

TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**23-15-13-Russell**

**Berrick Unit #1**

Start Date: 2004.08.30 @ 18:57:29
End Date: 2004.08.31 @ 00:11:29
Job Ticket #: 20343 DST #: 1

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

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20343 **DST#: 1**

Test Start: 2004.08.30 @ 18:57:29

## GENERAL INFORMATION:

Formation: LKC-"A-C"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:13:29
Time Test Ended: 00:11:29

Test Type: Conventional Bottom Hole
Tester: Jason McLemore
Unit No: 24

**Interval: 2993.00 ft (KB) To 3040.00 ft (KB) (TVD)**
Total Depth: 3040.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

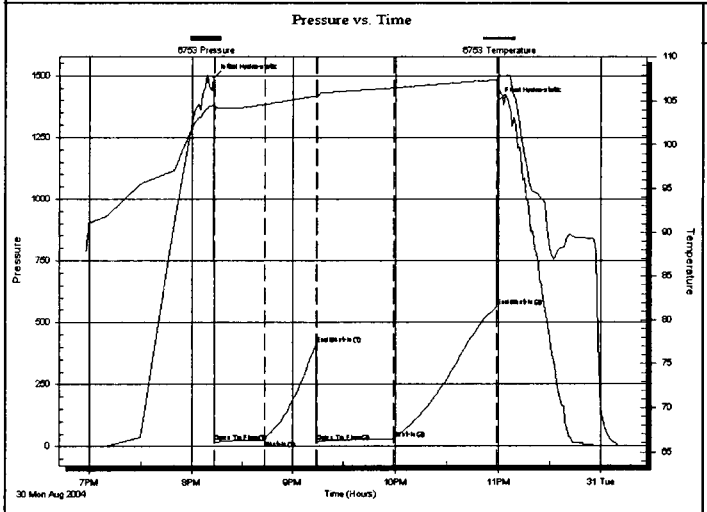
Reference Elevations: 1812.00 ft (KB)
1802.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 6753** **Inside**

Press@RunDepth: 28.23 psig @ 2996.00 ft (KB)
Start Date: 2004.08.30 End Date: 2004.08.31
Start Time: 18:57:39 End Time: 00:11:29

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.08.30 @ 20:12:59
Time Off Btm: 2004.08.30 @ 22:59:29

TEST COMMENT: IFP-Fair Blow , Built to 7"
ISI-Dead
FFP-5"On Opening,BOB in 10 min.
FSI-




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1493.17 | 104.60 | Initial Hydro-static |
| 1 | 16.89 | 103.84 | Open To Flow (1) |
| 30 | 25.91 | 104.61 | Shut-In(1) |
| 61 | 409.87 | 105.57 | End Shut-In(1) |
| 62 | 17.51 | 105.52 | Open To Flow (2) |
| 106 | 28.23 | 106.50 | Shut-In(2) |
| 166 | 563.26 | 107.40 | End Shut-In(2) |
| 167 | 1397.10 | 107.74 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 40.00 | SOCM-25%G-10%O-65%M | 0.28 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20343 **DST#: 1**

Test Start: 2004.08.30 @ 18:57:29

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 2954.00 ft | Diameter: | 3.80 inches | Volume: | 41.44 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 31.00 ft | Diameter: | 2.25 inches | Volume: | 0.15 bbl | |
| | | | | | Total Volume: | 41.59 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 13.00 ft |
| Depth to Top Packer: | 2993.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 47.00 ft |
| Tool Length: | 68.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 3000.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 45000.00 lb |
| Tool Chased | 0.00 ft |
| String Weight: Initial | 39000.00 lb |
| Final | 39000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 2973.00 | | |
| Shut In Tool | 5.00 | | | 2978.00 | | |
| Hydraulic tool | 5.00 | | | 2983.00 | | |
| Packer | 5.00 | | | 2988.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 2993.00 | | |
| Stubb | 1.00 | | | 2994.00 | | |
| Perforations | 1.00 | | | 2995.00 | | |
| Change Over Sub | 1.00 | | | 2996.00 | | |
| Recorder | 0.00 | 6753 | Inside | 2996.00 | | |
| Blank Spacing | 31.00 | | | 3027.00 | | |
| Change Over Sub | 1.00 | | | 3028.00 | | |
| Perforations | 9.00 | | | 3037.00 | | |
| Recorder | 0.00 | 13252 | Outside | 3037.00 | | |
| Bullnose | 3.00 | | | 3040.00 | 47.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **68.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20343 **DST#: 1**

Test Start: 2004.08.30 @ 18:57:29

## 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: | 50.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 8.78 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 4000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

## Recovery Information

Recovery Table

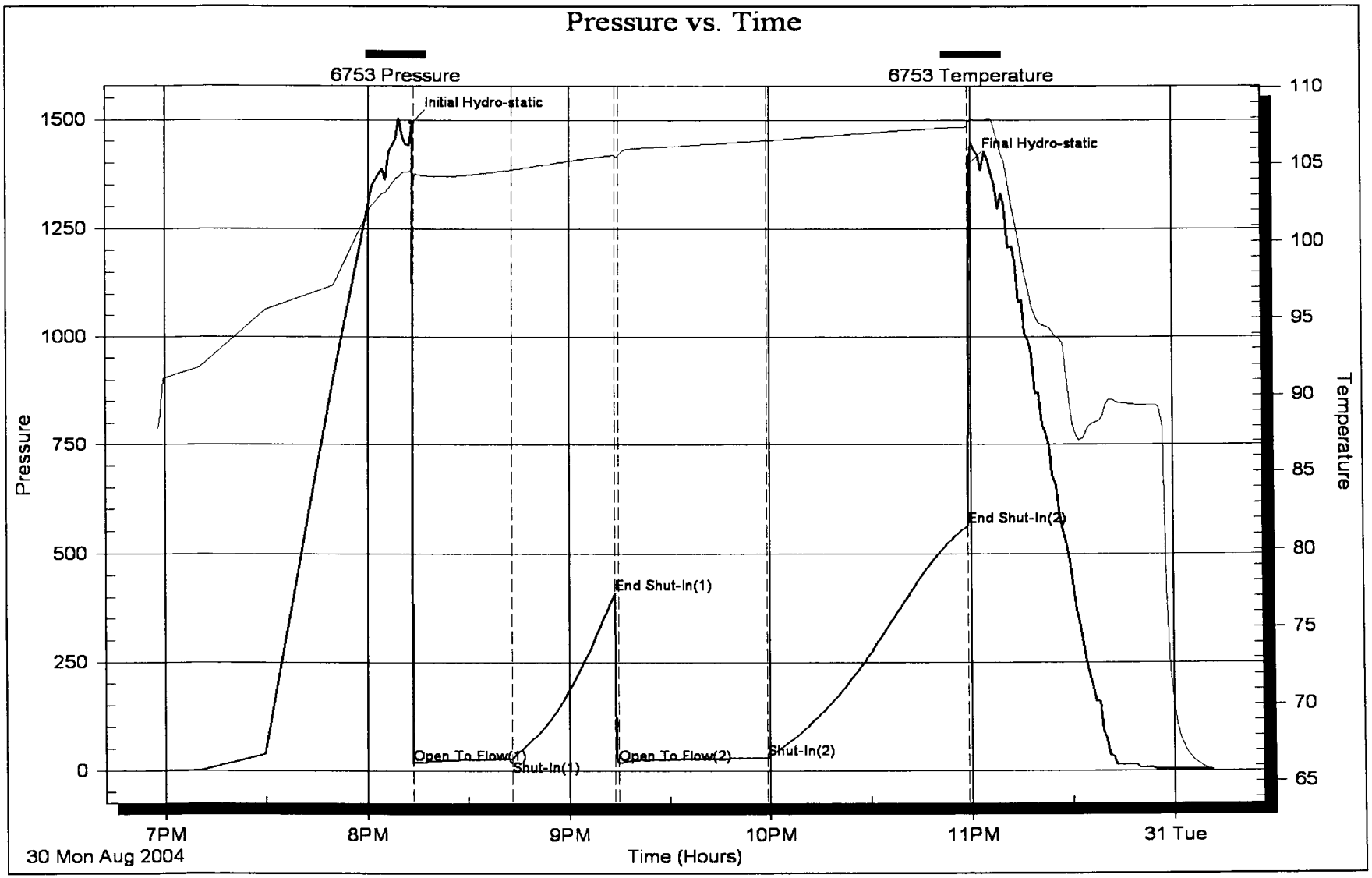
| Length ft | Description | Volume bbl |
|---|---|---|
| 40.00 | SOCM-25%G-10%O-65%M | 0.279 |

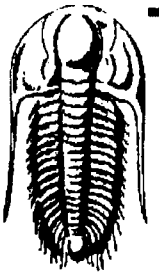
Total Length: 40.00 ft Total Volume: 0.279 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6753 Pressure
6753 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
70
65
7PM
8PM
9PM
10PM
11PM
31 Tue
30 Mon Aug 2004
Time (Hours)



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**23-15-13-Russell**

**Berrick Unit #1**

Start Date: 2004.08.31 @ 06:13:05
End Date: 2004.08.31 @ 11:51:35
Job Ticket #: 20344 DST #: 2

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

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20344 **DST#: 2**

Test Start: 2004.08.31 @ 06:13:05

## GENERAL INFORMATION:

Formation: LKC-"E-G"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:22:05
Time Test Ended: 11:51:35

Test Type: Conventional Bottom Hole
Tester: Jason McLemore
Unit No: 24

**Interval: 3037.00 ft (KB) To 3095.00 ft (KB) (TVD)**
Total Depth: 3040.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

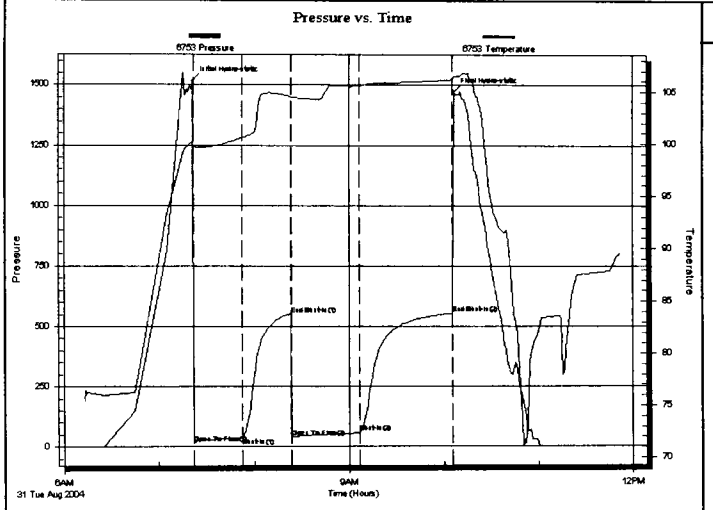
Reference Elevations: 1812.00 ft (KB)
1802.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 6753** **Inside**

Press@RunDepth: 56.49 psig @ 3041.00 ft (KB)
Start Date: 2004.08.31 End Date: 2004.08.31
Start Time: 06:13:15 End Time: 11:51:35

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.08.31 @ 07:21:35
Time Off Btm: 2004.08.31 @ 10:06:35

TEST COMMENT: IFP-Fair Blow, Built to 6"
ISI-Dead
FFP-Fair Blow, Built to 5-1/2"
FSI-Dead




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1516.02 | 100.16 | Initial Hydro-static |
| 1 | 15.27 | 99.63 | Open To Flow (1) |
| 31 | 38.19 | 100.59 | Shut-In(1) |
| 62 | 550.21 | 104.58 | End Shut-In(1) |
| 62 | 37.81 | 104.44 | Open To Flow (2) |
| 105 | 56.49 | 105.58 | Shut-In(2) |
| 164 | 554.23 | 106.19 | End Shut-In(2) |
| 165 | 1475.10 | 106.50 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 90.00 | Mud With Oil Spots | 0.98 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20344 **DST#: 2**

Test Start: 2004.08.31 @ 06:13:05

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3016.00 ft | Diameter: | 3.80 inches | Volume: | 42.31 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 31.00 ft | Diameter: | 2.25 inches | Volume: | 0.15 bbl | |
| | | | | | Total Volume: | 42.46 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 31.00 ft |
| Depth to Top Packer: | 3037.00 ft |
| Depth to Bottom Packer: | ft |
| Interval between Packers: | 58.00 ft |
| Tool Length: | 79.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 3000.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 42000.00 lb |
| Tool Chased | 0.00 ft |
| String Weight: Initial | 39000.00 lb |
| Final | 39000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 3017.00 | | |
| Shut In Tool | 5.00 | | | 3022.00 | | |
| Hydraulic tool | 5.00 | | | 3027.00 | | |
| Packer | 5.00 | | | 3032.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3037.00 | | |
| Stubb | 1.00 | | | 3038.00 | | |
| Perforations | 2.00 | | | 3040.00 | | |
| Change Over Sub | 1.00 | | | 3041.00 | | |
| Recorder | 0.00 | 6753 | Inside | 3041.00 | | |
| Blank Spacing | 31.00 | | | 3072.00 | | |
| Change Over Sub | 1.00 | | | 3073.00 | | |
| Perforations | 19.00 | | | 3092.00 | | |
| Recorder | 0.00 | 13252 | Outside | 3092.00 | | |
| Bullnose | 3.00 | | | 3095.00 | 58.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **79.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20344 **DST#: 2**

Test Start: 2004.08.31 @ 06:13:05

## 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: | 45.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 9.38 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 7000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

## Recovery Information

Recovery Table

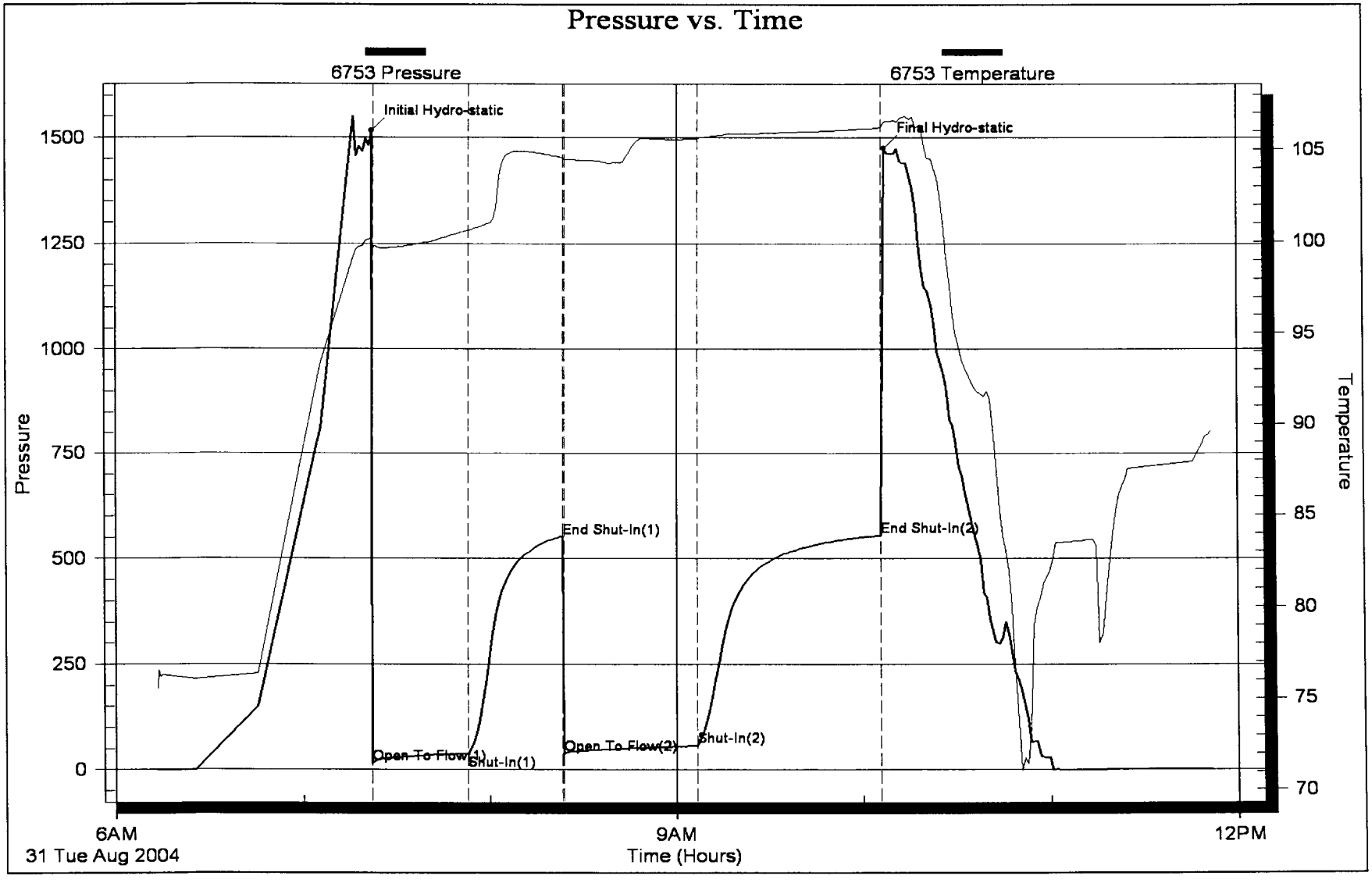
| Length ft | Description | Volume bbl |
|---|---|---|
| 90.00 | Mud With Oil Spots | 0.980 |

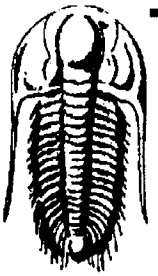
Total Length: 90.00 ft Total Volume: 0.980 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6753 Pressure
6753 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
105
100
95
90
85
80
75
70
6AM
31 Tue Aug 2004
9AM
Time (Hours)
12PM



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**23-15-13-Russell**

**Berrick Unit #1**

Start Date: 2004.09.01 @ 02:28:52
End Date: 2004.09.01 @ 09:40:22
Job Ticket #: 20345 DST #: 3

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

# DRILL STEM TEST REPORT

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20345 **DST#: 3**

Test Start: 2004.09.01 @ 02:28:52

## GENERAL INFORMATION:

Formation: **LKC-"J"-Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:01:52
Time Test Ended: 09:40:22

Test Type: Conventional Bottom Hole
Tester: Jason McLemore
Unit No: 24

**Interval: 3163.00 ft (KB) To 3289.00 ft (KB) (TVD)**
Total Depth: 3289.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

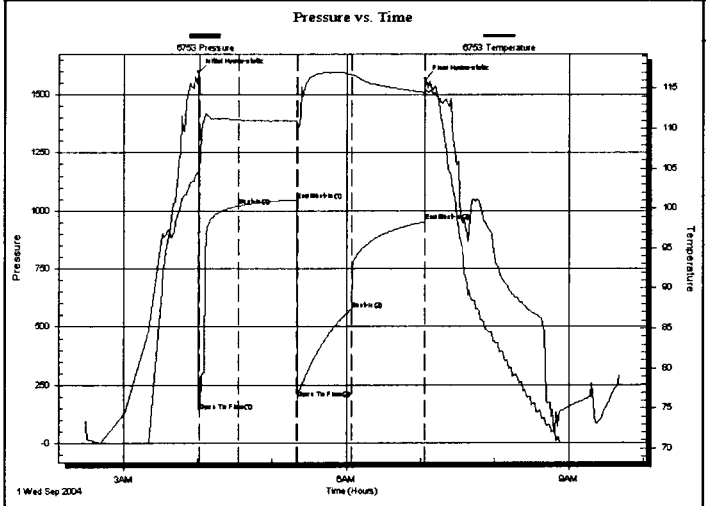
Reference Elevations: 1812.00 ft (KB)
1802.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 6753** **Inside**

Press@RunDepth: 574.49 psig @ 3167.00 ft (KB)
Start Date: 2004.09.01 End Date: 2004.09.01
Start Time: 02:29:02 End Time: 09:40:22

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.09.01 @ 04:00:52
Time Off Btm: 2004.09.01 @ 07:03:52

TEST COMMENT: IFP-Strong Blow ,BOB in 1-1/2 Min, Died Back to 9"
ISI-Dead
FFP-Strong Blow ,BOB in 2 Min, Lasted Throughout
FSI-Dead




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1596.14 | 104.57 | Initial Hydro-static |
| 1 | 136.28 | 105.21 | Open To Flow (1) |
| 32 | 1020.47 | 111.08 | Shut-In(1) |
| 79 | 1046.46 | 110.90 | End Shut-In(1) |
| 80 | 192.20 | 110.45 | Open To Flow (2) |
| 123 | 574.49 | 116.66 | Shut-In(2) |
| 182 | 951.66 | 114.45 | End Shut-In(2) |
| 183 | 1568.43 | 114.67 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 120.00 | SOCMW-5%G-10%O-80%W-5%M | 1.40 |
| 1025.00 | GOCMW-25%G-15%O-45%W-15%M | 14.38 |
| 90.00 | SOCMW-15%G-10%O-15%W-60%M | 1.26 |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20345 **DST#: 3**

Test Start: 2004.09.01 @ 02:28:52

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3140.00 ft | Diameter: | 3.80 inches | Volume: | 44.05 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 2.25 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 31.00 ft | Diameter: | 2.25 inches | Volume: | 0.15 bbl | |
| | | | | | Total Volume: | 44.20 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 29.00 ft |
| Depth to Top Packer: | 3163.00 ft |
| Depth to Bottom Packer: | ft |
| Interval between Packers: | 126.00 ft |
| Tool Length: | 147.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | |
|---|---|
| Tool Weight: | 3800.00 lb |
| Weight set on Packer: | 25000.00 lb |
| Weight to Pull Loose: | 65000.00 lb |
| Tool Chased | 0.00 ft |
| String Weight: Initial | 39000.00 lb |
| Final | 45000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 3143.00 | | |
| Shut In Tool | 5.00 | | | 3148.00 | | |
| Hydraulic tool | 5.00 | | | 3153.00 | | |
| Packer | 5.00 | | | 3158.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3163.00 | | |
| Stubb | 1.00 | | | 3164.00 | | |
| Perforations | 2.00 | | | 3166.00 | | |
| Change Over Sub | 1.00 | | | 3167.00 | | |
| Recorder | 0.00 | 6753 | Inside | 3167.00 | | |
| Blank Spacing | 94.00 | | | 3261.00 | | |
| Change Over Sub | 1.00 | | | 3262.00 | | |
| Perforations | 24.00 | | | 3286.00 | | |
| Recorder | 0.00 | 13252 | Outside | 3286.00 | | |
| Bullnose | 3.00 | | | 3289.00 | 126.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **147.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20345 **DST#: 3**

Test Start: 2004.09.01 @ 02:28:52

## 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: | 45.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 9.39 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 7000.00 ppm | | | | |
| Filter Cake: | inches | | | | |

## Recovery Information

Recovery Table

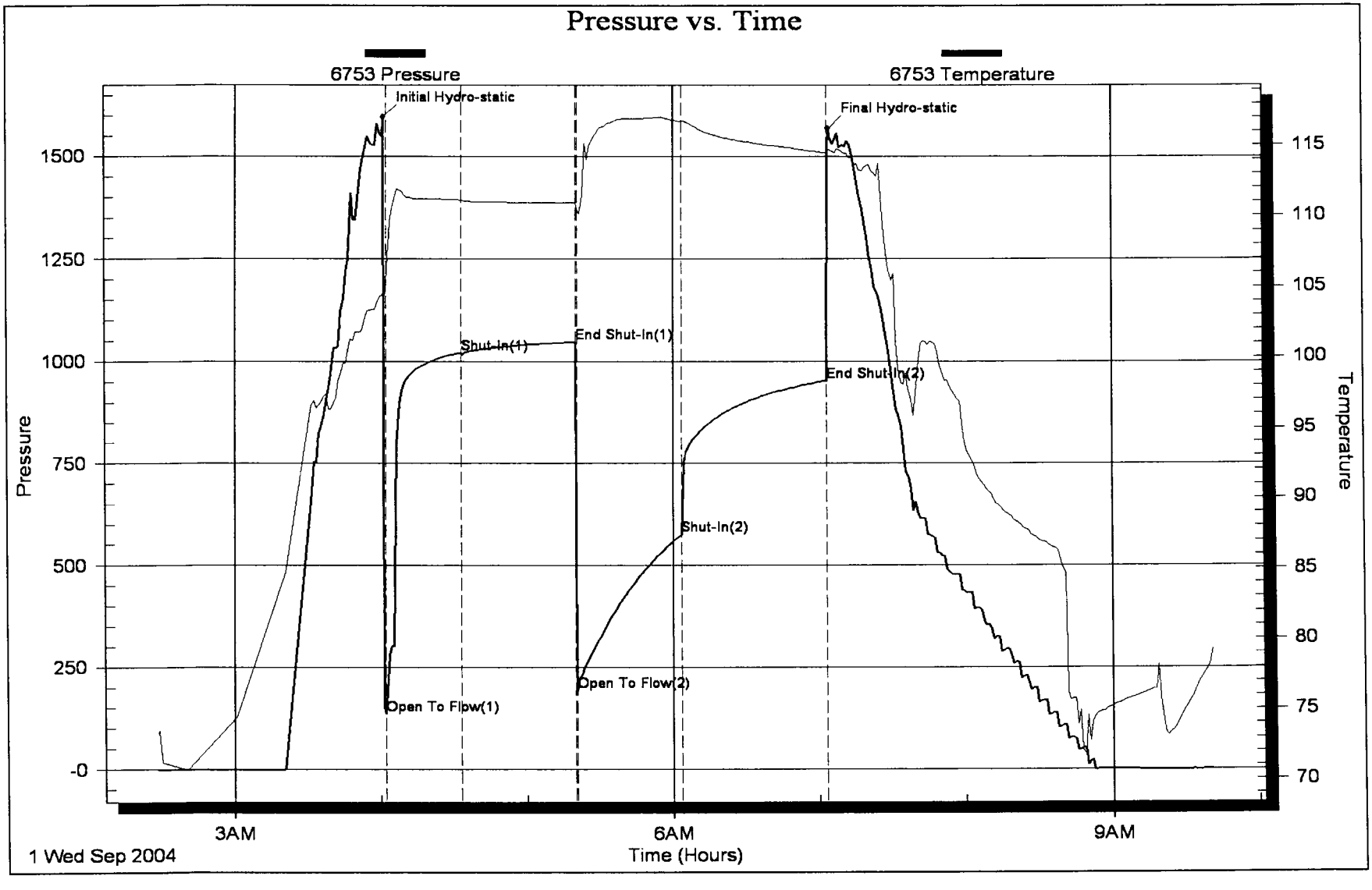
| Length ft | Description | Volume bbl |
|---|---|---|
| 120.00 | SOCMW-5%G-10%O-80%W-5%M | 1.401 |
| 1025.00 | GOCMW-25%G-15%O-45%W-15%M | 14.378 |
| 90.00 | SOCMW-15%G-10%O-15%W-60%M | 1.262 |

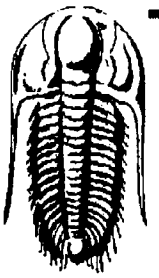
Total Length: 1235.00 ft Total Volume: 17.041 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6753 Pressure
6753 Temperature
Initial Hydro-static
Final Hydro-static
Shut-In(1)
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure
Temperature
1500
1250
1000
750
500
250
-0
115
110
105
100
95
90
85
80
75
70
3AM
6AM
9AM
1 Wed Sep 2004
Time (Hours)



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**23-15-13-Russell**

**Berrick Unit #1**

Start Date: 2004.09.01 @ 23:21:17

End Date: 2004.09.02 @ 05:58:17

Job Ticket #: 20346 DST #: 4

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

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20346 **DST#: 4**

Test Start: 2004.09.01 @ 23:21:17

## GENERAL INFORMATION:

Formation: LKC-"J"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:35:47
Time Test Ended: 05:58:17

Test Type: Conventional Straddle
Tester: Jason McLemore
Unit No: 24

**Interval: 3163.00 ft (KB) To 3218.00 ft (KB) (TVD)**
Total Depth: 3339.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

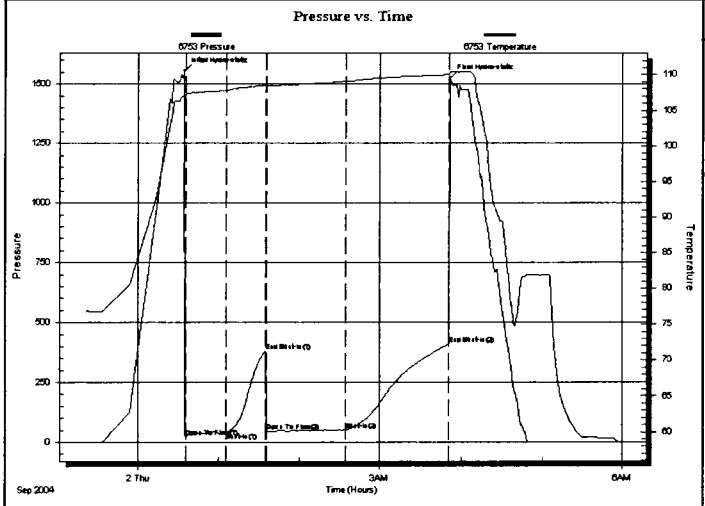
Reference Elevations: 1812.00 ft (KB)
1802.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 6753** **Inside**

Press@RunDepth: 50.64 psig @ 3175.00 ft (KB)
Start Date: 2004.09.01 End Date: 2004.09.02
Start Time: 23:21:27 End Time: 05:58:17

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.09.02 @ 00:34:17
Time Off Btm: 2004.09.02 @ 03:51:47

TEST COMMENT: IFP-Weak Blow , Built to 4"
ISI-Dead
FFP-Weak Surface Blow
FSI-Dead




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1553.81 | 106.96 | Initial Hydro-static |
| 2 | 20.83 | 107.24 | Open To Flow (1) |
| 32 | 41.09 | 107.77 | Shut-In(1) |
| 61 | 379.10 | 108.53 | End Shut-In(1) |
| 62 | 44.90 | 108.42 | Open To Flow (2) |
| 121 | 50.64 | 109.07 | Shut-In(2) |
| 197 | 409.59 | 110.04 | End Shut-In(2) |
| 198 | 1525.68 | 110.43 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 65.00 | Mud | 0.63 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20346 **DST#: 4**

Test Start: 2004.09.01 @ 23:21:17

## Tool Information

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3142.00 ft | Diameter: | 3.80 inches | Volume: | 44.07 bbl | Tool Weight: | 3800.00 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: | 31.00 ft | Diameter: | 2.25 inches | Volume: | 0.15 bbl | Weight to Pull Loose: | 55000.00 lb |
| | | | | | Total Volume: | 44.22 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | | 31.00 ft | | | | | String Weight: Initial | 41000.00 lb |
| Depth to Top Packer: | | 3163.00 ft | | | | | Final | 41000.00 lb |
| Depth to Bottom Packer: | | 3214.00 ft | | | | | | |
| Interval between Packers: | | 51.00 ft | | | | | | |
| Tool Length: | | 198.00 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 | | | 3143.00 | | |
| Shut In Tool | 5.00 | | | 3148.00 | | |
| Hydraulic tool | 5.00 | | | 3153.00 | | |
| Packer | 5.00 | | | 3158.00 | 21.00 | Bottom Of Top Packer |
| Packer | 5.00 | | | 3163.00 | | |
| Stubb | 1.00 | | | 3164.00 | | |
| Perforations | 10.00 | | | 3174.00 | | |
| Change Over Sub | 1.00 | | | 3175.00 | | |
| Recorder | 0.00 | 6753 | Inside | 3175.00 | | |
| Blank Spacing | 31.00 | | | 3206.00 | | |
| Change Over Sub | 1.00 | | | 3207.00 | | |
| Perforations | 6.00 | | | 3213.00 | | |
| Blank Off Sub | 1.00 | | | 3214.00 | 51.00 | Tool Interval |
| Packer | 5.00 | | | 3219.00 | | |
| Stubb | 1.00 | | | 3220.00 | | |
| Change Over Sub | 1.00 | | | 3221.00 | | |
| Blank Spacing | 93.00 | | | 3314.00 | | |
| Change Over Sub | 1.00 | | | 3315.00 | | |
| Perforations | 22.00 | | | 3337.00 | | |
| Recorder | 0.00 | 13252 | Below | 3337.00 | | |
| Bullnose | 3.00 | | | 3340.00 | 126.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **198.00** | | | | | |

TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer

PO Box 352
Russell, KS. 67665

ATTN: Matt Dreiling

**Berrick Unit #1**

**23-15-13-Russell**

Job Ticket: 20346 **DST#: 4**

Test Start: 2004.09.01 @ 23:21:17

## 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: | 52.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 8.79 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 8000.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

Recovery Table

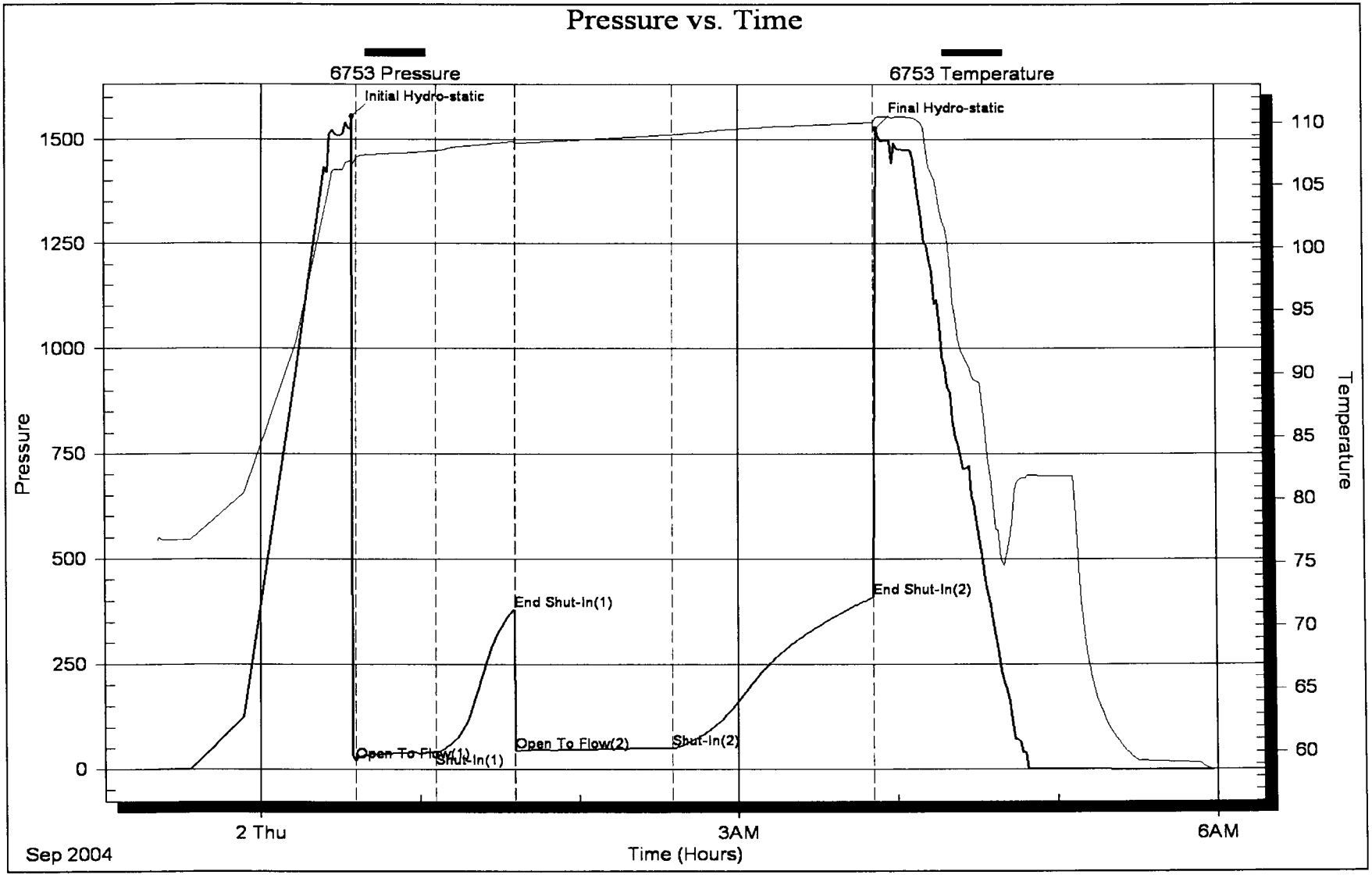
| Length ft | Description | Volume bbl |
|---|---|---|
| 65.00 | Mud | 0.629 |

Total Length: 65.00 ft Total Volume: 0.629 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6753 Pressure
6753 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
110
105
100
95
90
85
80
75
70
65
60
2 Thu
3AM
6AM
Sep 2004
Time (Hours)

# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 0139

№ 20343

05/03

## Test Ticket

Well Name & No. Berrick Unit #1 Test No. 1 Date 8-30-04

Company John O. Farmer Zone Tested LKC "A-C"

Address Po Box 352, Russell, Ks 67665 Elevation 1812 KB 1802 GL

Co. Rep / Geo. Matt Dreiling Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 23 Twp. 15s Rge. 13w Co. Russell State Ks

No. of Copies Reg Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 2993 - 3040 Initial Str Wt./Lbs. 39,000 Unseated Str Wt/Lbs. 39,000

Anchor Length 47' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 45,000

Top Packer Depth 2988 Tool Weight 3,000 ✓

Bottom Packer Depth 2993 Hole Size 7 7/8" Rubber Size 6 3/4" ✓

Total Depth 3040 Wt. Pipe Run 0 Drill Collar Run 31'

Mud Wt. 9.1 LCM Tr Vis. 50 WL 8.8 Drill Pipe Size 4½XH Ft. Run 2954

Blow Description IFP - Fair Blow, Built to 7"

ISI - Dead

FFP - 5" on opening, Built to BOB in 10 min.

FSI - Dead

Recovery - Total Feet 40 GIP 200 Ft. in DC _____ Ft. in DP _____

Rec. 40 Feet of SOCM 25 %gas 10 %oil %water 65 %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 107 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 4,000 ppm System

| | AK-1 | Alpine | | | | |
|---|---|---|---|---|---|---|
| (A) Initital Hydrostatic Mud | | 1493 | PSI | Recorder No. | 6753 | Test ✓ 900 |
| (B) First Initial Flow Pressure | | 17 | PSI | (depth) | 2996 | Elec. Rec. ✓ |
| (C) First Final Flow Pressure | | 26 | PSI | Recorder No. | 13252 | Jars |
| (D) Initial Shut-In Pressure | | 410 | PSI | (depth) | 3037 | Safety Jt. |
| (E) Second Initial Flow Pressure | | 18 | PSI | Recorder No. | | Circ Sub |
| (F) Second Final Flow Pressure | | 28 | PSI | (depth) | | Sampler |
| (G) Final Shut-In Pressure | | 563 | PSI | **Initial Opening** | 30 | Straddle |
| (Q) Final Hydrostatic Mud | | 1397 | PSI | Initial Shut-In | 30 | Ext. Packer |
| | | | | Final Flow | 45 | Shale Packer 76.50 |
| | | | | Final Shut-In | 60 | Mileage 45 1 Way |
| | | | | **T-On Location** | 17:30 | Sub Total: 976.50 |
| | | | | T-Started | 18:57 | Std. By |
| | | | | T-Open | 20:12 | Other |
| | | | | T-Pulled | 22:57 | Total: |
| | | | | T-Out | 00:05 | |

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Approved By _____

Our Representative Jason McJarrow

TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

05/03

№ 20344

# Test Ticket

Well Name & No. Berrick Unit #1 Test No. 2 Date 8-31-04

Company John O. Farmer Zone Tested LKC- "E-G"

Address Po Box 352, Russell, Ks. 67665 Elevation 1812 KB 1802 GL

Co. Rep / Geo. Matt Dreiling Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 23 Twp. 15 Rge. 13 Co. Russell State Ks

No. of Copies Reg Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3037 - 3095 Initial Str Wt./Lbs. 39,000 Unseated Str Wt/Lbs. 39,000

Anchor Length 58' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 42,000

Top Packer Depth 3032 Tool Weight 3000

Bottom Packer Depth 3037 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Total Depth 3095 Wt. Pipe Run 0 Drill Collar Run 31

Mud Wt. 9.1 LCM Tr Vis. 45 WL 9.4 Drill Pipe Size 4½ X H Ft. Run 3016

Blow Description IFP - Fair Blow, Built to 6"

ISI - Dead

FFP - Fair Blow, Built to 5½"

FSI - Dead

Recovery - Total Feet 90 GIP 60 Ft. in DC 31 Ft. in DP ~~29~~ 59

| | | | | | |
|---|---|---|---|---|---|
| Rec. 90 | Feet of Mud W/oil spots | %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. | Feet of | %gas | %oil | %water | %mud |

BHT 106 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 7,000 ppm System

| | AK-1 | Alpine | | | | | |
|---|---|---|---|---|---|---|---|
| (A) Initital Hydrostatic Mud | | 1516 | PSI | Recorder No. | 6753 | Test ✓ | 900 |
| (B) First Initial Flow Pressure | | 15 | PSI | (depth) | 3041 | Elec. Rec. | |
| (C) First Final Flow Pressure | | 38 | PSI | Recorder No. | 13252 | Jars | |
| (D) Initial Shut-In Pressure | | 550 | PSI | (depth) | 3092 | Safety Jt. | |
| (E) Second Initial Flow Pressure | | 38 | PSI | Recorder No. | | Circ Sub | |
| (F) Second Final Flow Pressure | | 56 | PSI | (depth) | | Sampler | |
| (G) Final Shut-In Pressure | | 554 | PSI | **Initial Opening** | 30 | Straddle | |
| (Q) Final Hydrostatic Mud | | 1475 | PSI | Initial Shut-In | 30 | Ext. Packer | |
| | | | | Final Flow | 45 | Shale Packer | |
| | | | | Final Shut-In | 60 | Mileage 45 | 76.50 |
| | | | | **T-On Location** | 6:00 | Sub Total: | 976.50 |
| | | | | T-Started | 6:13 | Std. By | ✓ |
| | | | | T-Open | 7:22 | Other | |
| | | | | T-Pulled | 10:07 | Total: | |
| | | | | T-Out | 11:25 | | |

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Approved By _____

Our Representative Jason McLemore

# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

05/03

№ 20345

## Test Ticket

Well Name & No. Berrick Unit #1 Test No. 3 Date 9-1-04

Company John O. Farmer Zone Tested LKC "J" - Arbuckle

Address P.O. Box 352, Russell, Ks 67665 Elevation 1812 KB 1802 GL

Co. Rep / Geo. Matt Dreiling Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 23 Twp. 15 Rge. 13 Co. Russell State Ks

No. of Copies Reg Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3163 - 3289 Initial Str Wt./Lbs. 39,000 Unseated Str Wt/Lbs. 45,000

Anchor Length 126' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 65,000

Top Packer Depth 3158 Tool Weight 3800

Bottom Packer Depth 3163 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Total Depth 3289 Wt. Pipe Run 0 Drill Collar Run 31

Mud Wt. 9.1 LCM Tr Vis. 45 WL 9.4 Drill Pipe Size 4½XH Ft. Run 3140

Blow Description IFP - Strong Blow, BOB in 1½ min, Died back to 9"

ISI - Dead

FFP - BOB in 2 min. Throughout

FSI - Dead

Recovery - Total Feet 1235 GIP _____ Ft. in DC 31 Ft. in DP 1204

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rec. 90 | Feet of SOCMW | 15 %gas | 10 %oil | 15 %water | 60 %mud |
| Rec. 1025 | Feet of 60CMW | 25 %gas | 15 %oil | 45 %water | 15 %mud |
| Rec. 120 | Feet of 50CMW | 5 %gas | 10 %oil | 80 %water | 5 %mud |
| Rec. _____ | Feet of _____ | %gas | %oil | %water | %mud |
| Rec. _____ | Feet of _____ | %gas | %oil | %water | %mud |

BHT 114 °F Gravity 35 °API D @ 80 °F Corrected Gravity 33 °API

RW .310 @ 75 °F Chlorides 19,000 ppm Recovery _____ Chlorides 7,000 ppm System

| | AK-1 | Alpine | | | | |
|---|---|---|---|---|---|---|
| (A) Initital Hydrostatic Mud | | 1596 PSI | Recorder No. | 6753 | Test | ✓ |
| (B) First Initial Flow Pressure | | 136 PSI | (depth) | 3167 | Elec. Rec. | ✓ |
| (C) First Final Flow Pressure | | 1020 PSI | Recorder No. | 13252 | Jars | |
| (D) Initial Shut-In Pressure | | 1046 PSI | (depth) | 3286 | Safety Jt. | |
| (E) Second Initial Flow Pressure | | 192 PSI | Recorder No. | | Circ Sub | |
| (F) Second Final Flow Pressure | | 574 PSI | (depth) | | Sampler | |
| (G) Final Shut-In Pressure | | 952 PSI | **Initial Opening** | 30 | Straddle | |
| (Q) Final Hydrostatic Mud | | 1562 PSI | Initial Shut-In | 45 | Ext. Packer | |
| | | | Final Flow | 45 | Shale Packer | |
| | | | Final Shut-In | 60 | Mileage | 95 |
| | | | **T-On Location** | 1:40 | Sub Total: | 976.50 |
| | | | T-Started | 2:28 | Std. By | |
| | | | T-Open | 4:00 | Other | |
| | | | T-Pulled | 7:00 | Total: | |
| | | | T-Out | 9:30 | | |

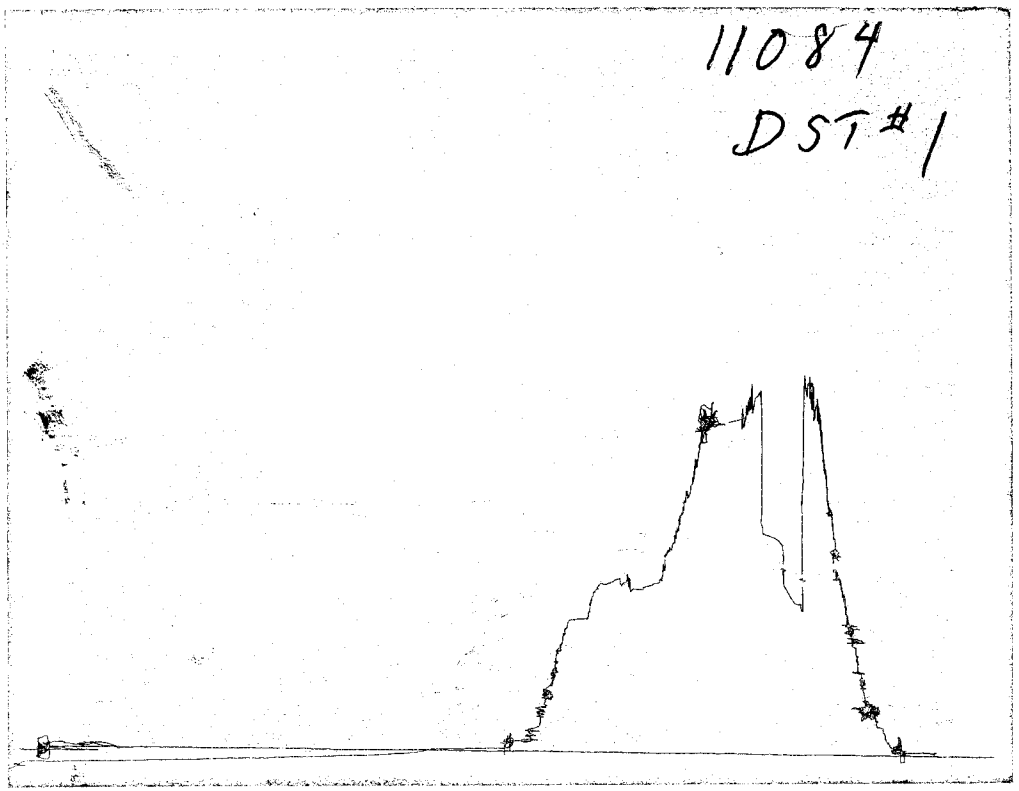
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Approved By Matt

Our Representative Jason McLemore

# CHART PAGE

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



# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

05/03

№ 20346

## Test Ticket

Well Name & No. Berrick Unit #1 Test No. 4 Date 9-1-04

Company John O. Farmer Zone Tested J

Address P.O Box 352, Russell, Ks 67665 Elevation 1810 KB 1802 GL

Co. Rep / Geo. Matt Dreiling Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 23 Twp. 15 Rge. 13 Co. Russell State Ks

No. of Copies Reg Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3163-3218 Initial Str Wt./Lbs. 41,000 Unseated Str Wt/Lbs. 41,000

Anchor Length 55 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 55,000

Top Packer Depth 3158 Tool Weight 3800

Bottom Packer Depth 3163 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Total Depth 3338 - LTD = 3339 Wt. Pipe Run 0 Drill Collar Run 31

Mud Wt. 9.4 LCM Tr Vis. 52 WL 8.8 Drill Pipe Size 4½XH Ft. Run 3142

Blow Description IFP - Weak Blow, Built to 4"

ISI - Dead

FFP - Weak Surface Blow

FSI - Dead

Recovery - Total Feet 65 GIP _____ Ft. in DC _____ Ft. in DP _____

| | | | | | | |
|---|---|---|---|---|---|---|
| Rec. 65 | Feet of Mud | %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. | Feet of | %gas | %oil | %water | %mud | |

BHT 110 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 8,000 ppm System

| | AK-1 | Alpine | |
|---|---|---|---|
| (A) Initital Hydrostatic Mud | | 1554 | PSI |
| (B) First Initial Flow Pressure | | 21 | PSI |
| (C) First Final Flow Pressure | | 41 | PSI |
| (D) Initial Shut-In Pressure | | 379 | PSI |
| (E) Second Initial Flow Pressure | | 45 | PSI |
| (F) Second Final Flow Pressure | | 51 | PSI |
| (G) Final Shut-In Pressure | | 410 | PSI |
| (Q) Final Hydrostatic Mud | | 1526 | PSI |

| | |
|---|---|
| Recorder No. | 6753 |
| (depth) | 3175 |
| Recorder No. | 13252 |
| (depth) | 3335 |
| Recorder No. | |
| (depth) | |
| **Initial Opening** | 30 |
| Initial Shut-In | 30 |
| Final Flow | 60 |
| Final Shut-In | 60 |
| **T-On Location** | ~~22:00~~ |
| T-Started | 23:21 |
| T-Open | 00:35 |
| T-Pulled | 3:35 |
| T-Out | 5:30 |

| | |
|---|---|
| Test ✓ | 900 |
| Elec. Rec. ✓ | |
| Jars | |
| Safety Jt. | |
| Circ Sub | |
| Sampler | |
| Straddle ✓ | 250 |
| Ext. Packer | |
| Shale Packer | |
| Mileage 45 | 76.50 |
| Sub Total: | 1226.50 |
| Std. By | |
| Other | |
| Total: | |

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Approved By _____

Our Representative Jason McLemore

# CHART PAGE

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

