**Facility Well Name** Redbarn #1 **UIC Permit #** KS-01-009-001 **Month** June **Year** 2023

**Submitted** 07/31/2023 **Approved** 08/16/2023 **KOLAR Document ID** 1723807

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 30

**Barrels per Day Maximum:** 35,714

| | | | 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** | 1,813 | 6.47 | 67 | 67 | 21.4 | 20.1 | |
| **Monthly Maximum** | 4,972 | 11.19 | 74 | 74 | 25.0 | 24.5 | |
| **Monthly Minimum** | 460 | 0.00 | 62 | 61 | 10.0 | 8.2 | |
| **Monthly Total** | 54,398 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 73.59 | 61.33 | -24.33 | -8.20 |

**Comments:**

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# Daily Recorder Data

| Day | Time<br>24 hr | Injection Volume<br>Barrels Per Day | Injection Rate<br>Barrels Per Minute | Annulus Pressure (Gauge)<br>psig | Annulus Pressure (Continuous Recorder)<br>psig | Injection Pressure (Gauge)<br>+ / - | Injection Pressure (Continuous Recorder)<br>+ / - | Seal Pot Fluid Level<br>inches | Type of Fluid Added to Seal Pot | Amount of Fluid Added to Seal Pot<br>gallons | Initials of Collector of Field Recordings | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 07:17 | 2,750.21 | 6.95 | 70 | 69.6 | 24 | 24.5 | 31 | N/A | | DM | | |
| 2 | 05:11 | 1,823.95 | 6.88 | 69 | 68.3 | 24 | 24.5 | 30 | N/A | | DM | | |
| 3 | 12:33 | 4,972.31 | 0.00 | 74 | 72.9 | 24 | 21.7 | 34 | N/A | | DM | | |
| 4 | 11:28 | 2,835.19 | 0.00 | 68 | 69.8 | 25 | 22.8 | 34 | N/A | | DM | | |
| 5 | 12:30 | 2,857.60 | 6.38 | 68 | 73.6 | 25 | 19.4 | 34 | N/A | | DM | | |
| 6 | 11:10 | 1,357.43 | 10.10 | 71 | 72.6 | 22 | 19.8 | 33 | N/A | | DM | | |
| 7 | 05:17 | 996.19 | 8.67 | 67 | 66.2 | 24 | 24.3 | 33 | N/A | | DM | | |
| 8 | 05:10 | 2,063.43 | 6.33 | 67 | 66.4 | 18 | 16.5 | 33 | N/A | | DM | | |
| 9 | 05:26 | 2,435.64 | 10.07 | 67 | 66.8 | 24 | 24.1 | 33 | N/A | | DM | | |
| 10 | 05:06 | 2,001.45 | 6.36 | 65 | 64.6 | 18 | 16.1 | 33 | N/A | | DM | | |
| 11 | 09:51 | 2,085.21 | 0.00 | 64 | 63.2 | 24 | 23.4 | 33 | N/A | | DM | | |
| 12 | 11:00 | 852.62 | 7.17 | 65 | 64.4 | 22 | 21.5 | 33 | N/A | | DM | | |
| 13 | 09:30 | 1,449.21 | 10.55 | 65 | 64.4 | 24 | 22.8 | 33 | N/A | | DM | | |
| 14 | 08:36 | 915.52 | 7.38 | 62 | 61.6 | 24 | 23.2 | 33 | N/A | | DM | | |
| 15 | 09:08 | 1,673.48 | 7.43 | 70 | 70.0 | 24 | 22.5 | 33 | N/A | | DM | | |
| 16 | 09:45 | 480.21 | 9.40 | 73 | 72.3 | 22 | 21.6 | 34 | N/A | | DM | | |
| 17 | 12:00 | 2,439.14 | 0.00 | 70 | 71.1 | 25 | 22.5 | 34 | N/A | | DM | | |
| 18 | 11:00 | 1,568.00 | 0.00 | 70 | 71.7 | 25 | 20.9 | 34 | N/A | | DM | | |
| 19 | 11:11 | 1,304.62 | 11.10 | 72 | 70.7 | 22 | 20.1 | 34 | N/A | | DM | | |
| 20 | 08:25 | 459.83 | 7.07 | 68 | 67.4 | 10 | 9.2 | 34 | N/A | | DM | | |
| 21 | 08:15 | 3,964.69 | 0.00 | 68 | 66.3 | 23 | 22.1 | 34 | N/A | | DM | | |
| 22 | 08:31 | 982.33 | 11.19 | 68 | 67.7 | 22 | 21.0 | 34 | N/A | | DM | | |
| 23 | 05:10 | 883.31 | 11.19 | 65 | 64.7 | 23 | 22.2 | 34 | N/A | | DM | | |
| 24 | 08:30 | 1,128.86 | 0.00 | 68 | 66.8 | 20 | 19.7 | 34 | N/A | | DM | | |
| 25 | 01:30 | 1,585.64 | 6.14 | 68 | 67.1 | 14 | 12.9 | 34 | N/A | | DM | | |
| 26 | 08:30 | 1,137.26 | 11.14 | 66 | 64.7 | 20 | 18.4 | 34 | N/A | | DM | | |
| 27 | 05:08 | 1,704.69 | 6.67 | 63 | 61.3 | 10 | 8.2 | 34 | N/A | | DM | | |
| 28 | 08:07 | 1,614.10 | 11.02 | 64 | 62.8 | 22 | 21.1 | 34 | N/A | | DM | | |
| 29 | 05:24 | 1,881.48 | 6.24 | 64 | 63.6 | 14 | 12.1 | 34 | N/A | | DM | | |
| 30 | 06:04 | 2,194.50 | 8.79 | 62 | 61.8 | 24 | 23.1 | 34 | N/A | | DM | | |
| | | | | | | | | | | | | | |

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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 | 86.45 | 06/07/2023 | 8.34 | 06/07/2023 | 167.0 | 06/07/2023 | 06/14/2023 | | |
| 2 | 85.96 | 06/14/2023 | 8.99 | 06/14/2023 | 176.0 | 06/14/2023 | 06/21/2023 | | |
| 3 | 83.67 | 06/21/2023 | 8.85 | 06/21/2023 | 189.0 | 06/21/2023 | 06/28/2023 | | |
| 4 | 88.26 | 06/28/2023 | 8.57 | 06/28/2023 | 246.0 | 06/28/2023 | 07/05/2023 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.

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# Quarterly Injectate Samples

**Quarter** 2
**Date Sample Collected** 06/14/2023
**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 |
|---|---|---|
| Ammonia | 3.600 | mg/l |
| Biological Oxygen Demand (BOD) | 67.900 | mg/l |
| Calcium | 34,700.000 | mg/l |
| Conductivity | 1,340.000 | Mmhos |
| Magnesium | 9,320.000 | mg/l |
| Oil and Grease | ND | mg/l |
| Sodium | 296,000.000 | mg/l |
| Sulfate | 67.100 | mg/l |
| Total Alkalinity as CaCO3 | 356.00000 | mg/l (as CaCO3) |
| Total Dissolved Solids | 819.000 | mg/l |
| Total Suspended Solids | 55.500 | mg/l |
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