

DRILL STEM TEST REPORT

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

1515 Wynkoop
STE 700
Denver Co 80202

ATTN: Tom Fertal

18-17s-15w

Stos ET AL #1-18

Start Date: 2010.06.29 @ 05:03:43

End Date: 2010.06.29 @ 14:07:53

Job Ticket #: 37237 DST #: 1

Trilobite Testing, Inc

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

Samuel Gary & Associates INC

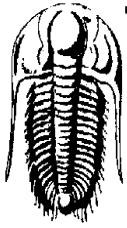
Stos ET AL #1-18

18-17s-15w

DST # 1

Lansing C

2010.06.29



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary & Associates INC

Stos ET AL #1-18

1515 Wynkoop
STE 700
Denver Co 80202
ATTN: Tom Fertal

18-17s-15w

Job Ticket: 37237

DST#: 1

Test Start: 2010.06.29 @ 05:03:43

GENERAL INFORMATION:

Formation: **Lansing C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:01:53

Time Test Ended: 14:07:53

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 31

Interval: 3312.00 ft (KB) To 3334.00 ft (KB) (TVD)

Reference Elevations: 2013.00 ft (KB)

Total Depth: 3334.00 ft (KB) (TVD)

2003.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8017 Inside

Press@RunDepth: 39.12 psig @ 3316.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.06.29

End Date:

2010.06.29

Last Calib.: 2010.06.29

Start Time: 05:03:48

End Time:

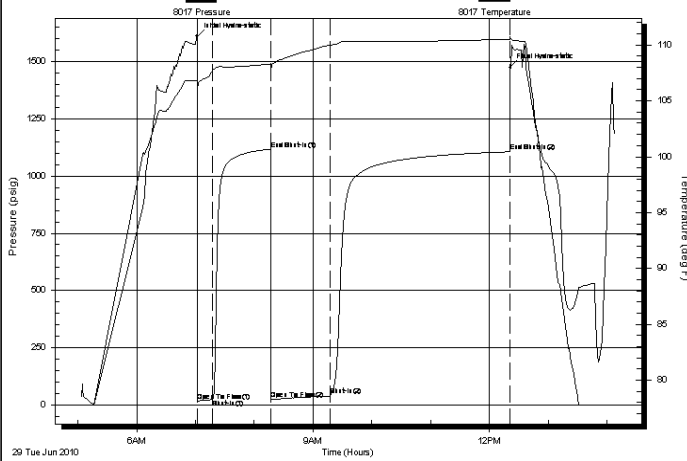
14:07:52

Time On Btm: 2010.06.29 @ 07:01:43

Time Off Btm: 2010.06.29 @ 12:21:13

TEST COMMENT: IFP-Weak blow built to 1 3/4 in
IS-Dead no blow back
FFP-Weak blow built to 1 1/4 in
FSI-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

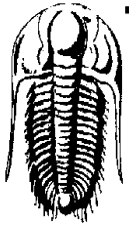
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1610.07	106.88	Initial Hydro-static
1	16.47	106.05	Open To Flow (1)
16	23.61	107.81	Shut-In(1)
75	1117.50	108.31	End Shut-In(1)
76	26.42	107.70	Open To Flow (2)
136	39.12	109.99	Shut-In(2)
320	1106.28	110.51	End Shut-In(2)
320	1473.87	110.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	MW with oil speakles 15%M85%W	0.35

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary & Associates INC
1515 Wynkoop
STE 700
Denver Co 80202
ATTN: Tom Fertal

Stos ET AL #1-18
18-17s-15w
Job Ticket: 37237 **DST#: 1**
Test Start: 2010.06.29 @ 05:03:43

GENERAL INFORMATION:

Formation: **Lansing C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:01:53
Time Test Ended: 14:07:53

Test Type: Conventional Bottom Hole
Tester: Jeff Brown
Unit No: 31

Interval: **3312.00 ft (KB) To 3334.00 ft (KB) (TVD)**
Total Depth: 3334.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2013.00 ft (KB)
2003.00 ft (CF)
KB to GR/CF: 10.00 ft

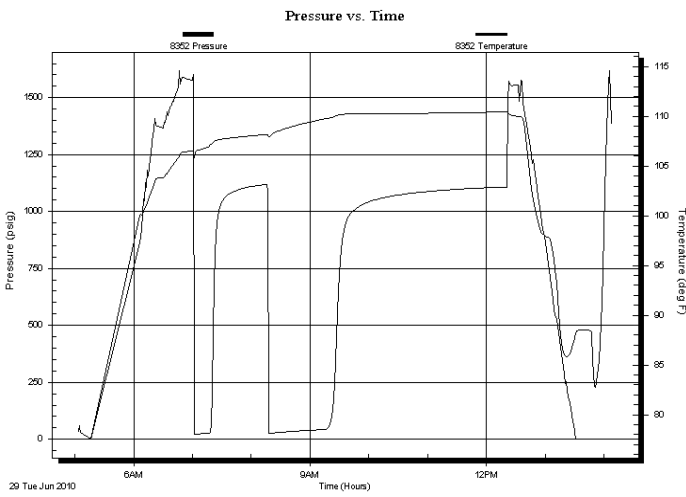
Serial #: 8352

Outside

Press@RunDepth: psig @ 3316.00 ft (KB)
Start Date: 2010.06.29 End Date: 2010.06.29
Start Time: 05:03:48 End Time: 14:07:52

Capacity: 8000.00 psig
Last Calib.: 2010.06.29
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak blow built to 1 3/4 in
IS-Dead no blow back
FFP-Weak blow built to 1 1/4 in
FSI-Dead no blow back



PRESSURE SUMMARY

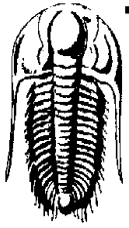
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
25.00	MW with oil speakles 15%M85%W	0.35

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates INC

Stos ET AL #1-18

1515 Wynkoop
STE 700
Denver Co 80202
ATTN: Tom Fertal

18-17s-15w

Job Ticket: 37237

DST#: 1

Test Start: 2010.06.29 @ 05:03:43

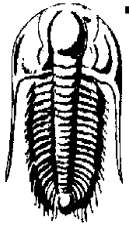
Tool Information

Drill Pipe:	Length: 3288.00 ft	Diameter: 3.80 inches	Volume: 46.12 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: 70000.00 lb
			<u>Total Volume: 46.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3312.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3284.00	
Shut In Tool	5.00			3289.00	
Hydraulic tool	5.00			3294.00	
Jars	5.00			3299.00	
Safety Joint	3.00			3302.00	
Packer	5.00			3307.00	29.00 Bottom Of Top Packer
Packer	5.00			3312.00	
Stubb	1.00			3313.00	
Perforations	3.00			3316.00	
Recorder	0.00	8017	Inside	3316.00	
Recorder	0.00	8352	Outside	3316.00	
Perforations	15.00			3331.00	
Bullnose	3.00			3334.00	22.00 Bottom Packers & Anchor

Total Tool Length: 51.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary & Associates INC

Stos ET AL #1-18

1515 Wynkoop
STE 700
Denver Co 80202
ATTN: Tom Fertal

18-17s-15w

Job Ticket: 37237

DST#: 1

Test Start: 2010.06.29 @ 05:03:43

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:	1900 ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.38 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3100.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	MW with oil speakles 15%M85%W	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

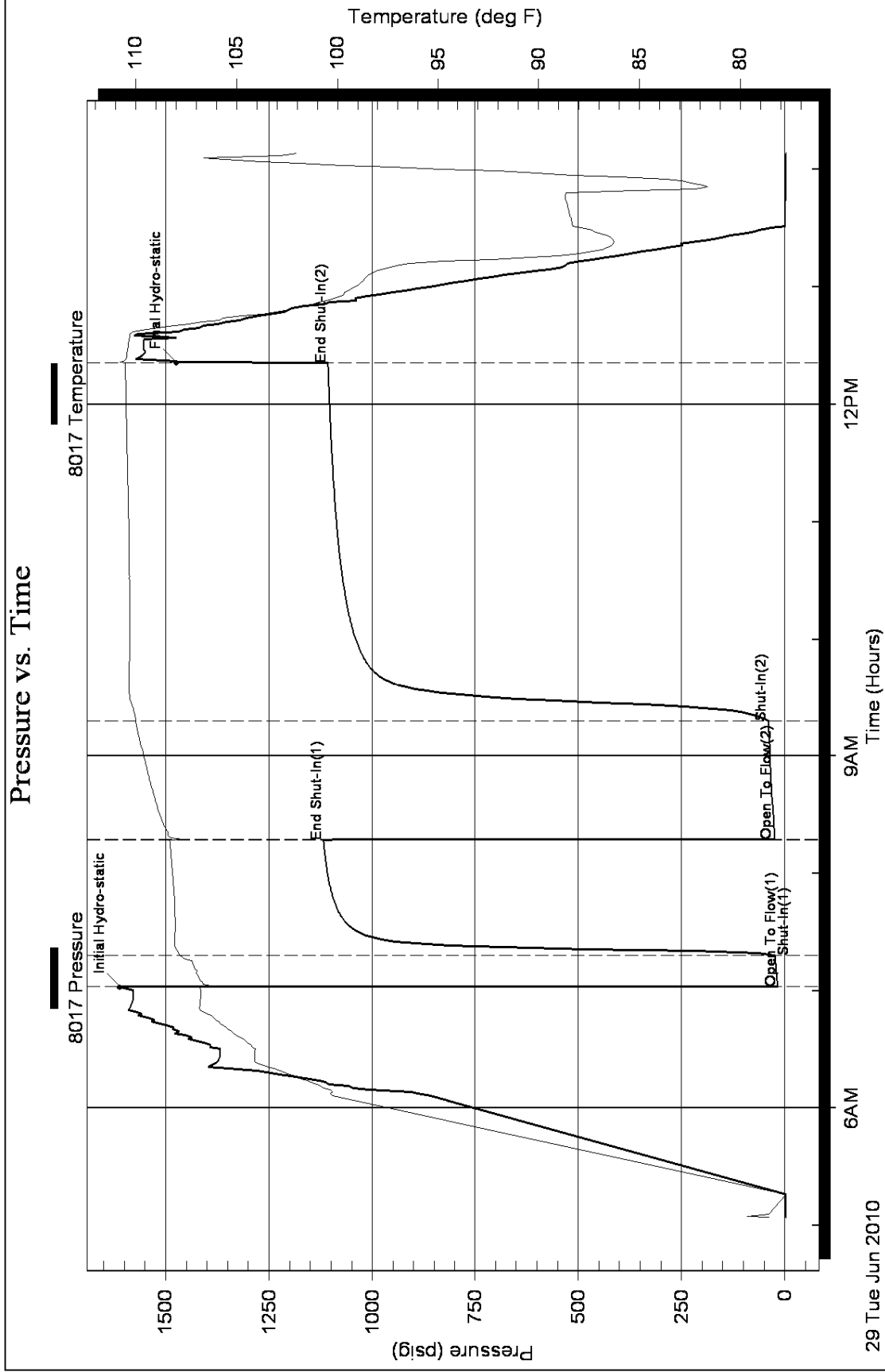
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



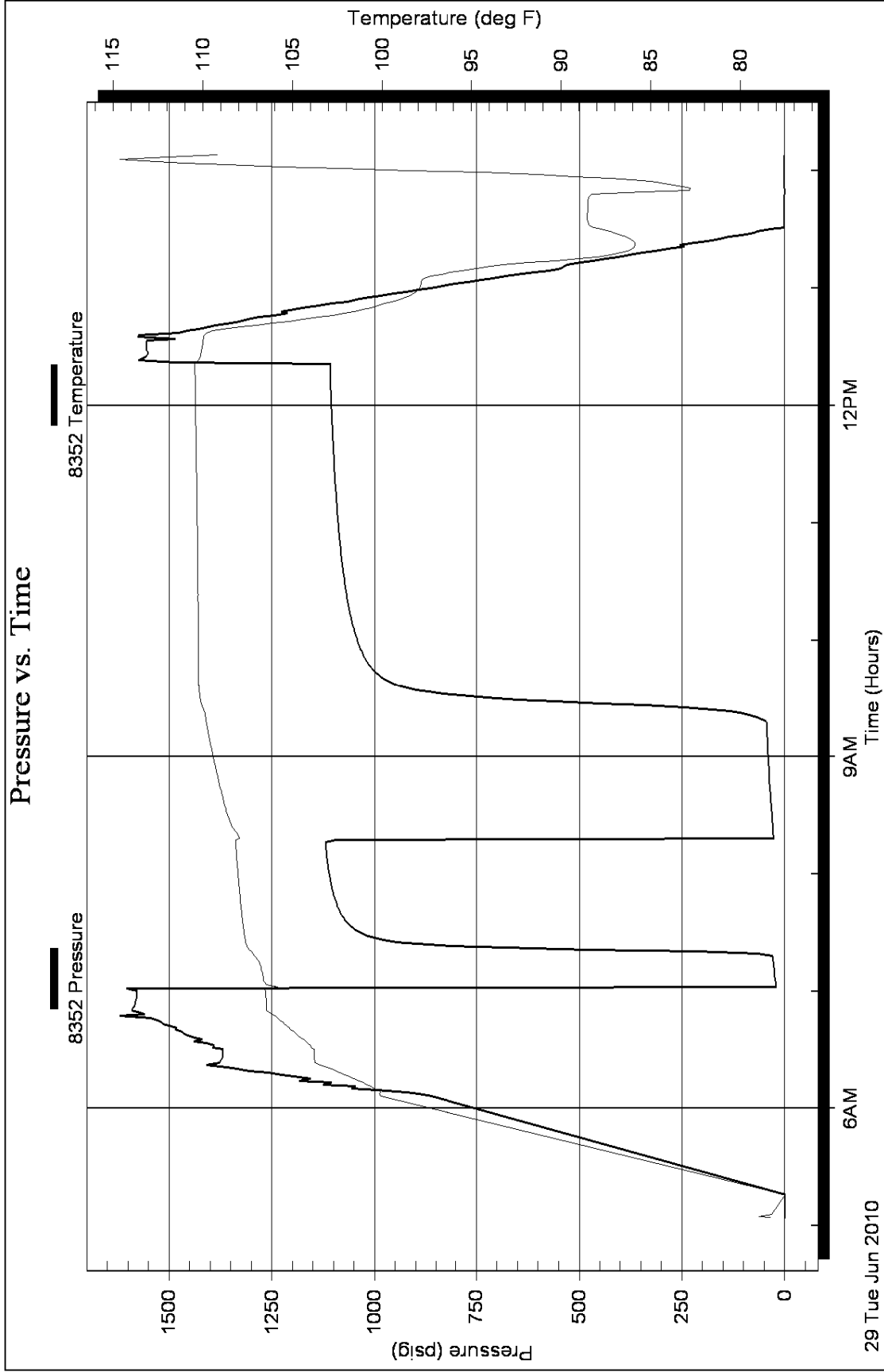
Serial #: 8352

Outside

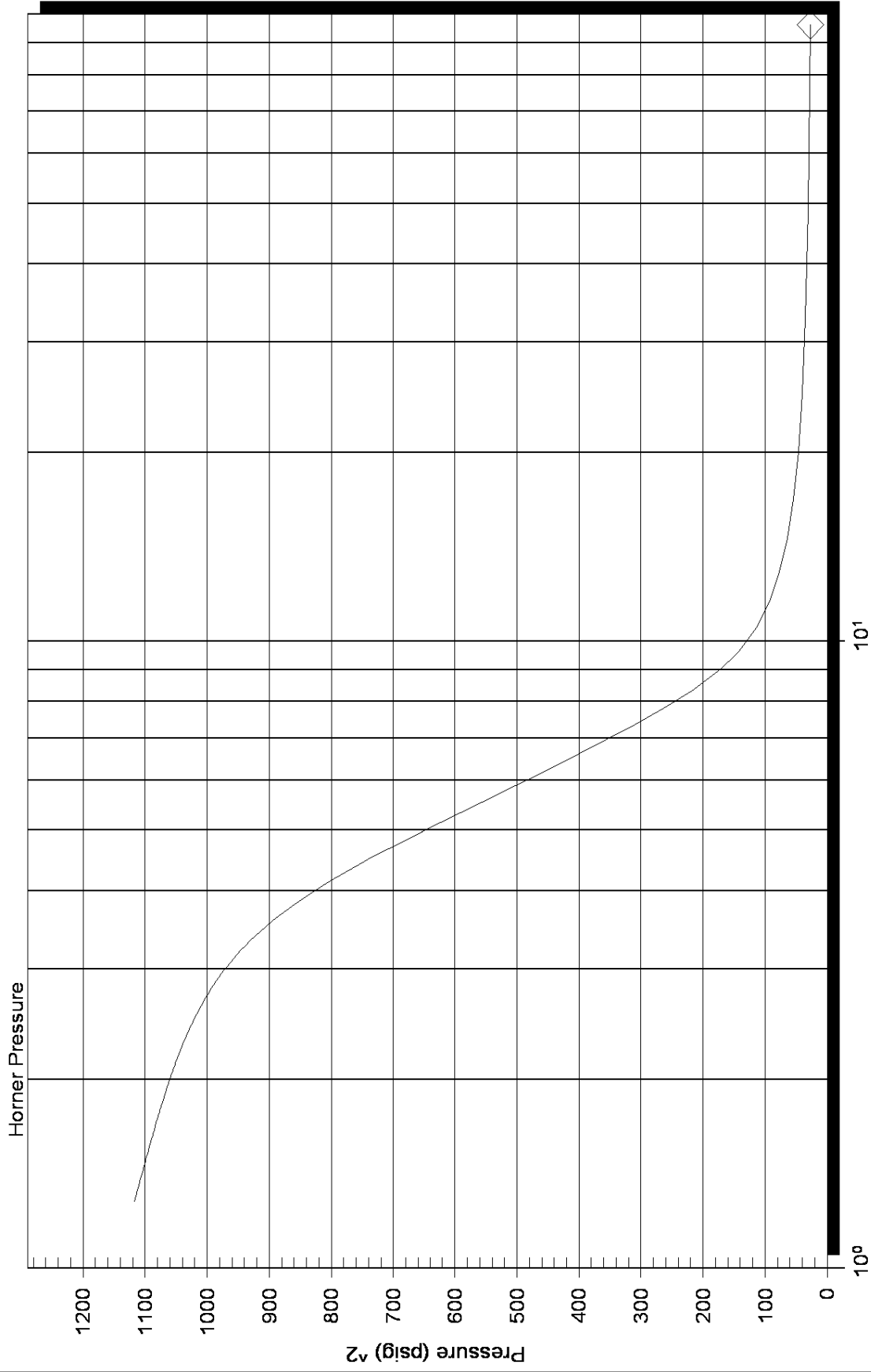
Samuel Gary & Associates INC

18-17s-15w

DST Test Number: 1



Homer Plot



Serial Number: 8017 (Inside)

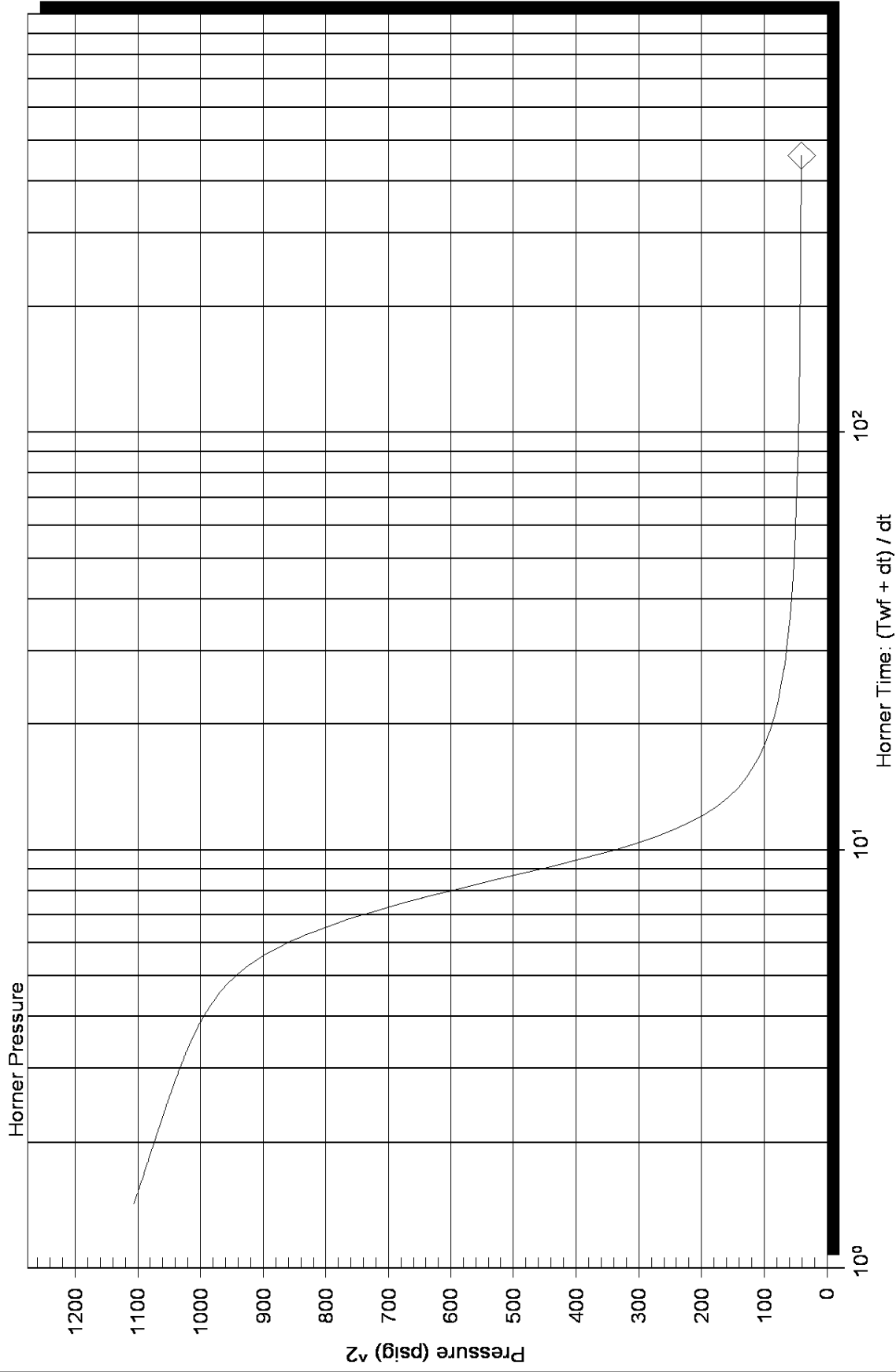
P* :

Slope (m) : kpa/log cycle

Horner Time: (Twf + dt) / dt

Flow Cycle: 1

Homer Plot

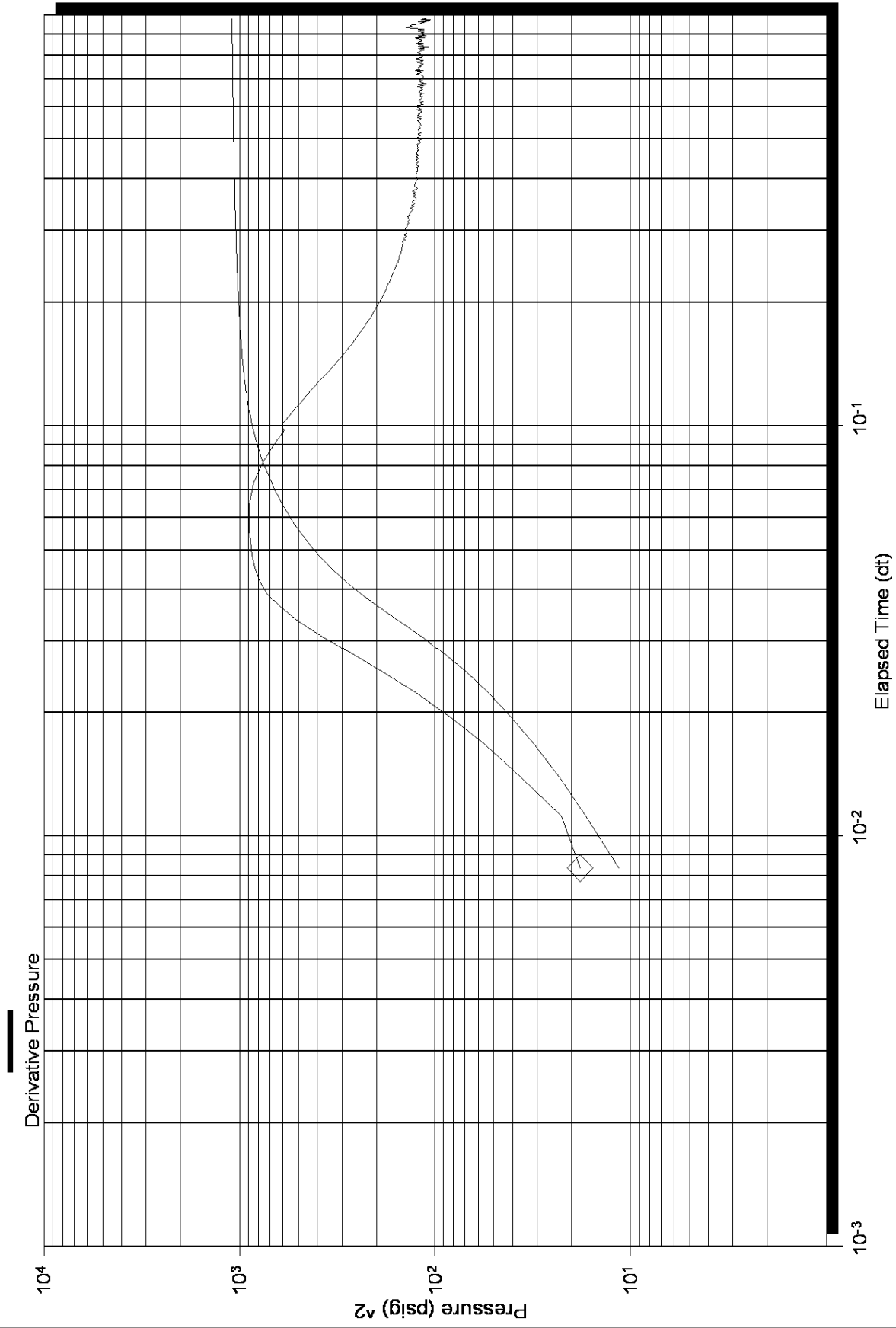


Serial Number: 8017 (Inside)

P* : Slope (m) : kpa/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Log-Log



Log-Log and Pseudo-Derivative

