Facility Well Name Northern (Cunningham) #3 **UIC Permit #** KS-05-151-003 **Month** February **Year** 2020

Submitted 03/19/2020 **Approved** 03/20/2020 **KOLAR Document ID** 1510548

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 29

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	493	0.56	104	104	-17.7	-17.2	0
Monthly Maximum	546	0.69	106	107	-15.0	-13.7	0
Monthly Minimum	318	0.50	100	100	-22.0	-23.6	0
Monthly Total	14,305						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
115.10	92.70	-9.70	-28.60

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	07:30	443.26	0.69	105	106.5	-20	-20.2	20		0	KS		
2	07:45	318.33	0.50	105	106.7	-17	-16.1	20		0	KS		
3	09:50	340.74	0.60	105	104.0	-22	-20.1	19		0	GH		
4	09:20	524.95	0.60	100	101.1	-17	-16.6	18		0	GH		
5	08:35	528.55	0.52	101	102.0	-17	-16.5	18		0	GH		
6	08:15	531.95	0.52	101	101.9	-17	-15.8	18		0	GH		
7	08:15	536.33	0.52	104	103.3	-18	-17.2	19		0	GH		
8	08:30	531.76	0.52	105	104.1	-17	-16.7	19		0	GH		
9	07:20	536.57	0.55	106	105.1	-18	-17.1	19		0	GH		
10	08:40	529.83	0.55	106	105.5	-17	-16.7	20		0	LF		
11	08:10	502.60	0.57	106	105.1	-17	-16.8	20		0	LF		
12	08:55	495.67	0.55	106	105.3	-15	-13.7	19		0	LF		
13	09:10	523.81	0.57	106	105.0	-17	-16.8	19		0	LF		
14	08:00	542.21	0.52	103	101.7	-18	-17.3	19		0	LF		
15	08:15	544.00	0.55	105	104.1	-17	-16.4	19		0	LF		
16	09:10	544.60	0.57	105	104.9	-17	-15.9	19		0	LF		
17	13:30	543.24	0.55	105	105.6	-18	-15.3	19		0	WV		
18	09:35	545.83	0.57	104	104.5	-21	-23.6	19		0	WV		
19	09:35	510.45	0.57	104	104.1	-16	-15.6	19		0	WV		
20	09:25	496.21	0.55	102	102.1	-16	-16.8	19		0	WV		
21	09:15	492.19	0.55	102	102.1	-17	-17.7	19		0	WV		
22	09:05	479.02	0.57	104	104.3	-17	-16.4	19		0	WV		
23	09:35	485.43	0.57	105	105.4	-16	-14.6	19		0	WV		
24	08:50	482.88	0.57	104	104.1	-17	-15.6	19		0	GH		
25	08:15	489.67	0.57	104	103.9	-18	-17.4	19		0	GH		
26	10:30	350.95	0.69	100	99.8	-21	-20.2	18		0	DV		
27	08:45	455.83	0.57	100	100.8	-18	-17.5	18		0	GH		
28	08:35	467.00	0.57	100	100.5	-19	-18.4	18		0	GH		
29	09:00	531.52	0.55	100	101.2	-19	-18.6	18		0	LF		
30													
31													

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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	58.00	02/03/2020	6.60	02/03/2020	N/A				
2	81.00	02/10/2020	6.50	02/10/2020	N/A				
3	91.00	02/17/2020	6.30	02/17/2020	N/A				
4	83.00	02/24/2020	6.40	02/24/2020	N/A				
5					N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 1
Date Sample Collected 01/20/2020
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	1,980.000	mg/l
Chloride	30,000.000	mg/l
Conductivity	70.100	Mmhos
Magnesium	489.000	mg/l
Sodium	14,900.000	mg/l
Sulfate	2,270.000	mg/l
Total Alkalinity as CaCO3	310.000	mg/l
Total Dissolved Solids	37,000.000	mg/l
Total Suspended Solids	44.000	mg/l