



## DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Forsyth B #1-17**

#### **17-32s-12w Barber,KS**

Start Date: 2014.01.14 @ 23:05:32

End Date: 2014.01.15 @ 07:34:17

Job Ticket #: 51866                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.23 @ 10:17:29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber, KS**  
**Forsyth B #1-17**  
 Job Ticket: 51866 **DST#: 1**  
 Test Start: 2014.01.14 @ 23:05:32

## GENERAL INFORMATION:

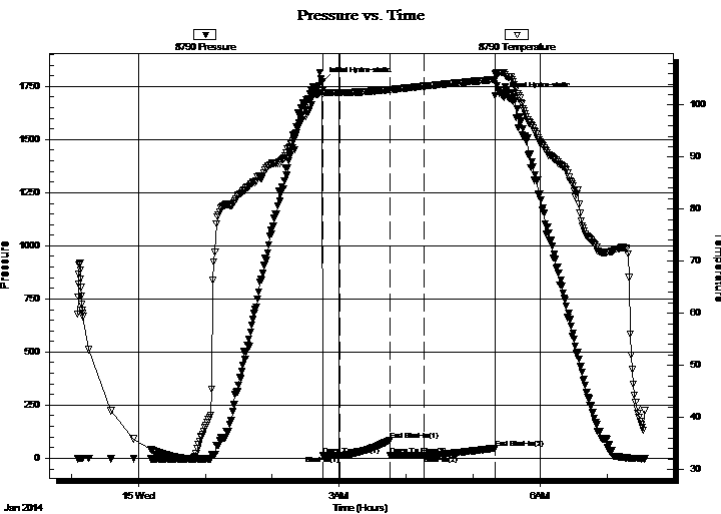
Formation: **Snyderville Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:45:47  
 Time Test Ended: 07:34:17  
 Interval: **3632.00 ft (KB) To 3680.00 ft (KB) (TVD)**  
 Total Depth: 3680.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jimmy Ricketts  
 Unit No: 48  
 Reference Elevations: 1600.00 ft (KB)  
 1591.00 ft (CF)  
 KB to GR/CF: 9.00 ft

## Serial #: 8790

Inside

Press@RunDepth: 13.78 psig @ 3641.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.14 End Date: 2014.01.15 Last Calib.: 2014.01.14  
 Start Time: 23:05:37 End Time: 07:34:16 Time On Btm: 2014.01.15 @ 02:45:02  
 Time Off Btm: 2014.01.15 @ 05:27:02

TEST COMMENT: Weak blow building to 1 inch initial flow period.  
 Weak surface blow throughout final flow period.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.27	102.71	Initial Hydro-static
1	12.47	102.13	Open To Flow (1)
16	12.02	102.32	Shut-In(1)
61	85.26	102.93	End Shut-In(1)
61	13.06	102.90	Open To Flow (2)
91	13.78	103.60	Shut-In(2)
155	47.65	104.87	End Shut-In(2)
162	1701.99	106.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Drilling Mud 100% M	0.01

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m <sup>3</sup> /d)



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PO Box 838  
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ATTN: Jon Christensen

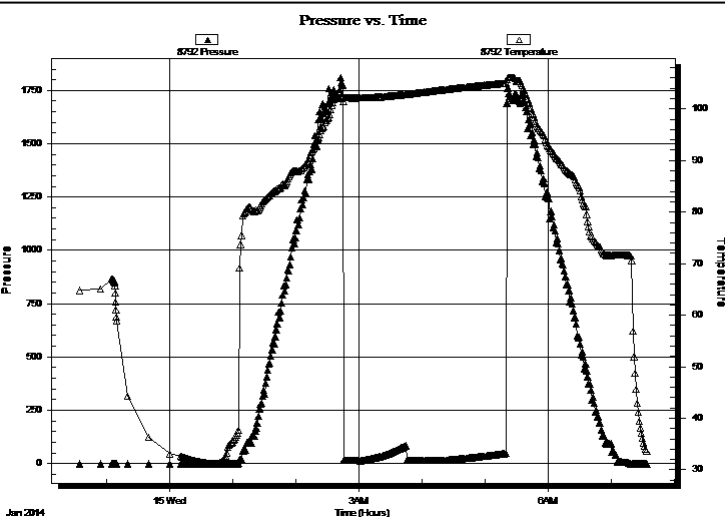
**17-32s-12w Barber, KS**  
**Forsyth B #1-17**  
Job Ticket: 51866      **DST#: 1**  
Test Start: 2014.01.14 @ 23:05:32

## GENERAL INFORMATION:

Formation: **Snyderville Sand**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 02:45:47      Tester: Jimmy Ricketts  
Time Test Ended: 07:34:17      Unit No: 48  
  
Interval: **3632.00 ft (KB) To 3680.00 ft (KB) (TVD)**      Reference Elevations: 1600.00 ft (KB)  
Total Depth: 3680.00 ft (KB) (TVD)      1591.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair      KB to GR/CF: 9.00 ft

**Serial #: 8792 Outside**  
Press@RunDepth:      psig @ 3641.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.01.14      End Date: 2014.01.15      Last Calib.: 1899.12.30  
Start Time: 22:34:29      End Time: 07:34:01      Time On Btm:  
Time Off Btm:

TEST COMMENT: Weak blow building to 1 inch initial flow period.  
Weak surface blow throughout final flow period.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Drilling Mud 100% M	0.01

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m <sup>3</sup> /d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51866 **DST#: 1**  
 Test Start: 2014.01.14 @ 23:05:32

**Tool Information**

Drill Pipe:	Length: 3408.00 ft	Diameter: 3.80 inches	Volume: 47.81 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 21000.00 lb
Drill Collar:	Length: 218.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 48.88 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	3632.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3611.00	
Shut In Tool	5.00			3616.00	
Hydraulic tool	5.00			3621.00	
Safety Joint	2.00			3623.00	
Packer	5.00			3628.00	22.00 Bottom Of Top Packer
Packer	4.00			3632.00	
Stubb	1.00			3633.00	
Perforations	7.00			3640.00	
Change Over Sub	1.00			3641.00	
Recorder	0.00	8790	Inside	3641.00	
Recorder	0.00	8792	Outside	3641.00	
Drill Pipe	31.00			3672.00	
Change Over Sub	1.00			3673.00	
Perforations	4.00			3677.00	
Bullnose	3.00			3680.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51866      **DST#: 1**  
 Test Start: 2014.01.14 @ 23:05:32

## Mud and Cushion Information

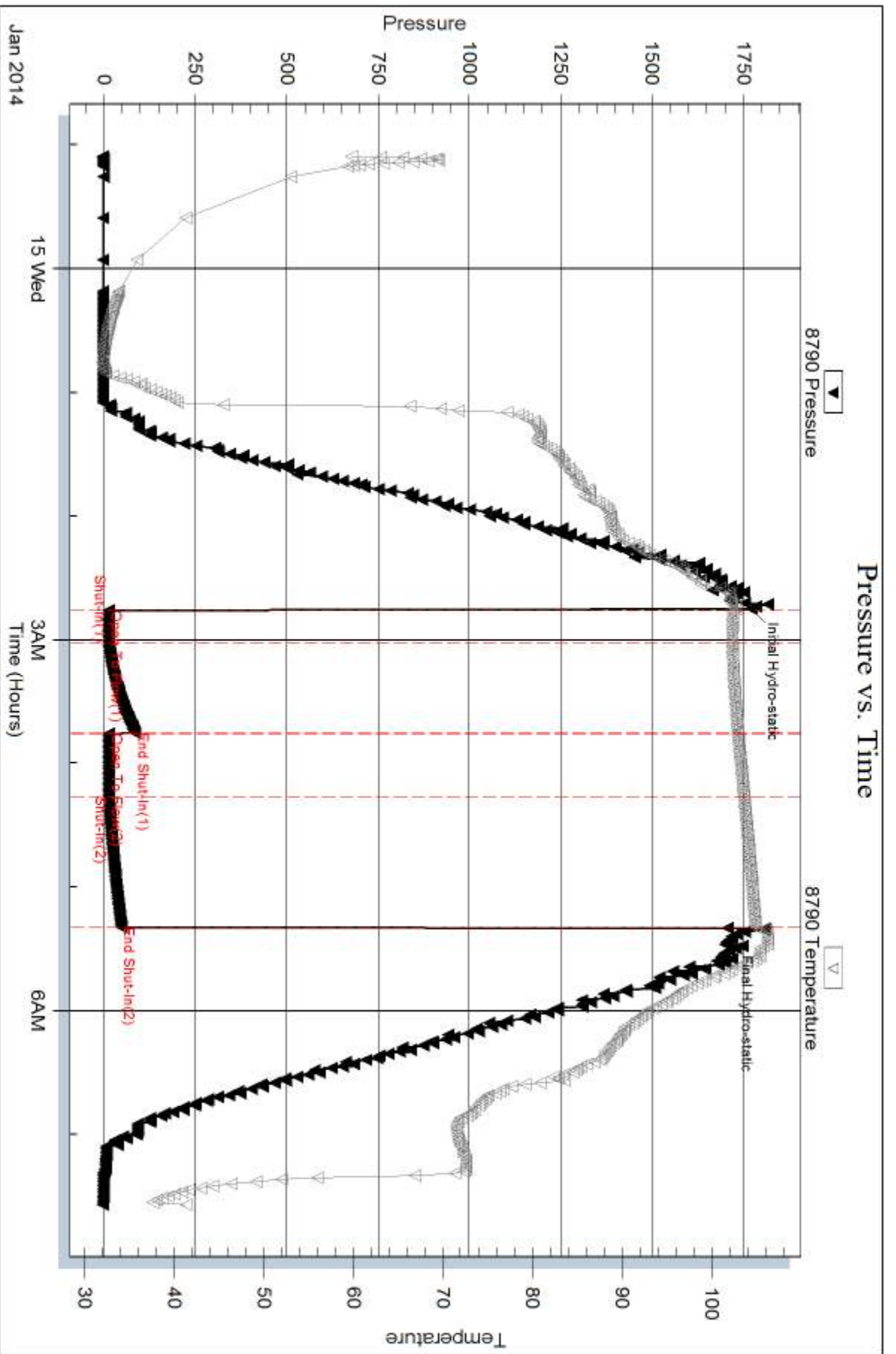
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.08 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: inches			

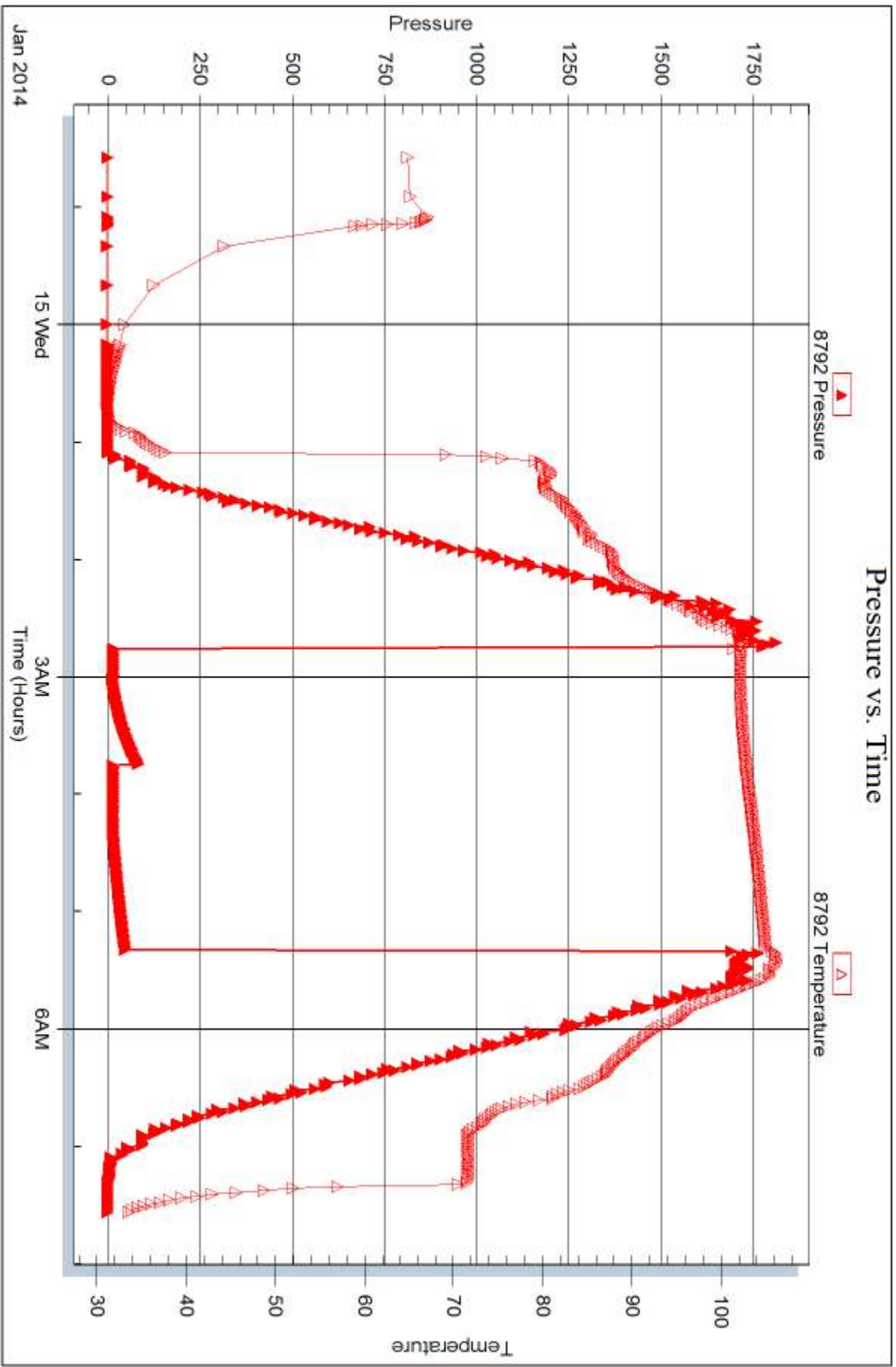
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Drilling Mud 100% M	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Forsyth B #1-17**

#### **17-32s-12w Barber,KS**

Start Date: 2014.01.16 @ 20:22:45

End Date: 2014.01.17 @ 04:10:15

Job Ticket #: 51845                      DST #: 2

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

Printed: 2014.01.23 @ 10:16:59

Herman L Loeb, LLC  
17-32s-12w Barber,KS  
Forsyth B #1-17  
DST # 2  
Miss.Chert  
2014.01.16





# DRILL STEM TEST REPORT

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

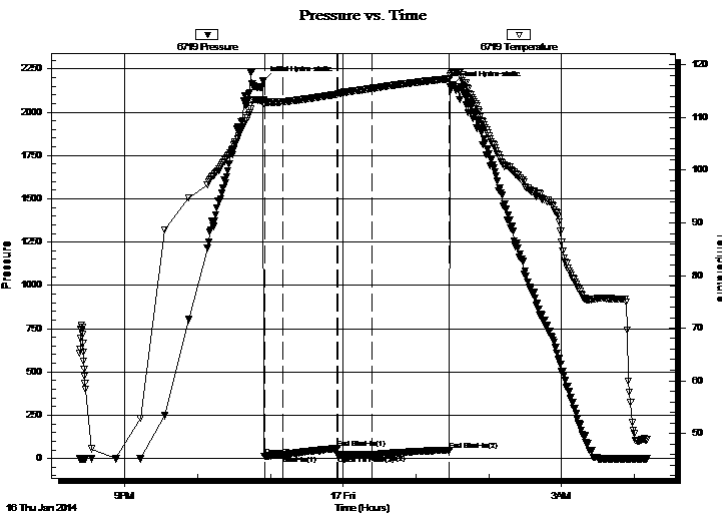
**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51845 **DST#: 2**  
 Test Start: 2014.01.16 @ 20:22:45

## GENERAL INFORMATION:

Formation: **Miss.Chert**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 22:55:00 Tester: Gary Pevoteaux  
 Time Test Ended: 04:10:15 Unit No: 53  
 Interval: **4355.00 ft (KB) To 4380.00 ft (KB) (TVD)** Reference Elevations: 1600.00 ft (KB)  
 Total Depth: 4380.00 ft (KB) (TVD) 1591.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

**Serial #: 6719 Outside**  
 Press@RunDepth: 21.98 psig @ 4356.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.16 End Date: 2014.01.17 Last Calib.: 2014.01.17  
 Start Time: 20:22:50 End Time: 04:10:14 Time On Btm: 2014.01.16 @ 22:54:15  
 Time Off Btm: 2014.01.17 @ 01:30:30

**TEST COMMENT:** IF: Weak blow . 3/4" to 1".  
 IS: No blow .  
 FF: Very weak blow . 1/4".  
 FS: No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2180.99	113.37	Initial Hydro-static
1	13.48	112.75	Open To Flow (1)
17	18.82	113.01	Shut-In(1)
61	58.01	114.43	End Shut-In(1)
62	17.17	114.52	Open To Flow (2)
90	21.98	115.56	Shut-In(2)
154	49.24	117.39	End Shut-In(2)
157	2156.15	118.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig. mud	0.05

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m <sup>3</sup> /d)





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51845      **DST#: 2**  
 Test Start: 2014.01.16 @ 20:22:45

**Tool Information**

Drill Pipe:	Length: 4148.00 ft	Diameter: 3.80 inches	Volume: 58.19 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: 20000.00 lb
Drill Collar:	Length: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 101000.0 lb
			<u>Total Volume: 59.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	4355.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4333.00	
Shut In Tool	5.00			4338.00	
Hydraulic tool	5.00			4343.00	
Safety Joint	3.00			4346.00	
Packer	4.00			4350.00	23.00      Bottom Of Top Packer
Packer	5.00			4355.00	
Stubb	1.00			4356.00	
Recorder	0.00	6719	Outside	4356.00	
Recorder	0.00	6773	Inside	4356.00	
Perforations	21.00			4377.00	
Bullnose	3.00			4380.00	25.00      Bottom Packers & Anchor

**Total Tool Length: 48.00**



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**FLUID SUMMARY**

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 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51845      **DST#: 2**  
 Test Start: 2014.01.16 @ 20:22:45

## Mud and Cushion Information

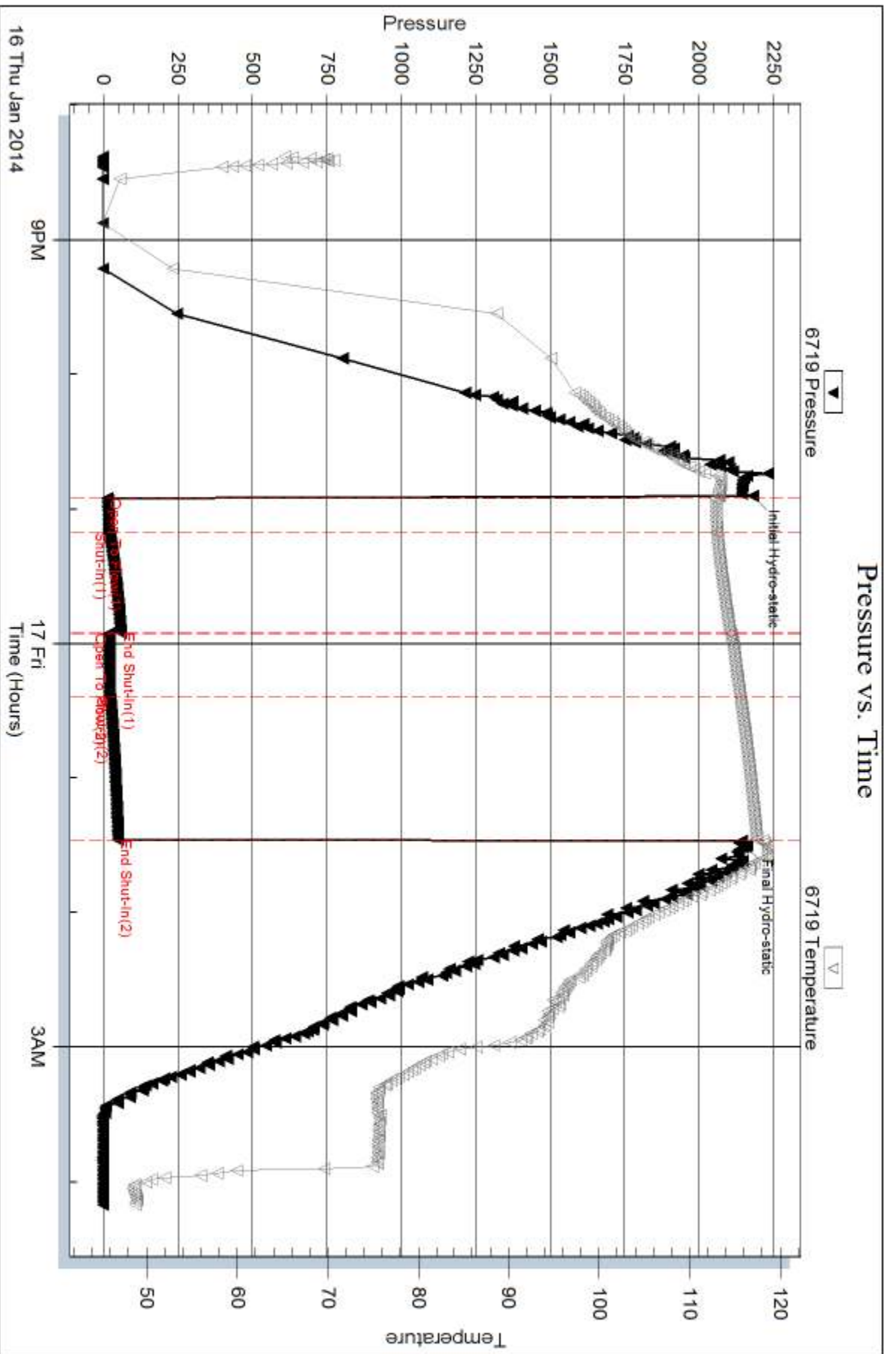
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	3000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig. mud	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



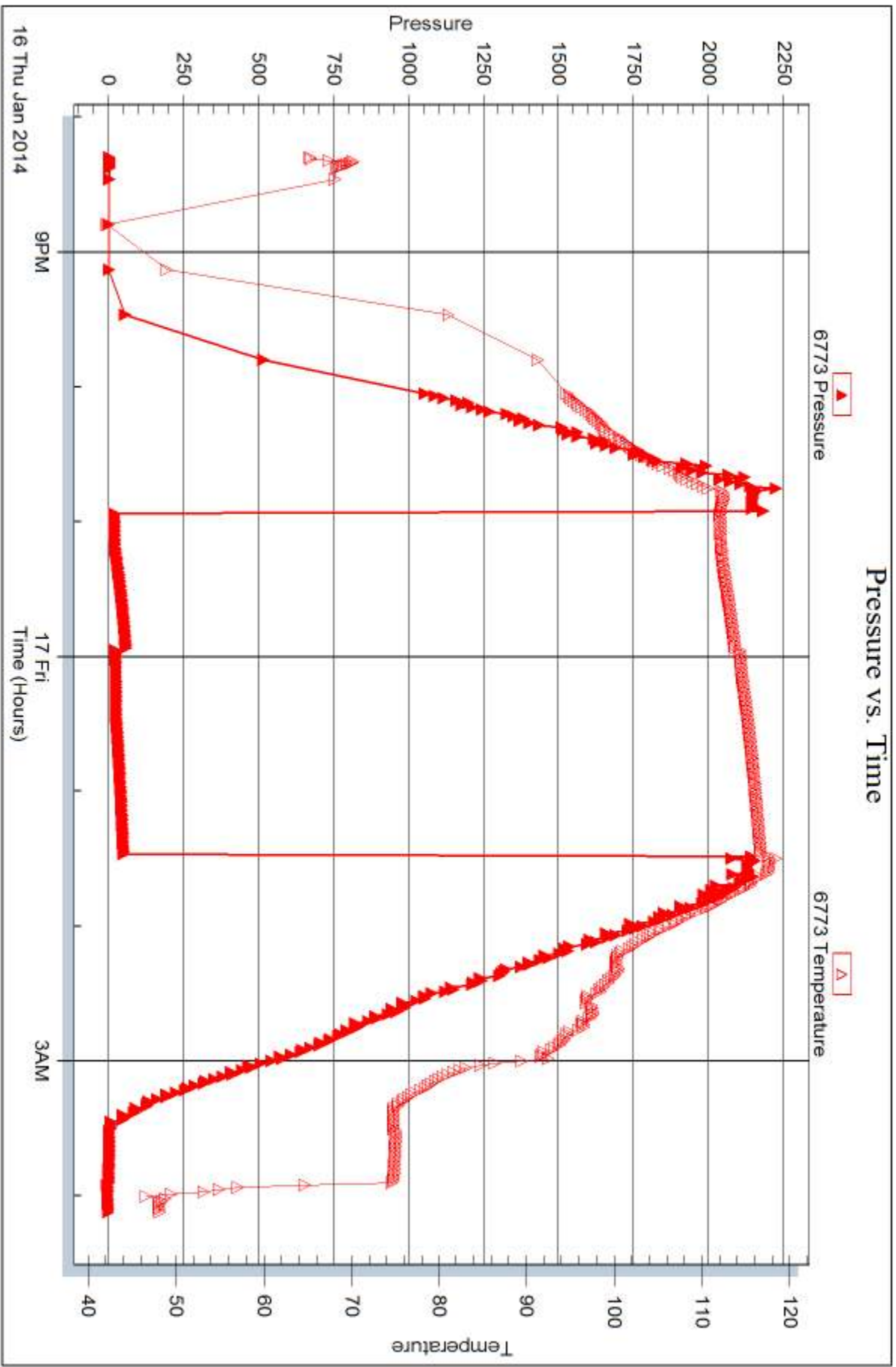
Serial #: 6773

Inside

Herman L Loeb, LLC

Forsyth B #1-17

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Forsyth B #1-17**

#### **17-32s-12w Barber,KS**

Start Date: 2014.01.17 @ 14:33:21

End Date: 2014.01.17 @ 23:45:36

Job Ticket #: 51846                      DST #: 3

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

Printed: 2014.01.23 @ 10:13:04

Herman L Loeb, LLC  
17-32s-12w Barber,KS  
Forsyth B #1-17  
DST # 3  
Miss. Chert  
2014.01.17



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

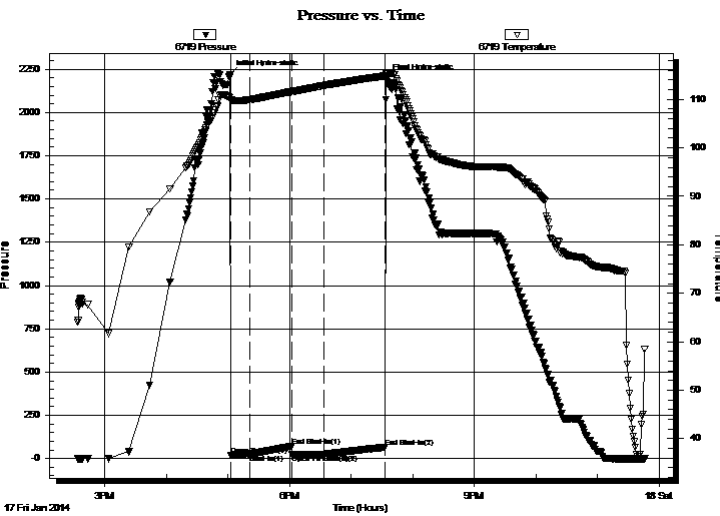
**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51846 **DST#: 3**  
 Test Start: 2014.01.17 @ 14:33:21

## GENERAL INFORMATION:

Formation: **Miss. Chert**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:02:36  
 Time Test Ended: 23:45:36  
 Interval: **4380.00 ft (KB) To 4420.00 ft (KB) (TVD)**  
 Total Depth: 4420.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 53  
 Reference Elevations: 1600.00 ft (KB)  
 1591.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 6719 Outside**  
 Press@RunDepth: 23.95 psig @ 4381.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.17 End Date: 2014.01.17 Last Calib.: 2014.01.17  
 Start Time: 14:33:26 End Time: 23:45:36 Time On Btm: 2014.01.17 @ 17:01:51  
 Time Off Btm: 2014.01.17 @ 19:34:06

TEST COMMENT: IF: Weak blow . Surf. - 1".  
 IS: No blow .  
 FF: Weak blow . Surf. - 1 1/2".  
 FS: No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2219.53	110.34	Initial Hydro-static
1	17.40	109.89	Open To Flow (1)
20	25.64	109.95	Shut-In(1)
61	70.11	111.61	End Shut-In(1)
61	22.22	111.60	Open To Flow (2)
92	23.95	112.85	Shut-In(2)
152	65.90	114.86	End Shut-In(2)
153	2195.86	115.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig mud 100%	0.05

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m <sup>3</sup> /d)







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51846 **DST#: 3**  
 Test Start: 2014.01.17 @ 14:33:21

**Tool Information**

Drill Pipe:	Length: 4173.00 ft	Diameter: 3.80 inches	Volume: 58.54 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: 218.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose:	95000.00 lb
			<u>Total Volume: 59.61 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial	90000.00 lb
Depth to Top Packer:	4380.00 ft			Final	90000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4358.00	
Shut In Tool	5.00			4363.00	
Hydraulic tool	5.00			4368.00	
Safety Joint	3.00			4371.00	
Packer	4.00			4375.00	23.00 Bottom Of Top Packer
Packer	5.00			4380.00	
Stubb	1.00			4381.00	
Recorder	0.00	6719	Outside	4381.00	
Recorder	0.00	6773	Inside	4381.00	
Perforations	36.00			4417.00	
Bullnose	3.00			4420.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51846      **DST#: 3**  
 Test Start: 2014.01.17 @ 14:33:21

## Mud and Cushion Information

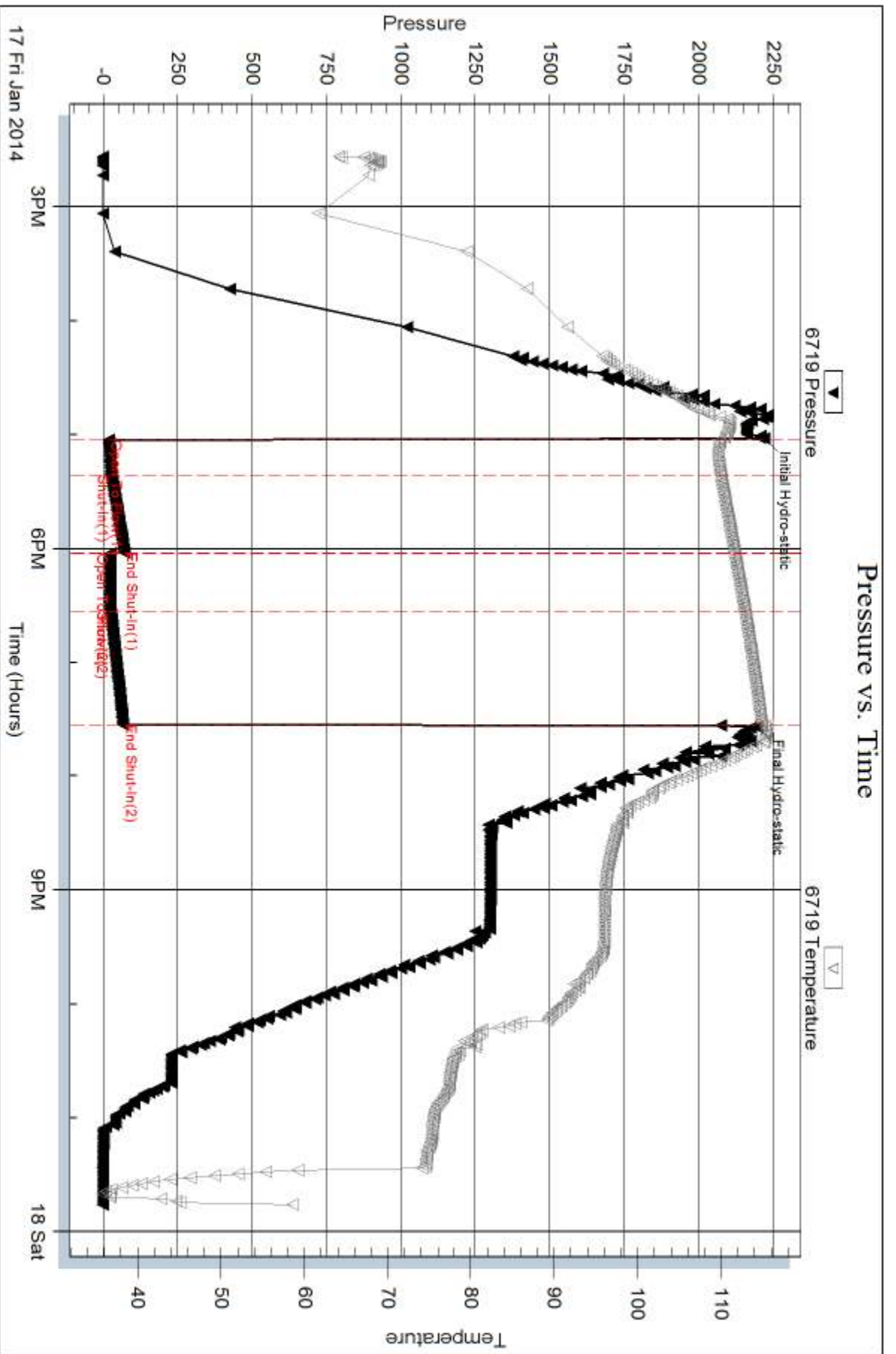
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	5000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig mud 100%	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



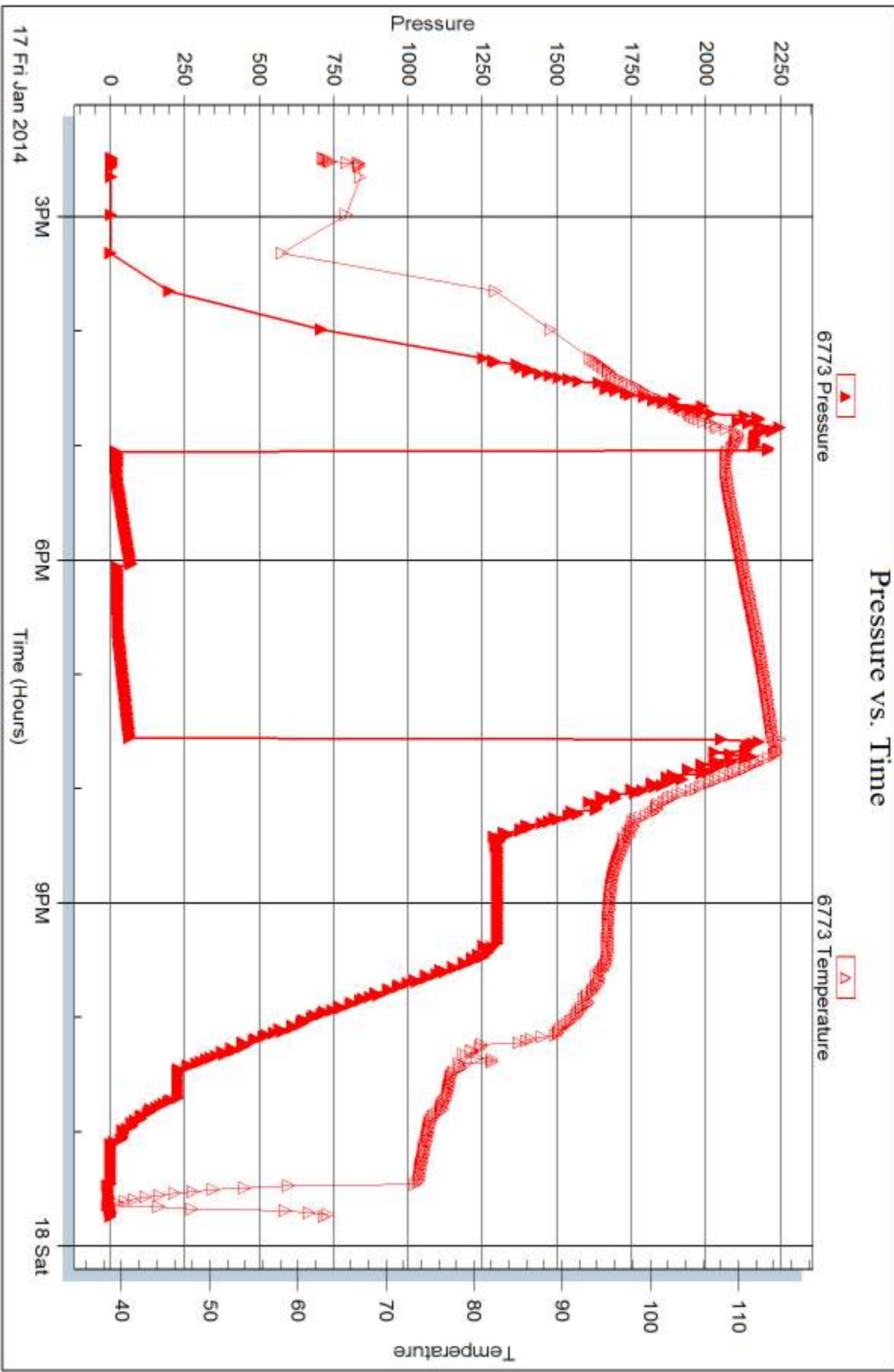
Serial #: 6773

Inside

Herman L Loeb, LLC

Forsyth B #1-17

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 51846

Printed: 2014.01.23 @ 10:13:06



## DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Forsyth B #1-17**

#### **17-32s-12w Barber,KS**

Start Date: 2014.01.19 @ 02:12:24

End Date: 2014.01.19 @ 10:42:09

Job Ticket #: 51847                      DST #: 4

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

Printed: 2014.01.23 @ 10:12:26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

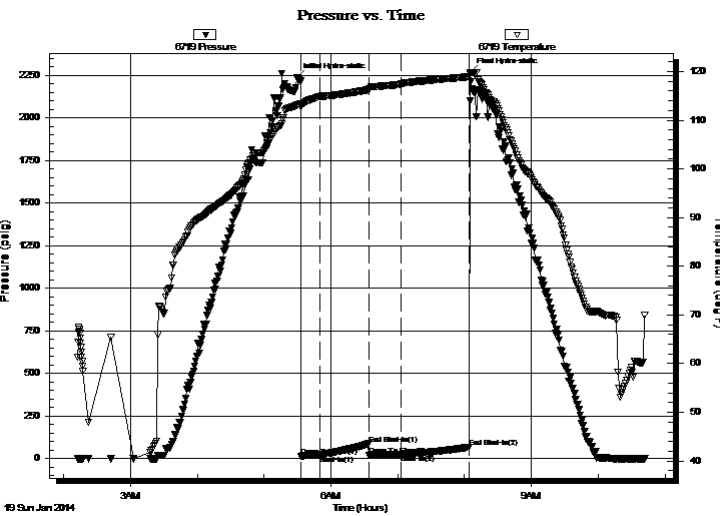
**17-32s-12w Barber, KS**  
**Forsyth B #1-17**  
 Job Ticket: 51847 **DST#: 4**  
 Test Start: 2014.01.19 @ 02:12:24

## GENERAL INFORMATION:

Formation: **Basal Miss. Chert**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:32:54  
 Time Test Ended: 10:42:09  
 Interval: **4480.00 ft (KB) To 4508.00 ft (KB) (TVD)**  
 Total Depth: 4508.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 53  
 Reference Elevations: 1600.00 ft (KB)  
 1591.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 6719 Outside**  
 Press@RunDepth: 21.87 psig @ 4481.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.19 End Date: 2014.01.19 Last Calib.: 2014.01.19  
 Start Time: 02:12:29 End Time: 10:42:08 Time On Btm: 2014.01.19 @ 05:29:39  
 Time Off Btm: 2014.01.19 @ 08:04:54

TEST COMMENT: IF: Weak blow . surf. - 1/2".  
 IS: No blow .  
 FF: Weak blow . surf. - 1"  
 FS: No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2235.18	113.08	Initial Hydro-static
4	14.02	112.68	Open To Flow (1)
21	20.38	114.87	Shut-In(1)
65	85.93	116.21	End Shut-In(1)
65	19.76	116.24	Open To Flow (2)
93	21.87	117.47	Shut-In(2)
155	66.63	118.92	End Shut-In(2)
156	2267.61	119.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	V SLI O Spkd M trc%Oil, 100%m	0.10

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m <sup>3</sup> /d)







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51847 **DST#: 4**  
 Test Start: 2014.01.19 @ 02:12:24

**Tool Information**

Drill Pipe:	Length: 4269.00 ft	Diameter: 3.80 inches	Volume: 59.88 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: 218.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 60.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 92000.00 lb
Depth to Top Packer:	4480.00 ft			Final 92000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4458.00	
Shut In Tool	5.00			4463.00	
Hydraulic tool	5.00			4468.00	
Safety Joint	3.00			4471.00	
Packer	4.00			4475.00	23.00 Bottom Of Top Packer
Packer	5.00			4480.00	
Stubb	1.00			4481.00	
Recorder	0.00	6719	Outside	4481.00	
Recorder	0.00	6773	Inside	4481.00	
Perforations	24.00			4505.00	
Bullnose	3.00			4508.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 51.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**17-32s-12w Barber,KS**  
**Forsyth B #1-17**  
 Job Ticket: 51847      **DST#: 4**  
 Test Start: 2014.01.19 @ 02:12:24

## Mud and Cushion Information

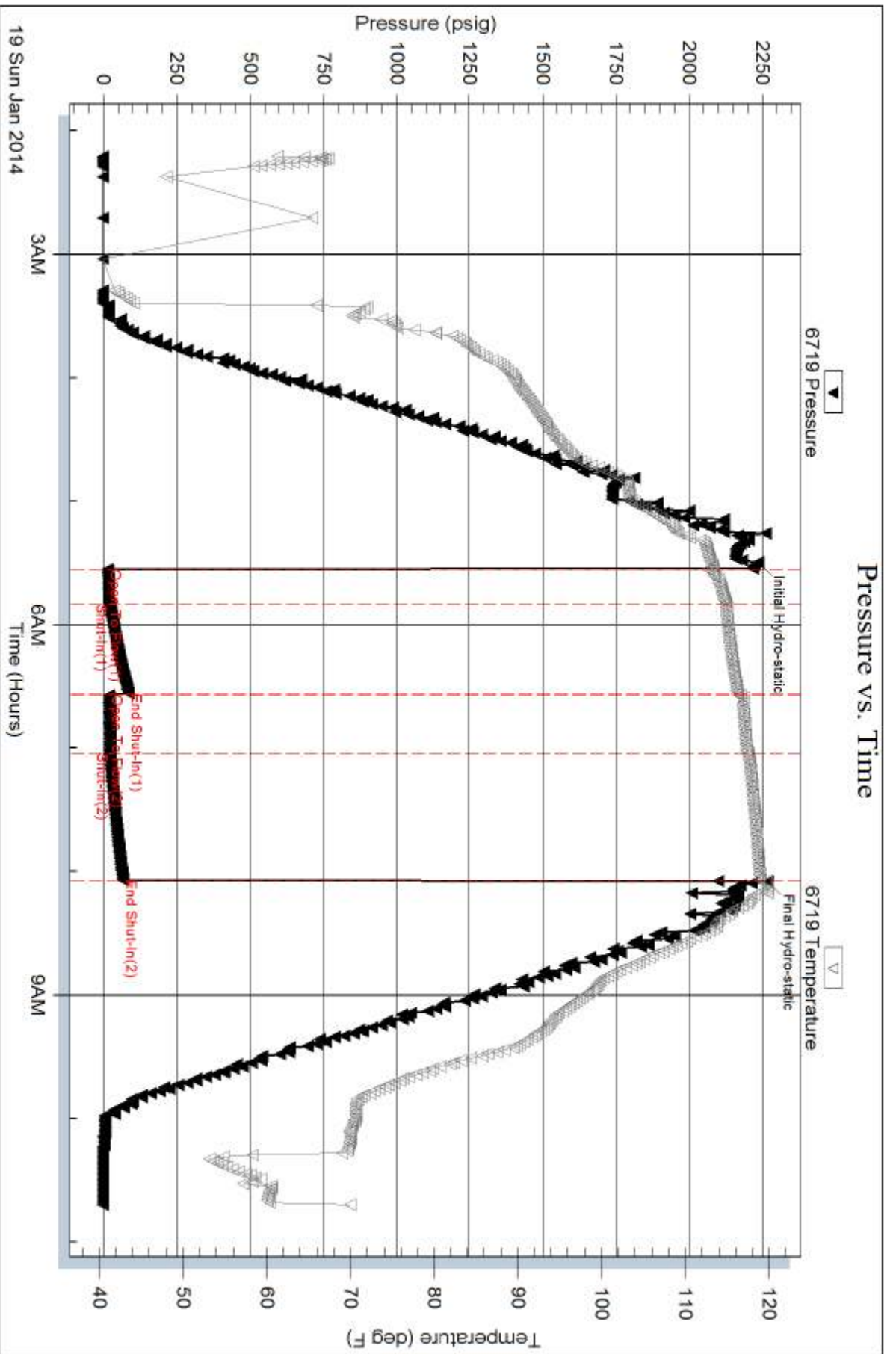
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	5000 ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	V SLI O Spkd M trc%Oil, 100%m	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



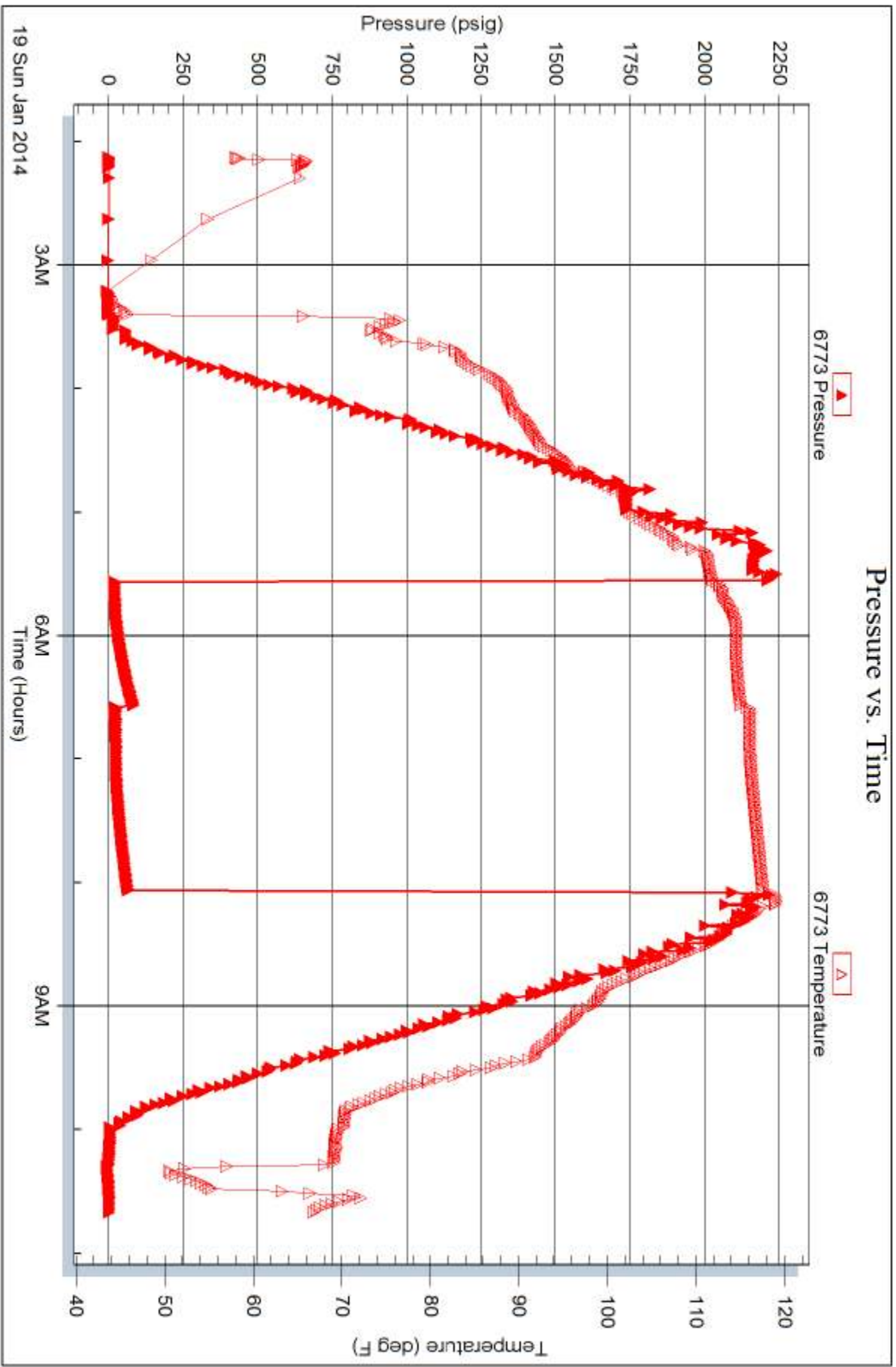
Serial #: 6773

Inside

Herman L Loeb, LLC

Forsyth B #1-17

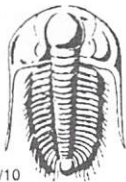
DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 51847

Printed: 2014.01.23 @ 10:12:28



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Forsyth "B" # ~~2-17~~ 2-17

## Test Ticket

NO. 51866

Well Name & No. Herman L Loeb, LLC Test No. 1 Date 1-15-14  
 Company ↓ Elevation 1598 KB 1589 GL  
 Address P.O. Box 838 Lawrenceville, IL 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling #4  
 Location: Sec. 17 Twp. 32 S Rge. 12 W Co. Barber State KS

Interval Tested 3632 - 3680 Zone Tested Snyderville Sand  
 Anchor Length 48 Drill Pipe Run 3408 Mud Wt. 9.1  
 Top Packer Depth 3627 Drill Collars Run 218 Vis 57  
 Bottom Packer Depth 3632 Wt. Pipe Run 0 WL 9.1  
 Total Depth 3680 Chlorides 3000 ppm System LCM  
 Blow Description weak blow building to 1 inch IFP  
weak surface blow throughout FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Drilling 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 2 BHT 106 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1773</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2030</u>
(B) First Initial Flow <u>12</u>	<input type="checkbox"/> Jars _____	T-Started <u>0045</u>
(C) First Final Flow <u>12</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0246</u>
(D) Initial Shut-In <u>85</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0520</u>
(E) Second Initial Flow <u>13</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0730</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>RT 80 124</u>	Comments <u>8792-2304:06</u>
(G) Final Shut-In <u>48</u>	<input type="checkbox"/> Sampler _____	<u>8790-2305:32</u>
(H) Final Hydrostatic <u>1702</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>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1349</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1349</u>	

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





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51845

Well Name & No. Forsyth B # 2-17 Test No. 2 Date 01-16-2014  
 Company Herman L. Loeb, LLC. Elevation 1600 KB 1591 GL  
 Address P.O. Box 838 Lawrenceville, IL. 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling Drilling Rig #4  
 Location: Sec. 17 Twp. 32s Rge. 12w Co. BARBER State KS

Interval Tested 4355 - 4380 Zone Tested Miss. Chert  
 Anchor Length 25' Drill Pipe Run 4140 Mud Wt. 9.3  
 Top Packer Depth 4350 Drill Collars Run 210 Vis 55  
 Bottom Packer Depth 4355 Wt. Pipe Run 6 WL 8.8  
 Total Depth 4380 Chlorides 3,000 ppm System LCM 2#

Blow Description IF: Weak blow, 3/4" to 1".  
ISI: NO blow.  
FF: Very weak blow, 1/4". FSI: NO blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Drig. mud</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 117° Gravity N/A API RW N.C. @ —° F Chlorides 3,000 ppm

(A) Initial Hydrostatic 281  Test 1250 T-On Location 1900  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 2022  
 (C) First Final Flow 19  Safety Joint 75 T-Open 2255  
 (D) Initial Shut-In 58  Circ Sub \_\_\_\_\_ T-Pulled ~~0110~~ 0127  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 0410  
 (F) Second Final Flow 22  Mileage 78 120.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 49  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2156  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1445.90  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1445.90

Approved By [Signature] Our Representative [Signature]

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

MATT SMITH 50<sup>00</sup>



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51846

Well Name & No. Forsyth B# 2-17 Test No. 3 Date 1-17-2014  
 Company Herman L. Loeb, LLC Elevation 1600 KB 1591 GL  
 Address P.O. Box 838 Lawrenceville, IL. 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling Drilling Rig # 4  
 Location: Sec. 17 Twp. 32s Rge. 12w Co. Barber State KS.

Interval Tested 4380 - 4420 Zone Tested Miss. Chert  
 Anchor Length 40' Drill Pipe Run ~~4173~~ 4173 Mud Wt. 9.4  
 Top Packer Depth 4375 Drill Collars Run 218 Vis 57  
 Bottom Packer Depth 4380 Wt. Pipe Run 2 WL 8-8  
 Total Depth 4420 Chlorides 5,000 ppm System LCM 4#

Blow Description IF: Weak blow, Surf. to 1'  
ISI: No blow.  
FF: Weak blow, Surf. to 1 1/2". FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>DRlg 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 16' BHT 115° Gravity N/A API RW N.C. @ — °F Chlorides 5,000 ppm

(A) Initial Hydrostatic	<u>2220</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>1400</u>
(B) First Initial Flow	<u>17</u>	<input type="checkbox"/> Jars		T-Started	<u>1433</u>
(C) First Final Flow	<u>26</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>1703</u>
(D) Initial Shut-In	<u>70</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>1930</u>
(E) Second Initial Flow	<u>22</u>	<input checked="" type="checkbox"/> Hourly Standby	<u>1 3/4</u>	T-Out	<u>2346</u>
(F) Second Final Flow	<u>24</u>	<input checked="" type="checkbox"/> Mileage	<u>92 124</u>	Comments	
(G) Final Shut-In	<u>66</u>	<input type="checkbox"/> Sampler		<u>TRN Matt Smith - 50</u>	
(H) Final Hydrostatic	<u>2196</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	
		<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
		<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60

Sub Total 1449

Sub Total 41.67  
 Total 1490.67  
 MP/DST Disc't

Approved By [Signature] Our Representative Ryan Reynolds  
 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. 51847

Well Name & No. Forsyth B# 2-17 Test No. 4 Date 1-19-2014  
 Company HERMAN L. LOEB, LLC. Elevation 1600 KB 1591 GL  
 Address P.O. Box 838 Lawrenceville, IL. 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling Drilling Rig #4  
 Location: Sec. 17 Twp. 32s Rge. 12w Co. BARBER State KS.

Interval Tested 4480 - 4508 Zone Tested Basal Miss. Chert  
 Anchor Length 28' Drill Pipe Run 4269 Mud Wt. 9.3  
 Top Packer Depth 4475 Drill Collars Run 218 Vis 43  
 Bottom Packer Depth 4480 Wt. Pipe Run 2 WL 9.2  
 Total Depth 4508 Chlorides 5,000 ppm System LCM 3#

Blow Description IF: Weak blow, surf. - 1/2".  
ISI: NO blow;  
FF: Weak blow, Surf. - 1".  
FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>VSLIOS ptd m</u>	<u>TRC</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 20 BHT 119° Gravity N/A API RW N/C @ ~ ° F Chlorides 5,000 ppm  
 (A) Initial Hydrostatic 2235  Test 1250 T-On Location 0106  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 0212  
 (C) First Final Flow 20  Safety Joint 75 T-Open 0533  
 (D) Initial Shut-In 86  Circ Sub \_\_\_\_\_ T-Pulled 0805  
 (E) Second Initial Flow 20  Hourly Standby \_\_\_\_\_ T-Out 1042  
 (F) Second Final Flow 22  Mileage 248 DST 4 Pick Tools 92+92 Comments \_\_\_\_\_  
 (G) Final Shut-In 67  Sampler \_\_\_\_\_ TRW MATH Smooth - 50  
 (H) Final Hydrostatic 2268  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 15  Extra Recorder 1d 5.25h Sub Total 800  
 Initial Shut-In 45  Day Standby 1 day DST 4-1600 Total 2373  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1573

Approved By [Signature] Our Representative [Signature]  
 Trilobite Testing Inc. shall not be liable for damaged or destroyed 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.