



DRILL STEM TEST REPORT

Prepared For: **Southwind Petroleum Corporation**

1400 West 14th Street
Wichita, Kansas
67203+2901

ATTN: Bob Williams

Dirks #27-1

27/19S/16W/Rush

Start Date: 2014.07.26 @ 07:57:00

End Date: 2014.07.26 @ 13:22:00

Job Ticket #: 18274 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2014.07.26 @ 13:39:22

Southwind Petroleum Corporation
27/19S/16W/Rush
Dirks #27-1
DST # 1
Arbuckle
2014.07.26



DRILL STEM TEST REPORT

Southwind Petroleum Corporation

27/19S/16W/Rush

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67203+2901
ATTN: Bob Williams

Dirks #27-1

Job Ticket: 18274

DST#: 1

Test Start: 2014.07.26 @ 07:57:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:48:30

Time Test Ended: 13:22:00

Test Type: Conventional Straddle (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/32

Interval: 3748.00 ft (KB) To 3775.00 ft (KB) (TVD)

Reference Elevations: 2054.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2049.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6749

Inside

Press@RunDepth: 413.92 psig @ 3764.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.07.26

End Date: 2014.07.26

Last Calib.: 2014.07.26

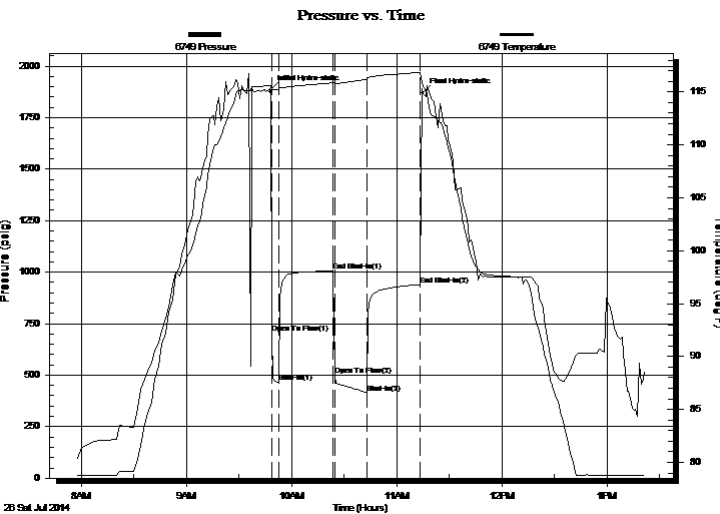
Start Time: 07:57:00

End Time: 13:22:00

Time On Btm: 2014.07.26 @ 09:48:00

Time Off Btm: 2014.07.26 @ 11:15:00

TEST COMMENT: 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 15 seconds/Gas to surface in 1 minute
 1ST Shut In 30 Minutes/No blow back after gas pressure bleed off
 2ND Open 20 Minutes/Stong blow/Blow at bottom of bucket at open
 2ND Shut In 30 Mintues/Blow back built to 1/4 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.66	115.57	Initial Hydro-static
1	704.28	115.19	Open To Flow (1)
5	464.29	115.21	Shut-In(1)
36	1004.99	115.85	End Shut-In(1)
37	501.30	115.76	Open To Flow (2)
55	413.92	116.22	Shut-In(2)
86	939.93	116.85	End Shut-In(2)
87	1869.85	115.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Oily Mud/Oil 10% Mud 90%	0.36

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	44.83	1702.79
Last Gas Rate	1.50	21.60	2200.99
Max. Gas Rate	1.00	44.83	1702.79



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Test Type: Conventional Straddle (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/32

Interval: 3748.00 ft (KB) To 3775.00 ft (KB) (TVD)

Reference Elevations: 2054.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2049.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6838 Outside

Press@RunDepth: 939.00 psig @ 3764.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.07.26

End Date: 2014.07.26

Last Calib.: 2014.07.26

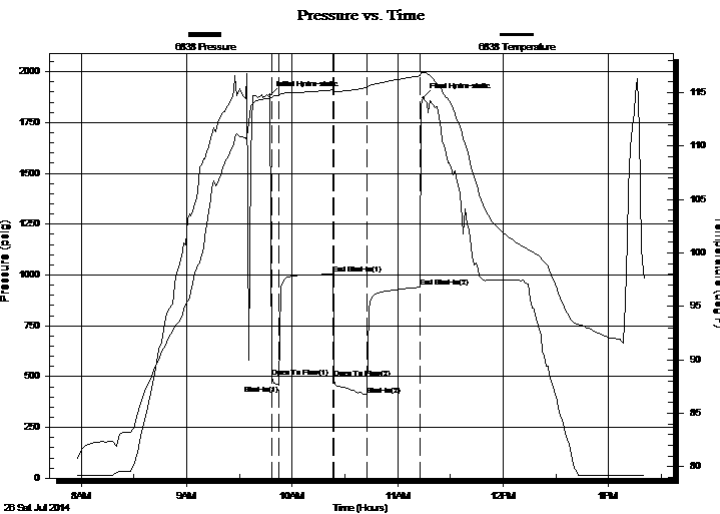
Start Time: 07:57:00

End Time: 13:21:00

Time On Btm: 2014.07.26 @ 09:47:30

Time Off Btm: 2014.07.26 @ 11:14:30

TEST COMMENT: 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 15 seconds/Gas to surface in 1 minute
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 2ND Open 20 Minutes/Stong blow/Blow at bottom of bucket at open
 2ND Shut In 30 Mintues/Blow back built to 1/4 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.24	114.44	Initial Hydro-static
1	498.53	114.49	Open To Flow (1)
5	458.32	114.75	Shut-In(1)
36	1003.22	115.25	End Shut-In(1)
37	493.24	115.09	Open To Flow (2)
55	408.72	115.46	Shut-In(2)
86	939.00	116.56	End Shut-In(2)
87	1871.65	116.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Oily Mud/Oil 10% Mud 90%	0.36

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	44.83	1702.79
Last Gas Rate	1.50	21.60	2200.99
Max. Gas Rate	1.00	44.83	1702.79



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Job Ticket: 18274

DST#: 1

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GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:48:30

Time Test Ended: 13:22:00

Test Type: Conventional Straddle (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/32

Interval: 3748.00 ft (KB) To 3775.00 ft (KB) (TVD)

Reference Elevations: 2054.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2049.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6663 Below (Straddle)

Press@RunDepth: psig @ 3890.02 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.07.26

End Date: 2014.07.26

Last Calib.: 2014.07.26

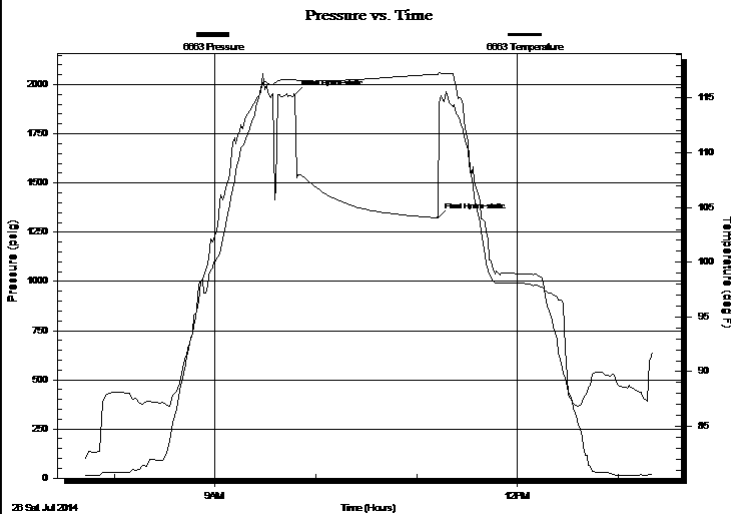
Start Time: 07:42:00

End Time: 13:20:30

Time On Btm: 2014.07.26 @ 09:47:30

Time Off Btm: 2014.07.26 @ 11:13:00

TEST COMMENT: 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 15 seconds/Gas to surface in 1 minute
 1ST Shut In 30 Minutes/No blow back after gas pressure bleed off
 2ND Open 20 Minutes/Strong blow/Blow at bottom of bucket at open
 2ND Shut In 30 Minutes/Blow back built to 1/4 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1947.92	116.69	Initial Hydro-static
86	1323.38	117.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Oily Mud/Oil 10% Mud 90%	0.36

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	44.83	1702.79
Last Gas Rate	1.50	21.60	2200.99
Max. Gas Rate	1.00	44.83	1702.79



DRILL STEM TEST REPORT

TOOL DIAGRAM

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27/19S/16W/Rush

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 Wichita, Kansas
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Dirks #27-1

Job Ticket: 18274

DST#: 1

Test Start: 2014.07.26 @ 07:57:00

Tool Information

Drill Pipe:	Length: 3715.00 ft	Diameter: 3.80 inches	Volume: 52.11 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 52.26 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.95 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3748.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	3893.02 ft				
Interval betw een Packers:	145.02 ft				
Tool Length:	161.97 ft				
Number of Packers:	3	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			3736.05	
Hydraulic tool	5.00			3741.05	
Top Packer	5.00			3746.05	
Packer	1.95			3748.00	16.95 Bottom Of Top Packer
Perforations	6.00			3754.00	
Handling Sub	5.00			3759.00	
Perforations	5.00			3764.00	
Recorder	0.00	6749	Inside	3764.00	
Recorder	0.00	6838	Outside	3764.00	
Blank Off Sub	0.68			3764.68	
Travel Collar	1.74			3766.42	
Packer Test Side	1.60			3768.02	
Packer Tail Side	1.50			3769.52	
Perforations	19.00			3788.52	
Change Over Sub	0.66			3789.18	
Drill Pipe	95.06			3884.24	
Change Over Sub	0.78			3885.02	
Perforations	5.00			3890.02	
Recorder	0.00	6663	Below	3890.02	
Bullnose	3.00			3893.02	145.02 Anchor Tool

Total Tool Length: 161.97



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FLUID SUMMARY

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Job Ticket: 18274

DST#: 1

Test Start: 2014.07.26 @ 07:57:00

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	sec/qt	Cushion Volume:	bbf		
Water Loss:	in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
45.00	Oily Mud/Oil 10% Mud 90%	0.358

Total Length: 45.00 ft Total Volume: 0.358 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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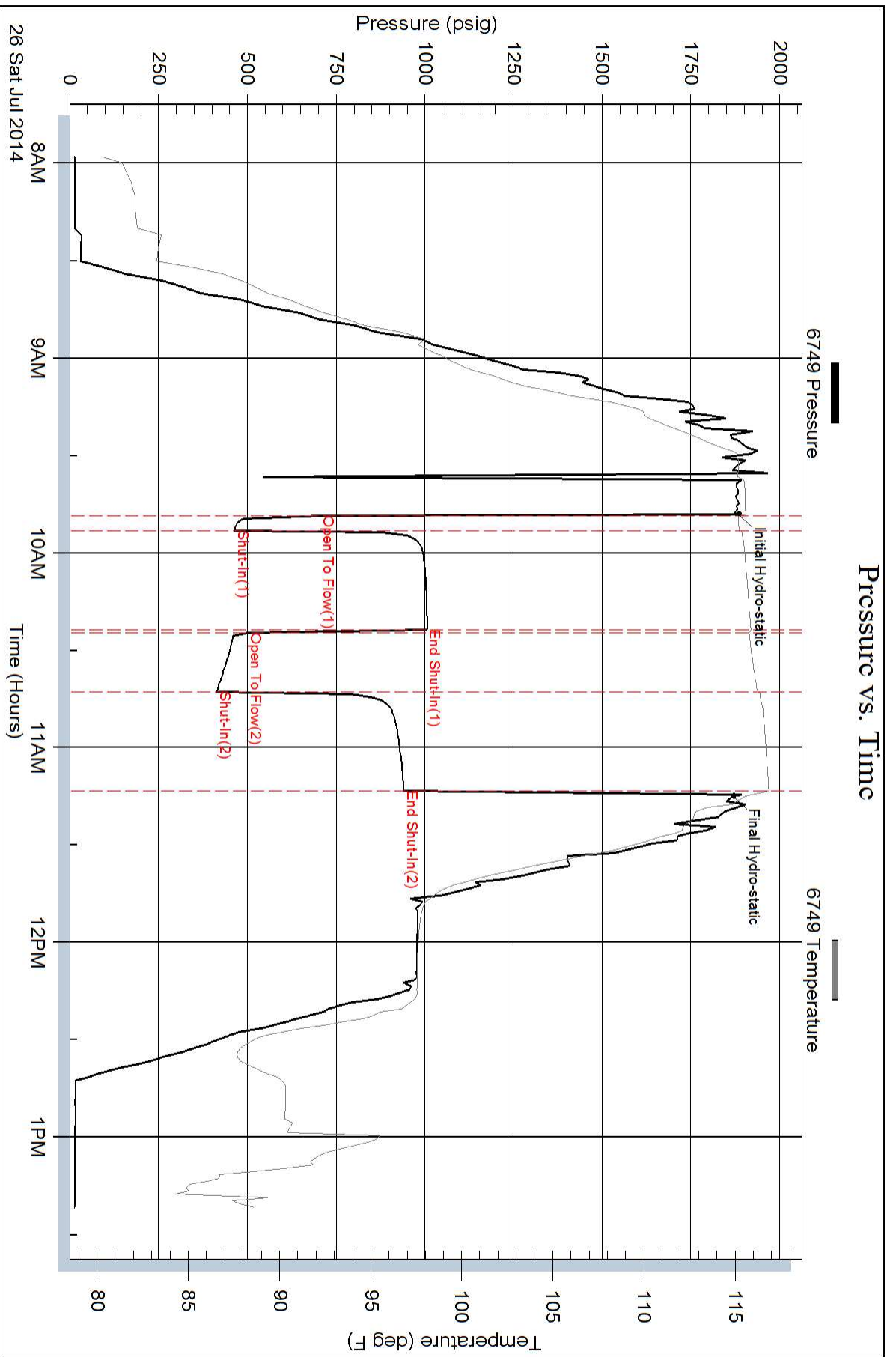
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	5	1.00	44.83	1702.79
2	5	1.50	20.00	2103.16
2	10	1.50	23.25	2301.86
2	15	1.50	21.60	2200.99
2	20	1.50	21.60	2200.99

Pressure vs. Time



Pressure vs. Time

