



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

DNOC  
 P.O. Box 372  
 Hays, Ks 67601  
 ATTN: Marc Downing

**IFS Unit 1-19**  
**19/20S/20W-Pawnee**  
 Job Ticket: 41844 **DST#: 2**  
 Test Start: 2011.02.25 @ 02:34:10

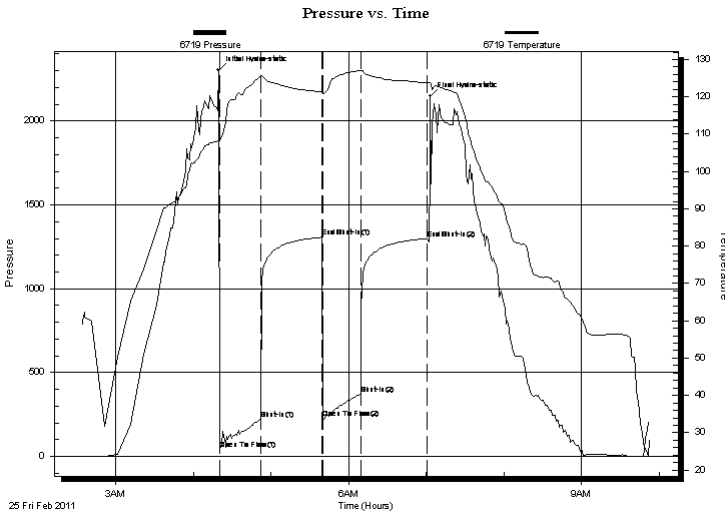
## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:20:10  
 Time Test Ended: 09:52:40  
 Interval: **4294.00 ft (KB) To 4368.00 ft (KB) (TVD)**  
 Total Depth: 4368.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole  
 Tester: Dustin Rash  
 Unit No: 47  
 Reference Elevations: 2219.00 ft (KB)  
 2213.00 ft (CF)  
 KB to GR/CF: 6.00 ft

**Serial #: 6719 Inside**  
 Press @ Run Depth: 373.06 psig @ 4296.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.02.25 End Date: 2011.02.25 Last Calib.: 2011.02.25  
 Start Time: 02:34:15 End Time: 09:52:39 Time On Btm: 2011.02.25 @ 04:19:10  
 Time Off Btm: 2011.02.25 @ 07:03:10

**TEST COMMENT:** IF-Strong building blow . BOB in 8 minutes 20 seconds.  
 ISI-No Return.  
 FF-Strong building blow . BOB in 9 minutes.  
 FSI-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2302.40	108.21	Initial Hydro-static
1	42.50	108.13	Open To Flow (1)
33	221.32	125.38	Shut-In(1)
80	1307.31	121.31	End Shut-In(1)
81	227.15	121.00	Open To Flow (2)
110	373.06	127.00	Shut-In(2)
162	1300.16	123.75	End Shut-In(2)
164	2146.83	123.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
496.00	70%Water/12.5%Gas/12.5%Oil/5%Mud	6.68
248.00	40%Water/40%Mud/10%Oil/10%Gas	3.48
33.00	50%Mud/20%Water/15%Oil/15%Gas	0.46
2.00	90%Oil/10%Gas	0.03

## Gas Rates

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



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**FLUID SUMMARY**

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Job Ticket: 41844

**DST#: 2**

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## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	42000 ppm
Viscosity: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.44 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
496.00	70%Water/12.5%Gas/12.5%Oil/5%Mud	6.675
248.00	40%Water/40%Mud/10%Oil/10%Gas	3.479
33.00	50%Mud/20%Water/15%Oil/15%Gas	0.463
2.00	90%Oil/10%Gas	0.028

Total Length: 779.00 ft      Total Volume: 10.645 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

