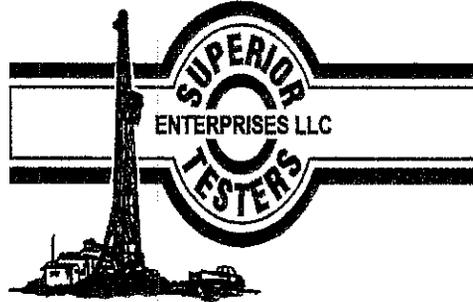


15-069. 25288



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DRILL STEM TEST REPORT

Prepared For: **RJM OIL CO.**

P.O. BOX 256  
CLAFLIN KS 67525-0256

SESE NW NE

ATTN: JIM MUSGROVE

1150 FNL

**34-16S-11W BARTON**

1400 FEL

**FREES #1**

Start Date: 2008.11.17 @ 13:05:00

End Date: 2008.11.17 @ 19:51:30

Job Ticket #: 16169      DST #: 1

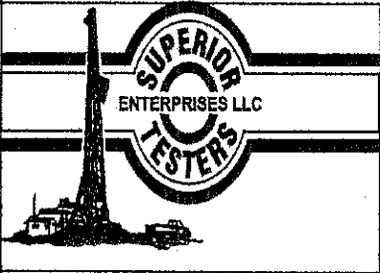
RJM OIL CO.      FREES #1      34-16S-11W BARTON      DST # 1      ARBUCKLE      2008.11.17



Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2008.11.17 @ 19:43:41

34-16s-11w



# DRILL STEM TEST REPORT

RJM OIL CO.  
 P.O. BOX 256  
 CLAFLIN KS 67525-0256  
 ATTN: JIM MUSGROVE

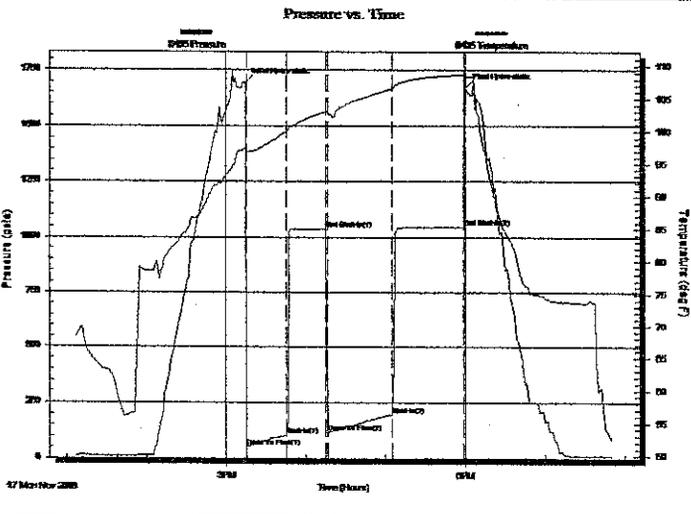
**FREES #1**  
**34-16S-11W BARTON**  
 Job Ticket: 16169      DST#: 1  
 Test Start: 2008.11.17 @ 13:05:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:15:30  
 Time Test Ended: 19:51:30  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: FRANK ZAMARRIPA  
 Unit No: 3335 64 MGB  
 Interval: **3342.00 ft (KB) To 3387.00 ft (KB) (TVD)**  
 Total Depth: 3387.00 ft (KB) (TVD)  
 Reference Elevations: 1953.00 ft (KB)  
 1948.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 195.00 psia @ 3382.00 ft (KB)      Capacity: 2000.00 psia  
 Start Date: 2008.11.17      End Date: 2008.11.17      Last Calib.: 2008.11.17  
 Start Time: 13:07:00      End Time: 19:51:30      Time On Btm: 2008.11.17 @ 15:14:30  
 Time Off Btm: 2008.11.17 @ 18:00:30

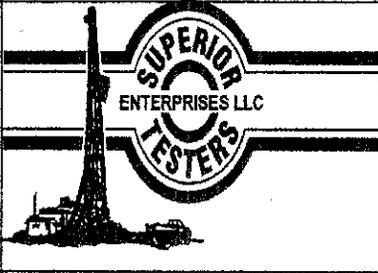
**TEST COMMENT:** 20-INITIAL OPEN:WEAK BUILDING BLOW BUILT TO BOTTOM OF 5 GALLON BUCKET IN 16 MINUTES  
 30-INITIAL SHUT-IN:NO BLOW BACK  
 30-FINAL OPEN:WEAK BUILDING BLOW BUILT TO BOTTOM OF 5 GALLON BUCKET IN 15 MINUTES  
 30-FINAL SHUT-IN:WEAK BLOW BACK BUILT TO 3 INCHES



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1695.00	97.49	Initial Hydro-static
2	50.00	97.03	Open To Flow (1)
32	103.00	99.98	Shut-In(1)
62	1037.00	103.07	End Shut-In(1)
63	114.00	102.72	Open To Flow (2)
111	195.00	106.58	Shut-In(2)
165	1046.00	108.68	End Shut-In(2)
167	1675.00	108.57	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
120.00	GAS 100%	1.75
245.00	GASSY OIL 15% GAS 85% OIL	3.58
240.00	GOOM 10% GAS 20% OIL 70% MUD	3.51

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (M.cfd)



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM OIL CO.  
 P.O. BOX 256  
 CLAFLIN KS 67525-0256  
 ATTN: JIMMUSGROVE

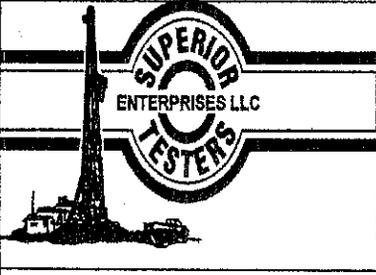
FREES #1  
**34-16S-11W BARTON**  
 Job Ticket: 16169      DST#: 1  
 Test Start: 2008.11.17 @ 13:05:00

## Tool Information

Drill Pipe:	Length: 3323.00 ft	Diameter: 3.88 inches	Volume: 48.60 bbl	Tool Weight: 20000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 48.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3342.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	66.00 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			3322.00	
Shut-In Tool	5.00			3327.00	
Hydraulic Tool	5.00			3332.00	
Packer	5.00			3337.00	21.00 Bottom Of Top Packer
Packer	5.00			3342.00	
Perforations	40.00			3382.00	
Recorder	0.00	8405	Inside	3382.00	
Recorder	0.00	4143	Outside	3382.00	
Bullnose	5.00			3387.00	45.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>66.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RJM OIL CO.  
 P.O. BOX 256  
 CLAFLIN KS 67525-0256  
 ATTN: JIMMUSGROVE

**FREES #1**  
**34-16S-11W BARTON**  
 Job Ticket: 16169      DST#: 1  
 Test Start: 2008.11.17 @ 13:05:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 46 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.59 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 3800.00 ppm		
Filter Cake: 1.00 inches		

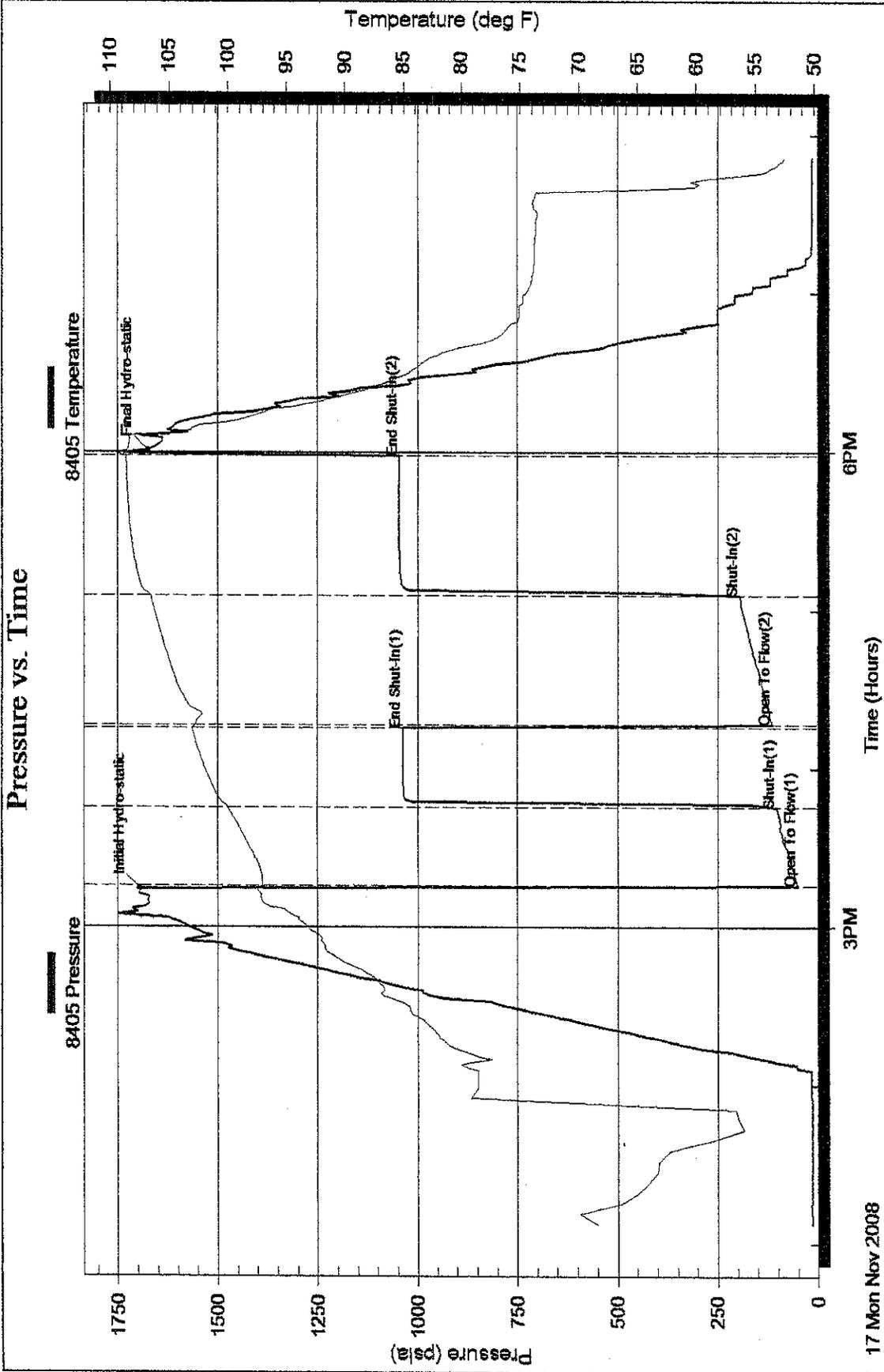
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GAS 100%	1.755
245.00	GASSY OIL 15% GAS 85% OIL	3.583
240.00	GOCM 10% GAS 20% OIL 70% MUD	3.510

Total Length: 605.00 ft      Total Volume: 8.848 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

# Pressure vs. Time



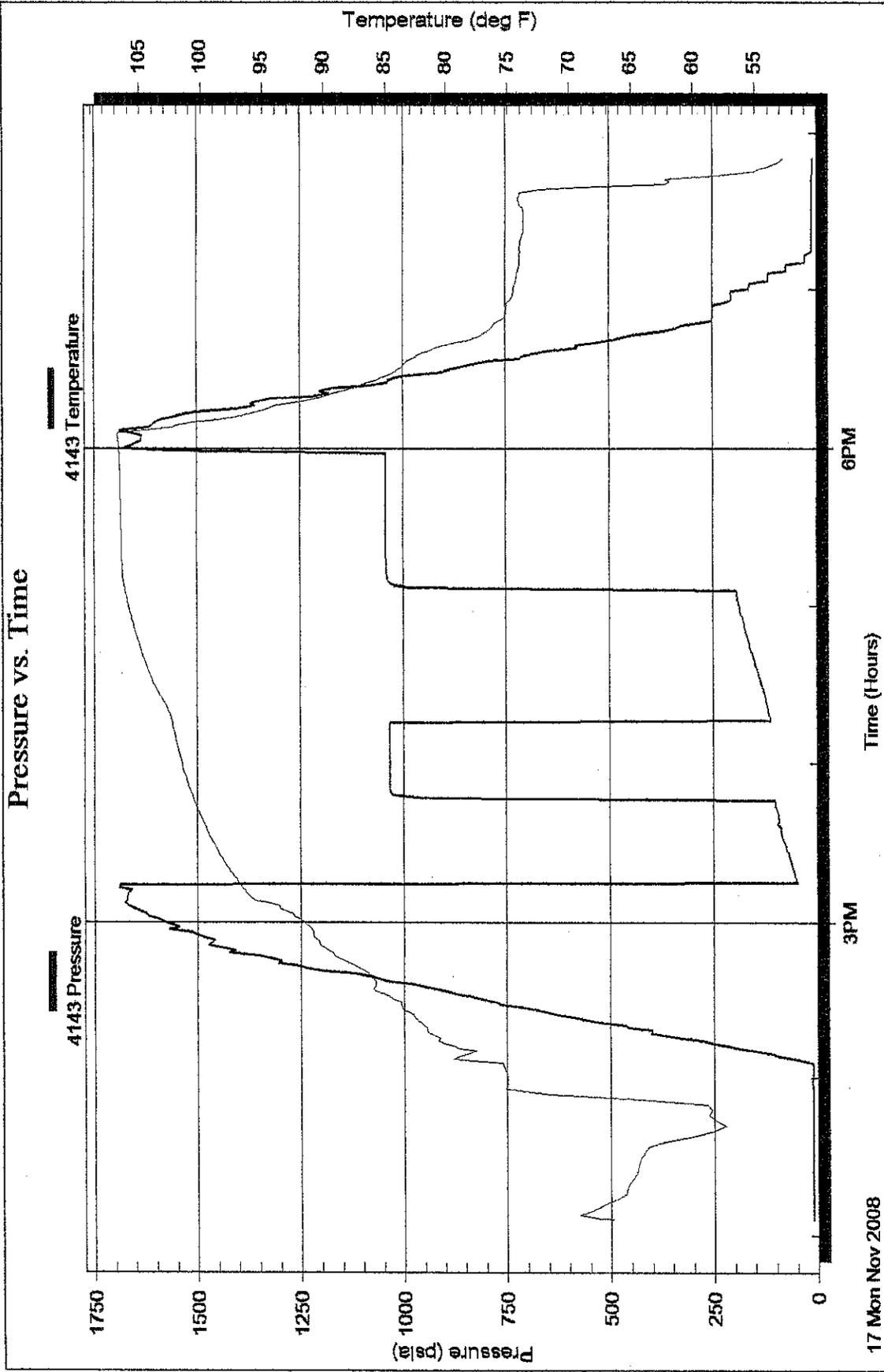
17 Mon Nov 2008

3PM

Time (Hours)

6PM

### Pressure vs. Time



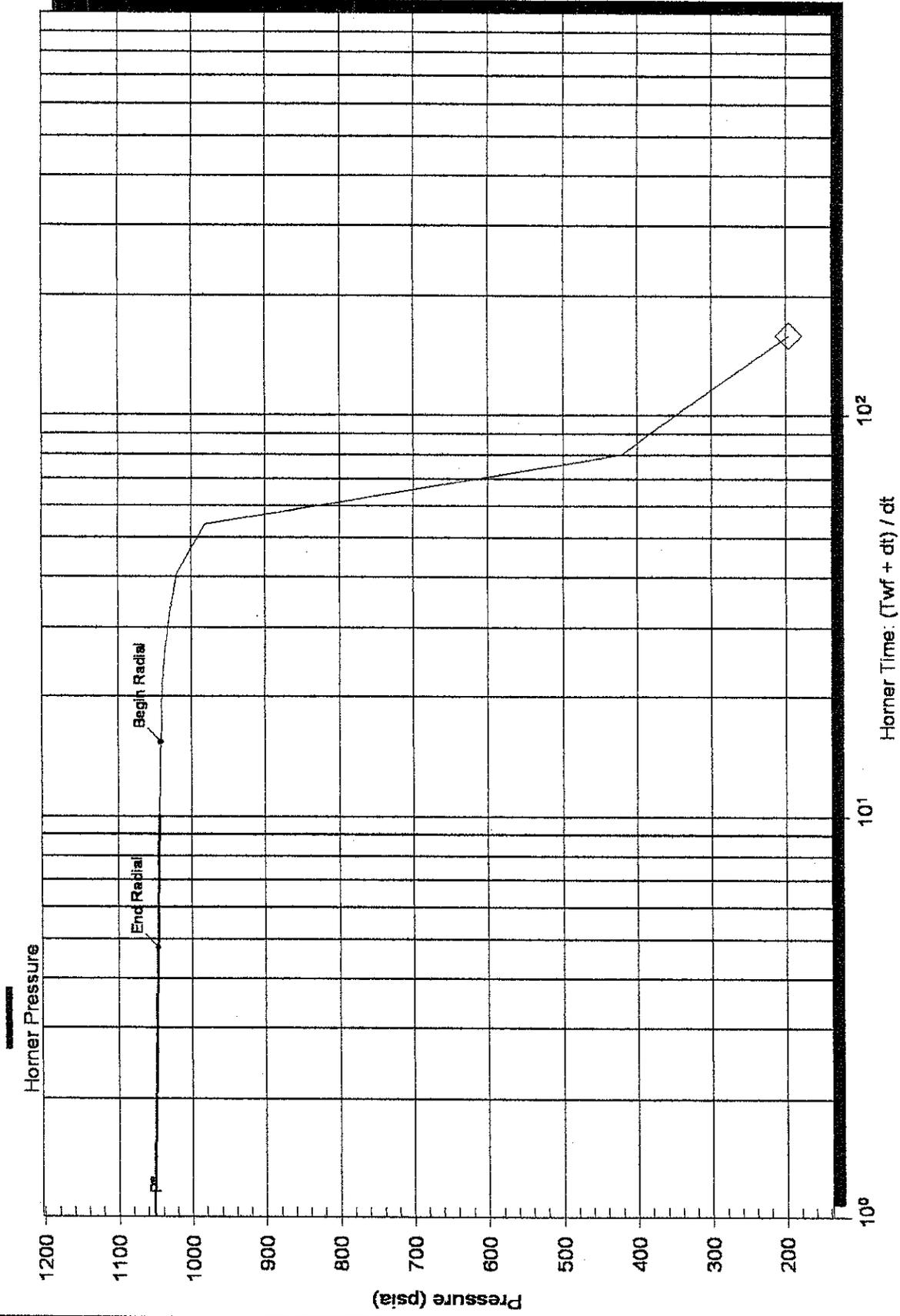
17 Mon Nov 2008

6PM

3PM

Time (Hours)

### Homer Plot



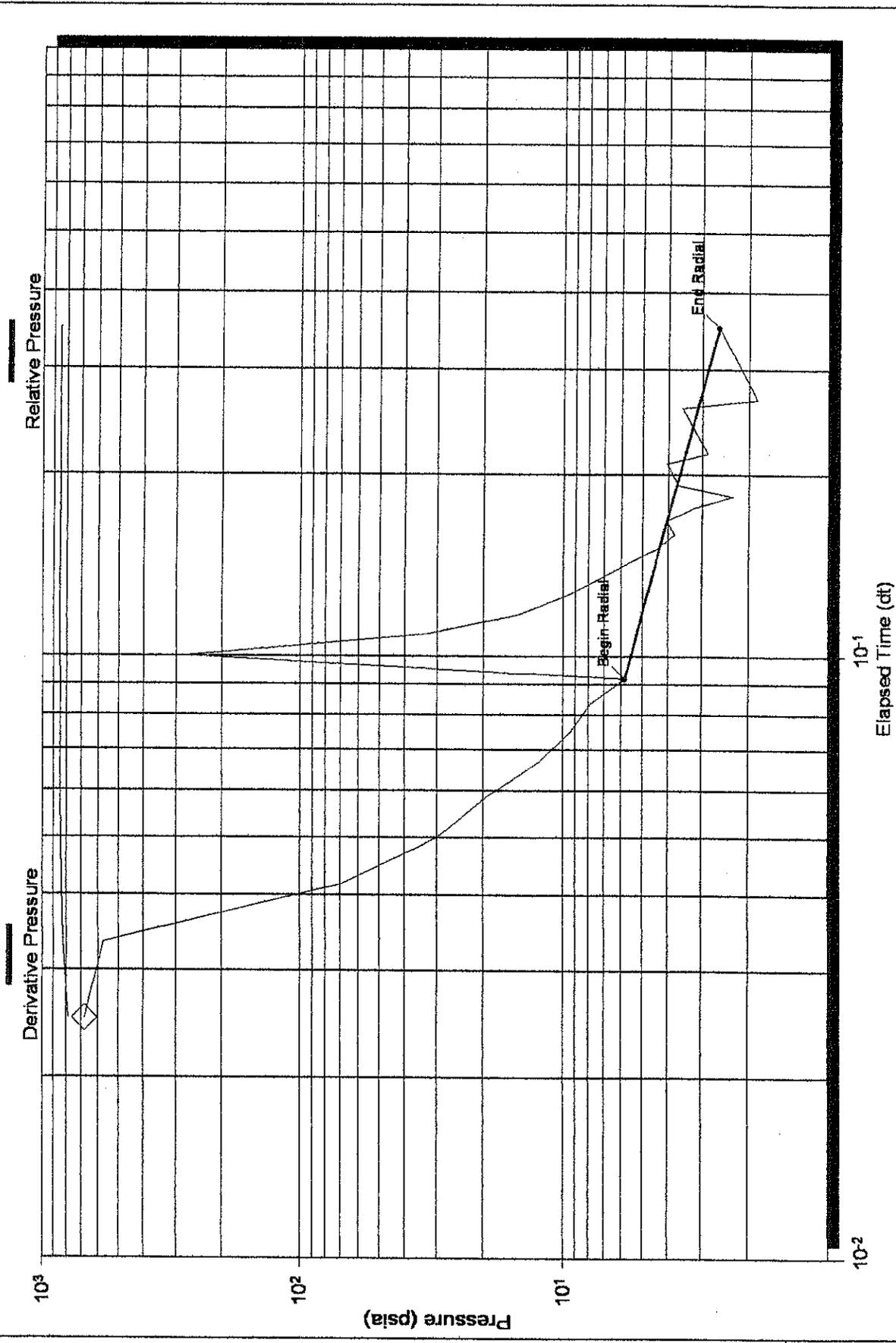
Serial Number: 8405 (inside)

$P^* : 1051.33$

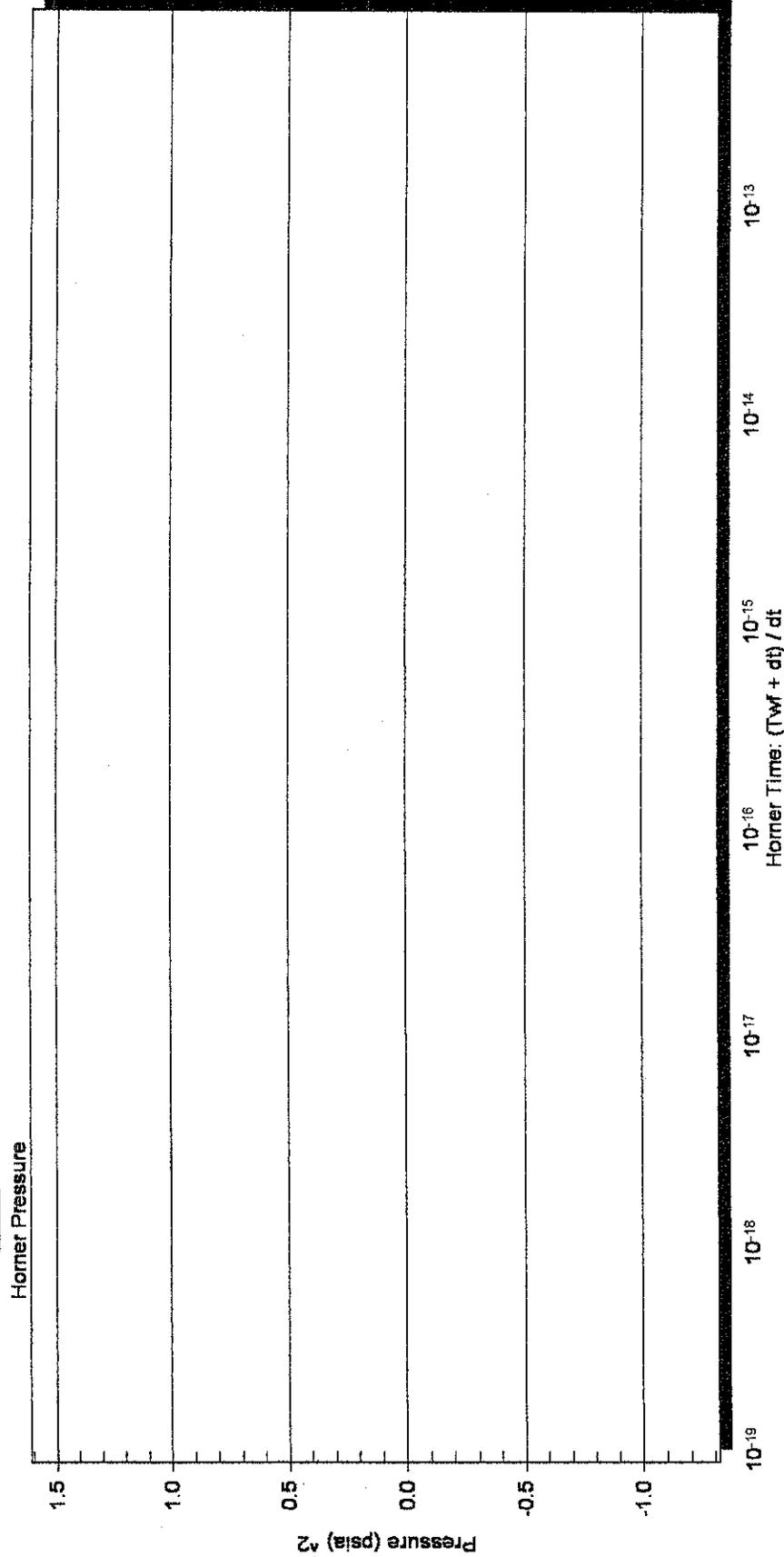
Slope (m) : 7.86 kpa/log cycle

Flow Cycle: 2

# Log-Log and Pseudo-Derivative



Horner Plot



Serial Number: 8405 (inside)

Flow Cycle: -2147483648

Analysis (Fluid)

Inputs

Average Fluid Viscosity: 1.2  
 Total System Compress: 1E-7  
 Formation Volume Factor: 1.2  
 Net Pay Thickness: 6.0  
 Formation Porosity: 0.18  
 Water Saturation: 0.35  
 Initial Static Reservoir Pressure: 1051.33  
 Flowing Bottom Hole Pressure: 195.0  
 Wellbore Radius: 3.94  
 Volume of Recovered Fluid: 8.85  
 Total Flowing Time: 1.3167

Outputs

Horner Slope (m): 7.86  
 Radius of investigation: 1053.2  
 Fluid Flow Rate: 80.0  
 Effective Permeability: 16080.24  
 Apparent Skin Factor: 854.39  
 kh: 29407.54