

15-185-23335

1-21s-13w

CONFIDENTIAL

MAR 16 2006

KCC



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

Hall H #1-1

Start Date: 2005.11.22 @ 14:02:07

End Date: 2005.11.22 @ 22:22:37

Job Ticket #: 23432 DST #: 1

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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

ATTN: Roger Martin

Job Ticket: 23432

DST#: 1

Test Start: 2005.11.22 @ 14:02:07

GENERAL INFORMATION:

Formation: **Lans.-K.C. A-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:17:22

Time Test Ended: 22:22:37

Test Type: Conventional Bottom Hole

Tester: Gerald Adams

Unit No: 19

Interval: **3227.00 ft (KB) To 3320.00 ft (KB) (TVD)**

Total Depth: 3320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1865.00 ft (KB)

1856.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6755 Inside

Press@RunDepth: 70.20 psig @ 3296.00 ft (KB)

Start Date: 2005.11.22

End Date: 2005.11.22

Start Time: 14:02:12

End Time: 22:22:36

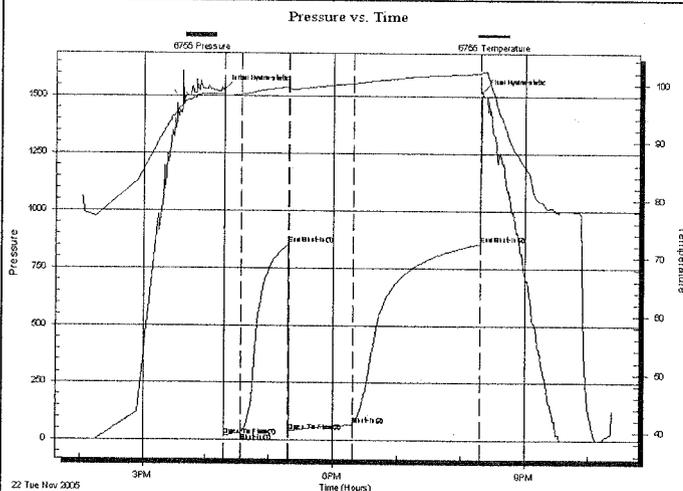
Capacity: 7000.00 psig

Last Calib.: 2005.11.22

Time On Btm: 2005.11.22 @ 16:17:07

Time Off Btm: 2005.11.22 @ 20:19:07

TEST COMMENT: IF: Weak blow . Built to 1 1/2".
IS: No blow .
FF: Weak blow . Built to 4".
FS: No blow .



PRESSURE SUMMARY

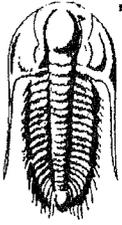
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1530.11 | 98.35 | Initial Hydro-static |
| 1 | 17.76 | 97.92 | Open To Flow (1) |
| 17 | 32.53 | 98.20 | Shut-In(1) |
| 61 | 853.36 | 99.51 | End Shut-In(1) |
| 62 | 40.05 | 99.20 | Open To Flow (2) |
| 121 | 70.20 | 100.13 | Shut-In(2) |
| 241 | 856.84 | 101.91 | End Shut-In(2) |
| 242 | 1520.17 | 102.27 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 90.00 | G&OCM 4%G 8%O 88%M | 0.44 |
| 0.00 | 90' GIP | 0.00 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23432

DST#: 1

ATTN: Roger Martin

Test Start: 2005.11.22 @ 14:02:07

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 2974.00 ft | Diameter: 3.80 inches | Volume: 41.72 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 22000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 68000.00 lb |
| | | | <u>Total Volume: 42.94 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 15.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3227.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 93.00 ft | | | |
| Tool Length: | 113.00 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 | | | 3212.00 | |
| Hydraulic tool | 5.00 | | | 3217.00 | |
| Packer | 5.00 | | | 3222.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3227.00 | |
| Stubb | 1.00 | | | 3228.00 | |
| Perforations | 5.00 | | | 3233.00 | |
| Change Over Sub | 0.50 | | | 3233.50 | |
| Blank Spacing | 62.00 | | | 3295.50 | |
| Change Over Sub | 0.50 | | | 3296.00 | |
| Recorder | 0.00 | 6755 | Inside | 3296.00 | |
| Perforations | 21.00 | | | 3317.00 | |
| Recorder | 0.00 | 11019 | Outside | 3317.00 | |
| Bullnose | 3.00 | | | 3320.00 | 93.00 Bottom Packers & Anchor |

Total Tool Length: 113.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23432

DST#: 1

ATTN: Roger Martin

Test Start: 2005.11.22 @ 14:02:07

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:

2800 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.72 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|--------------------|----------------|
| 90.00 | G&OCM 4%G 8%O 88%M | 0.443 |
| 0.00 | 90' GIP | 0.000 |

Total Length: 90.00 ft

Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6755

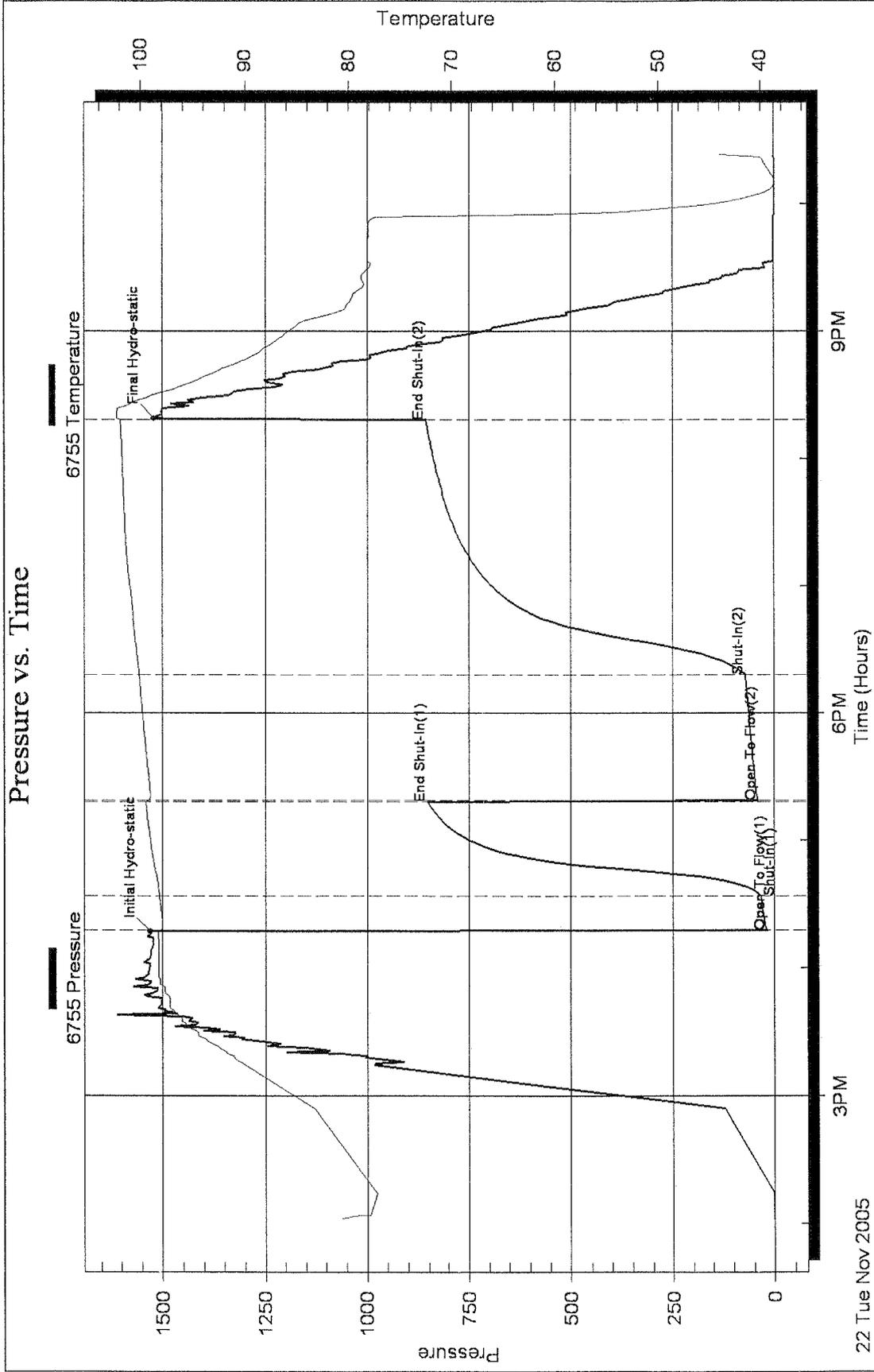
Inside

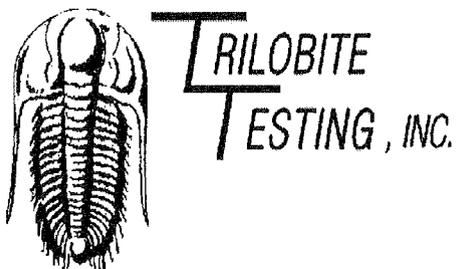
Mull Drilling Co.

1-21s-13w Stafford

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

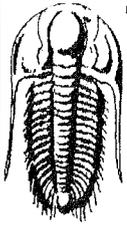
Hall H #1-1

Start Date: 2005.11.23 @ 06:01:20

End Date: 2005.11.23 @ 14:46:05

Job Ticket #: 23433 DST #: 2

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23433

DST#: 2

ATTN: Roger Martin

Test Start: 2005.11.23 @ 06:01:20

GENERAL INFORMATION:

Formation: **Lans.-K.C.-G**

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

Time Tool Opened: 08:17:20

Time Test Ended: 14:46:05

Test Type: **Conventional Bottom Hole**

Tester: **Gerald Adams**

Unit No: **19**

Interval: **3323.00 ft (KB) To 3337.00 ft (KB) (TVD)**

Total Depth: **3337.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Poor**

Reference Elevations: **1865.00 ft (KB)**

1856.00 ft (CF)

KB to GR/CF: **9.00 ft**

Serial #: 6755

Inside

Press@RunDepth: **119.31 psig @ 3324.00 ft (KB)**

Start Date: **2005.11.23**

End Date: **2005.11.23**

Capacity: **7000.00 psig**

Last Calib.: **2005.11.23**

Start Time: **06:01:25**

End Time: **14:46:05**

Time On Btm: **2005.11.23 @ 08:16:35**

Time Off Btm: **2005.11.23 @ 12:18:05**

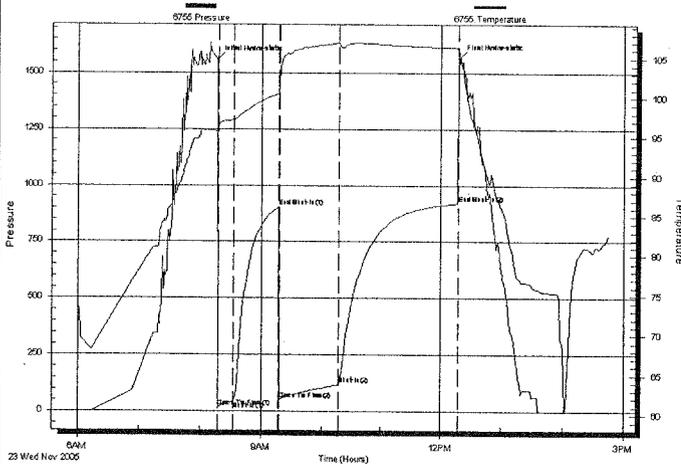
TEST COMMENT: IF:Weak blow . Built to 4".

IS:No blow .

FF:Weak blow . Built to 5 1/2".

FSI:No blow .

Pressure vs. Time



PRESSURE SUMMARY

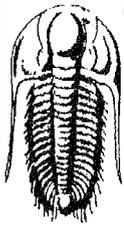
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1557.32 | 95.79 | Initial Hydro-static |
| 1 | 19.91 | 95.60 | Open To Flow (1) |
| 16 | 44.42 | 97.23 | Shut-In(1) |
| 61 | 903.42 | 100.53 | End Shut-In(1) |
| 62 | 52.73 | 101.72 | Open To Flow (2) |
| 121 | 119.31 | 107.03 | Shut-In(2) |
| 241 | 920.04 | 106.35 | End Shut-In(2) |
| 242 | 1565.59 | 105.63 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------------|--------------|
| 180.00 | MWw /oil specs 84%w 15%m 1%o | 0.89 |
| 0.00 | Rw .18 ohms @ 74degs. | 0.00 |
| 30.00 | SGCMWw /o specs 67%w 30%m 2%g | 190.15 |
| 0.00 | 30' GIP | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23433

DST#: 2

ATTN: Roger Martin

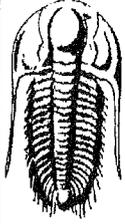
Test Start: 2005.11.23 @ 06:01:20

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3067.00 ft | Diameter: 3.80 inches | Volume: 43.02 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 61000.00 lb |
| | | | <u>Total Volume: 44.24 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 12.00 ft | | | String Weight: Initial 58000.00 lb |
| Depth to Top Packer: | 3323.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 14.00 ft | | | |
| Tool Length: | 34.00 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 | | | 3308.00 | |
| Hydraulic tool | 5.00 | | | 3313.00 | |
| Packer | 5.00 | | | 3318.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3323.00 | |
| Stubb | 1.00 | | | 3324.00 | |
| Recorder | 0.00 | 6755 | Inside | 3324.00 | |
| Perforations | 10.00 | | | 3334.00 | |
| Recorder | 0.00 | 11019 | Outside | 3334.00 | |
| Bullnose | 3.00 | | | 3337.00 | 14.00 Bottom Packers & Anchor |
| Total Tool Length: | 34.00 | | | | |



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23433

DST#: 2

ATTN: Roger Martin

Test Start: 2005.11.23 @ 06:01:20

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

54000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.71 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------------------|---------------|
| 180.00 | M/W/oil specs 84%w 15%m 1%o | 0.885 |
| 0.00 | Rw .18 ohms@ 74degs. | 0.000 |
| 30.00 | SGCM/W/o specs 67%w 30%m 2%g 1%o | 0.148 |
| 0.00 | 30' GIP | 0.000 |

Total Length: 210.00 ft

Total Volume: 1.033 bbl

Num Fluid Samples: 0

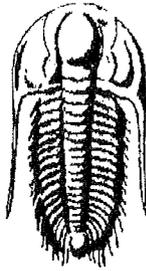
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

Hall H #1-1

Start Date: 2005.11.23 @ 21:58:10

End Date: 2005.11.24 @ 06:58:25

Job Ticket #: 23434 DST #: 3

Mull Drilling Co.

Hall H #1-1

1-21s-13w Stafford

DST # 3

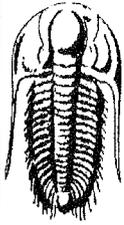
Lans-K.C.-H

2005.11.23

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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

ATTN: Roger Martin

Job Ticket: 23434

DST#: 3

Test Start: 2005.11.23 @ 21:58:10

GENERAL INFORMATION:

Formation: **Lans.-K.C.-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:02:10

Time Test Ended: 06:58:25

Test Type: Conventional Bottom Hole

Tester: Gerald Adams

Unit No: 19

Interval: **3357.00 ft (KB) To 3376.00 ft (KB) (TVD)**

Total Depth: 3376.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1865.00 ft (KB)

1856.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6755 Inside

Press@RunDepth: 93.61 psig @ 3358.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2005.11.23

End Date:

2005.11.24

Last Calib.: 2005.11.24

Start Time: 21:58:15

End Time:

06:58:25

Time On Btm: 2005.11.24 @ 00:01:00

Time Off Btm: 2005.11.24 @ 03:43:40

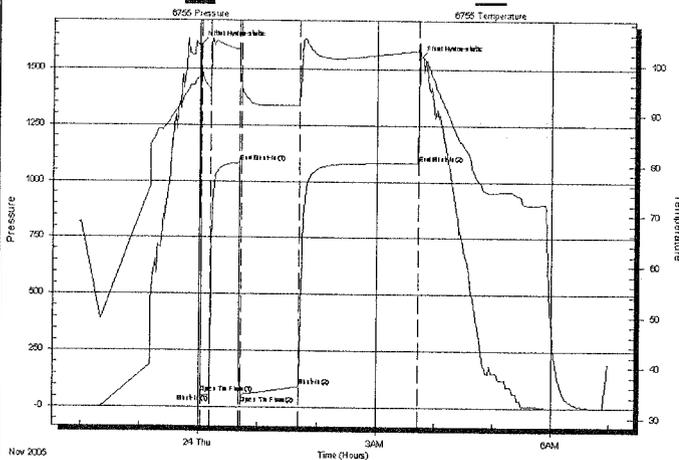
TEST COMMENT: IF: Strong blow . B.O.B. in 10 secs. GTS in 6 mins. See gas flow report.

IS: No blow .

FF: Strong blow . B.O.B. in 10 secs.

FS: Strong blow . B.O.B. in 20 mins.

Pressure vs. Time



PRESSURE SUMMARY

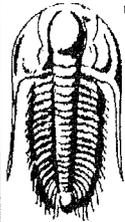
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1606.22 | 97.41 | Initial Hydro-static |
| 2 | 60.93 | 98.53 | Open To Flow (1) |
| 11 | 57.73 | 94.96 | Shut-In(1) |
| 41 | 1080.98 | 103.02 | End Shut-In(1) |
| 42 | 52.47 | 95.84 | Open To Flow (2) |
| 101 | 93.61 | 91.92 | Shut-In(2) |
| 222 | 1082.01 | 102.83 | End Shut-In(2) |
| 223 | 1543.80 | 104.51 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------|--------------|
| 248.00 | HG&MCO 29%g 36%o 35%m | 1.22 |
| 62.00 | GMCO 20%g 46%o 34%m | 0.87 |
| 30.00 | CGO 2%g 98%o | 0.42 |
| 0.00 | 3007' GIP. | 0.00 |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.50 | 2.00 | 110.63 |
| Last Gas Rate | | | |
| Max. Gas Rate | 0.50 | 8.00 | 151.10 |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.
PO Box 2758
Wichita KS 67201

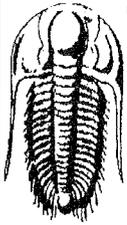
ATTN: Roger Martin

Hall H #1-1
1-21s-13w Stafford
Job Ticket: 23434 **DST#: 3**
Test Start: 2005.11.23 @ 21:58:10

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3099.00 ft | Diameter: 3.80 inches | Volume: 43.47 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 62000.00 lb |
| | | | <u>Total Volume: 44.69 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 10.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3357.00 ft | | | Final 61000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 19.00 ft | | | |
| Tool Length: | 39.00 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 | | | 3342.00 | |
| Hydraulic tool | 5.00 | | | 3347.00 | |
| Packer | 5.00 | | | 3352.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3357.00 | |
| Stubb | 1.00 | | | 3358.00 | |
| Recorder | 0.00 | 6755 | Inside | 3358.00 | |
| Perforations | 15.00 | | | 3373.00 | |
| Recorder | 0.00 | 11019 | Outside | 3373.00 | |
| Bullnose | 3.00 | | | 3376.00 | 19.00 Bottom Packers & Anchor |
| Total Tool Length: | 39.00 | | | | |



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23434

DST#: 3

ATTN: Roger Martin

Test Start: 2005.11.23 @ 21:58:10

Mud and Cushion Information

| | | |
|----------------------------------|----------------------------|--------------------------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: 37.5 deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: 4100 ppm |
| Viscosity: 49.00 sec/qt | Cushion Volume: bbl | |
| Water Loss: 7.57 in ³ | Gas Cushion Type: | |
| Resistivity: 0.00 ohm.m | Gas Cushion Pressure: psig | |
| Salinity: 4100.00 ppm | | |
| Filter Cake: 0.20 inches | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------|---------------|
| 248.00 | HG&MCO 29%g 36%o 35%m | 1.220 |
| 62.00 | GMCO 20%g 46%o 34%m | 0.870 |
| 30.00 | CGO 2%g 98%o | 0.421 |
| 0.00 | 3007' GIP. | 0.000 |

Total Length: 340.00 ft Total Volume: 2.511 bbl

Num Fluid Samples: 0 Num Gas Bombs: 1 Serial #: ga-1

Laboratory Name: Caraway Laboratory Location: Liberal, KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23434

DST#: 3

ATTN: Roger Martin

Test Start: 2005.11.23 @ 21:58:10

Gas Rates Information

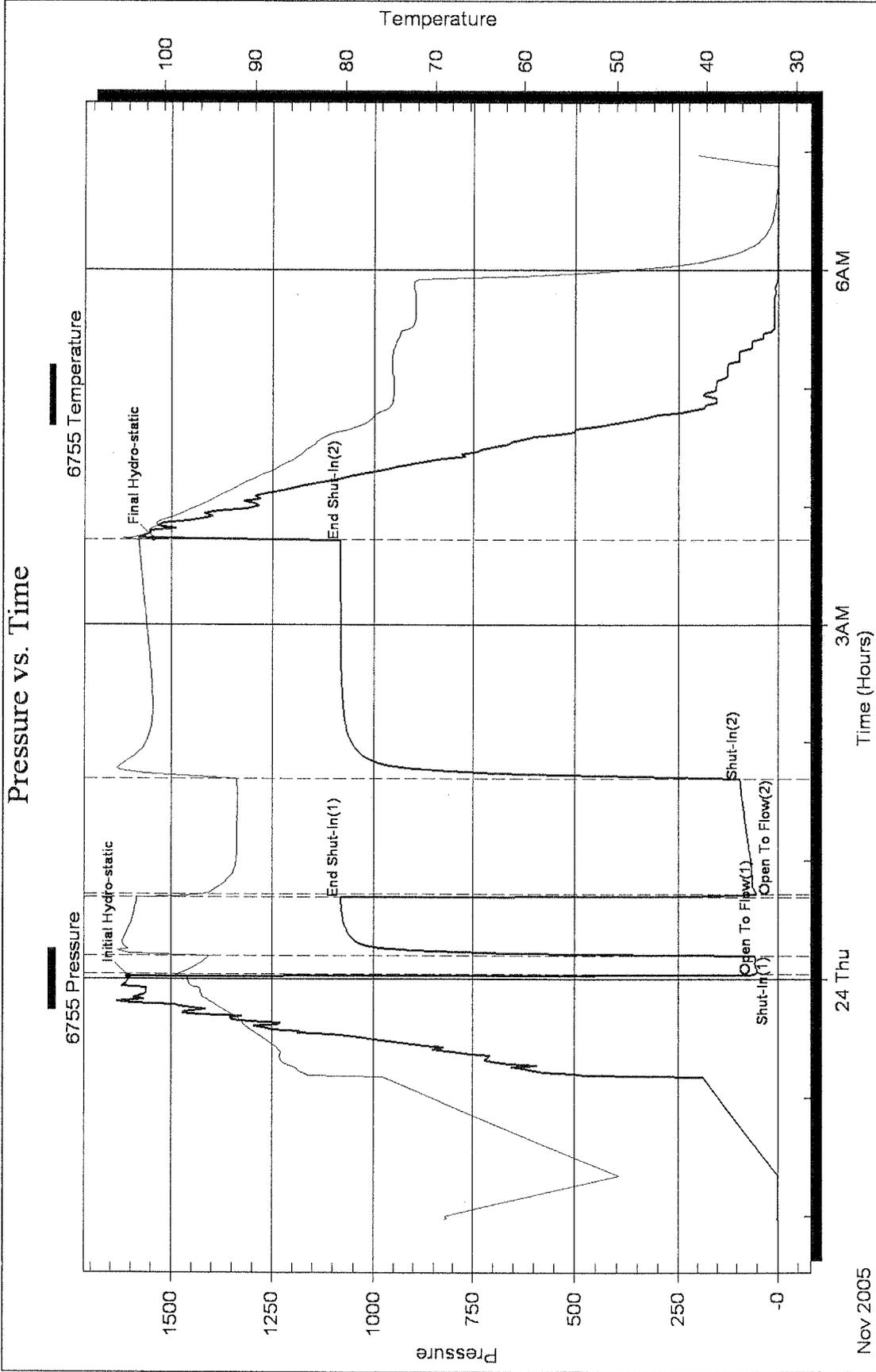
Temperature: 59 deg C

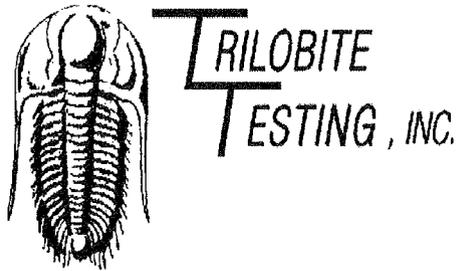
Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

| Flow Period | Elapsed Time | Choke (mm) | Pressure (kPaa) | Gas Rate (m ³ /d) |
|-------------|--------------|------------|-----------------|------------------------------|
| 1 | 10 | 0.50 | 2.00 | 110.63 |
| 1 | 10 | 0.50 | 2.00 | 110.63 |
| 1 | 10 | 0.50 | 2.00 | 110.63 |
| 2 | 5 | 0.50 | 8.00 | 151.10 |
| 2 | 10 | 0.50 | 5.00 | 130.87 |
| 2 | 15 | 0.50 | 3.50 | 120.75 |
| 2 | 20 | 0.50 | 2.00 | 110.63 |
| 2 | 25 | 0.50 | 1.75 | 108.94 |
| 2 | 30 | 0.50 | 1.50 | 107.26 |
| 2 | 35 | 0.50 | 1.50 | 107.26 |
| 2 | 40 | 0.50 | 1.75 | 108.94 |
| 2 | 45 | 0.50 | 1.75 | 108.94 |
| 2 | 50 | 0.50 | 2.00 | 110.63 |
| 0 | - | -999999.00 | -999999.00 | -999999.00 |





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

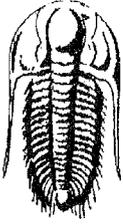
Hall H #1-1

Start Date: 2005.11.24 @ 16:50:37

End Date: 2005.11.25 @ 01:26:37

Job Ticket #: 23435 DST #: 4

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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23435

DST#: 4

ATTN: Roger Martin

Test Start: 2005.11.24 @ 16:50:37

GENERAL INFORMATION:

Formation: **Lans.- K.C.- I&J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:54:07

Time Test Ended: 01:26:37

Test Type: Conventional Bottom Hole

Tester: Gerald Adams

Unit No: 19

Interval: **3375.00 ft (KB) To 3413.00 ft (KB) (TVD)**

Reference Elevations: 1865.00 ft (KB)

Total Depth: 3413.00 ft (KB) (TVD)

1856.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 9.00 ft

Serial #: 6755

Inside

Press@RunDepth: 91.17 psig @ 3376.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2005.11.24

End Date: 2005.11.25

Last Calib.: 2005.11.25

Start Time: 16:50:42

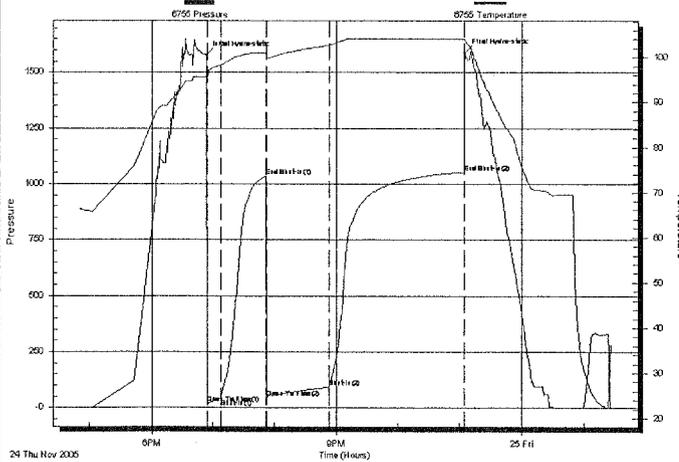
End Time: 01:26:37

Time On Btm: 2005.11.24 @ 18:53:47

Time Off Btm: 2005.11.24 @ 23:05:37

TEST COMMENT: IF: Strong blow . B.O.B. in 6 mins.
IS: No blow .
FF: Strong blow . B.O.B. in 10 secs.
FS: Weak blow . 1/4" to 1".

Pressure vs. Time



PRESSURE SUMMARY

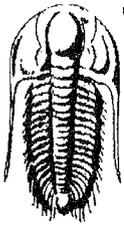
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1576.97 | 95.54 | Initial Hydro-static |
| 1 | 19.48 | 95.08 | Open To Flow (1) |
| 14 | 39.19 | 98.29 | Shut-In(1) |
| 58 | 1036.05 | 101.00 | End Shut-In(1) |
| 60 | 44.16 | 99.86 | Open To Flow (2) |
| 119 | 91.17 | 102.61 | Shut-In(2) |
| 251 | 1053.78 | 103.99 | End Shut-In(2) |
| 252 | 1590.64 | 104.06 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 186.00 | HG&OCM 30%g 30%o 40%m | 0.91 |
| 44.00 | Clean Gassy Oil 2%g 98%o | 0.22 |
| 0.00 | 2125' GIP | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23435

DST#: 4

ATTN: Roger Martin

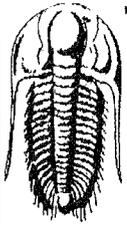
Test Start: 2005.11.24 @ 16:50:37

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3130.00 ft | Diameter: 3.80 inches | Volume: 43.91 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 45.13 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 23.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3375.00 ft | | | Final 61000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 38.00 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 | | | 3360.00 | |
| Hydraulic tool | 5.00 | | | 3365.00 | |
| Packer | 5.00 | | | 3370.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3375.00 | |
| Stubb | 1.00 | | | 3376.00 | |
| Recorder | 0.00 | 6755 | Inside | 3376.00 | |
| Perforations | 34.00 | | | 3410.00 | |
| Recorder | 0.00 | 11019 | Outside | 3410.00 | |
| Bullnose | 3.00 | | | 3413.00 | 38.00 Bottom Packers & Anchor |
| Total Tool Length: | 58.00 | | | | |



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23435

DST#: 4

ATTN: Roger Martin

Test Start: 2005.11.24 @ 16:50:37

Mud and Cushion Information

| | | |
|----------------------------------|----------------------------|--------------------------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: 32 deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: 7000 ppm |
| Viscosity: 45.00 sec/qt | Cushion Volume: bbl | |
| Water Loss: 7.97 in ³ | Gas Cushion Type: | |
| Resistivity: 0.00 ohm.m | Gas Cushion Pressure: psig | |
| Salinity: 7000.00 ppm | | |
| Filter Cake: 0.20 inches | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------------------|---------------|
| 186.00 | HG&OCM 30%g 30%o 40%m | 0.915 |
| 44.00 | Clean Gassy Oil 2%g 98%o | 0.216 |
| 0.00 | 2125' GIP | 0.000 |

Total Length: 230.00 ft Total Volume: 1.131 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6755

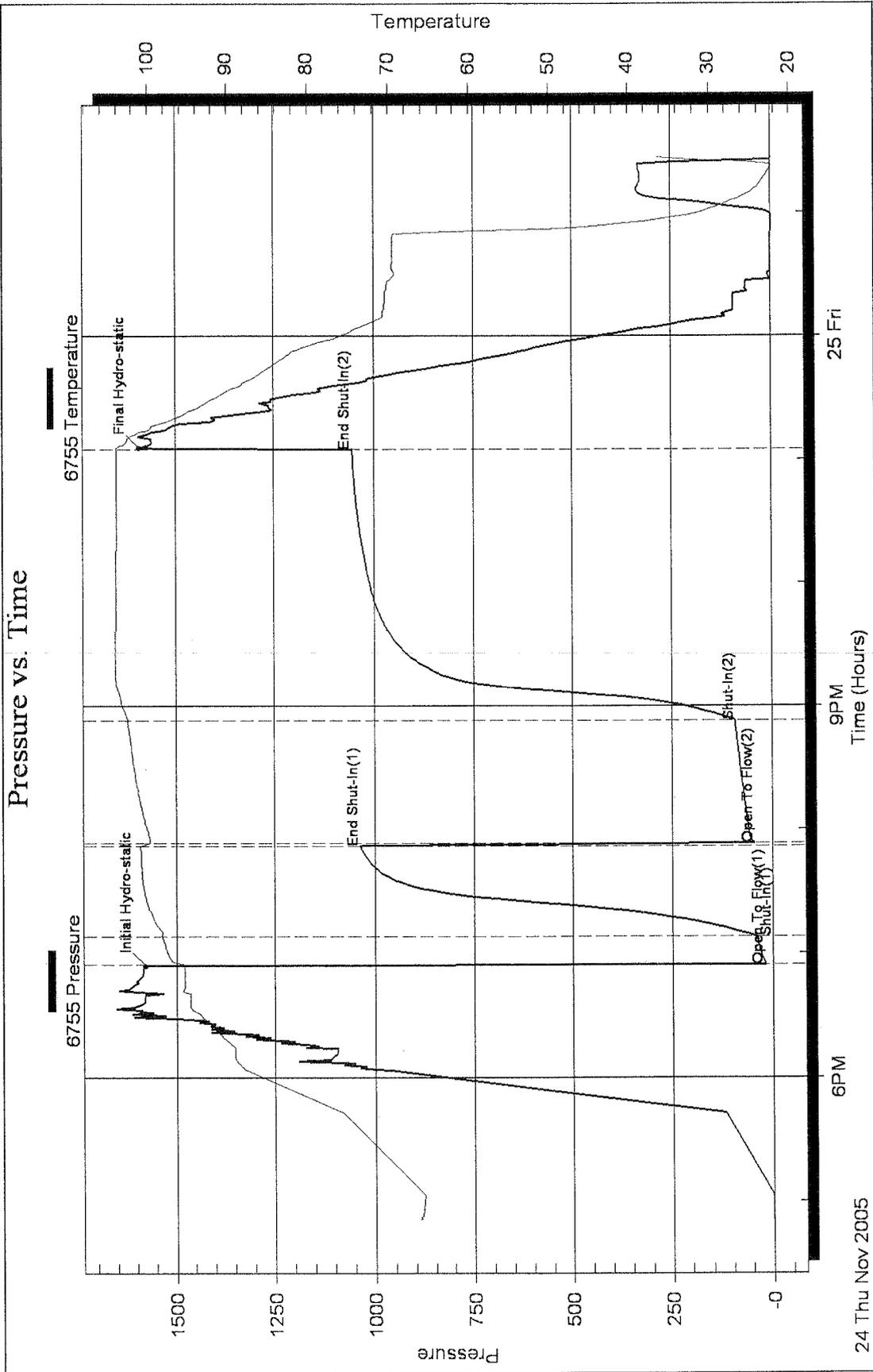
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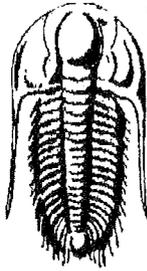
Mull Drilling Co.

1-21s-13w Stafford

DST Test Number: 4

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

Hall H #1-1

Start Date: 2005.11.25 @ 09:23:53

End Date: 2005.11.25 @ 17:34:38

Job Ticket #: 23436 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drilling Co.

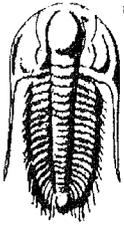
Hall H #1-1

1-21s-13w Stafford

DST # 5

Lans.-K.C. "K"

2005.11.25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23436

DST#: 5

ATTN: Roger Martin

Test Start: 2005.11.25 @ 09:23:53

GENERAL INFORMATION:

Formation: **Lans.-K.C. "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:53

Time Test Ended: 17:34:38

Test Type: Conventional Bottom Hole

Tester: Gerald Adams

Unit No: 19

Interval: **3411.00 ft (KB) To 3440.00 ft (KB) (TVD)**

Total Depth: 3440.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1865.00 ft (KB)

1856.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6755

Inside

Press@RunDepth: 73.20 psig @ 3412.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2005.11.25

End Date:

2005.11.25

Last Calib.: 2005.11.25

Start Time: 09:23:58

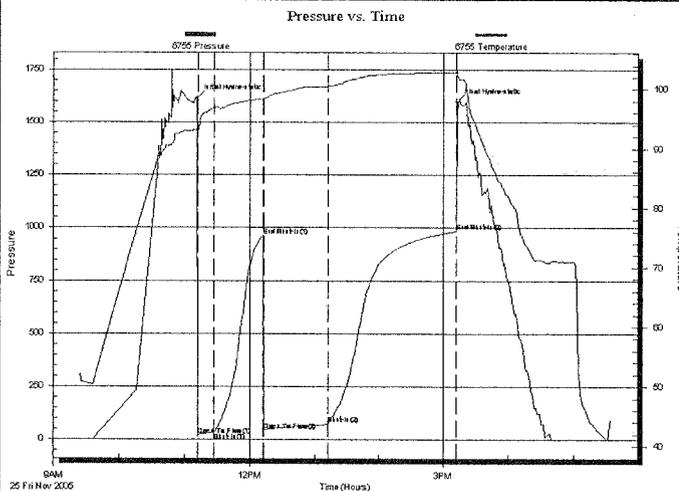
End Time:

17:34:37

Time On Btm: 2005.11.25 @ 11:11:33

Time Off Btm: 2005.11.25 @ 15:12:53

TEST COMMENT: IF: Strong blow . B.O.B. in 15 mins.
IS: Weak blow . 1/4" to 3/4".
FF: Strong blow . B.O.B. in 30 secs.
FS: Weak blow . 1/4" to 2".



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1613.73 | 93.14 | Initial Hydro-static |
| 1 | 18.33 | 92.77 | Open To Flow (1) |
| 16 | 35.27 | 96.86 | Shut-In(1) |
| 61 | 962.02 | 98.32 | End Shut-In(1) |
| 62 | 42.28 | 98.47 | Open To Flow (2) |
| 122 | 73.20 | 100.45 | Shut-In(2) |
| 241 | 984.21 | 102.82 | End Shut-In(2) |
| 242 | 1596.84 | 103.15 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------|--------------|
| 140.00 | HG&MCO 34%g 30%o 36%w | 0.69 |
| 0.00 | 590' GIP | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

ATTN: Roger Martin

Job Ticket: 23436

DST#: 5

Test Start: 2005.11.25 @ 09:23:53

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3162.00 ft | Diameter: 3.80 inches | Volume: 44.35 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 82000.00 lb |
| | | | <u>Total Volume: 45.57 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 19.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3411.00 ft | | | Final 61000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 29.00 ft | | | |
| Tool Length: | 49.00 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 | | | 3396.00 | |
| Hydraulic tool | 5.00 | | | 3401.00 | |
| Packer | 5.00 | | | 3406.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3411.00 | |
| Stubb | 1.00 | | | 3412.00 | |
| Recorder | 0.00 | 6755 | Inside | 3412.00 | |
| Perforations | 25.00 | | | 3437.00 | |
| Recorder | 0.00 | 11019 | Outside | 3437.00 | |
| Bullnose | 3.00 | | | 3440.00 | 29.00 Bottom Packers & Anchor |
| Total Tool Length: | 49.00 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23436

DST#: 5

ATTN: Roger Martin

Test Start: 2005.11.25 @ 09:23:53

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:

7100 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7100.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbf |
|--------------|-----------------------|---------------|
| 140.00 | HG&MCO 34%g 30%o 36%m | 0.688 |
| 0.00 | 590' GIP | 0.000 |

Total Length: 140.00 ft Total Volume: 0.688 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

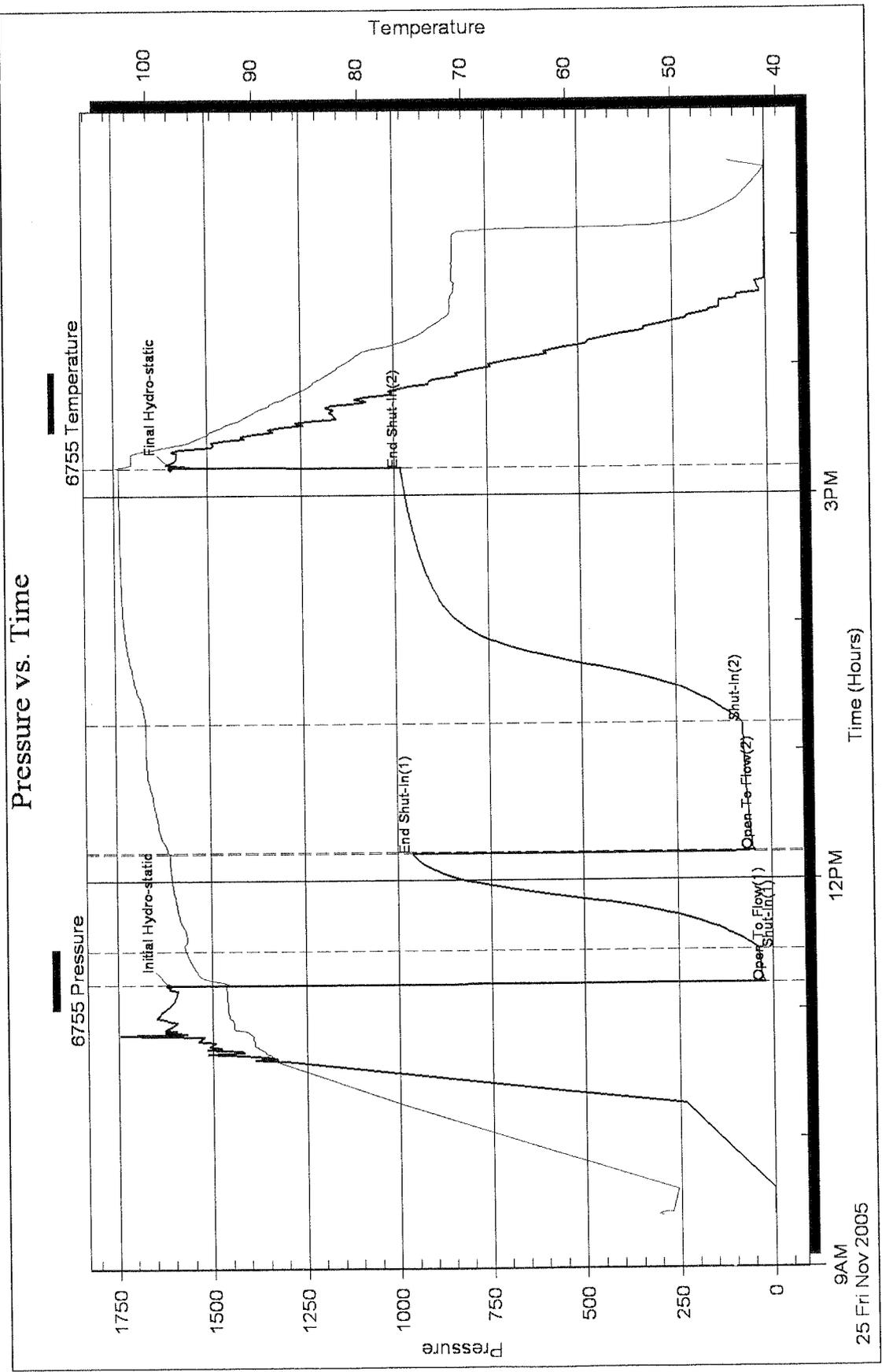
DST Test Number: 5

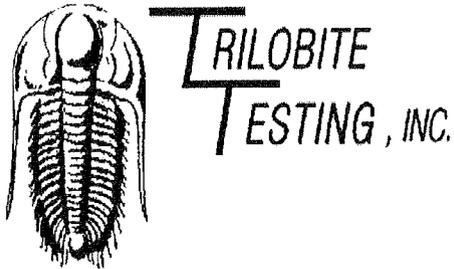
1-21s-13w Stafford

Multi Drilling Co.

Inside

Serial #: 6755





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

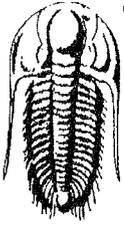
Hall H #1-1

Start Date: 2005.11.26 @ 01:40:50

End Date: 2005.11.26 @ 08:28:20

Job Ticket #: 23437 DST #: 6

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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

ATTN: Roger Martin

Job Ticket: 23437

DST#: 6

Test Start: 2005.11.26 @ 01:40:50

GENERAL INFORMATION:

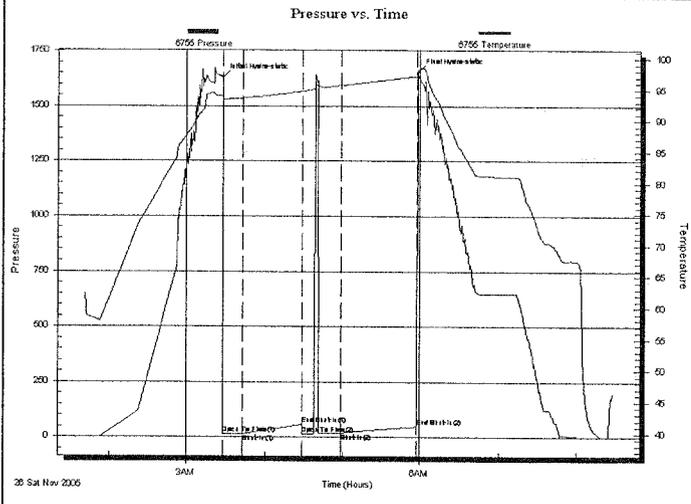
Formation: **Lans. K.C. " L"**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**
 Time Tool Opened: **03:28:10** Tester: **Gerald Adams**
 Time Test Ended: **08:28:20** Unit No: **19**
 Interval: **3437.00 ft (KB) To 3469.00 ft (KB) (TVD)** Reference Elevations: **1865.00 ft (KB)**
 Total Depth: **3469.00 ft (KB) (TVD)** **1856.00 ft (CF)**
 Hole Diameter: **7.88 inches** Hole Condition: **Poor** KB to GR/CF: **9.00 ft**

Serial #: 6755

Inside

Press@RunDepth: **17.92 psig @ 3438.00 ft (KB)** Capacity: **7000.00 psig**
 Start Date: **2005.11.26** End Date: **2005.11.26** Last Calib.: **2005.11.26**
 Start Time: **01:40:55** End Time: **08:28:19** Time On Btrm: **2005.11.26 @ 03:27:40**
 Time Off Btrm: **2005.11.26 @ 05:58:35**

TEST COMMENT: IF:Weak blow . 1/4" to 3/4".
 IS:No blow .
 FF:No blow . Flush tool after 6 mins. No blow .
 FSI:No blow .



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1630.49 | 93.95 | Initial Hydro-static |
| 1 | 13.60 | 93.53 | Open To Flow (1) |
| 16 | 14.97 | 93.64 | Shut-In(1) |
| 61 | 57.39 | 94.74 | End Shut-In(1) |
| 61 | 16.00 | 94.74 | Open To Flow (2) |
| 91 | 17.92 | 95.68 | Shut-In(2) |
| 151 | 47.70 | 97.18 | End Shut-In(2) |
| 151 | 1653.73 | 98.19 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 15.00 | OCM 2%o 98%m | 0.07 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23437

DST#: 6

ATTN: Roger Martin

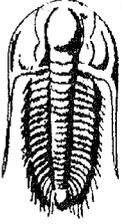
Test Start: 2005.11.26 @ 01:40:50

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3192.00 ft | Diameter: 3.80 inches | Volume: 44.78 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 75000.00 lb |
| | | | <u>Total Volume: 46.00 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 23.00 ft | | | String Weight: Initial 61000.00 lb |
| Depth to Top Packer: | 3437.00 ft | | | Final 61000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 32.00 ft | | | |
| Tool Length: | 52.00 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 | | | 3422.00 | |
| Hydraulic tool | 5.00 | | | 3427.00 | |
| Packer | 5.00 | | | 3432.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3437.00 | |
| Stubb | 1.00 | | | 3438.00 | |
| Recorder | 0.00 | 6755 | Inside | 3438.00 | |
| Perforations | 28.00 | | | 3466.00 | |
| Recorder | 0.00 | 11019 | Outside | 3466.00 | |
| Bullnose | 3.00 | | | 3469.00 | 32.00 Bottom Packers & Anchor |
| Total Tool Length: | 52.00 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23437

DST#: 6

ATTN: Roger Martin

Test Start: 2005.11.26 @ 01:40:50

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: | 7100 ppm |
| Viscosity: 45.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 7.97 in ³ | Gas Cushion Type: | | |
| Resistivity: 0.00 ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 7100.00 ppm | | | |
| Filter Cake: 0.20 inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| 15.00 | OCM 2%o 98%m | 0.074 |

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 6755

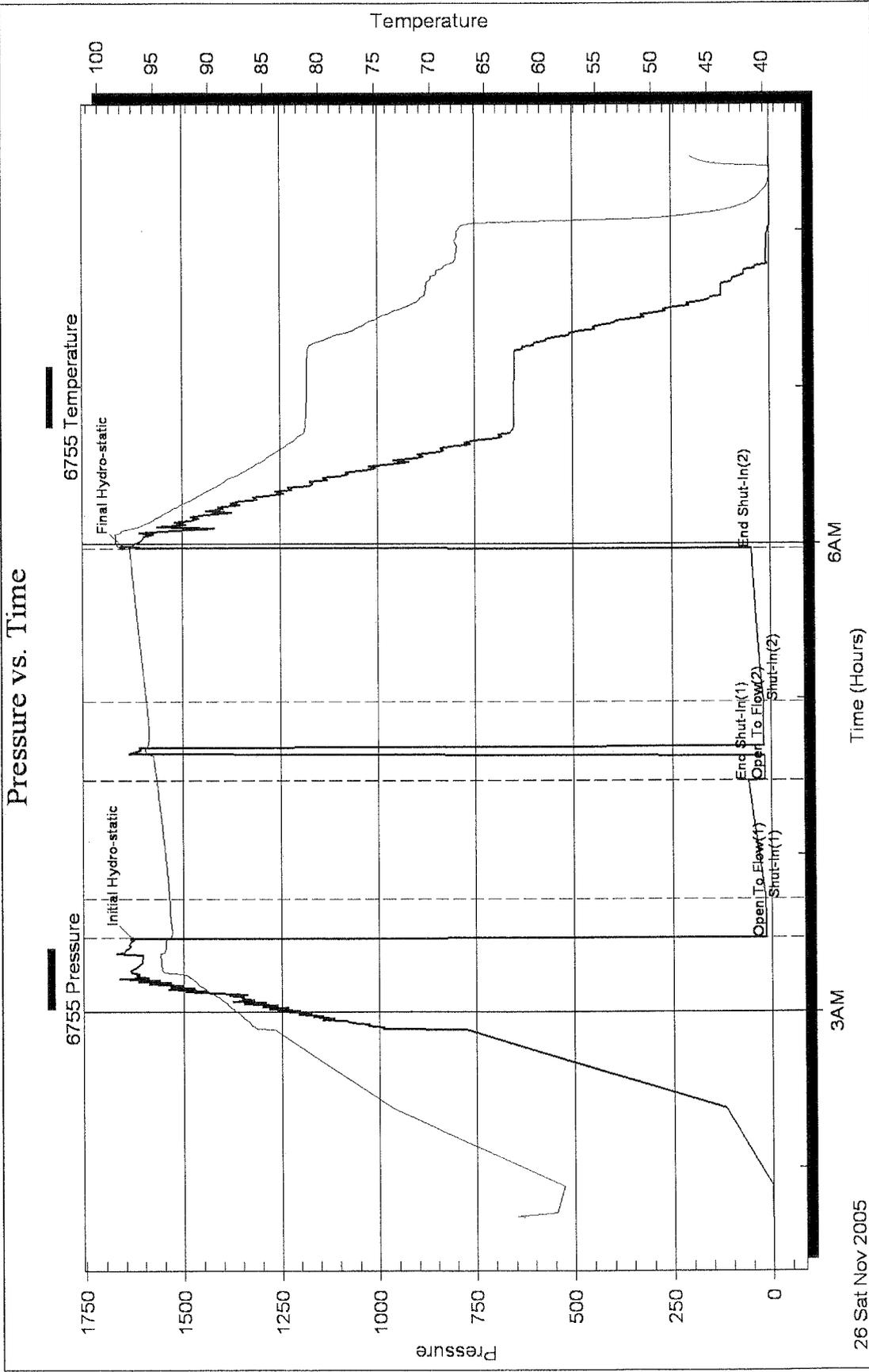
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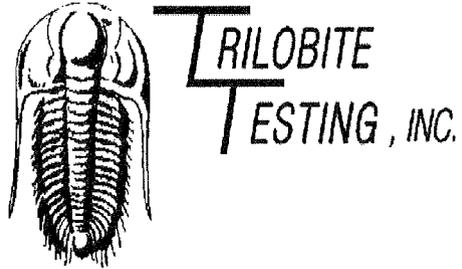
Mull Drilling Co.

1-21s-13w Stafford

DST Test Number: 6

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co.**

PO Box 2758
Wichita KS 67201

ATTN: Roger Martin

1-21s-13w Stafford

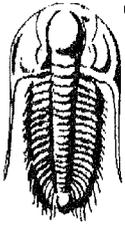
Hall H #1-1

Start Date: 2005.11.27 @ 10:21:07

End Date: 2005.11.27 @ 20:15:52

Job Ticket #: 23438 DST #: 7

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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23438

DST#: 7

ATTN: Roger Martin

Test Start: 2005.11.27 @ 10:21:07

GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 12:32:07

Time Test Ended: 20:15:52

Test Type: **Conventional Straddle**

Tester: **Gerald Adams**

Unit No: **19**

Interval: **3435.00 ft (KB) To 3467.00 ft (KB) (TVD)**

Reference Elevations: **1865.00 ft (KB)**

Total Depth: **3649.00 ft (KB) (TVD)**

1856.00 ft (CF)

Hole Diameter: **7.88 inches** Hole Condition: **Poor**

KB to GR/CF: **9.00 ft**

Serial #: 6755

Inside

Press@RunDepth: **295.18 psig @ 3449.50 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2005.11.27**

End Date: **2005.11.27**

Last Calib.: **2005.11.27**

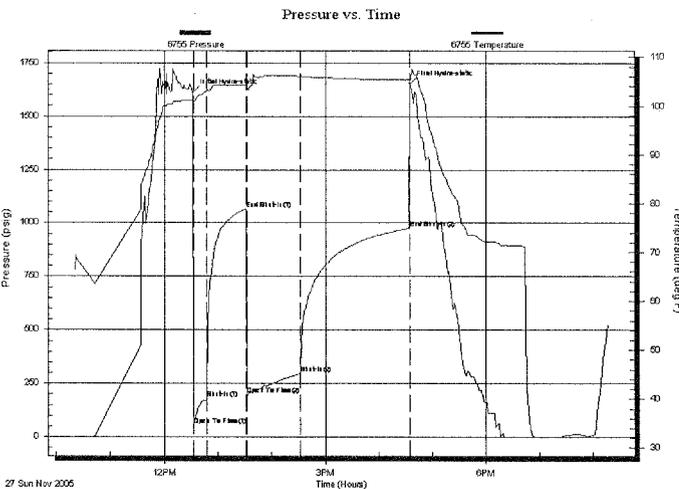
Start Time: **10:21:12**

End Time: **20:15:52**

Time On Btm: **2005.11.27 @ 12:31:47**

Time Off Btm: **2005.11.27 @ 16:35:22**

TEST COMMENT: IF: Strong blow . B.O.B. in 7 1/2 mins.
ISI: No blow
FF: Strong blow . B.O.B. in 12 mins.
FSI: No blow .



PRESSURE SUMMARY

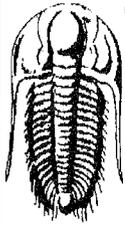
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1610.86 | 101.19 | Initial Hydro-static |
| 1 | 56.74 | 100.74 | Open To Flow (1) |
| 16 | 178.89 | 103.03 | Shut-In(1) |
| 60 | 1066.40 | 104.20 | End Shut-In(1) |
| 61 | 199.82 | 103.98 | Open To Flow (2) |
| 121 | 295.18 | 106.05 | Shut-In(2) |
| 243 | 975.60 | 105.35 | End Shut-In(2) |
| 244 | 1651.80 | 105.30 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 248.00 | G&OCWM 16%g 14%o 10%w 60%m | 1.22 |
| 352.00 | G&OCM 16%g 10%o 74%m | 4.94 |
| 0.00 | 300' GIP | 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.

Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23438

DST#: 7

ATTN: Roger Martin

Test Start: 2005.11.27 @ 10:21:07

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3163.00 ft | Diameter: 3.80 inches | Volume: 44.37 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 248.00 ft | Diameter: 2.25 inches | Volume: 1.22 bbl | Weight to Pull Loose: 80000.00 lb |
| | | | <u>Total Volume: 45.59 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 2.00 ft | | | String Weight: Initial 65000.00 lb |
| Depth to Top Packer: | 3437.00 ft | | | Final 66000.00 lb |
| Depth to Bottom Packer: | 3567.00 ft | | | |
| Interval between Packers: | 130.00 ft | | | |
| Tool Length: | 248.00 ft | | | |
| Number of Packers: | 3 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|---------------|------------|----------|------------|-------------------------------|
| Shut In Tool | 5.00 | | | 3414.00 | |
| Hydraulic tool | 5.00 | | | 3419.00 | |
| Jars | 5.00 | | | 3424.00 | |
| Safety Joint | 3.00 | | | 3427.00 | |
| Packer | 5.00 | | | 3432.00 | 28.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3437.00 | |
| Stubb | 1.00 | | | 3438.00 | |
| Perforations | 10.00 | | | 3448.00 | |
| Change Over Sub | 1.50 | | | 3449.50 | |
| Recorder | 0.00 | 6755 | Inside | 3449.50 | |
| Blank Spacing | 95.00 | | | 3544.50 | |
| Change Over Sub | 1.50 | | | 3546.00 | |
| Perforations | 20.00 | | | 3566.00 | |
| Recorder | 0.00 | 13255 | Outside | 3566.00 | |
| Blank Off Sub | 1.00 | | | 3567.00 | 130.00 Tool Interval |
| Packer | 6.00 | | | 3573.00 | |
| Stubb | 1.00 | | | 3574.00 | |
| Perforations | 15.00 | | | 3589.00 | |
| Change Over Sub | 1.00 | | | 3590.00 | |
| Blank Spacing | 63.00 | | | 3653.00 | |
| Change Over Sub | 1.00 | | | 3654.00 | |
| Recorder | 0.00 | 11019 | Below | 3654.00 | |
| Bullnose | 3.00 | | | 3657.00 | 90.00 Bottom Packers & Anchor |
| Total Tool Length: | 248.00 | | | | |



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FLUID SUMMARY

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Hall H #1-1

PO Box 2758
Wichita KS 67201

1-21s-13w Stafford

Job Ticket: 23438

DST#: 7

ATTN: Roger Martin

Test Start: 2005.11.27 @ 10:21:07

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: | 6700 ppm |
| Viscosity: 57.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 9.17 in ³ | Gas Cushion Type: | | |
| Resistivity: 0.00 ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 6700.00 ppm | | | |
| Filter Cake: 0.20 inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------------|---------------|
| 248.00 | G&OCMM 16%g 14%o 10%w 60%m | 1.220 |
| 352.00 | G&OCM 16%g 10%o 74%m | 4.938 |
| 0.00 | 300' GIP | 0.000 |

Total Length: 600.00 ft Total Volume: 6.158 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6755

Inside

Mull Drilling Co.

1-21s-13w Stafford

DST Test Number: 7

Pressure vs. Time

