



**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	_____	_____	_____	_____	_____

STAABCO CHEMICAL, INC.

P.O. Box D
Plainville, KS 67663

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

WATER ANALYSIS REPORT

Company: Shakespeare
Source: Campbell 2-8 SWD

Date Sampled: February 2, 2017
Date Analyzed: February 3, 2017

pH:	6.00	Total Dissolved Solids (mg/L):	103,964
Dissolved H ₂ S:	0		
Dissolved CO ₂ :	0	Total Ionic Strength:	1.930
Specific Gravity:	1.070		
Density, (lbs/gal):	8.92		

	mg/L	Meq/L
Anions		
Sulfide	521.6	521.6
Bicarbonate:	159	3
Chloride:	61,000	1,718
Sulfate:	3,100	65
Cations		
Calcium:	2,400	120
Magnesium:	1,147	94
Sodium:	36,144	1,571
Barium:	14	
Strontium:	0	
Total Hardness:	4,280	
Total Dissolved Iron:	0	
Ferrous Iron:	Not Determined	

PROBABLE MINERAL COMPOSITION

120 Ca	3 HCO ₃		
94 Mg	65 SO ₄		
1,571 Na	1,718 Cl		
		Meq/L	mg/L
		Calcium Bicarbonate:	3 211
		Calcium Sulfate:	65 4,396
		Calcium Chloride:	53 2,932
		Magnesium Bicarbonate:	0 0
		Magnesium Sulfate:	0 0
		Magnesium Chloride:	94 4,476
		Sodium Bicarbonate:	0 0
		Sodium Sulfate:	0 0
		Sodium Chloride:	1,571 91,869

Saturation Values
In Distilled Water @ 20°C

CaCO ₃	13 mg/L
CaSO ₄ * 2H ₂ O	2,090 mg/L
MgCO ₃	103 mg/L

COMMENTS:

STAABCO CHEMICAL, INC.

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Scale Deposition Potential Analysis

Company: Shakespeare
Source: Campbell 2-8 SWD

Date Sampled: February 2, 2017
Date Analyzed: February 3, 2017

Brine Composition

pH:	6.00	Ca, mg/L:	2,400	Total Hardness, mg/L:	4,280
Specific Gravity:	1.070	Mg, mg/L:	1,147	Total Dissolved Solids, mg/L:	103,964
HCO ₃ , mg/L:	159	Na, mg/L:	36,144	Total Ionic Strength:	1.930
Cl, mg/L:	61,000	Ba, mg/L:	14	Total Dissolved Iron, mg/L:	0.0
SO ₄ , mg/L:	3,100	Sr, mg/L:	0		

Calcium Carbonate Scale Indices


					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Stiff-Davis Index:	-1.19	-0.90	-0.55	-0.07	-0.77	-0.45
Deposition, lbs/1,000 Bbls:	-930.9	-530.3	-210.1	-18.3	-390.5	-156.9

Calcium Sulfate Scale Indices

					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Supersaturation Ratio:	0.79	0.80	0.81	0.82	0.80	0.81
Deposition, lbs/1,000 Bbls:	-400.7	-395.9	-372.9	-348.3	-387.8	-367.9

Barium Sulfate Scale Indices

					Specified Temperatures	
Temperature, °F:	75	100	125	150	110	130
Supersaturation Ratio:	212.32	150.98	108.67	76.25	132.83	100.63
Deposition, lbs/1,000 Bbls:	8.3	8.3	8.3	8.2	8.3	8.2

 Return To Main Menu



CAMPBELL 2-8 LIST OF LEASES

CAMPBELL 1-8

FREY 1-9

FREY 2-9

PETERSON 1-8