

**TRILOBITE
TESTING, INC.**

RECEIVED

**DEC 12 2001
KCC WICHITA**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water #300

Wichita, KS 67201

CONFIDENTIAL

KCC

DEC 04 2001

ATTN: Cutis Covey

CONFIDENTIAL

1-3S-41W Cheyenne KS

Buffington #1

ORIGINAL

Start Date: 2001.11.17 @ 19:05:52

End Date: 2001.11.18 @ 01:24:52

Job Ticket #: 14895

DST #: 1

Release

FEB 14 2003

**From
Confidential**

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Company

Buffington #1-1

1-3S-41W Cheyenne KS

DST # 1

LKC "A-D"

2001.11.17



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14895

DST#: 1

ATTN: Cutis Covey

Test Start: 2001.11.17 @ 19:05:52

GENERAL INFORMATION:

Formation: **L/KC "A-D"**

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

Time Tool Opened: 20:32:37

Time Test Ended: 01:24:52

Interval: **4360.00 ft (KB) To 4459.00 ft (KB) (TVD)**

Total Depth: **4459.00 ft (KB) (TVD)**

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

Test Type: **Conventional Bottom Hole**

Tester: **Rod Steinbrink**

Unit No: **22**

Reference Elevations: **3547.00 ft (KB)**

3542.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 3030

Inside

Press@RunDepth: **119.64 psig @ 4361.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2001.11.17**

End Date:

2001.11.18

Last Calib.:

1899.12.30

Start Time: **19:05:57**

End Time:

01:24:51

Time On Btmr:

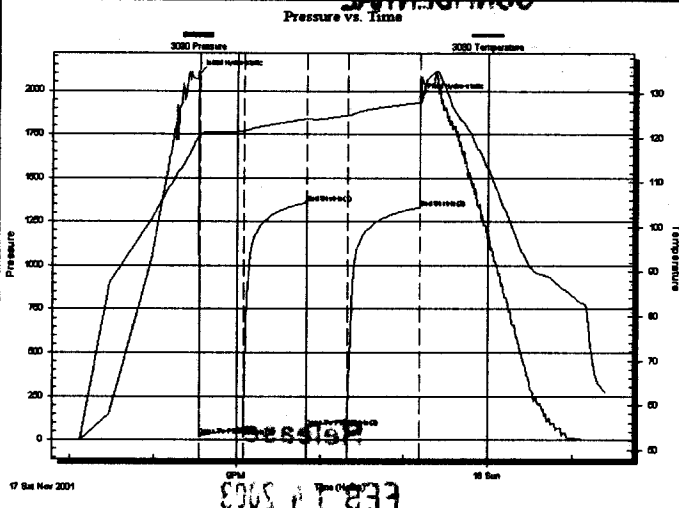
2001.11.17 @ 20:32:22

Time Off Btmr:

2001.11.17 @ 23:11:22

TEST COMMENT: **F; Weak Blow built to 3 IS; No return**
FF; Surface blow return @ 1600 steady thru
FS; No return

CONFIDENTIAL



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2096.89 | 120.36 | Initial Hydro-static |
| 1 | 20.93 | 120.44 | Open To Flow (1) |
| 33 | 68.99 | 121.44 | Shut-In(1) |
| 78 | 1358.13 | 124.20 | End Shut-In(1) |
| 78 | 73.84 | 124.21 | Open To Flow (2) |
| 108 | 119.64 | 124.99 | Shut-In(2) |
| 159 | 1330.67 | 127.90 | End Shut-In(2) |
| 159 | 1965.63 | 127.91 | Final Hydro-static |

RECOVERY

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| | RW .30@80F | |
| 70.00 | MW 80%w 20%m | 0.34 |
| 120.00 | Water | 0.59 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Buffington #1-1

250 N Water #30
Wichita, KS 67201

CONFIDENTIAL

1-3S-41W Cheyenne KS

Job Ticket: 14895

DST#: 1

ATTN: Cutis Covey

Test Start: 2001.11.17 @ 19:05:52

Tool Information

| | | | | |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3868.00 ft | Diameter: 3.80 inches | Volume: 54.26 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: 30000.00 lb |
| Drill Collar: | Length: 470.00 ft | Diameter: 2.25 inches | Volume: 2.31 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 56.57 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.00 ft | | | String Weight: Initial 55000.00 lb |
| Depth to Top Packer: | 4360.00 ft | | | Final 55000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval betw een Packers: | 99.00 ft | | | |
| Tool Length: | 126.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |
| Tool Comments: | | | | |

ORIGINAL

KCC

DEC 04 2001

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| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| S.I. Tool | 5.00 | | | 4338.00 | |
| HMV | 5.00 | | | 4343.00 | |
| Jars | 5.00 | | | 4348.00 | |
| Safety Joint | 2.00 | | | 4350.00 | |
| Packer | 5.00 | | | 4355.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4360.00 | |
| Stubb | 1.00 | | | 4361.00 | |
| Recorder | 0.00 | 3030 | Inside | 4361.00 | |
| Perforations | 29.00 | | | 4390.00 | |
| C.O. Sub | 1.00 | | | 4391.00 | |
| Anchor | 62.00 | | | 4453.00 | |
| C.O. Sub | 1.00 | | | 4454.00 | |
| Recorder | 0.00 | 13371 | Outside | 4454.00 | |
| Bullnose | 5.00 | | | 4459.00 | 99.00 Bottom Packers & Anchor |

Total Tool Length: 126.00

**Release
FEB 14 2003
From
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Buffington #1-1

250 N Water #100
Wichita, KS 67212

1-3S-41W Cheyenne KS

Job Ticket: 14895

DST#: 1

ATTN: Cutis Covey

Test Start: 2001.11.17 @ 19:05:52

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:

20000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.16 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| | RW .30@80F | |
| 70.00 | MW 80%w 20%m | 0.344 |
| 120.00 | Water | 0.590 |

Total Length: -999809.00 ft

Total Volume:

0.934 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .30 @ 80 deg =

Release
FEB 14 2003
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Serial #: 3030

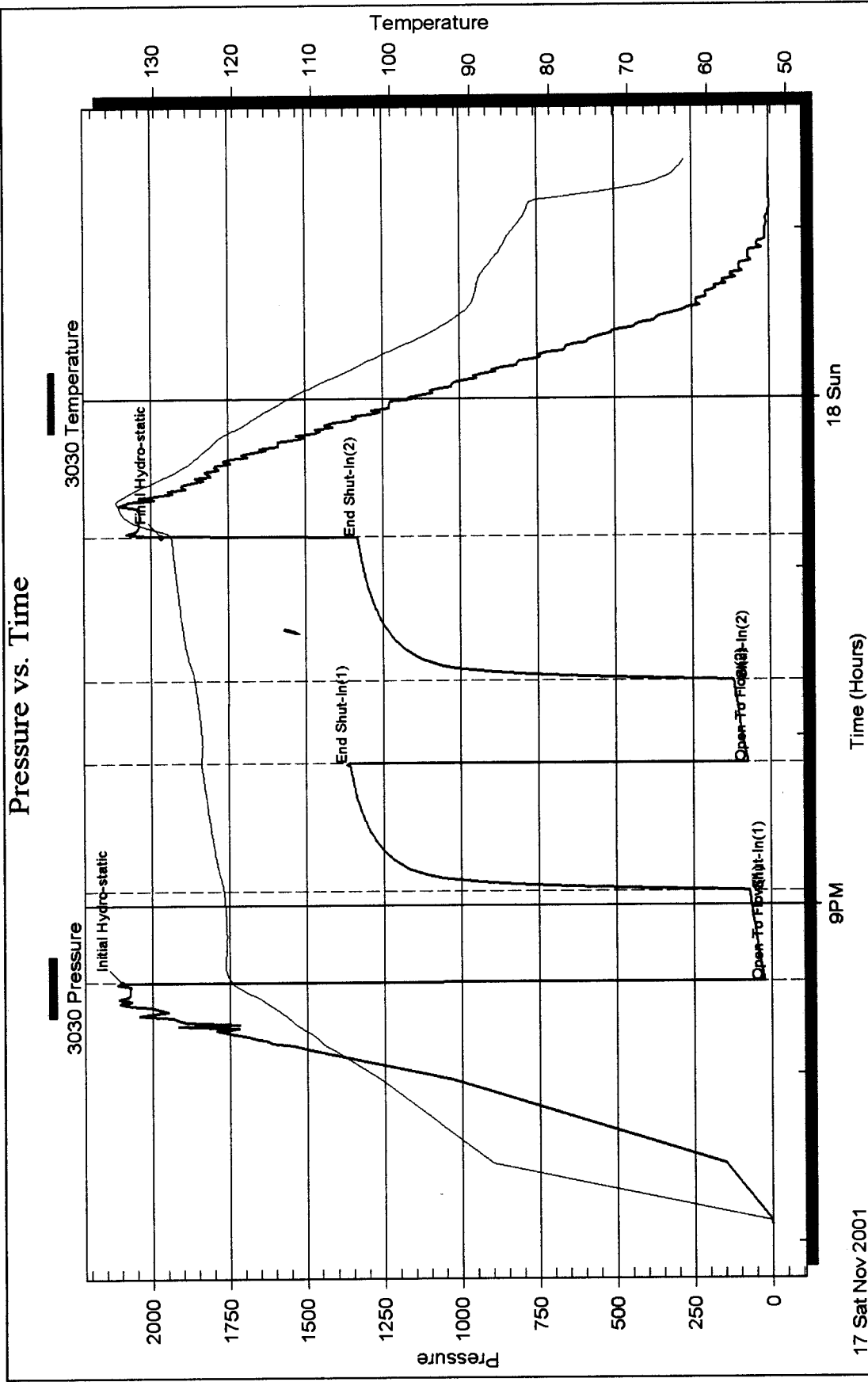
Inside

Murfin Drilling Company

1-3S-41W Cheyenne KS

DST Test Number: 1

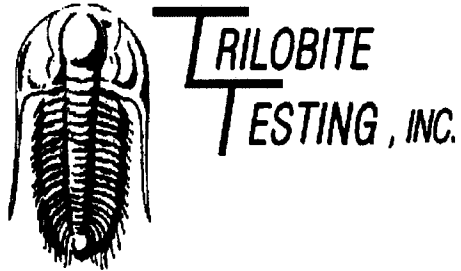
Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 14895

Printed: 2001.11.27 @ 12:35:00 Page 5



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water #300
Wichita, KS 67202

ATTN: Cutis Covey

1-3S-41W Cheyenne KS

Buffington #1-1

Start Date: 2001.11.18 @ 18:25:33

End Date: 2001.11.19 @ 01:26:43

Job Ticket #: 14896 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water #300
Wichita, KS 67202
ATTN: Curtis Covey

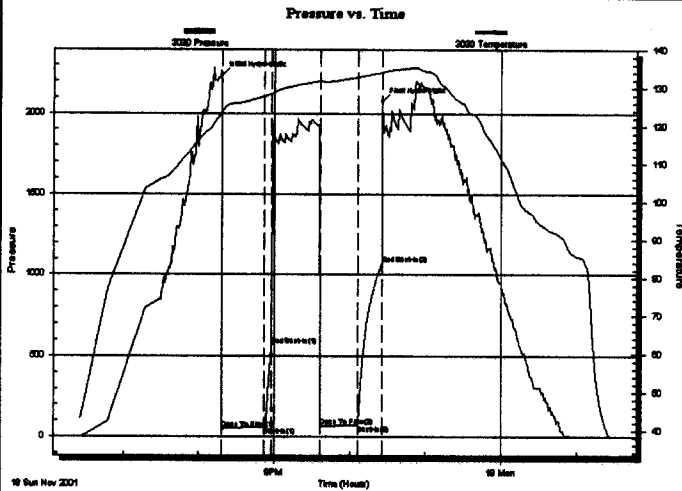
Buffington #1-1
1-3S-41W Cheyenne KS
Job Ticket: 14896 **DST#: 2**
Test Start: 2001.11.18 @ 18:25:33

GENERAL INFORMATION:

Formation: **L/KC "H"**
Deviated: **No Whipstock:** **ft (KB)**
Time Tool Opened: **20:18:43**
Time Test Ended: **01:26:43**
Interval: **4478.00 ft (KB) To 4565.00 ft (KB) (TVD)**
Total Depth: **4565.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Test Type: **Conventional Bottom Hole**
Tester: **Rod Steinbrink**
Unit No: **22**
Reference Elevations: **3547.00 ft (KB)**
3542.00 ft (CF)
KB to GR/CF: **5.00 ft**

Serial #: 3030 **Inside**
Press@RunDepth: **72.38 psig @ 4479.00 ft (KB)**
Start Date: **2001.11.18** End Date: **2001.11.19**
Start Time: **18:25:33** End Time: **01:26:42**
Capacity: **7000.00 psig**
Last Calib.: **1899.12.30**
Time On Btm: **2001.11.18 @ 20:18:13**
Time Off Btm: **2001.11.18 @ 22:25:28**

TEST COMMENT: **F; Weak intermitten 1" blow**
FF; No return



PRESSURE SUMMARY

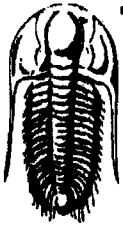
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2233.70 | 123.32 | Initial Hydro-static |
| 1 | 49.51 | 123.51 | Open To Flow (1) |
| 34 | 60.77 | 127.72 | Shut-In (1) |
| 40 | 562.15 | 128.39 | End Shut-In (1) |
| 79 | 64.47 | 131.73 | Open To Flow (2) |
| 108 | 72.38 | 132.70 | Shut-In (2) |
| 127 | 1065.23 | 133.95 | End Shut-In (2) |
| 128 | 2074.40 | 133.98 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 60.00 | Drig Mud | 0.30 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14896

DST#: 2

ATTN: Curtis Covey

Test Start: 2001.11.18 @ 18:25:33

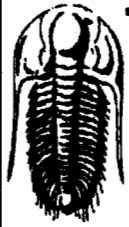
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3991.00 ft | Diameter: 3.80 inches | Volume: 55.98 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: 30000.00 lb |
| Drill Collar: | Length: 470.00 ft | Diameter: 2.25 inches | Volume: 2.31 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 58.29 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 10.00 ft | | | String Weight: Initial 55000.00 lb |
| Depth to Top Packer: | 4478.00 ft | | | Final 55000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 87.00 ft | | | |
| Tool Length: | 114.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| S.I. Tool | 5.00 | | | 4456.00 | |
| HMV | 5.00 | | | 4461.00 | |
| Jars | 5.00 | | | 4466.00 | |
| Safety Joint | 2.00 | | | 4468.00 | |
| Packer | 5.00 | | | 4473.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4478.00 | |
| Stubb | 1.00 | | | 4479.00 | |
| Recorder | 0.00 | 3030 | Inside | 4479.00 | |
| Perforations | 18.00 | | | 4497.00 | |
| C.O. Sub | 1.00 | | | 4498.00 | |
| Anchor | 61.00 | | | 4559.00 | |
| C.O. Sub | 1.00 | | | 4560.00 | |
| Recorder | 0.00 | 13371 | Outside | 4560.00 | |
| Bullnose | 5.00 | | | 4565.00 | 87.00 Bottom Packers & Anchor |

Total Tool Length: 114.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14896

DST#: 2

ATTN: Cutis Covey

Test Start: 2001.11.18 @ 18:25:33

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:

bbbl

Water Loss: 7.16 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 60.00 | Drig Mud | 0.295 |

Total Length: 60.00 ft

Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

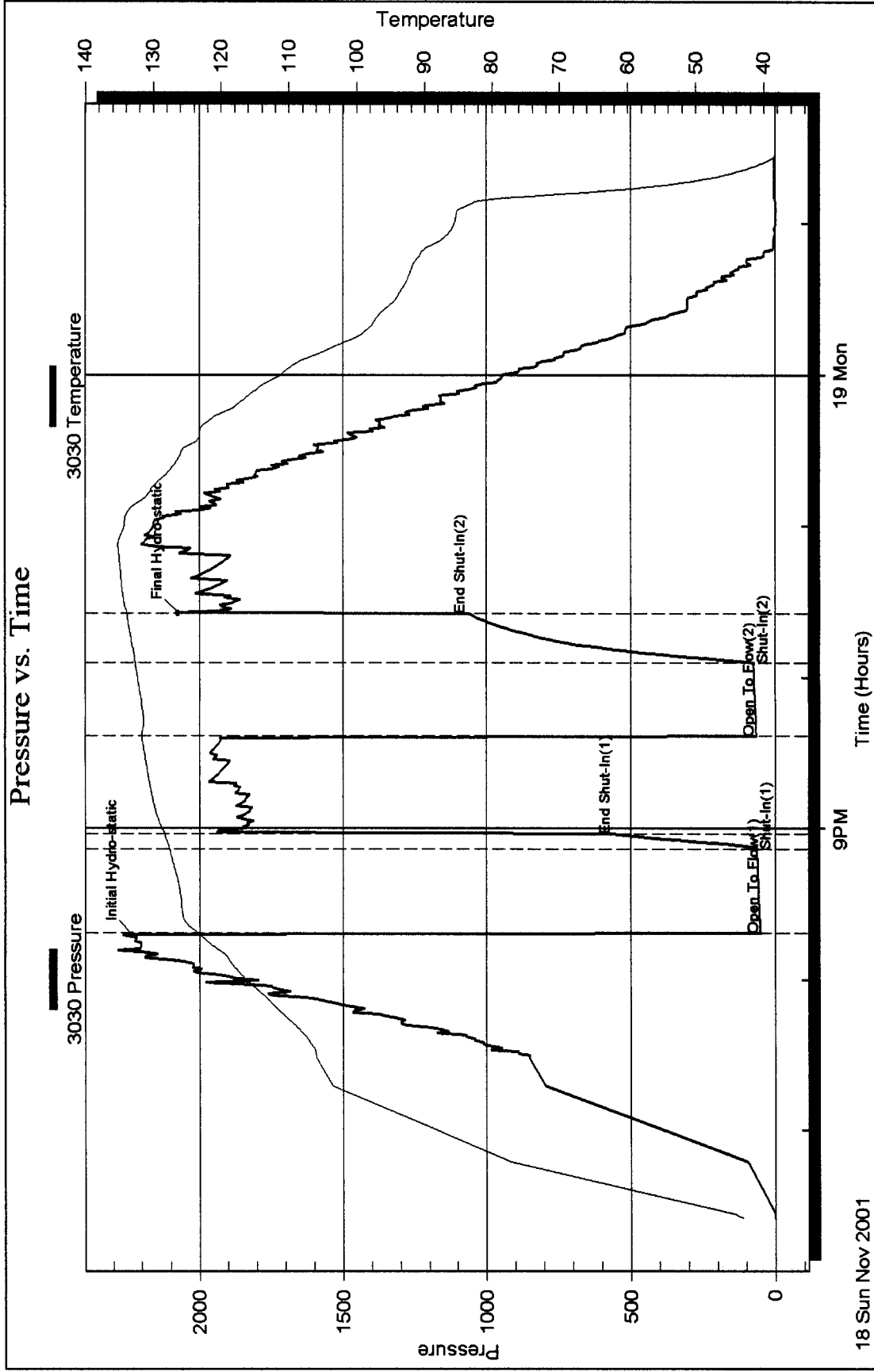
Serial #: 3030

Inside

Murfin Drilling Company

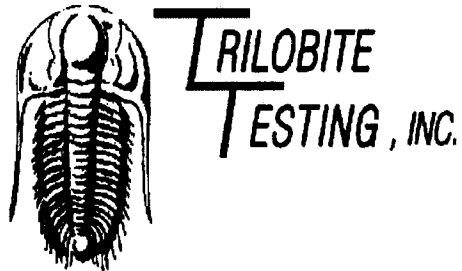
1-3S-41W Cheyenne KS

DST Test Number: 2



18 Sun Nov 2001

19 Mon



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water #300
Wichita, KS 67202

ATTN: Cutis Covey

1-3S-41W Cheyenne KS

Buffington #1-1

Start Date: 2001.11.19 @ 10:45:19

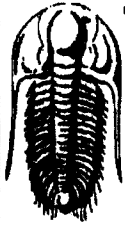
End Date: 2001.11.19 @ 17:01:49

Job Ticket #: 14897 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water #300
Wichita, KS 67202

ATTN: Curtis Covey

Buffington #1-1

1-3S-41W Cheyenne KS

Job Ticket: 14897

DST#: 3

Test Start: 2001.11.19 @ 10:45:19

GENERAL INFORMATION:

Formation: **L/KC "J"**

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

Time Tool Opened: 12:32:49

Time Test Ended: 17:01:49

Test Type: **Conventional Bottom Hole**

Tester: **Rod Steinbrink**

Unit No: **22**

Interval: **4575.00 ft (KB) To 4601.00 ft (KB) (TVD)**

Total Depth: **4601.00 ft (KB) (TVD)**

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

Reference Elevations: **3547.00 ft (KB)**

3542.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 3030

Inside

Press@RunDepth: **15.28 psig @ 4576.00 ft (KB)**

Start Date: **2001.11.19**

End Date:

2001.11.19

Capacity: **7000.00 psig**

Last Calib.: **1899.12.30**

Start Time: **10:45:24**

End Time:

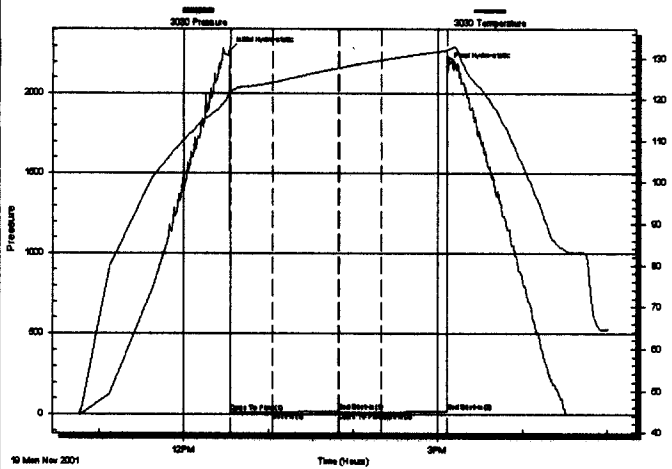
17:01:48

Time On Btm: **2001.11.19 @ 12:32:34**

Time Off Btm: **2001.11.19 @ 15:06:33**

TEST COMMENT: F; Very weak surface blow died in 25 mins
FF; No return blow

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2265.90 | 121.34 | Initial Hydro-static |
| 1 | 12.20 | 121.43 | Open To Flow (1) |
| 31 | 14.36 | 124.08 | Shut-in(1) |
| 77 | 21.79 | 127.61 | End Shut-in(1) |
| 78 | 13.94 | 127.65 | Open To Flow (2) |
| 108 | 15.28 | 129.51 | Shut-in(2) |
| 154 | 21.25 | 131.90 | End Shut-in(2) |
| 154 | 2171.69 | 131.92 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 2.00 | Drig Mud | 0.01 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14897

DST#: 3

ATTN: Cutis Covey

Test Start: 2001.11.19 @ 10:45:19

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4088.00 ft | Diameter: 3.80 inches | Volume: 57.34 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: 30000.00 lb |
| Drill Collar: | Length: 470.00 ft | Diameter: 2.25 inches | Volume: 2.31 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 59.65 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 10.00 ft | | | String Weight: Initial 55000.00 lb |
| Depth to Top Packer: | 4575.00 ft | | | Final 55000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 26.00 ft | | | |
| Tool Length: | 53.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| S.I. Tool | 5.00 | | | 4553.00 | |
| HMV | 5.00 | | | 4558.00 | |
| Jars | 5.00 | | | 4563.00 | |
| Safety Joint | 2.00 | | | 4565.00 | |
| Packer | 5.00 | | | 4570.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4575.00 | |
| Stubb | 1.00 | | | 4576.00 | |
| Recorder | 0.00 | 3030 | Inside | 4576.00 | |
| Perforations | 20.00 | | | 4596.00 | |
| Recorder | 0.00 | 13371 | Outside | 4596.00 | |
| Bullnose | 5.00 | | | 4601.00 | 26.00 Bottom Packers & Anchor |

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14897

DST#: 3

ATTN: Cutis Covey

Test Start: 2001.11.19 @ 10:45:19

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: 7.16 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 2.00 | Drig Mud | 0.010 |

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 3030

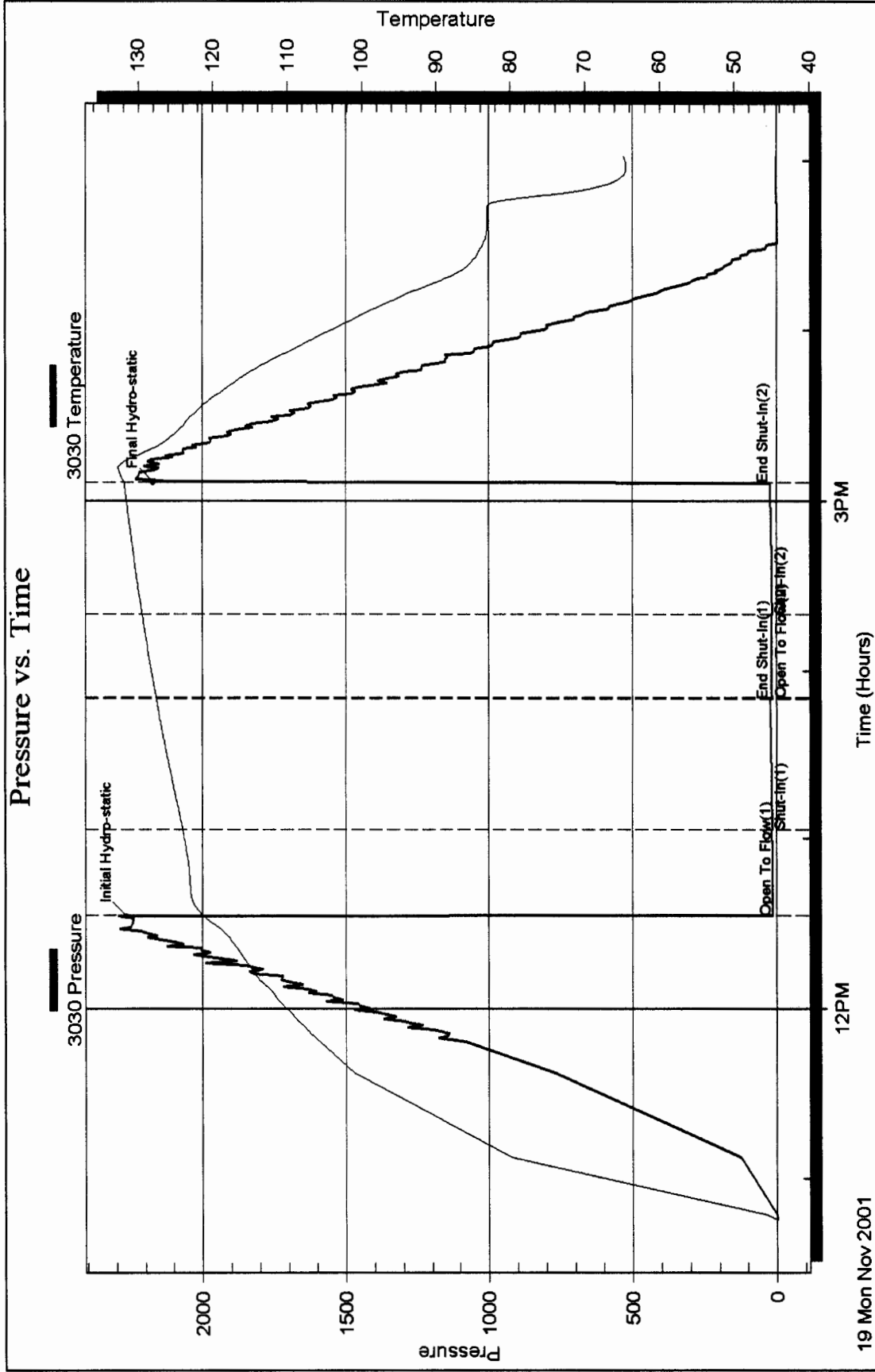
Inside

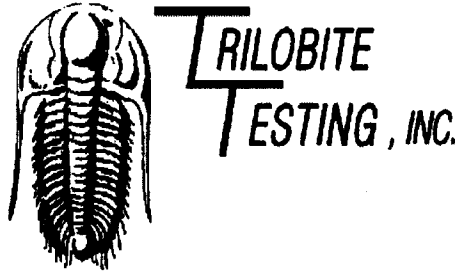
Murfin Drilling Company

1-3S-41W Cheyenne KS

DST Test Number: 3

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water #300
Wichita, KS 67202

ATTN: Cutis Covey

1-3S-41W Cheyenne KS

Buffington #1-1

Start Date: 2001.11.21 @ 07:02:17

End Date: 2001.11.21 @ 15:05:17

Job Ticket #: 14898 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14898

DST#: 4

ATTN: Cutis Covey

Test Start: 2001.11.21 @ 07:02:17

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3979.00 ft | Diameter: 3.80 inches | Volume: 55.81 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: 30000.00 lb |
| Drill Collar: | Length: 610.00 ft | Diameter: 2.25 inches | Volume: 3.00 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 58.81 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 4.00 ft | | | String Weight: Initial 55000.00 lb |
| Depth to Top Packer: | 4610.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 241.00 ft | | | |
| Tool Length: | 266.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|------------------------------------|
| S.I. Tool | 5.00 | | | 4590.00 | |
| HMV | 5.00 | | | 4595.00 | |
| Jars | 5.00 | | | 4600.00 | |
| Packer | 5.00 | | | 4605.00 | 25.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4610.00 | |
| Stubb | 1.00 | | | 4611.00 | |
| Perforations | 5.00 | | | 4616.00 | |
| Recorder | 0.00 | 3030 | Inside | 4616.00 | |
| C.O. Sub | 1.00 | | | 4617.00 | |
| Anchor | 31.00 | | | 4648.00 | |
| C.O. Sub | 1.00 | | | 4649.00 | |
| Perforations | 30.00 | | | 4679.00 | |
| Recorder | 0.00 | 13371 | Outside | 4679.00 | |
| Blank Off Sub | 1.00 | | | 4680.00 | 241.00 Tool Interval |
| Packer | 5.00 | | | 4685.00 | |
| Stubb | 1.00 | | | 4686.00 | |
| Perforations | 3.00 | | | 4689.00 | |
| C.O. Sub | 1.00 | | | 4690.00 | |
| Anchor | 155.00 | | | 4845.00 | |
| C.O. Sub | 1.00 | | | 4846.00 | |
| Recorder | 0.00 | 13276 | Below | 4846.00 | |
| Bullnose | 5.00 | | | 4851.00 | 1000265.00 Bottom Packers & Anchor |

Total Tool Length: 266.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Buffington #1-1

250 N Water #300
Wichita, KS 67202

1-3S-41W Cheyenne KS

Job Ticket: 14898

DST#: 4

ATTN: Curtis Covey

Test Start: 2001.11.21 @ 07:02:17

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:

25000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------|---------------|
| 290.00 | MW 85%w tr 15%mud | 1.426 |
| 795.00 | Wtr | 8.237 |

Total Length: 1085.00 ft

Total Volume:

9.663 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

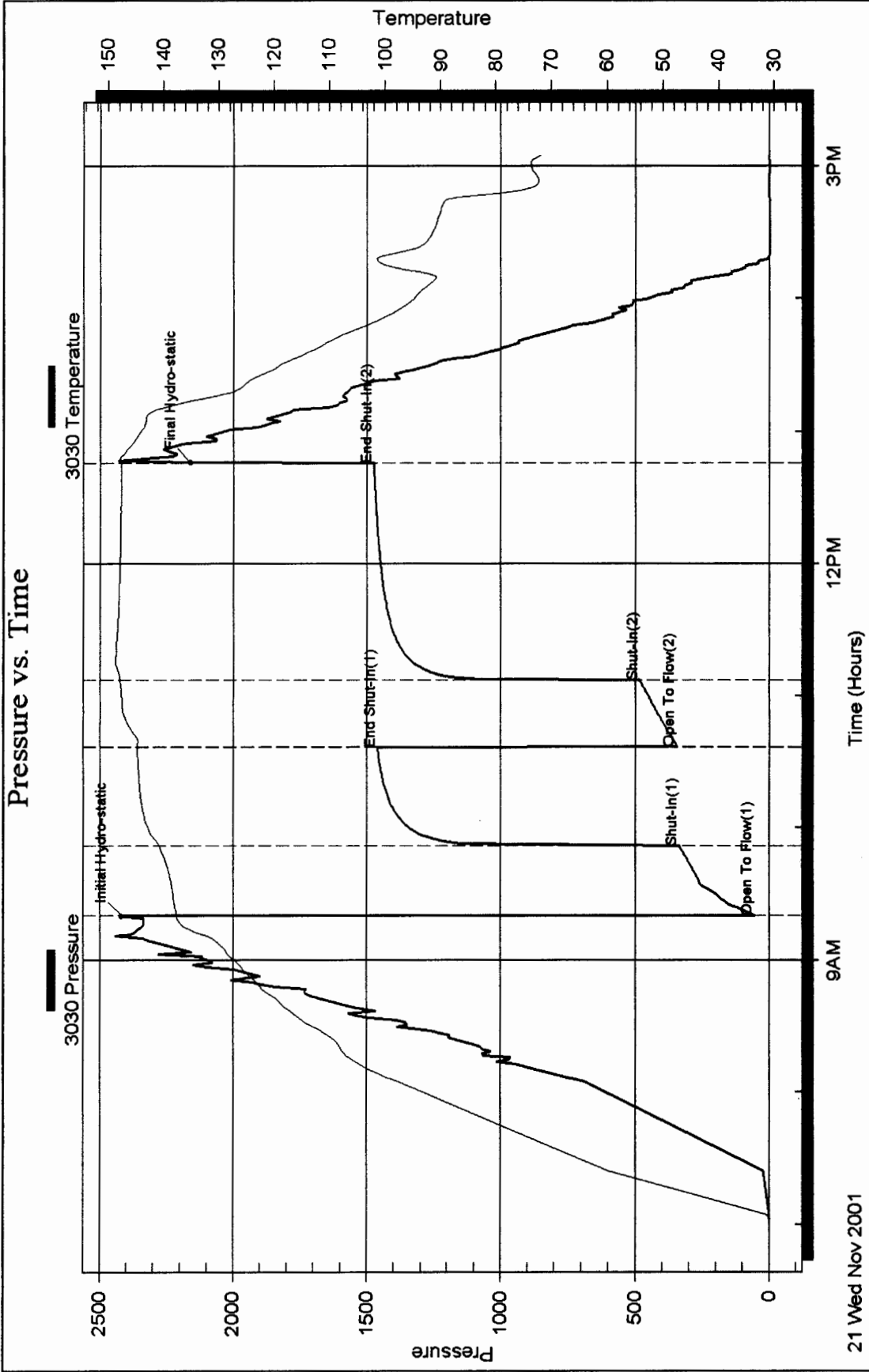
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .30 @ 65 deg =

Pressure vs. Time



21 Wed Nov 2001

9AM

12PM

3PM