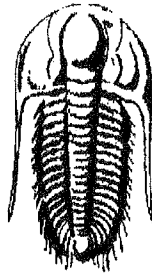


15-007-23359

24-34s-13w

IND



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

## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**24 34 13 Barber KS**

**Cundiff #1**

Start Date: 2008.09.12 @ 19:52:16

End Date: 2008.09.13 @ 06:35:31

Job Ticket #: 33002      DST #: 1

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CONSERVATION DIVISION  
WICHITA, KS

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Woolsey Operating Company

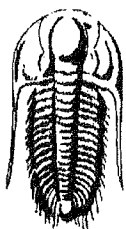
Cundiff #1

24 34 13 Barber KS

DST # 1

Mississippi

2008.09.12



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

## DRILL STEM TEST REPORT

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 33002

**DST#: 1**

Test Start: 2008.09.12 @ 19:52:16

### GENERAL INFORMATION:

Formation: **Mikssissippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:31:46

Time Test Ended: 06:35:31

Test Type: Conventional Bottom Hole

Tester: Kevin Taylor

Unit No: 23

**Interval: 4708.00 ft (KB) To 4795.00 ft (KB) (TVD)**

Total Depth: 4795.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1560.00 ft (KB)

1547.00 ft (CF)

KB to GR/CF: 13.00 ft

**Serial #: 8370** Inside

Press@RunDepth: 33.90 psig @ 4709.00 ft (KB)

Start Date: 2008.09.12

End Date: 2008.09.13

Start Time: 19:52:21

End Time: 06:35:31

Capacity: 7000.00 psig

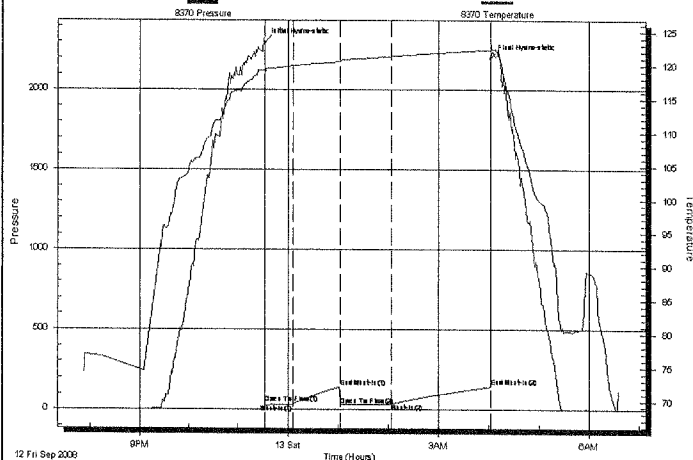
Last Calib.: 2008.09.13

Time On Btm: 2008.09.12 @ 23:31:31

Time Off Btm: 2008.09.13 @ 04:02:31

TEST COMMENT: IF Weak Blow Built To 7" In 30 Min.  
ISI Bled Off 5 Min No Blow  
FF Weak Blow Built To 7" In 2 Min. Died Off To 3" In 60 Min  
FSI Bled Off 5 Min. No Blow

Pressure vs. Time



### PRESSURE SUMMARY

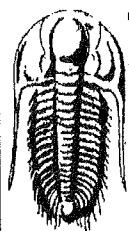
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2293.92         | 119.22       | Initial Hydro-static |
| 1           | 34.57           | 118.49       | Open To Flow (1)     |
| 34          | 33.51           | 119.99       | Shut-In(1)           |
| 91          | 141.83          | 120.61       | End Shut-In(1)       |
| 91          | 25.32           | 120.58       | Open To Flow (2)     |
| 152         | 33.90           | 121.40       | Shut-In(2)           |
| 271         | 142.61          | 122.40       | End Shut-In(2)       |
| 271         | 2198.05         | 124.07       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 8.00        | Mud         | 0.06         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 33002

**DST#: 1**

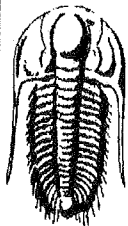
Test Start: 2008.09.12 @ 19:52:16

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 4517.00 ft | Diameter: 3.88 inches   | Volume: 66.06 bbl | Tool Weight: 2100.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches   | Volume: 0.00 bbl  | Weight set on Packer: 30000.00 lb  |
| Drill Collar:             | Length: 177.00 ft  | Diameter: 2.75 inches   | Volume: 1.30 bbl  | Weight to Pull Loose: 81000.00 lb  |
|                           |                    | Total Volume: 67.36 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 13.00 ft           |                         |                   | String Weight: Initial 80000.00 lb |
| Depth to Top Packer:      | 4708.00 ft         |                         |                   | Final 80000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 87.00 ft           |                         |                   |                                    |
| Tool Length:              | 114.00 ft          |                         |                   |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches   |                   |                                    |
| Tool Comments:            |                    |                         |                   |                                    |

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 4686.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4691.00    |                               |
| Jars             | 5.00        |            |          | 4696.00    |                               |
| Safety Joint     | 2.00        |            |          | 4698.00    |                               |
| Packer           | 5.00        |            |          | 4703.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 4708.00    |                               |
| Stubb            | 1.00        |            |          | 4709.00    |                               |
| Recorder         | 0.00        | 8370       | Inside   | 4709.00    |                               |
| Recorder         | 0.00        | 8289       | Inside   | 4709.00    |                               |
| Perforations     | 5.00        |            |          | 4714.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4715.00    |                               |
| Drill Pipe       | 62.00       |            |          | 4777.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4778.00    |                               |
| Perforations     | 12.00       |            |          | 4790.00    |                               |
| Bullnose         | 5.00        |            |          | 4795.00    | 87.00 Bottom Packers & Anchor |

**Total Tool Length: 114.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Woolsey Operating Company

**Cundiff #1**

125 N Market STE 1000  
Wichita KS 67202

**24 34 13 Barber KS**

Job Ticket: 33002

**DST#: 1**

ATTN: Bill Klaver

Test Start: 2008.09.12 @ 19:52:16

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 43.00 sec/qt

Water Loss: 11.15 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 4500.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 8.00         | Mud         | 0.059         |

Total Length: 8.00 ft

Total Volume: 0.059 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8370

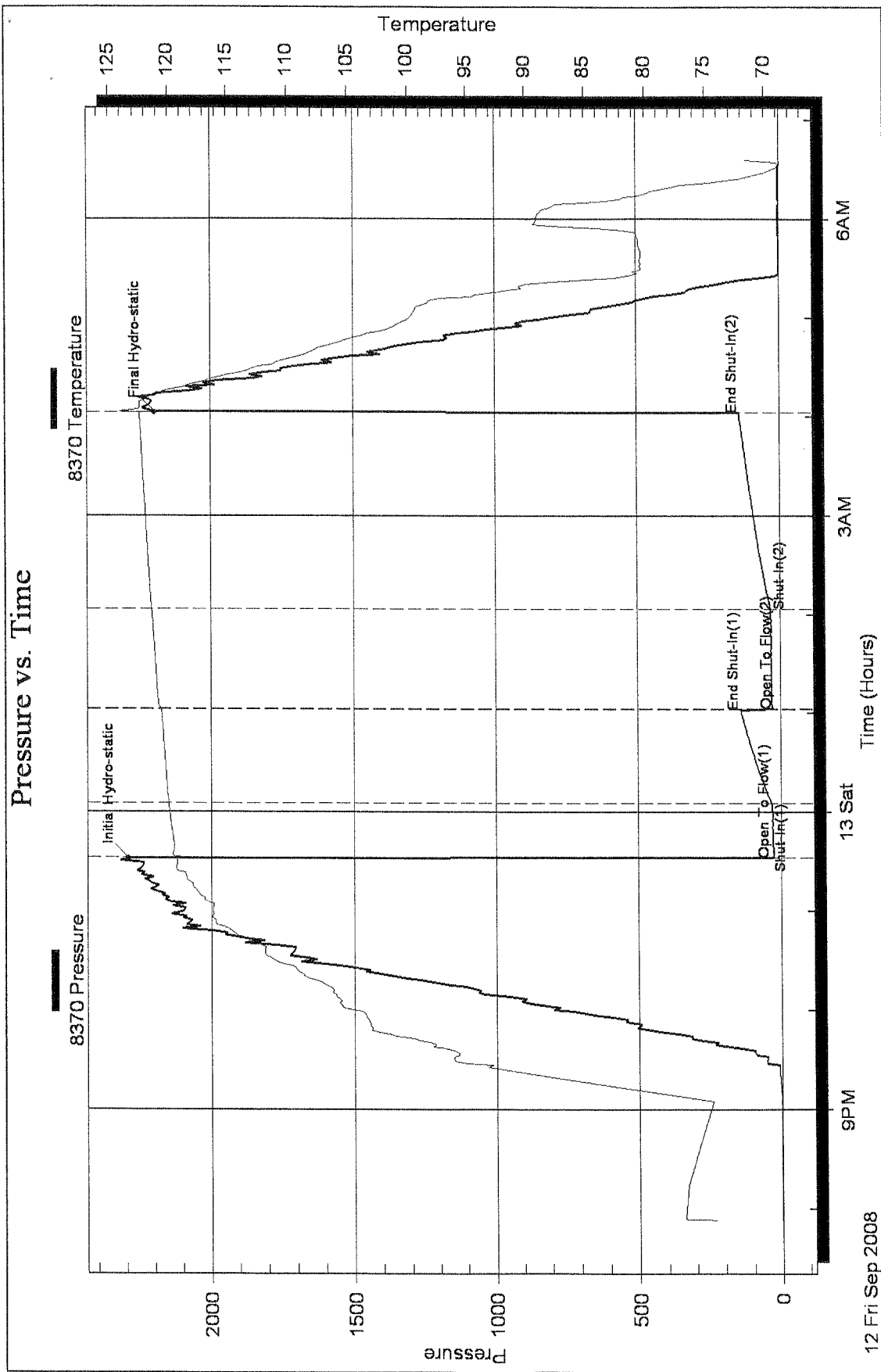
Inside

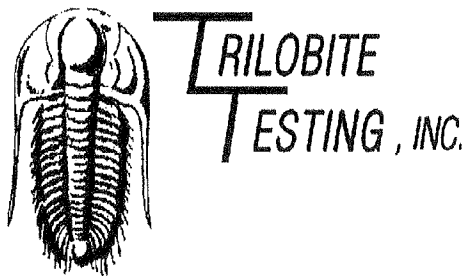
Woodsey Operating Company

24 34 13 Barber KS

DST Test Number: 1

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**24 34 13 Barber KS**

**Cundiff #1**

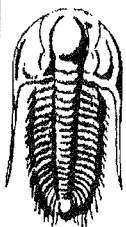
Start Date: 2008.09.13 @ 13:45:21

End Date: 2008.09.13 @ 23:19:51

Job Ticket #: 33003                      DST #: 2

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WICHITA, KS

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PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 33003

**DST#: 2**

Test Start: 2008.09.13 @ 13:45:21

### GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:59:36

Time Test Ended: 23:19:51

Test Type: Conventional Bottom Hole

Tester: Kevin Taylor

Unit No: 23

**Interval: 4796.00 ft (KB) To 4825.00 ft (KB) (TVD)**

Total Depth: 4825.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1560.00 ft (KB)

1547.00 ft (CF)

KB to GR/CF: 13.00 ft

**Serial #: 8370**

**Inside**

Press@RunDepth: 29.97 psig @ 4797.00 ft (KB)

Start Date: 2008.09.13

End Date: 2008.09.13

Capacity: 7000.00 psig

Last Calib.: 2008.09.13

Start Time: 13:45:26

End Time: 23:19:51

Time On Btm: 2008.09.13 @ 16:59:21

Time Off Btm: 2008.09.13 @ 21:01:06

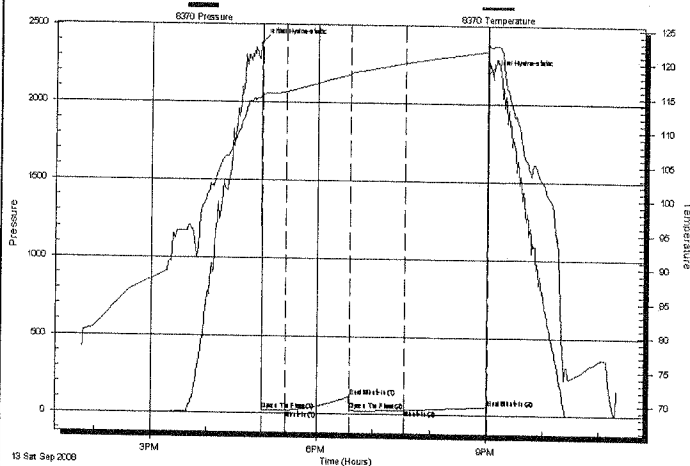
**TEST COMMENT:** I.F. Weak Surface Blow Died In 15 Min.

I.S.I. No Blow

F.F. No Blow

F.S.I. No Blow

Pressure vs. Time



### PRESSURE SUMMARY

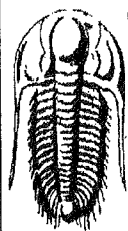
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2384.84         | 115.32       | Initial Hydro-static |
| 1           | 19.15           | 113.94       | Open To Flow (1)     |
| 27          | 22.97           | 115.67       | Shut-In (1)          |
| 96          | 116.20          | 118.26       | End Shut-In (1)      |
| 96          | 25.65           | 118.31       | Open To Flow (2)     |
| 154         | 29.97           | 120.01       | Shut-In (2)          |
| 242         | 54.67           | 121.80       | End Shut-In (2)      |
| 242         | 2201.33         | 122.76       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00        | Mud         | 0.04         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 33003

**DST#: 2**

Test Start: 2008.09.13 @ 13:45:21

### Tool Information

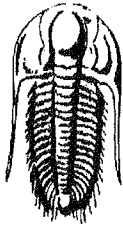
|                           |                    |                       |                   |                        |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe:               | Length: 4610.00 ft | Diameter: 3.88 inches | Volume: 67.42 bbl | Tool Weight:           | 2100.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl  | Weight set on Packer:  | 30000.00 lb |
| Drill Collar:             | Length: 177.00 ft  | Diameter: 2.75 inches | Volume: 1.30 bbl  | Weight to Pull Loose:  | 80000.00 lb |
|                           |                    | Total Volume:         | 68.72 bbl         | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 18.00 ft           |                       |                   | String Weight: Initial | 80000.00 lb |
| Depth to Top Packer:      | 4796.00 ft         |                       |                   | Final                  | 80000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |
| Interval between Packers: | 29.00 ft           |                       |                   |                        |             |
| Tool Length:              | 56.00 ft           |                       |                   |                        |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 4774.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4779.00    |                               |
| Jars             | 5.00        |            |          | 4784.00    |                               |
| Safety Joint     | 2.00        |            |          | 4786.00    |                               |
| Packer           | 5.00        |            |          | 4791.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 4796.00    |                               |
| Stubb            | 1.00        |            |          | 4797.00    |                               |
| Recorder         | 0.00        | 8370       | Inside   | 4797.00    |                               |
| Recorder         | 0.00        | 8289       | Inside   | 4797.00    |                               |
| Perforations     | 23.00       |            |          | 4820.00    |                               |
| Bullnose         | 5.00        |            |          | 4825.00    | 29.00 Bottom Packers & Anchor |

**Total Tool Length: 56.00**





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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Woolsey Operating Company

**Cundiff #1**

125 N Market STE 1000  
Wichita KS 67202

**24 34 13 Barber KS**

Job Ticket: 33003

**DST#: 2**

ATTN: Bill Klaver

Test Start: 2008.09.13 @ 13:45:21

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 9.95 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 5400.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 5.00         | Mud         | 0.037         |

Total Length: 5.00 ft

Total Volume: 0.037 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

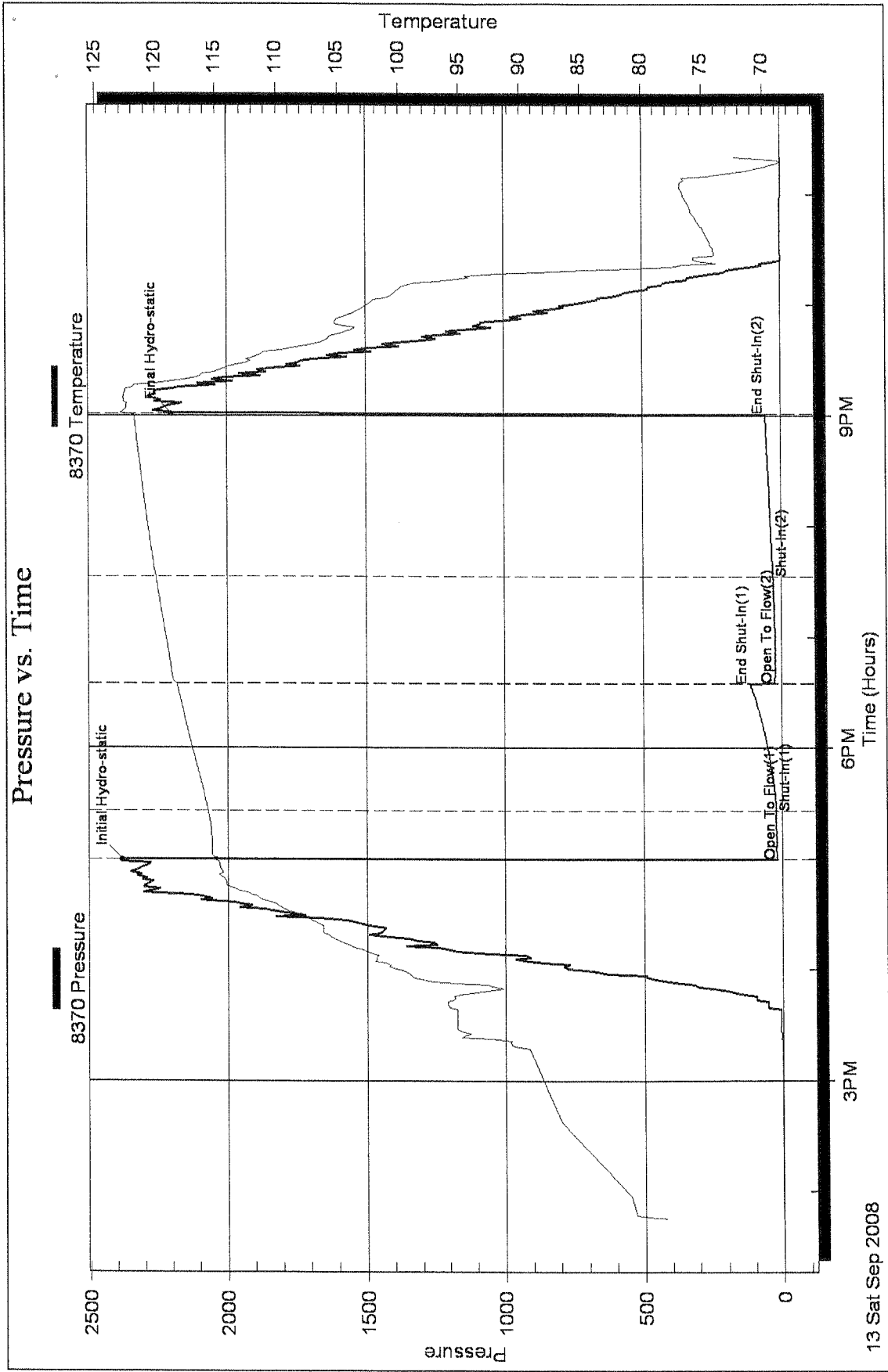
Serial #:

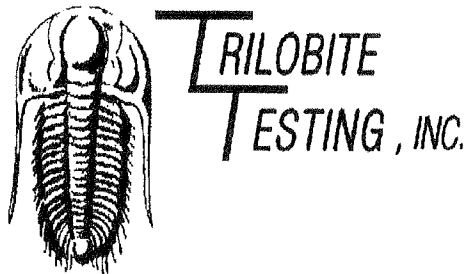
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**24 34 13 Barber KS**

**Cundiff #1**

Start Date: 2008.09.14 @ 17:31:17

End Date: 2008.09.15 @ 02:16:47

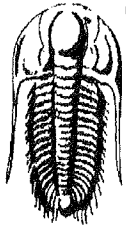
Job Ticket #: 32907 DST #: 3

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WICHITA, KS

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PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 32907

**DST#: 3**

Test Start: 2008.09.14 @ 17:31:17

### GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:35:17

Time Test Ended: 02:16:47

Test Type: Conventional Bottom Hole

Tester: Jerry Adams

Unit No: 45

Interval: **4826.00 ft (KB) To 4976.00 ft (KB) (TVD)**

Total Depth: 4976.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1560.00 ft (KB)

1547.00 ft (CF)

KB to GR/CF: 13.00 ft

**Serial #: 6798** Inside

Press@RunDepth: 46.13 psig @ 4828.00 ft (KB)

Start Date: 2008.09.14

End Date: 2008.09.15

Start Time: 17:31:18

End Time: 02:16:47

Capacity: 7000.00 psig

Last Calib.: 2008.09.15

Time On Btm: 2008.09.14 @ 19:34:47

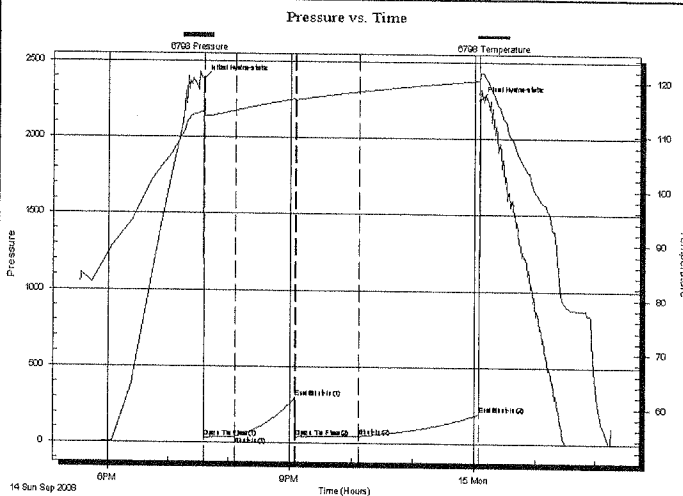
Time Off Btm: 2008.09.15 @ 00:05:17

TEST COMMENT: IF Weak blow . Built to 1 1/2"

ISI No blow

FF No blow

FSI No blow



### PRESSURE SUMMARY

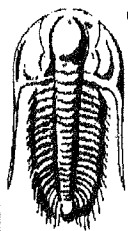
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2381.33         | 114.31       | Initial Hydro-static |
| 1           | 32.01           | 113.76       | Open To Flow (1)     |
| 32          | 40.21           | 114.62       | Shut-In(1)           |
| 90          | 295.30          | 116.80       | End Shut-In(1)       |
| 91          | 40.03           | 116.69       | Open To Flow (2)     |
| 152         | 46.13           | 118.17       | Shut-In(2)           |
| 270         | 196.65          | 120.33       | End Shut-In(2)       |
| 271         | 2250.67         | 121.10       | Final Hydro-static   |

### Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 20.00       | Drilling Mud 100% <sub>m</sub> | 0.10         |
| 0.00        |                                | 0.00         |
|             |                                |              |
|             |                                |              |
|             |                                |              |
|             |                                |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Company

**Cundiff #1**

125 N Market STE 1000  
Wichita KS 67202

**24 34 13 Barber KS**

Job Ticket: 32907

**DST#: 3**

ATTN: Bill Klaver

Test Start: 2008.09.14 @ 17:31:17

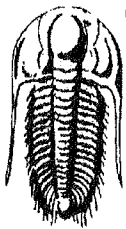
### Tool Information

|                           |                    |                       |                   |                        |             |         |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|---------|
| Drill Pipe:               | Length: 4640.00 ft | Diameter: 3.80 inches | Volume: 65.09 bbl | Tool Weight:           | 3000.00 lb  |         |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl  | Weight set on Packer:  | 25000.00 lb |         |
| Drill Collar:             | Length: 177.00 ft  | Diameter: 2.25 inches | Volume: 0.87 bbl  | Weight to Pull Loose:  | 90000.00 lb |         |
|                           |                    |                       | Total Volume:     | 65.96 bbl              | Tool Chased | 0.00 ft |
| Drill Pipe Above KB:      | 19.00 ft           |                       |                   | String Weight: Initial | 84000.00 lb |         |
| Depth to Top Packer:      | 4826.00 ft         |                       |                   | Final                  | 84000.00 lb |         |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |         |
| Interval between Packers: | 150.00 ft          |                       |                   |                        |             |         |
| Tool Length:              | 178.00 ft          |                       |                   |                        |             |         |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |         |
| Tool Comments:            |                    |                       |                   |                        |             |         |

### Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                 |
|------------------|-------------|------------|----------|------------|--------------------------------|
| Shut In Tool     | 5.00        |            |          | 4803.00    |                                |
| Hydraulic tool   | 5.00        |            |          | 4808.00    |                                |
| Jars             | 5.00        |            |          | 4813.00    |                                |
| Safety Joint     | 3.00        |            |          | 4816.00    |                                |
| Packer           | 5.00        |            |          | 4821.00    | 28.00 Bottom Of Top Packer     |
| Packer           | 5.00        |            |          | 4826.00    |                                |
| Stubb            | 1.00        |            |          | 4827.00    |                                |
| Change Over Sub  | 1.00        |            |          | 4828.00    |                                |
| Recorder         | 0.00        | 6798       | Inside   | 4828.00    |                                |
| Recorder         | 0.00        | 8358       | Inside   | 4828.00    |                                |
| Drill Pipe       | 123.00      |            |          | 4951.00    |                                |
| Change Over Sub  | 1.00        |            |          | 4952.00    |                                |
| Perforations     | 21.00       |            |          | 4973.00    |                                |
| Bullnose         | 3.00        |            |          | 4976.00    | 150.00 Bottom Packers & Anchor |

**Total Tool Length: 178.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Woolsey Operating Company

**Cundiff #1**

125 N Market STE 1000  
Wichita KS 67202

**24 34 13 Barber KS**

Job Ticket: 32907

**DST#: 3**

ATTN: Bill Klaver

Test Start: 2008.09.14 @ 17:31:17

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 9.97 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 5400.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psig

### Recovery Information

Recovery Table

| Length<br>ft | Description        | Volume<br>bbl |
|--------------|--------------------|---------------|
| 20.00        | Drilling Mud 100%m | 0.098         |
| 0.00         |                    | 0.000         |

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

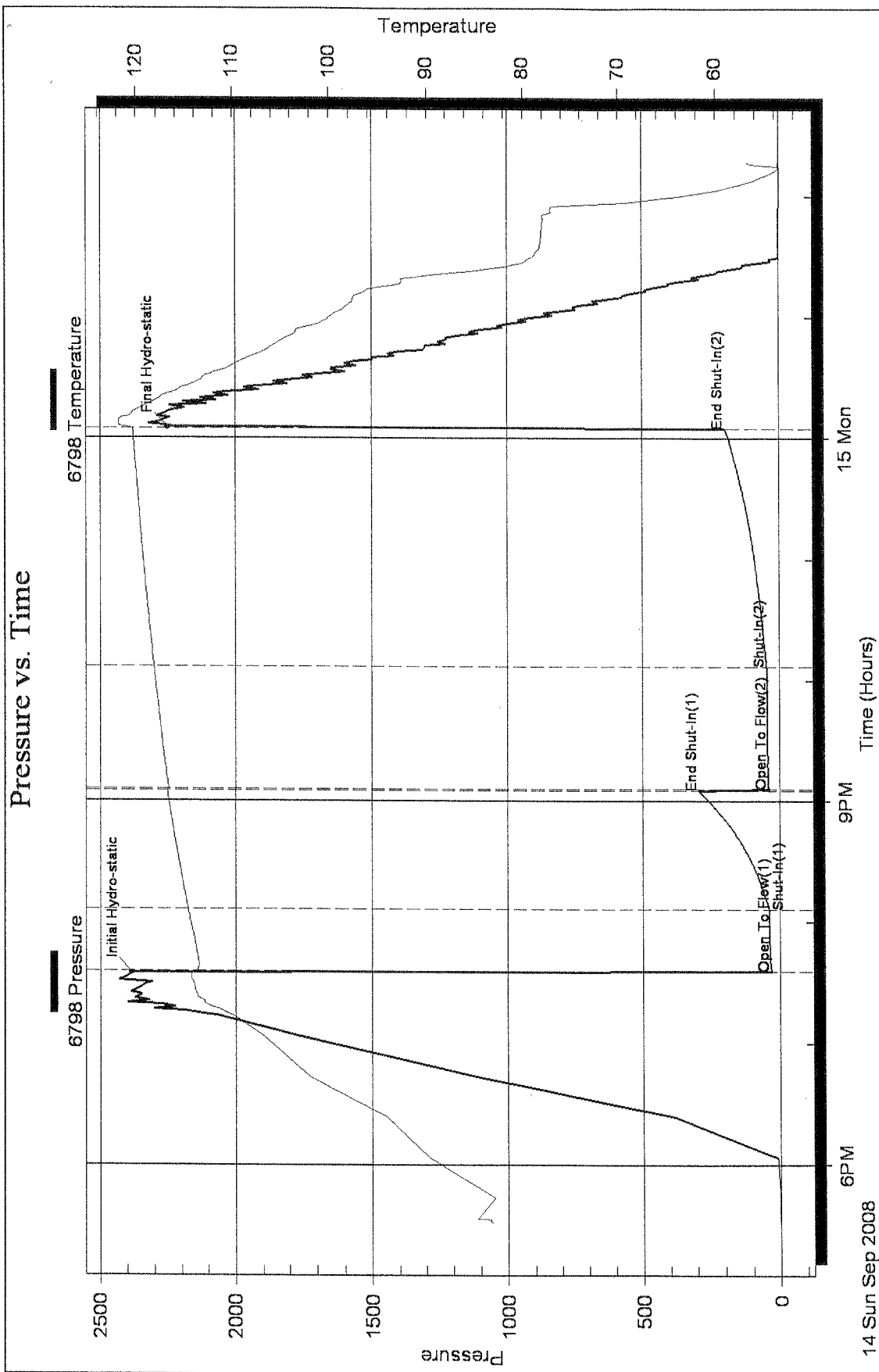
Serial #: none

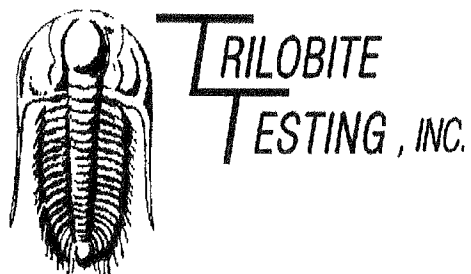
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**24 34 13 Barber KS**

**Cundiff #1**

Start Date: 2008.09.16 @ 00:22:31

End Date: 2008.09.16 @ 09:58:32

Job Ticket #: 32908      DST #: 4

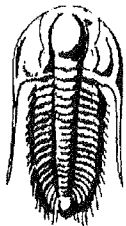
Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

RECEIVED  
KANSAS CORPORATION COMMISSION

JAN 02 2009

CONSERVATION DIVISION  
WICHITA, KS





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

## DRILL STEM TEST REPORT

Woolsey Operating Company

125 N Market STE 1000  
Wichita KS 67202

ATTN: Bill Klaver

**Cundiff #1**

**24 34 13 Barber KS**

Job Ticket: 32908

**DST#: 4**

Test Start: 2008.09.16 @ 00:22:31

### GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:05:02

Time Test Ended: 09:58:32

Test Type: Conventional Bottom Hole

Tester: Jerry Adams

Unit No: 45

**Interval: 5030.00 ft (KB) To 5170.00 ft (KB) (TVD)**

Total Depth: 5170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1560.00 ft (KB)

1547.00 ft (CF)

KB to GR/CF: 13.00 ft

**Serial #: 6798**

**Inside**

Press@RunDepth: 43.72 psig @ 5032.00 ft (KB)

Start Date: 2008.09.16

End Date: 2008.09.16

Start Time: 00:22:33

End Time: 09:58:32

Capacity: 7000.00 psig

Last Calib.: 2008.09.16

Time On Btm: 2008.09.16 @ 03:04:32

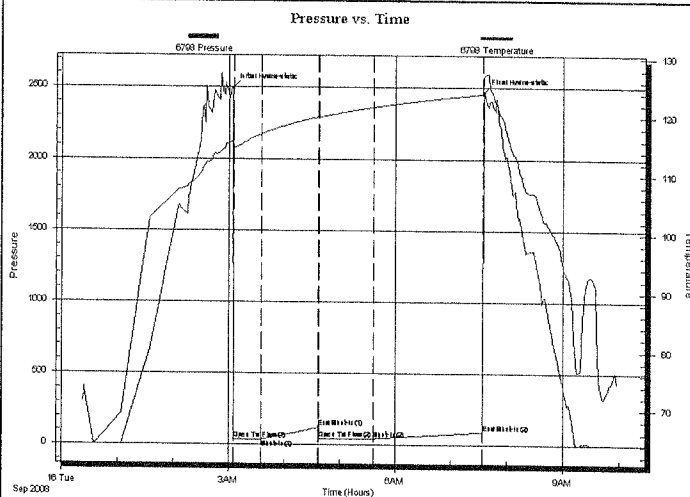
Time Off Btm: 2008.09.16 @ 07:36:02

**TEST COMMENT:** IF Weak blow Steady at 1/2"

ISI No blow

FF No blow

FSI No blow



### PRESSURE SUMMARY

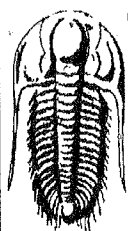
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2494.55         | 115.74       | Initial Hydro-static |
| 1           | 33.22           | 115.05       | Open To Flow (1)     |
| 32          | 38.75           | 117.09       | Shut-In(1)           |
| 93          | 122.69          | 120.02       | End Shut-In(1)       |
| 94          | 42.66           | 119.99       | Open To Flow (2)     |
| 152         | 43.72           | 121.68       | Shut-In(2)           |
| 270         | 91.62           | 123.97       | End Shut-In(2)       |
| 272         | 2466.30         | 126.94       | Final Hydro-static   |

### Recovery

| Length (ft) | Description            | Volume (bbl) |
|-------------|------------------------|--------------|
| 10.00       | Drilling Mud 100% m    | 0.05         |
| 0.00        | Few oil specks in tool | 0.00         |
| 0.00        |                        | 0.00         |
|             |                        |              |
|             |                        |              |
|             |                        |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Company

Cundiff #1

125 N Market STE 1000  
Wichita KS 67202

24 34 13 Barber KS

Job Ticket: 32908

DST#: 4

ATTN: Bill Klaver

Test Start: 2008.09.16 @ 00:22:31

### Tool Information

|                           |                    |                       |                   |                        |             |         |             |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|---------|-------------|
| Drill Pipe:               | Length: 4855.00 ft | Diameter: 3.80 inches | Volume: 68.10 bbl | Tool Weight:           | 3000.00 lb  |         |             |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl  | Weight set on Packer:  | 25000.00 lb |         |             |
| Drill Collar:             | Length: 177.00 ft  | Diameter: 2.25 inches | Volume: 0.87 bbl  | Weight to Pull Loose:  | 90000.00 lb |         |             |
|                           |                    |                       | Total Volume:     | 68.97 bbl              | Tool Chased | 0.00 ft |             |
| Drill Pipe Above KB:      | 30.00 ft           |                       |                   | String Weight: Initial | 85000.00 lb | Final   | 85000.00 lb |
| Depth to Top Packer:      | 5030.00 ft         |                       |                   |                        |             |         |             |
| Depth to Bottom Packer:   | ft                 |                       |                   |                        |             |         |             |
| Interval between Packers: | 140.00 ft          |                       |                   |                        |             |         |             |
| Tool Length:              | 168.00 ft          |                       |                   |                        |             |         |             |
| Number of Packers:        | 2                  | Diameter:             | 6.75 inches       |                        |             |         |             |
| Tool Comments:            |                    |                       |                   |                        |             |         |             |

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                 |
|------------------|-------------|------------|----------|------------|--------------------------------|
| Shut In Tool     | 5.00        |            |          | 5007.00    |                                |
| Hydraulic tool   | 5.00        |            |          | 5012.00    |                                |
| Jars             | 5.00        |            |          | 5017.00    |                                |
| Safety Joint     | 3.00        |            |          | 5020.00    |                                |
| Packer           | 5.00        |            |          | 5025.00    | 28.00 Bottom Of Top Packer     |
| Packer           | 5.00        |            |          | 5030.00    |                                |
| Stubb            | 1.00        |            |          | 5031.00    |                                |
| Change Over Sub  | 1.00        |            |          | 5032.00    |                                |
| Recorder         | 0.00        | 6798       | Inside   | 5032.00    |                                |
| Recorder         | 0.00        | 8358       | Inside   | 5032.00    |                                |
| Drill Pipe       | 123.00      |            |          | 5155.00    |                                |
| Change Over Sub  | 1.00        |            |          | 5156.00    |                                |
| Perforations     | 11.00       |            |          | 5167.00    |                                |
| Bullnose         | 3.00        |            |          | 5170.00    | 140.00 Bottom Packers & Anchor |

**Total Tool Length: 168.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Woolsey Operating Company

**Cundiff #1**

125 N Market STE 1000  
Wichita KS 67202

**24 34 13 Barber KS**

Job Ticket: 32908

**DST#: 4**

ATTN: Bill Klaver

Test Start: 2008.09.16 @ 00:22:31

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 11.18 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 5100.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description            | Volume<br>bbl |
|--------------|------------------------|---------------|
| 10.00        | Drilling Mud 100%m     | 0.049         |
| 0.00         | Few oil specks in tool | 0.000         |
| 0.00         |                        | 0.000         |

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time

