



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: 2010.11.02 @ 00:18:49

End Date: 2010.11.02 @ 08:08:13

Job Ticket #: 40324 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

Sam Gary
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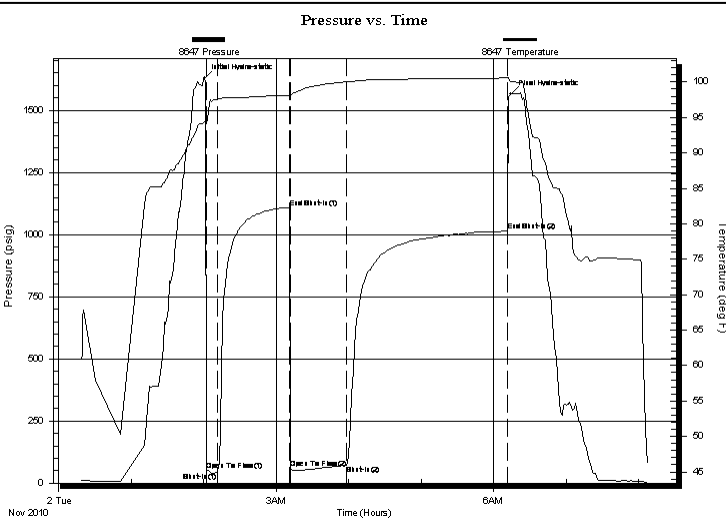
Wagner Trust 2-1
1-16-16/Rush
Job Ticket: 40324 **DST#: 3**
Test Start: 2010.11.02 @ 00:18:49

GENERAL INFORMATION:

Formation:
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole
Time Tool Opened: 02:02:14 Tester: Brian Fairbank
Time Test Ended: 08:08:13 Unit No: 41
Interval: 3355.00 ft (KB) To 3374.00 ft (KB) (TVD) Reference Elevations: 1910.00 ft (KB)
Total Depth: 3374.00 ft (KB) (TVD) 1900.00 ft (CF)
Hole Diameter: 7.88 inchesHole Condition: KB to GR/CF: 10.00 ft

Serial #: 8647 Inside
Press @RunDepth: 71.70 psig @ 3356.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.11.02 End Date: 2010.11.02 Last Calib.: 2010.11.02
Start Time: 00:18:49 End Time: 08:08:13 Time On Btm: 2010.11.02 @ 02:00:44
Time Off Btm: 2010.11.02 @ 06:14:43

TEST COMMENT: IFP - weak to good blow 1/2" - 7"
ISI - no blow back
FFP - BOB 10 min
FSI - 6" blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.76	94.39	Initial Hydro-static
2	51.32	94.20	Open To Flow (1)
11	42.37	97.60	Shut-In(1)
71	1108.73	98.14	End Shut-In(1)
72	60.85	98.21	Open To Flow (2)
118	71.70	100.01	Shut-In(2)
251	1015.06	100.56	End Shut-In(2)
254	1565.47	100.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW 70%W, 30%M	0.84
45.00	GW & OCM 15%G, 25%O, 10%W, 50%M	0.63
10.00	FREE OIL 95%O, 5%M	0.14
0.00	1185' GIP	0.00

Gas Rates

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



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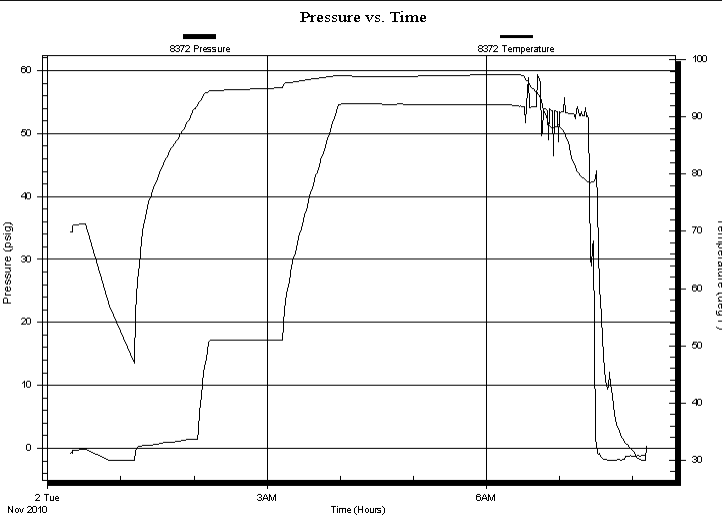
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 Total Depth: 3374.00 ft (KB) (TVD) 1900.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 10.00 ft

Serial #: 8372

Press @ Run Depth: psig @ ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.11.02 End Date: 2010.11.02 Last Calib.: 2010.11.02
 Start Time: 00:18:58 End Time: 08:10:52 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP - weak to good blow 1/2" - 7"
 ISI - no blow back
 FFP - BOB 10 min
 FSI - 6" blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW 70%W, 30%M	0.84
45.00	GW & OCM 15%G, 25%O, 10%W, 50%M	0.63
10.00	FREE OIL 95%O, 5%M	0.14
0.00	1185' GIP	0.00

Gas Rates

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



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 Tester: Brian Fairbank
 Unit No: 41

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 Total Depth: 3374.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1910.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 10.00 ft

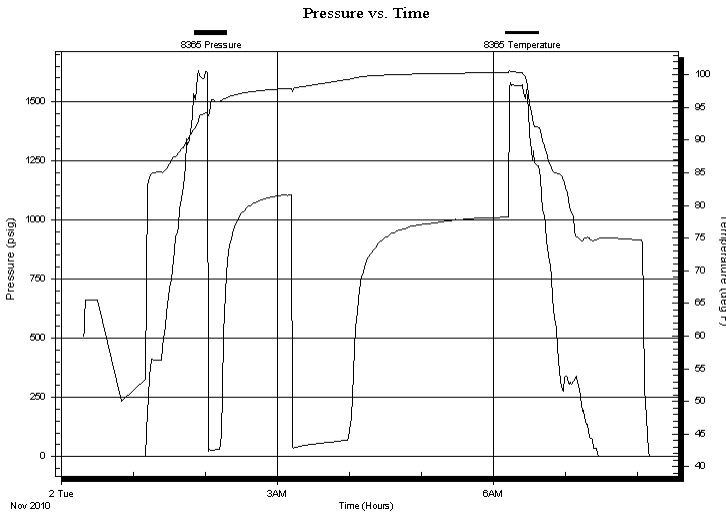
Serial #: 8365 Outside

Press @ Run Depth: psig @ 3356.00 ft (KB)
 Start Date: 2010.11.02 End Date: 2010.11.02
 Start Time: 00:18:22 End Time: 08:10:16

Capacity: 8000.00 psig
 Last Calib.: 2010.11.02
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP - weak to good blow 1/2" - 7"
 ISI - no blow back
 FFP - BOB 10 min
 FSI - 6" blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW 70%W, 30%M	0.84
45.00	GW & OCM 15%G, 25%O, 10%W, 50%M	0.63
10.00	FREE OIL 95%O, 5%M	0.14
0.00	1185' GIP	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

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Wagner Trust 2-1
1-16-16/Rush
Job Ticket: 40324 **DST#: 3**
Test Start: 2010.11.02 @ 00:18:49

Tool Information

Drill Pipe:	Length: 3334.00 ft	Diameter: 3.80 inches	Volume: 46.77 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: 52000.00 lb
			<u>Total Volume: 46.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3355.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
recorder	0.00	8647		3319.00	
pup joint	5.00			3324.00	
Change Over Sub	1.00			3325.00	
Shut In Tool	5.00			3330.00	
Sampler	3.00			3333.00	
Hydraulic tool	5.00			3338.00	
Jars	5.00			3343.00	
Safety Joint	2.00			3345.00	
Packer	5.00			3350.00	36.00 Bottom Of Top Packer
Packer	5.00			3355.00	
Stubb	1.00			3356.00	
Recorder	0.00	8647	Inside	3356.00	
Recorder	0.00	8365	Outside	3356.00	
Blank Spacing	31.00			3387.00	
Perforations	15.00			3402.00	
Bullnose	3.00			3405.00	50.00 Bottom Packers & Anchor
Total Tool Length:	86.00				



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 38000 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.38 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5000.00 ppm		
Filter Cake: inches		

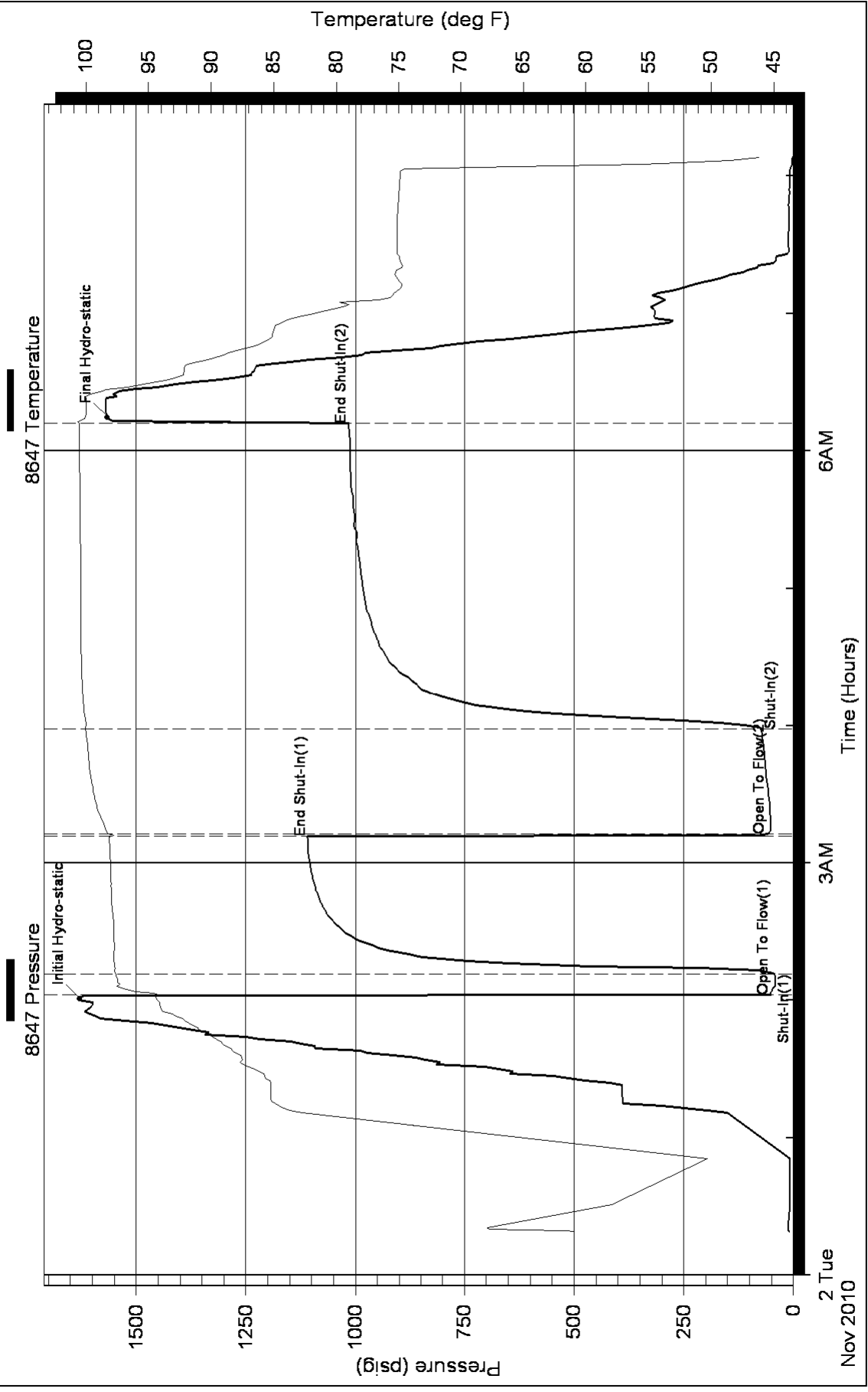
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MW 70%W, 30%M	0.842
45.00	GW & OCM 15%G, 25%O, 10%W, 50%M	0.631
10.00	FREE OIL 95%O, 5%M	0.140
0.00	1185' GIP	0.000

Total Length: 115.00 ft Total Volume: 1.613 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time



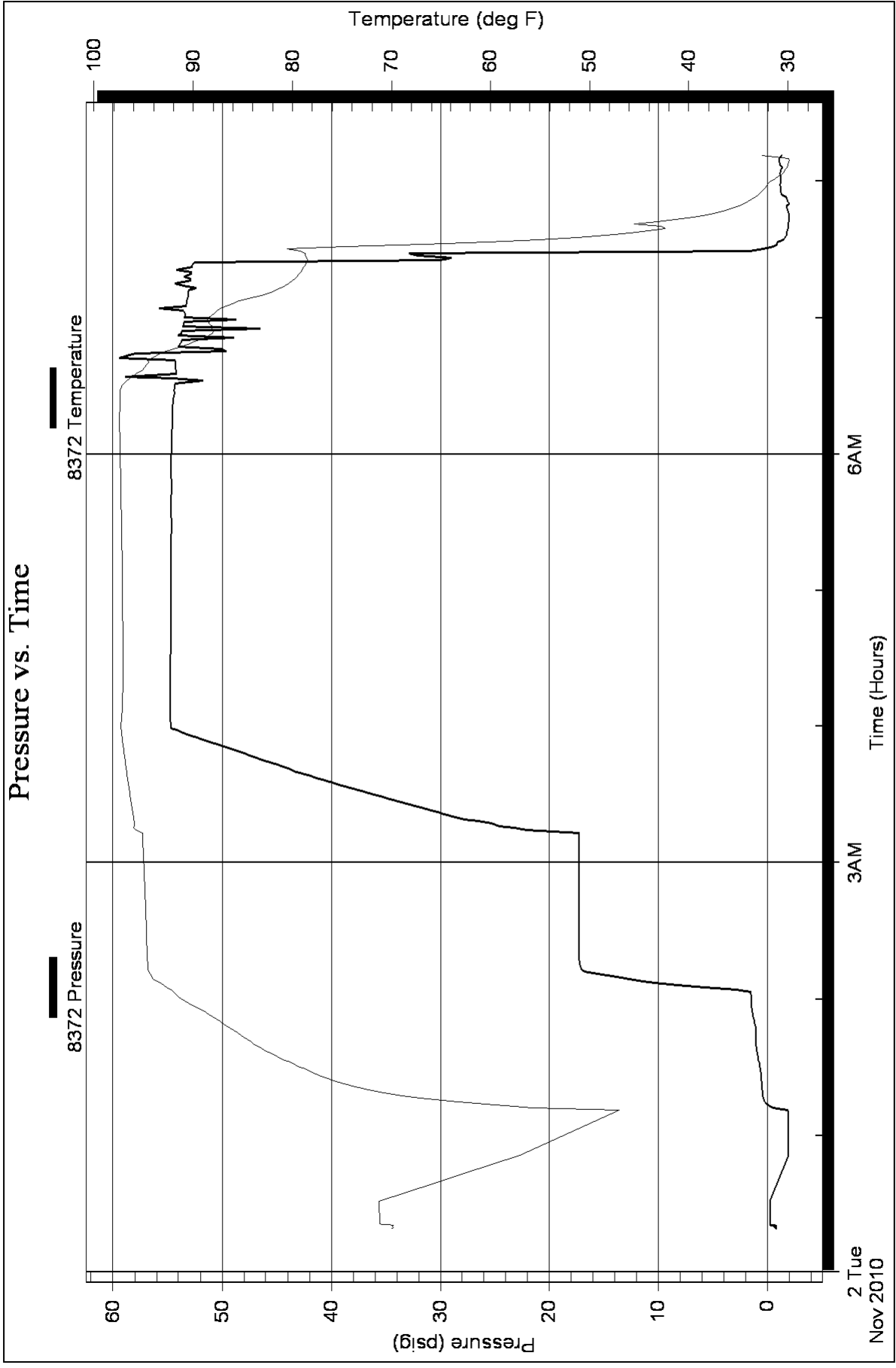
Serial #: 8372

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1-16-16/Rush

DST Test Number: 3

Pressure vs. Time



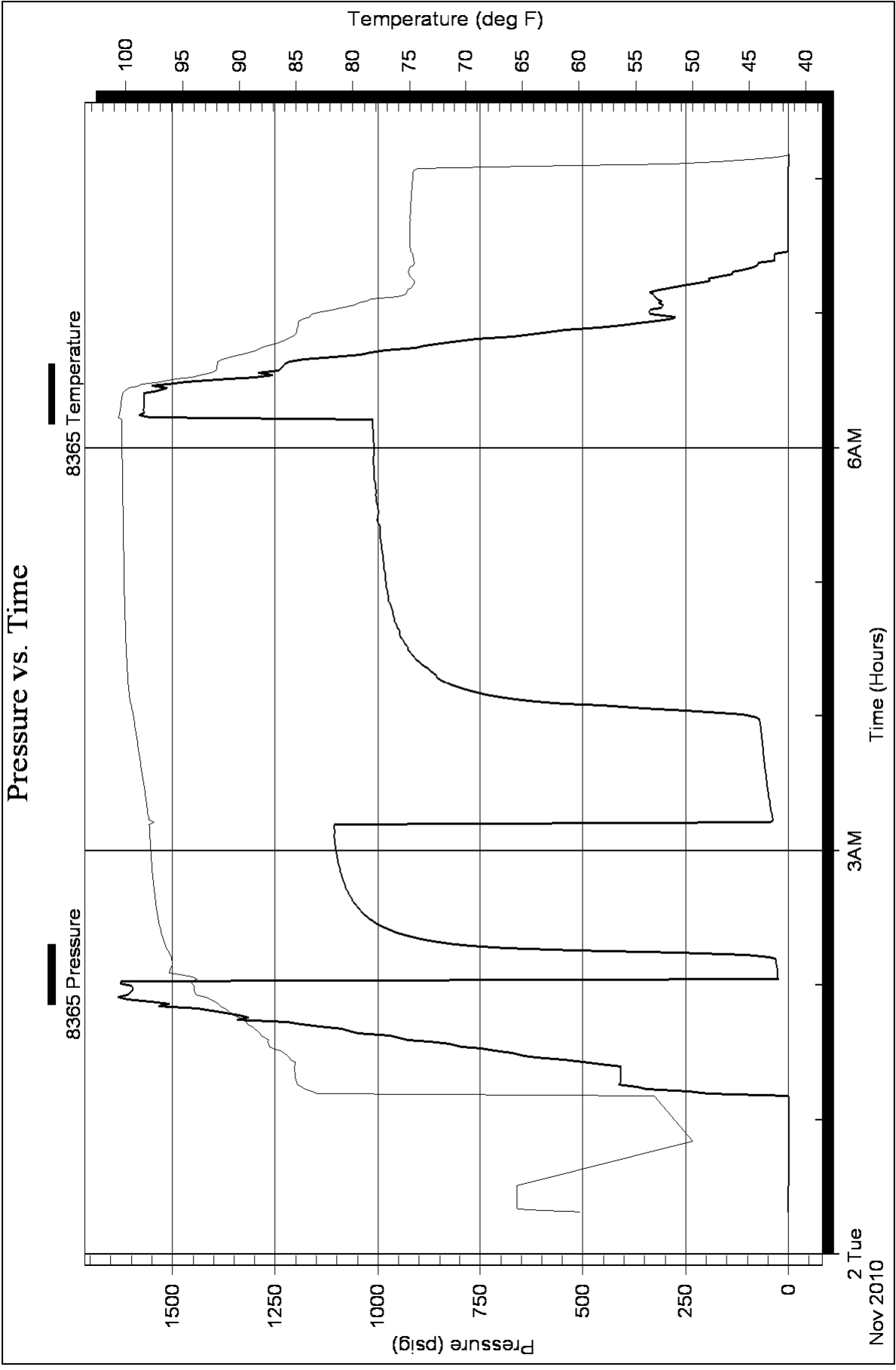
Serial #: 8365

Outside Sam Gary

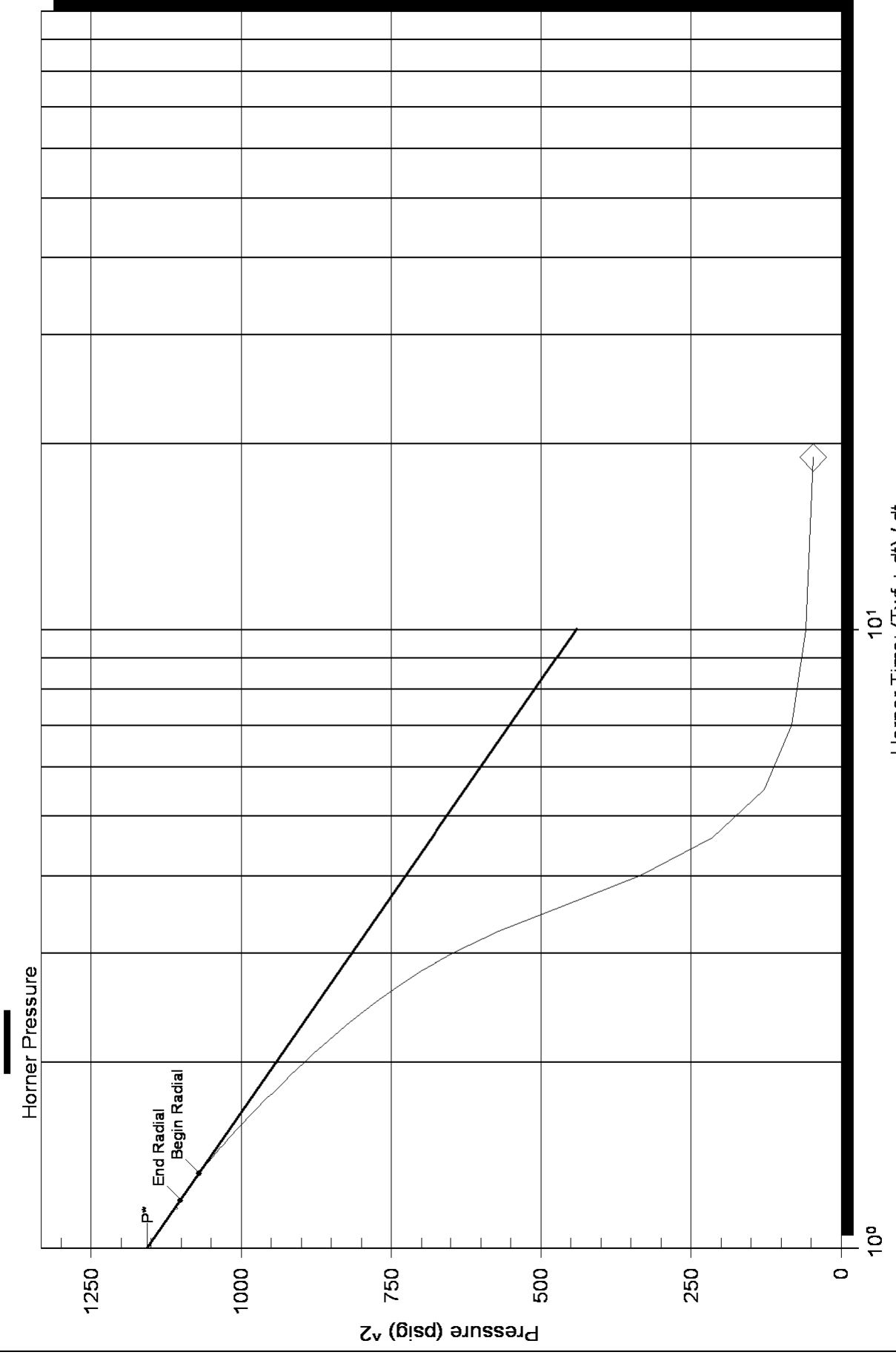
1-16-16/Rush

DST Test Number: 3

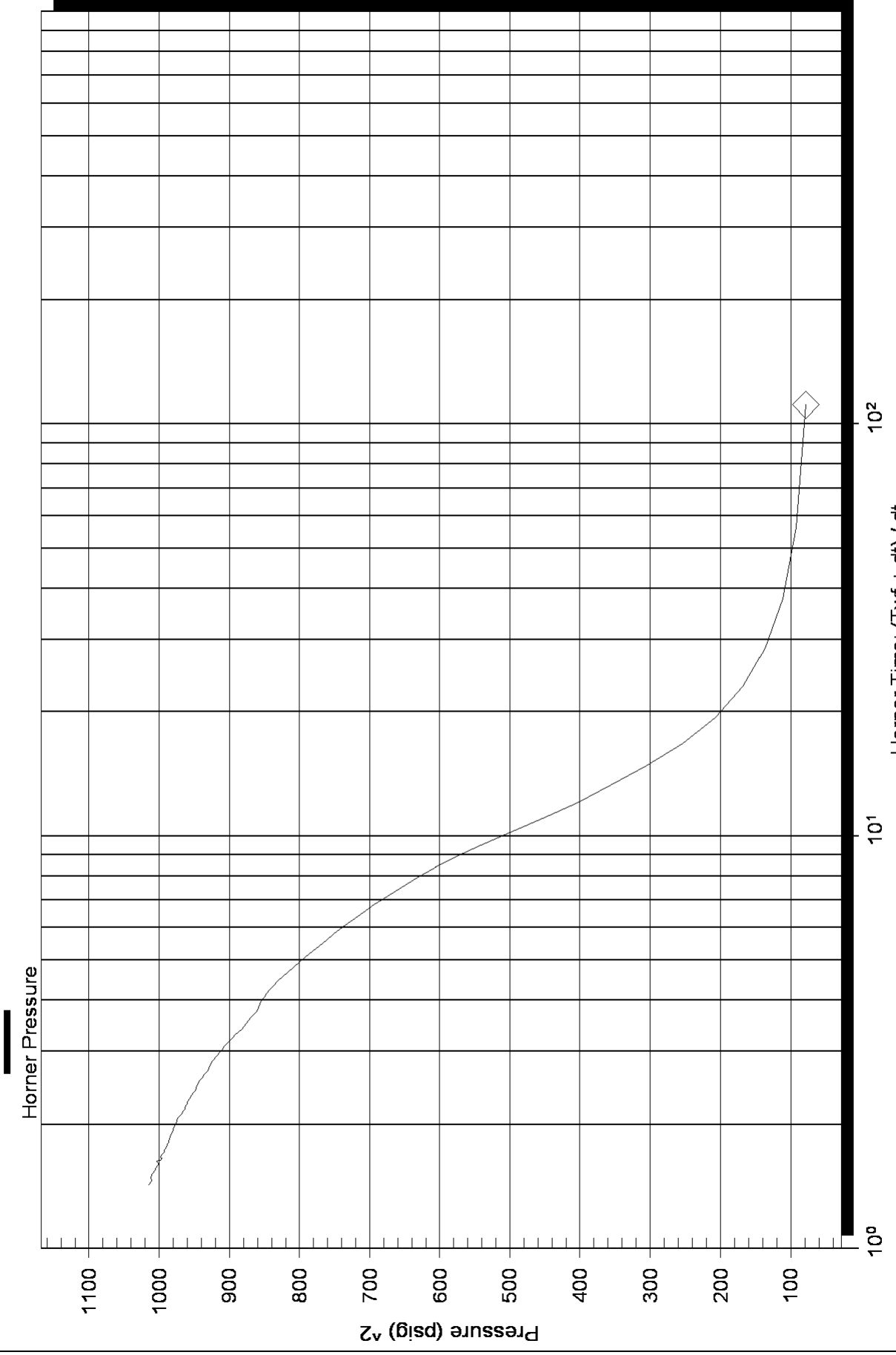
Pressure vs. Time



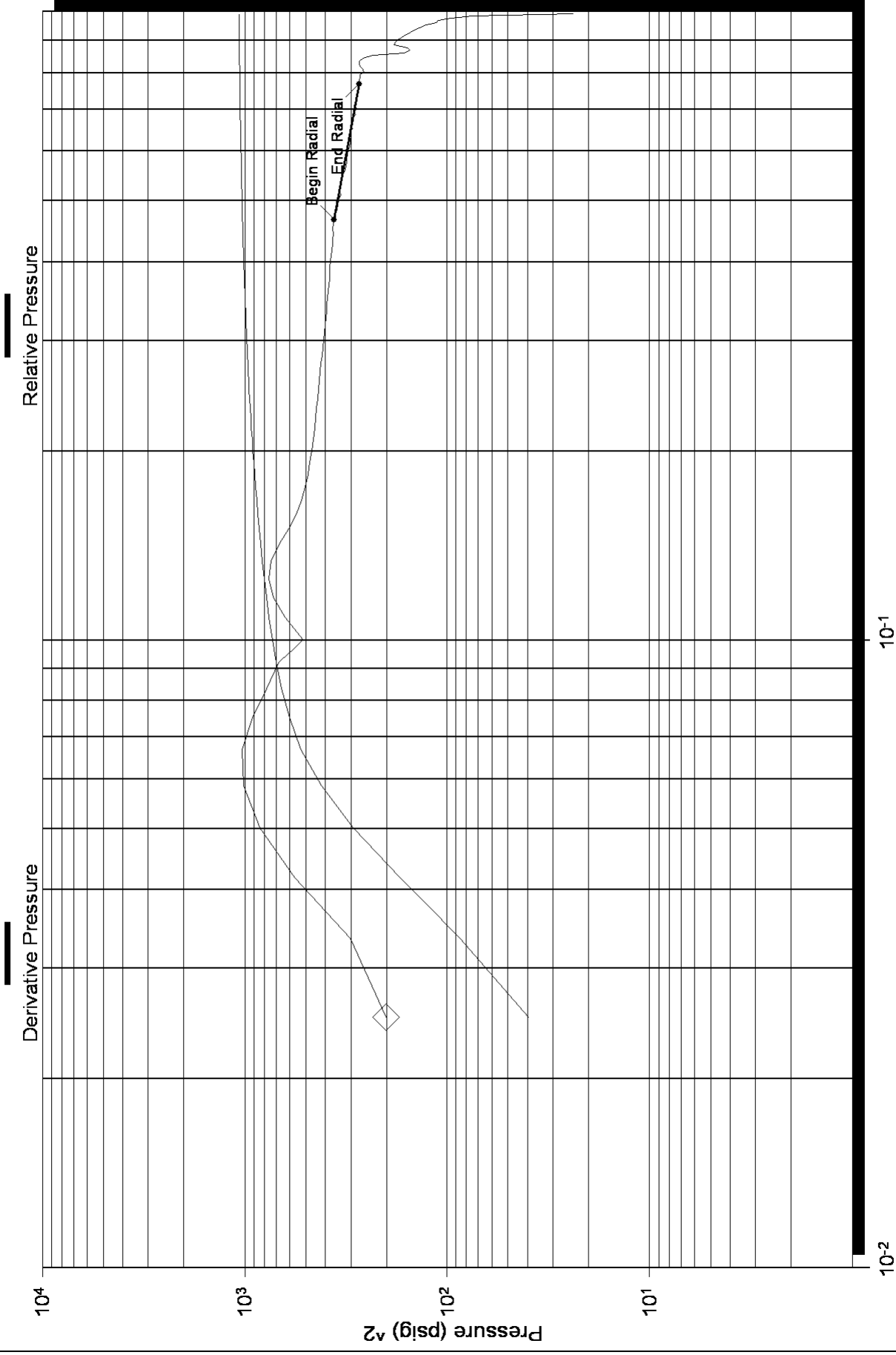
Homer Plot



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

