Facility Well Name Northern (Bushton) #1 **UIC Permit #** KS-01-159-003 **Month** February **Year** 2020

Submitted 03/19/2020 **Approved** 03/20/2020 **KOLAR Document ID** 1510545

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 13

Barrels per Day Maximum: 3,840

			Annulus Pressure psig min 60		Injection Pressure		
	Injection Volume Barrels per Day	Injection Rate Barrels per Minute	Gauge psig	Cont. Record psig	Gauge psig	Cont. Record psig	Amount Added to Seal Pot
Monthly Average	28	0.08	104	101	-27.0	-24.8	0
Monthly Maximum	90	2.43	112	110	-25.0	-22.5	0
Monthly Minimum	0	0.00	95	93	-28.0	-25.8	0
Monthly Total	822						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
112.00	91.70	-22.40	-25.90

Comments:

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Daily Recorder Data

Day	Time 24 hr	Injection Volume Barrels Per Day	Injection Rate Barrels Per Minute	Annulus Pressure (Gauge) psig	Annulus Pressure (Continuous Recorder) psig	Injection Pressure (Gauge) + / -	Injection Pressure (Continuous Recorder) + / -	Seal Pot Fluid Level inches	Type of Fluid Added to Seal Pot	Amount of Fluid Added to Seal Pot gallons	Initials of Collector of Field Recordings		
1	10:25	0.00	0.00	105	102.0	-25	-23.1	12	N/A	0	RB		
2	08:30	0.00	0.00	105	102.0	-25	-22.9	12	N/A	0	LM		
3	07:45	0.00	0.00	105	103.4	-25	-22.5	12	N/A	0	LM		
4	08:30	11.90	2.43	102	99.5	-27	-24.9	12	N/A	0	LM		
5	07:30	0.00	0.00	102	99.0	-27	-24.9	12	N/A	0	LM		
6	08:30	0.00	0.00	102	99.2	-27	-25.5	12	N/A	0	LM		
7	09:00	77.19	0.00	102	100.0	-27	-24.8	12	N/A	0	LM		
8	06:00	0.00	0.00	104	101.1	-27	-25.0	12	N/A	0	MU		
9	07:00	0.00	0.00	104	102.4	-27	-24.7	12	N/A	0	MU		
10	06:00	75.79	0.00	103	100.7	-26	-25.0	12	N/A	0	MU		
11	07:30	0.00	0.00	105	101.8	-27	-25.1	12	N/A	0	LM		
12	08:00	10.64	0.00	105	102.0	-27	-24.7	12	N/A	0	LM		
13	07:45	76.48	0.00	100	98.1	-27	-25.4	12	N/A	0	RB		
14	13:00	0.00	0.00	100	99.6	-27	-25.1	12	N/A	0	RB		
15	11:00	76.05	0.00	105	102.2	-27	-24.9	12	N/A	0	RB		
16	02:00	0.00	0.00	106	104.6	-27	-24.7	12	N/A	0	RB		
17	08:30	76.10	0.00	105	102.4	-27	-24.7	12	N/A	0	MW		
18	08:30	0.00	0.00	105	101.7	-27	-25.2	12	N/A	0	MW		
19	06:00	19.67	0.00	105	102.1	-27	-25.3	12	N/A	0	MU		
20	06:00	75.62	0.00	95	92.8	-28	-25.8	12	N/A	0	MU		
21	09:00	0.00	0.00	108	105.3	-28	-25.3	12	N/A	0	LM		
22	07:00	0.00	0.00	110	108.0	-28	-24.8	12	N/A	0	LM		
23	07:45	75.62	0.00	112	110.0	-27	-25.5	12	N/A	0	LM		
24	07:45	80.21	0.00	110	106.6	-27	-24.5	12	N/A	0	MW		
25	07:30	90.24	0.00	100	95.0	-27	-25.0	12	N/A	0	RB		
26	13:00	0.00	0.00	101	97.9	-28	-25.3	12	N/A	0	RB		
27	15:45	0.00	0.00	101	98.9	-28	-25.0	12	N/A	0	MW		
28	14:00	76.62	0.00	101	99.0	-27	-25.0	12	N/A	0	RB		
29	09:00	0.00	0.00	107	105.7	-28	-24.8	12	N/A	0	LM		
30													
31													

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Weekly Injectate Samples

Kansas Lab Certificate Number

Week	Temperature		pH		Chloride				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	53.00	02/03/2020	7.23	02/03/2020	N/A				
2	53.00	02/11/2020	7.46	02/11/2020	N/A				
3	54.00	02/18/2020	7.56	02/18/2020	N/A				
4	54.00	02/24/2020	7.37	02/24/2020	N/A				
5					N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 11/14/2019
Kansas Lab Certificate Number E-10146
Lab Name Pace Analytical-Salina

These samples shall be representative of injection activity and shall therefore be collected on days of injection.

Constituent	Value	Units
Calcium	129.000	mg/l
Chloride	630.000	mg/l
Conductivity	251.000	Mmhos
Diethanolamine	<50.000	mg/l
Iron	4.360	mg/l
Magnesium	16.000	mg/l
Sulfate	ND	mg/l
Total Alkalinity as CaCO3	313.000	mg/l
Total Dissolved Solids	1,510.000	mg/l
Total Hardness as CaCO3	389.000	mg/l