

**TRILOBITE  
TESTING, INC.**

## 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: 2012.03.05 @ 19:20:15

End Date: 2012.03.06 @ 04:07:15

Job Ticket #: 46924                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.06 @ 04:31:37



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# DRILL STEMTEST REPORT

Samuel Gary Jr. & Associates, Inc.

**31/11S/21W-Trego**

1515 Wynkoop Ste. #700  
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**Shubert ET AL 1-31**

ATTN: Tom Fernal

Job Ticket: 46924

**DST#: 2**

Test Start: 2012.03.05 @ 19:20:15

## GENERAL INFORMATION:

Formation: **LKC "A-C**

Deviated: Nb Whipstock ft (KB)

Time Tool Opened: 21:12:45

Time Test Ended: 04:07:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit Nr: 38

Interval: **3603.00 ft (KB) To 3650.00 ft (KB) (TVD)**

Reference Elevations: 2315.00 ft (KB)

Total Depth: 3650.00 ft (KB) (TVD)

2307.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8354**

**Inside**

Press @ Run Depth: 110.45 psig @ 3607.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.03.05

End Date:

2012.03.06

Last Calib:

2012.03.06

Start Time: 19:30:15

End Time:

04:07:15

Time On Btm

2012.03.05 @ 21:12:35

Time Off Btm

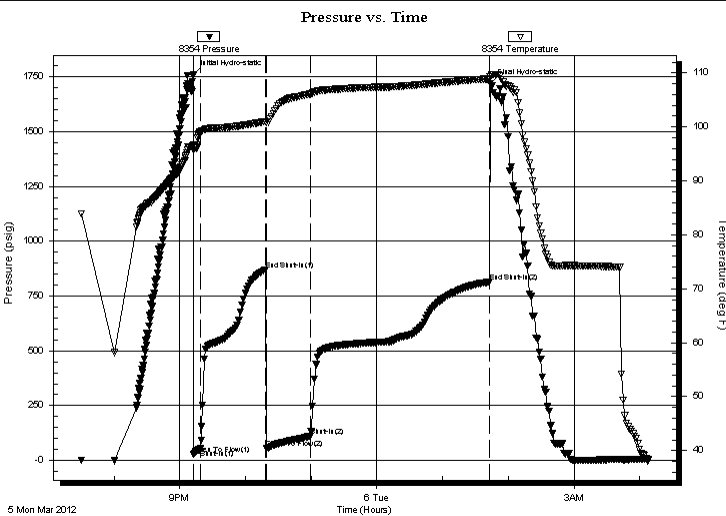
2012.03.06 @ 01:43:15

**TEST COMMENT:** IF-Fair building blow. Built to 6 inches.

IS-Nb Return.

FF-Strong building blow. BCB in 5 minutes 45 seconds.

FSI-Return @ 10 seconds. Built to 3&1/2 inches. Times-5-60-40-160



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1761.00	96.61	Initial Hydro-static
1	29.09	95.78	Open To Flow(1)
7	51.90	99.07	Shut-In(1)
66	868.71	101.00	End Shut-In(1)
67	55.67	100.83	Open To Flow(2)
107	110.45	106.09	Shut-In(2)
271	814.23	108.92	End Shut-In(2)
271	1718.85	109.29	Final Hydro-static

## Recovery

Length (ft)	Description	Vdume (bbl)
62.00	10% Gas/10% Oil/10% Water/70% Mud	0.59
93.00	10% Gas/10% Oil/80% Mud	1.30
62.00	60% Gas/40% Oil	0.87
0.00	589 G.I.P.	0.00

## Gas Rates

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







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**TOOL DIAGRAM**

Samuel Gary Jr. & Associates, Inc.

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Job Ticket: 46924

**DST#: 2**

ATTN: Tom Fernal

Test Start: 2012.03.05 @ 19:20:15

## Tool Information

Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 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: 27000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 4000.00 lb
			<u>Total Volume: 49.95 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3603.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	77.00 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	3573.00	
Change Over Sub	1.00			3574.00	
Shut In Tool	5.00			3579.00	
Sampler	2.00			3581.00	
Hydraulic tool	5.00			3586.00	
Jars	5.00			3591.00	
Safety Joint	3.00			3594.00	
Packer	5.00			3599.00	30.00 Bottom Of Top Packer
Packer	4.00			3603.00	
Stubb	1.00			3604.00	
Perforations	3.00			3607.00	
Recorder	0.00	8354	Inside	3607.00	
Recorder	0.00	8520	Outside	3607.00	
Change Over Sub	1.00			3608.00	
Drill Pipe	31.00			3639.00	
Change Over Sub	1.00			3640.00	
Perforations	7.00			3647.00	
Bullnose	3.00			3650.00	47.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



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**FLUID SUMMARY**

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Denver, CO 80202

**Shubert ET AL 1-31**

Job Ticket: 46924

**DST#: 2**

ATTN: Tom Fertal

Test Start: 2012.03.05 @ 19:20:15

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 54.00 sec/qt  
Water Loss: 7.80 cm<sup>3</sup>  
Resistivity: ohmm  
Salinity: 4800.00 ppm  
Filter Cake: inches

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

Oil API: 40 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	10% Gas/10% Oil/10% Water/70% Mud	0.587
93.00	10% Gas/10% Oil/80% Mud	1.305
62.00	60% Gas/40% Oil	0.870
0.00	589 G.I.P.	0.000

Total Length: 217.00ft      Total Volume: 2.762 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Sampler-350# pressure. 1.25 cubic feet gas. 2800 ML Oil.  
1200 ML Gas. 40 Gravity.

Serial # 8354

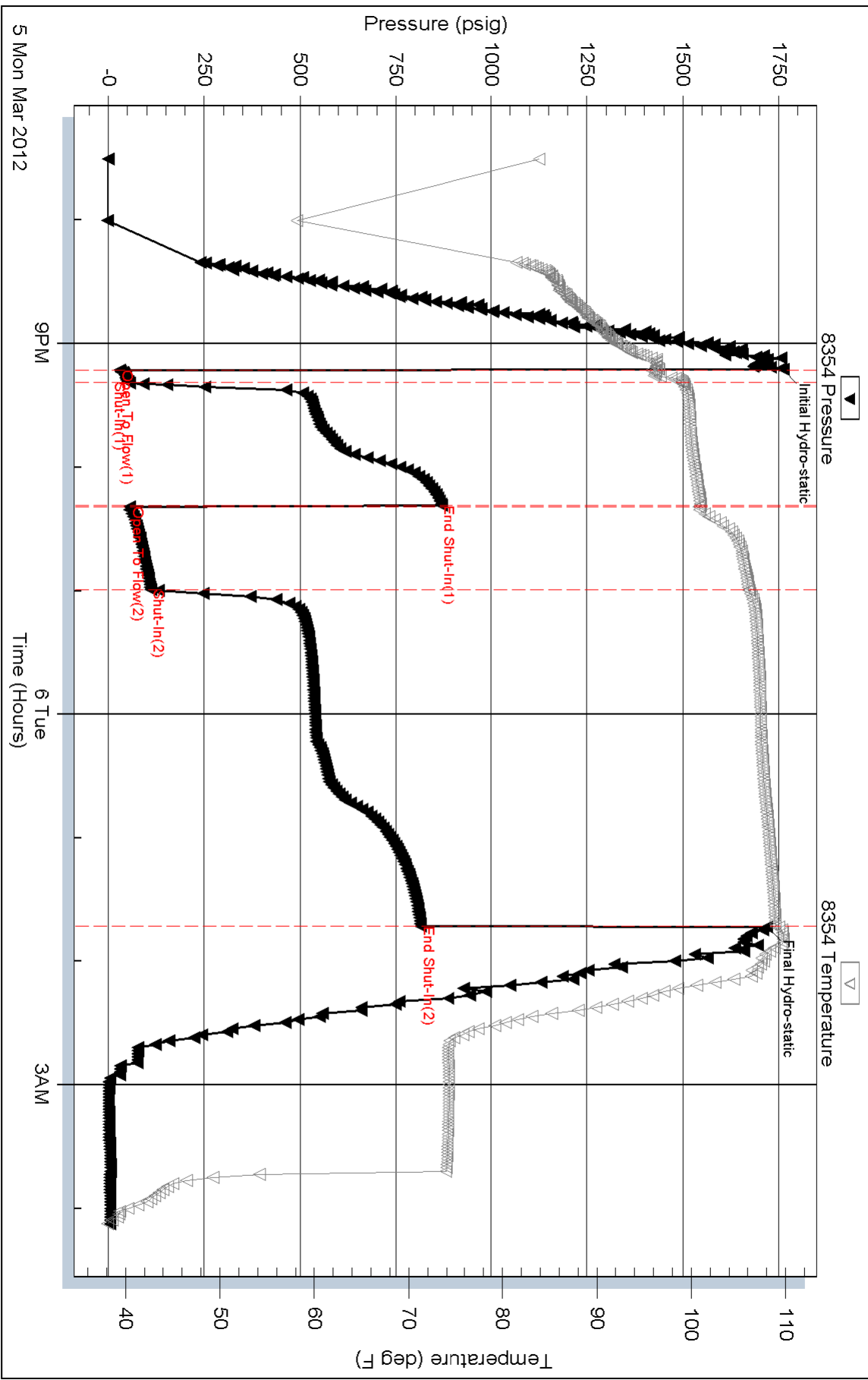
Inside

Samuel Gary J. & Associates, Inc.

Shubert ETAL 1-31

DST Test Number: 2

### Pressure vs. Time



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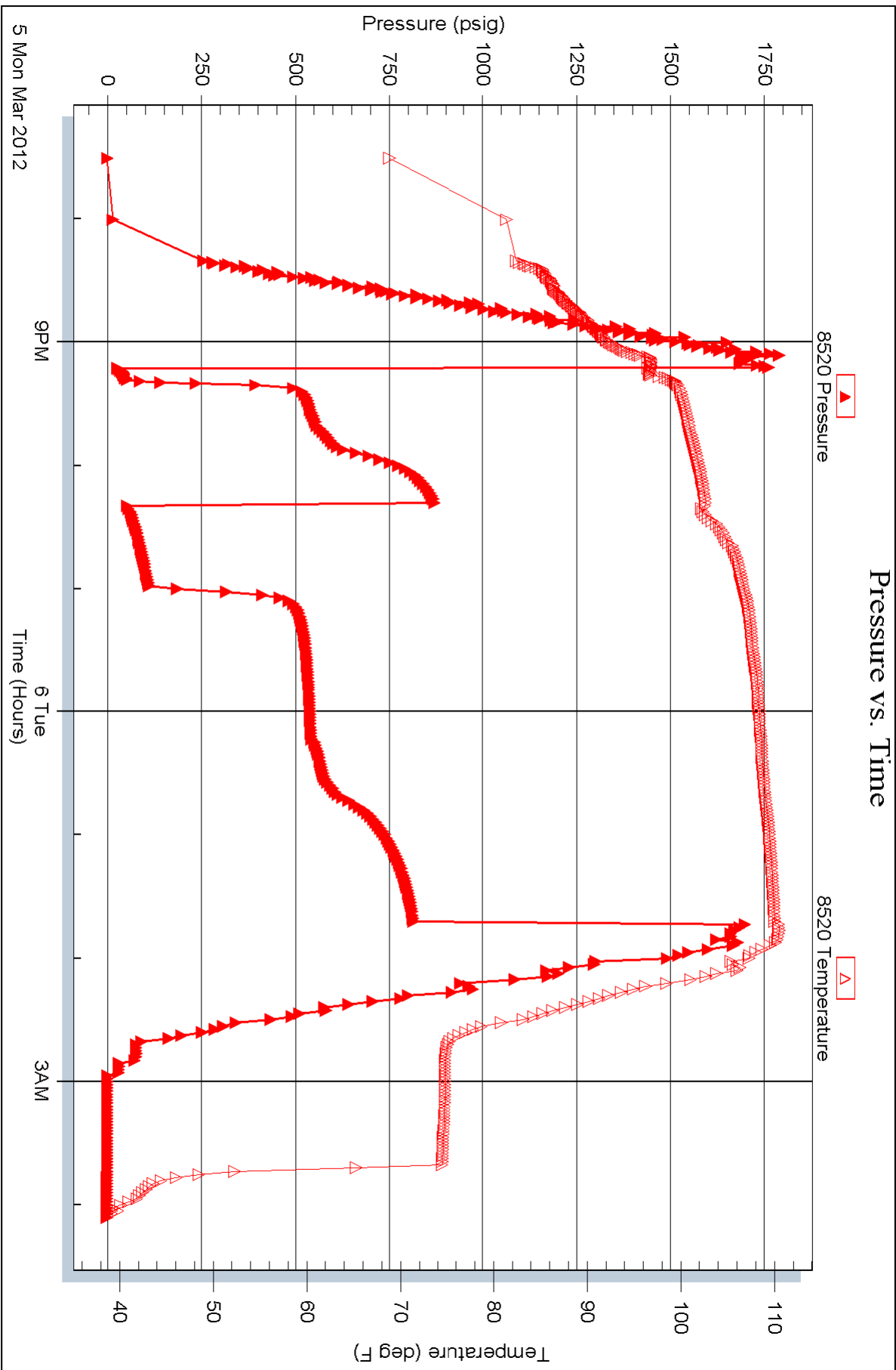
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Outside

Samuel Gary J. & Associates, Inc.

Shubert ETAL 1-31

DST Test Number: 2





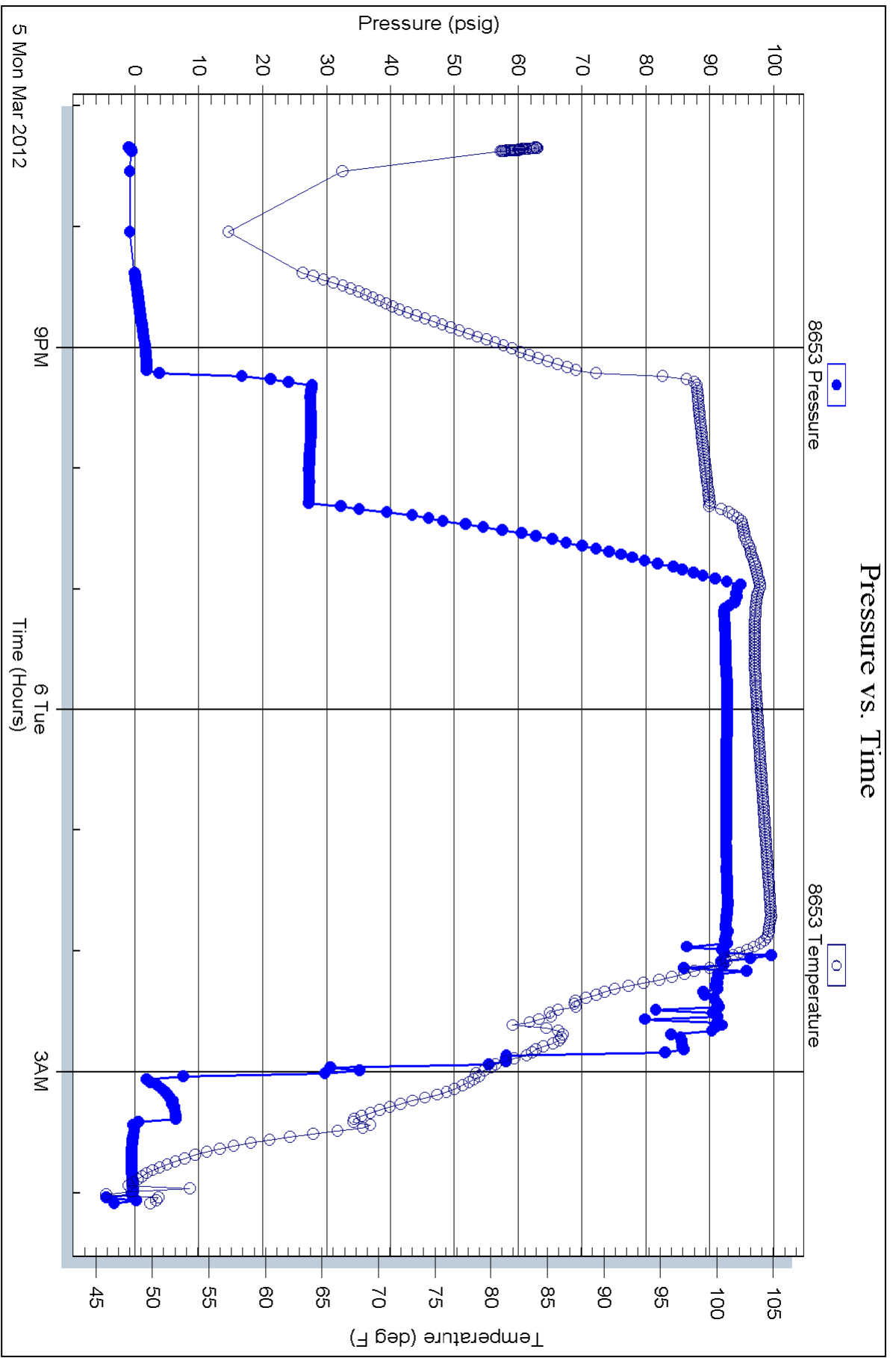
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Fluid

Samuel Gary J. & Associates, Inc.

Shubert ETAL 1-31

DST Test Number: 2

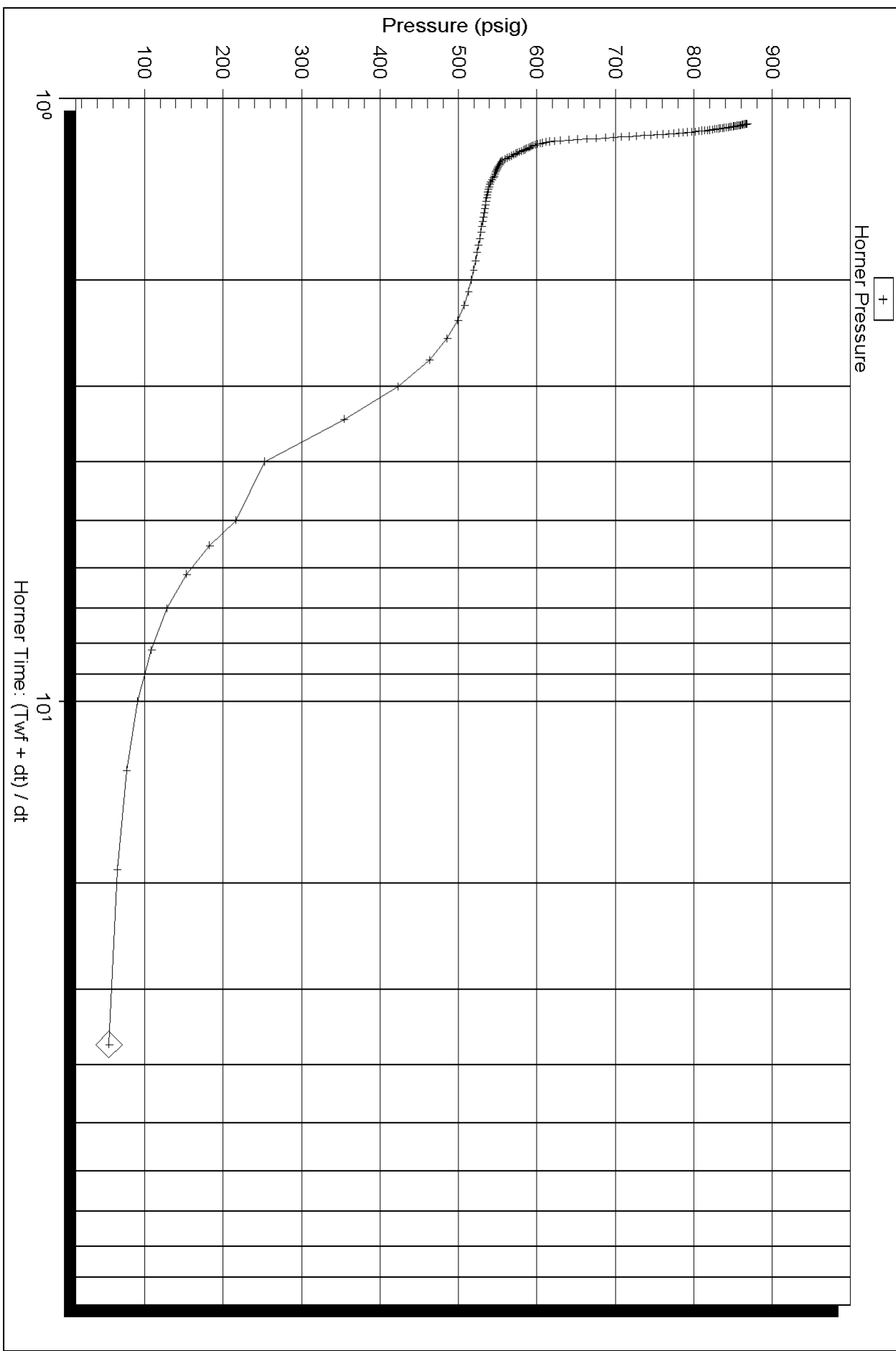


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### Horner Plot



Serial Number: 8364 (Inside)

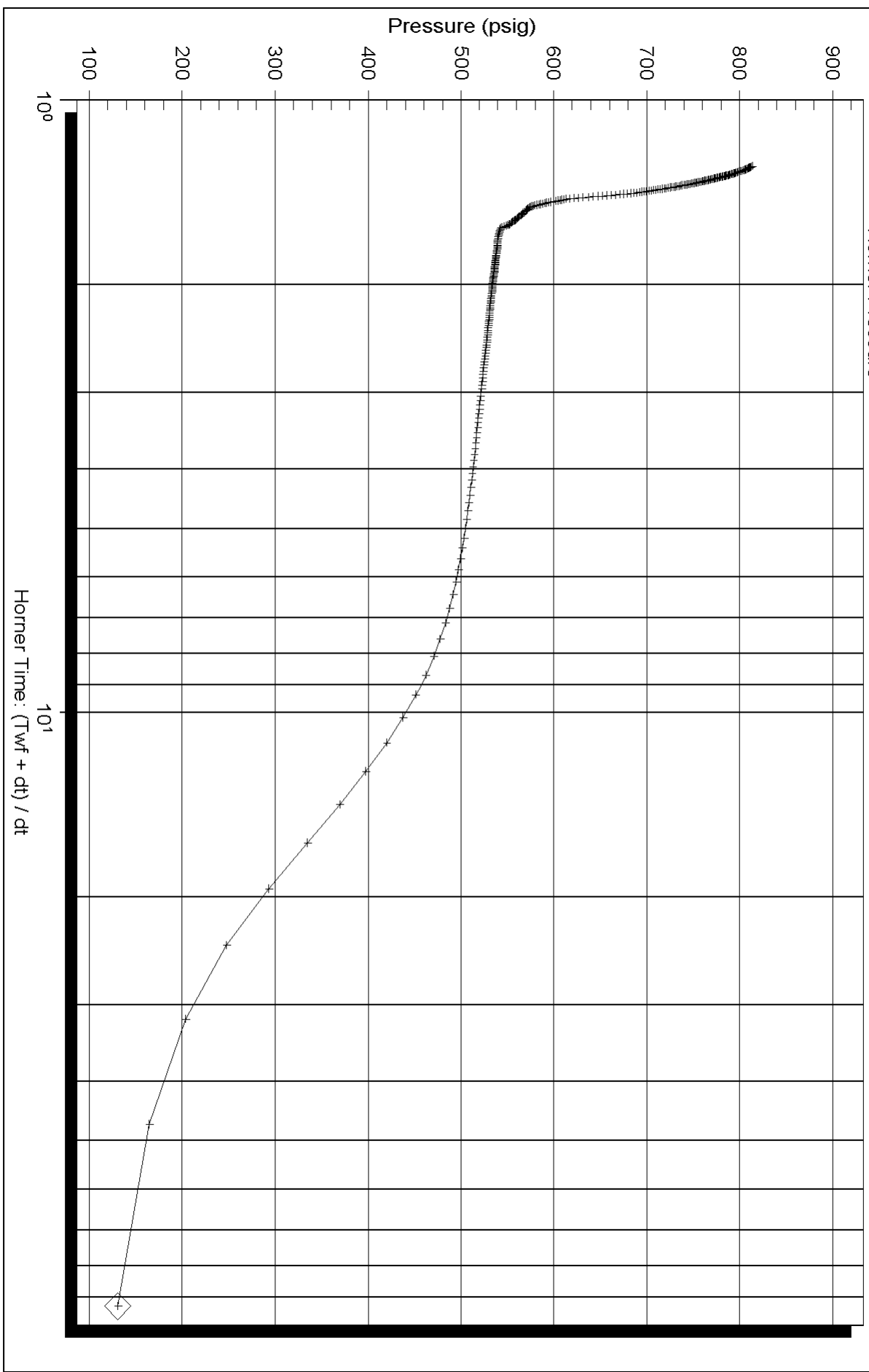
Pr :

Slope (m) : kpa/log cycle

Flow/Cycle: 1

### Horner Plot

Horner Pressure +



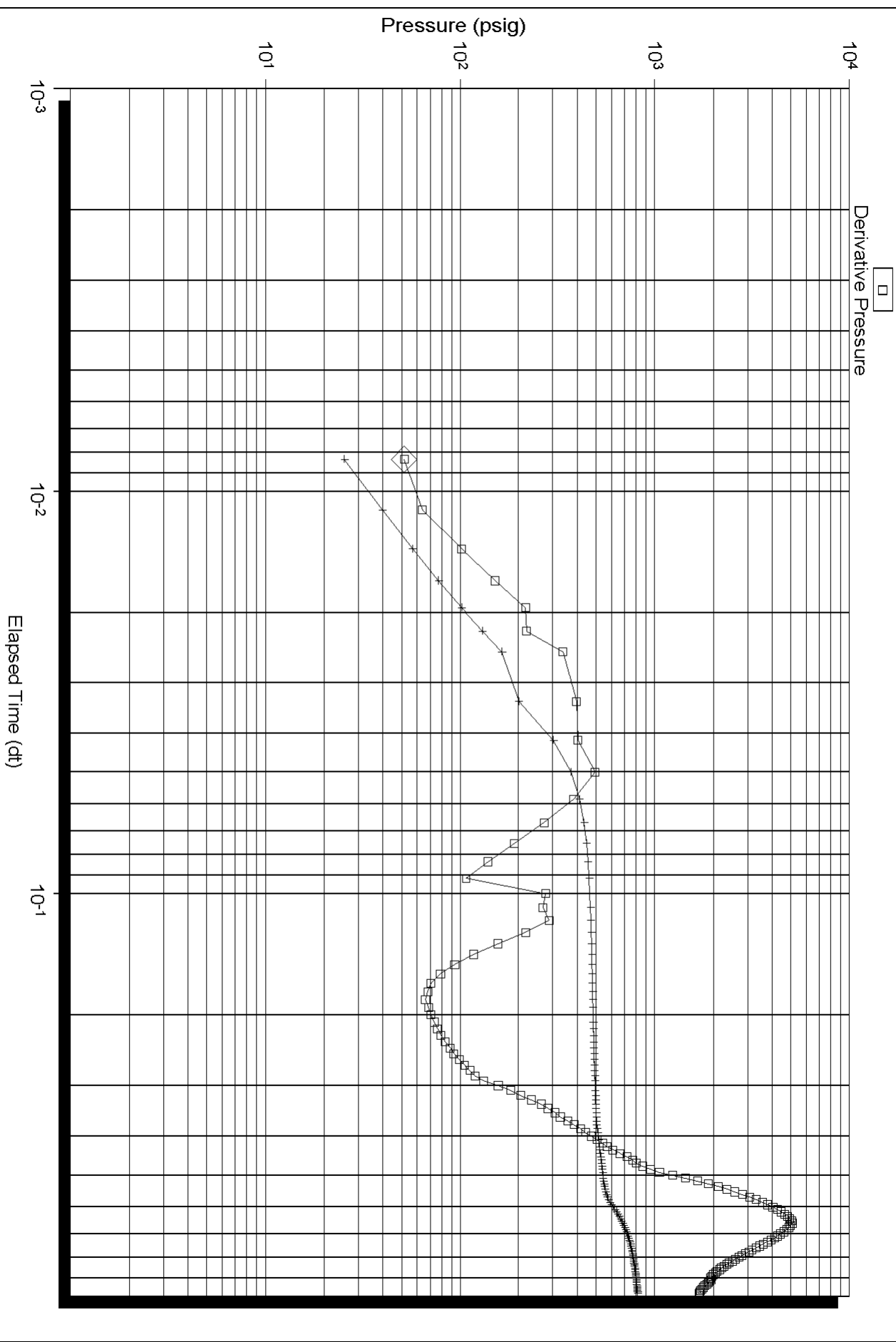
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Pr :

Slope (m) : kpa/log cycle

Flow/Cycle: 2

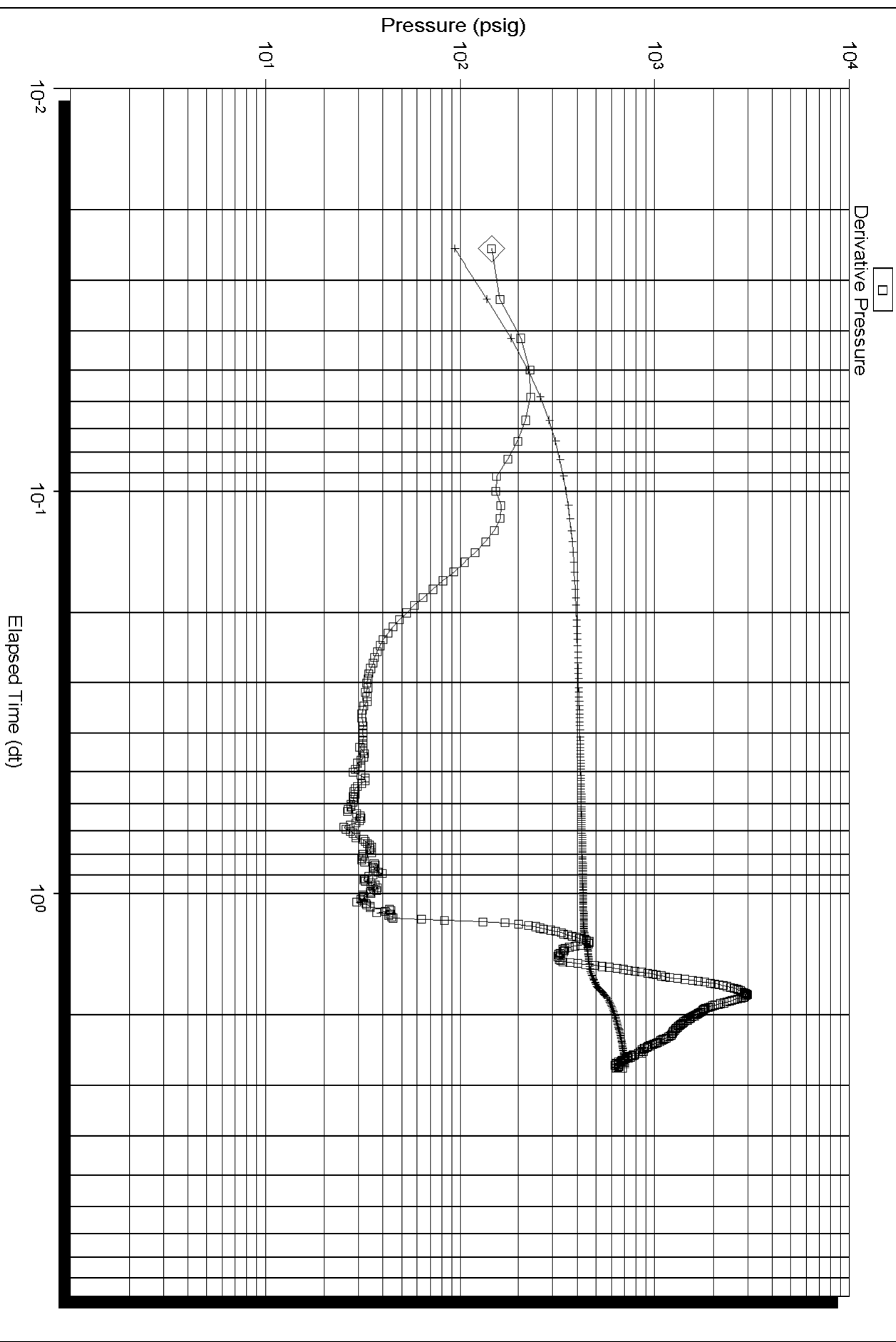
# Log-Log and Pseudo-Derivative



Serial Number: 8364 (Inside)

Flow Cycle: 1

# Log-Log and Pseudo-Derivative



Serial Number: 8364 (Inside)

Flow Cycle: 2