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

Submitted 03/02/2022 **Approved** 03/17/2022 **KOLAR Document ID** 1631908

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 28

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	450	0.55	87	86	-21.8	-23.6	0
Monthly Maximum	486	0.67	90	93	-20.0	-21.0	0
Monthly Minimum	328	0.48	81	82	-24.0	-25.0	0
Monthly Total	12,589						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
149.99	69.09	-16.63	-29.35

Comments:

Northern (Cunningham) #3 02/2022

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	09:30	469.21	0.55	88	86.9	-20	-21.0	14		0	WV		
2	10:30	337.02	0.55	85	82.7	-21	-23.0	14		0	WV		
3	15:25	471.98	0.55	83	81.9	-21	-24.0	13		0	WV		
4	08:20	462.29	0.55	84	83.1	-22	-24.0	13		0	WV		
5	09:45	450.43	0.55	86	84.6	-22	-23.0	13		0	WV		
6	09:20	461.57	0.55	87	85.6	-23	-24.0	14		0	WV		
7	08:53	459.21	0.57	89	86.1	-23	-24.0	14		0	BD		
8	08:50	457.19	0.57	89	86.6	-23	-24.0	14		0	BD		
9	09:24	475.26	0.55	89	86.5	-24	-24.0	14		0	BD		
10	08:50	363.07	0.55	89	87.2	-23	-24.0	14		0	BD		
11	09:40	328.00	0.55	89	87.5	-24	-24.0	14		0	BD		
12	07:19	477.83	0.55	88	84.4	-21	-25.0	13		0	BD		
13	08:03	471.07	0.55	88	86.0	-22	-24.0	14		0	BD		
14	09:30	482.00	0.52	89	86.9	-21	-24.0	14		0	KS		
15	03:00	470.07	0.50	88	88.6	-21	-23.0	14		0	KS		
16	01:30	417.24	0.55	87	89.6	-22	-23.0	14		0	KS		
17	08:10	482.62	0.50	81	83.8	-22	-23.0	14		0	KS		
18	10:00	460.19	0.52	88	86.5	-21	-23.0	14		0	KS		
19	07:30	459.48	0.55	87	86.6	-22	-24.0	14		0	KS		
20	08:05	478.67	0.48	86	87.6	-22	-24.0	14		0	KS		
21	10:20	456.50	0.55	90	88.2	-22	-23.0	14		0	AB		
22	09:20	486.00	0.50	86	89.3	-20	-23.0	14		0	AB		
23	11:35	441.17	0.67	86	84.0	-22	-24.0	14		0	AB		
24	08:50	439.14	0.57	88	93.2	-20	-24.0	14		0	AB		
25	09:10	460.05	0.52	86	86.9	-21	-23.0	14		0	AB		
26	07:45	464.67	0.57	88	81.8	-21	-25.0	14		0	AB		
27	08:10	469.62	0.55	88	88.9	-21	-24.0	14		0	AB		
28	09:00	437.79	0.55	87	85.9	-23	-24.0	14		0	WV		
29													
30													
31													

Northern (Cunningham) #3 02/2022

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	82.00	02/07/2022	6.50	02/07/2022	N/A				
2	78.00	02/14/2022	6.30	02/14/2022	N/A				
3	70.00	02/21/2022	6.60	02/21/2022	N/A				
4	83.00	02/28/2022	6.70	02/28/2022	N/A				
5					N/A				

No monthly injectate samples required.

Northern (Cunningham) #3 02/2022

Quarterly Injectate Samples

Quarter 1
Date Sample Collected 01/11/2022
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	31,000.000	mg/l
Conductivity	70.400	Mmhos
Magnesium	560.000	mg/l
Sodium	16,200.000	mg/l
Sulfate	2,340.000	mg/l
Total Alkalinity as CaCO3	327.000	mg/l
Total Dissolved Solids	60,000.000	mg/l
Total Suspended Solids	258.000	mg/l