

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: **Hineman P1 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: **AX37107**
 Location Code: **430670**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	185 mg/L	Titration
Dissolved CO2	350 mg/L	Titration
Dissolved H2S	73 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 °F	
pH of Water	7.5	Meter

Sample Analysis		
Analysis	Result	Analysis Method
Specific Gravity	1.047	Densitometer
Ionic Strength	0.900 mol/L	Calculation
Total Dissolved Solids	52300 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.100 %	Calculation

Cations - Analyzed By ICP					
Iron	<0.500 mg/L	Boron	19.0 mg/L	Silicon	7.12 mg/L
Manganese	<0.200 mg/L	Lithium	4.94 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	<0.500 mg/L
Calcium	625 mg/L	Zinc	<0.400 mg/L	Measured Sodium	13600 mg/L
Magnesium	301 mg/L	Lead	<0.500 mg/L		
Sodium	13600 mg/L	Cobalt	<0.500 mg/L		
Potassium	199 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*					
Chloride	34200 mg/L	Bromide	36.7 mg/L	Sulfate	3130 mg/L

PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	6.33	0.00	0.00	0.00	0.00	0.00
75°	0.00	0.00	6.66	0.00	0.00	0.00	0.00	0.00
100°	0.00	0.00	7.24	0.00	0.00	0.00	0.00	0.00
125°	0.00	0.00	8.09	0.00	0.00	0.00	0.00	0.00
150°	0.00	0.00	9.16	0.00	0.00	0.00	0.00	0.00
175°	0.00	0.00	10.39	1.43	0.00	0.00	0.00	0.00
200°	24.21	0.00	11.71	3.94	0.00	0.00	0.00	0.00
225°	160.35	0.00	13.09	6.25	0.00	0.00	0.00	0.00
250°	270.47	0.00	14.47	8.31	0.00	0.00	0.00	0.00
275°	360.08	0.00	15.86	10.10	0.00	0.00	0.00	0.00
300°	433.42	0.00	17.26	11.62	0.00	0.00	0.00	0.00
325°	493.69	0.00	18.67	12.90	0.00	0.00	0.00	0.00
350°	543.26	0.00	20.11	13.96	0.00	0.00	0.00	0.00
375°	583.93	0.00	21.59	14.83	0.00	0.00	0.00	0.00
400°	617.06	0.00	23.14	15.53	171.80	0.00	0.00	0.00

SI					
	Anhydrite	Calcite	Celestite	Gypsum	Halite
50°	-0.97	0.19	-0.11	-0.36	-2.14
75°	-0.77	0.20	-0.12	-0.39	-2.18
100°	-0.58	0.23	-0.11	-0.38	-2.20
125°	-0.42	0.27	-0.07	-0.37	-2.22
150°	-0.26	0.32	-0.03	-0.35	-2.22
175°	-0.12	0.38	0.03	-0.34	-2.23
200°	0.02	0.46	0.03	-0.34	-2.22
225°	0.15	0.54	0.18	-0.35	-2.22
250°	0.28	0.63	0.25	-0.37	-2.21
275°	0.40	0.73	0.33	-0.38	-2.19
300°	0.52	0.83	0.41	-0.38	-2.17
325°	0.64	0.93	0.50	-0.35	-2.15
350°	0.76	1.02	0.58	-0.27	-2.13
375°	0.87	1.11	0.67	-0.12	-2.10
400°	0.99	1.20	0.75	0.13	-2.06

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.

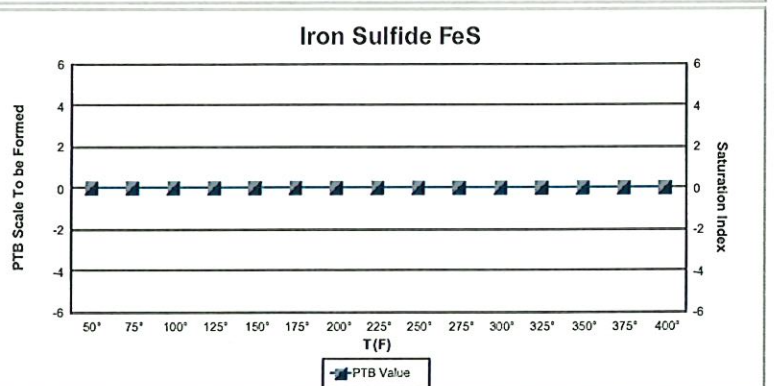
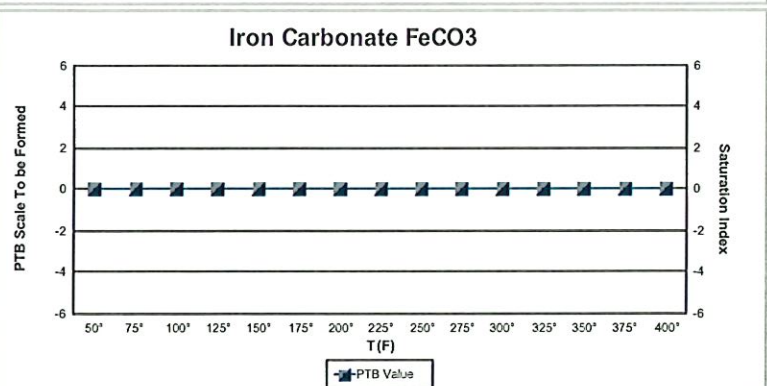
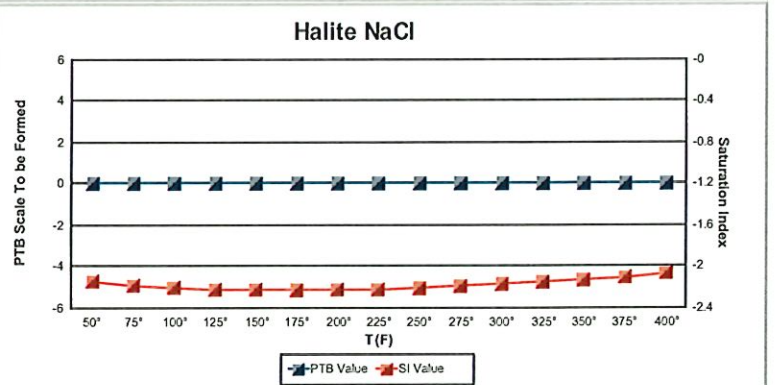
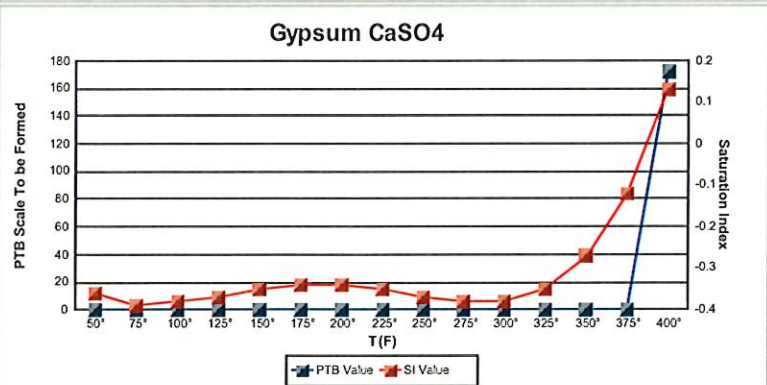
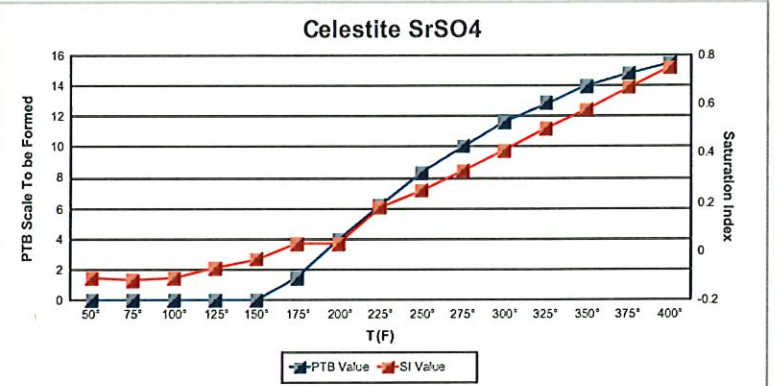
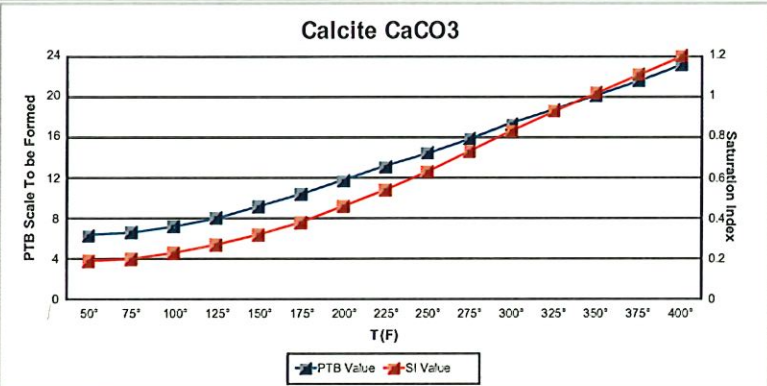
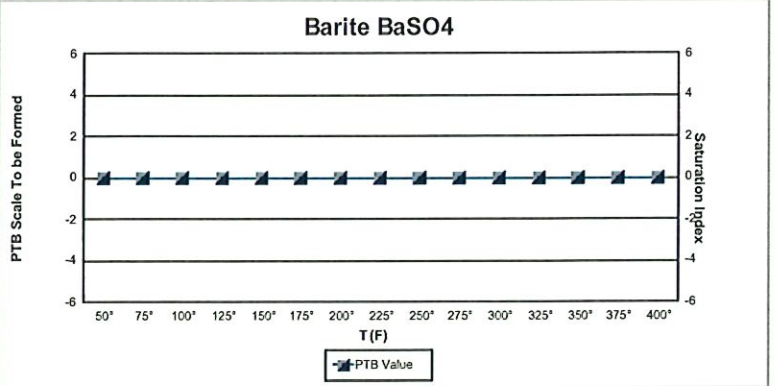
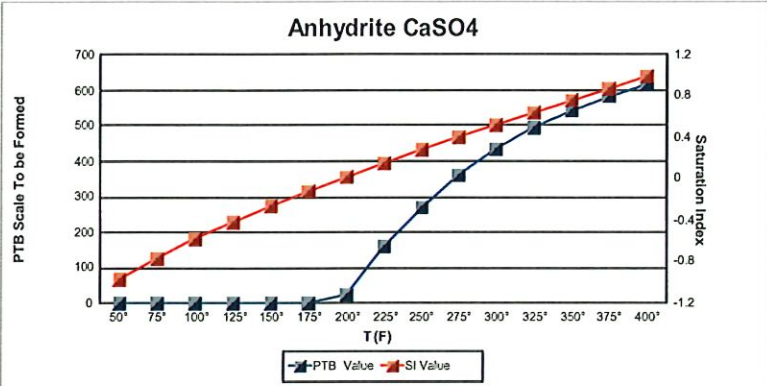
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