



## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary jr & Associates**

1515 Wynkoop  
Suite 700  
Denver, CO. 80202

ATTN: Neil Sharp

**2-16s-17w-Rush**

**Younger-Dome #1-2**

Start Date: 2011.03.07 @ 00:44:36

End Date: 2011.03.07 @ 09:52:36

Job Ticket #: 41719                      DST #: 4

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary jr & Associates

**Younger-Dome #1-2**

1515 Wynkoop  
Suite 700  
Denver, CO. 80202  
ATTN: Neil Sharp

**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

## GENERAL INFORMATION:

Formation: **Penn. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:28:06

Time Test Ended: 09:52:36

Test Type: Conventional Bottom Hole

Tester: JasonMcLemore

Unit No: 54

**Interval: 3464.00 ft (KB) To 3498.00 ft (KB) (TVD)**

Reference Elevations: 1913.00 ft (KB)

Total Depth: 3498.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8673 Inside**

Press @ Run Depth: 65.92 psig @ 3469.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.03.07

End Date:

2011.03.07

Last Calib.: 1899.12.30

Start Time: 00:44:38

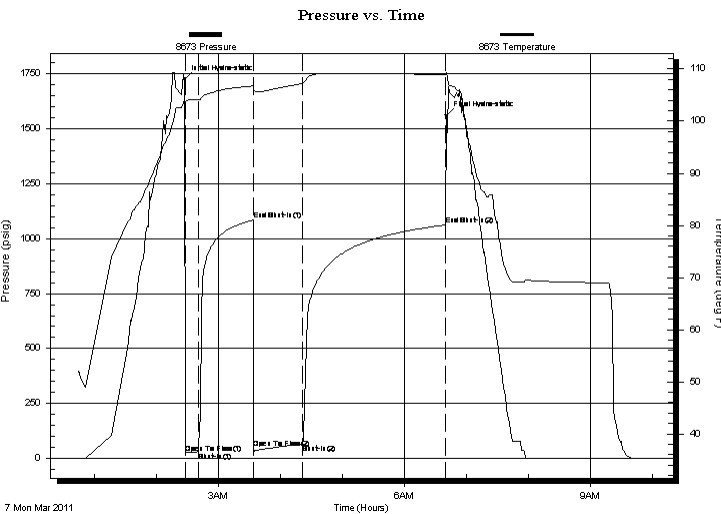
End Time:

09:52:36

Time On Btm: 2011.03.07 @ 02:27:21

Time Off Btm: 2011.03.07 @ 06:40:06

**TEST COMMENT:** IFP-10 Min.-Good Blow ,Built to 6"  
ISI-60 Min.-Dead  
FFP-45 Min.-Good Blow ,BOB in 12 Min.  
FSI-135 Min.-Dead



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1723.10	104.22	Initial Hydro-static
1	22.22	103.64	Open To Flow (1)
13	29.80	104.09	Shut-In(1)
66	1083.82	106.75	End Shut-In(1)
67	45.77	106.14	Open To Flow (2)
114	65.92	107.25	Shut-In(2)
253	1062.19	109.01	End Shut-In(2)
253	1560.35	109.35	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	Free Oil	1.40
30.00	OCM-35%O-65%M	0.42
0.00	300' Gas In Pipe	0.00

## Gas Rates

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







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**TOOL DIAGRAM**

Samuel Gary jr & Associates

**Younger-Dome #1-2**

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Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

## Tool Information

Drill Pipe:	Length: 3439.00 ft	Diameter: 3.80 inches	Volume: 48.24 bbl	Tool Weight: 2000.00 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: 60000.00 lb
			<u>Total Volume: 48.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3464.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	69.00 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	6755	Fluid	3429.00	
Change Over Sub	5.00			3434.00	
Shut In Tool	5.00			3439.00	
Sampler	3.00			3442.00	
Hydraulic tool	5.00			3447.00	
Jars	5.00			3452.00	
Safety Joint	2.00			3454.00	
Packer	5.00			3459.00	35.00 Bottom Of Top Packer
Packer	5.00			3464.00	
Stubb	1.00			3465.00	
Perforations	4.00			3469.00	
Recorder	0.00	8673	Inside	3469.00	
Recorder	0.00	6668	Outside	3469.00	
Perforations	26.00			3495.00	
Bullnose	3.00			3498.00	34.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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**Younger-Dome #1-2**

1515 Wynkoop  
Suite 700  
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ATTN: Neil Sharp

**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 46.00 sec/qt  
Water Loss: 8.07 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 5700.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 39 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	Free Oil	1.403
30.00	OCM-35%O-65%M	0.421
0.00	300' Gas In Pipe	0.000

Total Length: 130.00 ft      Total Volume: 1.824 bbl

Num Fluid Samples: 0

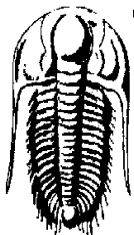
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler-100#, 3000ml, Gassy Oil 30%G-70%O



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# DRILL STEM TEST REPORT

**GAS RATES**

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**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

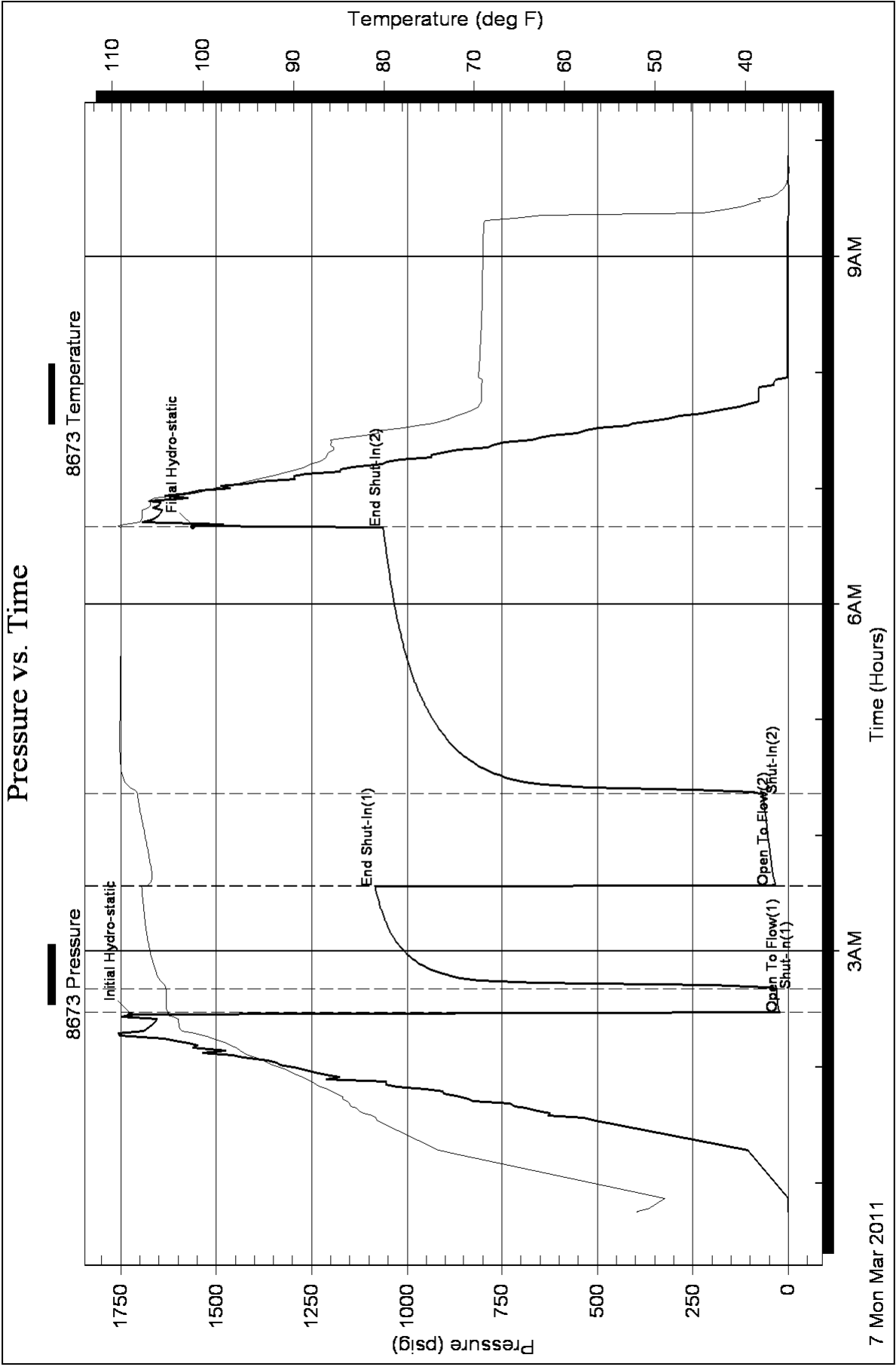
Test Start: 2011.03.07 @ 00:44:36

## Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

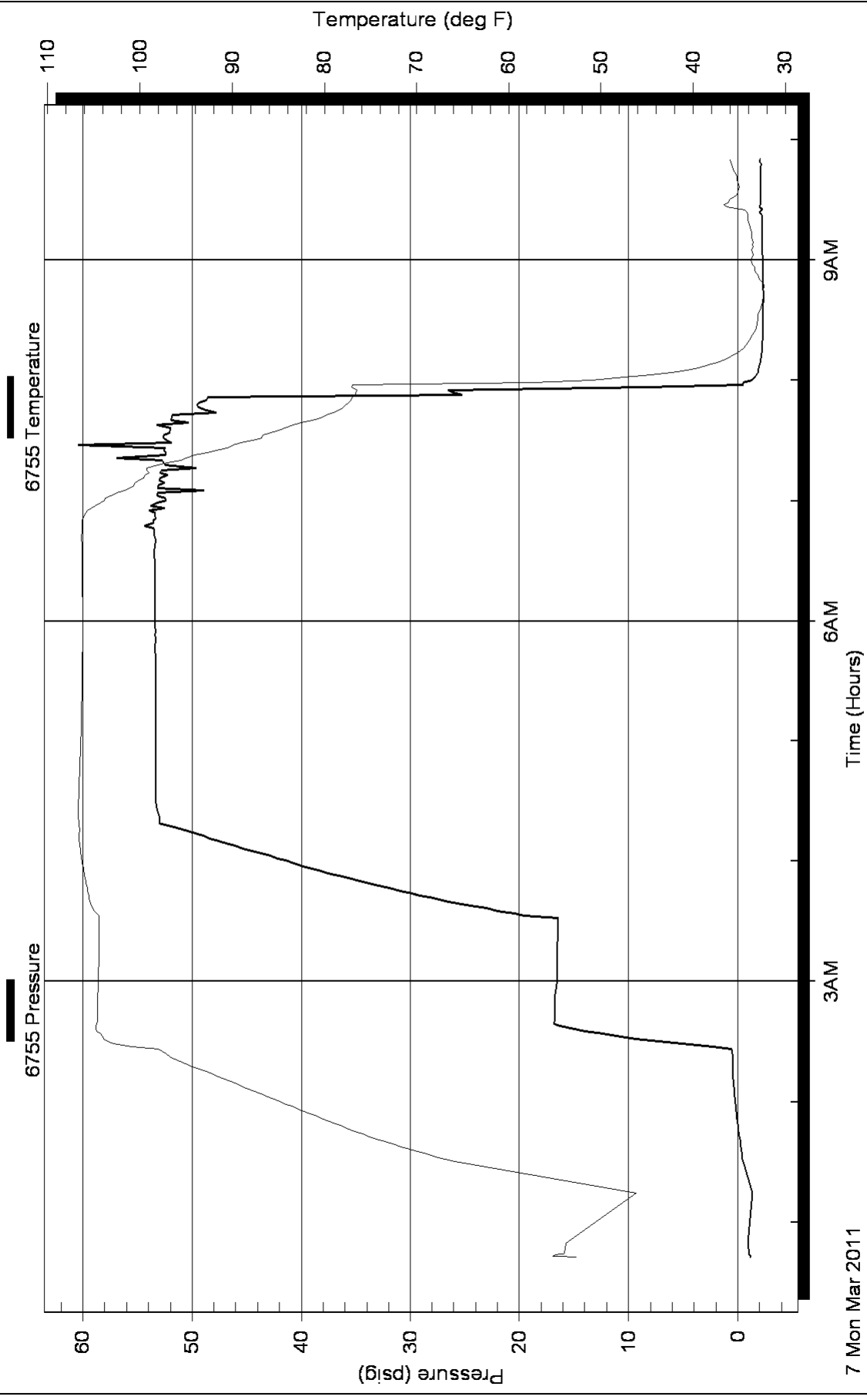
Gas Rates Table

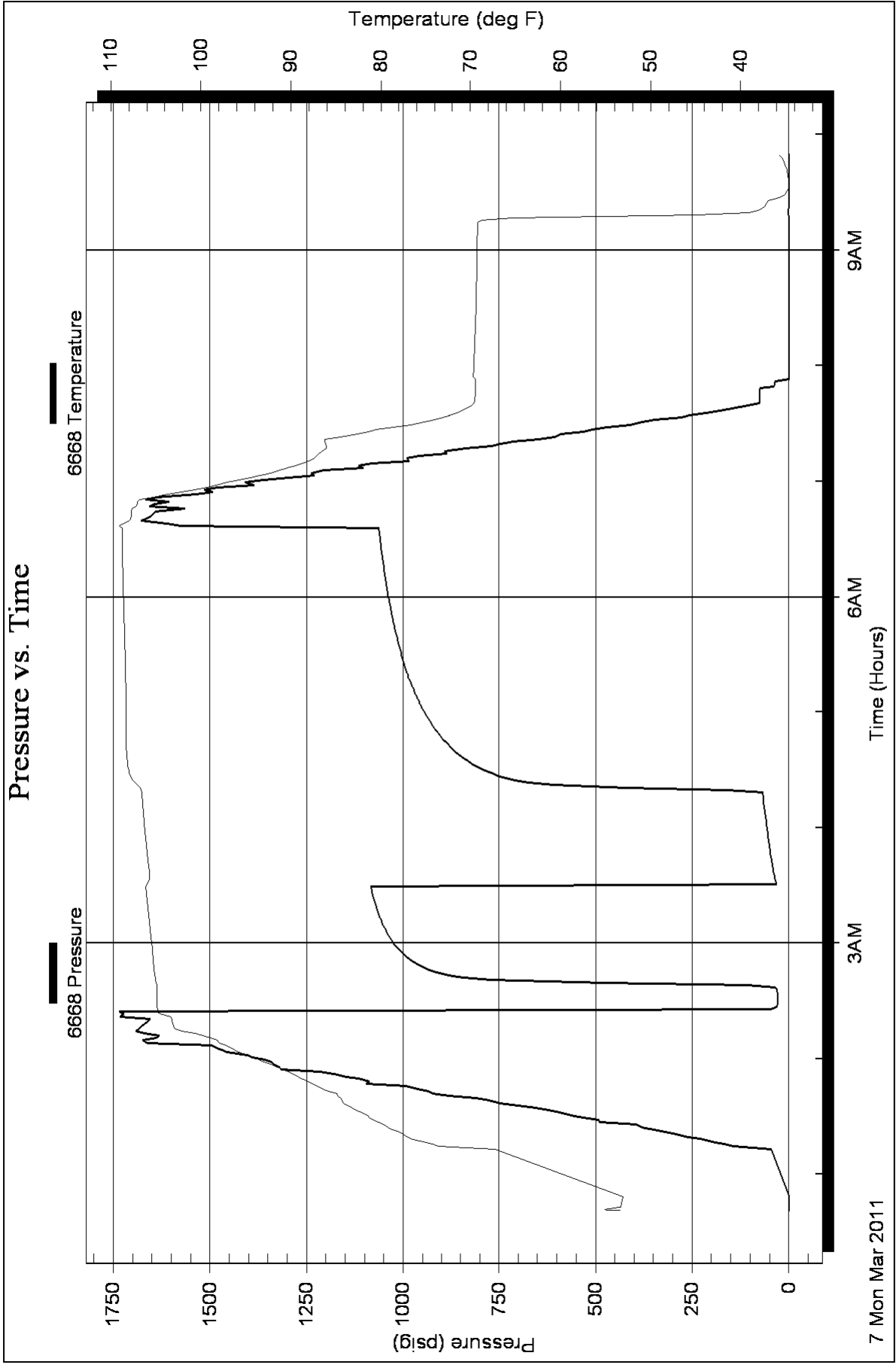
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
		0.00	0.00	0.00

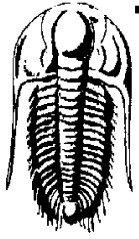




### Pressure vs. Time







**TRILOBITE  
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## DRILL STEM TESTING - DATA LISTING

Samuel Gary jr & Associates

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**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

Serial # 8673 Inside				Serial # 8673 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.02	51.9		87.7	1573.52	97.4
	0.2	-0.05	52.0		89.5	1732.76	98.5
	0.5	-0.07	52.0		91.2	1754.13	99.5
	0.7	-0.05	51.8		93.0	1694.55	101.7
	0.9	-0.04	51.6		94.7	1683.39	102.5
	1.2	-0.05	51.3		96.5	1672.11	102.6
	1.4	-0.07	51.1		98.2	1661.56	102.7
	1.6	-0.13	50.9		100.0	1655.01	102.7
	1.9	-0.18	50.8		101.7	1719.52	104.0
	22.0	11.23	67.2		102.2	1722.99	104.2
	47.5	502.22	80.8		102.5	1722.96	104.2
	49.2	563.71	81.0	Initial Hydro-static	102.7	1723.10	104.2
	51.0	643.68	82.1		103.0	1723.72	104.2
	52.7	656.27	82.8		103.2	233.44	103.5
	54.5	762.08	83.4	Open To Flow (1)	103.5	22.22	103.6
	56.2	729.32	83.8		103.7	22.77	103.8
	58.0	810.53	84.3		104.0	23.30	103.9
	59.7	869.97	84.7		104.2	22.54	103.9
	61.5	888.48	85.4		106.0	25.64	104.1
	63.2	964.74	86.2		107.7	28.43	104.1
	65.0	1026.51	87.0		109.5	28.99	104.0
	66.7	1122.72	87.6		111.2	28.59	104.0
	68.5	1116.05	88.4		113.0	28.84	104.1
	70.2	1180.28	89.2		114.7	29.66	104.1
	72.0	1308.87	89.9		115.0	29.68	104.1
	73.7	1271.90	90.8		115.2	29.72	104.1
	75.5	1388.38	91.8	Shut-In(1)	115.5	29.80	104.1
	77.2	1342.27	92.7		115.7	34.73	104.1
	79.0	1396.08	93.6		116.0	43.54	104.1
	80.7	1448.23	94.5		116.2	54.42	104.1
	82.5	1536.05	95.5		118.0	384.97	104.3
	84.2	1486.81	96.1		119.7	792.25	104.6
	86.0	1608.06	96.8		121.5	866.74	104.9

Printing every 7 samples

Serial # 8673 Inside				Serial # 8673 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	123.2	904.64	105.1		187.0	47.57	106.1
	125.0	930.55	105.2		188.7	48.66	106.1
	126.7	950.35	105.4		190.5	49.94	106.2
	128.5	966.44	105.5		192.2	51.15	106.3
	130.2	979.57	105.6		194.0	52.22	106.4
	132.0	990.90	105.7		195.7	53.20	106.4
	133.7	1000.72	105.8		197.5	54.18	106.5
	135.5	1009.34	105.9		199.2	55.24	106.6
	137.2	1017.06	105.9		201.0	56.38	106.6
	139.0	1024.17	106.0		202.7	57.40	106.7
	140.7	1030.34	106.1		204.5	58.47	106.8
	142.5	1035.98	106.1		206.2	59.52	106.9
	144.2	1041.17	106.2		208.0	60.64	106.9
	146.0	1045.86	106.3		209.7	61.93	107.0
	147.7	1050.17	106.3		211.5	62.93	107.1
	149.5	1054.14	106.4		213.2	63.98	107.1
	151.2	1057.79	106.4		215.0	65.03	107.2
	153.0	1061.42	106.5		216.2	65.81	107.2
	154.7	1064.33	106.5		216.5	65.86	107.2
	156.5	1067.35	106.5	Shut-In(2)	216.7	65.92	107.2
	158.2	1070.19	106.6		217.0	66.06	107.3
	160.0	1072.82	106.6		217.2	77.00	107.3
	161.7	1075.27	106.6		217.5	91.50	107.3
	163.5	1077.65	106.7		219.2	365.83	107.7
	165.2	1079.86	106.7		221.0	627.00	108.4
	167.0	1081.97	106.7		222.7	694.92	108.6
	168.2	1083.69	106.7		224.5	731.62	108.8
	168.5	1083.77	106.7		226.2	758.68	108.9
End Shut-In(1)	168.7	1083.82	106.7		228.0	780.39	109.0
	169.0	1083.69	106.8		229.7	798.71	109.0
Open To Flow (2)	169.2	45.77	106.1		231.5	814.66	109.1
	169.5	33.48	106.2		233.2	828.80	109.1
	171.2	35.59	105.7		235.0	841.67	109.1
	173.0	37.13	105.6		236.7	853.05	109.2
	174.7	39.10	105.6		238.5	863.53	109.2
	176.5	40.67	105.7		240.2	873.24	109.2
	178.2	41.90	105.7		242.0	882.04	109.2
	180.0	43.12	105.8		243.7	890.25	109.2
	181.7	44.23	105.8		245.5	897.98	109.2
	183.5	45.27	105.9		247.2	905.22	109.2
	185.2	46.40	106.0		249.0	911.91	109.2

Printing every 7 samples

<b>Serial # 8673 Inside</b>				<b>Serial # 8673 Inside</b>			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	250.7	918.35	109.2		322.5	1039.39	109.0
	252.5	924.37	109.2		324.2	1040.95	109.0
	254.2	929.94	109.2		326.0	1042.32	109.0
	256.0	935.33	109.2		327.7	1043.73	109.0
	257.7	940.42	109.2		329.5	1045.14	109.0
	259.5	945.31	109.2		331.2	1046.45	109.0
	261.2	949.93	109.1		333.0	1047.72	109.0
	263.0	954.37	109.1		334.7	1048.97	109.0
	264.7	958.62	109.1		336.5	1050.27	109.0
	266.5	962.64	109.1		338.2	1051.48	109.0
	268.2	966.57	109.1		340.0	1052.56	109.0
	270.0	970.18	109.1		341.7	1053.92	109.0
	271.7	974.15	109.1		343.5	1055.05	109.0
	273.5	977.20	109.1		345.2	1056.23	109.0
	275.2	980.84	109.1		347.0	1057.31	109.0
	277.0	984.01	109.1		348.7	1058.39	109.0
	278.7	986.75	109.1		350.5	1059.45	109.0
	280.5	989.84	109.1		352.2	1060.47	109.0
	282.2	992.65	109.1		354.0	1061.55	109.0
	284.0	995.40	109.1		354.7	1062.11	109.0
	285.7	998.09	109.1		355.0	1062.17	109.0
	287.5	1000.67	109.1	End Shut-In(2)	355.2	1062.19	109.0
	289.2	1003.13	109.1	Final Hydro-static	355.5	1560.35	109.3
	291.0	1005.61	109.1		355.7	1571.68	109.2
	292.7	1008.02	109.1		356.0	1573.31	109.0
	294.5	1010.30	109.1		357.7	1686.68	106.9
	296.2	1012.47	109.1		359.5	1661.95	106.8
	298.0	1014.66	109.1		361.2	1651.38	106.7
	299.7	1016.73	109.1		363.0	1642.97	106.7
	301.5	1018.81	109.1		364.7	1669.08	106.2
	303.2	1020.75	109.1		366.5	1647.86	105.8
	305.0	1022.67	109.1		368.2	1608.05	106.1
	306.7	1024.53	109.1		370.0	1574.04	105.3
	308.5	1026.34	109.1		371.7	1603.98	102.3
	310.2	1028.13	109.1		373.5	1543.67	100.0
	312.0	1029.93	109.0		375.2	1470.81	98.5
	313.7	1031.56	109.0		377.0	1387.41	96.9
	315.5	1033.28	109.0		378.7	1387.37	95.1
	317.2	1034.84	109.0		380.5	1327.16	93.2
	319.0	1036.36	109.0		382.2	1267.16	91.7
	320.7	1037.94	109.0		384.0	1204.75	90.3

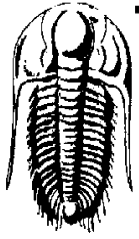
Printing every 7 samples

Serial # 8673 Inside				Serial # 8673 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	385.7	1105.43	89.1		457.5	1.28	69.2
	387.5	1066.60	88.1		459.2	1.29	69.2
	389.2	1001.57	87.0		461.0	1.30	69.2
	391.0	988.19	86.4		462.7	1.26	69.2
	392.7	929.38	86.3		464.5	1.21	69.1
	394.5	885.62	85.7		466.2	0.95	69.1
	396.2	788.48	85.5		468.0	1.34	69.1
	398.0	745.83	85.9		469.7	1.34	69.1
	399.7	713.49	85.9		471.5	1.33	69.1
	401.5	650.07	83.6		473.2	1.34	69.1
	403.2	589.55	81.0		475.0	1.36	69.1
	405.0	528.64	80.7		476.7	1.37	69.1
	406.7	468.03	77.3		478.5	1.37	69.1
	408.5	407.34	74.9		480.2	1.40	69.1
	410.2	344.91	73.5		482.0	1.39	69.1
	412.0	276.69	72.3		483.7	1.35	69.1
	413.7	226.63	71.1		485.5	1.35	69.1
	415.5	180.72	70.3		487.2	1.38	69.1
	417.2	137.06	69.5		489.0	1.40	69.0
	419.0	80.99	69.3		490.7	1.40	69.0
	420.7	77.05	69.1		492.5	1.40	69.0
	422.5	76.81	69.1		494.2	1.41	69.0
	424.2	76.68	69.1		496.0	1.45	69.0
	426.0	76.53	69.1		497.7	1.44	69.0
	427.7	76.28	69.1		499.5	1.43	69.0
	429.5	37.06	69.1		501.2	1.47	69.0
	431.2	33.68	69.1		503.0	1.47	69.0
	433.0	1.21	69.5		504.7	1.46	69.0
	434.7	1.22	69.5		506.5	1.49	69.0
	436.5	1.22	69.4		508.2	1.49	68.9
	438.2	1.21	69.4		510.0	1.49	68.9
	440.0	1.22	69.4		511.7	1.51	68.9
	441.7	1.22	69.4		513.5	1.54	68.8
	443.5	1.20	69.3		515.2	-1.19	63.4
	445.2	1.21	69.3		517.0	-1.25	46.6
	447.0	1.23	69.3		518.7	-1.72	43.1
	448.7	1.23	69.3		520.5	-1.85	41.1
	450.5	1.24	69.3		522.2	-1.88	39.5
	452.2	1.27	69.3		524.0	-1.87	38.2
	454.0	1.26	69.2		525.7	-1.63	37.8
	455.7	1.26	69.2		527.5	-1.91	36.6

Printing every 7 samples

<b>Serial # 8673 Inside</b>				<b>Serial # 6755 Fluid</b>			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	529.2	-1.56	36.1				
	531.0	-1.55	35.7				
	532.7	-1.15	35.5				
	534.5	-0.82	35.4				
	536.2	-0.09	35.4				
	538.0	0.10	35.3				
	539.7	0.20	35.2				
	541.5	0.20	35.3				
	543.2	0.20	35.3				
	545.0	0.13	35.3				
	546.7	0.20	35.3				
	548.0	-0.30	35.4				

Printing every 6 samples



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TESTING - DATA LISTING**

Samuel Gary jr & Associates

**Younger-Dome #1-2**

1515 Wynkoop  
Suite 700  
Denver, CO. 80202  
ATTN: Neil Sharp

**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

<b>Serial # 6755 Fluid</b>				<b>Serial # 6755 Fluid</b>			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.10	52.7		79.5	0.24	85.9
	0.2	-1.18	54.9		81.0	0.27	86.7
	0.4	-1.14	55.3		82.5	0.29	87.5
	0.6	-1.11	55.2		84.0	0.31	88.4
	0.8	-1.08	55.1		85.5	0.34	89.1
	1.0	-1.04	55.0		87.0	0.38	89.9
	1.2	-1.01	54.7		88.5	0.41	90.7
	1.4	-1.02	54.5		90.0	0.41	91.5
	1.6	-1.03	54.2		91.5	0.42	92.3
	1.8	-1.12	54.0		93.0	0.43	93.1
	7.0	-0.90	53.7		94.5	0.42	94.1
	37.0	-1.16	49.3		96.0	0.44	94.9
	48.0	-0.45	66.2		97.5	0.43	95.7
	49.5	-0.43	67.5		99.0	0.42	96.4
	51.0	-0.40	68.7		100.5	0.45	97.0
	52.5	-0.36	69.8		102.0	0.50	97.4
	54.0	-0.34	71.0		103.5	0.58	97.9
	55.5	-0.30	72.1		105.0	2.25	100.9
	57.0	-0.26	73.2		106.5	5.75	103.0
	58.5	-0.23	74.2		108.0	8.15	103.7
	60.0	-0.16	75.2		109.5	10.28	104.0
	61.5	-0.11	76.1		111.0	12.11	104.2
	63.0	-0.09	77.0		112.5	13.94	104.7
	64.5	-0.06	77.8		114.0	15.37	104.8
	66.0	-0.02	78.7		115.5	16.80	104.7
	67.5	0.03	79.5		117.0	16.80	104.6
	69.0	0.06	80.3		118.5	16.75	104.6
	70.5	0.08	81.1		120.0	16.74	104.6
	72.0	0.10	81.9		121.5	16.73	104.6
	73.5	0.14	82.7		123.0	16.73	104.6
	75.0	0.18	83.5		124.5	16.72	104.6
	76.5	0.21	84.3		126.0	16.72	104.6
	78.0	0.22	85.1		127.5	16.70	104.6

Printing every 6 samples



Serial # 6755				Serial # 6755			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	129.0	16.70	104.6		190.5	37.03	106.0
	130.5	16.68	104.6		192.0	38.11	106.1
	132.0	16.67	104.6		193.5	39.09	106.1
	133.5	16.62	104.6		195.0	40.03	106.2
	135.0	16.55	104.6		196.5	40.87	106.3
	136.5	16.53	104.5		198.0	41.74	106.3
	138.0	16.52	104.5		199.5	42.54	106.4
	139.5	16.51	104.5		201.0	43.42	106.4
	141.0	16.51	104.5		202.5	44.47	106.5
	142.5	16.52	104.5		204.0	45.56	106.5
	144.0	16.53	104.5		205.5	46.35	106.5
	145.5	16.54	104.5		207.0	47.24	106.6
	147.0	16.52	104.5		208.5	48.29	106.6
	148.5	16.50	104.5		210.0	49.03	106.6
	150.0	16.47	104.5		211.5	49.88	106.6
	151.5	16.47	104.4		213.0	50.83	106.5
	153.0	16.48	104.4		214.5	51.99	106.6
	154.5	16.49	104.4		216.0	52.98	106.6
	156.0	16.49	104.4		217.5	52.94	106.6
	157.5	16.47	104.4		219.0	52.94	106.7
	159.0	16.46	104.4		220.5	53.04	106.7
	160.5	16.46	104.4		222.0	53.15	106.7
	162.0	16.47	104.4		223.5	53.22	106.7
	163.5	16.47	104.4		225.0	53.25	106.7
	165.0	16.46	104.4		226.5	53.27	106.7
	166.5	16.45	104.4		228.0	53.30	106.7
	168.0	16.44	104.4		229.5	53.31	106.6
	169.5	16.43	104.4		231.0	53.32	106.6
	171.0	20.15	104.6		232.5	53.32	106.6
	172.5	22.03	104.9		234.0	53.30	106.6
	174.0	23.20	105.2		235.5	53.29	106.6
	175.5	24.95	105.3		237.0	53.29	106.6
	177.0	26.30	105.4		238.5	53.31	106.6
	178.5	27.63	105.5		240.0	53.32	106.6
	180.0	29.05	105.6		241.5	53.32	106.6
	181.5	30.15	105.6		243.0	53.31	106.5
	183.0	31.40	105.7		244.5	53.33	106.5
	184.5	32.52	105.8		246.0	53.32	106.5
	186.0	33.65	105.8		247.5	53.30	106.5
	187.5	34.67	105.9		249.0	53.31	106.5
	189.0	35.87	106.0		250.5	53.32	106.5

Printing every 6 samples

Serial # 6755				Serial # 6755			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	252.0	53.31	106.5		313.5	53.33	106.2
	253.5	53.30	106.5		315.0	53.35	106.2
	255.0	53.31	106.4		316.5	53.37	106.2
	256.5	53.31	106.4		318.0	53.36	106.2
	258.0	53.31	106.4		319.5	53.36	106.2
	259.5	53.30	106.4		321.0	53.36	106.2
	261.0	53.30	106.4		322.5	53.36	106.2
	262.5	53.31	106.4		324.0	53.37	106.2
	264.0	53.31	106.4		325.5	53.39	106.2
	265.5	53.33	106.4		327.0	53.39	106.2
	267.0	53.33	106.4		328.5	53.40	106.2
	268.5	53.33	106.4		330.0	53.39	106.2
	270.0	53.32	106.3		331.5	53.39	106.2
	271.5	53.32	106.3		333.0	53.39	106.2
	273.0	53.32	106.3		334.5	53.39	106.2
	274.5	53.31	106.3		336.0	53.36	106.2
	276.0	53.32	106.3		337.5	53.35	106.3
	277.5	53.32	106.3		339.0	53.36	106.2
	279.0	53.32	106.3		340.5	53.39	106.3
	280.5	53.33	106.3		342.0	53.39	106.3
	282.0	53.31	106.3		343.5	53.40	106.3
	283.5	53.30	106.3		345.0	53.40	106.3
	285.0	53.29	106.3		346.5	53.39	106.3
	286.5	53.30	106.3		348.0	53.41	106.3
	288.0	53.32	106.3		349.5	53.42	106.3
	289.5	53.33	106.3		351.0	53.41	106.3
	291.0	53.31	106.3		352.5	53.41	106.3
	292.5	53.32	106.3		354.0	53.41	106.3
	294.0	53.31	106.3		355.5	53.42	106.3
	295.5	53.30	106.3		357.0	48.06	106.3
	297.0	53.29	106.3		358.5	53.37	106.3
	298.5	53.31	106.2		360.0	53.41	106.3
	300.0	53.33	106.2		361.5	53.44	106.3
	301.5	53.34	106.2		363.0	53.47	106.3
	303.0	53.35	106.2		364.5	53.53	106.3
	304.5	53.35	106.2		366.0	53.48	106.3
	306.0	53.36	106.2		367.5	53.55	106.2
	307.5	53.34	106.2		369.0	53.55	106.1
	309.0	53.34	106.2		370.5	55.90	106.0
	310.5	53.36	106.2		372.0	53.53	105.8
	312.0	53.34	106.2		373.5	53.80	105.4

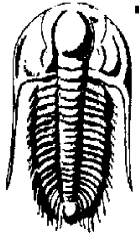
Printing every 6 samples

Serial # 6755				Serial # 6755			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	375.0	53.79	104.8		436.5	-0.65	55.2
	376.5	51.75	104.2		438.0	-1.39	49.4
	378.0	53.21	103.8		439.5	-1.67	45.6
	379.5	52.11	103.4		441.0	-1.80	42.8
	381.0	53.18	102.7		442.5	-1.88	40.6
	382.5	48.94	101.7		444.0	-1.94	39.2
	384.0	53.34	101.0		445.5	-2.03	37.9
	385.5	53.25	100.6		447.0	-2.09	37.0
	387.0	54.42	100.3		448.5	-2.14	36.3
	388.5	52.94	99.6		450.0	-2.18	35.6
	390.0	52.21	99.5		451.5	-2.21	35.1
	391.5	52.81	99.1		453.0	-2.24	34.6
	393.0	49.96	99.3		454.5	-2.25	34.3
	394.5	52.65	98.7		456.0	-2.25	34.1
	396.0	51.53	97.5		457.5	-2.28	33.9
	397.5	52.71	95.6		459.0	-2.32	33.7
	399.0	52.55	95.0		460.5	-2.32	33.5
	400.5	57.16	93.6		462.0	-2.31	33.3
	402.0	52.31	92.3		463.5	-2.32	33.2
	403.5	52.07	90.8		465.0	-2.34	33.1
	405.0	60.40	89.9		466.5	-2.34	33.1
	406.5	52.35	88.9		468.0	-2.32	33.0
	408.0	52.59	87.5		469.5	-2.31	33.0
	409.5	52.16	86.5		471.0	-2.32	32.9
	411.0	52.16	86.1		472.5	-2.34	32.8
	412.5	52.05	85.0		474.0	-2.34	32.6
	414.0	52.10	84.0		475.5	-2.35	32.5
	415.5	51.93	83.2		477.0	-2.37	32.5
	417.0	48.33	81.8		478.5	-2.38	32.5
	418.5	51.96	80.7		480.0	-2.36	32.4
	420.0	51.85	79.8		481.5	-2.36	32.4
	421.5	48.66	79.0		483.0	-2.36	32.4
	423.0	48.96	78.3		484.5	-2.35	32.3
	424.5	49.31	77.9		486.0	-2.33	32.5
	426.0	49.41	77.5		487.5	-2.32	32.7
	427.5	48.73	77.2		489.0	-2.32	33.0
	429.0	48.48	76.9		490.5	-2.32	33.1
	430.5	25.74	76.6		492.0	-2.31	33.3
	432.0	27.76	76.5		493.5	-2.30	33.4
	433.5	10.83	77.0		495.0	-2.29	33.6
	435.0	-0.51	77.0		496.5	-2.30	33.7

Printing every 6 samples

<b>Serial # 6755 Fluid</b>				<b>Serial # 6668 Outside</b>			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	498.0	-2.31	33.6				
	499.5	-2.30	33.5				
	501.0	-2.27	33.6				
	502.5	-2.27	33.6				
	504.0	-2.29	33.5				
	505.5	-2.27	33.6				
	507.0	-2.26	33.6				
	508.5	-2.27	33.7				
	510.0	-2.28	33.6				
	511.5	-2.27	33.7				
	513.0	-2.26	33.8				
	514.5	-2.25	33.9				
	516.0	-2.24	34.0				
	517.5	-2.24	34.1				
	519.0	-2.23	34.1				
	520.5	-2.09	34.1				
	522.0	-2.27	34.2				
	523.5	-1.93	36.1				
	525.0	-2.07	36.7				
	526.5	-2.10	35.9				
	528.0	-2.12	35.8				
	529.5	-2.13	35.4				
	531.0	-2.13	35.2				
	532.5	-2.12	35.1				
	534.0	-2.11	35.1				
	535.5	-2.12	35.1				
	537.0	-2.12	35.2				
	538.5	-2.12	35.3				
	540.0	-2.11	35.3				
	541.5	-2.09	35.5				
	543.0	-2.08	35.7				
	544.5	-2.06	35.8				
	546.0	-2.06	35.9				
	547.5	-2.06	36.0				
	548.0	-2.09	36.1				

Printing every 6 samples



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TESTING - DATA LISTING

Samuel Gary jr & Associates

**Younger-Dome #1-2**

1515 Wynkoop  
Suite 700  
Denver, CO. 80202  
ATTN: Neil Sharp

**2-16s-17w-Rush**

Job Ticket: 41719

**DST#: 4**

Test Start: 2011.03.07 @ 00:44:36

Serial # 6668 Outside				Serial # 6668 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.98	53.4		65.2	1024.17	87.4
	0.2	-1.05	54.8		66.7	1108.30	88.0
	0.4	-1.00	55.1		68.2	1115.49	88.6
	0.6	-0.95	55.0		69.7	1136.69	89.2
	0.8	-0.93	54.8		71.2	1210.32	89.9
	1.0	-0.90	54.4		72.7	1240.08	90.6
	1.2	-0.86	54.1		74.2	1280.29	91.4
	1.4	-0.84	53.8		75.7	1334.32	92.3
	1.6	-0.86	53.5		77.2	1340.61	93.1
	1.8	-0.87	53.3		78.7	1415.78	93.7
	7.0	-0.91	53.1		80.2	1425.73	94.7
	32.2	106.97	73.3		81.7	1456.02	95.7
	33.7	137.73	73.9		83.2	1470.09	96.3
	35.2	182.06	74.9		84.7	1459.09	96.7
	36.7	228.60	76.2		86.2	1546.70	97.4
	38.2	259.06	77.0		87.7	1572.45	98.1
	39.7	289.58	77.6		89.2	1601.83	98.8
	41.2	320.45	78.3		90.7	1631.37	99.8
	42.7	382.35	79.1		92.2	1668.40	100.9
	44.2	410.77	79.6		93.7	1688.88	102.5
	45.7	489.92	80.3		95.2	1678.64	103.0
	47.2	501.54	80.9		96.7	1669.04	103.1
	48.7	505.23	81.3		98.2	1660.06	103.2
	50.2	592.32	81.7		99.7	1653.68	103.2
	51.7	623.23	82.7		101.2	1773.26	103.6
	53.2	655.68	83.2		102.7	1721.77	104.8
	54.7	715.59	83.8		104.2	42.89	104.7
	56.2	744.08	84.2		105.7	32.30	104.8
	57.7	813.94	84.4		107.2	27.98	104.9
	59.2	838.63	84.7		108.7	26.99	104.9
	60.7	924.62	84.9		110.2	27.15	104.9
	62.2	932.68	86.0		111.7	27.53	104.9
	63.7	1033.63	86.7		113.2	28.55	104.9

Printing every 6 samples

Serial # 6668 Outside				Serial # 6668 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	114.7	29.66	104.9		176.2	38.91	105.7
	116.2	53.67	104.9		177.7	40.23	105.8
	117.7	262.92	104.9		179.2	41.58	105.8
	119.2	741.36	105.0		180.7	42.74	105.8
	120.7	842.94	105.1		182.2	44.10	105.9
	122.2	885.88	105.1		183.7	45.09	105.9
	123.7	913.89	105.1		185.2	46.37	105.9
	125.2	934.91	105.2		186.7	47.53	106.0
	126.7	951.79	105.2		188.2	48.56	106.0
	128.2	965.73	105.2		189.7	49.92	106.0
	129.7	977.53	105.3		191.2	50.91	106.1
	131.2	987.70	105.3		192.7	51.92	106.1
	132.7	996.64	105.3		194.2	52.85	106.1
	134.2	1004.69	105.3		195.7	53.58	106.2
	135.7	1011.78	105.4		197.2	54.52	106.2
	137.2	1018.11	105.4		198.7	55.38	106.2
	138.7	1024.00	105.4		200.2	56.31	106.3
	140.2	1029.46	105.5		201.7	57.23	106.3
	141.7	1034.21	105.5		203.2	58.39	106.3
	143.2	1038.80	105.6		204.7	59.26	106.3
	144.7	1043.01	105.6		206.2	60.27	106.4
	146.2	1046.81	105.6		207.7	61.27	106.4
	147.7	1050.52	105.7		209.2	62.50	106.4
	149.2	1053.91	105.7		210.7	63.46	106.4
	150.7	1057.06	105.7		212.2	64.22	106.5
	152.2	1060.00	105.8		213.7	65.27	106.5
	153.7	1063.09	105.8		215.2	66.14	106.5
	155.2	1065.54	105.8		216.7	66.72	106.5
	156.7	1067.97	105.9		218.2	158.36	106.6
	158.2	1070.44	105.9		219.7	474.04	106.8
	159.7	1072.68	105.9		221.2	641.30	107.1
	161.2	1074.77	106.0		222.7	695.70	107.4
	162.7	1076.86	106.0		224.2	728.23	107.7
	164.2	1078.80	106.0		225.7	752.89	107.8
	165.7	1080.60	106.1		227.2	772.94	107.9
	167.2	1082.38	106.1		228.7	790.04	108.0
	168.7	1084.24	106.1		230.2	805.02	108.1
	170.2	32.09	105.9		231.7	818.42	108.1
	171.7	34.30	105.7		233.2	830.45	108.2
	173.2	35.70	105.7		234.7	841.51	108.2
	174.7	37.39	105.7		236.2	851.54	108.2

Printing every 6 samples

Serial # 6668 Outside				Serial # 6668 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	237.7	860.81	108.2		299.2	1017.37	108.5
	239.2	869.43	108.2		300.7	1019.02	108.5
	240.7	877.41	108.3		302.2	1020.69	108.5
	242.2	884.98	108.3		303.7	1022.46	108.5
	243.7	892.00	108.3		305.2	1024.02	108.5
	245.2	898.66	108.3		306.7	1025.61	108.5
	246.7	904.99	108.3		308.2	1027.17	108.5
	248.2	910.90	108.3		309.7	1028.64	108.5
	249.7	916.55	108.3		311.2	1030.18	108.5
	251.2	921.84	108.3		312.7	1031.71	108.5
	252.7	926.91	108.3		314.2	1033.06	108.6
	254.2	931.76	108.3		315.7	1034.40	108.6
	255.7	936.29	108.3		317.2	1035.79	108.6
	257.2	940.78	108.3		318.7	1037.09	108.6
	258.7	945.03	108.3		320.2	1038.41	108.6
	260.2	949.09	108.3		321.7	1039.66	108.6
	261.7	952.98	108.3		323.2	1040.97	108.6
	263.2	956.70	108.3		324.7	1042.16	108.6
	264.7	960.30	108.3		326.2	1043.33	108.6
	266.2	963.71	108.3		327.7	1044.63	108.6
	267.7	967.12	108.3		329.2	1045.68	108.6
	269.2	970.58	108.3		330.7	1046.79	108.6
	270.7	973.48	108.3		332.2	1047.97	108.6
	272.2	976.41	108.3		333.7	1049.07	108.7
	273.7	979.50	108.3		335.2	1050.14	108.7
	275.2	982.15	108.3		336.7	1051.15	108.7
	276.7	984.76	108.3		338.2	1052.20	108.7
	278.2	987.35	108.3		339.7	1053.21	108.7
	279.7	989.95	108.3		341.2	1054.24	108.7
	281.2	992.48	108.4		342.7	1055.23	108.7
	282.7	994.94	108.4		344.2	1056.27	108.7
	284.2	997.19	108.4		345.7	1057.13	108.7
	285.7	999.51	108.4		347.2	1058.02	108.7
	287.2	1001.70	108.4		348.7	1058.99	108.7
	288.7	1003.80	108.4		350.2	1059.86	108.7
	290.2	1005.89	108.4		351.7	1060.84	108.7
	291.7	1008.14	108.4		353.2	1061.67	108.7
	293.2	1009.95	108.4		354.7	1062.74	108.8
	294.7	1011.75	108.4		356.2	1474.59	109.2
	296.2	1013.62	108.4		357.7	1687.28	108.0
	297.7	1015.48	108.5		359.2	1664.01	107.8

Printing every 6 samples

Serial # 6668 Outside				Serial # 6668 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	360.7	1653.00	107.7		422.2	75.06	69.5
	362.2	1645.52	107.7		423.7	74.85	69.5
	363.7	1639.23	107.7		425.2	74.70	69.5
	365.2	1663.86	107.3		426.7	74.55	69.5
	366.7	1645.72	107.0		428.2	39.98	69.4
	368.2	1605.53	107.0		429.7	35.22	69.4
	369.7	1654.33	106.7		431.2	34.54	69.4
	371.2	1587.53	104.8		432.7	-1.29	69.6
	372.7	1576.26	102.6		434.2	-1.28	69.6
	374.2	1461.39	101.0		435.7	-1.29	69.6
	375.7	1481.72	99.4		437.2	-1.29	69.6
	377.2	1449.76	98.1		438.7	-1.31	69.6
	378.7	1389.10	96.5		440.2	-1.28	69.6
	380.2	1327.80	95.1		441.7	-1.30	69.6
	381.7	1252.30	93.6		443.2	-1.31	69.6
	383.2	1237.21	92.2		444.7	-1.32	69.6
	384.7	1149.01	91.1		446.2	-1.30	69.5
	386.2	1143.61	90.0		447.7	-1.30	69.5
	387.7	1096.93	89.1		449.2	-1.32	69.5
	389.2	991.80	88.1		450.7	-1.32	69.5
	390.7	990.65	87.5		452.2	-1.32	69.5
	392.2	928.25	87.1		453.7	-1.31	69.5
	393.7	898.32	86.8		455.2	-1.29	69.5
	395.2	822.97	86.3		456.7	-1.30	69.5
	396.7	805.30	86.0		458.2	-1.34	69.5
	398.2	744.37	86.1		459.7	-1.35	69.4
	399.7	712.54	86.2		461.2	-1.33	69.4
	401.2	651.59	85.7		462.7	-1.31	69.4
	402.7	595.02	83.4		464.2	-1.31	69.4
	404.2	560.56	81.5		465.7	-1.34	69.4
	405.7	508.89	80.6		467.2	-1.33	69.4
	407.2	444.50	78.4		468.7	-1.33	69.4
	408.7	408.32	76.0		470.2	-1.33	69.4
	410.2	340.02	74.5		471.7	-1.33	69.4
	411.7	301.48	73.3		473.2	-1.32	69.4
	413.2	257.27	72.3		474.7	-1.30	69.3
	414.7	194.80	71.4		476.2	-1.30	69.3
	416.2	166.83	70.6		477.7	-1.32	69.3
	417.7	108.38	70.0		479.2	-1.34	69.3
	419.2	77.08	69.7		480.7	-1.33	69.3
	420.7	75.10	69.5		482.2	-1.34	69.3

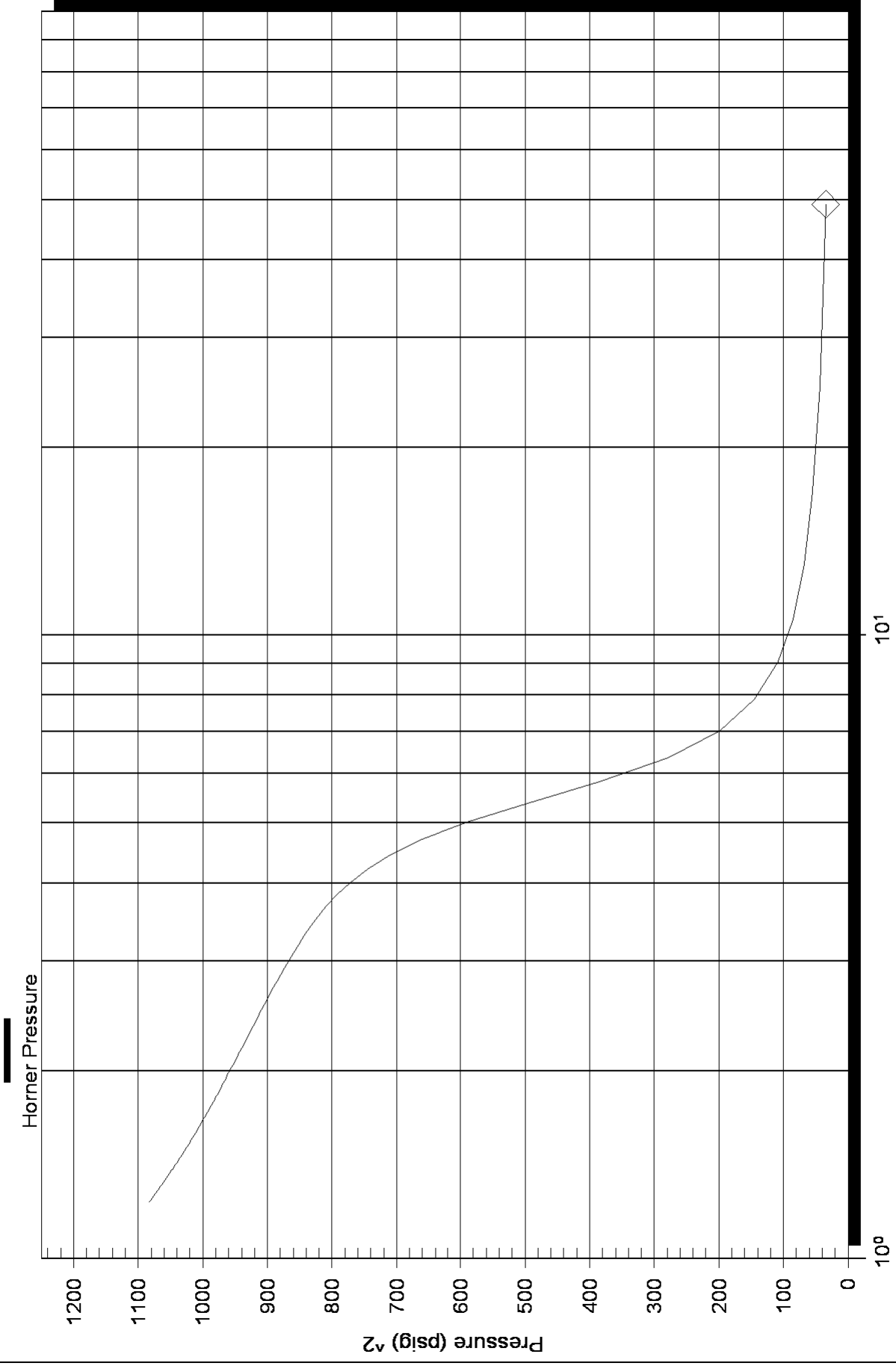
Printing every 6 samples



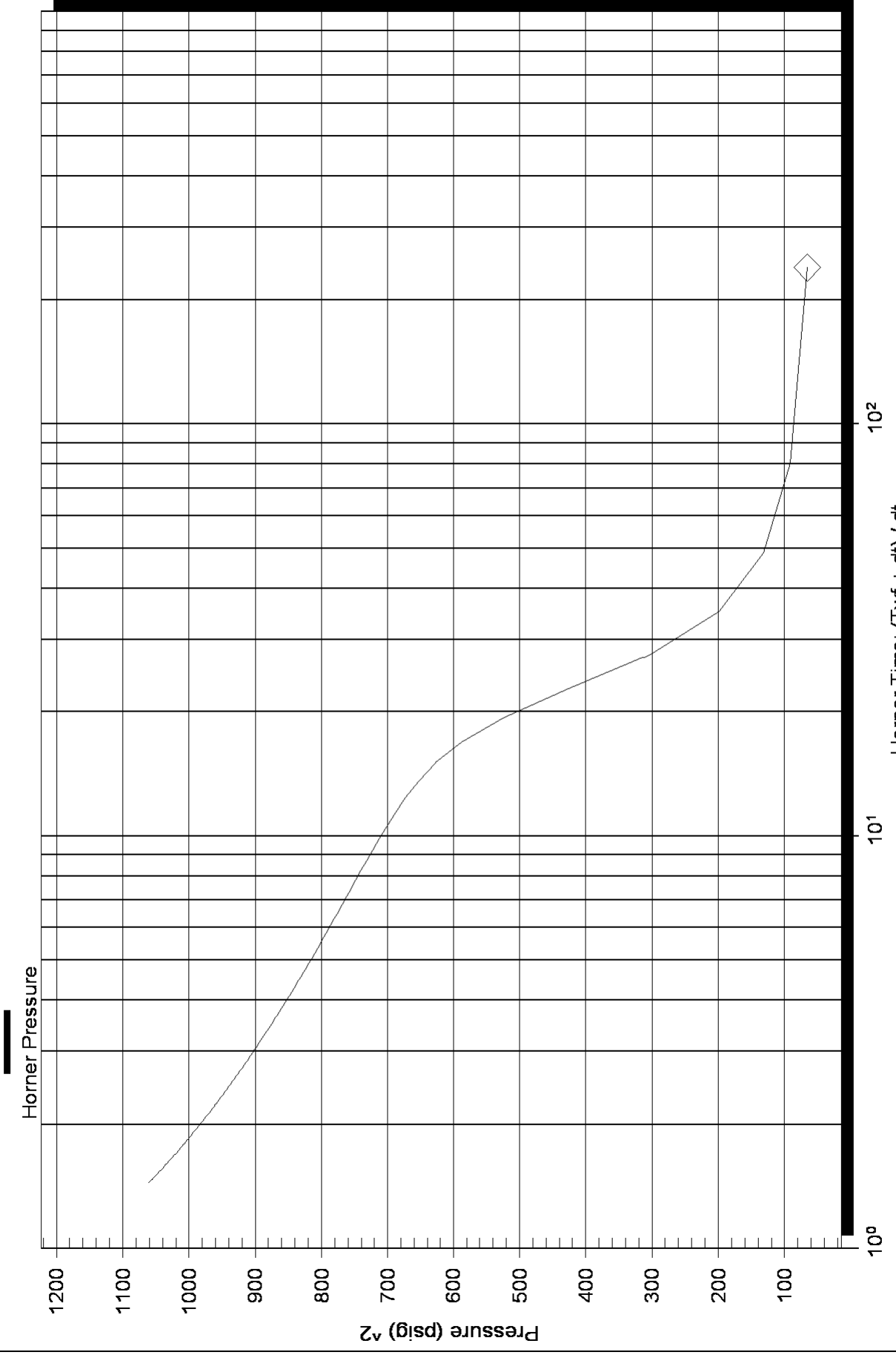
Serial # 6668 Outside				Serial # 6668 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	483.7	-1.32	69.3		545.2	-0.99	35.2
	485.2	-1.33	69.3		546.7	-1.04	35.4
	486.7	-1.34	69.3		548.2	-1.02	35.7
	488.2	-1.34	69.3				
	489.7	-1.33	69.3				
	491.2	-1.31	69.3				
	492.7	-1.31	69.3				
	494.2	-1.31	69.3				
	495.7	-1.31	69.3				
	497.2	-1.31	69.3				
	498.7	-1.31	69.3				
	500.2	-1.32	69.3				
	501.7	-1.35	69.2				
	503.2	-1.38	69.2				
	504.7	-1.38	69.2				
	506.2	-1.38	69.2				
	507.7	-1.39	69.2				
	509.2	-1.39	69.2				
	510.7	-1.39	69.2				
	512.2	-1.33	69.2				
	513.7	-1.22	69.2				
	515.2	-1.13	66.8				
	516.7	-0.58	50.0				
	518.2	-0.66	39.1				
	519.7	-0.76	37.9				
	521.2	-0.81	37.5				
	522.7	-0.94	37.2				
	524.2	-1.04	37.0				
	525.7	-1.03	36.0				
	527.2	-1.03	35.3				
	528.7	-1.02	35.0				
	530.2	-1.03	34.7				
	531.7	-1.02	34.7				
	533.2	-1.02	34.6				
	534.7	-1.03	34.6				
	536.2	-1.03	34.7				
	537.7	-1.03	34.7				
	539.2	-1.03	34.8				
	540.7	-1.02	34.9				
	542.2	-1.01	35.0				
	543.7	-1.02	35.1				

Printing every 6 samples

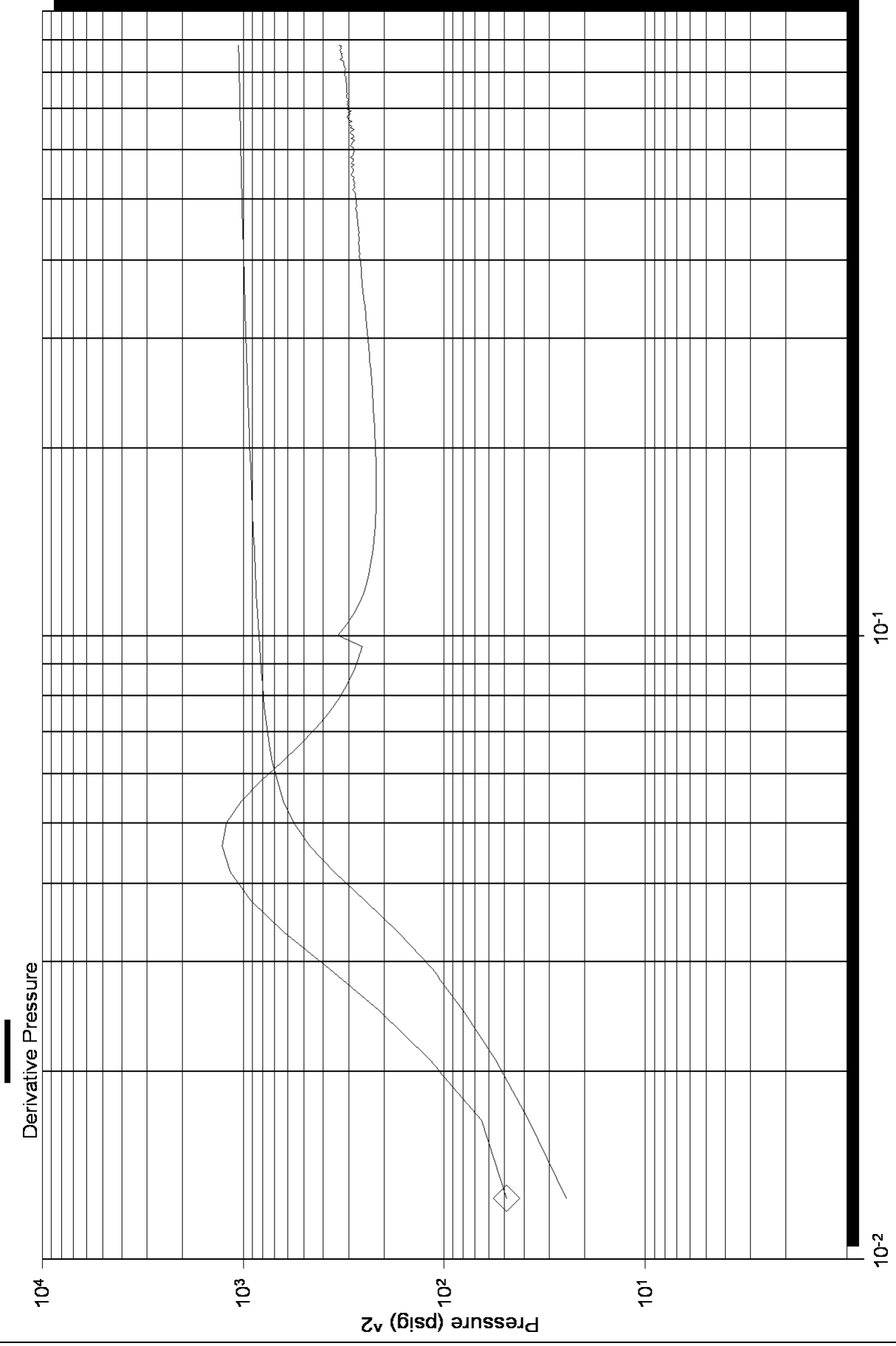
### Homer Plot



### Homer Plot



# Log-Log and Pseudo-Log-Derivative



# Log-Log and Pseudo-Derivative

