



## 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: 2011.08.05 @ 20:06:10

End Date: 2011.08.06 @ 03:20:10

Job Ticket #: 45228                      DST #: 3

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

Printed: 2011.11.23 @ 11:19:09

Samuel Gary Jr. & Assoc., Inc.  
Dale Stramel #1-1  
1-16S.-17W.-Rush  
DST # 3  
LKC "A-C"  
2011.08.05



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# DRILL STEM TEST REPORT

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**Dale Stramel #1-1**

1515 Wynkoop Ste.#700  
Denver, CO 80202

**1-16S.-17W.-Rush**

ATTN: Neil Sharp

Job Ticket: 45228

**DST#: 3**

Test Start: 2011.08.05 @ 20:06:10

## GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:38:20

Time Test Ended: 03:20:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3184.00 ft (KB) To 3239.00 ft (KB) (TVD)**

Reference Elevations: 1901.00 ft (KB)

Total Depth: 3239.00 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: 72.60 psig @ 3191.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.05

End Date:

2011.08.06

Last Calib.:

2011.08.06

Start Time: 20:16:10

End Time:

03:20:10

Time On Btm:

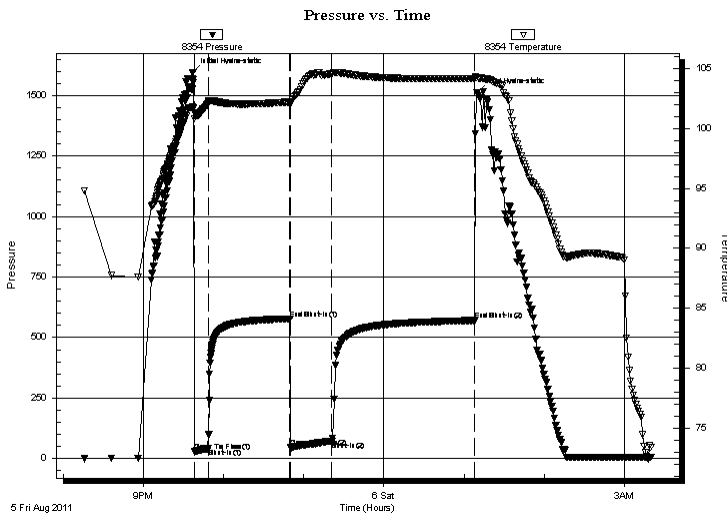
2011.08.05 @ 21:37:10

Time Off Btm:

2011.08.06 @ 01:09:40

**TEST COMMENT:** IF-Weak building blow . Built to 5 inches.  
 IS- No Return.  
 FF-Weak building blow . Built to 6 inches.  
 FS- No Return. Times= 10-60-30-105

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1594.95	101.74	Initial Hydro-static
2	31.30	100.83	Open To Flow (1)
12	41.16	102.15	Shut-In(1)
73	576.42	102.21	End Shut-In(1)
73	45.44	102.09	Open To Flow (2)
104	72.60	104.56	Shut-In(2)
211	570.50	104.15	End Shut-In(2)
213	1511.62	104.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	85%Water/15%Mud	0.84
55.00	70%Water/30%Mud	0.77

## Gas Rates

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



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**1-16S.-17W.-Rush**

ATTN: Neil Sharp

Job Ticket: 45228

**DST#: 3**

Test Start: 2011.08.05 @ 20:06:10

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Time Test Ended: 03:20:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3184.00 ft (KB) To 3239.00 ft (KB) (TVD)**

Reference Elevations: 1901.00 ft (KB)

Total Depth: 3239.00 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 @ Run Depth: psig @ 3191.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.05 End Date: 2011.08.06

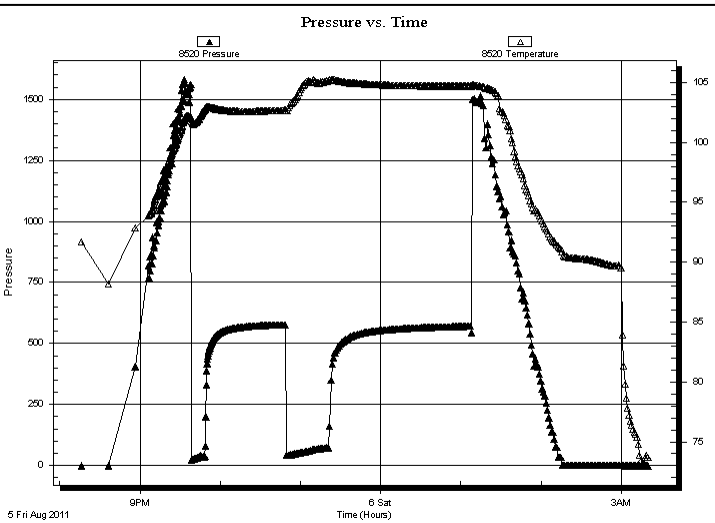
Last Calib.: 2011.08.06

Start Time: 20:16:20 End Time: 03:19:50

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Weak building blow . Built to 5 inches.  
 IS- No Return.  
 FF-Weak building blow . Built to 6 inches.  
 FS- No Return. Times= 10-60-30-105



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	85%Water/15%Mud	0.84
55.00	70%Water/30%Mud	0.77

## Gas Rates

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



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**Dale Stramel #1-1**

1515 Wynkoop Ste.#700  
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**1-16S.-17W.-Rush**

Job Ticket: 45228

**DST#: 3**

ATTN: Neil Sharp

Test Start: 2011.08.05 @ 20:06:10

## GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:38:20

Time Test Ended: 03:20:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3184.00 ft (KB) To 3239.00 ft (KB) (TVD)**

Reference Elevations: 1901.00 ft (KB)

Total Depth: 3239.00 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 @ 3154.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.05

End Date: 2011.08.06

Last Calib.: 2011.08.06

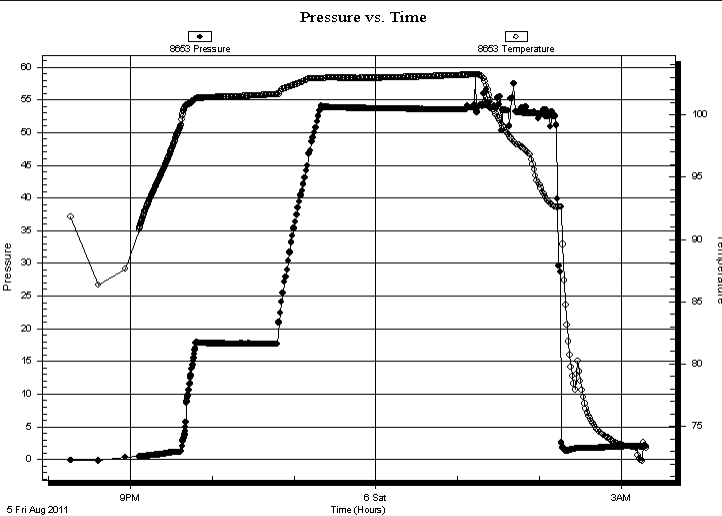
Start Time: 20:16:30

End Time: 03:18:00

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Weak building blow . Built to 5 inches.  
 IS- No Return.  
 FF-Weak building blow . Built to 6 inches.  
 FS- No Return. Times= 10-60-30-105



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	85%Water/15%Mud	0.84
55.00	70%Water/30%Mud	0.77

## Gas Rates

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



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TESTING, INC.**

# 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: 45228

**DST#: 3**

ATTN: Neil Sharp

Test Start: 2011.08.05 @ 20:06:10

## Tool Information

Drill Pipe:	Length: 3164.00 ft	Diameter: 3.80 inches	Volume: 44.38 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:	5000.00 lb
			<u>Total Volume: 44.38 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3184.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	55.00 ft				
Tool Length:	85.00 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	3154.00	
Change Over Sub	1.00			3155.00	
Shut In Tool	5.00			3160.00	
Sampler	2.00			3162.00	
Hydraulic tool	5.00			3167.00	
Jars	5.00			3172.00	
Safety Joint	3.00			3175.00	
Packer	5.00			3180.00	30.00 Bottom Of Top Packer
Packer	4.00			3184.00	
Stubb	1.00			3185.00	
Perforations	5.00			3190.00	
Change Over Sub	1.00			3191.00	
Recorder	0.00	8354	Inside	3191.00	
Recorder	0.00	8520	Outside	3191.00	
Drill Pipe	31.00			3222.00	
Change Over Sub	1.00			3223.00	
Perforations	13.00			3236.00	
Bullnose	3.00			3239.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 85.00**



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**FLUID SUMMARY**

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**1-16S.-17W.-Rush**

Job Ticket: 45228

**DST#: 3**

ATTN: Neil Sharp

Test Start: 2011.08.05 @ 20:06:10

## 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:

35000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 cm<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.19 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	85%Water/15%Mud	0.842
55.00	70%Water/30%Mud	0.772

Total Length: 115.00 ft      Total Volume: 1.614 bbl

Num Fluid Samples: 0

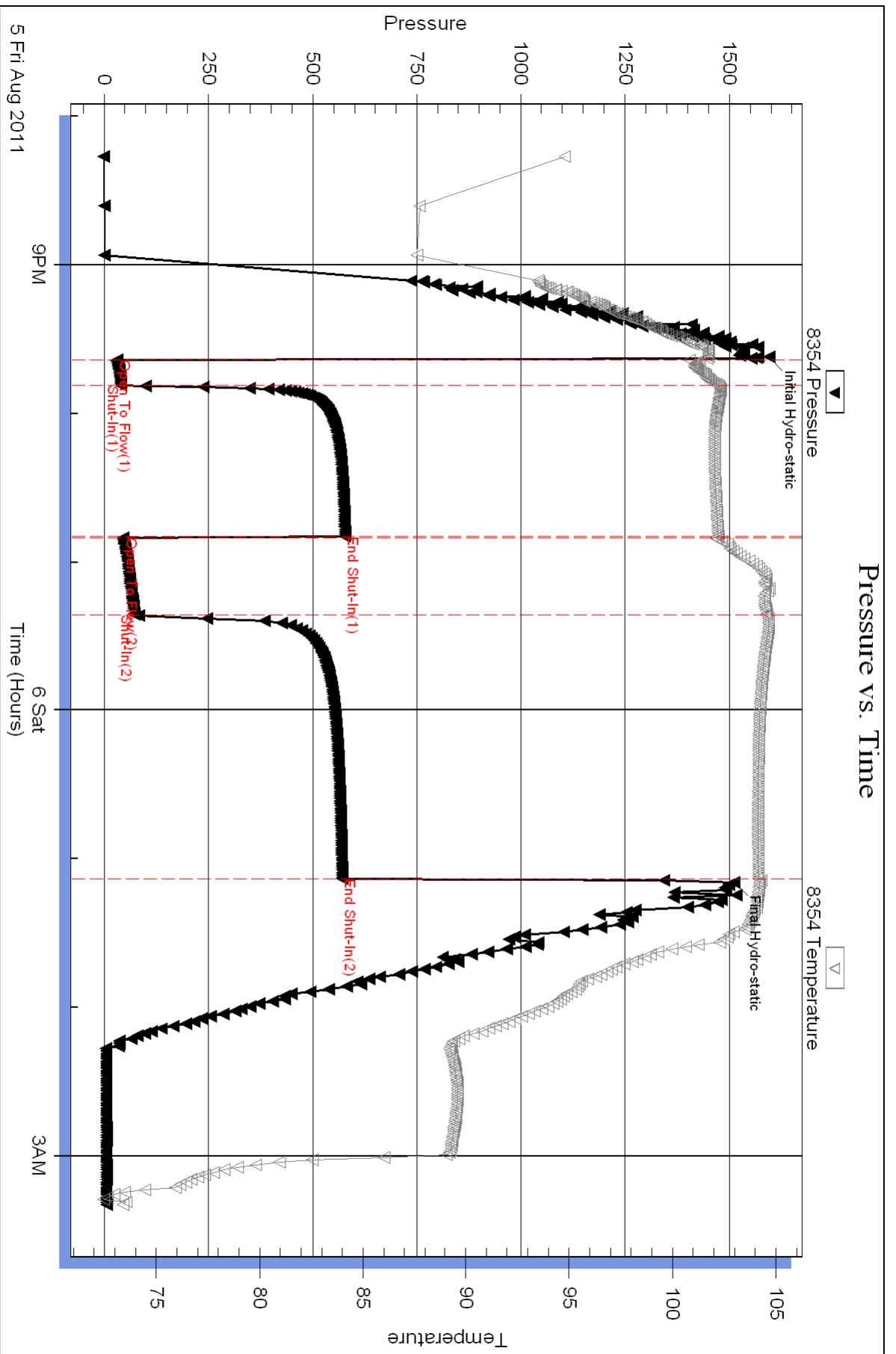
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler- 2000ML total. 1800 ML w ater. 200 ML Mud. 250# pressure.  
Res-.171 @ 73= 36000 chlorides.

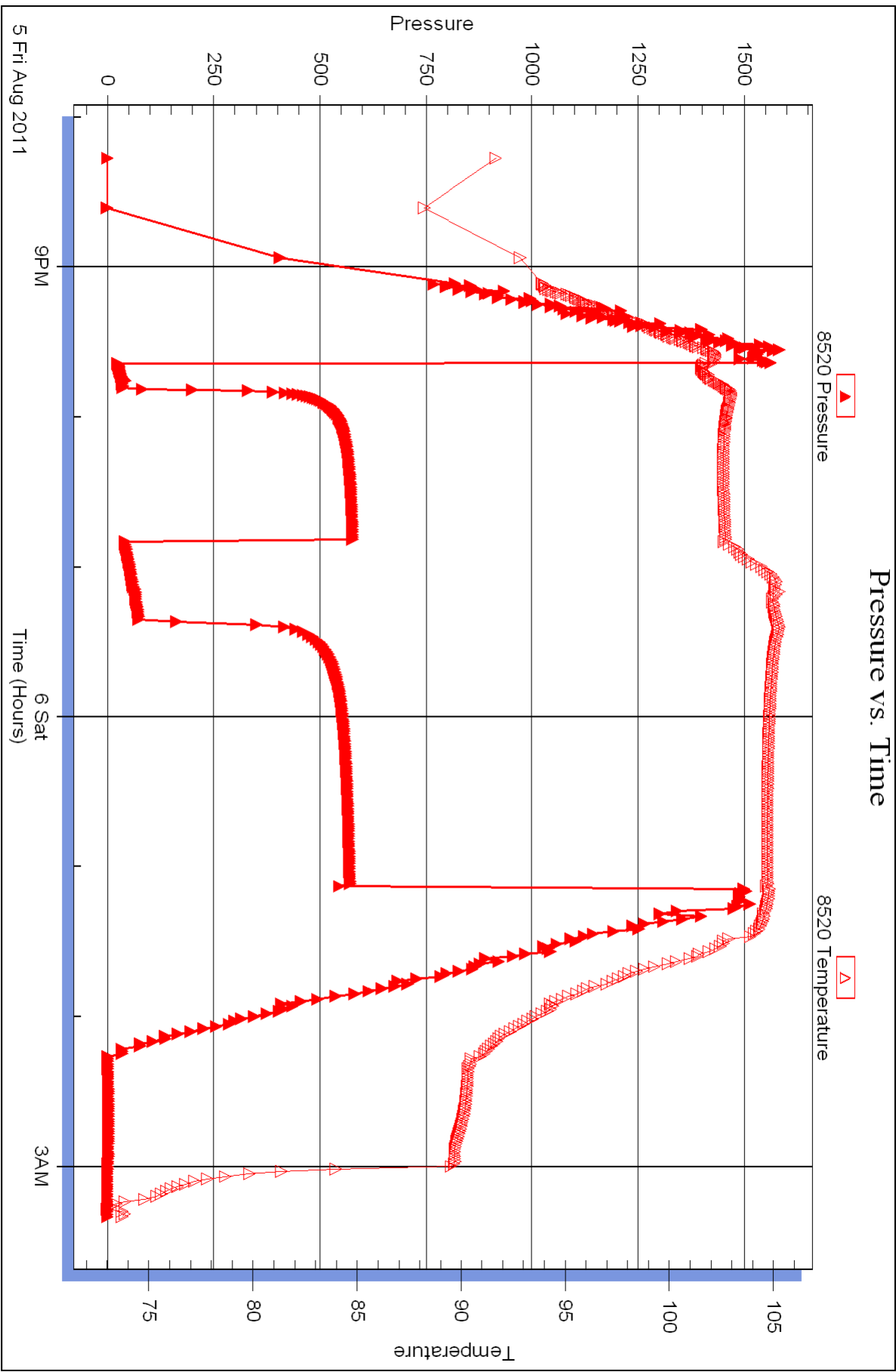


Serial #: 8520

Outside Samuel Gary Jr. & Assoc., Inc.

1-16S-17W-Rush

DST Test Number: 3





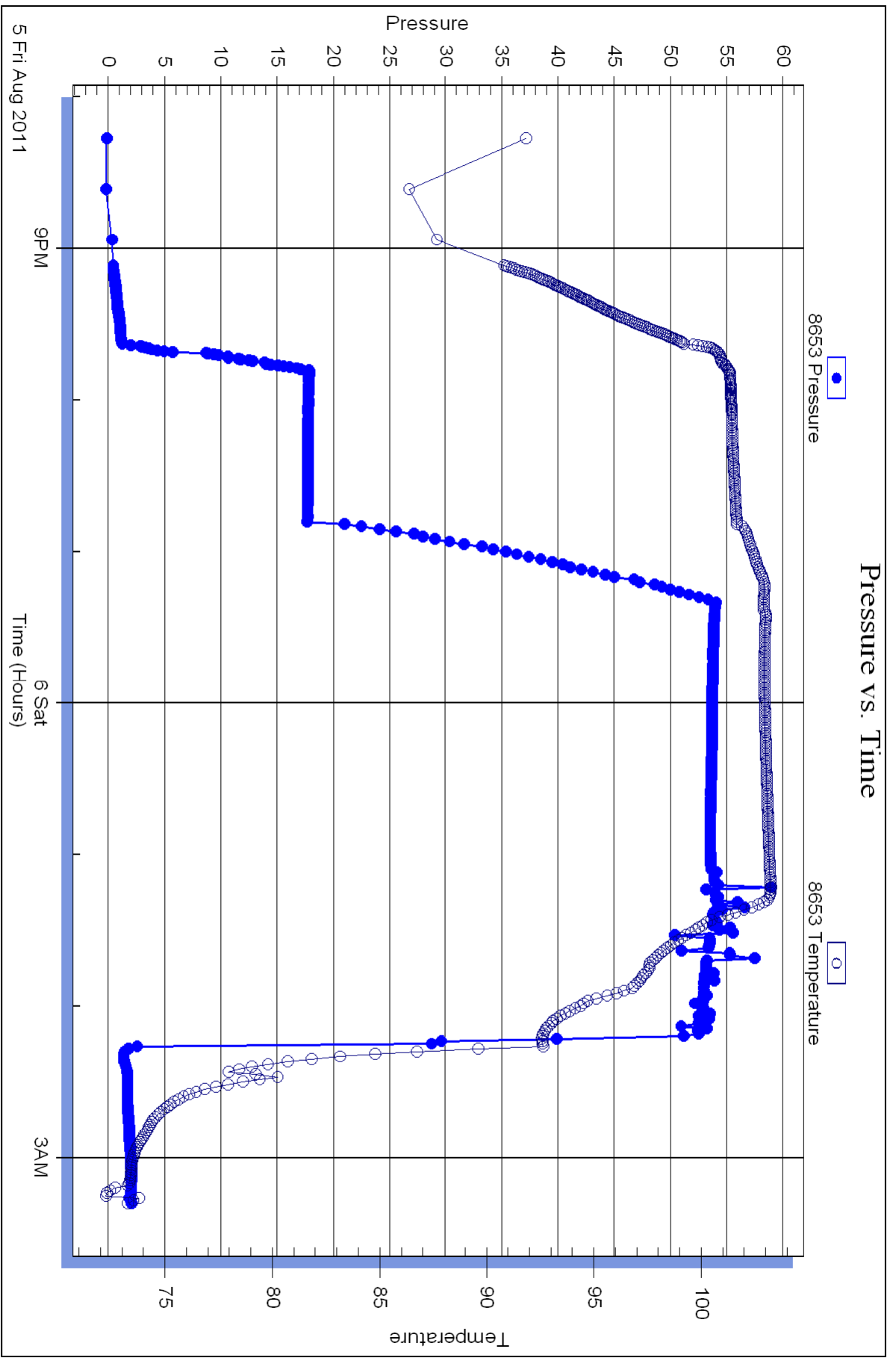
Serial #: 8653

Fluid

Samuel Gary Jr. & Assoc., Inc.

1-16S-17W-Rush

DST Test Number: 3

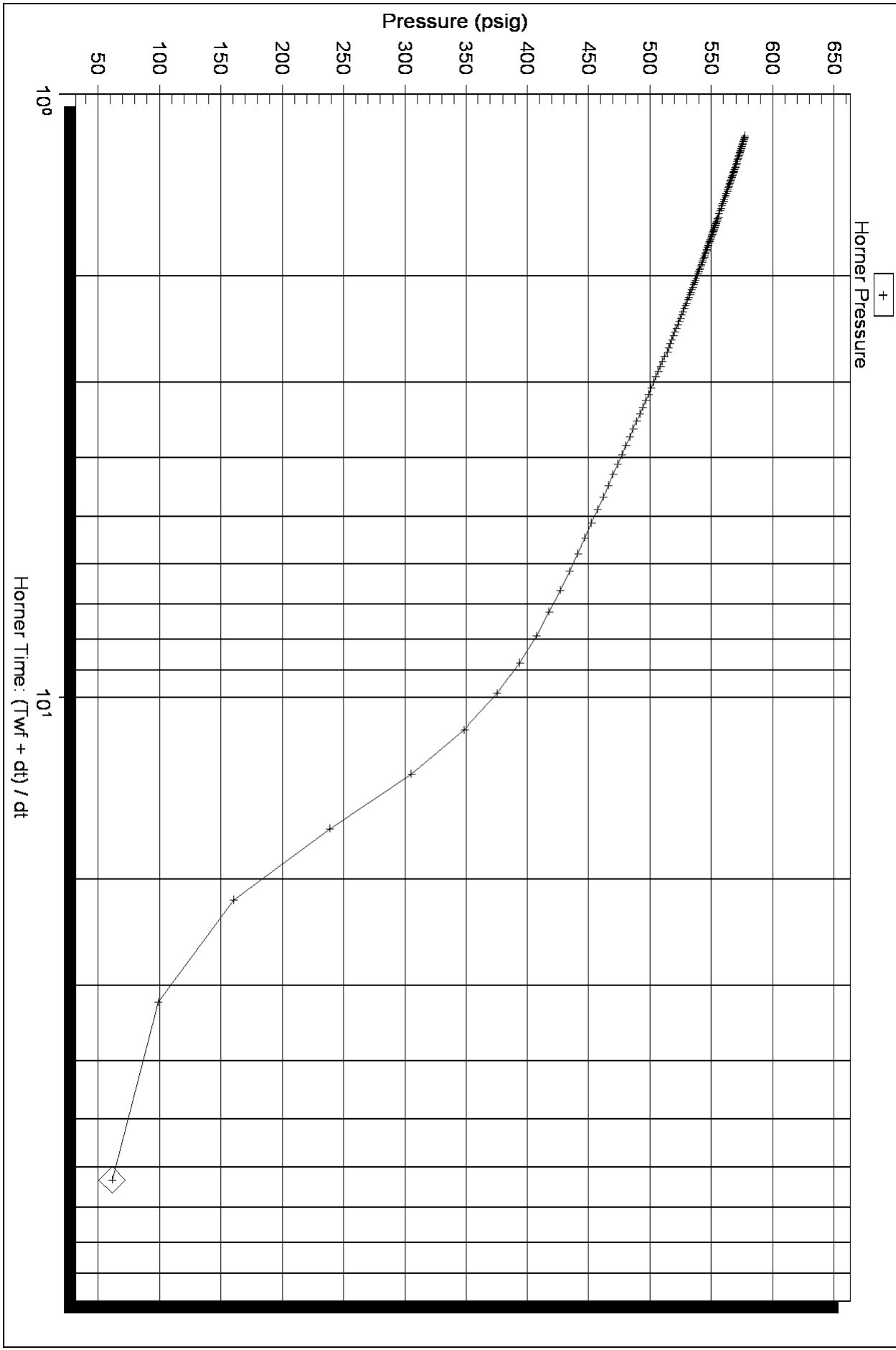


Triobite Testing, Inc

Ref. No: 45228

Printed: 2011.11.23 @ 11:19:12

# Horner Plot



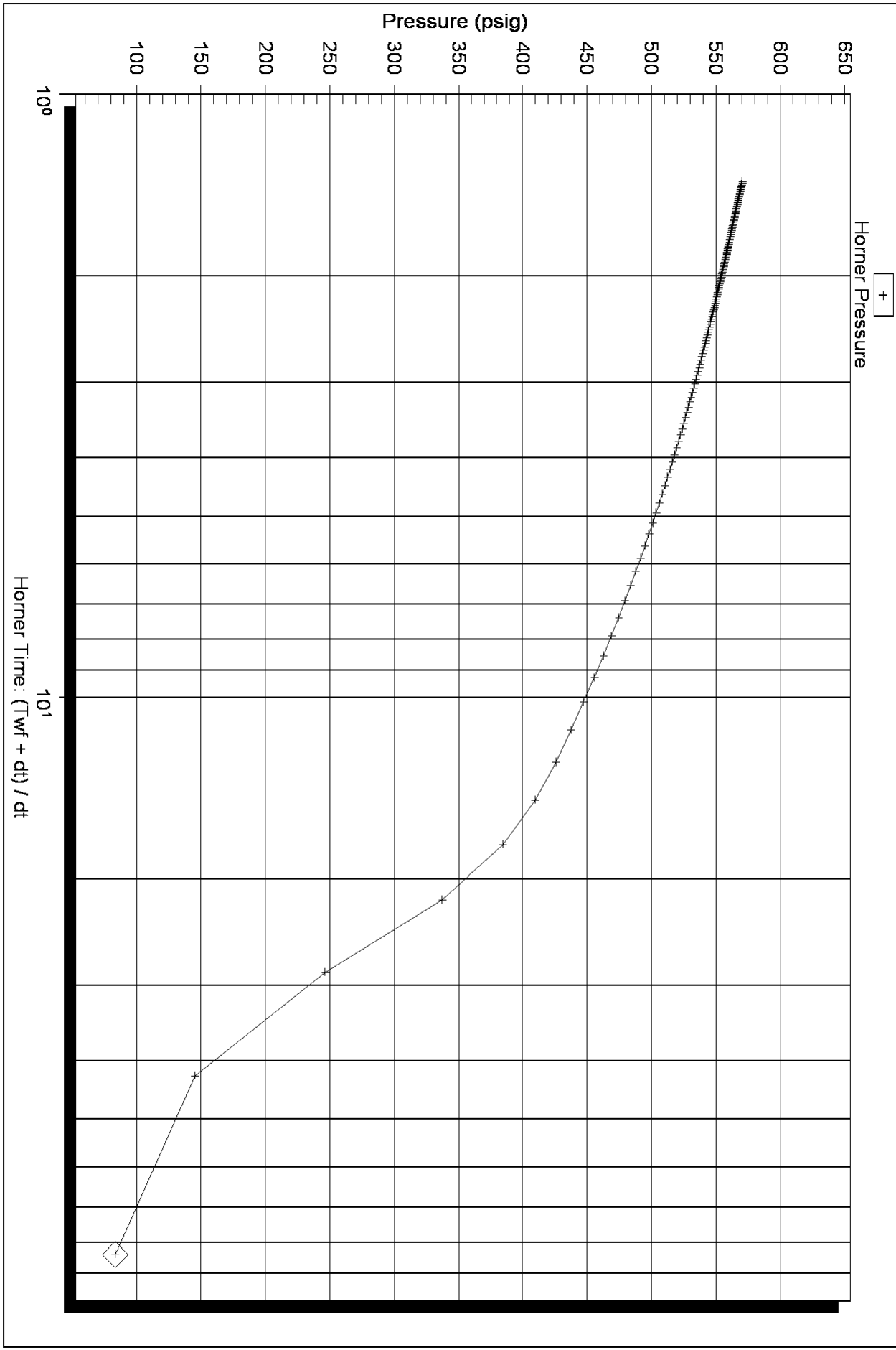
Serial Number: 8354 (Inside)

P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

### Horner Plot



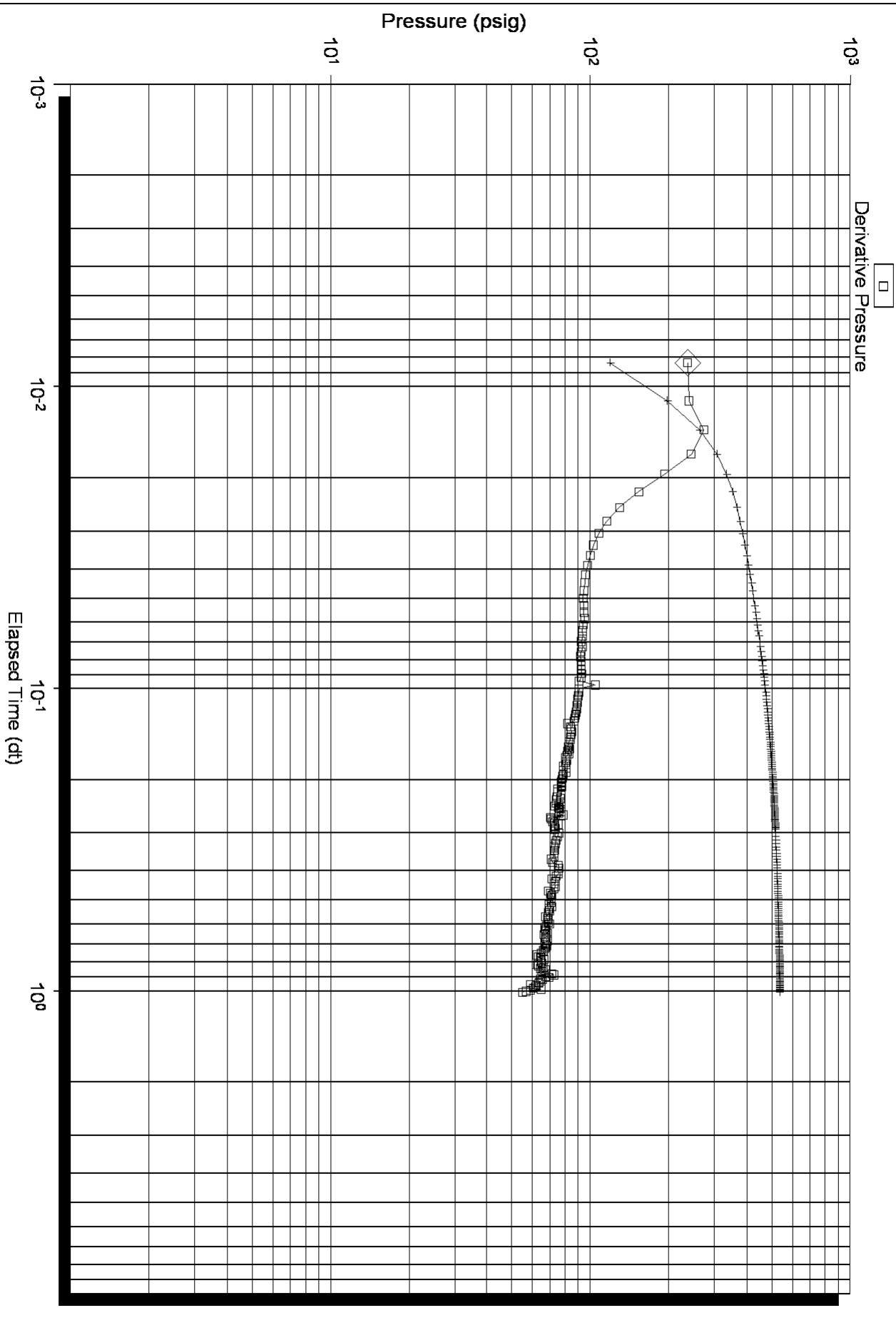
Serial Number: 8354 (Inside)

P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative

