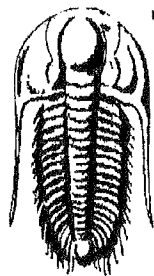


15-101-22002

19-18s-30w



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**19 18 30 Lane KS**

**Carson 1-19**

Start Date: 2007.02.12 @ 11:20:28

End Date: 2007.02.12 @ 19:51:22

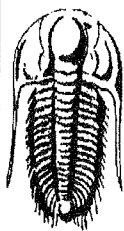
Job Ticket #: 26416      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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**CONFIDENTIAL**



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

## DRILL STEM TEST REPORT

Mull Drilling Company

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**Carson 1-19**

**19 18 30 Lane KS**

Job Ticket: 26416

DST#: 1

Test Start: 2007.02.12 @ 11:20:28

### GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:29:38

Time Test Ended: 19:51:22

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4128.00 ft (KB) To 4160.00 ft (KB) (TVD)**

Total Depth: 4160.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2907.00 ft (KB)

2902.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6772**

**Inside**

Press@RunDepth: 942.85 psig @ 4129.00 ft (KB)

Start Date: 2007.02.12

End Date:

2007.02.12

Capacity: 7000.00 psig

Last Calib.: 2007.02.12

Start Time: 11:20:28

End Time:

19:51:22

Time On Btm: 2007.02.12 @ 13:29:23

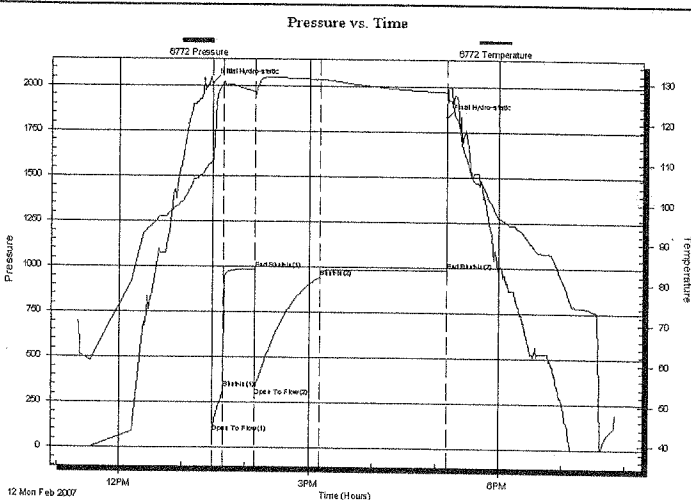
Time Off Btm: 2007.02.12 @ 17:10:37

TEST COMMENT: IF 1/4 blow BOB in 2 min.

IS No return

FF BOB in 3 min.

FS No return



### PRESSURE SUMMARY

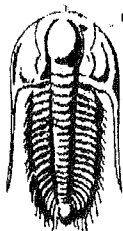
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2014.80         | 110.25       | Initial Hydro-static |
| 1           | 83.43           | 109.85       | Open To Flow (1)     |
| 11          | 325.59          | 129.81       | Shut-In (1)          |
| 40          | 985.37          | 127.61       | End Shut-In (1)      |
| 40          | 329.93          | 127.19       | Open To Flow (2)     |
| 101         | 942.85          | 130.67       | Shut-In (2)          |
| 221         | 985.90          | 127.69       | End Shut-In (2)      |
| 222         | 1830.30         | 128.01       | Final Hydro-static   |

### Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 1180.00     | WCM 95%W 5%M        | 14.90        |
| 434.00      | WMCO 5%O 85%W 10%M  | 6.09         |
| 310.00      | WMCO 10%O 20%W 70%M | 4.35         |
| 154.00      | OCW 70%O 30%W       | 2.16         |
| 30.00       | 100%O               | 0.42         |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26416

DST#: 1

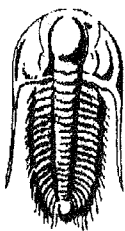
ATTN: Phil Ashey

Test Start: 2007.02.12 @ 11:20:28

### Tool Information

|                           |                    |                       |                   |                        |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3941.00 ft | Diameter: 3.80 inches | Volume: 55.28 bbl | Tool Weight:           | 1500.00 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: 181.00 ft  | Diameter: 2.25 inches | Volume: 0.89 bbl  | Weight to Pull Loose:  | 70000.00 lb |
|                           |                    | Total Volume:         | 56.17 bbl         | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 14.00 ft           |                       |                   | String Weight: Initial | 50000.00 lb |
| Depth to Top Packer:      | 4128.00 ft         |                       |                   | Final                  | 58000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |
| Interval between Packers: | 32.00 ft           |                       |                   |                        |             |
| Tool Length:              | 52.00 ft           |                       |                   |                        |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |
| Tool Comments:            |                    |                       |                   |                        |             |

| Tool Description   | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|--------------------|-------------|------------|----------|------------|-------------------------------|
| Stubb              | 1.00        |            |          | 4109.00    |                               |
| Shut In Tool       | 5.00        |            |          | 4114.00    |                               |
| Hydraulic tool     | 5.00        |            |          | 4119.00    |                               |
| Packer             | 5.00        |            |          | 4124.00    | 20.00 Bottom Of Top Packer    |
| Packer             | 4.00        |            |          | 4128.00    |                               |
| Stubb              | 1.00        |            |          | 4129.00    |                               |
| Recorder           | 0.00        | 6772       | Inside   | 4129.00    |                               |
| Perforations       | 26.00       |            |          | 4155.00    |                               |
| Recorder           | 0.00        | 7437       | Outside  | 4155.00    |                               |
| Bullhose           | 5.00        |            |          | 4160.00    | 32.00 Bottom Packers & Anchor |
| Total Tool Length: | 52.00       |            |          |            |                               |



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26416

**DST#: 1**

ATTN: Phil Ashey

Test Start: 2007.02.12 @ 11:20:28

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 21000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description         | Volume<br>bbl |
|--------------|---------------------|---------------|
| 1180.00      | WCM 95%W 5%M        | 14.903        |
| 434.00       | WMCO 5%O 85%W 10%M  | 6.088         |
| 310.00       | WMCO 10%O 20%W 70%M | 4.348         |
| 154.00       | OCW 70%O 30%W       | 2.160         |
| 30.00        | 100%O               | 0.421         |

Total Length: 2108.00 ft

Total Volume: 27.920 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 1

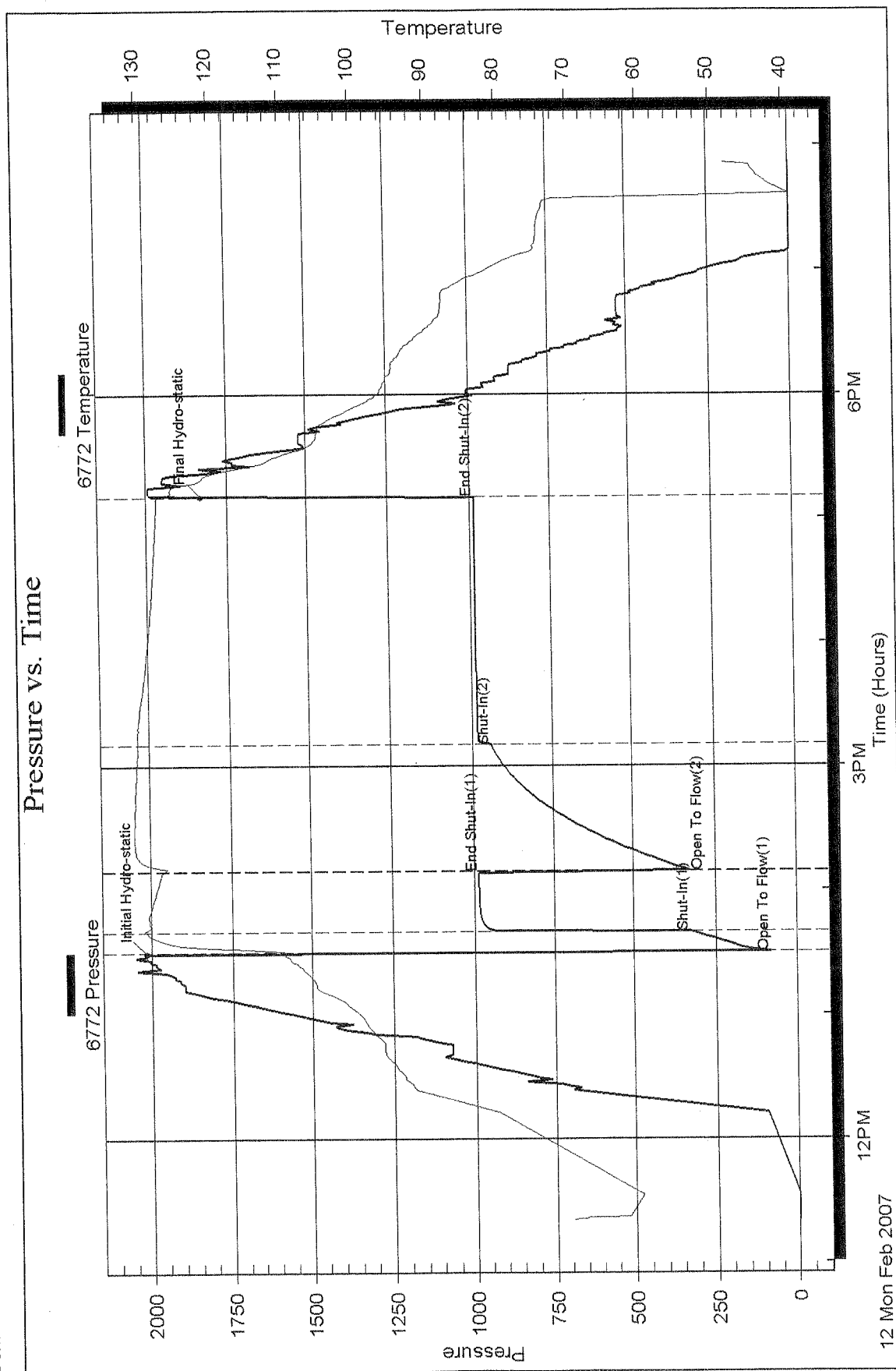
19 18 30 Lane KS

Mull Drilling Company

Inside

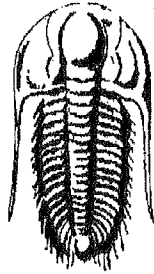
Serial #: 6772

# Pressure vs. Time



Ref. No: 26416

Trilobite Testing, Inc



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

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**19 18 30 Lane KS**

**Carson 1-19**

Start Date: 2007.02.13 @ 05:15:14

End Date: 2007.02.13 @ 15:24:39

Job Ticket #: 26417                      DST #: 2

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 Company

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**Carson 1-19**

**19 18 30 Lane KS**

Job Ticket: 26417

**DST#: 2**

Test Start: 2007.02.13 @ 05:15:14

### GENERAL INFORMATION:

Formation: **Lansing- J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:14:54

Time Test Ended: 15:24:39

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

**Interval: 4197.00 ft (KB) To 4215.00 ft (KB) (TVD)**

Total Depth: 4215.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2907.00 ft (KB)

2902.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6772**

**Inside**

Press@RunDepth: 437.70 psig @ 4198.00 ft (KB)

Start Date: 2007.02.13

End Date:

2007.02.13

Capacity: 7000.00 psig

Last Calib.: 2007.02.13

Start Time: 05:15:14

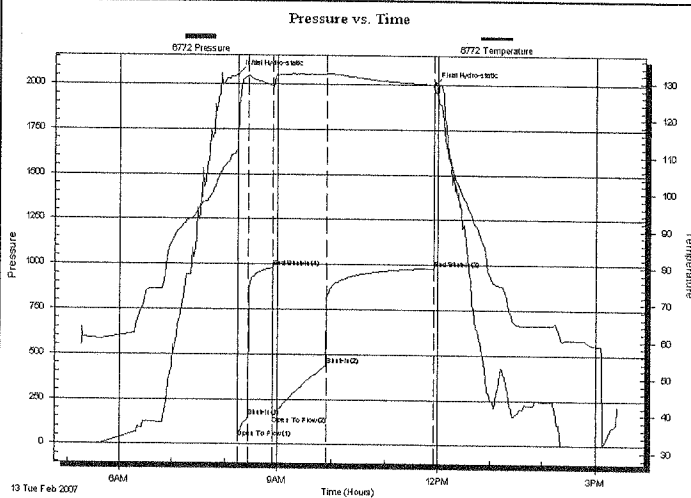
End Time:

15:24:39

Time On Btm: 2007.02.13 @ 08:14:39

Time Off Btm: 2007.02.13 @ 11:55:53

TEST COMMENT: IF 1/4 blow BOB in 8 min.  
IS No return  
FF 1/4 blow BOB in 8 min.  
FS Surface blow died in 3 min.



### PRESSURE SUMMARY

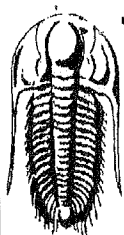
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2052.33         | 111.68       | Initial Hydro-static |
| 1           | 32.65           | 111.44       | Open To Flow (1)     |
| 12          | 149.69          | 131.54       | Shut-In (1)          |
| 40          | 980.08          | 129.05       | End Shut-In (1)      |
| 40          | 153.79          | 128.69       | Open To Flow (2)     |
| 100         | 437.70          | 132.25       | Shut-In (2)          |
| 221         | 982.62          | 129.57       | End Shut-In (2)      |
| 222         | 1993.92         | 129.83       | Final Hydro-static   |

### Recovery

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 496.00      | MW 95%W 5%M        | 5.31         |
| 248.00      | MW 90%W 10%M       | 3.48         |
| 206.00      | OCMW 5%O 55%W 40%M | 2.89         |
| 10.00       | 100%O              | 0.14         |
|             |                    |              |
|             |                    |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26417

**DST#: 2**

ATTN: Phil Ashey

Test Start: 2007.02.13 @ 05:15:14

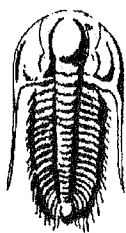
### Tool Information

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 4025.00 ft | Diameter: 3.80 inches | Volume: 56.46 bbl              | Tool Weight:           | 1500.00 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: 181.00 ft  | Diameter: 2.25 inches | Volume: 0.89 bbl               | Weight to Pull Loose:  | 70000.00 lb |
|                           |                    |                       | <b>Total Volume: 57.35 bbl</b> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 29.00 ft           |                       |                                | String Weight: Initial | 50000.00 lb |
| Depth to Top Packer:      | 4197.00 ft         |                       |                                | Final                  | 54000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                                |                        |             |
| Interval between Packers: | 18.00 ft           |                       |                                |                        |             |
| Tool Length:              | 38.00 ft           |                       |                                |                        |             |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                        |             |

Tool Comments:

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Stubb                     | 1.00         |            |          | 4178.00    |                               |
| Shut In Tool              | 5.00         |            |          | 4183.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 4188.00    |                               |
| Packer                    | 5.00         |            |          | 4193.00    | 20.00 Bottom Of Top Packer    |
| Packer                    | 4.00         |            |          | 4197.00    |                               |
| Stubb                     | 1.00         |            |          | 4198.00    |                               |
| Recorder                  | 0.00         | 6772       | Inside   | 4198.00    |                               |
| Perforations              | 12.00        |            |          | 4210.00    |                               |
| Recorder                  | 0.00         | 7437       | Outside  | 4210.00    |                               |
| Bullnose                  | 5.00         |            |          | 4215.00    | 18.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>38.00</b> |            |          |            |                               |





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Mull Drilling Company

Carson 1-19

PO Box 2758  
Wichita KS 67201

19 18 30 Lane KS

Job Ticket: 26417

DST#: 2

ATTN: Phil Ashey

Test Start: 2007.02.13 @ 05:15:14

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 6.77 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

28 deg API

Water Salinity:

35000 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description        | Volume<br>bbl |
|--------------|--------------------|---------------|
| 496.00       | MW 95%W 5%M        | 5.309         |
| 248.00       | MW 90%W 10%M       | 3.479         |
| 206.00       | OCMW 5%O 55%W 40%M | 2.890         |
| 10.00        | 100%O              | 0.140         |

Total Length: 960.00 ft

Total Volume: 11.818 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

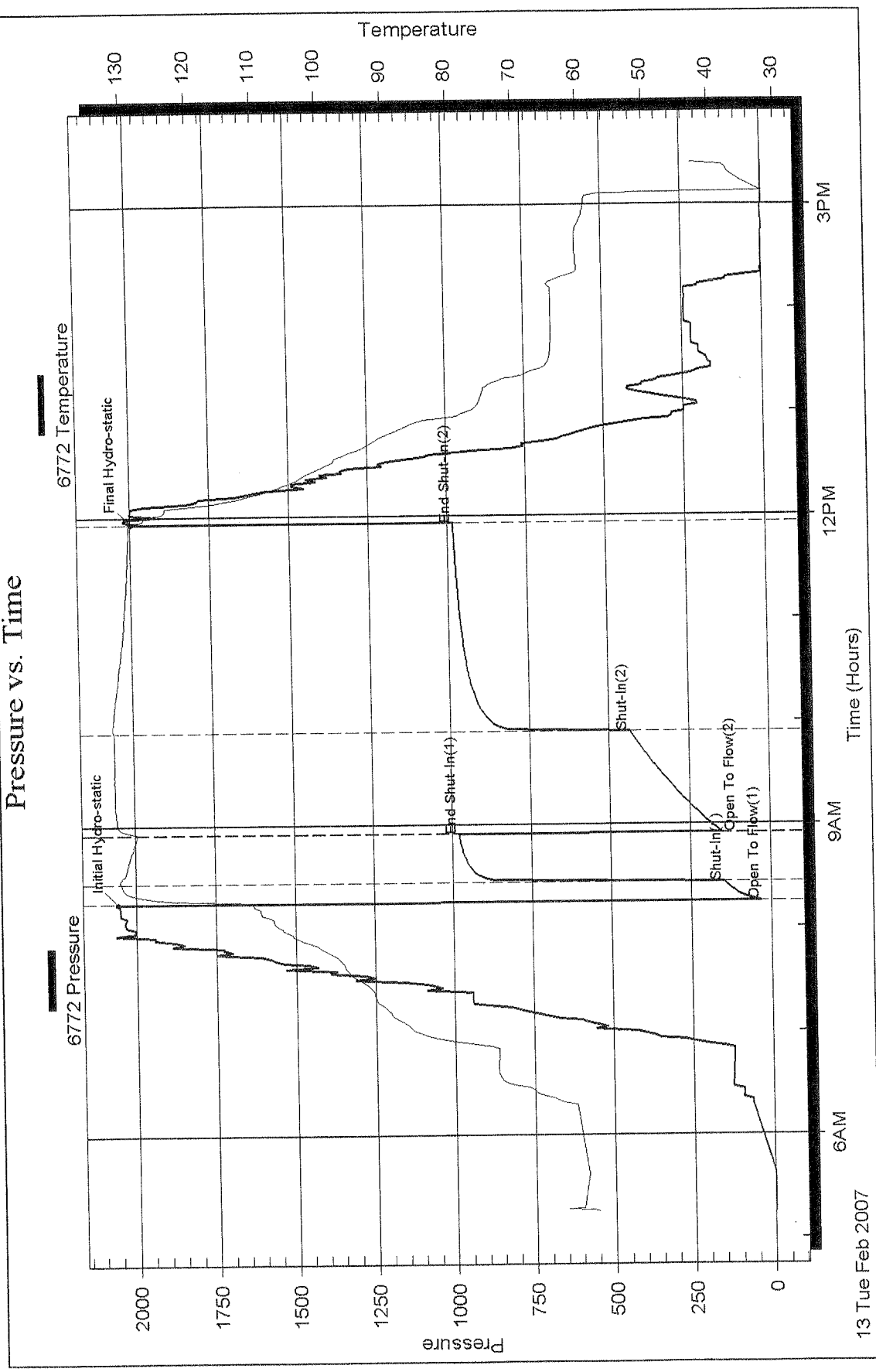
Serial #:

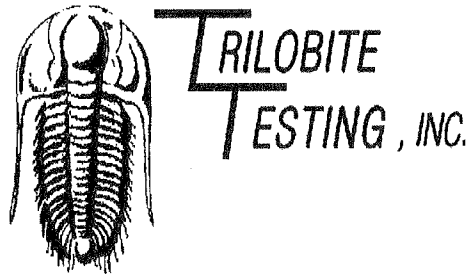
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**19 18 30 Lane KS**

**Carson 1-19**

Start Date: 2007.02.13 @ 23:38:00

End Date: 2007.02.14 @ 09:17:40

Job Ticket #: 26418                      DST #: 3

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 Company

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**Carson 1-19**

**19 18 30 Lane KS**

Job Ticket: 26418

**DST#: 3**

Test Start: 2007.02.13 @ 23:38:00

### GENERAL INFORMATION:

Formation: **Lansing- K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:40:10

Time Test Ended: 09:17:40

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4229.00 ft (KB) To 4250.00 ft (KB) (TVD)**

Total Depth: 4250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2907.00 ft (KB)

2902.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6772**

**Inside**

Press@RunDepth: 591.39 psig @ 4230.00 ft (KB)

Start Date: 2007.02.13

End Date:

2007.02.14

Capacity: 7000.00 psig

Last Calib.: 2007.02.14

Start Time: 23:38:00

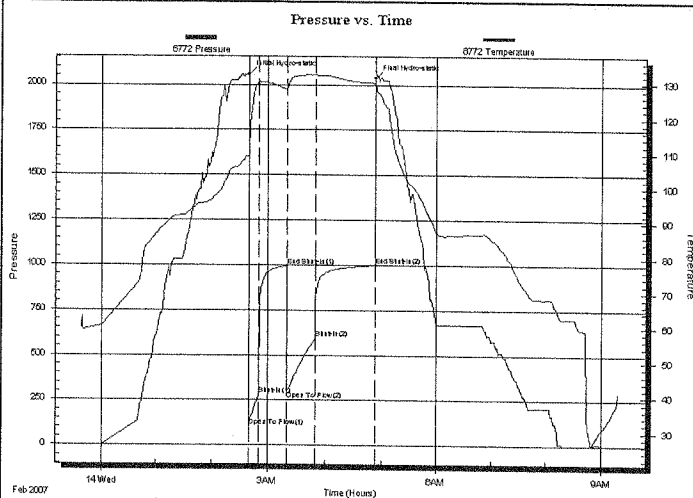
End Time:

09:17:40

Time On Btm: 2007.02.14 @ 02:39:40

Time Off Btm: 2007.02.14 @ 04:53:09

TEST COMMENT: IF 1/4 blow BOB in 1 1/2 min.  
IS Surface blow that never built  
FF 1/4 blow BOB in 2 1/2 min.  
FS Surface blow built to 3 in 60 min.



### PRESSURE SUMMARY

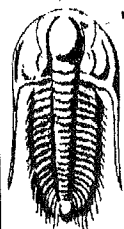
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2055.86         | 109.21       | Initial Hydro-static |
| 1           | 104.52          | 109.94       | Open To Flow (1)     |
| 11          | 278.68          | 130.43       | Shut-In (1)          |
| 41          | 994.45          | 128.30       | End Shut-In (1)      |
| 41          | 299.20          | 128.23       | Open To Flow (2)     |
| 71          | 591.39          | 132.57       | Shut-In (2)          |
| 133         | 997.65          | 130.22       | End Shut-In (2)      |
| 134         | 2036.01         | 130.35       | Final Hydro-static   |

### Recovery

| Length (ft) | Description               | Volume (bbl) |
|-------------|---------------------------|--------------|
| 372.00      | MCW 95%W 5%M              | 3.57         |
| 186.00      | OCMW 10%O 70%W 20%M       | 2.61         |
| 248.00      | GOCMW 20%G 20%O 40%W 20%M | 3.48         |
| 310.00      | MVCGO 30%G 40%O 20%W 10%M | 4.35         |
| 310.00      | 100%O                     | 4.35         |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

Carson 1-19

PO Box 2758  
Wichita KS 67201

19 18 30 Lane KS

Job Ticket: 26418

DST#: 3

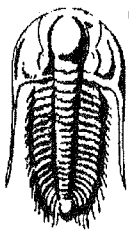
ATTN: Phil Ashey

Test Start: 2007.02.13 @ 23:38:00

### Tool Information

|                           |                    |                       |                   |                        |             |         |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|---------|
| Drill Pipe:               | Length: 4056.00 ft | Diameter: 3.80 inches | Volume: 56.90 bbl | Tool Weight:           | 1500.00 lb  |         |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl  | Weight set on Packer:  | 300000.0 lb |         |
| Drill Collar:             | Length: 181.00 ft  | Diameter: 2.25 inches | Volume: 0.89 bbl  | Weight to Pull Loose:  | 70000.00 lb |         |
|                           |                    |                       | Total Volume:     | 57.79 bbl              | Tool Chased | 0.00 ft |
| Drill Pipe Above KB:      | 28.00 ft           |                       |                   | String Weight: Initial | 50000.00 lb |         |
| Depth to Top Packer:      | 4229.00 ft         |                       |                   | Final                  | 58000.00 lb |         |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |         |
| Interval between Packers: | 21.00 ft           |                       |                   |                        |             |         |
| Tool Length:              | 41.00 ft           |                       |                   |                        |             |         |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |         |
| Tool Comments:            |                    |                       |                   |                        |             |         |

| Tool Description   | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|--------------------|-------------|------------|----------|------------|-------------------------------|
| Stubb              | 1.00        |            |          | 4210.00    |                               |
| Shut In Tool       | 5.00        |            |          | 4215.00    |                               |
| Hydraulic tool     | 5.00        |            |          | 4220.00    |                               |
| Packer             | 5.00        |            |          | 4225.00    | 20.00 Bottom Of Top Packer    |
| Packer             | 4.00        |            |          | 4229.00    |                               |
| Stubb              | 1.00        |            |          | 4230.00    |                               |
| Recorder           | 0.00        | 6772       | Inside   | 4230.00    |                               |
| Perforations       | 15.00       |            |          | 4245.00    |                               |
| Recorder           | 0.00        | 7437       | Outside  | 4245.00    |                               |
| Bullnose           | 5.00        |            |          | 4250.00    | 21.00 Bottom Packers & Anchor |
| Total Tool Length: | 41.00       |            |          |            |                               |



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26418

**DST#: 3**

ATTN: Phil Ashey

Test Start: 2007.02.13 @ 23:38:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 38000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description               | Volume<br>bbl |
|--------------|---------------------------|---------------|
| 372.00       | MCW 95%W 5%M              | 3.569         |
| 186.00       | OCMW 10%O 70%W 20%M       | 2.609         |
| 248.00       | GOCMW 20%G 20%O 40%W 20%M | 3.479         |
| 310.00       | MVCGO 30%G 40%O 20%W 10%M | 4.348         |
| 310.00       | 100%O                     | 4.348         |

Total Length: 1426.00 ft

Total Volume: 18.353 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

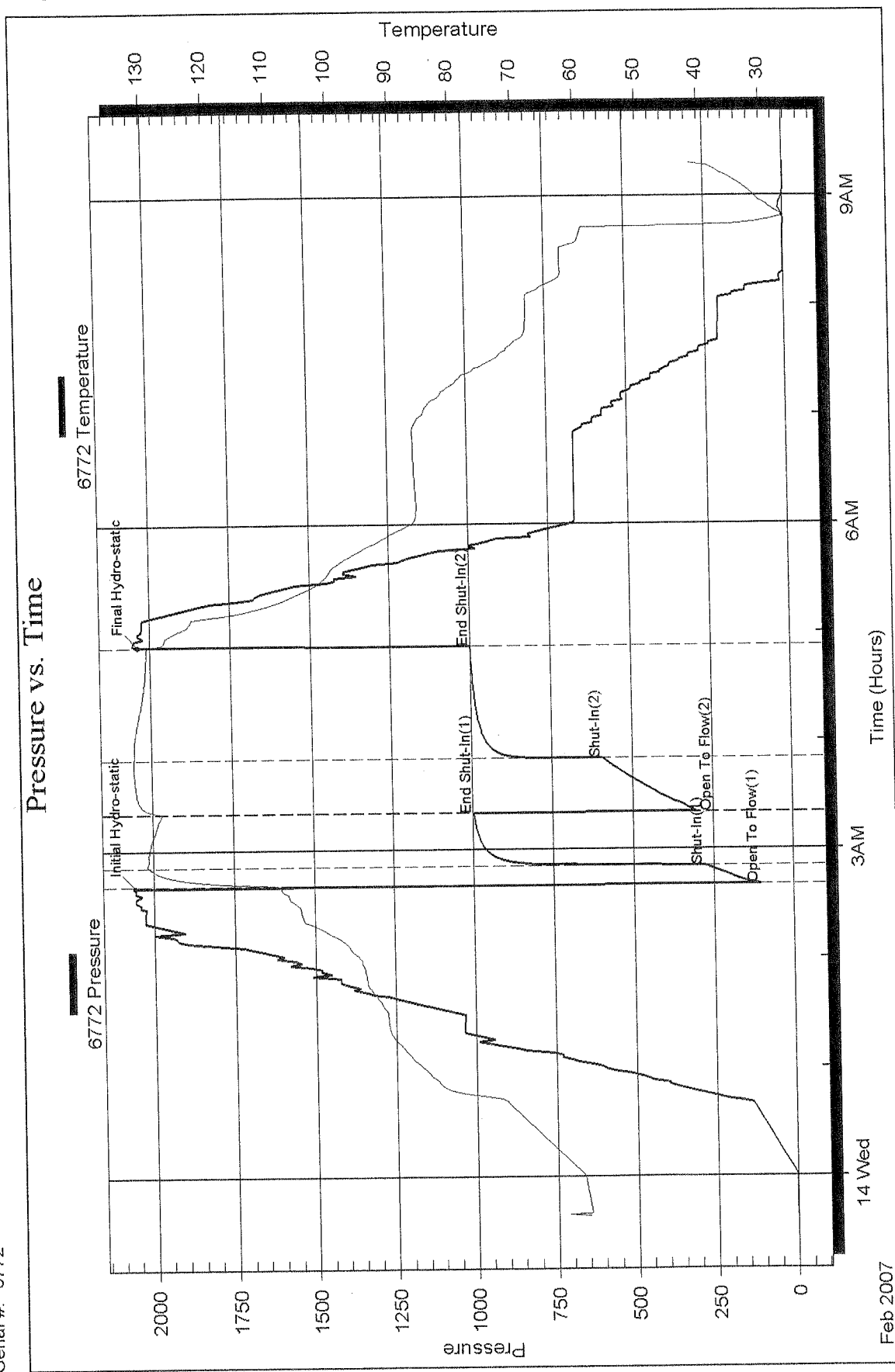
Serial #:

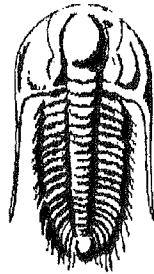
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





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

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**19 18 30 Lane KS**

**Carson 1-19**

Start Date: 2007.02.14 @ 22:26:59

End Date: 2007.02.15 @ 08:14:24

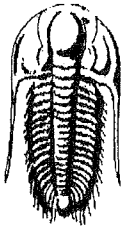
Job Ticket #: 26419                      DST #: 4

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 Company

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**Carson 1-19**

**19 18 30 Lane KS**

Job Ticket: 26419

**DST#: 4**

Test Start: 2007.02.14 @ 22:26:59

### GENERAL INFORMATION:

Formation: **LAnsing L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:05:39

Time Test Ended: 08:14:24

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4294.00 ft (KB) To 4325.00 ft (KB) (TVD)**

Total Depth: 4325.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2907.00 ft (KB)

2902.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6772**

**Inside**

Press@RunDepth: 243.63 psig @ 4295.00 ft (KB)

Start Date: 2007.02.14

End Date:

2007.02.15

Capacity: 7000.00 psig

Last Calib.: 2007.02.15

Start Time: 22:26:59

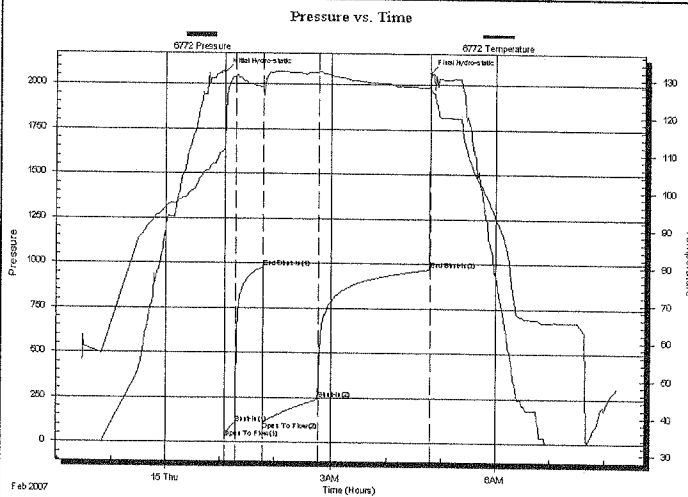
End Time:

08:14:24

Time On Btm: 2007.02.15 @ 01:05:24

Time Off Btm: 2007.02.15 @ 04:47:38

TEST COMMENT: IF 1/4 blow built to 8 in 10 min.  
IS No return  
FF BOB in 20 min.  
FS Surface blow never built



### PRESSURE SUMMARY

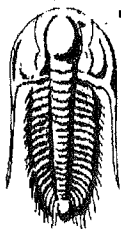
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2067.63         | 111.74       | Initial Hydro-static |
| 1           | 24.79           | 111.16       | Open To Flow (1)     |
| 11          | 104.74          | 130.56       | Shut-In(1)           |
| 42          | 975.87          | 127.56       | End Shut-In(1)       |
| 42          | 112.29          | 127.11       | Open To Flow (2)     |
| 101         | 243.63          | 131.70       | Shut-In(2)           |
| 222         | 969.12          | 127.88       | End Shut-In(2)       |
| 223         | 2066.15         | 128.30       | Final Hydro-static   |

### Recovery

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 310.00      | MCW 90%W 10%M      | 2.70         |
| 186.00      | OCMW 5%O 65%W 30%M | 2.61         |
| 62.00       | 100%O              | 0.87         |
|             |                    |              |
|             |                    |              |
|             |                    |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26419

**DST#: 4**

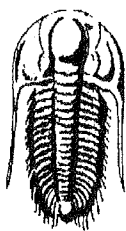
ATTN: Phil Ashey

Test Start: 2007.02.14 @ 22:26:59

### Tool Information

|                           |                    |                       |                   |                        |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe:               | Length: 4118.00 ft | Diameter: 3.80 inches | Volume: 57.76 bbl | Tool Weight:           | 1500.00 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: 181.00 ft  | Diameter: 2.25 inches | Volume: 0.89 bbl  | Weight to Pull Loose:  | 70000.00 lb |
|                           |                    | Total Volume:         | 58.65 bbl         | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 25.00 ft           |                       |                   | String Weight: Initial | 50000.00 lb |
| Depth to Top Packer:      | 4294.00 ft         |                       |                   | Final                  | 54000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |
| Interval between Packers: | 31.00 ft           |                       |                   |                        |             |
| Tool Length:              | 51.00 ft           |                       |                   |                        |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |
| Tool Comments:            |                    |                       |                   |                        |             |

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Stubb                     | 1.00         |            |          | 4275.00    |                               |
| Shut In Tool              | 5.00         |            |          | 4280.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 4285.00    |                               |
| Packer                    | 5.00         |            |          | 4290.00    | 20.00 Bottom Of Top Packer    |
| Packer                    | 4.00         |            |          | 4294.00    |                               |
| Stubb                     | 1.00         |            |          | 4295.00    |                               |
| Recorder                  | 0.00         | 6772       | Inside   | 4295.00    |                               |
| Perforations              | 25.00        |            |          | 4320.00    |                               |
| Recorder                  | 0.00         | 7437       | Outside  | 4320.00    |                               |
| Bullnose                  | 5.00         |            |          | 4325.00    | 31.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>51.00</b> |            |          |            |                               |



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26419

**DST#: 4**

ATTN: Phil Ashey

Test Start: 2007.02.14 @ 22:26:59

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 7.97 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbbl

psig

Oil API:

33 deg API

Water Salinity:

29000 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description        | Volume<br>bbl |
|--------------|--------------------|---------------|
| 310.00       | MCW 90%W 10%M      | 2.700         |
| 186.00       | OCMW 5%O 65%W 30%M | 2.609         |
| 62.00        | 100%O              | 0.870         |

Total Length: 558.00 ft

Total Volume: 6.179 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 4

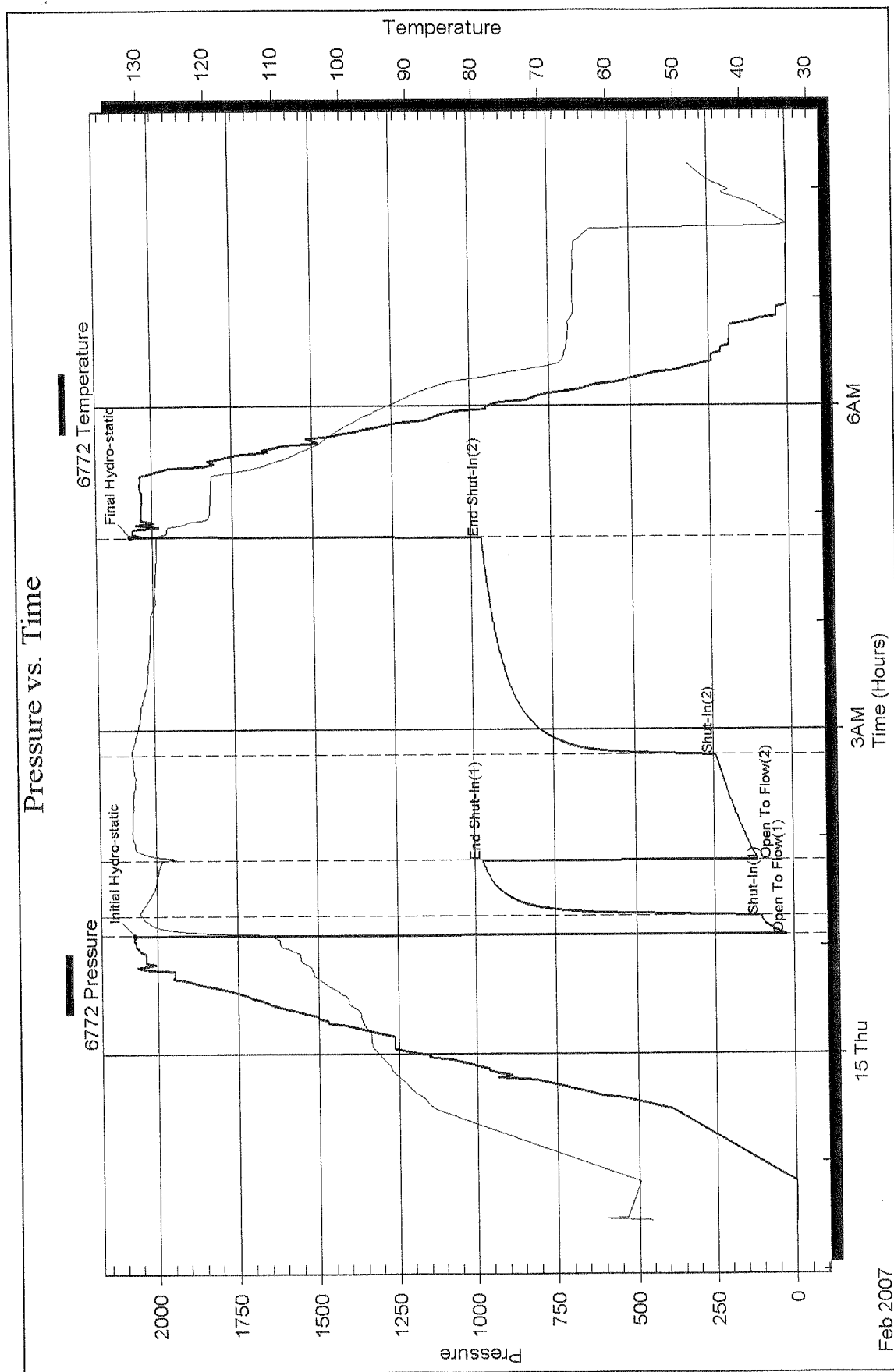
19 18 30 Lane KS

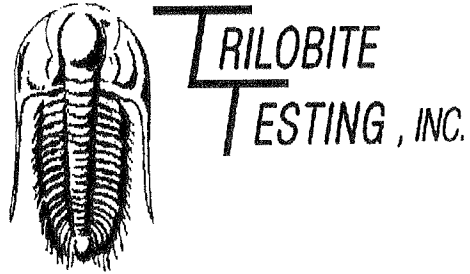
Mull Drilling Company

Inside

Serial #: 6772

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**19 18 30 Lane KS**

**Carson 1-19**

Start Date: 2007.02.16 @ 12:16:03

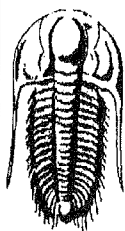
End Date: 2007.02.16 @ 17:45:27

Job Ticket #: 26420                      DST #: 5

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 Company

PO Box 2758  
Wichita KS 67201

ATTN: Phil Ashey

**Carson 1-19**

**19 18 30 Lane KS**

Job Ticket: 26420

**DST#: 5**

Test Start: 2007.02.16 @ 12:16:03

### GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:56:28

Time Test Ended: 17:45:27

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4511.00 ft (KB) To 4575.00 ft (KB) (TVD)**

Total Depth: 4160.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2907.00 ft (KB)

2902.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6772 Inside**

Press@RunDepth: 14.57 psig @ 4512.00 ft (KB)

Start Date: 2007.02.16

End Date:

2007.02.16

Capacity: 7000.00 psig

Last Calib.: 2007.02.16

Start Time: 12:16:03

End Time:

17:45:27

Time On Btm: 2007.02.16 @ 13:55:58

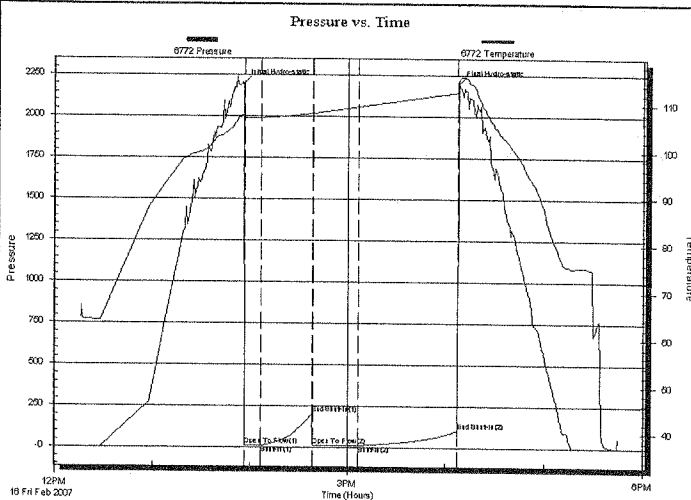
Time Off Btm: 2007.02.16 @ 16:07:58

TEST COMMENT: IF 1/4 blow died in 9 min.

IS No return

FF No blow

FS No return



### PRESSURE SUMMARY

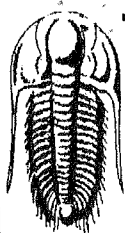
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2199.09         | 107.69       | Initial Hydro-static |
| 1           | 12.31           | 107.27       | Open To Flow (1)     |
| 11          | 13.03           | 107.15       | Shut-In (1)          |
| 42          | 203.03          | 108.12       | End Shut-In (1)      |
| 43          | 13.75           | 108.09       | Open To Flow (2)     |
| 71          | 14.57           | 109.51       | Shut-In (2)          |
| 132         | 105.28          | 112.57       | End Shut-In (2)      |
| 132         | 2202.05         | 114.81       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | 100%M       | 0.05         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

Carson 1-19

PO Box 2758  
Wichita KS 67201

19 18 30 Lane KS

Job Ticket: 26420

DST#: 5

ATTN: Phil Ashey

Test Start: 2007.02.16 @ 12:16:03

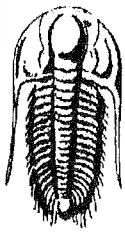
### Tool Information

|                           |                    |                       |                   |                        |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe:               | Length: 4332.00 ft | Diameter: 3.80 inches | Volume: 60.77 bbl | Tool Weight:           | 1500.00 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: 181.00 ft  | Diameter: 2.25 inches | Volume: 0.89 bbl  | Weight to Pull Loose:  | 70000.00 lb |
|                           |                    | Total Volume:         | 61.66 bbl         | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 22.00 ft           |                       |                   | String Weight: Initial | 52000.00 lb |
| Depth to Top Packer:      | 4511.00 ft         |                       |                   | Final                  | 52000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |
| Interval between Packers: | 64.00 ft           |                       |                   |                        |             |
| Tool Length:              | 84.00 ft           |                       |                   |                        |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Stubb            | 1.00        |            |          | 4492.00    |                               |
| Shut In Tool     | 5.00        |            |          | 4497.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4502.00    |                               |
| Packer           | 5.00        |            |          | 4507.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 4511.00    |                               |
| Stubb            | 1.00        |            |          | 4512.00    |                               |
| Recorder         | 0.00        | 6772       | Inside   | 4512.00    |                               |
| Perforations     | 25.00       |            |          | 4537.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4538.00    |                               |
| Drill Pipe       | 31.00       |            |          | 4569.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4570.00    |                               |
| Recorder         | 0.00        | 7437       | Outside  | 4570.00    |                               |
| Bullnose         | 5.00        |            |          | 4575.00    | 64.00 Bottom Packers & Anchor |

**Total Tool Length: 84.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Mull Drilling Company

**Carson 1-19**

PO Box 2758  
Wichita KS 67201

**19 18 30 Lane KS**

Job Ticket: 26420

**DST#: 5**

ATTN: Phil Ashey

Test Start: 2007.02.16 @ 12:16:03

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 46.00 sec/qt

Water Loss: 7.97 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 0 deg API

Water Salinity: 0 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 10.00        | 100%M       | 0.049         |

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DST Test Number: 5

19 18 30 Lane KS

Mull Drilling Company

Inside

Serial #: 6772

# Pressure vs. Time

