



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

## DRILL STEM TEST REPORT

Prepared For: **Midwestern Exploration**

3500 S Boulevard Ste 2B  
Edmond OK 73013

ATTN: Tom William

**7 34 33W**

**Metcalf 1-7**

Start Date: 2006.09.29 @ 14:14:27

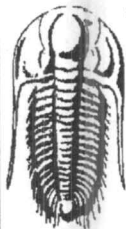
End Date: 2006.09.30 @ 09:56:21

Job Ticket #: 25745                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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Midwestern Exploration

3500 S Boulevard Ste 2B  
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ATTN: Tom William

**Metcalf 1-7**

**7 34 33W**

Job Ticket: 25745

**DST#: 1**

Test Start: 2006.09.29 @ 14:14:27

### GENERAL INFORMATION:

Formation: **Morrow Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:29:37

Time Test Ended: 09:56:21

Interval: **6023.00 ft (KB) To 6070.00 ft (KB) (TVD)**

Total Depth: 6070.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Alex Brechbuhler Jr.

Unit No: 20

Reference Elevations: 2889.00 ft (KB)

2875.00 ft (CF)

KB to GR/CF: 14.00 ft

**Serial #: 8166**

**Inside**

Press@RunDepth: 38.77 psig @ 6057.00 ft (KB)

Start Date: 2006.09.29

End Date:

2006.09.30

Start Time: 14:14:27

End Time:

09:56:21

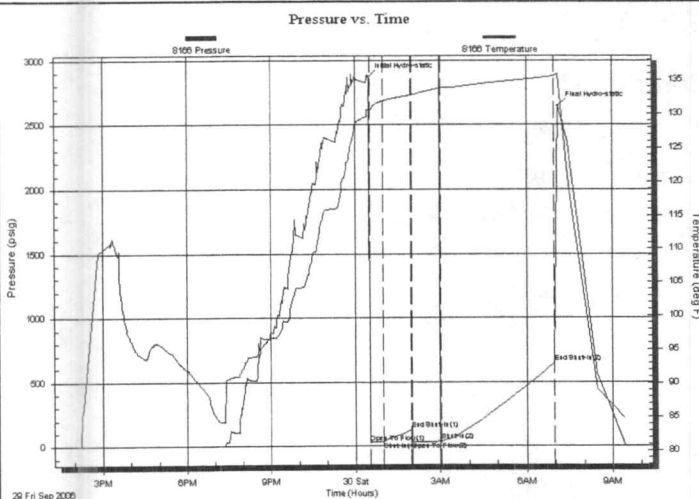
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2006.09.30 @ 00:28:37

Time Off Btm: 2006.09.30 @ 07:06:22

**TEST COMMENT:** IF Weak Building Blow 5 inches in 30 minutes  
ISI No Blow back  
FF Weak Building Blow, 10 inches in 60 minutes  
FSI No Blow back



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2873.66         | 130.67       | Initial Hydro-static |
| 1           | 27.79           | 130.13       | Open To Flow (1)     |
| 31          | 35.03           | 131.87       | Shut-In(1)           |
| 91          | 129.06          | 132.72       | End Shut-In(1)       |
| 91          | 30.83           | 132.70       | Open To Flow (2)     |
| 152         | 38.77           | 133.76       | Shut-In(2)           |
| 388         | 649.55          | 135.50       | End Shut-In(2)       |
| 398         | 2644.43         | 135.88       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | 100% Mud    | 0.05         |
| 349.00      | GIP         | 1.72         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



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## DRILL STEM TEST REPORT

TOOL DIAGRAM

Midwestern Exploration

**Metcalf 1-7**

3500 S Boulevard Ste 2B  
Edmond OK 73013

**7 34 33W**

Job Ticket: 25745

**DST#: 1**

ATTN: Tom William

Test Start: 2006.09.29 @ 14:14:27

### Tool Information

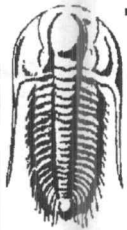
|                           |         |            |           |             |               |           |                        |             |
|---------------------------|---------|------------|-----------|-------------|---------------|-----------|------------------------|-------------|
| Drill Pipe:               | Length: | 5658.00 ft | Diameter: | 3.80 inches | Volume:       | 79.37 bbl | Tool Weight:           | 2000.00 lb  |
| Heavy Wt. Pipe:           | Length: | 0.00 ft    | Diameter: | 0.00 inches | Volume:       | 0.00 bbl  | Weight set on Packer:  | 20000.00 lb |
| Drill Collar:             | Length: | 359.00 ft  | Diameter: | 2.25 inches | Volume:       | 1.77 bbl  | Weight to Pull Loose:  | 110000.0 lb |
|                           |         |            |           |             | Total Volume: | 81.14 bbl | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      |         | 20.00 ft   |           |             |               |           | String Weight: Initial | 88000.00 lb |
| Depth to Top Packer:      |         | 6023.00 ft |           |             |               |           | Final                  | 88000.00 lb |
| Depth to Bottom Packer:   |         | ft         |           |             |               |           |                        |             |
| Interval between Packers: |         | 47.00 ft   |           |             |               |           |                        |             |
| Tool Length:              |         | 73.00 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  |             | 6002.00 |                               |
| Hydraulic tool  | 5.00  |             | 6007.00 |                               |
| Jars            | 5.00  |             | 6012.00 |                               |
| Safety Joint    | 2.00  |             | 6014.00 |                               |
| Packer          | 5.00  |             | 6019.00 | 26.00 Bottom Of Top Packer    |
| Packer          | 4.00  | Inside      | 6023.00 |                               |
| Stubb           | 1.00  |             | 6024.00 |                               |
| Perforations    | 1.00  |             | 6025.00 |                               |
| Change Over Sub | 1.00  |             | 6026.00 |                               |
| Drill Pipe      | 30.00 |             | 6056.00 |                               |
| Change Over Sub | 1.00  |             | 6057.00 |                               |
| Recorder        | 0.00  | 8166 Inside | 6057.00 |                               |
| Perforations    | 10.00 |             | 6067.00 |                               |
| Recorder        | 0.00  | 13761       | 6067.00 |                               |
| Bullnose        | 3.00  |             | 6070.00 | 47.00 Bottom Packers & Anchor |

**Total Tool Length: 73.00**



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### FLUID SUMMARY

Midwestern Exploration

**Metcalf 1-7**

3500 S Boulevard Ste 2B  
Edmond OK 73013

**7 34 33W**

Job Ticket: 25745

**DST#: 1**

ATTN: Tom William

Test Start: 2006.09.29 @ 14:14:27

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 6.80 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 1400.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 10.00        | 100% Mud    | 0.049         |
| 349.00       | GIP         | 1.716         |

Total Length: 359.00 ft

Total Volume: 1.765 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

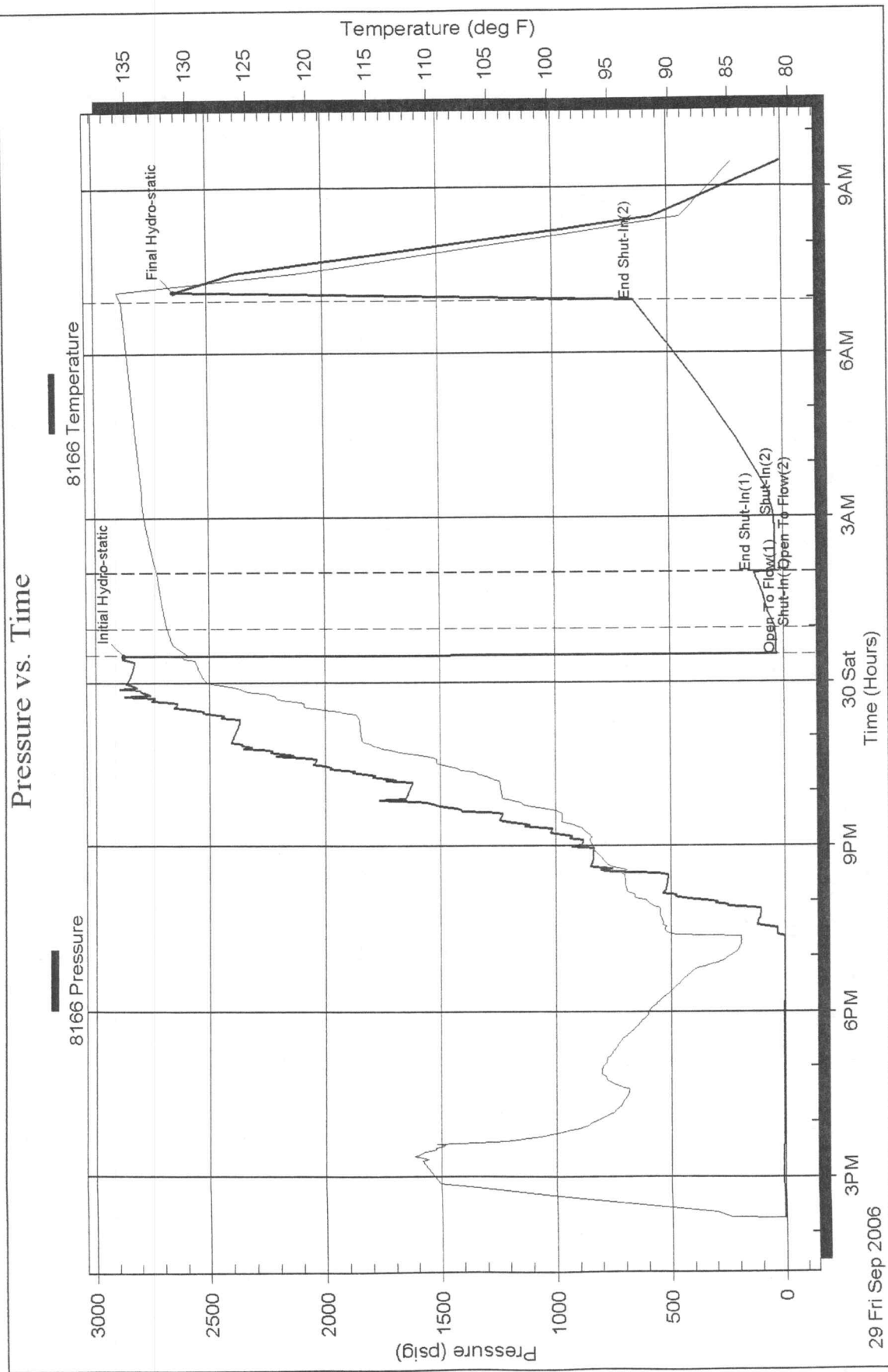
Serial #:

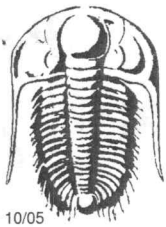
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

9335

25745

## Test Ticket

Well Name & No. Metcalf 1-7 Test No. \_\_\_\_\_ Date 9-29-06  
 Company Midwestern Exploration Zone Tested Morrow Sand  
 Address 3500 S. Boulevard Suite 2B Edmond OK 73013 Elevation 2889 KB 2875 GL \_\_\_\_\_  
 Co. Rep / Geo. Tom William Rig Berardo 1  
 Location: Sec. 7 Twp. 34 Rge. 33W Co. \_\_\_\_\_ State \_\_\_\_\_  
 Comment: \_\_\_\_\_ Release date / time: \_\_\_\_\_

Interval Tested 6023 to 6070 Initial Str Wt./Lbs. 88K Unseated Str Wt./Lbs. 88K  
 Anchor Length 47' Wt. Set Lbs. 20K Wt. Pulled Loose/Lbs. 110K  
 Top Packer Depth 6018 Tool Weight 2K  
 Bottom Packer Depth 6023 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓  
 Total Depth 6070 Wt. Pipe Run Ø Drill Collar Run 359  
 Mud Wt. 8.7 LCM 6 Vis. 51 WL 6.8 Drill Pipe Size 4.5XH Ft. Run 5658  
 Blow Description IF - Weak Building Blow, 5 inches  
ISI - No Blowback  
FF - Weak Building Blow, 10 inches  
FSI - No Blowback

Recovery - Total Feet 10 GIP 349 Ft. in DC 10 Ft. in DP Ø  
 Rec. 10 Feet of Mud %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water 100 %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 \_\_\_\_\_  
 BHT 135 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides \_\_\_\_\_ ppm System

|                                  |      |        |          |                 |       |              |      |
|----------------------------------|------|--------|----------|-----------------|-------|--------------|------|
| (A) Initial Hydrostatic Mud      | AK-1 | Alpine | 2874 PSI | Recorder No.    | 8166  | Test         | 1400 |
| (B) First Initial Flow Pressure  |      |        | 28 PSI   | (depth)         | 6019  | Jars         | 250  |
| (C) First Final Flow Pressure    |      |        | 35 PSI   | Recorder No.    | 13762 | Safety Jt.   | 75   |
| (D) Initial Shut-In Pressure     |      |        | 129 PSI  | (depth)         | 6070  | Circ Sub     |      |
| (E) Second Initial Flow Pressure |      |        | 30 PSI   | Recorder No.    |       | Sampler      |      |
| (F) Second Final Flow Pressure   |      |        | 39 PSI   | (depth)         |       | Straddle     |      |
| (G) Final Shut-In Pressure       |      |        | 650 PSI  | Initial Opening | 30    | Ext. Packer  |      |
| (Q) Final Hydrostatic Mud        |      |        | 2644 PSI | Initial Shut-In | 60    | Shale Packer |      |

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Approved By Billy Daugherty

Our Representative [Signature]

Final Flow 60  
 Final Shut-In 120  
 T-On Location 12:30 pm  
 T-Started 2:15 pm  
 T-Open 12:30 am  
 T-Pulled 6:45  
 T-Out 9:45 am

Ruined Packer 200  
 Mileage 31.25  
 Sub Total: 1956.25  
 Std. By No Standby By  
 Acc. Chg: \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Total: 1956.25

# CHART PAGE

This is a photocopy of the actual AK-1 recorder chart.

