



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: 2012.01.21 @ 02:19:00

End Date: 2012.01.21 @ 09:28:30

Job Ticket #: 46347 DST #: 2

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

Printed: 2012.01.24 @ 10:49:13

Samuel Gary Jr & Associates

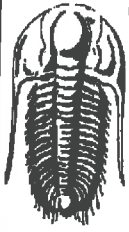
32-15s-15w Russell

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DST # 2

KC "F-G"

2012.01.21



**TRILOBITE
TESTING, INC.**

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Job Ticket: 46347

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.01.21 @ 02:19:00

GENERAL INFORMATION:

Formation: KC "F-G"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:54:00

Time Test Ended: 09:28:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 42

Interval: 3237.00 ft (KB) To 3288.00 ft (KB) (TVD)

Total Depth: 3288.00 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 #: 8700

Outside

Press@RunDepth: 47.69 psig @ 3274.00 ft (KB)

Start Date: 2012.01.21

End Date:

2012.01.21

Capacity: 8000.00 psig

Last Calib.: 2012.01.21

Start Time: 02:19:05

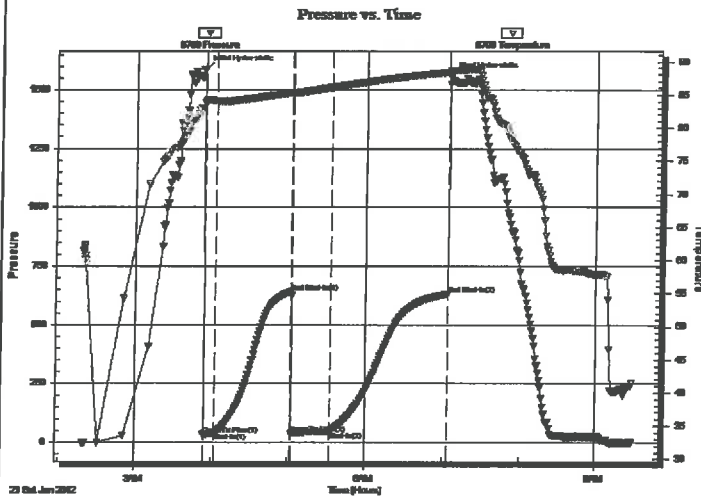
End Time:

09:28:29

Time On Btm: 2012.01.21 @ 03:53:30

Time Off Btm: 2012.01.21 @ 07:05:00

TEST COMMENT: 10 - IF- 1/2" Blow.
60 - IS- No blow back.
30 - FF- 5" Blow instantly, died off to a 1" blow.
90 - FS- No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1585.97	83.83	Initial Hydro-static
1	33.74	83.86	Open To Flow (1)
9	40.35	84.04	Shut-In(1)
69	640.70	85.33	End Shut-In(1)
70	37.70	85.22	Open To Flow (2)
100	47.69	86.12	Shut-In(2)
191	631.23	88.37	End Shut-In(2)
192	1557.99	88.67	Final Hydro-static

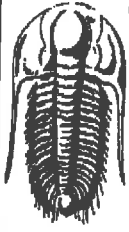
Recovery

Length (ft)	Description	Volume (bbl)
40.00	GVSOOM, 5%O,5%G, 90%M	0.28
0.00	31' of G.I.P.	0.00

* Recovery from multiple tests

Gas Rates

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



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TOOL DIAGRAM

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Job Ticket: 46347

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.01.21 @ 02:19:00

Tool Information

Drill Pipe:	Length: 3189.00 ft	Diameter: 3.80 inches	Volume: 44.73 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 44.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3237.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 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	8374	Fluid	3203.00	
Blank Spacing	4.00			3207.00	
Change Over Sub	1.00			3208.00	
Shut In Tool	5.00			3213.00	
Sampler	2.00			3215.00	
Hydraulic tool	5.00			3220.00	
Jars	5.00			3225.00	
Safety Joint	2.00			3227.00	
Packer	5.00			3232.00	34.00 Bottom Of Top Packer
Packer	5.00			3237.00	
Stubb	1.00			3238.00	
Perforations	3.00			3241.00	
Blank Spacing	33.00			3274.00	
Recorder	0.00	6625	Inside	3274.00	
Recorder	0.00	8700	Outside	3274.00	
Perforations	11.00			3285.00	
Bullnose	3.00			3288.00	51.00 Bottom Packers & Anchor
Total Tool Length:	85.00				



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FLUID SUMMARY

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Job Ticket: 46347

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.01.21 @ 02:19:00

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:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 cm³

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
40.00	GVSOCM, 5%O,5%G, 90%M	0.279
0.00	31' of G.I.P.	0.000

Total Length: 40.00 ft Total Volume: 0.279 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6625

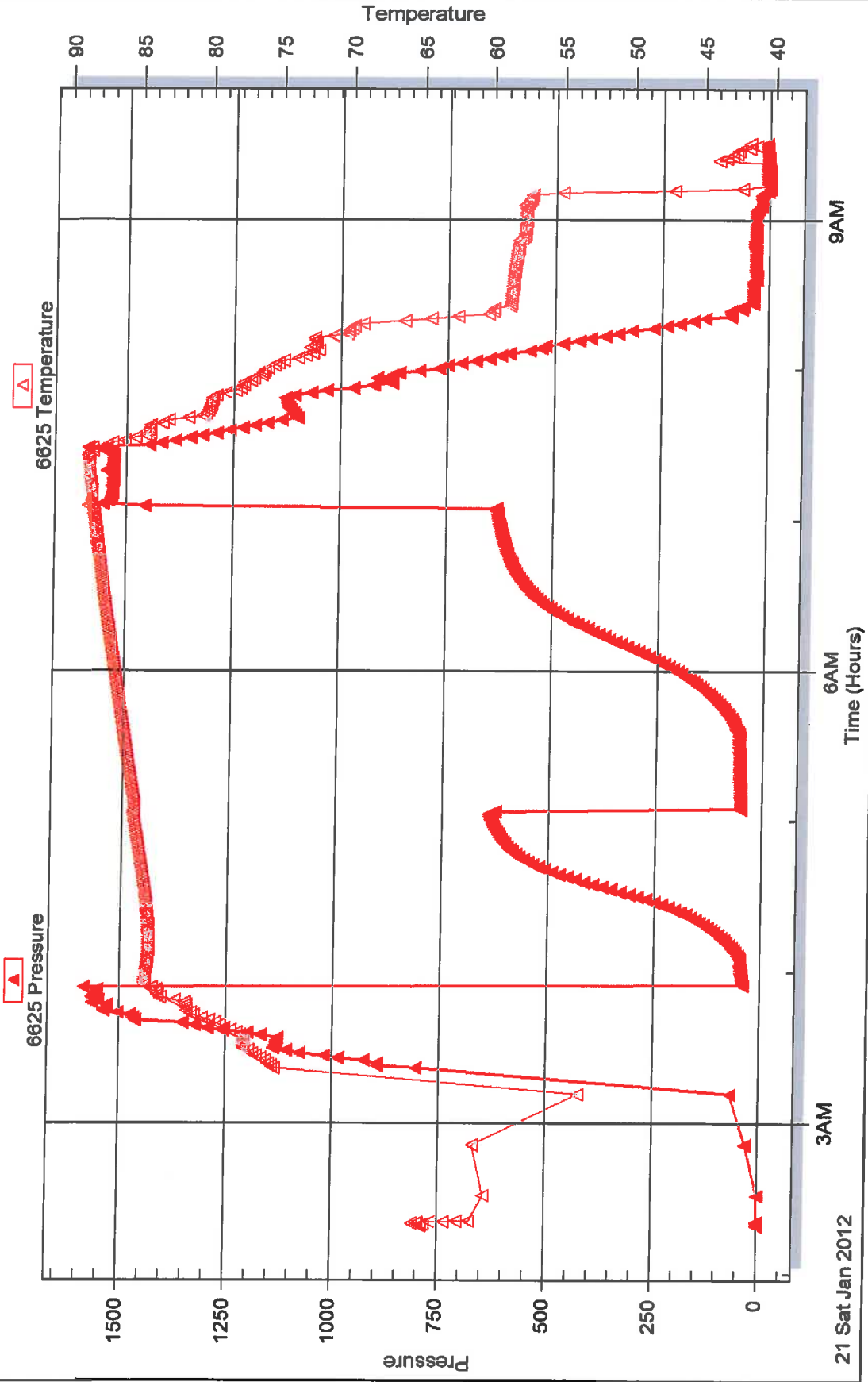
Inside

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DST Test Number: 2

Pressure vs. Time



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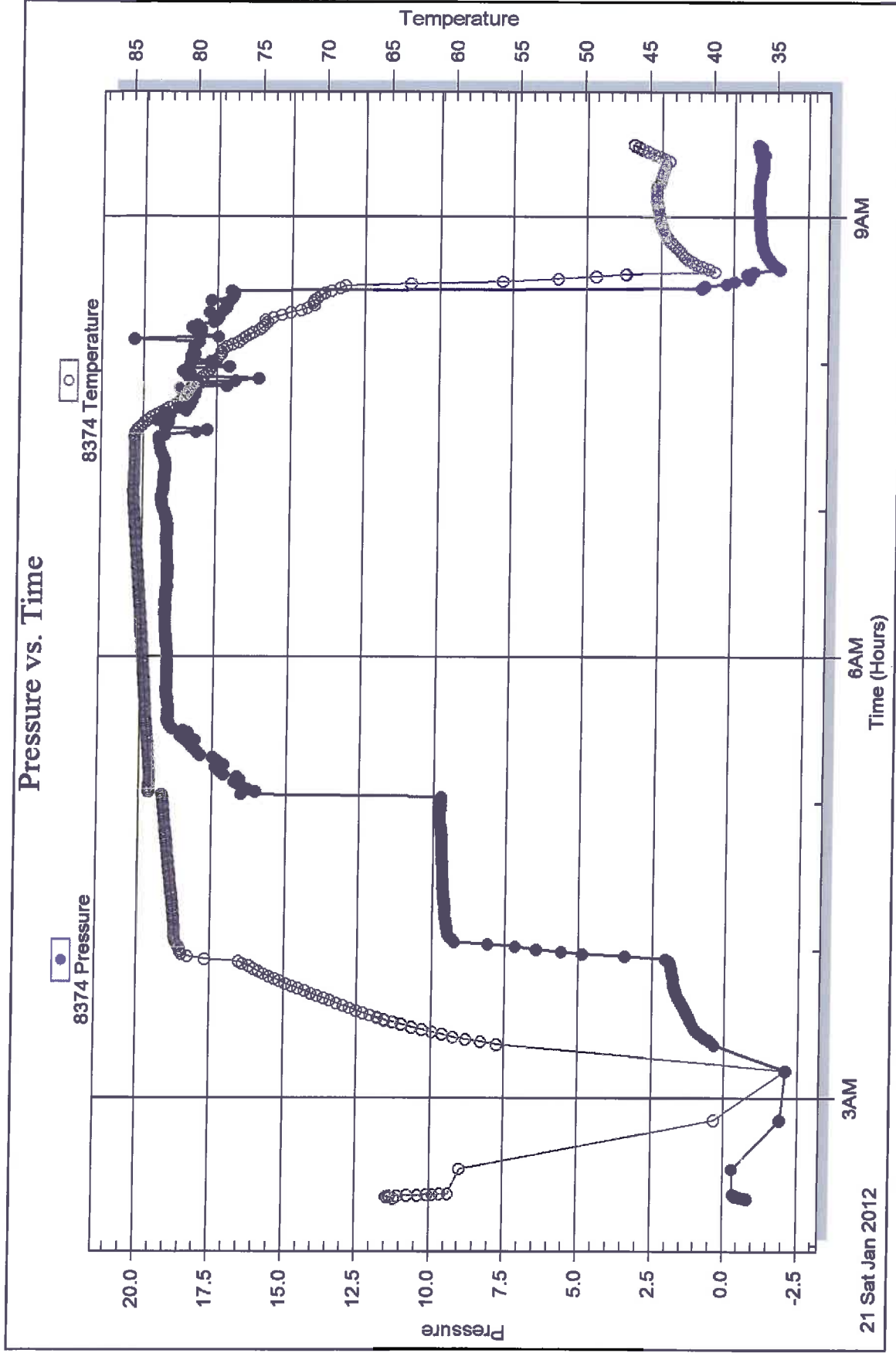
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Fluid

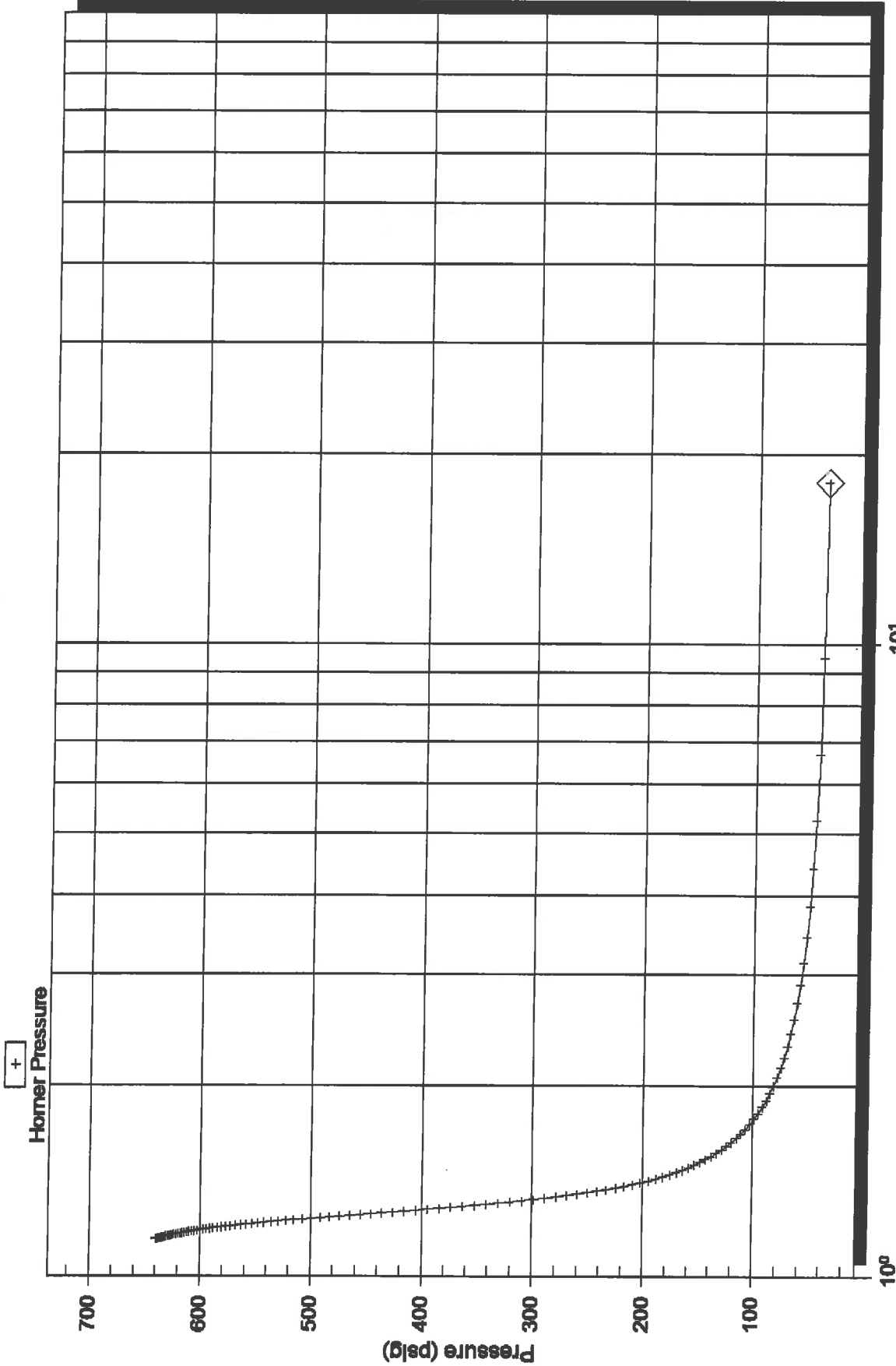
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DST Test Number: 2



Horner Plot



Serial Number: 8700 (Outside)

Horner Time: (Twf + dt) / dt

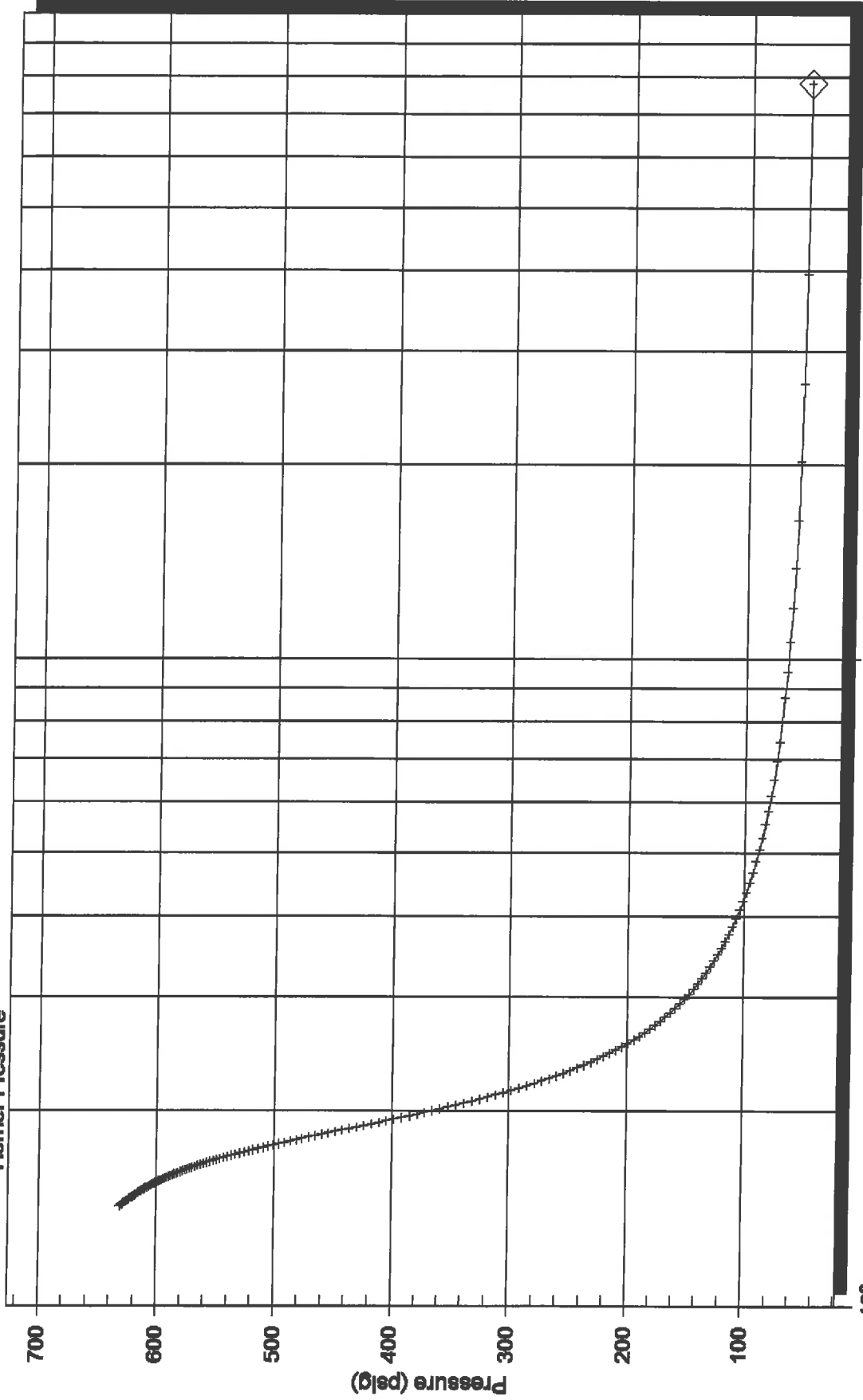
Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot

+

Horner Pressure



10¹

Horner Time: (Twf + dt) / dt

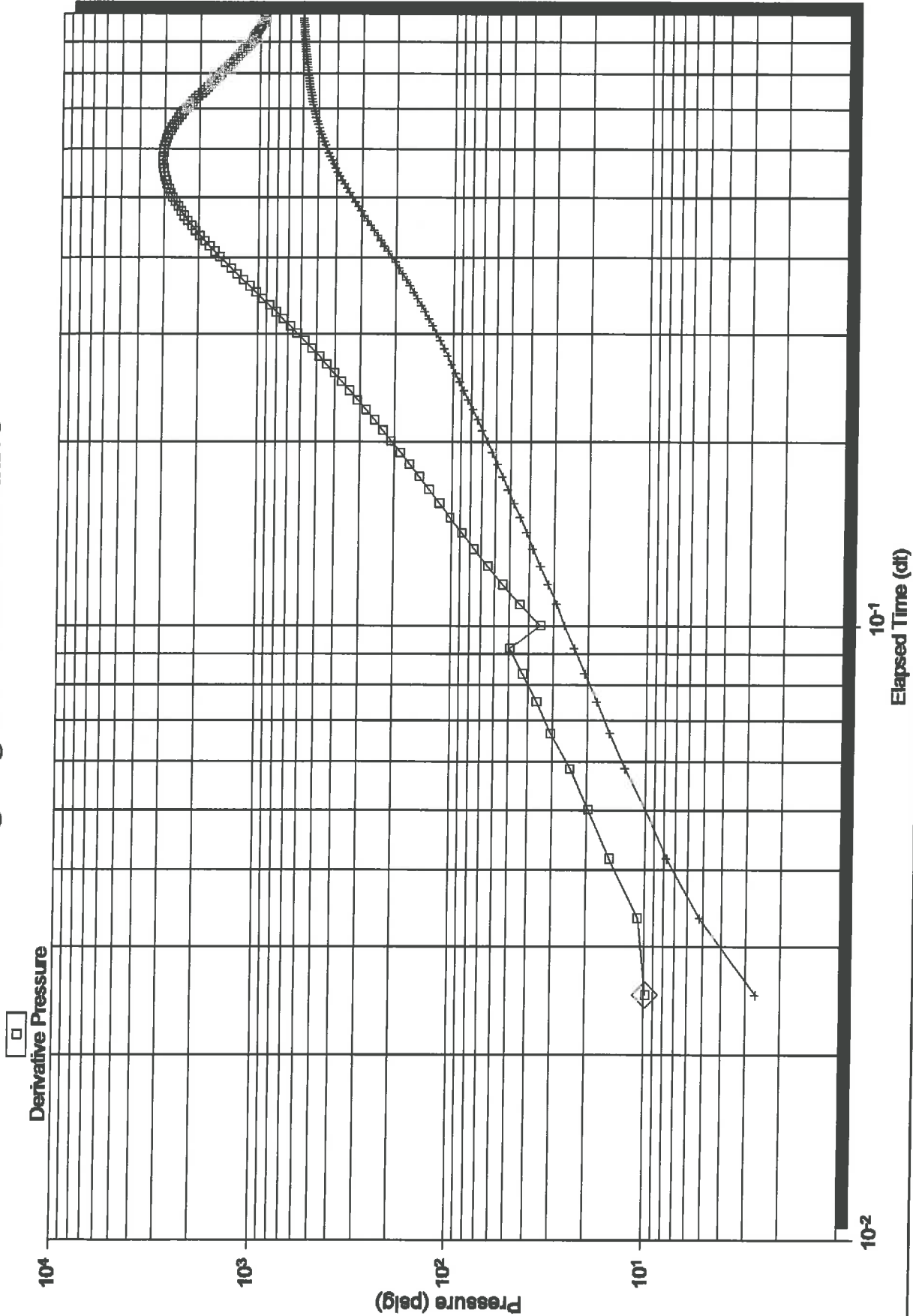
P* :

Slope (m) : kpa/log cycle

Serial Number: 8700 (Outside)

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

