

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	_____	_____	_____	_____	_____



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

REPORT DATE: 3/13/2025

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	SHAKESPEARE OIL	ACCOUNT REP:	BRETT J SUTER
DISTRICT:	KANSAS	SAMPLE ID:	202510002017
AREA/LEASE:	GLASSMAN	SAMPLE DATE:	2/27/2025
SAMPLE POINT NAME	GLASSMAN 4-35	ANALYSIS DATE:	3/13/2025
SITE TYPE:	WELL SITES	ANALYST:	BS/RH
SAMPLE POINT DESCRIPTION:	TANK		
CUSTOMER SAMPLE POINT ID:			

SHAKESPEARE OIL, GLASSMAN, GLASSMAN 4-35

FIELD DATA			ANALYSIS OF SAMPLE					
			ANIONS:		CATIONS:			
			mg/L	meq/L	mg/L	meq/L		
Initial Temperature (°F):	100	Chloride (Cl ⁻):	54980.0	1550.9	Sodium (Na ⁺):	35344.9	1538.1	
Final Temperature (°F):	53	Sulfate (SO ₄ ²⁻):	3234.0	67.3	Potassium (K ⁺):	363.8	9.3	
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):	165.1	2.7	Magnesium (Mg ²⁺):	480.2	39.5	
Final Pressure (psi):	15	Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	1237.5	61.8	
		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	72.3	1.7	
pH:		Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	1.0	0.0	
pH at time of sampling:	7.4	Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	0.7	0.0	
		Phosphate (PO ₄ ³⁻):	1.1	0.0	Manganese (Mn ²⁺):	0.3	0.0	
		Silica (SiO ₂):	ND		Lead (Pb ²⁺):	ND		
					Zinc (Zn ²⁺):	0.0	0.0	
ALKALINITY BY TITRATION:								
	mg/L	meq/L						
Bicarbonate (HCO ₃ ⁻):	780.0	12.8					Aluminum (Al ³⁺):	ND
Carbonate (CO ₃ ²⁻):	ND						Chromium (Cr ³⁺):	ND
Hydroxide (OH ⁻):	ND						Cobalt (Co ²⁺):	ND
							Copper (Cu ²⁺):	ND
							Molybdenum (Mo ²⁺):	ND
aqueous CO ₂ (ppm):	100.0	Formic Acid:	ND				Nickel (Ni ²⁺):	ND
aqueous H ₂ S (ppm):	15.0	Acetic Acid:	ND				Tin (Sn ²⁺):	ND
aqueous O ₂ (ppb):	ND	Propionic Acid:	ND				Titanium (Ti ²⁺):	ND
		Butyric Acid:	ND				Vanadium (V ²⁺):	ND
Calculated TDS (mg/L):	96495	Valeric Acid:	ND				Zirconium (Zr ²⁺):	ND
Density/Specific Gravity (g/cm ³):	1.0617						Lithium (Li):	ND
Measured Specific Gravity	ND						Total Hardness:	5155
Conductivity (mmhos):	ND							N/A
Resistivity:	ND							
MCF/D:	No Data							
BOPD:	No Data							
BWPD:	No Data							
		Anion/Cation Ratio:		0.99				ND = Not Determined

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

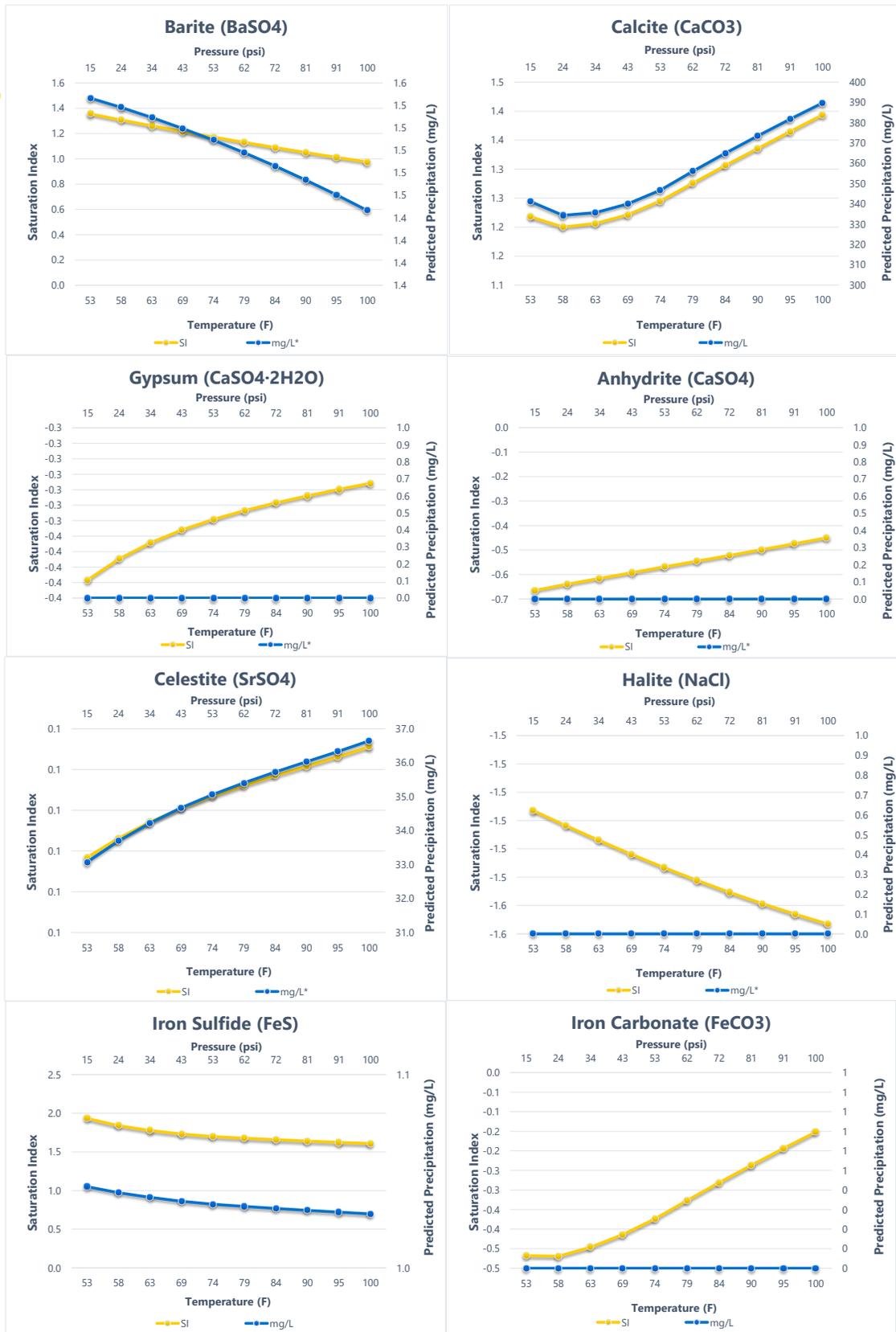
Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
53°F	15 psi	1.35	0.541	1.22	119.407	-0.36	0.000	-0.66	0.000
58°F	24 psi	1.31	0.538	1.20	117.037	-0.36	0.000	-0.64	0.000
63°F	34 psi	1.26	0.535	1.21	117.497	-0.35	0.000	-0.62	0.000
69°F	43 psi	1.22	0.532	1.22	119.019	-0.35	0.000	-0.59	0.000
74°F	53 psi	1.17	0.528	1.25	121.389	-0.34	0.000	-0.57	0.000
79°F	62 psi	1.13	0.524	1.28	124.628	-0.34	0.000	-0.55	0.000
84°F	72 psi	1.09	0.520	1.31	127.743	-0.34	0.000	-0.52	0.000
90°F	81 psi	1.05	0.516	1.34	130.743	-0.34	0.000	-0.50	0.000
95°F	91 psi	1.01	0.511	1.36	133.636	-0.33	0.000	-0.47	0.000
100°F	100 psi	0.97	0.506	1.39	136.426	-0.33	0.000	-0.45	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)
53°F	15 psi	0.11	11.576	-1.52	0.000	1.93	0.365	-0.47	0.000
58°F	24 psi	0.11	11.794	-1.52	0.000	1.84	0.364	-0.47	0.000
63°F	34 psi	0.11	11.979	-1.53	0.000	1.78	0.363	-0.45	0.000
69°F	43 psi	0.12	12.136	-1.53	0.000	1.73	0.362	-0.41	0.000
74°F	53 psi	0.12	12.273	-1.54	0.000	1.70	0.362	-0.37	0.000
79°F	62 psi	0.12	12.394	-1.54	0.000	1.68	0.361	-0.33	0.000
84°F	72 psi	0.12	12.505	-1.55	0.000	1.66	0.361	-0.28	0.000
90°F	81 psi	0.12	12.611	-1.55	0.000	1.64	0.360	-0.24	0.000
95°F	91 psi	0.12	12.717	-1.55	0.000	1.62	0.360	-0.19	0.000
100°F	100 psi	0.12	12.827	-1.56	0.000	1.61	0.360	-0.15	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; %CO₂ is not included in the calculations.



Comments:



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