Facility Well Name Northern (Cunningham) WIW #3 **UIC Permit #** KS-05-151-003 **Month** November **Year** 2022

Submitted 12/02/2022 **Approved** 12/13/2022 **KOLAR Document ID** 1675356

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 30

Barrels per Day Maximum: 4,000

			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	455	0.46	104	102	-21.7	-23.5	0
Monthly Maximum	537	0.71	108	107	-20.0	-23.0	0
Monthly Minimum	277	0.38	99	97	-24.0	-25.0	0
Monthly Total	13,656						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
145.97	92.46	-14.79	-29.35

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	10:15	462.33	0.43	108	106.5	-22	-23.0	20		0	DV		
2	08:10	332.98	0.69	108	107.1	-22	-24.0	20		0	KS		
3	09:00	450.38	0.60	103	105.1	-21	-23.0	20		0	KS		
4	11:40	399.79	0.43	103	100.5	-22	-24.0	19		0	DV		
5	08:55	486.76	0.43	105	102.6	-21	-23.0	19		0	DV		
6	08:35	491.76	0.43	105	103.5	-21	-23.0	19		0	DV		
7	10:09	497.71	0.43	105	104.5	-22	-23.0	19		0	BD		
8	09:35	393.98	0.43	106	104.3	-23	-23.0	20		0	BD		
9	08:57	504.45	0.45	104	103.6	-22	-23.0	19		0	BD		
10	09:21	515.29	0.43	105	104.1	-22	-23.0	19		0	BD		
11	07:30	488.93	0.43	104	102.8	-20	-23.0	19		0	BD		
12	07:39	489.83	0.43	104	103.3	-20	-23.0	19		0	BD		
13	08:37	523.24	0.45	104	103.0	-21	-24.0	19		0	BD		
14	09:25	504.33	0.45	104	103.8	-21	-23.0	19		0	JWM		
15	09:22	535.79	0.43	105	103.4	-21	-24.0	19		0	JWM		
16	10:40	519.10	0.43	105	103.2	-21	-24.0	20		0	JWM		
17	10:07	492.12	0.40	105	102.8	-22	-24.0	19		0	JWM		
18	10:14	361.31	0.71	105	101.8	-21	-24.0	19		0	JWM		
19	10:45	441.81	0.71	100	100.0	-23	-25.0	18		0	DMH		
20	09:05	537.33	0.43	102	101.8	-22	-24.0	18		0	DMH		
21	09:26	523.50	0.43	105	103.0	-22	-23.0	19		0	GN		
22	09:05	506.71	0.40	105	103.4	-23	-24.0	19		0	BD		
23	10:21	490.52	0.40	104	102.6	-22	-23.0	19		0	BD		
24	07:39	423.12	0.40	104	102.6	-21	-23.0	19		0	BD		
25	08:13	379.17	0.40	99	97.4	-24	-24.0	17		0	BD		
26	10:09	481.55	0.43	101	100.5	-21	-23.0	18		0	GKB		
27	10:33	397.17	0.40	101	100.7	-22	-23.0	18		0	GKB		
28	10:40	277.07	0.43	101	100.0	-23	-24.0	18		0	HS		
29	09:45	416.38	0.38	100	98.8	-22	-23.0	17		0	HS		
30	11:55	331.93	0.40	100	97.3	-22	-24.0	17		0	HS		
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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	87.30	11/07/2022	6.63	11/07/2022	N/A				
2	50.70	11/14/2022	6.70	11/14/2022	N/A				
3	73.50	11/21/2022	6.61	11/21/2022	N/A				
4	66.70	11/28/2022	6.78	11/28/2022	N/A				
5					N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 10/18/2022
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	2,300.000	mg/l
Chloride	40,000.000	mg/l
Conductivity	79.400	Mmhos
Magnesium	486.000	mg/l
Sodium	16,500.000	mg/l
Sulfate	3,590.000	mg/l
Total Alkalinity as CaCO3	297.000	mg/l
Total Dissolved Solids	64,300.000	mg/l
Total Suspended Solids	22.400	mg/l