

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: **Voshell 2 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: **AX37099**
 Location Code: **430660**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	171 mg/L	Titration
Dissolved CO2	220 mg/L	Titration
Dissolved H2S	71 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.048	Densitometer
Ionic Strength	1.01 mol/L	Calculation
Total Dissolved Solids	55800 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.0800 %	Calculation

Cations - Analyzed By ICP

Iron	<0.500 mg/L	Boron	19.9 mg/L	Silicon	7.68 mg/L
Manganese	<0.200 mg/L	Lithium	4.44 mg/L	Aluminum	<0.400 mg/L
Barium	0.143 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	31.0 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	947 mg/L	Zinc	<0.400 mg/L	Measured Sodium	18600 mg/L
Magnesium	364 mg/L	Lead	<0.500 mg/L		
Sodium	18600 mg/L	Cobalt	<0.500 mg/L		
Potassium	246 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*

Chloride	31300 mg/L	Bromide	30.6 mg/L	Sulfate	4100 mg/L
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PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.08	5.12	0.00	0.00	0.00	0.00	0.00
75°	0.00	0.07	5.34	0.00	0.00	0.00	0.00	0.00
100°	0.00	0.06	5.72	0.00	0.00	0.00	0.00	0.00
125°	0.00	0.05	6.32	1.76	0.00	0.00	0.00	0.00
150°	0.00	0.03	7.11	4.18	0.00	0.00	0.00	0.00
175°	106.39	0.02	8.06	6.67	0.00	0.00	0.00	0.00
200°	297.85	0.00	9.10	9.05	0.00	0.00	0.00	0.00
225°	450.93	0.00	10.20	11.20	0.00	0.00	0.00	0.00
250°	574.71	0.00	11.34	13.10	0.00	0.00	0.00	0.00
275°	675.57	0.00	12.50	14.72	0.00	0.00	0.00	0.00
300°	758.42	0.00	13.67	16.10	0.00	0.00	0.00	0.00
325°	826.89	0.00	14.87	17.25	0.00	0.00	0.00	0.00
350°	883.67	0.00	16.11	18.21	0.00	0.00	0.00	0.00
375°	930.76	0.00	17.39	18.99	64.41	0.00	0.00	0.00
400°	969.63	0.00	18.74	19.62	487.14	0.00	0.00	0.00

SI

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite
50°	-0.79	0.96	0.17	-0.02	-0.19	-2.05
75°	-0.58	0.71	0.18	-0.03	-0.21	-2.09
100°	-0.40	0.50	0.20	-0.01	-0.20	-2.11
125°	-0.23	0.33	0.23	0.04	-0.18	-2.13
150°	-0.08	0.20	0.27	0.09	-0.17	-2.13
175°	0.07	0.10	0.32	0.15	-0.16	-2.14
200°	0.20	0.02	0.39	0.15	-0.16	-2.13
225°	0.33	-0.04	0.46	0.30	-0.18	-2.13
250°	0.45	-0.09	0.54	0.37	-0.20	-2.12
275°	0.57	-0.13	0.62	0.45	-0.22	-2.10
300°	0.69	-0.16	0.71	0.54	-0.22	-2.09
325°	0.80	-0.19	0.80	0.62	-0.19	-2.07
350°	0.91	-0.22	0.88	0.70	-0.12	-2.04
375°	1.02	-0.25	0.97	0.78	0.03	-2.01
400°	1.13	-0.29	1.04	0.86	0.27	-1.98

Comments

Scaling predictions calculated using Scale Soft Pitzer 2019

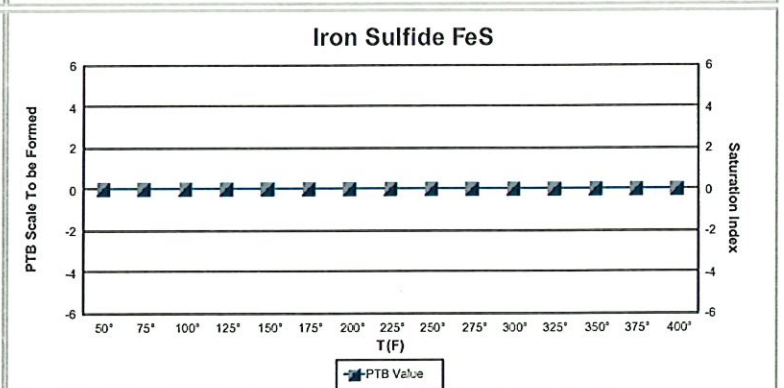
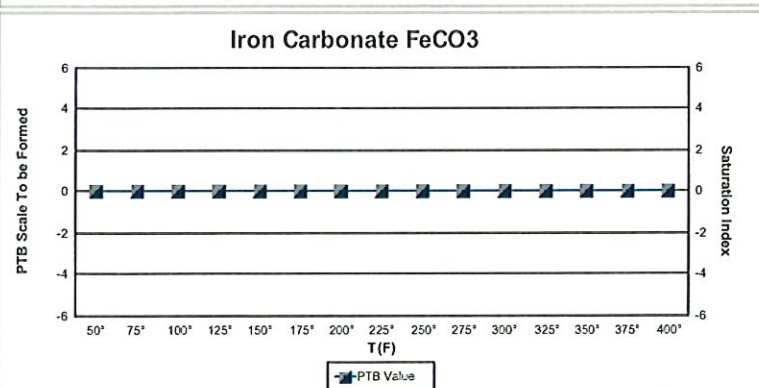
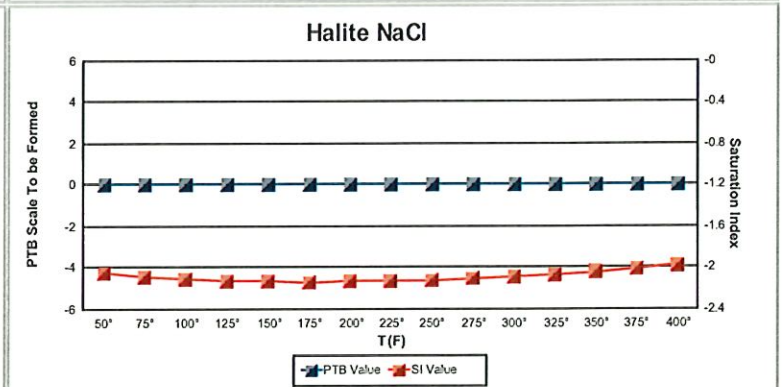
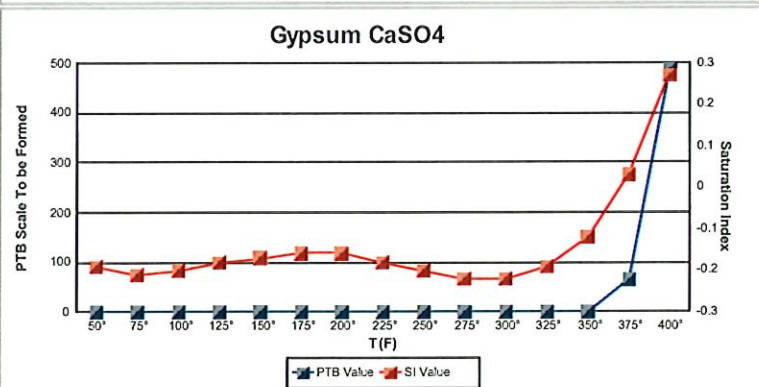
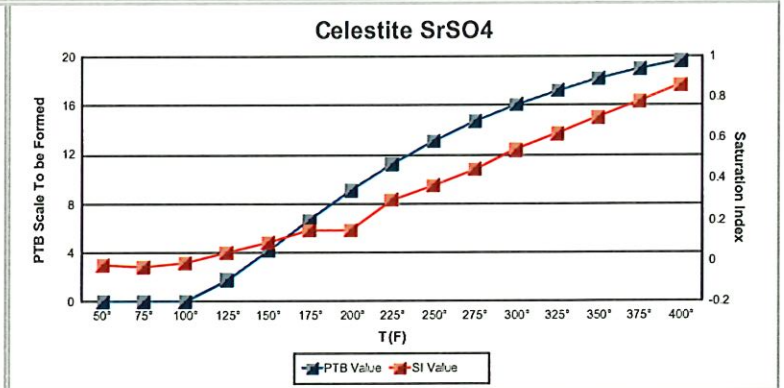
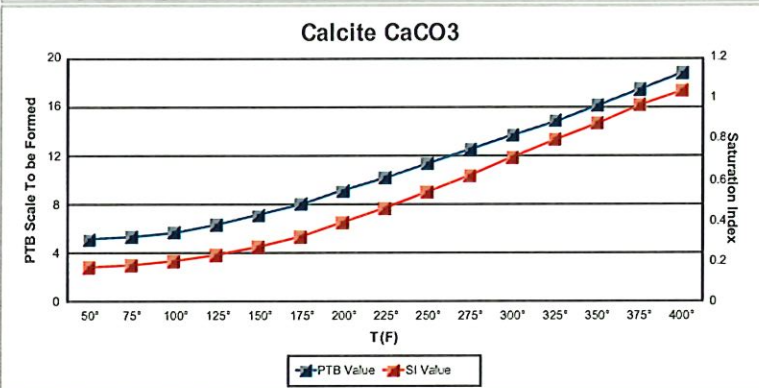
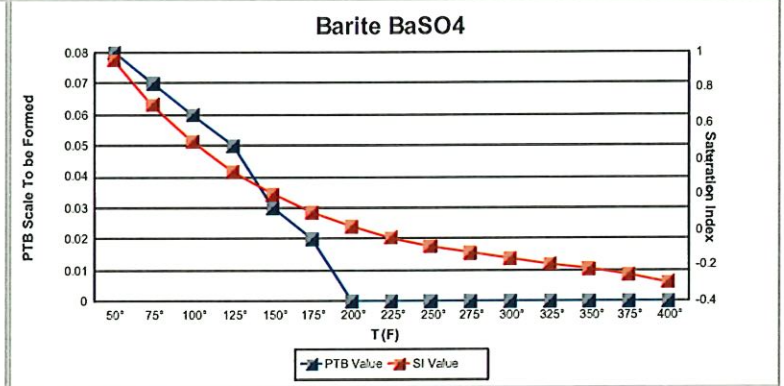
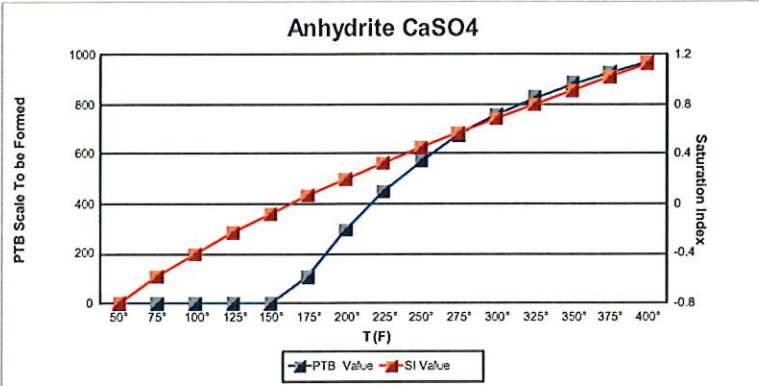
Scaling predictions dependent on provided field data. Incomplete/partial field data may impact results generated by scaling software.

Complete Water Analysis

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 Geographic Region: Kansas
 Geographic Location: Lane County
 System Description: Production System

Equipment Description: Voshell 2 SWD
 Sample Point: Bleeder
 Customer ID:
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Collect Date: 02/20/2024
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