



## 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: 2014.09.14 @ 00:00:00

End Date:

Job Ticket #: 60375

DST #: 9

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

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# DRILL STEM TEST REPORT

F.G. Holl Company LLC  
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 Wichita, Kansas 67206-2563  
 ATTN: Rene Husted

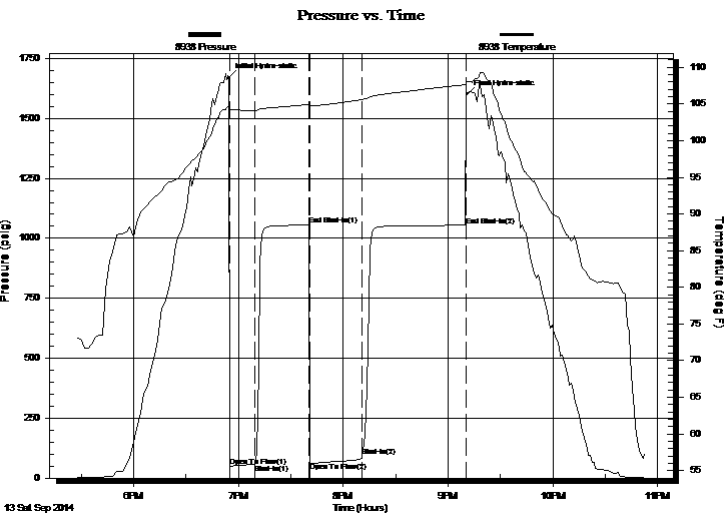
**19-19s18w Barton**  
**Kufeld #1-19**  
 Job Ticket: 60375      **DST#: 9**  
 Test Start: 2014.09.14 @ 00:00:00

## GENERAL INFORMATION:

Formation: **Kansas City "H & I"**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened:  
 Time Test Ended:  
**Interval: 3354.00 ft (KB) To 3412.00 ft (KB) (TVD)**  
 Total Depth: 3412.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gene Bujdig  
 Unit No: S4  
 Reference Elevations: 1915.00 ft (KB)  
 1907.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8938      Inside**  
 Press@RunDepth: 1054.18 psig @ 3408.22 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2014.09.13      End Date: 2014.09.13      Last Calib.: 2014.09.14  
 Start Time: 17:27:00      End Time: 22:53:00      Time On Btm: 2014.09.13 @ 18:54:30  
 Time Off Btm: 2014.09.13 @ 21:11:00

**TEST COMMENT:** 1st Opening 15 Minutes Very weak surface blow through out  
 1st Shut-In 30 Minutes  
 2nd Opening 30 Minutes Very weak surface blow through out  
 2nd Shut-In 60 Minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.51	104.60	Initial Hydro-static
1	49.73	104.23	Open To Flow (1)
15	57.39	104.04	Shut-In(1)
46	1054.83	104.95	End Shut-In(1)
47	65.04	104.45	Open To Flow (2)
77	92.81	105.60	Shut-In(2)
136	1054.18	107.64	End Shut-In(2)
137	1600.06	107.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	HEAVY MUD	0.98

## Gas Rates

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



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**19-19s18w Barton**  
**Kufeld #1-19**  
 Job Ticket: 60375      **DST#: 9**  
 Test Start: 2014.09.14 @ 00:00:00

## GENERAL INFORMATION:

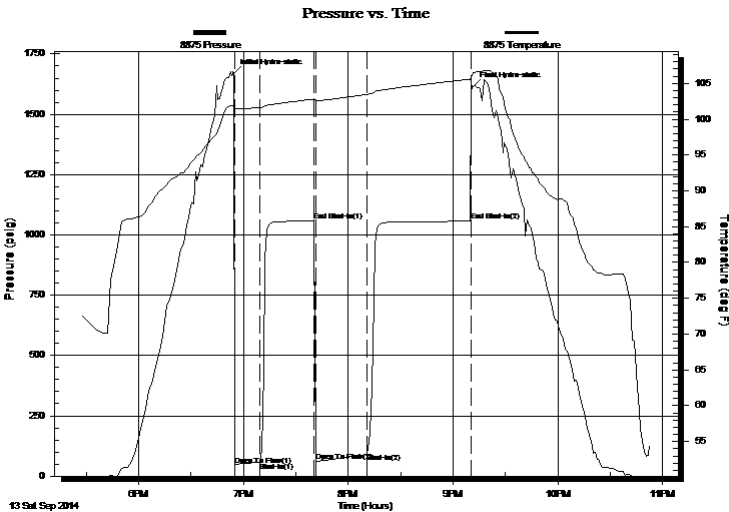
Formation: **Kansas City "H & I"**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened:  
 Time Test Ended:  
 Interval: **3354.00 ft (KB) To 3412.00 ft (KB) (TVD)**  
 Total Depth: 3412.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gene Bujdig  
 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: 1056.49 psig @ 3409.22 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2014.09.13      End Date: 2014.09.13      Last Calib.: 2014.09.14  
 Start Time: 17:27:00      End Time: 22:53:00      Time On Btm: 2014.09.13 @ 18:54:30  
 Time Off Btm: 2014.09.13 @ 21:11:30

**TEST COMMENT:** 1st Opening 15 Minutes Very weak surface blow through out  
 1st Shut-In 30 Minutes  
 2nd Opening 30 Minutes Very weak surface blow through out  
 2nd Shut-In 60 Minutes

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1669.69	101.86	Initial Hydro-static
1	46.98	101.43	Open To Flow (1)
15	58.34	101.61	Shut-In(1)
46	1057.70	102.83	End Shut-In(1)
47	61.08	102.62	Open To Flow (2)
77	94.69	103.46	Shut-In(2)
136	1056.49	105.58	End Shut-In(2)
137	1613.87	106.50	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	HEAVY MUD	0.98

## Gas Rates

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



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**TOOL DIAGRAM**

F.G. Holl Company LLC

**19-19s18w Barton**

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Wichita, Kansas 67206-2563

**Kufeld #1-19**

Job Ticket: 60375

**DST#: 9**

ATTN: Rene Husted

Test Start: 2014.09.14 @ 00:00:00

## Tool Information

Drill Pipe:	Length: 3338.00 ft	Diameter: 3.80 inches	Volume: 46.82 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: 70000.00 lb
			<u>Total Volume: 46.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3354.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.22 ft			
Tool Length:	86.22 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			3331.00	
Hydraulic Tool	5.00			3336.00	
Jars	6.00			3342.00	
Safety Joint	2.00			3344.00	
Top Packer	5.00			3349.00	
Packer	5.00			3354.00	28.00 Bottom Of Top Packer
Anchor	5.00			3359.00	
Change Over Sub	0.75			3359.75	
Drill Pipe	31.72			3391.47	
Change Over Sub	0.75			3392.22	
Anchor	15.00			3407.22	
Recorder	1.00	8938	Inside	3408.22	
Recorder	1.00	8875	Outside	3409.22	
Bull Plug	3.00			3412.22	58.22 Anchor Tool

**Total Tool Length: 86.22**



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**FLUID SUMMARY**

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Job Ticket: 60375

**DST#: 9**

ATTN: Rene Husted

Test Start: 2014.09.14 @ 00:00:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 10.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
70.00	hEAVY MUD	0.982

Total Length: 70.00 ft      Total Volume: 0.982 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

