

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
DEPOSITION POTENTIAL INDICATORS

Enterra Resources
WMU 41-2

Pro-Stim Chemicals
Troy Pelton

(Water injected into WMU 41-1)

WMU 42-3
WMU 42-4

Report Date: 06-14-2022 Sampled: 06-07-2022 at 0823
Sample #: 13906 Sample ID: WBAten

SATURATION LEVEL

Calcite (CaCO ₃)	0.625
Aragonite (CaCO ₃)	0.579
Witherite (BaCO ₃)	0.00
Strontianite (SrCO ₃)	0.00
Calcium oxalate (CaC ₂ O ₄)	0.00
Magnesite (MgCO ₃)	0.155
Anhydrite (CaSO ₄)	0.102
Gypsum (CaSO ₄ *2H ₂ O)	0.169
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)	136.61
Strengite (FePO ₄ *2H ₂ O)	0.00
Siderite (FeCO ₃)	66.37
Halite (NaCl)	< 0.001
Thenardite (Na ₂ SO ₄)	< 0.001
Iron sulfide (FeS)	0.00

FREE ION MOMENTARY EXCESS (ppm)

Calcite (CaCO ₃)	-0.209
Aragonite (CaCO ₃)	-0.253
Witherite (BaCO ₃)	-23.39
Strontianite (SrCO ₃)	-7.57
Calcium oxalate (CaC ₂ O ₄)	-0.282
Magnesite (MgCO ₃)	-1.59
Anhydrite (CaSO ₄)	-1402
Gypsum (CaSO ₄ *2H ₂ O)	-1062
Barite (BaSO ₄)	-0.0224
Celestite (SrSO ₄)	-37.61
Fluorite (CaF ₂)	-33.21
Calcium phosphate	> -0.001
Hydroxyapatite	-574.45
Silica (SiO ₂)	-118.44
Brucite (Mg(OH) ₂)	0.00402
Magnesium silicate	-231.35
Iron hydroxide (Fe(OH) ₃)	< 0.001
Strengite (FePO ₄ *2H ₂ O)	> -0.001
Siderite (FeCO ₃)	0.399
Halite (NaCl)	-446285
Thenardite (Na ₂ SO ₄)	-120230
Iron sulfide (FeS)	-0.0606

SIMPLE INDICES

Langelier	-0.0806
Ryznar	6.95
Puckorius	5.48
Larson-Skold Index	7.05
Stiff Davis Index	-0.211
Oddo-Tomson	-0.214

BOUND IONS

Calcium	201.50	159.26
Barium	0.00	0.00
Carbonate	0.629	0.210
Phosphate	0.00	0.00
Sulfate	715.00	569.33

OPERATING CONDITIONS

Temperature (°F)	76.00
Time(mins)	3.00

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



DownHole SAT®
FORMATION WATER CHEMISTRY INPUT

Enterra Resources
WMU 41-2

Pro-Stim Chemicals
Troy Pelton

(Water injected into WMU 91-1)

WMU42-3
WMU42-4

Report Date: 06-14-2022 Sampled: 06-07-2022 at 0823
Sample #: 13906 Sample ID: WBaten

CATIONS

Calcium (as Ca)	201.50
Magnesium (as Mg)	63.18
Barium (as Ba)	0.00
Strontium (as Sr)	0.00
Sodium (as Na)	914.56
Potassium (as K)	0.00
Lithium (as Li)	0.00
Ammonia (as NH ₃)	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	11.73
Manganese (as Mn)	0.0950
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

ANIONS

Chloride (as Cl)	1197
Sulfate (as SO ₄)	715.00
Bromine (as Br)	0.00
Dissolved CO ₂ (as CO ₂)	136.00
Bicarbonate (as HCO ₃)	422.00
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)	0.00
Fluoride (as F)	0.00
Nitrate (as NO ₃)	0.00
Boron (as B)	0.00

PARAMETERS

Calculated T.D.S.	3530
Molar Conductivity	4603
Resistivity	217.23
Sp.Gr.(g/mL)	1.00
Pressure(psia)	14.70
pCO ₂ (psia)	0.0487
pH ₂ S(atm)	0.00
Temperature (°F)	76.00
pH	6.79

CORROSION RATE PREDICTION

CO₂ - H₂S Rate(mpy) 0.0152

COMMENTS All anions & cations are in mg/l

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