



DRILL STEM TEST REPORT

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

9431 E Central ste 100 Wichita KS 67206

ATTN: Ryan Greenbaum

Petersen #1-36

36-19s-16w Rush

Start Date: 2014.04.20 @ 16:13:00

End Date: 2014.04.20 @ 22:05:30

Job Ticket #: 19289 DST #: 9

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

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ATTN: Ryan Greenbaum

Test Start: 2014.04.20 @ 16:13:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:40:00

Time Test Ended: 22:05:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend-20

Interval: 3725.00 ft (KB) To 3740.00 ft (KB) (TVD)

Reference Elevations: 1971.00 ft (KB)

Total Depth: 3740.00 ft (KB) (TVD)

1963.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6731

Press@RunDepth: 187.23 psig @ ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.04.20 End Date: 2014.04.20

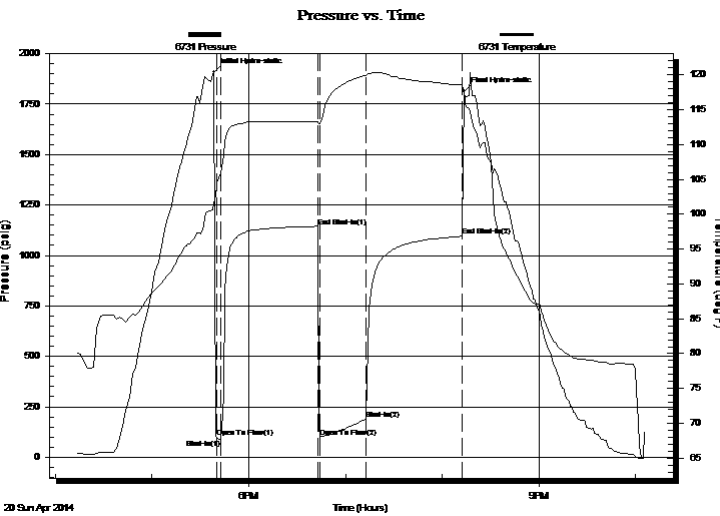
Last Calib.: 2014.04.20

Start Time: 16:13:00 End Time: 22:05:30

Time On Btm: 2014.04.20 @ 17:38:30

Time Off Btm: 2014.04.20 @ 20:13:30

TEST COMMENT: 1st Opening 5 Minutes-Strong blow built bottom of bucket in 30 sec
 1st Shut-in 60 Minutes-Yes blow back
 2nd Opening 30 Minutes-Strong blow built bottom of bucket in 30 sec
 2nd Shut-in 60 Minutes-Bottom of bucket



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.50	101.52	Initial Hydro-static
2	97.00	103.88	Open To Flow (1)
4	87.69	105.84	Shut-In(1)
65	1144.35	113.32	End Shut-In(1)
66	99.63	112.97	Open To Flow (2)
94	187.23	119.90	Shut-In(2)
154	1094.94	118.53	End Shut-In(2)
155	1814.38	117.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	gas w ater cut oil 10%w ater40%gas 50%	2.52
180.00	w ater 10% mud 90%w ater	2.52
0.00	2758 feet gas in pipe	0.00
0.00	chlorides 40,000 resistivity.1@65degrees	0.00

Gas Rates

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



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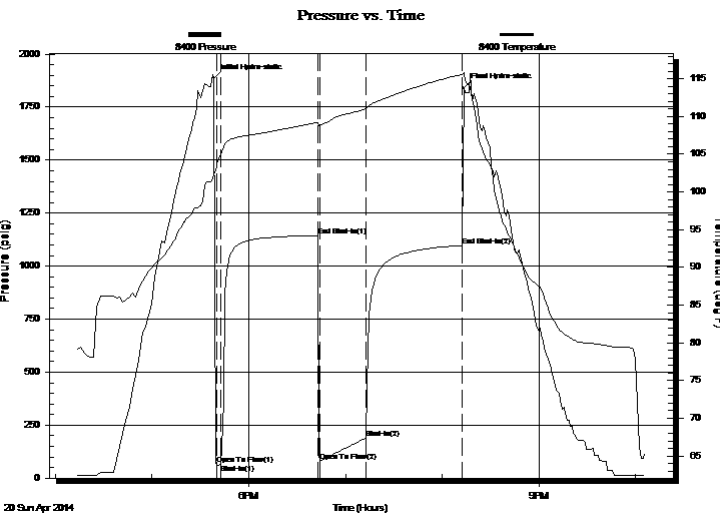
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 17:40:00
 Tester: Jared Scheck
 Time Test Ended: 22:05:30
 Unit No: 3320-Great Bend-20
 Interval: **3725.00 ft (KB) To 3740.00 ft (KB) (TVD)**
 Reference Elevations: 1971.00 ft (KB)
 Total Depth: 3740.00 ft (KB) (TVD)
 1963.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 8400

Press@RunDepth: 1097.26 psig @ ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.04.20 End Date: 2014.04.20 Last Calib.: 2014.04.20
 Start Time: 16:13:00 End Time: 22:05:30 Time On Btm: 2014.04.20 @ 17:38:30
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TEST COMMENT: 1st Opening 5 Minutes-Strong blow built bottom of bucket in 30 sec
 1st Shut-in 60 Minutes-Yes blow back
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 2nd Shut-in 60 Minutes-Bottom of bucket



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.53	102.21	Initial Hydro-static
2	64.20	103.42	Open To Flow (1)
4	65.47	104.91	Shut-In(1)
65	1143.92	109.22	End Shut-In(1)
66	81.21	108.92	Open To Flow (2)
94	188.60	110.97	Shut-In(2)
154	1097.26	115.57	End Shut-In(2)
155	1841.02	115.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	gas w ater cut oil 10%w ater40%gas 50%	2.52
180.00	w ater 10% mud 90%w ater	2.52
0.00	2758 feet gas in pipe	0.00
0.00	chlorides 40,000 resistivity.1@65degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company L.L.C

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9431 E Central ste 100 Wichita KS 67206

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DST#: 9

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Test Start: 2014.04.20 @ 16:13:00

Tool Information

Drill Pipe:	Length: 3718.00 ft	Diameter: 3.80 inches	Volume: 52.15 bbl	Tool Weight: 1000.00 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: 70000.00 lb
			<u>Total Volume: 52.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3725.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3707.00	
Safety Joint	5.00			3712.00	
Jars	6.00			3718.00	
Safety Joint	2.00			3720.00	
Packer	5.00			3725.00	23.00 Bottom Of Top Packer
Recorder	1.00			3726.00	
Recorder	1.00			3727.00	
Anchor	10.00			3737.00	
Bullnose	3.00			3740.00	15.00 Anchor Tool
Total Tool Length:	38.00				



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FLUID SUMMARY

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Test Start: 2014.04.20 @ 16:13:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 49.00 sec/qt
 Water Loss: 9.20 in³
 Resistivity: ohm.m
 Salinity: 6100.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psig
 Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	gas w ater cut oil 10%w ater40%gas 50%oil	2.525
180.00	w ater 10% mud 90%w ater	2.525
0.00	2758 feet gas in pipe	0.000
0.00	chlorides 40,000 resistivity.1@65degrees	0.000

Total Length: 360.00 ft Total Volume: 5.050 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

