



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates**

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Neil Sharp

26-16s-16w-Rush

Clair #4-26

Start Date: 2011.07.25 @ 03:00:58

End Date: 2011.07.25 @ 11:23:13

Job Ticket #: 43548 DST #: 1

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



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Test Start: 2011.07.25 @ 03:00:58

GENERAL INFORMATION:

Formation: **A-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:57:13
 Time Test Ended: 11:23:13
 Interval: **3248.00 ft (KB) To 3306.00 ft (KB) (TVD)**
 Total Depth: 3306.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Jason McLemore
 Unit No: 54
 Reference Elevations: 1991.00 ft (KB)
 1981.00 ft (CF)
 KB to GR/CF: 10.00 ft

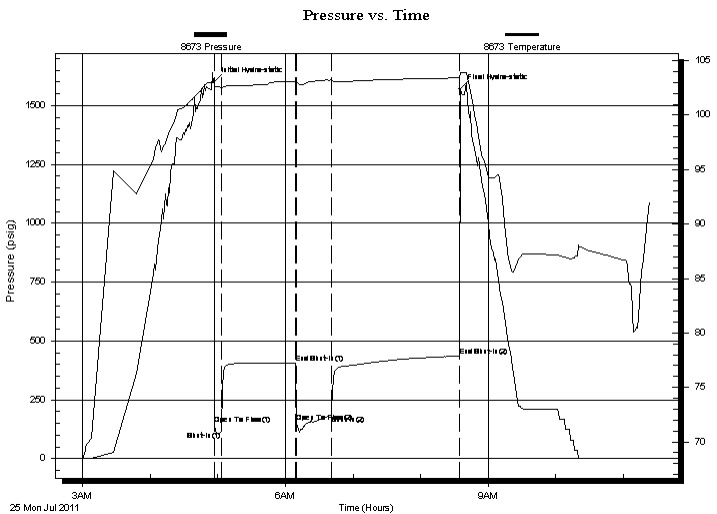
Serial #: 8673

Inside

Press @ Run Depth: 186.79 psig @ 3283.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.07.25 End Date: 2011.07.25 Last Calib.: 2011.07.25
 Start Time: 03:01:00 End Time: 11:23:13 Time On Btm: 2011.07.25 @ 04:56:58
 Time Off Btm: 2011.07.25 @ 08:35:13

TEST COMMENT: IFP-Strong, BOB in 30 Seconds, Gas To Surface on Shut In
 ISI-Blow back BOB in 25 Min.
 FFP-Strong, BOB on Open, Gauging Gas
 FSI-Blow back BOB in 70 Min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1600.40	103.17	Initial Hydro-static
1	146.05	102.43	Open To Flow (1)
7	115.90	102.49	Shut-In(1)
73	407.82	103.12	End Shut-In(1)
73	155.80	103.02	Open To Flow (2)
104	186.79	103.25	Shut-In(2)
218	434.95	103.41	End Shut-In(2)
219	1570.56	103.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
85.00	GOCM-20%G-55%O-25%M	1.19
300.00	Gassy Oil-25%G-75%O	4.21

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	15.00	107.70
Last Gas Rate	0.38	7.00	78.39
Max. Gas Rate	0.38	15.00	107.70



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TOOL DIAGRAM

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Tool Information

Drill Pipe:	Length: 3220.00 ft	Diameter: 3.80 inches	Volume: 45.17 bbl	Tool Weight: 2000.00 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: 60000.00 lb
			<u>Total Volume: 45.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3248.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Recorder	0.00	8736	Fluid	3214.00	
Change Over Sub	5.00			3219.00	
Shut In Tool	5.00			3224.00	
Sampler	2.00			3226.00	
Hydraulic tool	5.00			3231.00	
Jars	5.00			3236.00	
Safety Joint	2.00			3238.00	
Packer	5.00			3243.00	34.00 Bottom Of Top Packer
Packer	5.00			3248.00	
Stubb	1.00			3249.00	
Perforations	1.00			3250.00	
Change Over Sub	1.00			3251.00	
Blank Spacing	31.00			3282.00	
Change Over Sub	1.00			3283.00	
Recorder	0.00	8673	Inside	3283.00	
Recorder	0.00	6755	Outside	3283.00	
Perforations	20.00			3303.00	
Bullnose	3.00			3306.00	58.00 Bottom Packers & Anchor

Total Tool Length: 92.00



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 40 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
85.00	GOCM-20%G-55%O-25%M	1.192
300.00	Gassy Oil-25%G-75%O	4.208

Total Length: 385.00 ft Total Volume: 5.400 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler-275#, 1 cubic foot gas



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GAS RATES

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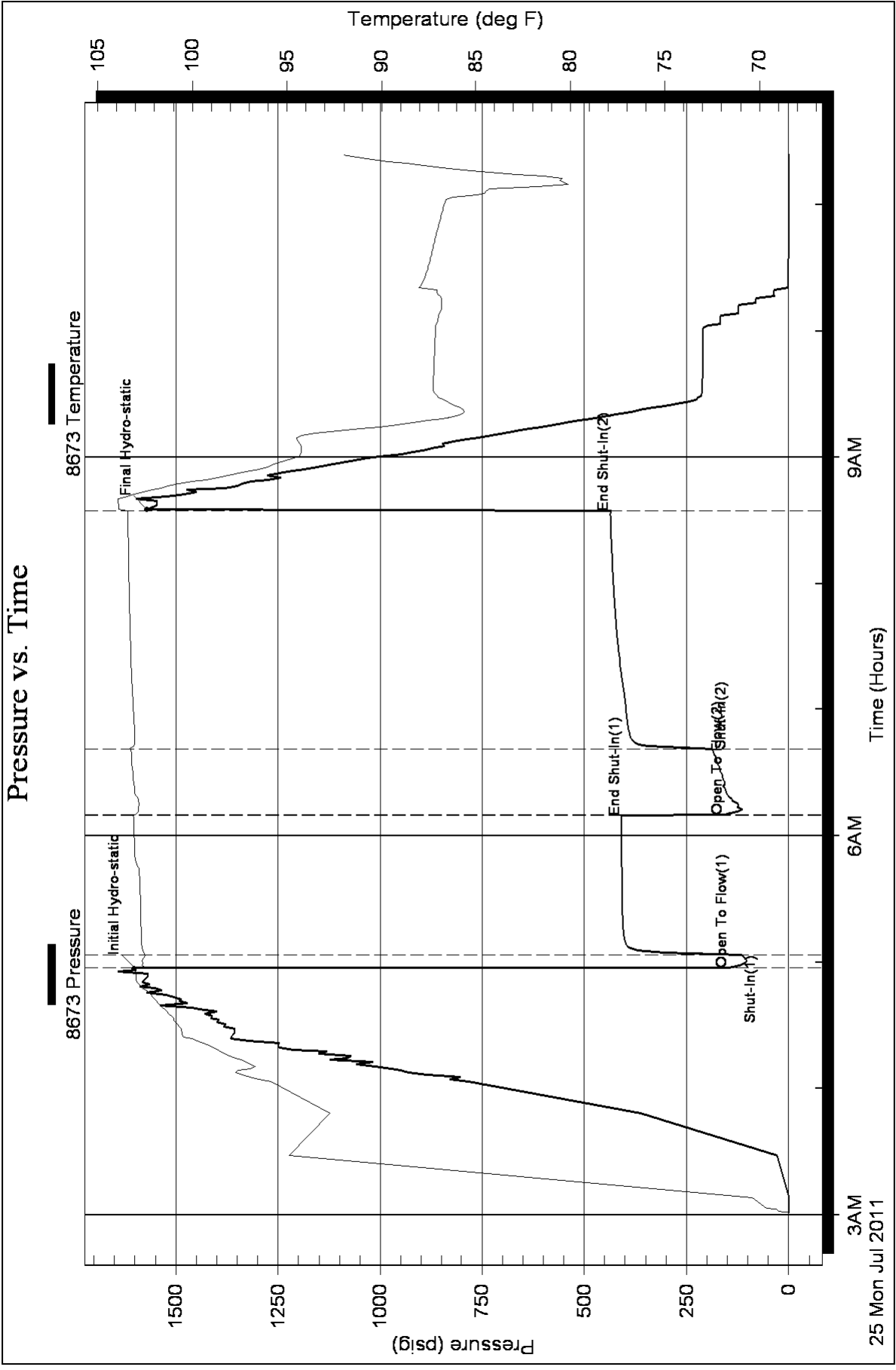
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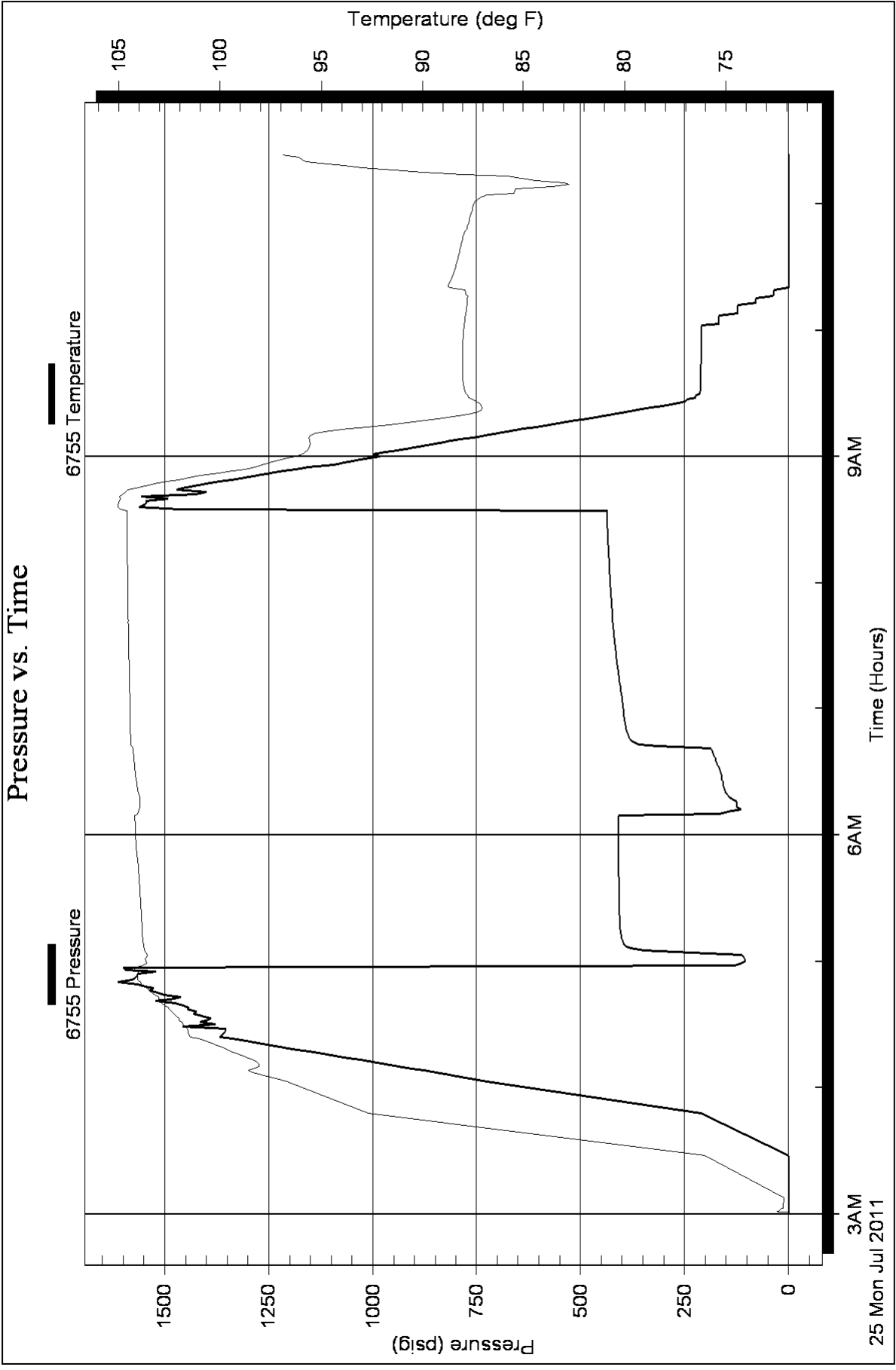
Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	10	0.38	15.00	107.70
2	20	0.38	9.00	85.72
2	30	0.38	7.00	78.39





Serial #: 8736

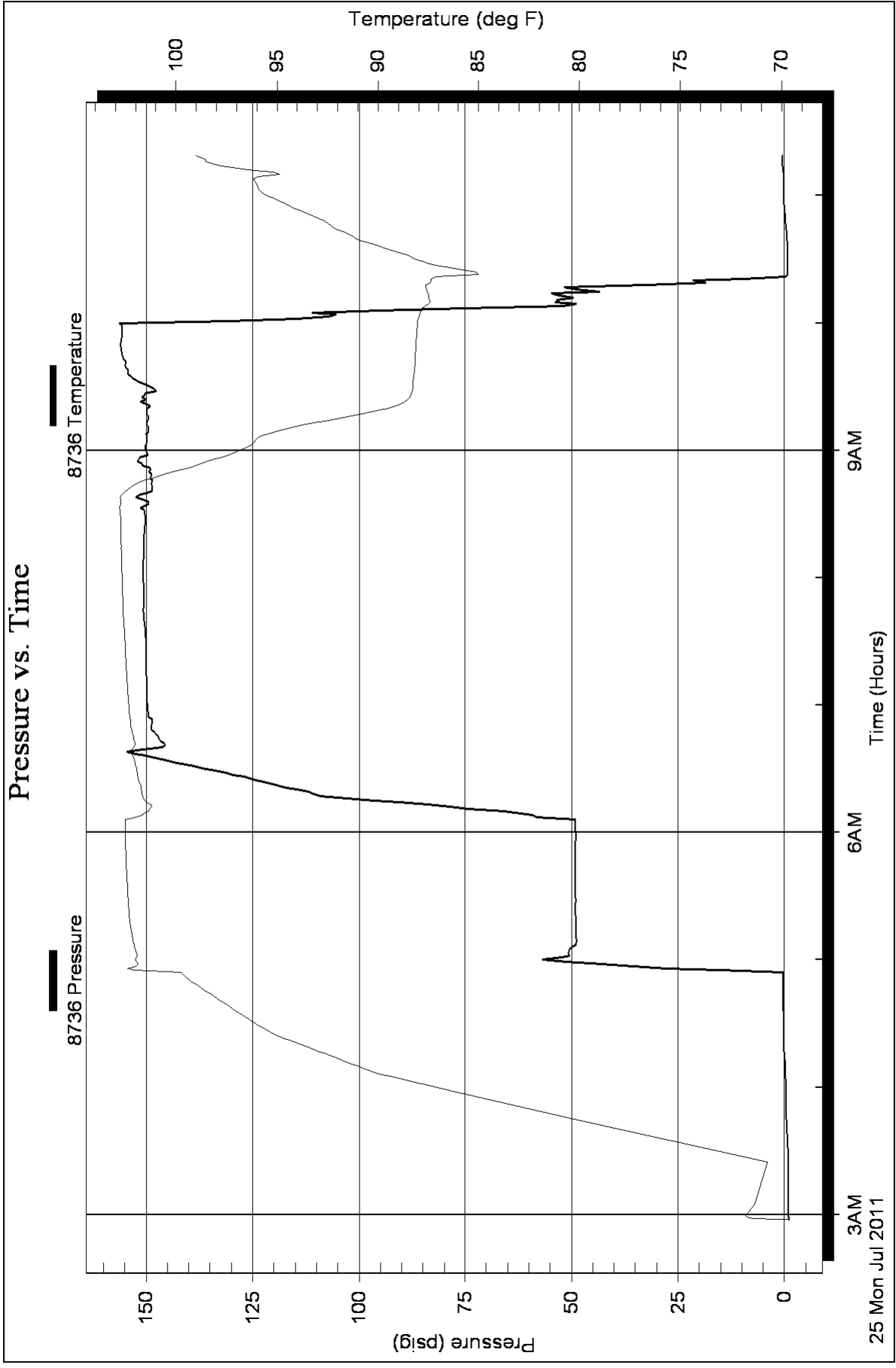
Fluid

Samuel Gary Jr. & Associates

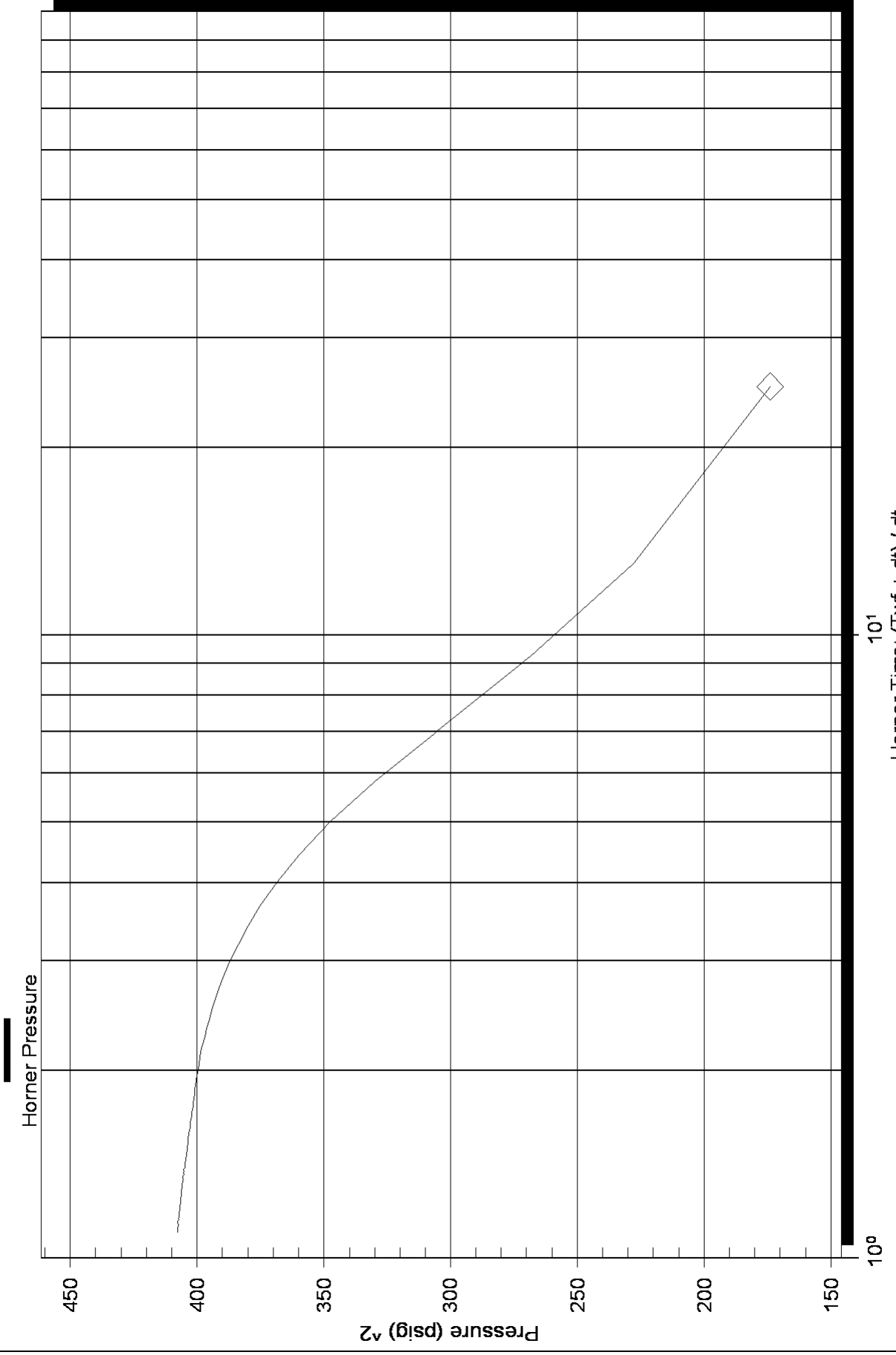
26-16s-16w - Rush

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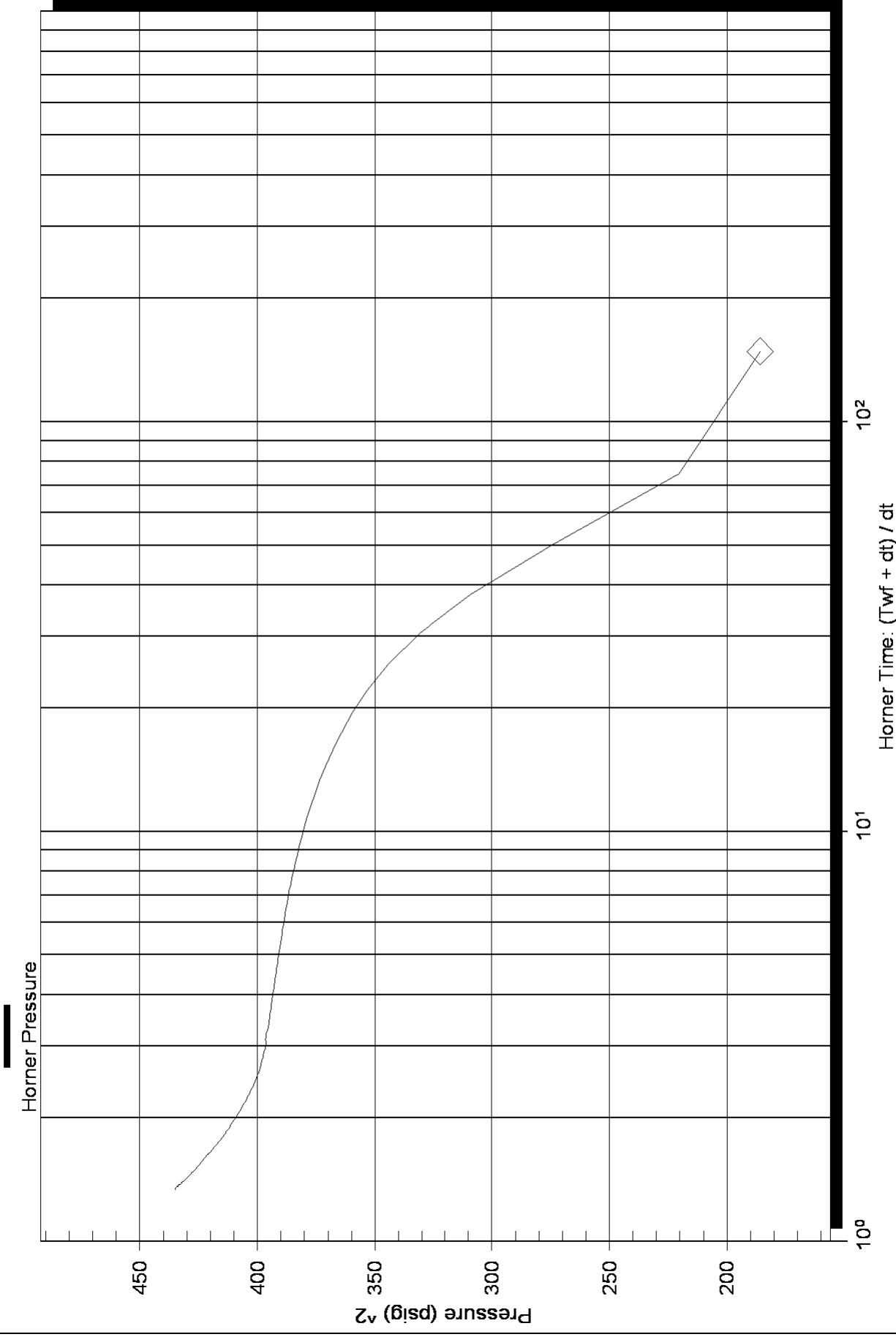
Pressure vs. Time



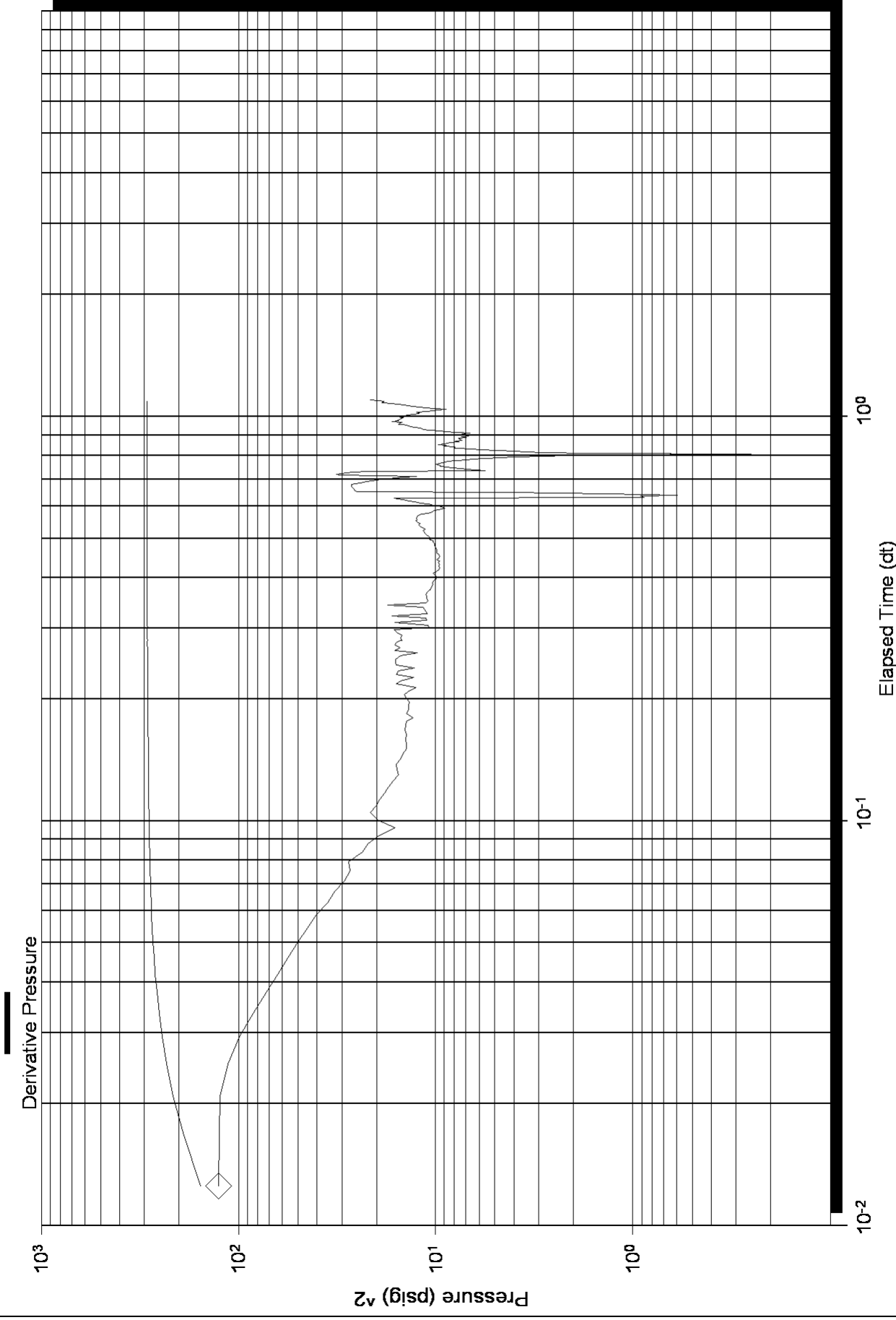
Homer Plot



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

