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 # 35263
Name: Enterra Resources, LLC
Address 1: PO BOX 5278
Address 2:
City: EDMOND State: OK Zip: 73083 + 5278
Contact Person: Les Evans
Phone: (405) 341-0005
Lease Name: HANKE B
Well Number: 3

API No.: 15-189-21864-00-01
Permit No: E32572.1
Reporting Year: 2022
(January 1 to December 31)

__ - __ - NW - NE Sec. 14 Twp. 31 S. R. 35 ☐ E ☑ W
(Q/Q/Q/Q)
4652 feet from ☐ N / ☑ S Line of Section
1983 feet from ☑ E / ☐ W Line of Section
County: Stevens

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☑ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 142000 mg/l Specific Gravity: 1.111 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 100 psi Injection Zone: CHESTER
Maximum Authorized Injection Rate: 500 barrels per day
Total Number of Enhanced Recovery Injection Wells Covered by this Permit: 2 *(Include TA's)*

III.

Month:	Total Fluid Injected BBL	Maximum Fluid Pressure	Total Gas Injected MCF	Maximum Gas Pressure	# Days of Injection
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
TOTAL	0		0		

Submitted Electronically

DownHole SAT(tm)

FORMATION WATER CHEMISTRY INPUT

Enterra
Hanke SWD

Pro-Stim Chemicals
Troy Pelton

Report Date: 08-01-2018
Sample #: 4516

Sampled: 07-27-2018 at 0823
Sample ID: WBaten

CATIONS		ANIONS	
Calcium (as Ca)	4880	Chloride (as Cl)	110000
Magnesium (as Mg)	4082	Sulfate (as SO_4)	650.00
Barium (as Ba)	77.00	Bromine (as Br)	0.00
Strontium (as Sr)	0.00	Dissolved CO_2 (as CO_2)	150.00
Sodium (as Na)	57736	Bicarbonate (as HCO_3)	140.00
Potassium (as K)	0.00	Carbonate (as CO_3)	0.00
Lithium (as Li)	0.00	Oxalic acid (as C_2O_4)	0.00
Ammonia (as NH_3)	0.00	Silica (as SiO_2)	0.00
Aluminum (as Al)	0.00	Phosphate(as PO_4)	0.00
Iron (as Fe)	48.00	H_2S (as H_2S)	0.00
Manganese (as Mn)	2.83	Fluoride (as F)	0.00
Zinc (as Zn)	0.00	Nitrate (as NO_3)	0.00
Lead (as Pb)	0.00	Boron (as B)	0.00

PARAMETERS

Calculated T.D.S.	171386
Molar Conductivity	282744
Resistivity	3.54
Sp.Gr.(g/mL)	1.11
Pressure(psia)	14.70
pCO_2(psia)	0.00994
pH_2S(atm)	0.00
Temperature (^oF)	70.00
pH	6.93

CORROSION RATE PREDICTION

CO_2 - H_2S Rate(mpy)	0.00477

COMMENTS All anions & cations are in mg/l

FRENCH CREEK SOFTWARE, INC.
1220 VALLEY FORGE ROAD, SUITE 21, VALLEY FORGE, PA 19460

DownHole SAT(tm)

FORMATION WATER
DEPOSITION POTENTIAL INDICATORS

Enterra
Hanke SWD

Pro-Stim Chemicals
Troy Pelton

Report Date: 08-01-2018
Sample #: 4516

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SATURATION LEVEL

Calcite ($CaCO_3$)	1.42
Aragonite ($CaCO_3$)	1.33
Witherite ($BaCO_3$)	0.00297
Strontianite ($SrCO_3$)	0.00
Calcium oxalate (CaC_2O_4)	0.00
Magnesite ($MgCO_3$)	1.28
Anhydrite ($CaSO_4$)	0.188
Gypsum ($CaSO_4*2H_2O$)	0.257
Barite ($BaSO_4$)	112.40
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 ($Fe(OH)_3$)	30.59
Strengite ($FePO_4*2H_2O$)	0.00
Siderite ($FeCO_3$)	7.88
Halite (NaCl)	0.122
Thenardite ($Na2SO_4$)	< 0.001
Iron sulfide (FeS)	0.00

FREE ION MOMENTARY EXCESS (ppm)

Calcite ($CaCO_3$)	0.0238
Aragonite ($CaCO_3$)	0.0202
Witherite ($BaCO_3$)	-39.40
Strontianite ($SrCO_3$)	-24.95
Calcium oxalate (CaC_2O_4)	-0.0271
Magnesite ($MgCO_3$)	0.0151
Anhydrite ($CaSO_4$)	-905.57
Gypsum ($CaSO_4*2H_2O$)	-695.94
Barite ($BaSO_4$)	129.10
Celestite ($SrSO_4$)	-679.84
Fluorite (CaF_2)	-8.97
Calcium phosphate	>-0.001
Hydroxyapatite	-820.41
Silica (SiO_2)	-81.42
Brucite ($Mg(OH)_2$)	0.00571
Magnesium silicate	-258.64
Iron hydroxide ($Fe(OH)_3$)	< 0.001
Strengite ($FePO_4*2H_2O$)	>-0.001
Siderite ($FeCO_3$)	0.0818
Halite (NaCl)	-291499
Thenardite ($Na2SO_4$)	-244211
Iron sulfide (FeS)	-0.108

SIMPLE INDICES

Langelier	0.825
Ryznar	5.28
Puckorius	4.75
Larson-Skold Index	1423
Stiff Davis Index	0.490
Oddo-Tomson	-0.331

BOUND IONS	**TOTAL**	**FREE**
Calcium	4880	4805
Barium	77.00	77.00
Carbonate	7.20	0.0485
Phosphate	0.00	0.00
Sulfate	650.00	158.01

OPERATING CONDITIONS

Temperature (^oF)	70.00
Time(mins)	3.00

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