



## DRILL STEM TEST REPORT

Prepared For: **Sam Gary & Associates Inc**

1515 Wynkoop St Ste 700  
Denver Colo 80202

ATTN: Clayton Comozzi

**23-15-16-Ellis-Ks**

**Leas 1-23**

Start Date: 2011.04.01 @ 13:14:56

End Date: 2011.04.01 @ 19:28:26

Job Ticket #: 042409                      DST #: 4

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



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TESTING, INC**

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**Leas 1-23**

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**23-15-16-Ellis-Ks**

ATTN: Clayton Comozzi

Job Ticket: 042409

**DST#: 4**

Test Start: 2011.04.01 @ 13:14:56

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:45:56

Time Test Ended: 19:28:26

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

**Interval: 3438.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Reference Elevations: 1870.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

1862.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8354**

**Inside**

Press @ Run Depth: 31.82 psig @ 3439.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.01

End Date:

2011.04.01

Last Calib.:

2011.04.01

Start Time: 13:24:56

End Time:

19:28:26

Time On Btm:

2011.04.01 @ 14:44:26

Time Off Btm:

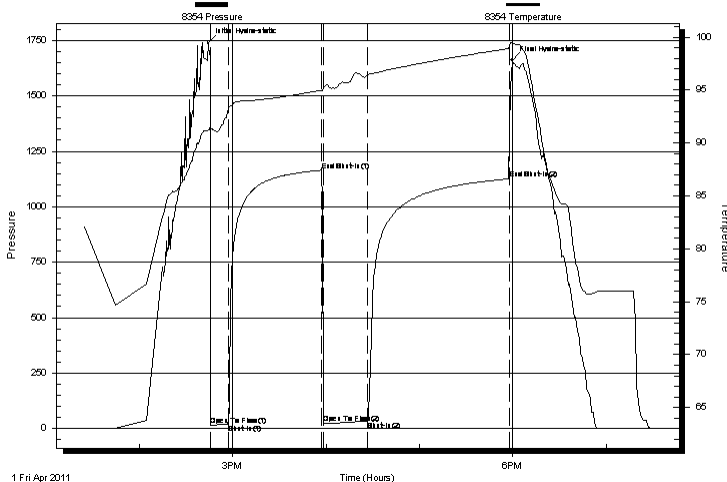
2011.04.01 @ 17:59:26

TEST COMMENT: IF-Weak steady surface blow

FF-Weak steady surface blow

Times-10-60-30-90

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.88	91.21	Initial Hydro-static
2	13.70	90.84	Open To Flow (1)
13	20.09	93.15	Shut-In(1)
73	1164.17	94.98	End Shut-In(1)
74	21.56	95.25	Open To Flow (2)
102	31.82	96.32	Shut-In(2)
193	1125.48	98.92	End Shut-In(2)
195	1660.72	99.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mdy Wtr	0.02
0.00	Rw .3 @ 65 = 25000ppm	0.00

## Gas Rates

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



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Total Depth: 3450.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1870.00 ft (KB)

1862.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8653 Outside**

Press @ Run Depth: psig @ 3439.00 ft (KB)

Start Date: 2011.04.01

End Date:

2011.04.01

Start Time: 13:14:55

End Time:

19:26:24

Capacity: 8000.00 psig

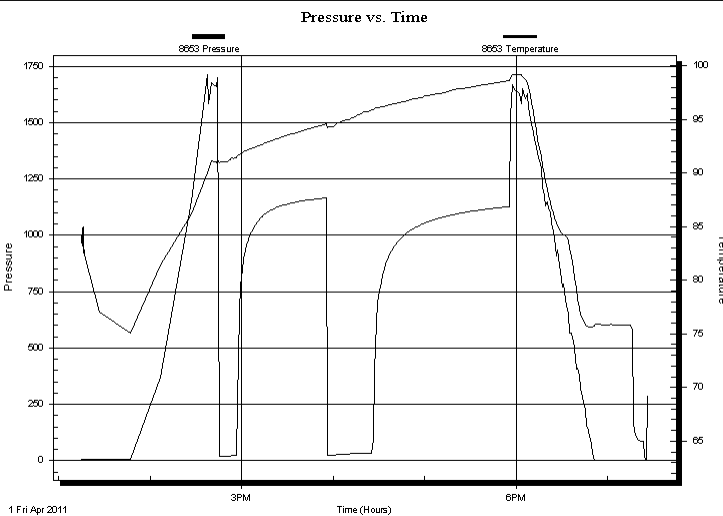
Last Calib.: 2011.04.01

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak steady surface blow

FF-Weak steady surface blow  
Times-10-60-30-90



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	Mdy Wtr	0.02
0.00	Rw .3 @ 65 = 25000ppm	0.00

**Gas Rates**

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



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Job Ticket: 042409

**DST#: 4**

ATTN: Clayton Comozzi

Test Start: 2011.04.01 @ 13:14:56

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Time Test Ended: 19:28:26

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

**Interval: 3438.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Total Depth: 3450.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1870.00 ft (KB)

1862.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8520 Inside**

Press @ RunDepth: psig @ 3404.00 ft (KB)

Start Date: 2011.04.01

End Date:

2011.04.01

Start Time: 13:14:14

End Time:

19:27:13

Capacity: 8000.00 psig

Last Calib.:

2011.04.01

Time On Btm:

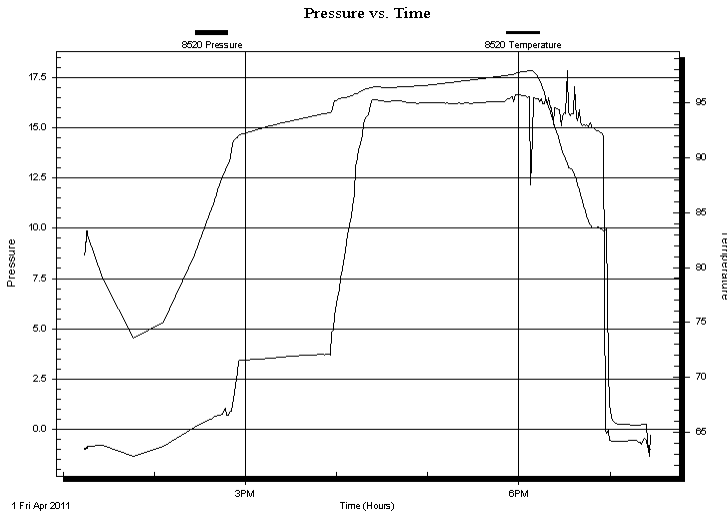
Time Off Btm:

TEST COMMENT: IF-Weak steady surface blow

FF-Weak steady surface blow

Times-10-60-30-90

## PRESSURE SUMMARY



Time (Min.)

Pressure (psig)

Temp (deg F)

Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mdy Wtr	0.02
0.00	Rw .3 @ 65 = 25000ppm	0.00

## Gas Rates

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



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Sam Gary & Associates Inc

**Leas 1-23**

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**23-15-16-Ellis-Ks**

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**DST#: 4**

ATTN: Clayton Comozzi

Test Start: 2011.04.01 @ 13:14:56

## Tool Information

Drill Pipe:	Length: 3382.00 ft	Diameter: 3.80 inches	Volume: 47.44 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 47.59 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3438.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	12.00 ft				
Tool Length:	47.00 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			3404.00	
Recorder	0.00	8520	Inside	3404.00	
Blank Spacing	5.00			3409.00	
Shut In Tool	5.00			3414.00	
Sampler	2.00			3416.00	
Hydraulic tool	5.00			3421.00	
Jars	5.00			3426.00	
Safety Joint	3.00			3429.00	
Packer	5.00			3434.00	35.00 Bottom Of Top Packer
Packer	4.00			3438.00	
Stubb	1.00			3439.00	
Recorder	0.00	8354	Inside	3439.00	
Recorder	0.00	8653	Outside	3439.00	
Perforations	8.00			3447.00	
Bullnose	3.00			3450.00	12.00 Bottom Packers & Anchor

**Total Tool Length: 47.00**



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**FLUID SUMMARY**

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**DST#: 4**

ATTN: Clayton Comozzi

Test Start: 2011.04.01 @ 13:14:56

## 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:

25000 ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mdy Wtr	0.025
0.00	Rw .3 @ 65 = 25000ppm	0.000

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

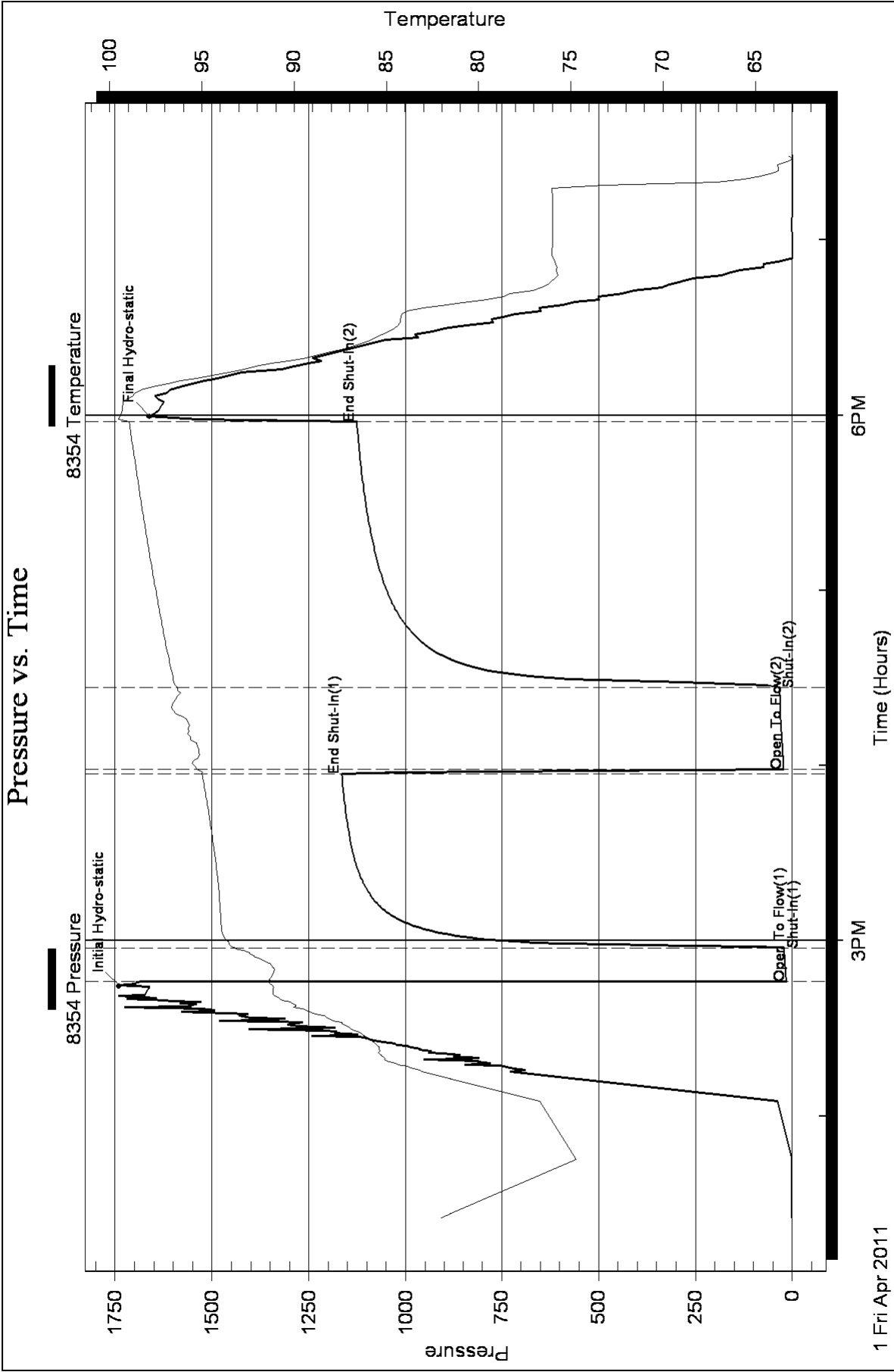
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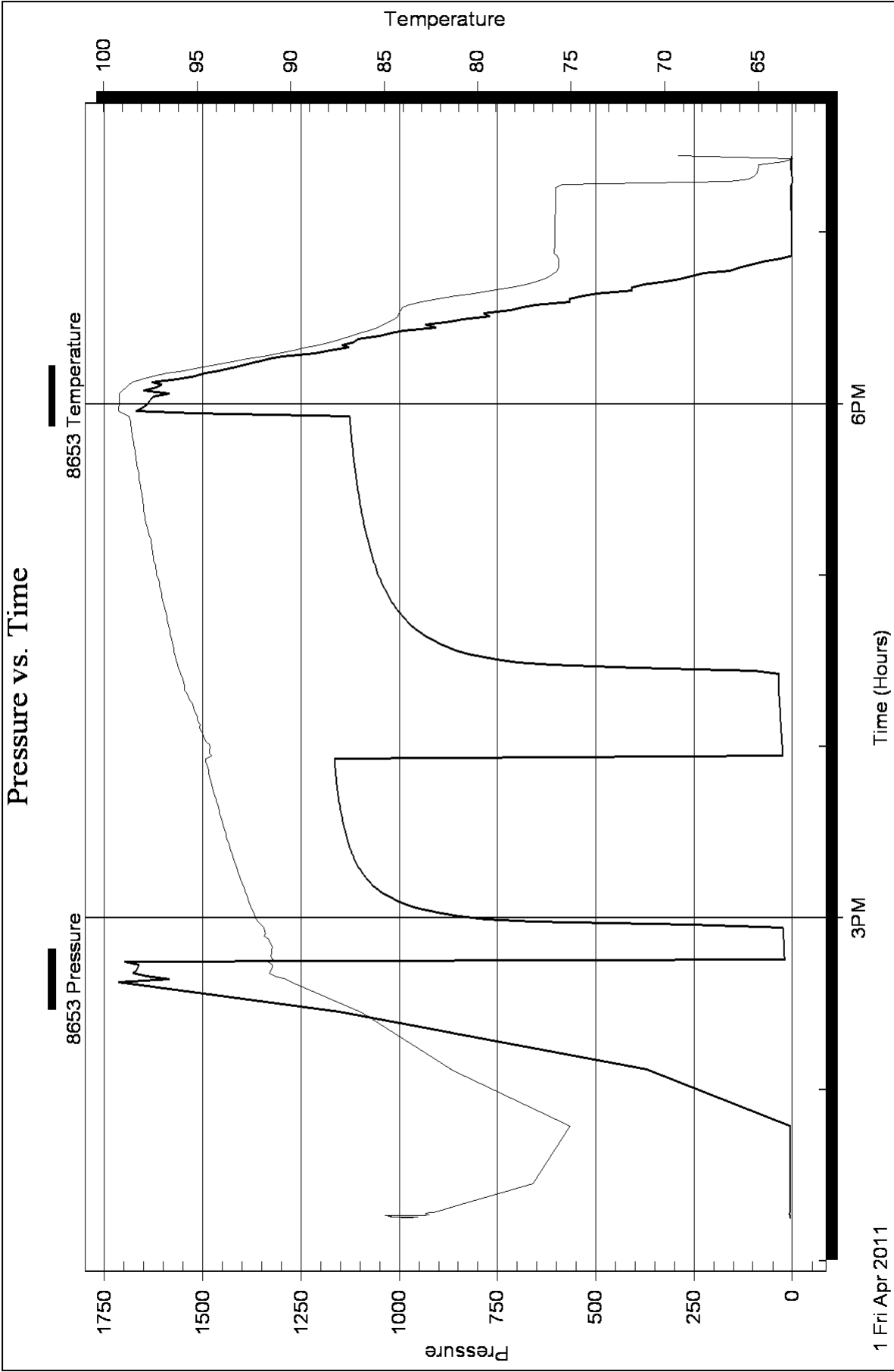
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Laboratory Location:

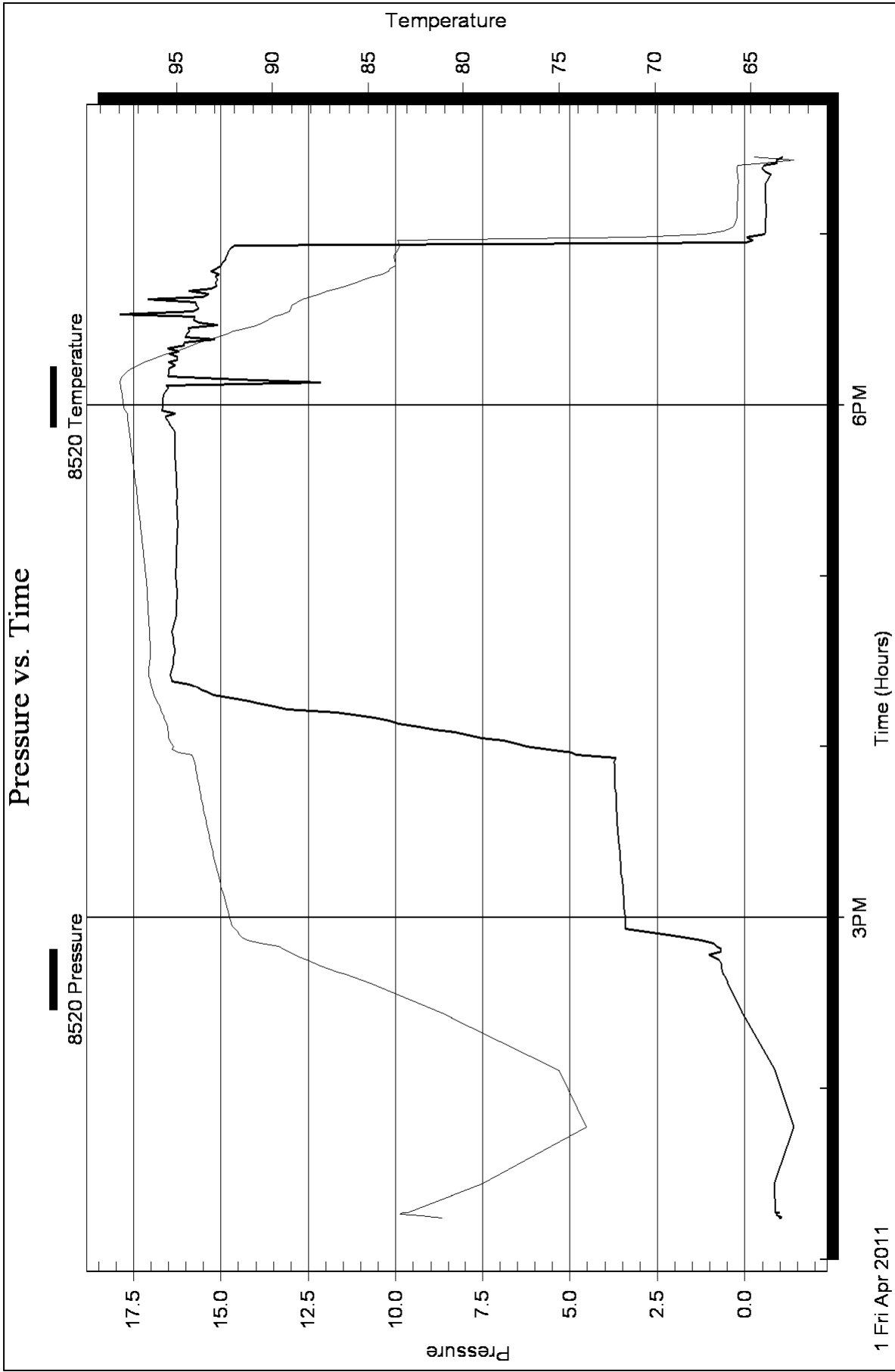
Recovery Comments: Sampler  
Gas

### Pressure vs. Time

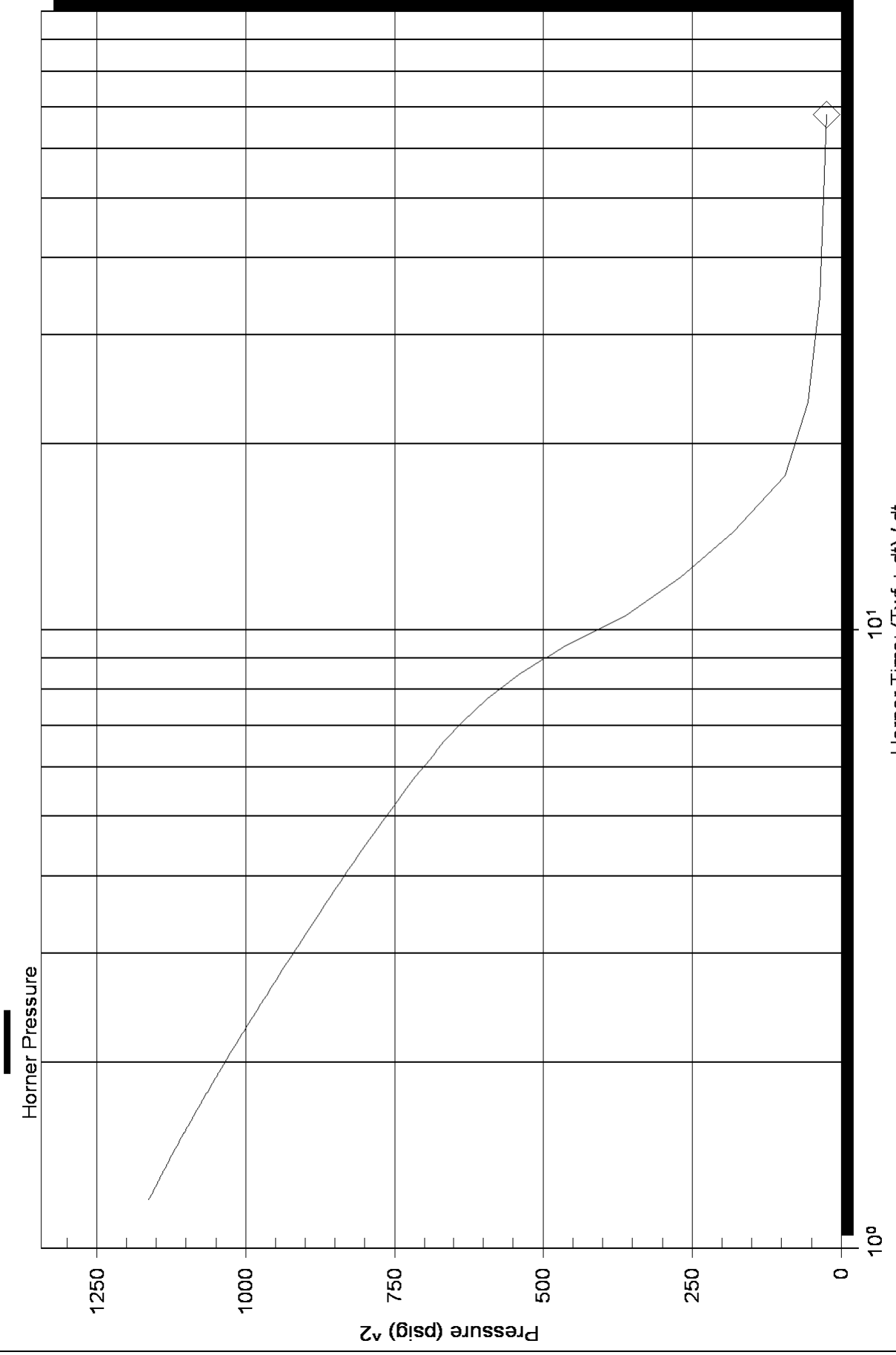




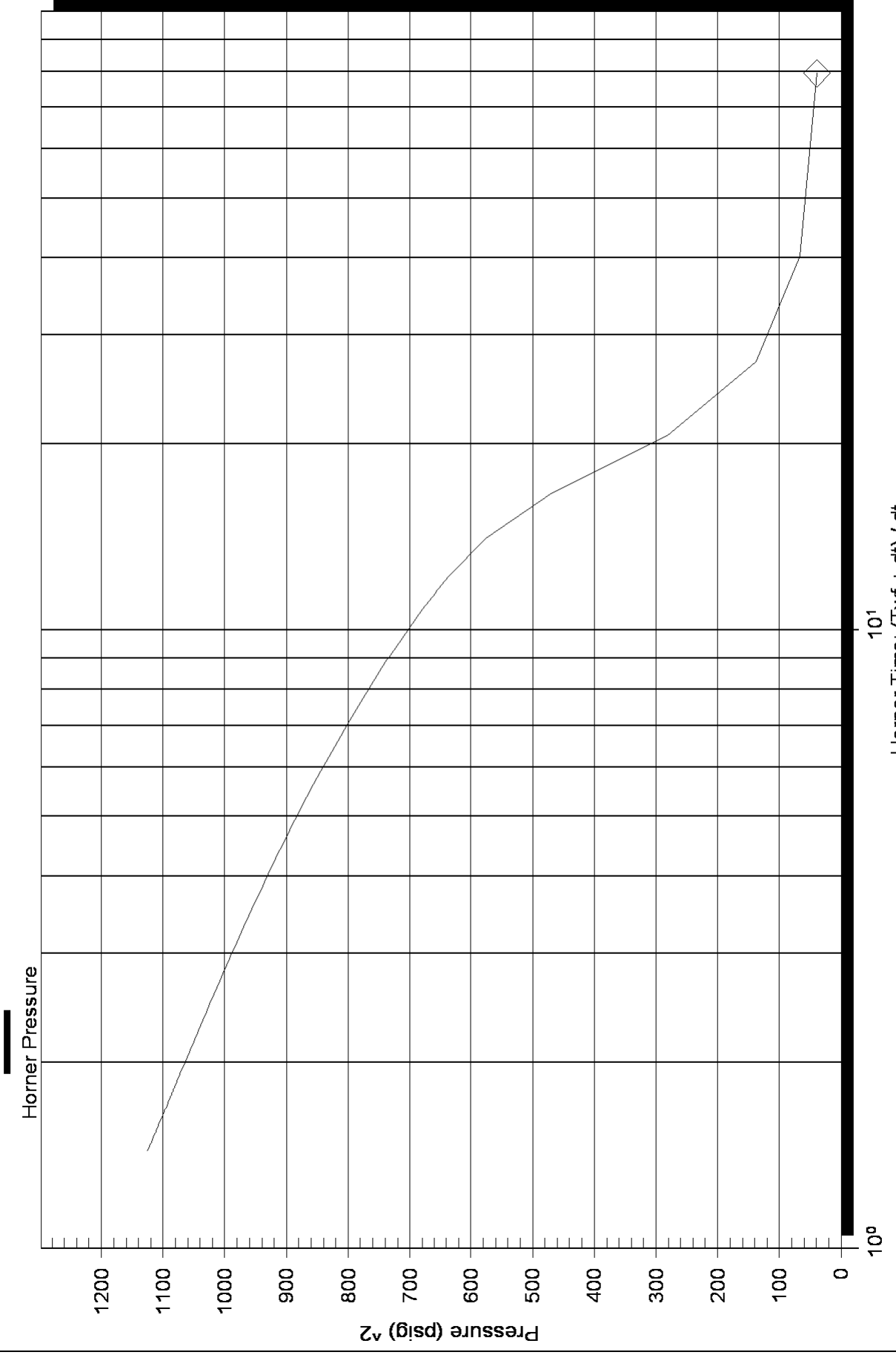




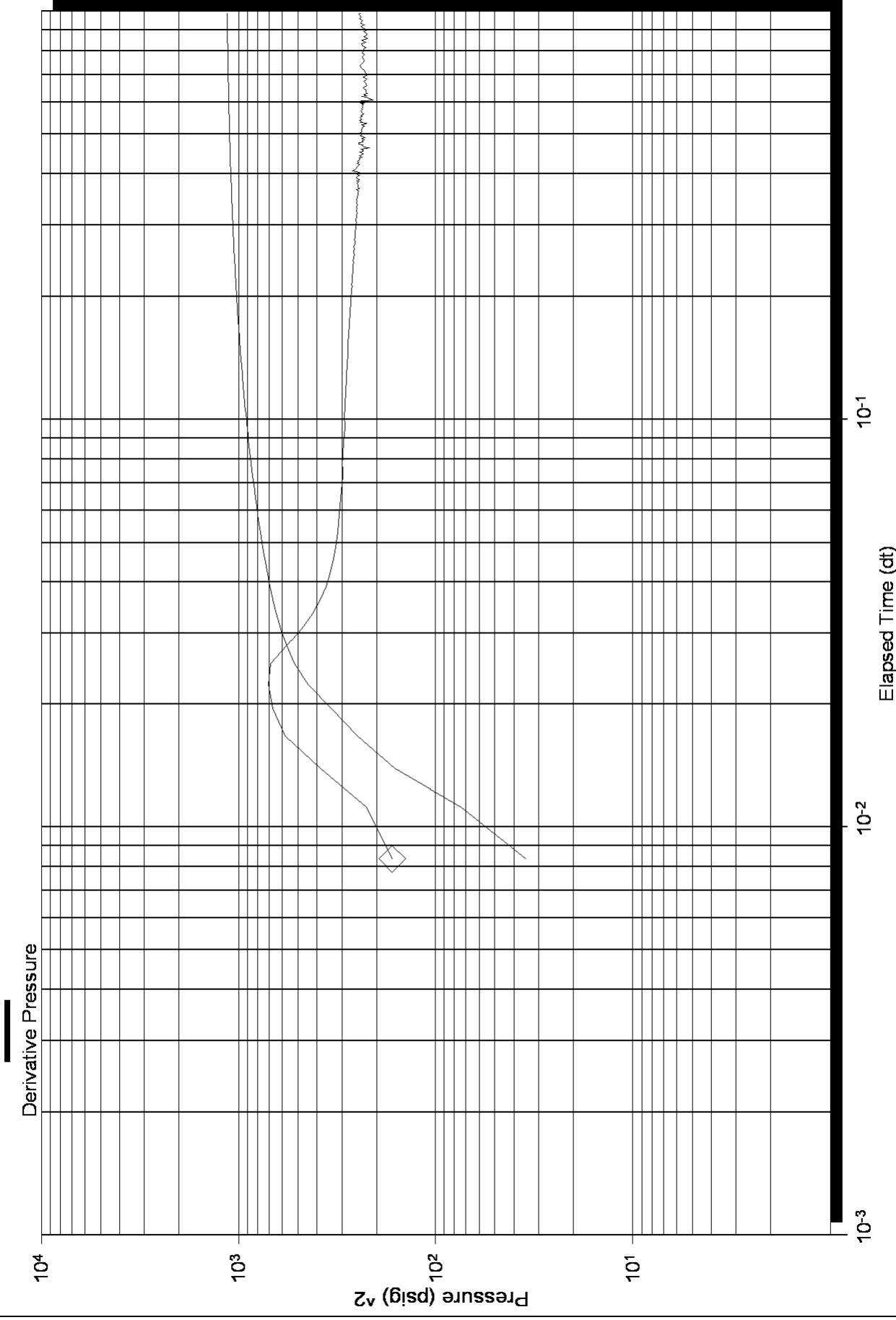
### Homer Plot



### Homer Plot



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative

