

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 # _____
Name: _____
Address 1: _____
Address 2: _____
City: _____ State: _____ Zip: _____ + _____
Contact Person: _____
Phone: (_____) _____
Lease Name: _____
Well Number: _____

API No.: _____
Permit No.: _____
Reporting Year: _____
(January 1 to December 31)
____ - ____ - ____ - ____ Sec. ____ Twp. ____ S. R. ____ E W
(a/a/a/a)
_____ feet from N / S Line of Section
_____ feet from E / W Line of Section
County: _____

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: _____ psi Injection Zone: _____
Maximum Authorized Injection Rate: _____ 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	_____	_____	_____	_____	_____
	February	_____	_____	_____	_____	_____
	March	_____	_____	_____	_____	_____
	April	_____	_____	_____	_____	_____
	May	_____	_____	_____	_____	_____
	June	_____	_____	_____	_____	_____
	July	_____	_____	_____	_____	_____
	August	_____	_____	_____	_____	_____
	September	_____	_____	_____	_____	_____
	October	_____	_____	_____	_____	_____
	November	_____	_____	_____	_____	_____
	December	_____	_____	_____	_____	_____
	TOTAL	_____	_____	_____	_____	_____



Cochran Chemical Company, Inc.

P. O. Drawer 1341
Wewoka, Ok. 74881

WATER ANALYSIS

COMPANY: Warren American Oil	LEASE & WELL: Richardson # 1
FIELD: Hackney East	COUNTY: Cowley STATE: KS
WATER: N/A (Bbls/Day)	Oil: N/A (Bbls/Day) SAMPLE POINT: well location
FORMATION:	DATE SAMPLED: 4/3/2017

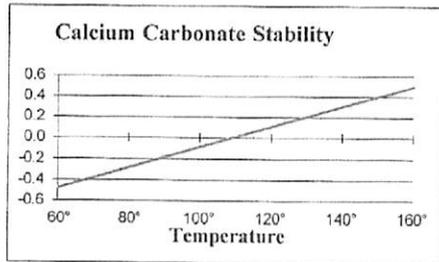
SOLIDS	<i>Cations</i>	me/l	mg/l	<i>Anions</i>	me/l	mg/l
Calcium (Ca)		740.0	14,800	Chloride (Cl)	3,662.0	130,000
Magnesium (Mg)		303.4	3,680	Bicarbonate (HCO ³⁻)	1.5	92
Sodium (Na)		2,626.3	60,406	Sulfate (SO ₄)	6.3	300
Barium (Ba)		0.0	0			
Iron, Total:		2.3	42	Total Dissolved Solids (mg/l):		209,277
Iron, Ferrous:		2.2	40			
Iron, Ferric:		0.1	2			

GASES:	
Oxygen, O ₂ :	N/A
Carbon Dioxide, CO ₂ :	100
Hydrogen Sulfide, H ₂ S:	0.5

Specific Gravity: 1.1046
pH: 6.1

Calcium Carbonate

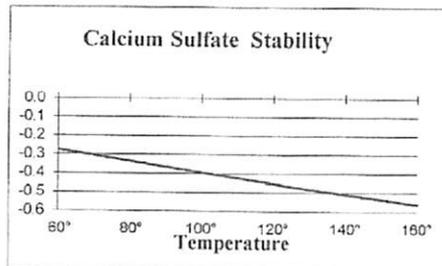
Temp	S.I.
60°	-0.47
80°	-0.28
100°	-0.08
120°	0.11
140°	0.31
160°	0.50



Positive values indicate precipitation.

Calcium Sulfate

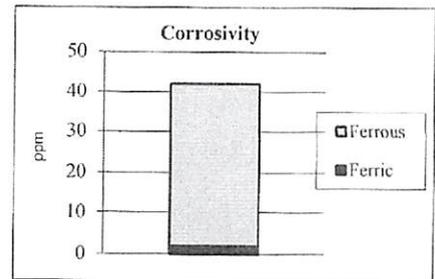
Temp	S.I.
60°	-0.27
80°	-0.33
100°	-0.39
120°	-0.45
140°	-0.51
160°	-0.56



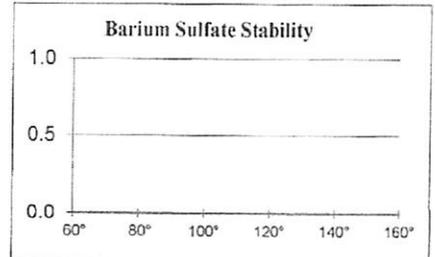
Positive values indicate precipitation.

Barium Sulfate

Temp	S.I.
60°	0.0
80°	0.0
100°	0.0
120°	0.0
140°	0.0
160°	0.0



Ferric iron is loss due to corrosion.
Ferrous iron is natural formation iron.



Positive values indicate precipitation.

NOTES: water sample temperature 63 degrees
will report bacteria test results when available

Tested by: Shidler