

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 BBL | Maximum Fluid Pressure | Total Gas Injected MCF | Maximum Gas Pressure | # Days of Injection |
|------|--------------|-----------------------------|---------------------------|---------------------------|-------------------------|------------------------|
| | January | _____ | _____ | _____ | _____ | _____ |
| | February | _____ | _____ | _____ | _____ | _____ |
| | March | _____ | _____ | _____ | _____ | _____ |
| | April | _____ | _____ | _____ | _____ | _____ |
| | May | _____ | _____ | _____ | _____ | _____ |
| | June | _____ | _____ | _____ | _____ | _____ |
| | July | _____ | _____ | _____ | _____ | _____ |
| | August | _____ | _____ | _____ | _____ | _____ |
| | September | _____ | _____ | _____ | _____ | _____ |
| | October | _____ | _____ | _____ | _____ | _____ |
| | November | _____ | _____ | _____ | _____ | _____ |
| | December | _____ | _____ | _____ | _____ | _____ |
| | TOTAL | _____ | _____ | _____ | _____ | _____ |

Customer: Shakespeare Oil Company
 Region: Kansas
 Location: Lane County, KS
 System: Production System

Equipment: Splitter B 1 OWWO
 Sample Point: Bleeder
 Sample ID: AO44663
 Acct Rep Email: Michael.Walters@ecolab.com

Collection Date: 02/03/2020
 Receive Date: 02/06/2020
 Report Date: 02/07/2020
 Location Code: 430665

Field Analysis

| | | | | | |
|------------------|----------|---------------|----------|---------------|---------|
| Bicarbonate | 127 mg/L | Dissolved CO2 | 220 mg/L | Dissolved H2S | 71 mg/L |
| Pressure Surface | 25 psi | Temperature | 100 ° F | pH of Water | 7.5 |

Sample Analysis

| | | | | | |
|---------------------------|----------------|------------------------|---------------|-------------|----------------|
| Conductivity (Calculated) | 89740 µS - cm3 | Ionic Strength | 1.06 | Resistivity | 0.111 ohms - m |
| Specific Gravity | 1.039 | Total Dissolved Solids | 57433.39 mg/L | | |

Cations

| | | | | | |
|-----------|---------------|-----------|------------|-----------|------------|
| Iron | <0.1 mg/L | Manganese | 0.040 mg/L | Barium | 0.037 mg/L |
| Strontium | 35.41 mg/L | Calcium | 1268 mg/L | Magnesium | 418.9 mg/L |
| Sodium | 20530.00 mg/L | | | | |

Anions

| | | | |
|----------|------------|---------|-----------|
| Chloride | 32724 mg/L | Sulfate | 2330 mg/L |
|----------|------------|---------|-----------|

Scale Type

| | | | |
|-----------------------|-----|----------------------|-------|
| Anhydrite CaSO4 PTB | N/A | Anhydrite CaSO4 SI | -0.60 |
| Barite BaSO4 PTB | N/A | Barite BaSO4 SI | -0.54 |
| Calcite CaCO3 PTB | N/A | Calcite CaCO3 SI | -0.05 |
| Celestite SrSO4 PTB | N/A | Celestite SrSO4 SI | -0.13 |
| Gypsum CaSO4 PTB | N/A | Gypsum CaSO4 SI | -0.48 |
| Hemihydrate CaSO4 PTB | N/A | Hemihydrate CaSO4 SI | -0.46 |

Comments

Scaling predictions calculated using Ordo-Tomson model

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