

ConocoPhillips, Ruby 28, 1RP-4798

UL-F, S-17, T-17S, R-32E, Lea County NM

On August 25th 2017 a chemical tank leak happened on the Ruby 28 location resulting in the release of 16 bbls of fluid with 5 recovered. On August 8th 2018 COPC went to location and did samples in 5 different points to a depth of 8' (see attached map). All points had samples taken at surface, 1', 4' and 8' and had the samples from Surface, 1' and 4' tested for chlorides, BTEX and TPH, the 8' samples were tested for chlorides only. Sample points 1,3, 4 and 5 all showed chlorides of >250 at 4' with sample point 2 showing <250 at 8'. All samples showed clean of BTEX and TPH at the 4' depth. We propose digging the entire area to a depth of 2.5 feet and the area around sample point 2 to a depth of 5' and replacing with clean soil. We will also take confirmation wall samples once the dig is completed. We request immediate backfill since the dig around the wellhead is at the deepest depths and would interfere with any well work if it was needed. We will attach photos and maps of all work along with soil sample results.

APPROVED

By Olivia Yu at 1:41 pm, Sep 28, 2018

Approx. DGW—81'

NMOCD approves of the vertical delineation completed for 1RP-4798. The proposed remediation is also approved. See email correspondence for clarifications.



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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 12042 POD1	RA	LE		2	2	1	28	17S	32E	614891	3631181	3289	400		
RA 10175	RA	LE			2	1	28	17S	32E	614814	3631005*	3394	158		
RA 12020 POD1	RA	LE		2	2	1	28	17S	32E	614828	3630954	3444	120	81	39
RA 08855	RA	LE		4	1	1	10	17S	32E	616061	3635742*	3567	158		

Average Depth to Water: **81 feet**
 Minimum Depth: **81 feet**
 Maximum Depth: **81 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 613015.15

Northing (Y): 3633883.68

Radius: 3700

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Ruby 28

Write a description for your map.

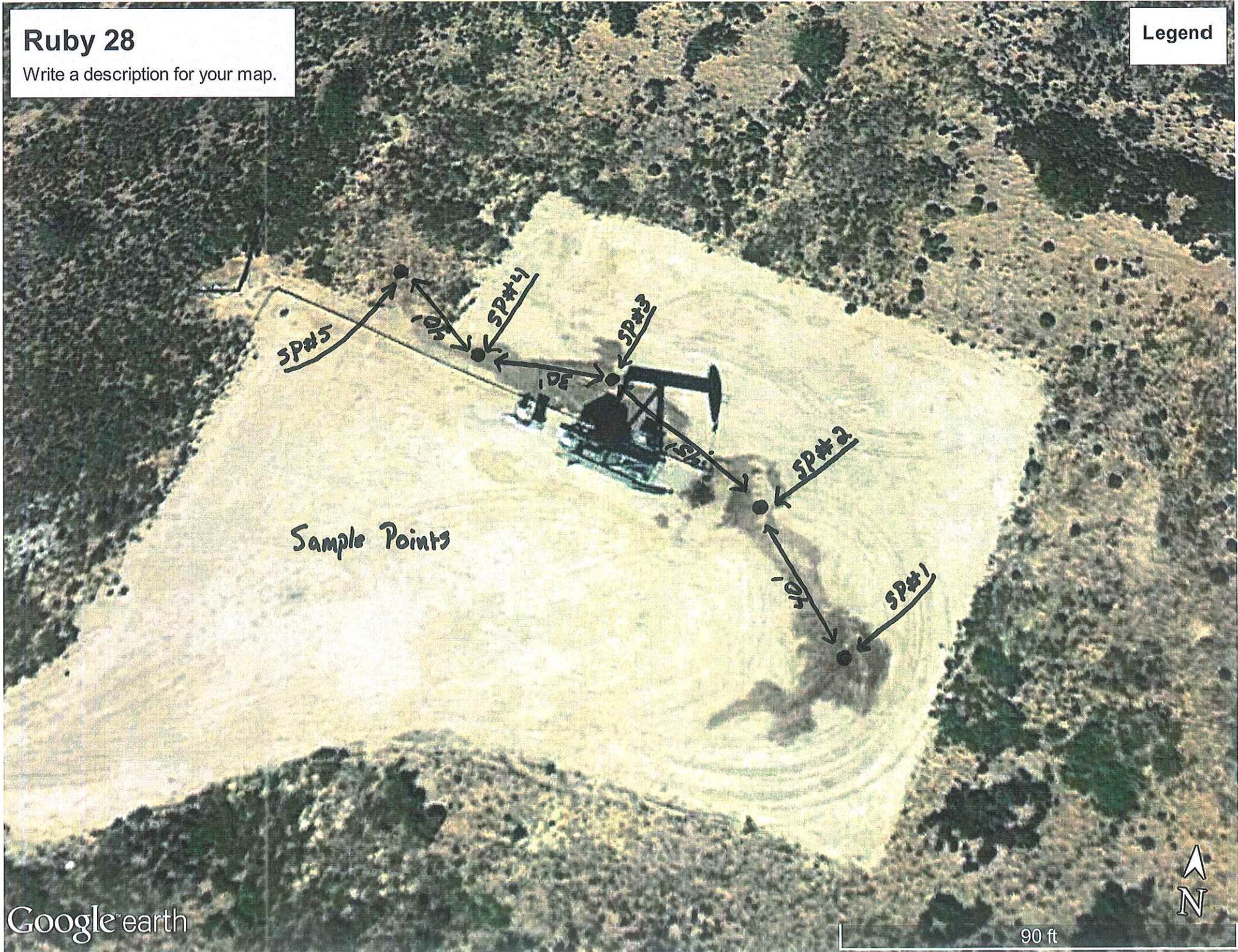
Legend



Ruby 28

Write a description for your map.

Legend



Sample Points

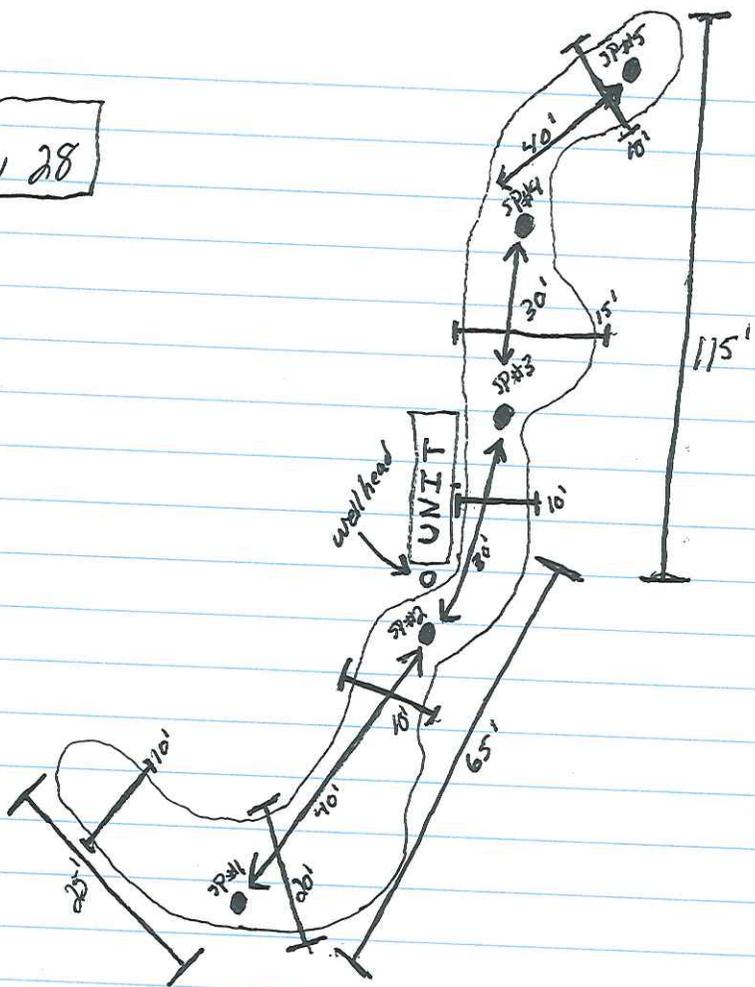


Ruby 28

(S.)

(W.)

(N.)



SP#1	SP#2	SP#3	SP#4
surface - 5600	surface - 597	surface - 15,000	surface - 39,800
1' - 960	1' - 11620	1' - 1390	1' - 2400
4' - 64	4' - 2290 - caliche	4' - 172 caliche	4' - 32 - caliche
8' caliche - 176	8' - 144	8' - 96	8' - 32
12'	12'	12'	12'

SP#5

surface - 1,070
1' - 176
4' - 176 - caliche
8' - 288
12'

(E.)

- SP#1 - 32° 50' 14.22" N - 103° 47' 32.00" W
- SP#2 - 32° 50' 14.67" N - 103° 47' 32.29" W
- SP#3 - 32° 50' 14.95" N - 103° 47' 32.76" W
- SP#4 - 32° 50' 15.02" N - 103° 47' 33.26" W
- SP#5 - 32° 50' 15.26" N - 103° 47' 33.52" W



August 15, 2018

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: RUBY 28

Enclosed are the results of analyses for samples received by the laboratory on 08/09/18 12:15.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #1 - SURFACE (H802206-01)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5600	16.0	08/14/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	08/09/2018	ND	224	112	200	0.551		
DRO >C10-C28*	6290	50.0	08/09/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	1290	50.0	08/09/2018	ND						

Surrogate: 1-Chlorooctane 94.4 % 41-142
Surrogate: 1-Chlorooctadecane 418 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

 Received: 08/09/2018
 Reported: 08/15/2018
 Project Name: RUBY 28
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/08/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP #1 - 1' (H802206-02)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	08/14/2018	ND	416	104	400	3.92	

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	08/09/2018	ND	224	112	200	0.551	
DRO >C10-C28*	12.6	10.0	08/09/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/09/2018	ND					

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #1 - 4' (H802206-03)

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	08/10/2018	ND	1.89	94.3	2.00	1.65		
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92		
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99		
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47		
Total BTEX	<0.300	0.300	08/10/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	08/14/2018	ND	416	104	400	3.92		

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	08/10/2018	ND	224	112	200	0.551		
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND						

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #1 - 8' (H802206-04)
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	08/14/2018	ND	416	104	400	3.92	

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Analytical Results For:

 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

 Received: 08/09/2018
 Reported: 08/15/2018
 Project Name: RUBY 28
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/08/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP #2 - SURFACE (H802206-05)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	08/14/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	08/10/2018	ND	224	112	200	0.551		
DRO >C10-C28*	8520	50.0	08/10/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	3130	50.0	08/10/2018	ND						

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 666 % 37.6-147

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Analytical Results For:

 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #2 - 1' (H802206-06)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	08/14/2018	ND	416	104	400	3.92	

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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	35.6	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	12.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 99.6 % 37.6-147

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 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #2 - 4' (H802206-07)

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	08/10/2018	ND	1.89	94.3	2.00	1.65		
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92		
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99		
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47		
Total BTEX	<0.300	0.300	08/10/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2280	16.0	08/14/2018	ND	416	104	400	3.92		

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	08/10/2018	ND	224	112	200	0.551		
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND						

Surrogate: 1-Chlorooctane 108 % 41-142
Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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 JUSTIN WRIGHT
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 Fax To: (575) 297-1477

 Received: 08/09/2018
 Reported: 08/15/2018
 Project Name: RUBY 28
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/08/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP #2 - 8' (H802206-08)
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	08/14/2018	ND	416	104	400	3.92	

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #3 - SURFACE (H802206-09)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15000	16.0	08/14/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	08/10/2018	ND	224	112	200	0.551		
DRO >C10-C28*	4700	50.0	08/10/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	1540	50.0	08/10/2018	ND						

Surrogate: 1-Chlorooctane 115 % 41-142

Surrogate: 1-Chlorooctadecane 412 % 37.6-147

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Analytical Results For:

 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #3 - 1' (H802206-10)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	08/14/2018	ND	416	104	400	3.92	

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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	33.1	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 117 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 JUSTIN WRIGHT
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 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #3 - 4' (H802206-11)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/14/2018	ND	416	104	400	3.92	

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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #3 - 8' (H802206-12)

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	08/14/2018	ND	432	108	400	3.77	

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #4 - SURFACE (H802206-13)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	30800	16.0	08/14/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	08/10/2018	ND	224	112	200	0.551		
DRO >C10-C28*	7940	50.0	08/10/2018	ND	226	113	200	0.615		
EXT DRO >C28-C36	1880	50.0	08/10/2018	ND						

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 570 % 37.6-147

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Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #4 - 1' (H802206-14)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	08/14/2018	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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	13.8	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #4 - 4' (H802206-15)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500CI-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	08/14/2018	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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #4 - 8' (H802206-16)

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	08/14/2018	ND	432	108	400	3.77	

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 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #5 - SURFACE (H802206-17)

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	08/10/2018	ND	1.89	94.3	2.00	1.65		
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92		
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99		
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47		
Total BTEX	<0.300	0.300	08/10/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1070	16.0	08/14/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10*	<50.0	50.0	08/10/2018	ND	224	112	200	0.551			
DRO >C10-C28*	3330	50.0	08/10/2018	ND	226	113	200	0.615			
EXT DRO >C28-C36	693	50.0	08/10/2018	ND							

Surrogate: 1-Chlorooctane 120 % 41-142

Surrogate: 1-Chlorooctadecane 304 % 37.6-147

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 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #5 - 1' (H802206-18)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

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	08/14/2018	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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 115 % 41-142
Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	08/09/2018	Sampling Date:	08/08/2018
Reported:	08/15/2018	Sampling Type:	Soil
Project Name:	RUBY 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: SP #5 - 4' (H802206-19)

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	08/10/2018	ND	1.89	94.3	2.00	1.65	
Toluene*	<0.050	0.050	08/10/2018	ND	1.83	91.7	2.00	6.92	
Ethylbenzene*	<0.050	0.050	08/10/2018	ND	1.85	92.6	2.00	5.99	
Total Xylenes*	<0.150	0.150	08/10/2018	ND	5.63	93.8	6.00	4.47	
Total BTEX	<0.300	0.300	08/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/14/2018	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	08/10/2018	ND	224	112	200	0.551	
DRO >C10-C28*	<10.0	10.0	08/10/2018	ND	226	113	200	0.615	
EXT DRO >C28-C36	<10.0	10.0	08/10/2018	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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 Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

 Received: 08/09/2018
 Reported: 08/15/2018
 Project Name: RUBY 28
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/08/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP #5 - 8' (H802206-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/14/2018	ND	432	108	400	3.77	

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*=Accredited Analyte

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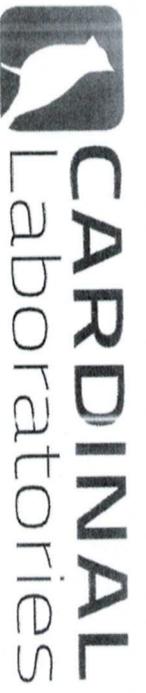


Celey D. Keene, Lab Director/Quality Manager

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.
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





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Conoco Phillips P.O. #: _____
 Project Manager: Justin Wright Company: Conoco Phillips
 Address: _____ Attn: _____
 City: Hobbs State: NM Zip: 88240
 Phone #: 575-631-9092 Fax #: _____ Address: _____
 Project #: _____ Project Owner: Conoco Phillips City: _____
 Project Name: Ruby 28 State: _____ Zip: _____
 Project Location: Log County, NM Phone #: _____
 Sampler Name: Justin Wright Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS	REMARKS	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<u>A802206</u>	<u>1 SP#1 - Surface</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>10:50</u>	<u>BTEX</u>	<u>TPH</u>	<u>Chlorides</u>
	<u>2 SP#1 - 1'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>10:52</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>3 SP#1 - 4'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>10:56</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>4 SP#1 - 8'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:01</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>5 SP#2 - Surface</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:08</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>6 SP#2 - 1'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:11</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>7 SP#2 - 4'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:20</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>8 SP#2 - 8'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:31</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>9 SP#3 - Surface</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:35</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>10 SP#3 - 11'</u>	<u>G</u>				<input checked="" type="checkbox"/>				<u>8-8-18</u>	<u>11:39</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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Relinquished By: _____ Date: 8-9-18 Received By: _____
 Relinquished By: _____ Date: 8-9-18 Received By: Janara
 Time: _____

Delivered By: (Circle One) -7.4% CHECKED BY: _____
 Sampler - UPS - Bus - Other: -7.35% (Initials) 79-#75
 Sample Condition: Cool Intact
 Yes No



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Conoco Phillips P.O. #: _____
 Project Manager: Jushy Wright Company: Conoco Phillips
 Address: _____ Attn: _____
 City: Hobbs State: NM Zip: 88240 Address: _____
 Phone #: 525-631-9098 Fax #: _____ City: _____
 Project #: 1 Project Owner: _____ State: _____ Zip: _____
 Project Name: Ruby 88 Phone #: _____
 Project Location: Lea County, NM Fax #: _____
 Sampler Name: Justin Wright

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<u>H802204</u>	<u>11 SP#3-4'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>11:45</u>	<u>BTEX</u>						
	<u>12 SP#3-8'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>11:58</u>	<u>TPH</u>						
	<u>13 SP#4-surface</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:12</u>	<u>Chlorides</u>						
	<u>14 SP#4-1'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:14</u>							
	<u>15 SP#4-4'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:23</u>							
	<u>16 SP#4-8'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:30</u>							
	<u>17 SP#5-surface</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:35</u>							
	<u>18 SP#5-1'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:39</u>							
	<u>19 SP#5-4'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:48</u>							
	<u>20 SP#5-8'</u>	<u>G</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>8-8-18</u>	<u>12:59</u>							

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Relinquished By: _____ Date: 8-9-18 Received By: Sumana Datta
 Time: 12:15 Date: 8-9-18
 Relinquished By: _____ Date: _____ Received By: _____
 Time: _____

Delivered By: (Circle One) -7.42/-7.35 Sample Condition: Cool Intact
 Sampler - UPS - Bus - Other: _____ Yes No
 CHECKED BY: (Initials) JDH