



## DRILL STEM TEST REPORT

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

9431 East Central Suite 100  
Wichita, Kansas 67206-2563

ATTN: Ryan Greenbaum

### **Foster Unit #1-5**

### **5-20s-16w Pawnee**

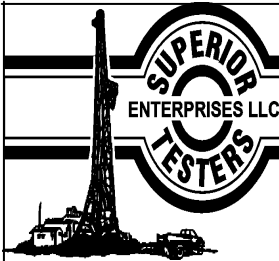
Start Date: 2012.06.07 @ 00:00:00

End Date: 2012.06.07 @ 00:00:00

Job Ticket #: 15871                      DST #: 4

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

Printed: 2012.06.07 @ 08:51:02



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Job Ticket: 15871

**DST#: 4**

Test Start: 2012.06.07 @ 00:00:00

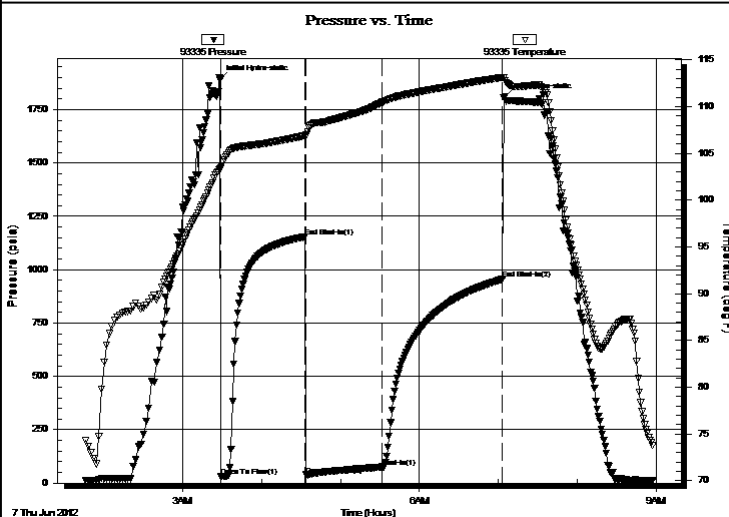
## GENERAL INFORMATION:

Formation: <b>Arbuckle</b>		Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock:	ft (KB)	Tester: Gene Budig
Time Tool Opened: 00:00:00		Unit No: 3335
Time Test Ended: 00:00:00		
<b>Interval: 3775.00 ft (KB) To 3785.00 ft (KB) (TVD)</b>		Reference Elevations: 2038.00 ft (KB)
Total Depth: 3785.00 ft (KB) (TVD)		2030.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 8.00 ft

**Serial #: 93335 Inside**

Press @ Run Depth: 955.72 psia @ 3781.00 ft (KB)	Capacity: 5000.00 psia
Start Date: 2012.06.07	End Date: 2012.06.07
Start Time: 01:45:00	End Time: 08:57:29
	Last Calib.: 2012.06.07
	Time On Btm: 2012.06.07 @ 03:28:30
	Time Off Btm: 2012.06.07 @ 07:04:00

**TEST COMMENT:** 1st Opening 5 Minutes-Weak building blow built to 4 inches into the water  
 1st Shut-In 60 Minutes-No blow back  
 2nd Opening 60 Minutes-Weak building blow built to the bottom of a 5 gallon bucket in 16 minutes  
 2nd Shut-In 90 Minutes-No blow back



## PRESSURE SUMMARY

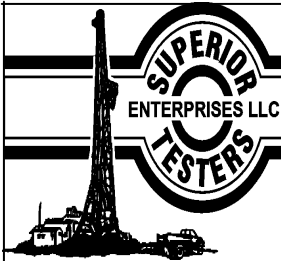
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1890.03	103.30	Initial Hydro-static
1	31.64	103.38	Open To Flow (1)
65	1154.03	106.89	End Shut-In(1)
66	38.69	106.93	Open To Flow (2)
123	74.97	110.43	Shut-In(1)
215	955.72	113.11	End Shut-In(2)
216	1807.79	113.10	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	250 feet of gas in the pipe	0.00
1.00	Clean oil on top	0.01
10.00	oil cut mud	0.14
80.00	Slightly muddy w ater	1.12
0.00	Chlorides 18000	0.00

## Gas Rates

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



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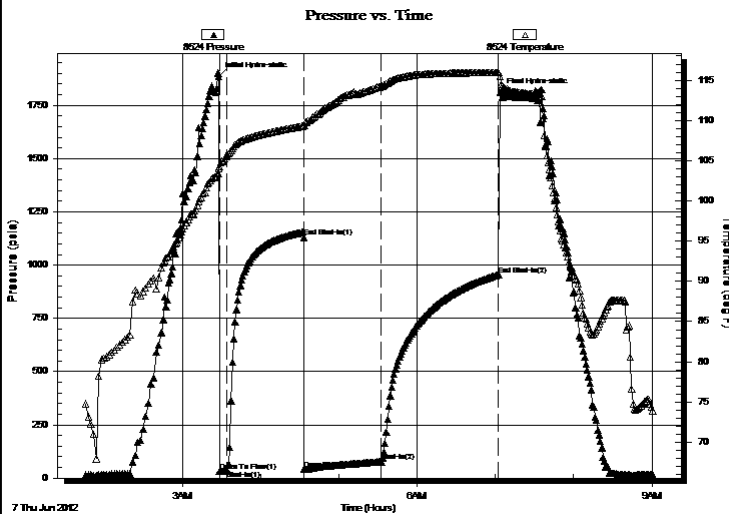
**5-20s-16w Pawnee**  
**Foster Unit #1-5**  
 Job Ticket: 15871 **DST#: 4**  
 Test Start: 2012.06.07 @ 00:00:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:00:00  
 Time Test Ended: 00:00:00  
 Interval: **3775.00 ft (KB) To 3785.00 ft (KB) (TVD)**  
 Total Depth: 3785.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gene Budig  
 Unit No: 3335  
 Reference Elevations: 2038.00 ft (KB)  
 2030.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8524 Outside**  
 Press @ RunDepth: 955.74 psia @ 3782.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2012.06.07 End Date: 2012.06.07 Last Calib.: 2012.06.07  
 Start Time: 01:45:00 End Time: 09:01:00 Time On Btm: 2012.06.07 @ 03:28:00  
 Time Off Btm: 2012.06.07 @ 07:03:30

**TEST COMMENT:** 1st Opening 5 Minutes-Weak building blow built to 4 inches into the water  
 1st Shut-In 60 Minutes-No blow back  
 2nd Opening 60 Minutes-Weak building blow built to the bottom of a 5 gallon bucket in 16 minutes  
 2nd Shut-In 90 Minutes-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1886.53	104.06	Initial Hydro-static
1	32.72	104.20	Open To Flow (1)
6	35.59	105.55	Shut-In(1)
65	1130.48	109.30	End Shut-In(1)
66	40.90	109.39	Open To Flow (2)
125	76.83	114.17	Shut-In(2)
215	955.74	115.96	End Shut-In(2)
216	1808.52	115.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	250 feet of gas in the pipe	0.00
1.00	Clean oil on top	0.01
10.00	oil cut mud	0.14
80.00	Slightly muddy w ater	1.12
0.00	Chlorides 18000	0.00

## Gas Rates

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



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**TOOL DIAGRAM**

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

**5-20s-16w Pawnee**  
**Foster Unit #1-5**  
 Job Ticket: 15871      **DST#: 4**  
 Test Start: 2012.06.07 @ 00:00:00

**Tool Information**

Drill Pipe:	Length: 3755.00 ft	Diameter: 3.80 inches	Volume: 52.67 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: 42000.00 lb
			<u>Total Volume: 52.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3775.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 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			3752.00	
Hydraulic Tool	5.00			3757.00	
Jars	6.00			3763.00	
Safety Joint	2.00			3765.00	
Packer	5.00			3770.00	28.00      Bottom Of Top Packer
Packer	5.00			3775.00	
Perforations	5.00			3780.00	
Recorder	1.00	93335	Inside	3781.00	
Recorder	1.00	8524	Outside	3782.00	
Bull Plug	3.00			3785.00	10.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>38.00</b>				



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## FLUID SUMMARY

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### 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:	48.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	7.60 in <sup>3</sup>	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	4000.00 ppm				
Filter Cake:	0.00 inches				

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	250 feet of gas in the pipe	0.000
1.00	Clean oil on top	0.014
10.00	oil cut mud	0.140
80.00	Slightly muddy water	1.122
0.00	Chlorides 18000	0.000

Total Length: 91.00 ft      Total Volume: 1.276 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

### Pressure vs. Time

