



DRILL STEMTEST REPORT

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

1515 Wynkoop Ste. #700
Denver, CO 80202

ATTN: Tom Fetal

Shubert ET AL 1-31

31/11S/21W-Trego

Start Date: 2012.03.04 @ 07:55:30

End Date: 2012.03.04 @ 15:46:30

Job Ticket #: 46923 DST #: 1

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

Printed: 2012.03.04 @ 16:33:04



TRILOBITE TESTING, INC.

DRILL STEMTEST REPORT

Samuel Gary Jr. & Associates, Inc.

31/11S/21W-Trego

1515 Wynkoop Ste. #700
Denver, CO 80202

Shubert ET AL 1-31

ATTN: Tom Fertal

Job Ticket: 46923

DST#: 1

Test Start: 2012.03.04 @ 07:55:30

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: Nb Whipstock ft (KB)

Time Tool Opened: 09:44:10

Time Test Ended: 15:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit Nr: 38

Interval: **3358.00 ft (KB) To 3387.00 ft (KB) (TVD)**

Reference Elevations: 2315.00 ft (KB)

Total Depth: 3387.00 ft (KB) (TVD)

2307.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @ Run Depth: 56.08 psig @ 3362.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.03.04

End Date:

2012.03.04

Last Calib.: 2012.03.04

Start Time: 08:05:30

End Time:

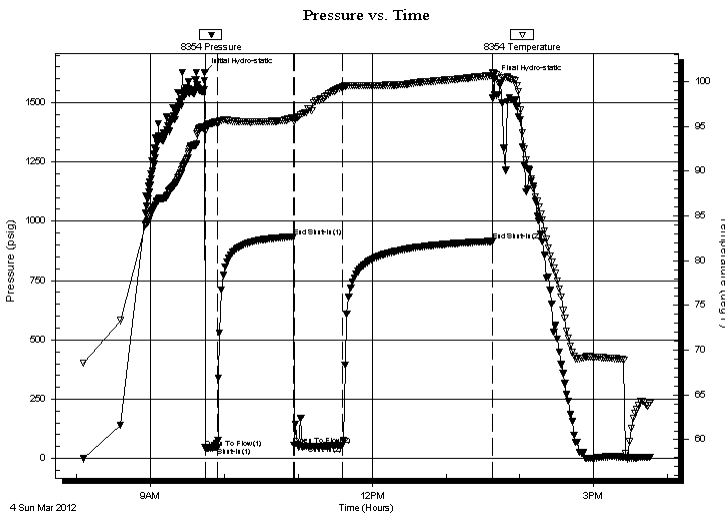
15:46:30

Time On Btm: 2012.03.04 @ 09:44:00

Time Off Btm: 2012.03.04 @ 13:39:00

TEST COMMENT: IF-Very weak building blow. Built to 1/2 inch.
IS-No Return.
FF-Very weak building blow. Built to 1 inch.
FS-No Return. Times- 10-60-40-120

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1625.48	94.85	Initial Hydro-static
1	44.93	94.40	Open To Flow (1)
11	45.35	95.42	Shut-In (1)
72	934.59	95.96	End Shut-In (1)
73	56.41	95.58	Open To Flow (2)
112	56.08	99.38	Shut-In (2)
234	915.40	100.69	End Shut-In (2)
235	1597.31	100.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	2% Oil/10% Water/88% Mud	0.56
10.00	2% Oil/98% Mud	0.14

Gas Rates

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



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TOOL DIAGRAM

Samuel Gary Jr. & Associates, Inc.

31/11S/21W-Trego

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Denver, CO 80202

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DST#: 1

ATTN: Tom Fertal

Test Start: 2012.03.04 @ 07:55:30

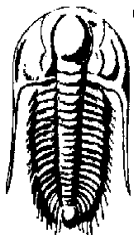
Tool Information

Drill Pipe:	Length: 3328.00 ft	Diameter: 3.80 inches	Volume: 46.68 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 25000.00 lb
			<u>Total Volume: 46.83 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3358.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	59.00 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	Fluid	3328.00	
Change Over Sub	1.00			3329.00	
Shut In Tool	5.00			3334.00	
Sampler	2.00			3336.00	
Hydraulic tool	5.00			3341.00	
Jars	5.00			3346.00	
Safety Joint	3.00			3349.00	
Packer	5.00			3354.00	30.00 Bottom Of Top Packer
Packer	4.00			3358.00	
Stubb	1.00			3359.00	
Perforations	3.00			3362.00	
Recorder	0.00	8354	Inside	3362.00	
Recorder	0.00	8520	Outside	3362.00	
Perforations	22.00			3384.00	
Bullnose	3.00			3387.00	29.00 Bottom Packers & Anchor

Total Tool Length: 59.00



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FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

31/11S/21W-Trego

1515 Wynkoop Ste. #700
Denver, CO 80202

Shubert ET AL 1-31

Job Ticket: 46923

DST#: 1

ATTN TomFertal

Test Start: 2012.03.04 @ 07:55:30

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 45.00 sec/qt
Water Loss: 7.60 cm³
Resistivity: ohmm
Salinity: 1000.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	2%OI/10%Water/88%Mud	0.559
10.00	2%OI/98%Mud	0.140

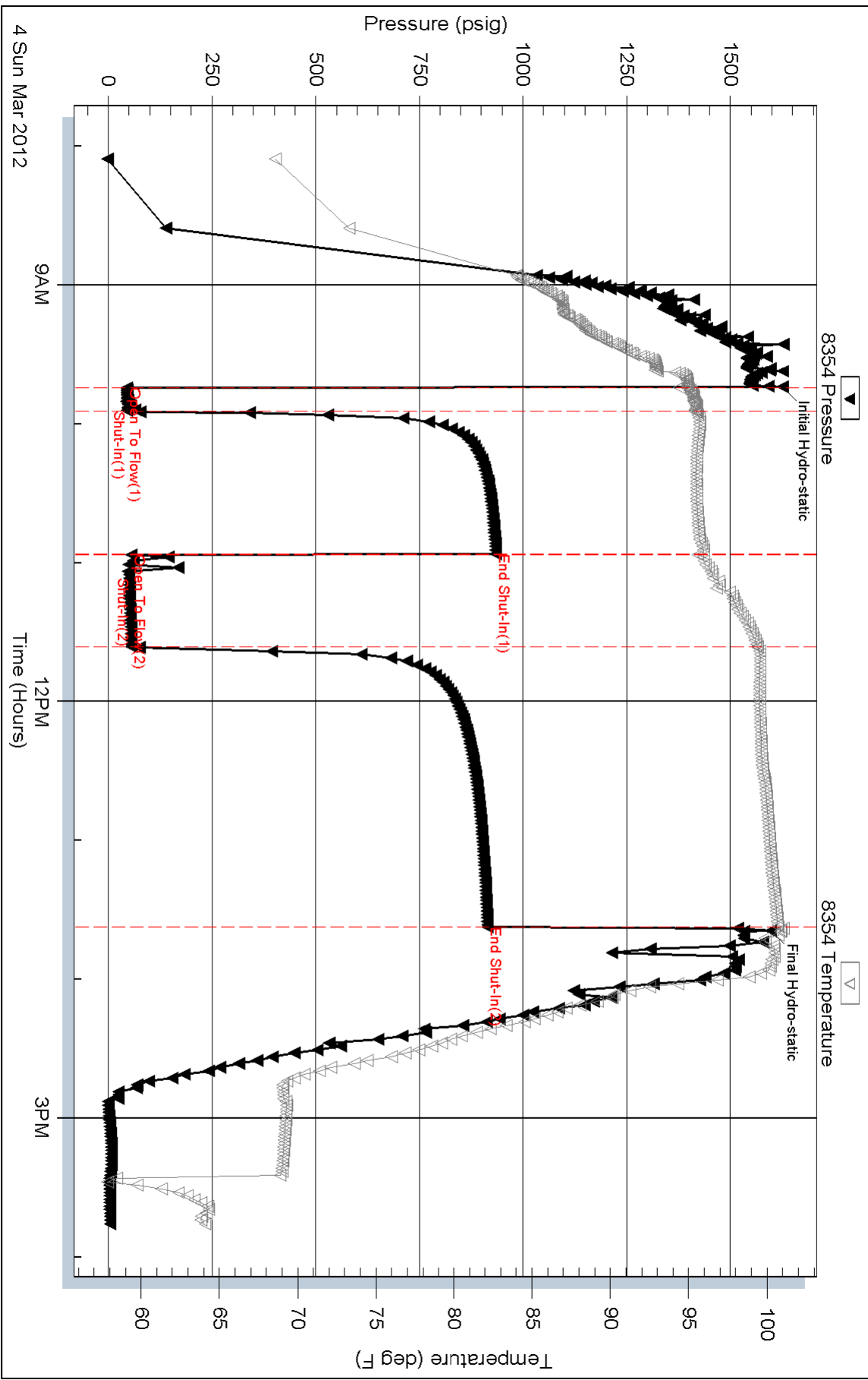
Total Length: 70.00ft Total Volume: 0.699 bbl

NumFluid Samples: 0 NumGas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler-400ML total. 600ML-Mud. 3400ML Water. 90# Pressure.
Chlorides- .153@64= 54,000 chlorides.

Pressure vs. Time

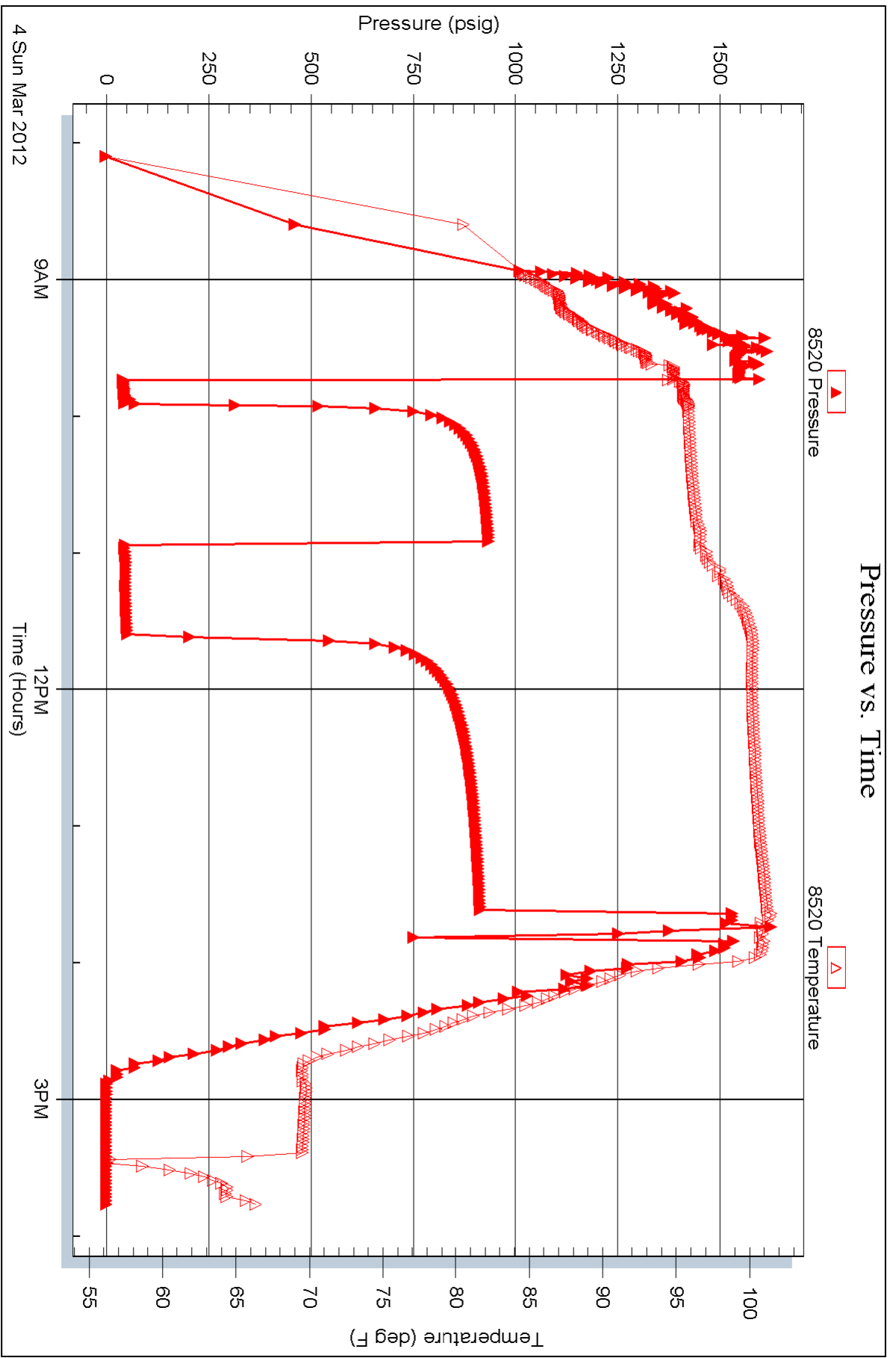


Serial # 8520

Outside Samuel Gary J. & Associates, Inc.

Subert ETAL 1-31

DSTest Number: 1



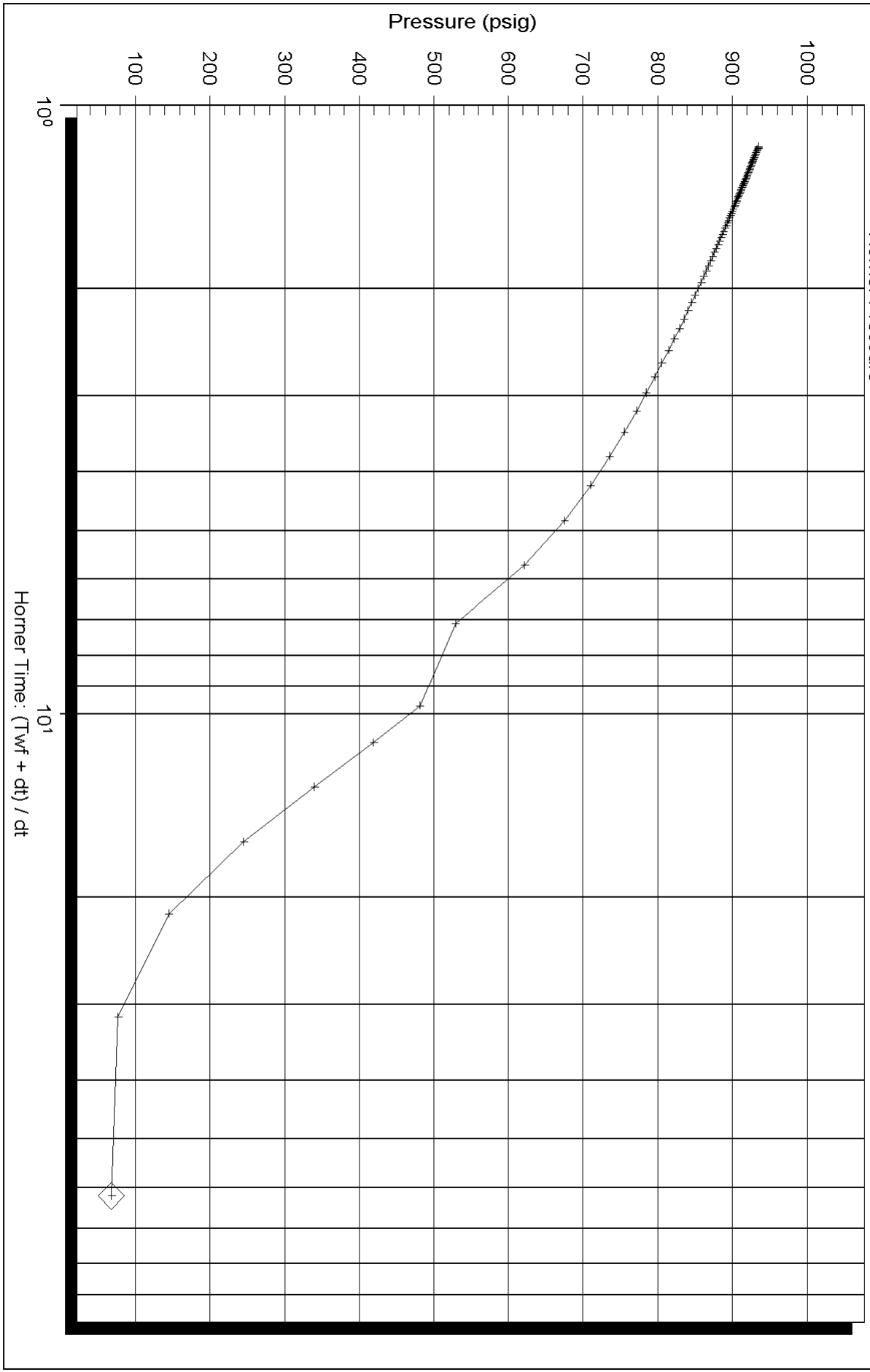
Thiokol Testing, Inc

Ref. No: 48923

Printed: 2012.03.04 @ 16:33:06

Horner Plot

Horner Pressure +



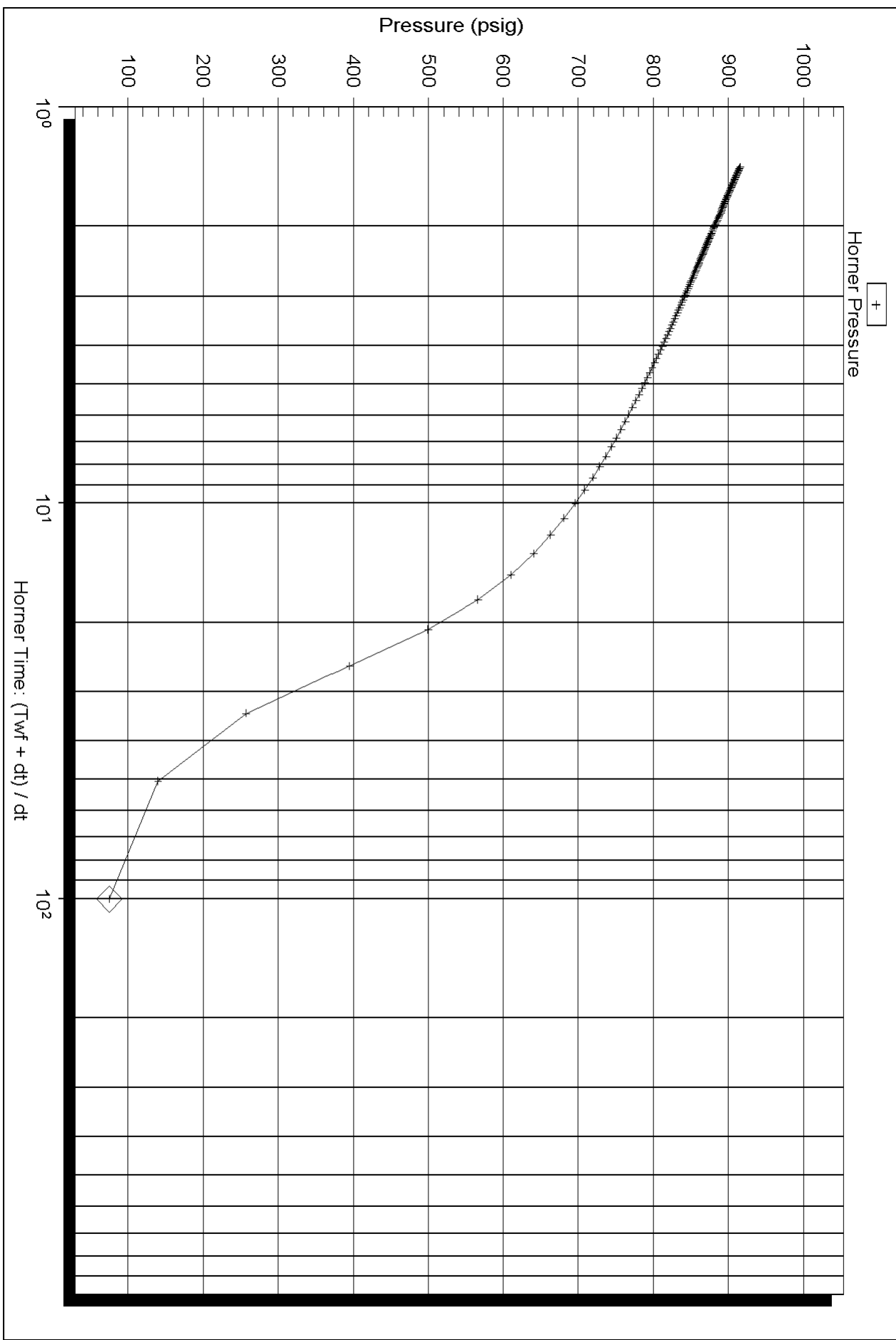
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P_r :

Slope (m) : kpa/log cycle

Flow/Cycle: 1

Horner Plot



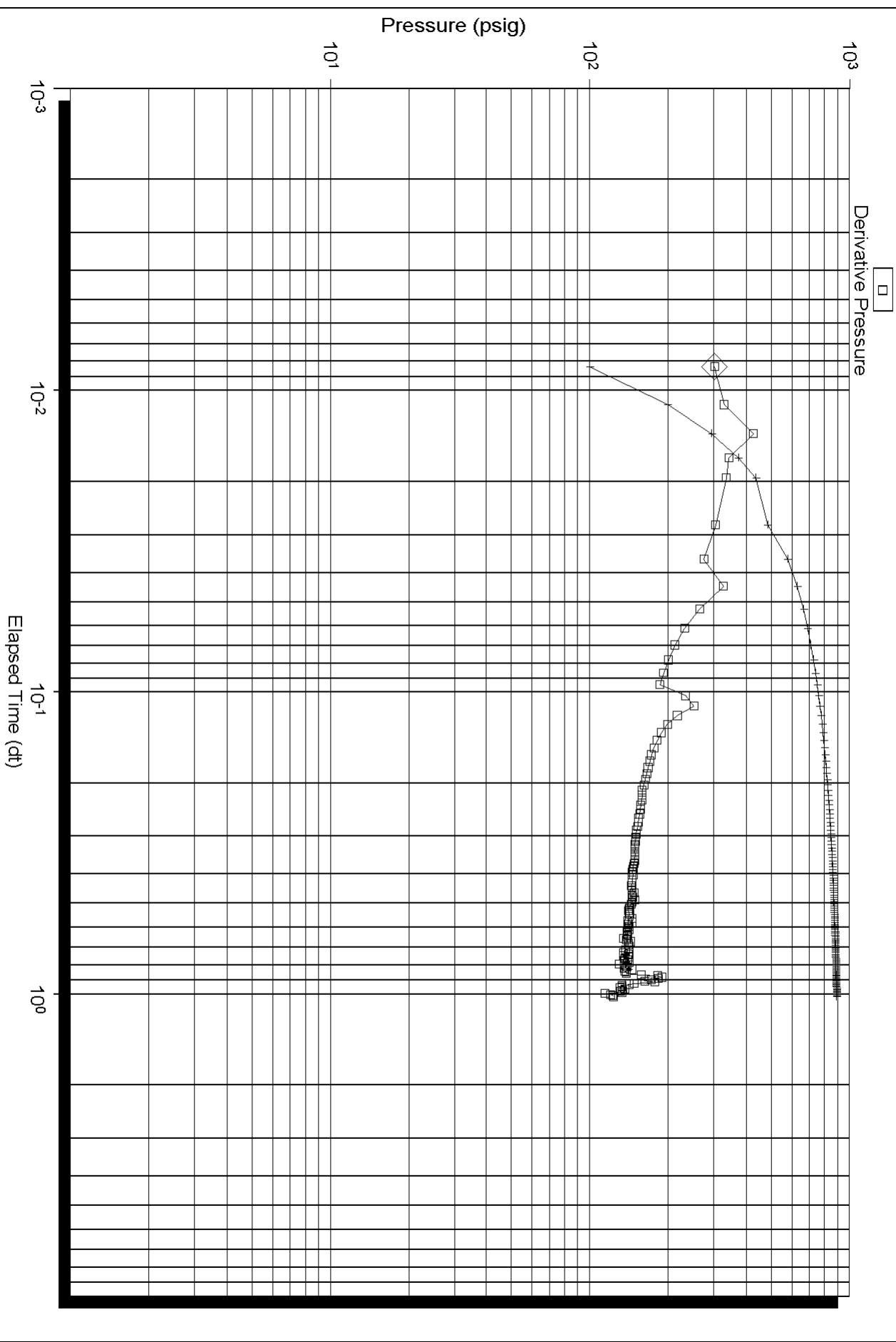
Serial Number: 8364 (Inside)

Pr :

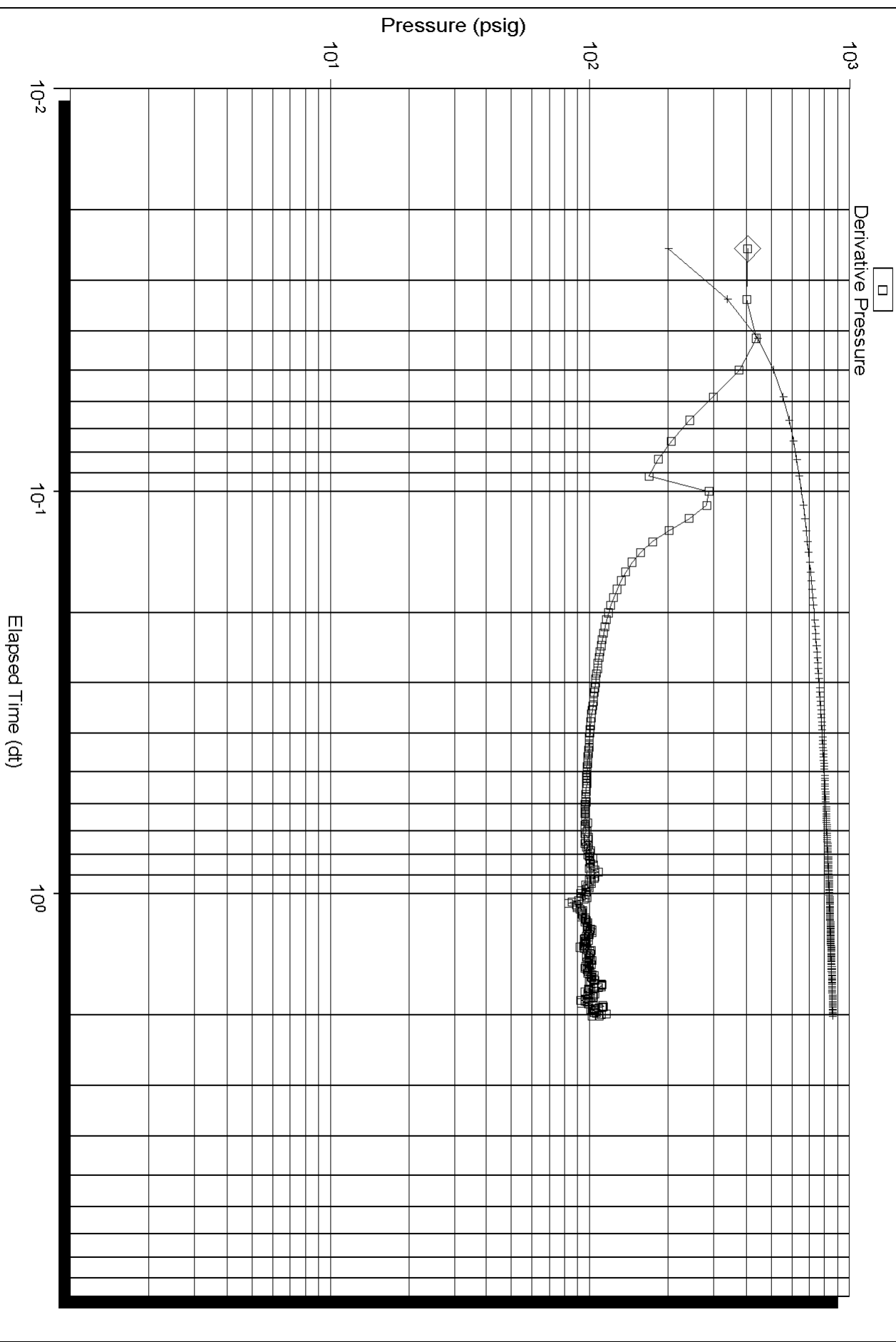
Slope (m) : kpa/log cycle

Flow/Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative



Serial Number: 8364 (Inside)

Flow Cycle: 2