



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Pioneer Resources, Inc  
80 Windmill Dr.  
Phillipsburg, Ks 67661  
ATTN: Jason Alm

**13 14s 32w Logan, Ks**

**Knopp #7**

Job Ticket: 61351

**DST#: 1**

Test Start: 2017.04.21 @ 23:31:00

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:20:30

Time Test Ended: 07:07:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

**Interval: 3861.00 ft (KB) To 3920.00 ft (KB) (TVD)**

Reference Elevations: 2845.00 ft (KB)

Total Depth: 3920.00 ft (KB) (TVD)

2837.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8845**

**Outside**

Press@RunDepth: 202.02 psig @ 3862.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.04.21

End Date:

2017.04.22

Last Calib.:

2017.04.22

Start Time: 23:31:05

End Time:

07:07:29

Time On Btm:

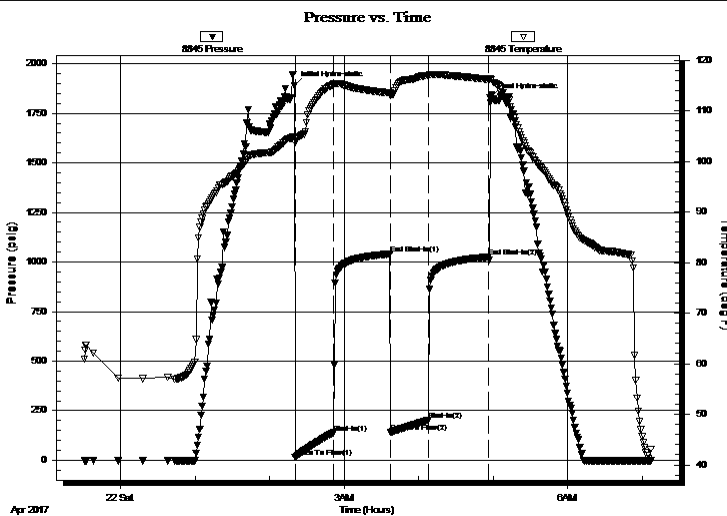
2017.04.22 @ 02:20:00

Time Off Btm:

2017.04.22 @ 04:57:30

**TEST COMMENT:** IF: BOB @ 15 min.  
IS: No return.  
FF: BOB @ 20 min.  
FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1888.41	104.83	Initial Hydro-static
1	13.53	103.73	Open To Flow (1)
32	138.45	115.12	Shut-In(1)
77	1040.27	113.52	End Shut-In(1)
78	143.03	112.95	Open To Flow (2)
108	202.02	116.96	Shut-In(2)
157	1025.20	116.18	End Shut-In(2)
158	1827.16	116.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
430.00	mcw 15m 85w (oil puddle on top)	4.60

## Gas Rates

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





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**FLUID SUMMARY**

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## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

39000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
430.00	mcw 15m 85w (oil puddle on top)	4.602

Total Length: 430.00 ft      Total Volume: 4.602 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .269 @ 48F = 39000ppm

