



DRILL STEM TEST REPORT

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

9431 East Central Suite 100
Wichita, Kansas 67206-2563

ATTN: Rene Husted

Kufeld #1-19

19-19s18w Barton

Start Date: 2014.09.15 @ 00:00:00

End Date:

Job Ticket #: 60378

DST #: 12

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.15 @ 20:09:39



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

F.G. Holl Company LLC
9431 East Central Suite 100
Wichita, Kansas 67206-2563
ATTN: Rene Husted

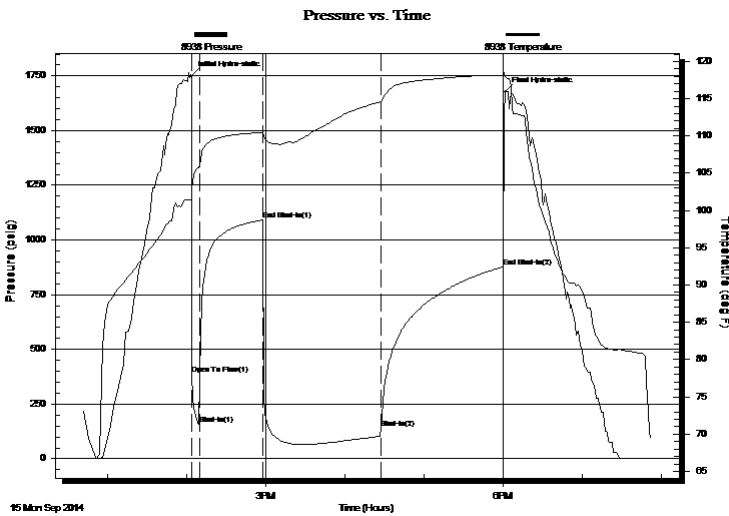
19-19s18w Barton
Kufeld #1-19
Job Ticket: 60378 **DST#: 12**
Test Start: 2014.09.15 @ 00:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened:
Time Test Ended:
Interval: 3554.00 ft (KB) To 3562.00 ft (KB) (TVD)
Total Depth: 3562.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: S4
Reference Elevations: 1915.00 ft (KB)
1907.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8938 Inside
Press@RunDepth: 876.95 psig @ 3558.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.15 End Date: 2014.09.15 Last Calib.: 2014.09.15
Start Time: 12:41:00 End Time: 19:52:00 Time On Btm: 2014.09.15 @ 14:03:30
Time Off Btm: 2014.09.15 @ 18:01:30

TEST COMMENT: 1st Opening 5 Minutes-Strong blow gas to surface in 3 minutes See gas flow report
1st nShut-In 45 Minutes-Fair blow back
2nd Opening 90 Minutes-Strong blow
2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

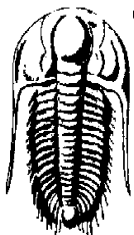
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1749.59	101.47	Initial Hydro-static
1	388.85	103.09	Open To Flow (1)
6	158.32	105.76	Shut-In(1)
54	1091.46	110.50	End Shut-In(1)
144	140.75	114.63	Shut-In(2)
237	876.95	118.12	End Shut-In(2)
238	1676.28	117.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
275.00	Clean Gassy Oil 15% Gas 85% Oil	3.86
0.00	Gravity 34 Corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	3.75	521.79
Last Gas Rate	0.50	0.90	103.21
Max. Gas Rate	0.50	21.35	241.19



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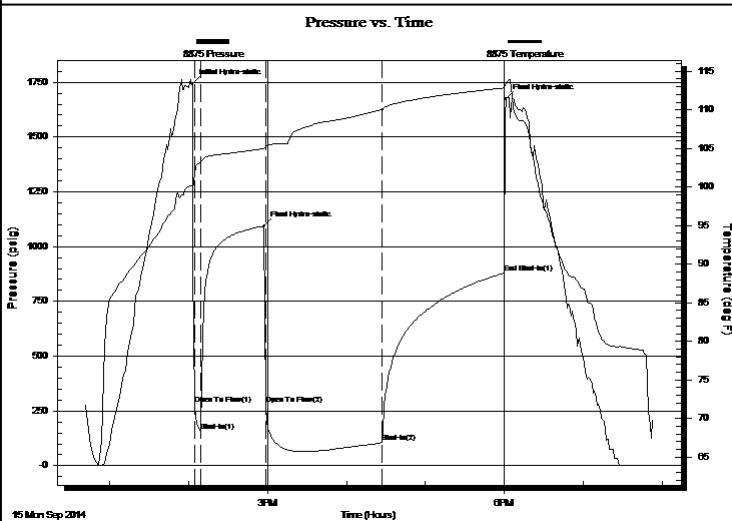
19-19s18w Barton
Kufeld #1-19
Job Ticket: 60378 **DST#: 12**
Test Start: 2014.09.15 @ 00:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened:
Time Test Ended:
Interval: 3554.00 ft (KB) To 3562.00 ft (KB) (TVD)
Total Depth: 3562.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: S4
Reference Elevations: 1915.00 ft (KB)
1907.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Outside**
Press@RunDepth: 878.81 psig @ 3559.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.15 End Date: 2014.09.15 Last Calib.: 2014.09.15
Start Time: 12:41:00 End Time: 19:52:30 Time On Btm: 2014.09.15 @ 14:03:00
Time Off Btm: 2014.09.15 @ 14:57:30

TEST COMMENT: 1st Opening 5 Minutes-Strong blow gas to surface in 3 minutes See gas flow report
1st nShut-In 45 Minutes-Fair blow back
2nd Opening 90 Minutes-Strong blow
2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1743.25	100.15	Initial Hydro-static
2	281.58	101.77	Open To Flow (1)
7	155.68	103.20	Shut-In(1)
55	1093.24	105.00	Final Hydro-static
56	280.48	105.08	Open To Flow (2)
144	105.12	110.02	Shut-In(2)
237	878.81	112.83	End Shut-In(1)
238	1675.31	113.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
275.00	Clean Gassy Oilo 15%Gas 85%Oil	3.86
0.00	Gravity 34 Corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	3.75	521.79
Last Gas Rate	0.50	0.90	103.21
Max. Gas Rate	0.50	21.35	241.19



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DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

19-19s18w Barton

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #1-19

Job Ticket: 60378

DST#: 12

ATTN: Rene Hustedad

Test Start: 2014.09.15 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3559.00 ft	Diameter: 3.80 inches	Volume: 49.92 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.76 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: 75000.00 lb
			<u>Total Volume: 49.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3554.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	31.00 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			3536.00	
Hydraulic Tool	5.00			3541.00	
Jars	6.00			3547.00	
Safety Joint	2.00			3549.00	
Packer	5.00			3554.00	23.00 Bottom Of Top Packer
Anchor	3.00			3557.00	
Recorder	1.00	8938	Inside	3558.00	
Recorder	1.00	8875	Outside	3559.00	
Bull Plug	3.00			3562.00	8.00 Anchor Tool
Total Tool Length:	31.00				



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FLUID SUMMARY

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Kufeld #1-19

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Test Start: 2014.09.15 @ 00:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
275.00	Clean Gassy Oilo 15%Gas 85%Oil	3.858
0.00	Gravity 34 Corrected	0.000

Total Length: 275.00 ft Total Volume: 3.858 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

