



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: 2017.03.25 @ 07:53:00

End Date: 2017.03.26 @ 12:32:00

Job Ticket #: 01161 DST #: 1

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

Printed: 2017.03.26 @ 00:59:19

BIRD DOG OIL LLC
29-16-10
SW-BOOR 1-29
DST # 1
KANSAS CITY I-J
2017.03.25



DRILL STEM TEST REPORT

BIRD DOG OIL LLC

29-16-10

1801 BROADWAY SUITE 450
DENVER, COLORADO 80202

SW-BOOR 1-29

ATTN: KEITH REAVIS

Job Ticket: 01161

DST#: 1

Test Start: 2017.03.25 @ 07:53:00

GENERAL INFORMATION:

Formation: **KANSAS CITY I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:40:00

Time Test Ended: 12:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3162.00 ft (KB) To 3192.00 ft (KB) (TVD)**

Reference Elevations: 1847.00 ft (KB)

Total Depth: 3162.00 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: 72.29 psia @ 3190.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.03.25

End Date:

2017.03.26

Last Calib.:

2017.03.26

Start Time: 19:53:00

End Time:

00:30:59

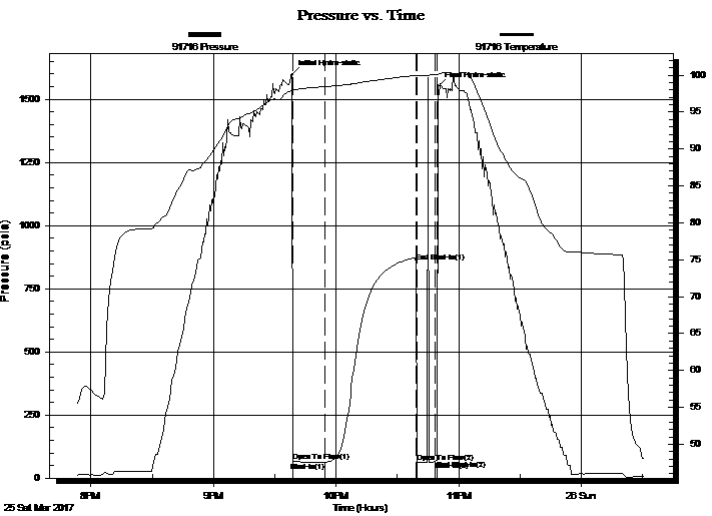
Time On Btm:

2017.03.25 @ 21:38:30

Time Off Btm:

2017.03.25 @ 22:50:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 13 MINUTES AND DIED
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 10 MINUTES NO BLOW-FLUSHED TOOL-GOOD SURGE-NO HELP
2ND SHUT-IN 05 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1596.72	97.98	Initial Hydro-static
1	65.04	98.03	Open To Flow (1)
16	64.26	98.44	Shut-In(1)
61	858.23	99.97	End Shut-In(1)
61	63.12	99.96	Open To Flow (2)
70	66.72	100.04	Shut-In(2)
71	72.29	100.07	End Shut-In(2)
72	1550.84	100.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	DRILLING MUD	0.28
0.00	THERE WERE A FES SPOTS OF OIL BET	0.001
0.00	THE SHUT-IN AND HYDRAULIC TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

BIRD DOG OIL LLC

29-16-10

1801 BROADWAY SUITE 450
DENVER, COLORADO 80202

SW-BOOR 1-29

Job Ticket: 01161

DST#: 1

ATTN: KEITH REAVIS

Test Start: 2017.03.25 @ 07:53:00

GENERAL INFORMATION:

Formation: **KANSAS CITY I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:40:00

Time Test Ended: 12:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3162.00 ft (KB) To 3192.00 ft (KB) (TVD)**

Reference Elevations: 1847.00 ft (KB)

Total Depth: 3162.00 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: 68.66 psia @ 3190.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.03.25

End Date:

2017.03.26

Last Calib.:

2017.03.26

Start Time: 19:53:00

End Time:

00:31:30

Time On Btm:

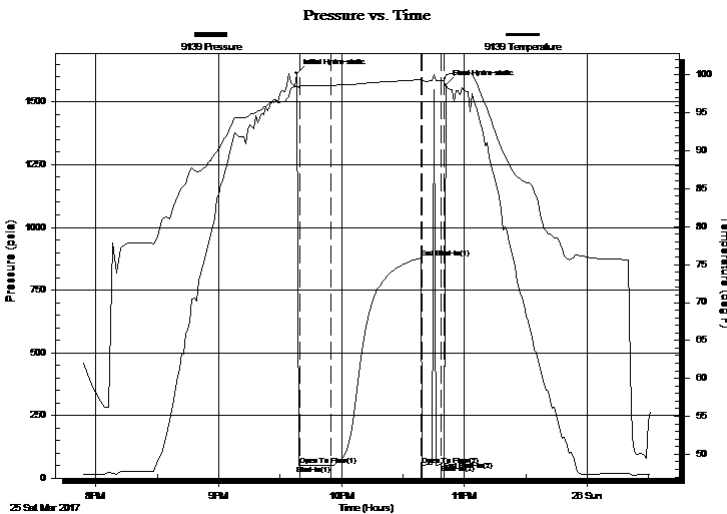
2017.03.25 @ 21:38:00

Time Off Btm:

2017.03.25 @ 22:51:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 13 MINUTES AND DIED
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 10 MINUTES NO BLOW-FLUSHED TOOL-GOOD SURGE-NO HELP
2ND SHUT-IN 05 MINUTES NO BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1614.85	98.45	Initial Hydro-static
2	49.87	98.58	Open To Flow (1)
17	49.52	98.64	Shut-In(1)
61	877.31	99.38	End Shut-In(1)
62	52.29	99.13	Open To Flow (2)
71	56.99	99.28	Shut-In(2)
72	68.66	99.31	End Shut-In(2)
73	1569.01	100.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	DRILLING MUD	0.28
0.00	THERE WERE A FES SPOTS OF OIL BET	0.001
0.00	THE SHUT-IN AND HYDRAULIC TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

BIRD DOG OIL LLC

29-16-10

1801 BROADWAY SUITE 450
DENVER, COLORADO 80202

SW-BOOR 1-29

Job Ticket: 01161

DST#: 1

ATTN: KEITH REAVIS

Test Start: 2017.03.25 @ 07:53:00

Tool Information

Drill Pipe:	Length: 3146.00 ft	Diameter: 3.80 inches	Volume: 44.13 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: 44.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3162.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Hydraulic tool	5.00			3138.00	
Jars	7.00			3145.00	
Shut In Tool	5.00			3150.00	
Safety Joint	2.00		Fluid	3152.00	
Top Packer	5.00			3157.00	
Packer	5.00			3162.00	29.00 Bottom Of Top Packer
Anchor	28.00			3190.00	
Recorder	0.00	9139	Inside	3190.00	
Recorder	0.00	91716	Outside	3190.00	
Bullnose	5.00			3195.00	33.00 Anchor Tool
Total Tool Length:	62.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

BIRD DOG OIL LLC

29-16-10

1801 BROADWAY SUITE 450
DENVER, COLORADO 80202

SW-BOOR 1-29

Job Ticket: 01161

DST#: 1

ATTN: . KEITH REAVIS

Test Start: 2017.03.25 @ 07:53:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 58.00 sec/qt
Water Loss: 9.40 in³
Resistivity: 3600.00 ohm.m
Salinity: ppm
Filter Cake: 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
20.00	DRILLING MUD	0.281
0.00	THERE WERE A FES SPOTS OF OIL BETWEEN	0.000
0.00	THE SHUT-IN AND HYDRAULIC TOOLS	0.000

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

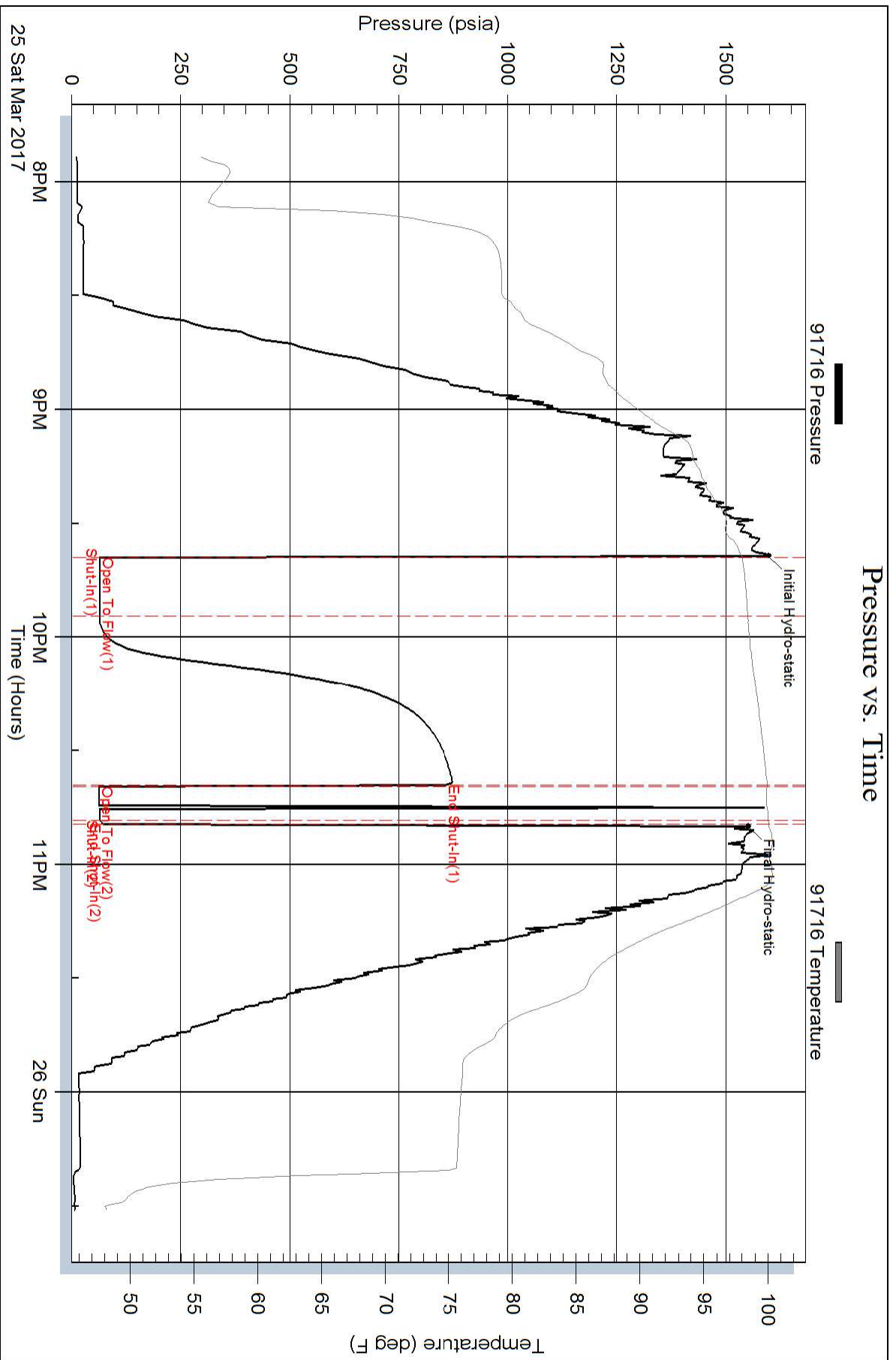
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

