KOLAR Document ID: 1630032

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 # 33629
Name: Great Plains Energy, Inc.
Address 1: 6121 S 58TH ST, STE B
Address 2:
City: LINCOLN State: NE Zip: 68516 + 3669
Contact Person: Matthew Mondero
Phone: (402) 443-6125
Lease Name: SAUVAGE
Well Number: 4

API No.: 15-039-20986-00-01
Permit No: E31992.4
Reporting Year: 2021
(January 1 to December 31)

____ - NE - SW - SE Sec. 26 Twp. 4 S. R. 30 ☐ E ☑ W
(Q/Q/Q/Q)
1155 feet from ☐ N / ☑ S Line of Section
1550 feet from ☑ E / ☐ W Line of Section
County: Decatur

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☑ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 91603 mg/l Specific Gravity: 1.052 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1500 psi Injection Zone: LANSING-KANSAS CITY,TORONTO
Maximum Authorized Injection Rate: 1000 barrels per day
Total Number of Enhanced Recovery Injection Wells Covered by this Permit: 1 *(Include TA's)*

III.

Month:	Total Fluid Injected BBL	Maximum Fluid Pressure	Total Gas Injected MCF	Maximum Gas Pressure	# Days of Injection
January	3941	225	0	0	31
February	2601	225	0	0	20
March	3417	225	0	0	31
April	4393	225	0	0	30
May	5127	225	0	0	31
June	4704	225	0	0	30
July	3997	225	0	0	31
August	5426	225	0	0	31
September	4217	225	0	0	30
October	4694	225	0	0	31
November	6372	225	0	0	30
December	4096	225	0	0	31
TOTAL	52985		0		

Submitted Electronically

Complete Water Analysis

Customer:	**GREAT PLAINS ENERGY INC**	Equipment Description:	**Swede Hollow Injection**	Collection Date:	**02/11/2022**
Geographic Region:	**Kansas**	Sample Point:	**Injection**	Receive Date:	**02/22/2022**
Geographic Location:	**Decatur County**	Sample ID:	**AT02253**	Report Date:	**02/25/2022**
System Description:	**Production System**	Account Rep:	**Steve.Eckhardt@championx.com**	Location Code:	**470211**

Field Analysis

Analysis	Result		Analysis Method
Bicarbonate	**459**	mg/L	Titration
Dissolved CO2	**220**	mg/L	Titration
Dissolved H2S	**132.6**	mg/L	Titration
Pressure Surface	**10**	psi	
Temperature	**76**	° F	
pH of Water	**6.9**		Meter

Sample Analysis

Analysis	Result		Analysis Method
Specific Gravity	**1.052**		Densitometer
Ionic Strength	**1.63**	mol/L	Calculation
Total Dissolved Solids	**91603.46**	mg/L	Calculation

Cations - Analyzed By ICP

Iron	**0.320**	mg/L	Measured Sodium	**33410**	mg/L
Manganese	**0.171**	mg/L			
Barium	**11.97**	mg/L			
Strontium	**402.4**	mg/L			
Calcium	**1254**	mg/L			
Magnesium	**540.6**	mg/L			
Sodium	**33410.00**	mg/L			

Anions - Analyzed By IC

Chloride	**55207**	mg/L
Sulfate	**318**	mg/L

Scale Type

Anhydrite CaSO4 PTB	N/A	**Anhydrite CaSO4 SI**	-1.63
Barite BaSO4 PTB	6.5	**Barite BaSO4 SI**	1.08
Calcite CaCO3 PTB	N/A	**Calcite CaCO3 SI**	-0.48
Celestite SrSO4 PTB	N/A	**Celestite SrSO4 SI**	-0.05
Gypsum CaSO4 PTB	N/A	**Gypsum CaSO4 SI**	-1.42
Hemihydrate CaSO4 PTB	N/A	**Hemihydrate CaSO4 SI**	-1.43

Comments

Scaling predictions calculated using Oddo-Tomson model