**Facility Well Name** Redbarn #1 **UIC Permit #** KS-01-009-001 **Month** October **Year** 2019

**Submitted** 01/27/2020 **Approved** 01/28/2020 **KOLAR Document ID** 1491910

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 31

**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** | 2,045 | 8.55 | 113 | 115 | -17.7 | -20.4 | 0 |
| **Monthly Maximum** | 3,842 | 12.55 | 130 | 135 | -12.0 | -12.6 | 0 |
| **Monthly Minimum** | 458 | 0.00 | 100 | 99 | -22.0 | -24.9 | 0 |
| **Monthly Total** | 63,388 | | | | | | 0 |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 138.82 | 97.86 | -1.12 | -25.11 |

**Comments:**

Redbarn #1 10/2019

# 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 | 00:00 | 1,132.40 | 0.00 | 110 | 117.0 | -16 | -17.1 | 35 | N/A | 0 | NR | | |
| 2 | 14:30 | 457.81 | 0.00 | 105 | 116.0 | -19 | -21.3 | 35 | N/A | 0 | NR | | |
| 3 | 07:00 | 979.60 | 0.00 | 100 | 103.2 | -14 | -16.3 | 35 | N/A | 0 | NR | | |
| 4 | 15:00 | 2,412.02 | 0.00 | 120 | 119.3 | -19 | -22.3 | 35 | N/A | 0 | NR | | |
| 5 | 08:00 | 3,404.45 | 12.55 | 110 | 112.1 | -19 | -21.1 | 33 | N/A | 0 | NR | | |
| 6 | 11:00 | 973.31 | 12.36 | 110 | 112.7 | -16 | -19.5 | 33 | N/A | 0 | NR | | |
| 7 | 14:30 | 1,429.10 | 9.93 | 120 | 120.8 | -18 | -22.0 | 35 | N/A | 0 | NR | | |
| 8 | 09:00 | 1,048.48 | 10.14 | 115 | 114.0 | -12 | -12.6 | 35 | N/A | 0 | NR | | |
| 9 | 12:00 | 1,372.48 | 9.76 | 110 | 112.2 | -16 | -19.3 | 32 | N/A | 0 | NR | | |
| 10 | 11:00 | 2,360.00 | 11.83 | 120 | 119.3 | -21 | -24.1 | 34 | N/A | 0 | NR | | |
| 11 | 10:00 | 918.48 | 9.95 | 110 | 110.5 | -20 | -22.0 | 35 | N/A | 0 | NR | | |
| 12 | 11:00 | 1,294.95 | 12.33 | 110 | 112.1 | -16 | -19.3 | 34 | N/A | 0 | NR | | |
| 13 | 09:00 | 1,636.50 | 9.29 | 110 | 113.0 | -16 | -17.6 | 34 | N/A | 0 | NR | | |
| 14 | 11:00 | 2,865.21 | 9.81 | 125 | 127.1 | -20 | -22.1 | 33 | N/A | 0 | NR | | |
| 15 | 10:00 | 2,527.05 | 11.43 | 130 | 135.4 | -19 | -22.3 | 33 | N/A | 0 | NR | | |
| 16 | 08:00 | 2,754.00 | 8.90 | 120 | 121.5 | -22 | -24.5 | 33 | N/A | 0 | NR | | |
| 17 | 15:00 | 2,998.00 | 6.76 | 130 | 135.0 | -17 | -21.3 | 33 | N/A | 0 | NR | | |
| 18 | 07:00 | 2,272.57 | 10.07 | 125 | 125.8 | -21 | -23.2 | 33 | N/A | 0 | NR | | |
| 19 | 10:00 | 2,689.90 | 7.33 | 115 | 116.1 | -16 | -21.0 | 33 | N/A | 0 | NR | | |
| 20 | 10:00 | 3,359.52 | 9.57 | 115 | 117.8 | -20 | -21.2 | 33 | N/A | 0 | NR | | |
| 21 | 09:30 | 3,124.57 | 9.79 | 115 | 116.1 | -19 | -21.2 | 33 | N/A | 0 | NR | | |
| 22 | 08:00 | 2,977.62 | 9.48 | 115 | 115.9 | -21 | -24.9 | 33 | N/A | 0 | NR | | |
| 23 | 14:00 | 2,091.33 | 9.83 | 115 | 117.0 | -16 | -19.3 | 33 | N/A | 0 | NR | | |
| 24 | 13:00 | 3,842.29 | 9.21 | 110 | 113.7 | -16 | -19.3 | 33 | N/A | 0 | NR | | |
| 25 | 10:00 | 1,269.57 | 11.67 | 110 | 113.0 | -16 | -19.3 | 33 | N/A | 0 | NR | | |
| 26 | 11:00 | 2,747.86 | 9.81 | 110 | 112.2 | -19 | -21.3 | 34 | N/A | 0 | NR | | |
| 27 | 10:00 | 938.86 | 7.40 | 110 | 112.1 | -19 | -21.1 | 34 | N/A | 0 | NR | | |
| 28 | 10:00 | 2,457.81 | 7.52 | 105 | 104.1 | -21 | -24.6 | 34 | N/A | 0 | NR | | |
| 29 | 10:00 | 1,362.62 | 9.79 | 105 | 106.3 | -16 | -17.1 | 34 | N/A | 0 | NR | | |
| 30 | 07:00 | 1,811.29 | 9.24 | 100 | 98.6 | -12 | -13.2 | 34 | N/A | 0 | NR | | |
| 31 | 14:00 | 1,878.76 | 9.29 | 105 | 104.0 | -17 | -21.0 | 34 | N/A | 0 | NR | | |

Redbarn #1 10/2019

# 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 | 61.11 | 10/18/2019 | 7.83 | 10/18/2019 | 170.0 | 10/18/2019 | 10/15/2019 | | |
| 2 | 72.13 | 10/16/2019 | 7.12 | 10/16/2019 | 242.0 | 10/16/2019 | 10/25/2019 | | |
| 3 | 87.14 | 10/23/2019 | 7.18 | 10/23/2019 | 359.0 | 10/23/2019 | 11/01/2019 | | |
| 4 | 68.70 | 10/30/2019 | 7.47 | 10/30/2019 | 516.0 | 10/30/2019 | 11/05/2019 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.