



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Clayton Camozzi

32-15-15 Russell, Ks

Hopkins et al 1-31

Start Date: 2011.09.05 @ 13:52:38

End Date: 2011.09.05 @ 19:36:38

Job Ticket #: 44166 DST #: 2

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



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DRILL STEM TEST REPORT

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Denver, CO 80202

32-15-15 Russell, Ks

Job Ticket: 44166

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2011.09.05 @ 13:52:38

GENERAL INFORMATION:

Formation: **LKC "F-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:17:08

Time Test Ended: 19:36:38

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: 3258.00 ft (KB) To 3291.00 ft (KB) (TVD)

Reference Elevations: 1936.00 ft (KB)

Total Depth: 3291.00 ft (KB) (TVD)

1926.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 19.70 psig @ 3263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.05 End Date: 2011.09.05

Last Calib.: 2011.09.05

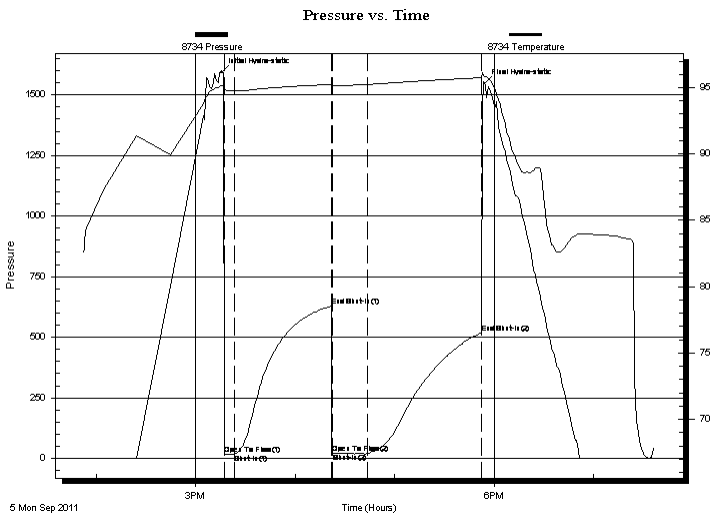
Start Time: 13:52:39 End Time: 19:36:38

Time On Btm: 2011.09.05 @ 15:15:38

Time Off Btm: 2011.09.05 @ 17:54:08

TEST COMMENT: 5 - IFP - dying sur blow
60 - ISI - no blow back
20 - FFP - no blow
70 - FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.63	95.14	Initial Hydro-static
2	16.41	94.62	Open To Flow (1)
8	18.98	94.75	Shut-In(1)
66	628.70	95.25	End Shut-In(1)
67	19.94	94.96	Open To Flow (2)
88	19.70	95.24	Shut-In(2)
157	518.77	95.74	End Shut-In(2)
159	1548.11	95.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100%	0.03

Gas Rates

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



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Time Test Ended: 19:36:38

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Reference Elevations: 1936.00 ft (KB)

Total Depth: 3291.00 ft (KB) (TVD)

1926.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid

Press @ RunDepth: psig @ 3223.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.05

End Date:

2011.09.05

Last Calib.:

2011.09.05

Start Time: 13:52:41

End Time:

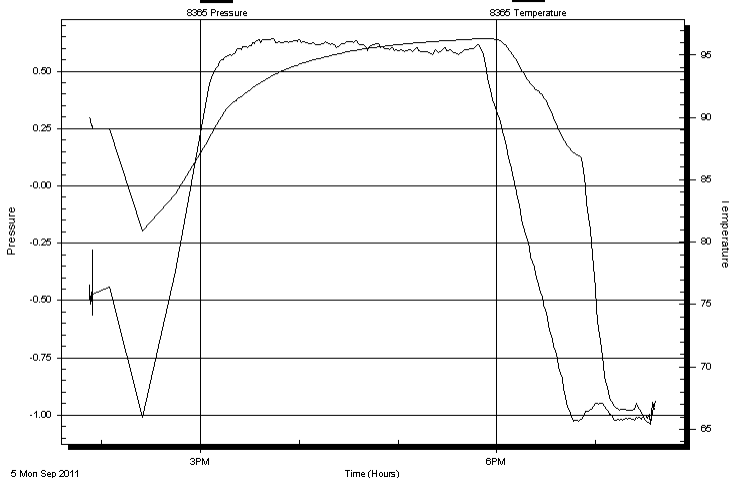
19:36:40

Time On Btm:

Time Off Btm:

TEST COMMENT: 5 - IFP - dying sur blow
60 - ISI - no blow back
20 - FFP - no blow
70 - FSI - no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100%	0.03

Gas Rates

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



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Job Ticket: 44166

DST#: 2

ATTN: Clayton Camozzi

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Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

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Reference Elevations: 1936.00 ft (KB)

Total Depth: 3291.00 ft (KB) (TVD)

1926.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8372 Inside

Press @ Run Depth: psig @ 3263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.05 End Date: 2011.09.05

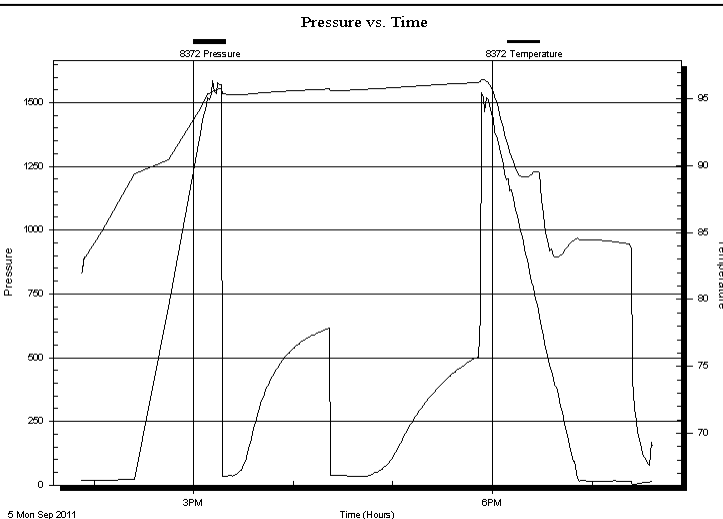
Last Calib.: 2011.09.05

Start Time: 13:52:33 End Time: 19:37:02

Time On Btm:

Time Off Btm:

TEST COMMENT: 5 - IFP - dying sur blow
60 - ISI - no blow back
20 - FFP - no blow
70 - FSI - no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100%	0.03

Gas Rates

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



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TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

Hopkins et al 1-31

1515 Wynkoop St. Ste 700
Denver, CO 80202

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Job Ticket: 44166

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2011.09.05 @ 13:52:38

Tool Information

Drill Pipe:	Length: 3253.00 ft	Diameter: 3.80 inches	Volume: 45.63 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: 45.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3258.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	68.00 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	3223.00	
Blank Spacing	5.00			3228.00	
Shut In Tool	5.00			3233.00	
Sampler	3.00			3236.00	
Hydraulic tool	5.00			3241.00	
Jars	5.00			3246.00	
Safety Joint	2.00			3248.00	
Packer	5.00			3253.00	35.00 Bottom Of Top Packer
Packer	5.00			3258.00	
Stubb	1.00			3259.00	
Perforations	4.00			3263.00	
Recorder	0.00	8372	Inside	3263.00	
Recorder	0.00	8734	Outside	3263.00	
Perforations	25.00			3288.00	
Bullnose	3.00			3291.00	33.00 Bottom Packers & Anchor

Total Tool Length: 68.00



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FLUID SUMMARY

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Test Start: 2011.09.05 @ 13:52:38

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:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud 100%	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl

Num Fluid Samples: 0

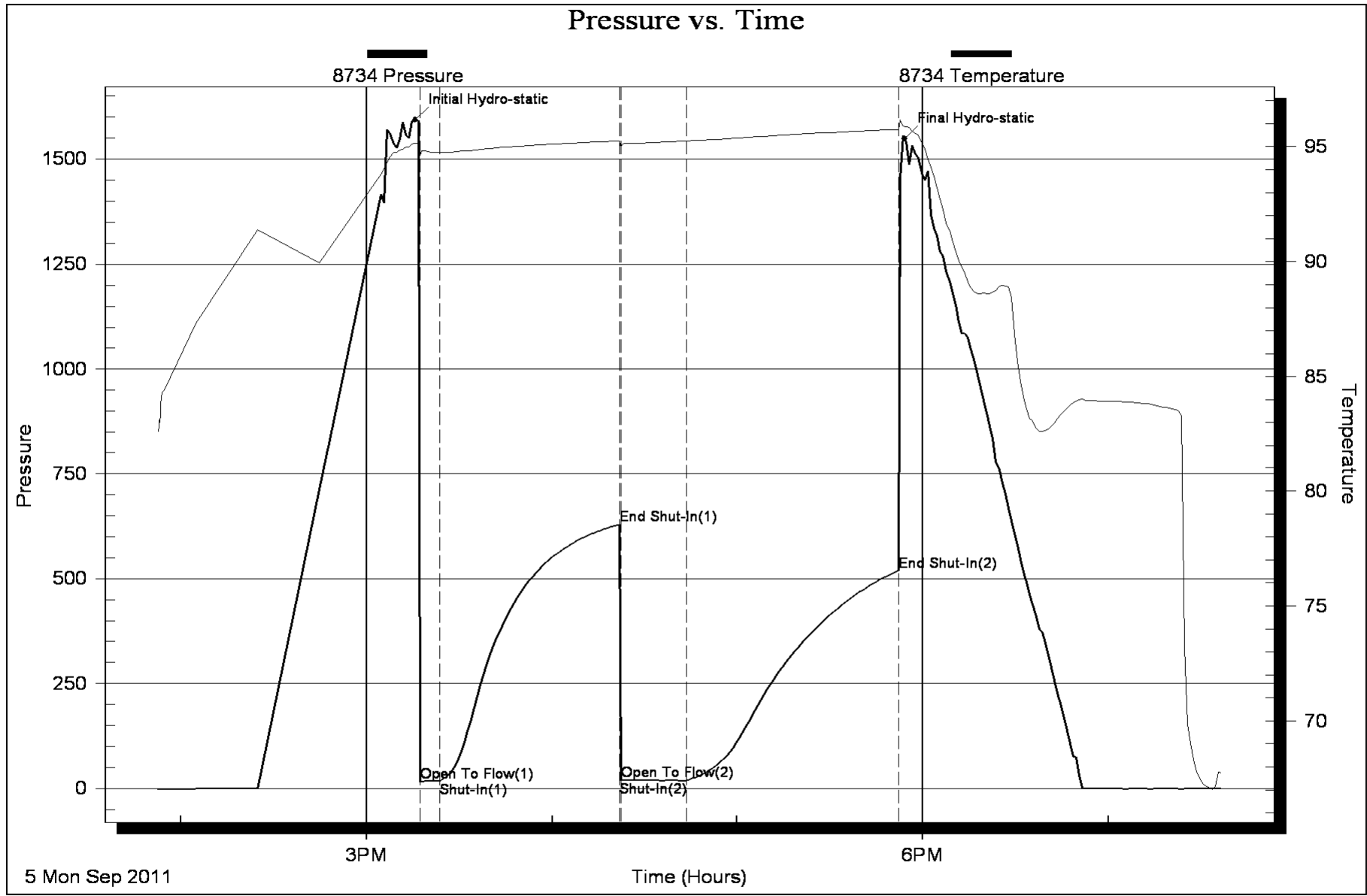
Num Gas Bombs: 0

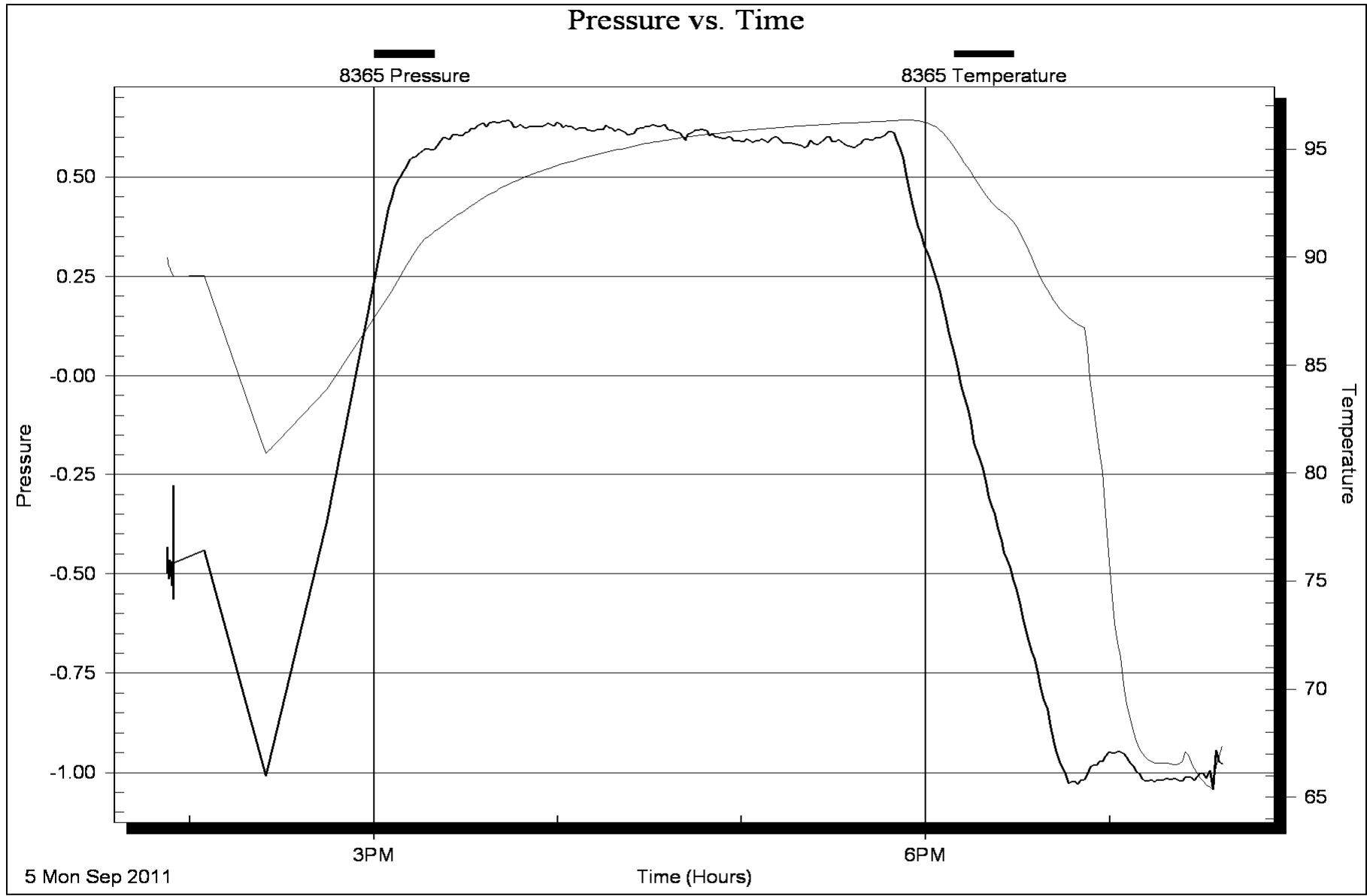
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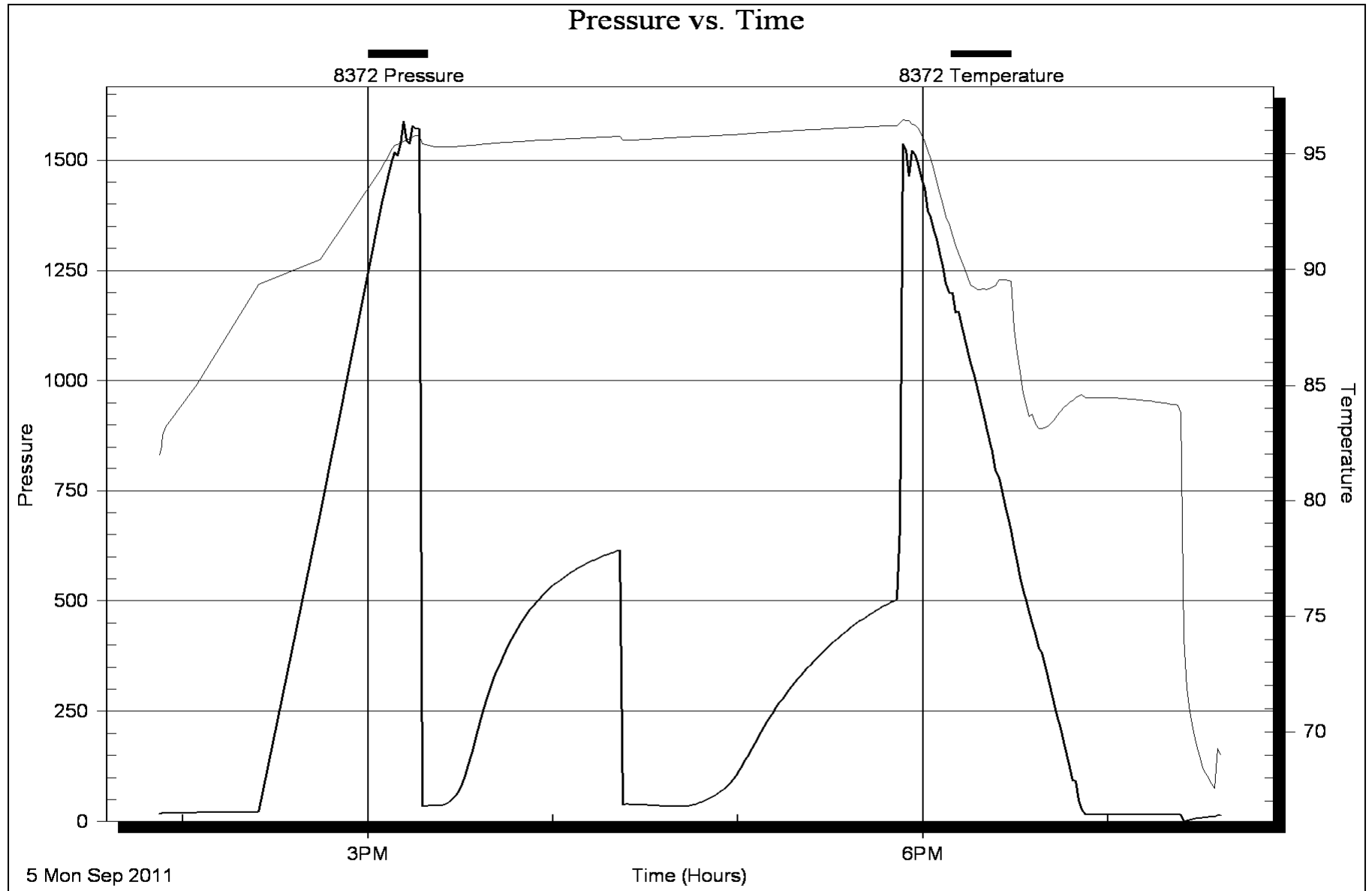
Laboratory Name:

Laboratory Location:

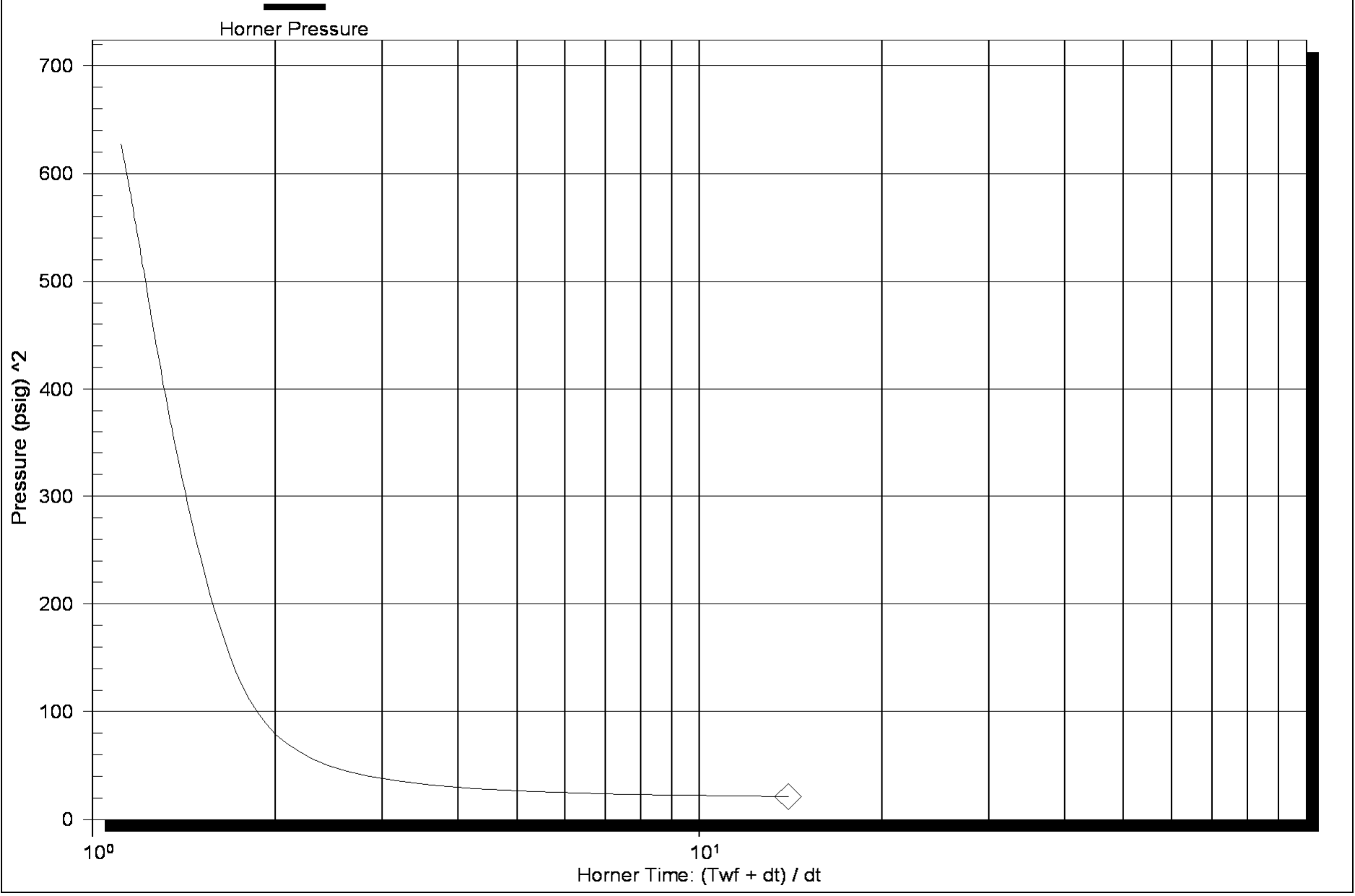
Recovery Comments: 4000 ml MUD, 80 lbs



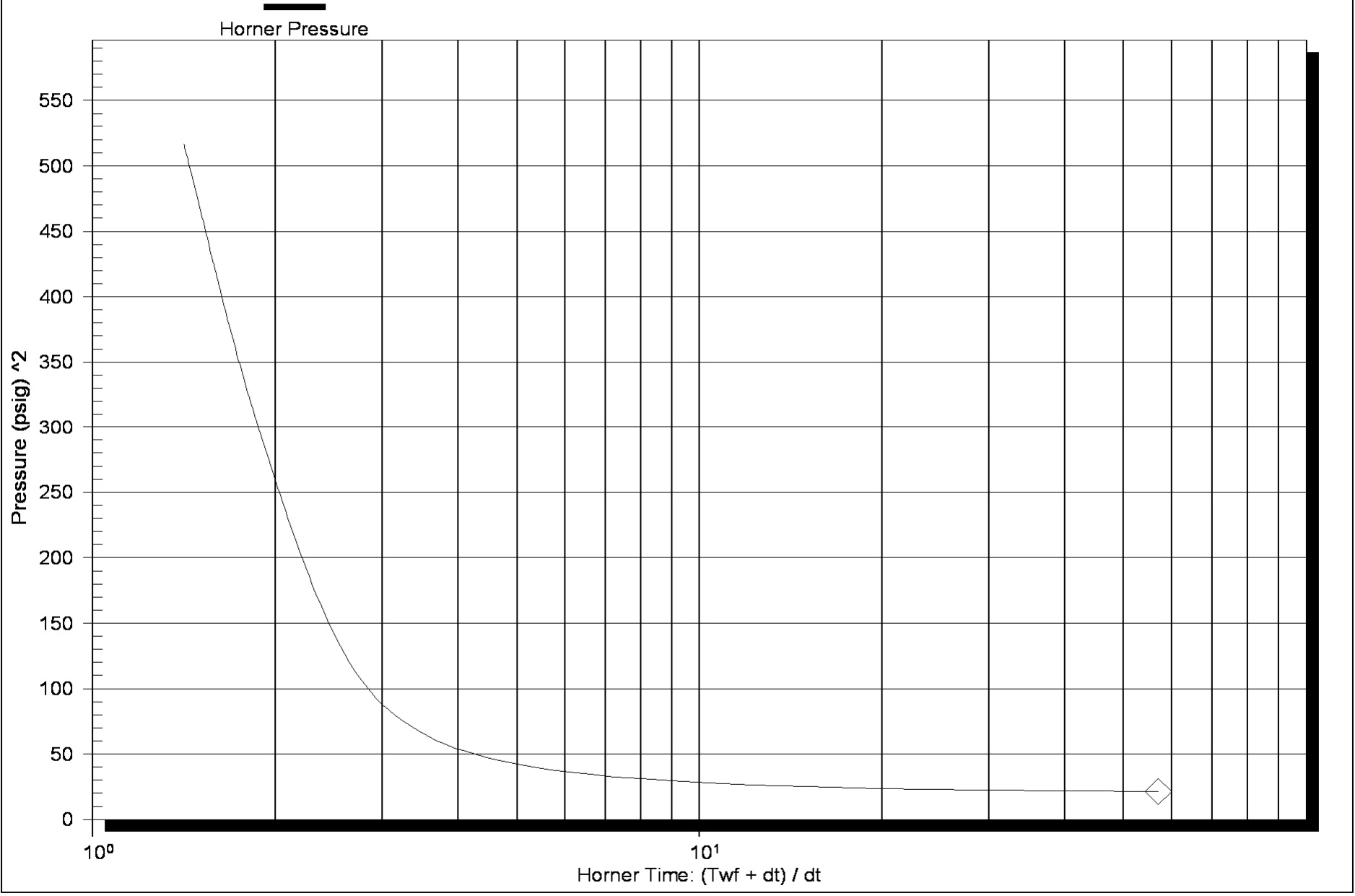




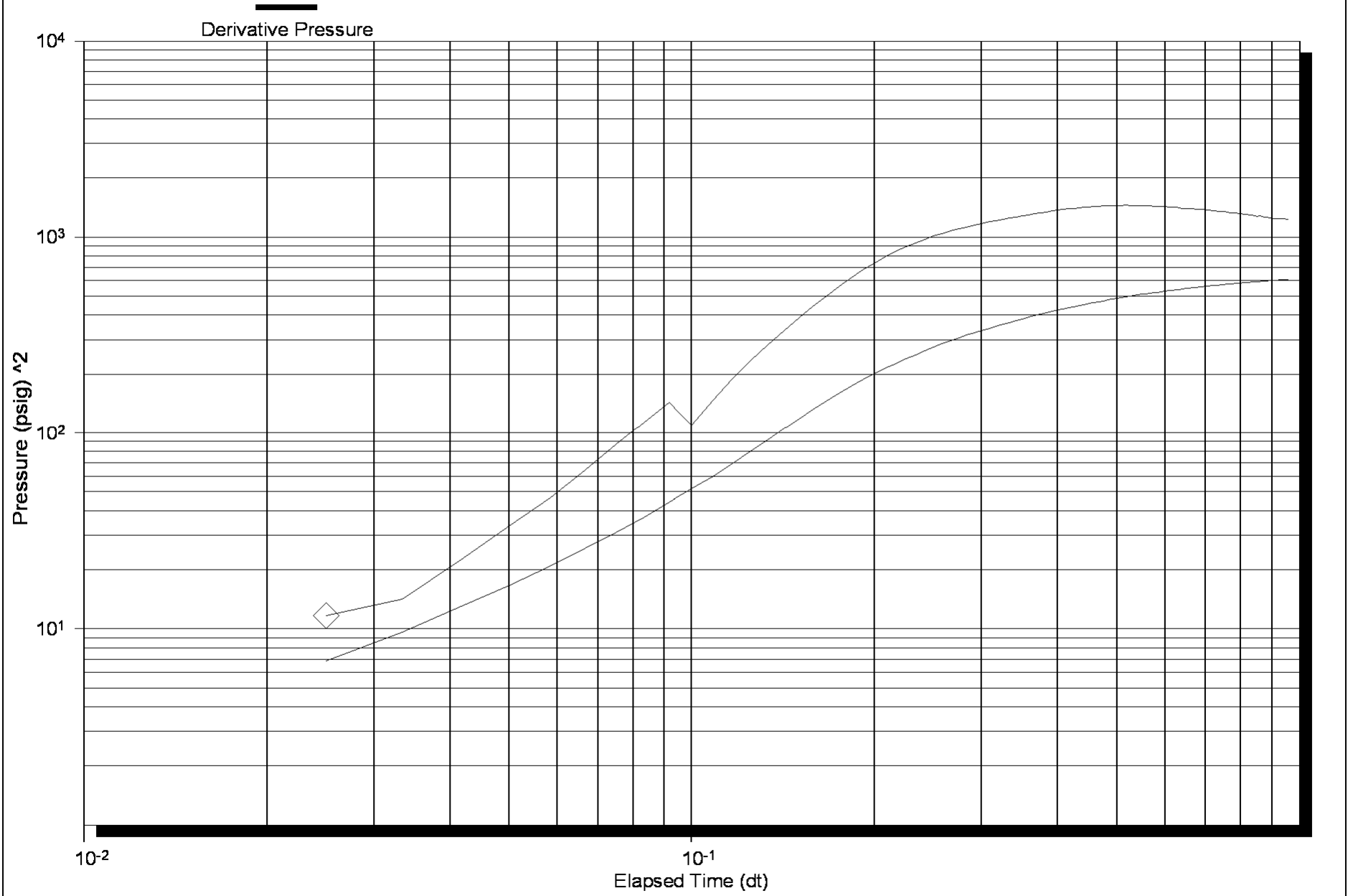
Horner Plot



Horner Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

