

**SITE INFORMATION****Report Type: Closure Report      1RP-5255****General Site Information:**

Site:	Stratocaster 20 Federal #3H					
Company:	COG Operating LLC					
Section, Township and Range	Unit O	Sec. 20	T 23S	R 34E		
Lease Number:	API No. 30-025-41447					
County:	Lea County					
GPS:	32.283769			-103.489961		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of HWY 128 and Delaware Basin Rd travel north on Delaware Basin Rd for 5.10 miles, turn east onto lease road and continue for 0.70 mi to Y in the road and continue northeast for 0.10 mi, turn east for 0.50 mi to location..					

**Release Data:**

<b>Date Released:</b>	10/22/2018
<b>Type Release:</b>	Oil and Produced Water
<b>Source of Contamination:</b>	Wellhead
<b>Fluid Released:</b>	3 bbls oil & 3 bbls water
<b>Fluids Recovered:</b>	2 bbls oil & 2 bbls water

**Official Communication:**

<b>Name:</b>	Ike Tavarez		Clair Gonzales
<b>Company:</b>	COG Operating, LLC		Tetra Tech
<b>Address:</b>	One Concho Center		901 West Wall Street
	600 W. Illinois Ave.		Suite 100
<b>City:</b>	Midland Texas, 79701		Midland, Texas
<b>Phone number:</b>	(432) 686-3023		(432) 687-8110
<b>Fax:</b>	(432) 684-7137		
<b>Email:</b>	<a href="mailto:itavarez@concho.com">itavarez@concho.com</a>		<a href="mailto:Clair.Gonzales@tetrattech.com">Clair.Gonzales@tetrattech.com</a>

**Site Characterization****Depth to Groundwater:** 345' below surface**Recommended Remedial Action Levels (RRALs)**

<b>Benzene</b>	<b>Total BTEX</b>	<b>TPH (GRO+DRO)</b>	<b>TPH (GRO+DRO+MRO)</b>	<b>Chlorides</b>
10 mg/kg	50 mg/kg	1,000 mg/kg	2,500 mg/kg	20,000 mg/kg

**ID72I-190808-C-1410**

August 5, 2019

Mr. Dylan Rose-Coss  
Environmental Engineer Specialist  
Oil Conservation Division, District 1  
1625 North French Drive  
Hobbs, New Mexico 88240

**Re: Closure for the COG Operating, LLC, Stratocaster 20 Federal #3H, Unit O, Section 20, Township 23 South, Range 34 East, Lea County, New Mexico. 1RP-5255**

Mr. Rose-Coss:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the Stratocaster 20 Federal #3H, Unit O, Section 20, Township 23 South, Range 34 East, Lea County, New Mexico (Site). The spill site coordinates are 32.283769°, -103.489961°. The site location is shown on Figures 1 and 2.

## **Background**

According to the State of New Mexico C-141 Report, the release occurred on October 22, 2018, and released approximately 3 barrels of oil and 3 barrels of produced water while tripping out of the hole. A vacuum truck was used to remove all freestanding fluids, recovering approximately 2 barrels of oil and 2 barrels of produced water. The release impacted an area on the pad measuring approximately 45' x 45' and 110' x 160' and overspray from the release impacted an area in the pasture measuring approximately 80' x 145'. The C-141 Form is included in Appendix A.

## **Site Characterization**

A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. Additionally, the site is located in a low karst potential area. No wells are listed in Section 20 on the New Mexico Office of the State Engineer's (NMOSE) database, USGS National Water Information System, or the Geology and Ground-Water Conditions in Southern Lea County, New Mexico (Report 6). The nearest well listed is in Section 16 on the USGS National Water Information System, approximately 0.7 miles north of the site, and has a reported depth to groundwater of 345 feet below surface. The site characterization data is shown in Appendix B.

## **Regulatory**

A risk-based evaluation was performed for the Site in accordance with the New Mexico

**Tetra Tech**

901 West Wall St, Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 [www.tetrattech.com](http://www.tetrattech.com)



Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 1,000 mg/kg (GRO + DRO) and 2,500 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,00 mg/kg.

## **Soil Assessment and Analytical Results**

### Auger Holes

On November 20, 2018, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of seven (7) auger holes (AH-1 through AH-7) were installed in the release footprint and overspray area to total depths ranging from 0-6" and 1.0'-1.5' below surface. Deeper samples were not collected due to a dense formation in the area. Selected soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, none of the samples collected showed benzene, total BTEX, or chloride concentrations above the RRALs. Additionally, the areas of auger holes (AH-1, AH-2, AH-5, AH-6, and AH-7) showed TPH concentrations below the RRALs. However, the areas of auger holes (AH-3 and AH-4) showed TPH (GRO+DRO) concentrations of 3,948 mg/kg (AH-3) and 6,556 mg/kg (AH-4) at 0-6" below surface.

### Trenches

Based on the laboratory data, Tetra Tech personnel returned to the site on December 20, 2018 to install two (2) backhoe sample trenches (T-1 and T-2) in the areas of auger holes (AH-3 and AH-4) in order to vertically delineate the TPH concentrations detected. Selected soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, none of the samples analyzed showed TPH, benzene, or total BTEX concentrations above the laboratory reporting limits. Additionally, no chloride concentrations above the RRAL was detected.

## **Additional Sampling**

Tetra Tech personnel returned to the site from June 26<sup>th</sup>-June 28<sup>th</sup>, 2019, to collect deeper samples in the areas of auger holes (AH-1 and AH-2). Two additional trenches (T-1 and T-2) were installed in the areas of auger holes (AH-1 and AH-2) to total depths of 2.0'-3.0' below surface. The samples were submitted to the laboratory for chloride analysis by EPA method

300.0. The trench locations are shown on Figure 3 and the laboratory analysis is summarized on Table 1.

Referring to Table 1, none of the samples collected showed chloride concentrations above 600 mg/kg.

### **Remediation Activities**

Tetra Tech submitted a work plan dated January 10, 2019, which was approved. Tetra Tech personnel returned to the site from July 14<sup>th</sup>-July 15<sup>th</sup>, 2019, to supervise the remediation activities. The areas of auger holes (AH-3 and AH-4) were excavated to total depths ranging from 0.5' to 1.5' below surface.

Composite confirmation bottom hole and sidewall samples were collected every 200 square feet to ensure proper removal of the impacted soils. A total of sixteen (16) bottom hole samples (Bottom Hole #1 through Bottom Hole #16) and eleven (11) sidewall samples (North Sidewall 1 through North Sidewall 3, East Sidewall 1 through East Sidewall 3, West Sidewall 1 through West Sidewall 3, South Sidewall 1, and South Sidewall 2) were collected. All samples were submitted to the laboratory for THP analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 2. The sample locations and excavation depths are shown on Figure 4.

Referring to Table 2, none of the final confirmation samples showed benzene, total BTEX, TPH, or chlorides above the RRLs.

Once the excavation was complete, the areas will be backfilled with clean material to surface grade. Approximately 140 cubic yards was excavated and hauled for proper disposal.

### **Conclusion**

Based on the laboratory results and remediation activities performed, COG requests closure of this spill issue. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,  
TETRA TECH



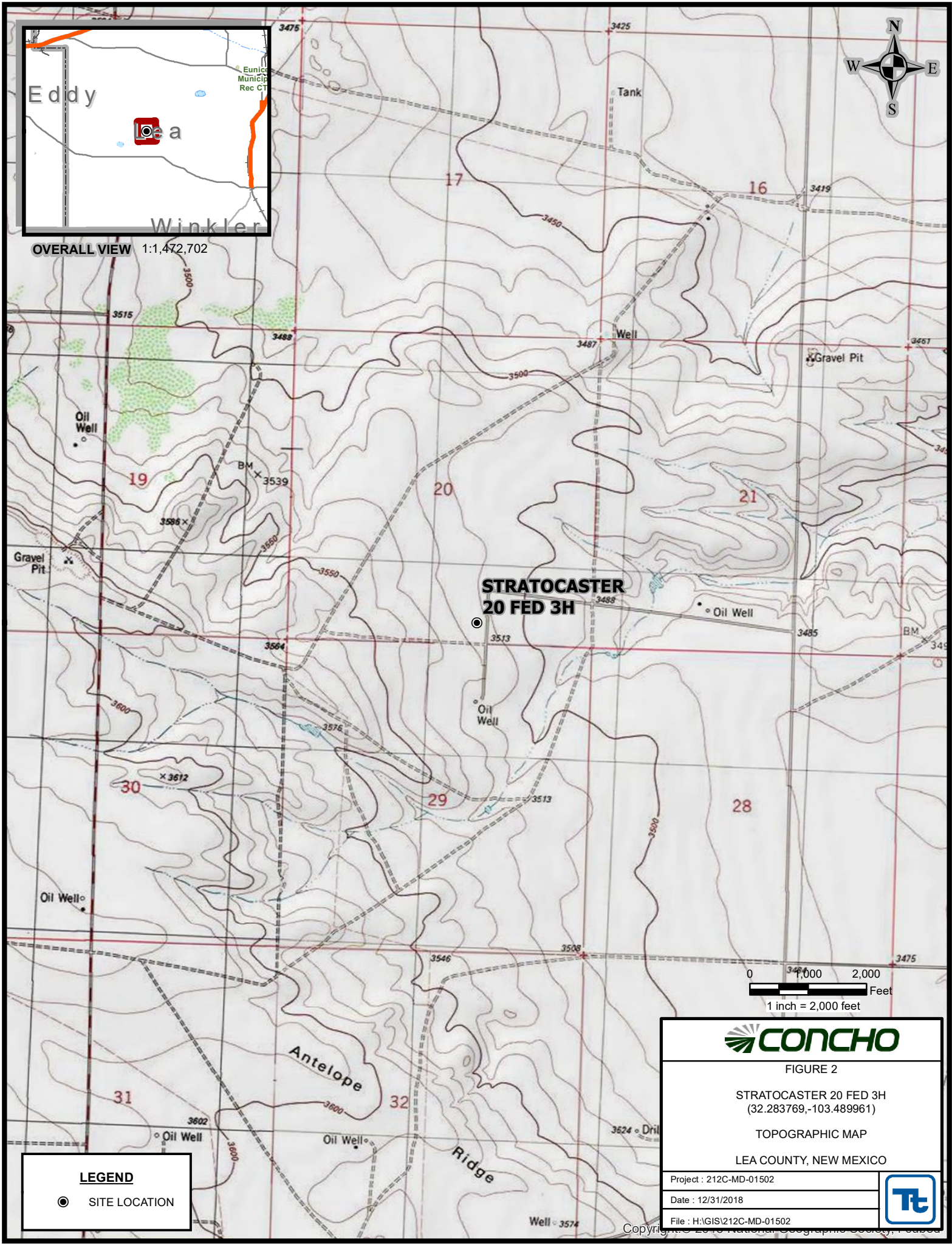
Clair Gonzales, P.G.  
Project Manager

cc: Jim Amos – BLM  
Ike Tavaréz – COG  
Rebecca Haskell – COG  
Dakota Neel – COG  
Sheldon Hitchcock – COG  
Deann Grant - COG

## Figures

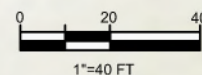
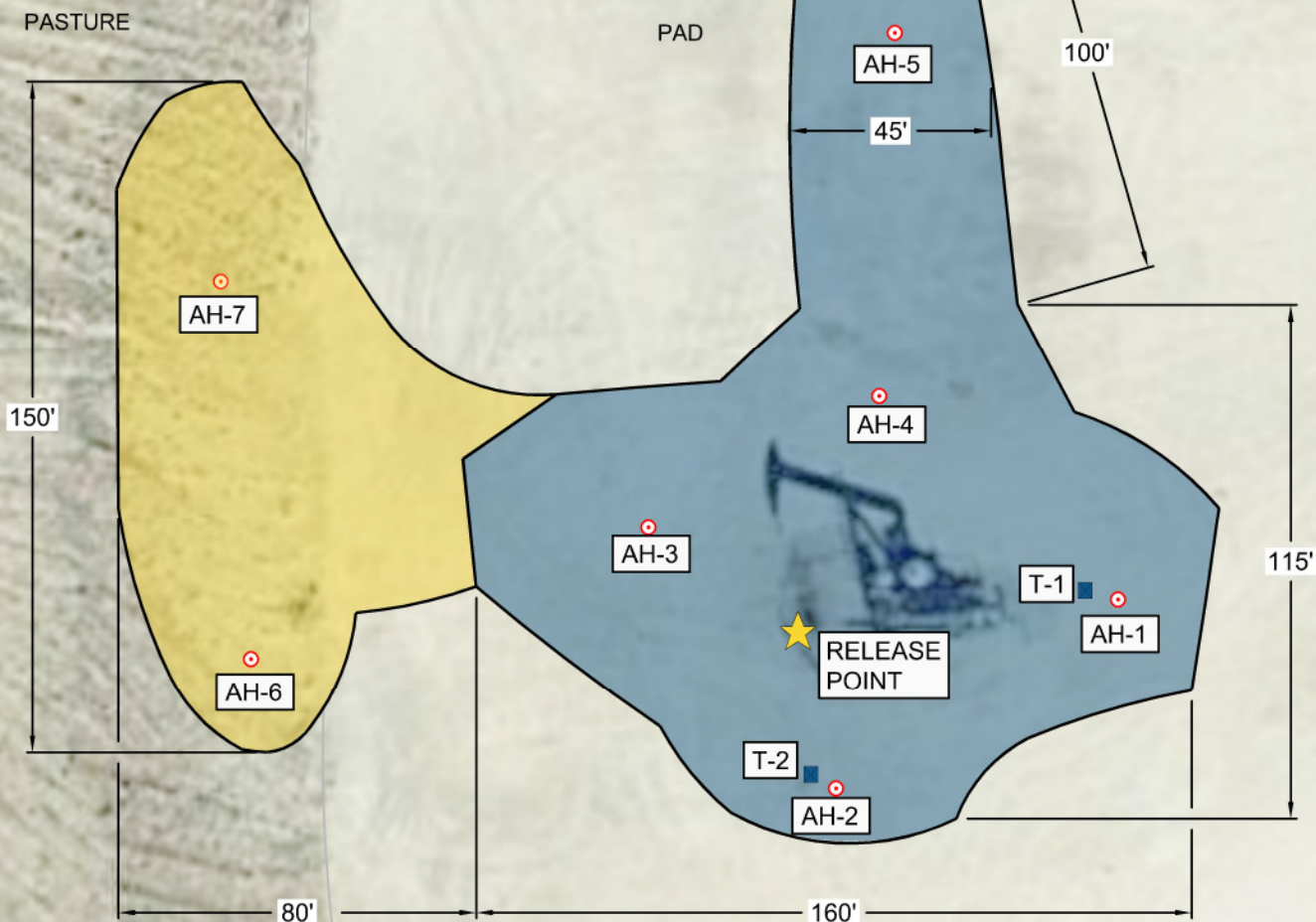
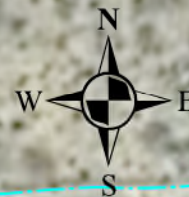








AUGER HOLE SAMPLE LOCATIONS		
AH-1	32.28379	-103.489731
AH-2	32.283677	-103.489931
AH-3	32.283832	-103.490124
AH-4	32.283913	-103.4899
AH-5	32.284129	-103.48989
AH-6	32.283754	-103.490345
AH-7	32.283981	-103.490366
T-1	32.283802°	-103.489770°
T-2	32.283688°	-103.489951°



#### LEGEND

- ⊙ AUGER HOLE SAMPLE LOCATIONS
- SPILL AREA
- OVERSPRAY AREA
- ABOVEGROUND POLY LINE



FIGURE 3

STRATOCASTER 20 FED 3H  
(32.283769°, -10489961°)

SPILL ASSESSMENT MAP  
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01502

Date: 12/31/2018

File: H:\GIS\212C-MD-01502

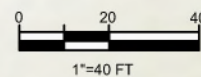
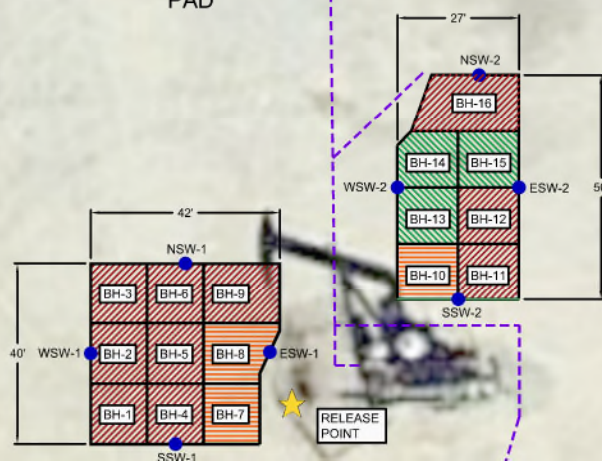






PASTURE

PAD



**LEGEND**

- BH = BOTTOM HOLE SAMPLE LOCATIONS
- SIDEWALL DESIGNATIONS
- 0.6' EXCAVATED DEPTH AREA
- 1.0' EXCAVATED DEPTH AREA
- 1.5' EXCAVATED DEPTH AREA
- BURIED PIPELINE
- ABOVEGROUND POLYPIPE/FLOWLINE

LEASE ROAD



FIGURE 4

STRATOCASTER 20 FED 3H  
(32.283769°, -104.89961°)

EXCAVATION AREA & DEPTH MAP  
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01829

Date: 08/06/2019

File: H:\GIS\212C-MD-01829



## Tables

**Table 1**  
**COG**  
**Stratocaster 20 Fed #3H**  
**Lea County, New Mexico**

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	GRO+DRO	ORO	Total						
AH-1	11/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	492
	"	1-1.5	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	0.00305	<0.00200	<0.00200	0.00305	897
T-1	6/27/2019	1	X		-	-	-	-	-	-	-	-	-	-	96.0
	"	2	X		-	-	-	-	-	-	-	-	-	-	144
	"	3	X		-	-	-	-	-	-	-	-	-	-	128
AH-2	11/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	887
	"	1-1.5	X		<14.9	<14.9	<14.9	<14.9	<14.9	<0.00202	0.00291	<0.00202	<0.00202	0.00291	991
T-2	6/27/2019	1	X		-	-	-	-	-	-	-	-	-	-	64.0
	"	2	X		-	-	-	-	-	-	-	-	-	-	176
AH-3	11/20/2018	0-6"	X		778	3,170	3,948	32.5	3,980	0.0124	2.09	1.86	4.76	8.72	193
T-2	12/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.00
	"	2	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	7.78
AH-4	11/20/2018	0-6"	X		656	5,900	6,556	<75.0	6,560	0.0622	0.726	0.331	0.900	2.02	455
T-1	12/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	68.2
	"	2	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	0.00236	<0.00200	0.0135	0.0159	33.1
AH-5	11/20/2018	0-1	X		<15.0	28.3	28.3	<15.0	28.3	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	15.4
AH-6	11/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.99
AH-7	11/20/2018	0-1	X		<15.0	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.99

(-) Not Analyzed



Proposed Excavation Depths

**Table 2**  
**COG**  
**Stratocaster 20 Fed #3H**  
**Lea County, New Mexico**

Sample ID	Sample Date	Sample Depth (ft)	BEB (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	GRO+DRO	ORO	Total						
North Sidewall 1	6/28/2019	-	-		X	<10.0	1,640	1,640	335	1,975	<0.050	<0.050	<0.050	<0.150	<0.300	400
	7/15/2019	-	-	X		<10.0	298	298	52.9	351	<0.050	<0.050	<0.050	<0.150	<0.300	320
North Sidewall 2	6/28/2019	-	-		X	<10.0	1,120	1,120	298	1,418	<0.050	<0.050	<0.050	<0.150	<0.300	464
	7/15/2019	-	-	X		<10.0	58.7	58.7	<10.0	58.7	<0.050	<0.050	<0.050	<0.150	<0.300	96
North Sidewall 3	7/15/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
East Sidewall 1	6/28/2019	-	-	X		<10.0	339	339	75.6	415	<0.050	<0.050	<0.050	<0.150	<0.300	768
East Sidewall 2	6/28/2019	-	-	X		<10.0	19.1	19.1	12.3	31.4	<0.050	<0.050	<0.050	<0.150	<0.300	112
East Sidewall 3	7/15/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	400
West Sidewall 1	6/28/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
West Sidewall 2	6/28/2019	-	-	X		<10.0	41.9	41.9	10.7	52.6	<0.050	<0.050	<0.050	<0.150	<0.300	560
West Sidewall 3	7/15/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	544
South Sidewall 1	6/28/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	208
South Sidewall 2	6/28/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	720
Bottom Hole #1	6/28/2019	-	0.5	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
Bottom Hole #2	6/28/2019	-	0.5	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
Bottom Hole #3	6/28/2019	-	0.5	X		<10.0	40.6	40.6	13.3	53.9	<0.050	<0.050	<0.050	<0.150	<0.300	304
Bottom Hole #4	6/28/2019	-	0.5	X		<10.0	104	104	30.7	135	<0.050	<0.050	<0.050	<0.150	<0.300	656
Bottom Hole #5	6/28/2019	-	0.5	X		<10.0	391	391	178	569	<0.050	<0.050	<0.050	<0.150	<0.300	736
Bottom Hole #6	6/28/2019	-	0.5	X		<10.0	255	255	45.5	301	<0.050	<0.050	<0.050	<0.150	<0.300	176



**Table 2**  
**COG**  
**Stratocaster 20 Fed #3H**  
**Lea County, New Mexico**

Sample ID	Sample Date	Sample Depth (ft)	BEB (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	GRO+DRO	ORO	Total						
Bottom Hole #7	6/28/2019	-	0.5		X	<10.0	325	325	248	573	<0.050	<0.050	<0.050	<0.150	<0.300	1,120
	7/15/2019	-	1.0	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	432
Bottom Hole #8	6/28/2019	-	0.5	X		<10.0	539	539	167	706	<0.050	<0.050	<0.050	<0.150	<0.300	1,620
	7/15/2019	-	1.0	X		<10.0	42.7	42.7	13.4	56.1	<0.050	<0.050	<0.050	<0.150	<0.300	720
Bottom Hole #9	6/28/2019	-	0.5	X		<10.0	372	372	80.5	453	<0.050	<0.050	<0.050	<0.150	<0.300	448
Bottom Hole #10	6/28/2019	-	0.5	X		<10.0	10.4	10.4	<10.0	10.4	<0.050	<0.050	<0.050	<0.150	<0.300	976
	7/15/2019	-	1.0	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	416
Bottom Hole #11	6/28/2019	-	0.5	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
Bottom Hole #12	6/28/2019	-	0.5	X		<10.0	30.2	30.2	<10.0	30.2	<0.050	<0.050	<0.050	<0.150	<0.300	304
Bottom Hole #13	6/28/2019	-	0.5		X	<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,010
	7/15/2019	-	1.0	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	464
Bottom Hole #14	6/28/2019	-	0.5		X	<10.0	2,030	2,030	447	2,477	<0.050	<0.050	<0.050	<0.150	<0.300	768
	7/15/2019	-	1.5	X		<10.0	323	323	61.4	384	<0.050	<0.050	<0.050	<0.150	<0.300	240
Bottom Hole #15	6/28/2019	-	0.5		X	<10.0	1,910	1,910	495	2,405	<0.050	<0.050	<0.050	<0.150	<0.300	592
	7/15/2019	-	1.5	X		<10.0	320	320	31.1	351	<0.050	<0.050	<0.050	<0.150	<0.300	176
Bottom Hole #16	6/28/2019	-	0.5	X		<10.0	901	901	263	1,164	<0.050	<0.050	<0.050	<0.150	<0.300	416

BEB Below Excavation Bottom

( - ) Not Analyzed

 Excavation Depths

Photos



View West – Area of AH-1



View Northwest – Area of AH-2





View East – Area of AH-3



View South – Area of AH-4





View West – Area of AH-5



View West – Area of AH-6





View West – Area of AH-7



View North – Excavated Area





View Northeast – Excavated Area



View North – Excavated Area

## Appendix A



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	NOY1830938217
District RP	1RP-5255
Facility ID	
Application ID	pOY1830938484

## Release Notification

### Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD) NOY1830938217
Contact mailing address	

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Federal minerals

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 type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input 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

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input 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)?	

### Initial Response

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

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input 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: _____	Title: _____
Signature: <u>Delann Opreant</u>	Date: _____
email: _____	Telephone: _____
<b>OCD Only</b>	
Received by: <b>RECEIVED</b> <b>By Olivia Yu at 10:32 am, Nov 05, 2018</b>	
Date: _____	

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input 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 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 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 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 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 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 type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input 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.


<p><b>Characterization Report Checklist:</b> <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li><li><input type="checkbox"/> Field data</li><li><input type="checkbox"/> Data table of soil contaminant concentration data</li><li><input type="checkbox"/> Depth to water determination</li><li><input type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li><li><input type="checkbox"/> Boring or excavation logs</li><li><input type="checkbox"/> Photographs including date and GIS information</li><li><input type="checkbox"/> Topographic/Aerial maps</li><li><input type="checkbox"/> Laboratory data including chain of custody</li></ul>
--

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.

Incident ID	
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: \_\_\_\_\_ Title: \_\_\_\_\_

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

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_



Incident ID	
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: \_\_\_\_\_

## Appendix B

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**COG - Stratocaster 20 Fed #3H**

**22 South 33 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**22 South 34 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**22 South 35 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**23 South 33 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**23 South 34 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**23 South 35 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**24 South 33 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**24 South 34 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**24 South 35 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**88** New Mexico State Engineers Well Reports

**105** USGS Well Reports

**90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

**90** Geology and Groundwater Resources of Eddy County, NM (Report 3)

**34** NMOCD - Groundwater Data

**121** Abandoned Waterwell (recently measured)



## New Mexico Office of the State Engineer

# Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
<a href="#">C 03620 POD1</a>		CUB	LE	1	4	3	32	23S	34E	641790	3569941	480	130	350
<a href="#">CP 00556 POD1</a>		CP	LE	4	4	3	08	23S	34E	641762	3576206	497	255	242
<a href="#">CP 00580</a>		CP	LE	3	4	3	23	23S	34E	646524	3572948*	220		
<a href="#">CP 00606</a>		CP	LE		4	1	23	23S	34E	646613	3573854*	650	265	385
<a href="#">CP 00618</a>		CP	LE	1	2	4	22	23S	34E	645713	3573539*	428	295	133
<a href="#">CP 00637</a>		CP	LE	3	3	4	15	23S	34E	645293	3574541*	430	430	0
<a href="#">CP 00872 POD1</a>		CP	LE	1	1	1	08	23S	34E	641225	3577504*	494	305	189
<a href="#">CP 01075 POD1</a>		CP	LE		1	1	08	23S	34E	641278	3577525	430	20	410
<a href="#">CP 01120 POD1</a>		CP	LE			3	14	23S	34E	646366	3574753	397	318	79
<a href="#">CP 01130 POD1</a>		CP	LE	2	1	2	07	23S	34E	640662	3577558	27		
<a href="#">CP 01130 POD2</a>		CP	LE	2	1	2	07	23S	34E	640674	3577549	27		
<a href="#">CP 01258 POD1</a>		CP	LE	1	4	3	22	23S	34E	645015	3573221	25		
<a href="#">CP 01258 POD2</a>		CP	LE	1	4	3	22	23S	34E	644941	3572883	65		
<a href="#">CP 01258 POD3</a>		CP	LE	1	4	3	22	23S	34E	644938	3573097	25		
<a href="#">CP 01502 POD1</a>		CP	LE	4	3	3	05	23S	34E	641342	3577635	648	200	448

Average Depth to Water: **246 feet**

Minimum Depth: **20 feet**

Maximum Depth: **430 feet**

**Record Count:** 15

**PLSS Search:**

**Township:** 23S **Range:** 34E

\*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.

11/14/18 10:37 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER





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[Contact USGS](#)  
[Search USGS](#)

## National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:


Groundwater

Geographic Area:

New Mexico

GO

Click to hide News Bulletins

- [Please see news on new formats](#)
- **UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read [more](#)**
- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

## Search Results -- 1 sites found

site\_no list =

- 321734103290001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

## USGS 321734103290001 23S.34E.16.333312

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°17'53", Longitude 103°28'59" NAD27

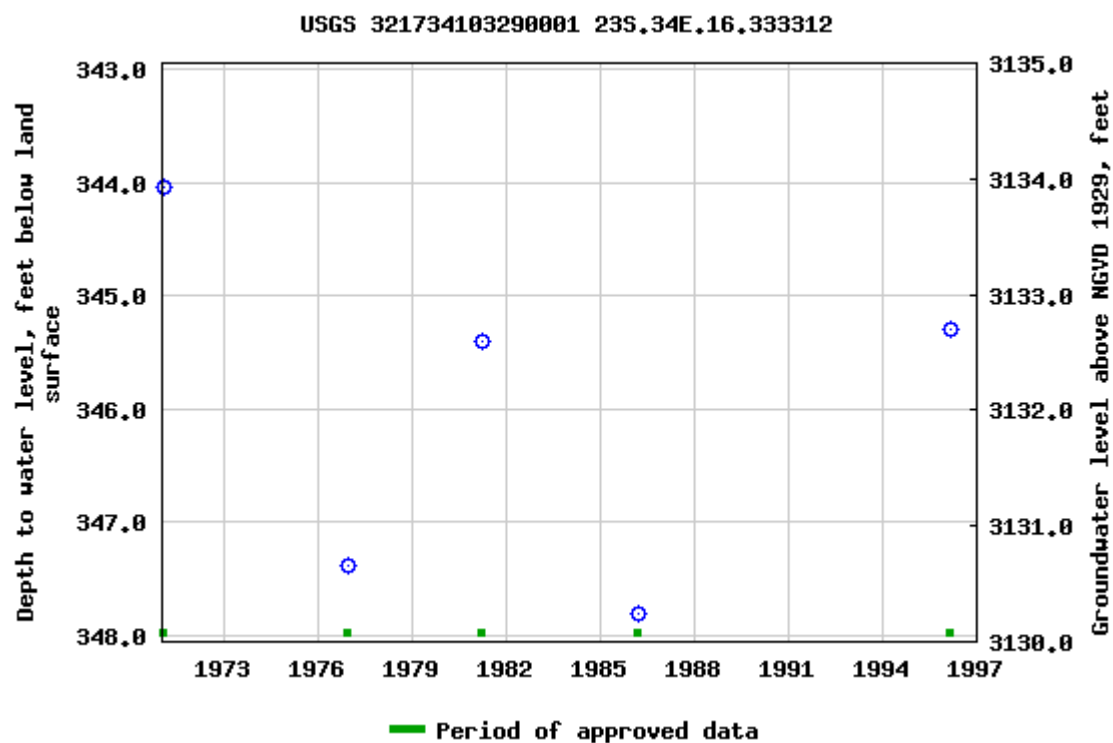
Land-surface elevation 3,478.00 feet above NGVD29

The depth of the well is 400 feet below land surface.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

## Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



Breaks in the plot represent a gap of at least one year between field measurements.

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**Title: Groundwater for New Mexico: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2018-11-14 12:38:21 EST

1.8 1.27 nadww01


# Stratocaster 20 Fed #3H


Karst Potential Map

Legend

 32.283769 -103.489961

 CRIT

 HIGH

 LOW

 MEDIUM

32.283769 -103.489961

Delaware Basin Rd

128

21

Google earth

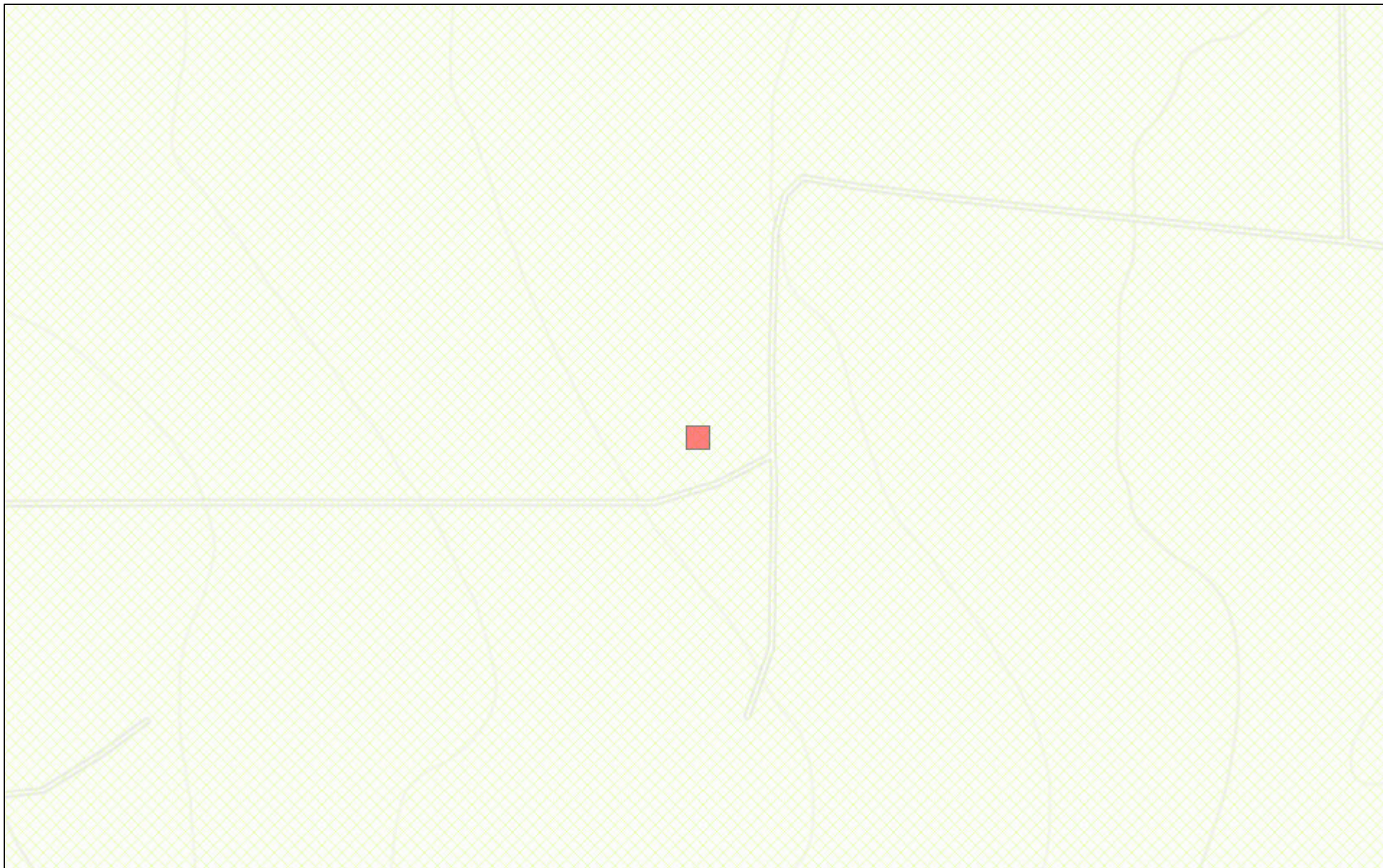
©2018 Google



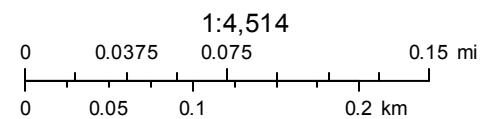
2 mi



# New Mexico NFHL Data



December 27, 2018



FEMA  
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

## Appendix C



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

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June 28, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: STRATOCASTER 20 FED 3

Enclosed are the results of analyses for samples received by the laboratory on 06/27/19 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 TETRA TECH  
 CLAIR GONZALES  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	06/27/2019	Sampling Date:	06/27/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: TRENCH 1 ( 1' ) (H902224-01)**

Chloride, SM4500CI-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	06/28/2019	ND	400	100	400	3.92	

**Sample ID: TRENCH 1 ( 2' ) (H902224-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/28/2019	ND	400	100	400	3.92	

**Sample ID: TRENCH 1 ( 3' ) (H902224-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/28/2019	ND	400	100	400	3.92	

**Sample ID: TRENCH 2 ( 1' ) (H902224-04)**

Chloride, SM4500CI-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	06/28/2019	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/27/2019	Sampling Date:	06/27/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: TRENCH 2 ( 2' ) (H902224-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/28/2019	ND	400	100	400	3.92		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



901 W Wall Street, Ste 100  
Midland, Texas 79705  
Tel (432) 682-4559  
Fax (432) 682-3946

[illegible]



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

---

July 01, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: STRATOCASTER 20 FED 3

Enclosed are the results of analyses for samples received by the laboratory on 06/28/19 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: NORTH 1 SIDEWALL (H902238-01)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTEX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	QM-07
DRO >C10-C28*	1640	10.0	06/28/2019	ND	224	112	200	10.8	QM-07
EXT DRO >C28-C36	335	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 70.5 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: NORTH 2 SIDEWALL (H902238-02)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTEX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	1120	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	298	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 80.6 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: EAST 1 SIDEWALL (H902238-03)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424	
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51	
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353	
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308	
Total BTX	<0.300	0.300	06/29/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	339	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	75.6	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 89.5 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: EAST 2 SIDEWALL (H902238-04)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	19.1	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	12.3	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: WEST 1 SIDEWALL (H902238-05)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

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	07/01/2019	ND	416	104	400	3.77	QR-03	

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	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: WEST 2 SIDEWALL (H902238-06)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTEx	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	41.9	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	10.7	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 67.3 % 41-142

Surrogate: 1-Chlorooctadecane 70.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
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Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: SOUTH 1 SIDEWALL (H902238-07)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424	
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51	
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353	
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308	
Total BTX	<0.300	0.300	06/29/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: SOUTH 2 SIDEWALL (H902238-08)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424	
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51	
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353	
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308	
Total BTEx	<0.300	0.300	06/29/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 75.0 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

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Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 1 ( 6" BEB ) (H902238-09)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 82.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 2 ( 6" BEB ) (H902238-10)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.0 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 3 ( 6" BEB ) (H902238-11)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	40.6	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	13.3	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 4 ( 6" BEB ) (H902238-12)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	104	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	30.7	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 5 ( 6" BEB ) (H902238-13)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	391	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	178	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 89.4 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 6 ( 6" BEB ) (H902238-14)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	255	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	45.5	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 7 ( 6" BEB ) (H902238-15)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/28/2019	ND	219	110	200	6.57	
DRO >C10-C28*	325	10.0	06/28/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	248	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 8 ( 6" BEB ) (H902238-16)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1620	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	219	110	200	6.57	
DRO >C10-C28*	539	10.0	06/29/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	167	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 9 ( 6" BEB ) (H902238-17)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	219	110	200	6.57	
DRO >C10-C28*	372	10.0	06/29/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	80.5	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 77.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 10 ( 6" BEB ) (H902238-18)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	219	110	200	6.57	
DRO >C10-C28*	10.4	10.0	06/29/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 76.4 % 41-142

Surrogate: 1-Chlorooctadecane 81.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 11 ( 6" BEB ) (H902238-19)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTEX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	219	110	200	6.57	
DRO >C10-C28*	<10.0	10.0	06/29/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 82.4 % 41-142

Surrogate: 1-Chlorooctadecane 85.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 12 ( 6" BEB ) (H902238-20)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.93	96.4	2.00	0.424		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.3	2.00	1.51		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.80	90.0	2.00	0.353		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.44	90.6	6.00	0.308		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	07/01/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	219	110	200	6.57	
DRO >C10-C28*	30.2	10.0	06/29/2019	ND	224	112	200	10.8	
EXT DRO >C28-C36	<10.0	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 69.3 % 41-142

Surrogate: 1-Chlorooctadecane 72.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 13 ( 6" BEB ) (H902238-21)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.88	94.1	2.00	2.15		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.5	2.00	1.37		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.81	90.3	2.00	1.17		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.43	90.4	6.00	1.68		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1010	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	196	98.1	200	8.76	
DRO >C10-C28*	<10.0	10.0	06/29/2019	ND	200	99.8	200	7.78	
EXT DRO >C28-C36	<10.0	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 14 ( 6" BEB ) (H902238-22)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.88	94.1	2.00	2.15		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.5	2.00	1.37		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.81	90.3	2.00	1.17		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.43	90.4	6.00	1.68		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	768	16.0	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	196	98.1	200	8.76	
DRO >C10-C28*	2030	10.0	06/29/2019	ND	200	99.8	200	7.78	
EXT DRO >C28-C36	447	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 97.4 % 41-142

Surrogate: 1-Chlorooctadecane 166 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 15 ( 6" BEB ) (H902238-23)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2019	ND	1.88	94.1	2.00	2.15	
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.5	2.00	1.37	
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.81	90.3	2.00	1.17	
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.43	90.4	6.00	1.68	
Total BTEX	<0.300	0.300	06/29/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	07/01/2019	ND	416	104	400	3.77	
TPH 8015M		mg/kg		Analyzed By: MS					
S-04									

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	196	98.1	200	8.76	
DRO >C10-C28*	1910	10.0	06/29/2019	ND	200	99.8	200	7.78	
EXT DRO >C28-C36	495	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 159 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
CLAIR GONZALES  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	06/28/2019	Sampling Date:	06/28/2019
Reported:	07/01/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01818 - ( 10-28-18 )	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 16 ( 6" BEB ) (H902238-24)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2019	ND	1.88	94.1	2.00	2.15		
Toluene*	<0.050	0.050	06/29/2019	ND	1.93	96.5	2.00	1.37		
Ethylbenzene*	<0.050	0.050	06/29/2019	ND	1.81	90.3	2.00	1.17		
Total Xylenes*	<0.150	0.150	06/29/2019	ND	5.43	90.4	6.00	1.68		
Total BTX	<0.300	0.300	06/29/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

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	07/01/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2019	ND	196	98.1	200	8.76	
DRO >C10-C28*	901	10.0	06/29/2019	ND	200	99.8	200	7.78	
EXT DRO >C28-C36	263	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 132 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

## Analysis Request of Custody Record



## Tetra Tech, Inc.

901 W. Wall Street, Ste 100  
Midland, Texas 79705  
Tel (432) 682-4559  
Fax (432) 682-3946

Client Name: COA		Site Manager: CLAIR COWLES	
Project Name: Strattonwater 20 C&S 34 (10.25.18)			
Project Location: LEA CO, NM		Project #: 212C-WO-D1818	
Invoice to: COA - IKE TAVAREZ			
Receiving Laboratory: CARDINAL		Sampler Signature: CONNER MCGHEERMAN	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)		
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE	None					
													YEAR: 2019	
1	NORTH 1 SIDEWALL	6/28/19		X				X			1	2	X	BTEX 8021B BTEX 8260B
2	NORTH 2 SIDEWALL			X				X			1	2	X	TPH TX1005 (Ext to C35)
3	EAST 1 SIDEWALL			X				X			1	2	X	TPH 8015M ( GRO - DRO - ORO - MRO)
4	EAST 2 SIDEWALL			X				X			1	2	X	PAH 8270C
5	WEST 1 SIDEWALL			X				X			1	2	X	Total Metals Ag As Ba Cd Cr Pb Se Hg
6	WEST 2 SIDEWALL			X				X			1	2	X	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
7	SOUTH 1 SIDEWALL			X				X			1	2	X	TCLP Volatiles
8	SOUTH 2 SIDEWALL			X				X			1	2	X	TCLP Semi Volatiles
9	Bottom Hole #1 ( 6'1' BEB)			X				X			1	2	X	RCI
10	Bottom Hole #2 ( 6' BEB)			X				X			1	2	X	GC/MS Vol. 8260B / 624

Relinquished by: <i>Conner McGheer</i>	Date: 6/26/19	Time: 1:50S	Received by: <i>Conner McGheer</i>	Date: 6/28/19	Time: 15:05
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY	REMARKS:
<input type="checkbox"/> STANDARD <input checked="" type="checkbox"/> RUSH: Same Day <u>24</u> hr 48 hr 72 hr <input type="checkbox"/> Rush Charges Authorized <input type="checkbox"/> Special Report Limits or TRRP Report	Sample Temperature: <u>4.3°C</u> (Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY





# Tetra Tech, Inc.

901W Wall Street, Ste 1000  
Midland, Texas 79705  
Tel (432) 682-4559  
Fax (432) 682-3946

سہ

## CLINICAL CONSIDERATIONS

STRATTON CASTLE 20 FEB 34 (10-28.12)

LEA CO, INC

212C-WD-01818

CON - 142 TAVAREZ

CHORDINAL

CONNER MOTHER IN

Comments:

### SAMPLE IDENTIFICATION

LAB # H902238

LAB USE ONLY

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

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

Date: Time:

Date: Time:

LAB USE  
ONLY

REMARKS:

STANDARD

Sample Temperature

☒ **RUSH:** Same Day

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July 17, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: STRATOCASTER 20 FED 3

Enclosed are the results of analyses for samples received by the laboratory on 07/16/19 8:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: NORTH # 1 SIDEWALL (H902427-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2019	ND	2.03	101	2.00	0.449	
Toluene*	<0.050	0.050	07/17/2019	ND	2.00	100	2.00	2.41	
Ethylbenzene*	<0.050	0.050	07/17/2019	ND	1.90	95.1	2.00	1.51	
Total Xylenes*	<0.150	0.150	07/17/2019	ND	5.82	97.0	6.00	0.454	
Total BTEX	<0.300	0.300	07/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	07/16/2019	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	298	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	52.9	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 75.9 % 41-142

Surrogate: 1-Chlorooctadecane 84.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received: 07/16/2019  
Reported: 07/17/2019  
Project Name: STRATOCASTER 20 FED 3  
Project Number: 212C-MD-01821  
Project Location: COG - LEA CO NM

Sampling Date: 07/15/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: NORTH # 2 SIDEWALL (H902427-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55	GC-NC	
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTEx	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-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	07/16/2019	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	58.7	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 77.3 % 41-142

Surrogate: 1-Chlorooctadecane 85.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received: 07/16/2019  
Reported: 07/17/2019  
Project Name: STRATOCASTER 20 FED 3  
Project Number: 212C-MD-01821  
Project Location: COG - LEA CO NM

Sampling Date: 07/15/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: NORTH # 3 SIDEWALL (H902427-03)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTX	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 73.3-129

Chloride, SM4500CI-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	07/16/2019	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 80.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: EAST # 3 SIDEWALL (H902427-04)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTX	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	07/16/2019	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 67.7 % 41-142

Surrogate: 1-Chlorooctadecane 73.1 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received: 07/16/2019  
Reported: 07/17/2019  
Project Name: STRATOCASTER 20 FED 3  
Project Number: 212C-MD-01821  
Project Location: COG - LEA CO NM

Sampling Date: 07/15/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: WEST # 3 SIDEWALL (H902427-05)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTX	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	544	16.0	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 73.9 % 41-142

Surrogate: 1-Chlorooctadecane 80.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 7 ( 1' BEB ) (H902427-06)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTEx	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

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	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 73.8 % 41-142

Surrogate: 1-Chlorooctadecane 81.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 8 ( 1' BEB ) (H902427-07)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTX	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	42.7	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	13.4	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 68.8 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 10 ( 1' BEB ) (H902427-08)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTX	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

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	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 65.1 % 41-142

Surrogate: 1-Chlorooctadecane 72.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 13 ( 1' BEB ) (H902427-09)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTEx	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	<10.0	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 61.8 % 41-142

Surrogate: 1-Chlorooctadecane 68.9 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 14 ( 1.5' BEB ) (H902427-10)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTEx	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	07/16/2019	ND	400	100	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	07/16/2019	ND	199	99.4	200	3.66	
DRO >C10-C28*	323	10.0	07/16/2019	ND	218	109	200	2.06	
EXT DRO >C28-C36	61.4	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 73.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TETRA TECH  
MIKE CARMONA  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701  
Fax To: (432) 682-3946

Received:	07/16/2019	Sampling Date:	07/15/2019
Reported:	07/17/2019	Sampling Type:	Soil
Project Name:	STRATOCASTER 20 FED 3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01821	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA CO NM		

**Sample ID: BOTTOM HOLE # 15 ( 1.5' BEB ) (H902427-11)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/16/2019	ND	1.96	98.0	2.00	2.21		
Toluene*	<0.050	0.050	07/16/2019	ND	1.95	97.7	2.00	7.55		
Ethylbenzene*	<0.050	0.050	07/16/2019	ND	1.84	91.8	2.00	7.85		
Total Xylenes*	<0.150	0.150	07/16/2019	ND	5.53	92.2	6.00	6.97		
Total BTEx	<0.300	0.300	07/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	07/16/2019	ND	400	100	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	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	320	10.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	31.1	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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



## Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

 901W Wall Street, Ste 100  
 Midland, Texas 79705  
 Tel (432) 582-4559  
 Fax (432) 682-3946

Client Name: <b>COA</b>		Site Manager: <b>MIKE CARMONA</b>	
Project Name: <b>Stratocaster 20 Fed 3</b>			
Project Location: <b>LEA CO, NM</b>		Project #: <b>212C-MD-C1821</b>	
Invoice to: <b>COA - MIKE TAVAREZ</b>			
Receiving Laboratory: <b>CARDINAL</b>		Sampler Signature: <b>CONVER MOERLIN</b>	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE	None			
												YEAR: 2019
1	North #1 Sidewalk	7/15/19		X				X			1	2
2	North #2 Sidewalk			X				X			1	2
3	North #3 Sidewalk			X				X			1	2
4	EAST #3 Sidewalk			X				X			1	2
5	West #3 Sidewalk			X				X			1	2
6	Bottom Hole #7 (1' BEB)			X				X			1	2
7	Bottom Hole #8 (1' BEB)			X				X			1	2
8	Bottom Hole #10 (1' BEB)			X				X			1	2
9	Bottom Hole #13 (1' BEB)			X				X			1	2
10	Bottom Hole #14 (1' BEB)			X				X			1	2

LAB USE ONLY	REMARKS:
<input type="checkbox"/> STANDARD	
<input checked="" type="checkbox"/> RUSH: Same Day (24 hr)	
<input type="checkbox"/> Rush Charges Authorized	
<input type="checkbox"/> Special Report Limits or TRRP Report	

 ANALYSIS REQUEST  
 (Circle or Specify Method No.)

 BTEX 8021B BTEX 8260B  
 TPH TX1005 (Ext to C35)  
 TPH 8015M (GRO - DRO - ORO - MRO)  
 PAH 8270C  
 Total Metals Ag As Ba Cd Cr Pb Se Hg  
 TCLP Metals Ag As Ba Cd Cr Pb Se Hg  
 TCLP Volatiles  
 TCLP Semi Volatiles  
 RCI  
 GC/MS Vol. 8260B / 624  
 GC/MS Semi. Vol. 8270C/625  
 PCB's 8082 / 608  
 NORM  
 PLM (Asbestos)  
 Chloride  
 Chloride Sulfate TDS  
 General Water Chemistry (see attached list)  
 Anion/Cation Balance

Hold

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

## Analysis Request of Chain of Custody Record

Page 2 of 2



Tetra Tech, Inc.

 901W Wall Street, Ste 100  
 Midland, Texas 79705  
 Tel (432) 682-4559  
 Fax (432) 682-3946

Client Name:

COL

Site Manager:

MIKE CARWANA

Project Name:

STRATOCASTER 20 FEB 3

Project Location:

LEA COUNTY

Project #:

212CMD-01815

Invoice to:

COLNICK BARTAREZ

Receiving Laboratory:

CARDINAL

Sampler Signature:

CONNER MOERZING

Comments:

H962427

LAB #  
(LAB USE ONLY)

## SAMPLE IDENTIFICATION

11 Bottom Hole #15 (1.5' BEB)

## SAMPLING

YEAR: 2019

DATE

TIME

## MATRIX

WATER

SOIL

## PRESERVATIVE METHOD

HCL

HNO<sub>3</sub>

ICE

None

# CONTAINERS

FILTERED (Y/N)

X BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

X TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

X Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST  
(Circle or Specify Method No.)

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

## REMARKS:

STANDARD

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

Sample Temperature

#97

-2.1°C

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

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