



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Neil Sharp

26-16-16 Rush, Ks

Yarmer 1-26

Start Date: 2011.07.13 @ 22:34:28

End Date: 2011.07.14 @ 06:32:28

Job Ticket #: 43420 DST #: 1

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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Yarmer 1-26

1515 Wynkoop St. Ste 700
Denver, CO 80202

26-16-16 Rush, Ks

Job Ticket: 43420

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.07.13 @ 22:34:28

GENERAL INFORMATION:

Formation: **Toronto - LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:42:28

Time Test Ended: 06:32:28

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: 3240.00 ft (KB) To 3302.00 ft (KB) (TVD)

Reference Elevations: 1978.00 ft (KB)

Total Depth: 3302.00 ft (KB) (TVD)

1968.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 254.47 psig @ 3247.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.13

End Date:

2011.07.14

Last Calib.:

2011.07.14

Start Time: 22:34:29

End Time:

06:32:28

Time On Btm:

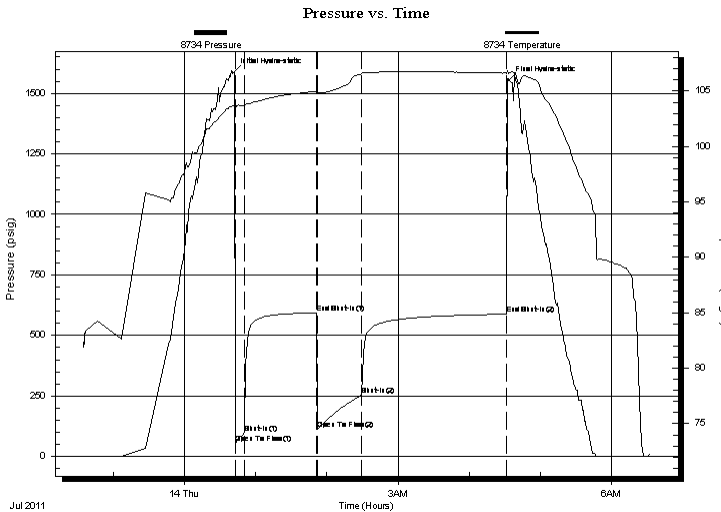
2011.07.14 @ 00:40:58

Time Off Btm:

2011.07.14 @ 04:33:28

TEST COMMENT: 10 - IFP - BOB 4 1/2 min
60 - ISI - no blow back
40 - FFP - BOB 6 min
120 - FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1585.28	103.73	Initial Hydro-static
2	54.92	103.44	Open To Flow (1)
10	98.34	103.71	Shut-In(1)
70	594.05	104.96	End Shut-In(1)
71	113.98	104.84	Open To Flow (2)
109	254.47	106.57	Shut-In(2)
231	587.35	106.63	End Shut-In(2)
233	1553.03	106.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	MW 95%W, 5%M	5.26
75.00	DRL MUD 100%	1.05

Gas Rates

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



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Job Ticket: 43420

DST#: 1

ATTN: Neil Sharp

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GENERAL INFORMATION:

Formation: **Toronto - LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:42:28

Time Test Ended: 06:32:28

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3240.00 ft (KB) To 3302.00 ft (KB) (TVD)**

Reference Elevations: 1978.00 ft (KB)

Total Depth: 3302.00 ft (KB) (TVD)

1968.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8372 Inside

Press @RunDepth: psig @ 3247.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.13 End Date: 2011.07.14

Last Calib.: 2011.07.14

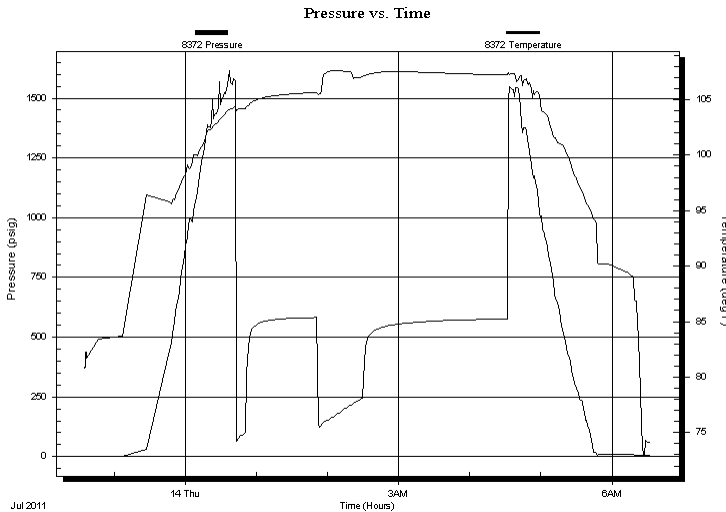
Start Time: 22:34:43 End Time: 06:32:42

Time On Btm:

Time Off Btm:

TEST COMMENT: 10 - IFP - BOB 4 1/2 min
60 - ISI - no blow back
40 - FFP - BOB 6 min
120 - FSI - no blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
375.00	MW 95%W, 5%M	5.26
75.00	DRL MUD 100%	1.05

Gas Rates

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



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Job Ticket: 43420

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.07.13 @ 22:34:28

GENERAL INFORMATION:

Formation: **Toronto - LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:42:28
 Time Test Ended: 06:32:28

Test Type: Conventional Bottom Hole
 Tester: Brian Fairbank
 Unit No: 41

Interval: 3240.00 ft (KB) To 3302.00 ft (KB) (TVD)
 Total Depth: 3302.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

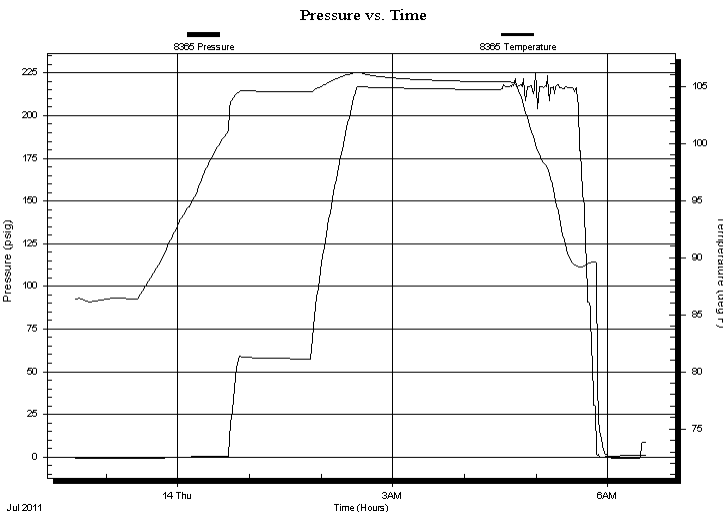
Reference Elevations: 1978.00 ft (KB)
 1968.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid

Press @ RunDepth: psig @ 3205.00 ft (KB)
 Start Date: 2011.07.13 End Date: 2011.07.14
 Start Time: 22:34:28 End Time: 06:32:57

Capacity: 8000.00 psig
 Last Calib.: 2011.07.14
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 10 - IFP - BOB 4 1/2 min
 60 - ISI - no blow back
 40 - FFP - BOB 6 min
 120 - FSI - no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
375.00	MW 95%W, 5%M	5.26
75.00	DRL MUD 100%	1.05

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

Yarmer 1-26

1515 Wynkoop St. Ste 700
Denver, CO 80202

26-16-16 Rush, Ks

Job Ticket: 43420

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.07.13 @ 22:34:28

Tool Information

Drill Pipe:	Length: 3221.00 ft	Diameter: 3.80 inches	Volume: 45.18 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 45.18 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3240.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	97.00 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	3205.00	
Blank Spacing	5.00			3210.00	
Shut In Tool	5.00			3215.00	
Sampler	3.00			3218.00	
Hydraulic tool	5.00			3223.00	
Jars	5.00			3228.00	
Safety Joint	2.00			3230.00	
Packer	5.00			3235.00	35.00 Bottom Of Top Packer
Packer	5.00			3240.00	
Stubb	1.00			3241.00	
Perforations	5.00			3246.00	
Change Over Sub	1.00			3247.00	
Recorder	0.00	8372	Inside	3247.00	
Recorder	0.00	8734	Outside	3247.00	
Blank Spacing	31.00			3278.00	
Change Over Sub	1.00			3279.00	
Perforations	20.00			3299.00	
Bullnose	3.00			3302.00	62.00 Bottom Packers & Anchor

Total Tool Length: 97.00



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FLUID SUMMARY

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Job Ticket: 43420

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.07.13 @ 22:34:28

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

50000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
375.00	MW 95%W, 5%M	5.260
75.00	DRL MUD 100%	1.052

Total Length: 450.00 ft

Total Volume: 6.312 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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GAS RATES

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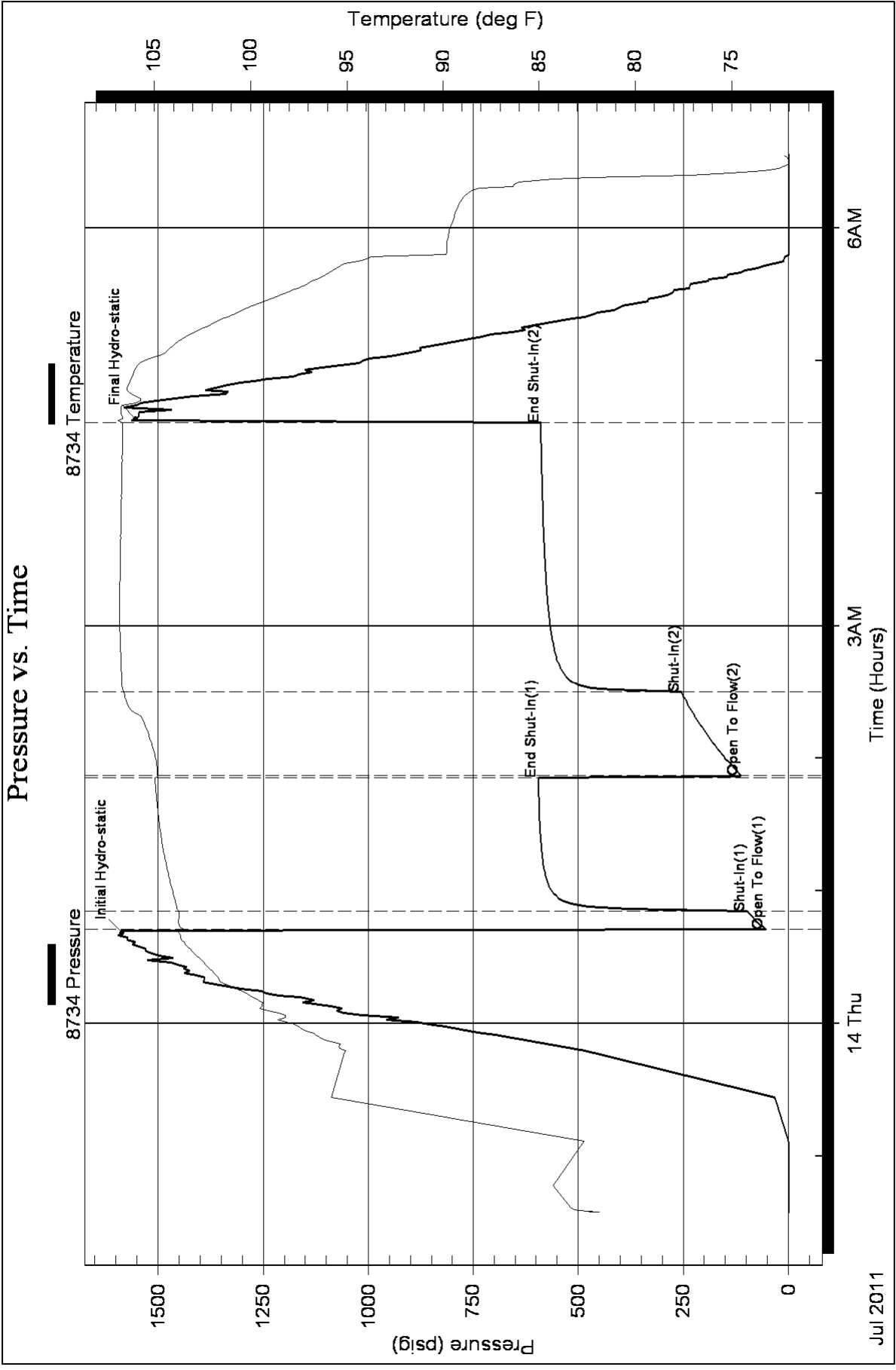
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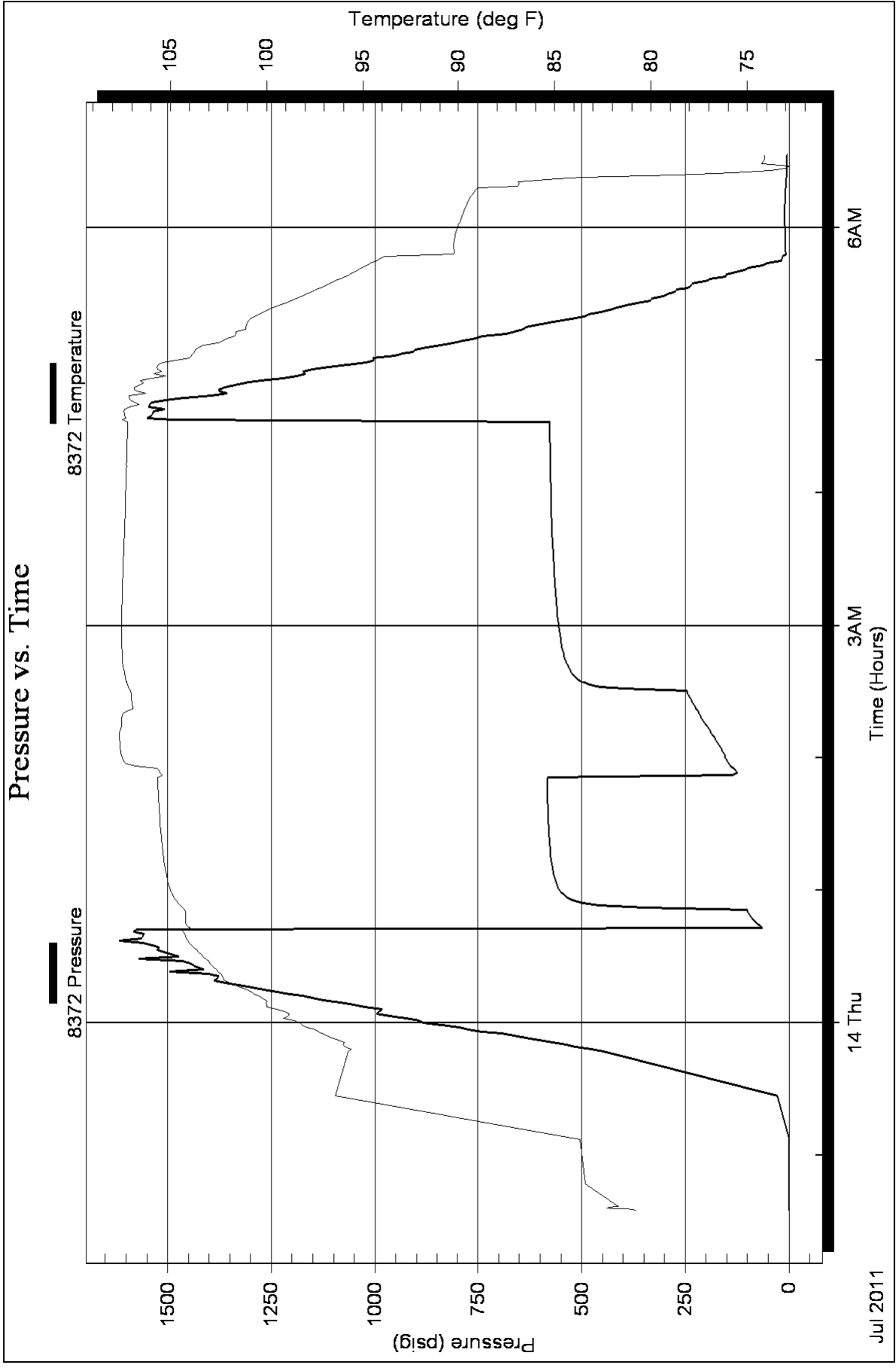
Gas Rates Information

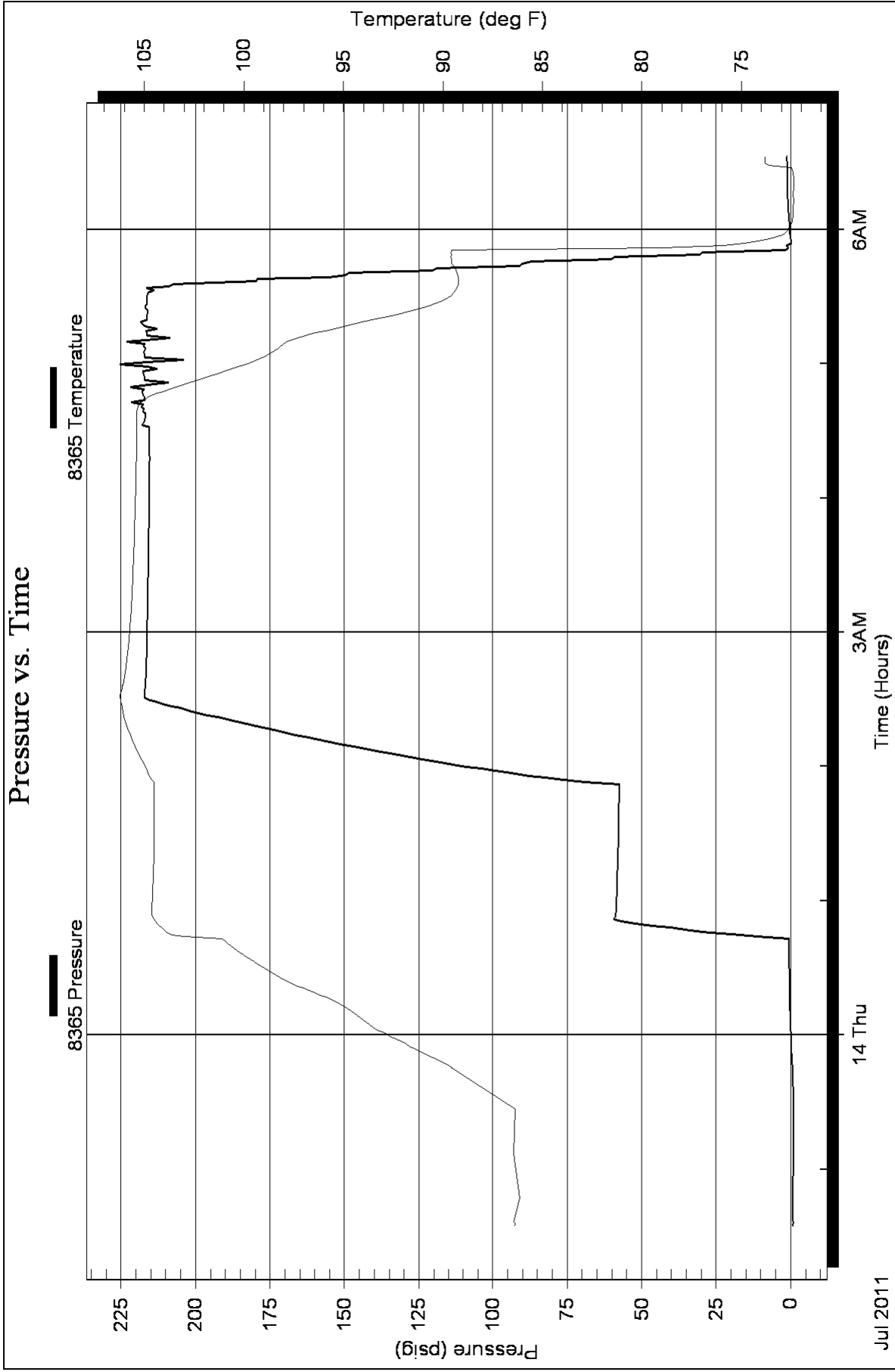
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

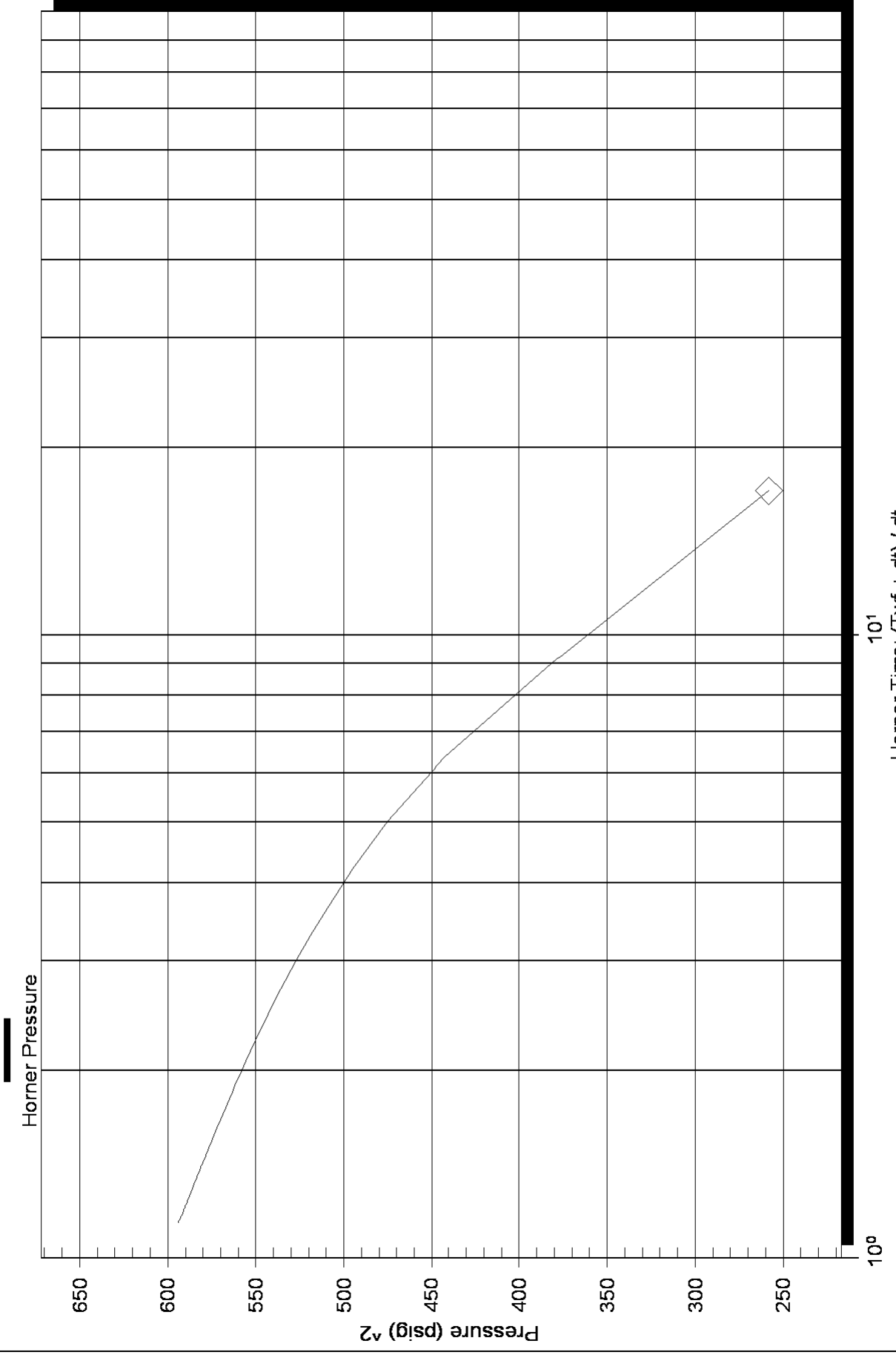
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00



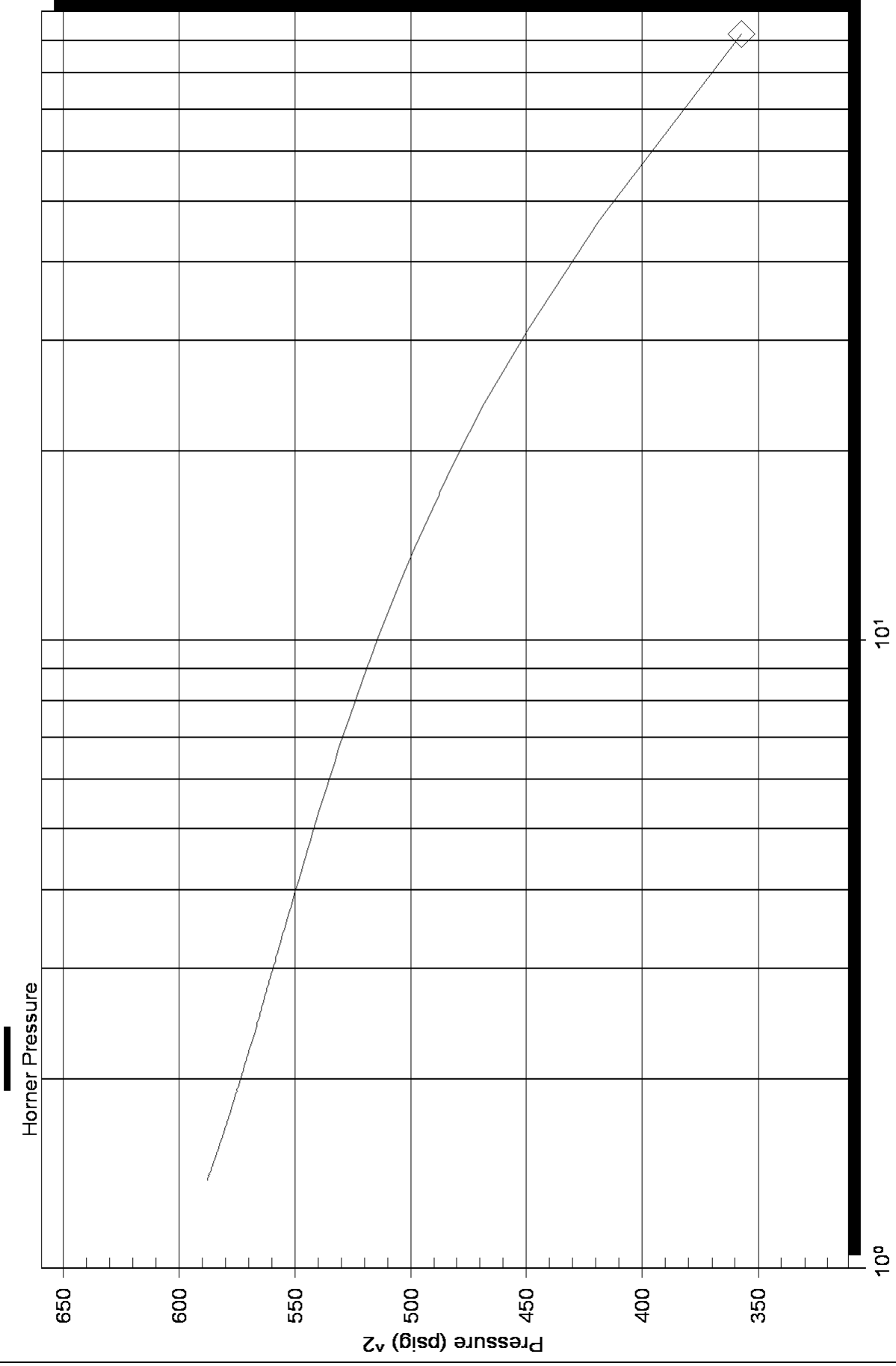




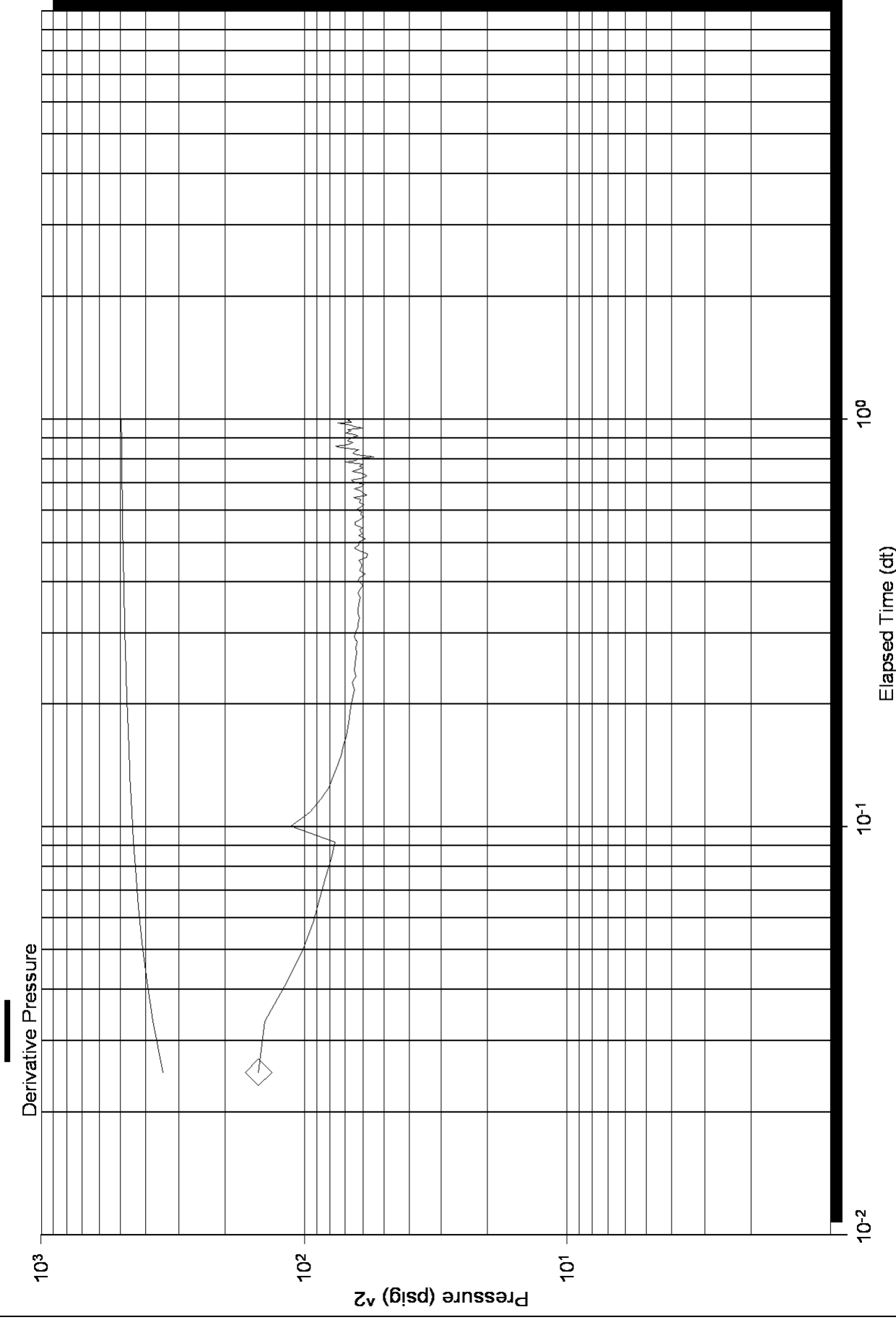
Homer Plot



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

