

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	_____	_____	_____	_____	_____

Submitted Electronically

Complete Water Analysis

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

Equipment Description: **Mcliesh 3-19**
 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: **AX37096**
 Location Code: **430650**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO ₃)	98 mg/L	Titration
Dissolved CO ₂	220 mg/L	Titration
Dissolved H ₂ S	46 mg/L	Titration
Pressure Surface	25 psi	
Temperature	100 ° F	
pH of Water	7.5	Meter

Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	1.042	Densitometer
Ionic Strength	0.910 mol/L	Calculation
Total Dissolved Solids	50300 mg/L	Calculation
Calculated pH	7.50	Calculation
Calculated CO ₂ in the gas	0.0400 %	Calculation

Cations - Analyzed By ICP

Iron	13.8 mg/L	Boron	17.1 mg/L	Silicon	11.8 mg/L
Manganese	1.60 mg/L	Lithium	7.92 mg/L	Aluminum	<0.400 mg/L
Barium	3.42 mg/L	Copper	<0.200 mg/L	Molybdenum	<0.200 mg/L
Strontium	162 mg/L	Nickel	<0.200 mg/L	Phosphorus	4.17 mg/L
Calcium	1380 mg/L	Zinc	<0.400 mg/L	Measured Sodium	14900 mg/L
Magnesium	542 mg/L	Lead	<0.500 mg/L		
Sodium	14900 mg/L	Cobalt	<0.500 mg/L		
Potassium	253 mg/L	Chromium	<0.100 mg/L		

Anions - Analyzed by IC*

Chloride	32800 mg/L	Bromide	57.7 mg/L	Sulfate	45.1 mg/L
----------	------------	---------	-----------	---------	-----------

PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	1.30	0.46	0.00	0.00	0.00	0.00	7.60
75°	0.00	0.73	0.51	0.00	0.00	0.00	0.00	7.59
100°	0.00	0.00	0.69	0.00	0.00	0.00	0.00	7.57
125°	0.00	0.00	1.01	0.00	0.00	0.00	0.00	7.56
150°	0.00	0.00	1.45	0.00	0.00	0.00	0.00	7.54
175°	0.00	0.00	1.99	0.00	0.00	0.00	0.00	7.54
200°	0.00	0.00	2.58	0.00	0.00	0.00	0.00	7.54
225°	0.00	0.00	3.22	0.00	0.00	0.00	0.00	7.55
250°	0.00	0.00	3.87	0.00	0.00	0.00	0.00	7.55
275°	0.00	0.00	4.53	0.00	0.00	0.00	0.03	7.56
300°	0.00	0.00	5.21	0.00	0.00	0.00	0.20	7.57
325°	0.00	0.00	5.89	0.00	0.00	0.00	0.24	7.58
350°	0.00	0.00	6.60	0.00	0.00	0.00	0.17	7.59
375°	0.00	0.00	7.33	0.00	0.00	0.00	0.00	7.59
400°	0.00	0.00	8.10	0.00	0.00	0.00	0.00	7.60

SI

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-2.52	0.45	0.03	-1.20	-1.92	-2.11	-0.64	3.23
75°	-2.32	0.20	0.03	-1.21	-1.94	-2.15	-0.54	2.95
100°	-2.13	-0.01	0.04	-1.19	-1.93	-2.17	-0.44	2.74
125°	-1.96	-0.18	0.06	-1.15	-1.91	-2.19	-0.35	2.60
150°	-1.80	-0.31	0.10	-1.10	-1.89	-2.19	-0.26	2.51
175°	-1.65	-0.41	0.14	-1.04	-1.88	-2.20	-0.19	2.47
200°	-1.52	-0.49	0.20	-1.04	-1.88	-2.19	-0.13	2.46
225°	-1.38	-0.56	0.26	-0.89	-1.89	-2.19	-0.07	2.48
250°	-1.26	-0.61	0.32	-0.82	-1.91	-2.18	-0.03	2.52
275°	-1.13	-0.65	0.40	-0.74	-1.92	-2.16	0.00	2.58
300°	-1.01	-0.68	0.47	-0.66	-1.92	-2.14	0.02	2.65
325°	-0.90	-0.71	0.55	-0.57	-1.89	-2.12	0.03	2.73
350°	-0.78	-0.74	0.62	-0.49	-1.81	-2.10	0.02	2.82
375°	-0.67	-0.77	0.70	-0.41	-1.66	-2.07	0.00	2.91
400°	-0.55	-0.81	0.78	-0.33	-1.41	-2.03	-0.04	3.01

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.

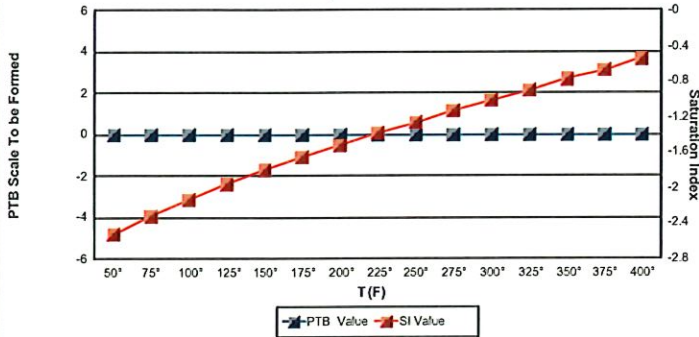
Complete Water Analysis

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

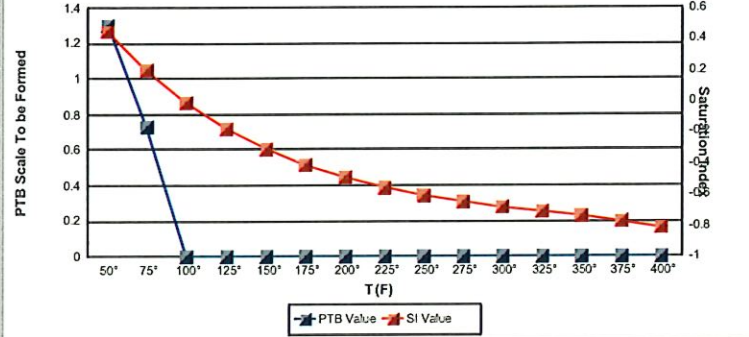
Equipment Description: McIlesh 3-19
Sample Point: Bleeder
Customer ID:
Latitude/Longitude: 0.00, 0.00
Account Rep: Michael.walters@championx.com

Collect Date: 02/20/2024
Submit Date: 02/20/2024
Report Date: 02/22/2024
Sample ID: AX37096
Location Code: 430650

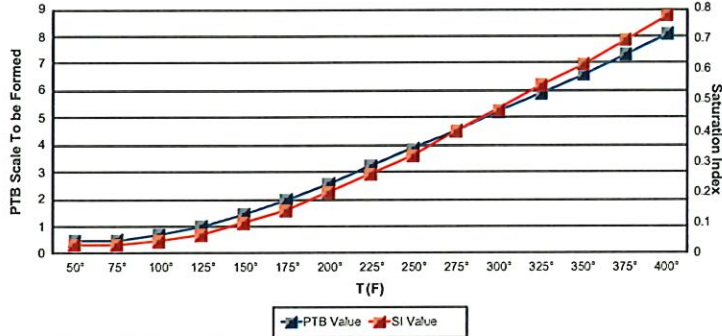
Anhydrite CaSO₄



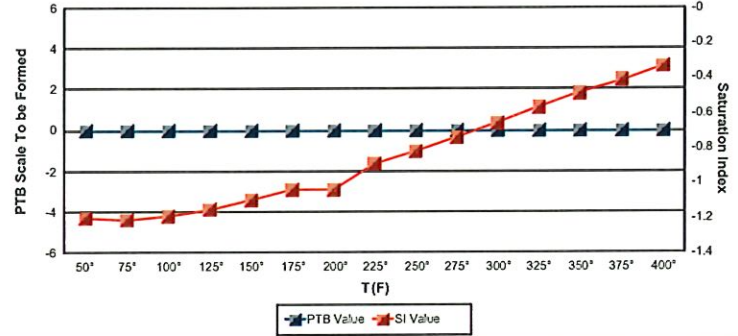
Barite BaSO₄



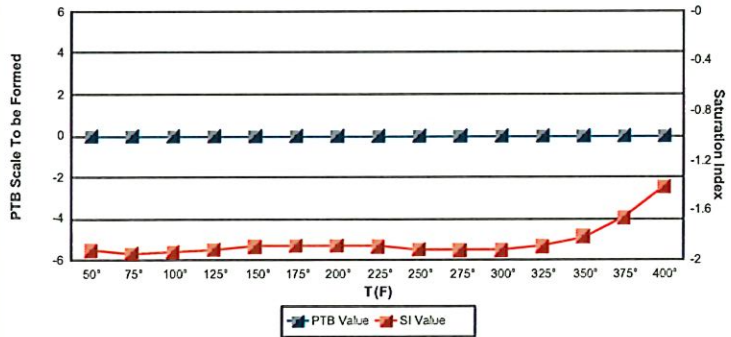
Calcite CaCO₃



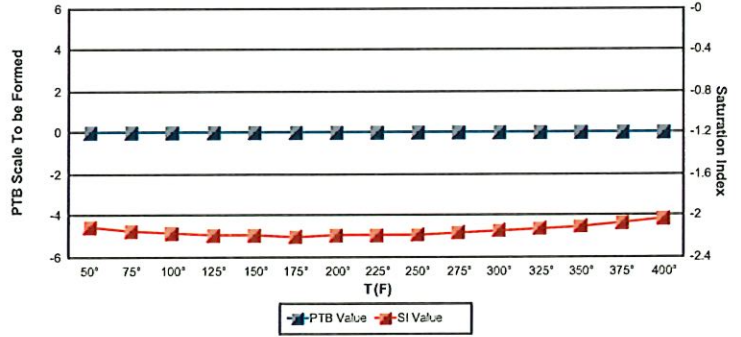
Celestite SrSO₄



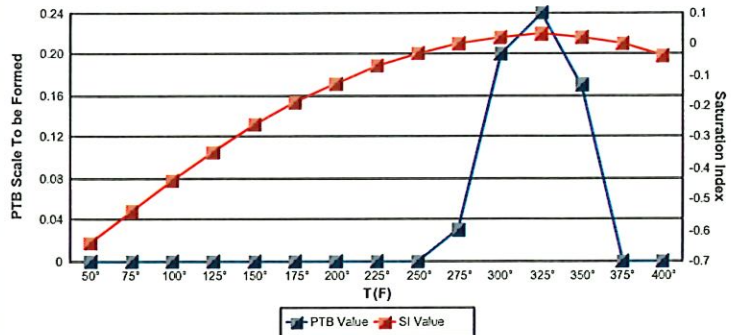
Gypsum CaSO₄



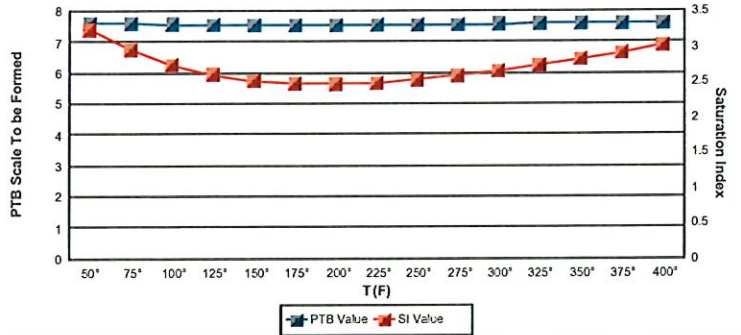
Halite NaCl



Iron Carbonate FeCO₃



Iron Sulfide FeS



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.

This document contains the confidential and/or proprietary information of ChampionX. The recipient agrees to maintain the confidentiality of the terms of this document, and shall not reproduce it by any means, disclose the contents of it to any third party, or use the contents of it for any purpose other than the purpose for which it was intended by ChampionX.
02/27/2024