

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form U3C

June 2015

Form must be Typed  
Form must be completed  
on a per well basis

# ANNUAL REPORT OF PRESSURE MONITORING, FLUID INJECTION AND ENHANCED RECOVERY

Complete all blanks - add pages if needed. Copy to be retained for five (5) years after filing date.

OPERATOR: License # \_\_\_\_\_  
Name: \_\_\_\_\_  
Address 1: \_\_\_\_\_  
Address 2: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_  
Lease Name: \_\_\_\_\_  
Well Number: \_\_\_\_\_

API No.: \_\_\_\_\_  
Permit No: \_\_\_\_\_  
Reporting Year: \_\_\_\_\_  
(January 1 to December 31)  
\_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Sec. \_\_\_\_ Twp. \_\_\_\_ S. R. \_\_\_\_ ☐ E ☐ W  
(a/a/a/a)  
\_\_\_\_\_ feet from ☐ N / ☐ S Line of Section  
\_\_\_\_\_ feet from ☐ E / ☐ W Line of Section  
County: \_\_\_\_\_

## I. Injection Fluid:

Type (Pick one): ☐ Fresh Water ☐ Treated Brine ☐ Untreated Brine ☐ Water/Brine  
Source: ☐ Produced Water ☐ Other (Attach list)  
Quality: Total Dissolved Solids: \_\_\_\_\_ mg/l Specific Gravity: \_\_\_\_\_ Additives: \_\_\_\_\_  
(Attach water analysis, if available)

## II. Well Data:

Maximum Authorized Injection Pressure: \_\_\_\_\_ psi Injection Zone: \_\_\_\_\_  
Maximum Authorized Injection Rate: \_\_\_\_\_ barrels per day  
Total Number of Enhanced Recovery Injection Wells Covered by this Permit: \_\_\_\_\_ (Include TA's)

| III. | Month:       | Total Fluid Injected<br>BBL | Maximum Fluid<br>Pressure | Total Gas Injected<br>MCF | Maximum Gas<br>Pressure | # Days of<br>Injection |
|------|--------------|-----------------------------|---------------------------|---------------------------|-------------------------|------------------------|
|      | January      | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | February     | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | March        | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | April        | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | May          | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | June         | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | July         | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | August       | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | September    | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | October      | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | November     | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | December     | _____                       | _____                     | _____                     | _____                   | _____                  |
|      | <b>TOTAL</b> | _____                       | _____                     | _____                     | _____                   | _____                  |

Submitted Electronically

Customer: **GREAT PLAINS ENERGY INC**

Region: **Kansas(KS)**

Location: **Trego County, KS**

System: **Disposal System**

Equipment: **Flax J SWD**

Sample Point: **Water Tank**

Sample ID: **AO55144**

Acct Rep Email: **Michael.Walters@ecolab.com**

Collection Date: **02/21/2020**

Receive Date: **02/24/2020**

Report Date: **02/25/2020**

Location Code: **402615**

### Field Analysis

|                  |                    |               |                 |               |                |
|------------------|--------------------|---------------|-----------------|---------------|----------------|
| Bicarbonate      | <b>303</b> mg/L    | Dissolved CO2 | <b>246</b> mg/L | Dissolved H2S | <b>20</b> mg/L |
| Pressure Surface | <b>&lt;.25</b> psi | Temperature   | <b>45</b> ° F   | pH of Water   | <b>7.0</b>     |

### Sample Analysis

|                           |                       |                        |                      |             |                       |
|---------------------------|-----------------------|------------------------|----------------------|-------------|-----------------------|
| Conductivity (Calculated) | <b>56089</b> µS - cm3 | Ionic Strength         | <b>0.69</b>          | Resistivity | <b>0.178</b> ohms - m |
| Specific Gravity          | <b>1.023</b>          | Total Dissolved Solids | <b>35897.11</b> mg/L |             |                       |

### Cations

|           |                      |           |                   |           |                   |
|-----------|----------------------|-----------|-------------------|-----------|-------------------|
| Iron      | <b>0.204</b> mg/L    | Manganese | <b>0.096</b> mg/L | Barium    | <b>0.076</b> mg/L |
| Strontium | <b>47.03</b> mg/L    | Calcium   | <b>1544</b> mg/L  | Magnesium | <b>410.7</b> mg/L |
| Sodium    | <b>10600.00</b> mg/L |           |                   |           |                   |

### Anions

|          |                   |         |                  |
|----------|-------------------|---------|------------------|
| Chloride | <b>20422</b> mg/L | Sulfate | <b>2570</b> mg/L |
|----------|-------------------|---------|------------------|

### Scale Type

|                       |     |                      |       |
|-----------------------|-----|----------------------|-------|
| Anhydrite CaSO4 PTB   | N/A | Anhydrite CaSO4 SI   | -0.79 |
| Barite BaSO4 PTB      | 0.0 | Barite BaSO4 SI      | 0.27  |
| Calcite CaCO3 PTB     | N/A | Calcite CaCO3 SI     | -0.47 |
| Celestite SrSO4 PTB   | 6.6 | Celestite SrSO4 SI   | 0.10  |
| Gypsum CaSO4 PTB      | N/A | Gypsum CaSO4 SI      | -0.28 |
| Hemihydrate CaSO4 PTB | N/A | Hemihydrate CaSO4 SI | -0.17 |

### Comments

Scaling predictions calculated using Odco-Tomson model

This document contains the confidential and/or proprietary information of Nalco Champion. The recipient agrees to maintain the confidentiality of the terms of this document, and shall not reproduce it by any means, disclose the contents of it to any third party, or use the contents of it for any purpose other than the purpose for which it was intended by Nalco Champion.

02/27/2020

Page 1 of 1