

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: **Janzen 3-36 WIW**  
 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: **AX37075**  
 Location Code: **514620**

### Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO <sub>3</sub> )	254 mg/L	Titration
Dissolved CO <sub>2</sub>	160 mg/L	Titration
Dissolved H <sub>2</sub> S	53 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 °F	
pH of Water	7.5	Meter

### Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.087	Densitometer
Ionic Strength	1.81 mol/L	Calculation
Total Dissolved Solids	103000 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO <sub>2</sub> in the gas	0.210 %	Calculation

### Cations - Analyzed By ICP

Iron	7.96 mg/L	Boron	24.2 mg/L	Silicon	6.52 mg/L
Manganese	<0.200 mg/L	Lithium	4.42 mg/L	Aluminum	<0.400 mg/L
Barium	0.119 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	47.1 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1610 mg/L	Zinc	<0.400 mg/L	Measured Sodium	32000 mg/L
Magnesium	608 mg/L	Lead	<0.500 mg/L		
Sodium	32000 mg/L	Cobalt	<0.500 mg/L		
Potassium	298 mg/L	Chromium	<0.100 mg/L		

### Anions - Analyzed by IC\*

Chloride	64900 mg/L	Bromide	36.5 mg/L	Sulfate	3270 mg/L
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### PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.05	36.42	0.00	0.00	0.00	0.00	4.39
75°	0.00	0.04	38.72	0.00	0.00	0.00	1.36	4.38
100°	0.00	0.02	40.76	0.00	0.00	0.00	2.58	4.38
125°	0.00	0.00	42.56	1.35	0.00	0.00	3.45	4.38
150°	0.00	0.00	44.16	5.28	0.00	0.00	4.08	4.38
175°	183.14	0.00	45.60	9.14	0.00	0.00	4.51	4.38
200°	398.19	0.00	46.93	12.70	0.00	0.00	4.81	4.38
225°	571.41	0.00	48.16	15.86	0.00	0.00	5.02	4.38
250°	713.21	0.00	49.33	18.60	0.00	0.00	5.16	4.38
275°	830.83	0.00	50.44	20.93	0.00	0.00	5.26	4.38
300°	929.83	0.00	51.53	22.90	0.00	0.00	5.31	4.38
325°	1,014.36	0.00	52.62	24.57	0.00	0.00	5.34	4.39
350°	1,087.45	0.00	53.70	25.99	0.00	0.00	5.33	4.39
375°	1,151.25	0.00	54.81	27.17	0.00	0.00	5.31	4.39
400°	1,207.14	0.00	55.93	28.15	323.98	0.00	5.25	4.39

### SI

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.76	0.58	0.95	-0.07	-0.18	-1.48	-0.03	3.06
75°	-0.55	0.35	1.01	-0.06	-0.20	-1.51	0.15	2.83
100°	-0.36	0.15	1.09	-0.03	-0.19	-1.52	0.31	2.69
125°	-0.19	-0.01	1.17	0.02	-0.17	-1.53	0.47	2.61
150°	-0.04	-0.14	1.27	0.07	-0.16	-1.54	0.61	2.57
175°	0.10	-0.25	1.38	0.14	-0.16	-1.55	0.75	2.58
200°	0.22	-0.33	1.48	0.14	-0.17	-1.55	0.87	2.61
225°	0.34	-0.40	1.60	0.27	-0.19	-1.54	0.98	2.66
250°	0.45	-0.46	1.71	0.34	-0.23	-1.54	1.07	2.72
275°	0.56	-0.51	1.81	0.41	-0.26	-1.53	1.14	2.79
300°	0.66	-0.56	1.91	0.48	-0.27	-1.53	1.18	2.87
325°	0.75	-0.61	2.00	0.54	-0.26	-1.51	1.20	2.94
350°	0.84	-0.66	2.07	0.61	-0.21	-1.50	1.20	3.02
375°	0.93	-0.71	2.14	0.67	-0.08	-1.48	1.17	3.09
400°	1.02	-0.77	2.20	0.73	0.14	-1.46	1.12	3.15

### 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.

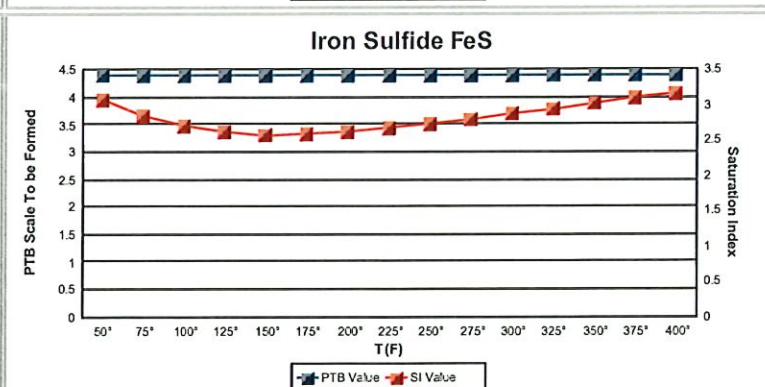
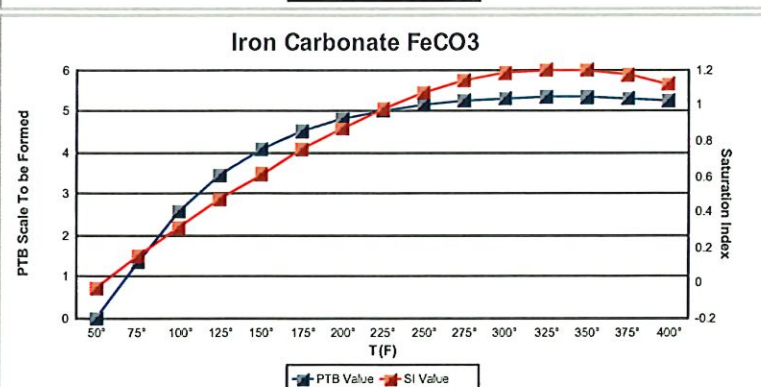
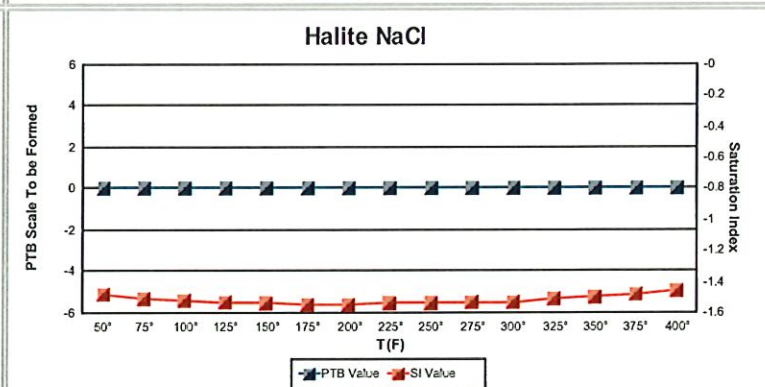
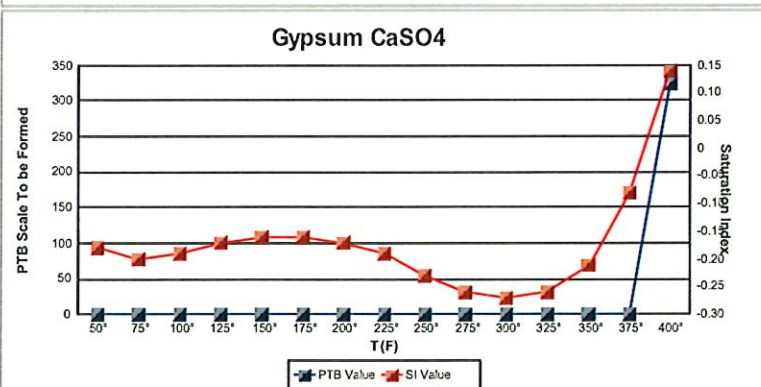
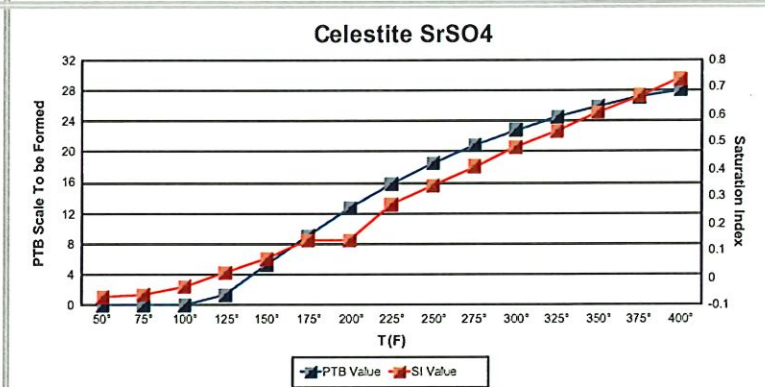
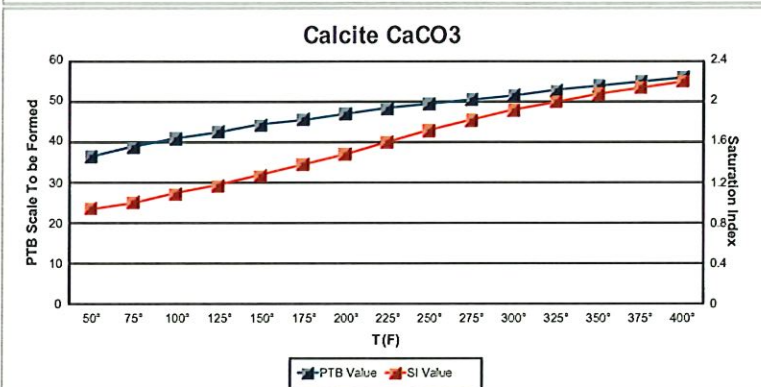
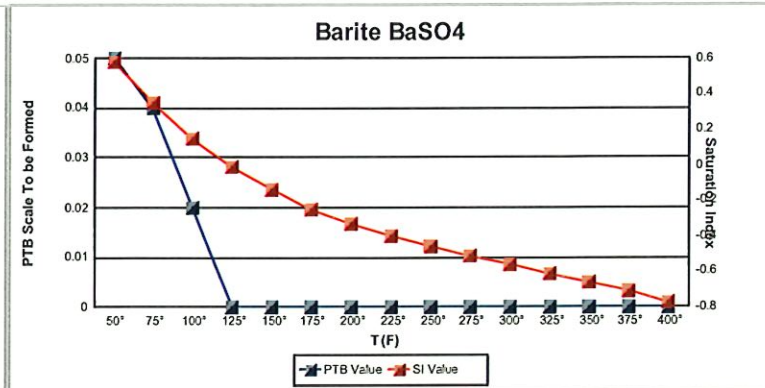
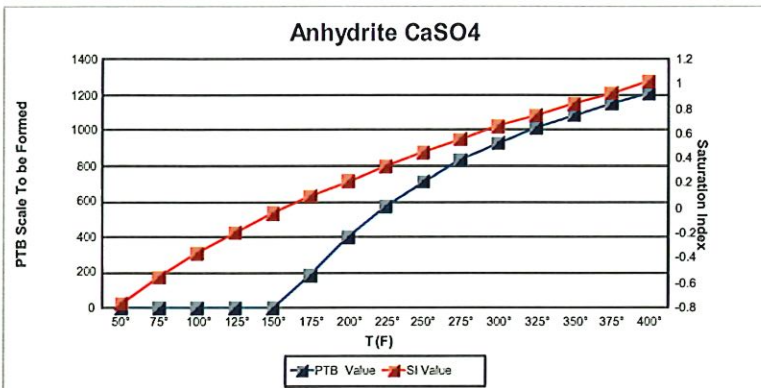


## Complete Water Analysis

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

Equipment Description: Janzen 3-36 WIW  
 Sample Point: Bleeder  
 Customer ID:  
 Latitude/Longitude: 0.00, 0.00  
 Account Rep: Michael.walters@championx.com

Collect Date: 02/20/2024  
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 Location Code: 514620



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 02/27/2024