SPUR ENERGY PARTNERS

Shelby 23 #1

Closure Report

API No. 30-015-41784
2RP-5335
Release Date: 03/31/2019

U/L B, Section 23, Township 19S, Range 25E
Eddy County

05/18/2020

Prepared by:
Hungry Horse, LLC
4024 Plains Highway
Lovington, NM 88260
(575)390-6397

May 18, 2020

New Mexico Energy, Mineral & Natural Resources
NMOCD District II
C/O Mike Bratcher, Robert Hamlet & Victoria Venegas
811 S. First Street
Artesia, NM 88210

Spur Energy Partners
C/O Braidy Moulder
920 Memorial City Way, Suite 1000
Houston, TX 77024

SUBJECT: **Closure Request for Spur Energy Partners – Shelby 23 #1**
API No. 30-015-41784
2RP-5355/Incident No. NAB1911288176
U/L B, Section 23, Township 19S, Range 25E
Eddy County

To Whom It May Concern,

On behalf of Spur Energy Partners, Hungry Horse, LLC has prepared this CLOSURE REPORT that describes the assessment, delineation and remediation for the release associated with the Shelby 23 #1 dated 03/31/2019 with RP#2RP-5355 and Incident No. NAB1911288176.

BACKGROUND

The site is located in Eddy County, New Mexico. The release was located on March 31st, 2019. The release was due to a leak on the manway gasket of the production separator at the facility of the subject well. All released fluid stayed on the location, the spill was measured to be 25bbls (length x width x depth divided by 5.62). Approximately 5bbls of oil and 20bbls of produced water was released. The vessel in question was switched out and a vacuum truck was dispatched to the site and recovered approximately 3bbls of crude oil and 12bbls of produced water. The approved corresponding C-141 for the release is attached.

GROUNDWATER INFORMATION

Hungry Horse, LLC has conducted a groundwater study of this area. It has been determined that according to the New Mexico Office of the State Engineer that the closest well to the site is 1,713' with water depth of 80bgs' (below ground surface). The wells are listed below.

RA05450 is 1,713' from the site with water depth at 80'bgs.
RA09295 is 1,845' from the site with water depth at 85'bgs.
RA09293 is 2,042' from the site with water depth at 60'bgs.

With the data collected during the groundwater research protocol, there is verifiable record of groundwater in the vicinity to the site detailed herein. Therefore, no eminent danger of groundwater impact is found at this site.

The Closure Criteria for Soils Impacted by a Release below, based on ground water of 80'bgs, which falls in to the 51' – 100' depth category. Please see the groundwater data and map attached.

DGW	Constituent	Method	Limit
51'-100'	Chloride	EPA 300.0 OR SM4500 CLB	10,000 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 METHOD 8015M	2,500 mg/kg
	GRO + DRO	EPA SW-846 METHOD 8015M	1,000 mg/kg
	BTEX	EPA SW-846 METHOD 8021B OR 8260B	50 mg/kg
	Benzene	EPA SW-846 METHOD 8021B OR 8260B	10 mg/kg

KARST MAPPING

The Karst Mapping Data found for this site is located inside the medium marked area in blue. When the site was delineated, it was fully delineated to meet the NMOCD standards for Karst areas. Medium Karst Areas fall into the <50 DGW closure criteria. Please see the table as shows below as well as the Karst Map that is attached herein.

DGW	Constituent	Method	Limit
≤ 50'	Chloride	EPA 300.0 OR SM4500 CLB	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 METHOD 8015M	100 mg/kg
	GRO + DRO	EPA SW-846 METHOD 8015M	50 mg/kg
	BTEX	EPA SW-846 METHOD 8021B OR 8260B	10 mg/kg
	Benzene	EPA SW-846 METHOD 8021B OR 8260B	10 mg/kg

SITE DELINEATION AND REMEDIATION

White Buffalo Environmental fully delineated the site vertically and horizontally starting on April 16th, 2019. The site was assessed, measured and photographed. After the One-call was cleared to proceed, delineation began by use of a hand auger. The soil was field tested for chloride using both the chloride

strip and the titration method. A PID Meter was also used to indicate concentrations of BTEX and hydrocarbons. Soil samples were taken from twelve points within the pad area. The area was sampled using 1'intervals for each sample point. All of the delineation samples were taken to Cardinal Laboratory for confirmation. **Please see the sample trending data sheet attached to this report for more information. Below you will find the vertical final sample depth data confirmed by Cardinal Laboratory.

Ver Sam ID	Depth	CHL mg/kg	BTEX mg/kg	GRO mg/kg	DRO mg/kg	E-Dro mg/kg	Ttl TPH mg/kg
SP 1	2'	32	0.322	<10	<10	<10	<30
SP 2	2'	80	<0.300	<10	<10	<10	<30
SP 3	2'	128	<0.300	<10	<10	<10	<30
SP 4	2'	160	<0.300	<10	<10	<10	<30
SP 5	2'	128	<0.300	<10	<10	<10	<30
SP 6	2'	32	<0.300	<10	<10	<10	<10
SP 7	3'	80	<0.300	<10	<10	<10	<30
SP 8	5'	80	<0.300	<10	<10	<10	<30
SP 9	2'	656	<0.300	<10	<10	<10	<30
SP 10	2'	560	<0.300	<10	<10	<10	59.2
SP 11	2'	512	<0.300	<10	42.6	<10	62.6
SP 12	2'	80	<0.300	<10	15.9	<10	35.9

Horizontal samples were then collected to find the horizontal extent of the impacted area. Each sample was sampled in the field and then taken to Cardinal Laboratory for confirmation. Below you will find the final samples for the sidewalls that were jarred and delivered to Cardinal Laboratory for confirmation.

Hor Sam ID	Depth	CHL mg/kg	BTEX mg/kg	GRO mg/kg	DRO mg/kg	E-Dro mg/kg	Ttl TPH mg/kg
SW 1	2'	48	<0.300	<10	<10	<10	<30
SW 2	2'	208	<0.300	<10	<10	<10	<30
SW 3	2'	224	<0.300	<10	<10	<10	<30
SW 4	2'	608	<0.300	<10	<10	<10	<30

All sample points fell well under the concentration levels for the site closure criteria. White Buffalo Environmental performed all the sampling, Hungry Horse does not have the appropriate email in which NMOCD was contacted to witness final closure samples. On May 17th, 2019 closure samples were obtained and sent to Cardinal Laboratory for confirmation. Below you will find the table showing the confirmed closure samples. Please also see the attached table for sample data trending.

Clos ID	Depth	CHL mg/kg	BTEX mg/kg	GRO mg/kg	DRO mg/kg	E-Dro mg/kg	Ttl TPH mg/kg
BH 1		112	<0.300	<10	<10	<10	<30
BH 2		96	<0.300	<10	<10	<10	<30
BH 3		128	<0.300	<10	<10	<10	<30
BH 4		192	<0.300	<10	<10	<10	<30
BH 5		122	<0.300	<10	<10	<10	<30
BH 6		144	<0.300	<10	<10	<10	<30
BH 7		128	<0.300	<10	<10	<10	<30
BH 8		128	<0.300	<10	<10	<10	<30

BH 9		112	<0.300	<10	<10	<10	<30
BH 10		128	<0.300	<10	<10	<10	<30
BH 11		144	<0.300	<10	<10	<10	<30
BH 12		128	<0.300	<10	<10	<10	<30
BH 13		128	<0.300	<10	<10	<10	<30
BH 14		176	<0.300	<10	<10	<10	<30
BH 15		128	<0.300	<10	<10	<10	<30

Below you will find the final sidewall closure samples as confirmed by Cardinal Laboratory. Please also see the attached table for sample data trending.

Clos SW	Depth	CHL mg/kg	BTEX mg/kg	GRO mg/kg	DRO mg/kg	E-Dro mg/kg	Ttl TPH mg/kg
SW 1		144	<0.300	<10	<10	<10	<30
SW 2		176	<0.300	<10	<10	<10	<30
SW 3		192	<0.300	<10	<10	<10	<30
SW 4		112	<0.300	<10	<10	<10	<30
SW 5		160	<0.300	<10	<10	<10	<30
SW 6		128	<0.300	<10	<10	<10	<30

All sample points, sidewalls and bottom hole samples fell well within the concentration levels for the site closure criteria. It was mutually agreed between Spur Energy and Hungry Horse that 1'bgs would be excavated and hauled to Lea Landfill. A total of 359 cubic yards of impacted material was excavated, loaded and hauled to Lea Landfill for disposal. Approximately 466 cubic yards of clean caliche was hauled in from the Ross Ranch Pit. Once the site was backfilled, it was leveled and contoured back to its original grade.

SCOPE OF WORK AND LIMITATIONS

The scope of our services consisted of the review of all White Buffalo Environmental data, regulatory liaison and preparation of this closure report. All work has been performed in accordance with the NMOCD Rules and Regulations for Spills and Releases dated August 14, 2018.

On behalf of Spur Energy Partners and Hungry Horse, LLC, we respectfully request closure of the release associated with the Shelby 23 #1 location. If you have any questions or concerns, please contact Natalie Gladden, Director of Environmental and Regulatory Services. She can be reached via her cell phone at (575) 390-6397 or via email at ngladden@hungry-horse.com.

Sincerely,

Kathy Rivera

Kathy Rivera
Project Manager
Hungry Horse, LLC
4024 Plains Highway

Lovington, NM 88260
Cell (575) 441-4374
Email krivera@hungry-horse.com

ATTACHMENTS

Initial Signed C-141
Groundwater data and map
Karst Map
Site Map
Sample Data
Sample Map
Lab Analyticals
Before Photos
During Photos
After Photos
Final C141

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	NAB1911228176
District RP	2RP-5355
Facility ID	
Application ID	pAB1911227905

Release Notification

Responsible Party

Responsible Party Percussion Petroleum	OGRID 371755
Contact Name Michael Martin	Contact Telephone (713) 429-4249
Contact email Michael@percussionpetroleum.com	Incident # *(assigned by OCD)* NAB1911228176
Contact mailing address 919 Milam Street, Suite 2475 Houston, TX 77002	

Location of Release Source

Latitude 32.65112 Longitude -104.45377
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Shelby 23 #1	Site Type Production Facility
Date Release Discovered 3/31/2019	API# *(if applicable)* 30-015-41784

Unit Letter	Section	Township	Range	County
B	23	19S	25E	Eddy

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) 5 bbls	Volume Recovered (bbls) 3 bbls
☒ Produced Water	Volume Released (bbls) 20 bbls	Volume Recovered (bbls) 12 bbls
	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
Spill was due to a leak on the manway gasket of the production separator at the facility of the subject well. All fluid stayed on location, and the spill area was measured to be 25 bbls (length x width x depth divided by 5.62). We switched out of the vessel and had a truck vacuum up the standing fluid. We'll repair the vessel and put back in service.

 State of New Mexico
 Oil Conservation Division

Incident ID	NAB1911228176
District RP	2RP-5355
Facility ID	
Application ID	pAB1911227905

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? Release of 25 bbls fluid.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, Michael Martin emailed Robert Hamlet, Victoria Venegas and Mike Bratcher (NMOCD) on 4/1/2019 at 11:30 AM.	

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: Michael Martin Title: Production Engineer

Signature: Michael Martin Date: 4/4/2019

email: Michael@percussionpetroleum.com Telephone: (713) 429-4249

OCD Only

Received by: Amalia Barrameda Date: 4/22/2019

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 551176.69 **Northing (Y):** 3612717.7 **Radius:** 1000

4/8/19 8:14 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 05450		RA	CH		4	2	15	19S	25E	550057	3614015*	1713	204	80	124
RA 09295		RA	ED	4	3	4	13	19S	25E	552979	3613115*	1845	250	85	165
RA 09293		RA	ED	3	4	4	13	19S	25E	553180	3613114*	2042	250	60	190
RA 09294		RA	ED	3	4	4	13	19S	25E	553180	3613114*	2042	194	76	118
RA 08611		RA	ED	1	1	1	19	19S	26E	553583	3612909*	2413	235	90	145
RA 02909		RA	ED		1	3	22	19S	25E	548864	3611989*	2424	188	130	58
RA 08986		RA	ED	1	3	3	22	19S	25E	548825	3611507	2644	320	220	100
RA 03304		RA	ED			1	27	19S	25E	549081	3610973*	2726	130	60	70
RA 08612		RA	ED	1	2	1	19	19S	26E	553989	3612912*	2819	221	80	141
RA 09988		RA	ED	2	4	1	19	19S	26E	554190	3612507*	3020	100	65	35
RA 01343		RA	ED	2	1	1	18	19S	26E	553777	3614525*	3166	440	69	371
RA 05900		RA	ED		2	2	16	19S	25E	548442	3614424*	3223	185	95	90
RA 10496		RA	ED	3	3	4	25	19S	25E	552801	3609865*	3282	110	40	70
RA 10155		RA	ED	4	3	4	25	19S	25E	553001	3609865*	3386	225	60	165
RA 07817		RA	ED	2	1	2	19	19S	26E	554592	3612915*	3421	224	145	79
RA 07817 CLW		RA	ED	2	1	2	19	19S	26E	554592	3612915*	3421	275	130	145
RA 09077		RA	ED	2	1	2	19	19S	26E	554592	3612915*	3421	200		
RA 07026		RA	ED		3	3	30	19S	26E	553699	3609975*	3726	135	105	30
RA 10262		RA	ED	2	2	2	19	19S	26E	554994	3612917*	3822	200	85	115
RA 03983		RA	CH		4	3	01	19S	25E	552457	3616444*	3940	375	100	275
RA 03018		RA	ED	3	2	4	34	19S	25E	549987	3608639*	4248	530		
RA 02958		RA	ED		1	4	34	19S	25E	549681	3608740*	4249	450		
RA 04208		RA	ED		2	4	03	19S	25E	550036	3616845*	4282	110		
RA 10002		RA	ED	2	2	1	31	19S	26E	554208	3609675*	4294	200	95	105
RA 05333		RA	ED		2	2	09	19S	25E	548430	3616046*	4315	315	260	55
RA 04236		RA	CH	3	3	1	02	19S	25E	550335	3617145*	4506	360	204	156
RA 04722		RA	ED		3	1	02	19S	25E	550436	3617246*	4588	200	42	158
RA 07639		RA	ED		3	1	01	19S	25E	552049	3617250*	4615	260	172	88
RA 04128		RA	ED			2	02	19S	25E	551443	3617449*	4738	211	100	111
RA 09050		RA	ED	1	1	2	20	19S	26E	556001	3612916*	4828	160	105	55

RA 09451	RA	ED	1	3	4	20	19S	26E	556006	3611701*	4935	200	

Average Depth to Water: **105 feet**

Minimum Depth: **40 feet**

Maximum Depth: **260 feet**

Record Count: 31

UTMNAD83 Radius Search (in meters):

Easting (X): 551176.69 **Northing (Y):** 3612717.7 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

4/8/19 8:15 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	RA 05450	4	2		15	19S	25E	550057	3614015*

Driller License:	464	**Driller Company:**	FULTON, C.O.		
Driller Name:					
Drill Start Date:	07/16/1968	**Drill Finish Date:**	07/21/1968	**Plug Date:**	
Log File Date:	08/21/1969	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	204 feet	**Depth Water:**	80 feet

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	RA 09295	4	3	4	13	19S	25E	552979	3613115*

Driller License:	1259	**Driller Company:**	CAMPBELL DRILLING		
Driller Name:	CAMPBELL DRILLING				
Drill Start Date:	10/20/1996	**Drill Finish Date:**	10/30/1996	**Plug Date:**	
Log File Date:	11/19/1996	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	15 GPM
Casing Size:	5.00	**Depth Well:**	250 feet	**Depth Water:**	85 feet

Water Bearing Stratifications:	Top	Bottom	Description
	92	93	Other/Unknown
	163	171	Other/Unknown

Casing Perforations:	Top	Bottom
	136	196

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	RA 09293	3	4	4	13	19S	25E	553180	3613114*

Driller License: 1259 **Driller Company:** CAMPBELL DRILLING

Driller Name: CAMPBELL DRILLING

Drill Start Date:	11/07/1996	**Drill Finish Date:**	11/14/1996	**Plug Date:**	
Log File Date:	11/26/1996	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	14 GPM
Casing Size:	5.00	**Depth Well:**	250 feet	**Depth Water:**	60 feet

Water Bearing Stratifications:	Top	Bottom	Description
	77	78	Other/Unknown
	181	185	Other/Unknown

Casing Perforations:	Top	Bottom
	60	90
	130	192

***UTM location was derived from PLSS - see Help**

SPUR ENERGY PARTNERS

SHELBY 23 #1
GROUND WATER MAP

RA 05450 80'DGW

RA 09295 85'DGW

RA 09293 60'DGW

Rockin R Red Rd

21

Rocking R Red Rd

SHELBY 23 #1

21A

Google Earth

N

4000 ft

PERCUSSION

SHELBY 23 #1

Legend

High

Low

Medium

Artesia

Atoka

SHELBY 23#1

Eddy

Carlsbad

N

10 mi

Google Earth

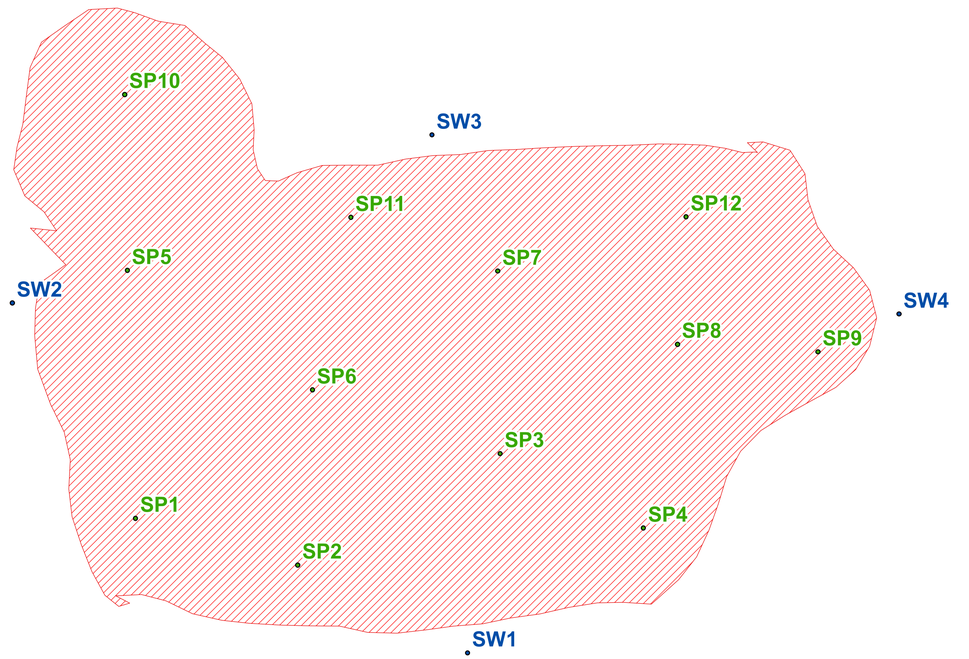
Image Landsat / Copernicus

GPS - SAMPLE POINTS:

SP1: 32.651158 -104.454102
SP2: 32.651218 -104.454039
SP3: 32.651228 -104.453959
SP4: 32.651211 -104.453907
SP5: 32.651248 -104.454126
SP6: 32.651240 -104.454046
SP7: 32.651255 -104.453944
SP8: 32.651246 -104.453884
SP9: 32.651245 -104.453838
SP10: 32.651299 -104.454112
SP11: 32.651264 -104.454003
SP12: 32.651268 -104.453874

GPS - SIDEWALLS:

SW1: 32.651198 -104.453984
SW2: 32.651247 -104.454138
SW3: 32.651282 -104.453972
SW4: 32.651250 -104.453826



2250 SQ. FT.
OF IMPACT
AREA

GPS COORDINATES:
32.6512424
-104.4540448

Legend

SamplePoint

Point_generic

SpillArea

0 12.5 25 50 75 100 Yards

SPUR ENERGY PARTNERS

SHELBY 23 #1

FIGURE 1
INPACTED AREA

N W E S

Hungry Horse LLC.

DRAWN BY: EDDIE GAYTAN

CHECKED BY: NATALIE GLADDEN

SP ID	Depth	Titr	PID	L-Chl	L-BTEX	L-GRO	L-DRO	L-MRO	Ttl TPH	Soil	Notes
SP1	SUR	6400									
	1'	240									
	2'	240		32	0.322	<10	<10	<10	<30		
SP2	SUR	<10.000									
	1'	320									
	2'	240		80	<.300	<10	<10	<10	<30		
SP3	SUR	<10.000									
	1'	240									
	2'	240		128	<.300	<10	<10	<10	<30		
SP4	SUR	<10.000									
	1'	240									
	2'	480		160	<.300	<10	<10	<10	<30		
SP5	SUR	<10.000									
	1'	320									
	2'	320		128	<.300	<10	<10	<10	<30		
SP6	SUR	<10.000									
	1'	320									
	2'	240		32	<.300	<10	<10	<10	<30		
SP7	SUR	<10.000									
	1'	2080									
	2'	320									
	3'	240		80	<.300	<10	<10	<10	<30		
SP8	SUR	<10.000									
	1'	320									TPH
	2'	320									TPH
	3'	320									TPH

	4'	320									TPH
	5'	320		80	<.300	<10	<10	<10	<30		TPH
SP9	SUR	<10.000									
	1'	960									
	2'	720		656	<.300	<10	<10	<10	<30		
SP10	SUR	<10.000									
	1'	1040									
	2'	560		560	<.300	<10	39.2	<10	59.2		
SP11	SUR	<10.000									
	1'	1680									
	2'	640		512	<.300	<10	42.6	<10	62.6		
SP12	SUF	<10.000									
	1'	640									TPH
	2'	320		80	<.300	<10	15.9	<10	35.9		TPH
SW1	SUR	<10.000									
	1'	240									
	2'	240		48	<.300	<10	<10	<10	30		
SW2	SUR	408									
	1'	320									
	2'	320		208	<.300	<10	<10	<10	30		
SW3	SUR	488									
	1'	400									
	2'	400		224	<.300	<10	<10	<10	30		
SW4	SUR	320									
	1'	480									
	2'	480		608	<.300	<10	<10	<10	30		

COMPANY - SPUR LOCATION NAME SHELBY 23 #1 RELEASE DATE ____Unknown_____

CLOSURE SAMPLES H901806

SP ID	DEPTH	L-CHL	L-BTEX	L-GRO	L- DRO	L-MRO	TtL TPH	Soil Type	NOTES
BH1		112	<0.300	<10.0	<10.0	<10.0	30		
BH2		96	<0.300	<10.0	<10.0	<10.0	30		
BH3		128	<0.300	<10.0	<10.0	<10.0	30		
BH4		192	<0.300	<10.0	<10.0	<10.0	30		
BH5		112	<0.300	<10.0	<10.0	<10.0	30		
BH6		144	<0.300	<10.0	<10.0	<10.0	30		
BH7		128	<0.300	<10.0	<10.0	<10.0	30		
BH8		128	<0.300	<10.0	<10.0	<10.0	30		
BH9		112	<0.300	<10.0	<10.0	<10.0	30		
BH10		128	<0.300	<10.0	<10.0	<10.0	30		
BH11		144	<0.300	<10.0	<10.0	<10.0	30		
BH12		128	<0.300	<10.0	<10.0	<10.0	30		
BH13		128	<0.300	<10.0	<10.0	<10.0	30		
BH14		176	<0.300	<10.0	<10.0	<10.0	30		
BH15		128	<0.300	<10.0	<10.0	<10.0	30		
CLOSURE SW									

SW1		144	<0.300	<10.0	<10.0	<10.0	30		
SW2		176	<0.300	<10.0	<10.0	<10.0	30		
SW3		192	<0.300	<10.0	<10.0	<10.0	30		
SW4		112	<0.300	<10.0	<10.0	<10.0	30		
SW5		160	<0.300	<10.0	<10.0	<10.0	30		
SW6		128	<0.300	<10.0	<10.0	<10.0	30		

CARDINAL Laboratories

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

April 15, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: SHELBY 23 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/10/19 15:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/08/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 1 - 2 (H901325-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	**0.068**	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	**0.099**	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	**0.155**	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	**0.322**	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.2 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *89.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *98.4 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/08/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 2 - 2 (H901325-02)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *87.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.8 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/08/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 3 - 2 (H901325-03)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *91.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *97.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/08/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 4 - 2 (H901325-04)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *88.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.1 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/08/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 5 - 2 (H901325-05)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *89.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *93.5 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Percussion Petroleum
Project Manager:	Jerry Matthews
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	Shelby 23 #1
Sampler Name:	Marc Rivera

BILL TO

P.O. #:	
Company:	White Buffalo Env.
Attn:	
Address:	407 E. Broadway
City:	Hobbs
State:	NM Zip: 88240
Phone #:	575-738-0424
Fax #:	575-738-0430

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H901325																	
1	SP1-2	G	1			X					X		4/8/19	10:09	X	X	X
2	SP2-2	G	1			X					X			10:45	X	X	X
3	SP3-2	G	1			X					X			11:38	X	X	X
4	SP4-2	G	1			X					X			11:51	X	X	X
5	SP5-2	G	1			X					X			2:11	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Kaitlyn McKenzie	Date: 4-10-19 Time: 15:15	Received By: Tamara Oldaker	
Relinquished By:	Date: Time:	Received By:	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:
email:
natalie.gladden@whitebuffalo.com
monique.cueto@whitebuffalo.com

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: -12.6° #97	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	TO

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

April 12, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: SHELBY 23 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/10/19 15:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/09/2019
Reported:	04/12/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 6 - 2 (H901326-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *83.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.4 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/09/2019
Reported:	04/12/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 7 - 3 (H901326-02)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.8 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *81.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.3 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/09/2019
Reported:	04/12/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 8 - 5 (H901326-03)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *85.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.7 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/10/2019	Sampling Date:	04/09/2019
Reported:	04/12/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 9 - 2 (H901326-04)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2019	ND	2.05	103	2.00	1.26	
Toluene*	<0.050	0.050	04/11/2019	ND	1.93	96.3	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/11/2019	ND	2.01	100	2.00	0.588	
Total Xylenes*	<0.150	0.150	04/11/2019	ND	6.29	105	6.00	2.06	
Total BTEX	<0.300	0.300	04/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**656**	16.0	04/12/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2019	ND	206	103	200	3.00	
DRO >C10-C28*	<10.0	10.0	04/11/2019	ND	198	99.1	200	0.579	
EXT DRO >C28-C36	<10.0	10.0	04/11/2019	ND					

Surrogate: 1-Chlorooctane *90.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Percussion Petroleum	BILL TO	
Project Manager:	Jerry Matthews	P.O. #:	
Address:		Company:	White Buffalo Env.
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	407 E. Broadway
Project #:	Project Owner:	City:	Hobbs
Project Name:		State:	NM Zip: 88240
Project Location:	Shelby 23 #1	Phone #:	575-738-0424
Sampler Name:	Marc Rivera	Fax #:	575-738-0430

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	BTEX	TPH
H901326																	
1	SP6-2	G				X					X		4/9/19	8:18	X	X	X
2	SP7-3	G				X					X			9:21	X	X	X
3	SP8-5	G				X					X			10:05	X	X	X
4	SP9-2	G				X					X			10:22	X	X	X

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Relinquished By:	Date: 4-10-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Kaitlyn Montanez	Time: 15:15	Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email: natalie.gladden@whitebuffalo.com monique.cueto@whitebuffalo.com
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -12.6c #97

Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No

CHECKED BY: (Initials) TO

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

April 16, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: SHELBY 23 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/11/19 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/11/2019	Sampling Date:	04/10/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 10 - 2 (H901336-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2019	ND	2.06	103	2.00	0.775	
Toluene*	<0.050	0.050	04/12/2019	ND	1.96	97.8	2.00	0.878	
Ethylbenzene*	<0.050	0.050	04/12/2019	ND	2.04	102	2.00	0.624	
Total Xylenes*	<0.150	0.150	04/12/2019	ND	6.23	104	6.00	0.453	
Total BTEX	<0.300	0.300	04/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2019	ND	204	102	200	0.864	
DRO >C10-C28*	**39.2**	10.0	04/12/2019	ND	208	104	200	2.17	
EXT DRO >C28-C36	<10.0	10.0	04/12/2019	ND					

Surrogate: 1-Chlorooctane *87.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *97.3 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/11/2019	Sampling Date:	04/10/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 11 - 2 (H901336-02)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2019	ND	2.06	103	2.00	0.775	
Toluene*	<0.050	0.050	04/12/2019	ND	1.96	97.8	2.00	0.878	
Ethylbenzene*	<0.050	0.050	04/12/2019	ND	2.04	102	2.00	0.624	
Total Xylenes*	<0.150	0.150	04/12/2019	ND	6.23	104	6.00	0.453	
Total BTEX	<0.300	0.300	04/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**512**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2019	ND	204	102	200	0.864	
DRO >C10-C28*	**42.6**	10.0	04/12/2019	ND	208	104	200	2.17	
EXT DRO >C28-C36	<10.0	10.0	04/12/2019	ND					

Surrogate: 1-Chlorooctane *84.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *92.9 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Percussion Petroleum
Project Manager:	Jerry Matthews
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	Shelby 23 #1
Sampler Name:	Mark Rivers

BILL TO

P.O. #:	
Company:	White Buffalo Env.
Attn:	
Address:	407 E. Broadway
City:	Hobbs
State:	NM Zip: 88240
Phone #:	575-738-0424
Fax #:	575-738-0430

ANALYSIS REQUEST: Chlorides, BTEX, TPH

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H901336																	
1	Sp10-2	G	1			X					X		4/10/19	10:01	X	X	X
2	Sp11-2	G	1			X					X		4/10/19	10:24	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Kathryn Montero	Date: 4-11-19 Time: 15:40	Received By: Tamara Oldaker	
Relinquished By:	Date: Time:	Received By:	

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -7.4°C #97

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials) TO

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:
Email:
natalie.gladden@whitebuffalo.com
monique.cueto@whitebuffalo.com

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CARDINAL Laboratories

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

April 17, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: SHELBY 23 #1

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/17/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SP 12 - 2 (H901361-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	04/16/2019	ND	400	100	400	0.00	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	**15.9**	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane *95.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/17/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 1 - 2 (H901361-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane *94.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.6 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/17/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 2 - 2 (H901361-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane *98.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.1 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/17/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 3 - 2 (H901361-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane *89.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.7 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/17/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 4 - 2 (H901361-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.2 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	04/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane *100 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.2 %* *37.6-147*

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

KM

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Percussion Petroleum
Project Manager:	Jerry Matthews
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	Shelby 23 #1
Sampler Name:	Marc Rivera

BILL TO

P.O. #:	
Company:	White Buffalo Env.
Attn:	
Address:	407 E. Broadway
City:	Hobbs
State:	NM Zip: 88240
Phone #:	575-738-0424
Fax #:	575-738-0430

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H901361																	
1	SP12-2	G	1			X					X		4/11/19	8:28	X	X	X
2	SW1-2	G	1			X					X			9:11	X	X	X
3	SW3-2	G	1			X					X			9:37	X	X	X
4	SW5-2	G	1			X					X			10:06	X	X	X
5	SW4-2	G	1			X					X			12:30	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Kaitlyn Martinez	Date: 4-12-19 Time: 14:55	Received By: Tamara Oldham	
Relinquished By:	Date: Time:	Received By:	

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -10.4°C #97

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials) T.O.

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:
email:
natalie.gladden@whitebuffalo.com
monique.cueto@whitebuffalo.com

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

May 21, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: SHELBY 23 #1

Enclosed are the results of analyses for samples received by the laboratory on 05/20/19 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 1 (H901806-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/20/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/20/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/20/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *87.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

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CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 2 (H901806-02)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/20/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/20/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/20/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *93.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.4 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 3 (H901806-03)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/20/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/20/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/20/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *90.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.5 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 4 (H901806-04)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/20/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/20/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/20/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/20/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *90.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.3 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 5 (H901806-05)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *92.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.5 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 6 (H901806-06)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.2 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *94.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 7 (H901806-07)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *93.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.5 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 8 (H901806-08)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.8 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *95.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.0 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 9 (H901806-09)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *95.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.5 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 10 (H901806-10)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.1 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *89.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.9 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 11 (H901806-11)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.3 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *93.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.3 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 12 (H901806-12)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/20/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/20/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/20/2019	ND					

Surrogate: 1-Chlorooctane *93.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.0 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 13 (H901806-13)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.3 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *90.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *93.2 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 14 (H901806-14)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *90.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *92.3 %* *37.6-147*

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CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: BH 15 (H901806-15)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.7 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *92.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.0 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 1 (H901806-16)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.2 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	05/21/2019	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *88.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.8 %* *37.6-147*

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Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 2 (H901806-17)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.2 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	05/21/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *85.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *88.0 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 3 (H901806-18)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	05/21/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *90.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *92.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 4 (H901806-19)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	05/21/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *89.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.9 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 5 (H901806-20)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.64	81.8	2.00	0.748	
Toluene*	<0.050	0.050	05/21/2019	ND	1.74	87.1	2.00	0.850	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.69	84.5	2.00	1.34	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.13	85.5	6.00	0.191	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.5 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	05/21/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	194	97.2	200	5.16	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	189	94.5	200	5.35	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *89.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *92.1 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

WHITE BUFFALO
JERRY MATTHEWS
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received:	05/20/2019	Sampling Date:	05/17/2019
Reported:	05/21/2019	Sampling Type:	Soil
Project Name:	SHELBY 23 #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION PETRO.		

Sample ID: SW 6 (H901806-21)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.67	83.6	2.00	1.49	
Toluene*	<0.050	0.050	05/21/2019	ND	1.77	88.3	2.00	0.893	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.7	2.00	1.51	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.20	86.7	6.00	1.65	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	05/21/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane *92.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *92.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

1 of 3 Rush

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Percussion Petroleum	BILL TO	ANALYSIS REQUEST
Project Manager:	Betty Mathis	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Shelby 83 #1	Phone #:	
Sampler Name:	Katlynn Montanez	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H901806																	
1	BH1	G	1			X					X		6/7/19	11:00	X	X	X
2	BH2	G	1			X					X			11:15	X	X	X
3	BH3	G	1			X					X			11:20	X	X	X
4	BH4	G	1			X					X			11:28	X	X	X
5	BH5	G	1			X					X			11:33	X	X	X
6	BH6	G	1			X					X			11:40	X	X	X
7	BH7	G	1			X					X			11:46	X	X	X
8	BH8	G	1			X					X			11:53	X	X	X
9	BH9	G	1			X					X			11:59	X	X	X
10	BH10	G	1			X					X			12:05	X	X	X

Relinquished By: Jraci Jennings	Date: 5-20-19 Time: 12:05	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: -2.4° #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO	REMARKS: Natalie.Gladden@whitebuffalo.com Katlynn.montanez@whitebuffalo.com

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

2 of 3 Rusn

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Percussion Petroleum	BILL TO
Project Manager: Serry Matheus	P.O. #:
Address:	Company:
City: State: Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: Shelby 23 #1	Phone #:
Sampler Name: Kathynn Montanez	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
11	BH 11	G	1			X					X		5/7/19	1:00	X	X	X
12	BH 12	G	1			X					X			1:07	X	X	X
13	BH 13	G	1			X					X			1:12	X	X	X
14	BH 14	G	1			X					X			1:19	X	X	X
15	BH 15	G	1			X					X			1:24	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Traci Jennings	Date: 5-20-19 Time: 12:05	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: -2.4°C #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO	REMARKS: Natalie.Gladen@whitebuffalo.com Kathynn.Montanez@whitebuffalo.com

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

3 of 3 Rush

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Percussion Petroleum	BILL TO
Project Manager: Jerry Matthews	P.O. #:
Address:	Company:
City: State: Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: Shelby 23 #1	Phone #:
Sampler Name: Kathryn Montero	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides	BTEX	TPH
16	SW1	G	1			X					X		5/19/19	2:00	X	X	X
17	SW2	G	1			X					X			2:09	X	X	X
18	SW3	G	1			X					X			2:13	X	X	X
19	SW4	G	1			X					X			2:20	X	X	X
20	SW5	G	1			X					X			2:28	X	X	X
21	SW6	G	1			X					X			2:34	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Traci Jennings	Date: 5-20-19 Time: 12:05	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
			REMARKS:

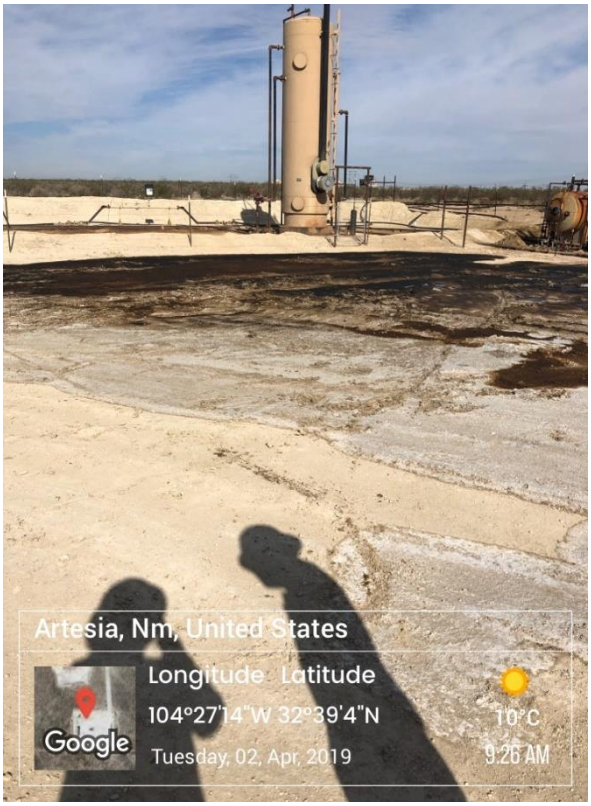
Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -2.4°C #197

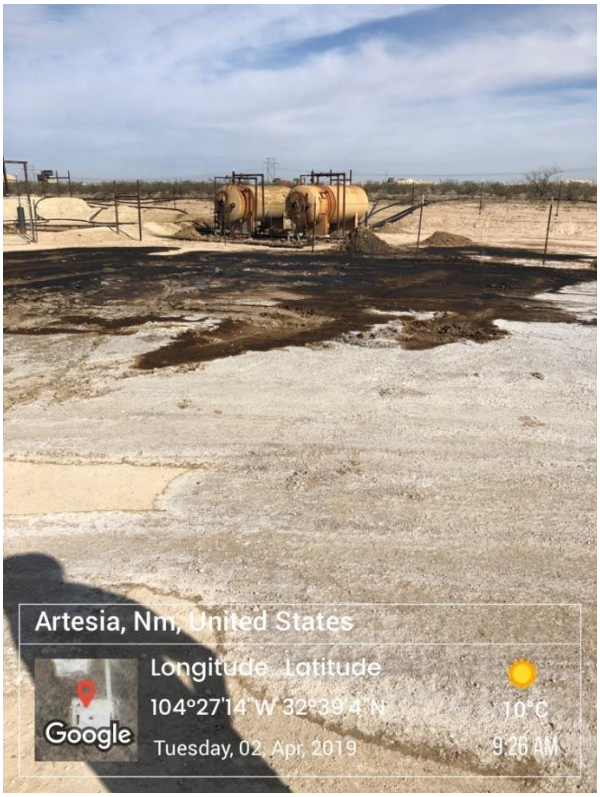
Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No

CHECKED BY: (Initials) TO

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

PERCUSSION
SHELBY 23 #1
BEFORE PHOTOS





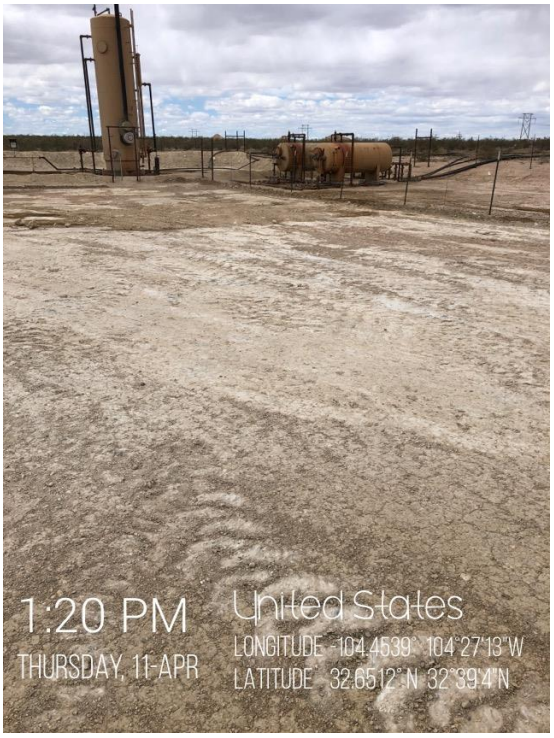
PERCUSSION
SHELBY 23 #1
BEFORE PHOTOS



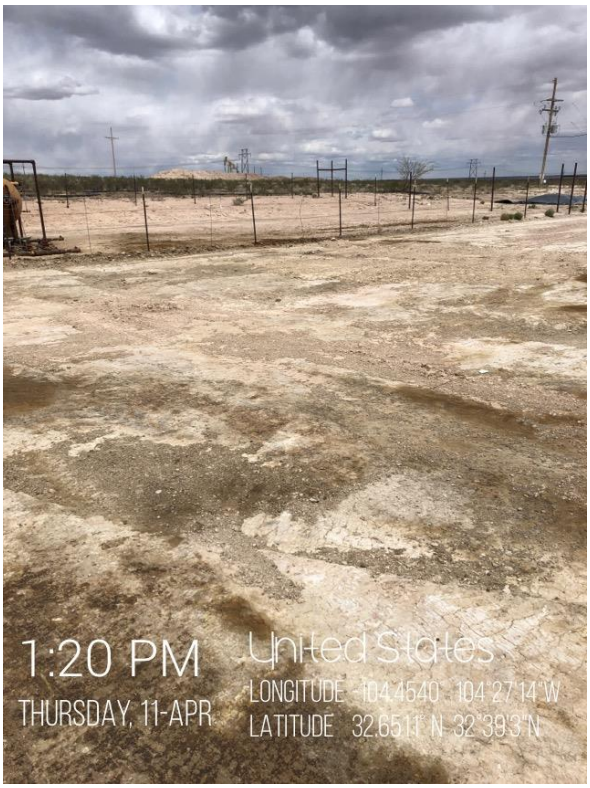

PERCUSSION
SHELBY 23 #1
DURING PHOTOS

PERCUSSION
SHELBY 23 #1
DURING PHOTOS

Percussion Petroleum
Shelby 23 #1
Closure Photos



Percussion Petroleum
Shelby 23 #1
Closure Photos



Form C-141
Page 3

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?	80' (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: **Natalie Gladden** Title: **Director of Environmental & Regulatory**

Signature: Natalie Gladden Date: 5-19-20

email: **NGLADDEN@HUGNRY-HORSE.COM** Telephone: **575-390-6397**

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: **Natalie Gladden** Title: **Director of Environmental and Regulatory**

Signature: Natalie Gladden Date: 5-19-20

email: **ngladden@hungry-horse.com** Telephone: **575-390-6397**

OCD Only

Received by: Chad Hensley Date: 04/19/2021

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: Chad Hensley Date: 04/19/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

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 8461

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
SPUR ENERGY PARTNERS LLC 9655 Katy Freeway Suite 500 Houston, TX77024	328947	8461	C-141

OCD Reviewer	Condition
chensley	None