

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	_____	_____	_____	_____	_____
	<b>TOTAL</b>	_____	_____	_____	_____	_____

**STAABCO CHEMICAL, INC.**

P.O. Box D  
Plainville, KS 67663

Phone: (785) 737-6141  
Fax: (785) 434-2529

**WATER ANALYSIS REPORT**

Company: Shakespeare  
Source: Strickert #1 WI

Date Sampled: February, 2019  
Date Analyzed: February, 2019

pH:	6.00	Total Dissolved Solids (mg/L):	33,140
Dissolved H <sub>2</sub> S:	15		
Dissolved CO <sub>2</sub> :	0	Total Ionic Strength:	0.655
Specific Gravity:	1.015		
Density, (lbs/gal):	8.47		

	mg/L	Meq/L
<b>Anions</b>		
Sulfide	9.6	9.6
Bicarbonate:	549	9
Chloride:	17,000	479
Sulfate:	3,400	71
<b>Cations</b>		
Calcium:	1,560	78
Magnesium:	488	40
Sodium:	10,136	441
Barium:	7	
Strontium:	0	
Total Hardness:	2,360	
Total Dissolved Iron:	0	
Ferrous Iron:	Not Determined	

**PROBABLE MINERAL COMPOSITION**

78 Ca	9 HCO <sub>3</sub>		
40 Mg	71 SO <sub>4</sub>	Meq/L	mg/L
441 Na	479 Cl		
<b>Saturation Values</b>			
In Distilled Water @ 20°C			
CaCO <sub>3</sub>	13 mg/L	Calcium Bicarbonate:	9 729
CaSO <sub>4</sub> * 2H <sub>2</sub> O	2,090 mg/L	Calcium Sulfate:	69 4,697
MgCO <sub>3</sub>	103 mg/L	Calcium Chloride:	0 0
		Magnesium Bicarbonate:	0 0
		Magnesium Sulfate:	2 110
		Magnesium Chloride:	38 1,818
		Sodium Bicarbonate:	0 0
		Sodium Sulfate:	0 0
		Sodium Chloride:	441 25,763

**COMMENTS:**

# STAABCO CHEMICAL, INC.

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## Scale Deposition Potential Analysis

Company: Shakespeare  
Source: Strickert #1 WI

Date Sampled: February, 2019  
Date Analyzed: February, 2019

### Brine Composition

pH:	6.00	Ca, mg/L:	1,560	Total Hardness, mg/L:	2,360
Specific Gravity:	1.015	Mg, mg/L:	488	Total Dissolved Solids, mg/L:	33,140
HCO <sub>3</sub> , mg/L:	549	Na, mg/L:	10,136	Total Ionic Strength:	0.655
Cl, mg/L:	17,000	Ba, mg/L:	7		
SO <sub>4</sub> , mg/L:	3,400	Sr, mg/L:	0	Total Dissolved Iron, mg/L:	0.0

### Calcium Carbonate Scale Indices

					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Stiff-Davis Index:	-0.81	-0.48	-0.12	0.31	-0.35	-0.03
Deposition, lbs/1,000 Bbls:	-800.7	-355.7	-73.6	129.0	-220.5	-48.8

### Calcium Sulfate Scale Indices

					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Supersaturation Ratio:	1.00	1.00	1.00	1.02	1.00	1.00
Deposition, lbs/1,000 Bbls:	0.3	-4.9	3.0	38.2	-5.2	5.7

### Barium Sulfate Scale Indices

					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Supersaturation Ratio:	277.97	194.02	137.48	96.53	169.39	127.18
Deposition, lbs/1,000 Bbls:	4.1	4.1	4.1	4.1	4.1	4.1

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