

15-193-20767

32-8s-31w

IND



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling co.**

CONFIDENTIAL
1700 N. Waterfront
Avy. Bldg. 1200
Wichita Ks. 67206

OCT 21 2009

KCC

ATTN: Kevin Kessler

32 8s 31w Thomas KS

1-32 Murphy- Schroeder unit

Start Date: 2009.07.26 @ 14:05:00

End Date: 2009.07.26 @ 21:43:30

Job Ticket #: 35809 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drilling co.

1-32 Murphy- Schroeder unit

32 8s 31w Thomas KS

DST # 1

LKC-A

2009.07.26



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling co.
1700 N. Waterfront
Pkwy. Bldg.1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35809 DST#: 1
Test Start: 2009.07.26 @ 14:05:00

Tool Information

Drill Pipe:	Length: 3920.00 ft	Diameter: 3.80 inches	Volume: 54.99 bbl	Tool Weight: 2000.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume: 55.60 bbl		Tool Chased 2.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4045.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4022.00	
Hydraulic tool	5.00			4027.00	
Jars	5.00			4032.00	
Safety Joint	3.00			4035.00	
Packer	5.00			4040.00	28.00 Bottom Of Top Packer
Packer	5.00			4045.00	
Stubb	1.00			4046.00	
Recorder	0.00	6672	Inside	4046.00	
Recorder	0.00	6752	Inside	4046.00	
Perforations	26.00			4072.00	
Bullnose	3.00			4075.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling co.

1-32 Murphy- Schroeder unit

1700 N. Waterfront
Pkw y. Bldg.1200
Wichita Ks. 67206

32 8s 31w Thomas KS

Job Ticket: 35809 DST#: 1

ATTN: Kevin Kessler

Test Start: 2009.07.26 @ 14:05:00

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:

40000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: 8.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	w cm-30%w 70%m	0.305
124.00	mcw-70%w 30%m-with oil specs	1.175

Total Length: 186.00 ft Total Volume: 1.480 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .18 @ 75F = 40000 chlorides

Serial #: 6672

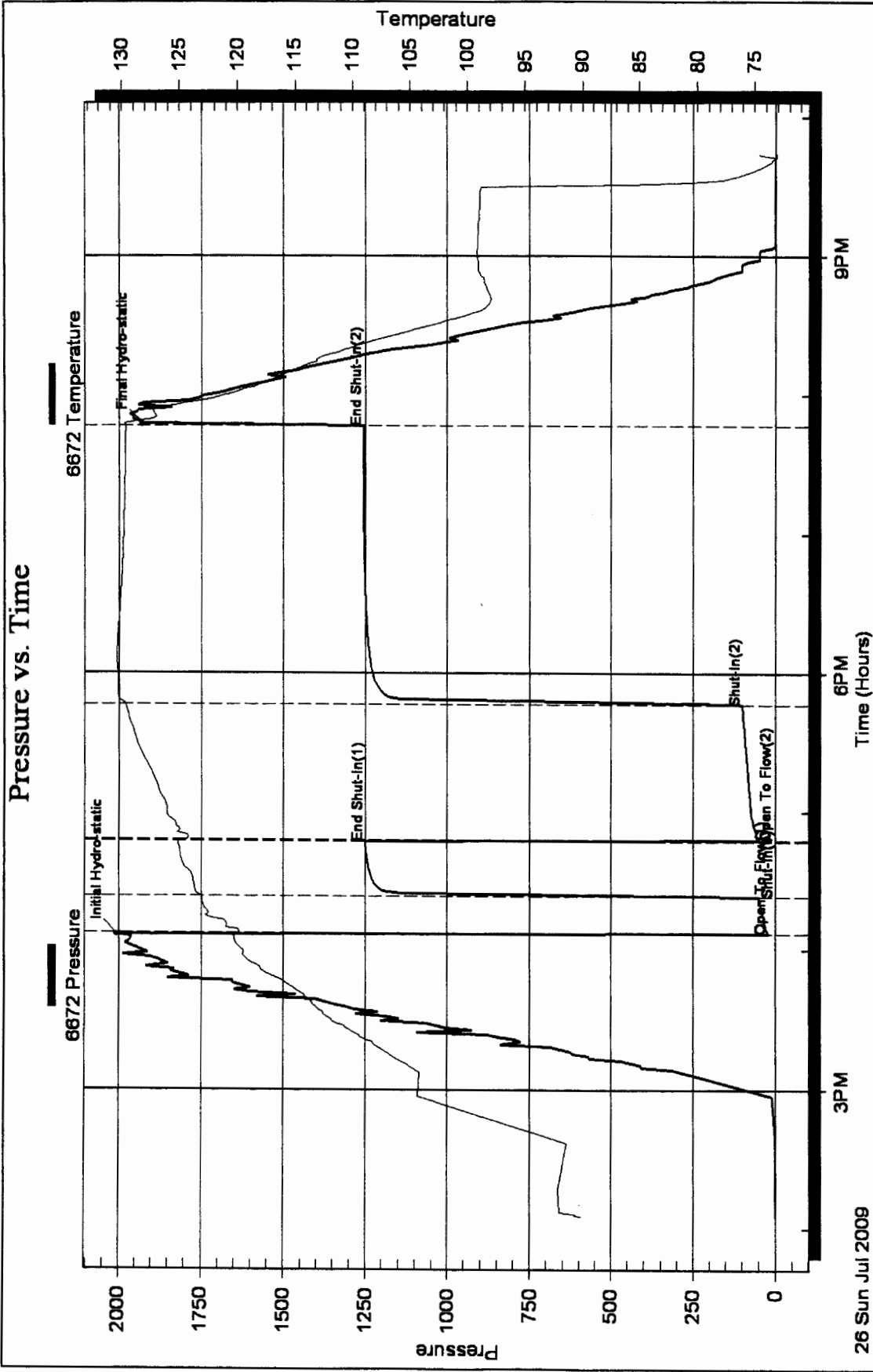
Inside

Mull Drilling co.

32.8s 31w Thomas KS

DST Test Number: 1

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling co.**

1700 N. Waterfront
Pky. Bldg. 1200
Wichita Ks. 67206

ATTN: Kevin Kessler

32 8s 31w Thomas KS

1-32 Murphy- Schroeder unit

Start Date: 2009.07.27 @ 05:00:00

End Date: 2009.07.27 @ 10:18:30

Job Ticket #: 35810 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drilling co.

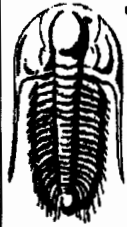
1-32 Murphy- Schroeder unit

32 8s 31w Thomas KS

DST # 2

LKC-B

2009.07.27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling co.
1700 N. Waterfront
Flwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35810 **DST#: 2**
Test Start: 2009.07.27 @ 05:00:00

GENERAL INFORMATION:

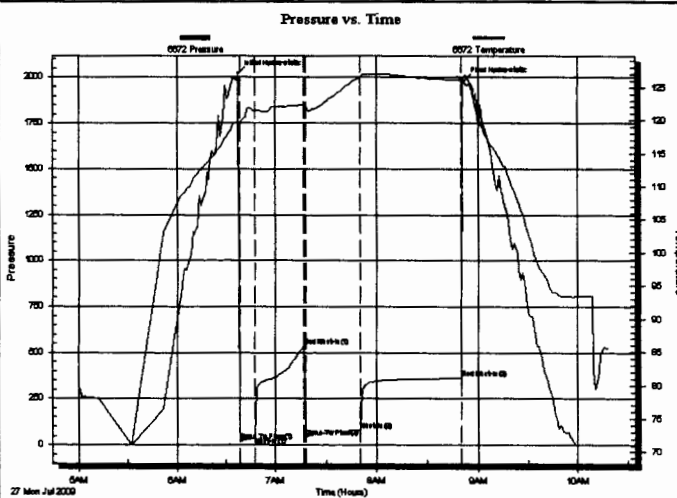
Formation: **LKC-B**
Deviated: **No Whipstock** ft (KB)
Time Tool Opened: 06:38:30
Time Test Ended: 10:18:30
Test Type: **Conventional Bottom Hole**
Tester: **Chuck Kreutzer**
Unit No: **36**
Interval: **4070.00 ft (KB) To 4105.00 ft (KB) (TVD)**
Reference Elevations: **3038.00 ft (KB)**
3033.00 ft (CF)
Total Depth: **4105.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Good**
KB to GR/CF: **5.00 ft**

Serial #: 6672

Inside

Press@RunDepth: **80.22 psig @ 4071.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2009.07.27** End Date: **2009.07.27** Last Calib.: **2009.07.27**
Start Time: **05:00:05** End Time: **10:18:29** Time On Btrr: **2009.07.27 @ 06:37:30**
Time Off Btrr: **2009.07.27 @ 08:51:30**

TEST COMMENT: IF: Weak surface blow built to 1 in. over 10 mins.
IS: No blow back.
FF: Weak blow after 5 mins. built to 2 1/4 in. over 30 mins
FS: No blow back.



PRESSURE SUMMARY

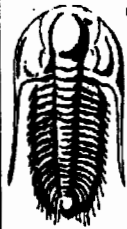
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2019.08	119.93	Initial Hydro-static
1	20.75	119.45	Open To Flow (1)
10	40.45	121.45	Shut-in(1)
39	535.40	122.33	End Shut-in(1)
40	43.88	121.83	Open To Flow (2)
73	80.22	126.64	Shut-in(2)
133	360.42	126.10	End Shut-in(2)
134	1983.09	126.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud-100% <i>m</i>	0.61
30.00	ocm-2% <i>o</i> 98% <i>m</i>	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling co.
1700 N. Waterfront
Pkwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35810 **DST#: 2**
Test Start: 2009.07.27 @ 05:00:00

Tool Information

Drill Pipe:	Length: 3940.00 ft	Diameter: 3.80 inches	Volume: 55.27 bbl	Tool Weight: 2000.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 55.88 bbl		Tool Chased 2.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4070.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	55.00 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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Shut in Tool	5.00			4055.00	
Hydraulic tool	5.00			4060.00	
Packer	5.00			4065.00	20.00 Bottom Of Top Packer
Packer	5.00			4070.00	
Stubb	1.00			4071.00	
Recorder	0.00	6672	Inside	4071.00	
Recorder	0.00	6752	Inside	4071.00	
Perforations	31.00			4102.00	
Bullnose	3.00			4105.00	35.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling co.
1700 N. Waterfront
Flwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35810 **DST#: 2**
Test Start: 2009.07.27 @ 05:00:00

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: in ³	Gas Cushion Type:		
Resistivity: 8.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	mud-100%m	0.610
30.00	ocm-2%o98%m	0.421

Total Length: 154.00 ft Total Volume: 1.031 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 6672

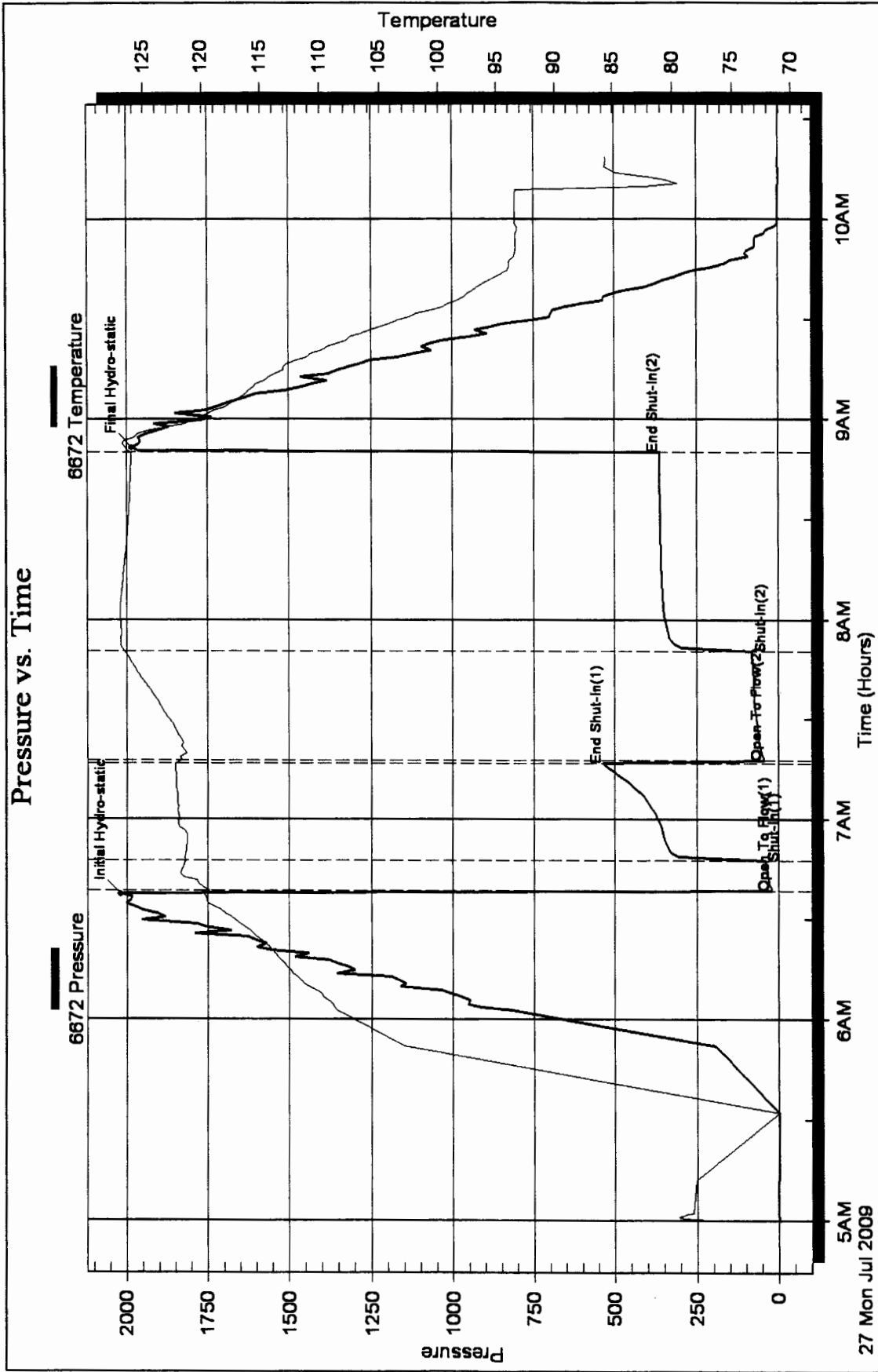
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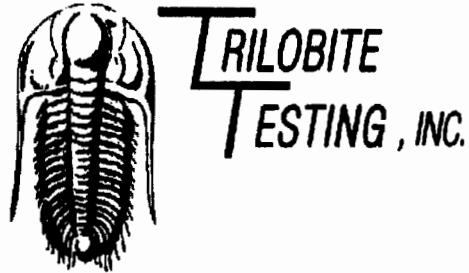
Mull Drilling co.

32.8s 31w Thomas KS

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling co.**

1700 N. Waterfront
Pky. Bldg. 1200
Wichita Ks. 67206

ATTN: Kevin Kessler

32 8s 31w Thomas KS

1-32 Murphy- Schroeder unit

Start Date: 2009.07.27 @ 18:36:00

End Date: 2009.07.28 @ 02:26:00

Job Ticket #: 35811 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drilling co.

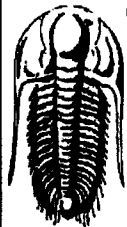
1-32 Murphy- Schroeder unit

32 8s 31w Thomas KS

DST # 3

LKC-D-F

2009.07.27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling Co.
1700 N. Waterfront
Pkwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35811 **DST#: 3**
Test Start: 2009.07.27 @ 18:36:00

GENERAL INFORMATION:

Formation: **LKC-D-F**

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

Time Tool Opened: 20:26:30

Time Test Ended: 02:26:00

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Kreutzer**

Unit No: **36**

Interval: **4110.00 ft (KB) To 4140.00 ft (KB) (TVD)**

Total Depth: **4140.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **3038.00 ft (KB)**

3033.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 6672

Inside

Press@RunDepth: **201.53 psig @ 4111.00 ft (KB)**

Start Date: **2009.07.27**

End Date:

2009.07.28

Start Time: **18:36:05**

End Time:

02:25:59

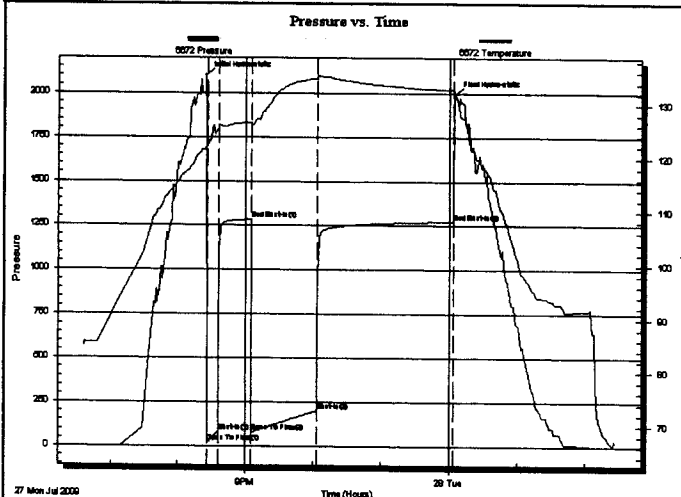
Capacity: **7000.00 psig**

Last Calib.: **2009.07.28**

Time On Btrr: **2009.07.27 @ 20:25:00**

Time Off Btrr: **2009.07.28 @ 00:05:30**

TEST COMMENT: IF: Fair blow, Built to 4 1/4 in. over 10 mins.
IS: No blow back.
FF: Blow after 1 min. built to B.O.B in 27 mins.
FSI: No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.23	121.65	Initial Hydro-static
2	23.19	122.18	Open To Flow (1)
11	81.08	125.52	Shut-In(1)
40	1283.96	126.61	End Shut-In(1)
41	82.23	126.04	Open To Flow (2)
98	201.53	134.90	Shut-In(2)
219	1274.47	132.78	End Shut-In(2)
221	1990.50	131.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	mcw-50% m50%w	1.48
124.00	mcw-40% m60%w	1.74
62.00	w cm-10%w 90% m	0.87
30.00	sow cm-1% o4%w 95% m	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling co.
1700 N. Waterfront
Pkwy. Bldg.1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35811 **DST#: 3**
Test Start: 2009.07.27 @ 18:36:00

Tool Information

Drill Pipe:	Length: 3971.00 ft	Diameter: 3.80 inches	Volume: 55.70 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 56.31 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4110.00 ft			Final 56000.00 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

Shut In Tool	5.00			4095.00	
Hydraulic tool	5.00			4100.00	
Packer	5.00			4105.00	20.00 Bottom Of Top Packer
Packer	5.00			4110.00	
Stubb	1.00			4111.00	
Recorder	0.00	6672	Inside	4111.00	
Recorder	0.00	6752	Inside	4111.00	
Perforations	26.00			4137.00	
Bullnose	3.00			4140.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling co.

1-32 Murphy- Schroeder unit

1700 N. Waterfront
Pky. Bldg.1200
Wichita Ks. 67206
ATTN: Kevin Kessler

32 8s 31w Thomas KS
Job Ticket: 35811 **DST#: 3**
Test Start: 2009.07.27 @ 18:36:00

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:	32000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: 8.40 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	mcw-50% m50%w	1.480
124.00	mcw-40% m60%w	1.739
62.00	w cm-10% w 90% m	0.870
30.00	sow cm-1% o4% w 95% m	0.421

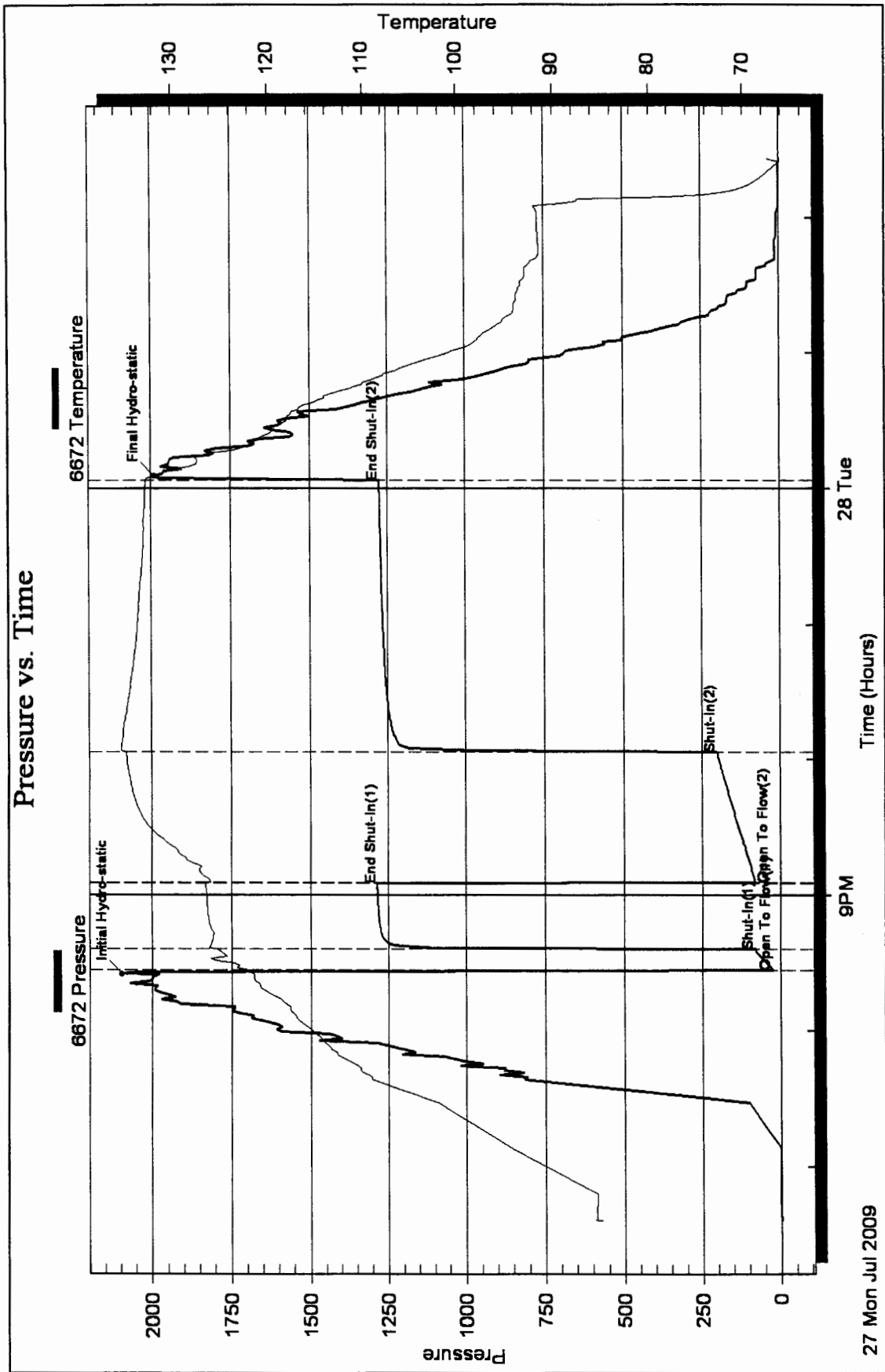
Total Length: 402.00 ft Total Volume: 4.510 bbl

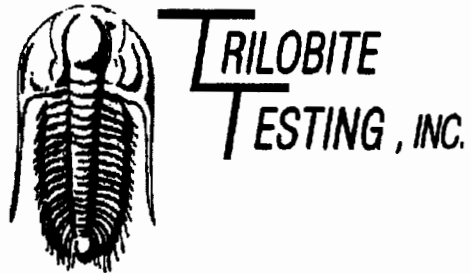
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW .24 @ 70.8F = 32000 chlorides

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling co.**

1700 N. Waterfront
Pky. Bldg. 1200
Wichita Ks. 67206

ATTN: Kevin Kessler

32 8s 31w Thomas KS

1-32 Murphy- Schroeder unit

Start Date: 2009.07.28 @ 22:00:00

End Date: 2009.07.29 @ 06:22:30

Job Ticket #: 35812 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drilling co.

1-32 Murphy- Schroeder unit

32 8s 31w Thomas KS

DST # 4

LKC-H-K

2009.07.28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling co.

1-32 Murphy- Schroeder unit

1700 N. Waterfront
Pkw y. Bldg.1200
Wichita Ks. 67206

32 8s 31w Thomas KS

Job Ticket: 35812 **DST#: 4**

ATTN: Kevin Kessler

Test Start: 2009.07.28 @ 22:00:00

GENERAL INFORMATION:

Formation: **LKC-H-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:19:00

Time Test Ended: 06:22:30

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer

Unit No: 36

Interval: **4180.00 ft (KB) To 4300.00 ft (KB) (TVD)**

Total Depth: 4075.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3038.00 ft (KB)

3033.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6672

Inside

Press@RunDepth: 137.00 psig @ 4185.00 ft (KB)

Start Date: 2009.07.28

End Date: 2009.07.29

Capacity: 7000.00 psig

Last Calib.: 2009.07.29

Start Time: 22:00:05

End Time: 06:22:29

Time On Btrr: 2009.07.29 @ 00:18:30

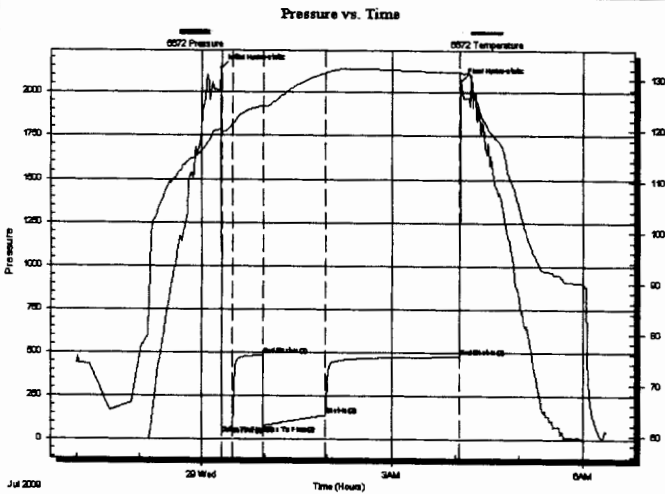
Time Off Btrr: 2009.07.29 @ 04:05:00

TEST COMMENT: IF: Weak blow built to 3 in. over 10 mins.

IS: No blow back.

FF: Fair blow, built to B.O.B in 50 mins.

IS: No blow back.



PRESSURE SUMMARY

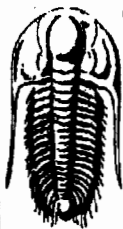
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.78	120.33	Initial Hydro-static
1	30.64	119.57	Open To Flow (1)
11	75.10	121.26	Shut-In(1)
40	482.39	124.81	End Shut-In(1)
40	78.82	124.61	Open To Flow (2)
99	137.00	131.30	Shut-In(2)
225	475.76	131.44	End Shut-In(2)
227	2063.31	131.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw-50% m50%w	2.35
3.00	oil-100%o	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling co.
1700 N. Waterfront
Flwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit

32 8s 31w Thomas KS

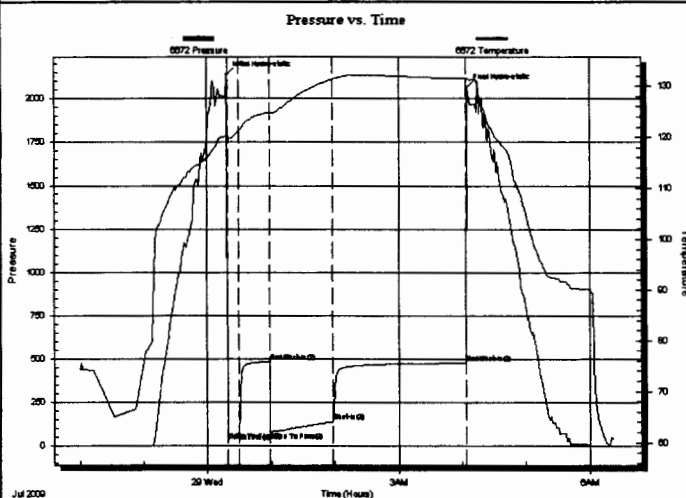
Job Ticket: 35812 DST#: 4
Test Start: 2009.07.28 @ 22:00:00

GENERAL INFORMATION:

Formation: **LKC-H-K**
Deviated: **No Whipstock** ft (KB)
Time Tool Opened: 00:19:00
Time Test Ended: 06:22:30
Test Type: **Conventional Bottom Hole**
Tester: **Chuck Kreutzer**
Unit No: **36**
Interval: **4180.00 ft (KB) To 4300.00 ft (KB) (TVD)**
Total Depth: **4075.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Good**
Reference Elevations: **3038.00 ft (KB)**
3033.00 ft (CF)
KB to GR/CF: **5.00 ft**

Serial #: 6672 **Inside**
Press@RunDepth: **137.00 psig @ 4185.00 ft (KB)**
Start Date: **2009.07.28** End Date: **2009.07.29**
Start Time: **22:00:05** End Time: **06:22:29**
Capacity: **7000.00 psig**
Last Calib.: **2009.07.29**
Time On Btm: **2009.07.29 @ 00:18:30**
Time Off Btm: **2009.07.29 @ 04:05:00**

TEST COMMENT: IF: Weak blow built to 3 in. over 10 mins.
IS: No blow back.
FF: Fair blow, built to B.O.B in 50 mins.
IS: No blow back.



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.78	120.33	Initial Hydro-static
1	30.64	119.57	Open To Flow (1)
11	75.10	121.26	Shut-In (1)
40	482.39	124.81	End Shut-In (1)
40	78.82	124.61	Open To Flow (2)
99	137.00	131.30	Shut-In (2)
225	475.76	131.44	End Shut-In (2)
227	2063.31	131.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw-50%/m50%/w	2.35
3.00	oil-100%o	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling co.
1700 N. Waterfront
Pkw y. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35812 DST#: 4
Test Start: 2009.07.28 @ 22:00:00

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:	60000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: 8.40 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	mcw -50% m50%w	2.349
3.00	oil-100%o	0.042

Total Length: 251.00 ft Total Volume: 2.391 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .12 @ 75F = 60000 chlorides

DST Test Number: 4

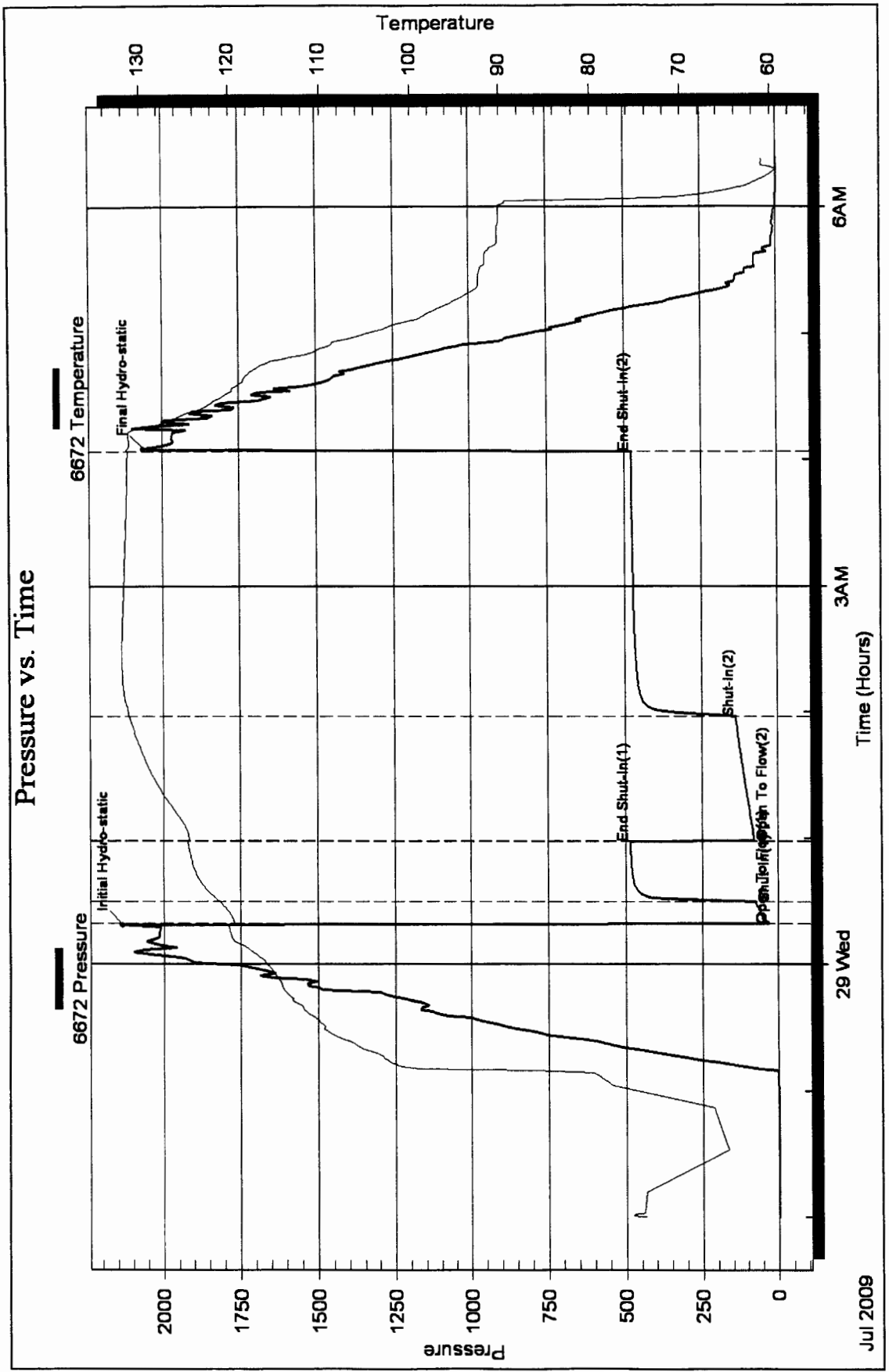
32.8s 31w Thomas KS

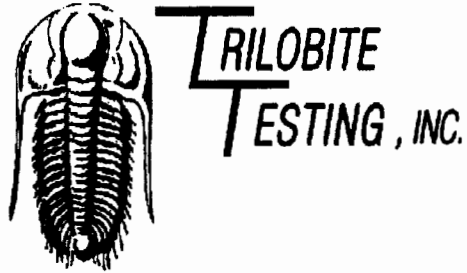
Mull Drilling co.

Inside

Serial #: 6672

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling co.**

1700 N. Waterfront
Pkw. Bldg. 1200
Wichita Ks. 67206

ATTN: Kevin Kessler

32 8s 31w Thomas KS

1-32 Murphy- Schroeder unit

Start Date: 2009.07.29 @ 14:30:00

End Date: 2009.07.29 @ 21:34:00

Job Ticket #: 35813 DST #: 5

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



**TRILOBITE
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DRILL STEM TEST REPORT

Mull Drilling co.
1700 N. Waterfront
Pkwy. Bldg.1200
Wichita Ks. 67206
ATTN: Kevin Kessler

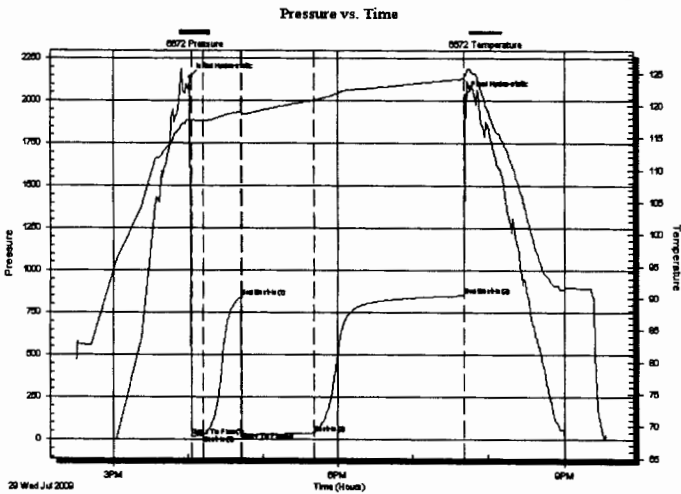
1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35813 **DST#: 5**
Test Start: 2009.07.29 @ 14:30:00

GENERAL INFORMATION:

Formation: **LKC-L-N**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 16:02:30
Time Test Ended: 21:34:00
Test Type: **Conventional Bottom Hole**
Tester: **Chuck Kreutzer**
Unit No: **36**
Interval: **4290.00 ft (KB) To 4330.00 ft (KB) (TVD)**
Reference Elevations: 3038.00 ft (KB)
Total Depth: **4330.00 ft (KB) (TVD)** 3033.00 ft (CF)
Hole Diameter: **7.88 inches** Hole Condition: **Good** KB to GRVCF: **5.00 ft**

Serial #: 6672 Inside
Press@RunDepth: 37.38 psig @ 4291.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2009.07.29 End Date: 2009.07.29 Last Calib.: 2009.07.29
Start Time: 14:30:05 End Time: 21:33:59 Time On Btrn: 2009.07.29 @ 16:01:30
Time Off Btrn: 2009.07.29 @ 19:42:00

TEST COMMENT: IF: Weak blow built to 3/8 in. over 10 mins.
IS: No blow back.
FF: Weak blow started at 3/8 in., built to 6 in. over 60 mins.
FSI: No blow back.



PRESSURE SUMMARY

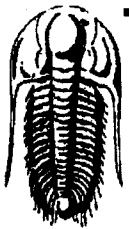
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.63	117.83	Initial Hydro-static
1	18.47	117.41	Open To Flow (1)
11	25.42	117.62	Shut-In (1)
41	840.63	119.01	End Shut-In (1)
42	45.78	118.48	Open To Flow (2)
100	37.38	120.82	Shut-In (2)
220	850.99	124.18	End Shut-In (2)
221	2034.43	124.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
57.00	gmco-10%g30%m60%o	0.28
62.00	gas in pipe-100%	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling co.
1700 N. Waterfront
Plwy. Bldg. 1200
Wichita Ks. 67206
ATTN: Kevin Kessler

1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35813 **DST#: 5**
Test Start: 2009.07.29 @ 14:30:00

Tool Information

Drill Pipe:	Length: 4161.00 ft	Diameter: 3.80 inches	Volume: 58.37 bbl	Tool Weight: 2000.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.98 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4290.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4275.00	
Hydraulic tool	5.00			4280.00	
Packer	5.00			4285.00	20.00 Bottom Of Top Packer
Packer	5.00			4290.00	
Stubb	1.00			4291.00	
Recorder	0.00	6672	inside	4291.00	
Recorder	0.00	6752	inside	4291.00	
Perforations	36.00			4327.00	
Bullnose	3.00			4330.00	40.00 Bottom Packers & Anchor
Total Tool Length:	60.00				



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1-32 Murphy- Schroeder unit
32 8s 31w Thomas KS
Job Ticket: 35813 **DST#: 5**
Test Start: 2009.07.29 @ 14:30:00

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: 8.40 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2800.00 ppm			
Filter Cake: 1.00 inches			

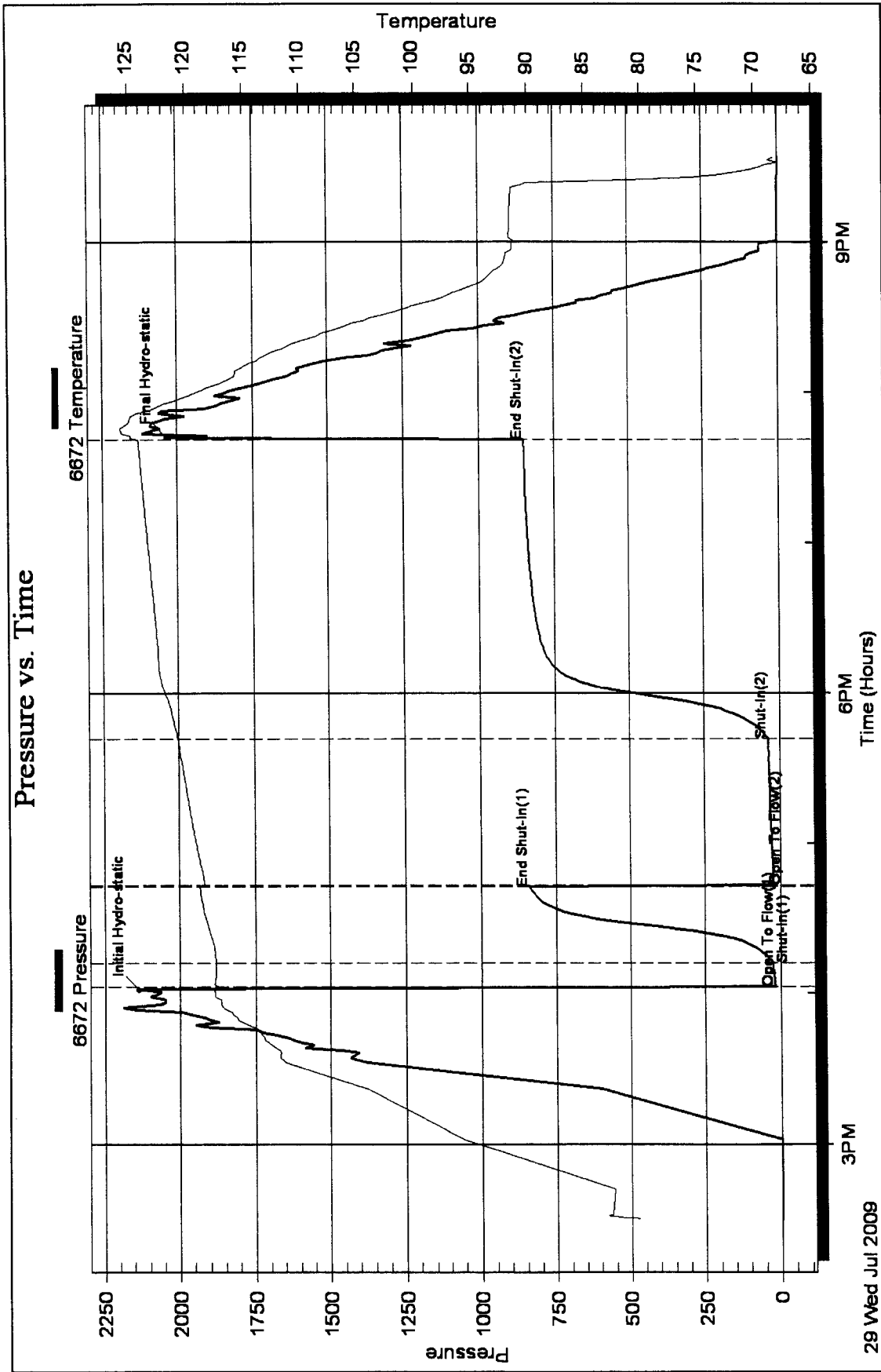
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
57.00	gmco-10%g30%m60%o	0.280
62.00	gas in pipe-100%	0.305

Total Length: 119.00 ft Total Volume: 0.585 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time



29 Wed Jul 2009