



# Weatherford® Completion Systems

## DRILL STEM TEST REPORT

Prepared For: **Sam Gary Jr.and assoc. Inc.**

1515 Wynkoop St.  
Suite 700  
Denver Co.80202

ATTN: Neil Sharp

**6-21s-10w Rice**

**Wells Trust 1-16**

Start Date: 2010.09.05 @ 20:20:05

End Date: 2010.09.06 @ 05:47:10

Job Ticket #: 040383          DST #: 4

ALPINE OIL SERVICES CORPORATION  
2460, 240 - 4 Avenue S.W. Calgary, AB. T2P 4H4  
ph: 263-7800 fax: 264-7260

Sam Gary Jr.and assoc. Inc.

Wells Trust 1-16

6-21s-10w Rice

DST # 4

Arbuckle

2010.09.05



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Wells Trust 1-16

6-21s-10w Rice

Job Ticket: 040383

DST#: 4

Test Start: 2010.09.05 @ 20:20:05

### GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: **No** Whipstock: **ft (KB)**  
Time Tool Opened: 22:20:40  
Time Test Ended: 05:47:10

Test Type: **Conventional Bottom Hole**  
Tester: **Andy Carreira**  
Unit No: **31**

Interval: **3394.00 ft (KB) To 3404.00 ft (KB) (TVD)**  
Total Depth: **3404.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1739.00 ft (KB)**  
**1729.00 ft (CF)**  
KB to GR/CF: **10.00 ft**

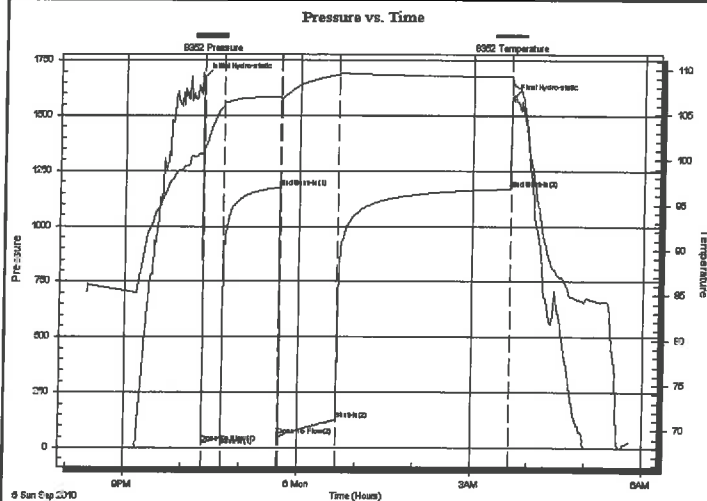
### Serial #: 8352

Outside

Press@RunDepth: **128.06 psig @ 3395.00 ft (KB)**  
Start Date: **2010.09.05** End Date: **2010.09.06**  
Start Time: **20:20:05** End Time: **05:47:09**

Capacity: **8000.00 psig**  
Last Calib.: **2010.09.06**  
Time On Btm: **2010.09.05 @ 22:20:00**  
Time Off Btm: **2010.09.06 @ 03:41:39**

TEST COMMENT: IF: Fair, 4 inches  
IS: No Return  
FF: BOB, 50 min.  
FS: No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.94	100.84	Initial Hydro-static
1	22.38	100.33	Open To Flow (1)
21	47.96	106.01	Shut-In (1)
80	1175.80	107.01	End Shut-In (1)
80	51.49	106.57	Open To Flow (2)
141	128.06	109.45	Shut-In (2)
321	1170.06	109.24	End Shut-In (2)
322	1579.38	108.68	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
250.00	SW sw =100%	3.51

### Gas Rates

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



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Job Ticket: 040383

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Total Depth: **3404.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1739.00 ft (KB)**

**1729.00 ft (CF)**

KB to GR/CF: **10.00 ft**

**Serial #: 8017**

**Inside**

Press@RunDepth: **psig @ 3395.00 ft (KB)**

Start Date: **2010.09.05**

End Date:

**2010.09.06**

Capacity:

**8000.00 psig**

Start Time: **20:20:05**

End Time:

**05:47:09**

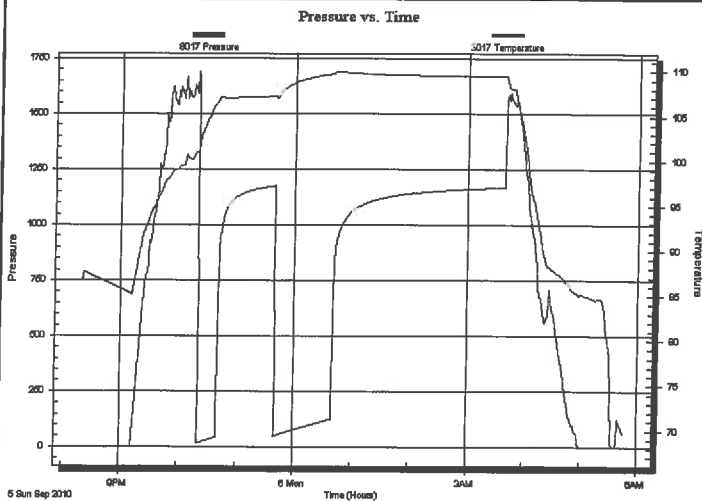
Last Callb.:

**2010.09.06**

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Fair, 4 inches  
 IS: No Return  
 FF: BOB, 50 min.  
 FS: No Return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
250.00	SW sw =100%	3.51

**Gas Rates**

Choke (Inches)	Pressure (psig)	Gas Rate (MMcfd)



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**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Sam Gary Jr. and assoc. Inc.

**Wells Trust 1-16**

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ATTN: Neil Sharp

**6-21s-10w Rice**

Job Ticket: 040383

**DST#: 4**

Test Start: 2010.09.05 @ 20:20:05

**Tool Information**

Drill Pipe:	Length: 3378.00 ft	Diameter: 3.80 inches	Volume: 47.38 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: 47.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3394.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3367.00	
Shut In Tool	5.00			3372.00	
Hydraulic tool	5.00			3377.00	
Jars	5.00			3382.00	
Safety Joint	3.00			3385.00	
Packer	5.00			3390.00	28.00 Bottom Of Top Packer
Packer	4.00			3394.00	
Stubb	1.00			3395.00	
Recorder	0.00	8017	Inside	3395.00	
Recorder	0.00	8352	Outside	3395.00	
Perforations	6.00			3401.00	
Bullnose	3.00			3404.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



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**FLUID SUMMARY**

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**6-21s-10w Rice**  
 Job Ticket: 040383      **DST#: 4**  
 Test Start: 2010.09.05 @ 20:20:05

**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:	20000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7400.00 ppm			
Filter Cake: Inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
250.00	SW sw =100%	3.507

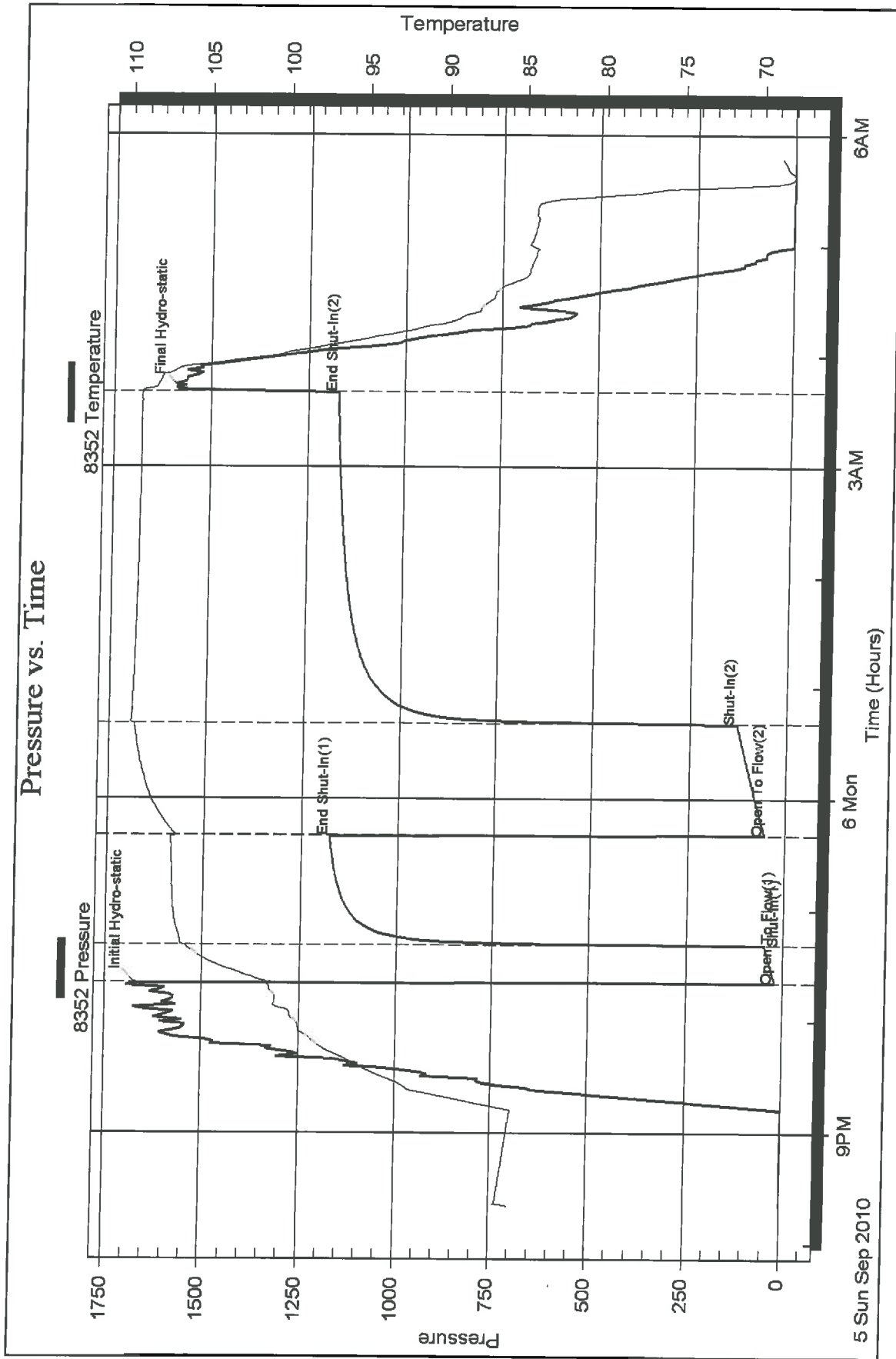
Total Length: 250.00 ft      Total Volume: 3.507 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

Serial #: 8352

Outside Sam Gary Jr. and assoc. Inc.

6-21s-10w Rice

DST Test Number: 4



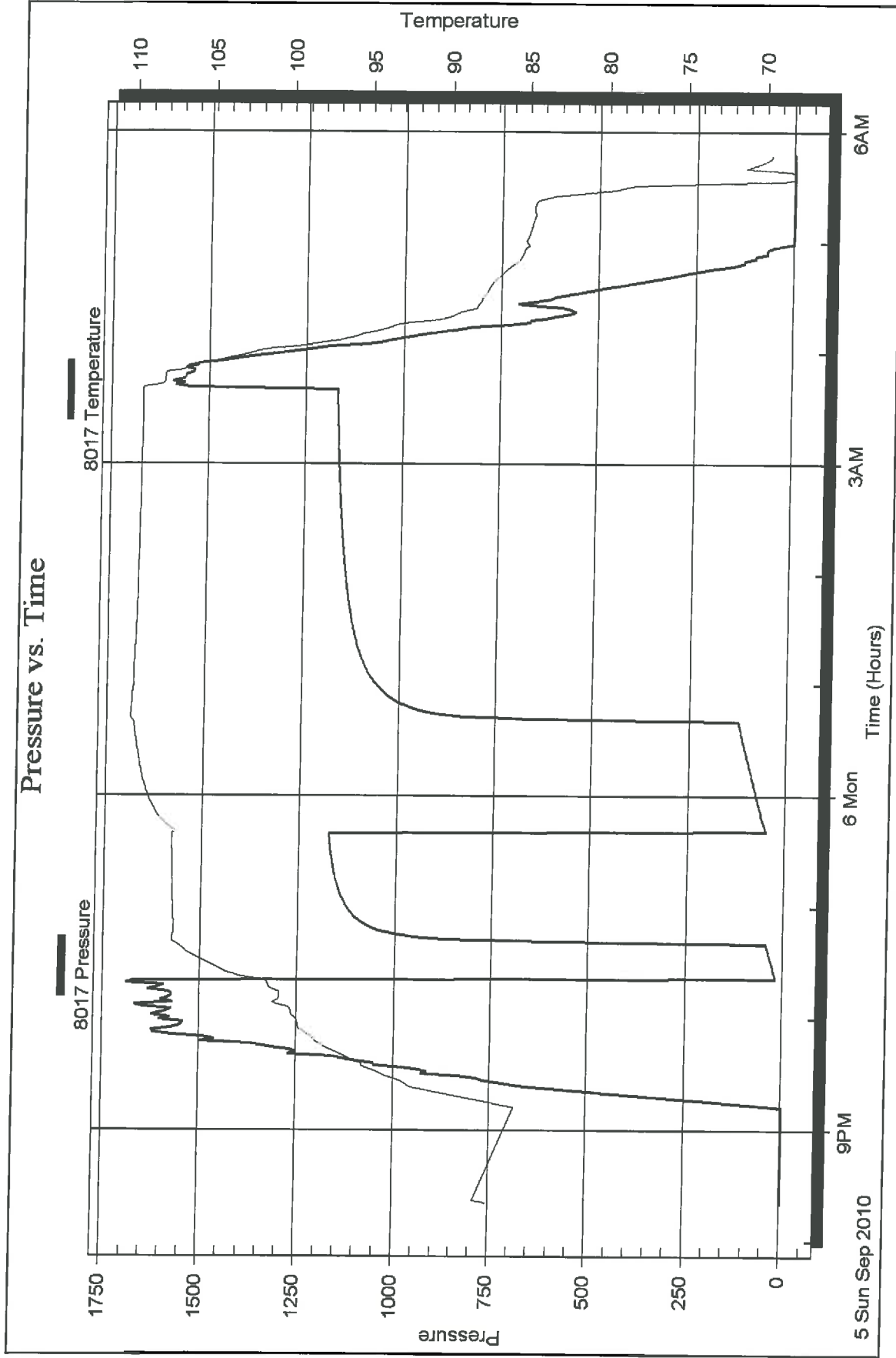
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Inside

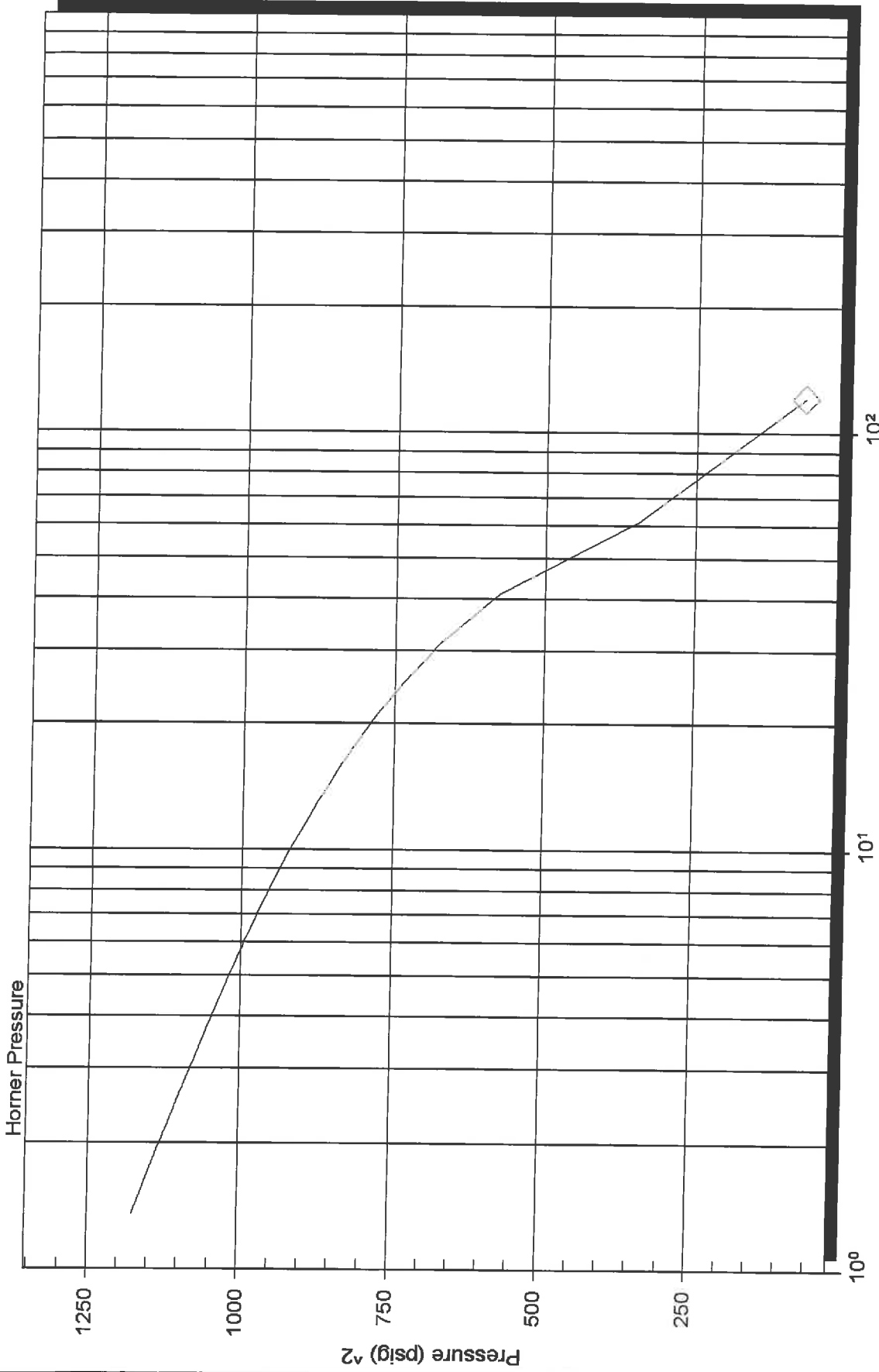
Sam Gary Jr. and assoc. Inc.

6-21s-10w Rice

DST Test Number: 4



### Horner Plot



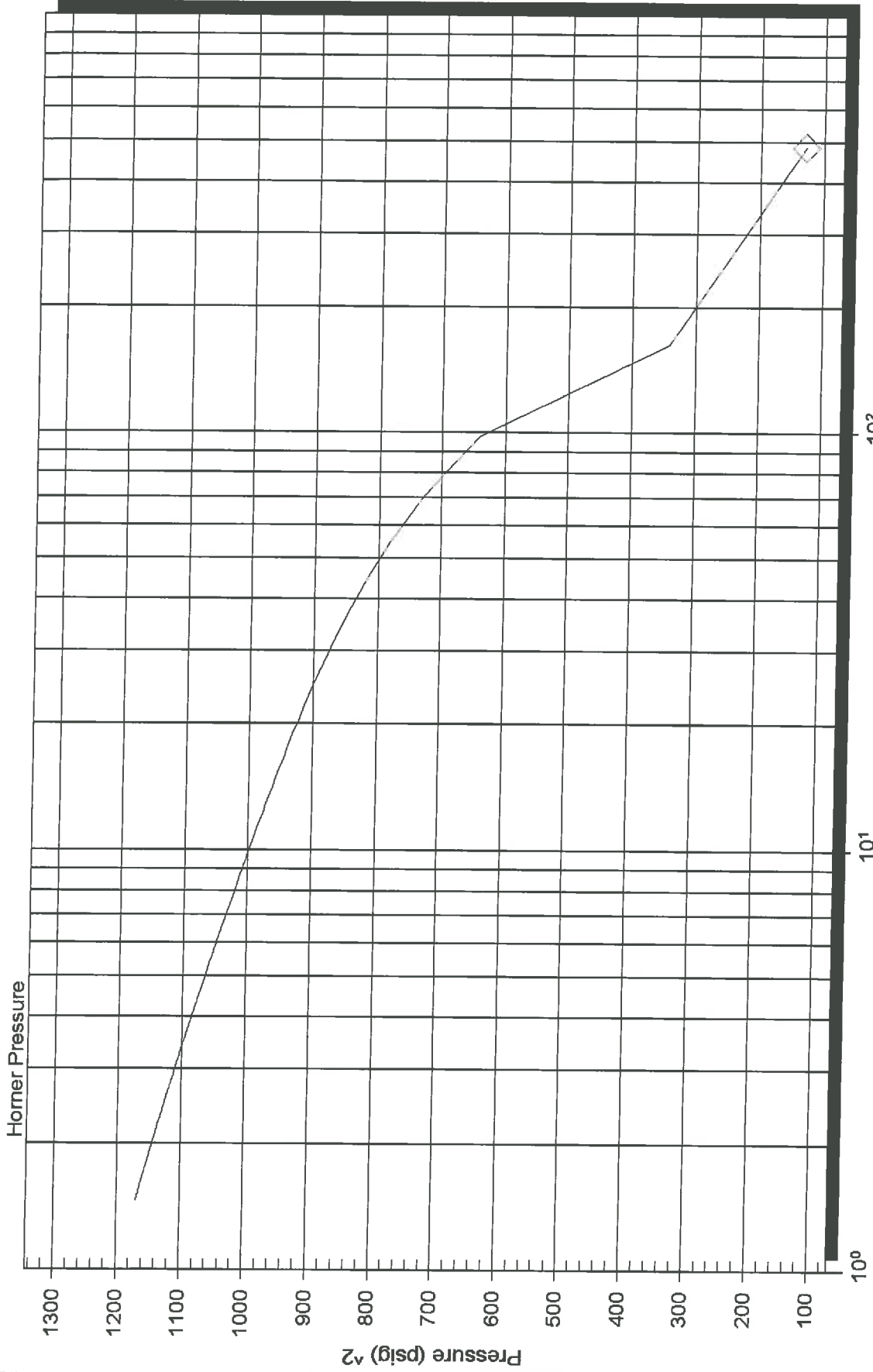
Serial Number: 8352 (Outside)

P\* : Slope (m) : kpa/log cycle

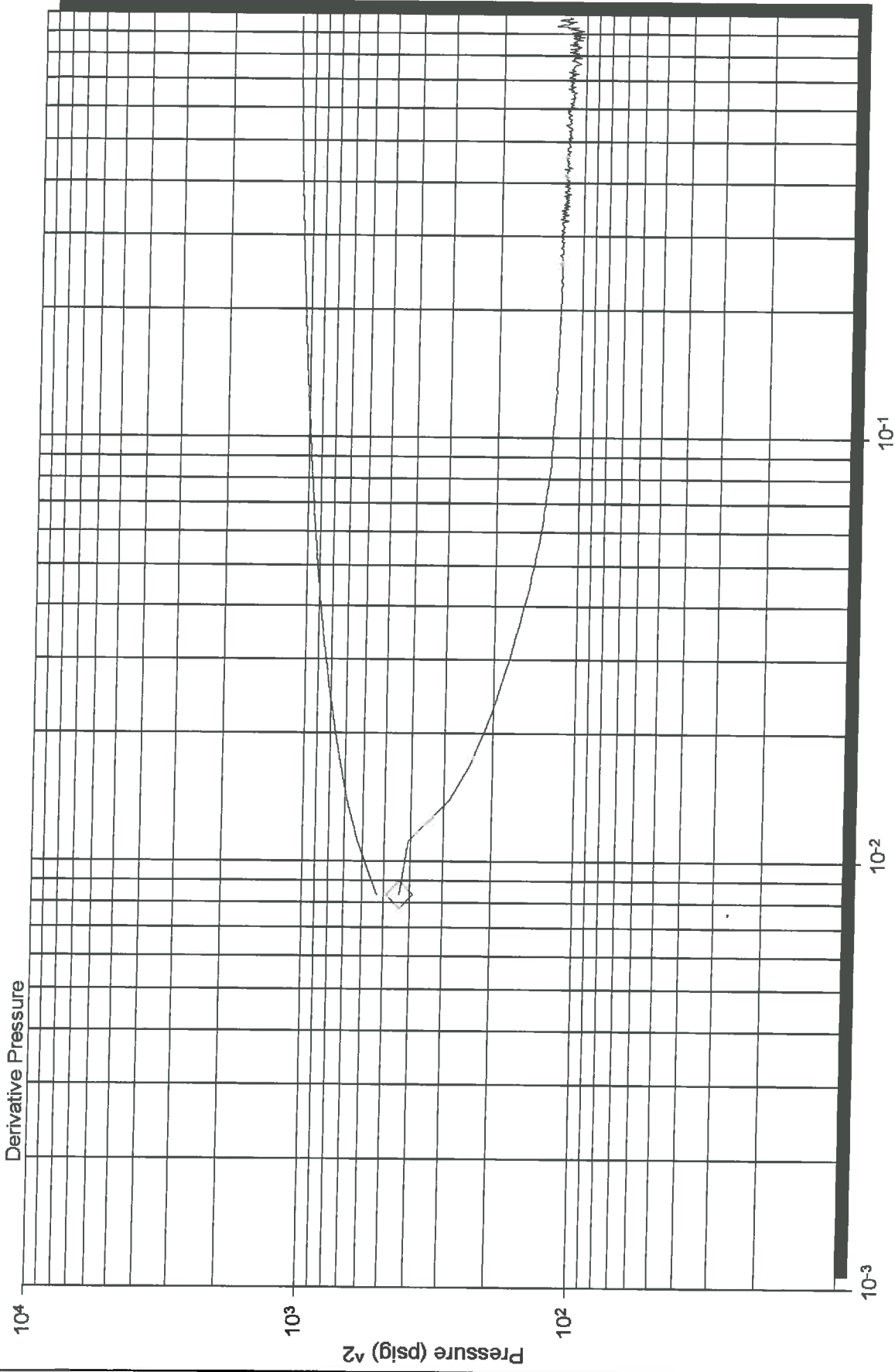
Flow Cycle: 1



### Horner Plot



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative

