

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: **Lane County**  
 System Description: **Production System**

Equipment Description: **Hineman 1 OWWO**  
 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: **AX37094**  
 Location Code: **430649**

### Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	127 mg/L	Titration
Dissolved CO2	160 mg/L	Titration
Dissolved H2S	58 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

### Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.059	Densitometer
Ionic Strength	1.23 mol/L	Calculation
Total Dissolved Solids	69000 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.0500 %	Calculation

### Cations - Analyzed By ICP

Iron	1.35 mg/L	Boron	22.6 mg/L	Silicon	7.23 mg/L
Manganese	<0.200 mg/L	Lithium	4.64 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	34.5 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1090 mg/L	Zinc	<0.400 mg/L	Measured Sodium	22300 mg/L
Magnesium	351 mg/L	Lead	<0.500 mg/L		
Sodium	22300 mg/L	Cobalt	<0.500 mg/L		
Potassium	325 mg/L	Chromium	<0.100 mg/L		

### Anions - Analyzed by IC\*

Chloride	40300 mg/L	Bromide	Not Detected mg/L	Sulfate	4460 mg/L
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### PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	0.83	0.49	0.00	0.00	0.00	0.74
75°	0.00	0.00	0.94	0.47	0.00	0.00	0.00	0.74
100°	0.00	0.00	1.15	1.85	0.00	0.00	0.00	0.73
125°	0.00	0.00	1.49	4.01	0.00	0.00	0.00	0.73
150°	0.00	0.00	1.96	6.50	0.00	0.00	0.00	0.73
175°	207.98	0.00	2.54	9.03	0.00	0.00	0.00	0.72
200°	407.15	0.00	3.20	11.42	0.00	0.00	0.00	0.72
225°	566.30	0.00	3.89	13.56	0.00	0.00	0.00	0.72
250°	695.02	0.00	4.61	15.44	0.00	0.00	0.00	0.73
275°	800.07	0.00	5.33	17.05	0.00	0.00	0.00	0.73
300°	886.59	0.00	6.06	18.41	0.00	0.00	0.00	0.73
325°	958.43	0.00	6.80	19.55	0.00	0.00	0.00	0.73
350°	1,018.41	0.00	7.55	20.51	0.00	0.00	0.00	0.73
375°	1,068.60	0.00	8.33	21.29	94.33	0.00	0.00	0.74
400°	1,110.46	0.00	9.15	21.93	554.56	0.00	0.00	0.74

### SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.74	0.04	0.01	-0.14	-1.87	-1.51	2.35
75°	-0.53	0.05	0.01	-0.16	-1.90	-1.39	2.06
100°	-0.34	0.06	0.03	-0.15	-1.92	-1.29	1.85
125°	-0.18	0.08	0.08	-0.14	-1.93	-1.20	1.70
150°	-0.02	0.11	0.13	-0.12	-1.94	-1.11	1.61
175°	0.12	0.15	0.19	-0.12	-1.94	-1.04	1.56
200°	0.25	0.20	0.19	-0.12	-1.94	-0.97	1.55
225°	0.38	0.25	0.33	-0.14	-1.94	-0.92	1.57
250°	0.50	0.31	0.41	-0.16	-1.93	-0.87	1.61
275°	0.61	0.38	0.49	-0.18	-1.92	-0.84	1.66
300°	0.72	0.44	0.57	-0.19	-1.90	-0.83	1.73
325°	0.83	0.51	0.64	-0.17	-1.89	-0.83	1.80
350°	0.93	0.57	0.72	-0.10	-1.87	-0.84	1.88
375°	1.04	0.63	0.80	0.04	-1.84	-0.87	1.96
400°	1.14	0.69	0.87	0.27	-1.81	-0.92	2.04

### Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

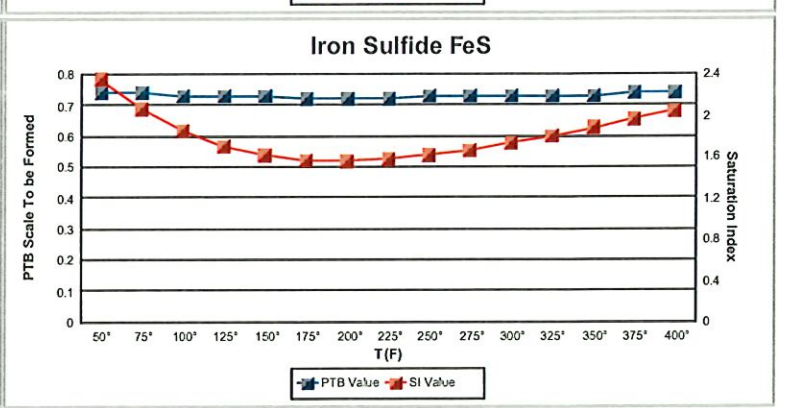
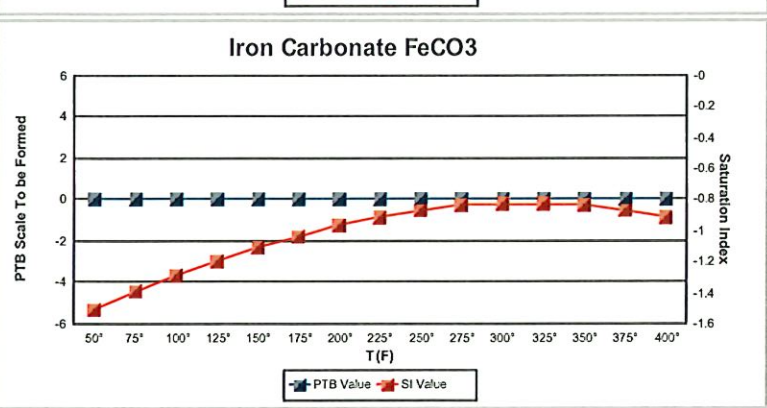
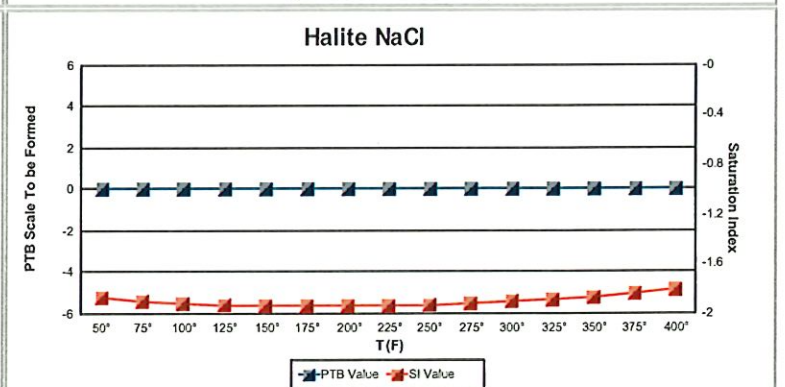
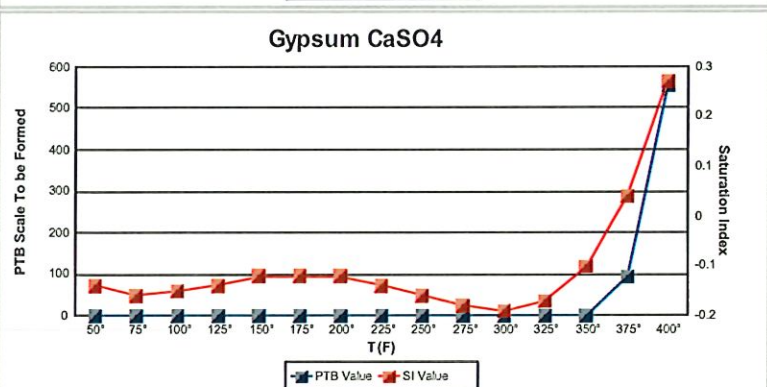
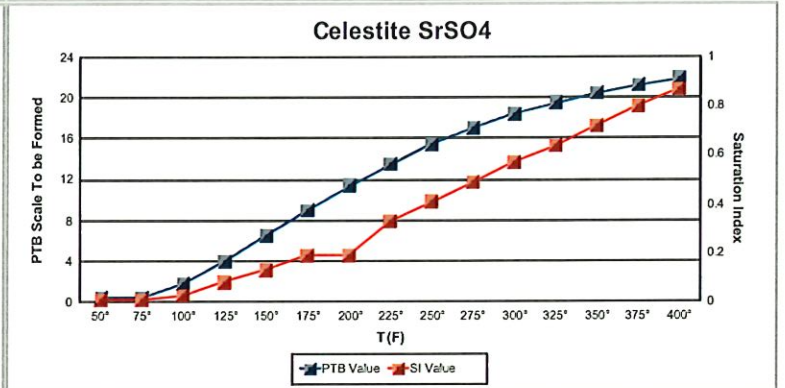
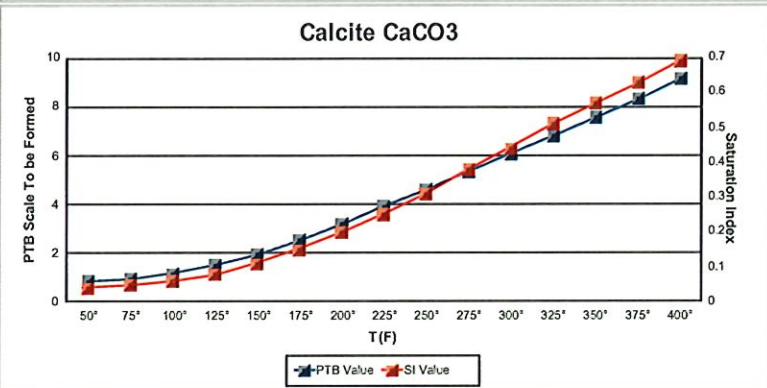
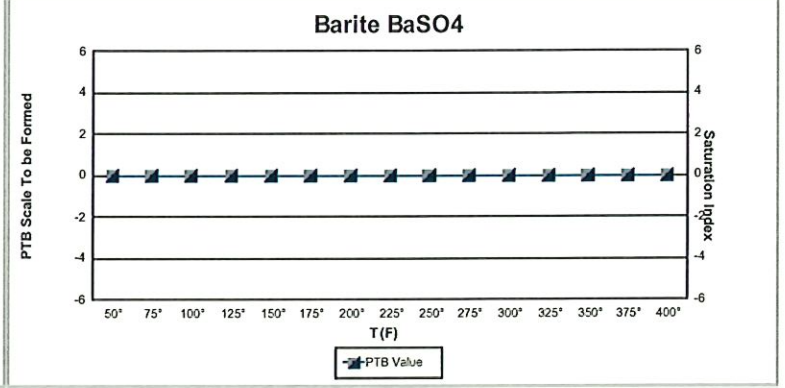
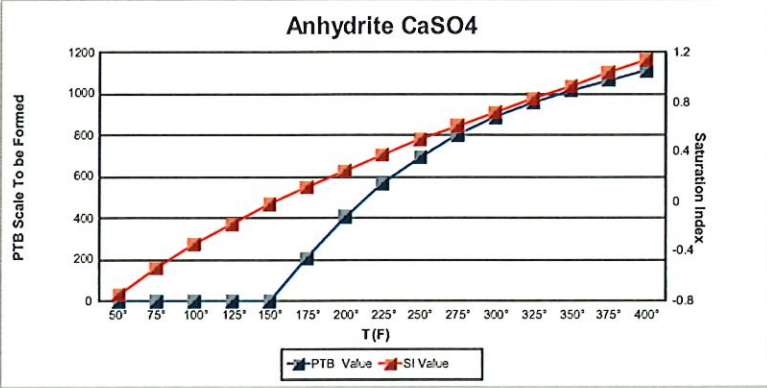
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