



## DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company LLC**

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

ATTN: Rene Husted

### **Kufeld #1-19**

### **19-19s18w Barton**

Start Date: 2014.09.16 @ 00:00:00

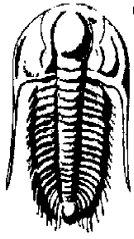
End Date:

Job Ticket #: 60380

DST #: 14

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

Printed: 2014.09.17 @ 02:43:21



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

F.G. Holl Company LLC

**19-19s18w Barton**

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

**Kufeld #1-19**

Job Ticket: 60380

**DST#: 14**

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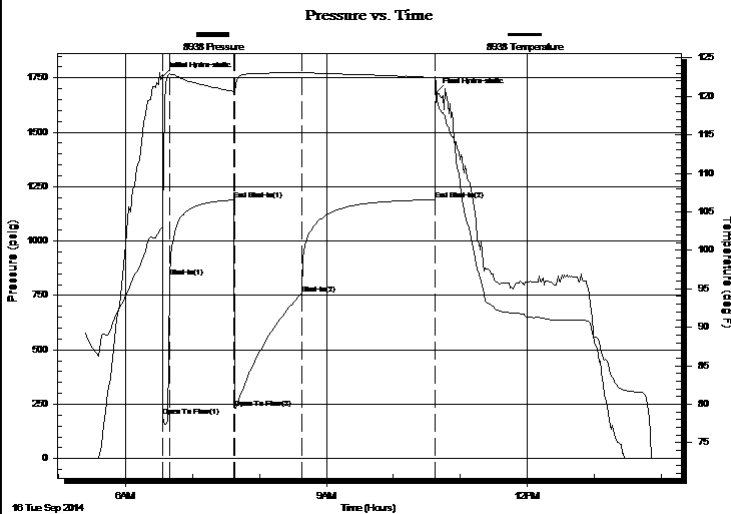
Test Start: 2014.09.16 @ 00:00:00

### GENERAL INFORMATION:

Formation:	<b>Arbuckle</b>		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened:			Tester: Gene Budig
Time Test Ended:			Unit No: S4
<b>Interval:</b>	<b>3571.00 ft (KB) To 3580.00 ft (KB) (TVD)</b>		Reference Elevations: 1915.00 ft (KB)
Total Depth:	3580.00 ft (KB) (TVD)		1907.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Fair	KB to GR/CF: 8.00 ft

<b>Serial #: 8938</b>	<b>Inside</b>				
Press@RunDepth:	1189.68 psig @	3576.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2014.09.16	End Date:	2014.09.16	Last Calib.:	1899.12.30
Start Time:	05:23:00	End Time:	13:52:30	Time On Btm:	2014.09.16 @ 06:33:00
				Time Off Btm:	2014.09.16 @ 10:38:30

**TEST COMMENT:** 1st Opening 5 Minutes-Good blow built to the bottom of the bucket in 30 seconds  
 1st Shut-In 60 Minutes-Fair blow back  
 2nd Opening 60 Minutes-Good blow -Gas to surface in 15 minutes-See gas flow report  
 2nd Shut-In 120 Minutes-Fair blow back



### PRESSURE SUMMARY

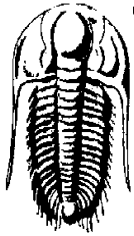
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1756.77	103.00	Initial Hydro-static
1	196.81	104.14	Open To Flow (1)
7	833.62	122.96	Shut-In(1)
64	1188.56	120.64	End Shut-In(1)
65	232.33	120.68	Open To Flow (2)
125	757.93	123.04	Shut-In(2)
244	1189.68	122.45	End Shut-In(2)
246	1681.49	121.72	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
350.00	Clean Gassy Oil Gravity 34 Corrected	4.91
0.00	15%gas 85%w ater	0.00
300.00	Gassy Oil cut muddy w ater	4.21
0.00	5 Gas 20%Oil 65%Water 10%Mud	0.00
300.00	Gassy Oil cut muddy w ater	4.21
0.00	5%Gas 15%Oil 75%Water 5%Mud	0.00

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	0.57	5.60
Last Gas Rate	0.13	0.57	5.60
Max. Gas Rate	0.13	0.57	5.60



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## DRILL STEM TEST REPORT

F.G. Holl Company LLC

19-19s18w Barton

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Wichita, Kansas 67206-2563

Kufeld #1-19

Job Ticket: 60380

DST#: 14

ATTN: Rene Husted

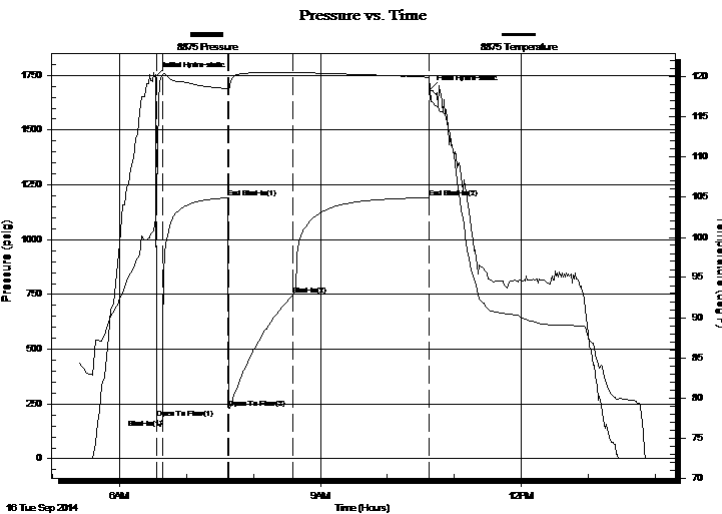
Test Start: 2014.09.16 @ 00:00:00

### GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock:                               ft (KB)  
 Time Tool Opened:  
 Time Test Ended:  
 Interval: **3571.00 ft (KB) To 3580.00 ft (KB) (TVD)**  
 Total Depth: 3580.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gene Budig  
 Unit No: S4  
 Reference Elevations: 1915.00 ft (KB)  
 1907.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8875 Outside**  
 Press@RunDepth: 1191.78 psig @ 3577.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.09.16 End Date: 2014.09.16 Last Calib.: 2014.09.17  
 Start Time: 05:23:00 End Time: 13:52:30 Time On Btm: 2014.09.16 @ 06:32:30  
 Time Off Btm: 2014.09.16 @ 10:38:30

**TEST COMMENT:** 1st Opening 5 Minutes Good blow built to the bottom of the bucket in 30 seconds  
 1st Shut-In 60 Minutes Fair blow back  
 2nd Opening 60 Minutes Good blow -Gas to surface in 15 minutes-See gas flow report  
 2nd Shut-In 120 Minutes Fair blow back



### PRESSURE SUMMARY

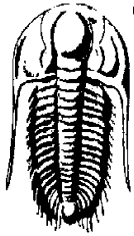
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1745.60	102.12	Initial Hydro-static
1	185.50	104.77	Open To Flow (1)
6	178.88	120.12	Shut-In(1)
64	1191.02	118.53	End Shut-In(1)
65	229.55	118.29	Open To Flow (2)
123	749.28	120.48	Shut-In(2)
245	1191.78	119.96	End Shut-In(2)
246	1686.02	118.59	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
350.00	Clean Gassy Oil Gravity 34 Corrected	4.91
0.00	15%gas 85%w ater	0.00
300.00	Gassy Oil cut muddy w ater	4.21
0.00	5 Gas 20%Oil 65%Water 10%Mud	0.00
300.00	Gassy Oil cut muddy w ater	4.21
0.00	5%Gas 15%Oil 75%Water 5%Mud	0.00

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	0.57	5.60
Last Gas Rate	0.13	0.57	5.60
Max. Gas Rate	0.13	0.57	5.60



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F.G. Holl Company LLC

**19-19s18w Barton**

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

**Kufeld #1-19**

Job Ticket: 60380

**DST#: 14**

ATTN: Rene Hustedad

Test Start: 2014.09.16 @ 00:00:00

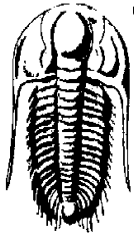
## Tool Information

Drill Pipe:	Length: 3555.00 ft	Diameter: 3.80 inches	Volume: 49.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.86 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 49.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3571.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3548.00	
Hydraulic Tool	5.00			3553.00	
Jars	6.00			3559.00	
Safety Joint	2.00			3561.00	
Top Packer	5.00			3566.00	
Packer	5.00			3571.00	28.00 Bottom Of Top Packer
Anchor	4.00			3575.00	
Recorder	1.00	8938	Inside	3576.00	
Recorder	1.00	8875	Outside	3577.00	
Bull Plug	3.00			3580.00	9.00 Anchor Tool
<b>Total Tool Length:</b>	<b>37.00</b>				



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**FLUID SUMMARY**

F.G. Holl Company LLC  
9431 East Central Suite 100  
Wichita, Kansas 67206-2563  
ATTN: Rene Husted

**19-19s18w Barton**  
**Kufeld #1-19**  
Job Ticket: 60380      **DST#: 14**  
Test Start: 2014.09.16 @ 00:00:00

## Mud and Cushion Information

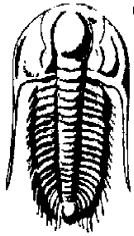
Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 26000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.80 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5900.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
350.00	Clean Gassy Oil Gravity 34 Corrected	4.910
0.00	15%gas 85%w ater	0.000
300.00	Gassy Oil cut muddy w ater	4.208
0.00	5 Gas 20%Oil 65%Water 10%Mud	0.000
300.00	Gassy Oil cut muddy w ater	4.208
0.00	5%Gas 15%Oil 75%Water 5%Mud	0.000
900.00	Gassy w ater Chlorides 26000	12.625
0.00	5Gas 95%w ater	0.000

Total Length: 1850.00 ft      Total Volume: 25.951 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



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## DRILL STEM TEST REPORT

**GAS RATES**

F.G. Holl Company LLC

**19-19s18w Barton**

9431 East Central Suite 100  
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**Kufeld #1-19**

Job Ticket: 60380

**DST#: 14**

ATTN: Rene Husted

Test Start: 2014.09.16 @ 00:00:00

### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	20	0.13	0.57	5.60
2	30	0.13	0.57	5.60
2	40	0.13	0.57	5.60
2	50	0.13	0.57	5.60
2	60	0.13	0.57	5.60

### Pressure vs. Time

