

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: **Jansen 4**
 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: **AX37078**
 Location Code: **514623**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	190 mg/L	Titration
Dissolved CO2	150 mg/L	Titration
Dissolved H2S	83 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.046	Densitometer
Ionic Strength	0.990 mol/L	Calculation
Total Dissolved Solids	54000 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.0800 %	Calculation

Cations - Analyzed By ICP

Iron	2.14 mg/L	Boron	16.2 mg/L	Silicon	9.04 mg/L
Manganese	<0.200 mg/L	Lithium	8.65 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	45.2 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1630 mg/L	Zinc	<0.400 mg/L	Measured Sodium	16400 mg/L
Magnesium	479 mg/L	Lead	<0.500 mg/L		
Sodium	16400 mg/L	Cobalt	<0.500 mg/L		
Potassium	279 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*

Chloride	32200 mg/L	Bromide	39.4 mg/L	Sulfate	2680 mg/L
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PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	13.59	0.00	0.00	0.00	0.00	1.18
75°	0.00	0.00	13.41	0.00	0.00	0.00	0.00	1.18
100°	0.00	0.00	13.37	0.00	0.00	0.00	0.00	1.17
125°	0.00	0.00	13.53	1.49	0.00	0.00	0.00	1.17
150°	0.00	0.00	13.88	4.81	0.00	0.00	0.00	1.17
175°	216.17	0.00	14.40	8.35	0.00	0.00	0.00	1.17
200°	408.62	0.00	15.06	11.79	0.00	0.00	0.00	1.17
225°	564.29	0.00	15.84	14.96	0.00	0.00	0.00	1.17
250°	691.87	0.00	16.72	17.79	0.00	0.00	0.00	1.17
275°	797.45	0.00	17.69	20.25	0.00	0.00	0.00	1.17
300°	885.71	0.00	18.75	22.36	0.00	0.00	0.00	1.17
325°	960.12	0.00	19.89	24.14	0.00	0.00	0.00	1.17
350°	1,023.22	0.00	21.12	25.63	0.00	0.00	0.00	1.18
375°	1,076.84	0.00	22.43	26.87	172.51	0.00	0.00	1.18
400°	1,122.29	0.00	23.81	27.87	607.51	0.00	0.00	1.18

SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.71	0.43	-0.02	-0.11	-2.09	-1.10	2.67
75°	-0.51	0.44	-0.03	-0.13	-2.12	-0.99	2.39
100°	-0.33	0.45	-0.02	-0.13	-2.15	-0.88	2.18
125°	-0.17	0.47	0.02	-0.12	-2.16	-0.79	2.05
150°	-0.01	0.51	0.07	-0.10	-2.17	-0.70	1.97
175°	0.13	0.56	0.13	-0.10	-2.17	-0.62	1.93
200°	0.26	0.62	0.13	-0.10	-2.17	-0.54	1.93
225°	0.39	0.69	0.26	-0.12	-2.16	-0.47	1.96
250°	0.51	0.77	0.34	-0.14	-2.15	-0.41	2.01
275°	0.63	0.85	0.41	-0.16	-2.14	-0.37	2.08
300°	0.74	0.94	0.49	-0.17	-2.12	-0.33	2.16
325°	0.85	1.03	0.57	-0.14	-2.10	-0.30	2.26
350°	0.96	1.12	0.65	-0.07	-2.08	-0.29	2.36
375°	1.07	1.21	0.73	0.08	-2.05	-0.30	2.46
400°	1.18	1.30	0.80	0.32	-2.01	-0.31	2.57

Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

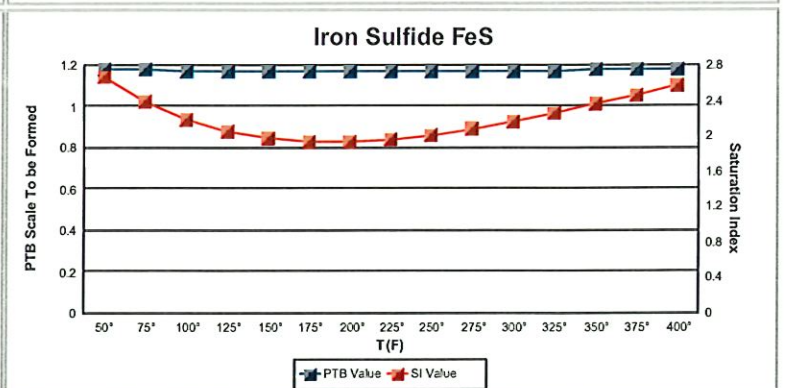
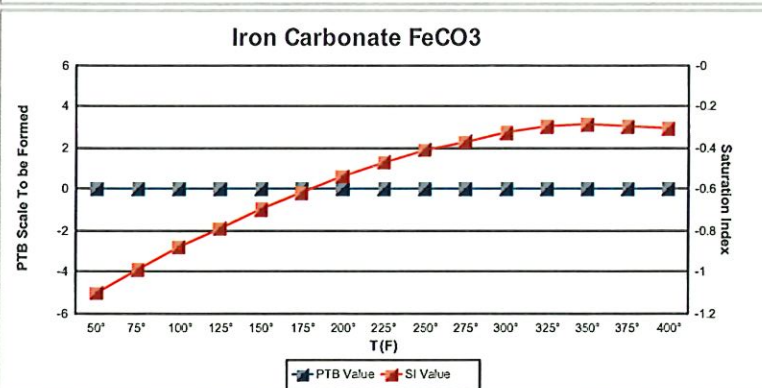
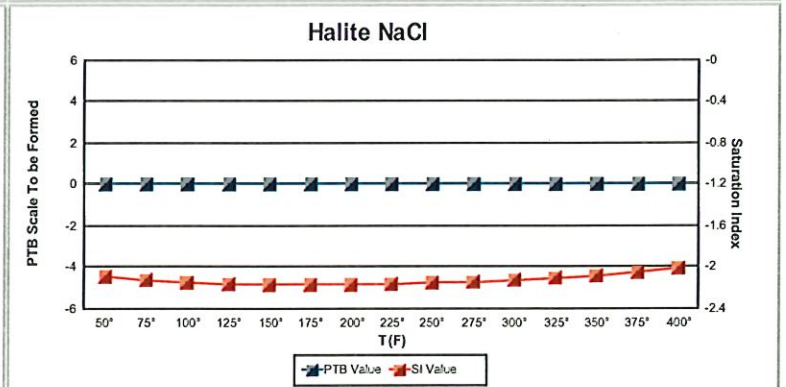
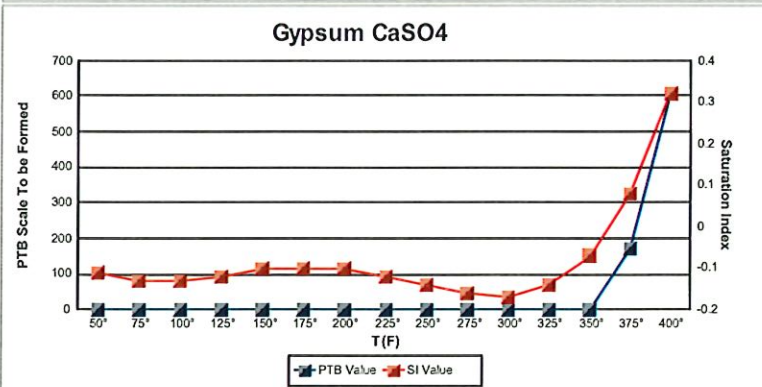
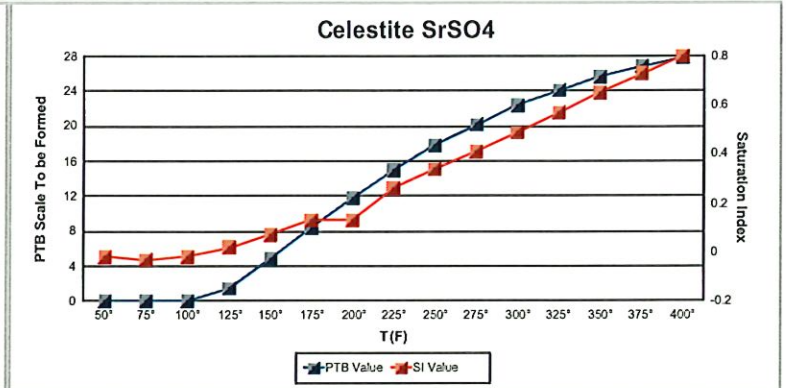
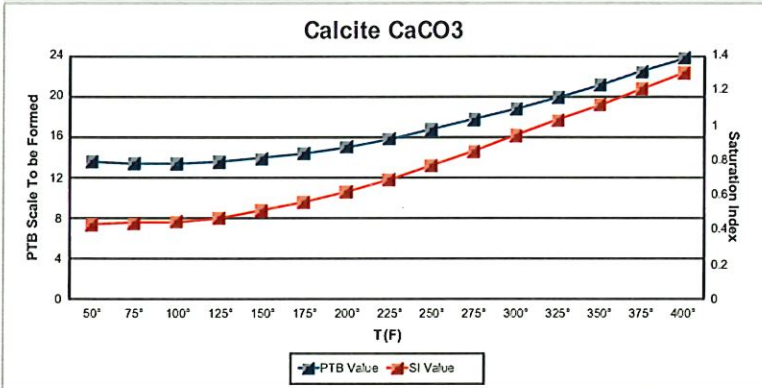
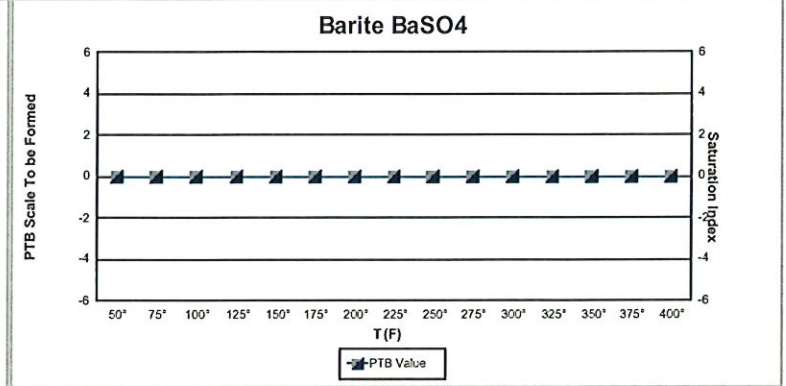
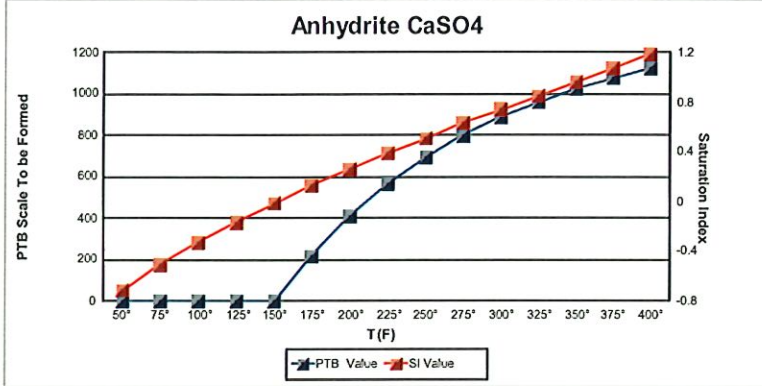
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