

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	_____	_____	_____	_____	_____



Baker Hughes
1625
Plainville Kansas 67663

Report Date: 2/26/2020

Complete Water Analysis Report SSP v.8

Customer:	Great Plains	Sample Date:	2/20/2020
District:	Kansas	Log Out Date:	
Area:	Norton	Sample ID:	
Lease:	Shulte No. 2 SWD	Analyst:	Tim Beims
Sample Point Name	Tank to Shulte 2 SWD well	Chemical Used:	
Sales Rep:	Tim Beims	Comments:	

Great Plains, Shulte No. 2 SWD, Tank to Shulte 2 SWD well

Field Data			Analysis of Sample					
			Anions:			Cations:		
			mg/L	meq/L	mg/L	meq/L	mg/L	meq/L
Initial Temperature (°F):	71		Chloride (Cl):	57600	1622.5	Sodium (Na ⁺):	29476	1287.2
Final Temperature (°F):	85		Sulfate (SO ₄ ²⁻):	500	10.4	Potassium (K ⁺):	0	0.0
Initial Pressure (psi):	15		Borate (H ₃ BO ₃):	0.0	0.0	Magnesium (Mg ²⁺):	1040	85.6
Final Pressure (psi):	15		Fluoride (F):	0.0	0.0	Calcium (Ca ²⁺):	5200	259.5
			Bromide (Br):	0.0	0.0	Strontium (Sr ²⁺):	0	0.0
pH:			Nitrite (NO ₂):	0.0	0.0	Barium (Ba ²⁺):	0	0.0
pH at time of sampling:	6.0		Nitrate (NO ₃):	0.0	0.0	Iron (Fe ²⁺):	9	0.3
pH at time of analysis:	NA		Phosphate (PO ₄ ³⁻):	0.0	0.0	Manganese (Mn ²⁺):	20	0.7
pH used in Calcs:	6.0		Silica (SiO ₂):	0.0	0.0	Lead (Pb ²⁺):	0	0.0
						Zinc (Zn ²⁺):	0	0.0
						Aluminum (Al ³⁺):	0.0	0.0
						Chromium (Cr ³⁺):	0.0	0.0
						Cobalt (Co ²⁺):	0.0	0.0
						Copper (Cu ²⁺):	0.0	0.0
						Molybdenum (Mo ²⁺):	0.0	0.0
						Nickel (Ni ²⁺):	0.0	0.0
						Tin (Sn ²⁺):	0.0	0.0
						Titanium (Ti ²⁺):	0.0	0.0
						Vanadium (V ²⁺):	0.0	0.0
						Zirconium (Zr ²⁺):	0.0	0.0
						Total Hardness:	16500	
Alkalinity by Titration:	mg/L	meq/L						
Bicarbonate (HCO ₃ ⁻):	160	2.6						
Carbonate (CO ₃ ²⁻):	0	0.0						
Hydroxide (OH):	0	0.0						
aqueous CO ₂ (ppm):	70	0.0						
aqueous H ₂ S (ppm):	15	0.0						
aqueous O ₂ (ppb):								
Calculated TDS (mg/L):	83315							
Density/Specific Gravity (g/cm ³):	1.0750							
Measured Density/Specific Gravity	0							
Conductivity (µmhos):	0							
MCF/D:	0							
BOPD:	0							
BWPD:	0							
			Anion/Cation Ratio:		1.00			

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	Amount	Index	Amt (PTB)
85°F	15 psi		0.000	0.07	3.567	-0.56	0.000	-0.74	0.000
83°F	15 psi		0.000	0.06	2.936	-0.56	0.000	-0.75	0.000
82°F	15 psi		0.000	0.05	2.294	-0.56	0.000	-0.75	0.000
80°F	15 psi		0.000	0.03	1.641	-0.56	0.000	-0.76	0.000
79°F	15 psi		0.000	0.02	0.976	-0.56	0.000	-0.77	0.000
77°F	15 psi		0.000	0.01	0.342	-0.56	0.000	-0.78	0.000
76°F	15 psi		0.000	-0.01	0.000	-0.57	0.000	-0.78	0.000
74°F	15 psi		0.000	-0.02	0.000	-0.57	0.000	-0.79	0.000
73°F	15 psi		0.000	-0.04	0.000	-0.57	0.000	-0.80	0.000
71°F	15 psi		0.000	-0.05	0.000	-0.57	0.000	-0.81	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)
85°F	15 psi		0.000	-1.59	0.000	-10.14	0.000	-1.01	0.000
83°F	15 psi		0.000	-1.59	0.000	-10.15	0.000	-1.03	0.000
82°F	15 psi		0.000	-1.59	0.000	-10.16	0.000	-1.05	0.000
80°F	15 psi		0.000	-1.59	0.000	-10.17	0.000	-1.07	0.000
79°F	15 psi		0.000	-1.59	0.000	-10.17	0.000	-1.09	0.000
77°F	15 psi		0.000	-1.58	0.000	-10.18	0.000	-1.11	0.000
76°F	15 psi		0.000	-1.58	0.000	-10.19	0.000	-1.12	0.000
74°F	15 psi		0.000	-1.58	0.000	-10.20	0.000	-1.14	0.000
73°F	15 psi		0.000	-1.58	0.000	-10.21	0.000	-1.16	0.000
71°F	15 psi		0.000	-1.58	0.000	-10.21	0.000	-1.18	0.000

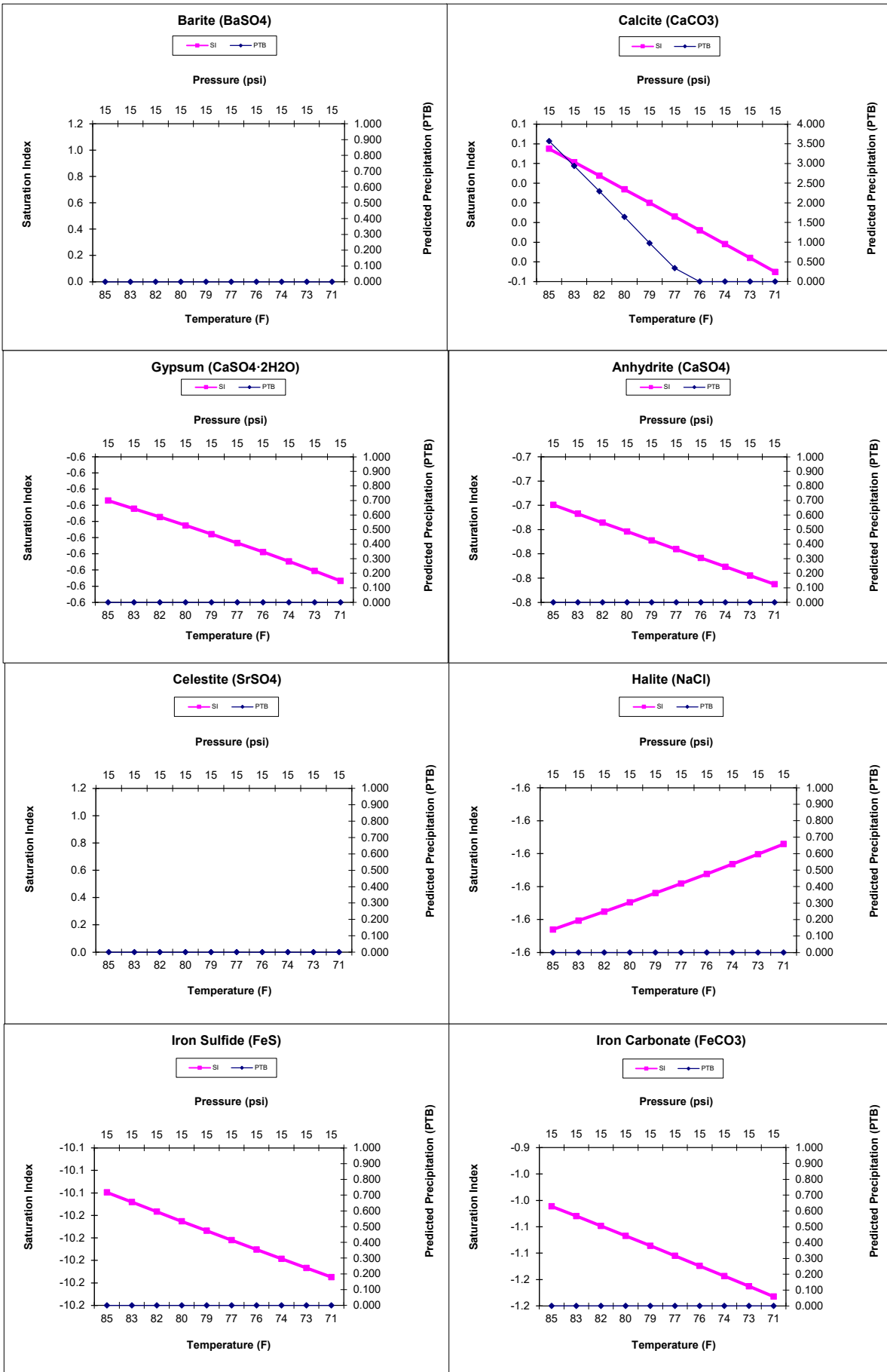
Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

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.



Sample ID: Great Plains, Shulte No. 2 SWD, Tank to Shulte 2 SWD well



Customer	District	Area	Lease	Sample Point	Salesman
Great Plains	Kansas	Norton	ulte No. 2 SW to Shulte 2 SW		Tim Beims

Sampling Date	Analysis Date	Sample ID	Analyst	Chemical Used	Comments
2/20/2020	1/0/1900	0	Tim Beims	0	0

Total Dissolved Solids	Anion-Cation Ratio	Total Hardness	Density	Conductivity
83315	1.00	16500	1.075	0.000

ppm CO2 (aq)	ppm H2S (aq)	ppb O2 (aq)	pH field	pH lab	pH in calc	Bicarbonate	Carbonate	Hydroxide
0.00	0.00	0.00	6.00	NA	0.00	160	0	0

Chloride	Sulfate	Borate	Flouride	Bromide	Nitrite	Nitrate	Phosphate	Silica	Formate
57600	500	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0

Acetate	Propionate	Butyrate	Valerate	Sodium	Potassium	Magnesium	Calcium	Strontium
0.0	0.0	0.0	0.0	29476	0	1040	5200	0

Barium	Iron	Manganese	Zinc	Lead	Aluminum	Chromium	Colbalt	Copper
0.0	9.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00

Barite SI 1	Barite PTB 1	Calcite SI 1	Calcite PTB 1	Gypsum SI 1	Gypsum PTB 1	Anhydrite SI 1
	0	0.07	4	-0.56	0	-0.74

Anhydrite PTB 1	Celestite SI 1	Celestite PTB 1	NaCl SI 1	NaCl PTB 1	FeS SI 1	FeS PTB 1	FeCO3 SI 1
0		0	-1.59	0	-10.14	0	-1.01

FeCO3 PTB 1	SSP Temp 2	SSP Pressure 2	Barite SI 2	Barite PTB 2	Calcite SI 2	Calcite PTB 2
0	71°F	15 psi		0	-0.05	0

Gypsum SI 2	Gypsum PTB 2	Anhydrite SI 2	Anhydrite PTB 2	Celestite SI 2	Celestite PTB 2	NaCl SI 2
-0.57	0	-0.81	0		0	-1.58

NaCl PTB 2	FeS SI 2	FeS PTB 2	FeCO3 SI 2	FeCO3 PTB 2
0	-10.21	0	-1.18	0