

DRILL STEM TEST REPORT

Prepared For: **Sam Gary Jr. & assoc.**

1515 Wynkoop ste 700
Denver Co. 80202

ATTN: Neil Sharpe

1-15s-17w Ellis co

Schumacher-Dreiling 1-1

Start Date: 2010.09.23 @ 14:45:05

End Date: 2010.09.24 @ 00:01:40

Job Ticket #: 040396 DST #: 1

Trilobite Testing, Inc

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

Sam Gary Jr. & assoc.

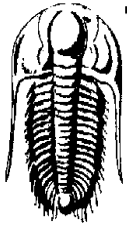
Schumacher-Dreiling 1-1

1-15s-17w Ellis co

DST # 1

LKC-"A-C"

2010.09.23



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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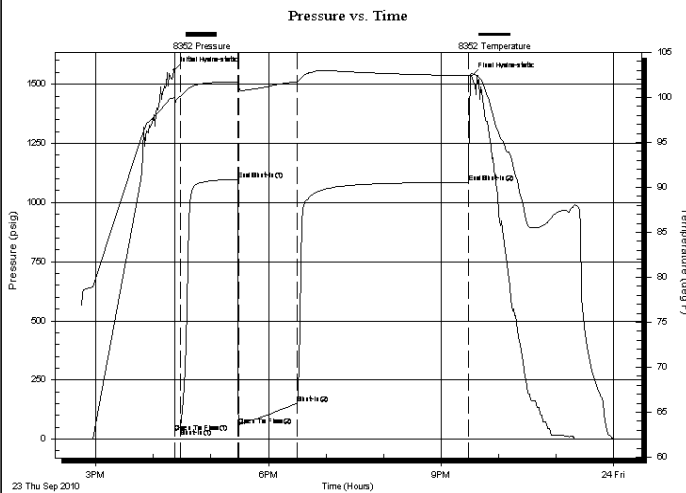
Schumacher-Dreiling 1-1
1-15s-17w Ellis co
Job Ticket: 040396 **DST#: 1**
Test Start: 2010.09.23 @ 14:45:05

GENERAL INFORMATION:

Formation: **LKC-"A-C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:22:30
Time Test Ended: 00:01:40
Test Type: Conventional Bottom Hole
Tester: Andy Carreira
Unit No: 31
Interval: **3192.00 ft (KB) To 3242.00 ft (KB) (TVD)**
Reference Elevations: 1942.00 ft (KB)
Total Depth: 3242.00 ft (KB) (TVD) 1932.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8352 Outside
Press@RunDepth: 150.63 psig @ 3197.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.09.23 End Date: 2010.09.24 Last Calib.: 2010.09.23
Start Time: 14:45:05 End Time: 00:01:39 Time On Btm: 2010.09.23 @ 16:21:20
Time Off Btm: 2010.09.23 @ 21:31:20

TEST COMMENT: IF: BOB, 2 min.
IS: No Return
FF: BOB, immediately, Gas to surface 45 min. TSTM
FS: Return blow, building to 8 inches



PRESSURE SUMMARY

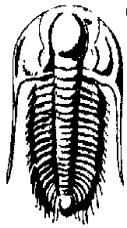
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1558.17	99.96	Initial Hydro-static
2	29.79	99.07	Open To Flow (1)
7	45.66	100.09	Shut-In(1)
67	1098.56	101.68	End Shut-In(1)
68	56.60	101.24	Open To Flow (2)
129	150.63	101.76	Shut-In(2)
308	1085.90	102.41	End Shut-In(2)
310	1534.62	102.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCGM g=25% o=15% m=60%	1.74
230.00	GO g=10% o=90%	3.23

Gas Rates

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



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Job Ticket: 040396

DST#: 1

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Tester: Andy Carreira

Unit No: 31

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Reference Elevations: 1942.00 ft (KB)

Total Depth: 3242.00 ft (KB) (TVD)

1932.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8017 Inside

Press@RunDepth: psig @ 3197.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.23

End Date: 2010.09.24

Last Calib.: 2010.09.23

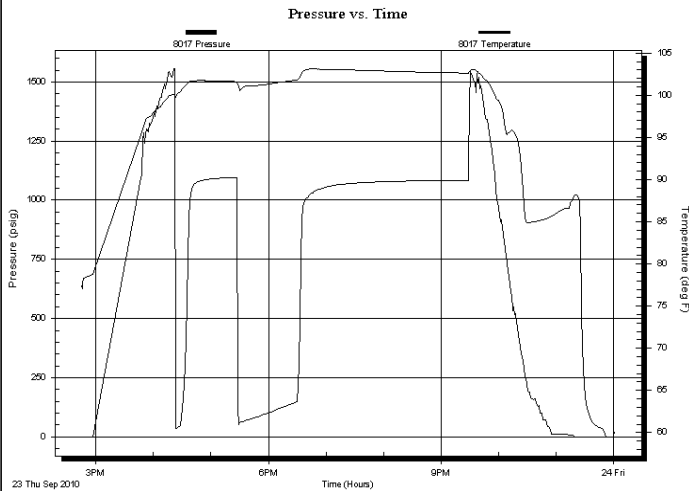
Start Time: 14:45:05

End Time: 00:01:40

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB, 2 min.
IS: No Return
FF: BOB, immediately, Gas to surface 45 min. TSTM
FS: Return blow, building to 8 inches



PRESSURE SUMMARY

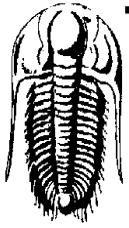
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCGM g=25% o=15% m=60%	1.74
230.00	GO g=10% o=90%	3.23

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary Jr. & assoc.
1515 Wynkoop ste 700
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ATTN: Neil Sharpe

Schumacher-Dreiling 1-1
1-15s-17w Ellis co
Job Ticket: 040396 **DST#: 1**
Test Start: 2010.09.23 @ 14:45:05

Tool Information

Drill Pipe:	Length: 3190.00 ft	Diameter: 3.80 inches	Volume: 44.75 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 44.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3192.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3165.00	
Shut In Tool	5.00			3170.00	
Hydraulic tool	5.00			3175.00	
Jars	5.00			3180.00	
Safety Joint	3.00			3183.00	
Packer	5.00			3188.00	28.00 Bottom Of Top Packer
Packer	4.00			3192.00	
Stubb	1.00			3193.00	
Perforations	3.00			3196.00	
Change Over Sub	1.00			3197.00	
Recorder	0.00	8017	Inside	3197.00	
Recorder	0.00	8352	Outside	3197.00	
Drill Pipe	31.00			3228.00	
Change Over Sub	1.00			3229.00	
Perforations	10.00			3239.00	
Bullnose	3.00			3242.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



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FLUID SUMMARY

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Job Ticket: 040396 **DST#: 1**
Test Start: 2010.09.23 @ 14:45:05

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 41 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.60 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4700.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

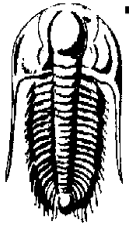
Length ft	Description	Volume bbl
124.00	OCGM g=25% o=15% m=60%	1.739
230.00	GO g=10% o=90%	3.226

Total Length: 354.00 ft Total Volume: 4.965 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:



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GAS RATES

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Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

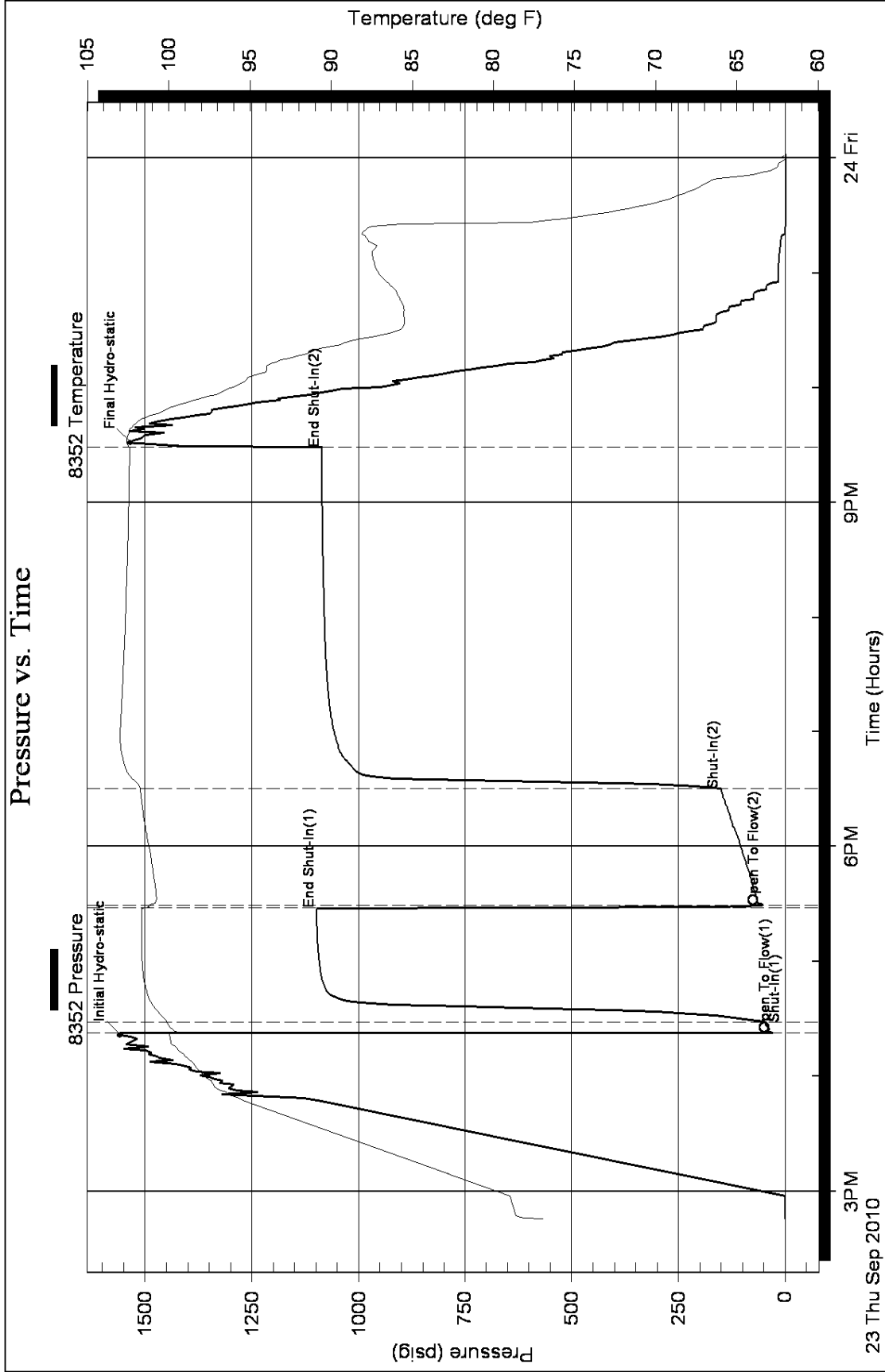
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00

Serial #: 8352

Outside Sam Gary Jr. & assoc.

1-15s-17w Ellis co

DST Test Number: 1



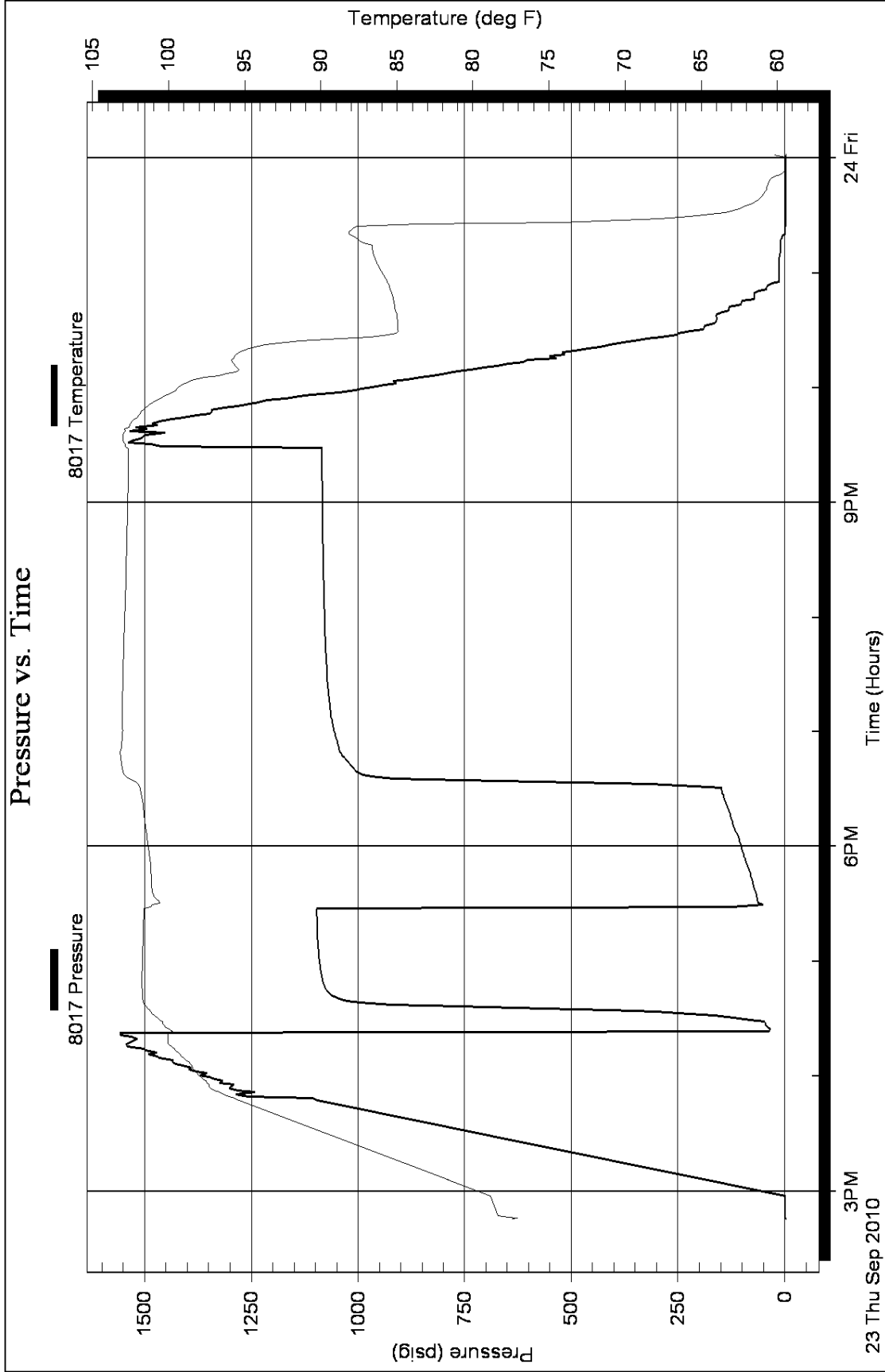
Serial #: 8017

Inside

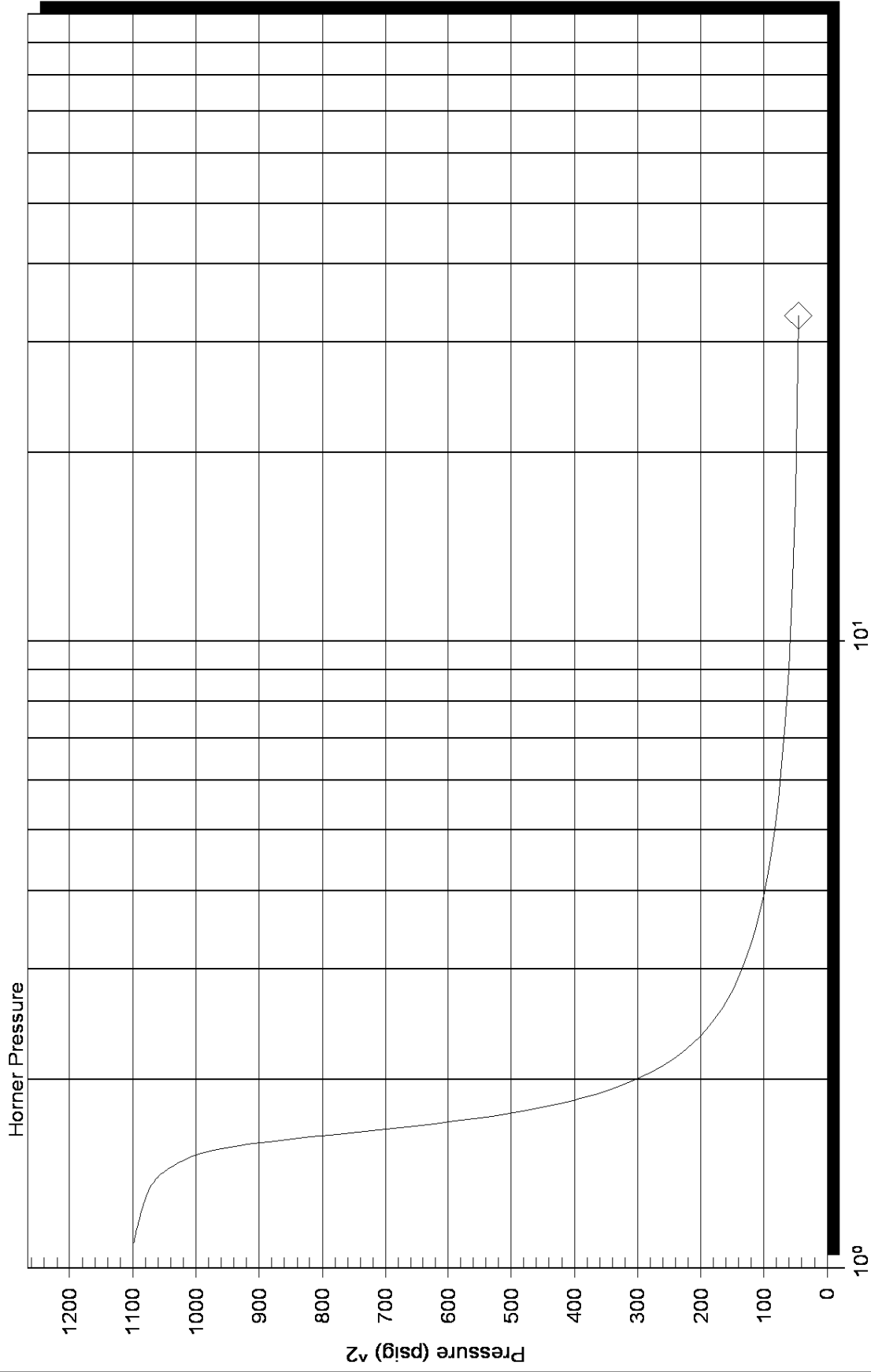
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1-15s-17w Ellis co

DST Test Number: 1



Homer Plot



Serial Number: 8352 (Outside)

P* :

Slope (m) : kpa/log cycle

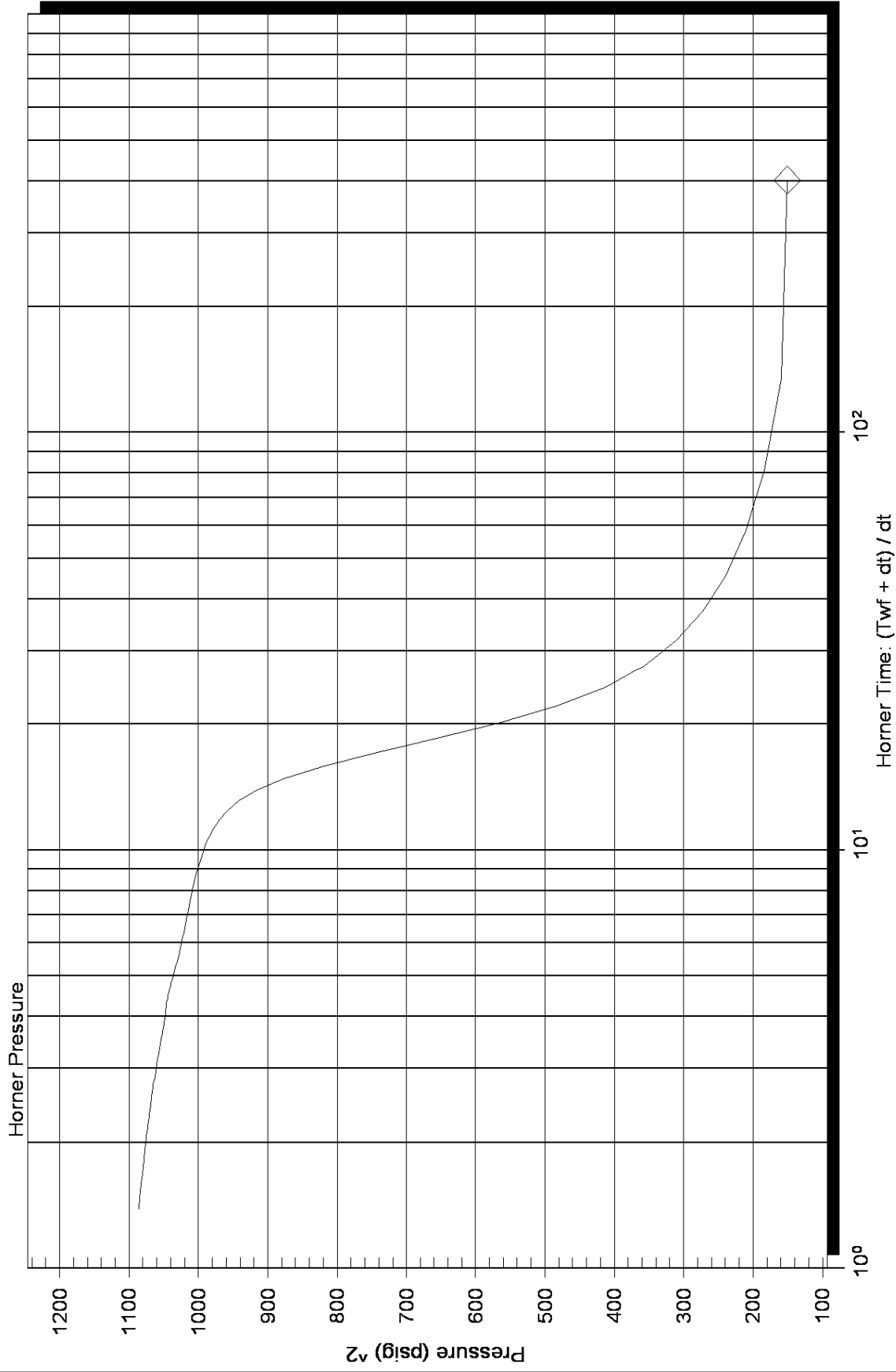
Horner Time: (Twf + dt) / dt

10¹

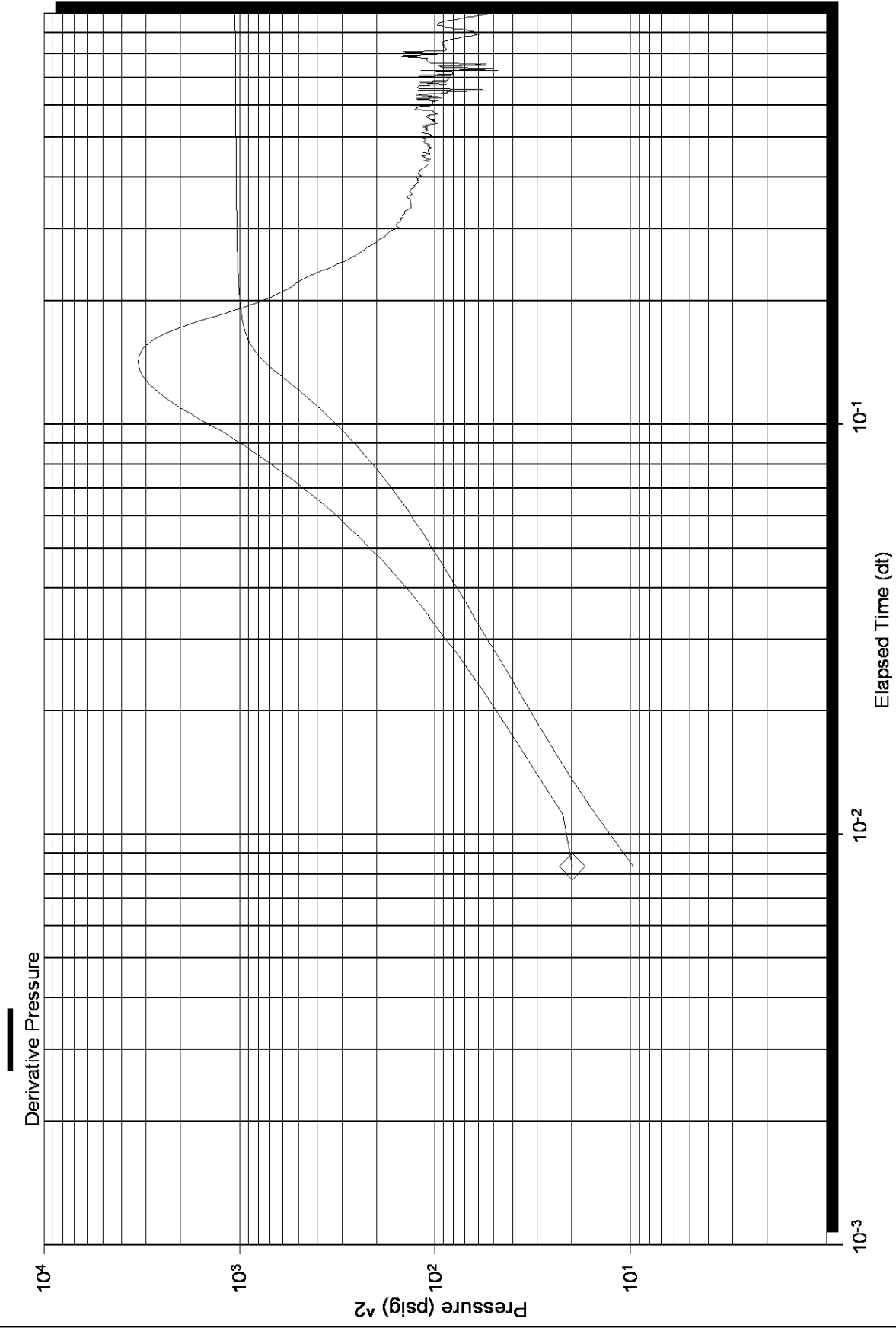
10⁰

Flow Cycle: 1

Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

