



## 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 @ 03:44:00

End Date: 2017.03.27 @ 10:30:00

Job Ticket #: 01163                      DST #: 3

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

Printed: 2017.03.27 @ 10:39:50

BIRD DOG OIL LLC    29-16-10    SW-BOOR 1-29    DST # 3    ARBUCKLE    2017.03.27



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SW-BOOR 1-29

Job Ticket: 01163

DST#: 3

ATTN: KEITH REAVIS

Test Start: 2017.03.27 @ 03:44:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:03:00

Time Test Ended: 10:30:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3279.00 ft (KB) To 3323.00 ft (KB) (TVD)**

Reference Elevations: 1847.00 ft (KB)

Total Depth: 3323.00 ft (KB) (TVD)

1838.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: **91716** Outside

Press@RunDepth: 1017.04 psia @ 3318.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.03.27

End Date:

2017.03.27

Last Calib.:

2017.03.27

Start Time: 03:44:00

End Time:

10:24:00

Time On Btm:

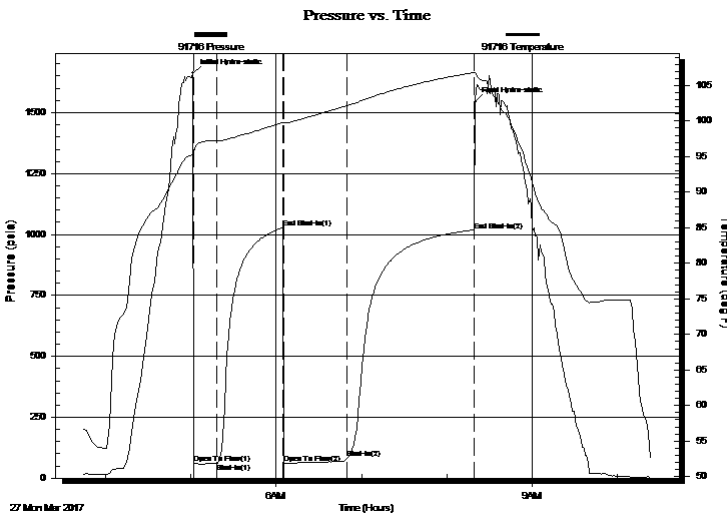
2017.03.27 @ 05:01:30

Time Off Btm:

2017.03.27 @ 08:20:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW BUILT TO 2 1/2 INCHES INTO THE WATER  
1ST SHUT-IN 45 MINUTES NO BLOW BACK  
2ND OPENING 45 MINUTES WEAK BLOW BUILT TO 6 INCHES INTO THE WATER  
2ND SHUT-IN 60 MINUTES NO BLOW BACK

## PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1661.48	95.32	Initial Hydro-static
1	59.42	95.61	Open To Flow (1)
17	60.66	97.22	Shut-In(1)
63	1027.26	99.77	End Shut-In(1)
64	62.89	99.80	Open To Flow (2)
108	79.94	102.15	Shut-In(2)
198	1017.04	106.82	End Shut-In(2)
199	1543.71	106.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL ON TOP	0.01
20.00	OIL CUT MUD 65 MUD 35 OIL	0.28
0.00	90 GAS IN THE PIPE	0.00

## Gas Rates

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



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Tester: GENE BUDIG

Unit No: 1

Interval: **3279.00 ft (KB) To 3323.00 ft (KB) (TVD)**

Reference Elevations: 1847.00 ft (KB)

Total Depth: 3323.00 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: 1024.01 psia @ 3318.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.03.27

End Date:

2017.03.27

Last Calib.:

2017.03.27

Start Time: 03:44:00

End Time:

10:24:30

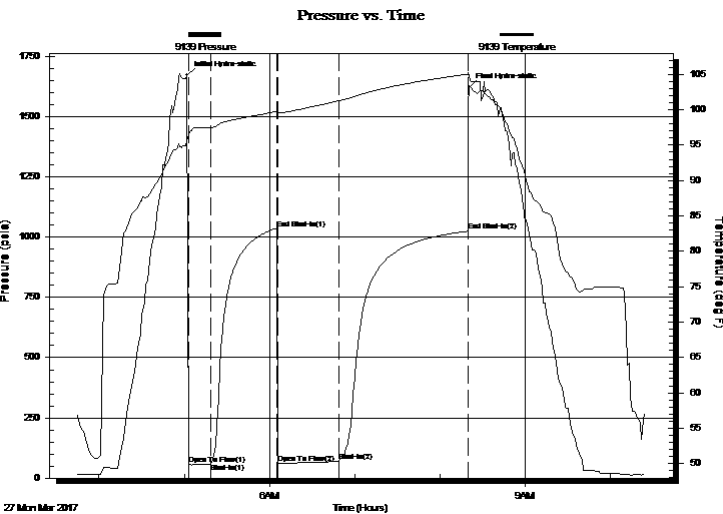
Time On Btm:

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2ND OPENING 45 MINUTES WEAK BLOW BUILT TO 6 INCHES INTO THE WATER  
2ND SHUT-IN 60 MINUTES NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1671.36	95.67	Initial Hydro-static
1	56.99	96.53	Open To Flow (1)
17	59.46	97.48	Shut-In(1)
64	1035.80	99.75	End Shut-In(1)
64	59.86	99.53	Open To Flow (2)
107	70.22	101.24	Shut-In(2)
198	1024.01	105.04	End Shut-In(2)
199	1621.52	104.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL ON TOP	0.01
20.00	OIL CUT MUD 65 MUD 35 OIL	0.28
0.00	90 GAS IN THE PIPE	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

BIRD DOG OIL LLC

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SW-BOOR 1-29

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DST#: 3

ATTN: KEITH REAVIS

Test Start: 2017.03.27 @ 03:44:00

## Tool Information

Drill Pipe:	Length: 3273.00 ft	Diameter: 3.80 inches	Volume: 45.91 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: 54000.00 lb
			<u>Total Volume: 45.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3279.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3255.00	
Hydraulic tool	5.00			3260.00	
Jars	7.00			3267.00	
Safety Joint	2.00		Fluid	3269.00	
Top Packer	5.00			3274.00	
Packer	5.00			3279.00	29.00 Bottom Of Top Packer
Anchor	39.00			3318.00	
Recorder	0.00	9139	Inside	3318.00	
Recorder	0.00	91716	Outside	3318.00	
Bullnose	5.00			3323.00	44.00 Anchor Tool
<b>Total Tool Length:</b>	<b>73.00</b>				



# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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Job Ticket: 01163

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## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 54.00 sec/qt  
Water Loss: 8.40 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: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	CLEAN OIL ON TOP	0.014
20.00	OIL CUT MUD 65 MUD 35 OIL	0.281
0.00	90 GAS IN THE PIPE	0.000

Total Length: 21.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

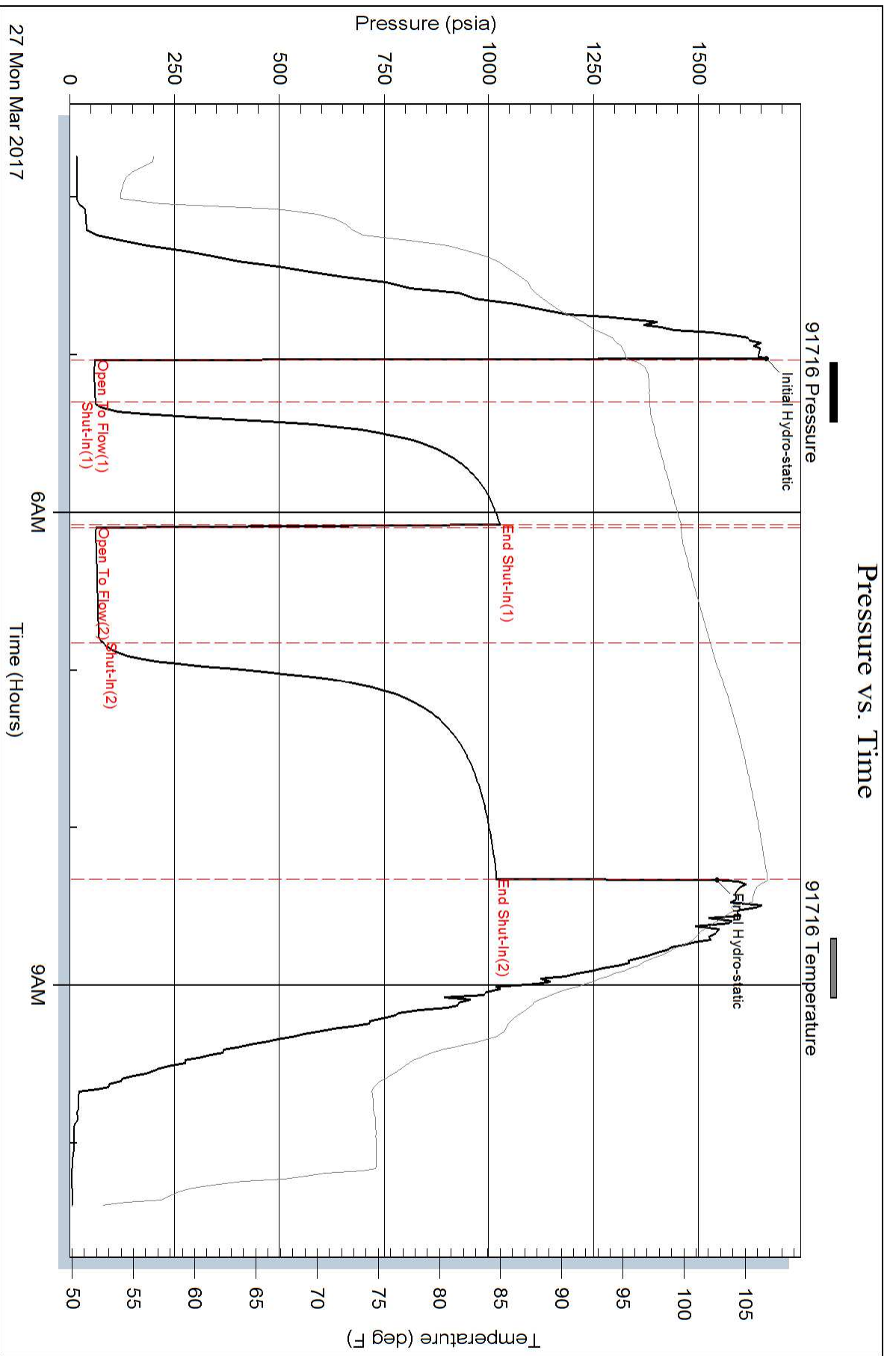
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



### Pressure vs. Time

