



DRILL STEM TEST REPORT

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

9431 East Central Suite 100
Wichita, Kansas 67206-2563

ATTN: Rene Husted

Panning #2-13

13-20s-14w Barton

Start Date: 2012.06.19 @ 00:00:00

End Date: 2012.06.19 @ 00:00:00

Job Ticket #: 17779 DST #: 6

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

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DRILL STEM TEST REPORT

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13-20s-14w Barton

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Test Start: 2012.06.19 @ 00:00:00

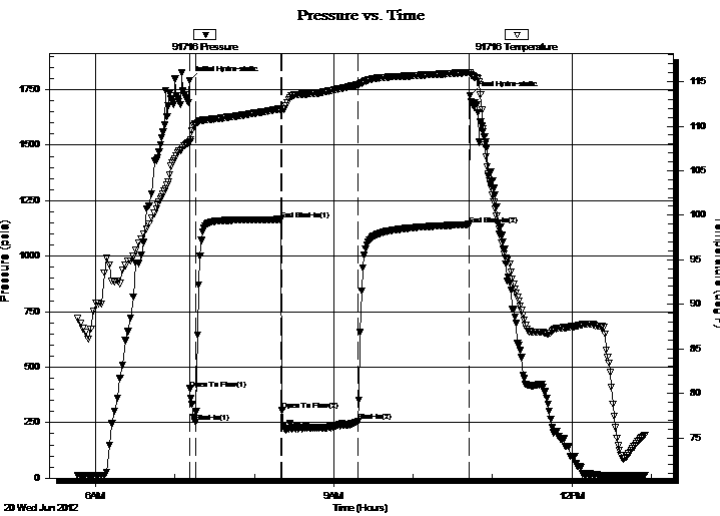
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00
 Interval: **3472.00 ft (KB) To 3555.00 ft (KB) (TVD)**
 Total Depth: 3555.00 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: 1895.00 ft (KB)
 1887.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 91716 Outside

Press @ Run Depth: 1142.82 psia @ 3551.84 ft (KB) Capacity: 5000.00 psia
 Start Date: 2012.06.20 End Date: 2012.06.20 Last Calib.: 2012.06.20
 Start Time: 05:45:00 End Time: 12:55:00 Time On Btm: 2012.06.20 @ 07:11:00
 Time Off Btm: 2012.06.20 @ 10:43:00

TEST COMMENT: 1st Opening 5 Minutes strong blow built to the bottom of a 5 gallon bucket in less than 1 minutes
 1st Shut-In 60 Minutes-Fair blow back
 2nd Opening 60 Minutes-Strong blow with gas to surface see gas flow report
 2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1791.25	108.15	Initial Hydro-static
1	402.72	108.27	Open To Flow (1)
5	251.32	110.22	Shut-In(1)
69	1165.40	111.95	End Shut-In(1)
70	307.30	111.95	Open To Flow (2)
128	254.95	114.67	Shut-In(2)
211	1142.82	116.04	End Shut-In(2)
212	1722.92	115.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	mud	1.68
60.00	slightly oil cut mud 2% Oil 98 %Mud	0.84
60.00	heavy oil cut mud 55% Oil 45% Mud	0.84
60.00	heavy oil and gas cut mud	0.84
0.00	5% Gas 80%Oil 15%Mud	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	16.43	472.34
Last Gas Rate	1.00	18.30	526.10
Max. Gas Rate	1.00	18.30	526.10



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Job Ticket: 17779

DST#: 6

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Test Start: 2012.06.19 @ 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: 3472.00 ft (KB) To 3555.00 ft (KB) (TVD)

Total Depth: 3555.00 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: 1895.00 ft (KB)

1887.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 93335 Inside

Press @ Run Depth: 1142.42 psia @ 3550.84 ft (KB)

Start Date: 2012.06.20

End Date: 2012.06.20

Start Time: 05:45:00

End Time: 12:55:59

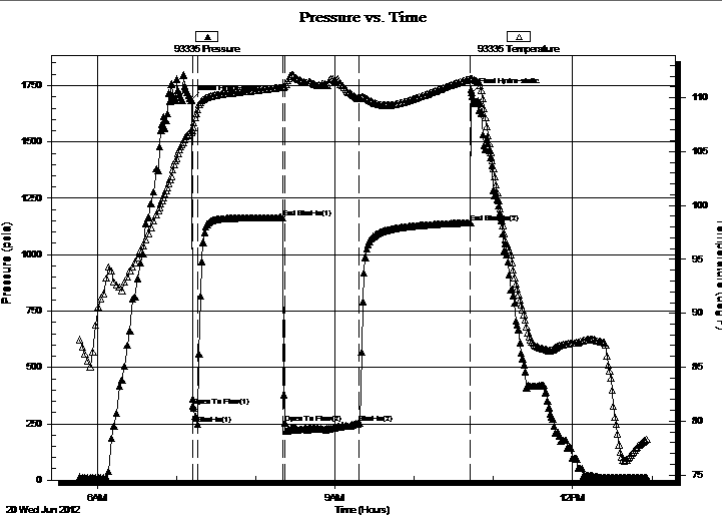
Capacity: 5000.00 psia

Last Calib.: 2012.06.20

Time On Btm: 2012.06.20 @ 07:11:00

Time Off Btm: 2012.06.20 @ 10:43:30

TEST COMMENT: 1st Opening 5 Minutes strong blow built to the bottom of a 5 gallon bucket in less than 1 minutes
1st Shut-In 60 Minutes-Fair blow back
2nd Opening 60 Minutes-Strong blow with gas to surface see gas flow report
2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1685.76	106.81	Initial Hydro-static
2	328.24	107.28	Open To Flow (1)
5	248.03	108.90	Shut-In(1)
70	1165.01	110.99	End Shut-In(1)
71	253.91	111.04	Open To Flow (2)
127	251.94	109.98	Shut-In(2)
212	1142.42	111.78	End Shut-In(2)
213	1717.90	111.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	mud	1.68
60.00	slightly oil cut mud 2% Oil 98 %Mud	0.84
60.00	heavy oil cut mud 55% Oil 45% Mud	0.84
60.00	heavy oil and gas cut mud	0.84
0.00	5% Gas 80%Oil 15%Mud	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	16.43	472.34
Last Gas Rate	1.00	18.30	526.10
Max. Gas Rate	1.00	18.30	526.10



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G.Holl Company L.L.C.

13-20s-14w Barton

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Panning #2-13

Job Ticket: 17779

DST#: 6

ATTN: Rene Husted

Test Start: 2012.06.19 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3471.00 ft	Diameter: 3.80 inches	Volume: 48.69 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: 48.69 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3472.00 ft			Final 37000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.84 ft			
Tool Length:	110.84 ft			
Number of Packers:	2	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			3449.00	
Hydraulic Tool	5.00			3454.00	
Jars	6.00			3460.00	
Safety Joint	2.00			3462.00	
Packer	5.00			3467.00	28.00 Bottom Of Top Packer
Packer	5.00			3472.00	
Perforations	5.00			3477.00	
Change Over Sub	0.75			3477.75	
Drill Pipe	62.34			3540.09	
Change Over Sub	0.75			3540.84	
Perforations	9.00			3549.84	
Recorder	1.00	93335	Inside	3550.84	
Recorder	1.00	91716	Outside	3551.84	
Bull Plug	3.00			3554.84	82.84 Bottom Packers & Anchor

Total Tool Length: 110.84



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FLUID SUMMARY

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DST#: 6

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Test Start: 2012.06.19 @ 00:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 8300.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psia

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	mud	1.683
60.00	slightly oil cut mud 2% Oil 98 %Mud	0.842
60.00	heavy oil cut mud 55% Oil 45% Mud	0.842
60.00	heavy oil and gas cut mud	0.842
0.00	5% Gas 80%Oil 15%Mud	0.000

Total Length: 300.00 ft Total Volume: 4.209 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



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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 (psia)	Gas Rate (Mcf/d)
2	5	1.00	16.43	472.34
2	15	1.00	18.30	526.10
2	25	1.00	18.30	526.10
2	35	1.00	18.30	526.10
2	45	1.00	18.30	526.10
2	55	1.00	18.30	526.10

