



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1190459  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

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

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

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

Wellsite Geologist: \_\_\_\_\_

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
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

|                                   |                 |   |
|-----------------------------------|-----------------|---|
| Spud Date or<br>Recompletion Date | Date Reached TD | Completion Date or<br>Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

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

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

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

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: \_\_\_\_\_

1190459

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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 |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |

| ADDITIONAL CEMENTING / SQUEEZE RECORD  |                  |                |              |                            |
|--|------------------|----------------|--------------|----------------------------|
| Purpose:   | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| <input type="checkbox"/> Perforate<br><input type="checkbox"/> Protect Casing<br><input type="checkbox"/> Plug Back TD<br><input type="checkbox"/> Plug Off Zone |                  |                |              |                            |
|  |                  |                |              |                            |

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(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 | Acid, Fracture, Shot, Cement Squeeze Record<br><i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |

|                |       |         |            |   |
|----------------|-------|---------|------------|---|
| 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 <i>(Explain)</i> _____ |
|---|--|

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
|                                   |           |         |             |               |         |

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

# QUALITY OILWELL CEMENTING, INC.

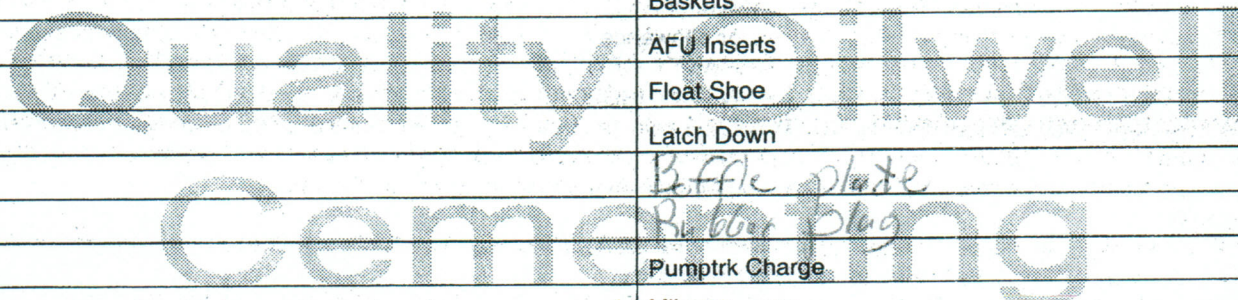
Federal Tax I.D.# 20-2886107

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

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

No. 7604

|  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
|--|----------|------|----|------------|----|-------|----|--|--------|------------------------|----|-------------|--|--------|---------|
| Date   | 11-10-13 | Sec. | 23 | Twp.       | 22 | Range | 15 | County   | Pawnee | State                  | KS | On Location |  | Finish | 1.30 PM |
| Lease  |          |      |    |            |    |       |    | Location   |        | Kadium RD + H-19 25 to |    |             |  |        |         |
| Block well unit  |          |      |    |            |    |       |    | Well No.   |        | 1                      |    |             |  |        |         |
| Contractor   |          |      |    |            |    |       |    | Owner  |        |                        |    |             |  |        |         |
| Royal I  |          |      |    |            |    |       |    | 17051 2nd W Sinto  |        |                        |    |             |  |        |         |
| 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. |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Type Job   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Surface  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Hole Size  |          |      |    | T.D.       |    |       |    | Charge To  |        |                        |    |             |  |        |         |
| 12 1/4   |          |      |    | 933        |    |       |    | Charter Energy   |        |                        |    |             |  |        |         |
| Csg.   |          |      |    | Depth      |    |       |    | Street   |        |                        |    | City        |  |        |         |
| 8 5/8  |          |      |    |            |    |       |    |  |        |                        |    | State       |  |        |         |
| Tbg. Size  |          |      |    | Depth      |    |       |    | City   |        |                        |    | State       |  |        |         |
|  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Tool   |          |      |    | Depth      |    |       |    | The above was done to satisfaction and supervision of owner agent or contractor. |        |                        |    |             |  |        |         |
| 7 1/4  |          |      |    | 7 1/4      |    |       |    |  |        |                        |    |             |  |        |         |
| Cement Left in Csg.  |          |      |    | Shoe Joint |    |       |    | Cement Amount Ordered  |        |                        |    |             |  |        |         |
| 0.322  |          |      |    | 10 1/4     |    |       |    | 475 Com 3/4" K   |        |                        |    |             |  |        |         |
| Meas Line  |          |      |    | Displace   |    |       |    | Flow Seal  |        |                        |    |             |  |        |         |
| 24 LB  |          |      |    | 58.5 BBL   |    |       |    | 2% gel 1/2" # flow seal  |        |                        |    |             |  |        |         |
| EQUIPMENT  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Common   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Pumptrk  |          |      |    | No.        |    |       |    | Cementer   |        |                        |    | Poz. Mix    |  |        |         |
| 5  |          |      |    |            |    |       |    | Helper   |        |                        |    | Mitt        |  |        |         |
| Bulktrk  |          |      |    | No.        |    |       |    | Driver   |        |                        |    | Gel.        |  |        |         |
| 19   |          |      |    |            |    |       |    | Lonnice  |        |                        |    |             |  |        |         |
| Bulktrk  |          |      |    | No.        |    |       |    | Driver   |        |                        |    | Calcium     |  |        |         |
| 24   |          |      |    |            |    |       |    | David L  |        |                        |    |             |  |        |         |
| JOB SERVICES & REMARKS   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Hulls  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Salt   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Remarks:   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Rat Hole   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Flowseal   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Mouse Hole   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Kol-Seal   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Centralizers   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Mud CLR 48   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Baskets  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| CFL-117 or CD110 CAF 38  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| D/V or Port Collar   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Sand   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Handling   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Mileage  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| 579  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| GUIDE EQUIPMENT  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Guide Shoe   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Centralizer  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Baskets  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| AFU Inserts  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Float Shoe   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Latch Down   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Baffle plate   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Rubber Plug  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Pumptrk Charge   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Mileage  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Tax  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Discount   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Total Charge   |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Signature  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |
| Doug Budz  |          |      |    |            |    |       |    |  |        |                        |    |             |  |        |         |



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7564

|          |          |      |    |      |    |       |    |                                     |        |       |    |             |  |        |          |
|----------|----------|------|----|------|----|-------|----|-------------------------------------|--------|-------|----|-------------|--|--------|----------|
| Date     | 11-18-13 | Sec. | 23 | Twp. | 22 | Range | 15 | County                              | Pawnee | State | Ks | On Location |  | Finish | 12:00 Pm |
| Location |          |      |    |      |    |       |    | Radium Rd + K-19, 25, 2 1/2 W, 54th |        |       |    |             |  |        |          |

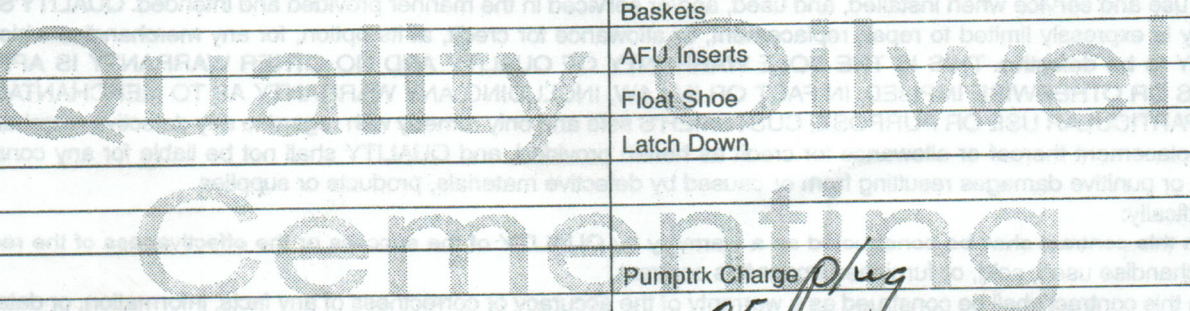
|                     |                |            |         |  |  |
|---------------------|----------------|------------|---------|--|--|
| Lease               | Blackwell unit | Well No.   | 1       | Owner  | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Contractor          | Royal #1       |            |         |  |  |
| Type Job            | Plug           |            |         |  |  |
| Hole Size           | 7 7/8"         | T.D.       | 4010'   | Charge To  | Charter Energy   |
| Csg.                |                | Depth      |         | Street   |  |
| Tbg. Size           | 4 1/2" D.P.    | Depth      | 3080'   | City   | State  |
| Tool                |                | Depth      |         | The above was done to satisfaction and supervision of owner agent or contractor. |  |
| Cement Left in Csg. |                | Shoe Joint |         | Cement Amount Ordered  | 210 SX 60/40 4% Gel  |
| Meas Line           |                | Displace   | H2O/mud | 1/4 # Fla Seal   |  |

| EQUIPMENT |      |     |          |        |    |
|-----------|------|-----|----------|--------|----|
| Pumptrk   | 16   | No. | Cementer | Lonnie | W. |
|           |      |     | Helper   |        |    |
| Bulktrk   | 8    | No. | Driver   | Lonnie | M. |
|           |      |     | Driver   |        |    |
| Bulktrk   | p.u. | No. | Driver   | Rock   |    |
|           |      |     | Driver   |        |    |

| JOB SERVICES & REMARKS |           |   |       |                         |     |
|------------------------|-----------|---|-------|-------------------------|-----|
| Remarks:               | 3080'     | - | 50 SX | Salt                    |     |
| Rat Hole               | 960'      | - | 50 SX | Flowseal                | 50# |
| Mouse Hole             | 300'      | - | 40 SX | Kol-Seal                |     |
| Centralizers           | 60'       | - | 20 SX | Mud CLR 48              |     |
| Baskets                | Rathole   | - | 30 SX | CFL-117 or CD110 CAF 38 |     |
| D/V or Port Collar     | mousehole | - | 20 SX | Sand                    |     |
|                        |           |   |       | Handling                |     |
|                        |           |   |       | Mileage                 |     |

|                      |  |  |  |                 |      |
|----------------------|--|--|--|-----------------|------|
| Cement did Circulate |  |  |  | FLOAT EQUIPMENT |      |
|                      |  |  |  | Guide Shoe      |      |
|                      |  |  |  | Centralizer     |      |
|                      |  |  |  | Baskets         |      |
|                      |  |  |  | AFU Inserts     |      |
|                      |  |  |  | Float Shoe      |      |
|                      |  |  |  | Latch Down      |      |
|                      |  |  |  | Pumptrk Charge  | plug |
|                      |  |  |  | Mileage         | 25   |
|                      |  |  |  | Tax             |      |
|                      |  |  |  | Discount        |      |
|                      |  |  |  | Total Charge    |      |

X Signature *Steve Blum*





## DRILL STEM TEST REPORT

Prepared For: **Charter Energy**

PO Box 252  
Great Bend, KS 67530

ATTN: Jim Musgrove

### **Blackwell Unit #1**

#### **23-22s-15w Pawnee,KS**

Start Date: 2013.11.15 @ 21:21:53

End Date: 2013.11.16 @ 02:22:08

Job Ticket #: 52518                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.20 @ 14:19:26



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy  
 PO Box 252  
 Great Bend, KS 67530  
 ATTN: Jim Musgrove

**23-22s-15w Pawnee, KS**  
**Blackwell Unit #1**  
 Job Ticket: 52518 **DST#: 1**  
 Test Start: 2013.11.15 @ 21:21:53

## GENERAL INFORMATION:

Formation: **LKC "A & B"**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 22:45:23 Tester: Leal Cason  
 Time Test Ended: 02:22:08 Unit No: 45  
**Interval: 3517.00 ft (KB) To 3570.00 ft (KB) (TVD)** Reference Elevations: 1977.00 ft (KB)  
 Total Depth: 3570.00 ft (KB) (TVD) 1971.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 6.00 ft

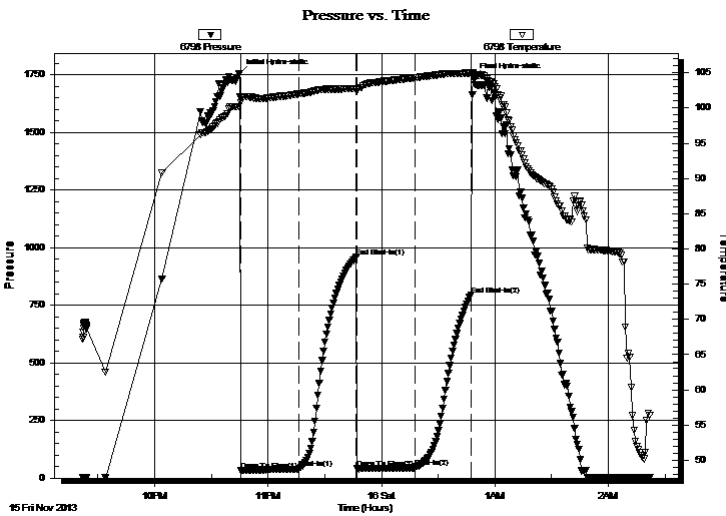
## Serial #: 6798

Inside

Press@RunDepth: 45.65 psig @ 3518.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.11.15 End Date: 2013.11.16 Last Calib.: 2013.11.16  
 Start Time: 21:21:54 End Time: 02:22:08 Time On Btm: 2013.11.15 @ 22:45:08  
 Time Off Btm: 2013.11.16 @ 00:48:23

TEST COMMENT: IF: Weak 3/4 inch Blow  
 IS: No Blow Back  
 FF: Weak 3/4 inch Blow  
 FS: No Blow Back

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1756.70         | 101.58       | Initial Hydro-static |
| 1           | 32.58           | 100.79       | Open To Flow (1)     |
| 32          | 40.81           | 102.02       | Shut-In(1)           |
| 62          | 958.95          | 102.81       | End Shut-In(1)       |
| 62          | 41.89           | 102.61       | Open To Flow (2)     |
| 93          | 45.65           | 104.31       | Shut-In(2)           |
| 123         | 795.91          | 104.98       | End Shut-In(2)       |
| 124         | 1740.07         | 104.84       | Final Hydro-static   |

## Recovery

| Length (ft) | Description   | Volume (bbl) |
|-------------|---------------|--------------|
| 30.00       | SOSM 1%O 99%M | 0.42         |
|             |               |              |
|             |               |              |
|             |               |              |
|             |               |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy  
 PO Box 252  
 Great Bend, KS 67530  
 ATTN: Jim Musgrove

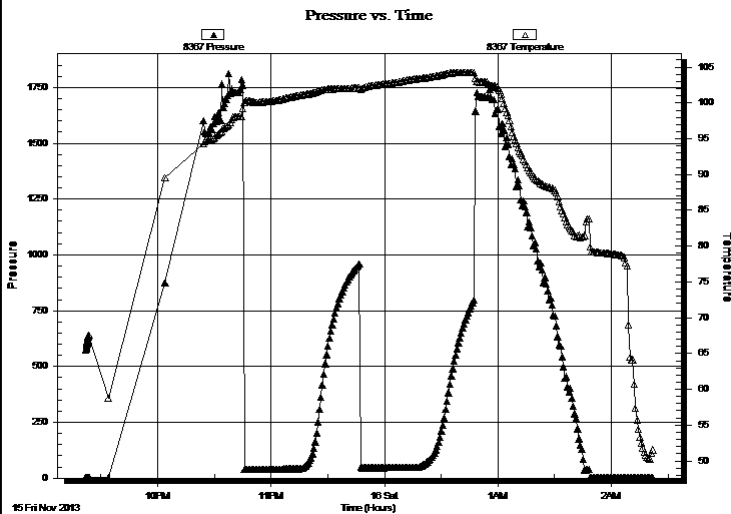
**23-22s-15w Pawnee, KS**  
**Blackwell Unit #1**  
 Job Ticket: 52518      **DST#: 1**  
 Test Start: 2013.11.15 @ 21:21:53

**GENERAL INFORMATION:**

Formation: **LKC "A & B"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:45:23  
 Time Test Ended: 02:22:08  
**Interval: 3517.00 ft (KB) To 3570.00 ft (KB) (TVD)**  
 Total Depth: 3570.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 45  
 Reference Elevations: 1977.00 ft (KB)  
 1971.00 ft (CF)  
 KB to GR/CF: 6.00 ft

**Serial #: 8367      Outside**  
 Press@RunDepth: psig @ 3518.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.11.15      End Date: 2013.11.16      Last Calib.: 2013.11.16  
 Start Time: 21:21:54      End Time: 02:22:08      Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Weak 3/4 inch Blow  
 IS: No Blow Back  
 FF: Weak 3/4 inch Blow  
 FS: No Blow Back



| PRESSURE SUMMARY |                 |              |            |
|------------------|-----------------|--------------|------------|
| Time (Min.)      | Pressure (psig) | Temp (deg F) | Annotation |
|                  |                 |              |            |
|                  |                 |              |            |
|                  |                 |              |            |
|                  |                 |              |            |

| Recovery    |               |              |
|-------------|---------------|--------------|
| Length (ft) | Description   | Volume (bbl) |
| 30.00       | SOSM 1%O 99%M | 0.42         |
|             |               |              |
|             |               |              |
|             |               |              |
|             |               |              |

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy

**23-22s-15w Pawnee,KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52518

**DST#: 1**

ATTN: Jim Musgrove

Test Start: 2013.11.15 @ 21:21:53

## Tool Information

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3520.00 ft | Diameter: 3.80 inches | Volume: 49.38 bbl              | Tool Weight:           | 2100.00 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: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose:  | 58000.00 lb |
|                           |                    |                       | <u>Total Volume: 49.38 bbl</u> | Tool Chased            | ft          |
| Drill Pipe Above KB:      | 22.00 ft           |                       |                                | String Weight: Initial | 52000.00 lb |
| Depth to Top Packer:      | 3517.00 ft         |                       |                                | Final                  | 52000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                                |                        |             |
| Interval between Packers: | 53.00 ft           |                       |                                |                        |             |
| Tool Length:              | 72.00 ft           |                       |                                |                        |             |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                        |             |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 3503.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3508.00    |                               |
| Packer           | 5.00        |            |          | 3513.00    | 19.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 3517.00    |                               |
| Stubb            | 1.00        |            |          | 3518.00    |                               |
| Recorder         | 0.00        | 6798       | Inside   | 3518.00    |                               |
| Recorder         | 0.00        | 8367       | Outside  | 3518.00    |                               |
| Perforations     | 5.00        |            |          | 3523.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3524.00    |                               |
| Drill Pipe       | 32.00       |            |          | 3556.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3557.00    |                               |
| Perforations     | 10.00       |            |          | 3567.00    |                               |
| Bullnose         | 3.00        |            |          | 3570.00    | 53.00 Bottom Packers & Anchor |

**Total Tool Length: 72.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy

**23-22s-15w Pawnee,KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52518      **DST#: 1**

ATTN: Jim Musgrove

Test Start: 2013.11.15 @ 21:21:53

## 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: 51.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 6400.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description   | Volume<br>bbl |
|--------------|---------------|---------------|
| 30.00        | SOSM 1%O 99%M | 0.421         |

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

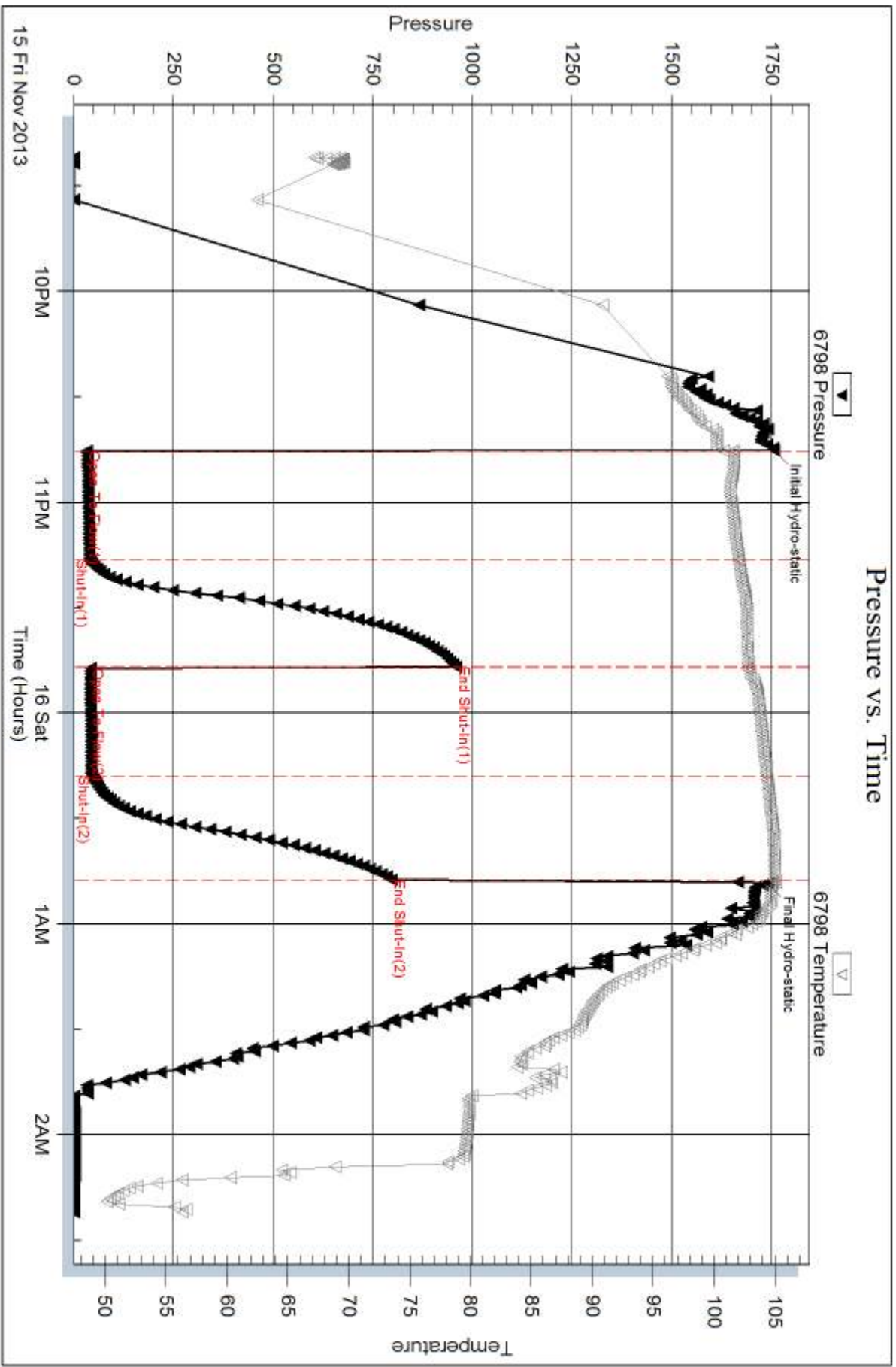
Serial #: 6798

Inside

Charter Energy

Blackwell Unit #1

DST Test Number: 1

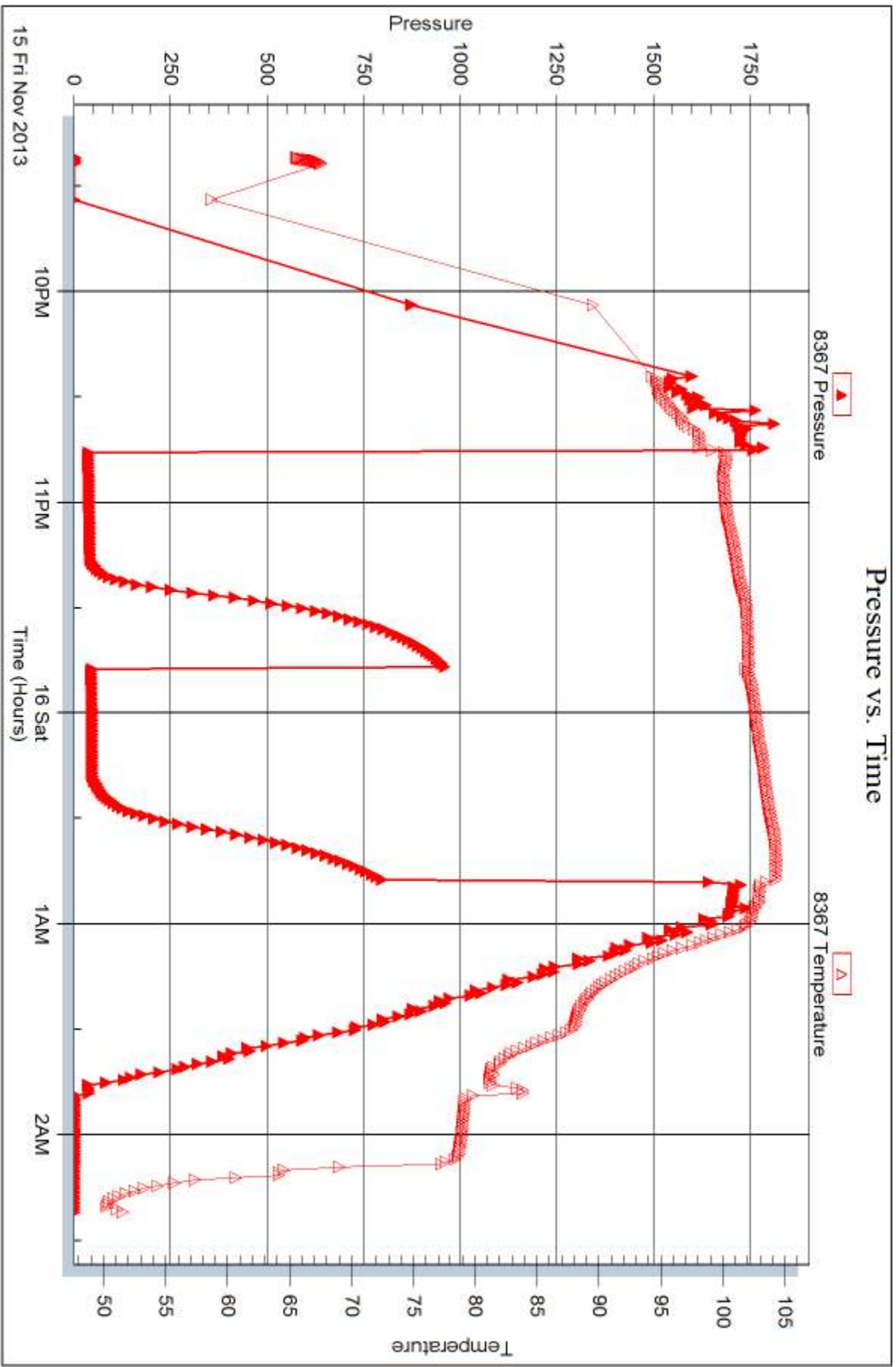


Serial #: 8367

Outside Charter Energy

Blackwell Unit #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Charter Energy**

PO Box 252  
Great Bend, KS 67530

ATTN: Jim Musgrove

### **Blackwell Unit #1**

#### **23-22s-15w Pawnee,KS**

Start Date: 2013.11.16 @ 11:49:42

End Date: 2013.11.16 @ 17:30:42

Job Ticket #: 52519                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.20 @ 14:18:47



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy  
PO Box 252  
Great Bend, KS 67530  
ATTN: Jim Musgrove

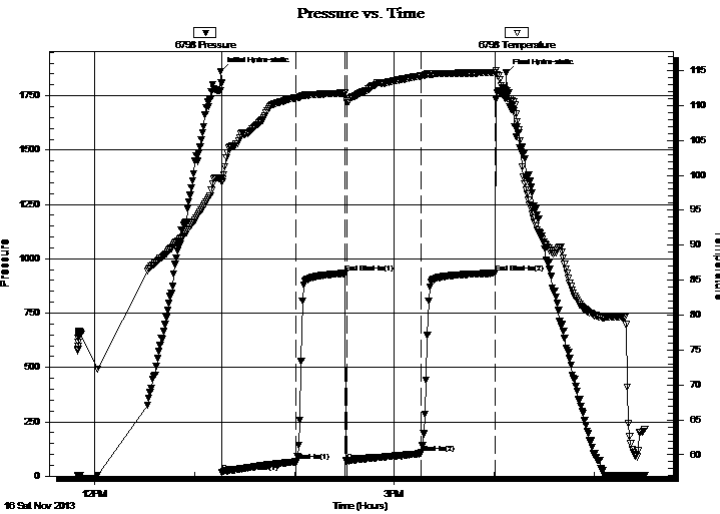
**23-22s-15w Pawnee, KS**  
**Blackwell Unit #1**  
Job Ticket: 52519      **DST#: 2**  
Test Start: 2013.11.16 @ 11:49:42

## GENERAL INFORMATION:

Formation: **Lansing "H"**  
Deviated: No Whipstock:                      ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 13:16:27      Tester: Leal Cason  
Time Test Ended: 17:30:42      Unit No: 45  
**Interval: 3641.00 ft (KB) To 3670.00 ft (KB) (TVD)**      Reference Elevations: 1977.00 ft (KB)  
Total Depth: 3670.00 ft (KB) (TVD)      1971.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 6.00 ft

**Serial #: 6798      Inside**  
Press@RunDepth: 103.69 psig @ 3642.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.11.16      End Date: 2013.11.16      Last Calib.: 2013.11.16  
Start Time: 11:49:43      End Time: 17:30:42      Time On Btm: 2013.11.16 @ 13:15:42  
Time Off Btm: 2013.11.16 @ 16:06:57

TEST COMMENT: IF: Weak Blow , Built to 4 inches  
IS: No Blow Back  
FF: Weak 1 1/2 inch Blow  
FS: No Blow Back



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1862.34         | 99.58        | Initial Hydro-static |
| 1           | 18.11           | 99.10        | Open To Flow (1)     |
| 46          | 66.32           | 111.07       | Shut-In(1)           |
| 75          | 933.02          | 111.78       | End Shut-In(1)       |
| 76          | 70.21           | 110.42       | Open To Flow (2)     |
| 120         | 103.69          | 114.22       | Shut-In(2)           |
| 165         | 933.75          | 114.68       | End Shut-In(2)       |
| 172         | 1853.52         | 111.18       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 186.00      | Water       | 2.61         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Charter Energy  
 PO Box 252  
 Great Bend, KS 67530  
 ATTN: Jim Musgrove

**23-22s-15w Pawnee, KS**

**Blackwell Unit #1**

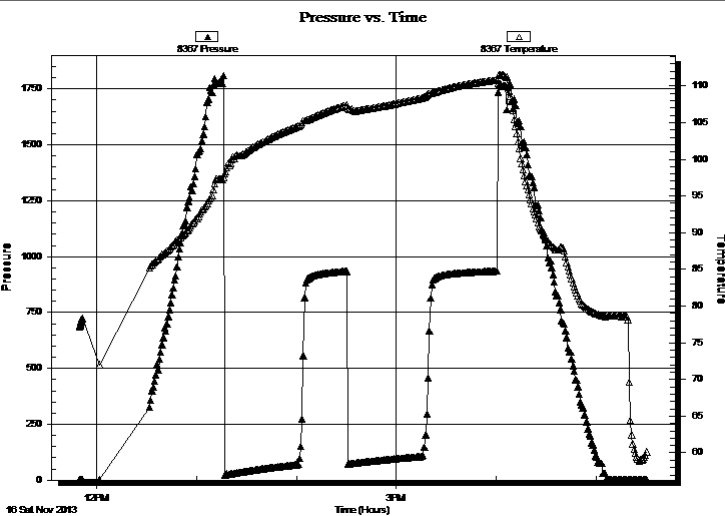
Job Ticket: 52519      **DST#: 2**  
 Test Start: 2013.11.16 @ 11:49:42

## GENERAL INFORMATION:

|                   |   |                      |  |                       |                                  |
|-------------------|---|----------------------|--|-----------------------|----------------------------------|
| Formation:        | <b>Lansing "H"</b>                              |                      |  | Test Type:            | Conventional Bottom Hole (Reset) |
| Deviated:         | No Whipstock:                                   | ft (KB)              |  | Tester:               | Leal Cason                       |
| Time Tool Opened: | 13:16:27  |                      |  | Unit No:              | 45                               |
| Time Test Ended:  | 17:30:42  |                      |  | Reference Elevations: | 1977.00 ft (KB)                  |
| <b>Interval:</b>  | <b>3641.00 ft (KB) To 3670.00 ft (KB) (TVD)</b> |                      |  |                       | 1971.00 ft (CF)                  |
| Total Depth:      | 3670.00 ft (KB) (TVD)                           |                      |  | KB to GR/CF:          | 6.00 ft                          |
| Hole Diameter:    | 7.88 inches                                     | Hole Condition: Good |  |                       |                                  |

|                       |                |                 |            |               |              |
|-----------------------|----------------|-----------------|------------|---------------|--------------|
| <b>Serial #: 8367</b> | <b>Outside</b> |                 |            | Capacity:     | 8000.00 psig |
| Press@RunDepth:       | psig @         | 3642.00 ft (KB) |            | Last Calib.:  | 2013.11.16   |
| Start Date:           | 2013.11.16     | End Date:       | 2013.11.16 | Time On Btm:  |              |
| Start Time:           | 11:49:43       | End Time:       | 17:30:42   | Time Off Btm: |              |

**TEST COMMENT:** IF: Weak Blow , Built to 4 inches  
 IS: No Blow Back  
 FF: Weak 1 1/2 inch Blow  
 FS: No Blow Back



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |            |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 186.00      | Water       | 2.61         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy

**23-22s-15w Pawnee, KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52519

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2013.11.16 @ 11:49:42

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3646.00 ft | Diameter: 3.80 inches | Volume: 51.14 bbl              | Tool Weight: 2100.00 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: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose: 60000.00 lb  |
|                           |                    |                       | <u>Total Volume: 51.14 bbl</u> | Tool Chased ft                     |
| Drill Pipe Above KB:      | 24.00 ft           |                       |                                | String Weight: Initial 52000.00 lb |
| Depth to Top Packer:      | 3641.00 ft         |                       |                                | Final 52000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 29.00 ft           |                       |                                |                                    |
| Tool Length:              | 48.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Shut In Tool              | 5.00         |            |          | 3627.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 3632.00    |                               |
| Packer                    | 5.00         |            |          | 3637.00    | 19.00 Bottom Of Top Packer    |
| Packer                    | 4.00         |            |          | 3641.00    |                               |
| Stubb                     | 1.00         |            |          | 3642.00    |                               |
| Recorder                  | 0.00         | 6798       | Inside   | 3642.00    |                               |
| Recorder                  | 0.00         | 8367       | Outside  | 3642.00    |                               |
| Perforations              | 25.00        |            |          | 3667.00    |                               |
| Bullnose                  | 3.00         |            |          | 3670.00    | 29.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>48.00</b> |            |          |            |                               |



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Charter Energy

**23-22s-15w Pawnee,KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52519

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2013.11.16 @ 11:49:42

### 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:

75000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6400.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 186.00       | Water       | 2.609         |

Total Length: 186.00 ft      Total Volume: 2.609 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

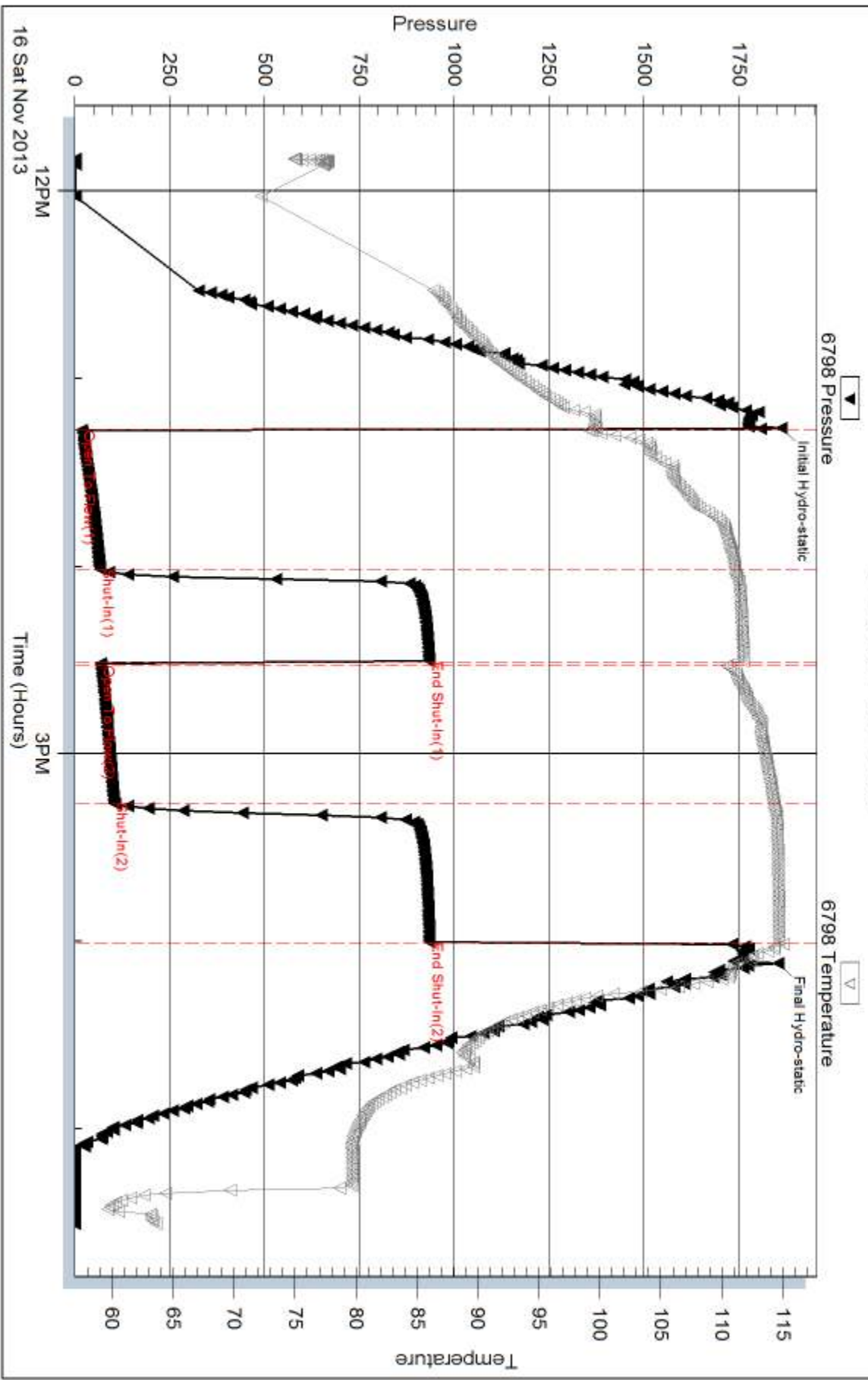
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .11 @ 66 degrees



### Pressure vs. Time

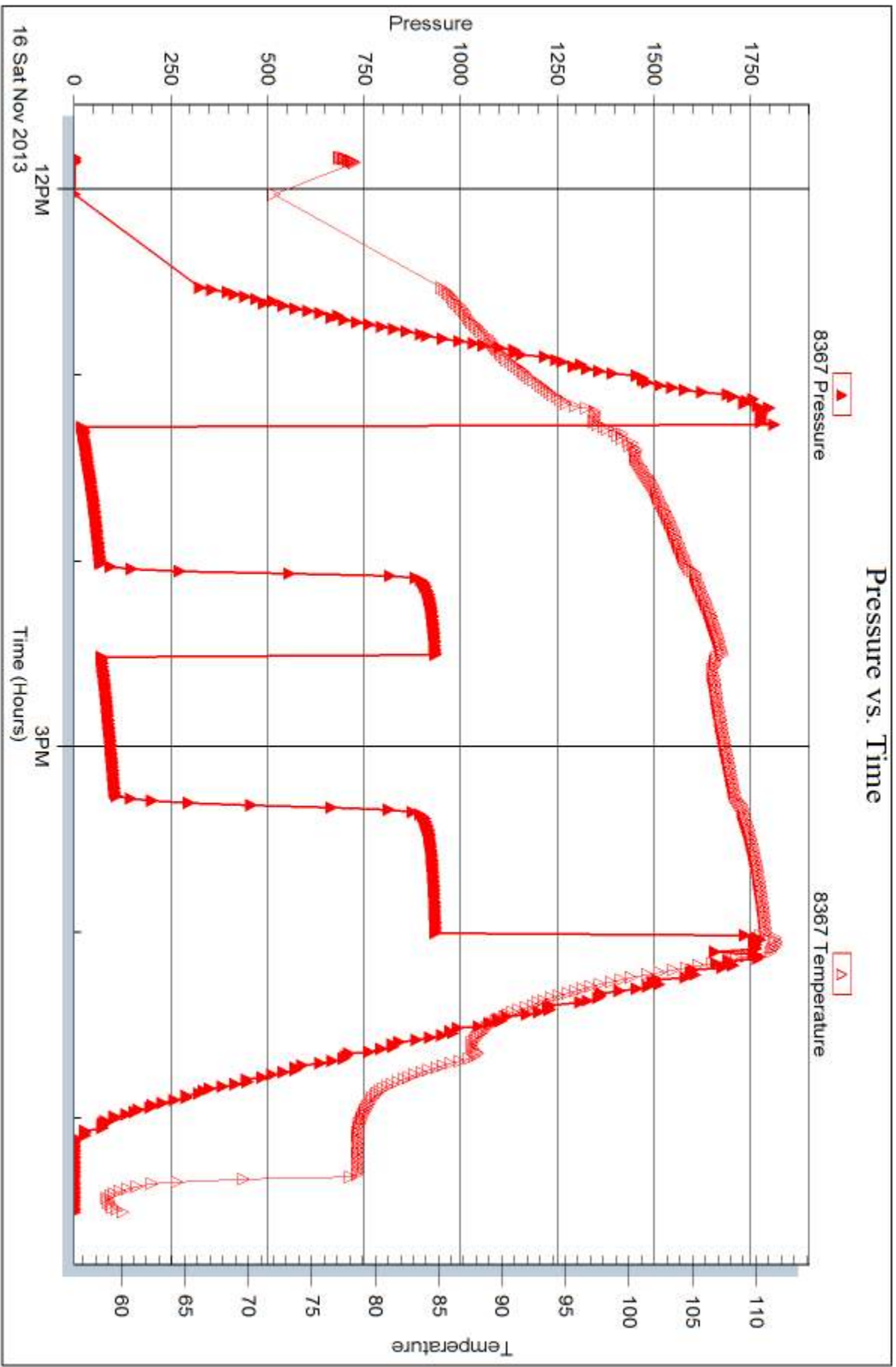


Serial #: 8367

Outside Charter Energy

Blackwell Unit #1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Charter Energy**

PO Box 252  
Great Bend, KS 67530

ATTN: Jim Musgrove

### **Blackwell Unit #1**

#### **23-22s-15w Pawnee,KS**

Start Date: 2013.11.17 @ 18:10:36

End Date: 2013.11.17 @ 23:11:51

Job Ticket #: 52520                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.20 @ 14:17:39

Charter Energy  
23-22s-15w Pawnee,KS  
Blackwell Unit #1  
DST # 3  
Simpson  
2013.11.17



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy  
PO Box 252  
Great Bend, KS 67530  
ATTN: Jim Musgrove

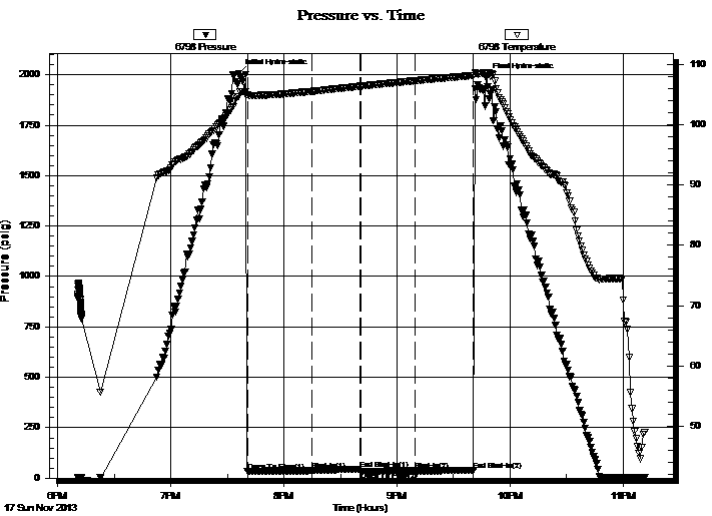
**23-22s-15w Pawnee, KS**  
**Blackwell Unit #1**  
Job Ticket: 52520      **DST#: 3**  
Test Start: 2013.11.17 @ 18:10:36

## GENERAL INFORMATION:

Formation: **Simpson**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 19:40:36  
Time Test Ended: 23:11:51  
Interval: **3918.00 ft (KB) To 3981.00 ft (KB) (TVD)**  
Total Depth: 3981.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Reference Elevations: 1977.00 ft (KB)  
1971.00 ft (CF)  
KB to GR/CF: 6.00 ft  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Leal Cason  
Unit No: 45

**Serial #: 6798      Inside**  
Press@RunDepth: 36.99 psig @ 3919.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.11.17      End Date: 2013.11.17      Last Calib.: 2013.11.17  
Start Time: 18:10:37      End Time: 23:11:51      Time On Btm: 2013.11.17 @ 19:36:06  
Time Off Btm: 2013.11.17 @ 21:47:21

TEST COMMENT: IF: Weak Blow , Built to 1 1/2 inch  
IS: No Blow Back  
FF: Weak Surface Blow , Dead @ 15 minutes  
FS: No Blow Back



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2007.00         | 104.70       | Initial Hydro-static |
| 5           | 32.35           | 105.00       | Open To Flow (1)     |
| 39          | 37.53           | 105.58       | Shut-In(1)           |
| 64          | 45.34           | 106.42       | End Shut-In(1)       |
| 65          | 33.27           | 106.43       | Open To Flow (2)     |
| 94          | 36.99           | 107.35       | Shut-In(2)           |
| 125         | 39.46           | 108.24       | End Shut-In(2)       |
| 132         | 1983.77         | 108.71       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | Mud         | 0.14         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy

**23-22s-15w Pawnee, KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52520

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2013.11.17 @ 18:10:36

## GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:40:36

Time Test Ended: 23:11:51

**Interval: 3918.00 ft (KB) To 3981.00 ft (KB) (TVD)**

Total Depth: 3981.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Reference Elevations: 1977.00 ft (KB)

1971.00 ft (CF)

KB to GR/CF: 6.00 ft

**Serial #: 8367 Outside**

Press@RunDepth: psig @ 3919.00 ft (KB)

Start Date: 2013.11.17 End Date: 2013.11.17

Start Time: 18:10:37 End Time: 23:11:51

Capacity: 8000.00 psig

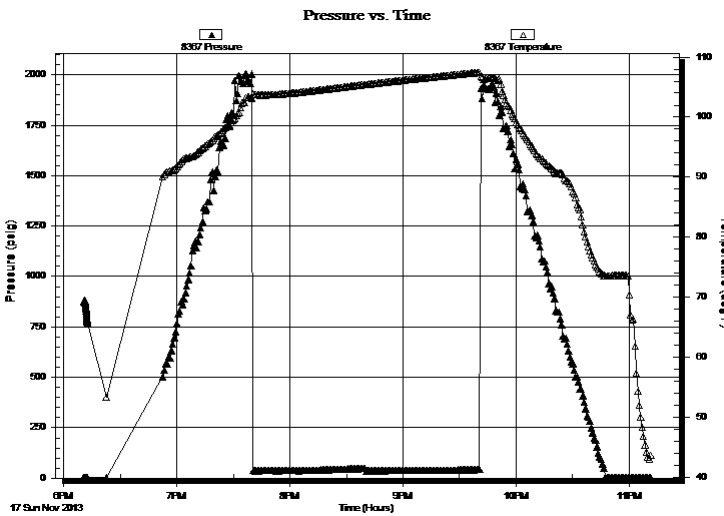
Last Calib.: 2013.11.17

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 1 1/2 inch  
IS: No Blow Back  
FF: Weak Surface Blow , Dead @ 15 minutes  
FS: No Blow Back

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|-------------|-----------------|--------------|------------|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | Mud         | 0.14         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy

**23-22s-15w Pawnee,KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52520

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2013.11.17 @ 18:10:36

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3932.00 ft | Diameter: 3.80 inches | Volume: 55.16 bbl              | Tool Weight: 2100.00 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: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose: 65000.00 lb  |
|                           |                    |                       | <u>Total Volume: 55.16 bbl</u> | Tool Chased ft                     |
| Drill Pipe Above KB:      | 33.00 ft           |                       |                                | String Weight: Initial 54000.00 lb |
| Depth to Top Packer:      | 3918.00 ft         |                       |                                | Final 54000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 63.00 ft           |                       |                                |                                    |
| Tool Length:              | 82.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool    | 5.00  |      |         | 3904.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 3909.00 |                               |
| Packer          | 5.00  |      |         | 3914.00 | 19.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 3918.00 |                               |
| Stubb           | 1.00  |      |         | 3919.00 |                               |
| Recorder        | 0.00  | 6798 | Inside  | 3919.00 |                               |
| Recorder        | 0.00  | 8367 | Outside | 3919.00 |                               |
| Perforations    | 5.00  |      |         | 3924.00 |                               |
| Change Over Sub | 1.00  |      |         | 3925.00 |                               |
| Drill Pipe      | 32.00 |      |         | 3957.00 |                               |
| Change Over Sub | 1.00  |      |         | 3958.00 |                               |
| Perforations    | 20.00 |      |         | 3978.00 |                               |
| Bullnose        | 3.00  |      |         | 3981.00 | 63.00 Bottom Packers & Anchor |

**Total Tool Length: 82.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy

**23-22s-15w Pawnee,KS**

PO Box 252  
Great Bend, KS 67530

**Blackwell Unit #1**

Job Ticket: 52520

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2013.11.17 @ 18:10:36

## 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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6400.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 10.00        | Mud         | 0.140         |

Total Length: 10.00 ft      Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6798

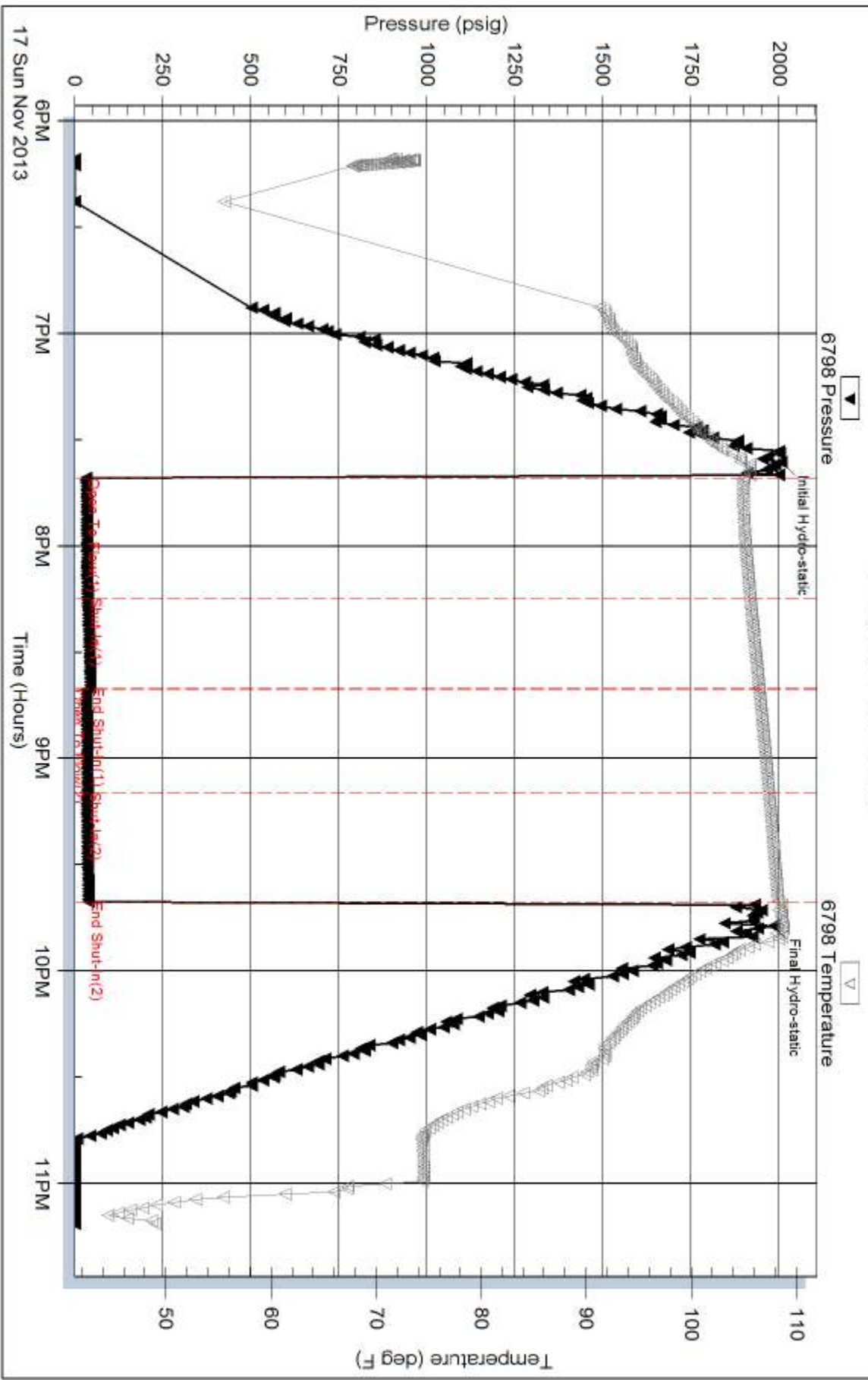
Inside

Charter Energy

Blackwell Unit #1

DST Test Number: 3

### Pressure vs. Time



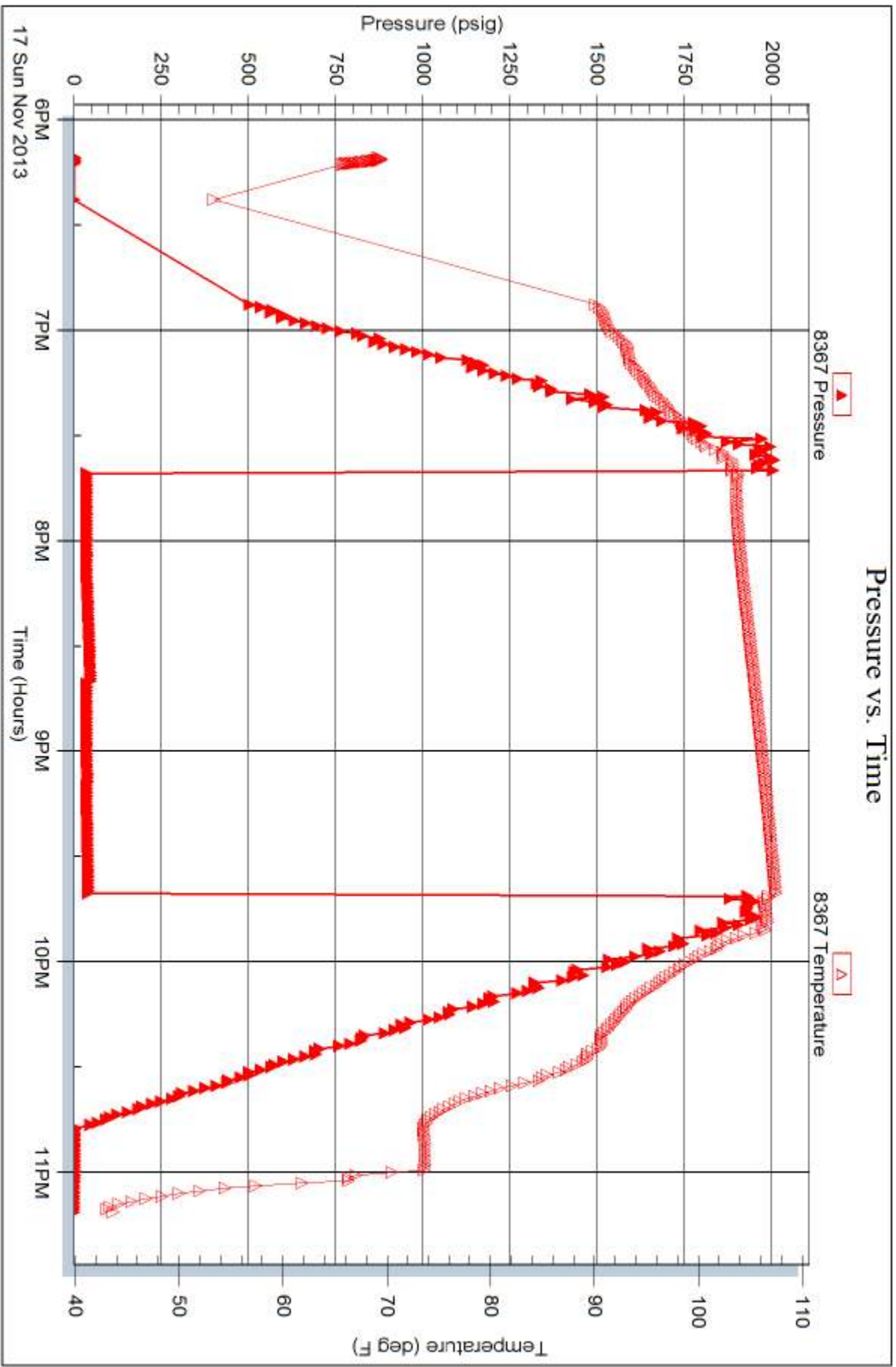


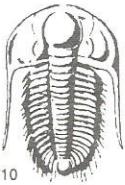
Serial #: 8367

Outside Charter Energy

Blackwell Unit #1

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52518

Well Name & No. Blackwell Unit 1 Test No. 1 Date 11/15/13  
 Company Charter Energy Elevation 1977 KB 1971 GL  
 Address PO Box 252 Great Bend, KS 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 1  
 Location: Sec. 23 Twp. 22S Rge. 15W Co. Pawnee State KS

Interval Tested 3517 - 3570 Zone Tested Lansing "A+B"  
 Anchor Length 53 Drill Pipe Run 3520 Mud Wt. 9.0  
 Top Packer Depth 3512 Drill Collars Run 0 Vis 51  
 Bottom Packer Depth 3517 Wt. Pipe Run 0 WL 8.4  
 Total Depth 3570 Chlorides 6400 ppm System LCM 1

Blow Description IF: weak 3/4 inch Blow  
ISF: No Blow Back  
FF: weak 3/4 inch Blow  
FSI: No Blow Back

| Rec       | Feet of     | %gas | %oil | %water    | %mud |
|-----------|-------------|------|------|-----------|------|
| <u>30</u> | <u>505m</u> |      |      | <u>99</u> |      |
| Rec       | Feet of     | %gas | %oil | %water    | %mud |
| Rec       | Feet of     | %gas | %oil | %water    | %mud |
| Rec       | Feet of     | %gas | %oil | %water    | %mud |
| Rec       | Feet of     | %gas | %oil | %water    | %mud |

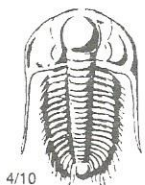
Rec Total 30 BHT 105 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic 1757  Test 1150 T-On Location 20:30  
 (B) First Initial Flow 33  Jars \_\_\_\_\_ T-Started 21:21  
 (C) First Final Flow 41  Safety Joint \_\_\_\_\_ T-Open 22:45  
 (D) Initial Shut-In 959  Circ Sub \_\_\_\_\_ T-Pulled 00:47  
 (E) Second Initial Flow 42  Hourly Standby \_\_\_\_\_ T-Out 02:22  
 (F) Second Final Flow 46  Mileage 90 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 796  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1740  Straddle \_\_\_\_\_

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_  
 Final Flow 30  Day Standby \_\_\_\_\_  
 Final Shut-In 30  Accessibility \_\_\_\_\_  
 Sub Total 1289.50

Approved By \_\_\_\_\_ Our Representative [Signature]

TriLOBITE Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52519

Well Name & No. Blackwell unit 1 Test No. 2 Date 11/16/13  
 Company Charter Energy Elevation 1977 KB 1971 GL  
 Address PO Box 252 Great Bend, KS 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 1  
 Location: Sec. 23 Twp. 22S Rge. 15W Co. Pawnee State KS

Interval Tested 3641 - 3670 Zone Tested Lansing "H"  
 Anchor Length 29 Drill Pipe Run 3646 Mud Wt. 9.3  
 Top Packer Depth 3636 Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 3641 Wt. Pipe Run 0 WL 10.0  
 Total Depth 3670 Chlorides 7500 ppm System LCM 1/2

Blow Description IF: weak Blow, Built to 4 inches  
ISI: NO Blow Back  
FF: weak 1 1/2 inch Blow  
FSI: NO Blow Back

| Rec        | Feet of      | %gas | %oil | %water | %mud |
|------------|--------------|------|------|--------|------|
| <u>186</u> | <u>water</u> |      |      |        |      |
| Rec        | Feet of      | %gas | %oil | %water | %mud |
| Rec        | Feet of      | %gas | %oil | %water | %mud |
| Rec        | Feet of      | %gas | %oil | %water | %mud |
| Rec        | Feet of      | %gas | %oil | %water | %mud |

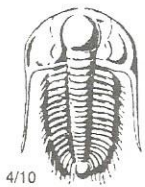
Rec Total 186 BHT 115 Gravity NIC API RW .11 @ 66 °F Chlorides 75000 ppm

(A) Initial Hydrostatic 1862  Test 1150 T-On Location 11:15  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 11:49  
 (C) First Final Flow 66  Safety Joint \_\_\_\_\_ T-Open 13:16  
 (D) Initial Shut-In 933  Circ Sub \_\_\_\_\_ T-Pulled 16:00  
 (E) Second Initial Flow 70  Hourly Standby \_\_\_\_\_ T-Out 17:30  
 (F) Second Final Flow 104  Mileage (90) 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 934  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1253  Straddle \_\_\_\_\_

Initial Open 45  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 45  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1289.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1289.50

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52520

Well Name & No. Blackwell unit 1 Test No. 3 Date 11/17/13  
 Company Charter Energy Elevation 1977 KB 1971 GL  
 Address PO Box 252 Great Bend KS 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 1  
 Location: Sec. 23 Twp. 22S Rge. 15W Co. Pawnee State KS

Interval Tested 3918 - 3981 Zone Tested ~~15W~~ Simpson  
 Anchor Length 63 Drill Pipe Run 3932 Mud Wt. 9.3  
 Top Packer Depth 3913 Drill Collars Run 0 Vis 54  
 Bottom Packer Depth 3918 Wt. Pipe Run 0 WL 10.0  
 Total Depth 3981 Chlorides 6300 ppm System LCM 1

Blow Description IF: weak blow, built to 1 1/2 inch  
ISF: NO BLOW BACK  
FF: weak surface blow, dead @ 15 minutes  
FSI: NO BLOW BACK

| Rec       | Feet of    | %gas | %oil | %water | %mud |
|-----------|------------|------|------|--------|------|
| <u>10</u> | <u>Mud</u> |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |

Rec Total 10 BHT 108 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

|                                     |   |                            |
|-------------------------------------|---|----------------------------|
| (A) Initial Hydrostatic <u>2007</u> | <input checked="" type="checkbox"/> Test <u>1150</u>                | T-On Location <u>17:15</u> |
| (B) First Initial Flow <u>32</u>    | <input type="checkbox"/> Jars                                       | T-Started <u>18:10</u>     |
| (C) First Final Flow <u>38</u>      | <input type="checkbox"/> Safety Joint                               | T-Open <u>19:40</u>        |
| (D) Initial Shut-In <u>45</u>       | <input type="checkbox"/> Circ Sub                                   | T-Pulled <u>21:40</u>      |
| (E) Second Initial Flow <u>33</u>   | <input type="checkbox"/> Hourly Standby                             | T-Out <u>23:11</u>         |
| (F) Second Final Flow <u>37</u>     | <input checked="" type="checkbox"/> Mileage <u>90</u> <u>139.50</u> | Comments                   |
| (G) Final Shut-In <u>39</u>         | <input type="checkbox"/> Sampler                                    |                            |
| (H) Final Hydrostatic <u>1984</u>   | <input type="checkbox"/> Straddle                                   |                            |

|                           |   |  |
|---------------------------|---|--|
| Initial Open <u>30</u>    | <input type="checkbox"/> Shale Packer   | <input type="checkbox"/> Ruined Shale Packer |
| Initial Shut-In <u>30</u> | <input type="checkbox"/> Extra Packer   | <input type="checkbox"/> Ruined Packer       |
| Final Flow <u>30</u>      | <input type="checkbox"/> Extra Recorder | <input type="checkbox"/> Extra Copies        |
| Final Shut-In <u>30</u>   | <input type="checkbox"/> Day Standby    | Sub Total <u>0</u>                           |
|                           | <input type="checkbox"/> Accessibility  | Total <u>1289.50</u>                         |
|                           | Sub Total <u>1289.50</u>                | MP/DST Disc't                                |

Approved By \_\_\_\_\_ Our Representative [Signature]

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