



## DRILL STEM TEST REPORT

Prepared For: **SHELBY RESOURCES LLC**

2717 CANAL BLVD SUITE C  
HAYS , KnaA 67601

ATTN: JEREMY SCHWARTZ

**FRICK FAMILY FARMS 1**

**18-22S-16W PAWNEE**

Start Date: 2016.10.04 @ 02:55:00

End Date: 2016.10.04 @ 10:58:00

Job Ticket #: 01131                      DST #: 1

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

Printed: 2016.10.04 @ 11:17:01



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Test Start: 2016.10.04 @ 02:55:00

## GENERAL INFORMATION:

Formation: **PENN CHERT**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:05:00

Time Test Ended: 10:58:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-54

Interval: **3917.00 ft (KB) To 3970.00 ft (KB) (TVD)**

Reference Elevations: 2026.00 ft (KB)

Total Depth: 3970.00 ft (KB) (TVD)

2016.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: **9139** Outside

Press@RunDepth: 1348.43 psia @ 3965.34 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.10.04

End Date: 2016.10.04

Last Calib.: 2016.10.04

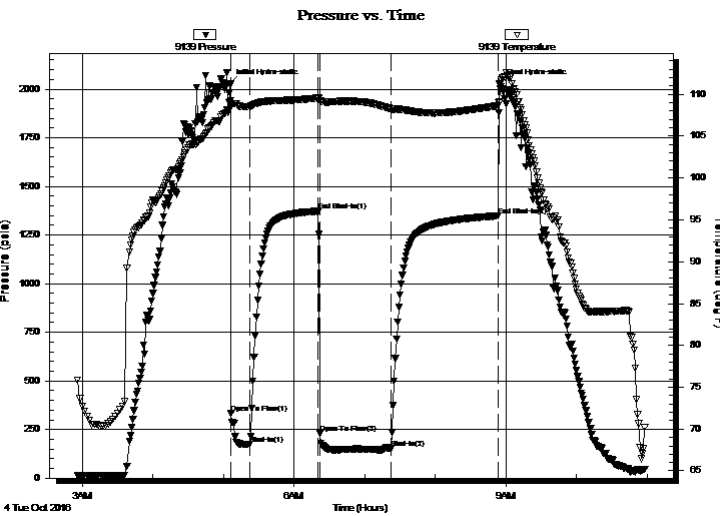
Start Time: 02:55:00

End Time: 10:58:00

Time On Btm: 2016.10.04 @ 05:05:30

Time Off Btm: 2016.10.04 @ 08:54:30

TEST COMMENT: 1ST OPENING 15 MINUTES STRONG BLOW GAS TO SURFACE IN 5 MINUTES  
 1ST SHUT-IN 60 MINUTES GOOD BLOW BACK  
 2ND OPENING 60 MINUTES STRONG BLOW SEE GAS FLOW REPORT  
 2ND SUT-IN 90 MINUTES- GOOD BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2027.19	109.14	Initial Hydro-static
1	335.60	108.74	Open To Flow (1)
17	173.82	108.55	Shut-In(1)
75	1372.39	109.55	End Shut-In(1)
77	228.66	109.27	Open To Flow (2)
137	151.60	108.23	Shut-In(2)
228	1348.43	108.66	End Shut-In(2)
229	2028.23	109.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
250.00	gassy mud	2.69

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	6.47	186.00
Last Gas Rate	1.00	6.47	186.00
Max. Gas Rate	1.00	8.11	233.15



# DRILL STEM TEST REPORT

TOOL DIAGRAM

SHELBY RESOURCES LLC

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DST#: 1

Test Start: 2016.10.04 @ 02:55:00

## Tool Information

Drill Pipe:	Length: 3821.00 ft	Diameter: 3.80 inches	Volume: 53.60 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: 90.00 ft	Diameter: 2.25 inches	Volume: 0.44 bbl	Weight to Pull Loose: 85000.00 lb
			Total Volume: 54.04 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3917.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.34 ft			
Tool Length:	82.34 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			3893.00	
Hydraulic tool	5.00			3898.00	
Jars	7.00			3905.00	
Safety Joint	2.00		Fluid	3907.00	
Top Packer	5.00			3912.00	
Packer	5.00			3917.00	29.00 Bottom Of Top Packer
Anchor	5.00			3922.00	
Change Over Sub	0.75			3922.75	
Drill Pipe	31.84			3954.59	
Change Over Sub	0.75			3955.34	
Anchor	10.00			3965.34	
Recorder	0.00	9119	Inside	3965.34	
Recorder	0.00	9139	Outside	3965.34	
Bullnose	5.00			3970.34	53.34 Anchor Tool

**Total Tool Length: 82.34**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

SHELBY RESOURCES LLC

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FRICK FAMILY FARMS 1

Job Ticket: 01131

DST#: 1

ATTN: JEREMY SCHWARTZ

Test Start: 2016.10.04 @ 02:55:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 58.00 sec/qt  
Water Loss: 9.20 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4200.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psia

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	gassy mud	2.687

Total Length: 250.00 ft      Total Volume: 2.687 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: 2 Gas samples were taken  
gas did burn w ith a blue flame



# DRILL STEM TEST REPORT

GAS RATES

SHELBY RESOURCES LLC

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DST#: 1

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Test Start: 2016.10.04 @ 02:55:00

## 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 (psia)	Gas Rate (Mcf/d)
1	10	1.00	6.47	186.00
1	15	1.00	6.47	186.00
2	10	1.00	8.11	233.15
2	20	1.00	6.47	186.00
2	30	1.00	6.47	186.00
2	40	1.00	6.47	186.00
2	50	1.00	6.47	186.00

