



DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-21s-16w PAWNEE

Start Date: 2016.03.23 @ 14:16:00

End Date: 2016.03.24 @ 13:00:00

Job Ticket #: 01221 DST #: 5

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

Printed: 2016.03.24 @ 05:51:44



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

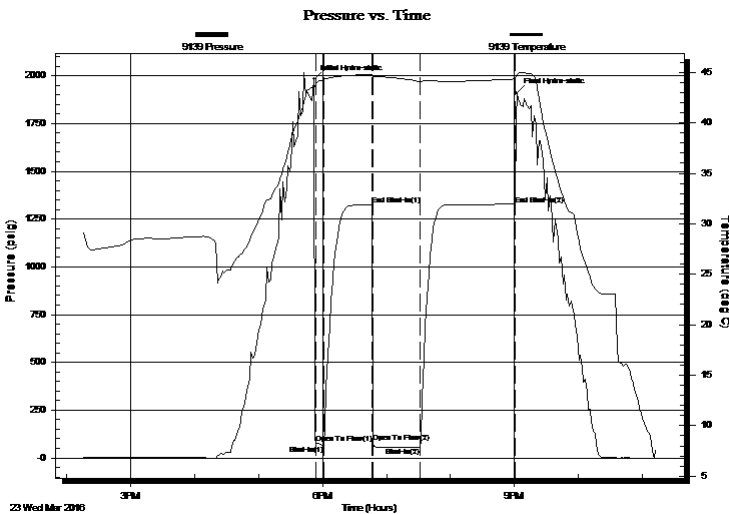
36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01221 **DST#: 5**
 Test Start: 2016.03.23 @ 14:16:00

GENERAL INFORMATION:

Formation: **SDIMPSON SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:52:00
 Time Test Ended: 13:00:00
 Interval: **3836.00 ft (KB) To 3902.00 ft (KB) (TVD)**
 Total Depth: 4000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9139 Inside
 Press@RunDepth: 1327.06 psig @ 3900.39 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.23 Last Calib.: 2016.03.24
 Start Time: 14:15:00 End Time: 23:13:00 Time On Btm: 2016.03.23 @ 17:52:00
 Time Off Btm: 2016.03.23 @ 21:02:30

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 30 SECONDS
 1st SHUT-IN 45 MINUTES NO BLOW BACK
 2nd OPENING 45 MINUTES STRONG BLOW GAS TO SURFACE IN 2 MINUTES SEE GAS FLOW REPOR 2nd SHUT-IN
 90 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1981.66	43.83	Initial Hydro-static
2	78.87	43.91	Open To Flow (1)
9	66.28	44.27	Shut-In(1)
54	1324.09	44.82	End Shut-In(1)
56	81.44	44.61	Open To Flow (2)
100	57.28	44.08	Shut-In(2)
189	1327.06	44.35	End Shut-In(2)
191	1911.43	44.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	drilling mud	0.44

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	-8.36	40.74
Last Gas Rate	0.50	-6.63	52.41
Max. Gas Rate	0.50	-6.63	52.41



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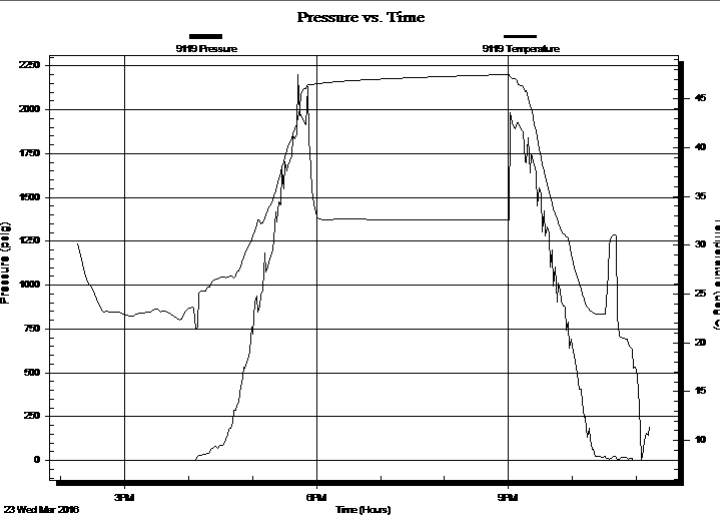
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 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9119 Outside
 Press@RunDepth: psig @ 3999.54 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.23 Last Calib.: 2016.03.24
 Start Time: 14:15:00 End Time: 23:13:00 Time On Btm:
 Time Off Btm:

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PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
90.00	drilling mud	0.44

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	-8.36	40.74
Last Gas Rate	0.50	-6.63	52.41
Max. Gas Rate	0.50	-6.63	52.41



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01221 **DST#: 5**
 Test Start: 2016.03.23 @ 14:16:00

Tool Information

Drill Pipe:	Length: 3600.00 ft	Diameter: 3.80 inches	Volume: 50.50 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:	2000.00 lb	
Drill Collar:	Length: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose:	72000.00 lb	
			Total Volume:	51.57 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	64000.00 lb	
Depth to Top Packer:	3836.00 ft			Final	64000.00 lb	
Depth to Bottom Packer:	3901.39 ft					
Interval between Packers:	65.39 ft					
Tool Length:	197.54 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			3812.00	
Hydraulic tool	5.00			3817.00	
Jars	7.00			3824.00	
Safety Joint	2.00		Fluid	3826.00	
Top Packer	5.00			3831.00	
Packer	5.00			3836.00	29.00 Bottom Of Top Packer
Anchor	5.00			3841.00	
Drill Pipe	30.64			3871.64	
Change Over Sub	0.75			3872.39	
Anchor	28.00			3900.39	
Recorder	0.00	9139	Inside	3900.39	
Recorder	0.00	91375	Outside	3900.39	
Blank Off Sub	1.00			3901.39	65.39 Tool Interval
Packer	5.00			3906.39	
Anchor	5.00			3911.39	
Change Over Sub	0.75			3912.14	
Drill Pipe	63.65			3975.79	
Change Over Sub	0.75			3976.54	
Anchor	23.00			3999.54	
Recorder	0.00	9119	Outside	3999.54	
Bullnose	5.00			4004.54	103.15 Bottom Packers & Anchor
Total Tool Length:	197.54				



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FLUID SUMMARY

Shelby Resources LLC

36-21s-16w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01221

DST#: 5

ATTN: Keith Revis

Test Start: 2016.03.23 @ 14:16:00

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: 74.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
90.00	drilling mud	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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GAS RATES

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FRANCIS 1-36
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Test Start: 2016.03.23 @ 14:16:00

Gas Rates Information

Temperature: 15 (deg C)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.50	-8.36	40.74
2	20	0.50	-7.20	48.57
2	30	0.50	-6.73	51.74
2	40	0.50	-6.63	52.41

Pressure vs. Time

