

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Associates**

1515 Wynkoop
Ste 700
Denver Co 80202

ATTN: Clayton Camozzi

Wayne Funk #1-32

32-15s-15w Russell

Start Date: 2012.01.20 @ 06:00:42

End Date: 2012.01.20 @ 14:14:36

Job Ticket #: 46828 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.01.20 @ 15:04:42

Samuel Gary Jr & Associates

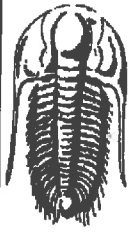
32-15s-15w Russell

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DST # 1

LKC A-C

2012.01.20



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Test Start: 2012.01.20 @ 06:00:42

GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:10:07

Time Test Ended: 14:14:36

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

Interval: **3150.00 ft (KB) To 3214.00 ft (KB) (TVD)**

Total Depth: 3214.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 1918.00 ft (KB)

1910.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: 75.35 psig @ 3154.00 ft (KB)

Start Date: 2012.01.20 End Date: 2012.01.20

Start Time: 06:00:42 End Time: 14:14:36

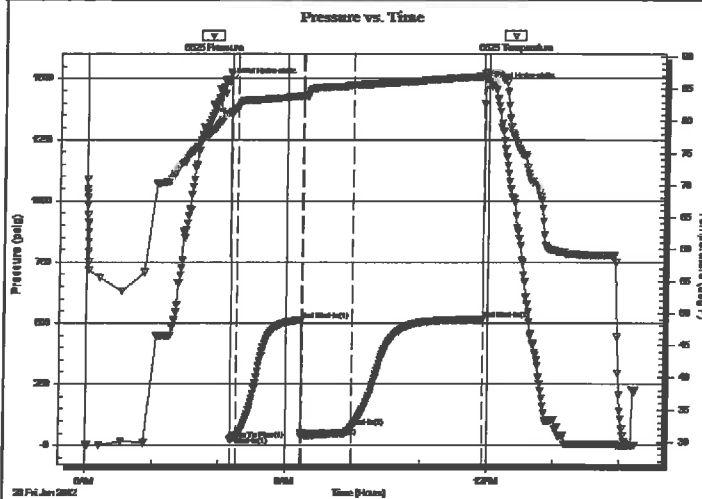
Capacity: 8000.00 psig

Last Calib.: 2012.01.20

Time On Btm: 2012.01.20 @ 08:07:07

Time Off Btm: 2012.01.20 @ 11:59:36

TEST COMMENT: 5-IFP-w k bl, 1/2"to 3"bl
60-ISIP-no bl
40-FFP-strg bl in 4 min
120-FSIP-surface bl 1st 55min,, then died



PRESSURE SUMMARY

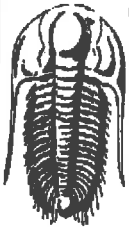
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1485.38	81.23	Initial Hydro-static
3	25.73	81.42	Open To Flow (1)
8	36.19	82.16	Shut-In(1)
67	511.62	83.96	End Shut-In(1)
68	36.32	83.84	Open To Flow (2)
112	75.35	85.64	Shut-In(2)
229	514.76	86.97	End Shut-In(2)
233	1467.08	87.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	300'GIP	0.00
70.00	HO&GCM 10%G40%O50%M	0.71

Gas Rates

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



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TOOL DIAGRAM

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Test Start: 2012.01.20 @ 06:00:42

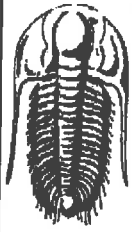
Tool Information

Drill Pipe:	Length: 3098.00 ft	Diameter: 3.80 inches	Volume: 43.46 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25500.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 43.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3150.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	98.00 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	8374	Fluid	3116.00	
Blank Spacing	4.00			3120.00	
Change Over Sub	1.00			3121.00	
Shut In Tool	5.00			3126.00	
Sampler	2.00			3128.00	
Hydraulic tool	5.00			3133.00	
Jars	5.00			3138.00	
Safety Joint	2.00			3140.00	
Packer	5.00			3145.00	34.00 Bottom Of Top Packer
Packer	5.00			3150.00	
Stubb	1.00			3151.00	
Perforations	3.00			3154.00	
Recorder	0.00	6625	Inside	3154.00	
Recorder	0.00	8700	Outside	3154.00	
Blank Spacing	33.00			3187.00	
Perforations	24.00			3211.00	
Bullnose	3.00			3214.00	64.00 Bottom Packers & Anchor
Total Tool Length:	98.00				



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FLUID SUMMARY

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Job Ticket: 46828

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.01.20 @ 06:00:42

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 6.37 in³
Resistivity: ohm.m
Salinity: 2300.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	300'GIP	0.000
70.00	HO&GCM 10%G40%O50%M	0.709

Total Length: 70.00 ft Total Volume: 0.709 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler Data: 350#PSI 600MLgas 1000MLOil 400MLmud

Serial #: 6625

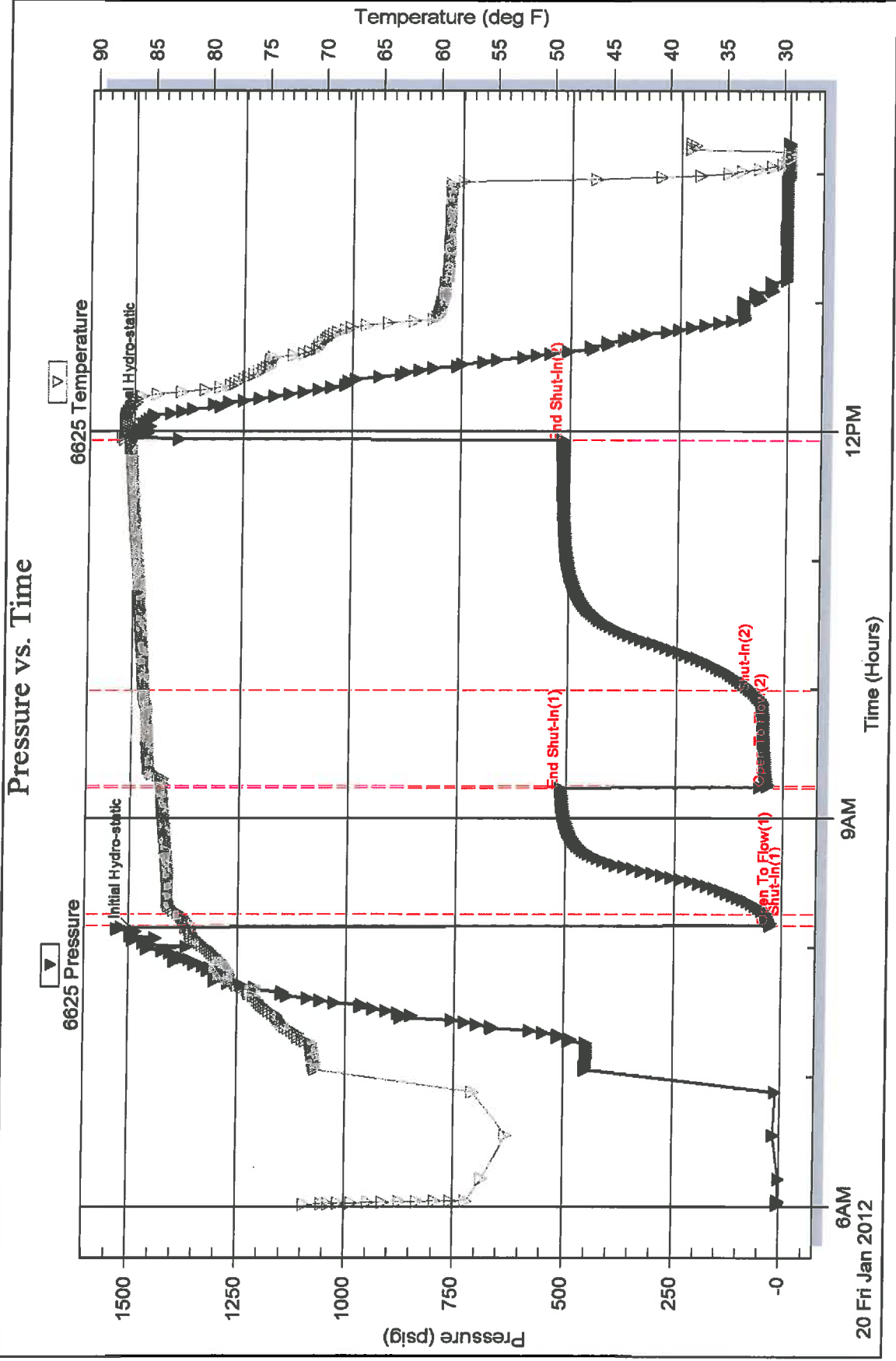
Inside

Samuel Gary Jr & Associates

Wayne Funk #1-32

DST Test Number: 1

Pressure vs. Time



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Ref. No: 46828

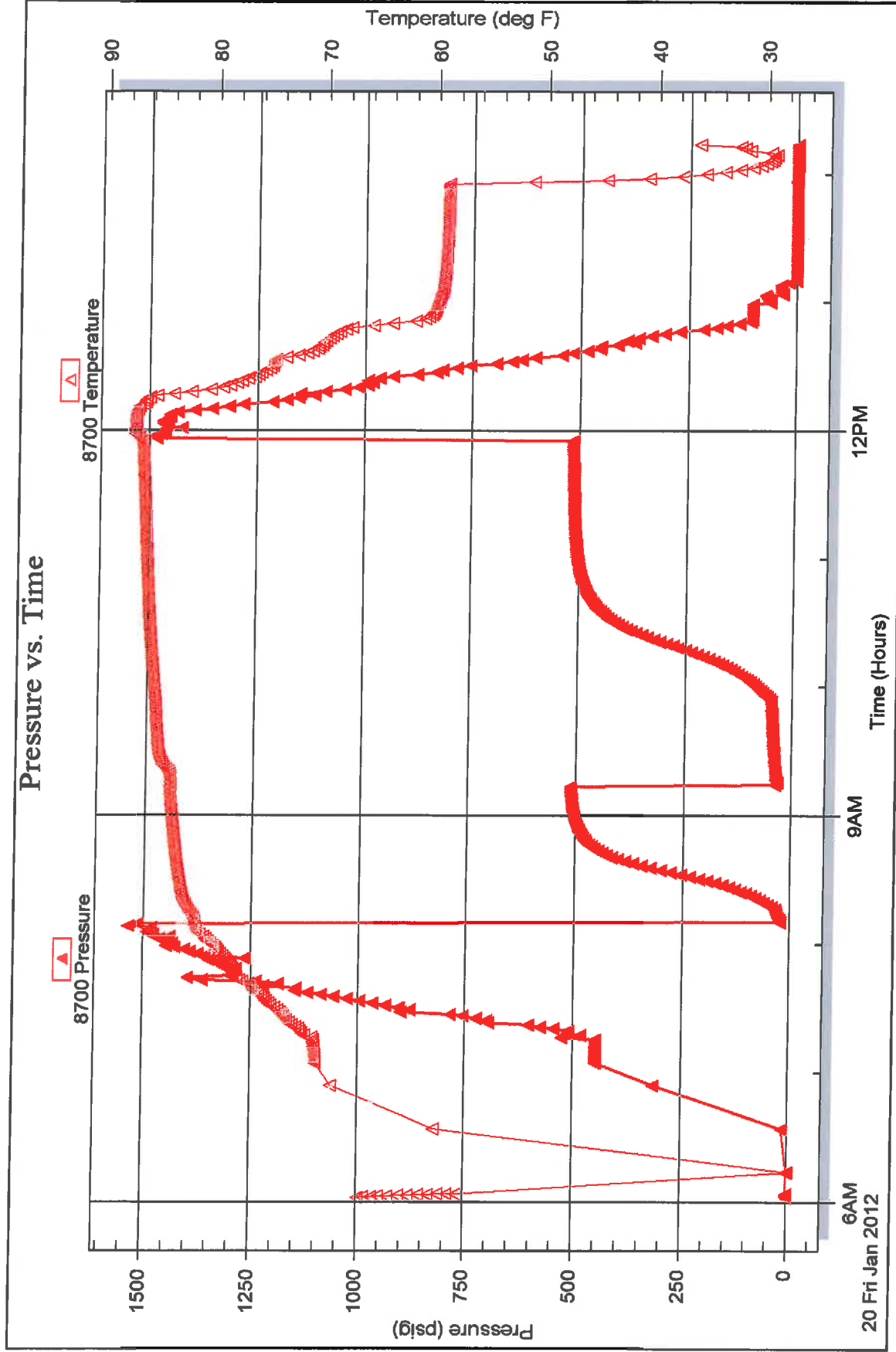
Triobite Testing, Inc

Serial #: 8700

Outside Samuel Gary Jr & Associates

Wayne Funk #1-32

DST Test Number: 1



Trilobite Testing, Inc

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Serial #: 8374

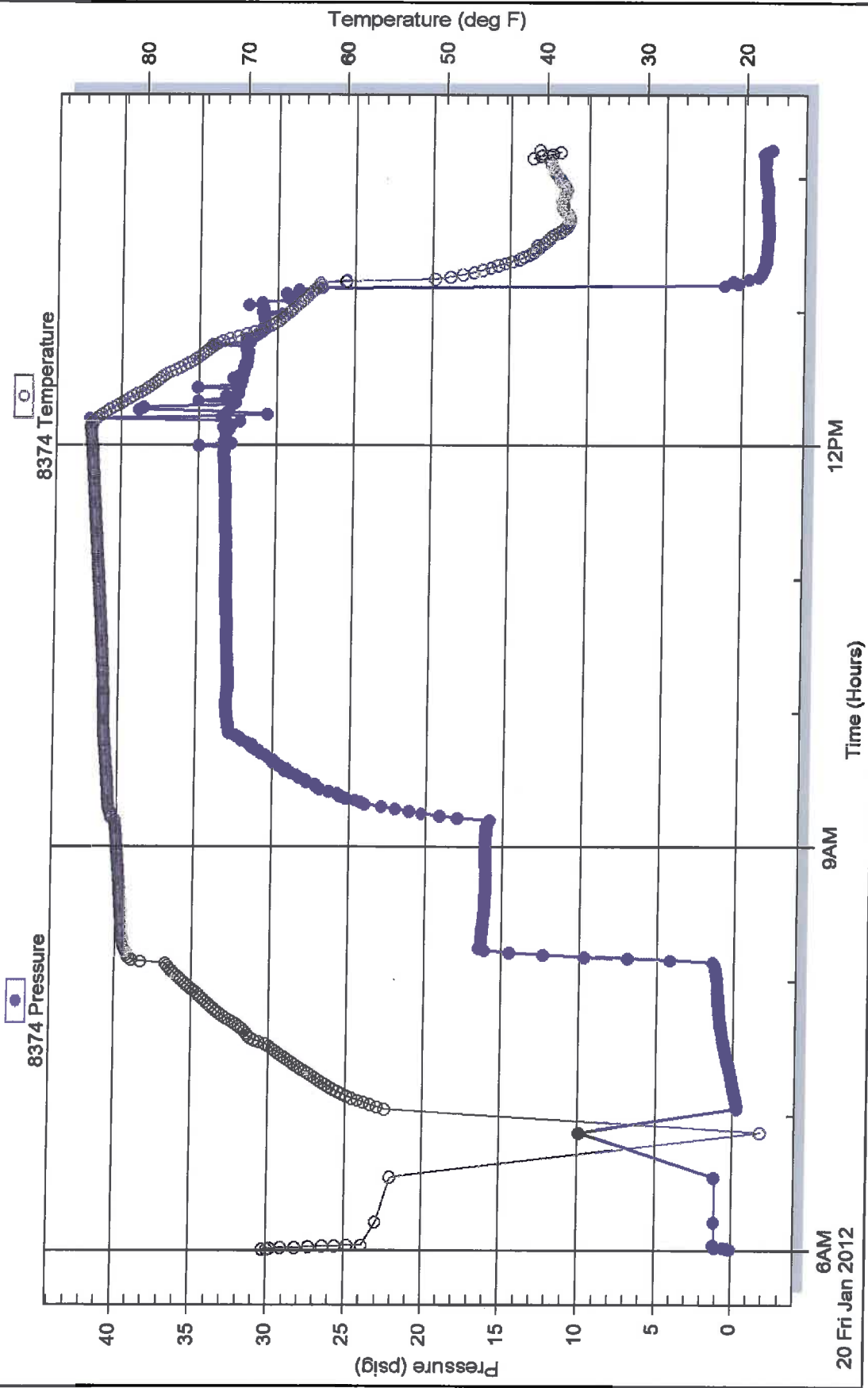
Samuel Gary Jr & Associates

Wayne Funk #1-32

Fluid

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

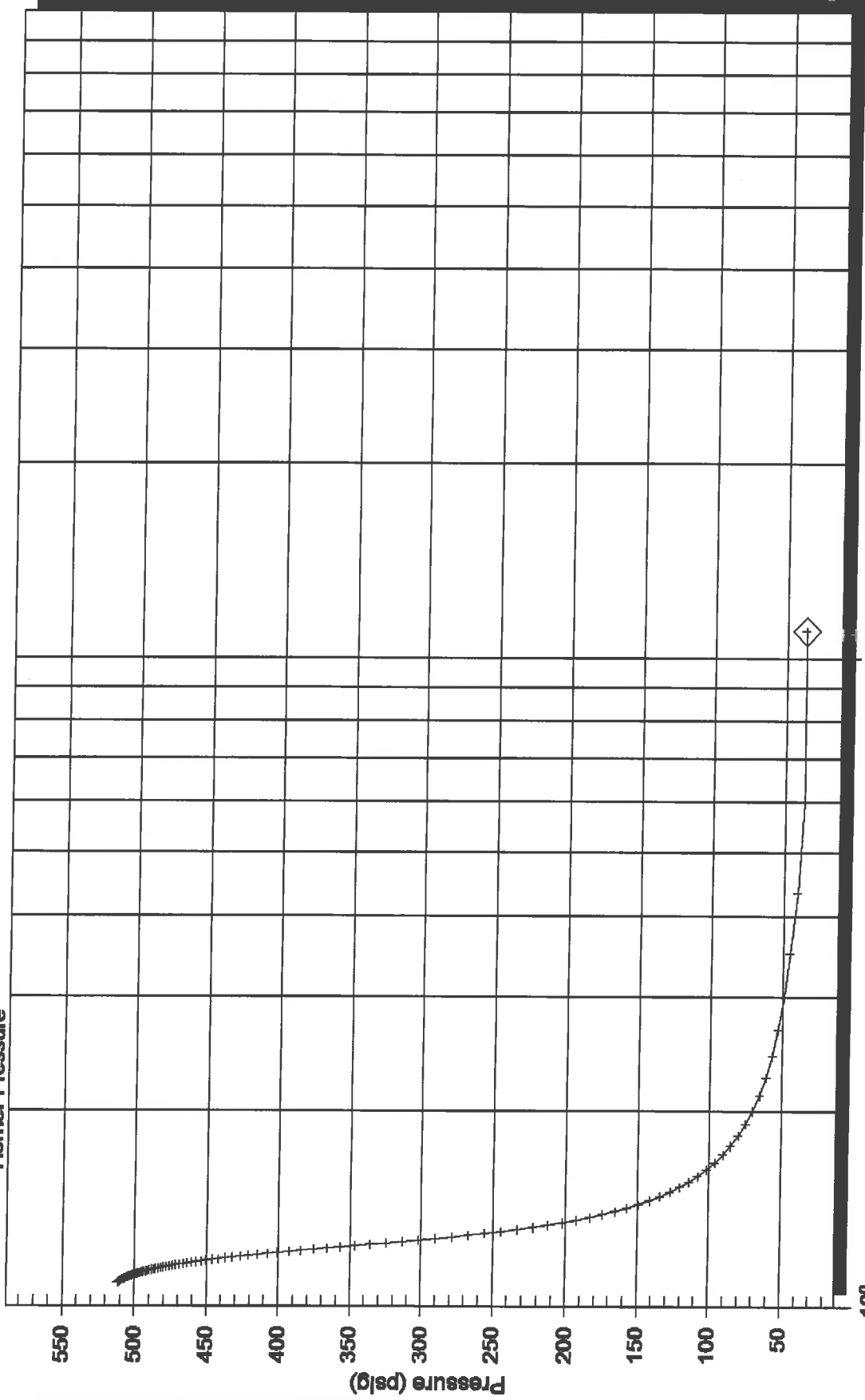
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Horner Plot

+

Horner Pressure



10¹

Horner Time: (Twf + dt) / dt

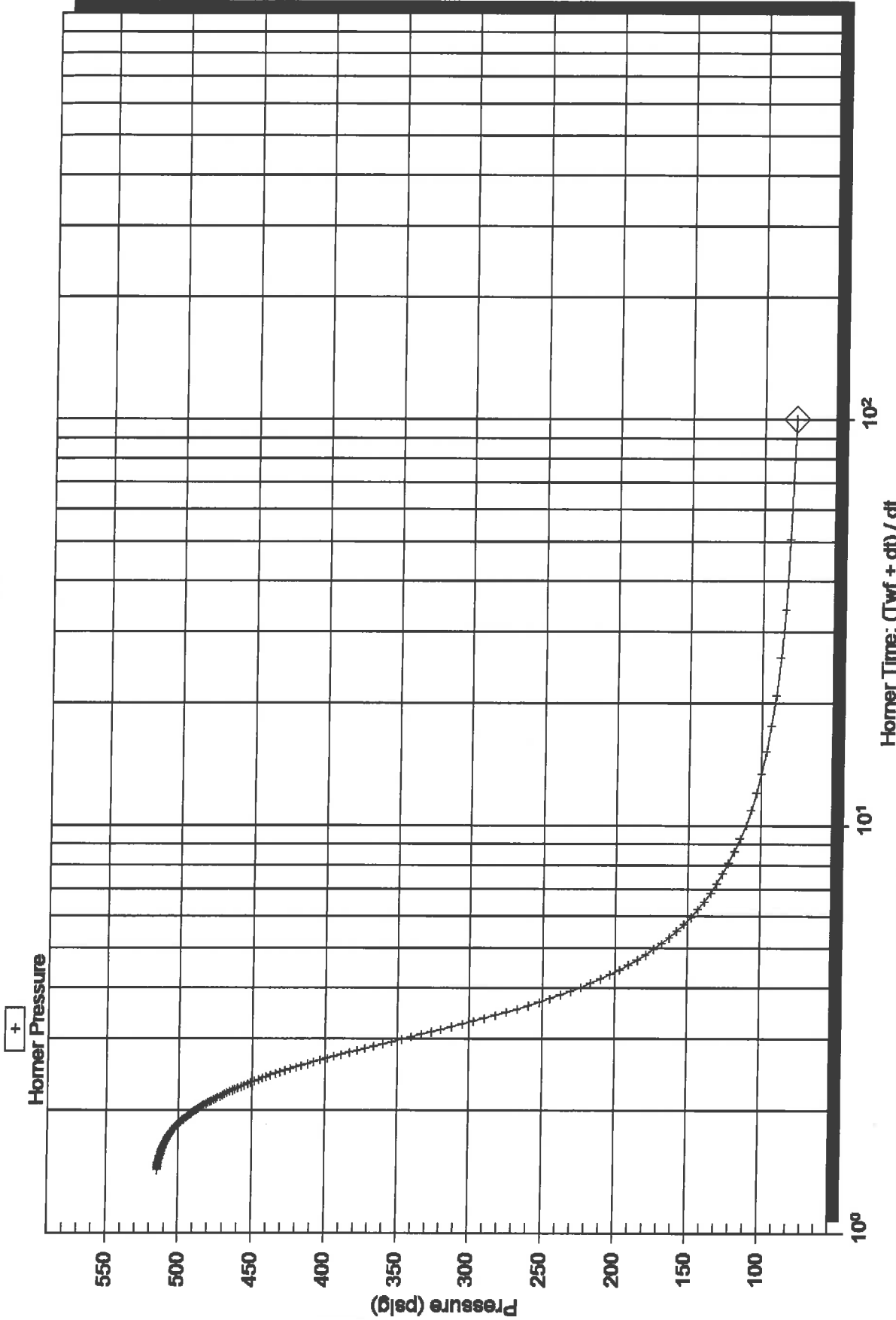
Serial Number: 6625 (Inside)

Slope (m) : kpa/log cycle

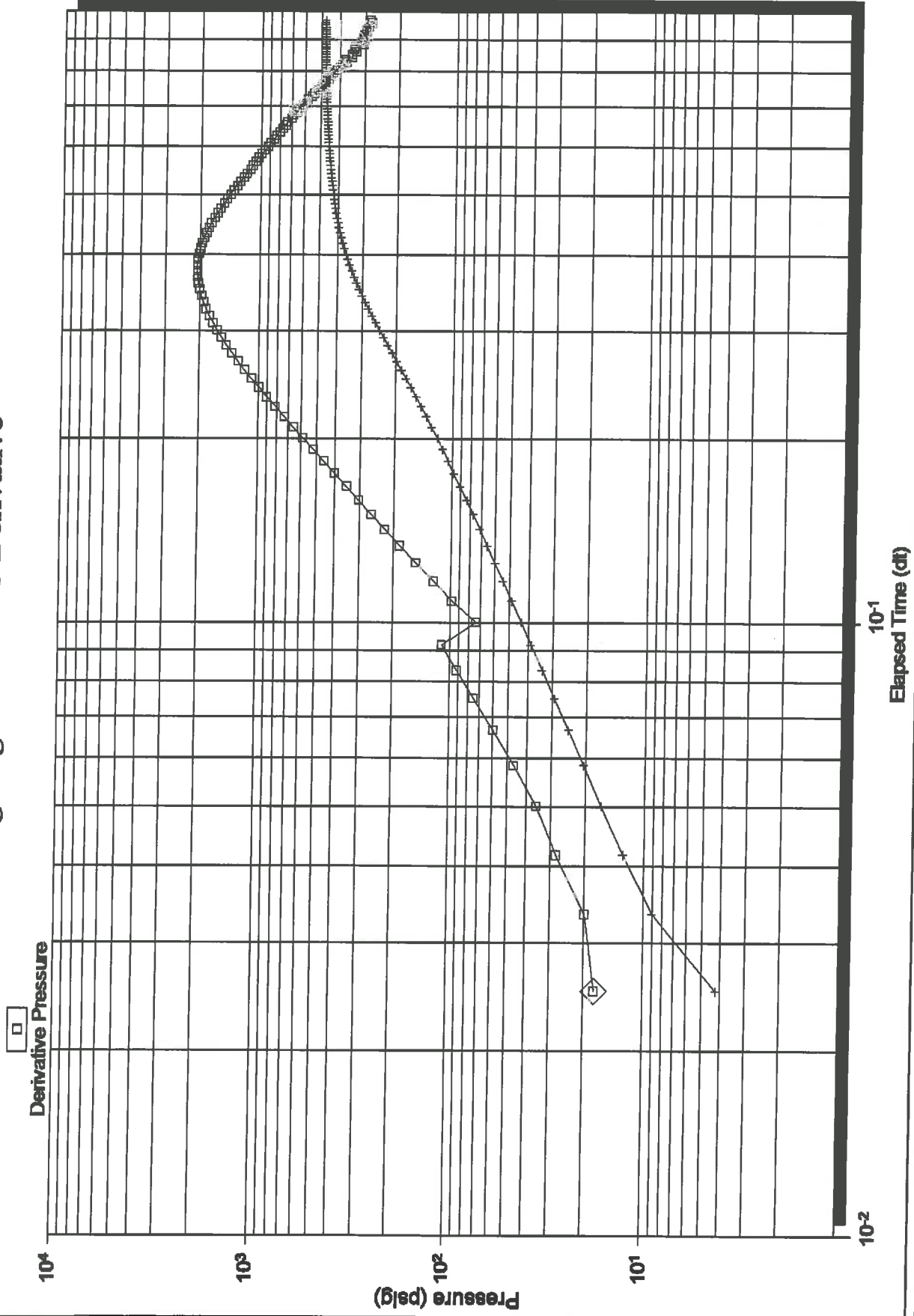
P* :

Flow Cycle: 1

Horner Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

