Facility Well Name Northern (Cunningham) #2 **UIC Permit #** KS-05-151-002 **Month** November **Year** 2020

Submitted 12/18/2020 **Approved** 12/21/2020 **KOLAR Document ID** 1539619

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	1,359	1.61	119	118	-21.8	-21.1	0
Monthly Maximum	1,623	1.86	129	127	-20.0	23.0	0
Monthly Minimum	807	1.45	114	114	-24.0	-23.5	0
Monthly Total	40,781						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
130.20	112.80	-17.70	-26.90

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	07:10	1,456.43	1.64	115	116.0	-24	-23.5	11		0	KS		
2	08:05	1,376.33	1.55	114	114.4	-23	-23.4	11		0	GH		
3	08:35	1,452.93	1.55	115	115.1	-22	-22.9	11		0	GH		
4	08:00	1,289.12	1.52	115	115.2	-22	-22.9	11		0	GH		
5	08:05	1,470.48	1.50	116	116.5	-22	-22.7	11		0	GH		
6	08:15	1,396.36	1.55	116	115.7	-22	23.0	11		0	GH		
7	06:55	1,362.05	1.55	116	116.0	-22	-22.8	11		0	GH		
8	06:55	1,365.76	1.52	115	114.9	-22	-22.6	11		0	GH		
9	08:30	1,369.74	1.86	115	114.8	-22	-22.5	11		0	KS		
10	08:30	1,329.48	1.45	115	114.1	-21	-23.0	11		0	KS		
11	08:15	1,346.00	1.52	114	115.9	-22	-23.0	10		0	KS		
12	08:10	1,423.33	1.45	120	117.3	-21	-22.9	10		0	KS		
13	07:50	1,377.67	1.81	116	115.0	-21	-22.9	10		0	KS		
14	07:15	1,321.55	1.60	116	114.8	-20	-21.9	10		0	KS		
15	07:30	1,327.64	1.69	114	114.0	-20	-22.0	10		0	KS		
16	08:15	807.14	1.62	116	114.5	-21	-22.8	10		0	LF		
17	08:45	907.93	1.62	116	114.6	-21	-22.6	8		0	LF		
18	08:15	1,462.02	1.64	128	126.4	-21	-22.1	9		0	LF		
19	08:30	1,462.98	1.74	129	127.1	-21	-21.9	10		0	LF		
20	10:35	977.31	1.57	122	120.9	-22	-22.1	9		0	LF		
21	08:25	1,436.83	1.60	122	120.7	-22	-22.6	9		0	LF		
22	08:25	1,534.45	1.64	122	120.6	-22	-22.7	10		0	LF		
23	09:35	1,502.21	1.48	121	119.2	-22	-22.6	11		0	WV		
24	09:05	1,414.90	1.50	118	116.5	-22	-21.9	10		0	WV		
25	09:55	873.86	1.79	116	115.1	-23	-22.3	8		0	WV		
26	08:05	1,439.69	1.67	124	122.8	-22	-22.5	9		0	WV		
27	09:05	1,557.95	1.52	125	123.5	-22	-22.4	10		0	WV		
28	09:40	1,611.55	1.64	124	122.9	-22	-22.5	11		0	WV		
29	09:55	1,623.07	1.71	123	121.6	-22	-22.6	11		0	WV		
30	08:50	1,503.79	1.81	119	116.7	-22	-22.3	11		0	GH		
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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	93.00	11/02/2020	6.90	11/02/2020	N/A				
2	86.00	11/09/2020	6.80	11/09/2020	N/A				
3	84.00	11/16/2020	6.40	11/16/2020	N/A				
4	98.00	11/23/2020	6.60	11/23/2020	N/A				
5	90.00	11/30/2020	6.70	11/30/2020	N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 10/15/2020
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	1,970.000	mg/l
Chloride	32,500.000	mg/l
Conductivity	69.900	Mmhos
Magnesium	534.000	mg/l
Sodium	15,900.000	mg/l
Sulfate	35,206.000	mg/l
Total Alkalinity as CaCO3	284.000	mg/l
Total Dissolved Solids	51,200.000	mg/l
Total Suspended Solids	42.600	mg/l