



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

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

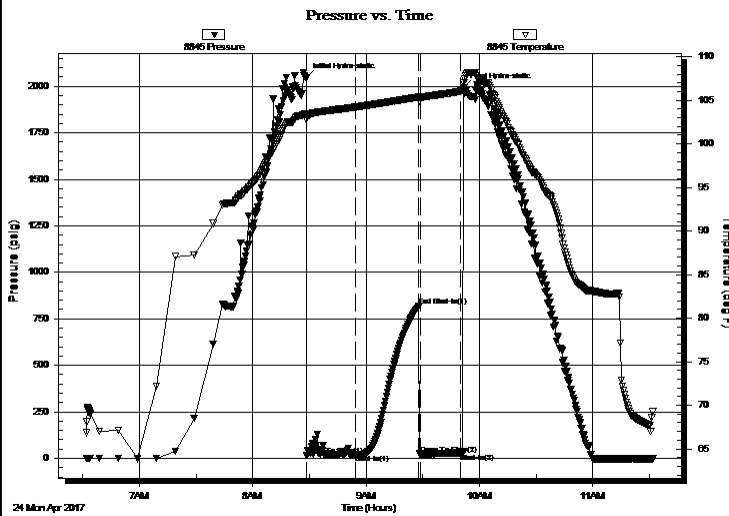
**13 14s 32w Logan, Ks**  
**Knopp #7**  
 Job Ticket: 61354 **DST#: 4**  
 Test Start: 2017.04.24 @ 06:32:00

### GENERAL INFORMATION:

Formation: **LKC J - L**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:28:30  
 Time Test Ended: 11:32:00  
**Interval: 4085.00 ft (KB) To 4185.00 ft (KB) (TVD)**  
 Total Depth: 4185.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Bradley Walter  
 Unit No: 78  
 Reference Elevations: 2845.00 ft (KB)  
 2837.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8845 Outside**  
 Press@RunDepth: 20.89 psig @ 4090.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.04.24 End Date: 2017.04.24 Last Calib.: 2017.04.24  
 Start Time: 06:32:05 End Time: 11:31:59 Time On Btm: 2017.04.24 @ 08:28:15  
 Time Off Btm: 2017.04.24 @ 09:51:45

**TEST COMMENT:** IF: 1" blow,  
 IS: No return.  
 FF: Surface blow.  
 FS: Pulled test.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2044.88	103.42	Initial Hydro-static
1	16.57	102.78	Open To Flow (1)
27	20.89	104.22	Shut-In(1)
60	820.34	105.36	End Shut-In(1)
61	23.23	105.25	Open To Flow (2)
82	25.99	106.05	Shut-In(2)
84	1991.42	107.04	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100m (oil spots)	0.15

\* Recovery from multiple tests

### Gas Rates

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



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**Knopp #7**

Job Ticket: 61354

**DST#: 4**

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 Hole Condition: Good  
 KB to GR/CF: 8.00 ft

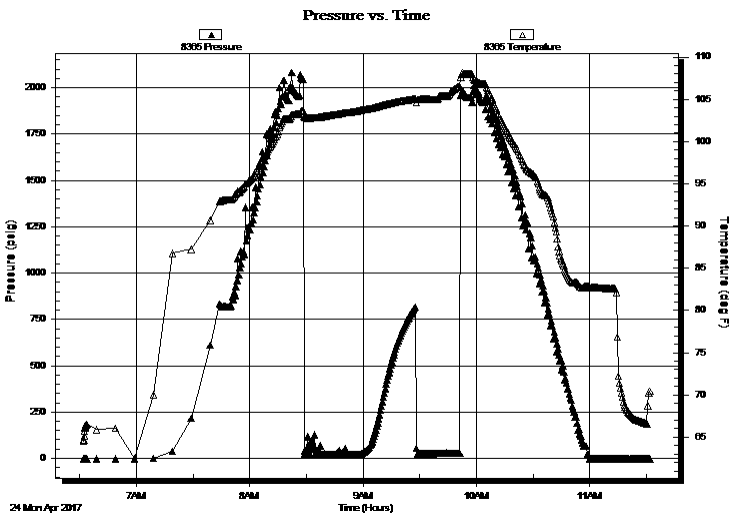
**Serial #: 8365**

**Inside**

Press@RunDepth: psig @ 4090.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2017.04.24	End Date: 2017.04.24
Start Time: 06:32:05	End Time: 11:31:59
	Last Calib.: 2017.04.24
	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** IF: 1" blow,  
 IS: No return.  
 FF: Surface blow.  
 FS: Pulled test.

**PRESSURE SUMMARY**



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
20.00	mud 100m (oil spots)	0.15

**Gas Rates**

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pioneer Resources, Inc

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

80 Windmill Dr.  
Phillipsburg, Ks 67661

**Knopp #7**

Job Ticket: 61354

**DST#: 4**

ATTN: Jason Alm

Test Start: 2017.04.24 @ 06:32:00

## 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:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100m (oil spots)	0.147

Total Length: 20.00 ft      Total Volume: 0.147 bbl

Num Fluid Samples: 0

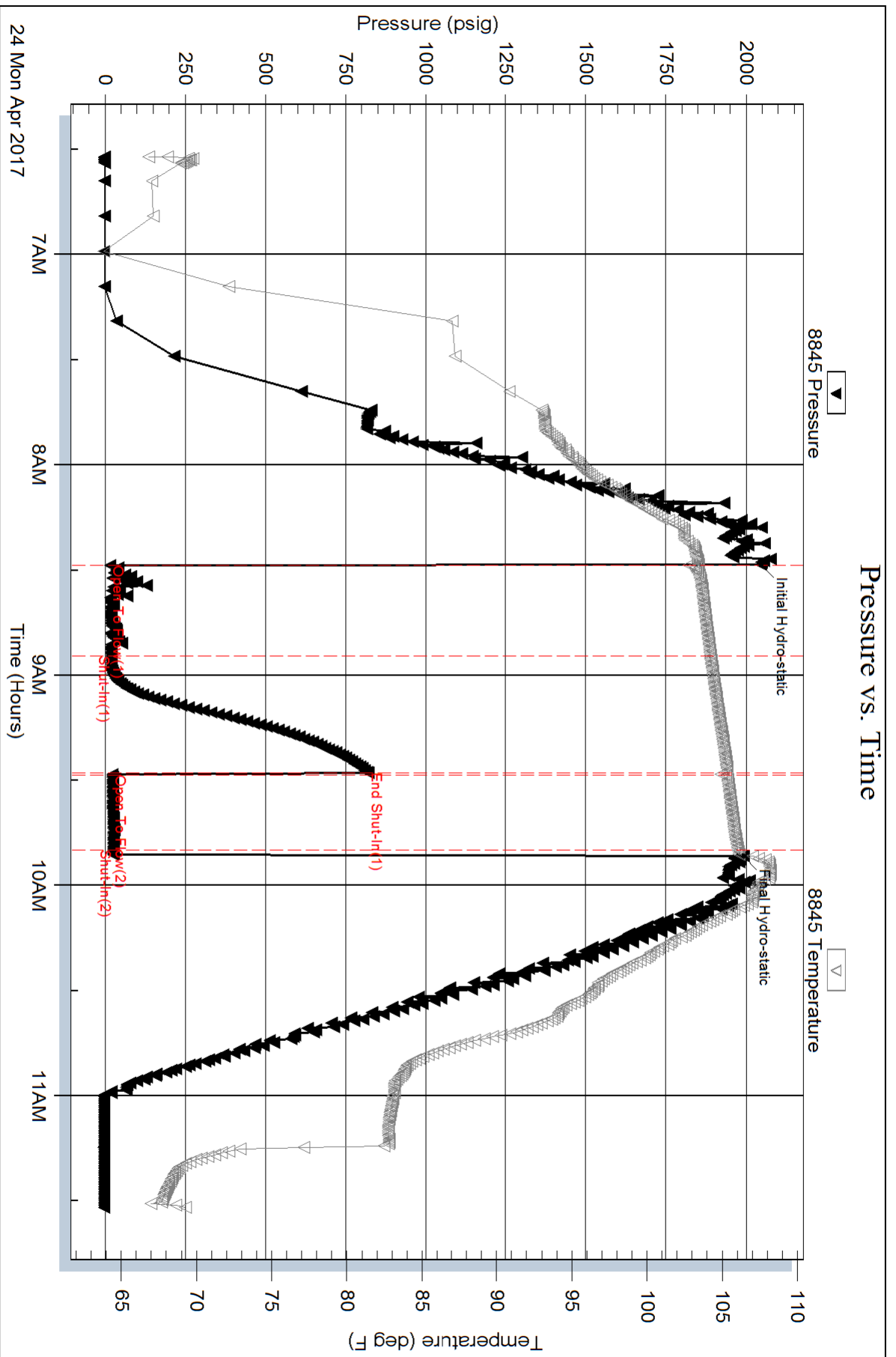
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8365

Inside

Pioneer Resources, Inc

Knopp #7

DST Test Number: 4

