

# **RICE** *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

**April 1, 2022**

## **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: 2021 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<sup>th</sup>, 2013 and approved on August 21<sup>st</sup>, 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<sup>th</sup>, 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<sup>st</sup>, 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<sup>th</sup>, 2014.

On May 14<sup>th</sup>, 2015, MW-1 was installed, and lithology soil samples were collected at regular intervals. The up-gradient well (MW-2) was installed November 15<sup>th</sup>, 2019 and the down-gradient well (MW-3) was installed on December 20<sup>th</sup>, 2019. The wells have been sampled regularly since installation. The most recent sampling event resulted in a chloride concentration of 4,600 mg/L in MW-1, 1,400 mg/L in MW-2, and 880 mg/L in MW-3. BTEX concentrations have remained below detectable limit in each well since installation. The samples collected from the up-gradient well (MW-2) suggests a non-ROC, up-gradient source has contributed to the degradation of groundwater quality. ROC will continue quarterly sampling in 2022.

Review of 2020 Annual Groundwater Report:  
Content satisfactory

1. Continue sampling on a semi-annual schedule at a minimum
2. OCD pre-approves eliminating BTEX & sulfate analyses from MW#2 & MW #3 this point forward
3. Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31,2022
4. OCD requires an abatement option(s) be submitted for pre-approval no later than June 30, 2022 to accelerate the reduction in the current chloride & TDS levels found in all site monitor wells or provide substantiate evidence of another source area being the cause or contributing to the elevated levels. OCD suggest arranging a meeting to discuss an alternative method(s) in order to mitigate the elevated values.

Attached is the Appendix, which contains:

1. A Geographical Location Map.
2. A map showing well locations.
3. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
4. The laboratory analytical results for 2021.

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,

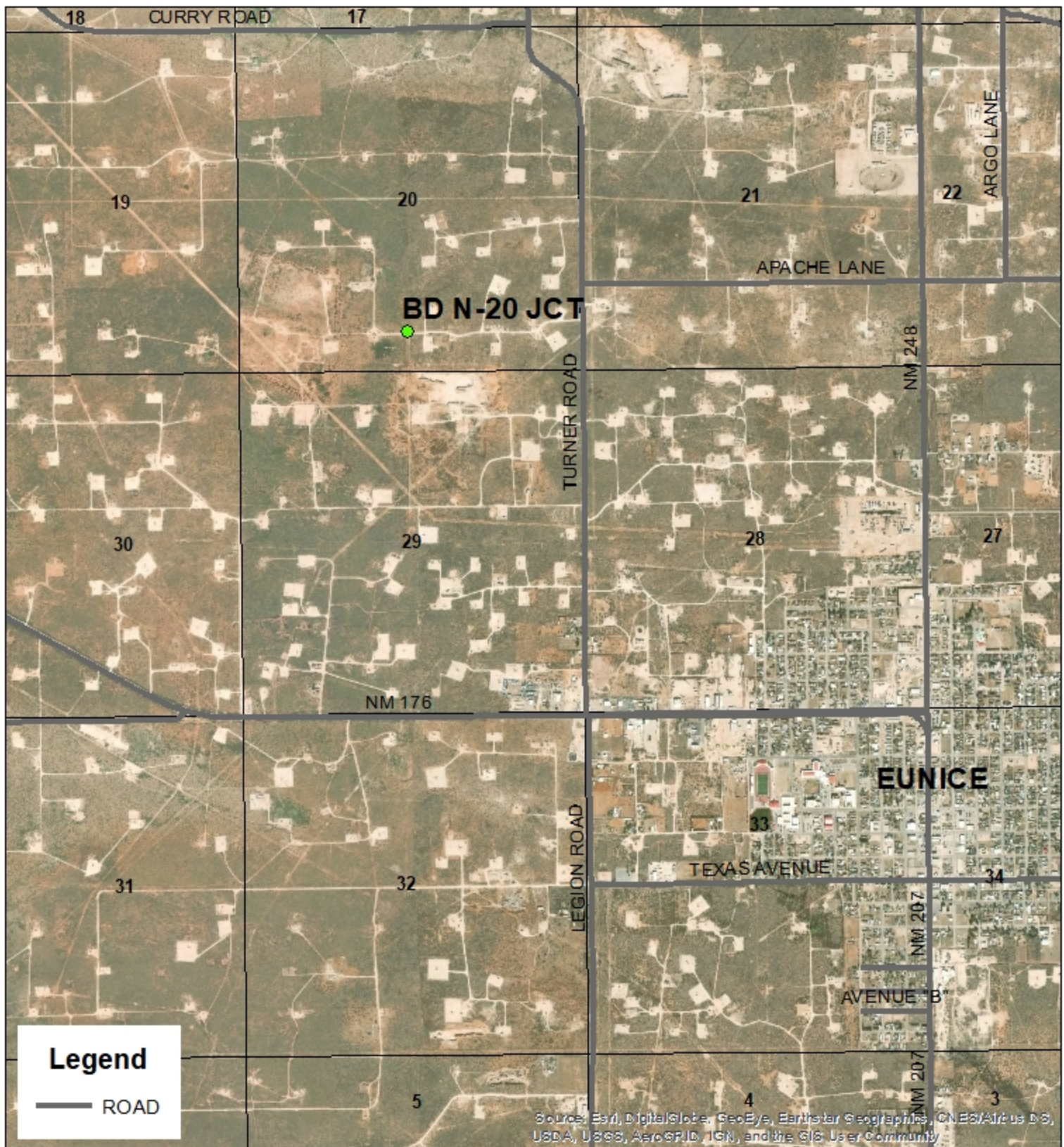
A handwritten signature in cursive script that reads "Katie Davis".

Katie Davis  
Environmental Manager  
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix



***BD N-20 JCT***

1R426-215

UL N SECTION 20  
T-21-S R-37-E  
LEA COUNTY, NMGPS: 32.458925 -103.185315  
NAD 83 STATE PLANE PROJ  
NM EAST ZONE0 2,000 4,000  
FeetDrawing date: 1/28/20  
Drafted by: T. Grieco





# 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

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



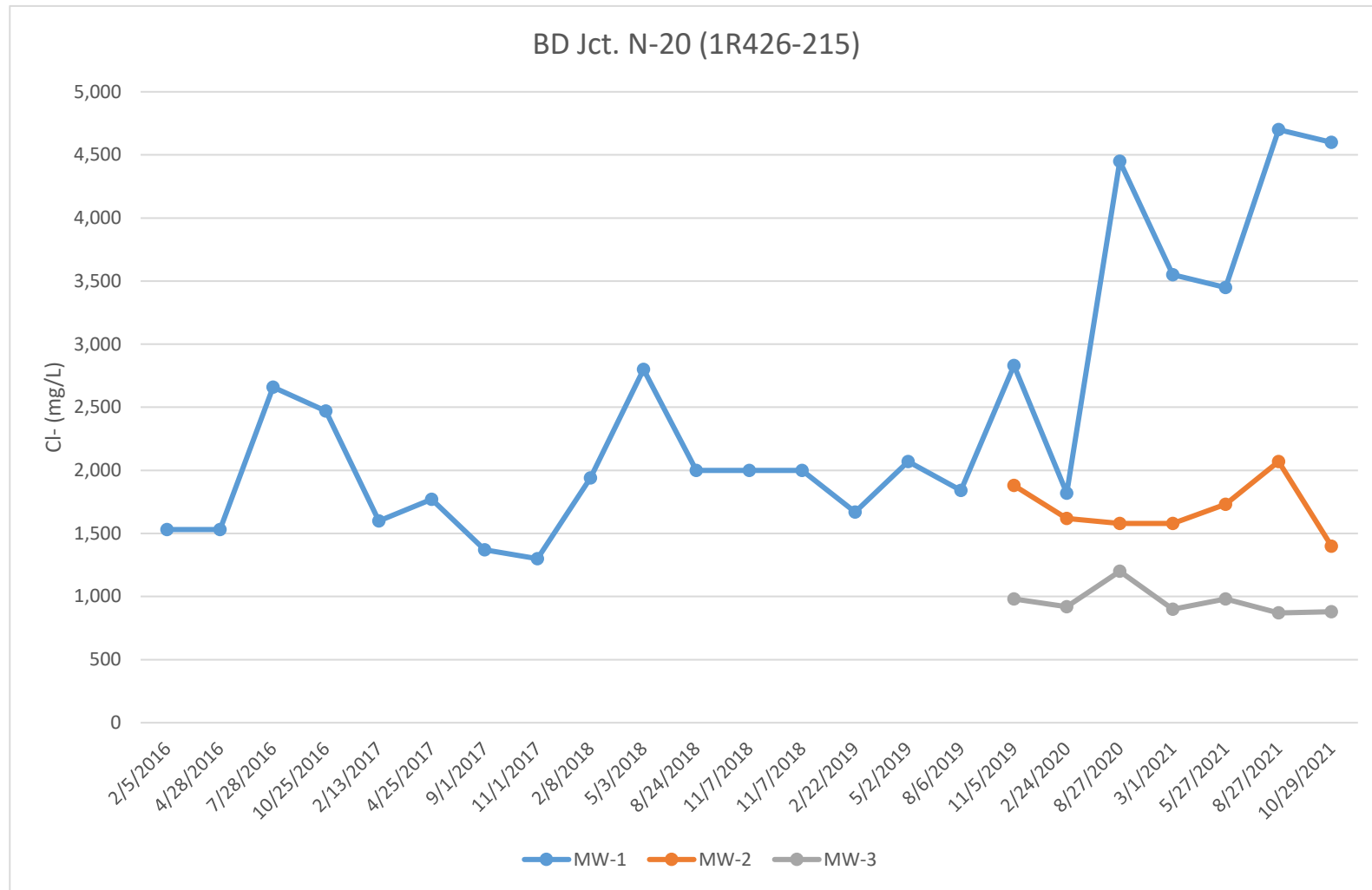
**ROC - BD Jct. N-20 (1R426-215)****Unit Letter N, Section 20, T21S, R37E**

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
1	100.1	146.9	30.4	100	2/24/2020	1,820	3,050	<0.001	<0.001	<0.001	<0.003	113	Clear No odor
1	110.16	146.9	23.9	100	8/27/2020	4,450	6,960	<0.001	<0.001	<0.001	<0.003	77.6	Clear No odor
1	100.18	146.9	30	100	3/1/2021	3,550	6,180	<0.001	<0.001	<0.001	<0.003	148	Clear No odor
1	100.19	146.9	30	100	5/27/2021	3,450	6,640	<0.001	<0.001	<0.001	<0.003	168	Clear No odor
1	100.18	146.9	30	100	8/27/2021	4,700	8,690	<0.001	<0.001	<0.001	<0.003	125	Clear No odor
1	100.14	146.9	30	100	10/29/2021	4,600	7,970	<0.001	<0.001	<0.001	<0.003	122	Clear No odor

**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
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
2	99.92	116.4	2.6	10	2/24/2020	1,620	3,230	<0.001	<0.001	<0.001	<0.003	190	Clear No odor
2	99.98	116.4	2.6	10	8/27/2020	1,580	3,180	<0.001	<0.001	<0.001	<0.003	183	Clear No odor
2	99.97	116.4	2.6	10	3/1/2021	1,580	3,140	<0.001	<0.001	<0.001	<0.003	225	Clear No odor
2	100.01	116.4	2.6	10	5/27/2021	1,730	3,120	<0.001	<0.001	<0.001	<0.003	172	Clear No odor
2	100	116.4	2.6	10	8/27/2021	2,070	3,660	<0.001	<0.001	<0.001	<0.003	283	Clear No odor
2	99.96	116.4	2.6	10	10/29/2021	1,400	2,540	<0.001	<0.001	<0.001	<0.003	192	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
3	99.08	116.35	2.8	10	2/24/2020	920	1,800	<0.001	<0.001	<0.001	<0.003	117	Clear No odor
3	99.1	116.35	2.8	10	8/27/2020	1,200	2,560	<0.001	<0.001	<0.001	<0.003	92.1	Clear No odor
3	99.13	116.35	2.8	10	3/1/2021	900	1,890	<0.001	<0.001	<0.001	<0.003	117	Clear No odor
3	99.18	116.35	2.8	10	5/27/2021	980	1,920	<0.001	<0.001	<0.001	<0.003	103	Clear No odor
3	99.17	116.35	2.7	10	8/27/2021	870	1,850	<0.001	<0.001	<0.001	<0.003	151	Clear No odor
3	99.12	116.35	2.7	10	10/29/2021	880	1,740	<0.001	<0.001	<0.001	<0.003	126	Clear No odor





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

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March 10, 2021

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 03/03/21 16:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	03/03/2021	Sampling Date:	03/01/2021
Reported:	03/10/2021	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 (H210524-01)**

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	03/08/2021	ND	0.021	106	0.0200	1.93	
Toluene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.69	
Ethylbenzene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.12	
Total Xylenes*	<0.003	0.003	03/08/2021	ND	0.064	106	0.0600	2.27	
Total BTEX	<0.006	0.006	03/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 58.2-133

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	3550	4.00	03/04/2021	ND	104	104	100	3.92	

Sulfate 375.4		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	148	25.0	03/04/2021	ND	20.6	103	20.0	1.66	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	6180	5.00	03/05/2021	ND	504	101	500	4.39	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	03/03/2021	Sampling Date:	03/01/2021
Reported:	03/10/2021	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 (H210524-02)**

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	03/08/2021	ND	0.021	106	0.0200	1.93	
Toluene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.69	
Ethylbenzene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.12	
Total Xylenes*	<0.003	0.003	03/08/2021	ND	0.064	106	0.0600	2.27	
Total BTEX	<0.006	0.006	03/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 58.2-133

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1580	4.00	03/04/2021	ND	104	104	100	3.92	

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	225	50.0	03/04/2021	ND	20.6	103	20.0	1.66		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3140	5.00	03/08/2021	ND	576	115	500	1.25		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	03/03/2021	Sampling Date:	03/01/2021
Reported:	03/10/2021	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 (H210524-03)**

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	03/08/2021	ND	0.021	106	0.0200	1.93	
Toluene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.69	
Ethylbenzene*	<0.001	0.001	03/08/2021	ND	0.021	103	0.0200	2.12	
Total Xylenes*	<0.003	0.003	03/08/2021	ND	0.064	106	0.0600	2.27	
Total BTEX	<0.006	0.006	03/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 58.2-133

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	900	4.00	03/04/2021	ND	104	104	100	3.92	

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	117	25.0	03/04/2021	ND	20.6	103	20.0	1.66		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1890	5.00	03/08/2021	ND	576	115	500	1.25		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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### 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

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "C. D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

## Cardinal Laboratories, Inc.

## LAB Order ID #

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

(Circle or Specify Method No.)

[illegible]

Relinquished by: <i>[Signature]</i>	Date: <i>3/3/2021</i>	Time: <i>1655</i>	Received by: <i>[Signature]</i>	Date: <i>3-3-21</i>	Time: <i>1655</i>
Rozanne Johnson					
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)	Sample Condition	CHECKED BY:									
Sampler - UPS - Bus - Other:	<table border="1"> <thead> <tr> <th></th> <th>Cool</th> <th>Intact</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		Cool	Intact	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	<input type="checkbox"/>	(Initials)
	Cool	Intact									
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
No	<input type="checkbox"/>	<input type="checkbox"/>									

Email Results: [kjones@riceswd.com](mailto:kjones@riceswd.com)  
[rozanne@sdacres.com](mailto:rozanne@sdacres.com)



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

---

June 07, 2021

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 06/02/21 11:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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





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:	06/02/2021	Sampling Date:	05/27/2021
Reported:	06/07/2021	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 (H211395-01)**

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	06/03/2021	ND	0.021	103	0.0200	3.36	
Toluene*	<0.001	0.001	06/03/2021	ND	0.019	96.6	0.0200	2.52	
Ethylbenzene*	<0.001	0.001	06/03/2021	ND	0.019	96.0	0.0200	3.47	
Total Xylenes*	<0.003	0.003	06/03/2021	ND	0.060	100	0.0600	3.73	
Total BTEX	<0.006	0.006	06/03/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 86.5-115

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	3450	4.00	06/02/2021	ND	104	104	100	3.92	

Sulfate 375.4		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	168	50.0	06/03/2021	ND	20.6	103	20.0	1.96	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	6640	5.00	06/04/2021	ND	517	103	500	7.23	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	06/02/2021	Sampling Date:	05/27/2021
Reported:	06/07/2021	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 (H211395-02)**

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	06/03/2021	ND	0.021	103	0.0200	3.36	
Toluene*	<0.001	0.001	06/03/2021	ND	0.019	96.6	0.0200	2.52	
Ethylbenzene*	<0.001	0.001	06/03/2021	ND	0.019	96.0	0.0200	3.47	
Total Xylenes*	<0.003	0.003	06/03/2021	ND	0.060	100	0.0600	3.73	
Total BTEX	<0.006	0.006	06/03/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 86.5-115

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1730	4.00	06/02/2021	ND	104	104	100	3.92	

Sulfate 375.4		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	172	50.0	06/03/2021	ND	20.6	103	20.0	1.96	

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3120	5.00	06/04/2021	ND	517	103	500	7.23		

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Celey D. Keene, Lab Director/Quality Manager



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:	06/02/2021	Sampling Date:	05/27/2021
Reported:	06/07/2021	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 (H211395-03)**

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	06/03/2021	ND	0.021	103	0.0200	3.36		
Toluene*	<0.001	0.001	06/03/2021	ND	0.019	96.6	0.0200	2.52		
Ethylbenzene*	<0.001	0.001	06/03/2021	ND	0.019	96.0	0.0200	3.47		
Total Xylenes*	<0.003	0.003	06/03/2021	ND	0.060	100	0.0600	3.73		
Total BTEX	<0.006	0.006	06/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 86.5-115

Chloride, SM4500CI-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	980	4.00	06/02/2021	ND	104	104	100	3.92		

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	103	25.0	06/03/2021	ND	20.6	103	20.0	1.96		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1920	5.00	06/04/2021	ND	517	103	500	7.23		

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Celey D. Keene, Lab Director/Quality Manager





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---

### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

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

### ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING		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	
				WATER	SOIL	AIR	SLUDGE	HCL (4-40ml VOA)	HNO3	NaHSO4	H2SO4	ICE (1-1 Liter HDPE)	NONE																							DATE (2021)
H211395																																				
1	Monitor Well #1	G	5	X				4				1	5/27	14:10	X																		X	X	X	
2	Monitor Well #2	G	5	X				4				1	5/27	10:05	X																		X	X	X	
3	Monitor Well #3	G	5	X				4				1	5/27	11:30	X																		X	X	X	

Relinquished by: <i>Rozanne Johnson</i>	Date: <i>6-2-21</i>	Time: <i>11:55</i>	Received by: <i>Jamars Aldate</i>	Date: <i>6-2-21</i>	Time: <i>11:55</i>
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:
Delivered By: (Circle One)	Sample Condition		CHECKED BY:		
	Yes	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	(Initials)		
Sampler - UPS - Bus - Other:	No	No			

Phone Results	Yes	No
Fax Results	Yes	No

Additional Fax Number:

REMARKS:

Email Results: [kjones@riceswd.com](mailto:kjones@riceswd.com)  
[rozanne@sdacres.com](mailto:rozanne@sdacres.com)



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

---

September 08, 2021

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 08/31/21 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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



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**Analytical Results For:**

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

Received:	08/31/2021	Sampling Date:	08/27/2021
Reported:	09/08/2021	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 (H212362-01)**

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	09/01/2021	ND	0.020	99.2	0.0200	2.52		
Toluene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	4.28		
Ethylbenzene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	3.92		
Total Xylenes*	<0.003	0.003	09/01/2021	ND	0.067	112	0.0600	5.10		
Total BTEX	<0.006	0.006	09/01/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	4700	4.00	09/01/2021	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	125	25.0	09/02/2021	ND	21.0	105	20.0	2.87		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	8690	5.00	09/03/2021	ND	244	81.3	300	2.31		

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	08/31/2021	Sampling Date:	08/27/2021
Reported:	09/08/2021	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 (H212362-02)**

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	09/01/2021	ND	0.020	99.2	0.0200	2.52		
Toluene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	4.28		
Ethylbenzene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	3.92		
Total Xylenes*	<0.003	0.003	09/01/2021	ND	0.067	112	0.0600	5.10		
Total BTEX	<0.006	0.006	09/01/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	2070	4.00	09/01/2021	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	283	83.3	09/02/2021	ND	21.0	105	20.0	2.87		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3660	5.00	09/07/2021	ND	244	81.3	300	2.31		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	08/31/2021	Sampling Date:	08/27/2021
Reported:	09/08/2021	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 (H212362-03)**

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	09/01/2021	ND	0.020	99.2	0.0200	2.52		
Toluene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	4.28		
Ethylbenzene*	<0.001	0.001	09/01/2021	ND	0.022	108	0.0200	3.92		
Total Xylenes*	<0.003	0.003	09/01/2021	ND	0.067	112	0.0600	5.10		
Total BTEX	<0.006	0.006	09/01/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	870	4.00	09/01/2021	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	151	25.0	09/02/2021	ND	21.0	105	20.0	2.87	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1850	5.00	09/07/2021	ND	244	81.3	300	2.31	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager

Phone Results	Yes	No
Fax Results	Yes	No      Additional Fax Number:
REMARKS:		
Email Results: <a href="mailto:kjones@riceswd.com">kjones@riceswd.com</a> <a href="mailto:rozanne@sdacres.com">rozanne@sdacres.com</a>		



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November 09, 2021

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 11/04/21 16:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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".

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/04/2021	Sampling Date:	10/29/2021
Reported:	11/09/2021	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 (H213138-01)**

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	11/08/2021	ND	0.021	106	0.0200	2.92	
Toluene*	<0.001	0.001	11/08/2021	ND	0.020	102	0.0200	4.30	
Ethylbenzene*	<0.001	0.001	11/08/2021	ND	0.020	99.9	0.0200	3.74	
Total Xylenes*	<0.003	0.003	11/08/2021	ND	0.063	104	0.0600	3.36	
Total BTEX	<0.006	0.006	11/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	4600	4.00	11/05/2021	ND	104	104	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*	122	25.0	11/05/2021	ND	23.1	116	20.0	5.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	7970	5.00	11/08/2021	ND	245	81.7	300	2.26		

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	11/04/2021	Sampling Date:	10/29/2021
Reported:	11/09/2021	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 #2 (H213138-02)**

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	11/08/2021	ND	0.021	106	0.0200	2.92	
Toluene*	<0.001	0.001	11/08/2021	ND	0.020	102	0.0200	4.30	
Ethylbenzene*	<0.001	0.001	11/08/2021	ND	0.020	99.9	0.0200	3.74	
Total Xylenes*	<0.003	0.003	11/08/2021	ND	0.063	104	0.0600	3.36	
Total BTEX	<0.006	0.006	11/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1400	4.00	11/05/2021	ND	104	104	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*	192	50.0	11/05/2021	ND	23.1	116	20.0	5.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2540	5.00	11/08/2021	ND	245	81.7	300	2.26		

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/04/2021	Sampling Date:	10/29/2021
Reported:	11/09/2021	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 #3 (H213138-03)**

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	11/08/2021	ND	0.021	106	0.0200	2.92	
Toluene*	<0.001	0.001	11/08/2021	ND	0.020	102	0.0200	4.30	
Ethylbenzene*	<0.001	0.001	11/08/2021	ND	0.020	99.9	0.0200	3.74	
Total Xylenes*	<0.003	0.003	11/08/2021	ND	0.063	104	0.0600	3.36	
Total BTEX	<0.006	0.006	11/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	880	4.00	11/05/2021	ND	104	104	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*	126	25.0	11/05/2021	ND	23.1	116	20.0	5.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1740	5.00	11/08/2021	ND	245	81.7	300	2.26		

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager

# Cardinal Laboratories, Inc.

<b>BILL TO</b>	<b>Company:</b>	<b>PO#</b>
<b>RICE Operating Company</b>		
<b>Address:</b>		<b>(Street, City, Zip)</b>
122 W Taylor Street ~ Hobbs, New Mexico 88240		
<b>Phone#:</b>	<b>Fax#:</b>	
(575) 393-9174	(575) 397-1471	

Sampler Signature: Rozarine Johnson (575)631-9310

[illegible]

Rezanne Johnson 11/4/21 16:15

4

NAME	DATE	TIME
Adi Hinson	11/11/21	11:00

Delivered By: (Circle One) Intact Sample Condition: Cool Intact 11 CHECKED BY: 11

Sampler - UPS - Bus - Other:	No	No
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## LAB Order ID # \_\_\_\_\_

(Circle or Specify Method No.)

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

\_\_\_\_\_

Page 6 of 6

Released to Imaging: 10/5/2022 2:01:01 PM

**District I**

1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 90541

**CONDITIONS**

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 90541
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Review of 2021 Annual Groundwater Report: Content satisfactory 1. Continue sampling on a bi-annual schedule at a minimum 2. OCD pre-approves eliminating BTEX & sulfate analyses from MW#2 & MW #3 this point forward 3. Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31,2022 4. OCD requires an abatement option(s) be submitted for pre-approval no later than March 31, 2023 to accelerate the reduction in the current chloride & TDS levels found in all site monitor wells or provide substantiate evidence of another source area being the cause or contributing to the elevated levels. OCD suggest arranging a meeting to discuss an alternative method(s) in order to mitigate the elevated values.	10/5/2022