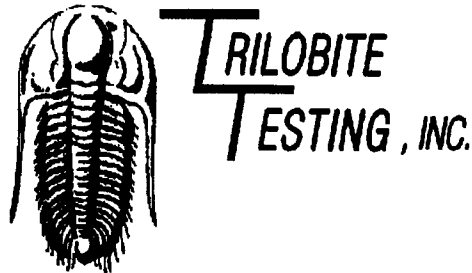


15-165-21863

34-16s-16w



## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202

ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

**Schlegel #1-34**

Start Date: 2009.12.08 @ 15:30:30

End Date: 2009.12.08 @ 22:29:30

Job Ticket #: 38058 DST #: 1

**KCC**

**MAR 18 2010**

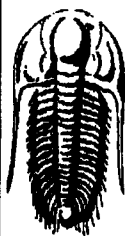
**CONFIDENTIAL**

**RECEIVED**

**MAR 22 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

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop St  
Suite 700  
Denver, CO 80202  
ATTN: Clayton Camozzi

**Schlegel #1-34**

**34-16s-16w Rush KS**

Job Ticket: 38058

**DST#:** 1

Test Start: 2009.12.08 @ 15:30:30

### GENERAL INFORMATION:

Formation: **LKC "H-I"**

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

Time Tool Opened: 17:30:00

Time Test Ended: 22:29:30

Test Type: **Conventional Bottom Hole**

Tester: **Tyson Flax**

Unit No: **44**

Interval: **3396.00 ft (KB) To 3446.00 ft (KB) (TVD)**

Total Depth: **3446.00 ft (KB) (TVD)**

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

Reference Elevations: **1988.00 ft (KB)**

**1978.00 ft (CF)**

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

**Serial #: 6719** **Inside**

Press@RunDepth: **56.32 psig @ 3401.00 ft (KB)**

Start Date: **2009.12.08**

End Date:

**2009.12.08**

Start Time: **15:30:35**

End Time:

**22:29:29**

Capacity: **8000.00 psig**

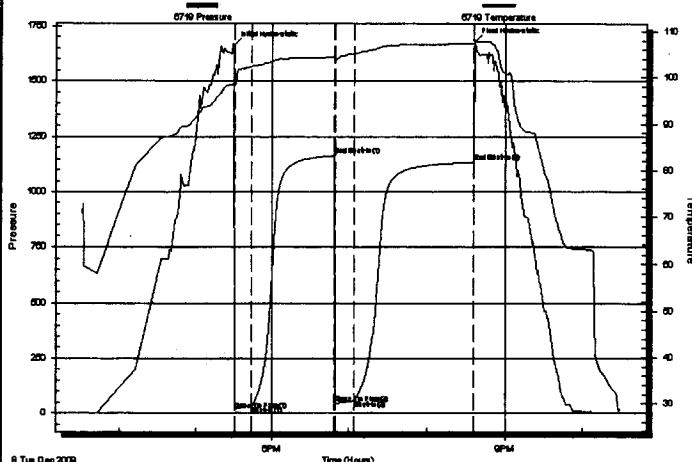
Last Calib.: **2009.12.08**

Time On Btm: **2009.12.08 @ 17:29:30**

Time Off Btm: **2009.12.08 @ 20:36:29**

**TEST COMMENT:** IFF-BOB in 7 min  
IS-Weak surface blow back died in 15 min  
FFP-BOB in 30 sec  
FSI-Weak surface blow back died in 10 min

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1662.14         | 98.58        | Initial Hydro-static |
| 1           | 15.87           | 98.22        | Open To Flow (1)     |
| 15          | 32.37           | 102.42       | Shut-In (1)          |
| 79          | 1164.95         | 104.34       | End Shut-In (1)      |
| 80          | 45.02           | 103.96       | Open To Flow (2)     |
| 95          | 56.32           | 105.12       | Shut-In (2)          |
| 187         | 1133.14         | 107.31       | End Shut-In (2)      |
| 187         | 1681.18         | 107.57       | Final Hydro-static   |

### Recovery

| Length (ft) | Description    | Volume (bbl) |
|-------------|----------------|--------------|
| 60.00       | OCM 30%O,70%M  | 0.85         |
| 45.00       | HOCM 60%O,40%M | 0.64         |
| 0.00        | 495' GP        | 0.00         |
|             |                |              |
|             |                |              |
|             |                |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates, Inc.

Schlegel #1-34

1515 Wynkoop St

34-16s-16w Rush KS

Suite 700

Job Ticket: 38058

DST#: 1

Denver, CO 80202

Test Start: 2009.12.08 @ 15:30:30

ATTN: Clayton Camozzi

### Tool Information

|                           |                    |                       |                         |                                    |
|---------------------------|--------------------|-----------------------|-------------------------|------------------------------------|
| Drill Pipe:               | Length: 3399.00 ft | Diameter: 3.82 inches | Volume: 48.18 bbl       | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl        | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl        | Weight to Pull Loose: 60000.00 lb  |
|                           |                    |                       | Total Volume: 48.18 bbl | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 31.00 ft           |                       |                         | String Weight: Initial 45000.00 lb |
| Depth to Top Packer:      | 3396.00 ft         |                       |                         | Final 46000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                         |                                    |
| Interval between Packers: | 50.00 ft           |                       |                         |                                    |
| Tool Length:              | 78.00 ft           |                       |                         |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                         |                                    |

Tool Comments:

### Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 3373.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3374.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3379.00    |                               |
| Blank Spacing    | 7.00        |            |          | 3386.00    |                               |
| Packer           | 5.00        |            |          | 3391.00    | 28.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3396.00    |                               |
| Stubb            | 1.00        |            |          | 3397.00    |                               |
| Perforations     | 3.00        |            |          | 3400.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3401.00    |                               |
| Recorder         | 0.00        | 6719       | Inside   | 3401.00    |                               |
| Recorder         | 0.00        | 6669       | Inside   | 3401.00    |                               |
| Blank Spacing    | 31.00       |            |          | 3432.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3433.00    |                               |
| Perforations     | 10.00       |            |          | 3443.00    |                               |
| Bullnose         | 3.00        |            |          | 3446.00    | 50.00 Bottom Packers & Anchor |

Total Tool Length: 78.00



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

**34-16s-16w Rush KS**

Suite 700

Job Ticket: 38058

**DST#: 1**

Denver, CO 80202

Test Start: 2009.12.08 @ 15:30:30

ATTN: Clayton Camozzi

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.48 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

| Length<br>ft | Description    | Volume<br>bbl |
|--------------|----------------|---------------|
| 60.00        | OCM 30%O,70%M  | 0.851         |
| 45.00        | HOCM 60%O,40%M | 0.638         |
| 0.00         | 495' GIP       | 0.000         |

Total Length: 105.00 ft

Total Volume: 1.489 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

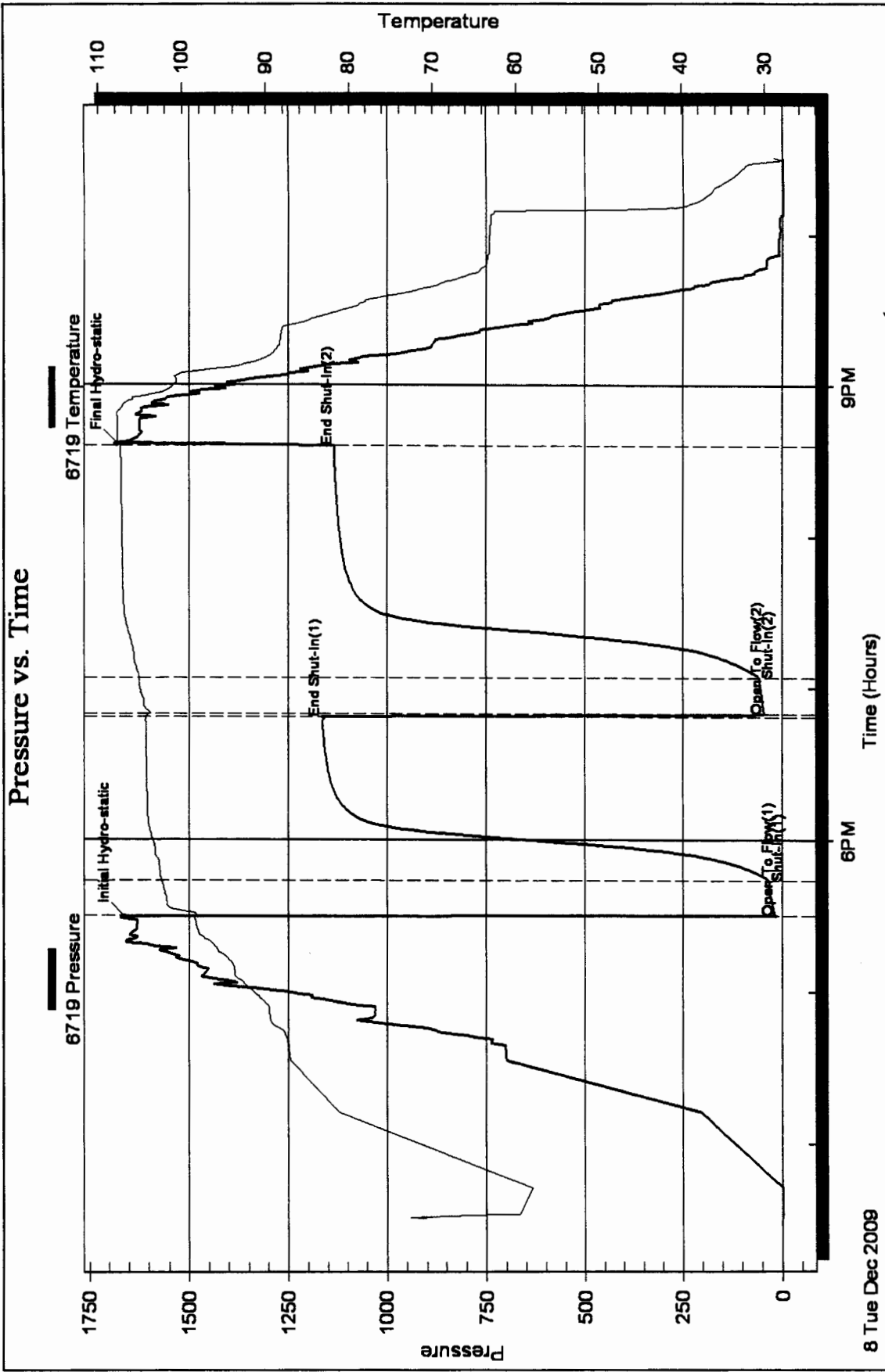
Serial #:

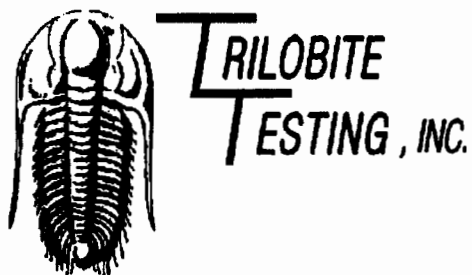
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202

ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

**Schlegel #1-34**

Start Date: 2009.12.09 @ 16:15:04

End Date: 2009.12.09 @ 20:23:19

Job Ticket #: 38059

DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

Suite 700

Denver, CO 80202

ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

Job Ticket: 38059

**DST#: 2**

Test Start: 2009.12.09 @ 16:15:04

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 20:23:19

Test Type: Conventional Bottom Hole

Tester: Tyson Flax

Unit No: 44

Interval: **3519.00 ft (KB) To 3570.00 ft (KB) (TVD)**

Total Depth: 3446.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1988.00 ft (KB)

1978.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6719** Inside

Press@RunDepth: psig @ 3525.00 ft (KB)

Start Date: 2009.12.09

End Date:

2009.12.09

Capacity: 8000.00 psig

Last Calib.: 2009.12.09

Start Time: 16:15:09

End Time:

20:23:19

Time On Btm: 2009.12.09 @ 16:15:40

Time Off Btm: 2009.12.09 @ 18:02:19

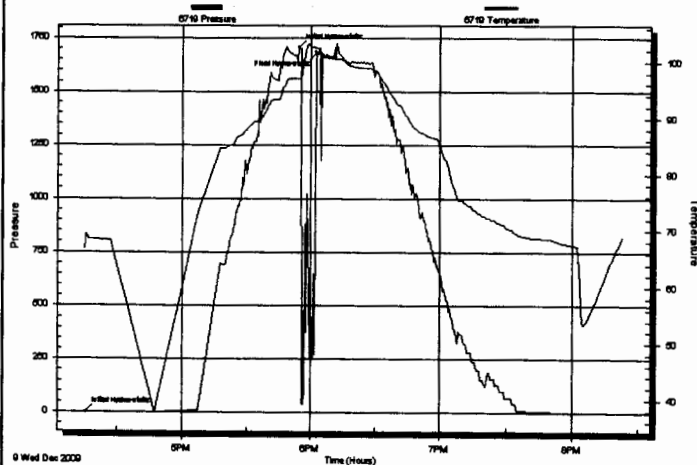
TEST COMMENT: IFF-Packer failure

ISI-

FFP-

FSI-

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           |                 |              | Initial Hydro-static |
| 99          | 1705.85         | 97.06        | Initial Hydro-static |
| 107         | 1683.85         | 102.49       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202  
ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

Job Ticket: 38059

**DST#: 2**

Test Start: 2009.12.09 @ 16:15:04

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3494.00 ft | Diameter: 3.82 inches   | Volume: 49.53 bbl | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.25 inches   | Volume: 0.00 bbl  | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches   | Volume: 0.00 bbl  | Weight to Pull Loose: lb           |
|                           |                    | Total Volume: 49.53 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 3.00 ft            |                         |                   | String Weight: Initial 48000.00 lb |
| Depth to Top Packer:      | 3519.00 ft         |                         |                   | Final lb                           |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 51.00 ft           |                         |                   |                                    |
| Tool Length:              | 79.00 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        |            |          | 3496.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3497.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3502.00    |                               |
| Blank Spacing    | 7.00        |            |          | 3509.00    |                               |
| Packer           | 5.00        |            |          | 3514.00    | 28.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3519.00    |                               |
| Stubb            | 1.00        |            |          | 3520.00    |                               |
| Perforations     | 4.00        |            |          | 3524.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3525.00    |                               |
| Recorder         | 0.00        | 6719       | Inside   | 3525.00    |                               |
| Recorder         | 0.00        | 6669       | Inside   | 3525.00    |                               |
| Blank Spacing    | 31.00       |            |          | 3556.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3557.00    |                               |
| Perforations     | 10.00       |            |          | 3567.00    |                               |
| Bullnose         | 3.00        |            |          | 3570.00    | 51.00 Bottom Packers & Anchor |

**Total Tool Length: 79.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

**34-16s-16w Rush KS**

Suite 700

Job Ticket: 38059

**DST#: 2**

Denver, CO 80202

Test Start: 2009.12.09 @ 16:15:04

ATTN: Clayton Camozzi

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
|              |             |               |

Total Length:

ft

Total Volume:

bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

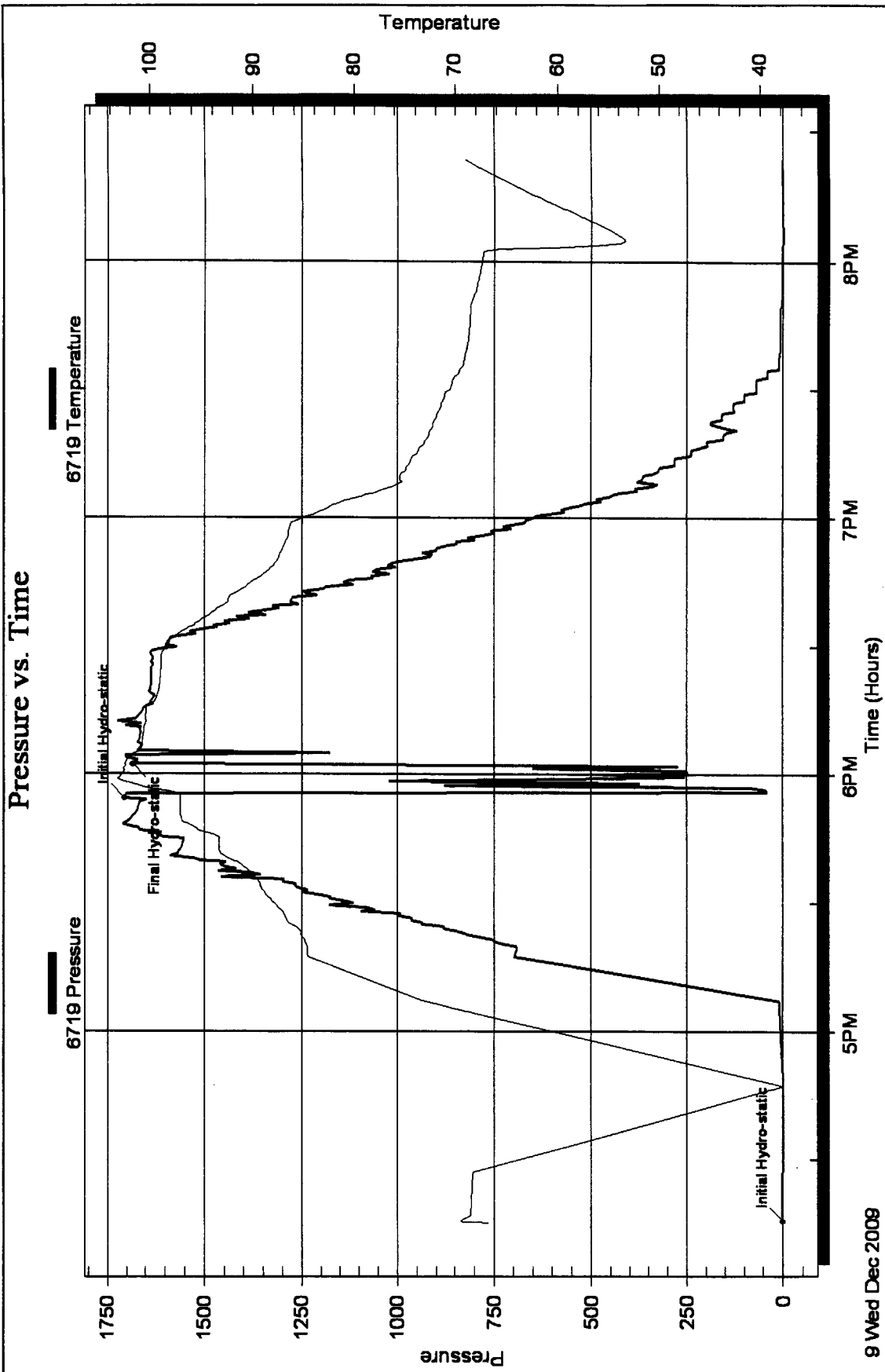
34-16s-16w Rush KS

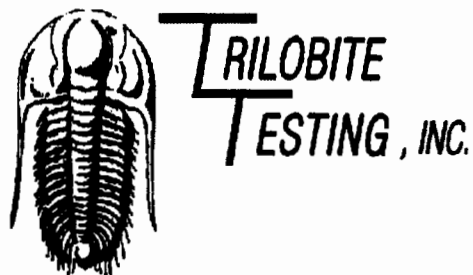
Samuel Gary Jr. & Associates, Inc.

Inside

Serial #: 6719

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202

ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

**Schlegel #1-34**

Start Date: 2009.12.09 @ 20:35:31

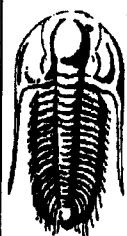
End Date: 2009.12.10 @ 04:44:16

Job Ticket #: 38060      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202  
ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

Job Ticket: 38060

**DST#: 3**

Test Start: 2009.12.09 @ 20:35:31

### GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 22:25:46

Time Test Ended: 04:44:16

Test Type: **Conventional Bottom Hole**

Tester: **Tyson Flax**

Unit No: **44**

Interval: **3473.00 ft (KB) To 3570.00 ft (KB) (TVD)**

Total Depth: **3570.00 ft (KB) (TVD)**

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

Reference Elevations: **1988.00 ft (KB)**

**1978.00 ft (CF)**

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

**Serial #: 6719**

**Inside**

Press@RunDepth: **62.61 psig @ 3479.00 ft (KB)**

Start Date: **2009.12.09**

End Date:

**2009.12.10**

Capacity: **8000.00 psig**

Last Calib.: **2009.12.10**

Start Time: **20:35:36**

End Time:

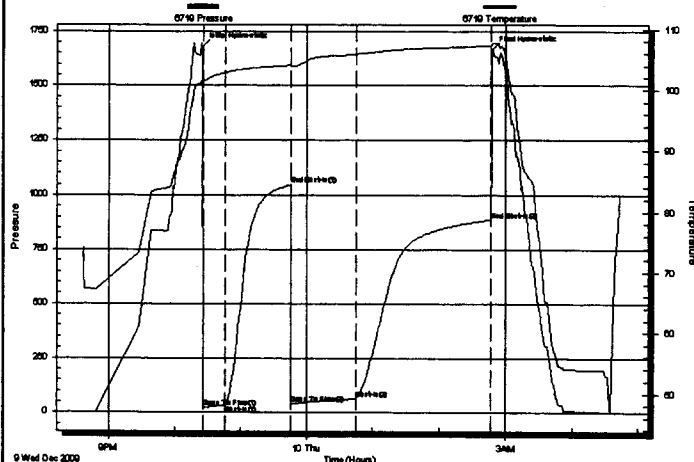
**04:44:15**

Time On Btm: **2009.12.09 @ 22:25:01**

Time Off Btm: **2009.12.10 @ 02:47:45**

**TEST COMMENT:** IFF-Weak blow built to 5"  
ISF-Weak surface blow back died in 10 min  
FFP-Weak blow built to 10"  
FSI-no blow back

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1679.44         | 101.65       | Initial Hydro-static |
| 1           | 24.50           | 101.31       | Open To Flow (1)     |
| 21          | 33.38           | 102.81       | Shut-In (1)          |
| 81          | 1047.49         | 104.06       | End Shut-In (1)      |
| 81          | 39.87           | 103.87       | Open To Flow (2)     |
| 140         | 62.61           | 105.89       | Shut-In (2)          |
| 262         | 887.89          | 107.26       | End Shut-In (2)      |
| 263         | 1663.19         | 107.62       | Final Hydro-static   |

### Recovery

| Length (ft) | Description       | Volume (bbl) |
|-------------|-------------------|--------------|
| 110.00      | HOCM 30% O, 70% M | 1.56         |
|             |                   |              |
|             |                   |              |
|             |                   |              |
|             |                   |              |
|             |                   |              |

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

**34-16s-16w Rush KS**

Suite 700

Job Ticket: 38060

**DST#: 3**

Denver, CO 80202

Test Start: 2009.12.09 @ 20:35:31

ATTN: Clayton Camozzi

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3461.00 ft | Diameter: 3.82 inches   | Volume: 49.06 bbl | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.25 inches   | Volume: 0.00 bbl  | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches   | Volume: 0.00 bbl  | Weight to Pull Loose: 60000.00 lb  |
|                           |                    | Total Volume: 49.06 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 16.00 ft           |                         |                   | String Weight: Initial 48000.00 lb |
| Depth to Top Packer:      | 3473.00 ft         |                         |                   | Final 49000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 97.00 ft           |                         |                   |                                    |
| Tool Length:              | 125.00 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        |            |          | 3450.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3451.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3456.00    |                               |
| Blank Spacing    | 7.00        |            |          | 3463.00    |                               |
| Packer           | 5.00        |            |          | 3468.00    | 28.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3473.00    |                               |
| Stubb            | 1.00        |            |          | 3474.00    |                               |
| Perforations     | 4.00        |            |          | 3478.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3479.00    |                               |
| Recorder         | 0.00        | 6719       | Inside   | 3479.00    |                               |
| Recorder         | 0.00        | 6669       | Inside   | 3479.00    |                               |
| Blank Spacing    | 63.00       |            |          | 3542.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3543.00    |                               |
| Perforations     | 24.00       |            |          | 3567.00    |                               |
| Bullnose         | 3.00        |            |          | 3570.00    | 97.00 Bottom Packers & Anchor |

**Total Tool Length: 125.00**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

**34-16s-16w Rush KS**

Suite 700

Job Ticket: 38060

**DST#:3**

Denver, CO 80202

Test Start: 2009.12.09 @ 20:35:31

ATTN: Clayton Camozzi

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

| Length<br>ft | Description    | Volume<br>bbl |
|--------------|----------------|---------------|
| 110.00       | HOCM 30%O,70%M | 1.559         |

Total Length: 110.00 ft

Total Volume: 1.559 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 3

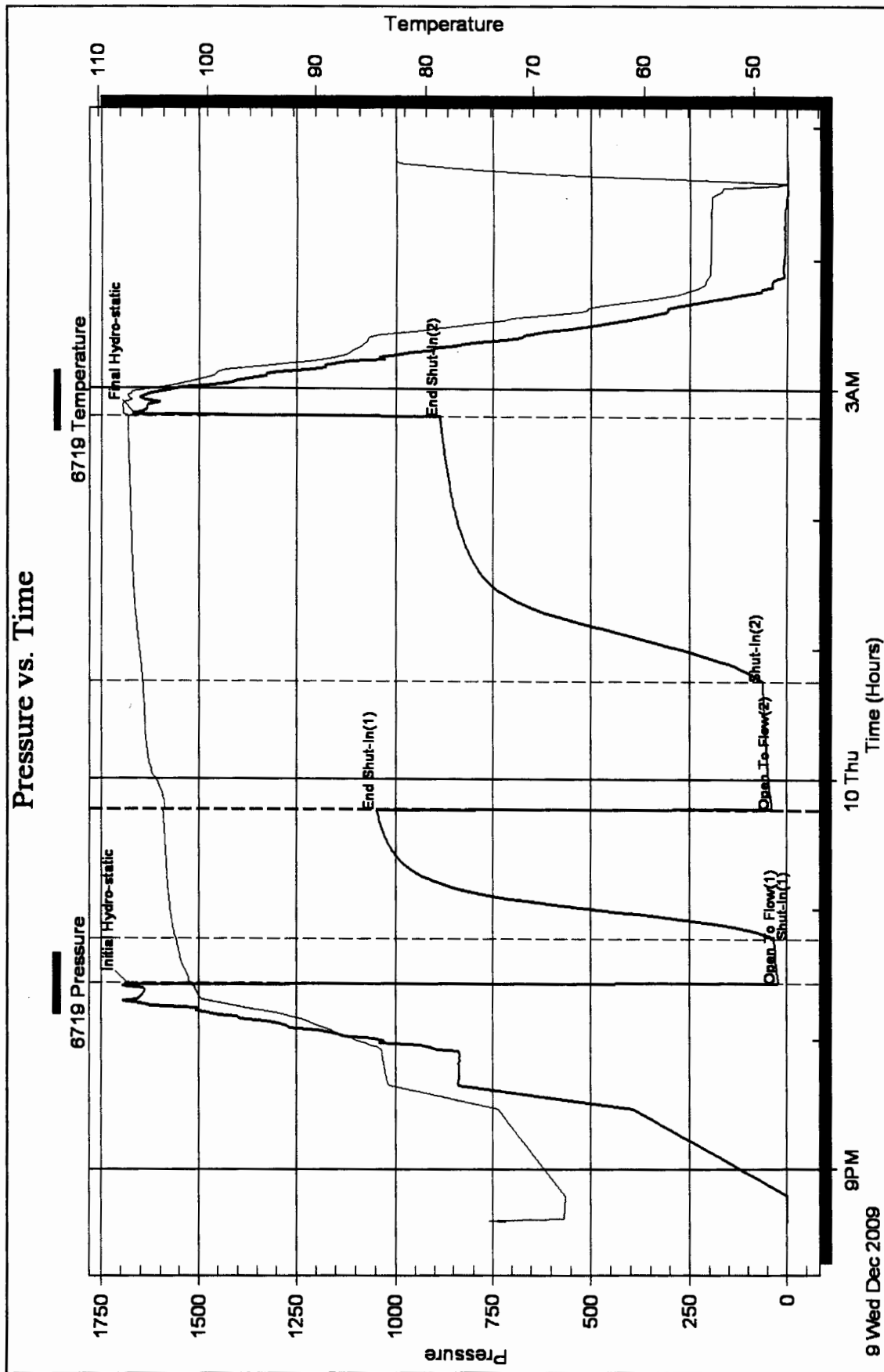
34-16s-16w Rush KS

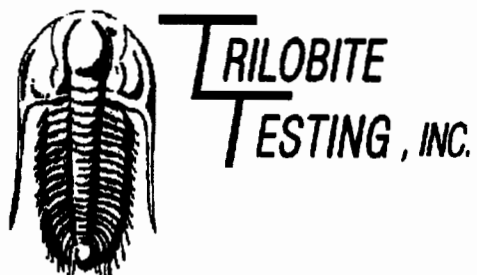
Samuel Gary Jr. & Associates, Inc.

Inside

Serial #: 6719

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop St  
Suite 700  
Denver, CO 80202

ATTN: Clayton Camozzi

**34-16s-16w Rush KS**

**Schlegel #1-34**

Start Date: 2009.12.10 @ 15:35:01

End Date: 2009.12.10 @ 21:51:16

Job Ticket #: 38061

DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop St  
Suite 700  
Denver, CO 80202  
ATTN: Clayton Camozzi

**Schlegel #1-34**

**34-16s-16w Rush KS**

Job Ticket: 38061

DST#: 4

Test Start: 2009.12.10 @ 15:35:01

### GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 17:10:31

Time Test Ended: 21:51:16

Test Type: **Conventional Bottom Hole**

Tester: **Tyson Flax**

Unit No: **44**

Interval: **3569.00 ft (KB) To 3576.00 ft (KB) (TVD)**

Total Depth: **3576.00 ft (KB) (TVD)**

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

Reference Elevations: **1988.00 ft (KB)**

**1978.00 ft (CF)**

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

**Serial #: 6669** **Inside**

Press@RunDepth: **279.75 psig @ 3570.00 ft (KB)**

Start Date: **2009.12.10**

End Date:

**2009.12.10**

Start Time: **15:35:02**

End Time:

**21:51:16**

Capacity: **8000.00 psig**

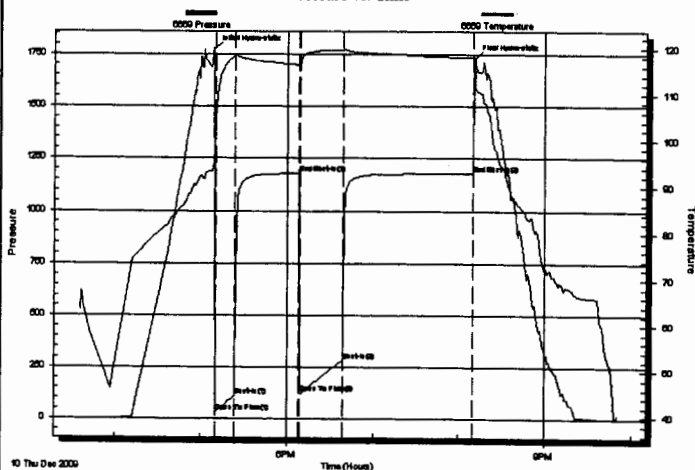
Last Calib.: **2009.12.10**

Time On Btm: **2009.12.10 @ 17:09:31**

Time Off Btm: **2009.12.10 @ 20:10:46**

TEST COMMENT: IFF-BOB in 4 min  
ISI-Weak surface blow back throughout  
FFP-BOB in 5.5 min  
FSI-Weak surface blow back died in 60 min

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1771.18         | 95.20        | Initial Hydro-static |
| 1           | 33.17           | 104.60       | Open To Flow (1)     |
| 15          | 110.27          | 118.43       | Shut-In (1)          |
| 59          | 1176.33         | 116.38       | End Shut-In (1)      |
| 60          | 123.78          | 116.02       | Open To Flow (2)     |
| 89          | 279.75          | 119.60       | Shut-In (2)          |
| 181         | 1176.96         | 118.00       | End Shut-In (2)      |
| 182         | 1727.08         | 113.33       | Final Hydro-static   |

### Recovery

| Length (ft) | Description  | Volume (bbl) |
|-------------|--------------|--------------|
| 560.00      | Water        | 7.94         |
| 60.00       | MW 80%W,20%M | 0.85         |
| 60.00       | WM 20%W,80%M | 0.85         |
|             |              |              |
|             |              |              |
|             |              |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates, Inc.

Schlegel #1-34

1515 Wynkoop St

34-16s-16w Rush KS

Suite 700

Job Ticket: 38061

DST#: 4

Denver, CO 80202

Test Start: 2009.12.10 @ 15:35:01

ATTN: Clayton Camozzi

### Tool Information

|                           |                    |                       |                         |                                    |
|---------------------------|--------------------|-----------------------|-------------------------|------------------------------------|
| Drill Pipe:               | Length: 3562.00 ft | Diameter: 3.82 inches | Volume: 50.49 bbl       | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl        | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl        | Weight to Pull Loose: 60000.00 lb  |
|                           |                    |                       | Total Volume: 50.49 bbl | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 14.00 ft           |                       |                         | String Weight: Initial 49000.00 lb |
| Depth to Top Packer:      | 3569.00 ft         |                       |                         | Final 54000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                         |                                    |
| Interval between Packers: | 7.00 ft            |                       |                         |                                    |
| Tool Length:              | 28.00 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        |            |          | 3549.00    |                              |
| Shut In Tool       | 5.00        |            |          | 3554.00    |                              |
| Hydraulic tool     | 5.00        |            |          | 3559.00    |                              |
| Packer             | 5.00        |            |          | 3564.00    | 21.00 Bottom Of Top Packer   |
| Packer             | 5.00        |            |          | 3569.00    |                              |
| Stubb              | 1.00        |            |          | 3570.00    |                              |
| Recorder           | 0.00        | 6669       | Inside   | 3570.00    |                              |
| Recorder           | 0.00        | 6719       | Inside   | 3570.00    |                              |
| Perforations       | 3.00        |            |          | 3573.00    |                              |
| Bullnose           | 3.00        |            |          | 3576.00    | 7.00 Bottom Packers & Anchor |
| Total Tool Length: | 28.00       |            |          |            |                              |



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

**Schlegel #1-34**

1515 Wynkoop St

**34-16s-16w Rush KS**

Suite 700

Job Ticket: 38061

**DST#: 4**

Denver, CO 80202

Test Start: 2009.12.10 @ 15:35:01

ATTN: Clayton Carozzi

### 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:

14000 ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

| Length<br>ft | Description  | Volume<br>bbl |
|--------------|--------------|---------------|
| 560.00       | Water        | 7.938         |
| 60.00        | MW 80%W,20%M | 0.851         |
| 60.00        | WM 20%W,80%M | 0.851         |

Total Length: 680.00 ft

Total Volume: 9.640 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .75 @ 44F = 14000 chlorides

DST Test Number: 4

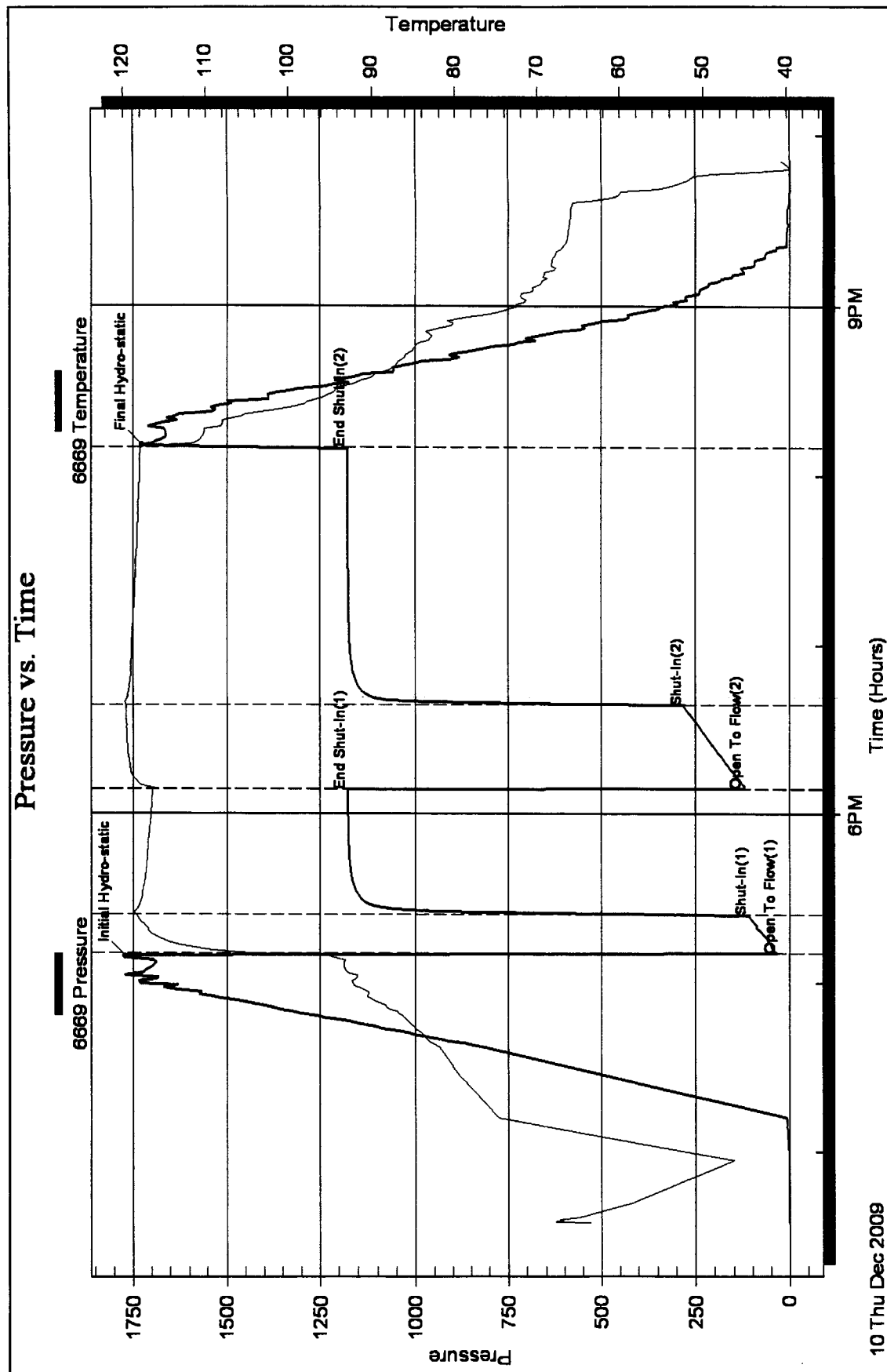
34-16s-16w Rush KS

Samuel Gary Jr. & Associates, Inc.

Inside

Serial #: 6669

# Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 38061

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