

APPROVED

RICE *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

April 1, 2021

Bradford Billings

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau

1220 S. St. Francis Drive

Santa Fe, New Mexico 87505

Review of 2020 Annual
Groundwater Report: **Content**
satisfactory

1. Continue sampling on a semi-annual schedule at a minimum
 2. OCD pre-approves eliminating MW #2 & MW #3 from further sampling
- Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31, 2022.

RE: 2020 Annual Groundwater Report

Rice Operating Company – BD SWD System

BD Jct. B-4-2 (1R426-204): UL/B, Sec. 4, T22S, R37E

Mr. Billings:

RICE Operating Company (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 1 mile south of Eunice, New Mexico at UL/B, Sec. 4, T22S, R37E as shown on the Geographical Location Map. Monitoring wells installed at the site confirmed groundwater is located at a depth of 92 feet below ground surface (bgs).

In 2008, ROC initiated work on the former B-4-2 junction box. The site was delineated using a backhoe to form a 30x25x12-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbon and chloride. The excavated soil was blended on site, and representative samples were collected from the excavation walls (4-wall comp), excavation bottom (bottom comp), and the blended excavated soil (backfill comp). Each sample was sent to a commercial laboratory for analysis of chloride and TPH, resulting in elevated concentrations. The excavation was backfilled with the blended excavated soil up to 5 ft bgs, and a 5 ft shelf was excavated to the east and west. At 5–4 ft bgs, a 40x25x1-ft thick compacted clay barrier was installed. The clay layer will provide a barrier that will inhibit the downward migration of chloride to groundwater. The remaining blended excavated soil was returned to the excavation and the site was contoured to the surrounding area.

An ICP was submitted to NMOCD on May 4th, 2015 and approved on May 7th, 2015. A total of eleven soil bores were drilled at the site on September 28th and 29th, 2015 and June 13th, 14th, 17th, 2016 and October 19th, 2016. As the bores were advanced, soil samples were collected at regular intervals and field tested for chloride and hydrocarbon. Representative samples from each bore were sent to a commercial laboratory for confirmatory analysis. Each sample was plugged with bentonite to ground surface.

A Corrective Action Plan (CAP) was submitted to the NMOCD and approved on June 30th, 2017. According to the NMOCD approved CAP, a 20-mil reinforced liner measuring 113x70-ft was installed and properly seated at a depth of 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 NMOCD on November 9th, 2017. NMOCD approved and 'Soil Closure' on December 11th, 2017.

Between November 13th-15th, 2018, three monitoring wells (MW-1, MW-2, and MW-3) were installed at the site. Lithology soil samples were collected at regular intervals. The wells were developed and have been sampled quarterly since installation. Groundwater chloride concentrations have remained low in each well. The most recent sampling event resulted in a chloride concentration of 248 mg/L in MW-1, 84 mg/L in MW-2, and 248 mg/L in MW-3. BTEX concentrations have remained below detectable limit in each well since installation. In 2020, ROC received NMOCD approval to cease BTEX sampling. ROC will continue quarterly sampling in 2021.

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 2020.

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

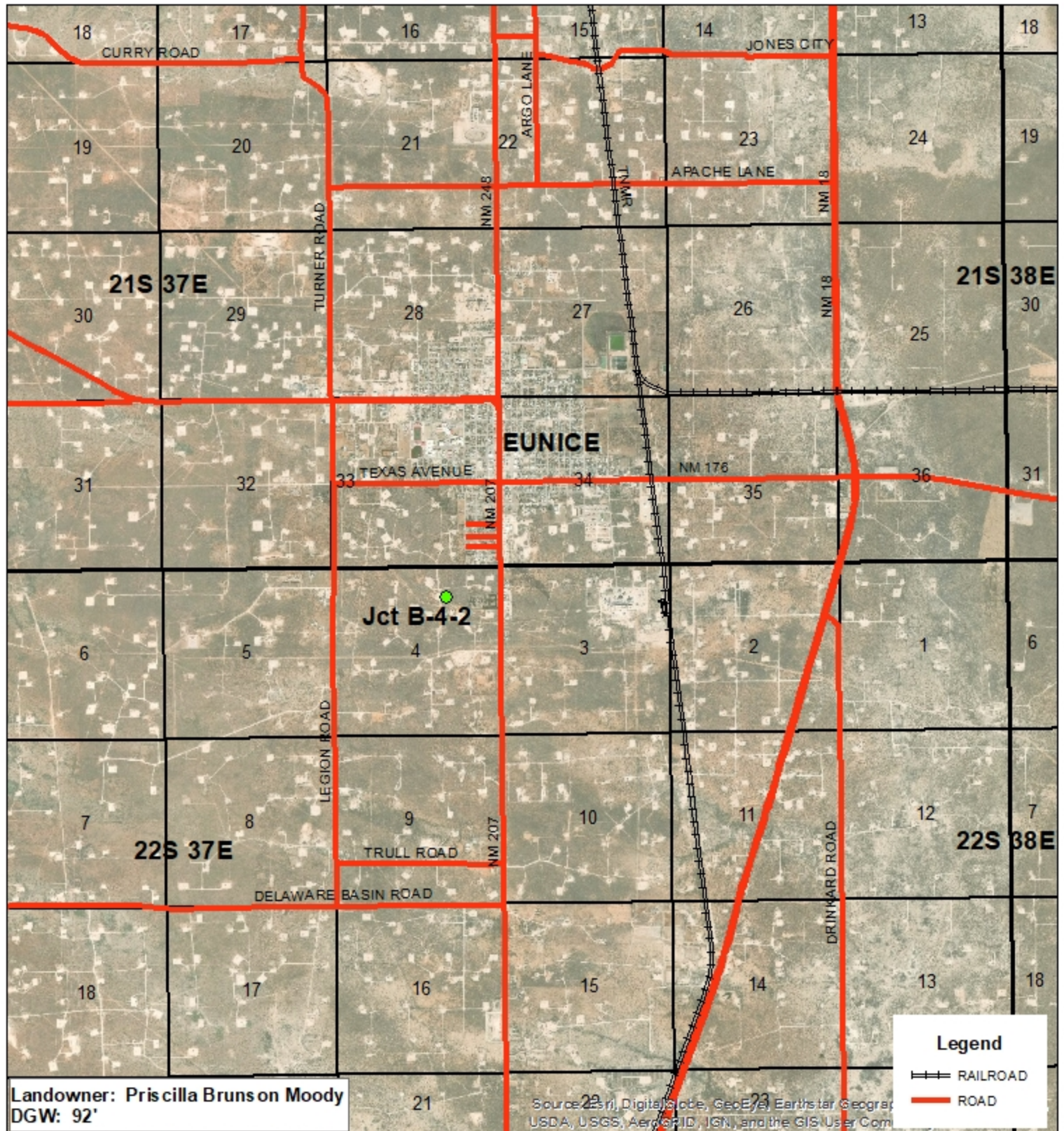
Sincerely,



Katie Davis
Environmental Manager
RICE Operating Company

appendix

Geographic Location Map



BD
JCT B-4-2
1R426-204

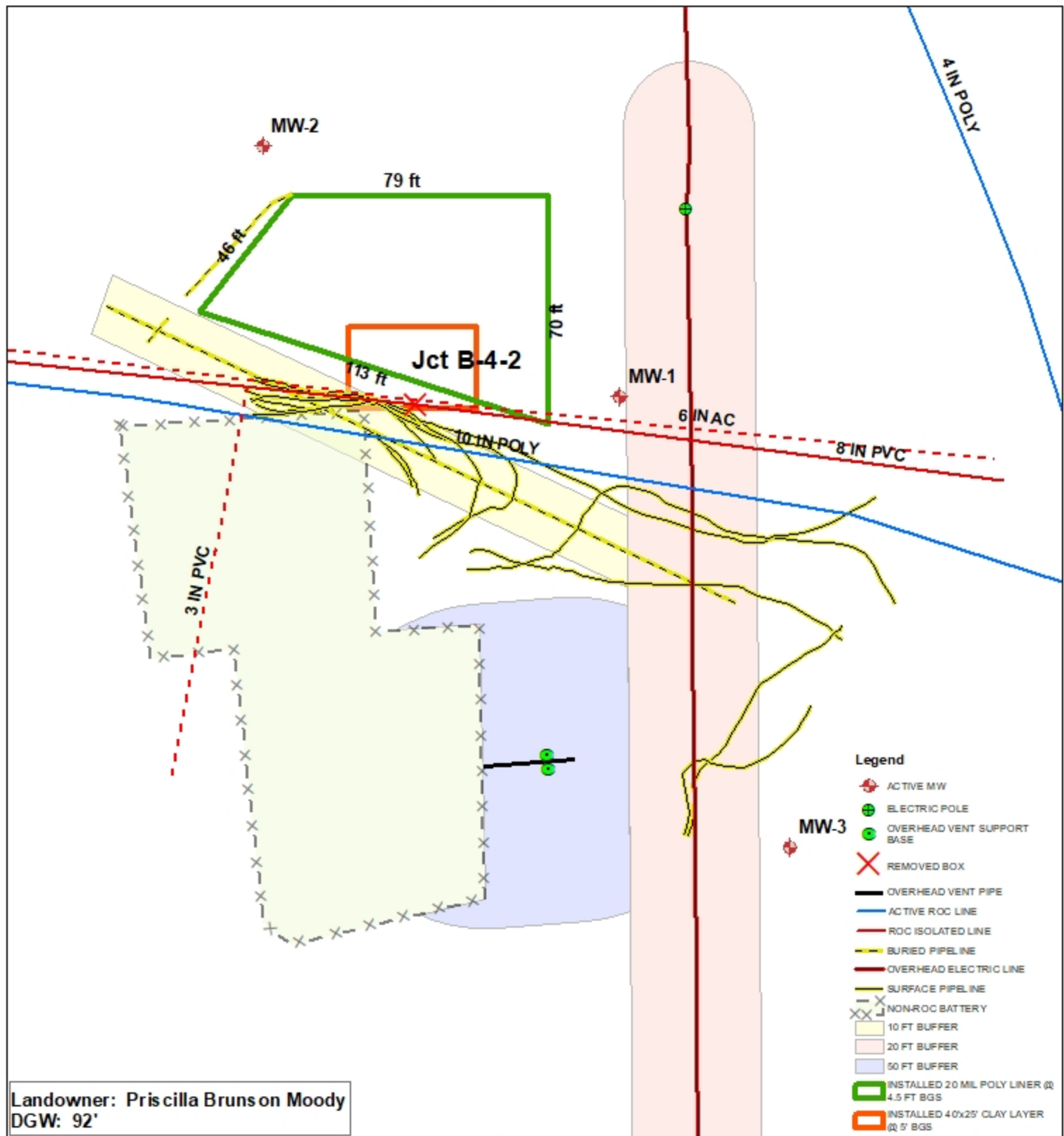
UL B, SECTION 4
T-22-S, R-37-E
LEA COUNTY, NM

GPS: 32.424613 -103.164313
NAD 83 STATE PLANE PROJ.
NEW MEXICO EAST ZONE

0 0.5 1
Miles

Drawing date: 3/11/2015
Drafted by: S. Edwards





BD
JCT B-4-2
 1R426-204

UL B, SECTION 4
 T-22-S, R-37-E
 LEA COUNTY, NM

GPS: 32.424613 -103.164313
 NAD 83 STATE PLANE PROJ.
 NEW MEXICO EAST ZONE

0 25 50
 Feet

Drawing date: 10/7/19
 Drafted by: T. Grieco



ROC - BD Jct. B-4-2 (1R426-204)

Unit Letter B, Section 4, T22S, R37E

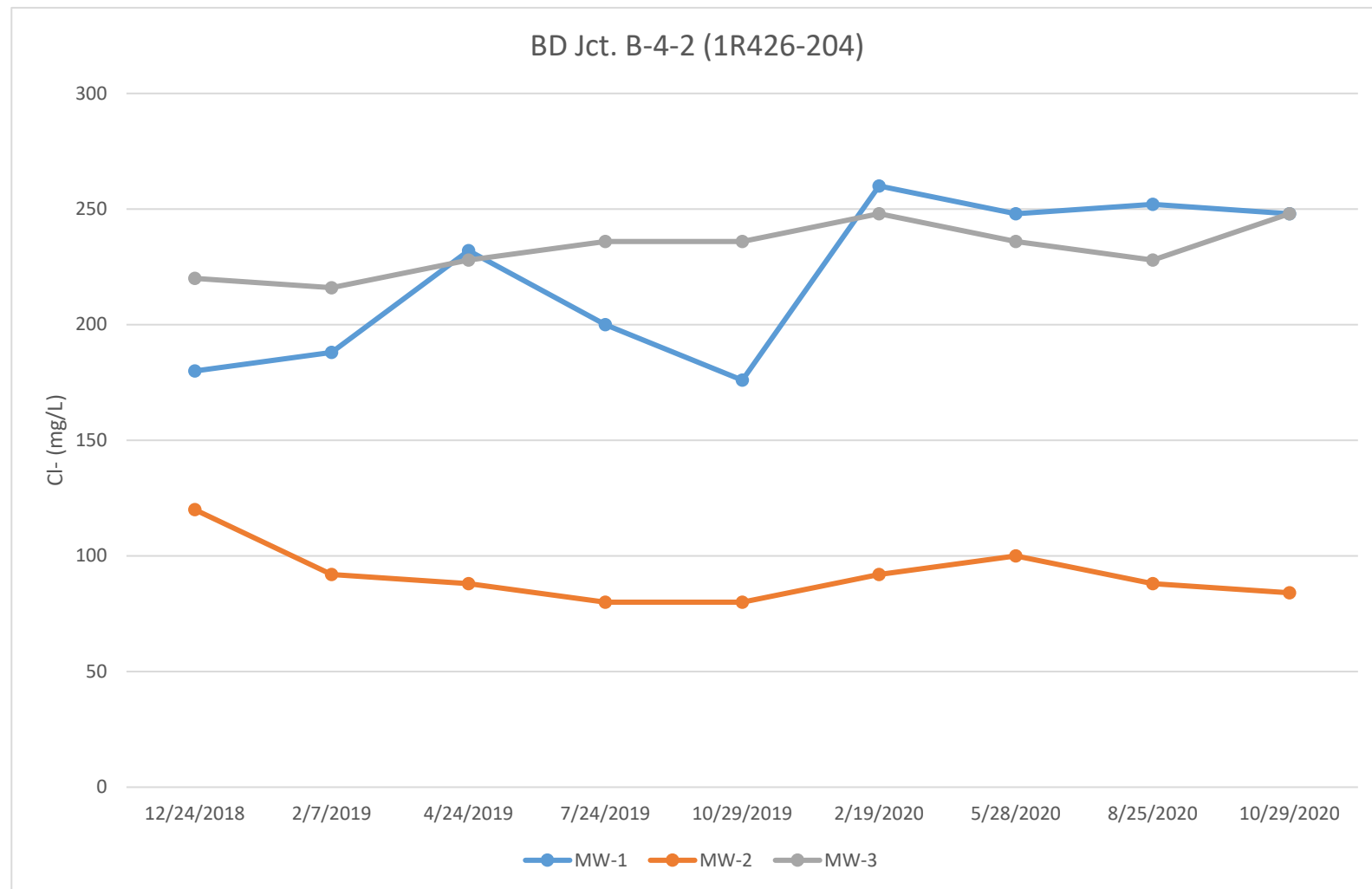
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	92.83	137.9	30	100	12/24/2018	180	759	<0.001	<0.001	<0.001	<0.003	272	Clear No odor
1	92.5	137.9	29.5	100	2/7/2019	188	841	<0.001	<0.001	<0.001	<0.003	349	Clear No odor
1	92.63	137.9	29.4	100	4/24/2019	232	866	<0.001	<0.001	<0.001	<0.003	151	Clear No odor
1	92.56	137.9	29.5	100	7/24/2019	200	1,030	<0.001	<0.001	<0.001	<0.003	291	Clear No odor
1	92.41	137.9	29.6	100	10/29/2019	176	963	<0.001	<0.001	<0.001	<0.003	253	Clear No odor
1	92.4	137.9	29.6	100	2/19/2020	260	983	<0.0005	<0.0005	<0.0005	<0.002	117	Clear No odor
1	92.43	137.9	29.6	100	5/28/2020	248	751	XXX	XXX	XXX	XXX	189	Clear No odor
1	92.34	137.9	29.6	100	8/25/2020	252	1,010	XXX	XXX	XXX	XXX	196	Clear No odor
1	92.35	137.9	29.6	100	10/29/2020	248	871	XXX	XXX	XXX	XXX	137	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	93.92	100.85	1.1	5	12/24/2018	120	574	<0.001	<0.001	<0.001	<0.003	179	Clear No odor
2	93.52	100.85	1.2	5	2/7/2019	92	650	<0.001	<0.001	<0.001	<0.003	155	Clear No odor
2	93.65	100.85	1.2	5	4/24/2019	88	646	<0.001	<0.001	<0.001	<0.003	124	Clear No odor
2	93.6	100.85	1.2	5	7/24/2019	80	577	<0.001	<0.001	<0.001	<0.003	180	Clear No odor
2	93.38	100.85	1.2	5	10/29/2019	80	569	<0.001	<0.001	<0.001	<0.003	101	Clear No odor
2	93.38	100.85	1.2	5	2/19/2020	92	598	<0.0005	<0.0005	<0.0005	<0.002	80.2	Clear No odor
2	93.41	100.85	1.2	5	5/28/2020	100	704	XXX	XXX	XXX	XXX	179	Clear No odor
2	93.32	100.85	1.2	5	8/25/2020	88	647	XXX	XXX	XXX	XXX	134	Clear No odor
2	93.38	100.85	1.2	5	10/29/2020	84	500	XXX	XXX	XXX	XXX	117	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	89.58	101.35	1.9	6	12/24/2018	220	807	<0.001	<0.001	<0.001	<0.003	187	Clear No odor
3	89.28	101.35	1.9	6	2/7/2019	216	916	<0.001	<0.001	<0.001	<0.003	177	Clear No odor
3	89.38	101.35	1.9	6	4/24/2019	228	906	<0.001	<0.001	<0.001	<0.003	144	Clear No odor
3	89.34	101.35	1.9	6	7/24/2019	236	915	<0.001	<0.001	<0.001	<0.003	158	Clear No odor

ROC - BD Jct. B-4-2 (1R426-204)**Unit Letter B, Section 4, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	89.19	101.35	1.9	6	10/29/2019	236	900	<0.001	<0.001	<0.001	<0.003	191	Clear No odor
3	89.15	101.35	2	6	2/19/2020	248	892	<0.0005	<0.0005	<0.0005	<0.002	91.2	Clear No odor
3	89.17	101.35	1.9	6	5/28/2020	236	944	XXX	XXX	XXX	XXX	188	Clear No odor
3	89.07	101.35	2	6	8/25/2020	228	936	XXX	XXX	XXX	XXX	140	Clear No odor
3	89.13	101.35	2	6	10/29/2020	248	824	XXX	XXX	XXX	XXX	141	Clear No odor





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

March 03, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION B-4-2

Enclosed are the results of analyses for samples received by the laboratory on 02/24/20 14:22.

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

Cardinal Laboratories is 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 fluid and cursive, with the first name "Celey" and last name "Keene" clearly legible.

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:	02/24/2020	Sampling Date:	02/19/2020
Reported:	03/03/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H000576-01)

BTEX 8260B		mg/L		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.0005	0.0005	02/28/2020	ND	0.019	92.8	0.0200	3.68	
Toluene*	<0.0005	0.0005	02/28/2020	ND	0.020	97.6	0.0200	6.84	
Ethylbenzene*	<0.0005	0.0005	02/28/2020	ND	0.021	103	0.0200	6.05	
Total Xylenes*	<0.002	0.002	02/28/2020	ND	0.065	108	0.0600	5.88	
Total BTEX	<0.003	0.003	02/28/2020	ND					

Surrogate: Dibromofluoromethane 103 % 89.2-112

Surrogate: Toluene-d8 106 % 92-106

Surrogate: 4-Bromofluorobenzene 96.6 % 80.4-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	260	4.00	02/26/2020	ND	100	100	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*	117	25.0	02/26/2020	ND	20.5	102	20.0	6.89	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	983	5.00	02/26/2020	ND	541	108	500	0.819	

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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:	02/24/2020	Sampling Date:	02/19/2020
Reported:	03/03/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H000576-02)

BTEX 8260B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.0005	0.0005	02/28/2020	ND	0.019	92.8	0.0200	3.68		
Toluene*	<0.0005	0.0005	02/28/2020	ND	0.020	97.6	0.0200	6.84		
Ethylbenzene*	<0.0005	0.0005	02/28/2020	ND	0.021	103	0.0200	6.05		
Total Xylenes*	<0.002	0.002	02/28/2020	ND	0.065	108	0.0600	5.88		
Total BTEX	<0.003	0.003	02/28/2020	ND						

Surrogate: Dibromofluoromethane 104 % 89.2-112
 Surrogate: Toluene-d8 102 % 92-106
 Surrogate: 4-Bromofluorobenzene 97.8 % 80.4-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	92.0	4.00	02/26/2020	ND	100	100	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*	80.2	25.0	02/26/2020	ND	20.5	102	20.0	6.89		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	598	5.00	02/28/2020	ND	526	105	500	8.49		

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*=Accredited Analyte

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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:	02/24/2020	Sampling Date:	02/19/2020
Reported:	03/03/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H000576-03)

BTEX 8260B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.0005	0.0005	02/29/2020	ND	0.019	92.8	0.0200	3.68		
Toluene*	<0.0005	0.0005	02/29/2020	ND	0.020	97.6	0.0200	6.84		
Ethylbenzene*	<0.0005	0.0005	02/29/2020	ND	0.021	103	0.0200	6.05		
Total Xylenes*	<0.002	0.002	02/29/2020	ND	0.065	108	0.0600	5.88		
Total BTEX	<0.003	0.003	02/29/2020	ND						

Surrogate: Dibromofluoromethane 103 % 89.2-112

Surrogate: Toluene-d8 101 % 92-106

Surrogate: 4-Bromofluorobenzene 93.9 % 80.4-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	248	4.00	02/26/2020	ND	96.0	96.0	100	4.08	QM-07	

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	91.2	25.0	02/26/2020	ND	20.5	102	20.0	6.89		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	892	5.00	02/28/2020	ND	526	105	500	8.49		

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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 "Celey D. Keene".

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.)

Project #: (575) 631-1471
Project Name: BD Junction B-4-2
Project Location: T22S R37E Sec2 B ~ Lea County New Mexico
Sampler Signature: Rozanne Johnson (575) 631-9310

[illegible]

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

Sample Condition	CHECKED BY:
------------------	-------------

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

(Initials) T

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



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

June 04, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION B-4-2

Enclosed are the results of analyses for samples received by the laboratory on 06/01/20 14:35.

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.

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:	06/01/2020	Sampling Date:	05/28/2020
Reported:	06/04/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H001475-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	248	4.00	06/02/2020	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*	189	50.0	06/02/2020	ND	20.1	101	20.0	0.890		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	751	5.00	06/03/2020	ND	540	108	500	0.777		

Sample ID: MONITOR WELL #2 (H001475-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	100	4.00	06/02/2020	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*	179	50.0	06/02/2020	ND	20.1	101	20.0	0.890		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	704	5.00	06/03/2020	ND	540	108	500	0.777		

Cardinal Laboratories

*=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



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:	06/01/2020	Sampling Date:	05/28/2020
Reported:	06/04/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H001475-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	236	4.00	06/02/2020	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*	188	50.0	06/02/2020	ND	20.1	101	20.0	0.890		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	944	5.00	06/03/2020	ND	540	108	500	0.777		

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in cursive script, 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 # _____

Company Name: RICE Operating Company		BILL TO Company: RICE Operating Company		PO#	
Project Manager: Katie Jones		Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240			
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		Phone#: (575) 393-9174		Fax#: (575) 397-1471	
Phone #: (575) 393-9174		Fax #: (575) 397-1471			

Project #: Project Name:
BD Junction B-4-2 2/17

Project Location: T22S R37E Sec2 B ~ Lea County New Mexico

Sampler Signature: Rozanne Johnson (575)631-9310

[illegible]

Relinquished by: 	Date: 6/1/2020	Time: 14:35	Received by: 	Date: 6-1-2014	Time:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

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

CHECKED BY:

(Initials)

7c

Phone Results	Yes	No
---------------	-----	----

Fax Results		Yes		No
-------------	--	-----	--	----

REMARKS:

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



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

September 04, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION B-4-2

Enclosed are the results of analyses for samples received by the laboratory on 08/27/20 10:20.

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.

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:	08/27/2020	Sampling Date:	08/25/2020
Reported:	09/04/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H002262-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	252	4.00	08/28/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	196	25.0	08/27/2020	ND	16.1	80.7	20.0	0.871		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1010	5.00	09/02/2020	ND	864	86.4	1000	5.66		

Sample ID: MONITOR WELL #2 (H002262-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	88.0	4.00	08/28/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	134	25.0	08/27/2020	ND	16.1	80.7	20.0	0.871		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	647	5.00	09/02/2020	ND	864	86.4	1000	5.66		

Cardinal Laboratories

*=Accredited Analyte

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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:	08/27/2020	Sampling Date:	08/25/2020
Reported:	09/04/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H002262-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	228	4.00	08/28/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	140	25.0	08/27/2020	ND	16.1	80.7	20.0	0.871		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	936	5.00	09/02/2020	ND	864	86.4	1000	5.66		

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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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.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

ANALYSIS REQUEST

(Circle or Specify Method No.)

Company Name: RICE Operating Company		BILL TO Company: RICE Operating Company		PO#	
Project Manager: Katie Jones		Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240			
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		Phone#: (575) 393-9174		Fax#: (575) 397-1471	
Phone #: (575) 393-9174		Fax #: (575) 397-1471			

Project #: Project Name:
BD Junction B-4-2

Project Location: Sampler Signature: Rozanne Johnson (575) 631-9310
T22S R37E Sec2 B ~ Lea County New Mexico

[illegible]

Relinquished by: <u>Rozanne Johnson</u>	Date: <u>8-27-2020</u>	Time: <u>10:15</u>	Received by: <u>Kenneth J. Baker</u>	Date: <u>8-27-20</u>	Time: <u>1020</u>
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

Delivered By: (Circle One)	Sample Condition <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">Cool</td> <td></td> <td style="text-align: center;">Intact</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">No</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;">No</td> <td style="text-align: center;"><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"/>	CHECKED BY: (Initials)
	Cool		Intact											
Yes	<input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>											
No	<input type="checkbox"/>	No	<input type="checkbox"/>											
Sampler - UPS - Bus - Other:														

[illegible]

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

REMARKS:	
Email Results:	kjones@riceswd.com rozanne@sdacres.com



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

November 09, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION B-4-2

Enclosed are the results of analyses for samples received by the laboratory on 11/02/20 15:35.

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.

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:	11/02/2020	Sampling Date:	10/29/2020
Reported:	11/09/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H002888-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	248	4.00	11/03/2020	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*	137	25.0	11/05/2020	ND	23.8	119	20.0	6.41		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	871	5.00	11/06/2020	ND	553	111	500	4.83		

Sample ID: MONITOR WELL #2 (H002888-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	84.0	4.00	11/03/2020	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*	117	25.0	11/05/2020	ND	23.8	119	20.0	6.41		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	500	5.00	11/06/2020	ND	553	111	500	4.83		

Cardinal Laboratories

*=Accredited Analyte

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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:	11/02/2020	Sampling Date:	10/29/2020
Reported:	11/09/2020	Sampling Type:	Water
Project Name:	BD JUNCTION B-4-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S-R37E-SEC2 B-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H002888-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	248	4.00	11/03/2020	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*	141	25.0	11/05/2020	ND	23.8	119	20.0	6.41		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	824	5.00	11/06/2020	ND	553	111	500	4.83		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

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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.

Company Name: RICE Operating Company		BILL TO Company: RICE Operating Company		PO#
Project Manager: Katie Jones		Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		Phone#: (575) 393-9174		Fax#: (575) 397-1471
Phone #: (575) 393-9174		Fax #: (575) 397-1471		
Project #:		Project Name: BD Junction B-4-2		
Project Location: T22S R37E Sec2 B ~ Lea County New Mexico		Sampler Signature: Rozanne Johnson (575) 631-9310		

[illegible]

Relinquished by: 	Date: 11/2/2020	Time: 15:35	Received by: 	Date: 11-2-20	Time: 1535
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

Delivered By: (Circle One)	Sample Condition <table style="width: 100%; text-align: center;"> <tr> <td></td> <td>Cool</td> <td>Intact</td> </tr> <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> </table>		Cool	Intact	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	<input type="checkbox"/>	CHECKED BY: (Initials) 
	Cool	Intact									
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
No	<input type="checkbox"/>	<input type="checkbox"/>									
Sampler - UPS - Bus - Other:											

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

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

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Page 5 of 5

Turn Around Time ~ 24 Hours

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

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

CONDITIONS

Action 23952

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 23952
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2020 Annual Groundwater Report: Content satisfactory 1. Continue sampling on a semi-annual schedule at a minimum 2. OCD pre-approves eliminating MW #2 & MW #3 from further sampling 3. Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31,2022.	2/4/2022