

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	_____	_____	_____	_____	_____

Complete Water Analysis

Customer: **SHAKESPEARE OIL COMPANY**
 Geographic Region: **Kansas**
 Geographic Location: **Lane County**
 System Description: **Production System**

Equipment Description: **Schoepf 2-15 SWD**
 Sample Point: **Bleeder**
 Sample ID: **AV13099**
 Account Rep: **Michael.Walters@championx.com**

Collection Date: **02/16/2023**
 Receive Date: **02/22/2023**
 Report Date: **02/23/2023**
 Location Code: **430658**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	220 mg/L	Titration
Dissolved CO2	290 mg/L	Titration
Dissolved H2S	110 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 °F	
pH of Water	7.5	Meter

Sample Analysis		
Analysis	Result	Analysis Method
Specific Gravity	1.039	Densitometer
Ionic Strength	0.900 mol/L	Calculation
Total Dissolved Solids	49200 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.0700 %	Calculation

Cations - Analyzed By ICP

Iron	<0.500 mg/L	Boron	22.1 mg/L	Silicon	8.52 mg/L
Manganese	<0.200 mg/L	Lithium	<1.000 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	31.6 mg/L	Nickel	<0.200 mg/L	Phosphorus	0.888 mg/L
Calcium	940 mg/L	Zinc	<0.400 mg/L	Measured Sodium	16700 mg/L
Magnesium	329 mg/L	Lead	<0.500 mg/L		
Sodium	16700 mg/L	Cobalt	0.762 mg/L		
Potassium	191 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC

Chloride	26700 mg/L	Sulfate	4070 mg/L
Bromide	25.5 mg/L		

	PTB							
	Anhydrite	Barite	Calcite	Colesite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	2.13	0.81	0.00	0.00	0.00	0.00
75°	0.00	0.00	2.04	0.40	0.00	0.00	0.00	0.00
100°	0.00	0.00	2.11	1.41	0.00	0.00	0.00	0.00
125°	0.00	0.00	2.42	3.26	0.00	0.00	0.00	0.00
150°	0.00	0.00	2.96	5.52	0.00	0.00	0.00	0.00
175°	136.59	0.00	3.72	7.87	0.00	0.00	0.00	0.00
200°	322.84	0.00	4.64	10.13	0.00	0.00	0.00	0.00
225°	471.88	0.00	5.71	12.20	0.00	0.00	0.00	0.00
250°	592.43	0.00	6.88	14.02	0.00	0.00	0.00	0.00
275°	690.63	0.00	8.14	15.59	0.00	0.00	0.00	0.00
300°	771.19	0.00	9.48	16.91	0.00	0.00	0.00	0.00
325°	837.63	0.00	10.89	18.02	0.00	0.00	0.00	0.00
350°	892.55	0.00	12.39	18.94	0.00	0.00	0.00	0.00
375°	937.90	0.00	13.96	19.69	144.37	0.00	0.00	0.00
400°	975.12	0.00	15.60	20.30	547.79	0.00	0.00	0.00

	SI				
	Anhydrite	Calcite	Colesite	Gypsum	Halite
50°	-0.77	0.06	0.02	-0.16	-2.17
75°	-0.56	0.06	0.01	-0.18	-2.20
100°	-0.38	0.06	0.03	-0.18	-2.23
125°	-0.21	0.08	0.07	-0.16	-2.24
150°	-0.06	0.10	0.12	-0.14	-2.25
175°	0.09	0.13	0.18	-0.14	-2.25
200°	0.22	0.17	0.18	-0.14	-2.25
225°	0.35	0.23	0.33	-0.15	-2.24
250°	0.48	0.29	0.40	-0.17	-2.23
275°	0.60	0.36	0.49	-0.19	-2.22
300°	0.72	0.44	0.57	-0.19	-2.20
325°	0.83	0.52	0.65	-0.16	-2.18
350°	0.95	0.61	0.74	-0.08	-2.15
375°	1.06	0.70	0.82	0.07	-2.12
400°	1.18	0.80	0.90	0.32	-2.08

Comments

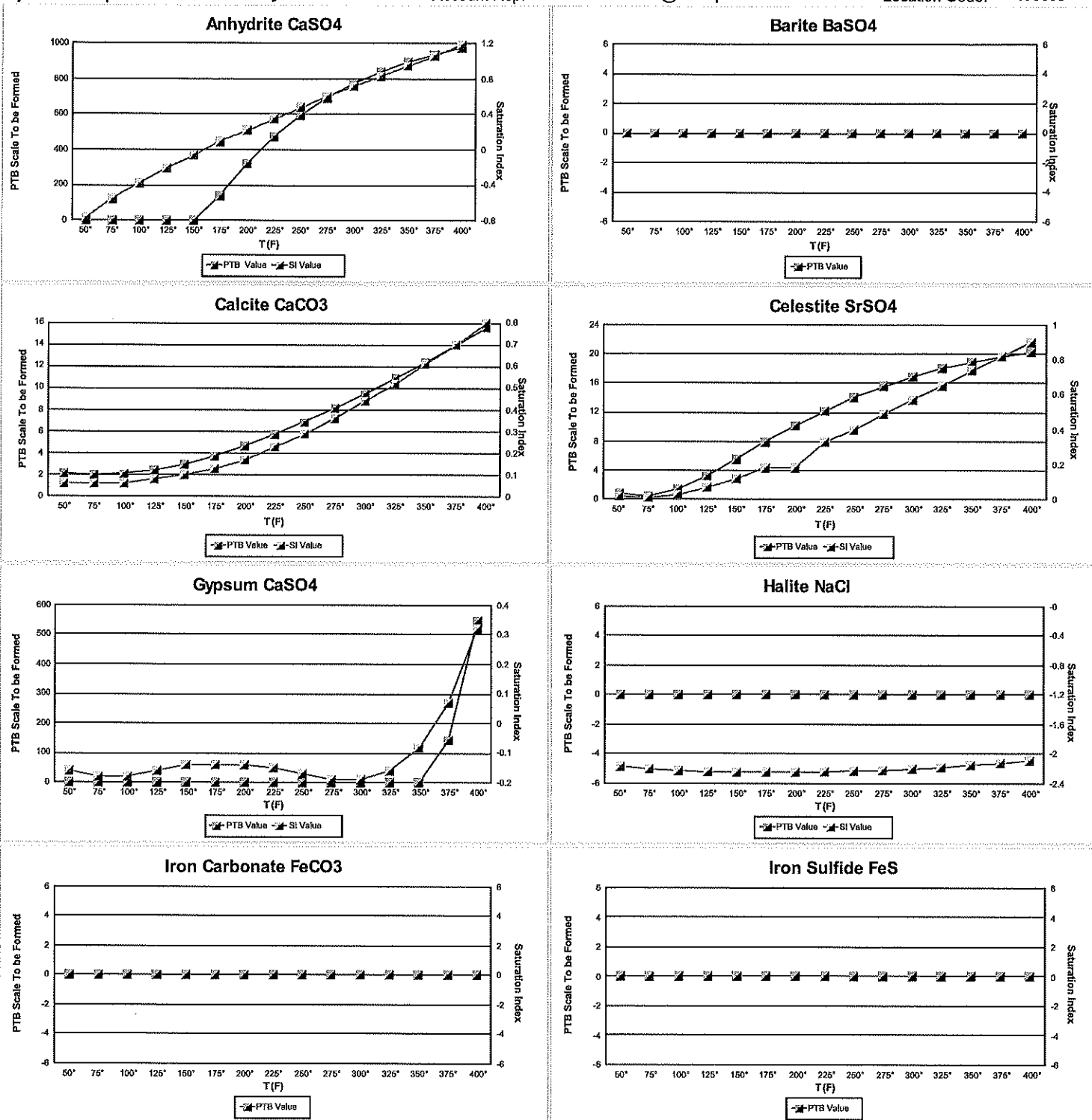
Scaling predictions calculated using Scale Soft Pitzer 2019
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 02/24/2023

Complete Water Analysis

Customer: SHAKESPEARE OIL COMPANY
 Geographic Region: Kansas
 Geographic Location: Lane County
 System Description: Production System

Equipment Description: Schoepf 2-15 SWD
 Sample Point: Bleeder
 Sample ID: AV13099
 Account Rep: Michael.Walters@championx.com

Collection Date: 02/16/2023
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