Facility Well Name Holly Frontier #1 **UIC Permit #** KS-01-115-001 **Month** January **Year** 2019

Submitted 02/27/2019 **Approved** 03/08/2019 **KOLAR Document ID** 1449628

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 6,167

			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	1,241	0.83	115	114	-27.0	-26.4	
Monthly Maximum	1,502	1.24	129	121	-27.0	-26.1	
Monthly Minimum	1,019	0.36	108	108	-27.0	-26.8	
Monthly Total	38,473						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
125.80	107.50	-17.70	-26.80

Comments:

Holly Frontier #1 01/2019

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	07:07	1,502.14	0.95	115	113.0	-27	-26.4	14			PS		
2	10:25	1,253.67	1.02	129	118.0	-27	-26.2	16			SW		
3	07:25	1,018.90	1.02	112	111.0	-27	-26.5	14			SW		
4	07:00	1,199.19	0.67	112	112.0	-27	-26.5	14			SW		
5	09:05	1,270.24	1.10	120	118.0	-27	-26.1	15			GAO		
6	08:44	1,271.93	0.67	119	118.0	-27	-26.3	15			GAO		
7	07:20	1,414.07	1.00	119	119.0	-27	-26.3	16			SW		
8	07:50	1,279.76	1.14	121	121.0	-27	-26.1	16			SW		
9	10:45	1,171.40	0.36	115	116.0	-27	-26.2	15			SW		
10	08:00	1,211.52	0.98	115	115.0	-27	-26.3	15			SW		
11	07:20	1,281.90	0.95	114	115.0	-27	-26.5	15			SW		
12	08:32	1,274.36	0.50	116	115.0	-27	-26.5	15			TN		
13	08:25	1,273.57	0.62	116	114.0	-27	-26.4	15			TN		
14	07:40	1,276.29	1.12	114	115.0	-27	-26.5	15			SW		
15	07:40	1,279.07	1.05	114	115.0	-27	-26.5	15			SW		
16	14:03	1,279.95	0.76	118	116.0	-27	-26.4	16			SW		
17	08:20	1,245.05	0.86	115	115.0	-27	-26.4	15			SW		
18	07:10	1,245.60	0.43	111	113.0	-27	-26.5	15			SW		
19	08:18	1,221.12	0.98	108	108.0	-27	-26.8	13			RTM		
20	09:38	1,226.00	0.74	112	111.0	-27	-26.6	14			RTM		
21	07:25	1,223.40	1.12	112	112.0	-27	-26.6	14			SW		
22	07:25	1,225.12	0.64	115	114.0	-27	-26.4	15			SW		
23	10:35	1,219.71	1.24	111	111.0	-27	-26.5	14			SW		
24	07:55	1,219.17	0.55	114	114.0	-27	-26.4	15			SW		
25	07:25	1,217.05	0.90	109	110.0	-27	-26.5	14			SW		
26	08:35	1,219.50	0.86	114	112.0	-27	-26.4	14			PS		
27	07:34	1,217.83	0.57	114	114.0	-27	-26.4	15			PS		
28	07:20	1,206.76	0.67	115	114.0	-27	-26.4	15			SW		
29	07:40	1,190.17	1.05	112	112.0	-27	-26.3	15			SW		
30	10:45	1,172.07	0.88	110	110.0	-27	-26.6	14			SW		
31	07:30	1,166.83	0.45	109	108.0	-27	-26.6	14			SW		

Holly Frontier #1 01/2019

Weekly Injectate Samples

Kansas Lab Certificate Number

Week	Temperature		pH		Chloride				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	57.00	01/02/2019	9.00	01/02/2019	72.0	01/02/2019	01/08/2019		
2	60.00	01/09/2019	8.80	01/09/2019	90.0	01/09/2019	01/11/2019		
3	61.00	01/16/2019	8.80	01/16/2019	92.0	01/16/2019	01/23/2019		
4	55.00	01/23/2019	8.60	01/23/2019	78.0	01/23/2019	01/30/2019		
5	56.00	01/30/2019	8.30	01/30/2019	101.0	01/30/2019	02/05/2019		

No monthly injectate samples required.

Holly Frontier #1 01/2019

Quarterly Injectate Samples

Quarter 1
Date Sample Collected 01/23/2019
Kansas Lab Certificate Number
Lab Name

These samples shall be representative of injection activity and shall therefore be collected on days of injection.

Constituent	Value	Units
Ammonia	<5.000	mg/l
Arsenic	0.000	mg/l
Benzene	<0.001	mg/l
Calcium	155.000	mg/l
Chromium	0.0340	mg/l
Conductivity	13,600.000	Mmhos
Cyanide	0.290	mg/l
Ethylbenzene	<0.001	mg/l
Iron	1.370	mg/l
Magnesium	23.000	mg/l
Oil and Grease	<5.000	mg/l
Sodium	3,540.000	mg/l
Sulfate	8,290.000	mg/l
Toluene	<0.001	mg/l
Total Alkalinity as CaCO3	285.000	mg/l
Total Dissolved Solids	11,800.000	mg/l
Total Suspended Solids	2,655.000	mg/l
Xylene	<0.001	mg/l