SPUR ENERGY PARTNERS

GOODMAN 22 #4H

CLOSURE REPORT

API NO. 30-015-44366
RELEASE DATE: 05/20/2018
2RP-4787
INCIDENT ID: NAB1815939152
U/L K, SECTION 22, TOWNSHIP 19S, RANGE 25E
EDDY COUNTY

September 23, 2020

PREPARED BY:

ESS
#7 COMPRESS ROAD
ARTESIA, NM 88210

September 23, 2020

State of New Mexico Energy Minerals and Natural Resources Department
Oil Conservation Division – District II
C/O Mike Bratcher, Robert Hamlet, Victoria Venegas, Cristina Eads
811 S. First Street
Artesia, NM 88210

Spur Energy Partners
C/O Braidy Moulder
919 Milam Street Suite 2475
Houston, TX 77002

RE: Goodman 22 #4H – Closure Request
Date of Release: May 20, 2018
API No. 30-015-44366
U/L K, Section 22, Township 19S, Range 25E

To Whom it May Concern:

Spur Energy Partners has retained ESS (Energy Staffing and Services), Environmental & Regulatory Division to address the environmental compliance issued concerning the release detailed herein. Below you will find the site-specific information concerning the delineation and remediation process that has taken place at the Goodman 22 #4H location.

SITE BACKGROUND

The site is located in Eddy County, New Mexico; 13.99 miles southwest of Artesia, New Mexico. The release occurred when a truck loading crude oil on behalf of Holly-Frontier/Navajo Refinery overflowed the trailer tank on the subject location. The driver reported 30bbls of crude oil was released with no volume of fluid reported recovered by the trucking company. This release occurred during Percussion Operations and was later transferred to Spur Energy Partners, LLC. The release was called into Mike Bratcher and Crystal Weaver of the NMOCD on May 21st, 2018 at 9:35 a.m. A C141 form was submitted for record on June 5th of 2018 and was given a spill report number as 2RP-4787 and an incident number of NAB1815939152, which was submitted as record on June 5th, 2018.

GENERAL SITE CHARACTERISTICS

ESS conducted an extended groundwater study of the area, it has been determined that according to the New Mexico Office of the State Engineer, the depth to groundwater is 220'bgs, which is listed as RA 08986 and is the closest well within the 25 years of data. Please see the list below of groundwater wells found withing 1147' from the site.

RA 02909: 520' (.098 miles) from the site, drilled in 1952 with groundwater at 130'bgs
RA 08986: 796' (.15 miles) from the site, drilled in 1995 with groundwater at 220'bgs
RA 03304: 1147' (0.21 miles) from the site, drilled in 1954 with groundwater at 60'bgs

Using the Table I, Closure Criteria for Soils Impacted by a Release dated 8/14/2018, this site falls under the site ranking of >100'bgs. Please see the chart below for the sampling criteria for this site:

Closure Criteria for Soil NMAC 19.15.29			
Depth	**Constituent**	**Method**	**Limit**
>100 feet	Chloride	EPA 300.0 OR SM4500 CL B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method	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

DISTANCE TO NEAREST POTABLE WATER WELL

Based on the review of the NMOSE Database, registered potable water wells are present within ½ a mile of the site. The closest well with viable water data in the last 25 years is the RA 08986, which measures .15 miles from the site. As seen on the OSE Map, two of the wells that are listed above fall inside the ½ mile radius of the Goodman 22 #4H and are listed below:

RA-02909 – drilled 1952 (domestic household well) shows to be .32 miles from the site and was originally drilled for oil test and is now used for stock purposes.
RA-08986 – drilled in 1995 (originally for irrigation), change of ownership moved to Yates Petroleum for prospecting or development of natural resource in 2001, permit was approved 12/03/2001. This well is .49 miles from the site.

Although the measurements from the NMOSE and OSE Pod Map are different these wells still fall within the ½ mile radius of the Goodman 22 #4H. With the information provided, it is safe to say that groundwater will not be a factor this this site. Please see the OSE Map attached to this report.

DISTANCE TO NEAREST SURFACE WATER

Brantley Lake near Lakewood is the closest surface water to the Goodman 22 #4H. It is approximately 5.9 miles southeast of the site.

SOIL CHARACTERISTICS

According to the USDA Resources Conservation Service, the soil survey indicates the following (please see the soil map attached):

9.0% Reagan Loam, 0 to 3 percent slopes

KARST CHARACTERISTICS

ESS evaluated date from the NMOCD Share-Point for Karst Map Designations in reference to the Goodman 22 #4H. The site appears to be in the Medium Karst Area. Based on the site observations with the extent of the release margins, the potential for Karst formations in this area is of "medium potential". With the information provided in this report, Karst is a factor in determining the site characterization. Closure criteria moves to 0 to 51' depth to groundwater, please find the sampling closure criteria.

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

SOIL REMEDIAL/LINER ACTIONS LEVELS

ESS has provided sufficient data that this produced water release has impacted soil for the Goodman 22 #4H release and that the protocol is consistent with the remediation/abatement goals and objectives set forth in the NMOCD (New Mexico Oil Conservation Division) Closure Criteria for Soils Impacted by a Release, dated August 14, 2018.

The guidance document provides direction for Spur Energy's initial response actions, site assessment, sampling procedures conducted by ESS Staff, we would like to present to you the following information concerning the delineation process for the release detailed herein.

Soil Sampling Procedures

Soil sampling for laboratory analysis was conducted according to the NMOCD – approved industry standards. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect clean samples in air tight glass jars supplied by the laboratory to conduct the analysis
- Each sample jar was labelled with site and sample information
- Samples were kept in and stored in a cool place and packed on ice
- Promptly ship sample to the lab for analysis following the chain of custody procedures

The following lab analysis method was used for each bottom hole and side wall sample submitted to Envirotech Analytical Laboratory:

Volatile Organics by EPA 8021B

- Benzene, Toluene, Ethylbenzene, p.m. Xylene, o-Xylene and Total Xylenes

Nonhalogenated Organics by EPA 8015D – GRO

- Gasoline Range Organics (C6-C10)

Nonhalogenated Organics by EPA 8015D – DRO/ORO

- Diesel Range Organics (C10-C28)
- Oil Range Organics (C28-C40)

Anions by EPA 300.0/9056A

- Chloride

RELEASE INVESTIGATION DATA EVALUATION

Based on this release being caused by Holly Frontier/Navajo Refinery, the cleanup procedures were completed by them as a 3rd party incident. Percussion Energy hired White Buffalo Environmental to conduct delineation sampling to verify that proper remediation activities had taken place. Percussion Energy could not obtain direct information concerning the remediation activities. The remediation activities began immediately after the one call was placed and was remediated soon thereafter. The old rule delineation method was used to clean this site up as it was completed before the August 14th rule amendment.

On or before May 13, 2019, White Buffalo began delineation of the site. A total of ten vertical samples were placed and fully delineated. Each sample was tested in the field using the

titration method to test for Chloride contaminated soil and a PID meter to test for volatiles. As you can see in the sample data obtained by White Buffalo Environmental and confirmed by Cardinal Laboratories, the final samples met the NMOCD Rules and Regulations prior to the amendment dated August 14th, 2018. Below you will find the delineation sample data along with the lab analysis in yellow.

SP ID	Depth	Titr	PID	L-BTEX	L-DRO	L-ORO	L-GRO	L-TPH	L-CHL
SP 1	SURF	720							
	1'	160							
	2'	160							
	3'	320							
	4'	720		<0.300	<10	<10	<10	<30	672
SP 2	SURF	400							
	1'	320							
	2'	320		<0.300	<10	<10	<10	<30	48
SP 3	SURF	320							
	1'	480							
	2'	80							
	3'	240							
	4'	320		<0.300	<10	<10	<10	<30	96
SP 4	SURF	320							
	1'	320							
	2'	160		<0.300	<10	<10	<10	<30	32
SP 5	SURF	560							
	1'	400							
	2'	240		<0.300	15.9	<10	<10	35.9	32
SP 6	SURF	880							
	1'	480							
	2'	560		<0.300	<10	<10	<10	<30	448
SP 7	SURF	800							
	1'	340							
	2'	160		<0.300	<10	<10	<10	<30	64
SP 8	SURF	800							
	1'	320							
	2'	160		<0.300	<10	<10	<10	<30	16
SP 9	SURF	400							

	1'	240							
	2'	240		<0.300	<10	<10	<10	<30	84.8
SP 10	SURF	720							
	1'	560							
	2'	960							
	3'	240							
	4'	240							
	5'	160		<0.300	135	<10	<10	155	32
SW 1	SURF	240							
	1'	2470							
	2'	320		<0.300	548	269	<10	827	80
SW 2	SURF	480							
	1'	280							
	2'	480		<0.300	<10	<10	<10	<30	240
SW 3	SURF	480							
	1'	960							
	2'	640		<0.300	206	48	<10	264	624
SW 4	SURF	1520							
	1'	960							
	2'	640		<0.300	512	216	<10	738	624
SW 5	SURF	480							
	1'	480							
	2'	800		<0.300	783	250	<10	1043	672
SW 6	SURF	720							
	1'	720							
	2'	640							
	3'	480		<0.300	679	407	<10	1096	368

It was found that during the verification of remediation, the only areas left in place was at the berm of the facility and around the load lines. This would be SP1, SW1, SW4, SW5 and SW5. SW3 came in with elevated DRO and slightly elevated chlorides. There was not signs of contamination wicking back up at the surface of the pad or any visual indications of soil contamination.

With groundwater not being a factor, remediation being prior to the new rule, we would like to request closure of this site on behalf of Spur Energy (now owner and operator of the well). When the well is plugged and the facility is abandoned Spur Energy will make sure proper channels will be followed to ensure this site is in compliance at that time.

Please find the delineation and regulatory data attached herein. If you have any questions or concerns, about this closure request, please contact me at any time.

Sincerely,

Natalie Gladden
Director of Environmental and Regulatory Services
#7 Compress Road
Artesia, NM 88210
Cell: 575-390-6397
Email: natalie@energystaffingllc.com

Attachments:

- Initial C141
- Groundwater Data & Map
- OSE POD Map
- Soil Map and Information
- Karst Map
- Delineation Sample Data & Sample Map
- Lab Analysis
- Site 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

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

JUN 05 2018
DISTRICT II-ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1815939152 371255 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company Percussion Petroleum Operating, LLC	Contact Eli Trevino
Address 919 Milam Street, Suite 2475 Houston, TX 77002	Telephone No. (575) 499-3993
Facility Name Goodman 22 #4H	Facility Type Private

Surface Owner Private	Mineral Owner Private	API No. 30-015-44366

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	22	19S	25E	2303'	South	2346'	West	Eddy

Latitude 32.64524 **Longitude** -104.473538 NAD83

NATURE OF RELEASE

Type of Release Produced oil	Volume of Release 30bbls	Volume Recovered
Source of Release Load line	Date and Hour of Occurrence 5/20/18 at 10:00 AM	Date and Hour of Discovery 5/20/18 at 10:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher (NMOCD) and Crystal Weaver (NMOCD)	
By Whom? Toby Rhodes	Date and Hour 5/21/18 at 9:35 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No watercourse impacted.

Describe Cause of Problem and Remedial Action Taken.*
At approximately 10:00 AM on May 20, 2018, a truck loading crude oil on behalf of Holly-Frontier/Navajo Refining overflowed the trailer tank on the subject location. The driver reported the spill to be 30 bbls of crude oil.

Describe Area Affected and Cleanup Action Taken.*
The spill was outside of the containment area. Holly Frontier/Navajo Refining took responsibility and supervised immediate cleanup activities. Holly Frontier/Navajo Refining have the final count on volume recovered during cleanup.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Michael Martin	**OIL CONSERVATION DIVISION** Approved by Environmental Specialist: Signed By Brittany Esparza
Printed Name: Michael Martin	
Title: Petroleum Engineer	Approval Date: 6/5/18 Expiration Date: N/A
E-mail Address: Michael@percussionpetroleum.com	Conditions of Approval: See attached Attached ☐ 2RP-4787
Date: 6/5/2018 Phone: (713) 429-4249	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 6/05/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4787 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 7/05/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right) (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 Subbasin	County	Source	q 64	q 16	q 4	Sec	Twp	Rng	X	Y		Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RA 02909		RA	ED	Shallow		1	3	22	19S	25E	548864	3611989*		520	06/26/1952	07/05/1952	08/11/1952	188	130	A.F. SMITH	
RA 08986		RA	ED	Shallow	1	3	3	22	19S	25E	548825	3611507		796	05/15/1995	05/15/1995	05/17/1995	320	220	GLENN'S WATER WELL SERVICE	421
RA 03304		RA	ED	Shallow			1	27	19S	25E	549081	3610973*		1147	10/13/1954	10/15/1954	11/22/1954	130	60	BEATTY, J.R.	62
RA 05450		RA	CH	Shallow		4	2	15	19S	25E	550057	3614015*		2049	07/16/1968	07/21/1968	08/21/1969	204	80		464
RA 05900		RA	ED	Shallow		2	2	16	19S	25E	548442	3614424*		2521	03/18/1974	03/19/1974	03/25/1974	185	95		460
RA 03018		RA	ED		3	2	4	34	19S	25E	549987	3608639*		3496		02/01/1953	08/26/1953	530		ABBOTT BROS.	46
RA 09295		RA	ED	Shallow	4	3	4	13	19S	25E	552979	3613115*		3748	10/20/1996	10/30/1996	11/19/1996	250	85	CAMPBELL DRILLING	1259
RA 06418		RA	ED	Shallow	1	2	3	17	19S	25E	545925	3613710*		3815	12/11/1978	12/18/1978	12/26/1978	120	72		406
RA 09293		RA	ED	Shallow	3	4	4	13	19S	25E	553180	3613114*		3941	11/07/1996	11/14/1996	11/26/1996	250	60	CAMPBELL DRILLING	1259
RA 09294		RA	ED	Shallow	3	4	4	13	19S	25E	553180	3613114*		3941	10/10/1996	10/16/1996	11/19/1996	194	76	CAMPBELL DRILLING	1259
RA 05333		RA	ED	Shallow		2	2	09	19S	25E	548430	3616046*		4075	04/18/1967	05/05/1967	05/12/1967	315	260	EXISTING WELL	353
RA 10496		RA	ED	Shallow	3	3	4	25	19S	25E	552801	3609865*		4079	04/01/2004	04/04/2004	04/14/2004	110	40	MARTIN, DELFORD	1064
RA 10155		RA	ED	Shallow	4	3	4	25	19S	25E	553001	3609865*		4249	05/26/2002	06/01/2002	06/07/2002	225	60	MARTIN, DELFORD	1064
RA 12222 POD1		RA	ED		2	4	2	30	19S	25E	545284	3610884		4263	02/24/2015	02/24/2015	06/06/2015			ATKINS, JACKIE D.	1249
RA 08611		RA	ED	Shallow	1	1	1	19	19S	26E	553583	3612909*		4287	10/22/1993	11/20/1993	11/24/1993	235	90	CAMPBELL DRILLING	1259
RA 04726		RA	ED	Shallow		3	2	19	19S	25E	544825	3612390*		4561	12/05/1962	12/20/1962	11/08/1962	390	310		62
RA 03942		RA	ED	Shallow	3	2	4	30	19S	25E	545141	3610277*		4603	10/03/1958	10/08/1958	10/20/1958	270	222		62
RA 08612		RA	ED	Shallow	1	2	1	19	19S	26E	553989	3612912*		4687	12/10/1993	12/17/1993	12/30/1993	221	80	CAMPBELL DRILLING	1259
RA 04208		RA	ED	Shallow		2	4	03	19S	25E	550036	3616845*		4808	04/15/1960	04/19/1960	02/02/1961	110		CALVIN DAVIS	
RA 07026		RA	ED	Shallow		3	3	30	19S	26E	553699	3609975*		4809	12/09/1982	12/30/1982	07/05/1983	135	105	EXISTING WELL	749
RA 09988		RA	ED	Shallow	2	4	1	19	19S	26E	554190	3612507*		4832	11/20/2000	03/02/2001	03/15/2001	100	65	HUDSON, FRITZ	885

Record Count: 21

UTMNAD83 Radius Search (in meters):

Easting (X): 549376 **Northing (Y):** 3612081.7 **Radius:** 5000

***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 02909	1	3		22	19S	25E	548864	3611989*

Driller License:		**Driller Company:**			
Driller Name:	A.F. SMITH				
Drill Start Date:	06/26/1952	**Drill Finish Date:**	07/05/1952	**Plug Date:**	
Log File Date:	08/11/1952	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	8.63	**Depth Well:**	188 feet	**Depth Water:**	130 feet

Water Bearing Stratifications:	Top	Bottom	Description
	120	130	Sandstone/Gravel/Conglomerate

***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 08986	1	3	3	22	19S	25E	548825	3611507

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN'S WATER WELL SERVICE

Drill Start Date: 05/15/1995 **Drill Finish Date:** 05/15/1995 **Plug Date:**

Log File Date: 05/17/1995 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** 320 feet **Depth Water:** 220 feet

Meter Number: 4314 **Meter Make:** HALLIBURTON

Meter Serial Number: 2ST23206 **Meter Multiplier:** 1.0000

Number of Dials: 6 **Meter Type:** Diversion

Unit of Measure: Barrels 42 gal. **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:** Quarterly (No Reading Expected)

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
01/01/2001	2000	160500	A	PRT		0	
03/01/2001	2000	180000	A	RPT		2.513	
12/31/2001	2001	180960	A	RPT		0.124	
04/01/2002	2002	180960	A	RPT		0	
06/30/2002	2002	180960	A	RPT		0	
09/30/2002	2002	180960	A	RPT		0	
04/01/2003	2003	180960	A	RPT		0	
08/15/2003	2003	180960	A	tw		0	
09/30/2003	2003	180960	A	tw		0	
12/31/2003	2003	180960	A	tw		0	
07/01/2004	2004	180960	A	sj		0	
10/01/2004	2004	180960	A	sj		0	
12/31/2004	2004	180960	A	sj		0	
09/30/2005	2005	180960	A	RPT		0	

**YTD Meter Amounts:	Year	Amount
	2000	2.513
	2001	0.124
	2002	0
	2003	0

**YTD Meter Amounts:	Year	Amount
	2004	0
	2005	0

Meter Number:	8259	**Meter Make:**	HALIBURTON
Meter Serial Number:	2 ST 23206	**Meter Multiplier:**	1.0000
Number of Dials:	6	**Meter Type:**	Diversion
Unit of Measure:	Barrels 42 gal.	**Return Flow Percent:**	
Usage Multiplier:	0.00	**Reading Frequency:**	Quarterly (No Reading Expected)

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
10/01/2004	2004	180960	A	sj		0	

**YTD Meter Amounts:	Year	Amount
	2004	0

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 03304			1	27	19S	25E	549081	3610973*

Driller License:	62	**Driller Company:**	BEATTY, J.R.		
Driller Name:	BEATTY, J.R.				
Drill Start Date:	10/13/1954	**Drill Finish Date:**	10/15/1954	**Plug Date:**	
Log File Date:	11/22/1954	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	130 feet	**Depth Water:**	60 feet

Water Bearing Stratifications:	Top	Bottom	Description
	90	100	Sandstone/Gravel/Conglomerate
	103	118	Sandstone/Gravel/Conglomerate

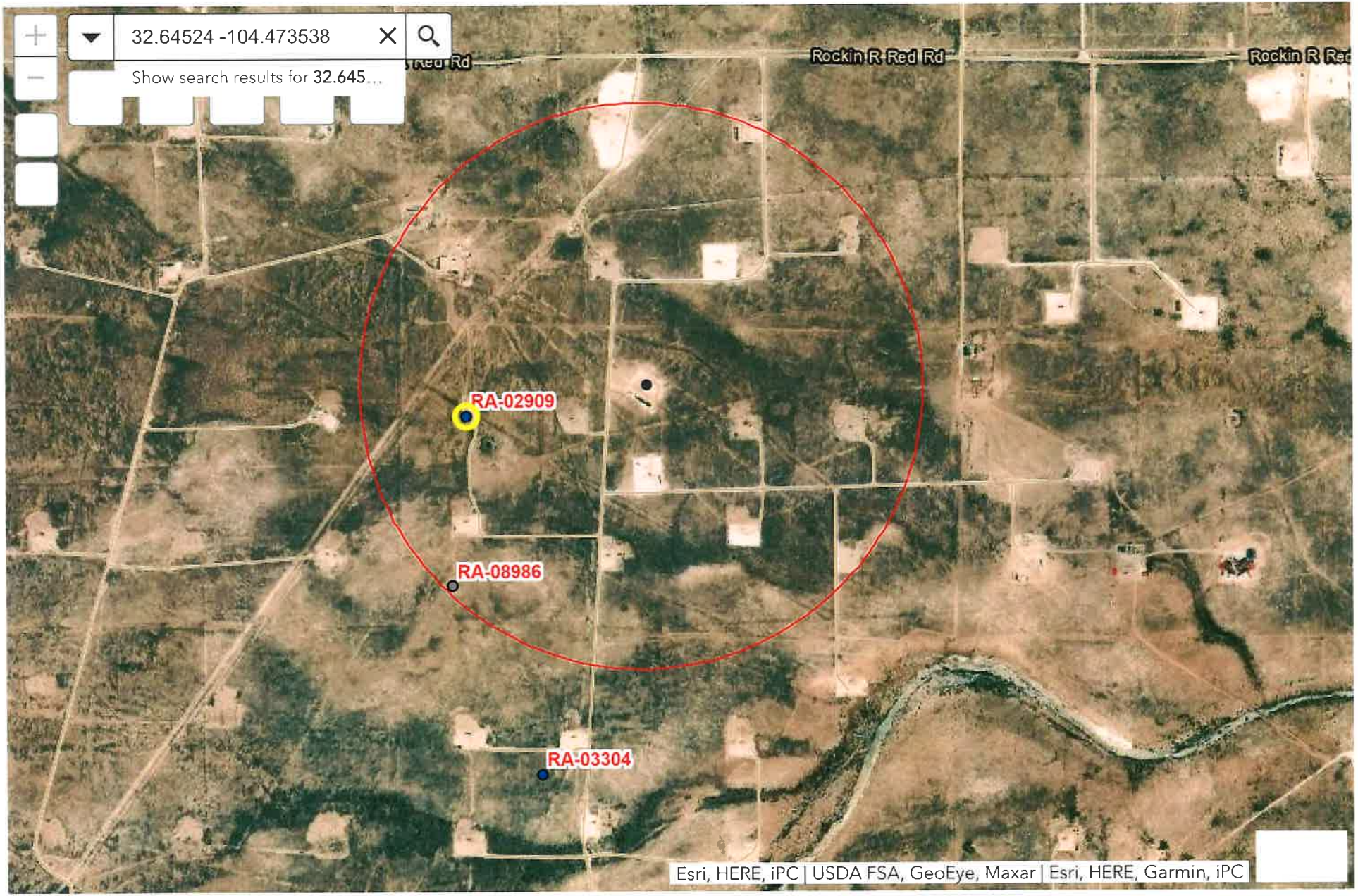
Casing Perforations:	Top	Bottom
	90	118

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

SPUR ENERGY PARTNERS

GOODMAN 22 #4H
GROUNDWATER MAP

OSE POD Locations Points of Diversion visible at 1:19,000 with 1,000 features per view Water Rights Look Up



1:18055

0.3mi

-104.464 32.646 Degrees

Soil Map—Eddy Area, New Mexico
(GOODMAN 22 #4H)

Map Scale: 1:1,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Soil Map—Eddy Area, New Mexico
(GOODMAN 22 #4H)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

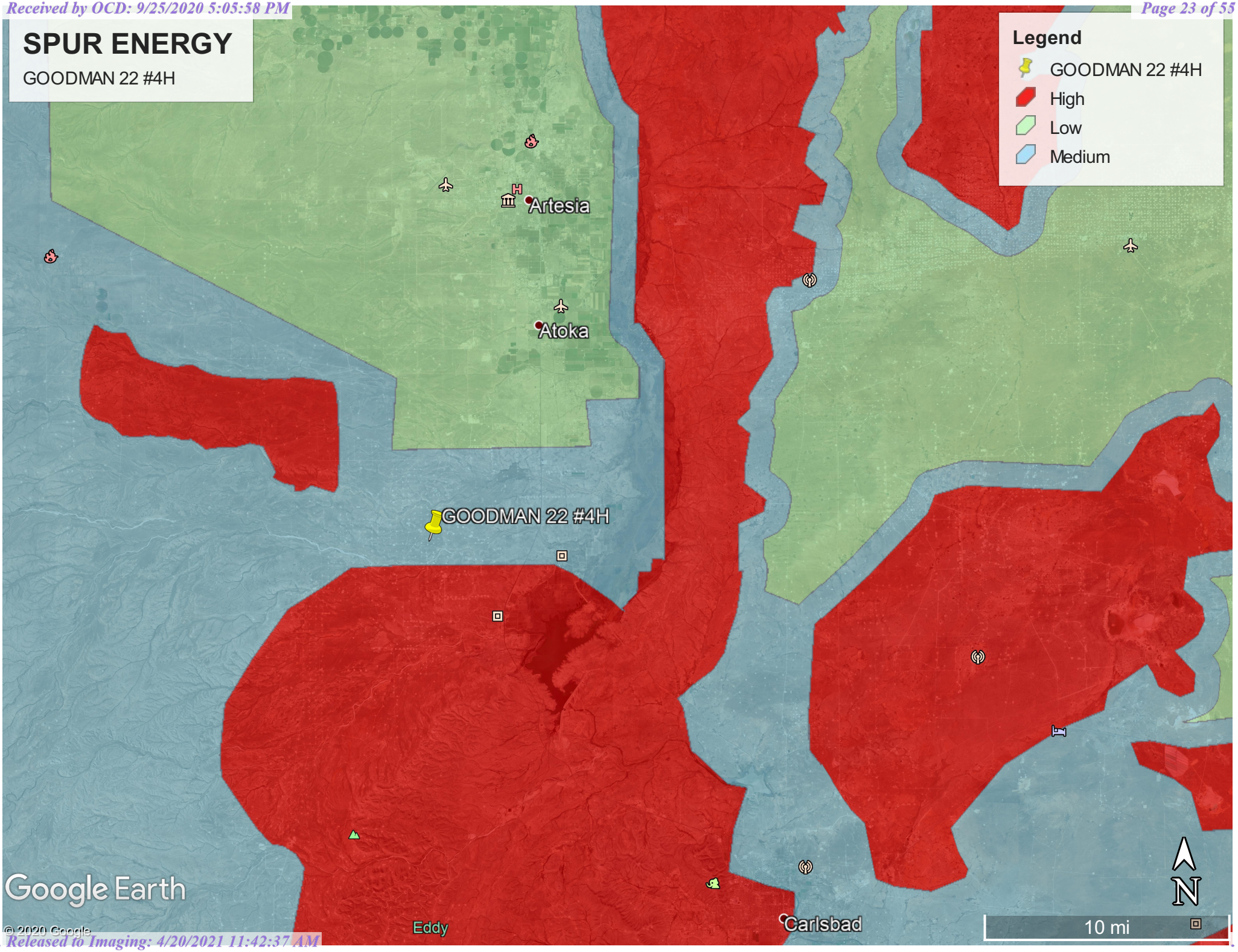
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RA	Reagan loam, 0 to 3 percent slopes	9.0	100.0%
Totals for Area of Interest		**9.0**	**100.0%**


SPUR ENERGY
GOODMAN 22 #4H
Legend
GOODMAN 22 #4H
High
Low
Medium
Artesia
Atoka
GOODMAN 22 #4H
Eddy
Carlsbad
Google Earth
© 2020 Google
10 mi
N

Company Name: PERCUSSION **Location Name:** GOODMAN 22 #4H **Release Date:** 5/20/2018

SP ID	Depth	Titr	PID	L-BTEX	L-DRO	L-ORO	L-GRO	L-TPH	L-CHL	Soil	Notes
SP 1	SURF	720									TPH
	1'	160									TPH
	2'	160									TPH
	3'	320									TPH
	4'	720		<0.300	<10	<10	<10	<30	672		TPH
SP 2	SURF	400									
	1'	320									
	2'	320		<0.300	<10	<10	<10	<30	48		
SP 3	SURF	320									
	1'	480									
	2'	80									TPH
	3'	240									TPH
	4'	320		<0.300	<10	<10	<10	<30	96		
SP 4	SURF	320									
	1'	320									
	2'	160		<0.300	<10	<10	<10	<30	32		
SP 5	SURF	560									
	1'	400									
	2'	240		<0.300	15.9	<10	<10	35.9	32		
SP 6	SURF	880									
	1'	480									
	2'	560		<0.300	<10	<10	<10	<30	448		
SP 7	SURF	800									
	1'	340									
	2'	160		<0.300	<10	<10	<10	<30	64		

SP 8	SURF	800									
	1'	320									
	2'	160		<0.300	<10	<10	<10	<30	16		
SP 9	SURF	400									
	1'	240									
	2'	240		<0.300	<10	<10	<10	<30	84.8		
SP 10	SURF	720									
	1'	560									
	2'	960									
	3'	240									
	4'	240									
	5'	160		<0.300	135	<10	<10	155	32		
SW 1	SURF	240									
	1'	2470									
	2'	320		<0.300	548	269	<10	827	80		
SW 2	SURF	480									
	1'	280									
	2'	480		<0.300	<10	<10	<10	<30	240		
SW 3	SURF	480									
	1'	960									
	2'	640		<0.300	206	48	<10	264	624		
SW 4	SURF	1520									
	1'	960									
	2'	640		<0.300	512	216	<10	738	624		
SW 5	SURF	480									
	1'	480									

	2'	800		<0.300	783	250	<10	1043	672		
SW 6	SURF	720									
	1'	720									
	2'	640									
	3'	480		<0.300	679	407	<10	1096	368		

SPUR ENERGY PARTNERS, LLC
GOODMAN 22 #4H SAMPLE MAP

SAMPLE POINT GPS:
SP1: 32.644913 -104.473455
SP2: 32.644950 -104.473512
SP3: 32.644969 -104.473572
SP4: 32.645026 -104.473619
SP5: 32.645026 -104.473676
SP6: 32.644917 -104.473404
SP7: 32.644946 -104.473452
SP8: 32.644978 -104.473499
SP9: 32.645008 -104.473554
SP10: 32.644990 -104.473620

GOODMAN 22 #4H

SIDEWALL SAMPLE POINT GPS:
SW1: 32.644893 -104.473424
SW2: 32.644960 -104.473429
SW3: 32.645038 -104.473591
SW4: 32.645035 -104.473707
SW5: 32.644976 -104.473617
SW6: 32.644927 -104.473497

IMPACTED AREA: 1711 SQ. FT.

SW4 SW3 SP5 SP4 SP3 SP10 SP9 SW5 SP8 SP3 SW2 SP7 SP2 SW6 SP1 SP6 SW1

Google Earth

N

60 ft

CARDINAL Laboratories

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

May 15, 2019

JERRY MATTHEWS

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: GOODMAN 22 4H

Enclosed are the results of analyses for samples received by the laboratory on 05/14/19 15:00.

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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 1 - 4 (H901751-01)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *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	**672**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *81.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.9 %* *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

Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 2 - 2 (H901751-02)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *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	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *78.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *82.4 %* *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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 3 - 4 (H901751-03)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	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	**96.0**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	**37.2**	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

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

Surrogate: 1-Chlorooctadecane *105 %* *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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 4 - 2 (H901751-04)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *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	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *91.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.4 %* *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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 5 - 2 (H901751-05)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	**15.9**	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *92.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.8 %* *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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 6 - 2 (H901751-06)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	**448**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *88.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.7 %* *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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 7 - 2 (H901751-07)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	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	**64.0**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *92.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.7 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 8 - 2 (H901751-08)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *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	**16.0**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

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

Surrogate: 1-Chlorooctadecane *94.0 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 9 - 2 (H901751-09)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *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	**16.0**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	**84.8**	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

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

Surrogate: 1-Chlorooctadecane *105 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SP 10 - 5 (H901751-10)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.2 %* *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	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	**135**	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *93.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *104 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 1 - 2 (H901751-11)

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	05/14/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/14/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/14/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/14/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.4 %* *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	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	**548**	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	**269**	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *95.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *106 %* *37.6-147*

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 2 - 2 (H901751-12)

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	05/15/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/15/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/15/2019	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	**240**	16.0	05/15/2019	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	05/15/2019	ND	214	107	200	0.131	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	227	113	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *89.3 %* *41-142*

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

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 3 - 2 (H901751-13)

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	05/15/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/15/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.3 %* *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	**624**	16.0	05/15/2019	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	05/15/2019	ND	195	97.7	200	3.22	
DRO >C10-C28*	**206**	10.0	05/15/2019	ND	183	91.5	200	3.40	
EXT DRO >C28-C36	**48.0**	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *88.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *109 %* *37.6-147*

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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:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 4 - 2 (H901751-14)

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	05/15/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/15/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *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	**624**	16.0	05/15/2019	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	05/15/2019	ND	195	97.7	200	3.22	
DRO >C10-C28*	**512**	10.0	05/15/2019	ND	183	91.5	200	3.40	
EXT DRO >C28-C36	**216**	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *85.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *111 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 5 - 2 (H901751-15)

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	05/15/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/15/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *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	**672**	16.0	05/15/2019	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	05/15/2019	ND	195	97.7	200	3.22	
DRO >C10-C28*	**783**	10.0	05/15/2019	ND	183	91.5	200	3.40	
EXT DRO >C28-C36	**250**	10.0	05/15/2019	ND					

Surrogate: 1-Chlorooctane *93.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *130 %* *37.6-147*

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Analytical Results For:

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

Received:	05/14/2019	Sampling Date:	05/13/2019
Reported:	05/15/2019	Sampling Type:	Soil
Project Name:	GOODMAN 22 4H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PERCUSSION		

Sample ID: SW 6 - 3 (H901751-16)

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	05/15/2019	ND	1.69	84.6	2.00	0.329	
Toluene*	<0.050	0.050	05/15/2019	ND	1.82	91.0	2.00	0.0328	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	1.76	88.1	2.00	0.892	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	5.33	88.9	6.00	0.390	
Total BTEX	<0.300	0.300	05/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *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	**368**	16.0	05/15/2019	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	05/15/2019	ND	195	97.7	200	3.22	
DRO >C10-C28*	**679**	10.0	05/15/2019	ND	183	91.5	200	3.40	
EXT DRO >C28-C36	**407**	10.0	05/15/2019	ND					

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

Surrogate: 1-Chlorooctadecane *124 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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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

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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:	Goodman 29 4H
Sampler Name:	Kathlynn Montanez

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

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
H901751																	
1	SP1-4	G	1			X					X		5/13/19	9:30	X	X	X
2	SP2-2	G	1			X					X			9:41	X	X	X
3	SP3-4	G	1			X					X			10:17	X	X	X
4	SP4-2	G	1			X					X			10:56	X	X	X
5	SP5-2	G	1			X					X			11:08	X	X	X
6	SP6-2	G	1			X					X			11:23	X	X	X
7	SP7-2	G	1			X					X			11:40	X	X	X
8	SP8-2	G	1			X					X			11:56	X	X	X
9	SP9-2	G	1			X					X			2:00	X	X	X
10	SP10-5	G	1			X					X		↓	2:30	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:	Date: 5-14-19	Received By:	Tamara Oldaker
Kathlynn Montanez	Time: 15:00		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -3.9° #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.sueto@whitebuffalo.com~~
Kathlynn.montanez@whitebuffalo.com

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

CARDINAL Laboratories

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:	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:	Goodman 22 4H	Phone #:	575-738-0424
Sampler Name:	Kathlynn Montenez	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												
H901751																												
11	SW1-2	G	1		X	X					X		5/5/19	2:20	X	X	X											
12	SW2-2	G	1			X					X			2:56	X	X	X											
13	SW3-2	G	1			X					X			3:17	X	X	X											
14	SW4-2	G	1			X					X			3:46	X	X	X											
15	SW5-2	G	1			X					X			4:07	X	X	X											
16	SWC-3	G	1			X					X			4:37	X	X	X											

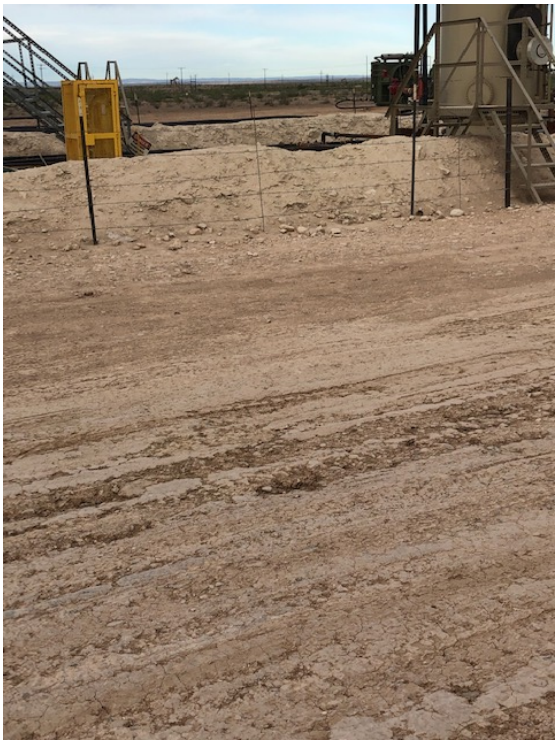
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed 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: Kathlynn Montenez	Date: 5-14-19	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 15:00		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email: natalie.gladden@whitebuffalo.com ~~monique.cueto@whitebuffalo.com~~ kathlynn.montenez@whiteBuffalo.com
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-3.9°C #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials) TO

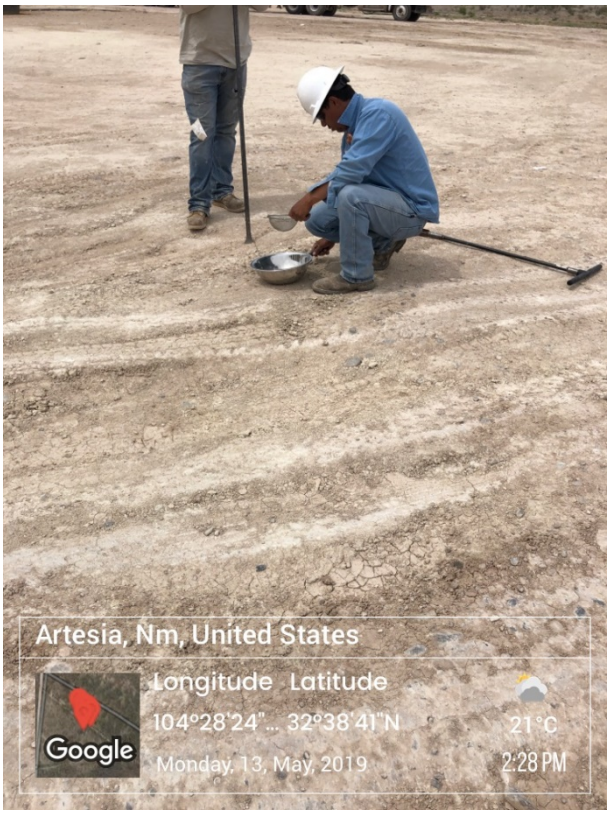
+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

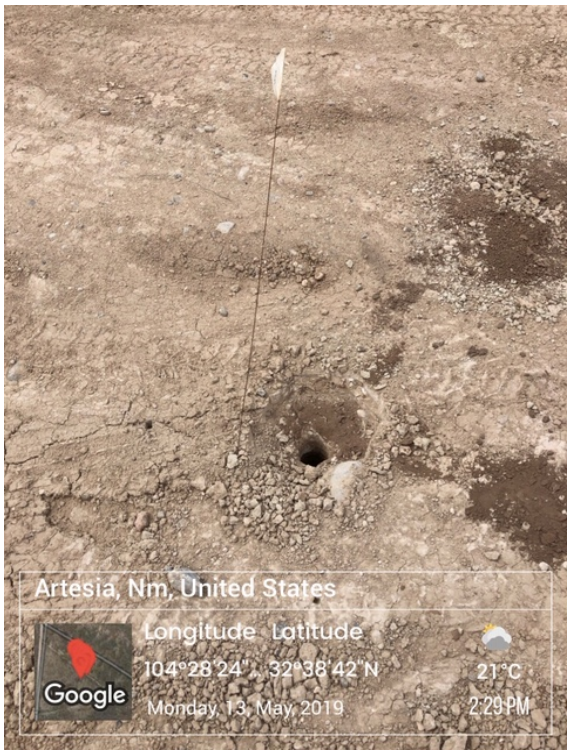
GOODMAN 22 #4H
SITE PHOTOS


SAFETY FIRST!




SAFETY FIRST!
Artesia, Nm, United States
Longitude Latitude
104°28'25"... 32°38'42"N
Monday, 13, May, 2019
21°C
2:27 PM
Google


Artesia, Nm, United States
Longitude Latitude
104°28'24"... 32°38'41"N
Monday, 13, May, 2019
21°C
2:28 PM
Google


Artesia, Nm, United States
Longitude Latitude
104°28'24"... 32°38'42"N
Monday, 13, May, 2019
21°C
2:29 PM
Google


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?	220' (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: 9/24/20

email: natalie@energystaffingllc.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 & Regulatory

Signature: Natalie Gladden Date: 9/24/20

email: natalie@energystaffingllc.com Telephone: 575-390-6397

OCD Only

Received by: Chad Hensley Date: 04/20/2021

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: 04/20/2021

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 10368

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
SPUR ENERGY PARTNERS LLC 9655 Katy Freeway Suite 500 Houston, TX77024	328947	10368	C-141

OCD Reviewer	Condition
chensley	None