



DRILL STEM TEST REPORT

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

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Neil Sharp

26-16s-16w-Rush

Clair #4-26

Start Date: 2011.07.26 @ 14:35:33

End Date: 2011.07.26 @ 22:11:03

Job Ticket #: 43550 DST #: 3

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

Printed: 2011.11.11 @ 15:03:50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

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26-16s-16w-Rush

Job Ticket: 43550

DST#: 3

Test Start: 2011.07.26 @ 14:35:33

GENERAL INFORMATION:

Formation: **F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:27:33

Time Test Ended: 22:11:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3336.00 ft (KB) To 3363.00 ft (KB) (TVD)

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3363.00 ft (KB) (TVD)

1981.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8673

Inside

Press @ Run Depth: 222.36 psig @ 3338.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.26

End Date:

2011.07.26

Last Calib.:

2011.07.26

Start Time: 14:35:35

End Time:

22:11:03

Time On Btm:

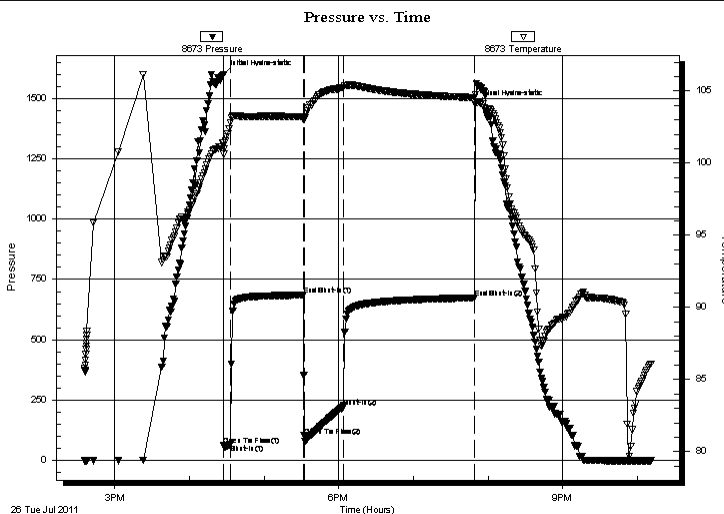
2011.07.26 @ 16:27:18

Time Off Btm:

2011.07.26 @ 19:49:48

TEST COMMENT: IFP-Strong, BOB in 1 Min. 40 Sec.
ISI-Dead
FFP-Strong, BOB in 2 min. 25 Sec.
FSI-Blow back BOB in 45 Min. lasted intermittantly through period.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1597.35	101.44	Initial Hydro-static
1	62.79	100.62	Open To Flow (1)
6	67.11	102.80	Shut-In(1)
65	684.92	103.23	End Shut-In(1)
65	102.72	103.01	Open To Flow (2)
97	222.36	105.26	Shut-In(2)
202	673.63	104.54	End Shut-In(2)
203	1473.44	104.73	Final Hydro-static

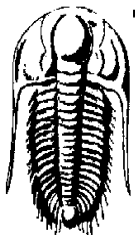
Recovery

Length (ft)	Description	Volume (bbl)
240.00	Muddy Water-95%W-5%M	3.37
210.00	Gassy Oily Water Mud-20%G-65%O-10%2.95%M	
0.00	780' Gas In Pipe	0.00

Gas Rates

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

* Recovery from multiple tests



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26-16s-16w-Rush

Job Ticket: 43550 **DST#: 3**
Test Start: 2011.07.26 @ 14:35:33

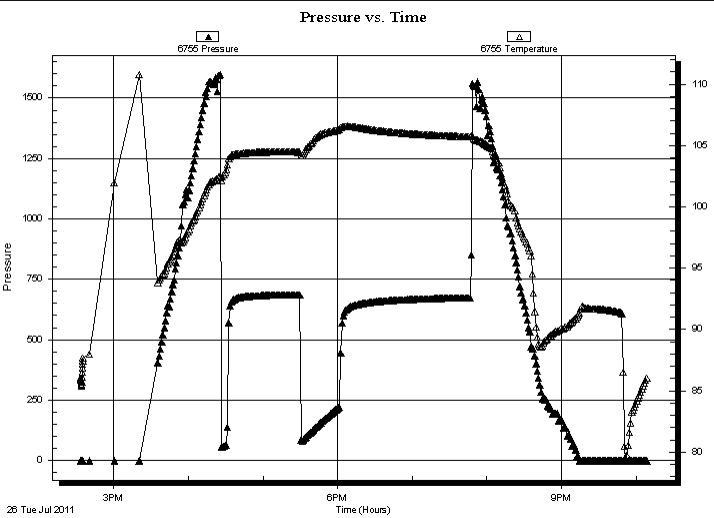
GENERAL INFORMATION:

Formation: F-G			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 16:27:33		Tester: Jason McLemore	
Time Test Ended: 22:11:03		Unit No: 54	
Interval: 3336.00 ft (KB) To 3363.00 ft (KB) (TVD)		Reference Elevations: 1991.00 ft (KB)	
Total Depth: 3363.00 ft (KB) (TVD)		1981.00 ft (CF)	
Hole Diameter: 7.80 inches	Hole Condition: Good	KB to GR/CF: 10.00 ft	

Serial #: 6755 Outside

Press @ Run Depth:	psig @	3338.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2011.07.26	End Date:	2011.07.26	Last Calib.:	2011.07.26
Start Time:	14:33:16	End Time:	22:09:14	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IFP-Strong, BOB in 1 Min. 40 Sec.
ISI-Dead
FFP-Strong, BOB in 2 min. 25 Sec.
FSI-Blow back BOB in 45 Min. lasted intermittantly through period.



PRESSURE SUMMARY

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

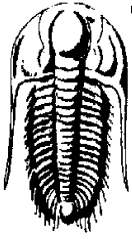
Recovery

Length (ft)	Description	Volume (bbl)
240.00	Muddy Water-95%W-5%M	3.37
210.00	Gassy Oily Water Mud-20%G-65%O-10%2.95%M	
0.00	780' Gas In Pipe	0.00

* Recovery from multiple tests

Gas Rates

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



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26-16s-16w-Rush

Job Ticket: 43550

DST#: 3

Test Start: 2011.07.26 @ 14:35:33

GENERAL INFORMATION:

Formation: **F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:27:33

Time Test Ended: 22:11:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3336.00 ft (KB) To 3363.00 ft (KB) (TVD)

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3363.00 ft (KB) (TVD)

1981.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8736 Fluid

Press @ Run Depth: psig @ 3302.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.26

End Date: 2011.07.26

Last Calib.: 2011.07.26

Start Time: 14:31:07

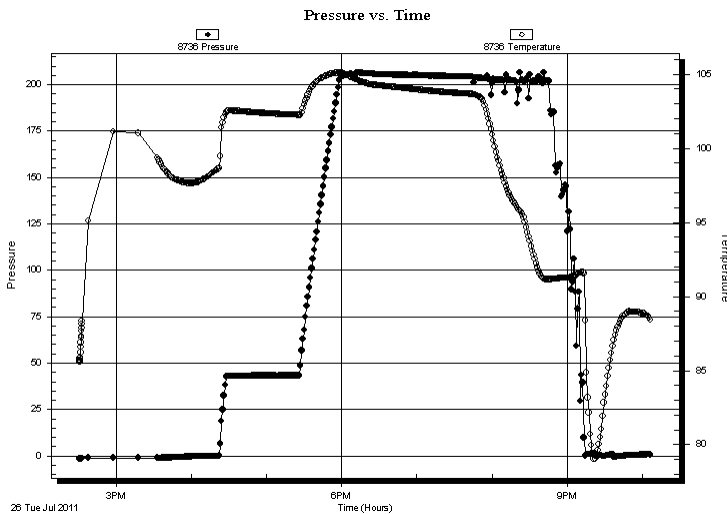
End Time: 22:07:05

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-Strong, BOB in 1 Min. 40 Sec.
ISI-Dead
FFP-Strong, BOB in 2 min. 25 Sec.
FSI-Blow back BOB in 45 Min. lasted intermittently through period.

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
240.00	Muddy Water-95%W-5%M	3.37
210.00	Gassy Oily Water Mud-20%G-65%O-10%2.95%M	
0.00	780' Gas In Pipe	0.00

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

Clair #4-26

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Neil Sharp

26-16s-16w-Rush

Job Ticket: 43550

DST#: 3

Test Start: 2011.07.26 @ 14:35:33

Tool Information

Drill Pipe:	Length: 3312.00 ft	Diameter: 3.80 inches	Volume: 46.46 bbl	Tool Weight: 2000.00 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: 53000.00 lb
			<u>Total Volume: 46.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3336.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 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	8736	Fluid	3302.00	
Change Over Sub	5.00			3307.00	
Shut In Tool	5.00			3312.00	
Sampler	2.00			3314.00	
Hydraulic tool	5.00			3319.00	
Jars	5.00			3324.00	
Safety Joint	2.00			3326.00	
Packer	5.00			3331.00	34.00 Bottom Of Top Packer
Packer	5.00			3336.00	
Stubb	1.00			3337.00	
Perforations	1.00			3338.00	
Recorder	0.00	8673	Inside	3338.00	
Recorder	0.00	6755	Outside	3338.00	
Perforations	20.00			3358.00	
Bullnose	3.00			3361.00	25.00 Bottom Packers & Anchor

Total Tool Length: 59.00



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FLUID SUMMARY

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26-16s-16w-Rush

Job Ticket: 43550

DST#: 3

Test Start: 2011.07.26 @ 14:35:33

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

58000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
240.00	Muddy Water-95%W-5%M	3.367
210.00	Gassy Oily Water Mud-20%G-65%O-10%W-	2.946
0.00	780' Gas In Pipe	0.000

Total Length: 450.00 ft Total Volume: 6.313 bbl

Num Fluid Samples: 0

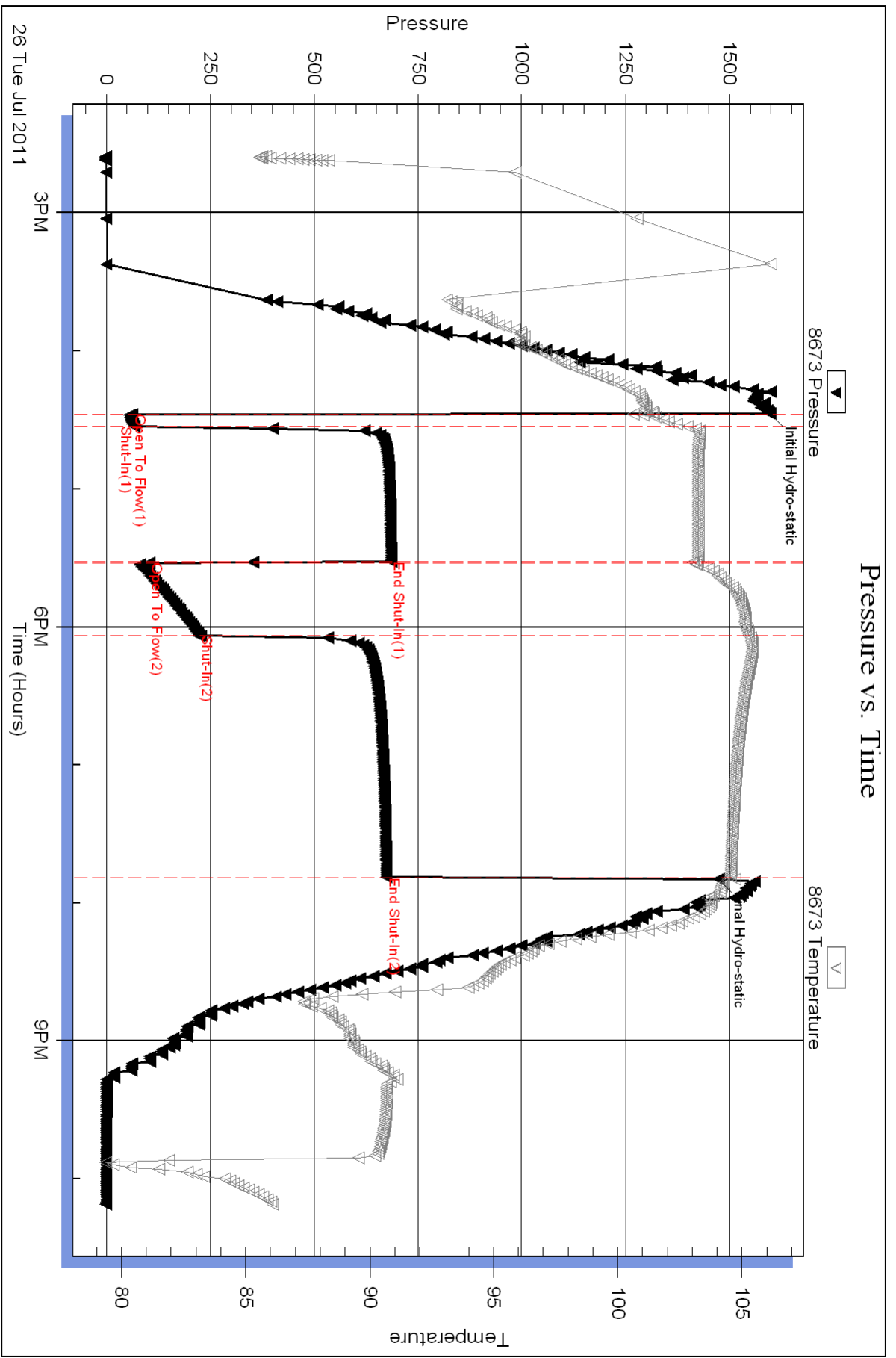
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler-750#, 1000ml Gassy Oil, 1000ml Salt Water

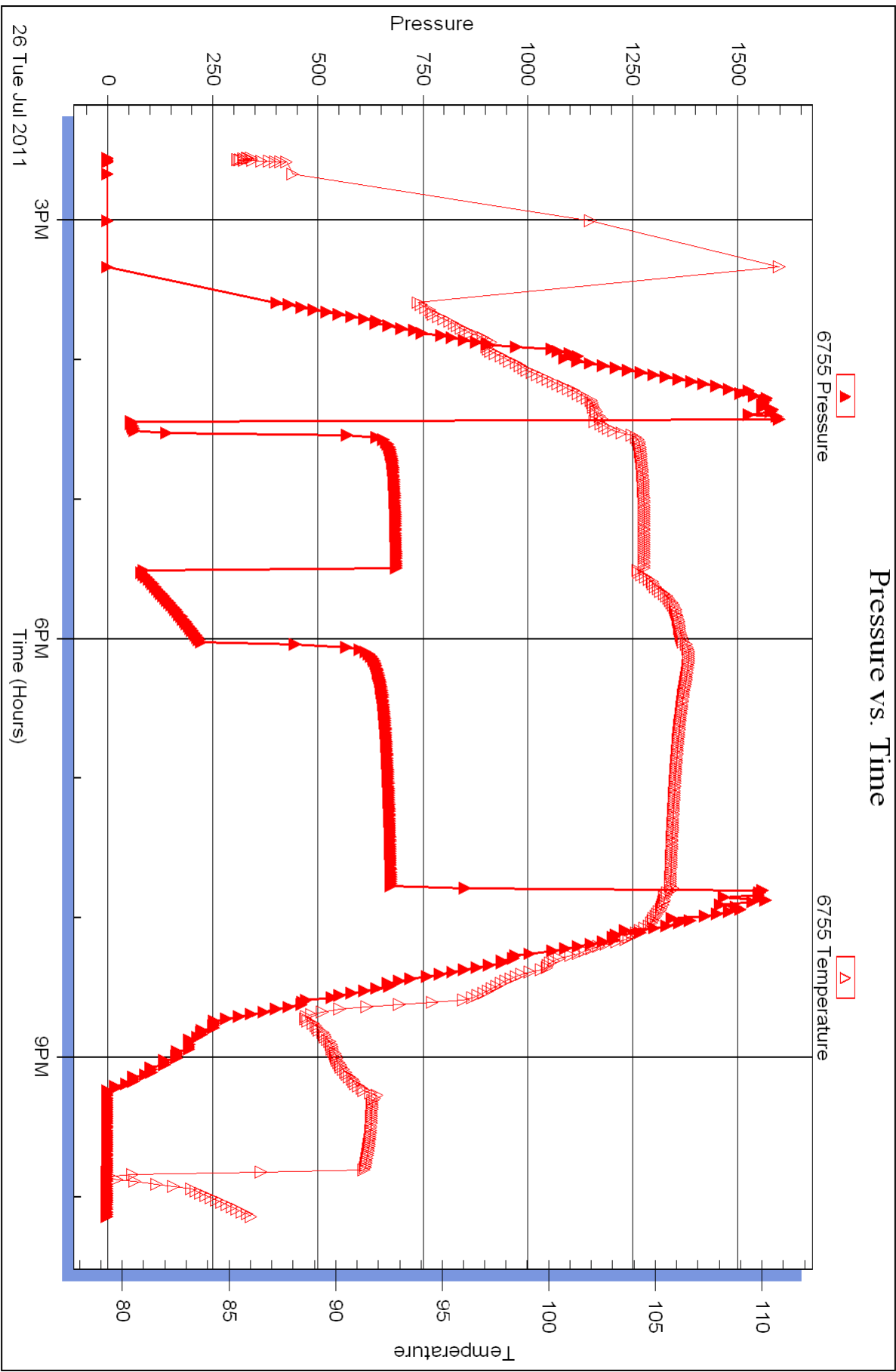


Serial #: 6755

Outside Samuel Gary Jr. & Associates

26-16s-16w-Rush

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 43550

Printed: 2011.11.11 @ 15:03:53

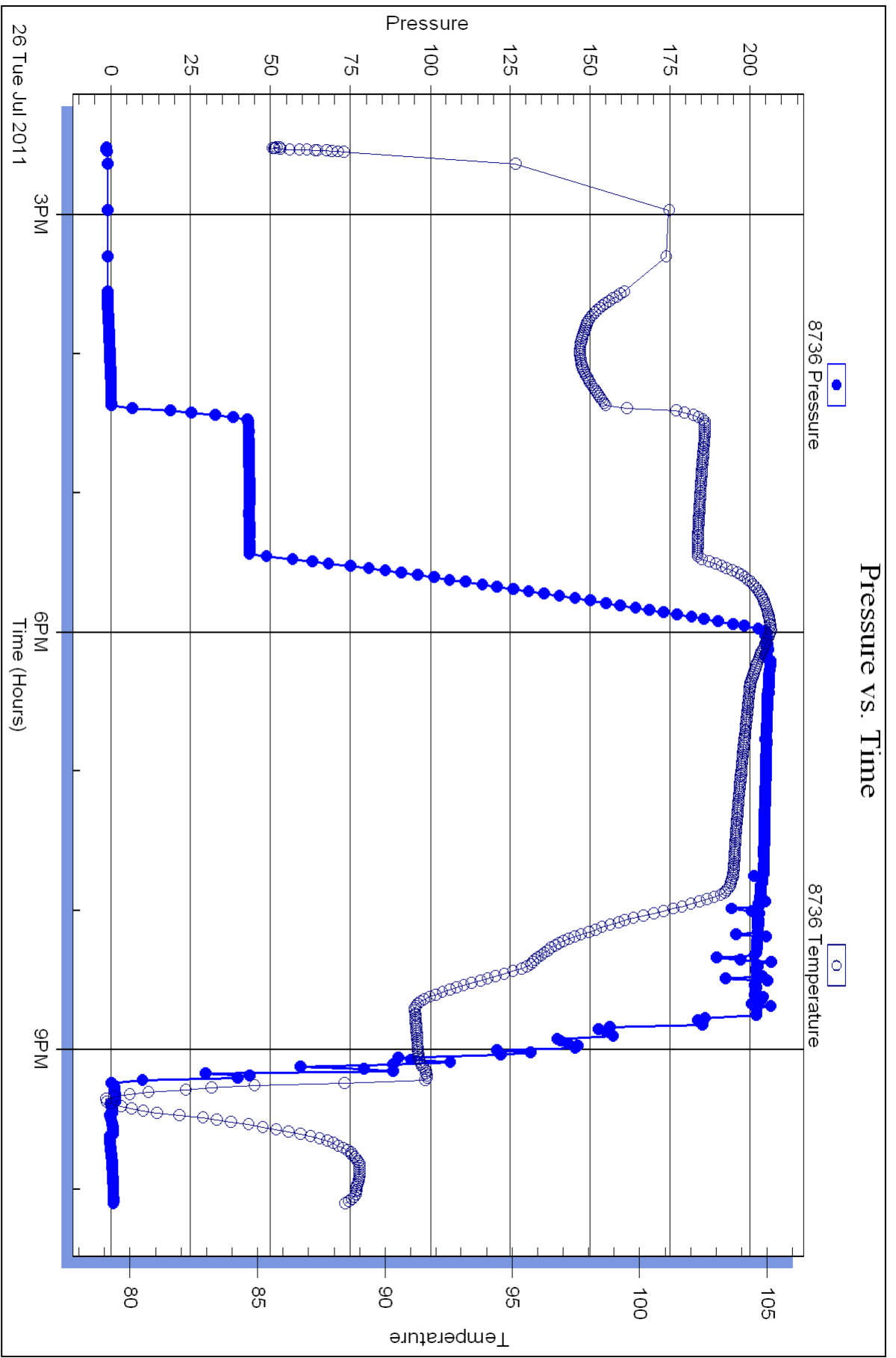
Serial #: 8736

Fluid

Samuel Gary Jr. & Associates

26-16s-16w-Rush

DST Test Number: 3

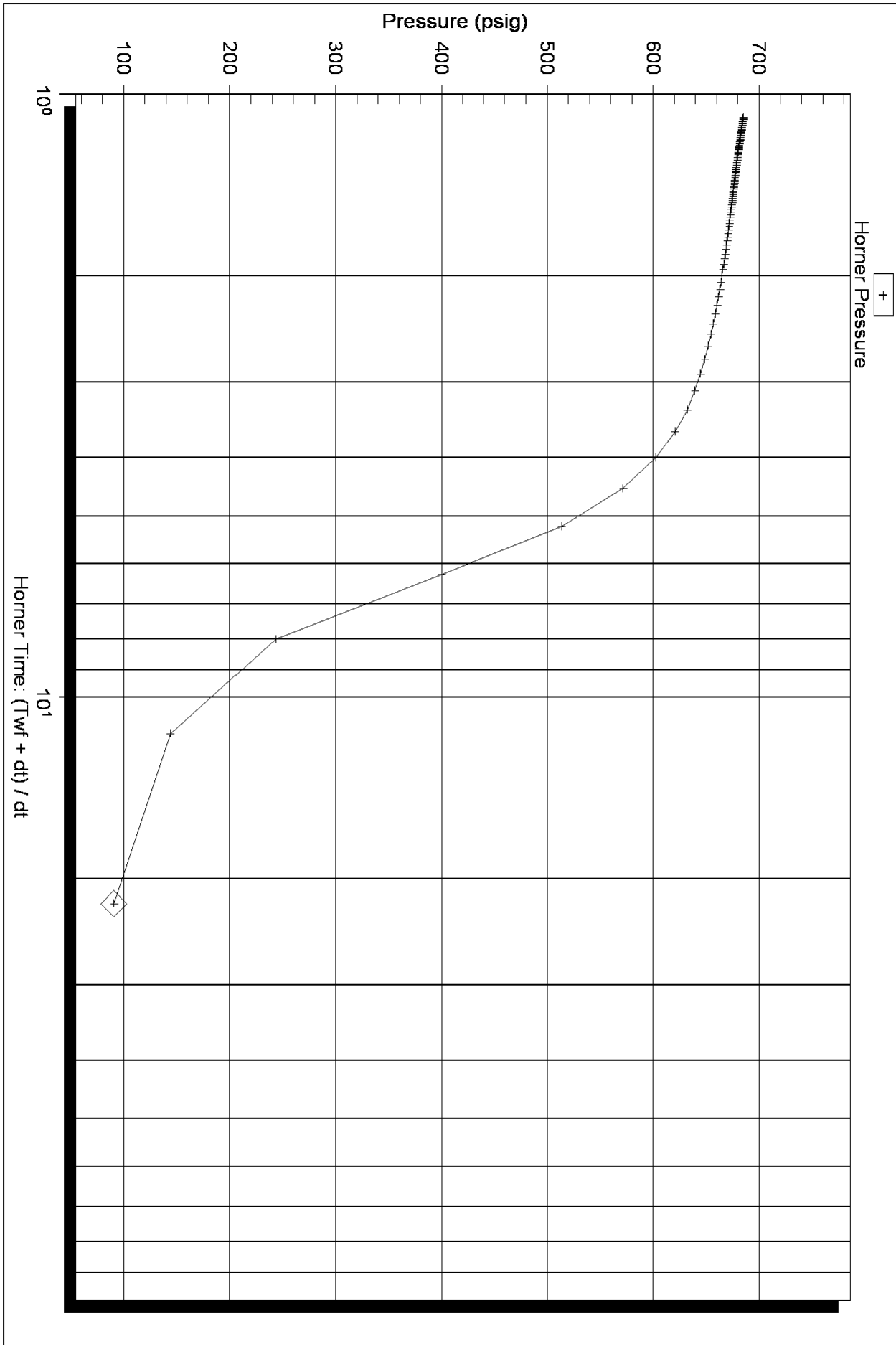


Triobite Testing, Inc

Ref. No: 43550

Printed: 2011.11.11 @ 15:03:54

Horner Plot



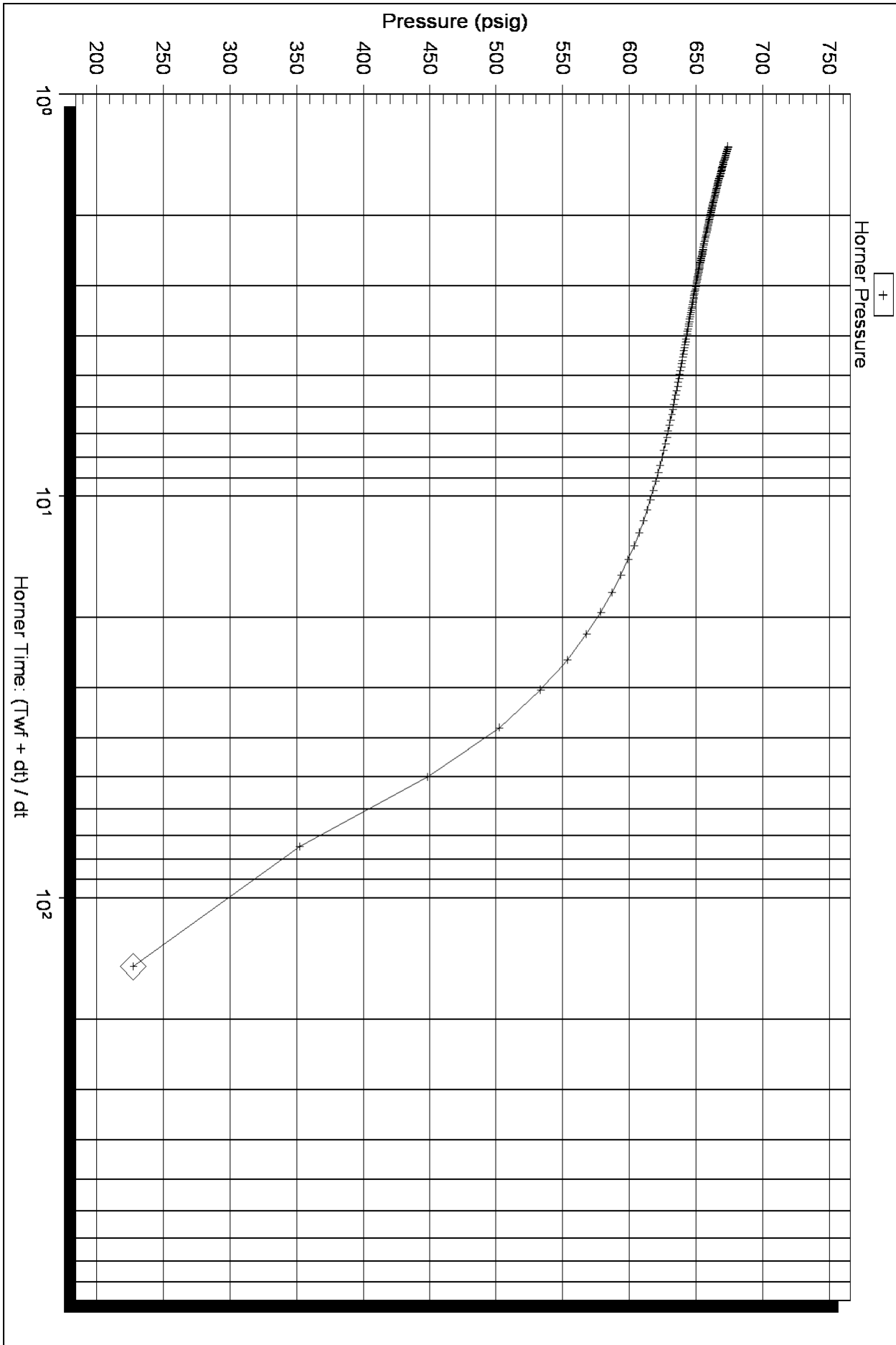
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P* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



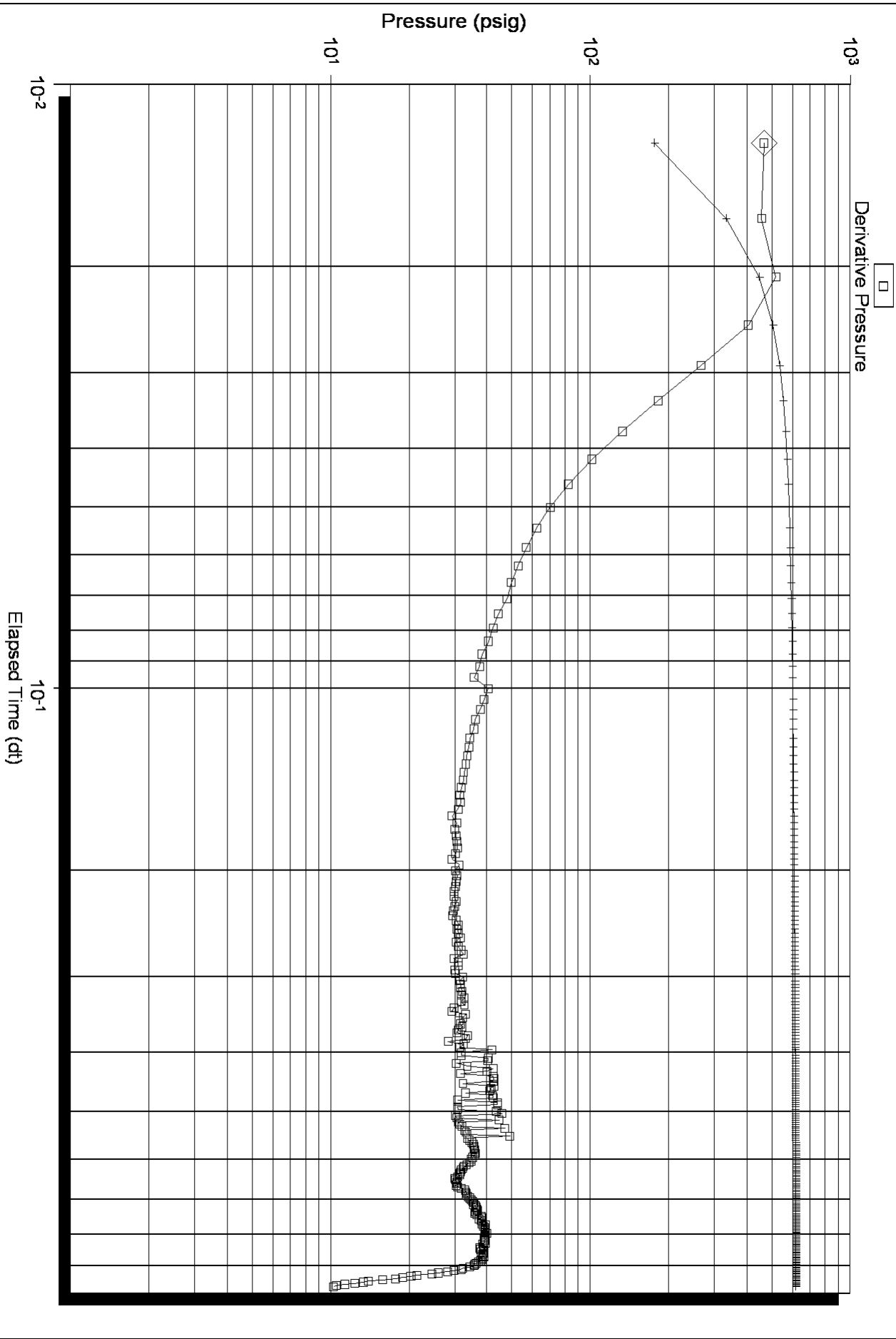
Serial Number: 8673 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

