



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. and Associates, Inc**

1515 Wynkoop St. Ste 700
Denver, CO
80202

ATTN: Claton Camozzi

1-16-16/Rush

Wagner Trust 4-1

Start Date: 2011.04.27 @ 20:01:52

End Date: 2011.04.28 @ 03:23:52

Job Ticket #: 42558 DST #: 3

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



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Test Start: 2011.04.27 @ 20:01:52

GENERAL INFORMATION:

Formation: **LKC "I-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:41:52

Time Test Ended: 03:23:52

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: 3334.00 ft (KB) To 3401.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3401.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 145.86 psig @ 3341.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.27 End Date: 2011.04.28

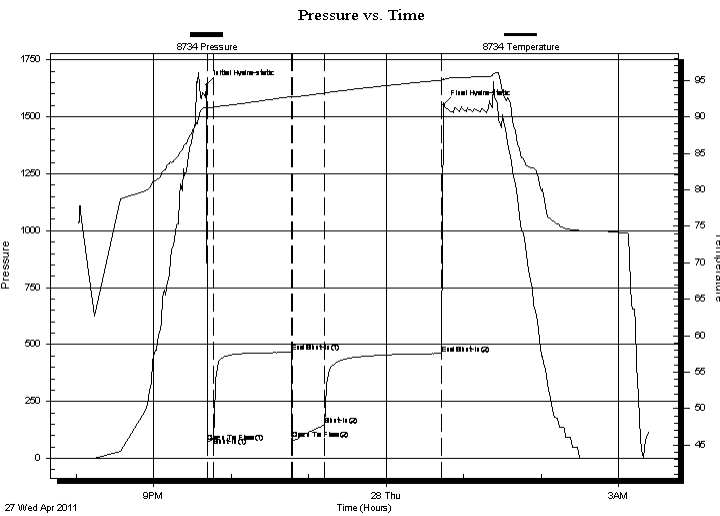
Last Calib.: 2011.04.28

Start Time: 20:01:53 End Time: 03:23:52

Time On Btm: 2011.04.27 @ 21:40:52

Time Off Btm: 2011.04.28 @ 00:44:22

TEST COMMENT: 5 - IFP - BOB 1 1/2 min
60 - ISI - 1" blow back - died 10 min
25 - FFP - BOB 1 min
90 - FSI - BOB 6 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.46	91.38	Initial Hydro-static
1	72.72	91.10	Open To Flow (1)
5	91.16	91.32	Shut-In(1)
66	465.44	92.77	End Shut-In(1)
67	84.54	92.72	Open To Flow (2)
91	145.86	93.24	Shut-In(2)
182	460.36	95.04	End Shut-In(2)
184	1553.00	95.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MO 85%O, 15%M	0.99
190.00	FREE OIL 95%O, 5%M	2.67
45.00	HOCM 40%O, 60%M	0.63
0.00	1720' GIP	0.00
0.00	G 1800, O 2000, M 200 350 LBS	0.00

Gas Rates

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



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TOOL DIAGRAM

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Tool Information

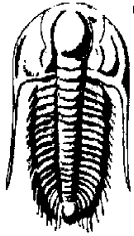
Drill Pipe:	Length: 3292.00 ft	Diameter: 3.80 inches	Volume: 46.18 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 53000.00 lb
			Total Volume: 46.33 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3334.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	102.00 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	8365	Fluid	3299.00	
Blank Spacing	5.00			3304.00	
Shut In Tool	5.00			3309.00	
Sampler	3.00			3312.00	
Hydraulic tool	5.00			3317.00	
Jars	5.00			3322.00	
Safety Joint	2.00			3324.00	
Packer	5.00			3329.00	35.00 Bottom Of Top Packer
Packer	5.00			3334.00	
Stubb	1.00			3335.00	
Perforations	5.00			3340.00	
Change Over Sub	1.00			3341.00	
Recorder	0.00	8372	Inside	3341.00	
Recorder	0.00	8734	Outside	3341.00	
Blank Spacing	31.00			3372.00	
Change Over Sub	1.00			3373.00	
Perforations	25.00			3398.00	
Bullnose	3.00			3401.00	67.00 Bottom Packers & Anchor

Total Tool Length: 102.00



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

42 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	MO 85%O, 15%M	0.989
190.00	FREE OIL 95%O, 5%M	2.665
45.00	HOCM 40%O, 60%M	0.631
0.00	1720' GIP	0.000
0.00	G 1800, O 2000, M 200 350 LBS	0.000

Total Length: 325.00 ft

Total Volume: 4.285 bbl

Num Fluid Samples: 0

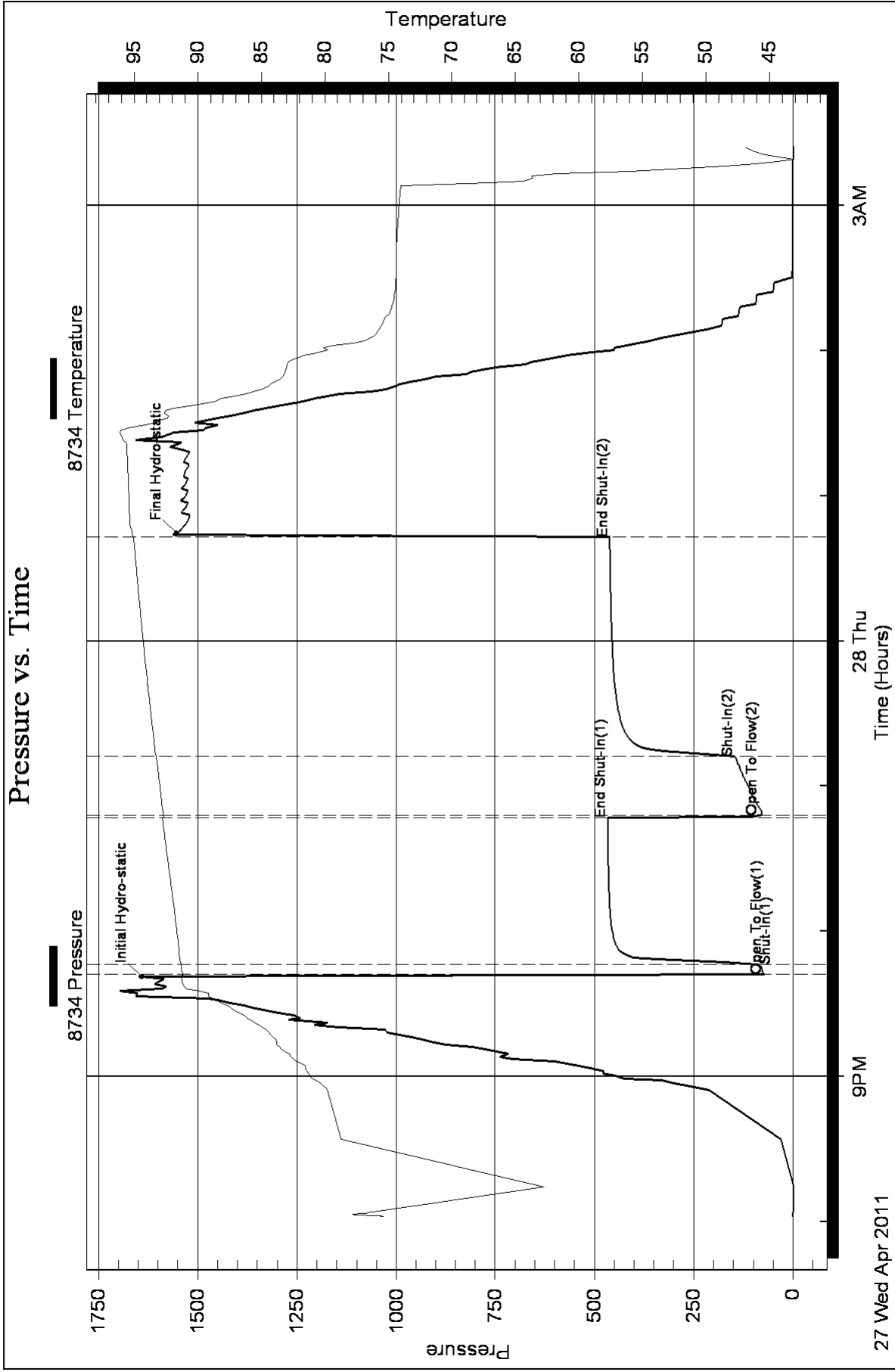
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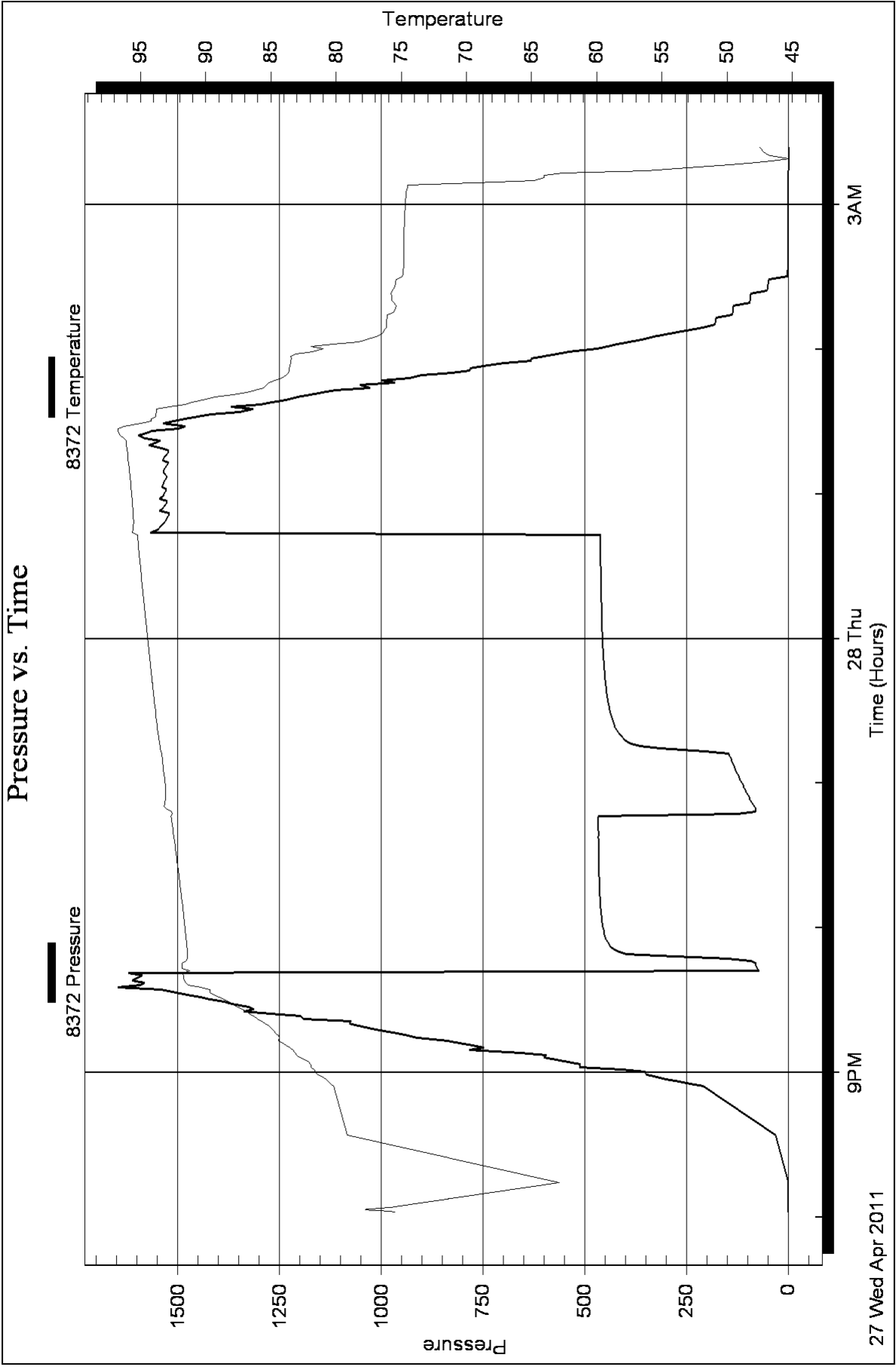
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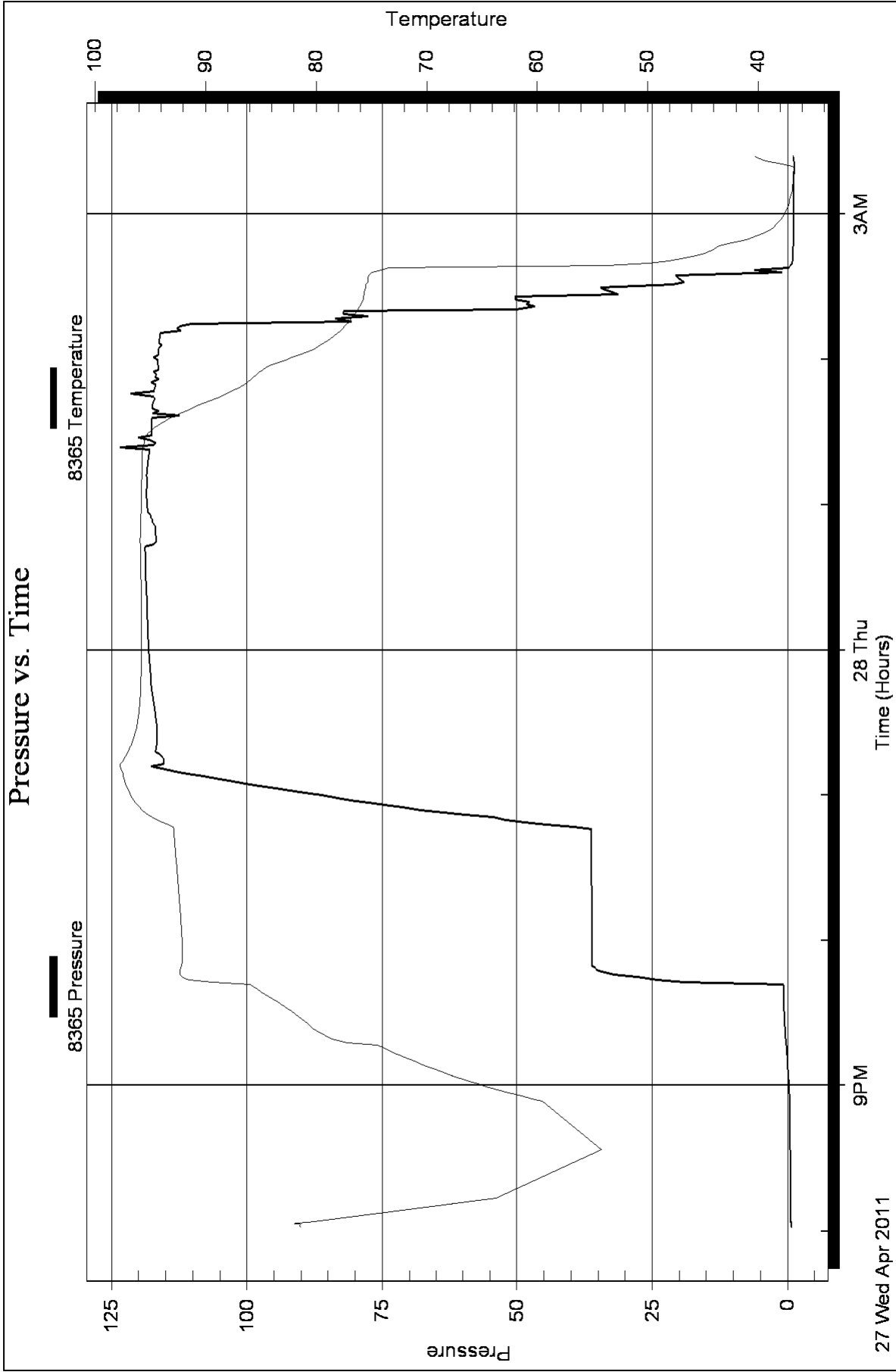
Laboratory Name:

Laboratory Location:

Recovery Comments:

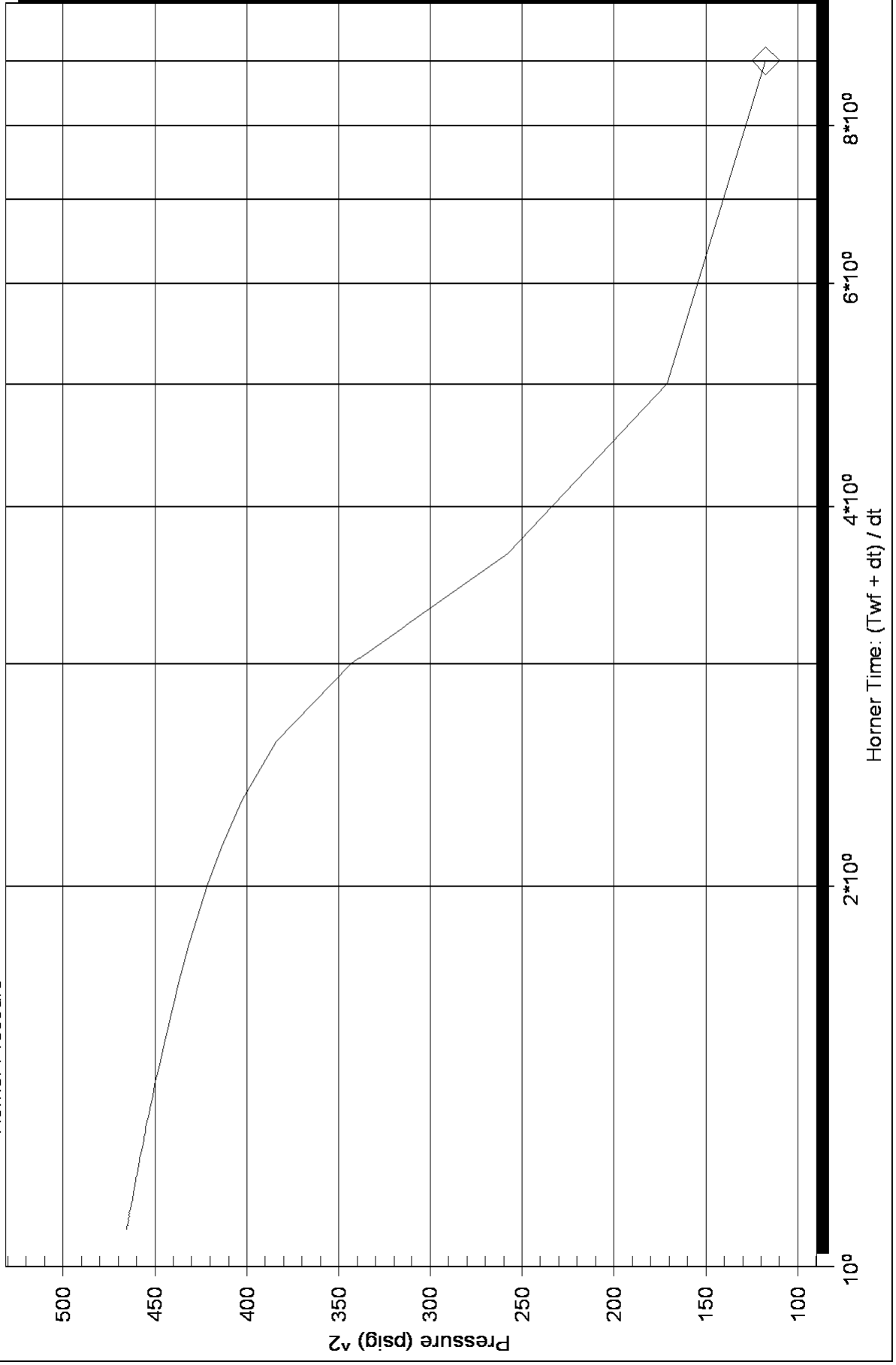




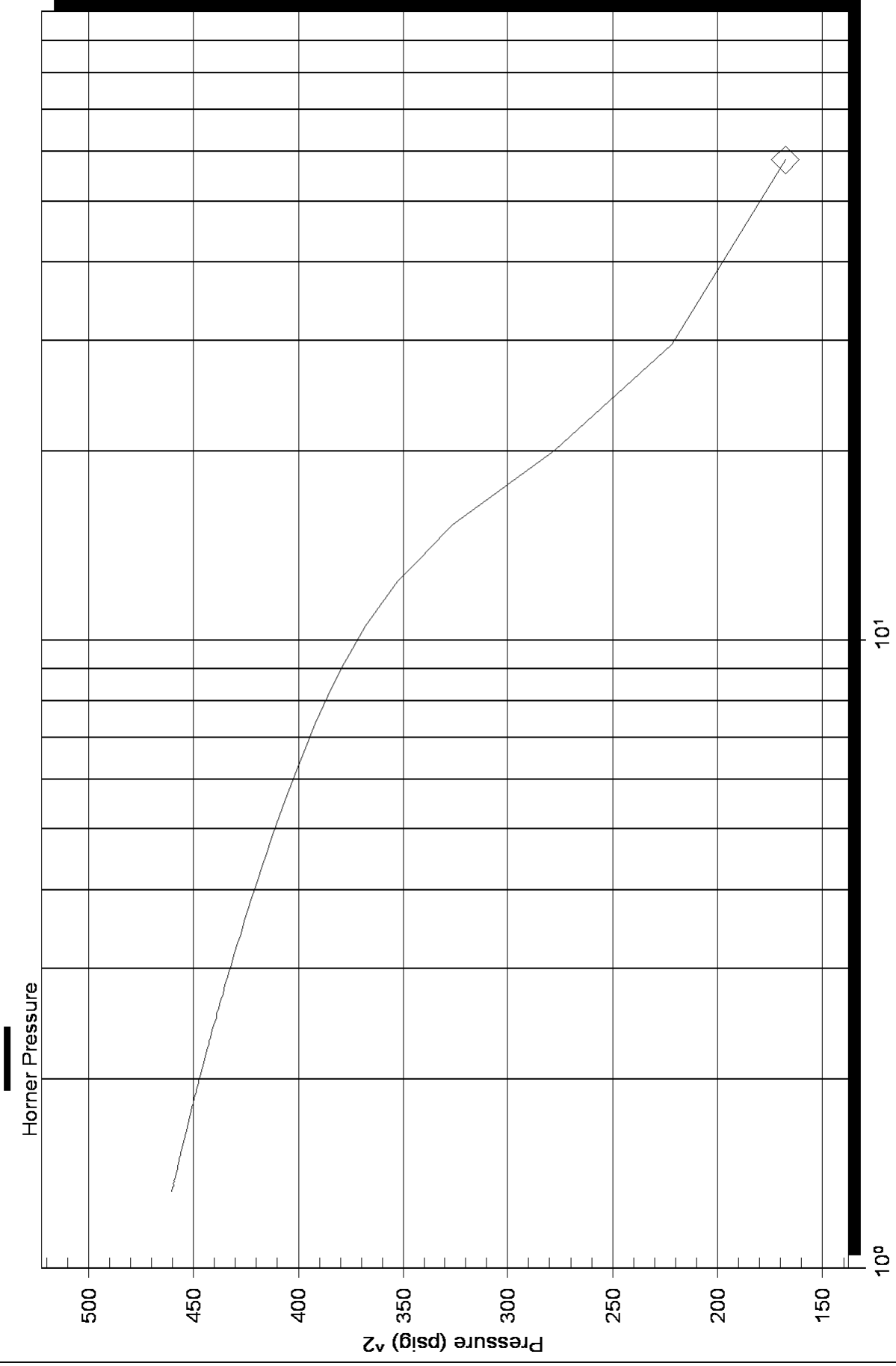


Homer Plot

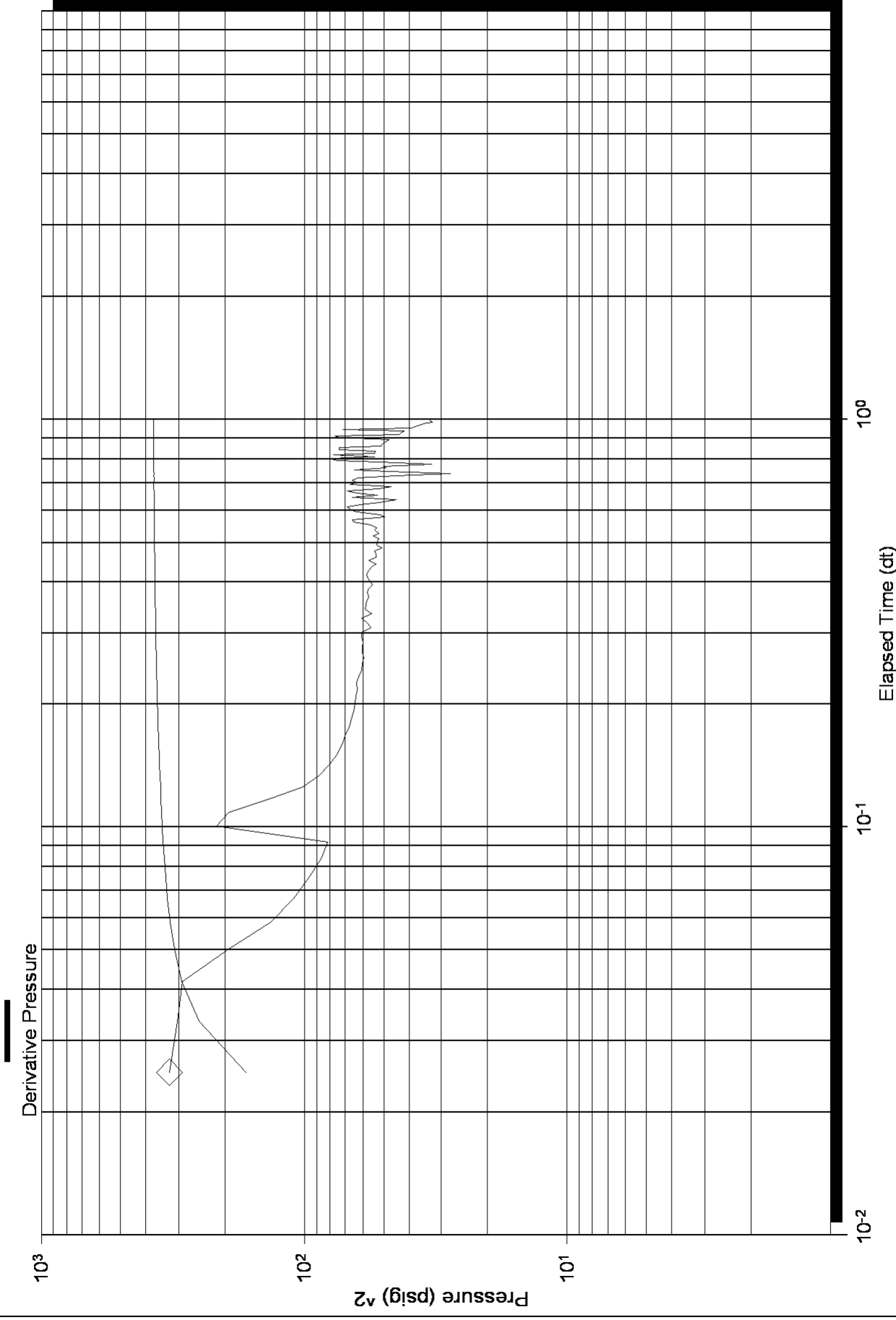
Horner Pressure



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

