Facility Well Name Deffenbaugh #2 **UIC Permit #** KS-01-091-002 **Month** May **Year** 2019

Submitted 06/26/2019 **Approved** 07/05/2019 **KOLAR Document ID** 1464374

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 14,286

			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	5,450	3.93	74	74	-12.4	-12.3	0
Monthly Maximum	8,839	5.90	79	79	-12.0	-10.4	0
Monthly Minimum	2,379	1.17	70	69	-13.0	-13.0	0
Monthly Total	168,946						0

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
79.38	68.54	-3.75	-13.18

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	pH Standard Units	Temp-ature degrees F
1	07:00	6,564.67	5.36	76	75.8	-12	-12.1	25	N/A	0	DWK	7.40	85.00
2	07:05	6,538.24	4.05	70	69.7	-12	-12.3	25	N/A	0	DWK	7.40	86.00
3	07:05	7,676.43	3.95	70	69.2	-12	-12.2	25	N/A	0	DWK	7.40	84.00
4	10:00	5,043.05	5.48	70	69.3	-12	-12.2	24	N/A	0	RLW	7.40	83.50
5	07:50	3,913.81	3.98	70	70.2	-12	-12.3	24	N/A	0	DWK	7.50	81.50
6	07:05	3,665.67	1.17	70	70.4	-13	-12.7	24	N/A	0	DWK	7.40	79.20
7	07:05	5,671.86	4.02	71	71.0	-13	-12.5	24	N/A	0	DWK	7.50	81.00
8	07:05	5,404.29	2.57	71	71.5	-13	-12.2	24	N/A	0	DWK	7.40	84.20
9	07:00	4,775.10	2.48	72	72.2	-13	-12.8	24	N/A	0	DWK	7.40	83.00
10	06:55	4,235.26	2.50	72	72.5	-13	-13.0	24	N/A	0	DWK	7.40	80.70
11	10:00	2,379.21	2.50	73	72.7	-13	-13.0	24	N/A	0	RLW	7.40	80.80
12	07:30	3,684.10	2.45	73	73.3	-12	-12.9	24	N/A	0	DWK	7.50	79.20
13	07:00	3,562.19	2.45	74	73.7	-12	-12.9	24	N/A	0	DWK	7.40	81.60
14	06:50	3,175.00	4.90	74	74.2	-12	-12.5	24	N/A	0	DWK	7.50	80.90
15	06:50	2,912.90	4.93	74	74.2	-12	-12.5	24	N/A	0	DWK	7.40	81.10
16	06:55	2,440.38	2.38	74	74.4	-13	-12.9	24	N/A	0	DWK	7.40	81.40
17	06:55	2,604.33	3.67	74	74.4	-13	-12.5	24	N/A	0	DWK	7.50	82.00
18	06:53	4,471.67	3.57	74	74.8	-12	-12.5	24	N/A	0	AWK	7.40	82.50
19	06:58	5,038.29	3.79	74	75.2	-12	-12.2	25	N/A	0	AWK	7.30	86.50
20	07:00	5,650.95	3.76	75	75.3	-12	-12.4	25	N/A	0	DWK	7.50	84.20
21	07:00	7,242.33	2.45	76	75.8	-13	-12.9	23	N/A	0	DWK	7.30	77.30
22	06:50	8,444.71	5.83	76	75.7	-12	-11.6	24	N/A	0	DWK	7.30	81.80
23	06:55	8,009.90	5.52	76	76.1	-12	-12.2	24	N/A	0	DWK	7.30	84.20
24	07:00	8,838.71	5.21	76	76.2	-12	-12.2	25	N/A	0	DWK	7.40	84.80
25	09:50	6,953.02	5.69	76	76.5	-12	-11.8	25	N/A	0	RLW	7.30	86.50
26	07:00	8,739.38	5.90	77	77.0	-12	-10.4	25	N/A	0	DWK	7.40	85.30
27	07:00	6,394.50	5.00	77	77.4	-12	-11.8	25	N/A	0	DWK	7.40	84.70
28	06:55	6,604.98	3.81	78	77.7	-13	-12.1	25	N/A	0	DWK	7.40	85.50
29	07:00	6,420.40	4.64	78	78.2	-13	-12.3	25	N/A	0	DWK	7.40	83.30
30	07:00	6,061.76	4.29	79	78.6	-13	-12.4	25	N/A	0	DWK	7.40	83.10
31	06:55	5,828.90	3.40	79	79.1	-13	-12.5	24	N/A	0	DWK	7.40	83.00

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Quarterly Injectate Samples

Quarter 2
Date Sample Collected 05/06/2019
Kansas Lab Certificate Number E-10419
Lab Name Geochemical Testing

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

Constituent	Value	Units
1,1,1-Trichloroethane	<0.001	mg/l
1,1-Dichloroethane	<0.001	mg/l
1,2-Dichlorobenzene	<0.001	mg/l
1,2-Dichloroethane	<0.001	mg/l
1,1-Dichloroethylene	<0.001	mg/l
1,2-Dichloropropane	<0.001	mg/l
1,3-Dichloropropene	<0.001	mg/l
Acetone	1.950	mg/l
Arsenic	0.098	mg/l
Benzene	0.004	mg/l
Calcium	142.000	mg/l
Chloride	5.000	mg/l
Chlorobenzene	0.001	mg/l
Chloroethane	<0.001	mg/l
Chloroform	<0.001	mg/l
Cis-1,2-Dichloroethylene	<0.001	mg/l
Conductivity	9,060.000	Mmhos
Copper	0.001	mg/l
Dichloromethane (Methylene Chloride)	<0.001	mg/l
Ethylbenzene	0.009	mg/l
Heptachlor	<0.000	mg/l
Iron	0.050	mg/l
Lead	0.001	mg/l

Quarterly Injectate Samples (continued)

Constituent	Value	Units
Magnesium	0.100	mg/l
Methyl Ethyl Ketone (2-Butanone)	1.050	mg/l
Methyl Isobutyl Ketone (4-Methyl 2-Pentanone)	0.010	mg/l
Nitrobenzene	<0.010	mg/l
Phenol	0.580	mg/l
Pyrene	<0.001	mg/l
Silver	<0.000	mg/l
Sulfate	5.000	mg/l
Tetrachloroethylene	<0.001	mg/l
Thallium	<0.000	mg/l
Toluene	0.006	mg/l
Total Alkalinity as CaCO3	3,080.000	mg/l
Total Hardness as CaCO3	1,100.000	mg/l
Total Suspended Solids	25.000	mg/l
Trichloroethylene	<0.001	mg/l
Trichlorofluoromethane	<0.001	mg/l
Vinyl Chloride	<0.001	mg/l
Xylene	0.022	mg/l
Zinc	0.130	mg/l