

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1

June 2009

Form Must Be Typed

Form must be Signed

All blanks must be Filled

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

OPERATOR: License # 5453  
Name: L-K Wireline, Inc.  
Address 1: P. O. Box 1188  
Address 2: \_\_\_\_\_  
City: Hays State: KS Zip: 67601 + \_\_\_\_\_  
Contact Person: Randy K. Longpine  
Phone: ( 785 ) 625.6877  
CONTRACTOR: License # 30606  
Name: Murfin Drilling Co., Inc.  
Wellsite Geologist: Randy Kilian  
Purchaser: \_\_\_\_\_

Designate Type of Completion:

- ☒ New Well ☐ Re-Entry ☐ Workover
- ☐ Oil ☐ WSW ☐ SWD ☐ SIOW  
☐ Gas ☒ D&A ☐ ENHR ☐ SIGW  
☐ OG ☐ GSW ☐ Temp. Abd.  
☐ CM (Coal Bed Methane)  
☐ Cathodic ☐ Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_  
Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- ☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD  
☐ Conv. to GSW

- ☐ Plug Back: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_  
☐ Commingled Permit #: \_\_\_\_\_  
☐ Dual Completion Permit #: \_\_\_\_\_  
☐ SWD Permit #: \_\_\_\_\_  
☐ ENHR Permit #: \_\_\_\_\_  
☐ GSW Permit #: \_\_\_\_\_

11/16/10 11/21/10 11/22/10  
Spud Date or Date Reached TD Completion Date or  
Recompletion Date Recompletion Date

API No. 15 - 051-26052-0000

Spot Description: \_\_\_\_\_  
N2 SE SE NE Sec. 27 Twp. 13 S. R. 16 ☐ East ☒ West  
2,110 Feet from ☒ North / ☐ South Line of Section  
330 Feet from ☒ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- ☒ NE ☐ NW ☐ SE ☐ SW

County: Ellis

Lease Name: Riedel Well #: 4

Field Name: Air Base

Producing Formation: none

Elevation: Ground: 1953' Kelly Bushing: 1958'

Total Depth: 3520' Plug Back Total Depth: surface

Amount of Surface Pipe Set and Cemented at: 263 Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☒ No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: 4100 ppm Fluid volume: 3000 bbls

Dewatering method used: Evaporation

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_ ☐ East ☐ West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

**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.

Signature: Randy K. Longpine  
Title: Randy K. Longpine Date: 4/14/11

**KCC Office Use ONLY**

RECEIVED

☐ Letter of Confidentiality Received

Date: APR 15 2011

☐ Confidential Release Date: \_\_\_\_\_

☒ Wireline Log Received

☒ Geologist Report Received

☐ UIC Distribution

ALT ☐ I ☒ II ☐ III Approved by: DG Date: 4/20/11

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Operator Name: L-K Wireline, Inc. Lease Name: Riedel Well #: 4Sec. 27 Twp. 13 S. R. 16 ☐ East ☒ West County: Ellis

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☒ Yes ☐ No  
(Attach Additional Sheets)Samples Sent to Geological Survey ☐ Yes ☒ NoCores Taken ☐ Yes ☒ NoElectric Log Run ☒ Yes ☐ NoElectric Log Submitted Electronically ☐ Yes ☒ No  
(If no, Submit Copy)

List All E. Logs Run:

Radiation Guard Log

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name Top Datum

See attached geo report

CASING RECORD ☐ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|-------------------|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Surface           | 12 1/4"           | 8 5/8"                    | 23                | 263'          | common         | 165          | 2% gel 3% c.c.             |
|                   |                   |                           |                   |               |                |              |                            |
|                   |                   |                           |                   |               |                |              |                            |

## ADDITIONAL CEMENTING / SQUEEZE RECORD

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

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br>(Amount and Kind of Material Used) | Depth |
|----------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|
|                |                                                                                           |                                                                                   |       |
|                |                                                                                           |                                                                                   |       |
|                |                                                                                           |                                                                                   |       |
|                |                                                                                           |                                                                                   |       |
|                |                                                                                           |                                                                                   |       |

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|                                                 |                                                                                                                                                                         |         |             |                                                                     |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|---------------------------------------------------------------------|
| TUBING RECORD:                                  | Size:                                                                                                                                                                   | Set At: | Packer At:  | Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Date of First, Resumed Production, SWD or ENHR. | Producing Method:<br><input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____ |         |             |                                                                     |
| Estimated Production Per 24 Hours               | Oil Bbls.                                                                                                                                                               | Gas Mcf | Water Bbls. | Gas-Oil Ratio Gravity                                               |

|                                                                                                                                                            |                                                                                                                                                                                                                                                   |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| DISPOSITION OF GAS:<br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br>(If vented, Submit ACO-18.) | METHOD OF COMPLETION:<br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. (Submit ACO-5) <input type="checkbox"/> Commingled (Submit ACO-4) <input type="checkbox"/> Other (Specify) _____ | PRODUCTION INTERVAL:<br>_____<br>_____ |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|

# QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4454

|                                         |                   |                       |                                    |                                                                                                                                          |                     |                                                                                  |                       |
|-----------------------------------------|-------------------|-----------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------|-----------------------|
| Date <u>11-22-10</u>                    | Sec. <u>27</u>    | Twp. <u>13</u>        | Range <u>16</u>                    | County <u>Ellis</u>                                                                                                                      | State <u>Kansas</u> | On Location                                                                      | Finish <u>5:30 PM</u> |
| Lease <u>Prodel</u>                     | Well No. <u>4</u> |                       | Location <u>Walker 21 1/2 into</u> |                                                                                                                                          |                     |                                                                                  |                       |
| Contractor <u>Martin Drilling Rig 8</u> |                   |                       |                                    | Owner                                                                                                                                    |                     |                                                                                  |                       |
| Type Job <u>Plug</u>                    |                   |                       |                                    | To Quality Oilwell Cementing, Inc.                                                                                                       |                     |                                                                                  |                       |
| Hole Size <u>7 7/8</u>                  |                   |                       |                                    | You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |                     |                                                                                  |                       |
| Csg. <u>7 7/8</u>                       |                   |                       |                                    | T.D. <u>3520</u>                                                                                                                         |                     | Charge To <u>L/R Wireline</u>                                                    |                       |
| Tbg. Size                               |                   |                       |                                    | Depth                                                                                                                                    |                     | Street                                                                           |                       |
| Tool                                    |                   |                       |                                    | Depth                                                                                                                                    |                     | City State                                                                       |                       |
| Cement Left in Csg.                     |                   |                       |                                    | Shoe Joint                                                                                                                               |                     | The above was done to satisfaction and supervision of owner agent or contractor. |                       |
| Meas. Line                              |                   |                       |                                    | Displace                                                                                                                                 |                     | Cement Amount Ordered <u>220 col 40 4 1/2 in</u>                                 |                       |
| EQUIPMENT                               |                   |                       |                                    |                                                                                                                                          |                     |                                                                                  |                       |
| Pumptrk <u>1</u>                        | No.               | Cementer <u>Steve</u> |                                    | Common <u>132</u>                                                                                                                        |                     |                                                                                  |                       |
| Bulktrk <u>10</u>                       | No.               | Driver <u>Wade</u>    |                                    | Poz. Mix <u>BB</u>                                                                                                                       |                     |                                                                                  |                       |
| Bulktrk                                 | No.               | Driver <u>Doug</u>    |                                    | Gel. <u>8</u>                                                                                                                            |                     |                                                                                  |                       |
| JOB SERVICES & REMARKS                  |                   |                       |                                    |                                                                                                                                          |                     |                                                                                  |                       |
| Remarks:                                |                   |                       |                                    | Calcium                                                                                                                                  |                     |                                                                                  |                       |
| Rat Hole                                |                   |                       |                                    | Hulls                                                                                                                                    |                     |                                                                                  |                       |
| Mouse Hole                              |                   |                       |                                    | Salt                                                                                                                                     |                     |                                                                                  |                       |
| Centralizers                            |                   |                       |                                    | Flowseal <u>55#</u>                                                                                                                      |                     |                                                                                  |                       |
| Baskets                                 |                   |                       |                                    | Kol-Seal                                                                                                                                 |                     |                                                                                  |                       |
| D/V or Port Collar                      |                   |                       |                                    | Mud CLR 48                                                                                                                               |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | CFL-117 or CD110 CAF 38                                                                                                                  |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Sand                                                                                                                                     |                     |                                                                                  |                       |
| <u>1st Plug @ 1060 250</u>              |                   |                       |                                    | Handling <u>228</u>                                                                                                                      |                     |                                                                                  |                       |
| <u>2nd " " 550 100</u>                  |                   |                       |                                    | Mileage                                                                                                                                  |                     |                                                                                  |                       |
| <u>3rd " " 300 40</u>                   |                   |                       |                                    | FLOAT EQUIPMENT                                                                                                                          |                     |                                                                                  |                       |
| <u>4th " " 40 10</u>                    |                   |                       |                                    | Guide Shoe                                                                                                                               |                     |                                                                                  |                       |
| <u>Port Hole 30</u>                     |                   |                       |                                    | Centralizer                                                                                                                              |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Baskets                                                                                                                                  |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | AFU Inserts                                                                                                                              |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Float Shoe                                                                                                                               |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Latch Down                                                                                                                               |                     |                                                                                  |                       |
| <u>Mouse Hole 15</u>                    |                   |                       |                                    | <u>1 8 1/2 Wood Plug</u>                                                                                                                 |                     |                                                                                  |                       |
| <u>Plug</u>                             |                   |                       |                                    | Pumptrk Charge                                                                                                                           |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Mileage <u>14</u>                                                                                                                        |                     |                                                                                  |                       |
| X Signature <u>Robert Ford</u>          |                   |                       |                                    | Tax                                                                                                                                      |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Discount                                                                                                                                 |                     |                                                                                  |                       |
|                                         |                   |                       |                                    | Total Charge                                                                                                                             |                     |                                                                                  |                       |

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Quality Oilwell  
Cementing

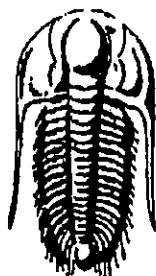
# QUALITY OILWELL CEMENTING, INC.

One 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4598

|                                        |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
|----------------------------------------|----------------------|----------|------------|-------------------------------------|-------------|------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----|-------------|--|--------|--------|
| Date                                   | 11-16-10             | Sec.     | 27         | Twp.                                | 13          | Range      | 16                                                                               | County                                                                                                                                                                         | Ellis | State | Ks | On Location |  | Finish | 8:45pm |
| Lease                                  | Riedel               | Well No. | 44         | Location Walker exit + I-70, 2N, 9S |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Contractor                             | Morton Rig #8        |          |            |                                     |             |            |                                                                                  | Owner                                                                                                                                                                          |       |       |    |             |  |        |        |
| Type Job                               | Surface              |          |            |                                     |             |            |                                                                                  | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |       |       |    |             |  |        |        |
| Hole Size                              | 12 1/4"              |          | T.D.       |                                     | 263'        |            | Charge To LK Wireline/Damar Resources                                            |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Csg.                                   | 8 7/8"               |          | Depth      |                                     | 263'        |            | Street                                                                           |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Tbg. Size                              |                      |          | Depth      |                                     |             |            | City                                                                             |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Tool                                   |                      |          | Depth      |                                     |             |            | State                                                                            |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Cement Left in Csg.                    | 15'                  |          | Shoe Joint |                                     | 15'         |            | The above was done to satisfaction and supervision of owner agent or contractor. |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Meas Line                              |                      |          | Displace   |                                     | 15 3/4 BBLs |            | Cement Amount Ordered 165 sx Common 3% CC                                        |                                                                                                                                                                                |       |       |    |             |  |        |        |
| EQUIPMENT                              |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Pumptrk                                | 1                    | No.      | Cement     | Nede                                |             | 2% Gel     |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Bulktrk                                | 3                    | No.      | Helper     |                                     |             | Common 165 |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Bulktrk                                | 3                    | No.      | Driver     | Doug                                |             | Poz. Mix   |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Bulktrk                                | 3                    | No.      | Driver     | Rick                                |             | Gel. 3     |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| JOB SERVICES & REMARKS                 |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Remarks:                               | Cement dtx Circulate |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Rat Hole                               |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Mouse Hole                             |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Centralizers                           |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Baskets                                |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| D/V or Port Collar                     |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
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| FLOAT EQUIPMENT                        |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Guide Shoe                             |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Centralizer                            |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Baskets                                |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| AFU Inserts                            |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Float Shoe                             |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Latch Down                             |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Pumptrk Charge Surface                 |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Mileage 15                             |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Tax                                    |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Discount                               |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Total Charge                           |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |
| Signature <i>[Signature]</i>           |                      |          |            |                                     |             |            |                                                                                  |                                                                                                                                                                                |       |       |    |             |  |        |        |



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **L-K Wireline Inc**

P O Box 118  
Hays, KS 67601-1188

ATTN: Randy Longpine

**27-13s-16w Ellis,KS**

**Riedel #4**

Start Date: 2010.11.20 @ 13:02:35

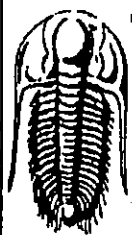
End Date: 2010.11.20 @ 19:08:29

Job Ticket #: 41039

DST #: 1

Trilobite Testing, Inc  
PO Box 1733 · Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

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**TESTING, INC**

## DRILL STEM TEST REPORT

L-K Wireline Inc

P O Box 118  
Hays, KS 67601-1188

ATTN: Randy Longpine

Riedel #4

27-13s-16w Ellis, KS

Job Ticket: 41039

DST#: 1

Test Start: 2010.11.20 @ 13:02:35

### GENERAL INFORMATION:

Formation: LKC C-D

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:22:30

Time Test Ended: 19:08:29

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 42

Interval: 3211.00 ft (KB) To 3255.00 ft (KB) (TVD)

Total Depth: 3255.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1958.00 ft (KB)

1953.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6625

Inside

Press@RunDepth: 20.96 psig @ 3219.00 ft (KB)

Start Date: 2010.11.20

End Date:

2010.11.20

Start Time: 13:02:35

End Time:

19:08:29

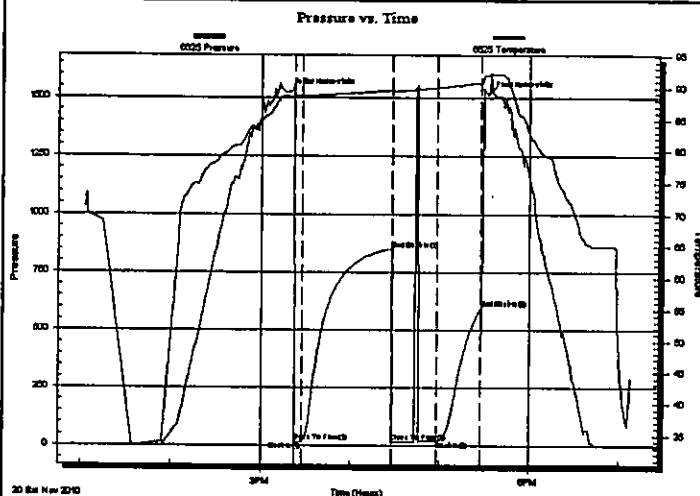
Capacity: 8000.00 psig

Last Calib.: 2010.11.20

Time On Btm: 2010.11.20 @ 15:19:00

Time Off Btm: 2010.11.20 @ 17:32:29

TEST COMMENT: IFP-w k bl surface to 1/8"bl  
ISIP-no bl  
FFP-surface bl died in 5 min, flushed tool  
FSIP-no bl



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1521.46         | 88.69        | Initial Hydro-static |
| 4           | 17.09           | 88.82        | Open To Flow (1)     |
| 9           | 16.63           | 88.82        | Shut-In(1)           |
| 69          | 849.93          | 89.66        | End Shut-In(1)       |
| 70          | 18.05           | 89.52        | Open To Flow (2)     |
| 99          | 20.96           | 90.08        | Shut-In(2)           |
| 129         | 598.43          | 90.84        | End Shut-In(2)       |
| 134         | 1514.18         | 92.01        | Final Hydro-static   |

### Recovery

| Length (ft) | Description       | Volume (bbl) |
|-------------|-------------------|--------------|
| 10.00       | Mud w/show of oil | 0.05         |
|             |                   |              |
|             |                   |              |
|             |                   |              |
|             |                   |              |
|             |                   |              |

### Gas Rates

| Choke (Inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
|----------------|-----------------|------------------|



**TRILOBITE**  
**TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

L-K Wireline Inc

P O Box 118  
Hays, KS 67601-1188

ATTN: Randy Longpine

Riedel #4

27-13s-16w Ellis, KS

Job Ticket: 41039

DST#: 1

Test Start: 2010.11.20 @ 13:02:35

### Tool Information

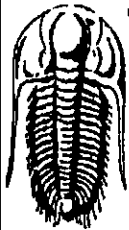
|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3068.00 ft | Diameter: 3.80 inches   | Volume: 43.04 bbl | Tool Weight: 2200.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches   | Volume: 0.00 bbl  | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 150.00 ft  | Diameter: 2.25 inches   | Volume: 0.74 bbl  | Weight to Pull Loose: 55000.00 lb  |
|                           |                    | Total Volume: 43.78 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 28.00 ft           |                         |                   | String Weight: Initial 42000.00 lb |
| Depth to Top Packer:      | 3211.00 ft         |                         |                   | Final 42000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 44.00 ft           |                         |                   |                                    |
| Tool Length:              | 65.00 ft           |                         |                   |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches   |                   |                                    |

Tool Comments:

### Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3191.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3196.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3201.00    |                               |
| Packer           | 5.00        |            |          | 3206.00    | 21.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3211.00    |                               |
| Stubb            | 1.00        |            |          | 3212.00    |                               |
| Perforations     | 7.00        |            |          | 3219.00    |                               |
| Recorder         | 0.00        | 6625       | Inside   | 3219.00    |                               |
| Recorder         | 0.00        | 8652       | Outside  | 3219.00    |                               |
| Blank Spacing    | 33.00       |            |          | 3252.00    |                               |
| Bullnose         | 3.00        |            |          | 3255.00    | 44.00 Bottom Packers & Anchor |

Total Tool Length: 65.00



**TRILOBITE**  
**TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

L-K Wireline Inc

Riedel #4

P O Box 118  
Hays, KS 67601-1188

27-13s-16w Ellis, KS

Job Ticket: 41039

DST#: 1

ATTN: Randy Longpine

Test Start: 2010.11.20 @ 13:02:35

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.92 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

#### Recovery Table

| Length<br>ft | Description       | Volume<br>bbl |
|--------------|-------------------|---------------|
| 10.00        | Mud w/show of oil | 0.049         |

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



