**Facility Well Name** ONEOK (Hutchinson) #2 **UIC Permit #** KS-01-155-002 **Month** May **Year** 2021

**Submitted** 06/28/2021 **Approved** 06/28/2021 **KOLAR Document ID** 1578839

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 4

**Barrels per Day Maximum:** 21,000

| | | | 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** | 150 | 0.10 | 79 | 81 | -5.3 | -4.4 | 0 |
| **Monthly Maximum** | 1,390 | 0.98 | 87 | 89 | 0.0 | 0.2 | 0 |
| **Monthly Minimum** | 0 | 0.00 | 74 | 74 | -12.0 | -10.4 | 0 |
| **Monthly Total** | 4,662 | | | | | | 0 |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 91.80 | 73.00 | 1.20 | -24.70 |

**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 | 22:20 | 1,390.48 | 0.98 | 82 | 82.8 | -10 | -9.2 | 15 | | 0 | JE | | |
| 2 | 19:31 | 1,071.43 | 0.74 | 82 | 84.0 | -12 | -10.4 | 15 | | 0 | JE | | |
| 3 | 19:44 | 1,195.24 | 0.83 | 80 | 80.9 | -10 | -7.4 | 15 | | 0 | JE | | |
| 4 | 19:18 | 1,004.76 | 0.69 | 81 | 82.4 | -7 | -6.1 | 15 | | 0 | JE | | |
| 5 | 18:58 | 0.00 | 0.00 | 83 | 84.6 | 0 | 0.1 | 15 | | 0 | JE | | |
| 6 | 18:27 | 0.00 | 0.00 | 85 | 86.7 | -1 | 0.0 | 15 | | 0 | SN | | |
| 7 | 19:33 | 0.00 | 0.00 | 87 | 88.9 | -4 | -4.9 | 15 | | 0 | SN | | |
| 8 | 18:25 | 0.00 | 0.00 | 80 | 81.2 | -5 | -4.8 | 15 | | 0 | SN | | |
| 9 | 18:27 | 0.00 | 0.00 | 74 | 74.4 | -9 | -8.1 | 15 | | 0 | SN | | |
| 10 | 19:40 | 0.00 | 0.00 | 75 | 76.8 | -10 | -8.9 | 15 | | 0 | SN | | |
| 11 | 18:36 | 0.00 | 0.00 | 75 | 76.6 | -10 | -8.4 | 15 | | 0 | SN | | |
| 12 | 19:06 | 0.00 | 0.00 | 76 | 78.1 | -10 | -8.1 | 15 | | 0 | SN | | |
| 13 | 20:19 | 0.00 | 0.00 | 76 | 79.1 | -10 | -7.9 | 15 | | 0 | JE | | |
| 14 | 18:47 | 0.00 | 0.00 | 79 | 80.7 | -10 | -7.8 | 15 | | 0 | JE | | |
| 15 | 18:27 | 0.00 | 0.00 | 80 | 81.0 | -8 | -6.9 | 15 | | 0 | JE | | |
| 16 | 18:35 | 0.00 | 0.00 | 80 | 79.9 | -7 | -6.5 | 15 | | 0 | JE | | |
| 17 | 18:38 | 0.00 | 0.00 | 80 | 80.5 | -5 | -5.6 | 15 | | 0 | JE | | |
| 18 | 18:47 | 0.00 | 0.00 | 79 | 78.3 | -5 | -5.0 | 15 | | 0 | JE | | |
| 19 | 18:35 | 0.00 | 0.00 | 79 | 79.9 | -5 | -4.9 | 15 | | 0 | JE | | |
| 20 | 20:42 | 0.00 | 0.00 | 79 | 79.6 | -5 | -4.0 | 15 | | 0 | RR | | |
| 21 | 18:53 | 0.00 | 0.00 | 80 | 82.1 | -4 | -3.0 | 15 | | 0 | RR | | |
| 22 | 18:30 | 0.00 | 0.00 | 80 | 81.1 | -4 | -2.8 | 15 | | 0 | RR | | |
| 23 | 18:23 | 0.00 | 0.00 | 79 | 80.1 | -3 | -2.1 | 15 | | 0 | RR | | |
| 24 | 18:14 | 0.00 | 0.00 | 79 | 79.3 | -2 | -1.4 | 15 | | 0 | RR | | |
| 25 | 18:37 | 0.00 | 0.00 | 81 | 82.5 | -1 | -0.5 | 15 | | 0 | RR | | |
| 26 | 18:47 | 0.00 | 0.00 | 81 | 82.5 | -1 | 0.2 | 15 | | 0 | RR | | |
| 27 | 20:15 | 0.00 | 0.00 | 81 | 80.6 | -1 | 0.0 | 15 | | 0 | JE | | |
| 28 | 18:57 | 0.00 | 0.00 | 78 | 79.6 | -1 | 0.0 | 15 | | 0 | JE | | |
| 29 | 18:43 | 0.00 | 0.00 | 78 | 80.6 | -1 | 0.0 | 15 | | 0 | JE | | |
| 30 | 18:45 | 0.00 | 0.00 | 78 | 77.3 | -1 | 0.0 | 15 | | 0 | JE | | |
| 31 | 19:15 | 0.00 | 0.00 | 77 | 77.7 | -2 | -2.9 | 15 | | 0 | JE | | |

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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 | 73.00 | 05/02/2021 | 6.99 | 05/02/2021 | 6,300.0 | 05/04/2021 | 05/21/2021 | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.

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# Quarterly Injectate Samples

**Quarter** 2
**Date Sample Collected** 05/04/2021
**Kansas Lab Certificate Number** E-10116
**Lab Name** Pace Analytical-Lenexa

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

| Constituent | Value | Units |
|---|---|---|
| Benzene | ND | mg/l |
| Calcium | 511.000 | mg/l |
| Conductivity | 20,900.000 | Mmhos |
| Iron | 7.900 | mg/l |
| Magnesium | 138.000 | mg/l |
| Sulfate | 2,370.000 | mg/l |
| Total Alkalinity as CaCO3 | 225.000 | mg/l |
| Total Dissolved Solids | 14,100.000 | mg/l |
| Total Hardness as CaCO3 | 1,840.000 | mg/l |
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