

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: **Production System**

Equipment Description: ~~York 1-3~~ **Yost 9-1**  
 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: **AX37120**  
 Location Code: **514631**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	342 mg/L	Titration
Dissolved CO2	190 mg/L	Titration
Dissolved H2S	130 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis		
Analysis	Result	Analysis Method
Specific Gravity	1.048	Densitometer
Ionic Strength	0.950 mol/L	Calculation
Total Dissolved Solids	53800 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.200 %	Calculation

### Cations - Analyzed By ICP

Iron	3.16 mg/L	Boron	29.4 mg/L	Silicon	8.40 mg/L
Manganese	<0.200 mg/L	Lithium	2.85 mg/L	Aluminum	<0.400 mg/L
Barium	0.133 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	33.1 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	711 mg/L	Zinc	<0.400 mg/L	Measured Sodium	20000 mg/L
Magnesium	227 mg/L	Lead	<0.500 mg/L		
Sodium	20000 mg/L	Cobalt	<0.500 mg/L		
Potassium	245 mg/L	Chromium	<0.100 mg/L		

### Anions - Analyzed by IC\*

Chloride	31100 mg/L	Bromide	28.7 mg/L	Sulfate	1050 mg/L
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PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.04	22.86	0.00	0.00	0.00	0.00	1.74
75°	0.00	0.02	23.60	0.00	0.00	0.00	0.00	1.74
100°	0.00	0.00	24.64	0.00	0.00	0.00	0.00	1.74
125°	0.00	0.00	26.01	0.00	0.00	0.00	0.00	1.74
150°	0.00	0.00	27.68	0.00	0.00	0.00	0.00	1.73
175°	0.00	0.00	29.56	0.00	0.00	0.00	0.00	1.73
200°	0.00	0.00	31.60	0.00	0.00	0.00	0.03	1.73
225°	0.00	0.00	33.75	0.00	0.00	0.00	0.41	1.74
250°	0.00	0.00	35.97	0.00	0.00	0.00	0.70	1.74
275°	0.00	0.00	38.27	0.00	0.00	0.00	0.92	1.74
300°	41.91	0.00	40.66	3.46	0.00	0.00	1.09	1.74
325°	120.95	0.00	43.14	7.36	0.00	0.00	1.20	1.74
350°	188.38	0.00	45.74	10.56	0.00	0.00	1.28	1.74
375°	246.09	0.00	48.47	13.16	0.00	0.00	1.31	1.74
400°	295.42	0.00	51.34	15.23	0.00	0.00	1.32	1.74

SI								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-1.51	0.34	0.38	-0.58	-0.91	-2.01	-0.65	2.96
75°	-1.29	0.10	0.40	-0.58	-0.92	-2.05	-0.52	2.68
100°	-1.10	-0.09	0.44	-0.54	-0.90	-2.07	-0.40	2.49
125°	-0.92	-0.25	0.48	-0.49	-0.88	-2.09	-0.29	2.37
150°	-0.76	-0.38	0.54	-0.43	-0.85	-2.09	-0.19	2.30
175°	-0.61	-0.47	0.61	-0.36	-0.84	-2.10	-0.09	2.28
200°	-0.46	-0.55	0.69	-0.36	-0.83	-2.09	0.01	2.30
225°	-0.33	-0.60	0.79	-0.20	-0.84	-2.09	0.09	2.34
250°	-0.19	-0.64	0.89	-0.11	-0.85	-2.08	0.17	2.40
275°	-0.07	-0.67	1.00	-0.02	-0.86	-2.06	0.24	2.49
300°	0.06	-0.70	1.11	0.07	-0.85	-2.05	0.30	2.58
325°	0.18	-0.72	1.23	0.16	-0.81	-2.03	0.34	2.69
350°	0.30	-0.74	1.35	0.25	-0.72	-2.00	0.38	2.80
375°	0.43	-0.77	1.46	0.35	-0.57	-1.97	0.39	2.92
400°	0.55	-0.79	1.57	0.44	-0.31	-1.94	0.39	3.04

### Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

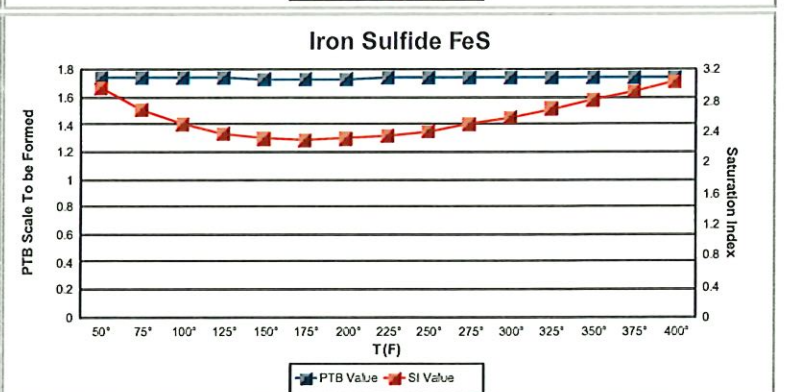
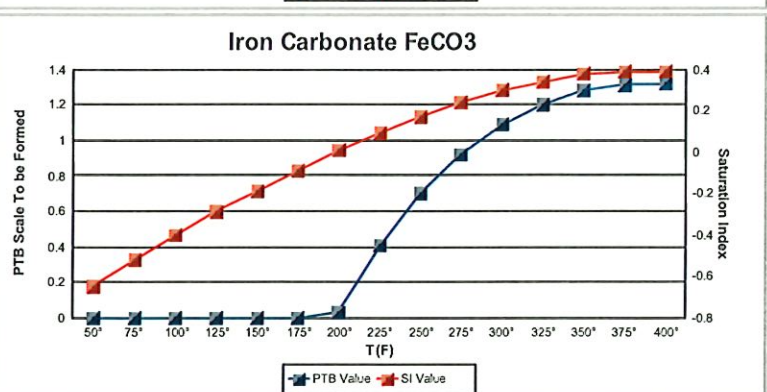
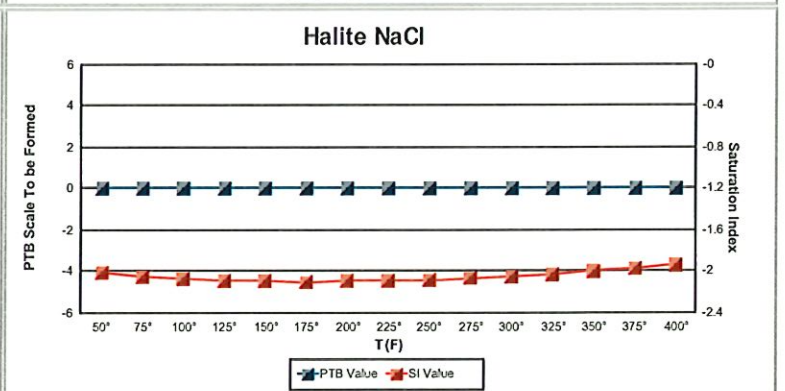
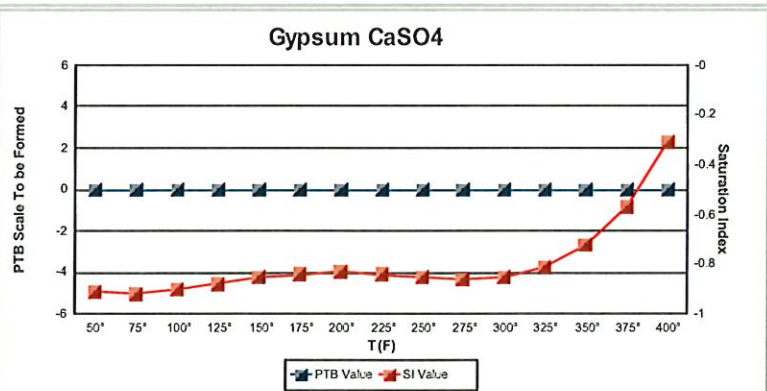
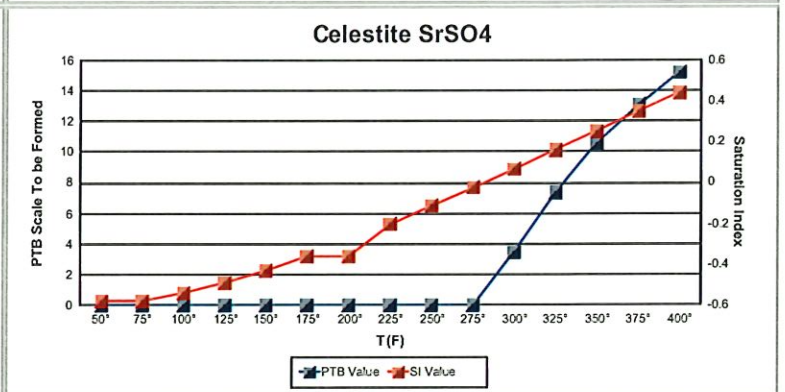
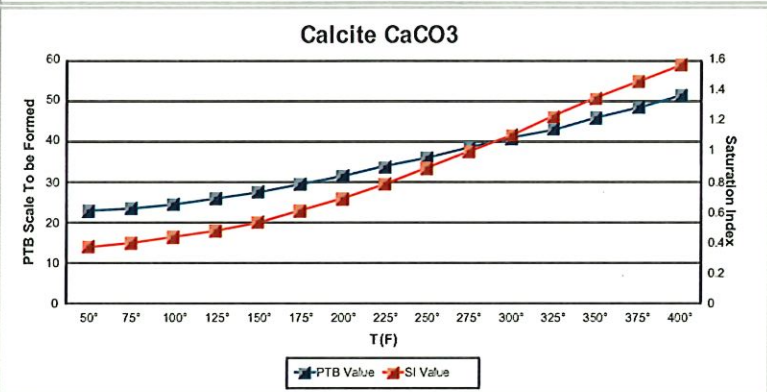
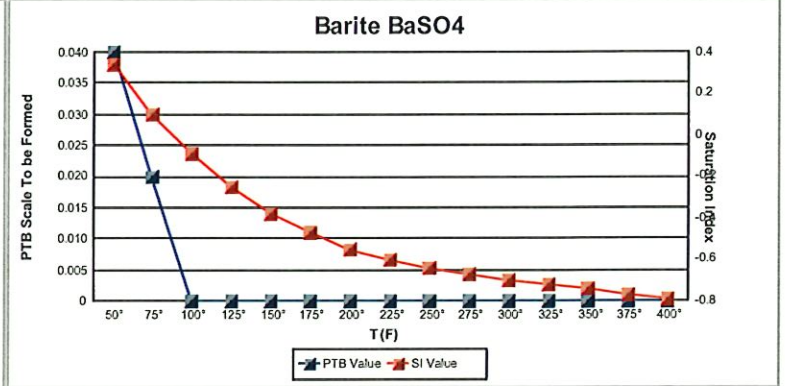
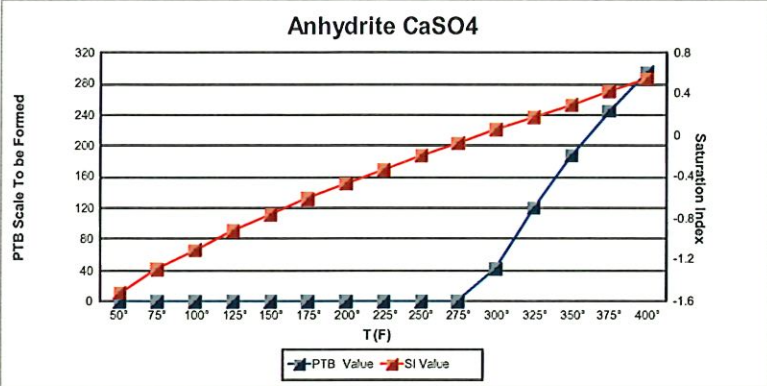
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