



DRILL STEM TEST REPORT

Prepared For: **SamGary Jr. Associates**

1515 Wynkoop STE 700
Denver Co

ATTN: Cloayton Camozzi

1-16-16, Rush Ks

Wagner Trust 3-1

Start Date: 2011.02.20 @ 16:40:26

End Date: 2011.02.20 @ 23:33:26

Job Ticket #: 41923 DST #: 4

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

SamGary Jr. Associates

Wagner Trust 3-1

1515 Wynkoop STE 700
Denver Co

1-16-16, Rush Ks

Job Ticket: 41923

DST#: 4

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

GENERAL INFORMATION:

Formation: **KC "J,K,L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:14:26

Time Test Ended: 23:33:26

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: 3378.00 ft (KB) To 3421.00 ft (KB) (TVD)

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8319 Outside

Press @ Run Depth: 59.82 psig @ 3383.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20 End Date: 2011.02.20

Last Calib.: 2011.02.20

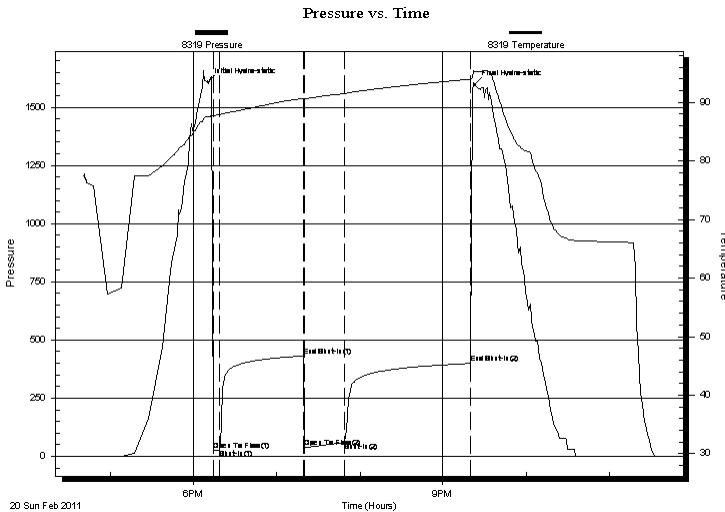
Start Time: 16:40:31 End Time: 23:33:25

Time On Btm: 2011.02.20 @ 18:09:56

Time Off Btm: 2011.02.20 @ 21:22:56

TEST COMMENT: IF 5 MIN-BOB in 1min
ISI 60 MIN-No blow
FF 30 MIN-BOB in 2.5min
FSI 90 MIN-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1607.58	87.51	Initial Hydro-static
5	24.03	87.68	Open To Flow (1)
9	28.51	87.92	Shut-In(1)
69	432.59	90.67	End Shut-In(1)
70	37.27	90.65	Open To Flow (2)
99	59.82	91.52	Shut-In(2)
190	399.36	93.96	End Shut-In(2)
193	1595.64	95.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GO 35%G 65%O	0.57
65.00	SGMCO 10%G 80%O 10%M	0.91
0.00	240ft GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

SamGary Jr. Associates
 1515 Wynkoop STE 700
 Denver Co
 ATTN: Clayton Camozzi

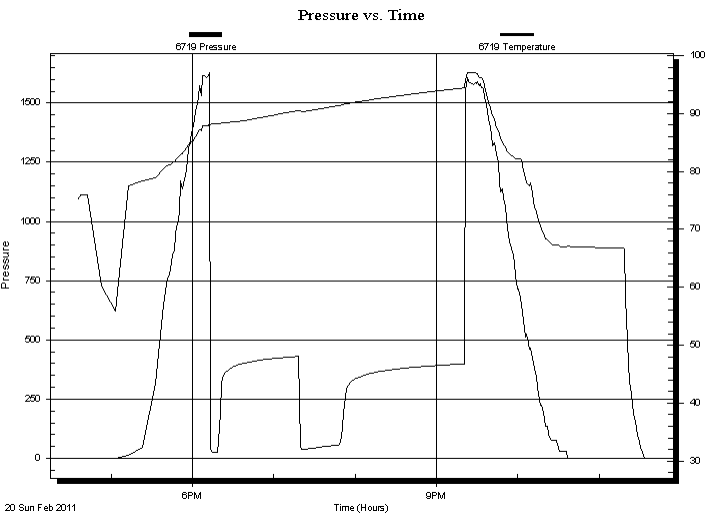
Wagner Trust 3-1
1-16-16, Rush Ks
 Job Ticket: 41923 **DST#: 4**
 Test Start: 2011.02.20 @ 16:40:26

GENERAL INFORMATION:

Formation:	KC "J,K,L"		Test Type:	Conventional Bottom Hole
Deviated:	No Whipstock:	ft (KB)	Tester:	Brett Dickinson
Time Tool Opened:	18:14:26		Unit No:	47
Time Test Ended:	23:33:26		Reference Elevations:	1941.00 ft (KB) 1933.00 ft (CF)
Interval:	3378.00 ft (KB) To 3421.00 ft (KB) (TVD)		KB to GR/CF:	8.00 ft
Total Depth:	3421.00 ft (KB) (TVD)			
Hole Diameter:	7.88 inches	Hole Condition: Fair		

Serial #: 6719	Inside			
Press @RunDepth:	psig @	3383.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2011.02.20	End Date:	2011.02.20	Last Calib.:
Start Time:	16:36:01	End Time:	23:33:25	Time On Btm:
				Time Off Btm:

TEST COMMENT: IF 5 MIN-BOB in 1min
 ISI 60 MIN-No blow
 FF 30 MIN-BOB in 2.5min
 FSI 90 MIN-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GO 35%G 65%O	0.57
65.00	SGMCO 10%G 80%O 10%M	0.91
0.00	240ft GIP	0.00

Gas Rates

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



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Wagner Trust 3-1

1515 Wynkoop STE 700
Denver Co

1-16-16, Rush Ks

Job Ticket: 41923

DST#: 4

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

GENERAL INFORMATION:

Formation: **KC "J,K,L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:14:26

Time Test Ended: 23:33:26

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: 3378.00 ft (KB) To 3421.00 ft (KB) (TVD)

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Fluid

Press @ RunDepth: psig @ 3343.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20 End Date: 2011.02.20

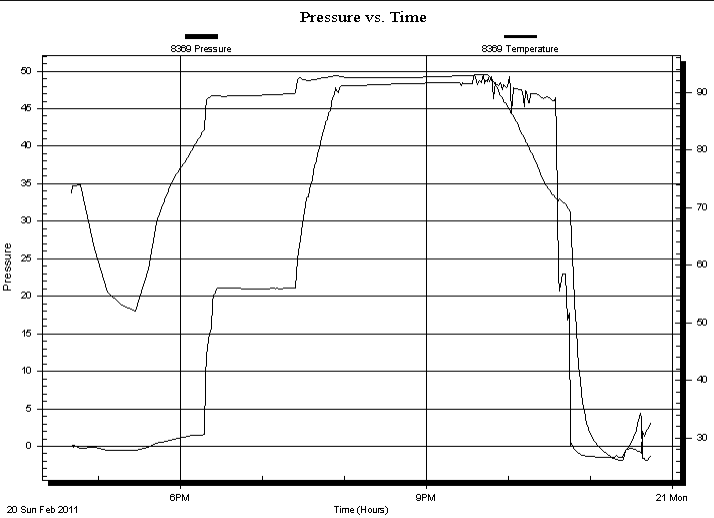
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Start Time: 16:40:16 End Time: 23:45:10

Time On Btm:

Time Off Btm:

TEST COMMENT: IF 5 MIN-BOB in 1min
ISI 60 MIN-No blow
FF 30 MIN-BOB in 2.5min
FSI 90 MIN-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GO 35%G 65%O	0.57
65.00	SGMCO 10%G 80%O 10%M	0.91
0.00	240ft GIP	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

SamGary Jr. Associates

Wagner Trust 3-1

1515 Wynkoop STE 700
Denver Co

1-16-16, Rush Ks

Job Ticket: 41923

DST#: 4

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

Tool Information

Drill Pipe:	Length: 3316.00 ft	Diameter: 3.80 inches	Volume: 46.51 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
			- bbl	String Weight: Initial	48000.00 lb
Drill Pipe Above KB:	4.00 ft			Final	50000.00 lb
Depth to Top Packer:	3378.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	43.00 ft				
Tool Length:	79.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3343.00	
Recorder	0.00	8369	Fluid	3343.00	
Drill Pipe	5.00			3348.00	
Shut In Tool	5.00			3353.00	
Sampler	3.00			3356.00	
Hydraulic tool	5.00			3361.00	
Jars	5.00			3366.00	
Safety Joint	3.00			3369.00	
Packer	4.00			3373.00	36.00 Bottom Of Top Packer
Packer	5.00			3378.00	
Stubb	1.00			3379.00	
Perforations	3.00			3382.00	
Change Over Sub	1.00			3383.00	
Recorder	0.00	8319	Outside	3383.00	
Recorder	0.00	6719	Inside	3383.00	
Blank Spacing	32.00			3415.00	
Change Over Sub	1.00			3416.00	
Perforations	2.00			3418.00	
Bullnose	3.00			3421.00	43.00 Bottom Packers & Anchor

Total Tool Length: 79.00



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FLUID SUMMARY

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Job Ticket: 41923

DST#: 4

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GO 35%G 65%O	0.568
65.00	SGMCO 10%G 80%O 10%M	0.912
0.00	240ft GIP	0.000

Total Length: 125.00 ft Total Volume: 1.480 bbl

Num Fluid Samples: 0

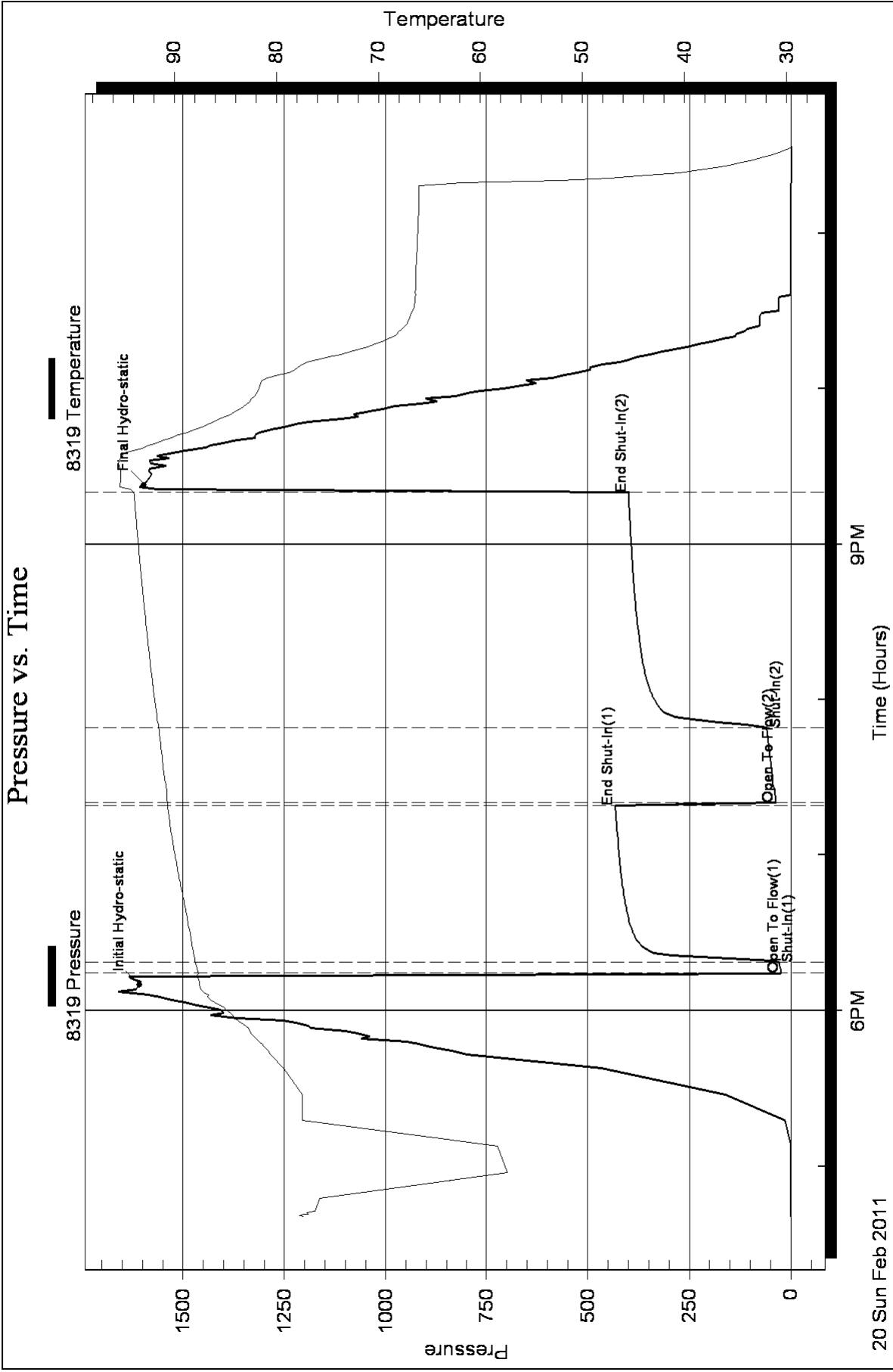
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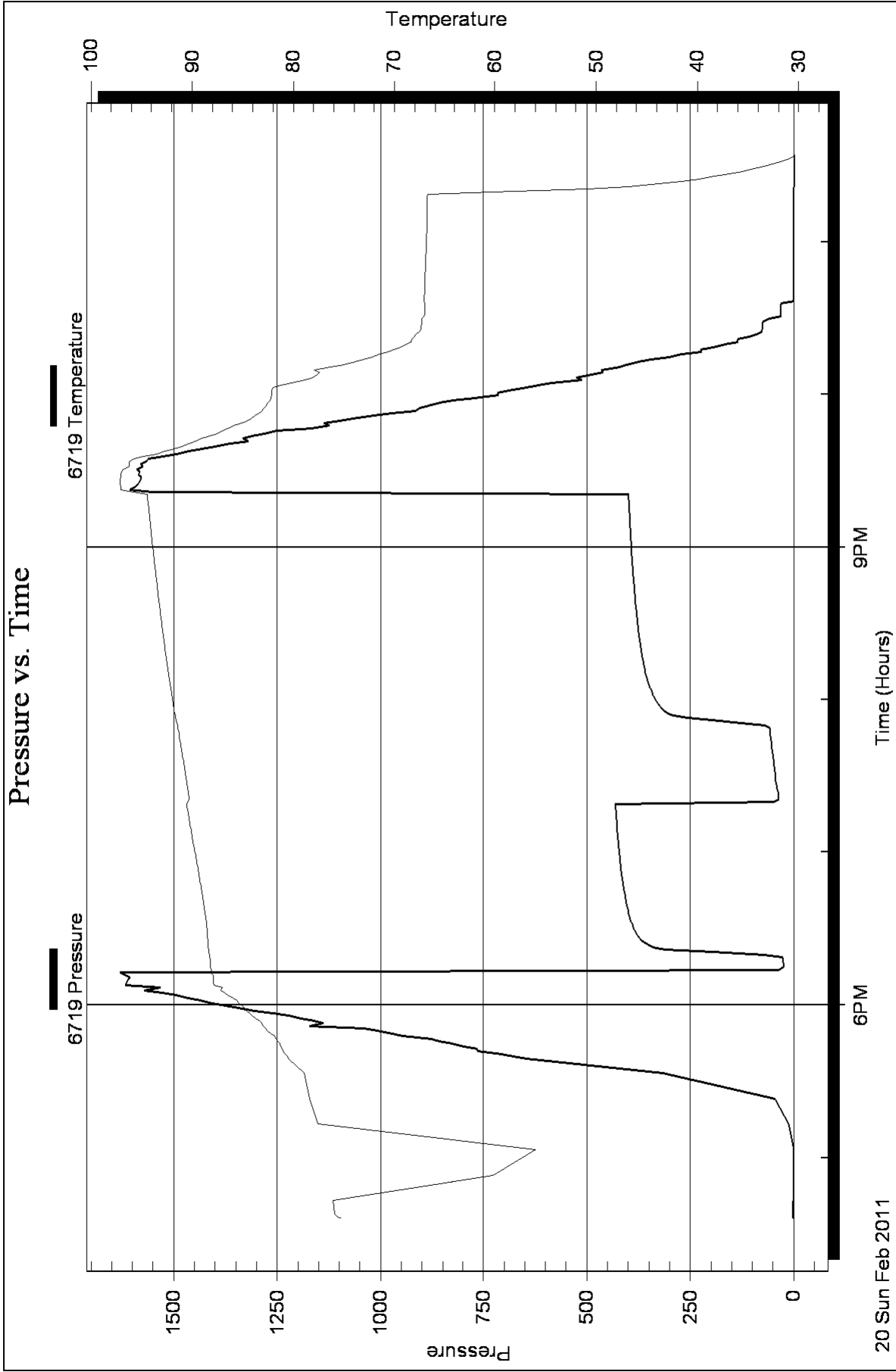
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data, Gas 1200ml, Oil 2800ml, 175 PSI





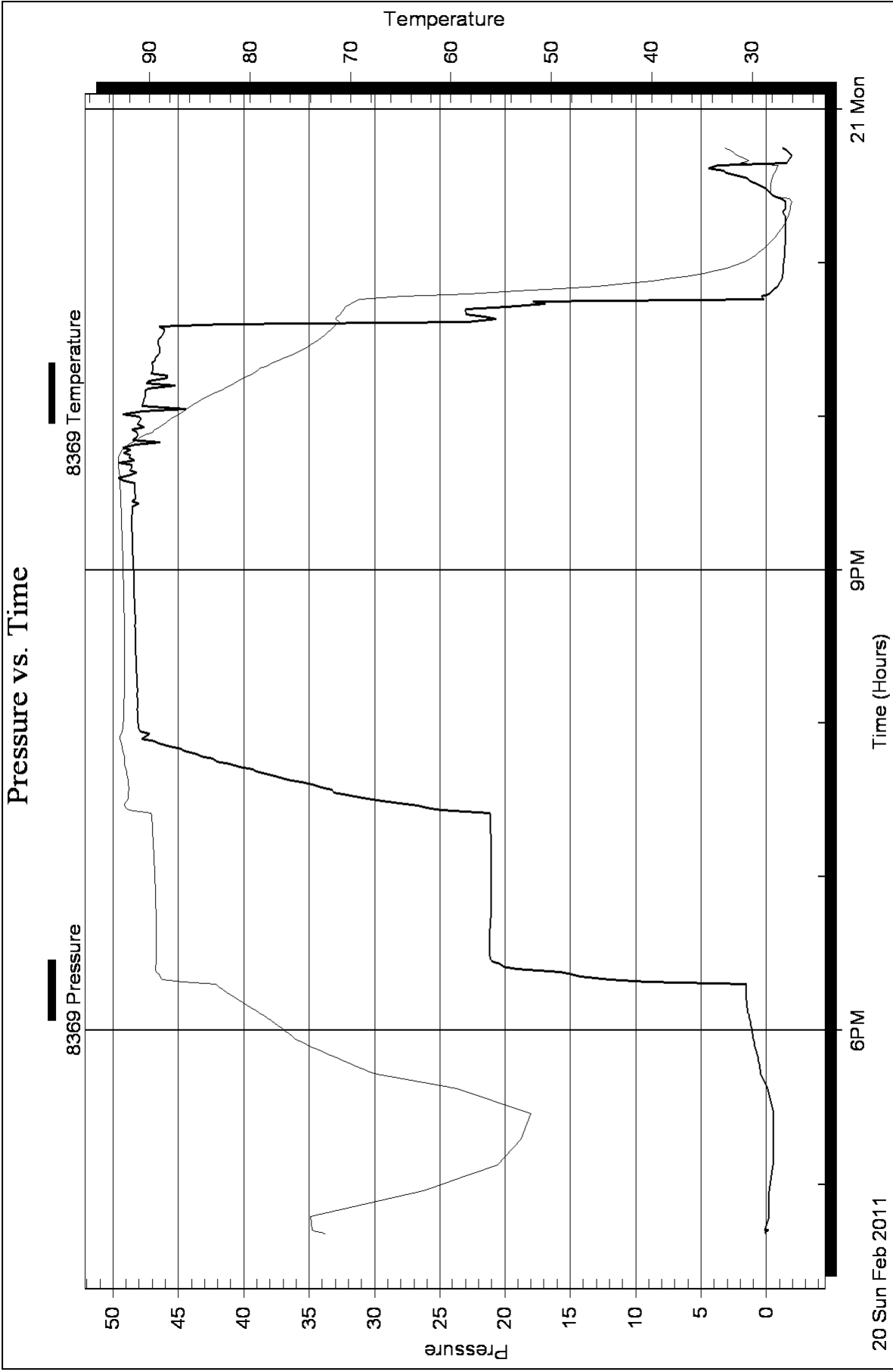
Serial #: 8369

Fluid

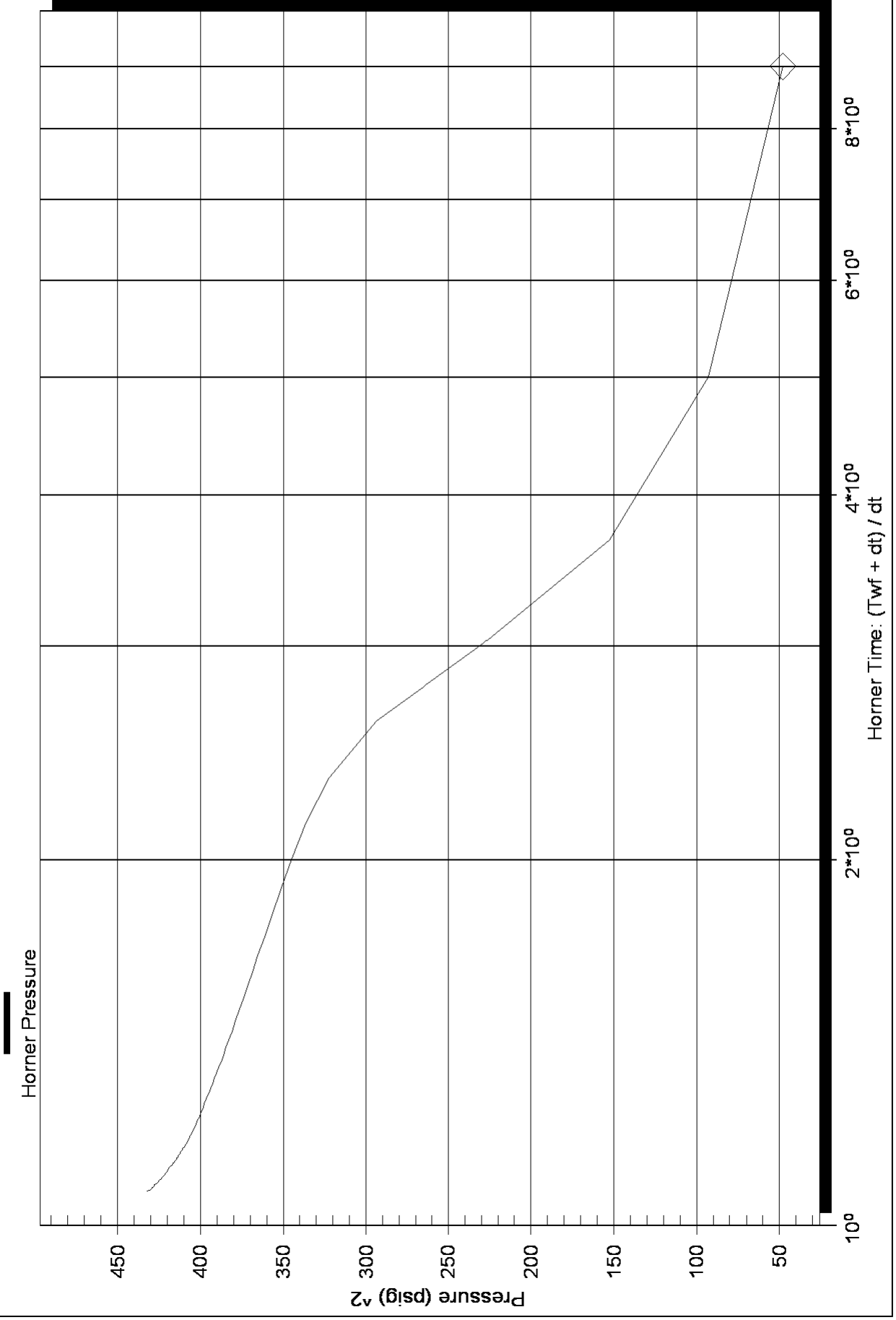
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1-16-16, Rush Ks

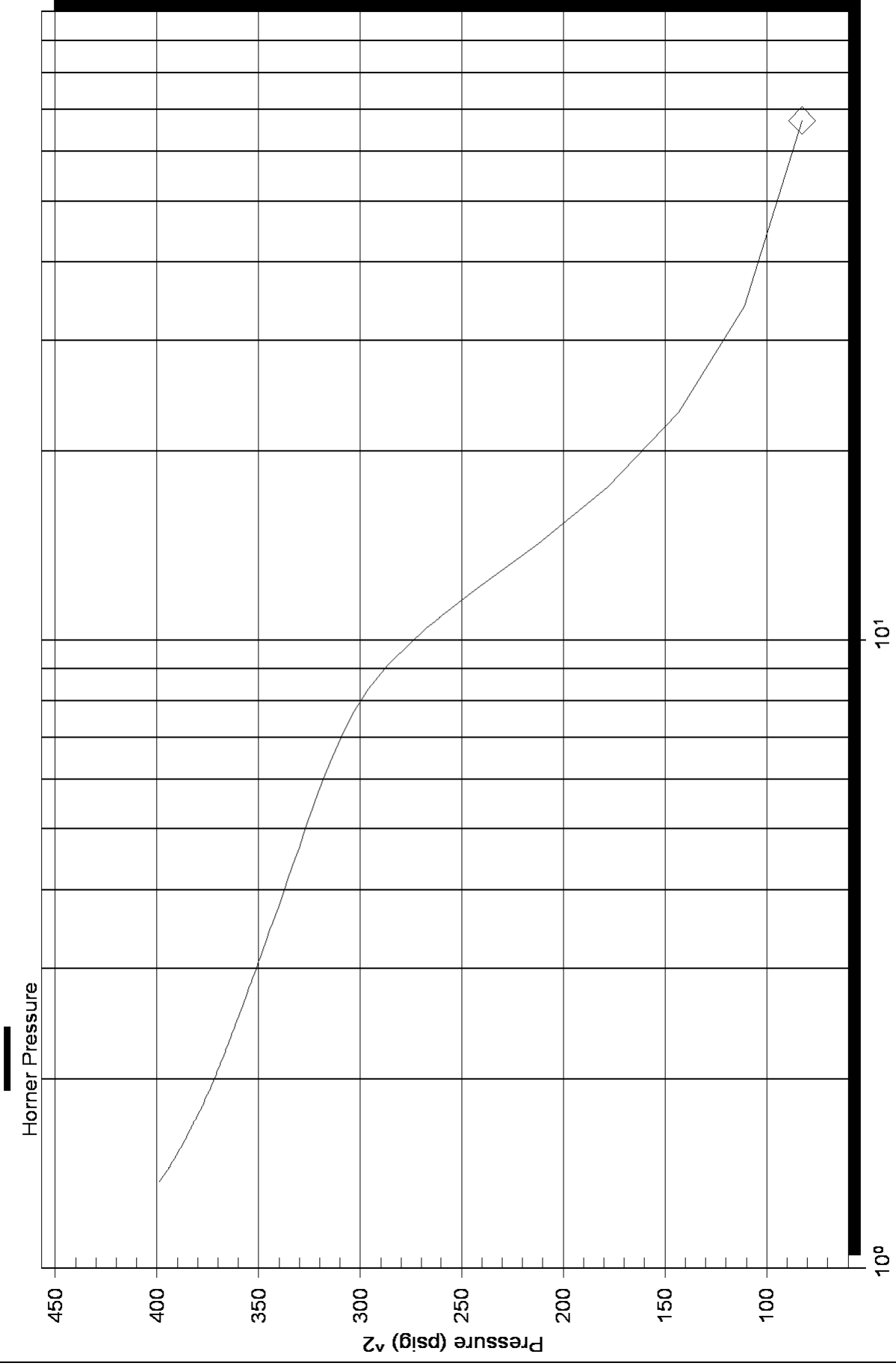
DST Test Number: 4



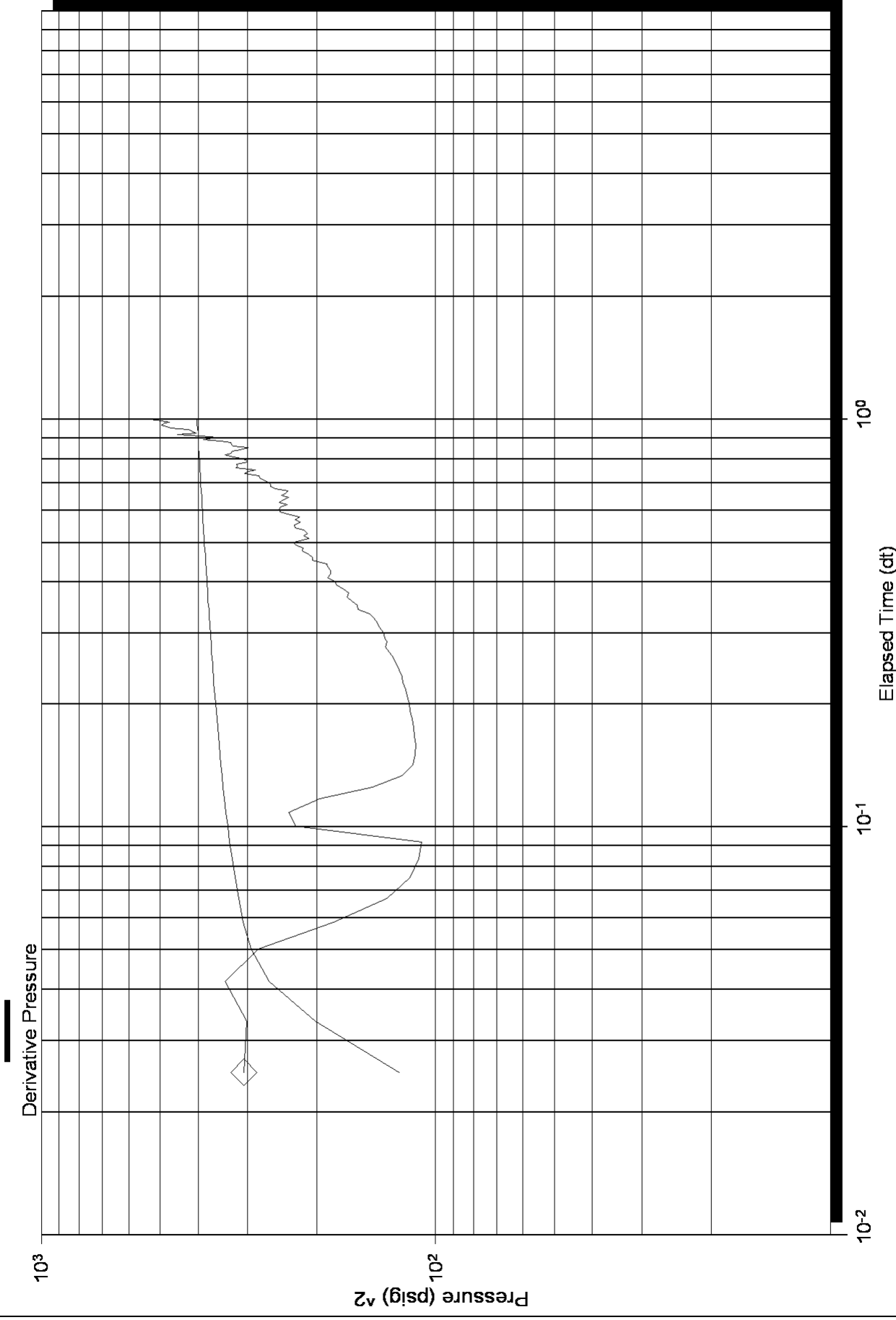
Homer Plot



Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

