KOLAR Document ID: 1554686

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 # 7311
Name: Shakespeare Oil Co., Inc.
Address 1: 202 W MAIN ST
Address 2:
City: SALEM State: IL Zip: 62881 + 1519
Contact Person: Don Williams
Phone: (618) 548-1585
Lease Name: HINEMAN UNIT
Well Number: 1-28

API No.: 15-101-22508-00-01
Permit No: E32775.1
Reporting Year: 2020
(January 1 to December 31)

SW - NW - SW - NW Sec. 28 Twp. 18 S. R. 28 ☐ E ☑ W
(Q/Q/Q/Q)
3330 feet from ☐ N / ☑ S Line of Section
5140 feet from ☑ E / ☐ W Line of Section
County: Lane

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☑ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 56793 mg/l Specific Gravity: 1.044 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1200 psi Injection Zone: LKC
Maximum Authorized Injection Rate: 600 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	2077	0	0	0	31
February	1842	0	0	0	29
March	1998	0	0	0	31
April	2305	0	0	0	30
May	2067	0	0	0	29
June	2111	0	0	0	30
July	2226	0	0	0	30
August	1986	0	0	0	27
September	858	0	0	0	9
October	2908	0	0	0	31
November	2290	0	0	0	30
December	1550	0	0	0	22
TOTAL	24218		0		

Submitted Electronically

CHAMPIONX

Complete Water Analysis Report

Customer: **SHAKESPEARE OIL COMPANY**
Region: **Kansas**
Location: **Lane County**
System: **Production System**

Equipment: **Hineman Unit 1-28**
Sample Point: **Bleeder**
Sample ID: **AQ70664**
Acct Rep Email: **Michael.Walters@championx.com**

Collection Date: **02/10/2021**
Receive Date: **02/10/2021**
Report Date: **02/11/2021**
Location Code: **430648**

Field Analysis

Bicarbonate	**195** mg/L	Dissolved CO2	**141** mg/L	Dissolved H2S	**99** mg/L
Pressure Surface	**25** psi	Temperature	**100** ° F	pH of Water	**7.5**

Sample Analysis

Conductivity (Calculated)	**88739** µS - cm3	Ionic Strength	**1.03** mol/L	Resistivity	**0.113** ohms - m
Specific Gravity	**1.044**	Total Dissolved Solids	**56793.05** mg/L		

Cations

Iron	**<0.1** mg/L	Manganese	**<0** mg/L	Barium	**0.213** mg/L
Strontium	**26.54** mg/L	Calcium	**848.2** mg/L	Magnesium	**337.1** mg/L
Sodium	**19920.00** mg/L				

Anions

Chloride	**32357** mg/L	Sulfate	**3109** mg/L

Scale Type

Anhydrite CaSO4 PTB	N/A	**Anhydrite CaSO4 SI**	-0.64
Barite BaSO4 PTB	0.1	**Barite BaSO4 SI**	0.35
Calcite CaCO3 PTB	N/A	**Calcite CaCO3 SI**	-0.03
Celestite SrSO4 PTB	N/A	**Celestite SrSO4 SI**	-0.12
Gypsum CaSO4 PTB	N/A	**Gypsum CaSO4 SI**	-0.52
Hemihydrate CaSO4 PTB	N/A	**Hemihydrate CaSO4 SI**	-0.51

Comments

Scaling predictions calculated using Oddo-Tomson model