

## DRILL STEM TEST REPORT

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

250 N Water STE  
Wichita, KS 67202

**KCC**  
**AUG 19 2010**  
**CONFIDENTIAL**

ATTN: Brad Rine

**32-27-25 Ford KS**

**Hartman #1-32**

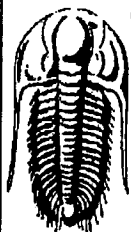
Start Date: 2010.06.03 @ 02:43:05

End Date: 2010.06.03 @ 10:44:59

Job Ticket #: 38260 DST #: 1

**RECEIVED**  
**AUG 20 2010**  
**KCC WICHITA**

Trilobite Testing, Inc  
PO Box 1733 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 STE  
Wichita, KS 67202

ATTN: Brad Rine

**Hartman #1-32**

**32-27-25 Ford KS**

Job Ticket: 38260

**DST#: 1**

Test Start: 2010.06.03 @ 02:43:05

### GENERAL INFORMATION:

Formation: **Morrow**

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

Time Tool Opened: 06:03:00

Time Test Ended: 10:44:59

Test Type: **Conventional Bottom Hole**

Tester: **Mike Roberts**

Unit No: **35**

Interval: **5157.00 ft (KB) To 5243.00 ft (KB) (TVD)**

Total Depth: **5243.00 ft (KB) (TVD)**

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

Reference Elevations: **2655.00 ft (KB)**

**2645.00 ft (CF)**

KB to GR/CF: **10.00 ft**

**Serial #: 8373** **Inside**

Press@RunDepth: **67.04 psig @ 5160.00 ft (KB)**

Start Date: **2010.06.03** End Date: **2010.06.03**

Start Time: **02:43:05** End Time: **10:44:59**

Capacity: **8000.00 psig**

Last Calib.: **2010.06.03**

Time On Btm: **2010.06.03 @ 06:02:45**

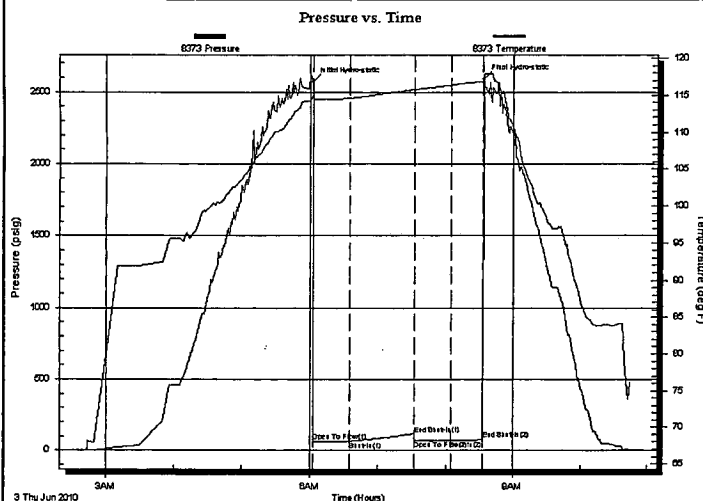
Time Off Btm: **2010.06.03 @ 08:34:14**

TEST COMMENT: IF: Built to 1/8" blow died to weak surface blow in 15 min

IS: No return blow

FF: No blow

FS: No return blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2569.01         | 114.88       | Initial Hydro-static |
| 1           | 62.78           | 114.19       | Open To Flow (1)     |
| 33          | 64.79           | 114.59       | Shut-In(1)           |
| 90          | 111.75          | 115.77       | End Shut-In(1)       |
| 90          | 70.06           | 115.75       | Open To Flow (2)     |
| 122         | 67.04           | 116.37       | Shut-In(2)           |
| 151         | 74.34           | 116.91       | End Shut-In(2)       |
| 152         | 2589.53         | 117.62       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | 100% m      | 0.05         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Hartman #1-32

250 N Water STE  
Wichita, KS 67202

32-27-25 Ford KS

Job Ticket: 38260

DST#: 1

ATTN: Brad Rine

Test Start: 2010.06.03 @ 02:43:05

### Tool Information

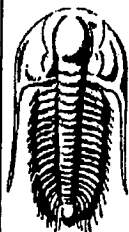
|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 4976.00 ft | Diameter: 3.80 inches   | Volume: 69.80 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: 179.00 ft  | Diameter: 2.25 inches   | Volume: 0.88 bbl  | Weight to Pull Loose: 80000.00 lb  |
|                           |                    | Total Volume: 70.68 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 26.00 ft           |                         |                   | String Weight: Initial 63000.00 lb |
| Depth to Top Packer:      | 5157.00 ft         |                         |                   | Final 63000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 86.00 ft           |                         |                   |                                    |
| Tool Length:              | 114.00 ft          |                         |                   |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches   |                   |                                    |

Tool Comments:

### Tool Description

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

|                    |        |      |         |         |                               |
|--------------------|--------|------|---------|---------|-------------------------------|
| Stubb              | 1.00   |      |         | 5130.00 |                               |
| Shut In Tool       | 5.00   |      |         | 5135.00 |                               |
| Hydraulic tool     | 5.00   |      |         | 5140.00 |                               |
| Jars               | 5.00   |      |         | 5145.00 |                               |
| Safety Joint       | 3.00   |      |         | 5148.00 |                               |
| Packer             | 5.00   |      |         | 5153.00 | 28.00 Bottom Of Top Packer    |
| Packer             | 4.00   |      |         | 5157.00 |                               |
| Stubb              | 1.00   |      |         | 5158.00 |                               |
| Perforations       | 2.00   |      |         | 5160.00 |                               |
| Recorder           | 0.00   | 8373 | Inside  | 5160.00 |                               |
| Recorder           | 0.00   | 8289 | Outside | 5160.00 |                               |
| Change Over Sub    | 1.00   |      |         | 5161.00 |                               |
| Drill Pipe         | 62.00  |      |         | 5223.00 |                               |
| Change Over Sub    | 1.00   |      |         | 5224.00 |                               |
| Perforations       | 14.00  |      |         | 5238.00 |                               |
| Bullnose           | 5.00   |      |         | 5243.00 | 86.00 Bottom Packers & Anchor |
| Total Tool Length: | 114.00 |      |         |         |                               |



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Murfin Drilling Co., Inc.

**Hartman #1-32**

250 N Water STE  
Wichita, KS 67202

**32-27-25 Ford KS**

Job Ticket: 38260

**DST#: 1**

ATTN: Brad Rine

Test Start: 2010.06.03 @ 02:43:05

### 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:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 10.00        | 100% m      | 0.049         |

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

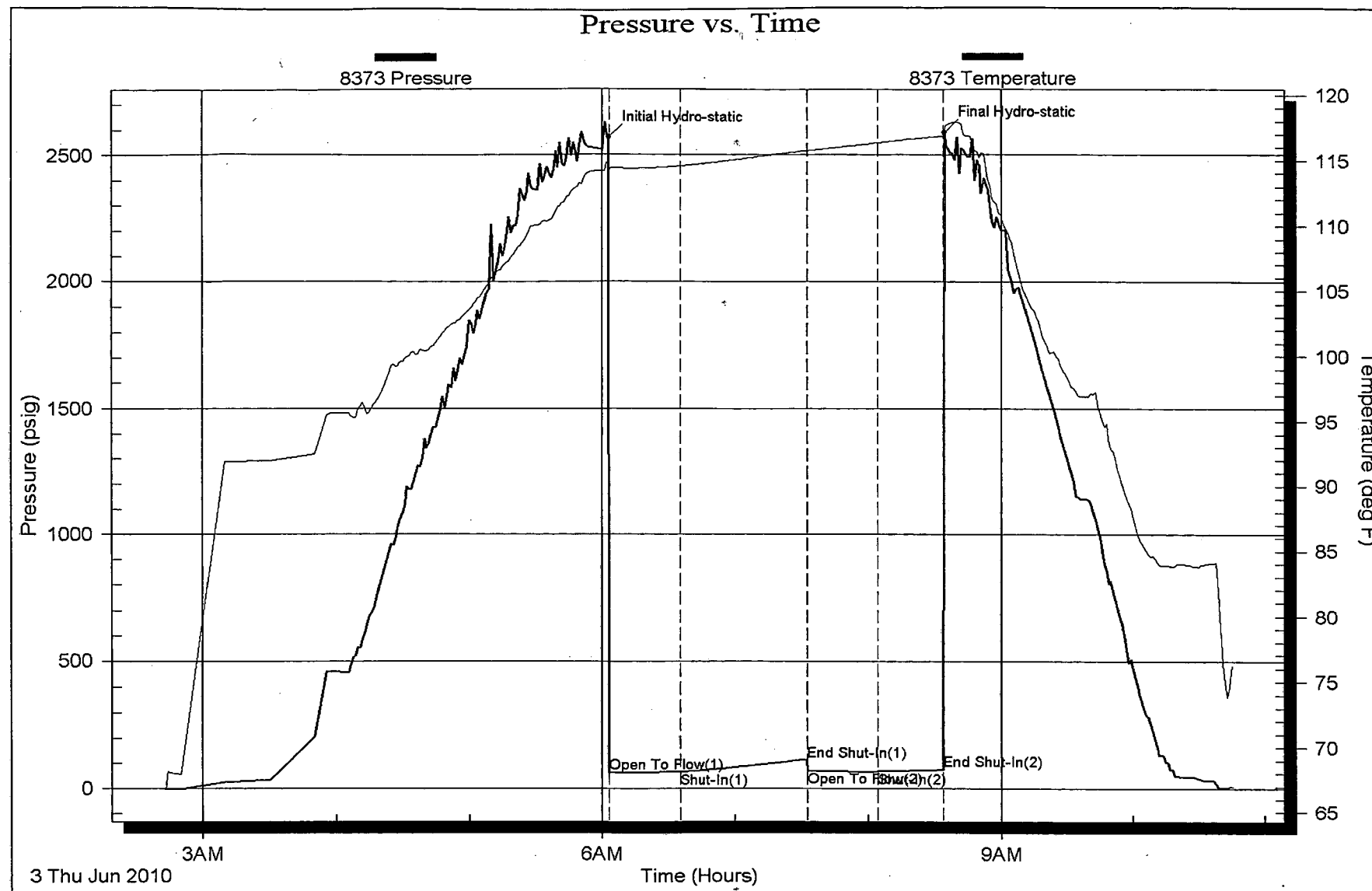
Num Gas Bombs: 0

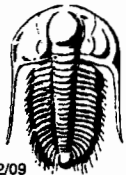
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 38260 14334

RECEIVED

JUN 07 2010

Well Name & No. Hartman #1-32 BY:                      Test No. 1 Date 6-3-10  
 Company Murfin Elevation 2655 KB 2645 GL                       
 Address 250 N Water Ste Wichita KS 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin #20  
 Location: Sec. 32 Twp. 27S Rge. 25W Co. Ford State KS

Interval Tested 5157-5243 Zone Tested Morrow  
 Anchor Length 86' Drill Pipe Run 503+4976 Mud Wt. 9.2  
 Top Packer Depth 5152 Drill Collars Run 179 Vis 50  
 Bottom Packer Depth 5157 Wt. Pipe Run 0 WL 8.4  
 Total Depth 5243 Chlorides 4400 ppm System LCM 2  
 Blow Description IF: Built to 48" Blow ~~did not~~ Died to Weak Surface Blow in 15 min  
IS: No Return Blow  
FF: No Blow  
FS: No Return Blow

|               |                  |      |      |        |                 |
|---------------|------------------|------|------|--------|-----------------|
| Rec <u>10</u> | Feet of <u>M</u> | %gas | %oil | %water | <u>100</u> %mud |
| Rec           | Feet of          | %gas | %oil | %water | %mud            |
| Rec           | Feet of          | %gas | %oil | %water | %mud            |
| Rec           | Feet of          | %gas | %oil | %water | %mud            |
| Rec           | Feet of          | %gas | %oil | %water | %mud            |

Rec Total 10 BHT 116 Gravity                      API RW                      @                      ° F Chlorides                      ppm  
 (A) Initial Hydrostatic 2569 ☒ Test 1325 T-On Location 1:40 Am  
 (B) First Initial Flow 62 ☒ Jars 250 T-Started 2:43 Am  
 (C) First Final Flow 64 ☒ Safety Joint 75 T-Open 6:02 Am  
 (D) Initial Shut-In 111 ☒ Circ Sub NL T-Pulled 8:32 Am  
 (E) Second Initial Flow 70 ☐ Hourly Standby                      T-Out 10:44 Am  
 (F) Second Final Flow 67 ☒ Mileage 152 RT 190 Comments                       
 (G) Final Shut-In 74 ☐ Sampler                       
 (H) Final Hydrostatic 2589 ☐ Straddle                     

Initial Open 30 ☐ Shale Packer                      ☐ Ruined Shale Packer                       
 Initial Shut-In 60 ☐ Extra Packer                      ☐ Ruined Packer                       
 Final Flow 30 ☐ Extra Recorder                      ☐ Extra Copies                       
 Final Shut-In 30 ☐ Day Standby                      Sub Total 0  
☐ Accessibility                      Total 1840  
 Sub Total 1840

Approved By Brad Rine

Our Representative Mike Roberts

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