



## DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas  
67206-2563

ATTN: Frank Greenbaum

**Wolf #3-12**

**12-20s-15w/ Barton**

Start Date: 2013.02.15 @ 06:10:00

End Date: 2013.02.15 @ 14:25:30

Job Ticket #: 16975                      DST #: 8

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

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F.G. Holl Company LLC

**12-20s-15w/ Barton**

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**Wolf #3-12**

Job Ticket: 16975

**DST#: 8**

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:05:30

Time Test Ended: 14:25:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

**Interval: 3564.00 ft (KB) To 3636.00 ft (KB) (TVD)**

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3636.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8405**

**Inside**

Press @ Run Depth: 100.61 psia @ 3633.20 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.15

End Date: 2013.02.15

Last Calib.: 2013.02.15

Start Time: 06:10:00

End Time: 14:25:30

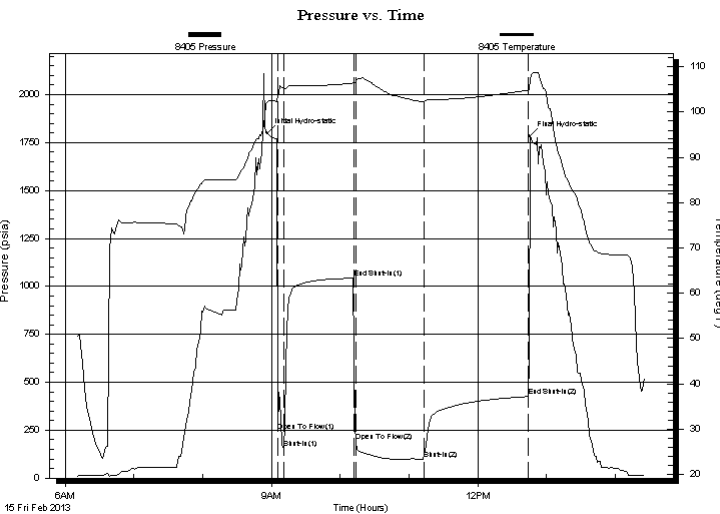
Time On Btm: 2013.02.15 @ 08:56:30

Time Off Btm: 2013.02.15 @ 12:45:30

**TEST COMMENT:** 1st Open/ 5 Minutes. Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in three minutes.

1st Shut in/ 60 Minutes. Weak blow back to surface.

2nd Open/ 60 Minutes. Strong blow built to bottom of bucket in less than 1 minute. gas to surface in 1 minute.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1799.13	102.41	Initial Hydro-static
9	244.04	103.60	Open To Flow (1)
15	153.07	105.08	Shut-In(1)
75	1043.20	106.40	End Shut-In(1)
77	194.41	106.69	Open To Flow (2)
137	100.61	102.26	Shut-In(2)
228	425.86	104.83	End Shut-In(2)
229	1785.62	107.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	840 feet of gas odor	0.00
150.00	mud	2.10
0.00	100% mud	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	14.30	411.11
Last Gas Rate	1.00	8.13	233.73
Max. Gas Rate	1.00	14.30	411.11



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## GENERAL INFORMATION:

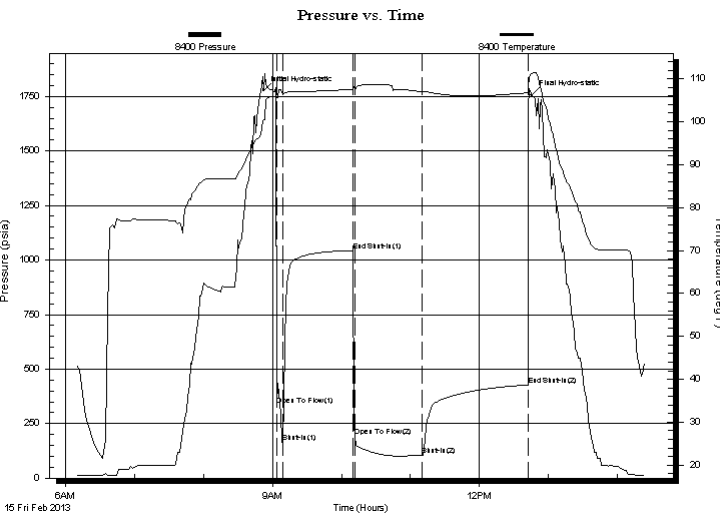
Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 09:05:30  
 Tester: Shane Konzem  
 Time Test Ended: 14:25:30  
 Unit No: 3330-20/ Great Bend  
 Interval: **3564.00 ft (KB) To 3636.00 ft (KB) (TVD)**  
 Reference Elevations: 1980.00 ft (KB)  
 Total Depth: 3636.00 ft (KB) (TVD)  
 1972.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Poor  
 KB to GR/CF: 8.00 ft

## Serial #: 8400

**Outside**

Press @ Run Depth: 427.83 psia @ 3634.20 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.02.15 End Date: 2013.02.15 Last Calib.: 2013.02.15  
 Start Time: 06:10:00 End Time: 14:24:23 Time On Btm: 2013.02.15 @ 08:52:23  
 Time Off Btm: 2013.02.15 @ 12:45:53

**TEST COMMENT:** 1st Open/ 5 Minutes. Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in three minutes.  
 1st Shut in/ 60 Minutes. Weak blow back to surface.  
 2nd Open/ 60 Minutes. Strong blow built to bottom of bucket in less than 1 minute. gas to surface in 1 minute.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1778.06	100.39	Initial Hydro-static
12	336.61	105.62	Open To Flow (1)
17	163.78	106.55	Shut-In(1)
78	1043.54	107.58	End Shut-In(1)
80	189.96	107.52	Open To Flow (2)
138	103.00	106.96	Shut-In(2)
230	427.83	106.75	End Shut-In(2)
234	1757.89	111.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	840 feet of gas odor	0.00
150.00	mud	2.10
0.00	100% mud	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	14.30	411.11
Last Gas Rate	1.00	8.13	233.73
Max. Gas Rate	1.00	14.30	411.11



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F.G. Holl Company LLC

**12-20s-15w/ Barton**

9431 E Central STE 100 Wichita Kansas 67206-2563

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Job Ticket: 16975

**DST#: 8**

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

## Tool Information

Drill Pipe:	Length: 3554.00 ft	Diameter: 3.80 inches	Volume: 49.85 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: 68000.00 lb
			<u>Total Volume: 49.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3564.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.20 ft			
Tool Length:	101.20 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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SHut-InTool	5.00		Inside	3541.00	
Hydraulic Tool	5.00			3546.00	
Jars	6.00			3552.00	
Safety Joint	2.00			3554.00	
Packer	5.00			3559.00	28.00 Bottom Of Top Packer
Packer	5.00			3564.00	
Anchor	5.00			3569.00	
Change Over Sub	0.75			3569.75	
Drill Pipe	31.70		Outside	3601.45	
Change Over Sub	0.75		Outside	3602.20	
Anchor	30.00			3632.20	
Recorder	1.00	8405	Inside	3633.20	
Recorder	1.00	8400	Outside	3634.20	
Bullnose	3.00			3637.20	73.20 Bottom Packers & Anchor

**Total Tool Length: 101.20**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

F.G. Holl Company LLC

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Test Start: 2013.02.15 @ 06:10:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 55.00 sec/qt  
Water Loss: 8.00 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 7300.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psia

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	840 feet of gas odor	0.000
150.00	mud	2.104
0.00	100% mud	0.000

Total Length: 150.00 ft      Total Volume: 2.104 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

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## 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	14.30	411.11
2	5	1.00	14.30	411.11
2	10	1.00	13.60	390.98
2	20	1.00	8.64	248.39
2	30	1.00	7.19	206.70
2	40	1.00	8.13	233.73

# Pressure vs. Time

