

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	_____	_____	_____	_____	_____
	<b>TOTAL</b>	_____	_____	_____	_____	_____

### Water Analysis Report

Attention: **Richard.Myers@CHAMP-TECH.com**

Location Code: **363606**

Sample ID: **AJ89491**

Login Batch: **2017-12-18-001-LP1**

Collection Date: **12/14/2017**

Receive Date: **12/18/2017**

Report Date: **12/19/2017**

Customer: **Cynosure Energy**

Region: **Kansas**

Location: **Barton County**

System: **Water Supply Well**

Equipment: **Huslig Supply Well**

Lab ID: **ABU-0055**

Sample Point: **Tank**

Analyses	Result	Unit
Dissolved CO2	75	mg/L
Dissolved H2S	0.5	mg/L
pH	6.5	
Pressure	25	psi
Temperature	100	° F

Analyses	Result	Unit
Bicarbonate	48.4	mg/L
Conductivity (Calculated)	1261	µS - cm3
Ionic Strength	0.02	
Resistivity	7.930	ohms - m
Specific Gravity	1.000	
Total Dissolved Solids	807.513	mg/L

Cations	Result	Unit
Iron	0.461	mg/L
Manganese	0.005	mg/L
Barium	0.135	mg/L
Strontium	1.682	mg/L
Calcium	195.3	mg/L
Magnesium	23.52	mg/L
Sodium	46.01	mg/L

Anions	Result	Unit
Chloride	369	mg/L
Sulfate	123	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-2.09
Barite BaSO4 PTB	0.0
Barite BaSO4 SI	0.18
Calcite CaCO3 SI	-1.00
Celestite SrSO4 SI	-1.72
Gypsum CaSO4 SI	-1.92
Hemihydrate CaSO4 SI	-1.68

Saturation Index Calculation (Tomson-Oddo Model)

**Comments**

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## Water Analysis Report

Attention: **Richard.Myers@CHAMP-TECH.com**

Location Code: **355087**

Sample ID: **AJ89489**

Login Batch: **2017-12-18-001-LP1**

Collection Date: **12/14/2017**

Receive Date: **12/18/2017**

Report Date: **12/19/2017**

Customer: **Cynosure Energy**

Region: **Kansas**

Location: **Barton County**

System: **Production**

Equipment: **Huslig 3-9**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

Analyses	Result	Unit
Dissolved CO2	305	mg/L
Dissolved H2S	0.5	mg/L
pH	6.5	
Pressure	25	psi
Temperature	100	° F

Analyses	Result	Unit
Bicarbonate	131.8	mg/L
Conductivity (Calculated)	205005	µS - cm3
Ionic Strength	2.72	
Resistivity	0.049	ohms - m
Specific Gravity	1.108	
Total Dissolved Solids	131235.5	mg/L

Cations	Result	Unit
Iron	30.66	mg/L
Manganese	1.632	mg/L
Barium	8.060	mg/L
Strontium	1126	mg/L
Calcium	10070	mg/L
Magnesium	3355	mg/L
Sodium	34564.31	mg/L

Anions	Result	Unit
Chloride	81637	mg/L
Sulfate	311	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.65
Barite BaSO4 PTB	3.6
Barite BaSO4 SI	0.62
Calcite CaCO3 SI	-0.31
Celestite SrSO4 PTB	77.4
Celestite SrSO4 SI	0.30
Gypsum CaSO4 SI	-0.69
Hemihydrate CaSO4 SI	-0.72

Saturation Index Calculation (Tomson-Oddo Model)
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## Water Analysis Report

Attention: **Richard.Myers@CHAMP-TECH.com**

Location Code: **355086**

Sample ID: **AJ89490**

Login Batch: **2017-12-18-001-LP1**

Collection Date: **12/14/2017**

Receive Date: **12/18/2017**

Report Date: **12/19/2017**

Customer: **Cynosure Energy**

Region: **Kansas**

Location: **Barton County**

System: **Production**

Equipment: **Huslig 2-9**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

Analyses	Result	Unit
Dissolved CO2	310	mg/L
Dissolved H2S	0.5	mg/L
pH	6.5	
Pressure	25	psi
Temperature	100	° F

Analyses	Result	Unit
Bicarbonate	136.7	mg/L
Conductivity (Calculated)	187479	µS - cm3
Ionic Strength	2.38	
Resistivity	0.053	ohms - m
Specific Gravity	1.083	
Total Dissolved Solids	119995.6	mg/L

Cations	Result	Unit
Iron	8.464	mg/L
Manganese	0.217	mg/L
Barium	19.79	mg/L
Strontium	1153	mg/L
Calcium	5905	mg/L
Magnesium	2907	mg/L
Sodium	35402.38	mg/L

Anions	Result	Unit
Chloride	74448	mg/L
Sulfate	15	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-2.20
Barite BaSO4 SI	-0.29
Calcite CaCO3 SI	-0.54
Celestite SrSO4 SI	-1.00
Gypsum CaSO4 SI	-2.21
Hemihydrate CaSO4 SI	-2.24

Saturation Index Calculation (Tomson-Oddo Model)
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