

## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

### **Kincheloe 6B #1**

### **5-27s-22w Ford,KS**

Start Date: 2013.02.18 @ 10:38:04

End Date: 2013.02.18 @ 16:49:49

Job Ticket #: 50857                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.27 @ 12:02:17



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

## DRILL STEM TEST REPORT

Ritchie Exploration Inc.

5-27s-22w Ford,KS

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

**Kincheloe 6B #1**

Job Ticket: 50857

**DST#: 1**

ATTN: Dave Williams

Test Start: 2013.02.18 @ 10:38:04

### GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:51:04

Time Test Ended: 16:49:49

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Reynolds

Unit No: 48

**Interval: 4812.00 ft (KB) To 4845.00 ft (KB) (TVD)**

Reference Elevations: 2446.00 ft (KB)

Total Depth: 4845.00 ft (KB) (TVD)

2436.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8790 Inside**

Press@RunDepth: 20.94 psig @ 4813.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.18

End Date:

2013.02.18

Last Calib.: 2013.02.18

Start Time: 10:38:09

End Time:

16:49:48

Time On Btm: 2013.02.18 @ 12:49:49

Time Off Btm: 2013.02.18 @ 15:09:04

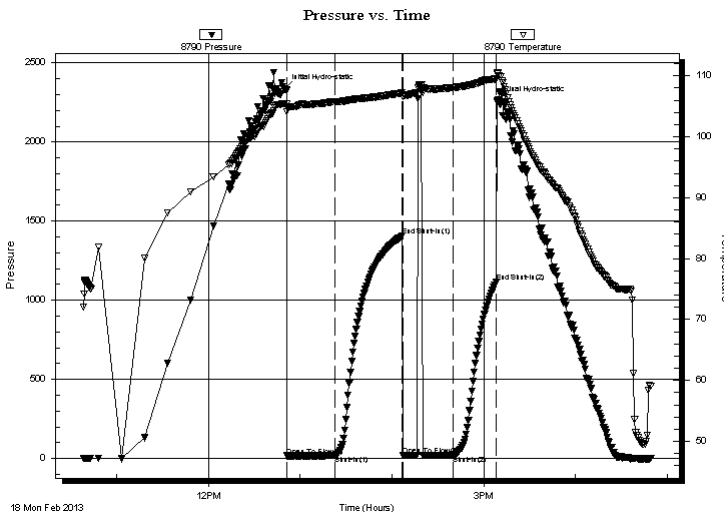
TEST COMMENT: IF: Weak blow . 1/4" - Died @ 23min.

IS: No blow

FF: No blow . Flshd tool 10" into. No blow

FS: No blow

### PRESSURE SUMMARY



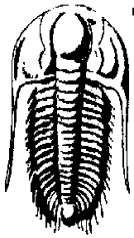
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2336.70         | 105.39       | Initial Hydro-static |
| 2           | 15.41           | 104.09       | Open To Flow (1)     |
| 33          | 17.96           | 105.75       | Shut-In(1)           |
| 77          | 1404.77         | 107.20       | End Shut-In(1)       |
| 78          | 18.07           | 106.63       | Open To Flow (2)     |
| 110         | 20.94           | 108.07       | Shut-In(2)           |
| 139         | 1117.34         | 109.50       | End Shut-In(2)       |
| 140         | 2263.82         | 110.57       | Final Hydro-static   |

### Recovery

| Length (ft) | Description       | Volume (bbl) |
|-------------|-------------------|--------------|
| 15.00       | Drig mud 100%miud | 0.21         |
|             |                   |              |
|             |                   |              |
|             |                   |              |
|             |                   |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

5-27s-22w Ford,KS

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

Kincheloe 6B #1

Job Ticket: 50857

DST#: 1

ATTN: Dave Williams

Test Start: 2013.02.18 @ 10:38:04

### Tool Information

|                           |         |            |           |             |               |           |                        |             |
|---------------------------|---------|------------|-----------|-------------|---------------|-----------|------------------------|-------------|
| Drill Pipe:               | Length: | 4789.00 ft | Diameter: | 3.80 inches | Volume:       | 67.18 bbl | Tool Weight:           | 2400.00 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: | 0.00 ft    | Diameter: | 0.00 inches | Volume:       | 0.00 bbl  | Weight to Pull Loose:  | 75000.00 lb |
|                           |         |            |           |             | Total Volume: | 67.18 bbl | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      |         | 3.00 ft    |           |             |               |           | String Weight: Initial | 70000.00 lb |
| Depth to Top Packer:      |         | 4812.00 ft |           |             |               |           | Final                  | 70000.00 lb |
| Depth to Bottom Packer:   |         | ft         |           |             |               |           |                        |             |
| Interval between Packers: |         | 33.00 ft   |           |             |               |           |                        |             |
| Tool Length:              |         | 59.00 ft   |           |             |               |           |                        |             |
| Number of Packers:        |         | 2          | Diameter: | 6.50 inches |               |           |                        |             |
| Tool Comments:            |         |            |           |             |               |           |                        |             |

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

|                |       |      |         |         |                               |
|----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool   | 5.00  |      |         | 4791.00 |                               |
| Hydraulic tool | 5.00  |      |         | 4796.00 |                               |
| Jars           | 5.00  |      |         | 4801.00 |                               |
| Safety Joint   | 2.00  |      |         | 4803.00 |                               |
| Packer         | 5.00  |      |         | 4808.00 | 26.00 Bottom Of Top Packer    |
| Packer         | 4.00  |      |         | 4812.00 |                               |
| Stubb          | 1.00  |      |         | 4813.00 |                               |
| Recorder       | 0.00  | 8790 | Inside  | 4813.00 |                               |
| Recorder       | 0.00  | 8788 | Outside | 4813.00 |                               |
| Perforations   | 29.00 |      |         | 4842.00 |                               |
| Bullnose       | 3.00  |      |         | 4845.00 | 33.00 Bottom Packers & Anchor |

**Total Tool Length: 59.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Ritchie Exploration Inc.

**5-27s-22w Ford,KS**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

**Kincheloe 6B #1**

Job Ticket: 50857

**DST#: 1**

ATTN: Dave Williams

Test Start: 2013.02.18 @ 10:38:04

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 7.98 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 2900.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

2900 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description       | Volume<br>bbl |
|--------------|-------------------|---------------|
| 15.00        | Drig mud 100%miud | 0.210         |

Total Length: 15.00 ft

Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

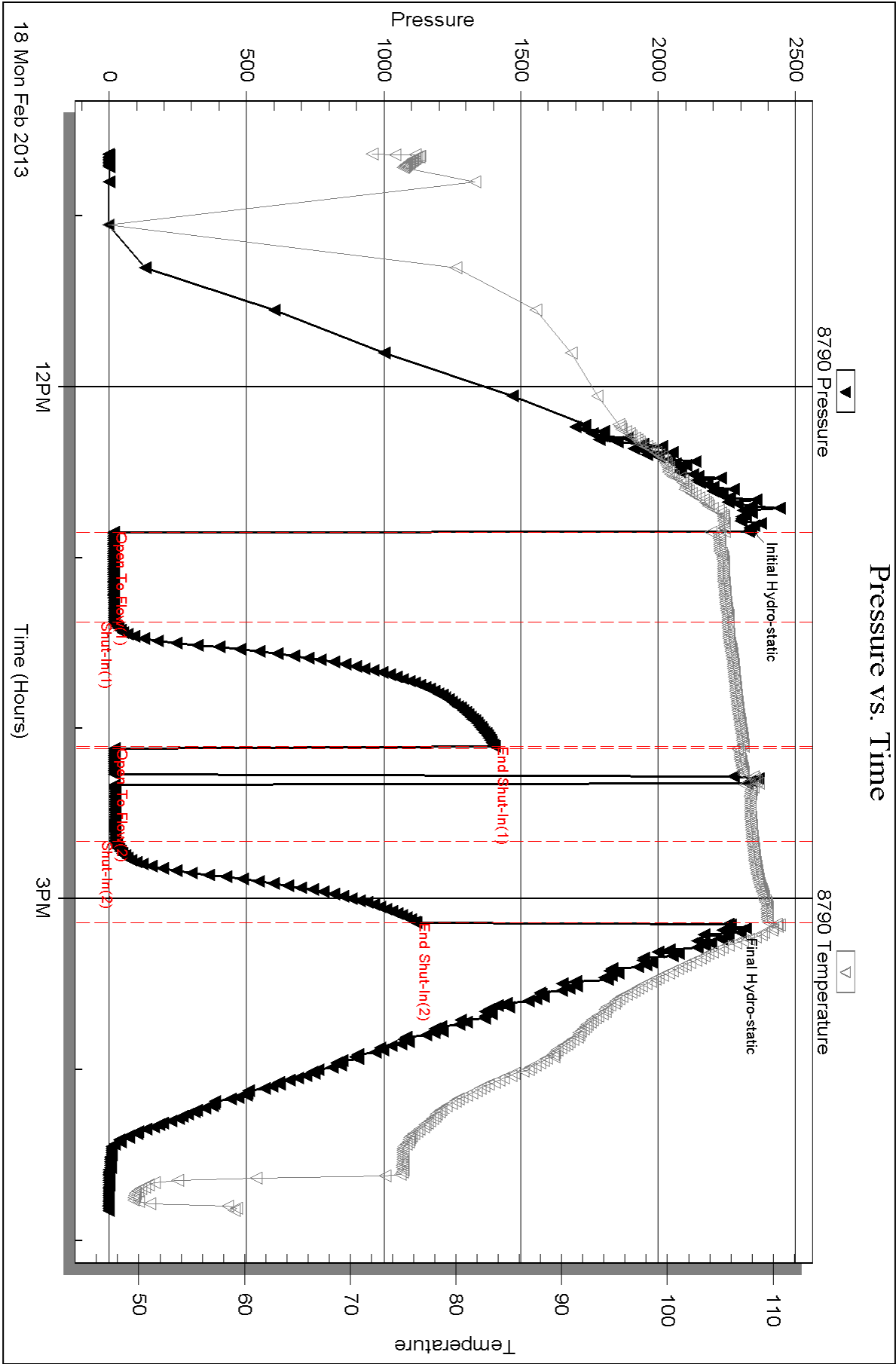
Serial #: 8790

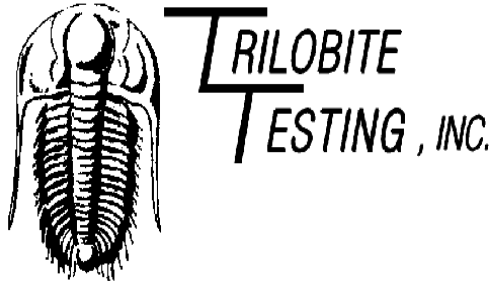
Inside

Ritchie Exploration Inc.

Kinchebe 6B #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

### **Kincheloe 6B #1**

### **5-27s-22w Ford,KS**

Start Date: 2013.02.19 @ 11:27:15

End Date: 2013.02.19 @ 17:16:30

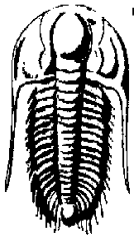
Job Ticket #: 50858                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.27 @ 12:01:37



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

## DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

**5-27s-22w Ford,KS**

**Kincheloe 6B #1**

Job Ticket: 50858

**DST#: 2**

Test Start: 2013.02.19 @ 11:27:15

### GENERAL INFORMATION:

Formation: **Huck**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:36:00

Time Test Ended: 17:16:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 48

**Interval: 4900.00 ft (KB) To 4975.00 ft (KB) (TVD)**

Total Depth: 4975.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2446.00 ft (KB)

2436.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8790 Inside**

Press@RunDepth: 23.13 psig @ 4901.00 ft (KB)

Start Date: 2013.02.19

End Date:

2013.02.19

Start Time: 11:27:20

End Time:

17:16:29

Capacity: 8000.00 psig

Last Calib.: 2013.02.19

Time On Btm: 2013.02.19 @ 13:32:30

Time Off Btm: 2013.02.19 @ 15:34:15

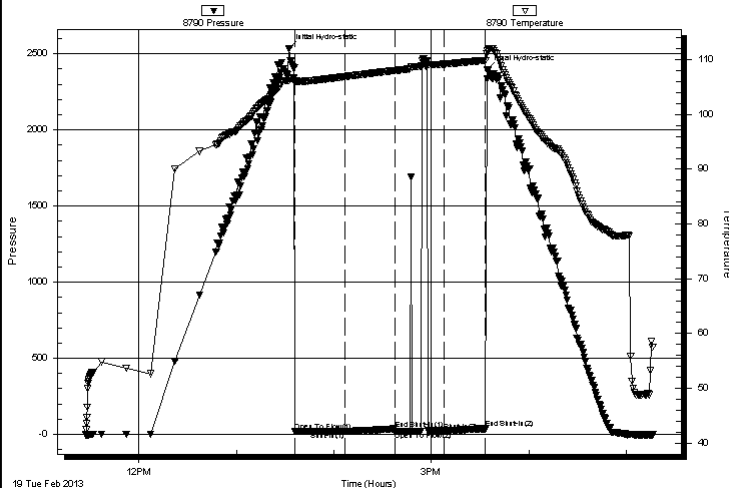
TEST COMMENT: IF: Weak blow . 1/4" - Dead @ 11min.

IS: No blow

FF: No blow . Flushed tool 10" into. No blow

FS: No blow

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2536.03         | 106.21       | Initial Hydro-static |
| 4           | 19.07           | 105.69       | Open To Flow (1)     |
| 35          | 18.89           | 106.91       | Shut-In(1)           |
| 65          | 35.96           | 108.02       | End Shut-In(1)       |
| 66          | 18.34           | 108.02       | Open To Flow (2)     |
| 96          | 23.13           | 109.20       | Shut-In(2)           |
| 121         | 37.88           | 109.88       | End Shut-In(2)       |
| 122         | 2394.48         | 111.65       | Final Hydro-static   |

Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 10.00       | Drig mud 100%mud | 0.14         |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |

Gas Rates

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

\* Recovery from multiple tests



## Ritchie Exploration Inc.

ATTN: Dave Williams

**Kincheloe 6B #1**

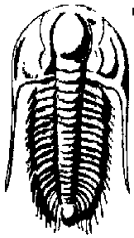
DST#: 2

Test Start: 2013.02.19 @ 11:27:15

## KB to GR/CF: 10.00 ft

Time Off Btm:

Printed: 2013.02.27 @ 12:01:37



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

5-27s-22w Ford,KS

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

Kincheloe 6B #1

Job Ticket: 50858

DST#: 2

ATTN: Dave Williams

Test Start: 2013.02.19 @ 11:27:15

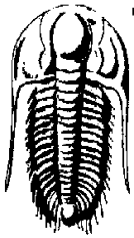
### Tool Information

|                           |         |            |           |             |               |           |                        |             |
|---------------------------|---------|------------|-----------|-------------|---------------|-----------|------------------------|-------------|
| Drill Pipe:               | Length: | 4882.00 ft | Diameter: | 3.80 inches | Volume:       | 68.48 bbl | Tool Weight:           | 2400.00 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: | 0.00 ft    | Diameter: | 0.00 inches | Volume:       | 0.00 bbl  | Weight to Pull Loose:  | 75000.00 lb |
|                           |         |            |           |             | Total Volume: | 68.48 bbl | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      |         | 8.00 ft    |           |             |               |           | String Weight: Initial | 71000.00 lb |
| Depth to Top Packer:      |         | 4900.00 ft |           |             |               |           | Final                  | 71000.00 lb |
| Depth to Bottom Packer:   |         | ft         |           |             |               |           |                        |             |
| Interval between Packers: |         | 75.00 ft   |           |             |               |           |                        |             |
| Tool Length:              |         | 101.00 ft  |           |             |               |           |                        |             |
| Number of Packers:        |         | 2          | Diameter: | 6.50 inches |               |           |                        |             |
| Tool Comments:            |         |            |           |             |               |           |                        |             |

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

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool    | 5.00  |      |         | 4879.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 4884.00 |                               |
| Jars            | 5.00  |      |         | 4889.00 |                               |
| Safety Joint    | 2.00  |      |         | 4891.00 |                               |
| Packer          | 5.00  |      |         | 4896.00 | 26.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 4900.00 |                               |
| Stubb           | 1.00  |      |         | 4901.00 |                               |
| Recorder        | 0.00  | 8790 | Inside  | 4901.00 |                               |
| Recorder        | 0.00  | 8788 | Outside | 4901.00 |                               |
| Perforations    | 3.00  |      |         | 4904.00 |                               |
| Change Over Sub | 1.00  |      |         | 4905.00 |                               |
| Drill Pipe      | 32.00 |      |         | 4937.00 |                               |
| Change Over Sub | 1.00  |      |         | 4938.00 |                               |
| Perforations    | 34.00 |      |         | 4972.00 |                               |
| Bullnose        | 3.00  |      |         | 4975.00 | 75.00 Bottom Packers & Anchor |

**Total Tool Length: 101.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Ritchie Exploration Inc.

**5-27s-22w Ford,KS**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

**Kincheloe 6B #1**

Job Ticket: 50858

**DST#: 2**

ATTN: Dave Williams

Test Start: 2013.02.19 @ 11:27:15

### 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:

4900 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description       | Volume<br>bbl |
|--------------|-------------------|---------------|
| 10.00        | Drilg mud 100%mud | 0.140         |

Total Length: 10.00 ft

Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

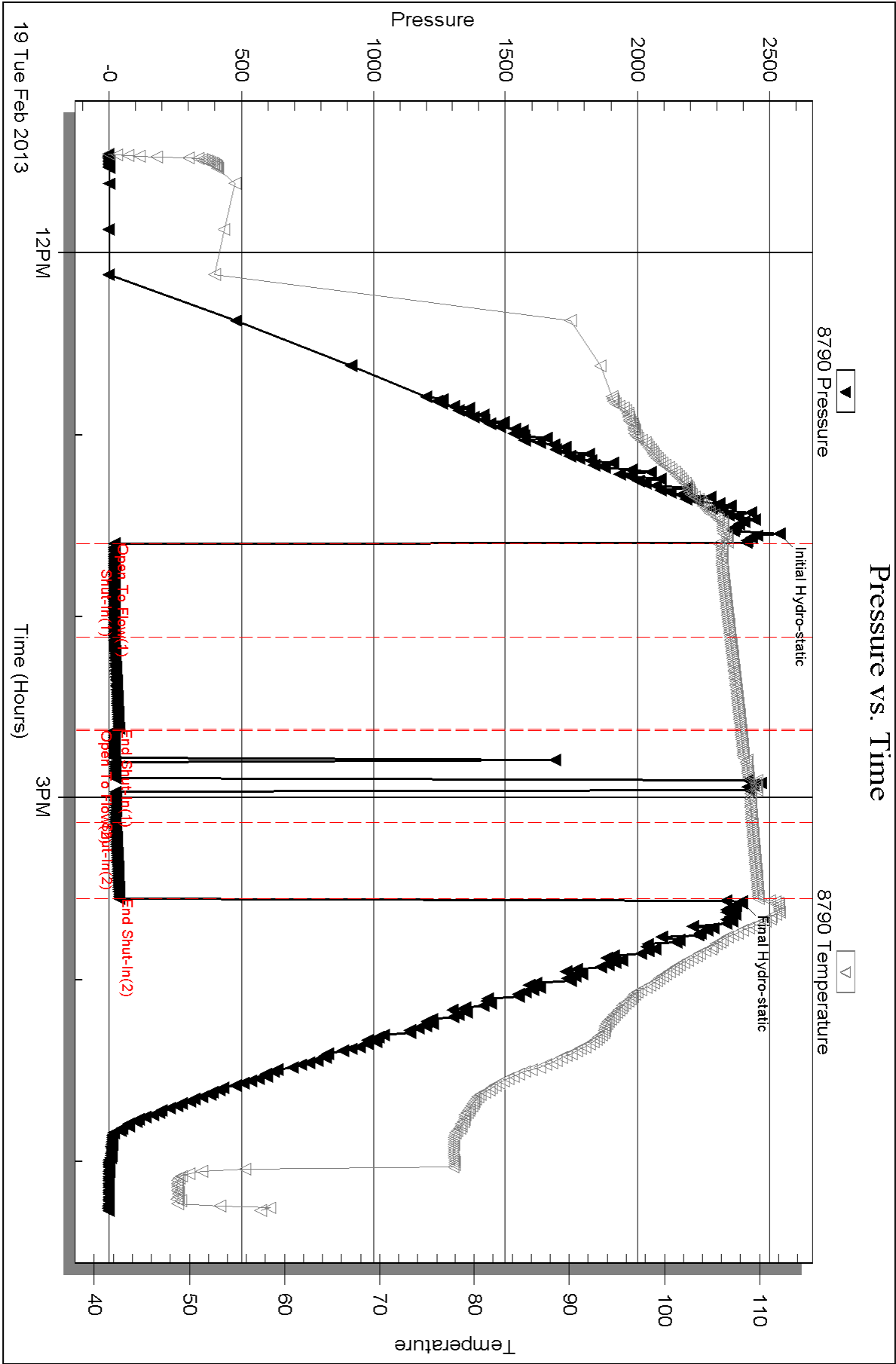
Serial #: 8790

Inside

Ritchie Exploration Inc.

Kinchebe 6B #1

DST Test Number: 2

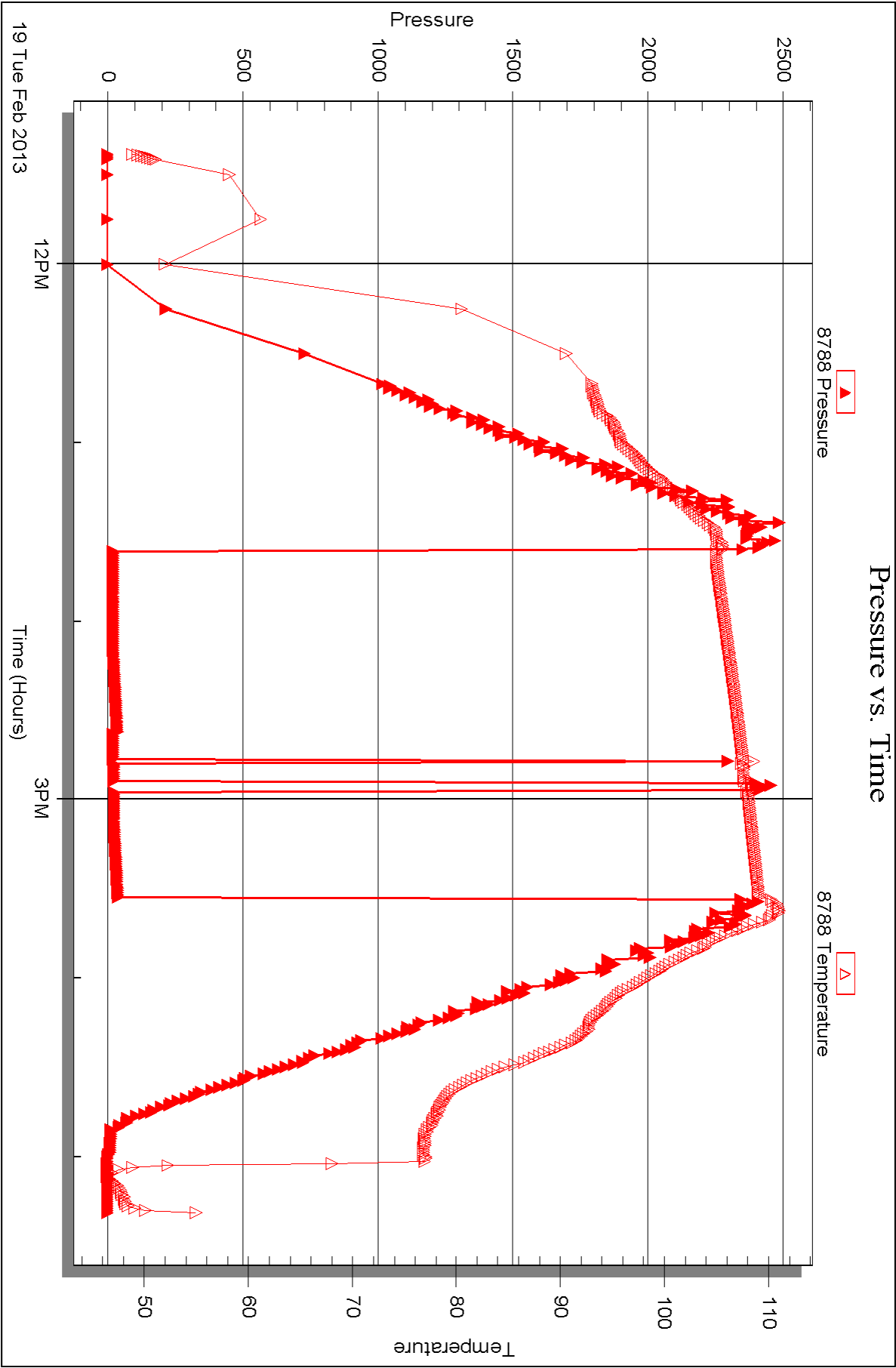


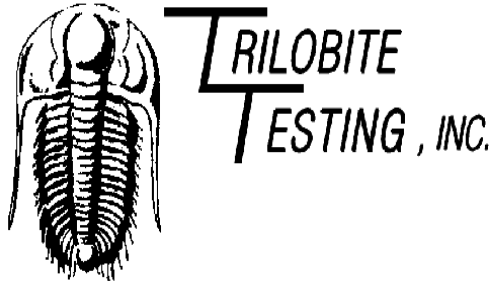
Serial #: 8788

Outside Ritchie Exploration Inc.

Kinchebe 6B #1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

### **Kincheloe 6B #1**

### **5-27s-22w Ford,KS**

Start Date: 2013.02.20 @ 11:18:42

End Date: 2013.02.20 @ 18:42:57

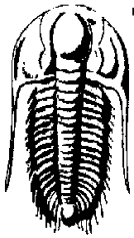
Job Ticket #: 50859                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.27 @ 12:00:14



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

**5-27s-22w Ford,KS**

**Kincheloe 6B #1**

Job Ticket: 50859

**DST#: 3**

Test Start: 2013.02.20 @ 11:18:42

### GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:38:12

Time Test Ended: 18:42:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 48

**Interval: 4945.00 ft (KB) To 5095.00 ft (KB) (TVD)**

Total Depth: 5095.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2446.00 ft (KB)

2436.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8790 Inside**

Press@RunDepth: 289.88 psig @ 4946.00 ft (KB)

Start Date: 2013.02.20

End Date:

2013.02.20

Start Time: 11:18:47

End Time:

18:42:56

Capacity: 8000.00 psig

Last Calib.: 2013.02.20

Time On Btm: 2013.02.20 @ 13:33:27

Time Off Btm: 2013.02.20 @ 16:41:57

TEST COMMENT: IF: Strong blow . BOB 16 min. No GTS.

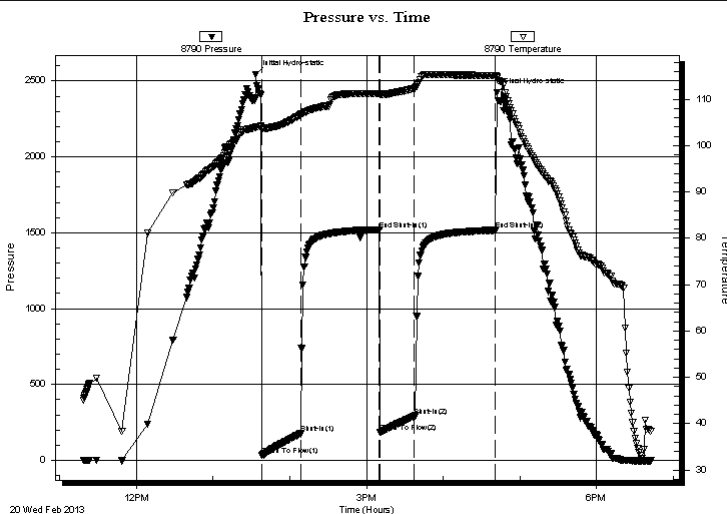
IS: No blow

FF: Strong blow . BOB 38 min. No GTS.(Tool out of synch first 14 min.)

FS: No blow

### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2543.74         | 103.96       | Initial Hydro-static |
| 5           | 33.05           | 103.36       | Open To Flow (1)     |
| 36          | 176.10          | 106.61       | Shut-In(1)           |
| 97          | 1520.98         | 111.23       | End Shut-In(1)       |
| 98          | 183.78          | 110.92       | Open To Flow (2)     |
| 124         | 289.88          | 112.32       | Shut-In(2)           |
| 188         | 1516.93         | 115.15       | End Shut-In(2)       |
| 189         | 2425.71         | 114.88       | Final Hydro-static   |



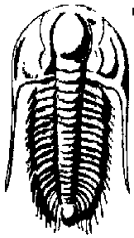
### Recovery

| Length (ft) | Description            | Volume (bbl) |
|-------------|------------------------|--------------|
| 255.00      | WCM 40%w tr, 60%mud    | 3.58         |
| 255.00      | WCM 20%w tr, 80%mud    | 3.58         |
| 75.00       | SLI WCM 5%w tr, 95%mud | 1.05         |
|             |                        |              |
|             |                        |              |
|             |                        |              |

### Gas Rates

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

\* Recovery from multiple tests



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

## DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

ATTN: Dave Williams

**5-27s-22w Ford,KS**

**Kincheloe 6B #1**

Job Ticket: 50859

**DST#: 3**

Test Start: 2013.02.20 @ 11:18:42

### GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:38:12

Time Test Ended: 18:42:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 48

**Interval: 4945.00 ft (KB) To 5095.00 ft (KB) (TVD)**

Total Depth: 5095.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2446.00 ft (KB)

2436.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8788 Outside**

Press@RunDepth: psig @ 4946.00 ft (KB)

Start Date: 2013.02.20

End Date:

2013.02.20

Start Time: 11:14:47

End Time:

18:45:26

Capacity: 8000.00 psig

Last Calib.: 2013.02.20

Time On Btm:

Time Off Btm:

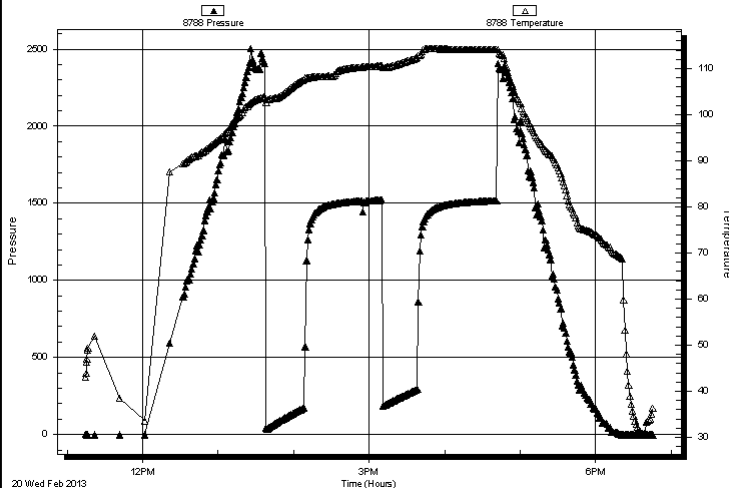
TEST COMMENT: IF: Strong blow . BOB 16 min. No GTS.

IS: No blow

FF: Strong blow . BOB 38 min. No GTS.(Tool out of synch first 14 min.)

FS: No blow

Pressure vs. Time



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|-------------|-----------------|--------------|------------|

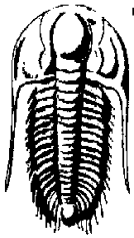
### Recovery

| Length (ft) | Description            | Volume (bbl) |
|-------------|------------------------|--------------|
| 255.00      | WCM 40%w tr, 60%mud    | 3.58         |
| 255.00      | WCM 20%w tr, 80%mud    | 3.58         |
| 75.00       | SLI WCM 5%w tr, 95%mud | 1.05         |
|             |                        |              |
|             |                        |              |
|             |                        |              |

### Gas Rates

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

\* Recovery from multiple tests



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

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc.

**5-27s-22w Ford,KS**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

**Kincheloe 6B #1**

Job Ticket: 50859

**DST#: 3**

ATTN: Dave Williams

Test Start: 2013.02.20 @ 11:18:42

### Tool Information

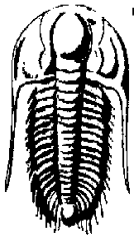
|                           |         |            |           |             |               |           |                        |             |
|---------------------------|---------|------------|-----------|-------------|---------------|-----------|------------------------|-------------|
| Drill Pipe:               | Length: | 4944.00 ft | Diameter: | 3.80 inches | Volume:       | 69.35 bbl | Tool Weight:           | 2400.00 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: | 0.00 ft    | Diameter: | 0.00 inches | Volume:       | 0.00 bbl  | Weight to Pull Loose:  | 82000.00 lb |
|                           |         |            |           |             | Total Volume: | 69.35 bbl | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      |         | 25.00 ft   |           |             |               |           | String Weight: Initial | 74000.00 lb |
| Depth to Top Packer:      |         | 4945.00 ft |           |             |               |           | Final                  | 77000.00 lb |
| Depth to Bottom Packer:   |         | ft         |           |             |               |           |                        |             |
| Interval between Packers: |         | 150.00 ft  |           |             |               |           |                        |             |
| Tool Length:              |         | 176.00 ft  |           |             |               |           |                        |             |
| Number of Packers:        |         | 2          | Diameter: | 6.50 inches |               |           |                        |             |
| Tool Comments:            |         |            |           |             |               |           |                        |             |

### Tool Description

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

|                 |        |      |         |         |        |                         |
|-----------------|--------|------|---------|---------|--------|-------------------------|
| Shut In Tool    | 5.00   |      |         | 4924.00 |        |                         |
| Hydraulic tool  | 5.00   |      |         | 4929.00 |        |                         |
| Jars            | 5.00   |      |         | 4934.00 |        |                         |
| Safety Joint    | 2.00   |      |         | 4936.00 |        |                         |
| Packer          | 5.00   |      |         | 4941.00 | 26.00  | Bottom Of Top Packer    |
| Packer          | 4.00   |      |         | 4945.00 |        |                         |
| Stubb           | 1.00   |      |         | 4946.00 |        |                         |
| Recorder        | 0.00   | 8790 | Inside  | 4946.00 |        |                         |
| Recorder        | 0.00   | 8788 | Outside | 4946.00 |        |                         |
| Perforations    | 3.00   |      |         | 4949.00 |        |                         |
| Change Over Sub | 0.50   |      |         | 4949.50 |        |                         |
| Drill Pipe      | 126.50 |      |         | 5076.00 |        |                         |
| Change Over Sub | 1.00   |      |         | 5077.00 |        |                         |
| Perforations    | 15.00  |      |         | 5092.00 |        |                         |
| Bullnose        | 3.00   |      |         | 5095.00 | 150.00 | Bottom Packers & Anchor |

**Total Tool Length: 176.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Ritchie Exploration Inc.

**5-27s-22w Ford,KS**

8100 E. 22nd. St. N. #700  
Wichita, KS 67278-3188

**Kincheloe 6B #1**

Job Ticket: 50859

**DST#: 3**

ATTN: Dave Williams

Test Start: 2013.02.20 @ 11:18:42

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 9.59 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API: deg API

Water Salinity: 65000 ppm

ft  
bbl

psig

### Recovery Information

Recovery Table

| Length<br>ft | Description            | Volume<br>bbl |
|--------------|------------------------|---------------|
| 255.00       | WCM 40%w tr, 60%mud    | 3.577         |
| 255.00       | WCM 20%w tr, 80%mud    | 3.577         |
| 75.00        | SLI WCM 5%w tr, 95%mud | 1.052         |

Total Length: 585.00 ft

Total Volume: 8.206 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

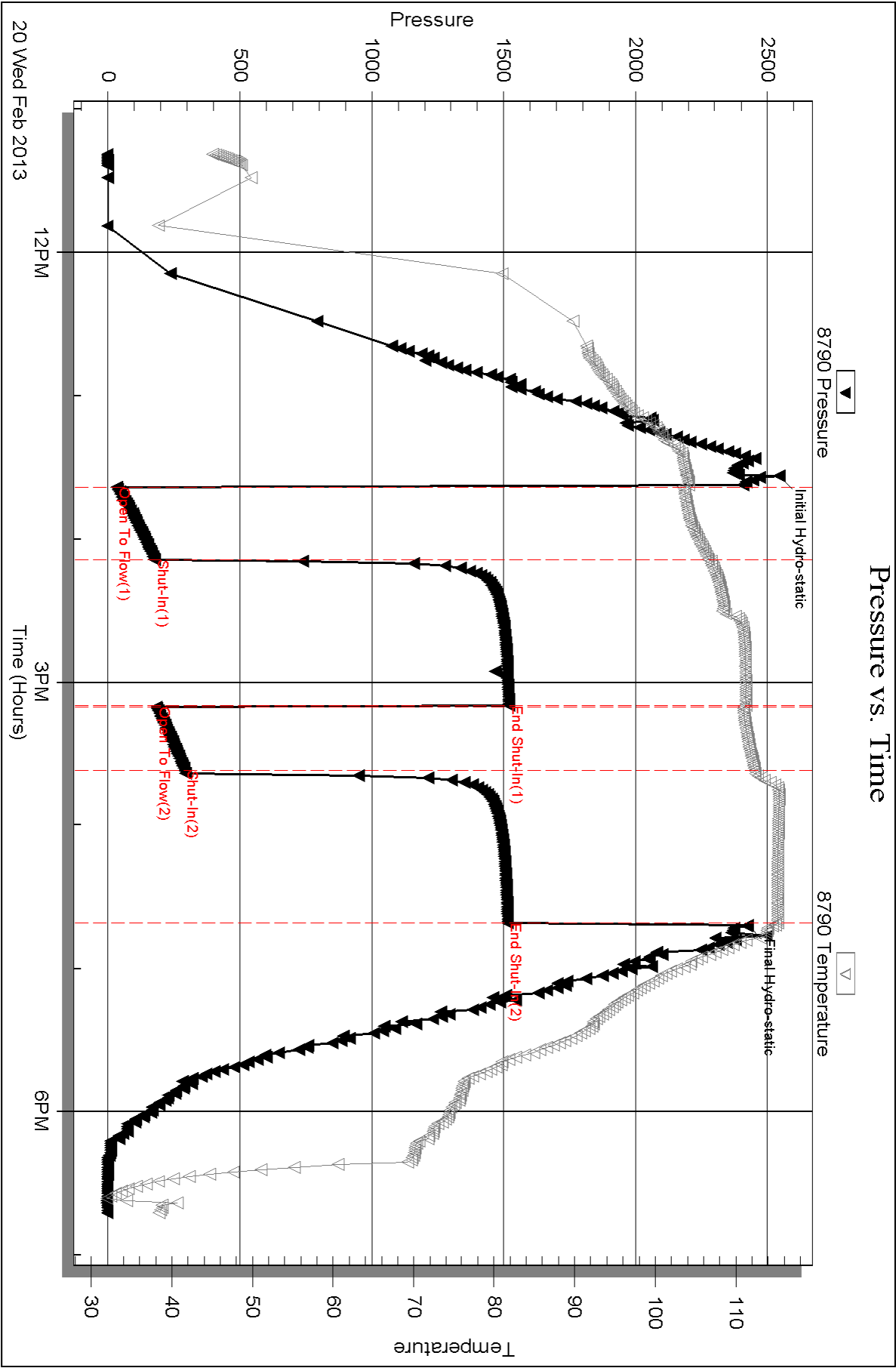
Serial #: 8790

Inside

Ritchie Exploration Inc.

Kinchebe 6B #1

DST Test Number: 3

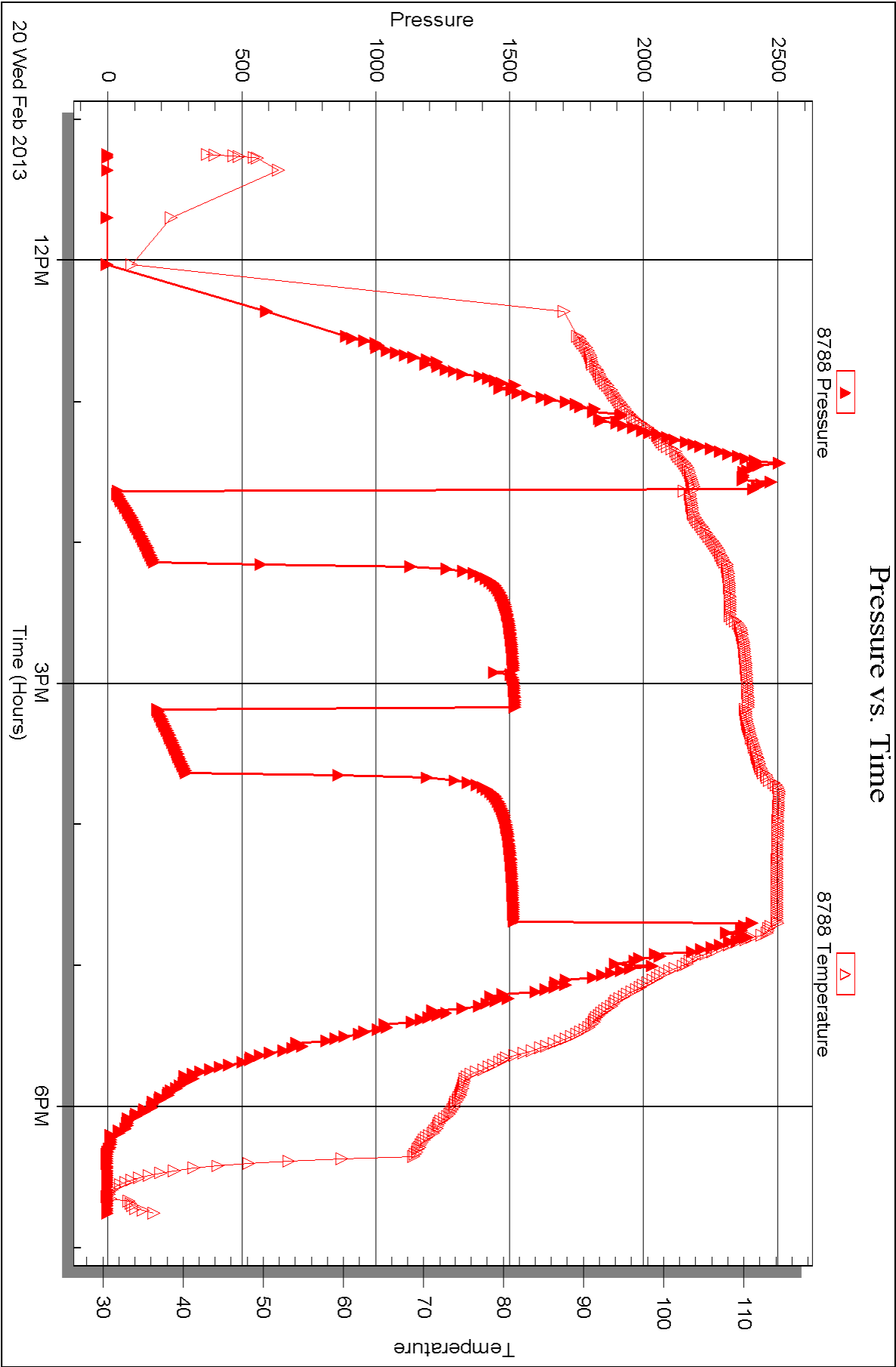


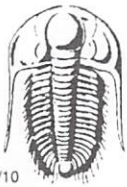
Serial #: 8788

Outside Ritchie Exploration Inc.

Kinchebe 6B #1

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50857

Well Name & No. Kincheloe 6B #1 Test No. 1 Date 2-18-13  
 Company Ritchie Expl. Inc. Elevation 2446 KB 2436 GL  
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278-3188  
 Co. Rep / Geo. Dave Williams Rig Val #1  
 Location: Sec. 5 Twp. 27s Rge. 22w Co. Ford State KS

Interval Tested 4812-4845 Zone Tested Pawnee  
 Anchor Length 33' Drill Pipe Run 4789 Mud Wt. 9.11  
 Top Packer Depth 4807 Drill Collars Run Ø Vis 48  
 Bottom Packer Depth 4812 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4845 Chlorides 2900 ppm System LCM 2#  
 Blow Description IF: Weak blow. '1/4" - Died @ 23 min. FSI: No blow

FF: No blow. Flushed tool 10 min. into. No blow  
FSI: No blow

| Rec       | Feet of        | %gas | %oil | %water     | %mud |
|-----------|----------------|------|------|------------|------|
| <u>15</u> | <u>Dry mud</u> |      |      | <u>100</u> |      |
| Rec       | Feet of        | %gas | %oil | %water     | %mud |
| Rec       | Feet of        | %gas | %oil | %water     | %mud |
| Rec       | Feet of        | %gas | %oil | %water     | %mud |
| Rec       | Feet of        | %gas | %oil | %water     | %mud |

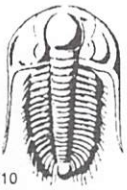
Rec Total 15 BHT 111 Gravity N/C API RW N/C @ N/C °F Chlorides 2900 ppm  
 (A) Initial Hydrostatic 2337 ☒ Test 1250 T-On Location 0800  
 (B) First Initial Flow 15 ☒ Jars 250 T-Started 1038  
 (C) First Final Flow 18 ☒ Safety Joint 75 T-Open 1251  
 (D) Initial Shut-In 1405 ☐ Circ Sub  T-Pulled 1505  
 (E) Second Initial Flow 18 ☐ Hourly Standby  T-Out 1650  
 (F) Second Final Flow 21 ☒ Mileage 142 220.10 Comments   
 (G) Final Shut-In 1117 ☐ Sampler   
 (H) Final Hydrostatic 2264 ☐ Straddle   
☐ Shale Packer   
☐ Extra Packer   
☐ Extra Recorder   
☐ Day Standby   
☐ Accessibility

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 30

☐ Ruined Shale Packer   
☐ Ruined Packer   
☐ Extra Copies   
 Sub Total 0  
 Total 1795.10  
 MP/DST Disc't

Approved By Daniel P. Williams Our Representative Ryan Roy  
 Sub Total 1795.10

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. 50858

Well Name & No. Kincheloe 6B # 1 Test No. 2 Date 2-19-13  
Company Ritchie Expl. Inc. Elevation 2446 KB 2436 GL  
Address 8100 E. 22<sup>nd</sup> St. N. #700 Wichita, KS 67278-3188  
Co. Rep / Geo. Dave Williams Rig Val #1  
Location: Sec. 5 Twp. 27s Rge. 22w Co. Ford State KS

Interval Tested 4900-4975 Zone Tested Huck  
Anchor Length 75 Drill Pipe Run 4882 Mud Wt. 9.3  
Top Packer Depth 4895 Drill Collars Run Ø Vis 49  
Bottom Packer Depth 4900 Wt. Pipe Run Ø WL 10.4  
Total Depth 4975 Chlorides 4900 ppm System LCM 2<sup>#</sup>  
Blow Description IF: Weak blow. 1/4" - Dead @ 11 min. ISI: No blow

FF: No blow. Flushed tool 10 min into. No blow.

FSI: No blow.

| Rec       | Feet of        | %gas | %oil | %water     | %mud |
|-----------|----------------|------|------|------------|------|
| <u>10</u> | <u>Dry mud</u> |      |      | <u>100</u> |      |
|           |                |      |      |            |      |
|           |                |      |      |            |      |
|           |                |      |      |            |      |
|           |                |      |      |            |      |

Rec Total 10 BHT 112 Gravity N/C API RW N/C @ N/C °F Chlorides 4900 ppm  
(A) Initial Hydrostatic 2536 ☒ Test 1250 T-On Location 1030  
(B) First Initial Flow 19 ☒ Jars 250 T-Started 1127  
(C) First Final Flow 19 ☒ Safety Joint 75 T-Open 1336  
(D) Initial Shut-In 36 ☐ Circ Sub \_\_\_\_\_ T-Pulled 1532  
(E) Second Initial Flow 18 ☐ Hourly Standby \_\_\_\_\_ T-Out 1716  
(F) Second Final Flow 23 ☒ Mileage 142 220.10  
(G) Final Shut-In 38 ☐ Sampler \_\_\_\_\_  
(H) Final Hydrostatic 2394 ☐ Straddle \_\_\_\_\_

Initial Open 30  
Initial Shut-In 30  
Final Flow 30  
Final Shut-In 30

☐ Shale Packer \_\_\_\_\_  
☐ Extra Packer \_\_\_\_\_  
☐ Extra Recorder \_\_\_\_\_  
☐ Day Standby \_\_\_\_\_  
☐ Accessibility \_\_\_\_\_  
Sub Total 1795.10

☐ Ruined Shale Packer \_\_\_\_\_  
☐ Ruined Packer \_\_\_\_\_  
☐ Extra Copies \_\_\_\_\_  
Sub Total 0  
Total 1795.10  
MP/DST Disc't \_\_\_\_\_

Approved By

Dave P. Williams

Our Representative

Ryan Reynolds

TriLOBITE TESTING INC. shall not be liable for damaged or 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. 50859

Well Name & No. Kincheloe 6B #1 Test No. 3 Date 2-20-13  
 Company Ritchie Expl. Inc. Elevation 2446 KB 2436 GL  
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278-3188  
 Co. Rep / Geo. Dave Williams Rig Val #1  
 Location: Sec. 5 Twp. 27s. Rge. 22w. Co. Ford State KS

Interval Tested 4945-5095 Zone Tested Mississippi  
 Anchor Length 150 Drill Pipe Run 4944 Mud Wt. 9.3  
 Top Packer Depth 4940 Drill Collars Run Ø Vis 50  
 Bottom Packer Depth 4945 Wt. Pipe Run Ø WL 9.6  
 Total Depth 5095 Chlorides 5000 ppm System LCM 2#  
 Blow Description IF: Strong blow. BOB 16 min. No GTS ISI: No blow

FF: Strong blow. BOB 38 min. No GTS (Tool out of synch first 14 min. of FF.)  
FSI: No blow.

| Rec        | Feet of        | %gas | %oil      | %water    | %mud |
|------------|----------------|------|-----------|-----------|------|
| <u>75</u>  | <u>SLI WCM</u> |      | <u>5</u>  | <u>95</u> |      |
| <u>255</u> | <u>WCM</u>     |      | <u>20</u> | <u>80</u> |      |
| <u>255</u> | <u>WCM</u>     |      | <u>40</u> | <u>60</u> |      |
|            |                |      |           |           |      |
|            |                |      |           |           |      |

Rec Total 585 BHT 115 Gravity N/K API RW 21 @ 39 °F Chlorides 6500 ppm

(A) Initial Hydrostatic 2544  
 (B) First Initial Flow 33  
 (C) First Final Flow 176  
 (D) Initial Shut-In 1521  
 (E) Second Initial Flow 184  
 (F) Second Final Flow 290  
 (G) Final Shut-In 1517  
 (H) Final Hydrostatic 2426

☒ Test 1350  
☒ Jars 250  
☒ Safety Joint 75  
☐ Circ Sub  
☐ Hourly Standby  
☒ Mileage 142 220.10  
☐ Sampler  
☐ Straddle  
☐ Shale Packer  
☐ Extra Packer  
☐ Extra Recorder  
☐ Day Standby  
☐ Accessibility  
 Sub Total 1795.10

T-On Location 1045  
 T-Started 1119  
 T-Open 1338  
 T-Pulled 1637  
 T-Out 1843  
 Comments

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60

☐ Ruined Shale Packer  
☐ Ruined Packer  
☐ Extra Copies  
 Sub Total 0  
 Total 1795.10  
 MP/DST Disc't

Approved By Dave Williams

Our Representative Ryan Rangel

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.