KOLAR Document ID: 1765233

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 # 7311
Name: Shakespeare Oil Co., Inc.
Address 1: 202 W MAIN ST
Address 2:
City: SALEM State: IL Zip: 62881 + 1519
Contact Person: Joseph McDanel
Phone: (618) 548-1585
Lease Name: TRACTOR
Well Number: 2-13

API No.: 15-171-21286-00-01
Permit No: D34343.0
Reporting Year: 2023
(January 1 to December 31)

SW - SW - NE - NE (Q/Q/Q/Q) Sec. 13 Twp. 18 S. R. 32 ☐ E ☑ W
1070 feet from ☑ N / ☐ S Line of Section
1220 feet from ☑ E / ☐ W Line of Section
County: Scott

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☐ Untreated Brine ☑ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 41500 mg/l Specific Gravity: 1.039 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 0 psi Injection Zone: CEDAR HILLS
Maximum Authorized Injection Rate: 500 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	2141	0	0	0	31
February	2100	0	0	0	28
March	2081	0	0	0	31
April	2080	0	0	0	30
May	2293	0	0	0	31
June	2004	0	0	0	30
July	2000	0	0	0	31
August	2183	0	0	0	31
September	2128	0	0	0	30
October	2027	0	0	0	31
November	2040	0	0	0	30
December	2189	0	0	0	31
TOTAL	25266		0		

Submitted Electronically

Complete Water Analysis

Customer:	**SHAKESPEARE OIL COMPANY**	Equipment Description:	**Tractor**	Collect Date:	**02/20/2024**
Formation Zone:		Sample Point:	**Bleeder**	Submit Date:	**02/20/2024**
Geographic Region:	**Kansas**	Customer ID:		Report Date:	**02/22/2024**
Geographic Location:	**Scott County**	Latitude/Longitude:	**0.00, 0.00**	Sample ID:	**AX37079**
System Description:	**Disposal**	Account Rep:	**Michael.walters@championx.com**	Location Code:	**514624**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	**215** mg/L	Titration
Dissolved CO2	**180** mg/L	Titration
Dissolved H2S	**100** mg/L	Titration
Pressure Surface	**25** psi	
Temperature	**100** ° F	
pH of Water	**7.5**	Meter

Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	**1.039**	Densitometer
Ionic Strength	**0.760** mol/L	Calculation
Total Dissolved Solids	**41500** mg/L	Calculation
Calculated pH	**7.50**	Calculation
Calculated CO2 in the gas	**0.0900** %	Calculation

Cations - Analyzed By ICP

Iron	**2.55** mg/L	Boron	**23.0** mg/L	Silicon	**11.8** mg/L
Manganese	**<0.200** mg/L	Lithium	**7.20** mg/L	Aluminum	**<0.400** mg/L
Barium	**<0.100** mg/L	Copper	**<0.200** mg/L	Molybdenum	**<0.200** mg/L
Strontium	**32.1** mg/L	Nickel	**<0.200** mg/L	Phosphorus	**<0.500** mg/L
Calcium	**1060** mg/L	Zinc	**<0.400** mg/L	Measured Sodium	**12900** mg/L
Magnesium	**309** mg/L	Lead	**<0.500** mg/L		
Sodium	**12900** mg/L	Cobalt	**<0.500** mg/L		
Potassium	**237** mg/L	Chromium	**<0.100** mg/L		

Anions - Analyzed by IC*

Chloride	**22700** mg/L	Bromide	**28.6** mg/L	Sulfate	**3950** mg/L

PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	8.28	4.01	0.00	0.00	0.00	1.40
75°	0.00	0.00	8.09	3.22	0.00	0.00	0.00	1.40
100°	0.00	0.00	8.11	3.81	0.00	0.00	0.00	1.40
125°	0.00	0.00	8.40	5.25	0.00	0.00	0.00	1.40
150°	66.50	0.00	8.94	7.15	0.00	0.00	0.00	1.39
175°	289.14	0.00	9.69	9.21	0.00	0.00	0.00	1.39
200°	466.48	0.00	10.63	11.24	0.00	0.00	0.00	1.39
225°	609.79	0.00	11.71	13.13	0.00	0.00	0.00	1.39
250°	726.94	0.00	12.90	14.83	0.00	0.00	0.00	1.40
275°	823.42	0.00	14.19	16.30	0.00	0.00	0.00	1.40
300°	903.48	0.00	15.57	17.56	0.00	0.00	0.00	1.40
325°	970.25	0.00	17.05	18.62	0.00	0.00	0.00	1.40
350°	1,026.06	0.00	18.62	19.50	63.19	0.00	0.00	1.40
375°	1,072.63	0.00	20.28	20.22	364.77	0.00	0.00	1.40
400°	1,111.23	0.00	22.02	20.80	747.75	0.00	0.00	1.40

SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.66	0.23	0.08	-0.05	-2.34	-1.03	2.82
75°	-0.46	0.23	0.06	-0.07	-2.38	-0.92	2.53
100°	-0.28	0.24	0.08	-0.07	-2.41	-0.82	2.32
125°	-0.11	0.26	0.11	-0.06	-2.42	-0.72	2.19
150°	0.04	0.29	0.16	-0.04	-2.43	-0.64	2.10
175°	0.18	0.33	0.22	-0.04	-2.43	-0.56	2.07
200°	0.32	0.38	0.22	-0.04	-2.43	-0.49	2.07
225°	0.45	0.44	0.36	-0.05	-2.42	-0.42	2.10
250°	0.57	0.52	0.43	-0.07	-2.41	-0.36	2.15
275°	0.70	0.60	0.51	-0.09	-2.39	-0.31	2.23
300°	0.81	0.69	0.60	-0.09	-2.37	-0.27	2.32
325°	0.93	0.78	0.68	-0.05	-2.35	-0.24	2.42
350°	1.05	0.88	0.76	0.03	-2.32	-0.22	2.53
375°	1.17	0.97	0.85	0.18	-2.29	-0.20	2.65
400°	1.29	1.07	0.93	0.43	-2.25	-0.20	2.77

Comments

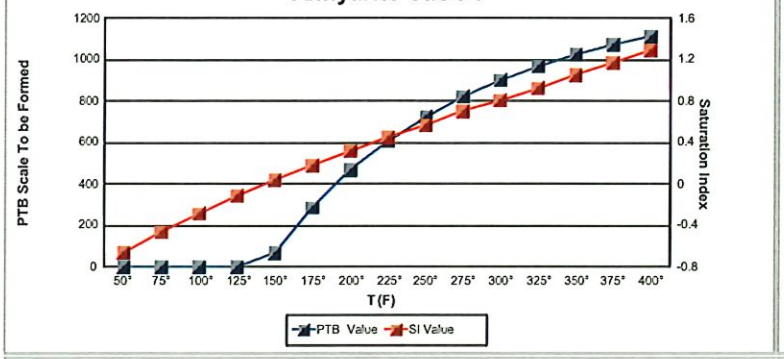
Scaling predictions calculated using Scale Soft Pitzer 2019

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

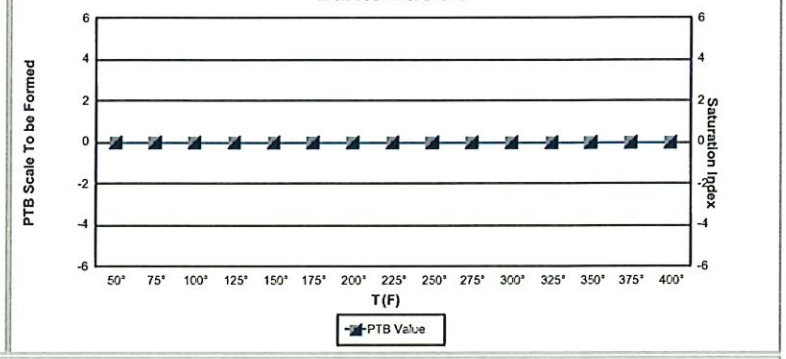
Complete Water Analysis

Customer:	SHAKESPEARE OIL COMPANY	Equipment Description:	Tractor	Collect Date:	02/20/2024
Formation Zone:		Sample Point:	Bleeder	Submit Date:	02/20/2024
Geographic Region:	Kansas	Customer ID:		Report Date:	02/22/2024
Geographic Location:	Scott County	Latitude/Longitude:	0.00, 0.00	Sample ID:	AX37079
System Description:	Disposal	Account Rep:	Michael.walters@championx.com	Location Code:	514624

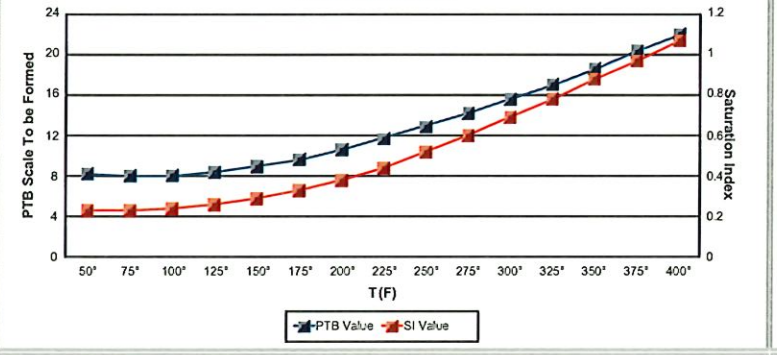
Anhydrite CaSO4



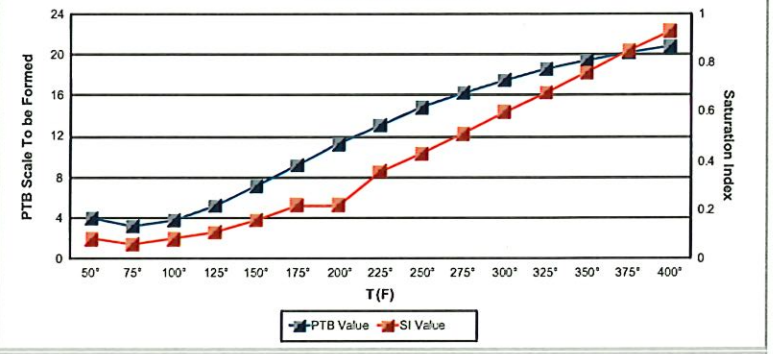
Barite BaSO4



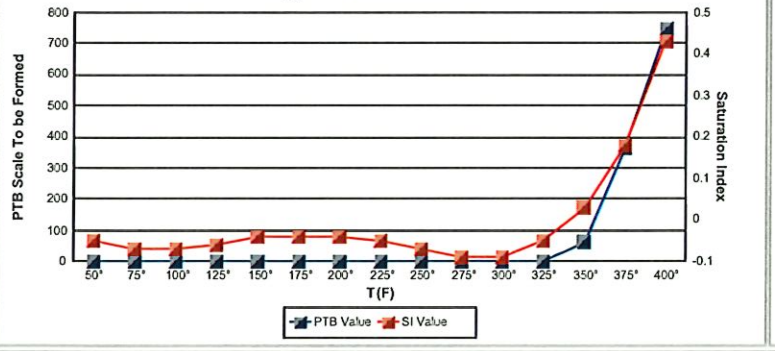
Calcite CaCO3



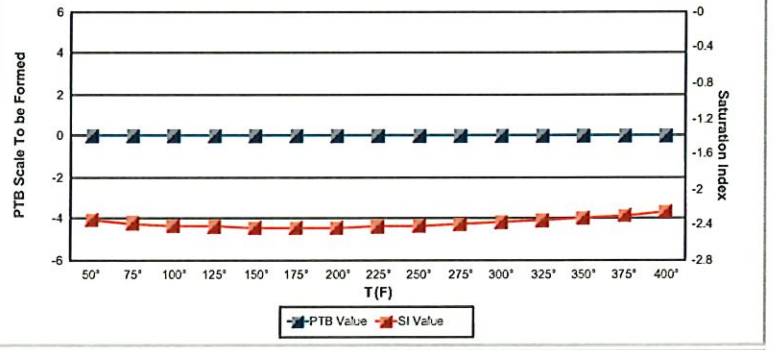
Celestite SrSO4



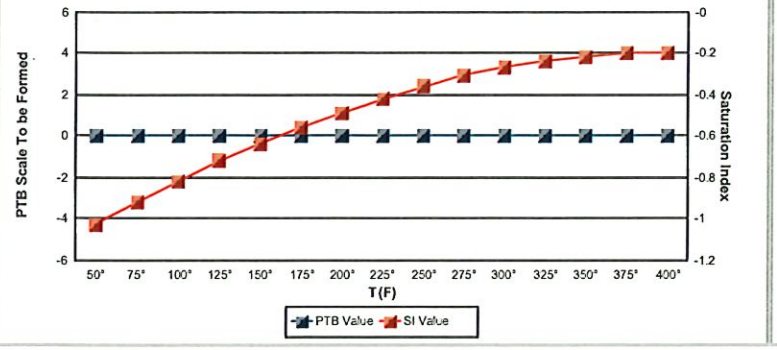
Gypsum CaSO4



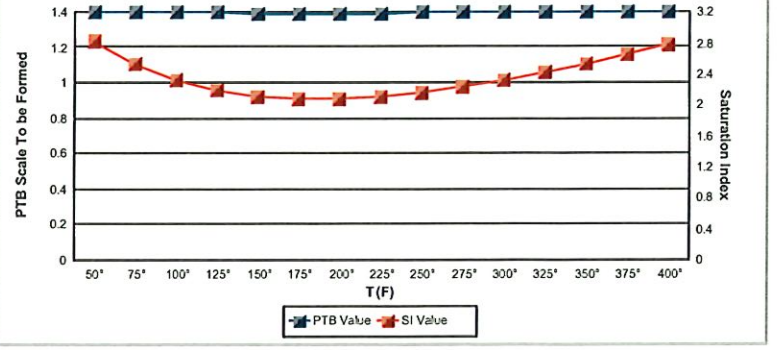
Halite NaCl



Iron Carbonate FeCO3



Iron Sulfide FeS



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