KOLAR Document ID: 1765224

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: SPLITTER B
Well Number: 1 OWWO

API No.: 15-101-20559-00-01
Permit No: E32592.2
Reporting Year: 2023
(January 1 to December 31)

(Q/Q/Q/Q) - W2 - W2 - NW Sec. 35 Twp. 18 S. R. 29 ☐ E ☑ W
4075 feet from ☐ N / ☑ S Line of Section
4947 feet from ☑ E / ☐ W Line of Section
County: Lane

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☐ Untreated Brine ☑ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 56500 mg/l Specific Gravity: 1.049 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1200 psi Injection Zone: ALTAMONT,LANSING-KANSAS CITY
Maximum Authorized Injection Rate: 750 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	5465	0	0	0	31
February	3354	0	0	0	28
March	4471	0	0	0	31
April	4271	0	0	0	30
May	4427	0	0	0	31
June	5802	0	0	0	30
July	6317	0	0	0	31
August	6354	0	0	0	31
September	5914	0	0	0	30
October	1689	0	0	0	31
November	2713	0	0	0	30
December	3504	0	0	0	31
TOTAL	54281		0		

Submitted Electronically

Complete Water Analysis

Customer:	**SHAKESPEARE OIL COMPANY**	Equipment Description:	**Splitter B 1 OWWO**	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:	**Lane County**	Latitude/Longitude:	**0.00, 0.00**	Sample ID:	**AX37102**
System Description:	**Production System**	Account Rep:	**Michael.walters@championx.com**	Location Code:	**430665**

Field Analysis

Analysis	Result	Analysis Method
Total Alkalinity (M-Alk as HCO3)	**200** mg/L	Titration
Dissolved CO2	**290** mg/L	Titration
Dissolved H2S	**87** mg/L	Titration
Pressure Surface	**25** psi	
Temperature	**100** ° F	
pH of Water	**7.5**	Meter

Sample Analysis

Analysis	Result	Analysis Method
Specific Gravity	**1.049**	Densitometer
Ionic Strength	**1.02** mol/L	Calculation
Total Dissolved Solids	**56500** mg/L	Calculation
Calculated pH	**7.50**	Calculation
Calculated CO2 in the gas	**0.0900** %	Calculation

Cations - Analyzed By ICP

Iron	**1.32**	mg/L	Boron	**22.4**	mg/L	Silicon	**7.82**	mg/L
Manganese	**<0.200**	mg/L	Lithium	**4.71**	mg/L	Aluminum	**<0.400**	mg/L
Barium	**<0.100**	mg/L	Copper	**<0.200**	mg/L	Molybdenum	**<0.200**	mg/L
Strontium	**35.8**	mg/L	Nickel	**<0.200**	mg/L	Phosphorus	**133**	mg/L
Calcium	**932**	mg/L	Zinc	**1.20**	mg/L	Measured Sodium	**19300**	mg/L
Magnesium	**352**	mg/L	Lead	**<0.500**	mg/L			
Sodium	**19300**	mg/L	Cobalt	**<0.500**	mg/L			
Potassium	**261**	mg/L	Chromium	**<0.100**	mg/L			

Anions - Analyzed by IC*

Chloride	**31400**	mg/L	Bromide	**30.9**	mg/L	Sulfate	**3840**	mg/L

PTB

	Anhydrite	Barite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	0.00	0.00	6.24	0.10	0.00	0.00	0.00	0.73
75°	0.00	0.00	6.39	0.00	0.00	0.00	0.00	0.72
100°	0.00	0.00	6.71	1.37	0.00	0.00	0.00	0.72
125°	0.00	0.00	7.26	3.65	0.00	0.00	0.00	0.72
150°	0.00	0.00	8.02	6.32	0.00	0.00	0.00	0.72
175°	41.32	0.00	8.96	9.05	0.00	0.00	0.00	0.71
200°	237.46	0.00	10.03	11.63	0.00	0.00	0.00	0.71
225°	394.74	0.00	11.18	13.96	0.00	0.00	0.00	0.71
250°	522.41	0.00	12.40	16.01	0.00	0.00	0.00	0.72
275°	626.93	0.00	13.66	17.76	0.00	0.00	0.00	0.72
300°	713.23	0.00	14.97	19.23	0.00	0.00	0.00	0.72
325°	785.00	0.00	16.33	20.47	0.00	0.00	0.00	0.72
350°	844.92	0.00	17.74	21.49	0.00	0.00	0.00	0.72
375°	894.98	0.00	19.23	22.32	0.00	0.00	0.00	0.72
400°	936.61	0.00	20.78	22.99	420.50	0.00	0.00	0.72

SI

	Anhydrite	Calcite	Celestite	Gypsum	Halite	Iron Carbonate	Iron Sulfide
50°	-0.84	0.18	0.00	-0.23	-2.04	-1.31	2.46
75°	-0.63	0.19	0.00	-0.25	-2.07	-1.19	2.18
100°	-0.44	0.21	0.02	-0.24	-2.09	-1.08	1.98
125°	-0.27	0.23	0.07	-0.23	-2.11	-0.98	1.84
150°	-0.12	0.27	0.12	-0.21	-2.12	-0.89	1.76
175°	0.03	0.32	0.18	-0.20	-2.12	-0.81	1.72
200°	0.16	0.38	0.18	-0.20	-2.12	-0.73	1.72
225°	0.29	0.45	0.33	-0.22	-2.11	-0.67	1.75
250°	0.42	0.52	0.41	-0.24	-2.10	-0.61	1.80
275°	0.53	0.61	0.49	-0.25	-2.09	-0.56	1.87
300°	0.65	0.69	0.57	-0.26	-2.07	-0.52	1.95
325°	0.76	0.78	0.66	-0.23	-2.05	-0.50	2.04
350°	0.88	0.87	0.74	-0.15	-2.03	-0.49	2.14
375°	0.99	0.96	0.82	0.00	-2.00	-0.49	2.24
400°	1.10	1.04	0.90	0.24	-1.96	-0.51	2.35

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.

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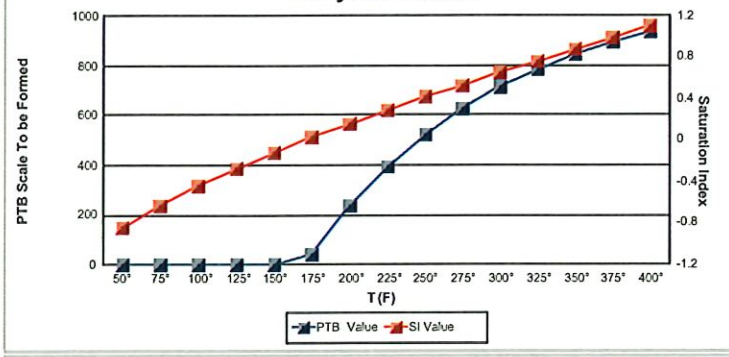
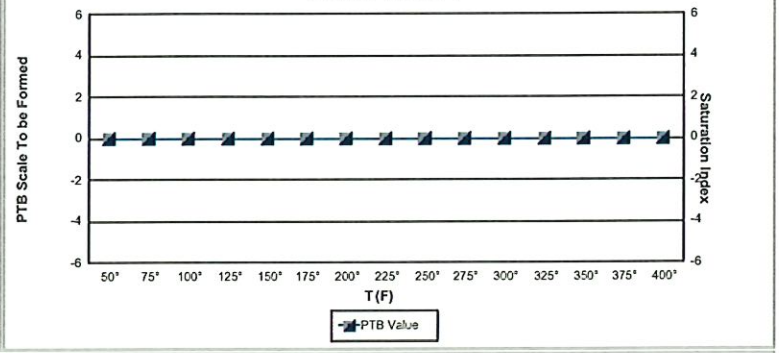
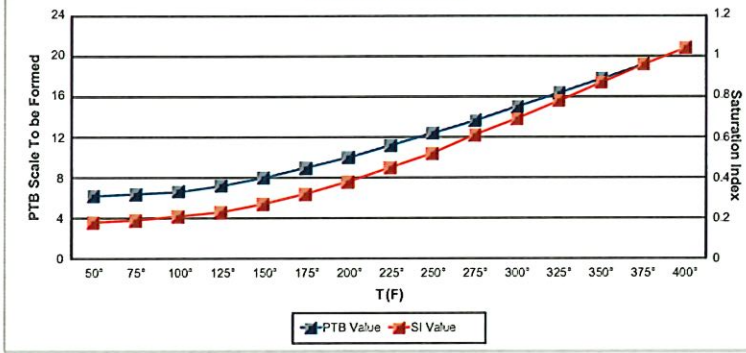
Anhydrite CaSO4



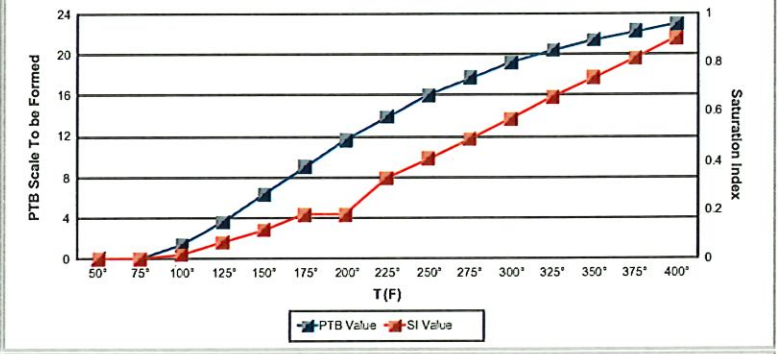
Barite BaSO4



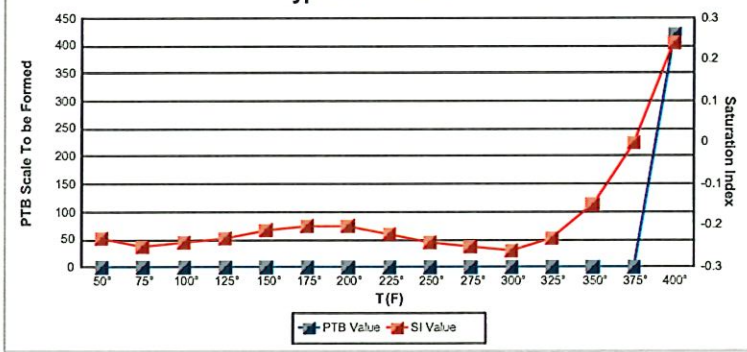
Calcite CaCO3



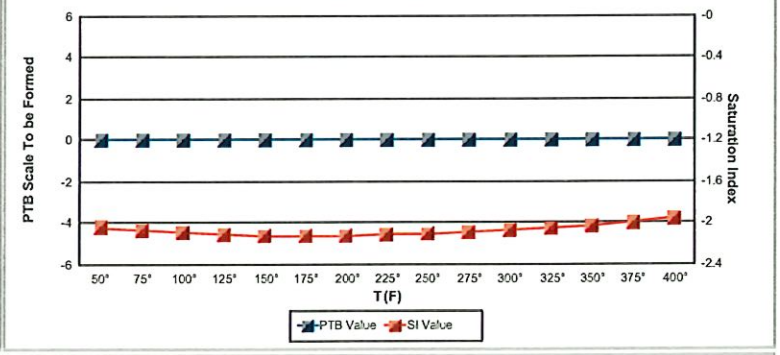
Celestite SrSO4



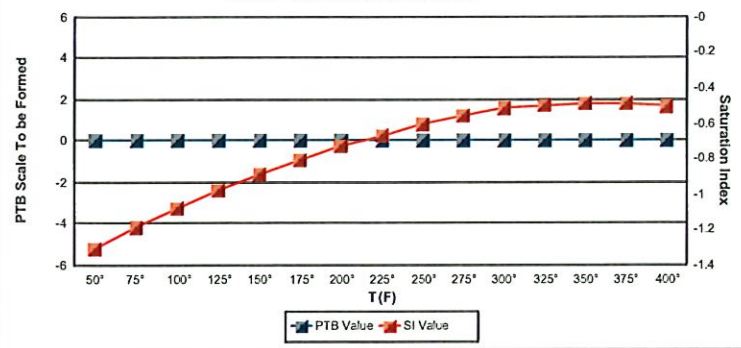
Gypsum CaSO4



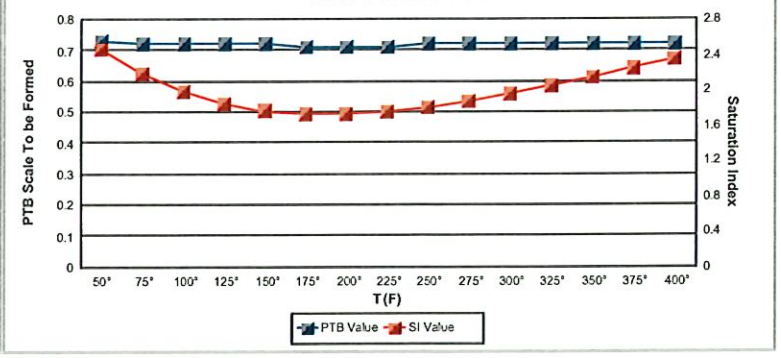
Halite NaCl



Iron Carbonate FeCO3



Iron Sulfide FeS



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