

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	_____	_____	_____	_____	_____
	<b>TOTAL</b>	_____	_____	_____	_____	_____



Central Area Laboratory  
12701 N. Santa Fe Ave, Suite 151  
Oklahoma City, Oklahoma 73114

REPORT DATE: 1/26/2024

**COMPLETE WATER ANALYSIS REPORT** SSP v.2010

<b>CUSTOMER:</b>	ALB INC.	<b>ACCOUNT REP:</b>	STANNLEY HAHN
<b>DISTRICT:</b>	KANSAS	<b>SAMPLE ID:</b>	202310002716
<b>AREA/LEASE:</b>	TITUS	<b>SAMPLE DATE:</b>	2/22/2023
<b>SAMPLE POINT NAME:</b>	TITUS 1	<b>ANALYSIS DATE:</b>	3/10/2023
<b>SITE TYPE:</b>	WELL SITES	<b>ANALYST:</b>	BS
<b>SAMPLE POINT DESCRIPTION:</b>	NOT PROVIDED		
<b>CUSTOMER SAMPLE POINT ID:</b>			

**ALB INC., TITUS, TITUS 1**

FIELD DATA			ANALYSIS OF SAMPLE											
			ANIONS:		mg/L		meq/L		CATIONS:		mg/L		meq/L	
Initial Temperature (°F):	250		Chloride (Cl <sup>-</sup> ):	118877.0	3353.4	Sodium (Na <sup>+</sup> ):	55371.8	2409.6						
Final Temperature (°F):	59		Sulfate (SO <sub>4</sub> <sup>2-</sup> ):	127.0	2.6	Potassium (K <sup>+</sup> ):	265.1	6.8						
Initial Pressure (psi):	100		Borate (H <sub>3</sub> BO <sub>3</sub> ):	63.3	1.0	Magnesium (Mg <sup>2+</sup> ):	2879.6	237.0						
Final Pressure (psi):	15		Fluoride (F <sup>-</sup> ):	ND		Calcium (Ca <sup>2+</sup> ):	10920.7	544.9						
			Bromide (Br <sup>-</sup> ):	ND		Strontium (Sr <sup>2+</sup> ):	921.6	21.0						
pH:			Nitrite (NO <sub>2</sub> <sup>-</sup> ):	ND		Barium (Ba <sup>2+</sup> ):	9.6	0.1						
pH at time of sampling:	6.6		Nitrate (NO <sub>3</sub> <sup>-</sup> ):	ND		Iron (Fe <sup>2+</sup> ):	17.6	0.6						
			Phosphate (PO <sub>4</sub> <sup>3-</sup> ):	0.2	0.0	Manganese (Mn <sup>2+</sup> ):	0.6	0.0						
			Silica (SiO <sub>2</sub> ):	ND		Lead (Pb <sup>2+</sup> ):	ND							
						Zinc (Zn <sup>2+</sup> ):	0.0	0.0						
ALKALINITY BY TITRATION:			mg/L		meq/L									
Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ):	30.5	0.5												
Carbonate (CO <sub>3</sub> <sup>2-</sup> ):	ND													
Hydroxide (OH <sup>-</sup> ):	ND													
			ORGANIC ACIDS:		mg/L		meq/L							
aqueous CO <sub>2</sub> (ppm):	627.0		Formic Acid:	ND		Molybdenum (Mo <sup>2+</sup> ):	ND							
aqueous H <sub>2</sub> S (ppm):	5.0		Acetic Acid:	ND		Nickel (Ni <sup>2+</sup> ):	ND							
aqueous O <sub>2</sub> (ppb):	ND		Propionic Acid:	ND		Tin (Sn <sup>2+</sup> ):	ND							
			Butyric Acid:	ND		Titanium (Ti <sup>2+</sup> ):	ND							
Calculated TDS (mg/L):	189421		Valeric Acid:	ND		Vanadium (V <sup>2+</sup> ):	ND							
Density/Specific Gravity (g/cm <sup>3</sup> ):	1.1214						Zirconium (Zr <sup>2+</sup> ):	ND						
Measured Specific Gravity:	ND						Lithium (Li):	ND						
Conductivity (mmhos):	ND								Total Hardness:	40223	N/A			
Resistivity:	ND													
MCF/D:	No Data													
BOPD:	No Data													
BWPD:	No Data													
			Anion/Cation Ratio:		1.04				ND = Not Determined					

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

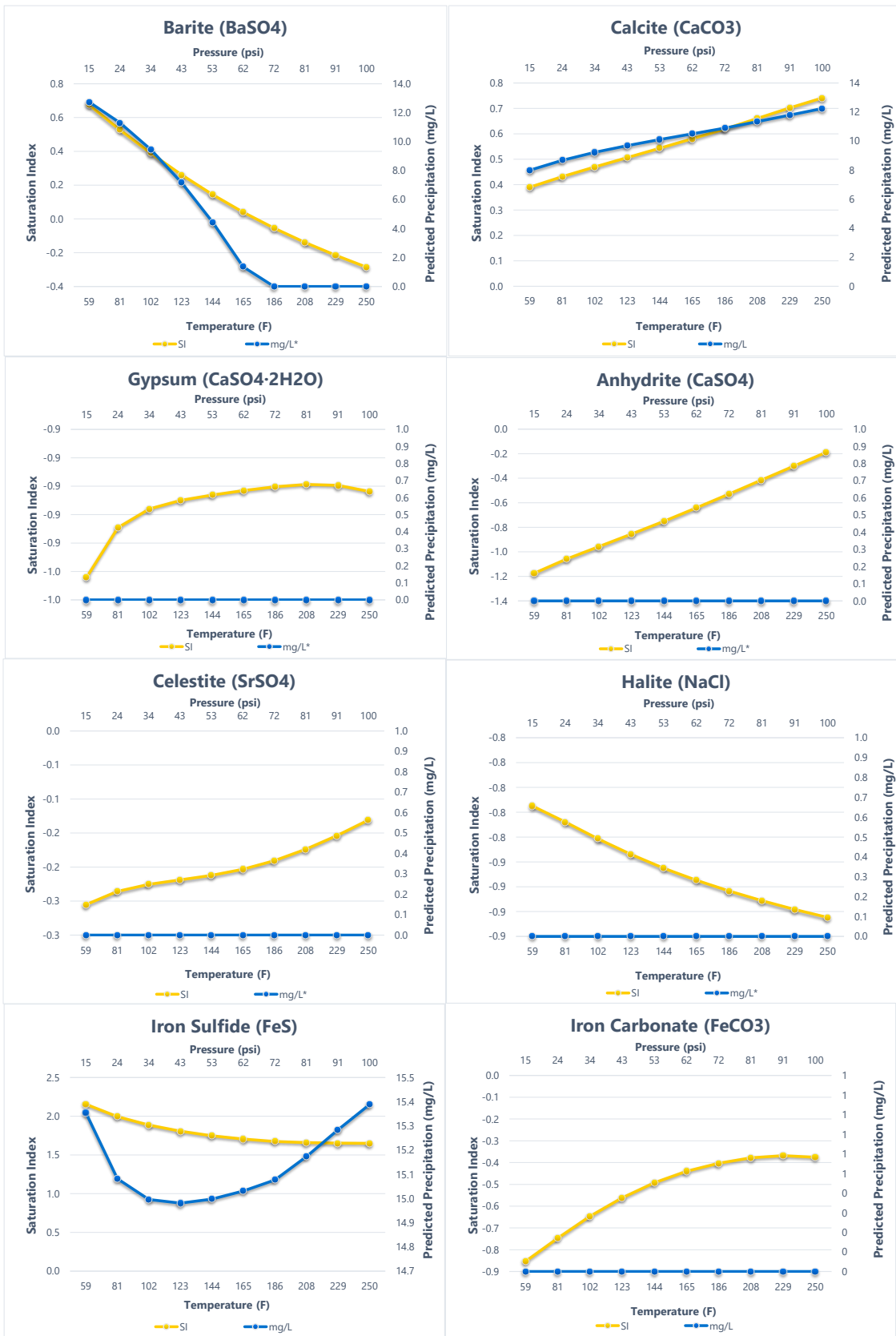
Conditions		Barite (BaSO <sub>4</sub> )		Calcite (CaCO <sub>3</sub> )		Gypsum (CaSO <sub>4</sub> ·2H <sub>2</sub> O)		Anhydrite (CaSO <sub>4</sub> )	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
59°F	15 psi	0.67	4.458	0.39	2.797	-0.96	0.000	-1.17	0.000
81°F	24 psi	0.53	3.957	0.43	3.038	-0.93	0.000	-1.06	0.000
102°F	34 psi	0.39	3.309	0.47	3.230	-0.92	0.000	-0.96	0.000
123°F	43 psi	0.26	2.509	0.51	3.391	-0.91	0.000	-0.85	0.000
144°F	53 psi	0.14	1.559	0.54	3.536	-0.91	0.000	-0.75	0.000
165°F	62 psi	0.04	0.477	0.58	3.675	-0.90	0.000	-0.64	0.000
186°F	72 psi	-0.05	0.000	0.62	3.812	-0.90	0.000	-0.53	0.000
208°F	81 psi	-0.14	0.000	0.66	3.968	-0.90	0.000	-0.42	0.000
229°F	91 psi	-0.22	0.000	0.70	4.128	-0.90	0.000	-0.30	0.000
250°F	100 psi	-0.29	0.000	0.74	4.284	-0.90	0.000	-0.19	0.000

Conditions		Celestite (SrSO <sub>4</sub> )		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO <sub>3</sub> )	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
59°F	15 psi	-0.26	0.000	-0.81	0.000	2.15	5.374	-0.85	0.000
81°F	24 psi	-0.24	0.000	-0.83	0.000	1.99	5.279	-0.75	0.000
102°F	34 psi	-0.23	0.000	-0.84	0.000	1.89	5.249	-0.65	0.000
123°F	43 psi	-0.22	0.000	-0.85	0.000	1.81	5.243	-0.56	0.000
144°F	53 psi	-0.21	0.000	-0.87	0.000	1.75	5.249	-0.49	0.000
165°F	62 psi	-0.20	0.000	-0.87	0.000	1.70	5.261	-0.44	0.000
186°F	72 psi	-0.19	0.000	-0.88	0.000	1.67	5.277	-0.40	0.000
208°F	81 psi	-0.17	0.000	-0.89	0.000	1.66	5.311	-0.38	0.000
229°F	91 psi	-0.15	0.000	-0.90	0.000	1.65	5.349	-0.37	0.000
250°F	100 psi	-0.13	0.000	-0.90	0.000	1.65	5.386	-0.38	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; %CO<sub>2</sub> 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.