



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: 2014.09.12 @ 00:00:00

End Date:

Job Ticket #: 60372

DST #: 6

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

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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: 60372 **DST#: 6**
 Test Start: 2014.09.12 @ 00:00:00

GENERAL INFORMATION:

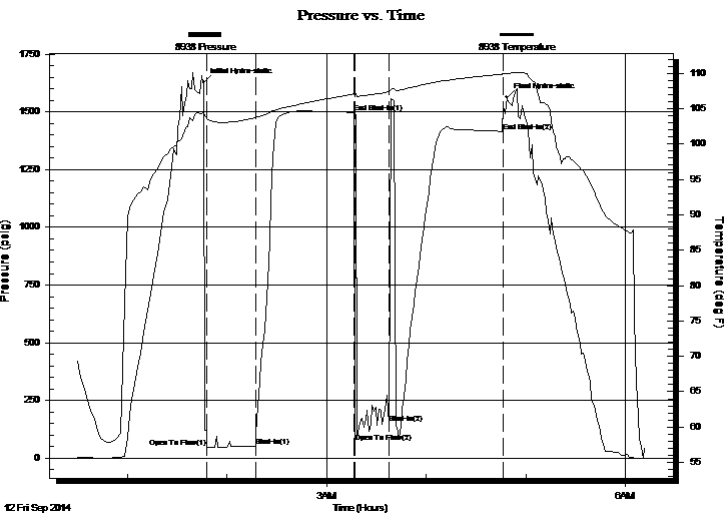
Formation: **Kansas City "A & B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended:
 Interval: **3232.00 ft (KB) To 3280.00 ft (KB) (TVD)**
 Total Depth: 3380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: S4 20 Miles
 Reference Elevations: 1915.00 ft (KB)
 1907.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8938 Inside

Press@RunDepth: 1415.46 psig @ 3276.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.12 End Date: 2014.09.12 Last Calib.: 2014.09.12
 Start Time: 00:29:00 End Time: 06:11:30 Time On Btm: 2014.09.12 @ 01:46:00
 Time Off Btm: 2014.09.12 @ 04:48:30

TEST COMMENT: 1st Opening 30 Minutes Weak steady 2 inch blow
 1st Shut-In 60 Minutes
 2nd Opening 30 Minutes-WEak blow died in 22 minutes flushed tool weak blow for 4 minutes and died
 2nd Shut-In 60 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.66	104.37	Initial Hydro-static
2	45.75	103.52	Open To Flow (1)
31	50.95	103.69	Shut-In(1)
91	1497.13	107.05	End Shut-In(1)
91	67.10	106.64	Open To Flow (2)
112	152.34	107.35	Shut-In(2)
180	1415.46	109.90	End Shut-In(2)
183	1563.16	109.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Very thick heavy mud	0.42

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



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9431 East Central Suite 100
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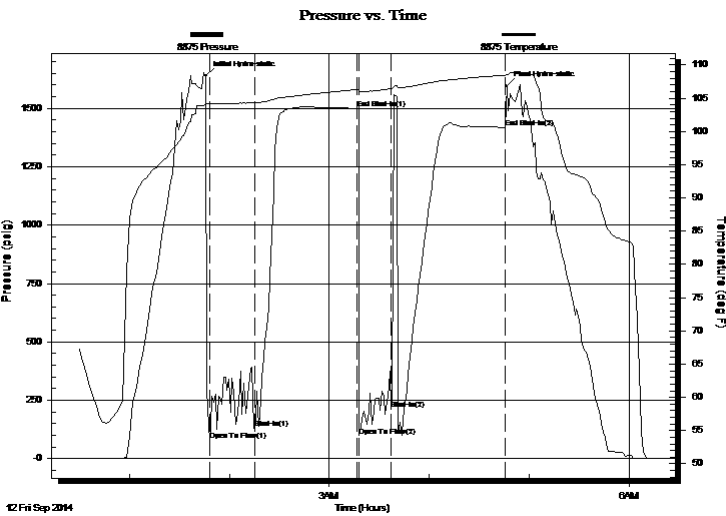
19-19s18w Barton
Kufeld #1-19
Job Ticket: 60372 **DST#: 6**
Test Start: 2014.09.12 @ 00:00:00

GENERAL INFORMATION:

Formation: **Kansas City "A & B"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: Tester: Gene Budig
Time Test Ended: Unit No: S4 20 Miles
Interval: 3232.00 ft (KB) To 3280.00 ft (KB) (TVD) Reference Elevations: 1915.00 ft (KB)
Total Depth: 3380.00 ft (KB) (TVD) 1907.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8875 Outside
Press@RunDepth: 1417.76 psig @ 3277.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.12 End Date: 2014.09.12 Last Calib.: 2014.09.12
Start Time: 00:29:04 End Time: 06:11:04 Time On Btm: 2014.09.12 @ 01:46:04
Time Off Btm: 2014.09.12 @ 04:46:34

TEST COMMENT: 1st Opening 30 Minutes Weak steady 2 inch blow
1st Shut-In 60 Minutes
2nd Opening 30 Minutes-WEak blow died in 22 minutes flushed tool weak blow for 4 minutes and died
2nd Shut-In 60 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.84	104.30	Initial Hydro-static
2	79.73	104.17	Open To Flow (1)
29	129.56	104.30	Shut-In(1)
91	1498.99	106.32	End Shut-In(1)
92	98.12	105.99	Open To Flow (2)
111	211.93	106.37	Shut-In(2)
180	1417.76	108.48	End Shut-In(2)
181	1596.41	108.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Very thick heavy mud	0.42

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



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TOOL DIAGRAM

F.G. Holl Company LLC

19-19s18w Barton

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #1-19

Job Ticket: 60372

DST#: 6

ATTN: Rene Hustedad

Test Start: 2014.09.12 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3216.00 ft	Diameter: 3.80 inches	Volume: 45.11 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: 68000.00 lb
			<u>Total Volume: 45.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3232.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	76.00 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			3209.00	
Hydraulic Tool	5.00			3214.00	
Jars	6.00			3220.00	
Safety Joint	2.00			3222.00	
Top Packer	5.00			3227.00	
Packer	5.00			3232.00	28.00 Bottom Of Top Packer
Anchor	43.00			3275.00	
Recorder	1.00	8938	Inside	3276.00	
Recorder	1.00	8875	Outside	3277.00	
Bull Plug	3.00			3280.00	48.00 Anchor Tool
Total Tool Length:	76.00				



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FLUID SUMMARY

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Test Start: 2014.09.12 @ 00:00:00

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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Very thick heavy mud	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

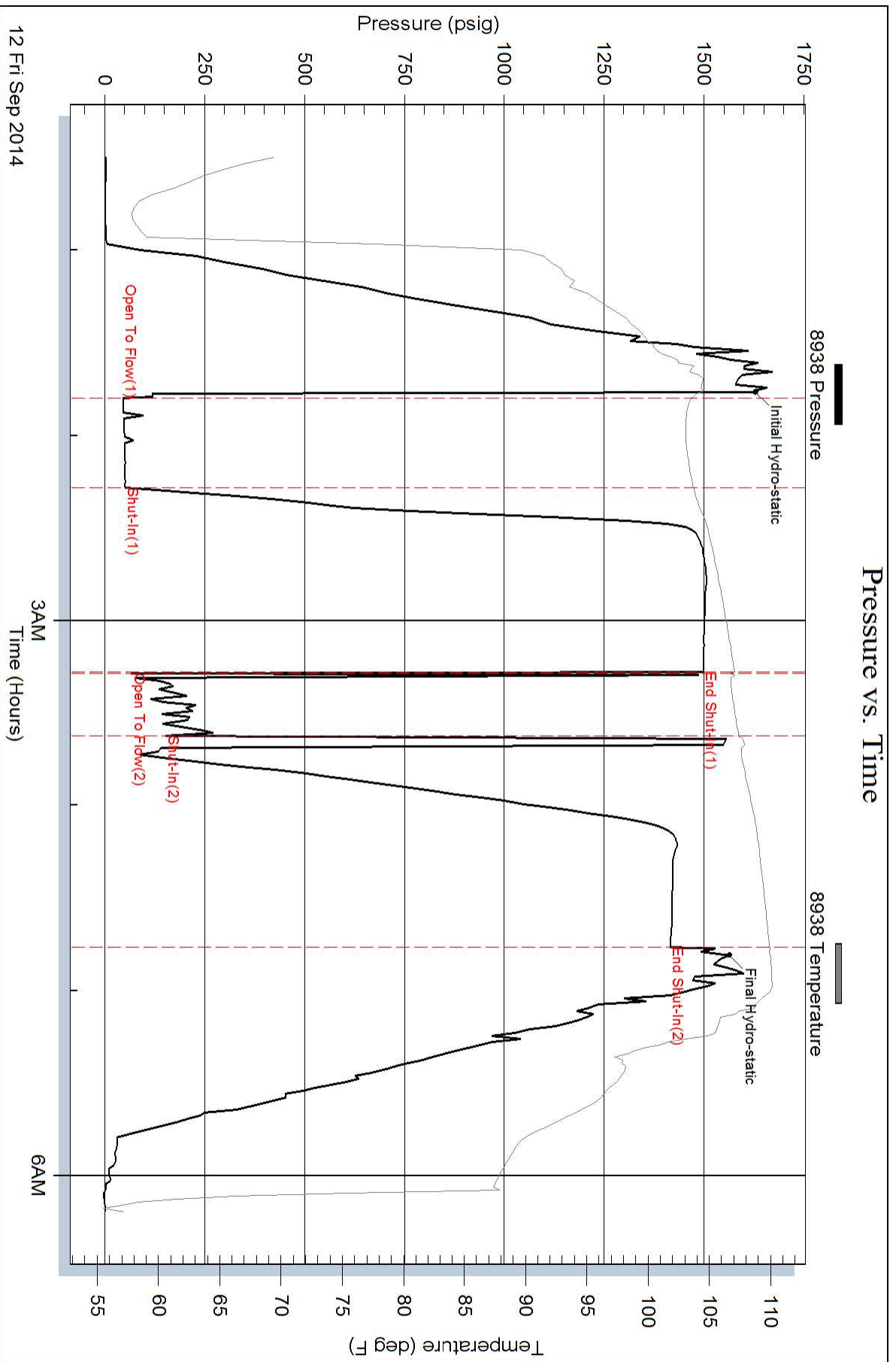
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

