

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	_____	_____	_____	_____	_____

Submitted Electronically

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:	WELL HEAD
CUSTOMER SAMPLE POINT ID:	

ACCOUNT REP:	BRETT J SUTER
SAMPLE ID:	202310008100
SAMPLE DATE:	12/4/2023
ANALYSIS DATE:	12/21/2023
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):	85	Chloride (Cl ⁻):		17000.0		479.5	Sodium (Na ⁺):		9405.2	409.3
Final Temperature (°F):	55	Sulfate (SO ₄ ²⁻):		2171.0		45.2	Potassium (K ⁺):		206.9	5.3
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):		93.0		1.5	Magnesium (Mg ²⁺):		378.4	31.1
Final Pressure (psi):	15	Fluoride (F ⁻):		ND			Calcium (Ca ²⁺):		1417.7	70.7
pH:		Bromide (Br ⁻):		ND			Strontium (Sr ²⁺):		43.4	1.0
		Nitrite (NO ₂ ⁻):		ND			Barium (Ba ²⁺):		0.0	0.0
	pH at time of sampling:	6.9	Nitrate (NO ₃ ⁻):		ND		Iron (Fe ²⁺):		10.3	0.4
		Phosphate (PO ₄ ³⁻):		0.0		0.0	Manganese (Mn ²⁺):		0.1	0.0
		Silica (SiO ₂):		ND			Lead (Pb ²⁺):		ND	
ALKALINITY BY TITRATION:		mg/L	meq/L							
Bicarbonate (HCO ₃ ⁻):	1020.0	16.7								
Carbonate (CO ₃ ²⁻):	ND									
Hydroxide (OH ⁻):	ND									
			ORGANIC ACIDS:		mg/L	meq/L				
aqueous CO ₂ (ppm):	40.0	Formic Acid:		ND			Molybdenum (Mo ²⁺):		ND	
aqueous H ₂ S (ppm):	5.0	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):	31653	Valeric Acid:		ND			Vanadium (V ²⁺):		ND	
Density/Specific Gravity (g/cm ³):	1.0195						Zirconium (Zr ²⁺):		ND	
Measured Specific Gravity	ND						Lithium (Li):		ND	
Conductivity (mmhos):	ND									
Resistivity:	ND									
MCF/D:	No Data						Total Hardness:		5153	N/A
BOPD:	No Data									
BWPD:	No Data	Anion/Cation Ratio:			1.05		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)
55°F	15 psi		0.000	0.83	149.990	-0.08	0.000	-0.41	0.000
58°F	24 psi		0.000	0.78	142.922	-0.08	0.000	-0.40	0.000
62°F	34 psi		0.000	0.77	140.963	-0.08	0.000	-0.39	0.000
65°F	43 psi		0.000	0.77	141.060	-0.08	0.000	-0.38	0.000
68°F	53 psi		0.000	0.79	143.621	-0.08	0.000	-0.36	0.000
72°F	62 psi		0.000	0.81	146.898	-0.08	0.000	-0.35	0.000
75°F	72 psi		0.000	0.83	150.125	-0.09	0.000	-0.34	0.000
78°F	81 psi		0.000	0.86	153.302	-0.09	0.000	-0.33	0.000
82°F	91 psi		0.000	0.88	156.429	-0.09	0.000	-0.32	0.000
85°F	100 psi		0.000	0.90	159.505	-0.09	0.000	-0.30	0.000

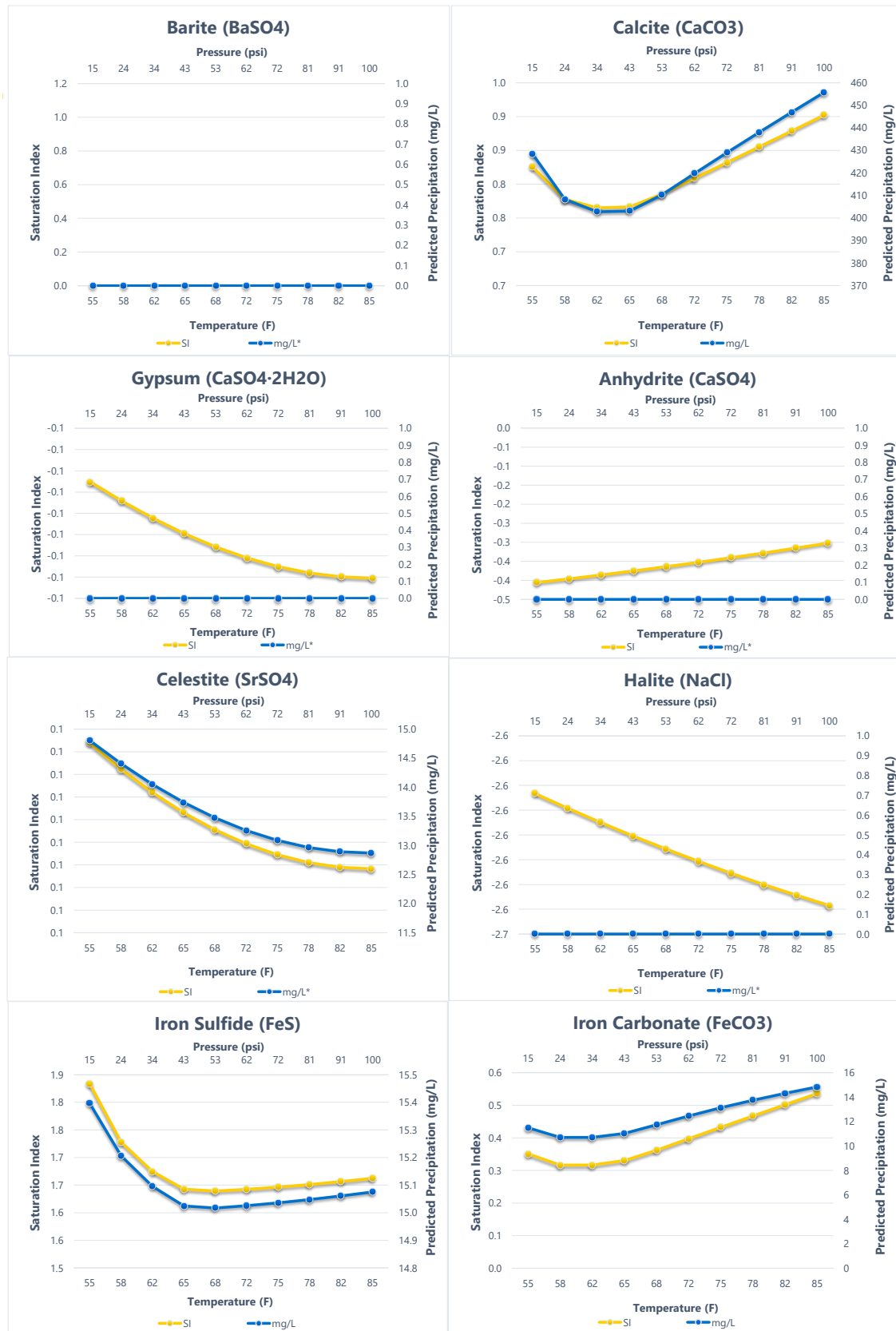
Conditions		Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
55°F	15 psi	0.08	5.182	-2.59	0.000	1.83	5.389	0.35	4.025
58°F	24 psi	0.08	5.042	-2.60	0.000	1.73	5.322	0.32	3.747
62°F	34 psi	0.07	4.918	-2.60	0.000	1.67	5.283	0.32	3.749
65°F	43 psi	0.07	4.809	-2.61	0.000	1.64	5.259	0.33	3.862
68°F	53 psi	0.07	4.717	-2.62	0.000	1.64	5.256	0.36	4.107
72°F	62 psi	0.07	4.640	-2.62	0.000	1.64	5.259	0.40	4.362
75°F	72 psi	0.07	4.580	-2.63	0.000	1.65	5.263	0.43	4.597
78°F	81 psi	0.07	4.538	-2.63	0.000	1.65	5.267	0.47	4.813
82°F	91 psi	0.07	4.512	-2.63	0.000	1.66	5.271	0.50	5.011
85°F	100 psi	0.07	4.504	-2.64	0.000	1.66	5.276	0.54	5.193

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.