

RICE *Operating Company*

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April 1, 2020

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: 2019 Annual Groundwater Report
Rice Operating Company – BD SWD System
BD J-30 vent (1R426-217): UL/J, Sec. 30, T21S, R37E**

Mr. Billings:

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

Background and Previous Work

The site is located approximately 2.3 miles northwest of Eunice, New Mexico at UL/J, Sec. 30, T21S, R37E as shown on the Geographical Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 106 feet below ground surface (bgs).

In 2007, ROC initiated work on the former J-30 vent junction box. The site was delineated using a backhoe to form a 30x30x12-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 and excavation bottom and sent to a commercial laboratory for analysis, resulting in elevated chloride concentrations and low hydrocarbon concentrations. The excavation was backfilled with the blended soil to 6 ft below ground surface (bgs). At 6-5 ft bgs, a 1 ft thick clay barrier was installed. The remaining backfill was blended with clean, imported soil and used to backfill the remainder of the excavation to ground surface and contoured to the surrounding area. On 3/16/2007, the site was seeded with a blend of native vegetation. To further investigate the presence of chloride, two soil bores were installed on April 18th, 2007. Soil samples were collected at regular intervals and field titrated for chlorides. Representative samples from each bore were sent to a commercial laboratory resulting in elevated chloride concentrations. Each bore hole was plugged with bentonite to ground surface. NMOCD was notified of potential groundwater impact on August 5th, 2008. A junction box disclosure report was submitted to NMOCD with all the 2009 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on February 17th, 2015 and approved on February 20th, 2015. According to the ICP, nine soil bores were installed to further delineate the vadose zone. Representative samples were collected from each bore and were sent to a commercial laboratory for analysis of chloride and hydrocarbon, resulting in elevated chloride concentrations. Each soil bore was plugged with bentonite to ground surface.

A Corrective Action Plan (CAP) was submitted and approved by NMOCD on August 12th, 2015. According to the NMOCD approved CAP, a 20-mil reinforced liner measuring 84x91-ft was installed and properly seated at 4.5 ft bgs. The site was backfilled and seeded with a blend of native vegetation. A CAP Report and Soil Closure Request detailing this work was submitted to NMOCD on August 24th, 2017. The report also requested monitoring wells installation. NMOCD approved this report and granted 'Soil Closure' on August 24th, 2017.

On December 11-12th, 2018, ROC installed two monitor wells. MW3 was installed down-gradient well and MW-1 was installed as a near-source monitoring well. On April 26, 2019, an up-gradient monitor well (MW-2) was installed. Lithology soil samples were collected from each well at regular intervals. The wells were developed and have been sampled quarterly since installation. Groundwater chloride concentrations in MW-1 averaged 1,145 mg/L in 2019. Chloride concentrations in MW-2 and MW-3 have remained low, below 136 mg/L. BTEX concentrations have remained below detectable limits since the wells were installed.

Given that BTEX concentrations have been below detectable limits since installation, ROC requests to suspend BTEX sampling in all three wells (MW-1, MW-2 and MW-3). Further, due to the current climate, and in the interest of safety, ROC proposes to reduce groundwater monitoring from quarterly to semi-annually beginning this year. This request is only temporary and regularly scheduled groundwater monitoring will commence as soon as possible.

Attached is the Appendix, which contains:

1. A Geographical Location Map.
2. A map showing well locations.
3. Monitoring well installation logs and photos.
4. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
5. The laboratory analytical results for 2019.

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,

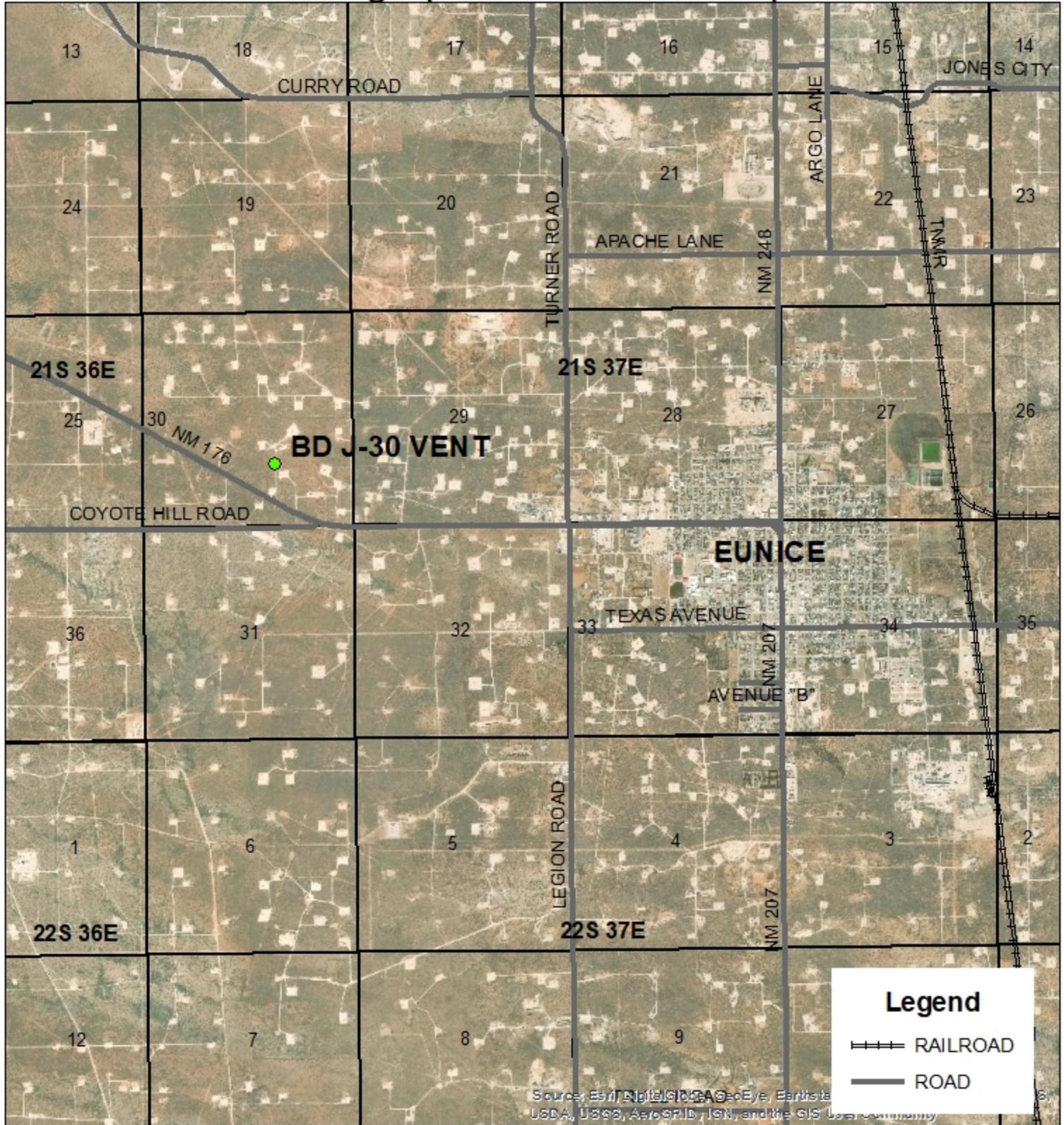
A handwritten signature in cursive script that reads "Katie Davis".

Katie Davis
Environmental Manager
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

Geographical Location Map

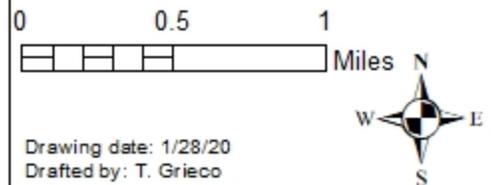


BD J-30 VENT

1R426-217

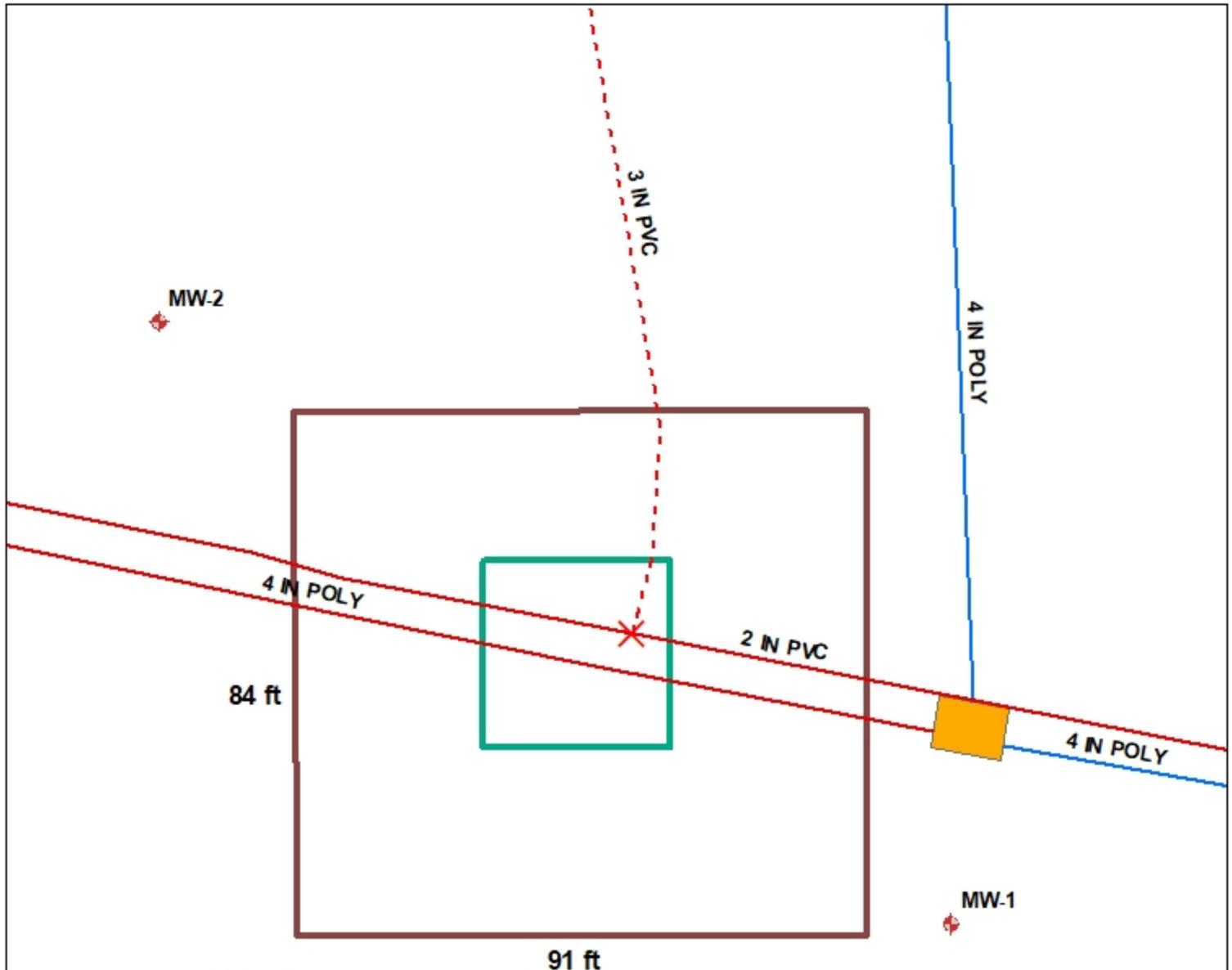
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T-21-S R-37-E
LEA COUNTY, NM

GPS: 32.446879, -103.199905
NAD 83 STATE PLANE PROJ
NM EAST ZONE



Drawing date: 1/28/20
Drafted by: T. Grieco

Site Map



Legend

- REMOVED BOX NM
- ACTIVE MW
- REMOVED MW
- ACTIVE ROC LINE
- ROC ISOLATED LINE
- ROC ISOLATED PROJECTED LINE
- ACTIVE CONCRETE JCT BOX
- INSTALLED 30'x30' CLAY LINER @ 5' BGS
- INSTALLED 84'x91', 20-MIL REINFORCED LINER @ 4.5 FT BGS

Landowner: Chevron USA
DGW: 106 ft

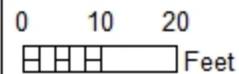


BD J-30 VENT

1R426-217

LEGALS: UL J SECTION 30
 T-21-S R-37-E
 LEA COUNTY, NM

GPS: 32.446879, -103.199905
 NAD 83 STATE PLANE PROJ
 NM EAST ZONE



Drawing date: 2/3/20
 Drafted by: T. Grieco

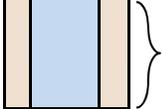


Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SM-light tan, silty sand		
40 ft						
				SM-light tan, silty sand, occasional caliche		
45 ft						
				SM-SAA		
50 ft						
				SM-SAA		
55 ft						
				SM-SAA		
60 ft						
				GM-reddish tan, gravelly silt, caliche		
65 ft						
				SM-reddish tan, silty sand, occasional caliche		
70 ft						
				SM-SAA		
75 ft						
				SM-light tan, silty sand		
80 ft						
				GM-light brown, silty gravel, caliche and sandstone		
85 ft						

Bentonite Seal

Sand Pack

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				GM-tan, gravelly silt, caliche and sandstone		
90 ft						
				GM-SAA		
95 ft						
				Not Sampled (NS)		
100 ft						
				NS		
105 ft						
				NS		
110 ft						
				NS		
115 ft						
				NS		
120 ft						
				NS		
125 ft						
				NS		
130 ft						
				NS		
135 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				NS		 Sand Pack
140 ft						

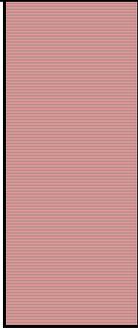
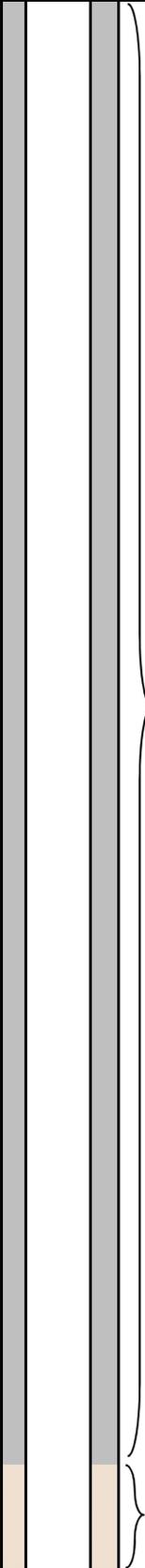
Logger:	Nick Kopiasz		
Driller:	Harrison & Cooper, Inc.		
Drilling Method:	Air Rotary		
Start Date:	12/12/2018		
End Date:	12/12/2018		

Project Name: BD J-30 vent
Well ID: MW-3
Project Consultant: Tasman

Comments: Located approximately 125 ft southeast of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.
DRAFTED BY: N.Kopiasz
 TD = 110 ft GW = 106 ft

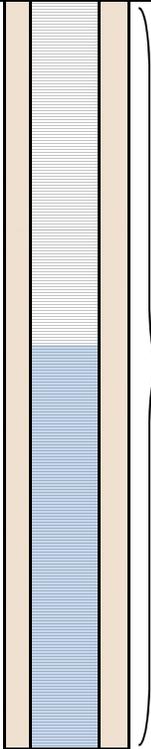
Location: Unit J, Section 30, T21S, R37E
Lat: 32.446657 **County:** Lea
Long: -103.199660 (NAD83) **State:** NM

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SM-reddish brown, silty sand		
SS						
				SW-light brown, well graded sand, caliche		
5 ft						
				SM-off-white, sandy silt, occasional caliche		
10 ft						
				SM-Same As Above (SAA)		
15 ft						
				SM-light tan, sandy silt		
20 ft						
				SM-off-white, sandy silt		
25 ft						
				SM-SAA		
30 ft						
				SM-SAA		
35 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SM-light tan, sandy silt, occasional caliche		
40 ft						
				SM-light tan, sandy silt		
45 ft						
				Not Sampled (NS)		
50 ft						
				NS		
55 ft						
				NS		
60 ft						
				NS		
65 ft						
				NS		
70 ft						
				NS		
75 ft						
				NS		
80 ft						
				NS		
85 ft						

Bentonite Seal

Sand Pack

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				NS		 <p>Sand Pack</p>
90 ft						
				NS		
95 ft						
				NS		
100 ft						
				NS		
105 ft						
110 ft				NS		

Logger:	Nick Kopiasz		
Driller:	Harrison & Cooper, Inc.		
Drilling Method:	6" Air rotary		
Start Date:	4/26/2019		
End Date:	4/26/2019		
Project Name: BD J-30 Vent		Well ID: MW-2	
Project Consultant: Tasman			

Comments: Located approximately 70 ft northwest of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.

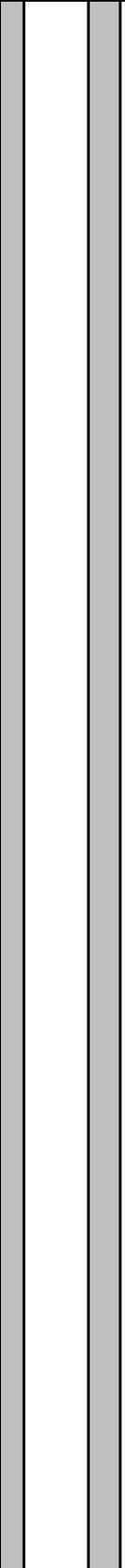
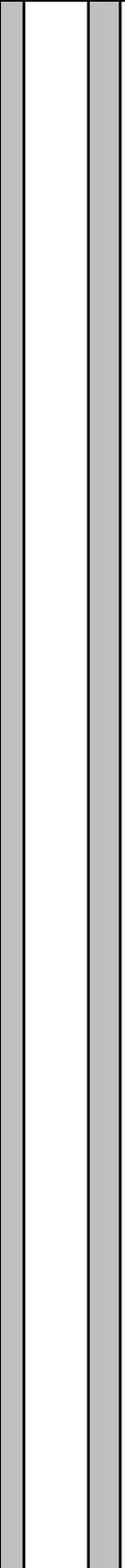
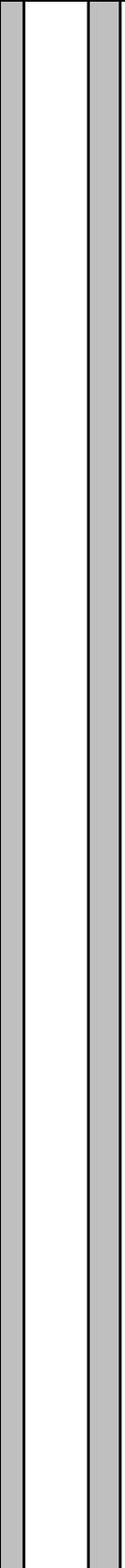
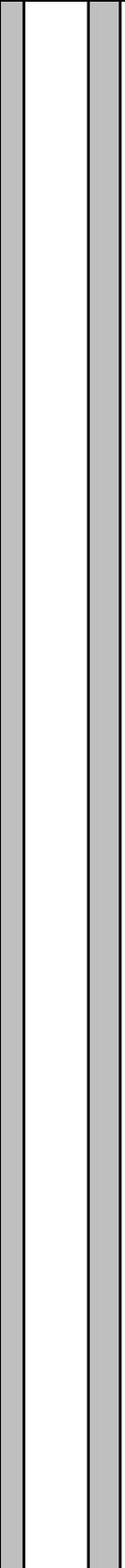
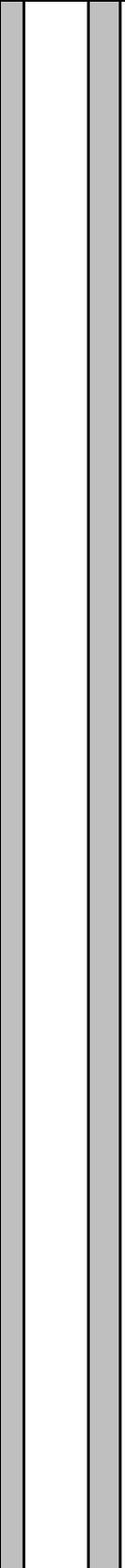
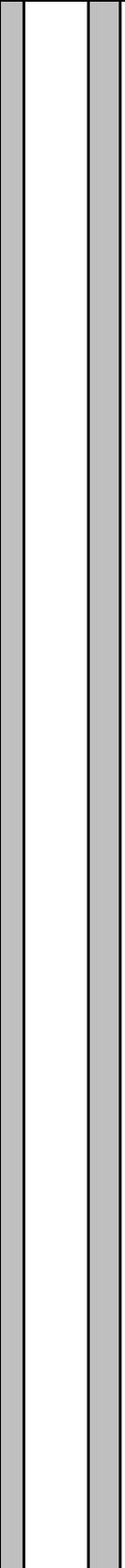
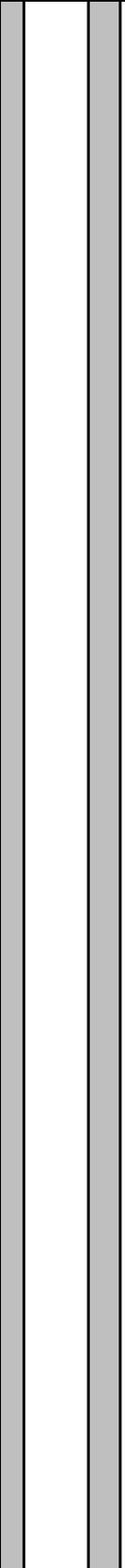
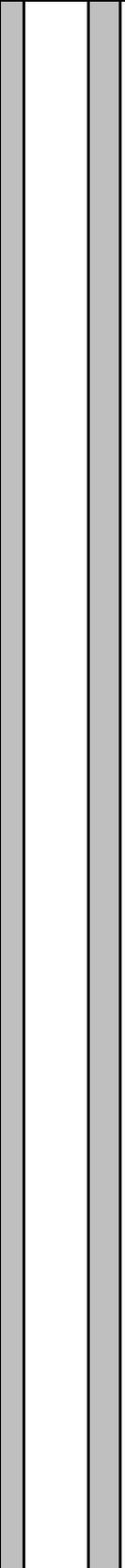
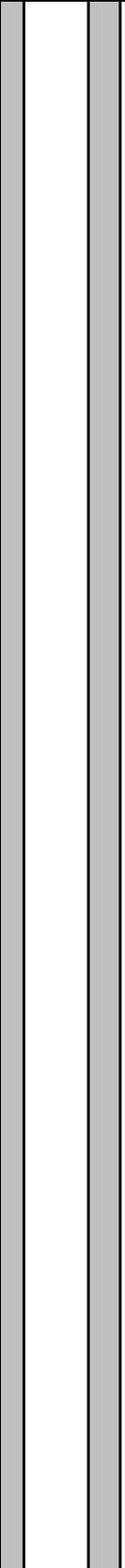
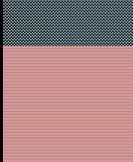
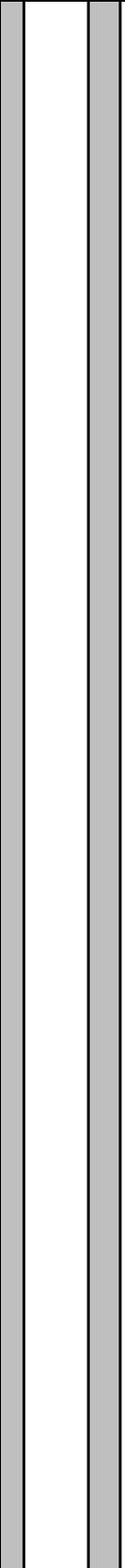
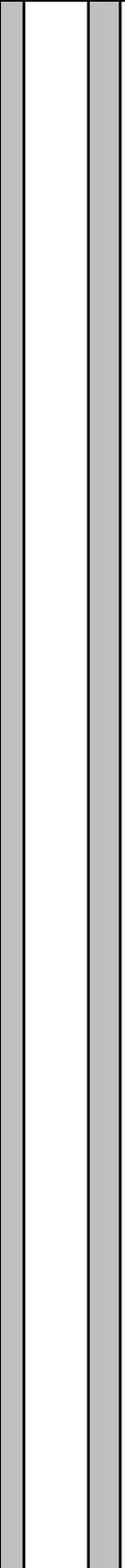
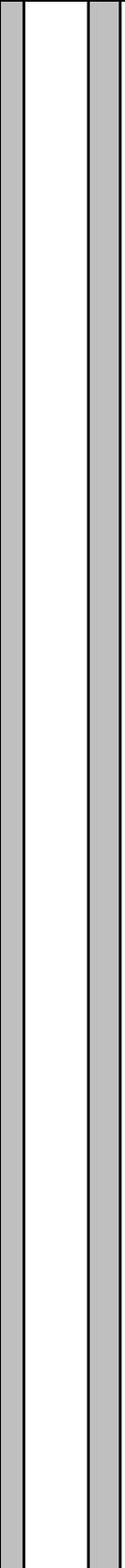
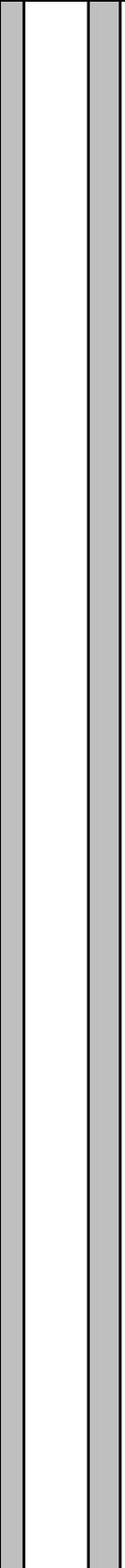
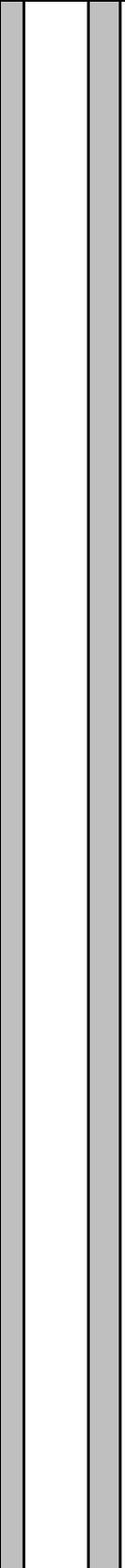
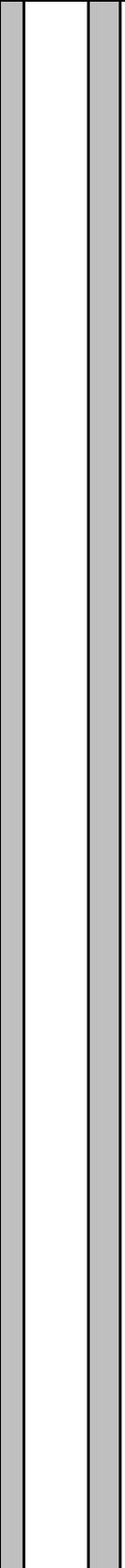
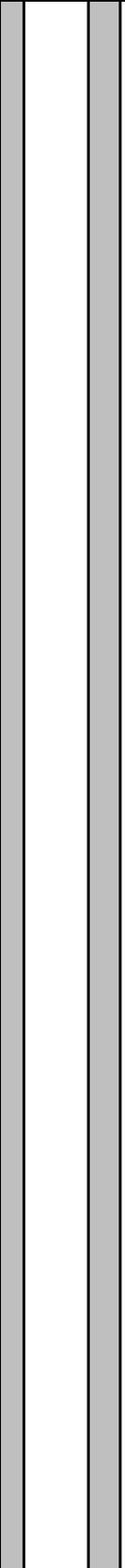
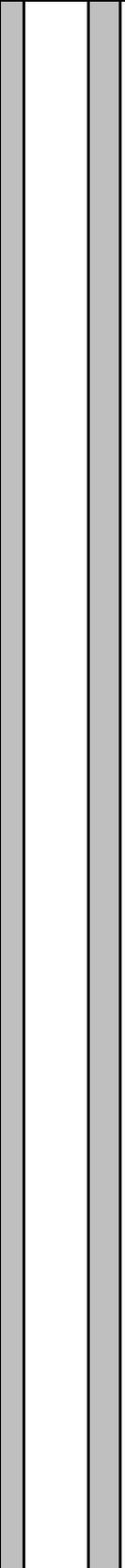
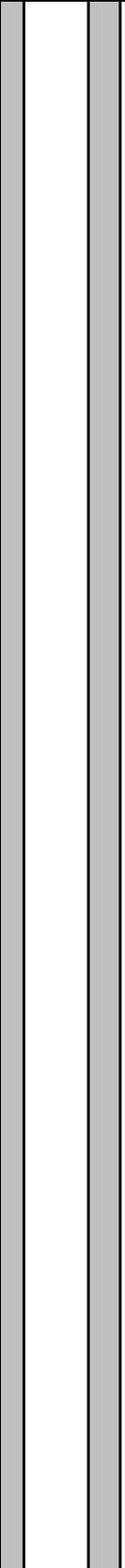
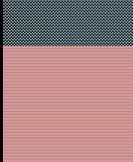
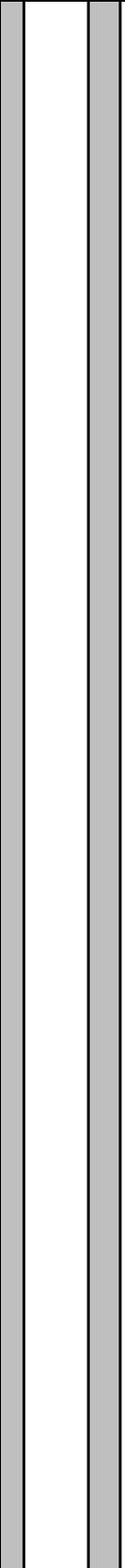
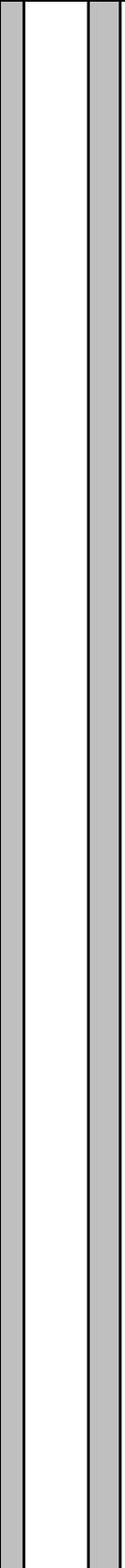
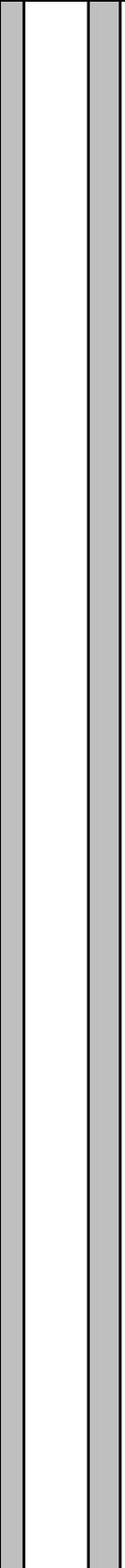
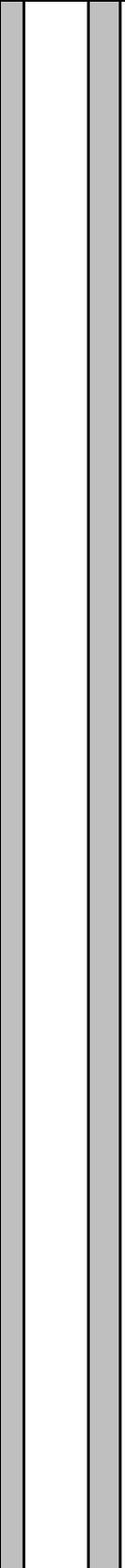
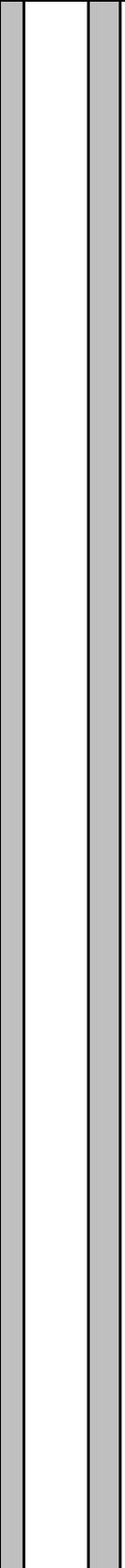
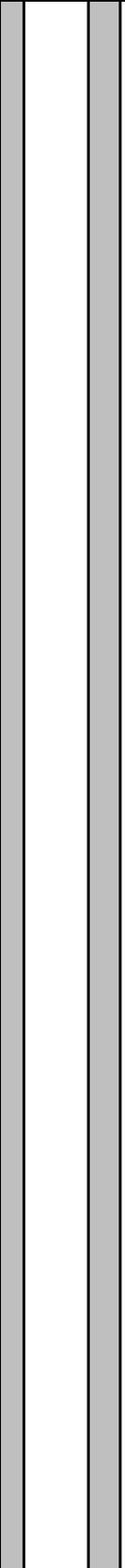
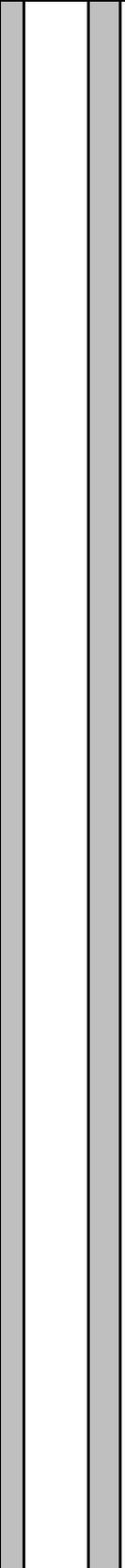
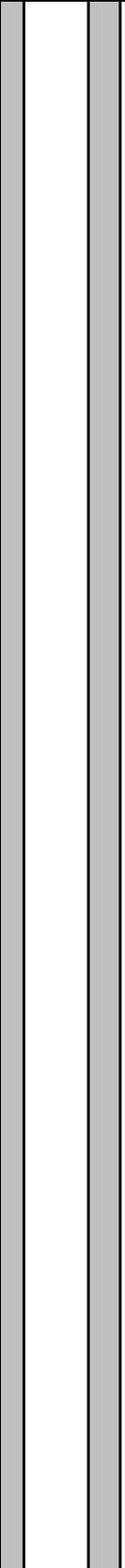
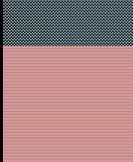
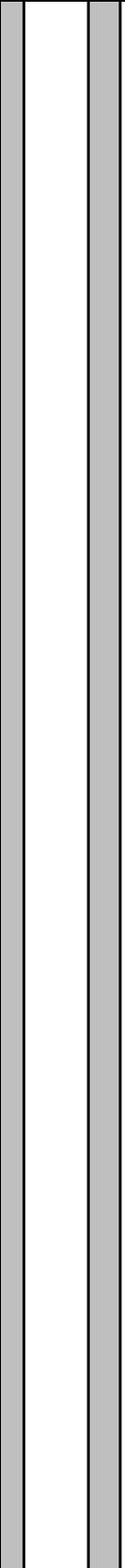
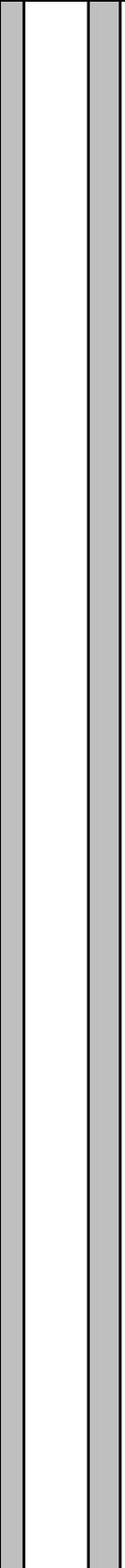
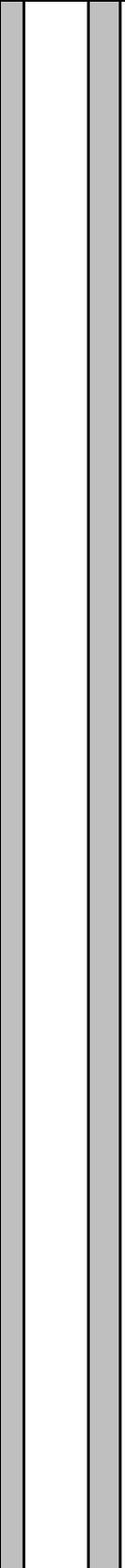
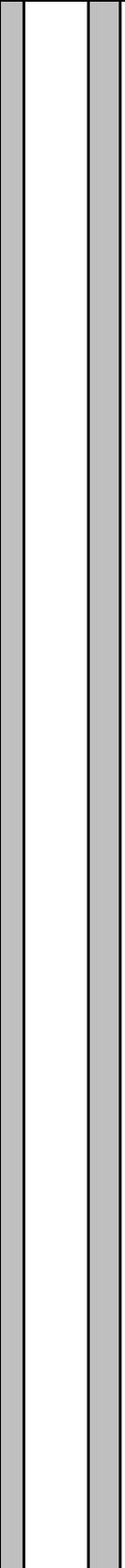
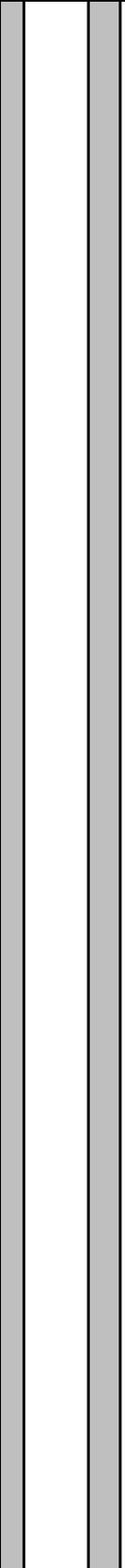
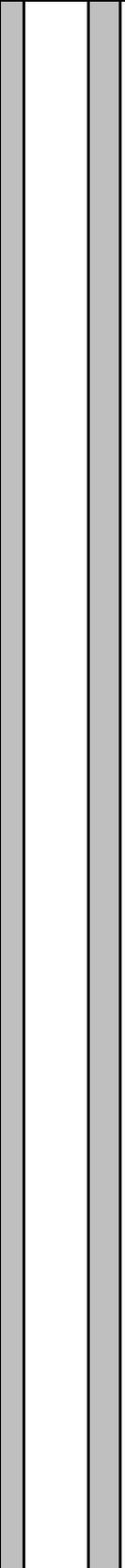
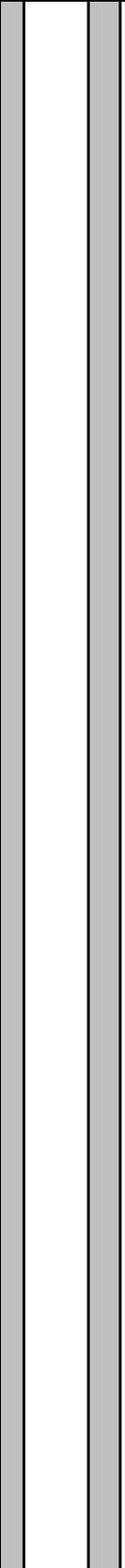
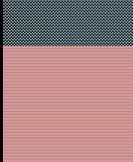
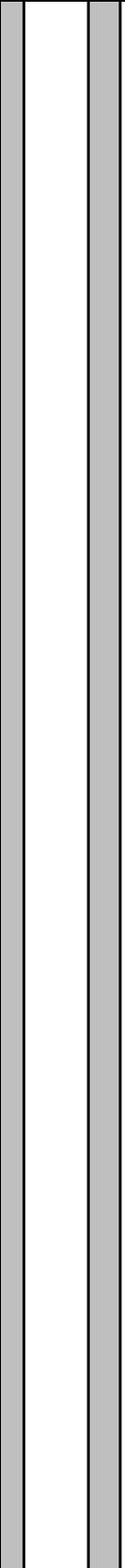
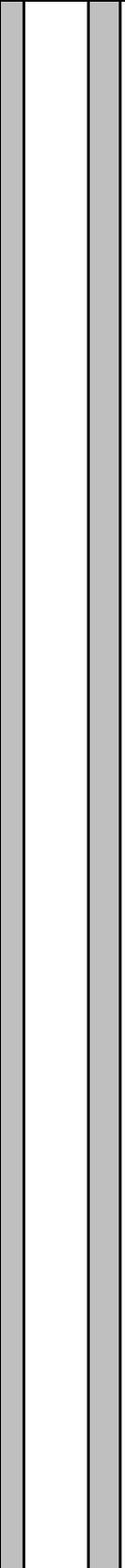
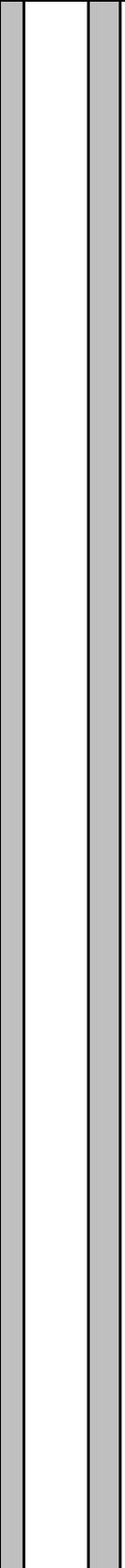
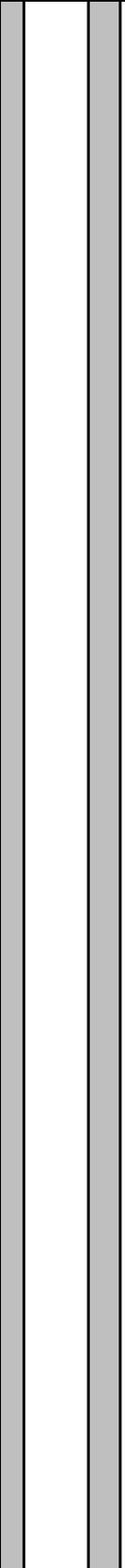
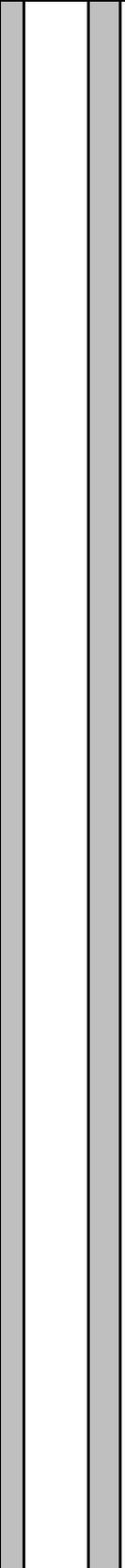
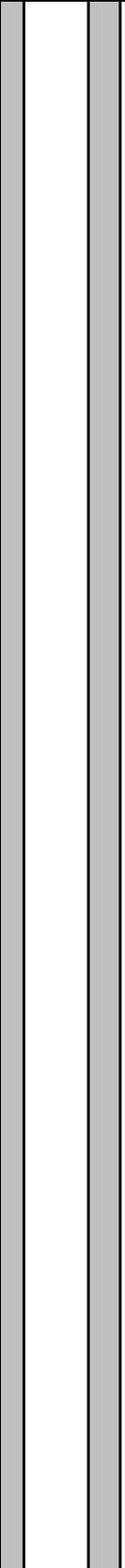
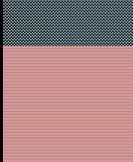
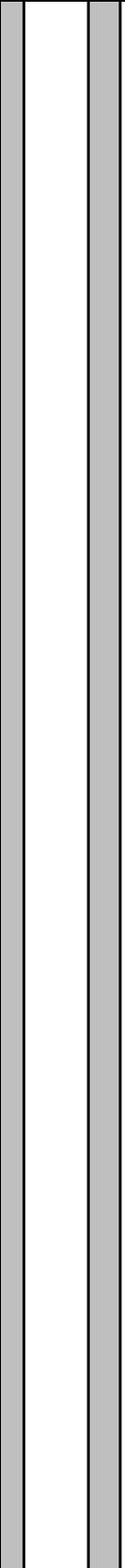
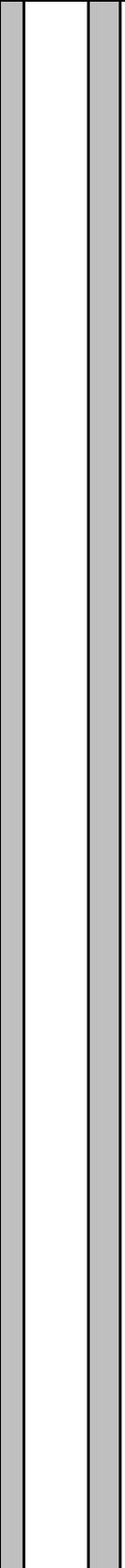
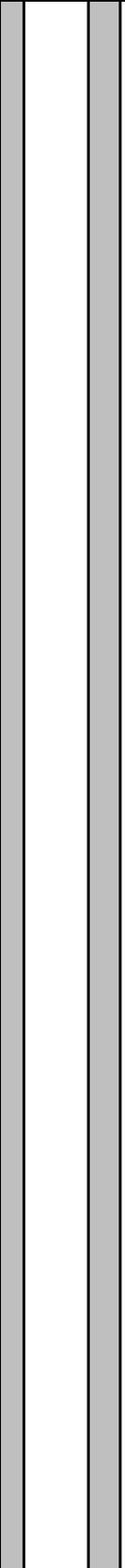
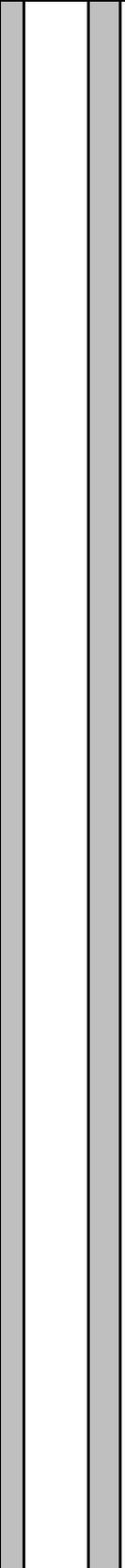
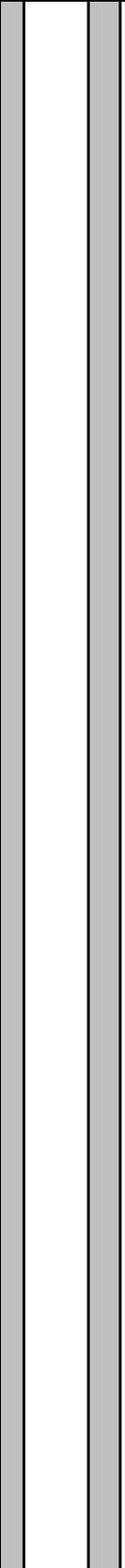
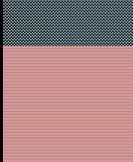
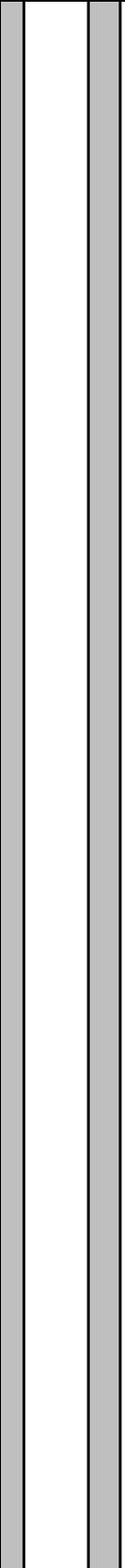
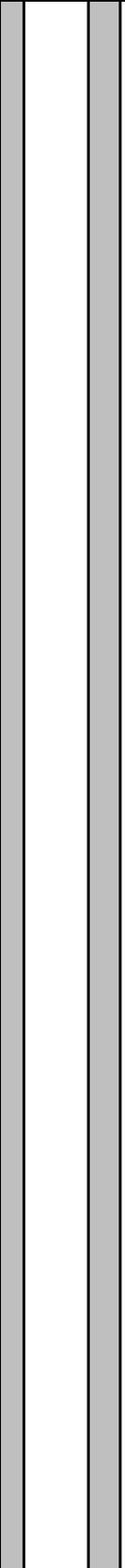
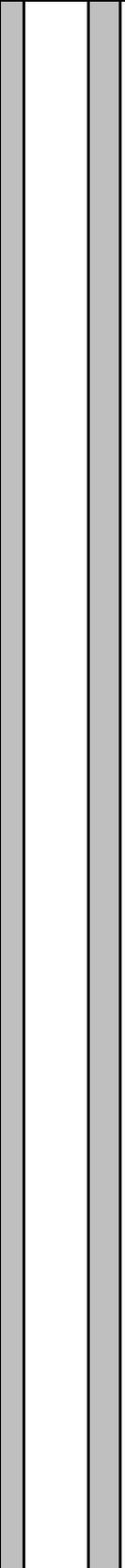
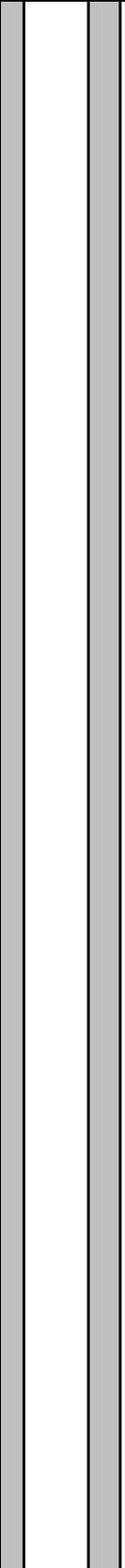
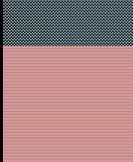
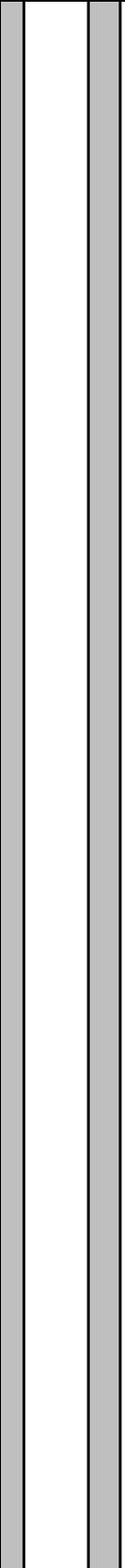
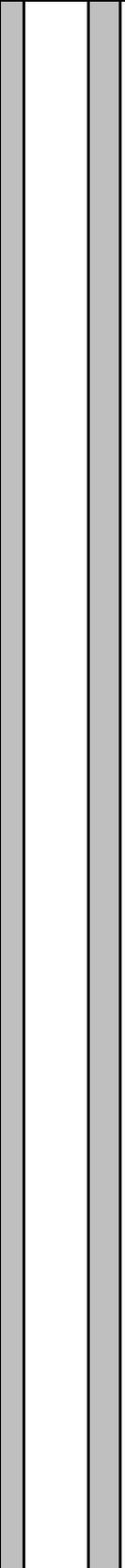
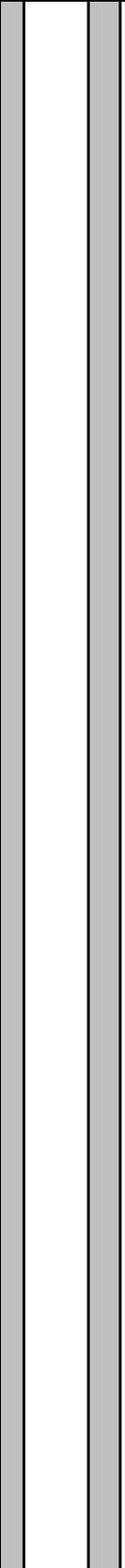
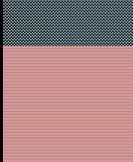
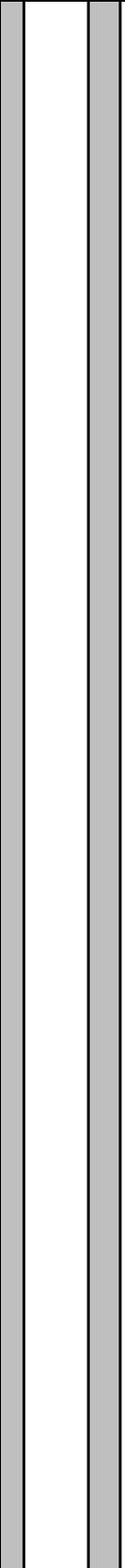
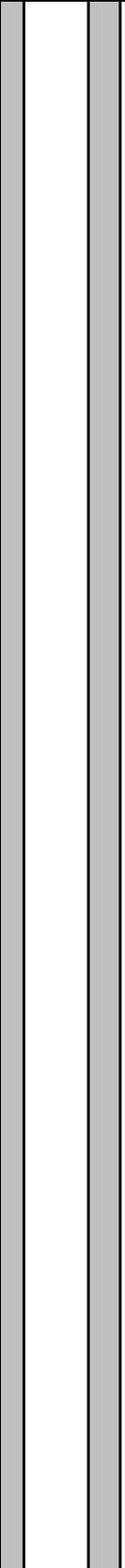
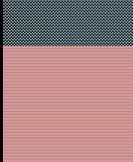
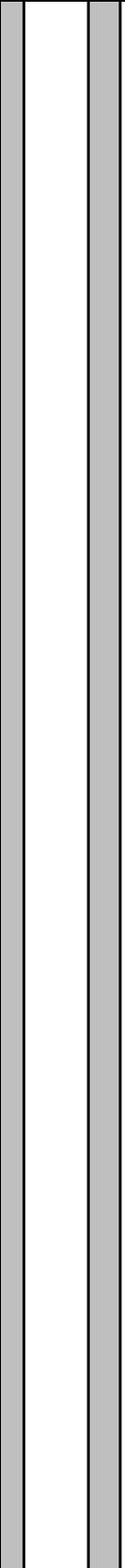
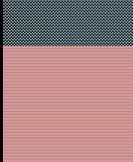
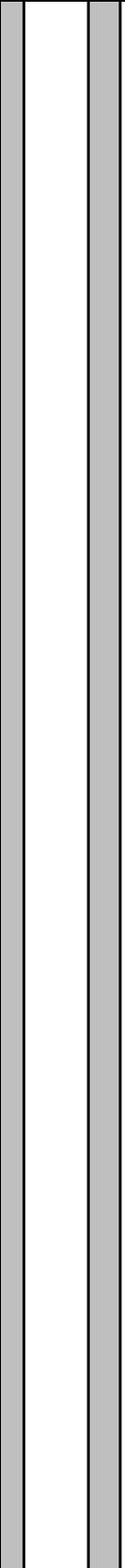
DRAFTED BY: N.Kopiasz

TD = 117 ft GW = 106 ft

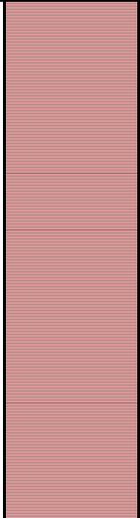
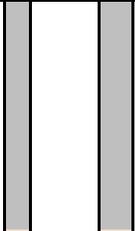
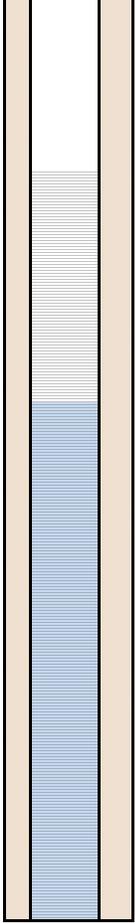
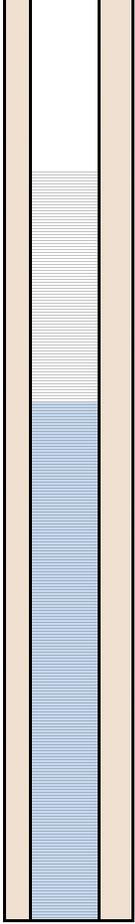
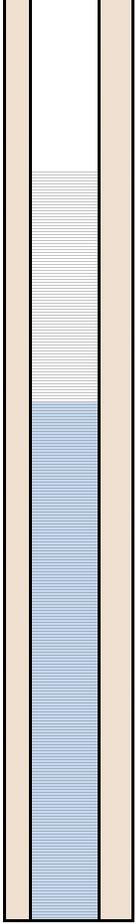
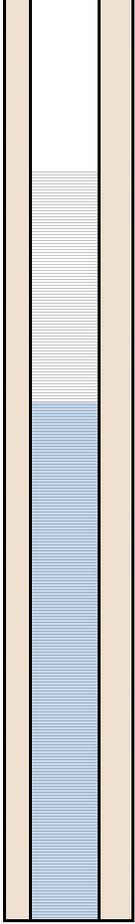
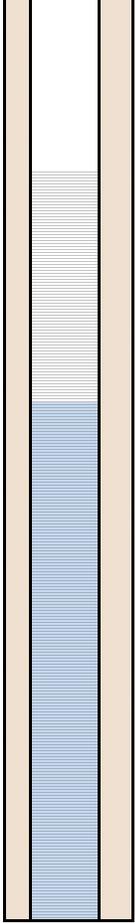
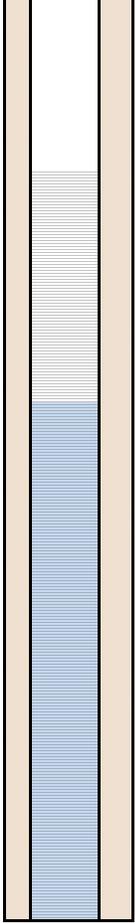
Location: Unit J, Section 30, T21S, R37E

Lat: 32.447018 **County:** Lea
Long: -103.200148 (NAD83) **State:** NM

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SM-reddish brown, silty sand		
SS						
				SC-reddish brown, clayey silt		
5 ft						
				SW-reddish tan, well graded sand, chunks of clayey sand		
10 ft						
				SW-tan, well graded sand with caliche		
15 ft						
				SM-tan, silty fine sand, some chunks of caliche		
20 ft						
				SM-Same As Above (SAA)		
25 ft						
				SM-SAA		
30 ft						
				GM-light tan, gravelly silty sand, caliche cobbles		
35 ft						

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction																																																																																																
				SM-tan, silty fine sand, some chunks of caliche																																																																																																		
40 ft											SW-tan, well graded sand, some sandstone cobbles			45 ft								SM-tan, silty fine sand			50 ft								SW-tan, well graded sand with fines, cobbles of sandstone			55 ft								SW-SAA			60 ft								GM-reddish tan, gravelly silt, sandstone cobbles			65 ft								GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft
				SW-tan, well graded sand, some sandstone cobbles																																																																																																		
45 ft											SM-tan, silty fine sand			50 ft								SW-tan, well graded sand with fines, cobbles of sandstone			55 ft								SW-SAA			60 ft								GM-reddish tan, gravelly silt, sandstone cobbles			65 ft								GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft											
				SM-tan, silty fine sand																																																																																																		
50 ft											SW-tan, well graded sand with fines, cobbles of sandstone			55 ft								SW-SAA			60 ft								GM-reddish tan, gravelly silt, sandstone cobbles			65 ft								GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																						
				SW-tan, well graded sand with fines, cobbles of sandstone																																																																																																		
55 ft											SW-SAA			60 ft								GM-reddish tan, gravelly silt, sandstone cobbles			65 ft								GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																	
				SW-SAA																																																																																																		
60 ft											GM-reddish tan, gravelly silt, sandstone cobbles			65 ft								GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																												
				GM-reddish tan, gravelly silt, sandstone cobbles																																																																																																		
65 ft											GM-SAA			70 ft								GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																																							
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70 ft											GM-SAA			75 ft								GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																																																		
				GM-SAA																																																																																																		
75 ft											GM-SAA			80 ft								SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																																																													
				GM-SAA																																																																																																		
80 ft											SM-reddish tan, silty fine sand, some sandstone chunks			85 ft																																																																																								
				SM-reddish tan, silty fine sand, some sandstone chunks																																																																																																		
85 ft																																																																																																						

Bentonite Seal

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction		
				SM-SAA				
90 ft								
				SM-SAA				
95 ft								
				SM-SAA				
100 ft								
				Not Sampled (NS)				
105 ft								
				NS				
110 ft								
				NS				
115 ft								
				NS				
120 ft								

Rice Operating Company
BD J-30 Vent
Drilling Photo Log



MW-1 drilling



Rice Operating Company
BD J-30 Vent
Drilling Photo Log



Rice Operating Company
BD J-30 vent
Monitoring Well Drilling
4/26/2019



Overview



Drilling

Rice Operating Company
BD J-30 vent
Monitoring Well Drilling
4/26/2019



Set

ROC - BD J-30 vent (1R426-217)

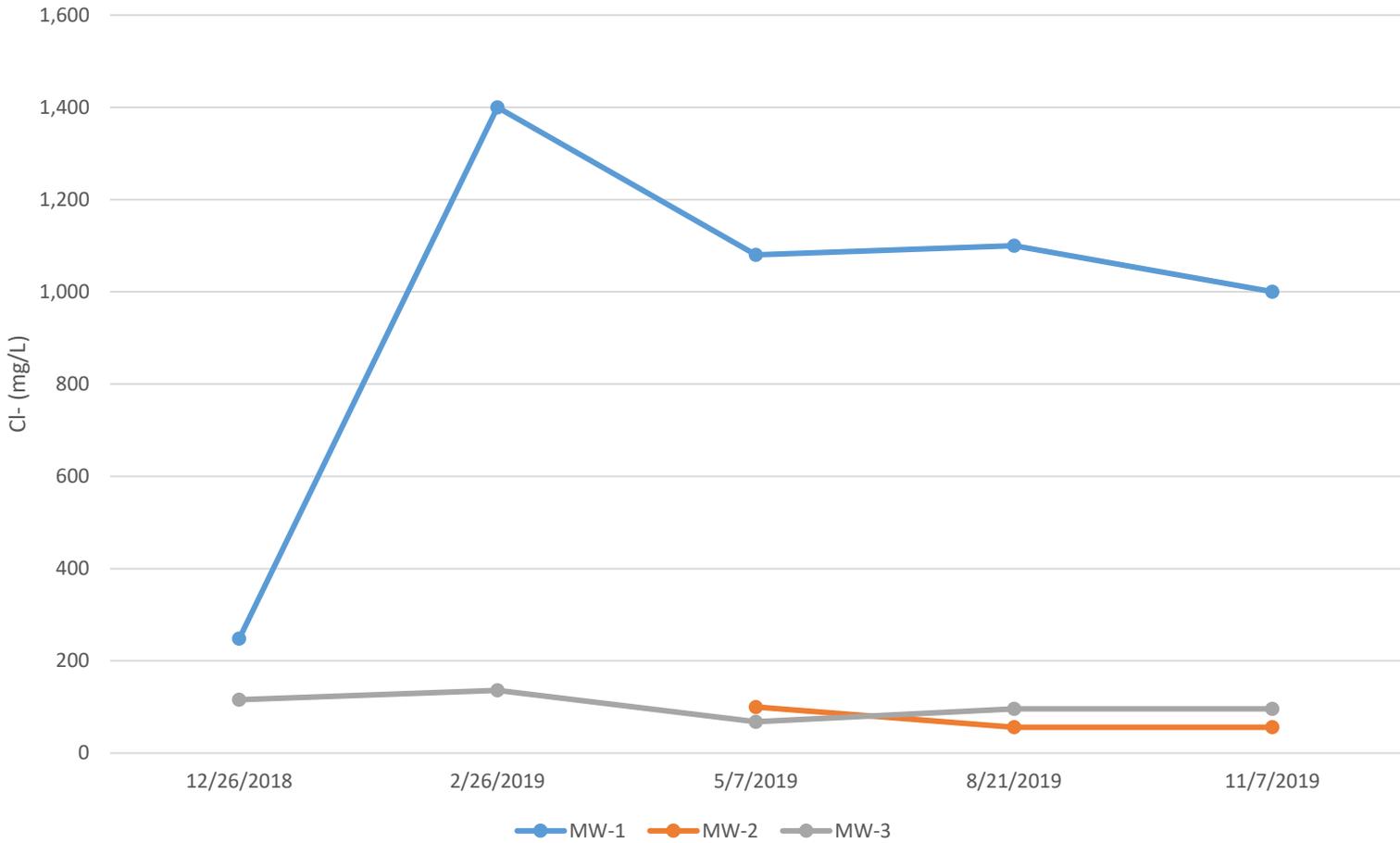
Unit Letter J, Section 30, T21S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	106.38	141.6	23	75	12/26/2018	248	664	<0.001	<0.001	<0.001	<0.003	157	Clear No odor
1	106.51	141.6	23	75	2/26/2019	1,400	1,900	<0.001	<0.001	<0.001	<0.003	52	Clear No odor
1	106.5	141.6	23	75	5/7/2019	1,080	2,120	<0.001	<0.001	<0.001	<0.003	65	Clear No odor
1	106.5	141.6	23	75	8/21/2019	1,100	2,220	<0.001	<0.001	<0.001	<0.003	53	Clear No odor
1	106.54	141.6	23	75	11/7/2019	1,000	2,000	<0.001	<0.001	<0.001	<0.003	47	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	107.52	120.05	2	6	5/7/2019	100	459	<0.001	<0.001	<0.001	<0.003	91	Clear No odor
2	107.51	120.05	2	6	8/21/2019	56	400	<0.001	<0.001	<0.001	<0.003	74	Clear No odor
2	107.55	120.05	2	6	11/7/2019	56	411	<0.001	<0.001	<0.001	<0.003	69	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	106.38	110.38	0.6	3	12/27/2018	116	321	<0.001	<0.001	<0.001	<0.003	107	Clear No odor
3	106.38	110.38	0.6	3	2/26/2019	136	478	<0.001	<0.001	<0.001	<0.003	86	Clear No odor
3	106.38	110.38	0.6	3	5/7/2019	68	531	<0.001	<0.001	<0.001	<0.003	83	Clear No odor
3	106.37	110.38	0.6	3	8/21/2019	96	536	<0.001	<0.001	<0.001	<0.003	74	Clear No odor
3	106.41	110.38	0.6	3	11/7/2019	96	547	<0.001	<0.001	<0.001	<0.003	78	Clear No odor

BD J-30 vent (1R426-217)



March 06, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 02/27/19 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,



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:	02/27/2019	Sampling Date:	02/26/2019
Reported:	03/06/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H900744-01)

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	03/05/2019	ND	0.021	106	0.0200	0.538	
Toluene*	<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862	
Ethylbenzene*	<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06	
Total Xylenes*	<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06	
Total BTEX	<0.006	0.006	03/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1400	4.00	02/28/2019	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*	52.4	10.0	02/28/2019	ND	22.9	114	20.0	0.263	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1900	5.00	03/04/2019	ND	514	97.5	527	0.847	

Cardinal Laboratories

*=Accredited Analyte

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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:	02/27/2019	Sampling Date:	02/26/2019
Reported:	03/06/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H900744-02)

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	03/05/2019	ND	0.021	106	0.0200	0.538		
Toluene*	<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862		
Ethylbenzene*	<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06		
Total Xylenes*	<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06		
Total BTEX	<0.006	0.006	03/05/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	136	4.00	02/28/2019	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*	86.4	25.0	02/28/2019	ND	22.9	114	20.0	0.263		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	478	5.00	03/04/2019	ND	514	97.5	527	0.847		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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



Celey D. Keene, Lab Director/Quality Manager



May 20, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 05/09/19 14:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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

Analytical Results For:

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

Received:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H901709-01)

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	05/09/2019	ND	0.022	111	0.0200	0.838	
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16	
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86	
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994	
Total BTEX	<0.006	0.006	05/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1080	4.00	05/20/2019	ND	100	100	100	0.00	

Sulfate 375.4		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	65.8	10.0	05/15/2019	ND	22.8	114	20.0	2.22	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2120	5.00	05/17/2019	ND	459	87.1	527	1.66	

Cardinal Laboratories

*=Accredited Analyte

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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:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H901709-02)

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	05/09/2019	ND	0.022	111	0.0200	0.838		
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16		
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86		
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994		
Total BTEX	<0.006	0.006	05/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 81.3-128

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	05/20/2019	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	91.6	25.0	05/15/2019	ND	22.8	114	20.0	2.22		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	459	5.00	05/17/2019	ND	459	87.1	527	1.66		

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*=Accredited Analyte

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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:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H901709-03)

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	05/09/2019	ND	0.022	111	0.0200	0.838		
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16		
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86		
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994		
Total BTEX	<0.006	0.006	05/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	05/20/2019	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	83.4	25.0	05/15/2019	ND	22.8	114	20.0	2.22		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	531	5.00	05/17/2019	ND	459	87.1	527	1.66		

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Celey D. Keene, Lab Director/Quality Manager

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



Celey D. Keene, Lab Director/Quality Manager

August 28, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 08/23/19 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,



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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H902920-01)

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	08/28/2019	ND	0.021	103	0.0200	1.14	
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16	
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500	
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453	
Total BTEX	<0.006	0.006	08/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.6 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1100	4.00	08/27/2019	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*	53.4	10.0	08/27/2019	ND	21.4	107	20.0	0.937	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2220	5.00	08/27/2019	ND	528	100	527	0.724	

Cardinal Laboratories

*=Accredited Analyte

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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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H902920-02)

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	1.14		
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16		
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500		
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453		
Total BTEX	<0.006	0.006	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	08/27/2019	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*	74.6	25.0	08/27/2019	ND	21.4	107	20.0	0.937		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	400	5.00	08/27/2019	ND	528	100	527	0.724		

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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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H902920-03)

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	1.14		
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16		
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500		
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453		
Total BTEX	<0.006	0.006	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	96.0	4.00	08/27/2019	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*	74.2	25.0	08/27/2019	ND	21.4	107	20.0	0.937		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	536	5.00	08/27/2019	ND	528	100	527	0.724		

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Celey D. Keene, Lab Director/Quality Manager

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



Celey D. Keene, Lab Director/Quality Manager



November 19, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 11/11/19 15:05.

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 style with a large, flowing "C" and "K".

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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H903824-01)

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	11/13/2019	ND	0.020	99.3	0.0200	1.96		
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37		
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11		
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25		
Total BTEX	<0.006	0.006	11/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	1000	4.00	11/13/2019	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	46.8	10.0	11/13/2019	ND	19.5	97.4	20.0	1.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2000	5.00	11/14/2019	ND	564	107	527	0.964		

Cardinal Laboratories

*=Accredited Analyte

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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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H903824-02)

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/13/2019	ND	0.020	99.3	0.0200	1.96		
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37		
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11		
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25		
Total BTEX	<0.006	0.006	11/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	11/13/2019	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	69.6	25.0	11/13/2019	ND	19.5	97.4	20.0	1.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	411	5.00	11/14/2019	ND	564	107	527	0.964		

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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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H903824-03)

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/13/2019	ND	0.020	99.3	0.0200	1.96		
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37		
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11		
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25		
Total BTEX	<0.006	0.006	11/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	96.0	4.00	11/13/2019	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	78.0	10.0	11/13/2019	ND	19.5	97.4	20.0	1.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	547	5.00	11/14/2019	ND	564	107	527	0.964		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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



