Confidentiality Requested: Yes No

# KANSAS CORPORATION COMMISSION **OIL & GAS CONSERVATION DIVISION**

1079136

Form ACO-1 August 2013 Form must be Typed Form must be Signed All blanks must be Filled

#### WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

| OPERATOR: License #                             | API No. 15   |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Name:   | Spot Description:  |  |  |  |  |  |
| Address 1:                                      |  |  |  |  |  |  |
| Address 2:                                      | Feet from Dorth / South Line of Section                    |  |  |  |  |  |
| City: State: Zip:+                              | Feet from East / West Line of Section                      |  |  |  |  |  |
| Contact Person:                                 | Footages Calculated from Nearest Outside Section Corner:   |  |  |  |  |  |
| Phone: ()                                       |  |  |  |  |  |  |
| CONTRACTOR: License #                           | GPS Location: Lat:, Long:                                  |  |  |  |  |  |
| Name:   | (e.g. xx.xxxxx) (e.gxxx.xxxxx)<br>Datum: NAD27 NAD83 WGS84 |  |  |  |  |  |
| Wellsite Geologist:                             |  |  |  |  |  |  |
| Purchaser:                                      | County:  |  |  |  |  |  |
| Designate Type of Completion:                   | Lease Name: Well #:  |  |  |  |  |  |
| New Well Re-Entry Workover                      | Field Name:  |  |  |  |  |  |
|   | Producing Formation:                                       |  |  |  |  |  |
| Gas D&A ENHR SIGW                               | Elevation: Ground: Kelly Bushing:                          |  |  |  |  |  |
| OG   GSW   Temp. Abd.                           | Total Vertical Depth: Plug Back Total Depth:               |  |  |  |  |  |
| CM (Coal Bed Methane)                           | Amount of Surface Pipe Set and Cemented at: Feet           |  |  |  |  |  |
| Cathodic Other (Core, Expl., etc.):             | Multiple Stage Cementing Collar Used?                      |  |  |  |  |  |
| If Workover/Re-entry: Old Well Info as follows: | If yes, show depth set: Feet                               |  |  |  |  |  |
| Operator:                                       | If Alternate II completion, cement circulated from:        |  |  |  |  |  |
| Well Name:                                      | feet depth to:w/sx cmt.                                    |  |  |  |  |  |
| Original Comp. Date: Original Total Depth:      |  |  |  |  |  |  |
| Deepening Re-perf. Conv. to ENHR Conv. to SWD   | Drilling Fluid Management Plan                             |  |  |  |  |  |
| Plug Back Conv. to GSW Conv. to Producer        | (Data must be collected from the Reserve Pit)              |  |  |  |  |  |
| Commingled Permit #:                            | Chloride content: ppm Fluid volume: bbls                   |  |  |  |  |  |
| Dual Completion     Permit #:                   | Dewatering method used:                                    |  |  |  |  |  |
| SWD     Permit #:                               | Location of fluid disposal if hauled offsite:              |  |  |  |  |  |
| ENHR         Permit #:                          |  |  |  |  |  |  |
| GSW Permit #:                                   | Operator Name:   |  |  |  |  |  |
|   | Lease Name: License #:                                     |  |  |  |  |  |
| Spud Date or Date Reached TD Completion Date or | Quarter Sec Twp S. R East West                             |  |  |  |  |  |
| Recompletion Date Recompletion Date             | County: Permit #:  |  |  |  |  |  |

#### AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

# Submitted Electronically

| KCC Office Use ONLY             |  |  |  |  |  |  |  |
|---------------------------------|--|--|--|--|--|--|--|
| Confidentiality Requested       |  |  |  |  |  |  |  |
| Date:                           |  |  |  |  |  |  |  |
| Confidential Release Date:      |  |  |  |  |  |  |  |
| Wireline Log Received           |  |  |  |  |  |  |  |
| Geologist Report Received       |  |  |  |  |  |  |  |
| UIC Distribution                |  |  |  |  |  |  |  |
| ALT I II III Approved by: Date: |  |  |  |  |  |  |  |

|  | Page Two                        | 1079136  |  |  |  |
|--|---------------------------------|--|--|--|--|
| Operator Name:   | Lease Name:                     | Well #:  |  |  |  |
| Sec TwpS. R   East  West                                   | County:                         |  |  |  |  |
| INCTRUCTIONS. Chow important tang of formations paratrated | Datail all agree Bapart all fin | al conice of drill stome tests giving interval tested, time test |  |  |  |

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

| Drill Stem Tests Taken<br>(Attach Additional Sh | eets)                | Yes No                       |                          | -                  | on (Top), Depth ar |                   | Sample                        |
|---|----------------------|------------------------------|--------------------------|--------------------|--------------------|-------------------|-------------------------------|
| Samples Sent to Geological Survey               |                      | Yes No                       | Nam                      | e                  |                    | Тор               | Datum                         |
| Cores Taken<br>Electric Log Run                 |                      | ☐ Yes ☐ No<br>☐ Yes ☐ No     |                          |                    |                    |                   |                               |
| List All E. Logs Run:                           |                      |                              |                          |                    |                    |                   |                               |
|   |                      |                              |                          |                    |                    |                   |                               |
|   |                      |                              | RECORD Ne                |                    |                    |                   |                               |
|   |                      | Report all strings set-      | conductor, surface, inte | ermediate, product | ion, etc.          |                   |                               |
| Purpose of String                               | Size Hole<br>Drilled | Size Casing<br>Set (In O.D.) | Weight<br>Lbs. / Ft.     | Setting<br>Depth   | Type of<br>Cement  | # Sacks<br>Used   | Type and Percent<br>Additives |
|   |                      |                              |                          |                    |                    |                   |                               |
|   |                      |                              |                          |                    |                    |                   |                               |
|   |                      |                              |                          |                    |                    |                   |                               |
|   |                      | ADDITIONAL                   | CEMENTING / SQU          | EEZE RECORD        |                    |                   |                               |
| Purpose:<br>Perforate                           | Depth<br>Top Bottom  | Type of Cement               | # Sacks Used             |                    | Type and F         | Percent Additives |                               |
|   |                      |                              |                          |                    |                    |                   |                               |

| Perforate                  | Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|----------------------------|------------|----------------|--------------|----------------------------|
| Protect Casing             |            |                |              |                            |
| Plug Back TD Plug Off Zone |            |                |              |                            |
|                            | 1          |                | 1            |                            |

No

| Did you perform a hydraulic fracturing treatment on this well?  | Yes |
|---|-----|
| Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? | Yes |
| Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?     | Yes |

| No | (If No, skip questions 2 and 3) |
|----|---------------------------------|
| No | (If No, skip question 3)        |

(If No, fill out Page Three of the ACO-1)

| Shots Per Foot                                  | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated |               |                  |             |       | A             |               | ement Squeeze Record<br>I of Material Used) | Depth |  |
|---|---|---------------|------------------|-------------|-------|---------------|---------------|---|-------|--|
|   |   |               |                  |             |       |               |               |   |       |  |
|   |   |               |                  |             |       |               |               |   |       |  |
|   |   |               |                  |             |       |               |               |   |       |  |
|   |   |               |                  |             |       |               |               |   |       |  |
|   |   |               |                  |             |       |               |               |   |       |  |
| TUBING RECORD: Size: Set At:                    |   |               |                  | Packer      | r At: | Liner Ru      | n:            | No  |       |  |
| Date of First, Resumed Production, SWD or ENHR. |   |               |                  | Producing N |       | ping          | Gas Lift      | Other (Explain)                             |       |  |
| Estimated Production<br>Per 24 Hours            |   |               | Wate             | ər          | Bbls. | Gas-Oil Ratio | Gravity       |   |       |  |
|   |   |               |                  |             |       |               |               |   |       |  |
| DISPOSITION OF GAS:                             |   |               | METHOD OF COMPLE |             | TION: |               | PRODUCTION IN | TERVAL:                                     |       |  |
| Vented Solo                                     | μ 🗌 ι   | Jsed on Lease |                  | Open Hole   | Perf. | Dually        |               | Commingled<br>(Submit ACO-4)                |       |  |
| (If vented, Su                                  | bmit ACO  | -18.)         | (Submit )        |             |       |               |               | (Submit ACO-4)                              |       |  |

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

| Form      | ACO1 - Well Completion         |  |  |  |  |
|-----------|--------------------------------|--|--|--|--|
| Operator  | O'Brien Energy Resources Corp. |  |  |  |  |
| Well Name | e Utz 1-17                     |  |  |  |  |
| Doc ID    | 1079136                        |  |  |  |  |

Tops

| Name                | Тор   | Datum |
|---------------------|-------|-------|
| Heebner             | 4476' | 1795' |
| Toronto             | 4500' | 1819' |
| Lansing             | 4622' | 1941' |
| Marmaton            | 5282' | 2601' |
| Cherokee            | 5461' | 2780' |
| Atoka               | 5718' | 3037' |
| Morrow              | 5777' | 3096' |
| Mississippi Chester | 5910' | 3229' |
| Ste. Genevieve      | 6146' | 3465' |
| St. Louis           | 5910' | 3545' |

Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802 Kansas Corporation Commission

Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Mark Sievers, Chairman Ward Loyd, Commissioner Thomas E. Wright, Commissioner Sam Brownback, Governor

May 08, 2012

Joe Forma O'Brien Energy Resources Corp. 18 CONGRESS ST, STE 207 PORTSMOUTH, NH 03801-4091

Re: ACO1 API 15-119-21310-00-00 Utz 1-17 NE/4 Sec.17-33S-29W Meade County, Kansas

**Dear Production Department:** 

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,

Joe Forma Vice President O'Brien Energy Resources Corp.

| Customer                                       | A 1         | SERVICE<br>I, Kansas |                       | Lease No. |          | Date                                  | Cement Report                        |
|--|-------------|----------------------|-----------------------|-----------|----------|---------------------------------------|--------------------------------------|
| Lease  | Drien       | Enersy               | and the second second | Well #    | 7        | Service Recei                         | 2-2012                               |
| Casing //                                      | 6           | Depth ///            | 81                    | County    |          | 04.4                                  | 2278                                 |
| 8/   | 824         | Depth 14             | Formation             |           | l enal l | 10                                    | 20                                   |
| Job Type                                       | 242         |                      |                       |           |          |                                       |                                      |
|  |             | Pipe I               |                       |           |          | orating Data                          | Cement Data                          |
| Casing size                                    | 818 2       | 4#                   | Tubing Size           |           |          | Shots/Ft                              | Lead UD5K A Con<br>2.95 FF 3-5 R     |
| Depth 14                                       | 199         |                      | Depth 5.5. 42         |           | From     |                                       | - 18.16d-sk 11.4 #                   |
|  | 2.2         |                      | Volume                |           | From     | То                                    |                                      |
|  | 1800        |                      | Max Press             |           | From     | То                                    | Tail in / 50 s/c C /455              |
| Well Conner                                    | ction 8 5/8 |                      | Annulus Vol.          | 1 84 1    | From     | То                                    |                                      |
| Plug Depth                                     | 1450        |                      | Packer Depth          |           | From     | То                                    | 6.336d-51 14.9#                      |
|  | Casing      | Tubing               | Bbis. Pumbed          | Rate      |          | Service                               | e Log                                |
| Time<br>145                                    | Pressure    | Pressure             |                       | Tidle     |          | 1                                     | In locution                          |
| 700  |             |                      |                       | <u> </u>  |          | - Alina U                             | Meeting Air (SD                      |
|  |             |                      |                       |           |          | Darch 1                               | 0.1                                  |
| 200  |             |                      |                       |           |          | Tels luma                             | Casine                               |
| 425  | · · · ·     |                      |                       |           |          | - Circow                              | TE THIS                              |
| 450  | Death       |                      | +                     | 1         |          | HOR UN                                | VOBES                                |
| 500  | 2000        |                      |                       |           |          | 1815500                               |                                      |
| 505  | 300         |                      | 210                   | 60        |          | Pumphe                                | ad cat @ 11.4 #                      |
| 550  | 200         |                      | 36                    | 4.5       |          | Pom Ta                                | il and @ 14.8 #                      |
| 610  |             |                      |                       |           |          | Drog P                                | 15-Wash Up                           |
| 603  |             |                      |                       |           | ļ        | Pis                                   | alace '                              |
| 625  | 200         |                      | 80                    | 5.5       |          | Slan D                                | oun-Displace                         |
| 430  | 300         |                      | 12                    | 20        |          | Land Plus                             | -Float Held                          |
|  | 1000        |                      | 1                     | 1 pl      |          | Coment                                | - To Sortal                          |
|  | -           |                      | L                     |           | 1. II.   | at the second second                  | Salara - States                      |
|  |             |                      |                       |           |          | 5050                                  | -Float Held<br>To Scotoec<br>Amplete |
|  |             |                      |                       |           |          |                                       |                                      |
|  |             |                      |                       | 1         |          |                                       | <u></u>                              |
|  |             | ·                    | 1                     | <u> </u>  |          | · · · · · · · · · · · · · · · · · · · |                                      |
| 10 10  |             |                      |                       | 1         | <u> </u> |                                       |                                      |
| <u> </u>                                       |             |                      |                       |           |          |                                       |                                      |
| _  |             |                      |                       |           |          |                                       |                                      |
|  |             |                      |                       | +         |          |                                       |                                      |
|  |             |                      |                       |           |          |                                       |                                      |
| 10.0   |             |                      |                       |           | L        | ·                                     |                                      |
| Service Units 19870<br>Driver Names J.C. Mauth |             | 27462<br>Eddic       |                       |           |          |                                       |                                      |

Noger

Sen Bentt Station Manager

Cementer

**Customer Representative** 

Taylor Printing, Inc.



# **Cement Report**

| Customer Obrica Energy       |           |             |                | Lease No.         |             |             | Date            | 276.12          |  |
|------------------------------|-----------|-------------|----------------|-------------------|-------------|-------------|-----------------|-----------------|--|
| Lease                        | 17        |             |                | Well # 1.17       |             |             | Service Receipt |                 |  |
| Casing                       | 13 111.5  | Depth 65    | 201            | County Marche     |             |             | State           |                 |  |
| Job Type                     | 1171      | . 51-       | Formation      | Legal Description |             |             |                 |                 |  |
| Pipe Data                    |           |             | Data           |                   |             | Perforating | Data            | Cement Data     |  |
|                              |           | Tubing Size |                |                   | Shots/I     |             | Lead 60 110 POZ |                 |  |
| Depth                        | 305       |             | Depth 57 414   |                   | From        |             | Го              | 1.481+2.54      |  |
| Volume                       | 07        |             | Volume         |                   | From        |             | Го              | 7 576J 54 135#  |  |
| Max Press                    | 200       |             | Max Press      |                   | From        |             | Го              | Tail in 175 MZ  |  |
| Well Conner                  | ction U/V | 7           | Annulus Voi.   |                   | From        |             | Го              | - 1.51117.54    |  |
| Plug Depth                   | (6761)    |             | Packer Depth   |                   | From        |             | Го              | 6646254148#     |  |
| Time                         | Casing    | Tubing      | Bbls. Pumbed   | Rate              |             |             | Servic          |                 |  |
| Time                         | Pressure  | Pressure    | Bbis. Fullibeo | nale              | +           | /           | 391410          | a larchain      |  |
| 505                          |           |             |                |                   | <u> </u>    | Sel         | the di          | Lector Prello   |  |
| 350                          |           |             |                |                   |             | 17          | - 11            | and the age     |  |
| 715                          |           |             | 199            |                   |             | 1           | 2. 2. 8         | All a starter   |  |
| 51/5                         |           |             |                |                   |             | Healt       | - T.            | All             |  |
| 350                          | 7 all     |             | 125            | 10                |             | Aure        | ine Fo          | T.              |  |
| 555                          | 775       | B           | 5              | 100               | - 1         | 2.          | mar te          | harrest         |  |
| 1 alton                      | 7912      |             | 17             | 10.79             |             | 1           | ale to          | Inch            |  |
| 405                          | 725       |             |                | 81.15             |             | 1           | etater -        | Same            |  |
| 615                          | -01       | _           | 1.07           | 5.0               |             | Anna A      | J. C.           | 118 12          |  |
| 670                          |           |             |                |                   |             | Pica.       | Plac            | Abort Blog = 11 |  |
| 675                          | 900       |             | 99             | 65                |             | 1           | solar           |                 |  |
| 1010                         | 910       |             | 10             | 20                |             | 5/m         | 1               | Deplace         |  |
| 1.45                         | 1400      |             |                | - st              |             | Les.        |                 | That Held -     |  |
|                              |           |             |                |                   |             |             |                 |                 |  |
|                              |           | ×.          |                |                   | JosConstell |             |                 |                 |  |
|                              |           |             |                |                   | 1           |             |                 |                 |  |
|                              |           |             |                |                   | T           |             |                 |                 |  |
|                              |           |             |                | 1 . 2             | 1 hank      | KFA USING   | Besic. En       | hery Services   |  |
|                              |           |             |                |                   |             | 1           |                 |                 |  |
|                              |           |             |                |                   |             |             |                 |                 |  |
|                              |           |             |                |                   |             |             |                 |                 |  |
|                              |           |             |                |                   |             |             |                 |                 |  |
| Service Uni                  | 199%      | >           | 27462          | 19878-19          | 683         |             |                 |                 |  |
| Driver Names T. Chever Eddie |           |             |                | Shour             |             |             |                 |                 |  |

Auter

Station Manager

Ton Bentt

Cementer

Samel Charles

# O'Brien Energy Resources, Inc. Utz No. 1-17, Angell South Field Section 17, T33S, R29W Meade County, Kansas

February, 2012

# Well Summary

The O'Brien Energy Resources, Utz No. 1-17, South Angell Field was drilled to a total depth of 6400' in the Mississippian St. Louis Formation in a total of 114 rotating hours for an average of 56 feet/hour. It was drilled 890' to the South of the Crooked Creek No. 2-8 and 927' to the East of the Rickers Ranch North No. 7-17. Formation tops ran low relative to both of these offsets. Formation tops came in 8' to 12' low relative to the Crooked Creek No. 2-8 from the Heebner to the Morrow. The Morrow "B" Sandstone came in 1' low. The Chester, Ste. Genevieve and St. Louis ran 3', 6' and 3' low respectively.

The Morrow came in 13' low relative to the Rickers Ranch North No. 7-17, 927' to the West. The Morrow "B" Sandstone came in 4' low and the Chester 16' low.

Excellent hydrocarbon shows were documented in the Morrow "B" Sandstone intervals(5802'-5820') and (5840'-5848') and with similar lithology types - Sandstone in up to 50% of the samples: Light brown to buff, salt and pepper and speckled green, friable, very fine upper well sorted subround grains, siliceous cement, calcareous, glauconitic, clean to argillaceous in part, fair to good intergranular and fine vuggy porosity, bright light yellow hydrocarbon fluorescence(most SS) good streaming cut, gas bubbles and oil odor when crushed, light brown matrix oil stain. A 180 Unit gas kick occurred from the upper interval and 160 Units from the lower one.

A show occurred in the Morrow "C" Sandstone (5882'-5886'): Medium to light mottled brown, friable, very fine well sorted grains, siliceous and clay cement, very calcerous and fossiliferous in part, carbonaceous inclusions, occasional fair intergranular and vuggy porosity, light speckled pale blue hydrocarbon fluorescence, fair streaming to bleeding cut, gas bubbles and light brown matrix oil stain and slight odor when crushed. A 35 Unit gas increase occurred.

Live oil shows occurred in small percentages of the samples in the St. Louis formation with occasional traces of formation gas.

 $4\frac{1}{2}$ " production casing was run on the Utz No. 1-17 on 2/25/12.

Respectfully Submitted,

Peter Debenham

# WELL DATA

| Operator:            | O'Brien Energy Resources, Inc., John Forma – Portsmouth, NH<br>Geologist: Paul Wiemann – Denver, CO   |  |  |  |  |
|----------------------|---|--|--|--|--|
| Prospect Geologist:  | David Ward, Ed Schuett, Denver  |  |  |  |  |
| Well:                | Utz No. 1-17, Angell South Field  |  |  |  |  |
| Location:            | 559' FNL & 723' FEL, Section 17, T33S, R29W, Meade County, Kansas – Southeast of Plains.  |  |  |  |  |
| Elevation:           | Ground Level 2669', Kelly Bushing 2681'   |  |  |  |  |
| Contractor:          | Duke Drilling Rig No. 6, Type: Double jacknife, triple stand, Toolpusher Rick<br>Schollenbarger, Drillers: Terry Sorter, Danny White, Saul Garcia |  |  |  |  |
| Company Man:         | Roger Pearson – Liberal, Kansas   |  |  |  |  |
| Spud Date:           | 2/19/12   |  |  |  |  |
| Total Depth:         | 2/24/12, Driller 6400', Logger 6396', St. Louis Formation   |  |  |  |  |
| Casing Program:      | 37 joints of 8 5/8", J-2, 24Lbs/ft, set at 1489'. 4 <sup>1</sup> / <sub>2</sub> " production casing set to TD.                                    |  |  |  |  |
| Mud Program:         | Winter Mud, engineer K.L. Rice, displaced 2600', Chem. gel/LCM.   |  |  |  |  |
| Wellsite Consultant: | Peter Debenham with mudlogging trailer, Call depth 4000', Box 350, Drake, CO 80515, 720/220-4860.   |  |  |  |  |
| Samples:             | 30' to 5700', 20' to TD and 10' through zones of interest.  |  |  |  |  |
| Electric Logs:       | Weatherford, engineer Lynn Scott , Array Induction, Compensated Neutron/Density, Microlog, Hi Res.  |  |  |  |  |
| Status:              | 4 $\frac{1}{2}$ " production casing run 2/25/2012.  |  |  |  |  |

#### WELL CHRONOLOGY

# 6 AMDATE DEPTHFOOTAGERIG ACTIVITY

12/17 Rig up casing crew and run and cement 150 joints of 4 <sup>1</sup>/<sub>2</sub>" production casing set at 6313' on the Crooked Creek Offset No. 4-8 with 170 sacks of AA. Cement in rodent holes and rig down.

2/18 Move to location and rig up rotary tools and tarps. Mix spud mud.

2/19 1355' 1355' Blow down mouse hole and rat hole and finish rig up. Spud in 12 1/4" surface hole to 1355'. Survey(1/4 deg.).

2/20 1725' 370' 12 <sup>1</sup>/<sub>4</sub>" to 1591' and circulate and trip for casing. Rig up and cement 37 joints of 8 5/8" set at 1489' and wait on cement and nipple up and pressure test BOP. Trip in and drill plug and cement and 7 7/8" hole to 1630' and trip for Bit No. 3. To 1630'.

| 2/21 | 3290'                   | 1569' | Service rig and survey(3/4 deg.) and clean suction. To 3290'.  |
|------|-------------------------|-------|--|
| 2/22 | 4680'                   | 1390' | Survey(3/4 deg.) and clean suction.                            |
|      | 5560'<br>and circulate. | 880'  | To 5008' and circulate for samples and wiper trip 27 stands to |

2/24 6400' 840' To 6400'TD and circulate. Wiper trip and circulate. Drop survey(1 <sup>1</sup>/<sub>4</sub> deg.) and circulate and condition mud. Trip out for logs and run elogs. Trip in and circulate and trip out laying down. Run and cement 4 <sup>1</sup>/<sub>2</sub>" production casing to TD. Rig down.

#### **BIT RECORD**

| <u>NO.</u> | MAKE | <u>TYPE</u> | <u>SIZE</u> | <u>OUT</u>    | FOOTAGE  | HOURS       |
|------------|------|-------------|-------------|---------------|----------|-------------|
| 1          | STC  | MXCL        | 12 1/4"     | 1491'         | 1491'    | 25          |
| 2          | HTC  | F27I RR     | 7 7/8"      | 1630'         | 139'     | 1 3/4       |
| 3          | HTC  | Q506F       | 7 7/8"      | 6400'         | 4770'    | 87 1/2      |
|            |      |             |             | Total Rotatin | g Hours: | 114         |
|            |      |             | Average:    |               |          | 56.14 Ft/hr |

#### MUD PROPERTIES

| DATE | <b>DEPTH</b> | <u>WT</u> | <u>VIS</u> | <u>PV</u> | <u>YP</u> | <u>рН</u> | <u>WL</u> | <u>CL</u> | LCM-LBS/BBL |
|------|--------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-------------|
| 2/19 | 1011'        | 9.2       | 62         |           |           |           |           |           | 18          |
| 2/20 | 1491'        | 8.3       |            |           |           |           |           |           |             |
| 2/21 | 2760'        | 8.9       | 40         | 2         | 2         | 9.0       | 48.0      | 16K       | 2           |
| 2/22 | 4135'        | 8.9       | 41         | 12        | 12        | 8.5       | 28.0      | 8K        | 4           |
| 2/23 | 5180'        | 9.1       | 45         | 17        | 11        | 10.5      | 9.0       | 4K        | 6           |
| 2/24 | 6325'        | 9.2       | 50         | 20        | 11        | 10.5      | 7.0       | 3.2K      | 4           |

## **DEVIATION RECORD - degree**

503' 1/4, 1491' 1, 2005' 1/2, 2555' 3/4, 4005 3/4, 6400' 1 1/4

## ELECTRIC LOG FORMATION TOPS- KB Elev. 2681'

|                     |       |              | *Crooked Creek No. 2-8 |                 |
|---------------------|-------|--------------|------------------------|-----------------|
| <b>FORMATION</b>    | DEPTH | <b>DATUM</b> | DATUM                  | <b>POSITION</b> |
| Casing              | 1489' | +1192'       |                        |                 |
| Heebner             | 4476' | -1795'       | -1787'                 | -8'             |
| Toronto             | 4500' | -1819'       | -1810'                 | -9'             |
| Lansing             | 4622' | -1941'       | -1930'                 | -11'            |
| Marmaton            | 5282' | -2601'       | -2592'                 | -9'             |
| Cherokee            | 5461' | -2780'       | -2768'                 | -12'            |
| Atoka               | 5718' | -3037'       | -3028'                 | -9'             |
| Morrow              | 5777' | -3096'       | -3087'                 | -9'             |
| "B" SS              | 5802' | -3121'       | -3120'                 | -1'             |
| "C" SS              | 5883' | -3201'       |                        |                 |
| Mississippi Chester | 5910' | -3229'       | -3226'                 | -3'             |
| Ste. Genevieve      | 6146' | -3465'       | -3459'                 | -6'             |
| St. Louis           | 6226' | -3545'       | -3542'                 | -3'             |
| TD                  | 6400' | -3719'       |                        |                 |

\*O'Brien Energy Resources, Crooked Creek No. 2-8, 330'FSL & 660'FEL, Sec. 8 – app. 890' to the North, K.B. Elev. 2680'.

|                     |              |        | <b>*Rickers Ranch North No. 7-17</b> |          |
|---------------------|--------------|--------|--------------------------------------|----------|
| <b>FORMATION</b>    | <b>DEPTH</b> | DATUM  | DATUM                                | POSITION |
| Casing              | 1489'        | +1192' |                                      |          |
| Heebner             | 4476'        | -1795' | -1783'                               | -12'     |
| Toronto             | 4500'        | -1819' | -1813'                               | -6'      |
| Lansing             | 4622'        | -1941' | -1933'                               | -8'      |
| Marmaton            | 5282'        | -2601' | -2595'                               | -6'      |
| Cherokee            | 5461'        | -2780' | -2779'                               | -1'      |
| Atoka               | 5718'        | -3037' | -3035'                               | -2'      |
| Morrow              | 5777'        | -3096' | -3083'                               | -13'     |
| "B" SS              | 5802'        | -3121' | -3117'                               | -4'      |
| "C" SS              | 5883'        | -3201' |                                      |          |
| Mississippi Chester | 5910'        | -3229' | -3213'                               | -16'     |
| Ste. Genevieve      | 6146'        | -3465' | -3447'                               | -18'     |
| St. Louis           | 6226'        | -3545' | -3531'                               | -14'     |
| TD                  | 6400'        | -3719' |                                      |          |

\*O'Brien Energy Resources, Rickers Ranch North No. 7-17, 660'FNL & 1650'FEL, Sec. 17 – app. 927' to the West, K.B. Elev. 2697'.