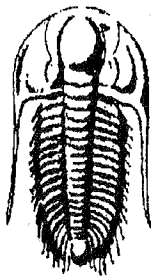


13-15s-27w

IND



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: Mull Drilling Company

**CONFIDENTIAL** 158  
Wichita, KS 67202

JUL 14 2009

ATTN: Kevin Kessler **KCC**

15-063-2771

13-15s-27w Gove KS

#1-13 Garvey B

Start Date: 2009.04.13 @ 10:06:05

End Date: 2009.04.13 @ 16:09:44

Job Ticket #: 34203 DST #: 1

KANSAS CORPORATION COMMISSION  
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Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Mull Drilling Company

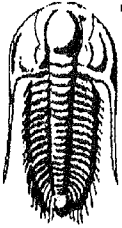
#1-13 Garvey B

13-15s-27w Gove KS

DST # 1

Lans. H-1

2009.04.13



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34203      DST#: 1

ATTN: Kevin Kessler

Test Start: 2009.04.13 @ 10:06:05

## GENERAL INFORMATION:

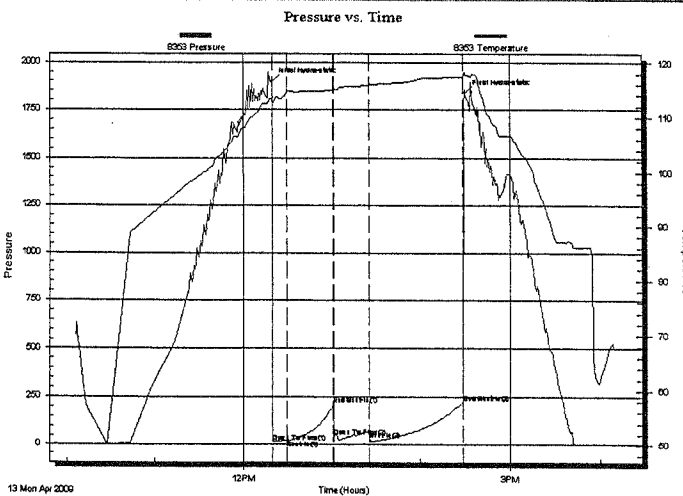
Formation: **Lans. H-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:19:15  
 Time Test Ended: 16:09:44  
 Interval: **3760.00 ft (KB) To 3820.00 ft (KB) (TVD)**  
 Total Depth: 3820.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: Brandon Domsch  
 Unit No: 48  
 Reference Elevations: 2350.00 ft (KB)  
 2341.00 ft (CF)  
 KB to GR/CF: 9.00 ft

## Serial #: 8353

Inside

Press@RunDepth: 72.93 psig @ 3761.00 ft (KB)      Capacity: 7000.00 psig  
 Start Date: 2009.04.13      End Date: 2009.04.13      Last Calib.: 2009.04.13  
 Start Time: 10:06:05      End Time: 16:09:44      Time On Btm: 2009.04.13 @ 12:18:45  
 Time Off Btm: 2009.04.13 @ 14:30:14

TEST COMMENT: IF: Built to 1 3/4 inch.  
 IS: No return.  
 FF: Built to 1 1/4 inch died back to 1/4 inch.  
 FS: No return.



## PRESSURE SUMMARY

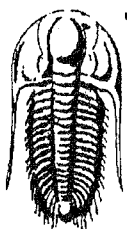
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.30	113.42	Initial Hydro-static
1	15.31	112.34	Open To Flow (1)
10	22.21	114.57	Shut-In(1)
42	210.02	114.95	End Shut-In(1)
42	41.66	115.01	Open To Flow (2)
67	72.93	115.85	Shut-In(2)
130	218.12	117.52	End Shut-In(2)
132	1838.03	118.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 15%o 85%om	0.35
0.00	GIP = 0	0.00
0.00	API = N/A	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34203

**DST#: 1**

ATTN: Kevin Kessler

Test Start: 2009.04.13 @ 10:06:05

## Tool Information

Drill Pipe:	Length: 3748.00 ft	Diameter: 3.80 inches	Volume: 52.57 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 52.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3760.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

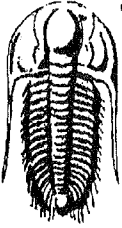
Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3741.00	
Shut In Tool	5.00			3746.00	
Hydraulic tool	5.00			3751.00	
Packer	5.00			3756.00	20.00 Bottom Of Top Packer
Packer	4.00			3760.00	
Stubb	1.00			3761.00	
Recorder	0.00	8353	inside	3761.00	
Recorder	0.00	6741	inside	3761.00	
Perforations	21.00			3782.00	
Change Over Sub	1.00			3783.00	
Drill Pipe	31.00			3814.00	
Change Over Sub	1.00			3815.00	
Bullnose	5.00			3820.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**

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**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Company

#1-13 Garvey B

PO Box 2758  
Wichita, KS 67202

13-15s-27w Gove KS

Job Ticket: 34203

DST#: 1

ATTN: Kevin Kessler

Test Start: 2009.04.13 @ 10:06:05

## 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: 43.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.95 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	OCM 15%o 85% <sub>m</sub>	0.351
0.00	GIP = 0	0.000
0.00	API = N/A	0.000

Total Length: 25.00 ft      Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

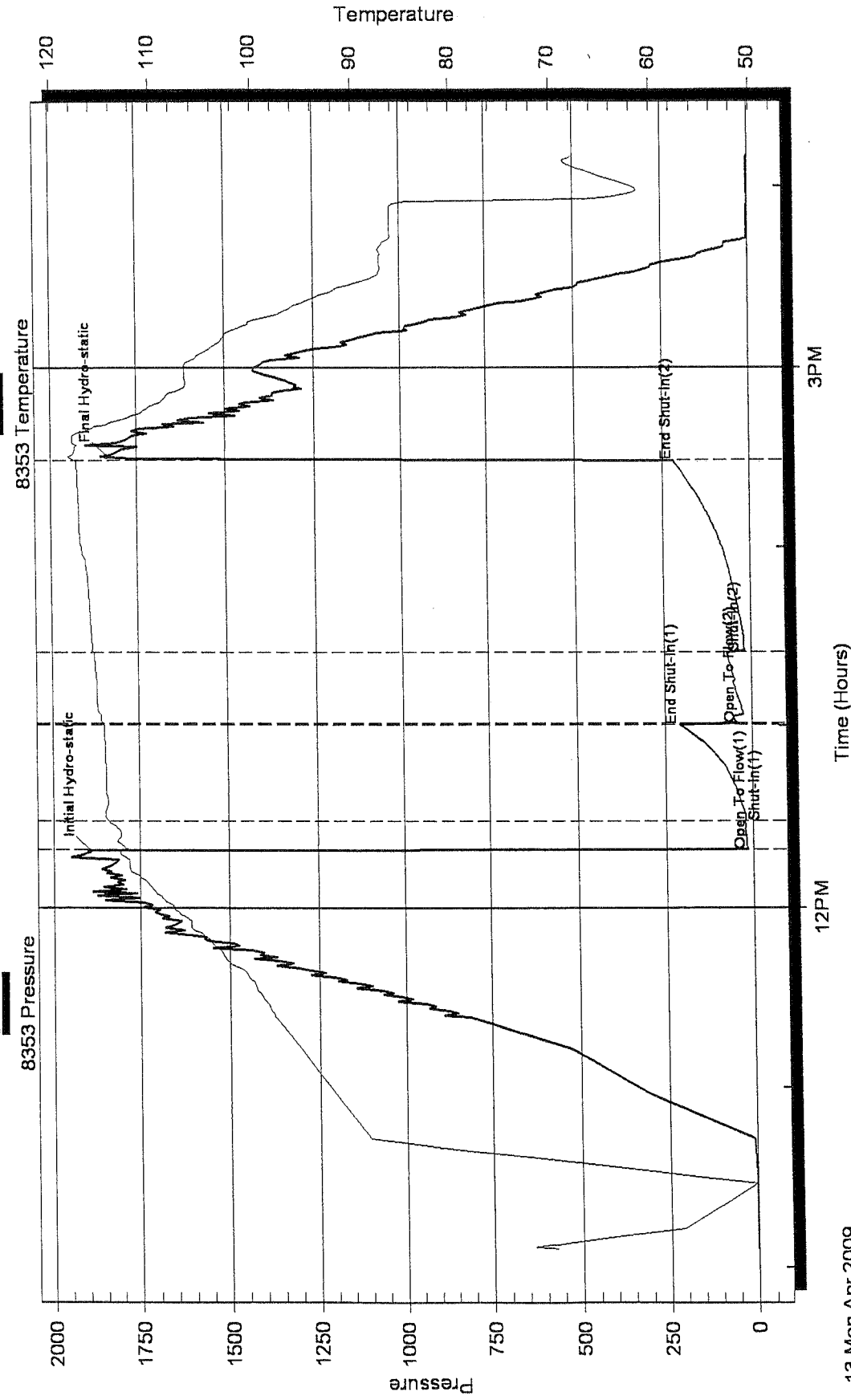
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

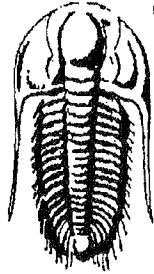


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Ref. No: 34203

Trilobite Testing, Inc



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita, KS 67202

ATTN: Kevin Kessler

**13-15s-27w Gove KS**

**#1-13 Garvey B**

Start Date: 2009.04.14 @ 00:24:05

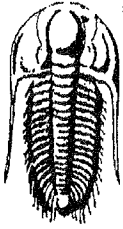
End Date: 2009.04.14 @ 08:37:29

Job Ticket #: 34204          DST #: 2

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**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34204

**DST#: 2**

ATTN: Kevin Kessler

Test Start: 2009.04.14 @ 00:24:05

## GENERAL INFORMATION:

Formation: **Lans. J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:16:30

Time Test Ended: 08:37:29

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: **3820.00 ft (KB) To 3850.00 ft (KB) (TVD)**

Reference Elevations: 2350.00 ft (KB)

Total Depth: 3850.00 ft (KB) (TVD)

2341.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8353** Inside

Press@RunDepth: 40.33 psig @ 3821.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.04.14

End Date: 2009.04.14

Last Calib.: 2009.04.14

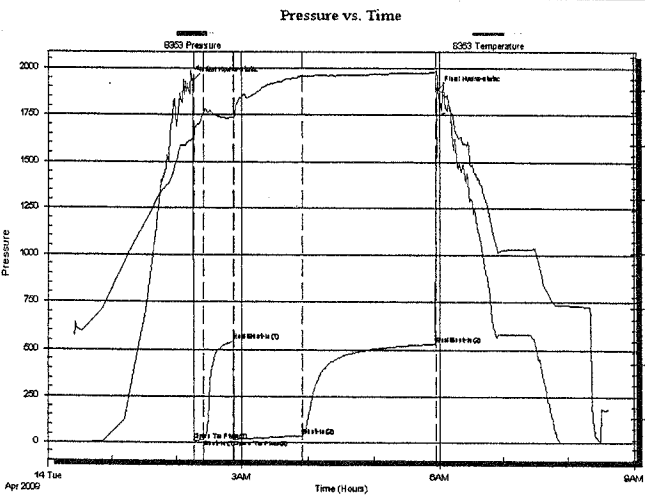
Start Time: 00:24:05

End Time: 08:37:29

Time On Btm: 2009.04.14 @ 02:15:45

Time Off Btm: 2009.04.14 @ 05:58:14

**TEST COMMENT:** IF: Built to 3 1/2 inches.  
IS: No return.  
FF: Built to 9 1/2 inches.  
FS: No return.



## PRESSURE SUMMARY

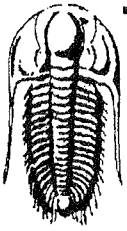
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1933.36	111.10	Initial Hydro-static
1	13.47	110.85	Open To Flow (1)
9	16.88	115.51	Shut-In (1)
37	543.04	114.85	End Shut-In (1)
37	19.62	114.65	Open To Flow (2)
100	40.33	122.53	Shut-In (2)
221	530.16	123.22	End Shut-In (2)
223	1887.74	122.04	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	WCM 30%w 70%o	0.70
10.00	SMCO 95%o 5%o	0.14
0.00	GIP = 120 FT	0.00
0.00	API = 38@60F = 38	0.00
0.00	RW = NA	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mull Drilling Company

#1-13 Garvey B

PO Box 2758  
Wichita, KS 67202

13-15s-27w Gove KS

Job Ticket: 34204

DST#: 2

ATTN: Kevin Kessler

Test Start: 2009.04.14 @ 00:24:05

**Tool Information**

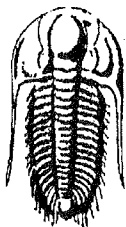
Drill Pipe:	Length: 3809.00 ft	Diameter: 3.80 inches	Volume: 53.43 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 72000.00 lb
		<b>Total Volume:</b>	<b>53.43 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3820.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 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			3801.00	
Shut In Tool	5.00			3806.00	
Hydraulic tool	5.00			3811.00	
Packer	5.00			3816.00	20.00 Bottom Of Top Packer
Packer	4.00			3820.00	
Stubb	1.00			3821.00	
Recorder	0.00	8353	Inside	3821.00	
Recorder	0.00	6741	Inside	3821.00	
Perforations	24.00			3845.00	
Bullnose	5.00			3850.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				

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**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Company

#1-13 Garvey B

PO Box 2758  
Wichita, KS 67202

13-15s-27w Gove KS

Job Ticket: 34204

DST#: 2

ATTN: Kevin Kessler

Test Start: 2009.04.14 @ 00:24:05

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 10.31 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
50.00	WCM 30%w 70%m	0.701
10.00	SMCO 95%o 5%m	0.140
0.00	GIP = 120 FT	0.000
0.00	API = 38@60F = 38	0.000
0.00	RW = N/A	0.000

Total Length: 60.00 ft

Total Volume: 0.841 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8353

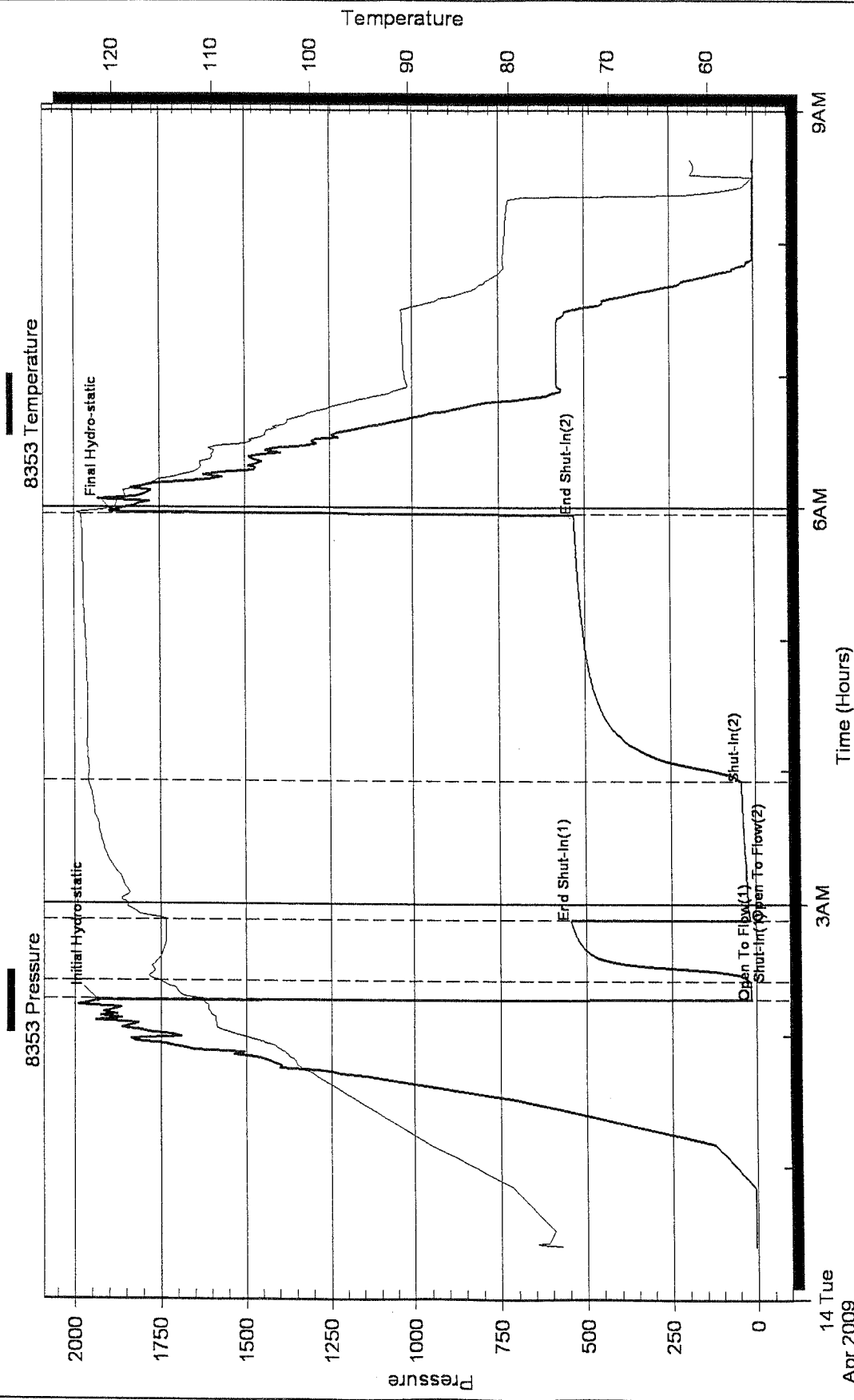
Inside

Mull Drilling Company

13-15s-27w Gove KS

DST Test Number: 2

### Pressure vs. Time



TRIBITE TESTING CORPORATION

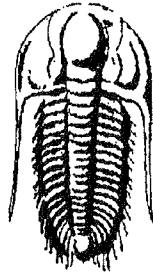
Ref. No: 34204

Printed: 2009.04.22 @ 09:41:20 Page 5

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TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita, KS 67202

ATTN: Kevin Kessler

**13-15s-27w Gove KS**

**#1-13 Garvey B**

Start Date: 2009.04.15 @ 15:14:05

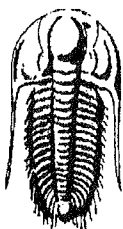
End Date: 2009.04.15 @ 20:24:44

Job Ticket #: 34205                      DST #: 3

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**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34205

**DST#: 3**

ATTN: Kevin Kessler

Test Start: 2009.04.15 @ 15:14:05

## GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:39:15

Time Test Ended: 20:24:44

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: **4070.00 ft (KB) To 4130.00 ft (KB) (TVD)**

Total Depth: 4130.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2350.00 ft (KB)

2341.00 ft (CF)

KB to GR/CF: 9.00 ft

**Serial #: 8353**

Inside

Press@RunDepth: 18.63 psig @ 4071.00 ft (KB)

Start Date: 2009.04.15

End Date:

2009.04.15

Capacity: 7000.00 psig

Last Calib.: 2009.04.15

Start Time: 15:14:05

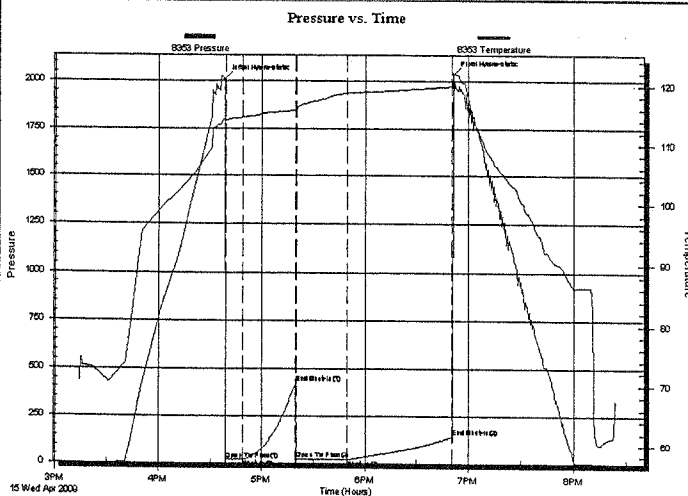
End Time:

20:24:44

Time On Btm: 2009.04.15 @ 16:38:15

Time Off Btm: 2009.04.15 @ 18:51:30

TEST COMMENT: IF: Built to 1 inch.  
IS: No return.  
FF: Built to 1 inch died back to 1/4 inch.  
FS: No return.



## PRESSURE SUMMARY

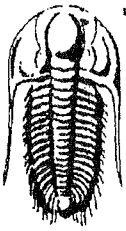
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2010.20	114.33	Initial Hydro-static
1	16.92	114.19	Open To Flow (1)
11	17.55	114.62	Shut-In(1)
42	421.08	115.80	End Shut-In(1)
42	20.14	115.75	Open To Flow (2)
72	18.63	118.82	Shut-In(2)
133	145.10	119.92	End Shut-In(2)
134	2038.03	121.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	O spotted M 100%	0.21

## Gas Rates

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



**TRIOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34205

**DST#: 3**

ATTN: Kevin Kessler

Test Start: 2009.04.15 @ 15:14:05

### Tool Information

Drill Pipe:	Length: 4060.00 ft	Diameter: 3.80 inches	Volume: 56.95 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
		<u>Total Volume:</u>	<u>56.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4070.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

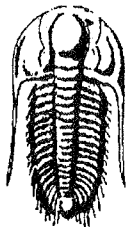
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4051.00	
Shut In Tool	5.00			4056.00	
Hydraulic tool	5.00			4061.00	
Packer	5.00			4066.00	20.00 Bottom Of Top Packer
Packer	4.00			4070.00	
Stubb	1.00			4071.00	
Recorder	0.00	8353	Inside	4071.00	
Recorder	0.00	6741	Inside	4071.00	
Perforations	21.00			4092.00	
Change Over Sub	1.00			4093.00	
Drill Pipe	31.00			4124.00	
Change Over Sub	1.00			4125.00	
Bullnose	5.00			4130.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**

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TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34205

**DST#: 3**

ATTN: Kevin Kessler

Test Start: 2009.04.15 @ 15:14:05

## 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: 41.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 13.52 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	O spotted M 100% <sub>m</sub>	0.210

Total Length: 15.00 ft

Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8353

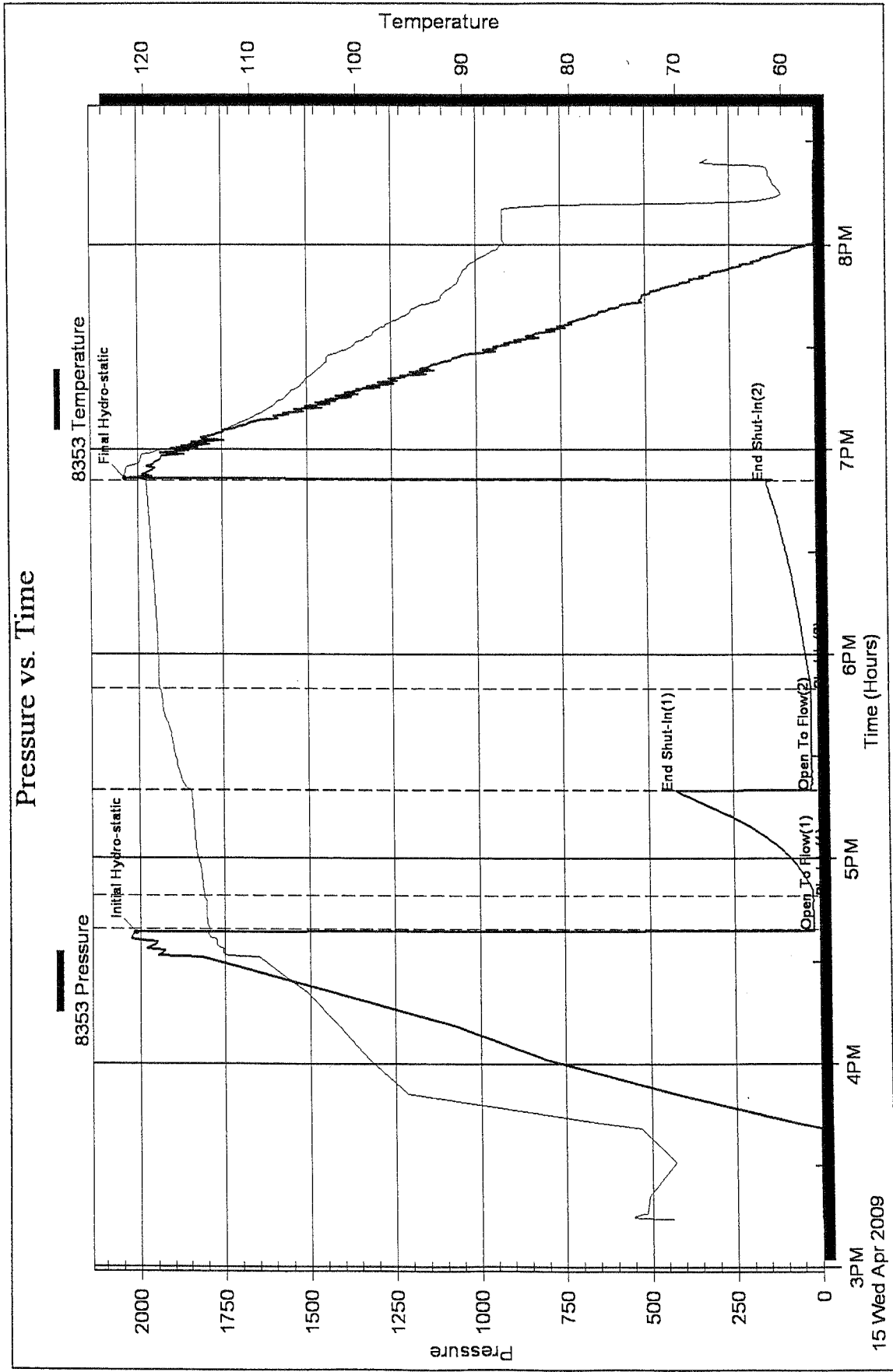
Inside

Mull Drilling Company

13-15s-27w Gove KS

DST Test Number: 3

### Pressure vs. Time



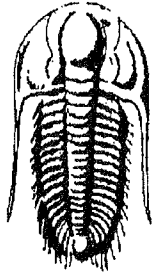
Triobite Testing, Inc

Ref. No: 34205

ACCEPTATION COMMISSION

JUL 15 2009

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**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita, KS 67202

ATTN: Kevin Kessler

**13-15s-27w Gove KS**

**#1-13 Garvey B**

Start Date: 2009.04.16 @ 10:12:05

End Date: 2009.04.16 @ 17:54:29

Job Ticket #: 34206                      DST #: 4

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PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Mull Drilling Company

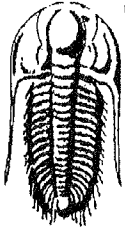
#1-13 Garvey B

13-15s-27w Gove KS

DST # 4

Miss.

2009.04.16



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34206

DST#: 4

ATTN: Kevin Kessler

Test Start: 2009.04.16 @ 10:12:05

## GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:15:00

Time Test Ended: 17:54:29

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: **4104.00 ft (KB) To 4214.00 ft (KB) (TVD)**

Reference Elevations: 2350.00 ft (KB)

Total Depth: 4214.00 ft (KB) (TVD)

2341.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8353**

**Inside**

Press@RunDepth: 60.45 psig @ 4105.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.04.16

End Date:

2009.04.16

Last Calib.:

2009.04.16

Start Time: 10:12:05

End Time:

17:54:29

Time On Btm:

2009.04.16 @ 12:14:15

Time Off Btm:

2009.04.16 @ 15:57:29

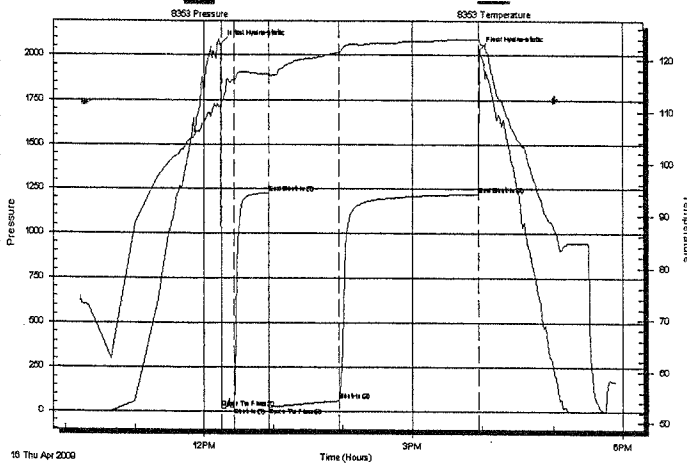
TEST COMMENT: IF: Built to 2 1/2 inches.

IS: No return.

FF: Built to 8 1/2 inches.

FS: Came back @ 10 mins, had a surface blow for 22 mins.

Pressure vs. Time



## PRESSURE SUMMARY

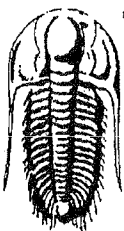
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2059.26	111.28	Initial Hydro-static
1	16.79	110.98	Open To Flow (1)
12	24.82	116.20	Shut-In(1)
42	1224.68	117.27	End Shut-In(1)
43	24.29	117.03	Open To Flow(2)
102	60.45	121.38	Shut-In(2)
223	1218.09	124.00	End Shut-In(2)
224	2027.75	123.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 5%o 95% m	0.42
35.00	O&M 50%o 50% m	0.49
45.00	CO 100%o	0.63
0.00	GIP 120	0.00
0.00	API = 35@70F = 34	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drilling Company

#1-13 Garvey B

PO Box 2758  
Wichita, KS 67202

13-15s-27w Gove KS

Job Ticket: 34206

DST#: 4

ATTN: Kevin Kessler

Test Start: 2009.04.16 @ 10:12:05

**Tool Information**

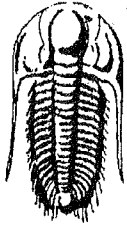
Drill Pipe:	Length: 4094.00 ft	Diameter: 3.80 inches	Volume: 57.43 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
		Total Volume: 57.43 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4104.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	110.00 ft			
Tool Length:	130.00 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			4085.00	
Shut In Tool	5.00			4090.00	
Hydraulic tool	5.00			4095.00	
Packer	5.00			4100.00	20.00 Bottom Of Top Packer
Packer	4.00			4104.00	
Stubb	1.00			4105.00	
Recorder	0.00	8353	Inside	4105.00	
Recorder	0.00	6741	Inside	4105.00	
Perforations	9.00			4114.00	
Change Over Sub	1.00			4115.00	
Drill Pipe	93.00			4208.00	
Change Over Sub	1.00			4209.00	
Bullnose	5.00			4214.00	110.00 Bottom Packers & Anchor

**Total Tool Length: 130.00**

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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34206

**DST#: 4**

ATTN: Kevin Kessler

Test Start: 2009.04.16 @ 10:12:05

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.05 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3300.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SOCM 5%o 95%m	0.421
35.00	O&M 50%o 50%m	0.491
45.00	CO 100%o	0.631
0.00	GIP 120	0.000
0.00	API = 35@70F = 34	0.000

Total Length: 110.00 ft      Total Volume: 1.543 bbl

Num Fluid Samples: 0

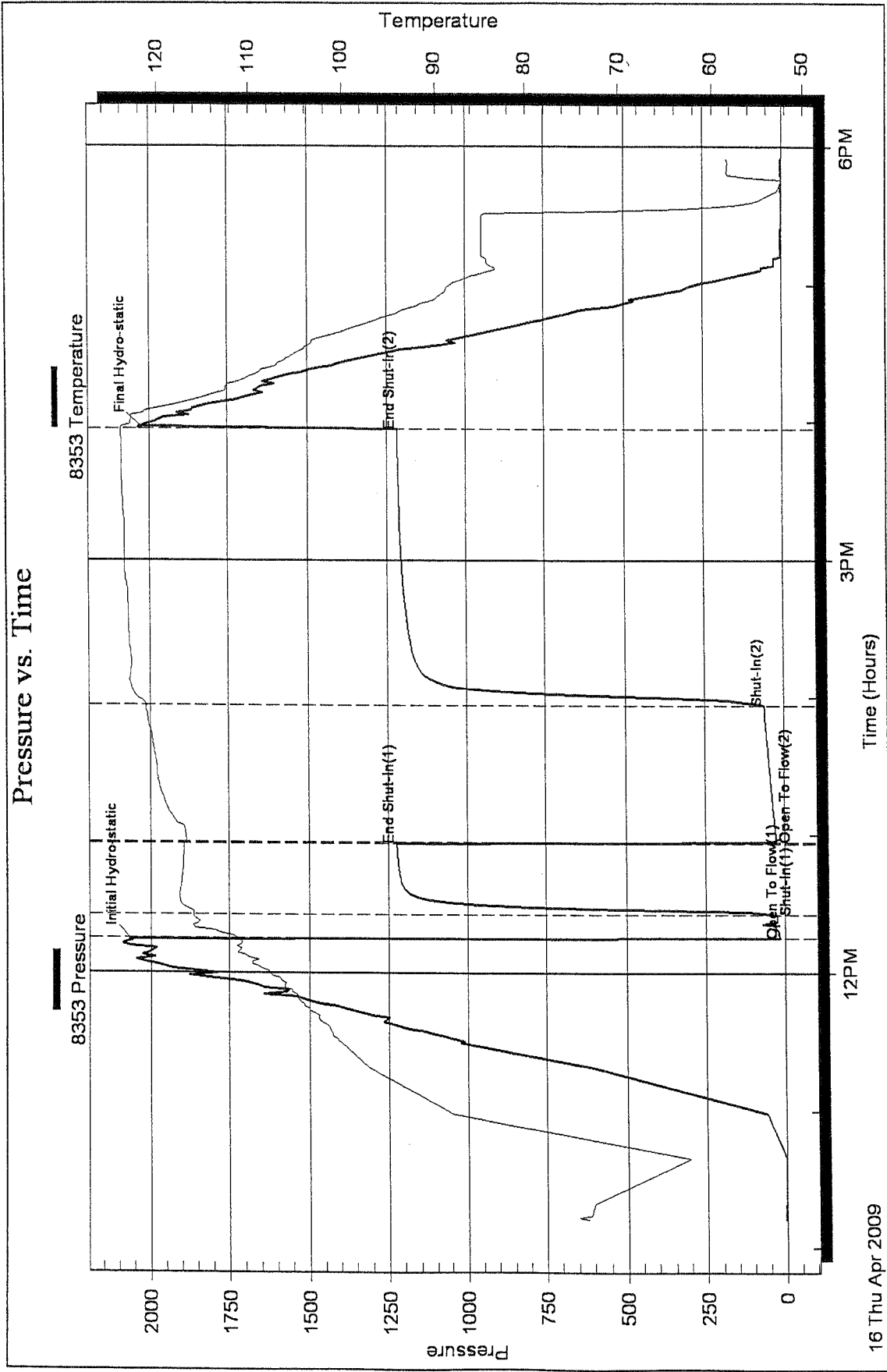
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



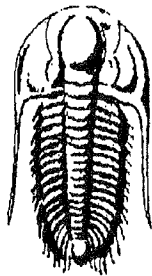
MAKING CONNECTION COMMISSION

Ref. No: 34206

Printed: 2009.04.22 @ 09:41:55 Page 5

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**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

PO Box 2758  
Wichita, KS 67202

ATTN: Kevin Kessler

**13-15s-27w Gove KS**

**#1-13 Garvey B**

Start Date: 2009.04.17 @ 01:14:00

End Date: 2009.04.17 @ 10:27:54

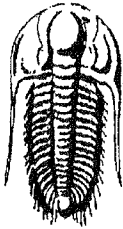
Job Ticket #: 34576                      DST #: 5

KANSAS CORPORATION COMMISSION  
JUL 15 2009

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drilling Company

#1-13 Garvey B

PO Box 2758  
Wichita, KS 67202

13-15s-27w Gove KS

ATTN: Kevin Kessler

Job Ticket: 34576

DST#: 5

Test Start: 2009.04.17 @ 01:14:00

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:02:06

Time Test Ended: 10:27:54

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: **4214.00 ft (KB) To 4225.00 ft (KB) (TVD)**

Total Depth: 4225.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2350.00 ft (KB)

2341.00 ft (CF)

KB to GR/CF: 9.00 ft

**Serial #: 8351**

**Inside**

Press@RunDepth: 198.29 psig @ 4215.00 ft (KB)

Start Date: 2009.04.17

End Date:

2009.04.17

Capacity:

7000.00 psig

Last Calib.:

2009.04.17

Start Time: 01:14:01

End Time:

10:27:54

Time On Btm:

2009.04.17 @ 03:01:54

Time Off Btm:

2009.04.17 @ 06:47:54

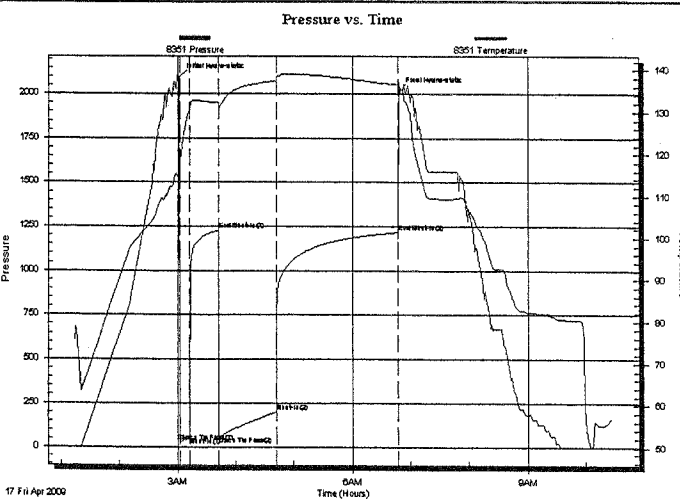
## TEST COMMENT:

IF: BOB in 8 1/2 mins.

IS: Surface blow for 26 mins.

FF: BOB in 9 mins.

FS: Surface blow off & on throughout.



## PRESSURE SUMMARY

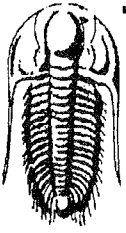
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2093.33	114.41	Initial Hydro-static
1	26.41	113.24	Open To Flow (1)
11	53.30	130.23	Shut-In (1)
41	1226.00	132.26	End Shut-In (1)
41	63.80	131.57	Open To Flow (2)
101	198.29	137.45	Shut-In (2)
226	1215.86	136.51	End Shut-In (2)
226	2015.01	136.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OMCW 5%O 85%W 10%M	0.84
120.00	VMCOG 10%G 55%O 25%W 10%M	1.68
280.00	CGO 10%G 90%O	3.93
0.00	120 GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34576

**DST#: 5**

ATTN: Kevin Kessler

Test Start: 2009.04.17 @ 01:14:00

## Tool Information

Drill Pipe:	Length: 4218.00 ft	Diameter: 3.80 inches	Volume: 59.17 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 59.17 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4214.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	31.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

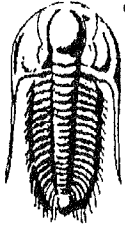
Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4195.00	
Shut In Tool	5.00			4200.00	
Hydraulic tool	5.00			4205.00	
Packer	5.00			4210.00	20.00 Bottom Of Top Packer
Packer	4.00			4214.00	
Stubb	1.00			4215.00	
Recorder	0.00	8351	Inside	4215.00	
Recorder	0.00	8359	Inside	4215.00	
Perforations	5.00			4220.00	
Bullnose	5.00			4225.00	11.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>31.00</b>				

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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drilling Company

**#1-13 Garvey B**

PO Box 2758  
Wichita, KS 67202

**13-15s-27w Gove KS**

Job Ticket: 34576

**DST#: 5**

ATTN: Kevin Kessler

Test Start: 2009.04.17 @ 01:14:00

## 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: ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.95 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3300.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OMCW 5%O 85%W 10%M	0.842
120.00	WMCOG 10%G 55%O 25%W 10%M	1.683
280.00	CGO 10%G 90%O	3.928
0.00	120 GIP	0.000

Total Length: 460.00 ft      Total Volume: 6.453 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

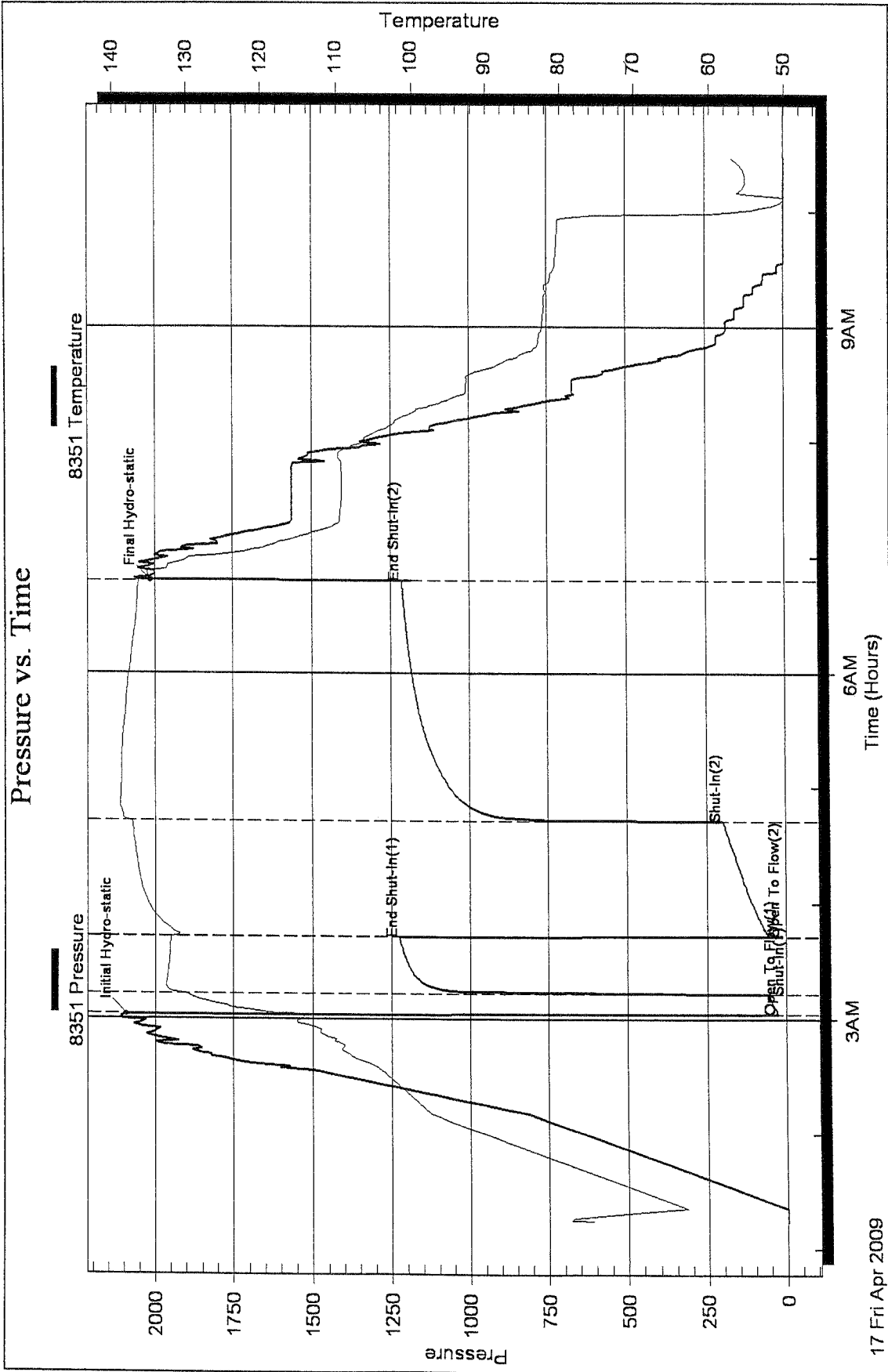
Serial #: 8351

Inside

Mull Drilling Company

13-15s-27w Gove KS

DST Test Number: 5



OPERATION COMMISSION

Trilobite Testing, Inc

Ref. No: 34576

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