SITE INFORMATION

Report Type: Closure Report NRM 2007643671

General Site Information:						
Site:	**Klondike to Pistolero Layflat**					
Company:	**EOG Resources**					
Section, Township and Range	**Unit G**	**Sec. 33**	**T 24S**	**R 34E**		
County:	**Lea County**					
GPS:	**32.17438**			**-103.472196**		

Release Data:	
Date Released:	1/29/2020
Type Release:	Layflat
Source of Contamination:	Produced Water
Fluid Released:	30 bbls
Fluids Recovered:	10bbls

Official Communication:			
Name:	Todd Wells		Mike Carmona
Company:	EOG Reources		Tetra Tech
Address:	5509 Champions Dr		901 West Wall Street
			Suite 100
City:	Midland Texas, 79706		Midland, Texas
Phone number:	432-686-7016		(432) 687-8121
Fax:			
Email:	todd_well@eogresources.com		mike.carmona@tetratech.com

Site Characterization	
Depth to Groundwater:	*223.94' bgs*
Karst Potential:	*low*

Recommended Remedial Action Levels (RRALs)			
Benzene	***Total BTEX***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*100 mg/kg*	*600 mg/kg*

TETRA TECH

January 4, 2021

Environmental Specialist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Report for the EOG Resources, Klondike to Pistolero Layflat, Unit G, Section 33, Township 24 South, Range 34 East, Lea County, New Mexico.

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess and remediate a release that occurred at the EOG Resources, Klondike to Pistolero Layflat, Unit G, Section 33, Township 24 South, Range 34 East, Lea County, New Mexico (Site). The site coordinates are 32.174378º, -103.472196º. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the release was discovered on January 29, 2020, and released approximately 30 barrels of reuse water, due to a failure of a 12 inch lay flat head, 10 barrels of the released fluids were recovered. The release occurred alongside a lease road, impacted areas measuring approximately 657’ x 38’. 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, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances, and the site is in a low karst potential area. The nearest well is listed in the USGS National Water Information Database website in Section 35, approximately 1.80 miles west/northwest of the site, and has a reported depth to groundwater of 223.94 feet below ground surface. Site characterization data is included in Appendix B.

Regulatory

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

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TETRA TECH

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 100 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

On March 13, 2020, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of twelve (12) auger holes (AH-1 through AH-12) were installed to total depths ranging from 0-1' – 1.5' below surface. Selected samples were analyzed 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, elevated concentrations requiring remediation are highlighted (green). The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples analyzed showed benzene, total BTEX, or TPH concentrations above the RRALs threshold. However, elevated chloride concentrations were detected, all below the remediation thresholds, but there were exceptions above the 600 mg/kg threshold. The areas of AH-11 and AH-12 showed chloride concentrations above 600 mg/kg that were not vertically defined at total depths ranging from 0-1' below surface. The area of auger hole (AH-7) showed concentrations above 600 mg/kg, decreasing with depth, with concentrations of 978 mg/kg and 38 mg/kg, for depths of 0-1' to 1.5', respectively.

Remediation Activities

Based on the results of the soil assessment, Tetra Tech personnel were onsite April 23, 2020, to supervise the remediation and reclamation activities as well as to collect confirmation samples. The impacted areas were excavated to total depths ranging from 1.5'-4.5' below surface, as shown on Figure 4 and Table 2.

A total of thirty-four (34) bottom hole samples (Bottom Hole 1 through Bottom Hole 34) and thirteen (13) sidewall samples (N1SW, N2SW, N3SW, W1SW, W2SW, W3SW, E1SW, E2SW, E3SW, E4SW, S1SW, S2SW, S3SW) were collected every 200 square feet to ensure proper removal of the contaminated soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 2. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 2, none of the samples collected showed TPH, benzene, and total BTEX above the laboratory reporting limits. Additionally, all samples collected showed chloride concentrations below the RRALs.

Approximately 730 cubic yards of material was excavated and transported offsite for proper disposal. The areas were then backfilled with clean material to surface grade.

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Conclusion

Based on the laboratory results and remediation activities performed, EOG requests closure of this spill issue. The final C-141 is enclosed in Appendix A. 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

Mike Carmona,
Project Manager

Figures

SITE LOCATION

N
W E
S

0 10,416.5 20,833

Approximate Scale in Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

STATE LOCATOR MAP

OVERVIEW MAP
KLONDIKE TO PISTOLERO LAYFLAT
Property Located at coordinates 32.174378°,-103.472196°
LEA COUNTY, NEW MEXICO

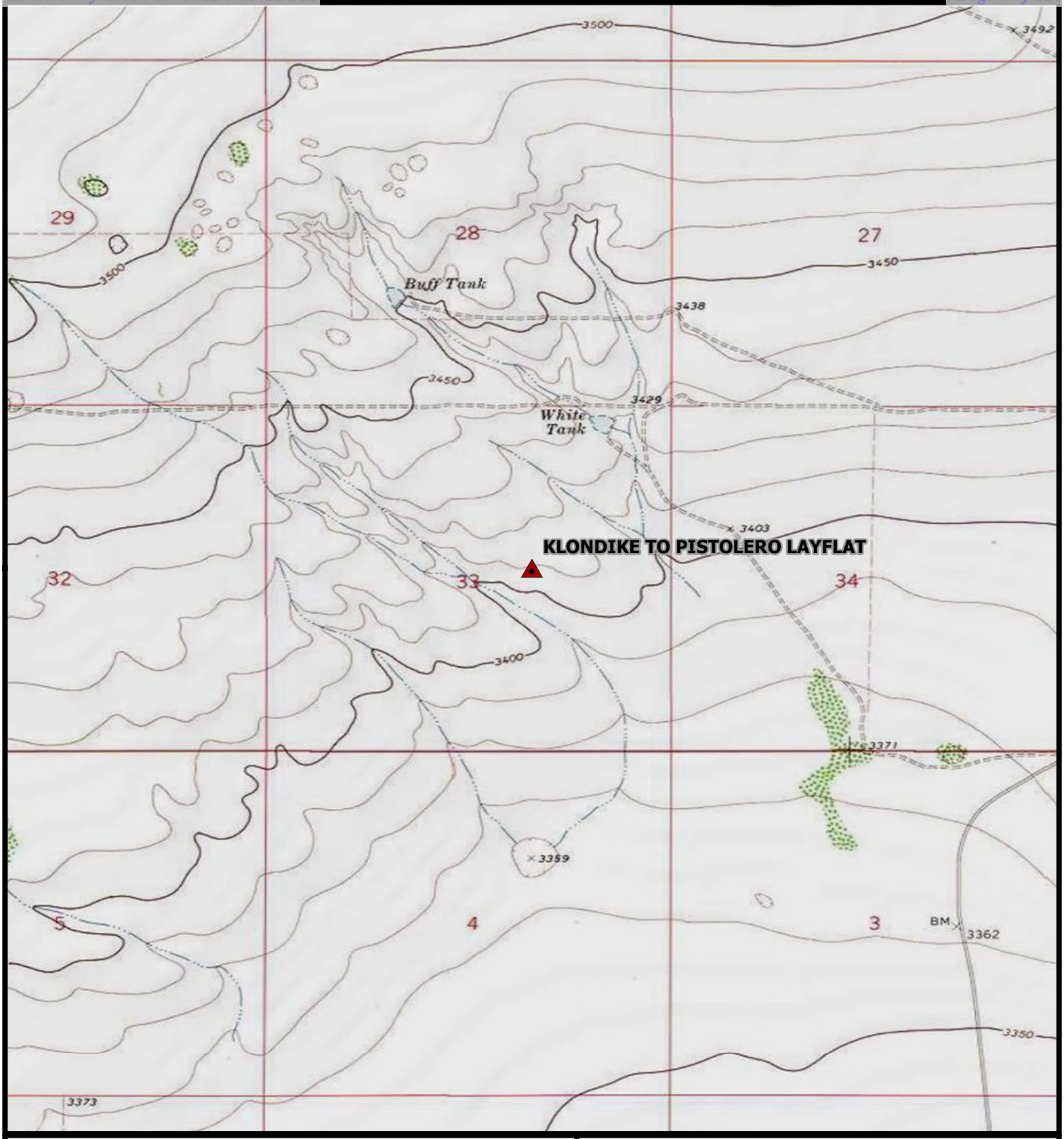
eog resources

TETRA TECH
901 W Wall St Ste. 100,
Midland, TX 79701
(432) 682-4559

Project #: 212C-MD-02144
Date:03-31-2020
Drawn By:MLM

FIGURE 1

Document Path: H:\GIS\EOG RESOURCES\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT\MXD\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT FIG. 1.mxd



SITE LOCATION

N
W E
S

0 1,000 2,000

Approximate Scale in Feet

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

TOPOGRAPHIC MAP
KLONDIKE TO PISTOLERO LAYFLAT
Property Located at coordinates 32.174378°,-103.472196°
LEA COUNTY, NEW MEXICO

eog resources

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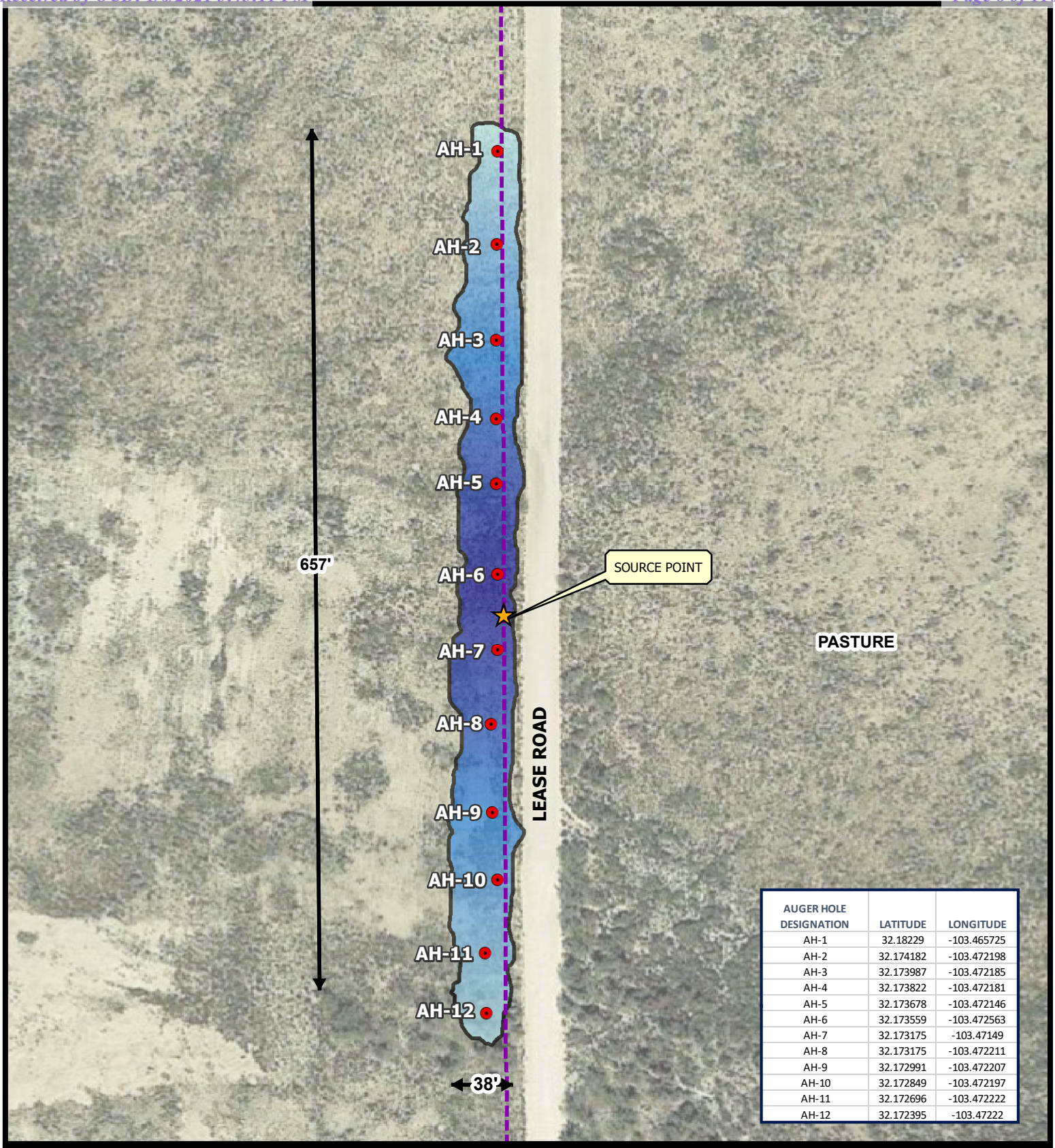
Project #: 212C-MD-02144
Date:03-31-2020
Drawn By:MLM

FIGURE 2

Document Path: H:\GIS\EOG RESOURCES\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT\MXD\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT FIG. 2.mxd



AUGER HOLE DESIGNATION	LATITUDE	LONGITUDE
AH-1	32.18229	-103.465725
AH-2	32.174182	-103.472198
AH-3	32.173987	-103.472185
AH-4	32.173822	-103.472181
AH-5	32.173678	-103.472146
AH-6	32.173559	-103.472563
AH-7	32.173175	-103.47149
AH-8	32.173175	-103.472211
AH-9	32.172991	-103.472207
AH-10	32.172849	-103.472197
AH-11	32.172696	-103.472222
AH-12	32.172395	-103.47222

AUGERHOLE SAMPLE LOCATIONS
SOURCE POINT
LAYFLAT LINE
IMPACTED AREA

N
W E
S

0 50 100
Approximate Scale in Feet

Source: "New Mexico". 32°10'27.76"N, 103°28'19.91"W. **Google Earth**. November 02, 2017. April 2, 2020.

SPILL ASSESSMENT MAP
KLONDIKE TO PISTOLERO LAYFLAT
Property Located at coordinates 32.174378°,-103.472196°
LEA COUNTY, NEW MEXICO

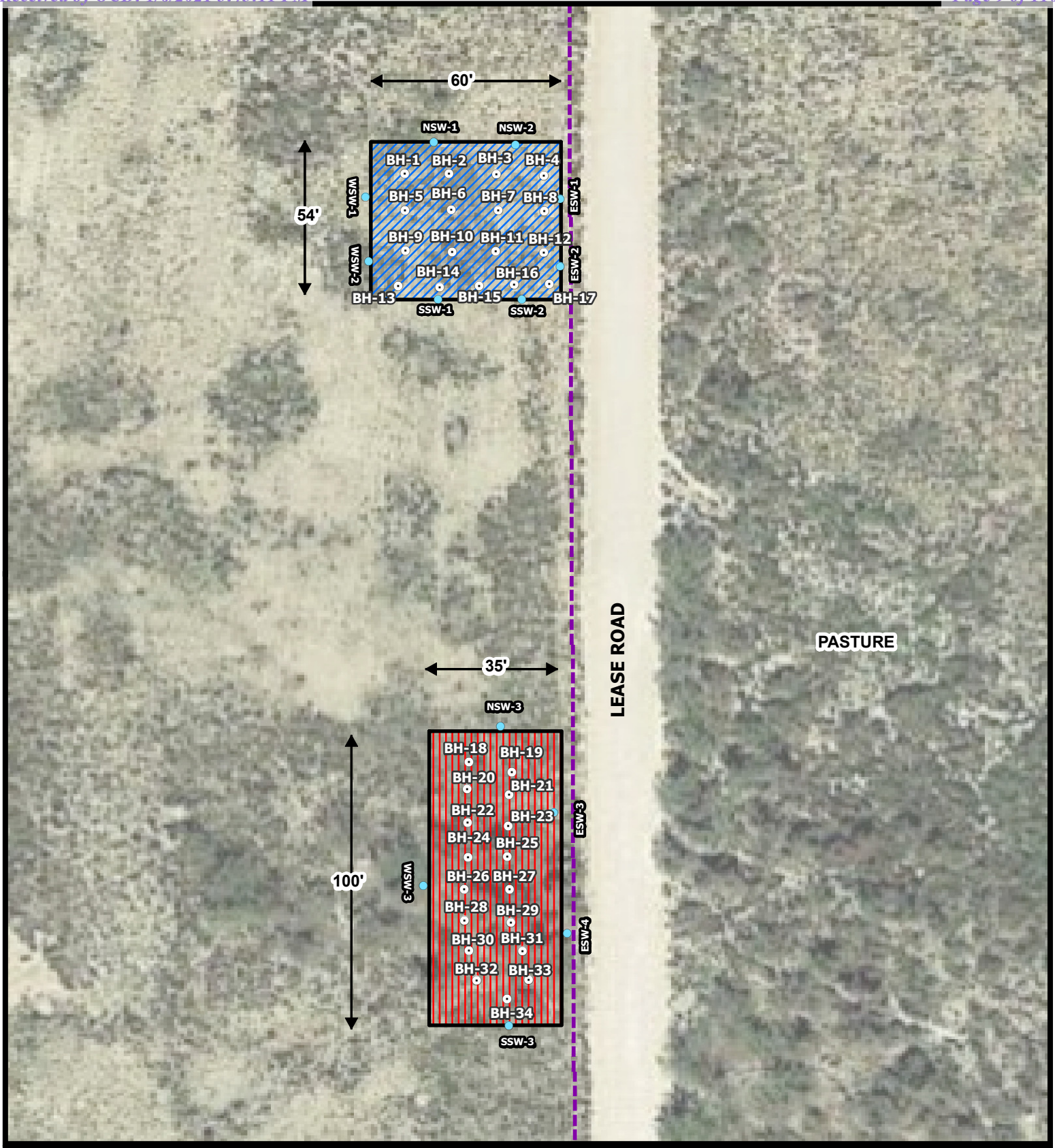
eog resources

TETRA TECH
901 W Wall St Ste. 100,
Midland, TX 79701
(432) 682-4559

Project #: 212C-MD-02144
Date:03-31-2020
Drawn By:MLM

FIGURE 3

Date: 4/15/2020 Document Path: H:\GIS\EOG RESOURCES\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT\MXD\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT FIG. 3.mxd



BOTTOMHOLE SAMPLE LOCATIONS

SIDEWALL SAMPLE LOCATIONS

1.5' EXCAVATED DEPTH AREA

4.5' EXCAVATED DEPTH AREA

LAYFLAT LINE

N

W E

S

Approximate Scale in Feet

Source: "New Mexico". 32°10'27.76"N, 103°28'19.91"W. **Google Earth**. November 02, 2017. April 2, 2020.

EXCAVATION AREA & DEPTH MAP
KLONDIKE TO PISTOLERO LAYFLAT
Property Located at coordinates 32.174378°,-103.472196°
LEA COUNTY, NEW MEXICO

eog resources

TETRA TECH
901 W Wall St Ste. 100,
Midland, TX 79701
(432) 682-4559

Project #: 212C-MD-02144
Date:05-05-2020
Drawn By:MLM

FIGURE
4

Date: 5/12/2020 Document Path: H:\GIS\EOG RESOURCES\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT\MXD\212C-MD-02144 KLONDIKE TO PISTOLERO LAYFLAT FIG. 4.mxd

Tables

Table 1
EOG
Klondike-Pistelero Layflat
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	MRO	Total						
AH-1	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	22
AH-2	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<9.88
AH-3	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<9.94
AH-4	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<9.96
AH-5	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<9.98
AH-6	3/13/2020	0-1	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<9.98
	"	1.5	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<9.88
AH-7	3/13/2020	0-1		X	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**978**
	"	1.5		X	<50.1	<76.6	<50.1	77	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	38
AH-8	3/13/2020	0-1	X		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	389
	"	1.5	X		<50.1	<50.1	<50.1	<50.1	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	427
	"	2.5	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<9.98
AH-9	3/13/2020	0-1	X		<50.1	<50.1	<50.1	<50.1	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	362
	"	1.5	X		<50.2	<50.2	<50.2	<50.2	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	354
AH-10	3/13/2020	0-1	X		<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	160
	3/13/2020	1.5	X		<50.1	<50.1	<50.1	<50.1	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	37
AH-11	3/13/2020	0-1		X	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**1,320**
AH-12	3/13/2020	0-1		X	<50.2	<50.2	<50.2	<50.2	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	**1,070**

Excavated

Table 2
EOG Resources
Klondike-Pistelero Layflat
Lea County, New Mexico

Sample ID	Sample Date	Excavation 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	MRO	Total						
BH-1	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	17.2
BH-2	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	15.0
BH-3	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	18.7
BH-4	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	279
BH-5	4/23/2020	4.5'	-	-	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	294
BH-6	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	291
BH-7	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	15.6
BH-8	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	17.0
BH-9	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	16.8
BH-10	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	16.9
BH-11	4/23/2020	4.5'	-	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	13.9
BH-12	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	12.5
BH-13	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	14.9
BH-14	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	12.7
BH-15	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	12.9
BH-16	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	13.8
BH-17	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	13.1
BH-18	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	46.1
BH-19	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	43.6
BH-20	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	44.3
BH-21	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	23.8
BH-22	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	35.9
BH-23	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	31.2
BH-24	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	95.7
BH-25	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	58.9
BH-26	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	128
BH-27	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	5.59
BH-28	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	6.12
BH-29	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	5.42
BH-30	4/23/2020	4.5'	-	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	9.97
BH-31	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	11.3
BH-32	4/23/2020	4.5'	-	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	9.33
BH-33	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	10.9
BH-34	4/23/2020	4.5'	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	34.2

Table 2
EOG Resources
Klondike-Pistelero Layflat
Lea County, New Mexico

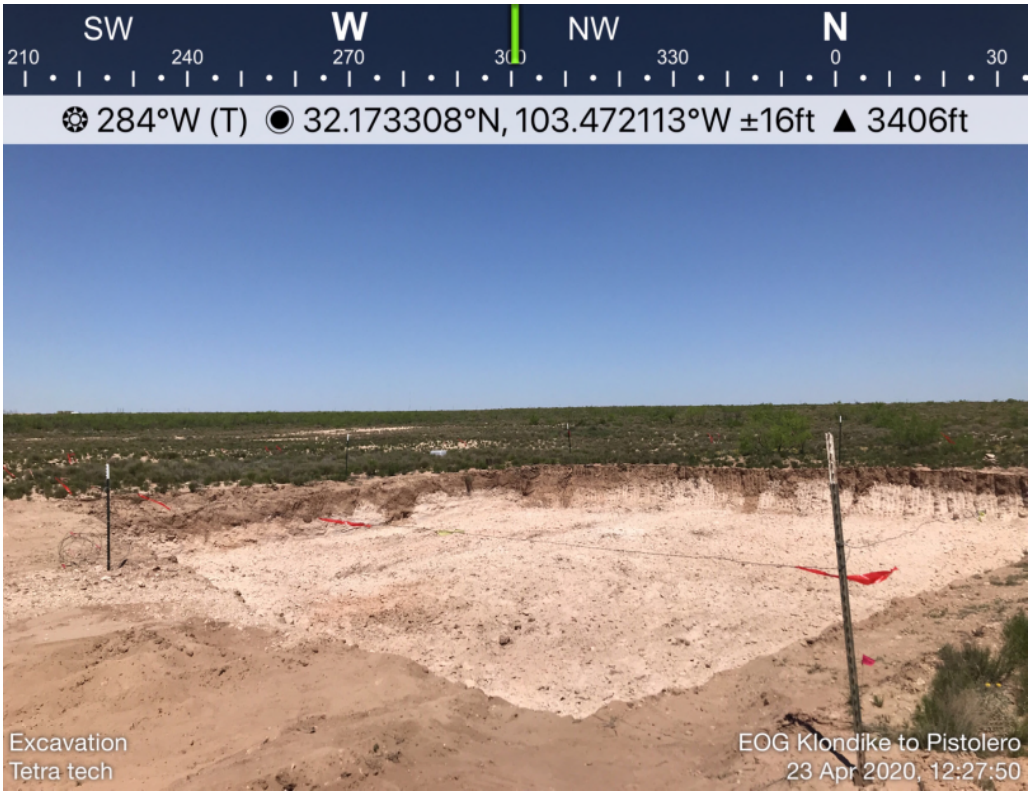
Sample ID	Sample Date	Excavation Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
N1SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	15.5
N2SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	10.8
N3SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	41.5
E1SW	4/23/2020	-	-	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	12.0
E2SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	11.8
E3SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	40.1
E4SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	45.4
S1SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	10.9
S2SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	11.1
S3SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	33.4
W1SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	12.8
W2SW	4/23/2020	-	-	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	12.4
W3SW	4/23/2020	-	-	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	41.7

(-) Not Analyzed

Photos

EOG Klondike to Pistolero Layflat

Lea County, New Mexico

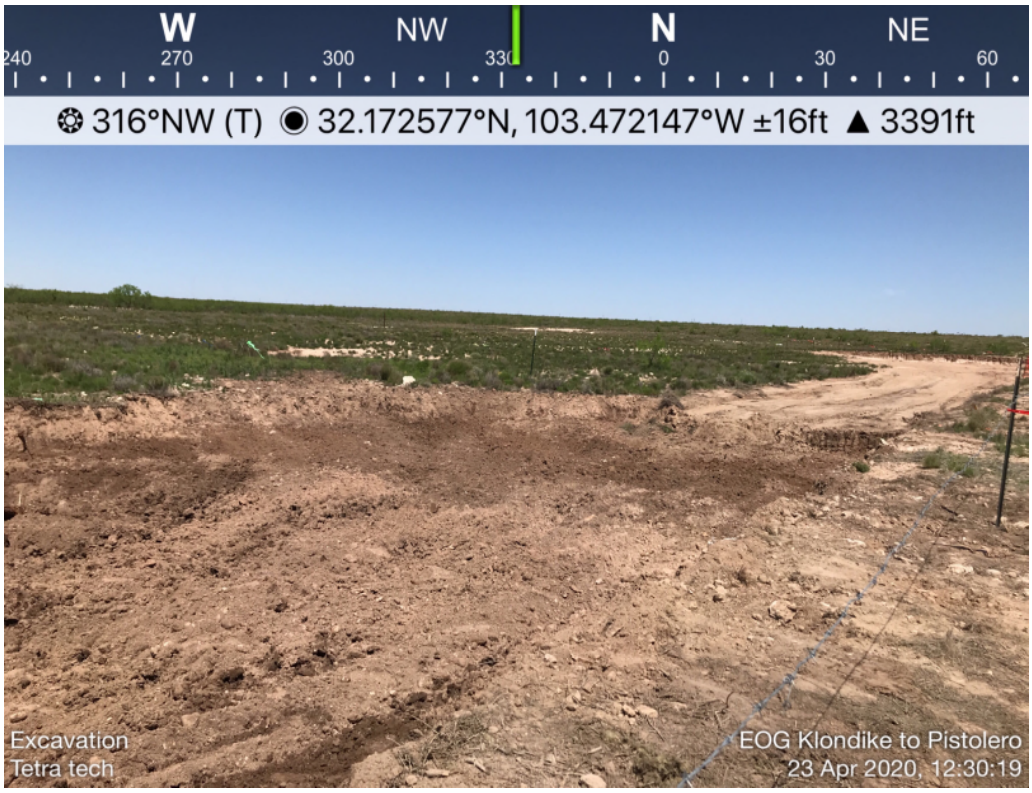


View Northwest, area of Bottom holes 1-17

View Southwest, area of Bottom holes 1-17

EOG Klondike to Pistolero Layflat

Lea County, New Mexico



View Northwest, area of Bottom holes 18-25

View South, area of Bottom holes 26-34

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	NRM2007643671
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party EOG Resources	OGRID 7377
Contact Name Todd Wells	Contact Telephone (432) 686-3613
Contact email Todd_Wells@eogresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5509 Champions Drive Midland, TX 79706	

Location of Release Source

Latitude 32.173879° Longitude -103.472214°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Klondike to Pistolero Lay Flat	Site Type Reuse Water Lay Flat Line
Date Release Discovered 1/29/20	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
G	33	24S	34E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Reuse Water	Volume Released (bbls) 30	Volume Recovered (bbls) 10
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: While pumping from one pit to another, the 12-inch lay flat head failed. Approximately 30 bbls of reuse water released from the line and 10 bbls was recovered.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2007643671
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? More than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? No	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Todd Wells Title: Environmental Specialist

Signature: Todd Wells Date: 3-6-20

email: Todd_Wells@eogresources.com Telephone: (432) 686-3613

OCD Only

Received by: Ramona Marcus Date: 3/16/2020

State of New Mexico
Oil Conservation Division

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?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ 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)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ 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?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Cristina Eads Date: 01/06/2021

State of New Mexico
Oil Conservation Division

Incident ID	NRM2007643671
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: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Cristina Eads Date: 01/06/2021

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.

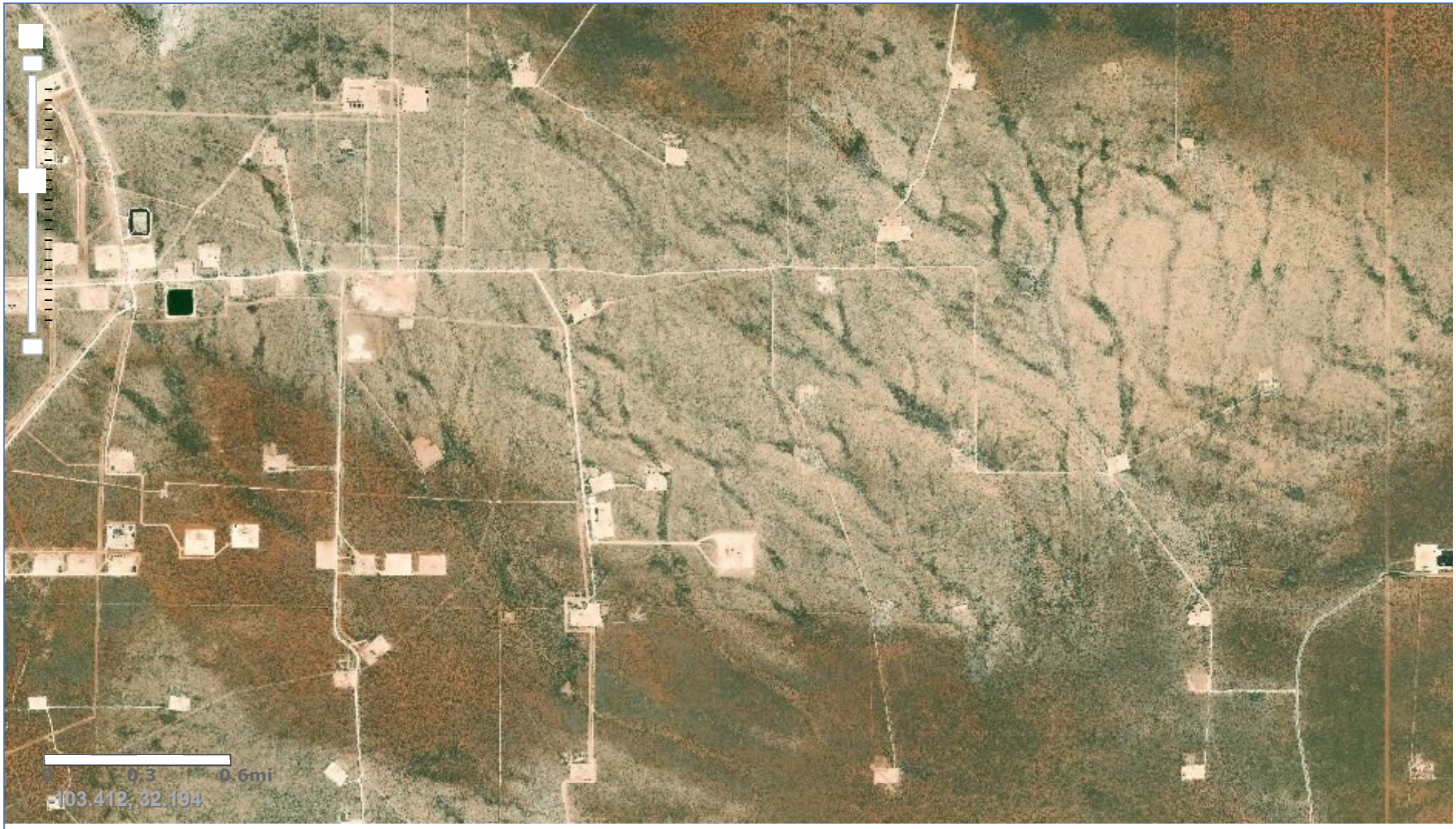
Closure Approved by: _____ Date: 03/15/2021

Printed Name: Cristina Eads Title: Environmental Specialist

Appendix B

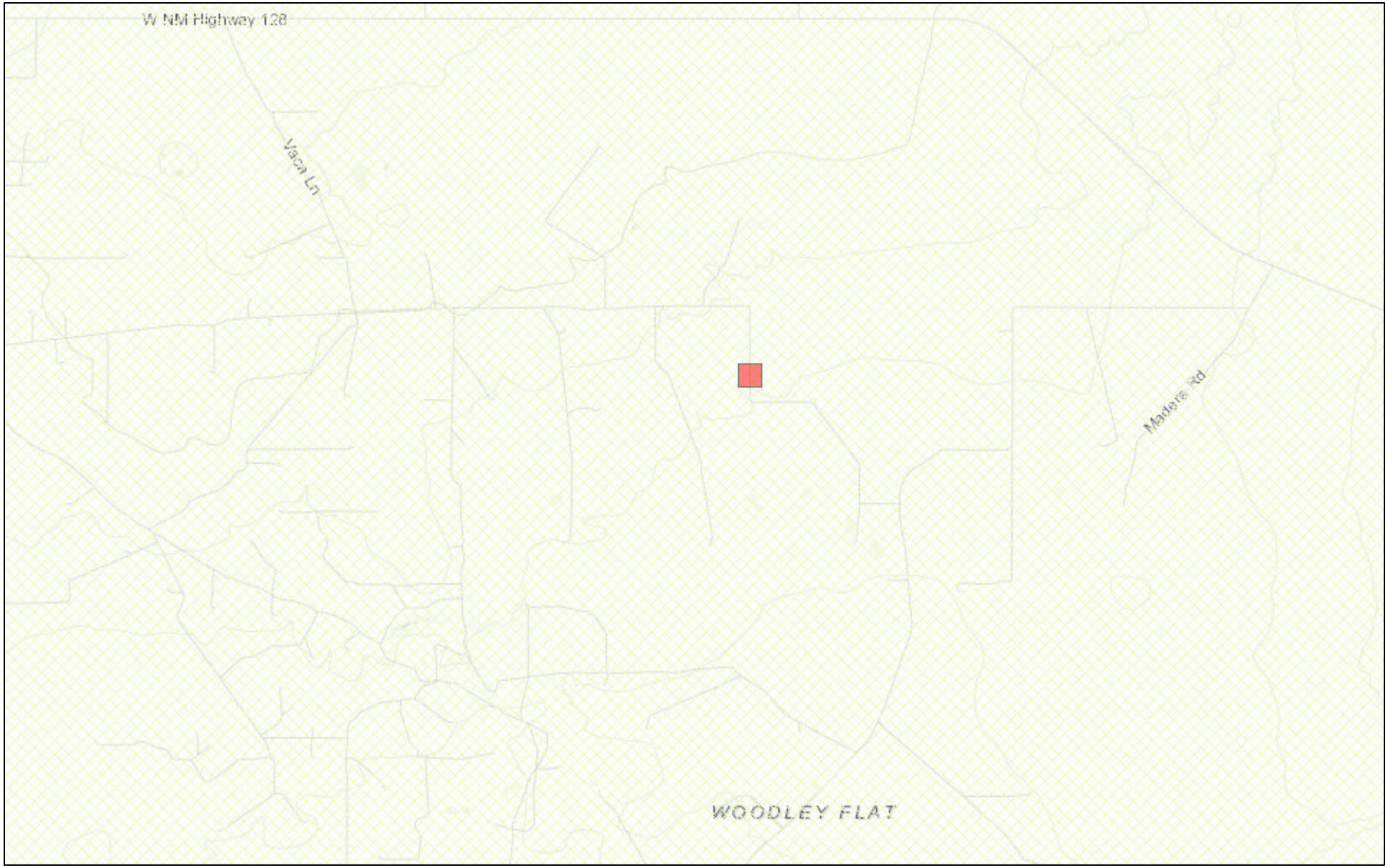
USGS science for a changing world

National Water Information System: Mapper



Site Information

New Mexico NFHL Data



April 6, 2020

1:72,224

0 0.5 1 2 mi

0 1 2 4 km

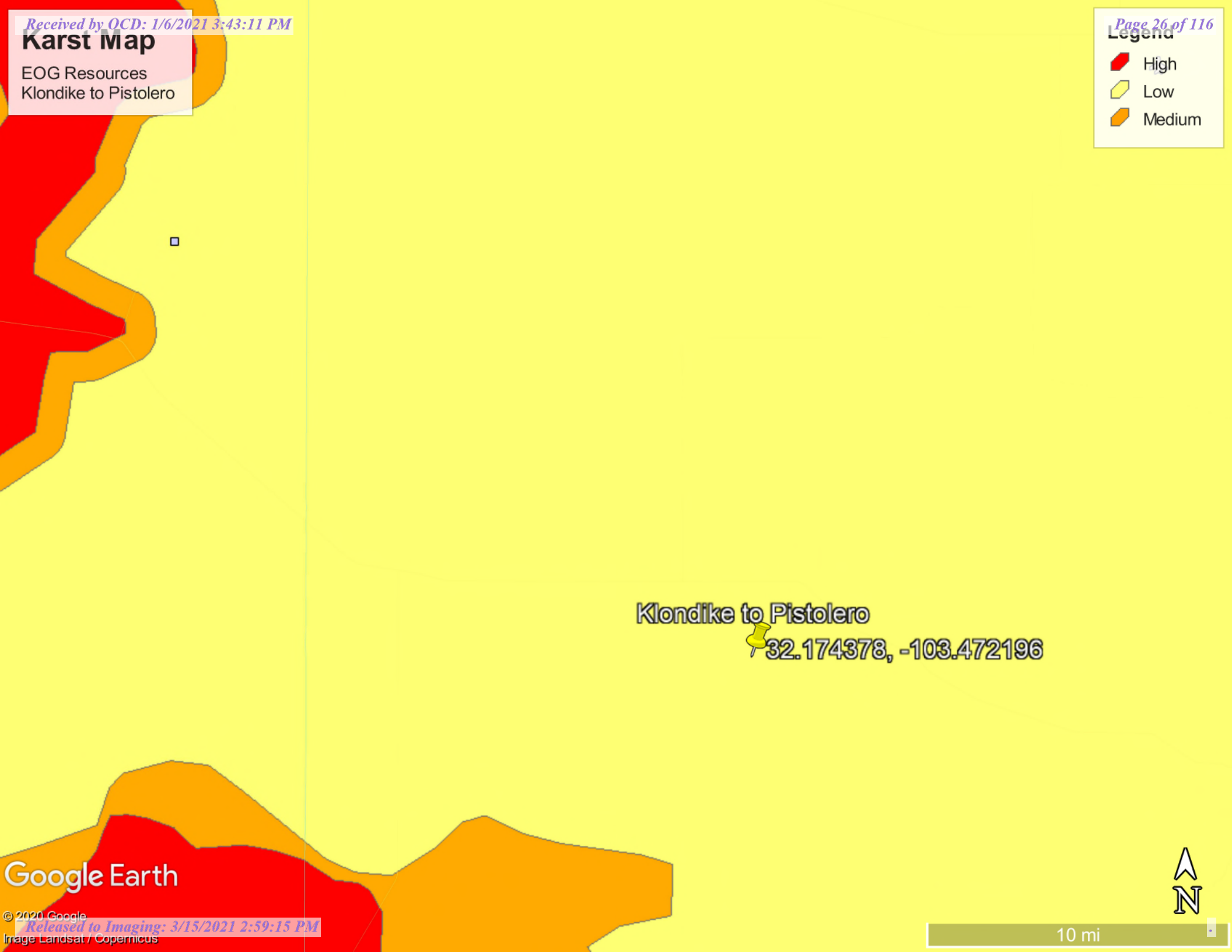
FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

nmflood.org is made possible through a collaboration with NMDHSEM, EDAC, and FEMA
This is a non-regulatory product for informational use only. Please consult your local floodplain administrator for further information.

Karst Map

EOG Resources
Klondike to Pistolero

Legend
- High
- Low
- Medium



National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater ▼ Geographic Area: New Mexico ▼ GO

Click to hideNews Bulletins

- **Notice** - The USGS Water Resources Mission Area's priority is to maintain the safety and well-being of our communities, including providing critical situational awareness in times of flooding in all 50 U.S. states and additional territories. Our hydrologic monitoring stations continue to send data in near real-time to NWISWeb, and we are continuing critical water monitoring activities to protect life and property on a case-by-case basis. The health and safety of the public and our employees are our highest priorities, and we continue to follow guidance from the White House, the CDC, and state and local authorities.

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321025103263601

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321025103263601 24S.34E.35.12411

Lea County, New Mexico
Latitude 32°10'44.0", Longitude 103°26'31.2" NAD83
Land-surface elevation 3,409.00 feet above NGVD29
The depth of the well is 257 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1953-03-29		D	223.90			2		U		U	A
1971-01-13		D	218.04			2		U		U	A
1976-01-15		D	219.06			2		U		U	A
1981-03-20		D	217.71			2		U		U	A
1986-03-06		D	223.50			2		U		U	A
1991-05-31		D	219.18			2		U		U	A
1996-03-14		D	219.19			2		S		U	A
2013-01-16	15:00 MST	m	223.94			2		S	USGS	R	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Water Well Data
Average Depth to Groundwater (ft)
Klondike to Pistolero
Lea County, New Mexico

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

6 329	5	4	3	2	1 137
7	8 255	9	10	11	12
18	17	16 345	15	14	13
19	20	21	22 282 295	23 233 265	24
30	29	28	27	26	25
31	32 160 130	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 20 22	11	12
18	17	16	15	14	13
19	20	21	22	23 208	24 16.9
30	29	28	27	26	25
31	32	33 70 93.2	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	10 300	11	12
18	17	16	15	14	13
19	20 97	21	22	23	24
30 139	29	28	27	26	25
31	32	33	34	35	36

25 South 33 East

6	5 118	4	3 172	2	1
7	8	9	10	11 140	12 200
18	17	16	15	14	13 185
19	20 200	21 120	22	23	24
30	29	28	27 125	26 110	25
31 190	32	33	34	35	36

25 South 34 East

6	5	4	3	2	1 260
7	8	9	10	11	12
18	17	16	15 135	14	13
19	20	21	22	23	24 300
30	29 129 50	28	27	26	25
31	32	33	34	35	36

25 South 35 East

6	5 165	4	3 108	2	1
7	8	9	10	11	12
18 230	17	16	15	14	13
19	20	21 218	22	23	24
30 80	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)

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

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

Appendix C

Analytical Report 655688

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Klondike - Pistelero Layflat

212C-MD-02144

17-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

17-MAR-20

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **655688**
Klondike - Pistelero Layflat
Project Address: Lea Co, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655688. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655688 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 655688

Tetra Tech- Midland, Midland, TX

Klondike - Pistelero Layflat

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH#1 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-001
AH#2 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-002
AH#3 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-003
AH#4 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-004
AH#5 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-005
AH#6 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-006
AH#6 (1-1.5')	S	03-13-20 00:00	1 - 1.5 ft	655688-007
AH#7 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-008
AH#7 (1-1.5')	S	03-13-20 00:00	1 - 1.5 ft	655688-009
AH#8 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-010
AH#8 (1-1.5')	S	03-13-20 00:00	1 - 1.5 ft	655688-011
AH#8 (2-2.5')	S	03-13-20 00:00	2 - 2.5 ft	655688-012
AH#9 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-013
AH#9 (1-1.5')	S	03-13-20 00:00	1 - 1.5 ft	655688-014
AH#10 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-015
AH#10 (1-1.5')	S	03-13-20 00:00	1 - 1.5 ft	655688-016
AH#11 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-017
AH#12 (0-1')	S	03-13-20 00:00	0 - 1 ft	655688-018

Version: 1.%

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Klondike - Pistelero Layflat

Project ID: *212C-MD-02144*
Work Order Number(s): *655688*

Report Date: *17-MAR-20*
Date Received: *03/13/2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119634 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3119636 Inorganic Anions by EPA 300/300.1
Lab Sample ID 655688-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 655688-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3119818 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 655688

Tetra Tech- Midland, Midland, TX

Project Name: Klondike - Pistelero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Fri Mar-13-20 02:55 pm
Report Date: 17-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	655688-001		655688-002		655688-003		655688-004		655688-005		655688-006	
	Field Id:	AH#1 (0-1')		AH#2 (0-1')		AH#3 (0-1')		AH#4 (0-1')		AH#5 (0-1')		AH#6 (0-1')	
	Depth:	0-1 ft		0-1 ft		0-1 ft		0-1 ft		0-1 ft		0-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00	
BTEX by EPA 8021B	***Extracted:***	Mar-13-20 18:00		Mar-13-20 18:00		Mar-13-20 18:00		Mar-13-20 18:00		Mar-13-20 18:00		Mar-13-20 18:54	
	Analyzed:	Mar-14-20 06:52		Mar-14-20 07:12		Mar-14-20 16:24		Mar-14-20 07:53		Mar-14-20 08:13		Mar-14-20 11:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402	<0.00396	0.00396	<0.00399	0.00399	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40	
	Analyzed:	Mar-13-20 17:33		Mar-13-20 17:38		Mar-13-20 17:44		Mar-13-20 18:02		Mar-13-20 18:07		Mar-13-20 18:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.2	10.0	<9.88	9.88	<9.94	9.94	<9.96	9.96	<9.98	9.98	<9.98	9.98
TPH By SW8015 Mod	***Extracted:***	Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30	
	Analyzed:	Mar-13-20 19:04		Mar-13-20 19:25		Mar-13-20 19:45		Mar-13-20 20:05		Mar-13-20 20:26		Mar-13-20 20:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0

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Version: 1.%

Jessica Kramer
Project Manager

Final 1.000

Certificate of Analysis Summary 655688

Tetra Tech- Midland, Midland, TX

Project Name: Klondike - Pistelero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Fri Mar-13-20 02:55 pm
Report Date: 17-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	655688-007		655688-008		655688-009		655688-010		655688-011		655688-012	
	Field Id:	AH#6 (1-1.5')		AH#7 (0-1')		AH#7 (1-1.5')		AH#8 (0-1')		AH#8 (1-1.5')		AH#8 (2-2.5')	
	Depth:	1-1.5 ft		0-1 ft		1-1.5 ft		0-1 ft		1-1.5 ft		2-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00	
BTEX by EPA 8021B	***Extracted:***	Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54	
	Analyzed:	Mar-14-20 11:58		Mar-14-20 12:18		Mar-14-20 12:39		Mar-14-20 12:59		Mar-14-20 11:17		Mar-14-20 13:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
m,p-Xylenes		<0.00401	0.00401	<0.00401	0.00401	<0.00397	0.00397	<0.00402	0.00402	<0.00394	0.00394	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00197	0.00197	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	***Extracted:***	Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40	
	Analyzed:	Mar-13-20 18:19		Mar-13-20 18:25		Mar-13-20 18:30		Mar-13-20 18:48		Mar-13-20 18:54		Mar-13-20 19:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.88	9.88	978	9.98	37.5 X	9.90	389	9.90	427	9.94	<9.98	9.98
TPH By SW8015 Mod	***Extracted:***	Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 17:30		Mar-13-20 17:30		Mar-13-20 18:30		Mar-13-20 18:30	
	Analyzed:	Mar-13-20 21:06		Mar-13-20 21:27		Mar-13-20 17:43		Mar-13-20 18:44		Mar-13-20 19:04		Mar-13-20 19:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.1	50.1	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	76.6	50.1	<49.9	49.9	<50.1	50.1	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.1	50.1	<49.9	49.9
Total TPH		<50.0	50.0	<50.0	50.0	76.6	50.1	<49.9	49.9	<50.1	50.1	<49.9	49.9

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Version: 1.%

Jessica Kramer
Project Manager

Certificate of Analysis Summary 655688

Tetra Tech- Midland, Midland, TX

Project Name: Klondike - Pistelero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Fri Mar-13-20 02:55 pm
Report Date: 17-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	655688-013		655688-014		655688-015		655688-016		655688-017		655688-018	
	Field Id:	AH#9 (0-1')		AH#9 (1-1.5')		AH#10 (0-1')		AH#10 (1-1.5')		AH#11 (0-1')		AH#12 (0-1')	
	Depth:	0-1 ft		1-1.5 ft		0-1 ft		1-1.5 ft		0-1 ft		0-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00		Mar-13-20 00:00	
BTEX by EPA 8021B	***Extracted:***	Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54		Mar-13-20 18:54	
	Analyzed:	Mar-14-20 13:40		Mar-14-20 14:00		Mar-14-20 15:02		Mar-14-20 15:22		Mar-14-20 15:43		Mar-14-20 16:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00395	0.00395	<0.00400	0.00400	<0.00403	0.00403	<0.00402	0.00402	<0.00404	0.00404
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Inorganic Anions by EPA 300/300.1	***Extracted:***	Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40		Mar-13-20 16:40	
	Analyzed:	Mar-13-20 19:17		Mar-13-20 19:22		Mar-13-20 19:28		Mar-13-20 19:34		Mar-13-20 19:40		Mar-13-20 19:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		362	9.96	354	10.0	160	10.0	36.7	9.94	1320	9.98	1070	9.92
TPH By SW8015 Mod	***Extracted:***	Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30		Mar-13-20 18:30	
	Analyzed:	Mar-13-20 19:45		Mar-13-20 20:05		Mar-13-20 20:26		Mar-13-20 20:46		Mar-13-20 21:06		Mar-13-20 21:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.1	50.1	<49.8	49.8	<50.2	50.2
Diesel Range Organics (DRO)		<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.1	50.1	<49.8	49.8	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.1	50.1	<49.8	49.8	<50.2	50.2
Total TPH		<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.1	50.1	<49.8	49.8	<50.2	50.2

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Version: 1.%

Jessica Kramer
Project Manager

Final 1.000

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119708 **Sample:** 655688-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 17:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	100	94	70-135	
o-Terphenyl	52.1	50.1	104	70-135	

Lab Batch #: 3119708 **Sample:** 655688-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 18:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	99.7	86	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 3119703 **Sample:** 655688-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.5	100	91	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 3119708 **Sample:** 655688-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	58.3	50.1	116	70-135	

Lab Batch #: 3119703 **Sample:** 655688-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	100	90	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119708 **Sample:** 655688-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	99.8	100	70-135	
o-Terphenyl	54.1	49.9	108	70-135	

Lab Batch #: 3119703 **Sample:** 655688-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	100	90	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 3119708 **Sample:** 655688-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 19:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	100	86	70-135	
o-Terphenyl	46.8	50.1	93	70-135	

Lab Batch #: 3119703 **Sample:** 655688-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	100	94	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 3119708 **Sample:** 655688-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	50.7	50.2	101	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119703 **Sample:** 655688-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 3119708 **Sample:** 655688-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.6	99	70-135	
o-Terphenyl	52.8	49.8	106	70-135	

Lab Batch #: 3119703 **Sample:** 655688-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 3119708 **Sample:** 655688-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 20:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.8	100	89	70-135	
o-Terphenyl	48.7	50.1	97	70-135	

Lab Batch #: 3119703 **Sample:** 655688-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 21:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	100	90	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119708 **Sample:** 655688-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 21:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	99.5	87	70-135	
o-Terphenyl	47.4	49.8	95	70-135	

Lab Batch #: 3119703 **Sample:** 655688-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 21:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.5	100	91	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 3119708 **Sample:** 655688-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 21:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	51.8	50.2	103	70-135	

Lab Batch #: 3119634 **Sample:** 655688-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 06:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3119634 **Sample:** 655688-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 07:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119634 **Sample:** 655688-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 07:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

Lab Batch #: 3119634 **Sample:** 655688-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 08:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0274	0.0300	91	70-130	

Lab Batch #: 3119818 **Sample:** 655688-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 11:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0289	0.0300	96	70-130	

Lab Batch #: 3119818 **Sample:** 655688-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 11:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3119818 **Sample:** 655688-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 11:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0285	0.0300	95	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119818 **Sample:** 655688-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 12:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0275	0.0300	92	70-130	

Lab Batch #: 3119818 **Sample:** 655688-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 12:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3119818 **Sample:** 655688-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 12:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3119818 **Sample:** 655688-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 13:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3119818 **Sample:** 655688-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 13:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119818 **Sample:** 655688-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 14:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

Lab Batch #: 3119818 **Sample:** 655688-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 15:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0276	0.0300	92	70-130	

Lab Batch #: 3119818 **Sample:** 655688-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 15:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3119818 **Sample:** 655688-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 15:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0253	0.0300	84	70-130	

Lab Batch #: 3119818 **Sample:** 655688-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 16:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119634 **Sample:** 655688-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 16:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3119703 **Sample:** 7698918-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 15:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	100	93	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 3119708 **Sample:** 7698930-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 15:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 3119634 **Sample:** 7698870-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 23:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0281	0.0300	94	70-130	

Lab Batch #: 3119818 **Sample:** 7698871-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/20 09:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119703 **Sample:** 7698918-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 14:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	53.5	50.0	107	70-135	

Lab Batch #: 3119708 **Sample:** 7698930-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 14:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

Lab Batch #: 3119634 **Sample:** 7698870-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 23:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0286	0.0300	95	70-130	

Lab Batch #: 3119818 **Sample:** 7698871-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/20 09:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0273	0.0300	91	70-130	

Lab Batch #: 3119703 **Sample:** 7698918-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	53.1	50.0	106	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119708 **Sample:** 7698930-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

Lab Batch #: 3119634 **Sample:** 7698870-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/13/20 23:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	70-130	
4-Bromofluorobenzene	0.0276	0.0300	92	70-130	

Lab Batch #: 3119818 **Sample:** 7698871-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/20 09:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0279	0.0300	93	70-130	

Lab Batch #: 3119703 **Sample:** 655684-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 18:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 3119708 **Sample:** 655688-009 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 18:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	56.7	50.2	113	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119634 **Sample:** 655684-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 00:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0274	0.0300	91	70-130	

Lab Batch #: 3119818 **Sample:** 655688-011 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 10:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3119703 **Sample:** 655684-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 18:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	49.6	50.0	99	70-135	

Lab Batch #: 3119708 **Sample:** 655688-009 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/13/20 18:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	53.6	50.1	107	70-135	

Lab Batch #: 3119634 **Sample:** 655684-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 00:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	70-130	
4-Bromofluorobenzene	0.0285	0.0300	95	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Klondike - Pistelero Layflat

Work Orders : 655688,

Project ID: 212C-MD-02144

Lab Batch #: 3119818 **Sample:** 655688-011 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/20 10:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: Klondike - Pistelero Layflat

Work Order #: 655688 **Project ID:** 212C-MD-02144

Analyst: MAB **Date Prepared:** 03/13/2020 **Date Analyzed:** 03/13/2020

Lab Batch ID: 3119634 **Sample:** 7698870-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.109	109	0.100	0.107	107	2	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.102	102	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.100	0.0963	96	4	71-129	35	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.200	0.199	100	3	70-135	35	
o-Xylene	<0.00200	0.100	0.104	104	0.100	0.100	100	4	71-133	35	

Analyst: MAB **Date Prepared:** 03/13/2020 **Date Analyzed:** 03/14/2020

Lab Batch ID: 3119818 **Sample:** 7698871-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.106	106	0.100	0.130	130	20	70-130	35	
Toluene	<0.00200	0.100	0.101	101	0.100	0.124	124	20	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0955	96	0.100	0.117	117	20	71-129	35	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.200	0.240	120	20	70-135	35	
o-Xylene	<0.00200	0.100	0.100	100	0.100	0.122	122	20	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: Klondike - Pistelero Layflat

Work Order #: 655688 **Project ID:** 212C-MD-02144

Analyst: MAB **Date Prepared:** 03/13/2020 **Date Analyzed:** 03/13/2020

Lab Batch ID: 3119636 **Sample:** 7698872-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	258	103	250	259	104	0	90-110	20	

Analyst: DTH **Date Prepared:** 03/13/2020 **Date Analyzed:** 03/13/2020

Lab Batch ID: 3119703 **Sample:** 7698918-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	982	98	1000	962	96	2	70-135	35	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1000	1060	106	1	70-135	35	

Analyst: DTH **Date Prepared:** 03/13/2020 **Date Analyzed:** 03/13/2020

Lab Batch ID: 3119708 **Sample:** 7698930-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	867	87	1000	916	92	5	70-135	35	
Diesel Range Organics (DRO)	<50.0	1000	984	98	1000	1040	104	6	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: Klondike - Pistelero Layflat

Work Order # : 655688 **Project ID:** 212C-MD-02144

Lab Batch ID: 3119634 **QC- Sample ID:** 655684-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2020 **Date Prepared:** 03/13/2020 **Analyst:** MAB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.100	0.111	111	0.0994	0.0966	97	14	70-130	35	
Toluene	<0.00201	0.100	0.102	102	0.0994	0.0892	90	13	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0981	98	0.0994	0.0865	87	13	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.201	100	0.199	0.177	89	13	70-135	35	
o-Xylene	<0.00201	0.100	0.103	103	0.0994	0.0905	91	13	71-133	35	

Lab Batch ID: 3119818 **QC- Sample ID:** 655688-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2020 **Date Prepared:** 03/13/2020 **Analyst:** MAB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.0981	98	0.101	0.0980	97	0	70-130	35	
Toluene	<0.00200	0.0998	0.0918	92	0.101	0.0918	91	0	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0844	85	0.101	0.0850	84	1	71-129	35	
m,p-Xylenes	<0.00399	0.200	0.171	86	0.201	0.172	86	1	70-135	35	
o-Xylene	<0.00200	0.0998	0.0858	86	0.101	0.0866	86	1	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Klondike - Pistelero Layflat

Work Order # : 655688 **Project ID:** 212C-MD-02144

Lab Batch ID: 3119636 **QC- Sample ID:** 655684-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2020 **Date Prepared:** 03/13/2020 **Analyst:** MAB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<9.98	200	212	106	200	218	109	3	90-110	20	

Lab Batch ID: 3119636 **QC- Sample ID:** 655688-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2020 **Date Prepared:** 03/13/2020 **Analyst:** MAB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	37.5	198	253	109	198	262	113	3	90-110	20	X

Lab Batch ID: 3119703 **QC- Sample ID:** 655684-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2020 **Date Prepared:** 03/13/2020 **Analyst:** DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	849	85	1000	878	88	3	70-135	35	
Diesel Range Organics (DRO)	88.1	1000	936	85	1000	946	86	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Klondike - Pistelero Layflat

Work Order # : 655688 **Project ID:** 212C-MD-02144

Lab Batch ID: 3119708 **QC- Sample ID:** 655688-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2020 **Date Prepared:** 03/13/2020 **Analyst:** DTH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	937	94	1000	875	88	7	70-135	35	
Diesel Range Organics (DRO)	76.6	1000	1050	97	1000	982	91	7	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

1655688

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Klondike - Pistelero Layflat	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02144
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	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
	AH #1 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #2 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #3 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #4 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #5 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #6 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #6 (1-1.5')	3/13/2020			X				X			1	N	X		X												X							
	AH #7 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #7 (1-1.5')	3/13/2020			X				X			1	N	X		X												X							
	AH #8 (0-1')	3/13/2020			X				X			1	N	X		X												X							

Relinquished by: Conner Moehring	Date: 3/13/20	Time: 1455	Received by: [signature]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Received by: 3/13/20 1455

LAB USE ONLY

Sample Temperature: 2.5

REMARKS:

- [X] STANDARD
- [ ] **RUSH:** Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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655688

Page 2 of 2

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	EOG	**Site Manager:**	Mike Carmona
Project Name:	Klondike - Pistelero Layflat		
Project Location: (county, state)	Lea Co, NM	**Project #:**	212C-MD-02144
Invoice to:	EOG - Todd Wells		
Receiving Laboratory:	Xenco	**Sampler Signature:**	Conner Moehring
Comments:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	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
	AH #8 (1-1.5')	3/13/2020			X				X			1	N	X		X												X							
	AH #8 (2-2.5')	3/13/2020			X				X			1	N															X							
	AH #9 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #9 (1-1.5')	3/13/2020			X				X			1	N	X		X												X							
	AH #10 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #10 (1-1.5')	3/13/2020			X				X			1	N	X		X												X							
	AH #11 (0-1')	3/13/2020			X				X			1	N	X		X												X							
	AH #12 (0-1')	3/13/2020			X				X			1	N	X		X												X							

Relinquished by: Conner Moehring Date: Time:
Received by: Date: 3/13/20 Time: 1455

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

LAB USE ONLY
Sample Temperature
2.9

REMARKS:
- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

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Analytical Report 659726

for

Tetra Tech- Midland

Project Manager: Mike Carmona

EOG-Klondike to Pistolero Layflat

212C-MD-02144

04.29.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04.29.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **659726**
EOG-Klondike to Pistolero Layflat
Project Address: Lea County, New Mexico

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 659726. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 659726 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 659726

Tetra Tech- Midland, Midland, TX

EOG-Klondike to Pistolero Layflat

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottomhole-1 comp 4.5'	S	04.23.2020 00:00		659726-001
Bottomhole-2 comp 4.5'	S	04.23.2020 00:00		659726-002
Bottomhole-3 comp 4.5'	S	04.23.2020 00:00		659726-003
Bottomhole-4 comp 4.5'	S	04.23.2020 00:00		659726-004
Bottomhole-5 comp 4.5'	S	04.23.2020 00:00		659726-005
Bottomhole-6 comp 4.5'	S	04.23.2020 00:00		659726-006
Bottomhole-7 comp 4.5'	S	04.23.2020 00:00		659726-007
Bottomhole-8 comp 4.5'	S	04.23.2020 00:00		659726-008
Bottomhole-9 comp 4.5'	S	04.23.2020 00:00		659726-009
Bottomhole-10 comp 4.5'	S	04.23.2020 00:00		659726-010
Bottomhole-11 comp 4.5'	S	04.23.2020 00:00		659726-011
Bottomhole-12 comp 4.5'	S	04.23.2020 00:00		659726-012
Bottomhole-13 comp 4.5'	S	04.23.2020 00:00		659726-013
Bottomhole-14 comp 4.5'	S	04.23.2020 00:00		659726-014
Bottomhole-15 comp 4.5'	S	04.23.2020 00:00		659726-015
Bottomhole-16 comp 4.5'	S	04.23.2020 00:00		659726-016
Bottomhole-17 comp 4.5'	S	04.23.2020 00:00		659726-017
Bottomhole-18 comp 4.5'	S	04.23.2020 00:00		659726-018
Bottomhole-19 comp 4.5'	S	04.23.2020 00:00		659726-019
Bottomhole-20 comp 4.5'	S	04.23.2020 00:00		659726-020
Bottomhole-21 comp 4.5'	S	04.23.2020 00:00		659726-021
Bottomhole-22 comp 4.5'	S	04.23.2020 00:00		659726-022
Bottomhole-23 comp 4.5'	S	04.23.2020 00:00		659726-023
Bottomhole-24 comp 4.5'	S	04.23.2020 00:00		659726-024
Bottomhole-25 comp 4.5'	S	04.23.2020 00:00		659726-025
Bottomhole-26 comp 4.5'	S	04.23.2020 00:00		659726-026
Bottomhole-27 comp 4.5'	S	04.23.2020 00:00		659726-027
Bottomhole-28 comp 4.5'	S	04.23.2020 00:00		659726-028
Bottomhole-29 comp 4.5'	S	04.23.2020 00:00		659726-029
Bottomhole-30 comp 4.5'	S	04.23.2020 00:00		659726-030
Bottomhole-31 comp 4.5'	S	04.23.2020 00:00		659726-031
Bottomhole-32 comp 4.5'	S	04.23.2020 00:00		659726-032
Bottomhole-33 comp 4.5'	S	04.23.2020 00:00		659726-033
Bottomhole-34 comp 4.5'	S	04.23.2020 00:00		659726-034
NSW-1 comp 4.5'	S	04.23.2020 00:00		659726-035
NSW-2 comp 4.5'	S	04.23.2020 00:00		659726-036
NSW-3 comp 4.5'	S	04.23.2020 00:00		659726-037
SSW-1 comp 4.5'	S	04.23.2020 00:00		659726-038
SSW-2 comp 4.5'	S	04.23.2020 00:00		659726-039
SSW-3 comp 4.5'	S	04.23.2020 00:00		659726-040
WSW-1 comp 4.5'	S	04.23.2020 00:00		659726-041
WSW-2 comp 4.5'	S	04.23.2020 00:00		659726-042
WSW-3 comp 4.5'	S	04.23.2020 00:00		659726-043

Sample Cross Reference 659726

Tetra Tech- Midland, Midland, TX

EOG-Klondike to Pistolero Layflat

ESW-1 comp 4.5'	S	04.23.2020 00:00	659726-044
ESW-2 comp 4.5'	S	04.23.2020 00:00	659726-045
ESW-3 comp 4.5'	S	04.23.2020 00:00	659726-046
ESW-4 comp 4.5'	S	04.23.2020 00:00	659726-047

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: EOG-Klondike to Pistolero Layflat

Project ID: *212C-MD-02144*
Work Order Number(s): *659726*

Report Date: *04.29.2020*
Date Received: *04.24.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3124190 Inorganic Anions by EPA 300/300.1
Lab Sample ID 659726-041 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 659726-041, -042, -043, -044, -045, -046, -047.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3124382 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Samples affected are: 7702217-1-BKS,7702217-1-BLK,7702217-1-BSD,659444-027 S,659444-027 SD,659726-006,659726-005,659726-004,659726-003,659726-002.

Batch: LBA-3124394 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Samples affected are: 7702222-1-BKS,7702222-1-BLK,7702222-1-BSD,659726-041 S,659726-041 SD,659726-031,659726-041,659726-029,659726-030.

Batch: LBA-3124476 BTEX by EPA 8021B
Lab Sample ID 659726-039 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 659726-039, -040, -042, -043, -044, -045, -046, -047.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	659726-001		659726-002		659726-003		659726-004		659726-005		659726-006	
	Field Id:	Bottomhole-1 comp 4.5'		Bottomhole-2 comp 4.5'		Bottomhole-3 comp 4.5'		Bottomhole-4 comp 4.5'		Bottomhole-5 comp 4.5'		Bottomhole-6 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	04.27.2020 12:00		04.27.2020 12:00		04.27.2020 12:00		04.27.2020 12:00		04.27.2020 12:00		04.27.2020 12:00	
	Analyzed:	04.27.2020 17:48		04.27.2020 18:08		04.27.2020 18:28		04.27.2020 18:48		04.27.2020 19:09		04.27.2020 19:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397	<0.00401	0.00401	<0.00402	0.00402	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	*Extracted:*	04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15	
	Analyzed:	04.24.2020 19:02		04.24.2020 19:18		04.24.2020 19:23		04.24.2020 19:29		04.24.2020 19:34		04.24.2020 19:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		17.2	5.03	15.0	4.96	18.7	4.97	279	5.02	294	5.01	291	4.99
TPH By SW8015 Mod	*Extracted:*	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.24.2020 22:31		04.24.2020 23:35		04.24.2020 23:56		04.25.2020 00:18		04.25.2020 00:39		04.25.2020 01:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	659726-007		659726-008		659726-009		659726-010		659726-011		659726-012	
	Field Id:	Bottomhole-7 comp 4.5'		Bottomhole-8 comp 4.5'		Bottomhole-9 comp 4.5'		Bottomhole-10 comp 4.5'		Bottomhole-11 comp 4.5'		Bottomhole-12 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	04.28.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00	
	Analyzed:	04.28.2020 18:20		04.28.2020 04:18		04.28.2020 04:38		04.28.2020 04:59		04.28.2020 05:19		04.28.2020 05:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402	<0.00401	0.00401	<0.00399	0.00399	<0.00397	0.00397	<0.00397	0.00397
o-Xylene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total BTEX		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Inorganic Anions by EPA 300/300.1	*Extracted:*	04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15	
	Analyzed:	04.24.2020 19:55		04.24.2020 20:00		04.24.2020 20:06		04.24.2020 20:11		04.24.2020 20:16		04.24.2020 20:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.6	4.97	17.0	4.99	16.8	4.99	16.9	5.00	13.9	5.00	12.5	5.00
TPH By SW8015 Mod	*Extracted:*	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.25.2020 01:22		04.25.2020 01:44		04.25.2020 02:05		04.25.2020 02:27		04.25.2020 03:10		04.25.2020 03:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0
Total TPH		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	659726-013		659726-014		659726-015		659726-016		659726-017		659726-018	
	Field Id:	Bottomhole-13 comp 4.5'		Bottomhole-14 comp 4.5'		Bottomhole-15 comp 4.5'		Bottomhole-16 comp 4.5'		Bottomhole-17 comp 4.5'		Bottomhole-18 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.28.2020 17:00		04.28.2020 17:00	
	Analyzed:	04.28.2020 06:00		04.28.2020 06:20		04.28.2020 06:41		04.28.2020 07:01		04.28.2020 18:40		04.28.2020 19:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00403	0.00403	<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:15	
	Analyzed:	04.24.2020 20:37		04.24.2020 20:53		04.24.2020 20:58		04.24.2020 21:04		04.24.2020 21:09		04.24.2020 21:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		14.9	4.97	12.7	4.98	12.9	5.00	13.8	4.96	13.1	5.04	46.1	4.98
TPH By SW8015 Mod	***Extracted:***	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.25.2020 03:53		04.25.2020 04:13		04.25.2020 04:34		04.25.2020 04:56		04.25.2020 05:17		04.25.2020 05:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Total TPH		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	659726-019		659726-020		659726-021		659726-022		659726-023		659726-024	
	Field Id:	Bottomhole-19 comp 4.5'		Bottomhole-20 comp 4.5'		Bottomhole-21 comp 4.5'		Bottomhole-22 comp 4.5'		Bottomhole-23 comp 4.5'		Bottomhole-24 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	04.28.2020 17:00		04.28.2020 17:00		04.27.2020 17:00		04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:00	
	Analyzed:	04.28.2020 19:21		04.28.2020 19:42		04.28.2020 03:58		04.28.2020 20:02		04.28.2020 20:23		04.28.2020 20:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00396	0.00396	<0.00403	0.00403	<0.00403	0.00403	<0.00401	0.00401	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	04.24.2020 13:15		04.24.2020 13:15		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30	
	Analyzed:	04.24.2020 21:19		04.24.2020 21:25		04.24.2020 20:01		04.24.2020 20:21		04.24.2020 20:28		04.24.2020 20:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		43.6	4.97	44.3	4.97	23.8	5.00	35.9	5.00	31.2	5.03	95.7	4.98
TPH By SW8015 Mod	***Extracted:***	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.25.2020 05:59		04.25.2020 06:20		04.24.2020 22:31		04.24.2020 23:35		04.24.2020 23:56		04.25.2020 00:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	659726-025		659726-026		659726-027		659726-028		659726-029		659726-030	
	Field Id:	Bottomhole-25 comp 4.5'		Bottomhole-26 comp 4.5'		Bottomhole-27 comp 4.5'		Bottomhole-28 comp 4.5'		Bottomhole-29 comp 4.5'		Bottomhole-30 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:00		04.27.2020 17:15		04.27.2020 17:15		04.27.2020 17:15	
	Analyzed:	04.28.2020 21:04		04.28.2020 21:24		04.28.2020 22:47		04.27.2020 23:48		04.28.2020 00:08		04.28.2020 00:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	<0.00400	0.00400	<0.00400	0.00400	<0.00397	0.00397	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30	
	Analyzed:	04.24.2020 20:42		04.24.2020 21:02		04.24.2020 21:09		04.24.2020 21:16		04.24.2020 21:23		04.24.2020 21:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		58.9	4.96	128	5.01	5.59	4.98	6.12	5.00	5.42	5.04	9.97	5.00
TPH By SW8015 Mod	***Extracted:***	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.25.2020 00:39		04.25.2020 01:01		04.25.2020 01:22		04.25.2020 01:44		04.25.2020 02:05		04.25.2020 02:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8
Total TPH		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	659726-031		659726-032		659726-033		659726-034		659726-035		659726-036	
	Field Id:	Bottomhole-31 comp 4.5'		Bottomhole-32 comp 4.5'		Bottomhole-33 comp 4.5'		Bottomhole-34 comp 4.5'		NSW-1 comp 4.5'		NSW-2 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	04.27.2020 17:15		04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:00	
	Analyzed:	04.28.2020 00:48		04.28.2020 23:07		04.28.2020 23:28		04.28.2020 23:48		04.29.2020 00:08		04.29.2020 00:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	*Extracted:*	04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30	
	Analyzed:	04.24.2020 21:37		04.24.2020 21:57		04.24.2020 22:04		04.24.2020 22:25		04.24.2020 22:31		04.24.2020 22:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		11.3	5.05	9.33	4.96	10.9	4.95	34.2	4.95	15.5	4.97	10.8	4.96
TPH By SW8015 Mod	*Extracted:*	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00	
	Analyzed:	04.25.2020 03:10		04.25.2020 03:31		04.25.2020 03:53		04.25.2020 04:13		04.25.2020 04:34		04.25.2020 04:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0
Total TPH		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	659726-037		659726-038		659726-039		659726-040		659726-041		659726-042	
	Field Id:	NSW-3 comp 4.5'		SSW-1 comp 4.5'		SSW-2 comp 4.5'		SSW-3 comp 4.5'		WSW-1 comp 4.5'		WSW-2 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	04.28.2020 17:00		04.28.2020 17:00		04.28.2020 17:15		04.28.2020 17:15		04.27.2020 17:15		04.28.2020 17:15	
	Analyzed:	04.29.2020 00:49		04.29.2020 01:09		04.29.2020 05:14		04.29.2020 05:34		04.27.2020 23:28		04.29.2020 05:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402	<0.00403	0.00403	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	***Extracted:***	04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:30		04.24.2020 13:45		04.24.2020 13:45	
	Analyzed:	04.24.2020 22:45		04.24.2020 22:52		04.24.2020 22:59		04.24.2020 23:06		04.24.2020 23:47		04.25.2020 00:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		41.5	4.99	10.9	4.95	11.1	4.98	33.4	4.99	12.8 X	5.05	12.4	4.98
TPH By SW8015 Mod	***Extracted:***	04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 15:00		04.24.2020 11:00		04.24.2020 11:00	
	Analyzed:	04.25.2020 05:17		04.25.2020 05:38		04.25.2020 05:59		04.25.2020 06:20		04.24.2020 18:38		04.24.2020 18:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<50.0	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 659726

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Klondike to Pistolero Layflat

Project Id: 212C-MD-02144
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Fri 04.24.2020 10:07
Report Date: 04.29.2020 12:32
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	659726-043		659726-044		659726-045		659726-046		659726-047	
	Field Id:	WSW-3 comp 4.5'		ESW-1 comp 4.5'		ESW-2 comp 4.5'		ESW-3 comp 4.5'		ESW-4 comp 4.5'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00		04.23.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	04.28.2020 17:15		04.28.2020 17:15		04.28.2020 17:15		04.28.2020 17:15		04.28.2020 17:15	
	Analyzed:	04.29.2020 06:15		04.29.2020 06:35		04.29.2020 06:56		04.29.2020 07:16		04.29.2020 07:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00398	0.00398	<0.00396	0.00396	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	04.24.2020 13:45		04.24.2020 13:45		04.24.2020 13:45		04.24.2020 13:45		04.24.2020 13:45	
	Analyzed:	04.25.2020 00:14		04.25.2020 00:21		04.25.2020 00:28		04.25.2020 00:49		04.25.2020 00:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		41.7	5.00	12.0	4.96	11.8	5.02	40.1	4.97	45.4	4.95
TPH By SW8015 Mod	***Extracted:***	04.24.2020 11:00		04.24.2020 11:00		04.24.2020 11:00		04.24.2020 11:00		04.24.2020 11:00	
	Analyzed:	04.24.2020 19:20		04.24.2020 19:41		04.24.2020 20:02		04.24.2020 20:23		04.24.2020 20:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH		<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.9	49.9

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Jessica Kramer
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124178 **Sample:** 659726-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 18:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	99.9	93	70-130	
o-Terphenyl	49.8	50.0	100	70-130	

Lab Batch #: 3124178 **Sample:** 659726-042 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 18:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.0	100	95	70-130	
o-Terphenyl	50.2	50.0	100	70-130	

Lab Batch #: 3124178 **Sample:** 659726-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 19:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.7	94	70-130	
o-Terphenyl	49.7	49.9	100	70-130	

Lab Batch #: 3124178 **Sample:** 659726-044 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 19:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	99.6	92	70-130	
o-Terphenyl	47.6	49.8	96	70-130	

Lab Batch #: 3124178 **Sample:** 659726-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 20:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	99.9	90	70-130	
o-Terphenyl	47.0	50.0	94	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124178 **Sample:** 659726-046 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 20:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.0	99.8	93	70-130	
o-Terphenyl	50.0	49.9	100	70-130	

Lab Batch #: 3124178 **Sample:** 659726-047 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 20:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	99.7	97	70-130	
o-Terphenyl	51.9	49.9	104	70-130	

Lab Batch #: 3124180 **Sample:** 659726-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 22:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	99.9	92	70-130	
o-Terphenyl	48.3	50.0	97	70-130	

Lab Batch #: 3124182 **Sample:** 659726-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 22:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-130	
o-Terphenyl	56.4	49.9	113	70-130	

Lab Batch #: 3124180 **Sample:** 659726-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-130	
o-Terphenyl	52.5	50.0	105	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124182 **Sample:** 659726-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-130	
o-Terphenyl	57.5	50.0	115	70-130	

Lab Batch #: 3124180 **Sample:** 659726-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.9	95	70-130	
o-Terphenyl	50.0	50.0	100	70-130	

Lab Batch #: 3124182 **Sample:** 659726-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-130	
o-Terphenyl	59.0	49.9	118	70-130	

Lab Batch #: 3124180 **Sample:** 659726-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 00:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	99.7	98	70-130	
o-Terphenyl	52.0	49.9	104	70-130	

Lab Batch #: 3124182 **Sample:** 659726-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 00:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-130	
o-Terphenyl	57.2	50.0	114	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124180 **Sample:** 659726-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 00:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.6	96	70-130	
o-Terphenyl	50.6	49.8	102	70-130	

Lab Batch #: 3124182 **Sample:** 659726-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 00:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.8	110	70-130	
o-Terphenyl	57.6	49.9	115	70-130	

Lab Batch #: 3124180 **Sample:** 659726-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	99.9	96	70-130	
o-Terphenyl	51.2	50.0	102	70-130	

Lab Batch #: 3124182 **Sample:** 659726-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-130	
o-Terphenyl	55.8	50.0	112	70-130	

Lab Batch #: 3124180 **Sample:** 659726-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	100	99	70-130	
o-Terphenyl	51.9	50.0	104	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124182 **Sample:** 659726-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.7	110	70-130	
o-Terphenyl	57.5	49.9	115	70-130	

Lab Batch #: 3124180 **Sample:** 659726-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	99.7	92	70-130	
o-Terphenyl	48.1	49.9	96	70-130	

Lab Batch #: 3124182 **Sample:** 659726-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 01:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.9	104	70-130	
o-Terphenyl	55.1	50.0	110	70-130	

Lab Batch #: 3124180 **Sample:** 659726-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 02:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100	97	70-130	
o-Terphenyl	50.4	50.0	101	70-130	

Lab Batch #: 3124182 **Sample:** 659726-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 02:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-130	
o-Terphenyl	54.8	49.9	110	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124180 **Sample:** 659726-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 02:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	99.9	90	70-130	
o-Terphenyl	46.3	50.0	93	70-130	

Lab Batch #: 3124182 **Sample:** 659726-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 02:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-130	
o-Terphenyl	57.0	49.8	114	70-130	

Lab Batch #: 3124180 **Sample:** 659726-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	99.6	89	70-130	
o-Terphenyl	45.8	49.8	92	70-130	

Lab Batch #: 3124182 **Sample:** 659726-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-130	
o-Terphenyl	61.0	50.0	122	70-130	

Lab Batch #: 3124180 **Sample:** 659726-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.9	90	70-130	
o-Terphenyl	45.4	50.0	91	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124182 **Sample:** 659726-032 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-130	
o-Terphenyl	56.6	49.9	113	70-130	

Lab Batch #: 3124180 **Sample:** 659726-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.7	99	70-130	
o-Terphenyl	50.6	49.9	101	70-130	

Lab Batch #: 3124182 **Sample:** 659726-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 03:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-130	
o-Terphenyl	56.5	50.0	113	70-130	

Lab Batch #: 3124180 **Sample:** 659726-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	99.8	97	70-130	
o-Terphenyl	50.7	49.9	102	70-130	

Lab Batch #: 3124182 **Sample:** 659726-034 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-130	
o-Terphenyl	58.1	50.0	116	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124180 **Sample:** 659726-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	99.9	96	70-130	
o-Terphenyl	49.9	50.0	100	70-130	

Lab Batch #: 3124182 **Sample:** 659726-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-130	
o-Terphenyl	55.0	49.9	110	70-130	

Lab Batch #: 3124180 **Sample:** 659726-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.2	100	94	70-130	
o-Terphenyl	48.8	50.0	98	70-130	

Lab Batch #: 3124182 **Sample:** 659726-036 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 04:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-130	
o-Terphenyl	55.8	50.0	112	70-130	

Lab Batch #: 3124180 **Sample:** 659726-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	99.7	92	70-130	
o-Terphenyl	46.5	49.9	93	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124182 **Sample:** 659726-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-130	
o-Terphenyl	57.7	50.0	115	70-130	

Lab Batch #: 3124180 **Sample:** 659726-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	99.9	94	70-130	
o-Terphenyl	49.3	50.0	99	70-130	

Lab Batch #: 3124182 **Sample:** 659726-038 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-130	
o-Terphenyl	55.0	49.9	110	70-130	

Lab Batch #: 3124180 **Sample:** 659726-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	100	96	70-130	
o-Terphenyl	51.1	50.0	102	70-130	

Lab Batch #: 3124182 **Sample:** 659726-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 05:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-130	
o-Terphenyl	55.0	49.9	110	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124180 **Sample:** 659726-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 06:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	99.9	90	70-130	
o-Terphenyl	47.0	50.0	94	70-130	

Lab Batch #: 3124182 **Sample:** 659726-040 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.25.2020 06:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-130	
o-Terphenyl	55.8	50.0	112	70-130	

Lab Batch #: 3124382 **Sample:** 659726-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 17:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	70-130	
4-Bromofluorobenzene	0.0384	0.0300	128	70-130	

Lab Batch #: 3124382 **Sample:** 659726-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 18:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0443	0.0300	148	70-130	**

Lab Batch #: 3124382 **Sample:** 659726-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 18:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	70-130	
4-Bromofluorobenzene	0.0456	0.0300	152	70-130	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124382 **Sample:** 659726-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 18:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0466	0.0300	155	70-130	**

Lab Batch #: 3124382 **Sample:** 659726-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 19:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	70-130	
4-Bromofluorobenzene	0.0486	0.0300	162	70-130	**

Lab Batch #: 3124382 **Sample:** 659726-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 19:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0450	0.0300	150	70-130	**

Lab Batch #: 3124394 **Sample:** 659726-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 23:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0453	0.0300	151	70-130	**

Lab Batch #: 3124394 **Sample:** 659726-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 23:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0269	0.0300	90	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124394 **Sample:** 659726-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 00:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0422	0.0300	141	70-130	**

Lab Batch #: 3124394 **Sample:** 659726-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 00:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	70-130	
4-Bromofluorobenzene	0.0436	0.0300	145	70-130	**

Lab Batch #: 3124394 **Sample:** 659726-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 00:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0435	0.0300	145	70-130	**

Lab Batch #: 3124393 **Sample:** 659726-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 03:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

Lab Batch #: 3124393 **Sample:** 659726-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 04:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124393 **Sample:** 659726-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 04:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3124393 **Sample:** 659726-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 04:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0313	0.0300	104	70-130	

Lab Batch #: 3124393 **Sample:** 659726-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 05:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0318	0.0300	106	70-130	

Lab Batch #: 3124393 **Sample:** 659726-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 05:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

Lab Batch #: 3124393 **Sample:** 659726-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 06:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124393 **Sample:** 659726-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 06:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	70-130	

Lab Batch #: 3124393 **Sample:** 659726-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 06:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3124393 **Sample:** 659726-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 07:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

Lab Batch #: 3124473 **Sample:** 659726-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 18:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3124473 **Sample:** 659726-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 18:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124473 **Sample:** 659726-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 19:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0346	0.0300	115	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3124473 **Sample:** 659726-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 19:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3124473 **Sample:** 659726-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 19:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

Lab Batch #: 3124473 **Sample:** 659726-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 20:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0311	0.0300	104	70-130	

Lab Batch #: 3124473 **Sample:** 659726-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 20:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124473 **Sample:** 659726-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 20:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

Lab Batch #: 3124473 **Sample:** 659726-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 21:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0244	0.0300	81	70-130	

Lab Batch #: 3124473 **Sample:** 659726-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 21:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3124473 **Sample:** 659726-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 22:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3124473 **Sample:** 659726-032 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 23:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0311	0.0300	104	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124473 **Sample:** 659726-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 23:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

Lab Batch #: 3124473 **Sample:** 659726-034 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 23:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0296	0.0300	99	70-130	

Lab Batch #: 3124473 **Sample:** 659726-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 00:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3124473 **Sample:** 659726-036 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 00:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

Lab Batch #: 3124473 **Sample:** 659726-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 00:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124473 **Sample:** 659726-038 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 01:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3124476 **Sample:** 659726-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 05:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3124476 **Sample:** 659726-040 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 05:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0331	0.0300	110	70-130	

Lab Batch #: 3124476 **Sample:** 659726-042 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 05:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	70-130	
4-Bromofluorobenzene	0.0368	0.0300	123	70-130	

Lab Batch #: 3124476 **Sample:** 659726-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 06:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124476 **Sample:** 659726-044 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 06:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	70-130	
4-Bromofluorobenzene	0.0318	0.0300	106	70-130	

Lab Batch #: 3124476 **Sample:** 659726-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 06:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0312	0.0300	104	70-130	

Lab Batch #: 3124476 **Sample:** 659726-046 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 07:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0314	0.0300	105	70-130	

Lab Batch #: 3124476 **Sample:** 659726-047 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 07:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3124178 **Sample:** 7702047-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 11:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-130	
o-Terphenyl	52.3	50.0	105	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124180 **Sample:** 7702053-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 21:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	100	98	70-130	
o-Terphenyl	52.4	50.0	105	70-130	

Lab Batch #: 3124182 **Sample:** 7702054-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 21:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-130	
o-Terphenyl	60.2	50.0	120	70-130	

Lab Batch #: 3124382 **Sample:** 7702217-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 11:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0407	0.0300	136	70-130	**

Lab Batch #: 3124394 **Sample:** 7702222-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 23:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0421	0.0300	140	70-130	**

Lab Batch #: 3124393 **Sample:** 7702220-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 03:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0295	0.0300	98	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124473 **Sample:** 7702284-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 17:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0277	0.0300	92	70-130	

Lab Batch #: 3124476 **Sample:** 7702285-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.29.2020 04:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0292	0.0300	97	70-130	

Lab Batch #: 3124178 **Sample:** 7702047-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 12:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-130	
o-Terphenyl	59.6	50.0	119	70-130	

Lab Batch #: 3124180 **Sample:** 7702053-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 21:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-130	
o-Terphenyl	56.2	50.0	112	70-130	

Lab Batch #: 3124182 **Sample:** 7702054-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 21:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-130	
o-Terphenyl	55.8	50.0	112	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124382 **Sample:** 7702217-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 15:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0455	0.0300	152	70-130	**

Lab Batch #: 3124394 **Sample:** 7702222-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 21:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	70-130	
4-Bromofluorobenzene	0.0479	0.0300	160	70-130	**

Lab Batch #: 3124393 **Sample:** 7702220-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 01:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3124473 **Sample:** 7702284-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 15:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3124476 **Sample:** 7702285-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.29.2020 02:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124178 **Sample:** 7702047-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 12:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-130	
o-Terphenyl	53.4	50.0	107	70-130	

Lab Batch #: 3124180 **Sample:** 7702053-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 22:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-130	
o-Terphenyl	58.0	50.0	116	70-130	

Lab Batch #: 3124182 **Sample:** 7702054-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.24.2020 22:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-130	
o-Terphenyl	62.0	50.0	124	70-130	

Lab Batch #: 3124382 **Sample:** 7702217-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 09:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0453	0.0300	151	70-130	**

Lab Batch #: 3124394 **Sample:** 7702222-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.27.2020 21:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0484	0.0300	161	70-130	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124393 **Sample:** 7702220-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 01:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0286	0.0300	95	70-130	

Lab Batch #: 3124473 **Sample:** 7702284-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.28.2020 15:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

Lab Batch #: 3124476 **Sample:** 7702285-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04.29.2020 03:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3124178 **Sample:** 659639-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 13:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.7	99	70-130	
o-Terphenyl	51.8	49.9	104	70-130	

Lab Batch #: 3124180 **Sample:** 659726-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 22:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	99.7	99	70-130	
o-Terphenyl	53.3	49.9	107	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124182 **Sample:** 659726-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 22:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.6	111	70-130	
o-Terphenyl	58.2	49.8	117	70-130	

Lab Batch #: 3124382 **Sample:** 659444-027 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 09:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0458	0.0300	153	70-130	**

Lab Batch #: 3124394 **Sample:** 659726-041 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 21:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	70-130	
4-Bromofluorobenzene	0.0478	0.0300	159	70-130	**

Lab Batch #: 3124393 **Sample:** 659726-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 02:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0292	0.0300	97	70-130	

Lab Batch #: 3124473 **Sample:** 659726-007 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 16:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	70-130	
4-Bromofluorobenzene	0.0294	0.0300	98	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124476 **Sample:** 659726-039 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 03:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3124178 **Sample:** 659639-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 13:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.6	99	70-130	
o-Terphenyl	52.6	49.8	106	70-130	

Lab Batch #: 3124180 **Sample:** 659726-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-130	
o-Terphenyl	55.3	50.0	111	70-130	

Lab Batch #: 3124182 **Sample:** 659726-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.24.2020 23:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.9	111	70-130	
o-Terphenyl	57.7	50.0	115	70-130	

Lab Batch #: 3124382 **Sample:** 659444-027 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 10:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0466	0.0300	155	70-130	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Orders: 659726 **Project ID:** 212C-MD-02144

Lab Batch #: 3124394 **Sample:** 659726-041 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.27.2020 22:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	70-130	
4-Bromofluorobenzene	0.0482	0.0300	161	70-130	**

Lab Batch #: 3124393 **Sample:** 659726-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 02:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3124473 **Sample:** 659726-007 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.28.2020 16:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

Lab Batch #: 3124476 **Sample:** 659726-039 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04.29.2020 03:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0327	0.0300	109	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order #: 659726 **Project ID:** 212C-MD-02144

Analyst: KTL **Date Prepared:** 04.27.2020 **Date Analyzed:** 04.27.2020

Lab Batch ID: 3124382 **Sample:** 7702217-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.102	102	0.100	0.102	102	0	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.100	0.108	108	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.104	104	0.100	0.107	107	3	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.226	113	0.200	0.234	117	3	70-130	35	
o-Xylene	<0.00200	0.100	0.114	114	0.100	0.116	116	2	70-130	35	

Analyst: KTL **Date Prepared:** 04.27.2020 **Date Analyzed:** 04.28.2020

Lab Batch ID: 3124393 **Sample:** 7702220-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0895	90	0.100	0.0951	95	6	70-130	35	
Toluene	<0.00200	0.100	0.0911	91	0.100	0.0967	97	6	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0927	93	0.100	0.0983	98	6	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.200	0.192	96	5	70-130	35	
o-Xylene	<0.00200	0.100	0.0927	93	0.100	0.0973	97	5	70-130	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order #: 659726 **Project ID:** 212C-MD-02144

Analyst: KTL **Date Prepared:** 04.27.2020 **Date Analyzed:** 04.27.2020

Lab Batch ID: 3124394 **Sample:** 7702222-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.103	103	0.100	0.101	101	2	70-130	35	
Toluene	<0.00200	0.100	0.112	112	0.100	0.111	111	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.110	110	0.100	0.108	108	2	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.241	121	0.200	0.237	119	2	70-130	35	
o-Xylene	<0.00200	0.100	0.121	121	0.100	0.120	120	1	70-130	35	

Analyst: KTL **Date Prepared:** 04.28.2020 **Date Analyzed:** 04.28.2020

Lab Batch ID: 3124473 **Sample:** 7702284-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.105	105	0.100	0.0845	85	22	70-130	35	
Toluene	<0.00200	0.100	0.0984	98	0.100	0.0787	79	22	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0989	99	0.100	0.0790	79	22	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.200	0.154	77	22	70-130	35	
o-Xylene	<0.00200	0.100	0.0978	98	0.100	0.0793	79	21	70-130	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order #: 659726 **Project ID:** 212C-MD-02144

Analyst: KTL **Date Prepared:** 04.28.2020 **Date Analyzed:** 04.29.2020

Lab Batch ID: 3124476 **Sample:** 7702285-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0997	100	0.100	0.0963	96	3	70-130	35	
Toluene	<0.00200	0.100	0.0923	92	0.100	0.0883	88	4	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0901	90	0.100	0.0867	87	4	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.174	87	0.200	0.168	84	4	70-130	35	
o-Xylene	<0.00200	0.100	0.0913	91	0.100	0.0883	88	3	70-130	35	

Analyst: CHE **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124172 **Sample:** 7702007-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	245	98	250	241	96	2	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order #: 659726 **Project ID:** 212C-MD-02144

Analyst: CHE **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124212 **Sample:** 7702008-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	255	102	250	256	102	0	90-110	20	

Analyst: CHE **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124190 **Sample:** 7702010-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	254	102	250	255	102	0	90-110	20	

Analyst: ARM **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124178 **Sample:** 7702047-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1000	922	92	11	70-130	20	
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1000	1020	102	10	70-130	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order #: 659726 **Project ID:** 212C-MD-02144

Analyst: ARM **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124180 **Sample:** 7702053-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	979	98	1000	1010	101	3	70-130	20	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1000	1110	111	4	70-130	20	

Analyst: ARM **Date Prepared:** 04.24.2020 **Date Analyzed:** 04.24.2020

Lab Batch ID: 3124182 **Sample:** 7702054-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1040	104	1000	1020	102	2	70-130	20	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1000	1050	105	3	70-130	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124382 **QC- Sample ID:** 659444-027 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.27.2020 **Date Prepared:** 04.27.2020 **Analyst:** KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.0845	85	0.0992	0.0855	86	1	70-130	35	
Toluene	<0.00200	0.0998	0.0860	86	0.0992	0.0850	86	1	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0803	80	0.0992	0.0771	78	4	70-130	35	
m,p-Xylenes	<0.00399	0.200	0.174	87	0.198	0.166	84	5	70-130	35	
o-Xylene	<0.00200	0.0998	0.0885	89	0.0992	0.0846	85	5	70-130	35	

Lab Batch ID: 3124393 **QC- Sample ID:** 659726-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.28.2020 **Date Prepared:** 04.27.2020 **Analyst:** KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00199	0.0994	0.0896	90	0.100	0.0903	90	1	70-130	35	
Toluene	<0.00199	0.0994	0.0904	91	0.100	0.0948	95	5	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0922	93	0.100	0.0978	98	6	70-130	35	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.200	0.193	97	7	70-130	35	
o-Xylene	<0.00199	0.0994	0.0921	93	0.100	0.0981	98	6	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124394 **QC- Sample ID:** 659726-041 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.27.2020 **Date Prepared:** 04.27.2020 **Analyst:** KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.0894	90	0.0992	0.0801	81	11	70-130	35	
Toluene	<0.00200	0.0998	0.0962	96	0.0992	0.0859	87	11	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0935	94	0.0992	0.0853	86	9	70-130	35	
m,p-Xylenes	<0.00399	0.200	0.203	102	0.198	0.187	94	8	70-130	35	
o-Xylene	<0.00200	0.0998	0.103	103	0.0992	0.0945	95	9	70-130	35	

Lab Batch ID: 3124473 **QC- Sample ID:** 659726-007 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.28.2020 **Date Prepared:** 04.28.2020 **Analyst:** KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.103	103	0.100	0.0973	97	6	70-130	35	
Toluene	<0.00200	0.0998	0.0919	92	0.100	0.0916	92	0	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0919	92	0.100	0.0922	92	0	70-130	35	
m,p-Xylenes	<0.00399	0.200	0.176	88	0.200	0.179	90	2	70-130	35	
o-Xylene	<0.00200	0.0998	0.0883	88	0.100	0.0908	91	3	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124476 **QC- Sample ID:** 659726-039 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.29.2020 **Date Prepared:** 04.28.2020 **Analyst:** KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0656	66	0.0994	0.0628	63	4	70-130	35	X
Toluene	<0.00200	0.100	0.0614	61	0.0994	0.0610	61	1	70-130	35	X
Ethylbenzene	<0.00200	0.100	0.0616	62	0.0994	0.0623	63	1	70-130	35	X
m,p-Xylenes	<0.00400	0.200	0.120	60	0.199	0.123	62	2	70-130	35	X
o-Xylene	<0.00200	0.100	0.0634	63	0.0994	0.0660	66	4	70-130	35	X

Lab Batch ID: 3124172 **QC- Sample ID:** 659726-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	17.2	252	281	105	252	270	100	4	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124172 **QC- Sample ID:** 659726-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	13.9	250	260	98	250	258	98	1	90-110	20	

Lab Batch ID: 3124190 **QC- Sample ID:** 659639-020 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.25.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	336	249	603	107	249	596	104	1	90-110	20	

Lab Batch ID: 3124190 **QC- Sample ID:** 659726-041 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	12.8	253	306	116	253	291	110	5	90-110	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124212 **QC- Sample ID:** 659726-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	23.8	250	290	106	250	289	106	0	90-110	20	

Lab Batch ID: 3124212 **QC- Sample ID:** 659726-031 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	11.3	253	273	103	253	275	104	1	90-110	20	

Lab Batch ID: 3124178 **QC- Sample ID:** 659639-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1010	101	996	1030	103	2	70-130	20	
Diesel Range Organics (DRO)	20.4	997	1100	108	996	1110	109	1	70-130	20	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: EOG-Klondike to Pistolero Layflat

Work Order # : 659726 **Project ID:** 212C-MD-02144

Lab Batch ID: 3124180 **QC- Sample ID:** 659726-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1050	105	999	1090	109	4	70-130	20	
Diesel Range Organics (DRO)	<49.9	997	1190	119	999	1220	122	2	70-130	20	

Lab Batch ID: 3124182 **QC- Sample ID:** 659726-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04.24.2020 **Date Prepared:** 04.24.2020 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	1080	108	999	1090	109	1	70-130	20	
Diesel Range Organics (DRO)	<49.8	996	1120	112	999	1120	112	0	70-130	20	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Analysis Request of Chain of Custody Record

Lab 597124

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Klondike to Pistolero Layflat	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02144
Invoice to: Todd WELLS	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	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	TPH 8015R			Hold
	Bottomhole-1 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-2 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-3 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-4 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-5 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-6 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-7 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-8 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-9 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						
	Bottomhole-10 comp 4.5'	4/23/2020			X				X			1	N	X		X												X						

Relinquished by:	Date: 4/24	Time:	Received by: Date: 4/24 Time: 1057
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature
5.6/5.3

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr (48 hr) 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

LS9724

Tetra Tech, Inc.

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

Client Name:	EOG	**Site Manager:**	Mike Carmona
Project Name:	Klondike to Pistolero Layflat		
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02144
Invoice to:			
Receiving Laboratory:	Xenco	**Sampler Signature:**	Devin Dominguez
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	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	TPH 8015R			Hold
	Bottomhole-11 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-12 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-13 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-14 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-15 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-16 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-17 comp 4.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-18 comp 1.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-19 comp 1.5'	4/23/2020			X				X		1	N	X		X												X							
	Bottomhole-20 comp 1.5'	4/23/2020			X				X		1	N	X		X												X							

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	4/24				1457
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature

5.0/5.3

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

Lesa7324

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Klondike to Pistolero Layflat	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02144
Invoice to:	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	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	TPH 8015R			Hold
	Bottomhole-21 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-22 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-23 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-24 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-25 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-26 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-27 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-28 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-29 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-30 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							

Relinquished by:	Date: 4/24	Time:	Received by: Date: Time: 1057
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 5.0/5.4

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

lesa724

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Klondike to Pistolero Layflat	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02144
Invoice to:	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	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	TPH 8015R			Hold
	Bottomhole-31 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-32 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-33 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	Bottomhole-34 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	NSW-1 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	NSW-2 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	NSW-3 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	SSW-1 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	SSW-2 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	SSW-3 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							

Relinquished by:	Date: 4/24	Time:	Received by: Date: Time: 1607
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 5.6/5.3

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr (48 hr) 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

10/5/24

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Klondike to Pistolero Layflat	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02144
Invoice to:	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	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	TPH 8015R			Hold
	WSW-1 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	WSW-2 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	WSW-3 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	ESW-1 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	ESW-2 comp 4.5'	4/23/2020			X				X			1	N	X		X												X							
	ESW-3 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							
	ESW-4 comp 1.5'	4/23/2020			X				X			1	N	X		X												X							

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	4/24/24				1600
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 5.0/5.2

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 04.24.2020 10.07.00 AM

Work Order #: 659726

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	BTEX was in bulk conatiner
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04.24.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 04.24.2020
Jessica Kramer

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

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

CONDITIONS

Action 14095

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
EOG RESOURCES INC P.O. Box 2267 Midland, TX79702	7377	14095	C-141

OCD Reviewer	Condition
ceads	None