



## 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: 2011.02.28 @ 05:52:24

End Date: 2011.02.28 @ 14:00:54

Job Ticket #: 042852                      DST #: 2

Trilobite Testing, Inc  
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TESTING, INC**

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Test Start: 2011.02.28 @ 05:52:24

## GENERAL INFORMATION:

Formation: **LKC-F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:58:54

Time Test Ended: 14:00:54

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

**Interval: 3270.00 ft (KB) To 3303.00 ft (KB) (TVD)**

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3303.00 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: 223.25 psig @ 3271.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.28

End Date:

2011.02.28

Last Calib.:

2011.02.28

Start Time: 05:52:25

End Time:

14:00:54

Time On Btm:

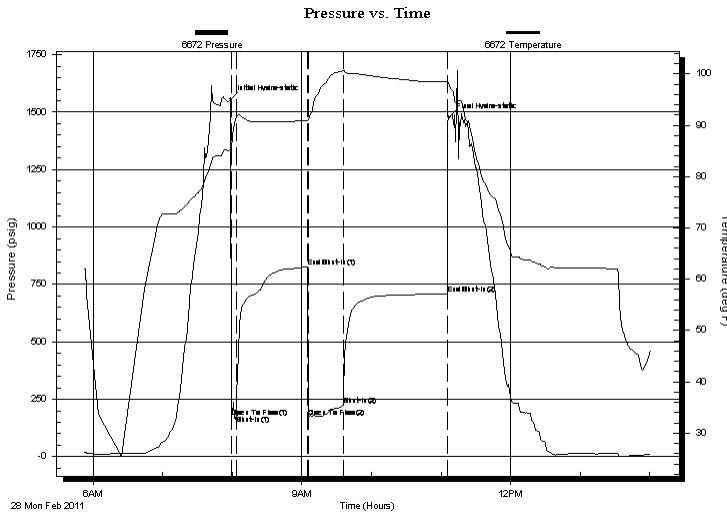
2011.02.28 @ 07:58:24

Time Off Btm:

2011.02.28 @ 11:06:54

**TEST COMMENT:** IFP-5 min-Strong blow BOB in 45 sec  
ISI-60 min-Weak blow back built to 1/8 in  
FFP-30 min-Strong blow BOB in 30 sec  
FSI-90 min Good blow back BOB in 14 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1555.36	85.15	Initial Hydro-static
1	171.97	85.45	Open To Flow (1)
5	180.26	91.41	Shut-In(1)
67	825.08	90.88	End Shut-In(1)
68	172.10	91.14	Open To Flow (2)
97	223.25	100.63	Shut-In(2)
187	710.53	98.45	End Shut-In(2)
189	1478.21	97.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	SOCGM 5%O 15%G80%M	0.60
31.00	V SOCM 2%O 98%M	0.43
252.00	HOCGWM 35%G10%M5%W50%O	3.53
126.00	HOCGM 30%G25%M45%O	1.77
63.00	MCO 20%M80%O	0.88
0.00	1417 GIP	0.00

## Gas Rates

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







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**TOOL DIAGRAM**

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## Tool Information

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 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: 65000.00 lb
			<u>Total Volume: 45.51 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3270.00 ft			Final 49000.00 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
Change Over Sub	1.00			3236.00	
Recorder	0.00	8679	Fluid	3236.00	
Drill Pipe	5.00			3241.00	
Shut In Tool	5.00			3246.00	
Sampler	2.00			3248.00	
Hydraulic tool	5.00			3253.00	
Jars	5.00			3258.00	
Safety Joint	3.00			3261.00	
Packer	4.00			3265.00	35.00 Bottom Of Top Packer
Packer	5.00			3270.00	
Stubb	1.00			3271.00	
Recorder	0.00	6672	Inside	3271.00	
Recorder	0.00	8321	Outside	3271.00	
Perforations	29.00			3300.00	
Bullnose	3.00			3303.00	33.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



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**FLUID SUMMARY**

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ATTN: Clayton Camozzi

Test Start: 2011.02.28 @ 05:52:24

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

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	SOCGM 5%O 15%G80%M	0.601
31.00	VSOCM 2%O 98%M	0.435
252.00	HOCGWM 35%G10%M5%W50%O	3.535
126.00	HOCGM30%G25%M45%O	1.767
63.00	MCO20%M80%O	0.884
0.00	1417 GIP	0.000

Total Length: 535.00 ft      Total Volume: 7.222 bbl

Num Fluid Samples: 0

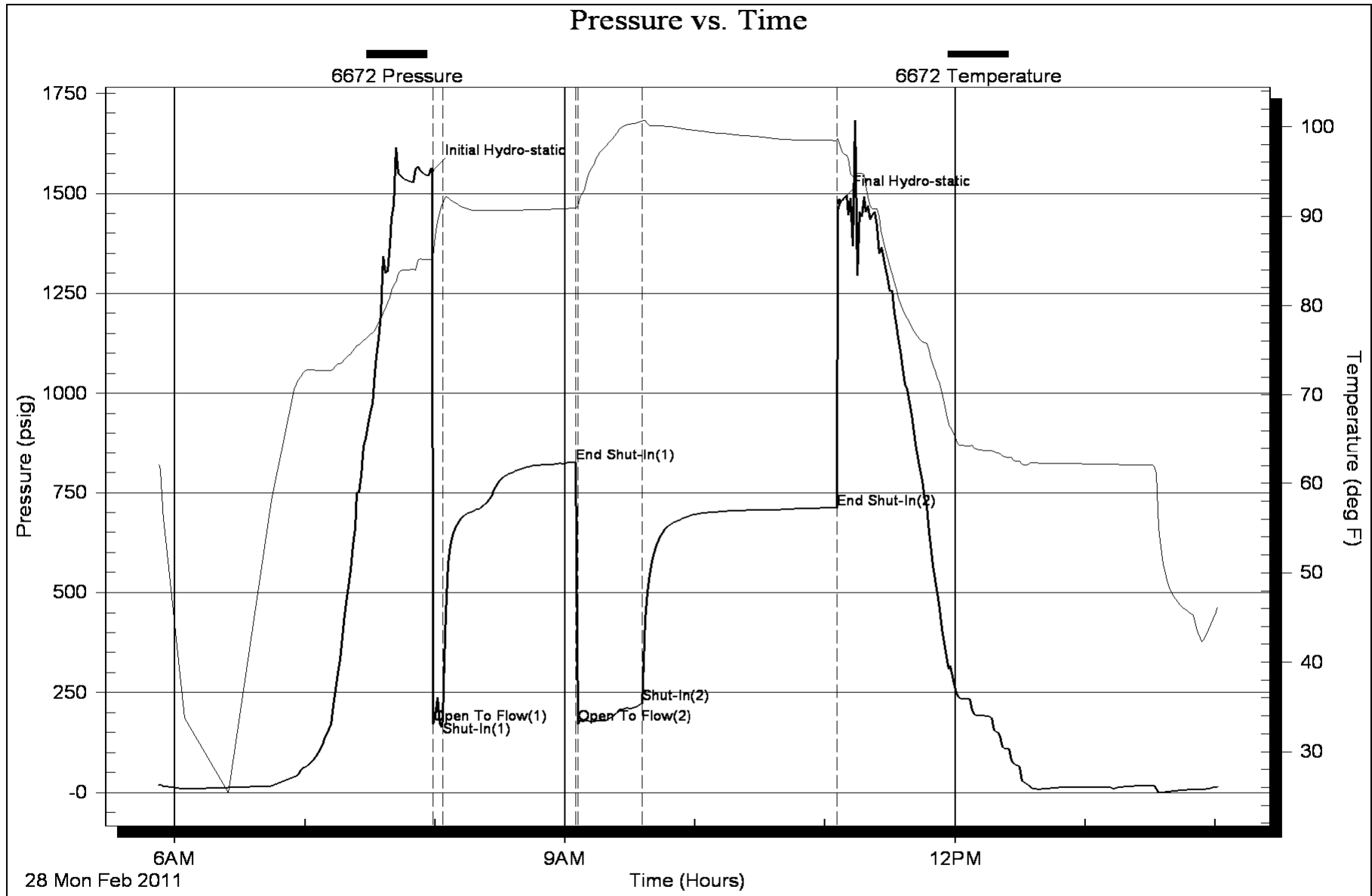
Num Gas Bombs: 0

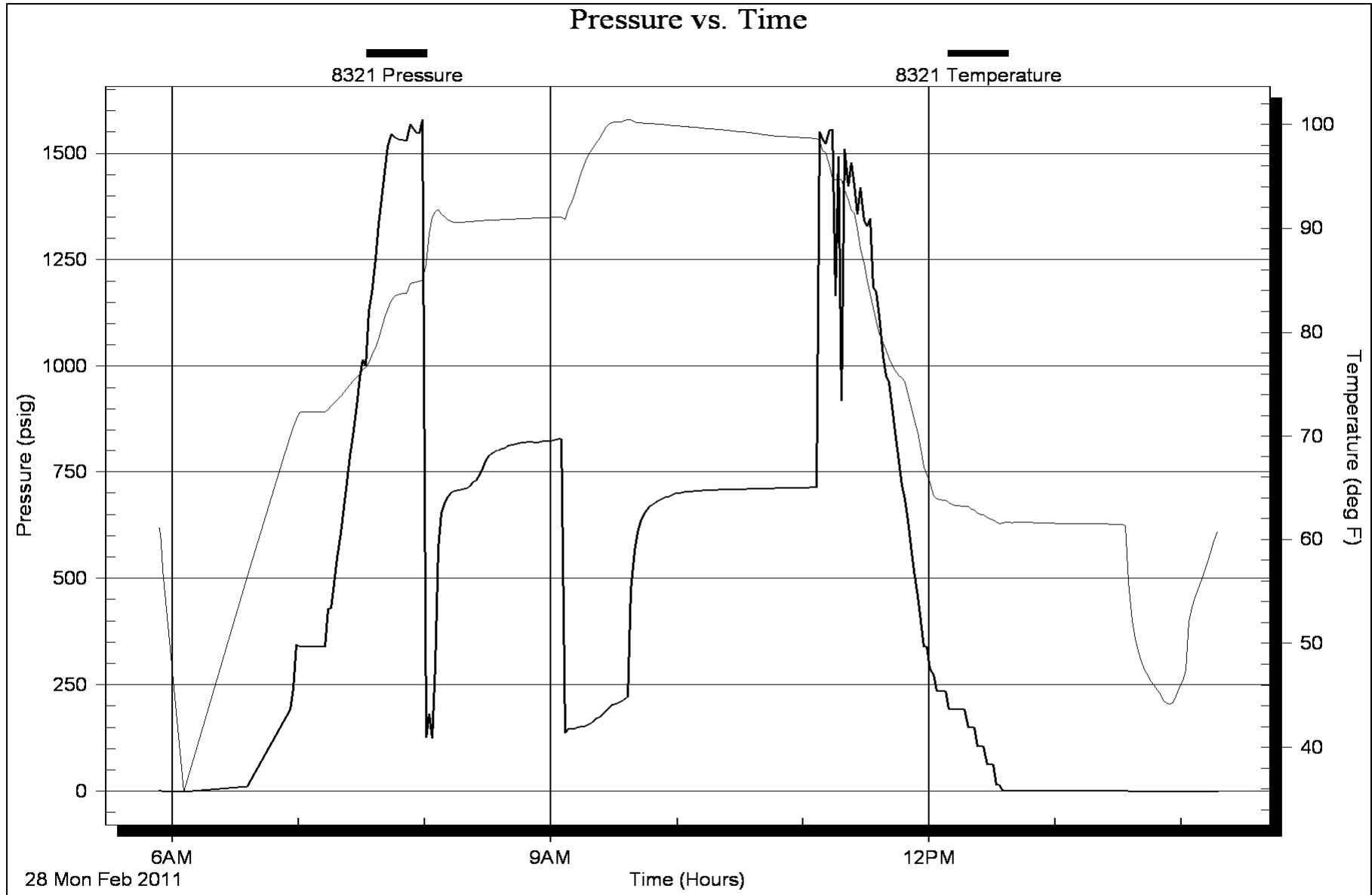
Serial #:

Laboratory Name:

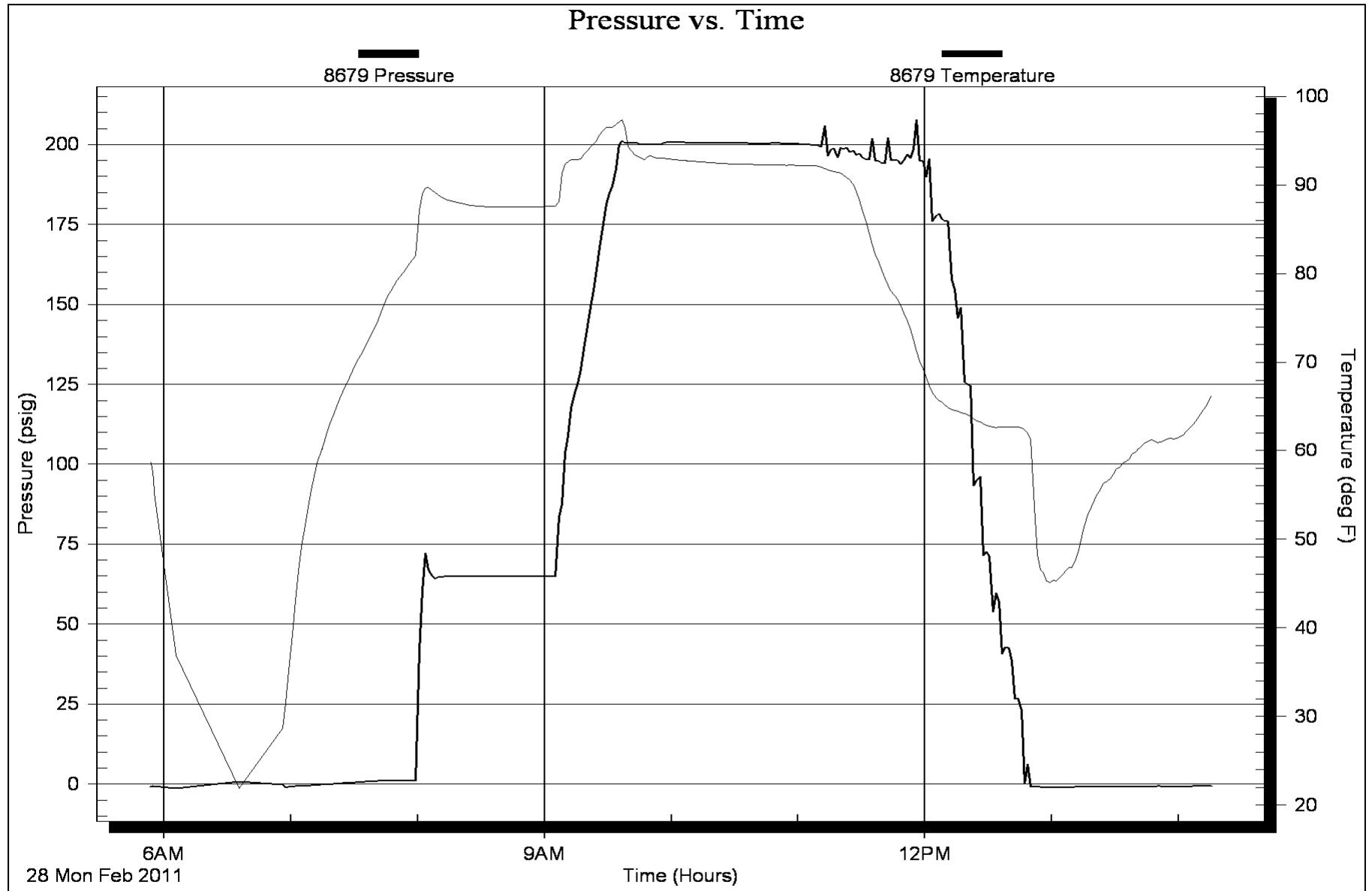
Laboratory Location:

Recovery Comments: 2800 total ML- 360 PSI- 1QF of gas-2700 ML of oil-100ML of mud

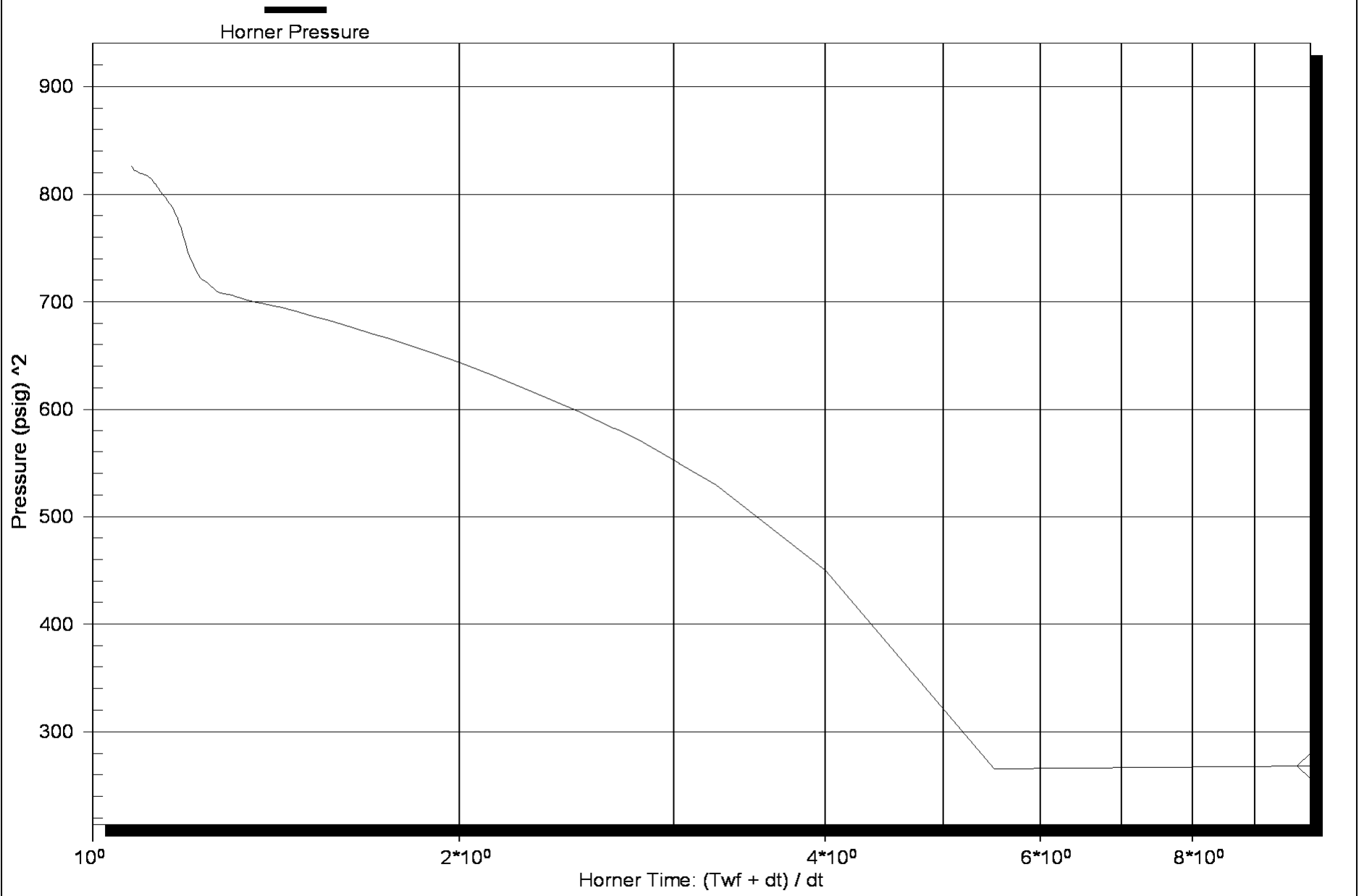




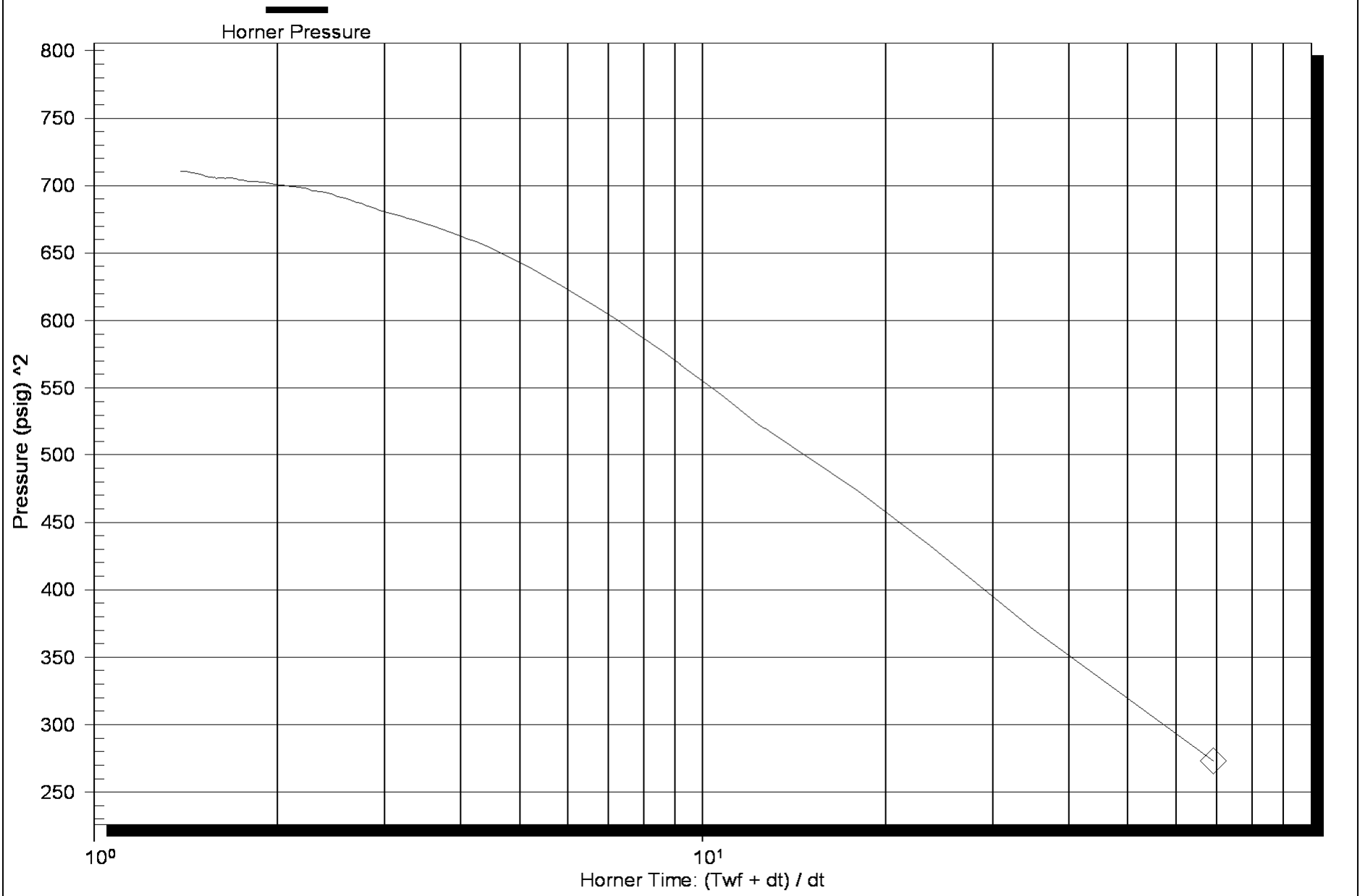




### Horner Plot



### Horner Plot



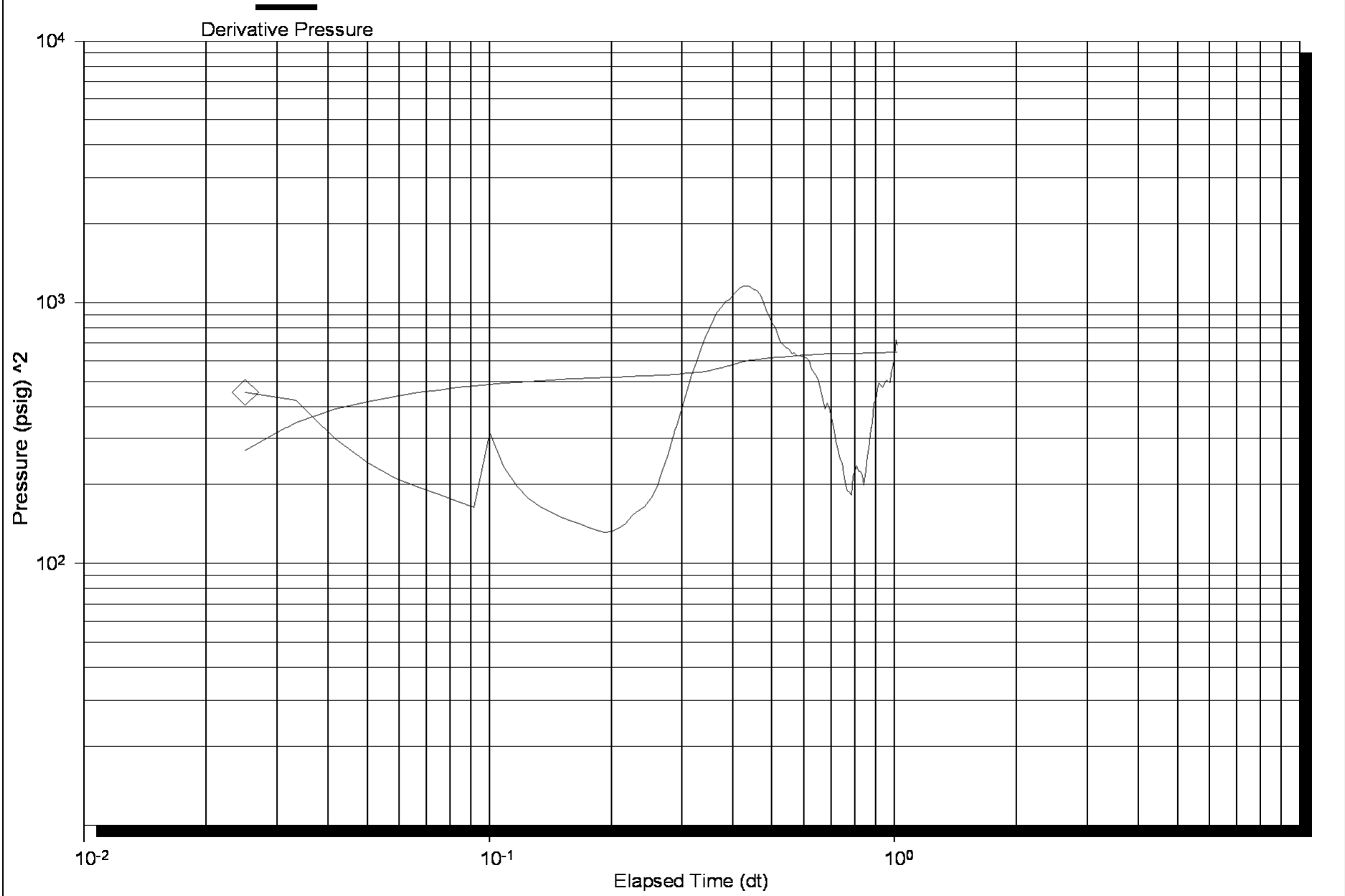
Serial Number: 6672 (Inside)

P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

### Log-Log and Pseudo-Derivative



### Log-Log and Pseudo-Derivative

