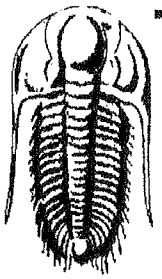
15-051-25821-00-00

31-12s-19w

KGS



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

SW SW
750 FSL
450 FWL

Start Date: 2008.09.19 @ 17:35:01
End Date: 2008.09.20 @ 01:11:31
Job Ticket #: 33706 DST #: 1

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33706 **DST#: 1**

Test Start: 2008.09.19 @ 17:35:01

## GENERAL INFORMATION:

Formation: **Topeka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:23:16
Time Test Ended: 01:11:31

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

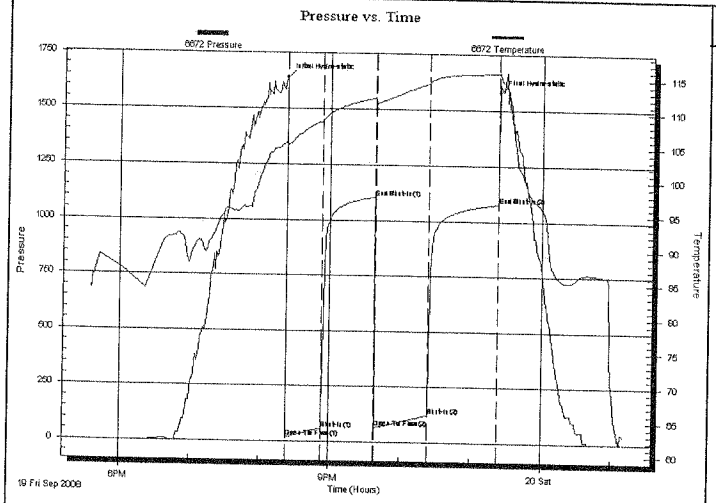
**Interval: 3424.00 ft (KB) To 3475.00 ft (KB) (TVD)**
Total Depth: 3475.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 6672** **Inside**
Press@RunDepth: 1075.95 psig @ 3428.00 ft (KB)
Start Date: 2008.09.19 End Date: 2008.09.20
Start Time: 17:35:02 End Time: 01:11:31

Capacity: 7000.00 psig
Last Calib.: 2008.09.20
Time On Btm: 2008.09.19 @ 20:23:01
Time Off Btm: 2008.09.19 @ 23:23:31

TEST COMMENT: IFP-BOB in 5 min
ISI-Weak surface blow back built to 2" died to weak surface
FFP-BOB in 7.5 min
FSI-weak blow back built to 8" died to




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1642.17 | 105.73 | Initial Hydro-static |
| 1 | 16.21 | 104.82 | Open To Flow (1) |
| 30 | 57.78 | 108.54 | Shut-In(1) |
| 75 | 1104.10 | 112.05 | End Shut-In(1) |
| 76 | 64.87 | 111.37 | Open To Flow (2) |
| 120 | 120.00 | 114.21 | Shut-In(2) |
| 180 | 1075.95 | 115.73 | End Shut-In(2) |
| 181 | 1580.75 | 115.93 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 30.00 | SOCWM 10%O,30%W,60%M | 0.43 |
| 60.00 | GMCO 20%G,40%O,40%M | 0.85 |
| 120.00 | GMCO 20%G,60%O,20%M | 1.70 |
| 60.00 | GCO 20%G,80%O | 0.85 |
| 0.00 | 1110' GIP | 0.00 |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33706 **DST#: 1**

Test Start: 2008.09.19 @ 17:35:01

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3407.00 ft | Diameter: | 3.82 inches | Volume: | 48.30 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| | | | | | Total Volume: | 48.30 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 4.00 ft |
| Depth to Top Packer: | 3424.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 51.00 ft |
| Tool Length: | 72.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 2200.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 55000.00 lb |
| Tool Chased | 0.00 ft |
| String Weight: Initial | 44000.00 lb |
| Final | 47000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Shut In Tool | 5.00 | | | 3408.00 | | |
| Change Over Sub | 1.00 | | | 3409.00 | | |
| Hydraulic tool | 5.00 | | | 3414.00 | | |
| Packer | 5.00 | | | 3419.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3424.00 | | |
| Stubb | 1.00 | | | 3425.00 | | |
| Perforations | 2.00 | | | 3427.00 | | |
| Change Over Sub | 1.00 | | | 3428.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3428.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3428.00 | | |
| Blank Spacing | 31.00 | | | 3459.00 | | |
| Change Over Sub | 1.00 | | | 3460.00 | | |
| Perforations | 12.00 | | | 3472.00 | | |
| Bullnose | 3.00 | | | 3475.00 | 51.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **72.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33706 **DST#: 1**

Test Start: 2008.09.19 @ 17:35:01

## 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: | 54.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 8.76 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 2000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

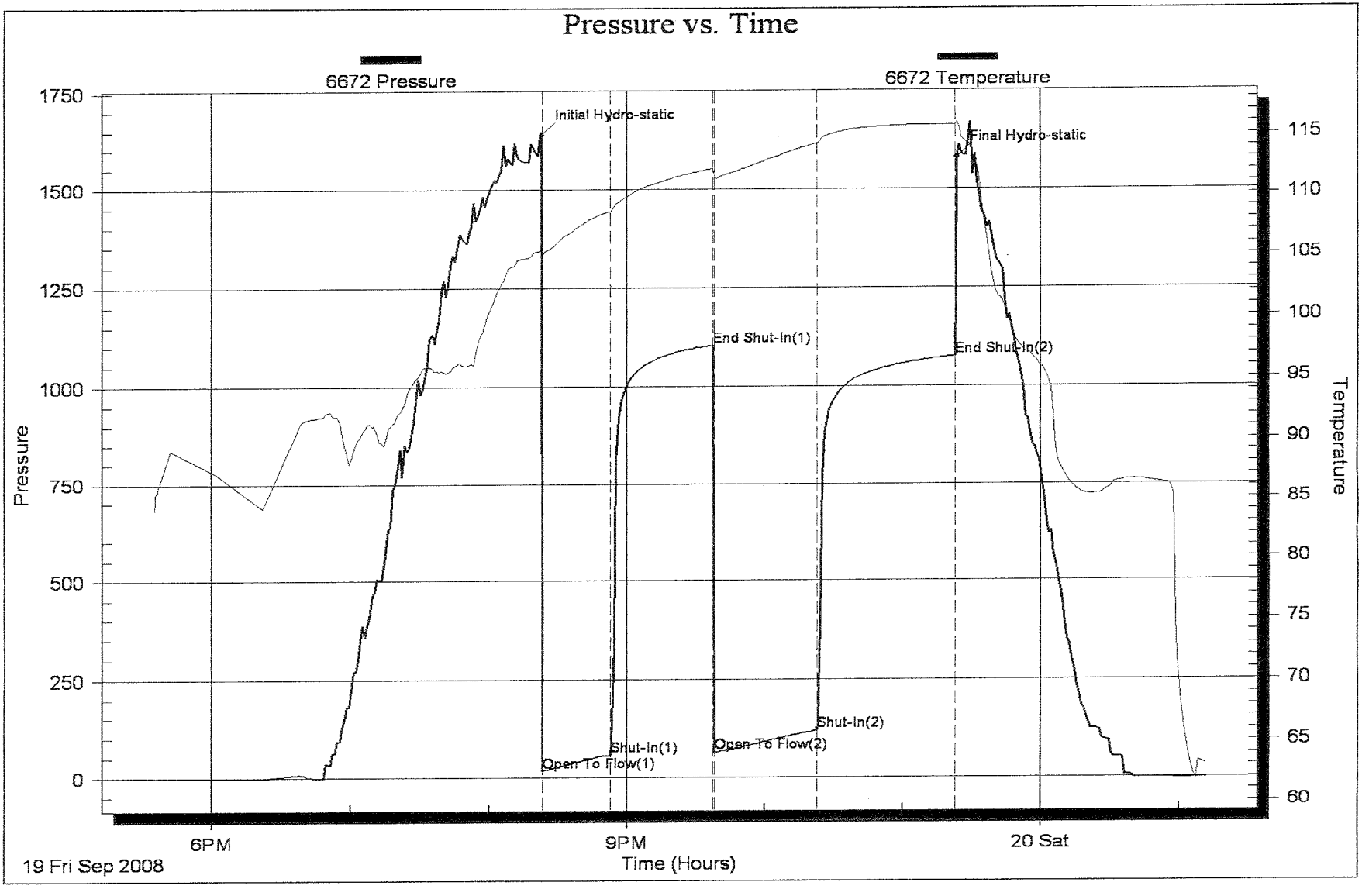
## Recovery Information

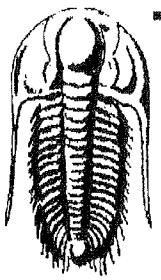
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 30.00 | SOCWM 10%O,30%W,60%M | 0.425 |
| 60.00 | GMCO 20%G,40%O,40%M | 0.851 |
| 120.00 | GMCO 20%G,60%O,20%M | 1.701 |
| 60.00 | GCO 20%G,80%O | 0.851 |
| 0.00 | 1110' GIP | 0.000 |

Total Length: 270.00 ft Total Volume: 3.828 bbl

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


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Shut-In(2)
Open To Flow(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
60
6PM
9PM
20 Sat
19 Fri Sep 2008
Time (Hours)



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.20 @ 09:22:20

End Date: 2008.09.20 @ 15:39:05

Job Ticket #: 33707 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33707 **DST#: 2**

Test Start: 2008.09.20 @ 09:22:20

## GENERAL INFORMATION:

Formation: **Toronto - LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:07:05
Time Test Ended: 15:39:05

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

**Interval: 3477.00 ft (KB) To 3527.00 ft (KB) (TVD)**
Total Depth: 3527.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

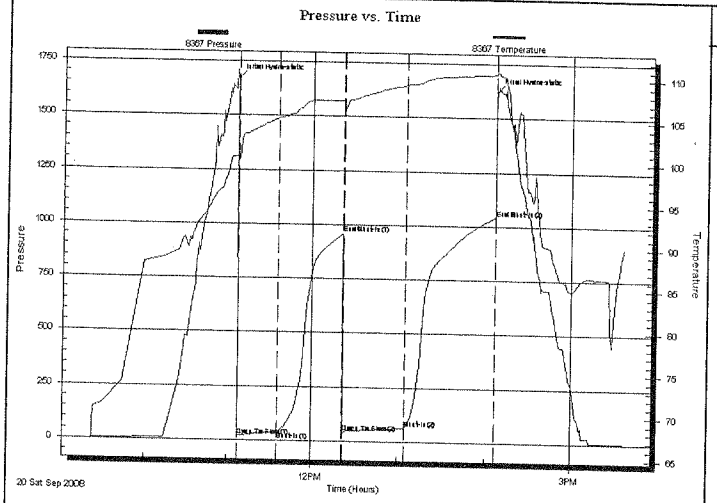
Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 8367** **Inside**

Press@RunDepth: 62.81 psig @ 3481.00 ft (KB)
Start Date: 2008.09.20 End Date: 2008.09.20
Start Time: 09:22:21 End Time: 15:39:05

Capacity: 7000.00 psig
Last Calib.: 2008.09.20
Time On Btm: 2008.09.20 @ 11:06:50
Time Off Btm: 2008.09.20 @ 14:07:05

TEST COMMENT: IFP-BOB in 14 min
ISI-Weak surface blow back died in 6 min
FFP-BOB in 30 sec
FSI-Weak surface blow back died in 9 min




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1669.01 | 100.77 | Initial Hydro-static |
| 1 | 17.42 | 100.09 | Open To Flow (1) |
| 30 | 37.66 | 105.21 | Shut-In(1) |
| 75 | 957.37 | 107.34 | End Shut-In(1) |
| 76 | 40.00 | 106.50 | Open To Flow (2) |
| 118 | 62.81 | 109.21 | Shut-In(2) |
| 180 | 1040.14 | 110.57 | End Shut-In(2) |
| 181 | 1618.49 | 110.85 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 60.00 | GOCM 20%G,30%O,50%M | 0.85 |
| 55.00 | GMCO 30%G,40%O,30%M | 0.78 |
| 0.00 | 905' GIP | 0.00 |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33707 **DST#: 2**

Test Start: 2008.09.20 @ 09:22:20

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3470.00 ft | Diameter: | 3.82 inches | Volume: | 49.19 bbl | Tool Weight: | | 2200.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight set on Packer: | | 25000.00 lb |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight to Pull Loose: | | 55000.00 lb |
| | | | | | Total Volume: | 49.19 bbl | Tool Chased | | 0.00 ft |
| Drill Pipe Above KB: | | 14.00 ft | | | | | String Weight: | Initial | 46000.00 lb |
| Depth to Top Packer: | | 3477.00 ft | | | | | | Final | 48000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | | |
| Interval betw een Packers: | | 50.00 ft | | | | | | | |
| Tool Length: | | 71.00 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 | | | 3461.00 | | |
| Change Over Sub | 1.00 | | | 3462.00 | | |
| Hydraulic tool | 5.00 | | | 3467.00 | | |
| Packer | 5.00 | | | 3472.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3477.00 | | |
| Stubb | 1.00 | | | 3478.00 | | |
| Perforations | 2.00 | | | 3480.00 | | |
| Change Over Sub | 1.00 | | | 3481.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3481.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3481.00 | | |
| Blank Spacing | 32.00 | | | 3513.00 | | |
| Change Over Sub | 1.00 | | | 3514.00 | | |
| Perforations | 10.00 | | | 3524.00 | | |
| Bullnose | 3.00 | | | 3527.00 | 50.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **71.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33707 **DST#: 2**

Test Start: 2008.09.20 @ 09:22:20

## 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: | 49.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 8.86 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 6000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

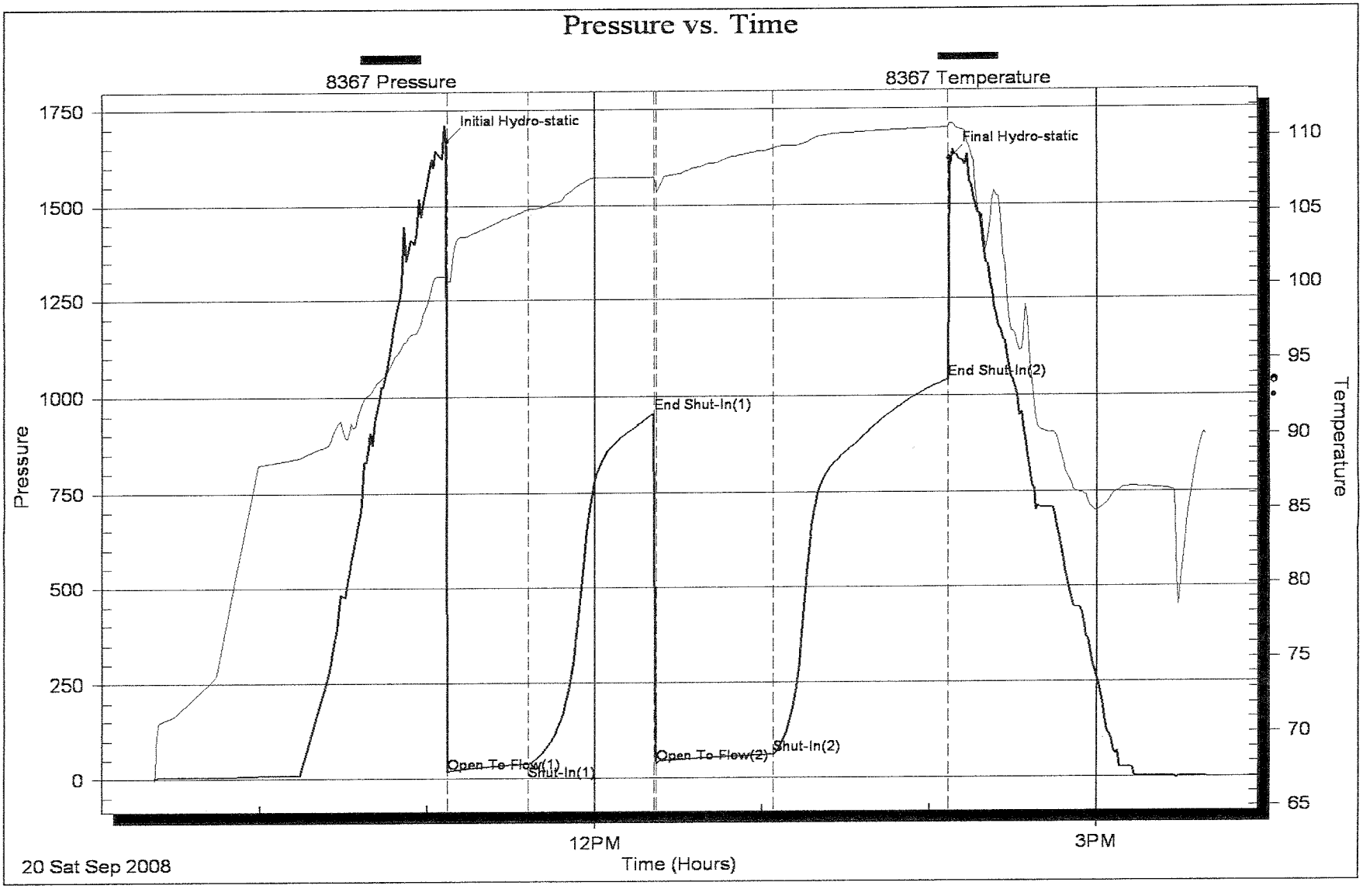
## Recovery Information

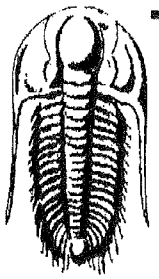
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 60.00 | GOCM 20%G,30%O,50%M | 0.851 |
| 55.00 | GMCO 30%G,40%O,30%M | 0.780 |
| 0.00 | 905' GIP | 0.000 |

Total Length: 115.00 ft Total Volume: 1.631 bbl

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


Pressure vs. Time
8367 Pressure
8367 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
70
65
12PM
3PM
Time (Hours)
20 Sat Sep 2008



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.20 @ 21:39:47

End Date: 2008.09.21 @ 04:07:17

Job Ticket #: 33708 DST #: 3

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

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33708 **DST#: 3**

Test Start: 2008.09.20 @ 21:39:47

## GENERAL INFORMATION:

Formation: **LKC "B-C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:31:02
Time Test Ended: 04:07:17

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

**Interval: 3525.00 ft (KB) To 3560.00 ft (KB) (TVD)**
Total Depth: 3560.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

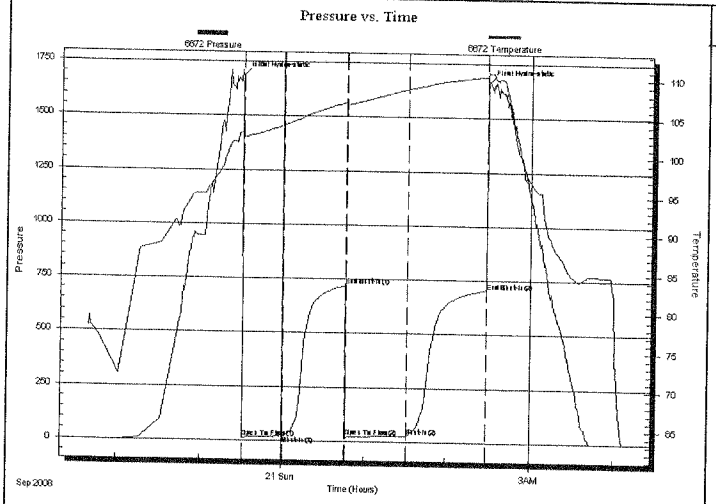
Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 6672** **Inside**

Press@RunDepth: 27.29 psig @ 3530.00 ft (KB)
Start Date: 2008.09.20 End Date: 2008.09.21
Start Time: 21:39:48 End Time: 04:07:17

Capacity: 7000.00 psig
Last Calib.: 2008.09.21
Time On Btm: 2008.09.20 @ 23:30:47
Time Off Btm: 2008.09.21 @ 02:29:32

TEST COMMENT: IFP-Weak surface blow built to 1.5"
ISI-no blow back
FFP-Weak surface blow built to 1"
FSI-no blow back




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1684.24 | 103.10 | Initial Hydro-static |
| 1 | 13.48 | 102.33 | Open To Flow (1) |
| 30 | 22.12 | 103.93 | Shut-In(1) |
| 75 | 717.43 | 106.85 | End Shut-In(1) |
| 76 | 22.68 | 106.48 | Open To Flow (2) |
| 121 | 27.29 | 108.63 | Shut-In(2) |
| 178 | 701.90 | 110.34 | End Shut-In(2) |
| 179 | 1661.82 | 110.70 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 30.00 | SOCM 5%O,95%M | 0.43 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33708 **DST#: 3**

Test Start: 2008.09.20 @ 21:39:47

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3532.00 ft | Diameter: | 3.82 inches | Volume: | 50.07 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| | | | | | Total Volume: | 50.07 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 28.00 ft |
| Depth to Top Packer: | 3525.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 35.00 ft |
| Tool Length: | 56.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 2200.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 70000.00 lb |
| Tool Chased | 2.00 ft |
| String Weight: Initial | 44000.00 lb |
| Final | 44000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 3505.00 | | |
| Shut In Tool | 5.00 | | | 3510.00 | | |
| Hydraulic tool | 5.00 | | | 3515.00 | | |
| Packer | 5.00 | | | 3520.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3525.00 | | |
| Stubb | 1.00 | | | 3526.00 | | |
| Perforations | 4.00 | | | 3530.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3530.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3530.00 | | |
| Perforations | 27.00 | | | 3557.00 | | |
| Bullnose | 3.00 | | | 3560.00 | 35.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **56.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33708 **DST#: 3**

Test Start: 2008.09.20 @ 21:39:47

## 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: | 49.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 8.87 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 6000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

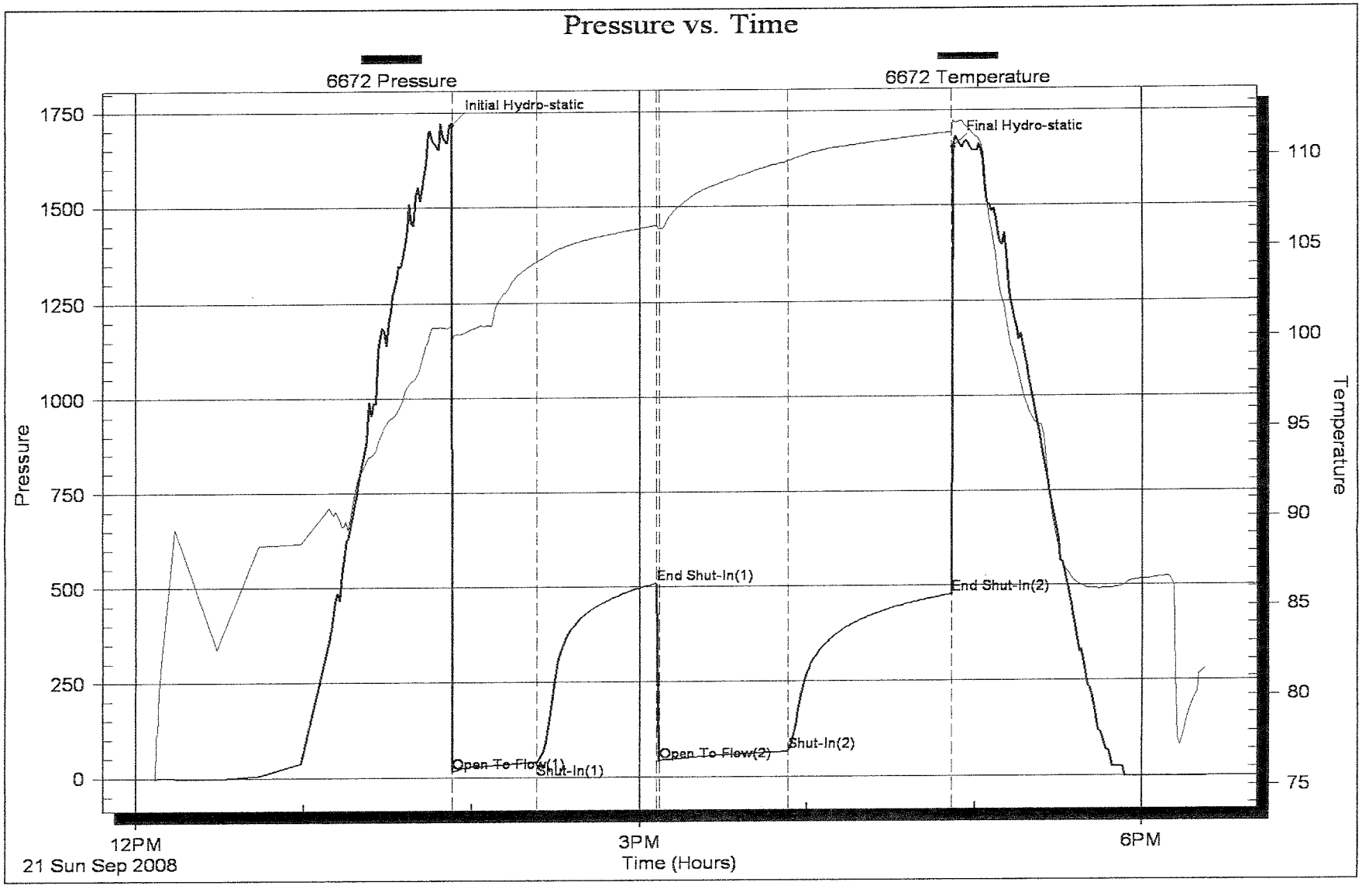
## Recovery Information

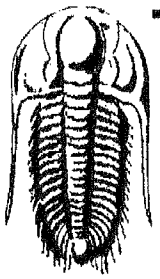
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 30.00 | SOCM 5%O,95%M | 0.425 |

Total Length: 30.00 ft Total Volume: 0.425 bbl

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


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
12PM
21 Sun Sep 2008
3PM
Time (Hours)
6PM



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.21 @ 12:06:45
End Date: 2008.09.21 @ 18:22:45
Job Ticket #: 33709 DST #: 4

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33709 **DST#: 4**

Test Start: 2008.09.21 @ 12:06:45

## GENERAL INFORMATION:

Formation: **LKC "C-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:53:00
Time Test Ended: 18:22:45

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

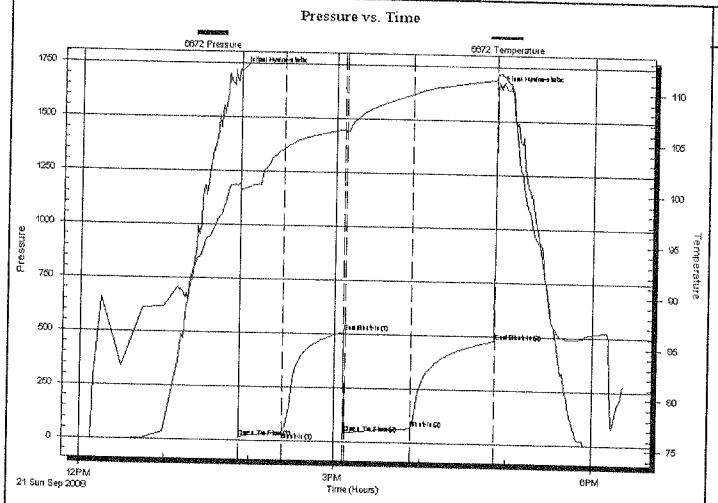
**Interval: 3555.00 ft (KB) To 3601.00 ft (KB) (TVD)**
Total Depth: 3475.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 6672** **Inside**
Press@RunDepth: 65.82 psig @ 3561.00 ft (KB)
Start Date: 2008.09.21 End Date: 2008.09.21
Start Time: 12:06:46 End Time: 18:22:45

Capacity: 7000.00 psig
Last Calib.: 2008.09.21
Time On Btm: 2008.09.21 @ 13:52:45
Time Off Btm: 2008.09.21 @ 16:52:30

TEST COMMENT: IFP-Weak surface blow built to 5"
ISI-Weak surffface blow back died in 20 min
FFP-Weak surface blow built to 7.5"
FSI-Weak surface blow back died in 12 min




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1716.39 | 100.73 | Initial Hydro-static |
| 1 | 14.78 | 99.87 | Open To Flow (1) |
| 31 | 38.75 | 104.23 | Shut-In(1) |
| 74 | 508.59 | 106.21 | End Shut-In(1) |
| 75 | 41.84 | 106.01 | Open To Flow (2) |
| 121 | 65.82 | 109.73 | Shut-In(2) |
| 179 | 477.87 | 111.30 | End Shut-In(2) |
| 180 | 1651.01 | 111.92 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 60.00 | VSOCWM 2%O,10%W,88%M | 0.85 |
| 40.00 | OCM 30%O,70%M | 0.57 |
| 5.00 | CO | 0.07 |
| 0.00 | 195' GIP | 0.00 |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33709 **DST#: 4**

Test Start: 2008.09.21 @ 12:06:45

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3564.00 ft | Diameter: | 3.82 inches | Volume: | 50.52 bbl | Tool Weight: | | 2200.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight set on Packer: | | 25000.00 lb |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight to Pull Loose: | | 60000.00 lb |
| | | | | | Total Volume: | 50.52 bbl | Tool Chased | | 0.00 ft |
| Drill Pipe Above KB: | | 30.00 ft | | | | | String Weight: | Initial | 47000.00 lb |
| Depth to Top Packer: | | 3555.00 ft | | | | | | Final | 49000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | | |
| Interval betw een Packers: | | 46.00 ft | | | | | | | |
| Tool Length: | | 67.00 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 | | | 3539.00 | | |
| Change Over Sub | 1.00 | | | 3540.00 | | |
| Hydraulic tool | 5.00 | | | 3545.00 | | |
| Packer | 5.00 | | | 3550.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3555.00 | | |
| Stubb | 1.00 | | | 3556.00 | | |
| Perforations | 4.00 | | | 3560.00 | | |
| Change Over Sub | 1.00 | | | 3561.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3561.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3561.00 | | |
| Blank Spacing | 31.00 | | | 3592.00 | | |
| Change Over Sub | 1.00 | | | 3593.00 | | |
| Perforations | 5.00 | | | 3598.00 | | |
| Bullnose | 3.00 | | | 3601.00 | 46.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **67.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33709 **DST#: 4**

Test Start: 2008.09.21 @ 12:06:45

## Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 9.07 in³
Resistivity: ohm.m
Salinity: 6500.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 29 deg API
Water Salinity: ppm

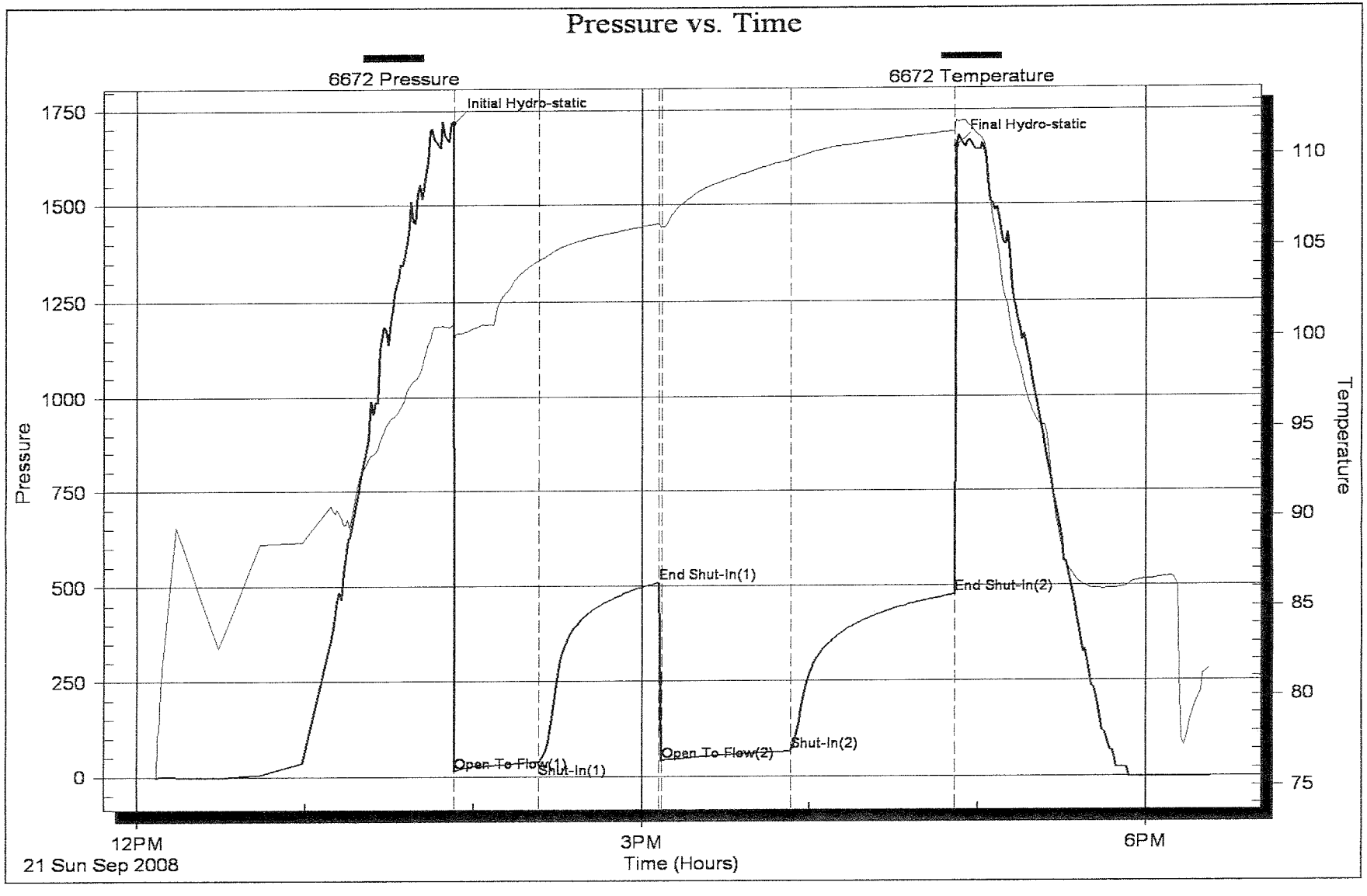
## Recovery Information

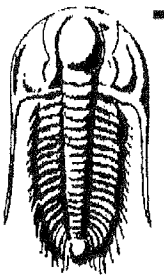
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 60.00 | VSOCWM 2%O,10%W,88%M | 0.851 |
| 40.00 | OCM 30%O,70%M | 0.567 |
| 5.00 | CO | 0.071 |
| 0.00 | 195' GIP | 0.000 |

Total Length: 105.00 ft Total Volume: 1.489 bbl

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


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
12PM
21 Sun Sep 2008
3PM
Time (Hours)
6PM



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.22 @ 05:22:06
End Date: 2008.09.22 @ 11:30:06
Job Ticket #: 33710 DST #: 5

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

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33710 **DST#: 5**

Test Start: 2008.09.22 @ 05:22:06

## GENERAL INFORMATION:

Formation: **LKC "H-I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:02:51
Time Test Ended: 11:30:06

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

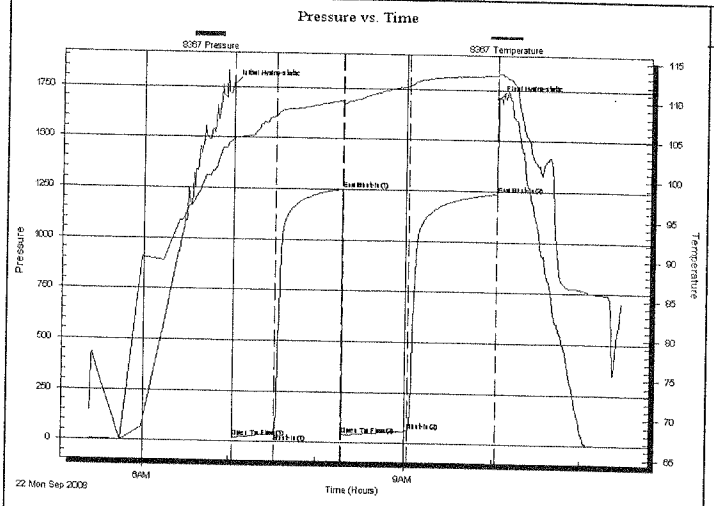
**Interval: 3632.00 ft (KB) To 3680.00 ft (KB) (TVD)**
Total Depth: 3680.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 8367** **Inside**
Press@RunDepth: 61.59 psig @ 3636.00 ft (KB)
Start Date: 2008.09.22 End Date: 2008.09.22
Start Time: 05:22:07 End Time: 11:30:06

Capacity: 7000.00 psig
Last Calib.: 2008.09.22
Time On Btm: 2008.09.22 @ 07:02:36
Time Off Btm: 2008.09.22 @ 10:02:21

TEST COMMENT: IFP-Weak surface blow built to 3.5"
ISI-no blow back
FFP-Weak surface blow built to 1"
FSI-no blow back




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1762.50 | 105.51 | Initial Hydro-static |
| 1 | 19.96 | 104.83 | Open To Flow (1) |
| 29 | 39.12 | 107.85 | Shut-In(1) |
| 75 | 1251.12 | 109.92 | End Shut-In(1) |
| 75 | 41.07 | 109.42 | Open To Flow (2) |
| 120 | 61.59 | 111.92 | Shut-In(2) |
| 180 | 1237.19 | 113.35 | End Shut-In(2) |
| 180 | 1706.35 | 113.56 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 40.00 | Mud w/scuim of oil | 0.57 |
| 60.00 | WM 40%W,60%M | 0.85 |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33710 **DST#: 5**

Test Start: 2008.09.22 @ 05:22:06

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3626.00 ft | Diameter: | 3.82 inches | Volume: | 51.40 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| | | | | | Total Volume: | 51.40 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 15.00 ft |
| Depth to Top Packer: | 3632.00 ft |
| Depth to Bottom Packer: | ft |
| Interval between Packers: | 46.00 ft |
| Tool Length: | 67.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 2200.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 70000.00 lb |
| Tool Chased | 0.00 ft |
| String Weight: Initial | 46000.00 lb |
| Final | 47000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Shut In Tool | 5.00 | | | 3616.00 | | |
| Change Over Sub | 1.00 | | | 3617.00 | | |
| Hydraulic tool | 5.00 | | | 3622.00 | | |
| Packer | 5.00 | | | 3627.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3632.00 | | |
| Stubb | 1.00 | | | 3633.00 | | |
| Perforations | 2.00 | | | 3635.00 | | |
| Change Over Sub | 1.00 | | | 3636.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3636.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3636.00 | | |
| Blank Spacing | 31.00 | | | 3667.00 | | |
| Change Over Sub | 1.00 | | | 3668.00 | | |
| Perforations | 7.00 | | | 3675.00 | | |
| Bullnose | 3.00 | | | 3678.00 | 46.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **67.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33710 **DST#: 5**

Test Start: 2008.09.22 @ 05:22:06

## 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: | 30000 ppm |
| Viscosity: | 46.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 9.08 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 6500.00 ppm | | | | |
| Filter Cake: | inches | | | | |

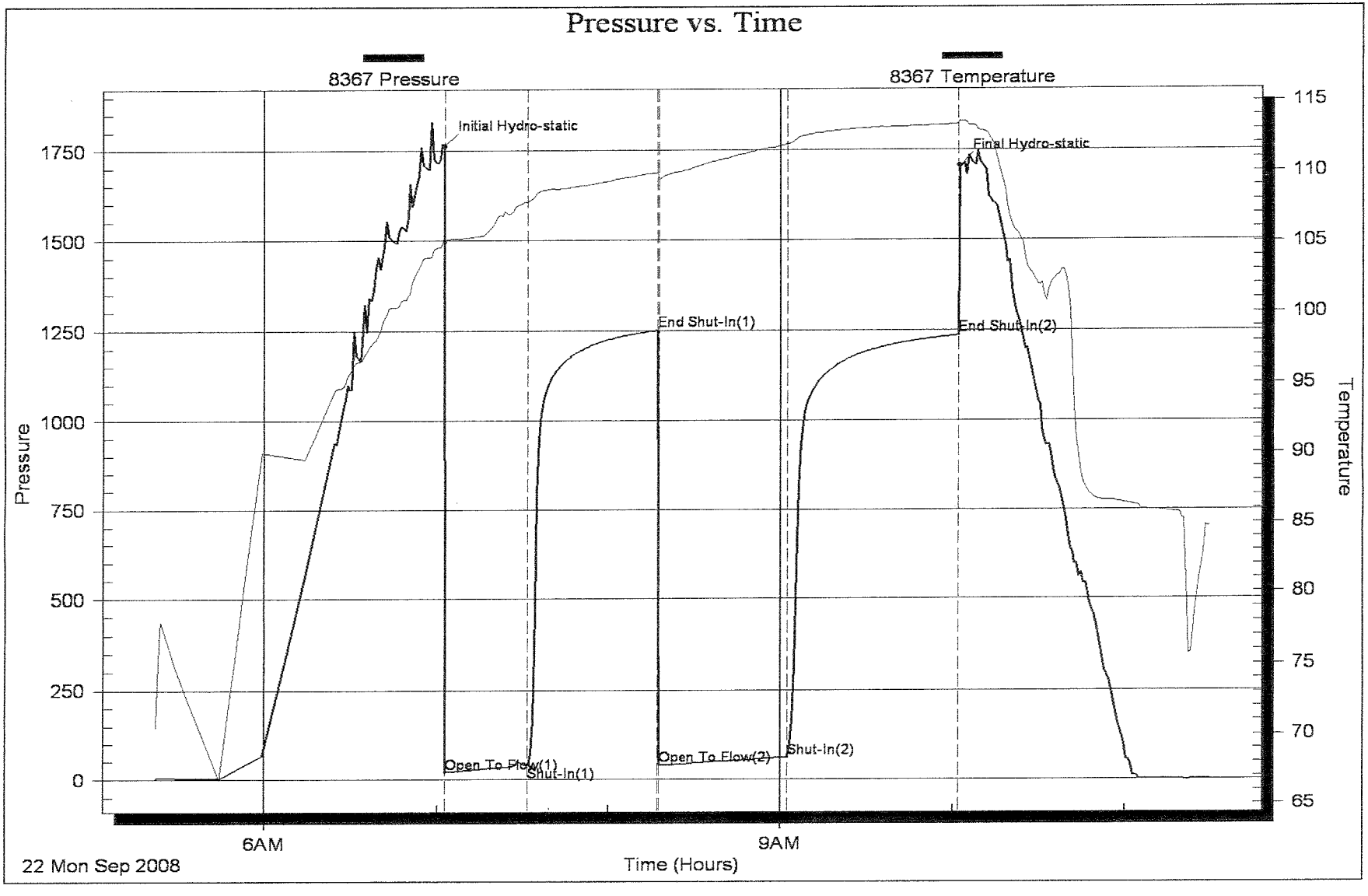
## Recovery Information

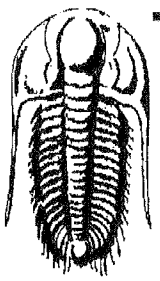
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 40.00 | Mud w/scuim of oil | 0.567 |
| 60.00 | WM 40%W,60%M | 0.851 |

Total Length: 100.00 ft Total Volume: 1.418 bbl

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


Pressure vs. Time
8367 Pressure
8367 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
6AM
9AM
22 Mon Sep 2008
Time (Hours)



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.22 @ 18:35:41

End Date: 2008.09.23 @ 01:23:56

Job Ticket #: 33711 DST #: 6

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

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33711 **DST#: 6**

Test Start: 2008.09.22 @ 18:35:41

## GENERAL INFORMATION:

Formation: **LKC "J-K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:43:56
Time Test Ended: 01:23:56

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

**Interval: 3678.00 ft (KB) To 3720.00 ft (KB) (TVD)**
Total Depth: 3720.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

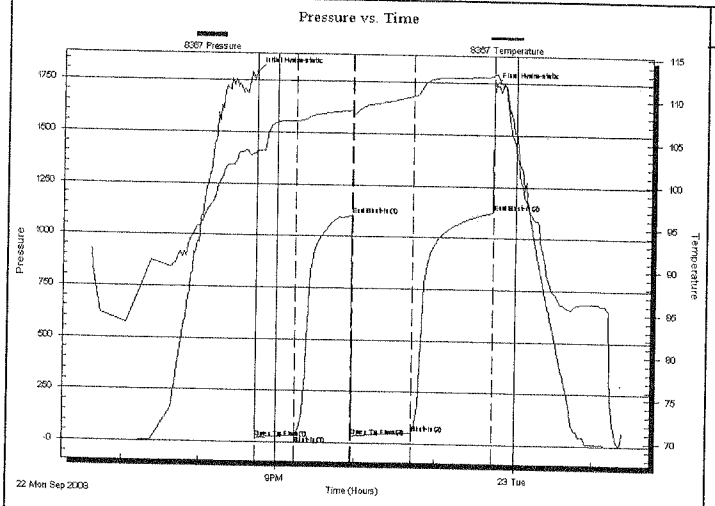
Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 8367** **Inside**

Press@RunDepth: 53.22 psig @ 3682.00 ft (KB)
Start Date: 2008.09.22 End Date: 2008.09.23
Start Time: 18:35:42 End Time: 01:23:56

Capacity: 7000.00 psig
Last Calib.: 2008.09.23
Time On Btm: 2008.09.22 @ 20:43:41
Time Off Btm: 2008.09.22 @ 23:43:41

TEST COMMENT: IFP-BOB in 15 min
ISI-Weak surface blow back built to 1" died in 25 min
FFP-BOB in 8 min
FSI-weak surface blow back built to 1/2" died in 20 min




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1790.91 | 103.89 | Initial Hydro-static |
| 1 | 18.84 | 103.34 | Open To Flow (1) |
| 31 | 34.10 | 107.29 | Shut-In(1) |
| 73 | 1101.71 | 108.65 | End Shut-In(1) |
| 74 | 33.05 | 108.18 | Open To Flow (2) |
| 120 | 53.22 | 110.43 | Shut-In(2) |
| 180 | 1125.23 | 112.82 | End Shut-In(2) |
| 180 | 1737.14 | 113.09 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 60.00 | GMCO 20%G,40%O,40%M | 0.85 |
| 45.00 | GMCO 30%G,50%O,20%M | 0.64 |
| 0.00 | 615' GIP | 0.00 |
| | | |
| | | |
| | | |

## Gas Rates

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

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33711 **DST#: 6**

Test Start: 2008.09.22 @ 18:35:41

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3688.00 ft | Diameter: | 3.82 inches | Volume: | 52.28 bbl | Tool Weight: | 2200.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight to Pull Loose: | 60000.00 lb |
| | | | | | Total Volume: | 52.28 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | | 31.00 ft | | | | | String Weight: Initial | 46000.00 lb |
| Depth to Top Packer: | | 3678.00 ft | | | | | Final | 49000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | |
| Interval betw een Packers: | | 42.00 ft | | | | | | |
| Tool Length: | | 63.00 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 | | | 3662.00 | | |
| Change Over Sub | 1.00 | | | 3663.00 | | |
| Hydraulic tool | 5.00 | | | 3668.00 | | |
| Packer | 5.00 | | | 3673.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3678.00 | | |
| Stubb | 1.00 | | | 3679.00 | | |
| Perforations | 2.00 | | | 3681.00 | | |
| Change Over Sub | 1.00 | | | 3682.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3682.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3682.00 | | |
| Blank Spacing | 30.00 | | | 3712.00 | | |
| Change Over Sub | 1.00 | | | 3713.00 | | |
| Perforations | 4.00 | | | 3717.00 | | |
| Bullnose | 3.00 | | | 3720.00 | 42.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **63.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33711 **DST#: 6**

Test Start: 2008.09.22 @ 18:35:41

## Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: in³
Resistivity: ohm.m
Salinity: 7000.00 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

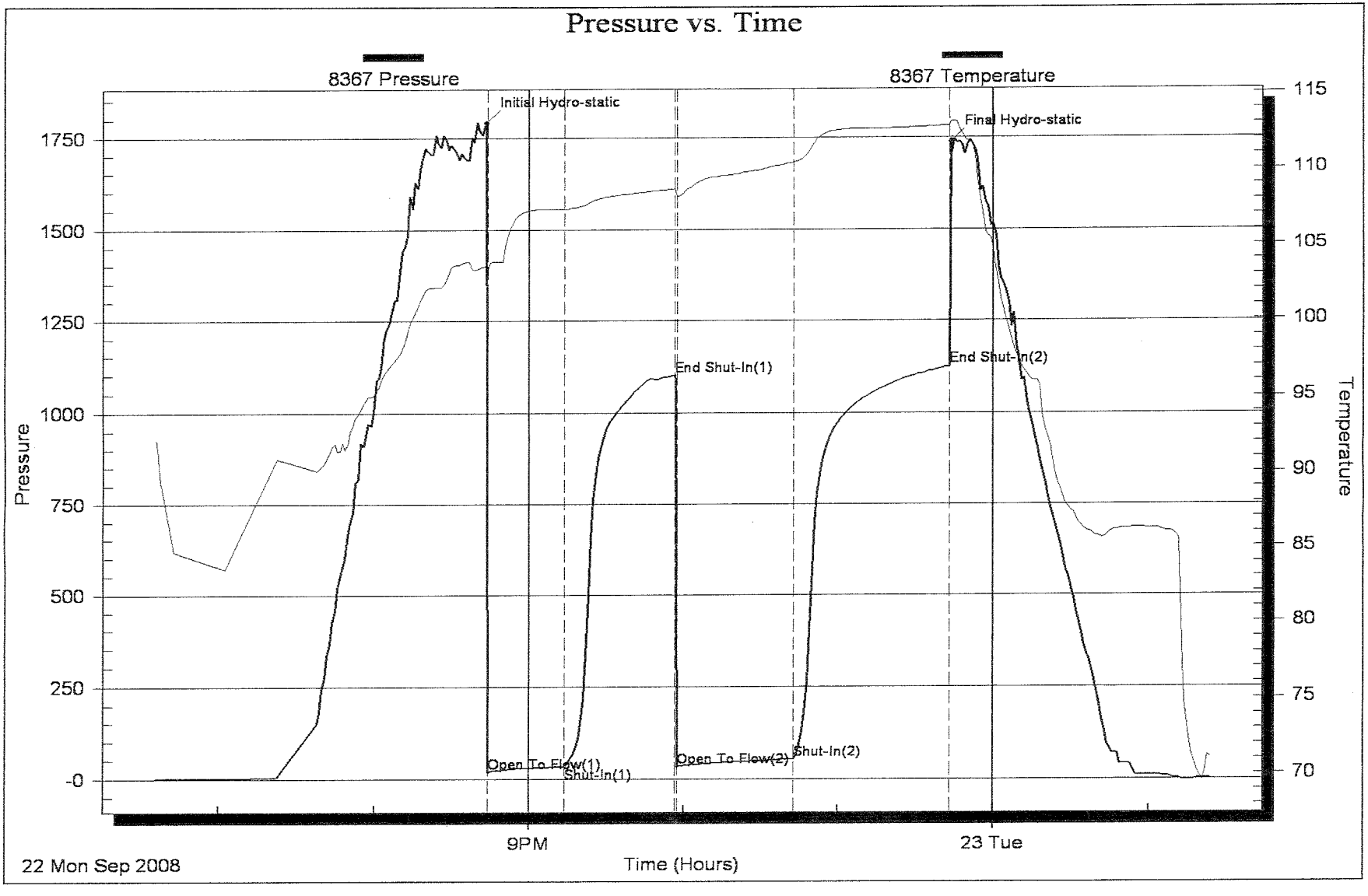
## Recovery Information

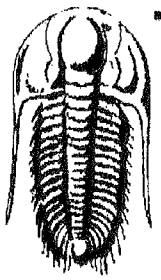
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 60.00 | GMCO 20%G,40%O,40%M | 0.851 |
| 45.00 | GMCO 30%G,50%O,20%M | 0.638 |
| 0.00 | 615' GIP | 0.000 |

Total Length: 105.00 ft Total Volume: 1.489 bbl

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


Pressure vs. Time
8367 Pressure
8367 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
1750
1500
1250
1000
750
500
250
-0
Pressure
115
110
105
100
95
90
85
80
75
70
Temperature
9PM
23 Tue
Time (Hours)
22 Mon Sep 2008



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.23 @ 16:03:38

End Date: 2008.09.23 @ 22:19:38

Job Ticket #: 33712 DST #: 7

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33712 **DST#: 7**

Test Start: 2008.09.23 @ 16:03:38

## GENERAL INFORMATION:

Formation: **Marm/Cong**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:56:38
Time Test Ended: 22:19:38

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

**Interval: 3755.00 ft (KB) To 3879.00 ft (KB) (TVD)**
Total Depth: 3879.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

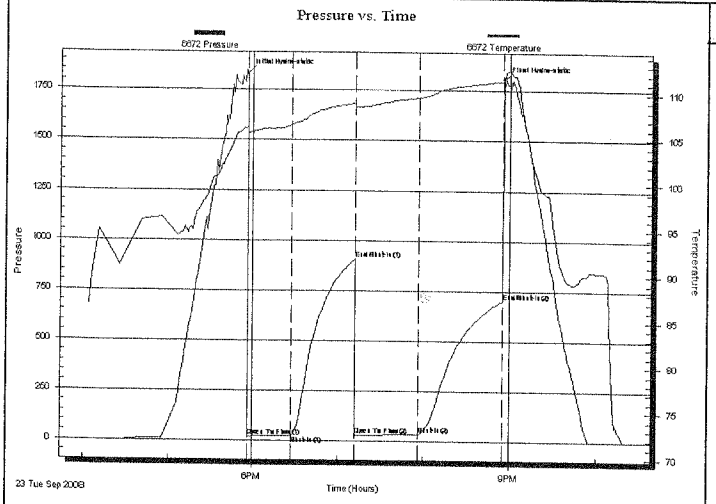
Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 6672** **Inside**

Press@RunDepth: 32.81 psig @ 3761.00 ft (KB)
Start Date: 2008.09.23 End Date: 2008.09.23
Start Time: 16:03:39 End Time: 22:19:38

Capacity: 7000.00 psig
Last Calib.: 2008.09.23
Time On Btm: 2008.09.23 @ 17:56:08
Time Off Btm: 2008.09.23 @ 20:56:08

TEST COMMENT: IFP-Weak surface blow built to 2"
ISI-no blow back
FFP-Very weak surface blow throughout
FSI-no blow back




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1832.75 | 106.26 | Initial Hydro-static |
| 1 | 18.89 | 105.50 | Open To Flow (1) |
| 31 | 25.10 | 106.56 | Shut-In(1) |
| 76 | 907.16 | 108.93 | End Shut-In(1) |
| 76 | 27.57 | 108.27 | Open To Flow (2) |
| 121 | 32.81 | 109.55 | Shut-In(2) |
| 180 | 701.16 | 111.41 | End Shut-In(2) |
| 180 | 1805.98 | 111.90 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 38.00 | OCM 20%O,80%M | 0.54 |
| 2.00 | CO | 0.03 |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33712 **DST#: 7**

Test Start: 2008.09.23 @ 16:03:38

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3752.00 ft | Diameter: | 3.82 inches | Volume: | 53.19 bbl | Tool Weight: | | 2200.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight set on Packer: | | 25000.00 lb |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight to Pull Loose: | | 60000.00 lb |
| | | | | | Total Volume: | 53.19 bbl | Tool Chased | | 0.00 ft |
| Drill Pipe Above KB: | | 18.00 ft | | | | | String Weight: | Initial | 49000.00 lb |
| Depth to Top Packer: | | 3755.00 ft | | | | | | Final | 49000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | | |
| Interval between Packers: | | 124.00 ft | | | | | | | |
| Tool Length: | | 145.00 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 | | | 3739.00 | | |
| Change Over Sub | 1.00 | | | 3740.00 | | |
| Hydraulic tool | 5.00 | | | 3745.00 | | |
| Packer | 5.00 | | | 3750.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3755.00 | | |
| Stubb | 1.00 | | | 3756.00 | | |
| Perforations | 4.00 | | | 3760.00 | | |
| Change Over Sub | 1.00 | | | 3761.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3761.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3761.00 | | |
| Blank Spacing | 94.00 | | | 3855.00 | | |
| Change Over Sub | 1.00 | | | 3856.00 | | |
| Perforations | 20.00 | | | 3876.00 | | |
| Bullnose | 3.00 | | | 3879.00 | 124.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **145.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33712 **DST#: 7**

Test Start: 2008.09.23 @ 16:03:38

## 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: | 40.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 9.39 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 9000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

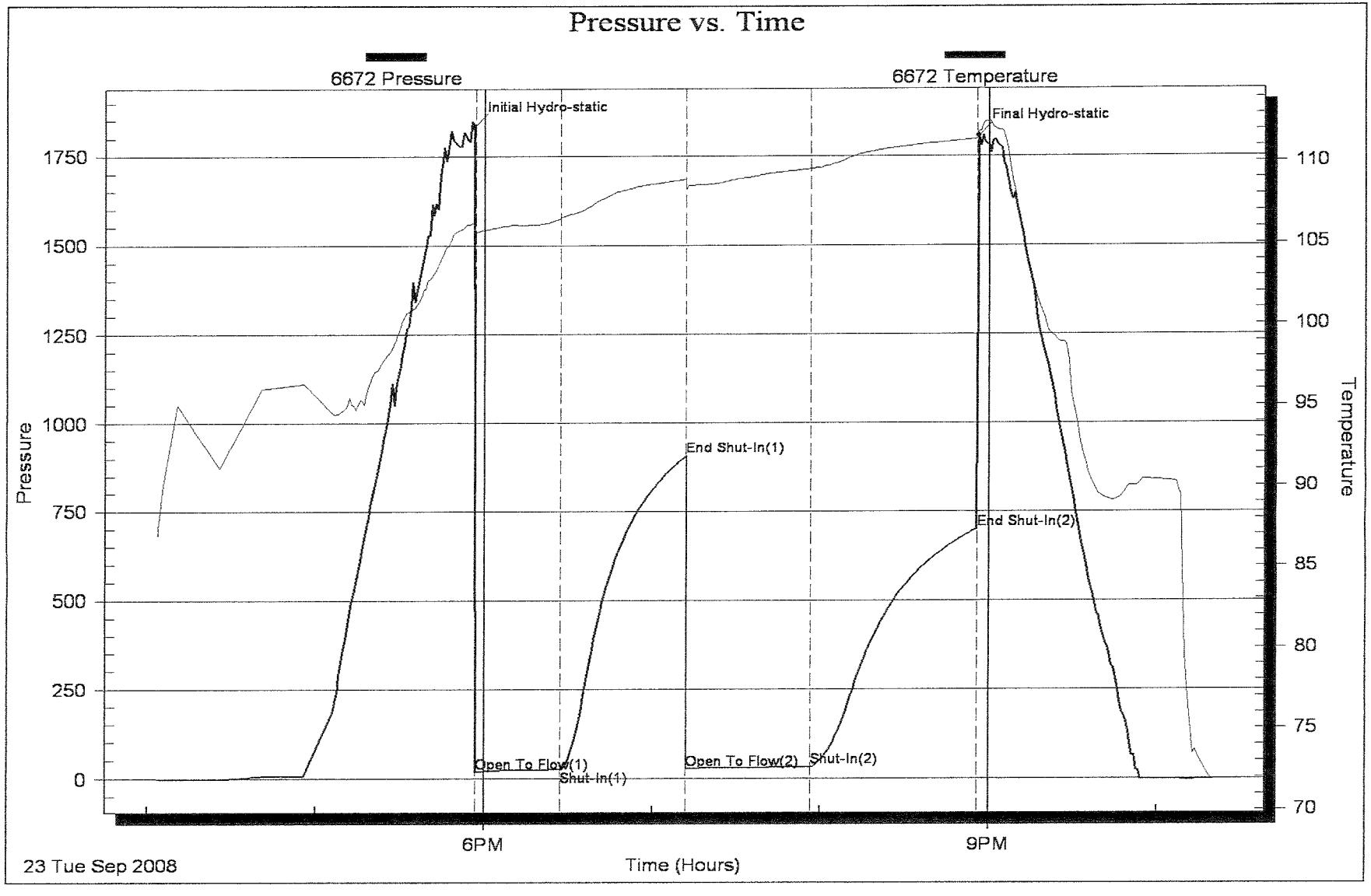
## Recovery Information

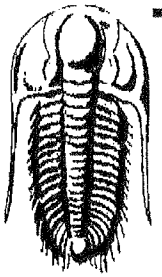
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 38.00 | OCM 20%O,80%M | 0.539 |
| 2.00 | CO | 0.028 |

Total Length: 40.00 ft Total Volume: 0.567 bbl

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


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
70
6PM
9PM
23 Tue Sep 2008
Time (Hours)



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **Tomlinson Operating**

7154 W. State St.
PMB 302
Boise, ID 83714

ATTN: Kim Shoemaker

**31 12 19 Ellis KS**

**Pfeifer Farms #1**

Start Date: 2008.09.24 @ 04:38:50

End Date: 2008.09.24 @ 10:51:35

Job Ticket #: 33713 DST #: 8

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

# DRILL STEM TEST REPORT

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33713 **DST#: 8**

Test Start: 2008.09.24 @ 04:38:50

## GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:21:35
Time Test Ended: 10:51:35

Test Type: Conventional Bottom Hole
Tester: Tyson Flax
Unit No: 44

**Interval: 3874.00 ft (KB) To 3901.00 ft (KB) (TVD)**
Total Depth: 3901.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

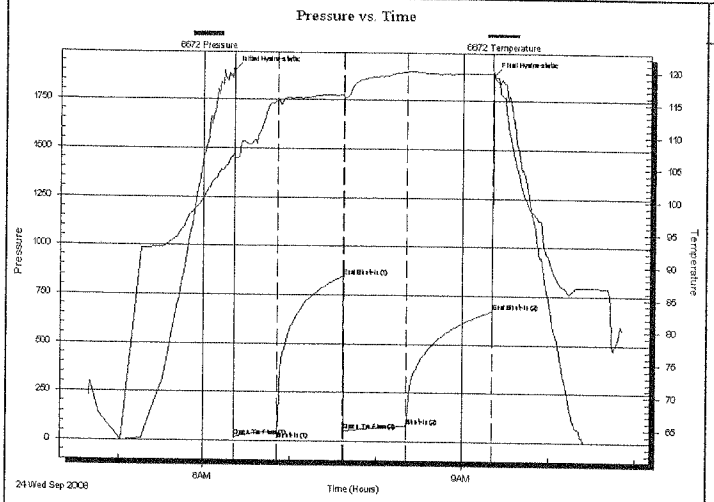
Reference Elevations: 2197.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 5.00 ft

**Serial #: 6672** **Inside**

Press@RunDepth: 79.01 psig @ 3878.00 ft (KB)
Start Date: 2008.09.24 End Date: 2008.09.24
Start Time: 04:38:51 End Time: 10:51:35

Capacity: 7000.00 psig
Last Calib.: 2008.09.24
Time On Btm: 2008.09.24 @ 06:21:20
Time Off Btm: 2008.09.24 @ 09:21:20

TEST COMMENT: IFP-Weak surface blow built to 6"
ISI-no blow back
FFP-Weak surface blow built to 2.5"
FSI-no blow back




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1899.58 | 107.28 | Initial Hydro-static |
| 1 | 17.89 | 106.24 | Open To Flow (1) |
| 31 | 50.26 | 115.33 | Shut-In(1) |
| 76 | 845.86 | 116.37 | End Shut-In(1) |
| 76 | 52.29 | 115.86 | Open To Flow (2) |
| 120 | 79.01 | 119.86 | Shut-In(2) |
| 180 | 671.52 | 119.79 | End Shut-In(2) |
| 180 | 1879.01 | 119.92 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 60.00 | MW 50%W,50%M | 0.85 |
| 60.00 | WM 10%W,90%M | 0.85 |
| 15.00 | Mud w/ scum of oil | 0.21 |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33713 **DST#: 8**

Test Start: 2008.09.24 @ 04:38:50

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3883.00 ft | Diameter: | 3.82 inches | Volume: | 55.04 bbl | Tool Weight: | 2200.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | Weight to Pull Loose: | 55000.00 lb |
| | | | | | Total Volume: | 55.04 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | | 30.00 ft | | | | | String Weight: Initial | 49000.00 lb |
| Depth to Top Packer: | | 3874.00 ft | | | | | Final | 50000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | |
| Interval betw een Packers: | | 27.00 ft | | | | | | |
| Tool Length: | | 48.00 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 | | | 3854.00 | | |
| Shut In Tool | 5.00 | | | 3859.00 | | |
| Hydraulic tool | 5.00 | | | 3864.00 | | |
| Packer | 5.00 | | | 3869.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3874.00 | | |
| Stubb | 1.00 | | | 3875.00 | | |
| Perforations | 3.00 | | | 3878.00 | | |
| Recorder | 0.00 | 8367 | Inside | 3878.00 | | |
| Recorder | 0.00 | 6672 | Inside | 3878.00 | | |
| Perforations | 20.00 | | | 3898.00 | | |
| Bullnose | 3.00 | | | 3901.00 | 27.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **48.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tomlinson Operating

7154 W. State St.
PMB 302
Boise, ID 83714
ATTN: Kim Shoemaker

**Pfeifer Farms #1**

**31 12 19 Ellis KS**

Job Ticket: 33713 **DST#: 8**

Test Start: 2008.09.24 @ 04:38:50

## 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: | 19500 ppm |
| Viscosity: | 40.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 9.39 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 9000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

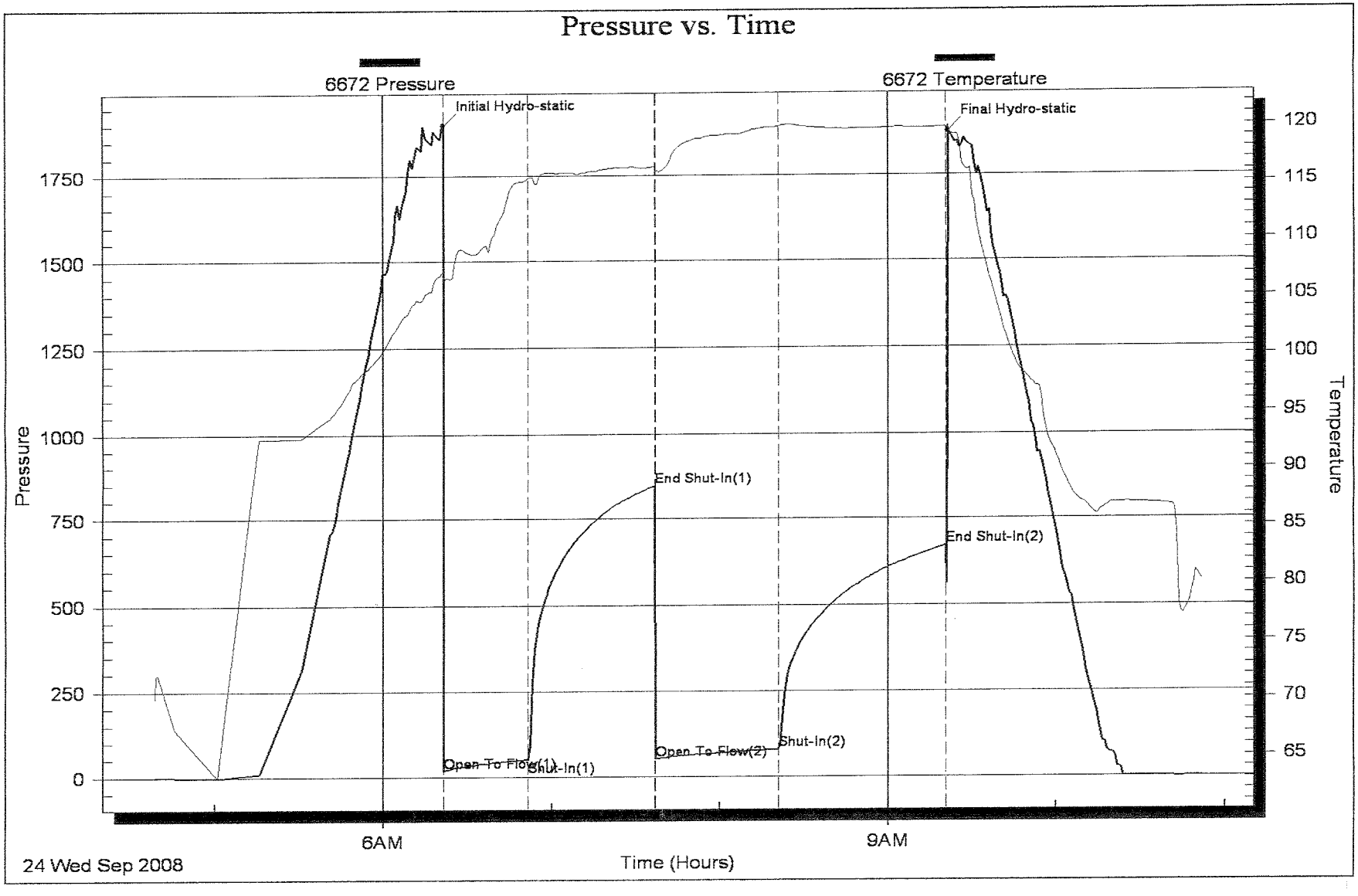
## Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 60.00 | MW 50%W,50%M | 0.851 |
| 60.00 | WM 10%W,90%M | 0.851 |
| 15.00 | Mud w/ scum of oil | 0.213 |

Total Length: 135.00 ft Total Volume: 1.915 bbl

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


Pressure vs. Time
6672 Pressure
6672 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
70
65
6AM
9AM
Time (Hours)
24 Wed Sep 2008