

# RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240

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

April 1, 2023

Nelson Velez

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

**REVIEWED**

By Mike Buchanan at 8:50 am, Jun 21, 2023

RE: **2022 Annual Groundwater Report**  
**Rice Operating Company – BD SWD System**  
**BD Jct. N-20 (1R426-215): UL/N, Sec. 20, T21S, R37E**

Mr. Velez:

Final Review of the 2022 Annual GW  
Report for RICE - BD SWD System Jct  
N-20

: **Content Satisfactory**

1. Continue to gw monitor and sample quarterly per gw monitoring plan.
2. Await response from NMOCD on termination request.

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 100 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 2,340 mg/L in MW-1, 1,260 mg/L in MW-2, and 900 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. On October 5<sup>th</sup>, 2022, NMOCD granted approval to

eliminate BTEX and sulfate analyses from MW-2 and MW-3. NMOCD also requested abatement options be submitted to accelerate the reduction in the current chloride and TDS, along with evidence of an up-gradient source. ROC reviewed historical aerial photos and submitted a Termination Request to NMOCD on March 30<sup>th</sup>, 2023.

ROC will continue quarterly sampling in 2023.

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 2022.

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

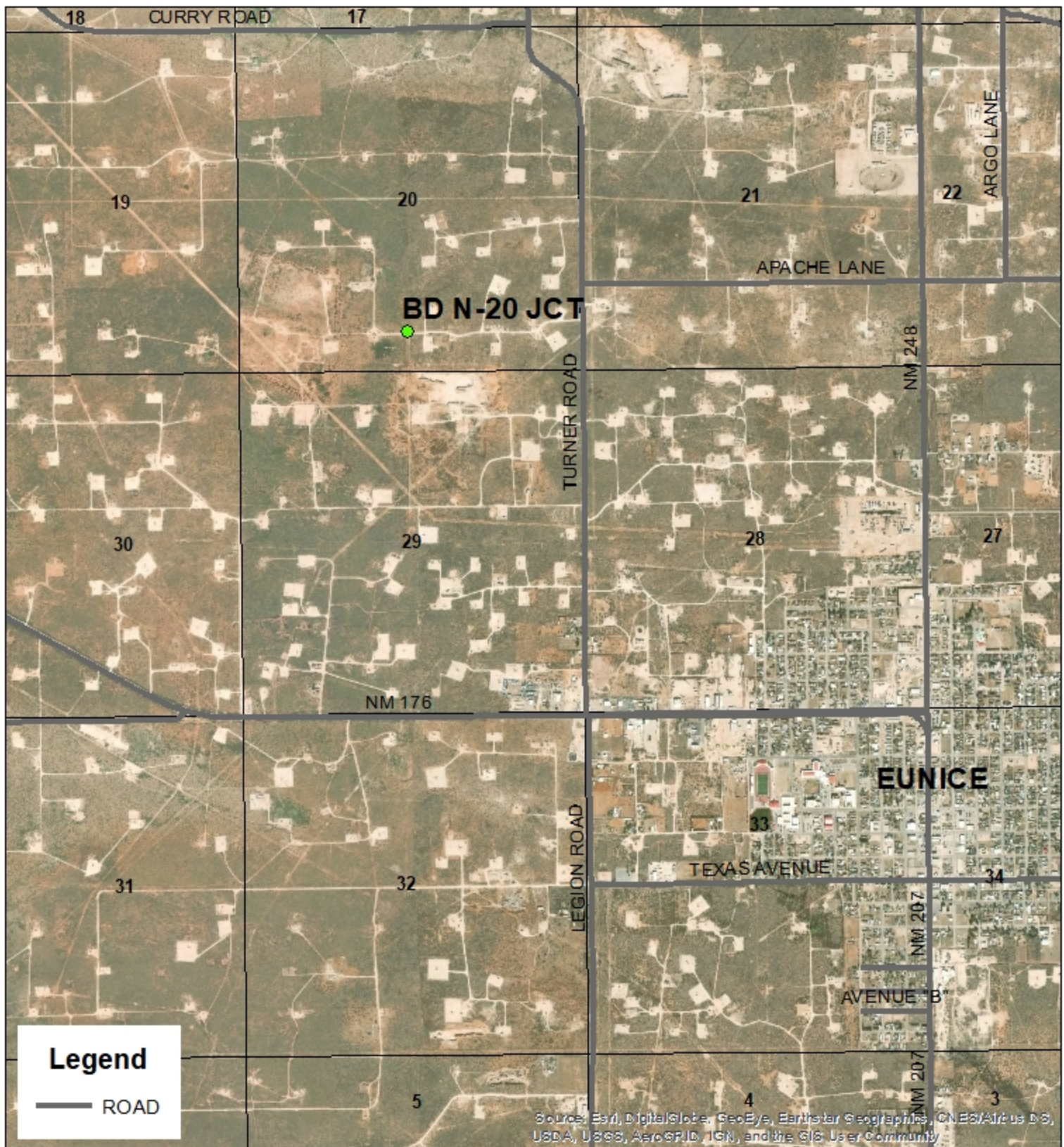
Sincerely,

A handwritten signature in black ink that reads "Katie Davis". The signature is written in a cursive, flowing style.

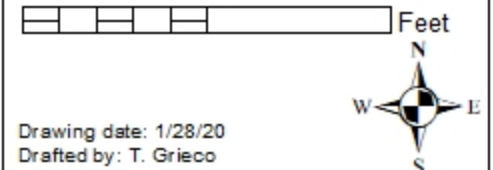
Katie Davis  
Environmental Manager  
RICE Operating Company (ROC)

appendix

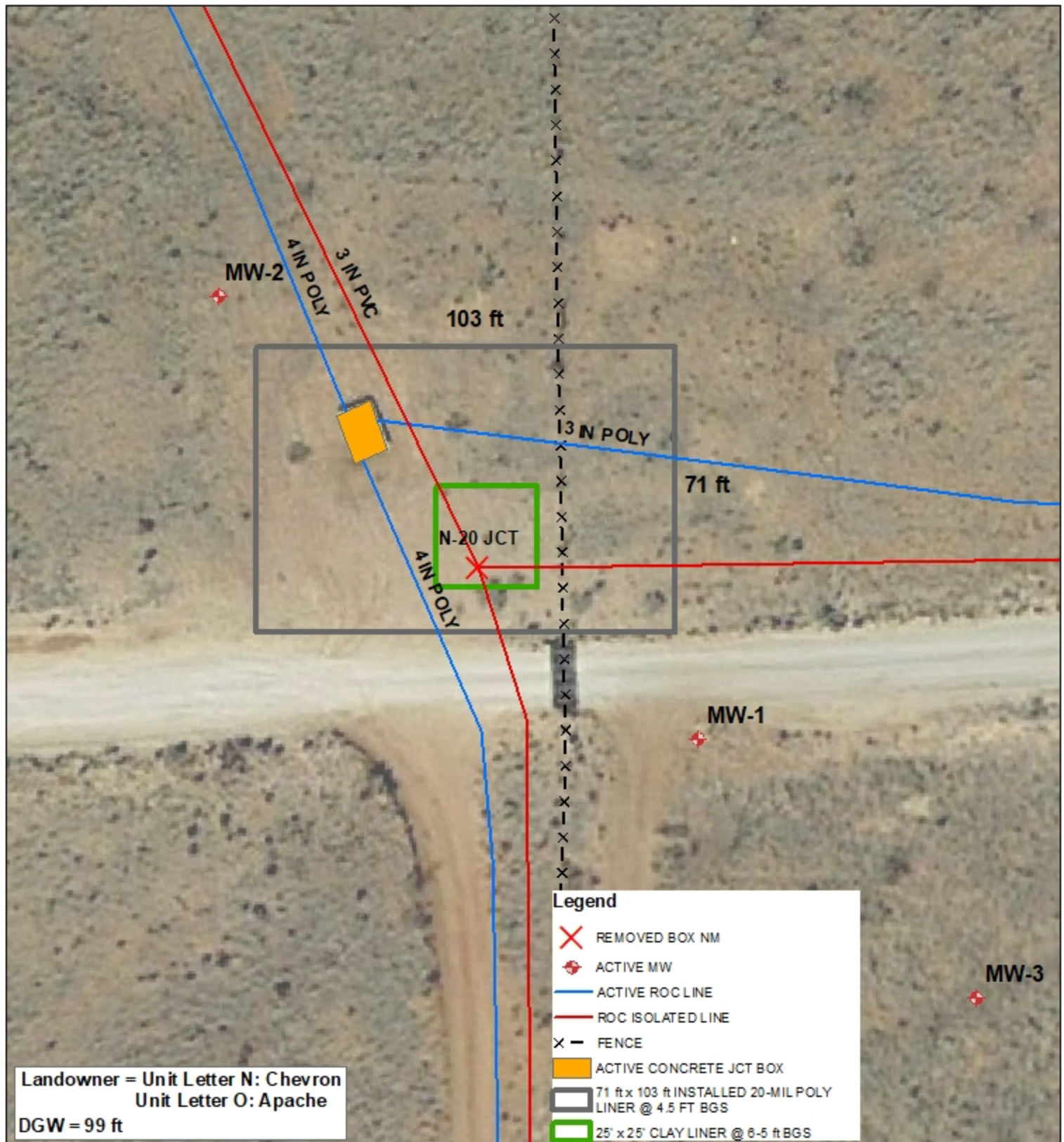


***BD N-20 JCT***

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**

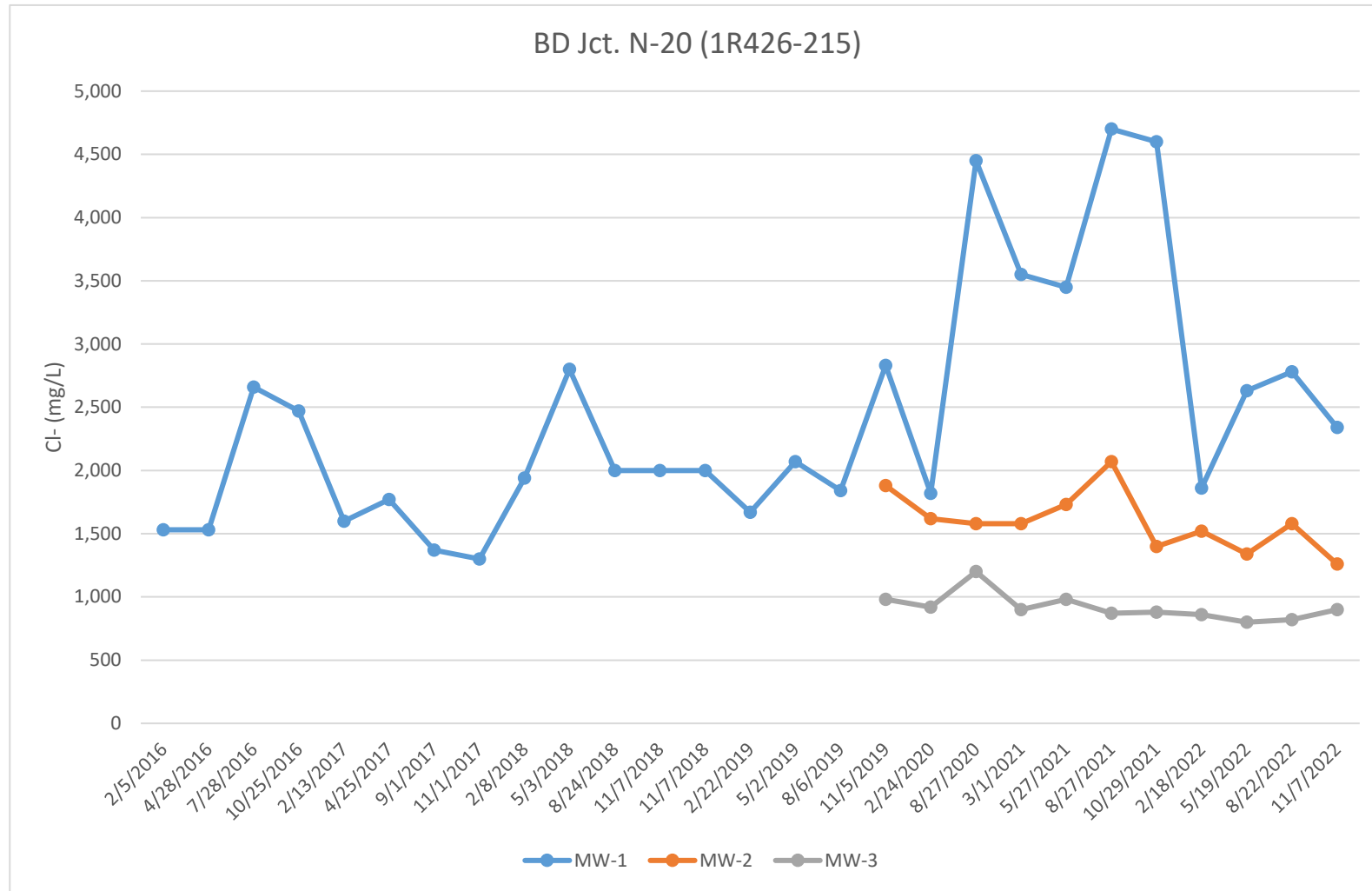
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	100.11	146.9	30	100	2/18/2022	1,860	3,200	<0.001	<0.001	<0.001	<0.003	168	Clear No odor
1	100.12	146.9	30	100	5/19/2022	2,630	4,850	<0.001	<0.001	<0.001	<0.003	273	Clear No odor
1	100.13	146.9	30	100	8/22/2022	2,780	5,800	<0.001	<0.001	<0.001	<0.003	201	Clear No odor
1	100.15	146.9	30	100	11/7/2022	2,340	4,410	<0.001	<0.001	<0.001	<0.003	200	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
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
2	99.94	116.4	2.6	10	2/18/2022	1,520	2,900	<0.001	<0.001	<0.001	<0.003	226	Clear No odor
2	99.95	116.4	2.6	10	5/19/2022	1,340	2,410	<0.001	<0.001	<0.001	<0.003	128	Clear No odor
2	99.98	116.4	2.6	10	8/22/2022	1,580	3,390	<0.001	<0.001	<0.001	<0.003	159	Clear No odor
2	99.99	116.4	2.6	10	11/7/2022	1,260	2,550	<0.001	<0.001	<0.001	<0.003	143	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

**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
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
3	99.06	116.35	2.6	10	2/18/2022	860	1,640	<0.001	<0.001	<0.001	<0.003	133	Clear No odor
3	99.13	116.35	2.8	10	5/19/2022	800	1,760	<0.001	<0.001	<0.001	<0.003	136	Clear No odor
3	99.15	116.35	2.8	10	8/22/2022	820	2,240	<0.001	<0.001	<0.001	<0.003	92.8	Clear No odor
3	99.16	116.35	2.8	10	11/7/2022	900	1,690	<0.001	<0.001	<0.001	<0.003	95	Clear No odor







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

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November 17, 2022

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 11/10/22 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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



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:	11/10/2022	Sampling Date:	11/07/2022
Reported:	11/17/2022	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 (H225338-01)**

BTEX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/16/2022	ND	0.019	94.8	0.0200	1.52		
Toluene*	<0.001	0.001	11/16/2022	ND	0.019	95.0	0.0200	0.522		
Ethylbenzene*	<0.001	0.001	11/16/2022	ND	0.018	90.4	0.0200	2.87		
Total Xylenes*	<0.003	0.003	11/16/2022	ND	0.056	92.6	0.0600	1.88		
Total BTEX	<0.006	0.006	11/16/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.3 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	2340	4.00	11/11/2022	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*	200	50.0	11/11/2022	ND	20.9	104	20.0	5.92		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	4410	5.00	11/11/2022	ND	537	107	500	4.93		

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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:	11/10/2022	Sampling Date:	11/07/2022
Reported:	11/17/2022	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 (H225338-02)**

BTEX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/16/2022	ND	0.019	94.8	0.0200	1.52		
Toluene*	<0.001	0.001	11/16/2022	ND	0.019	95.0	0.0200	0.522		
Ethylbenzene*	<0.001	0.001	11/16/2022	ND	0.018	90.4	0.0200	2.87		
Total Xylenes*	<0.003	0.003	11/16/2022	ND	0.056	92.6	0.0600	1.88		
Total BTEX	<0.006	0.006	11/16/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.9 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	1260	4.00	11/11/2022	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*	143	25.0	11/11/2022	ND	20.9	104	20.0	5.92		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2550	5.00	11/11/2022	ND	537	107	500	4.93		

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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:	11/10/2022	Sampling Date:	11/07/2022
Reported:	11/17/2022	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 (H225338-03)**

BTEX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/16/2022	ND	0.019	94.8	0.0200	1.52		
Toluene*	<0.001	0.001	11/16/2022	ND	0.019	95.0	0.0200	0.522		
Ethylbenzene*	<0.001	0.001	11/16/2022	ND	0.018	90.4	0.0200	2.87		
Total Xylenes*	<0.003	0.003	11/16/2022	ND	0.056	92.6	0.0600	1.88		
Total BTEX	<0.006	0.006	11/16/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.7 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	900	4.00	11/11/2022	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*	95.0	25.0	11/11/2022	ND	20.9	104	20.0	5.92		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1690	5.00	11/15/2022	ND	530	106	500	0.890		

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\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

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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\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager

## Cardinal Laboratories, Inc.

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

(Circle or Specify Method No.)

[illegible]

Page 6 of 6

Released to Imaging: 6/21/2023 9:03:49 AM





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

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August 26, 2022

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 08/24/22 9:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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



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:	08/24/2022	Sampling Date:	08/22/2022
Reported:	08/26/2022	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 (H223867-01)**

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/25/2022	ND	0.020	101	0.0200	0.905	
Toluene*	<0.001	0.001	08/25/2022	ND	0.022	109	0.0200	2.11	
Ethylbenzene*	<0.001	0.001	08/25/2022	ND	0.026	129	0.0200	12.6	
Total Xylenes*	<0.003	0.003	08/25/2022	ND	0.070	117	0.0600	10.7	
Total BTEX	<0.006	0.006	08/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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*	2780	4.00	08/25/2022	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*	201	50.0	08/24/2022	ND	20.9	104	20.0	2.33		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	5800	5.00	08/25/2022	ND	814	81.4	1000	1.93		

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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:	08/24/2022	Sampling Date:	08/22/2022
Reported:	08/26/2022	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 (H223867-02)**

BTEX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	08/25/2022	ND	0.020	101	0.0200	0.905		
Toluene*	<0.001	0.001	08/25/2022	ND	0.022	109	0.0200	2.11		
Ethylbenzene*	<0.001	0.001	08/25/2022	ND	0.026	129	0.0200	12.6		
Total Xylenes*	<0.003	0.003	08/25/2022	ND	0.070	117	0.0600	10.7		
Total BTEX	<0.006	0.006	08/25/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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*	1580	4.00	08/25/2022	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*	159	50.0	08/24/2022	ND	20.9	104	20.0	2.33		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3390	5.00	08/25/2022	ND	814	81.4	1000	1.93		

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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:	08/24/2022	Sampling Date:	08/22/2022
Reported:	08/26/2022	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 (H223867-03)**

BTEX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/25/2022	ND	0.020	101	0.0200	0.905	
Toluene*	<0.001	0.001	08/25/2022	ND	0.022	109	0.0200	2.11	
Ethylbenzene*	<0.001	0.001	08/25/2022	ND	0.026	129	0.0200	12.6	
Total Xylenes*	<0.003	0.003	08/25/2022	ND	0.070	117	0.0600	10.7	
Total BTEX	<0.006	0.006	08/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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*	820	4.00	08/25/2022	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*	92.8	25.0	08/24/2022	ND	20.9	104	20.0	2.33		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2240	5.00	08/25/2022	ND	814	81.4	1000	1.93		

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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.
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

# 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>Rezanne Johnson (575) 831-9310</b>		

(Circle or Specify Method No.)

[illegible]

Relinquished by: Rozanne Johnson Date: 8/24/22 Time: 8:20

Received by: James Lee Date: 8/24/77 Time: 8:21

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

Relinquished by: \_\_\_\_\_ Date: 8/24/22 Time: \_\_\_\_\_  
Delivered By: James John (Circle One)

Received By: (Laboratory Staff)	Date:	Time:
	8-24-22	0950
Sample Condition	CHECKED BY:	

REMARKS:

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

Delivered By: (Circle One)

Sample Condition

CHECKED BY:

	Cool	Intact
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>

(Initials)

Sampler - UPS - Bus - Other:



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

---

June 02, 2022

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 05/25/22 12:10.

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:	05/25/2022	Sampling Date:	05/19/2022
Reported:	06/02/2022	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 (H222225-01)**

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	05/31/2022	ND	0.020	102	0.0200	0.740		
Toluene*	<0.001	0.001	05/31/2022	ND	0.020	98.1	0.0200	0.685		
Ethylbenzene*	<0.001	0.001	05/31/2022	ND	0.019	94.6	0.0200	1.36		
Total Xylenes*	<0.003	0.003	05/31/2022	ND	0.060	99.2	0.0600	0.564		
Total BTEX	<0.006	0.006	05/31/2022	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*	2630	4.00	05/26/2022	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*	273	10.0	05/27/2022	ND	19.8	99.0	20.0	0.202		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	4850	5.00	05/27/2022	ND	529	106	500	0.963		

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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:	05/25/2022	Sampling Date:	05/19/2022
Reported:	06/02/2022	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 (H222225-02)**

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	05/31/2022	ND	0.020	102	0.0200	0.740		
Toluene*	<0.001	0.001	05/31/2022	ND	0.020	98.1	0.0200	0.685		
Ethylbenzene*	<0.001	0.001	05/31/2022	ND	0.019	94.6	0.0200	1.36		
Total Xylenes*	<0.003	0.003	05/31/2022	ND	0.060	99.2	0.0600	0.564		
Total BTEX	<0.006	0.006	05/31/2022	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*	1340	4.00	05/26/2022	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*	128	10.0	05/27/2022	ND	19.8	99.0	20.0	0.202	

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2410	5.00	05/27/2022	ND	529	106	500	0.963		

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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:	05/25/2022	Sampling Date:	05/19/2022
Reported:	06/02/2022	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 (H222225-03)**

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	05/31/2022	ND	0.020	102	0.0200	0.740		
Toluene*	<0.001	0.001	05/31/2022	ND	0.020	98.1	0.0200	0.685		
Ethylbenzene*	<0.001	0.001	05/31/2022	ND	0.019	94.6	0.0200	1.36		
Total Xylenes*	<0.003	0.003	05/31/2022	ND	0.060	99.2	0.0600	0.564		
Total BTEX	<0.006	0.006	05/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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*	800	4.00	05/26/2022	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*	136	10.0	05/27/2022	ND	19.8	99.0	20.0	0.202		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1760	5.00	05/27/2022	ND	529	106	500	0.963		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

---

### Notes and Definitions

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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\*=Accredited Analyte

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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.

Fax (575) 393-2476		BILL TO Company:		PO#
Company Name: RICE Operating Company		RICE Operating Company		
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) 831-9310		
		PRESERVATIVE		

[illegible]

Relinquished by: <i>Rezanne Johnson</i> Date: <i>5/25/2022</i> Time: <i>12:00</i>	Received by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: _____ Time: _____	Received By: (Laboratory Staff) <i>Godi Benson</i> Date: <i>5/25/22</i> Time: _____
Delivered By: (Circle One) <i>UPS</i>	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Intact No <input type="checkbox"/> No <input type="checkbox"/>
Sampler - UPS - Bus - Other: _____	CHECKED BY: <i>[Signature]</i> (Initials)

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # H222225-1-3

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

[illegible]



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

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March 01, 2022

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 02/23/22 12:25.

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





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:	02/23/2022	Sampling Date:	02/18/2022
Reported:	03/01/2022	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 (H220701-01)**

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	02/28/2022	ND	0.020	100	0.0200	0.668		
Toluene*	<0.001	0.001	02/28/2022	ND	0.019	97.5	0.0200	0.0975		
Ethylbenzene*	<0.001	0.001	02/28/2022	ND	0.019	96.4	0.0200	1.06		
Total Xylenes*	<0.003	0.003	02/28/2022	ND	0.061	101	0.0600	1.11		
Total BTEX	<0.006	0.006	02/28/2022	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*	1860	4.00	02/24/2022	ND	100	100	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	02/28/2022	ND	18.6	92.8	20.0	2.66		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3200	5.00	03/01/2022	ND	496	99.2	500	1.94		

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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:	02/23/2022	Sampling Date:	02/18/2022
Reported:	03/01/2022	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 (H220701-02)**

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	02/28/2022	ND	0.020	100	0.0200	0.668	
Toluene*	<0.001	0.001	02/28/2022	ND	0.019	97.5	0.0200	0.0975	
Ethylbenzene*	<0.001	0.001	02/28/2022	ND	0.019	96.4	0.0200	1.06	
Total Xylenes*	<0.003	0.003	02/28/2022	ND	0.061	101	0.0600	1.11	
Total BTEX	<0.006	0.006	02/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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*	1520	4.00	02/24/2022	ND	100	100	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*	226	50.0	02/28/2022	ND	18.6	92.8	20.0	2.66		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2900	5.00	03/01/2022	ND	496	99.2	500	1.94		

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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:	02/23/2022	Sampling Date:	02/18/2022
Reported:	03/01/2022	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 (H220701-03)**

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	02/28/2022	ND	0.020	100	0.0200	0.668	
Toluene*	<0.001	0.001	02/28/2022	ND	0.019	97.5	0.0200	0.0975	
Ethylbenzene*	<0.001	0.001	02/28/2022	ND	0.019	96.4	0.0200	1.06	
Total Xylenes*	<0.003	0.003	02/28/2022	ND	0.061	101	0.0600	1.11	
Total BTEX	<0.006	0.006	02/28/2022	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*	860	4.00	02/24/2022	ND	100	100	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*	133	25.0	02/28/2022	ND	18.6	92.8	20.0	2.66		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1640	5.00	03/01/2022	ND	496	99.2	500	1.94		

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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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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.

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

## ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

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 Vol:

TCLP Semi Volatiles

TCLP Pesticides

170

RCI

GC/MS Vol. 8260B/624

GC/MS Semi. Vol. 8270C/625

8082/608

8082/608

Pesticides 8081A/608

BOD, TSS, pH

Moisture Content

Cations (Ca, Mg, Na, K)

Anions (Cl, SO<sub>4</sub>, CO<sub>3</sub>, HCO<sub>3</sub>)

Sulfates

Total Dissolved Solids

Total Dissolved Solids

Chlorides

Turn Around Time ~ 24 Hours

Relinquished by: <i>James Johnson</i>	Date: <i>2/23/2022</i>	Time: <i>7:25</i>	Received by: <i>James Johnson</i>	Date: <i>2/23/2022</i>	Time: <i>7:26</i>												
Relinquished by: <i>James Johnson</i>	Date: <i>2/23/2022</i>	Time: <i>12:25</i>	Received by: (Laboratory Staff) <i>MICHAEL D. DICKER</i>	Date: <i>2-23-22</i>	Time: <i>12:25</i>												
Delivered By: (Circle One)			Sample Condition	CHECKED BY:													
amplifier - UPS - Bus - Other: <i>(UPS)</i>			<table border="1"> <tr> <td></td> <td>Cool</td> <td></td> <td>Intact</td> </tr> <tr> <td>Yes</td> <td><input checked="" type="checkbox"/></td> <td>Yes</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> <td>No</td> <td><input type="checkbox"/></td> </tr> </table>		Cool		Intact	Yes	<input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	No	<input type="checkbox"/>	<i>JD</i> (Initials)	
	Cool		Intact														
Yes	<input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>														
No	<input type="checkbox"/>	No	<input type="checkbox"/>														

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)

Page 6 of 6

Released to Imaging: 6/21/2023 9:03:49 AM



**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 202438

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 202438
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	1.Continue to gw monitor and sample quarterly per gw monitoring plan. 2. Await response from NMOCD on termination request.	6/21/2023