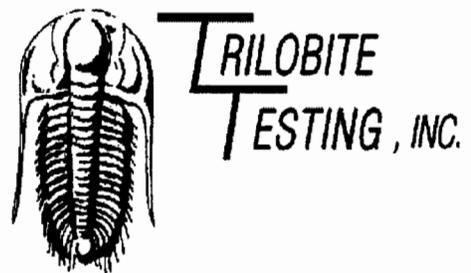


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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc.**
250 N. Water Suite 300
Wichita, KS 67202

ATTN: Scott Robinson

17-10s-19w

Berland "B"6-17

Start Date: 2002.01.01 @ 08:34:15
End Date: 2002.01.01 @ 16:18:45
Job Ticket #: 15584 DST #: 1

Release
FEB 17 2003
From
Confidential

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

Murfin Drilling Co. Inc.

Berland "B"6-17

17-10s-19w

DST # 1

Arbuckle

2002.01.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Scott Robinson

Berland "B"6-17
17-10s-19w
Job Ticket: 15584 **DST#: 1**
Test Start: 2002.01.01 @ 08:34:15

Tool Information

Drill Pipe:	Length: 3617.00 ft	Diameter: 3.80 inches	Volume: 50.74 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: 20000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 51.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3741.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.02 ft			
Tool Length:	35.02 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			3722.00	
S.I. Tool	5.00			3727.00	
HMV	5.00			3732.00	
Packer	4.00			3736.00	20.00 Bottom Of Top Packer
Packer	5.00			3741.00	
Stubb	1.00			3742.00	
Perforations	1.00			3743.00	
Recorder	0.01	3017	Inside	3743.01	
Perforations	10.00			3753.01	
Recorder	0.01	13308	Outside	3753.02	
Bullnose	3.00			3756.02	15.02 Bottom Packers & Anchor

Total Tool Length: 35.02

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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Scott Robinson

Berland "B"6-17
17-10s-19w
Job Ticket: 15584 DST#: 1
Test Start: 2002.01.01 @ 08:34:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 31 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.98 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4900.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	M-C-O 20% oil 80% mud	0.295
75.00	free oil	0.460

Total Length: 135.00 ft Total Volume: 0.755 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

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Serial #: 3017

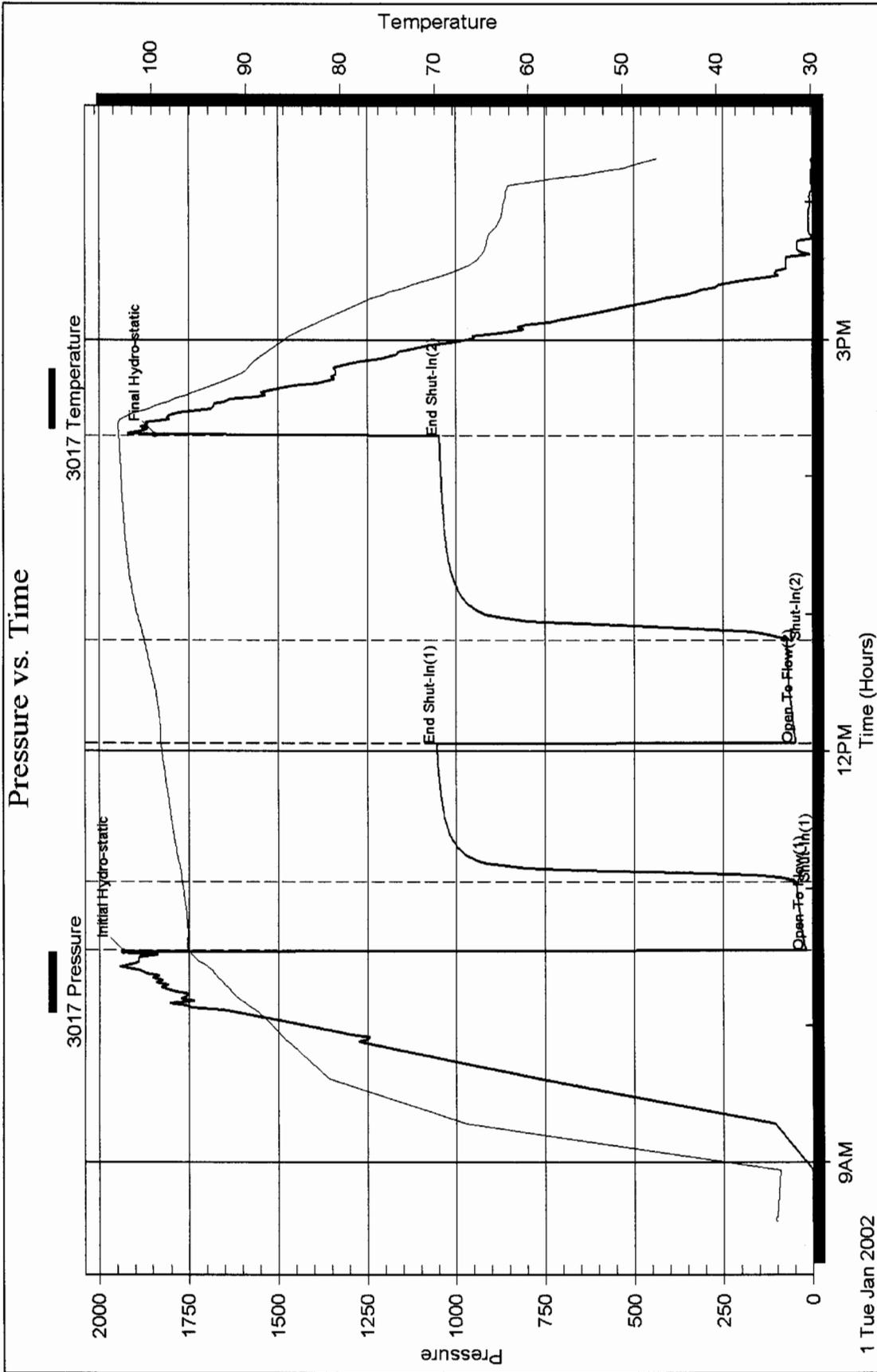
Inside

Murfin Drilling Co. Inc.

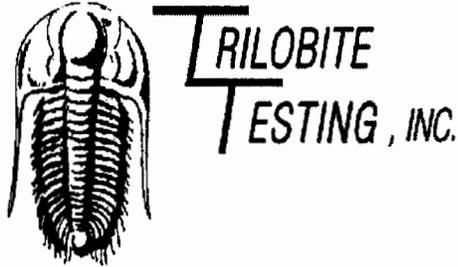
17--10s--19w

DST Test Number: 1

Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc.**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Scott Robinson

17-10s-19w

Berland "B"6-17

Start Date: 2002.01.02 @ 00:20:14

End Date: 2002.01.02 @ 08:05:44

Job Ticket #: 15585 DST #: 2

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



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DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

Berland "B"6-17

250 N. Water Suite 300
Wichita, KS 67202

17-10s-19w

Job Ticket: 15585

DST#: 2

ATTN: Scott Robinson

Test Start: 2002.01.02 @ 00:20:14

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:19:44

Time Test Ended: 08:05:44

Test Type: Conventional Bottom Hole

Tester: John Schmidt

Unit No: 18

Interval: **3756.00 ft (KB) To 3766.00 ft (KB) (TVD)**

Total Depth: 3766.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2191.00 ft (KB)

2186.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 3017

Inside

Press@RunDepth: 99.14 psig @ 3758.01 ft (KB)

Start Date: 2002.01.02

End Date: 2002.01.02

Start Time: 00:20:15

End Time: 08:05:44

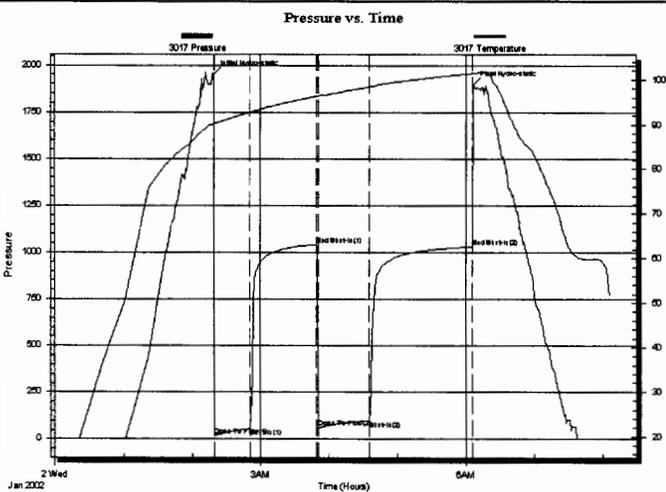
Capacity: 7000.00 psig

Last Calib.: 2002.01.02

Time On Btm: 2002.01.02 @ 02:19:14

Time Off Btm: 2002.01.02 @ 06:06:14

TEST COMMENT: IF-Weak built to 4" ISI-no blow
FF-Weak built to 4" FSI-no blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.32	90.15	Initial Hydro-static
1	17.37	90.27	Open To Flow (1)
31	58.19	92.68	Shut-In(1)
90	1043.19	96.32	End Shut-In(1)
92	62.69	96.41	Open To Flow(2)
136	99.14	98.36	Shut-In(2)
227	1031.79	101.39	End Shut-In(2)
227	1893.32	101.39	Final Hydro-static

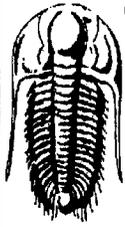
Recovery

Length (ft)	Description	Volume (bbl)
125.00	S-O-C-M-W-10%-O-30%-M-60%-W	0.61
75.00	Oil	0.51

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. Inc.

Berland "B"6-17

250 N. Water Suite 300
Wichita, KS 67202

17-10s-19w

Job Ticket: 15585

DST#: 2

ATTN: Scott Robinson

Test Start: 2002.01.02 @ 00:20:14

Tool Information

Drill Pipe:	Length: 3586.00 ft	Diameter: 3.80 inches	Volume: 50.30 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: 20000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 42000.00 lb
			<u>Total Volume: 51.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3756.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.01 ft			
Tool Length:	25.01 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			3742.00	
S.I. Tool	5.00			3747.00	
HMV	5.00			3752.00	
Packer	4.00			3756.00	15.00 Bottom Of Top Packer
Stubb	1.00			3757.00	
Perforations	1.00			3758.00	
Recorder	0.01	3017	Inside	3758.01	
Perforations	5.00			3763.01	
Bullnose	3.00			3766.01	10.01 Anchor Tool
Total Tool Length:	25.01				

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 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drilling Co. Inc. 250 N. Water Suite 300 Wichita, KS 67202 ATTN: Scott Robinson	Berland "B"6-17 17-10s-19w Job Ticket: 15585 Test Start: 2002.01.02 @ 00:20:14	DST#: 2

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 30 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 19000 ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4900.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	S-O-C-M-W-10%-O-30%-M-60%-W	0.615
75.00	Oil	0.505

Total Length: 200.00 ft Total Volume: 1.120 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .36@70F

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Serial #: 3017

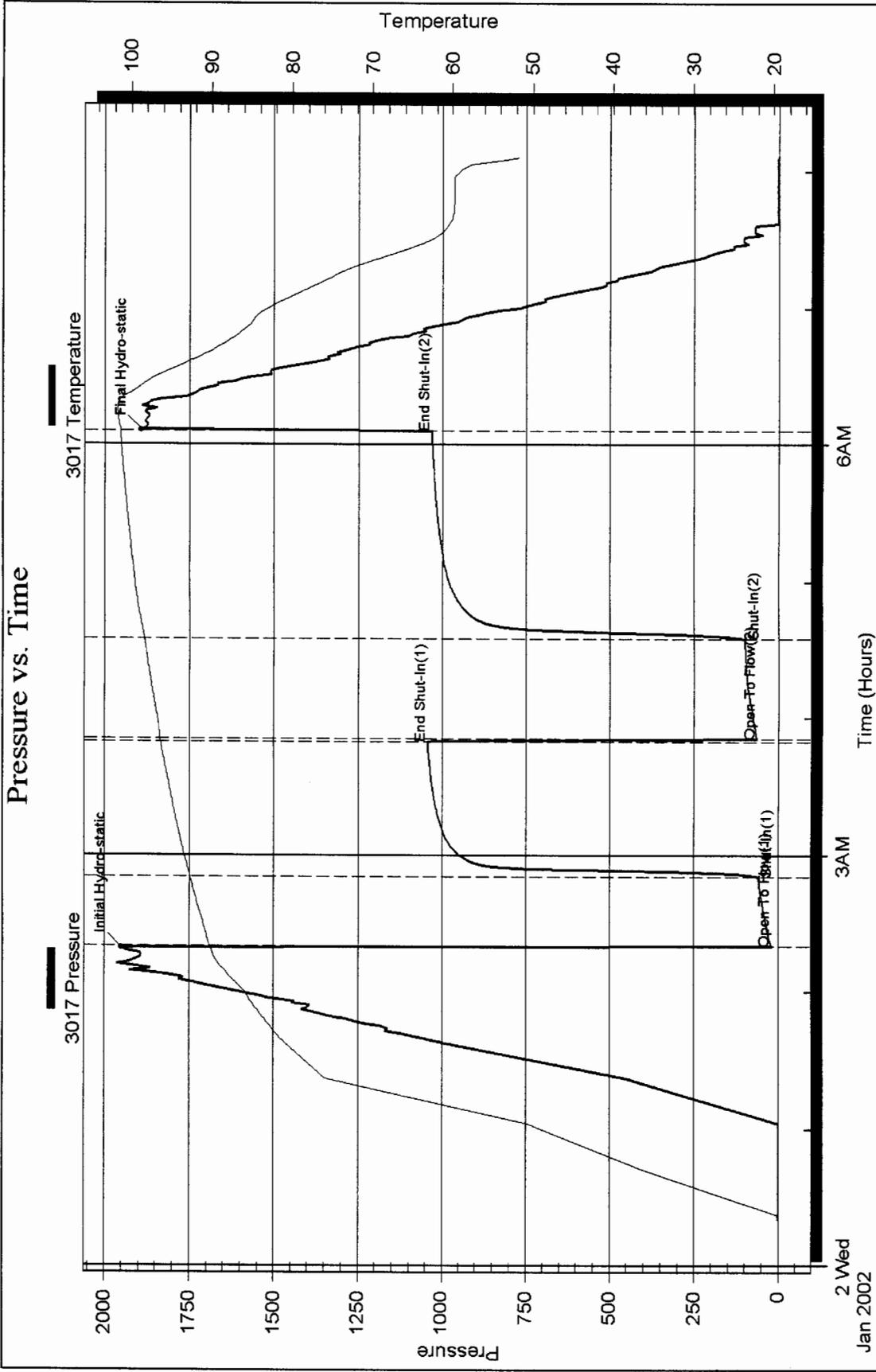
Inside

Murfin Drilling Co. Inc.

17-10s-19w

DST Test Number: 2

Pressure vs. Time



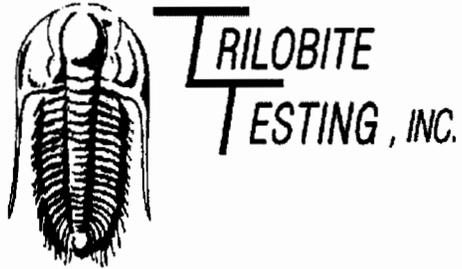
Trilobite Testing, Inc

Ref. No: 15585

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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc.**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Scott Robinson

17--10s--19w

Berland "B"6-17

Start Date: 2002.01.02 @ 15:19:09

End Date: 2002.01.02 @ 23:05:39

Job Ticket #: 15586 DST #: 3

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

Berland "B"6-17

250 N. Water Suite 300
Wichita, KS 67202

17-10s-19w

Job Ticket: 15586

DST#: 3

ATTN: Scott Robinson

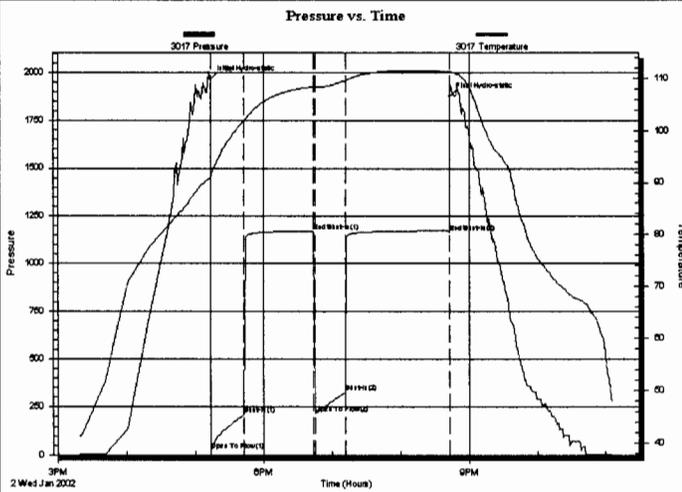
Test Start: 2002.01.02 @ 15:19:09

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:13:39
 Time Test Ended: 23:05:39
 Interval: **3766.00 ft (KB) To 3773.00 ft (KB) (TVD)**
 Total Depth: 3773.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: John Schmidt
 Unit No: 18
 Reference Elevations: 2191.00 ft (KB)
 2186.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 3017 Inside
 Press@RunDepth: 326.98 psig @ 3767.01 ft (KB) Capacity: 7000.00 psig
 Start Date: 2002.01.02 End Date: 2002.01.02 Last Calib.: 2002.01.02
 Start Time: 15:19:10 End Time: 23:05:39 Time On Btm: 2002.01.02 @ 17:13:09
 Time Off Btm: 2002.01.02 @ 20:43:09

TEST COMMENT: IF-Strong B.O.B.in 6 min. IS-Weak blow back
 FF-Strong B.O.B.in 9 min. FSI-Weak blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.20	90.82	Initial Hydro-static
1	26.27	90.98	Open To Flow (1)
30	212.46	101.97	Shut-In(1)
91	1172.51	108.35	End Shut-In(1)
92	216.37	108.41	Open To Flow (2)
119	326.98	109.58	Shut-In(2)
210	1164.61	111.30	End Shut-In(2)
210	1875.40	111.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
670.00	Salt Water	7.71
165.00	Free Oil	2.31

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. Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Scott Robinson

Berland "B"6-17
17-10s-19w
Job Ticket: 15586 **DST#: 3**
Test Start: 2002.01.02 @ 15:19:09

Tool Information

Drill Pipe:	Length: 3586.00 ft	Diameter: 3.80 inches	Volume: 50.30 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: 20000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 42000.00 lb
			<u>Total Volume: 51.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3766.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.01 ft			
Tool Length:	22.01 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			3752.00	
S.I. Tool	5.00			3757.00	
HMV	5.00			3762.00	
Packer	4.00			3766.00	15.00 Bottom Of Top Packer
Stubb	1.00			3767.00	
Recorder	0.01	3017	Inside	3767.01	
Perforations	3.00			3770.01	
Bullnose	3.00			3773.01	7.01 Anchor Tool

Total Tool Length: 22.01

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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Scott Robinson

Berland "B"6-17
17-10s-19w
Job Ticket: 15586 **DST#: 3**
Test Start: 2002.01.02 @ 15:19:09

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 30000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.38 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5900.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
670.00	Salt Water	7.713
165.00	Free Oil	2.315

Total Length: 835.00 ft Total Volume: 10.028 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW .2@83F

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Serial #: 3017

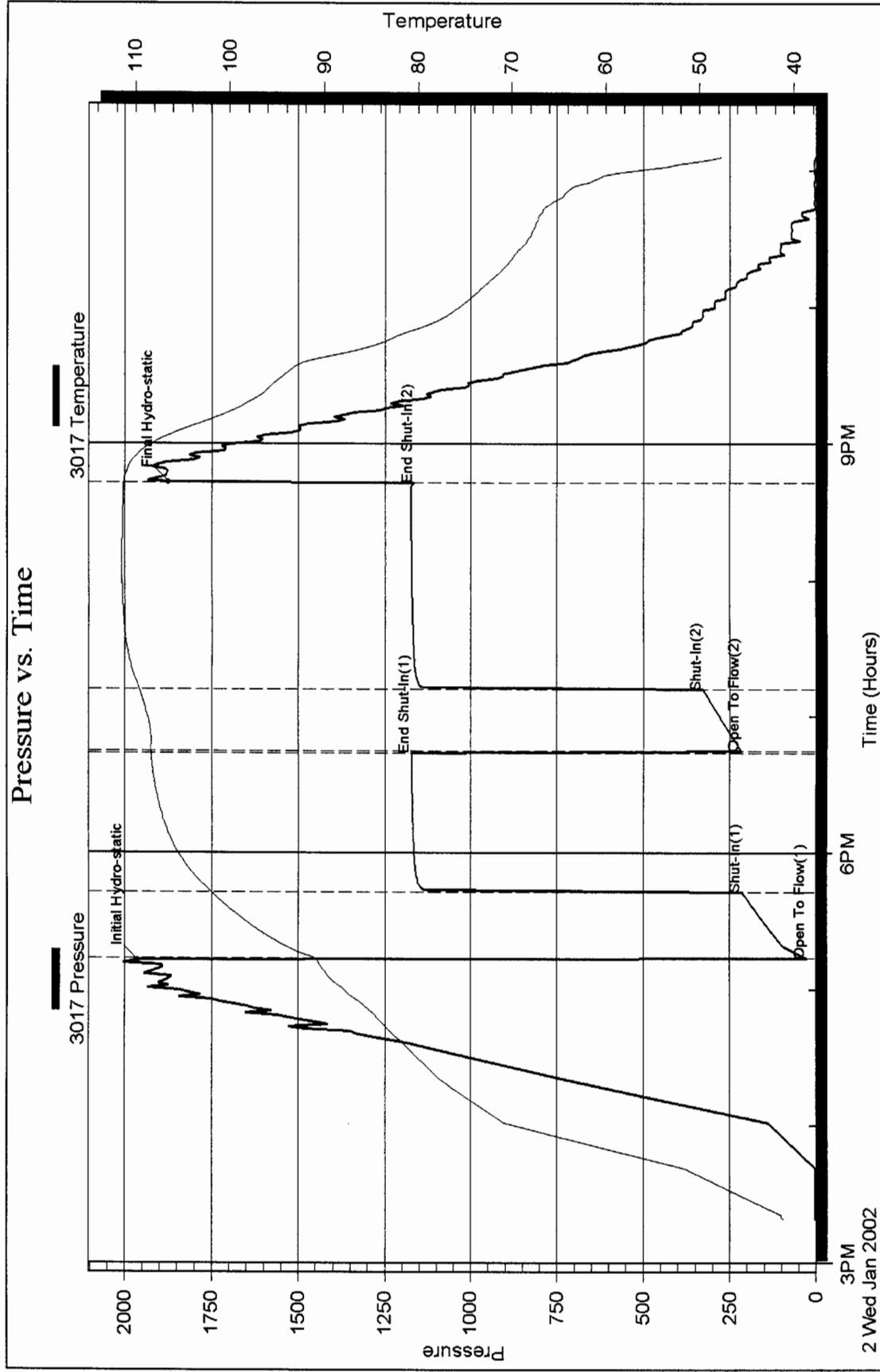
Inside

Murfin Drilling Co. Inc.

17--10s--19w

DST Test Number: 3

Pressure vs. Time



3PM
2 Wed Jan 2002

6PM

9PM