

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

## DRILL STEM TEST REPORT

Larson Engineering

562 West St Rd 4  
Olmitz, Ks

ATTN: Bob Lew ellyn

**Ehmke #1-19**

**19-17s-29w Lane , Ks**

Job Ticket: 041142

**DST#: 1**

Test Start: 2011.01.28 @ 11:32:38

### GENERAL INFORMATION:

Formation: I

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:37:38

Time Test Ended: 16:50:53

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 40

**Interval: 4158.00 ft (KB) To 4188.00 ft (KB) (TVD)**

Total Depth: 4188.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2840.00 ft (KB)

2833.00 ft (CF)

KB to GR/CF: 7.00 ft

**Serial #: 6667 Inside**

Press@RunDepth: 15.72 psig @ 4159.00 ft (KB)

Start Date: 2011.01.28

End Date:

2011.01.28

Start Time: 11:32:38

End Time:

16:39:53

Capacity: 8000.00 psig

Last Calib.: 2011.01.28

Time On Btm: 2011.01.28 @ 13:37:23

Time Off Btm: 2011.01.28 @ 15:08:38

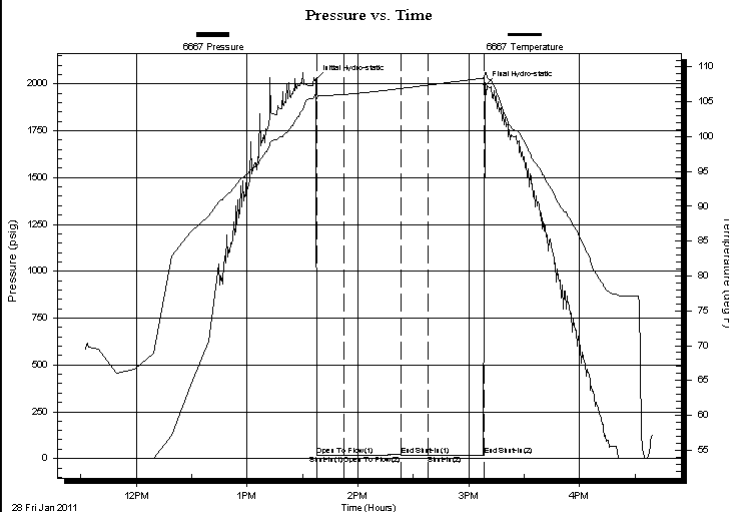
TEST COMMENT: Weak blow died in 5 min.

No return

No blow

No return

### PRESSURE SUMMARY



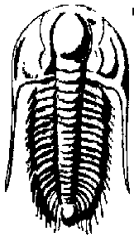
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2022.43         | 106.08       | Initial Hydro-static |
| 1           | 15.53           | 105.53       | Open To Flow (1)     |
| 15          | 15.82           | 106.06       | Shut-In(1)           |
| 46          | 19.14           | 106.91       | End Shut-In(1)       |
| 46          | 15.33           | 106.92       | Open To Flow (2)     |
| 61          | 15.72           | 107.41       | Shut-In(2)           |
| 91          | 17.94           | 108.42       | End Shut-In(2)       |
| 92          | 1993.53         | 108.91       | Final Hydro-static   |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 1.00        | mud 100% m  | 0.00         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



**TRILOBITE**  
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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Larson Engineering

**Ehmke #1-19**

562 West St Rd 4  
Olmitz, Ks

**19-17s-29w Lane , Ks**

Job Ticket: 041142

**DST#: 1**

ATTN: Bob Lew ellyn

Test Start: 2011.01.28 @ 11:32:38

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 1.00         | mud 100%m   | 0.005         |

Total Length: 1.00 ft

Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

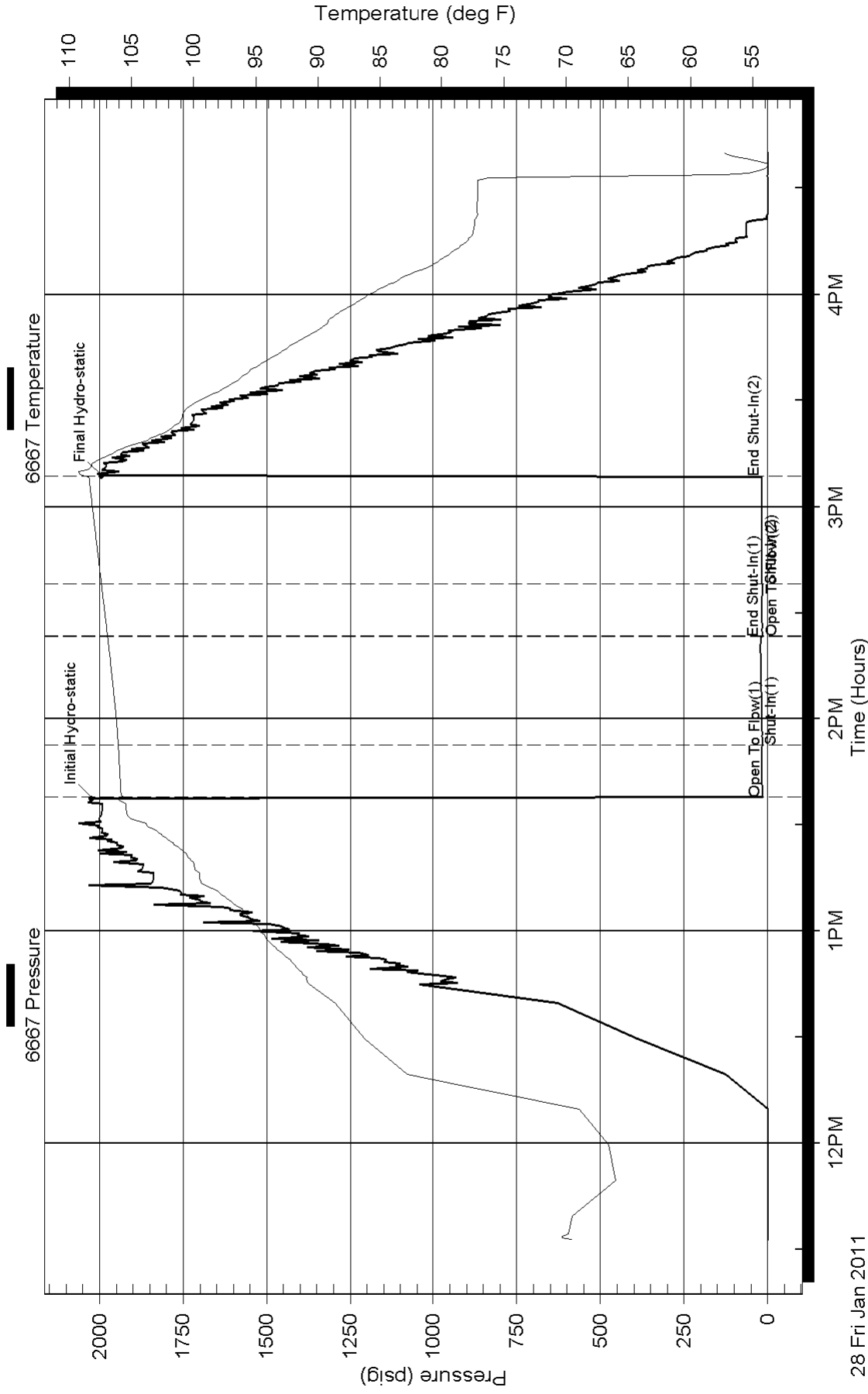
Serial #:

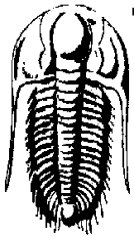
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





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

## DRILL STEM TEST REPORT

Larson Engineering

562 West St Rd 4  
Olmitz, Ks

ATTN: Bob Lewellyn

**Ehmke #1-19**

**19-17s-29w Lane , Ks**

Job Ticket: 041143

**DST#: 2**

Test Start: 2011.01.29 @ 06:36:13

### GENERAL INFORMATION:

Formation: **K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:32:58

Time Test Ended: 12:55:13

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 40

**Interval: 4218.00 ft (KB) To 4244.00 ft (KB) (TVD)**

Reference Elevations: 2840.00 ft (KB)

Total Depth: 4244.00 ft (KB) (TVD)

2833.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6667 Inside**

Press@RunDepth: 71.97 psig @ 4219.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.01.29

End Date:

2011.01.29

Last Calib.: 2011.01.29

Start Time: 06:36:13

End Time:

12:38:13

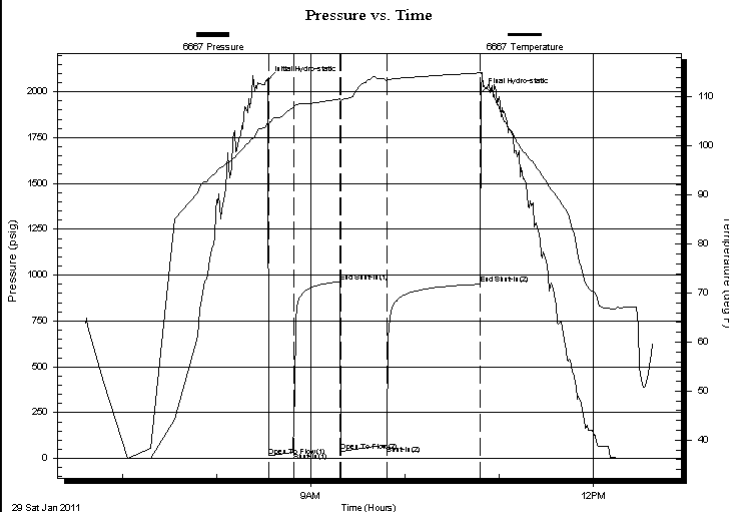
Time On Btm: 2011.01.29 @ 08:32:43

Time Off Btm: 2011.01.29 @ 10:48:43

TEST COMMENT: 1 1/4" in blow  
No return  
1 1/4" in blow  
No return

### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2063.60         | 104.96       | Initial Hydro-static |
| 1           | 14.93           | 104.18       | Open To Flow (1)     |
| 17          | 35.10           | 107.96       | Shut-In(1)           |
| 46          | 964.05          | 109.58       | End Shut-In(1)       |
| 47          | 37.41           | 109.26       | Open To Flow (2)     |
| 76          | 71.97           | 113.36       | Shut-In(2)           |
| 136         | 950.48          | 114.90       | End Shut-In(2)       |
| 136         | 1995.27         | 115.00       | Final Hydro-static   |

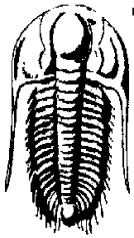


### Recovery

| Length (ft) | Description     | Volume (bbl) |
|-------------|-----------------|--------------|
| 122.00      | w c m 40%w 60%m | 0.60         |
|             |                 |              |
|             |                 |              |
|             |                 |              |
|             |                 |              |
|             |                 |              |

### Gas Rates

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



**TRILOBITE**  
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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Larson Engineering

**Ehmke #1-19**

562 West St Rd 4  
Olmitz, Ks

**19-17s-29w Lane , Ks**

Job Ticket: 041143

**DST#: 2**

ATTN: Bob Lew ellyn

Test Start: 2011.01.29 @ 06:36:13

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

28000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description     | Volume<br>bbl |
|--------------|-----------------|---------------|
| 122.00       | w c m 40%w 60%m | 0.600         |

Total Length: 122.00 ft

Total Volume: 0.600 bbl

Num Fluid Samples: 0

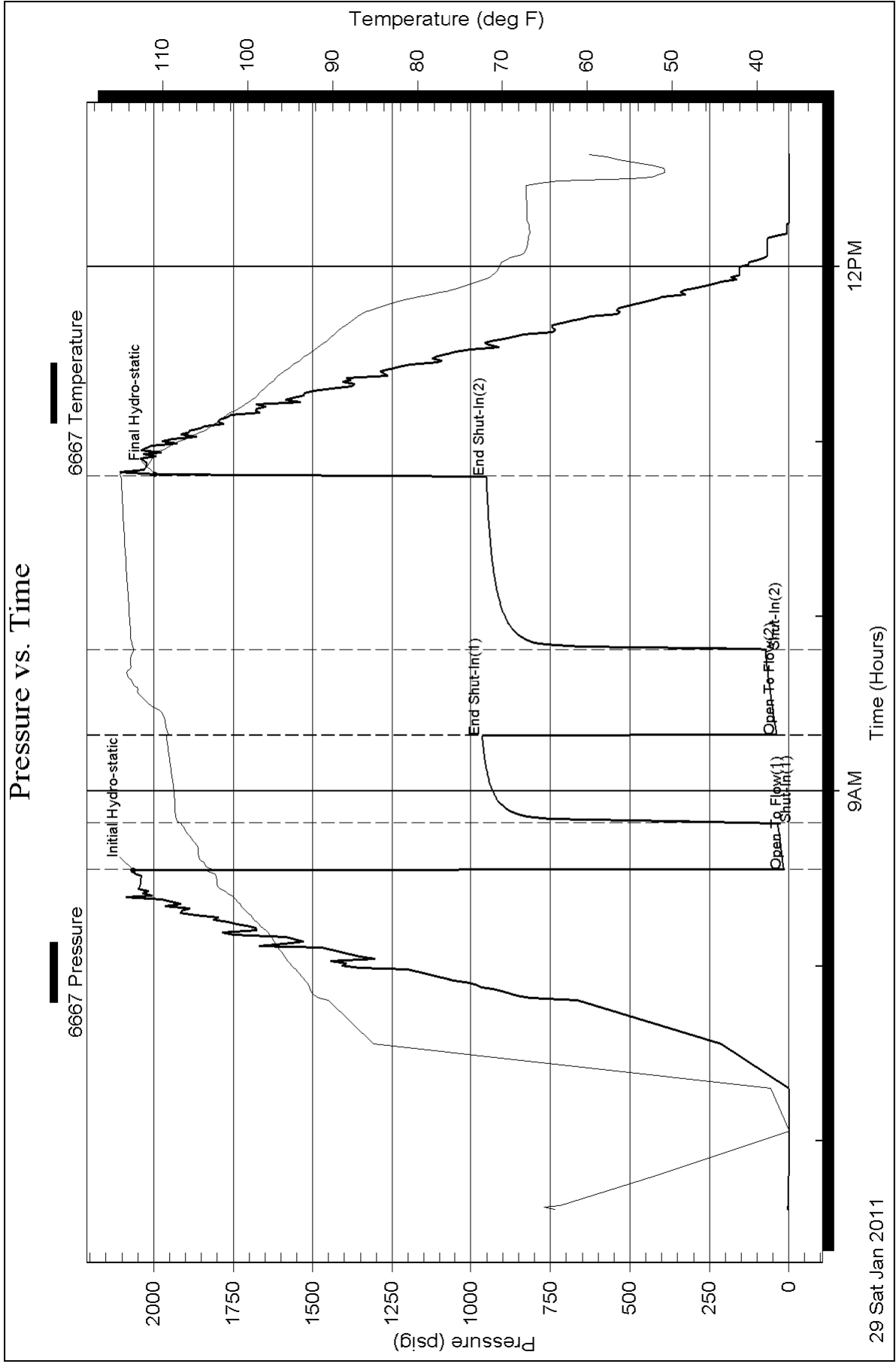
Num Gas Bombs: 0

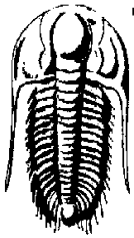
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .280 @ 62\*f = 28,000 chlor





**TRILOBITE**  
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## DRILL STEM TEST REPORT

Larson Engineering

562 West St Rd 4  
Olmitz, KS

ATTN: Bob Lewellyn

**Ehmke #1-19**

**19-17s-29w Lane KS**

Job Ticket: 041144

**DST#: 3**

Test Start: 2011.01.29 @ 22:21:05

### GENERAL INFORMATION:

Formation: **L**

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

Time Tool Opened: 00:29:20

Time Test Ended: 04:10:50

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **40**

**Interval: 4254.00 ft (KB) To 4278.00 ft (KB) (TVD)**

Reference Elevations: **2840.00 ft (KB)**

Total Depth: **4278.00 ft (KB) (TVD)**

**2833.00 ft (CF)**

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

KB to GR/CF: **7.00 ft**

**Serial #: 6667** **Inside**

Press@RunDepth: **15.55 psig @ 4255.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2011.01.29**

End Date:

**2011.01.30**

Last Calib.: **2011.01.30**

Start Time: **22:21:05**

End Time:

**03:52:50**

Time On Btm: **2011.01.30 @ 00:29:05**

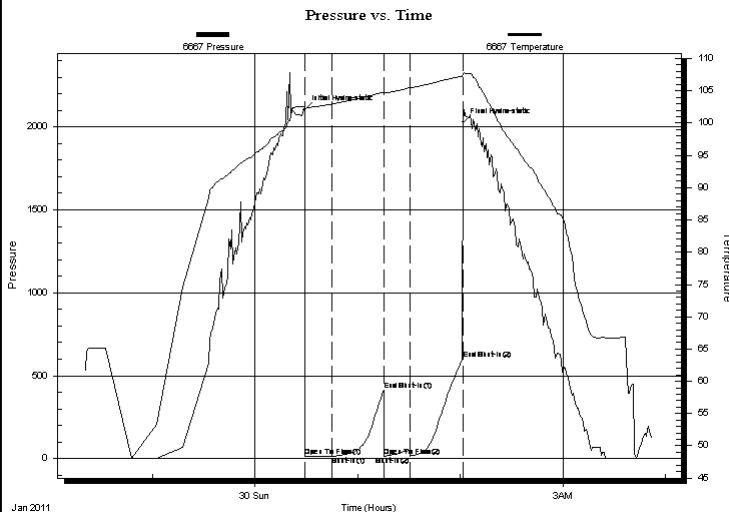
Time Off Btm: **2011.01.30 @ 02:01:50**

TEST COMMENT: **Weak Surface blow died in 10 min**

**No return**

**No blow**

**No return**



### PRESSURE SUMMARY

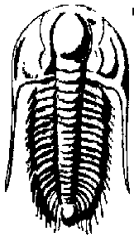
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2104.16         | 102.65       | Initial Hydro-static |
| 1           | 14.99           | 102.08       | Open To Flow (1)     |
| 16          | 15.88           | 102.95       | Shut-In(1)           |
| 46          | 413.81          | 104.77       | End Shut-In(1)       |
| 47          | 15.41           | 104.60       | Open To Flow (2)     |
| 62          | 15.55           | 105.43       | Shut-In(2)           |
| 93          | 597.59          | 107.27       | End Shut-In(2)       |
| 93          | 2028.33         | 107.68       | Final Hydro-static   |

### Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 1.00        | heavy mud 100% m | 0.00         |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |

### Gas Rates

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



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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Larson Engineering

**Ehmke #1-19**

562 West St Rd 4  
Olmitz, KS

**19-17s-29w Lane KS**

Job Ticket: 041144

**DST#: 3**

ATTN: Bob Lew ellyn

Test Start: 2011.01.29 @ 22:21:05

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description     | Volume<br>bbl |
|--------------|-----------------|---------------|
| 1.00         | heavy mud 100%m | 0.005         |

Total Length: 1.00 ft

Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

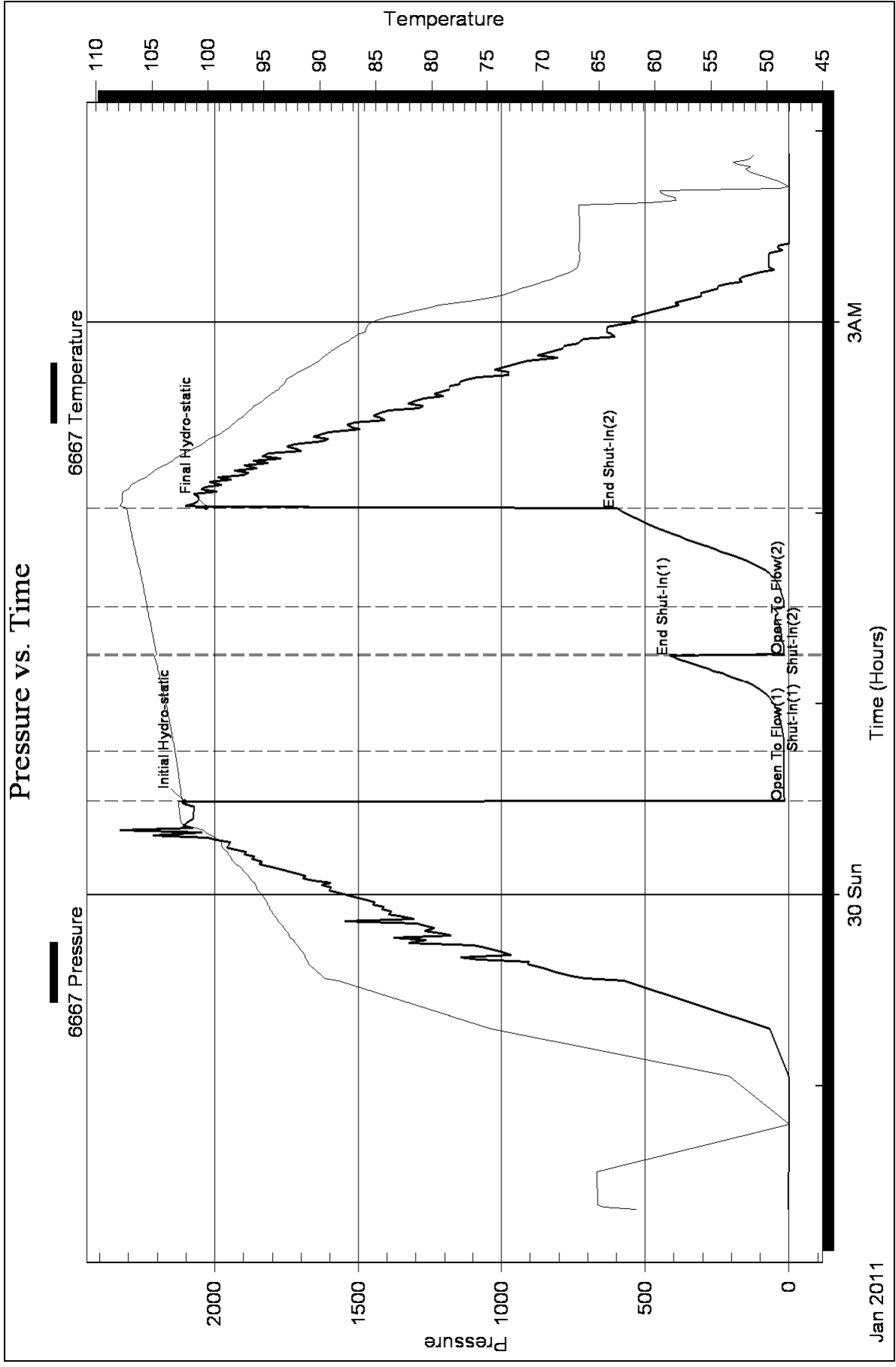
Serial #:

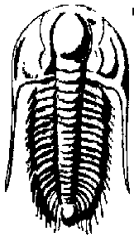
Laboratory Name:

Laboratory Location:

Recovery Comments:







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## DRILL STEM TEST REPORT

Larson Engineering

562 West St Rd 4  
Olmitz, KS

ATTN: Bob Lewellyn

**Ehmke #1-19**

**19-17s-29w Lane KS**

Job Ticket: 041145

**DST#: 4**

Test Start: 2011.01.30 @ 21:57:51

### GENERAL INFORMATION:

Formation: **Lenapah**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:08:51

Time Test Ended: 05:15:51

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 40

**Interval: 4298.00 ft (KB) To 4355.00 ft (KB) (TVD)**

Reference Elevations: 2840.00 ft (KB)

Total Depth: 4355.00 ft (KB) (TVD)

2833.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6667 Inside**

Press@RunDepth: 188.21 psig @ 4299.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.01.30

End Date:

2011.01.31

Last Calib.: 2011.01.31

Start Time: 21:57:51

End Time:

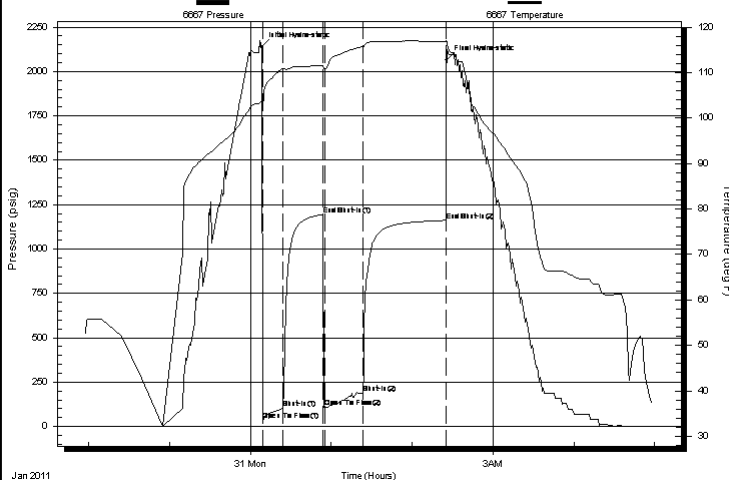
04:58:51

Time On Btm: 2011.01.31 @ 00:08:21

Time Off Btm: 2011.01.31 @ 02:25:36

**TEST COMMENT:** B.O.B. in 13 min  
Surface return in 7 min built to 1/4" in.  
B.O.B. in 13 min  
Surface return in 5 min built to 1 1/2" in.

Pressure vs. Time



PRESSURE SUMMARY

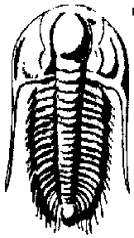
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2138.02         | 103.54       | Initial Hydro-static |
| 1           | 35.92           | 103.18       | Open To Flow (1)     |
| 16          | 101.58          | 110.97       | Shut-In(1)           |
| 46          | 1193.32         | 111.49       | End Shut-In(1)       |
| 47          | 107.64          | 110.93       | Open To Flow (2)     |
| 75          | 188.21          | 115.69       | Shut-In(2)           |
| 137         | 1161.21         | 116.85       | End Shut-In(2)       |
| 138         | 2065.08         | 116.88       | Final Hydro-static   |

Recovery

| Length (ft) | Description             | Volume (bbl) |
|-------------|-------------------------|--------------|
| 120.00      | s g o c m 5%g 30%o 65%m | 0.59         |
| 180.00      | s g m c o 5%g 30%m 65%o | 2.51         |
| 80.00       | c g o 5%g 95%o          | 1.12         |
| 0.00        | 220' gas in pipe        | 0.00         |
|             |                         |              |
|             |                         |              |

Gas Rates

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



**TRILOBITE**  
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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Larson Engineering

**Ehmke #1-19**

562 West St Rd 4  
Olmitz, KS

**19-17s-29w Lane KS**

Job Ticket: 041145

**DST#: 4**

ATTN: Bob Lew ellyn

Test Start: 2011.01.30 @ 21:57:51

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 6.80 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

26 deg API

0 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description             | Volume<br>bbl |
|--------------|-------------------------|---------------|
| 120.00       | s g o c m 5%g 30%o 65%m | 0.590         |
| 180.00       | s g m c o 5%g 30%m 65%o | 2.507         |
| 80.00        | c g o 5%g 95%o          | 1.122         |
| 0.00         | 220' gas in pipe        | 0.000         |

Total Length: 380.00 ft

Total Volume: 4.219 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

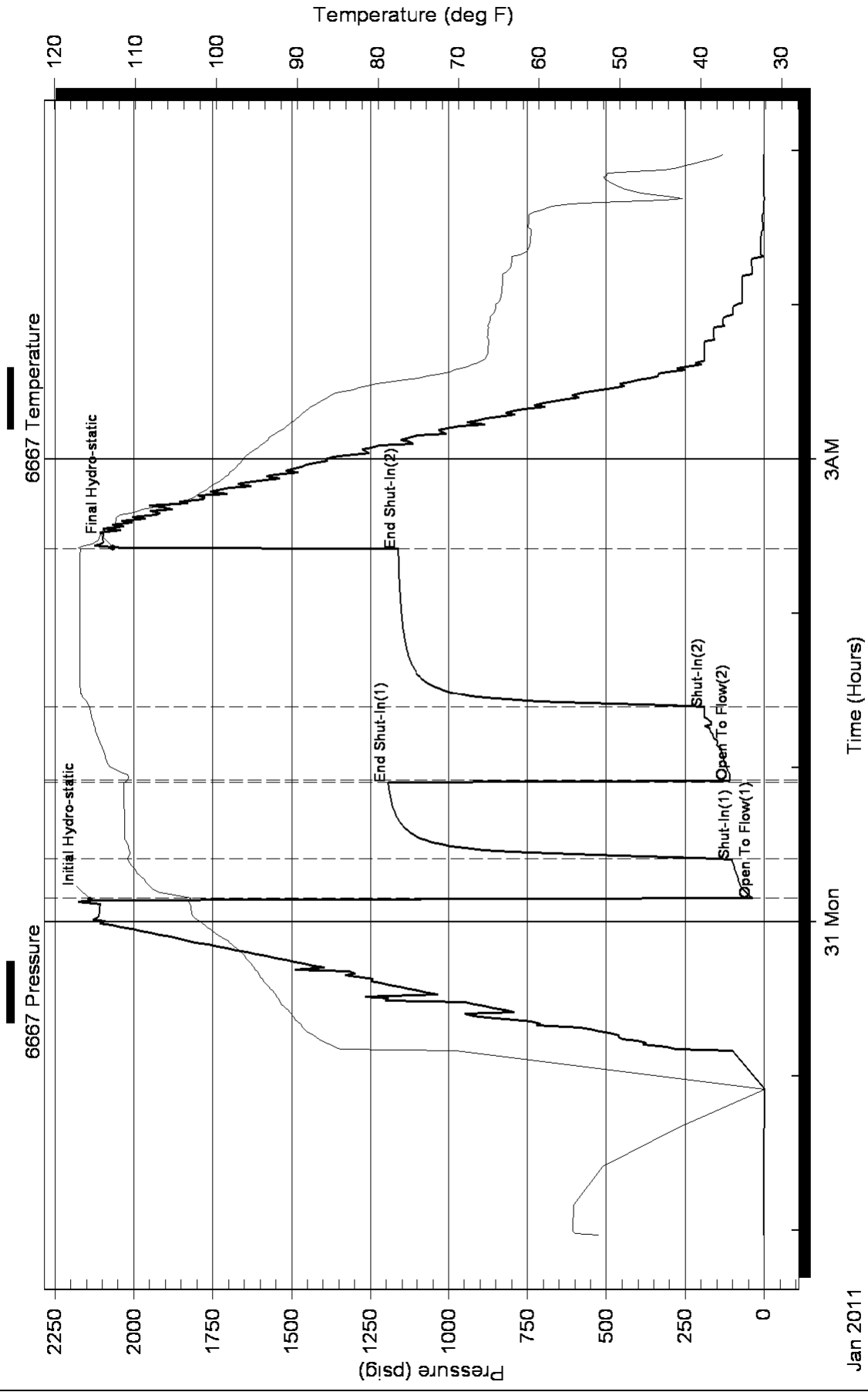
Serial #:

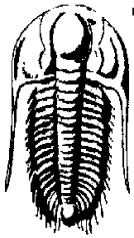
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





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

## DRILL STEM TEST REPORT

Larson Engineering

562 West St Rd 4  
Olmitz, Ks

ATTN: Bob Lewellyn

**Ehmke #1-19**

**19-17s-29w Lane , Ks**

Job Ticket: 041146

**DST#: 5**

Test Start: 2011.02.01 @ 03:30:39

### GENERAL INFORMATION:

Formation: **Pawnee , Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:02:39

Time Test Ended: 15:25:24

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 40

**Interval: 4406.00 ft (KB) To 4495.00 ft (KB) (TVD)**

Reference Elevations: 2840.00 ft (KB)

Total Depth: 4495.00 ft (KB) (TVD)

2833.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6667 Inside**

Press@RunDepth: 32.95 psig @ 4407.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.01

End Date:

2011.02.01

Last Calib.: 2011.02.01

Start Time: 03:30:39

End Time:

15:06:24

Time On Btm: 2011.02.01 @ 09:02:24

Time Off Btm: 2011.02.01 @ 11:24:24

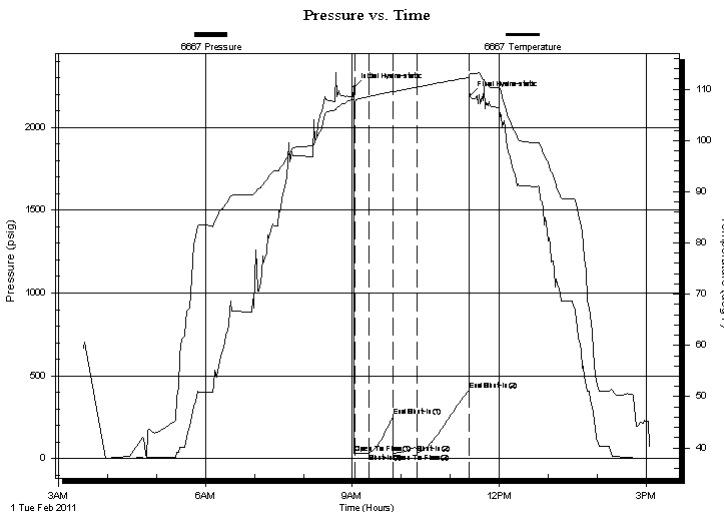
TEST COMMENT: Weak blow died in 8 min.

No return

Nop blow

No return

### PRESSURE SUMMARY



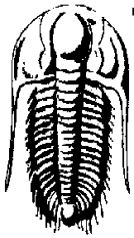
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2243.02         | 108.13       | Initial Hydro-static |
| 1           | 28.95           | 106.83       | Open To Flow (1)     |
| 18          | 31.60           | 108.54       | Shut-In(1)           |
| 48          | 253.85          | 109.61       | End Shut-In(1)       |
| 48          | 31.94           | 109.50       | Open To Flow (2)     |
| 78          | 32.95           | 110.40       | Shut-In(2)           |
| 141         | 412.63          | 112.30       | End Shut-In(2)       |
| 142         | 2194.43         | 112.96       | Final Hydro-static   |

### Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 5.00        | heavy mud 100% m | 0.02         |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Larson Engineering

**Ehmke #1-19**

562 West St Rd 4  
Olmitz, Ks

**19-17s-29w Lane , Ks**

Job Ticket: 041146

**DST#: 5**

ATTN: Bob Lew ellyn

Test Start: 2011.02.01 @ 03:30:39

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description     | Volume<br>bbl |
|--------------|-----------------|---------------|
| 5.00         | heavy mud 100%m | 0.025         |

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

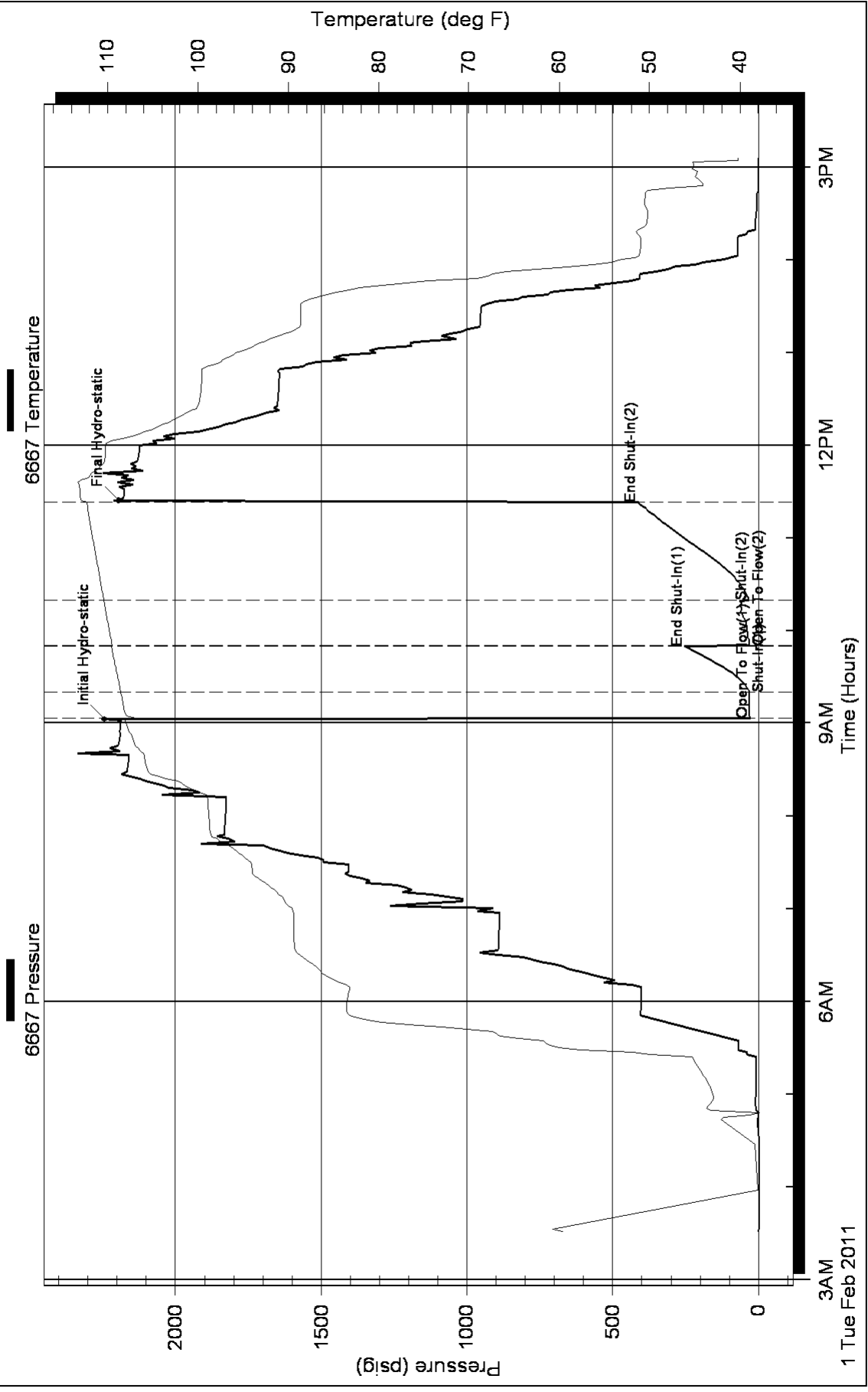
Serial #:

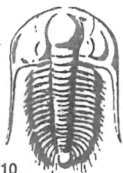
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





**TRILOBITE  
TESTING INC.**

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
FEB 08 2011

## Test Ticket

NO. 041142 15365

Well Name & No. Thmke # 1-19 BY: \_\_\_\_\_ Test No. #1 Date 1/28/11  
Company Larson Engineering Elevation 2840 KB 2833 GL  
Address 562 West St. Rd 4 Chm 72, KS  
Co. Rep / Geo. Bob Jewell Rig H.D. #2  
Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4158 4188 Zone Tested I  
Anchor Length 30 Drill Pipe Run 4015' Mud Wt. 9.1  
Top Packer Depth 4153 Drill Collars Run 122' XH Vis 34  
Bottom Packer Depth 4158 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
Total Depth 4188 Chlorides 900 ppm System LCM #2  
Blow Description Weak blow died in 5min  
No return  
No blow  
No return

| Rec      | Feet of    | %gas | %oil | %water     | %mud |
|----------|------------|------|------|------------|------|
| <u>1</u> | <u>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 1' BHT 108° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm  
(A) Initial Hydrostatic 2022 ☒ Test 1225' T-On Location 10:20  
(B) First Initial Flow 15 ☒ Jars 250' T-Started 11:32  
(C) First Final Flow 15 ☒ Safety Joint 75' T-Open 13:37  
(D) Initial Shut-In 19 ☒ Circ Sub N/A T-Pulled 15:07  
(E) Second Initial Flow 15 ☐ Hourly Standby \_\_\_\_\_ T-Out 16:50  
(F) Second Final Flow 15 ☒ Mileage 48 RT 100 Comments \_\_\_\_\_  
(G) Final Shut-In 17 ☐ Sampler \_\_\_\_\_  
(H) Final Hydrostatic 1993 ☐ Straddle \_\_\_\_\_

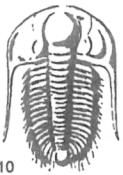
| Initial Open | Initial Shut-In | Final Flow | Final Shut-In | Sub Total | Total       | MP/DST Disc't |
|--------------|-----------------|------------|---------------|-----------|-------------|---------------|
| <u>15</u>    | <u>30</u>       | <u>15</u>  | <u>30</u>     | <u>8</u>  | <u>1610</u> |               |

☐ Ruined Shale Packer  
☐ Ruined Packer  
☐ Extra Copies  
Sub Total 8  
Total 1610  
MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

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# Test Ticket

NO. 041143

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Well Name & No. Ehmke # 1-19 BY: \_\_\_\_\_ Test No. # 2 Date 1/29/11  
Company Larson Engineering Elevation 2840 KB 2833 GL \_\_\_\_\_  
Address 562 West St. Rd 4 Chmiz, KS  
Co. Rep / Geo. Bob Lewellyn Rig H.D. # 2  
Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4218 4244 Zone Tested K.  
Anchor Length 26 Drill Pipe Run 4075' Mud Wt. 9.1  
Top Packer Depth 4213 Drill Collars Run 122' X-H Vis 54  
Bottom Packer Depth 4218 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
Total Depth 4244 Chlorides 900 ppm System LCM # 2

Blow Description 1 1/4" in blow  
No return  
1 1/4" in blow  
No return

| Rec         | Feet of    | %gas | %oil | %water     | %mud       |
|-------------|------------|------|------|------------|------------|
| <u>122'</u> | <u>WCM</u> |      |      | <u>40%</u> | <u>60%</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 122' BHT 115° Gravity \_\_\_\_\_ API RW 280 @ 62° F Chlorides 28000 ppm  
(A) Initial Hydrostatic 2063 ☒ Test 1225' T-On Location 06:15  
(B) First Initial Flow 14 ☒ Jars 250' T-Started 06:35  
(C) First Final Flow 35 ☒ Safety Joint 75' T-Open 08:33  
(D) Initial Shut-In 964 ☒ Circ Sub 4/R T-Pulled 10:48  
(E) Second Initial Flow 37 ☐ Hourly Standby \_\_\_\_\_ T-Out 12:55  
(F) Second Final Flow 71 ☒ Mileage 48RT 60' Comments \_\_\_\_\_  
(G) Final Shut-In 950 ☐ Sampler \_\_\_\_\_  
(H) Final Hydrostatic 1995 ☐ Straddle \_\_\_\_\_  
☐ Shale Packer \_\_\_\_\_  
☐ Extra Packer \_\_\_\_\_  
☐ Extra Recorder \_\_\_\_\_  
☐ Day Standby \_\_\_\_\_  
☐ Accessibility \_\_\_\_\_

Initial Open 15  
Initial Shut-In 30  
Final Flow 30  
Final Shut-In 60

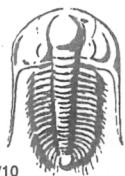
Sub Total 1010'

☐ Ruined Shale Packer \_\_\_\_\_  
☐ Ruined Packer \_\_\_\_\_  
☐ Extra Copies \_\_\_\_\_  
Sub Total 8  
Total 1010'  
MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_

Our Representative \_\_\_\_\_

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## Test Ticket

NO. 041144

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Well Name & No. Ehnke # 1-19 BY: \_\_\_\_\_ Test No. #3 Date 1-30-11  
Company Harson Engineering Elevation 2840 KB 2833 GL \_\_\_\_\_  
Address 562 West St. Rd 4 Olmitz, Ks  
Co. Rep / Geo. Bob Lewellyn Rig H.D. #2  
Location: Sec. 19 Twp. 17S Rge. 29W Co. Lawe State Ks

Interval Tested 4254 4278 Zone Tested L  
Anchor Length 24 Drill Pipe Run 4109' Mud Wt. 9.2  
Top Packer Depth 4249 Drill Collars Run 122' XH Vis 51  
Bottom Packer Depth 4254 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
Total Depth 4278 Chlorides 900 ppm System LCM #2

Blow Description Weak Surface blow died in 10 min  
No return  
No blow  
No return

| Rec       | Feet of            | %gas | %oil | %water     | %mud |
|-----------|--------------------|------|------|------------|------|
| <u>1'</u> | <u>mas (Heavy)</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 1' BHT 107° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

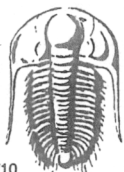
|                         |             |                                                  |                  |                                              |              |
|-------------------------|-------------|--------------------------------------------------|------------------|----------------------------------------------|--------------|
| (A) Initial Hydrostatic | <u>2104</u> | <input checked="" type="checkbox"/> Test         | <u>1225-</u>     | T-On Location                                | <u>21:45</u> |
| (B) First Initial Flow  | <u>14</u>   | <input checked="" type="checkbox"/> Jars         | <u>250-</u>      | T-Started                                    | <u>22:20</u> |
| (C) First Final Flow    | <u>15</u>   | <input checked="" type="checkbox"/> Safety Joint | <u>75-</u>       | T-Open                                       | <u>00:30</u> |
| (D) Initial Shut-In     | <u>413</u>  | <input checked="" type="checkbox"/> Circ Sub     | <u>N/C</u>       | T-Pulled                                     | <u>02:00</u> |
| (E) Second Initial Flow | <u>15</u>   | <input type="checkbox"/> Hourly Standby          |                  | T-Out                                        | <u>04:10</u> |
| (F) Second Final Flow   | <u>15</u>   | <input checked="" type="checkbox"/> Mileage      | <u>48 RT 60-</u> | Comments                                     |              |
| (G) Final Shut-In       | <u>597</u>  | <input type="checkbox"/> Sampler                 |                  |                                              |              |
| (H) Final Hydrostatic   | <u>2028</u> | <input type="checkbox"/> Straddle                |                  | <input type="checkbox"/> Ruined Shale Packer |              |

|                 |           |                                         |              |                                        |              |
|-----------------|-----------|-----------------------------------------|--------------|----------------------------------------|--------------|
| Initial Open    | <u>15</u> | <input type="checkbox"/> Shale Packer   |              | <input type="checkbox"/> Ruined Packer |              |
| Initial Shut-In | <u>30</u> | <input type="checkbox"/> Extra Packer   |              | <input type="checkbox"/> Extra Copies  |              |
| Final Flow      | <u>15</u> | <input type="checkbox"/> Extra Recorder |              | Sub Total                              | <u>8</u>     |
| Final Shut-In   | <u>30</u> | <input type="checkbox"/> Day Standby    |              | Total                                  | <u>1610-</u> |
|                 |           | <input type="checkbox"/> Accessibility  |              | MP/DST Disc't                          |              |
|                 |           | Sub Total                               | <u>1610-</u> |                                        |              |

Approved By \_\_\_\_\_

Our Representative \_\_\_\_\_

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# Test Ticket

NO. 041145

Well Name & No. Ehmke # 1-19 Test No. #4 Date 1-31-11  
Company Larson Engineering Elevation 2840 KB 2833 GL  
Address 562 West St. Rd. 4 Ohm. 7z - Ks  
Co. Rep / Geo. Bob Lewellyn Rig H.D. #2  
Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State Ks

Interval Tested 4298 4355 Zone Tested Lenapah  
Anchor Length 57 Drill Pipe Run 4168' Mud Wt. 9'  
Top Packer Depth 4293 Drill Collars Run 122' X 11 Vis 56  
Bottom Packer Depth 4298 Wt. Pipe Run          WL 6.8  
Total Depth 4355 Chlorides 1000 ppm System LCM #

Blow Description B.O.B. in 13 min  
Surface return in 7 min built to 1/4" w.  
B.O.B. in 13 min

Surface return in 5 min built to 1 1/2" w.

| Rec        | Feet of                           | %gas     | %oil      | %water          | %mud            |
|------------|-----------------------------------|----------|-----------|-----------------|-----------------|
| <u>80</u>  | <u>Cgo</u>                        | <u>5</u> | <u>95</u> | <u>        </u> | <u>        </u> |
| <u>180</u> | <u>Sgmco</u>                      | <u>5</u> | <u>65</u> | <u>        </u> | <u>30</u>       |
| <u>120</u> | <u>Sgocm</u>                      | <u>5</u> | <u>30</u> | <u>        </u> | <u>65</u>       |
| Rec        | Feet of                           | %gas     | %oil      | %water          | %mud            |
| Rec        | Feet of <u>(270' GAS in A.Pe)</u> | %gas     | %oil      | %water          | %mud            |

Rec Total 380' BHT 117° Gravity 26 API RW          @         ° F Chlorides          ppm

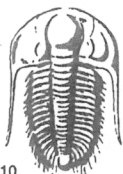
|                         |             |                                                  |                   |               |                 |
|-------------------------|-------------|--------------------------------------------------|-------------------|---------------|-----------------|
| (A) Initial Hydrostatic | <u>2138</u> | <input checked="" type="checkbox"/> Test         | <u>1225'</u>      | T-On Location | <u>21:09</u>    |
| (B) First Initial Flow  | <u>35</u>   | <input checked="" type="checkbox"/> Jars         | <u>250'</u>       | T-Started     | <u>21:37</u>    |
| (C) First Final Flow    | <u>101</u>  | <input checked="" type="checkbox"/> Safety Joint | <u>75'</u>        | T-Open        | <u>00:07</u>    |
| (D) Initial Shut-In     | <u>1193</u> | <input checked="" type="checkbox"/> Circ Sub     | <u>N/C</u>        | T-Pulled      | <u>02:22</u>    |
| (E) Second Initial Flow | <u>107</u>  | <input type="checkbox"/> Hourly Standby          | <u>        </u>   | T-Out         | <u>05:15</u>    |
| (F) Second Final Flow   | <u>188</u>  | <input checked="" type="checkbox"/> Mileage      | <u>48 RT 100'</u> | Comments      | <u>        </u> |
| (G) Final Shut-In       | <u>1161</u> | <input type="checkbox"/> Sampler                 | <u>        </u>   |               | <u>        </u> |
| (H) Final Hydrostatic   | <u>2065</u> | <input type="checkbox"/> Straddle                | <u>        </u>   |               | <u>        </u> |

|                 |           |                                                  |                 |                                              |                 |
|-----------------|-----------|--------------------------------------------------|-----------------|----------------------------------------------|-----------------|
| Initial Open    | <u>15</u> | <input checked="" type="checkbox"/> Shale Packer | <u>250'</u>     | <input type="checkbox"/> Ruined Shale Packer | <u>        </u> |
| Initial Shut-In | <u>30</u> | <input type="checkbox"/> Extra Packer            | <u>        </u> | <input type="checkbox"/> Ruined Packer       | <u>        </u> |
| Final Flow      | <u>30</u> | <input type="checkbox"/> Extra Recorder          | <u>        </u> | <input type="checkbox"/> Extra Copies        | <u>        </u> |
| Final Shut-In   | <u>60</u> | <input type="checkbox"/> Day Standby             | <u>        </u> | Sub Total                                    | <u>8</u>        |
|                 |           | <input type="checkbox"/> Accessibility           | <u>        </u> | Total                                        | <u>1860</u>     |
|                 |           | Sub Total                                        | <u>1860</u>     | MP/DST Disc't                                | <u>        </u> |

Approved By [Signature]

Our Representative [Signature]

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# Test Ticket

NO. 041146

Well Name & No. Ehmke #1-19 Test No. #5 Date 2-1-11  
 Company Larson Engineering Elevation 2840 KB 2833 GL  
 Address 362 West 5th Rd 1/2 Chinitz, KS  
 Co. Rep / Geo. Bob Lewellyn Rig H.D. #2  
 Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4406 4495 Zone Tested Pawnee - Ft Scott  
 Anchor Length 89 Drill Pipe Run 4288 Mud Wt. 9.4  
 Top Packer Depth 4401 Drill Collars Run 122 XH Vis 63  
 Bottom Packer Depth 4406 Wt. Pipe Run — WL 7.2  
 Total Depth 4495 Chlorides 1000 ppm System LCM #2

Blow Description Weak blow died in 8 min

No return

No blow

No return

| Rec       | Feet of            | %gas | %oil | %water     | %mud |
|-----------|--------------------|------|------|------------|------|
| <u>5'</u> | <u>mud (Heavy)</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 112° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2243  
 (B) First Initial Flow 28  
 (C) First Final Flow 31  
 (D) Initial Shut-In 253  
 (E) Second Initial Flow 31  
 (F) Second Final Flow 32  
 (G) Final Shut-In 412  
 (H) Final Hydrostatic 2194

☒ Test 1225  
☒ Jars 250  
☒ Safety Joint 75  
☒ Circ Sub N/C  
☐ Hourly Standby 2 1/2 hrs 250  
☒ Mileage 48 RT 60  
☐ Sampler —  
☐ Straddle —  
☒ Shale Packer 250  
☐ Extra Packer —  
☐ Extra Recorder —  
☐ Day Standby —  
☐ Accessibility —  
 Sub Total 2110

T-On Location 02:44  
 T-Started 03:30  
 T-Open 09:03  
 T-Pulled 11:18  
 T-Out 15:25  
 Comments 2 1/2 hrs  
Standby Time  
☐ Ruined Shale Packer —  
☐ Ruined Packer —  
☐ Extra Copies —  
 Sub Total 0  
 Total 2110

Initial Open 15  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 60

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Our Representative [Signature]

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