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

April 1, 2020

Bradford Billings
Environmental Bureau, Oil Conservation Division
New Mexico Energy, Minerals, & Natural Resources Department
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: **2019 Annual Groundwater Report**
Rice Operating Company – BD SWD System
BD Jct. N-20 (1R426-215): UL/N, Sec. 20, T21S, R37E

Mr. Billings:

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.

Background and Previous Work

The site is located approximately 2 miles northwest of Eunice, New Mexico at UL/N, Sec. 20, T21S, R37E as shown on the Geographical Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 99 feet below ground surface (bgs).

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on August 5, 2013 and approved on August 21, 2013. According to the ICP, the site was investigated through soil bore installation resulting in elevated chloride concentrations that decreased with depth. Based on the soil bore installation, a Corrective Action Plan (CAP) was submitted and approved by NMOCD on October 30, 2013. According to the NMOCD approved CAP, a 71x103-ft, 20-mil reinforced liner was installed and properly seated at 4.5 ft bgs. The site was backfilled and seeded with a blend of native vegetation. A CAP Report and Soil Closure Request detailing this work was submitted to the NMOCD on August 1, 2014. The report also requested a near-source monitor well (MW-1) and an up-gradient well (MW-2) to determine groundwater quality. NMOCD approved this report and granted 'Soil Closure' on September 18, 2014.

On May 14, 2015, MW-1 was installed, and lithology soil samples were collected at regular intervals. The well was developed and sampled in conjunction with the quarterly monitoring well sampling. The chloride concentrations have remained high, resulting in a chloride concentration of 2,830 mg/L in the 4th quarterly sample of 2019. The up-gradient well (MW-2) was installed November 15, 2019 and the down-gradient well (MW-3) was installed on December 20, 2019. MW-2 and MW-3 were developed and sampled, resulting in a concentration of 1,880 mg/L and 980 mg/L, respectively. The initial sample collected from the up-gradient well (MW-2) suggests a non-ROC, up-gradient source may have contributed to the degradation of groundwater quality.

Due to the current climate, and in the interest of safety, ROC is proposing to reduce groundwater monitoring from quarterly to semi-annually for the remainder of this year. This request is only temporary and regularly scheduled groundwater monitoring will commence as soon as possible.

Attached is the Appendix, which contains:

1. A Geographical Location Map.
2. A map showing well locations.
3. Monitoring well logs and photos of installation.
4. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
5. The laboratory analytical results for 2019.

Rice Operating Company appreciates the opportunity to work with you on this project. Please contact me at (575) 393-9174 or Edward Hansen at (505) 920-4965 if you have any questions or wish to further discuss this site. Thank you for your time and consideration.

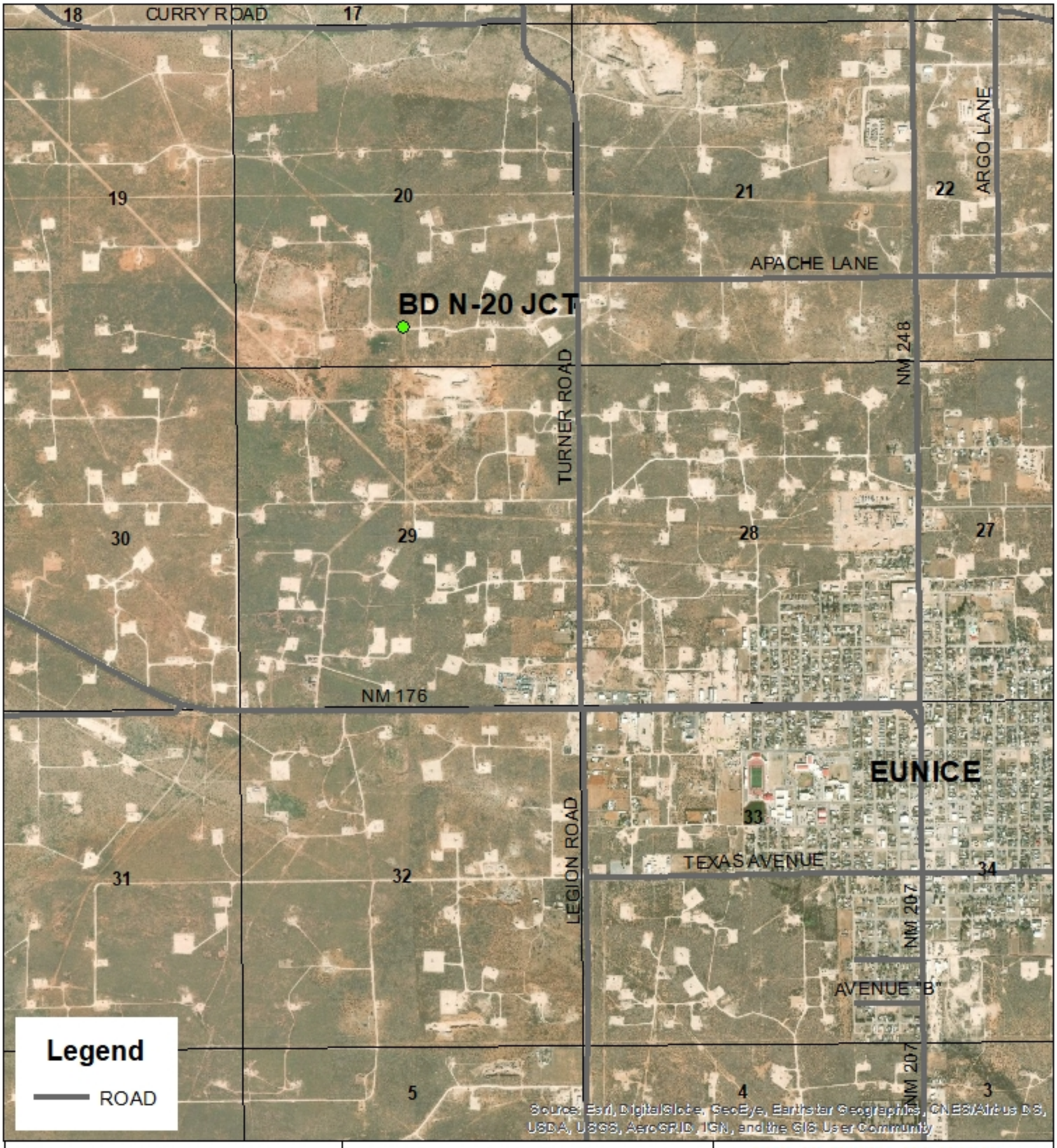
Sincerely,

Katie Davis
Environmental Manager
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

Geographical Location Map



RICE OPERATING COMPANY
ROC
SINCE 1955

BD N-20 JCT

1R426-215

UL N SECTION 20
T-21-S R-37-E
LEA COUNTY, NM

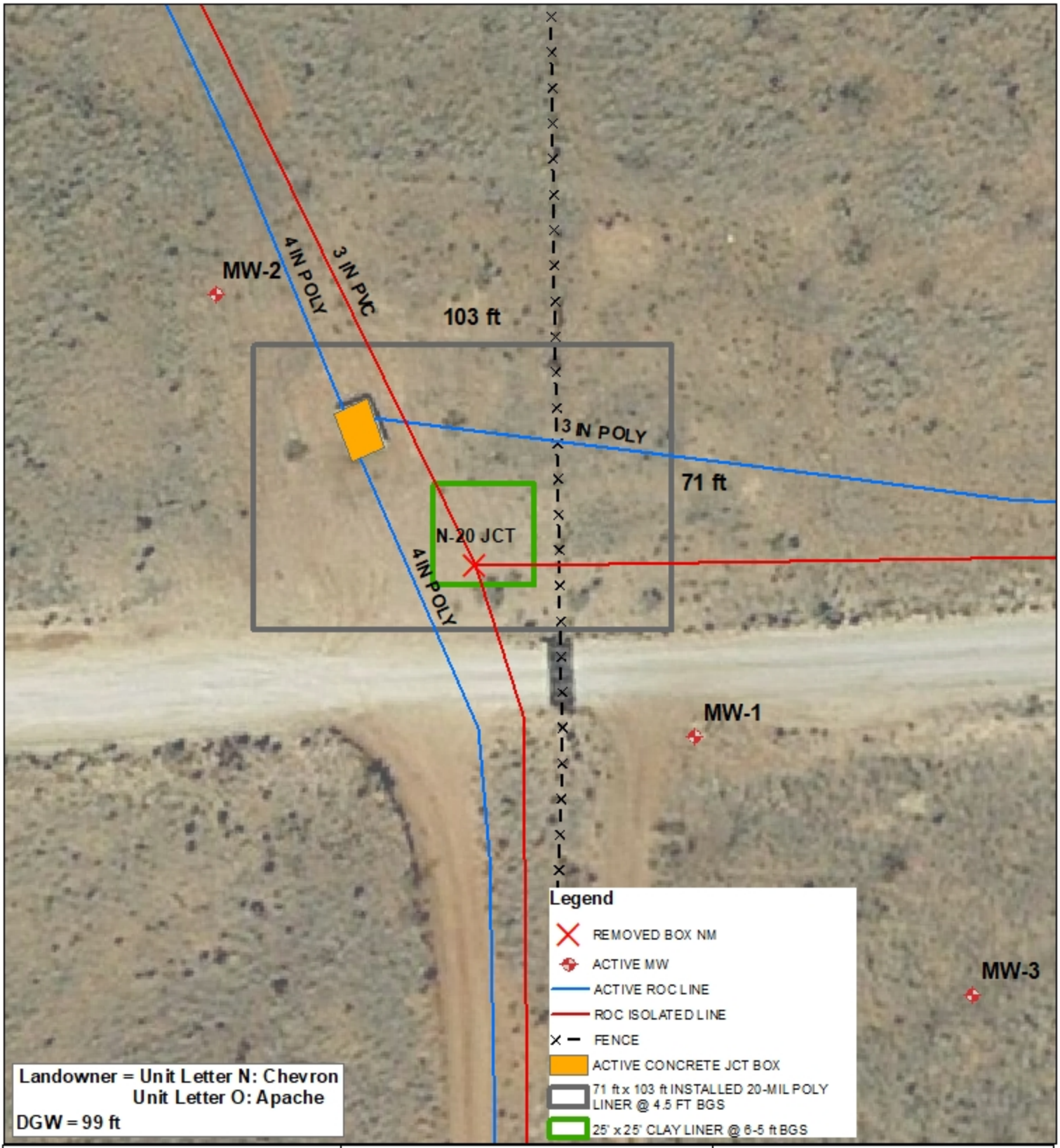
GPS: 32.458925 -103.185315
NAD 83 STATE PLANE PROJ
NM EAST ZONE

0 2,000 4,000 Feet

N
W E
S

Drawing date: 1/28/20
Drafted by: T. Grieco

Site Map



RICE OPERATING COMPANY
ROC
SINCE 1955

BD N-20 JCT

1R426-215

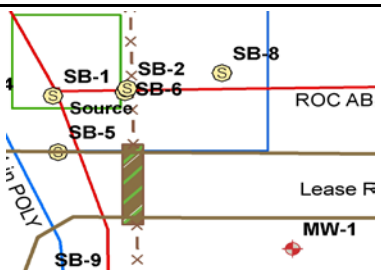
UL N SECTION 20
T-21-S R-37-E
LEA COUNTY, NM

GPS: 32.458925 -103.185315
NAD 83 STATE PLANE PROJ
NM EAST ZONE

0 25 50
Feet

N
W E
S

Drawing date: 2/3/20
Drafted by: T. Grieco

Logger:	Chris Flores		Basin Environmental Effective Solutions Service Technologies
Driller:	Harrison & Cooper, Inc.		**Company:** ROC
Drilling Method:	Mud Drilling		**Project Name:** BD Jct. N-20 **Well ID:** MW-1
Start Date:	5/18/2015		
End Date:	5/18/2015		

Comments: MW-1 was installed by mud drilling. Samples were taken for lithology only.

DRAFTED BY: L. Weinheimer

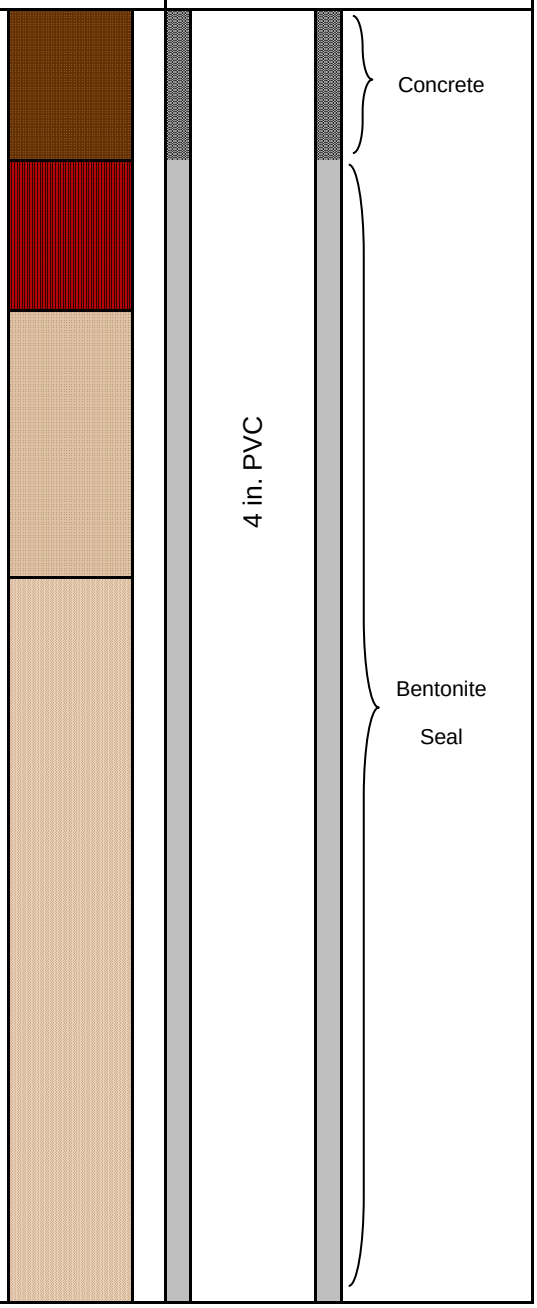
TD = 145 ft GW = 99 ft

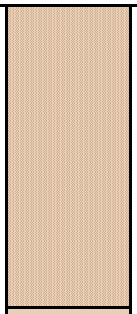
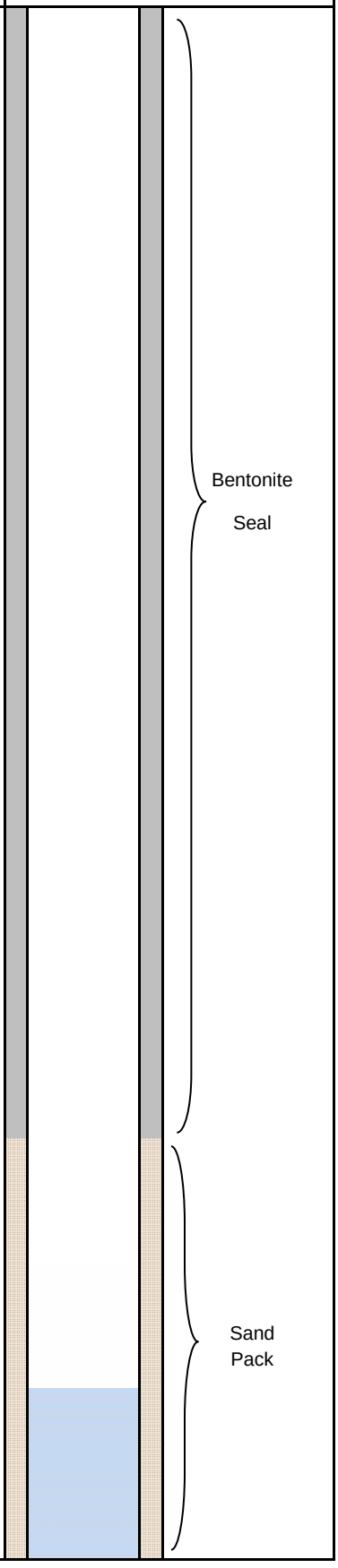
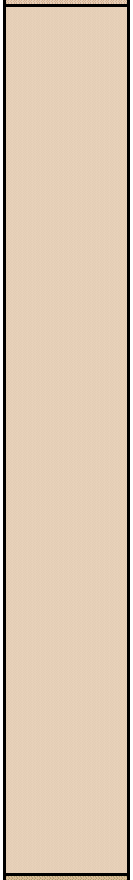
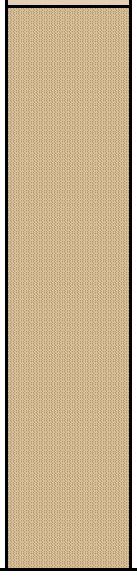
Location: UL/N, Sec. 20, T21S, R37S

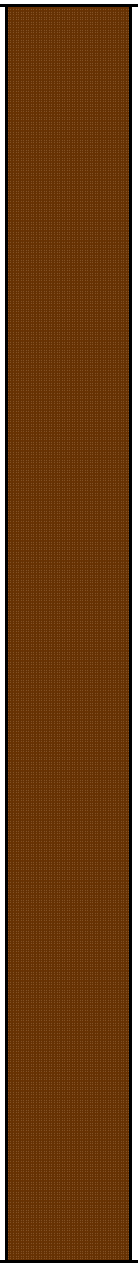
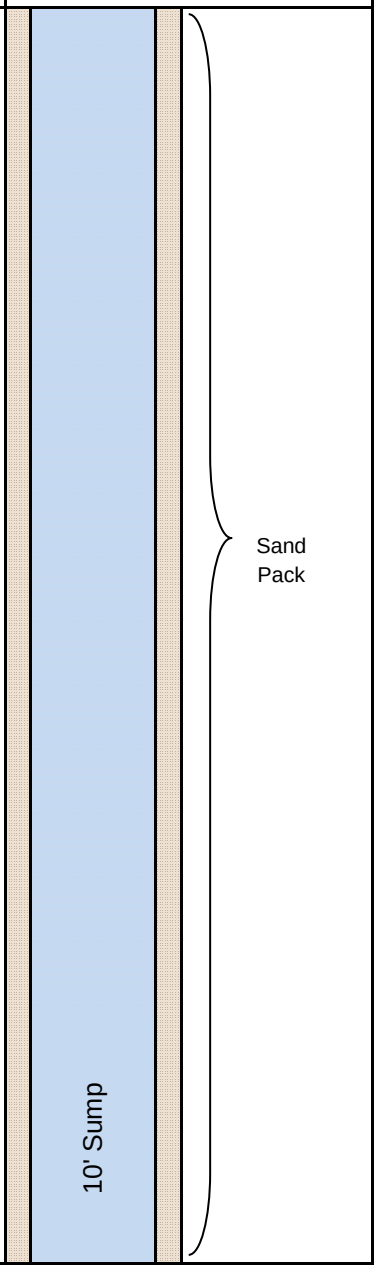
Lat: 32.458713 **County:** Lea

Long: -103.185052 **State**: NM

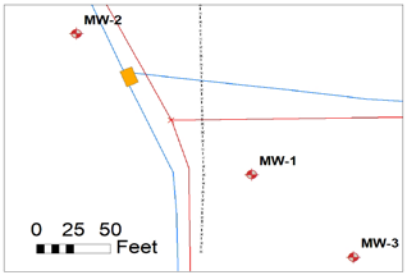
Depth (feet)	Chloride field tests	LAB	PID	Description
SS				Brown Fine Sand, Dry, No Odor
5 ft				Red Clay, Dry, No Odor
10 ft				Tan Sand, Dry, No Odor
15 ft				
20 ft				Ground Up Caliche, Dry, No Odor
25 ft				
30 ft				
35 ft				
40 ft				



Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
45 ft				Ground Up Caliche, Dry, No Odor		
50 ft						
55 ft				Caliche w/Tan Sand, Dry, No Odor		
60 ft						
65 ft						
70 ft						
75 ft						
80 ft						
85 ft				Cemented Sandstone, Dry, No Odor		
90 ft						
95 ft						
100 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
105 ft				Brown Fine Sand, Wet from Mudding Up, No Odor		
110 ft						
115 ft						
120 ft						
125 ft						
130 ft						
135 ft						
140 ft						
				(143'-145)Red Bed, Wet from Mudding Up, No Odor		
145 ft						

Logger:	Nick Kopiasz
Driller:	HCI Drilling
Drilling Method:	Air/Mud Rotary
Start Date:	11/15/2019
End Date:	11/15/2019



TASMAN GEOSCIENCES

Project Name: BD Jct. N-20

Well ID: MW-2

Project Consultant: Tasman

Comments: Located approximately 100 ft northwest of the former junction box. Soil samples were collected from drill cuttings at specified intervals.

DRAFTED BY: N.Kopiasz

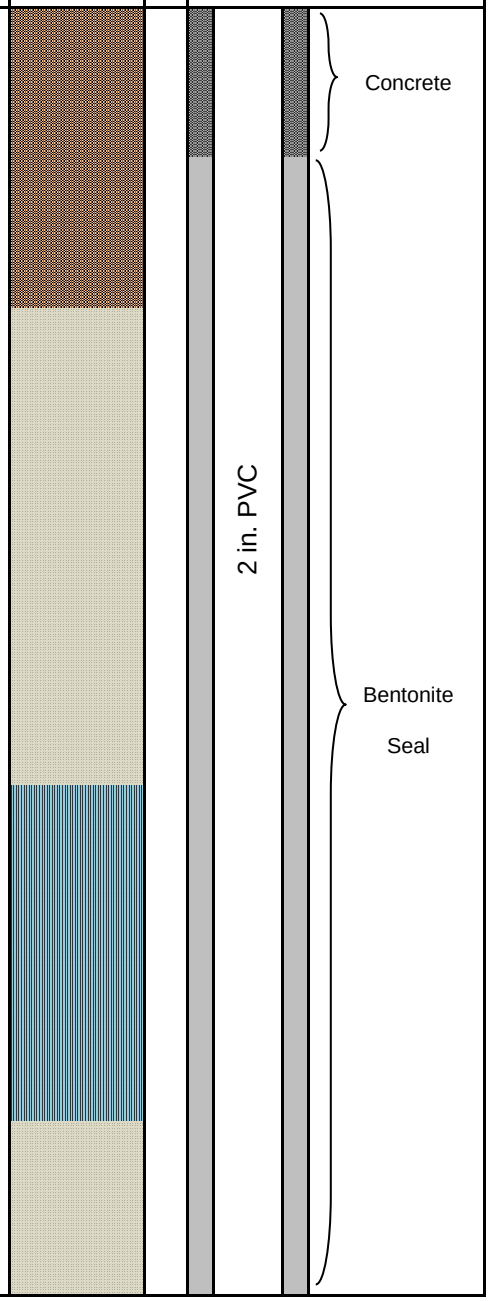
TD = 113 ft GW = 99 ft

Location: Unit N, Section 20, T21S, R37E

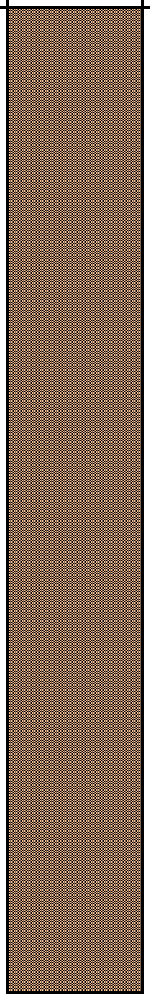
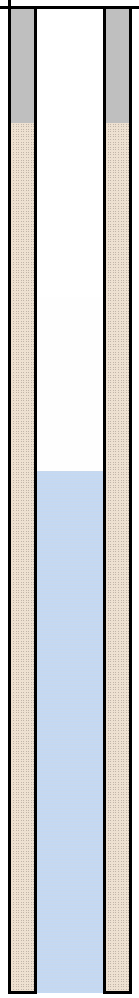
Lat: 32.459017 **County:** Lea

Long:-103.185431 (NAD83) **State:** NM

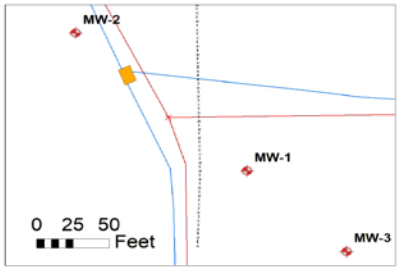
Depth (feet)	Chloride field tests	LAB	PID	Description
				SP-Rust red, very fine poorly graded sand
SS				
				SP-Same As Above (SAA)
5 ft				
				SW-reddish tan, well graded with caliche and very fine sands
10 ft				
				SW-tan, well graded with caliche and fine sands
15 ft				
				SW-SAA
20 ft				
				GW-tan, well graded gravels of caliche and fine sands
25 ft				
				GW-SAA
30 ft				
				SW-tan, well graded caliche and fine sands
35 ft				



Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SW-well graded caliche and sandstone grains		
40 ft						
				SP-tan, poorly graded fine sands		
45 ft						
				SP-SAA		
50 ft						
				SP-SAA		
55 ft						
				SP-SAA		
60 ft						Bentonite Seal
				SP-reddish tan, very fine sands		
65 ft						
				SW-reddish tan, well graded with sandstone grains and very fine sand		
70 ft						
				GW-reddish tan, well graded sandstone gravels		
75 ft						
				GW-SAA		
80 ft						
				GW-SAA		
85 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SP-reddish brown, poorly graded fine sands		
90 ft						
				SP-SAA		
95 ft						
				SP-SAA		
100 ft						
				SP-SAA		
105 ft						
				SP-SAA		
110 ft						
				SP-SAA		
115 ft						

Logger:	Nick Kopiasz
Driller:	HCI Drilling
Drilling Method:	Air/Mud Rotary
Start Date:	12/20/2019
End Date:	12/20/2019



TASMAN GEOSCIENCES

Project Name: BD Jct. N-20

Well ID: MW-3

Project Consultant: Tasman

Comments: Located approximately 150 ft southeast of the former junction box. Soil samples were collected from drill cuttings at specified intervals.

DRAFTED BY: N.Kopiasz

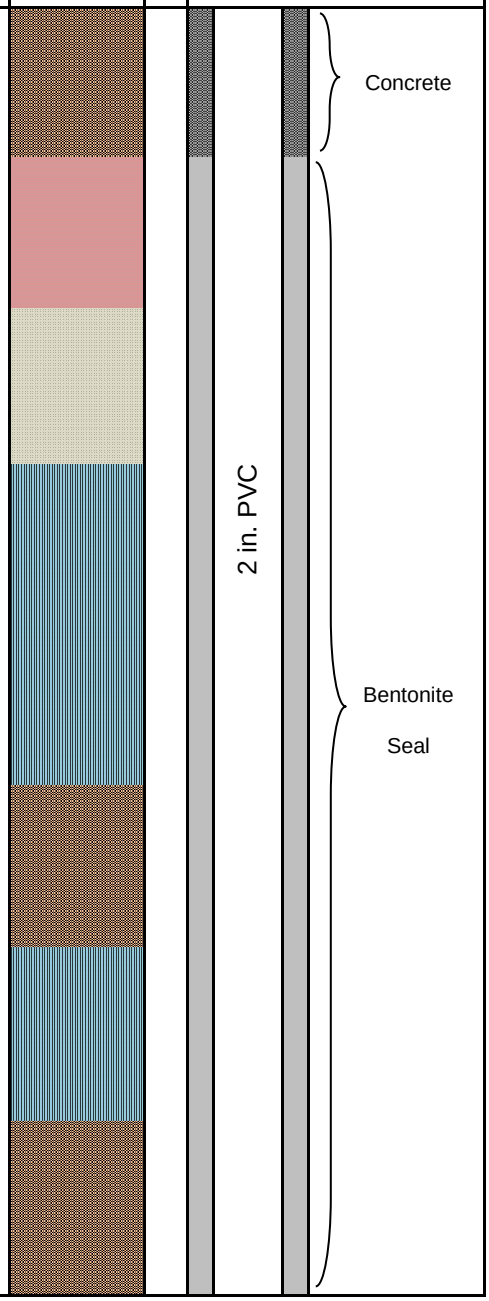
TD = 115 ft GW = 99 ft

Location: Unit N, Section 20, T21S, R37E

Lat: 32.458541 **County:** Lea

Long:-103.184832 (NAD83) **State:** NM

Depth (feet)	Chloride field tests	LAB	PID	Description
				SP-rust red, very fine poorly graded sand
SS				
				SM-rust red, fine sand with silt, cohesive clumps of silt and sand
5 ft				
				SW-tan, well graded fine sand and coarse caliche grains
10 ft				
				GW-tan, well graded gravelsof caliche and fine sand
15 ft				
				GW-Same As Above (SAA)
20 ft				
				SP-tan, poorly graded fine sand
25 ft				
				GW-tan, well graded caliche gravels with fine sand
30 ft				
				SP-orangish tan, poorly graded fine sand
35 ft				



Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SP-SAA		
40 ft						
				SW-tan, well graded fine sand and coarse caliche grains		
45 ft						
				SW-SAA		
50 ft						
				SP-tan, poorly graded fine sands		
55 ft						
				SP-SAA		
60 ft						Bentonite Seal
				GW-reddish tan, well graded gravels of sandstone and sand		
65 ft						
				SW-reddish tan, well graded coarse sandstone and fine sand		
70 ft						
				SP-reddish brown,		
75 ft						
				SP-SAA		
80 ft						
				SW-reddish brown, well graded coarse sandstone with fine sand		
85 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SP-reddish brown, poorly graded fine sand		Bentonite Seal
90 ft						
				SP-reddish brown, poorly graded fine sand with occasional chunks of sandstone		Sand Pack
95 ft						
				NR-No Recovery		
100 ft						
				NR		
105 ft						
				NR		
110 ft						
				NR		
115 ft						

BD Jct. N-20 (1R426-215)
Unit N, Section 20, T21S, R37E

Facing Southeast 5/18/2015

Facing North 5/18/2015

Rice Operating Company
BD N-20 Jct.
Drilling Monitoring Wells
11/15/2019

MW-2 Setting Well

MW-2 Completed

Rice Operating Company
BD N-20 Jct.
Drilling Monitoring Wells
12/20/2019

Site Overview

Rice Operating Company
BD N-20 Jct.
Drilling Monitoring Wells
12/20/2019

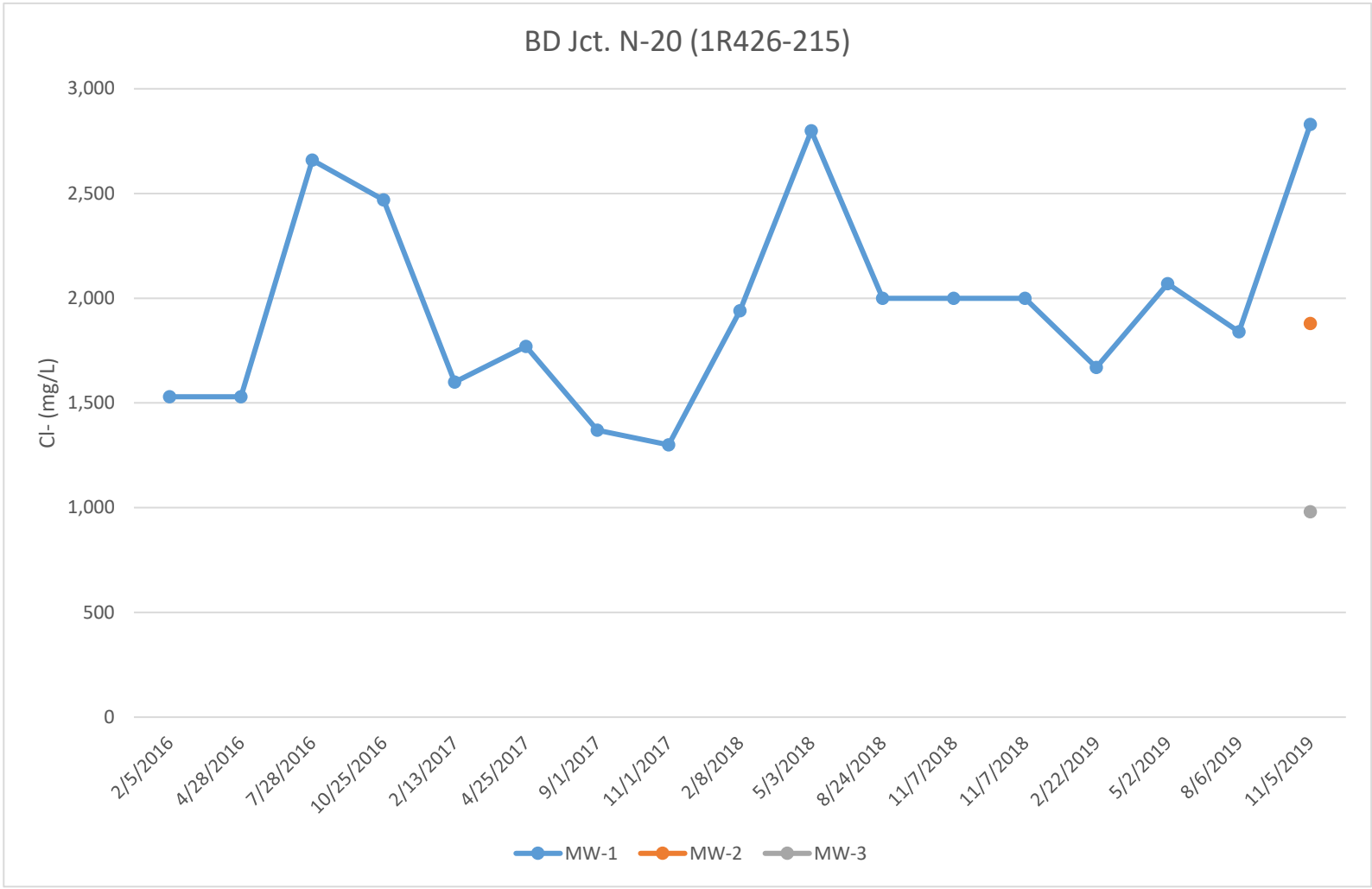
Well Completed

ROC - BD Jct. N-20 (1R426-215)
Unit Letter N, Section 20, T21S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	100.09	146.9	30.4	100	6/22/2015	640	2,600	<0.001	<0.001	<0.001	<0.003	240	Clear No odor
1	100.23	146.9	30.34	100	8/7/2015	1,100	2,950	<0.001	<0.001	<0.001	<0.003	112	Clear No odor
1	100.22	146.9	30.34	100	10/29/2015	1,260	3,740	<0.001	<0.001	<0.001	<0.003	94	Clear No odor
1	100.14	146.9	30.4	100	2/5/2016	1,530	2,710	<0.001	<0.001	<0.001	<0.003	85	Clear No odor
1	100.14	146.9	30.4	100	4/28/2016	1,530	3,050	<0.001	<0.001	<0.001	<0.003	240	Clear No odor
1	100.21	146.9	30	100	7/28/2016	2,660	5,220	<0.001	<0.001	<0.001	<0.003	16	Clear No odor
1	100.07	146.9	30	100	10/25/2016	2,470	6,460	<0.001	<0.001	<0.001	<0.003	18	Clear No odor
1	100.04	146.9	30.5	100	2/13/2017	1,600	2,970	<0.001	<0.001	<0.001	<0.003	38	Clear No odor
1	99.95	146.9	30.5	100	4/25/2017	1,770	3,160	<0.001	<0.001	<0.001	<0.003	67	Clear No odor
1	99.94	146.9	30.5	100	9/1/2017	1,370	3,170	<0.001	<0.001	<0.001	<0.003	198	Clear No odor
1	99.93	146.9	30.5	100	11/1/2017	1,300	2,780	<0.001	<0.001	<0.001	<0.003	272	Clear No odor
1	99.94	146.9	30.5	100	2/8/2018	1,940	3,310	<0.001	<0.001	<0.001	<0.003	119	Clear No odor
1	100.02	146.9	30.5	100	5/3/2018	2,800	4,850	<0.001	<0.001	<0.001	<0.003	110	Clear No odor
1	100.03	146.9	30.5	100	8/24/2018	2,000	5,040	<0.001	<0.001	<0.001	<0.003	107	Clear No odor
1	100.01	146.9	30.5	100	11/7/2018	2,000	3,510	<0.001	<0.001	<0.001	<0.003	110	Clear No odor
1	100.02	146.9	30.5	100	2/22/2019	1,670	2,740	<0.001	<0.001	<0.001	<0.003	140	Clear No odor
1	100.03	146.9	30.5	100	5/2/2019	2,070	3,370	<0.001	<0.001	<0.001	<0.003	107	Clear No odor
1	100.01	146.9	30.5	100	8/6/2019	1,840	4,240	<0.001	<0.001	<0.001	<0.003	111	Clear No odor
1	100.09	146.9	30	100	11/5/2019	2,830	5,240	<0.001	<0.001	<0.001	<0.003	127	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	99.96	116.4	2.6	10	12/23/2019	1,880	3,420	<0.001	<0.001	<0.001	<0.003	218	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	99.12	116.35	2.8	10	12/23/2019	980	1,880	<0.001	<0.001	<0.001	<0.003	152	Clear No odor


BD Jct. N-20 (1R426-215)
Cl- (mg/L)
3,000
2,500
2,000
1,500
1,000
500
0
2/5/2016
4/28/2016
7/28/2016
10/25/2016
2/13/2017
4/25/2017
9/1/2017
11/1/2017
2/8/2018
5/3/2018
8/24/2018
11/7/2018
11/7/2018
2/22/2019
5/2/2019
8/6/2019
11/5/2019
MW-1
MW-2
MW-3

CARDINAL Laboratories

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

March 06, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION N-20

Enclosed are the results of analyses for samples received by the laboratory on 02/27/19 13:41.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/27/2019	Sampling Date:	02/22/2019
Reported:	03/06/2019	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H900742-01)

BTEX 8021B mg/L Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/05/2019	ND	0.021	106	0.0200	0.538	
Toluene*	<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862	
Ethylbenzene*	<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06	
Total Xylenes*	<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06	
Total BTEX	<0.006	0.006	03/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.9 %* *81.3-128*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**1670**	4.00	02/28/2019	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**140**	25.0	02/28/2019	ND	22.9	114	20.0	0.263	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**2740**	5.00	02/28/2019	ND	528	100	527	1.80	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company

BILL TO Company: RICE Operating Company PO#

Project Manager: Katie Jones

Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240

Phone#: (575) 393-9174 Fax#: (575)397-1471

Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240

Phone #: (575) 393-9174 Fax #: (575) 397-1471

Project #: Project Name: BD Junction N-20

Project Location: T21S R37E Sec20 N ~ Lea County New Mexico

Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2019)	TIME
H00742 1	Monitor Well #1	G	1	X								1		2/22	11:30

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	

Relinquished by: Rozanne Johnson Date: 2/27/2019 Time: 13:40

Received by: Date: Time:

Relinquished by: Date: Time:

Received By: (Laboratory Staff) Jodi Henson Date: 2/27/19 Time: 13:41

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

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

CHECKED BY: (Initials) JH

Phone Results: Yes / No

Fax Results: Yes / No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net

CARDINAL Laboratories

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

May 21, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION N-20

Enclosed are the results of analyses for samples received by the laboratory on 05/07/19 15:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	05/07/2019	Sampling Date:	05/02/2019
Reported:	05/21/2019	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H901646-01)

BTEX 8021B mg/L Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	05/09/2019	ND	0.021	103	0.0200	1.25	
Toluene*	<0.001	0.001	05/09/2019	ND	0.021	106	0.0200	2.31	
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.020	99.2	0.0200	0.232	
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.060	101	0.0600	0.0281	
Total BTEX	<0.006	0.006	05/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *81.3-128*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**2070**	4.00	05/09/2019	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**107**	25.0	05/14/2019	ND	21.9	109	20.0	3.77	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**3370**	5.00	05/17/2019	ND	580	110	527	8.00	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction N-20
Project Location: T21S R37E Sec20 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2019)	TIME
H901646-1	Monitor Well #1	G	1	X								1		5/2	13:50

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021B/602	
BTEX 8021B/602	X
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO_4, CO_3, HCO_3)	
Sulfates	X
Total Dissolved Solids	X
Chlorides	X
Turn Around Time ~ 24 Hours	

Relinquished by: Rozanne Johnson	Date: 5/7/2019	Time: 15:35	Received by: Tamara Oldaker	Date: 5-7-19 Time: 15:40
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date: Time:

Phone Results ☐ Yes ☐ No

Fax Results ☐ Yes ☐ No Additional Fax Number:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

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

CHECKED BY: T.O. (Initials)

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net

CARDINAL Laboratories

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

August 16, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION N-20

Enclosed are the results of analyses for samples received by the laboratory on 08/09/19 15:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	08/09/2019	Sampling Date:	08/05/2019
Reported:	08/16/2019	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H902751-01)

BTEX 8021B mg/L Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/15/2019	ND	0.020	101	0.0200	9.95	
Toluene*	<0.001	0.001	08/15/2019	ND	0.021	104	0.0200	8.14	
Ethylbenzene*	<0.001	0.001	08/15/2019	ND	0.020	101	0.0200	6.66	
Total Xylenes*	<0.003	0.003	08/15/2019	ND	0.063	106	0.0600	2.82	
Total BTEX	<0.006	0.006	08/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *81.3-128*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**1840**	4.00	08/12/2019	ND	104	104	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**111**	25.0	08/13/2019	ND	19.7	98.6	20.0	7.52	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**4240**	5.00	08/13/2019	ND	425	80.6	527	1.41	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction N-20
Project Location: T21S R37E Sec20 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H902751

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2019)	TIME
1	Monitor Well #1	G	1	X								1		8/5	14:25

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	

Relinquished by: Rozanne Johnson	Date: 8/9/2019	Time: 15:50	Received by: [signature]
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)

Date: 8-9-19 Time: 15:50

Date: Time:

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

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

CHECKED BY: (Initials) TO

CARDINAL Laboratories

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

November 13, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION N-20

Enclosed are the results of analyses for samples received by the laboratory on 11/06/19 13:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/06/2019	Sampling Date:	11/05/2019
Reported:	11/13/2019	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H903791-01)

BTEX 8021B mg/L Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	11/07/2019	ND	0.020	99.2	0.0200	0.551	
Toluene*	<0.001	0.001	11/07/2019	ND	0.018	89.6	0.0200	0.479	
Ethylbenzene*	<0.001	0.001	11/07/2019	ND	0.020	98.6	0.0200	0.310	
Total Xylenes*	<0.003	0.003	11/07/2019	ND	0.058	96.9	0.0600	0.843	
Total BTEX	<0.006	0.006	11/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *74-98*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**2830**	4.00	11/08/2019	ND	104	104	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**127**	25.0	11/08/2019	ND	18.3	91.6	20.0	16.9	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**5240**	5.00	11/11/2019	ND	515	97.7	527	6.02	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction N-20
Project Location: T21S R37E Sec20 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H903791 LAB # (LAB USE ONLY)

FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2019)	TIME
1 Monitor Well #1	G	1	X								1		11/5	14:10

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	

Relinquished by: Rozanne Johnson	Date: 11/6/2019	Time: 13:10	Received by:	Date: 11-6-19 Time: 13:10
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date: Time:

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

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

CHECKED BY: (Initials) T.O.

CARDINAL Laboratories

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

January 02, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION N-20

Enclosed are the results of analyses for samples received by the laboratory on 12/27/19 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/27/2019	Sampling Date:	12/23/2019
Reported:	01/02/2020	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H904301-01)

BTEX 8021B mg/L Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	12/31/2019	ND	0.019	94.3	0.0200	0.980	
Toluene*	<0.001	0.001	12/31/2019	ND	0.018	92.4	0.0200	1.90	
Ethylbenzene*	<0.001	0.001	12/31/2019	ND	0.018	89.4	0.0200	1.53	
Total Xylenes*	<0.003	0.003	12/31/2019	ND	0.053	88.6	0.0600	1.83	
Total BTEX	<0.006	0.006	12/31/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *89.7 %* *58.2-133*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**1880**	4.00	12/27/2019	ND	104	104	100	3.77	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**218**	50.0	12/30/2019	ND	20.6	103	20.0	2.49	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**3420**	5.00	12/30/2019	ND	534	101	527	0.611	

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/27/2019	Sampling Date:	12/23/2019
Reported:	01/02/2020	Sampling Type:	Water
Project Name:	BD JUNCTION N-20	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC20 N-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H904301-02)

BTEX 8021B mg/L **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	12/31/2019	ND	0.019	94.3	0.0200	0.980	
Toluene*	<0.001	0.001	12/31/2019	ND	0.018	92.4	0.0200	1.90	
Ethylbenzene*	<0.001	0.001	12/31/2019	ND	0.018	89.4	0.0200	1.53	
Total Xylenes*	<0.003	0.003	12/31/2019	ND	0.053	88.6	0.0600	1.83	
Total BTEX	<0.006	0.006	12/31/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *84.3 %* *58.2-133*

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**980**	4.00	12/27/2019	ND	104	104	100	3.77	

Sulfate 375.4 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**152**	50.0	12/30/2019	ND	20.6	103	20.0	2.49	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1880**	5.00	12/31/2019	ND	534	101	527	0.611	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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

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*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # ____________________

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#:
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction N-20
Project Location: T21S R37E Sec20 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

ANALYSIS REQUEST
(Circle or Specify Method No.)

H904301

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2019)	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1	Monitor Well #2	G	3	X					2				1		12/23	9:50		X																	X	X	X	
2	Monitor Well #3	G	3	X					2				1		12/23	11:20		X																	X	X	X	

Relinquished by: Rozanne Johnson Date: 12/27/2019 Time: 11:25	Received by: Date: 12-27-19 Time: 11:25
Relinquished by: Date: Time:	Received By: (Laboratory Staff) Date: Time:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool Yes ✓ / No; Intact Yes ✓ / No. CHECKED BY: (Initials) T.O.

Phone Results		Yes		No	
Fax Results		Yes		No	Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net