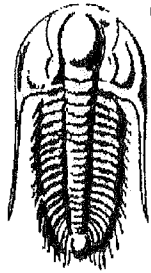


15-135-24213

4-19s-24w



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co Inc**

Box 2758
Wichita Ks 67201-2758

CONFIDENTIAL KCC

ATTN: Roger Martin

MAR 24 2003

4-19s-24w

CONFIDENTIAL

Crick #2-4

Start Date: 2003.02.27 @ 05:32:03

End Date: 2003.02.27 @ 13:32:32

Job Ticket #: 15834

DST #: 1

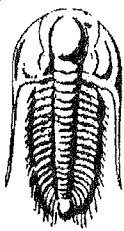
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

CONFIDENTIAL

ORIGINAL


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Co Inc

Crick #2-4

Box 2758
Wichita Ks 67201-2758

4-19s-24w

ATTN: Roger Martin

Job Ticket: 15834

DST#: 1

Test Start: 2003.02.27 @ 05:32:03

GENERAL INFORMATION:

Formation: **Cherokee/ Congl Snd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:33:02

Time Test Ended: 13:32:32

Interval: **4336.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Total Depth: 4380.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Shawn Tatro

Unit No: 17

Reference Elevations: 2347.00 ft (KB)

2339.00 ft (CF)

KB to GRVCF: 8.00 ft

KCC

MAR 24 2003

CONFIDENTIAL

Serial #: 3307

Inside

Press@RunDepth: 185.89 psig @ 4342.50 ft (KB)

Start Date: 2003.02.27

End Date:

2003.02.27

Start Time: 05:32:03

End Time:

13:32:32

Capacity: 7000.00 psig

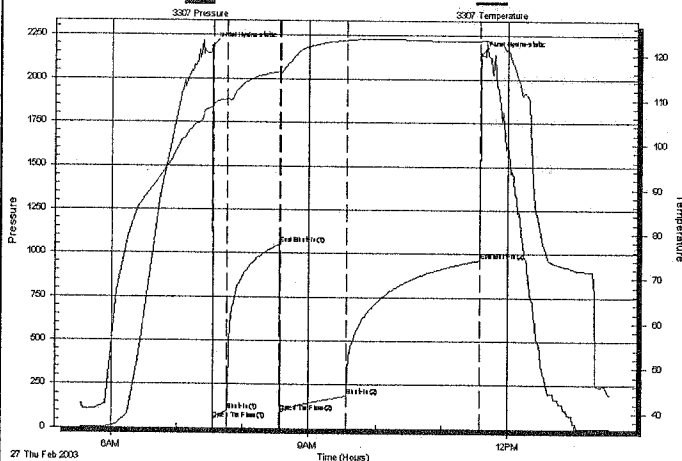
Last Calib.: 1899.12.30

Time On Btm: 2003.02.27 @ 07:32:32

Time Off Btm: 2003.02.27 @ 11:35:32

TEST COMMENT: IF- 0.5 inches building to top BOB in 10 minutes
 IS- 2 inch blow
 FF- 1 inch blow built to BOB in 19 minutes
 FS- no blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2185.57	108.24	Initial Hydro-static
1	48.63	108.40	Open To Flow (1)
14	99.88	110.10	Shut-In(1)
61	1049.51	116.30	End Shut-In(1)
62	94.83	116.34	Open To Flow (2)
121	185.89	123.38	Shut-In(2)
242	962.55	123.17	End Shut-In(2)
243	2143.92	123.34	Final Hydro-static

Recovery

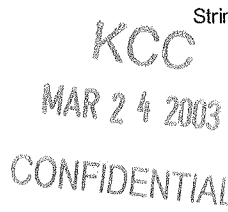
Length (ft)	Description	Volume (bbl)
120.00	oil specked water 2%O 78%W 20%M	1.68
120.00	Mud & WCO 60%O 10%W 40%M	1.68
90.00	MCO 60% O 40%M	1.26
50.00	clean gassy oil 10% G 90%O	0.70
0.00	60' gas in pipe	0.00

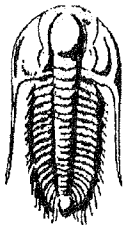
Gas Rates

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

ORIGINAL

 TRILOBITE TESTING, INC.		DRILL STEM TEST REPORT		TOOL DIAGRAM	
Mull Drilling Co Inc Box 2758 Wichita Ks 67201-2758 ATTN: Roger Martin		Crick #2-4 4-19s-24w Job Ticket: 15834 DST#: 1 Test Start: 2003.02.27 @ 05:32:03			
Tool Information					
Drill Pipe:	Length: 4338.00 ft	Diameter: 3.80 inches	Volume: 60.85 bbl	Tool Weight: 1800.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb	
		Total Volume: 60.85 bbl		Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	4336.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	73.00 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			4309.00	
S.I. Tool	5.00			4314.00	
HMV	5.00			4319.00	
Jars	5.00			4324.00	
Safety Joint	2.00			4326.00	
Packer	5.00			4331.00	28.00 Bottom Of Top Packer
Packer	5.00			4336.00	
Stubb	1.00			4337.00	
Perforations	5.00			4342.00	
C.O. Sub	0.50			4342.50	
Recorder	0.00	3307	Inside	4342.50	
C.O. Sub	1.00			4343.50	
Blank Spacing	31.00			4374.50	
C.O. Sub	0.50			4375.00	
Perforations	3.00			4378.00	
Recorder	0.00	5495	Inside	4378.00	
Bullnose	3.00			4381.00	45.00 Bottom Packers & Anchor
Total Tool Length:		73.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co Inc

Crick #2-4

Box 2758
Wichita Ks 67201-2758

4-19s-24w

Job Ticket: 15834

DST#: 1

ATTN: Roger Martin

Test Start: 2003.02.27 @ 05:32:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

32000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	oil specked water 2%O 78%w 20%m	1.683
120.00	Mud & WCO 60%O 10%W 40%M	1.683
90.00	MCO 60% O 40%M	1.262
50.00	clean gassy oil 10% G 90%O	0.701
0.00	60' gas in pipe	0.000

Total Length: 380.00 ft

Total Volume: 5.329 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

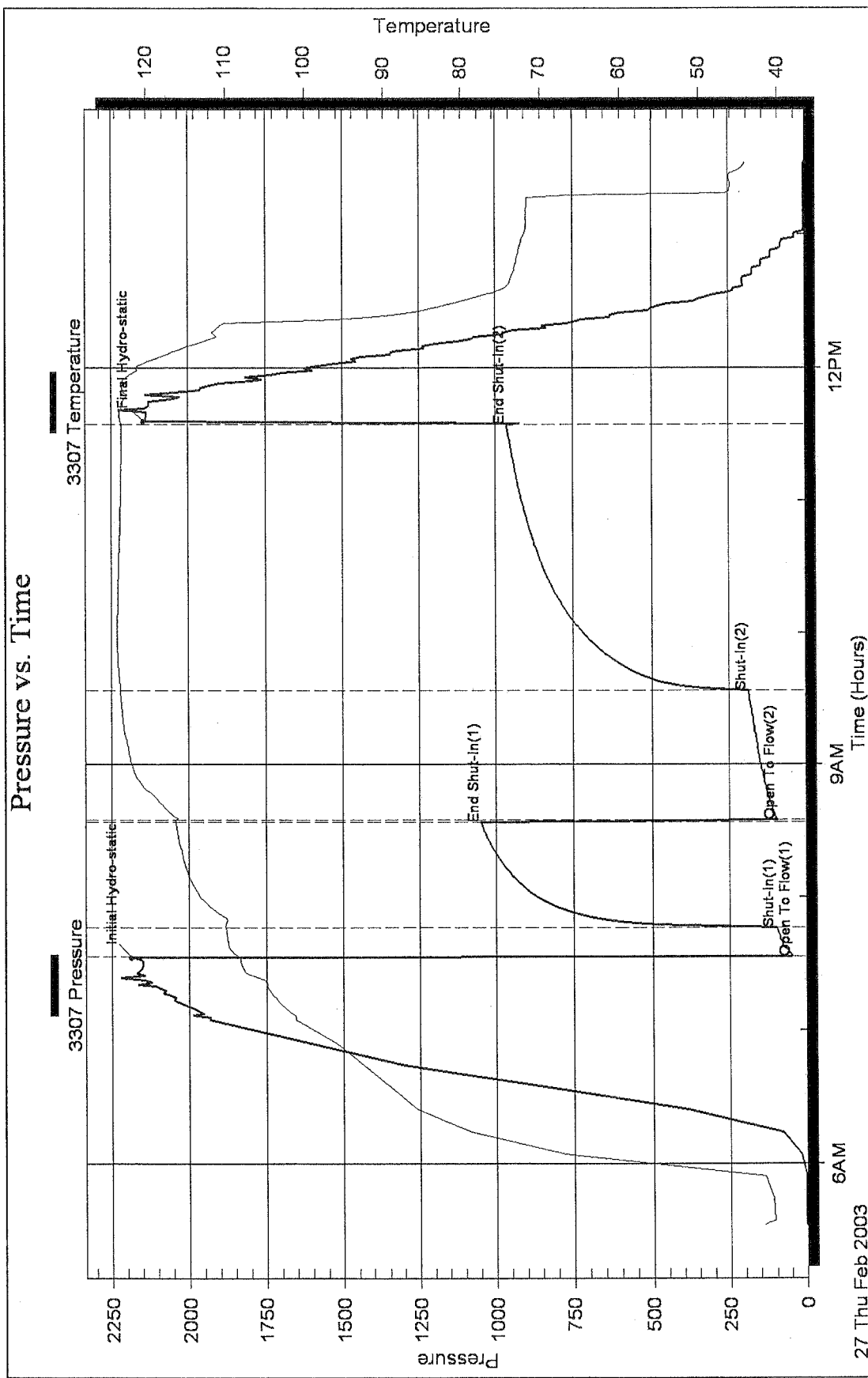
Serial #:

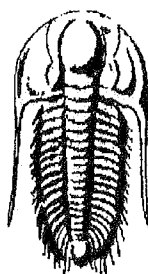
Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .29@53

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co Inc**

Box 2758
Wichita Ks 67201-2758

ATTN: Roger Martin

4-19s-24w

Crick #2-4

Start Date: 2003.02.27 @ 20:42:56

End Date: 2003.02.28 @ 04:39:26

Job Ticket #: 15835 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drilling Co Inc

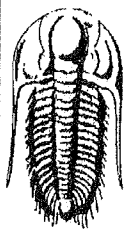
Crick #2-4

4-19s-24w

DST # 2

Cherokee

2003.02.27



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co Inc

Box 2758
Wichita Ks 67201-2758

ATTN: Roger Martin

Crick #2-4

4-19s-24w

Job Ticket: 15835

DST#: 2

Test Start: 2003.02.27 @ 20:42:56

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:34:26

Time Test Ended: 04:39:26

Test Type: Conventional Bottom Hole

Tester: Shawn Tatro

Unit No: 17

Interval: **4373.00 ft (KB) To 4385.00 ft (KB) (TVD)**

Total Depth: 4385.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2347.00 ft (KB)

2339.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3307

Inside

Press@RunDepth: 175.90 psig @ 4379.00 ft (KB)

Start Date: 2003.02.27

End Date:

2003.02.28

Start Time: 20:42:57

End Time:

04:39:26

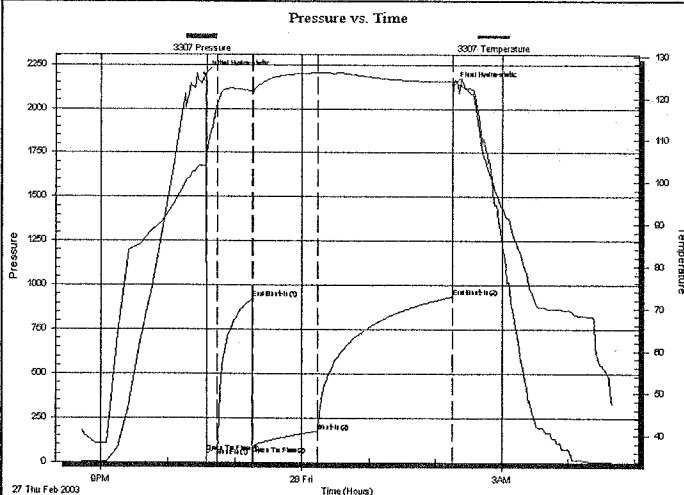
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2003.02.27 @ 22:32:56

Time Off Btm: 2003.02.28 @ 02:15:56

TEST COMMENT: IF- 2 inch blow built to BOB in 9 minutes
IS- 1 inch blow
FF- 2 inch blow built to BOB in 16 minutes
FS- .25 inch blow



PRESSURE SUMMARY

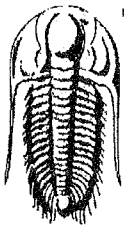
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2194.82	103.97	Initial Hydro-static
2	53.65	106.35	Open To Flow (1)
11	78.21	118.60	Shut-In (1)
42	923.42	121.64	End Shut-In (1)
43	92.57	121.61	Open To Flow (2)
101	175.90	126.03	Shut-In (2)
222	935.85	123.89	End Shut-In (2)
223	2134.30	124.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	muddy water 95% water 5% mud	2.52
40.00	Oand WCM 20% oil 30% water 50% mud	0.56
150.00	Gassy Oil 10% Gas 90% oil	2.10

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co Inc

Box 2758
Wichita Ks 67201-2758

ATTN: Roger Martin

Crick #2-4

4-19s-24w

Job Ticket: 15835

DST#: 2

Test Start: 2003.02.27 @ 20:42:56

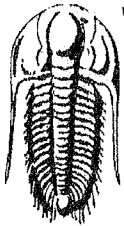
Tool Information

Drill Pipe:	Length: 4371.00 ft	Diameter: 3.80 inches	Volume: 61.31 bbl	Tool Weight: 1800.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 61.31 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4373.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4346.00	
S.I. Tool	5.00			4351.00	
HMV	5.00			4356.00	
Jars	5.00			4361.00	
Safety Joint	2.00			4363.00	
Packer	5.00			4368.00	28.00 Bottom Of Top Packer
Packer	5.00			4373.00	
Stubb	1.00			4374.00	
Perforations	5.00			4379.00	
Recorder	0.00	3307	Inside	4379.00	
Perforations	3.00			4382.00	
Recorder	0.00	5495	Inside	4382.00	
Bullnose	3.00			4385.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co Inc

Crick #2-4

Box 2758
Wichita Ks 67201-2758

4-19s-24w

Job Ticket: 15835

DST#: 2

ATTN: Roger Martin

Test Start: 2003.02.27 @ 20:42:56

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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	muddy water 95% water 5% mud	2.525
40.00	Oand WCM 20% oil 30% water 50% mud	0.561
150.00	Gassy Oil 10% Gas 90% oil	2.104

Total Length: 370.00 ft

Total Volume: 5.190 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

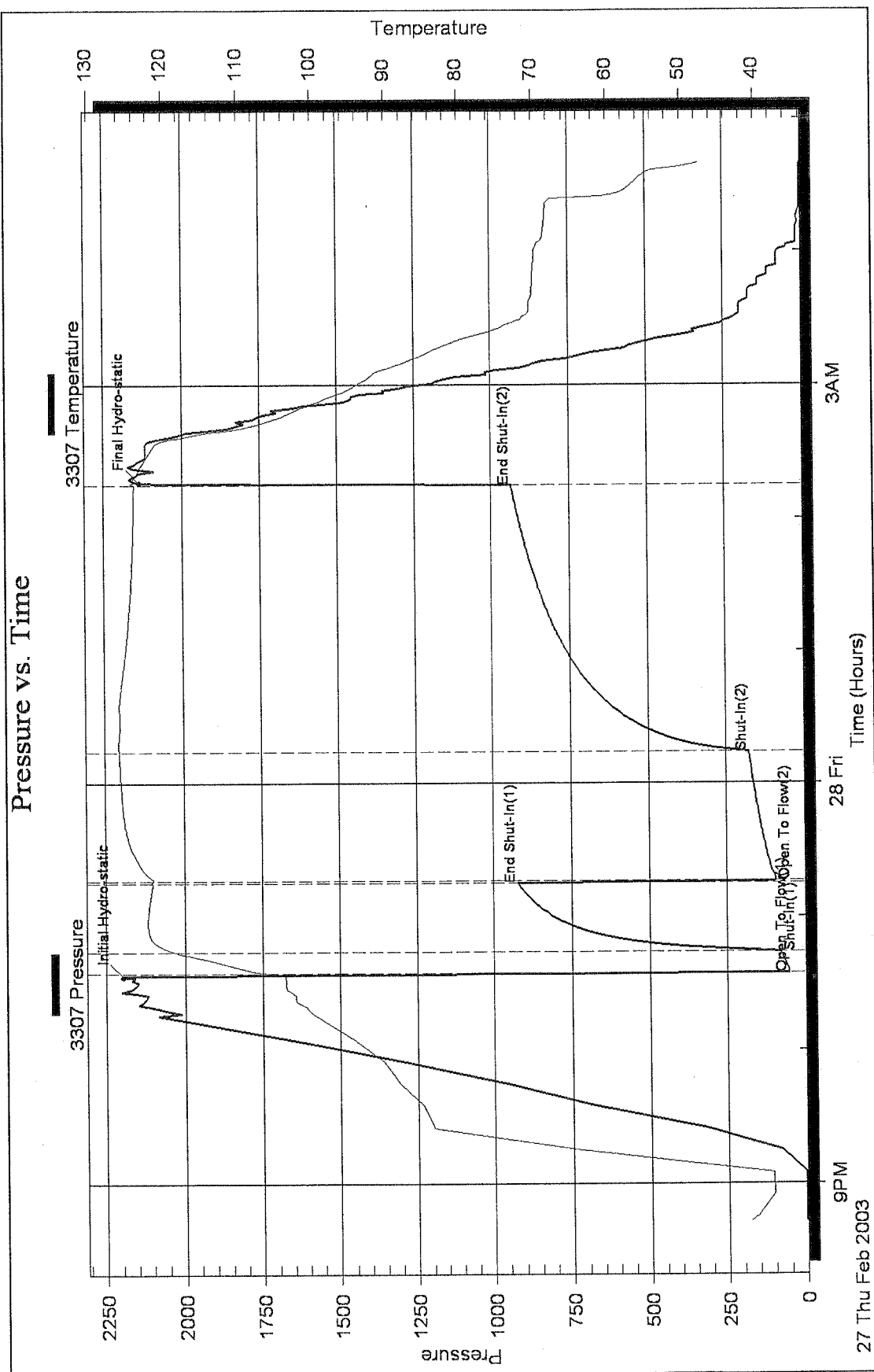
Serial #:

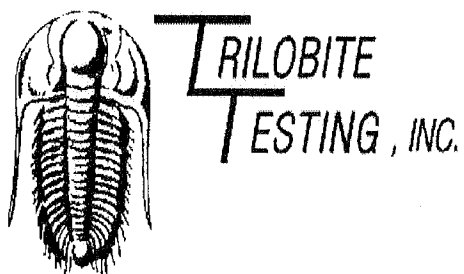
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co Inc**

Box 2758
Wichita Ks 67201-2758

ATTN: Roger Martin

4-19s-24w

Crick #2-4

Start Date: 2003.02.28 @ 20:55:14

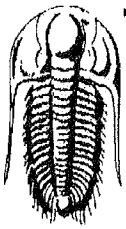
End Date: 2003.03.01 @ 07:00:57

Job Ticket #: 15275 DST #: 3

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 Co Inc
Box 2758
Wichita Ks 67201-2758

ATTN: Roger Martin

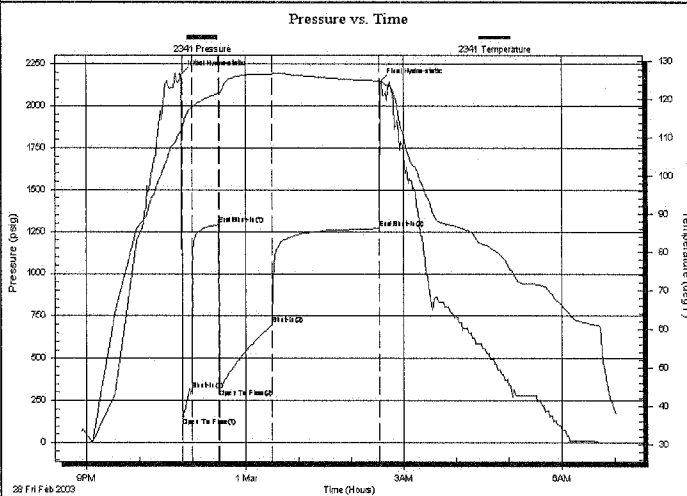
Crick #2-4
4-19s-24w
Job Ticket: 15275 **DST#: 3**
Test Start: 2003.02.28 @ 20:55:14

GENERAL INFORMATION:

Formation: **Congl.Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:48:12
Time Test Ended: 07:00:57
Test Type: Conventional Straddle
Tester: Shane McBride
Unit No: 25
Interval: **4380.00 ft (KB) To 4393.00 ft (KB) (TVD)**
Reference Elevations: 2347.00 ft (KB)
Total Depth: 4460.00 ft (KB) (TVD) 2339.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 2341 **Inside**
Press@RunDepth: 698.85 psig @ 4381.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2003.02.28 End Date: 2003.03.01 Last Calib.: 1899.12.30
Start Time: 20:55:14 End Time: 07:00:57 Time On Btm: 2003.02.28 @ 22:47:12
Time Off Btm: 2003.03.01 @ 02:32:57

TEST COMMENT: B.O.B. in 1 1/2min.
No return
B.O.B. in 4 min.
No return



PRESSURE SUMMARY

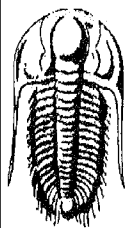
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2184.61	111.83	Initial Hydro-static
1	99.17	112.23	Open To Flow (1)
12	313.57	117.92	Shut-In(1)
43	1292.36	121.60	End Shut-In(1)
44	320.80	121.66	Open To Flow (2)
104	698.85	126.74	Shut-In(2)
225	1268.20	124.93	End Shut-In(2)
226	2141.59	124.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	s g m c o 10%g 40%m 50%o	3.79
360.00	g m c o 20%g 30%m 50%o	5.05
890.00	s m c g o 15%m 25%g 60%o	12.48
130.00	s o & g c w 10%o 10%g 80%w	1.82
60.00	water w/trace of oil 100%w	0.84

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co Inc

Crick #2-4

Box 2758
Wichita Ks 67201-2758

4-19s-24w

Job Ticket: 15275

DST#: 3

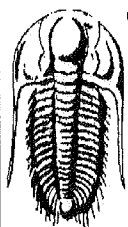
ATTN: Roger Martin

Test Start: 2003.02.28 @ 20:55:14

Tool Information

Drill Pipe:	Length: 4371.00 ft	Diameter: 3.80 inches	Volume: 61.31 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	75000.00 lb
			Total Volume: 61.31 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	4380.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	4387.00 ft				
Interval between Packers:	7.00 ft				
Tool Length:	110.00 ft				
Number of Packers:	3	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4351.00	
S.I. Tool	5.00			4356.00	
HMV	5.00			4361.00	
Jars	5.00			4366.00	
Safety Joint	2.00			4368.00	
Packer	5.00			4373.00	30.00 Bottom Of Top Packer
Packer	7.00			4380.00	
Stubb	1.00			4381.00	
Recorder	0.00	2341	Inside	4381.00	
Perforations	6.00			4387.00	7.00 Tool Interval
Packer	6.00			4393.00	
Stubb	1.00		Below	4394.00	
C.O. Sub	1.00			4395.00	
drillpipe	62.00			4457.00	
C.O. Sub	1.00			4458.00	
Recorder	0.00	2023		4458.00	
Bullnose	2.00			4460.00	73.00 Bottom Packers & Anchor
Total Tool Length:		110.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co Inc

Crick #2-4

Box 2758
Wichita Ks 67201-2758

4-19s-24w

Job Ticket: 15275

DST#: 3

ATTN: Roger Martin

Test Start: 2003.02.28 @ 20:55:14

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:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	s g m c o 10%g 40%m 50%o	3.787
360.00	g m c o 20%g 30%m 50%o	5.050
890.00	s m c g o 15%m 25%g 60%o	12.484
130.00	s o & g c w 10%o 10%g 80%w	1.824
60.00	water w/trace of oil 100%w	0.842

Total Length: 1710.00 ft

Total Volume: 23.987 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

