**Facility Well Name** Compass #3 **UIC Permit #** KS-01-159-005 **Month** February **Year** 2019

**Submitted** 03/12/2019 **Approved** 05/03/2019 **KOLAR Document ID** 1453909

# Class I-V Injection Well Monthly Monitoring

## Summary of Monthly Report

**Number of days injection occurred:** 28

**Barrels per Day Maximum:** 20,571

| | Injection Volume Barrels per Day | Injection Rate Barrels per Minute | Annulus Pressure psig min 50 Gauge psig | Annulus Pressure Cont. Record psig | Injection Pressure Gauge psig | Injection Pressure Cont. Record psig | Amount Added to Seal Pot |
|---|---|---|---|---|---|---|---|
| **Monthly Average** | 13,793 | 9.42 | 71 | 69 | -18.9 | -18.4 | |
| **Monthly Maximum** | 14,207 | 10.00 | 77 | 74 | -18.0 | -18.0 | |
| **Monthly Minimum** | 9,689 | 0.24 | 67 | 64 | -30.0 | -30.0 | |
| **Monthly Total** | 386,205 | | | | | | |

## Summary of Continuous Recorder Data

| Maximum Annulus Pressure psig | Minimum Annulus Pressure psig | Maximum Injection Pressure psig | Minimum Injection Pressure psig |
|---|---|---|---|
| 75.00 | 64.00 | -17.00 | -31.00 |

**Comments:**

The pump that feeds the well was offline and required a reset on 2-18-19.

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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 | Conductivity Mmhos | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 07:37 | 10,211.62 | 9.62 | 75 | 72.0 | -19 | -18.0 | 7 | | | BW | 2,632.00 | |
| 2 | 09:14 | 13,874.90 | 9.86 | 76 | 73.0 | -19 | -18.0 | 7 | | | BW | 2,622.00 | |
| 3 | 08:10 | 13,903.64 | 9.60 | 77 | 74.0 | -19 | -18.0 | 7 | | | BW | 2,633.00 | |
| 4 | 06:59 | 13,924.67 | 9.76 | 74 | 72.0 | -18 | -18.0 | 7 | | | KB | 2,626.00 | |
| 5 | 07:27 | 13,873.10 | 9.64 | 72 | 69.0 | -18 | -18.0 | 7 | | | KB | 2,611.00 | |
| 6 | 08:43 | 13,954.02 | 9.67 | 72 | 69.0 | -18 | -18.0 | 7 | | | KB | 2,631.00 | |
| 7 | 09:02 | 14,029.17 | 9.57 | 70 | 67.0 | -18 | -18.0 | 7 | | | KB | 2,645.00 | |
| 8 | 09:07 | 14,093.93 | 9.90 | 71 | 68.0 | -18 | -18.0 | 7 | | | KB | 2,632.00 | |
| 9 | 07:32 | 14,147.64 | 9.64 | 72 | 69.0 | -18 | -18.0 | 7 | | | KB | 2,628.00 | |
| 10 | 09:21 | 14,143.69 | 9.62 | 73 | 70.0 | -18 | -18.0 | 7 | | | KB | 2,620.00 | |
| 11 | 07:10 | 14,196.21 | 9.86 | 74 | 71.0 | -18 | -18.0 | 8 | | | KB | 2,624.00 | |
| 12 | 07:28 | 14,179.90 | 9.95 | 72 | 70.0 | -19 | -18.0 | 7 | | | BW | 2,617.00 | |
| 13 | 08:46 | 14,206.67 | 9.79 | 72 | 70.0 | -19 | -18.0 | 7 | | | BW | 2,654.00 | |
| 14 | 09:12 | 14,079.12 | 9.55 | 73 | 71.0 | -19 | -18.0 | 7 | | | BW | 2,618.00 | |
| 15 | 07:46 | 14,104.24 | 9.76 | 70 | 68.0 | -19 | -18.0 | 7 | | | BW | 2,636.00 | |
| 16 | 10:54 | 14,047.02 | 9.76 | 69 | 67.0 | -19 | -18.0 | 7 | | | BW | 2,620.00 | |
| 17 | 10:10 | 14,121.98 | 9.71 | 70 | 68.0 | -20 | -18.0 | 7 | | | BW | 2,616.00 | |
| 18 | 07:38 | 9,689.45 | 0.24 | 68 | 66.0 | -30 | -30.0 | 7 | | | BW | 10.00 | |
| 19 | 08:06 | 14,153.36 | 10.00 | 68 | 66.0 | -19 | -18.0 | 7 | | | BW | 2,641.00 | |
| 20 | 09:47 | 14,172.62 | 9.90 | 71 | 68.0 | -18 | -18.0 | 7 | | | KB | 2,626.00 | |
| 21 | 08:27 | 14,117.64 | 9.83 | 71 | 68.0 | -18 | -18.0 | 7 | | | KB | 2,620.00 | |
| 22 | 10:04 | 14,142.57 | 9.83 | 71 | 68.0 | -18 | -18.0 | 7 | | | KB | 2,628.00 | |
| 23 | 07:29 | 14,167.88 | 9.79 | 71 | 68.0 | -18 | -18.0 | 7 | | | KB | 2,614.00 | |
| 24 | 10:45 | 14,166.95 | 9.83 | 70 | 67.0 | -18 | -18.0 | 7 | | | KB | 2,615.00 | |
| 25 | 08:31 | 14,150.07 | 9.79 | 70 | 67.0 | -18 | -18.0 | 7 | | | KB | 2,611.00 | |
| 26 | 08:51 | 14,090.02 | 9.74 | 68 | 65.0 | -18 | -18.0 | 7 | | | KB | 2,627.00 | |
| 27 | 07:32 | 14,132.48 | 9.81 | 67 | 64.0 | -19 | -18.0 | 7 | | | BW | 2,617.00 | |
| 28 | 07:09 | 14,130.45 | 9.64 | 67 | 64.0 | -19 | -18.0 | 7 | | | BW | 2,623.00 | |
| 29 | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | |

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# Weekly Injectate Samples

**Kansas Lab Certificate Number** 320

| **Week** | **Temperature** | | **pH** | | **Chloride** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Degrees Fahrenheit | Date | Standard Units | Date | Cl concentration (mg/l) | Date Sample Collected | Date Sampl Analysed | | |
| 1 | 58.60 | 02/03/2019 | 7.46 | 02/03/2019 | 655.0 | 02/03/2019 | 02/03/2019 | | |
| 2 | 58.80 | 02/11/2019 | 7.37 | 02/11/2019 | 647.0 | 02/11/2019 | 02/11/2019 | | |
| 3 | 57.50 | 02/17/2019 | 7.41 | 02/17/2019 | 658.0 | 02/17/2019 | 02/17/2019 | | |
| 4 | 58.10 | 02/25/2019 | 7.32 | 02/25/2019 | 658.0 | 02/25/2019 | 02/25/2019 | | |
| 5 | | | | | | | | | |

## No monthly injectate samples required.

# Quarterly Injectate Samples

**Quarter** 1
**Date Sample Collected** 01/03/2019
**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 |
|---|---|---|
| Calcium | 124.000 | mg/l |
| Iron | <0.010 | mg/l |
| Magnesium | 15.800 | mg/l |
| Sulfate | 134.000 | mg/l |
| Total Alkalinity as CaCO3 | 314.000 | mg/l |
| Total Dissolved Solids | 1,660.000 | mg/l |
| Total Hardness as CaCO3 | 375.000 | mg/l |
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