



## DRILL STEM TEST REPORT

Prepared For: **BIRD DOG OIL LLC**

1801 BROADWAY SUITE 450  
DENVER , COLORADO 80202

ATTN: .KEITH REAVIS

**SW-BOOR 1-29**

**29-16-10**

Start Date: 2017.03.27 @ 16:44:00

End Date: 2017.03.27 @ 21:39:00

Job Ticket #: 01164                      DST #: 4

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

Printed: 2017.03.27 @ 22:15:59

BIRD DOG OIL LLC    29-16-10    SW-BOOR 1-29    DST # 4    ARBUCKLE    2017.03.27



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Test Start: 2017.03.27 @ 16:44:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:04:00

Time Test Ended: 21:39:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3315.00 ft (KB) To 3328.00 ft (KB) (TVD)**

Reference Elevations: 1847.00 ft (KB)

Total Depth: 3328.00 ft (KB) (TVD)

1838.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 9139

Inside

Press@RunDepth: 950.24 psia @ 3323.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.03.27

End Date:

2017.03.27

Last Calib.:

2017.03.27

Start Time: 16:45:00

End Time:

21:38:00

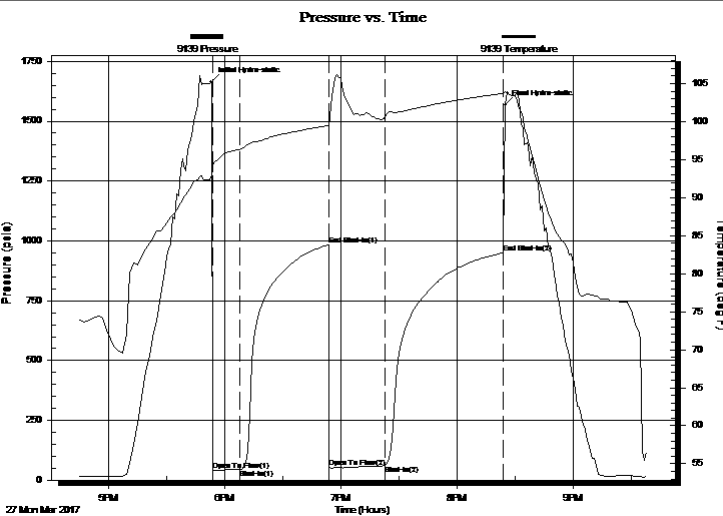
Time On Btm:

2017.03.27 @ 17:53:00

Time Off Btm:

2017.03.27 @ 20:25:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 15 MINUTES AND DIED  
1ST SHUT-IN 45 MINUTES NO BLOW BACK  
2ND OPENING 30 MINUTES WEAK BUILDING BLOW BUILT TO 2 1/2 INCHES INTO THE WATER  
2ND SHUT-IN 60 MINUTES NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1664.45	92.94	Initial Hydro-static
1	42.23	93.62	Open To Flow (1)
15	46.80	96.34	Shut-In(1)
61	983.94	99.51	End Shut-In(1)
61	52.54	99.19	Open To Flow (2)
90	60.89	100.70	Shut-In(2)
151	950.24	103.69	End Shut-In(2)
152	1567.87	103.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	30 feet of gas in the pipe	0.00
5.00	clean oil	0.07
50.00	oil cut mud 40 oil 60 mud	0.70

## Gas Rates

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



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Tester: GENE BUDIG

Unit No: 1

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Reference Elevations: 1847.00 ft (KB)

Total Depth: 3328.00 ft (KB) (TVD)

1838.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

## Serial #: 91716

Press@RunDepth: 908.54 psia @ ft (KB)

Capacity: psia

Start Date: 2017.03.27

End Date: 2017.03.27

Last Calib.: 1899.12.30

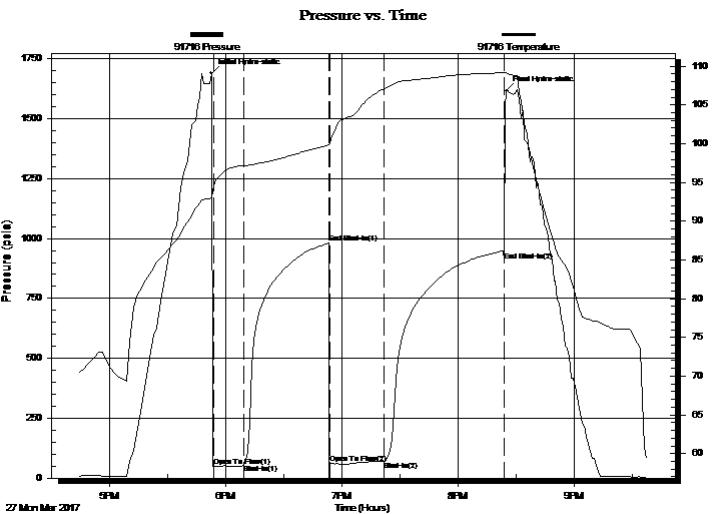
Start Time: 16:44:00

End Time: 21:37:30

Time On Btm: 2017.03.27 @ 17:52:30

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2ND OPENING 30 MINUTES WEAK BUILDING BLOW BUILT TO 2 1/2 INCHES INTO THE WATER  
2ND SHUT-IN 60 MINUTES NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1689.20	92.97	Initial Hydro-static
2	49.53	94.52	Open To Flow (1)
17	57.39	97.19	Shut-In(1)
61	979.64	99.82	End Shut-In(1)
62	60.42	100.01	Open To Flow (2)
90	69.64	107.11	Shut-In(2)
152	908.54	109.17	End Shut-In(2)
153	1616.72	109.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	30 feet of gas in the pipe	0.00
5.00	clean oil	0.07
50.00	oil cut mud 40 oil 60 mud	0.70

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

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## Tool Information

Drill Pipe:	Length: 3302.00 ft	Diameter: 3.80 inches	Volume: 46.32 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 42000.00 lb
			<u>Total Volume: 46.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3315.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	42.00 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			3291.00	
Hydraulic tool	5.00			3296.00	
Jars	7.00			3303.00	
Safety Joint	2.00		Fluid	3305.00	
Top Packer	5.00			3310.00	
Packer	5.00			3315.00	29.00 Bottom Of Top Packer
Anchor	8.00			3323.00	
Recorder	0.00	9139	Inside	3323.00	
Recorder	0.00	91716	Outside	3323.00	
Bullnose	5.00			3328.00	13.00 Anchor Tool
<b>Total Tool Length:</b>	<b>42.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

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### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 8.39 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: deg API

ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	30 feet of gas in the pipe	0.000
5.00	clean oil	0.070
50.00	oil cut mud 40 oil 60 mud	0.701

Total Length: 55.00 ft      Total Volume: 0.771 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

