

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**
 Formation Zone:
 Geographic Region: **Kansas**
 Geographic Location: **Lane County**
 System Description: **Production System**

Equipment Description: **Marit 2-24 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: **AX37083**
 Location Code: **430656**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	132 mg/L	Titration
Dissolved CO2	250 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	1.048	Densitometer
Ionic Strength	0.900 mol/L	Calculation
Total Dissolved Solids	50000 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.0600 %	Calculation

Cations - Analyzed By ICP					
Iron	1.58 mg/L	Boron	21.7 mg/L	Silicon	8.06 mg/L
Manganese	<0.200 mg/L	Lithium	4.99 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	30.9 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	806 mg/L	Zinc	12.7 mg/L	Measured Sodium	15000 mg/L
Magnesium	370 mg/L	Lead	<0.500 mg/L		
Sodium	15000 mg/L	Cobalt	<0.500 mg/L		
Potassium	228 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*			
Chloride	28800 mg/L	Bromide	26.1 mg/L
		Sulfate	4520 mg/L

	PTB							
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	0.00	3.87	0.00	0.00	0.00	0.87
75°	0.00	0.00	0.00	3.27	0.00	0.00	0.00	0.86
100°	0.00	0.00	0.00	3.95	0.00	0.00	0.00	0.86
125°	0.00	0.00	0.49	5.39	0.00	0.00	0.00	0.86
150°	0.00	0.00	1.19	7.24	0.00	0.00	0.00	0.85
175°	131.17	0.00	2.04	9.20	0.00	0.00	0.00	0.85
200°	299.89	0.00	2.97	11.12	0.00	0.00	0.00	0.85
225°	432.88	0.00	3.95	12.89	0.00	0.00	0.00	0.85
250°	538.59	0.00	4.94	14.47	0.00	0.00	0.00	0.86
275°	623.02	0.00	5.93	15.83	0.00	0.00	0.00	0.86
300°	690.83	0.00	6.92	17.00	0.00	0.00	0.00	0.86
325°	745.51	0.00	7.90	17.98	0.00	0.00	0.00	0.86
350°	789.67	0.00	8.90	18.79	0.00	0.00	0.00	0.86
375°	825.31	0.00	9.92	19.46	119.87	0.00	0.00	0.87
400°	853.93	0.00	10.98	20.00	490.33	0.00	0.00	0.87

	SI							
	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide	
50°	-0.75	-0.02	0.08	-0.15	-2.18	-1.36	2.41	
75°	-0.55	-0.02	0.07	-0.17	-2.22	-1.24	2.13	
100°	-0.37	0.00	0.08	-0.17	-2.24	-1.14	1.93	
125°	-0.21	0.02	0.12	-0.15	-2.26	-1.04	1.79	
150°	-0.05	0.06	0.17	-0.14	-2.27	-0.95	1.71	
175°	0.09	0.10	0.23	-0.13	-2.27	-0.86	1.68	
200°	0.22	0.16	0.23	-0.14	-2.26	-0.79	1.68	
225°	0.35	0.23	0.37	-0.15	-2.26	-0.72	1.71	
250°	0.48	0.30	0.44	-0.17	-2.25	-0.66	1.76	
275°	0.60	0.37	0.52	-0.19	-2.23	-0.62	1.82	
300°	0.71	0.45	0.60	-0.19	-2.21	-0.58	1.91	
325°	0.83	0.53	0.68	-0.16	-2.19	-0.57	1.99	
350°	0.94	0.61	0.77	-0.08	-2.17	-0.56	2.09	
375°	1.05	0.68	0.85	0.06	-2.14	-0.57	2.19	
400°	1.17	0.76	0.93	0.31	-2.10	-0.60	2.29	

Comments

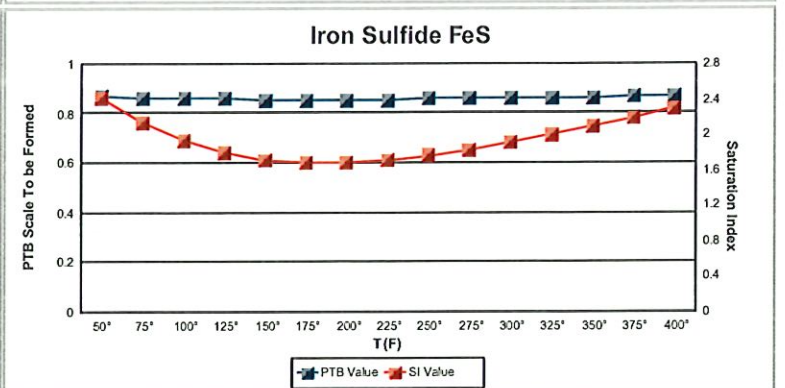
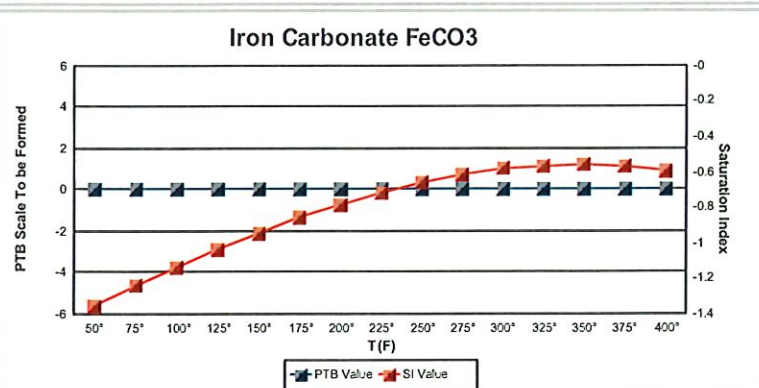
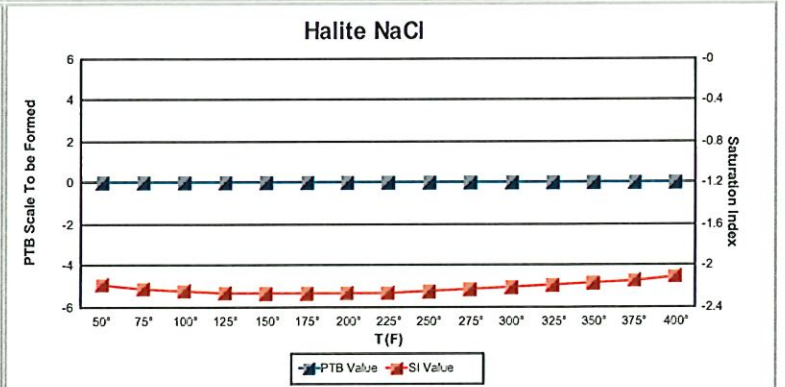
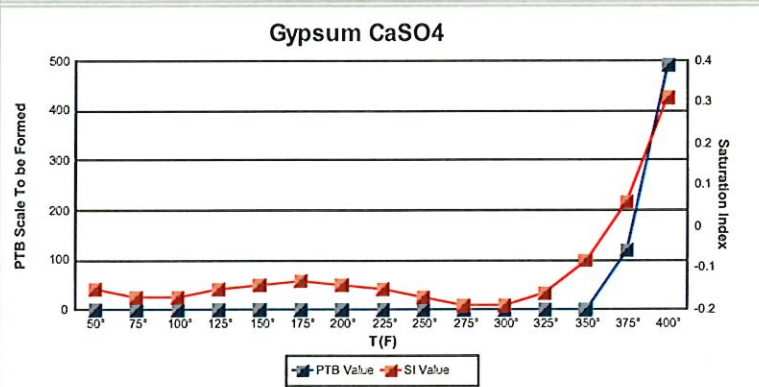
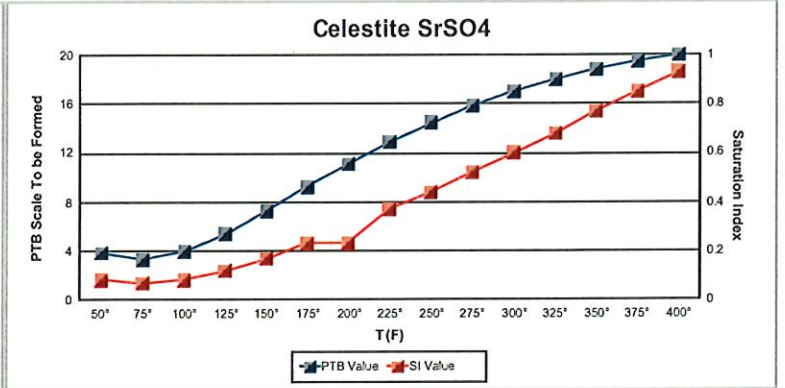
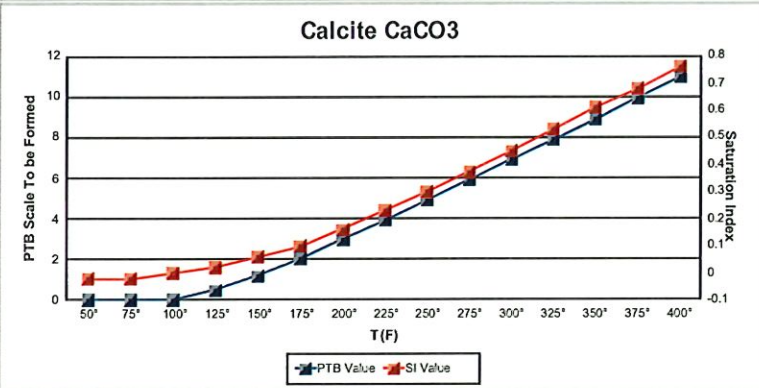
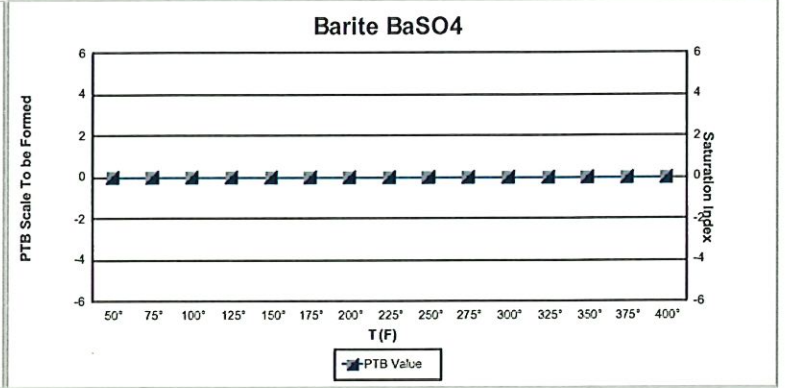
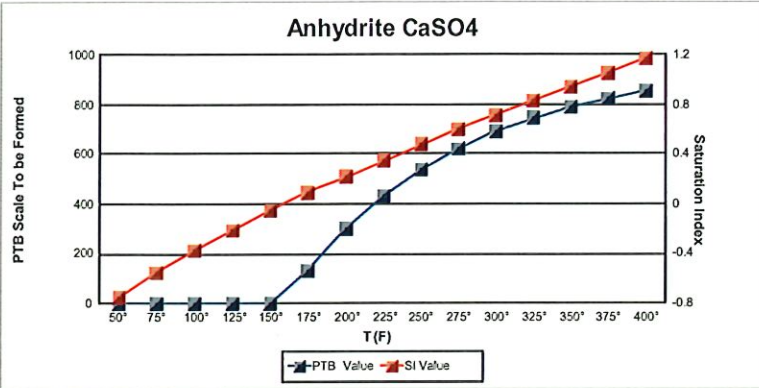
Scaling predictions calculated using Scale Soft Pitzer 2019
 Scaling predictions dependent on provided field data. Incomplete/partial field data may impact results generated by scaling software.

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