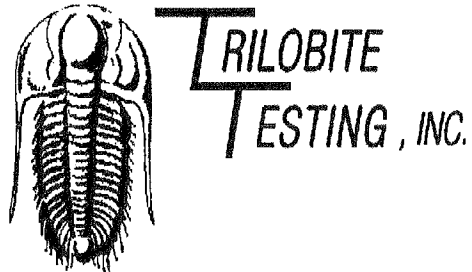


15-135-24621

33-18s-23w



## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling CO Inc**

PO Box 2758  
Wichita KS 67201-2758

ATTN: Mark Shreve

**33 18S 23W Ness KS**

**Hawkinson # 1-33**

Start Date: 2007.03.27 @ 00:50:52

End Date: 2007.03.27 @ 09:01:22

Job Ticket #: 27428                      DST #: 1

**KCC**  
**MAY 03 2007**  
**CONFIDENTIAL**

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



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

## DRILL STEM TEST REPORT

Mull Drilling CO Inc

PO Box 2758  
Wichita KS 67201-2758

ATTN: Mark Shreve

Hawkinson # 1-33

33 18S 23W Ness KS

Job Ticket: 27428

DST#: 1

Test Start: 2007.03.27 @ 00:50:52

### GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:40:22

Time Test Ended: 09:01:22

Test Type: Conventional Bottom Hole

Tester: John Schmidt

Unit No: 31

Interval: **4200.00 ft (KB) To 4275.00 ft (KB) (TVD)**

Total Depth: 4275.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2257.00 ft (KB)

2252.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **6669**

Inside

Press@RunDepth: 68.72 psig @ 4203.00 ft (KB)

Start Date: 2007.03.27

End Date:

2007.03.27

Capacity: 7000.00 psig

Last Calib.: 2007.03.27

Start Time: 00:50:57

End Time:

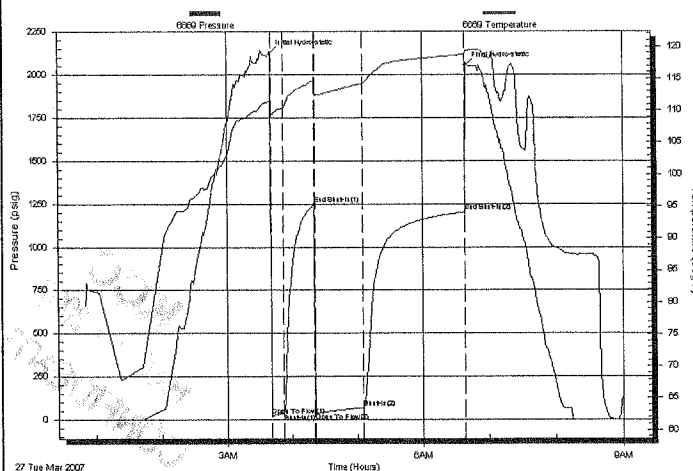
09:01:21

Time On Btm: 2007.03.27 @ 03:39:52

Time Off Btm: 2007.03.27 @ 06:38:52

TEST COMMENT: IF Weak built to 1 "  
ISI Dead  
FF Weak built to 1 & 1/2 "  
FSI Dead

Pressure vs. Time



PRESSURE SUMMARY

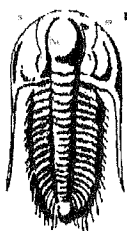
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2121.87         | 111.42       | Initial Hydro-static |
| 1           | 21.70           | 109.32       | Open To Flow (1)     |
| 12          | 35.59           | 110.40       | Shut-In (1)          |
| 41          | 1247.17         | 114.72       | End Shut-In (1)      |
| 42          | 40.24           | 112.31       | Open To Flow (2)     |
| 86          | 68.72           | 114.23       | Shut-In (2)          |
| 178         | 1201.87         | 118.77       | End Shut-In (2)      |
| 179         | 2049.76         | 119.03       | Final Hydro-static   |

Recovery

| Length (ft) | Description   | Volume (bbl) |
|-------------|---------------|--------------|
| 114.00      | OCM 10%O 90%M | 0.56         |
| 10.00       | Clean Oil     | 0.05         |
|             |               |              |
|             |               |              |
|             |               |              |

Gas Rates

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



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

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drilling CO Inc  
PO Box 2758  
Wichita KS 67201-2758  
  
ATTN: Mark Shreve

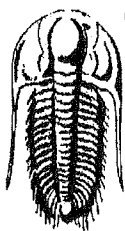
**Hawkinson # 1-33**  
**33 18S 23W Ness KS**  
Job Ticket: 27428      **DST#: 1**  
Test Start: 2007.03.27 @ 00:50:52

### Tool Information

|                           |                    |                       |                   |                        |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe:               | Length: 4081.00 ft | Diameter: 3.80 inches | Volume: 57.25 bbl | Tool Weight:           | 2500.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.70 inches | Volume: 0.00 bbl  | Weight set on Packer:  | 20000.00 lb |
| Drill Collar:             | Length: 124.00 ft  | Diameter: 2.25 inches | Volume: 0.61 bbl  | Weight to Pull Loose:  | 60000.00 lb |
|                           |                    | Total Volume:         | 57.86 bbl         | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 30.00 ft           |                       |                   | String Weight: Initial | 44000.00 lb |
| Depth to Top Packer:      | 4200.00 ft         |                       |                   | Final                  | 44000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |
| Interval between Packers: | 75.00 ft           |                       |                   |                        |             |
| Tool Length:              | 100.00 ft          |                       |                   |                        |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |

Tool Comments:

| Tool Description          | Length (ft)   | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|---------------|------------|----------|------------|-------------------------------|
| Change Over Sub           | 1.00          |            |          | 4176.00    |                               |
| Shut In Tool              | 5.00          |            |          | 4181.00    |                               |
| Hydraulic tool            | 5.00          |            |          | 4186.00    |                               |
| Jars                      | 5.00          |            |          | 4191.00    |                               |
| Packer                    | 4.00          |            |          | 4195.00    | 25.00 Bottom Of Top Packer    |
| Packer                    | 5.00          |            |          | 4200.00    |                               |
| Stubb                     | 1.00          |            |          | 4201.00    |                               |
| Perforations              | 1.00          |            |          | 4202.00    |                               |
| Change Over Sub           | 1.00          |            |          | 4203.00    |                               |
| Recorder                  | 0.00          | 6669       | Inside   | 4203.00    |                               |
| Blank Spacing             | 30.00         |            |          | 4233.00    |                               |
| Recorder                  | 0.00          | 11084      | Outside  | 4233.00    |                               |
| Blank Spacing             | 31.00         |            |          | 4264.00    |                               |
| Change Over Sub           | 1.00          |            |          | 4265.00    |                               |
| Perforations              | 7.00          |            |          | 4272.00    |                               |
| Bullnose                  | 3.00          |            |          | 4275.00    | 75.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>100.00</b> |            |          |            |                               |



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

## DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling CO Inc  
PO Box 2758  
Wichita KS 67201-2758  
ATTN: Mark Shreve

Hawkinson # 1-33  
33 18S 23W Ness KS  
Job Ticket: 27428 DST#: 1  
Test Start: 2007.03.27 @ 00:50:52

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 49.00 sec/qt  
Water Loss: 10.39 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig  
Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description   | Volume<br>bbl |
|--------------|---------------|---------------|
| 114.00       | OCM 10%O 90%M | 0.561         |
| 10.00        | Clean Oil     | 0.049         |

Total Length: 124.00 ft Total Volume: 0.610 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:  
Laboratory Name: Laboratory Location:  
Recovery Comments:

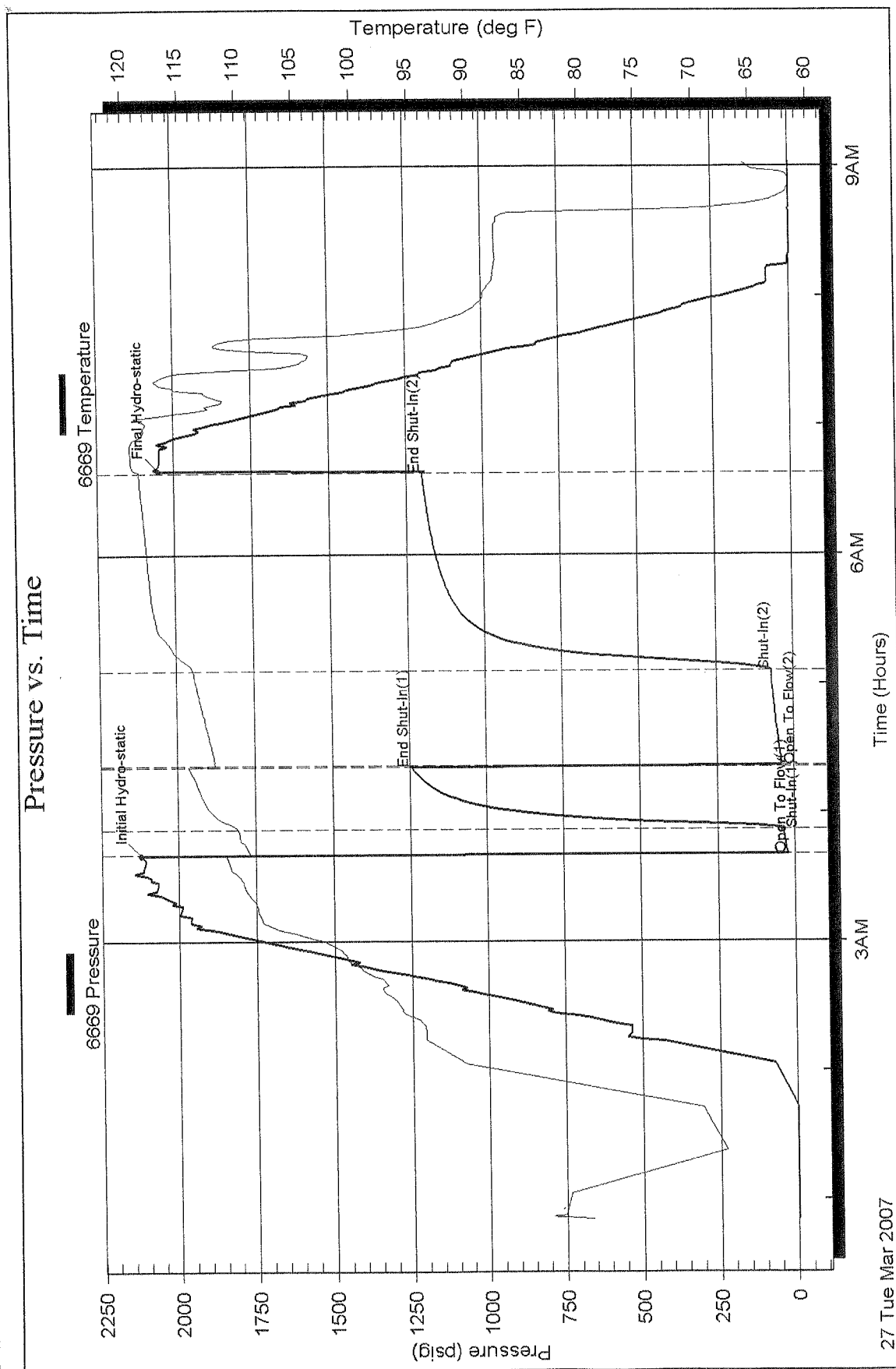
DST Test Number: 1

33 18S 23W Ness KS

Serial #: 6669 Mull Drilling CO Inc

Inside

# Pressure vs. Time



Ref. No: 27428

Trilobite Testing, Inc