**Facility Well Name** Pioneer #3 **UIC Permit #** KS-01-077-002 **Month** June **Year** 2021

**Submitted** 07/09/2021 **Approved** 07/23/2021 **KOLAR Document ID** 1581843

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 29

**Barrels per Day Maximum:** 1,000

| | Injection Volume Barrels per Day | Injection Rate Barrels per Minute | Annulus Pressure psig min 60 Gauge psig | Annulus Pressure Cont. Record psig | Injection Pressure Gauge psig | Injection Pressure Cont. Record psig | Amount Added to Seal Pot |
|---|---|---|---|---|---|---|---|
| **Monthly Average** | 52 | 0.04 | 83 | 83 | -24.8 | -24.9 | 0 |
| **Monthly Maximum** | 305 | 0.21 | 86 | 86 | -22.0 | -22.3 | 0 |
| **Monthly Minimum** | 0 | 0.00 | 78 | 80 | -27.0 | -27.1 | 0 |
| **Monthly Total** | 1,548 | | | | | | 0 |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 87.60 | 76.59 | -8.98 | -27.29 |

**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 | 14:00 | 24.31 | 0.02 | 81 | 81.5 | -26 | -25.9 | 17 | | 0 | KS | | |
| 2 | 14:00 | 76.26 | 0.05 | 82 | 81.8 | -25 | -25.4 | 17 | | 0 | KS | | |
| 3 | 14:00 | 56.45 | 0.05 | 82 | 82.4 | -25 | -24.6 | 17 | | 0 | KS | | |
| 4 | 14:00 | 51.88 | 0.05 | 83 | 82.8 | -24 | -24.1 | 17 | | 0 | KS | | |
| 5 | 14:00 | 61.43 | 0.05 | 83 | 83.5 | -22 | -22.3 | 17 | | 0 | KS | | |
| 6 | 14:00 | 46.31 | 0.02 | 83 | 83.4 | -24 | -23.5 | 17 | | 0 | KS | | |
| 7 | 14:00 | 19.79 | 0.02 | 84 | 83.7 | -23 | -22.6 | 17 | | 0 | KS | | |
| 8 | 14:00 | 16.02 | 0.00 | 84 | 83.8 | -23 | -22.9 | 17 | | 0 | KS | | |
| 9 | 14:00 | 16.17 | 0.00 | 84 | 84.3 | -24 | -24.4 | 17 | | 0 | SA | | |
| 10 | 14:00 | 43.81 | 0.02 | 83 | 83.2 | -25 | -25.5 | 17 | | 0 | SA | | |
| 11 | 14:00 | 57.79 | 0.05 | 84 | 83.7 | -26 | -26.0 | 17 | | 0 | MS | | |
| 12 | 14:00 | 6.55 | 0.00 | 83 | 83.4 | -24 | -23.8 | 17 | | 0 | MS | | |
| 13 | 14:00 | 62.57 | 0.05 | 82 | 82.1 | -27 | -26.9 | 17 | | 0 | MS | | |
| 14 | 14:00 | 49.90 | 0.02 | 83 | 83.3 | -27 | -27.1 | 17 | | 0 | SA | | |
| 15 | 14:00 | 61.17 | 0.05 | 83 | 83.3 | -26 | -26.6 | 16 | | 0 | MB | | |
| 16 | 14:00 | 62.81 | 0.05 | 83 | 83.2 | -26 | -26.1 | 16 | | 0 | MB | | |
| 17 | 14:00 | 304.52 | 0.21 | 85 | 85.1 | -25 | -25.7 | 16 | | 0 | MB | | |
| 18 | 14:00 | 0.07 | 0.00 | 85 | 85.8 | -23 | -23.8 | 16 | | 0 | MB | | |
| 19 | 14:00 | 0.00 | 0.00 | 86 | 86.2 | -23 | -23.7 | 16 | | 0 | MB | | |
| 20 | 14:00 | 47.64 | 0.02 | 85 | 85.6 | -25 | -25.2 | 16 | | 0 | MB | | |
| 21 | 14:00 | 46.24 | 0.02 | 81 | 81.1 | -26 | -26.2 | 16 | | 0 | MB | | |
| 22 | 14:00 | 10.38 | 0.00 | 83 | 83.0 | -23 | -23.5 | 16 | | 0 | SA | | |
| 23 | 14:00 | 26.76 | 0.02 | 83 | 83.4 | -24 | -24.0 | 16 | | 0 | SA | | |
| 24 | 14:00 | 77.10 | 0.05 | 84 | 84.5 | -26 | -26.4 | 16 | | 0 | SA | | |
| 25 | 14:00 | 43.83 | 0.02 | 83 | 83.5 | -25 | -25.4 | 16 | | 0 | KS | | |
| 26 | 14:00 | 36.38 | 0.02 | 82 | 82.3 | -25 | -24.7 | 16 | | 0 | KS | | |
| 27 | 14:00 | 55.07 | 0.05 | 81 | 81.3 | -25 | -24.9 | 16 | | 0 | KS | | |
| 28 | 14:00 | 65.98 | 0.05 | 81 | 79.9 | -25 | -25.2 | 16 | | 0 | KS | | |
| 29 | 14:00 | 69.45 | 0.05 | 78 | 79.5 | -25 | -25.3 | 15 | | 0 | MS | | |
| 30 | 14:00 | 51.45 | 0.05 | 83 | 83.5 | -27 | -26.7 | 15 | | 0 | MS | | |
| 31 | | | | | | | | | | 0 | MS | | |

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# Weekly Injectate Samples

**Kansas Lab Certificate Number** E-10152

| **Week** | **Temperature** | | **pH** | | **Chloride** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Degrees Fahrenheit | Date | Standard Units | Date | Cl concentration (mg/l) | Date Sample Collected | Date Sampl Analysed | | |
| 1 | 67.00 | 06/03/2021 | 7.90 | 06/03/2021 | 880.0 | 06/03/2021 | 06/07/2021 | | |
| 2 | 71.00 | 06/11/2021 | 7.80 | 06/11/2021 | 820.0 | 06/11/2021 | 06/14/2021 | | |
| 3 | 71.00 | 06/18/2021 | 7.80 | 06/18/2021 | 500.0 | 06/18/2021 | 06/22/2021 | | |
| 4 | 72.00 | 06/25/2021 | 7.90 | 06/25/2021 | 800.0 | 06/25/2021 | 06/30/2021 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.

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# Quarterly Injectate Samples

**Quarter** 2
**Date Sample Collected** 06/16/2021
**Kansas Lab Certificate Number** E-10152
**Lab Name** SDK Laboratories (Hutchinson)

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

| Constituent | Value | Units |
|---|---|---|
| Benzene | 0.000 | mg/l |
| Calcium | 109.000 | mg/l |
| Conductivity | 870.000 | Mmhos |
| Iron | 0.019 | mg/l |
| Magnesium | 8.010 | mg/l |
| Sulfate | 19.500 | mg/l |
| Total Alkalinity as CaCO3 | 264.000 | mg/l |
| Total Dissolved Solids | 580.000 | mg/l |
| Total Hardness as CaCO3 | 305.000 | mg/l |
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