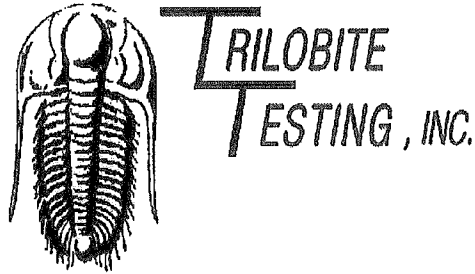


15-065-23617

22-9s-24w

*Send*



### DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 372  
Hays, KS 67601

ATTN: Marc Downing

**22 9s 24w Graham KS**

**SBR Unit #1-22**

Start Date: 2010.04.25 @ 10:33:00

End Date: 2010.04.25 @ 16:04:00

Job Ticket #: 38323                      DST #: 1

RECEIVED  
MAY 24 2010  
KCC WICHITA

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

Downing Nelson Oil Co., Inc.

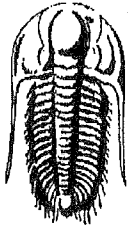
SBR Unit #1-22

22 9s 24w Graham KS

DST # 1

LKC "C - D"

2010.04.25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38323      **DST#: 1**

ATTN: Marc Dow ning

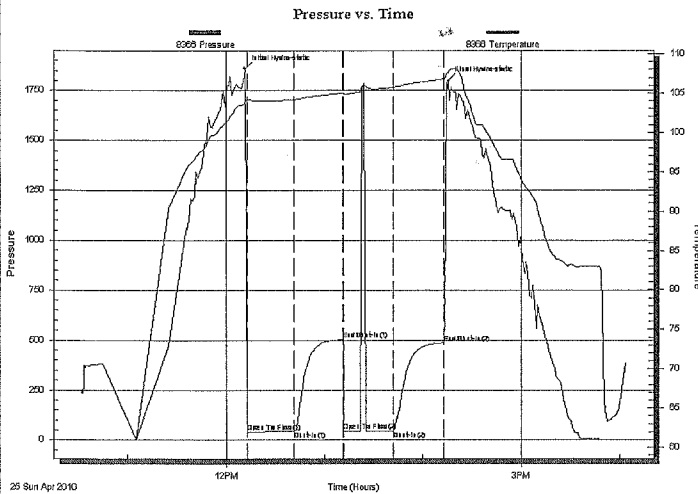
Test Start: 2010.04.25 @ 10:33:00

## GENERAL INFORMATION:

Formation: **LKC "C - D"**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 12:12:30  
 Time Test Ended: 16:04:00  
 Interval: **3812.00 ft (KB) To 3850.00 ft (KB) (TVD)**  
 Total Depth: 3850.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: James Winder  
 Unit No: 46  
 Reference Elevations: 2445.00 ft (KB)  
 2437.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8366**      **Inside**  
 Press@RunDepth: 44.93 psig @ 3813.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2010.04.25      End Date: 2010.04.25      Last Calib.: 2010.04.25  
 Start Time: 10:33:05      End Time: 16:03:59      Time On Btm: 2010.04.25 @ 12:11:30  
 Time Off Btm: 2010.04.25 @ 14:16:00

**TEST COMMENT:** IF: Bled off surge blow , Surface blow from 5 min. to close  
 IS: Bled off, No blow back  
 FF: No blow , Flushed tool @ 14 min., Surface blow till close  
 FS: No blow back



## PRESSURE SUMMARY

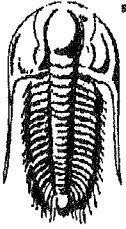
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1858.41         | 103.93       | Initial Hydro-static |
| 1           | 41.24           | 104.10       | Open To Flow (1)     |
| 30          | 43.18           | 104.16       | Shut-In(1)           |
| 60          | 502.27          | 105.00       | End Shut-In(1)       |
| 61          | 43.06           | 104.85       | Open To Flow (2)     |
| 91          | 44.93           | 105.74       | Shut-In(2)           |
| 122         | 486.27          | 106.78       | End Shut-In(2)       |
| 125         | 1798.28         | 107.55       | Final Hydro-static   |

## Recovery

| Length (ft) | Description       | Volume (bbl) |
|-------------|-------------------|--------------|
| 67.00       | Mud 100%          | 0.66         |
| 0.00        | Oil spots in tool | 0.00         |
|             |                   |              |
|             |                   |              |
|             |                   |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38323

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2010.04.25 @ 10:33:00

## Tool Information

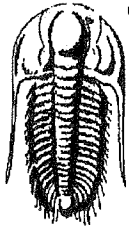
|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3771.00 ft | Diameter: 3.80 inches | Volume: 52.90 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: 31.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 105000.0 lb  |
|                            |                    |                       | <u>Total Volume: 53.05 bbl</u> | Tool Chased 8.00 ft                |
| Drill Pipe Above KB:       | 10.00 ft           |                       |                                | String Weight: Initial 56000.00 lb |
| Depth to Top Packer:       | 3812.00 ft         |                       |                                | Final 57000.00 lb                  |
| Depth to Bottom Packer:    | ft                 |                       |                                |                                    |
| Interval betw een Packers: | 38.00 ft           |                       |                                |                                    |
| Tool Length:               | 58.00 ft           |                       |                                |                                    |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                                    |

### Tool Comments:

Tool chased 8' to bottom after opening  
Hole lost about 8' - 10' of mud

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

|                           |              |      |        |         |                               |
|---------------------------|--------------|------|--------|---------|-------------------------------|
| S.I. Tool                 | 5.00         |      |        | 3797.00 |                               |
| HYD S.I. Tool             | 5.00         |      |        | 3802.00 |                               |
| Packer                    | 5.00         |      |        | 3807.00 | 20.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |      |        | 3812.00 |                               |
| Stubb                     | 1.00         |      |        | 3813.00 |                               |
| Recorder                  | 0.00         | 8366 | Inside | 3813.00 |                               |
| Recorder                  | 0.00         | 8320 | Inside | 3813.00 |                               |
| Perforations              | 34.00        |      |        | 3847.00 |                               |
| Bullnose                  | 3.00         |      |        | 3850.00 | 38.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>58.00</b> |      |        |         |                               |



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38323

**DST#: 1**

ATTN: Marc Downing

Test Start: 2010.04.25 @ 10:33:00

## 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:

bbf

Water Loss: 7.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 0.06 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description       | Volume<br>bbf |
|--------------|-------------------|---------------|
| 67.00        | Mud 100%          | 0.657         |
| 0.00         | Oil spots in tool | 0.000         |

Total Length: 67.00 ft      Total Volume: 0.657 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 1

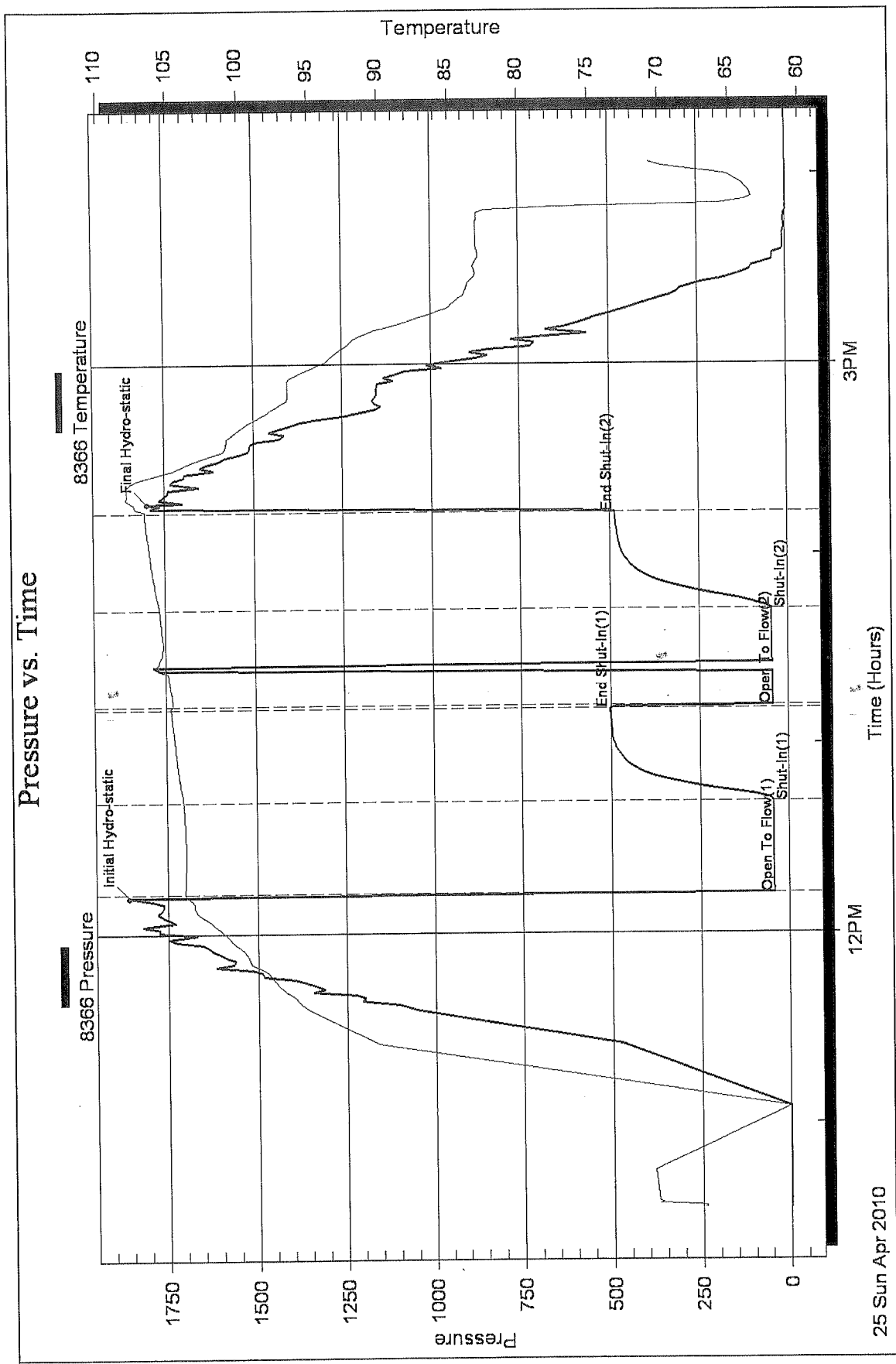
22.9s 24w Graham KS

Downing Nelson Oil Co., Inc.

Inside

Serial #: 8366

# Pressure vs. Time



25 Sun Apr 2010

12PM

3PM



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 372  
Hays, KS 67601

ATTN: Marc Downing

**22 9s 24w Graham KS**

**SBR Unit #1-22**

Start Date: 2010.04.26 @ 00:02:00

End Date: 2010.04.26 @ 06:23:30

Job Ticket #: 38324                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Downing Nelson Oil Co., Inc.

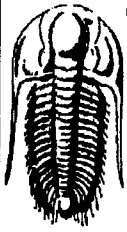
SBR Unit #1-22

22 9s 24w Graham KS

DST # 2

LKC "E - F"

2010.04.26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38324 **DST#: 2**

ATTN: Marc Dow ning

Test Start: 2010.04.26 @ 00:02:00

## GENERAL INFORMATION:

Formation: **LKC "E - F"**

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

Time Tool Opened: 01:46:30

Time Test Ended: 06:23:30

Test Type: **Conventional Bottom Hole**

Tester: **James Winder**

Unit No: **46**

Interval: **3852.00 ft (KB) To 3880.00 ft (KB) (TVD)**

Total Depth: **3880.00 ft (KB) (TVD)**

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

Reference Elevations: **2445.00 ft (KB)**

**2437.00 ft (CF)**

KB to GR/CF: **8.00 ft**

**Serial #: 8366**

**Inside**

Press@RunDepth: **86.77 psig @ 3853.00 ft (KB)**

Start Date: **2010.04.26**

End Date:

**2010.04.26**

Capacity: **8000.00 psig**

Last Calib.: **2010.04.26**

Start Time: **00:02:05**

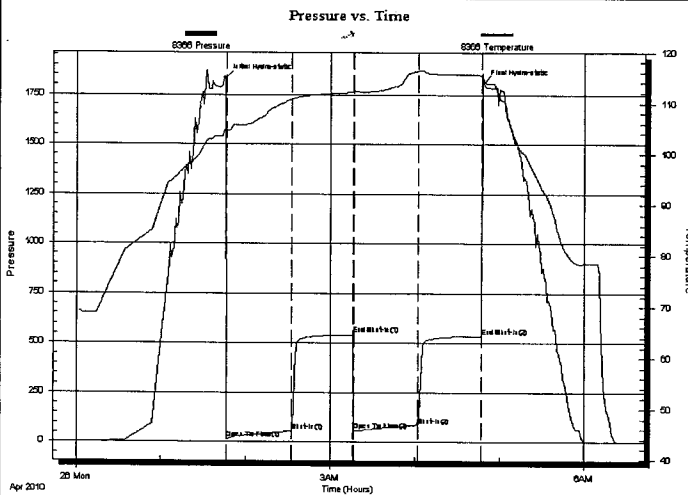
End Time:

**06:23:29**

Time On Btm: **2010.04.26 @ 01:45:30**

Time Off Btm: **2010.04.26 @ 04:48:30**

**TEST COMMENT:** IF: Blow built to 9"  
IS: Bled off, No blow back  
FF: Blow built to 7"  
FSI: Bled off, No blow back



## PRESSURE SUMMARY

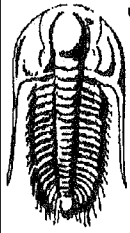
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1832.10         | 105.04       | Initial Hydro-static |
| 1           | 14.49           | 104.54       | Open To Flow (1)     |
| 47          | 57.04           | 110.77       | Shut-In(1)           |
| 91          | 542.68          | 112.16       | End Shut-In(1)       |
| 92          | 58.16           | 112.27       | Open To Flow (2)     |
| 136         | 86.77           | 116.22       | Shut-In(2)           |
| 182         | 537.58          | 115.48       | End Shut-In(2)       |
| 183         | 1808.85         | 114.34       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 3.00        | CO 93%o 5% m 2%g               | 0.01         |
| 32.00       | SO/MM 51% m, 42% w, 5% o, 2% g | 0.19         |
| 125.00      | MCW w /trace oil 78% w, 22% m  | 1.75         |
| 0.00        | Gravity = 27.2 api             | 0.00         |
| 0.00        | RW = .176 ohms @ 44.3 deg F    | 0.00         |
| 0.00        | Chlorides = 70,000 ppm         | 0.00         |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38324

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2010.04.26 @ 00:02:00

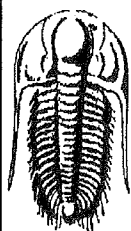
## Tool Information

|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3834.00 ft | Diameter: 3.80 inches | Volume: 53.78 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: 31.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 70000.00 lb  |
|                            |                    |                       | <u>Total Volume: 53.93 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:       | 33.00 ft           |                       |                                | String Weight: Initial 56000.00 lb |
| Depth to Top Packer:       | 3852.00 ft         |                       |                                | Final 57000.00 lb                  |
| Depth to Bottom Packer:    | ft                 |                       |                                |                                    |
| Interval betw een Packers: | 28.00 ft           |                       |                                |                                    |
| Tool Length:               | 48.00 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         |      |        | 3837.00 |                               |
| HYD S.I. Tool             | 5.00         |      |        | 3842.00 |                               |
| Packer                    | 5.00         |      |        | 3847.00 | 20.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |      |        | 3852.00 |                               |
| Stubb                     | 1.00         |      |        | 3853.00 |                               |
| Recorder                  | 0.00         | 8366 | Inside | 3853.00 |                               |
| Recorder                  | 0.00         | 8320 | Inside | 3853.00 |                               |
| Perforations              | 24.00        |      |        | 3877.00 |                               |
| Bullnose                  | 3.00         |      |        | 3880.00 | 28.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>48.00</b> |      |        |         |                               |



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38324

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2010.04.26 @ 00:02:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 27.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 70000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 0.06 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description                 | Volume<br>bbl |
|--------------|-----------------------------|---------------|
| 3.00         | CO 93%o 5%m 2%g             | 0.015         |
| 32.00        | SO/MM 51%m, 42%w, 5%o, 2%g  | 0.194         |
| 125.00       | MCW w /trace oil 78%w, 22%m | 1.753         |
| 0.00         | Gravity = 27.2 api          | 0.000         |
| 0.00         | RW = .176 ohms @ 44.3 deg F | 0.000         |
| 0.00         | Chlorides = 70,000 ppm      | 0.000         |

Total Length: 160.00 ft      Total Volume: 1.962 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

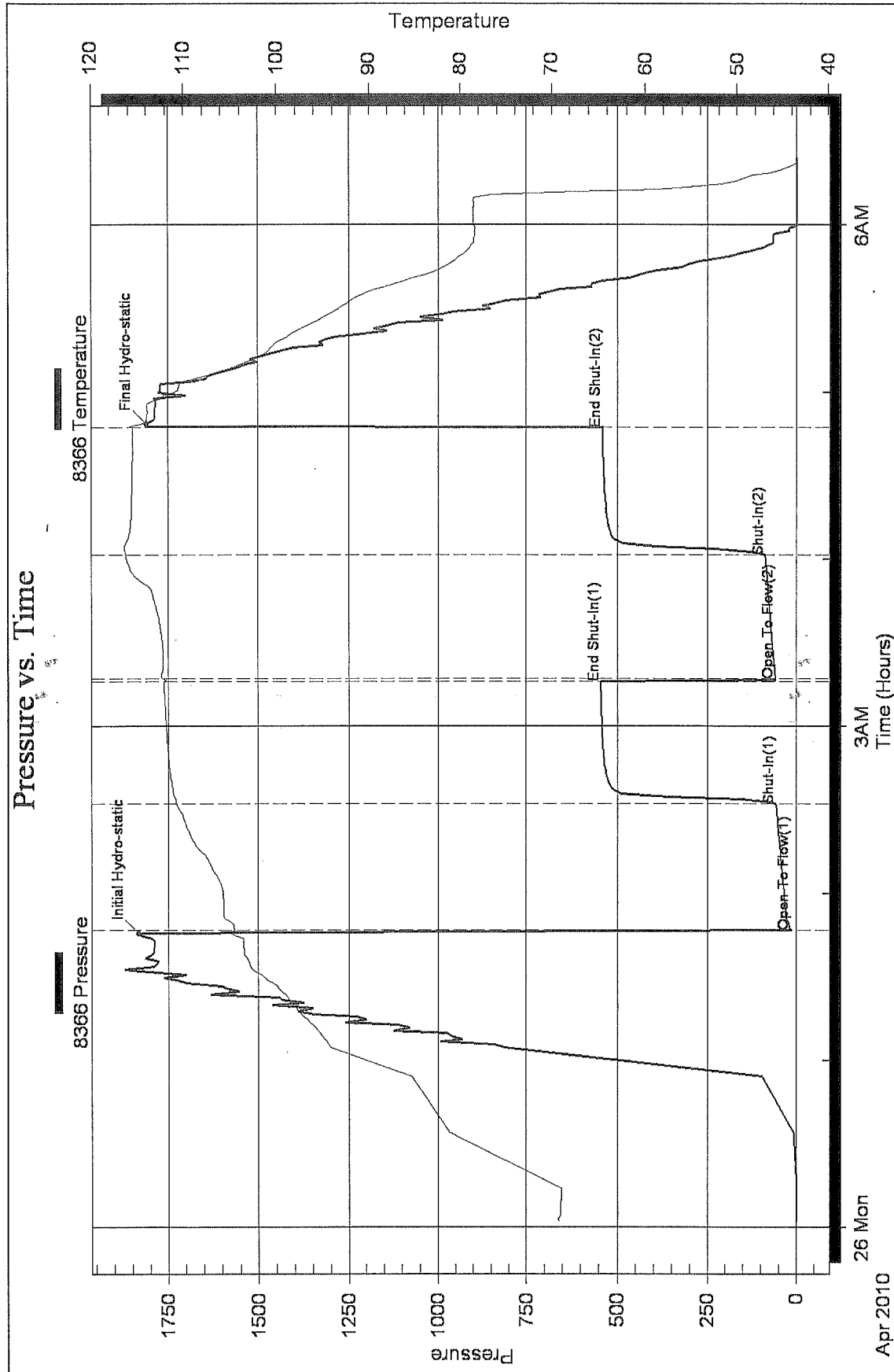
Serial #:

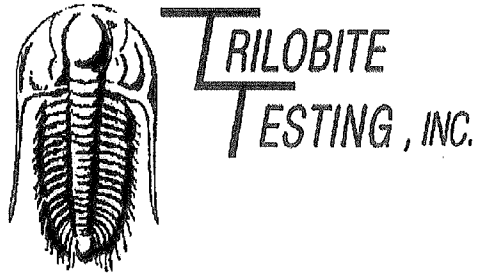
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 372  
Hays, KS 67601

ATTN: Marc Downing

**22 9s 24w Graham KS**

**SBR Unit #1-22**

Start Date: 2010.04.26 @ 16:43:00

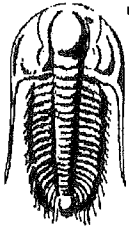
End Date: 2010.04.26 @ 21:14:00

Job Ticket #: 38325                      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

Dow ning Nelson Oil Co., Inc.

PO Box 372  
Hays, KS 67601

ATTN: Marc Dow ning

**SBR Unit #1-22**

**22 9s 24w Graham KS**

Job Ticket: 38325

**DST#: 3**

Test Start: 2010.04.26 @ 16:43:00

### GENERAL INFORMATION:

Formation: **LKC "I - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:20:00

Time Test Ended: 21:14:00

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 46

Interval: **3937.00 ft (KB) To 3980.00 ft (KB) (TVD)**

Total Depth: 3980.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2445.00 ft (KB)

2437.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8366**

Inside

Press@RunDepth: 15.00 psig @ 3938.00 ft (KB)

Start Date: 2010.04.26

End Date: 2010.04.26

Capacity: 8000.00 psig

Last Calib.: 2010.04.26

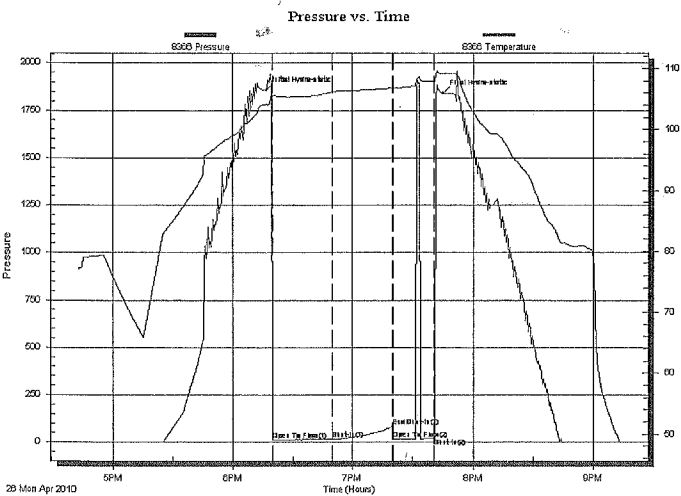
Start Time: 16:43:05

End Time: 21:13:59

Time On Btm: 2010.04.26 @ 18:17:00

Time Off Btm: 2010.04.26 @ 19:45:00

**TEST COMMENT:** IF: 1/4" Blow through open  
IS: Bled off, No blow back  
FF: No blow, Flushed tool @ 15 min., No blow  
Pulled Tool



### PRESSURE SUMMARY

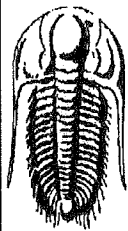
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1856.73         | 104.09       | Initial Hydro-static |
| 3           | 12.72           | 105.42       | Open To Flow (1)     |
| 33          | 15.00           | 106.17       | Shut-In(1)           |
| 63          | 83.83           | 106.83       | End Shut-In(1)       |
| 64          | 15.95           | 106.82       | Open To Flow (2)     |
| 84          | 19.69           | 107.90       | Shut-In(2)           |
| 88          | 1840.10         | 109.16       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 6.00        | Mud 100%    | 0.03         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38325

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2010.04.26 @ 16:43:00

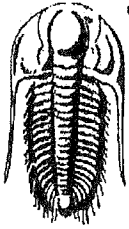
### Tool Information

|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3895.00 ft | Diameter: 3.80 inches | Volume: 54.64 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: 31.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 72000.00 lb  |
|                            |                    |                       | <u>Total Volume: 54.79 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:       | 9.00 ft            |                       |                                | String Weight: Initial 58000.00 lb |
| Depth to Top Packer:       | 3937.00 ft         |                       |                                | Final 58000.00 lb                  |
| Depth to Bottom Packer:    | ft                 |                       |                                |                                    |
| Interval betw een Packers: | 43.00 ft           |                       |                                |                                    |
| Tool Length:               | 63.00 ft           |                       |                                |                                    |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                                    |

### Tool Comments:

Tool slid 5' to bottom before open

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| S.I. Tool                 | 5.00         |            |          | 3922.00    |                               |
| HYD S.I. Tool             | 5.00         |            |          | 3927.00    |                               |
| Packer                    | 5.00         |            |          | 3932.00    | 20.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |            |          | 3937.00    |                               |
| Stubb                     | 1.00         |            |          | 3938.00    |                               |
| Recorder                  | 0.00         | 8366       | Inside   | 3938.00    |                               |
| Recorder                  | 0.00         | 8320       | Inside   | 3938.00    |                               |
| Perforations              | 6.00         |            |          | 3944.00    |                               |
| Blank Spacing             | 33.00        |            |          | 3977.00    |                               |
| Bullnose                  | 3.00         |            |          | 3980.00    | 43.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>63.00</b> |            |          |            |                               |



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

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 38325                      **DST#: 3**

ATTN: Marc Dow ning

Test Start: 2010.04.26 @ 16:43:00

**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: 55.00 sec/qt          | Cushion Volume: bbl        |                 |         |
| Water Loss: 7.77 in <sup>3</sup> | Gas Cushion Type:          |                 |         |
| Resistivity: ohm.m               | Gas Cushion Pressure: psig |                 |         |
| Salinity: 1200.00 ppm            |                            |                 |         |
| Filter Cake: 0.03 inches         |                            |                 |         |

**Recovery Information**

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 6.00         | Mud 100%    | 0.030         |

Total Length: 6.00 ft      Total Volume: 0.030 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

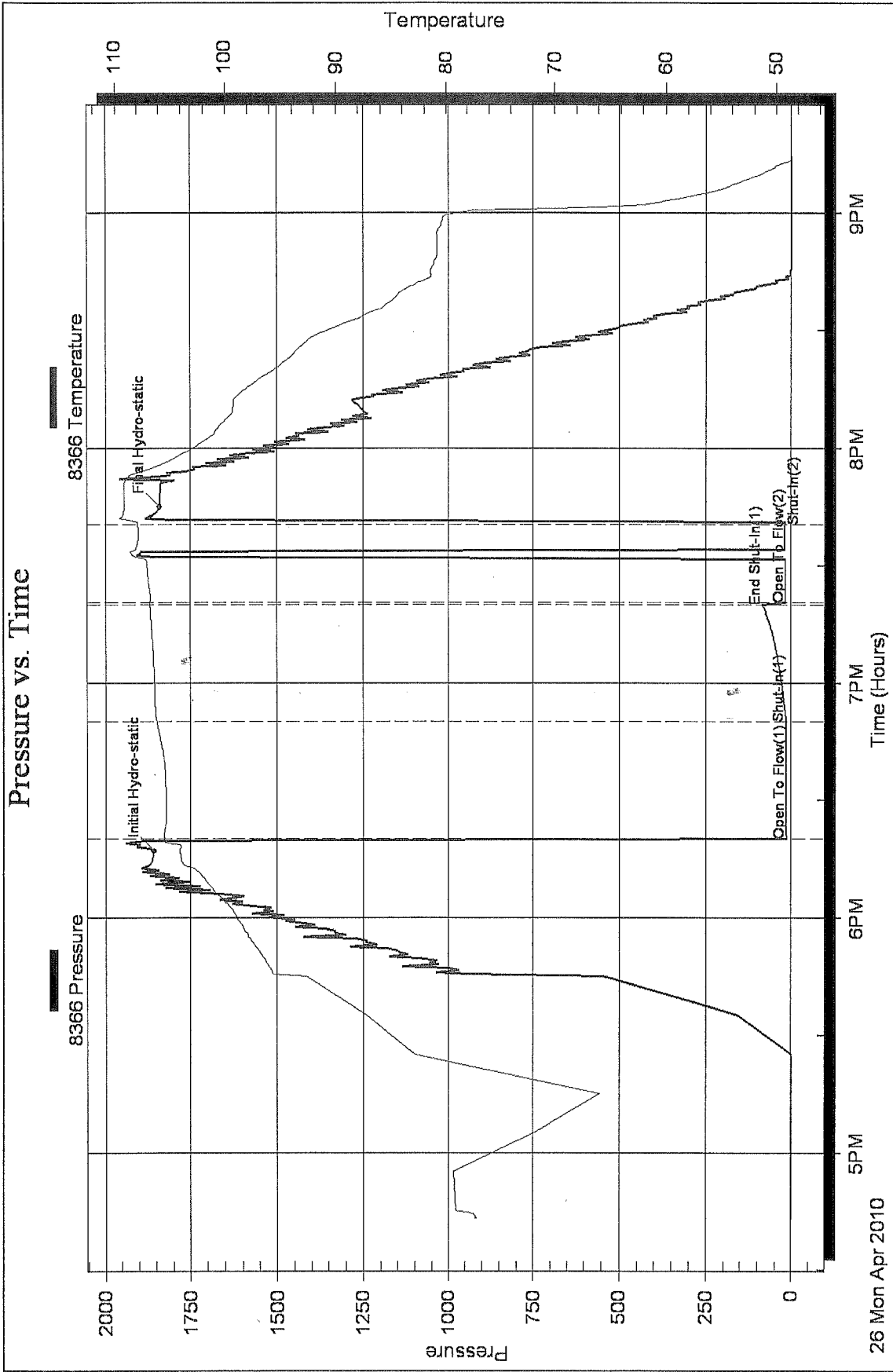
Serial #: 8366

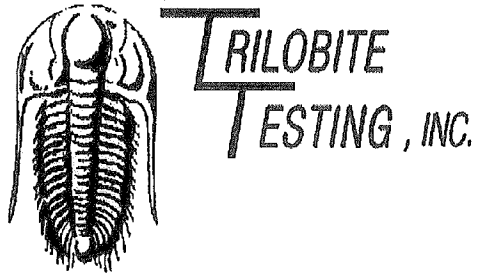
Inside

Dowling Nelson Oil Co., Inc.

22 9s, 24w Graham KS

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 372  
Hays, KS 67601

ATTN: Marc Downing

**22 9s 24w Graham KS**

**SBR Unit #1-22**

Start Date: 2010.04.27 @ 11:59:00

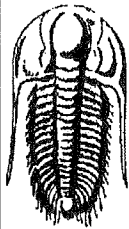
End Date: 2010.04.27 @ 18:03:00

Job Ticket #: 37326                      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

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 37326

**DST#: 4**

ATTN: Marc Dow ning

Test Start: 2010.04.27 @ 11:59:00

### GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:27:30

Time Test Ended: 18:03:00

Test Type: Conventional Straddle

Tester: James Winder

Unit No: 46

Interval: **3956.00 ft (KB) To 3994.00 ft (KB) (TVD)**

Reference Elevations: 2445.00 ft (KB)

Total Depth: 4062.00 ft (KB) (TVD)

2437.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8366**

**Inside**

Press@RunDepth: 645.52 psig @ 3957.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.04.27 End Date: 2010.04.27

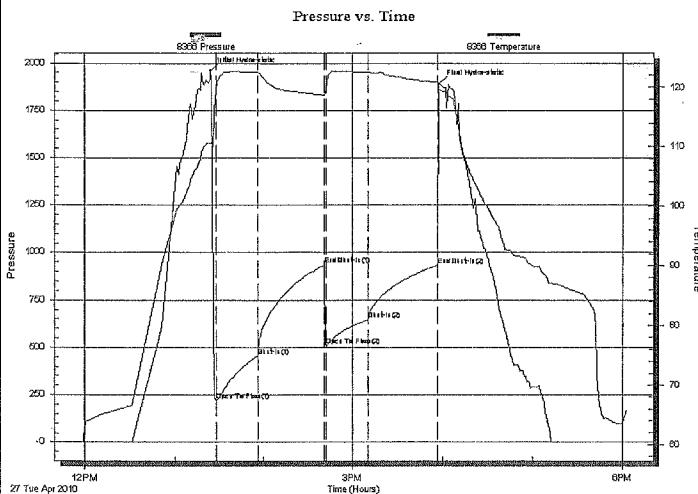
Last Calib.: 2010.04.27

Start Time: 11:59:05 End Time: 18:02:59

Time On Btm: 2010.04.27 @ 13:24:00

Time Off Btm: 2010.04.27 @ 15:57:30

**TEST COMMENT:** IF: Blow built to BOB in about 1 min.  
IS: Bled off, Surface blow back @ 11 min., built to 1/4"  
FF: Blow built to BOB in 1 3/4 min.  
FSI: Bled off, Surface blow back @ 18 min., built to 1/8"



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1957.51         | 110.60       | Initial Hydro-static |
| 4           | 221.54          | 119.49       | Open To Flow (1)     |
| 32          | 454.50          | 122.51       | Shut-In(1)           |
| 77          | 933.91          | 118.67       | End Shut-In(1)       |
| 78          | 509.01          | 119.54       | Open To Flow (2)     |
| 107         | 645.52          | 122.49       | Shut-In(2)           |
| 153         | 933.26          | 120.81       | End Shut-In(2)       |
| 154         | 1888.25         | 119.83       | Final Hydro-static   |

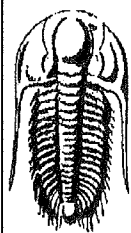
### Recovery

| Length (ft) | Description                       | Volume (bbl) |
|-------------|-----------------------------------|--------------|
| 124.00      | SMCW 96%w, 4%m                    | 1.46         |
| 946.00      | Dropped bar - Fluid out circ. sub | 13.27        |
| 186.00      | SO/MCW 65%w, 30%m, 3%g, 2%o       | 2.61         |
| 124.00      | SO/MM 48%m, 46%w, 3%o, 3%g        | 1.74         |
| 0.00        | RW = .127 ohms @ 72.8 deg F       | 0.00         |
| 0.00        | Chlorides = 55,000 ppm            | 0.00         |

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 37326      **DST#: 4**

ATTN: Marc Dow ning

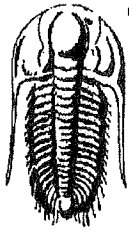
Test Start: 2010.04.27 @ 11:59:00

**Tool Information**

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3929.00 ft | Diameter: 3.80 inches | Volume: 55.11 bbl              | Tool Weight: 3000.00 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: 31.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 75000.00 lb  |
|                           |                    |                       | <u>Total Volume: 55.26 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 24.00 ft           |                       |                                | String Weight: Initial 58000.00 lb |
| Depth to Top Packer:      | 3956.00 ft         |                       |                                | Final 66000.00 lb                  |
| Depth to Bottom Packer:   | 3994.00 ft         |                       |                                |                                    |
| Interval between Packers: | 38.00 ft           |                       |                                |                                    |
| Tool Length:              | 126.00 ft          |                       |                                |                                    |
| Number of Packers:        | 3                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

| Tool Description          | Length (ft)   | Serial No. | Position | Depth (ft) | Accum. Lengths                     |
|---------------------------|---------------|------------|----------|------------|------------------------------------|
| S.I. Tool                 | 5.00          |            |          | 3941.00    |                                    |
| HYDS.I. Tool              | 5.00          |            |          | 3946.00    |                                    |
| Packer                    | 5.00          |            |          | 3951.00    | 20.00      Bottom Of Top Packer    |
| Packer                    | 5.00          |            |          | 3956.00    |                                    |
| Stubb                     | 1.00          |            |          | 3957.00    |                                    |
| Recorder                  | 0.00          | 8366       | Inside   | 3957.00    |                                    |
| Recorder                  | 0.00          | 8320       | Inside   | 3957.00    |                                    |
| Perforations              | 32.00         |            |          | 3989.00    |                                    |
| Blank Off Sub             | 1.00          |            |          | 3990.00    |                                    |
| Blank Spacing             | 4.00          |            |          | 3994.00    | 38.00      Tool Interval           |
| Packer                    | 0.00          |            |          | 3994.00    |                                    |
| Shale Packer              | 0.00          |            |          | 3994.00    |                                    |
| Stubb                     | 1.00          |            |          | 3995.00    |                                    |
| Recorder                  | 0.00          | 8671       | Inside   | 3995.00    |                                    |
| Blank Spacing             | 64.00         |            |          | 4059.00    |                                    |
| Bullnose                  | 3.00          |            |          | 4062.00    | 68.00      Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>126.00</b> |            |          |            |                                    |



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co., Inc.

**SBR Unit #1-22**

PO Box 372  
Hays, KS 67601

**22 9s 24w Graham KS**

Job Ticket: 37326

**DST#: 4**

ATTN: Marc Downing

Test Start: 2010.04.27 @ 11:59:00

## 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: | 55000 ppm |
| Viscosity: 52.00 sec/qt          | Cushion Volume: bbl        |                 |           |
| Water Loss: 7.92 in <sup>3</sup> | Gas Cushion Type:          |                 |           |
| Resistivity: ohm.m               | Gas Cushion Pressure: psig |                 |           |
| Salinity: 2000.00 ppm            |                            |                 |           |
| Filter Cake: 0.03 inches         |                            |                 |           |

## Recovery Information

Recovery Table

| Length<br>ft | Description                       | Volume<br>bbl |
|--------------|-----------------------------------|---------------|
| 124.00       | SMCW 96%w , 4%m                   | 1.457         |
| 946.00       | Dropped bar - Fluid out circ. sub | 13.270        |
| 186.00       | SO/MCW 65%w , 30%m, 3%g, 2%o      | 2.609         |
| 124.00       | SO/MM 48%m, 46%w , 3%o, 3%g       | 1.739         |
| 0.00         | RW = .127 ohms @ 72.8 deg F       | 0.000         |
| 0.00         | Chlorides = 55,000 ppm            | 0.000         |

Total Length: 1380.00 ft      Total Volume: 19.075 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

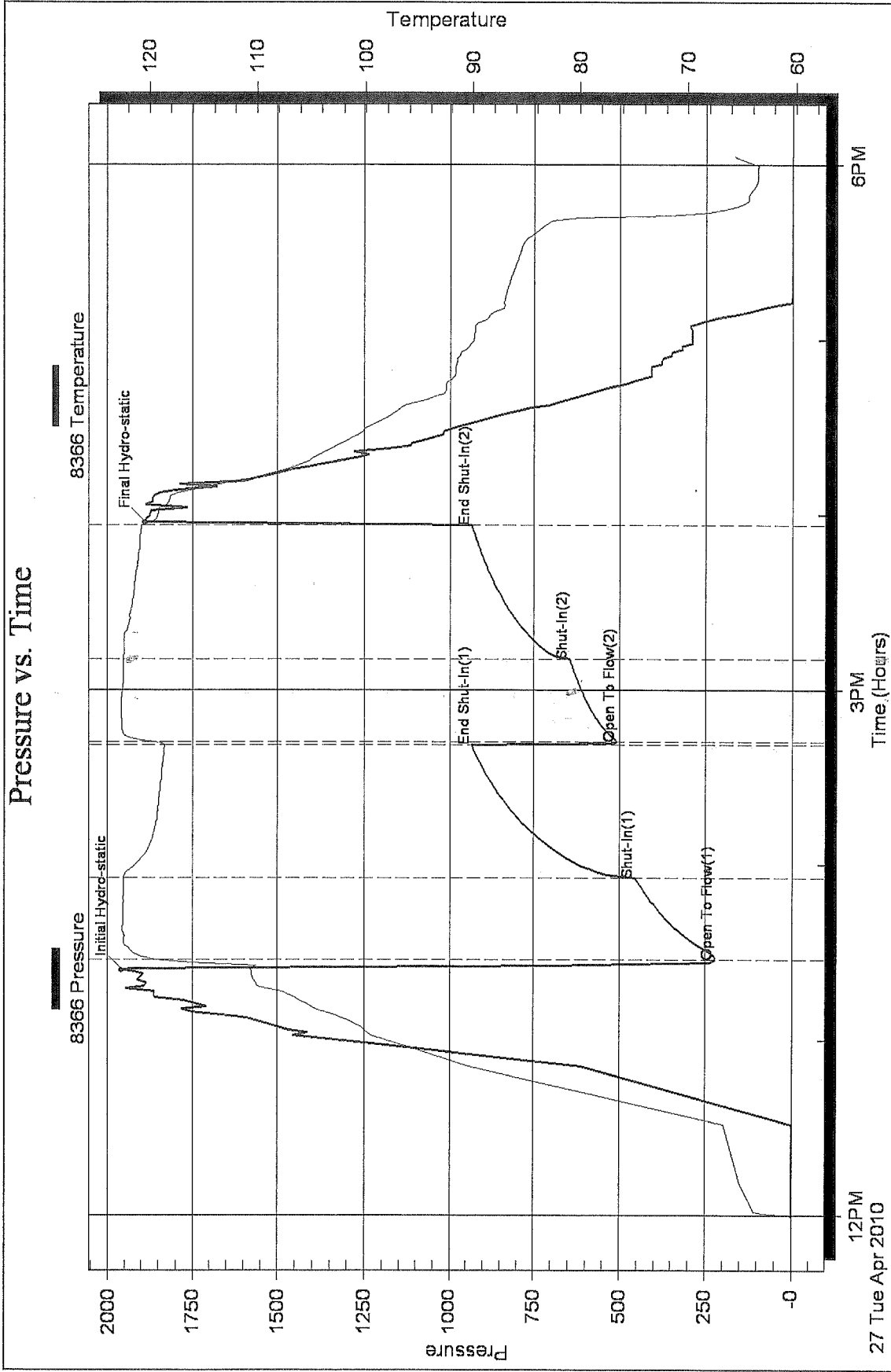
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



Serial #: 8671

Inside

Downing Nelson Oil Co., Inc.

22 9s 24w Graham KS

DST Test Number: 4

### Pressure vs. Time

