



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1209674  
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: \_\_\_\_\_

1209674

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>_____ |
|--|--|---|





## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Conell #1**

### **26-11s-20w Ellis,KS**

Start Date: 2014.05.13 @ 20:22:00

End Date: 2014.05.14 @ 04:01:45

Job Ticket #: 54043                      DST #: 1

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

Printed: 2014.05.15 @ 14:51:02

TDI, Inc  
26-11s-20w Ellis,KS  
Conell #1  
DST # 1  
LKC "I,J"  
2014.05.13



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54043 **DST#: 1**  
Test Start: 2014.05.13 @ 20:22:00

## GENERAL INFORMATION:

Formation: **LKC "I,J"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 23:11:15  
Time Test Ended: 04:01:45  
Interval: **3542.00 ft (KB) To 3595.00 ft (KB) (TVD)**  
Total Depth: 3798.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Straddle (Initial)  
Tester: Cody Bloedorn  
Unit No: 73  
Reference Elevations: 2096.00 ft (KB)  
2088.00 ft (CF)  
KB to GR/CF: 8.00 ft

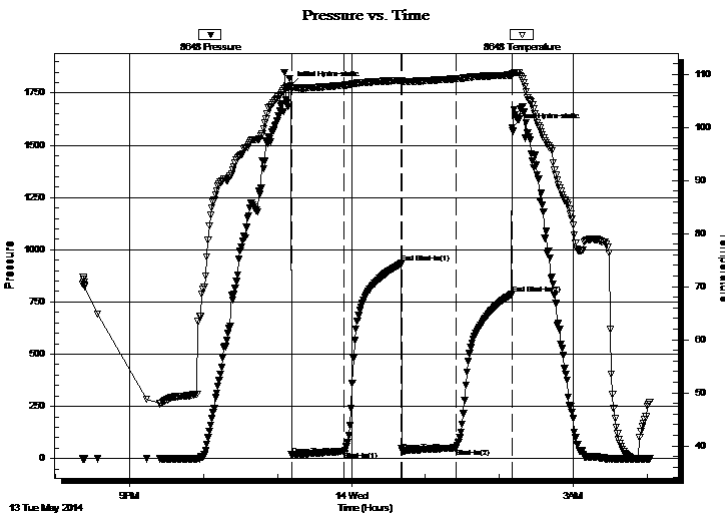
## Serial #: 8648

Inside

Press@RunDepth: 51.07 psig @ 3580.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.05.13 End Date: 2014.05.14 Last Calib.: 2014.05.14  
Start Time: 20:22:05 End Time: 04:01:44 Time On Btm: 2014.05.13 @ 23:11:00  
Time Off Btm: 2014.05.14 @ 02:10:30

TEST COMMENT: 45 - IF- B.O.B. in 17 minutes  
45 - IS- Surface return  
45 - FF- B.O.B. in 34 Minutes  
45 - FS- Surface return

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1787.78         | 107.93       | Initial Hydro-static |
| 1           | 17.83           | 107.22       | Open To Flow (1)     |
| 44          | 34.86           | 107.94       | Shut-In(1)           |
| 90          | 934.47          | 108.88       | End Shut-In(1)       |
| 90          | 36.76           | 108.61       | Open To Flow (2)     |
| 134         | 51.07           | 109.16       | Shut-In(2)           |
| 179         | 787.31          | 109.87       | End Shut-In(2)       |
| 180         | 1584.87         | 110.10       | Final Hydro-static   |

## Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 10.00       | HOCM, 30%O, 70%M | 0.14         |
| 77.00       | GO, 5%G, 95%O    | 1.08         |
| 0.00        | 341' of G.I.P.   | 0.00         |
|             |                  |              |
|             |                  |              |

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54043 **DST#: 1**  
Test Start: 2014.05.13 @ 20:22:00

**Tool Information**

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3527.00 ft | Diameter: 3.80 inches | Volume: 49.47 bbl              | Tool Weight: 2000.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 30000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose: 50000.00 lb  |
|                           |                    |                       | <u>Total Volume: 49.47 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 6.00 ft            |                       |                                | String Weight: Initial 45000.00 lb |
| Depth to Top Packer:      | 3542.00 ft         |                       |                                | Final 45000.00 lb                  |
| Depth to Bottom Packer:   | 3595.00 ft         |                       |                                |                                    |
| Interval between Packers: | 53.00 ft           |                       |                                |                                    |
| Tool Length:              | 283.00 ft          |                       |                                |                                    |
| Number of Packers:        | 3                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

| Tool Description          | Length (ft)   | Serial No. | Position | Depth (ft) | Accum. Lengths                 |
|---------------------------|---------------|------------|----------|------------|--------------------------------|
| Change Over Sub           | 1.00          |            |          | 3522.00    |                                |
| Shut In Tool              | 5.00          |            |          | 3527.00    |                                |
| Hydraulic tool            | 5.00          |            |          | 3532.00    |                                |
| Packer                    | 5.00          |            |          | 3537.00    | 21.00 Bottom Of Top Packer     |
| Packer                    | 5.00          |            |          | 3542.00    |                                |
| Stubb                     | 1.00          |            |          | 3543.00    |                                |
| Perforations              | 4.00          |            |          | 3547.00    |                                |
| Change Over Sub           | 1.00          |            |          | 3548.00    |                                |
| Drill Pipe                | 31.00         |            |          | 3579.00    |                                |
| Change Over Sub           | 1.00          |            |          | 3580.00    |                                |
| Recorder                  | 0.00          | 8648       | Inside   | 3580.00    |                                |
| Recorder                  | 0.00          | 8940       | Outside  | 3580.00    |                                |
| Perforations              | 14.00         |            |          | 3594.00    |                                |
| Blank Off Sub             | 1.00          |            |          | 3595.00    | 53.00 Tool Interval            |
| Packer                    | 4.00          |            |          | 3599.00    |                                |
| Change Over Sub           | 1.00          |            |          | 3600.00    |                                |
| Drill Pipe                | 186.00        |            |          | 3786.00    |                                |
| Change Over Sub           | 1.00          |            |          | 3787.00    |                                |
| Recorder                  | 0.00          | 8958       | Below    | 3787.00    |                                |
| Perforations              | 14.00         |            |          | 3801.00    |                                |
| Bullnose                  | 3.00          |            |          | 3804.00    | 209.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>283.00</b> |            |          |            |                                |





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54043  
Test Start: 2014.05.13 @ 20:22:00

**DST#: 1**

## Mud and Cushion Information

|                                  |                            |                     |
|----------------------------------|----------------------------|---------------------|
| Mud Type: Gel Chem               | Cushion Type:              | Oil API: 32 deg API |
| Mud Weight: 9.00 lb/gal          | Cushion Length: ft         | Water Salinity: ppm |
| Viscosity: 61.00 sec/qt          | Cushion Volume: bbl        |                     |
| Water Loss: 7.59 in <sup>3</sup> | Gas Cushion Type:          |                     |
| Resistivity: ohm.m               | Gas Cushion Pressure: psig |                     |
| Salinity: 1300.00 ppm            |                            |                     |
| Filter Cake: inches              |                            |                     |

## Recovery Information

Recovery Table

| Length<br>ft | Description      | Volume<br>bbl |
|--------------|------------------|---------------|
| 10.00        | HOCM, 30%O, 70%M | 0.140         |
| 77.00        | GO, 5%G, 95%O    | 1.080         |
| 0.00         | 341' of G.I.P.   | 0.000         |

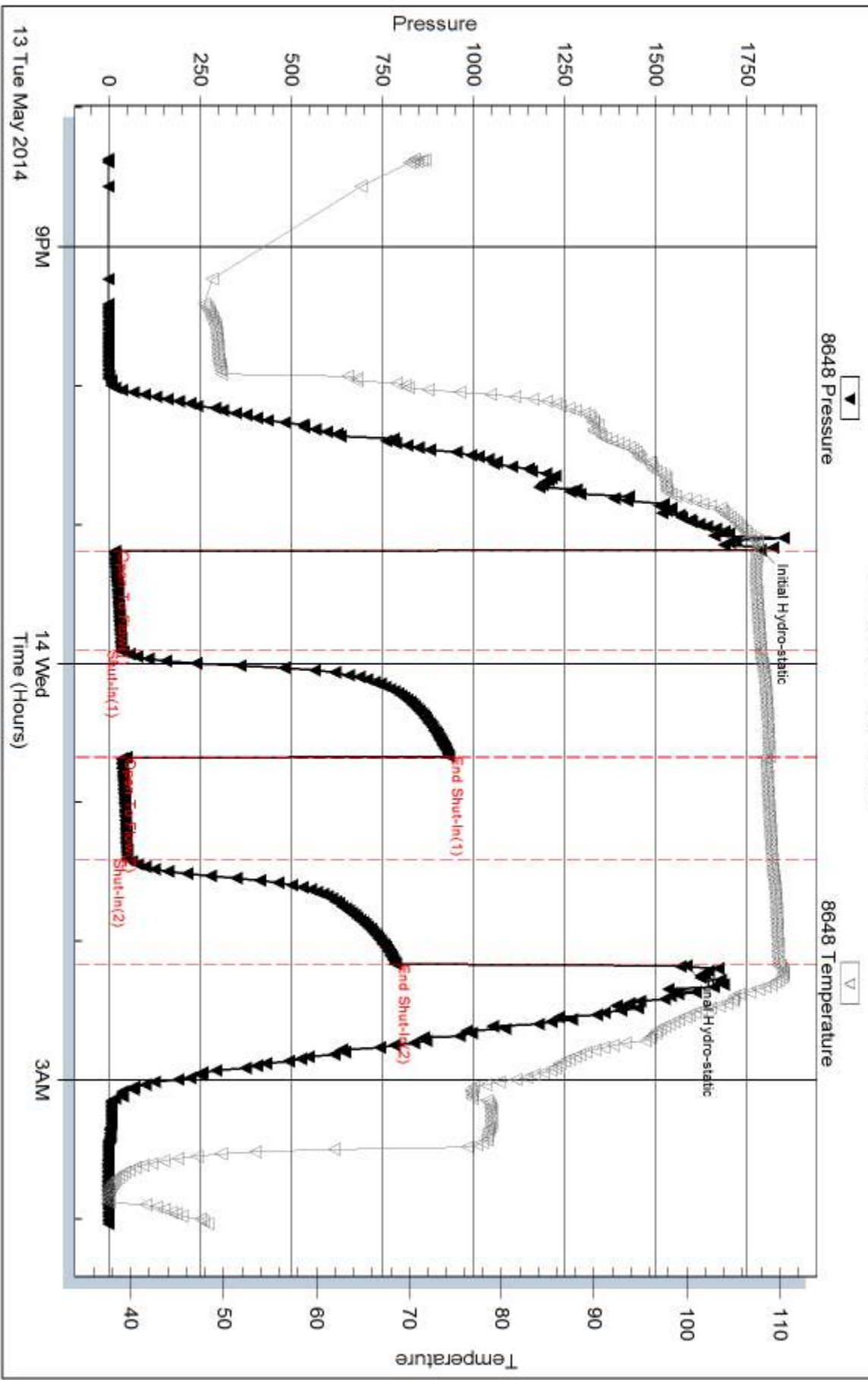
Total Length: 87.00 ft      Total Volume: 1.220 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: 30 @ 40 Degrees = 32 Gravity

### Pressure vs. Time

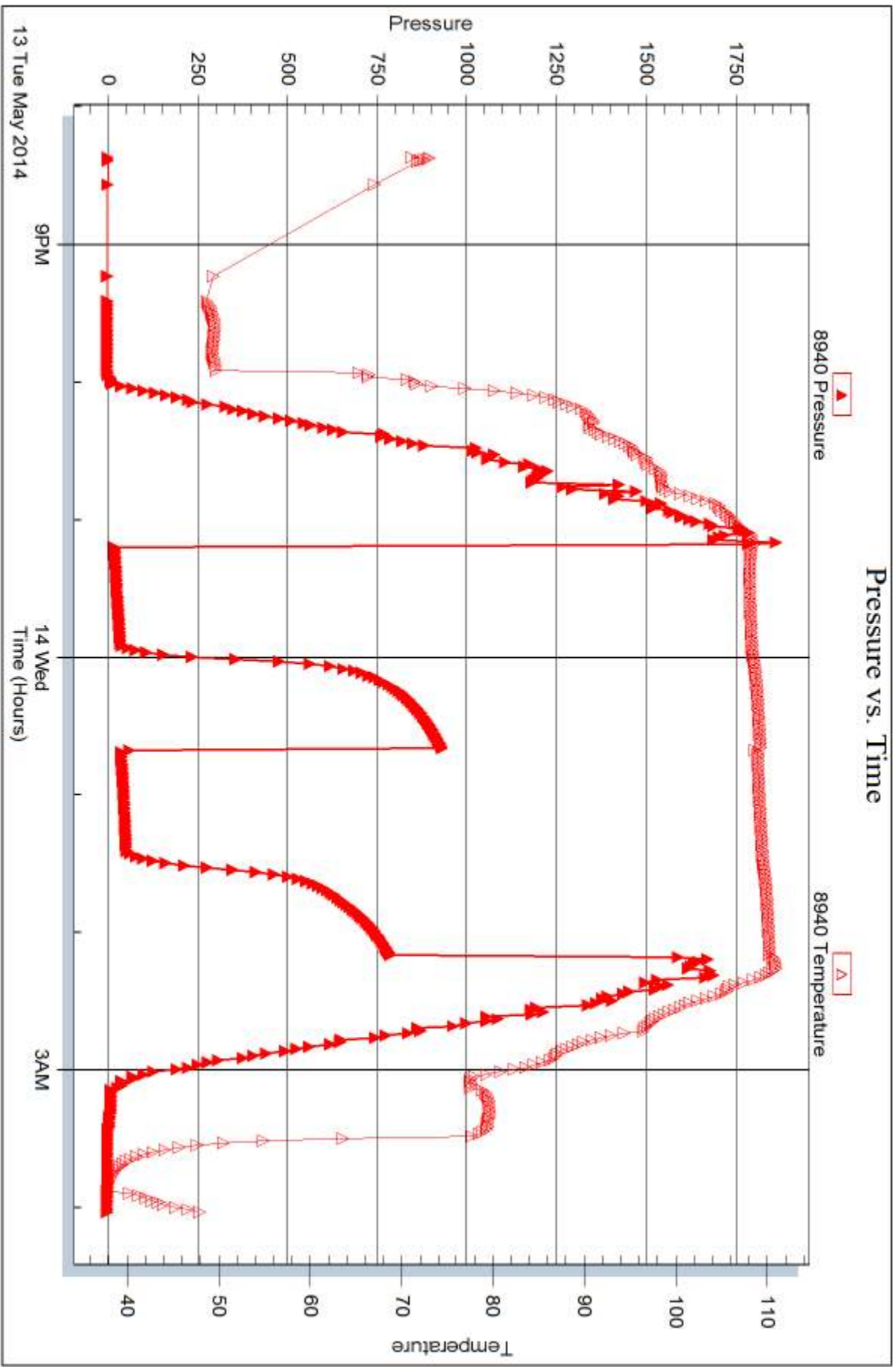


Serial #: 8940

Outside TDI, Inc

Cornell #1

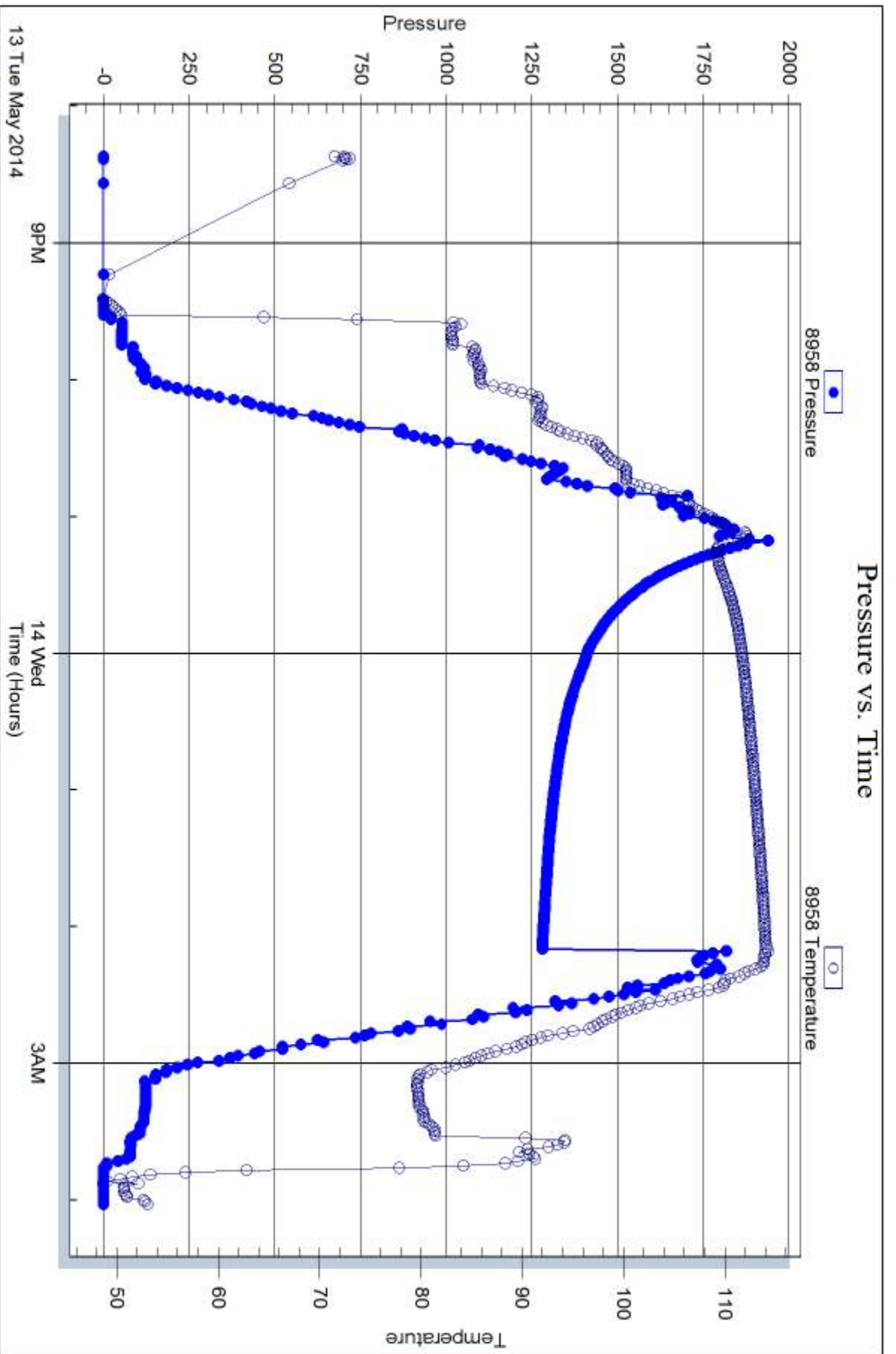
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54043

Printed: 2014.05.15 @ 14:51:03





## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Conell #1**

### **26-11s-20w Ellis,KS**

Start Date: 2014.05.13 @ 20:22:00

End Date:

Job Ticket #: 54044

DST #: 2

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

Printed: 2014.05.15 @ 14:50:33











**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54044      **DST#: 2**  
Test Start: 2014.05.13 @ 20:22:00

**Tool Information**

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3681.00 ft | Diameter: 3.80 inches | Volume: 51.63 bbl              | Tool Weight:           | 2000.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer:  | 30000.00 lb |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose:  | 45000.00 lb |
|                           |                    |                       | <u>Total Volume: 51.63 bbl</u> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 27.00 ft           |                       |                                | String Weight: Initial | 45000.00 lb |
| Depth to Top Packer:      | 3675.00 ft         |                       |                                | Final                  | 45000.00 lb |
| Depth to Bottom Packer:   | 3722.00 ft         |                       |                                |                        |             |
| Interval between Packers: | 47.00 ft           |                       |                                |                        |             |
| Tool Length:              | 150.00 ft          |                       |                                |                        |             |
| Number of Packers:        | 3                  | Diameter: 6.75 inches |                                |                        |             |

Tool Comments:

| <b>Tool Description</b> | <b>Length (ft)</b> | <b>Serial No.</b> | <b>Position</b> | <b>Depth (ft)</b> | <b>Accum. Lengths</b> |
|-------------------------|--------------------|-------------------|-----------------|-------------------|-----------------------|
|-------------------------|--------------------|-------------------|-----------------|-------------------|-----------------------|

|                 |       |      |         |         |                                    |
|-----------------|-------|------|---------|---------|------------------------------------|
| Change Over Sub | 1.00  |      |         | 3655.00 |                                    |
| Shut In Tool    | 5.00  |      |         | 3660.00 |                                    |
| Hydraulic tool  | 5.00  |      |         | 3665.00 |                                    |
| Packer          | 5.00  |      |         | 3670.00 | 21.00      Bottom Of Top Packer    |
| Packer          | 5.00  |      |         | 3675.00 |                                    |
| Stubb           | 1.00  |      |         | 3676.00 |                                    |
| Perforations    | 4.00  |      |         | 3680.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3681.00 |                                    |
| Drill Pipe      | 31.00 |      |         | 3712.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3713.00 |                                    |
| Recorder        | 0.00  | 8648 | Inside  | 3713.00 |                                    |
| Recorder        | 0.00  | 8940 | Outside | 3713.00 |                                    |
| Perforations    | 8.00  |      |         | 3721.00 |                                    |
| Blank Off Sub   | 1.00  |      |         | 3722.00 | 47.00      Tool Interval           |
| Packer          | 4.00  |      |         | 3726.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3727.00 |                                    |
| Drill Pipe      | 62.00 |      |         | 3789.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3790.00 |                                    |
| Recorder        | 0.00  | 8958 | Below   | 3790.00 |                                    |
| Perforations    | 11.00 |      |         | 3801.00 |                                    |
| Bullnose        | 3.00  |      |         | 3804.00 | 82.00      Bottom Packers & Anchor |

**Total Tool Length: 150.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc

**26-11s-20w Ellis,KS**

1310 Bison Rd  
Hays KS 67601

**Conell #1**

Job Ticket: 54044

**DST#: 2**

ATTN: Herb Deines

Test Start: 2014.05.13 @ 20:22:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbbl |
|--------------|-------------|----------------|
|              |             |                |

Total Length:

ft

Total Volume:

bbbl

Num Fluid Samples: 0

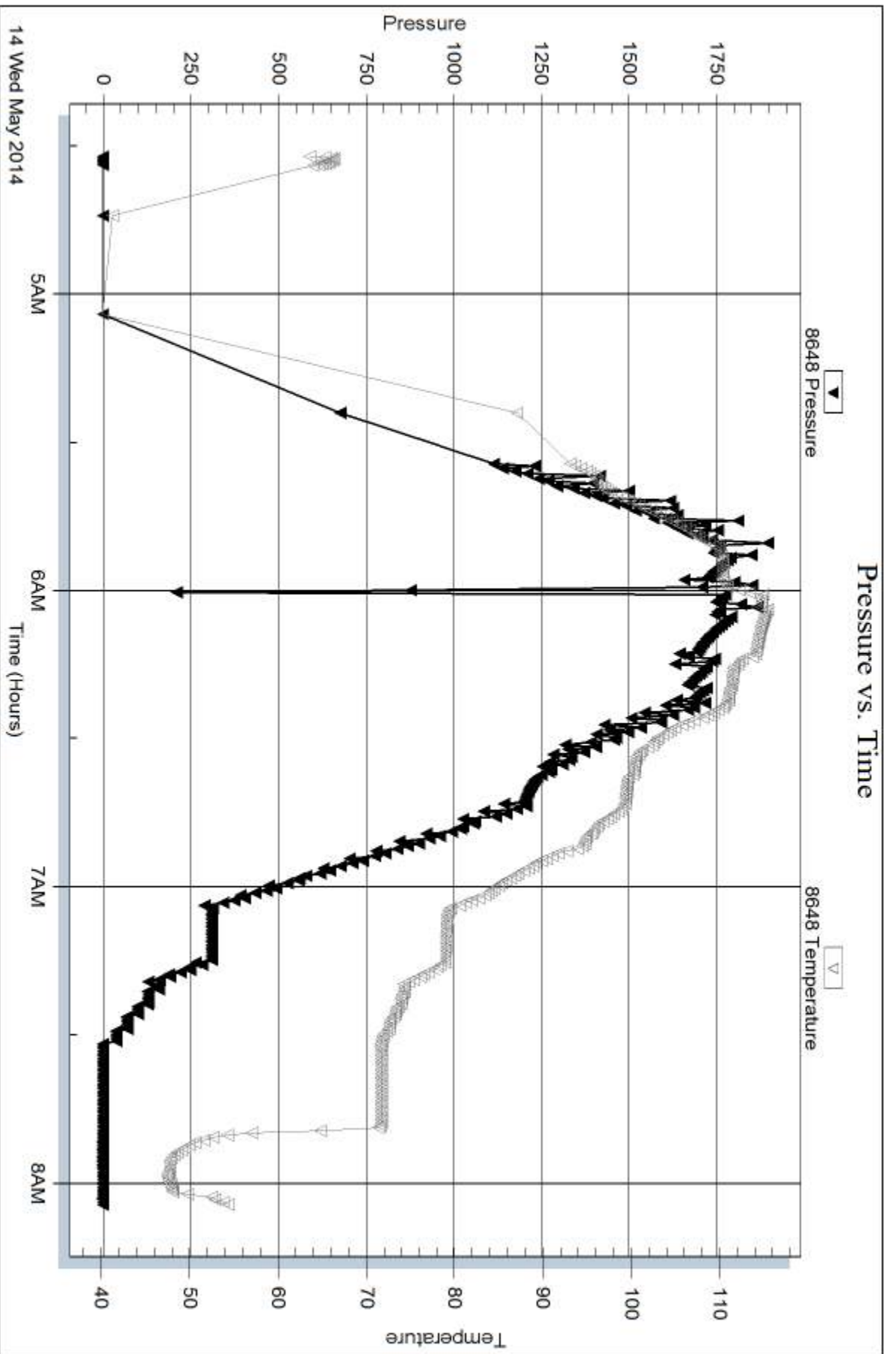
Num Gas Bombs: 0

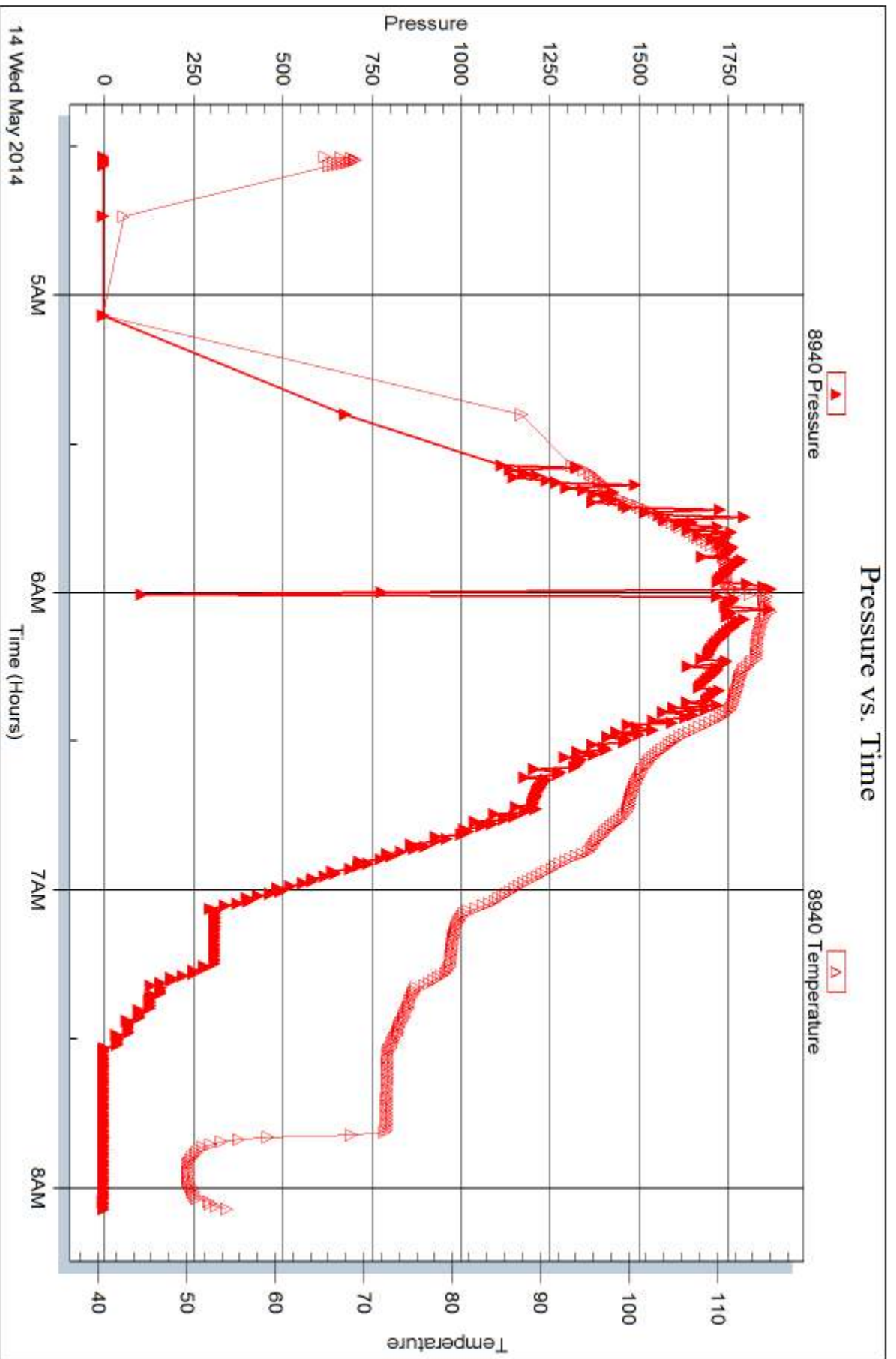
Serial #:

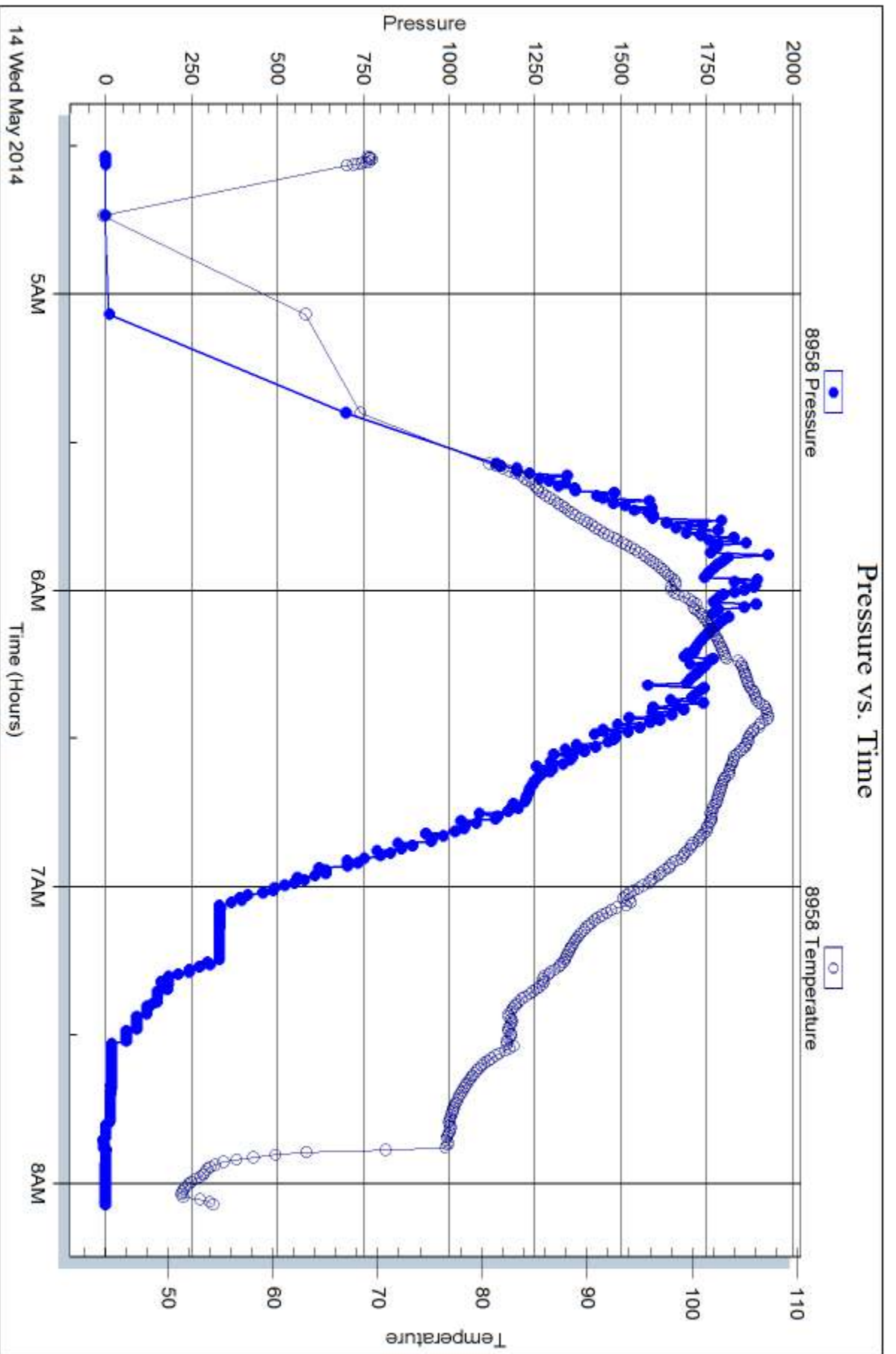
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Conell #1**

### **26-11s-20w Ellis,KS**

Start Date: 2014.05.14 @ 08:27:00

End Date: 2014.05.14 @ 14:29:45

Job Ticket #: 54045                      DST #: 3

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

Printed: 2014.05.15 @ 14:50:02

TDI, Inc  
26-11s-20w Ellis,KS  
Conell #1  
DST # 3  
Arbuckle  
2014.05.14



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

TDI, Inc  
 1310 Bison Rd  
 Hays KS 67601  
 ATTN: Herb Deines

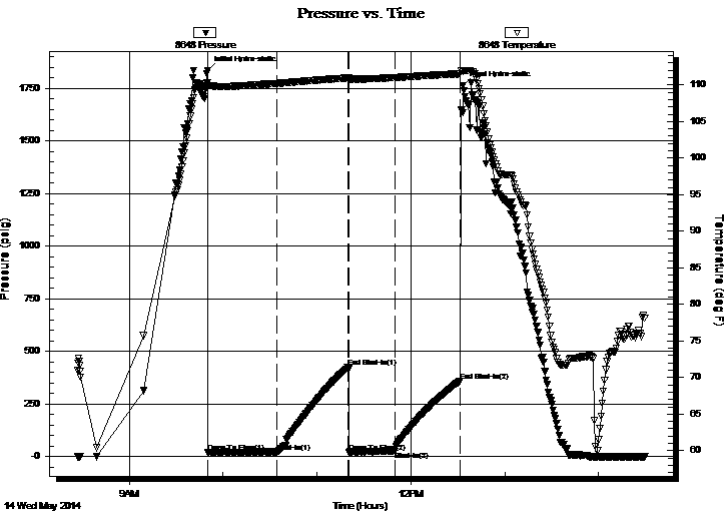
**26-11s-20w Ellis,KS**  
**Conell #1**  
 Job Ticket: 54045 **DST#: 3**  
 Test Start: 2014.05.14 @ 08:27:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Straddle (Reset)  
 Time Tool Opened: 09:50:15  
 Tester: Cody Bloedorn  
 Time Test Ended: 14:29:45  
 Unit No: 73  
 Interval: **3600.00 ft (KB) To 3722.00 ft (KB) (TVD)**  
 Reference Elevations: 2096.00 ft (KB)  
 Total Depth: 3798.00 ft (KB) (TVD)  
 2088.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 8648 Inside**  
 Press@RunDepth: 24.07 psig @ 3700.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.05.14 End Date: 2014.05.14 Last Calib.: 2014.05.14  
 Start Time: 08:27:05 End Time: 14:29:44 Time On Btm: 2014.05.14 @ 09:50:00  
 Time Off Btm: 2014.05.14 @ 12:33:15

**TEST COMMENT:** 45 - IF- 1 1/2" blow in 18 minutes. stayed there for rest of open.  
 45 - IS- Surface return  
 30 - FF- Surged and died  
 45 - FS- No return



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1835.67         | 110.34       | Initial Hydro-static |
| 1           | 19.25           | 109.73       | Open To Flow (1)     |
| 45          | 22.43           | 110.20       | Shut-In(1)           |
| 90          | 424.24          | 110.95       | End Shut-In(1)       |
| 91          | 21.45           | 110.78       | Open To Flow (2)     |
| 120         | 24.07           | 110.99       | Shut-In(2)           |
| 162         | 360.41          | 111.52       | End Shut-In(2)       |
| 164         | 1763.27         | 111.94       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                  | Volume (bbl) |
|-------------|------------------------------|--------------|
| 15.00       | Mud - w ith Oil spots, 100%M | 0.21         |
|             |                              |              |
|             |                              |              |
|             |                              |              |
|             |                              |              |

\* Recovery from multiple tests

## Gas Rates

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









**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54045      **DST#: 3**  
Test Start: 2014.05.14 @ 08:27:00

**Tool Information**

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3588.00 ft | Diameter: 3.80 inches | Volume: 50.33 bbl              | Tool Weight:           | 2000.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer:  | 30000.00 lb |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight to Pull Loose:  | 49000.00 lb |
|                           |                    |                       | <u>Total Volume: 50.33 bbl</u> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 9.00 ft            |                       |                                | String Weight: Initial | 45000.00 lb |
| Depth to Top Packer:      | 3600.00 ft         |                       |                                | Final                  | 45000.00 lb |
| Depth to Bottom Packer:   | 3722.00 ft         |                       |                                |                        |             |
| Interval between Packers: | 122.00 ft          |                       |                                |                        |             |
| Tool Length:              | 224.00 ft          |                       |                                |                        |             |
| Number of Packers:        | 3                  | Diameter: 6.75 inches |                                |                        |             |

Tool Comments:

| <b>Tool Description</b> | <b>Length (ft)</b> | <b>Serial No.</b> | <b>Position</b> | <b>Depth (ft)</b> | <b>Accum. Lengths</b> |
|-------------------------|--------------------|-------------------|-----------------|-------------------|-----------------------|
|-------------------------|--------------------|-------------------|-----------------|-------------------|-----------------------|

|                 |       |      |         |         |                                    |
|-----------------|-------|------|---------|---------|------------------------------------|
| Change Over Sub | 1.00  |      |         | 3580.00 |                                    |
| Shut In Tool    | 5.00  |      |         | 3585.00 |                                    |
| Hydraulic tool  | 5.00  |      |         | 3590.00 |                                    |
| Packer          | 5.00  |      |         | 3595.00 | 21.00      Bottom Of Top Packer    |
| Packer          | 5.00  |      |         | 3600.00 |                                    |
| Stubb           | 1.00  |      |         | 3601.00 |                                    |
| Perforations    | 4.00  |      |         | 3605.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3606.00 |                                    |
| Drill Pipe      | 93.00 |      |         | 3699.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3700.00 |                                    |
| Recorder        | 0.00  | 8648 | Inside  | 3700.00 |                                    |
| Recorder        | 0.00  | 8940 | Outside | 3700.00 |                                    |
| Perforations    | 21.00 |      |         | 3721.00 |                                    |
| Blank Off Sub   | 1.00  |      |         | 3722.00 | 122.00      Tool Interval          |
| Packer          | 4.00  |      |         | 3726.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3727.00 |                                    |
| Drill Pipe      | 62.00 |      |         | 3789.00 |                                    |
| Change Over Sub | 1.00  |      |         | 3790.00 |                                    |
| Recorder        | 0.00  | 8958 | Below   | 3790.00 |                                    |
| Perforations    | 10.00 |      |         | 3800.00 |                                    |
| Bullnose        | 3.00  |      |         | 3803.00 | 81.00      Bottom Packers & Anchor |

**Total Tool Length: 224.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

TDI, Inc  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**26-11s-20w Ellis,KS**  
**Conell #1**  
Job Ticket: 54045      **DST#: 3**  
Test Start: 2014.05.14 @ 08:27:00

### Mud and Cushion Information

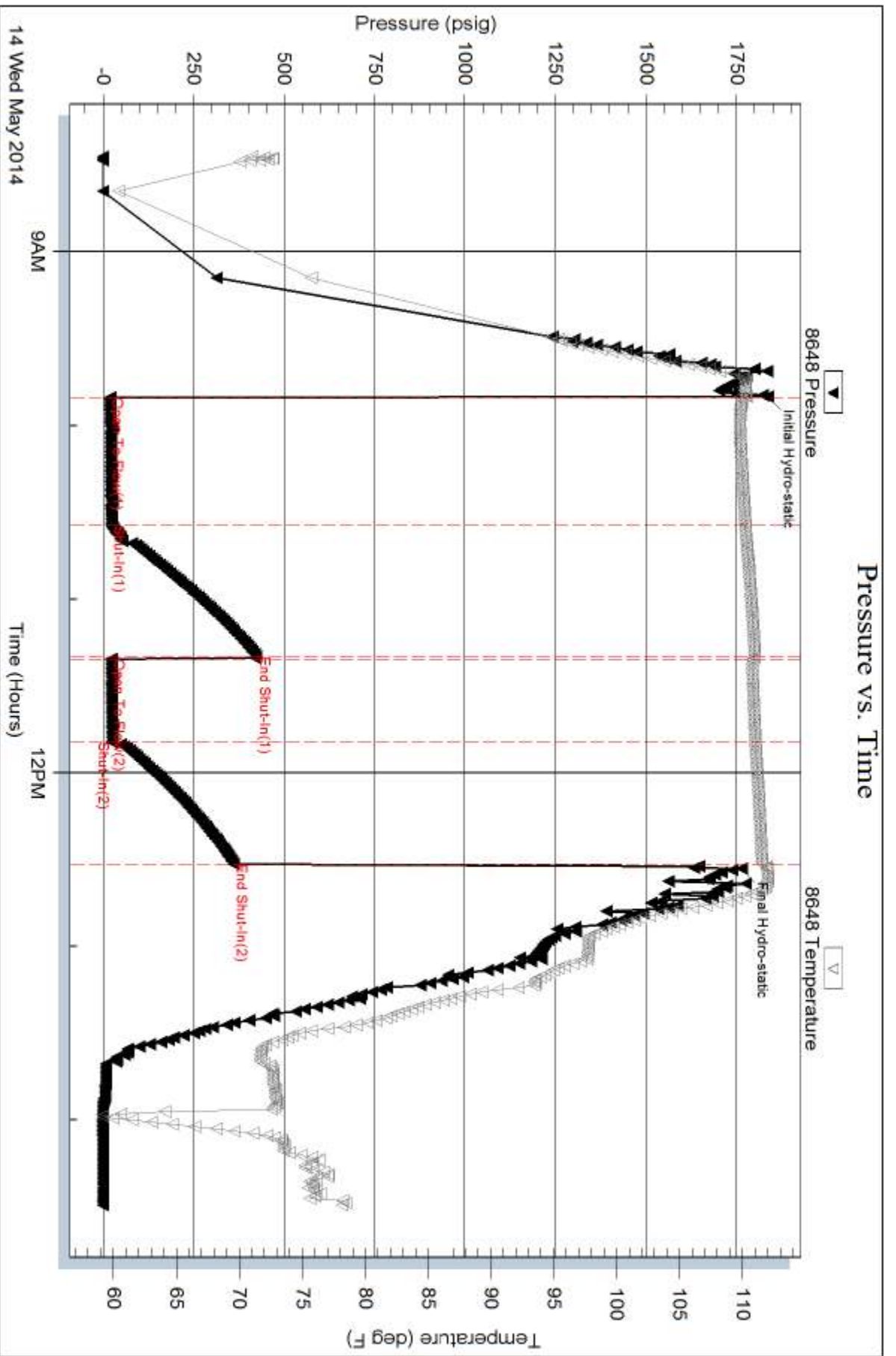
|                                  |                            |                 |         |
|----------------------------------|----------------------------|-----------------|---------|
| Mud Type: Gel Chem               | Cushion Type:              | Oil API:        | deg API |
| Mud Weight: 9.00 lb/gal          | Cushion Length: ft         | Water Salinity: | ppm     |
| Viscosity: 61.00 sec/qt          | Cushion Volume: bbl        |                 |         |
| Water Loss: 7.58 in <sup>3</sup> | Gas Cushion Type:          |                 |         |
| Resistivity: ohm.m               | Gas Cushion Pressure: psig |                 |         |
| Salinity: 1300.00 ppm            |                            |                 |         |
| Filter Cake: inches              |                            |                 |         |

### Recovery Information

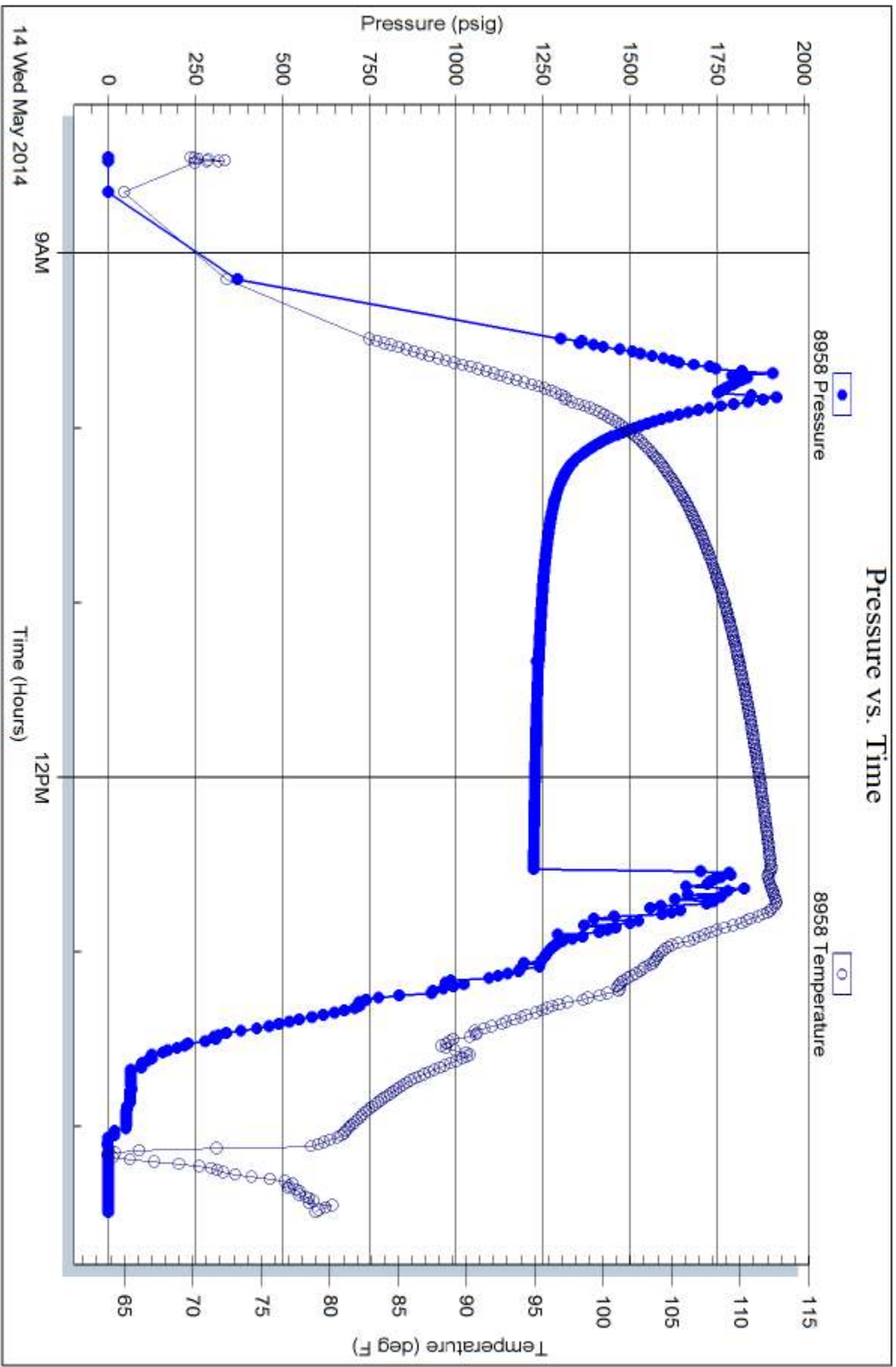
Recovery Table

| Length<br>ft | Description                   | Volume<br>bbl |
|--------------|-------------------------------|---------------|
| 15.00        | Mud - w with Oil spots, 100%M | 0.210         |

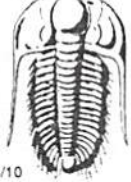
Total Length: 15.00 ft      Total Volume: 0.210 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:











# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54043**

Well Name & No. Conell #1 Test No. 1 Date 5-13-14  
 Company TDI Inc Elevation ~~2088~~ 2096 KB 2088 GL  
 Address 1310 Bison Rd, Hays KS, 67601  
 Co. Rep / Geo. Herb Rig Southwind #1  
 Location: Sec. 26 Twp. 11s Rge. 20w Co. Ellis State KS

Interval Tested 3542-3595 TD 3798 Zone Tested "I, J"  
 Anchor Length 53' 203' tail Drill Pipe Run 3527' Mud Wt. 9.0  
 Top Packer Depth 3537 Drill Collars Run — Vis 61  
 Bottom Packer Depth 3542 Wt. Pipe Run — WL 7.6  
 Total Depth 3595 Chlorides 1300 ppm System LCM —

Blow Description IF- B.O.B. in 17 minutes  
ISI- Surface return  
FF- B.O.B. in 34 minutes  
FBI- surface return

| Rec       | Feet of            | %gas      | %oil      | %water    | %mud     |
|-----------|--------------------|-----------|-----------|-----------|----------|
| <u>10</u> | <u>HO CM</u>       | <u>30</u> | <u>—</u>  | <u>70</u> | <u>—</u> |
| <u>77</u> | <u>60</u>          | <u>5</u>  | <u>95</u> | <u>—</u>  | <u>—</u> |
| <u>—</u>  | <u>—</u>           | <u>—</u>  | <u>—</u>  | <u>—</u>  | <u>—</u> |
| <u>—</u>  | <u>341' G.I.P.</u> | <u>—</u>  | <u>—</u>  | <u>—</u>  | <u>—</u> |
| <u>—</u>  | <u>—</u>           | <u>—</u>  | <u>—</u>  | <u>—</u>  | <u>—</u> |

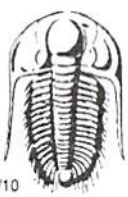
Rec Total 87' BHT 109° Gravity 32 API RW — @ — ° F Chlorides — ppm

|                                     |   |   |
|-------------------------------------|---|---|
| (A) Initial Hydrostatic <u>1787</u> | <input checked="" type="checkbox"/> Test <u>1150</u>          | T-On Location <u>1948</u>                             |
| (B) First Initial Flow <u>17</u>    | <input type="checkbox"/> Jars <u>—</u>                        | T-Started <u>2022</u>                                 |
| (C) First Final Flow <u>34</u>      | <input type="checkbox"/> Safety Joint <u>—</u>                | T-Open <u>2312</u>                                    |
| (D) Initial Shut-In <u>934</u>      | <input type="checkbox"/> Circ Sub <u>—</u>                    | T-Pulled <u>0212</u>                                  |
| (E) Second Initial Flow <u>36</u>   | <input type="checkbox"/> Hourly Standby <u>—</u>              | T-Out <u>0403</u>                                     |
| (F) Second Final Flow <u>51</u>     | <input checked="" type="checkbox"/> Mileage <u>SIRT 79.05</u> | Comments <u>30@40 Degrees</u>                         |
| (G) Final Shut-In <u>787</u>        | <input type="checkbox"/> Sampler <u>—</u>                     |   |
| (H) Final Hydrostatic <u>1584</u>   | <input checked="" type="checkbox"/> Straddle <u>600</u>       | <input type="checkbox"/> Ruined Shale Packer <u>—</u> |

|                           |  |   |
|---------------------------|--|---|
| Initial Open <u>45</u>    | <input type="checkbox"/> Shale Packer <u>—</u>   | <input type="checkbox"/> Ruined Packer <u>—</u> |
| Initial Shut-In <u>45</u> | <input type="checkbox"/> Extra Packer <u>—</u>   | <input type="checkbox"/> Extra Copies <u>—</u>  |
| Final Flow <u>45</u>      | <input type="checkbox"/> Extra Recorder <u>—</u> | Sub Total <u>0</u>                              |
| Final Shut-In <u>45</u>   | <input type="checkbox"/> Day Standby <u>—</u>    | Total <u>1829.05</u>                            |
|                           | <input type="checkbox"/> Accessibility <u>—</u>  | MP/DST Disc't <u>—</u>                          |
|                           | Sub Total <u>1829.05</u>                         |   |

Approved By \_\_\_\_\_ Our Representative Cody Bledorn

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. 54044

Well Name & No. Connell #1 Test No. 2 Date 5-14-14  
 Company TDI, Inc Elevation 2096 KB 2088 GL  
 Address 1310 Bison Rd, Hays KS, 67601  
 Co. Rep / Geo. Herb Rig Southwind #1  
 Location: Sec. 26 Twp. 11s Rge. 20w Co. ELLIS State KS

Interval Tested 3675-3722 Zone Tested Arbuckle  
 Anchor Length 47 76tail Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.0  
 Top Packer Depth 3670 Drill Collars Run — Vis 61  
 Bottom Packer Depth 3675 Wt. Pipe Run — WL 7.6  
 Total Depth 3722 Chlorides 1300 ppm System LCM —  
 Blow Description IF- Opened tool \* packer Failure \*  
ISI-  
FF-  
FSI-

| 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 | Feet of | %gas | %oil | %water | %mud |

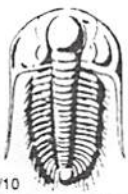
Rec Total \_\_\_\_\_ BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic \_\_\_\_\_  Test 950 T-On Location 0400  
 (B) First Initial Flow \_\_\_\_\_  Jars \_\_\_\_\_ T-Started 0432  
 (C) First Final Flow \_\_\_\_\_  Safety Joint \_\_\_\_\_ T-Open 0600  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 0613  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 0804  
 (F) Second Final Flow \_\_\_\_\_  Mileage \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open \_\_\_\_\_  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In \_\_\_\_\_  Day Standby \_\_\_\_\_ Total 1550  
 Final Flow \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_ Sub Total 1550

Approved By \_\_\_\_\_ Our Representative Cody Bell

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54045

Well Name & No. Connell #1 Test No. 3 Date 5-14-14  
 Company TDI, Inc Elevation 2096 KB 2088 GL  
 Address 1310 Bison Rd, Hays KS, 67601  
 Co. Rep / Geo. Herb Rig Southwind #1  
 Location: Sec. 26 Twp. 11s Rge. 20w Co. Ellis State KS

Interval Tested 3600-3722 3798TD Zone Tested Arbuckle  
 Anchor Length 122' 76' tail Drill Pipe Run 3588' Mud Wt. 9.0  
 Top Packer Depth 3595 Drill Collars Run — Vis 61  
 Bottom Packer Depth 3600 Wt. Pipe Run — WL 7.6  
 Total Depth 3722 Chlorides 1300 ppm System LCM —  
 Blow Description IF-1 1/2" blow in 18 min. Stayed there rest of open  
ISI - surface return  
FF - Surged & died  
FSI - No return

| Rec       | Feet of                     | %gas | %oil | %water     | %mud |
|-----------|-----------------------------|------|------|------------|------|
| <u>15</u> | <u>Mud - with oil spots</u> |      |      | <u>100</u> |      |
| Rec       | Feet of                     | %gas | %oil | %water     | %mud |
| Rec       | Feet of                     | %gas | %oil | %water     | %mud |
| Rec       | Feet of                     | %gas | %oil | %water     | %mud |

Rec Total 15' BHT 1110 Gravity — API RW — @ — °F Chlorides — ppm

|                                     |   |  |
|-------------------------------------|---|--|
| (A) Initial Hydrostatic <u>1835</u> | <input checked="" type="checkbox"/> Test <u>1150</u>    | T-On Location <u>0804</u>                    |
| (B) First Initial Flow <u>19</u>    | <input type="checkbox"/> Jars                           | T-Started <u>0827</u>                        |
| (C) First Final Flow <u>22</u>      | <input type="checkbox"/> Safety Joint                   | T-Open <u>0949</u>                           |
| (D) Initial Shut-In <u>424</u>      | <input type="checkbox"/> Circ Sub                       | T-Pulled <u>12:34</u>                        |
| (E) Second Initial Flow <u>21</u>   | <input type="checkbox"/> Hourly Standby                 | T-Out <u>1429</u>                            |
| (F) Second Final Flow <u>24</u>     | <input type="checkbox"/> Mileage                        | Comments                                     |
| (G) Final Shut-In <u>360</u>        | <input type="checkbox"/> Sampler                        |  |
| (H) Final Hydrostatic <u>1763</u>   | <input checked="" type="checkbox"/> Straddle <u>600</u> | <input type="checkbox"/> Ruined Shale Packer |
|                                     | <input type="checkbox"/> Shale Packer                   | <input type="checkbox"/> Ruined Packer       |
| Initial Open <u>45</u>              | <input type="checkbox"/> Extra Packer                   | <input type="checkbox"/> Extra Copies        |
| Initial Shut-In <u>45</u>           | <input type="checkbox"/> Extra Recorder                 | Sub Total <u>0</u>                           |
| Final Flow <u>30</u>                | <input type="checkbox"/> Day Standby                    | Total <u>1750</u>                            |
| Final Shut-In <u>45</u>             | <input type="checkbox"/> Accessibility                  | MP/DST Disc't                                |
|                                     | Sub Total <u>1750</u>                                   |  |

Approved By \_\_\_\_\_

Our Representative Cody Blair

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.




|             |           |       |       |
|-------------|-----------|-------|-------|
| Topeka      | 3134-1038 | -1033 | -1027 |
| Heebner Sh. | 3356-1260 | -1254 | -1249 |
| Toronto     | 3379-1283 | -1277 | -1271 |
| LKC         | 3397-1301 | -1295 | -1288 |
| BKC         | 3622-1526 | -1521 | -1511 |
| Arbuckle    | 3708-1612 | -1601 | -1598 |
| RTD         | 3800-1704 | -1618 | -1628 |

**SUMMARY OF DAILY ACTIVITY**

- 5-08-14 RU, Spud 4:00 PM, set 8 5/8" surface casing to 223' w/ 150 sxs  
Common 2%Gel 3%CC, slope 3/4 degree, plug down 11:15 PM
- 5-09-14 224', drill plug 7:15 AM
- 5-10-14 2010', drilling
- 5-11-14 2750', drilling, displaced 2967' to 2985'
- 5-12-14 3315', drilling
- 5-13-14 3705', drilling, CFS 3710', CFS 3718', RTD 3800' @11:31AM, short trip, TOWB, slope @3800' 3/4 degree, logs, straddle DST # 1 3542'-3595' "I-J" LKC
- 5-14-14 3800', straddle DST #2 3675'-3722' Arbuckle- Misrun, straddle DST # 3 3600'-3722', Arbuckle, TIWB, LDDP, start running production casing
- 5-15-14 3800', finish running production casing and cementing

**DST # 1 STRADDLE TEST 3542' TO 3595' BOTTOM PACKER HELD**

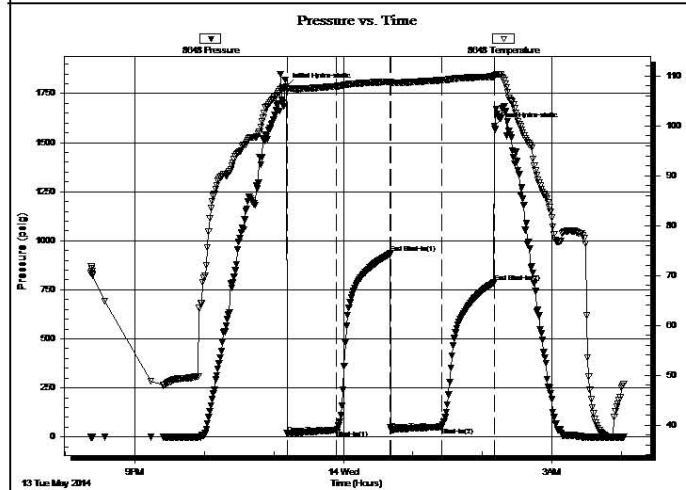
|   |  |  |
|---|--|--|
|  | <b>DRILL STEM TEST REPORT</b>  |  |
|   | TDI, Inc<br>1310 Bison Rd<br>Hays KS, 67601<br><br>ATTN: Herb Deines | <b>26-11s-20w Ellis</b><br><br><b>Conell #1</b><br>Job Ticket: 54043 <b>DST#: 1</b><br>Test Start: 2014.05.13 @ 20:22:00 |

**GENERAL INFORMATION:**

|   |                                    |  |
|---|------------------------------------|--|
| Formation: <b>LKC "I,J"</b>                               | Deviated: No Whipstock: ft (KB)    | Test Type: Conventional Straddle (Initial) |
| Time Tool Opened: 23:11:15                                | Time Test Ended: 04:01:45          | Tester: Cody Bloedorn                      |
| Interval: <b>3542.00 ft (KB) To 3595.00 ft (KB) (TVD)</b> | Total Depth: 3798.00 ft (KB) (TVD) | Reference Elevations: 2096.00 ft (KB)      |
| Hole Diameter: 7.88 inches                                | Hole Condition: Fair               | 2088.00 ft (CF)                            |
|   |                                    | KB to GR/CF: 8.00 ft                       |

|                                     |  |                                     |
|-------------------------------------|--|-------------------------------------|
| <b>Serial #: 8648</b> <b>Inside</b> | Press@RunDepth: 51.07 psig @ 3580.00 ft (KB) | Capacity: 8000.00 psig              |
| Start Date: 2014.05.13              | End Date: 2014.05.14                         | Last Calib.: 2014.05.14             |
| Start Time: 20:22:05                | End Time: 04:01:44                           | Time On Btm: 2014.05.13 @ 23:11:00  |
|                                     |  | Time Off Btm: 2014.05.14 @ 02:10:30 |

TEST COMMENT: 45 - IF- B.O.B. in 17 minutes  
 45 - IS- Surface return  
 45 - FF- B.O.B. in 34 Minutes  
 45 - FS- Surface return



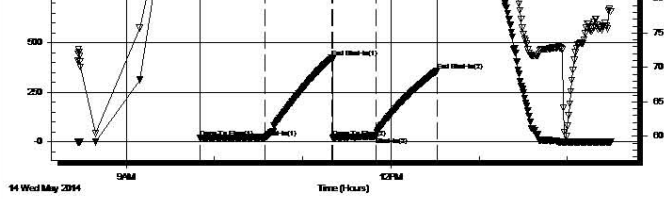
| PRESSURE SUMMARY |                 |              |                      |
|------------------|-----------------|--------------|----------------------|
| Time (Mn.)       | Pressure (psig) | Temp (deg F) | Annotation           |
| 0                | 1787.78         | 107.93       | Initial Hydro-static |
| 1                | 17.83           | 107.22       | Open To Flow (1)     |
| 44               | 34.86           | 107.94       | Shut-In(1)           |
| 90               | 934.47          | 108.88       | End Shut-In(1)       |
| 90               | 36.76           | 108.61       | Open To Flow (2)     |
| 134              | 51.07           | 109.16       | Shut-In(2)           |
| 179              | 787.31          | 109.87       | End Shut-In(2)       |
| 180              | 1584.87         | 110.10       | Final Hydro-static   |

| Recovery    |                  |              |
|-------------|------------------|--------------|
| Length (ft) | Description      | Volume (bbl) |
| 10.00       | HOCM, 30%O, 70%M | 0.14         |
| 77.00       | GO, 5%G, 95%O    | 1.08         |
| 0.00        | 341' of G.I.P.   | 0.00         |
|             |                  |              |
|             |                  |              |

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







164 1763.27 111.94 Final Hydro-static

| Recovery    |                             |              |
|-------------|-----------------------------|--------------|
| Length (ft) | Description                 | Volume (bbl) |
| 15.00       | Mud - with Oil spots, 100%M | 0.21         |
|             |                             |              |
|             |                             |              |
|             |                             |              |
|             |                             |              |

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

Triobite Testing, Inc Ref. No: 54045 Printed: 2014.05.14 @ 14:44:52

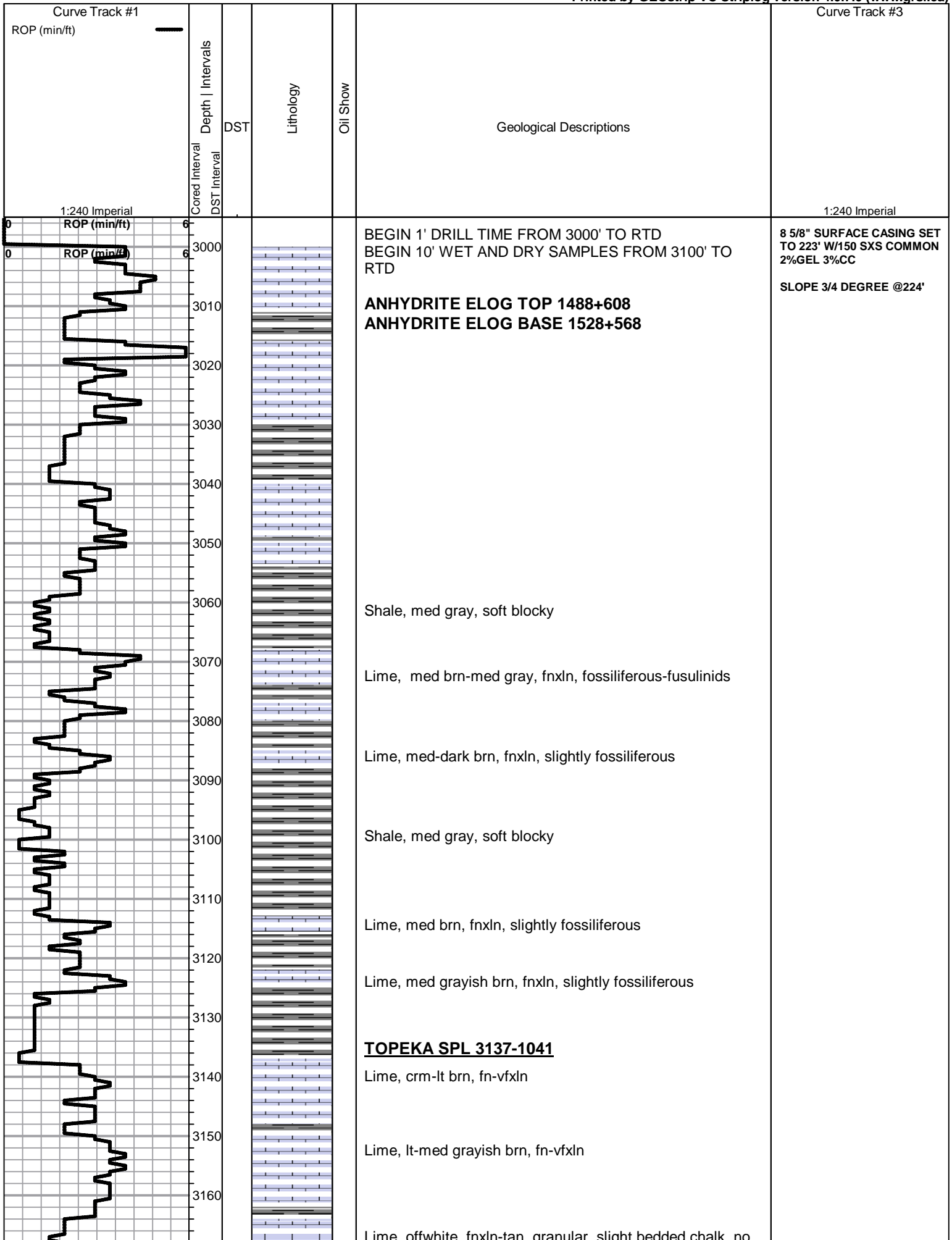
**ROCK TYPES**

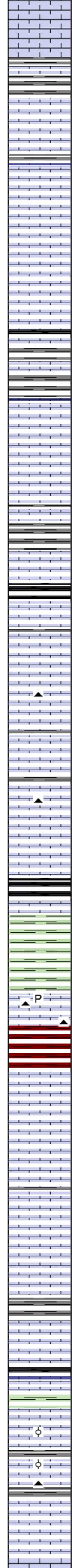
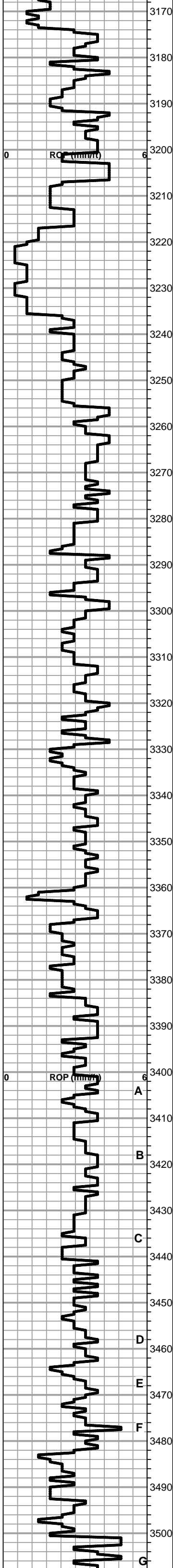
|          |           |            |            |
|----------|-----------|------------|------------|
| Clystcol | Lmst fw<7 | shale, grn | shale, red |
| Dolprim  | Lmst fw7> | shale, gry | Ss         |
| Dol Lime | Lscongl   | Carbon Sh  |            |

**ACCESSORIES**

|                |               |
|----------------|---------------|
| <b>MINERAL</b> | <b>FOSSIL</b> |
| ▲ Chert, dark  | ◊ Oolite      |
| P Pyrite       |               |
| △ Chert White  |               |

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





Lime, offwhite, med tan, granular, slight bedded chert, no wet cut

Lime, med brn-med gray, fnxln, slightly fossiliferous

Lime, med grayish brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, offwhite-med grayish brn, fnxln, slightly granular

Lime, offwhite-grayish brn, fn-vfxln, slightly fossiliferous

Lime, med-dark brn, fnlxn-granular, slightly fossiliferous

Shale, black carbonaceous, blocky

Lime, lt-med brn, fnxln

Lime, crm-tan, fn-micro xln

Lime, tan-lt brn, fn-vfxln

Lime, tan-lt brn-lt grayish brn, fn-vfxln

Lime, lt-med brn, fnxln

Shale, black carbonaceous, fissile, blocky

Lime, crm-lt brn, fn-vfxln

Lime, lt-med brn, fn-vfxln, hard on crush

Lime, crm-med brn, fn-micro xln, slight bedded chalk

Lime, crm-lt brn, fnlxn-granular, slight bedded chalk

Lime, lt-med brn, fnlxn-granular, Lime gray, shaley with dark chert

Lime, lt-med brn, fnlxn-granular in part, chalk matrix in part

**HEEBNER SHALE SPL 3358-1262**  
 Shale, black carbonaceous, fissile, blocky  
 Lime, lt-med brn, micro xln

Shale, lime green soft blocky-sticky clumps in part

**TORONTO SPL 3382-1286**  
 Lime, lt-med brn, fn-vfxln, slightly pyritic, chert in part

Shale, soft with red wash

**LKC SPL 3400-1304**  
 Lime, crm-lt brn, fn-vfxln

Lime, crm-tan, fn-micro xln NS

Lime, lt gray-crm-tan, fn-vfxln, NS

Lime, tan-med brn, fn-vfxln, slightly fossiliferous, well cemented

Lime, lt-med brn, fnxln, NS

Shale, med gray, soft-firm, calcareous and fossiliferous in part

Lime, tan-lt brn, mostly fnxln, few chips with scattered vuggy porosity, scattered-saturated stain, NFO, No Odor

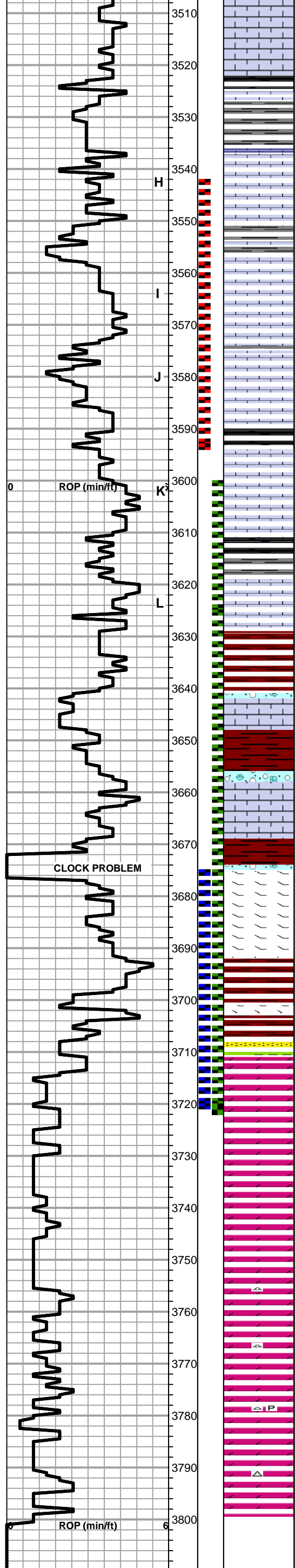
Shale, black carbonaceous

Lime, tan, oolitic w/ fossil fragments, scattered to saturated staining, NFO, No Odor

Lime, tan, oolitic, interoolitic porosity, scattered to saturated staining, NFO, No Odor

Lime, crm-tan, fnxln, bedded chalk with white wash

Lime, crm-tan, fnxln, bedded chalk



Lime, crm-tan, fn-vfxln, bedded chalk

Shale, black carbonaceous

Lime, tan, fn-vfxln, bedded chalk in part, few chips with spotty staining, NFO, No Odor

Lime, offwhite-crm, fn-vfxln

● Lime, crm, mostly fnxln, zone of oolitic/fossil fragments, lt odor, scattered-saturated staining, NFO

Lime, offwhite-crm, fn-vfxln

● Lime, crm-tan, oomoldic, scattered to saturated staining, very lt odor, oily sheen on samples

Lime, crm, fn-vfxln, slight bedded chalk  
Shale, black carbonaceous, blocky

Lime, crm, fn-vfxln, slight bedded chalk, NS

Shale, gray-black carbonaceous, blocky

Lime, crm, fn-vfxln-micro xln in part  
**BKC SPL 3629-1533**

Shale, red, sandy, hard on crush in part grading into softer shale with red wash

Lime, crm, fnxln with red shale staining and shale inclusions

Shale, red, sandy, hard on crush, lime clastics mixed with red shale

Lime, fn-micro xln with red shale staining and shale inclusions

CLOCK PROBLEM

Lime, crm-tan-lt brn, fn-vfxln, slightly dolomitic

Lime, tan-lt gray, fnxln-granular, orange chert, NS

Shale, red, brn, maroon, soft blocky

SS, quartz, poorly sorted, deed flacky gilsonite, No Odor, NFO

D **ARBUCKLE SPL 3710-1614**

● Dolomite, lt-med brn, fnxln with fn-med grained granular with interxln porosity, scattered to saturated staining, lt odor, oily sheen

○ Dolomite, tan-lt brn, fnxln-granular with few chips of cxln with rhombic xln development, oolitic chert

Dolomite, crm-tan, fnxln-granular

Dolomite, crm-tan, fnxln-granular with lt white chalk wash

Dolomite, tan-lt brn, fnxln-granular, white chert

Dolomite, crm-tan-lt salmon, fnxln-granular

Dolomite, crm-lt brn, fnxln-granular, slightly pyritic

Dolomite, crm-lt brn, fnxln-granular

**RTD 3800-1704 LTD 3798-1702**

DST # 1 STRADDLE TEST  
LOG INTERVAL 3542'-3595'  
SEE HEADER FOR TEST  
SUMMARY

DST # 2 STRADDLE TEST LOG  
INTERVAL 3675'-3722'  
TOP PACKER FAILURE

DST # 3 STRADDLE TEST  
LOG INTERVAL 3600'-3722'  
SEE HEADER FOR TEST  
SUMMARY

RAN 90 JOINTS 14# 5 1/2"  
CASING SET TO 3799' W/ 150  
SXS EA2, TOP STAGE W/ 150  
SMD, 30 SXS RATHOLE, 15 SX  
MOUSEHOLE

SLOPE @3800' 3/4 DEGREE

# GLOBAL CEMENTING, L.L.C.

1322

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell, KS

|                                |                  |                |                 |            |                     |                          |                           |
|--------------------------------|------------------|----------------|-----------------|------------|---------------------|--------------------------|---------------------------|
| DATE <u>5-8-14</u>             | SEC. <u>28</u>   | TWP. <u>11</u> | RANGE <u>20</u> | CALLED OUT | ON LOCATION         | JOB START <u>10:45pm</u> | JOB FINISH <u>11:15pm</u> |
| LEASE <u>Conell</u>            | WELL #. <u>1</u> | LOCATION       |                 |            | COUNTY <u>Ellis</u> | STATE <u>KS</u>          |                           |
| OLD OR <u>NEW</u> (CIRCLE ONE) |                  |                |                 |            |                     |                          |                           |

CONTRACTOR Southwind #1

TYPE OF JOB Surface

HOLE SIZE 12 3/4 T.D. 25

CASING SIZE 8 5/8 DEPTH 23.07

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 250 psi MINIMUM 100 psi

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 2054

PERFS

DISPLACEMENT 12 3/4 bbl

EQUIPMENT

PUMP TRUCK CEMENTER Heath

# P1 HELPER Cody - Brad

BULK TRUCK

# B4 DRIVER Eric

BULK TRUCK

# DRIVER

REMARKS:

Run 5 JTS of 8 5/8 casing and landing

Est Circulation with mud pump

Hook up and m.r. 150sr and disp 12 3/4

bbl H2O - shut in @ 250psi

Cement Did Circulate

CHARGE TO: TOT

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Global Cementing, L.L.C.,  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME W. A. ...

SIGNATURE [Signature]

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 150sr com 3% CC

290 gal

COMMON \_\_\_\_\_ @ \_\_\_\_\_

POZMIX \_\_\_\_\_ @ \_\_\_\_\_

GEL \_\_\_\_\_ @ \_\_\_\_\_

CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_

ASC \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS



JOB LOG

SWIFT Services, Inc.

DATE 5-14-14 PAGE NO.

CUSTOMER TPI WELL NO. #1 LEASE Conell JOB TYPE 2-Stage TICKET NO. 25495

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS |   | PRESSURE (PSI)      |        | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|---------------------|--------|--|
|           |      |            |                    | T     | C | TUBING              | CASING |  |
|           | 2100 |            |                    |       |   |                     |        | on loc w/FE                            |
|           |      |            |                    |       |   |                     |        | RTD 3813                               |
|           |      |            |                    |       |   |                     |        | 5 1/2" x 14" # x 3795' x 42'           |
|           |      |            |                    |       |   |                     |        | Cost 1,3,4,6,8,89,11,13,53             |
|           |      |            |                    |       |   |                     |        | Back 2,14,54                           |
|           |      |            |                    |       |   |                     |        | DV 54 @ 1454'                          |
|           | 2315 |            |                    |       |   |                     |        | Start FE                               |
|           | 0100 |            |                    |       |   |                     |        | Break Circ                             |
|           |      |            |                    |       |   |                     |        | <del>Plug</del>                        |
|           | 0200 | 5          | 0                  |       |   | 200                 |        | Start Prof 500 gal Mud flush           |
|           | 0215 | 5          | 32/0               |       |   | 800                 |        | Start EA-2 Cement                      |
|           | 0223 |            | 36                 |       |   | 200                 |        | End Cement                             |
|           |      |            |                    |       |   |                     |        | Wash P+L                               |
|           |      |            |                    |       |   |                     |        | <del>Drop</del> Drop LD Plug           |
|           | 0231 | 6          | 0                  |       |   | 200                 |        | Start Displacement air                 |
|           | 0240 | 5          | 55                 |       |   | 250                 |        | mud                                    |
|           | 0245 | 5          | 70                 |       |   | 250                 |        | KCL                                    |
|           | 0250 |            | <del>87</del> 92   |       |   | <del>630</del> 1500 |        | Land Plug                              |
|           |      |            |                    |       |   |                     |        | Release Pressure / Float Hold          |
|           |      |            |                    |       |   |                     |        | Drop Opening Plug                      |
|           | 0300 | 2          | 7                  |       |   |                     |        | Plug RHM 30/sks SMD Cement             |
|           | 0310 |            |                    |       |   | 1400                |        | Open DV                                |
|           | 0311 | 5          | 0                  |       |   | 200                 |        | Start 150/sks SMD Cement               |
|           | 0320 |            | 86                 |       |   | 200                 |        | End Cement                             |
|           |      |            |                    |       |   |                     |        | Wash P+L                               |
|           |      |            |                    |       |   |                     |        | Drop Closing Plug                      |
|           | 0327 | 5          | 0                  |       |   | 200                 |        | Start Displacement                     |
|           |      | 4          | 0                  |       |   |                     |        | Circ. Cement                           |
|           | 0335 |            | 35.5               |       |   | <del>450</del> 1500 |        | Land Plug                              |
|           |      |            |                    |       |   |                     |        | Release Pressure / DV Closed           |
|           |      |            |                    |       |   |                     |        | circ 50/sks top it                     |
|           |      |            |                    |       |   |                     |        | Thank you,<br>Nick, David B. + Craig   |