Facility Well Name Northern (Mullinville) #1 **UIC Permit #** KS-01-097-001 **Month** June **Year** 2020

Submitted 07/02/2020 **Approved** 07/07/2020 **KOLAR Document ID** 1522433

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 12

Barrels per Day Maximum: 2,381

			Annulus Pressure psig min 40		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	106	0.07	70	69	-26.2	-25.1	2
Monthly Maximum	500	2.14	70	71	-25.0	-24.0	45
Monthly Minimum	0	0.00	69	68	-27.0	-26.0	0
Monthly Total	3,190						45

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
71.00	68.00	-23.00	-27.00

Comments:

The seal pot was cleaned on 6/4/2020. Used oil was disposed of and the seal pot was filled to 59 inches of new EAL224H Mobil. The well was shut in to avoid and disruptions in well pressures.

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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	09:16	0.00	0.00	70	69.0	-27	-26.0	46	0	0	RFS		
2	09:10	0.00	0.00	70	69.0	-27	-26.0	46	0	0	RFS		
3	08:35	0.00	0.00	70	69.0	-27	-26.0	46	0	0	RFS		
4	07:57	23.81	0.00	70	69.0	-27	-26.0	46	EAL224H N	45	RFS		
5	08:31	0.00	0.00	70	69.0	-27	-26.0	59	0	0	RFS		
6	08:12	166.67	0.00	70	70.0	-27	-26.0	56	0	0	RFS		
7	06:31	166.67	0.00	70	68.0	-26	-25.0	57	0	0	RFS		
8	09:57	142.86	0.00	70	70.0	-26	-25.0	57	0	0	RFS		
9	08:08	0.00	0.00	70	69.0	-26	-25.0	58	0	0	RFS		
10	09:50	333.33	0.00	70	71.0	-26	-25.0	54	0	0	RFS		
11	08:27	214.29	0.00	70	70.0	-26	-25.0	55	0	0	RFS		
12	06:15	0.00	0.00	70	69.0	-27	-26.0	57	0	0	RFS		
13	10:30	476.19	0.00	70	71.0	-26	-25.0	52	0	0	GDJ		
14	08:25	0.00	0.00	70	69.0	-25	-26.0	57	0	0	GDJ		
15	15:37	0.00	0.00	70	70.0	-25	-26.0	58	0	0	RFS		
16	08:00	0.00	0.00	70	69.0	-26	-25.0	58	0	0	RFS		
17	10:50	0.00	0.00	70	69.0	-26	-24.0	59	0	0	AT		
18	11:10	500.00	0.00	70	70.0	-26	-25.0	55	0	0	AT		
19	10:00	214.29	0.00	70	70.0	-25	-24.0	53	0	0	AT		
20	10:30	0.00	0.00	70	69.0	-25	-24.0	57	0	0	AT		
21	10:20	0.00	0.00	70	69.0	-25	-24.0	58	0	0	AT		
22	14:17	0.00	0.00	70	69.0	-25	-24.0	58	0	0	RFS		
23	13:15	0.00	0.00	70	69.0	-27	-26.0	58	0	0	RFS		
24	09:30	285.71	2.14	70	69.0	-26	-25.0	56	0	0	JN		
25	10:30	476.19	0.00	70	71.0	-26	-25.0	54	0	0	RFS		
26	11:15	0.00	0.00	70	69.0	-26	-25.0	57	0	0	JN		
27	12:00	190.48	0.00	69	68.0	-26	-24.0	51	0	0	JN		
28	08:30	0.00	0.00	70	69.0	-27	-25.0	58	0	0	JN		
29	09:00	0.00	0.00	70	69.0	-27	-25.0	58	0	0	JN		
30	08:20	0.00	0.00	70	69.0	-27	-25.0	58	0	0	JN		
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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	76.50	06/04/2020	6.70	06/04/2020	N/A				
2	71.60	06/11/2020	6.70	06/11/2020	N/A				
3	74.70	06/19/2020	6.50	06/19/2020	N/A				
4	74.20	06/25/2020	6.90	06/25/2020	N/A				
5					N/A				

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 2
Date Sample Collected 04/21/2020
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	241,000.000	mg/l
Chloride	145.000	mg/l
Iron	1,430.000	mg/l
Magnesium	32,300.000	mg/l
Sulfate	664.000	mg/l
Total Dissolved Solids	1,700.000	mg/l
Total Alkalinity as CaCO3		mg/l (as CaCO3)
Total Hardness as CaCO3	735,000.000	mg/l (as CaCO3)
Conductivity	1,970.000	Mmhos