



DRILL STEM TEST REPORT

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

1515 Wynkoop Ste 700
Denver Co 80202

ATTN: Clayton Camozzi

36-17-12-Barton-Ks

Hipp Liebl Et Al 1-36

Start Date: 2011.02.22 @ 06:47:51

End Date: 2011.02.22 @ 14:11:51

Job Ticket #: 041686 DST #: 1

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Sam Gary & Associates Inc

Hipp Liebl Et Al 1-36

1515 Wynkoop Ste 700
Denver Co 80202

36-17-12-Barton-Ks

Job Ticket: 041686

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2011.02.22 @ 06:47:51

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:47:11

Time Test Ended: 14:11:51

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: 3378.00 ft (KB) To 3392.00 ft (KB) (TVD)

Reference Elevations: 1845.00 ft (KB)

Total Depth: 3392.00 ft (KB) (TVD)

1838.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8354

Inside

Press @ Run Depth: 106.37 psig @ 3379.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.22

End Date:

2011.02.22

Last Calib.:

2011.02.22

Start Time:

06:57:51

End Time:

14:11:51

Time On Btm:

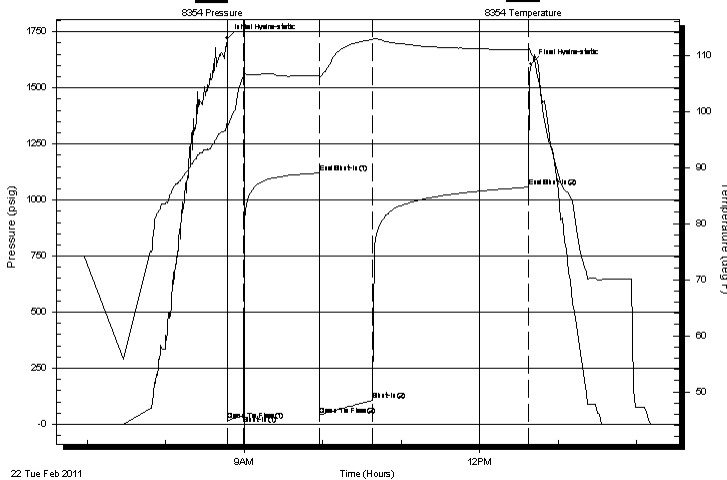
2011.02.22 @ 08:47:01

Time Off Btm:

2011.02.22 @ 12:39:21

TEST COMMENT: IF 10 MIN-Weak building to 2"
ISI 60 MIN- No Blow
FF 40 MIN-Weak building to 5"
FSI 120 MIN-No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1720.58	97.87	Initial Hydro-static
1	16.57	97.31	Open To Flow (1)
13	38.18	106.21	Shut-In(1)
71	1120.65	106.35	End Shut-In(1)
71	42.64	105.92	Open To Flow (2)
111	106.37	112.78	Shut-In(2)
231	1057.29	110.96	End Shut-In(2)
233	1607.45	110.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mdy Wtr 80%w 20%m	2.81

Gas Rates

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



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ATTN: Clayton Camozzi

Job Ticket: 041686 **DST#: 1**

Test Start: 2011.02.22 @ 06:47:51

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:47:11

Time Test Ended: 14:11:51

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: **3378.00 ft (KB) To 3392.00 ft (KB) (TVD)**

Total Depth: 3392.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1845.00 ft (KB)

1838.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8520 Outside

Press @ Run Depth: psig @ 3379.00 ft (KB)

Start Date: 2011.02.22

End Date:

2011.02.22

Start Time: 06:48:12

End Time:

14:11:41

Capacity: 8000.00 psig

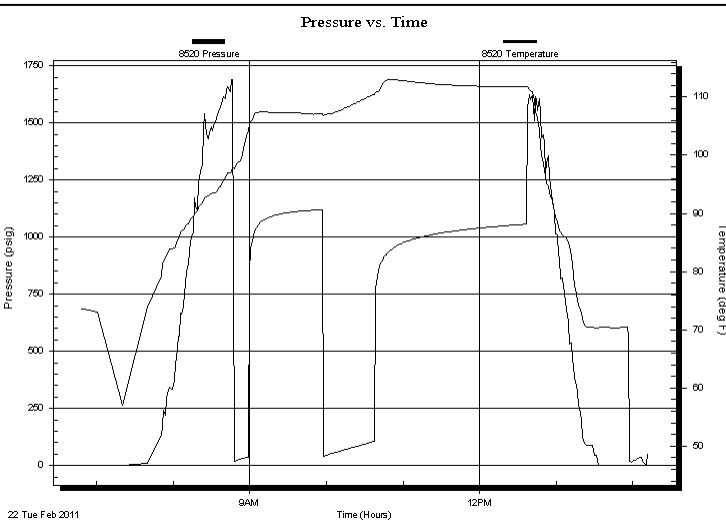
Last Calib.:

2011.02.22

Time On Btm:

Time Off Btm:

TEST COMMENT: IF 10 MIN-Weak building to 2"
ISI 60 MIN- No Blow
FF 40 MIN-Weak building to 5"
FSI 120 MIN-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mdy Wtr 80%w 20%m	2.81

Gas Rates

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



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Hipp Liebl Et Al 1-36

1515 Wynkoop Ste 700
Denver Co 80202

36-17-12-Barton-Ks

ATTN: Clayton Camozzi

Job Ticket: 041686

DST#: 1

Test Start: 2011.02.22 @ 06:47:51

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:47:11

Time Test Ended: 14:11:51

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: 3378.00 ft (KB) To 3392.00 ft (KB) (TVD)

Total Depth: 3392.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1845.00 ft (KB)

1838.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8653

Inside

Press @ RunDepth: psig @ 3343.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.22 End Date: 2011.02.22

Last Calib.: 2011.02.22

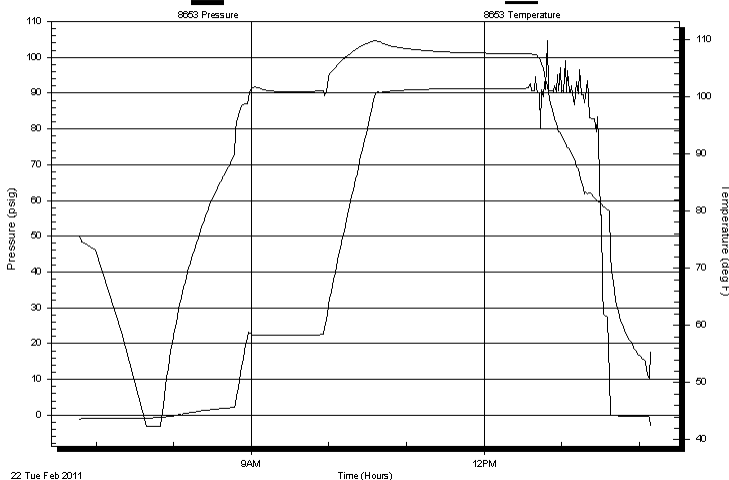
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Time On Btm:

Time Off Btm:

TEST COMMENT: IF 10 MIN-Weak building to 2"
ISI 60 MIN- No Blow
FF 40 MIN-Weak building to 5"
FSI 120 MIN-No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mdy Wtr 80%w 20%m	2.81

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary & Associates Inc

Hipp Liebl Et Al 1-36

1515 Wynkoop Ste 700
Denver Co 80202

36-17-12-Barton-Ks

Job Ticket: 041686

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2011.02.22 @ 06:47:51

Tool Information

Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 bbl	Tool Weight: 3200.00 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: 50000.00 lb
			<u>Total Volume: 47.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3378.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	49.00 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	8653	Inside	3343.00	
Blank Spacing	5.00			3348.00	
Shut In Tool	5.00			3353.00	
Sampler	3.00			3356.00	
Hydraulic tool	5.00			3361.00	
Jars	5.00			3366.00	
Safety Joint	3.00			3369.00	
Packer	5.00			3374.00	35.00 Bottom Of Top Packer
Packer	4.00			3378.00	
Stubb	1.00			3379.00	
Recorder	0.00	8354	Inside	3379.00	
Recorder	0.00	8520	Outside	3379.00	
Perforations	10.00			3389.00	
Bullnose	3.00			3392.00	14.00 Bottom Packers & Anchor

Total Tool Length: 49.00



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FLUID SUMMARY

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Job Ticket: 041686

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2011.02.22 @ 06:47:51

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: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Mdy Wtr 80%w 20%m	2.805

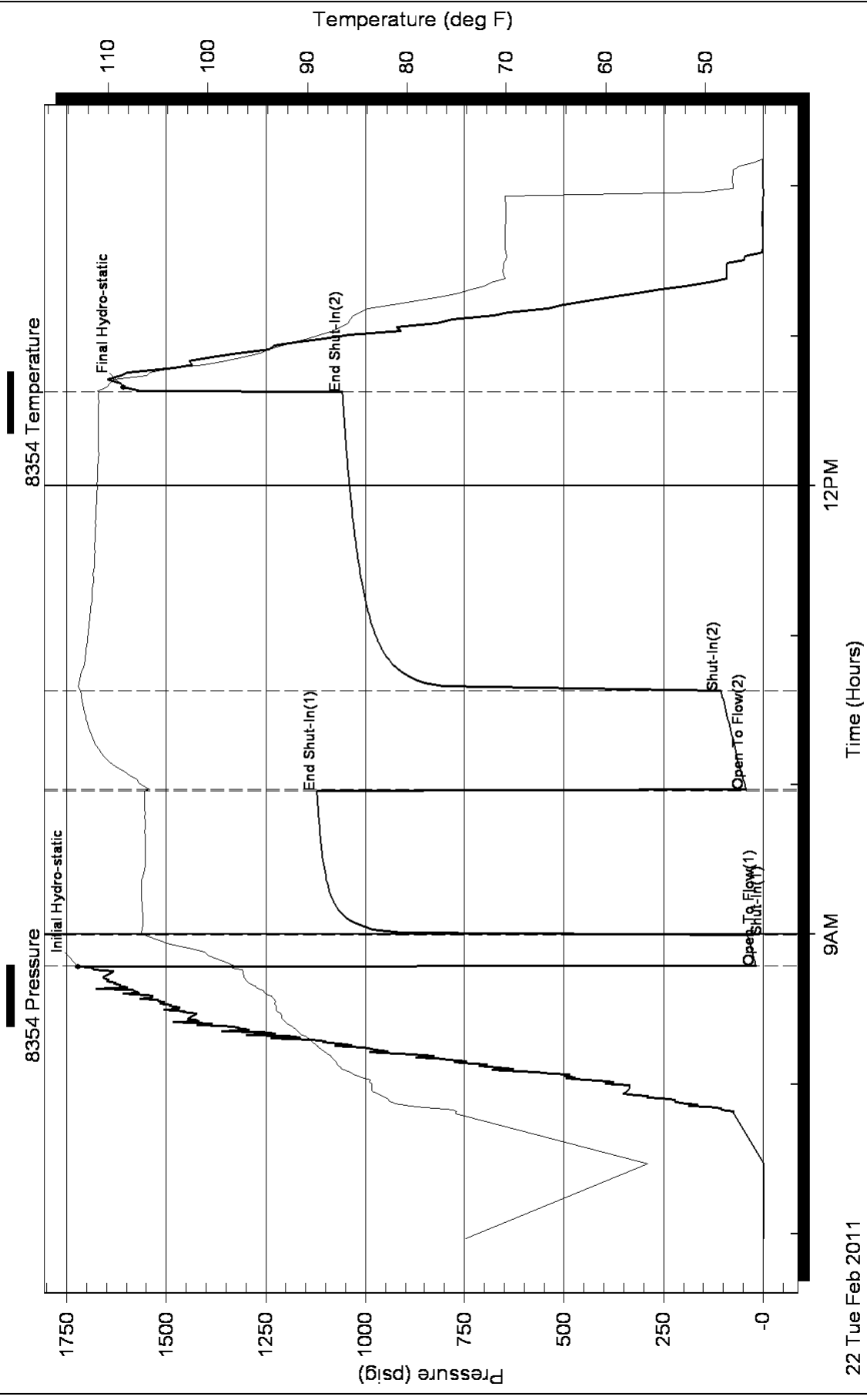
Total Length: 200.00 ft Total Volume: 2.805 bbl

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

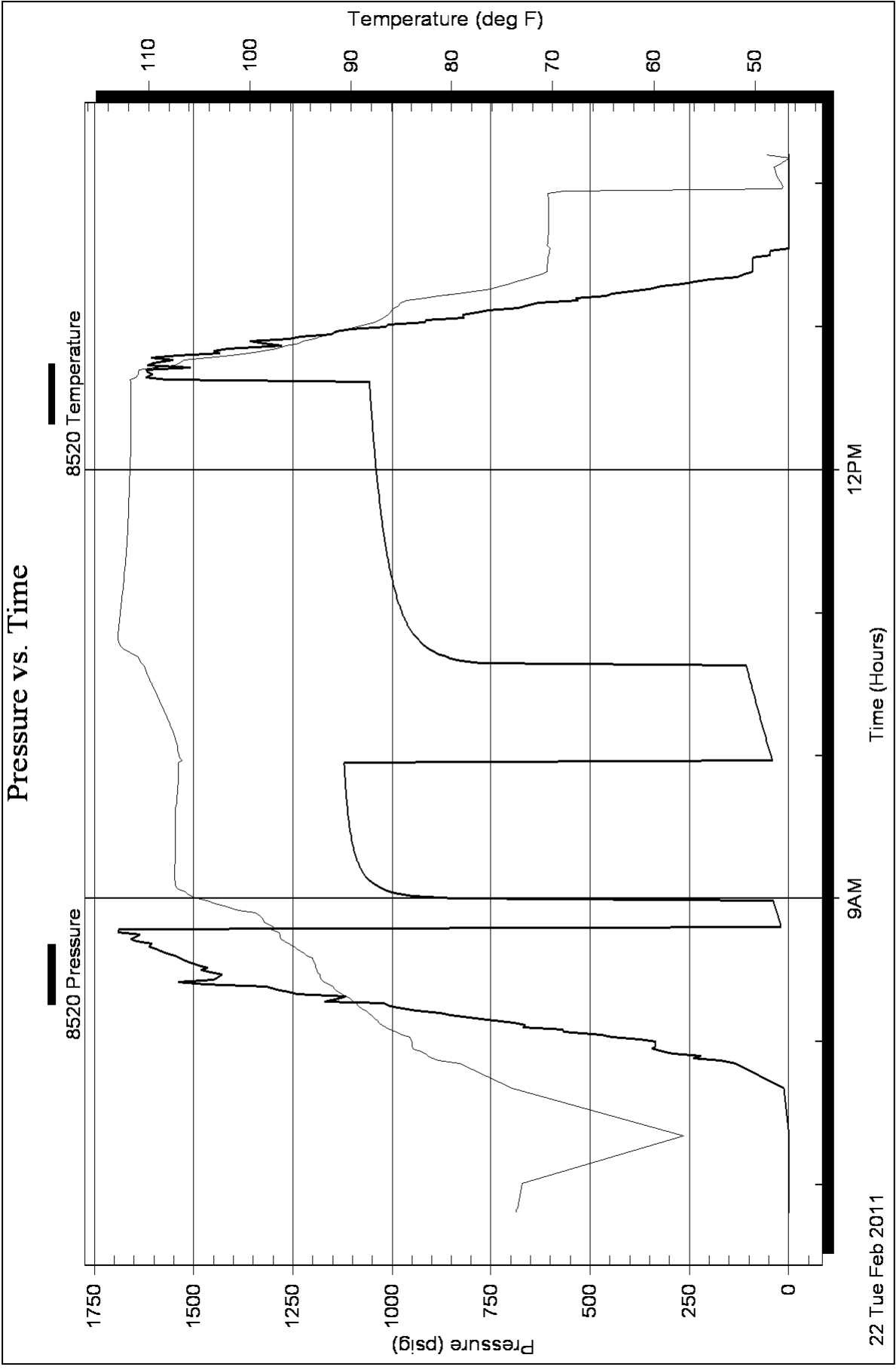
Laboratory Name: Laboratory Location:

Recovery Comments: SAMPLE GAS OIL MUD WATER 4000ml PRESSURE900psi TOTAL4000

Pressure vs. Time



Pressure vs. Time



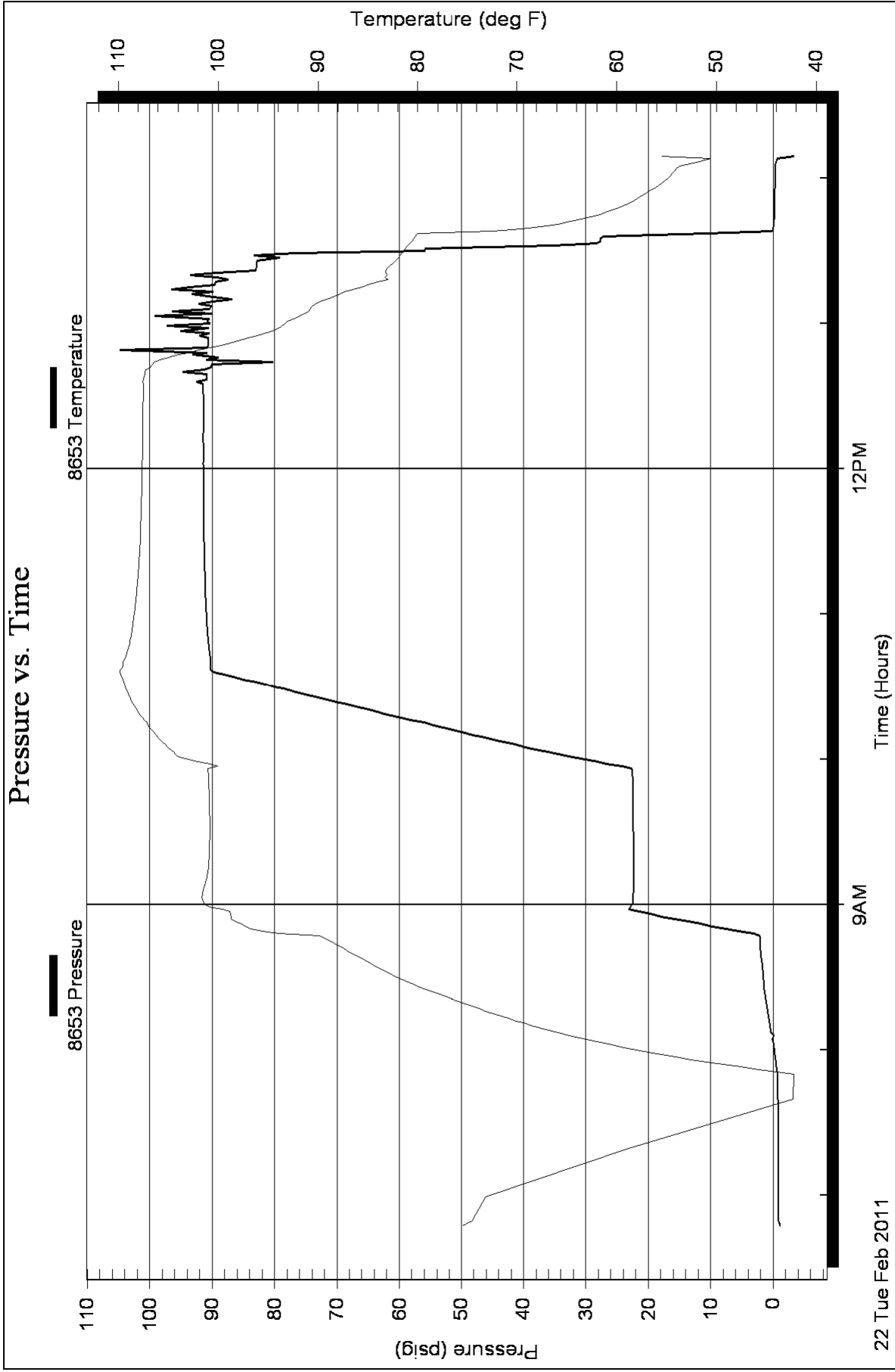
Serial #: 8653

Inside

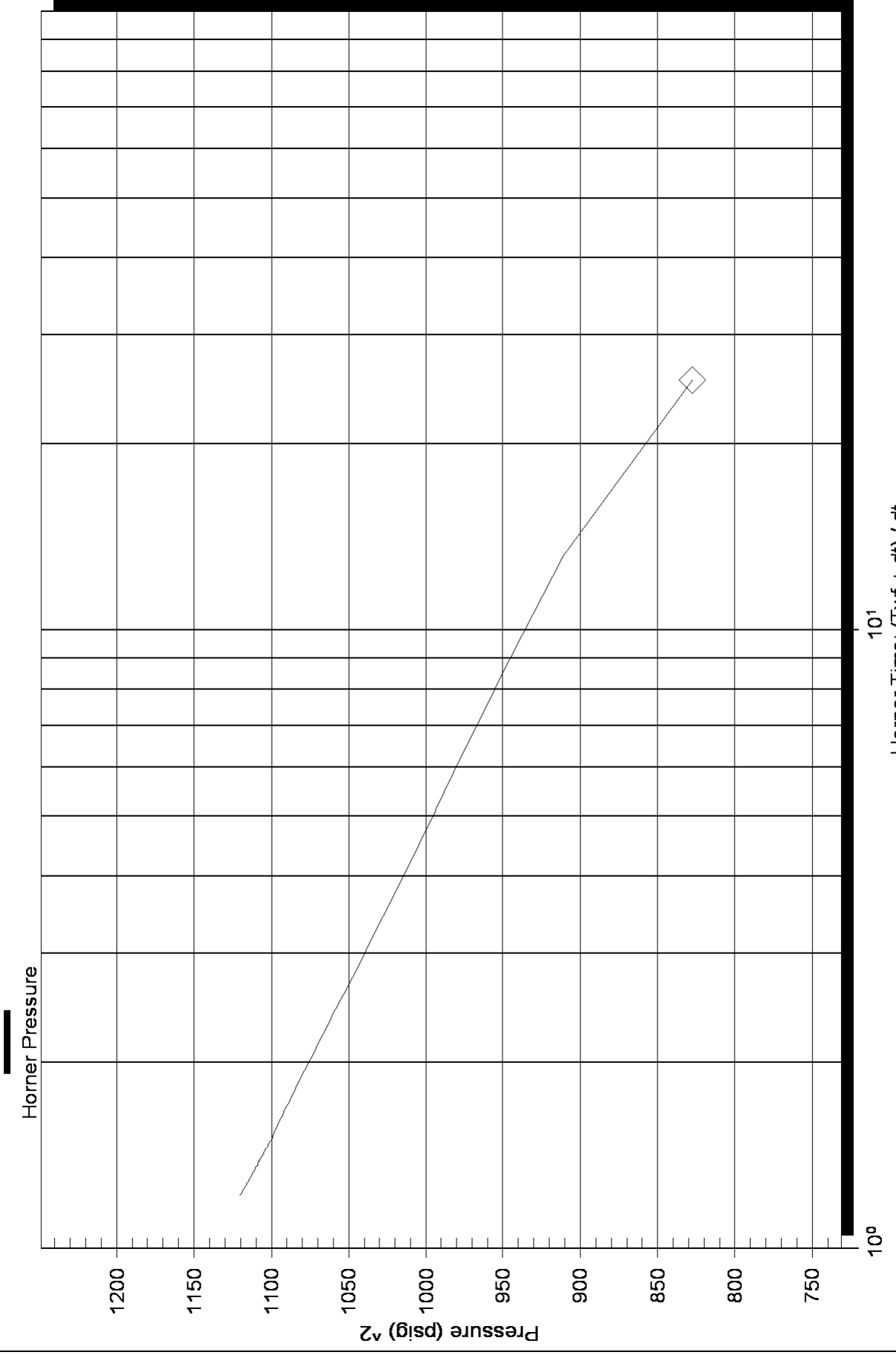
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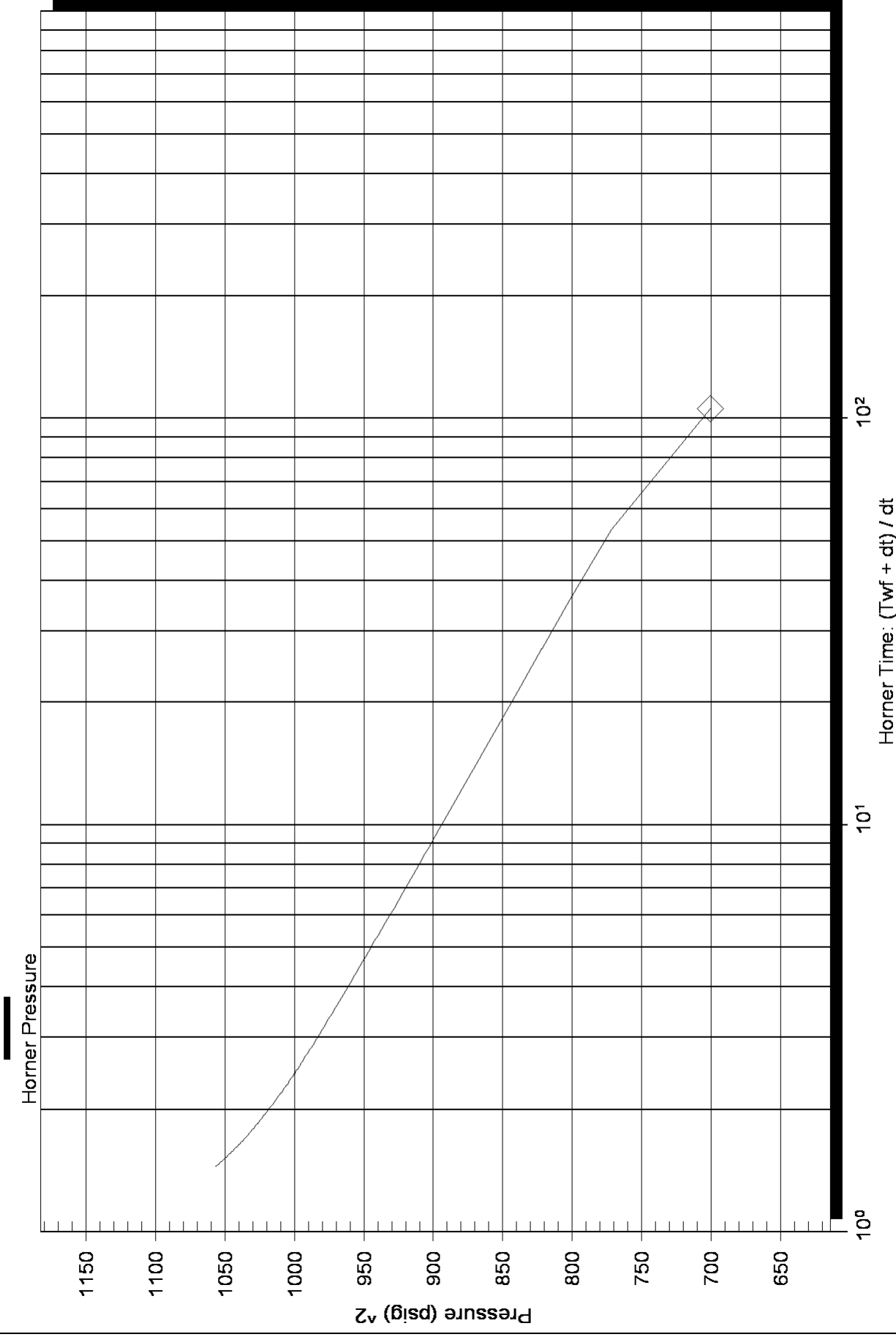
DST Test Number: 1



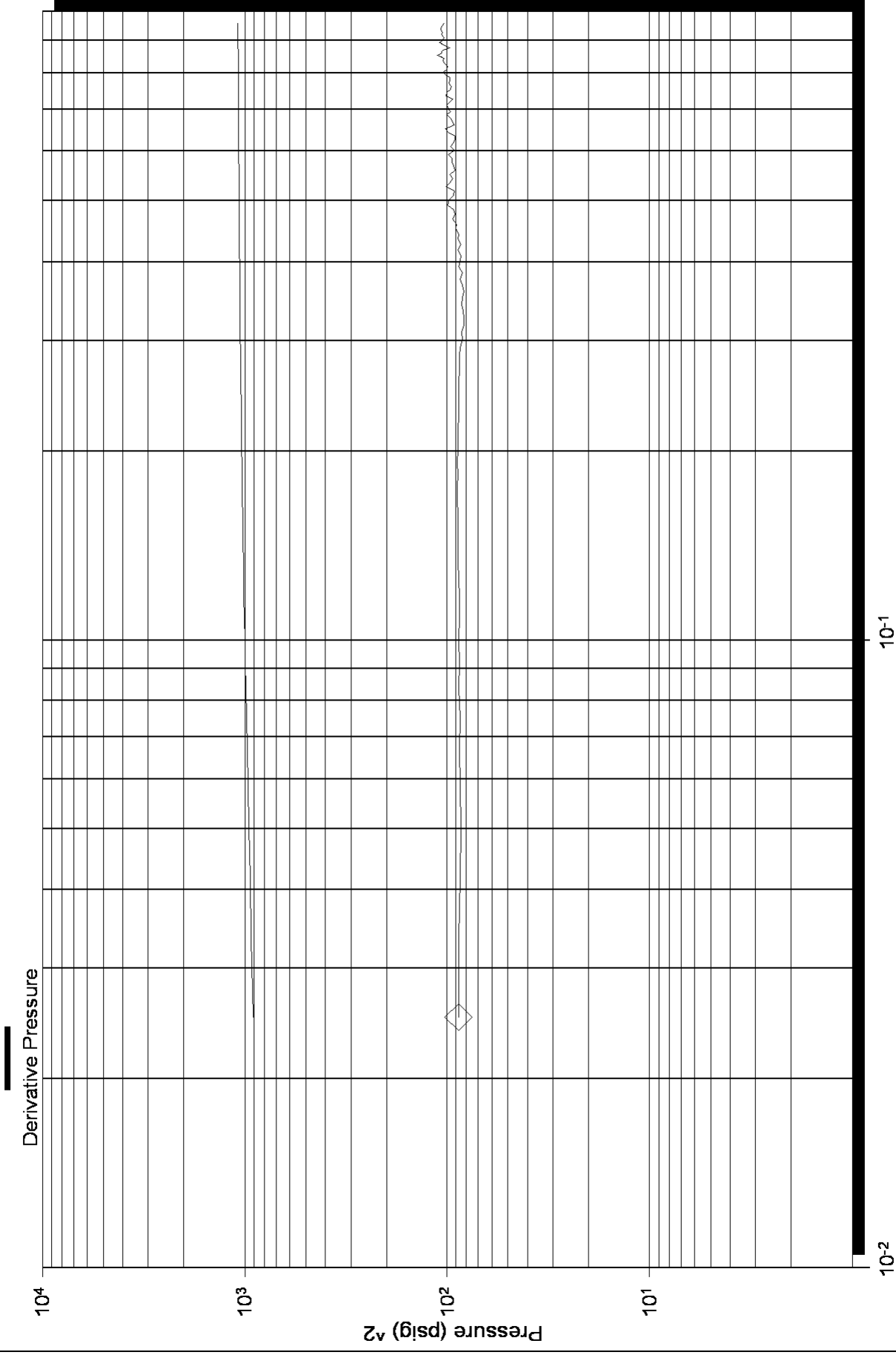
Homer Plot



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

