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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: HARPER-TALDO
Well Number: 1-22

API No.: 15-101-22435-00-01
Permit No: E32554.1
Reporting Year: 2020
(January 1 to December 31)

SE (Q) - SW (Q) - SE (Q) - NE (Q) Sec. 22 Twp. 18 S. R. 29 ☐ E ☑ W
2483 feet from ☑ N / ☐ S Line of Section
926 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: 47388 mg/l Specific Gravity: 1.039 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1200 psi Injection Zone: ALTAMONT,JOHNSON
Maximum Authorized Injection Rate: 750 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	481	600	0	0	24
February	475	750	0	0	21
March	201	800	0	0	22
April	762	1200	0	0	24
May	1266	950	0	0	31
June	5713	1000	0	0	30
July	4670	1100	0	0	26
August	5091	900	0	0	31
September	4383	900	0	0	30
October	4533	900	0	0	31
November	4572	1000	0	0	30
December	4285	800	0	0	31
TOTAL	36432		0		

Submitted Electronically

CHAMPIONX

Complete Water Analysis Report

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

Equipment: **Harper Taldo 1-22**
Sample Point: **Bleeder**
Sample ID: **AQ70662**
Acct Rep Email: **Michael.Walters@championx.com**

Collection Date: **02/10/2021**
Receive Date: **02/10/2021**
Report Date: **02/11/2021**
Location Code: **430647**

Field Analysis

Bicarbonate	**229** mg/L	Dissolved CO2	**229** mg/L	Dissolved H2S	**36** mg/L
Pressure Surface	**25** psi	Temperature	**100** ° F	pH of Water	**7.5**

Sample Analysis

Conductivity (Calculated)	**74043** µS - cm3	Ionic Strength	**0.85** mol/L	Resistivity	**0.135** ohms - m
Specific Gravity	**1.039**	Total Dissolved Solids	**47387.55** mg/L		

Cations

Iron	**<0.1** mg/L	Manganese	**<0** mg/L	Barium	**0.239** mg/L
Strontium	**30.01** mg/L	Calcium	**552.0** mg/L	Magnesium	**254.3** mg/L
Sodium	**17370.00** mg/L				

Anions

Chloride	**26536** mg/L	Sulfate	**2416** mg/L

Scale Type

Anhydrite CaSO4 PTB	N/A	**Anhydrite CaSO4 SI**	-0.90
Barite BaSO4 PTB	0.1	**Barite BaSO4 SI**	0.40
Calcite CaCO3 PTB	N/A	**Calcite CaCO3 SI**	-0.06
Celestite SrSO4 PTB	N/A	**Celestite SrSO4 SI**	-0.10
Gypsum CaSO4 PTB	N/A	**Gypsum CaSO4 SI**	-0.76
Hemihydrate CaSO4 PTB	N/A	**Hemihydrate CaSO4 SI**	-0.73

Comments

Scaling predictions calculated using Oddo-Tomson model