KOLAR Document ID: 1835176

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: Anna Diss
Phone: (618) 548-1585
Lease Name: GLASSMAN
Well Number: 6-35

API No.: 15-109-21010-00-02
Permit No: E31708.1
Reporting Year: 2024
(January 1 to December 31)

NE - NW - SE - NE (Q/Q/Q/Q) Sec. 35 Twp. 12 S. R. 32 ☐ E ☑ W
3718 feet from ☐ N / ☑ S Line of Section
988 feet from ☑ E / ☐ W Line of Section
County: Logan

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☐ Untreated Brine ☑ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 119476 mg/l Specific Gravity: 1.0748 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1200 psi Injection Zone: ARBUCKLE
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	5576	0	0	0	31
February	5396	0	0	0	29
March	4636	0	0	0	31
April	4614	0	0	0	30
May	5160	0	0	0	31
June	4696	0	0	0	30
July	5112	0	0	0	31
August	4963	0	0	0	31
September	5143	0	0	0	30
October	4723	0	0	0	31
November	5021	0	0	0	30
December	5455	0	0	0	31
TOTAL	60495		0		

Submitted Electronically

Baker Hughes

Central Area Laboratory
12701 N. Santa Fe Ave, Suite 151
Oklahoma City, Oklahoma 73114

Upstream Chemicals

REPORT DATE: 3/13/2025

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	SHAKESPEARE OIL	**ACCOUNT REP:**	BRETT J SUTER
DISTRICT:	KANSAS	**SAMPLE ID:**	202510002018
AREA/LEASE:	GLASSMAN	**SAMPLE DATE:**	2/27/2025
SAMPLE POINT NAME	GLASSMAN 6-35	**ANALYSIS DATE:**	3/13/2025
SITE TYPE:	WELL SITES	**ANALYST:**	BS/RH
SAMPLE POINT DESCRIPTION:	TANK		
CUSTOMER SAMPLE POINT ID:			

SHAKESPEARE OIL, GLASSMAN, GLASSMAN 6-35

FIELD DATA

Initial Temperature (°F):	100
Final Temperature (°F):	55
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	7.1

ALKALINITY BY TITRATION:	**mg/L**	**meq/L**
Bicarbonate (HCO_3^-):	700.0	11.5
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

aqueous CO_2 (ppm):	35.0
aqueous H_2S (ppm):	10.0
aqueous O2 (ppb):	ND
Calculated TDS (mg/L):	119476
Density/Specific Gravity (g/cm³):	1.0748
Measured Specific Gravity	ND
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

ANALYSIS OF SAMPLE

ANIONS:	**mg/L**	**meq/L**
Chloride (Cl^-):	69300.0	1954.9
Sulfate (SO_4^{2-}):	5956.0	124.0
Borate (H_3BO_3):	187.3	3.0
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	0.6	0.0
Silica (SiO_2):	ND	

ORGANIC ACIDS:	**mg/L**	**meq/L**
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	
Anion/Cation Ratio:	1.10	

CATIONS:	**mg/L**	**meq/L**
Sodium (Na^+):	41330.8	1798.6
Potassium (K^+):	448.2	11.5
Magnesium (Mg^{2+}):	475.5	39.1
Calcium (Ca^{2+}):	1215.1	60.6
Strontium (Sr^{2+}):	49.8	1.1
Barium (Ba^{2+}):	0.4	0.0
Iron (Fe^{2+}):	0.0	0.0
Manganese (Mn^{2+}):	0.2	0.0
Lead (Pb^{2+}):	ND	
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	ND	
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	ND	
Molybdenum (Mo^{2+}):	ND	
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Lithium (Li):	ND	
Total Hardness:	5054	N/A

ND = Not Determined

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.

Conditions		**Barite ($BaSO_4$)**		**Calcite ($CaCO_3$)**		**Gypsum ($CaSO_4 \cdot 2H_2O$)**		**Anhydrite ($CaSO_4$)**	
Temp	**Press.**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**
55°F	15 psi	1.18	0.229	0.96	99.156	-0.14	0.000	-0.42	0.000
60°F	24 psi	1.14	0.227	0.94	96.583	-0.13	0.000	-0.39	0.000
65°F	34 psi	1.09	0.225	0.94	96.963	-0.12	0.000	-0.37	0.000
70°F	43 psi	1.05	0.223	0.96	98.452	-0.12	0.000	-0.35	0.000
75°F	53 psi	1.01	0.221	0.99	100.804	-0.12	0.000	-0.32	0.000
80°F	62 psi	0.97	0.219	1.02	104.067	-0.11	0.000	-0.30	0.000
85°F	72 psi	0.94	0.217	1.05	107.188	-0.11	0.000	-0.28	0.000
90°F	81 psi	0.90	0.214	1.09	110.179	-0.11	0.000	-0.25	0.000
95°F	91 psi	0.86	0.212	1.12	113.048	-0.10	0.000	-0.23	0.000
100°F	100 psi	0.83	0.209	1.15	115.804	-0.10	0.000	-0.21	0.000

Conditions		**Celestite ($SrSO_4$)**		**Halite (NaCl)**		**Iron Sulfide (FeS)**		**Iron Carbonate ($FeCO_3$)**	
Temp	**Press.**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**
55°F	15 psi	0.19	13.105	-1.34	0.000	-0.36	0.000	-2.50	0.000
60°F	24 psi	0.20	13.261	-1.34	0.000	-0.46	0.000	-2.51	0.000
65°F	34 psi	0.20	13.393	-1.34	0.000	-0.51	0.000	-2.49	0.000
70°F	43 psi	0.20	13.503	-1.35	0.000	-0.55	0.000	-2.46	0.000
75°F	53 psi	0.20	13.596	-1.35	0.000	-0.58	0.000	-2.42	0.000
80°F	62 psi	0.21	13.676	-1.35	0.000	-0.59	0.000	-2.37	0.000
85°F	72 psi	0.21	13.744	-1.36	0.000	-0.60	0.000	-2.32	0.000
90°F	81 psi	0.21	13.805	-1.36	0.000	-0.61	0.000	-2.28	0.000
95°F	91 psi	0.21	13.861	-1.36	0.000	-0.62	0.000	-2.23	0.000
100°F	100 psi	0.21	13.914	-1.37	0.000	-0.62	0.000	-2.19	0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

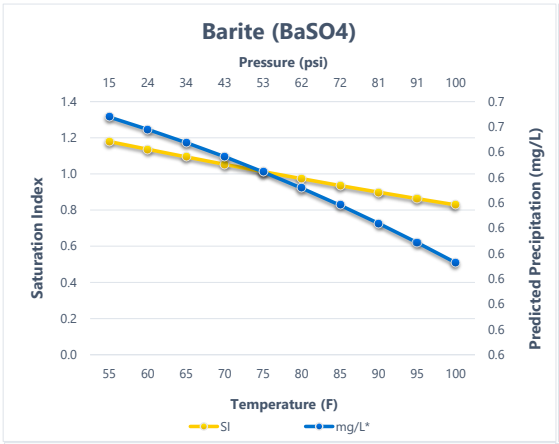
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

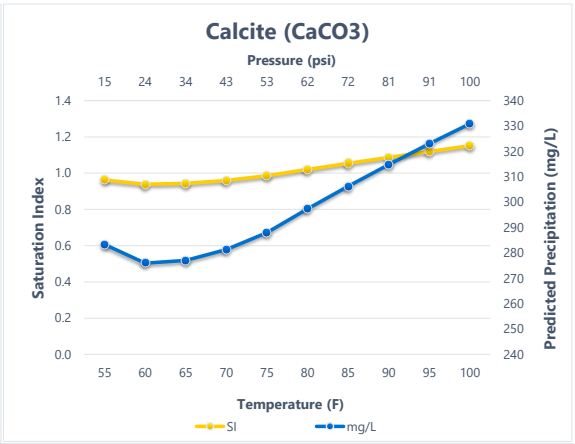
Note 3: Saturation Index predictions on this sheet use pH and alkalinity; $\%CO_2$ is not included in the calculations.

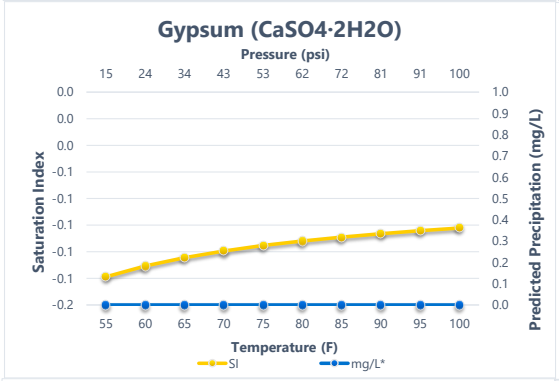
EESI ScaleSoftPitzer™ SSP2010

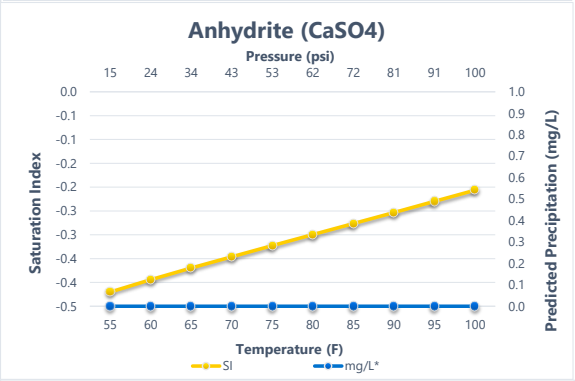
Comments:

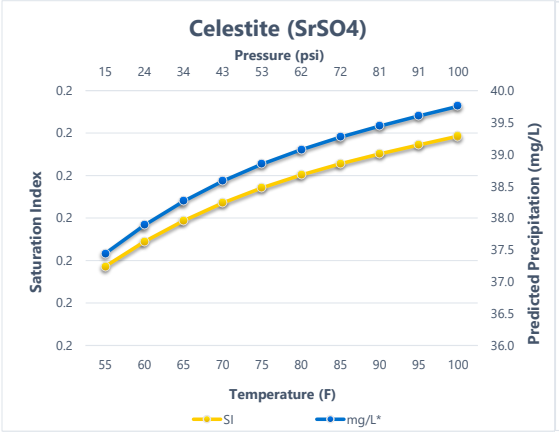
SAMPLE ID: 202510002018 SHAKESPEARE OIL, GLASSMAN, GLASSMAN 6-35

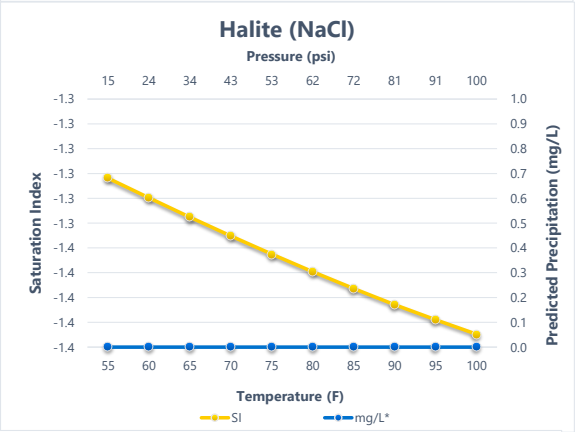


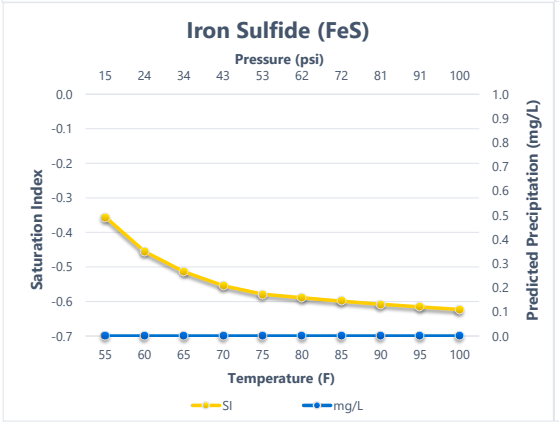


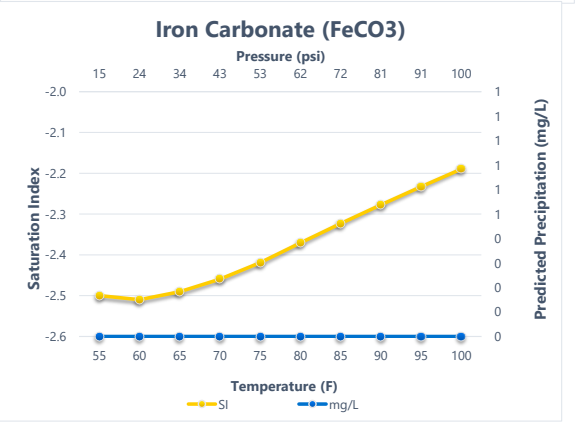












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