

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: 2/26/2022

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER: US OIL
DISTRICT: KANSAS
AREA/LEASE: POWERS
SAMPLE POINT NAME: POWERS 1-2 SWD
SITE TYPE: WELL SITES
SAMPLE POINT DESCRIPTION: WATER TANK

ACCOUNT REP: BRETT J SUTER
SAMPLE ID: 202210001537
SAMPLE DATE: 2/4/2022
ANALYSIS DATE: 2/25/2022
ANALYST: BS

US OIL, POWERS, POWERS 1-2 SWD

FIELD DATA			ANALYSIS OF SAMPLE							
			ANIONS:		mg/L	meq/L	CATIONS:		mg/L	meq/L
Initial Temperature (°F):	150	Chloride (Cl ⁻):	16559.0	467.1	Sodium (Na ⁺):	9415.0	409.7			
Final Temperature (°F):	50	Sulfate (SO ₄ ²⁻):	2037.0	42.4	Potassium (K ⁺):	179.8	4.6			
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):	93.7	1.5	Magnesium (Mg ²⁺):	396.8	32.7			
Final Pressure (psi):	15	Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	1447.2	72.2			
		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	43.2	1.0			
pH:		Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.4	0.0			
pH at time of sampling:	6.9	Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	1.1	0.0			
		Phosphate (PO ₄ ³⁻):	0.0	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 ⁻):	520.0		8.5							
Carbonate (CO ₃ ²⁻):	ND									
Hydroxide (OH ⁻):	ND									
			ORGANIC ACIDS:		mg/L	meq/L				
aqueous CO ₂ (ppm):	60.0	Formic Acid:	ND		Aluminum (Al ³⁺):	ND				
aqueous H ₂ S (ppm):	80.0	Acetic Acid:	ND		Chromium (Cr ²⁺):	ND				
aqueous O ₂ (ppb):	ND	Propionic Acid:	ND		Cobalt (Co ²⁺):	ND				
		Butyric Acid:	ND		Copper (Cu ²⁺):	ND				
Calculated TDS (mg/L):	30600	Valeric Acid:	ND		Molybdenum (Mo ²⁺):	ND				
Density/Specific Gravity (g/cm ³):	1.0189									
Measured Specific Gravity	ND									
Conductivity (mmhos):	ND									
Resistivity:	ND									
MCF/D:	No Data									
BOPD:	No Data									
BWPD:	No Data	Anion/Cation Ratio:	1.00	ND = Not Determined						

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

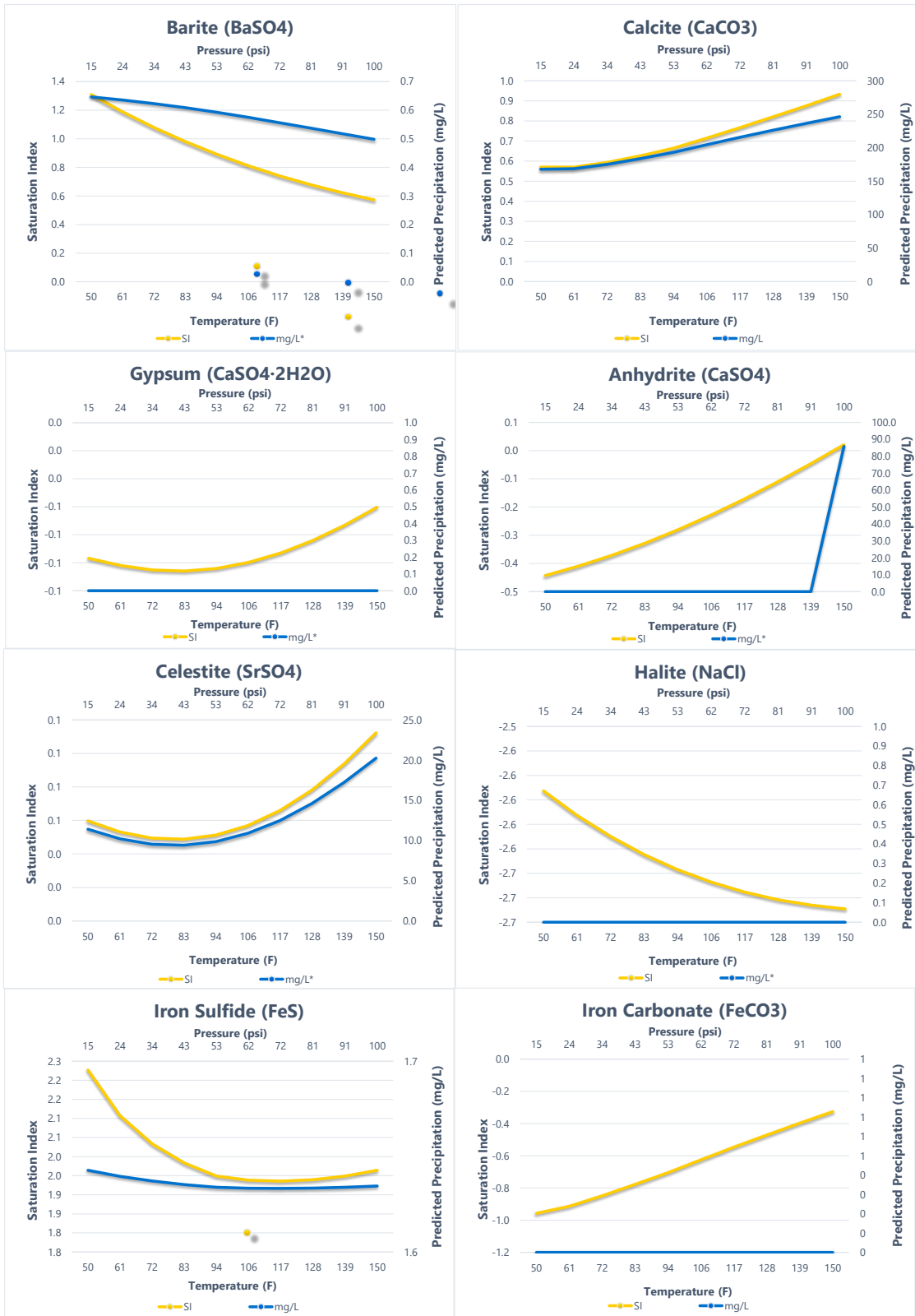
Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
50°F	15 psi	1.31	0.226	0.57	58.770	-0.10	0.000	-0.44	0.000
61°F	24 psi	1.19	0.223	0.57	59.027	-0.10	0.000	-0.41	0.000
72°F	34 psi	1.08	0.218	0.59	61.301	-0.11	0.000	-0.37	0.000
83°F	43 psi	0.98	0.213	0.63	64.298	-0.11	0.000	-0.33	0.000
94°F	53 psi	0.89	0.207	0.66	67.588	-0.10	0.000	-0.28	0.000
106°F	62 psi	0.81	0.201	0.71	71.589	-0.10	0.000	-0.23	0.000
117°F	72 psi	0.74	0.195	0.77	75.487	-0.09	0.000	-0.17	0.000
128°F	81 psi	0.68	0.188	0.82	79.221	-0.08	0.000	-0.11	0.000
139°F	91 psi	0.62	0.181	0.88	82.800	-0.07	0.000	-0.05	0.000
150°F	100 psi	0.57	0.174	0.93	86.236	-0.06	0.000	0.02	30.028

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	0.06	3.991	-2.59	0.000	2.23	0.575	-0.96	0.000
61°F	24 psi	0.05	3.574	-2.61	0.000	2.11	0.574	-0.91	0.000
72°F	34 psi	0.05	3.338	-2.63	0.000	2.03	0.573	-0.85	0.000
83°F	43 psi	0.05	3.296	-2.64	0.000	1.98	0.572	-0.78	0.000
94°F	53 psi	0.05	3.455	-2.66	0.000	1.95	0.572	-0.70	0.000
106°F	62 psi	0.06	3.815	-2.67	0.000	1.94	0.572	-0.62	0.000
117°F	72 psi	0.07	4.373	-2.68	0.000	1.94	0.572	-0.55	0.000
128°F	81 psi	0.08	5.115	-2.68	0.000	1.94	0.572	-0.47	0.000
139°F	91 psi	0.09	6.027	-2.69	0.000	1.95	0.572	-0.40	0.000
150°F	100 psi	0.11	7.086	-2.69	0.000	1.96	0.572	-0.33	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.