



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: 2014.04.17 @ 00:30:00

End Date: 2014.04.17 @ 06:54:30

Job Ticket #: 19283 DST #: 3

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

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Job Ticket: 19283

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2014.04.17 @ 00:30:00

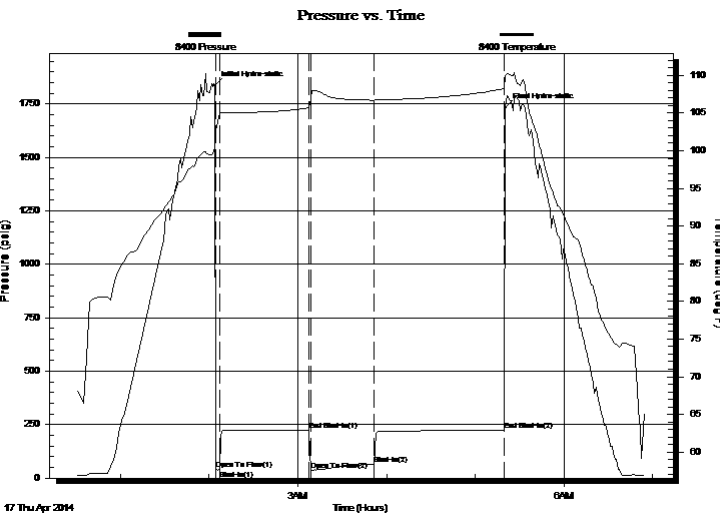
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 02:04:30
 Tester: Jared Scheck
 Time Test Ended: 06:54:30
 Unit No: 3320-Great Bend -20
 Interval: **3640.00 ft (KB) To 3650.00 ft (KB) (TVD)**
 Reference Elevations: 1971.00 ft (KB)
 Total Depth: 3650.00 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: 64.40 psig @ ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.04.17 End Date: 2014.04.17 Last Calib.: 2014.04.17
 Start Time: 00:30:00 End Time: 06:54:30 Time On Btm: 2014.04.17 @ 02:03:30
 Time Off Btm: 2014.04.17 @ 05:20:30

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 in 30 sec see gas report
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1837.12	100.37	Initial Hydro-static
1	40.67	102.80	Open To Flow (1)
4	37.46	104.81	Shut-In(1)
64	223.76	105.68	End Shut-In(1)
65	38.45	106.89	Open To Flow (2)
108	64.40	106.72	Shut-In(2)
196	222.62	108.20	End Shut-In(2)
197	1732.31	109.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	11.00	40.30
Max. Gas Rate	0.25	11.00	40.30



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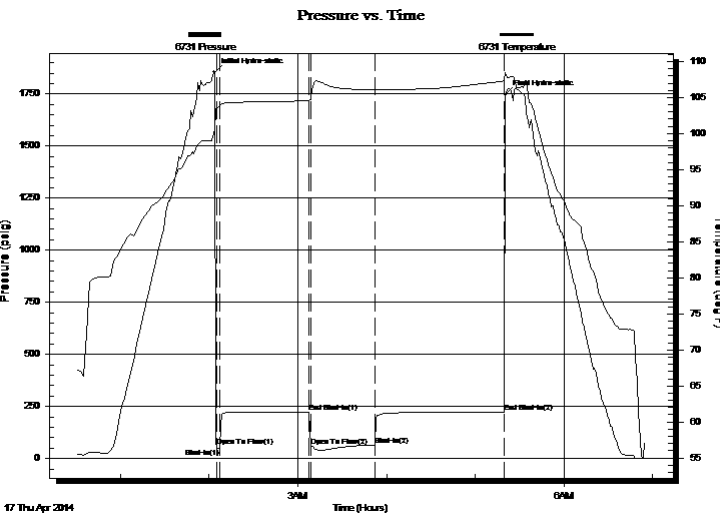
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 02:04:30
 Tester: Jared Scheck
 Time Test Ended: 06:54:30
 Unit No: 3320-Great Bend -20
 Interval: **3640.00 ft (KB) To 3650.00 ft (KB) (TVD)**
 Reference Elevations: 1971.00 ft (KB)
 Total Depth: 3650.00 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: 224.44 psig @ ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.04.17 End Date: 2014.04.17 Last Calib.: 2014.04.17
 Start Time: 00:30:00 End Time: 06:54:30 Time On Btm: 2014.04.17 @ 02:03:30
 Time Off Btm: 2014.04.17 @ 05:20:30

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 in 30 sec see gas report
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1853.48	100.57	Initial Hydro-static
2	58.49	103.70	Open To Flow (1)
4	47.71	103.81	Shut-In(1)
64	224.21	104.62	End Shut-In(1)
65	58.63	104.72	Open To Flow (2)
109	64.76	106.08	Shut-In(2)
196	224.44	107.28	End Shut-In(2)
197	1745.95	108.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	11.00	40.30
Max. Gas Rate	0.25	11.00	40.30



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: 19283

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2014.04.17 @ 00:30:00

Tool Information

Drill Pipe:	Length: 3622.00 ft	Diameter: 3.80 inches	Volume: 50.81 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: 50.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3640.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	33.00 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			3622.00	
Hydraulic tool	5.00			3627.00	
Jars	6.00			3633.00	
Safety Joint	2.00			3635.00	
Packer	5.00			3640.00	23.00 Bottom Of Top Packer
Recorder	1.00			3641.00	
Recorder	1.00			3642.00	
Anchor	5.00			3647.00	
Bullnose	3.00			3650.00	10.00 Anchor Tool
Total Tool Length:	33.00				



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FLUID SUMMARY

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Job Ticket: 19283

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2014.04.17 @ 00:30:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mud	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 L.L.C

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Job Ticket: 19283

DST#: 3

ATTN: Ryan Greenbaum

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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	0.25	5.00	30.78
2	20	0.25	9.00	37.12
2	30	0.25	11.00	40.30
2	40	0.25	11.00	40.30

