

DRILL STEM TEST REPORT

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

1515 Wynkoop
STE 700
Denver Co 80202

ATTN: Tom Fertal

18-17s-15w Barton

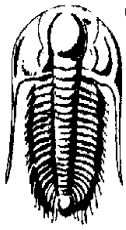
Stos ET AL #1-18

Start Date: 2010.06.30 @ 22:53:54

End Date: 2010.07.01 @ 06:02:14

Job Ticket #: 37239 DST #: 3

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary & Associates INC

Stos ET AL #1-18

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STE 700
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Job Ticket: 37239 **DST#: 3**
Test Start: 2010.06.30 @ 22:53:54

GENERAL INFORMATION:

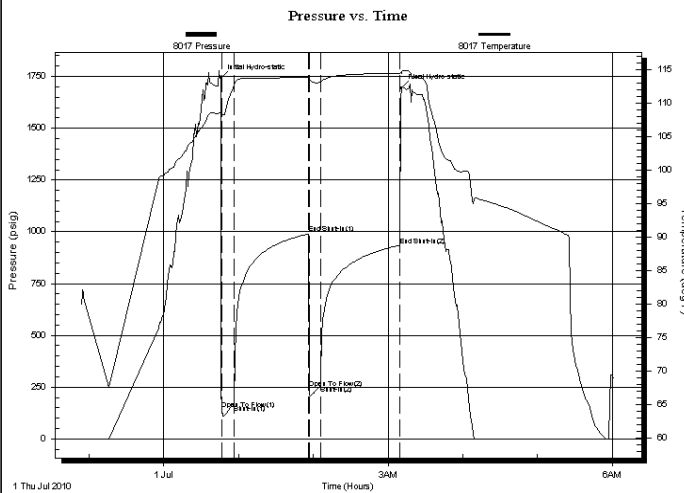
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:46:14
 Time Test Ended: 06:02:14
 Interval: **3528.00 ft (KB) To 3578.00 ft (KB) (TVD)**
 Total Depth: 3578.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Jeff 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: 258.63 psig @ 3535.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.06.30 End Date: 2010.07.01 Last Calib.: 2010.07.01
 Start Time: 22:53:59 End Time: 06:02:14 Time On Btm: 2010.07.01 @ 00:45:54
 Time Off Btm: 2010.07.01 @ 03:10:33

TEST COMMENT: IFP-Strong blow BOB in 1 1/2 min
 ISI Strong blow back BOB in 24 min
 FFP-Strong blow BOB in 1 min
 FSI-Strong blow back BOB in 34 min



PRESSURE SUMMARY

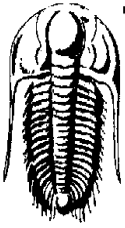
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1740.22	108.68	Initial Hydro-static
1	141.98	108.12	Open To Flow (1)
11	167.80	112.73	Shut-In(1)
71	990.44	113.87	End Shut-In(1)
71	242.94	113.53	Open To Flow (2)
80	258.63	113.19	Shut-In(2)
144	932.94	114.43	End Shut-In(2)
145	1692.85	114.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
252.00	Free Oil	3.53
189.00	MO10%M90%O	2.65
189.00	HOCGM50%O10%G40%M	2.65
0.00	504 GIP	0.00

Gas Rates

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



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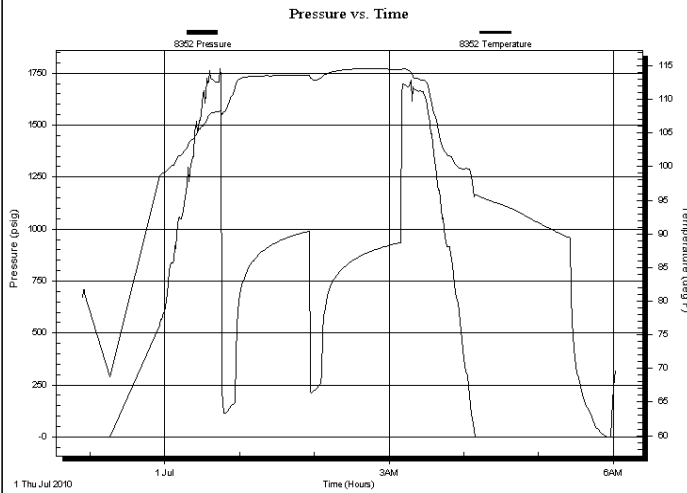
Stos ET AL #1-18
18-17s-15w Barton
 Job Ticket: 37239 **DST#: 3**
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 Unit No: 31
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 Total Depth: 3578.00 ft (KB) (TVD)
 Reference Elevations: 2013.00 ft (KB)
 Hole Diameter: 7.88 inches Hole Condition: Good
 KB to GR/CF: 10.00 ft

Serial #: 8352 Outside
 Press @ Run Depth: psig @ 3535.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.06.30 End Date: 2010.07.01 Last Calib.: 2010.07.01
 Start Time: 22:53:59 End Time: 06:02:14 Time On Btm:
 Time Off Btm:

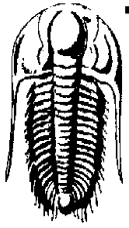
TEST COMMENT: IFP-Strong blow BOB in 1 1/2 min
 ISI Strong blow back BOB in 24 min
 FFP-Strong blow BOB in 1 min
 FSI-Strong blow back BOB in 34 min



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

Recovery		
Length (ft)	Description	Volume (bbl)
252.00	Free Oil	3.53
189.00	MO10%M90%O	2.65
189.00	HOCGM50%O10%G40%M	2.65
0.00	504 GIP	0.00

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



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TOOL DIAGRAM

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Stos ET AL #1-18

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Job Ticket: 37239

DST#: 3

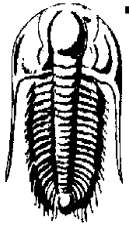
Test Start: 2010.06.30 @ 22:53:54

Tool Information

Drill Pipe:	Length: 3507.00 ft	Diameter: 3.80 inches	Volume: 49.19 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: 49.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3528.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	79.00 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			3500.00	
Shut In Tool	5.00			3505.00	
Hydraulic tool	5.00			3510.00	
Jars	5.00			3515.00	
Safety Joint	3.00			3518.00	
Packer	5.00			3523.00	29.00 Bottom Of Top Packer
Packer	5.00			3528.00	
Stubb	1.00			3529.00	
Perforations	5.00			3534.00	
Change Over Sub	1.00			3535.00	
Recorder	0.00	8017	Inside	3535.00	
Recorder	0.00	8352	Outside	3535.00	
Blank Spacing	31.00			3566.00	
Change Over Sub	1.00			3567.00	
Perforations	8.00			3575.00	
Bullnose	3.00			3578.00	50.00 Bottom Packers & Anchor
Total Tool Length:	79.00				



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FLUID SUMMARY

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Job Ticket: 37239

DST#: 3

Test Start: 2010.06.30 @ 22:53:54

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: 7.98 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4300.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	Free Oil	3.535
189.00	MO10%M90%O	2.651
189.00	HOCGM50%O10%G40%M	2.651
0.00	504 GIP	0.000

Total Length: 630.00 ft Total Volume: 8.837 bbl

Num Fluid Samples: 0

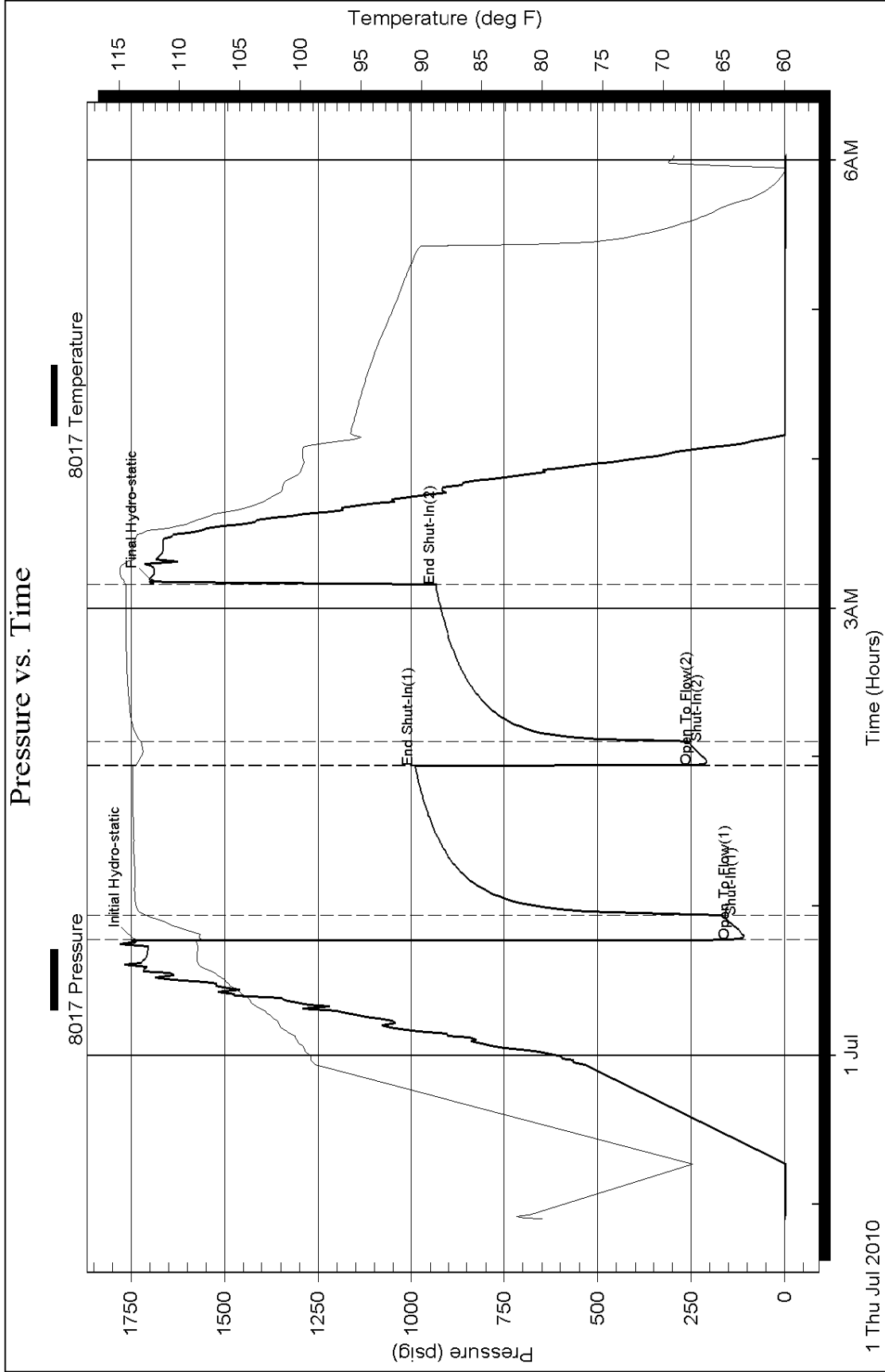
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



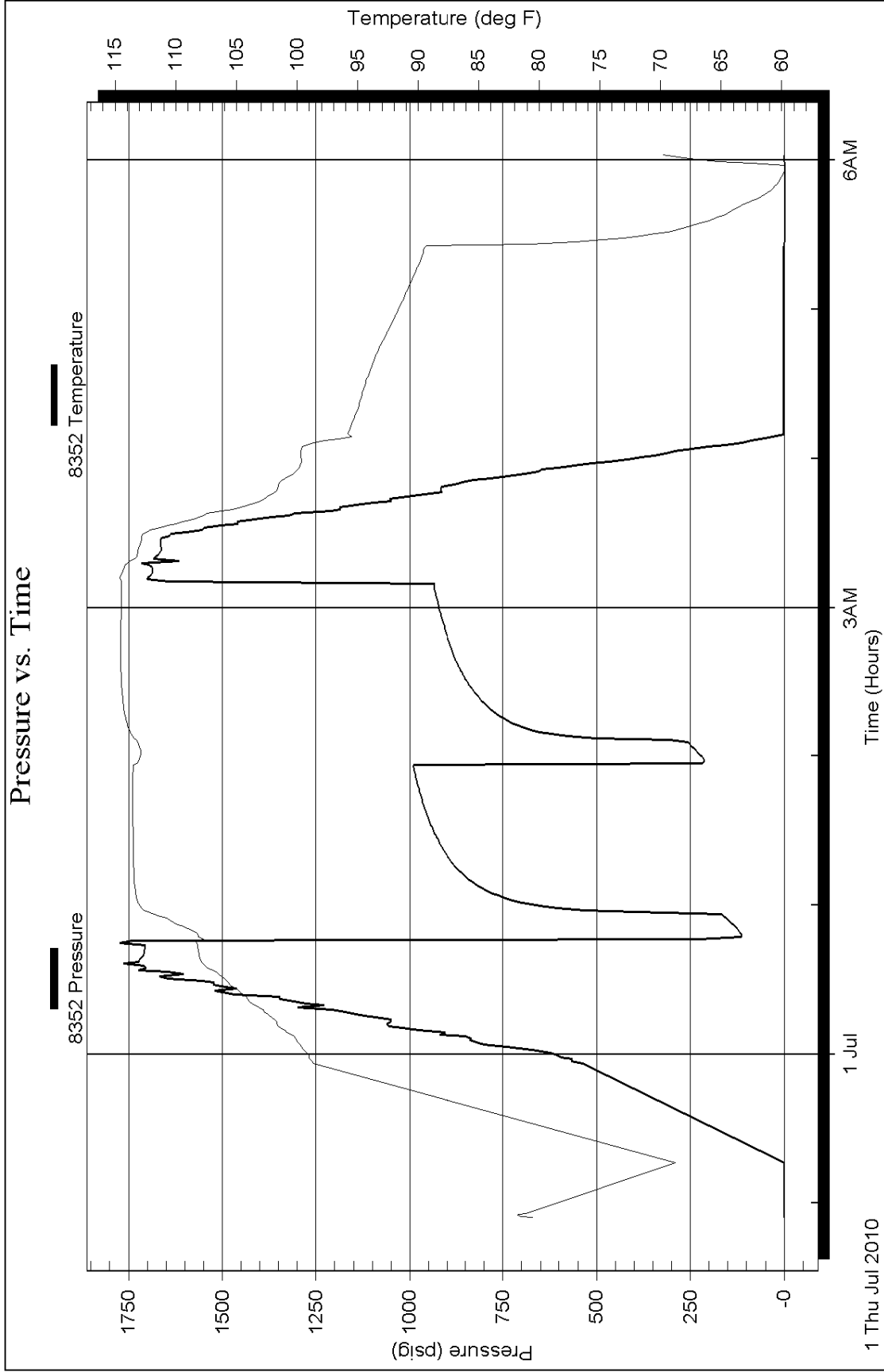
Serial #: 8352

Outside

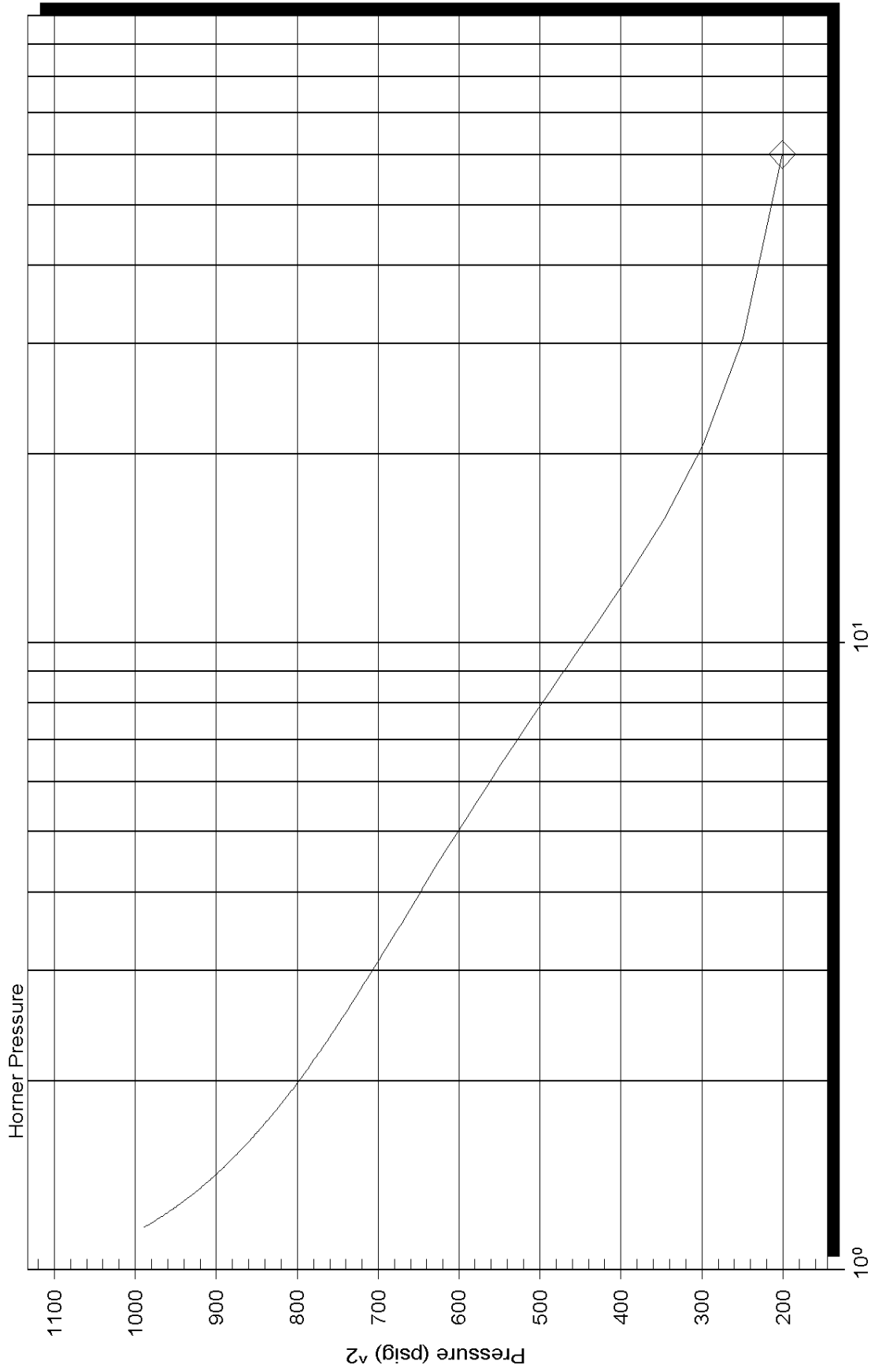
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DST Test Number: 3



Horner Plot



Serial Number: 8017 (Inside)

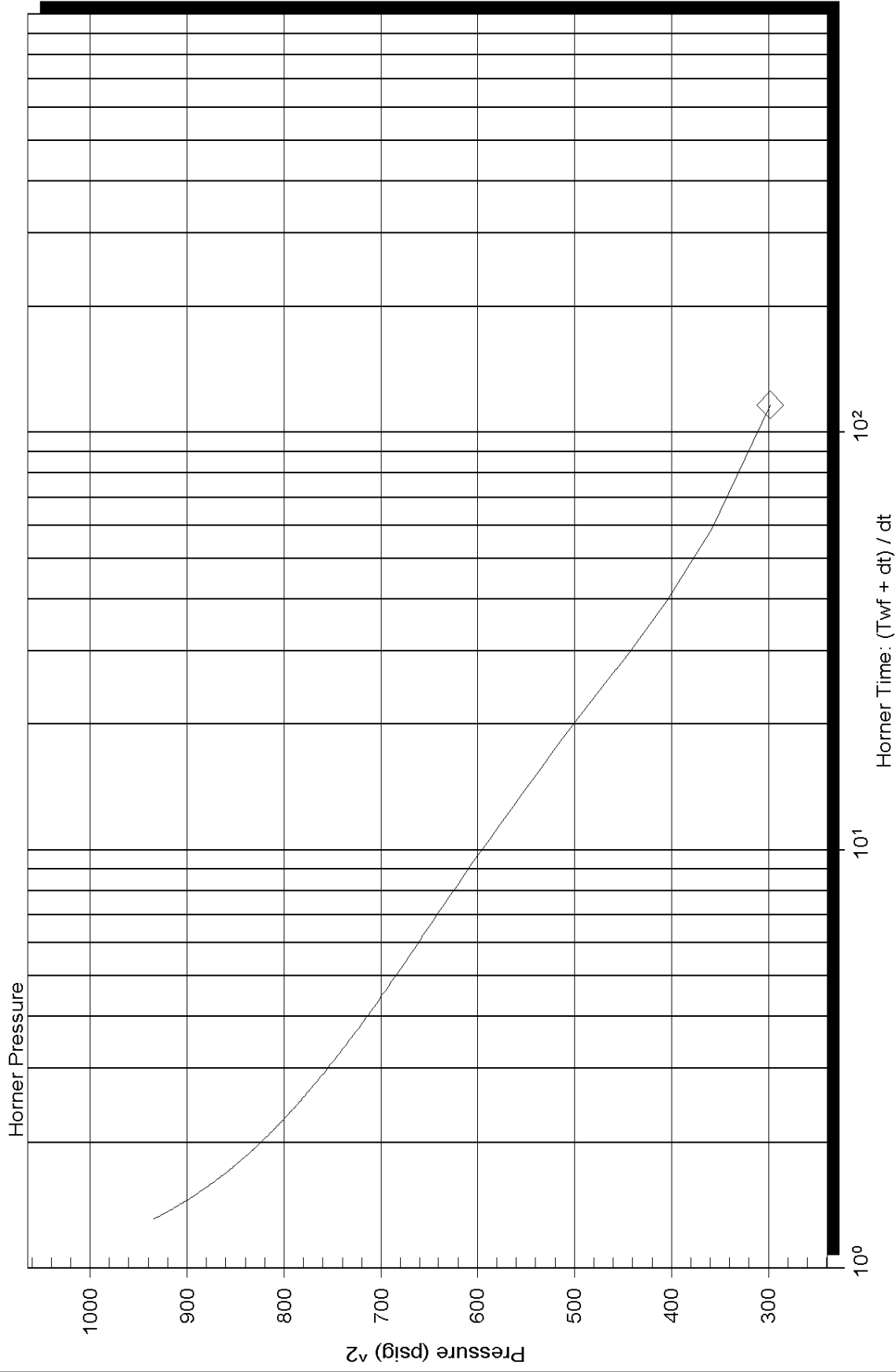
P* :

Horner Time: (Twf + dt) / dt

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



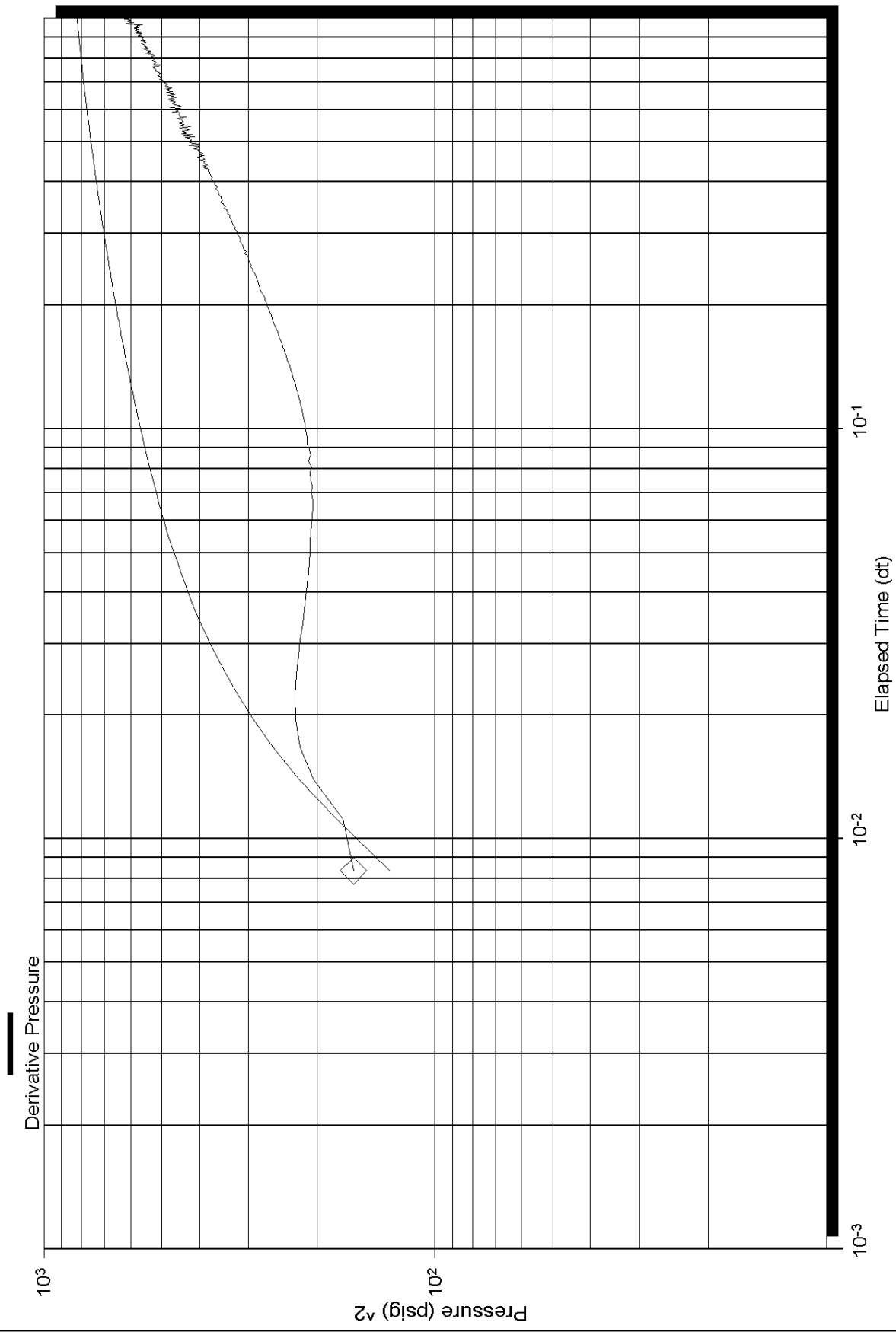
Serial Number: 8017 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Log-Derivative



Log-Log and Pseudo-Log-Derivative

