

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: 2/2/2024

Complete Water Analysis Report SSP v.8

Customer:	Fossil Energy	Sample Date:	2/2/2024
District:	Norton	Log Out Date:	2/2/2024
Area:	Norton Kansas	Sample ID:	Henderson #1 Water Tank
Lease:	Henderson #1	Analyst:	Bill Foster
Sample Point Name	Water Tank	Chemical Used:	
Sales Rep:	Bill Foster	Comments:	

Fossil Energy, Henderson #1, Water Tank

Field Data			Analysis of Sample							
Initial Temperature (°F):	140		Anions:		mg/L	meq/L	Cations:		mg/L	meq/L
Final Temperature (°F):	70		Chloride (Cl ⁻):	8100	228.2	Sodium (Na ⁺):	400	17.5		
Initial Pressure (psi):	15		Sulfate (SO ₄ ²⁻):	870	18.1	Potassium (K ⁺):	160	4.1		
Final Pressure (psi):	15		Borate (H ₃ BO ₃):	50.0	0.8	Magnesium (Mg ²⁺):	835	68.7		
			Fluoride (F ⁻):	0.0	0.0	Calcium (Ca ²⁺):	3200	159.7		
			Bromide (Br ⁻):	0.0	0.0	Strontium (Sr ²⁺):	125	2.9		
pH:			Nitrite (NO ₂ ⁻):	0.0	0.0	Barium (Ba ²⁺):	0.0	0.0		
pH at time of sampling:	6.7		Nitrate (NO ₃ ⁻):	0.0	0.0	Iron (Fe ²⁺):	0.0	0.0		
pH at time of analysis:	6.7		Phosphate (PO ₄ ³⁻):	0.2	0.0	Manganese (Mn ²⁺):	0.00	0.0		
pH used in Calcs:	6.7		Silica (SiO ₂):	0.0	0.0	Lead (Pb ²⁺):	0.00	0.0		
						Zinc (Zn ²⁺):	0.0	0.0		
Alkalinity by Titration:	mg/L	meq/L	Organic Acids:		mg/L	meq/L				
Bicarbonate (HCO ₃ ⁻):	130	2.1	Formate:	0.0	0.0	Molybdenum (Mo ²⁺):	0.0	0.0		
Carbonate (CO ₃ ²⁻):	0	0.0	Acetate:	0.0	0.0	Nickel (Ni ²⁺):	0.0	0.0		
Hydroxide (OH ⁻):	0	0.0	Propionate:	0.0	0.0	Tin (Sn ²⁺):	0.0	0.0		
aqueous CO ₂ (ppm):	0.0		Butyrate:	0.0	0.0	Titanium (Ti ²⁺):	0.0	0.0		
aqueous H ₂ S (ppm):	0.0		Valerate:	0.0	0.0	Vanadium (V ²⁺):	0.0	0.0		
aqueous O ₂ (ppb):	0.0					Zirconium (Zr ²⁺):	0.0	0.0		
Calculated TDS (mg/L):	13870					Total Hardness:	16000	N/A		
Density/Specific Gravity (g/cm ³):	1.6500									
Measured Density/Specific Gravity	2									
Conductivity (µmhos):	0									
MCF/D:	0									
BOPD:	0									
BWPD:	0		Anion/Cation Ratio:		0.99					

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)
70°F	15 psi		0.000	0.35	10.734	-0.01	0.000	-0.30	0.000
78°F	15 psi		0.000	0.41	12.442	-0.02	0.000	-0.27	0.000
86°F	15 psi		0.000	0.48	14.082	-0.02	0.000	-0.24	0.000
93°F	15 psi		0.000	0.54	15.646	-0.01	0.000	-0.20	0.000
101°F	15 psi		0.000	0.61	17.130	-0.01	0.000	-0.17	0.000
109°F	15 psi		0.000	0.68	18.533	0.00	0.000	-0.13	0.000
117°F	15 psi		0.000	0.75	19.855	0.00	4.384	-0.08	0.000
124°F	15 psi		0.000	0.81	21.097	0.01	14.676	-0.04	0.000
132°F	15 psi		0.000	0.88	22.260	0.02	26.429	0.01	9.275
140°F	15 psi		0.000	0.95	23.348	0.04	39.408	0.06	50.812

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)
70°F	15 psi	0.27	38.609	-4.28	0.000	0	0.000		0.000
78°F	15 psi	0.27	38.494	-4.29	0.000	0	0.000		0.000
86°F	15 psi	0.27	38.652	-4.30	0.000	0	0.000		0.000
93°F	15 psi	0.27	39.075	-4.31	0.000	0	0.000		0.000
101°F	15 psi	0.28	39.755	-4.32	0.000	0	0.000		0.000
109°F	15 psi	0.29	40.676	-4.32	0.000	0	0.000		0.000
117°F	15 psi	0.30	41.822	-4.33	0.000	0	0.000		0.000
124°F	15 psi	0.31	43.170	-4.34	0.000	0	0.000		0.000
132°F	15 psi	0.32	44.699	-4.34	0.000	0	0.000		0.000
140°F	15 psi	0.34	46.382	-4.34	0.000	0	0.000		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.



ScaleSoftPitzer™
SSP2010

Sample ID: Henderson #1 Water Tank Fossil Energy, Henderson #1, Water Tank

