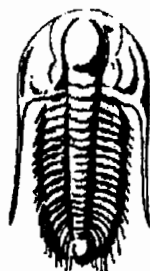


CONFIDENTIAL

KCC  
APR 07 2005  
CONFIDENTIAL

ORIGINAL



TRILOBITE  
TESTING, INC.

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co In

**14-9-26 Sheridan, Ks**

**Eugene #1-14**

Start Date: 2005.01.30 @ 04:55:14

End Date: 2005.01.30 @ 11:44:53

Job Ticket #: 20477      DST #: 1

RECEIVED

APR 08 2005

KCC WICHITA

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

Murfin Drilling Co Inc

Eugene #1-14

14-9-26 Sheridan, Ks

DST # 1

Toronto-A

2005.01.30



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

**Eugene #1-14**

**14-9-26 Sheridan, Ks**

Job Ticket: 20477

DST#: 1

Test Start: 2005.01.30 @ 04:55:14

### GENERAL INFORMATION:

Formation: **Toronto-A**

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

Time Tool Opened: 07:06:54

Time Test Ended: 11:44:53

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **25**

Interval: **3806.00 ft (KB) To 3868.00 ft (KB) (TVD)**

Total Depth: **3868.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2604.00 ft (KB)**

**2599.00 ft (CF)**

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

**Serial #: 6771**

**Inside**

Press@RunDepth: **64.10 psig @ 3807.00 ft (KB)**

Start Date: **2005.01.30**

End Date:

**2005.01.30**

Start Time: **04:55:14**

End Time:

**11:44:53**

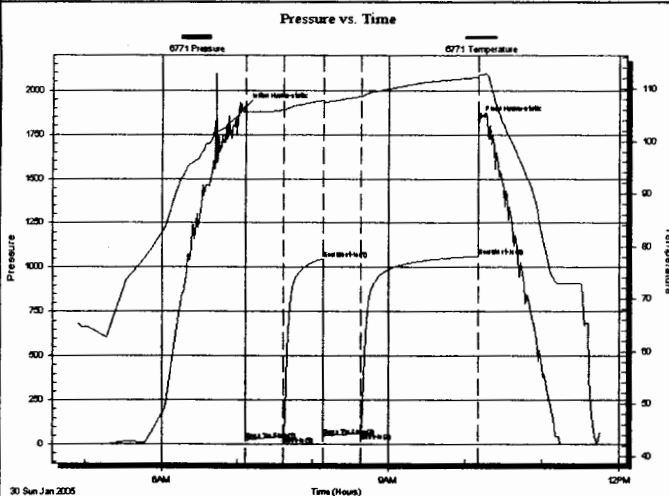
Capacity: **7000.00 psig**

Last Calib.: **2005.01.30**

Time On Btm: **2005.01.30 @ 07:06:39**

Time Off Btm: **2005.01.30 @ 10:10:39**

TEST COMMENT: 3/4" in. blow died in 25 min.  
No return  
Bubble to open tool No blow  
No return



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1902.82         | 106.18       | Initial Hydro-static |
| 1           | 21.70           | 104.90       | Open To Flow (1)     |
| 31          | 44.52           | 106.00       | Shut-In (1)          |
| 62          | 1046.80         | 107.84       | End Shut-In (1)      |
| 63          | 46.25           | 107.44       | Open To Flow (2)     |
| 92          | 64.10           | 108.60       | Shut-In (2)          |
| 184         | 1064.41         | 112.24       | End Shut-In (2)      |
| 184         | 1834.63         | 112.59       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 65.00       | mud         | 0.32         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

**Eugene #1-14**

250 N Water, Suite 300  
Wichita, Ks

**14-9-26 Sheridan, Ks**

Job Ticket: 20477

**DST#: 1**

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.30 @ 04:55:14

### Tool Information

|                           |                    |                       |                   |                                    |
|---------------------------|--------------------|-----------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3686.00 ft | Diameter: 3.80 inches | Volume: 51.70 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: 124.00 ft  | Diameter: 2.25 inches | Volume: 0.61 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume:         | 52.31 bbl         | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 24.00 ft           |                       |                   | String Weight: Initial 43000.00 lb |
| Depth to Top Packer:      | 3806.00 ft         |                       |                   | Final 43000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                   |                                    |
| Interval between Packers: | 62.00 ft           |                       |                   |                                    |
| Tool Length:              | 82.00 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        |            |          | 3787.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3792.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3797.00    |                               |
| Packer           | 5.00        |            |          | 3802.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 3806.00    |                               |
| Stubb            | 1.00        |            |          | 3807.00    |                               |
| Recorder         | 0.00        | 6771       | Inside   | 3807.00    |                               |
| Perforations     | 23.00       |            |          | 3830.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3831.00    |                               |
| Drill Pipe       | 31.00       |            |          | 3862.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3863.00    |                               |
| Recorder         | 0.00        | 11057      | Outside  | 3863.00    |                               |
| Bullnose         | 5.00        |            |          | 3868.00    | 62.00 Bottom Packers & Anchor |

**Total Tool Length: 82.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20477

DST#: 1

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.30 @ 04:55:14

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

1000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 65.00        | mud         | 0.320         |

Total Length: 65.00 ft

Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

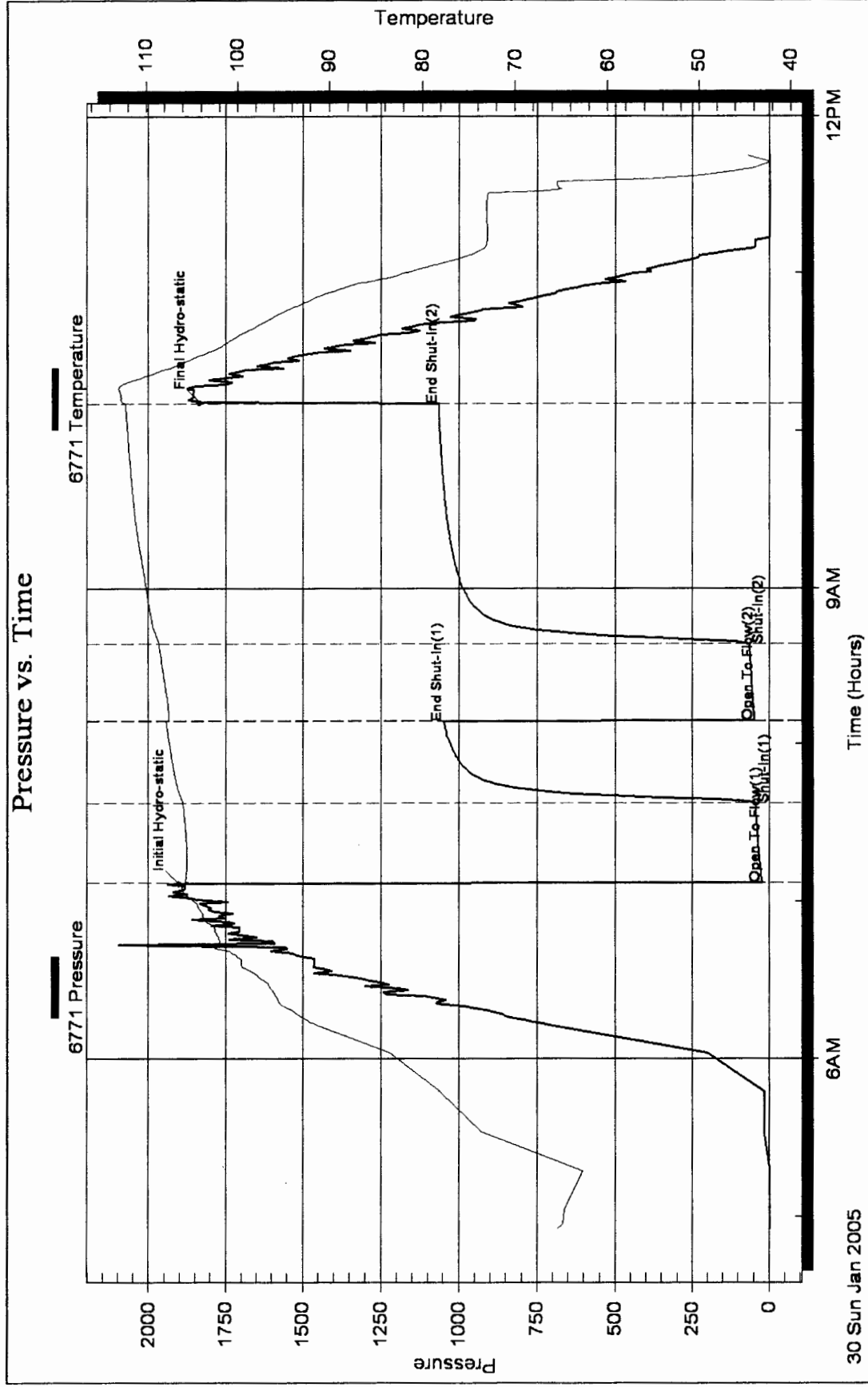
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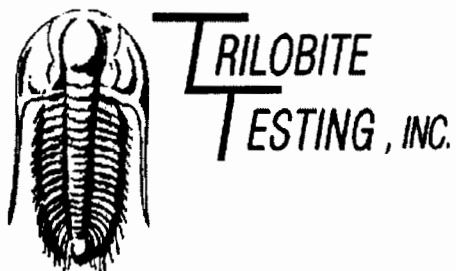
Inside

Murfin Drilling Co Inc

14-9-26 Sheridan, Ks

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

**14-9-26 Sheridan, Ks**

**Eugene #1-14**

Start Date: 2005.01.30 @ 21:05:21

End Date: 2005.01.31 @ 03:56:00

Job Ticket #: 20478      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

Murfin Drilling Co Inc

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

Eugene #1-14

14-9-26 Sheridan, Ks

Job Ticket: 20478

DST#: 2

Test Start: 2005.01.30 @ 21:05:21

### GENERAL INFORMATION:

Formation: **B-F**

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

Time Tool Opened: 22:52:16

Time Test Ended: 03:56:00

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: **3868.00 ft (KB) To 3928.00 ft (KB) (TVD)**

Total Depth: **3928.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2604.00 ft (KB)**

**2599.00 ft (CF)**

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

Serial #: **6771**

Inside

Press@RunDepth: **367.36 psig @ 3869.00 ft (KB)**

Start Date: **2005.01.30**

End Date:

**2005.01.31**

Start Time: **21:05:21**

End Time:

**03:56:00**

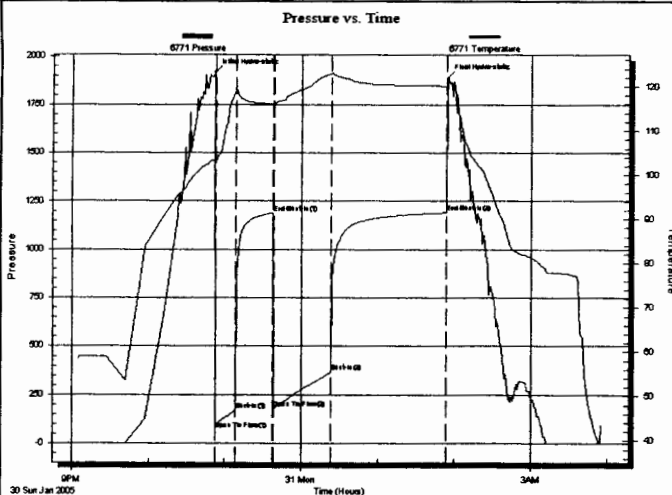
Capacity: **7000.00 psig**

Last Calib.: **2005.01.31**

Time On Btm: **2005.01.30 @ 22:51:46**

Time Off Btm: **2005.01.31 @ 01:54:31**

TEST COMMENT: B.O.B. in 5 min.  
Bleed off for 2 min. return in 7 min. weak surface blow.  
B.O.B. in 8 min.  
Bleed off for 2 min. return in 6 min. 1/4 in. blow.



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1914.54         | 103.45       | Initial Hydro-static |
| 1           | 68.59           | 102.88       | Open To Flow (1)     |
| 17          | 168.13          | 118.64       | Shut-In(1)           |
| 46          | 1189.71         | 115.98       | End Shut-In(1)       |
| 47          | 177.50          | 115.60       | Open To Flow (2)     |
| 92          | 367.36          | 122.88       | Shut-In(2)           |
| 182         | 1191.53         | 120.11       | End Shut-In(2)       |
| 183         | 1888.01         | 120.77       | Final Hydro-static   |

### Recovery

| Length (ft) | Description                         | Volume (bbl) |
|-------------|-------------------------------------|--------------|
| 300.00      | water 100%w                         | 3.08         |
| 180.00      | s m c w 15% m 85% w                 | 2.52         |
| 200.00      | s o g & w c m 5% o 5% g 25% w 65% m | 2.81         |
| 30.00       | c g o 15% g 85% o                   | 0.42         |
|             |                                     |              |
|             |                                     |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20478

DST#: 2

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.30 @ 21:05:21

### Tool Information

|                           |                    |                       |                   |                                    |
|---------------------------|--------------------|-----------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3747.00 ft | Diameter: 3.80 inches | Volume: 52.56 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: 124.00 ft  | Diameter: 2.25 inches | Volume: 0.61 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume:         | 53.17 bbl         | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 23.00 ft           |                       |                   | String Weight: Initial 43000.00 lb |
| Depth to Top Packer:      | 3868.00 ft         |                       |                   | Final 65000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                   |                                    |
| Interval between Packers: | 60.00 ft           |                       |                   |                                    |
| Tool Length:              | 80.00 ft           |                       |                   |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                   |                                    |
| Tool Comments:            |                    |                       |                   |                                    |

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3849.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3854.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3859.00    |                               |
| Packer           | 5.00        |            |          | 3864.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 3868.00    |                               |
| Stubb            | 1.00        |            |          | 3869.00    |                               |
| Recorder         | 0.00        | 6771       | Inside   | 3869.00    |                               |
| Perforations     | 21.00       |            |          | 3890.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3891.00    |                               |
| Drill Pipe       | 31.00       |            |          | 3922.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3923.00    |                               |
| Recorder         | 0.00        | 11057      | Outside  | 3923.00    |                               |
| Bullnose         | 5.00        |            |          | 3928.00    | 60.00 Bottom Packers & Anchor |

Total Tool Length: 80.00



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20478

DST#: 2

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.30 @ 21:05:21

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

38000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                     | Volume<br>bbl |
|--------------|---------------------------------|---------------|
| 300.00       | water 100%w                     | 3.079         |
| 180.00       | s m c w 15%m 85%w               | 2.525         |
| 200.00       | s o g & w c m 5%o 5%g 25%w 65%m | 2.805         |
| 30.00        | c g o 15%g 85%o                 | 0.421         |

Total Length: 710.00 ft

Total Volume: 8.830 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6771

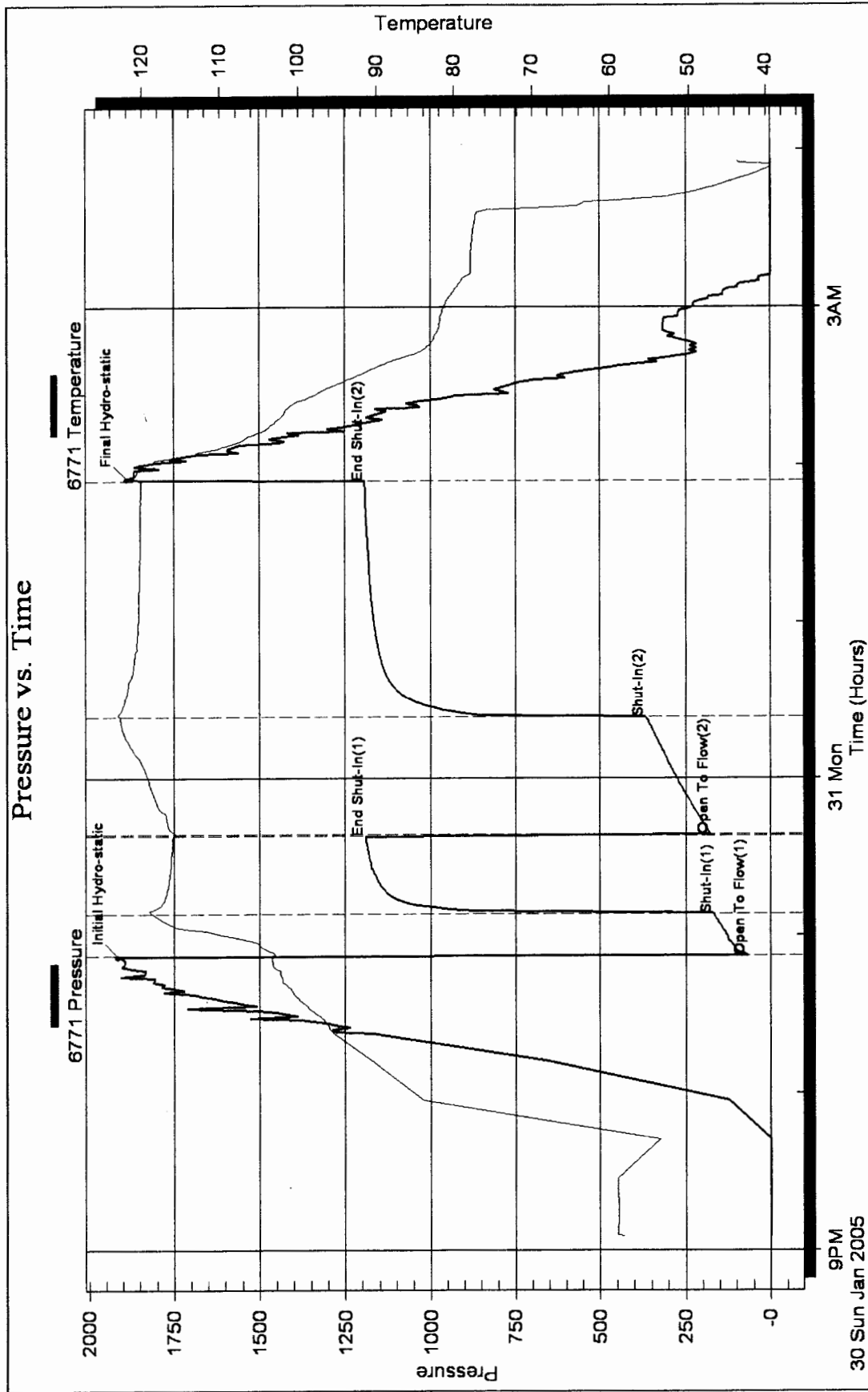
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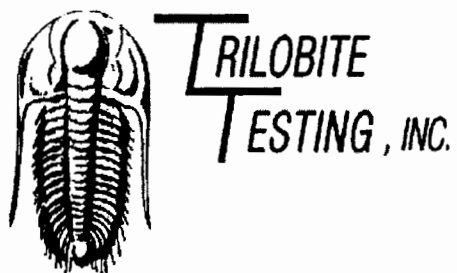
Murfin Drilling Co Inc

14-9-26 Sheridan, Ks

DST Test Number: 2

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

**14-9-26 Sheridan, Ks**

**Eugene #1-14**

Start Date: 2005.01.31 @ 16:05:16

End Date: 2005.01.31 @ 21:51:10

Job Ticket #: 20479      DST #: 3

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



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

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

Eugene #1-14

14-9-26 Sheridan, Ks

Job Ticket: 20479

DST#: 3

Test Start: 2005.01.31 @ 16:05:16

### GENERAL INFORMATION:

Formation: KC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:34:11

Time Test Ended: 21:51:10

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: 3966.00 ft (KB) To 4010.00 ft (KB) (TVD)

Total Depth: 4010.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2604.00 ft (KB)

2599.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 28.47 psig @ 3967.00 ft (KB)

Start Date: 2005.01.31

End Date:

2005.01.31

Start Time: 16:05:16

End Time:

21:51:10

Capacity: 7000.00 psig

Last Calib.: 2005.01.31

Time On Btm: 2005.01.31 @ 17:33:26

Time Off Btm: 2005.01.31 @ 20:07:11

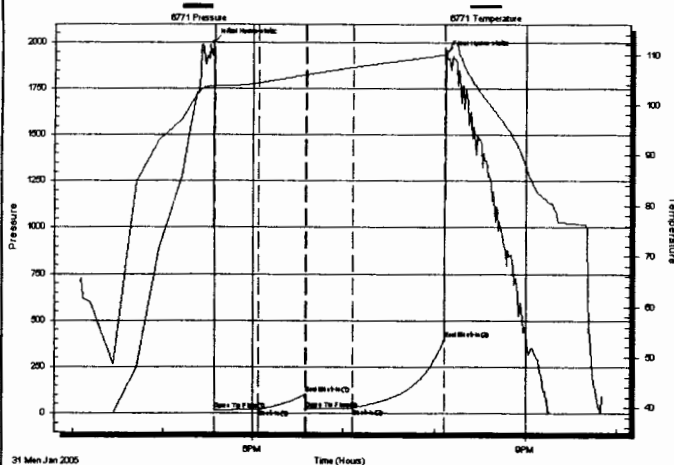
TEST COMMENT: Weak blow died in 11 min.

No return

Bubble to open tool

No return

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2000.31         | 104.18       | Initial Hydro-static |
| 1           | 14.50           | 103.95       | Open To Flow (1)     |
| 31          | 22.44           | 104.36       | Shut-In(1)           |
| 62          | 102.34          | 105.96       | End Shut-In(1)       |
| 62          | 21.86           | 105.96       | Open To Flow (2)     |
| 93          | 28.47           | 107.43       | Shut-In(2)           |
| 153         | 399.64          | 110.00       | End Shut-In(2)       |
| 154         | 1935.99         | 110.86       | Final Hydro-static   |

### Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 5.00        | o c m 15%o 85% m | 0.02         |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20479

DST#: 3

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.31 @ 16:05:16

### Tool Information

|                           |                    |                       |                   |                                    |
|---------------------------|--------------------|-----------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3840.00 ft | Diameter: 3.80 inches | Volume: 53.87 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: 124.00 ft  | Diameter: 2.25 inches | Volume: 0.61 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume:         | 54.48 bbl         | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 18.00 ft           |                       |                   | String Weight: Initial 43000.00 lb |
| Depth to Top Packer:      | 3966.00 ft         |                       |                   | Final 43000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                   |                                    |
| Interval between Packers: | 44.00 ft           |                       |                   |                                    |
| Tool Length:              | 64.00 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        |            |          | 3947.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3952.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3957.00    |                               |
| Packer           | 5.00        |            |          | 3962.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 3966.00    |                               |
| Stubb            | 1.00        |            |          | 3967.00    |                               |
| Recorder         | 0.00        | 6771       | Inside   | 3967.00    |                               |
| Perforations     | 5.00        |            |          | 3972.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3973.00    |                               |
| Drill Pipe       | 31.00       |            |          | 4004.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4005.00    |                               |
| Recorder         | 0.00        | 11057      | Outside  | 4005.00    |                               |
| Bullhose         | 5.00        |            |          | 4010.00    | 44.00 Bottom Packers & Anchor |

**Total Tool Length: 64.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20479

DST#: 3

ATTN: Murfin Drilling Co Inc

Test Start: 2005.01.31 @ 16:05:16

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2900 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description       | Volume<br>bbl |
|--------------|-------------------|---------------|
| 5.00         | o c m 15% o 85% m | 0.025         |

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

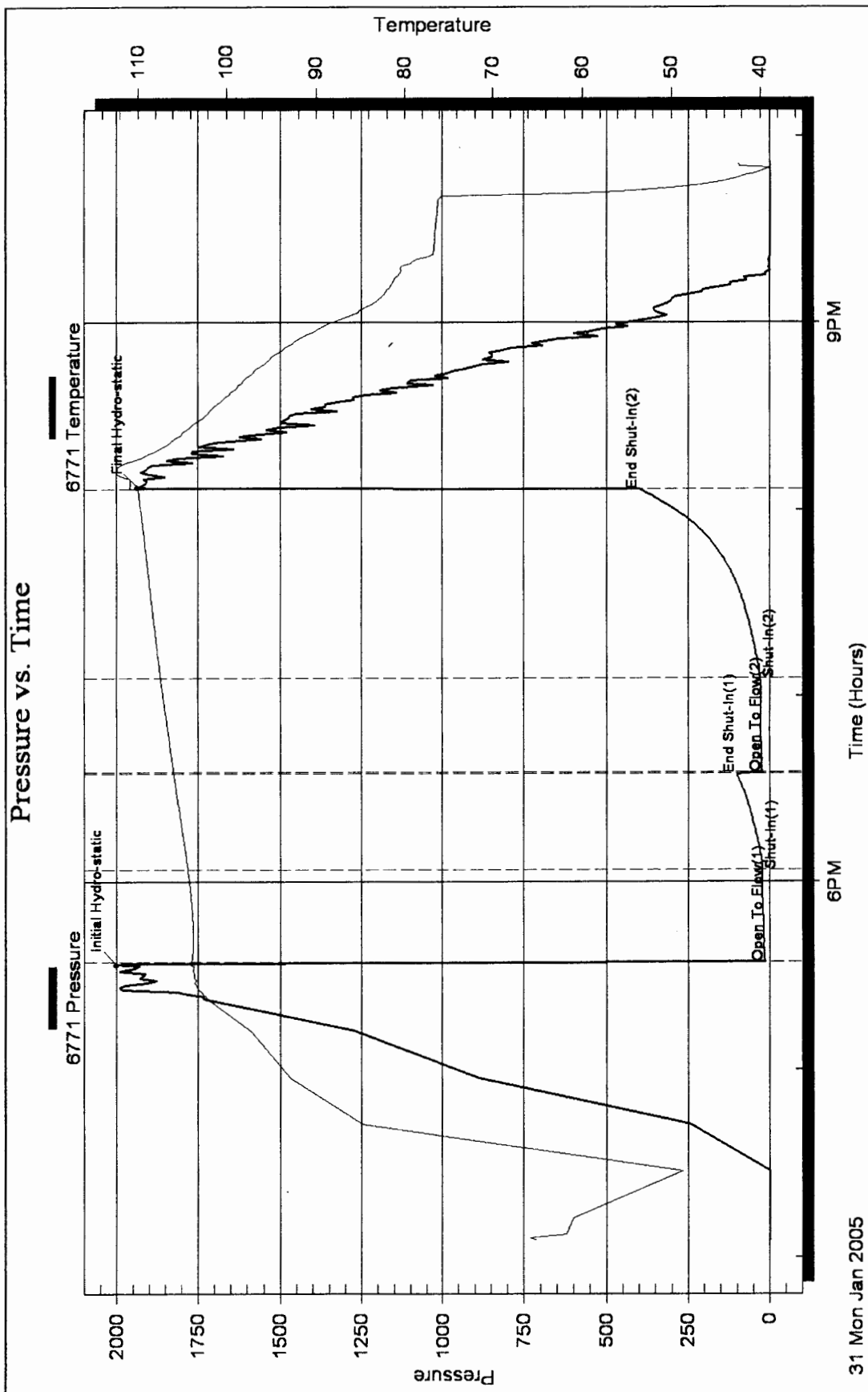
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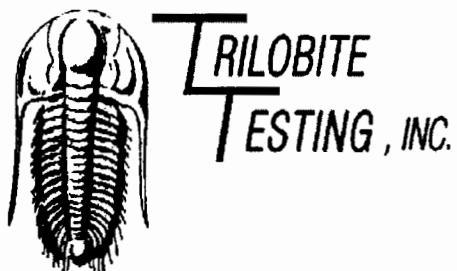
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co In

**14-9-26 Sheridan, Ks**

**Eugene #1-14**

Start Date: 2005.02.01 @ 04:27:15

End Date: 2005.02.01 @ 12:45:39

Job Ticket #: 20480      DST #: 4

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

Murfin Drilling Co Inc

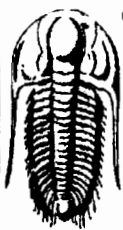
Eugene #1-14

14-9-26 Sheridan, Ks

DST # 4

J

2005.02.01



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

Eugene #1-14

14-9-26 Sheridan, Ks

Job Ticket: 20480

DST#: 4

Test Start: 2005.02.01 @ 04:27:15

### GENERAL INFORMATION:

Formation: J

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:05:40

Time Test Ended: 12:45:39

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: 4010.00 ft (KB) To 4036.00 ft (KB) (TVD)

Total Depth: 4036.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2604.00 ft (KB)

2599.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 835.62 psig @ 4011.00 ft (KB)

Start Date: 2005.02.01

End Date:

2005.02.01

Start Time: 04:27:15

End Time:

12:33:39

Capacity: 7000.00 psig

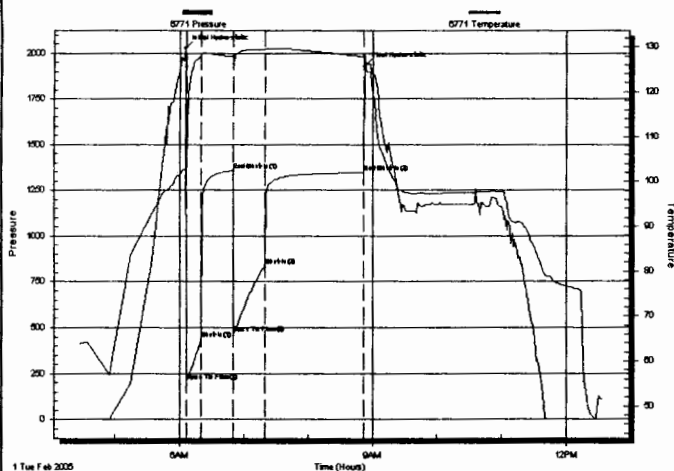
Last Calib.: 2005.02.01

Time On Btm: 2005.02.01 @ 06:04:40

Time Off Btm: 2005.02.01 @ 08:52:25

TEST COMMENT: B.O.B. in 1 min.  
Bleed off for 3 min. return to B.O.B. in 5 min.  
B.O.B. @ open  
Bleed off for 3 min. (gas to surface) return to B.O.B. in 4 min.

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2025.14         | 102.49       | Initial Hydro-static |
| 1           | 208.41          | 103.48       | Open To Flow (1)     |
| 16          | 436.59          | 128.13       | Shut-In(1)           |
| 45          | 1356.22         | 127.79       | End Shut-In(1)       |
| 46          | 468.27          | 126.45       | Open To Flow (2)     |
| 75          | 835.62          | 129.35       | Shut-In(2)           |
| 168         | 1346.40         | 127.87       | End Shut-In(2)       |
| 168         | 1929.06         | 128.05       | Final Hydro-static   |

### Recovery

| Length (ft) | Description                | Volume (bbl) |
|-------------|----------------------------|--------------|
| 62.00       | o c m 25o 75m              | 0.30         |
| 62.00       | o & w c m 15o 35w 50m      | 0.30         |
| 62.00       | o c m 25o 75m              | 0.87         |
| 2109.00     | c g o reversed out 20g 80o | 29.58        |
| 30.00       | c g o 20g 80o              | 0.42         |

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

**Eugene #1-14**

250 N Water, Suite 300  
Wichita, Ks

**14-9-26 Sheridan, Ks**

Job Ticket: 20480

**DST#: 4**

ATTN: Murfin Drilling Co Inc

Test Start: 2005.02.01 @ 04:27:15

### Tool Information

|                           |                    |                       |                   |                                    |
|---------------------------|--------------------|-----------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3872.00 ft | Diameter: 3.80 inches | Volume: 54.31 bbl | Tool Weight: 1500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl  | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 124.00 ft  | Diameter: 2.25 inches | Volume: 0.61 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume:         | 54.92 bbl         | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 6.00 ft            |                       |                   | String Weight: Initial 43000.00 lb |
| Depth to Top Packer:      | 4010.00 ft         |                       |                   | Final 49000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                   |                                    |
| Interval between Packers: | 26.00 ft           |                       |                   |                                    |
| Tool Length:              | 46.00 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        |            |          | 3991.00    |                               |
| Shut In Tool       | 5.00        |            |          | 3996.00    |                               |
| Hydraulic tool     | 5.00        |            |          | 4001.00    |                               |
| Packer             | 5.00        |            |          | 4006.00    | 20.00 Bottom Of Top Packer    |
| Packer             | 4.00        |            |          | 4010.00    |                               |
| Stubb              | 1.00        |            |          | 4011.00    |                               |
| Recorder           | 0.00        | 6771       | Inside   | 4011.00    |                               |
| Perforations       | 20.00       |            |          | 4031.00    |                               |
| Recorder           | 0.00        | 11057      | Outside  | 4031.00    |                               |
| Bullnose           | 5.00        |            |          | 4036.00    | 26.00 Bottom Packers & Anchor |
| Total Tool Length: | 46.00       |            |          |            |                               |



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20480

DST#: 4

ATTN: Murfin Drilling Co, Inc

Test Start: 2005.02.01 @ 04:27:15

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2800 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                | Volume<br>bbl |
|--------------|----------------------------|---------------|
| 62.00        | o c m 25o 75m              | 0.305         |
| 62.00        | o & w c m 15o 35w 50m      | 0.305         |
| 62.00        | o c m 25o 75m              | 0.870         |
| 2109.00      | c g o reversed out 20g 80o | 29.584        |
| 30.00        | c g o 20g 80o              | 0.421         |

Total Length: 2325.00 ft

Total Volume: 31.485 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

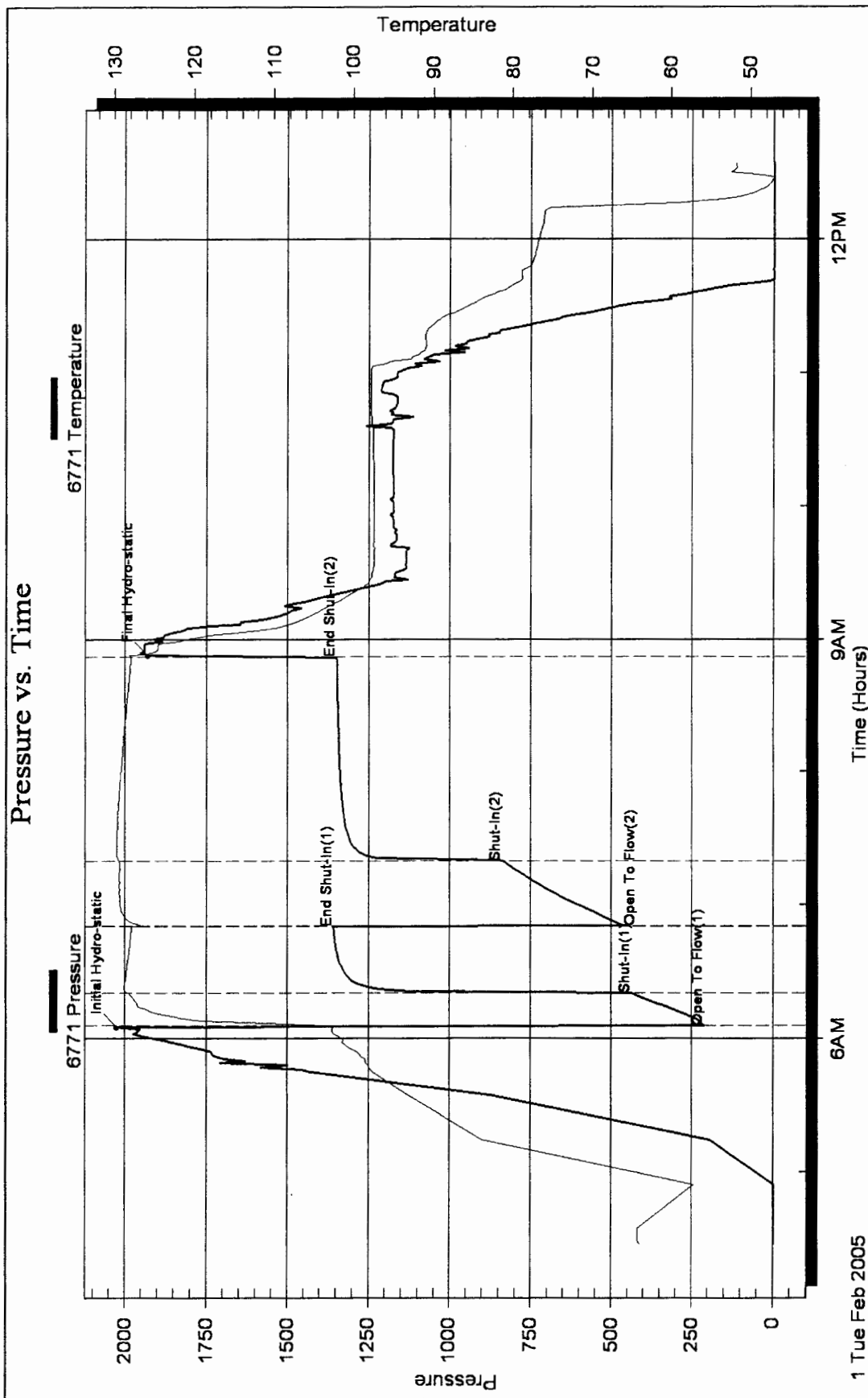
Serial #:

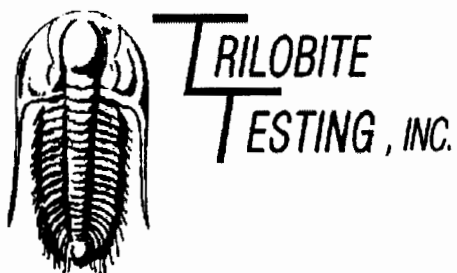
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co In

**14-9-26 Sheridan, Ks**

**Eugene #1-14**

Start Date: 2005.02.01 @ 18:55:27

End Date: 2005.02.02 @ 00:46:36

Job Ticket #: 20481                      DST #: 5

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



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

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water, Suite 300  
Wichita, Ks

ATTN: Murfin Drilling Co Inc

Eugene #1-14

14-9-26 Sheridan, Ks

Job Ticket: 20481

DST#: 5

Test Start: 2005.02.01 @ 18:55:27

### GENERAL INFORMATION:

Formation: K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:46:52

Time Test Ended: 00:46:36

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 25

Interval: 4040.00 ft (KB) To 4058.00 ft (KB) (TVD)

Total Depth: 4058.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2604.00 ft (KB)

2599.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 20.57 psig @ 4041.00 ft (KB)

Start Date: 2005.02.01

End Date:

2005.02.02

Start Time: 18:55:27

End Time:

00:46:36

Capacity: 7000.00 psig

Last Calib.: 2005.02.02

Time On Btm: 2005.02.01 @ 20:46:37

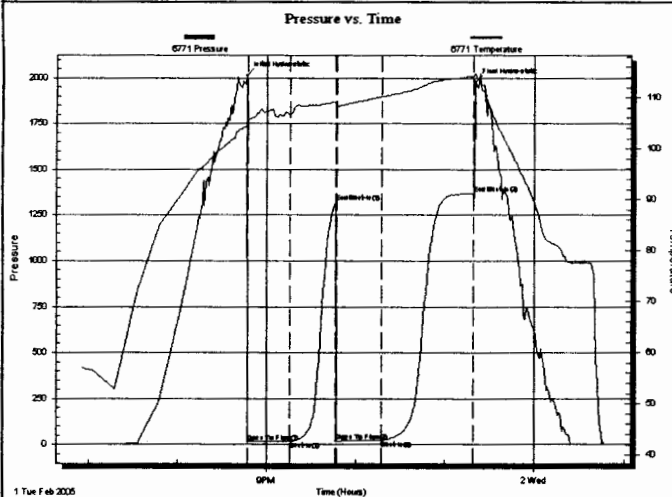
Time Off Btm: 2005.02.01 @ 23:20:07

TEST COMMENT: 1/2" in @ open died back to a weak surface blow

No return

Bubble to open tool No blow

No return



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2013.69         | 105.40       | Initial Hydro-static |
| 1           | 12.64           | 104.91       | Open To Flow (1)     |
| 30          | 17.54           | 106.63       | Shut-In(1)           |
| 60          | 1319.62         | 109.12       | End Shut-In(1)       |
| 61          | 18.67           | 108.61       | Open To Flow (2)     |
| 91          | 20.57           | 110.17       | Shut-In(2)           |
| 153         | 1368.35         | 114.27       | End Shut-In(2)       |
| 154         | 1980.25         | 114.79       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 3.00        | mud 100% m  | 0.01         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20481

DST#: 5

ATTN: Murfin Drilling Co Inc

Test Start: 2005.02.01 @ 18:55:27

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3903.00 ft | Diameter: 3.80 inches   | Volume: 54.75 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: 124.00 ft  | Diameter: 2.25 inches   | Volume: 0.61 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume: 55.36 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 7.00 ft            |                         |                   | String Weight: Initial 43000.00 lb |
| Depth to Top Packer:      | 4040.00 ft         |                         |                   | Final 43000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 18.00 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        |            |          | 4021.00    |                               |
| Shut In Tool       | 5.00        |            |          | 4026.00    |                               |
| Hydraulic tool     | 5.00        |            |          | 4031.00    |                               |
| Packer             | 5.00        |            |          | 4036.00    | 20.00 Bottom Of Top Packer    |
| Packer             | 4.00        |            |          | 4040.00    |                               |
| Stubb              | 1.00        |            |          | 4041.00    |                               |
| Recorder           | 0.00        | 6771       | Inside   | 4041.00    |                               |
| Perforations       | 12.00       |            |          | 4053.00    |                               |
| Recorder           | 0.00        | 11057      | Outside  | 4053.00    |                               |
| Bullnose           | 5.00        |            |          | 4058.00    | 18.00 Bottom Packers & Anchor |
| Total Tool Length: | 38.00       |            |          |            |                               |



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co Inc

Eugene #1-14

250 N Water, Suite 300  
Wichita, Ks

14-9-26 Sheridan, Ks

Job Ticket: 20481

DST#: 5

ATTN: Murfin Drilling Co, Inc

Test Start: 2005.02.01 @ 18:55:27

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2800 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 3.00         | mud 100% m  | 0.015         |

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time

