



## 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: 2013.02.16 @ 16:09:00

End Date: 2013.02.16 @ 23:01:30

Job Ticket #: 17552                      DST #: 10

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

Printed: 2013.02.16 @ 23:20:22



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

9431 E Central STE 100 Wichita Kansas 67206-2563

**Wolf #3-12**

Job Ticket: 17552

**DST#: 10**

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:00

Time Test Ended: 23:01:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3330 Great Bend/20

**Interval: 3652.00 ft (KB) To 3666.00 ft (KB) (TVD)**

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8405 Inside**

Press @ RunDepth: 36.03 psia @ 3662.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.16

End Date: 2013.02.16

Last Calib.: 2013.02.16

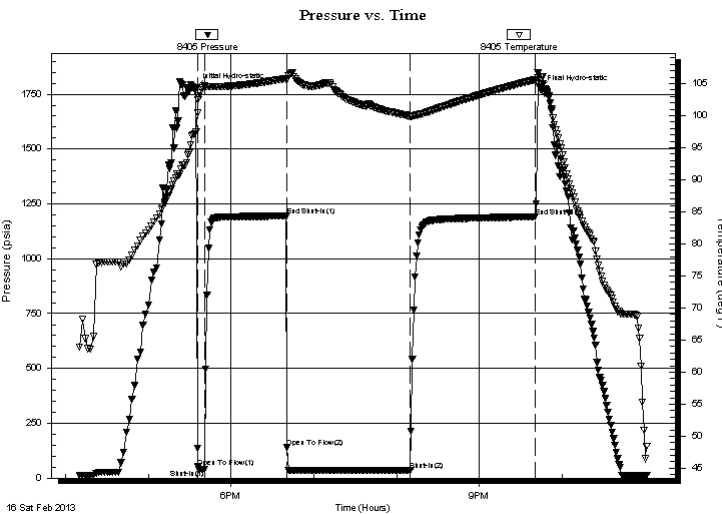
Start Time: 16:09:00

End Time: 23:01:30

Time On Btm: 2013.02.16 @ 17:34:30

Time Off Btm: 2013.02.16 @ 21:44:30

**TEST COMMENT:** 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 20 seconds/Gas to surface in 1 minute  
 1ST Shut In 60 Minutes/Slight surface blow back  
 2ND Open 90 Minutes/Strong blow/Blow built to bottom of bucket at open  
 2ND Shut In 90 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1778.18	97.50	Initial Hydro-static
2	51.27	102.49	Open To Flow (1)
6	40.94	104.67	Shut-In(1)
66	1194.48	105.81	End Shut-In(1)
66	139.06	105.44	Open To Flow (2)
156	36.03	99.86	Shut-In(2)
246	1190.78	105.62	End Shut-In(2)
250	1773.18	106.12	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.50	7.77	52.41
Last Gas Rate	0.75	4.26	66.60
Max. Gas Rate	0.50	7.77	52.41



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Tester: Ken Swinney

Unit No: 3330 Great Bend/20

**Interval: 3652.00 ft (KB) To 3666.00 ft (KB) (TVD)**

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8400 Outside**

Press @ RunDepth: 1189.52 psia @ 3663.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.16

End Date: 2013.02.16

Last Calib.: 2013.02.16

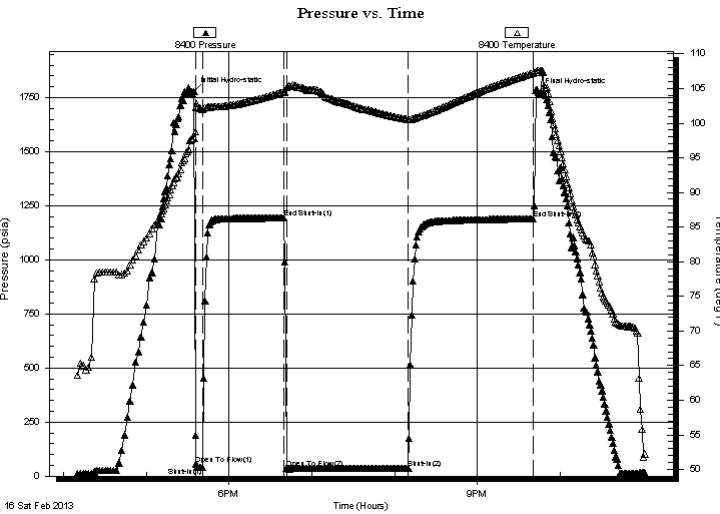
Start Time: 16:09:00

End Time: 23:02:00

Time On Btm: 2013.02.16 @ 17:34:30

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 1ST Shut In 60 Minutes/Slight surface blow back  
 2ND Open 90 Minutes/Strong blow/Blow built to bottom of bucket at open  
 2ND Shut In 90 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1779.16	97.84	Initial Hydro-static
2	56.40	102.30	Open To Flow (1)
6	41.38	101.96	Shut-In(1)
65	1193.01	104.53	End Shut-In(1)
67	37.82	105.13	Open To Flow (2)
156	36.31	100.50	Shut-In(2)
247	1189.52	107.23	End Shut-In(2)
250	1773.78	107.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.50	7.77	52.41
Last Gas Rate	0.75	4.26	66.60
Max. Gas Rate	0.50	7.77	52.41



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F.G. Holl Company LLC

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

9431 E Central STE 100 Wichita Kansas 67206-2563

**Wolf #3-12**

Job Ticket: 17552

**DST#: 10**

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

## Tool Information

Drill Pipe:	Length: 3649.00 ft	Diameter: 3.80 inches	Volume: 51.19 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: 58000.00 lb
			<u>Total Volume: 51.19 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3652.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 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-InTool	5.00		Inside	3629.00	
Hydraulic Tool	5.00			3634.00	
Jars	6.00			3640.00	
Safety Joint	2.00			3642.00	
Packer	5.00			3647.00	28.00 Bottom Of Top Packer
Packer	5.00			3652.00	
Anchor	9.00			3661.00	
Recorder	1.00	8405	Inside	3662.00	
Recorder	1.00	8400	Outside	3663.00	
Bullnose	3.00			3666.00	14.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

F.G. Holl Company LLC

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

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**Wolf #3-12**

Job Ticket: 17552

**DST#: 10**

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

### 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: 79.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

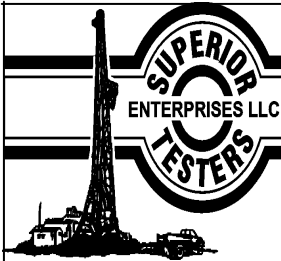
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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**GAS RATES**

F.G. Holl Company LLC

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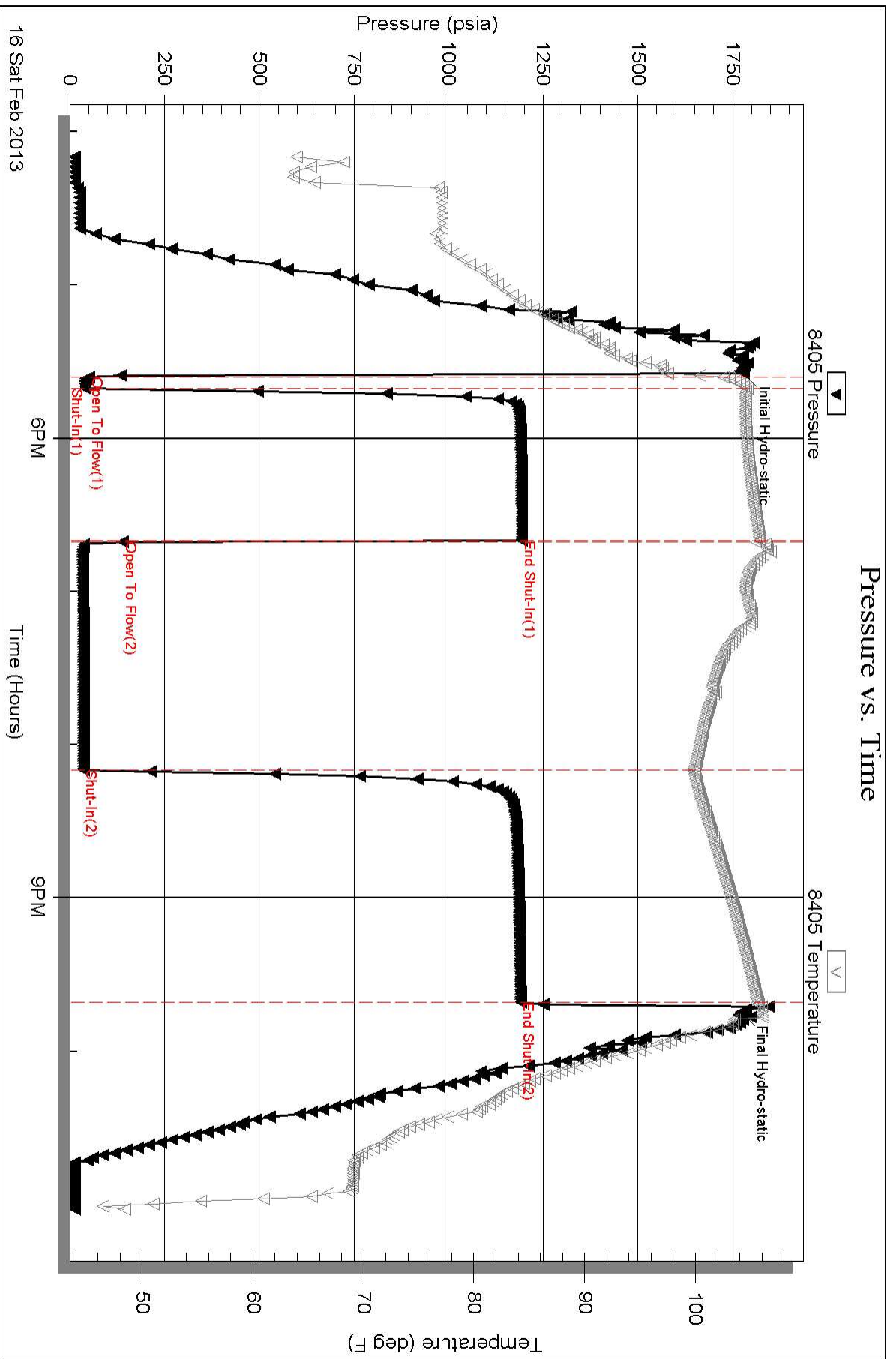
Test Start: 2013.02.16 @ 16:09:00

## 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)
1	3	0.50	7.77	52.41
1	3	0.50	7.77	52.41
2	2	0.75	6.41	100.12
2	5	0.75	4.98	77.80
2	15	0.75	4.26	66.60
2	25	0.75	4.26	66.60
2	35	0.75	4.26	66.60
2	45	0.75	4.26	66.60
2	55	0.75	4.26	66.60
2	65	0.75	4.26	66.60
2	75	0.75	4.26	66.60
2	85	0.75	4.26	66.60



### Pressure vs. Time

