

**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Woolsey Operating Co  
 125 N Market Ste 1000  
 Wichita, KS 67202  
 ATTN: Bill Klaver

**31-30S-6W Kingman**

**Harder 2**

Job Ticket: 64971

**DST#: 2**

Test Start: 2019.05.25 @ 17:15:00

## GENERAL INFORMATION:

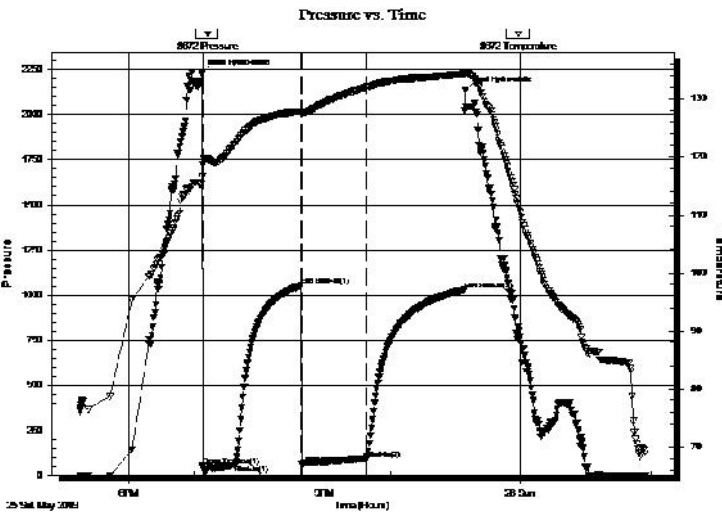
Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 19:07:32  
 Tester: Leal Cason  
 Time Test Ended: 01:55:02  
 Unit No: 74  
 Interval: **4343.00 ft (KB) To 4355.00 ft (KB) (TVD)**  
 Reference Elevations: 1592.00 ft (KB)  
 Total Depth: 4355.00 ft (KB) (TVD)  
 1580.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 12.00 ft

## Serial #: 8672

**Inside**

Press@RunDepth: 94.72 psig @ 4344.00 ft (KB) Capacity: psig  
 Start Date: 2019.05.25 End Date: 2019.05.26 Last Calib.: 2019.05.26  
 Start Time: 17:15:01 End Time: 01:55:02 Time On Btm: 2019.05.25 @ 19:06:47  
 Time Off Btm: 2019.05.25 @ 23:09:02

**TEST COMMENT:** IF: Fair Blow , BOB in 8 minutes, Built to 27 inches  
 IS: No Blow Back  
 FF: Fair Blow , BOB in 24 minutes, Built to 34 inches  
 FS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.64	115.23	Initial Hydro-static
1	51.79	116.61	Open To Flow (1)
31	61.41	122.33	Shut-In(1)
92	1052.92	127.86	End Shut-In(1)
92	66.19	127.64	Open To Flow (2)
152	94.72	132.01	Shut-In(2)
242	1029.63	134.28	End Shut-In(2)
243	2134.67	134.56	Final Hydro-static

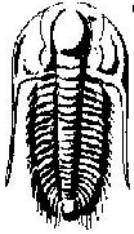
## Recovery

Length (ft)	Description	Volume (bbl)
0.00	209 GIP	0.00
121.00	MCW 10%M 90%W	0.60
40.00	SOCM 2%O 98%M	0.56

## Gas Rates

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

\* Recovery from multiple tests



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**Harder 2**

ATTN: Bill Klaver

Job Ticket: 64971      **DST#: 2**

Test Start: 2019.05.25 @ 17:15:00

**GENERAL INFORMATION:**

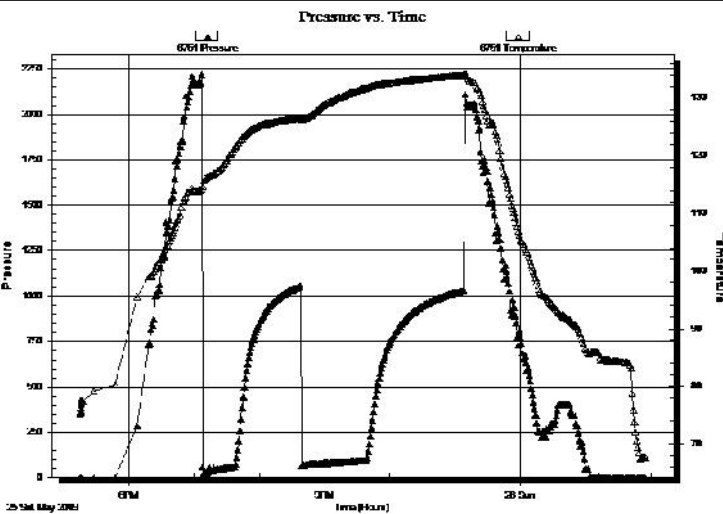
Formation: **Mississippi**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 19:07:32      Tester: Leal Cason  
Time Test Ended: 01:55:02      Unit No: 74  
**Interval: 4343.00 ft (KB) To 4355.00 ft (KB) (TVD)**  
Total Depth: 4355.00 ft (KB) (TVD)      Reference Elevations: 1592.00 ft (KB)  
Hole Diameter: 7.88 inches Hole Condition: Good      1580.00 ft (CF)  
KB to GR/CF: 12.00 ft

**Serial #: 6751**

**Outside**

Press@RunDepth:      psig @ 4344.00 ft (KB)      Capacity:      psig  
Start Date: 2019.05.25      End Date: 2019.05.26      Last Calib.: 2019.05.26  
Start Time: 17:15:01      End Time: 01:55:02      Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF: Fair Blow , BOB in 8 minutes, Built to 27 inches  
IS: No Blow Back  
FF: Fair Blow , BOB in 24 minutes, Built to 34 inches  
FS: No Blow Back



**PRESSURE SUMMARY**

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

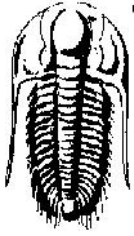
**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	209 GIP	0.00
121.00	MCW 10%M 90%W	0.60
40.00	SOCM 2%O 98%M	0.56

**Gas Rates**

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co  
125 N Market Ste 1000  
Wichita, KS 67202  
ATTN: Bill Klaver

**31-30S-6W Kingman**  
**Harder 2**  
Job Ticket: 64971      **DST#: 2**  
Test Start: 2019.05.25 @ 17:15:00

## 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: 72000 ppm	
Viscosity: 69.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	209 GIP	0.000
121.00	MCW 10%M 90%W	0.595
40.00	SOCM 2%O 98%M	0.561

Total Length: 161.00 ft      Total Volume: 1.156 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: RW w as .12 @ 64 degrees

Serial #: 8672

Inside

Woodsey Operating Co

Harder 2

DST Test Number: 2

### Pressure vs. Time

