Facility Well Name Northern (Mullinville) #1 **UIC Permit #** KS-01-097-001 **Month** November **Year** 2023

Submitted 12/13/2023 **Approved** 12/28/2023 **KOLAR Document ID** 1740871

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 16

Barrels per Day Maximum: 2,381

			Annulus Pressure psig min 40		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	279	0.23	70	69	-24.9	-24.3	0
Monthly Maximum	1,667	2.36	71	70	0.0	0.0	0
Monthly Minimum	0	0.00	69	67	-28.0	-27.0	0
Monthly Total	8,364						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
70.00	67.00	0.00	-27.00

Comments:

Annual Fall Off Test Cunducted 9/26/2023-9/27/2023

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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	08:45	1,666.67	0.00	70	69.0	-26	-26.0	57	N/A	0	RFS		
2	10:15	1,642.86	0.00	70	68.0	-20	-20.0	44	N/A	0	RFS		
3	10:30	0.00	0.00	70	69.0	0	0.0	56	N/A	0	RFS		
4	06:35	142.86	0.00	70	69.0	-27	-26.0	57	N/A	0	RFS		
5	06:30	0.00	0.00	70	69.0	-26	-25.0	59	N/A	0	RFS		
6	08:19	0.00	0.00	70	69.0	-25	-25.0	60	N/A	0	RFS		
7	08:06	761.90	2.33	70	70.0	-26	-27.0	49	N/A	0	RFS		
8	09:03	7.14	0.00	70	68.0	-26	-26.0	59	N/A	0	DJA		
9	09:30	547.62	2.31	70	70.0	-26	-25.0	48	N/A	0	LRC		
10	10:46	47.62	0.00	69	69.0	-26	-26.0	58	N/A	0	DJA		
11	08:54	0.00	0.00	70	68.0	-26	-25.0	60	N/A	0	DJA		
12	08:37	0.00	0.00	70	68.0	-25	-24.0	61	N/A	0	DJA		
13	11:46	0.00	0.00	70	69.0	-24	-24.0	61	N/A	0	LCR		
14	09:08	0.00	0.00	70	68.0	-23	-23.0	61	N/A	0	LCR		
15	11:05	0.00	0.00	70	68.0	-26	-25.0	61	N/A	0	RFS		
16	08:30	23.81	0.00	70	68.0	-22	-21.0	61	N/A	0	RFS		
17	08:10	571.43	0.00	71	70.0	-27	-27.0	47	N/A	0	RFS		
18	07:05	0.00	0.00	70	69.0	-26	-26.0	59	N/A	0	AT		
19	10:50	0.00	0.00	70	68.0	-25	-25.0	61	N/A	0	AT		
20	09:00	404.76	0.00	71	67.0	-27	-26.0	51	N/A	0	RFS		
21	08:40	0.00	0.00	70	69.0	-26	-25.0	60	N/A	0	RFS		
22	09:17	23.81	0.00	70	68.0	-28	-27.0	58	N/A	0	JC		
23	06:10	571.43	0.00	71	70.0	-27	-26.0	51	N/A	0	JC		
24	05:45	595.24	2.36	70	70.0	-27	-25.0	53	N/A	0	JC		
25	10:24	761.90	0.00	71	70.0	-28	-27.0	53	N/A	0	JC		
26	10:29	0.00	0.00	70	69.0	-26	-25.0	58	N/A	0	JC		
27	10:05	0.00	0.00	70	69.0	-26	-25.0	60	N/A	0	JC		
28	10:48	0.00	0.00	70	69.0	-25	-24.0	61	N/A	0	JC		
29	10:00	571.43	0.00	70	69.0	-27	-27.0	43	N/A	0	JN		
30	11:00	23.81	0.00	70	68.0	-27	-27.0	57	N/A	0	JN		
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Weekly Injectate Samples

Kansas Lab Certificate Number E-10146

Week	**Temperature**		**pH**		**Chloride**				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	61.00	11/02/2023	7.90	11/02/2023	N/A				
2	64.10	11/08/2023	7.10	11/08/2023	N/A				
3	60.10	11/16/2023	8.00	11/16/2023	N/A				
4	69.00	11/22/2023	8.40	11/22/2023	N/A				
5	78.70	11/30/2023	8.00	11/30/2023	N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 10/18/2023
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	242,000.000	mg/l
Chloride	189.000	mg/l
Conductivity	2,220.000	Mmhos
Iron	160.000	mg/l
Magnesium	30,400.000	mg/l
Sulfate	782.000	mg/l
Total Alkalinity as CaCO3	ND	mg/l
Total Dissolved Solids	1,860.000	mg/l
Total Hardness as CaCO3	729,000.000	mg/l