# 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

> 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 4<sup>th</sup>, 2015 and approved on May 7<sup>th</sup>, 2015. A total of eleven soil bores were drilled at the site on September 28<sup>th</sup> and 29<sup>th</sup>, 2015 and June 13<sup>th</sup>, 14<sup>th</sup>, 17<sup>th</sup>, 2016 and October 19<sup>th</sup>, 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.



Review of 2020 Annual Groundwater Report: <u>Content</u> 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.

A Corrective Action Plan (CAP) was submitted to the NMOCD and approved on June 30<sup>th</sup>, 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 9<sup>th</sup>, 2017. NMOCD approved and 'Soil Closure' on December 11<sup>th</sup>, 2017.

Between November 13<sup>th</sup>-15<sup>th</sup>, 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,

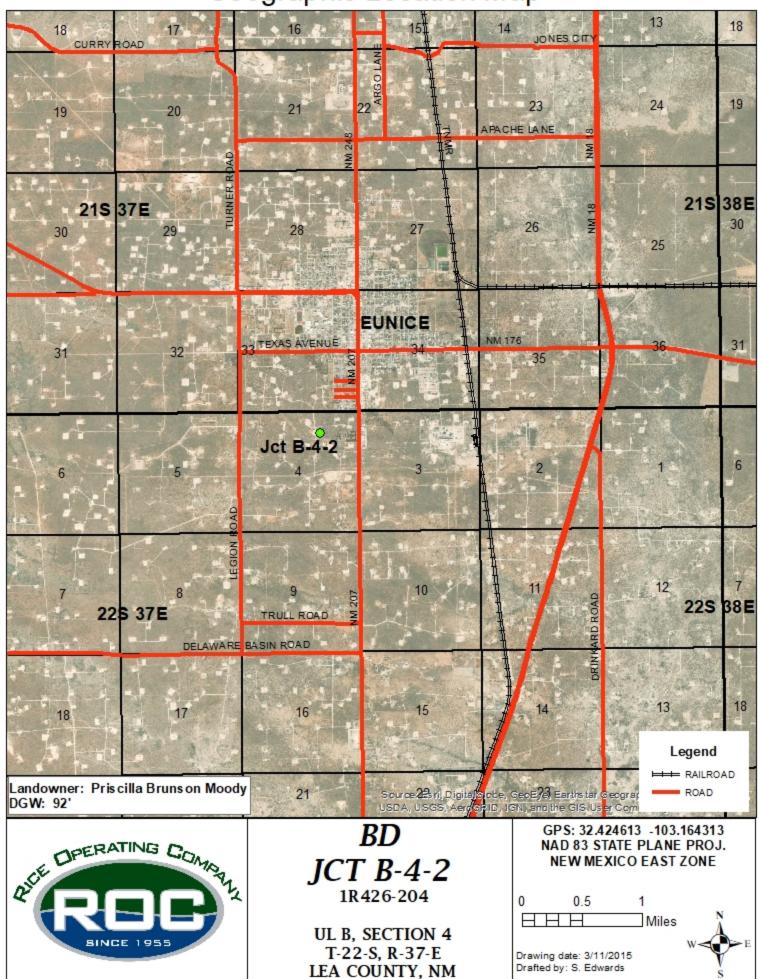
Katie Davis

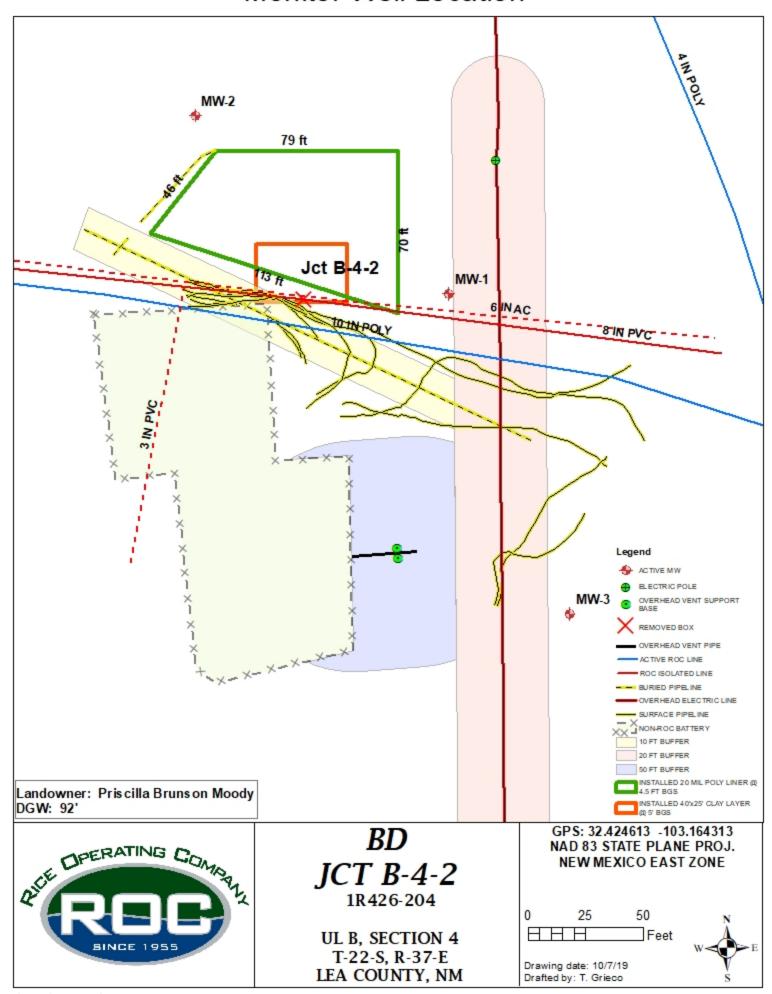
Environmental Manager

**RICE Operating Company** 

Katy Davis

appendix





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

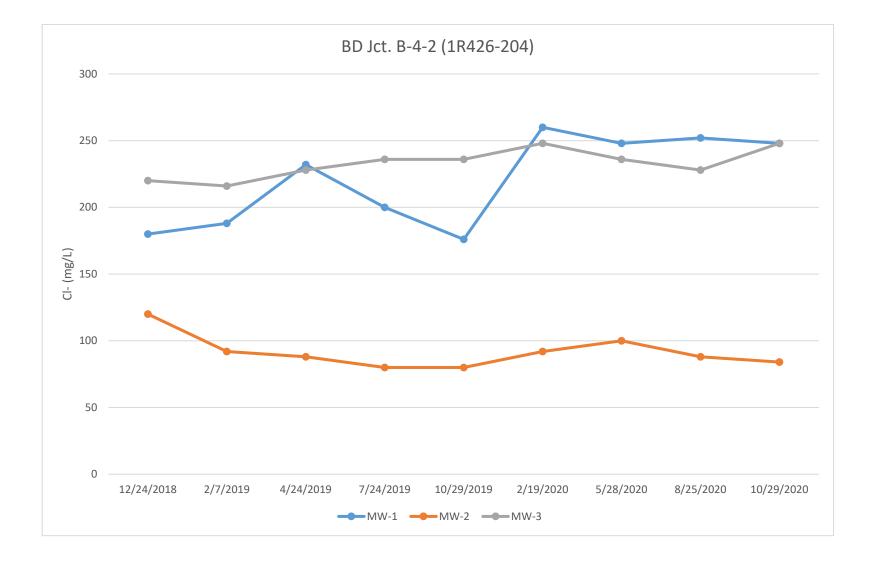
MW	Depth to	Total	Well	Volume	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl	Total	Sulfato	Comments
IVIVV	Water	Depth	Volume	Purged	Sample Date	G	103	belizelle	Toluelle	Benzene	Xylenes	Sulfate	Comments
1	92.83	137.9	30	100	12/24/2018	180	759	<0.001	<0.001	<0.001	<0.003	272	Clear No odor
1	92.5	137.9	29.5	100	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	Total	Well	Volume	Sample Date	Cl	TDS	Ponzono	Toluene	Ethyl	Total	Culfata	Comments
IVIVV	Water	Depth	Volume	Purged	Sample Date	Ci	נטו	Benzene	Toluelle	Benzene	Xylenes	Sullate	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	Total	Well	Volume	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl	Total	Culfata	Comments
IVIVV	Water	Depth	Volume	Purged	Sample Date	Ci	נטו	benzene	Toluelle	Benzene	Xylenes	Sullate	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





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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

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

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

Accreditation applies to public drinking water matrices.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

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

Received: 02/24/2020

03/03/2020

Project Name: BD JUNCTION B-4-2
Project Number: NONE GIVEN

Project Location: T22S-R37E-SEC2 B-LEA CTY., NM

Sampling Date: 02/19/2020

Sampling Type: Water

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

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

Reported:

DTEV 0260D

BTEX 8260B	mg/	L	Analyze	d 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 9	% 89.2-11	2						
Surrogate: Toluene-d8	106 9	% 92-106	i						
Surrogate: 4-Bromofluorobenzene	96.6	% 80.4-12	4						
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	Analyze	d 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	Analyze	d 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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Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240

Fax To: (575) 397-1471

Received: 02/24/2020
Reported: 03/03/2020
Project Name: BD JUNCTION B-4-2
Project Number: NONE GIVEN

Sampling Type: Sampling Condition: Sample Received By:

Sampling Date:

Water
Cool & Intact
Tamara Oldaker

02/19/2020

Project Location: T22S-R37E-SEC2 B-LEA CTY., NM

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

BTEX 8260B	mg/	'L	Analyze	d 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 9	% 89.2-11	2						
Surrogate: Toluene-d8	102 9	% 92-100	í						
Surrogate: 4-Bromofluorobenzene	97.8	% 80.4-12	4						
Chloride, SM4500CI-B	mg/	'L	Analyze	d 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	Analyze	d 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	Analyze	d 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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Celey D. Keine



## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240

Fax To: (575) 397-1471

Received: 02/24/2020 Reported: 03/03/2020 Project Name: BD JUNCTION B-4-2 Project Number: NONE GIVEN

Sampling Type: Sampling Condition: Sample Received By:

Sampling Date:

Cool & Intact Tamara Oldaker

02/19/2020

Water

Project Location: T22S-R37E-SEC2 B-LEA CTY., NM

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

BTEX 8260B	mg/	L	Analyze	d 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 9	% 89.2-11.	2						
Surrogate: Toluene-d8	101 9	92-106	í						
Surrogate: 4-Bromofluorobenzene	93.9	% 80.4-12	4						
Chloride, SM4500CI-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d 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. Keine



#### **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  $6^{\circ}\text{C}$ 

Samples reported on an as received basis (wet) unless otherwise noted on report

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Fax (575) 393-2476 Company Name:	TIES.						LU			39	11	IC.						LAE	Ord	er ID	#_												
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Project Manager:		RIC	EC	pera	ating	g Co	mp	any												JAL													
Katie Jones					7.3.3.3.1						City, Zip	0)		7	r 1		î	ě	(Circ	ie or	Spe	city	Meth	l bor	Vo.)								
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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 <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Celey D. Keine

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-14

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	Analyze	d 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	Analyze	d 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	Analyze	d 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	Analyze	d 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	Analyze	d 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	Analyze	d 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

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Celeg & Freene



## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240

Fax To: (575) 397-1471

 Received:
 06/01/2020

 Reported:
 06/04/2020

 Project Name:
 BD JUNCTION B-4-2

NONE GIVEN T22S-R37E-SEC2 B-LEA CTY., NM Sampling Date:
Sampling Type:
Sampling Condition:

Water Cool & Intact Tamara Oldaker

05/28/2020

Sample Received By:

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

Project Number:

Project Location:

Chloride, SM4500Cl-B	mg	/L	Analyze	d 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	Analyze	d 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	Analyze	d 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	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene

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Released to Imaging: 2/4/2022 12:25:54 PM



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 <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

Rice Operating Company 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	Analyze	d 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	Analyze	d 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	Analyze	d 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, SM4500CI-B	mg	/L	Analyze	d 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	Analyze	d 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	Analyze	d 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. Keine



## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240

Fax To: (575) 397-1471

 Received:
 08/27/2020

 Reported:
 09/04/2020

 Project Name:
 BD JUNCTION B-4-2

NONE GIVEN
T22S-R37E-SEC2 B-LEA CTY., NM

Sampling Date: Sampling Type: Sampling Condition: Sample Received By: 08/25/2020 Water Cool & Intact

Tamara Oldaker

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

Project Number:

Project Location:

Chloride, SM4500Cl-B	mg	/L	Analyze	d 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	Analyze	d 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	Analyze	d 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	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Kreine



## **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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Celey D. Keene

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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 <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

Celey D. Keene

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

Rice Operating Company 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	Analyze	d 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	Analyze	d 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	Analyze	d 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, SM4500CI-B	mg	/L	Analyze	d 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	Analyze	d 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	Analyze	d 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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Celeg & Freene



10/29/2020

Cool & Intact

Tamara Oldaker

Water

## Analytical Results For:

Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240

Fax To: (575) 397-1471

Received: 11/02/2020
Reported: 11/09/2020
Project Name: BD JUNCTION B-4-2
Project Number: NONE GIVEN

11/09/2020Sampling Type:BD JUNCTION B-4-2Sampling Condition:NONE GIVENSample Received By:

Sampling Date:

Project Location: T22S-R37E-SEC2 B-LEA CTY., NM

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

Chloride, SM4500CI-B	mg	/L	Analyze	d 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	Analyze	d 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	Analyze	d 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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## **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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Celey D. Keine

Page 1 of 1

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland - Hobbs, NM 88240 Tel (575) 393-2326 Fax (575) 393-2476	lal		al	b	r	a	to	ri	e	5,	I	n	c.		Γ				LAI	ВО	rder	ID#	_											5 of
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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

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 23952

# **CONDITIONS**

Operator:	OGRID:
RICE OPERATING COMPANY	19174
122 W Taylor	Action Number:
Hobbs, NM 88240	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