

APPROVED

RICE *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

April 1, 2021

Bradford Billings

Environmental Bureau, Oil Conservation Division

New Mexico Energy, Minerals, & Natural Resources Department

1220 S. St. Francis Drive

Santa Fe, New Mexico 87505

RE: 2020 Annual Groundwater Report

Rice Operating Company – Hobbs SWD System

Hobbs K-29 EOL Boot (1R428-50): UL/K, Sec. 29, T18S, R38E

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

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

Mr. Billings:

ROC is the service provider (agent) for the Hobbs 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. The system is now abandoned.

The site is located approximately 2.37 miles west of Hobbs, New Mexico at UL/K, Sec. 29, T18S, R38E as shown on the Geographical Location Map. NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 67 feet.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on April 4th, 2008 and approved on May 21st, 2008. According to the ICP, the site was investigated through vertical and soil bore installation resulting in elevated chloride concentrations that decreased with depth. Based on the investigation, two monitoring wells were installed to determine groundwater quality and the wells have been sampled regularly since installation.

A Corrective Action Plan (CAP) was submitted and approved by NMOCD on February 5th, 2015. According to the NMOCD approved CAP, a 63x53-ft 20-mil reinforced liner was installed and properly seated at 4 ft bgs. The site was backfilled and seeded with a blend of native vegetation. A CAP Report and Soil Closure Request detailing this work was submitted to the NMOCD on September 8th, 2015. The report also requested an additional monitoring well (MW-3) be installed down-gradient of the site. NMOCD approved this report and granted 'Soil Closure' on September 15th, 2015. On October 2nd, 2015, the down-gradient well (MW-3) was installed, and lithology soil samples were collected at regular intervals.

ROC submitted the 2018 Annual Report and Addendum with a request to plug and abandon MW-1 and replace it with a 4-inch well to be used for groundwater recovery. NMOCD approved the request on September 5th, 2019. On November 12th, 2019, the well was plugged using a cement grout with 1-3% bentonite and a three ft cap of cement at the surface. A 4-inch

well (MW-1R) was installed approximately 10 ft southeast of the former well and lithology samples were collected at regular intervals.

All wells have been sampled regularly per NMOCD guidelines since installation. The attached table summarizes the analytical results from groundwater samples collected from the monitor wells at the site. The most recent sampling event resulted in a chloride concentration of 284 mg/L in MW-1, 72 mg/L in MW-2, and 88 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 also received approval to reduce the sampling interval to semi-annual. 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.

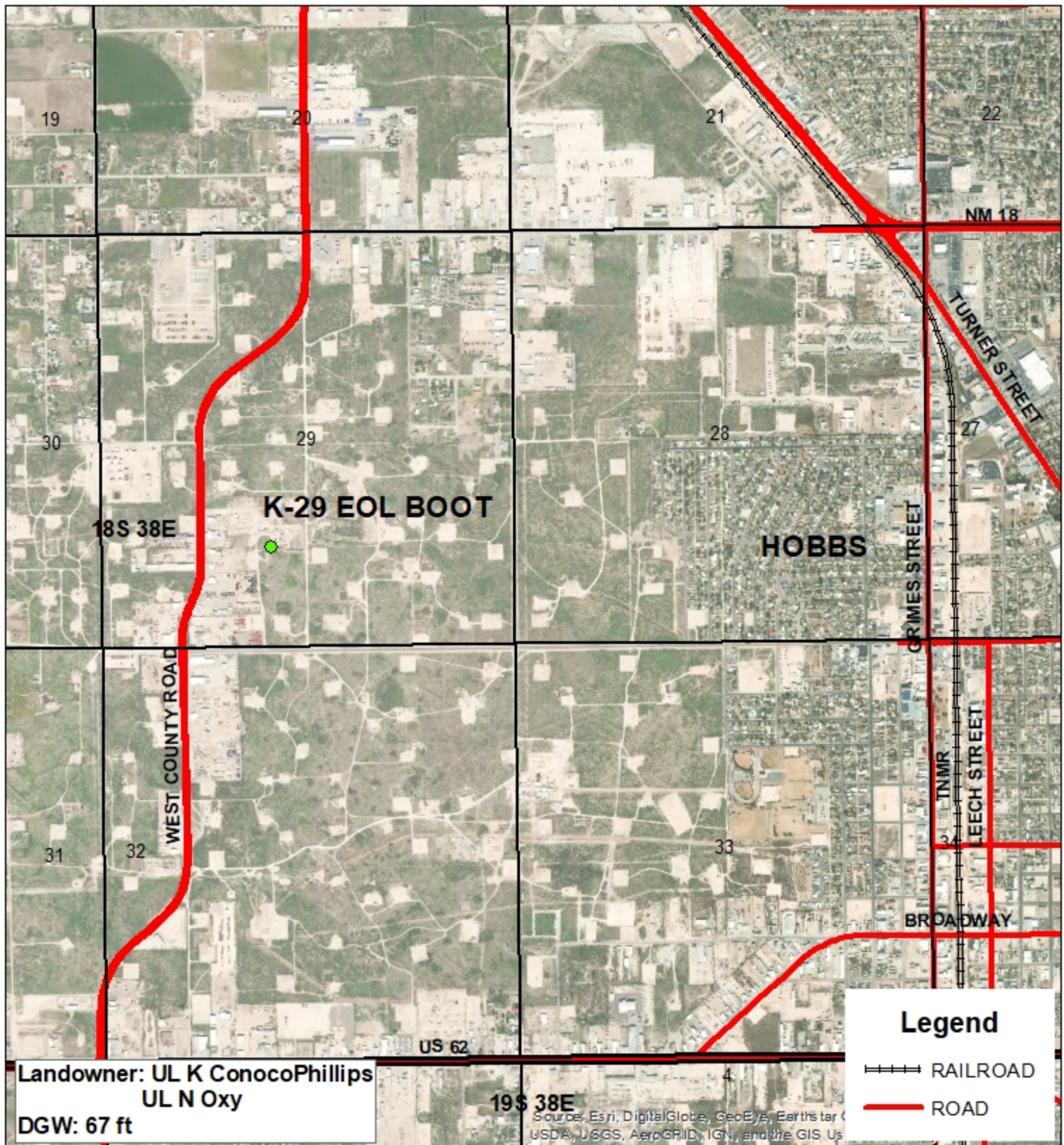
Sincerely,



Katie Davis
Environmental Manager
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix



Landowner: UL K ConocoPhillips
UL N Oxy
DGW: 67 ft



HOBBS K-29 BOOT & EOL

1R428-50

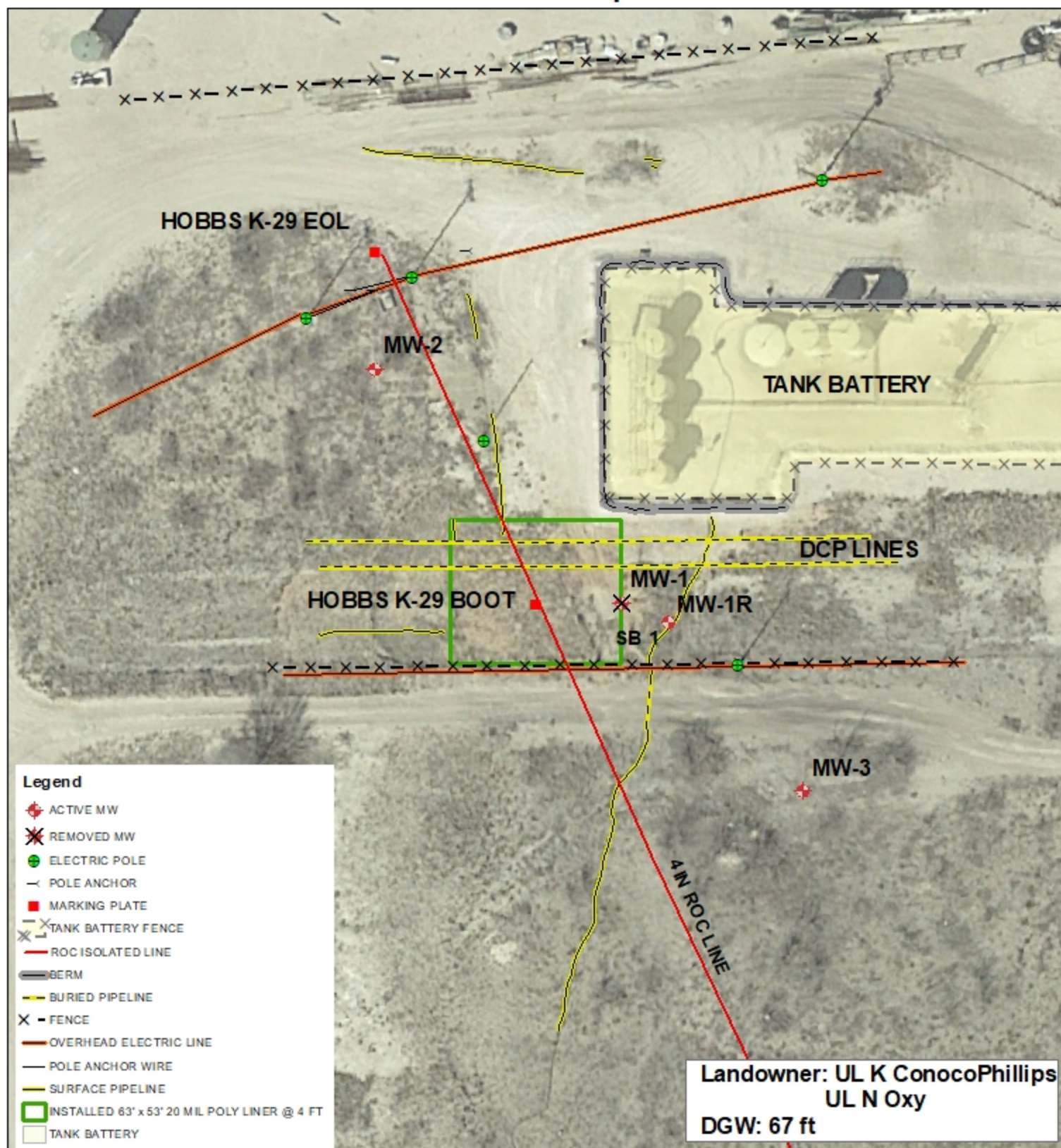
UL K & N SECTION 29
T-18-S R-38-E
LEA COUNTY, NM

GPS: 32.714915 -103.172174
NAD83 STATE PLANE PROJ
NM EAST ZONE

0 1,000 2,000
Feet

Drawing date: 2/4/20
Drafted by: T. Grieco





HOBBS K-29 BOOT & EOL

1R428-50

UL K & N SECTION 29
T-18-S R-38-E
LEA COUNTY, NM

GPS: 32.714915 -103.172174
NAD83 STATE PLANE PROJ
NM EAST ZONE

0 25 50
Feet

GPS date: 11/03/14 TG
Drawing date: 2/4/20
Drafted by: T. Grieco



ROC - Hobbs K-29 EOL (1R428-50)
Unit Letter K, Section 29, T18S, R38E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	62.34	73.6	1.8	6	7/14/2009	520	1,310	<0.001	<0.001	<0.001	<0.003	57	Silt to clear Slight odor
1	62.43	73.6	1.8	6	10/27/2009	332	757	0.001	<0.001	0.002	<0.003	59.5	Silt to clear Slight odor
1	62.72	73.62	1.7	6	3/15/2010	476	1,170	<0.001	<0.001	<0.001	<0.003	71.5	Silt to clear Slight odor
1	62.81	73.62	1.7	6	6/4/2010	432	1,320	<0.001	<0.001	<0.001	<0.003	78	Silt to clear Slight odor
1	62.56	73.62	1.8	6	8/30/2010	540	1,400	<0.001	<0.001	<0.001	<0.003	51.7	Silt to clear Slight odor
1	62.91	73.62	1.7	6	12/10/2010	560	1,280	<0.001	<0.001	<0.001	<0.003	67.9	Silt to clear Slight odor
1	63.05	73.62	1.7	6	3/23/2011	610	1,620	<0.001	<0.001	<0.001	<0.003	76.9	Silt to clear Slight odor
1	63.22	73.62	1.7	6	6/20/2011	540	1,280	<0.001	<0.001	<0.001	<0.003	71.9	Silt to clear Slight odor
1	63.44	73.62	1.6	6	9/20/2011	610	1,470	<0.001	<0.001	<0.001	<0.003	82.1	Silt to clear Slight odor
1	63.62	73.62	1.6	6	12/15/2011	540	1,320	<0.001	<0.001	<0.001	<0.003	87.2	Silt to clear Slight odor
1	63.78	73.62	1.6	6	3/13/2012	570	1,360	0.003	<0.001	<0.001	<0.003	74.2	Silt to clear Slight odor
1	63.93	73.62	1.6	6	6/11/2012	500	1,410	<0.001	<0.001	<0.001	<0.003	85.5	Silt to clear Slight odor
1	64.14	73.62	1.5	6	9/6/2012	500	1,280	<0.001	<0.001	<0.001	<0.003	77.6	Silt to clear Slight odor
1	64.3	73.62	1.5	6	11/29/2012	550	1,340	<0.001	<0.001	<0.001	<0.003	71.5	Silt to clear Slight odor
1	64.48	73.62	1.5	6	3/7/2013	492	1,220	<0.001	<0.001	<0.001	<0.003	88	Silt to clear Slight odor
1	64.69	73.62	1.4	6	6/24/2013	344	1,060	<0.001	<0.001	<0.001	<0.003	63	Silt to clear Slight odor
1	64.95	73.62	1.4	8	9/16/2013	336	987	<0.001	<0.001	<0.001	<0.003	88	Silt to clear Slight odor
1	65.15	73.62	1.4	6	12/12/2013	352	1,130	<0.001	<0.001	<0.001	<0.003	194	Silt to clear Slight odor
1	65.29	73.62	1.3	6	3/19/2014	352	1,080	<0.001	<0.001	<0.001	<0.003	112	Silt to clear Slight odor
1	65.49	73.62	1.3	6	6/16/2014	264	864	<0.001	<0.001	<0.001	<0.003	64.2	Silt to clear Slight odor
1	65.78	73.62	1.3	6	9/10/2014	352	1,150	<0.001	<0.001	<0.001	<0.003	250	Silt to clear Slight odor
1	65.63	73.62	1.3	6	12/17/2014	300	904	<0.001	<0.001	<0.001	<0.003	158	Silt to clear Slight odor
1	65.78	73.62	1.3	6	3/17/2015	264	904	<0.001	<0.001	<0.001	<0.003	73	Silt to clear Slight odor
1	65.88	73.62	1.2	6	6/16/2015	320	1,020	<0.001	<0.001	<0.001	<0.003	86	Silt to clear Slight odor
1	65.93	73.65	1.2	6	9/17/2015	316	1,050	<0.001	<0.001	<0.001	<0.003	144	Silt to clear Slight odor
1	65.65	73.65	1.2	6	12/1/2015	252	764	<0.001	<0.001	<0.001	<0.003	79.9	Silt to clear Slight odor
1	65.9	73.65	1.2	6	3/28/2016	416	1,120	<0.001	<0.001	<0.001	<0.003	58.7	Silt to clear Slight odor
1	66.05	73.65	1.2	6	6/23/2016	490	1,430	<0.001	<0.001	<0.001	<0.003	62.4	Silt to clear Slight odor
1	65.93	73.65	1.2	6	9/26/2016	640	1,940	<0.001	<0.001	<0.001	<0.003	73	Silt to clear Slight odor

ROC - Hobbs K-29 EOL (1R428-50)
Unit Letter K, Section 29, T18S, R38E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	65.67	73.65	1.3	6	12/5/2016	500	1,420	<0.001	<0.001	<0.001	<0.003	72	Silt to clear Slight odor
1	65.91	73.65	1.2	6	3/20/2017	610	1,520	<0.001	<0.001	<0.001	<0.003	78	Silt to clear Slight odor
1	66.26	73.65	1.2	6	6/22/2017	620	1,690	<0.001	<0.001	<0.001	<0.003	81	Silt to clear Slight odor
1	66.28	73.65	1.2	6	9/25/2017	460	1,780	<0.001	<0.001	<0.001	<0.003	74	Silt to clear Slight odor
1	66.32	73.65	1.2	6	12/21/2017	510	1,290	<0.001	<0.001	<0.001	<0.003	80	Silt to clear Slight odor
1	66.46	73.62	1.1	6	3/20/2018	550	1,410	<0.001	<0.001	<0.001	<0.003	70.9	Silt to clear Slight odor
1	66.62	73.62	1.1	6	6/26/2018	550	1,380	<0.001	<0.001	<0.001	<0.003	67.8	Silt to clear Slight odor
1	66.77	73.62	1.1	6	9/18/2018	500	1,240	<0.001	<0.001	<0.001	<0.003	71.6	Silt to clear Slight odor
1	66.81	73.62	1.1	6	12/20/2018	500	1,310	<0.001	<0.001	<0.001	<0.003	89.8	Silt to clear Slight odor
1	66.94	73.65	1.1	6	3/25/2019	660	1,620	<0.001	<0.001	<0.001	<0.003	67	Silt to clear Slight odor
1	67.08	73.65	1	6	6/24/2019	620	1,610	<0.001	<0.001	<0.001	<0.003	66	Silt to clear Slight odor
1	67.15	73.65	1	6	9/23/2019	640	1,670	<0.001	<0.001	<0.001	<0.003	62	Silt to clear Slight odor
1R	67.46	112.78	29	100	12/9/2019	200	730	<0.001	<0.001	<0.001	<0.003	70.7	Silt to clear Slight odor
1R	67.63	112.78	29.3	100	3/19/2020	264	822	<0.001	<0.001	<0.001	<0.003	73.5	Silt to clear Slight odor
1R	67.88	112.78	29.2	100	9/28/2020	284	674	XXX	XXX	XXX	XXX	62	Silt to clear Slight odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	63.67	77.41	2.2	8	3/13/2012	68	522	<0.001	<0.001	<0.001	<0.003	83.2	Silt to clear Slight odor
2	63.87	77.41	2.2	8	6/11/2012	68	474	<0.001	<0.001	<0.001	<0.003	86.4	Silt to clear Slight odor
2	64.02	77.41	2.1	8	9/6/2012	64	500	<0.001	<0.001	<0.001	<0.003	88.2	Silt to clear Slight odor
2	64.22	77.41	2.1	8	11/29/2012	68	521	<0.001	<0.001	<0.001	<0.003	88.5	Silt to clear Slight odor
2	64.41	77.41	2.1	8	3/7/2013	72	478	<0.001	<0.001	<0.001	<0.003	95	Silt to clear Slight odor
2	64.65	77.41	2	8	6/24/2013	68	504	<0.001	<0.001	<0.001	<0.003	83	Silt to clear Slight odor
2	64.86	77.41	2	8	9/16/2013	64	485	<0.001	<0.001	<0.001	<0.003	75.3	Silt to clear Slight odor
2	65.04	77.41	2	8	12/12/2013	64	473	<0.001	<0.001	<0.001	<0.003	93.4	Silt to clear Slight odor
2	65.24	77.41	1.9	8	3/19/2014	68	426	<0.001	<0.001	<0.001	<0.003	88.2	Silt to clear Slight odor
2	65.51	77.41	1.9	8	6/16/2014	68	572	<0.001	<0.001	<0.001	<0.003	82.5	Silt to clear Slight odor

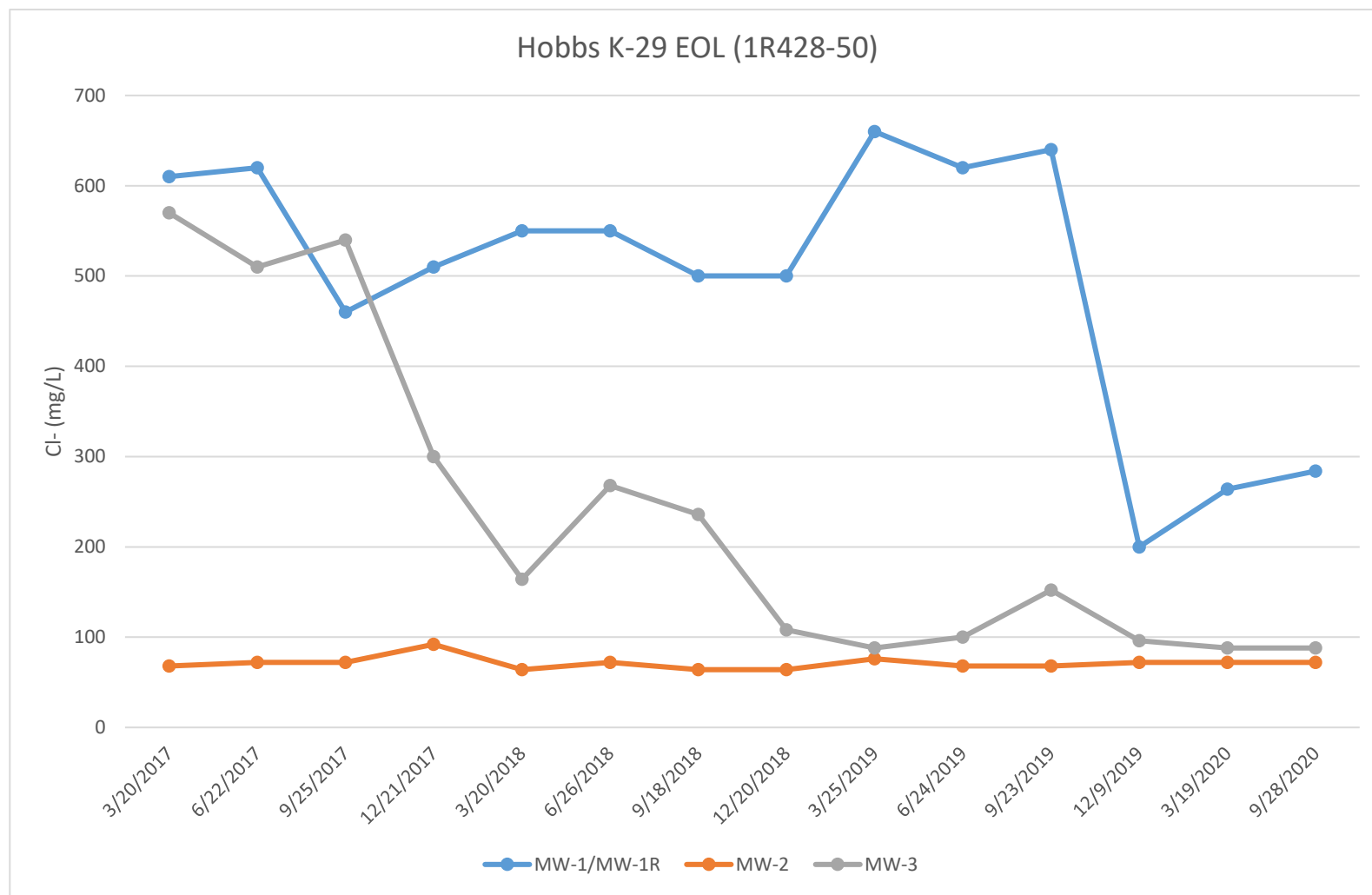
ROC - Hobbs K-29 EOL (1R428-50)
Unit Letter K, Section 29, T18S, R38E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	65.74	77.41	1.9	8	9/10/2014	64	512	<0.001	<0.001	<0.001	<0.003	98.1	Silt to clear Slight odor
2	65.57	77.41	1.9	8	12/17/2014	68	482	<0.001	<0.001	<0.001	<0.003	87	Silt to clear Slight odor
2	65.72	77.41	1.9	8	3/17/2015	52	452	<0.001	<0.001	<0.001	<0.003	77	Silt to clear Slight odor
2	65.84	77.41	1.9	8	6/16/2015	72	518	<0.001	<0.001	<0.001	<0.003	70	Silt to clear Slight odor
2	65.88	77.41	1.9	8	9/17/2015	72	546	<0.001	<0.001	<0.001	<0.003	63.3	Silt to clear Slight odor
2	65.57	77.41	1.9	8	12/1/2015	72	558	<0.001	<0.001	<0.001	<0.003	87	Silt to clear Slight odor
2	65.84	77.41	1.9	8	3/28/2016	68	556	<0.001	<0.001	<0.001	<0.003	76.8	Silt to clear Slight odor
2	65.96	77.41	1.8	8	6/23/2016	76	506	<0.001	<0.001	<0.001	<0.003	110	Silt to clear Slight odor
2	65.86	77.41	1.8	8	9/26/2016	68	544	<0.001	<0.001	<0.001	<0.003	95	Silt to clear Slight odor
2	65.6	77.41	1.9	8	12/5/2016	92	560	<0.001	<0.001	<0.001	<0.003	107	Silt to clear Slight odor
2	65.84	77.41	1.9	8	3/20/2017	68	540	<0.001	<0.001	<0.001	<0.003	72	Silt to clear Slight odor
2	66.18	77.41	1.8	8	6/22/2017	72	532	<0.001	<0.001	<0.001	<0.003	82	Silt to clear Slight odor
2	66.21	77.41	1.8	8	9/25/2017	72	714	<0.001	<0.001	<0.001	<0.003	92	Silt to clear Slight odor
2	66.28	77.41	1.8	8	12/21/2017	92	526	<0.001	<0.001	<0.001	<0.003	98	Silt to clear Slight odor
2	66.41	77.41	1.8	8	3/20/2018	64	404	<0.001	<0.001	<0.001	<0.003	94.7	Silt to clear Slight odor
2	66.55	77.41	1.7	8	6/26/2018	72	638	<0.001	<0.001	<0.001	<0.003	71.6	Silt to clear Slight odor
2	66.71	77.41	1.7	8	9/18/2018	64	520	<0.001	<0.001	<0.001	<0.003	86.2	Silt to clear Slight odor
2	66.74	77.41	1.7	8	12/20/2018	64	510	<0.001	<0.001	<0.001	<0.003	121	Silt to clear Slight odor
2	66.89	77.41	1.7	8	3/25/2019	76	543	<0.001	<0.001	<0.001	<0.003	94	Silt to clear Slight odor
2	67.02	77.41	1.7	8	6/24/2019	68	603	<0.001	<0.001	<0.001	<0.003	34	Silt to clear Slight odor
2	67.09	77.41	1.7	8	9/23/2019	68	496	<0.001	<0.001	<0.001	<0.003	103	Silt to clear Slight odor
2	67.28	77.41	1.6	8	12/9/2019	72	561	<0.001	<0.001	<0.001	<0.003	85	Silt to clear Slight odor
2	67.45	77.41	1.6	8	3/19/2020	72	526	<0.001	<0.001	<0.001	<0.003	72	Silt to clear Slight odor
2	67.72	77.41	1.6	8	9/28/2020	72	460	XXX	XXX	XXX	XXX	79	Silt to clear Slight odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	64.23	110.22	29.9	120	12/1/2015	220	784	<0.001	<0.001	<0.001	<0.003	65	Silt to clear Slight odor

ROC - Hobbs K-29 EOL (1R428-50)**Unit Letter K, Section 29, T18S, R38E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	64.18	110.22	30	100	3/28/2016	296	960	<0.001	<0.001	<0.001	<0.003	65	Silt to clear Slight odor
3	64.6	110.22	30	100	6/23/2016	510	1,240	<0.001	<0.001	<0.001	<0.003	62	Silt to clear Slight odor
3	64.45	110.22	30	100	9/26/2016	540	1,600	<0.001	<0.001	<0.001	<0.003	67	Silt to clear Slight odor
3	64.18	110.22	30	100	12/5/2016	560	1,400	<0.001	<0.001	<0.001	<0.003	71	Silt to clear Slight odor
3	64.5	110.22	30	100	3/20/2017	570	1,520	<0.001	<0.001	<0.001	<0.003	96	Silt to clear Slight odor
3	64.83	110.22	30	100	6/22/2017	510	1,560	<0.001	<0.001	<0.001	<0.003	78	Silt to clear Slight odor
3	64.85	110.22	30	100	9/25/2017	540	1,800	<0.001	<0.001	<0.001	<0.003	71	Silt to clear Slight odor
3	64.88	110.22	30	100	12/21/2017	300	980	<0.001	<0.001	<0.001	<0.003	45	Silt to clear Slight odor
3	65.02	110.22	29.4	100	3/20/2018	164	662	<0.001	<0.001	<0.001	<0.003	77.2	Silt to clear Slight odor
3	65.11	110.22	29.3	100	6/26/2018	268	984	<0.001	<0.001	<0.001	<0.003	130	Silt to clear Slight odor
3	65.26	110.22	29.2	100	9/18/2018	236	584	<0.001	<0.001	<0.001	<0.003	91.1	Silt to clear Slight odor
3	65.28	110.22	29.2	100	12/20/2018	108	474	<0.001	<0.001	<0.001	<0.003	60.9	Silt to clear Slight odor
3	65.49	110.22	29	100	3/25/2019	88	614	<0.001	<0.001	<0.001	<0.003	88	Silt to clear Slight odor
3	65.63	110.22	29	100	6/24/2019	100	627	<0.001	<0.001	<0.001	<0.003	55	Silt to clear Slight odor
3	65.7	110.22	29	100	9/23/2019	152	634	<0.001	<0.001	<0.001	<0.003	92	Silt to clear Slight odor
3	65.88	110.22	29	100	12/9/2019	96	628	<0.001	<0.001	<0.001	<0.003	58	Silt to clear Slight odor
3	66.03	110.22	28.7	100	3/19/2020	88	616	<0.001	<0.001	<0.001	<0.003	88	Silt to clear Slight odor
3	66.31	110.22	28.5	100	9/28/2020	88	544	XXX	XXX	XXX	XXX	79.8	Silt to clear Slight odor





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

April 01, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: HOBBS K-29 BOOT

Enclosed are the results of analyses for samples received by the laboratory on 03/25/20 13:45.

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 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:	03/25/2020	Sampling Date:	03/19/2020
Reported:	04/01/2020	Sampling Type:	Water
Project Name:	HOBBS K-29 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T18S-R38E-SEC29 K-LEA CTY., NM		

Sample ID: MONITOR WELL # 1R (H000918-01)

BTEX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.249	
Toluene*	<0.001	0.001	03/30/2020	ND	0.021	103	0.0200	0.0779	
Ethylbenzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.659	
Total Xylenes*	<0.003	0.003	03/30/2020	ND	0.061	102	0.0600	0.741	
Total BTEX	<0.006	0.006	03/30/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 58.2-133

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	264	4.00	03/26/2020	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*	73.5	10.0	03/26/2020	ND	23.4	117	20.0	18.5	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	822	5.00	03/27/2020	ND	554	111	500	1.23	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/25/2020	Sampling Date:	03/19/2020
Reported:	04/01/2020	Sampling Type:	Water
Project Name:	HOBBS K-29 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T18S-R38E-SEC29 K-LEA CTY., NM		

Sample ID: MONITOR WELL # 2 (H000918-02)

BTX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.249	
Toluene*	<0.001	0.001	03/30/2020	ND	0.021	103	0.0200	0.0779	
Ethylbenzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.659	
Total Xylenes*	<0.003	0.003	03/30/2020	ND	0.061	102	0.0600	0.741	
Total BTX	<0.006	0.006	03/30/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 58.2-133

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	72.0	4.00	03/26/2020	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*	92.8	25.0	03/26/2020	ND	23.4	117	20.0	18.5		

TDS 160.1		mg/L		Analyzed By: GM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*		526	5.00	03/27/2020	ND	554	111	500	1.23	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/25/2020	Sampling Date:	03/19/2020
Reported:	04/01/2020	Sampling Type:	Water
Project Name:	HOBBS K-29 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T18S-R38E-SEC29 K-LEA CTY., NM		

Sample ID: MONITOR WELL # 3 (H000918-03)

BTX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.249	
Toluene*	<0.001	0.001	03/30/2020	ND	0.021	103	0.0200	0.0779	
Ethylbenzene*	<0.001	0.001	03/30/2020	ND	0.021	104	0.0200	0.659	
Total Xylenes*	<0.003	0.003	03/30/2020	ND	0.061	102	0.0600	0.741	
Total BTX	<0.006	0.006	03/30/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 58.2-133

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	88.0	4.00	03/26/2020	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*	90.2	25.0	03/26/2020	ND	23.4	117	20.0	18.5		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	616	5.00	03/27/2020	ND	554	111	500	1.23		

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Celey D. Keene, Lab Director/Quality Manager



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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 black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

Company Name: 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:
	Hobbs K-29 Boot

Project Location: T18S-R38E-Sec29 K ~ Lea County - New Mexico

[illegible]

Relinquished by: <i>[Signature]</i>	Date: <i>3/25/2020</i>	Time: <i>1345</i>	Received by: <i>[Signature]</i>	Date: <i>3-25-20</i>	Time: <i>1345</i>
Rozanne Johnson			Received By: (Laboratory Staff)		

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)

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

REMARKS:

Email Results:

kjones@riceswd.com

rozanne11@windstream.net



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

October 05, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: HOBBS K-29 BOOT

Enclosed are the results of analyses for samples received by the laboratory on 09/30/20 16:05.

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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/30/2020	Sampling Date:	09/28/2020
Reported:	10/05/2020	Sampling Type:	Water
Project Name:	HOBBS K-29 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T18S-R38E-SEC29 K-LEA CTY., NM		

Sample ID: MONITOR WELL # 1R (H002589-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	284	4.00	10/01/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	62.0	10.0	10/02/2020	ND	18.3	91.6	20.0	2.80		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	674	5.00	10/02/2020	ND	535	107	500	1.08		

Sample ID: MONITOR WELL # 2 (H002589-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	72.0	4.00	10/01/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	79.0	25.0	10/02/2020	ND	18.3	91.6	20.0	2.80		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	460	5.00	10/02/2020	ND	535	107	500	1.08		

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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:	09/30/2020	Sampling Date:	09/28/2020
Reported:	10/05/2020	Sampling Type:	Water
Project Name:	HOBBS K-29 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T18S-R38E-SEC29 K-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H002589-03)

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	10/01/2020	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	79.8	25.0	10/02/2020	ND	18.3	91.6	20.0	2.80		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	544	5.00	10/02/2020	ND	535	107	500	1.08		

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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.

Page 5 of 5

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

Project #: Project Name: Hobbs K-29 Boot
Project Location: T18S-R38E-Sec29 K ~ Lea County - New Mexico
Sampler Signature: Rozanne Johnson (575) 631-9310

(Circle or Specify Method No.)

[illegible]

Relinquished by: <u>Deanne Johnson</u>	Date: <u>9/30/2020</u>	Time: <u>16:05</u>	Received by: <u>Tamara Clark</u>	Date: <u>9-30-20</u>	Time: <u>1605</u>
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

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

Delivered By: (Circle One)

Sample Condition

CHECKED BY:

Sampler - UPS - Bus - Other:

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

(Initials)

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

District I

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

District II

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

District III

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

District IV

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

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

CONDITIONS

Action 24227

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 24227
	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. At a minimum, continue sampling on a semi-annual schedule 2. OCD pre-approves sampling termination from MW #2 and #3 3. Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31,2022.	1/31/2022