KOLAR Document ID: 1380750

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 # 3309
Name: Eagle Petroleum, Inc.
Address 1: PO BOX 335
Address 2:
City: ELLINWOOD State: KS Zip: 67526 + 0335
Contact Person: RON HICKEL15
Phone: ( 620 ) 793-2037
Lease Name: HARTER B
Well Number: 1

API No.: 15-185-00718-00-02
Permit No: D31328.0
Reporting Year: 2017
*(January 1 to December 31)*

(Q/Q/Q/Q) SW - NW - SW Sec. 9 Twp. 21 S. R. 13 ☐ E ☑ W
1631 feet from ☐ N / ☑ S Line of Section
4941 feet from ☑ E / ☐ W Line of Section
County: Stafford

**I. Injection Fluid:**

Type *(Pick one)*: ☐ Fresh Water ☑ Treated Brine ☐ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 2891729 mg/l Specific Gravity: 1.016 Additives:
*(Attach water analysis, if available)*

**II. Well Data:**

Maximum Authorized Injection Pressure: 0 psi Injection Zone: ARBUCKLE
Maximum Authorized Injection Rate: 2000 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 | 9300 | 0 | 0 | | 31 |
| February | 8400 | 0 | 0 | | 28 |
| March | 9300 | 0 | 0 | | 31 |
| April | 9000 | 0 | 0 | | 30 |
| May | 9300 | 0 | 0 | | 31 |
| June | 9000 | 0 | 0 | | 30 |
| July | 9300 | 0 | 0 | | 31 |
| August | 9300 | 0 | 0 | | 31 |
| September | 9000 | 0 | 0 | | 30 |
| October | 9300 | 0 | 0 | | 31 |
| November | 9000 | 0 | 0 | | 30 |
| December | 9300 | 0 | 0 | | 31 |
| ***TOTAL*** | 109500 | | 0 | | |

Submitted Electronically

NALCO Champion

An Ecolab Company

# Water Analysis Report

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

Location Code: **29075**

Sample ID: **AK03693**

Login Batch: **2018-01-12-001-LP1**

Collection Date: **01/09/2018**

Receive Date: **01/12/2018**

Report Date: **01/12/2018**

Customer: **Eagle Petroleum Inc. (1507789)**

Region: **Kansas(KS)**

Location: **Barton, KS**

System: **Production System**

Equipment: **Well Southern B**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

| Analyses | Result | Unit |
|---|---|---|
| Dissolved CO2 | **264** | mg/L |
| Dissolved H2S | **60** | mg/L |
| pH | **7.2** | |
| Pressure | **25** | psi |
| Temperature | **74** | ° F |

| Analyses | Result | Unit |
|---|---|---|
| Bicarbonate | **332** | mg/L |
| Conductivity (Calculated) | **33656** | µS - cm3 |
| Ionic Strength | **0.41** | |
| Resistivity | **0.297** | ohms - m |
| Specific Gravity | **1.010** | |
| Total Dissolved Solids | **21541.96** | mg/L |

| Cations | Result | Unit |
|---|---|---|
| Iron | **1.799** | mg/L |
| Manganese | **0.055** | mg/L |
| Barium | **0.081** | mg/L |
| Strontium | **34.51** | mg/L |
| Calcium | **828.9** | mg/L |
| Magnesium | **271.8** | mg/L |
| Sodium | **6942.81** | mg/L |

| Anions | Result | Unit |
|---|---|---|
| Chloride | **11922** | mg/L |
| Sulfate | **1208** | mg/L |

| Scale Type | Result |
|---|---|
| Anhydrite CaSO4 SI | **-1.09** |
| Barite BaSO4 PTB | **0.0** |
| Barite BaSO4 SI | **0.09** |
| Calcite CaCO3 PTB | **7.4** |
| Calcite CaCO3 SI | **0.04** |
| Celestite SrSO4 SI | **-0.15** |
| Gypsum CaSO4 SI | **-0.75** |
| Hemihydrate CaSO4 SI | **-0.63** |

Saturation Index Calculation (Tomson-Oddo Model)

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# Water Analysis Report

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

Location Code: **321312**

Sample ID: **AK03694**

Login Batch: **2018-01-12-001-LP1**

Collection Date: **01/09/2018**

Receive Date: **01/12/2018**

Report Date: **01/12/2018**

Customer: **Eagle Petroleum Inc. (1507789)**

Region: **Kansas(KS)**

Location: **Stafford, KS**

System: **Production System**

Equipment: **Well Harter B-6**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

| Analyses | Result | Unit |
|---|---|---|
| Dissolved CO2 | **220** | mg/L |
| Dissolved H2S | **75** | mg/L |
| pH | **7.5** | |
| Pressure | **25** | psi |
| Temperature | **79** | ° F |

| Analyses | Result | Unit |
|---|---|---|
| Bicarbonate | **205** | mg/L |
| Conductivity (Calculated) | **45165** | µS - cm3 |
| Ionic Strength | **0.56** | |
| Resistivity | **0.221** | ohms - m |
| Specific Gravity | **1.016** | |
| Total Dissolved Solids | **28917.29** | mg/L |

| Cations | Result | Unit |
|---|---|---|
| Iron | **11.34** | mg/L |
| Manganese | **0.259** | mg/L |
| Barium | **0.043** | mg/L |
| Strontium | **30.40** | mg/L |
| Calcium | **1291** | mg/L |
| Magnesium | **365.9** | mg/L |
| Sodium | **9077.35** | mg/L |

| Anions | Result | Unit |
|---|---|---|
| Chloride | **15444** | mg/L |
| Sulfate | **2492** | mg/L |

| Scale Type | Result |
|---|---|
| Anhydrite CaSO4 SI | **-0.63** |
| Barite BaSO4 SI | **-0.07** |
| Calcite CaCO3 PTB | **26.7** |
| Calcite CaCO3 SI | **0.23** |
| Celestite SrSO4 SI | **-0.01** |
| Gypsum CaSO4 SI | **-0.33** |
| Hemihydrate CaSO4 SI | **-0.25** |

Saturation Index Calculation (Tomson-Oddo Model)

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# Water Analysis Report

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

Location Code: **321314**

Sample ID: **AK03695**

Login Batch: **2018-01-12-001-LP1**

Collection Date: **01/10/2018**

Receive Date: **01/12/2018**

Report Date: **01/12/2018**

Customer: **Eagle Petroleum Inc. (1507789)**

Region: **Kansas(KS)**

Location: **Barton Co, KS**

System: **Production System**

Equipment: **Well Knop C-1**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

| Analyses | Result | Unit |
|---|---|---|
| Dissolved CO2 | **211** | mg/L |
| Dissolved H2S | **55** | mg/L |
| pH | **7.2** | |
| Pressure | **25** | psi |
| Temperature | **72** | ° F |

| Analyses | Result | Unit |
|---|---|---|
| Bicarbonate | **307** | mg/L |
| Conductivity (Calculated) | **33805** | µS - cm3 |
| Ionic Strength | **0.42** | |
| Resistivity | **0.296** | ohms - m |
| Specific Gravity | **1.010** | |
| Total Dissolved Solids | **21635.36** | mg/L |

| Cations | Result | Unit |
|---|---|---|
| Iron | **0.094** | mg/L |
| Manganese | **0.048** | mg/L |
| Barium | **0.085** | mg/L |
| Strontium | **39.53** | mg/L |
| Calcium | **988.9** | mg/L |
| Magnesium | **320.8** | mg/L |
| Sodium | **6709.90** | mg/L |

| Anions | Result | Unit |
|---|---|---|
| Chloride | **11848** | mg/L |
| Sulfate | **1421** | mg/L |

| Scale Type | Result |
|---|---|
| Anhydrite CaSO4 SI | **-0.98** |
| Barite BaSO4 PTB | **0.0** |
| Barite BaSO4 SI | **0.16** |
| Calcite CaCO3 PTB | **8.3** |
| Calcite CaCO3 SI | **0.05** |
| Celestite SrSO4 SI | **-0.05** |
| Gypsum CaSO4 SI | **-0.62** |
| Hemihydrate CaSO4 SI | **-0.50** |

Saturation Index Calculation (Tomson-Oddo Model)

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# Water Analysis Report

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

Location Code: **29070**

Sample ID: **AK03696**

Login Batch: **2018-01-12-001-LP1**

Collection Date: **01/10/2018**

Receive Date: **01/12/2018**

Report Date: **01/12/2018**

Customer: **Eagle Petroleum Inc. (1507789)**

Region: **Kansas(KS)**

Location: **Barton, KS**

System: **Production System**

Equipment: **Well Augrim**

Lab ID: **ABU-0055**

Sample Point: **Wellhead**

| Analyses | Result | Unit |
|---|---|---|
| Dissolved CO2 | **255** | mg/L |
| Dissolved H2S | **60** | mg/L |
| pH | **7.5** | |
| Pressure | **25** | psi |
| Temperature | **71** | ° F |

| Analyses | Result | Unit |
|---|---|---|
| Bicarbonate | **337** | mg/L |
| Conductivity (Calculated) | **37183** | µS - cm3 |
| Ionic Strength | **0.47** | |
| Resistivity | **0.269** | ohms - m |
| Specific Gravity | **1.013** | |
| Total Dissolved Solids | **23798.23** | mg/L |

| Cations | Result | Unit |
|---|---|---|
| Iron | **1.323** | mg/L |
| Manganese | **0.054** | mg/L |
| Barium | **0.024** | mg/L |
| Strontium | **27.44** | mg/L |
| Calcium | **1185** | mg/L |
| Magnesium | **316.8** | mg/L |
| Sodium | **7274.59** | mg/L |

| Anions | Result | Unit |
|---|---|---|
| Chloride | **12449** | mg/L |
| Sulfate | **2207** | mg/L |

| Scale Type | Result |
|---|---|
| Anhydrite CaSO4 SI | **-0.75** |
| Barite BaSO4 SI | **-0.26** |
| Calcite CaCO3 PTB | **68.0** |
| Calcite CaCO3 SI | **0.41** |
| Celestite SrSO4 SI | **-0.06** |
| Gypsum CaSO4 SI | **-0.39** |
| Hemihydrate CaSO4 SI | **-0.27** |

Saturation Index Calculation (Tomson-Oddo Model)

**Comments**