

**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Chieftain Oil Co Inc.  
605 S.6th, P.O.Box 124  
Kiowa, KS 67070  
ATTN: David Barker

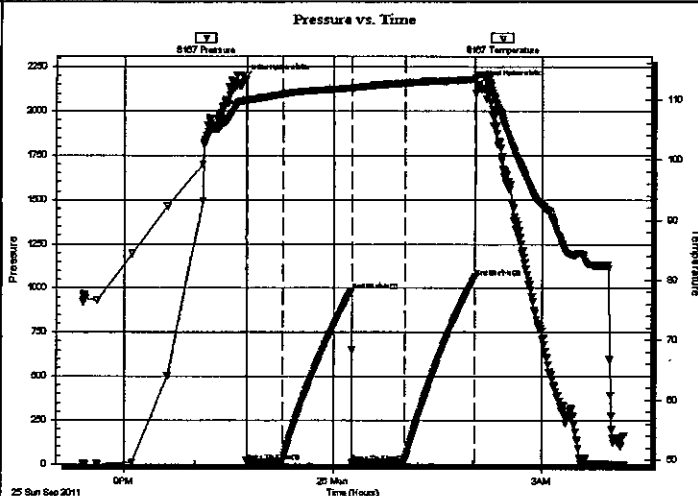
**Jake #2**  
**18-33s-10w Barber,KS**  
Job Ticket: 43973      DST#: 1  
Test Start: 2011.09.25 @ 20:24:37

### GENERAL INFORMATION:

Formation: **Hertha**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 22:45:07  
Time Test Ended: 04:10:22  
Interval: **4456.00 ft (KB) To 4482.00 ft (KB) (TVD)**  
Total Depth: 4482.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Gary Revoteaux  
Unit No: 56  
Reference Elevations: 1629.00 ft (KB)  
1621.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8167**      Inside  
Press@RunDepth: 15.56 psig @ 4457.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.09.25      End Date: 2011.09.26      Last Calib.: 2011.09.26  
Start Time: 20:24:42      End Time: 04:10:21      Time On Btm: 2011.09.25 @ 22:42:52  
Time Off Btm: 2011.09.26 @ 02:04:37

TEST COMMENT: IF: Strong blow . B.O.B. in 4 mins.  
IS: No blow .  
FF: Strong blow . B.O.B. in 2 secs.  
FS: No blow .



### PRESSURE SUMMARY

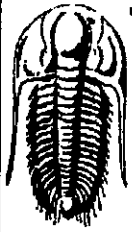
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.55	109.82	Initial Hydro-static
3	14.95	109.58	Open To Flow (1)
34	17.68	110.86	Shut-In(1)
93	987.16	111.90	End Shut-In(1)
93	11.22	111.68	Open To Flow (2)
138	15.56	112.67	Shut-In(2)
200	1065.06	113.37	End Shut-In(2)
202	2154.03	114.16	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud w a trace of oil	0.10
0.00	2040 ft. of GIP	0.00

### Gas Rates

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



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**TOOL DIAGRAM**

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ATTN: David Barker

**Jake #2**  
**18-33s-10w Barber,KS**  
Job Ticket: 43973      **DST#: 1**  
Test Start: 2011.09.25 @ 20:24:37

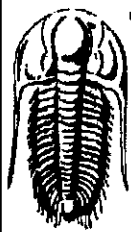
**Tool Information**

Drill Pipe:	Length: 4329.00 ft	Diameter: 3.80 inches	Volume: 60.72 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 61.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4456.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4429.00	
Shut in tool	5.00			4434.00	
HMV	5.00			4439.00	
Jars	5.00			4444.00	
Safety Joint	3.00			4447.00	
Packer	4.00			4451.00	28.00 Bottom Of Top Packer
Packer	5.00			4456.00	
Stubb	1.00			4457.00	
Recorder	0.00	8167	Inside	4457.00	
Recorder	0.00	8370	Outside	4457.00	
Perforations	20.00			4477.00	
Bullnose	5.00			4482.00	26.00 Bottom Packers & Anchor

**Total Tool Length: 54.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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Kiowa, KS 67070  
ATTN: David Barker

**Jake #2**  
**18-33s-10w Barber,KS**  
Job Ticket: 43973      **DST#: 1**  
Test Start: 2011.09.25 @ 20:24:37

## Mud and Cushion Information

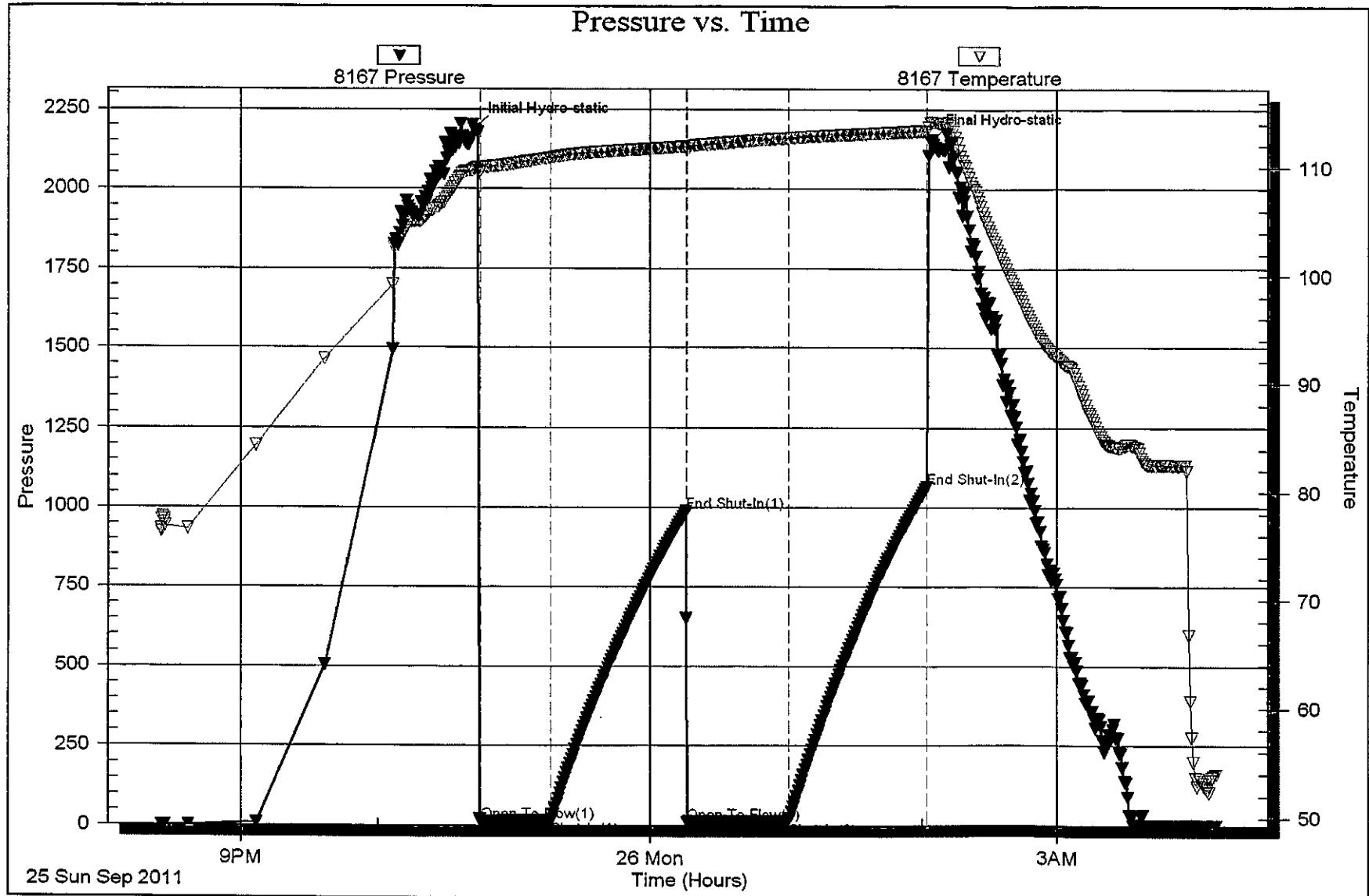
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	3500 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.59 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 0.20 inches			

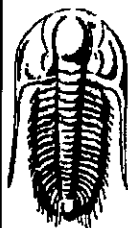
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud w a trace of oil	0.098
0.00	2040 ft.of GIP	0.000

Total Length: 20.00 ft      Total Volume: 0.098 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
 Laboratory Name: Caraway      Laboratory Location:  
 Recovery Comments: P





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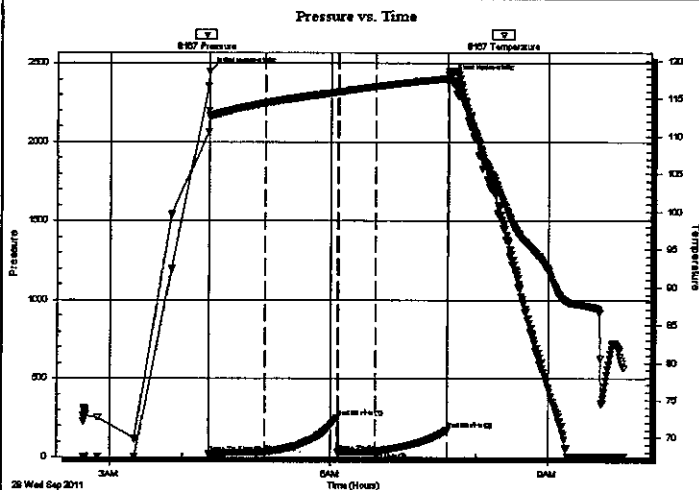
**Jake #2**  
**18-33s-10w Barber,KS**  
Job Ticket: 43974      **DST#: 2**  
Test Start: 2011.09.28 @ 02:38:06

### GENERAL INFORMATION:

Formation: **Misener**  
Deviated: **No** Whipstock:                      ft (KB)  
Time Tool Opened: 04:21:06  
Time Test Ended: 10:02:06  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Gary Pavoteaux  
Unit No: 56  
Interval: **4896.00 ft (KB) To 5010.00 ft (KB) (TVD)**  
Reference Elevations: 1629.00 ft (KB)  
Total Depth: 5010.00 ft (KB) (TVD)                      1621.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair                      KB to GR/CF: 8.00 ft

**Serial #: 8167**      **Inside**  
Press@RunDepth: 37.94 psig @ 4897.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.09.28      End Date: 2011.09.28      Last Calib.: 2011.09.28  
Start Time: 02:38:11      End Time: 10:02:05      Time On Btm: 2011.09.28 @ 04:20:51  
Time Off Btm: 2011.09.28 @ 07:38:21

TEST COMMENT: IF:Weak blow . 1/2 - 1 1/2".  
IS:No blow .  
FF:No blow .  
FS:No blow .



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2449.40	113.37	Initial Hydro-static
1	21.90	112.79	Open To Flow (1)
46	30.77	114.43	Shut-In(1)
105	254.84	115.93	End Shut-In(1)
106	30.84	115.90	Open To Flow (2)
136	37.94	116.64	Shut-In(2)
196	173.19	117.71	End Shut-In(2)
198	2403.68	118.74	Final Hydro-static

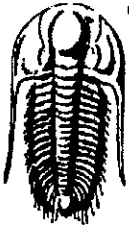
### Recovery

Length (ft)	Description	Volume (bbl)
25.00	Drilling mud	0.12

\* Recovery from multiple tests

### Gas Rates

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



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**TOOL DIAGRAM**

Chieftain Oil Co Inc.

**Jake #2**

605 S.6th, P.O.Box 124  
Kiowa, KS 67070

**18-33s-10w Barber,KS**

Job Ticket: 43974

**DST#: 2**

ATTN: David Barker

Test Start: 2011.09.28 @ 02:38:06

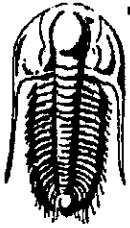
### Tool Information

Drill Pipe:	Length: 4761.00 ft	Diameter: 3.80 inches	Volume: 66.78 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 67.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4896.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	114.00 ft			
Tool Length:	142.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4869.00	
Shut in tool	5.00			4874.00	
HMV	5.00			4879.00	
Jars	5.00			4884.00	
Safety Joint	3.00			4887.00	
Packer	4.00			4891.00	28.00 Bottom Of Top Packer
Packer	5.00			4896.00	
Stubb	1.00			4897.00	
Recorder	0.00	8167	Inside	4897.00	
Recorder	0.00	8370	Outside	4897.00	
Perforations	7.00			4904.00	
Blank Spacing	95.00			4999.00	
Perforations	6.00			5005.00	
Bullnose	5.00			5010.00	114.00 Bottom Packers & Anchor

**Total Tool Length: 142.00**



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**18-33s-10w Barber,KS**

Job Ticket: 43974

**DST#: 2**

ATTN: David Barker

Test Start: 2011.09.28 @ 02:38:06

**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:

4400 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
25.00	Drilling mud	0.123

Total Length: 25.00ft

Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

