



DRILL STEM TEST REPORT

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

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

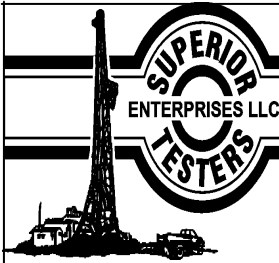
Start Date: 2014.06.11 @ 03:43:00

End Date: 2014.06.11 @ 09:34:30

Job Ticket #: 18338 DST #: 12

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

Printed: 2014.06.11 @ 10:45:31



DRILL STEM TEST REPORT

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
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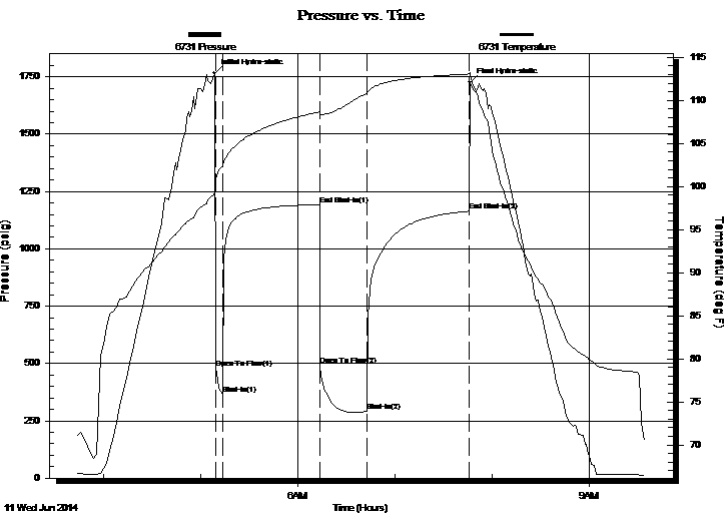
19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18338 **DST#: 12**
 Test Start: 2014.06.11 @ 03:43:00

GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Dustin Ellis
Time Tool Opened: 05:09:30	Unit No: 3315-Great Bend-15
Time Test Ended: 09:34:30	Reference Elevations: 1904.00 ft (KB)
Interval: 3536.00 ft (KB) To 3545.00 ft (KB) (TVD)	1896.00 ft (CF)
Total Depth: 3545.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

Serial #: 6731 Inside	Capacity: 5000.00 psig
Press@RunDepth: 292.19 psig @ 3540.00 ft (KB)	Last Calib.: 2014.06.11
Start Date: 2014.06.11 End Date: 2014.06.11	Time On Btm: 2014.06.11 @ 05:08:30
Start Time: 03:43:00 End Time: 09:34:30	Time Off Btm: 2014.06.11 @ 07:46:30

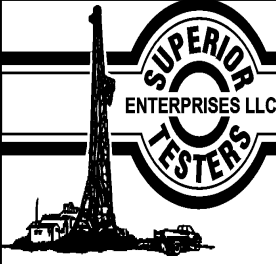
TEST COMMENT: 1st Open 5 minutes Strong building blow buit to the bottom of a 5 gallon bucket of w ater instantly.
 1st Shut in 60 minutes Yes blow back.
 2nd Open 30 minutes Strong building blow built to the bottom of a 5 gallon bucket of w ater instantly.
 2nd Shut in 60 minutes Yes blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1765.70	99.29	Initial Hydro-static
2	481.13	100.93	Open To Flow (1)
5	367.02	102.46	Shut-In(1)
65	1192.58	108.69	End Shut-In(1)
66	490.68	108.46	Open To Flow (2)
95	292.19	110.86	Shut-In(2)
158	1164.06	113.08	End Shut-In(2)
158	1725.19	113.26	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
471.00	Clean gassy oil 100%	6.61
0.00	Gravity of oil 41 corrected	0.00
0.00	Gas to surface in 3 minutes into pipe.	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	15.10	460.79
Last Gas Rate	0.75	11.10	398.31
Max. Gas Rate	0.75	15.10	460.79



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19-19s-14-Barton

Calcara unit 1-19

Job Ticket: 18338

DST#: 12

Test Start: 2014.06.11 @ 03:43:00

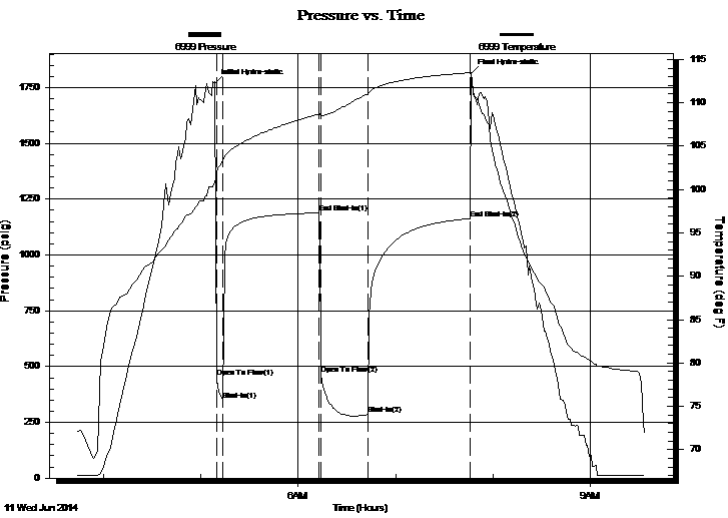
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 05:09:30
 Tester: Dustin Ellis
 Time Test Ended: 09:34:30
 Unit No: 3315-Great Bend-15
Interval: 3536.00 ft (KB) To 3545.00 ft (KB) (TVD)
 Reference Elevations: 1904.00 ft (KB)
 Total Depth: 3545.00 ft (KB) (TVD)
 1896.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 6999 Outside

Press@RunDepth: 1162.64 psig @ 3540.00 ft (KB)	Capacity: 5000.00 psig
Start Date: 2014.06.11	End Date: 2014.06.11
Last Calib.: 2014.06.11	
Start Time: 03:43:00	End Time: 09:34:00
Time On Btm: 2014.06.11 @ 05:08:30	
Time Off Btm: 2014.06.11 @ 07:46:30	

TEST COMMENT: 1st Open 5 minutes Strong building blow buit to the bottom of a 5 gallon bucket of w ater instantly.
 1st Shut in 60 minutes Yes blow back.
 2nd Open 30 minutes Strong building blow buit to the bottom of a 5 gallon bucket of w ater instantly.
 2nd Shut in 60 minutes Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.08	100.74	Initial Hydro-static
1	452.67	101.82	Open To Flow (1)
5	351.20	103.33	Shut-In(1)
65	1188.28	108.71	End Shut-In(1)
66	465.42	108.58	Open To Flow (2)
95	284.64	111.04	Shut-In(2)
158	1162.64	113.47	End Shut-In(2)
158	1814.37	113.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
471.00	Clean gassy oil 100%	6.61
0.00	Gravity of oil 41 corrected	0.00
0.00	Gas to surface in 3 minutes into pipe.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	15.10	460.79
Last Gas Rate	0.75	11.10	398.31
Max. Gas Rate	0.75	15.10	460.79



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TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18338 **DST#: 12**
 Test Start: 2014.06.11 @ 03:43:00

Tool Information

Drill Pipe:	Length: 3522.00 ft	Diameter: 3.80 inches	Volume: 49.40 bbl	Tool Weight: 2000.00 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: 62000.00 lb
			<u>Total Volume: 49.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3536.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 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			3513.00	
Hydraulic tool	5.00			3518.00	
Jars	6.00			3524.00	
Safety Joint	2.00			3526.00	
Top Packer	5.00			3531.00	
Packer	5.00			3536.00	28.00 Bottom Of Top Packer
Perforations	4.00			3540.00	
Recorder	0.00	6731	Inside	3540.00	
Recorder	0.00	6999	Outside	3540.00	
Bull Plug	5.00			3545.00	9.00 Anchor Tool
Total Tool Length:	37.00				



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FLUID SUMMARY

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19-19s-14-Barton

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Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18338

DST#: 12

ATTN: Rene Husted

Test Start: 2014.06.11 @ 03:43:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 89.94 in³
Resistivity: ohm.m
Salinity: 7300.00 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
471.00	Clean gassy oil 100%	6.607
0.00	Gravity of oil 41 corrected	0.000
0.00	Gas to surface in 3 minutes into pipe.	0.000

Total Length: 471.00 ft Total Volume: 6.607 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: See gas charts!



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GAS RATES

F.G. Holl Company

19-19s-14-Barton

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Wichita Kansas 67206

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Test Start: 2014.06.11 @ 03:43:00

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	0.75	15.10	460.79
2	10	0.75	15.10	460.79
2	20	0.75	11.10	398.31

Pressure vs. Time

