

DRILL STEM TEST REPORT

Prepared For: **Samuel Gary & Associates INC**

1515 Wynkoop
STE 700
Denver Co 80202

ATTN: Tom Fertal

18-17s-15w Barton

Stos ET AL #1-18

Start Date: 2010.06.29 @ 00:08:08

End Date: 2010.06.29 @ 07:00:08

Job Ticket #: 37238 DST #: 2

Trilobite Testing, Inc

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

Samuel Gary & Associates INC

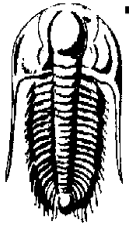
Stos ET AL #1-18

18-17s-15w Barton

DST # 2

Lansing Middle "G"

2010.06.29



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TESTING, INC**

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Job Ticket: 37238 **DST#: 2**
Test Start: 2010.06.29 @ 00:08:08

GENERAL INFORMATION:

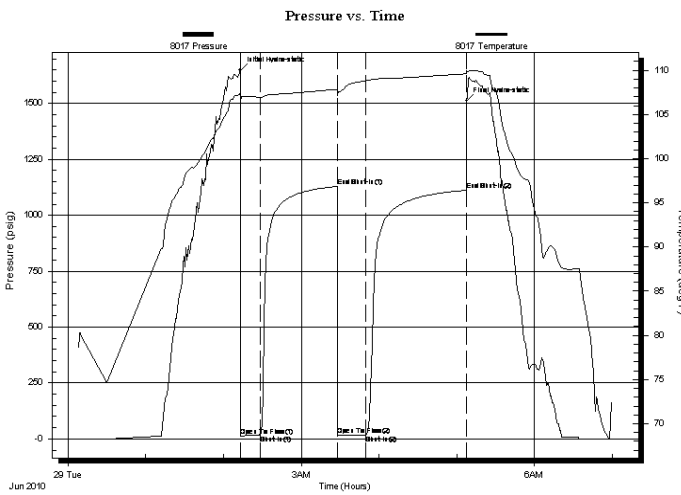
Formation: **Lansing Middle "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:13:08
 Time Test Ended: 07:00:08
 Interval: **3398.00 ft (KB) To 3410.00 ft (KB) (TVD)**
 Total Depth: 3410.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Jeff Brown
 Unit No: 31
 Reference Elevations: 2013.00 ft (KB)
 2003.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8017

Inside

Press@RunDepth: 17.56 psig @ 3399.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.06.29 End Date: 2010.06.29 Last Calib.: 2010.06.30
 Start Time: 00:08:13 End Time: 07:00:07 Time On Btm: 2010.06.29 @ 02:12:58
 Time Off Btm: 2010.06.29 @ 05:07:38

TEST COMMENT: IFP-Weak blow built to 3/4 in
 IS-Dead no blow back
 FFP-Dead no blow
 FSI-Dead no blow back



PRESSURE SUMMARY

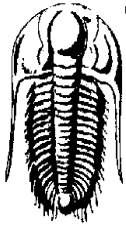
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1647.42 | 107.47 | Initial Hydro-static |
| 1 | 12.63 | 106.54 | Open To Flow (1) |
| 15 | 14.96 | 106.97 | Shut-In(1) |
| 75 | 1128.65 | 107.87 | End Shut-In(1) |
| 76 | 15.74 | 107.20 | Open To Flow (2) |
| 97 | 17.56 | 108.84 | Shut-In(2) |
| 175 | 1112.04 | 109.61 | End Shut-In(2) |
| 175 | 1511.43 | 109.93 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 10.00 | MW with oil specks 50%M50%W | 0.14 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



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Job Ticket: 37238

DST#: 2

Test Start: 2010.06.29 @ 00:08:08

GENERAL INFORMATION:

Formation: **Lansing Middle "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:13:08

Time Test Ended: 07:00:08

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 31

Interval: **3398.00 ft (KB) To 3410.00 ft (KB) (TVD)**

Reference Elevations: 2013.00 ft (KB)

Total Depth: 3410.00 ft (KB) (TVD)

2003.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8352 **Outside**

Press@RunDepth: psig @ 3399.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.06.29

End Date:

2010.06.29

Last Calib.:

2010.06.30

Start Time: 00:08:13

End Time:

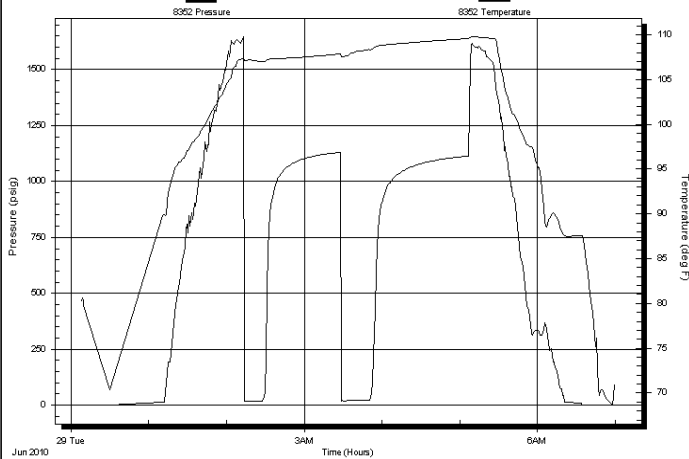
07:00:07

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-Weak blow built to 3/4 in
IS-Dead no blow back
FFP-Dead no blow
FSI-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

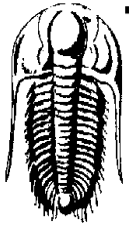
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
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Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 10.00 | MW with oil specks 50%M50%W | 0.14 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

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Denver Co 80202
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18-17s-15w Barton

Job Ticket: 37238

DST#: 2

Test Start: 2010.06.29 @ 00:08:08

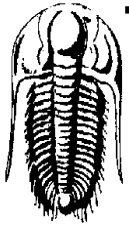
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3380.00 ft | Diameter: 3.80 inches | Volume: 47.41 bbl | Tool Weight: 2200.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 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: 65000.00 lb |
| | | | <u>Total Volume: 47.41 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 11.00 ft | | | String Weight: Initial 56000.00 lb |
| Depth to Top Packer: | 3398.00 ft | | | Final 56000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 12.00 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 |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 3370.00 | |
| Shut In Tool | 5.00 | | | 3375.00 | |
| Hydraulic tool | 5.00 | | | 3380.00 | |
| Jars | 5.00 | | | 3385.00 | |
| Safety Joint | 3.00 | | | 3388.00 | |
| Packer | 5.00 | | | 3393.00 | 29.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3398.00 | |
| Stubb | 1.00 | | | 3399.00 | |
| Recorder | 0.00 | 8017 | Inside | 3399.00 | |
| Recorder | 0.00 | 8352 | Outside | 3399.00 | |
| Perforations | 8.00 | | | 3407.00 | |
| Bullnose | 3.00 | | | 3410.00 | 12.00 Bottom Packers & Anchor |

Total Tool Length: 41.00



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FLUID SUMMARY

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18-17s-15w Barton

Job Ticket: 37238

DST#: 2

Test Start: 2010.06.29 @ 00:08:08

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: | 3600 ppm |
| Viscosity: 54.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 9.18 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 4900.00 ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------|---------------|
| 10.00 | MW with oil specks 50%M50%W | 0.140 |

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

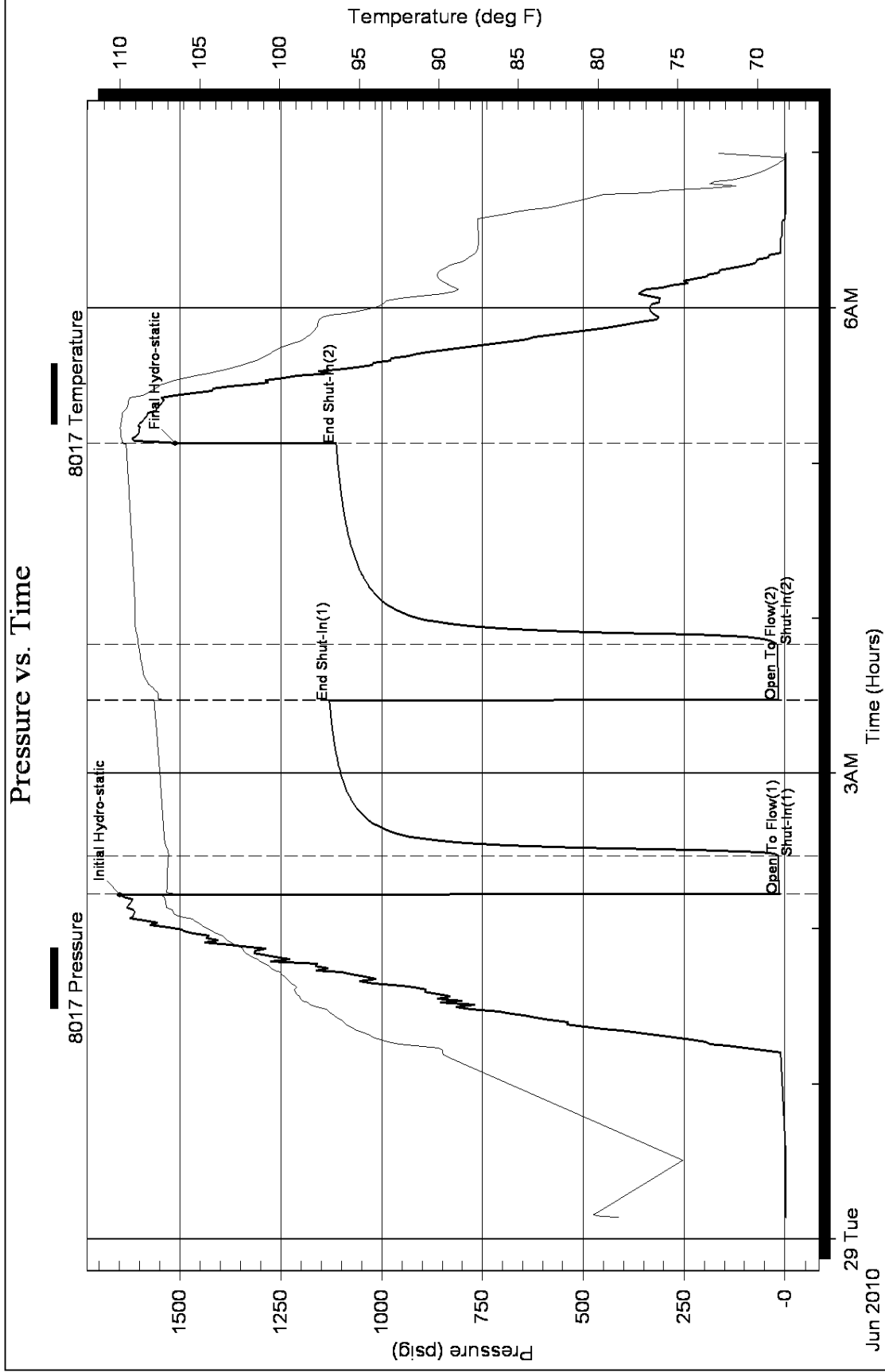
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



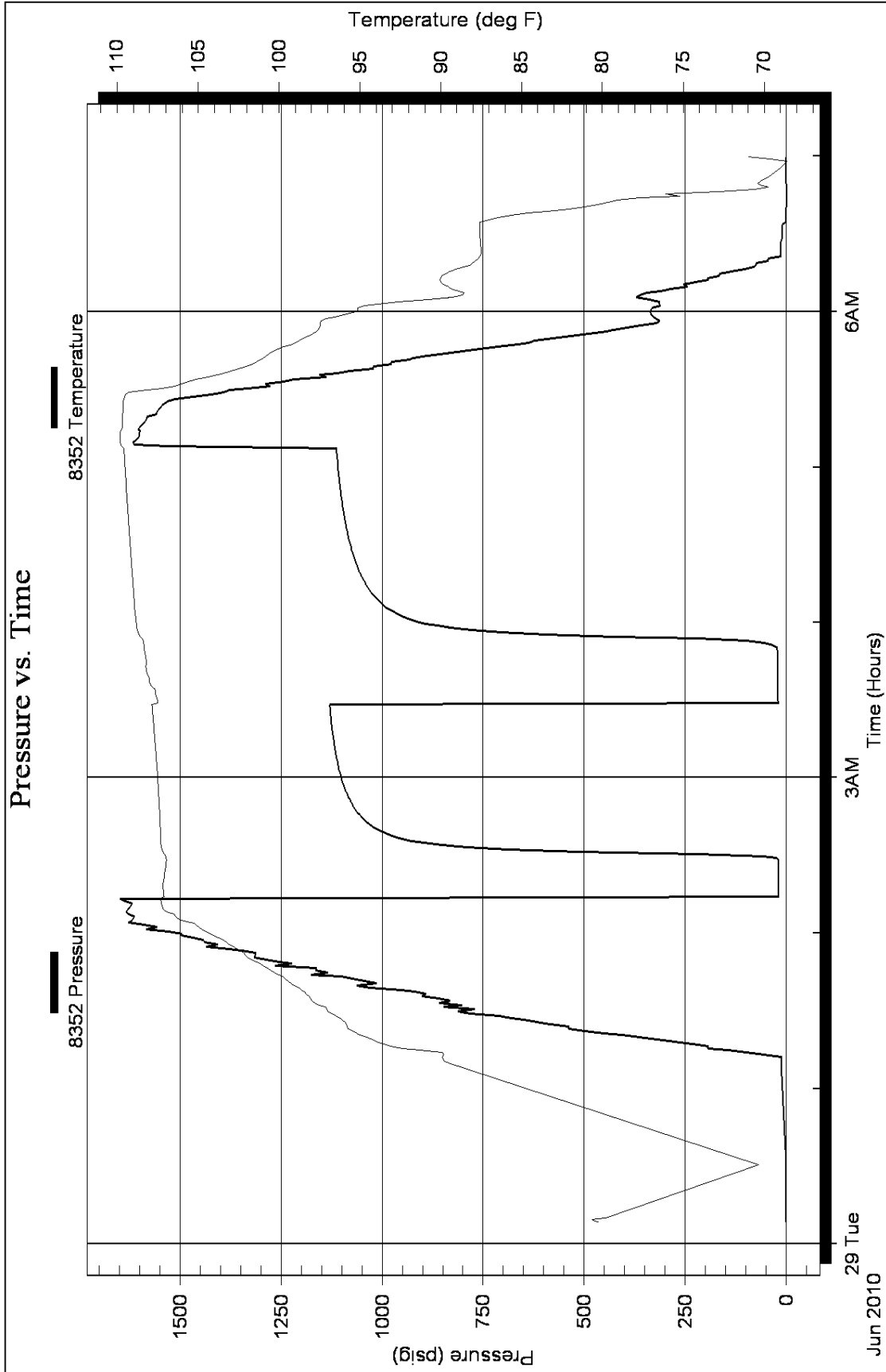
Serial #: 8352

Outside

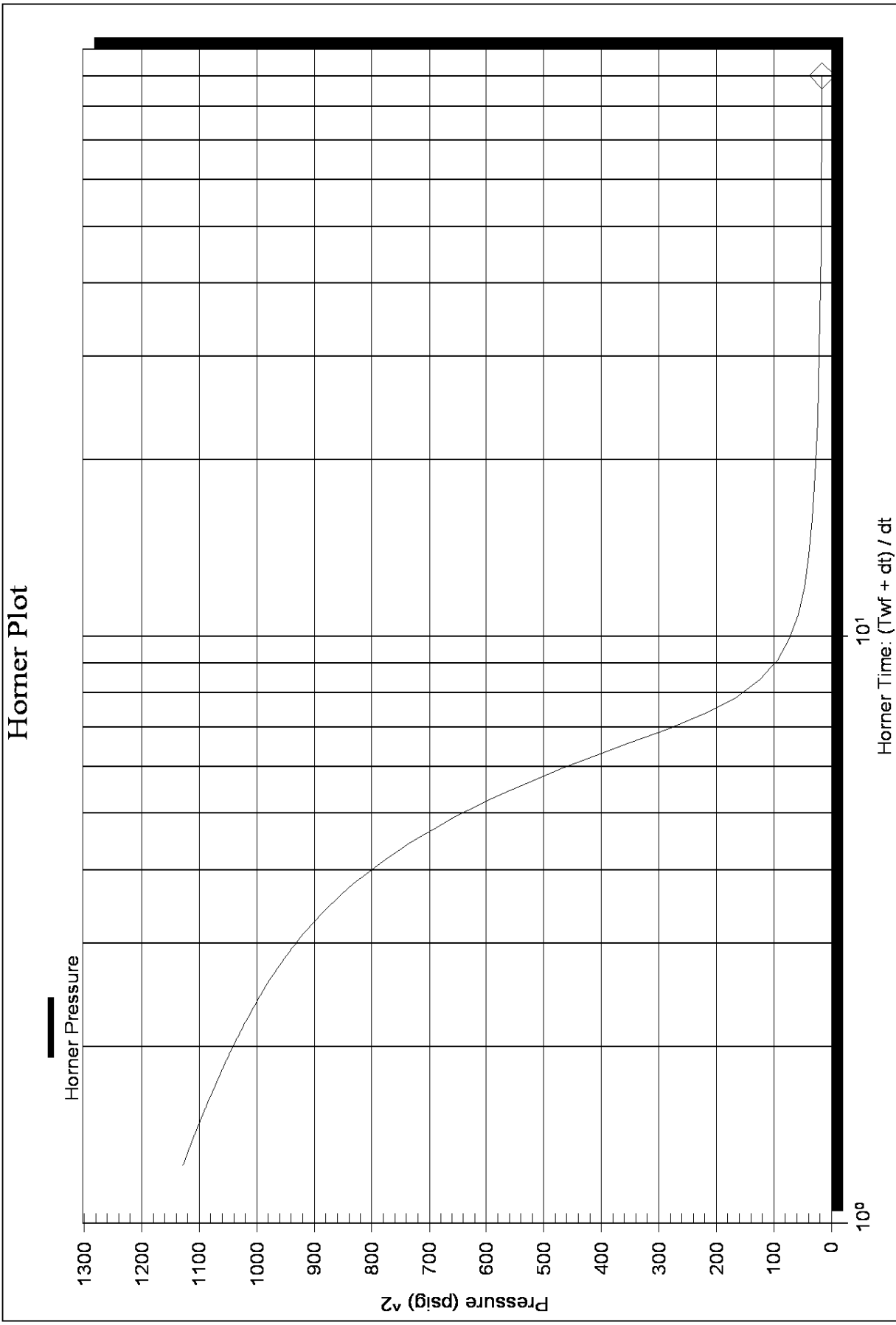
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DST Test Number: 2



Homer Plot



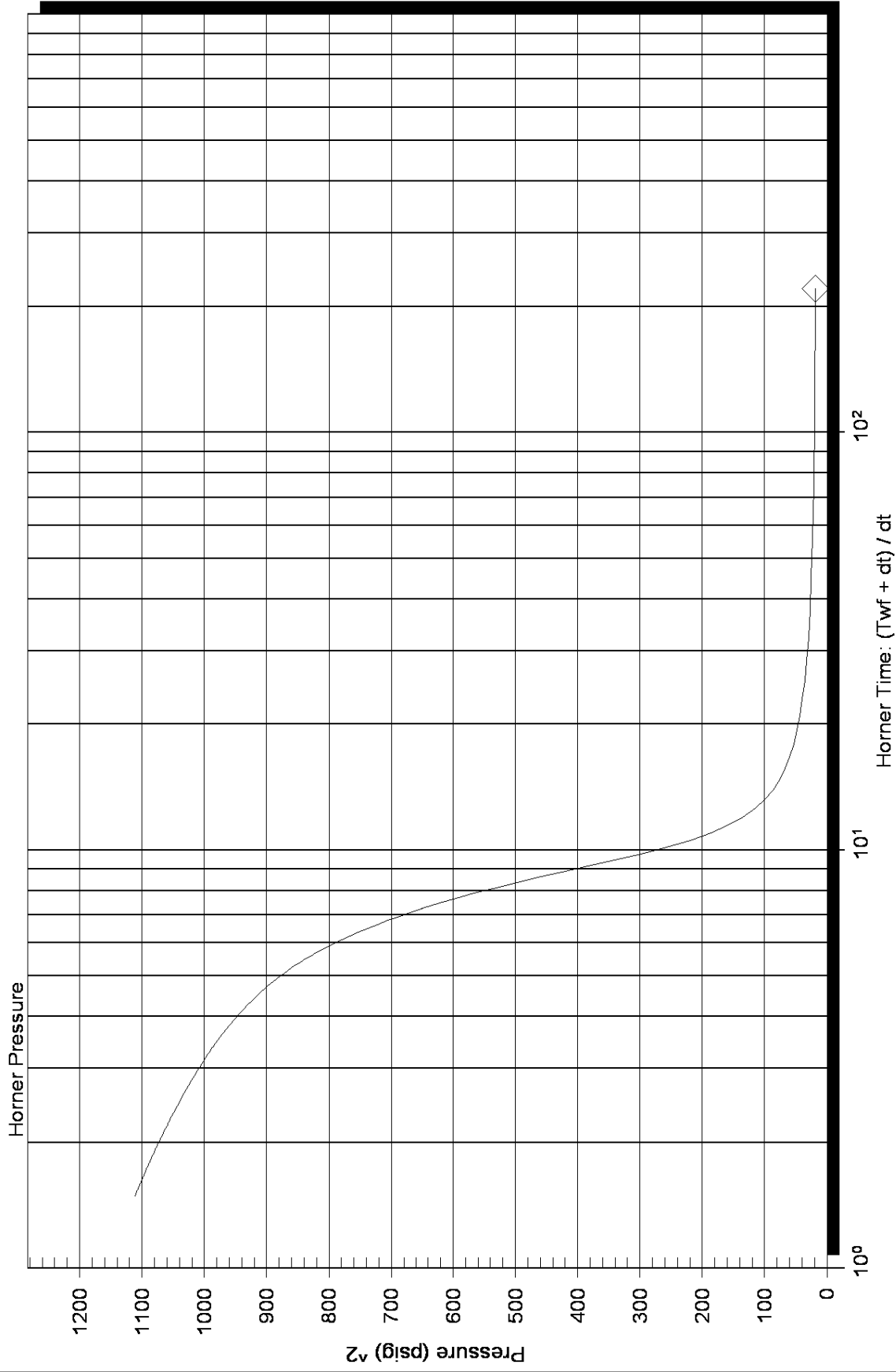
Serial Number: 8017 (Inside)

P* :

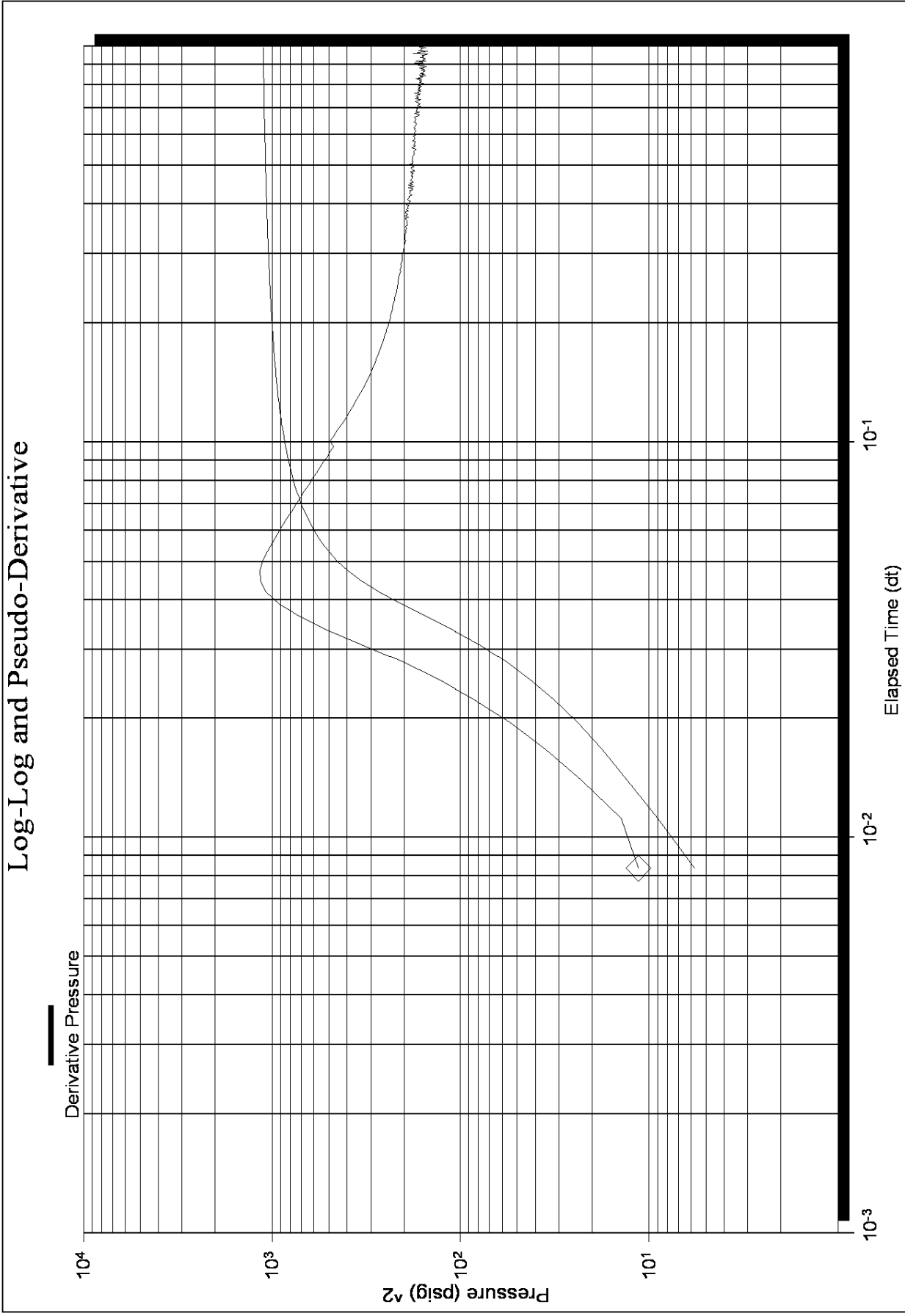
Slope (m) : kpa/log cycle

Flow Cycle: 1

Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Log-Derivative

