



DRILL STEM TEST REPORT

Prepared For: **SAMUEL GARY JR & ASSOCIATES INC**

SAMUEL GARY JR & ASSOCIATES INC
1515 WYNKOOP ST SUITE 700
DENVER CO 80202

ATTN: CLAYTON CAMOZZI

3-17S-16W RUSH

YARMER ET AL 1-3

Start Date: 2010.08.03 @ 07:45:00

End Date: 2010.08.03 @ 14:40:00

Job Ticket #: 16340 DST #: 3

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

Printed: 2010.08.04 @ 08:32:34

SAMUEL GARY JR & ASSOCIATES INC

YARMER ET AL 1-3

3-17S-16W RUSH

DST # 3

Lansing H - I

2010.08.03



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DST#: 3

Test Start: 2010.08.03 @ 07:45:00

GENERAL INFORMATION:

Formation: **Lansing H - I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:12:30

Time Test Ended: 14:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-56

Interval: 3395.00 ft (KB) To 3434.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3434.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8405 Inside

Press @ RunDepth: 67.99 psia @ 3430.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.03

End Date: 2010.08.03

Last Calib.: 2010.08.03

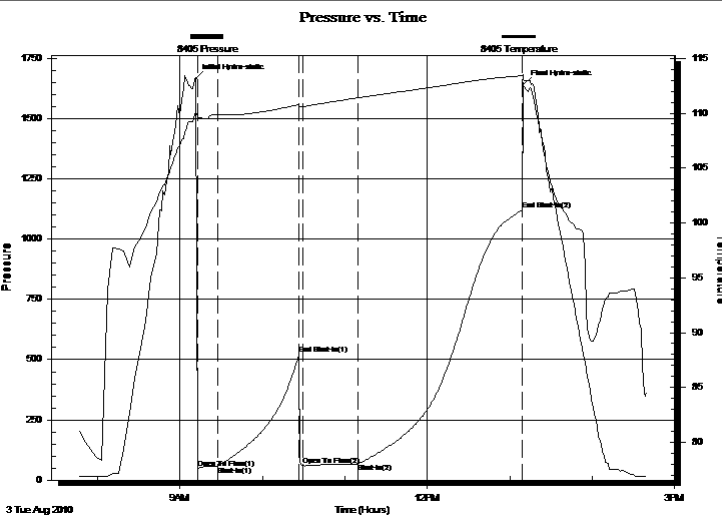
Start Time: 07:47:00

End Time: 14:40:00

Time On Btm: 2010.08.03 @ 09:11:30

Time Off Btm: 2010.08.03 @ 13:10:00

TEST COMMENT: 15/INITIAL OPEN:WEAK BLOW BUILT 5 1/2 INCHES INTO WATER IN 15 MINUTES
 60/INITIAL SHUT IN:NO BLOW BACK
 40/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE
 120/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1663.94	110.13	Initial Hydro-static
1	49.46	109.66	Open To Flow (1)
16	57.56	109.87	Shut-In(1)
75	521.76	110.80	End Shut-In(1)
78	59.55	110.61	Open To Flow (2)
118	67.99	111.40	Shut-In(2)
238	1119.74	113.42	End Shut-In(2)
239	1642.22	113.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GASSY Oil Cut Mud	0.88
	5%Gas 20% Oil 75%Mud	0.00
	300 Feet of Gas in the pipe	

Gas Rates

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



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Tester: JARED SCHECK

Unit No: 3320-GB-56

Interval: 3395.00 ft (KB) To 3434.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3434.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8524 Outside

Press @ RunDepth: 1119.80 psia @ 3431.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.03

End Date: 2010.08.03

Last Calib.: 2010.08.03

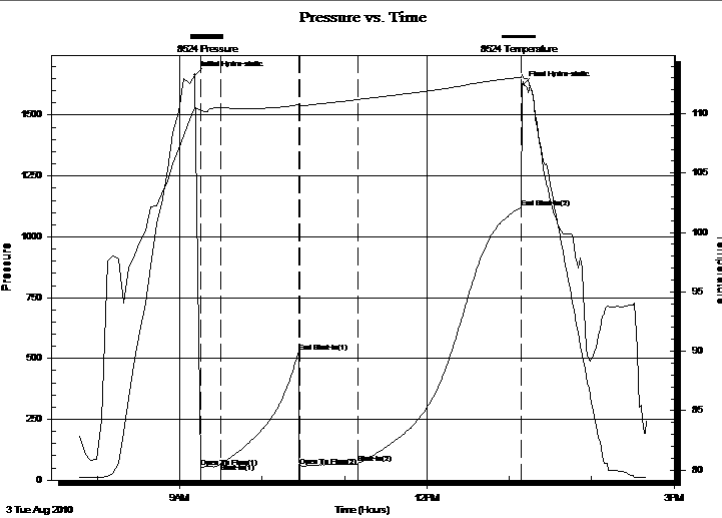
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 40/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE
 120/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1664.35	110.53	Initial Hydro-static
4	52.22	110.23	Open To Flow (1)
19	67.92	110.48	Shut-In(1)
76	525.57	110.74	End Shut-In(1)
77	56.55	110.69	Open To Flow (2)
119	67.67	111.19	Shut-In(2)
238	1119.80	113.05	End Shut-In(2)
239	1622.27	113.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GASSY Oil Cut Mud	0.88
	5%Gas 20% Oil 75%Mud	0.00
	300 Feet of Gas in the pipe	

Gas Rates

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



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TOOL DIAGRAM

SAMUEL GARY JR & ASSOCIATES INC

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Test Start: 2010.08.03 @ 07:45:00

Tool Information

Drill Pipe:	Length: 3376.00 ft	Diameter: 3.80 inches	Volume: 47.36 bbl	Tool Weight: 1000.00 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: 70000.00 lb
			<u>Total Volume: 47.36 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3395.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	68.00 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			3367.00	
Shut-In Tool	5.00			3372.00	
Hydraulic Tool	5.00			3377.00	
Jars	6.00			3383.00	
Safety Joint	2.00			3385.00	
Packer	5.00			3390.00	29.00 Bottom Of Top Packer
Packer	5.00			3395.00	
Perforations	34.00			3429.00	
Recorder	1.00	8405	Inside	3430.00	
Recorder	1.00	8524	Outside	3431.00	
Bullnose	3.00			3434.00	39.00 Bottom Packers & Anchor

Total Tool Length: 68.00



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Polymer	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 4600.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

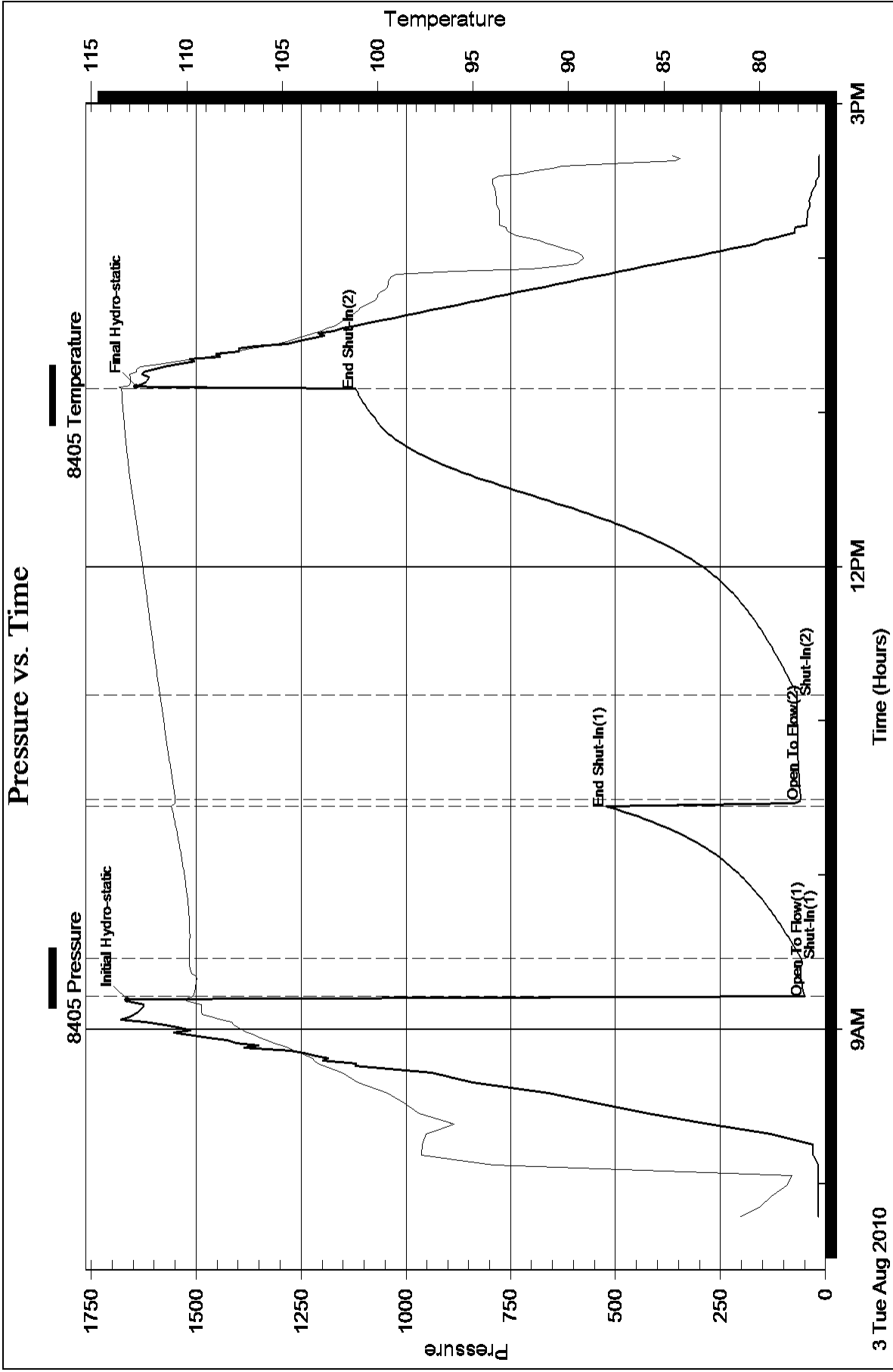
Length ft	Description	Volume bbl
63.00	GASSY Oil Cut Mud	0.884
	5%Gas 20% Oil 75%Mud	0.000
	300 Feet of Gas in the pipe	

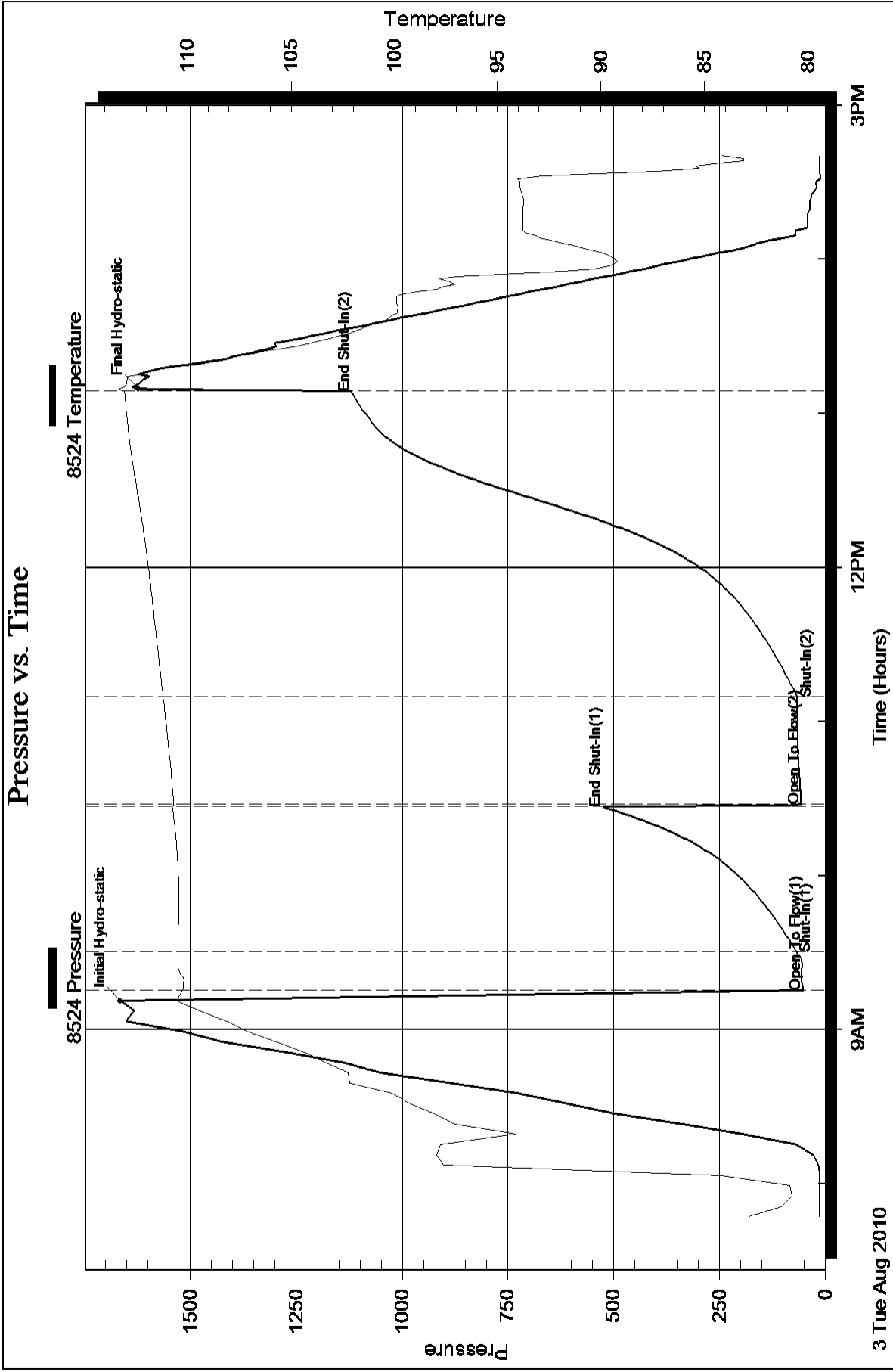
Total Length: 63.00 ft Total Volume: 0.884 bbl

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

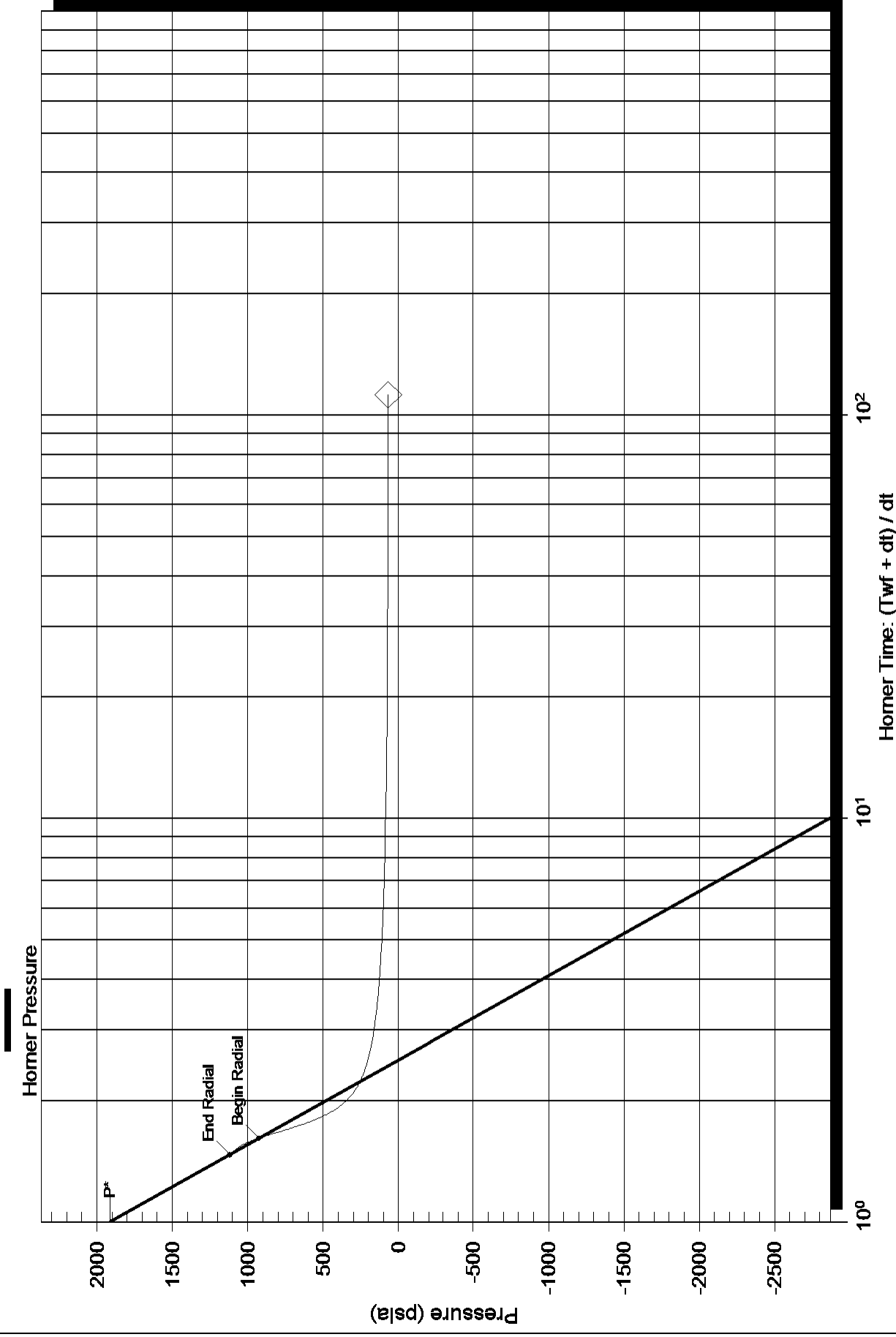
Laboratory Name: Laboratory Location:

Recovery Comments: There was not enough break over on the final shut-in to get an accurate extrapolation 65% break over is needed





Horner Plot



Log-Log and Pseudo-Derivative

