

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: Injection

Equipment Description: Janzen 6-36 INJ
 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: AX37115
 Location Code: 514630

Field Analysis			Sample Analysis		
Analysis	Result	Analysis Method	Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	386 mg/L	Titration	Specific Gravity	1.082	Densitometer
Dissolved CO2	330 mg/L	Titration	Ionic Strength	1.87 mol/L	Calculation
Dissolved H2S	85 mg/L	Titration	Total Dissolved Solids	105000 mg/L	Calculation
Pressure Surface	25 psi		Calculated pH	7.50	Calculation
Temperature	100 °F		Calculated CO2 in the gas	0.300 %	Calculation
pH of Water	7.5	Meter			

Cations - Analyzed By ICP					
Iron	3.65 mg/L	Boron	25.9 mg/L	Silicon	7.31 mg/L
Manganese	<0.200 mg/L	Lithium	4.48 mg/L	Aluminum	<0.400 mg/L
Barium	0.170 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	53.8 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1710 mg/L	Zinc	<0.400 mg/L	Measured Sodium	37600 mg/L
Magnesium	623 mg/L	Lead	<0.500 mg/L		
Sodium	37600 mg/L	Cobalt	<0.500 mg/L		
Potassium	316 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*					
Chloride	63000 mg/L	Bromide	43.4 mg/L	Sulfate	864 mg/L

PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.02	60.07	0.00	0.00	0.00	0.00	2.01
75°	0.00	0.00	63.21	0.00	0.00	0.00	0.00	2.01
100°	0.00	0.00	65.88	0.00	0.00	0.00	0.18	2.01
125°	0.00	0.00	68.18	0.00	0.00	0.00	0.87	2.00
150°	0.00	0.00	70.19	0.00	0.00	0.00	1.36	2.00
175°	0.00	0.00	71.98	0.00	0.00	0.00	1.69	2.00
200°	0.00	0.00	73.62	0.00	0.00	0.00	1.92	2.00
225°	0.00	0.00	75.18	0.00	0.00	0.00	2.08	2.01
250°	0.00	0.00	76.70	0.00	0.00	0.00	2.19	2.01
275°	0.00	0.00	78.20	0.00	0.00	0.00	2.27	2.01
300°	65.52	0.00	79.73	0.00	0.00	0.00	2.31	2.01
325°	129.28	0.00	81.30	4.50	0.00	0.00	2.34	2.01
350°	181.41	0.00	82.92	9.57	0.00	0.00	2.34	2.01
375°	224.34	0.00	84.61	13.84	0.00	0.00	2.33	2.01
400°	259.75	0.00	86.36	17.38	0.00	0.00	2.30	2.01

SI								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-1.39	0.10	1.05	-0.65	-0.81	-1.42	-0.29	2.85
75°	-1.16	-0.12	1.11	-0.62	-0.82	-1.44	-0.13	2.61
100°	-0.97	-0.30	1.19	-0.58	-0.80	-1.46	0.03	2.46
125°	-0.79	-0.46	1.27	-0.52	-0.77	-1.47	0.19	2.38
150°	-0.64	-0.58	1.37	-0.46	-0.76	-1.47	0.33	2.34
175°	-0.49	-0.68	1.48	-0.39	-0.75	-1.48	0.46	2.34
200°	-0.36	-0.77	1.59	-0.39	-0.76	-1.48	0.59	2.37
225°	-0.24	-0.83	1.71	-0.24	-0.78	-1.48	0.70	2.42
250°	-0.12	-0.89	1.82	-0.17	-0.81	-1.47	0.79	2.49
275°	-0.02	-0.93	1.94	-0.09	-0.83	-1.47	0.87	2.57
300°	0.09	-0.98	2.05	-0.02	-0.85	-1.46	0.92	2.65
325°	0.18	-1.02	2.15	0.06	-0.84	-1.45	0.95	2.73
350°	0.28	-1.07	2.25	0.13	-0.78	-1.44	0.96	2.81
375°	0.37	-1.12	2.33	0.20	-0.65	-1.42	0.94	2.89
400°	0.46	-1.18	2.41	0.26	-0.43	-1.40	0.90	2.96

Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

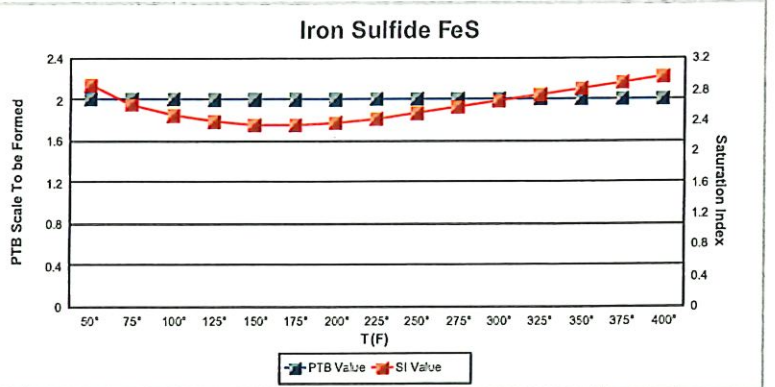
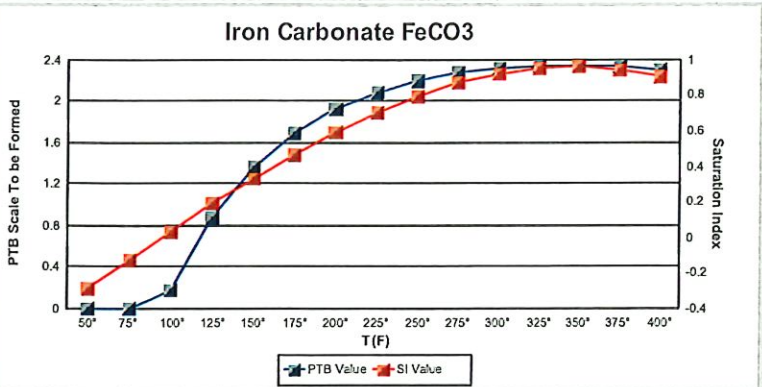
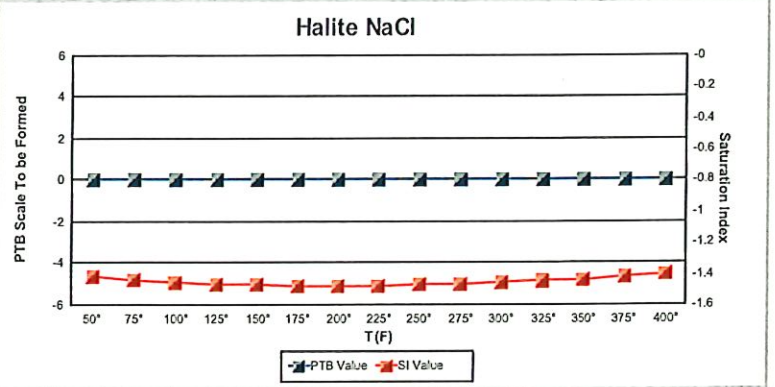
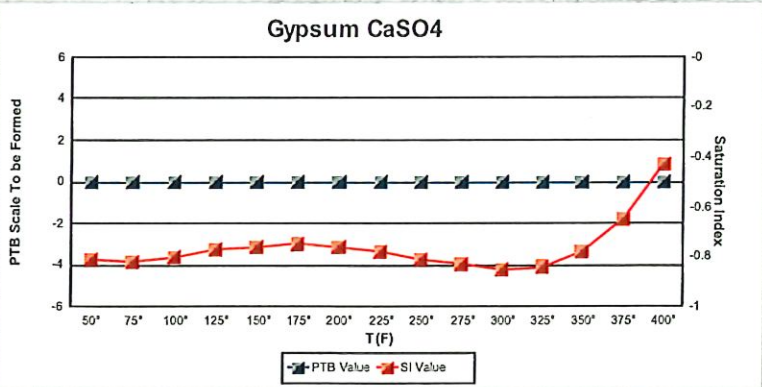
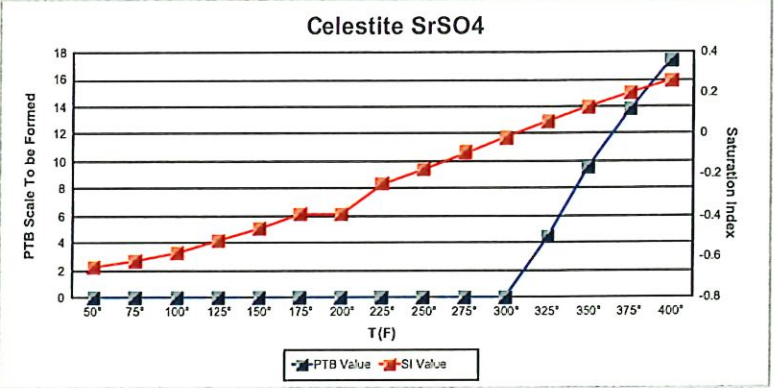
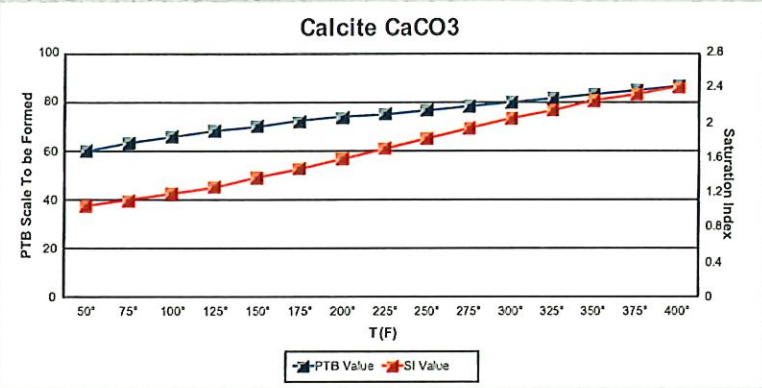
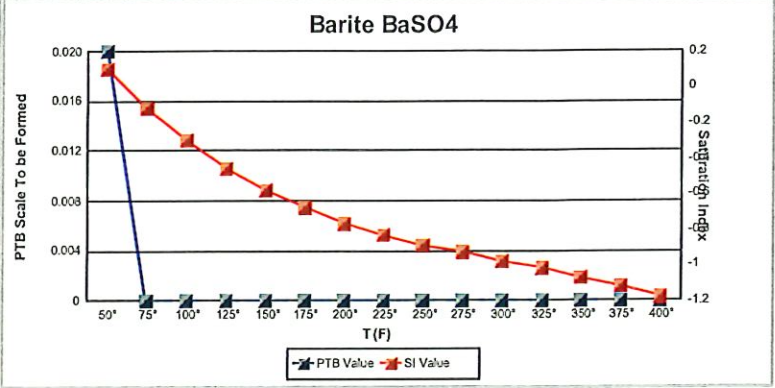
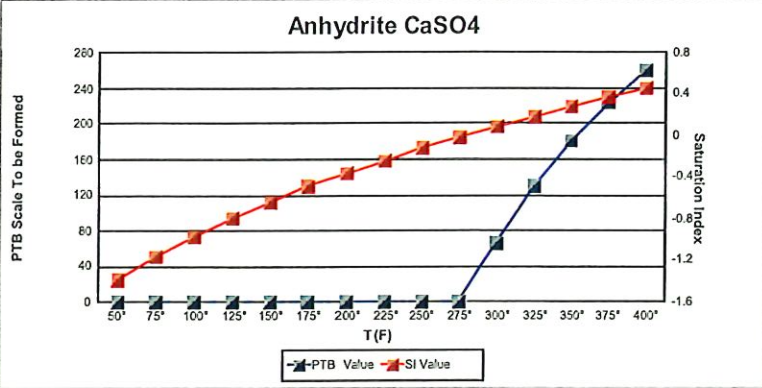
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