Facility Well Name Hutch #1 **UIC Permit #** KS-01-155-011 **Month** February **Year** 2021

Submitted 03/12/2021 **Approved** 03/17/2021 **KOLAR Document ID** 1564054

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 28

Barrels per Day Maximum: 54,762

			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	22,279	15.80	144	142	-23.1	-22.2	0
Monthly Maximum	32,476	24.98	165	167	-22.0	-12.1	0
Monthly Minimum	15,881	3.74	128	125	-28.0	-26.6	0
Monthly Total	623,810						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
157.50	124.05	-10.92	-27.07

Comments:

Continuous vacuum readings from 2/8 to 2/16 may not be accurate due to the extreme cold temperatures. They are insulated and have heat tape but were still affected by the cold.

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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	13:00	25,666.67	6.38	142	139.1	-23	-25.2	15		0	RT		
2	09:28	19,261.90	3.74	138	134.5	-24	-26.6	15		0	JAD		
3	08:45	19,642.86	19.67	135	132.3	-23	-25.0	15		0	RT		
4	09:16	23,500.00	17.55	134	130.9	-23	-25.2	15		0	JAD		
5	09:10	19,976.19	16.48	130	126.5	-22	-25.6	15		0	RLT		
6	09:08	20,333.33	14.76	128	125.2	-22	-25.6	15		0	JWH		
7	10:06	20,476.19	16.88	132	129.8	-22	-25.8	15		0	JWH		
8	09:31	21,047.62	22.14	140	128.7	-22	-18.6	15		0	RLT		
9	10:12	22,761.90	16.29	140	127.8	-22	-12.1	16		0	RLT		
10	11:25	21,880.95	9.76	140	132.3	-23	-12.9	15		0	RLT		
11	14:30	24,095.24	11.90	130	131.3	-23	-13.4	15		0	RLT		
12	10:50	15,880.95	9.36	130	133.6	-22	-15.9	15		0	RLT		
13	08:17	18,547.62	9.74	134	132.0	-22	-17.0	16		0	CM		
14	08:26	20,428.57	13.48	135	132.3	-22	-16.8	16		0	CM		
15	15:33	32,476.19	23.12	140	143.1	-28	-16.5	16		0	MP		
16	08:23	17,952.38	10.45	140	137.8	-22	-15.2	16		0	JWH		
17	09:20	25,690.48	17.83	148	147.1	-23	-23.9	16		0	RLT		
18	09:08	24,309.52	24.98	140	148.6	-22	-24.4	15		0	JWH		
19	13:55	29,571.43	18.17	150	156.4	-23	-25.6	14		0	CM		
20	09:08	20,190.48	10.52	150	149.7	-27	-26.5	14		0	MP		
21	12:55	27,476.19	17.98	160	158.0	-24	-25.1	15		0	MP		
22	09:17	19,142.86	22.07	155	154.5	-23	-24.9	14		0	CM		
23	14:40	25,904.76	19.05	165	166.6	-24	-25.0	15		0	MP		
24	14:20	23,690.48	17.71	160	159.1	-24	-25.7	14		0	CM		
25	11:28	16,523.81	17.26	155	152.9	-23	-25.8	14		0	CM		
26	08:50	19,428.57	19.76	153	150.6	-23	-25.3	14		0	MP		
27	09:40	22,904.76	17.55	155	153.2	-23	-25.2	14		0	RT		
28	13:35	25,047.62	17.93	160	158.2	-24	-25.5	14		0	RT		
29													
30													
31													

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Weekly Injectate Samples

Kansas Lab Certificate Number E-60649

Week	Temperature		pH		Chloride				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	53.60	02/01/2021	7.70	02/01/2021	640.0	02/01/2021	02/01/2021		
2	57.90	02/10/2021	7.50	02/10/2021	660.0	02/10/2021	02/10/2021		
3	54.10	02/18/2021	7.80	02/18/2021	690.0	02/18/2021	02/22/2021		
4	52.50	02/22/2021	7.30	02/22/2021	770.0	02/22/2021	02/22/2021		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 1
Date Sample Collected 02/24/2021
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	337.000	mg/l
Carbon Tetrachloride	0.008	mg/l
Chloride	861.000	mg/l
Conductivity	4,010.000	Mmhos
Magnesium	62.600	mg/l
Sodium	661.000	mg/l
Sulfate	424.000	mg/l
Total Alkalinity as CaCO3	918.000	mg/l
Total Dissolved Solids	2,810.000	mg/l
Total Suspended Solids	ND	mg/l
Trichloroethylene	ND	mg/l