Facility Well Name Northern (Cunningham) WIW #3 **UIC Permit #** KS-05-151-003 **Month** April **Year** 2023

Submitted 05/03/2023 **Approved** 05/11/2023 **KOLAR Document ID** 1712261

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	225	0.41	89	88	-21.6	-23.0	0
Monthly Maximum	285	1.07	95	95	-3.0	-4.0	0
Monthly Minimum	118	0.12	83	85	-24.0	-25.0	0
Monthly Total	6,756						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
97.73	83.41	0.00	-28.31

Comments:

Northern (Cunningham) WIW #3 04/2023

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	09:15	210.45	0.12	88	86.2	-22	-24.0	10		0	DMH		
2	10:33	232.45	0.12	88	85.3	-23	-24.0	9		0	JWM		
3	10:00	209.12	0.36	90	87.8	-23	-24.0	11		0	GN		
4	10:00	227.02	0.38	90	87.5	-23	-24.0	10		0	BD		
5	08:34	224.74	0.64	90	87.7	-22	-25.0	10		0	GN		
6	09:30	237.33	0.52	90	85.7	-22	-24.0	10		0	GN		
7	08:41	191.10	0.62	90	87.2	-22	-25.0	11		0	GN		
8	09:00	227.50	0.38	90	85.9	-22	-24.0	10		0	GN		
9	09:51	191.38	0.62	88	85.9	-23	-24.0	10		0	BD		
10	09:24	227.17	0.38	86	86.1	-23	-24.0	10		0	GKB		
11	09:48	222.57	0.50	90	89.7	-24	-24.0	11		0	GKB		
12	09:02	167.93	0.40	90	89.7	-24	-25.0	11		0	GKB		
13	10:28	182.14	1.07	93	91.1	-23	-22.0	12		0	GKB		
14	10:27	184.86	0.12	90	89.3	-24	-24.0	7		0	GKB		
15	08:22	245.98	0.38	89	87.2	-22	-24.0	10		0	GKB		
16	09:04	247.17	0.62	89	87.2	-22	-24.0	10		0	GKB		
17	09:00	224.69	0.52	88	89.7	-20	-24.0	10		0	KS		
18	08:20	217.67	0.43	89	87.2	-21	-23.0	10		0	KS		
19	09:50	280.45	0.33	89	88.4	-22	-23.0	10		0	KS		
20	09:40	276.31	0.33	88	86.2	-21	-24.0	10		0	KS		
21	09:00	281.50	0.36	87	86.6	-21	-23.0	10		0	KS		
22	08:40	274.33	0.33	88	86.3	-21	-24.0	10		0	KS		
23	07:45	284.88	0.33	91	88.9	-20	-23.0	11		0	AB		
24	09:25	273.33	0.33	90	88.5	-22	-23.0	11		0	CWA		
25	08:21	281.60	0.31	83	88.7	-23	-23.0	11		0	CWA		
26	09:25	265.38	0.31	84	89.1	-23	-23.0	11		0	KS		
27	08:29	199.33	0.60	90	89.4	-22	-22.0	11		0	CWA		
28	08:56	185.81	0.33	92	89.7	-23	-23.0	11		0	CWA		
29	08:35	163.88	0.33	90	86.5	-22	-24.0	10		0	DV		
30	09:10	118.14	0.33	95	94.7	-3	-4.0	13		0	DV		
31													

Northern (Cunningham) WIW #3 04/2023

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	62.20	04/03/2023	6.98	04/03/2023	N/A				
2	76.70	04/10/2023	6.95	04/10/2023	N/A				
3	63.50	04/17/2023	6.71	04/17/2023	N/A				
4	72.30	04/24/2023	6.15	04/24/2023	N/A				
5					N/A				

No monthly injectate samples required.

Northern (Cunningham) WIW #3 04/2023

Quarterly Injectate Samples

Quarter 2
Date Sample Collected 04/06/2023
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	2,230.000	mg/l
Chloride	99,600.000	mg/l
Conductivity	78.200	Mmhos
Magnesium	563.000	mg/l
Sodium	15,700.000	mg/l
Sulfate	2,590.000	mg/l
Total Alkalinity as CaCO3	307.000	mg/l
Total Dissolved Solids	55,000.000	mg/l
Total Suspended Solids	28.000	mg/l