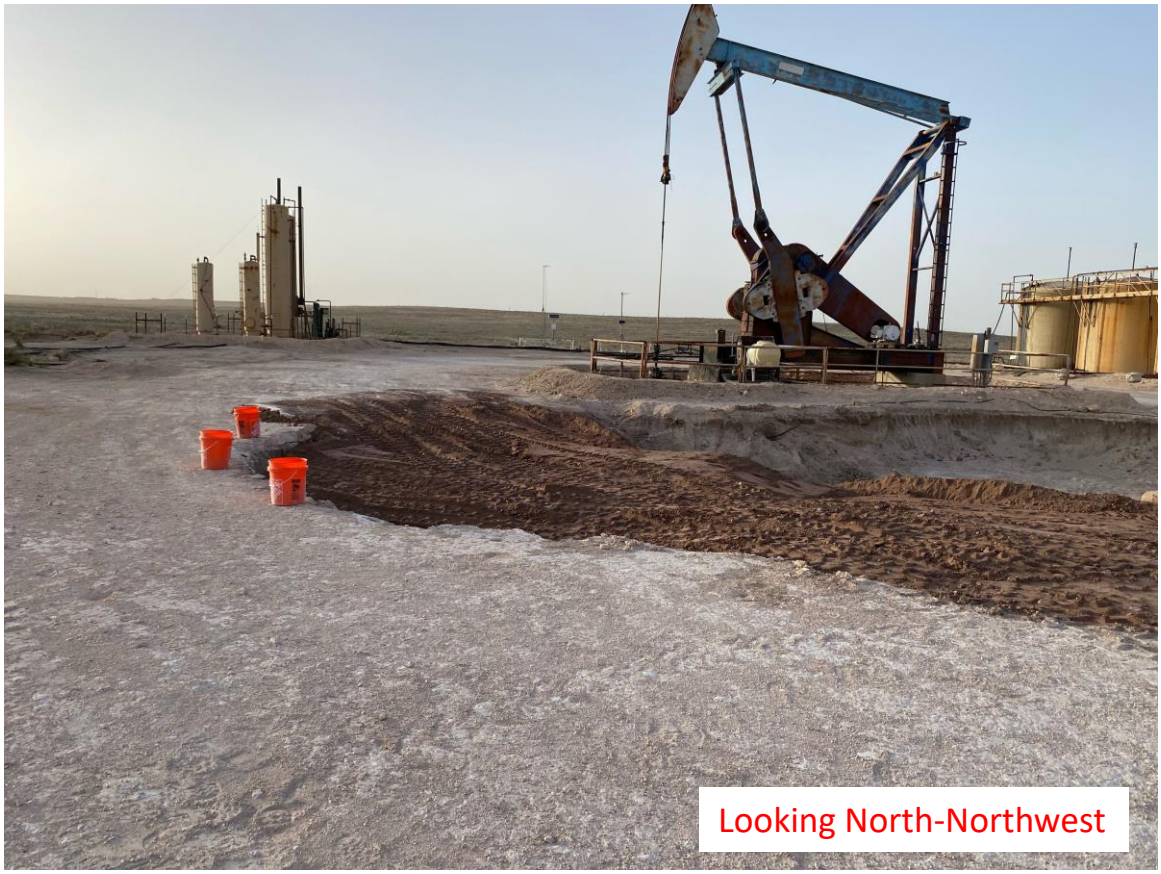
PHOTOGRAPHS

Hand Augered Holes (2/14/2024)

Excavation (3/8/2024)

Excavation (3/8/2024)





Backfilling with clean soil and site after completion (caliche re-surface)

Sampling on 3/18/2024 in 5’x7’x5’ (width/length/depth) deep hole within native soil (not clean backfill)

ATTACHMENT C

LABORATORY REPORTS

CARDINAL Laboratories

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

March 13, 2024

CHRIS GRAY

R. MARLEY LLC

45 W CROSSROADS ST

ROSWELL, NM 88205

RE: FOUR PETE SAKE #1

Enclosed are the results of analyses for samples received by the laboratory on 03/08/24 16:18.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 1 SIDEWALL 2' (H241206-01)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *93.4 %* *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	**96.0**	16.0	03/12/2024	ND	432	108	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	03/12/2024	ND	216	108	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	214	107	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *84.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *70.2 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 2 SIDEWALL 2' (H241206-02)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *92.7 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	03/12/2024	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	03/12/2024	ND	216	108	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	214	107	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *88.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *76.4 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 3 SIDEWALL 2' (H241206-03)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID 93.9 % 71.5-134

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	03/12/2024	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	03/12/2024	ND	216	108	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	214	107	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane 83.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 4 SIDEWALL 2' (H241206-04)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *93.9 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	03/12/2024	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	03/12/2024	ND	216	108	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	214	107	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *79.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *66.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 5 SIDEWALL 2' (H241206-05)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *93.4 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	03/12/2024	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	03/12/2024	ND	216	108	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	214	107	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *88.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *72.0 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 6 SIDEWALL 3' (H241206-06)

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	03/12/2024	ND	2.16	108	2.00	2.60	
Toluene*	<0.050	0.050	03/12/2024	ND	2.13	107	2.00	2.38	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.10	105	2.00	2.00	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.11	102	6.00	2.09	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *93.6 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *89.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 7 SIDEWALL 3' (H241206-07)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *95.8 %* *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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 8 SIDEWALL 3' (H241206-08)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *91.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.4 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 9 SIDEWALL 3' (H241206-09)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *111 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *93.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.4 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 10 SIDEWALL 3' (H241206-10)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

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

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *89.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.8 %* *49.1-148*

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 11 SIDEWALL 3' (H241206-11)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *111 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *97.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.3 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/08/2024	Sampling Date:	03/08/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE #1	Sample Received By:	Shalyn Rodriguez
Project Location:	NM		

Sample ID: T - 12 SIDEWALL 4' (H241206-12)

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	03/12/2024	ND	1.81	90.4	2.00	4.85	
Toluene*	<0.050	0.050	03/12/2024	ND	1.91	95.4	2.00	1.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	1.89	94.3	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	5.72	95.4	6.00	0.665	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	03/12/2024	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	03/12/2024	ND	201	100	200	4.02	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	210	105	200	8.63	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: R. Marley LLC
Project Manager: Chris Gray
Address: 45 W Crossroads St
City: Roswell State: NM Zip: 88205
Phone #: 970-628-5711 Fax #:
Project #: Four Pete Sake #1 Project Owner:
Project Name: Four Pete Sake #1
Project Location: NM
Sampler Name: Chris Gray

BILL TO

P.O. #:
Company: R. Marley LLC
Attn: Chris Gray
Address: 45 W Crossroads
City: Roswell
State: NM Zip: 88203
Phone #: 970-628-5711
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY 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	Chloride	TPH	BTEX
H241206-1	T-1 Sidewall 2'					X							3-8-24	9:05			X
-2	T-2 Sidewall 2'					X								10:10			
-3	T-3 Sidewall 2'					X								10:34			
-4	T-4 Sidewall 2'					X											
-5	T-5 Sidewall 2'					X											
-6	T-6 Sidewall 3'					X											
-7	T-7 Sidewall 3'					X											
-8	T-8 Sidewall 3'					X											
-9	T-9 Sidwall 3'					X											
-10	T-10 Sidewall 3'					X											

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Relinquished By: Chris Gray Date: 3-8-24 Time: 4:18 P
Received By: S Rodriguez
Relinquished By: Date: Time:
Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
REMARKS: Chris@R.Marley.Com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 27.3
Corrected Temp. °C
Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No
CHECKED BY: (Initials) SR

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #140 Correction Factor 0°C
Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.4 07/11/23

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 7/17/2024 1:34:17 PM

Released to Imaging: 7/19/2024 11:09:33 AM

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO
Company Name:		P.O. #:
Project Manager:		Company:
Address:		Attn:
City:	State: Zip:	Address:
Phone #:	Fax #:	City:
Project #:	Project Owner:	State: Zip:
Project Name:		Phone #:
Project Location:		Fax #:
Sampler Name:		

Lab I.D. (FOR LAB USE ONLY)	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	ANALYSIS REQUEST: Chloride	TPH	BTEX
H241206																	
11	T-11 Sidewall 3'					X									✓	✓	✓
12	T-12 Sidewall 4'					X									✓	✓	✓

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Relinquished By: Chris Gray	Date: 3-5-24 Time: 4:18P	Received By: [signature]	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS: Chris@R Marley-Com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.3 Corrected Temp. °C	Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No CHECKED BY: (Initials) SR	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #140 Correction Factor 0°C Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.4 07/11/23

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 7/17/2024 1:34:17 PM

Released to Imaging: 7/19/2024 11:09:33 AM

CARDINAL Laboratories

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

March 22, 2024

CHRIS GRAY

R. MARLEY LLC

45 W CROSSROADS ST

ROSWELL, NM 88205

RE: FOUR PETE SAKE #1

Enclosed are the results of analyses for samples received by the laboratory on 03/19/24 9:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/19/2024	Sampling Date:	03/18/2024
Reported:	03/22/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE	Sample Received By:	Tamara Oldaker
Project Location:	NM		

Sample ID: T - 10 SIDEWALL 5' NE (H241404-01)

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	03/21/2024	ND	2.15	107	2.00	3.91	
Toluene*	<0.050	0.050	03/21/2024	ND	2.32	116	2.00	9.48	
Ethylbenzene*	<0.050	0.050	03/21/2024	ND	2.44	122	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/21/2024	ND	7.42	124	6.00	11.0	
Total BTEX	<0.300	0.300	03/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *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	**384**	16.0	03/21/2024	ND	464	116	400	7.14	

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	03/20/2024	ND	204	102	200	2.29	
DRO >C10-C28*	<10.0	10.0	03/20/2024	ND	192	95.8	200	5.28	
EXT DRO >C28-C36	<10.0	10.0	03/20/2024	ND					

Surrogate: 1-Chlorooctane *88.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *78.5 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/19/2024	Sampling Date:	03/18/2024
Reported:	03/22/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE	Sample Received By:	Tamara Oldaker
Project Location:	NM		

Sample ID: T - 10 SIDEWALL 5' S (H241404-02)

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	03/21/2024	ND	2.15	107	2.00	3.91	
Toluene*	<0.050	0.050	03/21/2024	ND	2.32	116	2.00	9.48	
Ethylbenzene*	<0.050	0.050	03/21/2024	ND	2.44	122	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/21/2024	ND	7.42	124	6.00	11.0	
Total BTEX	<0.300	0.300	03/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *116 %* *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	**480**	16.0	03/21/2024	ND	464	116	400	7.14	

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	03/20/2024	ND	204	102	200	2.29	
DRO >C10-C28*	<10.0	10.0	03/20/2024	ND	192	95.8	200	5.28	
EXT DRO >C28-C36	<10.0	10.0	03/20/2024	ND					

Surrogate: 1-Chlorooctane *85.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *76.5 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

R. MARLEY LLC
CHRIS GRAY
45 W CROSSROADS ST
ROSWELL NM, 88205
Fax To:

Received:	03/19/2024	Sampling Date:	03/18/2024
Reported:	03/22/2024	Sampling Type:	Soil
Project Name:	FOUR PETE SAKE #1	Sampling Condition:	Cool & Intact
Project Number:	FOUR PETE SAKE	Sample Received By:	Tamara Oldaker
Project Location:	NM		

Sample ID: T - 10 SIDEWALL 5' NW (H241404-03)

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	03/21/2024	ND	2.15	107	2.00	3.91	
Toluene*	<0.050	0.050	03/21/2024	ND	2.32	116	2.00	9.48	
Ethylbenzene*	<0.050	0.050	03/21/2024	ND	2.44	122	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/21/2024	ND	7.42	124	6.00	11.0	
Total BTEX	<0.300	0.300	03/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PIL *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	**496**	16.0	03/21/2024	ND	464	116	400	7.14	

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	03/20/2024	ND	204	102	200	2.29	
DRO >C10-C28*	<10.0	10.0	03/20/2024	ND	192	95.8	200	5.28	
EXT DRO >C28-C36	<10.0	10.0	03/20/2024	ND					

Surrogate: 1-Chlorooctane *81.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *73.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

CARDINAL Laboratories

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	R. Marley LLC
Project Manager:	Chris Gray
Address:	45 W Crossroads St
City:	Roswell State: NM Zip: 88203
Phone #:	970-628-5711 Fax #:
Project #:	Four Pete Sake Project Owner:
Project Name:	Four Pete Sake
Project Location:	NM
Sampler Name:	Chris Gray

BILL TO

P.O. #:	
Company:	R. Marley LLC
Attn:	Chris Gray
Address:	45 W Crossroads
City:	Roswell NM
State:	NM Zip: 88205
Phone #:	970-628-5711
Fax #:	

ANALYSIS REQUEST

Chloride | TPH | BTEX

FOR LAB USE ONLY 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
H241404														
1	T-10 Sidewall 6' NE					X					X		3-18-24	
2	T-10 Sidewall 6' S					X					X		3-18-24	
3	T-10 Sidewall 6' NW					X					X		3-18-24	

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Relinquished By:	Date: 3-19-24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Chris Gray	Time: 0940	Tamara Oldaker	All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		Chris@R-Marley.com

Delivered By: (Circle One)	Observed Temp. °C 4.2	Sample Condition: Cool ☑ Yes ☐ No	Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: ☑ Standard ☐ Rush
Sampler - UPS - Bus - Other:	Corrected Temp. °C				Thermometer ID #140 Correction Factor 0°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.4 07/11/23

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 7/17/2024 1:34:17 PM

Released to Imaging: 7/19/2024 11:09:33 AM

ATTACHMENT D

OCD CORRESPONDENCE

From: OCDOnline@state.nm.us
Date: April 30, 2024 at 10:25:31 AM MDT
To: Mike Hanagan <mike@manzanoenergy.com>
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 302572

To whom it may concern (c/o Michael Hanagan for MANZANO LLC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nJXK1534849827,
for the following reasons:

- **Closure is denied. Per 19.15.29.11 The responsible party must provide a scaled diagram, determine the depth to ground water, determine the lateral and vertical extents of soil contamination. Per 19.15.29.12 the responsible party must determine if the release is located within an area overlying a subsurface mine; with an unstable area, or within a 100-year floodplain. Per 19.15.29.12.D.(1). The responsible party must test the remediated areas for contamination with representative five-point composite samples from the walls and base. The responsible party must notify the appropriate division district office two business days prior to conducting final sampling. (c) The responsible party may elect to perform a composite and grab sample plan of the remediated area where each composite sample is not representative of more than 200 square feet.**
- **Please provide scaled site maps, determine category of karst, groundwater determination, fully delineate release vertically and horizontally. No base sample results were provided. Sample notice provided for 3/8/24 but not for 3/18/24. Results discussed in closure report for T-10, T10NE,S and NW, but no results provided.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 302572.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Crystal Walker
575-393-6161
Crystal.Walker@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

John Thompson

From: John Thompson
Sent: Wednesday, January 03, 2024 4:58 PM
To: Mike Hanagan
Subject: Fwd: [EXTERNAL] Four Pete Sake #!
Attachments: image001.jpg; Public Notice Implementation of Digital C-141 and Incident Statuses (1).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Sent from my iPhone

Begin forwarded message:

From: "Wells, Shelly, EMNRD" <Shelly.Wells@emnrd.nm.gov>
Date: December 20, 2023 at 4:37:05 PM MST
To: John Thompson <John@manzanoenergy.com>
Subject: RE: [EXTERNAL] Four Pete Sake #!

Protected by N8Tech
Warning: Sender Shelly.Wells@emnrd.nm.gov has never sent any emails to your organization.
Please be careful before replying or clicking/downloading the attachment and URLs.
Report Mark as Safe
powered by Graphu

The compliance # ***cEZB2325057881*** states the following:

Issues: Stuffing box leak into a 10x15 dry bermed ground all inside fence, open containment at battery compressor-off and wellhead have fluids & no net, battery chem container has no containment and dry release; 100x100 dry TPH & chlorides & sponge ground west & south of separators berm. PJO has surrounding berm, discoloration and sponge ground outside PJ berm, last prod 6/1/23, prev insp 6/4/20, drum at PJ has low fluids. TB: Tank is 85 ft from well, sign at battery has well API #, ineffective berm, dry chlorides.

It's from 8/30/2023 when Eugene Bolton inspected 30-025-36311.

The incident that is not closed under that well number is **NJXK1534849827 (1RP-4015).** In order to close this out, some research will need to be conducted and find the paperwork wherein you locate documentation of the remediation that was carried out in 2015 including laboratory data and this will need to be submitted under incident # **NJXK1534849827** as a Remediation Closure Report (C-141-v-

Closure). If you are unable to provide any supporting documentation of what remediation occurred in 2015, new confirmation samples would need to be collected in the release footprint to confirm there is no contamination in accordance with 19.15.29 NMAC and these would need to be submitted in a remediation closure report on the e-permitting site. I have also attached the Public Notice which outlines the new procedures for submitting C-141s to the OCD portal.

I hope this information helps,

Shelly

Shelly Wells * Environmental Specialist-Advanced

Environmental Bureau

EMNRD-Oil Conservation Division

1220 S. St. Francis Drive|Santa Fe, NM 87505

(505)469-7520|Shelly.Wells@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: John Thompson <John@manzanoenergy.com>
Sent: Tuesday, December 12, 2023 11:13 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bolton, Eugene, EMNRD <Eugene.Bolton@emnrd.nm.gov>; Nick McClelland <nick@manzanoenergy.com>
Subject: [EXTERNAL] Four Pete Sake #!

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

I received the following from Eugene Bolton NMOCD – South. It is my understanding this area was remediated back in 2015 and the contaminated soil was removed and replaced. Please advise what we need to do to get the closure approved and get this back in compliance.

cEZB2325057881

OCD Permitting

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	346696	**Districts:**	Hobbs
Operator:	[231429] MANZANO LLC	**Counties:**	Lea
Description:	MANZANO LLC [231429] , FOUR PETE SAKE #001 , nJXK1534849827		
Status:	APPROVED		
Status Date:	05/22/2024		
References (2):	30-025-36311, nJXK1534849827		

Questions

Prerequisites

Incident ID (n#)	**nJXK1534849827**
Incident Name	**NJXK1534849827 FOUR PETE SAKE #001 @ 30-025-36311**
Incident Type	**Produced Water Release**
Incident Status	**Closure Not Approved**
Incident Well	**[30-025-36311] FOUR PETE SAKE #001**

Location of Release Source

Site Name	**FOUR PETE SAKE #001**
Date Release Discovered	**12/14/2015**
Surface Owner	**State**

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	25
What is the estimated number of samples that will be gathered	3
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/18/2024

Acknowledgments

This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

Summary: *amsoares (5/22/2024),* Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a
remediation closure samples not being accepted.

Reasons

No reasons found for this submission.

Go Back

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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 364745

QUESTIONS

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nJXK1534849827**
Incident Name	**NJXK1534849827 FOUR PETE SAKE #001 @ 30-025-36311**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-36311] FOUR PETE SAKE #001**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	FOUR PETE SAKE #001
Date Release Discovered	12/14/2015
Surface Owner	State

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Producing Well | Crude Oil | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Producing Well | Produced Water | Released: 9 BBL | Recovered: 0 BBL | Lost: 9 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Condensate | Released: 0 BBL | Recovered: 0 BBL | Lost: 0 BBL.
Natural Gas Vented (Mcf) Details	Cause: Equipment Failure | Other (Specify) | Natural Gas Vented | Released: 0 Mcf | Recovered: 0 Mcf | Lost: 0 Mcf.
Natural Gas Flared (Mcf) Details	Cause: Equipment Failure | Other (Specify) | Natural Gas Flared | Released: 0 Mcf | Recovered: 0 Mcf | Lost: 0 Mcf.
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)	none

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QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	all actions have been undertaken.
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: Anna-Marie Soares Title: production analyst Email: anna-marie@manzanoenergy.com Date: 07/17/2024

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QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	4030
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
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	03/08/2024
On what date will (or did) the final sampling or liner inspection occur	03/18/2024
On what date will (or was) the remediation complete(d)	03/18/2024
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	40025
What is the estimated volume (in cubic yards) that will be remediated	826
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	GANDY MARLEY LANDFARM/LANDFILL [fEEM0112338393]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(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: Anna-Marie Soares Title: production analyst Email: anna-marie@manzanoenergy.com Date: 07/17/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**346696**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**03/18/2024**
What was the (estimated) number of samples that were to be gathered	**3**
What was the sampling surface area in square feet	**25**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7800
What was the total volume (cubic yards) remediated	826
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	Please see report for addition detail.

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

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

I hereby agree and sign off to the above statement	Name: Anna-Marie Soares Title: production analyst Email: anna-marie@manzanoenergy.com Date: 07/17/2024

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

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

QUESTIONS (continued)

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Operator:	OGRID:
MANZANO LLC P.O. Box 1737 Roswell, NM 88202	231429
	Action Number: 364745
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
crystal.walker	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	7/19/2024