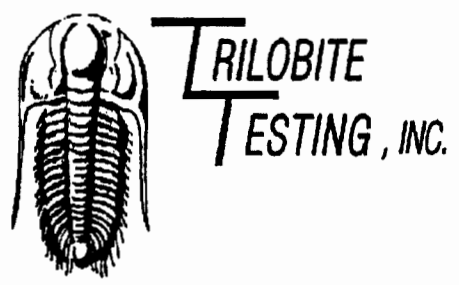


05-335-42W

RECEIVED
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DRILL STEM TEST REPORT

Prepared For: **Dominion Expl & Prod**
14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

ATTN: John Schick

5-33-42

Blout #7-5

Start Date: 2003.04.03 @ 21:14:40
End Date: 2003.04.04 @ 10:33:55
Job Ticket #: 15874 DST #: 1

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

Dominion Expl & Prod
Blout #7-5
5-33-42
DST # 1
Lwr Morrow SS
2003.04.03



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Dominion Expl & Prod

Blout #7-5

14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

5-33-42

Job Ticket: 15874

DST#: 1

ATTN: John Schick

Test Start: 2003.04.03 @ 21:14:40

GENERAL INFORMATION:

Formation: **Lwr Morrow SS**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 01:13:25

Time Test Ended: 10:33:55

Test Type: **Conventional Bottom Hole**

Tester: **Blake Wallace**

Unit No: **20**

Interval: **4445.00 ft (KB) To 4750.00 ft (KB) (TVD)**

Total Depth: **4750.00 ft (KB) (TVD)**

Hole Diameter: **7.78 inches** Hole Condition: **Good**

Reference Elevations: **3353.00 ft (KB)**

3341.00 ft (CF)

KB to GR/CF: **12.00 ft**

Serial #: **3030** Inside

Press@RunDepth: **261.72 psig @ 4448.00 ft (KB)**

Start Date: **2003.04.03**

End Date: **2003.04.04**

Capacity: **7000.00 psig**

Last Calib.: **1899.12.30**

Start Time: **21:14:44**

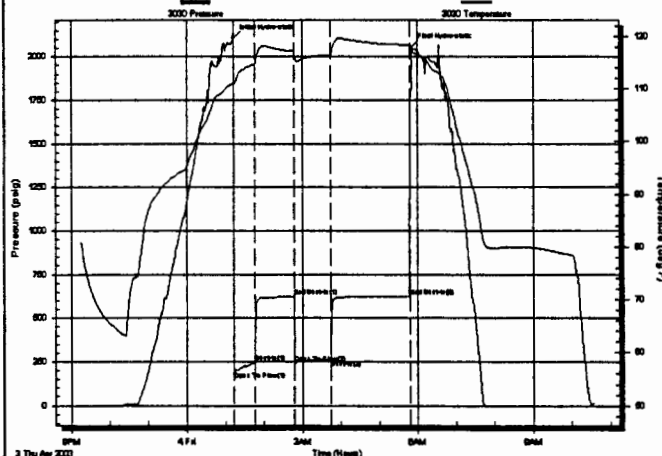
End Time: **10:33:55**

Time On Btm: **2003.04.04 @ 01:12:55**

Time Off Btm: **2003.04.04 @ 05:51:10**

TEST COMMENT: IF-strong blow BOB 1 min GTS 5 min
IS- after 18 min blow back built to 8 inches
FF-strong blow BOB as soon as open
FSI-blow back built to 10 inches started to die off after 1.25 hrs died back to s

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2106.10	111.06	Initial Hydro-static
1	144.68	111.06	Open To Flow (1)
33	244.09	114.61	Shut-In (1)
94	620.10	117.23	End Shut-In (1)
95	236.78	116.53	Open To Flow (2)
152	261.72	116.43	Shut-In (2)
275	624.25	118.42	End Shut-In (2)
279	2054.53	118.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
686.00	5% Gas 95% mud	6.80

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	20.00	126.02
Last Gas Rate	0.75	38.00	818.48
Max. Gas Rate	0.38	42.00	206.61



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dominion Expl & Prod

Blout #7-5

14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

5-33-42

Job Ticket: 15874

DST#: 1

ATTN: John Schick

Test Start: 2003.04.03 @ 21:14:40

Tool Information

Drill Pipe:	Length: 4135.00 ft	Diameter: 3.80 inches	Volume: 58.00 bbl	Tool Weight: 1800.00 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: 310.00 ft	Diameter: 2.25 inches	Volume: 1.52 bbl	Weight to Pull Loose: 120000.0 lb
		Total Volume: 59.52 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4445.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	305.00 ft			
Tool Length:	335.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4416.00	
S.I. Tool	5.00			4421.00	
Sampler	3.00			4424.00	
HMV	5.00			4429.00	
Jars	5.00			4434.00	
Safety Joint	2.00			4436.00	
Packer	5.00			4441.00	30.00 Bottom Of Top Packer
Packer	4.00			4445.00	
Stubb	1.00			4446.00	
Perforations	2.00			4448.00	
Recorder	0.00	3030	Inside	4448.00	
Perforations	20.00			4468.00	
Change Over Sub	1.00			4469.00	
Blank Spacing	277.00			4746.00	
Change Over Sub	1.00			4747.00	
Recorder	0.00	11019	Outside	4747.00	
Bullnose	3.00			4750.00	305.00 Bottom Packers & Anchor
Total Tool Length:	335.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Dominion Expl & Prod

Blout #7-5

14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

5-33-42

Job Ticket: 15874

DST#: 1

ATTN: John Schick

Test Start: 2003.04.03 @ 21:14:40

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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
686.00	5% Gas 95% mud	6.799

Total Length: 686.00 ft

Total Volume: 6.799 bbl

Num Fluid Samples: 1

Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, Ks

Recovery Comments: 4000 ML gas @ 600 PSI 25 cubic ft gas



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Dominion Expl & Prod

Blout #7-5

14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

5-33-42

Job Ticket: 15874

DST#: 1

ATTN: John Schick

Test Start: 2003.04.03 @ 21:14:40

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	10	0.38	20.00	126.02
1	10	0.38	20.00	126.02
1	20	0.38	36.00	184.63
1	30	0.38	42.00	206.61
2	15	0.75	34.00	756.00
2	20	0.75	34.00	756.00
2	30	0.75	35.00	771.62
2	40	0.75	36.00	787.24
2	50	0.75	38.00	818.48

Serial #: 3030

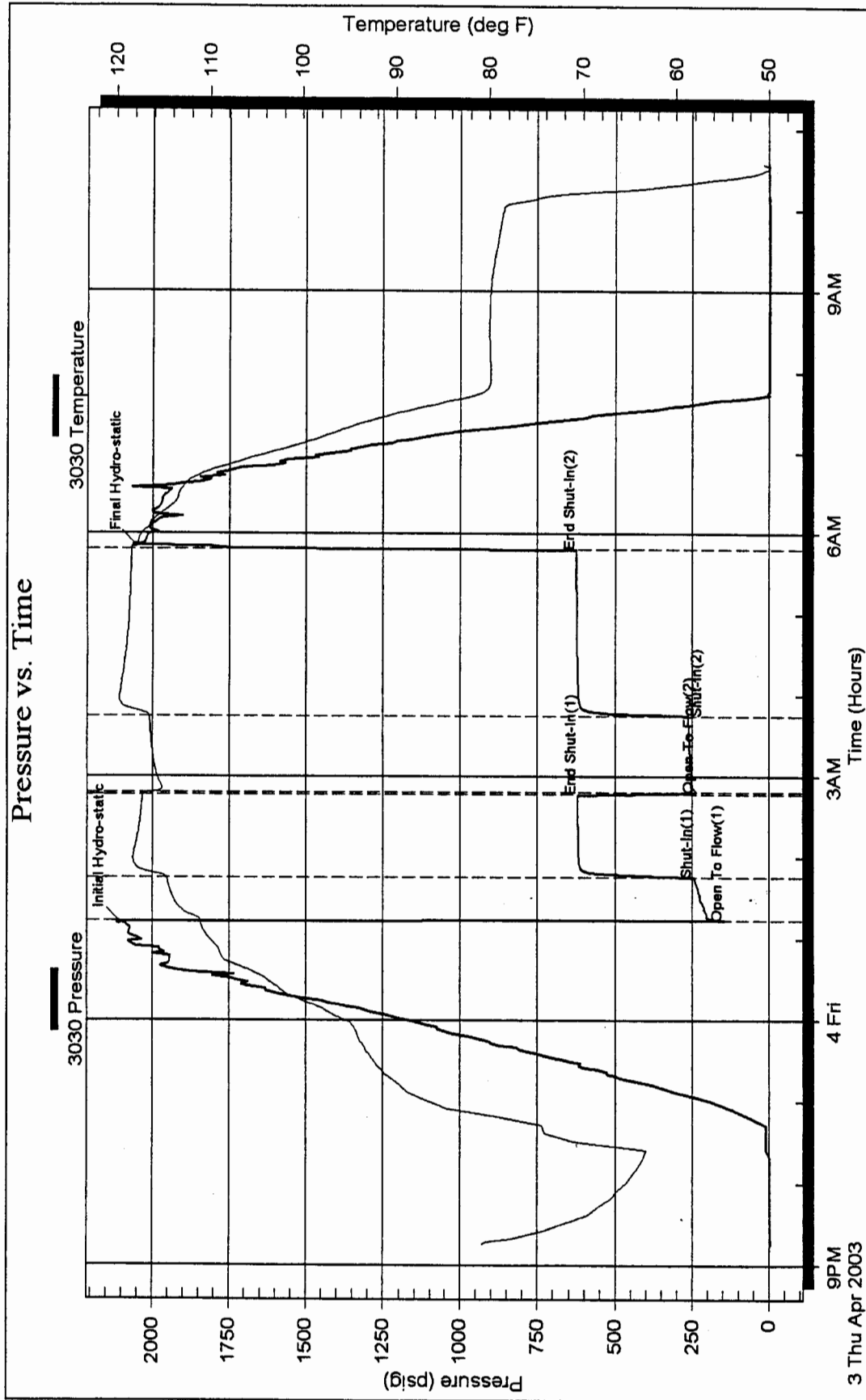
Inside

Dominion Expl & Prod

5-33-42

DST Test Number: 1

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Dominion Expl & Prod

Blout #7-5

14000 Quail Springs Parkway Ste 600
Oklahoma City OK 73134

5-33-42

Job Ticket: 15874

DST#: 1

ATTN: John Schick

Test Start: 2003.04.03 @ 21:14:40

Serial # 3030 Inside				Serial # 3030 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-3.75	80.7		159.4	1076.80	94.5
	0.6	-4.82	80.7		161.7	1104.44	94.7
	1.2	-4.73	80.6		163.9	1192.06	95.0
	1.8	-4.47	80.2		166.2	1189.98	95.6
	9.9	-3.75	74.3		168.4	1268.62	96.5
	18.9	-3.40	70.5		170.7	1276.82	97.1
	27.9	-3.48	68.3		172.9	1357.37	97.6
	36.9	-3.47	66.6		175.2	1364.74	98.3
	45.9	-3.38	65.4		177.4	1431.75	99.0
	54.9	-3.42	64.5		179.7	1447.67	100.0
	63.9	-3.36	63.5		181.9	1481.65	100.8
	72.9	-3.53	69.1		184.2	1582.49	101.6
	81.9	9.53	74.1		186.4	1569.21	102.1
	90.9	37.41	75.9		188.7	1630.16	102.5
	99.9	121.75	84.4		190.9	1657.15	102.9
	108.9	238.44	88.0		193.2	1686.07	103.4
	117.9	382.90	89.7		195.4	1781.64	103.8
	123.4	500.44	90.7		197.7	1806.36	104.4
	125.7	526.13	91.2		199.9	1833.59	105.0
	127.9	556.74	91.5		202.2	1926.30	105.7
	130.2	593.99	91.8		204.4	1918.45	106.5
	132.4	612.39	92.1		206.7	1947.57	107.4
	134.7	641.11	92.3		208.9	1944.20	108.2
	136.9	702.90	92.5		211.2	1942.34	108.6
	139.2	729.03	92.8		213.4	1941.46	108.8
	141.4	758.03	93.1		215.7	1960.29	108.9
	143.7	810.58	93.3		217.9	1974.40	109.0
	145.9	847.05	93.4		220.2	2053.05	109.3
	148.2	901.95	93.6		222.4	2019.33	109.6
	150.4	943.74	93.9		224.7	2032.82	109.9
	152.7	961.39	94.1		226.9	2064.37	110.2
	154.9	990.17	94.2		229.2	2077.83	110.4
	157.2	1053.55	94.3		231.4	2073.84	110.7

Printing every 9 samples

Serial # 3030	Inside			Serial # 3030	Inside		
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	233.7	2070.66	110.8		305.2	619.11	117.7
	235.9	2088.86	110.9		307.4	619.19	117.6
	237.7	2082.09	111.0		309.7	619.33	117.5
	237.9	2092.75	111.0		311.9	619.49	117.5
Initial Hydro-static	238.2	2106.10	111.1		314.2	619.61	117.5
	238.4	153.25	111.1		316.4	619.71	117.4
Open To Flow (1)	238.7	144.68	111.1		318.7	619.81	117.4
	238.9	156.33	111.1		320.9	619.90	117.3
	241.2	204.12	111.3		323.2	619.94	117.3
	243.4	202.01	112.1		325.4	620.00	117.3
	245.7	207.00	112.7		327.7	620.08	117.3
	247.9	210.15	113.2		329.9	620.10	117.2
	250.2	213.85	113.5		331.2	620.10	117.2
	252.4	220.46	113.7		331.4	620.14	117.2
	254.7	225.89	113.9	End Shut-In(1)	331.7	620.10	117.2
	256.9	223.52	114.0		331.9	614.90	117.2
	259.2	228.09	114.1		332.2	392.53	117.2
	261.4	232.03	114.2		332.4	285.61	117.1
	263.7	234.70	114.3		332.7	251.40	117.0
	265.9	237.26	114.4		332.9	235.22	116.8
	268.2	240.97	114.5	Open To Flow (2)	333.2	236.78	116.5
	270.2	242.25	114.6		333.4	237.92	116.3
	270.4	242.41	114.6		333.7	238.92	116.0
Shut-In(1)	270.7	244.09	114.6		333.9	237.84	115.8
	270.9	295.76	114.6		336.2	247.12	115.1
	271.2	345.33	114.6		338.4	253.04	115.2
	271.4	387.79	114.7		340.7	251.96	115.3
	273.7	569.95	115.8		342.9	250.22	115.5
	275.9	605.82	117.1		345.2	249.72	115.6
	278.2	613.01	117.8		347.4	250.92	115.7
	280.4	615.16	118.1		349.7	251.68	115.8
	282.7	616.18	118.2		351.9	253.12	115.9
	284.9	616.80	118.2		354.2	252.50	115.9
	287.2	617.30	118.2		356.4	253.56	116.0
	289.4	617.66	118.1		358.7	255.37	116.1
	291.7	617.96	118.0		360.9	257.37	116.1
	293.9	618.23	118.0		363.2	257.19	116.2
	296.2	618.44	117.9		365.4	257.07	116.2
	298.4	618.65	117.8		367.7	258.67	116.2
	300.7	618.78	117.8		369.9	259.91	116.3
	302.9	618.98	117.7		372.2	259.25	116.3

Printing every 9 samples

Serial # 3030	Inside			Serial # 3030	Inside		
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	374.4	259.09	116.3		455.4	622.73	118.7
	376.7	262.10	116.3		457.7	622.83	118.7
	378.9	259.07	116.4		459.9	622.93	118.7
	381.2	260.59	116.4		462.2	623.07	118.7
	383.4	260.25	116.4		464.4	623.13	118.6
	385.7	261.13	116.4		466.7	623.19	118.6
	387.9	262.10	116.4		468.9	623.25	118.6
	388.9	263.08	116.4		471.2	623.29	118.6
Shut-In(2)	389.2	262.82	116.4		473.4	623.43	118.6
	389.4	261.72	116.4		475.7	623.49	118.6
	389.7	295.94	116.4		477.9	623.53	118.5
	389.9	348.31	116.4		480.2	623.61	118.5
					482.4	623.71	118.5
	390.2	392.89	116.5		484.7	623.79	118.5
	392.4	576.74	117.3		486.9	623.81	118.5
	394.7	607.45	118.6		489.2	623.90	118.5
	396.9	613.43	119.3		491.4	623.92	118.5
	399.2	615.56	119.6		493.7	623.96	118.5
	401.4	616.58	119.7		495.9	624.04	118.5
	403.7	617.30	119.6		498.2	624.04	118.5
	405.9	617.96	119.6		500.4	624.10	118.4
	408.2	618.50	119.6		502.7	624.08	118.4
	410.4	618.90	119.5		504.9	624.10	118.4
	412.7	619.22	119.5		507.2	624.16	118.4
	414.9	619.62	119.4		509.4	624.22	118.4
	417.2	619.86	119.4		511.7	624.24	118.4
	419.4	620.08	119.4		512.7	624.23	118.4
	421.7	620.36	119.3		512.9	624.27	118.4
	423.9	620.60	119.2	End Shut-In(2)	513.2	624.25	118.4
	426.2	620.84	119.2		513.4	644.92	118.4
	428.4	621.00	119.2		513.7	1449.93	118.4
	430.7	621.18	119.1		513.9	1758.17	118.4
	432.9	621.34	119.1		515.9	1529.74	118.2
	435.2	621.56	119.0	Final Hydro-static	516.2	1681.63	118.1
	437.4	621.70	119.0		516.4	2054.53	118.1
	439.7	621.87	119.0		516.7	2000.52	118.0
	441.9	622.01	118.9		516.9	2041.32	118.0
	444.2	622.13	118.9		517.2	2031.96	117.9
	446.4	622.29	118.9		519.4	2027.68	117.7
	448.7	622.45	118.8		521.7	2017.70	117.6
	450.9	622.55	118.8		523.9	2014.60	117.4
	453.2	622.65	118.8				

Printing every 9 samples

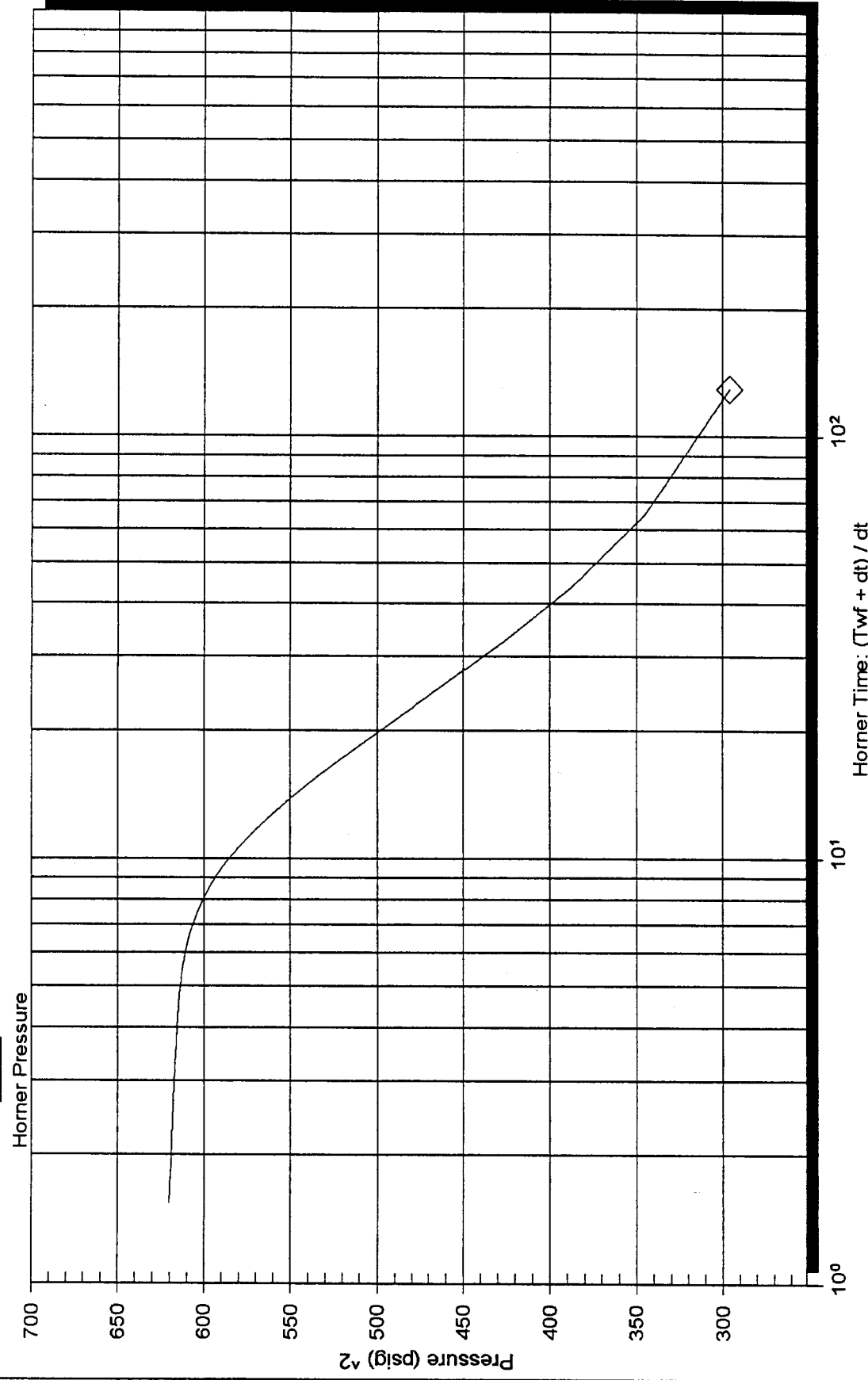
Serial # 3030	Inside			Serial # 3030	Inside		
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	526.2	1978.81	117.2		618.4	365.38	87.5
	528.4	2013.56	116.7		620.7	268.26	86.1
	530.7	2004.87	116.4		622.9	186.47	84.6
	532.9	1935.57	116.3		625.2	103.38	83.0
	535.2	1981.45	116.1		627.4	-4.90	81.6
	537.4	1962.47	115.7		629.7	4.67	80.7
	539.7	1993.11	115.3		631.9	-5.11	80.3
	541.9	1944.38	114.9		634.2	-5.11	80.0
	544.2	1978.13	114.4		636.4	-5.09	79.9
	546.4	1972.42	114.0		638.7	-5.05	79.8
	548.7	1969.24	113.6		640.9	-5.07	79.8
	550.9	1967.64	113.5		643.2	-4.99	79.8
	553.2	1962.11	113.4		645.4	-4.97	79.9
	555.4	1947.99	113.3		647.7	-4.95	79.9
	557.7	1935.29	113.1		649.9	-4.97	79.9
	559.9	1932.05	112.8		652.2	-4.97	79.9
	562.2	1904.97	112.6		654.4	-4.94	79.9
	564.4	1878.39	112.3		656.7	-4.97	79.9
	566.7	1845.63	111.7		658.9	-4.97	79.9
	568.9	1817.89	111.0		661.2	-4.95	79.9
	571.2	1761.50	110.3		663.4	-4.94	80.0
	573.4	1649.64	109.3		665.7	-4.92	80.0
	575.7	1605.52	108.2		667.9	-4.93	80.0
	577.9	1613.85	107.1		670.2	-4.92	80.0
	580.2	1555.50	106.1		672.4	-4.95	80.0
	582.4	1496.63	105.0		674.7	-4.94	80.0
	584.7	1415.72	103.8		676.9	-4.89	80.0
	586.9	1379.70	102.6		679.2	-4.92	80.0
	589.2	1320.80	101.4		681.4	-4.92	80.0
	591.4	1261.15	100.3		683.7	-4.95	80.0
	593.7	1203.18	99.3		685.9	-4.95	80.0
	595.9	1167.91	98.2		688.2	-4.99	80.0
	598.2	1083.53	97.4		690.4	-4.97	80.0
	600.4	1024.63	96.5		692.7	-5.01	80.0
	602.7	924.98	95.6		694.9	-4.97	79.9
	604.9	818.43	94.7		697.2	-5.01	79.9
	607.2	748.78	93.7		699.4	-5.03	79.9
	609.4	649.50	92.5		701.7	-5.01	79.9
	611.7	592.06	91.4		703.9	-4.97	79.9
	613.9	531.22	90.2		706.2	-5.03	79.9
	616.2	447.85	88.9		708.4	-5.07	79.8

Printing every 9 samples

Serial # 3030		Inside	
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	710.7	-5.01	79.8
	712.9	-5.03	79.7
	715.2	-5.01	79.7
	717.4	-5.01	79.6
	719.7	-5.03	79.6
	721.9	-5.07	79.6
	724.2	-5.03	79.5
	726.4	-5.01	79.5
	728.7	-5.05	79.4
	730.9	-5.07	79.4
	733.2	-5.07	79.3
	735.4	-5.05	79.3
	737.7	-5.03	79.2
	739.9	-5.05	79.1
	742.2	-5.05	79.1
	744.4	-5.03	79.0
	746.7	-5.03	79.0
	748.9	-5.01	78.9
	751.2	-5.01	78.8
	753.4	-5.05	78.8
	755.7	-5.01	78.7
	757.9	-4.99	78.7
	760.2	-4.99	78.6
	762.4	-4.95	78.5
	764.7	-4.97	78.5
	766.9	-4.97	78.4
	769.2	-4.43	77.9
	771.4	-4.29	75.9
	773.7	-4.41	74.6
	775.9	-3.73	73.3
	778.2	-2.48	68.8
	780.4	-2.45	64.1
	782.7	-2.53	60.7
	784.9	-2.61	58.3
	787.2	-2.29	55.8
	789.4	-2.32	53.4
	791.7	-2.62	51.6
	793.9	-2.84	50.6
	796.2	-2.98	50.0
	798.4	-3.63	50.1
	799.2	-4.15	50.6

Printing every 9 samples

Horner Plot



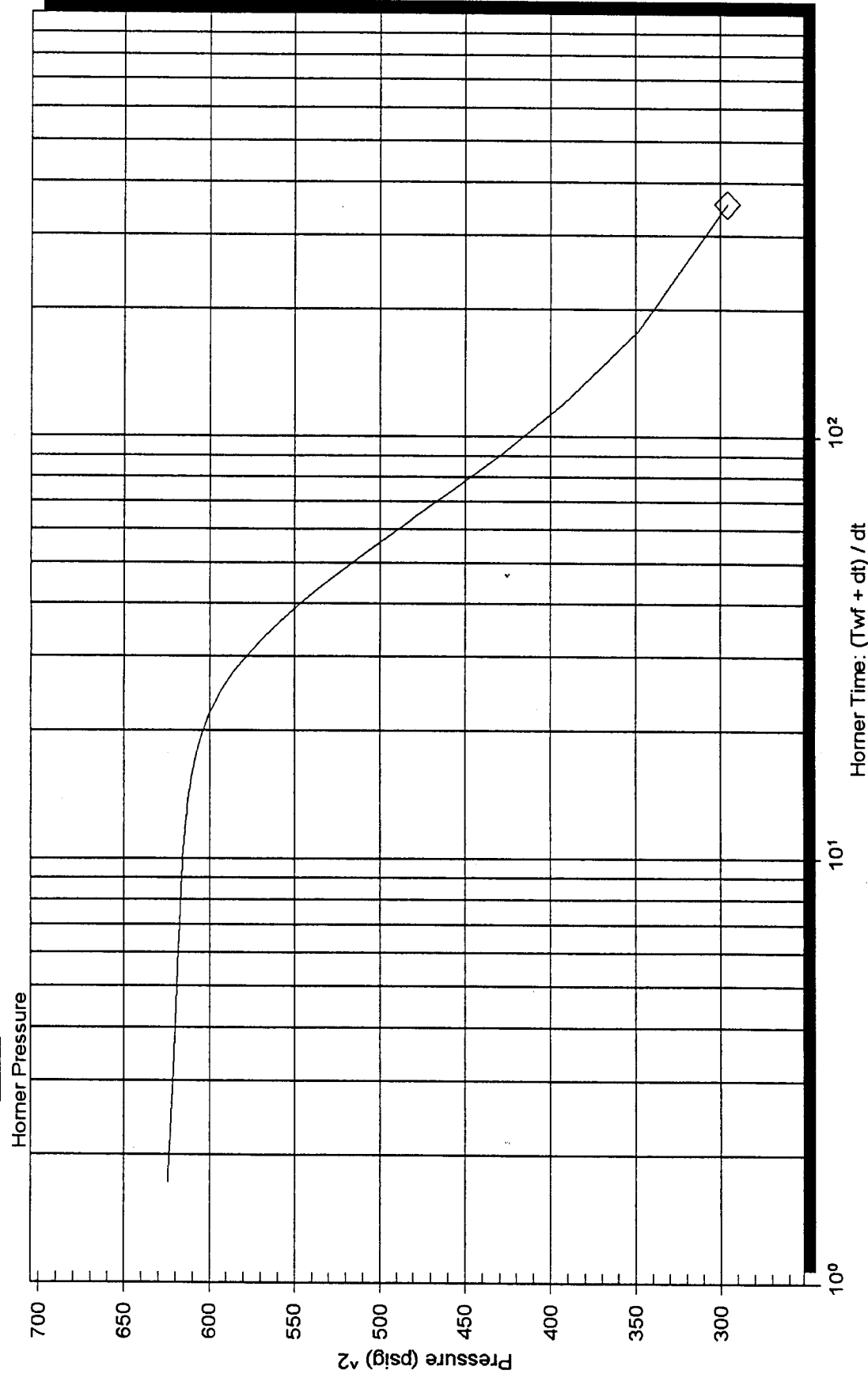
Serial Number: 3030 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot

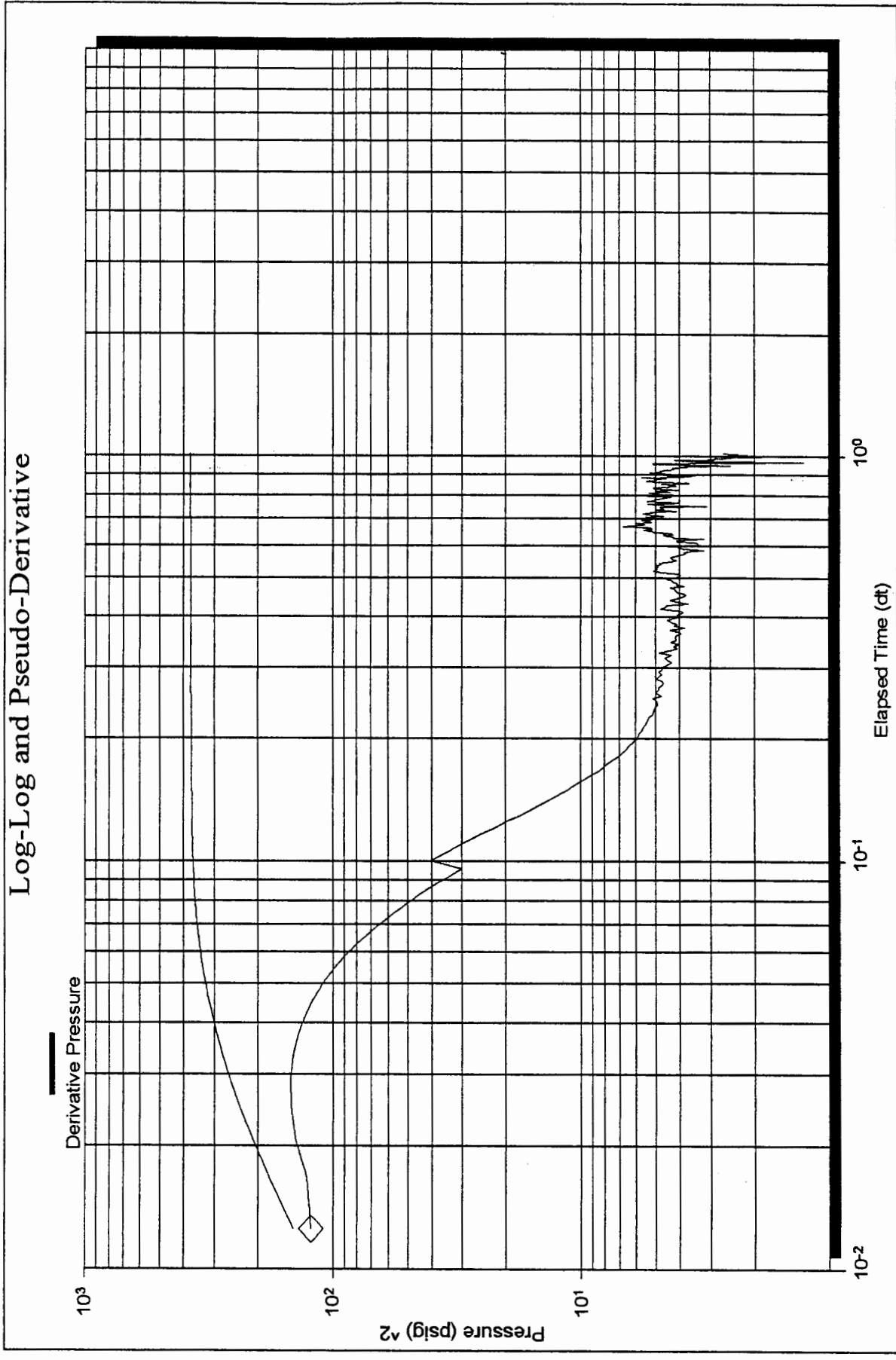


Serial Number: 3030 (Inside)

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

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative

