



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary & Associates, INC**

1515 Wynkoop ste 700
Denver Co 80202

ATTN: Clayton Camozzi

36-15s-16w Ellis

Boxberger 3-36

Start Date: 2011.02.27 @ 14:21:28

End Date: 2011.02.27 @ 22:01:28

Job Ticket #: 042851 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



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ATTN: Clayton Camozzi

Job Ticket: 042851

DST#: 1

Test Start: 2011.02.27 @ 14:21:28

GENERAL INFORMATION:

Formation: **LKC-A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:12:28

Time Test Ended: 22:01:28

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Interval: 3182.00 ft (KB) To 3242.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3242.00 ft (KB) (TVD)

1935.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6672 Inside

Press @ Run Depth: 643.49 psig @ 3219.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.27 End Date: 2011.02.27

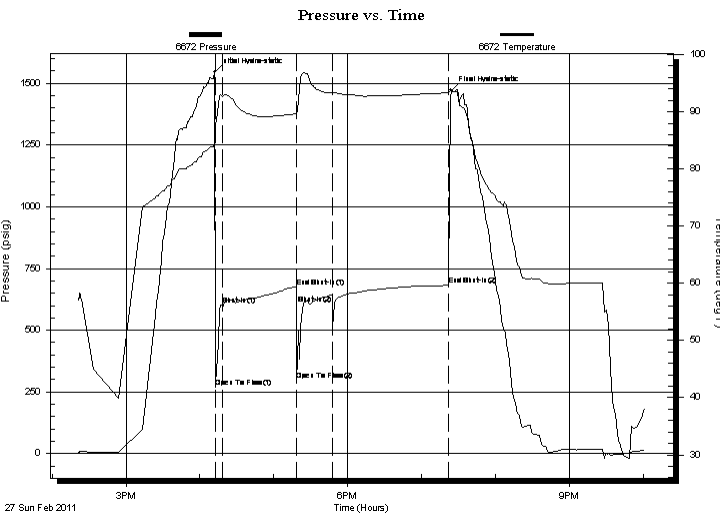
Last Calib.: 2003.01.01

Start Time: 14:21:29 End Time: 22:01:28

Time On Btm: 2011.02.27 @ 16:11:58

Time Off Btm: 2011.02.27 @ 19:23:58

TEST COMMENT: IFP-5min-Strong blow BOB in 1 min
ISI-60min-Dead no blow back
FFP-30min-Strong blow BOB in 30 sec
FSI-90 min-Fair blow back built to 4 1/2 in Died back to 4 in



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1544.35	84.40	Initial Hydro-static
1	270.87	84.84	Open To Flow (1)
6	603.24	92.74	Shut-In(1)
66	676.86	89.60	End Shut-In(1)
67	299.85	89.43	Open To Flow (2)
96	643.49	93.29	Shut-In(2)
190	683.54	93.33	End Shut-In(2)
192	1470.99	93.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCGM 20%O20%G60%M	0.60
109.00	HOCGM20%M40%O40%G	1.53
15.00	MCO 30%M70%O	0.21
3.00	MO 3%M97%O	0.04
0.00	1386 GIP	0.00

Gas Rates

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



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Formation: **LKC-A-C**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 16:12:28

Time Test Ended: 22:01:28

Test Type: **Conventional Bottom Hole**

Tester: **Jeff Brown**

Unit No: **44**

Interval: 3182.00 ft (KB) To 3242.00 ft (KB) (TVD)

Reference Elevations: **1943.00 ft (KB)**

Total Depth: **3242.00 ft (KB) (TVD)**

1935.00 ft (CF)

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

KB to GR/CF: **8.00 ft**

Serial #: 8679

Fluid

Press @ RunDepth: **psig @ 3148.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2011.02.27** End Date: **2011.02.27**

Last Calib.: **2003.01.01**

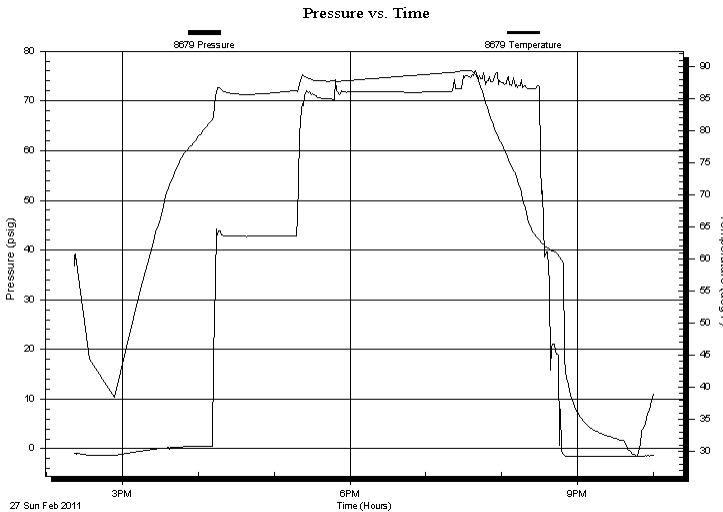
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Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-5min-Strong blow BOB in 1 min
 ISI-60min-Dead no blow back
 FFP-30min-Strong blow BOB in 30 sec
 FSI-90 min-Fair blow back built to 4 1/2 in Died back to 4 in

PRESSURE SUMMARY



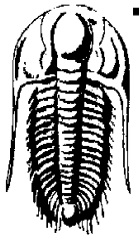
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCCGM 20%O20%G60%M	0.60
109.00	HOCGM20%M40%O40%G	1.53
15.00	MCO 30%M70%O	0.21
3.00	MO 3%M97%O	0.04
0.00	1386 GIP	0.00

Gas Rates

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



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36-15s-16w Ellis

Job Ticket: 042851 **DST#: 1**

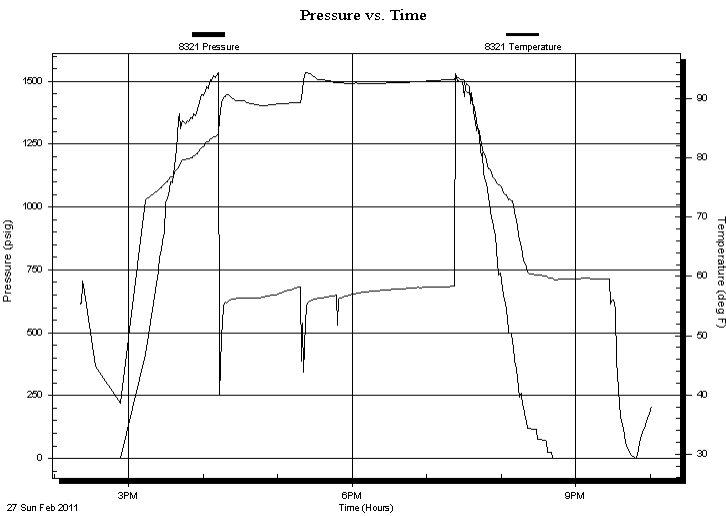
Test Start: 2011.02.27 @ 14:21:28

GENERAL INFORMATION:

Formation: LKC-A-C			Test Type: Conventional Bottom Hole
Deviated: No Whipstock:	ft (KB)		Tester: Jeff Brown
Time Tool Opened: 16:12:28			Unit No: 44
Time Test Ended: 22:01:28			
Interval: 3182.00 ft (KB) To 3242.00 ft (KB) (TVD)		Reference Elevations:	1943.00 ft (KB)
Total Depth: 3242.00 ft (KB) (TVD)			1935.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair		KB to GR/CF:	8.00 ft

Serial #: 8321	Outside				Capacity:	8000.00 psig
Press @ Run Depth:	psig @	3219.00 ft (KB)			Last Calib.:	2003.01.01
Start Date:	2011.02.27	End Date:	2011.02.27		Time On Btm:	
Start Time:	14:21:29	End Time:	22:01:28		Time Off Btm:	

TEST COMMENT: IFP-5min-Strong blow BOB in 1 min
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PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCCGM 20%O20%G60%M	0.60
109.00	HOCGM20%M40%O40%G	1.53
15.00	MCO 30%M70%O	0.21
3.00	MO 3%M97%O	0.04
0.00	1386 GIP	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates, INC

Boxberger 3-36

1515 Wynkoop ste 700
Denver Co 80202

36-15s-16w Ellis

Job Ticket: 042851

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2011.02.27 @ 14:21:28

Tool Information

Drill Pipe:	Length: 3141.00 ft	Diameter: 3.80 inches	Volume: 44.06 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 44.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3182.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3148.00	
Recorder	0.00	8679	Fluid	3148.00	
Drill Pipe	5.00			3153.00	
Shut In Tool	5.00			3158.00	
Sampler	2.00			3160.00	
Hydraulic tool	5.00			3165.00	
Jars	5.00			3170.00	
Safety Joint	3.00			3173.00	
Packer	4.00			3177.00	35.00 Bottom Of Top Packer
Packer	5.00			3182.00	
Stubb	1.00			3183.00	
Perforations	3.00			3186.00	
Change Over Sub	1.00			3187.00	
Drill Pipe	31.00			3218.00	
Change Over Sub	1.00			3219.00	
Recorder	0.00	6672	Inside	3219.00	
Recorder	0.00	8321	Outside	3219.00	
Perforations	20.00			3239.00	
Bullnose	3.00			3242.00	60.00 Bottom Packers & Anchor

Total Tool Length: 95.00



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FLUID SUMMARY

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Job Ticket: 042851

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2011.02.27 @ 14:21:28

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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	OCGM 20%O20%G60%M	0.601
109.00	HOCGM20%M40%O40%G	1.529
15.00	MCO 30%M70%O	0.210
3.00	MO 3%M97%O	0.042
0.00	1386 GIP	0.000

Total Length: 190.00 ft

Total Volume: 2.382 bbl

Num Fluid Samples: 0

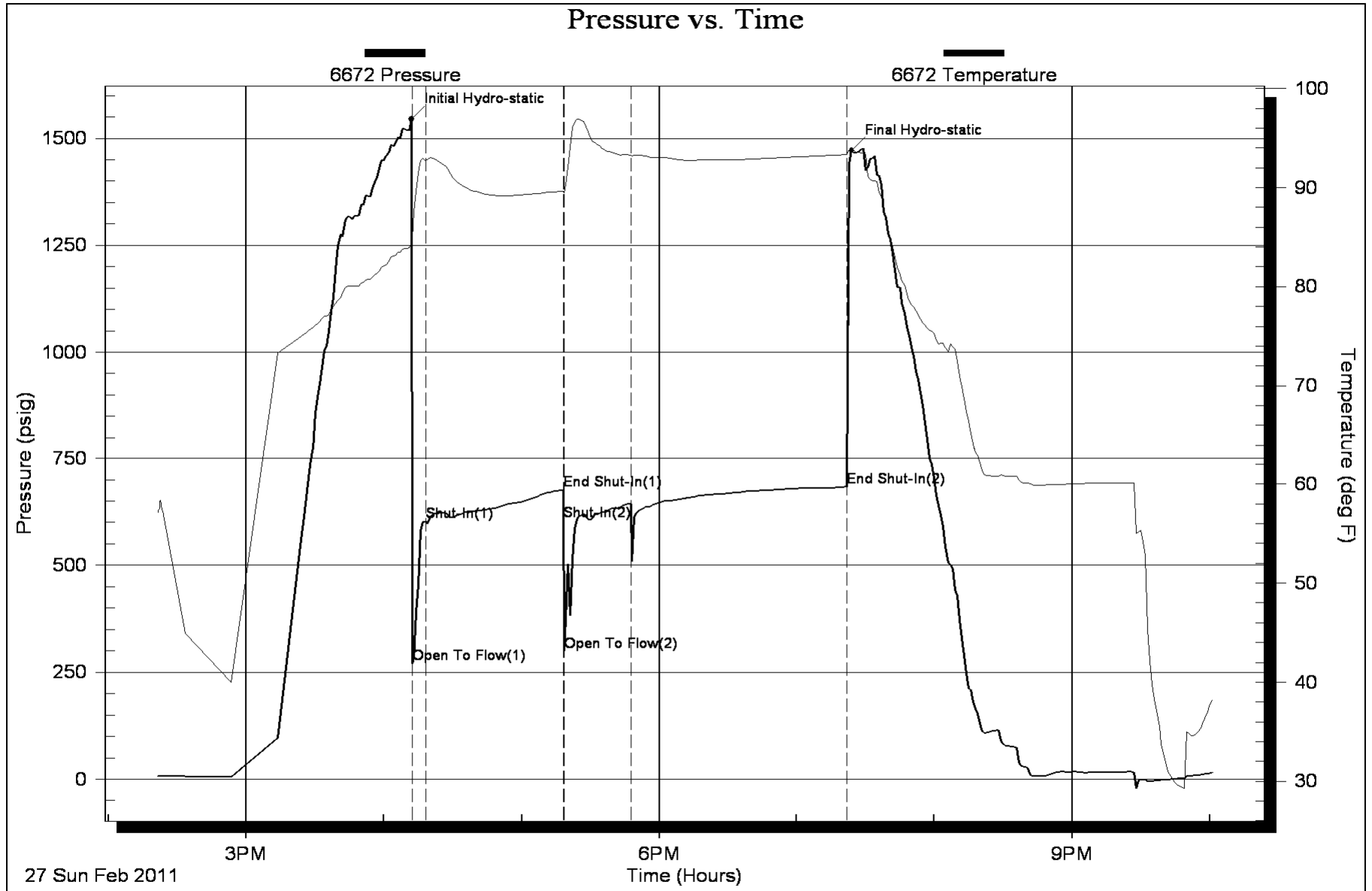
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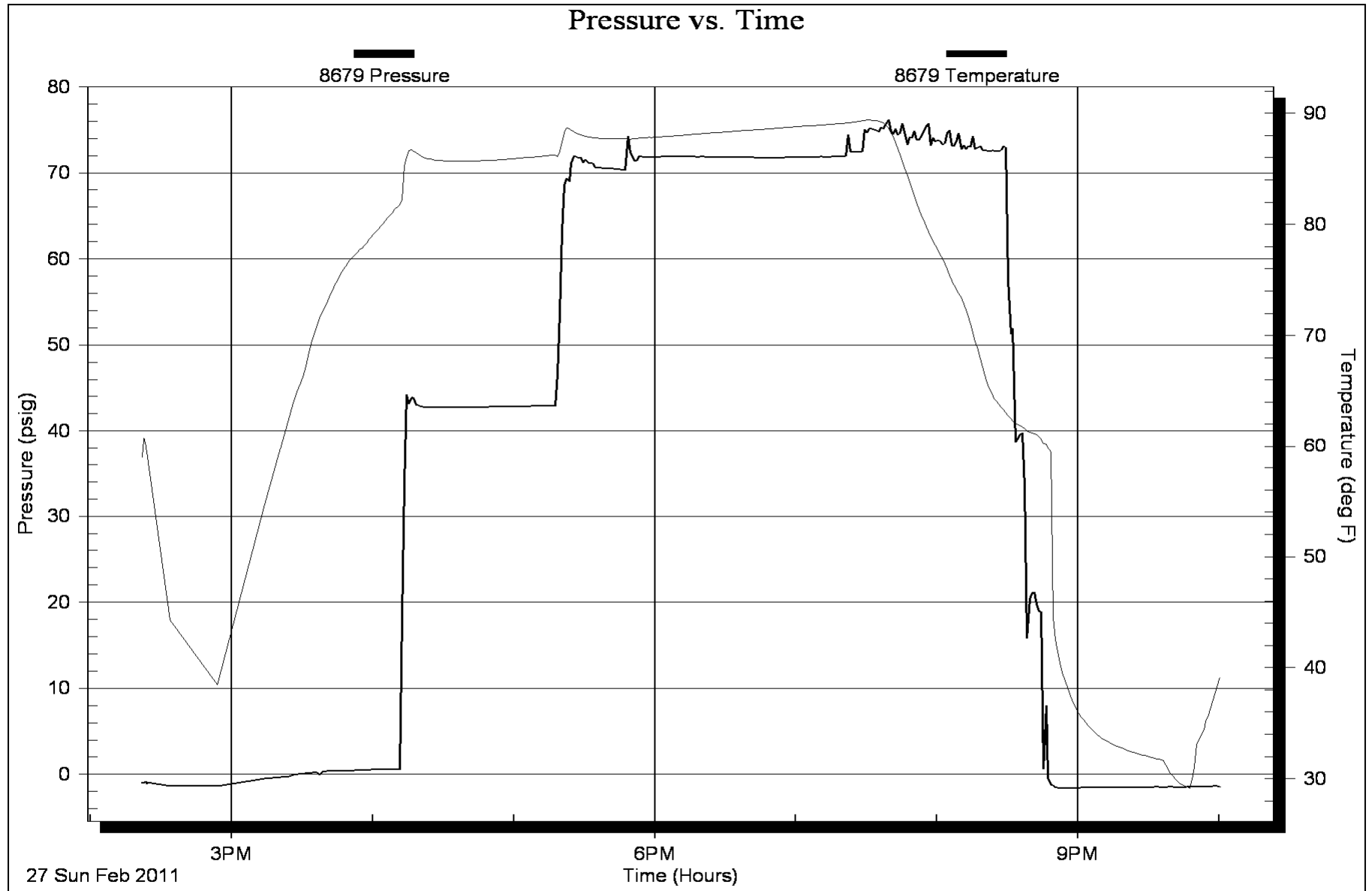
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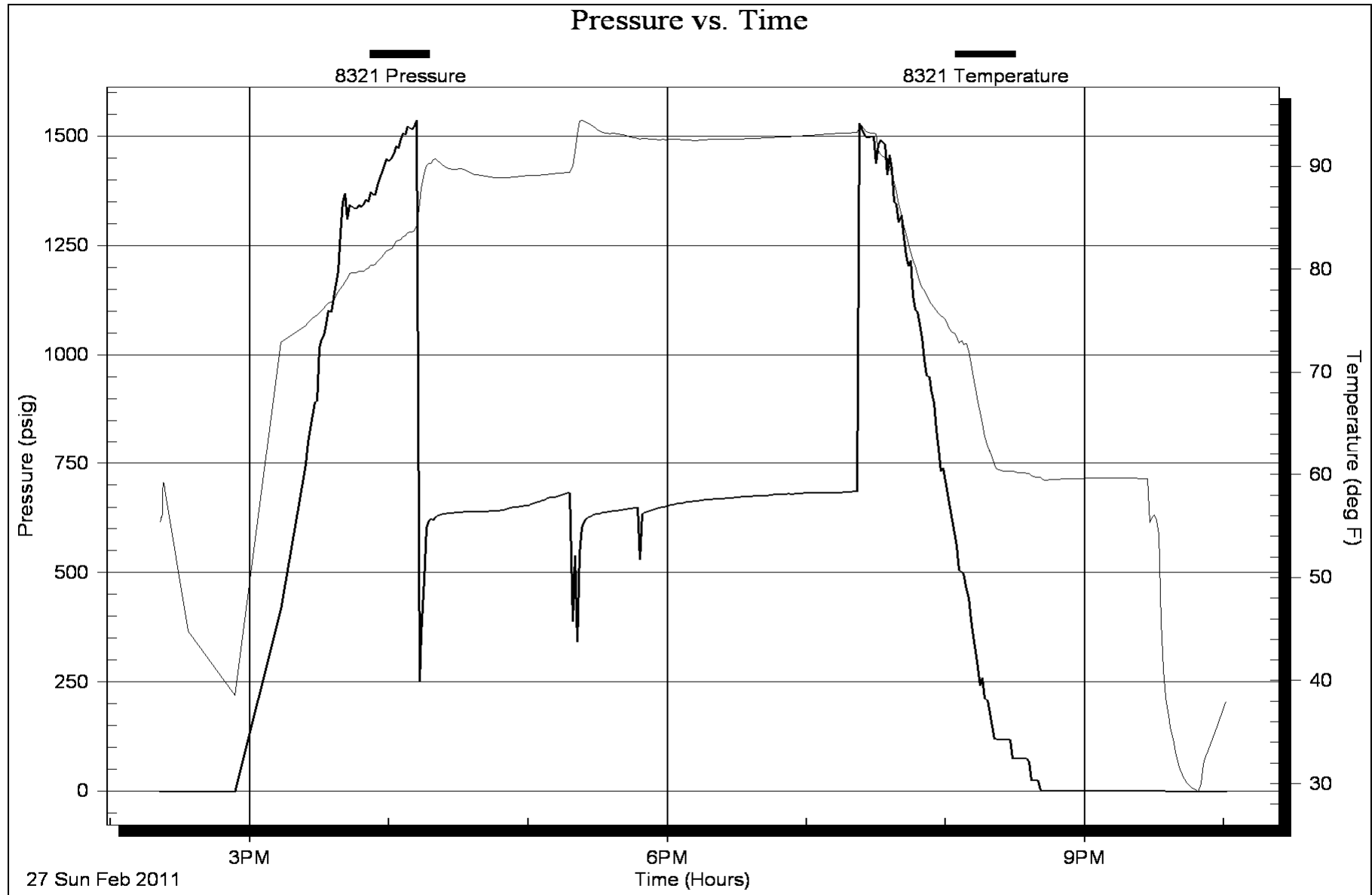
Laboratory Name:

Laboratory Location:

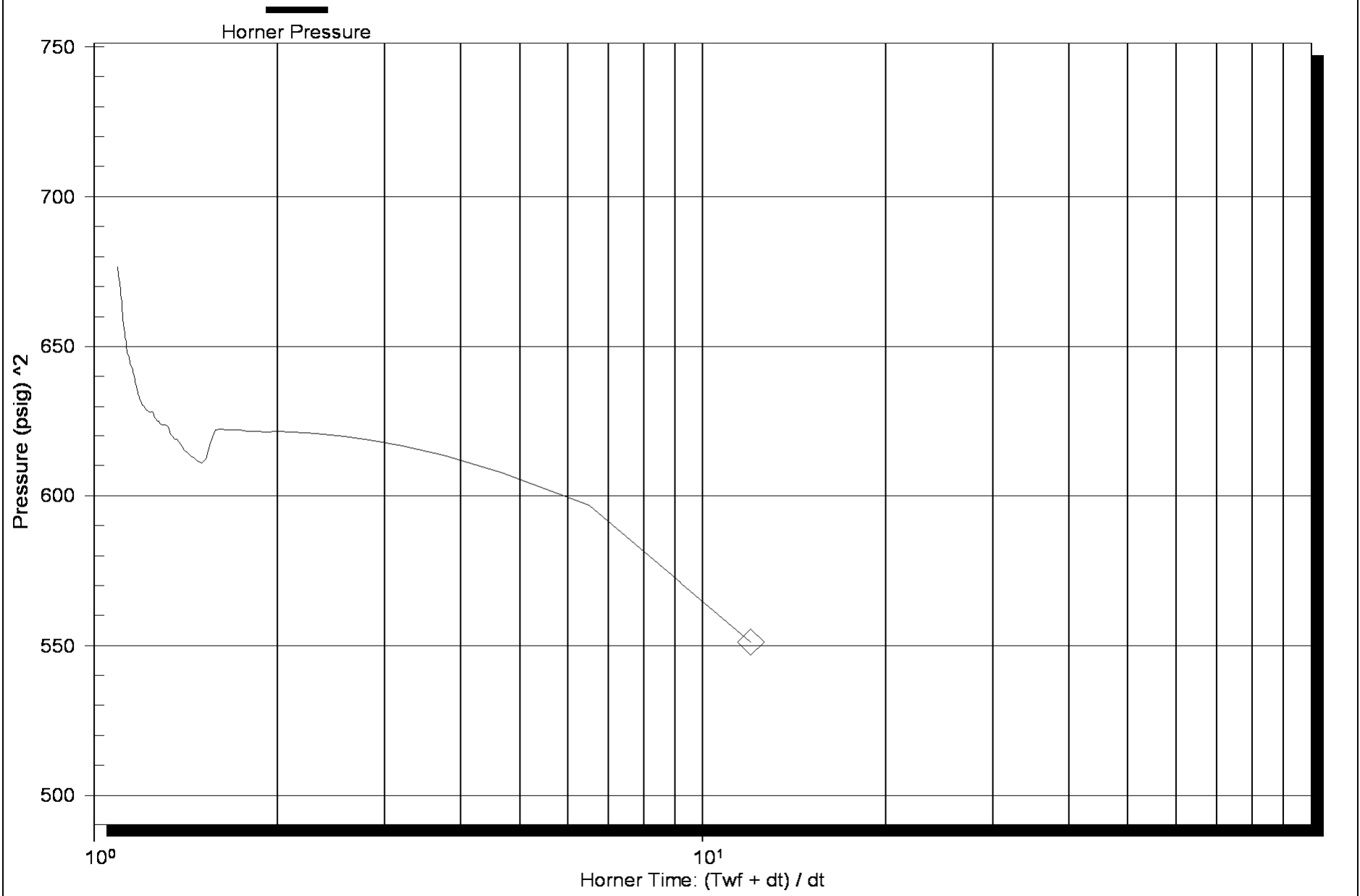
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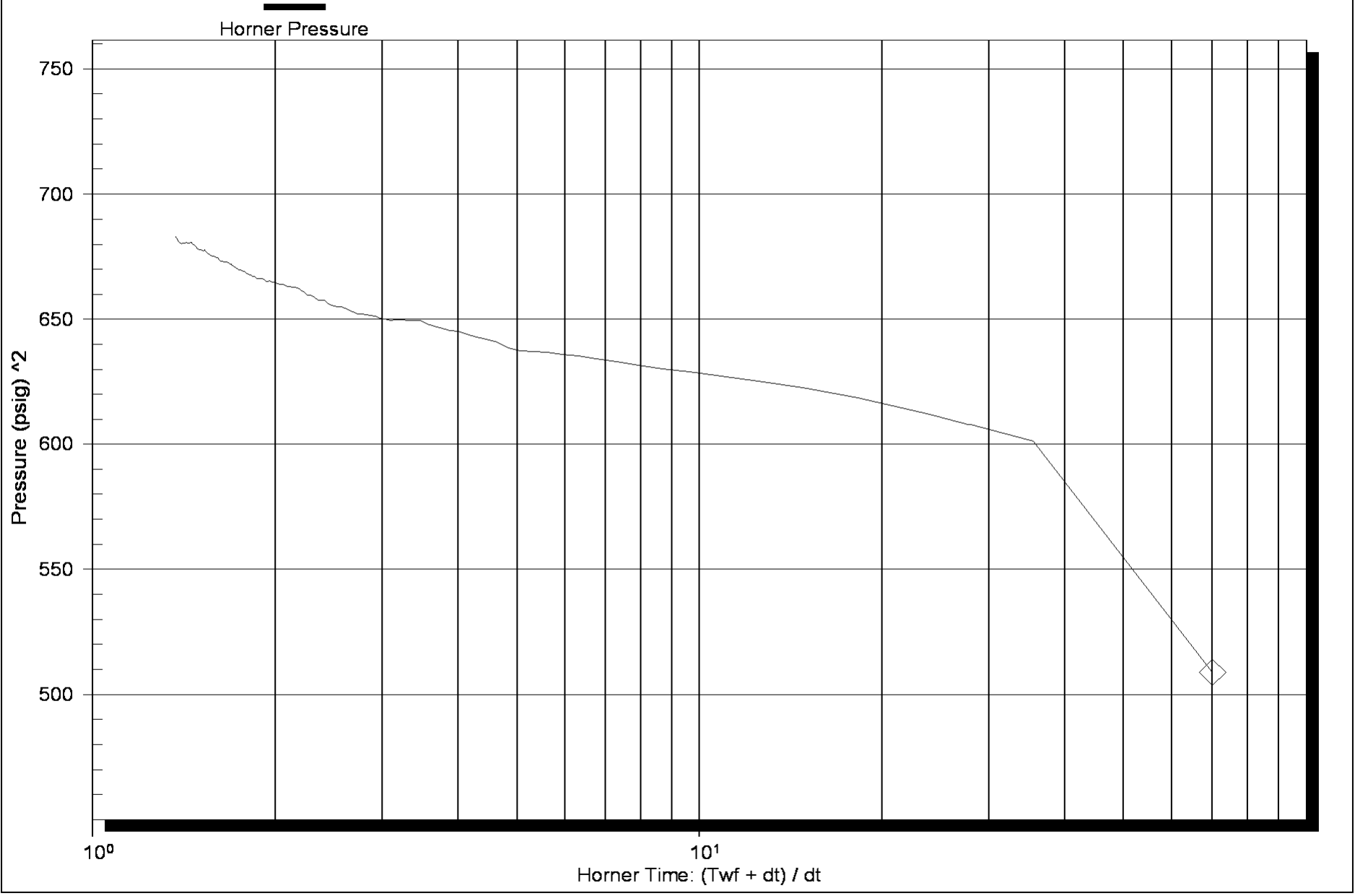




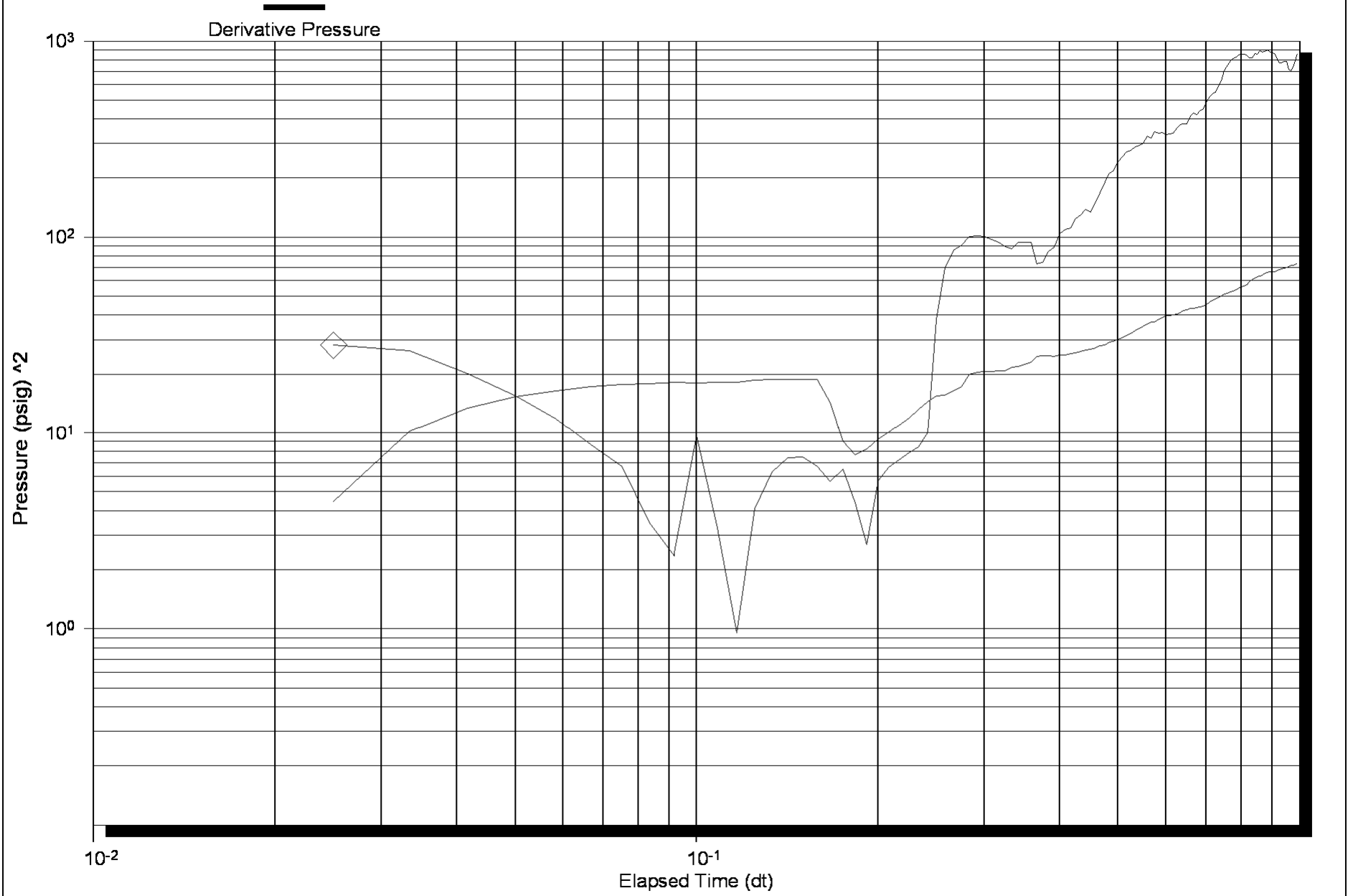
Horner Plot



Horner Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

