



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

DNOC  
 PO Box 1019  
 Hays, KS 67601  
 ATTN: Marc Downing

**Franz Trust 1-19**  
**19-20-20 Pawnee KS**  
 Job Ticket: 41795 **DST#: 3**  
 Test Start: 2011.03.07 @ 13:09:04

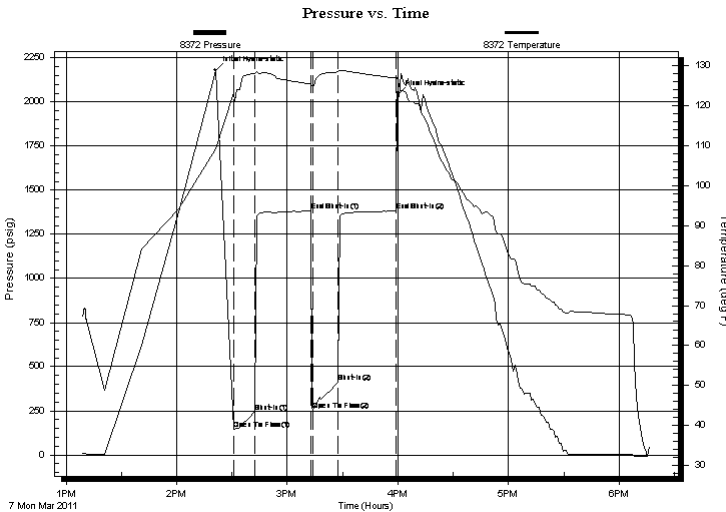
## GENERAL INFORMATION:

Formation: **Miss (3)**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:31:03  
 Time Test Ended: 18:16:33  
**Interval: 4370.00 ft (KB) To 4390.00 ft (KB) (TVD)**  
 Total Depth: 4485.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition:  
 Test Type: Conventional Straddle  
 Tester: Brian Fairbank  
 Unit No: 41  
 Reference Elevations: 2204.00 ft (KB)  
 2196.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8372 Inside**  
 Press @ Run Depth: 409.59 psig @ 4375.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.03.07 End Date: 2011.03.07 Last Calib.: 2011.03.07  
 Start Time: 13:09:04 End Time: 18:16:33 Time On Btm: 2011.03.07 @ 14:21:03  
 Time Off Btm: 2011.03.07 @ 16:00:03

TEST COMMENT: IFP - BOB 3 min  
 ISI - no blow back  
 FFP - BOB 3 min  
 FSI - no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2178.89	109.19	Initial Hydro-static
10	145.30	123.24	Open To Flow (1)
22	244.48	128.07	Shut-In(1)
52	1381.44	125.44	End Shut-In(1)
53	254.69	124.81	Open To Flow (2)
67	409.59	128.42	Shut-In(2)
98	1381.24	126.91	End Shut-In(2)
99	2043.10	126.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
885.00	MW 90%W, 10%M	12.13

## Gas Rates

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



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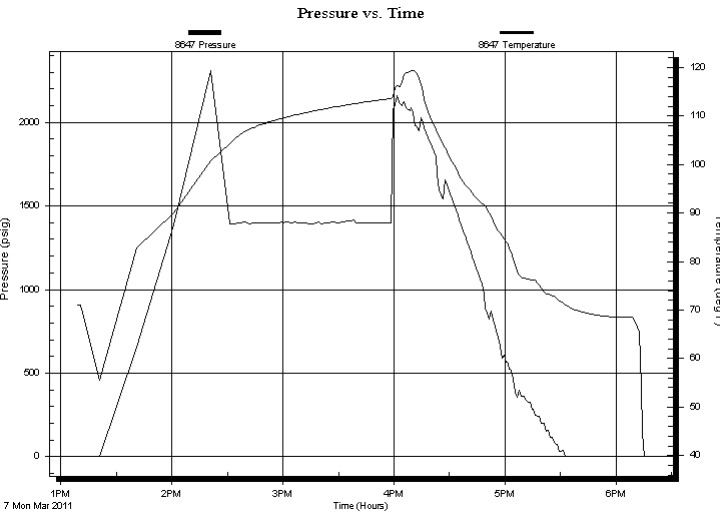
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**19-20-20 Pawnee KS**  
Job Ticket: 41795      **DST#: 3**  
Test Start: 2011.03.07 @ 13:09:04

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Deviated: No Whipstock:                      ft (KB)      Test Type: Conventional Straddle  
Time Tool Opened: 14:31:03      Tester: Brian Fairbank  
Time Test Ended: 18:16:33      Unit No: 41  
**Interval: 4370.00 ft (KB) To 4390.00 ft (KB) (TVD)**      Reference Elevations: 2204.00 ft (KB)  
Total Depth: 4485.00 ft (KB) (TVD)      2196.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition:      KB to GR/CF: 8.00 ft

**Serial #: 8647      Below (Straddle)**  
Press @ Run Depth:                      psig @ 4396.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.03.07      End Date: 2011.03.07      Last Calib.: 2011.03.07  
Start Time: 13:09:04      End Time: 18:16:03      Time On Btm:  
Time Off Btm:

TEST COMMENT: IFP - BOB 3 min  
ISI - no blow back  
FFP - BOB 3 min  
FSI - no blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
885.00	MW 90%W, 10%M	12.13

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



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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

DNOC  
PO Box 1019  
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**Franz Trust 1-19**  
**19-20-20 Pawnee KS**  
Job Ticket: 41795      **DST#: 3**  
Test Start: 2011.03.07 @ 13:09:04

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	45000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7200.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
885.00	MW 90%W, 10%M	12.132

Total Length: 885.00 ft      Total Volume: 12.132 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

