

**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Chieftain Oil Co.Inc.**

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

ATTN: Arden Ratzlaff

**6-35s-11w Barber KS**

**Big Chief #2**

Start Date: 2011.03.25 @ 20:06:47

End Date: 2011.03.26 @ 05:46:32

Job Ticket #: 041621      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Chieftain Oil Co.Inc.

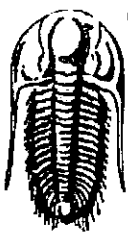
Big Chief #2

6-35s-11w Barber KS

DST # 1

Swopa

2011.03.25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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

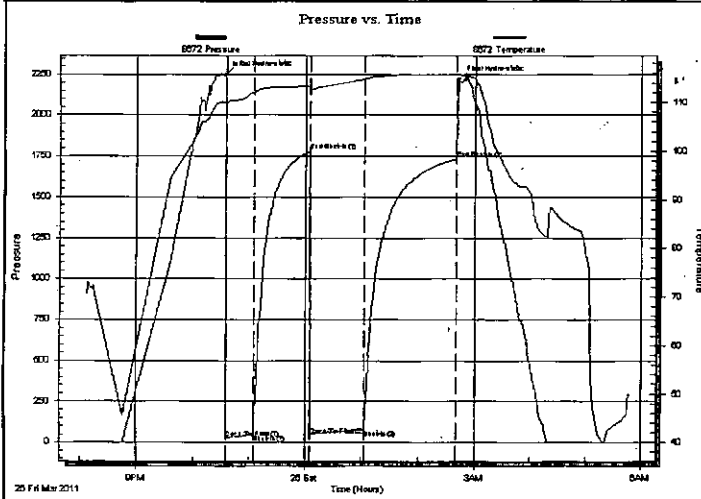
**Big Chief #2**  
**6-35s-11w Barber KS**  
Job Ticket: 041621      **DST#: 1**  
Test Start: 2011.03.25 @ 20:06:47

## GENERAL INFORMATION:

Formation: **Swope**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 22:35:17  
Time Test Ended: 05:46:32  
Test Type: Conventional Straddle  
Tester: Gary Pavoteaux  
Unit No: 56  
Interval: 4517.00 ft (KB) To 4549.00 ft (KB) (TVD)  
Reference Elevations: 1404.00 ft (KB)  
Total Depth: 4721.00 ft (KB) (TVD)      1394.00 ft (CF)  
Hole Diameter: 7.88 inches      Hole Condition: Poor      KB to GR/CF: 10.00 ft

**Serial #: 8672**      Inside  
Press@RunDepth: 78.38 psig @ 4518.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.03.25      End Date: 2011.03.26      Last Calib.: 2011.03.26  
Start Time: 20:06:52      End Time: 05:46:32      Time On Btm: 2011.03.25 @ 22:34:02  
Time Off Btm: 2011.03.26 @ 02:42:47

**TEST COMMENT:** IF: Strong blow . B.O.B. in 40secs .GTS in 29 mins.  
IS: Weak blow . 1"  
FF: Strong blow . B.O.B. in 2 secs.(see gas flow report)  
FS: Weak blow . 1 - 1 1/2".



## PRESSURE SUMMARY

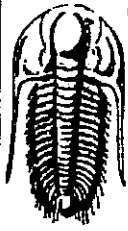
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2250.06	110.10	Initial Hydro-static
2	26.55	109.50	Open To Flow (1)
31	50.54	112.08	Shut-In(1)
91	1781.36	113.34	End Shut-In(1)
92	40.68	112.73	Open To Flow (2)
149	78.38	114.77	Shut-In(2)
247	1734.26	115.75	End Shut-In(2)
249	2219.91	115.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	MW 19% m 81% w / R w .31ohms @ 50deg	0.39
105.00	GCM 12% g 88% m	1.11

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	1.00	24.43
Max. Gas Rate	0.25	5.00	30.78



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

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

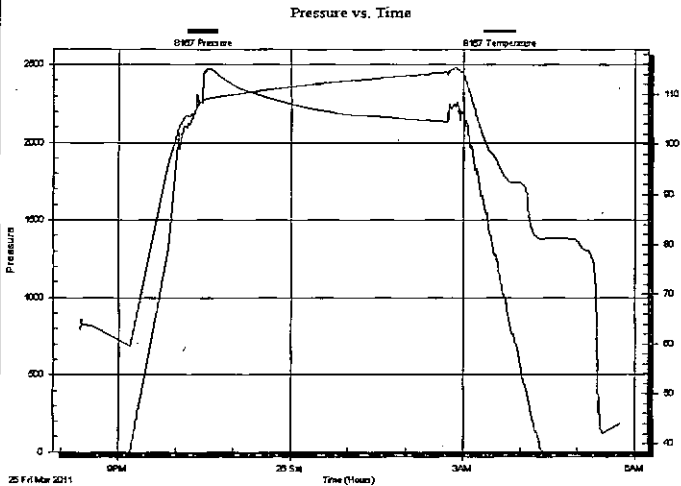
**Big Chief #2**  
**6-35s-11w Barber KS**  
Job Ticket: 041621 **DST#: 1**  
Test Start: 2011.03.25 @ 20:06:47

**GENERAL INFORMATION:**

Formation: **Swope**  
Deviated: **No Whipstock:** ft (KB)  
Time Tool Opened: 22:35:17  
Time Test Ended: 05:46:32  
Interval: **4517.00 ft (KB) To 4549.00 ft (KB) (TVD)**  
Total Depth: **4721.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Poor**  
Test Type: **Conventional Straddle**  
Tester: **Gary Pevoteaux**  
Unit No: **56**  
Reference Elevations: **1404.00 ft (KB)**  
**1394.00 ft (CF)**  
KB to GR/CF: **10.00 ft**

**Serial #: 8167** Below  
Press@RunDepth: psig @ **4550.00 ft (KB)** Capacity: **8000.00 psig**  
Start Date: **2011.03.25** End Date: **2011.03.26** Last Calib.: **2011.03.26**  
Start Time: **20:20:10** End Time: **05:45:35** Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF: Strong blow . B.O.B. in 40secs. GTS in 29 mins.  
IS: Weak blow . 1".  
FF: Strong blow . B.O.B. in 2 secs. (see gas flow report)  
FS: Weak blow . 1 - 1 1/2".



**PRESSURE SUMMARY**

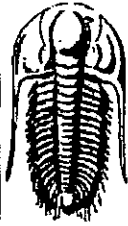
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
80.00	MW 19%m 81%w / Rw .31ohms@50deg	0.39
105.00	GCM 12%g 88%m	1.11

**Gas Rates**

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	1.00	24.43
Max. Gas Rate	0.25	5.00	30.78



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Chieftain Oil Co. Inc.

**Big Chief #2**

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

**6-35s-11w Barber KS**

Job Ticket: 041621

**DST#: 1**

ATTN: Arden Ratzlaff

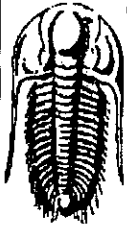
Test Start: 2011.03.25 @ 20:06:47

**Tool Information**

Drill Pipe:	Length: 4392.00 ft	Diameter: 3.80 inches	Volume: 61.61 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: 27000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 62.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4517.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	4549.00 ft			
Interval between Packers:	32.00 ft			
Tool Length:	227.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4495.00	
Shut in tool	5.00			4500.00	
HMV	5.00			4505.00	
Safety Joint	3.00			4508.00	
Packer	4.00			4512.00	23.00 Bottom Of Top Packer
Packer	5.00			4517.00	
Stubb	1.00			4518.00	
Recorder	0.00	8672	Inside	4518.00	
Recorder	0.00	8370	Outside	4518.00	
Perforations	27.00			4545.00	
Blank Off Sub	1.00			4546.00	
T.C.	3.00			4549.00	32.00 Tool Interval
Packer	0.00			4549.00	
Stubb	1.00			4550.00	
Recorder	0.00	8167	Below	4550.00	
Perforations	9.00			4559.00	
Blank Spacing	157.00			4716.00	
Bullnose	5.00			4721.00	172.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>227.00</b>				



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Chieftain Oil Co. Inc.

**Big Chief #2**

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

**6-35s-11w Barber KS**

Job Ticket: 041621

**DST#: 1**

ATTN: Arden Ratzlaff

Test Start: 2011.03.25 @ 20:06:47

**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:

31000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
80.00	MW 19% <i>m</i> 81% <i>w</i> / <i>Rw</i> .31ohms@50deg	0.393
105.00	GCM 12% <i>g</i> 88% <i>m</i>	1.108

Total Length: 185.00 ft

Total Volume: 1.501 bbl

Num Fluid Samples: 0

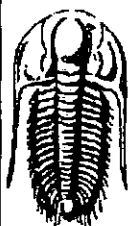
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE  
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## DRILL STEM TEST REPORT

**GAS RATES**

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

**Big Chief #2**

**6-35s-11w Barber KS**

Job Ticket: 041621

DST#: 1

ATTN: Arden Ratzlaff

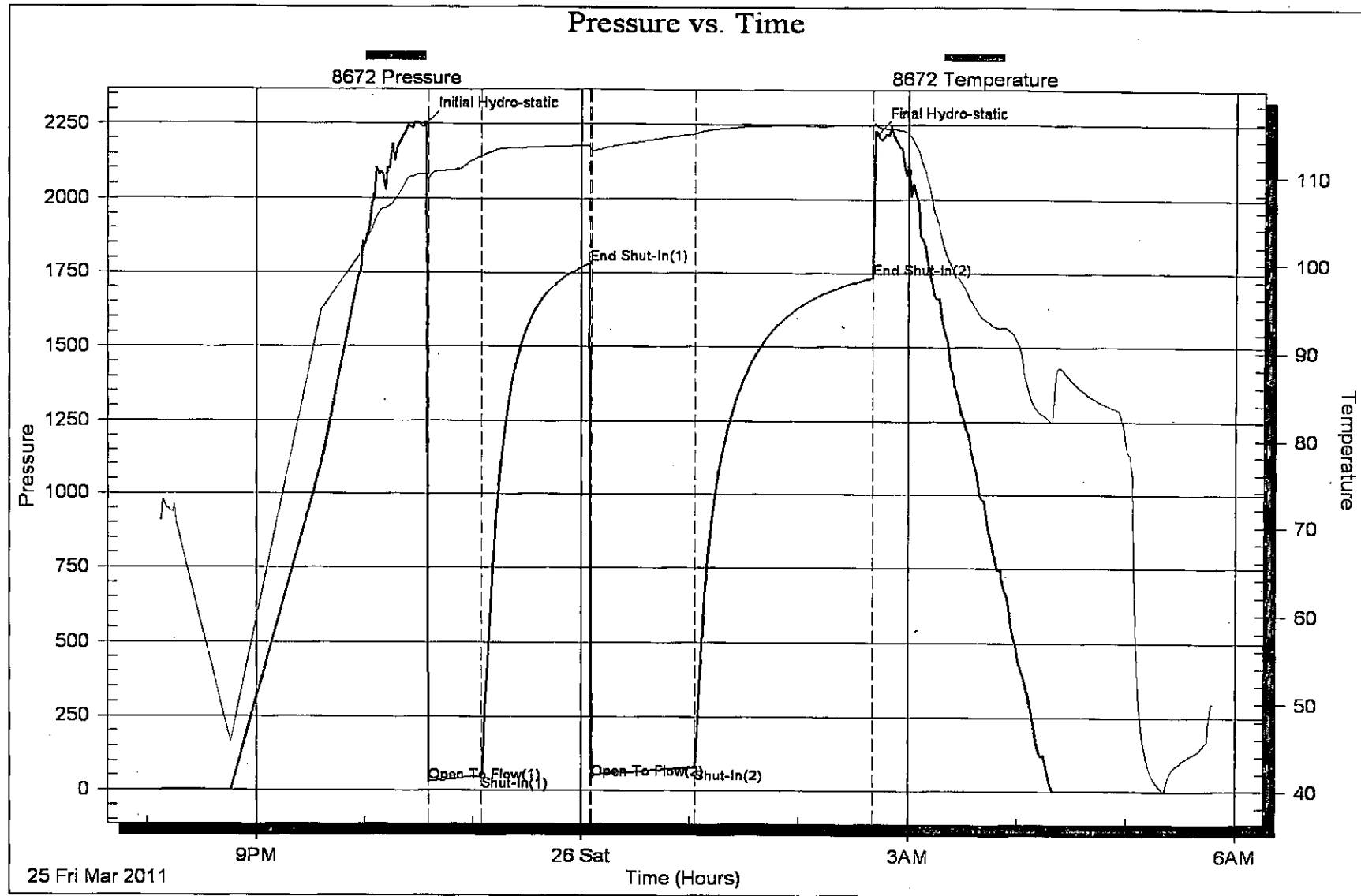
Test Start: 2011.03.25 @ 20:06:47

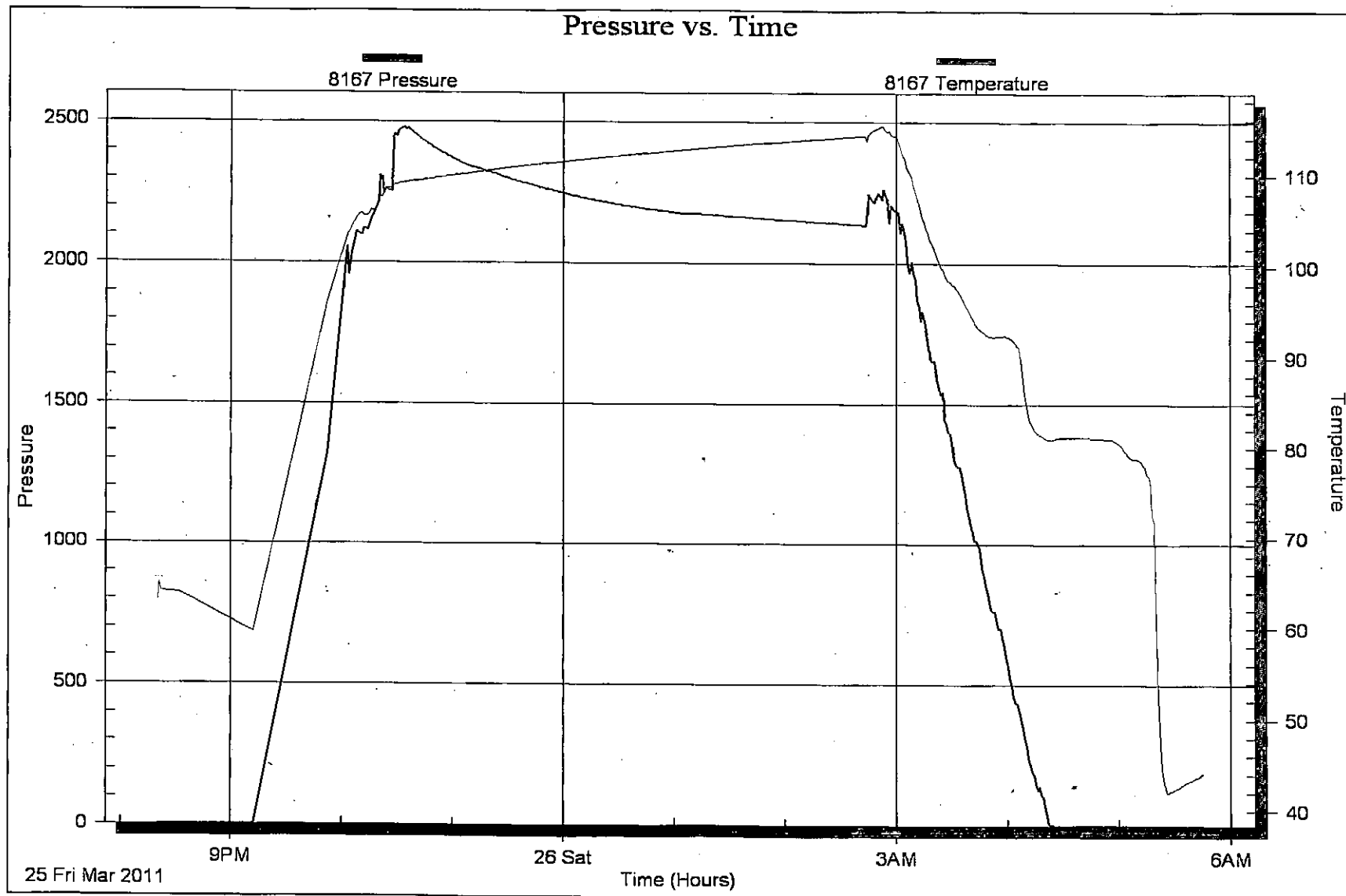
### Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

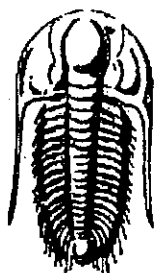
Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
2	5	0.25	5.00	30.78
2	5	0.25	5.00	30.78
2	10	0.25	3.00	27.60
2	20	0.25	2.00	26.02
2	40	0.25	1.00	24.43









**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Chieftain Oil Co.Inc.**

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

ATTN: Arden Ratzlaff

**6-35s-11w Barber KS**

**Big Chief #2**

Start Date: 2011.03.28 @ 10:30:47

End Date: 2011.03.28 @ 19:40:32

Job Ticket #: 041622      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Chieftain Oil Co.Inc.

Big Chief #2

6-35s-11w Barber KS

DST # 2

Misener

2011.03.28



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

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

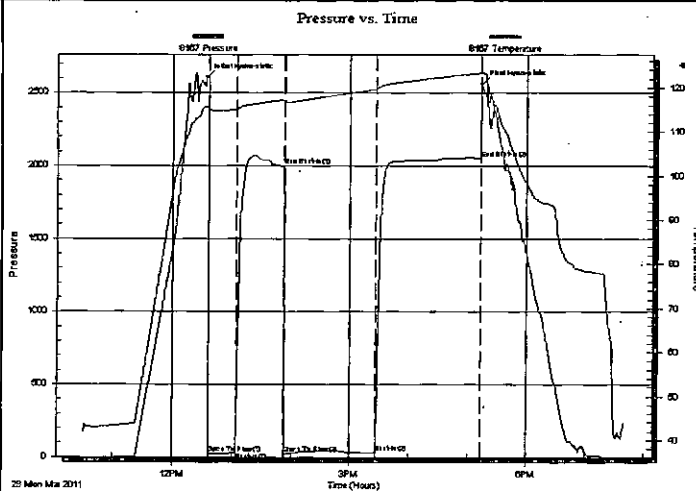
**Big Chief #2**  
**6-35s-11w Barber KS**  
Job Ticket: 041622      DST#: 2  
Test Start: 2011.03.28 @ 10:30:47

### GENERAL INFORMATION:

Formation: **Misener**  
Deviated: **No Whipstock:**      ft (KB)  
Time Tool Opened: 12:36:02  
Time Test Ended: 19:40:32  
Interval: **5143.00 ft (KB) To 5158.00 ft (KB) (TVD)**  
Total Depth: **5158.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Poor**  
Test Type: **Conventional Bottom Hole**  
Tester: **Gary Revoteaux**  
Unit No: **56**  
Reference Elevations: **1404.00 ft (KB)**  
**1394.00 ft (CF)**  
KB to GR/CF: **10.00 ft**

**Serial #: 8167**      **Inside**  
Press@RunDepth: **29.09 psig @ 5144.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2011.03.28**      End Date: **2011.03.28**      Last Calib.: **2011.03.28**  
Start Time: **10:30:52**      End Time: **19:40:32**      Time On Btm: **2011.03.28 @ 12:34:02**  
Time Off Btm: **2011.03.28 @ 17:13:32**

**TEST COMMENT:** IF:Strong blow . B.O.B. in 12 secs. GTS in 11 mins. (see gas flow report)  
IS:Strong blow . B.O.B.  
FF:Strong blow . (see gas flow report)  
FS:Strong blow . B.O.B.



### PRESSURE SUMMARY

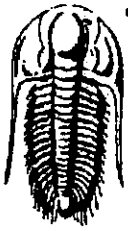
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2609.09	115.57	Initial Hydro-static
2	27.50	115.11	Open To Flow (1)
31	29.72	115.06	Shut-In (1)
79	1999.58	117.29	End Shut-In (1)
80	24.32	116.76	Open To Flow (2)
173	29.09	119.72	Shut-In (2)
279	2055.58	123.38	End Shut-In (2)
280	2561.46	123.46	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
40.00	Drig. mud w/trace of oil	0.20

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	5.00	130.87
Last Gas Rate	0.50	6.00	137.61
Max. Gas Rate	0.50	16.00	205.07



**TRILOBITE  
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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chieftain Oil Co. Inc.

**Big Chief #2**

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

**6-35s-11w Barber KS**

Job Ticket: 041622

**DST#: 2**

ATTN: Arden Ratzlaff

Test Start: 2011.03.28 @ 10:30:47

## Tool Information

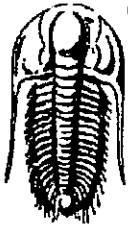
Drill Pipe:	Length: 5018.00 ft	Diameter: 3.80 inches	Volume: 70.39 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 83000.00 lb
			<u>Total Volume: 70.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	5143.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			5121.00	
Shut in tool	5.00			5126.00	
HMV	5.00			5131.00	
Safety Joint	3.00			5134.00	
Packer	4.00			5138.00	23.00 Bottom Of Top Packer
Packer	5.00			5143.00	
Stubb	1.00			5144.00	
Recorder	0.00	8167	Inside	5144.00	
Recorder	0.00	8370	Outside	5144.00	
Perforations	9.00			5153.00	
Bullnose	5.00			5158.00	15.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Chieftain Oil Co. Inc.

**Big Chief #2**

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

**6-35s-11w Barber KS**

Job Ticket: 041622

DST#: 2

ATTN: Arden Ratzlaff

Test Start: 2011.03.28 @ 10:30:47

**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:

5000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
40.00	Drlg.mud w/trace of oil	0.197

Total Length: 40.00 ft

Total Volume: 0.197 bbl

Num Fluid Samples: 0

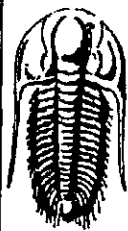
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

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

**Big Chief #2**

**6-35s-11w Barber KS**

Job Ticket: 041622

DST#: 2

ATTN: Arden Ratzlaff

Test Start: 2011.03.28 @ 10:30:47

## Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	20	0.50	5.00	130.87
1	30	0.50	6.00	137.61
2	10	0.50	9.00	157.85
2	20	0.50	12.00	178.09
2	30	0.50	14.00	191.58
2	40	0.50	16.00	205.07
2	50	0.50	16.00	205.07
2	60	0.50	13.00	184.83
2	70	0.50	7.00	144.36
2	80	0.50	6.00	137.61

