



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 @ 06:45:00

End Date: 2016.10.04 @ 00:00:00

Job Ticket #: 01132 DST #: 2

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

Printed: 2016.10.05 @ 02:01:02



DRILL STEM TEST REPORT

SHELBY RESOURCES LLC

18-22S-16W PAWNEE

2717 CANAL BLVD SUITE C
HAYS, KnaA 67601

FRICK FAMILY FARMS 1

ATTN: JEREMY SCHWARTZ

Job Ticket: 01132

DST#: 2

Test Start: 2016.10.04 @ 06:45:00

GENERAL INFORMATION:

Formation: **PEN CHERT**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:22:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-54

Interval: **3970.00 ft (KB) To 3985.00 ft (KB) (TVD)**

Reference Elevations: 2026.00 ft (KB)

Total Depth: 3985.00 ft (KB) (TVD)

2016.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 9139

Inside

Press@RunDepth: 1339.72 psia @ 3980.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.10.04

End Date:

2016.10.05

Last Calib.:

2016.10.05

Start Time: 18:55:00

End Time:

01:48:30

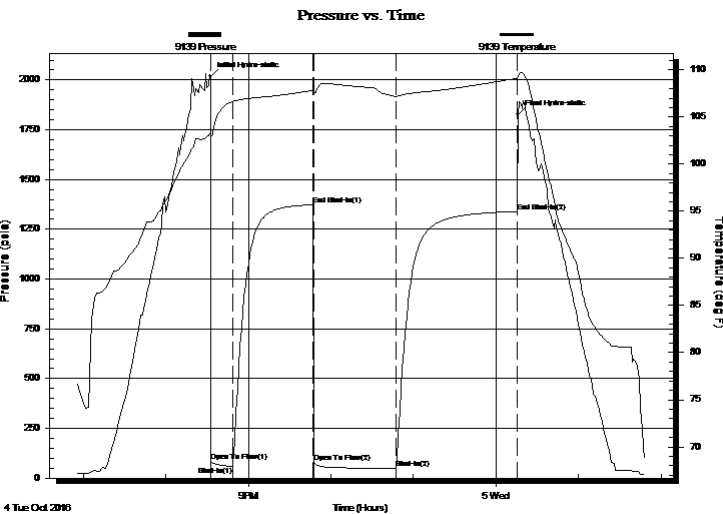
Time On Btm:

2016.10.04 @ 20:32:30

Time Off Btm:

2016.10.05 @ 00:16:00

TEST COMMENT: 1ST OPENING 15 MINUTES GOOD BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 2 MINUTES
1ST SHUT-IN 60 MINUTES NO BLOW BACK
2ND OPENING 60 MINUTES-STRONG BLOW GAS TO SURFACE IN 6 MINUTES
2ND SHUT-IN 90 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2018.33	103.30	Initial Hydro-static
1	82.60	102.91	Open To Flow (1)
16	59.55	106.62	Shut-In(1)
75	1374.12	107.84	End Shut-In(1)
76	79.06	107.49	Open To Flow (2)
135	49.49	107.19	Shut-In(2)
223	1339.72	109.11	End Shut-In(2)
224	1826.50	109.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GASSY MUD	0.05

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.10	3.33
Last Gas Rate	0.25	2.80	4.44
Max. Gas Rate	0.25	2.80	4.44



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Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-54

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Reference Elevations: 2026.00 ft (KB)

Total Depth: 3985.00 ft (KB) (TVD)

2016.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: **91716** Outside

Press@RunDepth: 1326.53 psia @ 3980.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.10.04

End Date: 2016.10.05

Last Calib.: 2016.10.05

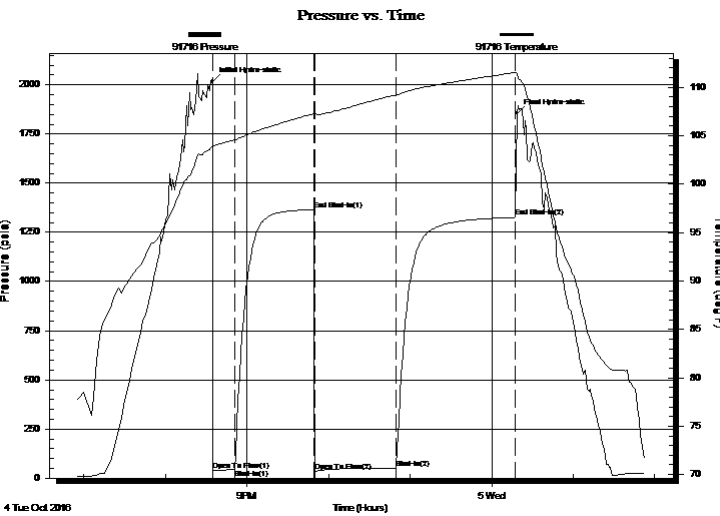
Start Time: 18:55:00

End Time: 01:53:00

Time On Btm: 2016.10.04 @ 20:34:30

Time Off Btm: 2016.10.05 @ 00:18:30

TEST COMMENT: 1ST OPENING 15 MINUTES GOOD BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 2 MINUTES
1ST SHUT-IN 60 MINUTES NO BLOW BACK
2ND OPENING 60 MINUTES-STRONG BLOW GAS TO SURFACE IN 6 MINUTES
2ND SHUT-IN 90 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2016.72	103.92	Initial Hydro-static
1	39.96	103.98	Open To Flow (1)
17	43.05	104.57	Shut-In(1)
75	1366.84	107.28	End Shut-In(1)
76	32.72	107.28	Open To Flow (2)
135	49.61	109.19	Shut-In(2)
223	1326.53	111.54	End Shut-In(2)
224	1854.35	111.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GASSY MUD	0.05

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.10	3.33
Last Gas Rate	0.25	2.80	4.44
Max. Gas Rate	0.25	2.80	4.44



DRILL STEM TEST REPORT

TOOL DIAGRAM

SHELBY RESOURCES LLC

18-22S-16W PAWNEE

2717 CANAL BLVD SUITE C
HAYS, KnaA 67601

FRICK FAMILY FARMS 1

Job Ticket: 01132

DST#: 2

ATTN: JEREMY SCHWARTZ

Test Start: 2016.10.04 @ 06:45:00

Tool Information

Drill Pipe:	Length: 3854.00 ft	Diameter: 3.80 inches	Volume: 54.06 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: 90.00 ft	Diameter: 2.25 inches	Volume: 0.44 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 54.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3970.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	44.00 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			3946.00	
Hydraulic tool	5.00			3951.00	
Jars	7.00			3958.00	
Safety Joint	2.00		Fluid	3960.00	
Top Packer	5.00			3965.00	
Packer	5.00			3970.00	29.00 Bottom Of Top Packer
Anchor	10.00			3980.00	
Recorder	0.00	9139	Inside	3980.00	
Recorder	0.00	91716	Outside	3980.00	
Bullnose	5.00			3985.00	15.00 Anchor Tool
Total Tool Length:	44.00				



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FLUID SUMMARY

SHELBY RESOURCES LLC

18-22S-16W PAWNEE

2717 CANAL BLVD SUITE C
HAYS , KnaA 67601

FRICK FAMILY FARMS 1

Job Ticket: 01132

DST#: 2

ATTN: JEREMY SCHWARTZ

Test Start: 2016.10.04 @ 06:45:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.80 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 4100.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	GASSY MUD	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 2 GAS SAMPLES TAKEN THE LAST 10 MINUTES OF THE OPENING
GAS DID BURN BLUE



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GAS RATES

SHELBY RESOURCES LLC

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DST#: 2

Test Start: 2016.10.04 @ 06:45:00

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)
2	10	0.25	2.10	3.33
2	20	0.25	2.80	4.44
2	30	0.25	2.80	4.44
2	40	0.25	2.80	4.44
2	50	0.25	2.80	4.44

Pressure vs. Time

