Facility Well Name Northern (Bushton) #1 **UIC Permit #** KS-01-159-003 **Month** June **Year** 2019

Submitted 07/01/2019 **Approved** 08/15/2019 **KOLAR Document ID** 1464854

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 15

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	40	0.05	108	108	-23.4	-24.8	0
Monthly Maximum	159	1.50	114	113	-22.0	-24.0	0
Monthly Minimum	0	0.00	102	102	-27.0	-25.0	0
Monthly Total	1,186						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
115.00	101.00	-24.00	-25.00

Comments:

Transferred water/amine Liquids from V-19 to disposal well. 8,000 gallons. 5/23/19.

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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	06:30	0.00	0.00	109	109.0	-23	-25.0	6	N/A	0	MU		
2	06:00	0.00	0.00	110	110.0	-23	-25.0	6	N/A		MU		
3	10:30	0.00	0.00	110	110.0	-23	-25.0	5	N/A		MW		
4	10:30	26.62	0.00	108	110.0	-23	-25.0	5	N/A		MW		
5	09:00	0.00	0.00	110	109.0	-23	-25.0	5	N/A	0	MW		
6	11:30	0.00	0.00	109	110.0	-22	-24.0	5	N/A	0	TS		
7	09:00	0.00	0.00	110	109.0	-23	-25.0	5	N/A	0	TM		
8	08:45	0.00	0.00	111	109.0	-27	-25.0	5	N/A	0	TS		
9	06:30	0.00	0.00	110	109.0	-27	-25.0	5	N/A	0	TS		
10	06:00	75.57	0.00	108	107.0	-23	-25.0	5	N/A	0	MU		
11	06:00	0.00	0.00	109	107.0	-23	-25.0	5	N/A	0	MU		
12	06:00	12.24	0.00	109	107.0	-23	-25.0	5	N/A	0	MU		
13	06:00	76.43	0.00	102	102.0	-23	-25.0	5	N/A	0	MU		
14	08:00	77.17	0.00	105	106.0	-23	-25.0	5	N/A	0	LM		
15	07:45	83.24	0.00	106	106.0	-23	-25.0	5	N/A	0	LM		
16	07:45	0.00	0.00	109	109.0	-23	-25.0	5	N/A	0	LM		
17	07:50	0.00	0.00	108	108.0	-23	-25.0	5	N/A	0	RB		
18	10:00	100.81	0.00	111	112.0	-22	-25.0	5	N/A	0	MW		
19	13:00	0.00	0.00	111	112.0	-22	-24.0	5	N/A	0	MW		
20	07:45	79.40	0.00	110	111.0	-23	-25.0	5	N/A	0	RB		
21	09:00	0.00	0.00	114	113.0	-22	-24.0	5	N/A	0	MW		
22	07:10	74.93	0.00	105	107.0	-24	-25.0	5	N/A	0	TS		
23	10:15	0.00	0.00	110	110.0	-27	-25.0	5	N/A	0	TS		
24	08:00	86.79	1.50	106	107.0	-23	-24.0	5	N/A	0	LM		
25	08:00	16.95	0.00	110	111.0	-23	-24.0	5	N/A	0	LM		
26	07:30	85.60	0.00	105	106.0	-23	-25.0	5	N/A	0	LM		
27	07:30	156.29	0.00	105	106.0	-24	-25.0	5	N/A	0	LM		
28	08:30	158.64	0.00	106	106.0	-24	-25.0	5	N/A	0	LM		
29	06:30	0.00	0.00	109	108.0	-24	-25.0	5	N/A	0	GA		
30	07:30	74.93	0.00	109	108.0	-24	-25.0	5	N/A	0	GA		
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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	65.00	06/03/2019	6.87	06/03/2019	N/A				
2	65.00	06/10/2019	5.34	06/10/2019	N/A				
3	67.00	06/17/2019	6.31	06/17/2019	N/A				
4	63.00	06/24/2019	6.50	06/24/2019	N/A				
5					N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 2
Date Sample Collected 04/15/2019
Kansas Lab Certificate Number 1120146
Lab Name

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

Constituent	Value	Units
Calcium	52.500	mg/l
Chloride	234.000	mg/l
Iron	47.900	mg/l
Magnesium	64.800	mg/l
Sulfate	21.700	mg/l
Total Dissolved Solids	1,120.000	mg/l
Total Alkalinity as CaCO3	292.000	mg/l (as CaCO3)
Total Hardness as CaCO3	158.000	mg/l (as CaCO3)
Conductivity	170.000	Mmhos