

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: **Scott County**
 System Description: **Disposal**

Equipment Description: **COG**
 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: **AX37074**
 Location Code: **514619**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	278 mg/L	Titration
Dissolved CO2	120 mg/L	Titration
Dissolved H2S	36 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis		
Analysis	Result	Analysis Method
Specific Gravity	1.050	Densitometer
Ionic Strength	1.01 mol/L	Calculation
Total Dissolved Solids	56200 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.310 %	Calculation

Cations - Analyzed By ICP					
Iron	9.92 mg/L	Boron	22.4 mg/L	Silicon	7.56 mg/L
Manganese	0.335 mg/L	Lithium	4.14 mg/L	Aluminum	<0.400 mg/L
Barium	0.104 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	36.5 mg/L	Nickel	<0.200 mg/L	Phosphorus	0.771 mg/L
Calcium	1120 mg/L	Zinc	<0.400 mg/L	Measured Sodium	16500 mg/L
Magnesium	432 mg/L	Lead	<0.500 mg/L		
Sodium	16500 mg/L	Cobalt	<0.500 mg/L		
Potassium	230 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*			
Chloride	33200 mg/L	Bromide	32.7 mg/L
		Sulfate	4330 mg/L

PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.05	31.47	5.51	0.00	0.00	1.11	5.46
75°	0.00	0.05	35.87	4.91	0.00	0.00	3.01	5.45
100°	0.00	0.04	40.03	5.69	0.00	0.00	4.36	5.45
125°	0.00	0.03	43.88	7.32	0.00	0.00	5.28	5.45
150°	68.53	0.01	47.39	9.37	0.00	0.00	5.89	5.45
175°	303.42	0.00	50.53	11.56	0.00	0.00	6.30	5.45
200°	489.62	0.00	53.34	13.68	0.00	0.00	6.56	5.46
225°	639.41	0.00	55.83	15.64	0.00	0.00	6.74	5.46
250°	761.32	0.00	58.05	17.38	0.00	0.00	6.85	5.46
275°	861.36	0.00	60.02	18.89	0.00	0.00	6.93	5.46
300°	944.15	0.00	61.80	20.19	0.00	0.00	6.98	5.47
325°	1,013.13	0.00	63.40	21.28	0.00	0.00	7.00	5.47
350°	1,070.85	0.00	64.88	22.19	0.00	0.00	7.02	5.47
375°	1,119.18	0.00	66.25	22.95	269.97	0.00	7.02	5.47
400°	1,159.46	0.00	67.53	23.56	695.67	0.00	7.02	5.47

SI								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.66	0.87	0.76	0.10	-0.06	-2.08	0.10	2.88
75°	-0.46	0.61	0.85	0.09	-0.08	-2.12	0.29	2.71
100°	-0.28	0.40	0.95	0.10	-0.08	-2.14	0.49	2.61
125°	-0.11	0.23	1.06	0.14	-0.07	-2.15	0.67	2.57
150°	0.04	0.09	1.19	0.19	-0.05	-2.16	0.85	2.57
175°	0.18	-0.01	1.32	0.25	-0.05	-2.16	1.01	2.60
200°	0.31	-0.10	1.45	0.25	-0.06	-2.16	1.17	2.66
225°	0.44	-0.16	1.58	0.38	-0.07	-2.15	1.30	2.74
250°	0.56	-0.21	1.72	0.46	-0.10	-2.14	1.42	2.83
275°	0.67	-0.25	1.85	0.53	-0.12	-2.13	1.52	2.93
300°	0.79	-0.29	1.97	0.61	-0.12	-2.11	1.59	3.03
325°	0.90	-0.32	2.08	0.69	-0.10	-2.09	1.64	3.13
350°	1.00	-0.35	2.19	0.77	-0.02	-2.07	1.67	3.23
375°	1.11	-0.39	2.28	0.84	0.12	-2.04	1.68	3.33
400°	1.22	-0.43	2.37	0.92	0.36	-2.01	1.66	3.43

Comments

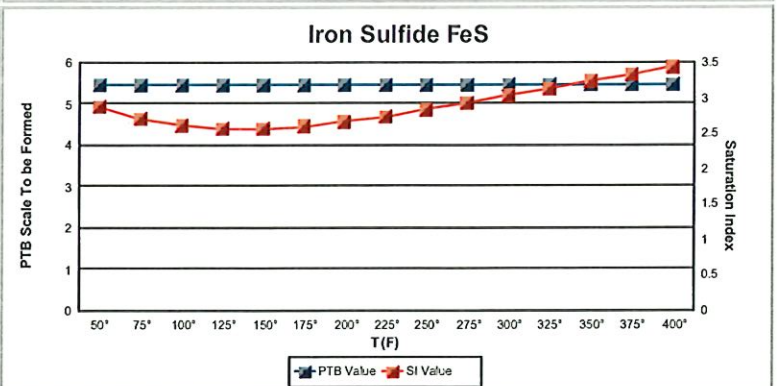
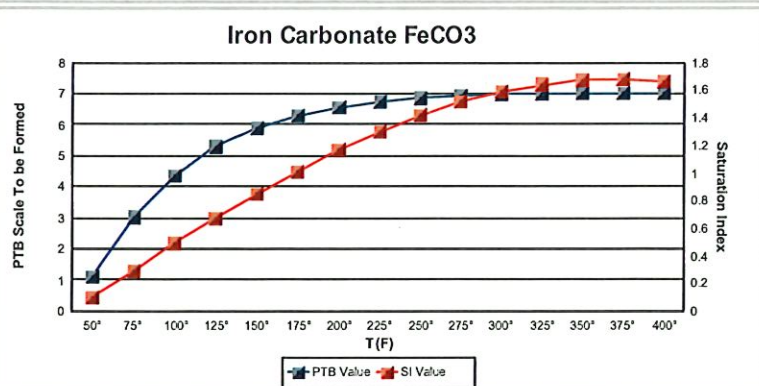
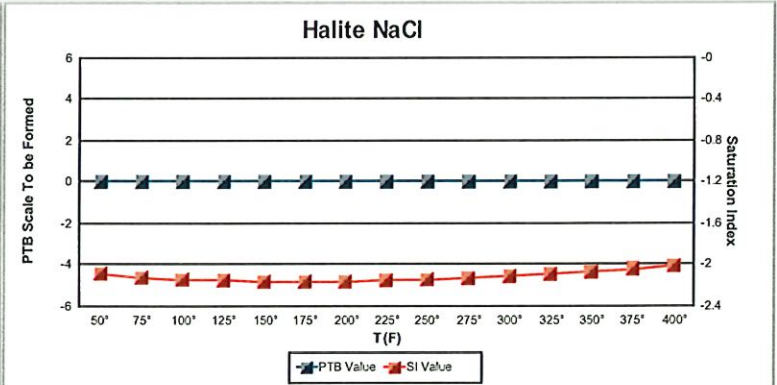
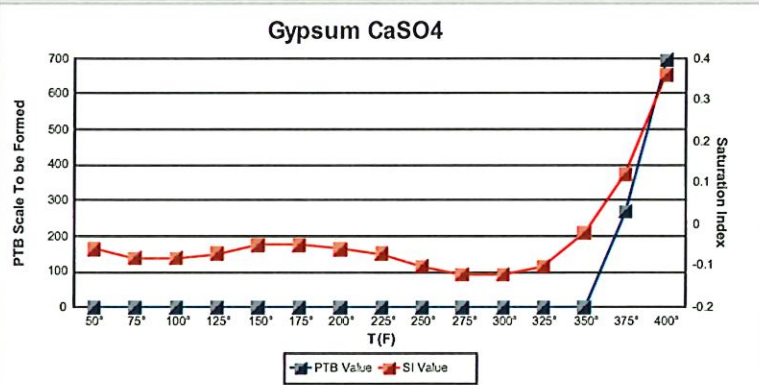
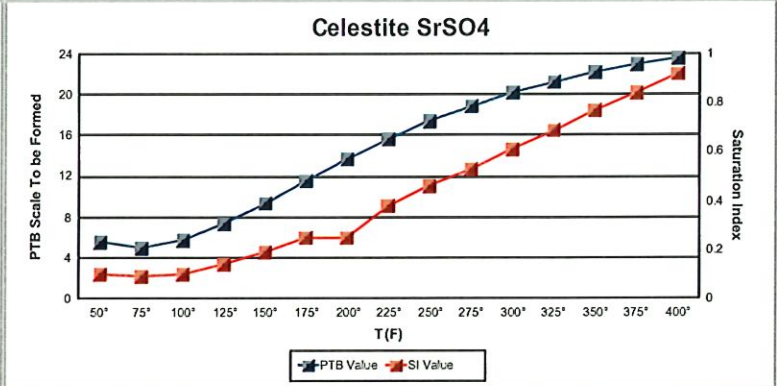
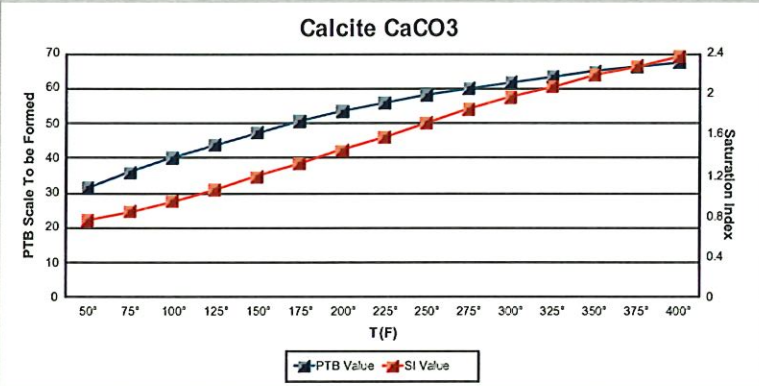
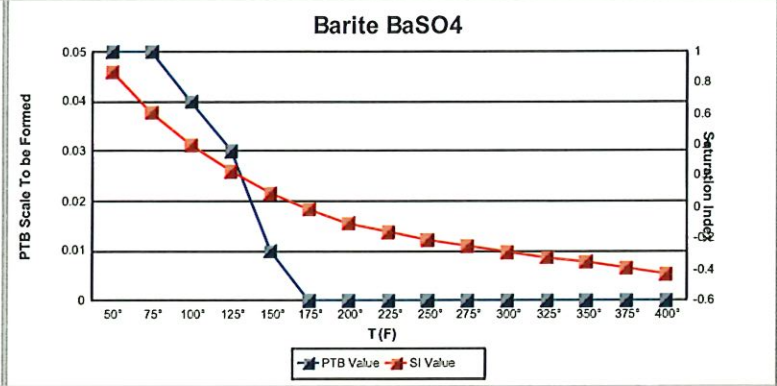
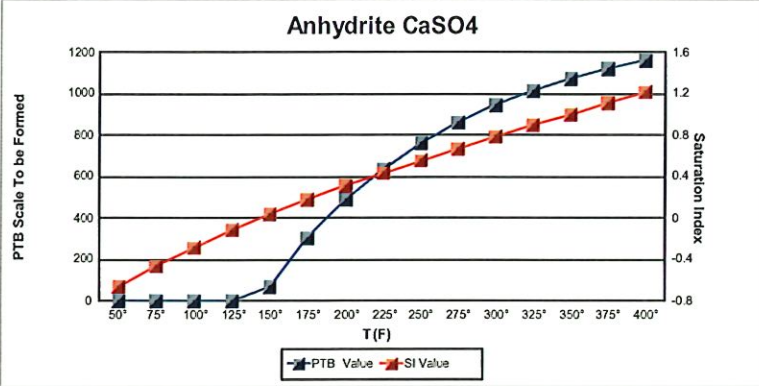
Scaling predictions calculated using Scale Soft Pitzer 2019
 Scaling predictions dependent on provided field data. Incomplete/partial field data may impact results generated by scaling software.

Complete Water Analysis

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

Equipment Description: COG
 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: AX37074
 Location Code: 514619



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.