



# CONOCOPHILLIPS

P.O. Box 2197  
Houston, TX 77252-2197  
Phone 281.293.1000

## Ruby Federal #9

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# Termination Request

API No: 3002540360

Release Date: November 11<sup>th</sup>, 2013

Unit Letter O, Section 18, Township 17S, Range 32E

**October 30<sup>th</sup>, 2014**

**Tomas ‘Doc’ Oberding**

New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau – District 1  
1625 N. French Dr.  
Hobbs, NM 88240-9273

**RE: Termination Request  
ConocoPhillips – Ruby Federal Well #9  
UL/O sec. 18 T17S R32E  
API No. 3002540360**

Dr. Oberding:

ConocoPhillips (CoP) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

**Background and Previous Work**

The site is located approximately 3 miles southwest of Maljamar, New Mexico at UL/O sec. 18 T17S R32E. NM OSE and BLM records indicate that groundwater will likely be encountered at a depth of approximately 145 +/- feet.

On November 11<sup>th</sup>, 2013, the top of a ¼ inch gauge blew out releasing 36 barrels of produced water and 15 barrels of oil over 4,360 square feet of primarily lease pad. A total of 20 barrels of produced water and 10 barrels of oil were recovered. The gauge was replaced and NMOCD and BLM were notified of the release on November 12<sup>th</sup>, 2013. An initial C-141 was signed on November 12<sup>th</sup>, 2013 and submitted to NMOCD and BLM for their approval (Appendix A).

RECS personnel were on site beginning on November 14<sup>th</sup>, 2013 to assess the release. The release was sampled at the surface and with depth (Figure 1). Representative samples from the release were taken to a commercial laboratory for analysis (Appendix B). In all five sampling points, the surface samples showed elevated laboratory chloride levels, Gasoline Range Organics (GRO) readings, Diesel Range Organics (DRO) readings and BTEX readings. As Point 2, Point 3 and Point 5 were sampled with depth, all constituents dropped below regulatory standards between 1.5 ft and 3 ft bgs.

On December 18<sup>th</sup>, 2013, a Corrective Action Plan (CAP) was submitted to NMOCD and BLM. NMOCD verbally approved the CAP on December 18<sup>th</sup>, 2013 and BLM approved the CAP on January 9<sup>th</sup>, 2014. Based on the laboratory analysis of the release, the CAP stated that the areas around Point 1, Point 3 and Point 5 would be scraped down to 1.5 ft

(Figure 2). The area around Point 2 would be excavated to 3 ft bgs. The area around Point 4 would be excavated until samples returned chloride values below regulatory standards.

Once the entire excavation was completed, grab samples would be taken from the walls of the excavation and sent to a commercial laboratory to show that all constituents were below regulatory standards. The excavation on the lease pad would be backfilled with clean, imported caliche and the excavation in the pasture would be backfilled with clean, imported soil. All excavated material would be taken to a NMOCD approved facility for disposal. The area in the pasture would have soil amendments added as necessary and then the area would be seeded.

Corrective action activities began at the site on March 31<sup>st</sup>, 2014. The site was scraped down as shown in Figure 3. Wall samples were collected and field tested for chlorides and organic vapors. The samples were then taken to a commercial laboratory for analyses and returned constituents below regulatory standards (Appendix C). A total of 270 cubic yards of contaminated soil was taken to a NMOCD approved facility for disposal. A total of 80 cubic yards of top soil and 300 yards of caliche were imported to the site to replace the contaminated soil taken for disposal. A sample of the imported backfill was taken to a commercial laboratory for analysis and returned a chloride result of 288 mg/kg. The lease pad was backfilled with the imported caliche and the pasture area was backfilled with the imported top soil. Both areas were contoured to the surrounding area. On May 7<sup>th</sup>, 2014, the pasture area was seeded with BLM mix #2.

Photo documentation of these activities can be found in Appendix D.

Given that CoP has completed the CAP work as approved by NMOCD, CoP respectfully requests 'remediation termination' and site closure. A final C-141 can be found in Appendix E.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lara Weinheimer', with a long, sweeping horizontal stroke extending to the right.

Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

Attachments:

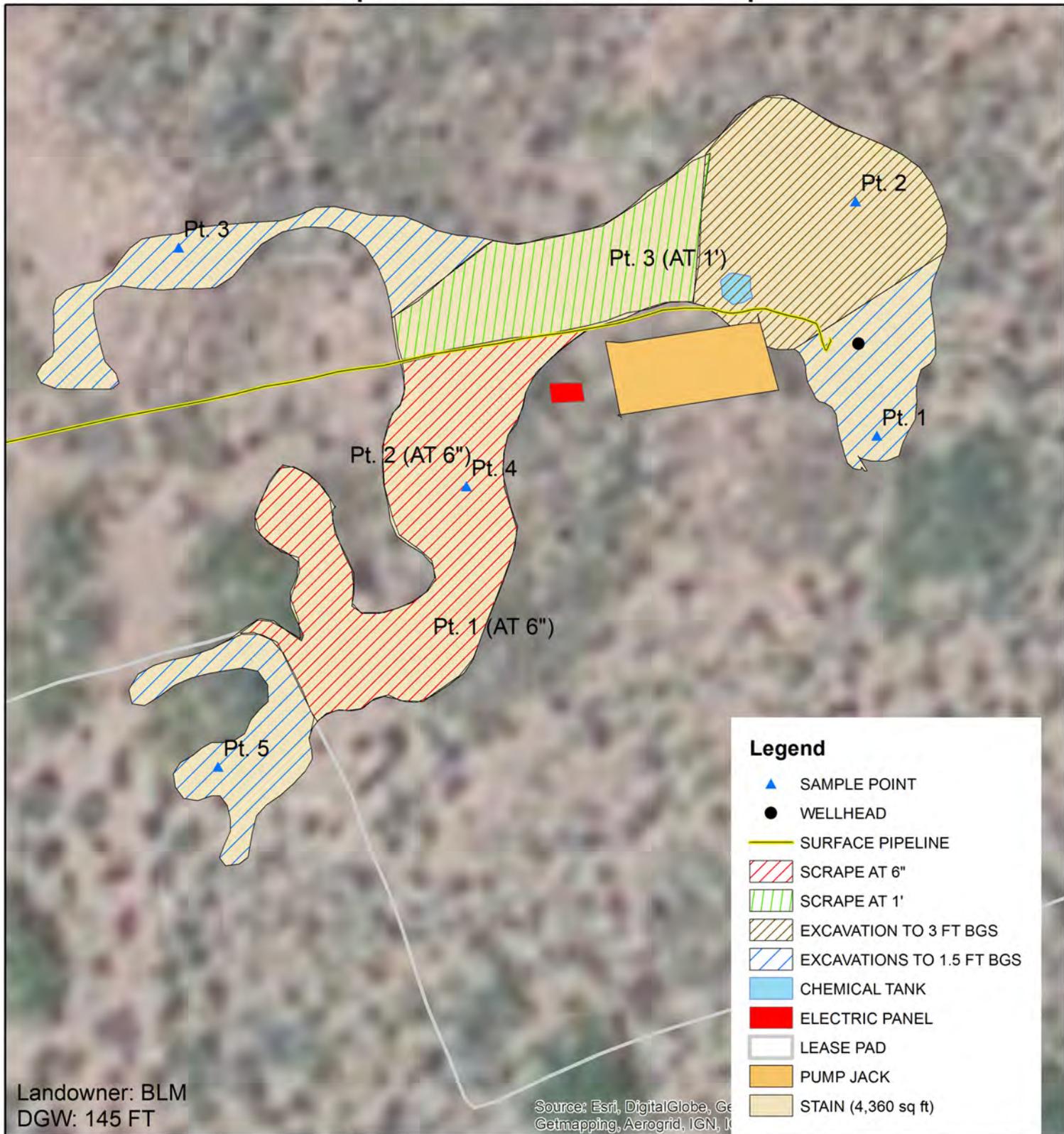
- Figure 1 – Initial Sampling Data
- Figure 2 – Proposed Excavation Depths
- Figure 3 – Excavation Data

Appendix A – Initial C-141  
Appendix B – Initial Laboratory Analyses  
Appendix C – Final Laboratory Analyses  
Appendix D – Photo Documentation  
Appendix E – Final C-141

# Figures



# Proposed Excavation Depths



**Legend**

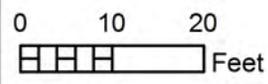
- ▲ SAMPLE POINT
- WELLHEAD
- SURFACE PIPELINE
- ▨ SCRAPE AT 6"
- ▨ SCRAPE AT 1'
- ▨ EXCAVATION TO 3 FT BGS
- ▨ EXCAVATIONS TO 1.5 FT BGS
- CHEMICAL TANK
- ELECTRIC PANEL
- LEASE PAD
- PUMP JACK
- STAIN (4,360 sq ft)

Landowner: BLM  
DGW: 145 FT

Source: Esri, DigitalGlobe, GeoEye, AeroGRID, IGN, etc.

**CONOCOPHILLIPS**  
**RUBY FEDERAL**  
**WELL #9**  
LEGALS: UL/O sec. 18  
T-17-S R-32-E  
LEA COUNTY, NM

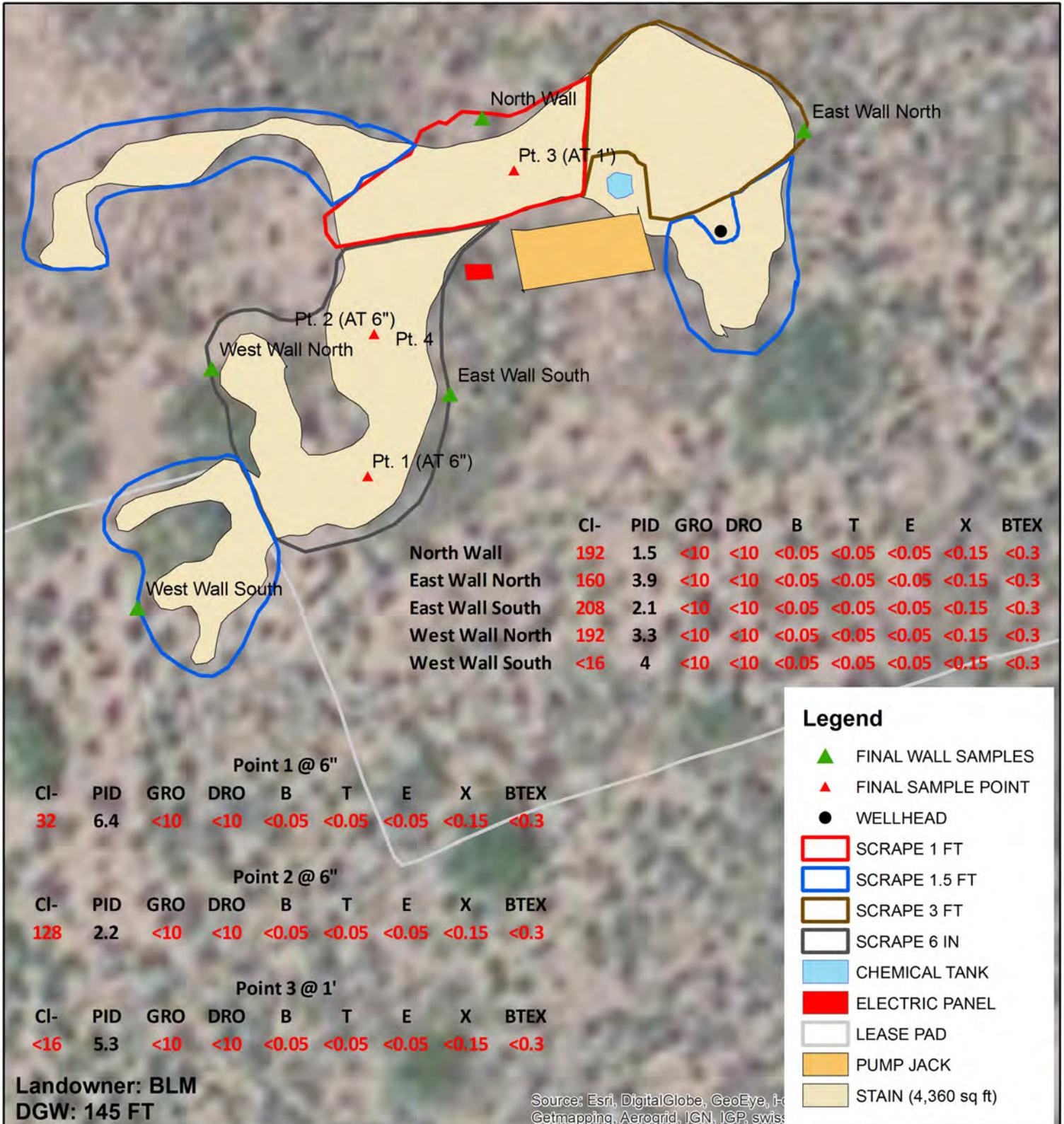
Figure 2



GPS date: 11-19-13 KN  
Drawing date: 12-18-13  
Drafted by: L. Weinheimer



# Excavation Data



Landowner: BLM  
DGW: 145 FT

Source: Esri, DigitalGlobe, GeoEye, IGN, Getmapping, Aerogrid, IGP, swis

## Legend

- ▲ FINAL WALL SAMPLES
- ▲ FINAL SAMPLE POINT
- WELLHEAD
- SCRAPE 1 FT
- SCRAPE 1.5 FT
- SCRAPE 3 FT
- SCRAPE 6 IN
- CHEMICAL TANK
- ELECTRIC PANEL
- LEASE PAD
- PUMP JACK
- STAIN (4,360 sq ft)



**CONOCOPHILLIPS**  
**RUBY FEDERAL**  
**WELL #9**  
LEGALS: UL/O sec. 18  
T-17-S R-32-E  
LEA COUNTY, NM

Figure 3



0 10 20  
Feet

GPS date: 4/3/14 CF  
Drawing date: 5/30/14  
Drafted by: C. Ursanic/L. Weinheimer

# Appendix A

Initial C-141

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

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

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: <b>ConocoPhillips</b>	Contact: <b>David May</b>
Address: <b>29 Vacuum Complex Lane</b>	Telephone No. <b>575-391-3106</b>
Facility Name: <b>Ruby Federal Well #9</b>	Facility Type: <b>Well</b>

Surface Owner: BLM	Mineral Owner BLM	API No. 3002540360
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	18	17S	32E	480	South	1650	East	LEA

Latitude **32.8286948558908**

Longitude **-103.802651025065**

**NATURE OF RELEASE**

Type of Release: <b>Spill</b>	Volume of Release: 51 BBLS	Volume Recovered: 30 BBLS
Source of Release: 1/4 inch Gauge	Date and Hour of Occurrence <b>11/11/13 8:00 am</b>	Date and Hour of Discovery <b>SAME</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Jim Amos/Geoffrey Leking</b>	
By Whom? <b>David May</b>	Date and Hour: <b>11/12/13 3:50 pm</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

At the Ruby Federal #9 the top of a 1/4 inch gauge had blown out. Spill amount was 36 BPW and 15 BO with 20 BPW and 10 BO recovered. MSO blocked in 1/4 inch valve, removed handle and replaced gauge.

Describe Area Affected and Cleanup Action Taken.\*

Effected area was 81 Ft X 141 Ft. and will be remediated according to BLM requirements.

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.

<b><u>OIL CONSERVATION DIVISION</u></b>	
Signature:	Approved by Environmental Specialist:
Printed Name: David May	Approval Date:
Title: LEAD HSE	Expiration Date:
E-mail Address: <b>david.d.may@conocophillips.com</b>	Conditions of Approval:
Date: 11/12/13	Attached <input type="checkbox"/>
Phone: 575-391-3106	

\* Attach Additional Sheets If Necessary

# Appendix B

## Initial Laboratory Analyses

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967



December 02, 2013

JACOB KAMPLAIN  
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC  
419 W. CAIN  
HOBBS, NM 88240

RE: CONOCO RUBY FEDERAL WELL #9

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/21/2013	Sampling Date:	11/14/2013
Reported:	12/02/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 1 SURFACE (H302862-01)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	11/25/2013	ND	1.95	97.4	2.00	0.491	
<b>Toluene*</b>	<b>10.3</b>	2.00	11/25/2013	ND	1.96	97.8	2.00	0.750	
<b>Ethylbenzene*</b>	<b>35.2</b>	2.00	11/25/2013	ND	1.94	97.1	2.00	2.11	
<b>Total Xylenes*</b>	<b>64.7</b>	6.00	11/25/2013	ND	5.74	95.7	6.00	2.65	
<b>Total BTEX</b>	<b>110</b>	12.0	11/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 146 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1170</b>	16.0	11/26/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>1590</b>	100	11/24/2013	ND	192	96.2	200	3.40	
<b>DRO &gt;C10-C28</b>	<b>20800</b>	100	11/24/2013	ND	197	98.6	200	2.56	

Surrogate: 1-Chlorooctane 211 % 65.2-140

Surrogate: 1-Chlorooctadecane 365 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/21/2013	Sampling Date:	11/14/2013
Reported:	12/02/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 2 SURFACE (H302862-02)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>4.01</b>	1.00	11/25/2013	ND	1.95	97.4	2.00	0.491		
<b>Toluene*</b>	<b>34.6</b>	1.00	11/25/2013	ND	1.96	97.8	2.00	0.750		
<b>Ethylbenzene*</b>	<b>34.9</b>	1.00	11/25/2013	ND	1.94	97.1	2.00	2.11		
<b>Total Xylenes*</b>	<b>42.1</b>	3.00	11/25/2013	ND	5.74	95.7	6.00	2.65		
<b>Total BTEX</b>	<b>116</b>	6.00	11/25/2013	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>13300</b>	16.0	11/26/2013	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
<b>GRO C6-C10</b>	<b>838</b>	100	11/24/2013	ND	192	96.2	200	3.40			
<b>DRO &gt;C10-C28</b>	<b>7440</b>	100	11/24/2013	ND	197	98.6	200	2.56			

Surrogate: 1-Chlorooctane 163 % 65.2-140

Surrogate: 1-Chlorooctadecane 215 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/21/2013	Sampling Date:	11/14/2013
Reported:	12/02/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 3 SURFACE (H302862-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>14.0</b>	5.00	11/25/2013	ND	1.95	97.4	2.00	0.491	
<b>Toluene*</b>	<b>77.6</b>	5.00	11/25/2013	ND	1.96	97.8	2.00	0.750	
<b>Ethylbenzene*</b>	<b>89.6</b>	5.00	11/25/2013	ND	1.94	97.1	2.00	2.11	
<b>Total Xylenes*</b>	<b>122</b>	15.0	11/25/2013	ND	5.74	95.7	6.00	2.65	
<b>Total BTEX</b>	<b>303</b>	30.0	11/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>9200</b>	16.0	11/26/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>3570</b>	200	11/24/2013	ND	192	96.2	200	3.40		
<b>DRO &gt;C10-C28</b>	<b>24700</b>	200	11/24/2013	ND	197	98.6	200	2.56		

Surrogate: 1-Chlorooctane 241 % 65.2-140

Surrogate: 1-Chlorooctadecane 477 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/21/2013	Sampling Date:	11/14/2013
Reported:	12/02/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 4 SURFACE (H302862-04)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2013	ND	1.95	97.4	2.00	0.491	
<b>Toluene*</b>	<b>1.42</b>	0.500	11/25/2013	ND	1.96	97.8	2.00	0.750	
<b>Ethylbenzene*</b>	<b>5.51</b>	0.500	11/25/2013	ND	1.94	97.1	2.00	2.11	
<b>Total Xylenes*</b>	<b>9.38</b>	1.50	11/25/2013	ND	5.74	95.7	6.00	2.65	
<b>Total BTEX</b>	<b>16.3</b>	3.00	11/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>17200</b>	16.0	11/26/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>350</b>	100	11/24/2013	ND	192	96.2	200	3.40		
<b>DRO &gt;C10-C28</b>	<b>3030</b>	100	11/24/2013	ND	197	98.6	200	2.56		

Surrogate: 1-Chlorooctane 140 % 65.2-140

Surrogate: 1-Chlorooctadecane 182 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/21/2013	Sampling Date:	11/14/2013
Reported:	12/02/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 5 SURFACE (H302862-05)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>3.50</b>	2.00	11/25/2013	ND	1.95	97.4	2.00	0.491	
<b>Toluene*</b>	<b>42.2</b>	2.00	11/25/2013	ND	1.96	97.8	2.00	0.750	
<b>Ethylbenzene*</b>	<b>57.7</b>	2.00	11/25/2013	ND	1.94	97.1	2.00	2.11	
<b>Total Xylenes*</b>	<b>79.8</b>	6.00	11/25/2013	ND	5.74	95.7	6.00	2.65	
<b>Total BTEX</b>	<b>183</b>	12.0	11/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 132 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>5200</b>	16.0	11/26/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>1880</b>	200	11/25/2013	ND	213	107	200	2.70	
<b>DRO &gt;C10-C28</b>	<b>10500</b>	200	11/25/2013	ND	217	108	200	1.78	

Surrogate: 1-Chlorooctane 189 % 65.2-140

Surrogate: 1-Chlorooctadecane 336 % 63.6-154

Cardinal Laboratories

\*=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.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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



---

Celey D. Keene, Lab Director/Quality Manager



# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RECS		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																																																																																																																																												
Project Manager: JKAMPLAIN		P.O. #:		<table border="1"> <tr><td>Chlorides</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TPH 8015 M</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>BTEX</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Texas TPH</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Complete Cations/Anions</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TDS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										Chlorides																					TPH 8015 M																						BTEX																						Texas TPH																						Complete Cations/Anions																						TDS																					
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Relinquished By: <i>[Signature]</i>	Date: 11/21/13	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: <i>[Signature]</i>	REMARKS: email results: ALL	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



November 27, 2013

JACOB KAMPLAIN  
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC  
419 W. CAIN  
HOBBS, NM 88240

RE: CONOCO RUBY FEDERAL WELL #9

Enclosed are the results of analyses for samples received by the laboratory on 11/20/13 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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 "Mike Snyder".

Mike Snyder  
Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 2 1' (H302827-01)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 92.9 % 61.3-142

Surrogate: Toluene-d8 100 % 71.3-129

Surrogate: 4-Bromofluorobenzene 99.2 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1120</b>	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 97.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 2 3' (H302827-02)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 94.7 % 61.3-142

Surrogate: Toluene-d8 99.9 % 71.3-129

Surrogate: 4-Bromofluorobenzene 103 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 94.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 2 3.5' (H302827-03)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 97.1 % 61.3-142

Surrogate: Toluene-d8 99.3 % 71.3-129

Surrogate: 4-Bromofluorobenzene 96.8 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 96.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 3 6" (H302827-04)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
<b>Toluene*</b>	<b>0.079</b>	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
<b>Ethylbenzene*</b>	<b>0.368</b>	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
<b>Total Xylenes*</b>	<b>0.553</b>	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
<b>Total BTEX</b>	<b>1.00</b>	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 98.4 % 61.3-142

Surrogate: Toluene-d8 95.6 % 71.3-129

Surrogate: 4-Bromofluorobenzene 130 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1060</b>	16.0	11/25/2013	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	
<b>GRO C6-C10</b>	<b>29.4</b>	10.0	11/21/2013	ND	190	95.0	200	13.1		
<b>DRO &gt;C10-C28</b>	<b>569</b>	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 96.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 3 1.5' (H302827-05)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 97.6 % 61.3-142

Surrogate: Toluene-d8 99.9 % 71.3-129

Surrogate: 4-Bromofluorobenzene 101 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 99.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 3 2' (H302827-06)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 96.7 % 61.3-142

Surrogate: Toluene-d8 97.6 % 71.3-129

Surrogate: 4-Bromofluorobenzene 96.7 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 97.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 5 6" (H302827-07)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 92.0 % 61.3-142

Surrogate: Toluene-d8 97.2 % 71.3-129

Surrogate: 4-Bromofluorobenzene 100 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>528</b>	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 98.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 5 2' (H302827-08)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 101 % 61.3-142

Surrogate: Toluene-d8 98.3 % 71.3-129

Surrogate: 4-Bromofluorobenzene 98.6 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>48.0</b>	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
<b>DRO &gt;C10-C28</b>	<b>23.0</b>	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 83.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.9 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 JACOB KAMPLAIN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	11/20/2013	Sampling Date:	11/19/2013
Reported:	11/27/2013	Sampling Type:	Soil
Project Name:	CONOCO RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 5 2.5' (H302827-09)**

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58		
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599		
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54		
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240		
Total BTEX	<0.300	0.300	11/21/2013	ND						

Surrogate: Dibromofluoromethane 99.1 % 61.3-142

Surrogate: Toluene-d8 97.9 % 71.3-129

Surrogate: 4-Bromofluorobenzene 98.2 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>80.0</b>	16.0	11/25/2013	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	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	<10.0	10.0	11/21/2013	ND	180	89.8	200	4.80		

Surrogate: 1-Chlorooctane 99.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder, Organic Supervisor

**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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\*=Accredited Analyte

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Mike Snyder, Organic Supervisor



# Appendix C

## Final Laboratory Analyses

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967



April 04, 2014

KYLE NORMAN  
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC  
419 W. CAIN  
HOBBS, NM 88240

RE: RUBY FEDERAL WELL #9

Enclosed are the results of analyses for samples received by the laboratory on 04/03/14 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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". The signature is written in a cursive style with a large, flowing "C" and "K".

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	04/03/2014	Sampling Date:	04/02/2014
Reported:	04/04/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SEC. 4 PT. 1 @ 6" (H400996-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2014	ND	2.59	129	2.00	1.32	
Toluene*	<0.050	0.050	04/04/2014	ND	2.50	125	2.00	0.955	
Ethylbenzene*	<0.050	0.050	04/04/2014	ND	2.47	124	2.00	1.10	
Total Xylenes*	<0.150	0.150	04/04/2014	ND	7.08	118	6.00	0.890	
Total BTEX	<0.300	0.300	04/04/2014	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 112 % 89.4-126*

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	04/04/2014	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/04/2014	ND	183	91.4	200	1.10	
DRO >C10-C28	<10.0	10.0	04/04/2014	ND	203	101	200	5.74	

*Surrogate: 1-Chlorooctane 104 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 100 % 63.6-154*

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	04/03/2014	Sampling Date:	04/03/2014
Reported:	04/04/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SEC. 4 PT. 2 @ 6" (H400996-02)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2014	ND	2.59	129	2.00	1.32		
Toluene*	<0.050	0.050	04/04/2014	ND	2.50	125	2.00	0.955		
Ethylbenzene*	<0.050	0.050	04/04/2014	ND	2.47	124	2.00	1.10		
Total Xylenes*	<0.150	0.150	04/04/2014	ND	7.08	118	6.00	0.890		
Total BTEX	<0.300	0.300	04/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>128</b>	16.0	04/04/2014	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/04/2014	ND	183	91.4	200	1.10		
DRO >C10-C28	<10.0	10.0	04/04/2014	ND	203	101	200	5.74		

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	04/03/2014	Sampling Date:	04/03/2014
Reported:	04/04/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SEC. 4 PT. 3 @ 1' (H400996-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2014	ND	2.59	129	2.00	1.32	
Toluene*	<0.050	0.050	04/04/2014	ND	2.50	125	2.00	0.955	
Ethylbenzene*	<0.050	0.050	04/04/2014	ND	2.47	124	2.00	1.10	
Total Xylenes*	<0.150	0.150	04/04/2014	ND	7.08	118	6.00	0.890	
Total BTEX	<0.300	0.300	04/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/04/2014	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/04/2014	ND	183	91.4	200	1.10	
DRO >C10-C28	<10.0	10.0	04/04/2014	ND	203	101	200	5.74	

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**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



---

Celey D. Keene, Lab Director/Quality Manager





May 19, 2014

LAURA FLORES

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: RUBY FEDERAL WELL #9

Enclosed are the results of analyses for samples received by the laboratory on 05/19/14 12:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 LAURA FLORES  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/19/2014	Sampling Date:	05/19/2014
Reported:	05/19/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: IMPORTED BACKFILL (H401524-01)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>288</b>	16.0	05/19/2014	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### 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



---

Celey D. Keene, Lab Director/Quality Manager





May 30, 2014

KYLE NORMAN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: RUBY FEDERAL WELL #9

Enclosed are the results of analyses for samples received by the laboratory on 05/23/14 11:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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 cursive script that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/23/2014	Sampling Date:	05/23/2014
Reported:	05/30/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: NORTH WALL (H401584-01)**

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	05/29/2014	ND	2.07	103	2.00	3.77	
Toluene*	<0.050	0.050	05/29/2014	ND	2.05	102	2.00	3.01	
Ethylbenzene*	<0.050	0.050	05/29/2014	ND	1.96	98.2	2.00	3.78	
Total Xylenes*	<0.150	0.150	05/29/2014	ND	6.15	102	6.00	3.77	
Total BTEX	<0.300	0.300	05/29/2014	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 106 % 89.4-126*

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>192</b>	16.0	05/29/2014	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	05/27/2014	ND	199	99.5	200	1.11	
DRO >C10-C28	<10.0	10.0	05/27/2014	ND	213	107	200	0.0136	

*Surrogate: 1-Chlorooctane 125 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 121 % 63.6-154*

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/23/2014	Sampling Date:	05/23/2014
Reported:	05/30/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: EAST WALL NORTH (H401584-02)**

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	05/29/2014	ND	2.07	103	2.00	3.77	
Toluene*	<0.050	0.050	05/29/2014	ND	2.05	102	2.00	3.01	
Ethylbenzene*	<0.050	0.050	05/29/2014	ND	1.96	98.2	2.00	3.78	
Total Xylenes*	<0.150	0.150	05/29/2014	ND	6.15	102	6.00	3.77	
Total BTEX	<0.300	0.300	05/29/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>160</b>	16.0	05/29/2014	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	05/27/2014	ND	199	99.5	200	1.11	
DRO >C10-C28	<10.0	10.0	05/27/2014	ND	213	107	200	0.0136	

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/23/2014	Sampling Date:	05/23/2014
Reported:	05/30/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: EAST WALL SOUTH (H401584-03)**

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	05/29/2014	ND	2.07	103	2.00	3.77		
Toluene*	<0.050	0.050	05/29/2014	ND	2.05	102	2.00	3.01		
Ethylbenzene*	<0.050	0.050	05/29/2014	ND	1.96	98.2	2.00	3.78		
Total Xylenes*	<0.150	0.150	05/29/2014	ND	6.15	102	6.00	3.77		
Total BTEX	<0.300	0.300	05/29/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	05/29/2014	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	05/27/2014	ND	199	99.5	200	1.11		
DRO >C10-C28	<10.0	10.0	05/27/2014	ND	213	107	200	0.0136		

Surrogate: 1-Chlorooctane 119 % 65.2-140

Surrogate: 1-Chlorooctadecane 119 % 63.6-154

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 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/23/2014	Sampling Date:	05/23/2014
Reported:	05/30/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: WEST WALL NORTH (H401584-04)**

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	05/29/2014	ND	2.07	103	2.00	3.77	
Toluene*	<0.050	0.050	05/29/2014	ND	2.05	102	2.00	3.01	
Ethylbenzene*	<0.050	0.050	05/29/2014	ND	1.96	98.2	2.00	3.78	
Total Xylenes*	<0.150	0.150	05/29/2014	ND	6.15	102	6.00	3.77	
Total BTEX	<0.300	0.300	05/29/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/29/2014	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	05/27/2014	ND	199	99.5	200	1.11	
DRO >C10-C28	<10.0	10.0	05/27/2014	ND	213	107	200	0.0136	

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

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 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/23/2014	Sampling Date:	05/23/2014
Reported:	05/30/2014	Sampling Type:	Soil
Project Name:	RUBY FEDERAL WELL #9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: WEST WALL SOUTH (H401584-05)**

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	05/29/2014	ND	2.07	103	2.00	3.77		
Toluene*	<0.050	0.050	05/29/2014	ND	2.05	102	2.00	3.01		
Ethylbenzene*	<0.050	0.050	05/29/2014	ND	1.96	98.2	2.00	3.78		
Total Xylenes*	<0.150	0.150	05/29/2014	ND	6.15	102	6.00	3.77		
Total BTEX	<0.300	0.300	05/29/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/29/2014	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	05/27/2014	ND	199	99.5	200	1.11		
DRO >C10-C28	<10.0	10.0	05/27/2014	ND	213	107	200	0.0136		

Surrogate: 1-Chlorooctane 116 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**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



---

Celey D. Keene, Lab Director/Quality Manager



# Appendix D

Photo Documentation

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

# ConocoPhillips Ruby Federal Well #9

Unit Letter O, Section 18, T17S, R32E



Initial release area, facing north 11/14/13



Initial release area, facing NNE 11/14/13



Initial release area, facing east 11/14/13



Initial release area, facing east 11/14/13



Completed auguring for depth, facing northwest  
11/19/13



Beginning scraping activities, facing south  
4/2/14



Shoveling release around well head, facing north  
4/2/14



Excavating area around point 4, facing west  
4/2/14



Excavating around point 4, facing west 4/3/14



Excavation final, facing north 4/3/14



Excavation final, facing east 4/3/14



Exporting soil, facing northwest 4/3/14



Backfilling point 1 excavation, facing northeast 4/4/14



Backfilling point 2 excavation, facing southeast 4/4/14



Backdragging point 2 area, facing northeast 4/7/14



Backdragging point 1 area, facing northeast 4/24/14



Completed site, facing north

4/7/14



Completed site, facing southeast

4/7/14



Seeding pasture area, facing northeast

5/7/14



Completed site, facing southeast

5/7/14

# Appendix E

Final C-141

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

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

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company Conoco Phillips	Contact
Address 29 Vacuum Complex Lane	Telephone No.
Facility Name Ruby Federal Well #9	Facility Type Well
Surface Owner BLM	Mineral Owner BLM
API No. 3002540360	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	18	17S	32E	480	South	1650	East	LEA

Latitude 32.8286948558908 Longitude -103.802651025065

**NATURE OF RELEASE**

Type of Release: Spill	Volume of Release: 51 BBLs	Volume Recovered: 30 BBLs
Source of Release: 1/4 inch Gauge	Date and Hour of Occurrence 11/11/13 8:00 am	Date and Hour of Discovery Same
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jim Amos/ Geoffrey Leking	
By Whom? David May	Date and Hour: 11/12/13 3:50 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* At the Ruby Federal #9 the top of a 1/4 inch gauge had blown out. Spill amount was 36 BPW and 15 BO with 20 BPW and 10 BO recovered. MSO blocked in 1/4 inch valve, removed handle and replaced gauge.

Describe Area Affected and Cleanup Action Taken.\* On November 11<sup>th</sup>, 2013, the top of a 1/4 inch gauge blew out releasing 36 barrels of produced water and 15 barrels of oil over 4,360 square feet of primarily lease pad. A total of 20 barrels of produced water and 10 barrels of oil were recovered. The gauge was replaced and NMOCD and BLM were notified of the release on November 12<sup>th</sup>, 2013. An initial C-141 was signed on November 12<sup>th</sup>, 2013 and submitted to NMOCD and BLM. RECS personnel were on site beginning on November 14<sup>th</sup>, 2013 to assess the release. The release was sampled at the surface and with depth. Representative samples from the release were taken to a commercial laboratory for analysis. In all five sampling points, the surface samples showed elevated laboratory chloride levels, Gasoline Range Organics (GRO) readings, Diesel Range Organics (DRO) readings and BTEX readings. As Point 2, Point 3 and Point 5 were sampled with depth, all constituents dropped below regulatory standards between 1.5 ft and 3 ft bgs. On December 18<sup>th</sup>, 2013, a Corrective Action Plan (CAP) was submitted to NMOCD and BLM. NMOCD verbally approved the CAP on December 18<sup>th</sup>, 2013 and BLM approved the CAP on January 9<sup>th</sup>, 2014. Corrective action activities began at the site on April 2<sup>nd</sup>, 2014. The site was scraped down and composite samples for each scrape were taken and field tested for chlorides and organic vapors. The samples were taken to a commercial laboratory for analysis and returned values below regulatory standards. A total of 270 yards of contaminated soil was taken to a NMOCD approved facility for disposal. A total of 80 yards of sand and 300 yards of caliche were imported to the site to replace the contaminated soil taken for disposal. On April 7<sup>th</sup>, 2014 the site was backfilled and contoured to the surrounding area. On May 7<sup>th</sup>, 2014, the pasture area was seeded with BLM mix #2.

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: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: SEAN ROBINSON	Approved by Environmental Specialist:	
Title: OPERATIONS SUPERVISOR	Approval Date:	Expiration Date:
E-mail Address: sean.robinson@co.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9/2/14	Phone: 575-370-8873	