



## DRILL STEM TEST REPORT

Prepared For: **ESP Development, Inc.**

1749 B 250th AVE  
Hays, KS 67601

ATTN: Austin Klaus

### **Delmer Chrisler B #1**

### **35-11s-16w Ellis, KS**

Start Date: 2015.04.25 @ 17:40:00

End Date: 2015.04.26 @ 00:16:00

Job Ticket #: 62464                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.28 @ 10:04:21



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

ESP Development, Inc.

1749 B 250th AVE  
Hays, KS 67601

ATTN: Austin Klaus

**35-11s-16w Ellis, KS**

**Delmer Chrisler B #1**

Job Ticket: 62464

**DST#: 1**

Test Start: 2015.04.25 @ 17:40:00

## GENERAL INFORMATION:

Formation: **LCK "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:53:30

Time Test Ended: 00:16:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Phillip Gage

Unit No: 77

**Interval: 2967.00 ft (KB) To 3025.00 ft (KB) (TVD)**

Reference Elevations: 1743.00 ft (KB)

Total Depth: 3025.00 ft (KB) (TVD)

1735.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 18.03 psig @ 2968.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.04.25

End Date:

2015.04.26

Last Calib.:

2015.04.26

Start Time: 17:40:01

End Time:

00:16:00

Time On Btm:

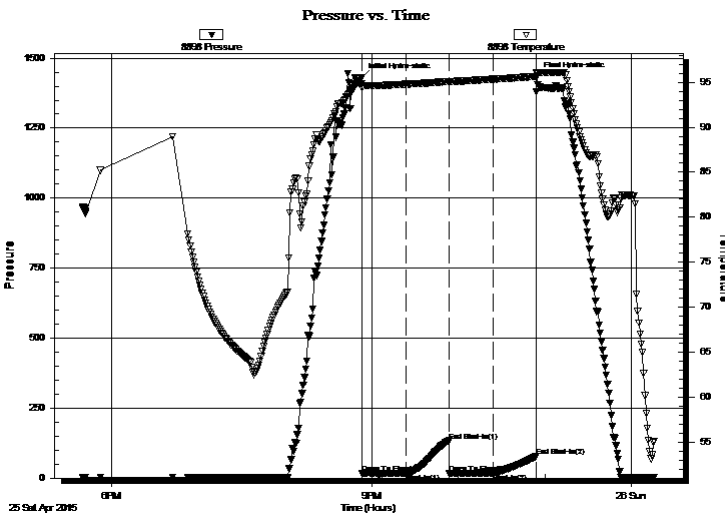
2015.04.25 @ 20:53:10

Time Off Btm:

2015.04.25 @ 22:54:39

TEST COMMENT: 30-IF-Built to 1/4"  
30-ISI-No Return  
30-FF-No Blow  
30-FSI-No Return

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1431.72         | 94.87        | Initial Hydro-static |
| 1           | 15.54           | 94.41        | Open To Flow (1)     |
| 31          | 16.89           | 94.78        | Shut-In(1)           |
| 61          | 133.36          | 95.09        | End Shut-In(1)       |
| 61          | 17.55           | 95.02        | Open To Flow (2)     |
| 91          | 18.03           | 95.34        | Shut-In(2)           |
| 121         | 77.02           | 95.64        | End Shut-In(2)       |
| 122         | 1433.07         | 96.04        | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00        | M, 100%m    | 0.04         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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



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

## DRILL STEM TEST REPORT

ESP Development, Inc.

1749 B 250th AVE  
Hays, KS 67601

ATTN: Austin Klaus

**35-11s-16w Ellis, KS**

**Delmer Chrisler B #1**

Job Ticket: 62464

**DST#: 1**

Test Start: 2015.04.25 @ 17:40:00

### GENERAL INFORMATION:

Formation: **LCK "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:53:30

Time Test Ended: 00:16:00

**Interval: 2967.00 ft (KB) To 3025.00 ft (KB) (TVD)**

Total Depth: 3025.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Phillip Gage

Unit No: 77

Reference Elevations: 1743.00 ft (KB)

1735.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8897 Inside**

Press@RunDepth: psig @ 2968.00 ft (KB)

Start Date: 2015.04.25

End Date: 2015.04.26

Capacity: 8000.00 psig

Last Calib.: 2015.04.26

Start Time: 17:40:01

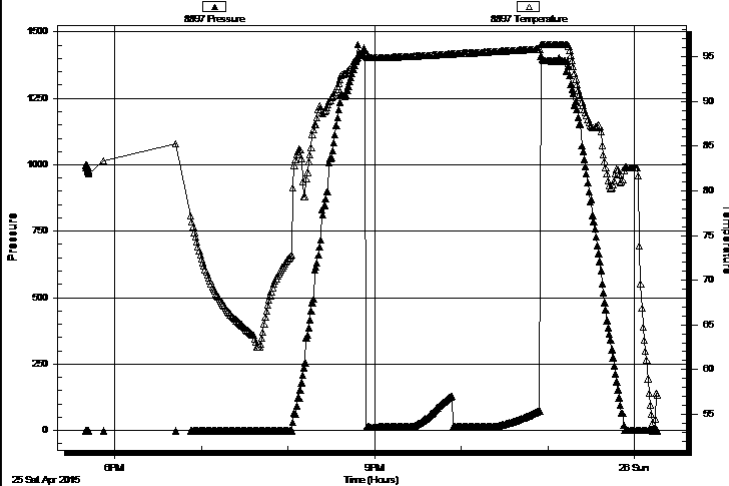
End Time: 00:16:20

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Built to 1/4"  
30-ISI-No Return  
30-FF-No Blow  
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00        | M, 100%m    | 0.04         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

ESP Development, Inc.

**35-11s-16w Ellis, KS**

1749 B 250th AVE  
Hays, KS 67601

**Delmer Chrisler B #1**

Job Ticket: 62464

**DST#: 1**

ATTN: Austin Klaus

Test Start: 2015.04.25 @ 17:40:00

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 2658.00 ft | Diameter: 3.80 inches | Volume: 37.28 bbl              | Tool Weight: 2000.00 lb            |
| Heavy Wt. Pipe:           | Length: 310.00 ft  | Diameter: 2.75 inches | Volume: 2.28 bbl               | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl               | Weight to Pull Loose: 48000.00 lb  |
|                           |                    |                       | <u>Total Volume: 39.56 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 21.00 ft           |                       |                                | String Weight: Initial 46000.00 lb |
| Depth to Top Packer:      | 2967.00 ft         |                       |                                | Final 46000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 58.00 ft           |                       |                                |                                    |
| Tool Length:              | 78.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |
| Tool Comments:            |                    |                       |                                |                                    |

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 2952.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 2957.00    |                               |
| Packer           | 5.00        |            |          | 2962.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 2967.00    |                               |
| Stubb            | 1.00        |            |          | 2968.00    |                               |
| Recorder         | 0.00        | 8897       | Inside   | 2968.00    |                               |
| Recorder         | 0.00        | 8898       | Outside  | 2968.00    |                               |
| Perforations     | 21.00       |            |          | 2989.00    |                               |
| Change Over Sub  | 1.00        |            |          | 2990.00    |                               |
| Drill Pipe       | 31.00       |            |          | 3021.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3022.00    |                               |
| Bullnose         | 3.00        |            |          | 3025.00    | 58.00 Bottom Packers & Anchor |

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

ESP Development, Inc.

**35-11s-16w Ellis, KS**

1749 B 250th AVE  
Hays, KS 67601

**Delmer Chrisler B #1**

Job Ticket: 62464

**DST#: 1**

ATTN: Austin Klaus

Test Start: 2015.04.25 @ 17:40:00

## 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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.50 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 5.00         | M, 100%m    | 0.037         |

Total Length: 5.00 ft      Total Volume: 0.037 bbl

Num Fluid Samples: 0

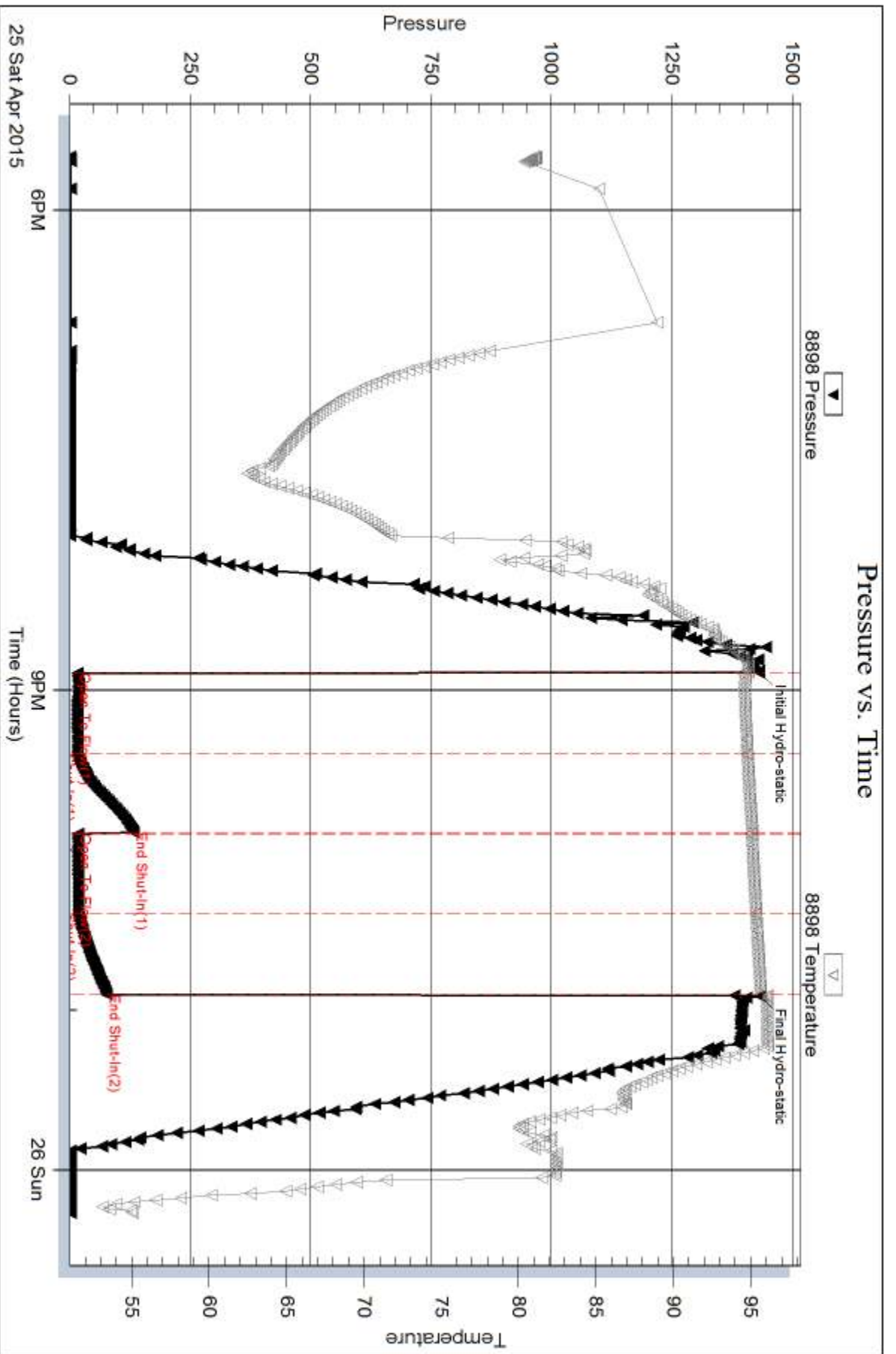
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



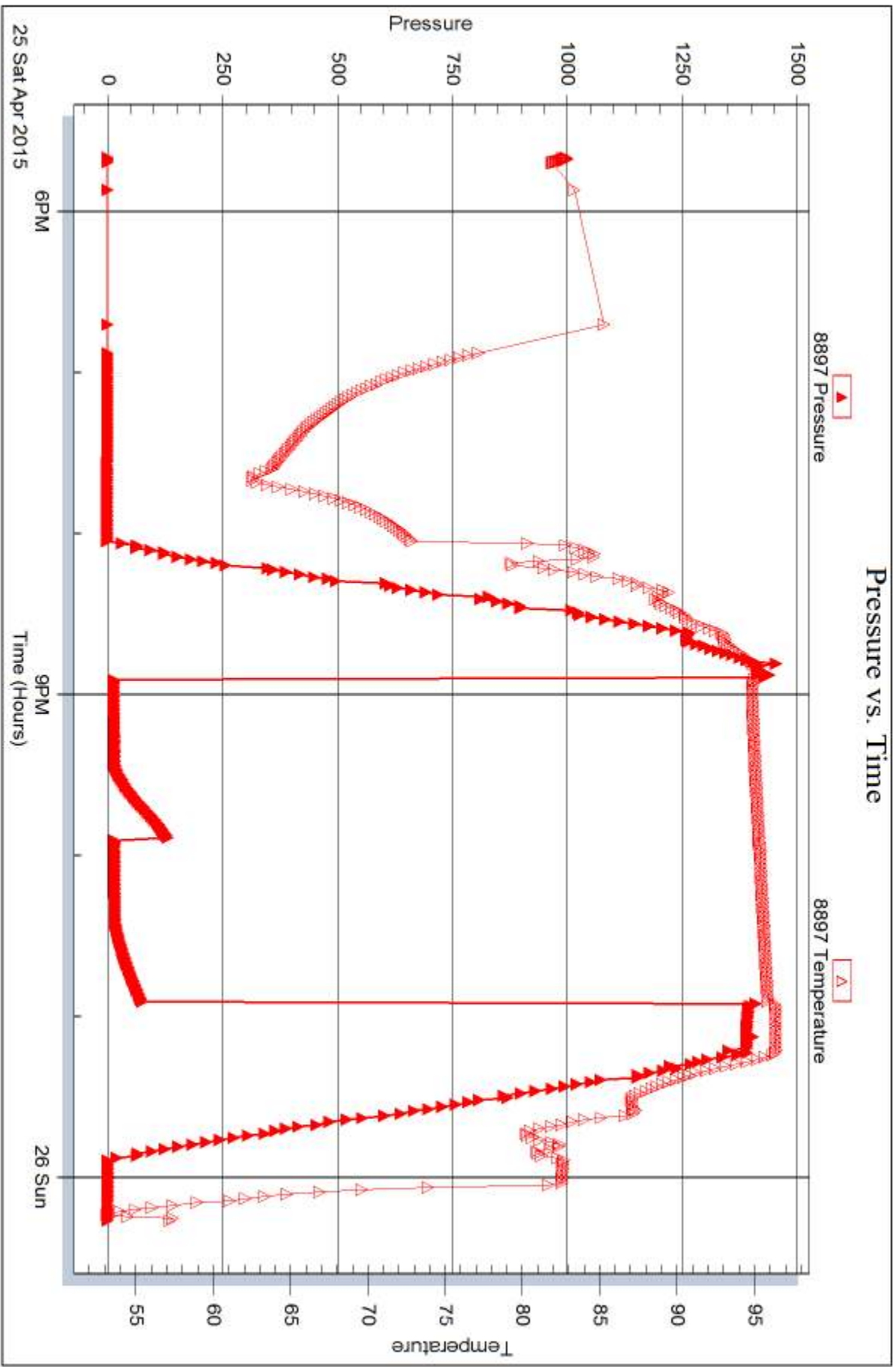
Serial #: 8897

Inside

ESP Development, Inc.

Delmer Chrysler B #1

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 62464

Printed: 2015.04.28 @ 10:04:22



## DRILL STEM TEST REPORT

Prepared For: **ESP Development, Inc.**

1749 B 250th AVE  
Hays, KS 67601

ATTN: Austin Klaus

### **Delmer Chrisler B #1**

### **35-11s-16w Ellis, KS**

Start Date: 2015.04.26 @ 13:49:00

End Date: 2015.04.26 @ 19:08:09

Job Ticket #: 62465                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.28 @ 09:22:35





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

ESP Development, Inc.

**35-11s-16w Ellis, KS**

1749 B 250th AVE  
Hays, KS 67601

**Delmer Chrisler B #1**

Job Ticket: 62465

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2015.04.26 @ 13:49:00

## GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:39:30

Time Test Ended: 19:08:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 77

**Interval: 3099.00 ft (KB) To 3180.00 ft (KB) (TVD)**

Reference Elevations: 1743.00 ft (KB)

Total Depth: 3180.00 ft (KB) (TVD)

1735.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 33.08 psig @ 3100.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.04.26

End Date: 2015.04.26

Last Calib.: 2015.04.26

Start Time: 13:49:01

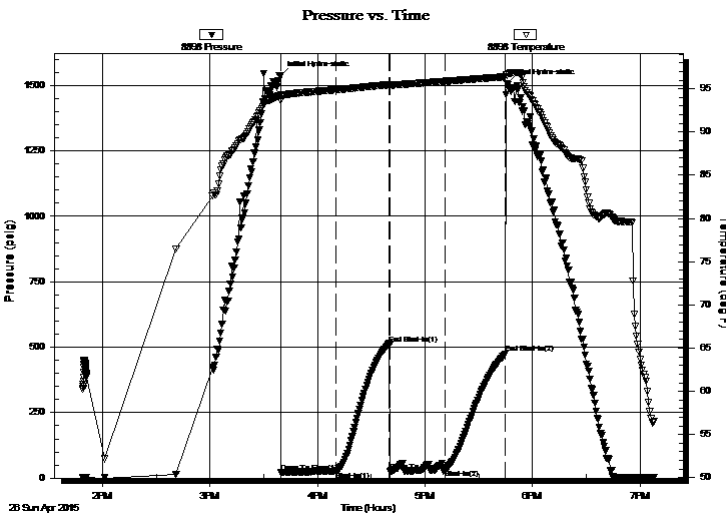
End Time: 19:08:10

Time On Btm: 2015.04.26 @ 15:39:20

Time Off Btm: 2015.04.26 @ 17:45:40

**TEST COMMENT:** 30-IF-Built to 3/4"  
30-ISI-No Return  
30-FF-No Blow  
30-FSI-No Return

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1536.44         | 94.34        | Initial Hydro-static |
| 1           | 21.75           | 93.64        | Open To Flow (1)     |
| 31          | 25.73           | 94.88        | Shut-In(1)           |
| 61          | 513.90          | 95.46        | End Shut-In(1)       |
| 61          | 27.05           | 95.31        | Open To Flow (2)     |
| 92          | 33.08           | 95.86        | Shut-In(2)           |
| 126         | 476.15          | 96.39        | End Shut-In(2)       |
| 127         | 1507.35         | 96.60        | Final Hydro-static   |

## Recovery

| Length (ft) | Description               | Volume (bbl) |
|-------------|---------------------------|--------------|
| 10.00       | M, 100% m, with oil spots | 0.07         |
|             |                           |              |
|             |                           |              |
|             |                           |              |
|             |                           |              |

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

ESP Development, Inc.

**35-11s-16w Ellis, KS**

1749 B 250th AVE  
Hays, KS 67601

**Delmer Chrisler B #1**

Job Ticket: 62465

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2015.04.26 @ 13:49:00

## Tool Information

|                           |                    |                       |                         |                                    |
|---------------------------|--------------------|-----------------------|-------------------------|------------------------------------|
| Drill Pipe:               | Length: 2783.00 ft | Diameter: 3.80 inches | Volume: 39.04 bbl       | Tool Weight: 2000.00 lb            |
| Heavy Wt. Pipe:           | Length: 310.00 ft  | Diameter: 2.75 inches | Volume: 2.28 bbl        | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 0.00 ft    | Diameter: 2.25 inches | Volume: 0.00 bbl        | Weight to Pull Loose: 48000.00 lb  |
|                           |                    |                       | Total Volume: 41.32 bbl | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 14.00 ft           |                       |                         | String Weight: Initial 48000.00 lb |
| Depth to Top Packer:      | 3099.00 ft         |                       |                         | Final 48000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                         |                                    |
| Interval between Packers: | 81.00 ft           |                       |                         |                                    |
| Tool Length:              | 101.00 ft          |                       |                         |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                         |                                    |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 3084.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3089.00    |                               |
| Packer           | 5.00        |            |          | 3094.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3099.00    |                               |
| Stubb            | 1.00        |            |          | 3100.00    |                               |
| Recorder         | 0.00        | 8897       | Inside   | 3100.00    |                               |
| Recorder         | 0.00        | 8898       | Outside  | 3100.00    |                               |
| Perforations     | 12.00       |            |          | 3112.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3113.00    |                               |
| Drill Pipe       | 63.00       |            |          | 3176.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3177.00    |                               |
| Bullnose         | 3.00        |            |          | 3180.00    | 81.00 Bottom Packers & Anchor |

**Total Tool Length: 101.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

ESP Development, Inc.

**35-11s-16w Ellis, KS**

1749 B 250th AVE  
Hays, KS 67601

**Delmer Chrisler B #1**

Job Ticket: 62465

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2015.04.26 @ 13:49:00

## 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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description               | Volume<br>bbbl |
|--------------|---------------------------|----------------|
| 10.00        | M, 100% m, with oil spots | 0.073          |

Total Length: 10.00 ft      Total Volume: 0.073 bbl

Num Fluid Samples: 0

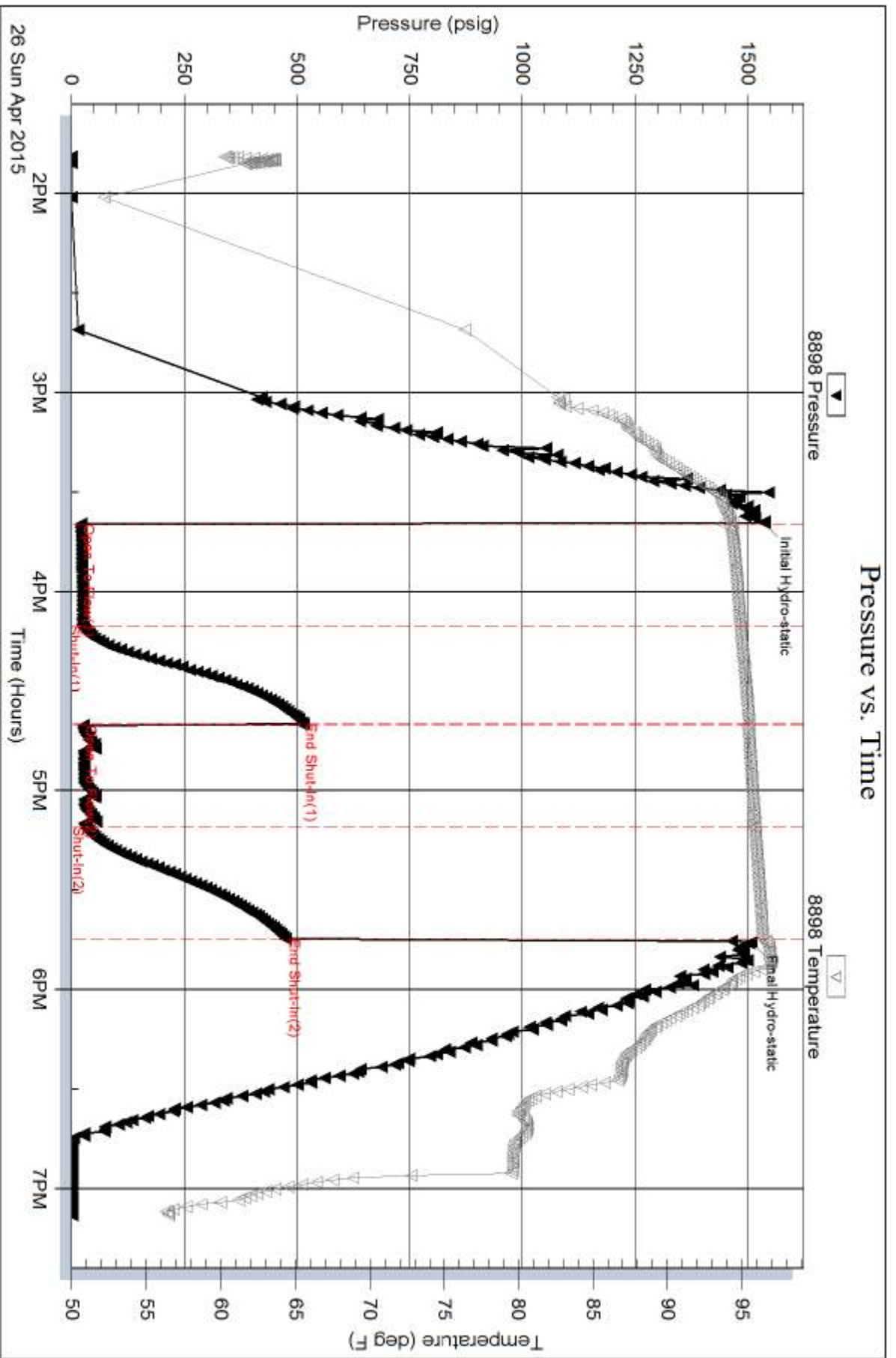
Num Gas Bombs: 0

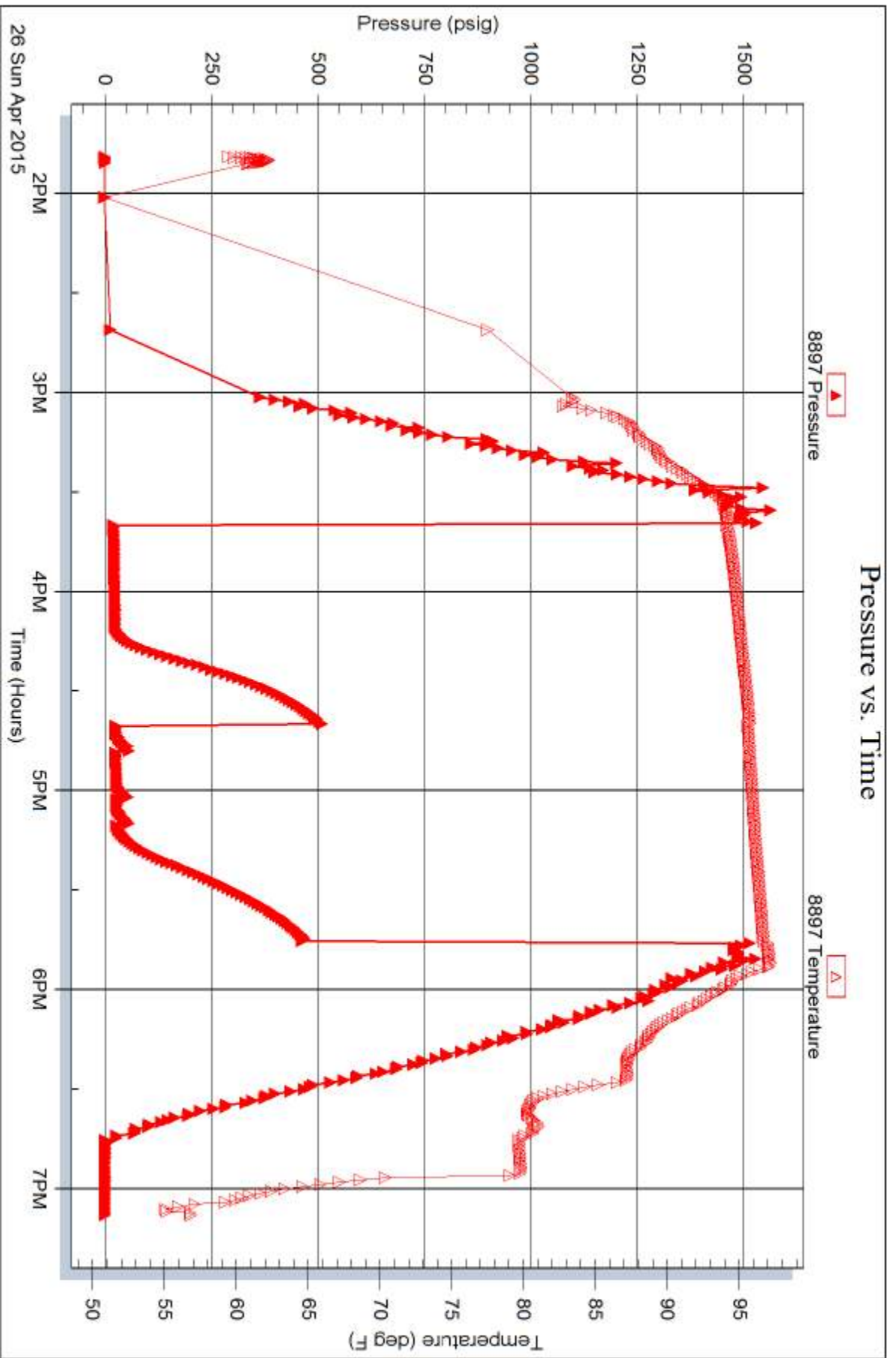
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62464

Well Name & No. Delmer Christer "B" #1 Test No. 1 Date 4-25-15  
 Company ESP Development, Inc Elevation 1743 KB 1735 GL  
 Address 1749 B 250<sup>th</sup> AVE Hays, KS 67601  
 Co. Rep / Geo. Austin Klaus Rig Discovery Rig 2  
 Location: Sec. 35 Twp. 11s Rge. 16w Co. Ellis State KS

Interval Tested 2967-3025 Zone Tested LKC "C-D"  
 Anchor Length 58' Drill Pipe Run 2658 Mud Wt. 8.8  
 Top Packer Depth 2962 Drill Collars Run 0 Vis 47  
 Bottom Packer Depth 2967 Wt. Pipe Run 310 WL 8  
 Total Depth 3025 Chlorides 4000 ppm System LCM 1.5#  
 Blow Description IF- Built to 1/4"  
ISE No Return  
FF- No Blow  
FSE- No Return

| Rec       | Feet of  | %gas | %oil | %water     | %mud |
|-----------|----------|------|------|------------|------|
| <u>5'</u> | <u>M</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 5' BHT 96 Gravity — API RW — °F Chlorides — ppm

(A) Initial Hydrostatic 1431  Test 1050 T-On Location 06:21  
 (B) First Initial Flow 15  Jars \_\_\_\_\_ T-Started 17:40  
 (C) First Final Flow 16  Safety Joint \_\_\_\_\_ T-Open 20:54  
 (D) Initial Shut-In 133  Circ Sub \_\_\_\_\_ T-Pulled 22:54  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 00:16  
 (F) Second Final Flow 18  Mileage 56 RT 56 Comments \_\_\_\_\_  
 (G) Final Shut-In 77  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,433  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  
 Final Shut-In 30  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1106 Sub Total 0  
 Total 1106 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Phillip Gray Thank You  
 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. 62465

Well Name & No. Delmer Christer "B" #1 Test No. 2 Date 4-26-15  
 Company ESP Development, Inc Elevation 1743 KB 1735 GL  
 Address 1749 B 250<sup>th</sup> AVE Hays, KS 67601  
 Co. Rep / Geo. Austin Klaus Rig Discovery 2  
 Location: Sec. 35 Twp. 11s Rge. 16w Co. Ellis State KS

Interval Tested 3099-3180 Zone Tested LKC "H-K"  
 Anchor Length 81' Drill Pipe Run 2783 Mud Wt. 9.1  
 Top Packer Depth 3094 Drill Collars Run 0 Vis 49  
 Bottom Packer Depth 3099 Wt. Pipe Run 310 WL 8.8  
 Total Depth 3180 Chlorides 4,000 ppm System LCM 1#

Blow Description IF Built to 3/4"  
ISI- No Return  
FF No Blow  
FSI- No Return

| Rec        | Feet of                  | %gas | %oil | %water     | %mud |
|------------|--------------------------|------|------|------------|------|
| <u>10'</u> | <u>M, with oil spots</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 10' BHT 96 Gravity 1050 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 1536  Test 1050 T-On Location 13:47  
 (B) First Initial Flow 21  Jars T-Started 13:49  
 (C) First Final Flow 25  Safety Joint T-Open 15:41  
 (D) Initial Shut-In 513  Circ Sub T-Pulled 17:41  
 (E) Second Initial Flow 27  Hourly Standby T-Out 19:09  
 (F) Second Final Flow 33  Mileage 56 RT x2 Comments Loaded tools  
 (G) Final Shut-In 476  Sampler 56+56 on 4-27-15 @ 16:15  
 (H) Final Hydrostatic 1,507  Straddle  Ruined Shale Packer

Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1162  
 Accessibility MP/DST Disc't  
 Sub Total 1162

Approved By \_\_\_\_\_ Our Representative Philipp Hays Thank You

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.