

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
DISTRICT: KANSAS
AREA/LEASE: OTTLEY
SAMPLE POINT NAME: OTTLEY 4-10
SITE TYPE: WELL SITES
SAMPLE POINT DESCRIPTION: NOT PROVIDED
CUSTOMER SAMPLE POINT ID:

ACCOUNT REP: BRETT J SUTER
SAMPLE ID: 202510002014
SAMPLE DATE: 2/27/2025
ANALYSIS DATE: 3/13/2025
ANALYST: BS/RH

SHAKESPEARE OIL, OTTLEY, OTTLEY 4-10

FIELD DATA			ANALYSIS OF SAMPLE											
			ANIONS:		mg/L		meq/L		CATIONS:		mg/L		meq/L	
Initial Temperature (°F):	100		Chloride (Cl ⁻):	40390.0	1139.4	Sodium (Na ⁺):	25942.4	1128.9						
Final Temperature (°F):	57		Sulfate (SO ₄ ²⁻):	3346.0	69.7	Potassium (K ⁺):	289.0	7.4						
Initial Pressure (psi):	100		Borate (H ₃ BO ₃):	161.7	2.6	Magnesium (Mg ²⁺):	444.4	36.6						
Final Pressure (psi):	15		Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	1031.6	51.5						
			Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	47.4	1.1						
pH:			Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.6	0.0						
pH at time of sampling:	7.4		Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	0.5	0.0						
			Phosphate (PO ₄ ³⁻):	0.9	0.0	Manganese (Mn ²⁺):	0.0	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 ⁻):	1460.0	23.9												
Carbonate (CO ₃ ²⁻):	ND													
Hydroxide (OH ⁻):	ND													
			ORGANIC ACIDS:		mg/L		meq/L							
aqueous CO ₂ (ppm):	90.0		Formic Acid:	ND		Molybdenum (Mo ²⁺):	ND							
aqueous H ₂ S (ppm):	10.0		Acetic Acid:	ND		Nickel (Ni ²⁺):	ND							
aqueous O ₂ (ppb):	ND		Propionic Acid:	ND		Tin (Sn ²⁺):	ND							
			Butyric Acid:	ND		Titanium (Ti ²⁺):	ND							
Calculated TDS (mg/L):	72952		Valeric Acid:	ND		Vanadium (V ²⁺):	ND							
Density/Specific Gravity (g/cm ³):	1.0467						Zirconium (Zr ²⁺):	ND						
Measured Specific Gravity:	ND						Lithium (Li):	ND						
Conductivity (mmhos):	ND						Total Hardness:	4464	N/A					
Resistivity:	ND													
MCF/D:	No Data													
BOPD:	No Data													
BWPD:	No Data													
			Anion/Cation Ratio:		1.01		ND = Not Determined							

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

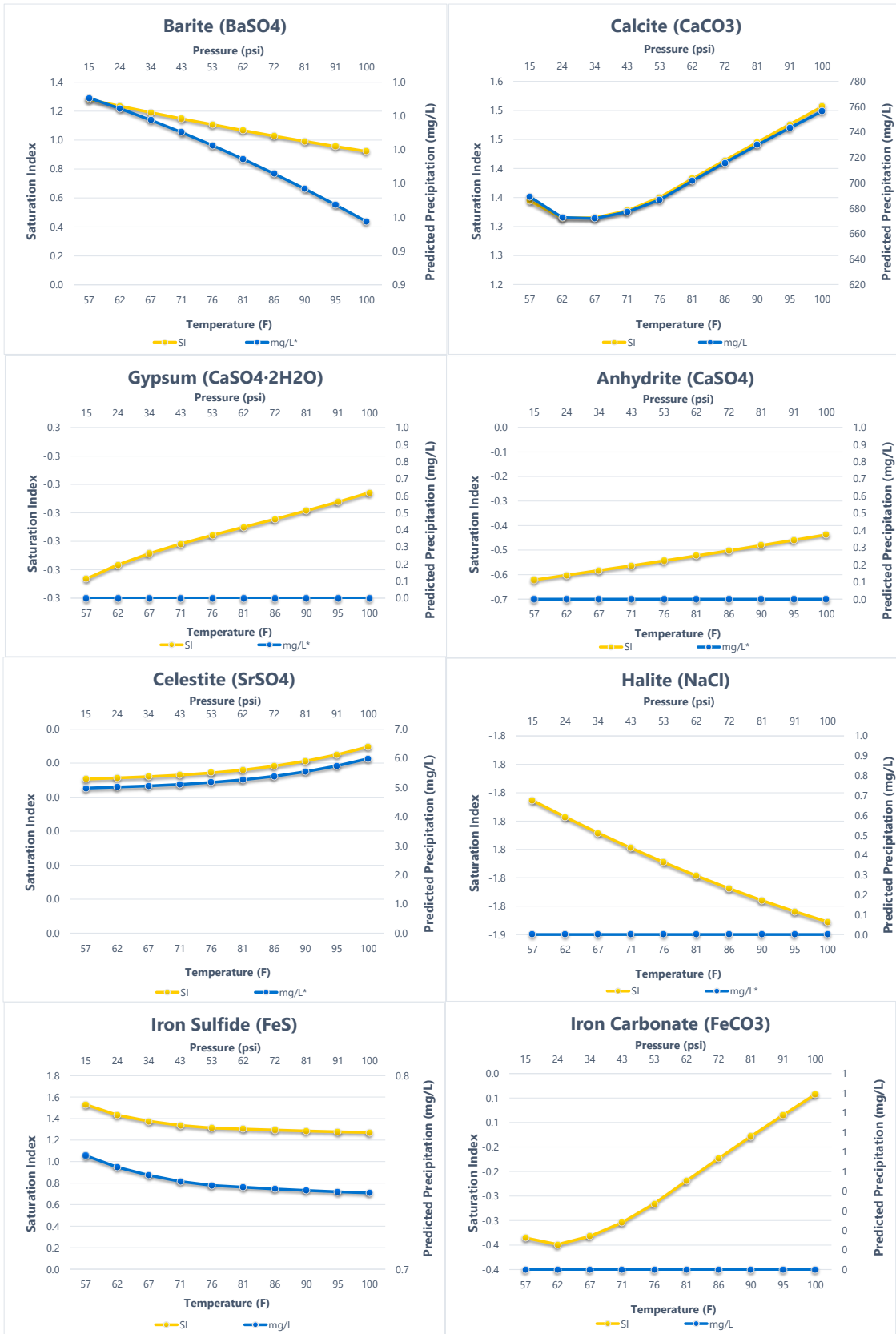
Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
57°F	15 psi	1.28	0.361	1.34	241.221	-0.32	0.000	-0.62	0.000
62°F	24 psi	1.23	0.359	1.31	235.509	-0.32	0.000	-0.60	0.000
67°F	34 psi	1.19	0.356	1.32	235.223	-0.32	0.000	-0.58	0.000
71°F	43 psi	1.15	0.354	1.33	237.053	-0.32	0.000	-0.56	0.000
76°F	53 psi	1.11	0.351	1.35	240.398	-0.31	0.000	-0.54	0.000
81°F	62 psi	1.07	0.348	1.38	245.568	-0.31	0.000	-0.52	0.000
86°F	72 psi	1.03	0.345	1.41	250.589	-0.31	0.000	-0.50	0.000
90°F	81 psi	0.99	0.342	1.45	255.466	-0.31	0.000	-0.48	0.000
95°F	91 psi	0.96	0.339	1.48	260.205	-0.31	0.000	-0.46	0.000
100°F	100 psi	0.92	0.335	1.51	264.812	-0.31	0.000	-0.44	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)
57°F	15 psi	0.02	1.742	-1.80	0.000	1.53	0.266	-0.34	0.000
62°F	24 psi	0.02	1.755	-1.81	0.000	1.43	0.263	-0.35	0.000
67°F	34 psi	0.02	1.769	-1.81	0.000	1.38	0.262	-0.33	0.000
71°F	43 psi	0.02	1.786	-1.82	0.000	1.34	0.261	-0.30	0.000
76°F	53 psi	0.02	1.810	-1.82	0.000	1.31	0.260	-0.27	0.000
81°F	62 psi	0.02	1.842	-1.83	0.000	1.30	0.260	-0.22	0.000
86°F	72 psi	0.02	1.884	-1.83	0.000	1.29	0.260	-0.17	0.000
90°F	81 psi	0.03	1.940	-1.84	0.000	1.28	0.259	-0.13	0.000
95°F	91 psi	0.03	2.010	-1.84	0.000	1.28	0.259	-0.08	0.000
100°F	100 psi	0.03	2.096	-1.85	0.000	1.27	0.259	-0.04	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.