



## DRILL STEM TEST REPORT

Prepared For: **YOUNGER ENERGY COMPANY**

9415 E. HARRY SUITE 402 BUILDING 400  
WICHITA, KANSAS 67207-5083

ATTN: KEITH REAVIS

### **MOSIER BAUER UNIT 1**

### **27-21S-15W PAWNEE**

Start Date: 2016.08.03 @ 22:55:00

End Date: 2016.08.04 @ 00:00:00

Job Ticket #: DST #: 1

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

Printed: 2016.08.04 @ 10:05:17



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27-21S-15W PAWNEE

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MOSIER BAUER UNIT 1

ATTN: KEITH REAVIS

Job Ticket: **DST#: 1**

Test Start: 2016.08.03 @ 22:55:00

## GENERAL INFORMATION:

Formation: **SIMPSON SAND**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:38:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-45

Interval: **3707.00 ft (KB) To 3889.00 ft (KB) (TVD)**

Reference Elevations: 1970.00 ft (KB)

Total Depth: 3889.00 ft (KB) (TVD)

1957.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: **9119**

Inside

Press@RunDepth: 1312.89 psia @ 3883.98 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.08.03

End Date: 2016.08.03

Last Calib.: 2016.08.04

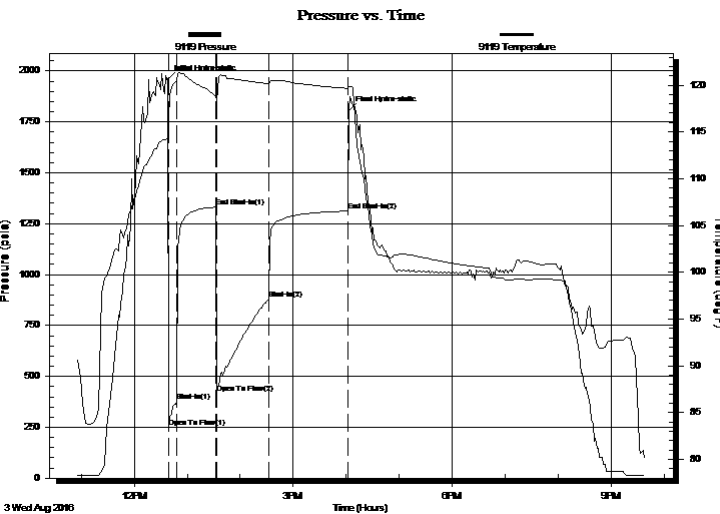
Start Time: 10:55:00

End Time: 21:38:00

Time On Btm: 2016.08.03 @ 12:38:00

Time Off Btm: 2016.08.03 @ 16:03:00

**TEST COMMENT:** 1ST OPENING 10 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES  
1ST SHUT-IN 45 MINUTES-WEAK SURFACE BLOW THROUGH OUT  
2ND OPENING 60 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES  
2ND SHUT IN 90 MINUTES-3 INCH BLOW BACK TO WEAK SURFACE BLOW



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1955.74	114.41	Initial Hydro-static
1	250.72	113.85	Open To Flow (1)
10	376.49	120.50	Shut-In(1)
55	1331.68	118.88	End Shut-In(1)
55	415.72	118.36	Open To Flow (2)
115	881.56	120.16	Shut-In(2)
204	1312.89	119.65	End Shut-In(2)
205	1806.75	119.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2200.00	CLEAN GASSY OIL 15 GAS 85 OIL	29.20
0.00	240 GAS IN THE PIPE	0.00
0.00	GRAVITY OF OIL 39 CORRECTED	0.00

## Gas Rates

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



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MOSIER BAUER UNIT 1

ATTN: KEITH REAVIS

Job Ticket: **DST#: 1**

Test Start: 2016.08.03 @ 22:55:00

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Formation: **SIMPSON SAND**

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Time Tool Opened: 12:38:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-45

Interval: **3707.00 ft (KB) To 3889.00 ft (KB) (TVD)**

Reference Elevations: 1970.00 ft (KB)

Total Depth: 3889.00 ft (KB) (TVD)

1957.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 9139 Outside**

Press@RunDepth: 1313.92 psia @ 3883.98 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.08.03

End Date: 2016.08.04

Last Calib.: 2016.08.04

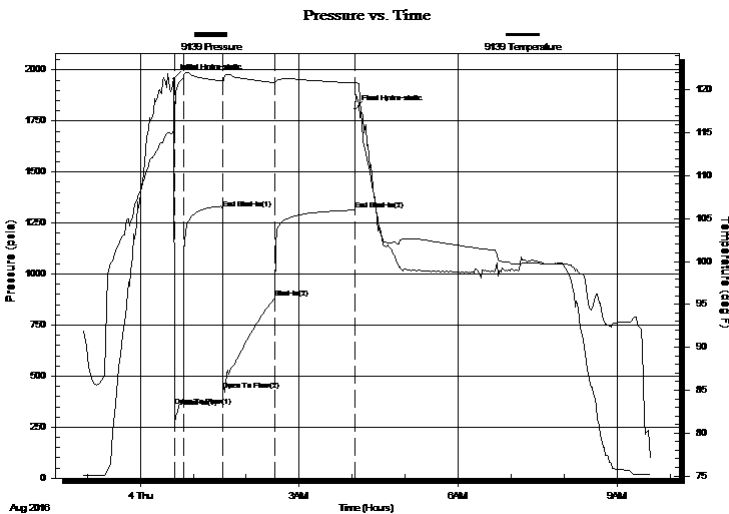
Start Time: 22:55:00

End Time: 09:38:00

Time On Btm: 2016.08.04 @ 00:38:00

Time Off Btm: 2016.08.04 @ 04:03:00

**TEST COMMENT:** 1ST OPENING 10 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES  
1ST SHUT-IN 45 MINUTES-WEAK SURFACE BLOW THROUGH OUT  
2ND OPENING 60 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES  
2ND SHUT IN 90 MINUTES-3 INCH BLOW BACK TO WEAK SURFACE BLOW



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1957.30	115.28	Initial Hydro-static
1	354.06	114.39	Open To Flow (1)
11	389.21	121.34	Shut-In(1)
56	1320.79	121.06	End Shut-In(1)
56	430.69	120.66	Open To Flow (2)
115	880.98	120.85	Shut-In(2)
205	1313.92	120.81	End Shut-In(2)
205	1808.00	121.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2200.00	CLEAN GASSY OIL 15 GAS 85 OIL	29.20
0.00	240 GAS IN THE PIPE	0.00
0.00	GRAVITY OF OIL 39 CORRECTED	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

YOUNGER ENERGY COMPANY

27-21S-15W PAWNEE

9415 E. HARRY SUITE 402 BUILDING 400  
WICHITA, KANSAS 67207-5083

MOSIER BAUER UNIT 1

ATTN: KEITH REAVIS

Job Ticket: **DST#: 1**

Test Start: 2016.08.03 @ 22:55:00

## Tool Information

Drill Pipe:	Length: 3514.00 ft	Diameter: 3.80 inches	Volume: 49.29 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: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3707.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	181.98 ft			
Tool Length:	210.98 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3683.00	
Hydraulic tool	5.00			3688.00	
Jars	7.00			3695.00	
Safety Joint	2.00		Fluid	3697.00	
Top Packer	5.00			3702.00	
Packer	5.00			3707.00	29.00 Bottom Of Top Packer
Anchor	7.00			3714.00	
Change Over Sub	0.75			3714.75	
Drill Pipe	158.48			3873.23	
Change Over Sub	0.75			3873.98	
Anchor	10.00			3883.98	
Recorder	0.00	9119	Inside	3883.98	
Recorder	0.00	9139	Outside	3883.98	
Bullnose	5.00			3888.98	181.98 Anchor Tool

**Total Tool Length: 210.98**



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FLUID SUMMARY

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MOSIER BAUER UNIT 1

Job Ticket: DST#: 1

ATTN: KEITH REAVIS

Test Start: 2016.08.03 @ 22:55:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.40 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 2750.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2200.00	CLEAN GASSY OIL 15 GAS 85 OIL	29.202
0.00	240 GAS IN THE PIPE	0.000
0.00	GRAVITY OF OIL 39 CORRECTED	0.000

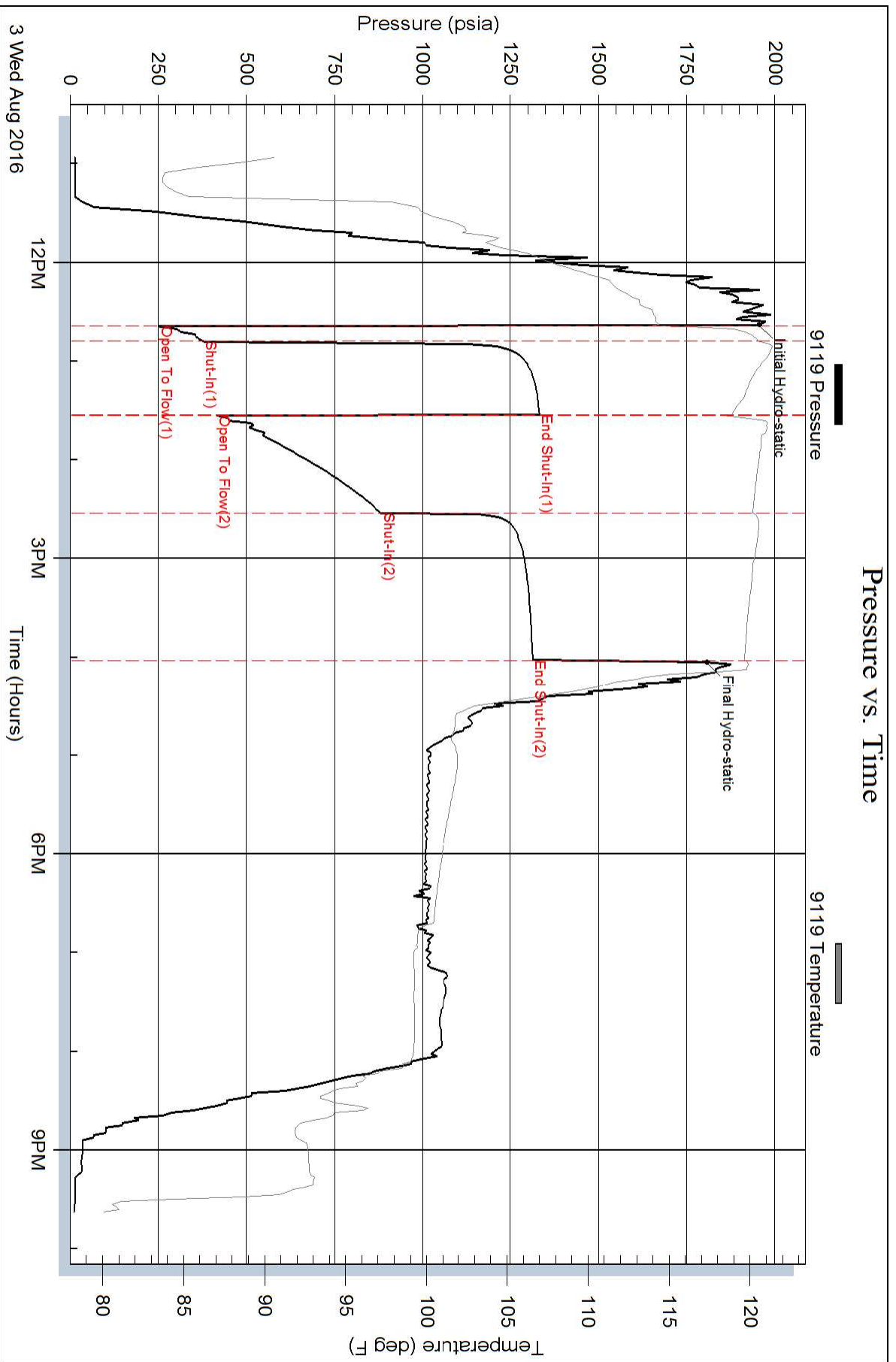
Total Length: 2200.00 ft      Total Volume: 29.202 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: REVERSED OIL TO A TANK TRUCK

### Pressure vs. Time



### Pressure vs. Time

