



## DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop St. Ste. 700  
Denver, Co  
80202

ATTN: Clayton Camozzi

**1-16-16/Rush**

**Wagner Trust 2-1**

Start Date: 2010.10.31 @ 07:02:27

End Date: 2010.10.31 @ 15:20:51

Job Ticket #: 40322                      DST #: 1

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



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TESTING, INC.**

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**Wagner Trust 2-1**  
**1-16-16/Rush**  
Job Ticket: 40322      **DST#: 1**  
Test Start: 2010.10.31 @ 07:02:27

## GENERAL INFORMATION:

Formation:

Deviated:      No      Whipstock:      ft (KB)

Time Tool Opened: 08:44:22

Time Test Ended: 15:20:51

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

**Interval: 3153.00 ft (KB) To 3213.00 ft (KB) (TVD)**

Reference Elevations: 1910.00 ft (KB)

Total Depth: 3213.00 ft (KB) (TVD)

1900.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 10.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 343.85 psig @ 3158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.31

End Date:

2010.10.31

Last Calib.: 2010.10.31

Start Time: 07:02:27

End Time:

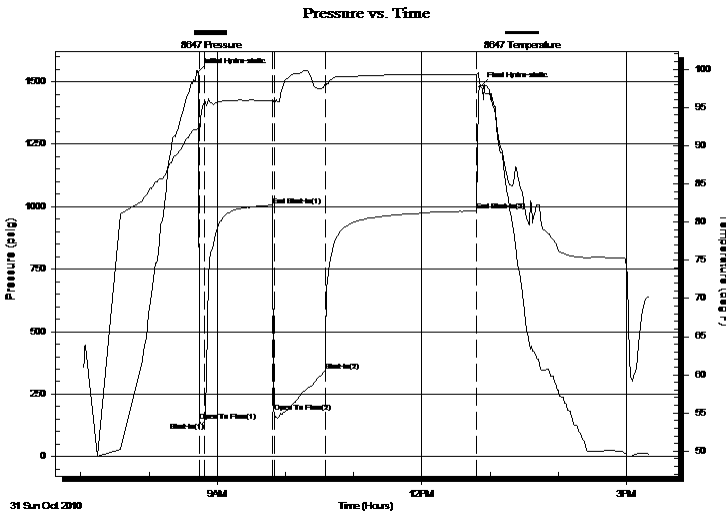
15:20:51

Time On Btm: 2010.10.31 @ 08:42:52

Time Off Btm: 2010.10.31 @ 12:51:21

**TEST COMMENT:** IFP - BOB 1 min  
ISI - no blow back  
FFP - BOB 30 sec - GTS 9 min  
FSI - BOB 4 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1536.38	92.27	Initial Hydro-static
2	140.61	91.41	Open To Flow (1)
6	136.29	95.61	Shut-In(1)
66	1003.17	95.95	End Shut-In(1)
67	176.10	96.08	Open To Flow (2)
112	343.85	98.27	Shut-In(2)
246	983.36	99.27	End Shut-In(2)
249	1479.14	97.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
685.00	FREE OIL 95%O, 5%M	9.61
105.00	GMCO 20%G, 50%O, 30%M	1.47
25.00	SOCM 5%O, 95%M	0.35
0.00	GTS 14 MIN	0.00

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	4.00	6.89
Last Gas Rate	0.13	12.00	9.88
Max. Gas Rate	0.13	12.00	9.88



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Job Ticket: 40322      **DST#: 1**  
Test Start: 2010.10.31 @ 07:02:27

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Deviated: No Whipstock: ft (KB)

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Time Test Ended: 15:20:51

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Tester: Brian Fairbank

Unit No: 41

**Interval: 3153.00 ft (KB) To 3213.00 ft (KB) (TVD)**

Reference Elevations: 1910.00 ft (KB)

Total Depth: 3213.00 ft (KB) (TVD)

1900.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 10.00 ft

## Serial #: 8372

Press @ Run Depth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.31 End Date: 2010.10.31

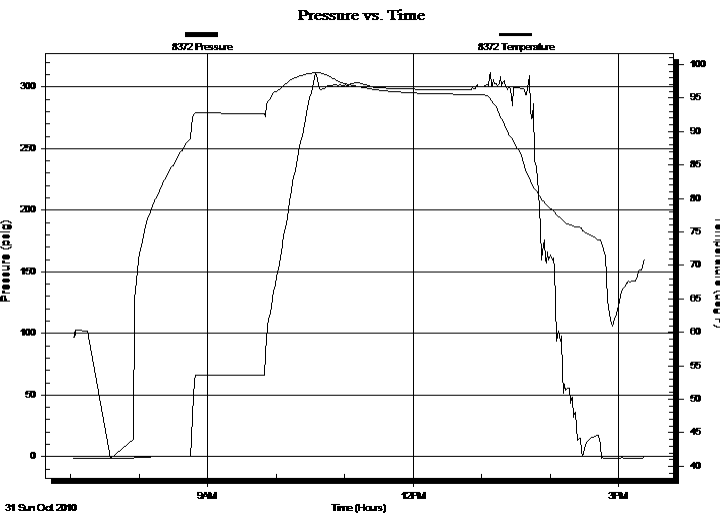
Last Calib.: 2010.10.31

Start Time: 07:02:40 End Time: 15:22:34

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP - BOB 1 min  
ISI - no blow back  
FFP - BOB 30 sec - GTS 9 min  
FSI - BOB 4 min



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
685.00	FREE OIL 95%O, 5%M	9.61
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**TOOL DIAGRAM**

Sam Gary  
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**Wagner Trust 2-1**  
**1-16-16/Rush**  
Job Ticket: 40322      **DST#: 1**  
Test Start: 2010.10.31 @ 07:02:27

**Tool Information**

Drill Pipe:	Length: 3126.00 ft	Diameter: 3.80 inches	Volume: 43.85 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 43.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3153.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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recorder	0.00	8647		3117.00	
pup joint	5.00			3122.00	
Change Over Sub	1.00			3123.00	
Shut In Tool	5.00			3128.00	
Sampler	3.00			3131.00	
Hydraulic tool	5.00			3136.00	
Jars	5.00			3141.00	
Safety Joint	2.00			3143.00	
Packer	5.00			3148.00	36.00      Bottom Of Top Packer
Packer	5.00			3153.00	
Stubb	1.00			3154.00	
Perforations	3.00			3157.00	
Change Over Sub	1.00			3158.00	
Recorder	0.00	8647	Inside	3158.00	
Recorder	0.00	8365	Outside	3158.00	
Blank Spacing	31.00			3189.00	
Change Over Sub	1.00			3190.00	
Perforations	20.00			3210.00	
Bullnose	3.00			3213.00	60.00      Bottom Packers & Anchor

**Total Tool Length: 96.00**



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**FLUID SUMMARY**

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Job Ticket: 40322      **DST#: 1**  
Test Start: 2010.10.31 @ 07:02:27

**Mud and Cushion Information**

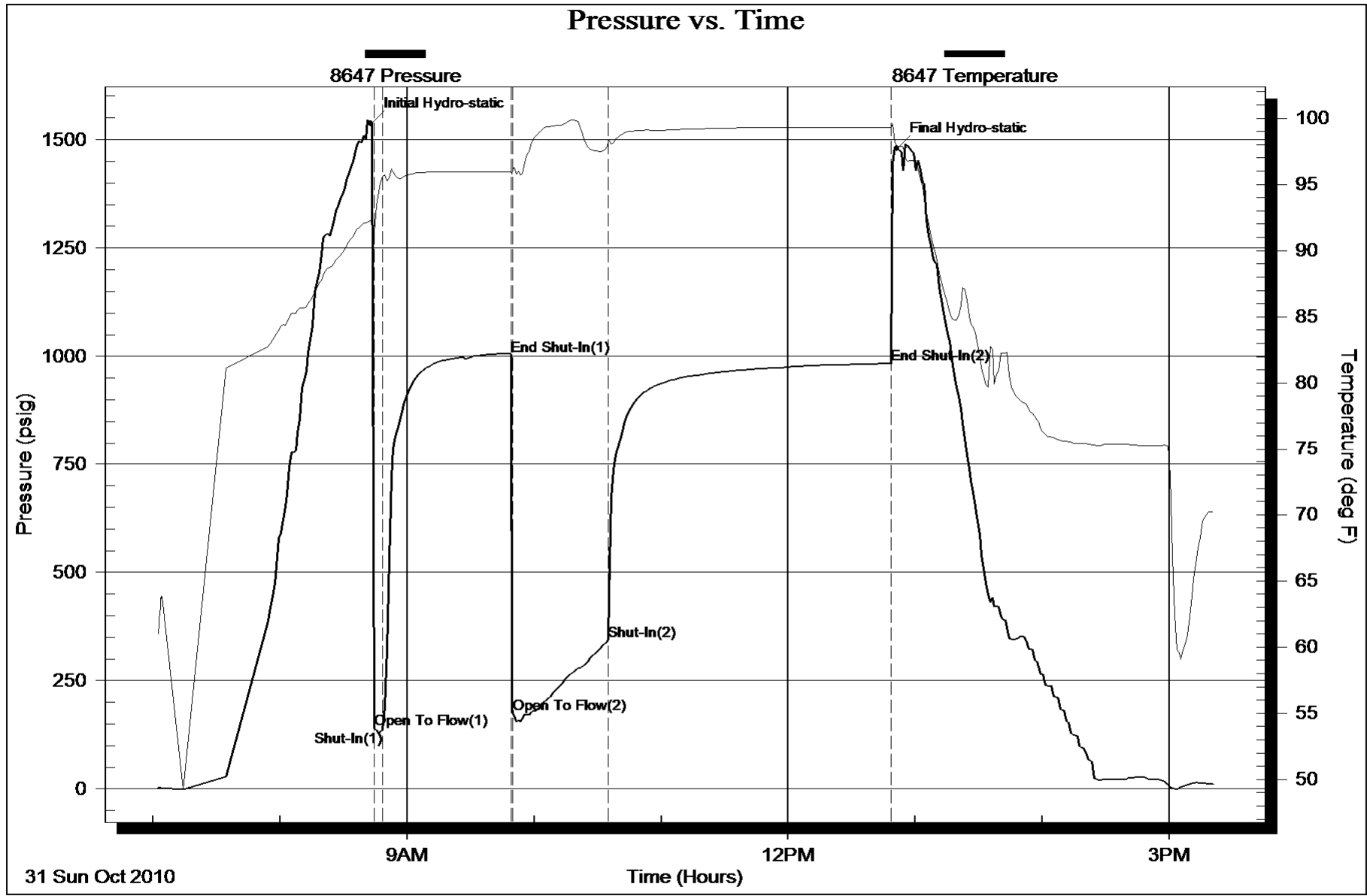
Mud Type: Gel Chem	Cushion Type:	Oil API: 45 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.60 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3400.00 ppm		
Filter Cake: inches		

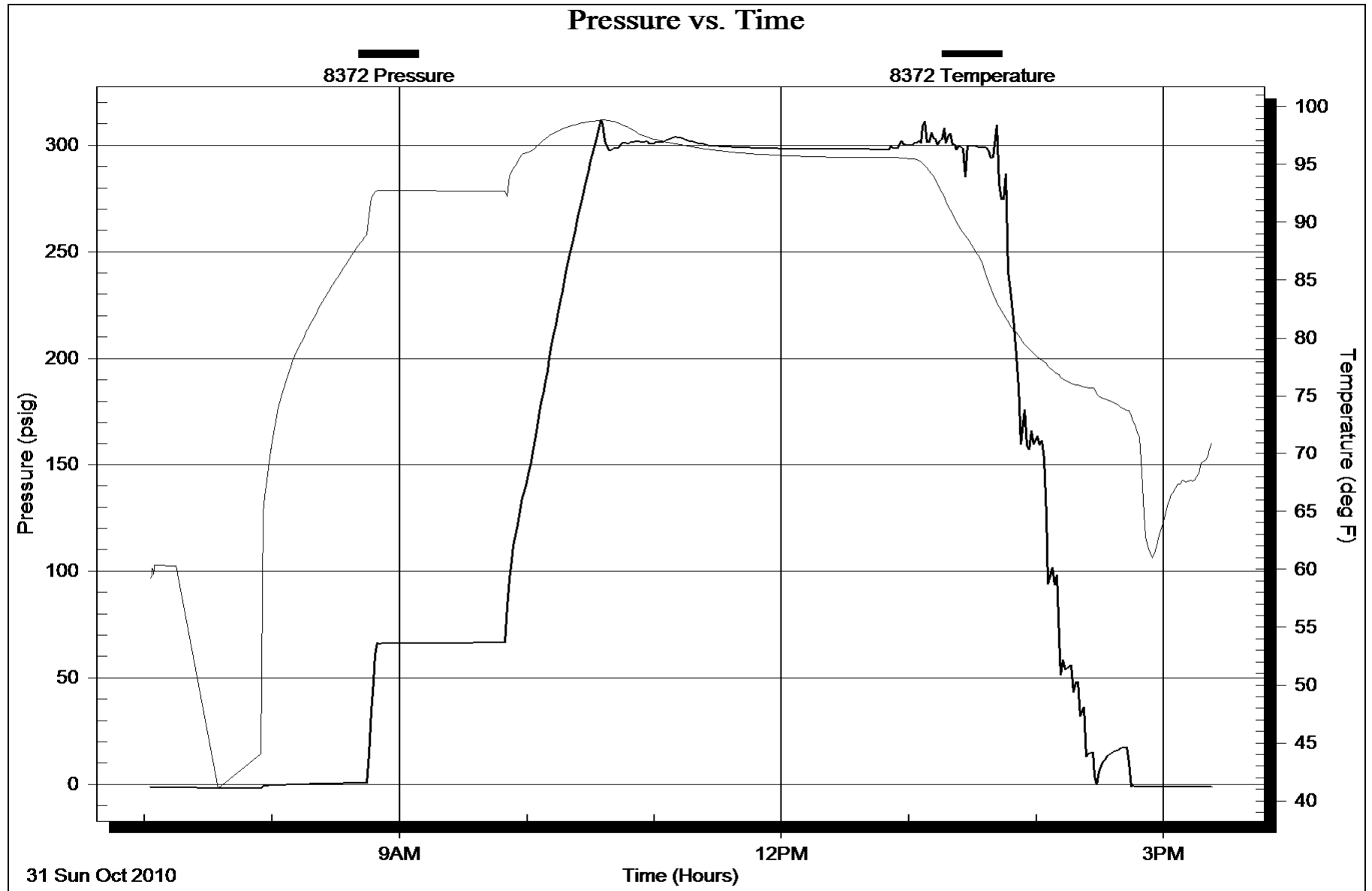
**Recovery Information**

Recovery Table

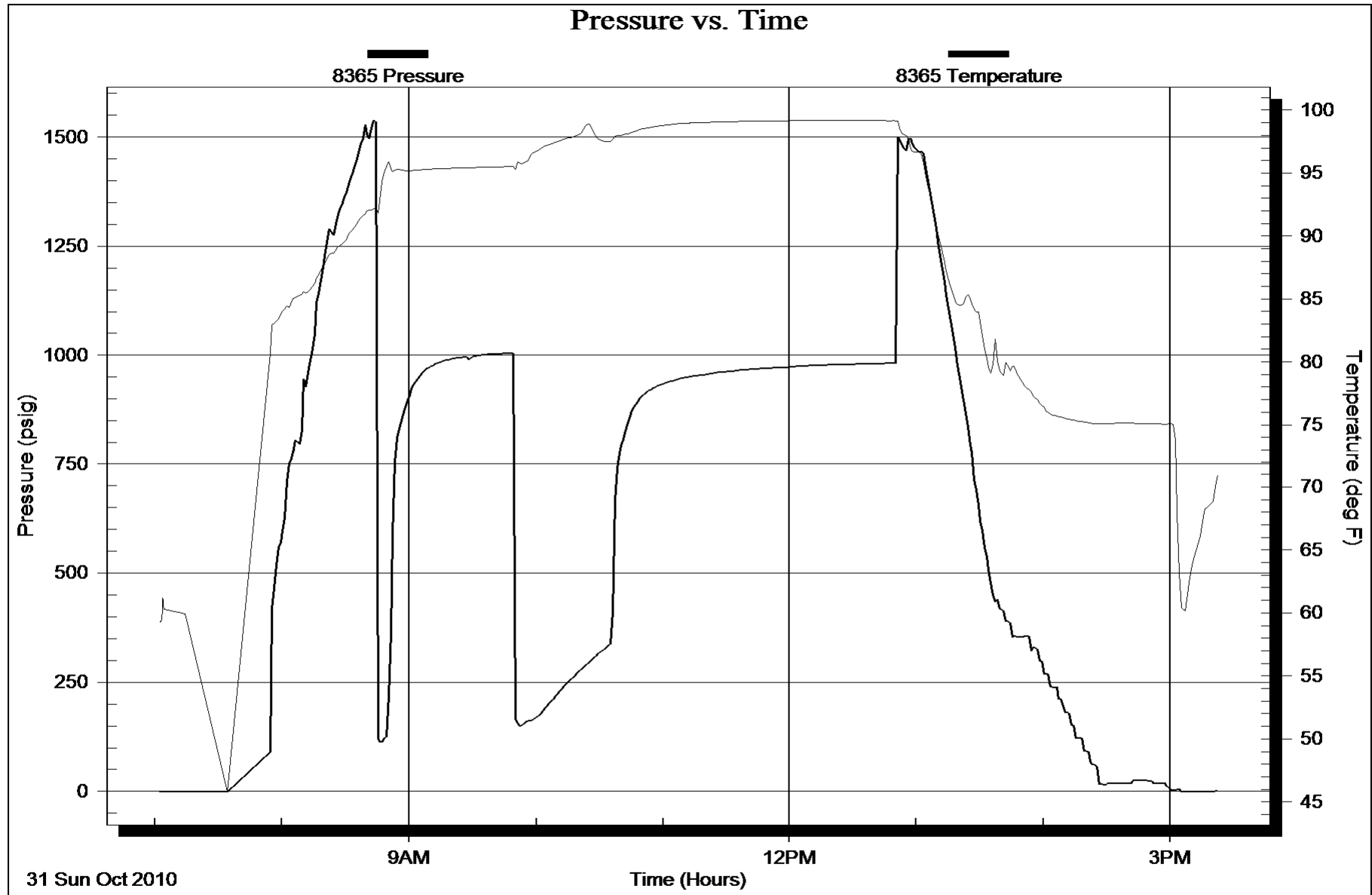
Length ft	Description	Volume bbl
685.00	FREE OIL 95%O, 5%M	9.609
105.00	GMCO 20%G, 50%O, 30%M	1.473
25.00	SOCM 5%O, 95%M	0.351
0.00	GTS 14 MIN	0.000

Total Length: 815.00 ft      Total Volume: 11.433 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

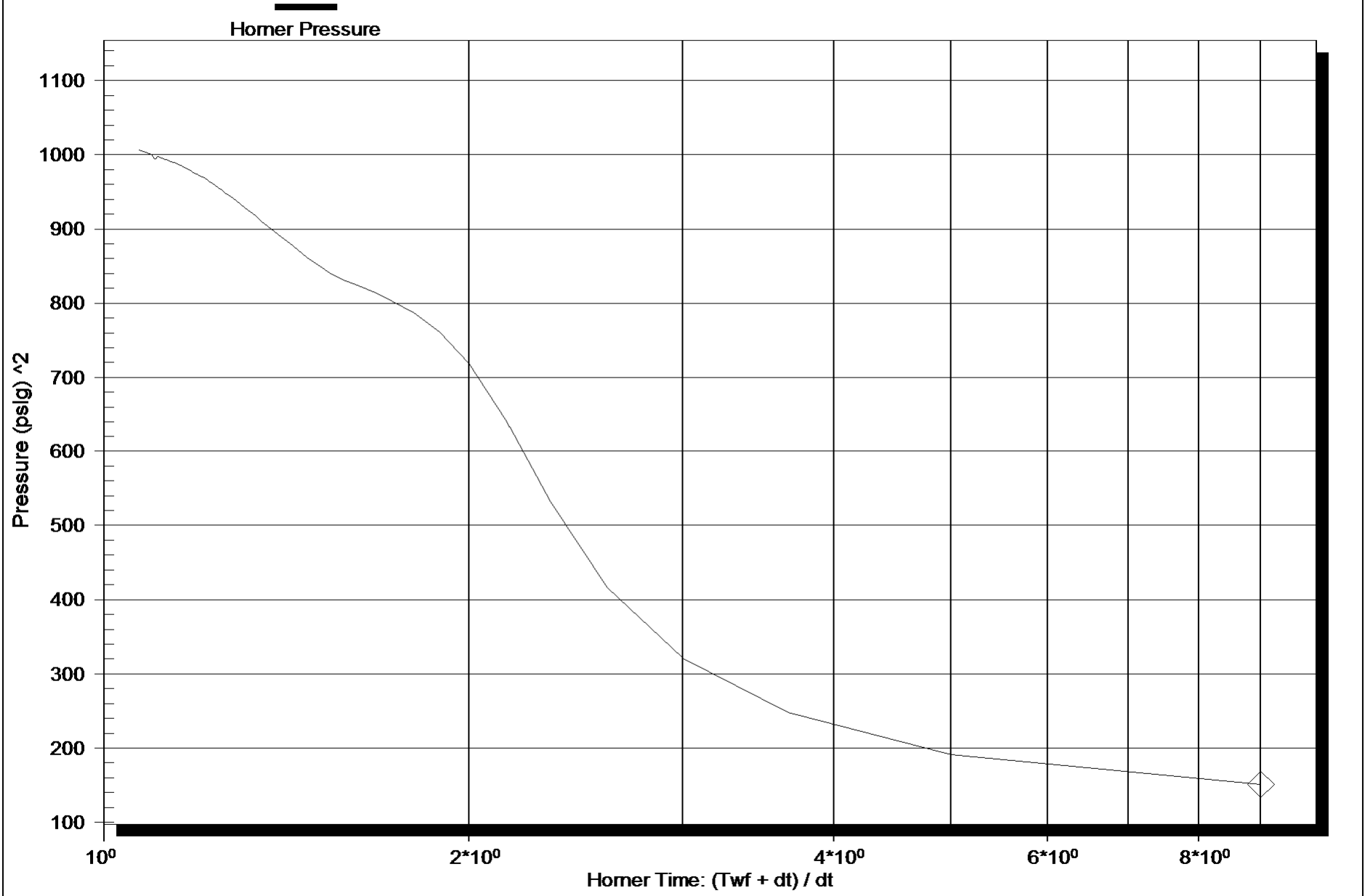




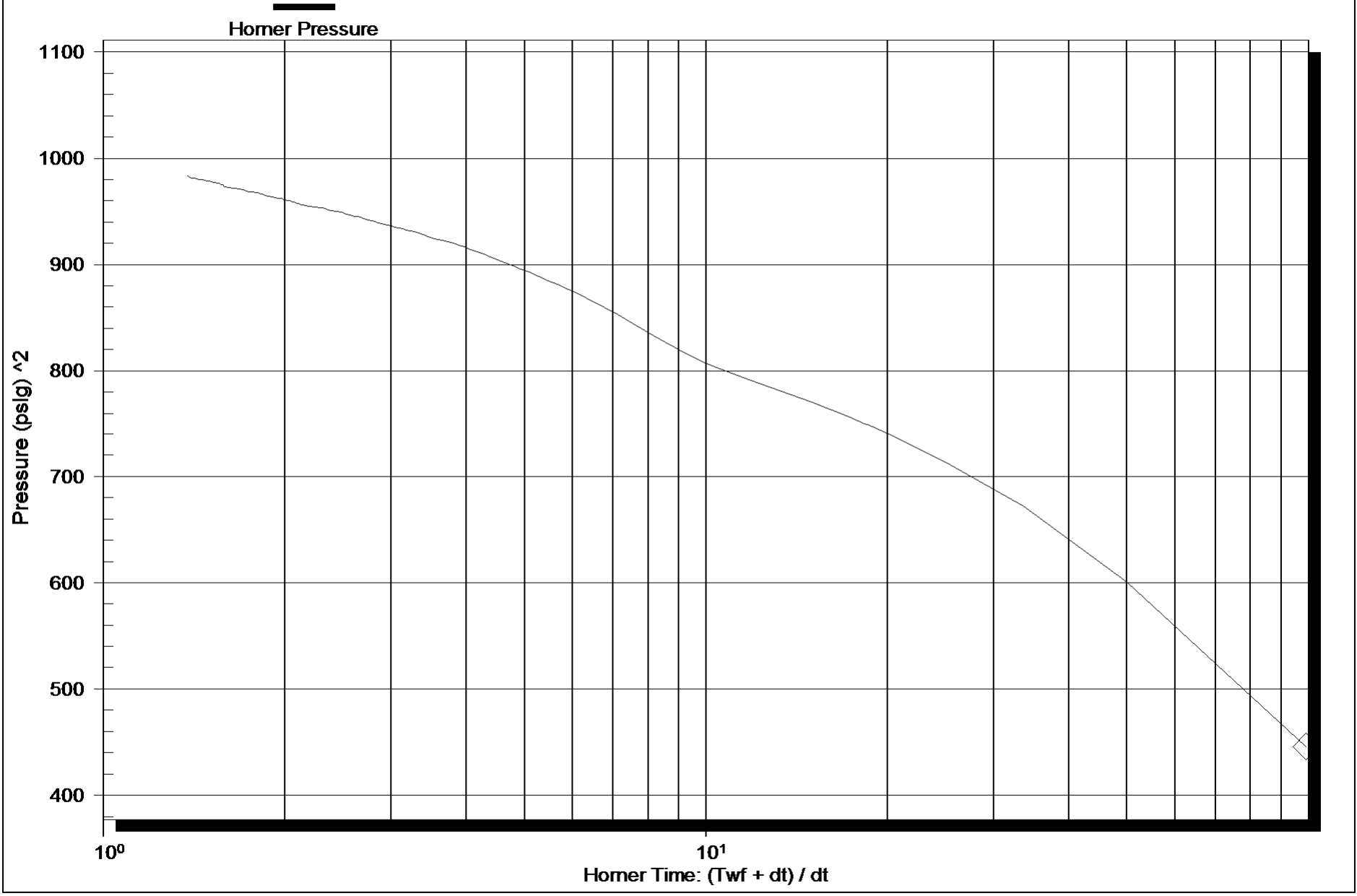




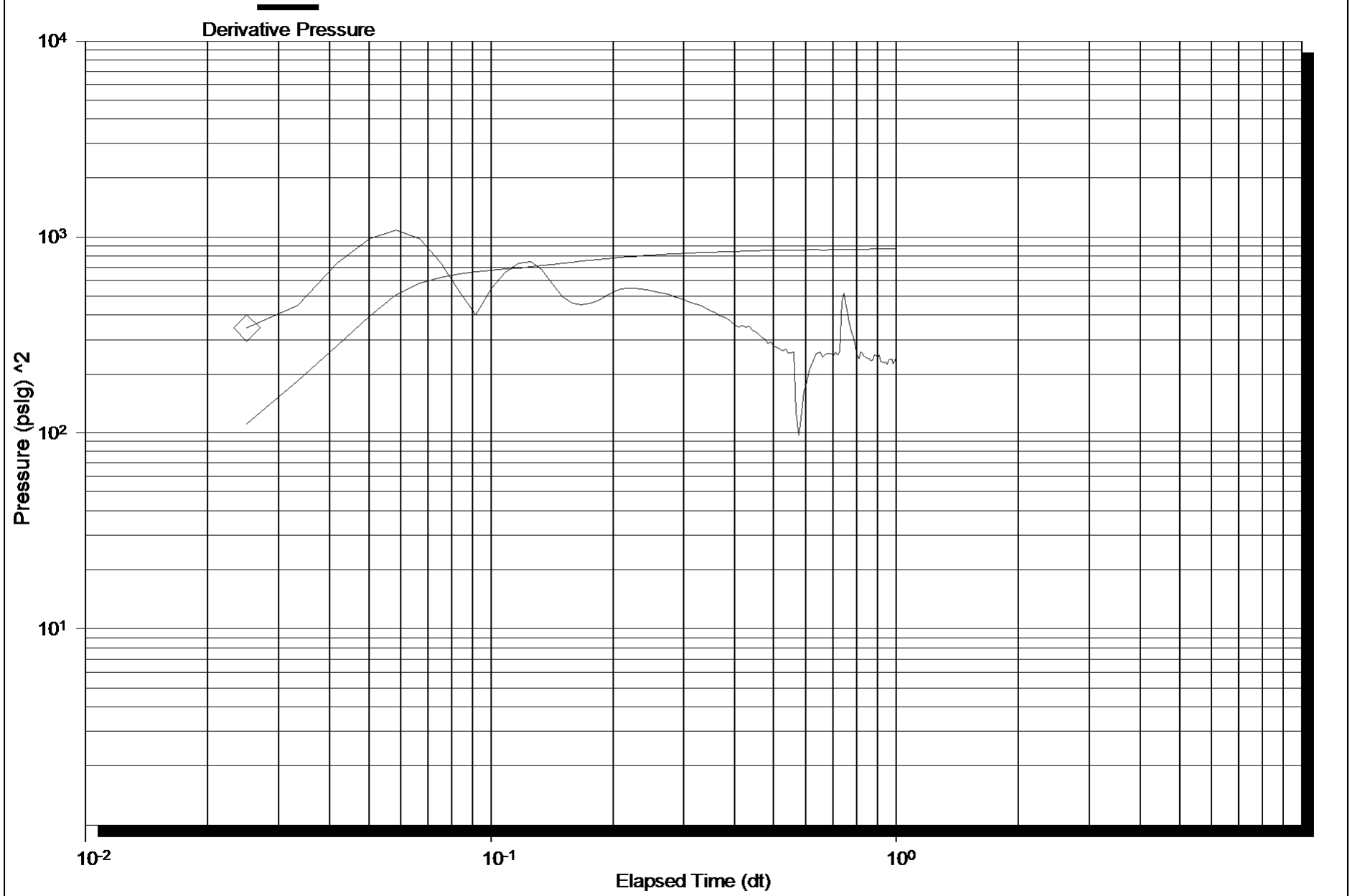
# Horner Plot



# Horner Plot



### Log-Log and Pseudo-Derivative



### Log-Log and Pseudo-Derivative

