

## DRILL STEM TEST REPORT

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

1515 Wynkoop  
Suite  
Denver, CO. 80202

ATTN: Tom Fertal

### **Wagner Family #1-5**

#### **5-16s-15w-Barton**

Start Date: 2011.11.16 @ 04:51:00

End Date: 2011.11.16 @ 11:39:00

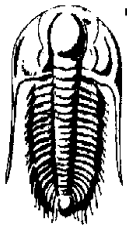
Job Ticket #: 44671                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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Printed: 2011.11.16 @ 11:17:29



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

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Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44671      **DST#: 2**  
Test Start: 2011.11.16 @ 04:51:00

## GENERAL INFORMATION:

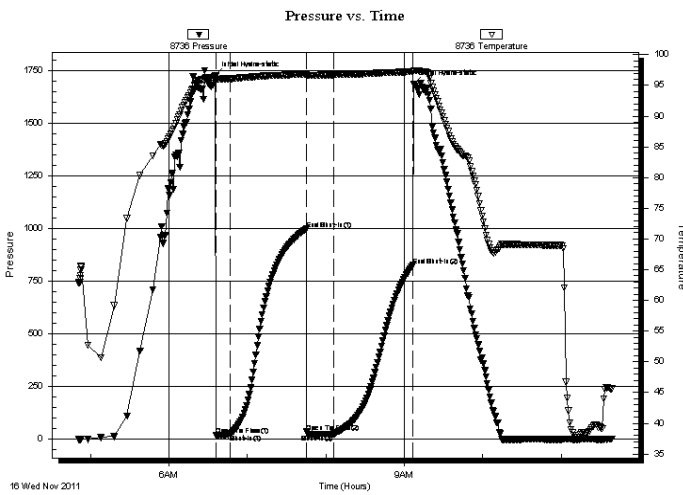
Formation: **Lansing "J-K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:36:00  
 Time Test Ended: 11:39:00  
 Interval: **3390.00 ft (KB) To 3430.00 ft (KB) (TVD)**  
 Total Depth: 3590.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Cody Bloedorn  
 Unit No: 54  
 Reference Elevations: 1950.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8736

Outside

Press@RunDepth: 24.63 psig @ 3391.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.11.16 End Date: 2011.11.16 Last Calib.: 2011.11.16  
 Start Time: 04:51:05 End Time: 11:38:59 Time On Btm: 2011.11.16 @ 06:35:30  
 Time Off Btm: 2011.11.16 @ 09:07:30

TEST COMMENT: 10 - IF- 1/2" blow  
 60 - IS- No blow back  
 20 - FF- 1" blow  
 60 - FS- No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1728.17	96.41	Initial Hydro-static
1	17.45	95.95	Open To Flow (1)
11	22.72	96.07	Shut-In(1)
70	998.44	96.83	End Shut-In(1)
70	34.34	96.54	Open To Flow (2)
91	24.63	96.75	Shut-In(2)
151	825.54	97.25	End Shut-In(2)
152	1685.52	97.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	VSOCM, 5%M, 95%M	0.28
0.00	Sampler: 1000ML, 900ML of Mud, 100 ML	0.00

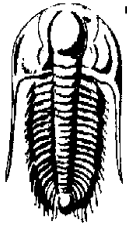
## Gas Rates

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

\* Recovery from multiple tests







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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

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**Wagner Family #1-5**

Job Ticket: 44671      **DST#: 2**  
Test Start: 2011.11.16 @ 04:51:00

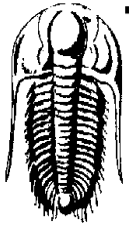
**Tool Information**

Drill Pipe:	Length: 3380.00 ft	Diameter: 3.80 inches	Volume: 47.41 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 49000.00 lb
			<u>Total Volume: 47.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3390.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	3430.00 ft			
Interval between Packers:	40.00 ft			
Tool Length:	239.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	5.00			3361.00	
Shut In Tool	5.00			3366.00	
Sampler	2.00			3368.00	
Hydraulic tool	5.00			3373.00	
Jars	5.00			3378.00	
Safety Joint	2.00			3380.00	
Packer	5.00			3385.00	34.00 Bottom Of Top Packer
Packer	5.00			3390.00	
Stubb	1.00			3391.00	
Recorder	0.00	8673	Inside	3391.00	
Recorder	0.00	8736	Outside	3391.00	
Perforations	38.00			3429.00	
Blank Off Sub	1.00			3430.00	40.00 Tool Interval
Packer	5.00			3435.00	
Change Over Sub	1.00			3436.00	
Recorder	0.00	6755	Below	3436.00	
Drill Pipe	155.00			3591.00	
Change Over Sub	1.00			3592.00	
5	3.00			3595.00	165.00 Bottom Packers & Anchor

**Total Tool Length: 239.00**



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FLUID SUMMARY

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Denver, CO. 80202  
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**Wagner Family #1-5**

Job Ticket: 44671      **DST#: 2**  
Test Start: 2011.11.16 @ 04:51:00

## 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:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.60 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5900.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	VSOCM, 5%M, 95%M	0.281
0.00	Sampler: 1000ML, 900ML of Mud, 100 ML of	0.000

Total Length: 20.00 ft      Total Volume: 0.281 bbl

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

Laboratory Name:      Laboratory Location:

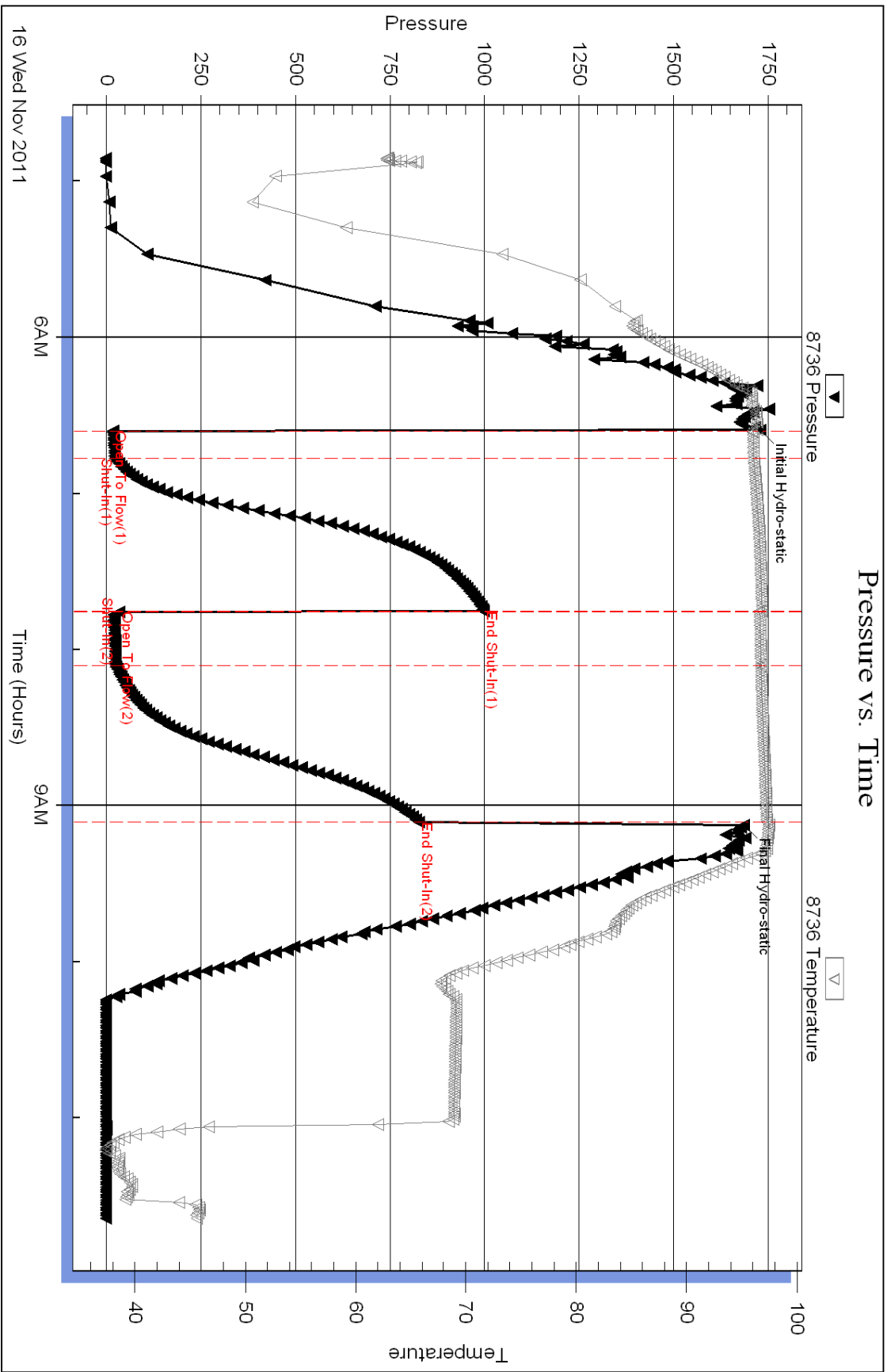
Recovery Comments:

Serial #: 8736

Outside Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2



Tribolite Testing, Inc

Ref. No: 44671

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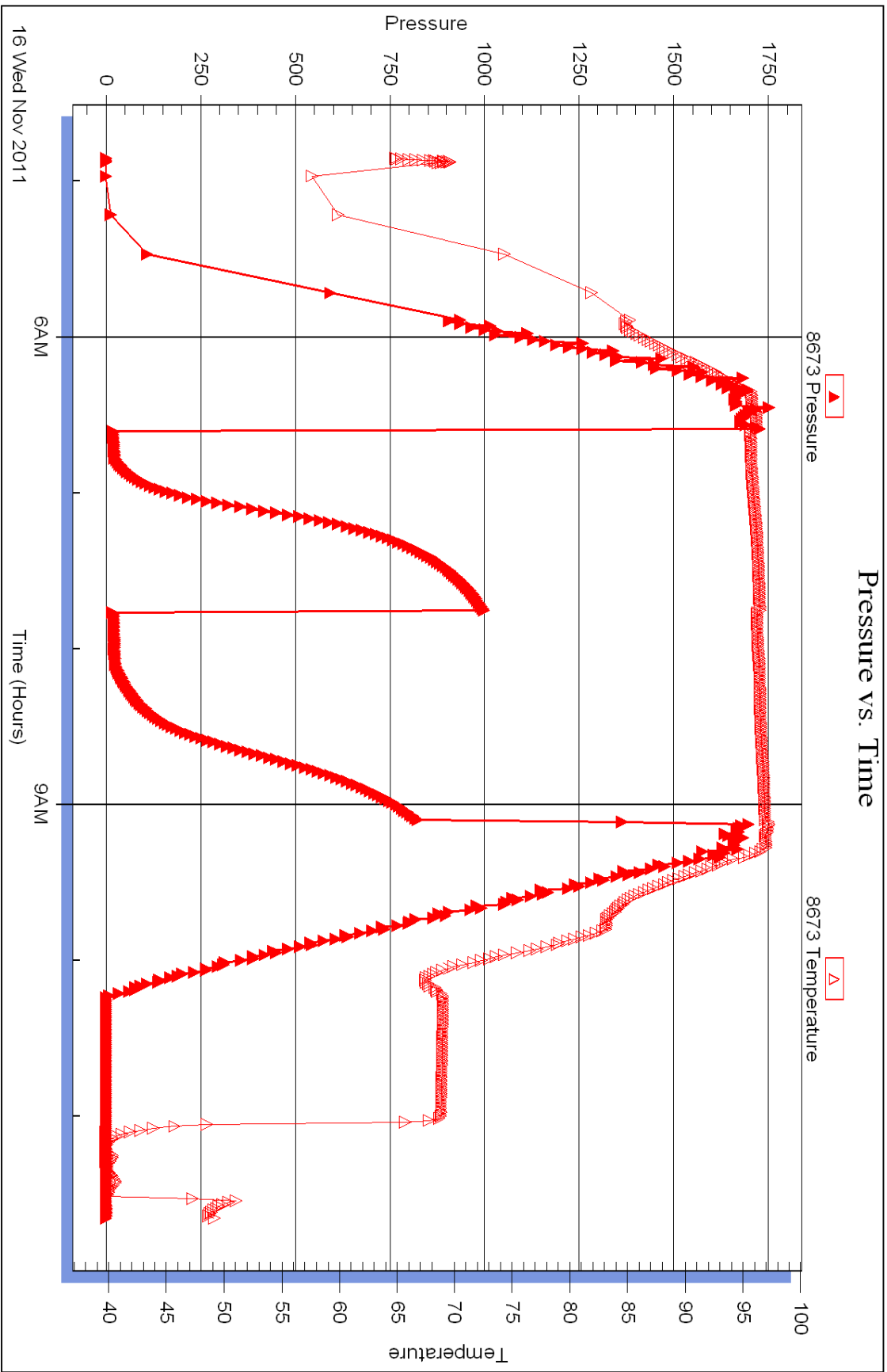
Serial #: 8673

Inside

Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 44671

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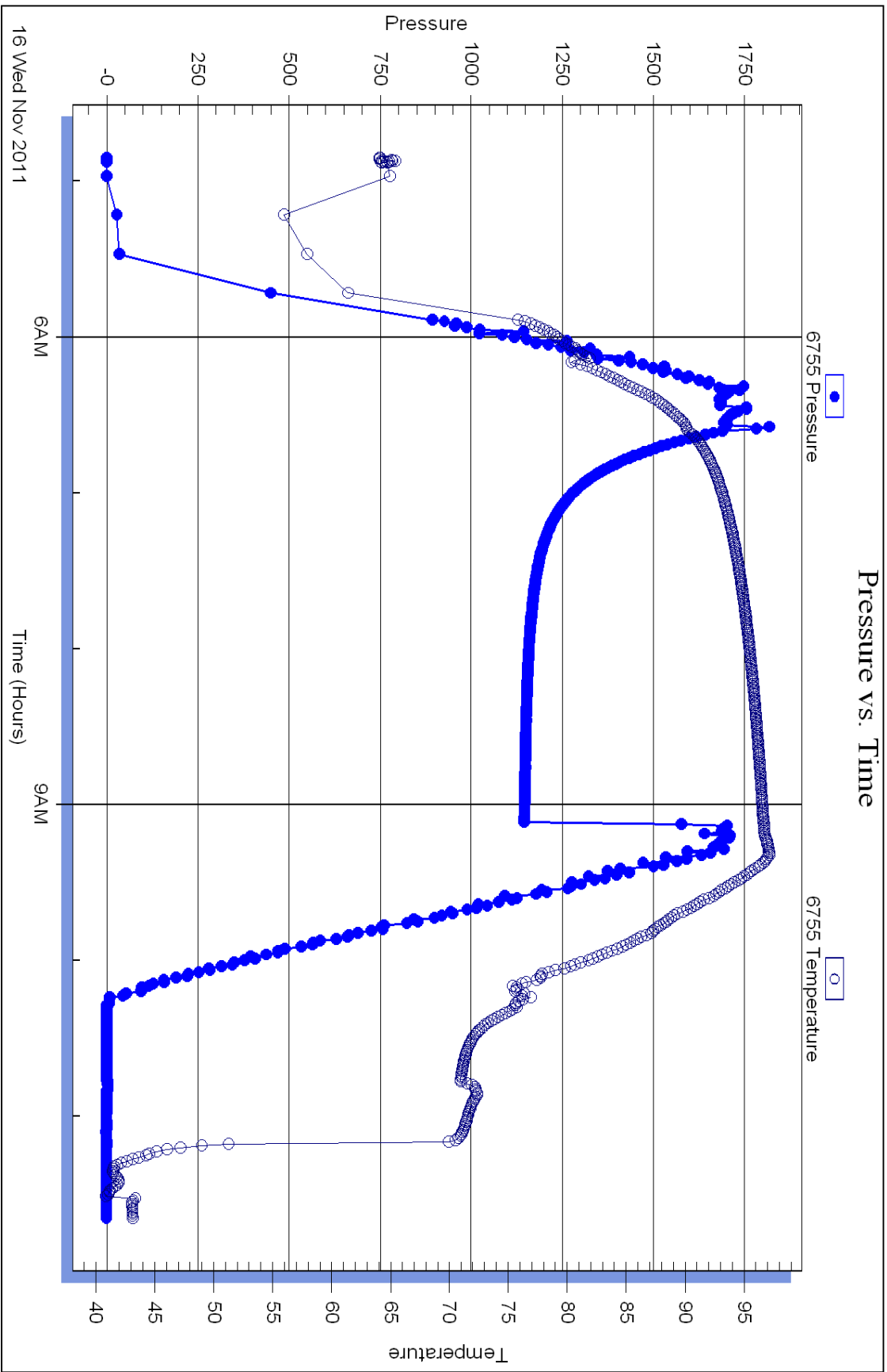


Serial #: 6755

Below (Str ~~at~~) Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2

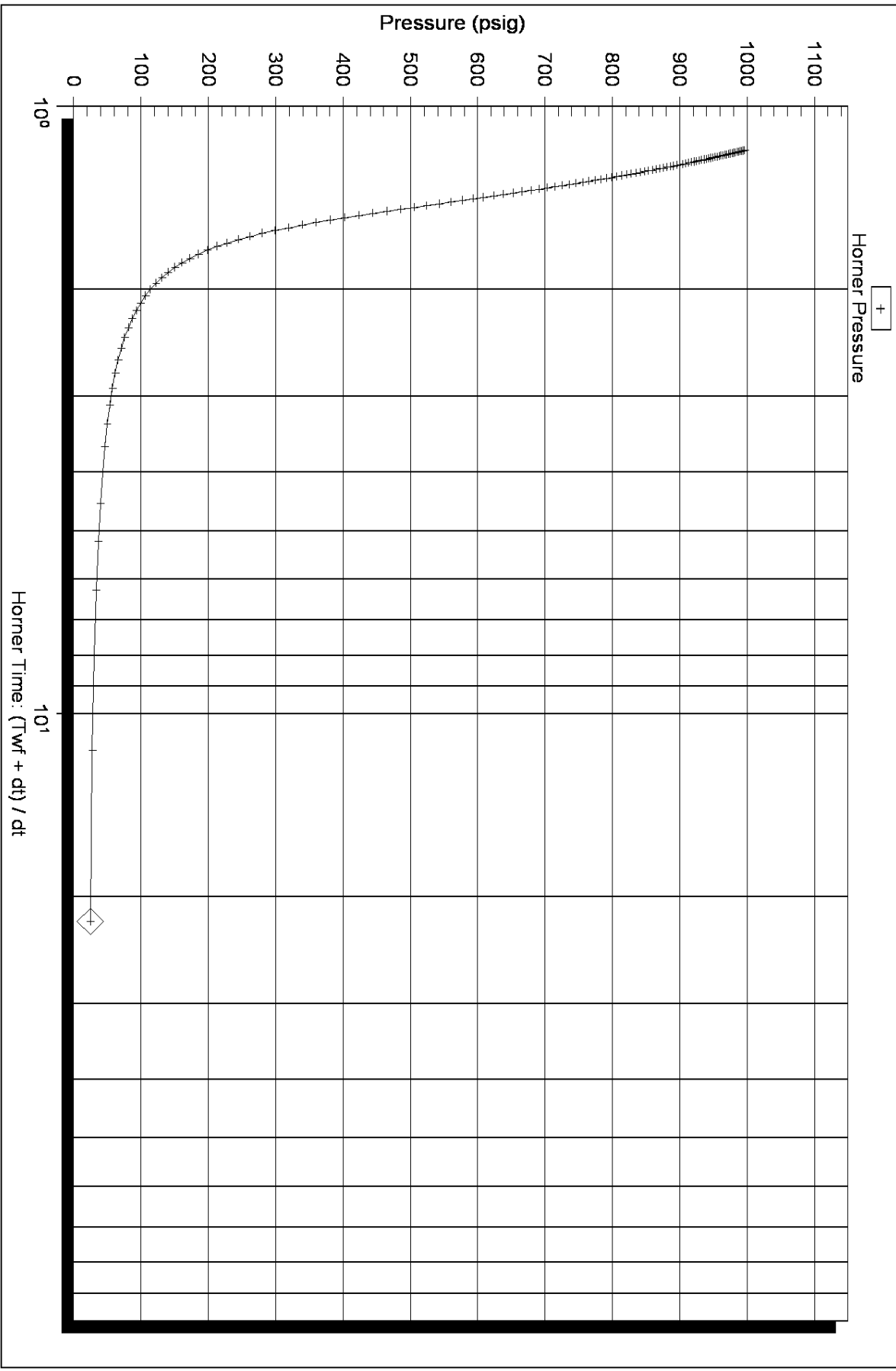


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# Horner Plot



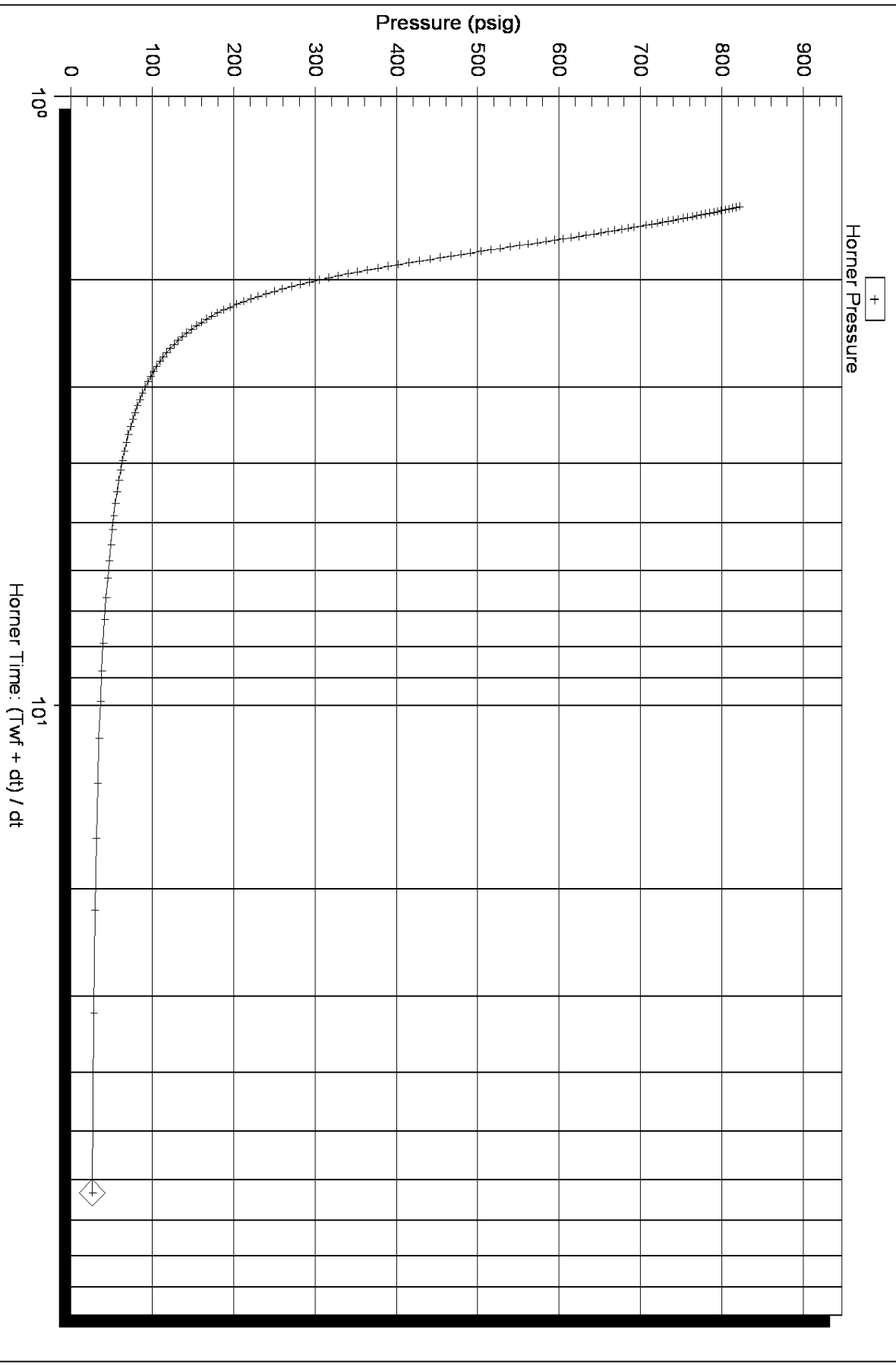
Serial Number: 8736 (Outside)

P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

# Horner Plot



Serial Number: 8736 (Outside)

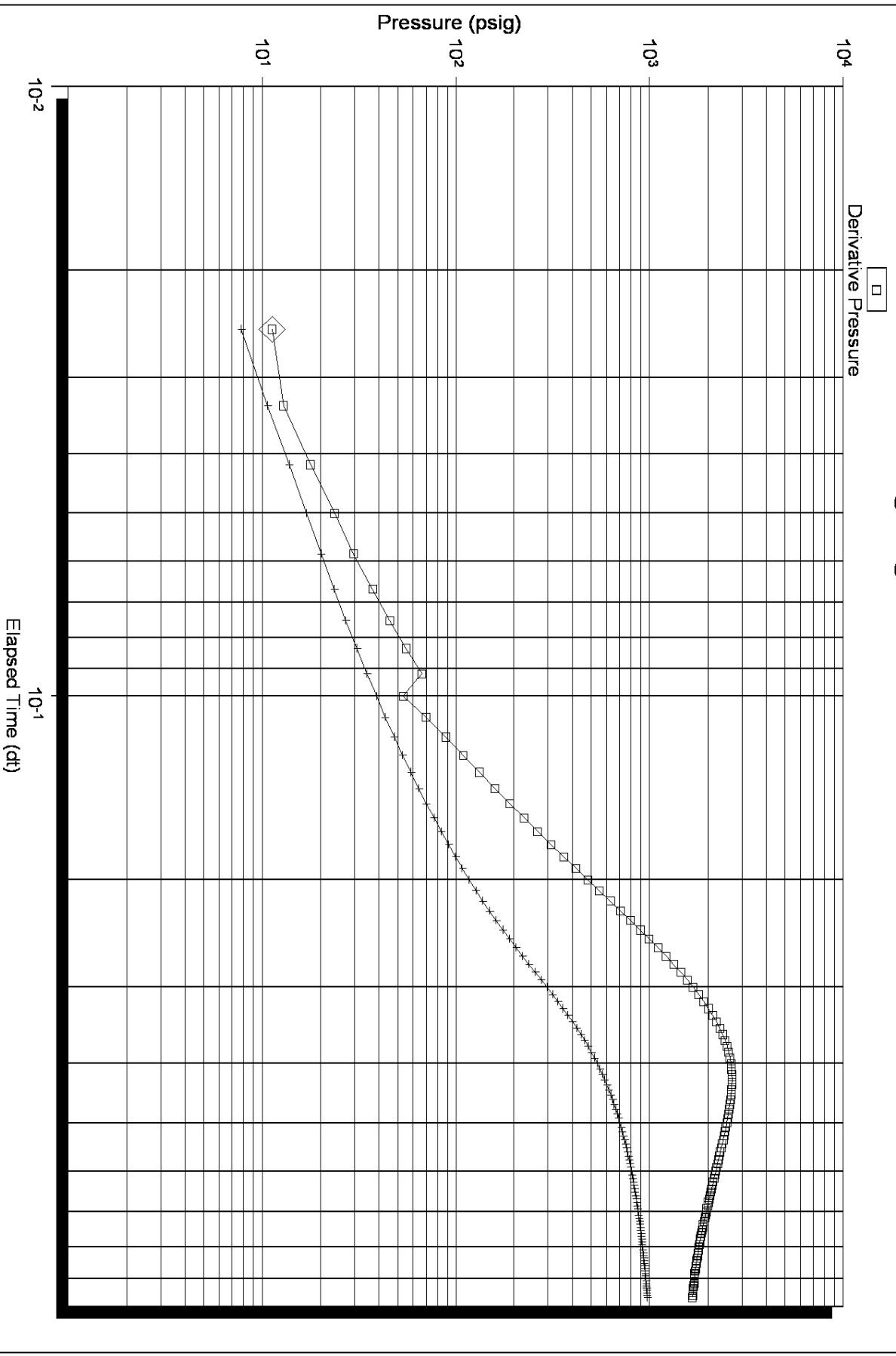
P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

Horner Time: (Twr + dt) / dt

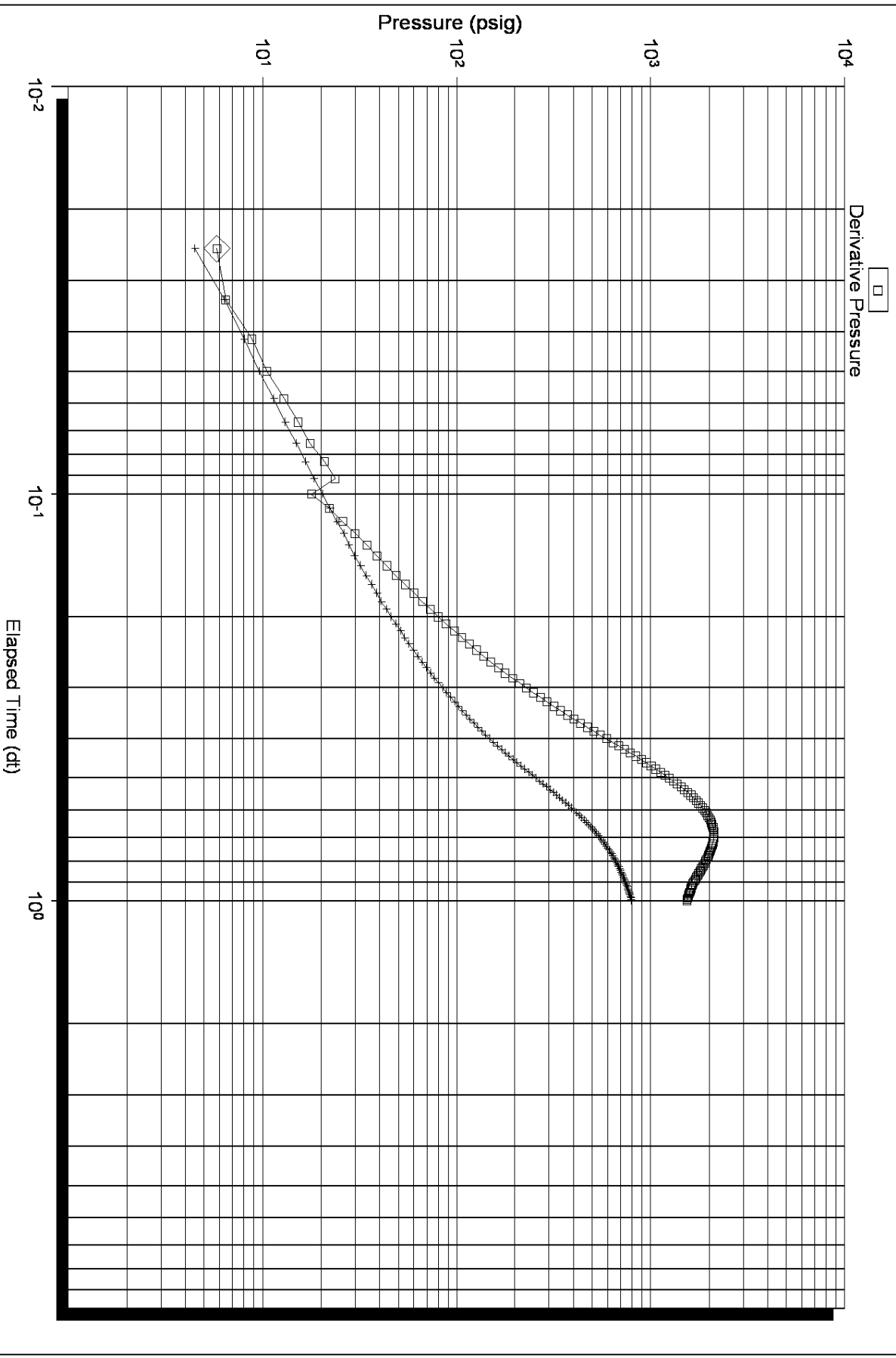
# Log-Log and Pseudo-Derivative



Serial Number: 8736 (Outside)

Flow Cycle: 1

# Log-Log and Pseudo-Derivative



Serial Number: 8736 (Outside)

Flow Cycle: 2