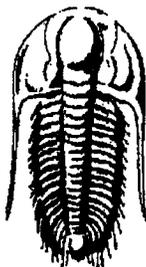


KCC  
MAY 12 2006  
CONFIDENTIAL



TRILOBITE  
TESTING, INC.

Woolsey Operating Co., LLC

Bartholow B-#1

35-32s-12w

DST # 1

Elgin Sand

2006.01.22

DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.22 @ 15:08:47

End Date: 2006.01.22 @ 17:50:32

Job Ticket #: 23511                      DST #: 1

API:  
15-007-22968

RECEIVED  
KANSAS CORPORATION COMMISSION  
MAY 12 2006  
CONSERVATION DIVISION  
WICHITA, KS

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

35-32s-12w





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23511      **DST#: 1**  
Test Start: 2006.01.22 @ 15:08:47

### Tool Information

Drill Pipe:	Length: 3428.00 ft	Diameter: 3.25 inches	Volume: 35.17 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:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 35.17 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3436.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	144.00 ft				
Tool Length:	172.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3409.00	
Shut In Tool	5.00			3414.00	
Hydraulic tool	5.00			3419.00	
Jars	5.00			3424.00	
Safety Joint	2.00			3426.00	
Packer	5.00			3431.00	28.00      Bottom Of Top Packer
Packer	5.00			3436.00	
Stubb	1.00			3437.00	
Perforations	2.00			3439.00	
Change Over Sub	1.00			3440.00	
Recorder	0.00	6753	Inside	3440.00	
Blank Spacing	127.00			3567.00	
Change Over Sub	1.00			3568.00	
Perforations	9.00			3577.00	
Recorder	0.00	13400	Outside	3577.00	
Bullnose	3.00			3580.00	144.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>172.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23511

**DST#: 1**

Test Start: 2006.01.22 @ 15:08:47

## 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:	ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	VSI GCM 1%g 99%m	0.616

Total Length: 60.00 ft      Total Volume: 0.616 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

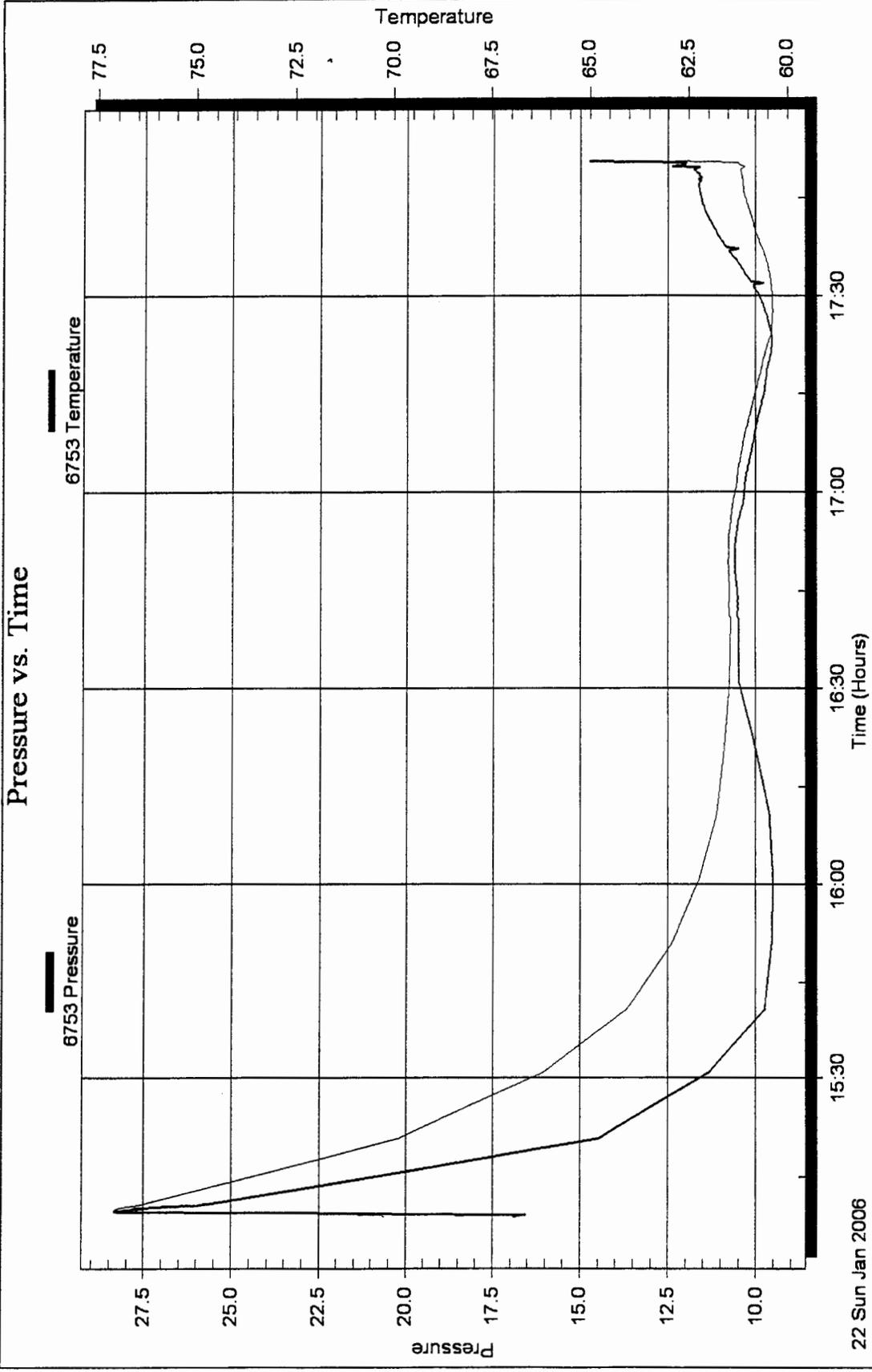
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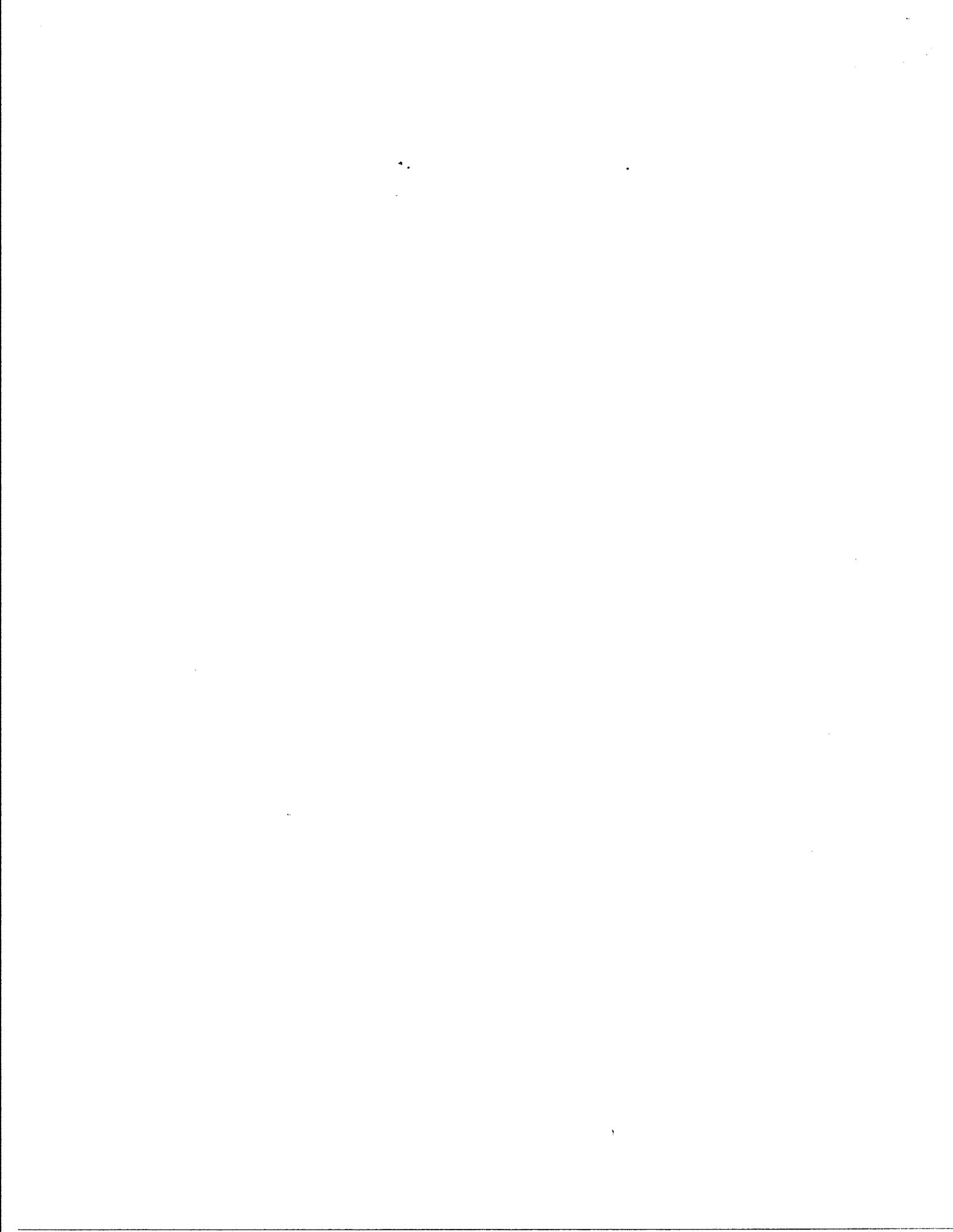
Laboratory Name:

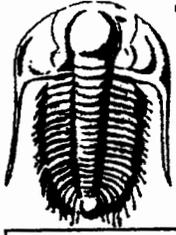
Laboratory Location:

Recovery Comments:

### Pressure vs. Time







# TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT  
 Woolsey Operating Co., LLC  
 125 N Market Ste 1000  
 Wichita KS 67202

Well name#:	Bartholow B #1	Date:	1/22/2006
Location#:	35-32S-12W Barber Co Kansas	Ticket #:	23511
		DST#	1

**General Informaion:**

Formation:		Test Type:	Conventional	BHT:	
Interval:	Elgin Sand	Tester:	Davy Cline	OIL API:	
Total Depth:	3580	Elevation:	1513 ft(KB)	H2O Salinity:	
Hole Diameter:	7 7/8"		1505 ft(CF)		
Start Data:		Tool Weight:	2400	Mud Type:	Chemical
Start Time:		Weight Set on Packers:	20000	Mud Weight:	9
Time tool opened:		Weight to Pull Loose:	60000	Viscosity:	43
Time Off Btn:		Initial String Weight:	58000	Water Loss:	11.99
End Date:		Final String Weight:	58000	Resistivity:	
End Time:		Drill Pipe Length:	3428	Salinity:	4500
		Drill Collar Length:			
		Wt. Pipe Length:			

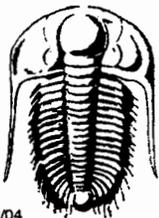
Test Comment:

IF: Weak blow. Very slow increasing blow to 2 1/2 in.  
 ISI: Bled off. No Blow back.  
 FF: No blow. Flushed tool. Had a weak blow that built to 1 3/4" in.  
 FSI: Bled off. No Blow back.

Recovery Length(ft): 60 VSI GCM 1%G 99%M

**Gas Volume Report**

Recorder #:	13400	Min:	Ins. Of water PSIG	Orifice size	MCF/D
Pressure Summary:	Time:(min)				
Initial Hydro-static:	1678				
Open to Flow (1):	155 30				
Shut-in (1):	117 60				
End Shut-in (1):	1003				
Open to Flow (2):	164 60				
Shut-in (2):	142 90				
End Shut-in (2);	912				
Final Hydro-static:	1660				



# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 23511

9/04

## Test Ticket

Well Name & No. Bartholow 'B' #1 Test No. 1 Date 1-22-06  
 Company Woolsey Operating Co., LLC Zone Tested Elgin Sand  
 Address 125 N. Market Ste. 1000 Wichita, KS 67202 Elevation 1513 KB 1505 GR  
 Co. Rep / Geo. Roger Martin Cont. Duke Drq. Rig 2 Est. Ft. of Pay — Por. — %  
 Location: Sec. 35 Twp. 32s Rge. 12w Co. Barber State KS  
 No. of Copies 5 Distribution Sheet (Y, N) — Turnkey (Y, N) — Evaluation (Y, N) —

Interval Tested 3436 - 3580 Initial Str Wt./Lbs. 58,000 Unseated Str Wt./Lbs. 58,000  
 Anchor Length 144 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 3431 Tool Weight 2400  
 Bottom Packer Depth 3436 Hole Size 7 7/8"  Rubber Size 6 3/4"   
 Total Depth 3580 Wt. Pipe Run — Drill Collar Run 0  
 Mud Wt. 8.9 LCM — Vis. 43 WL 12.0 Drill Pipe Size 4 1/2" XH Ft. Run 3428

Blow Description FF: Weak blow. Very slow increasing blow to 2 1/2 inches.  
ISI: Bled off. No blow back  
FF: No blow. Flushed Tool. Had a weak blow that built to 1 3/4 inches.  
FSI: Bled off. No blow back.

Recovery - Total Feet 60 GIP NO Ft. in DC 0 Ft. in DP 60  
 Rec. 60 Feet of USI GCM 1% gas %oil %water 99 %mud  
 Rec. — Feet of — %gas %oil %water %mud  
 Rec. — Feet of — %gas %oil %water %mud  
 Rec. — Feet of — %gas %oil %water %mud  
 Rec. — Feet of — %gas %oil %water %mud  
 BHT — °F Gravity — °API D @ — °F Corrected Gravity — °API  
 RW — @ — °F Chlorides — ppm Recovery — Chlorides 4500 ppm System

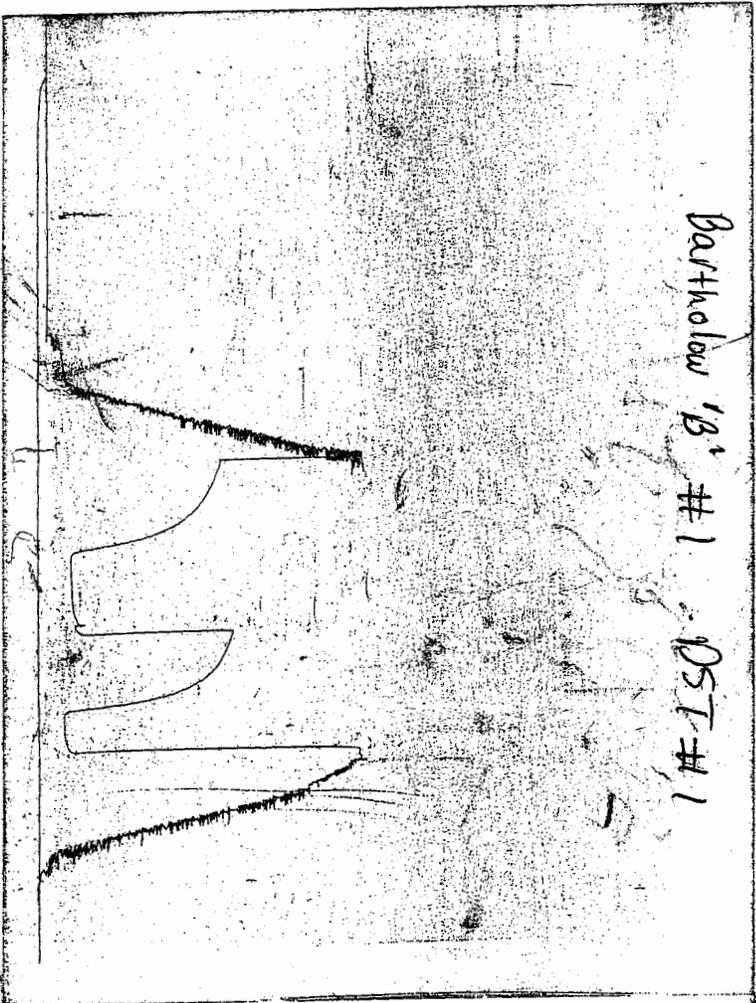
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1690</u>	PSI	<u>6753</u>	<input checked="" type="checkbox"/> <u>100</u>
(B) First Initial Flow Pressure	<u>155</u>	PSI	(depth) <u>3490</u>	Jars <input checked="" type="checkbox"/> <u>20</u>
(C) First Final Flow Pressure	<u>133</u>	PSI	Recorder No. <u>13400</u>	Safety Jt. <input checked="" type="checkbox"/> <u>5</u>
(D) Initial Shut-In Pressure	<u>1033</u>	PSI	(depth) <u>3577</u>	Circ Sub <input checked="" type="checkbox"/> <u>NC</u>
(E) Second Initial Flow Pressure	<u>213</u>	PSI	Recorder No. <u>—</u>	Sampler <u>—</u>
(F) Second Final Flow Pressure	<u>165</u>	PSI	(depth) <u>—</u>	Straddle <u>—</u>
(G) Final Shut-In Pressure	<u>945</u>	PSI	Initial Opening <u>30</u>	Ext. Packer <u>—</u>
(Q) Final Hydrostatic Mud	<u>1680</u>	PSI	Initial Shut-In <u>60</u>	Shale Packer <u>—</u>
			Final Flow <u>60</u>	Ruined Packer <u>—</u>
			Final Shut-In <u>40</u>	Mileage <input checked="" type="checkbox"/> <u>82 total</u>
			T-On Location <u>14:15</u>	Sub Total: <u>1332</u>
			T-Started <u>15:08</u>	Std. By <u>1.25</u> <u>62.:</u>
			T-Open <u>17:17</u>	Other <u>—</u>
			T-Pulled <u>21:20</u>	Total: <u>81394.5</u>
			T-Out <u>23:30</u>	

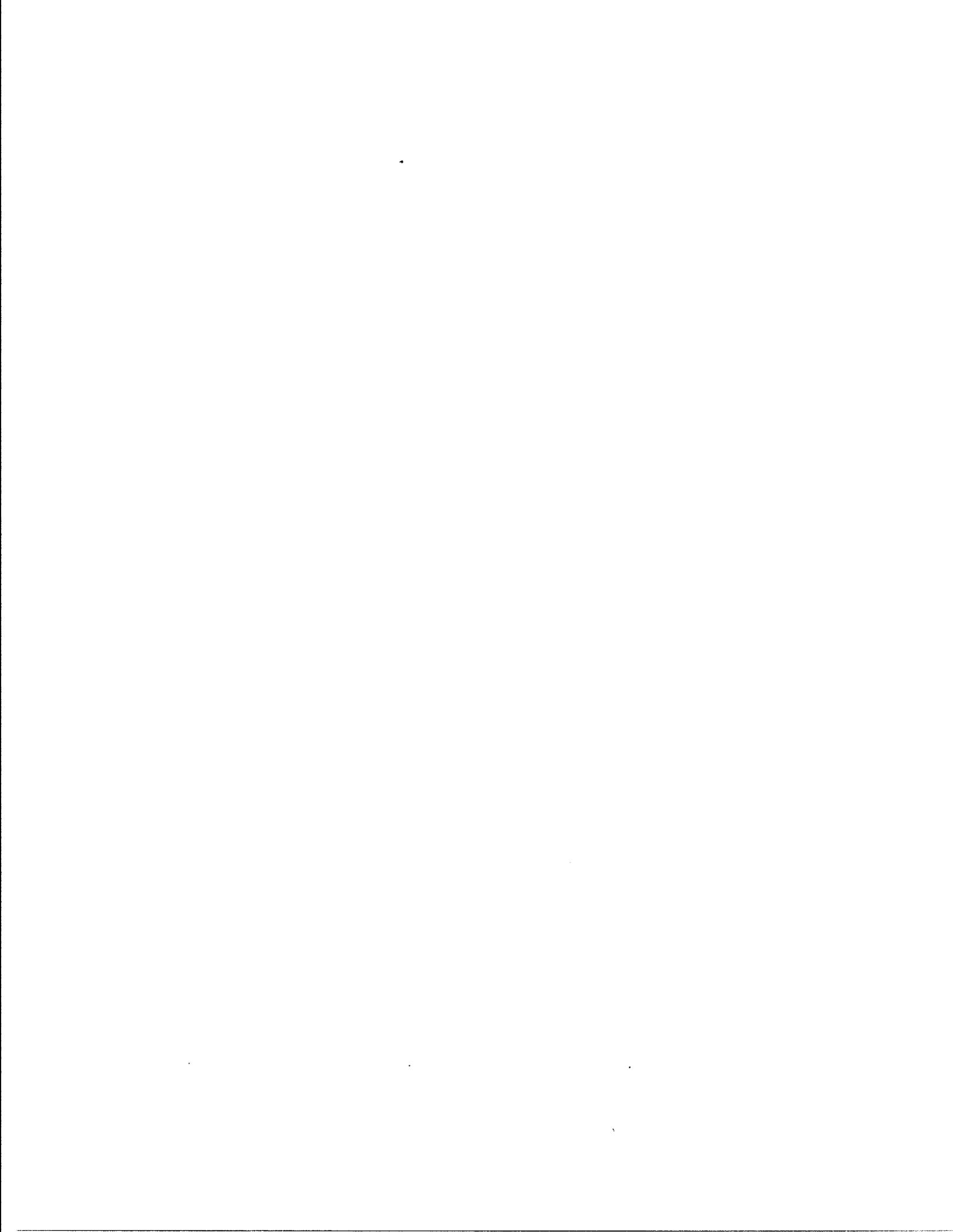
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Roger Martin  
 Our Representative Danny Cline

**CHART PAGE**

This is a photocopy of the actual AK-1 recorder chart.







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

## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.23 @ 16:30:49

End Date: 2006.01.23 @ 21:17:49

Job Ticket #: 23512                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23512      **DST#: 2**  
Test Start: 2006.01.23 @ 16:30:49

### GENERAL INFORMATION:

Formation: **Lower Douglas Sand**

Deviated: No Whipstock:      ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 21:17:49

Test Type: Conventional Bottom Hole

Tester: Davy Cline

Unit No: 24

Interval: **3713.00 ft (KB) To 3757.00 ft (KB) (TVD)**

Reference Elevations: 1513.00 ft (KB)

Total Depth: 3580.00 ft (KB) (TVD)

1505.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

**Serial #: 6753      Inside**

Press@RunDepth:      psig @ 3717.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2006.01.23

End Date: 2006.01.23

Last Calib.: 2006.01.23

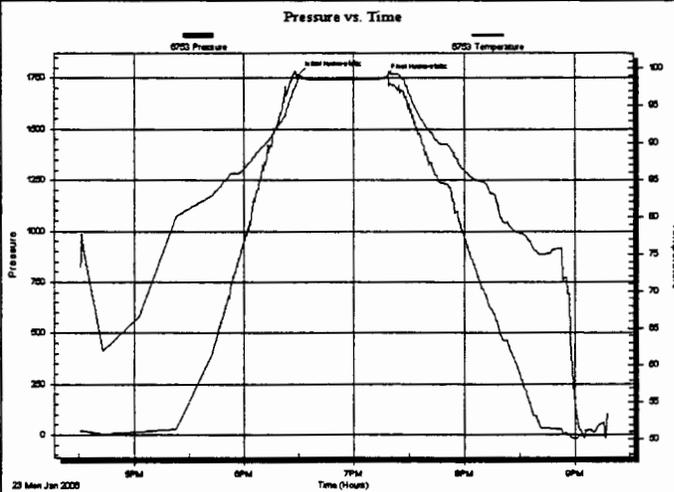
Start Time: 16:30:50

End Time: 21:17:49

Time On Btm: 2006.01.23 @ 18:29:49

Time Off Btm: 2006.01.23 @ 19:16:49

**TEST COMMENT:** Ran into somekind of obstruction 10 to 12 feet off of bottom.  
Company decided not to try the test until reconditioning the hole.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1765.78	98.62	Initial Hydro-static
47	1750.43	98.76	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

**35-32s-12w**

Job Ticket: 23512

**DST#: 2**

ATTN: Roger Martin

Test Start: 2006.01.23 @ 16:30:49

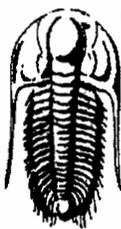
### Tool Information

Drill Pipe:	Length: 3712.00 ft	Diameter: 3.25 inches	Volume: 38.09 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 38.09 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3713.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3686.00	
Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Jars	5.00			3701.00	
Safety Joint	2.00			3703.00	
Packer	5.00			3708.00	28.00 Bottom Of Top Packer
Packer	5.00			3713.00	
Stubb	1.00			3714.00	
Perforations	3.00			3717.00	
Recorder	0.00	6753	Inside	3717.00	
Perforations	37.00			3754.00	
Recorder	0.00	13400	Outside	3754.00	
Bullnose	3.00			3757.00	44.00 Bottom Packers & Anchor

**Total Tool Length: 72.00**



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

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Wolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23512      **DST#: 2**

Test Start: 2006.01.23 @ 16:30:49

## 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:	ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl

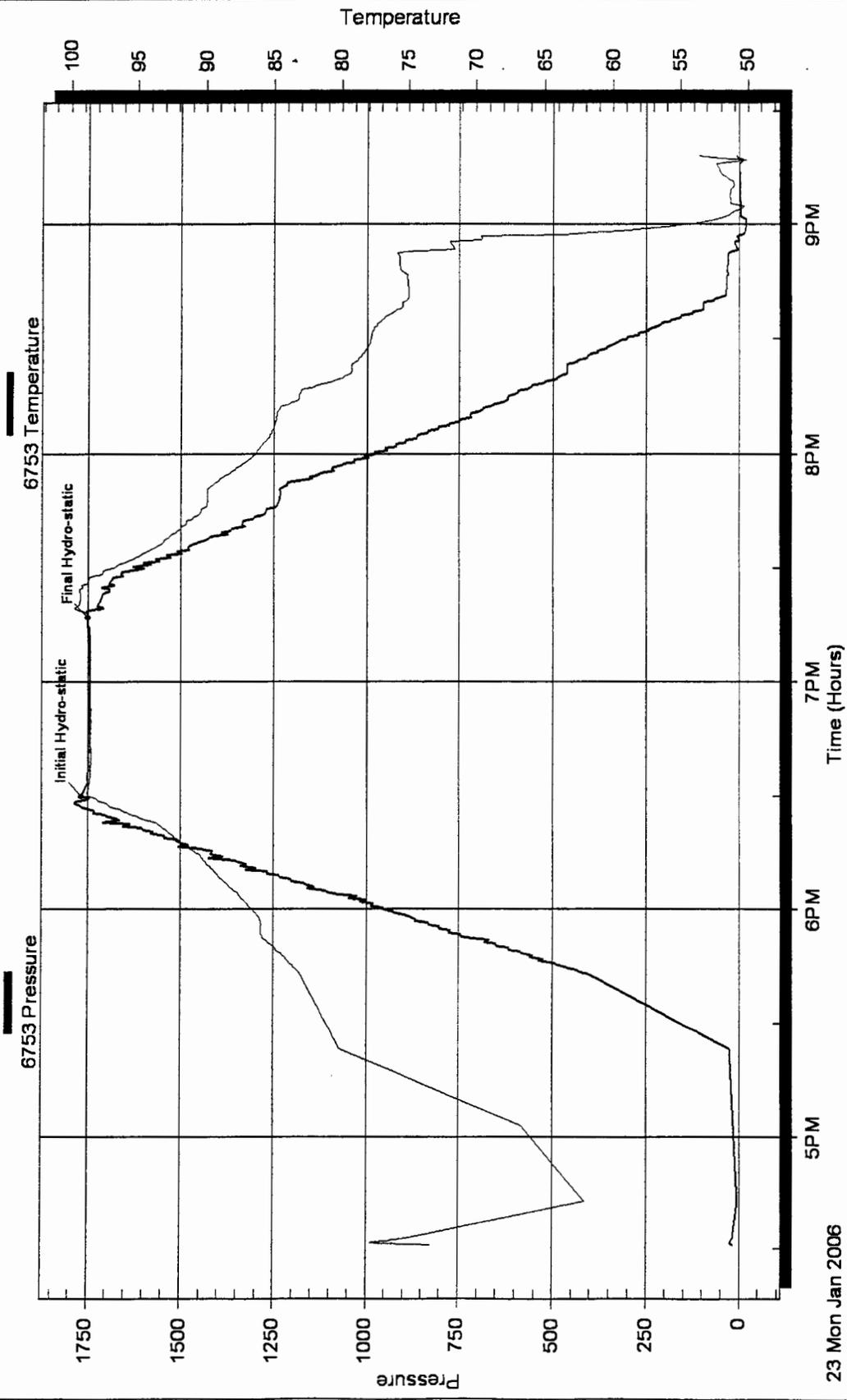
Total Length: ft      Total Volume: bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

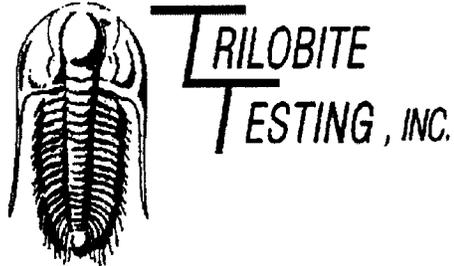
Laboratory Name:      Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.24 @ 03:59:55

End Date: 2006.01.24 @ 11:47:55

Job Ticket #: 23513                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Woolsey Operating Co., LLC

Bartholow B-#1

35-32s-12w

DST # 3

Lower Douglas Sand

2006.01.24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Woolsey Operating Co., LLC  
125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

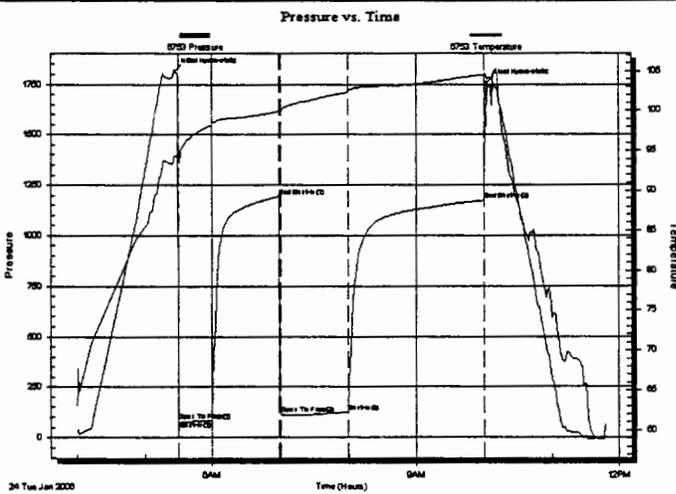
**Bartholow B-#1**  
**35-32s-12w**  
Job Ticket: 23513      DST#: 3  
Test Start: 2006.01.24 @ 03:59:55

## GENERAL INFORMATION:

Formation: Lower Douglas Sand  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 05:29:40  
Time Test Ended: 11:47:55  
Test Type: Conventional Bottom Hole  
Tester: Davy Cline  
Unit No: 24  
Interval: 3712.00 ft (KB) To 3764.00 ft (KB) (TVD)  
Reference Elevations: 1513.00 ft (KB)  
Total Depth: 3580.00 ft (KB) (TVD) 1505.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

**Serial #: 6753** Inside  
Press@RunDepth: 123.00 psig @ 3715.00 ft (KB) Capacity: 7000.00 psig  
Start Date: 2006.01.24 End Date: 2006.01.24 Last Calib.: 2006.01.24  
Start Time: 03:59:55 End Time: 11:47:55 Time On Btrm: 2006.01.24 @ 05:26:40  
Time Off Btrm: 2006.01.24 @ 10:02:25

**TEST COMMENT:** F: Strong blow . BOB 1 1/2 min. GTS 29 min.  
IS: Bled off. No blow back.  
FF: Strong blow . BOB Immediately. Gauged gas.  
FS: Bled off. No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1814.88	94.41	Initial Hydro-static
3	83.40	95.60	Open To Flow (1)
33	81.26	98.23	Shut-In(1)
93	1194.37	99.93	End Shut-In(1)
94	113.45	99.41	Open To Flow (2)
153	123.00	102.31	Shut-In(2)
274	1172.94	104.50	End Shut-In(2)
276	1758.76	104.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	G & WCM 1%g 27%w 72%m	0.62
60.00	GCM 1%g 99%m	0.62
0.00	Gas in all fluid free pipe.	0.00

## Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	13.50	44.26
Last Gas Rate	0.25	24.50	61.71
Max. Gas Rate	0.25	24.50	61.71



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23513

**DST#: 3**

Test Start: 2006.01.24 @ 03:59:55

### Tool Information

Drill Pipe:	Length: 3712.00 ft	Diameter: 3.25 inches	Volume: 38.09 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 38.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3712.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3685.00	
Shut In Tool	5.00			3690.00	
Hydraulic tool	5.00			3695.00	
Jars	5.00			3700.00	
Safety Joint	2.00			3702.00	
Packer	5.00			3707.00	28.00 Bottom Of Top Packer
Packer	5.00			3712.00	
Stubb	1.00			3713.00	
Perforations	1.00			3714.00	
Change Over Sub	1.00			3715.00	
Recorder	0.00	6753	Inside	3715.00	
Blank Spacing	32.00			3747.00	
Change Over Sub	1.00			3748.00	
Perforations	13.00			3761.00	
Recorder	0.00	13400	Outside	3761.00	
Bullnose	3.00			3764.00	52.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>80.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23513      **DST#: 3**

Test Start: 2006.01.24 @ 03:59:55

## 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:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	G & WCM 1%g 27%w 72%m	0.616
60.00	GCM 1%g 99%m	0.616
0.00	Gas in all fluid free pipe.	0.000

Total Length: 120.00 ft      Total Volume: 1.232 bbl

Num Fluid Samples: 1      Num Gas Bombs: 0      Serial #: DC

Laboratory Name: Caraway      Laboratory Location: Liberal, KS

Recovery Comments: water chlorides- .48 ohms @55 deg.



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23513      **DST#: 3**

Test Start: 2006.01.24 @ 03:59:55

### 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	13.50	44.26
2	10	0.25	16.50	49.02
2	15	0.25	18.00	51.40
2	20	0.25	19.50	53.78
2	25	0.25	20.50	55.37
2	30	0.25	21.50	56.95
2	35	0.25	22.50	58.54
2	40	0.25	23.50	60.12
2	45	0.25	24.00	60.92
2	50	0.25	24.50	61.71
2	55	0.25	24.50	61.71
2	60	0.25	24.50	61.71

DST Test Number: 3

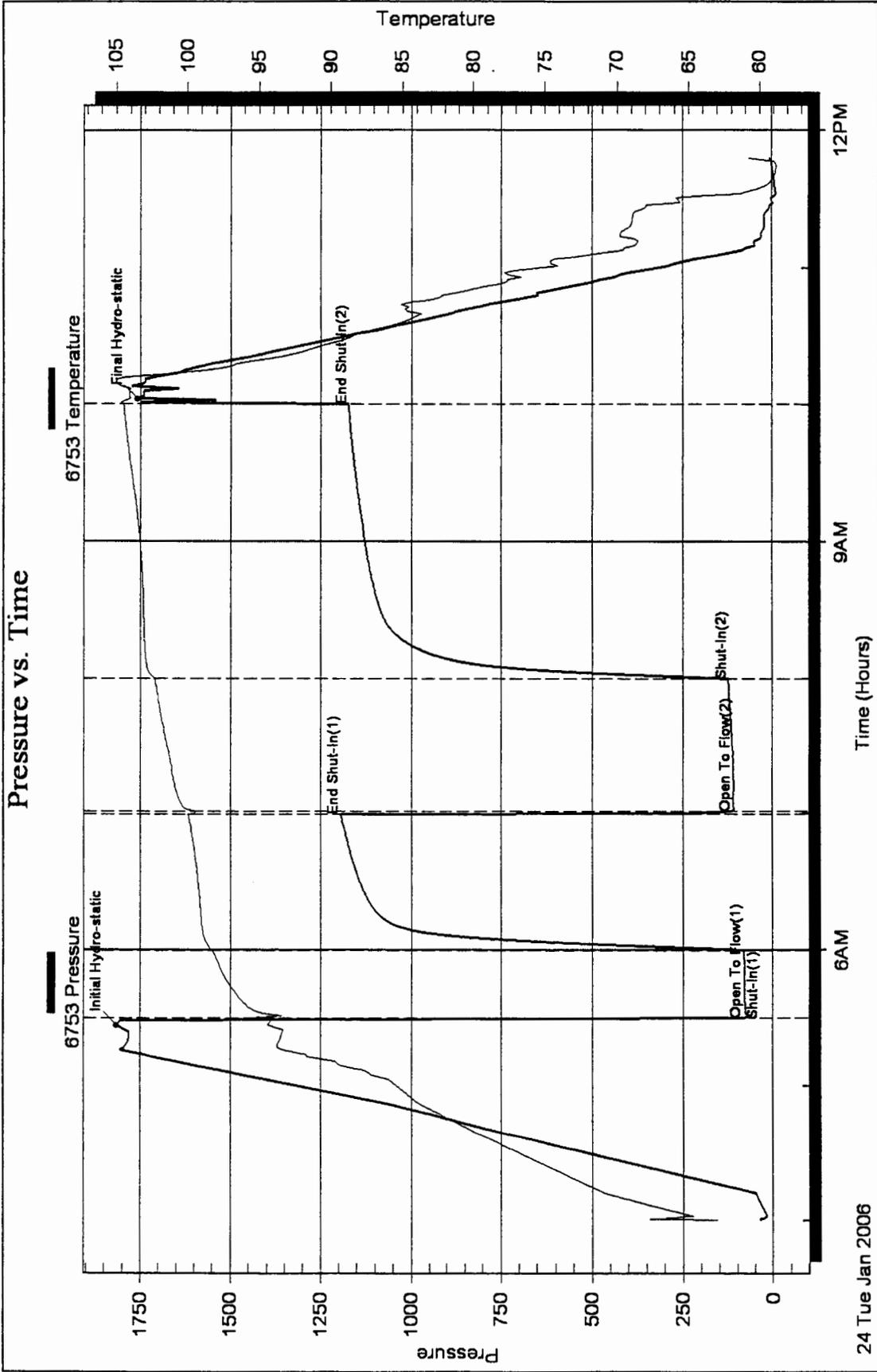
35-32s-12w

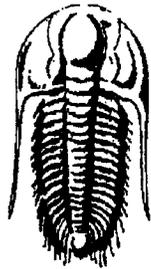
Woolsey Operating Co., LLC

Inside

Serial #: 6753

### Pressure vs. Time





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

## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.24 @ 17:52:28

End Date: 2006.01.25 @ 02:37:58

Job Ticket #: 23514      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Woolsey Operating Co., LLC

Bartholow B-#1

35-32s-12w

DST # 4

Lower Douglas Sand

2006.01.24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23514

**DST#: 4**

Test Start: 2006.01.24 @ 17:52:28

## GENERAL INFORMATION:

Formation: **Lower Douglas Sand**

Deviated: **No Whipstock:** ft (KB)

Time Tool Opened: 20:04:13

Time Test Ended: 02:37:58

Test Type: **Conventional Bottom Hole**

Tester: **Davy Cline**

Unit No: **24**

Interval: **3757.00 ft (KB) To 3776.00 ft (KB) (TVD)**

Reference Elevations: **1513.00 ft (KB)**

Total Depth: **3580.00 ft (KB) (TVD)**

**1505.00 ft (CF)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

KB to GR/CF: **8.00 ft**

**Serial #: 6753**

**Inside**

Press@RunDepth: **143.53 psig @ 3758.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2006.01.24**

End Date:

**2006.01.25**

Last Calib.: **2006.01.25**

Start Time: **17:52:29**

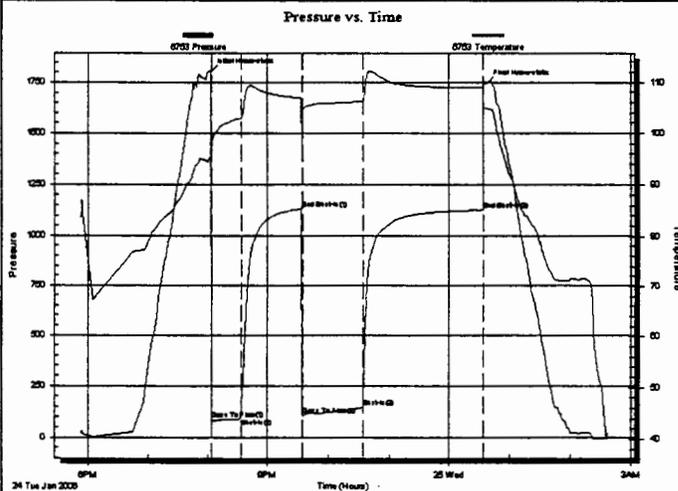
End Time:

**02:37:58**

Time On Btrr: **2006.01.24 @ 20:03:13**

Time Off Btrr: **2006.01.25 @ 00:37:13**

**TEST COMMENT:** F: Strong blow . BOB 30 sec. GTS 29 min.  
IS: Bled off. Had a weak surface blow .  
FF: Strong blow . BOB immediately. Gauged gas.  
FSI: Bled off. Had a weak blow that increased to 7 inches after 1 hr



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1803.31	95.29	Initial Hydro-static
1	87.94	98.12	Open To Flow (1)
31	90.36	102.88	Shut-In(1)
91	1131.54	106.88	End Shut-In(1)
92	106.02	103.46	Open To Flow (2)
151	143.53	106.22	Shut-In(2)
271	1126.79	109.00	End Shut-In(2)
274	1747.29	104.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	G&SI OCVM 30%g 5%o 28%w 37%m	0.64
62.00	G&SI OCVM 41%g 5%o 30%w 24%m	0.64
62.00	G&SI OCVM 2%g 2%o 96%w	0.64
62.00	Salt Water 100%w	0.64
0.00	Gas in all fluid free pipe.	0.00

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	11.00	40.30
Last Gas Rate	0.25	16.00	48.23
Max. Gas Rate	0.25	16.00	48.23



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**  
Job Ticket: 23514      **DST#: 4**  
Test Start: 2006.01.24 @ 17:52:28

### Tool Information

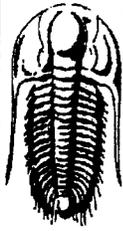
Drill Pipe:	Length: 3744.00 ft	Diameter: 3.25 inches	Volume: 38.42 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 38.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3757.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3730.00	
Shut In Tool	5.00			3735.00	
Hydraulic tool	5.00			3740.00	
Jars	5.00			3745.00	
Safety Joint	2.00			3747.00	
Packer	5.00			3752.00	28.00 Bottom Of Top Packer
Packer	5.00			3757.00	
Stubb	1.00			3758.00	
Recorder	0.00	6753	Inside	3758.00	
Perforations	15.00			3773.00	
Recorder	0.00	13400	Outside	3773.00	
Bullnose	3.00			3776.00	19.00 Bottom Packers & Anchor

**Total Tool Length: 47.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**  
Job Ticket: 23514      **DST#: 4**  
Test Start: 2006.01.24 @ 17:52:28

**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:	64000 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

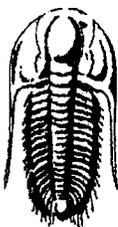
Length ft	Description	Volume bbl
62.00	G&SI OCMM 30%g 5%o 28%w 37%m	0.636
62.00	G&SI OCMW 41%g 5%o 30%w 24%m	0.636
62.00	G&SI OCW 2%g 2%o 96%w	0.636
62.00	Salt Water 100%w	0.636
0.00	Gas in all fluid free pipe.	0.000

Total Length: 248.00 ft      Total Volume: 2.544 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: water recovery- .25 ohms @ 40 deg.



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market

**35-32s-12w**

Ste. 1000

Job Ticket: 23514

**DST#: 4**

Wichita, KS 67202

ATTN: Roger Martin

Test Start: 2006.01.24 @ 17:52:28

### 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	11.00	40.30
2	5	0.25	11.00	40.30
2	10	0.25	11.00	40.30
2	20	0.25	11.50	41.09
2	25	0.25	11.75	41.48
2	30	0.25	12.50	42.67
2	35	0.25	13.00	43.47
2	40	0.25	13.50	44.26
2	45	0.25	14.00	45.05
2	50	0.25	14.50	45.85
2	55	0.25	15.50	47.43
2	60	0.25	16.00	48.23

DST Test Number: 4

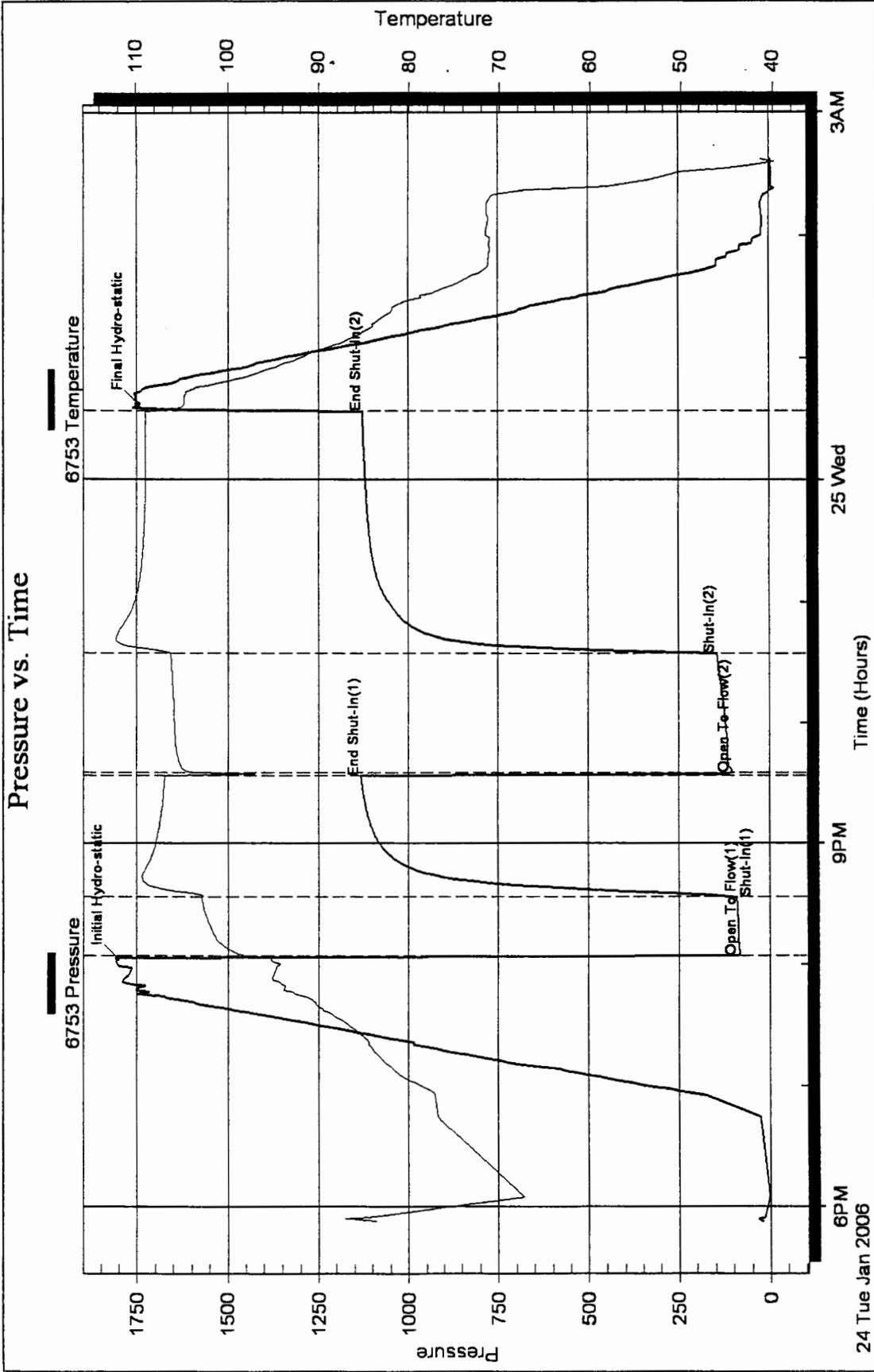
35-32s-12w

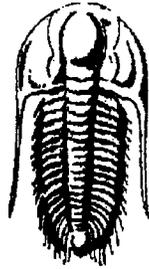
Woodsey Operating Co., LLC

Insfide

Serial #: 6753

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.25 @ 11:32:05

End Date: 2006.01.25 @ 19:06:05

Job Ticket #: 23515                      DST #: 5

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Woolsey Operating Co., LLC

Bartholow B-#1

35-32s-12w

DST # 5

Lansing A

2006.01.25





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23515

**DST#: 5**

Test Start: 2006.01.25 @ 11:32:05

### Tool Information

Drill Pipe:	Length: 3807.00 ft	Diameter: 3.25 inches	Volume: 39.06 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 39.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	3816.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3789.00	
Shut In Tool	5.00			3794.00	
Hydraulic tool	5.00			3799.00	
Jars	5.00			3804.00	
Safety Joint	2.00			3806.00	
Packer	5.00			3811.00	28.00 Bottom Of Top Packer
Packer	5.00			3816.00	
Stubb	1.00			3817.00	
Recorder	0.00	6753	Inside	3817.00	
Perforations	18.00			3835.00	
Recorder	0.00	13400	Outside	3835.00	
Bullnose	3.00			3838.00	22.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**



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

# DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23515

DST#: 5

Test Start: 2006.01.25 @ 11:32:05

## 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:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
12.00	GCM 1%g 99%m	0.123

Total Length: 12.00 ft      Total Volume: 0.123 bbl

Num Fluid Samples: 0

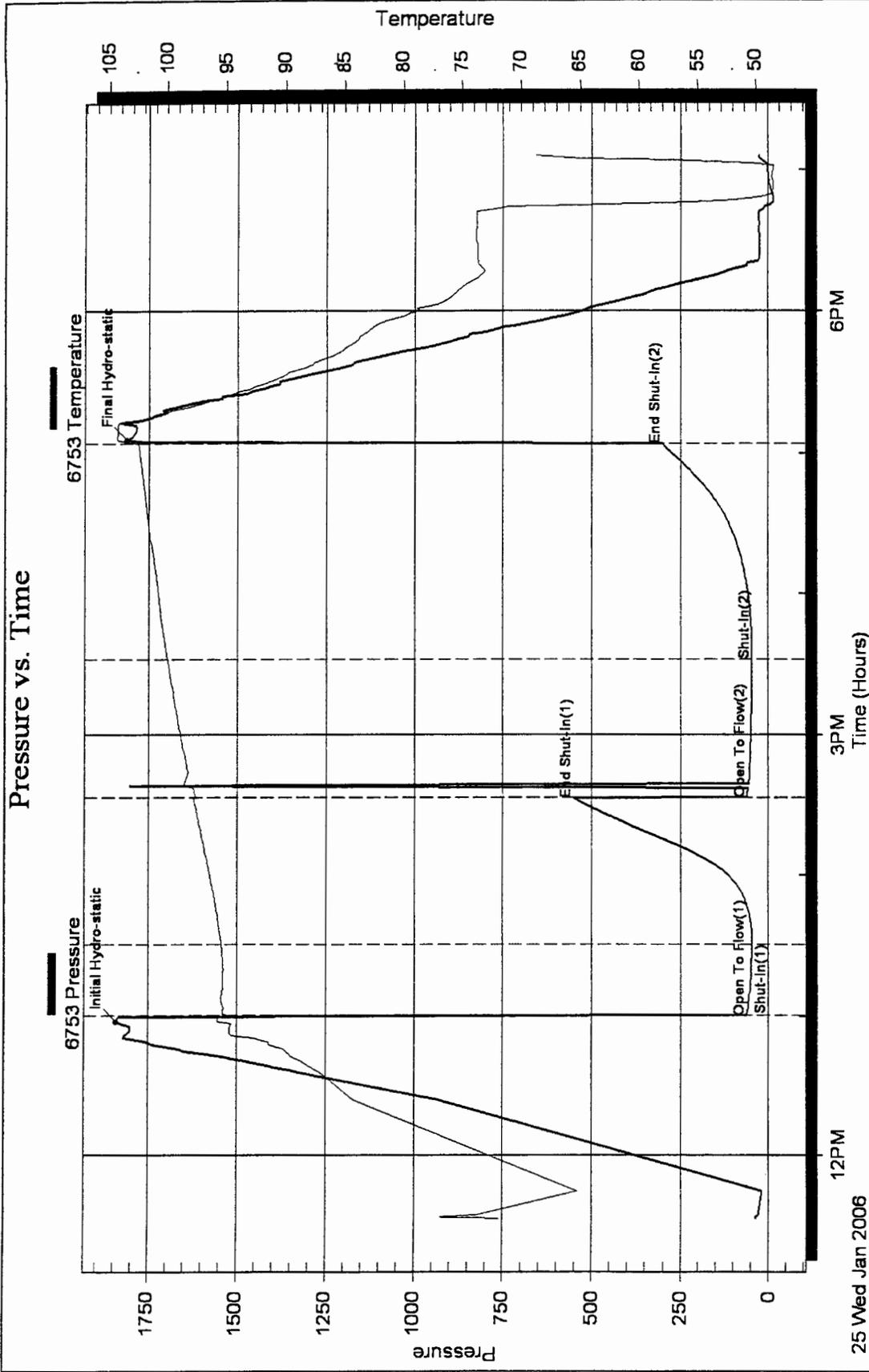
Num Gas Bombs: 0

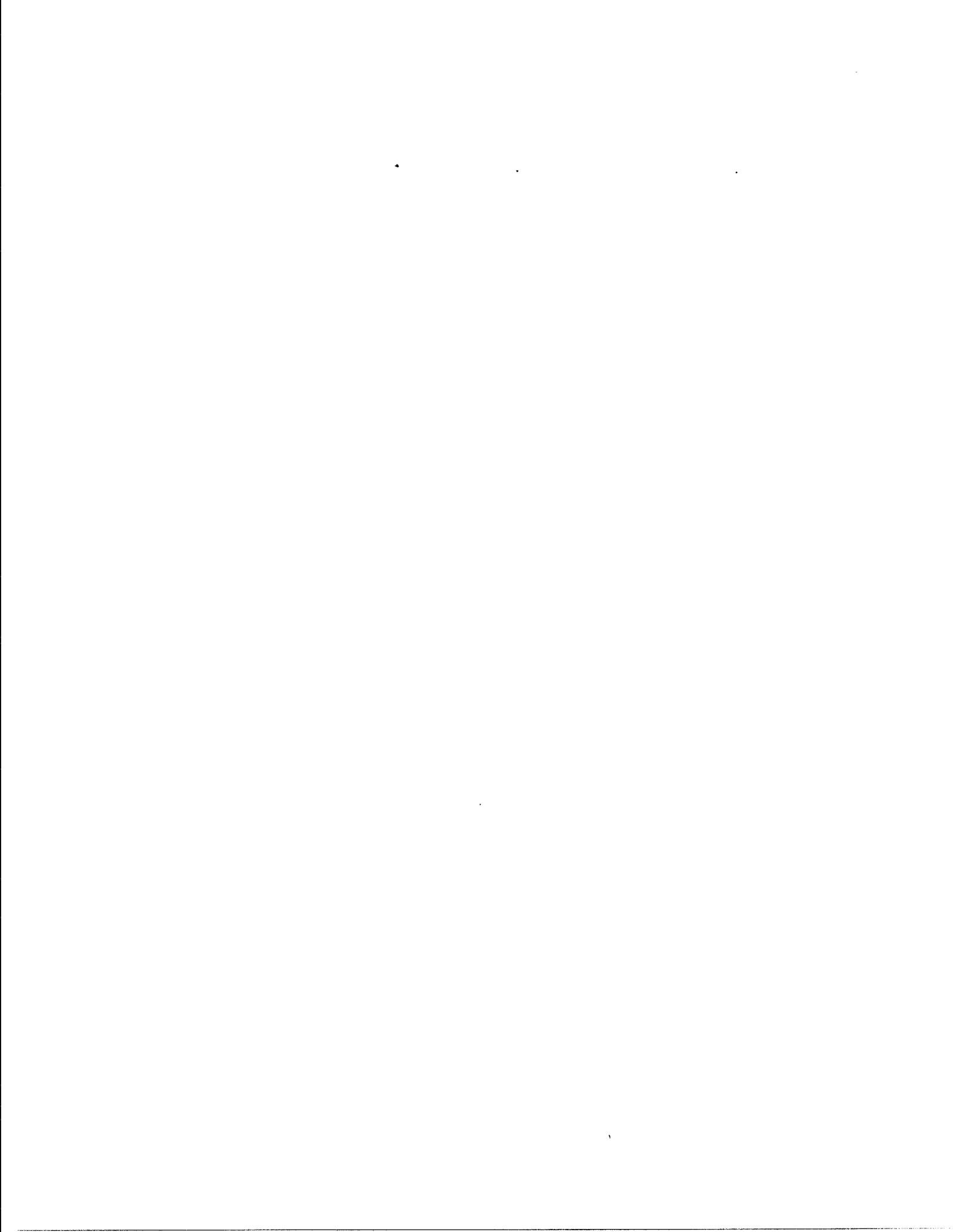
Serial #:

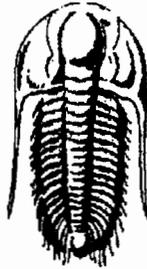
Laboratory Name:

Laboratory Location:

Recovery Comments:







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Co., LLC**

125 N. Market  
Ste. 1000  
Wichita, KS 67202

ATTN: Roger Martin

**35-32s-12w**

**Bartholow B-#1**

Start Date: 2006.01.27 @ 21:15:39

End Date: 2006.01.28 @ 06:06:09

Job Ticket #: 23516                      DST #: 6

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Woolsey Operating Co., LLC

Bartholow B-#1

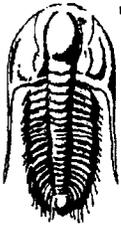
35-32s-12w

DST # 6

Miss.

2006.01.27





**TRILOBITE**  
TESTING, INC.

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Wbolsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**

Job Ticket: 23516      DST#: 6  
Test Start: 2006.01.27 @ 21:15:39

**Tool Information**

Drill Pipe:	Length: 4374.00 ft	Diameter: 3.25 inches	Volume: 44.88 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 44.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4394.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			4367.00	
Shut In Tool	5.00			4372.00	
Hydraulic tool	5.00			4377.00	
Jars	5.00			4382.00	
Safety Joint	2.00			4384.00	
Packer	5.00			4389.00	28.00      Bottom Of Top Packer
Packer	5.00			4394.00	
Stubb	1.00			4395.00	
Perforations	2.00			4397.00	
Change Over Sub	1.00			4398.00	
Recorder	0.00	6753	Inside	4398.00	
Blank Spacing	31.00			4429.00	
Change Over Sub	1.00			4430.00	
Perforations	28.00			4458.00	
Recorder	0.00	13400	Outside	4458.00	
Bullnose	3.00			4461.00	67.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>95.00</b>				



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

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Wbalsey Operating Co., LLC

**Bartholow B-#1**

125 N. Market  
Ste. 1000  
Wichita, KS 67202  
ATTN: Roger Martin

**35-32s-12w**  
Job Ticket: 23516      **DST#: 6**  
Test Start: 2006.01.27 @ 21:15:39

**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:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
20.00	GCM 1%g 99%m	0.205
0.00	200' Gas in pipe.	0.000

Total Length: 20.00 ft      Total Volume: 0.205 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

