

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>	_____	_____	_____	_____	_____

## Complete Water Analysis

Customer: **SHAKESPEARE OIL COMPANY**  
 Formation Zone:  
 Geographic Region: **Kansas**  
 Geographic Location: **Scott County**  
 System Description: **Disposal**

Equipment Description: **Strickert 10 SWD**  
 Sample Point: **Bleeder**  
 Customer ID:  
 Latitude/Longitude: **0.00, 0.00**  
 Account Rep: **Michael.walters@championx.com**

Collect Date: **02/20/2024**  
 Submit Date: **02/20/2024**  
 Report Date: **02/22/2024**  
 Sample ID: **AX37077**  
 Location Code: **514622**

### Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO <sub>3</sub> )	166 mg/L	Titration
Dissolved CO <sub>2</sub>	260 mg/L	Titration
Dissolved H <sub>2</sub> S	48 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 °F	
pH of Water	7.5	Meter

### Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.028	Densitometer
Ionic Strength	0.530 mol/L	Calculation
Total Dissolved Solids	28300 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO <sub>2</sub> in the gas	0.150 %	Calculation

### Cations - Analyzed By ICP

Iron	4.06 mg/L	Boron	12.7 mg/L	Silicon	11.0 mg/L
Manganese	<0.200 mg/L	Lithium	8.89 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	33.6 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1030 mg/L	Zinc	<0.400 mg/L	Measured Sodium	8600 mg/L
Magnesium	289 mg/L	Lead	<0.500 mg/L		
Sodium	8600 mg/L	Cobalt	<0.500 mg/L		
Potassium	179 mg/L	Chromium	<0.100 mg/L		

### Anions - Analyzed by IC\*

Chloride	15400 mg/L	Bromide	26.3 mg/L	Sulfate	2510 mg/L
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### PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	11.84	1.88	0.00	0.00	0.00	2.23
75°	0.00	0.00	12.70	0.62	0.00	0.00	0.00	2.23
100°	0.00	0.00	13.84	1.07	0.00	0.00	0.00	2.22
125°	0.00	0.00	15.21	2.64	0.00	0.00	0.00	2.22
150°	0.00	0.00	16.71	4.84	0.00	0.00	0.00	2.22
175°	130.43	0.00	18.28	7.31	0.00	0.00	0.19	2.22
200°	295.48	0.00	19.86	9.78	0.00	0.00	0.78	2.22
225°	431.12	0.00	21.41	12.11	0.00	0.00	1.23	2.23
250°	544.18	0.00	22.92	14.21	0.00	0.00	1.56	2.23
275°	639.48	0.00	24.39	16.05	0.00	0.00	1.80	2.23
300°	720.72	0.00	25.81	17.62	0.00	0.00	1.98	2.23
325°	790.66	0.00	27.23	18.93	0.00	0.00	2.09	2.23
350°	851.33	0.00	28.64	20.02	0.00	0.00	2.17	2.24
375°	904.22	0.00	30.06	20.90	265.55	0.00	2.20	2.24
400°	950.41	0.00	31.52	21.61	601.65	0.00	2.21	2.24

### SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.75	0.38	0.03	-0.14	-2.66	-0.64	2.66
75°	-0.55	0.41	0.01	-0.16	-2.71	-0.50	2.42
100°	-0.37	0.46	0.02	-0.16	-2.73	-0.36	2.26
125°	-0.21	0.52	0.05	-0.14	-2.75	-0.23	2.17
150°	-0.05	0.60	0.10	-0.13	-2.76	-0.09	2.14
175°	0.10	0.69	0.15	-0.12	-2.76	0.04	2.15
200°	0.24	0.80	0.15	-0.12	-2.75	0.16	2.19
225°	0.37	0.91	0.30	-0.12	-2.74	0.27	2.26
250°	0.50	1.03	0.38	-0.14	-2.73	0.38	2.35
275°	0.63	1.15	0.46	-0.14	-2.71	0.47	2.46
300°	0.76	1.27	0.55	-0.13	-2.69	0.54	2.57
325°	0.89	1.39	0.64	-0.09	-2.66	0.60	2.69
350°	1.01	1.50	0.73	0.00	-2.63	0.64	2.81
375°	1.14	1.61	0.82	0.16	-2.59	0.66	2.94
400°	1.27	1.72	0.91	0.42	-2.54	0.67	3.06

### Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

Scaling predictions dependent on provided field data. Incomplete/partial field data may impact results generated by scaling software.

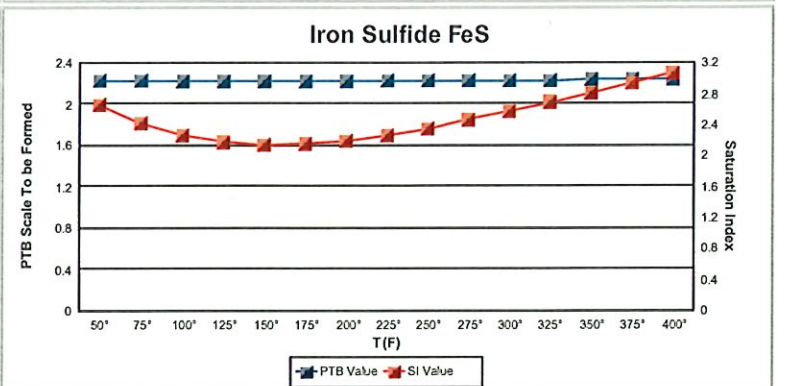
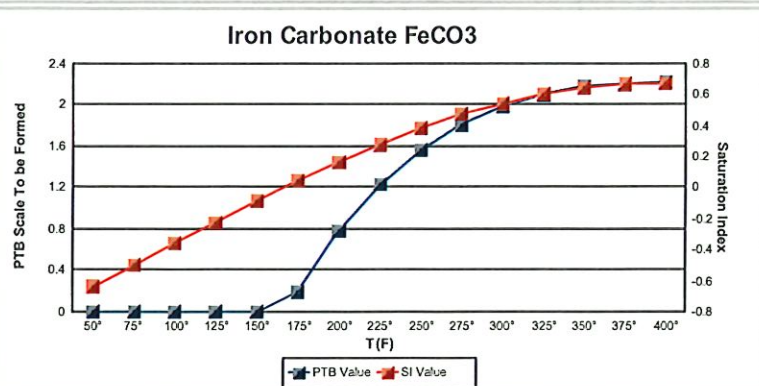
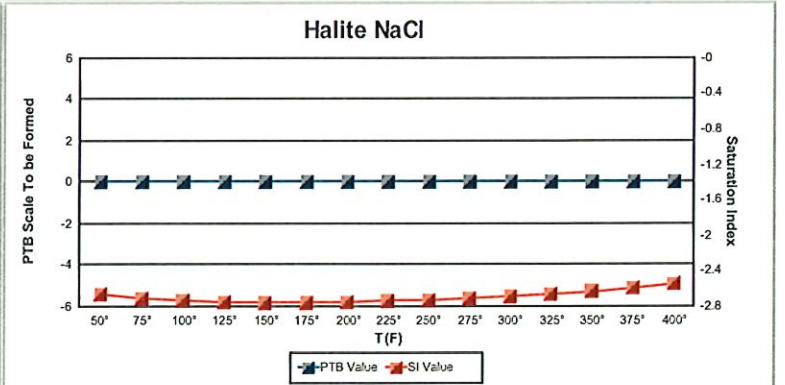
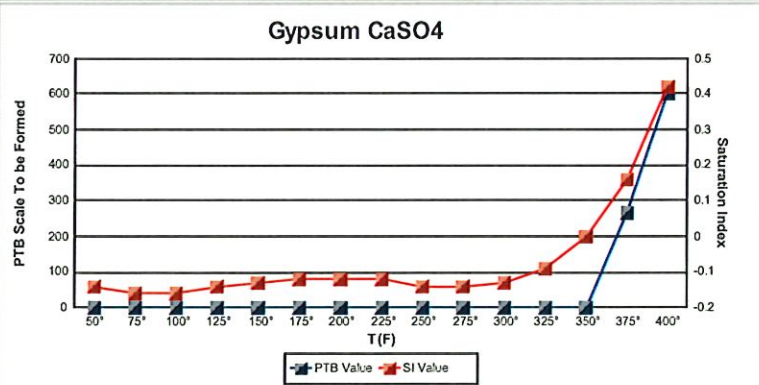
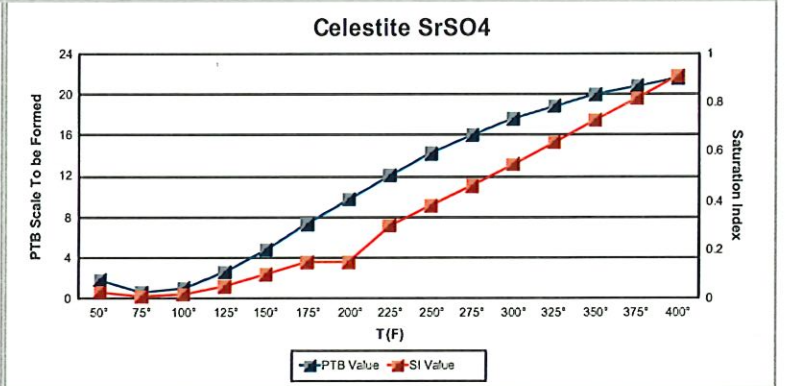
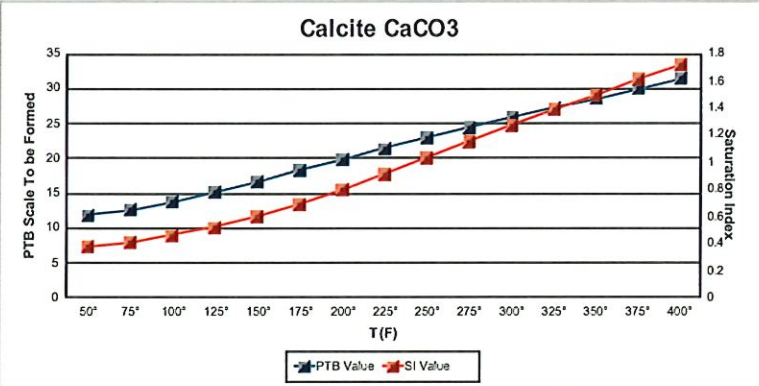
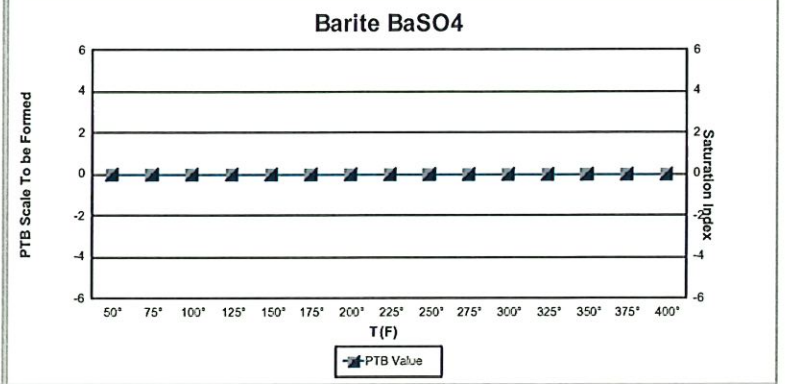
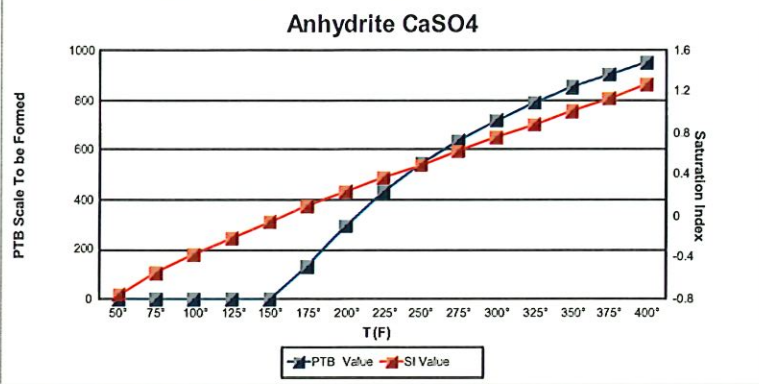


## Complete Water Analysis

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 Formation Zone:  
 Geographic Region: Kansas  
 Geographic Location: Scott County  
 System Description: Disposal

Equipment Description: Strickert 10 SWD  
 Sample Point: Bleeder  
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