



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Neil Sharp

25-16-16 Rush, Ks

Maier Family Trust 1-25

Start Date: 2011.09.26 @ 21:17:10

End Date: 2011.09.27 @ 05:22:40

Job Ticket #: 45152 DST #: 3

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



TRILOBITE TESTING, INC.

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Job Ticket: 45152

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Test Start: 2011.09.26 @ 21:17:10

GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:10:10

Time Test Ended: 05:22:40

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: 3485.00 ft (KB) To 3540.00 ft (KB) (TVD)

Reference Elevations: 1971.00 ft (KB)

Total Depth: 3540.00 ft (KB) (TVD)

1961.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 387.46 psig @ 3489.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.26

End Date:

2011.09.27

Last Calib.:

2011.09.27

Start Time:

21:17:11

End Time:

05:22:40

Time On Btm:

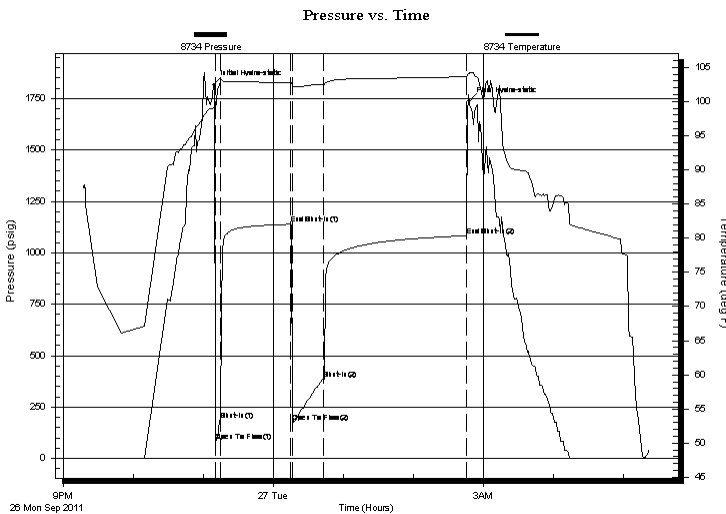
2011.09.26 @ 23:08:40

Time Off Btm:

2011.09.27 @ 02:47:40

TEST COMMENT: 5 - IFP - BOB 2 min
60 - ISI - 3" blow back - died 21 min
30 - FFP - BOB 1 1/2 min
12 - FSI - BOB 9 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1818.01	99.08	Initial Hydro-static
2	84.00	98.68	Open To Flow (1)
6	187.67	102.87	Shut-In(1)
66	1138.85	102.81	End Shut-In(1)
67	175.42	102.43	Open To Flow (2)
94	387.46	102.53	Shut-In(2)
217	1083.20	103.62	End Shut-In(2)
219	1737.69	104.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	VSOCM 5%O, 95%M	0.63
170.00	GMO 20%G, 50%O, 30%M	2.38
700.00	FREE OIL 95%O, 5%M	9.82
0.00	510' GIP	0.00

Gas Rates

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



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TOOL DIAGRAM

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Test Start: 2011.09.26 @ 21:17:10

Tool Information

Drill Pipe:	Length: 3475.00 ft	Diameter: 3.80 inches	Volume: 48.75 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: 62000.00 lb
			Total Volume: 48.75 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3485.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	90.00 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	3450.00	
Blank Spacing	5.00			3455.00	
Shut In Tool	5.00			3460.00	
Sampler	3.00			3463.00	
Hydraulic tool	5.00			3468.00	
Jars	5.00			3473.00	
Safety Joint	2.00			3475.00	
Packer	5.00			3480.00	35.00 Bottom Of Top Packer
Packer	5.00			3485.00	
Stubb	1.00			3486.00	
Perforations	3.00			3489.00	
Recorder	0.00	8372	Inside	3489.00	
Recorder	0.00	8734	Outside	3489.00	
Change Over Sub	1.00			3490.00	
Blank Spacing	31.00			3521.00	
Change Over Sub	1.00			3522.00	
Perforations	15.00			3537.00	
Bullnose	3.00			3540.00	55.00 Bottom Packers & Anchor

Total Tool Length: 90.00



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FLUID SUMMARY

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DST#: 3

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Test Start: 2011.09.26 @ 21:17:10

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 64.00 sec/qt
Water Loss: 9.18 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 39 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	VSOCM 5%O, 95%M	0.631
170.00	GMO 20%G, 50%O, 30%M	2.385
700.00	FREE OIL 95%O, 5%M	9.819
0.00	510' GIP	0.000

Total Length: 915.00 ft Total Volume: 12.835 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: 1500 ML GAS, 1500 ML OIL, 1000 ML MUD, 295 LBS



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GAS RATES

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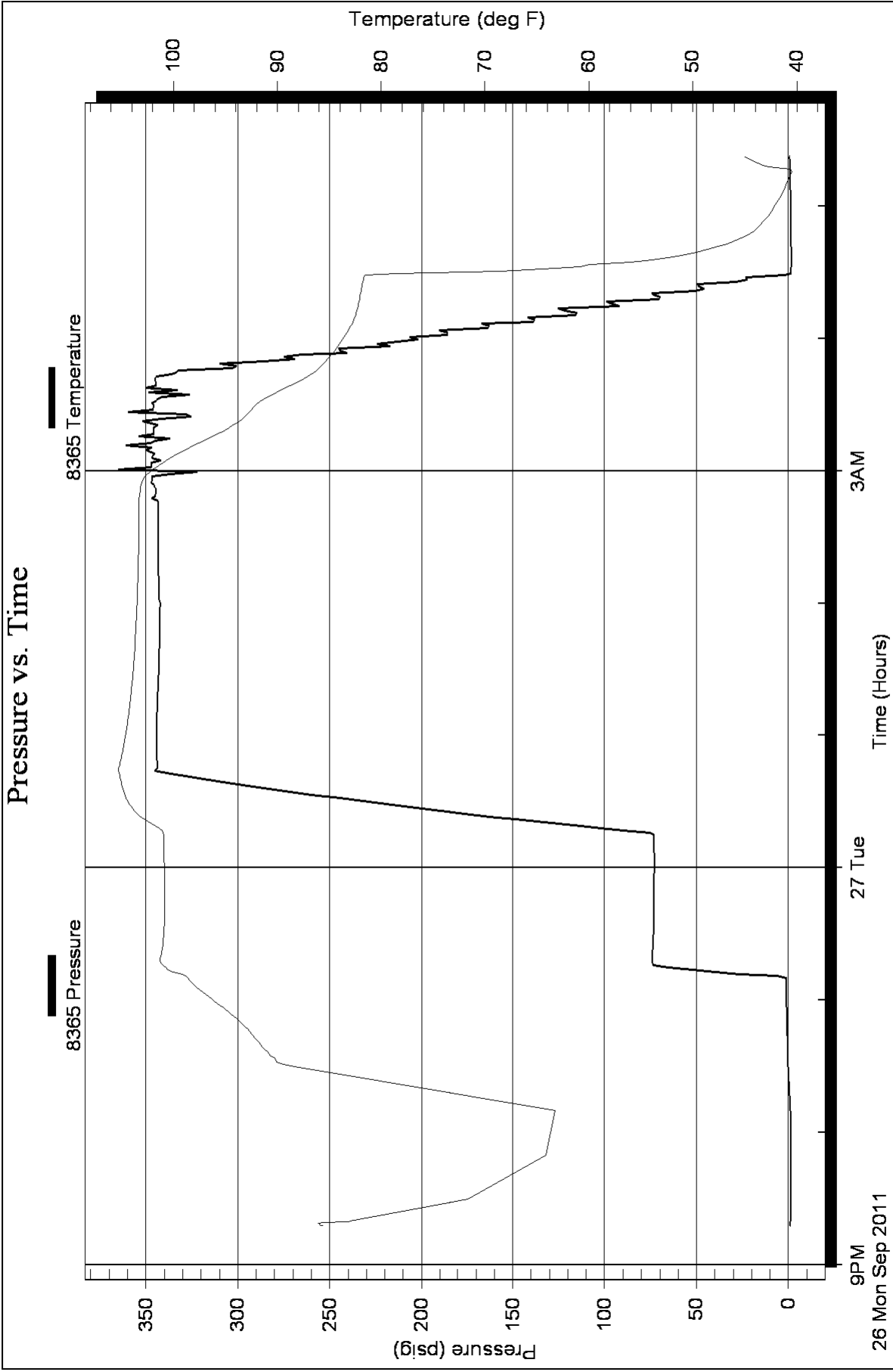
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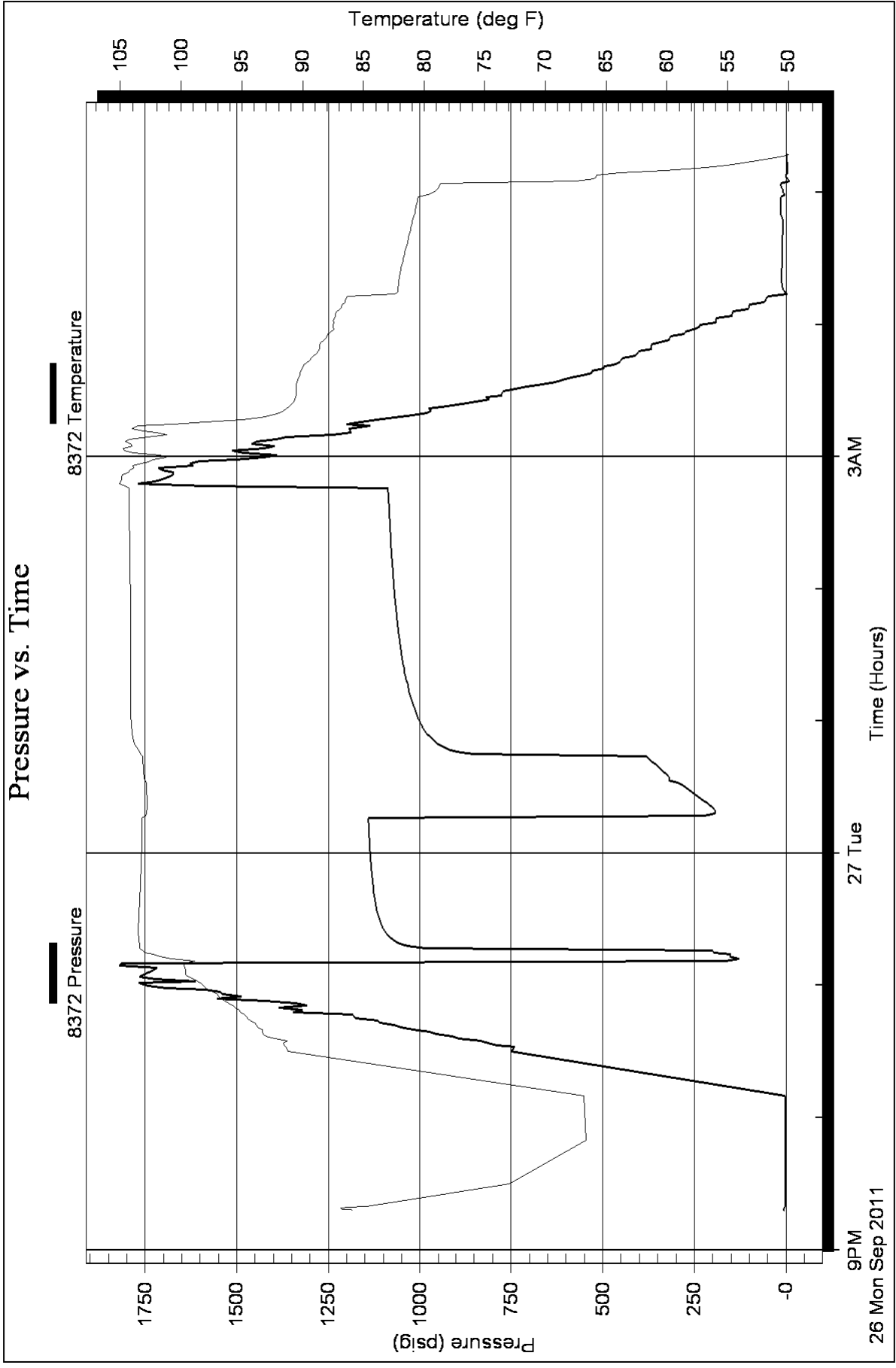
Gas Rates Information

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

Gas Rates Table

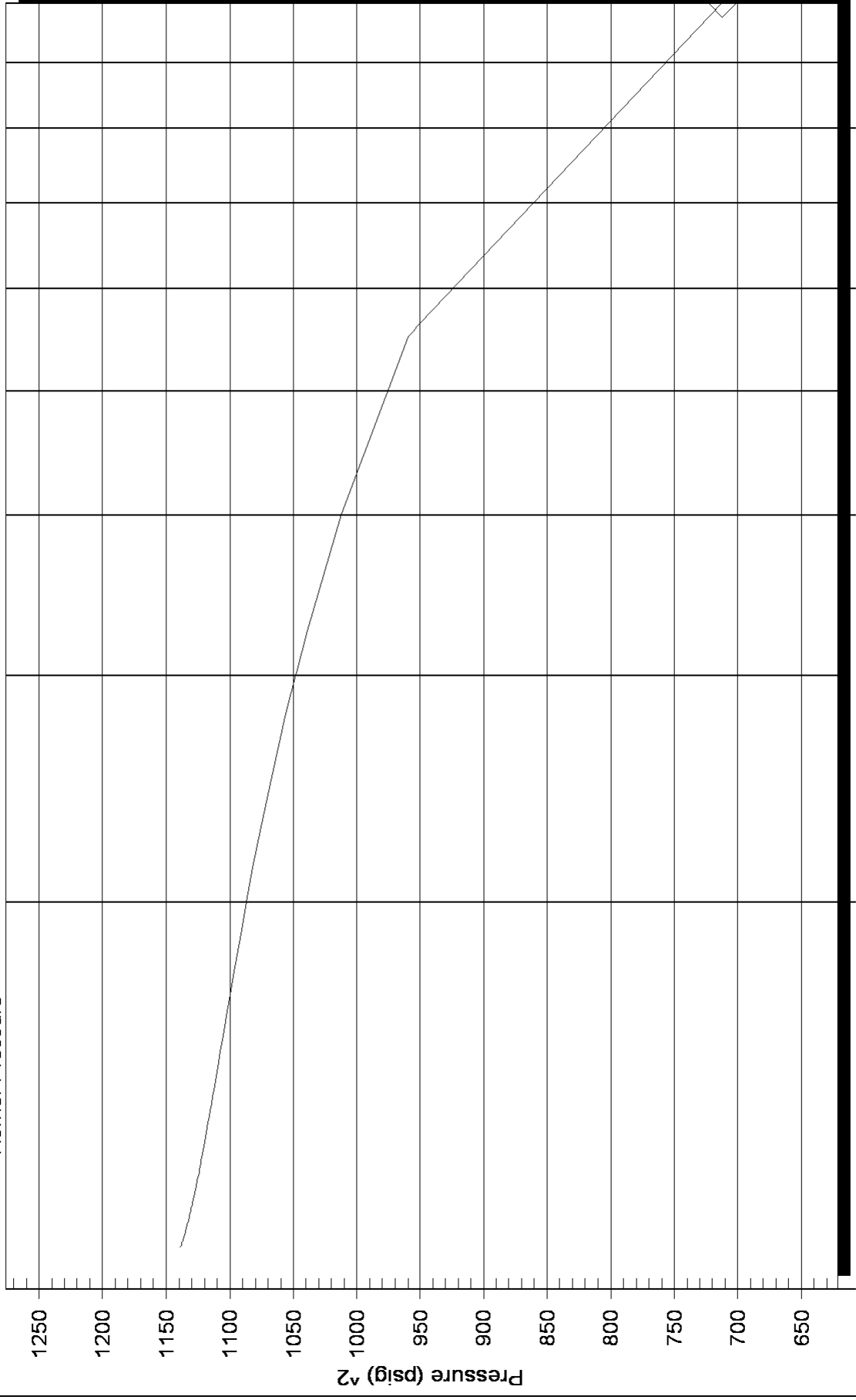
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00



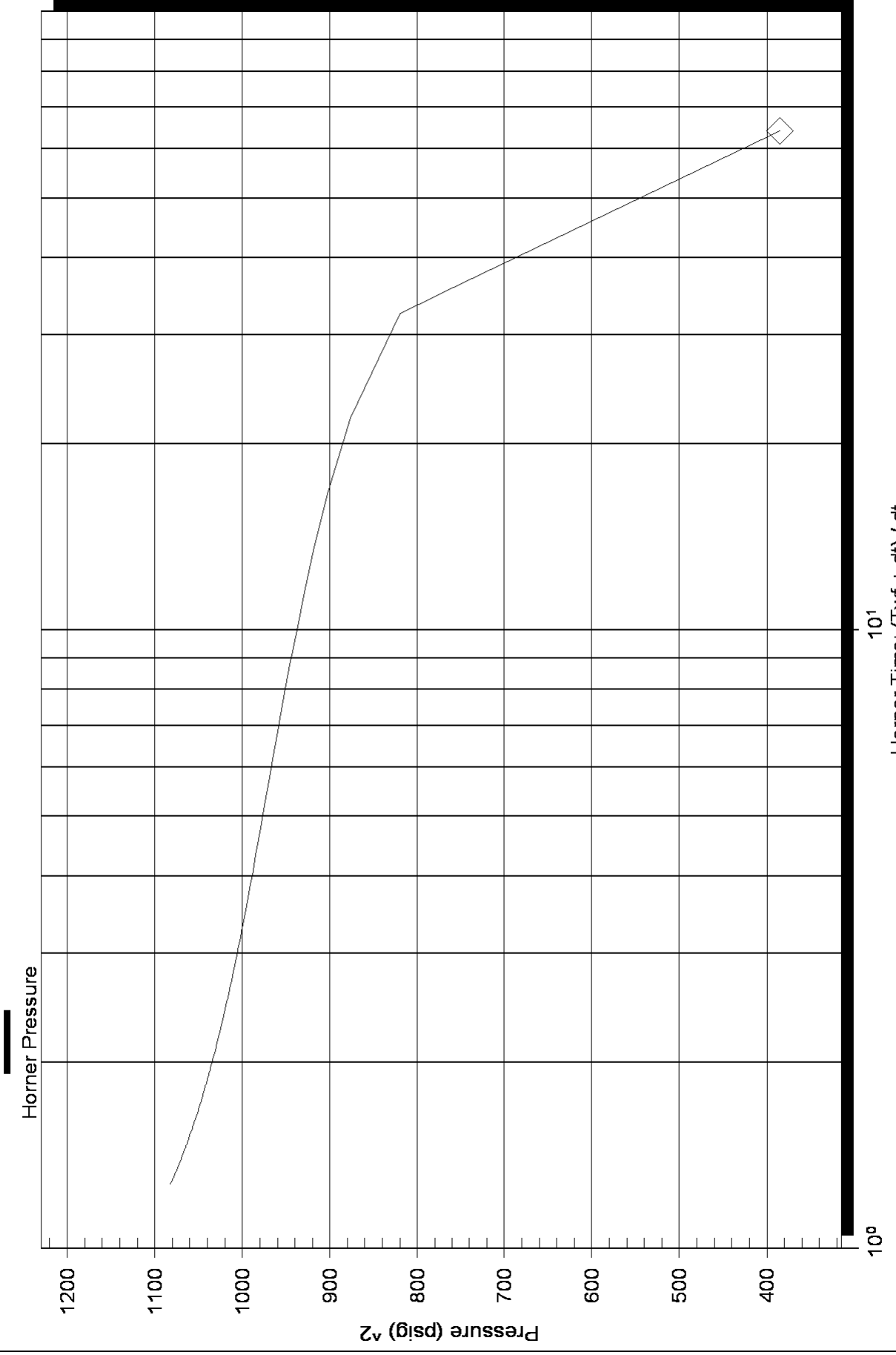


Homer Plot

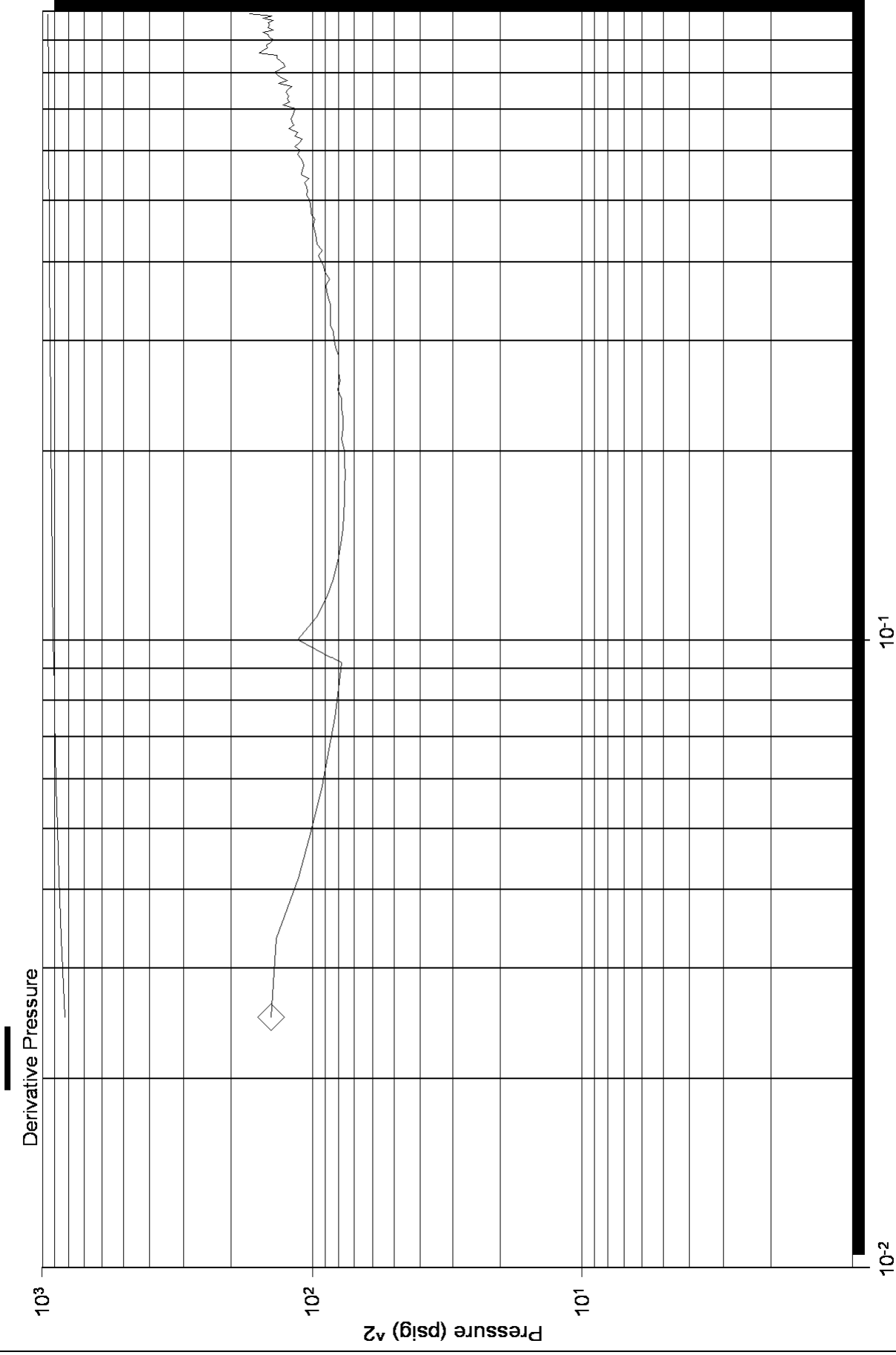
Horner Pressure



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

