



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Assoc. inc**

1515 Wynkoop St.
Suite 700
Denver Co. 80202

ATTN: Clayton Camozzi

4-16s-16w Rush

Bogleigh Wallah West TR 1-4

Start Date: 2011.07.19 @ 19:23:05

End Date: 2011.07.20 @ 02:58:29

Job Ticket #: 43514 DST #: 1

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



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TESTING, INC.**

DRILL STEM TEST REPORT

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Bogleigh Wallah West TR 1-4

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ATTN: Clayton Camozzi

4-16s-16w Rush

Job Ticket: 43514

DST#: 1

Test Start: 2011.07.19 @ 19:23:05

GENERAL INFORMATION:

Formation: **LKC " B-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:07:00

Time Test Ended: 02:58:29

Test Type: Conventional Bottom Hole

Tester: Andy Carreira

Unit No: 39

Interval: 3200.00 ft (KB) To 3223.00 ft (KB) (TVD)

Reference Elevations: 1915.00 ft (KB)

Total Depth: 3223.00 ft (KB) (TVD)

1907.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8352 Outside

Press @ Run Depth: 113.98 psig @ 3201.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.19 End Date: 2011.07.20

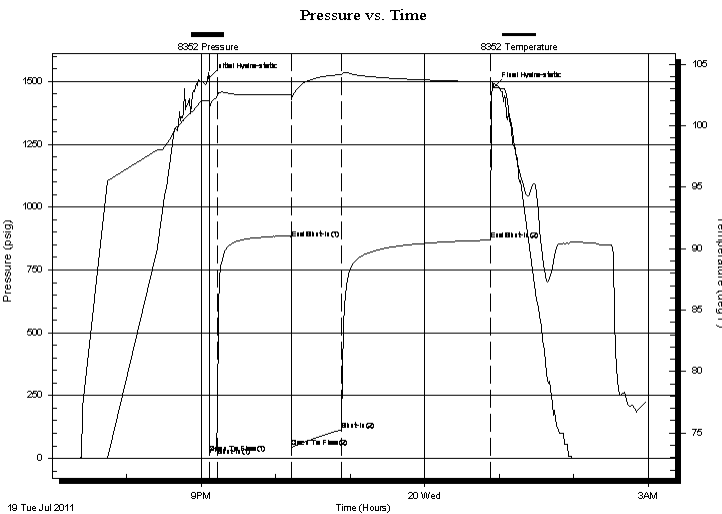
Last Calib.: 2011.07.20

Start Time: 19:23:05 End Time: 02:58:29

Time On Btm: 2011.07.19 @ 21:06:40

Time Off Btm: 2011.07.20 @ 00:55:50

TEST COMMENT: IF:(5min) 4 inch blow .
IS:(60min) No Return
FF:(40min) BOB, 6 min.
FS:(120min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1515.85	102.06	Initial Hydro-static
1	21.20	101.35	Open To Flow (1)
7	42.67	102.31	Shut-In(1)
66	872.81	102.53	End Shut-In(1)
67	45.29	102.28	Open To Flow (2)
106	113.98	104.15	Shut-In(2)
227	868.88	103.55	End Shut-In(2)
230	1478.20	103.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	MW m=10% w=90%	2.32
15.00	WCMO w=20% m=30% o=50%	0.21

Gas Rates

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



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4-16s-16w Rush

Job Ticket: 43514

DST#: 1

Test Start: 2011.07.19 @ 19:23:05

GENERAL INFORMATION:

Formation: **LKC " B-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:07:00

Time Test Ended: 02:58:29

Test Type: Conventional Bottom Hole

Tester: Andy Carreira

Unit No: 39

Interval: 3200.00 ft (KB) To 3223.00 ft (KB) (TVD)

Reference Elevations: 1915.00 ft (KB)

Total Depth: 3223.00 ft (KB) (TVD)

1907.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8017 Inside

Press @ Run Depth: psig @ 3201.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.19 End Date: 2011.07.20

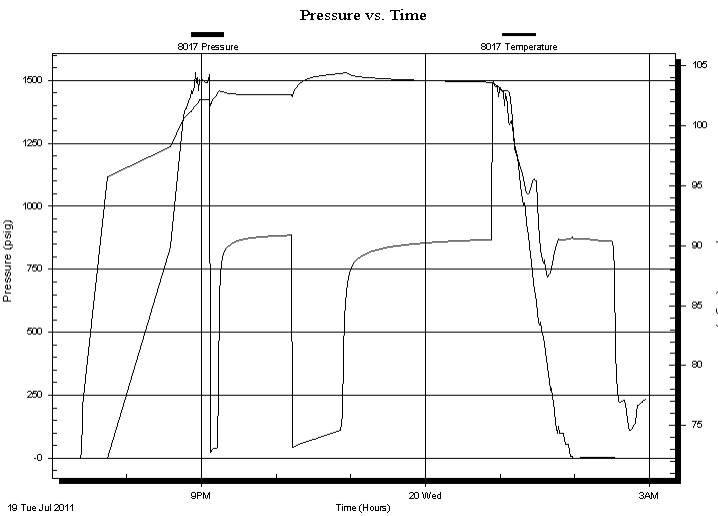
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Start Time: 19:22:45 End Time: 02:58:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:(5min) 4 inch blow .
IS:(60min) No Return
FF:(40min) BOB, 6 min.
FS:(120min) No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
185.00	MW m=10% w=90%	2.32
15.00	WCMO w =20% m=30% o=50%	0.21

Gas Rates

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



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1515 Wynkoop St.
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ATTN: Clayton Camozzi

4-16s-16w Rush

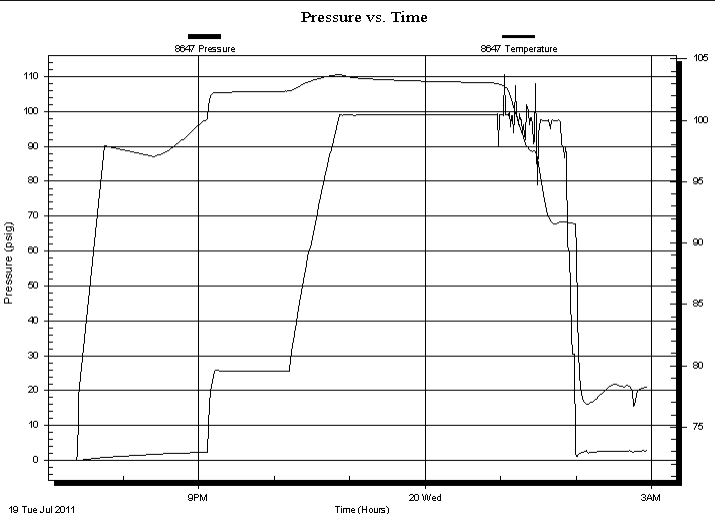
Job Ticket: 43514 **DST#: 1**
Test Start: 2011.07.19 @ 19:23:05

GENERAL INFORMATION:

Formation: **LKC "B-C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:07:00
 Time Test Ended: 02:58:29
Interval: 3200.00 ft (KB) To 3223.00 ft (KB) (TVD)
 Total Depth: 3223.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 1915.00 ft (KB)
 1907.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8647 Fluid
 Press @ RunDepth: psig @ 3166.00 ft (KB)
 Start Date: 2011.07.19 End Date: 2011.07.20
 Start Time: 19:23:05 End Time: 02:56:59
 Capacity: 8000.00 psig
 Last Calib.: 2011.07.20
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:(5min) 4 inch blow .
 IS:(60min) No Return
 FF:(40min) BOB, 6 min.
 FS:(120min) No Return



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

Recovery		
Length (ft)	Description	Volume (bbl)
185.00	MW m=10% w=90%	2.32
15.00	WCMO w=20% m=30% o=50%	0.21

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

Bogleigh Wallah West TR 1-4

1515 Wynkoop St.
Suite 700
Denver Co. 80202
ATTN: Clayton Camozzi

4-16s-16w Rush

Job Ticket: 43514

DST#: 1

Test Start: 2011.07.19 @ 19:23:05

Tool Information

Drill Pipe:	Length: 3160.00 ft	Diameter: 3.80 inches	Volume: 44.33 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: 30.15 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 44.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.15 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3200.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3166.00	
Recorder	0.00	8647	Fluid	3166.00	
Blank Spacing	5.00			3171.00	
Shut In Tool	5.00			3176.00	
Sampler	2.00			3178.00	
Hydraulic tool	5.00			3183.00	
Jars	5.00			3188.00	
Safety Joint	3.00			3191.00	
Packer	5.00			3196.00	35.00 Bottom Of Top Packer
Packer	4.00			3200.00	
Stubb	1.00			3201.00	
Recorder	0.00	8017	Inside	3201.00	
Recorder	0.00	8352	Outside	3201.00	
Perforations	19.00			3220.00	
Bullnose	3.00			3223.00	23.00 Bottom Packers & Anchor

Total Tool Length: 58.00



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FLUID SUMMARY

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Job Ticket: 43514

DST#: 1

Test Start: 2011.07.19 @ 19:23:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

102000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	MW m=10% w=90%	2.320
15.00	WCMO w=20% m=30% o=50%	0.210

Total Length: 200.00 ft Total Volume: 2.530 bbl

Num Fluid Samples: 0

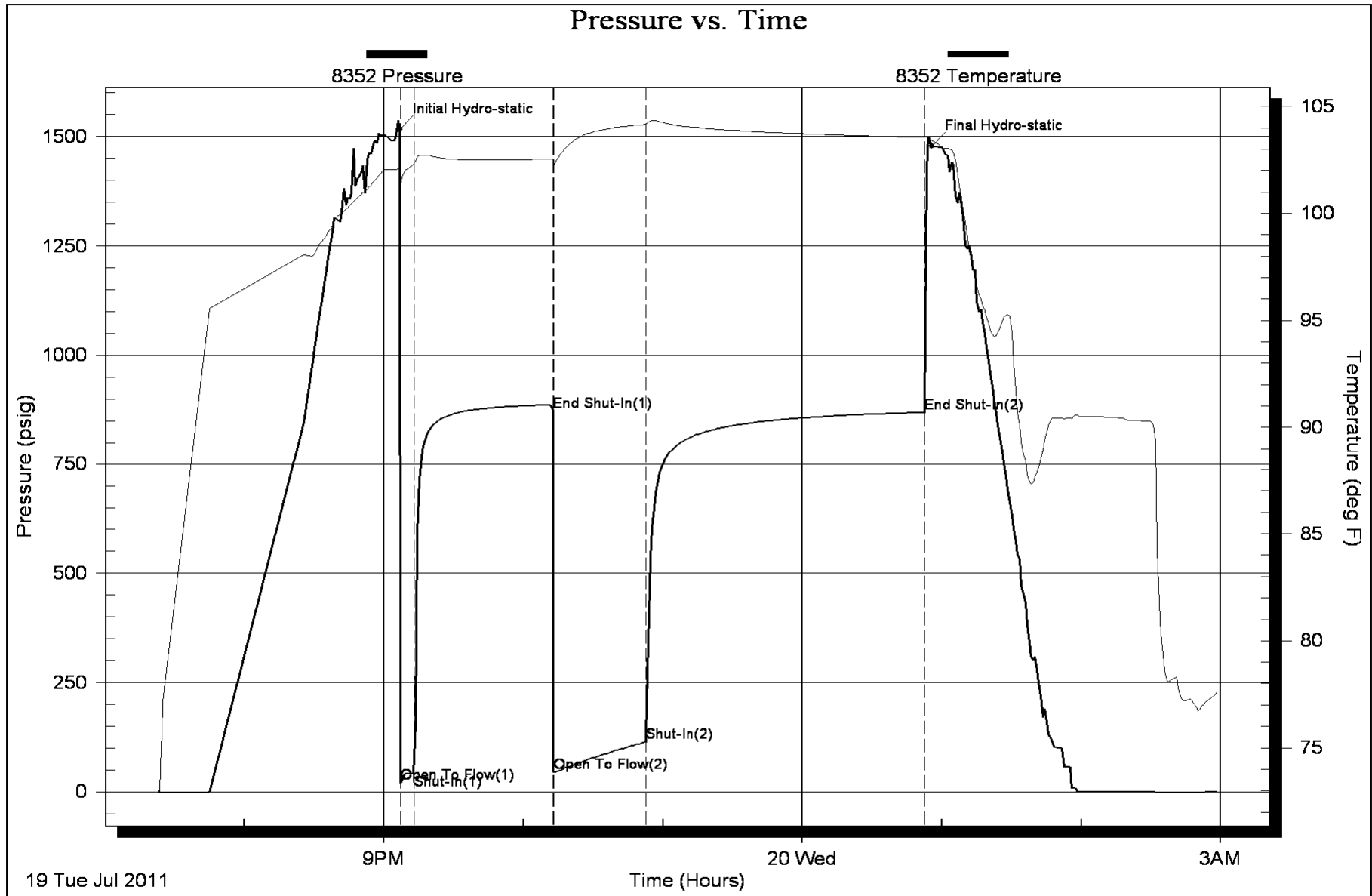
Num Gas Bombs: 0

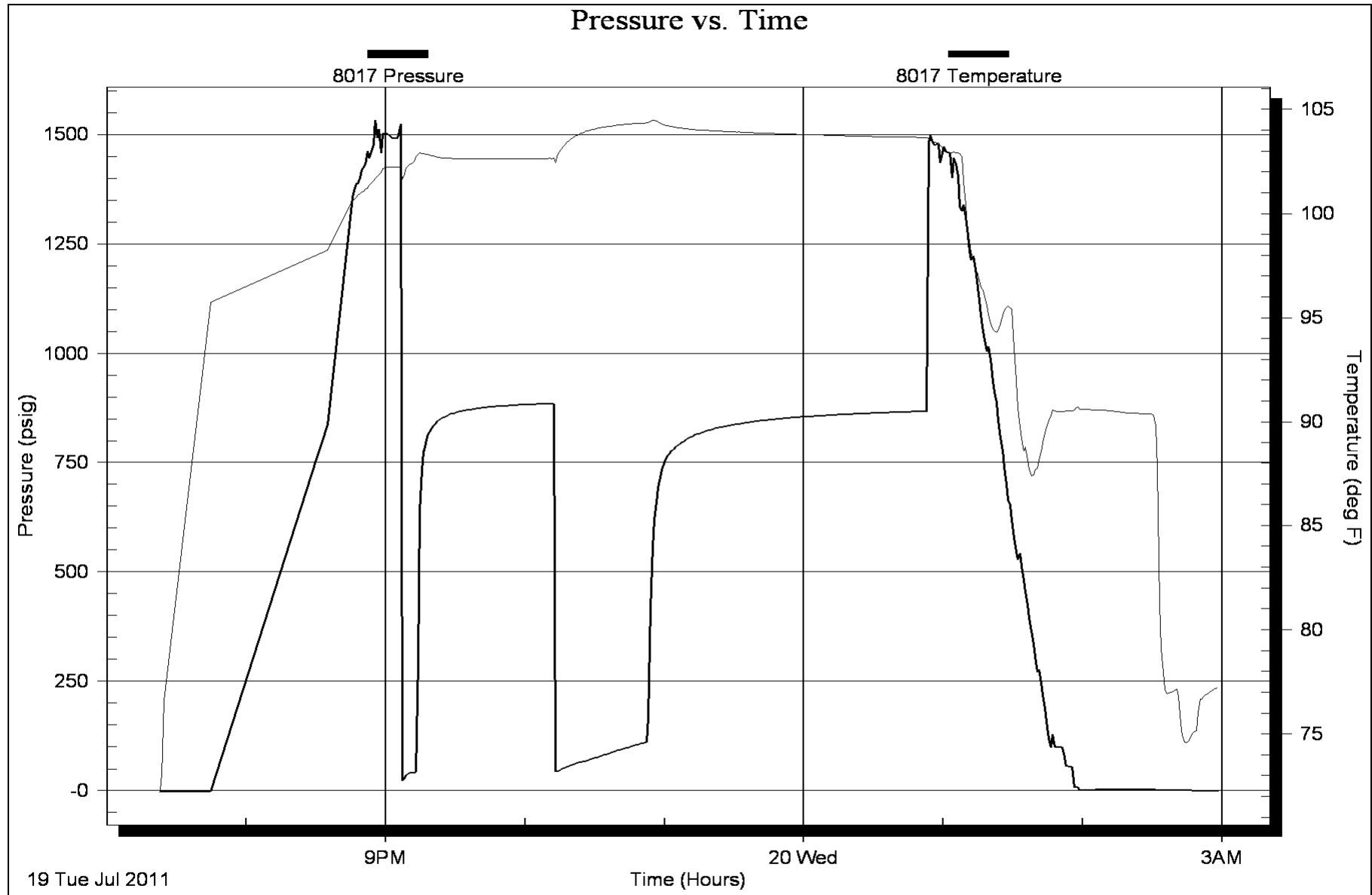
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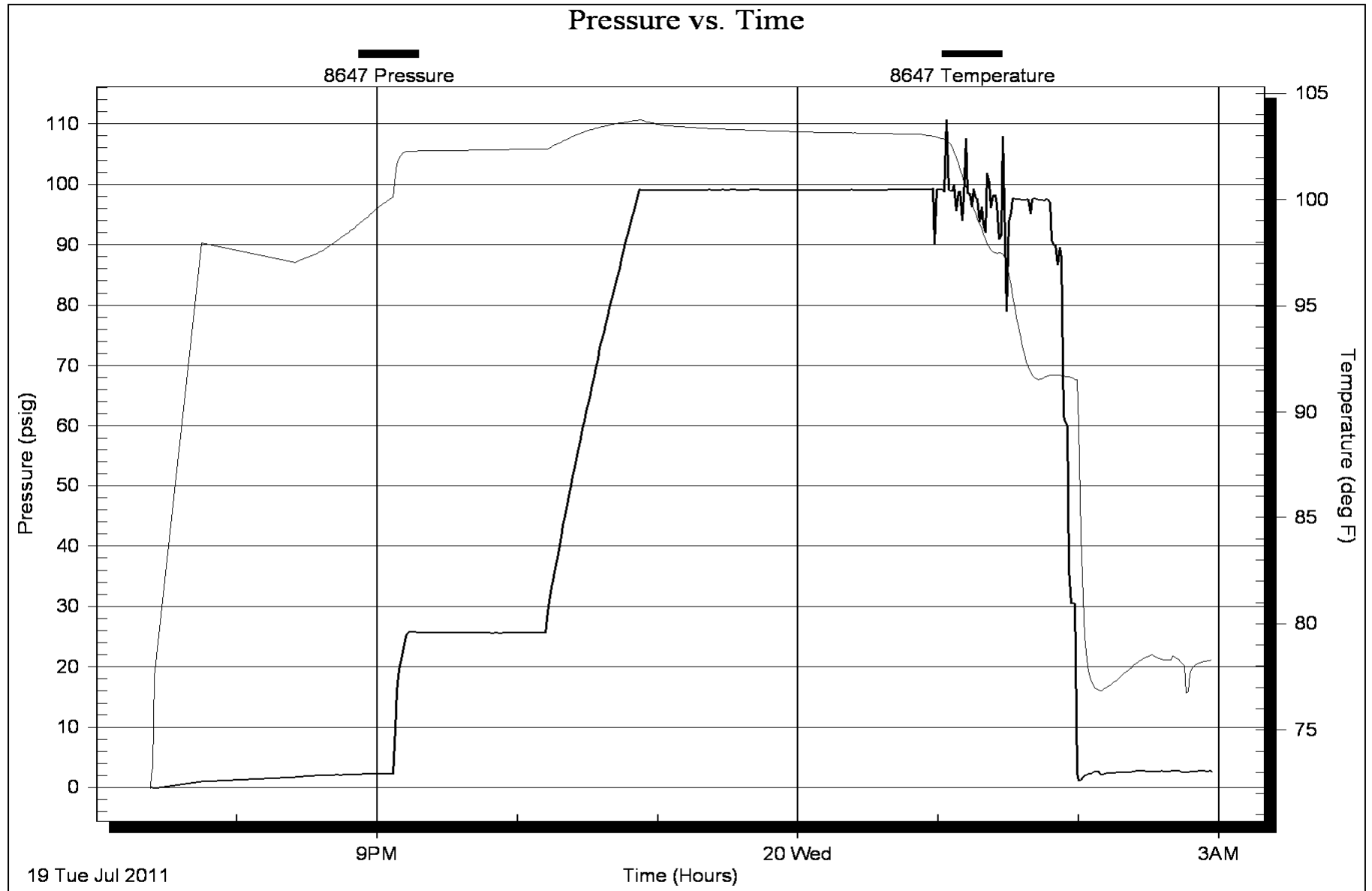
Laboratory Name:

Laboratory Location:

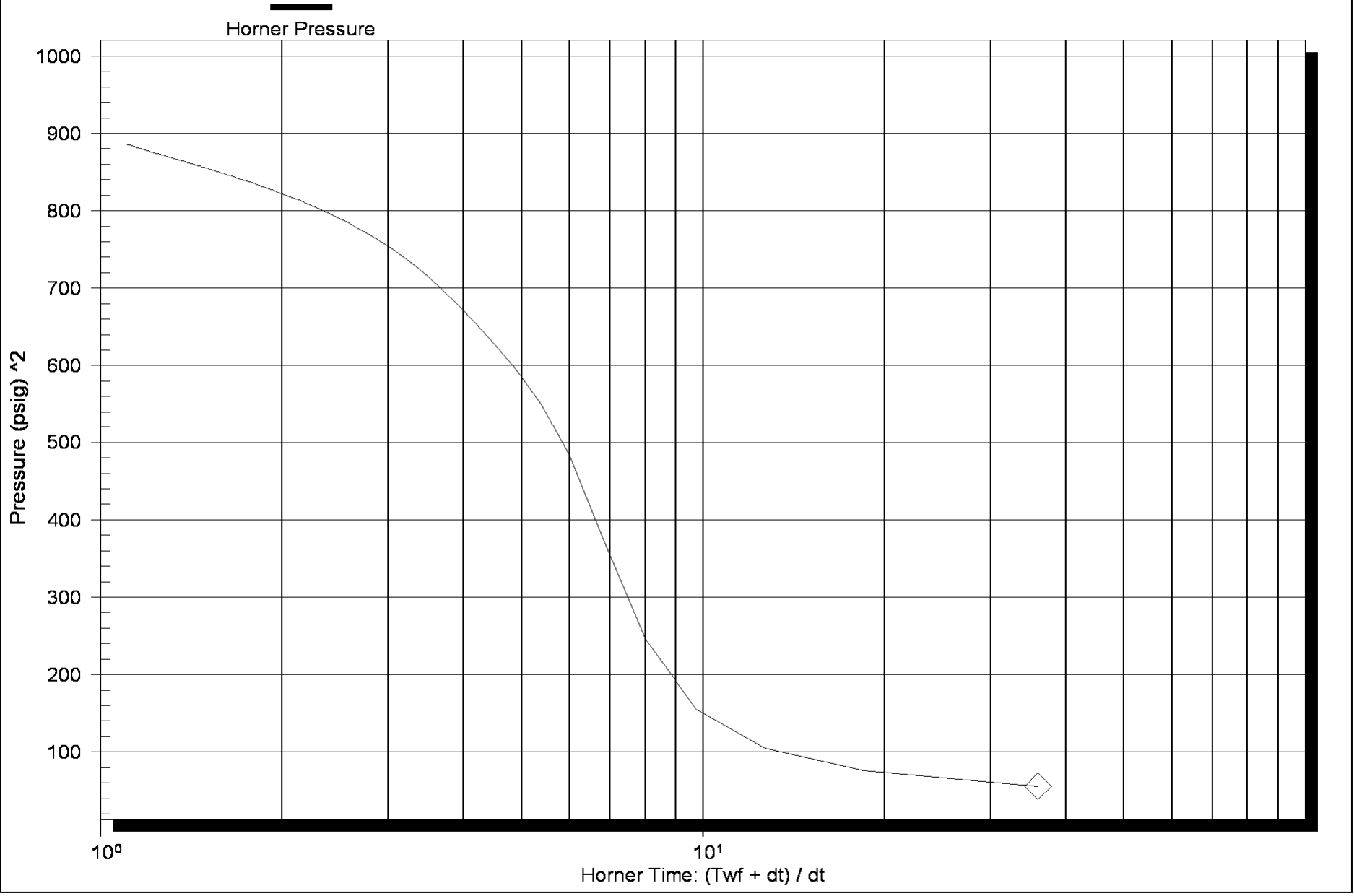
Recovery Comments: Sampler Data- gas=1/2cf Oil=200ml w ater=1800ml Press=275lbs



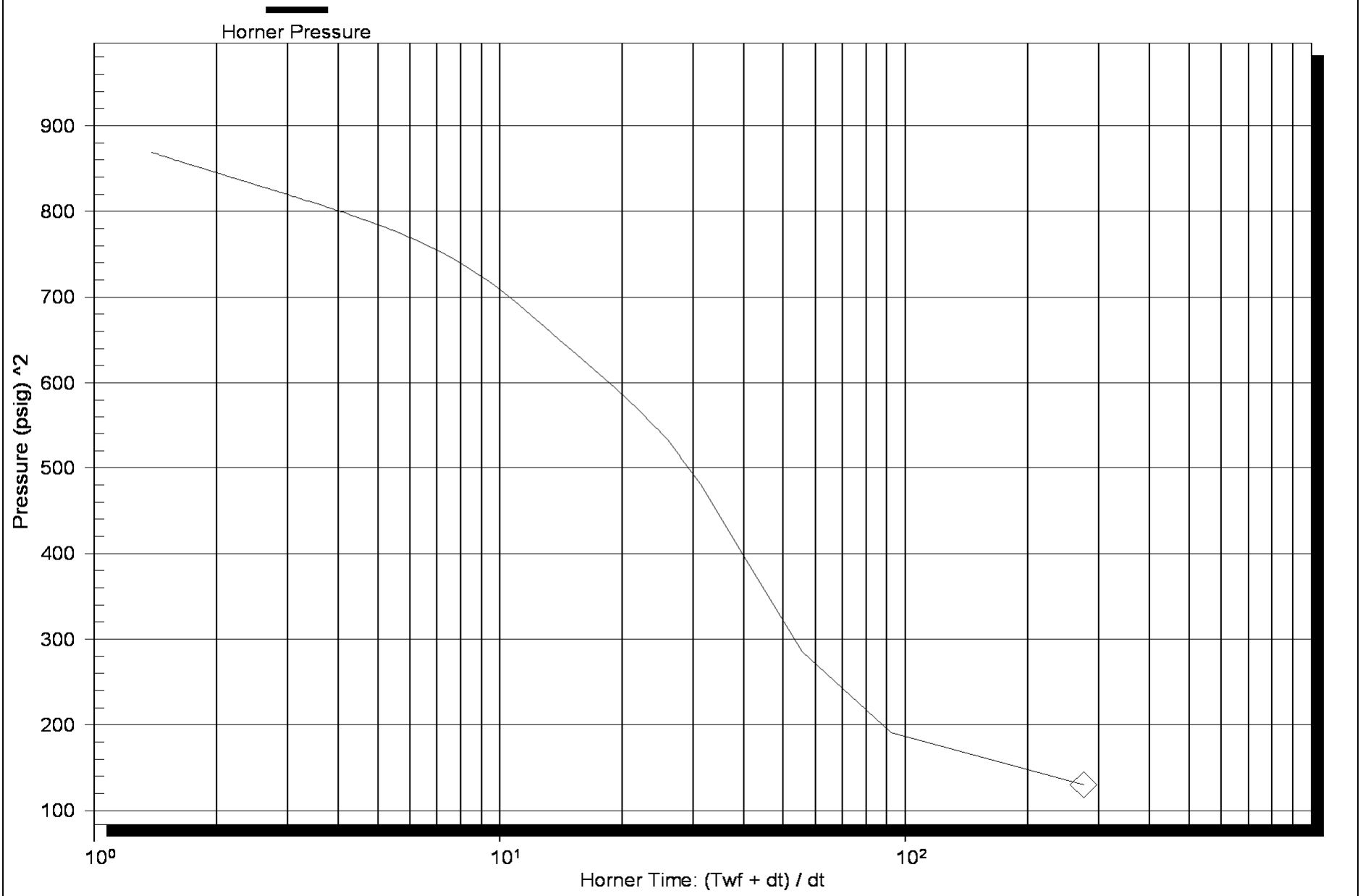


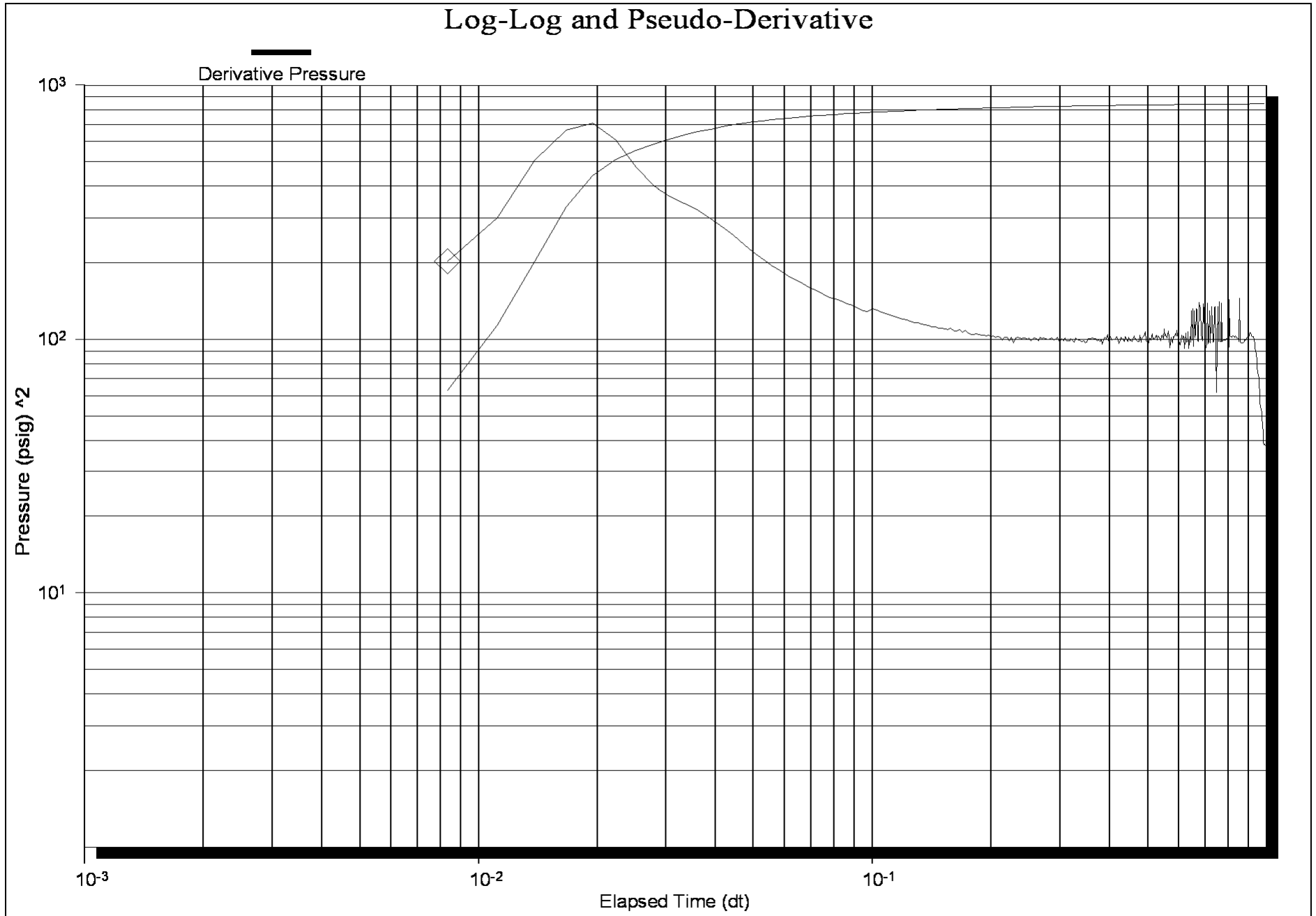


Horner Plot



Horner Plot





Log-Log and Pseudo-Derivative

