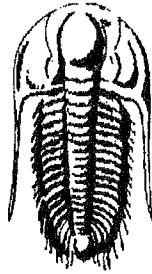


21-7s-20w



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

## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Prod**

PO Box 723  
Alma, NE 68920

ATTN: Randy K

**21 7 20 Rooks KS**

**Cook C #1**

Start Date: 2008.08.31 @ 21:10:54

End Date: 2008.09.01 @ 04:28:54

Job Ticket #: 32753      DST #: 1

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

15-163-23758-00-00  
1370FNL 460FWL  
NE NWSW NW

Bach Oil Prod

Cook C #1

21 7 20 Rooks KS

DST # 1

Top

2008.08.31



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

## DRILL STEM TEST REPORT

Bach Oil Prod

PO Box 723  
Alma, NE 68920

ATTN: Randy K

**Cook C #1**

**21 7 20 Rooks KS**

Job Ticket: 32753

**DST#: 1**

Test Start: 2008.08.31 @ 21:10:54

### GENERAL INFORMATION:

Formation: **Top**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:54:54

Time Test Ended: 04:28:54

Interval: **3242.00 ft (KB) To 3255.00 ft (KB) (TVD)**

Total Depth: 3255.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Kyle Kinderknecht

Unit No: 31

Reference Elevations: 2092.00 ft (KB)

2087.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8319**

**Inside**

Press@RunDepth: 178.17 psig @ 3243.00 ft (KB)

Start Date: 2008.08.31

End Date:

2008.09.01

Capacity: 7000.00 psig

Last Calib.: 2008.09.01

Start Time: 21:10:59

End Time:

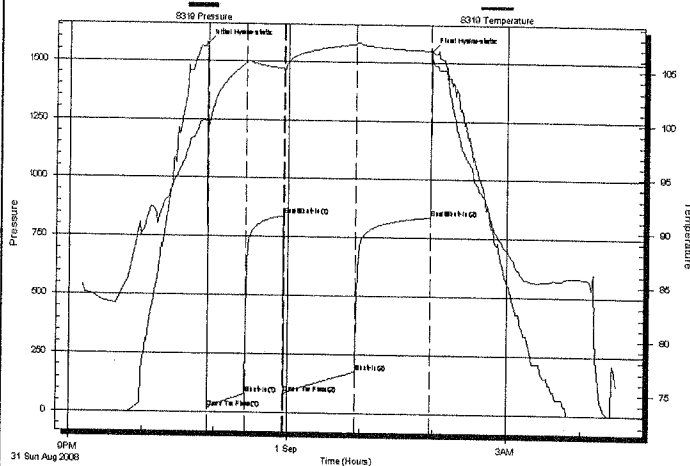
04:28:53

Time On Btm: 2008.08.31 @ 22:53:54

Time Off Btm: 2008.09.01 @ 01:58:24

TEST COMMENT: IF Building blow to 8 1/2"  
FF 5 1/2"

Pressure vs. Time



### PRESSURE SUMMARY

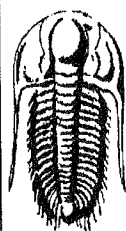
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1572.37         | 100.34       | Initial Hydro-static |
| 1           | 15.49           | 99.59        | Open To Flow (1)     |
| 32          | 79.91           | 105.54       | Shut-In (1)          |
| 63          | 840.05          | 105.09       | End Shut-In (1)      |
| 63          | 83.33           | 104.79       | Open To Flow (2)     |
| 122         | 178.17          | 107.40       | Shut-In (2)          |
| 184         | 838.45          | 106.85       | End Shut-In (2)      |
| 185         | 1548.63         | 106.83       | Final Hydro-static   |

### Recovery

| Length (ft) | Description                 | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 275.00      | Mdyw tr scum of oil in tool | 3.90         |
|             |                             |              |
|             |                             |              |
|             |                             |              |
|             |                             |              |
|             |                             |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Bach Oil Prod

**Cook C #1**

PO Box 723  
Alma, NE 68920

**21 7 20 Rooks KS**

Job Ticket: 32753

**DST#: 1**

ATTN: Randy K

Test Start: 2008.08.31 @ 21:10:54

### Tool Information

Drill Pipe: Length: 3240.00 ft Diameter: 3.82 inches Volume: 45.93 bbl  
Heavy Wt. Pipe: Length: 0.00 ft Diameter: 0.00 inches Volume: 0.00 bbl  
Drill Collar: Length: 0.00 ft Diameter: 0.00 inches Volume: 0.00 bbl  
Total Volume: 45.93 bbl

Tool Weight: 2000.00 lb

Weight set on Packer: 25000.00 lb

Weight to Pull Loose: 30000.00 lb

Tool Chased 0.00 ft

String Weight: Initial 25000.00 lb

Final 26000.00 lb

Drill Pipe Above KB: 18.00 ft

Depth to Top Packer: 3242.00 ft

Depth to Bottom Packer: ft

Interval between Packers: 13.00 ft

Tool Length: 33.00 ft

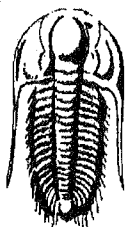
Number of Packers: 2 Diameter: 6.75 inches

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |      |      |        |         |                               |
|-----------------|------|------|--------|---------|-------------------------------|
| Change Over Sub | 1.00 |      |        | 3223.00 |                               |
| Shut In Tool    | 5.00 |      |        | 3228.00 |                               |
| Hydraulic tool  | 5.00 |      |        | 3233.00 |                               |
| Packer          | 4.00 |      |        | 3237.00 | 20.00 Bottom Of Top Packer    |
| Packer          | 5.00 |      |        | 3242.00 |                               |
| Stubb           | 1.00 |      |        | 3243.00 |                               |
| Recorder        | 0.00 | 8319 | Inside | 3243.00 |                               |
| Recorder        | 0.00 | 8369 | Inside | 3243.00 |                               |
| Perforations    | 9.00 |      |        | 3252.00 |                               |
| Bullnose        | 3.00 |      |        | 3255.00 | 13.00 Bottom Packers & Anchor |

**Total Tool Length: 33.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Bach Oil Prod

**Cook C #1**

PO Box 723  
Alma, NE 68920

**21 7 20 Rooks KS**

Job Ticket: 32753

**DST#: 1**

ATTN: Randy K

Test Start: 2008.08.31 @ 21:10:54

### 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: 45000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 0.75 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                 | Volume<br>bbl |
|--------------|-----------------------------|---------------|
| 275.00       | Mdyw tr scum of oil in tool | 3.898         |

Total Length: 275.00 ft      Total Volume: 3.898 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

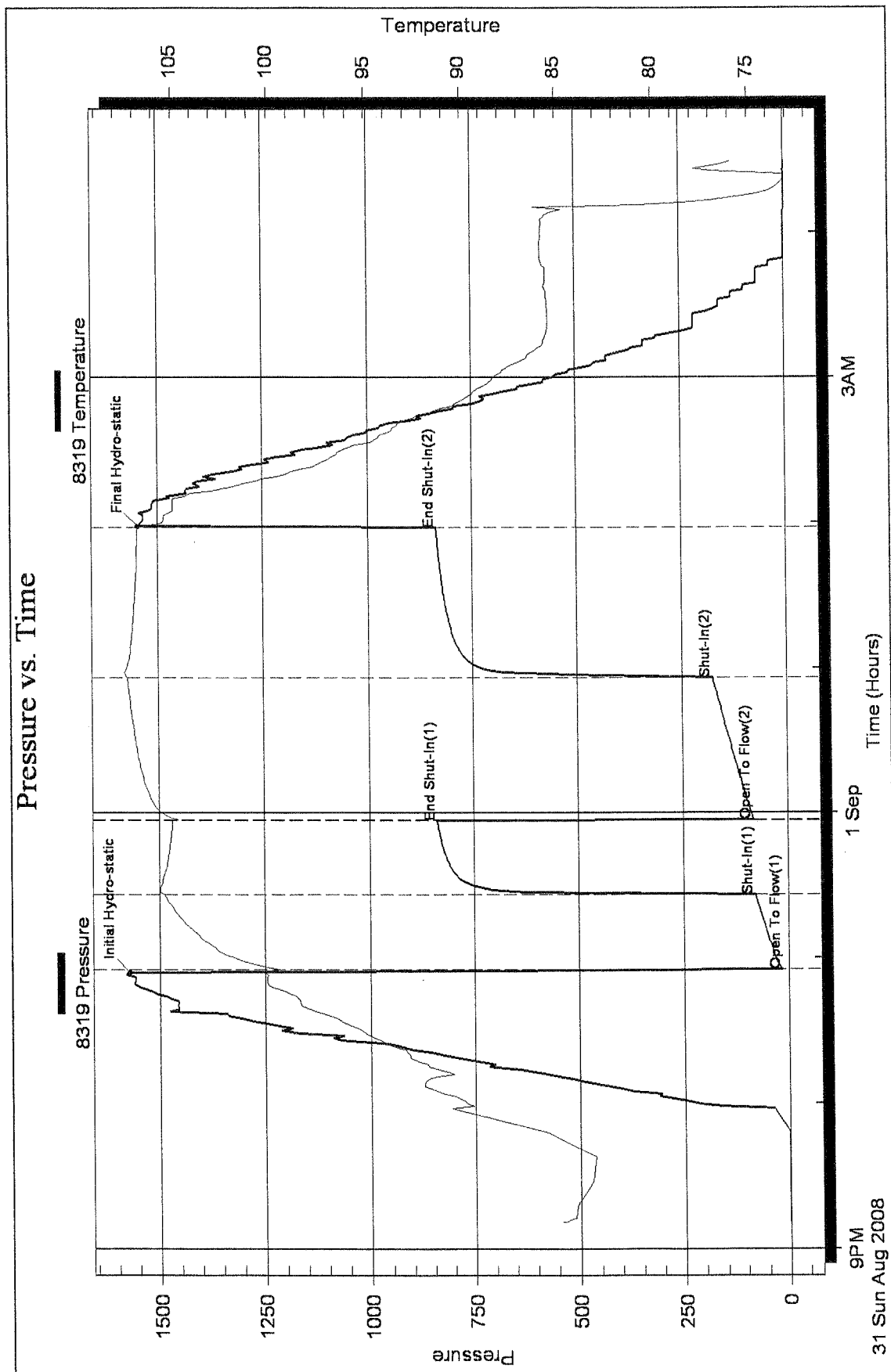
Serial #:

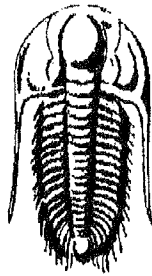
Laboratory Name:

Laboratory Location:

Recovery Comments: rw .16 @ 74 deg.

# Pressure vs. Time





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

## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Prod**

PO Box 723  
Alma, NE 68920

ATTN: Randy K

**21 7 20 Rooks KS**

**Cook C #1**

Start Date: 2008.09.01 @ 18:27:18

End Date: 2008.09.02 @ 03:43:18

Job Ticket #: 32754      DST #: 2

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Bach Oil Prod

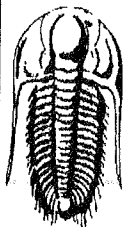
Cook C #1

21 7 20 Rooks KS

DST # 2

Tor.-LKC "C"

2008.09.01



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

## DRILL STEM TEST REPORT

Bach Oil Prod

PO Box 723  
Alma, NE 68920

ATTN: Randy K

**Cook C #1**

**21 7 20 Rooks KS**

Job Ticket: 32754

**DST#: 2**

Test Start: 2008.09.01 @ 18:27:18

### GENERAL INFORMATION:

Formation: **Tor.-LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:37:48

Time Test Ended: 03:43:18

Interval: **3269.00 ft (KB) To 3365.00 ft (KB) (TVD)**

Total Depth: 3365.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Kyle Kinderknecht

Unit No: 31

Reference Elevations: 2092.00 ft (KB)

2087.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8319**

**Inside**

Press@RunDepth: 291.05 psig @ 3275.00 ft (KB)

Start Date: 2008.09.01

End Date:

2008.09.02

Capacity: 7000.00 psig

Last Calib.: 2008.09.02

Start Time: 18:27:23

End Time:

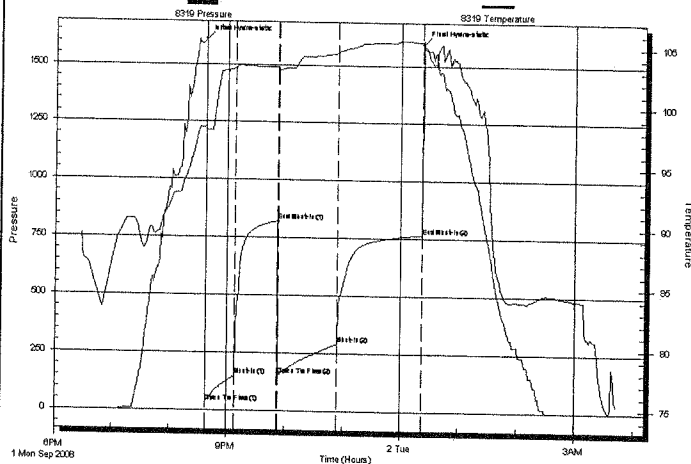
03:43:18

Time On Btm: 2008.09.01 @ 20:37:18

Time Off Btm: 2008.09.02 @ 00:23:18

TEST COMMENT: IF BOB 6 min  
ISI 1" Blow back  
FF BOB 5 min  
FSI Surface

Pressure vs. Time



### PRESSURE SUMMARY

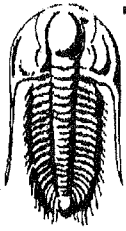
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1607.29         | 98.42        | Initial Hydro-static |
| 1           | 34.68           | 98.04        | Open To Flow (1)     |
| 31          | 150.67          | 103.13       | Shut-In (1)          |
| 76          | 821.70          | 103.30       | End Shut-In (1)      |
| 76          | 156.54          | 103.07       | Open To Flow (2)     |
| 137         | 291.05          | 104.50       | Shut-In (2)          |
| 225         | 765.13          | 105.47       | End Shut-In (2)      |
| 226         | 1594.08         | 105.56       | Final Hydro-static   |

### Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 190.00      | MCW 90%W 10%M       | 2.69         |
| 63.00       | OWCM 10%O 20%W 70%M | 0.89         |
| 63.00       | OWCM 10%O 10%W 80%M | 0.89         |
| 95.00       | OCM 15%O 85%M       | 1.35         |
| 160.00      | GsyO 10%g 90%O      | 2.27         |
| 0.00        | GIP 120'            | 0.00         |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Bach Oil Prod

**Cook C #1**

PO Box 723  
Alma, NE 68920

**21 7 20 Rooks KS**

Job Ticket: 32754

**DST#: 2**

ATTN: Randy K

Test Start: 2008.09.01 @ 18:27:18

### Tool Information

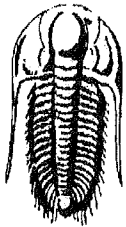
|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3270.00 ft | Diameter: 3.82 inches   | Volume: 46.35 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: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 0.00 inches   | Volume: 0.00 bbl  | Weight to Pull Loose: 30000.00 lb  |
|                           |                    | Total Volume: 46.35 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 21.00 ft           |                         |                   | String Weight: Initial 22000.00 lb |
| Depth to Top Packer:      | 3269.00 ft         |                         |                   | Final 24000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 96.00 ft           |                         |                   |                                    |
| Tool Length:              | 116.00 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        |            |          | 3250.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3255.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3260.00    |                               |
| Packer           | 4.00        |            |          | 3264.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3269.00    |                               |
| Stubb            | 1.00        |            |          | 3270.00    |                               |
| Perforations     | 5.00        |            |          | 3275.00    |                               |
| Recorder         | 0.00        | 8319       | Inside   | 3275.00    |                               |
| Recorder         | 0.00        | 8369       | Inside   | 3275.00    |                               |
| Blank Spacing    | 63.00       |            |          | 3338.00    |                               |
| Perforations     | 24.00       |            |          | 3362.00    |                               |
| Bullnose         | 3.00        |            |          | 3365.00    | 96.00 Bottom Packers & Anchor |

**Total Tool Length: 116.00**





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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Back Oil Prod

**Cook C #1**

PO Box 723  
Alma, NE 68920

**21 7 20 Rooks KS**

Job Ticket: 32754

DST#: 2

ATTN: Randy K

Test Start: 2008.09.01 @ 18:27:18

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 7.97 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 800.00 ppm

Filter Cake: 0.75 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

29 deg API

Water Salinity:

35000 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description         | Volume<br>bbl |
|--------------|---------------------|---------------|
| 190.00       | MCW 90%W 10%M       | 2.693         |
| 63.00        | OWCM 10%O 20%W 70%M | 0.893         |
| 63.00        | OWCM 10%O 10%W 80%M | 0.893         |
| 95.00        | OCM 15%O 85%M       | 1.347         |
| 160.00       | GsyO 10%g 90%O      | 2.268         |
| 0.00         | GIP 120'            | 0.000         |

Total Length: 571.00 ft      Total Volume: 8.094 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .2 @ 75 deg.

# Pressure vs. Time

