# L Peter Galusky, Jr PE

5935 Exeter Circle Norcross, GA 30071 | 470 955-5335 | peter@bluerock.pro

## **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 87504

### **RE: 2020 Annual Report**

Rice Operating Company Vacuum K-35-1 Boot, UL K, Sec 35, T17S, R35E OCD Case Number 1R425-03

Sent by E-mail

Mr. Billings:

This letter summarizes remediation history and progress made for this project over the past calendar year. Location and site schematic maps are given in the Appendix (Figures 1 and 2, respectively).

OCD granted termination of soil remediation requirements (soil closure) on October 13<sup>th</sup>, 2011, allowing for the cessation of groundwater withdrawals and stipulating that groundwater monitoring must continue semi-annually at wells MW-2, MW-3 and MW-4.

A Groundwater Recovery Notification was submitted to the NMOCD on September 4<sup>th</sup>, 2013 and NMOCD approved the notification on September 5<sup>th</sup>, 2013. Groundwater recovery began from RW-1 on September 13<sup>th</sup>, 2013. According to the NMOCD approved Groundwater Recovery Notification, ROC began sampling all the wells (MW-1, MW-2, MW-3, MW-4, and RW-1) on a semi-annual (twice a year) basis in 2013, and a quarterly basis in 2014. In 2020, NMOCD granted approval to temporarily cease groundwater recovery and reduce the sampling interval to semi-annual.

Brief Summary of Groundwater Monitoring and Present Status

• Approximately 32,110 barrels of chloride-affected groundwater have been withdrawn from a near-source recovery well (RW-1) over the period June 2008 through November 2019 resulting in the removal of an estimated 2,359 kg of chlorides (Appendix - Figure 3).

## Rice Operating Company Vacuum K-35-1 Boot Annual Report

Recovered groundwater has been used for a purposeful use. Groundwater withdrawal did not take place during 2020.

- The average annual groundwater chloride concentration in the near/at-source monitor well, MW-4, remained low at 137 mg/l in 2019 and 136 mg/l in 2020 (Appendix Figure 3, Table 1).
- The average annual groundwater chloride concentration in the down-gradient monitor well, MW-2 dropped from 50 mg/l in 2019 to 40 mg/l in 2020 (Appendix Table 1).
- The average annual groundwater chloride concentration in the down-gradient recovery well, RW-1, dropped from 269 mg/l in 2019 to 238 mg/l in 2020. (Appendix Figure 3, Table 1).
- The average annual groundwater chloride concentration in the up-gradient monitor well (MW-3) was little changed, measuring 307 mg/l in 2019 vs 304 mg/l in 2020. (Appendix Figure 3, Table 1).

ROC will continue quarterly groundwater sampling and groundwater recovery during 2021, reporting to NMOCD the results by April of next year. At that point we will propose a path forward to include a recommendation as to whether groundwater withdrawals should continue or whether the pumping objectives have been essentially met.

ROC is the service provider (agent) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The Vacuum SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Please do not hesitate to contact either myself or Rice Operating Company if you have any questions or need additional information.

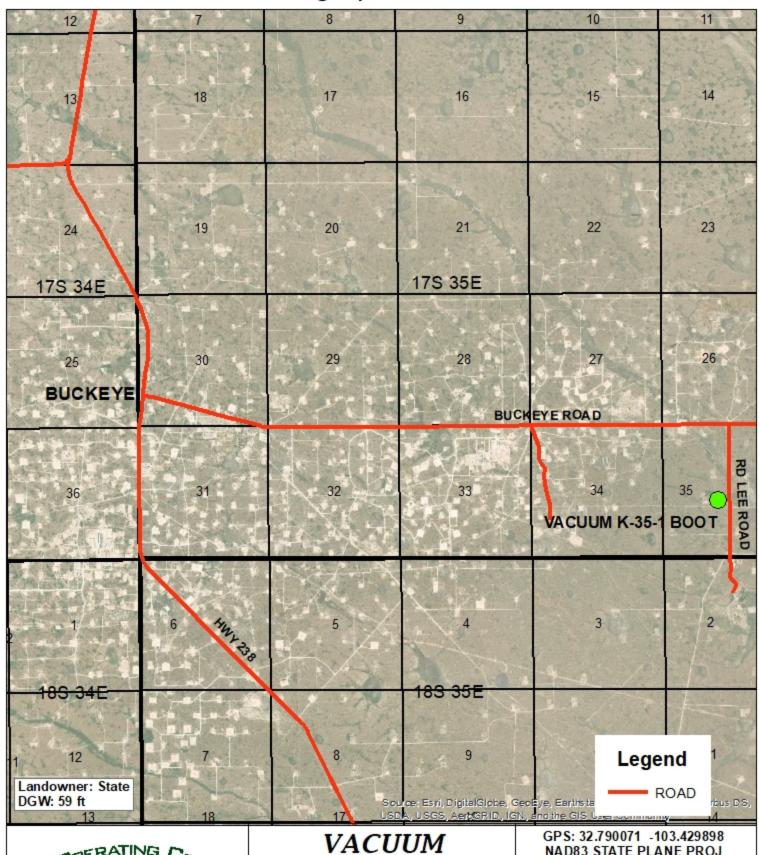
Sincerely,

L. Peter Galusky, Jr. P.E. NM Prof. Engineer No. 22561

Copy: Rice Operating Company Attachments: ... as noted, above.



# Geographic Location



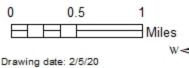


# K-35-1 JCT BOOT

1R425-03

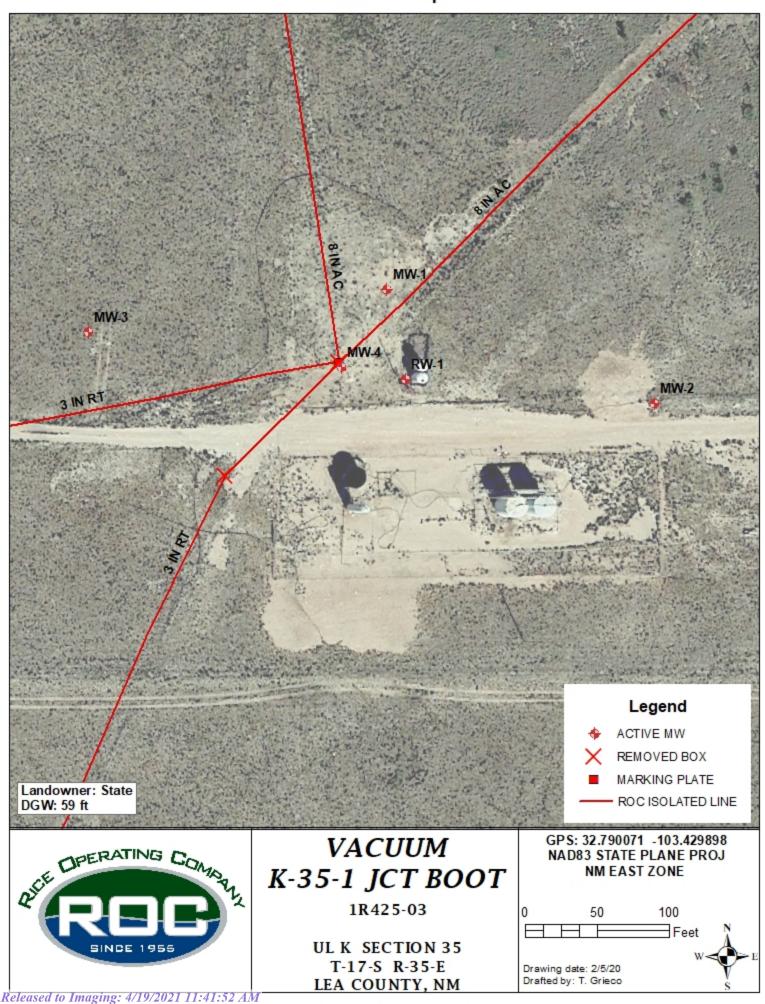
**ULK SECTION 35** T-17-S R-35-E LEA COUNTY, NM

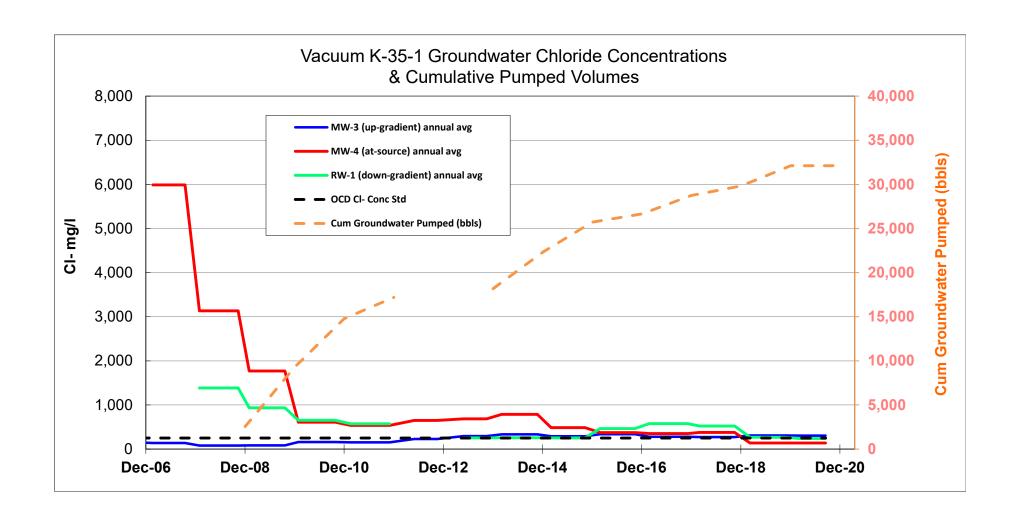
NAD83 STATE PLANE PROJ NM EAST ZONE



Drafted by: T. Grieco

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# Vacuum K-35-1 Groundwater Data

# Groundwater Chloride Conc (mg/l)

								MW-4 (at-	
	MW-1					MW-3 (up-		source)	
	(downgradient	MW-1 annual	MW-2 (down-	MW-2	MW-3 (up-	gradient)	MW-4 (at-	annual	RW-1 (down-
Date	well)	avg	gradient well)	annual avg	gradient)	annual avg	source)	avg	gradient)
6/28/06	508	684	32	29	140	153			
10/19/06	859	684	26	29	165	153			
2/21/07	1,080	1,138	29	27	178	138	6,770	5,988	
5/22/07	923	1,138	25	27	128	138	6,390	5,988	
8/7/07	1,150	1,138	27	27	134	138	6,790	5,988	
10/16/07	1,400	1,138	28	27	112	138	4,000	5,988	
1/30/08	1,300	1,330	80	43	88	81	4,550	3,135	
4/30/08	1,440	1,330	32	43	84	81	3,450	3,135	1,880
7/30/08	1,360	1,330	32	43	76	81	2,580	3,135	1,070
11/10/08	1,220	1,330	28	43	76	81	1,960	3,135	1,200
1/30/09	1,280	1,210	28	28	76	83	2,080	1,770	1,680
5/1/09	1,420	1,210	28	28	84	83	2,300	1,770	750
8/4/09	940	1,210	28	28	72	83	1,500	1,770	580
10/20/09	1,200	1,210	28	28	100	83	1,200	1,770	730
1/27/10	1,180	795	32	32	152	157	460	608	490
4/28/10	460	795	32	32	128	157	800	608	1,220
7/29/10	980	795	32	32	184	157	650	608	570
10/26/10	560	795	32	32	164	157	520	608	332
2/16/11	800	662	32	34	128	152	680	535	750
6/1/11	396	662	32	34	148	152	380	535	476
8/30/11	352	662	32	34	156	152	380	535	490
12/1/11	1,100	662	40	34	176	152	700	535	
5/29/12			36	36	204	228	610	650	
11/15/12			36	36	252	228	690	650	
5/28/13			36	36	280	294	650	685	212
11/15/13	1,040	1,040	36	36	308	294	720	685	300
3/4/14	920	733	32	36	312	333	870	788	364
6/3/14	800	733	36	36	356	333	810	788	300
8/28/14	750	733	44	36	328	333	830	788	292
11/21/14	460	733	32	36	336	333	640	788	84



3/3/15	499	423	40	44	304	288	750	486	252
6/3/15	470	423	60	44	244	288	510	486	240
8/22/15	292	423	36	44	284	288	340	486	292
11/8/15	432	423	40	44	320	288	344	486	220
2/26/16	830	630	48	46	430	337	440	372	570
5/21/16	740	630	32	46	284	337	280	372	620
9/10/16	520	630	36	46	332	337	336	372	368
11/10/16	430	630	68	46	300	337	430	372	292
2/22/17	850	968	40	54	280	279	256	352	690
5/25/17	960	968	84	54	296	279	392	352	810
9/16/17	1,040	968	60	54	320	279	460	352	156
12/2/17	1,020	968	32	54	220	279	300	352	652
2/28/18	1,300	1,305	44	39	328	274	320	376	680
5/15/18	1,300	1,305	36	39	180	274	228	376	820
9/8/18	1,120	1,305	36	39	288	274	610	376	112
11/13/18	1,500	1,305	40	39	300	274	344	376	480
3/6/19	870	748	44	50	324	307	128	137	820
5/29/19	900	748	32	50	312	307	132	137	108
9/6/19	640	748	48	50	320	307	148	137	108
11/16/19	580	748	76	50	272	307	140	137	40
3/7/20	328	358	40	40	312	304	132	136	212
9/12/20	388	358	40	40	296	304	140	136	264



March 16, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION K-35-1

Enclosed are the results of analyses for samples received by the laboratory on 03/10/20 13:58.

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: 03/10/2020 Sampling Date: 03/07/2020 Reported: 03/16/2020 Sampling Type: Water

Project Name: VACUUM JUNCTION K-35-1 Sampling Condition: Cool & Intact
Project Number: NOT GIVEN Sample Received By: Tamara Oldaker

Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

#### Sample ID: MONITOR WELL #1 (H000749-01)

Chloride, SM4500CI-B	mg	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	328	4.00	03/11/2020	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*	71.8	10.0	03/12/2020	ND	21.5	107	20.0	1.41	
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	03/16/2020	ND	548	110	500	0.263	

#### Sample ID: MONITOR WELL #2 (H000749-02)

Chloride, SM4500CI-B	mg	/L	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	40.0	4.00	03/11/2020	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*	57.1	10.0	03/12/2020	ND	21.5	107	20.0	1.41	
TDS 160.1	mg	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	422	5.00	03/16/2020	ND	548	110	500	0.263	

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 whistoever 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. Keine



#### Analytical Results For:

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

Fax To: (575) 397-1471

Received: 03/10/2020 Reported: 03/16/2020

Project Name: VACUUM JUNCTION K-35-1

Project Number: NOT GIVEN

Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

Sampling Date: 03/07/2020 Sampling Type: Water

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

#### Sample ID: MONITOR WELL #3 (H000749-03)

Chloride, SM4500Cl-B	mg,	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	312	4.00	03/11/2020	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*	97.8	25.0	03/12/2020	ND	21.5	107	20.0	1.41	
TDS 160.1	mg,	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	810	5.00	03/16/2020	ND	548	110	500	0.263	

#### Sample ID: MONITOR WELL #4 (H000749-04)

Chloride, SM4500CI-B	mg	/L	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	132	4.00	03/11/2020	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*	77.6	10.0	03/12/2020	ND	21.5	107	20.0	1.41	
TDS 160.1	mg	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	543	5.00	03/16/2020	ND	548	110	500	0.263	

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Celey D. Keene



03/07/2020

Water

#### Analytical Results For:

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

Fax To: (575) 397-1471

Received: 03/10/2020 Sampling Date:
Reported: 03/16/2020 Sampling Type:

Project Name: VACUUM JUNCTION K-35-1 Sampling Condition: Cool & Intact
Project Number: NOT GIVEN Sample Received By: Tamara Oldaker

Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

#### Sample ID: RECOVERY WELL #1 (H000749-05)

Chloride, SM4500CI-B	mg	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	212	4.00	03/11/2020	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*	68.6	10.0	03/12/2020	ND	21.5	107	20.0	1.41	
TDS 160.1	mg	/L	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	642	5.00	03/16/2020	ND	548	110	500	0.263	

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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. Keine

East Marland - Hobbs, NM 88240 Tel (575) 393-2326 Fax (575) 393-2476  Cardinal Laboratories, Inc.							CHAIN-OF-CUSTODY AND ANALYSIS REQUEST																								
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September 18, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION K-35-1

Enclosed are the results of analyses for samples received by the laboratory on 09/15/20 16:10.

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">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: 09/15/2020 Sampling Date: 09/12/2020 Reported: 09/18/2020 Sampling Type: Water

Project Name: VACUUM JUNCTION K-35-1 Sampling Condition: Cool & Intact
Project Number: NOT GIVEN Sample Received By: Tamara Oldaker

Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

#### Sample ID: MONITOR WELL #1 (H002446-01)

mg	/L	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
388	4.00	09/16/2020	ND	96.0	96.0	100	4.08	
mg	/L	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
57.8	10.0	09/16/2020	ND	20.9	104	20.0	10.1	
mg	/L	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
982	5.00	09/18/2020	5.00	830	83.0	1000	1.14	
	Result 388 mg, Result 57.8 mg,	388	Result         Reporting Limit         Analyzed           388         4.00         09/16/2020           mg/L         Analyzed           Result         Reporting Limit         Analyzed           57.8         10.0         09/16/2020           mg/L         Analyzed           Result         Reporting Limit         Analyzed	Result         Reporting Limit         Analyzed         Method Blank           388         4.00         09/16/2020         ND           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank           57.8         10.0         09/16/2020         ND           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank	Result         Reporting Limit         Analyzed         Method Blank         BS           388         4.00         09/16/2020         ND         96.0           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank         BS           57.8         10.0         09/16/2020         ND         20.9           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed Method Blank         BS	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           388         4.00         09/16/2020         ND         96.0         96.0           mg/L         Analyzed By: AC           Frequence         Result         Reporting Limit         Analyzed By: AC           Result         Reporting Limit         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           388         4.00         09/16/2020         ND         96.0         96.0         100           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           57.8         10.0         09/16/2020         ND         20.9         104         20.0           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           388         4.00         09/16/2020         ND         96.0         96.0         100         4.08           mg/L         Analyzed By: AC           F7.8         10.0         09/16/2020         ND         20.9         104         20.0         10.1           mg/L         Analyzed By: AC           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD

#### Sample ID: MONITOR WELL #2 (H002446-02)

Chloride, SM4500CI-B	mg	/L	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	40.0	4.00	09/16/2020	ND	96.0	96.0	100	4.08	
Sulfate 375.4	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	49.7	10.0	09/16/2020	ND	20.9	104	20.0	10.1	
TDS 160.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	414	5.00	09/18/2020	5.00	830	83.0	1000	1.14	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



Tamara Oldaker

Sample Received By:

#### Analytical Results For:

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

Received: 09/15/2020 Sampling Date: 09/12/2020 Reported: 09/18/2020 Sampling Type: Water Project Name: **VACUUM JUNCTION K-35-1** Sampling Condition: Cool & Intact

NOT GIVEN Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

#### Sample ID: MONITOR WELL #3 (H002446-03)

Project Number:

Chloride, SM4500CI-B	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	296	4.00	09/16/2020	ND	96.0	96.0	100	4.08	
Sulfate 375.4	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	76.7	25.0	09/16/2020	ND	20.9	104	20.0	10.1	
TDS 160.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	703	5.00	09/18/2020	5.00	830	83.0	1000	1.14	

#### Sample ID: MONITOR WELL #4 (H002446-04)

Chloride, SM4500CI-B	mg	mg/L Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	140	4.00	09/16/2020	ND	96.0	96.0	100	4.08	
Sulfate 375.4	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	71.4	10.0	09/16/2020	ND	20.9	104	20.0	10.1	
TDS 160.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	514	5.00	09/18/2020	5.00	830	83.0	1000	1.14	

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Celey D. Keene



09/12/2020

Water

#### Analytical Results For:

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

Fax To: (575) 397-1471

Received: 09/15/2020 Sampling Date:
Reported: 09/18/2020 Sampling Type:

Project Name: VACUUM JUNCTION K-35-1 Sampling Condition: Cool & Intact
Project Number: NOT GIVEN Sample Received By: Tamara Oldaker

Project Location: T17S-R35E-SEC35 K LEA COUNTY, NM

#### Sample ID: RECOVERY WELL #1 (H002446-05)

Chloride, SM4500Cl-B	mg,	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	264	4.00	09/16/2020	ND	96.0	96.0	100	4.08	
Sulfate 375.4	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	78.4	10.0	09/16/2020	ND	20.9	104	20.0	10.1	
TDS 160.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	764	5.00	09/18/2020	5.00	830	83.0	1000	1.14	

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Celeg & Keene



#### **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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LAB USE ONLY	# CONTAINERS	WATER	SOIL	AIR SLUDGE		HCL (4 40ml VOA)	NaHSO.	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1Liter HDPE)	NONE	DATE (2020)	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (CI, SO4, CO3, HCO3) Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
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Released to Imaging: 4/19/2021 11:41:52 AM

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

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** 

COMMENTS

Action 24248

#### **COMMENTS**

Operator:			OGRID:	Action Number:	Action Type:
RICE OPERATING COMPANY	122 W Taylor	Hobbs, NM88240	19174	24248	GROUND WATER ABATEMENT

Created By	Comment	Comment Date
bbillings	Trends look god for review with eye to closure next year if data continue as per recent numbers	04/19/2021

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

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 24248

#### **CONDITIONS OF APPROVAL**

Operator:			OGRID:	Action Number:	Action Type:
RICE OPERATING COMPANY	122 W Taylor	Hobbs, NM88240	19174	24248	GROUND WATER ABATEMENT

OCD Reviewer	Condition
bbillings	Continue operations as outlined in most recent report.