

**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

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

1700 N Waterfront Pkwy  
Wichita, KS 67206

ATTN: Kevin Kessler

**25 15S 27W Gove KS**

**Steffens #1-25**

Start Date: 2010.03.10 @ 00:39:05

End Date: 2010.03.10 @ 08:45:29

Job Ticket #: 37803                      DST #: 1

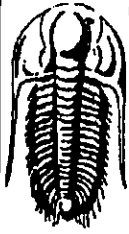
**KCC  
JUN 18 2010  
CONFIDENTIAL**

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

**RECEIVED  
KANSAS CORPORATION COMMISSION**

**JUN 21 2010**

**CONSERVATION DIVISION  
WICHITA, KS**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37803      **DST#: 1**  
Test Start: 2010.03.10 @ 00:39:05

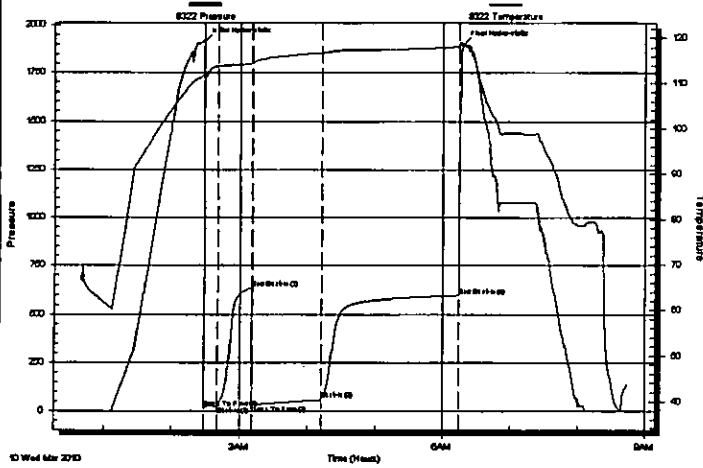
**GENERAL INFORMATION:**

Formation: **Lans, H, I, J**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 02:28:15  
Time Test Ended: 08:45:29  
Interval: **3940.00 ft (KB) To 4030.00 ft (KB) (TVD)**  
Total Depth: **4030.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brandon Domsch**  
Unit No: **48**  
Reference Elevations: **2506.00 ft (KB)**  
**2497.00 ft (CF)**  
KB to GR/CF: **9.00 ft**

**Serial #: 8322**      **Inside**  
Press@RunDepth: **59.29 psig @ 3941.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.03.10**      End Date: **2010.03.10**      Last Calib.: **2010.03.10**  
Start Time: **00:39:05**      End Time: **08:45:29**      Time On Btm: **2010.03.10 @ 02:28:00**  
Time Off Btm: **2010.03.10 @ 06:17:29**

**TEST COMMENT:** IF: Built to 5 1/2 inches.  
IS: No return.  
FF: BOB in 22 mins.  
FS: No return.

**Pressure vs. Time**



**PRESSURE SUMMARY**

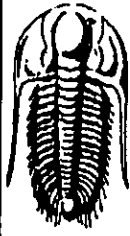
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1916.00	111.60	Initial Hydro-static
1	18.62	111.15	Open To Flow (1)
12	28.42	113.83	Shut-In(1)
42	633.92	114.35	End Shut-In(1)
43	29.97	114.51	Open To Flow (2)
104	59.29	116.83	Shut-In(2)
227	595.71	118.11	End Shut-In(2)
230	1899.04	118.77	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	O&GCM 10%g 30%o 60%m	0.84
40.00	SOCM 10%o 90%m	0.56
0.00	GIP = 320 FT	0.00
0.00	API = NA	0.00

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mull Drilling Co., Inc.

**Steffens #1-25**

1700 N Waterfront Pkwy  
Wichita, KS 67206

**25 15S 27W Gove KS**

Job Ticket: 37803

**DST#: 1**

ATTN: Kevin Kessler

Test Start: 2010.03.10 @ 00:39:05

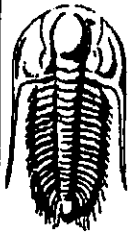
**Tool Information**

Drill Pipe:	Length: 3932.00 ft	Diameter: 3.80 inches	Volume: 55.16 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<b>Total Volume: 55.16 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3940.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 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			3913.00	
Shut In Tool	5.00			3918.00	
Hydraulic tool	5.00			3923.00	
Jars	5.00			3928.00	
Safety Joint	3.00			3931.00	
Packer	5.00			3936.00	28.00 Bottom Of Top Packer
Packer	4.00			3940.00	
Stubb	1.00			3941.00	
Recorder	0.00	8322	inside	3941.00	
Recorder	0.00	8166	inside	3941.00	
Perforations	21.00			3962.00	
Change Over Sub	1.00			3963.00	
Drill Pipe	61.00			4024.00	
Change Over Sub	1.00			4025.00	
Bullnose	5.00			4030.00	90.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**



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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
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ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37803      DST#: 1  
Test Start: 2010.03.10 @ 00:39:05

**Mud and Cushion Information**

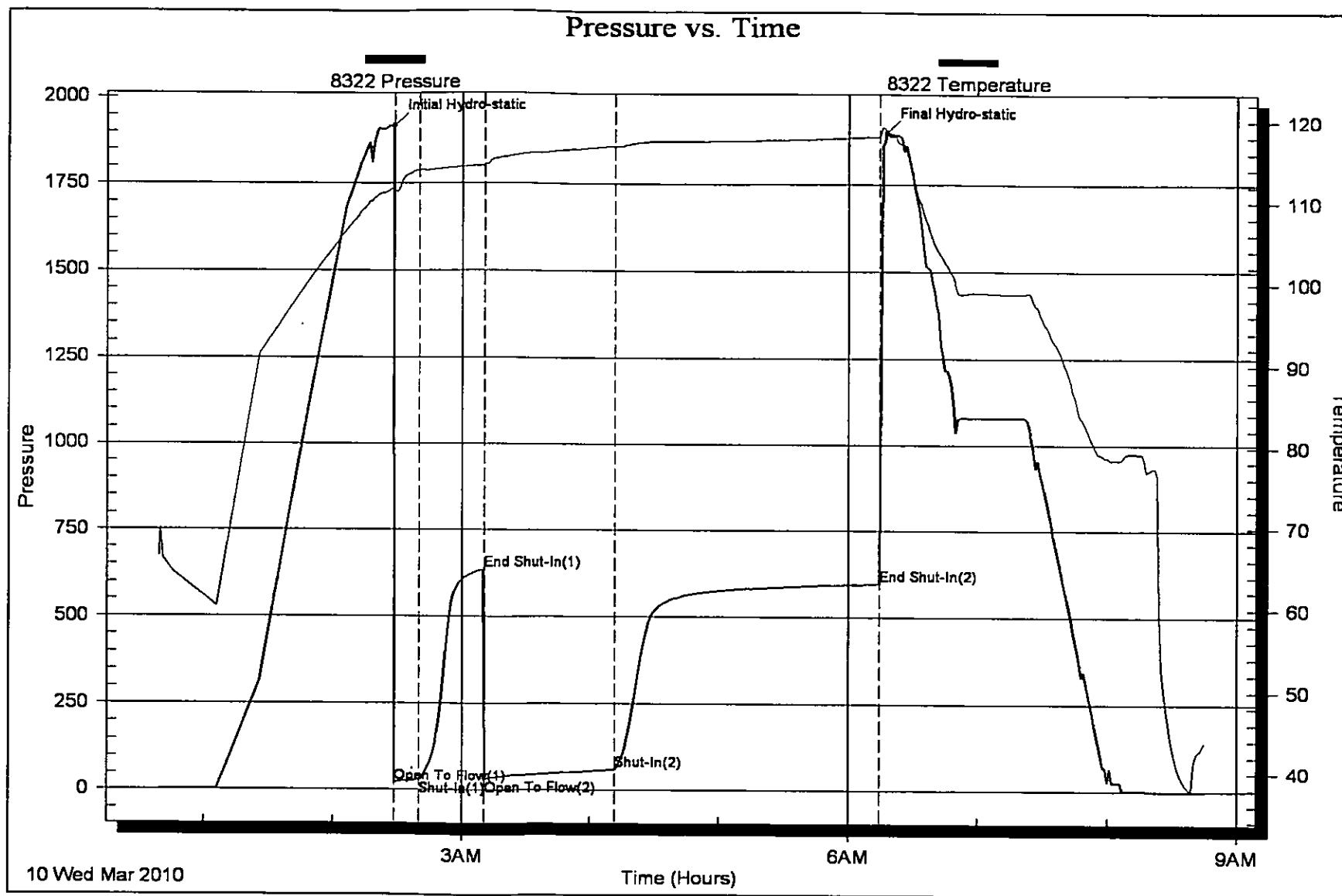
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.94 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2200.00 ppm			
Filter Cake: 1.00 inches			

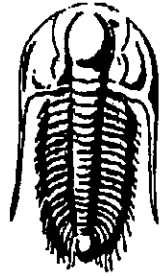
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
60.00	O&GCM 10%g 30%o 60%m	0.842
40.00	SOCM 10%o 90%m	0.561
0.00	GIP = 320 FT	0.000
0.00	API = N/A	0.000

Total Length: 100.00 ft      Total Volume: 1.403 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:





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## DRILL STEM TEST REPORT

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

1700 N Waterfront Pkwy  
Wichita, KS 67206

ATTN: Kevin Kessler

**25 15S 27W Gove KS**

**Steffens #1-25**

Start Date: 2010.03.10 @ 16:39:05

End Date: 2010.03.10 @ 22:00:14

Job Ticket #: 37804                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drilling Co., Inc.

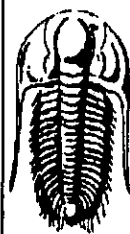
Steffens #1-25

25 15S 27W Gove KS

DST # 2

Lans, K

2010.03.10



**TRILOBITE  
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## DRILL STEM TEST REPORT

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
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ATTN: Kevin Kessler

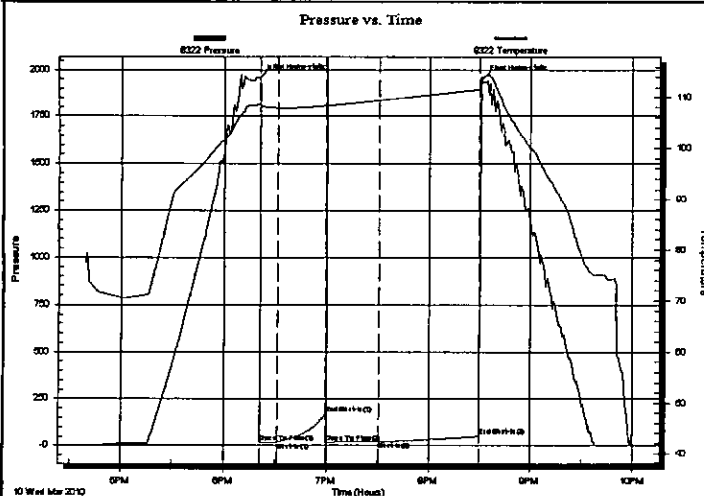
**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37804      DST#: 2  
Test Start: 2010.03.10 @ 16:39:05

### GENERAL INFORMATION:

Formation: **Lans, K**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 18:21:15  
Time Test Ended: 22:00:14  
Interval: **4020.00 ft (KB) To 4060.00 ft (KB) (TVD)**  
Total Depth: **4060.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brandon Domsch**  
Unit No: **48**  
Reference Elevations: **2506.00 ft (KB)**  
**2497.00 ft (CF)**  
KB to GR/CF: **9.00 ft**

**Serial #: 8322**      **Inside**  
Press@RunDepth: **20.18 psig @ 4021.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.03.10**      End Date: **2010.03.10**      Last Calib.: **2010.03.10**  
Start Time: **16:39:05**      End Time: **22:00:14**      Time On Btm: **2010.03.10 @ 18:20:30**  
Time Off Btm: **2010.03.10 @ 20:31:15**

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



### PRESSURE SUMMARY

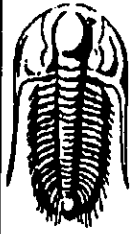
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1954.91	108.55	Initial Hydro-static
1	17.04	108.28	Open To Flow (1)
11	18.55	107.87	Shut-In(1)
40	168.57	108.34	End Shut-In(1)
40	19.56	108.32	Open To Flow (2)
71	20.18	109.38	Shut-In(2)
130	51.62	111.63	End Shut-In(2)
131	1951.62	113.24	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	M 100%am	0.07
0.00	GIP = 0	0.00

### Gas Rates

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



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**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mull Drilling Co., Inc.

**Steffens #1-25**

1700 N Waterfront Pkwy  
Wichita, KS 67206

**25 15S 27W Gove KS**

Job Ticket: 37804

**DST#: 2**

ATTN: Kevin Kessler

Test Start: 2010.03.10 @ 16:39:05

**Tool Information**

Drill Pipe:	Length: 4022.00 ft	Diameter: 3.80 inches	Volume: 56.42 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<b>Total Volume: 56.42 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4020.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 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			3993.00	
Shut In Tool	5.00			3998.00	
Hydraulic tool	5.00			4003.00	
Jars	5.00			4008.00	
Safety Joint	3.00			4011.00	
Packer	5.00			4016.00	28.00 Bottom Of Top Packer
Packer	4.00			4020.00	
Stubb	1.00			4021.00	
Recorder	0.00	8322	Inside	4021.00	
Recorder	0.00	8166	Inside	4021.00	
Perforations	2.00			4023.00	
Change Over Sub	1.00			4024.00	
Drill Pipe	30.00			4054.00	
Change Over Sub	1.00			4055.00	
Bullnose	5.00			4060.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



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ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37804      DST#: 2  
Test Start: 2010.03.10 @ 16:39:05

**Mud and Cushion Information**

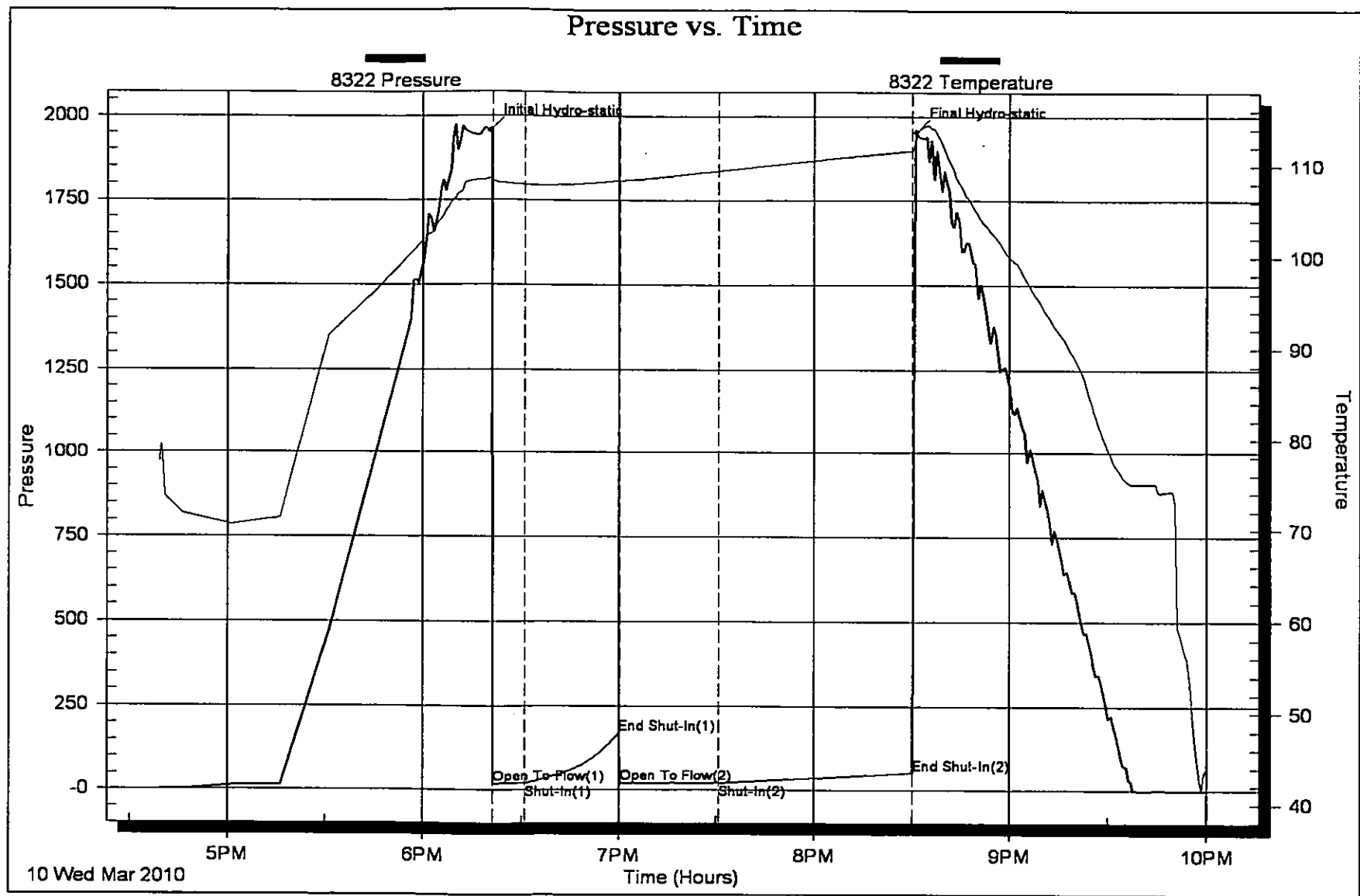
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.55 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3700.00 ppm			
Filter Cake: 1.00 inches			

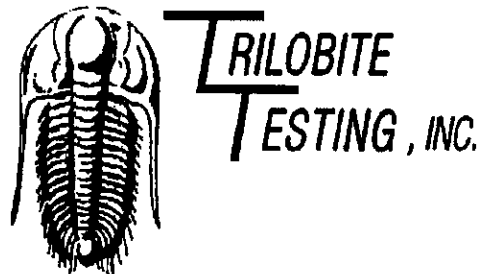
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
5.00	M 100% m	0.070
0.00	GP = 0	0.000

Total Length: 5.00 ft      Total Volume: 0.070 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:





## DRILL STEM TEST REPORT

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

1700 N Waterfront Pkwy  
Wichita, KS 67206

ATTN: Kevin Kessler

**25 15S 27W Gove KS**

**Steffens #1-25**

Start Date: 2010.03.12 @ 04:24:05

End Date: 2010.03.12 @ 10:21:14

Job Ticket #: 37805                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



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## DRILL STEM TEST REPORT

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37805      DST#: 3  
Test Start: 2010.03.12 @ 04:24:05

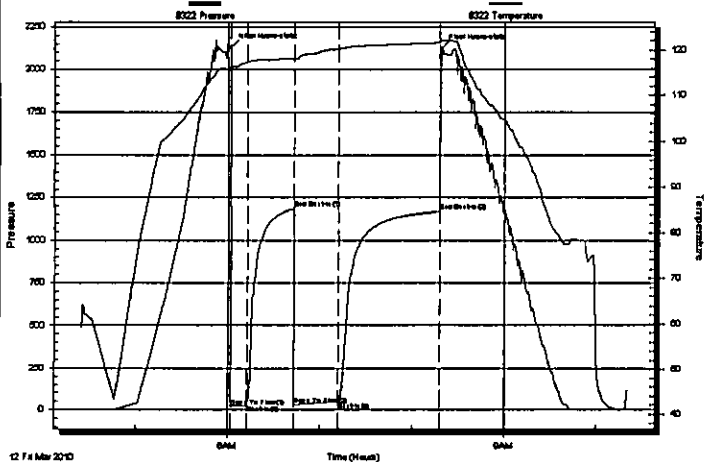
### GENERAL INFORMATION:

Formation: **Ft Scott - Miss.**  
Deviated: **No Whipstock:**                      ft (KB)  
Time Tool Opened: 06:01:45  
Time Test Ended: 10:21:14  
Interval: **4260.00 ft (KB) To 4390.00 ft (KB) (TVD)**  
Total Depth: **4390.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brandon Domsch**  
Unit No: **48**  
Reference Elevations: **2506.00 ft (KB)**  
**2497.00 ft (CF)**  
KB to GR/CF: **9.00 ft**

**Serial #: 8322**      Inside  
Press@RunDepth: **45.26 psig @ 4261.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.03.12**      End Date: **2010.03.12**      Last Calib.: **2010.03.12**  
Start Time: **04:24:05**      End Time: **10:21:14**      Time On Btm: **2010.03.12 @ 06:01:30**  
Time Off Btm: **2010.03.12 @ 08:19:15**

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

Pressure vs. Time



### PRESSURE SUMMARY

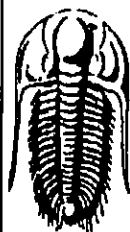
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2128.10	116.14	Initial Hydro-static
1	20.24	115.71	Open To Flow (1)
11	27.95	117.41	Shut-In(1)
41	1184.59	118.06	End Shut-In(1)
42	31.33	118.13	Open To Flow (2)
70	45.26	120.27	Shut-In(2)
137	1169.31	121.56	End Shut-In(2)
138	2123.66	122.08	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
30.00	OCM 15%o 85% m	0.42
60.00	CO&G 25%g 75%o	0.84
0.00	GIP = 30 ft	0.00
0.00	API = 38@50F = 39	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co., Inc.

Steffens #1-25

1700 N Waterfront Pkwy  
Wichita, KS 67206

25 15S 27W Gove KS

Job Ticket: 37805

DST#: 3

ATTN: Kevin Kessler

Test Start: 2010.03.12 @ 04:24:05

### Tool Information

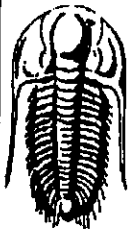
Drill Pipe:	Length: 4244.00 ft	Diameter: 3.80 inches	Volume: 59.53 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 59.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4260.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	130.00 ft			
Tool Length:	158.00 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			4233.00	
Shut In Tool	5.00			4238.00	
Hydraulic tool	5.00			4243.00	
Jars	5.00			4248.00	
Safety Joint	3.00			4251.00	
Packer	5.00			4256.00	28.00 Bottom Of Top Packer
Packer	4.00			4260.00	
Stubb	1.00			4261.00	
Recorder	0.00	8322	inside	4261.00	
Recorder	0.00	8166	inside	4261.00	
Perforations	29.00			4290.00	
Change Over Sub	1.00			4291.00	
Drill Pipe	93.00			4384.00	
Change Over Sub	1.00			4385.00	
Bullnose	5.00			4390.00	130.00 Bottom Packers & Anchor

**Total Tool Length: 158.00**



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ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37805      DST#: 3  
Test Start: 2010.03.12 @ 04:24:05

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.55 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 1.00 inches			

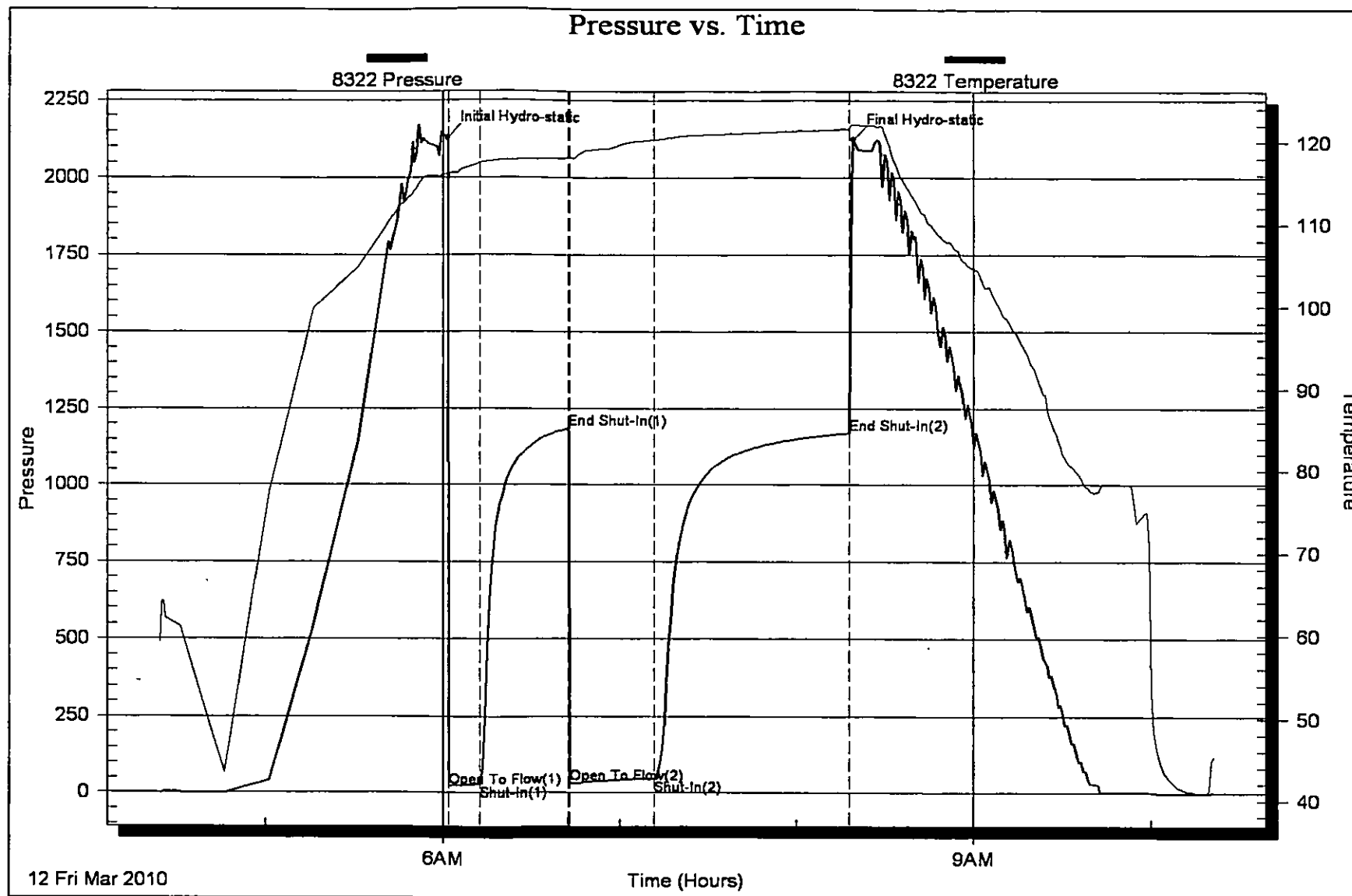
**Recovery Information**

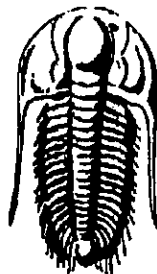
Recovery Table

Length ft	Description	Volume bbl
30.00	OCM 15%o 85%m	0.421
60.00	CO&G 25%g 75%o	0.842
0.00	GIP = 30 ft	0.000
0.00	API = 38@50F = 39	0.000

Total Length: 90.00 ft      Total Volume: 1.263 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





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ATTN: Kevin Kessler

**25 15S 27W Gove KS**

**Steffens #1-25**

Start Date: 2010.03.12 @ 17:19:05

End Date: 2010.03.13 @ 01:04:44

Job Ticket #: 37806                      DST #: 4

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



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ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37806      DST#: 4  
Test Start: 2010.03.12 @ 17:19:05

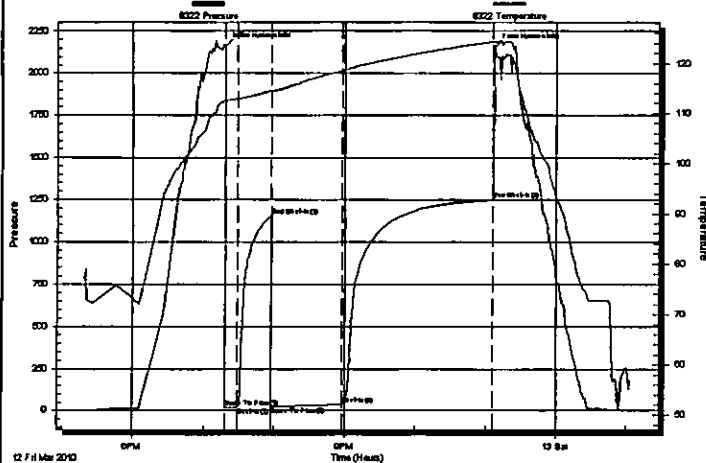
### GENERAL INFORMATION:

Formation: Miss.  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:18:30  
Time Test Ended: 01:04:44  
Interval: 4390.00 ft (KB) To 4400.00 ft (KB) (TVD)  
Total Depth: 4400.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Brandon Domsch  
Unit No: 48  
Reference Elevations: 2506.00 ft (KB)  
2497.00 ft (CF)  
KB to GR/CF: 9.00 ft

Serial #: 8322 Inside  
Press@RunDepth: 36.72 psig @ 4391.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2010.03.12 End Date: 2010.03.13 Last Calib.: 2010.03.13  
Start Time: 17:19:05 End Time: 01:04:44 Time On Btm: 2010.03.12 @ 19:18:00  
Time Off Btm: 2010.03.12 @ 23:07:15

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

Pressure vs. Time



### PRESSURE SUMMARY

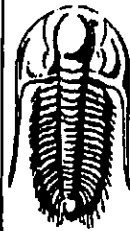
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2163.08	112.72	Initial Hydro-static
1	17.60	112.02	Open To Flow (1)
11	21.07	112.79	Shut-In(1)
40	1154.52	114.55	End Shut-In(1)
40	22.33	114.42	Open To Flow (2)
100	36.72	118.52	Shut-In(2)
229	1249.23	124.34	End Shut-In(2)
230	2158.41	124.27	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 10%o 90% m	0.28
40.00	CO 100%o	0.56
0.00	GIP = 0	0.00
0.00	API = 36@40F = 38	0.00

### Gas Rates

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



**TRILOBITE  
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## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Kevin Kessler

Steffens #1-25  
25 15S 27W Gove KS  
Job Ticket: 37806      DST#: 4  
Test Start: 2010.03.12 @ 17:19:05

### Tool Information

Drill Pipe:	Length: 4368.00 ft	Diameter: 3.80 inches	Volume: 61.27 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4390.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 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			4363.00	
Shut In Tool	5.00			4368.00	
Hydraulic tool	5.00			4373.00	
Jars	5.00			4378.00	
Safety Joint	3.00			4381.00	
Packer	5.00			4386.00	28.00      Bottom Of Top Packer
Packer	4.00			4390.00	
Stubb	1.00			4391.00	
Recorder	0.00	8322	Inside	4391.00	
Recorder	0.00	8166	Inside	4391.00	
Perforations	4.00			4395.00	
Bullnose	5.00			4400.00	10.00      Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Kevin Kessler

**Steffens #1-25**  
**25 15S 27W Gove KS**  
Job Ticket: 37806      DST#: 4  
Test Start: 2010.03.12 @ 17:19:05

**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: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 1.00 inches			

**Recovery Information**

Recovery Table

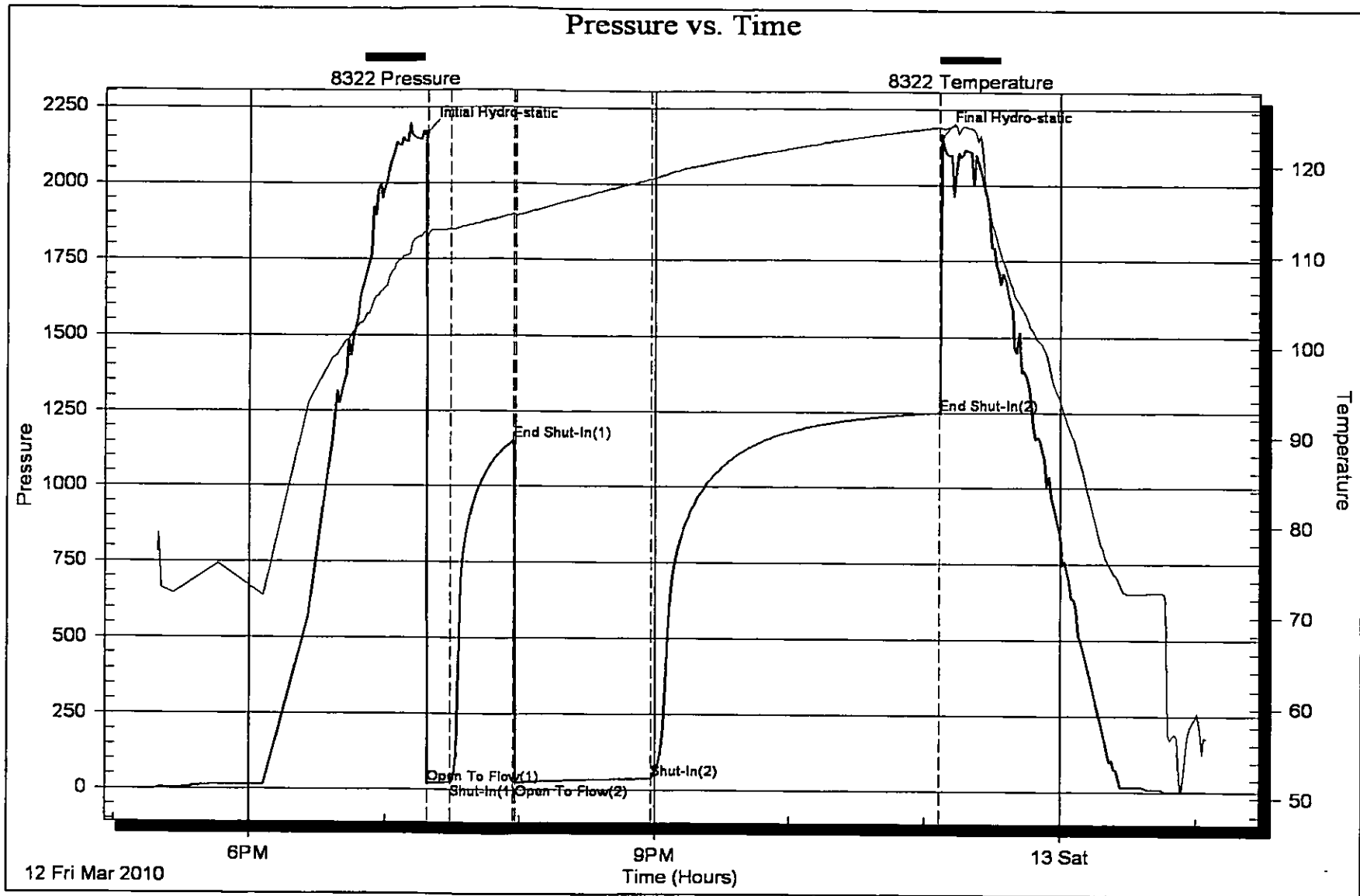
Length ft	Description	Volume bbl
20.00	OCM 10%o 90%m	0.281
40.00	CO 100%o	0.561
0.00	GP = 0	0.000
0.00	API = 36@40F = 38	0.000

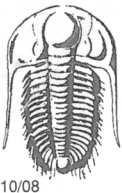
Total Length: 60.00 ft      Total Volume: 0.842 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:





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## Test Ticket

NO. 37803 ✓

14011

Well Name & No. Steffens #1-25 BY: \_\_\_\_\_ Test No. 1 Date 3-9-10  
 Company Mull Elevation 2506 KB 2497 GL \_\_\_\_\_  
 Address 1700 N. Waterfront PKWY Wichita KS 67206  
 Co. Rep / Geo. Kevin Kessler Rig Duke #4  
 Location: Sec. 25 Twp. 15S Rge. 27W Co. Gove State KS

Interval Tested 3940 - 4030 Zone Tested Lams, H, I, J  
 Anchor Length 90' Drill Pipe Run 3932 Mud Wt. 9.1  
 Top Packer Depth 3935 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3940 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4030 Chlorides 2200 ppm System LCM Trc  
 Blow Description IF: Built to 5 1/2 inches.  
IS: No return.  
FF: BOB in 22 mins. GIP = 320 ft  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>50CM</u>		<u>10</u>		<u>90</u>
<u>60</u>	<u>0+G CM</u>	<u>10</u>	<u>30</u>		<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

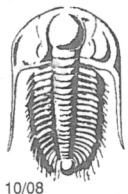
Rec Total 100 BHT 118 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1916  Test 1150- T-On Location 22:45 pm  
 (B) First Initial Flow 18  Jars 250- T-Started 00:39 am  
 (C) First Final Flow 28  Safety Joint 75- T-Open 02:32 am  
 (D) Initial Shut-In 633  Circ Sub NK T-Pulled 06:12 am  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 08:45 am  
 (F) Second Final Flow 59  Mileage 112 = \$112.00 Comments \_\_\_\_\_  
 (G) Final Shut-In 595  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1899  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1587-  
 Sub Total 1587-

Initial Open 10  
 Initial Shut-In 30  
 Final Flow 60  
 Final Shut-In 100

Approved By Kevin Kessler Our Representative Borch Deuk

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

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Brandon Turley  
785-650-8399

## Test Ticket

NO. 37804

MAR 15 2010

BY:

Well Name & No. Steffens #1-25 Test No. 2 Date 3-10-10  
 Company Mull Elevation 2506 KB 2497 GL  
 Address 1700 N. Waterfront Bkwy Wichita KS 67206  
 Co. Rep / Geo. Kevin Kessler Rig Duke #4  
 Location: Sec. 25 Twp. 15s Rge. 27w Co. Gove State KS

Interval Tested 4020-4060 Zone Tested Lans K  
 Anchor Length 40 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.2  
 Top Packer Depth 4015 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 4020 Wt. Pipe Run 0 WL 9.6  
 Total Depth 4060 Chlorides 3700 ppm System LCM Trc  
 Blow Description IF: Built to 3/4 inch  
IS: No return.  
FP: No blow.  
FS: No return.

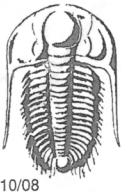
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</u>			<u>100</u>	

Rec Total 5 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1954  Test 1150 T-On Location 16:15pm  
 (B) First Initial Flow 17  Jars 250 T-Started 16:39pm  
 (C) First Final Flow 18  Safety Joint 75 T-Open 18:25pm  
 (D) Initial Shut-In 168  Circ Sub N/C T-Pulled 20:35pm  
 (E) Second Initial Flow 19  Hourly Standby \_\_\_\_\_ T-Out 22:01pm  
 (F) Second Final Flow 20  Mileage 112 @ 112.00 Comments \_\_\_\_\_  
 (G) Final Shut-In 51  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1957  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 10  Day Standby \_\_\_\_\_ Sub Total \$  
 Initial Shut-In 30  Accessibility \_\_\_\_\_ Total 1587  
 Final Flow 30 Sub Total 1587

Approved By Kevin Kessler Our Representative [Signature]

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## Test Ticket

NO. 37805

10/08

Well Name & No. Steffans #1-25 Test No. 3 Date 3-12-10  
 Company Mull Elevation 2506 KB 2497 GL  
 Address 1700 N. Waterfront Bkwy, Wichita KS 67206  
 Co. Rep / Geo. Kevin Kessler Rig Duke #4  
 Location: Sec. 25 Twp. 15s Rge. 27w Co. Gove State KS

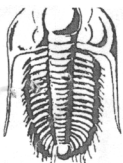
Interval Tested 4260 - 4390 Zone Tested Ht Scott - Miss.  
 Anchor Length 130' Drill Pipe Run 4244 Mud Wt. 9.4  
 Top Packer Depth 4255 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 4260 Wt. Pipe Run 0 WL 9.6  
 Total Depth 4390 Chlorides 3500 ppm System LCM Trc  
 Blow Description IF: Built to 1 3/4 inches.  
IS: No return.  
FF: Built to 1 3/4 inches BIP = 30 FT  
FS: No return.

Rec	Feet of		%gas	%oil	%water	%mud
<u>60</u>	<u>CO + G</u>	<u>25</u>	<u>75</u>			
<u>30</u>	<u>OCM</u>		<u>15</u>		<u>85</u>	
		<u>38 @ 50°F =&gt;</u>				
<u>90</u>	<u>BHT 121</u>	<u>Gravity 39</u>	<u>API RW</u>	<u>@</u>	<u>°F</u>	<u>Chlorides ppm</u>

(A) Initial Hydrostatic 2128  Test 1150 T-On Location 03:45 am  
 (B) First Initial Flow 20  Jars 250 T-Started 04:21 am  
 (C) First Final Flow 27  Safety Joint 75 T-Open 06:06 am  
 (D) Initial Shut-In 1184  Circ Sub N/C T-Pulled 08:16 am  
 (E) Second Initial Flow 31  Hourly Standby T-Out 10:21 am  
 (F) Second Final Flow 45  Mileage 112 = \$112.00 Comments \_\_\_\_\_  
 (G) Final Shut-In 1169  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2123  Straddle \_\_\_\_\_  
 Shale Packer  Ruined Shale Packer  
 Extra Packer  Ruined Packer x1 = \$260.00  
 Extra Recorder  Extra Copies \_\_\_\_\_  
 Initial Open 10  Day Standby Sub Total 260  
 Initial Shut-In 30  Accessibility Total 1847  
 Final Flow 30  
 Final Shut-In 60 Sub Total 1587

Approved By Kevin Kessler Our Representative Frank Duh

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## Test Ticket

NO. 37806

Well Name & No. Stephens #1-25 BY: \_\_\_\_\_ Date 3-12-10  
 Company Mull Test No. 4 Elevation 2506 KB 2497 GL  
 Address 1700 N. Waterfront PKWY, Wichita KS 67202  
 Co. Rep / Geo. Kevin Kessler Rig Duke #4  
 Location: Sec. 25 Twp. 15S Rge. 27W Co. Gove State KS

Interval Tested 4390 - ~~4400~~ Zone Tested Miss  
 Anchor Length 10' Drill Pipe Run 4368 Mud Wt. 9.3  
 Top Packer Depth 4385 Drill Collars Run 0 Vis 68  
 Bottom Packer Depth 4390 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4400 Chlorides 4800 ppm System LCM Trc  
 Blow Description IF: Built to 1 1/2 inches.  
IS: No return.  
FF: Built to 3 1/2 inches. GIP = 0  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>CO</u>	<u>100</u>			
<u>20</u>	<u>OCM</u>	<u>10</u>			<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total	<u>60</u>	BHT	<u>124</u>	Gravity	<u>38</u>
				API RW	@ _____ °F
				Chlorides	ppm

(A) Initial Hydrostatic 2163  Test 1150 T-On Location 16:55pm  
 (B) First Initial Flow 17  Jars 250- T-Started 17:19pm  
 (C) First Final Flow 21  Safety Joint 75- T-Open 19:22pm  
 (D) Initial Shut-In 1154  Circ Sub N/C T-Pulled 23:02pm  
 (E) Second Initial Flow 22  Hourly Standby \_\_\_\_\_ T-Out 01:04am  
 (F) Second Final Flow 36  Mileage 112 = \$112.00 Comments \_\_\_\_\_  
 (G) Final Shut-In 1249  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2143  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 10  Day Standby \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Accessibility \_\_\_\_\_ Total 1587-  
 Final Flow 60  
 Final Shut-In 120  
 Sub Total 1587-

Approved By Kevin Kessler Our Representative Bruce Duke  
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