

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	_____	_____	_____	_____	_____



DownHole SAT®
FORMATION WATER CHEMISTRY INPUT

Enterra
WSMU #2

Pro-Stim Chemicals
Troy Pelton

Report Date: 10-15-2019
Sample #: 6872

Sampled: 10-07-2019 at 0823
Sample ID: WBaten

CATIONS

Calcium (as Ca)	4480
Magnesium (as Mg)	1045
Barium (as Ba)	0.00
Strontium (as Sr)	0.00
Sodium (as Na)	45303
Potassium (as K)	0.00
Lithium (as Li)	0.00
Ammonia (as NH ₃)	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	1.50
Manganese (as Mn)	1.00
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

ANIONS

Chloride (as Cl)	80000
Sulfate (as SO ₄)	1550
Bromine (as Br)	0.00
Dissolved CO ₂ (as CO ₂)	80.00
Bicarbonate (as HCO ₃)	140.00
Carbonate (as CO ₃)	0.00
Oxalic acid (as C ₂ O ₄)	0.00
Silica (as SiO ₂)	0.00
Phosphate (as PO ₄)	0.00
H ₂ S (as H ₂ S)	5.00
Fluoride (as F)	0.00
Nitrate (as NO ₃)	0.00
Boron (as B)	0.00

PARAMETERS

Calculated T.D.S.	129410
Molar Conductivity	191565
Resistivity	5.22
Sp.Gr.(g/mL)	1.08
Pressure(psia)	14.70
pCO ₂ (psia)	0.0185
pH ₂ S(atm)	< 0.001
Temperature (°F)	73.00
pH	6.60

CORROSION RATE PREDICTION

CO ₂ - H ₂ S Rate(mpy)	0.0127
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COMMENTS All anions & cations are in mg/l

SGB Solutions
5918 S County Road 1273, Midland, TX 79706



DownHole SAT®
FORMATION WATER
DEPOSITION POTENTIAL INDICATORS

Enterra
WSMU #2

Pro-Stim Chemicals
Troy Pelton

Report Date: 10-15-2019
Sample #: 6872

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SATURATION LEVEL

Calcite (CaCO ₃)	0.882
Aragonite (CaCO ₃)	0.823
Witherite (BaCO ₃)	0.00
Strontianite (SrCO ₃)	0.00
Calcium oxalate (CaC ₂ O ₄)	0.00
Magnesite (MgCO ₃)	0.208
Anhydrite (CaSO ₄)	0.563
Gypsum (CaSO ₄ *2H ₂ O)	0.810
Barite (BaSO ₄)	0.00
Celestite (SrSO ₄)	0.00
Fluorite (CaF ₂)	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica (SiO ₂)	0.00
Brucite (Mg(OH) ₂)	< 0.001
Magnesium silicate	0.00
Iron hydroxide (Fe(OH) ₃)	< 0.001
Strengite (FePO ₄ *2H ₂ O)	0.00
Siderite (FeCO ₃)	0.250
Halite (NaCl)	0.0595
Thenardite (Na ₂ SO ₄)	< 0.001
Iron sulfide (FeS)	0.281

FREE ION MOMENTARY EXCESS (ppm)

Calcite (CaCO ₃)	-0.00946
Aragonite (CaCO ₃)	-0.0152
Witherite (BaCO ₃)	-72.29
Strontianite (SrCO ₃)	-23.36
Calcium oxalate (CaC ₂ O ₄)	-0.0391
Magnesite (MgCO ₃)	-0.226
Anhydrite (CaSO ₄)	-607.99
Gypsum (CaSO ₄ *2H ₂ O)	-213.84
Barite (BaSO ₄)	-0.254
Celestite (SrSO ₄)	-347.24
Fluorite (CaF ₂)	-10.97
Calcium phosphate	>-0.001
Hydroxyapatite	-930.90
Silica (SiO ₂)	-91.85
Brucite (Mg(OH) ₂)	0.00307
Magnesium silicate	-282.45
Iron hydroxide (Fe(OH) ₃)	< 0.001
Strengite (FePO ₄ *2H ₂ O)	>-0.001
Siderite (FeCO ₃)	-0.223
Halite (NaCl)	-371793
Thenardite (Na ₂ SO ₄)	-232711
Iron sulfide (FeS)	-0.632

SIMPLE INDICES

Langelier	0.343
Ryznar	5.91
Puckorius	5.04
Larson-Skold Index	1054
Stiff Davis Index	-0.238
Oddo-Tomson	-0.783

BOUND IONS

Calcium	4480	4274
Barium	0.00	0.00
Carbonate	2.64	0.0422
Phosphate	0.00	0.00
Sulfate	1550	608.24

TOTAL

FREE

OPERATING CONDITIONS

Temperature (°F)	73.00
Time(mins)	3.00

SGB Solutions
5918 S County Road 1273, Midland, TX 79706