

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 1 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: **AX37103**
 Location Code: **430666**

Field Analysis		
Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	288 mg/L	Titration
Dissolved CO2	370 mg/L	Titration
Dissolved H2S	68 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	0.870 mol/L	Calculation
Total Dissolved Solids	50200 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO2 in the gas	0.260 %	Calculation

Cations - Analyzed By ICP					
Iron	0.540 mg/L	Boron	19.3 mg/L	Silicon	6.24 mg/L
Manganese	<0.200 mg/L	Lithium	4.42 mg/L	Aluminum	<0.400 mg/L
Barium	0.144 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	26.7 mg/L	Nickel	<0.200 mg/L	Phosphorus	5.36 mg/L
Calcium	604 mg/L	Zinc	<0.400 mg/L	Measured Sodium	13100 mg/L
Magnesium	269 mg/L	Lead	<0.500 mg/L		
Sodium	13100 mg/L	Cobalt	<0.500 mg/L		
Potassium	192 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*			
Chloride	31700 mg/L	Bromide	32.1 mg/L
		Sulfate	4000 mg/L

PTB								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.08	25.34	0.81	0.00	0.00	0.00	0.29
75°	0.00	0.07	27.64	0.05	0.00	0.00	0.00	0.29
100°	0.00	0.06	30.21	0.60	0.00	0.00	0.00	0.29
125°	0.00	0.05	32.95	1.99	0.00	0.00	0.00	0.29
150°	0.00	0.04	35.75	3.82	0.00	0.00	0.00	0.29
175°	0.00	0.03	38.51	5.81	0.00	0.00	0.00	0.29
200°	121.11	0.02	41.18	7.76	0.00	0.00	0.00	0.29
225°	244.67	0.01	43.72	9.58	0.00	0.00	0.00	0.29
250°	342.52	0.00	46.12	11.19	0.00	0.00	0.00	0.29
275°	420.29	0.00	48.39	12.60	0.00	0.00	0.05	0.29
300°	482.38	0.00	50.56	13.80	0.00	0.00	0.10	0.29
325°	532.07	0.00	52.64	14.81	0.00	0.00	0.14	0.30
350°	571.88	0.00	54.68	15.65	0.00	0.00	0.16	0.30
375°	603.70	0.00	56.71	16.34	0.00	0.00	0.17	0.30
400°	628.98	0.00	58.73	16.89	277.04	0.00	0.17	0.30

SI								
	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.87	1.07	0.53	0.02	-0.27	-2.20	-1.17	1.98
75°	-0.67	0.81	0.58	0.00	-0.29	-2.23	-1.02	1.75
100°	-0.49	0.60	0.64	0.01	-0.29	-2.26	-0.86	1.61
125°	-0.33	0.42	0.72	0.05	-0.27	-2.27	-0.71	1.53
150°	-0.17	0.29	0.81	0.09	-0.26	-2.28	-0.56	1.51
175°	-0.03	0.18	0.92	0.15	-0.25	-2.28	-0.42	1.53
200°	0.11	0.10	1.04	0.15	-0.26	-2.28	-0.28	1.58
225°	0.24	0.04	1.16	0.29	-0.27	-2.27	-0.16	1.65
250°	0.36	0.00	1.29	0.37	-0.29	-2.26	-0.04	1.74
275°	0.48	-0.04	1.42	0.45	-0.30	-2.24	0.06	1.84
300°	0.60	-0.07	1.55	0.53	-0.30	-2.23	0.14	1.95
325°	0.72	-0.10	1.67	0.61	-0.27	-2.20	0.20	2.06
350°	0.84	-0.12	1.78	0.70	-0.19	-2.18	0.23	2.18
375°	0.95	-0.15	1.89	0.78	-0.04	-2.15	0.25	2.29
400°	1.07	-0.18	1.98	0.86	0.21	-2.11	0.25	2.40

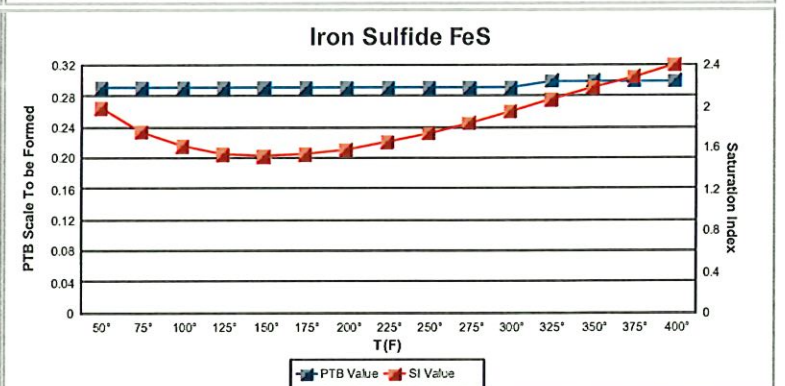
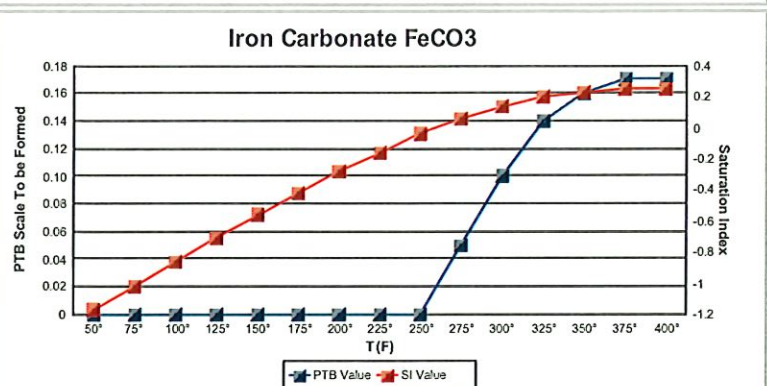
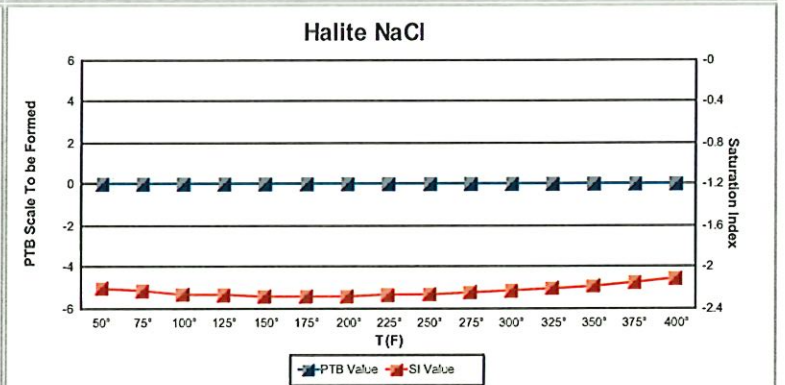
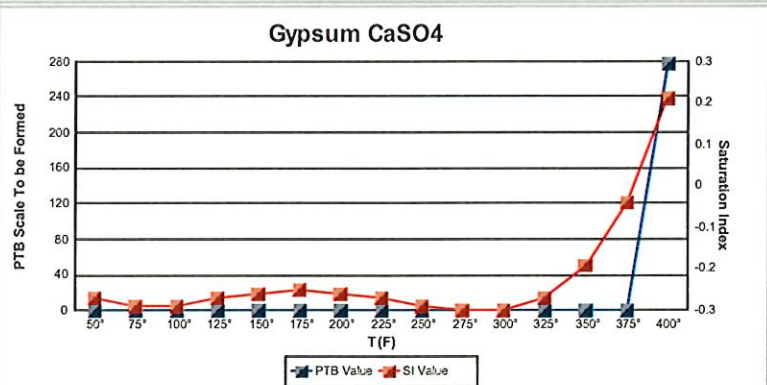
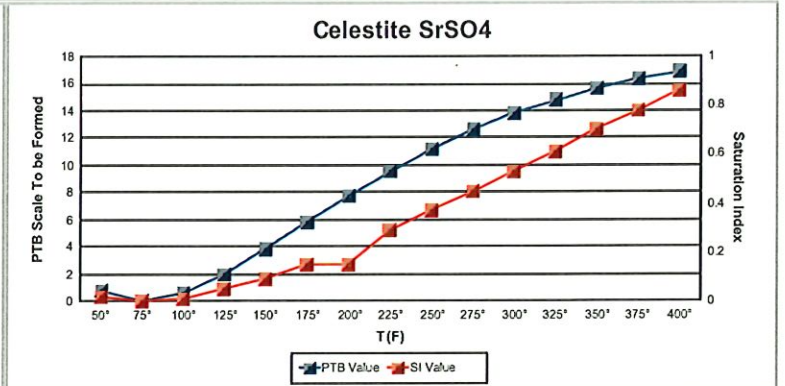
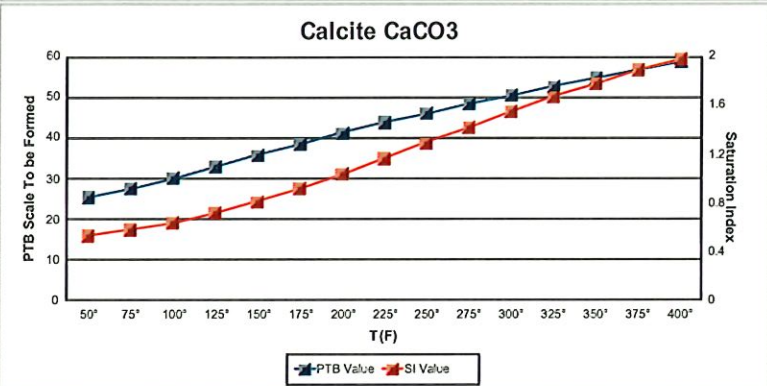
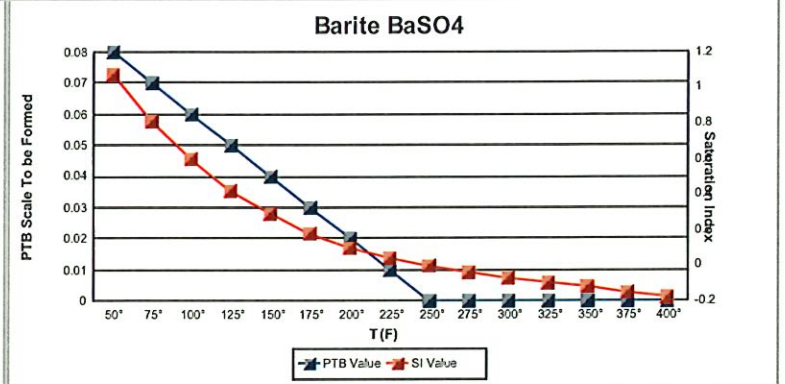
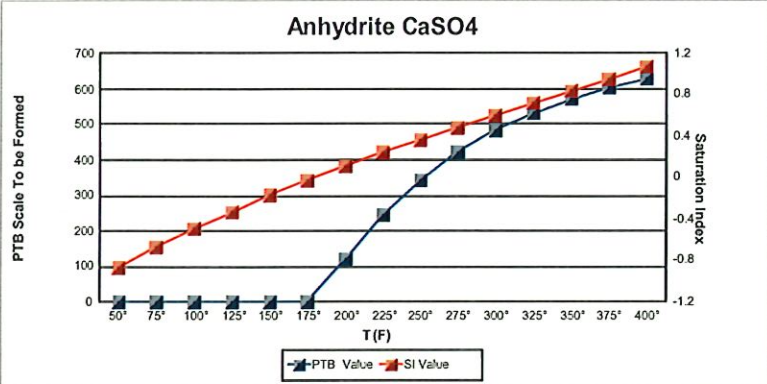
Comments

Complete Water Analysis

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

Equipment Description: Keenan 1 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: AX37103
 Location Code: 430666



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.