



## DRILL STEM TEST REPORT

Prepared For: **Gore Oil Company**

202 S St Francis  
Wichita KS 67202

ATTN: Chuck Schmaltz

### **Carmichael #2**

### **22-9s-18w-Rooks KS**

Start Date: 2013.10.21 @ 14:21:59

End Date: 2013.10.21 @ 23:22:09

Job Ticket #: 54842                      DST #: 1

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

Printed: 2013.10.25 @ 11:10:38



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54842

**DST#: 1**

ATTN: Chuck Schmalz

Test Start: 2013.10.21 @ 14:21:59

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:29:29

Time Test Ended: 23:22:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

**Interval: 3412.00 ft (KB) To 3455.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 3455.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8898 Outside**

Press @ Run Depth: 238.22 psig @ 3419.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.21

End Date:

2013.10.21

Last Calib.:

2013.10.21

Start Time: 14:22:00

End Time:

23:22:09

Time On Btm:

2013.10.21 @ 17:29:19

Time Off Btm:

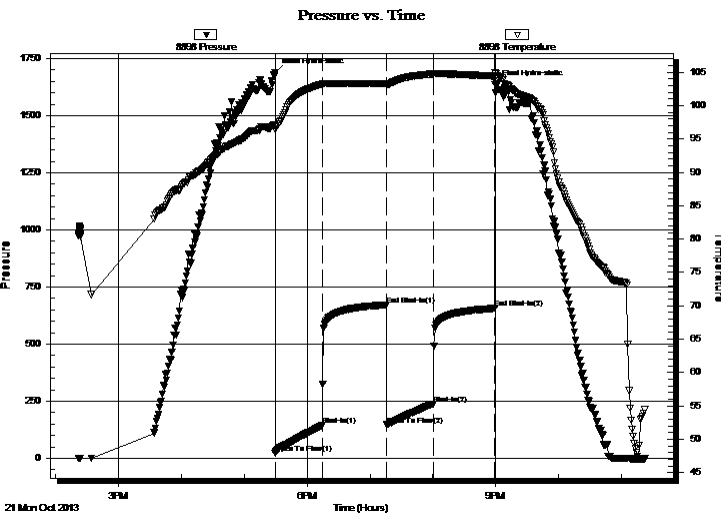
2013.10.21 @ 20:59:08

**TEST COMMENT:** Good surface blow built to 7"

Dead no blow back

B.O.B. In 25 mins.

Dead no blow back



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1689.14         | 97.16        | Initial Hydro-static |
| 1           | 22.64           | 96.45        | Open To Flow (1)     |
| 46          | 143.44          | 103.22       | Shut-In(1)           |
| 107         | 671.83          | 103.29       | End Shut-In(1)       |
| 107         | 146.90          | 103.06       | Open To Flow (2)     |
| 152         | 238.22          | 104.75       | Shut-In(2)           |
| 210         | 656.61          | 104.43       | End Shut-In(2)       |
| 210         | 1635.26         | 104.98       | Final Hydro-static   |

## Recovery

| Length (ft) | Description              | Volume (bbl) |
|-------------|--------------------------|--------------|
| 120.00      | 20%M 80%W                | 1.40         |
| 300.00      | 5%M 95%W w ith oil spots | 4.21         |
|             |                          |              |
|             |                          |              |
|             |                          |              |

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54842

**DST#: 1**

ATTN: Chuck Schmaltz

Test Start: 2013.10.21 @ 14:21:59

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3377.00 ft | Diameter: 3.80 inches | Volume: 47.37 bbl              | Tool Weight: 2200.00 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: 55000.00 lb  |
|                           |                    |                       | <u>Total Volume: 47.52 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 23.00 ft           |                       |                                | String Weight: Initial 52000.00 lb |
| Depth to Top Packer:      | 3412.00 ft         |                       |                                | Final 54000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 43.00 ft           |                       |                                |                                    |
| Tool Length:              | 70.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 3390.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3395.00    |                               |
| Jars             | 5.00        |            |          | 3400.00    |                               |
| Safety Joint     | 2.00        |            |          | 3402.00    |                               |
| Packer           | 5.00        |            |          | 3407.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3412.00    |                               |
| Stubb            | 1.00        |            |          | 3413.00    |                               |
| Perforations     | 6.00        |            |          | 3419.00    |                               |
| Recorder         | 0.00        | 8897       | Inside   | 3419.00    |                               |
| Recorder         | 0.00        | 8898       | Outside  | 3419.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3420.00    |                               |
| Drill Pipe       | 31.00       |            |          | 3451.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3452.00    |                               |
| Bullnose         | 3.00        |            |          | 3455.00    | 43.00 Bottom Packers & Anchor |

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54842

**DST#: 1**

ATTN: Chuck Schmalz

Test Start: 2013.10.21 @ 14:21:59

## 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:

60000 ppm

Viscosity: 76.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7.20 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description              | Volume<br>bbbl |
|--------------|--------------------------|----------------|
| 120.00       | 20%M 80%W                | 1.401          |
| 300.00       | 5%M 95%W w ith oil spots | 4.208          |

Total Length: 420.00 ft

Total Volume: 5.609 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

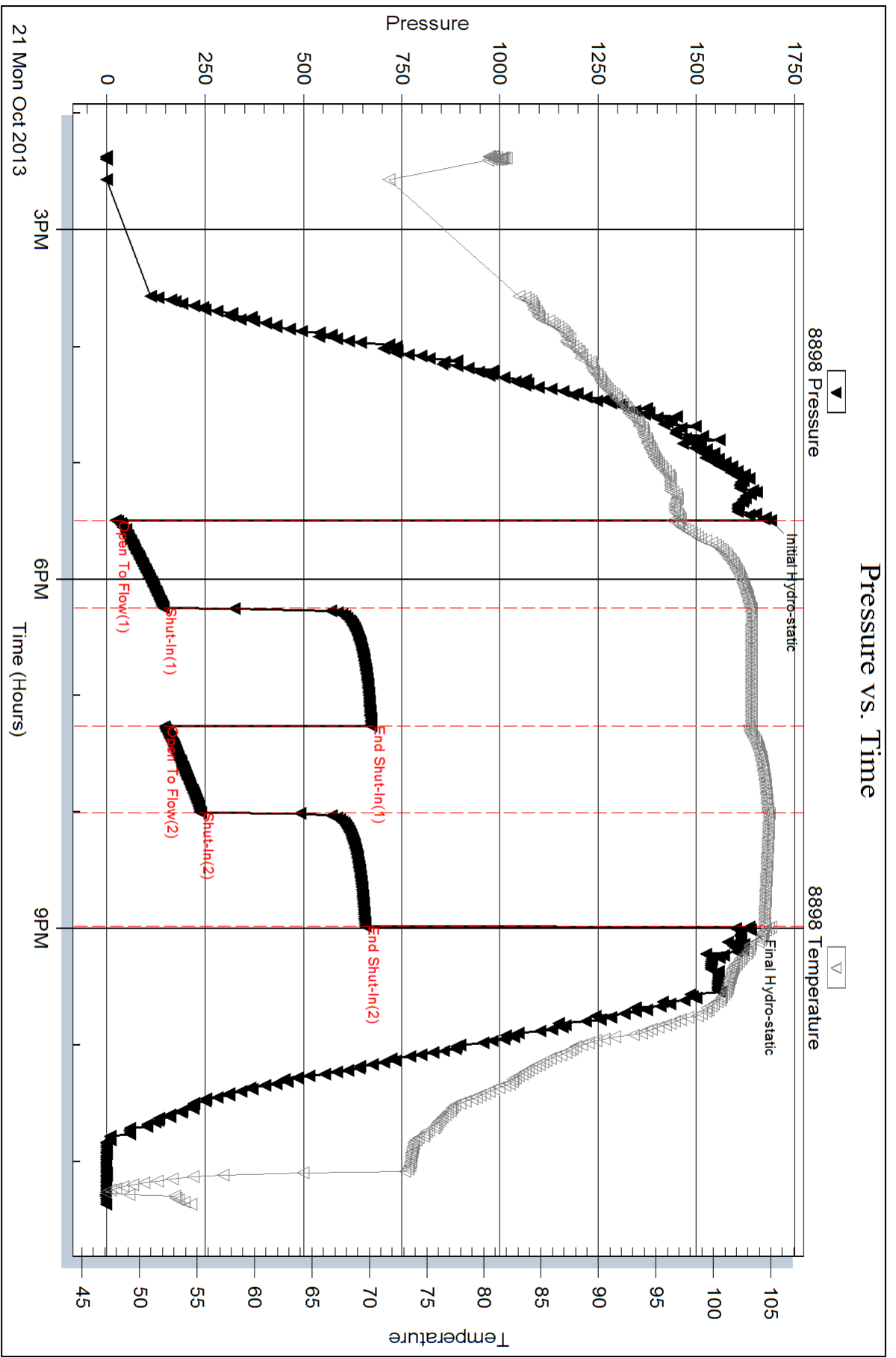
Recovery Comments:

Serial #: 8898

Outside Gore Oil Company

Carmichael #2

DST Test Number: 1



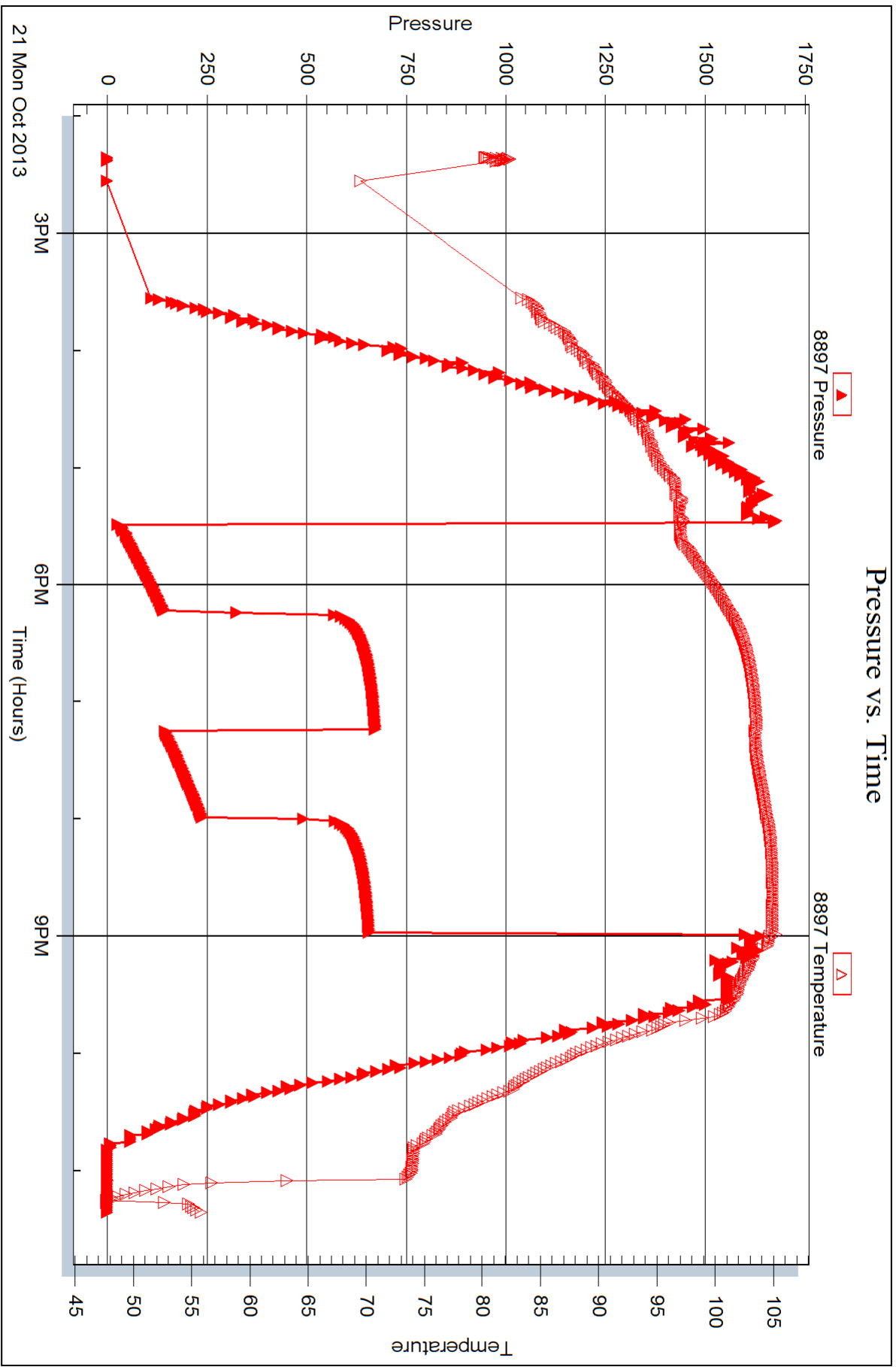
Serial #: 8897

Inside

Gore Oil Company

Carmichael #2

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54842

Printed: 2013.10.25 @ 11:10:40



## DRILL STEM TEST REPORT

Prepared For: **Gore Oil Company**

202 S St Francis  
Wichita KS 67202

ATTN: Chuck Schmaltz

### **Carmichael #2**

### **22-9s-18w-Rooks KS**

Start Date: 2013.10.22 @ 12:01:31

End Date: 2013.10.22 @ 19:55:31

Job Ticket #: 54843                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.25 @ 11:08:25





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54843

**DST#: 2**

ATTN: Chuck Schmalz

Test Start: 2013.10.22 @ 12:01:31

## GENERAL INFORMATION:

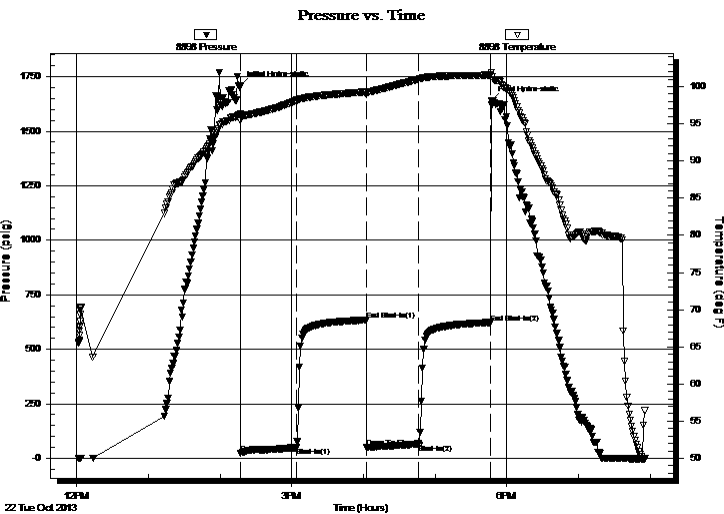
Formation: **KC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:17:11  
 Time Test Ended: 19:55:31  
 Interval: **3462.00 ft (KB) To 3562.00 ft (KB) (TVD)**  
 Total Depth: 3562.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Tate Lang  
 Unit No: 49  
 Reference Elevations: 2161.00 ft (KB)  
 2153.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8898

**Outside**

Press @ Run Depth: 65.26 psig @ 3470.00 ft (KB)  
 Start Date: 2013.10.22 End Date: 2013.10.22  
 Start Time: 12:01:32 End Time: 19:55:31  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.10.22  
 Time On Btm: 2013.10.22 @ 14:17:01  
 Time Off Btm: 2013.10.22 @ 17:47:01

**TEST COMMENT:** Weak surface blow built to 3"  
 Dead no blow back  
 Weak surface blow built to 1/2"  
 Dead no blow back



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1709.18         | 96.31        | Initial Hydro-static |
| 1           | 22.71           | 95.45        | Open To Flow (1)     |
| 47          | 48.77           | 98.13        | Shut-In(1)           |
| 106         | 633.70          | 99.30        | End Shut-In(1)       |
| 106         | 49.77           | 98.90        | Open To Flow (2)     |
| 150         | 65.26           | 100.99       | Shut-In(2)           |
| 210         | 622.68          | 101.55       | End Shut-In(2)       |
| 210         | 1641.28         | 101.93       | Final Hydro-static   |

## Recovery

| Length (ft) | Description              | Volume (bbl) |
|-------------|--------------------------|--------------|
| 80.00       | 30%M 70%W with oil spots | 0.84         |
|             |                          |              |
|             |                          |              |
|             |                          |              |
|             |                          |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54843

**DST#: 2**

ATTN: Chuck Schmaltz

Test Start: 2013.10.22 @ 12:01:31

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3408.00 ft | Diameter: 3.80 inches | Volume: 47.81 bbl              | Tool Weight: 2200.00 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: 59000.00 lb  |
|                           |                    |                       | <u>Total Volume: 47.96 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 4.00 ft            |                       |                                | String Weight: Initial 52000.00 lb |
| Depth to Top Packer:      | 3462.00 ft         |                       |                                | Final 52000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 100.00 ft          |                       |                                |                                    |
| Tool Length:              | 127.00 ft          |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                 |       |      |         |         |                                |
|-----------------|-------|------|---------|---------|--------------------------------|
| Shut In Tool    | 5.00  |      |         | 3440.00 |                                |
| Hydraulic tool  | 5.00  |      |         | 3445.00 |                                |
| Jars            | 5.00  |      |         | 3450.00 |                                |
| Safety Joint    | 2.00  |      |         | 3452.00 |                                |
| Packer          | 5.00  |      |         | 3457.00 | 27.00 Bottom Of Top Packer     |
| Packer          | 5.00  |      |         | 3462.00 |                                |
| Stubb           | 1.00  |      |         | 3463.00 |                                |
| Perforations    | 7.00  |      |         | 3470.00 |                                |
| Recorder        | 0.00  | 8897 | Inside  | 3470.00 |                                |
| Recorder        | 0.00  | 8898 | Outside | 3470.00 |                                |
| Change Over Sub | 1.00  |      |         | 3471.00 |                                |
| Drill Pipe      | 63.00 |      |         | 3534.00 |                                |
| Change Over Sub | 1.00  |      |         | 3535.00 |                                |
| Perforations    | 24.00 |      |         | 3559.00 |                                |
| Bullnose        | 3.00  |      |         | 3562.00 | 100.00 Bottom Packers & Anchor |

**Total Tool Length: 127.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Gore Oil Company

**22-9s-18w-Rooks KS**

202 S St Francis  
Wichita KS 67202

**Carmichael #2**

Job Ticket: 54843

**DST#: 2**

ATTN: Chuck Schmaltz

Test Start: 2013.10.22 @ 12:01:31

## 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:

35000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2250.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description               | Volume<br>bbbl |
|--------------|---------------------------|----------------|
| 80.00        | 30%M 70%W w ith oil spots | 0.840          |

Total Length: 80.00 ft      Total Volume: 0.840 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

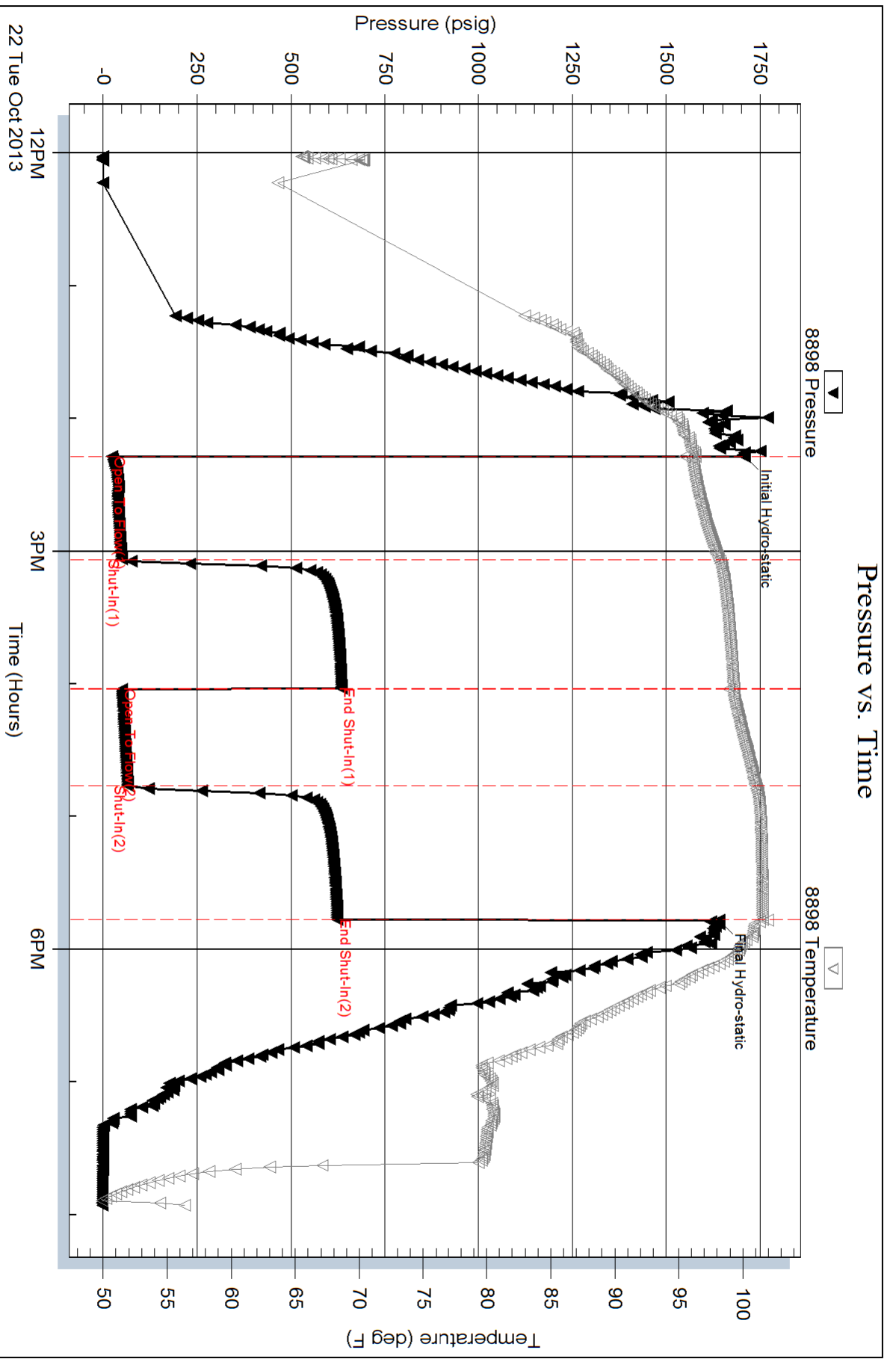
Recovery Comments:

Serial #: 8898

Outside Gore Oil Company

Carmichael #2

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54843

Printed: 2013.10.25 @ 11:08:26

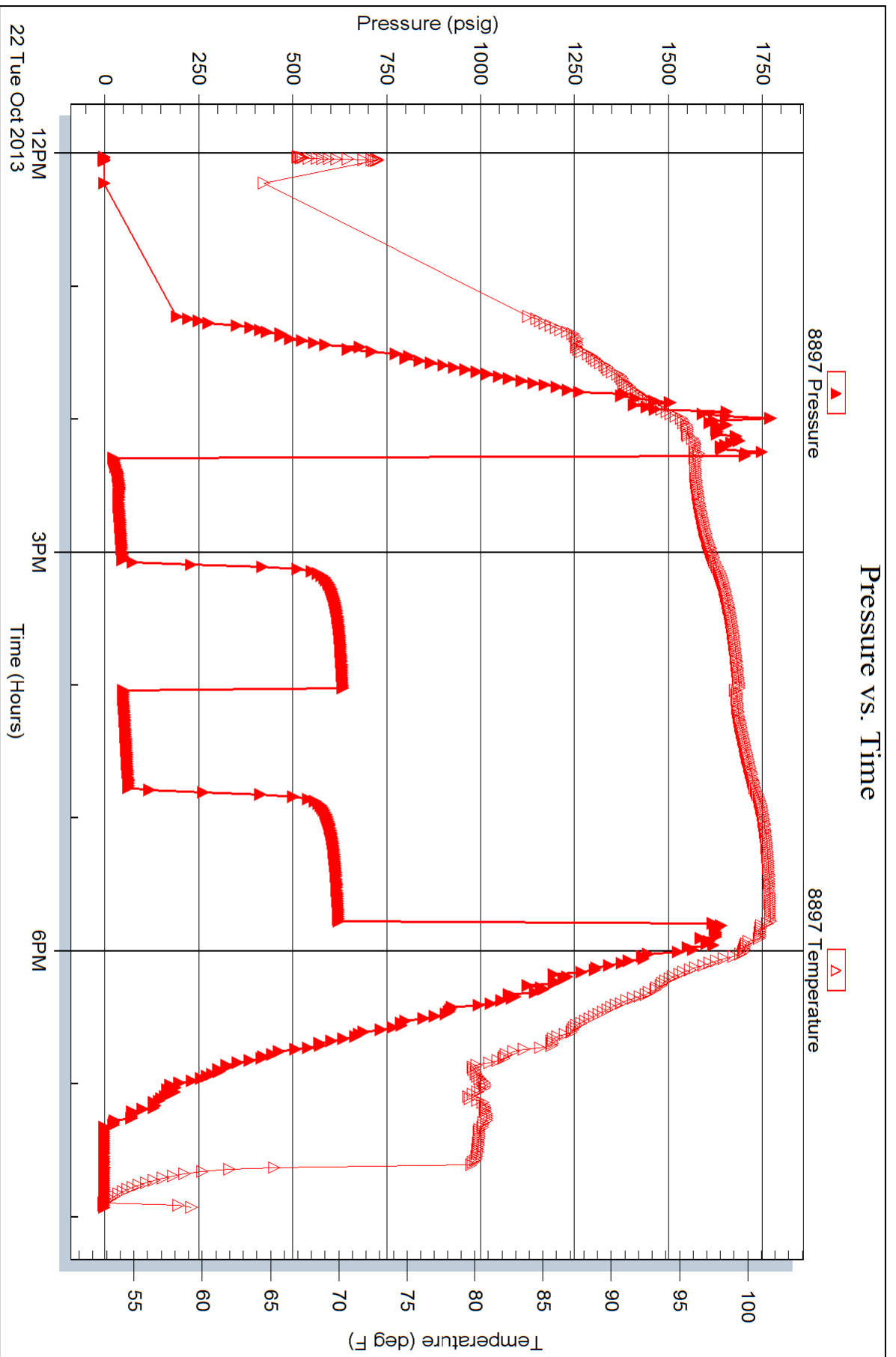
Serial #: 8897

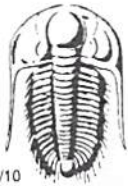
Inside

Gore Oil Company

Carmichael #2

DST Test Number: 2





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54842

Well Name & No. Carmichael #2 Test No. 1 Date 10-21-13  
 Company Gore Oil Company Elevation 2161 KB 2153 GL  
 Address 202 S St. Francis Wichita KS 67202  
 Co. Rep / Geo. Chuck Schmalz Rig Maverick #108  
 Location: Sec. 22 Twp. 9 Rge. 18 Co. Reeds State KS

Interval Tested 3412 3455 Zone Tested Lansing  
 Anchor Length 43 Drill Pipe Run 3377 Mud Wt. 8.6  
 Top Packer Depth 3468 Drill Collars Run 31 Vis 76  
 Bottom Packer Depth 3412 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3455 Chlorides 1800 ppm System LCM 3#

Blow Description Good surface blow built to Tin.  
Dead no blow back  
B.O.B. In 25 mins  
Dead no blow back

| Rec        | Feet of                    | %gas | %oil      | %water    | %mud |
|------------|----------------------------|------|-----------|-----------|------|
| <u>120</u> | <u>MCW</u>                 |      | <u>80</u> | <u>20</u> |      |
| <u>300</u> | <u>SMCW with oil spots</u> |      | <u>95</u> | <u>5</u>  |      |
| Rec        | Feet of                    | %gas | %oil      | %water    | %mud |
| Rec        | Feet of                    | %gas | %oil      | %water    | %mud |
| Rec        | Feet of                    | %gas | %oil      | %water    | %mud |

Rec Total 420 BHT 105 Gravity - API RW 160 @ 50 ° F Chlorides 6000 ppm

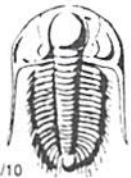
(A) Initial Hydrostatic 1689  Test 1150 T-On Location 12:25  
 (B) First Initial Flow 23  Jars 250 T-Started 14:21  
 (C) First Final Flow 143  Safety Joint 75 T-Open 17:29  
 (D) Initial Shut-In 672  Circ Sub T-Pulled 20:59  
 (E) Second Initial Flow 147  Hourly Standby 2 hrs 200 T-Out 23:21  
 (F) Second Final Flow 238  Mileage 60 R/T 93  
 (G) Final Shut-In 657  Sampler  
 (H) Final Hydrostatic 1635  Straddle  
 Shale Packer  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Initial Open 45  Ruined Shale Packer  
 Initial Shut-In 60  Ruined Packer  
 Final Flow 45  Extra Copies  
 Final Shut-In 60 Sub Total 0  
 Total 1768  
 MP/DST Disc't

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54843**

Well Name & No. Carmichael #2 Test No. 2 Date 10-22-13  
 Company Gore Oil Company Elevation 2161 KB 2153 GL  
 Address 202 S St Francis Wichita KS 67202  
 Co. Rep / Geo. Chuck Schmalz Rig Maverick #108  
 Location: Sec. 22 Twp. 9 Rge. 18 Co. Rooks State KS

Interval Tested 3462 3562 Zone Tested KC  
 Anchor Length 100 Drill Pipe Run 3408 Mud Wt. 9.0  
 Top Packer Depth 3458 Drill Collars Run 31 Vis 55  
 Bottom Packer Depth 3462 Wt. Pipe Run 0 WL 8.4  
 Total Depth 3562 Chlorides 2250 ppm System LCM 2F

Blow Description Weat surface blow built to 3in,  
Dead no blow back  
Neat surface blow built to 1/2in  
Dead no blowback

| Rec                 | Feet of             | %gas                  | %oil                      | %water                | %mud     |
|---------------------|---------------------|-----------------------|---------------------------|-----------------------|----------|
| Rec <u>80</u>       | Feet of <u>mc w</u> | <u>with oil spots</u> | <u>70</u>                 | <u>30</u>             | <u>0</u> |
| Rec Total <u>80</u> | BHT <u>102</u>      | Gravity               | API RW <u>231 @ 60° F</u> | Chlorides <u>3000</u> | ppm      |

(A) Initial Hydrostatic 1709  Test 1150 T-On Location 11:25  
 (B) First Initial Flow 23  Jars 250 T-Started 12:01  
 (C) First Final Flow 49  Safety Joint 75 T-Open 14:17  
 (D) Initial Shut-In 634  Circ Sub T-Pulled 17:47  
 (E) Second Initial Flow 50  Hourly Standby T-Out 19:53  
 (F) Second Final Flow 65  Mileage 60 R/T x2 186 Comments loaded  
 (G) Final Shut-In 622  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1641  Straddle  Ruined Packer  
 Shale Packer  Extra Copies  
 Extra Packer Sub Total 0  
 Extra Recorder Total 1661  
 Day Standby MP/DST Disc't  
 Accessibility  
 Sub Total 1661

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.