KOLAR Document ID: 1621040

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 # 31647
Name: Churchill, Kim dba K.C. Operations
Address 1: 534 SE 70 AVE
Address 2:
City: ELLINWOOD State: KS Zip: 67526 + 9226
Contact Person: Kim Churchill
Phone: (620) 564-2279
Lease Name: BRYANT
Well Number: 1

API No.: 15-009-21827-00-01
Permit No: D26312.0
Reporting Year: 2021
(January 1 to December 31)

(Q/Q/Q/Q) SE - NE - NW Sec. 14 Twp. 20 S. R. 11 ☐ E ☑ W
4369 feet from ☐ N / ☑ S Line of Section
3161 feet from ☑ E / ☐ W Line of Section
County: Barton

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: 0 psi Injection Zone: ARBUCKLE
Maximum Authorized Injection Rate: 4000 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	5730				31
February	4810				28
March	5831				31
April	5701				30
May	5698				31
June	5670				30
July	4170				31
August	4290				31
September	5560				30
October	5210				31
November	5350				30
December	5140				31
TOTAL	63160		0		

Submitted Electronically

Complete Water Analysis

Customer:	**K C OPERATIONS**	Equipment Description:	**Bryant - SWD**	Collection Date:	**02/16/2022**
Geographic Region:	**Kansas**	Sample Point:	**SWD**	Receive Date:	**02/17/2022**
Geographic Location:	**Barton County**	Sample ID:	**AS97343**	Report Date:	**02/22/2022**
System Description:	**Production System**	Account Rep:	**Aaron.Clanton@championx.com**	Location Code:	**483856**

Field Analysis

Analysis	Result		Analysis Method
Bicarbonate	**136.64**	mg/L	Titration
Dissolved CO2	**125.00**	mg/L	Titration
Dissolved H2S	**80.00**	mg/L	Titration
Pressure Surface	**25**	psi	
Temperature	**100**	° F	
pH of Water	**5.50**		Meter

Sample Analysis

Analysis	Result		Analysis Method
Specific Gravity	**1.020**		Densitometer
Ionic Strength	**0.52**	mol/L	Calculation
Total Dissolved Solids	**26707.61**	mg/L	Calculation

Cations - Analyzed By ICP

Iron	**1.024**	mg/L	Measured Sodium	**7090**	mg/L
Manganese	**0.025**	mg/L			
Barium	**0.903**	mg/L			
Strontium	**70.82**	mg/L			
Calcium	**1254**	mg/L			
Magnesium	**426.2**	mg/L			
Sodium	**7090.00**	mg/L			

Anions - Analyzed By IC

Chloride	**15716**	mg/L
Sulfate	**2012**	mg/L

Scale Type

Anhydrite CaSO4 PTB	N/A	**Anhydrite CaSO4 SI**	-0.60
Barite BaSO4 PTB	0.4	**Barite BaSO4 SI**	1.05
Calcite CaCO3 PTB	N/A	**Calcite CaCO3 SI**	-1.75
Celestite SrSO4 PTB	22.3	**Celestite SrSO4 SI**	0.28
Gypsum CaSO4 PTB	N/A	**Gypsum CaSO4 SI**	-0.44
Hemihydrate CaSO4 PTB	N/A	**Hemihydrate CaSO4 SI**	-0.37

Comments

Scaling predictions calculated using Oddo-Tomson model