

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: **Keenan Stucky 1-34**
 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: **AX37104**
 Location Code: **430667**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-ALK as HCO3)	303 mg/L	Titration
Dissolved CO2	180 mg/L	Titration
Dissolved H2S	92 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	0.840 mol/L	Calculation
Total Dissolved Solids	49200 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.230 %	Calculation

Cations - Analyzed By ICP

Iron	<0.500 mg/L	Boron	14.6 mg/L	Silicon	5.78 mg/L
Manganese	<0.200 mg/L	Lithium	4.42 mg/L	Aluminum	<0.400 mg/L
Barium	<0.100 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	25.8 mg/L	Nickel	<0.200 mg/L	Phosphorus	0.868 mg/L
Calcium	614 mg/L	Zinc	<0.400 mg/L	Measured Sodium	13200 mg/L
Magnesium	<0.200 mg/L	Lead	<0.500 mg/L		
Sodium	13200 mg/L	Cobalt	<0.500 mg/L		
Potassium	182 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*

Chloride	30900 mg/L	Bromide	31.0 mg/L	Sulfate	3880 mg/L
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PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	26.32	0.23	0.00	0.00	0.00	0.00
75°	0.00	0.00	27.53	0.00	0.00	0.00	0.00	0.00
100°	0.00	0.00	29.06	0.12	0.00	0.00	0.00	0.00
125°	0.00	0.00	30.88	1.55	0.00	0.00	0.00	0.00
150°	0.00	0.00	32.90	3.41	0.00	0.00	0.00	0.00
175°	0.00	0.00	35.04	5.42	0.00	0.00	0.00	0.00
200°	137.74	0.00	37.22	7.39	0.00	0.00	0.00	0.00
225°	261.32	0.00	39.41	9.21	0.00	0.00	0.00	0.00
250°	359.31	0.00	41.59	10.83	0.00	0.00	0.00	0.00
275°	437.28	0.00	43.75	12.23	0.00	0.00	0.00	0.00
300°	499.51	0.00	45.91	13.43	0.00	0.00	0.00	0.00
325°	549.28	0.00	48.09	14.43	0.00	0.00	0.00	0.00
350°	589.04	0.00	50.31	15.25	0.00	0.00	0.00	0.00
375°	620.71	0.00	52.59	15.93	2.18	0.00	0.00	0.00
400°	645.73	0.00	54.94	16.47	326.66	0.00	0.00	0.00

SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite
50°	-0.86	0.50	0.01	-0.26	-2.20
75°	-0.66	0.54	-0.01	-0.28	-2.24
100°	-0.48	0.58	0.00	-0.28	-2.26
125°	-0.32	0.64	0.04	-0.26	-2.28
150°	-0.16	0.71	0.09	-0.25	-2.28
175°	-0.02	0.80	0.15	-0.24	-2.29
200°	0.12	0.90	0.15	-0.24	-2.28
225°	0.26	1.01	0.29	-0.25	-2.27
250°	0.38	1.13	0.37	-0.27	-2.26
275°	0.51	1.25	0.45	-0.28	-2.25
300°	0.63	1.37	0.54	-0.27	-2.23
325°	0.75	1.49	0.62	-0.24	-2.21
350°	0.87	1.61	0.71	-0.15	-2.18
375°	0.99	1.72	0.80	0.00	-2.15
400°	1.11	1.82	0.88	0.25	-2.11

Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

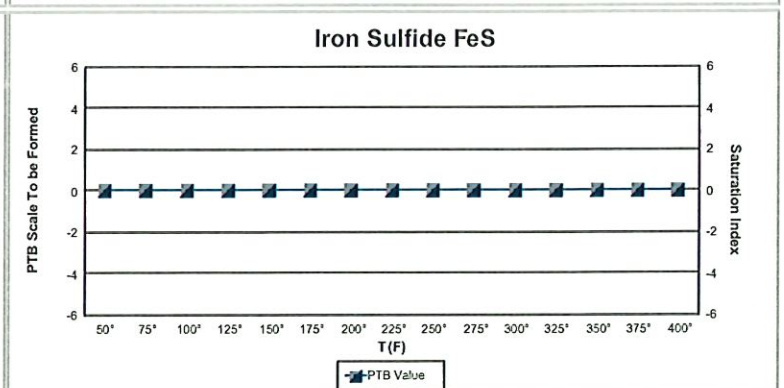
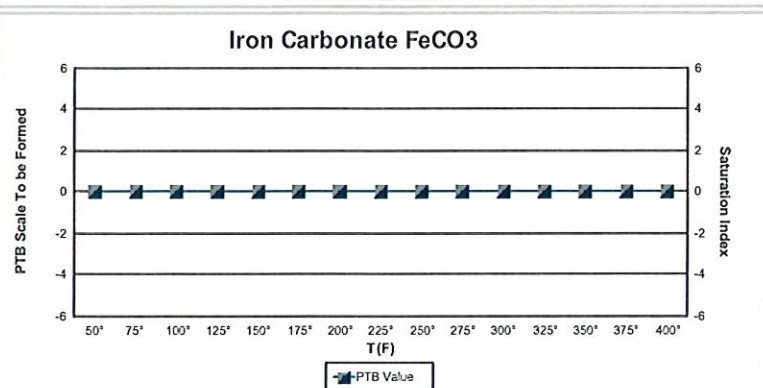
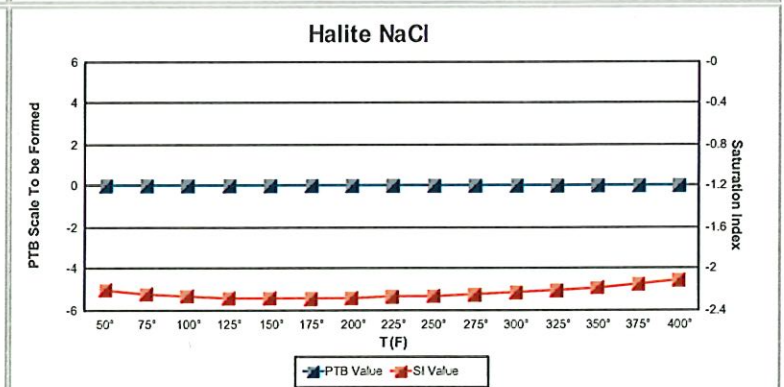
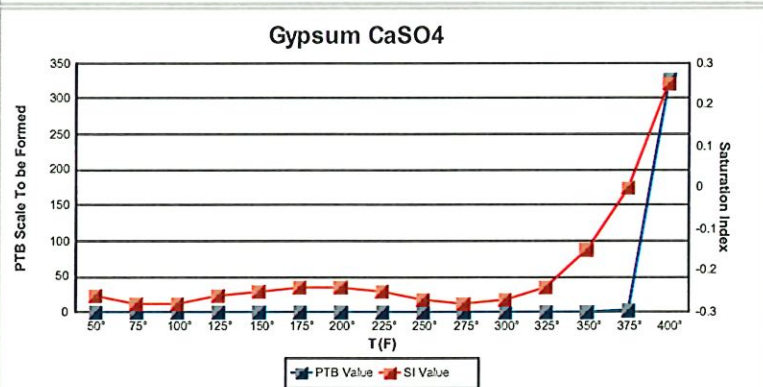
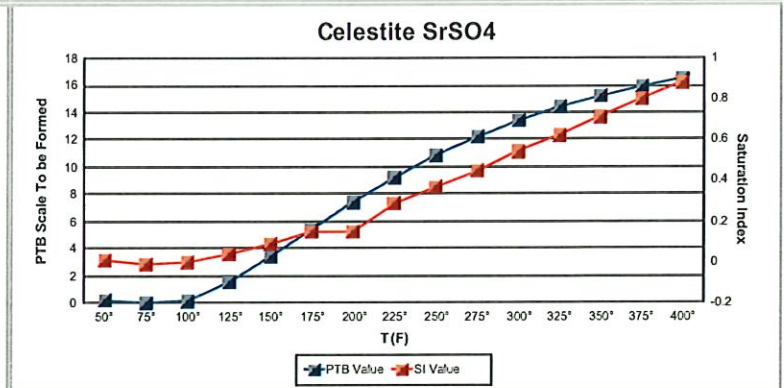
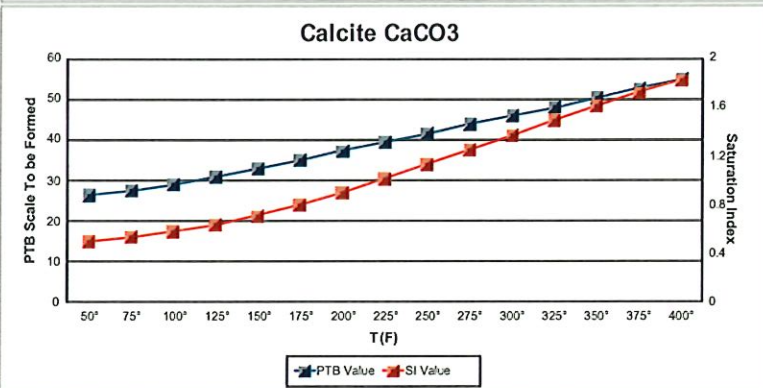
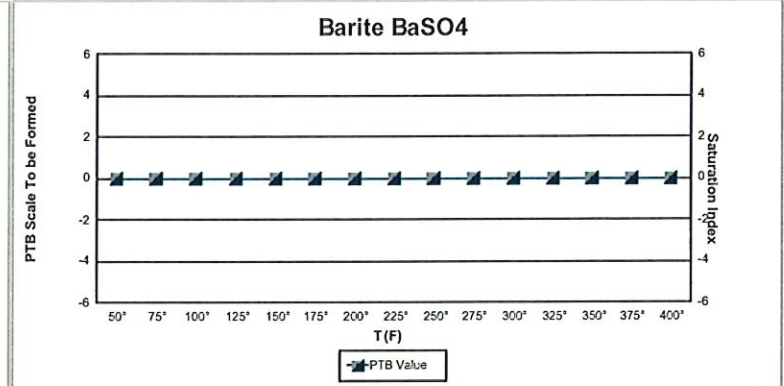
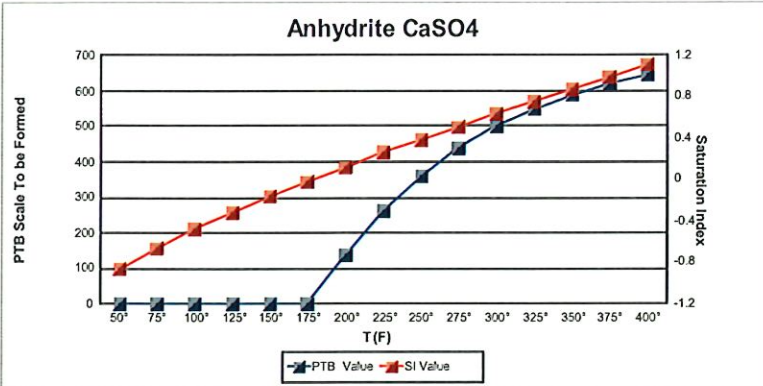
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