



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: 2014.04.16 @ 10:07:00

End Date: 2014.04.16 @ 16:46:30

Job Ticket #: 19282 DST #: 2

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

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DRILL STEM TEST REPORT

F G Holl Company L.L.C

36-19s-16w Rush

9431 E Central ste 100 Wichita KS 67206

Petersen #1-36

Job Ticket: 19282

DST#: 2

ATTN: Ryan Greenbaum

Test Start: 2014.04.16 @ 10:07:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:47:30

Time Test Ended: 16:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheckj

Unit No: 3320-Great Bend-20

Interval: 3580.00 ft (KB) To 3640.00 ft (KB) (TVD)

Reference Elevations: 1971.00 ft (KB)

Total Depth: 3640.00 ft (KB) (TVD)

1963.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 673

Press@RunDepth: 133.24 psig @ ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.04.16

End Date: 2014.04.16

Last Calib.: 2014.04.16

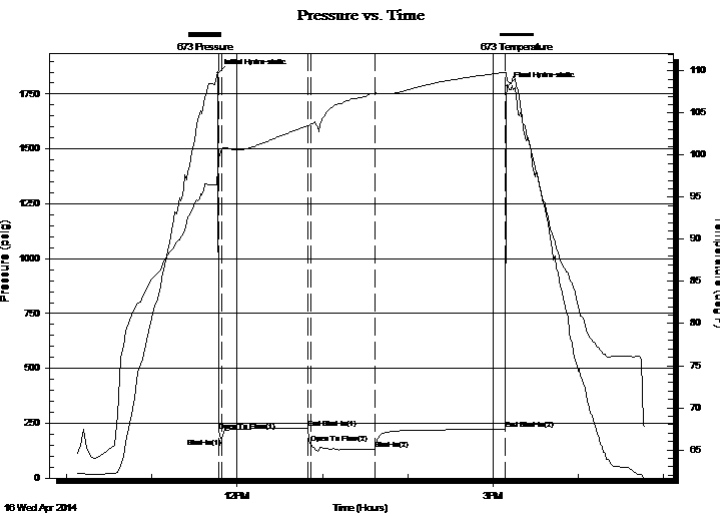
Start Time: 10:07:00

End Time: 16:46:30

Time On Btm: 2014.04.16 @ 11:46:30

Time Off Btm: 2014.04.16 @ 15:10:00

TEST COMMENT: 1st Opening 2 Minutes-Strong blow built bottom of bucket in 30 sec
 1st Shut-in 60 Minutes-Yes blow back
 2nd Opening 45 Minutes-Strong blow built bottom of bucket less then 1 minute see gas report
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1844.67	98.47	Initial Hydro-static
1	214.17	99.65	Open To Flow (1)
3	179.95	100.70	Shut-In(1)
64	225.60	103.50	End Shut-In(1)
65	159.17	103.61	Open To Flow (2)
111	133.24	107.36	Shut-In(2)
202	221.24	109.82	End Shut-In(2)
204	1785.43	108.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	mud	1.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	16.00	205.07
Last Gas Rate	0.50	16.00	205.07
Max. Gas Rate	0.50	16.00	205.07



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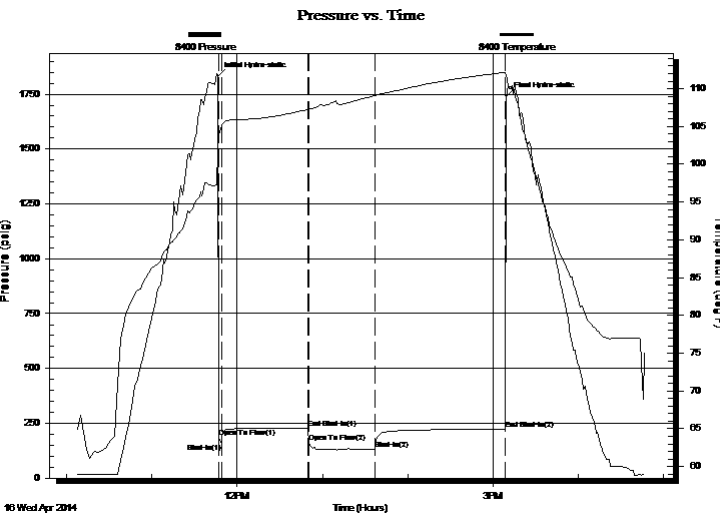
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:47:30
 Time Test Ended: 16:46:30
 Interval: **3580.00 ft (KB) To 3640.00 ft (KB) (TVD)**
 Total Depth: 3640.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheckj
 Unit No: 3320-Great Bend-20
 Reference Elevations: 1971.00 ft (KB)
 1963.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8400

Press@RunDepth: 222.87 psig @ ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.04.16 End Date: 2014.04.16 Last Calib.: 2014.04.16
 Start Time: 10:07:00 End Time: 16:46:30 Time On Btm: 2014.04.16 @ 11:46:30
 Time Off Btm: 2014.04.16 @ 15:09:30

TEST COMMENT: 1st Opening 2 Minutes-Strong blow built bottom of bucket in 30 sec
 1st Shut-in 60 Minutes-Yes blow back
 2nd Opening 45 Minutes-Strong blow built bottom of bucket less then 1 minute see gas report
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.49	101.91	Initial Hydro-static
1	187.80	103.86	Open To Flow (1)
3	160.63	105.03	Shut-In(1)
63	226.81	107.23	End Shut-In(1)
64	161.60	107.26	Open To Flow (2)
111	133.38	109.11	Shut-In(2)
202	222.87	112.16	End Shut-In(2)
203	1740.18	111.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	mud	1.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	16.00	205.07
Last Gas Rate	0.50	16.00	205.07
Max. Gas Rate	0.50	16.00	205.07



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company L.L.C

36-19s-16w Rush

9431 E Central ste 100 Wichita KS 67206

Petersen #1-36

Job Ticket: 19282

DST#: 2

ATTN: Ryan Greenbaum

Test Start: 2014.04.16 @ 10:07:00

Tool Information

Drill Pipe:	Length: 3561.00 ft	Diameter: 3.80 inches	Volume: 49.95 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: 75000.00 lb
			<u>Total Volume: 49.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3580.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3557.00	
Hydraulic tool	5.00			3562.00	
Jars	6.00			3568.00	
Safety Joint	2.00			3570.00	
Packer	5.00			3575.00	28.00 Bottom Of Top Packer
Packer	5.00			3580.00	
Change Over Sub	0.50			3580.50	
Drill Pipe	32.00			3612.50	
Change Over Sub	0.50			3613.00	
Recorder	1.00			3614.00	
Recorder	1.00			3615.00	
Anchor	22.00			3637.00	
Bullnose	3.00			3640.00	60.00 Bottom Packers & Anchor

Total Tool Length: 88.00



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FLUID SUMMARY

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Test Start: 2014.04.16 @ 10:07:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 9200.00 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

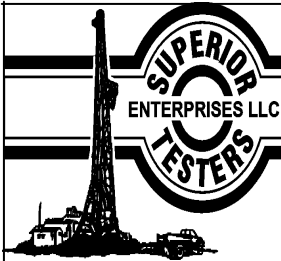
Length ft	Description	Volume bbl
120.00	mud	1.683

Total Length: 120.00 ft Total Volume: 1.683 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: gas sample w as taken



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GAS RATES

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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 (psig)	Gas Rate (Mcf/d)
2	10	0.50	16.00	205.07
2	20	0.50	16.00	205.07
2	30	0.50	16.00	205.07
2	40	0.50	16.00	205.07

Pressure vs. Time

