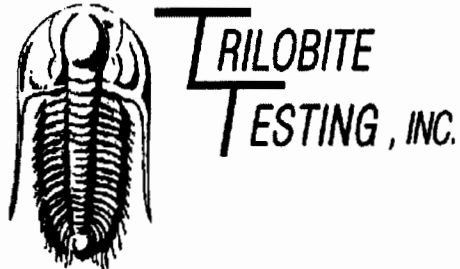


RECEIVED
KANSAS CORPORATION COMMISSION

MAY 09 2002

CONSERVATION DIVISION
WICHITA, KS



DRILL STEM TEST REPORT

Prepared For: **Pickrell Drilling Company**

100 S. Main Ste. 105
Wichita, KS 67202

ATTN: Roger L. Martin

*15-033-
21288*

36-31s-20w Comanche

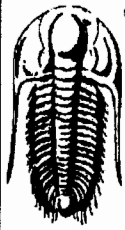
Gray B et.al. #1

Start Date: 2001.12.31 @ 21:53:40

End Date: 2002.01.01 @ 09:21:55

Job Ticket #: 15366 DST #: 1

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15366

DST#: 1

ATTN: Roger L.Martin

Test Start: 2001.12.31 @ 21:53:40

GENERAL INFORMATION:

Formation: **Mississippian**

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

Time Tool Opened: 01:38:25

Time Test Ended: 09:21:55

Test Type: **Conventional Bottom Hole**

Tester: **Gary Pevoteaux**

Unit No: **13**

Interval: **5079.00 ft (KB) To 5176.00 ft (KB) (TVD)**

Reference Elevations: **2077.00 ft (KB)**

Total Depth: **5176.00 ft (KB) (TVD)**

2072.00 ft (CF)

Hole Diameter: **7.88 inches** Hole Condition: **Poor**

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

Serial #: 3289

Inside

Press@RunDepth: **176.90 psig @ 5080.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2001.12.31**

End Date:

2002.01.01

Last Calib.:

2002.01.01

Start Time: **21:53:45**

End Time:

09:21:55

Time On Btm:

2002.01.01 @ 01:38:10

Time Off Btm:

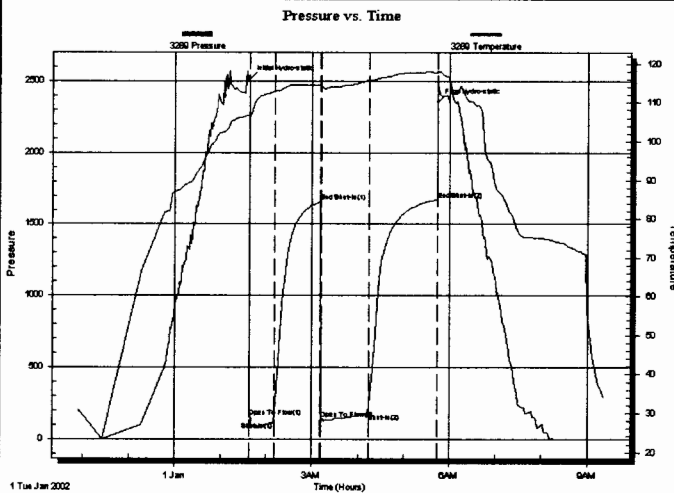
2002.01.01 @ 05:43:39

TEST COMMENT: F:Strong blow . B.O.B in 50 secs. GTS i n 12 mins. (see gas volume report)

IS:No blow .

FF:Strong blow . (see gas volume report)

FSI:No blow .



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2512.96 | 106.59 | Initial Hydro-static |
| 1 | 154.69 | 105.94 | Open To Flow (1) |
| 33 | 117.04 | 112.81 | Shut-In(1) |
| 93 | 1655.98 | 114.43 | End Shut-In(1) |
| 94 | 142.58 | 114.23 | Open To Flow (2) |
| 155 | 176.90 | 115.84 | Shut-In(2) |
| 246 | 1672.44 | 117.83 | End Shut-In(2) |
| 246 | 2352.38 | 118.24 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 60.00 | OCWM 20%o 15%w 65%m | 0.30 |
| 120.00 | O&GCM 10%g 22%o 8%w 60%m | 0.59 |
| 125.00 | O&GCM 5%o 25%g 70%m | 0.93 |
| 60.00 | SOCGM 3%o 10%g 87%m | 0.84 |
| 75.00 | GCM 20%g 80%m | 1.05 |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.25 | 2.00 | 26.02 |
| Last Gas Rate | 0.25 | 1.00 | 24.43 |
| Max. Gas Rate | 0.25 | 4.00 | 29.19 |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Fickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15366

DST#: 1

ATTN: Roger L.Martin

Test Start: 2001.12.31 @ 21:53:40

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4786.00 ft | Diameter: 3.80 inches | Volume: 67.13 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 lb |
| Drill Collar: | Length: 270.00 ft | Diameter: 2.25 inches | Volume: 1.33 bbl | Weight to Pull Loose: 90000.00 lb |
| | | | <u>Total Volume: 68.46 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 4.00 ft | | | String Weight: Initial 80000.00 lb |
| Depth to Top Packer: | 5079.00 ft | | | Final 80500.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 97.00 ft | | | |
| Tool Length: | 124.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|---------------|------------|----------|------------|-------------------------------|
| C.O. Sub | 1.00 | | | 5053.00 | |
| S.I. Tool | 5.00 | | | 5058.00 | |
| HMV | 5.00 | | | 5063.00 | |
| Jars | 5.00 | | | 5068.00 | |
| Safety Joint | 2.00 | | | 5070.00 | |
| Packer | 4.00 | | | 5074.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 5079.00 | |
| Stubb | 1.00 | | | 5080.00 | |
| Recorder | 0.00 | 3289 | Inside | 5080.00 | |
| Perforations | 4.00 | | | 5084.00 | |
| C.O. Sub | 1.00 | | | 5085.00 | |
| Blank Spacing | 63.00 | | | 5148.00 | |
| C.O. Sub | 1.00 | | | 5149.00 | |
| Perforations | 25.00 | | | 5174.00 | |
| Recorder | 0.00 | 10242 | Outside | 5174.00 | |
| Bullnose | 2.00 | | | 5176.00 | 97.00 Bottom Packers & Anchor |
| Total Tool Length: | 124.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15366

DST#: 1

ATTN: Roger L.Martin

Test Start: 2001.12.31 @ 21:53:40

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:

4000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|--------------------------|----------------|
| 60.00 | OCWM 20%o 15%w 65%m | 0.295 |
| 120.00 | O&GCM 10%g 22%o 8%w 60%m | 0.590 |
| 125.00 | O&GCM 5%o 25%g 70%m | 0.934 |
| 60.00 | SOCGM 3%o 10%g 87%m | 0.842 |
| 75.00 | GCM 20%g 80%m | 1.052 |

Total Length: 440.00 ft

Total Volume: 3.713 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: gp

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Pickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15366

DST#: 1

ATTN: Roger L.Martin

Test Start: 2001.12.31 @ 21:53:40

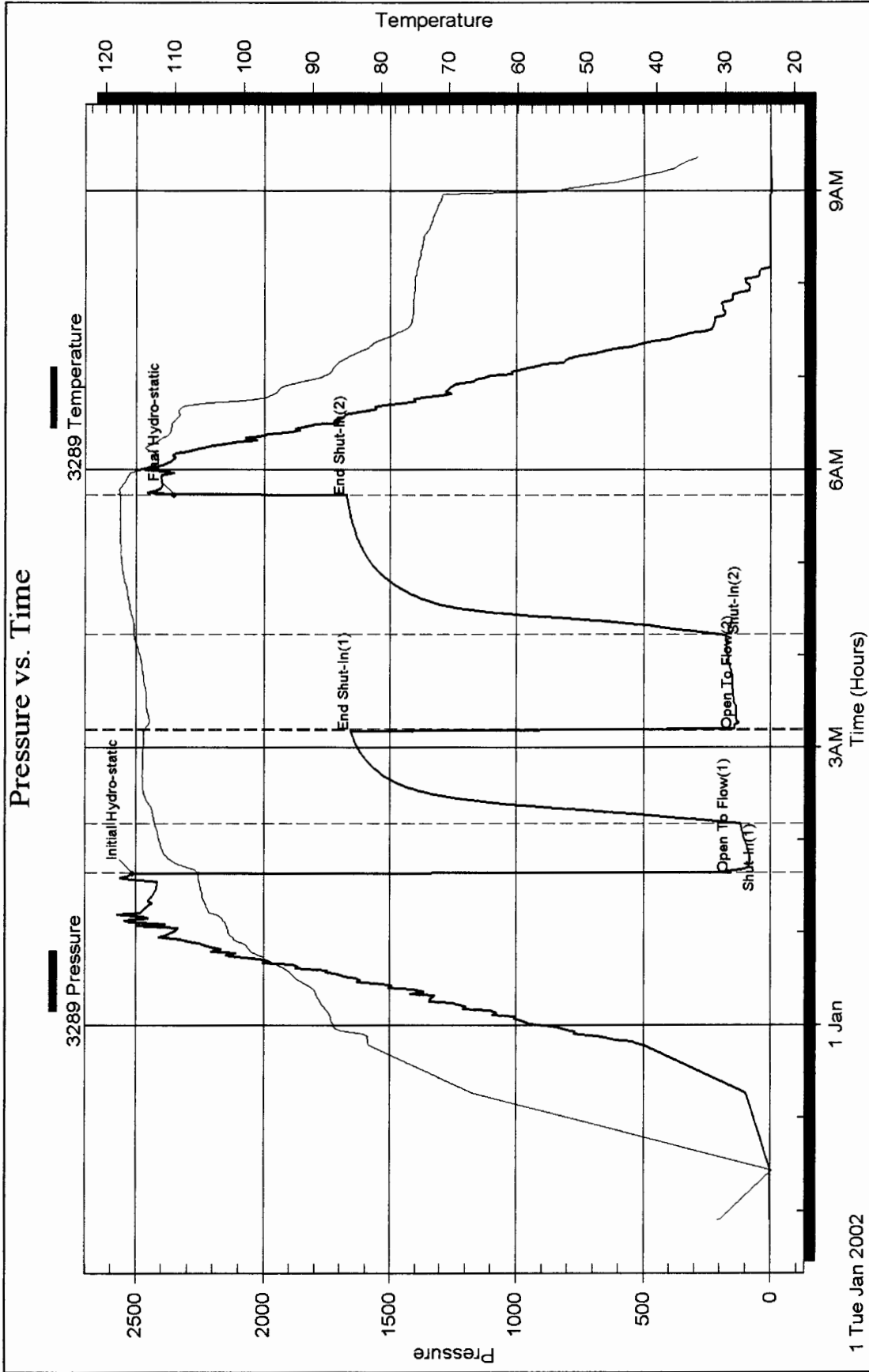
Gas Rates Information

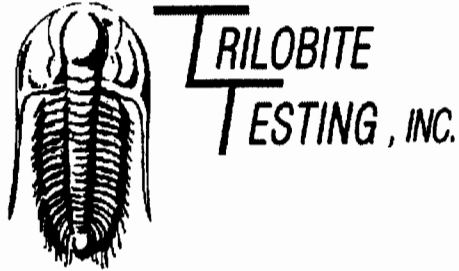
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

| Flow Period | Elapsed Time | Choke (mm) | Pressure (kPaa) | Gas Rate (m ³ /d) |
|-------------|--------------|------------|-----------------|------------------------------|
| 1 | 15 | 0.25 | 2.00 | 26.02 |
| 1 | 15 | 0.25 | 2.00 | 26.02 |
| 1 | 20 | 0.25 | 3.00 | 27.60 |
| 1 | 25 | 0.25 | 3.00 | 27.60 |
| 1 | 30 | 0.25 | 3.00 | 27.60 |
| 2 | 5 | 0.25 | 4.00 | 29.19 |
| 2 | 10 | 0.25 | 4.00 | 29.19 |
| 2 | 15 | 0.25 | 3.00 | 27.60 |
| 2 | 20 | 0.25 | 3.00 | 27.60 |
| 2 | 25 | 0.25 | 2.00 | 26.02 |
| 2 | 30 | 0.25 | 2.00 | 26.02 |
| 2 | 35 | 0.25 | 2.00 | 26.02 |
| 2 | 40 | 0.25 | 1.00 | 24.43 |
| 2 | 45 | 0.25 | 1.00 | 24.43 |
| 2 | 50 | 0.25 | 1.00 | 24.43 |
| 2 | 55 | 0.25 | 1.00 | 24.43 |

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Pickrell Drilling Company**

100 S. Main Ste. 105
Wichita, KS 67202

ATTN: Roger L. Martin

36-31s-20w Comanche

Gray B et.al. #1

Start Date: 2002.01.01 @ 20:24:01

End Date: 2002.01.02 @ 06:21:16

Job Ticket #: 15367 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Pickrell Drilling Company

Gray B et.al. #1

36-31s-20w Comanche

DST # 2

Mississippian

2002.01.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pickrell Drilling Company
100 S. Main Ste. 105
Wichita, KS 67202
ATTN: Roger L.Martin

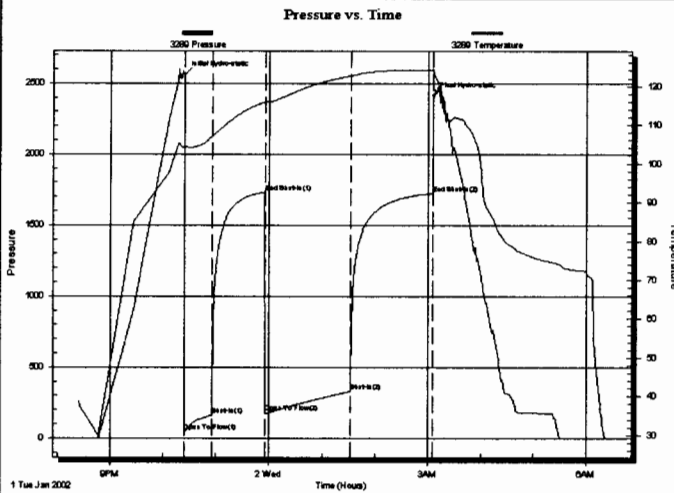
Gray B et.al. #1
36-31s-20w Comanche
Job Ticket: 15367 **DST#: 2**
Test Start: 2002.01.01 @ 20:24:01

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 22:24:31
Time Test Ended: 06:21:16
Test Type: **Conventional Bottom Hole**
Tester: **Gary Pevoteaux**
Unit No: **13**
Interval: **5176.00 ft (KB) To 5221.00 ft (KB) (TVD)**
Reference Elevations: 2077.00 ft (KB)
Total Depth: 5221.00 ft (KB) (TVD) 2072.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: **Poor** KB to GR/CF: 5.00 ft

Serial #: 3289 Inside
Press@RunDepth: 332.82 psig @ 5177.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2002.01.01 End Date: 2002.01.02 Last Calib.: 1899.12.30
Start Time: 20:24:06 End Time: 06:21:16 Time On Btm: 2002.01.01 @ 22:24:16
Time Off Btm: 2002.01.02 @ 03:05:45

TEST COMMENT: F:Fair to strong blow . B.O.B. in 24 mins.
IS:No blow .
FF:Fair blow .B.O.B in 66 mins.
FSI:No blow ..



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2561.27 | 104.47 | Initial Hydro-static |
| 1 | 43.40 | 104.33 | Open To Flow (1) |
| 32 | 163.59 | 107.08 | Shut-In(1) |
| 91 | 1729.24 | 115.88 | End Shut-In(1) |
| 92 | 179.35 | 115.38 | Open To Flow (2) |
| 188 | 332.82 | 122.64 | Shut-In(2) |
| 282 | 1720.98 | 124.22 | End Shut-In(2) |
| 282 | 2412.47 | 124.40 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--|--------------|
| 550.00 | Salt water Rw .51 ohms @ 39 deg. | 5.80 |
| 120.00 | MW w ith a few oil specks. 18% m 82% w | 1.68 |
| 30.00 | MW w ith oil specks. 35% m 65% w | 0.42 |
| | | 0.84 |
| | | 1.05 |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15367

DST#: 2

ATTN: Roger L.Martin

Test Start: 2002.01.01 @ 20:24:01

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4944.00 ft | Diameter: 3.80 inches | Volume: 69.35 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 lb |
| Drill Collar: | Length: 210.00 ft | Diameter: 2.25 inches | Volume: 1.03 bbl | Weight to Pull Loose: 90000.00 lb |
| | | | <u>Total Volume: 70.38 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.00 ft | | | String Weight: Initial 78000.00 lb |
| Depth to Top Packer: | 5176.00 ft | | | Final 79000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 45.00 ft | | | |
| Tool Length: | 72.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| C.O. Sub | 1.00 | | | 5150.00 | |
| S.I. Tool | 5.00 | | | 5155.00 | |
| HMV | 5.00 | | | 5160.00 | |
| Jars | 5.00 | | | 5165.00 | |
| Safety Joint | 2.00 | | | 5167.00 | |
| Packer | 4.00 | | | 5171.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 5176.00 | |
| Stubb | 1.00 | | | 5177.00 | |
| Recorder | 0.00 | 3289 | Inside | 5177.00 | |
| Perforations | 5.00 | | | 5182.00 | |
| C.O. Sub | 1.00 | | | 5183.00 | |
| Blank Spacing | 30.00 | | | 5213.00 | |
| C.O. Sub | 1.00 | | | 5214.00 | |
| Perforations | 5.00 | | | 5219.00 | |
| Recorder | 0.00 | 10242 | Outside | 5219.00 | |
| Bullnose | 2.00 | | | 5221.00 | 45.00 Bottom Packers & Anchor |
| Total Tool Length: | 72.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Company

Gray B et.al. #1

100 S. Main Ste. 105
Wichita, KS 67202

36-31s-20w Comanche

Job Ticket: 15367

DST#: 2

ATTN: Roger L.Martin

Test Start: 2002.01.01 @ 20:24:01

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------------------------|---------------|
| 550.00 | Salt water Rw .51 ohms @ 39 deg. | 5.802 |
| 120.00 | MW with a few oil specks. 18%m 82%w | 1.683 |
| 30.00 | MW with oil specks. 35%m 65%w | 0.421 |
| | | 0.842 |
| | | 1.052 |

Total Length: 700.00 ft

Total Volume: 8.748 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 3289

Inside

Fickrell Drilling Company

36-31s-20w Comanche

DST Test Number: 2

