



## DRILL STEM TEST REPORT

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

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

ATTN: Ryan Greenbaum

### **Mermis"A"Unit #1-21**

#### **21-20s-15w Barton**

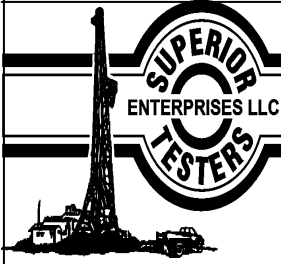
Start Date: 2012.09.23 @ 00:00:00

End Date: 2012.09.23 @ 00:00:00

Job Ticket #: 17753                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2012.09.23 @ 17:05:58



# DRILL STEM TEST REPORT

F.G. Holl Company LLC  
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 Wichita, Kansas 67206-2563  
 ATTN: Ryan Greenbaum

**21-20s-15w Barton**  
**Mermis"A"Unit #1-21**  
 Job Ticket: 17753 **DST#: 3**  
 Test Start: 2012.09.23 @ 00:00:00

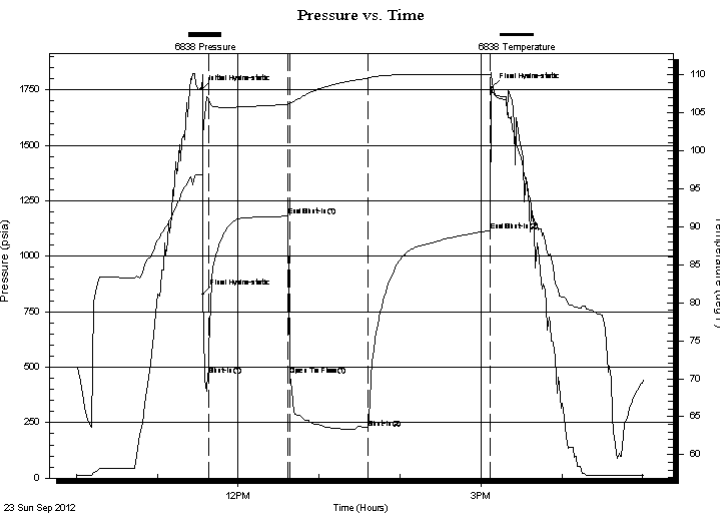
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:00:00 Tester: Gene Budig  
 Time Test Ended: 00:00:00 Unit No: 3335  
 Interval: **3640.00 ft (KB) To 3742.00 ft (KB) (TVD)**  
 Reference Elevations: 2012.00 ft (KB)  
 Total Depth: 3742.00 ft (KB) (TVD) 2004.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 8.00 ft

## Serial #: 6838 Inside

Press@RunDepth: 1115.09 psia @ 3641.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2012.09.23 End Date: 2012.09.23 Last Calib.: 2012.09.23  
 Start Time: 10:00:00 End Time: 17:01:30 Time On Btm: 2012.09.23 @ 11:33:00  
 Time Off Btm: 2012.09.23 @ 11:34:00

**TEST COMMENT:** 1st Opening 5 Minutes-Strong blow built to the bottom of a 5 gallon bucket in 30 seconds  
 1st Shut-In 60 Minutes-Fair blow back  
 2nd Opening 45 Minutes-Strong blow gas to surface see gas flow report



## PRESSURE SUMMARY

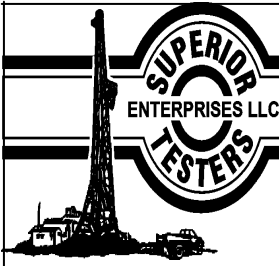
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1752.35	96.80	Initial Hydro-static
1	828.43	101.42	Final Hydro-static
5	462.70	106.88	Shut-In(1)
64	1180.45	106.10	End Shut-In(1)
66	465.29	106.14	Open To Flow (1)
124	226.06	109.58	Shut-In(2)
214	1115.09	110.06	End Shut-In(2)
215	1759.17	110.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
275.00	Drilling Mud	3.86

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	26.60	764.72
Last Gas Rate	1.00	19.50	560.60
Max. Gas Rate	1.00	26.60	764.72



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**21-20s-15w Barton**

**Mermis"A"Unit #1-21**

Job Ticket: 17753      **DST#: 3**  
 Test Start: 2012.09.23 @ 00:00:00

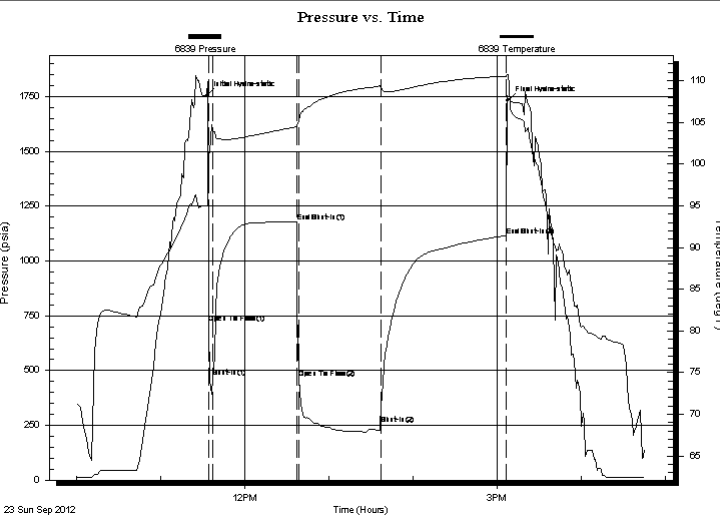
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No    Whipstock:                      ft (KB)  
 Time Tool Opened: 00:00:00  
 Time Test Ended: 00:00:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gene Budig  
 Unit No: 3335  
 Interval: **3640.00 ft (KB) To 3742.00 ft (KB) (TVD)**  
 Total Depth: 3742.00 ft (KB) (TVD)  
 Reference Elevations: 2012.00 ft (KB)  
 2004.00 ft (CF)  
 Hole Diameter: 7.88 inches    Hole Condition:                      KB to GR/CF: 8.00 ft

## Serial #: 6839    Outside

Press@RunDepth: 1114.25 psia @ 3642.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2012.09.23      End Date: 2012.09.23      Last Calib.: 2012.09.23  
 Start Time: 10:00:00      End Time: 16:45:30      Time On Btm: 2012.09.23 @ 11:33:00  
 Time Off Btm: 2012.09.23 @ 15:08:00

**TEST COMMENT:** 1st Opening 5 Minutes-Strong blow built to the bottom of a 5 gallon bucket in 30 seconds  
 1st Shut-In 60 Minutes-Fair blow back  
 2nd Opening 45 Minutes-Strong blow gas to surface see gas flow report



## PRESSURE SUMMARY

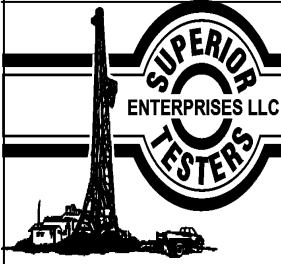
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1753.39	95.04	Initial Hydro-static
2	715.85	101.03	Open To Flow (1)
5	470.43	103.89	Shut-In(1)
64	1179.76	104.48	End Shut-In(1)
66	465.76	105.19	Open To Flow (2)
124	255.01	109.40	Shut-In(2)
214	1114.25	110.54	End Shut-In(2)
215	1731.20	110.70	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
275.00	Drilling Mud	3.86

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	26.60	764.72
Last Gas Rate	1.00	19.50	560.60
Max. Gas Rate	1.00	26.60	764.72



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**21-20s-15w Barton**  
**Mermis"A"Unit #1-21**  
 Job Ticket: 17753      **DST#: 3**  
 Test Start: 2012.09.23 @ 00:00:00

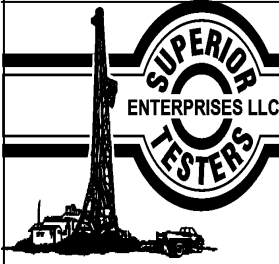
**Tool Information**

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.80 inches	Volume: 51.17 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	74000.00 lb
			<u>Total Volume: 51.17 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3640.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	5.00 ft				
Tool Length:	25.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3625.00	
Hydraulic Tool	5.00			3630.00	
Packer	5.00			3635.00	20.00      Bottom Of Top Packer
Packer	5.00			3640.00	
Anchor	0.00			3640.00	
Recorder	1.00	6838	Inside	3641.00	
Recorder	1.00	6839	Outside	3642.00	
Bullnose	3.00			3645.00	5.00      Bottom Packers & Anchor

**Total Tool Length: 25.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

F.G. Holl Company LLC

**21-20s-15w Barton**

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

**Mermis"A"Unit #1-21**

Job Ticket: 17753

**DST#: 3**

ATTN: Ryan Greenbaum

Test Start: 2012.09.23 @ 00:00:00

### 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: 65.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
275.00	Drilling Mud	3.858

Total Length: 275.00 ft      Total Volume: 3.858 bbl

Num Fluid Samples: 0

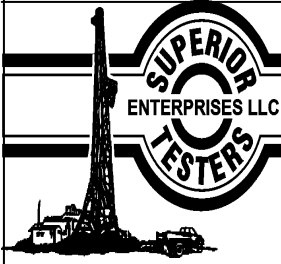
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



# DRILL STEM TEST REPORT

**GAS RATES**

F.G. Holl Company LLC

**21-20s-15w Barton**

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**Mermis"A"Unit #1-21**

Job Ticket: 17753

**DST#: 3**

ATTN: Ryan Greenbaum

Test Start: 2012.09.23 @ 00:00:00

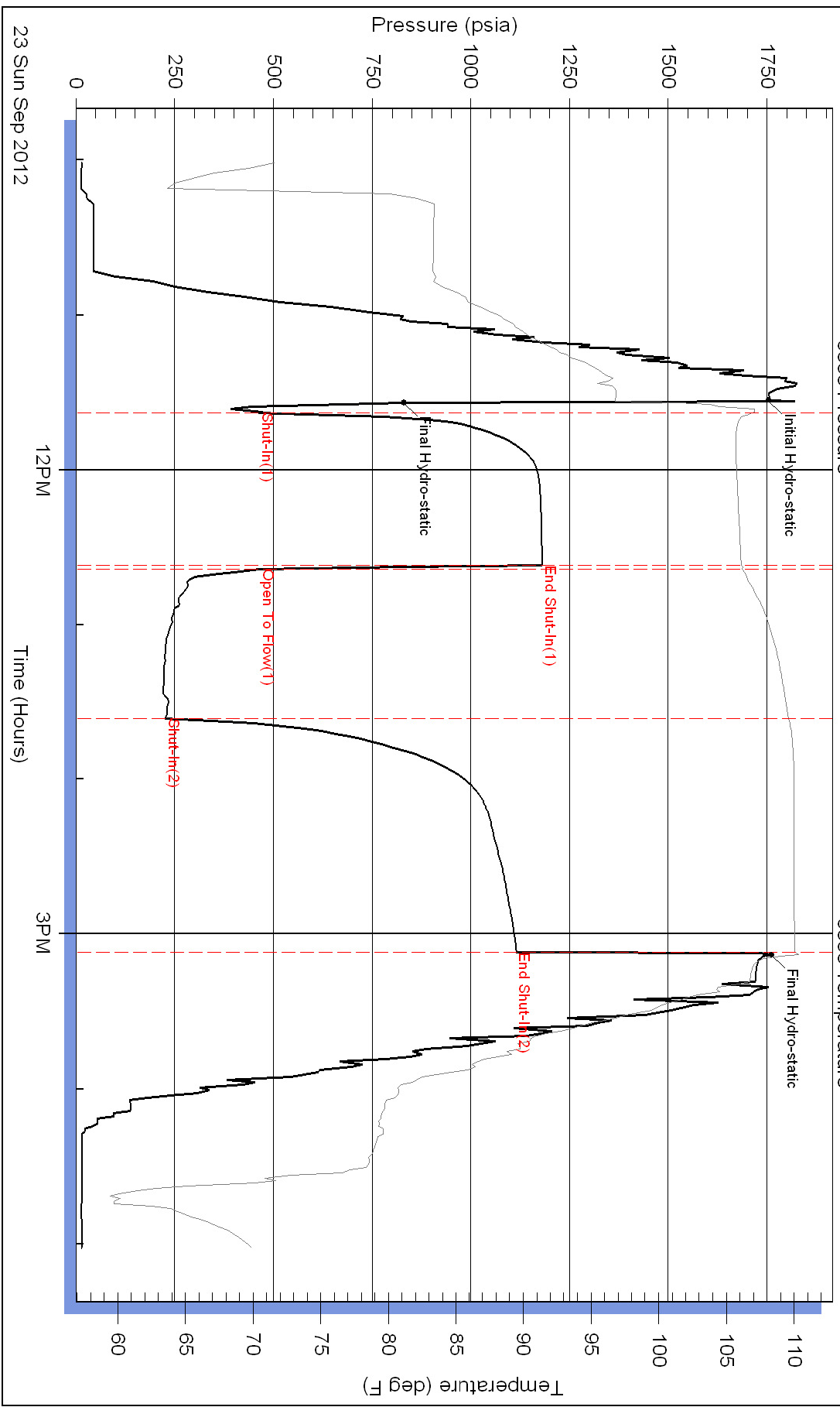
## Gas Rates Information

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

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	5	1.00	26.60	764.72
2	15	1.00	24.68	709.52
2	25	1.00	22.75	654.04
2	35	1.00	19.50	560.60
2	45	1.00	19.50	560.60
2	55	1.00	19.50	560.60
2	60	1.00	19.50	560.60

### Pressure vs. Time



### Pressure vs. Time

