

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: **Disposal**

Equipment Description: **Eaton A2 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: **AX37111**
 Location Code: **514627**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	224 mg/L	Titration
Dissolved CO2	320 mg/L	Titration
Dissolved H2S	75 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis		
Analysis	Result	Analysis Method
Specific Gravity	1.075	Densitometer
Ionic Strength	1.72 mol/L	Calculation
Total Dissolved Solids	98000 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.130 %	Calculation

Cations - Analyzed By ICP					
Iron	1.27 mg/L	Boron	28.8 mg/L	Silicon	8.04 mg/L
Manganese	0.289 mg/L	Lithium	5.01 mg/L	Aluminum	<0.400 mg/L
Barium	0.237 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	71.0 mg/L	Nickel	<0.200 mg/L	Phosphorus	<0.500 mg/L
Calcium	1050 mg/L	Zinc	<0.400 mg/L	Measured Sodium	34200 mg/L
Magnesium	449 mg/L	Lead	<0.500 mg/L		
Sodium	34200 mg/L	Cobalt	<0.500 mg/L		
Potassium	437 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*			
Chloride	58900 mg/L	Bromide	59.2 mg/L
		Sulfate	2580 mg/L

PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.12	18.83	0.00	0.00	0.00	0.00	0.70
75°	0.00	0.10	19.67	0.00	0.00	0.00	0.00	0.70
100°	0.00	0.08	20.55	4.29	0.00	0.00	0.00	0.69
125°	0.00	0.05	21.51	9.77	0.00	0.00	0.00	0.69
150°	0.00	0.02	22.54	15.42	0.00	0.00	0.00	0.69
175°	0.00	0.00	23.62	20.78	0.00	0.00	0.00	0.69
200°	0.00	0.00	24.73	25.60	0.00	0.00	0.00	0.69
225°	78.87	0.00	25.85	29.80	0.00	0.00	0.00	0.69
250°	227.92	0.00	26.97	33.38	0.00	0.00	0.00	0.69
275°	351.54	0.00	28.10	36.39	0.00	0.00	0.00	0.69
300°	455.68	0.00	29.24	38.90	0.00	0.00	0.00	0.69
325°	544.74	0.00	30.41	41.00	0.00	0.00	0.00	0.69
350°	621.94	0.00	31.61	42.75	0.00	0.00	0.00	0.70
375°	689.55	0.00	32.87	44.20	0.00	0.00	0.00	0.70
400°	749.07	0.00	34.19	45.38	0.00	0.00	0.00	0.70

SI								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-1.09	0.76	0.51	-0.02	-0.51	-1.50	-1.08	2.40
75°	-0.87	0.53	0.54	0.00	-0.52	-1.52	-0.94	2.13
100°	-0.68	0.35	0.59	0.04	-0.50	-1.54	-0.81	1.94
125°	-0.50	0.19	0.64	0.09	-0.48	-1.55	-0.69	1.82
150°	-0.35	0.06	0.71	0.16	-0.46	-1.56	-0.57	1.76
175°	-0.20	-0.04	0.78	0.23	-0.45	-1.56	-0.46	1.74
200°	-0.07	-0.12	0.87	0.23	-0.46	-1.56	-0.37	1.75
225°	0.06	-0.18	0.96	0.38	-0.48	-1.56	-0.28	1.78
250°	0.17	-0.23	1.05	0.45	-0.50	-1.56	-0.21	1.83
275°	0.28	-0.28	1.15	0.53	-0.53	-1.55	-0.15	1.90
300°	0.39	-0.32	1.24	0.60	-0.54	-1.54	-0.12	1.97
325°	0.49	-0.36	1.32	0.68	-0.53	-1.53	-0.10	2.04
350°	0.59	-0.40	1.40	0.75	-0.46	-1.51	-0.11	2.12
375°	0.68	-0.45	1.47	0.83	-0.33	-1.49	-0.14	2.19
400°	0.78	-0.50	1.52	0.90	-0.11	-1.47	-0.20	2.26

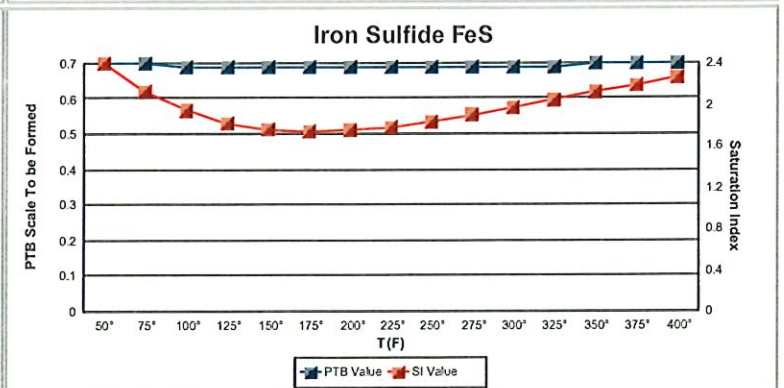
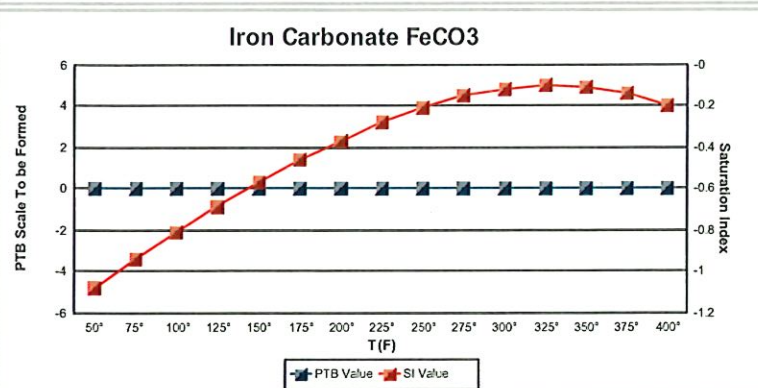
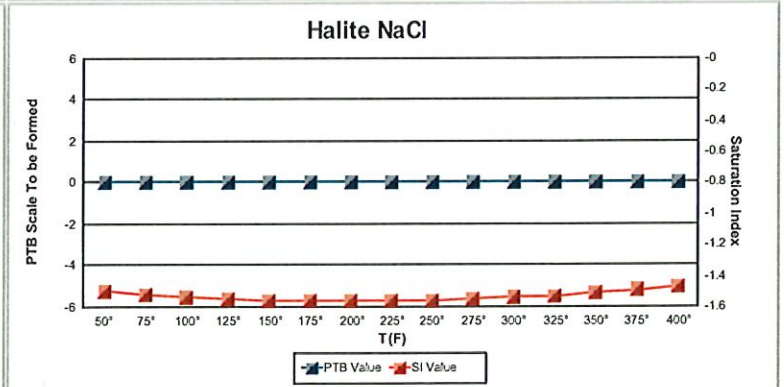
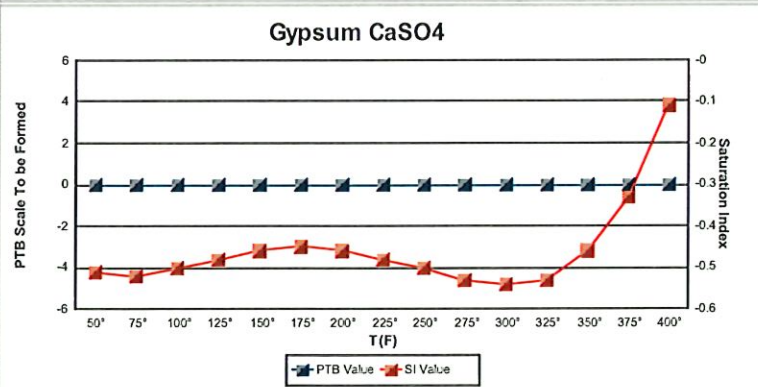
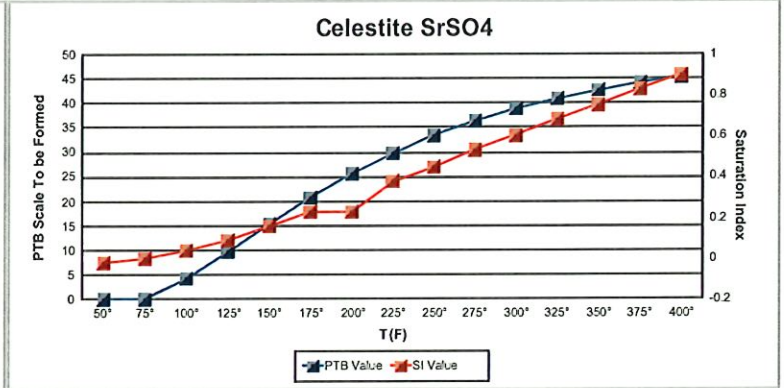
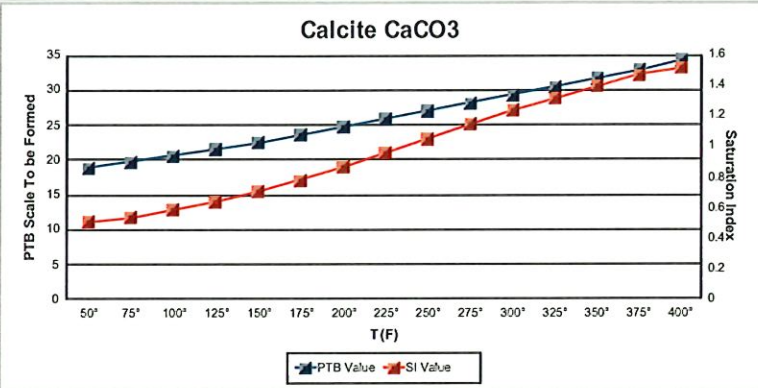
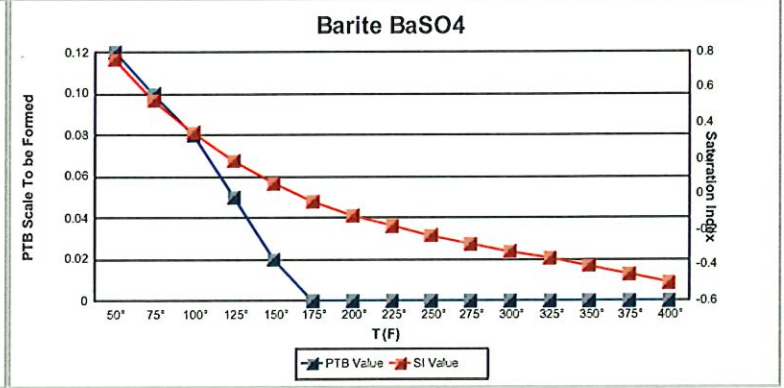
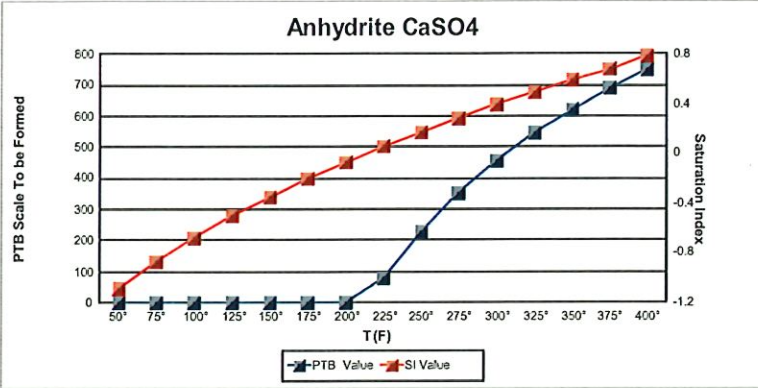
Comments

Complete Water Analysis

Customer: SHAKESPEARE OIL COMPANY
 Formation Zone:
 Geographic Region: Kansas
 Geographic Location: Lane County
 System Description: Disposal

Equipment Description: Eaton A2 SWD
 Sample Point: Bleeder
 Customer ID:
 Latitude/Longitude: 0.00, 0.00
 Account Rep: Michael.walters@championx.com

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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.