

REPORT NUMBER

**19-098-0281**

COMPLETED DATE

**Apr 10, 2019**

RECEIVED DATE

**Apr 8, 2019**

ACCOUNT

**31936**

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**PAGE 1/3**

TODAY'S DATE

**Apr 10, 2019**

**LT ENVIRONMENTAL  
BRIAN SULZBERGER  
4600 W 60TH AVE  
ARVADA CO 80003**

IDENTIFICATION

**PO 014216176****HALLMARK 1 32****SOIL ANALYSIS REPORT**

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O. I.	PHOSPHORUS			NEUTRAL AMMONIUM ACETATE(EXCHANGEABLE)								pH		CATION EXCHANGE CAPACITY C.E.C.	PERCENT BASE SATURATION (COMPUTED)								
			P <sub>1</sub> (WEAK 1:7 ppm	P <sub>2</sub> (STRONG 1:7 ppm	OLSEN BICARBONATE P ppm	K		Mg		Ca		Na		SOIL pH 1:1	BUFFER INDEX		% K	% Mg	% Ca	% H	% Na				
						RATE	RATE	RATE	RATE	RATE	RATE	RATE	RATE												
*344*		percent	RATE												meq/100g										
16818	COMPOSITE 1	0.4	VL	1	VL	3	VL	10	L	80	L	167	M	2843	VH	9		8.7		15.9	1.3	8.8	89.7	0.0	0.2
16819	COMPOSITE 2	0.5	VL	3	VL	103	VH	5	VL	95	L	168	M	2611	VH	9		8.8		14.7	1.7	9.5	88.5	0.0	0.3
16820	COMPOSITE 3	3.0	M	6	VL	35	M	9	L	142	L	181	M	4243	VH	9		8.2		23.1	1.6	6.5	91.7	0.0	0.2

LAB NUMBER	NITRATE-N (FIA)										SULFUR S ICAP		ZINC Zn DTPA		MANGANESE Mn DTPA		IRON Fe DTPA		COPPER Cu DTPA		BORON B SORB. DTPA		EXCESS LIME RATE	SOLUBLE SALTS 1:1 mmhos/ cm		RATE
	SURFACE			SUBSOIL 1			SUBSOIL 2			Total lbs/A																
	ppm	lbs/A	depth (in)	ppm	lbs/A	depth (in)	ppm	lbs/A	depth (in)																	
*344*	2	4	0-6							4	8	L	0.5	VL	4	VL	22	H	0.5	L	0.5	L	H	0.2	L	
16819	2	4	0-6							4	8	L	0.1	VL	2	VL	5	VL	0.2	VL	0.3	VL	M	0.1	L	
16820	4	7	0-6							7	7	L	0.3	VL	2	VL	8	L	0.4	L	1.1	M	H	0.3	L	

REV.10/17

*The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.*

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**SODIUM ADSORPTION RATIO REPORT**

Method Lab Number Units	Sample Id	CALCULATED Sodium Adsorption Ratio	SATURATED PASTE EXTRACTION		
			Sodium (Water Soluble) mg/L	Magnesium (Water Soluble) mg/L	Calcium (Water Soluble) mg/L
34416818	COMPOSITE 1	0.3	6	3	24
34416819	COMPOSITE 2	0.4	7	4	19
34416820	COMPOSITE 3	0.2	5	4	48

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Account Number/ Company Name: 31936 / LT Environmental Chain of Custody Record: Yes ☒ No ☐

Purchase Order: 014216176 Samples for Regulatory Use: Yes ☐ No ☐

REPORT & BILL TO		IDENTIFICATION		COPY TO	
Name:	Deidre Duffy	Client Name:	LT Environmental	Name:	
Address:	848 E. 2nd Ave	Sample ID:	Hallmark 1 32	Address:	
City, State:	Durango, CO. ZIP: 81301	Sample Date:	4/4/2019		ZIP:
Phone:	970-385-1996 FAX:	Sample Time:	11:00	Phone:	
Email:	dduffy@itenk.com				

[illegible]



SAMPLE ID  
BTEX: TOTAL BTEX  
TPH: TOTAL PETROLEUM HYDROCARBONS  
ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
<: INDICATES RESULT IS LESS THAN THE  
LABORATORY REPORTING LIMIT

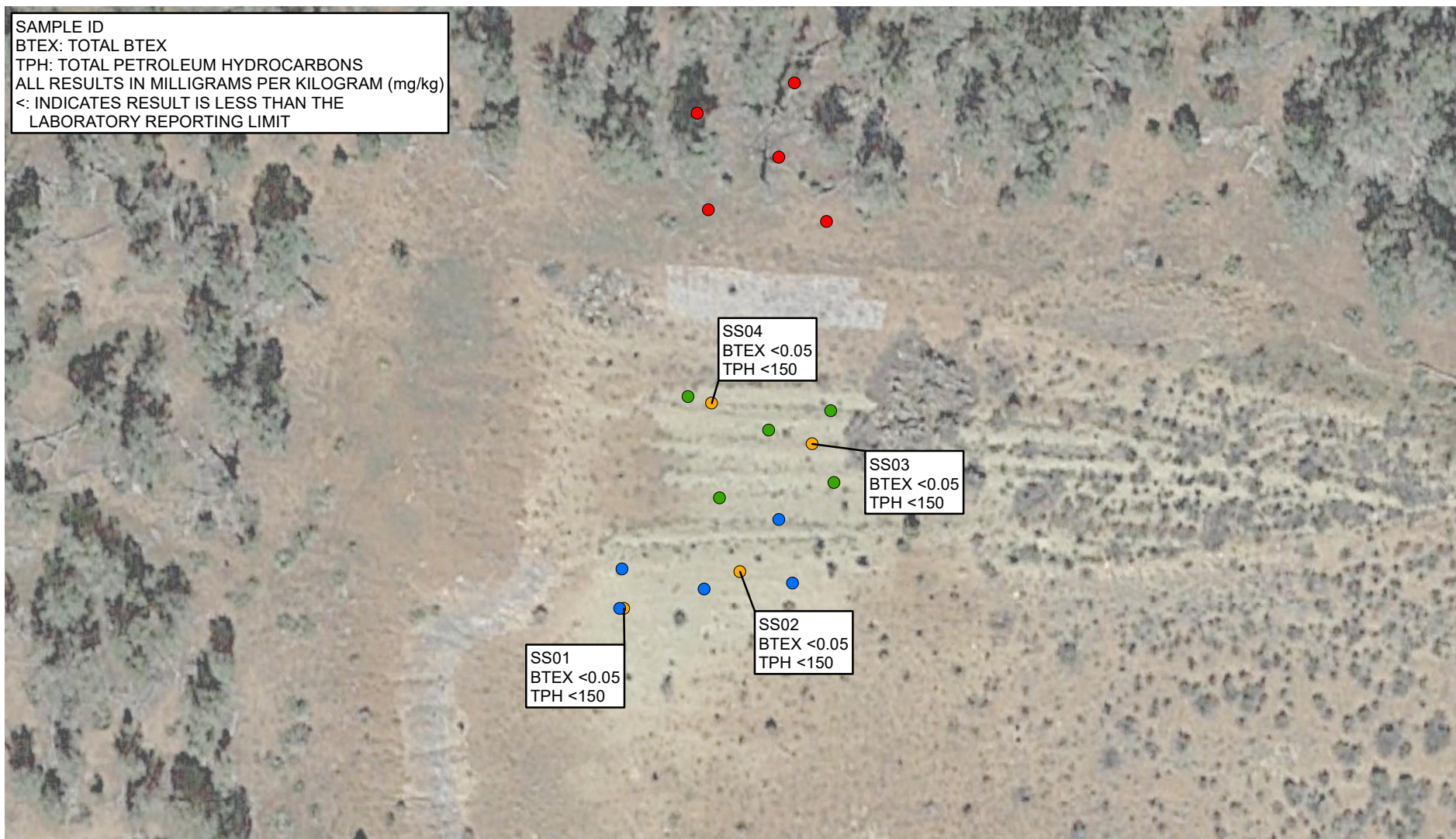
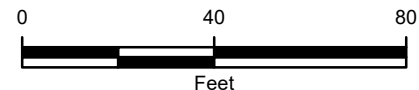


IMAGE COURTESY OF GOOGLE EARTH 2015

## LEGEND

- SOIL SAMPLE
- AGRONOMIC COMPOSITE 1
- AGRONOMIC COMPOSITE 2
- AGRONOMIC COMPOSITE 3



SOIL SAMPLES COLLECTED APRIL 4, 2019  
HALLMARK 1-32  
NWSW SEC 32-T34N-R12W  
LA PLATA COUNTY, COLORADO

ANADARKO PETROLEUM CORPORATION



**TABLE 1  
SOIL ANALYTICAL RESULTS**

**KMG - HALLMARK 1 32  
ANADARKO  
LA PLATA COUNTY, COLORADO**

Sample ID	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	TPH (mg/kg)
SS01	4/4/2019	<0.050	<0.050	<0.050	<0.050	<25.0	<25.0	<100	<150
SS02	4/4/2019	<0.050	<0.050	<0.050	<0.050	<25.0	<25.0	<100	<150
SS03	4/4/2019	<0.050	<0.050	<0.050	<0.050	<25.0	<25.0	<100	<150
SS04	4/4/2019	<0.050	<0.050	<0.050	<0.050	<25.0	<25.0	<100	<150
<b>COGCC Standards</b>		<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>500</b>

**NOTES:**

BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes

COGCC - Colorado Oil and Gas Conservation Committee

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

NE - Not Established

TPH- total petroleum hydrocarbons

RRO - Residual range organics

**Bold** - indicates value exceeds stated NMOCD standard

< -indicates value is less than stated laboratory reporting limit

