



DRILL STEM TEST REPORT

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

1515 Wynkoop Ste.#700
Denver, CO 80202

ATTN: Neil Sharp

1-16S.-17W.-Rush

Dale Stramel #1-1

Start Date: 2011.08.04 @ 06:10:10

End Date: 2011.08.04 @ 14:01:40

Job Ticket #: 45226 DST #: 1

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

Printed: 2011.11.23 @ 11:17:14

Samuel Gary Jr. & Assoc., Inc.
Dale Stramel #1-1
1-16S.-17W.-Rush
DST # 1
Topeka
2011.08.04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Assoc., Inc.

Dale Stramel #1-1

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Denver, CO 80202

1-16S.-17W.-Rush

ATTN: Neil Sharp

Job Ticket: 45226

DST#: 1

Test Start: 2011.08.04 @ 06:10:10

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:15:10

Time Test Ended: 14:01:40

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 2906.00 ft (KB) To 2956.00 ft (KB) (TVD)

Reference Elevations: 1901.00 ft (KB)

Total Depth: 2956.00 ft (KB) (TVD)

1891.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8354 Inside

Press @ Run Depth: 36.32 psig @ 2909.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.04

End Date: 2011.08.04

Last Calib.: 2011.08.04

Start Time: 06:20:10

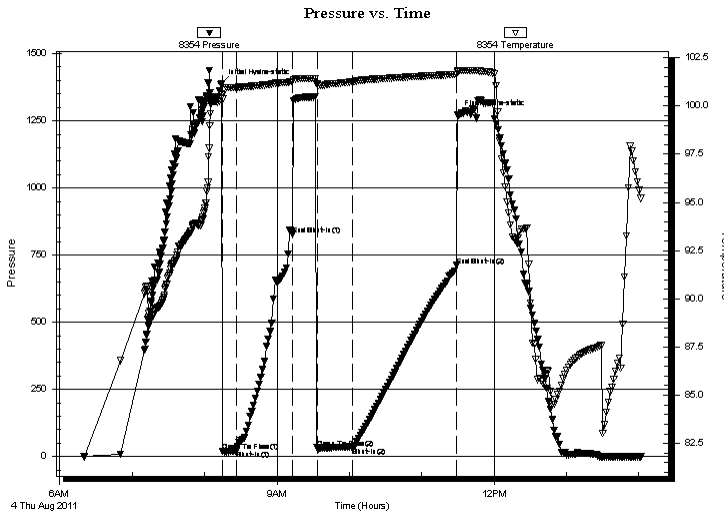
End Time: 14:01:40

Time On Btm: 2011.08.04 @ 08:14:10

Time Off Btm: 2011.08.04 @ 11:29:40

TEST COMMENT: IF-Strong building blow . BOB in 3 minutes 30 seconds.
ISI-Return in 35 seconds. Built to 2 inches.
FF-Strong building blow . BOB in 40 seconds.
FSI-No Return. Times=10-60-30-105

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1388.64	100.42	Initial Hydro-static
1	19.13	100.35	Open To Flow (1)
12	21.73	100.95	Shut-In(1)
59	826.65	101.25	End Shut-In(1)
80	29.73	101.12	Open To Flow (2)
109	36.32	101.26	Shut-In(2)
195	711.03	101.64	End Shut-In(2)
196	1273.60	101.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	80%Mud/20%Oil	0.77
0.00	660' G.I.P.	0.00

Gas Rates

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



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Time Tool Opened: 08:15:10

Time Test Ended: 14:01:40

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **2906.00 ft (KB) To 2956.00 ft (KB) (TVD)**

Reference Elevations: 1901.00 ft (KB)

Total Depth: 2956.00 ft (KB) (TVD)

1891.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8520 Outside

Press @RunDepth: psig @ 2909.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.04 End Date: 2011.08.04

Last Calib.: 2011.08.04

Start Time: 06:20:20 End Time: 14:00:20

Time On Btm:

Time Off Btm:

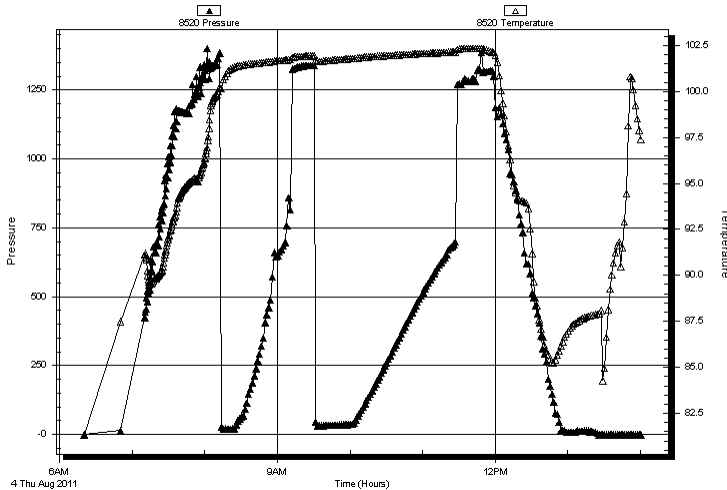
TEST COMMENT: IF-Strong building blow . BOB in 3 minutes 30 seconds.

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FSI-No Return. Times=10-60-30-105

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	80%Mud/20%Oil	0.77
0.00	660' G.I.P.	0.00

Gas Rates

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



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Dale Stramel #1-1

1515 Wynkoop Ste.#700
Denver, CO 80202

1-16S.-17W.-Rush

ATTN: Neil Sharp

Job Ticket: 45226

DST#: 1

Test Start: 2011.08.04 @ 06:10:10

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:15:10

Time Test Ended: 14:01:40

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 2906.00 ft (KB) To 2956.00 ft (KB) (TVD)

Reference Elevations: 1901.00 ft (KB)

Total Depth: 2956.00 ft (KB) (TVD)

1891.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8653

Fluid

Press@RunDepth: psig @ 2876.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.04

End Date: 2011.08.04

Last Calib.: 2011.08.04

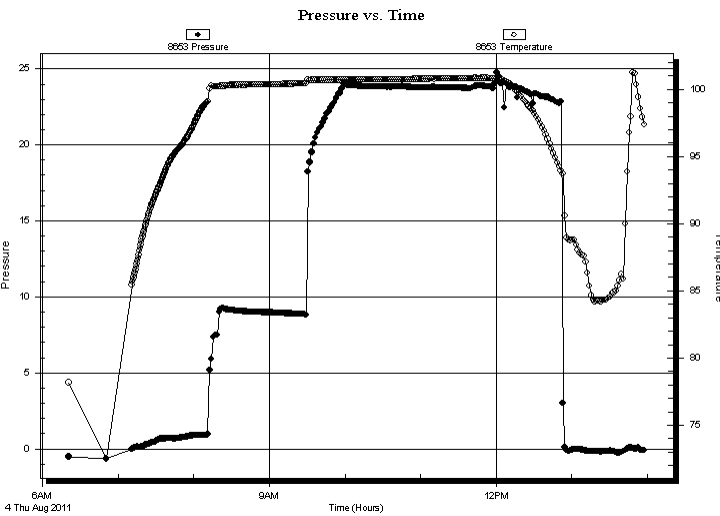
Start Time: 06:20:40

End Time: 13:58:10

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Strong building blow . BOB in 3 minutes 30 seconds.
ISI-Return in 35 seconds. Built to 2 inches.
FF-Strong building blow . BOB in 40 seconds.
FSI-No Return. Times=10-60-30-105



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	80%Mud/20%Oil	0.77
0.00	660' G.I.P.	0.00

Gas Rates

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



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Dale Stramel #1-1

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1-16S.-17W.-Rush

Job Ticket: 45226

DST#: 1

ATTN: Neil Sharp

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GENERAL INFORMATION:

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Time Tool Opened: 08:15:10

Time Test Ended: 14:01:40

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **2906.00 ft (KB) To 2956.00 ft (KB) (TVD)**

Reference Elevations: 1901.00 ft (KB)

Total Depth: 2956.00 ft (KB) (TVD)

1891.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8736 Below (Straddle)

Press @ Run Depth: psig @ 2960.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.04

End Date:

2011.08.04

Last Calib.:

2011.08.04

Start Time: 06:10:31

End Time:

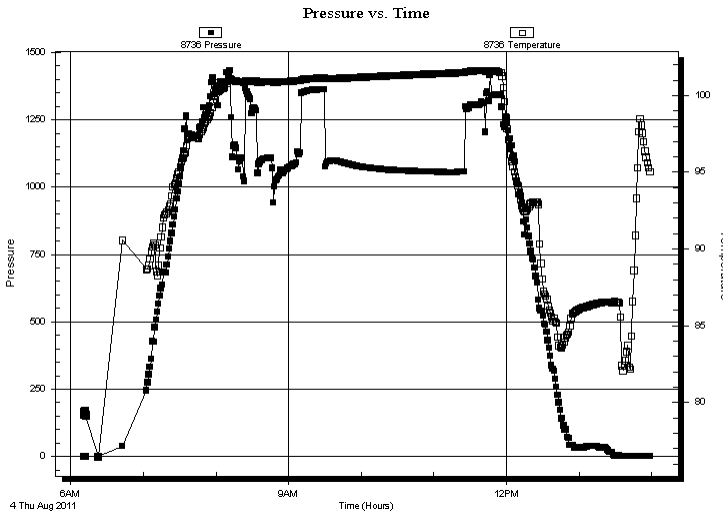
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Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Strong building blow . BOB in 3 minutes 30 seconds.
ISI-Return in 35 seconds. Built to 2 inches.
FF-Strong building blow . BOB in 40 seconds.
FSI-No Return. Times=10-60-30-105

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	80%Mud/20%Oil	0.77
0.00	660' G.I.P.	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Assoc., Inc.

Dale Stramel #1-1

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Denver, CO 80202

1-16S.-17W.-Rush

Job Ticket: 45226

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.08.04 @ 06:10:10

Tool Information

Drill Pipe:	Length: 2882.00 ft	Diameter: 3.80 inches	Volume: 40.43 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: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 40.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	2906.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	2954.00 ft			
Interval between Packers:	48.00 ft			
Tool Length:	128.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Recorder	0.00	8653	Fluid	2876.00	
Change Over Sub	1.00			2877.00	
Shut In Tool	5.00			2882.00	
Sampler	2.00			2884.00	
Hydraulic tool	5.00			2889.00	
Jars	5.00			2894.00	
Safety Joint	3.00			2897.00	
Packer	5.00			2902.00	30.00 Bottom Of Top Packer
Packer	4.00			2906.00	
Stubb	1.00			2907.00	
Perforations	2.00			2909.00	
Recorder	0.00	8354	Inside	2909.00	
Recorder	0.00	8520	Outside	2909.00	
Change Over Sub	1.00			2910.00	
Drill Pipe	31.00			2941.00	
Change Over Sub	1.00			2942.00	
Perforations	11.00			2953.00	
Blank Off Sub	1.00			2954.00	48.00 Tool Interval
Packer	4.00			2958.00	
Stubb	1.00			2959.00	
Recorder	1.00	8736	Below	2960.00	
Perforations	8.00			2968.00	
Change Over Sub	1.00			2969.00	
Drill Pipe	31.00			3000.00	
Change Over Sub	1.00			3001.00	
Bullnose	3.00			3004.00	50.00 Bottom Packers & Anchor

Total Tool Length: 128.00



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FLUID SUMMARY

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Job Ticket: 45226

DST#: 1

ATTN: Neil Sharp

Test Start: 2011.08.04 @ 06:10:10

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
55.00	80%Mud/20%Oil	0.772
0.00	660' G.I.P.	0.000

Total Length: 55.00 ft Total Volume: 0.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler=800ML Mud. 400ML Oil. 4.25 cubic feet gas. 350#Pressure.

Serial #: 8354

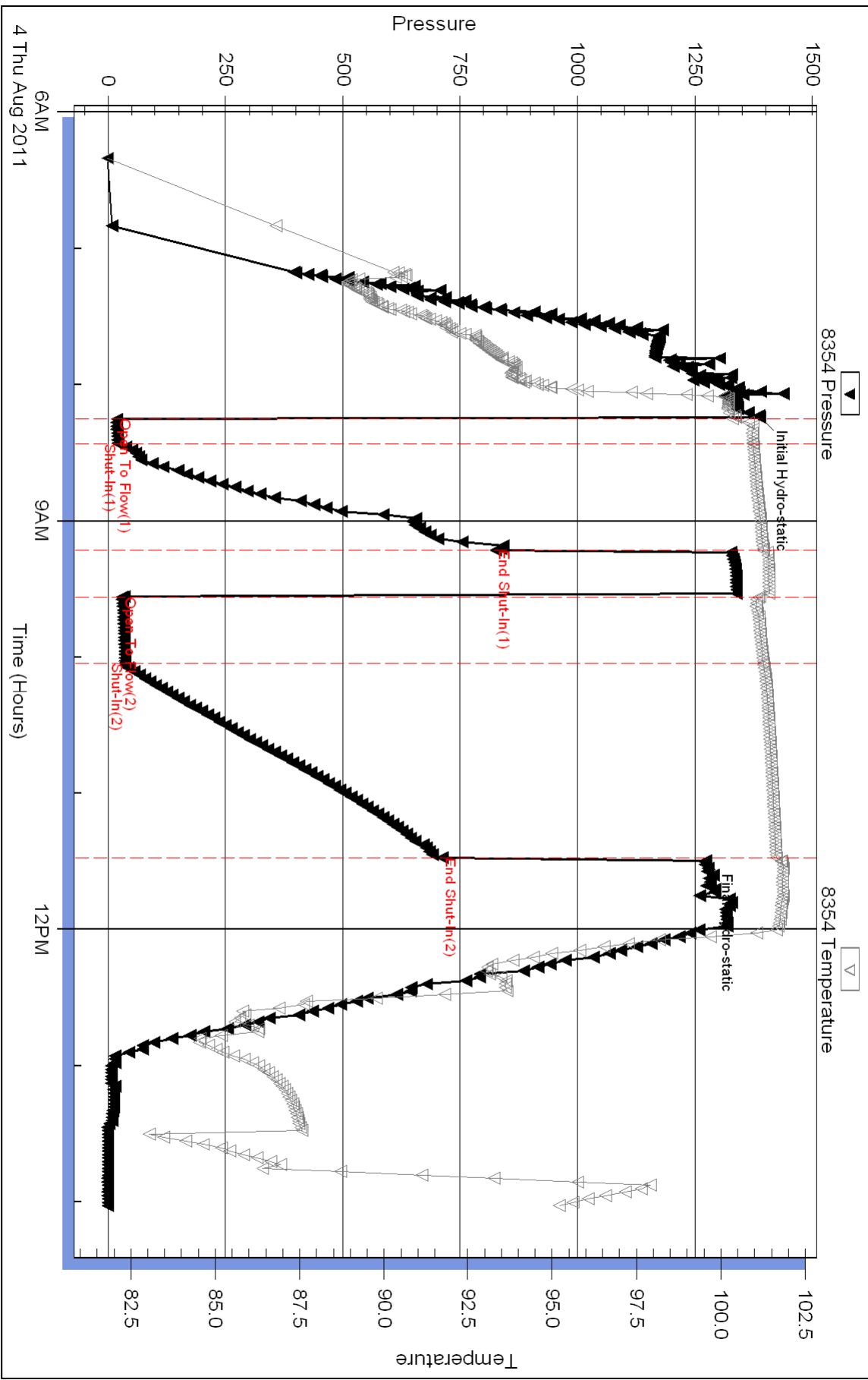
Inside

Samuel Gary Jr. & Assoc., Inc.

1-16S-17W-Rush

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 45226

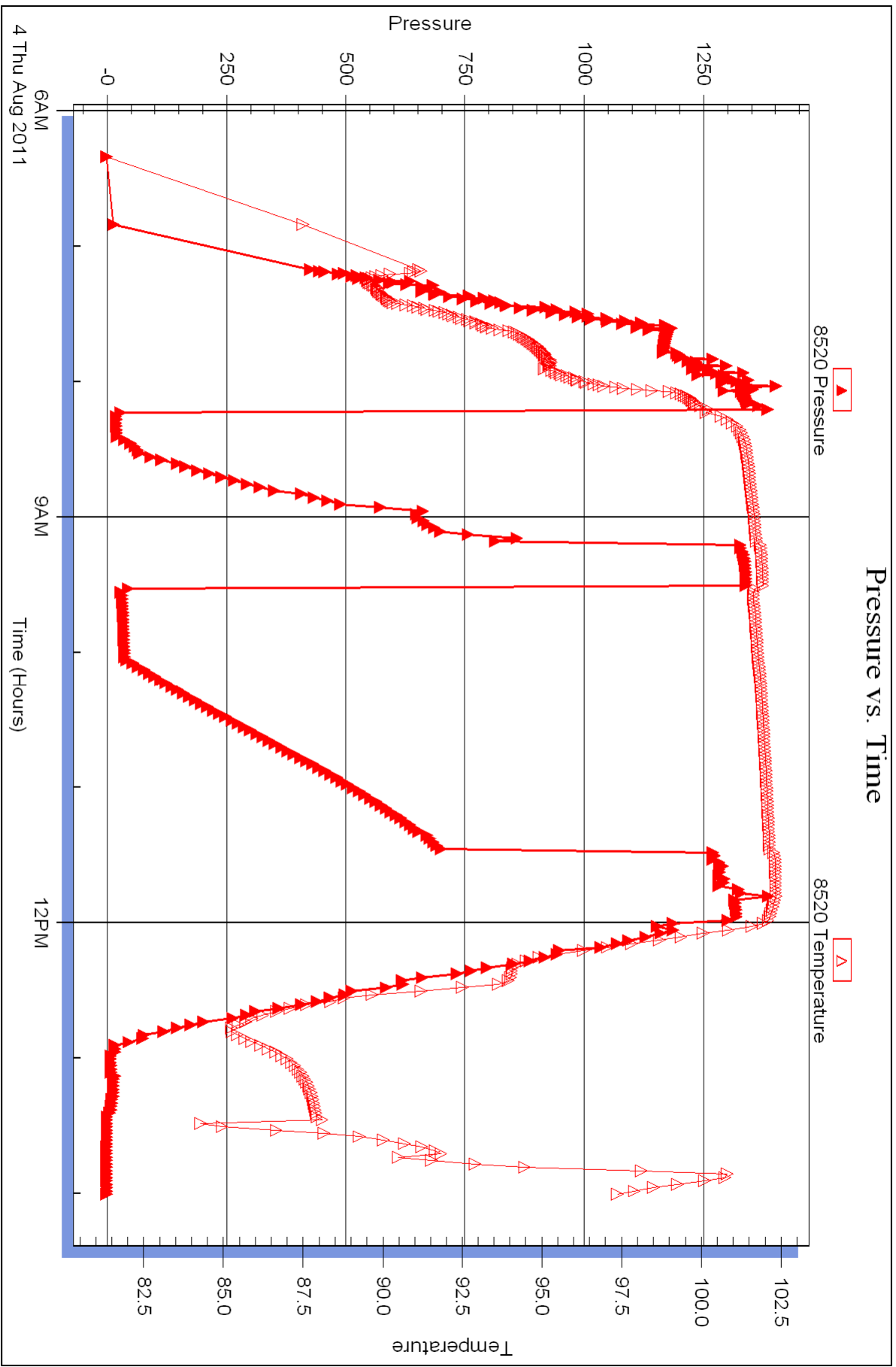
Printed: 2011.11.23 @ 11:17:16

Serial #: 8520

Outside Samuel Gary Jr. & Assoc., Inc.

1-16S-17W-Rush

DST Test Number: 1



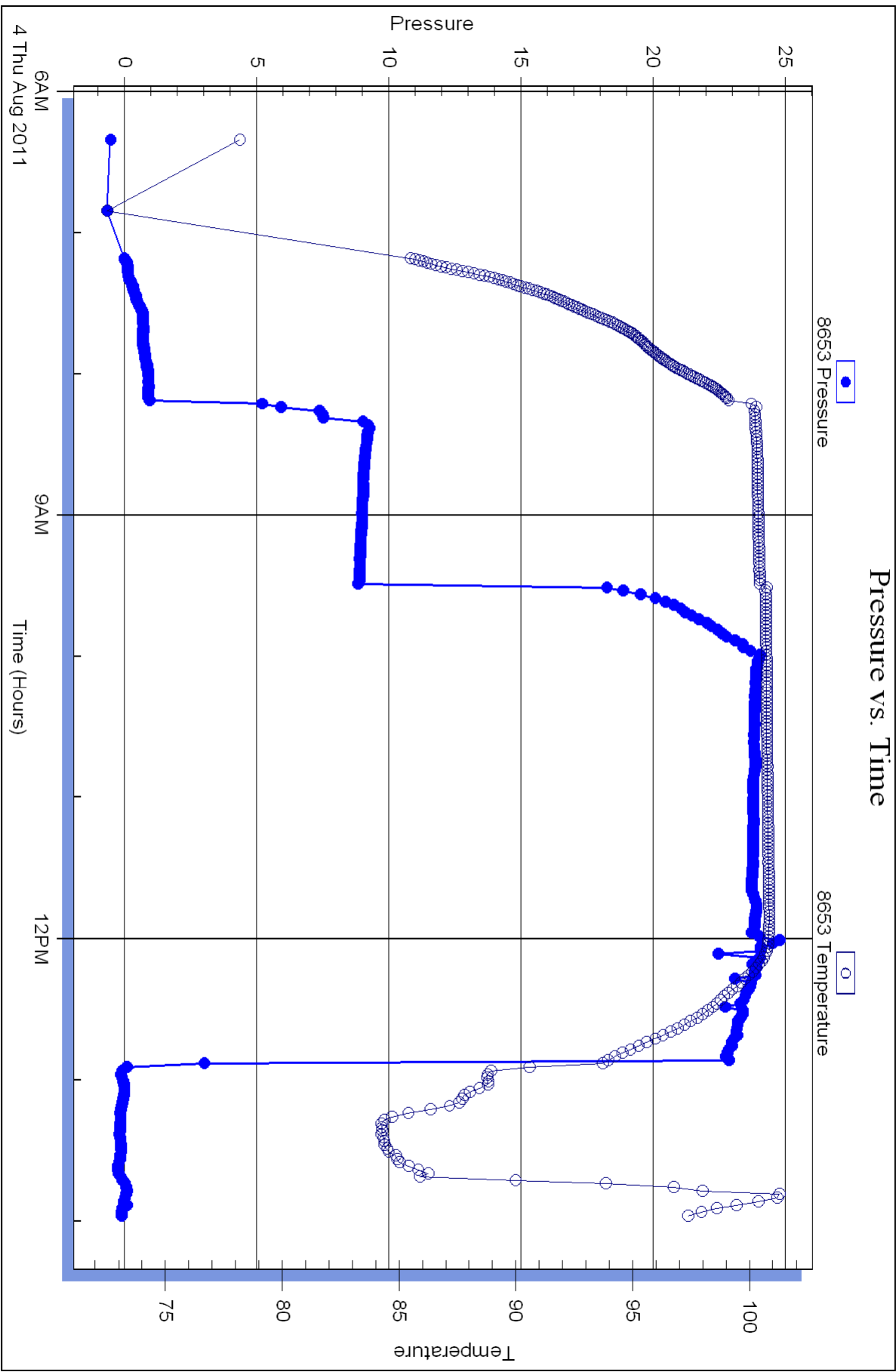
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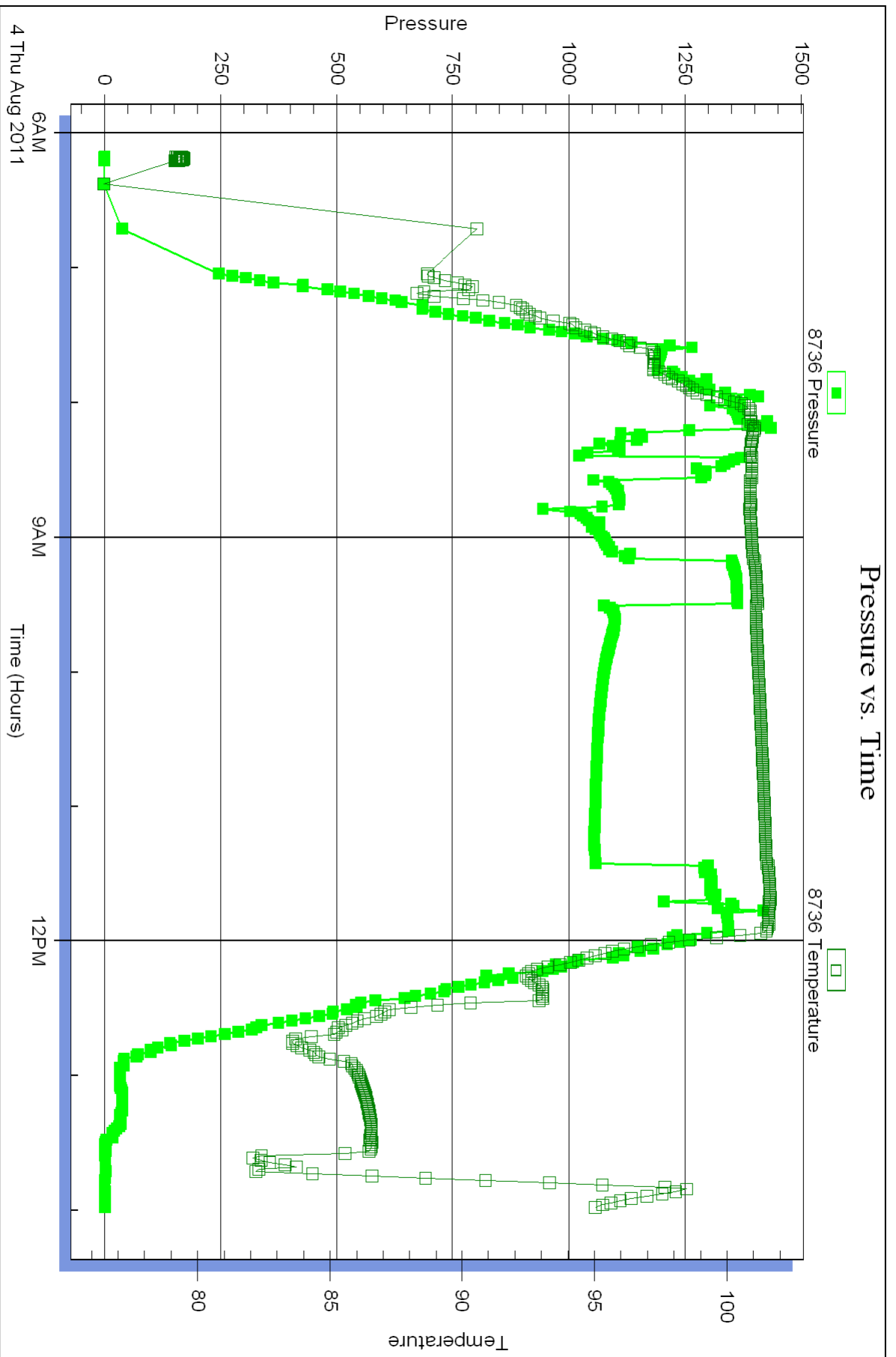
Fluid

Samuel Gary Jr. & Assoc., Inc.

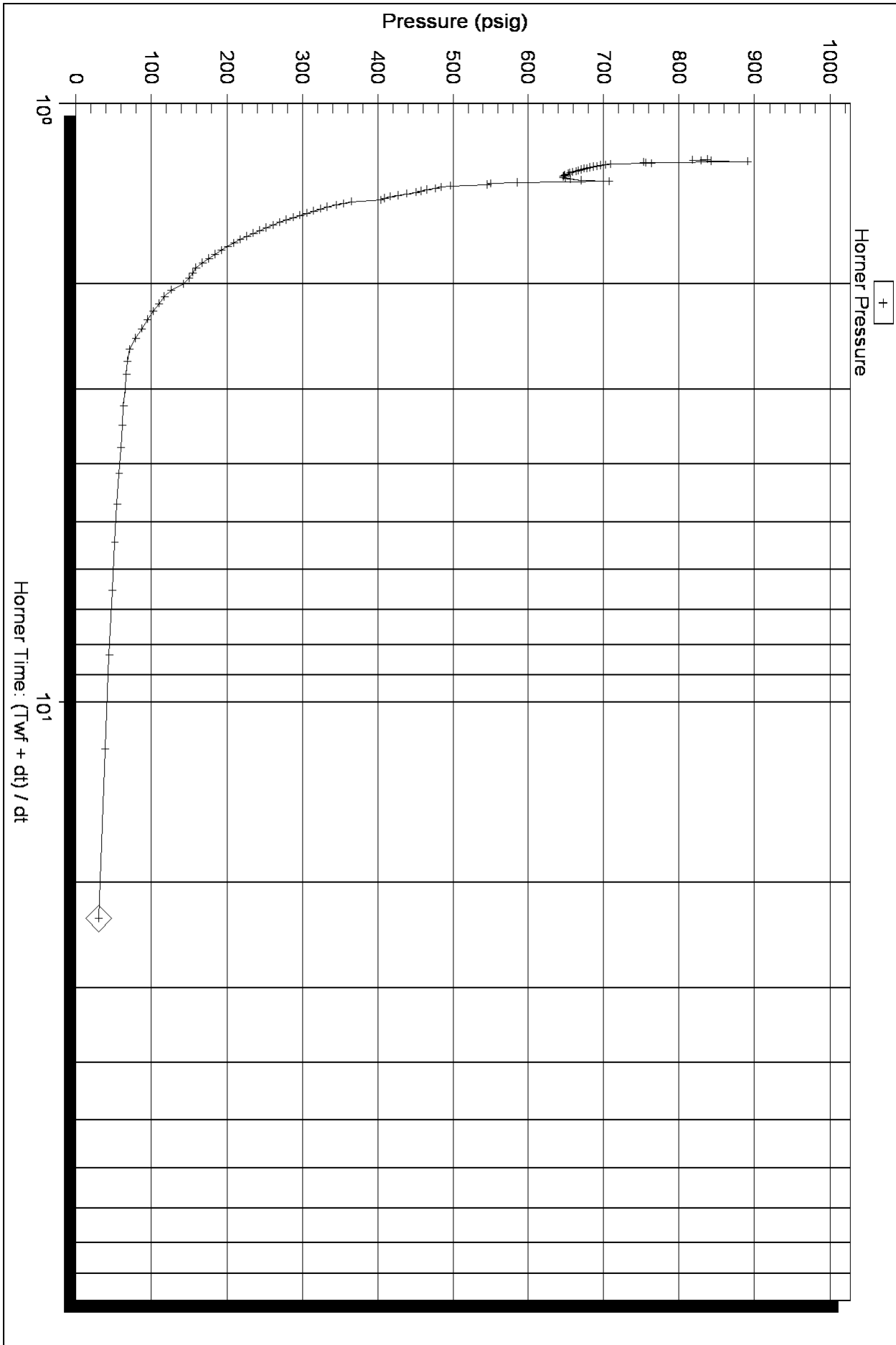
1-16S-17W-Rush

DST Test Number: 1





Horner Plot



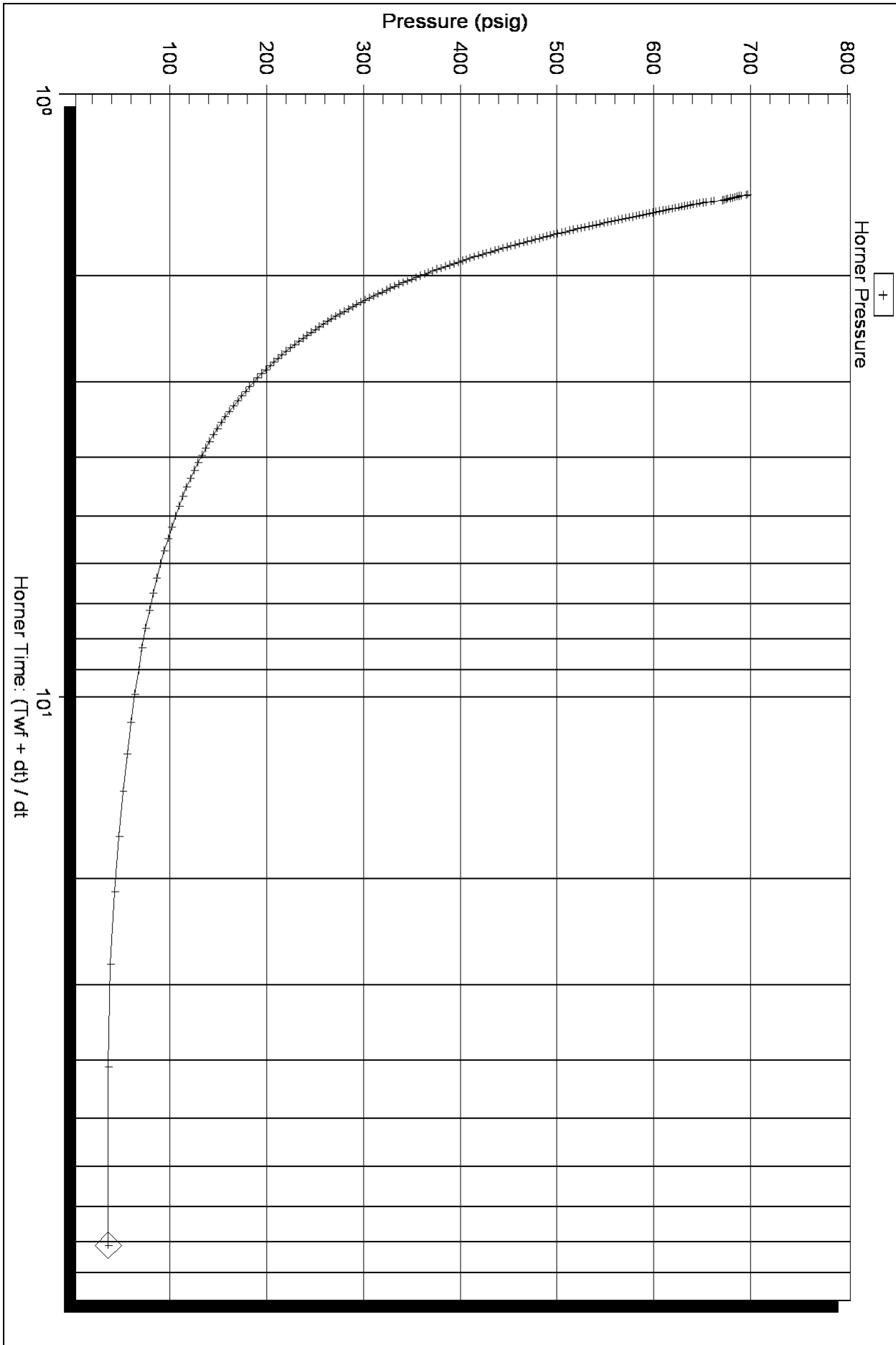
Serial Number: 8354 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



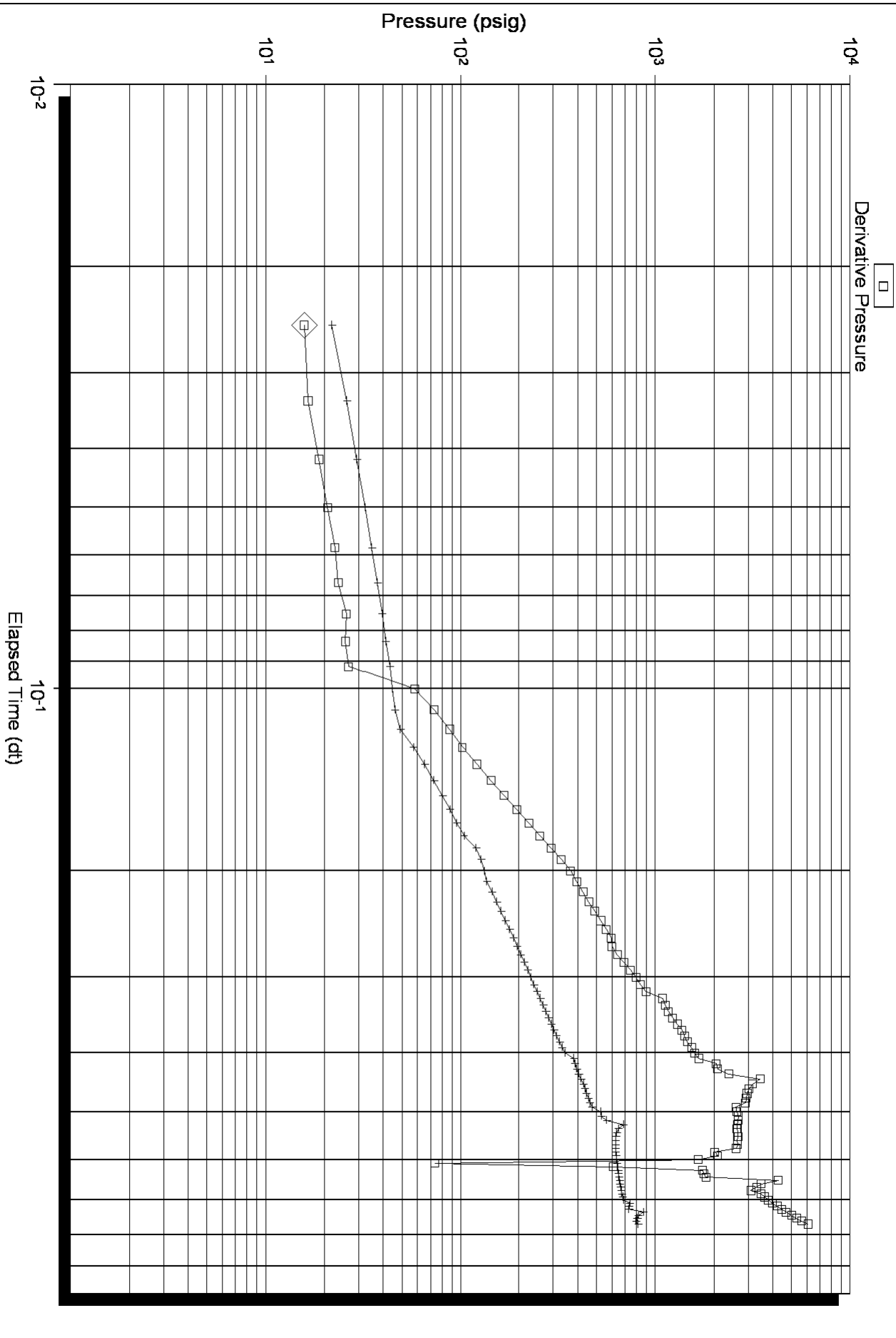
Serial Number: 8354 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

