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

Submitted 05/21/2020 **Approved** 05/26/2020 **KOLAR Document ID** 1517047

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 22

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	62	0.15	110	107	-27.8	-24.6	0
Monthly Maximum	229	1.83	120	117	-25.0	-22.2	0
Monthly Minimum	0	0.00	101	97	-30.0	-25.1	0
Monthly Total	1,864						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
120.30	96.40	-21.50	-25.40

Comments:

Northern (Bushton) #1 04/2020

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	09:00	76.52	0.00	110	106.4	-30	-24.6	12	N/A	0	LM		
2	09:00	0.00	0.00	106	103.7	-28	-24.9	12	N/A	0	LM		
3	08:00	74.90	0.00	110	106.6	-28	-25.0	12	N/A	0	MU		
4	09:00	76.57	0.00	110	105.7	-28	-25.0	12	N/A	0	MU		
5	10:00	76.43	0.00	109	105.6	-28	-24.7	12	N/A	0	MU		
6	08:45	10.76	0.00	106	103.8	-28	-24.7	12	N/A	0	MW		
7	08:45	75.52	0.00	110	105.2	-28	-24.5	12	N/A	0	MW		
8	08:45	0.00	0.00	110	107.9	-28	-24.4	12	N/A	0	MW		
9	08:30	153.98	0.00	103	98.8	-28	-25.1	12	N/A	0	MW		
10	09:20	78.36	0.00	110	106.8	-28	-25.0	12	N/A	0	RB		
11	11:40	195.40	0.00	106	103.0	-25	-23.5	12	N/A	0	RB		
12	11:45	121.86	0.00	109	105.0	-28	-24.7	12	N/A	0	RB		
13	13:00	131.31	1.83	110	107.8	-28	-24.6	12	N/A	0	MU		
14	09:00	35.93	0.00	116	114.2	-28	-25.0	12	N/A	0	MU		
15	06:00	0.00	0.00	117	114.2	-28	-25.0	12	N/A	0	MU		
16	10:00	75.83	0.00	117	114.0	-28	-25.0	12	N/A	0	MU		
17	09:30	44.43	1.83	112	109.0	-28	-24.6	12	N/A	0	LM		
18	09:20	31.69	0.00	120	116.0	-28	-24.7	13	N/A	0	LM		
19	12:30	76.43	0.00	120	117.0	-28	-24.5	12	N/A	0	LM		
20	09:30	0.00	0.00	111	107.5	-28	-24.8	12	N/A	0	LM		
21	10:00	0.00	0.00	111	106.6	-28	-24.6	12	N/A	0	RB		
22	11:00	92.21	0.00	111	106.7	-28	-24.5	11	N/A	0	RB		
23	14:00	0.00	0.00	111	107.6	-28	-24.4	11	N/A	0	RB		
24	10:00	74.93	0.00	110	106.9	-28	-24.7	12	N/A	0	MW		
25	07:30	0.00	0.00	110	105.7	-28	-25.0	12	N/A	0	MW		
26	10:00	76.00	0.00	110	105.9	-28	-25.0	12	N/A	0	MW		
27	10:00	228.83	0.00	101	96.6	-28	-25.0	9	N/A	0	RB		
28	08:45	0.00	0.00	108	104.2	-27	-23.9	11	N/A	0	DJ		
29	07:40	15.48	0.17	108	104.4	-25	-22.2	11	N/A	0	LM		
30	08:55	40.48	0.62	108	103.9	-26	-23.0	10	N/A	0	DJ		
31													

Northern (Bushton) #1 04/2020

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	57.00	04/06/2020	6.92	04/06/2020	N/A				
2	60.00	04/13/2020	8.13	04/13/2020	N/A				
3	60.00	04/21/2020	7.93	04/21/2020	N/A				
4	60.00	04/27/2020	7.61	04/27/2020	N/A				
5					N/A				

No monthly injectate samples required.

Northern (Bushton) #1 04/2020

Quarterly Injectate Samples

Quarter 1
Date Sample Collected 02/18/2020
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	167.000	mg/l
Chloride	796.000	mg/l
Conductivity	280.000	Mmhos
Diethanolamine	<50.000	mg/l
Iron	2.540	mg/l
Magnesium	23.400	mg/l
Sulfate	26.500	mg/l
Total Alkalinity as CaCO3	324.000	mg/l
Total Dissolved Solids	1,720.000	mg/l
Total Hardness as CaCO3	514.000	mg/l