

# RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240  
Phone: (575) 393-9174 • Fax: (575) 397-1471

approved per fieldwork  
© ARCS 1, 2, 4

Revised Pages to be  
submitted  
HOBBS OCD

January 7, 2014

*Geoffrey Leking*

Environmental Specialist  
NMOC D - DIST 1  
11/10/14

JAN 07 2014

Mr. Geoffrey Leking  
New Mexico Oil Conservation Division – District 1  
1625 North French Drive  
Hobbs, New Mexico 88240

RECEIVED

RE: Corrective Action Plan (CAP)  
BD Jct. N-31-1 Accidental Discharge: Unit N, Section 31, T21S, R37E  
API No. 30-025-38528  
RICE Operating Company – Blinbery Drinkard SWD System

Mr. Leking:

ROC submits the following Corrective Action Plan (CAP) for the BD Jct. N-31-1 Accidental Discharge (AD). The AD was located in unit letter N, section 31, T21S, R37E, as shown in Figure 1. ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

An accidental discharge of produced water was discovered on December 31, 2013. The NMOC D District 1 office was notified that day, and an initial C-141 was submitted to the District 1 office on January 2, 2014. According to the initial C-141, a PVC flange in the junction box cracked, releasing the 60 bbls of produced water, which affected a total of 10,995 ft<sup>2</sup> of pasture and lease road. After the AD was discovered, the line was shut in and a vacuum truck was used to recover 20 bbls of the produced water, then the flange was permanently repaired. The initial C-141 and photos of the leak are included in Appendix A.

On January 2, 2014, RECS personnel were onsite to collect hand auger soil samples at regular intervals in three separate areas. Each sample was field titrated for chloride and screen for hydrocarbons using a PID. Auger point 1 was collected near the source of the AD to a depth of 2 ft bgs. Chloride concentrations decreased from 7,494 mg/kg at the surface to a concentration of 152 mg/kg at 1.5 ft bgs and 87 mg/kg at 2 ft bgs. Auger point 2 was collected near the center of the AD to a depth of 1 ft bgs. Chloride concentrations decreased from 9,504 mg/kg at the surface to 245 mg/kg at 0.5 ft to 87 mg/kg at 1 ft bgs. Auger point 3 was collected from the southern part of the AD to a depth of 2.5 ft bgs. Chloride concentrations decreased from 7,109 mg/kg at the surface to 151 mg/kg at 2.5 ft bgs. Laboratory analysis confirmed chloride concentrations that decreased with depth and TPH concentrations below detectable limits. This data and the AD boundary is shown in Figure 2. The lab result is included in Appendix B.

JAN 15 2014

During a meeting with the District 1 NMOCD office on January 3, 2013, the following corrective actions were discussed. The AD will be separated into four different sections, based on chloride concentration. Area 1 is the soil surrounding auger points 1 and 2, Area 2 is the ravine section, Area 3 is the soil surrounding historical over flow pit, and Area 4 is the soil surrounding auger point 3. To protect groundwater quality, ROC proposes to excavate Area 1 to a depth of 1-1.5 ft bgs. Area 2 is proposed to be excavated and sampled to verify chloride concentrations. Area 3 is proposed to be excavated to a depth of 2 ft bgs, and Area 4 is proposed to be excavated to a depth of 2.5 ft bgs. The specified excavation depths will remove the highest chloride concentrations. The excavation boundaries are summarized in Figure 2. Figure 3 is a detailed plat that shows surrounding features and non-ROC pipelines.

Each excavated area will then be backfilled with soil containing a chloride concentration below 500 mg/kg and a field PID reading below 100 ppm. Any soil requiring disposal will be properly disposed of at a NMOCD approved facility. The backfilled excavation will then be seeded with a blend of native vegetation. Vegetation provides a natural infiltration barrier, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone.

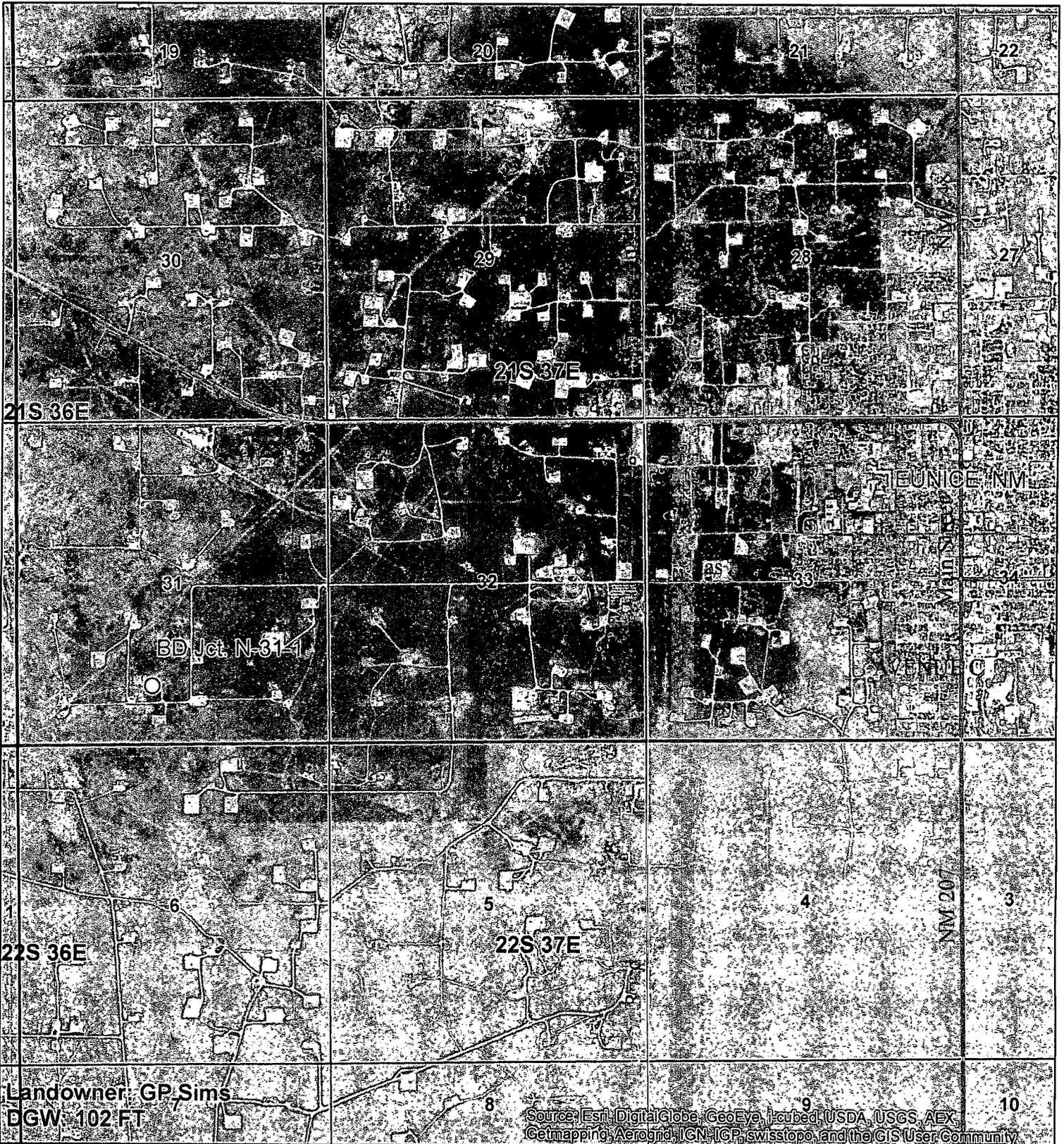
ROC appreciates the opportunity to work with you on this project. Please call Hack Conder or me at (575) 393-2967 if you have any questions or wish to discuss the site.

Sincerely,



Katie Jones  
Environmental Project Manager  
*RICE Operating Company*

# Site Location Map

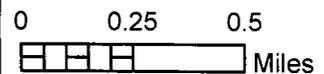
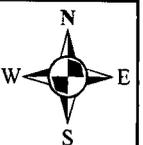


## *BD Jct. N-31-1*

LEGALS: UL/N sec. 31  
T-21-S R-37-E  
LEA COUNTY

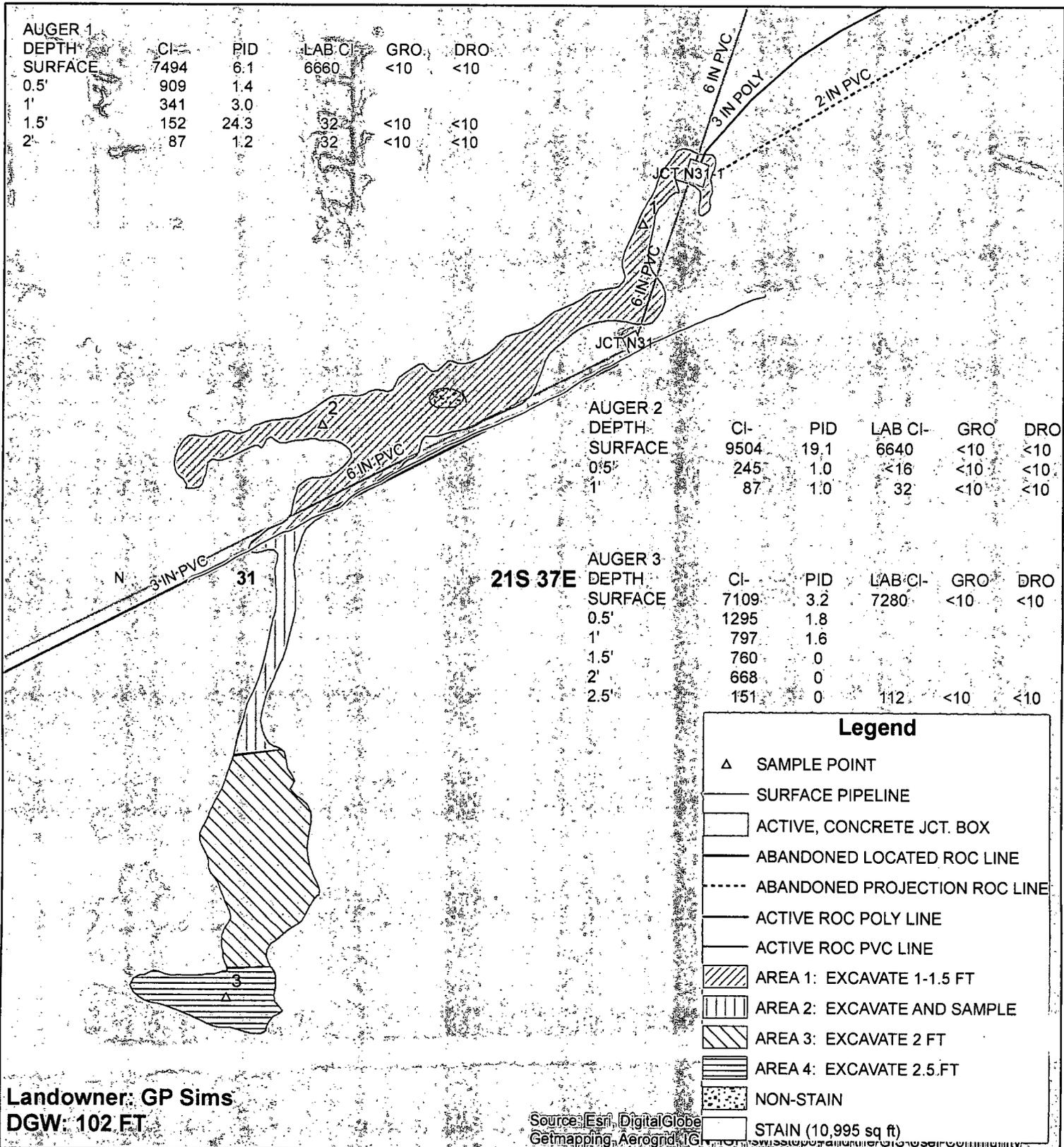
API No. 30-025-38528

## Figure 1



Drawing date: 1/3/14  
Drafted by: T. Grieco

# Proposed Excavation



Landowner: GP Sims  
DGW: 102 FT

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

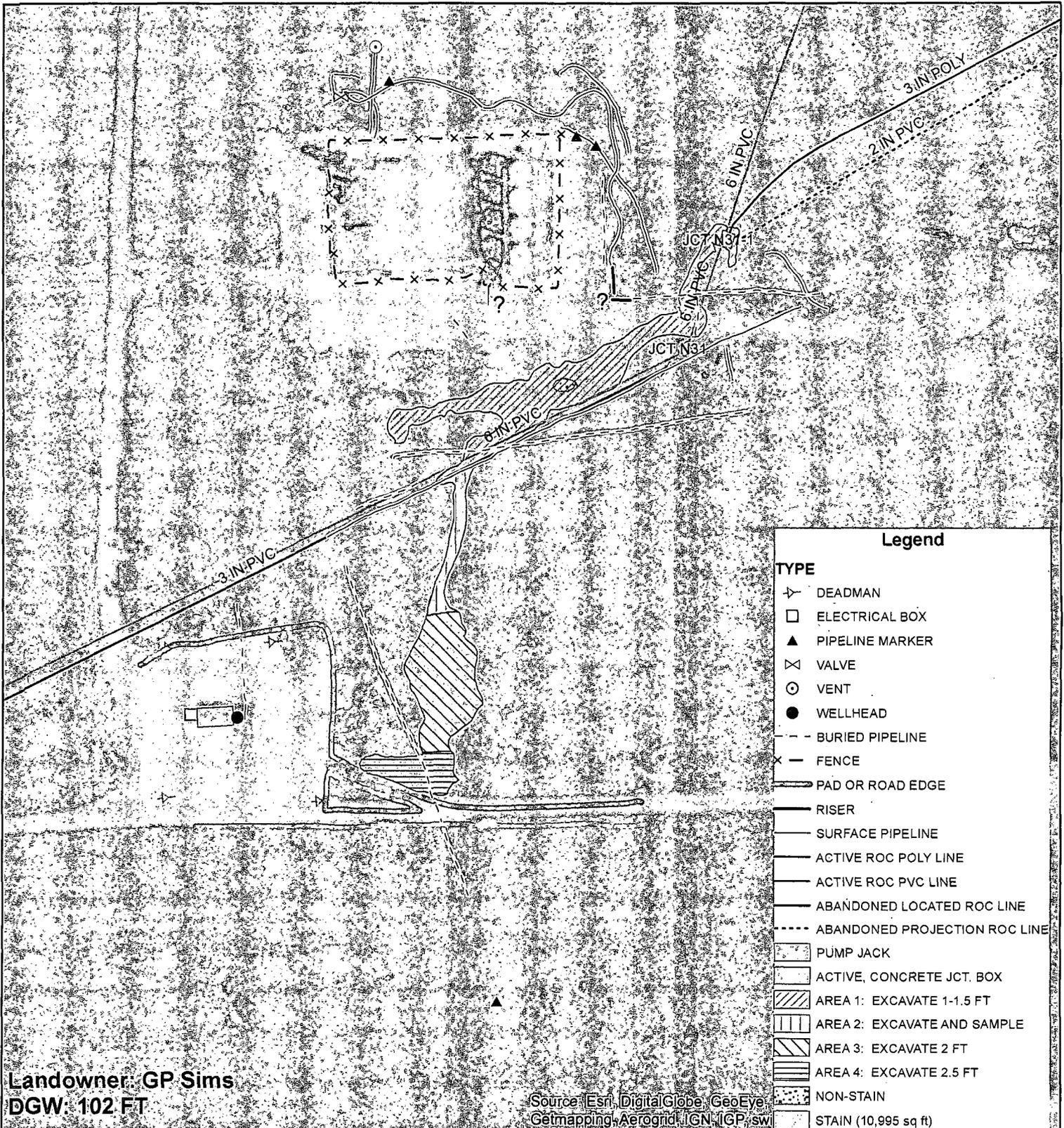


**BD Jct. N-31-1**  
 LEGALS: UL/N sec. 31  
 T-21-S R-37-E  
 LEA COUNTY  
 API No. 30-025-38528

**Figure 2**

GPS date: 12/31/13 KN  
 Drawing date: 1/2/14  
 Drafted by: L. Weinheimer

# Lines



Landowner: GP Sims  
 DGW: 102 FT

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

Legend	
TYPE	
▽	DEADMAN
□	ELECTRICAL BOX
▲	PIPELINE MARKER
⊗	VALVE
⊙	VENT
●	WELLHEAD
- - -	BURIED PIPELINE
x - x	FENCE
▬	PAD OR ROAD EDGE
▬	RISER
▬	SURFACE PIPELINE
▬	ACTIVE ROC POLY LINE
▬	ACTIVE ROC PVC LINE
▬	ABANDONED LOCATED ROC LINE
⋯	ABANDONED PROJECTION ROC LINE
▭	PUMP JACK
▭	ACTIVE, CONCRETE JCT. BOX
▨	AREA 1: EXCAVATE 1-1.5 FT
▨	AREA 2: EXCAVATE AND SAMPLE
▨	AREA 3: EXCAVATE 2 FT
▨	AREA 4: EXCAVATE 2.5 FT
▭	NON-STAIN
▭	STAIN (10,995 sq ft)

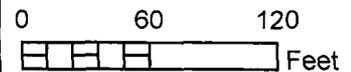
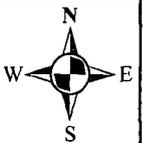


## BD Jct. N-31-1

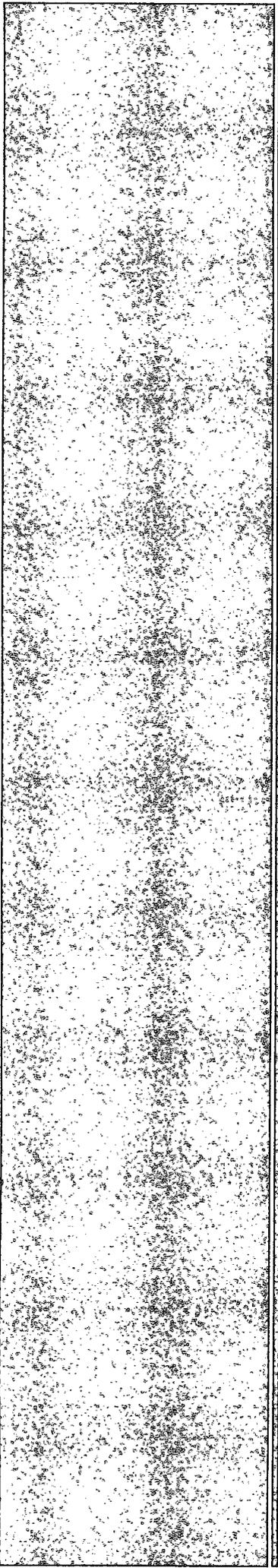
LEGALS: UL/N sec. 31  
 T-21-S R-37-E  
 LEA COUNTY

API No. 30-025-38528

## Figure 3



GPS date: 1/6/14 BC  
 Drawing date: 1/6/14  
 Drafted by: T. Grieco



# Appendix A

Initial C-141 and Photodocumentation

**RICE Operating Company (ROC)**  
112 West Taylor Hobbs, NM 88240  
Phone 575.393.9174

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

HOBBS OCD

Form C-141  
Revised August 8, 2011

JAN 07 2014

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

RECEIVED

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	Rice Operating Company	Contact	Hack Conder
Address	122 W. Taylor St., Hobbs, NM 88240	Telephone No.	(575) 631-6432
Facility Name	BD Jct. N-31-1	Facility Type	Junction Box
Surface Owner	G.P. Sims	Mineral Owner	
		API No.	3002538528

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	31	21S	37E	1018	FSL	2229	FWL	Lea

Latitude 32.431016 Longitude -103.203183

**NATURE OF RELEASE**

Type of Release	Produced water	Volume of Release	60 bbls	Volume Recovered	20 bbls
Source of Release	Junction box	Date and Hour of Occurrence	12/31/13 11:00 am	Date and Hour of Discovery	12/31/13 11:00 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoff Leking - NMOCD		
By Whom?	Hack Conder	Date and Hour	12/31/13 2:20 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.\*

The PVC flange in the junction box cracked releasing 60 barrels of produced water. The line was shut in and isolated. A vacuum truck was called to the site and recovered 20 barrels of produced water. The flange will be repaired on 1/2/14.

Describe Area Affected and Cleanup Action Taken.\*

A total of 10,995 sq ft of pasture land and lease road was affected. Initial assessment and remediation will begin on 1/2/14 and the site will be remediated to NMOCD guidelines.

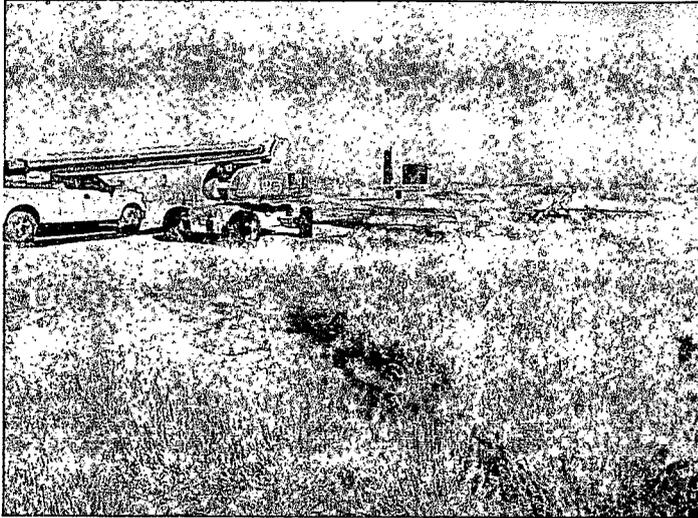
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Hack Conder	Approved by Environmental Specialist:		
Title: Environmental Manager	Approval Date:	Expiration Date:	
E-mail Address: hconder@riceswd.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date:	Phone: (575) 631-6432		

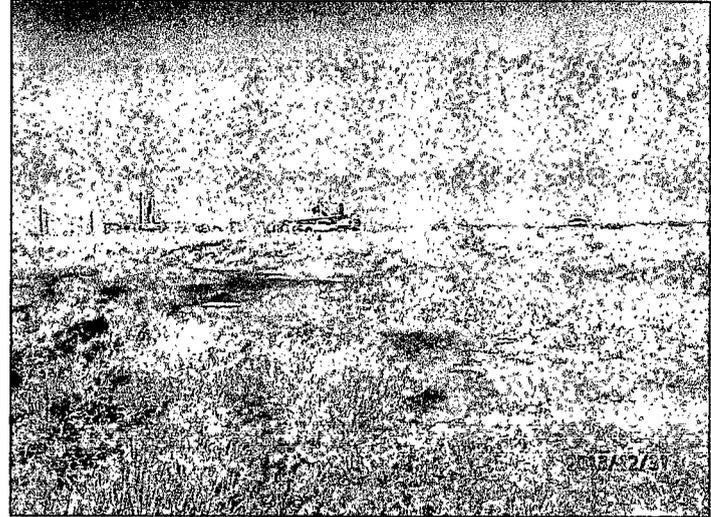
\* Attach Additional Sheets If Necessary

BD Jct. N-31-1 (API# 30-025-38528)

Unit N, Section 31, T21S, R37E



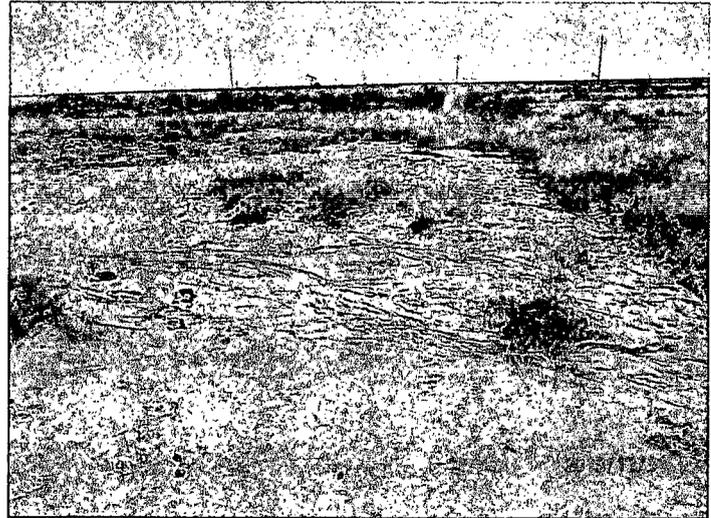
Facing northeast



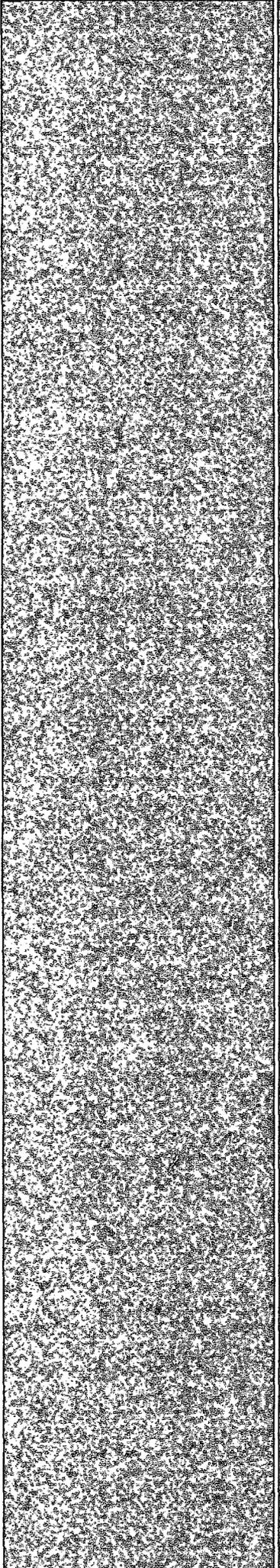
Facing north



Facing south



Facing south



# Appendix B

## Laboratory Analysis

**RICE Operating Comany (ROC)**  
112 West Taylor Hobbs, NM 88240  
Phone 575.393.9174

January 07, 2014

KYLE NORMAN

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD N-31-1

Enclosed are the results of analyses for samples received by the laboratory on 01/06/14 8:05.

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,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KYLE NORMAN  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	01/06/2014	Sampling Date:	01/02/2014
Reported:	01/07/2014	Sampling Type:	Soil
Project Name:	BD N-31-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E		

**Sample ID: PT. 1 @ SURFACE (H400021-01)**

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>6660</b>	16.0	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		

Surrogate: 1-Chlorooctane 90.5 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 90.8 % 63.6-154

**Sample ID: PT. 1 @ 1.5 FT (H400021-02)**

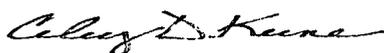
Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		

Surrogate: 1-Chlorooctane 98.0 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 94.4 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KYLE NORMAN  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	01/06/2014	Sampling Date:	01/02/2014
Reported:	01/07/2014	Sampling Type:	Soil
Project Name:	BD N-31-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E		

**Sample ID: PT. 1 @ 2 FT (H400021-03)**

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>32.0</b>	16.0	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		

Surrogate: 1-Chlorooctane 98.3 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 94.4 % 63.6-154

**Sample ID: PT. 2 @ SURFACE (H400021-04)**

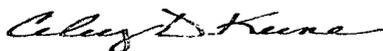
Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>6640</b>	16.0	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		

Surrogate: 1-Chlorooctane 98.8 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 93.1 % 63.6-154

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\*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KYLE NORMAN  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	01/06/2014	Sampling Date:	01/02/2014
Reported:	01/07/2014	Sampling Type:	Soil
Project Name:	BD N-31-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E		

**Sample ID: PT. 2 @ 6 IN (H400021-05)**

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	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		
<i>Surrogate: 1-Chlorooctane</i>		<i>94.6 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>88.2 %</i>	<i>63.6-154</i>							

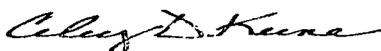
**Sample ID: PT. 2 @ 1 FT (H400021-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>32.0</b>	16.0	01/07/2014	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32		
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78		
<i>Surrogate: 1-Chlorooctane</i>		<i>97.9 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>92.8 %</i>	<i>63.6-154</i>							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KYLE NORMAN  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	01/06/2014	Sampling Date:	01/02/2014
Reported:	01/07/2014	Sampling Type:	Soil
Project Name:	BD N-31-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E		

**Sample ID: PT. 3 @ SURFACE (H400021-07)**

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>7280</b>	16.0	01/07/2014	ND	416	104	400	3.77	
TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32	
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78	

Surrogate: 1-Chlorooctane	91.6 %	65.2-140
Surrogate: 1-Chlorooctadecane	85.3 %	63.6-154

**Sample ID: PT. 3 @ 2.5 FT (H400021-08)**

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>112</b>	16.0	01/07/2014	ND	416	104	400	3.77	
TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/06/2014	ND	212	106	200	3.32	
DRO >C10-C28	<10.0	10.0	01/06/2014	ND	207	103	200	2.78	

Surrogate: 1-Chlorooctane	95.0 %	65.2-140
Surrogate: 1-Chlorooctadecane	92.4 %	63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

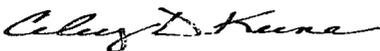
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported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

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