

CONFIDENTIAL



TRILOBITE TESTING, INC.

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JUL 29 2002
KCC WICHITA

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Inc.**

PO Box 2758
Wichita KS 67201-2758

CONFIDENTIAL KCC

ATTN: Roger Martin

JUL 25 2002

12 22s 14w **CONFIDENTIAL**

Anderson Williams 1-12

Start Date: 2002.04.25 @ **Release**
End Date: 2002.04.25 @ 23:05:25
Job Ticket #: 15377

JUL 28 2003
DST # 1
From Confidential

Release
JUL 28 2003
From Confidential

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

Mull Drilling Inc.

Anderson Williams 1-12

12 22s 14w

DST # 1

Lansing B-F

2002.04.25

CONFIDENTIAL

ORIGINAL



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15377 DST#: 1
Test Start: 2002.04.25 @ 14:29:55

GENERAL INFORMATION:

Formation: Lansing B-F
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:53:55
Time Test Ended: 23:05:25

KCC

JUL 25 2002

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Test Type: Conventional Bottom Hole
Tester: Wenrich
Unit No: 14

Interval: 3434.00 ft (KB) To 3490.00 ft (KB) (TVD)
Total Depth: 3490.00 ft (KB) (TVD)
Hole Diameter: 7.79 inches Hole Condition: Poor

Reference Elevations: 1933.00 ft (KB)
1924.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 3289

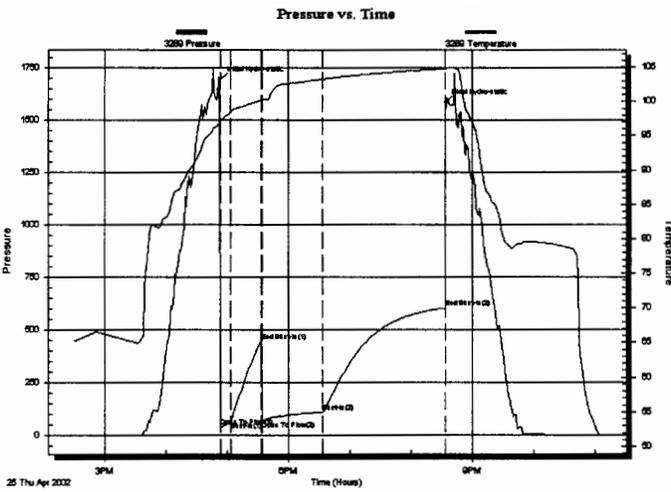
Inside

Press@RunDepth: 110.51 psig @ 3435.00 ft (KB)
Start Date: 2002.04.25 End Date: 2002.04.25
Start Time: 14:30:00 End Time: 23:05:25

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2002.04.25 @ 16:53:10
Time Off Btm: 2002.04.25 @ 20:34:09

TEST COMMENT: IF: Strong blow .BOB in 8 min.
IS: No blow .
FF: Strong blow .BOB in 3 min.
FS: No blow .

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PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation. Rows include initial hydro-static, open to flow, shut-in, and final hydro-static data points.

Recovery

Table with 3 columns: Length (ft), Description, Volume (bbl). Rows show recovery data for different fluid types and volumes.

Gas Rates

Table with 4 columns: Choke (inches), Pressure (psig), Gas Rate (Mcf/d).



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15377 **DST#: 1**
Test Start: 2002.04.25 @ 14:29:55

Tool Information

Drill Pipe:	Length: 3194.00 ft	Diameter: 3.80 inches	Volume: 44.80 bbl	Tool Weight: 2100.00 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: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 46.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3434.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3412.00	
S.I. Tool	5.00			3417.00	
Sampler	3.00			3420.00	
HMV	5.00			3425.00	
Packer	5.00			3430.00	23.00 Bottom Of Top Packer
Packer	4.00			3434.00	
Stubb	1.00			3435.00	
Recorder	0.00	3289	Inside	3435.00	
Perforations	2.00			3437.00	
C.O. Sub	1.00			3438.00	
Blank Spacing	30.00			3468.00	
C.O. Sub	0.00			3468.00	
Perforations	20.00			3488.00	
Recorder	0.00	10242	Outside	3488.00	
Bullnose	2.00			3490.00	56.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.

Anderson Williams 1-12

PO Box 2758
Wichita KS 67201-2758

12 22s 14w

Job Ticket: 15377

DST#: 1

ATTN: Roger Martin

Test Start: 2002.04.25 @ 14:29:55

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: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 11.93 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 5200.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
67.00	ow cm10%o 30%w 60%m	0.329
60.00	ow cm3%o 20%w 77%m	0.295
60.00	m 100%m	0.295

Total Length: 187.00 ft Total Volume: 0.919 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Recovery:750 ml g. 500 ml o. 1000 ml.250 ml 525 psi

Serial #: 3289

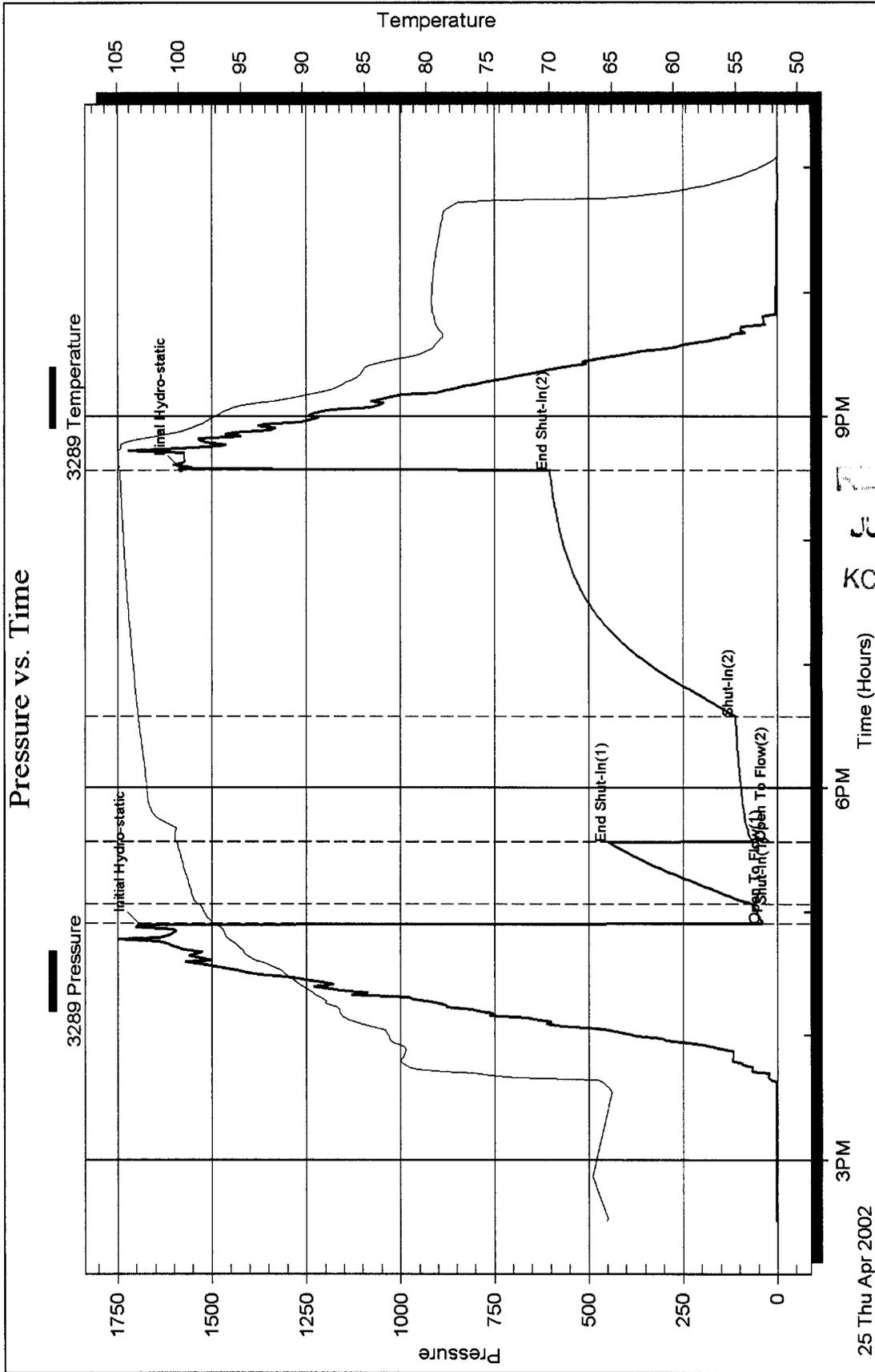
Inside

Mull Drilling Inc.

12 22s 14w

DST Test Number: 1

Pressure vs. Time

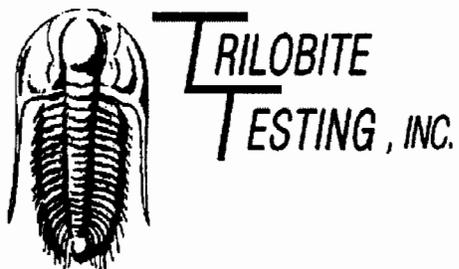


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Trilobite Testing, Inc

Ref. No: 15377

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DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Inc.**
PO Box 2758
Wichita KS 67201-2758

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JUL 29 2002
KCC WICHITA

ATTN: Roger Martin

12 22s 14w

Anderson Williams 1-12

Start Date: 2002.04.26 @ 11:02:39
End Date: 2002.04.26 @ 19:07:39
Job Ticket #: 15378 DST #: 2

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

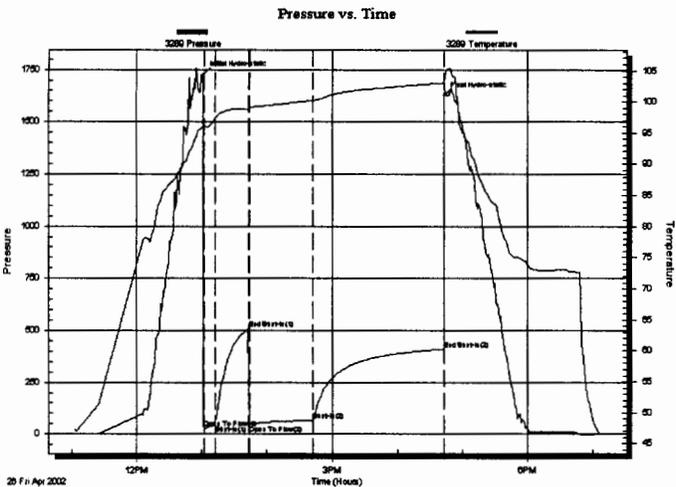
Anderson Williams 1-12
12 22s 14w
Job Ticket: 15378 **DST#: 2**
Test Start: 2002.04.26 @ 11:02:39

GENERAL INFORMATION:

Formation: **KC H-I**
Deviated: **No Whipstock:** **ft (KB)**
Time Tool Opened: 13:02:24
Time Test Ended: 19:07:39
Interval: **3526.00 ft (KB) To 3563.00 ft (KB) (TVD)**
Total Depth: **3563.00 ft (KB) (TVD)**
Hole Diameter: **7.79 inches** Hole Condition: **Poor**
Test Type: **Conventional Bottom Hole**
Tester: **Wenrich**
Unit No: **14**
Reference Elevations: **1933.00 ft (KB)**
1924.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 3289 **Inside**
Press@RunDepth: **66.07 psig @ 3530.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2002.04.26** End Date: **2002.04.26** Last Calib.: **1899.12.30**
Start Time: **11:02:44** End Time: **19:07:38** Time On Btm: **2002.04.26 @ 13:01:39**
Time Off Btm: **2002.04.26 @ 16:43:08**

TEST COMMENT: IF: Strong blow .BOB in 1.75 min.
IS: No blow .
FF: Strong blow .BOB immediately.
FSI: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1723.29	95.88	Initial Hydro-static
1	30.77	96.08	Open To Flow (1)
11	43.76	97.26	Shut-in(1)
42	508.70	98.88	End Shut-in(1)
43	41.98	99.00	Open To Flow (2)
101	66.07	100.22	Shut-in(2)
222	410.86	103.04	End Shut-in(2)
222	1625.89	103.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	ocm 10%o 90%m	0.30
61.00	mcog 10%g 70%o 20%m	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15378 **DST#: 2**
Test Start: 2002.04.26 @ 11:02:39

Tool Information

Drill Pipe:	Length: 3284.00 ft	Diameter: 3.80 inches	Volume: 46.07 bbl	Tool Weight:	2100.00 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: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 47.27 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3526.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	60.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

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Tool Description Length (ft) Serial No. Position Depth (ft) Accum. Lengths

C.O. Sub	1.00			3504.00	
S.I. Tool	5.00			3509.00	
Sampler	3.00			3512.00	
HMV	5.00			3517.00	
Packer	5.00			3522.00	23.00 Bottom Of Top Packer
Packer	4.00			3526.00	
Stubb	1.00			3527.00	
Perforations	3.00			3530.00	
Recorder	0.00	3289	Inside	3530.00	
Perforations	31.00			3561.00	
Recorder	0.00	10242	Outside	3561.00	
Bullnose	2.00			3563.00	37.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15378 **DST#: 2**
Test Start: 2002.04.26 @ 11:02:39

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: 11.16 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6800.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	ocm 10%o 90%m	0.295
61.00	mcog 10%g 70%o 20%m	0.300

Total Length: 121.00 ft Total Volume: 0.595 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler:355psi 120mlg 276ml 4mlm total400ml

Serial #: 3289

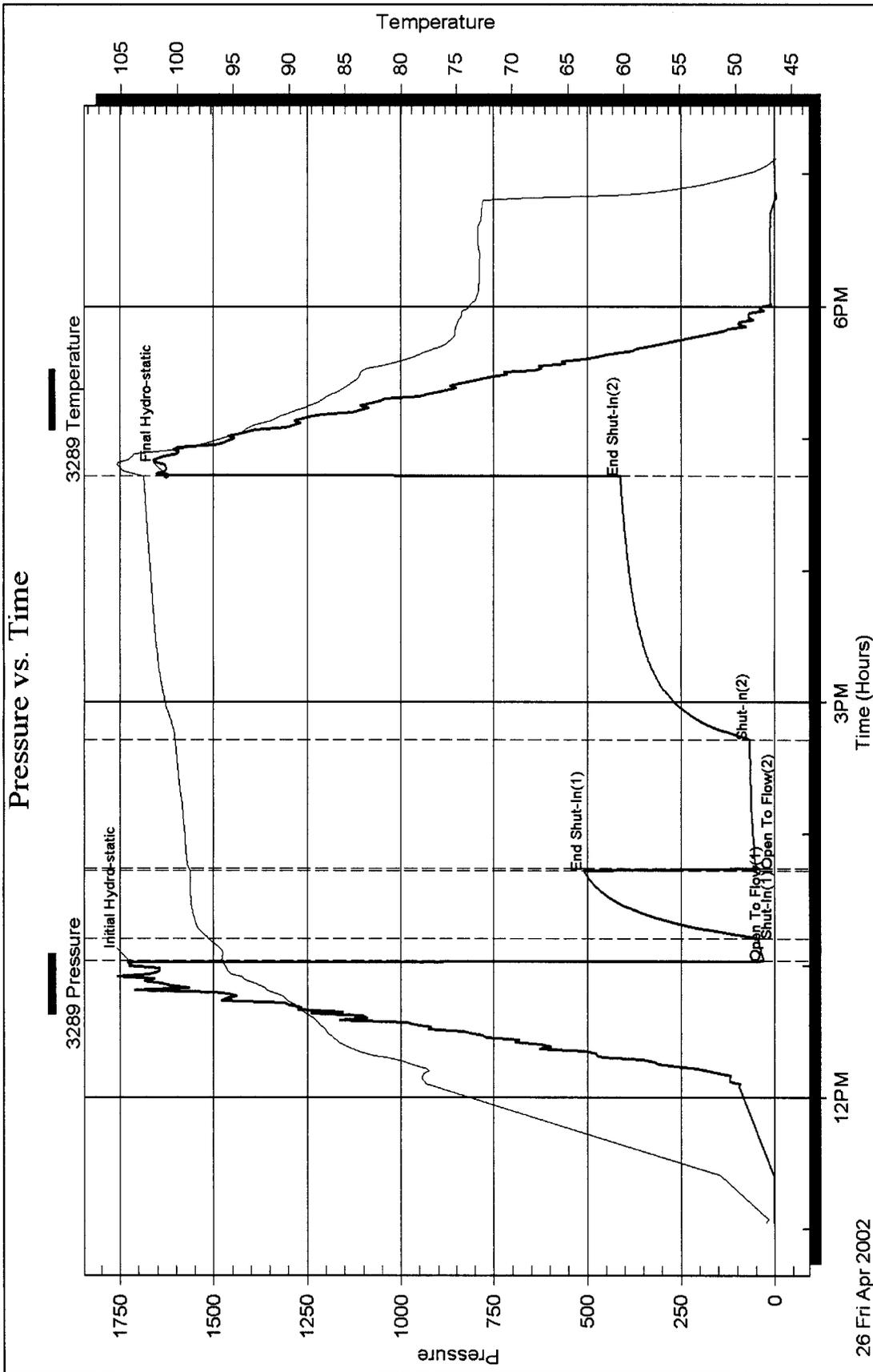
Inside

Mull Drilling Inc.

12 22s 14w

DST Test Number: 2

Pressure vs. Time



26 Fri Apr 2002

12PM

3PM

6PM

Time (Hours)

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Tribolite Testing, Inc

Ref. No: 15378

Printed: 2002.05.03 @ 09:25:28 Page 5



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Inc.**
PO Box 2758
Wichita KS 67201-2758

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ATTN: Roger Martin

12 22s 14w

Anderson Williams 1-12

Start Date: 2002.04.27 @ 01:22:20
End Date: 2002.04.27 @ 08:34:50
Job Ticket #: 15379 DST #: 3

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



**TRILLOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

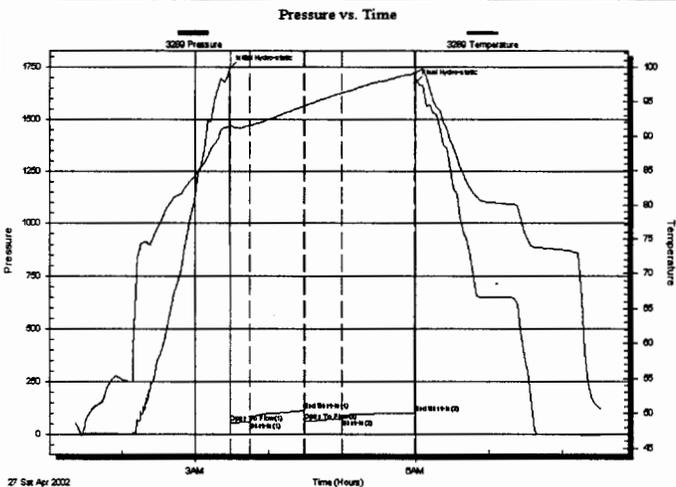
Anderson Williams 1-12
12 22s 14w
Job Ticket: 15379 **DST#: 3**
Test Start: 2002.04.27 @ 01:22:20

GENERAL INFORMATION:

Formation: **KC**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 03:29:05
Time Test Ended: 08:34:50
Interval: **3561.00 ft (KB) To 3585.00 ft (KB) (TVD)**
Total Depth: **3585.00 ft (KB) (TVD)**
Hole Diameter: **7.79 inches** Hole Condition: **Poor**
Test Type: **Conventional Bottom Hole**
Tester: **Wenrich**
Unit No: **14**
Reference Elevations: **1933.00 ft (KB)**
1924.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 3289 **Inside**
Press@RunDepth: **73.69 psig @ 3565.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2002.04.27** End Date: **2002.04.27** Last Calib.: **1899.12.30**
Start Time: **01:22:25** End Time: **08:34:49** Time On Btm: **2002.04.27 @ 03:28:35**
Time Off Btm: **2002.04.27 @ 05:59:50**

TEST COMMENT: IF:Weak blow .1/2-3/4 inches.
IS:No blow
FF:No blow .Flush tool after 5 min. Surge. 1/8 inch .Blow died.
FSI:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1740.75	91.34	Initial Hydro-static
1	55.68	91.43	Open To Flow (1)
17	60.39	91.48	Shut-In(1)
61	114.78	94.37	End Shut-In(1)
62	65.43	94.42	Open To Flow (2)
92	73.69	96.28	Shut-In(2)
151	101.02	99.10	End Shut-In(2)
152	1672.72	99.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	socm 5%o 95%m	0.30
50.00	m 100%	0.25

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15379 **DST#: 3**
Test Start: 2002.04.27 @ 01:22:20

Tool Information

Drill Pipe:	Length: 3312.00 ft	Diameter: 3.80 inches	Volume: 46.46 bbl	Tool Weight: 2100.00 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: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 47.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3561.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

C.O. Sub	1.00			3539.00	
S.I. Tool	5.00			3544.00	
Sampler	3.00			3547.00	
HMV	5.00			3552.00	
Packer	5.00			3557.00	23.00 Bottom Of Top Packer
Packer	4.00			3561.00	
Stubb	1.00			3562.00	
Perforations	3.00			3565.00	
Recorder	0.00	3289	Inside	3565.00	
Perforations	18.00			3583.00	
Recorder	0.00	10242	Outside	3583.00	
Bullnose	2.00			3585.00	24.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15379 **DST#: 3**
Test Start: 2002.04.27 @ 01:22:20

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: 11.17 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6800.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	socm 5%o 95%m	0.295
50.00	m 100%	0.246

Total Length: 110.00 ft Total Volume: 0.541 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: SAMPLER: 0psi 400ml total mud w/ oil scum

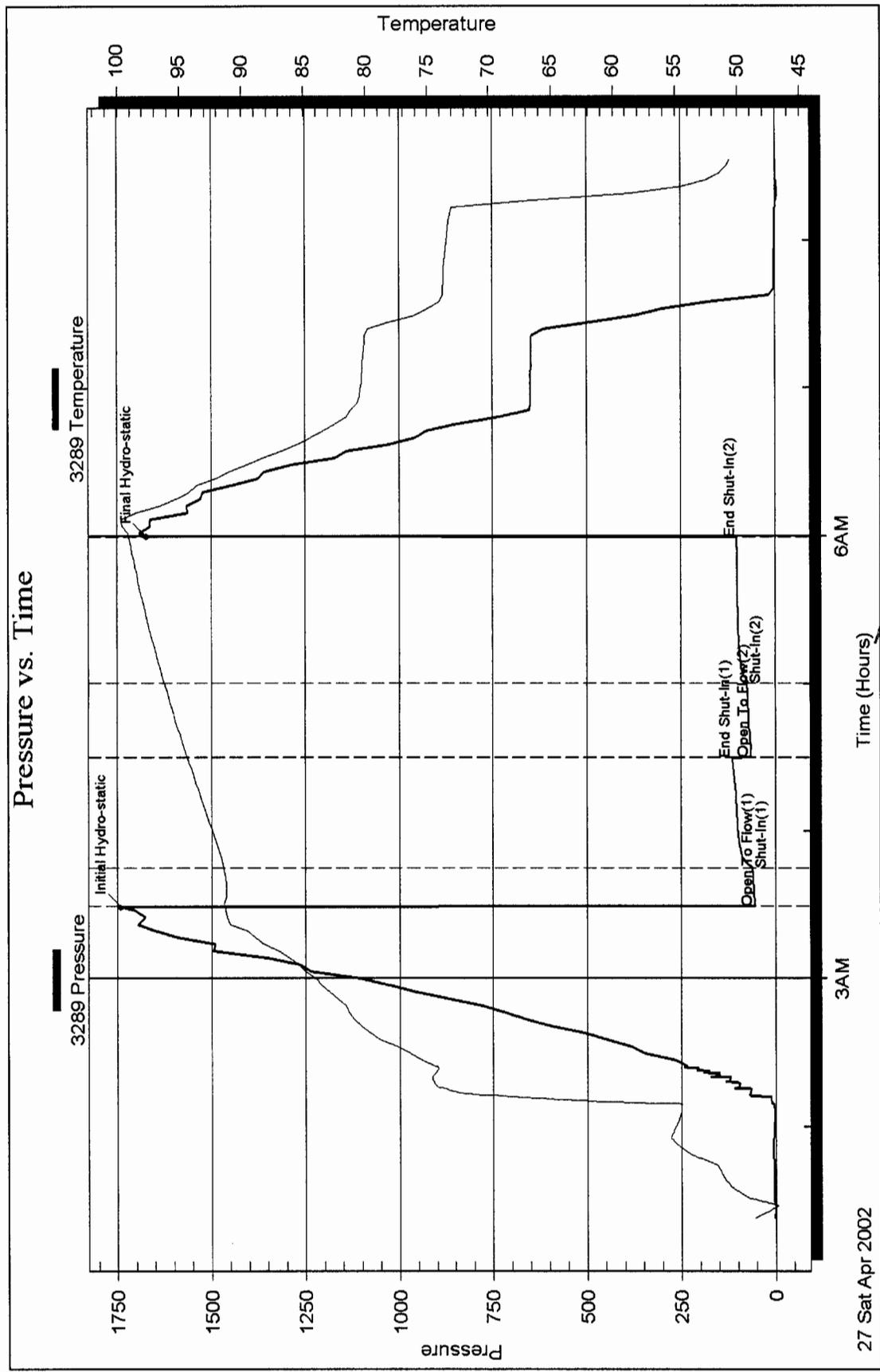
Serial #: 3289

Inside

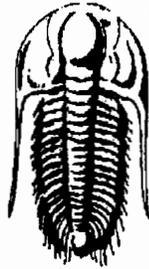
Mull Drilling Inc.

12 22s 14w

DST Test Number: 3



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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Inc.**

PO Box 2758
Wichita KS 67201-2758

RECEIVED
JUL 29 2002
KCC WICHITA

ATTN: Roger Martin

12 22s 14w

Anderson Williams 1-12

Start Date: 2002.04.27 @ 22:15:14

End Date: 2002.04.28 @ 05:03:14

Job Ticket #: 15380 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drilling Inc.
Anderson Williams 1-12
12 22s 14w
DST # 4
KC K-L
2002.04.27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15380 **DST#: 4**
Test Start: 2002.04.27 @ 22:15:14

GENERAL INFORMATION:

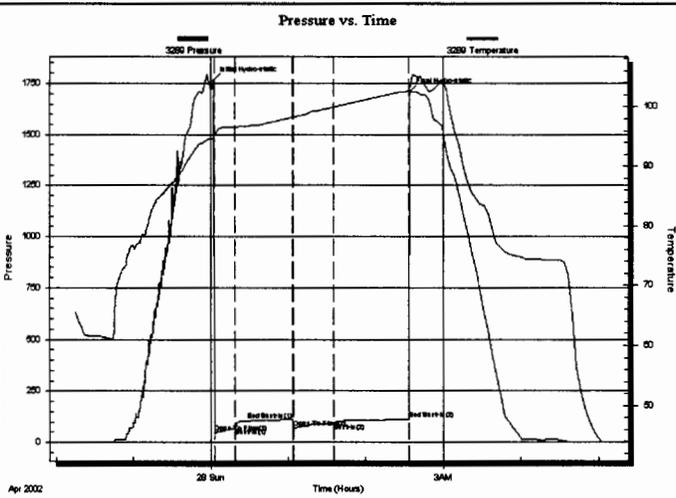
Formation: **KC K-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:03:14
 Time Test Ended: 05:03:14
 Interval: **3585.00 ft (KB) To 3635.00 ft (KB) (TVD)**
 Total Depth: 3635.00 ft (KB) (TVD)
 Hole Diameter: 7.79 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole
 Tester: Wenrich
 Unit No: 14
 Reference Elevations: 1933.00 ft (KB)
 1924.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 3289

Inside

Press@RunDepth: 93.35 psig @ 3589.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2002.04.27 End Date: 2002.04.28 Last Calib.: 1899.12.30
 Start Time: 22:15:19 End Time: 05:03:13 Time On Btm: 2002.04.28 @ 00:02:44
 Time Off Btm: 2002.04.28 @ 02:33:58

TEST COMMENT: IF:Weak blow .2"-3 3/4".
 IS:No blow .
 FF:No blow .Flush tool.Surge. No blow .
 FSI:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1762.18	94.73	Initial Hydro-static
1	45.67	94.93	Open To Flow (1)
16	68.04	96.60	Shut-in(1)
61	109.95	98.26	End Shut-in(1)
62	71.24	98.27	Open To Flow (2)
93	93.35	99.90	Shut-in(2)
151	110.25	102.69	End Shut-in(2)
152	1708.97	103.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
130.00	w m 45%w 55%m	0.64

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Inc.

Anderson Williams 1-12

PO Box 2758
Wichita KS 67201-2758

12 22s 14w

Job Ticket: 15380

DST#: 4

ATTN: Roger Martin

Test Start: 2002.04.27 @ 22:15:14

Tool Information

Drill Pipe:	Length: 3345.00 ft	Diameter: 3.80 inches	Volume: 46.92 bbl	Tool Weight: 2100.00 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: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 48.12 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3585.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3563.00	
S.I. Tool	5.00			3568.00	
Sampler	3.00			3571.00	
HMV	5.00			3576.00	
Packer	5.00			3581.00	23.00 Bottom Of Top Packer
Packer	4.00			3585.00	
Stubb	1.00			3586.00	
Perforations	3.00			3589.00	
Recorder	0.00	3289	Inside	3589.00	
C.O. Sub	1.00			3590.00	
Blank Spacing	30.00			3620.00	
C.O. Sub	0.00			3620.00	
Perforations	12.00			3632.00	
Recorder	0.00	10242	Outside	3632.00	
Bullnose	2.00			3634.00	49.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15380 **DST#: 4**
Test Start: 2002.04.27 @ 22:15:14

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:	16000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.17 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 11000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	w m 45%w 55%m	0.639

Total Length: 130.00 ft Total Volume: 0.639 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: SAMPLER:500 ml of water w/oil scum @ 0psi 16000 chlorides

Serial #: 3289

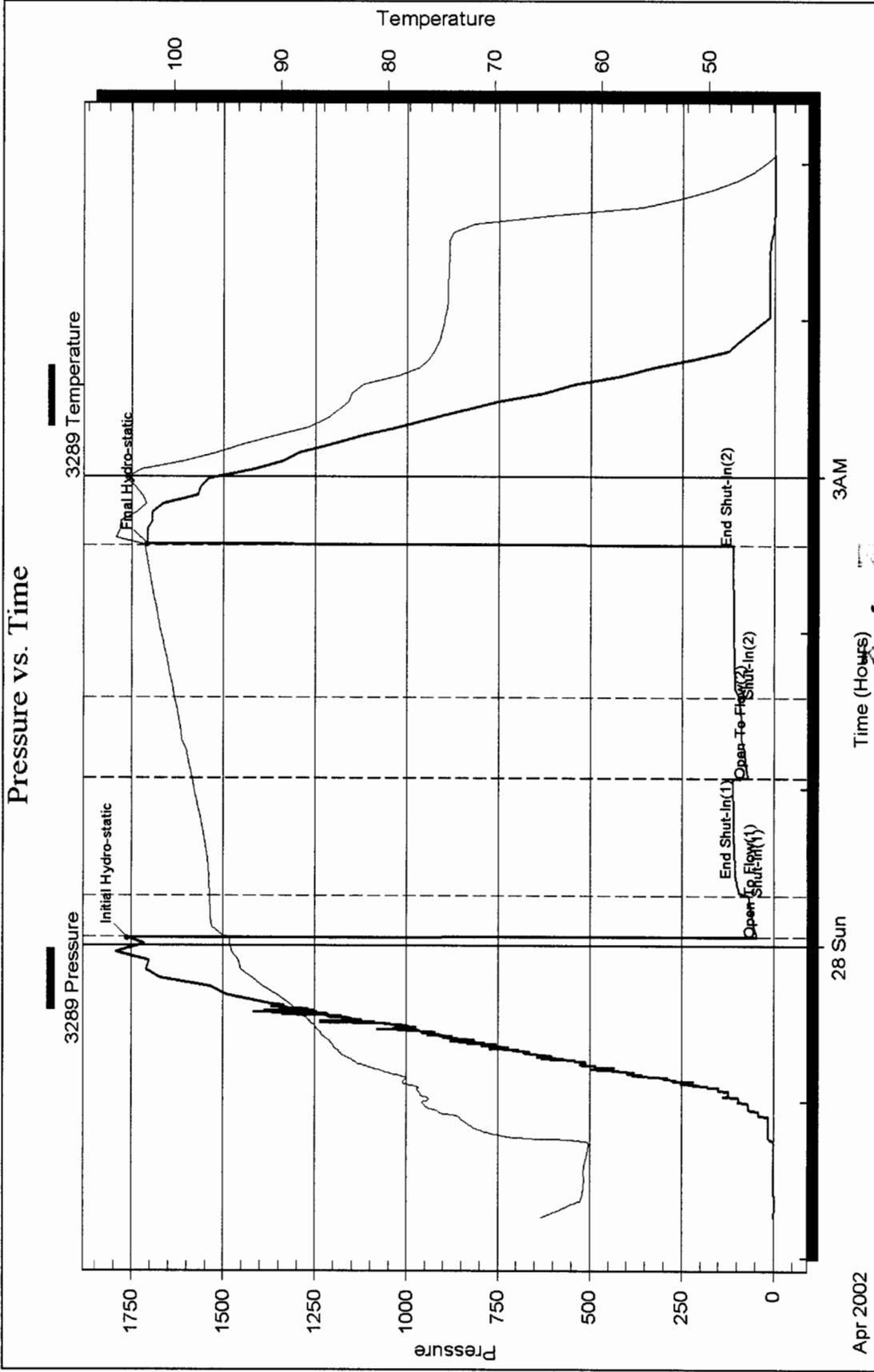
Inside

Mull Drilling Inc.

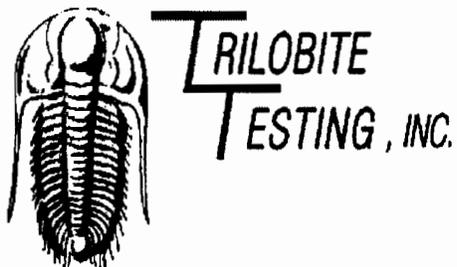
12 22s 14w

DST Test Number: 4

Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Inc.**

PO Box 2758
Wichita KS 67201-2758

ATTN: Roger Martin

12 22s 14w

Anderson Williams 1-12

Start Date: 2002.04.28 @ 17:16:19

End Date: 2002.04.29 @ 02:56:19

Job Ticket #: 15381 DST #: 5

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



**TRIOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

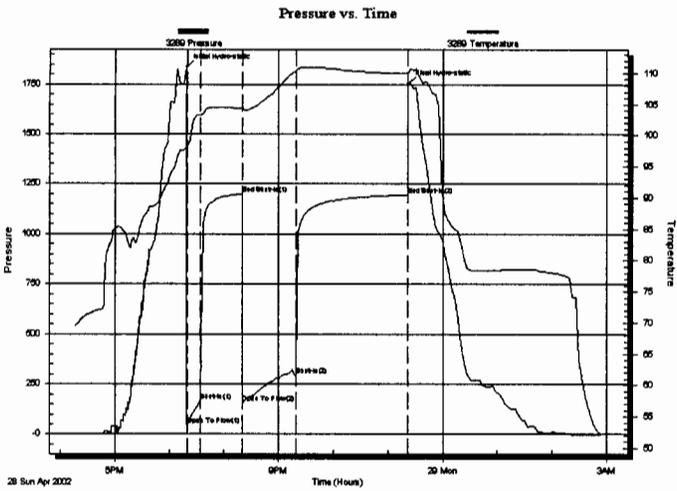
Anderson Williams 1-12
12 22s 14w
Job Ticket: 15381 **DST#: 5**
Test Start: 2002.04.28 @ 17:16:19

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:19:34
Time Test Ended: 02:56:19
Interval: **3681.00 ft (KB) To 3745.00 ft (KB) (TVD)**
Total Depth: 3745.00 ft (KB) (TVD)
Hole Diameter: 7.79 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole
Tester: Wenrich
Unit No: 14
Reference Elevations: 1933.00 ft (KB)
1924.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 3289 **Inside**
Press@RunDepth: 292.58 psig @ 3685.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2002.04.28 End Date: 2002.04.29 Last Calib.: 1899.12.30
Start Time: 17:16:24 End Time: 02:56:19 Time On Btm: 2002.04.28 @ 19:18:49
Time Off Btm: 2002.04.28 @ 23:22:04

TEST COMMENT: IF: Strong blow . BOB in 12.75 min.
IS: No blow .
FF: Strong blow . BOB in 16 min.
FS: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1834.78	98.06	Initial Hydro-static
1	45.81	98.30	Open To Flow (1)
16	164.39	103.34	Shut-in(1)
61	1200.30	104.40	End Shut-in(1)
62	155.44	104.47	Open To Flow (2)
121	292.58	110.41	Shut-in(2)
243	1196.69	109.96	End Shut-in(2)
244	1751.83	110.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
245.00	w cgo 36%g 42%o 22%w	1.20
186.00	m&w cgo 32%g 43%o 13%w 12%m	2.61
157.00	tw gocm 4%g 33%o 3%w 60%m	2.20

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15381 **DST#: 5**
Test Start: 2002.04.28 @ 17:16:19

Tool Information

Drill Pipe:	Length: 3437.00 ft	Diameter: 3.80 inches	Volume: 48.21 bbl	Tool Weight: 2100.00 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: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 49.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3681.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			3659.00	
S.I. Tool	5.00			3664.00	
Sampler	3.00			3667.00	
HMV	5.00			3672.00	
Packer	5.00			3677.00	23.00 Bottom Of Top Packer
Packer	4.00			3681.00	
Stubb	1.00			3682.00	
Perforations	3.00			3685.00	
Recorder	0.00	3289	Inside	3685.00	
C.O. Sub	1.00			3686.00	
Blank Spacing	31.00			3717.00	
C.O. Sub	0.00			3717.00	
Perforations	26.00			3743.00	
Recorder	0.00	10242	Outside	3743.00	
Bullnose	2.00			3745.00	64.00 Bottom Packers & Anchor

Total Tool Length: 87.00

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JUL 29 2002
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.
PO Box 2758
Wichita KS 67201-2758
ATTN: Roger Martin

Anderson Williams 1-12
12 22s 14w
Job Ticket: 15381 **DST#: 5**
Test Start: 2002.04.28 @ 17:16:19

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: 11.97 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 12000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
245.00	w cgo 36%g 42%o 22%w	1.205
186.00	m&w cgo 32%g 43%o 13%w 12%m	2.609
157.00	tw gocm 4%g 33%o 3%w 60%m	2.202

Total Length: 588.00 ft Total Volume: 6.016 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: SAMPLER:1000ml 350mg 500ml o trace m 150ml w @125psi

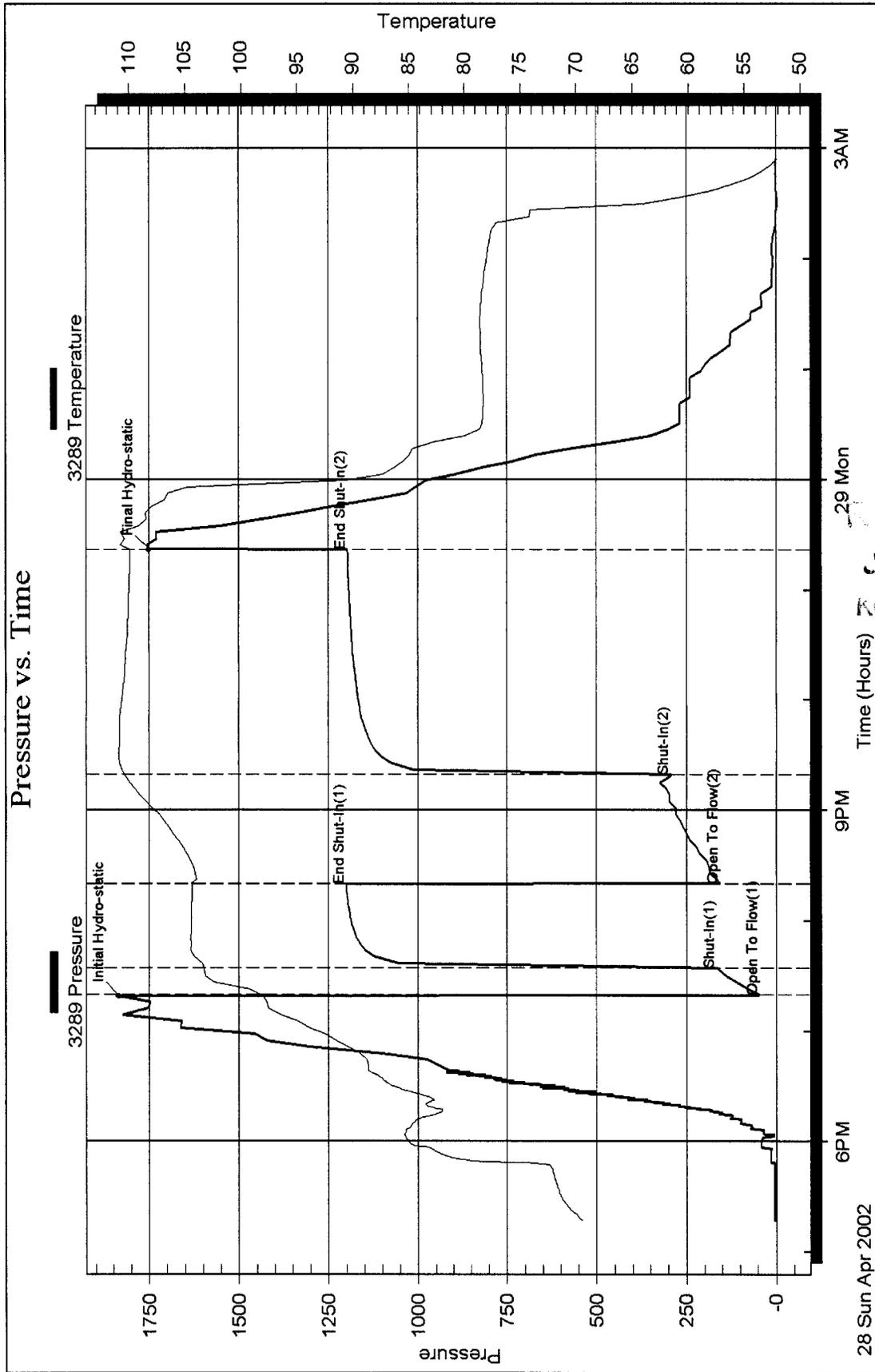
Serial #: 3289

Inside

Mull Drilling Inc.

12 22s 14w

DST Test Number: 5



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