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KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water, Suite #250
Wichita Ks. 67202

ATTN: Paul Gunzelman

25-6s-22w-Graham Co.

Worcester #1-25

Start Date: 2003.07.24 @ 09:28:23

End Date: 2003.07.24 @ 16:47:53

Job Ticket #: 18803

DST #: 1

**RELEASED
FROM
CONFIDENTIAL**

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Murfin Drilling Co

Worcester #1-25

25-6s-22w-Graham Co.

DST # 1

Lansing "B"

2003.07.24

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79958


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfine Drilling Co

Worcester #1-25

250 N Water, Suite #250
Wichita Ks. 67202

25-6s-22w-Graham Co.

Job Ticket: 18803

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2003.07.24 @ 09:28:23

GENERAL INFORMATION:

Formation: **Lansing "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:00:53

Time Test Ended: 16:47:53

Interval: **3543.00 ft (KB) To 3566.00 ft (KB) (TVD)**

Total Depth: 3566.00 ft (KB) (TVD)

Hole Diameter: 6.80 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 28

Reference Elevations: 2269.00 ft (KB)

2263.00 ft (CF)

KB to GR/CF: 6.00 ft

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AUG 07 2003

CONFIDENTIAL

Serial #: 6753

Inside

Press@RunDepth: 120.97 psig @ 3544.00 ft (KB)

Start Date: 2003.07.24

End Date:

2003.07.24

Start Time: 09:28:25

End Time:

16:47:53

Capacity: 7000.00 psig

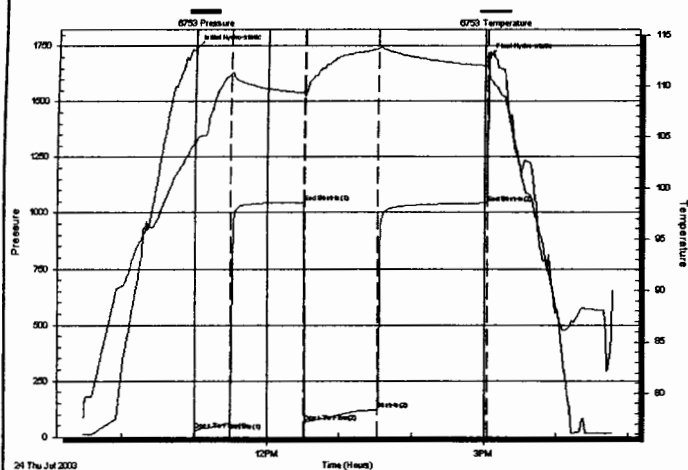
Last Calib.: 1899.12.30

Time On Btm: 2003.07.24 @ 11:00:38

Time Off Btm: 2003.07.24 @ 15:02:53

TEST COMMENT: IFP-Weak Blow, Built To 2.75" in 30 min, No Blow back
 FFP- Fair Blow, Built To 4" in 60 min, No Blow back

Pressure vs. Time



24 Thu Jul 2003

Time (Hours)

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.89	104.81	Initial Hydro-static
1	27.25	104.41	Open To Flow (1)
30	62.64	111.24	Shut-In(1)
90	1047.10	109.30	End Shut-In(1)
91	63.85	108.95	Open To Flow (2)
152	120.97	113.61	Shut-In(2)
242	1043.17	111.97	End Shut-In(2)
243	1701.23	111.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Mud Cut Water, 70% water, 30% mud	0.39
110.00	Mud Cut Water, 99% water, 1% mud	0.60
10.00	Water Cut Mud, 10% water, 90% mud	0.14

Gas Rates

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

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		TOOL DIAGRAM																																																																														
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Tool Information <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Drill Pipe:</td> <td style="width: 16.5%;">Length: 3364.00 ft</td> <td style="width: 16.5%;">Diameter: 3.80 inches</td> <td style="width: 16.5%;">Volume: 47.19 bbl</td> <td style="width: 16.5%;">Tool Weight: 2000.00 lb</td> </tr> <tr> <td>Heavy Wt. Pipe:</td> <td>Length: 0.00 ft</td> <td>Diameter: inches</td> <td>Volume: 0.00 bbl</td> <td>Weight set on Packer: 25000.00 lb</td> </tr> <tr> <td>Drill Collar:</td> <td>Length: 184.00 ft</td> <td>Diameter: 2.25 inches</td> <td>Volume: 0.90 bbl</td> <td>Weight to Pull Loose: 58000.00 lb</td> </tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: center;">Total Volume: 48.09 bbl</td> <td>Tool Chased 0.00 ft</td> </tr> <tr> <td>Drill Pipe Above KB:</td> <td>28.00 ft</td> <td></td> <td></td> <td>String Weight: Initial 42000.00 lb</td> </tr> <tr> <td>Depth to Top Packer:</td> <td>3543.00 ft</td> <td></td> <td></td> <td>Final 42000.00 lb</td> </tr> <tr> <td>Depth to Bottom Packer:</td> <td>ft</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Interval between Packers:</td> <td>23.00 ft</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tool Length:</td> <td>46.00 ft</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Number of Packers:</td> <td>2</td> <td>Diameter:</td> <td>6.75 inches</td> <td></td> </tr> <tr> <td colspan="5">Tool Comments:</td> </tr> </table>				Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 bbl	Tool Weight: 2000.00 lb	Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb	Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 58000.00 lb			Total Volume: 48.09 bbl		Tool Chased 0.00 ft	Drill Pipe Above KB:	28.00 ft			String Weight: Initial 42000.00 lb	Depth to Top Packer:	3543.00 ft			Final 42000.00 lb	Depth to Bottom Packer:	ft				Interval between Packers:	23.00 ft				Tool Length:	46.00 ft				Number of Packers:	2	Diameter:	6.75 inches		Tool Comments:																											
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 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drilling Co 250 N Water, Suite #250 Wichita Ks. 67202 ATTN: Paul Gunzelman	Worcester #1-25 25-6s-22w-Graham Co. Job Ticket: 18803 DST#: 1 Test Start: 2003.07.24 @ 09:28:23	

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:
Mud Weight: 9.00 lb/gal	Cushion Length: ft	deg API
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	Water Salinity: 49000 ppm
Water Loss: 7.59 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 700.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Mud Cut Water, 70% water, 30% mud	0.393
110.00	Mud Cut Water, 99% water, 1% mud	0.596
10.00	Water Cut Mud, 10% water, 90% mud	0.140

Total Length: 200.00 ft Total Volume: 1.129 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

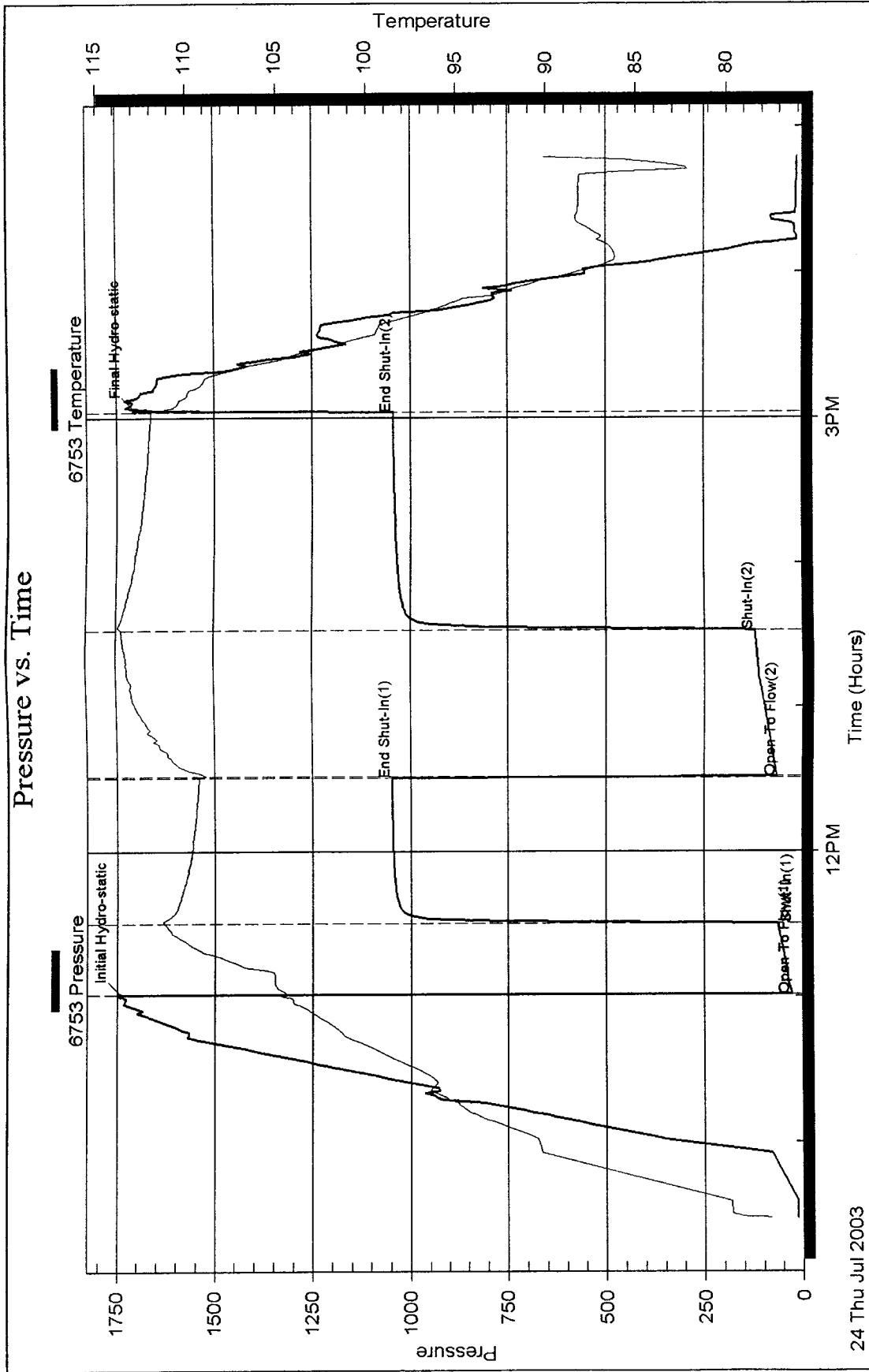
Serial #: 6753

Inside

Murfin Drilling Co

25-6s-22w -Graham Co.

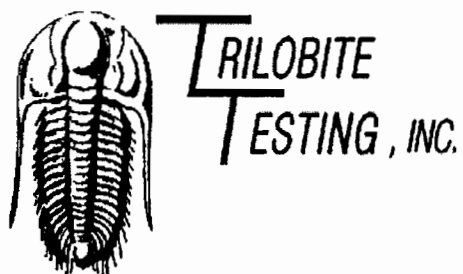
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 18803

Printed: 2003.08.01 @ 06:48:23 Page 5



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water, Suite #250
Wichita Ks. 67202

ATTN: Paul Gunzelman

25-6s-22w-Graham Co.

Worcester #1-25

Start Date: 2003.07.24 @ 09:28:23

End Date:

Job Ticket #: 18804

DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

A detailed black and white illustration of a trilobite fossil, showing its segmented body, head, and tail. The trilobite is oriented vertically, with its head at the top and tail at the bottom. The body is divided into three main sections: the head (cephalon), the thorax (middle section), and the pygidium (tail). The thorax is composed of many segments, each with a central spine. The head has a large, rounded eye and a small mouth. The tail is broad and flat, with a central spine and many small spines along the edges. The illustration is a high-contrast, black and white drawing, typical of a scientific illustration.

**TRILOBITE
TESTING, INC.**

Murfin Drilling Co

250 N Water, Suite #250
Wichita Ks. 67202

ATTN: Paul Gunzelman

Worcester #1-25

25-6s-22w-Graham Co.

Job Ticket: 18804

DST#: 2

Test Start: 2003.07.24 @ 09:28:23

GENERAL INFORMATION:

Formation: **Lans-Kc "E-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended:

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 28

Interval: 3584.00 ft (KB) To 3714.00 ft (KB) (TVD)

Total Depth: 3714.00 ft (KB) (TVD)

Hole Diameter: 6.80 inchesHole Condition: Good

Reference Elevations: 2269.00 ft (KB)

2263.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 6753 Inside

Press@RunDepth: psig @ 3692.00 ft (KB)

Start Date: 2003.07.24

End Date:

2003.07.24

Start Time: 09:28:25

End Time:

16:47:53

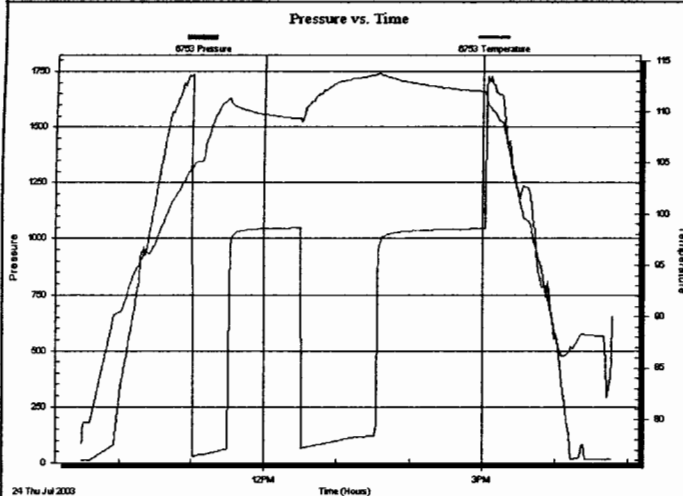
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP- Fair Blow , Built To 9", No Blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Mud Cut Water, 70% w ater, 30% mud	0.39
110.00	Mud Cut Water, 99% w ater, 1% mud	0.60
10.00	Water Cut Mud, 10% w ater, 90% mud	0.14

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

Worcester #1-25

250 N Water, Suite #250
Wichita Ks. 67202

25-6s-22w-Graham Co.

Job Ticket: 18804

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2003.07.24 @ 09:28:23

Tool Information

Drill Pipe:	Length: 3395.00 ft	Diameter: 3.80 inches	Volume: 47.62 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: lb
		Total Volume: 48.52 bbl		Tool Chased 5.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3584.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	130.00 ft			
Tool Length:	153.00 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			3562.00	
Shut In Tool	5.00			3567.00	
Hydraulic tool	5.00			3572.00	
Safety Joint	2.00			3574.00	
Packer	5.00			3579.00	23.00 Bottom Of Top Packer
Packer	5.00			3584.00	
Stubb	1.00			3585.00	
Perforations	10.00			3595.00	
Change Over Sub	1.00			3596.00	
Blank Spacing	95.00			3691.00	
Change Over Sub	1.00			3692.00	
Recorder	0.00	6753	Inside	3692.00	
Perforations	19.00			3711.00	
Recorder	0.00	13252	Outside	3711.00	
Bullnose	3.00			3714.00	130.00 Bottom Packers & Anchor

Total Tool Length: 153.00

79958



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

Worcester #1-25

250 N Water, Suite #250
Wichita Ks. 67202

25-6s-22w-Graham Co.

Job Ticket: 18804

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2003.07.24 @ 09:28:23

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: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Mud Cut Water, 70% water, 30% mud	0.393
110.00	Mud Cut Water, 99% water, 1% mud	0.596
10.00	Water Cut Mud, 10% water, 90% mud	0.140

Total Length: 200.00 ft

Total Volume: 1.129 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

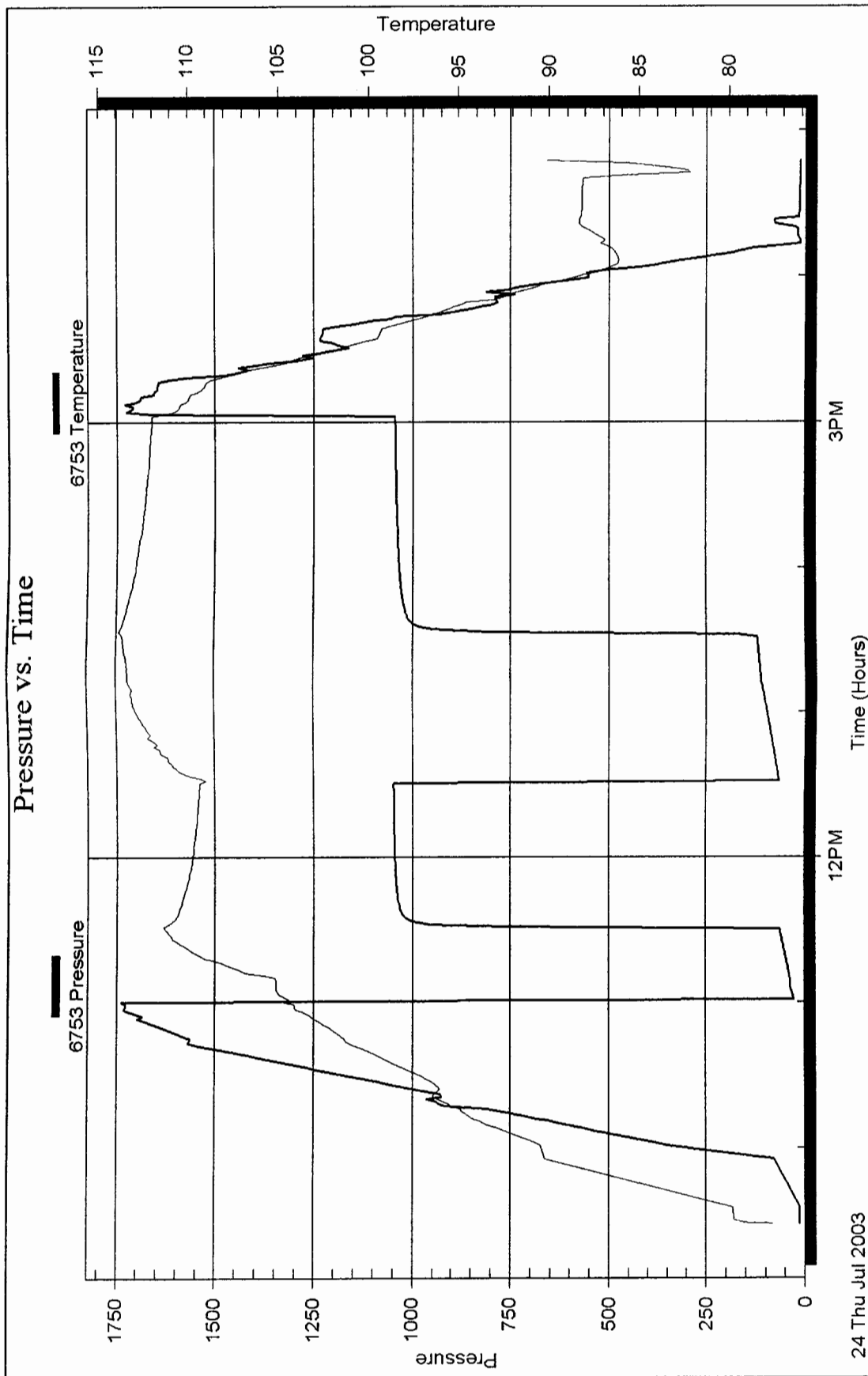
Serial #: 6753

Inside

Murfin Drilling Co

25-6s-22w-Graham Co.

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 18804

Printed: 2003.08.01 @ 06:51:08 Page 5