



May 8, 2023

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Release Characterization and Remediation Work Plan
Maverick Permian, LLC
EVGSAU 0546-038 Flowline Leak
Unit Letter L2, Section 05, Township 18 South, Range 35 East
Lea County, New Mexico
Incident ID# nAPP2310150208**

Dear Sir or Madam,

Tetra Tech, Inc. (Tetra Tech) was contracted by Maverick Permian, LLC (Maverick) to assess a release that occurred from a subsurface flow line associated with the East Vacuum Grayburg San Andres Unit (EVGSAU) 0546-038. The release footprint is located near Jay Lane in Public Land Survey System (PLSS) Unit Letter L2, Section 05, Township 18 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.782555°, -103.477691° as shown in **Figure 1** and **Figure 2**.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release was discovered on February 24, 2023. The C-141 reports that the release occurred due to internal corrosion of a subsurface production flow line leading to a 4 barrel (bbl) spill crude oil and a 10 bbl spill of produced water off-pad. Approximately 1 bbl of produced water and 1 bbl of crude oil were reported as recovered by a vac-truck during the initial response. The NMOCD received the Initial C-141 on April 21, 2023, and subsequently assigned the release Incident ID nAPP2310150208. The initial C-141 Release notification form is included in **Attachment 1**.

1.1 SITE CHARACTERIZATION

Tetra Tech performed a site characterization for the release location which did not identify any watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playas, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains within the distances specified in 19.15.09 New Mexico Administrative Code (NMAC). Based on a review of the NMOCD Mapper The Site is in an area of low karst potential as shown in **Attachment 2**.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are four (4) water wells located within an 800-meter (approximately ½-mile) radius of the release location. The average depth to groundwater reported at these four wells is 72 feet below ground surface (bgs), ranging from 60 to 85 feet bgs. None of the currently available depths to groundwater was recorded in the last 25 years. The site characterization data is included in **Attachment 2**.

Tetra Tech, Inc.

1500 CityWest Boulevard, Houston, Texas 77042
Tel +1.832.251.5160 | tetrattech.com/oga | tetrattech.com

Release Characterization Work Plan
Maverick Permian, LLC
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REGULATORY FRAMEWORK

Based upon the release footprint location and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chloride in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site are as follows. As the depth to groundwater information is greater than 25 years old, RRALs assume the most conservative criterion for groundwater as less than 50 feet bgs:

Closure Criteria for Soils Impacted by a Release

Constituent	Remediation RRAL
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

Additionally, in accordance with the NMOCD guidance Procedures for Implementation of the Spill Rule (19.15.29 NMAC) (September 6, 2019), the following reclamation requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations are as follows:

Reclamation Requirements

Constituent	Remediation RRAL
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg

INITIAL RESPONSE ACTIVITIES

The release occurred due to internal corrosion of a surface production flow line consisting of an approximately 5,465 square foot area in open pasture, as shown in **Figure 3**. According to site records, initial response actions were taken by Maverick at the release site on March 9, 2023. Maverick responded to the site by removing standing fluid and making an initial excavation/scrape of approximately the top 6 inches of impacted material. The scraped material was sent to R360 for disposal. Confirmation samples were not collected during the initial response activities. Tetra Tech conducted a visual site inspection on March 16, 2023, to document the release and initial scrape area. The area encompassing this initial scrape was approximately 11,680 square feet as shown in **Figure 3**.

1.2 SITE ASSESSMENT SUMMARY

On April 7, 2023, Tetra Tech personnel returned to the Site to conduct soil sampling to delineate the release extent and confirm the efficacy of the reported remediation activities conducted during the initial response. A total of 12 hand auger borings were installed to achieve horizontal delineation of the release. Hand auger borings (AH-1 through AH-12) were installed along the perimeter of the reported release extent to depths ranging from 0-1 feet

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bgs to horizontally delineate the release. Hand auger refusal was encountered at approximately 1 foot bgs due to hardpan soil material. Boring locations are presented in **Figure 4**.

A total of 12 samples were collected from the 12 borings and submitted to Cardinal Laboratory in Hobbs, New Mexico, for analysis of Total Petroleum Hydrocarbons (GRO, DRO, and EXT DRO) by EPA Method 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA Method SM4500Cl-B. Copies of the laboratory analytical data packages are included in **Attachment 3**.

SUMMARY OF SAMPLING RESULTS

Results from the April 7, 2023 soil sampling event are summarized in **Table 1**. The laboratory reported concentrations of chloride, TPH, and BTEX as less than RRALs and Reclamation Requirements in samples AH-1, AH-2, AH-6, AH-9, and AH-10. The remaining samples reported concentrations as greater than RRALs and Reclamation Requirements for chloride and/or TPH. Photographic documentation of Site conditions at the time of the assessment is presented in **Attachment 4**.

1.3 REMEDIATION WORK PLAN

Based on the analytical results from the assessment, Maverick proposes to remove the impacted material within the release extent as shown in **Figure 5**. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to an approximate depth of 2 to 4 feet below the surrounding surface until representative samples from the excavation sidewalls and the floor of the excavation report concentrations of constituents as less than Site RRALs and Reclamation Requirements. Heavy equipment will come no more than two feet from any pressurized lines. Impacted soils within the vicinity of the surface and subsurface lines which intersect the release footprint will be excavated with hydro-vac excavation or dug by hand to the maximum extent practicable.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation floor and sidewall samples will be collected for verification of remedial activities and analyzed for TPH, BTEX, and chloride. Once analytical results are received, NMOCD will be notified, and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is between 750 to 1,500 cubic yards.

CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, Maverick proposes the following alternative confirmation sampling plan to adhere to NMOCD requirements. The proposed confirmation sample locations are depicted in **Figure 6**. Twenty-five (25) confirmation floor samples and eight (8) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 10,240 square feet.

These confirmation sidewall samples will be representative of approximately 200 square feet each and floor samples will be representative of no more than approximately 500 square feet of the excavated area. Confirmation samples will be submitted to Cardinal Laboratory for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (EPA SM4500Cl-B). Once results are received, NMOCD will be notified, and the excavation will then be backfilled with clean material to surface grade.

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SITE RECLAMATION AND RESTORATION PLAN

Post-remediation, the backfilled pasture areas will be seeded (in the next first favorable growing season) to aid in revegetation. Based on the soils at the site, gravelly loam, the New Mexico State Land Office (NMSLO) Coarse (CS) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in pounds of pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a broadcaster and raked. If a broadcaster is used for dispersal, the quantity of PLS per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds PLS per acre are included in **Attachment 5**. Final reclamation will create a landform that approximates and blends in with the surrounding landform while controlling erosion.

1.4 CONCLUSION

Maverick proposes to begin remediation activities at the Site within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (832) 252-2093.

Sincerely,



Steve Jester
Program Manager
Tetra Tech, Inc.



Charles H. Terhune IV, P.G.
Program Manager
Tetra Tech, Inc.

cc: Bryce Wagoner, Maverick Permian, LLC
New Mexico State Land Office

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LIST OF ATTACHMENTS

Figures

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Approximate Release Extent and Site Features
- Figure 4 – Site Assessment Map
- Figure 5 – Proposed Remediation Extent
- Figure 6 – Confirmation Sampling Plan

Tables

- Table 1 – Summary of Analytical Results – Soil Assessment

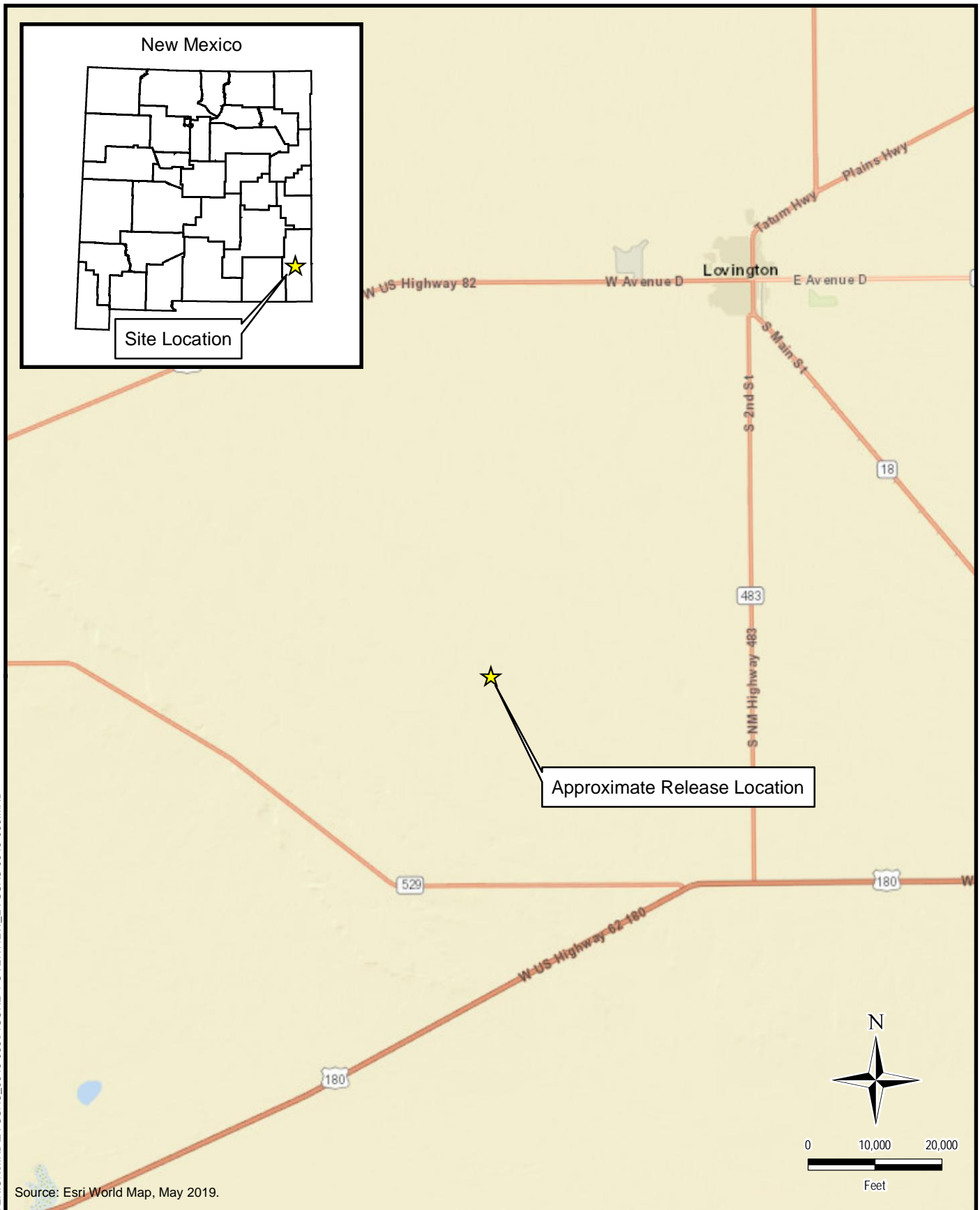
Attachments

- Attachment 1 – C-141 Forms
- Attachment 2 – Site Characterization Data
- Attachment 3 – Laboratory Analytical Data
- Attachment 4 – Photographic Documentation
- Attachment 5 – NMSLO Seed Mixture Details

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FIGURES



DOCUMENT PATH: D:\MAVERICK\MXD\EVGSAU_0546-038\FIGURE 1 OVERVIEW EVGSAU 0546-038.MXD

Source: Esri World Map, May 2019.



TETRA TECH

www.tetrattech.com

901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

MAVERICK NATURAL RESOURCES

nAPP2310150208
(32.782554°, -103.477691°)
LEA COUNTY, NEW MEXICO

**EVGSAU 0546-038 FLOWLINE RELEASE
OVERVIEW MAP**

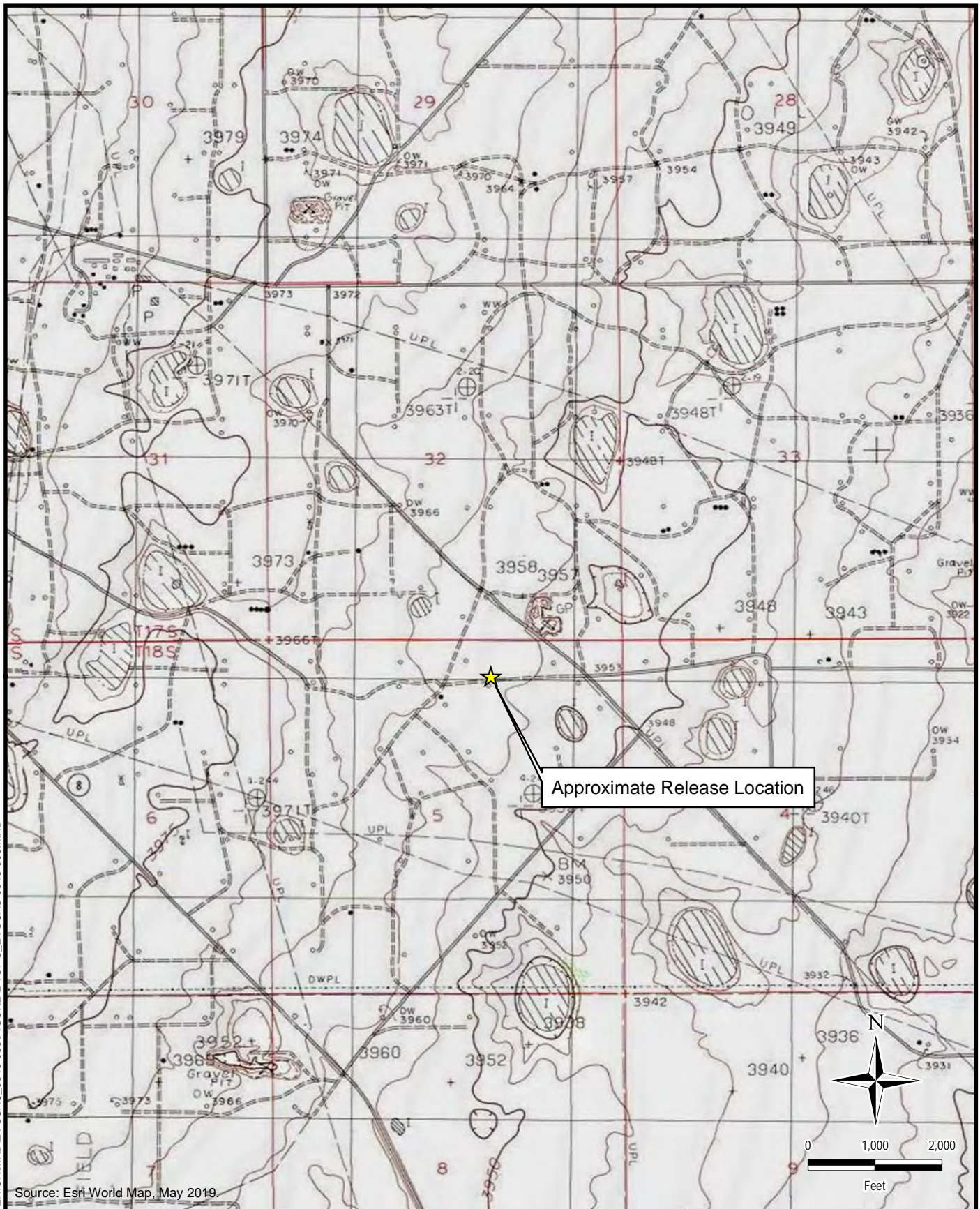
PROJECT NO.: 212C-HN-02278

DATE: MAY 02, 2023

DESIGNED BY: AAM

Figure No.

1



DOCUMENT PATH: D:\MAVERICK\DEV\SAU_0546-038\FIGURE 2 TOPO_EV\SAU_0546-038.MXD


TETRA TECH
www.tetrattech.com

 901 West Wall Street, Suite 100
 Midland, Texas 79701
 Phone: (432) 682-4559
 Fax: (432) 682-3946

MAVERICK NATURAL RESOURCES

 nAPP2310150208
 (32.782554°, -103.477691°)
 LEA COUNTY, NEW MEXICO

**EVSAU 0546-038 FLOWLINE RELEASE
 TOPOGRAPHIC MAP**

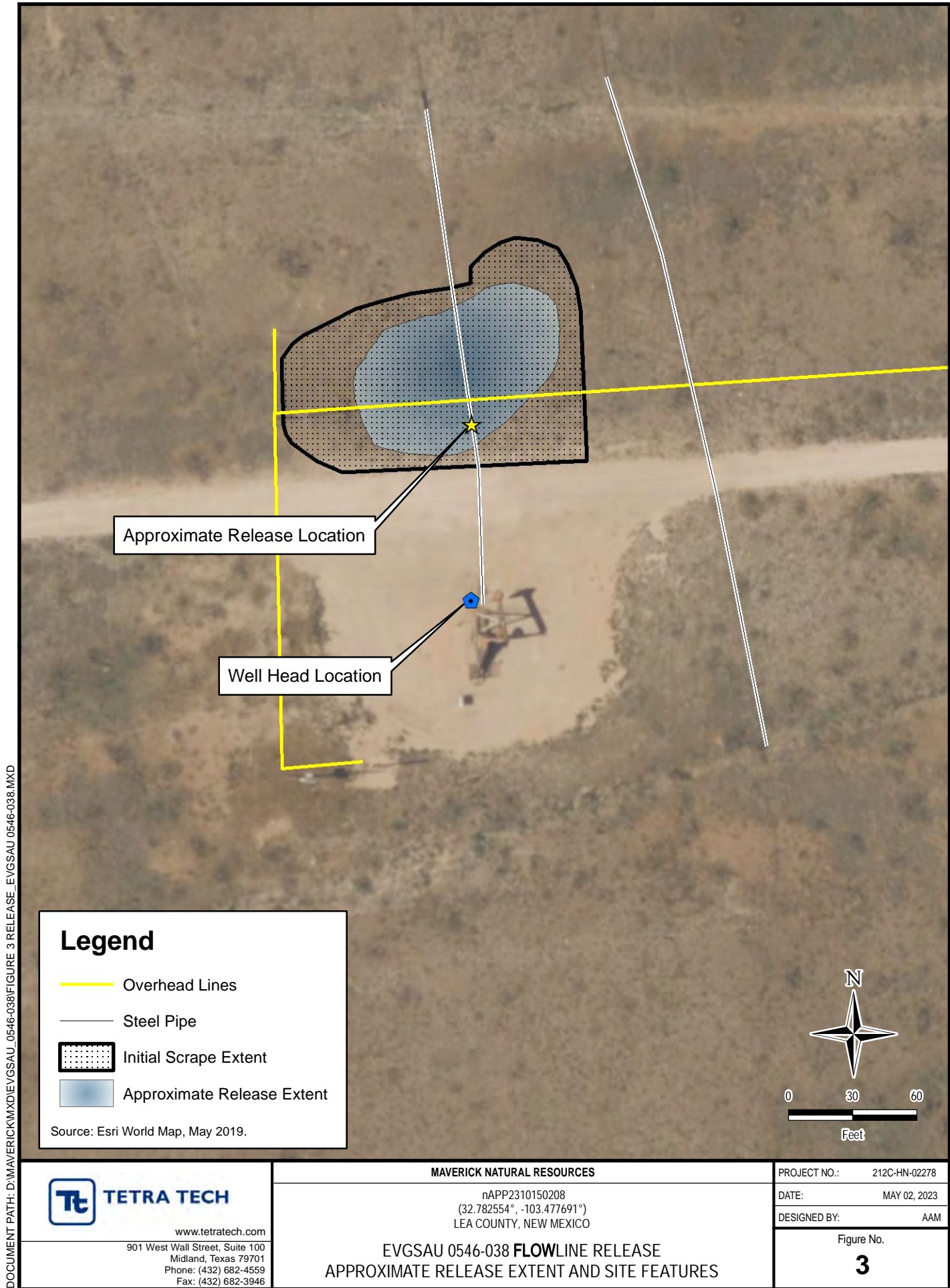
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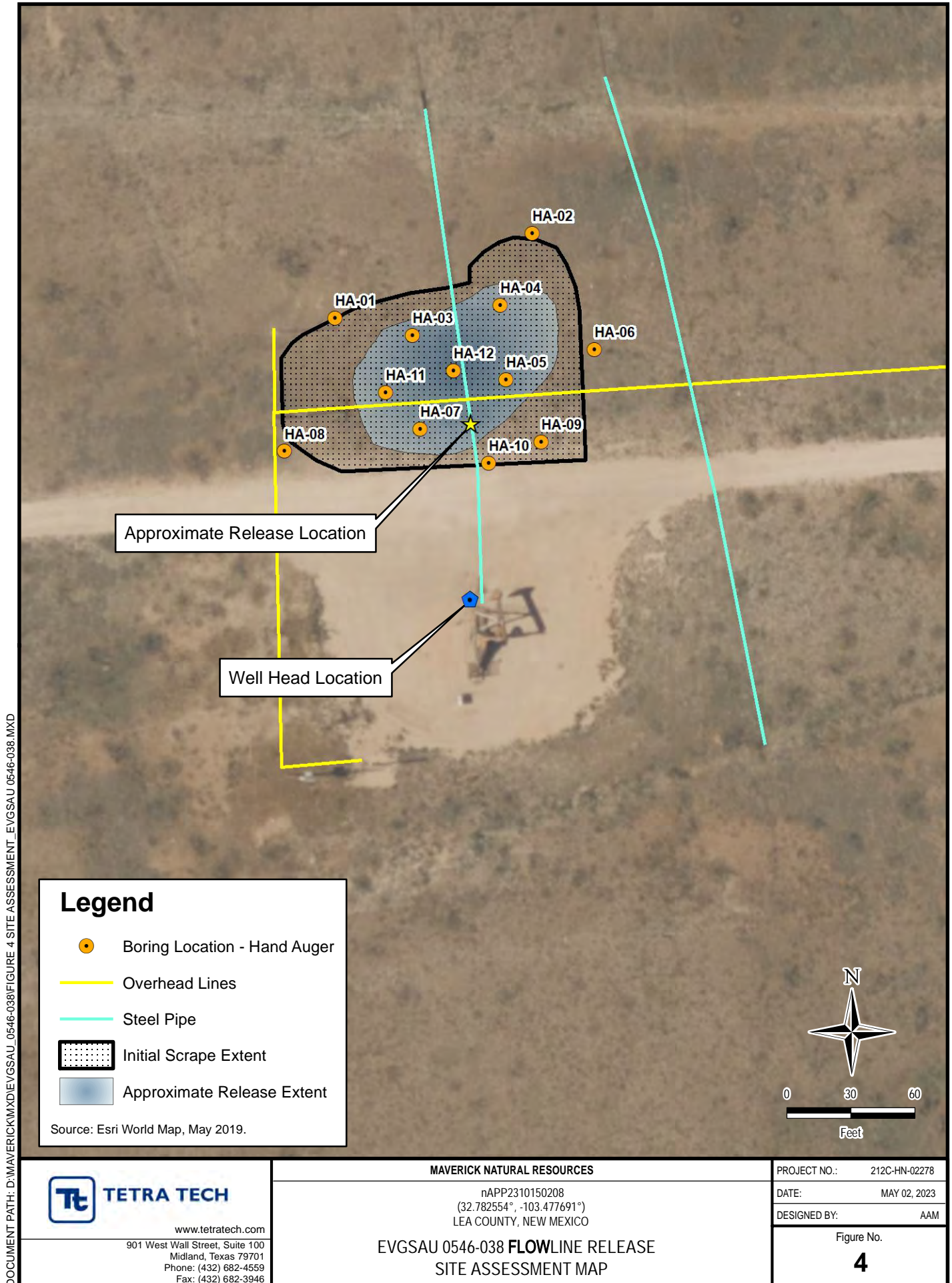
DATE: MAY 02, 2023

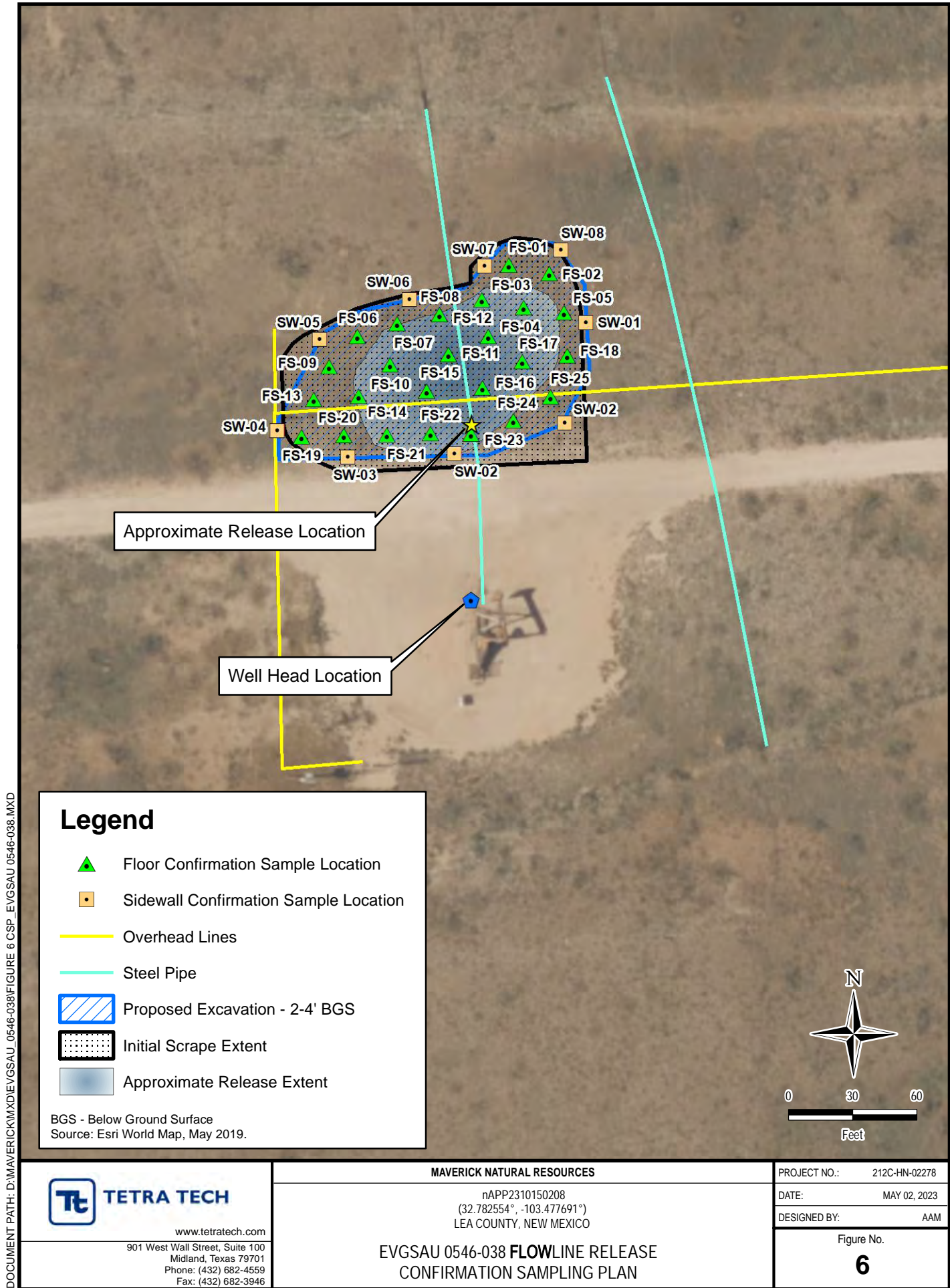
DESIGNED BY: AAM

Figure No.

2







Release Characterization Work Plan
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TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
ASSESSMENT SAMPLING - INCIDENT ID NAPP2310150208
MAVERICK NATURAL RESOURCES
EVGSAU 0546-038 FLOWLINE RELEASE
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
															C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆			
		feet bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
Reclamation Requirements (19.15.29 NMAC)			600		10								50								100	
AH-1	4/7/2023	0 - 1	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30	
AH-2	4/7/2023	1 - 2	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30	
AH-3	4/7/2023	0 - 1	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		855		207		1,062	
AH-4	4/7/2023	0 - 1	5,920		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		218		55		273	
AH-5	4/7/2023	0 - 1	12,800		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		246		60.5		307	
AH-6	4/7/2023	0 - 1	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30	
AH-7	4/7/2023	0 - 1	6,800		<0.050		0.121		0.747		2.33		3.19		24.8		1,030		201		1,256	
AH-8	4/7/2023	0 - 1	848		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		30.6		17.1		48	
AH-9	4/7/2023	0 - 1	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30	
AH-10	4/7/2023	0 - 1	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30	
AH-11	4/7/2023	0 - 1	8,260		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		736		165		901	
AH-12	4/7/2023	0 - 1	4,240		<0.050		0.082		0.362		1.86		2.31		126		5,020		998		6,144	

NOTES:

bgs: Below ground surface

mg/kg: Milligrams per kilogram

TPH:

GRO:

DRO:

1: Method SM4500Cl-B

2: Method 8021B

3: Method 8015M

Bold, italicized, and highlighted values indicate exceedance of Remediation RRALs or Reclamation Requirements, as applicable

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ATTACHMENT 1 – C-141 FORMS

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2310150208
District RP	-
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Maverick Permian, LLC	OGRID	331199
Contact Name	Bryce Wagoner	Contact Telephone	(928) 241-1862
Contact email	Bryce.Wagoner@mavresources.com	Incident # (assigned by OCD)	nAPP2310150208
Contact mailing address	1410 NW County Road Hobbs, New Mexico 88240		

Location of Release Source

Latitude 32.7825 Longitude -103.4777
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	EVGSAU 0546-038	Site Type	Flowline Leak
Date Release Discovered	02/24/2023	API# (if applicable)	

Unit Letter	Section	Township	Range	County
L2	05	18S	35E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 4	Volume Recovered (bbls) 1
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 1
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

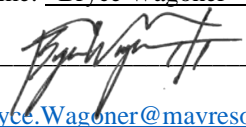
Cause of Release
Internal corrosion of a flow line.

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Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Not Applicable	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Bryce Wagoner</u>	Title: <u>Permian HSE Specialist</u>
Signature: 	Date: <u>4/21/2023</u>
email: <u>Bryce.Wagoner@mavresources.com</u>	Telephone: <u>(928) 241-1862</u>
<u>OCD Only</u>	
Received by: <u>Jocelyn Harimon</u>	Date: <u>04/21/2023</u>

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Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	est. <u>72</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

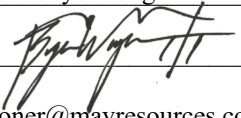
- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile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

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

State of New Mexico
Oil Conservation Division

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District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Bryce Wagoner Title: Permian HSE Specialist
Signature:  Date: 5.11.2023
email: Bryce.Wagoner@mavresources.com Telephone: (928) 241-1862

OCD Only

Received by: Jocelyn Harimon Date: 05/12/2023

Incident ID	nAPP2310150208
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Facility ID	
Application ID	

Remediation Plan

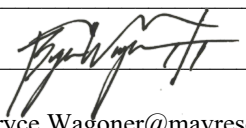
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.


I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Bryce Wagoner Title: Permian HSE Specialist
Signature:  Date: 5.11.2023
email: Bryce.Wagoner@mavresources.com Telephone: (928) 241-1862

OCD Only

Received by: Jocelyn Harimon Date: 05/12/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 08/01/2023

Incident ID	nAPP2310150208
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Release Characterization Work Plan
Maverick Permian, LLC
EVGSAU 0546-038
Incident ID: nAPP2310150208

May 8, 2023

ATTACHMENT 2 – SITE CHARACTERIZATION DATA



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 04931	L	LE		1	2	05	18S	35E		642561	3628183*	30	237	70	167
L 04829 S	L	LE		3	4	32	17S	35E		642554	3628586*	372	198	85	113
L 04591	L	LE		4	2	05	18S	35E		642970	3627785*	591	130	75	55
L 04250	L	LE				05	18S	35E		642378	3627565*	673	112	60	52

Average Depth to Water: **72 feet**

Minimum Depth: **60 feet**

Maximum Depth: **85 feet**

Record Count: 4

UTM NAD83 Radius Search (in meters):

Easting (X): 642561.49

Northing (Y): 3628213.3

Radius: 800

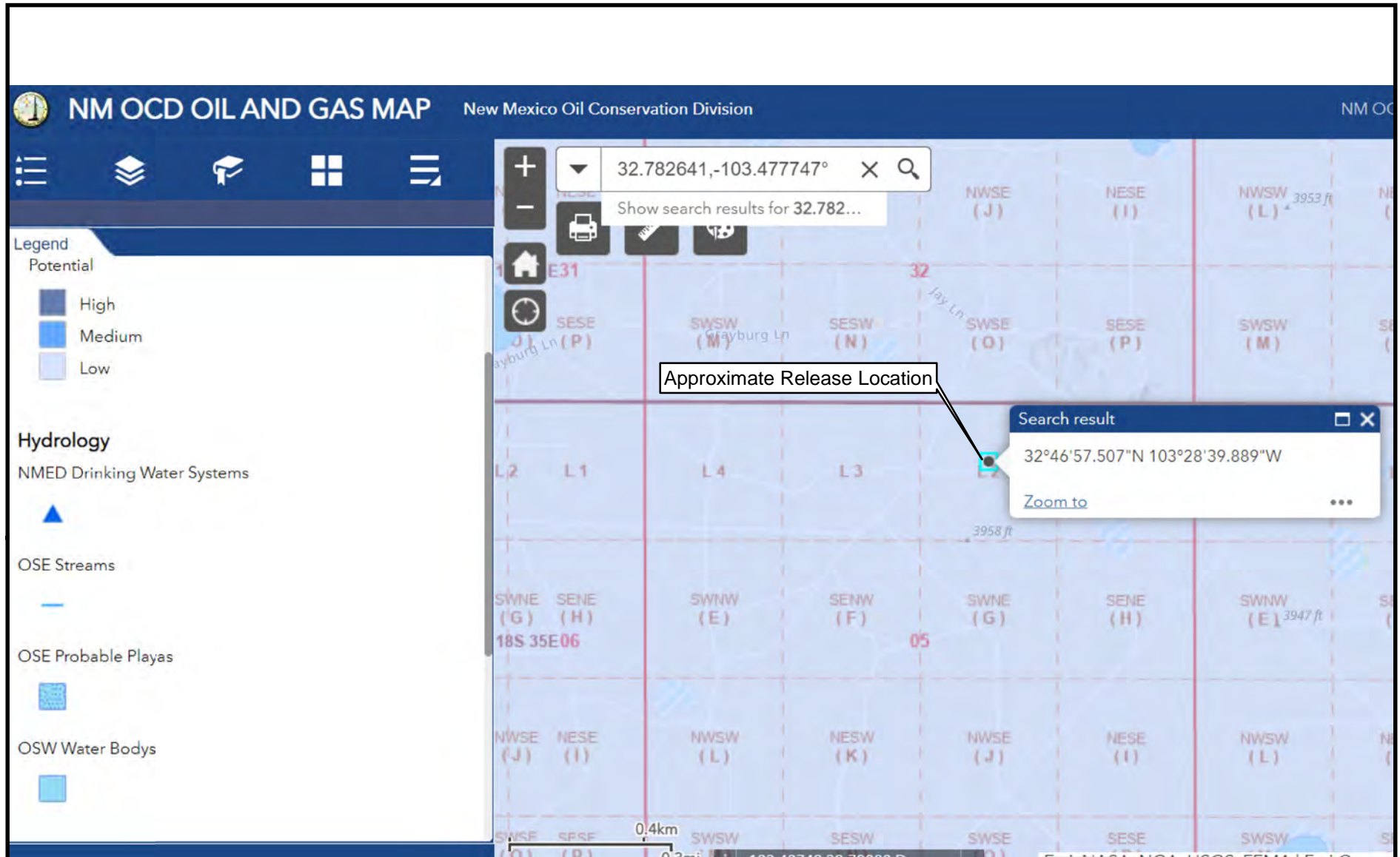
*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.


4/27/23 2:27 PM

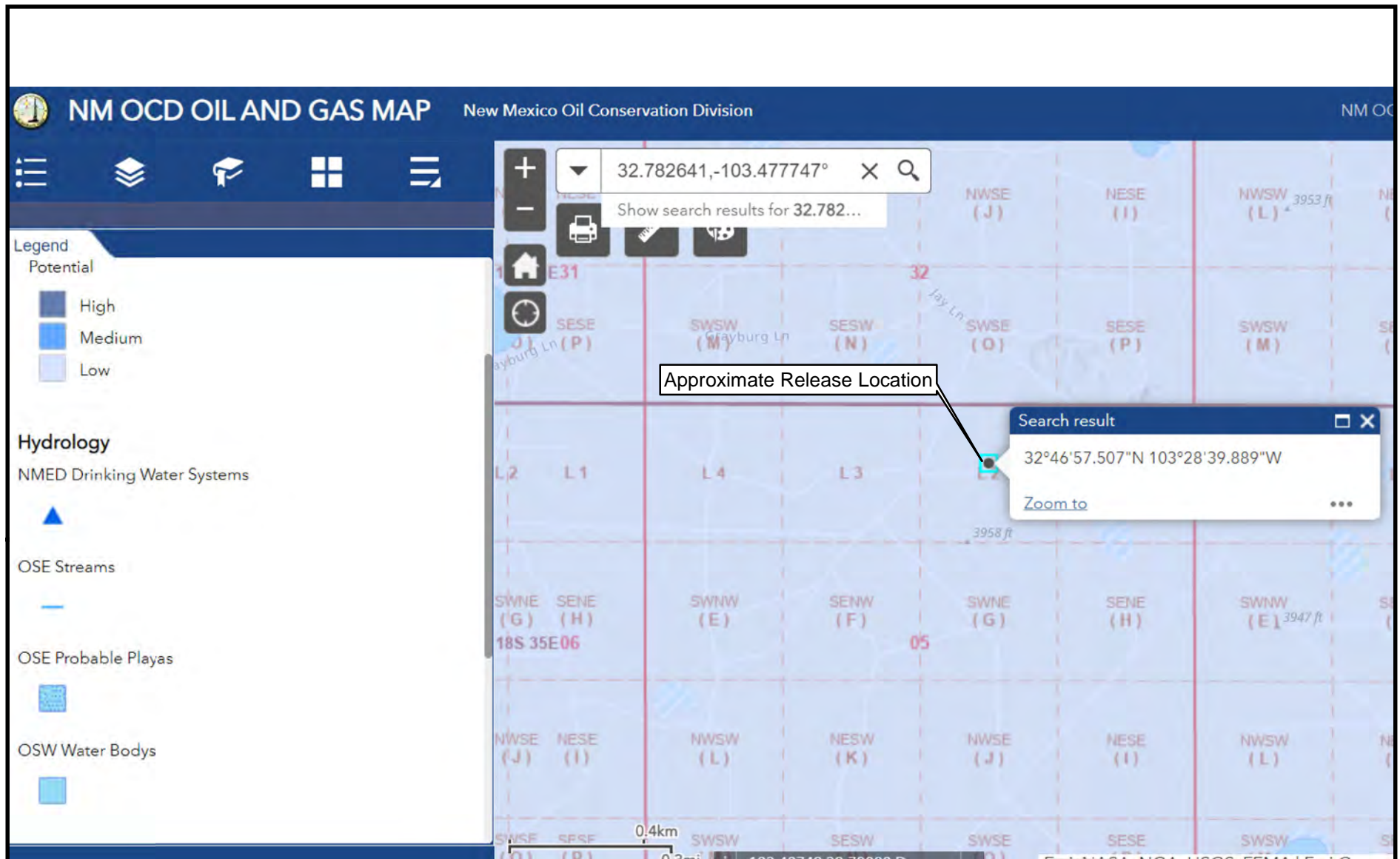
Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER




DOCUMENT PATH: D:\MAVERICK\MXDA\APPENDIX_EYGS AU 0546-038.MXD

 TETRA TECH www.tetrattech.com 901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946	MAVERICK NATURAL RESOURCES		PROJECT NO.: 212C-HN-02278
	(32.782641°, -103.477747°) LEA COUNTY, NEW MEXICO		DATE: APRIL 27, 2023
	EVGSAU 0546-038 INJECTION LINE RELEASE KARST POTENTIAL, PROBABLE PLAYS, AND WATER BODIES		DESIGNED BY: AAM
			Appendix B



DOCUMENT PATH: D:\MAVERICK\MXDA\APPENDIX_EYVSAU 0546-038.MXD

 TETRA TECH www.tetrattech.com 901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946	MAVERICK NATURAL RESOURCES		PROJECT NO.: 212C-HN-02278
	(32.782641°, -103.477747°) LEA COUNTY, NEW MEXICO		DATE: APRIL 27, 2023
	EVGSAU 0546-038 FLOW LINE RELEASE KARST POTENTIAL, PROBABLE PLAYAS, AND WATER BODIES		DESIGNED BY: AAM
			Appendix B

Release Characterization Work Plan
Maverick Permian, LLC
EVGSAU 0546-038
Incident ID: nAPP2310150208

May 8, 2023

ATTACHMENT 3 – LABORATORY ANALYTICAL DATA

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

April 17, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EVGSAU - 0546-038

Enclosed are the results of analyses for samples received by the laboratory on 04/10/23 9:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH - 1 (0-1')	H231665-01	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 2 (0-1')	H231665-02	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 3 (0-1')	H231665-03	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 4 (0-1')	H231665-04	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 5 (0-1')	H231665-05	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 6 (0-1')	H231665-06	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 7 (0-1')	H231665-07	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 8 (0-1')	H231665-08	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 9 (0-1')	H231665-09	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 10 (0-1')	H231665-10	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 11 (0-1')	H231665-11	Soil	07-Apr-23 00:00	10-Apr-23 09:30
AH - 12 (0-1')	H231665-12	Soil	07-Apr-23 00:00	10-Apr-23 09:30

04/17/23 - Client added chloride to sample -12 (see COC). This is the revised report and will replace the one sent on 04/14/23.

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 1 (0-1')
H231665-01 (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	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134 3041246 JH 13-Apr-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane 50.2 % 48.2-134 3041309 MS 13-Apr-23 8015B

Surrogate: 1-Chlorooctadecane 53.0 % 49.1-148 3041309 MS 13-Apr-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 2 (0-1')
H231665-02 (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	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			110 %		71.5-134	3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			65.5 %		48.2-134	3041309	MS	13-Apr-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			69.6 %		49.1-148	3041309	MS	13-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 3 (0-1')
H231665-03 (Soil)

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

Chloride	480		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			101 %	71.5-134		3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
DRO >C10-C28*	855		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
EXT DRO >C28-C36	207		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	

Surrogate: 1-Chlorooctane			84.3 %	48.2-134		3041309	MS	14-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			121 %	49.1-148		3041309	MS	14-Apr-23	8015B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 4 (0-1')
H231665-04 (Soil)

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

Chloride	5920		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			97.2 %		71.5-134	3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	218		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	55.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane			48.3 %		48.2-134	3041309	MS	13-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			61.8 %		49.1-148	3041309	MS	13-Apr-23	8015B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 5 (0-1')
H231665-05 (Soil)

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

Chloride	12800		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %		71.5-134	3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	246		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	60.5		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane			64.8 %		48.2-134	3041309	MS	13-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			82.7 %		49.1-148	3041309	MS	13-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 6 (0-1')
H231665-06 (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	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134 3041246 JH 13-Apr-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane 66.4 % 48.2-134 3041309 MS 13-Apr-23 8015B

Surrogate: 1-Chlorooctadecane 72.8 % 49.1-148 3041309 MS 13-Apr-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 7 (0-1')
H231665-07 (Soil)

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

Chloride	6800		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Toluene*	0.121		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Ethylbenzene*	0.747		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Total Xylenes*	2.33		0.150	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Total BTEX	3.19		0.300	mg/kg	50	3041246	JH	14-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			133 %	71.5-134		3041246	JH	14-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	24.8		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	1030		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	201		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane			88.6 %	48.2-134		3041309	MS	13-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			121 %	49.1-148		3041309	MS	13-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 8 (0-1')
H231665-08 (Soil)

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

Chloride	848		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134 3041246 JH 13-Apr-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
DRO >C10-C28*	30.6		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
EXT DRO >C28-C36	17.1		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	

Surrogate: 1-Chlorooctane 87.7 % 48.2-134 3041309 MS 14-Apr-23 8015B

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148 3041309 MS 14-Apr-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 9 (0-1')
H231665-09 (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	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			111 %		71.5-134	3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane			55.3 %		48.2-134	3041309	MS	13-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			58.8 %		49.1-148	3041309	MS	13-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 10 (0-1')**H231665-10 (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	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			112 %		71.5-134	3041246	JH	13-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3041309	MS	14-Apr-23	8015B	

Surrogate: 1-Chlorooctane			82.1 %		48.2-134	3041309	MS	14-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			87.2 %		49.1-148	3041309	MS	14-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 11 (0-1')**H231665-11 (Soil)**

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

Chloride	8260		16.0	mg/kg	4	3041341	GM	13-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3041246	JH	13-Apr-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3041246	JH	13-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134 3041246 JH 13-Apr-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	736		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	165		10.0	mg/kg	1	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane 81.0 % 48.2-134 3041309 MS 13-Apr-23 8015B

Surrogate: 1-Chlorooctadecane 126 % 49.1-148 3041309 MS 13-Apr-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

AH - 12 (0-1')**H231665-12 (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	3041727	GM	17-Apr-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Toluene*	0.082		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Ethylbenzene*	0.362		0.050	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Total Xylenes*	1.86		0.150	mg/kg	50	3041246	JH	14-Apr-23	8021B	
Total BTEX	2.31		0.300	mg/kg	50	3041246	JH	14-Apr-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			130 %	71.5-134		3041246	JH	14-Apr-23	8021B	
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Petroleum Hydrocarbons by GC FID**S-06**

GRO C6-C10*	126		50.0	mg/kg	5	3041309	MS	13-Apr-23	8015B	
DRO >C10-C28*	5020		50.0	mg/kg	5	3041309	MS	13-Apr-23	8015B	
EXT DRO >C28-C36	998		50.0	mg/kg	5	3041309	MS	13-Apr-23	8015B	

Surrogate: 1-Chlorooctane			112 %	48.2-134		3041309	MS	13-Apr-23	8015B	
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Surrogate: 1-Chlorooctadecane			250 %	49.1-148		3041309	MS	13-Apr-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 3041341 - 1:4 DI Water**Blank (3041341-BLK1)**

Prepared & Analyzed: 13-Apr-23

Chloride	ND	16.0	mg/kg						
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LCS (3041341-BS1)

Prepared & Analyzed: 13-Apr-23

Chloride	432	16.0	mg/kg	400	108	80-120			
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LCS Dup (3041341-BSD1)

Prepared & Analyzed: 13-Apr-23

Chloride	416	16.0	mg/kg	400	104	80-120	3.77	20	
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Batch 3041727 - 1:4 DI Water**Blank (3041727-BLK1)**

Prepared & Analyzed: 17-Apr-23

Chloride	ND	16.0	mg/kg						
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LCS (3041727-BS1)

Prepared & Analyzed: 17-Apr-23

Chloride	400	16.0	mg/kg	400	100	80-120			
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LCS Dup (3041727-BSD1)

Prepared & Analyzed: 17-Apr-23

Chloride	400	16.0	mg/kg	400	100	80-120	0.00	20	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: EVGSAU - 0546-038
Project Number: 212C-HN-02278
Project Manager: CHUCK TERHUNE
Fax To: (432) 682-3946

Reported:
17-Apr-23 17:51

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 3041246 - Volatiles**Blank (3041246-BLK1)**

Prepared: 12-Apr-23 Analyzed: 13-Apr-23

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)	0.0528		mg/kg	0.0500		106	71.5-134			

LCS (3041246-BS1)

Prepared: 12-Apr-23 Analyzed: 13-Apr-23

Benzene	1.88	0.050	mg/kg	2.00		94.0	81.4-118			
Toluene	1.95	0.050	mg/kg	2.00		97.5	88.7-121			
Ethylbenzene	2.10	0.050	mg/kg	2.00		105	86.1-120			
m,p-Xylene	4.23	0.100	mg/kg	4.00		106	88.2-124			
o-Xylene	2.15	0.050	mg/kg	2.00		108	84.9-118			
Total Xylenes	6.38	0.150	mg/kg	6.00		106	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0553		mg/kg	0.0500		111	71.5-134			

LCS Dup (3041246-BS1)

Prepared: 12-Apr-23 Analyzed: 13-Apr-23

Benzene	1.94	0.050	mg/kg	2.00		97.1	81.4-118	3.24	15.8	
Toluene	2.01	0.050	mg/kg	2.00		100	88.7-121	2.87	15.9	
Ethylbenzene	2.15	0.050	mg/kg	2.00		107	86.1-120	2.28	16	
m,p-Xylene	4.30	0.100	mg/kg	4.00		108	88.2-124	1.68	16.2	
o-Xylene	2.19	0.050	mg/kg	2.00		109	84.9-118	1.71	16.7	
Total Xylenes	6.49	0.150	mg/kg	6.00		108	87.3-122	1.69	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0520		mg/kg	0.0500		104	71.5-134			

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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Reported:
17-Apr-23 17:51

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 3041309 - General Prep - Organics**Blank (3041309-BLK1)**

Prepared & Analyzed: 13-Apr-23

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	44.4		mg/kg	49.6		89.6	48.2-134			
Surrogate: 1-Chlorooctadecane	48.7		mg/kg	50.0		97.3	49.1-148			

LCS (3041309-BS1)

Prepared & Analyzed: 13-Apr-23

GRO C6-C10	192	10.0	mg/kg	200		96.1	78.5-124			
DRO >C10-C28	198	10.0	mg/kg	200		99.0	72.5-126			
Total TPH C6-C28	390	10.0	mg/kg	400		97.5	77.6-123			
Surrogate: 1-Chlorooctane	47.7		mg/kg	49.6		96.2	48.2-134			
Surrogate: 1-Chlorooctadecane	55.5		mg/kg	50.0		111	49.1-148			

LCS Dup (3041309-BS1)

Prepared & Analyzed: 13-Apr-23

GRO C6-C10	207	10.0	mg/kg	200		104	78.5-124	7.44	17.7	
DRO >C10-C28	213	10.0	mg/kg	200		106	72.5-126	7.25	21	
Total TPH C6-C28	420	10.0	mg/kg	400		105	77.6-123	7.34	18.5	
Surrogate: 1-Chlorooctane	47.1		mg/kg	49.6		95.0	48.2-134			
Surrogate: 1-Chlorooctadecane	54.4		mg/kg	50.0		109	49.1-148			

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of 2



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	Maverick	Site Manager:	Chuck Terhune
Project Name:	EVGSAU - 0546 - 038	(281) 755-8965	chuck.terhune@tetratech.com
Project Location: (county, state)	Lea County, NM	Project #:	212C-HN-02278
Invoice to:	chuck.terhune@tetratech.com		
Receiving Laboratory:	Cardinal Labs	Sampler Signature:	Miguel A. Flores
Comments:			

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)															Hold
		YEAR: 2023		WATER	SOIL	HCL	HNO ₃	ICE				BTEX 8021B	BTEX 8260B / 624	TPH TX1005 (Ext to C: C: C: D												

Inquired by: Miguel A Flores Date: Time:

Received by: [Signature] Date: Time: 0930 4/10/23

Inquired by: Date: Time:

Received by: Date: Time:

Inquired by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature

4.8°C

0.6°C

4.2°C

REMARKS:

Standard

☐ RUSH: Same Day 24 hr 48 hr 72 hr☐ Rush Charges Authorized☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



Page 20 of 20

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible]

LAB USE ONLY Sample Temperature <i>4.8°C</i> <i>C.O. 6°C</i> <i>4.2°C</i>	REMARKS: * <i>Customer Requested Standard analyses run.</i> <input type="checkbox"/> RUSH: Same Day 24 hr 48 hr 72 hr <i>To #117</i> <input type="checkbox"/> Rush Charges Authorized <input type="checkbox"/> Special Report Limits or TRRP Report <i>#113</i>
(Circle) <u>HAND DELIVERED</u> FEDEX UPS Tracking #:	

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Release Characterization Work Plan
Maverick Permian, LLC
EVGSAU 0546-038
Incident ID: nAPP2310150208

May 8, 2023

ATTACHMENT 4 – PHOTOGRAPHIC DOCUMENTATION

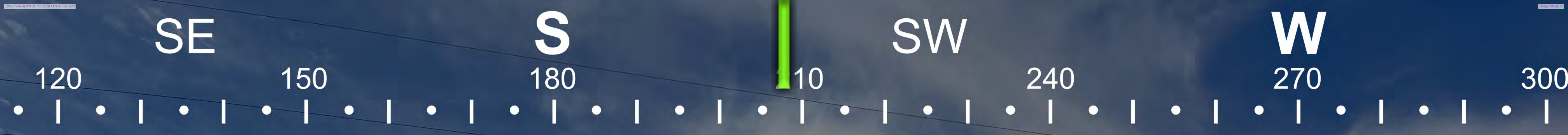


☀ 172°S (T) LAT: 32.782804 LON: -103.477735 ±4m ▲ 1210m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:06:18 MDT

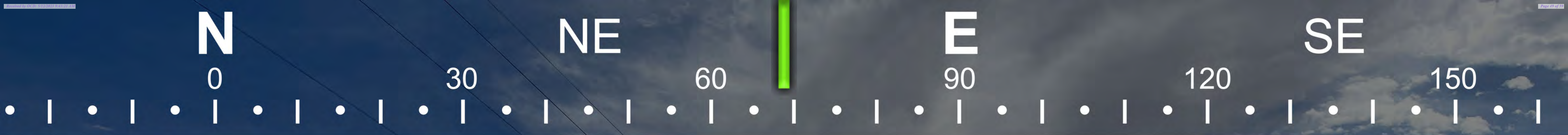


☉ 208°SW (T) LAT: 32.782795 LON: -103.477541 ±4m ▲ 1209m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07-2023, 10:06:01 MDT



☉ 69°E (T) LAT: 32.782528 LON: -103.477846 ±4m ▲ 1210m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:04:58 MDT



☉ 354°N (T) LAT: 32.782512 LON: -103.477690 ±4m ▲ 1209m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:05:14 MDT



NE

E

SE

S

30

60

90

120

150

180

☉ 96°E (T) LAT: 32.782600 LON: -103.477922 ±4m ▲ 1210m

Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:06:49 MDT



☀ 354°N (T) LAT: 32.782501 LON: -103.477686 ±4m ▲ 1210m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:05:10 MDT



☉ 289°W (T) LAT: 32.782531 LON: -103.477520 ±4m ▲ 1209m



Site Assessment
Tetra Tech

Maverick - EVGSAU 0546-038
Apr 07 2023, 10:05:30 MDT

Release Characterization Work Plan
Maverick Permian, LLC
EVGSAU 0546-038
Incident ID: nAPP2310150208

May 8, 2023

ATTACHMENT 5 – NMSLO SEED MIXTURE DETAILS

NMSLO Seed Mix**Coarse (CS)****COARSE (CS) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	VNS, Southern	2.0	F
Sideoats grama	Vaughn, El Reno	2.0	F
Blue grama	Hachita, Lovington	1.5	D
Little bluestem	Cimmaron, Pastura	1.5	F
Sand dropseed	VNS, Southern	1.0	S
Plains bristlegrass	VNS, Southern	0.75	D
Forbs:			
Parry penstemon	VNS, Southern	1.0	D
Desert globemallow	VNS, Southern	1.0	D
White prairieclover	Kaneb, VNS	0.5	D
Sulfur buckwheat	VNS, Southern	0.5	D
Shrubs:			
Fourwing saltbush	VNS, Southern	1.0	D
Skunkbush sumac	VNS, Southern	1.0	D
Common winterfat	VNS, Southern	1.0	F
Fringed sagewort	VNS, Southern	0.5	F
Total PLS/acre		18.25	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow.
- If one species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



Map Unit Description: Kimbrough-Lea complex, dry, 0 to 3 percent slopes---Lea County, New Mexico

EVGSAU 0546-038

Lea County, New Mexico

KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tw46

Elevation: 2,500 to 4,800 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 57 to 63 degrees F

Frost-free period: 180 to 220 days

Farmland classification: Not prime farmland

Map Unit Composition

Kimbrough and similar soils: 45 percent

Lea and similar soils: 25 percent

Minor components: 30 percent

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

Description of Kimbrough

Setting

Landform: Playa rims, plains

Down-slope shape: Convex, linear

Across-slope shape: Concave, linear

Parent material: Loamy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 3 inches: gravelly loam

Bw - 3 to 10 inches: loam

Bkkm1 - 10 to 16 inches: cemented material

Bkkm2 - 16 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 4 to 18 inches to petrocalcic

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 95 percent

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

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Map Unit Description: Kimbrough-Lea complex, dry, 0 to 3 percent slopes---Lea County, New Mexico

EVGSAU 0546-038

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R077DY049TX - Very Shallow 12-17" PZ
Hydric soil rating: No

Description of Lea

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Calcareous, loamy eolian deposits from the blackwater draw formation of pleistocene age over indurated caliche of pliocene age

Typical profile

A - 0 to 10 inches: loam
Bk - 10 to 18 inches: loam
Bkk - 18 to 26 inches: gravelly fine sandy loam
Bkkm - 26 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 22 to 30 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R077DY047TX - Sandy Loam 12-17" PZ
Hydric soil rating: No

Minor Components

Douro

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY047TX - Sandy Loam 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No



Map Unit Description: Kimbrough-Lea complex, dry, 0 to 3 percent slopes---Lea County, New Mexico

EVGSAU 0546-038

Kenhill

Percent of map unit: 12 percent

Landform: Plains

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R077DY038TX - Clay Loam 12-17" PZ

Hydric soil rating: No

Spraberry

Percent of map unit: 6 percent

Landform: Playa rims, plains

Down-slope shape: Convex, linear

Across-slope shape: Linear

Ecological site: R077DY049TX - Very Shallow 12-17" PZ

Other vegetative classification: Unnamed (G077DH000TX)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 19, Sep 8, 2022



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

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

CONDITIONS

Action 216422

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 216422
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan approved as written. Maverik Permian has 60-days (November 29, 2023) to submit its final closure report.	8/1/2023