



DRILL STEM TEST REPORT

Prepared For: **Younger Energy Company**

9415 E.Harry Ste403bldg 400

ATTN: Keith Reavis

Johnston #4

34-21s-15w

Start Date: 2017.11.16 @ 10:40:00

End Date: 2017.11.16 @ 17:00:00

Job Ticket #: 01102 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2017.11.16 @ 17:20:08



DRILL STEM TEST REPORT

Younger Energy Company
 9415 E.Harry Ste403bldg 400
 ATTN: Keith Reavis

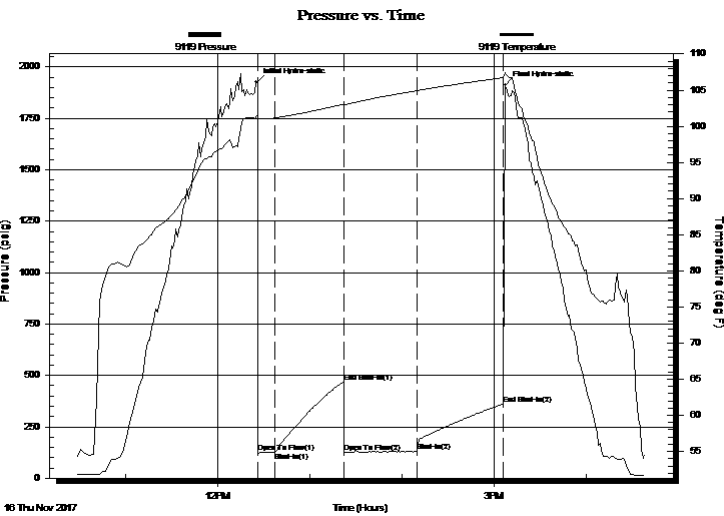
34-21s-15w
Johnston #4
 Job Ticket: 01102 **DST#: 1**
 Test Start: 2017.11.16 @ 10:40:00

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:48:00
 Time Test Ended: 17:00:00
 Interval: **3710.00 ft (KB) To 3890.00 ft (KB) (TVD)**
 Total Depth: 3890.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1972.00 ft (KB)
 1964.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9119 Outside
 Press@RunDepth: 360.26 psig @ 3884.84 ft (KB) Capacity: 5000.00 psig
 Start Date: 2017.11.16 End Date: 2017.11.16 Last Calib.: 2017.11.16
 Start Time: 10:28:00 End Time: 16:38:00 Time On Btm: 2017.11.16 @ 12:25:30
 Time Off Btm: 2017.11.16 @ 15:07:30

TEST COMMENT: 1st Opening 10 Minutes Weak blow built to 2 inches
 1st Shut-In 45 Minutes no blow back
 2nd Opening 45 Minutes weak blow built to 1 inch decreased and died in 27 minutes
 2nd Shut-In 60 Minutes no blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.40	101.41	Initial Hydro-static
1	124.46	101.00	Open To Flow (1)
12	127.89	101.14	Shut-In(1)
57	468.30	103.03	End Shut-In(1)
57	127.15	102.96	Open To Flow (2)
105	133.03	104.93	Shut-In(2)
161	360.26	106.73	End Shut-In(2)
162	1911.78	107.45	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
15.00	Drilling mud	0.21

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



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Younger Energy Company
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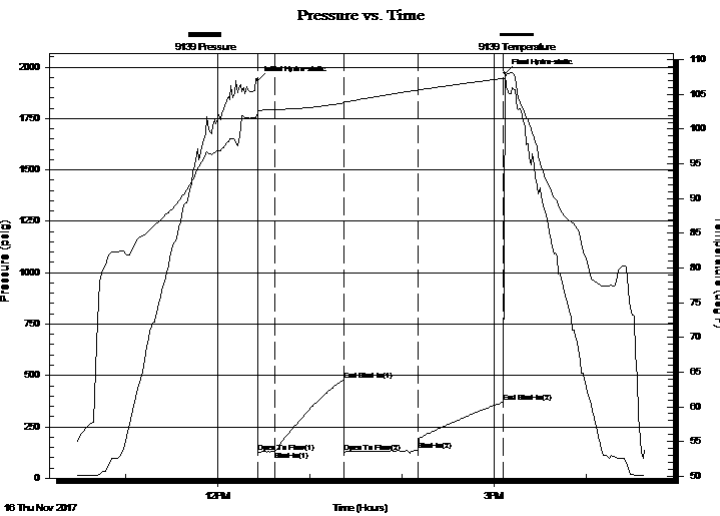
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 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1972.00 ft (KB)
 1964.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9139 Inside
 Press@RunDepth: 369.62 psig @ 3884.84 ft (KB) Capacity: 5000.00 psig
 Start Date: 2017.11.16 End Date: 2017.11.16 Last Calib.: 2017.11.16
 Start Time: 10:28:00 End Time: 16:38:00 Time On Btm: 2017.11.16 @ 12:26:00
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 2nd Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1934.75	102.40	Initial Hydro-static
1	125.67	102.70	Open To Flow (1)
12	130.68	102.84	Shut-In(1)
56	478.48	103.75	End Shut-In(1)
57	127.59	103.87	Open To Flow (2)
105	137.40	105.65	Shut-In(2)
160	369.62	107.31	End Shut-In(2)
161	1970.37	107.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drilling mud	0.21

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Younger Energy Company

34-21s-15w

9415 E.Harry Ste403bldg 400

Johnston #4

ATTN: Keith Reavis

Job Ticket: 01102

DST#: 1

Test Start: 2017.11.16 @ 10:40:00

Tool Information

Drill Pipe:	Length: 3692.00 ft	Diameter: 3.80 inches	Volume: 51.79 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:	72000.00 lb
			<u>Total Volume: 51.79 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3710.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	179.84 ft				
Tool Length:	209.84 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			3685.00	
Hydraulic tool	5.00			3690.00	
Jars	5.00			3695.00	
Safety Joint	5.00			3700.00	
Packer	5.00			3705.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3710.00	
Change Over Sub	0.75			3710.75	
Drill Pipe	157.34			3868.09	
Change Over Sub	0.75		Inside	3868.84	
Anchor	16.00			3884.84	
Recorder	0.00	9139	Inside	3884.84	
Recorder	0.00	9119	Outside	3884.84	
Bullnose	5.00			3889.84	179.84 Bottom Packers & Anchor

Total Tool Length: 209.84



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FLUID SUMMARY

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Job Ticket: 01102

DST#: 1

Test Start: 2017.11.16 @ 10:40:00

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Drilling mud	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

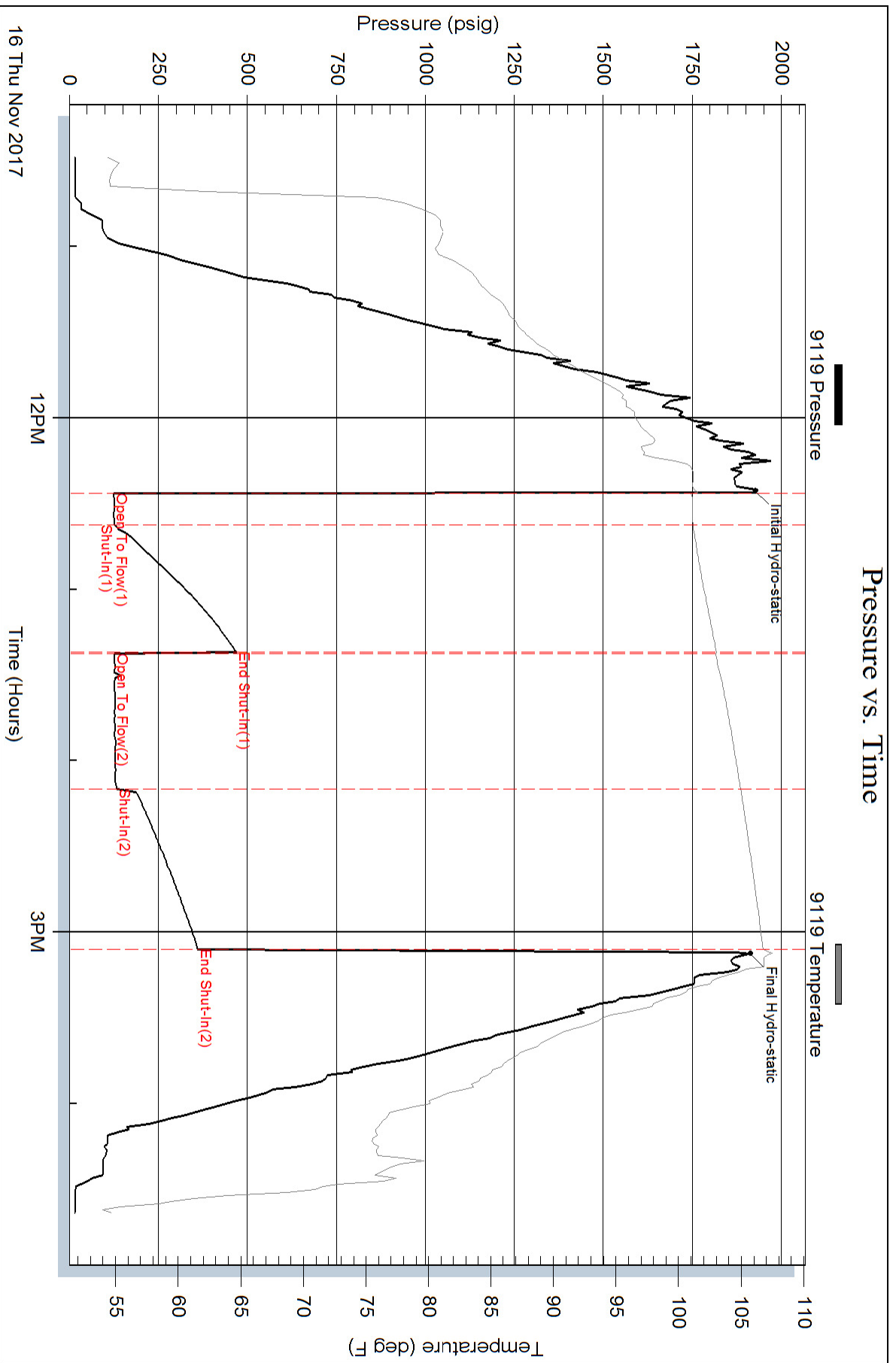
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

