

**TRILOBITE
TESTING, INC.**

RECEIVED

JAN 04 2002

KCC WICHITA

DRILL STEM TEST REPORT

CONFIDENTIAL

Prepared for: **Mull Drilling Co. Inc.**

P.O. Box 2758
Wichita, KS 67201

ORIGINAL

KCC

ATTN: Scott Mueller

JAN 03 2002

17-17-27 Lane KS

CONFIDENTIAL

Waterson #1-17

Start Date: 2001.10.09 @ 09:31:01

End Date: 2001.10.09 @ 14:50:00

Job Ticket #: 15559 DST #: 1

Release

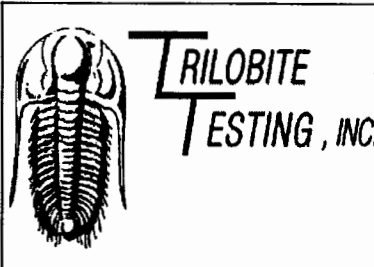
MAR 10 2003

**From
Confidential**

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



DRILL STEM TEST REPORT

Mull Drilling Co. Inc.

Waterson #1-17

P.O. Box 2758
Wichita, KS 67201

17-17-27 Lane KS

Job Ticket: 15559

DST#: 1

ATTN: Scott Mueller

Test Start: 2001.10.09 @ 09:31:01

GENERAL INFORMATION:

Formation: **Ft. Scott/Cher**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:32:30

Time Test Ended: 14:50:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **4484.00 ft (KB) To 4560.00 ft (KB) (TVD)**

Total Depth: 4560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2698.00 ft (KB)

2690.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: **2357**

Inside

Press@RunDepth: 22.29 psig @ 4487.01 ft (KB)

Start Date: 2001.10.09

End Date:

2001.10.09

Start Time: 09:31:01

End Time:

14:50:00

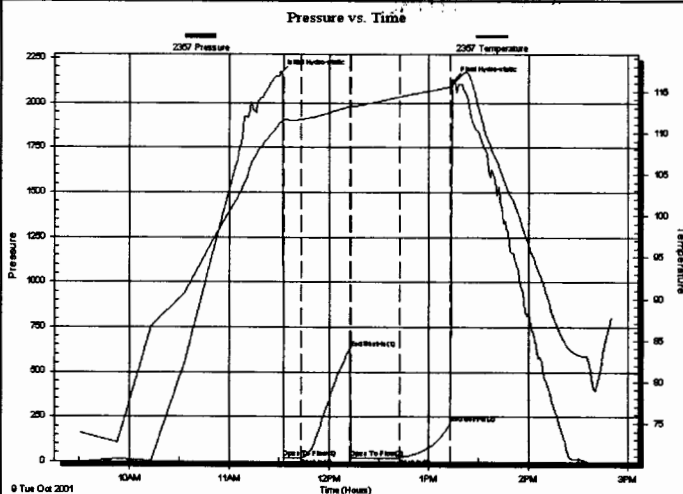
Capacity: 7000.00 psig

Last Calib.: 2001.01.10

Time On Btm: 2001.10.09 @ 11:31:00

Time Off Btm: 2001.10.09 @ 13:15:00

TEST COMMENT: F-Weak 1/4" steady blow
FF-No blow
Times-10-30-30-30



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2165.23	111.31	Initial Hydro-static
2	19.75	111.56	Open To Flow (1)
13	20.67	111.60	Shut-In(1)
42	631.42	113.18	End Shut-In(1)
42	21.39	113.21	Open To Flow (2)
72	22.29	114.36	Shut-In(2)
102	214.78	115.57	End Shut-In(2)
104	2126.42	116.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling mud	0.29

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc.

Waterson #1-17

P.O. Box 2758
Wichita, KS 67201

17-17-27 Lane KS

Job Ticket: 15559

DST#: 1

ATTN: Scott Mueller


Test Start: 2001.10.09 @ 09:31:01

Tool Information

Drill Pipe:	Length: 4466.00 ft	Diameter: 7.80 inches	Volume: 263.95 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 263.95 bbl</u>	Tool Chased 0.01 ft
Drill Pipe Above KB:	10.02 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4484.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.02 ft			
Tool Length:	104.02 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			4457.00	
S.I. Tool	5.00			4462.00	
HMV	5.00			4467.00	
Jars	5.00			4472.00	
Safety Joint	2.00			4474.00	
Packer	5.00			4479.00	28.00 Bottom Of Top Packer
Packer	5.00			4484.00	
Stubb	1.00			4485.00	
Perforations	1.00			4486.00	
C.O. Sub	1.00			4487.00	
Recorder	0.01	2357	Inside	4487.01	
Blank Spacing	62.00			4549.01	
C.O. Sub	1.00			4550.01	
Recorder	0.01	13254	Outside	4550.02	
Perforations	7.00			4557.02	
Bullnose	3.00			4560.02	76.02 Bottom Packers & Anchor
Total Tool Length:	104.02				

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT	FLUID SUMMARY
	Mull Drilling Co. Inc. P.O. Box 2758 Wichita, KS 67201 ATTN: Scott Mueller	Waterson #1-17 17-17-27 Lane KS Job Ticket: 15559 DST#: 1 Test Start: 2001.10.09 @ 09:31:01

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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.37 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1300.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drilling mud	0.294

Total Length: 5.00 ft Total Volume: 0.294 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

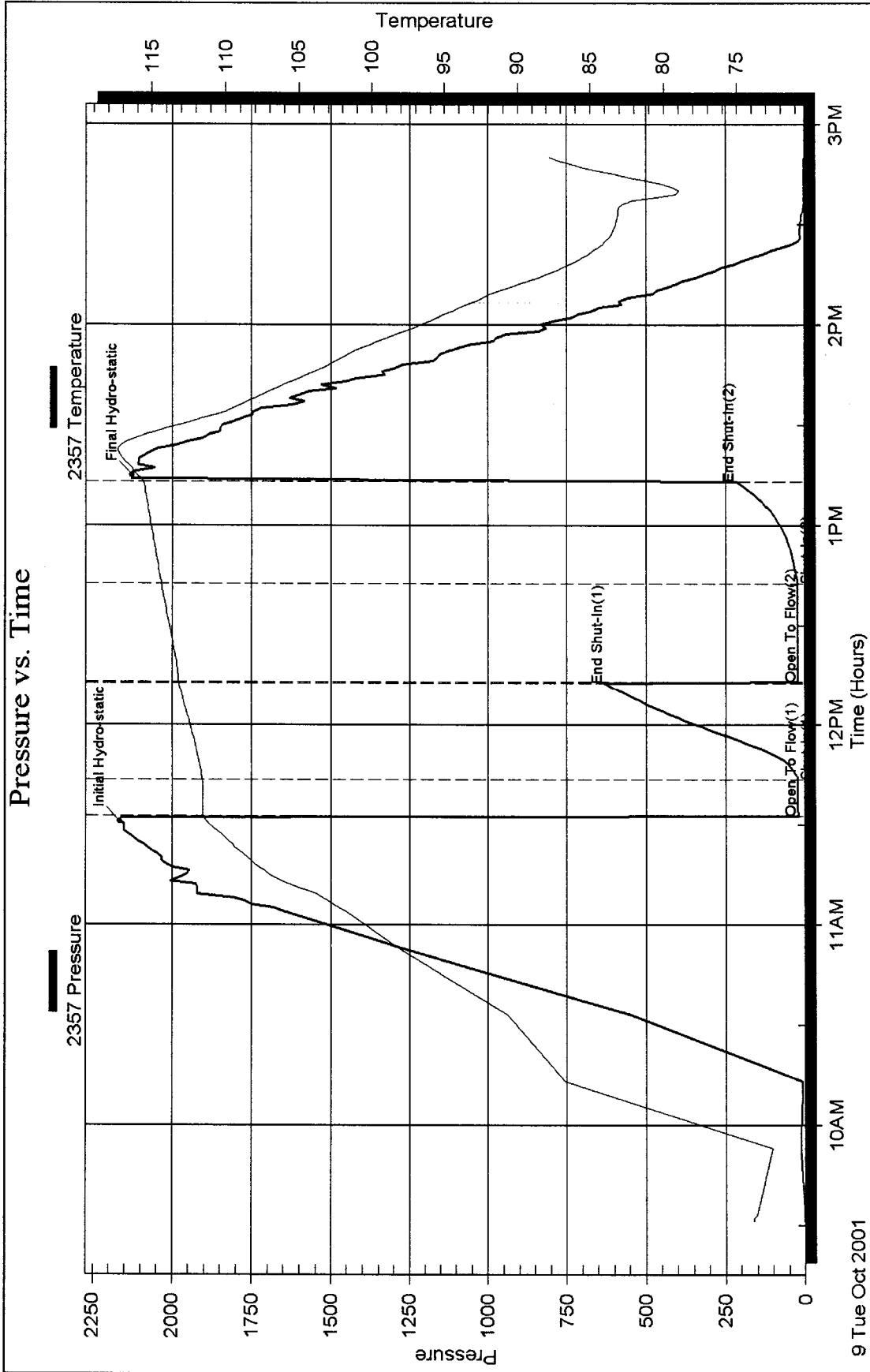
Serial #: 2357

Inside Mull Drilling Co. Inc.

17-17-27 Lane KS

DST Test Number: 1

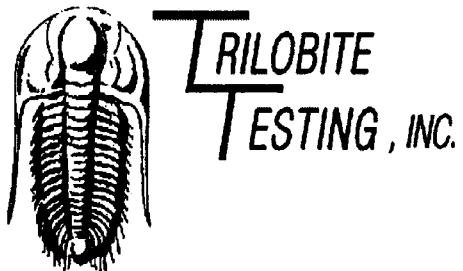
Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 15559

Printed: 2001.10.12 @ 10:08:13 Page 5



DRILL STEM TEST REPORT

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

P.O. Box 2758
Wichita, KS 67201

ATTN: Scott Mueller

17-17-27 Lane KS

Waterson #1-17

Start Date: 2001.10.11 @ 15:56:21

End Date: 2001.10.11 @ 18:55:21

Job Ticket #: 15560 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drilling Co. Inc.

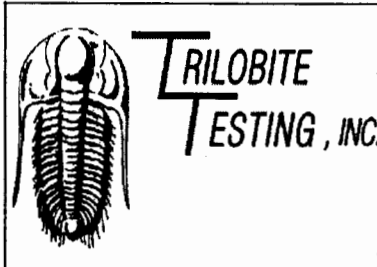
Waterson #1-17

17-17-27 Lane KS

DST # 2

Cher Sd

2001.10.11



DRILL STEM TEST REPORT

Mull Drilling Co. Inc.

Waterson #1-17

P.O. Box 2758
Wichita, KS 67201

17-17-27 Lane KS

ATTN: Scott Mueller

Job Ticket: 15560

DST#: 2

Test Start: 2001.10.11 @ 15:56:21

GENERAL INFORMATION:

Formation: **Cher Sd**

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

Time Tool Opened: 17:38:51

Time Test Ended: 18:55:21

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **4539.00 ft (KB) To 4584.00 ft (KB) (TVD)**

Total Depth: **4584.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2698.00 ft (KB)**

2690.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 2357

Inside

Press@RunDepth: **22.82 psig @ 4542.01 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2001.10.11**

End Date: **2001.10.11**

Last Calib.: **2001.01.12**

Start Time: **15:56:22**

End Time: **18:55:21**

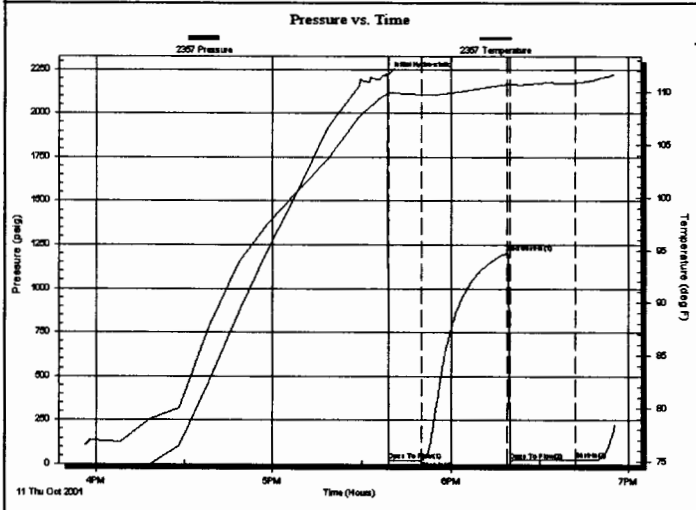
Time On Btm: **2001.10.11 @ 17:38:21**

Time Off Btm:

TEST COMMENT: **F-Weak 1/4" steady blow**

FF-No blow

Times-10-30-30-30



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2217.40	109.78	Initial Hydro-static
1	21.05	109.84	Open To Flow (1)
12	22.82	109.75	Shut-in(1)
41	1204.62	110.72	End Shut-in(1)
42	23.20	110.74	Open To Flow (2)
64	24.92	110.84	Shut-in(2)

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DM	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc.

Waterson #1-17

P.O. Box 2758
Wichita, KS 67201

17-17-27 Lane KS

Job Ticket: 15560

DST#: 2

ATTN: Scott Mueller

Test Start: 2001.10.11 @ 15:56:21

Tool Information

Drill Pipe:	Length: 4528.00 ft	Diameter: 7.80 inches	Volume: 267.61 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			Total Volume: 267.61 bbl	Tool Chased 0.01 ft
Drill Pipe Above KB:	17.02 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4539.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.02 ft			
Tool Length:	73.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4512.00	
S.I. Tool	5.00			4517.00	
HMV	5.00			4522.00	
Jars	5.00			4527.00	
Safety Joint	2.00			4529.00	
Packer	5.00			4534.00	28.00 Bottom Of Top Packer
Packer	5.00			4539.00	
Stubb	1.00			4540.00	
Perforations	1.00			4541.00	
C.O. Sub	1.00			4542.00	
Recorder	0.01	2357	Inside	4542.01	
Blank Spacing	31.00			4573.01	
C.O. Sub	1.00			4574.01	
Recorder	0.01	13254	Outside	4574.02	
Perforations	7.00			4581.02	
Bullnose	3.00			4584.02	45.02 Bottom Packers & Anchor
Total Tool Length:	73.02				

103209

DST Test Number: 2

17-17-27 Lane KS

Mull Drilling Co. Inc.

Inside

Serial #: 2357

Pressure vs. Time

