

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	_____	_____	_____	_____	_____

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	SHAKESPEARE OIL	ACCOUNT REP:	BRETT J SUTER
DISTRICT:	KANSAS	SAMPLE ID:	202410001357
AREA/LEASE:	GLASSMAN	SAMPLE DATE:	2/9/2024
SAMPLE POINT NAME:	GLASSMAN 4-35	ANALYSIS DATE:	2/23/2024
SITE TYPE:	WELL SITES	ANALYST:	BS
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):	150	Chloride (Cl ⁻):	69867.0	1970.9	Sodium (Na ⁺):	39540.1	1720.6
Final Temperature (°F):	50	Sulfate (SO ₄ ²⁻):	3318.0	69.1	Potassium (K ⁺):	497.1	12.7
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):	185.9	3.0	Magnesium (Mg ²⁺):	454.8	37.4
Final Pressure (psi):	15	Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	1005.5	50.2
		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	48.4	1.1
pH:		Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.2	0.0
pH at time of sampling:	7.0	Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	3.8	0.1
		Phosphate (PO ₄ ³⁻):	0.2	0.0	Manganese (Mn ²⁺):	0.0	0.0
		Silica (SiO ₂):	ND		Lead (Pb ²⁺):	ND	
					Zinc (Zn ²⁺):	0.1	0.0
ALKALINITY BY TITRATION:							
	mg/L	meq/L					
Bicarbonate (HCO ₃ ⁻):	450.0	7.4	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):	200.0	Formic Acid:	ND		Nickel (Ni ²⁺):	ND	
aqueous H ₂ S (ppm):	25.0	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):	115185	Valeric Acid:	ND		Zirconium (Zr ²⁺):	ND	
Density/Specific Gravity (g/cm ³):	1.0715				Lithium (Li):	ND	
Measured Specific Gravity:	ND						
Conductivity (mmhos):	ND				Total Hardness:	4443	N/A
Resistivity:	ND						
MCF/D:	No Data						
BOPD:	No Data						
BWPD:	No Data	Anion/Cation Ratio:		1.13			ND = Not Determined

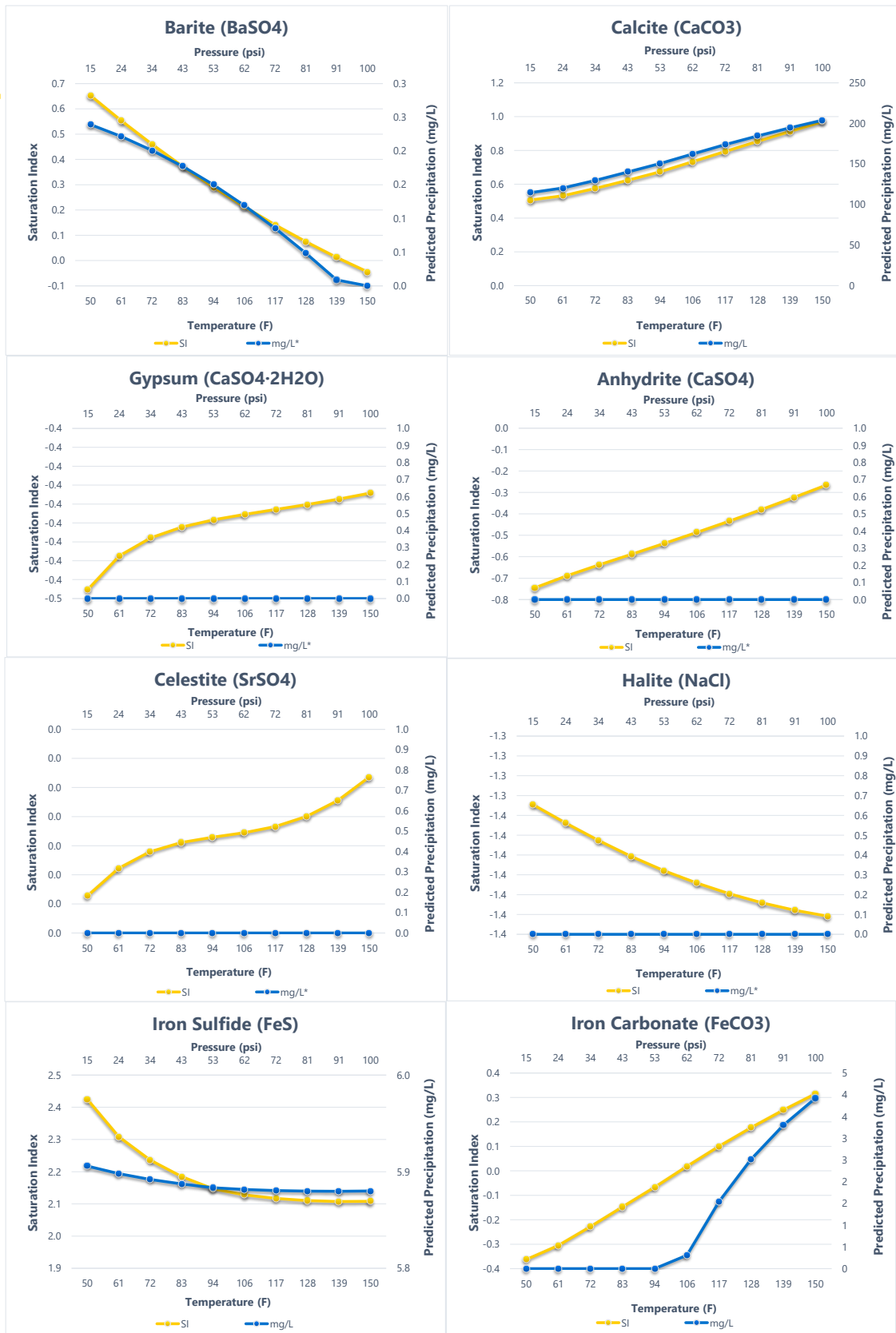
SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.

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)
50°F	15 psi	0.65	0.084	0.51	40.111	-0.45	0.000	-0.75	0.000
61°F	24 psi	0.55	0.078	0.53	42.120	-0.43	0.000	-0.69	0.000
72°F	34 psi	0.46	0.070	0.57	45.418	-0.42	0.000	-0.64	0.000
83°F	43 psi	0.37	0.062	0.62	49.043	-0.41	0.000	-0.59	0.000
94°F	53 psi	0.29	0.052	0.67	52.709	-0.41	0.000	-0.54	0.000
106°F	62 psi	0.21	0.042	0.73	56.812	-0.41	0.000	-0.49	0.000
117°F	72 psi	0.14	0.030	0.79	60.810	-0.40	0.000	-0.43	0.000
128°F	81 psi	0.07	0.017	0.85	64.548	-0.40	0.000	-0.38	0.000
139°F	91 psi	0.01	0.003	0.91	68.053	-0.40	0.000	-0.32	0.000
150°F	100 psi	-0.04	0.000	0.97	71.349	-0.39	0.000	-0.27	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)
50°F	15 psi	-0.03	0.000	-1.34	0.000	2.42	2.067	-0.36	0.000
61°F	24 psi	-0.02	0.000	-1.35	0.000	2.31	2.064	-0.31	0.000
72°F	34 psi	-0.02	0.000	-1.36	0.000	2.24	2.062	-0.23	0.000
83°F	43 psi	-0.02	0.000	-1.37	0.000	2.18	2.061	-0.15	0.000
94°F	53 psi	-0.02	0.000	-1.38	0.000	2.15	2.059	-0.07	0.000
106°F	62 psi	-0.02	0.000	-1.38	0.000	2.13	2.059	0.02	0.108
117°F	72 psi	-0.02	0.000	-1.39	0.000	2.12	2.058	0.10	0.540
128°F	81 psi	-0.01	0.000	-1.39	0.000	2.11	2.058	0.18	0.882
139°F	91 psi	-0.01	0.000	-1.40	0.000	2.11	2.058	0.25	1.154
150°F	100 psi	-0.01	0.000	-1.40	0.000	2.11	2.058	0.32	1.372

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.