

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

16-15s-22w Trego KS

Werth #1-16

Start Date: 2006.03.30 @ 06:08:22

End Date: 2006.03.30 @ 14:47:51

Job Ticket #: 24811 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24811 **DST#: 1**

Test Start: 2006.03.30 @ 06:08:22

GENERAL INFORMATION:

Formation: **Cher Sd**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:11:51
Time Test Ended: 14:47:51

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 28

Interval: 4129.00 ft (KB) To 4187.00 ft (KB) (TVD)
Total Depth: 4187.00 ft (KB) (TVD)
Hole Diameter: 6.75 inches Hole Condition: Fair

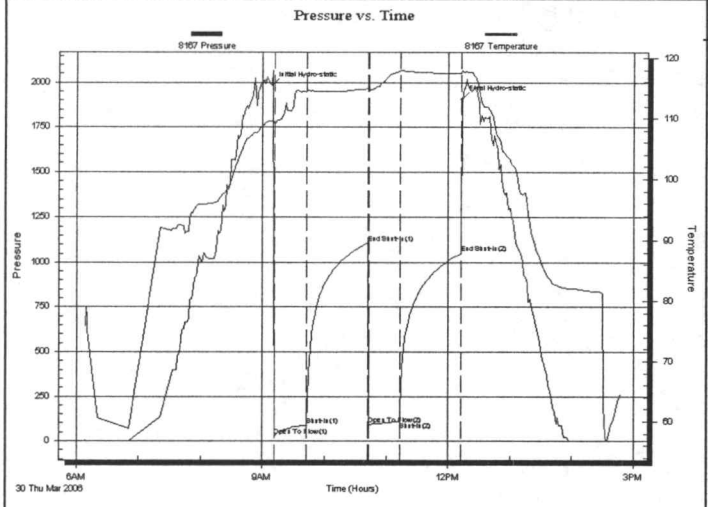
Reference Elevations: 2270.00 ft (KB)
2265.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8167 **Inside**

Press@RunDepth: 109.14 psig @ 4132.01 ft (KB)
Start Date: 2006.03.30 End Date: 2006.03.30
Start Time: 06:08:22 End Time: 14:47:51

Capacity: 7000.00 psig
Last Calib.: 2006.03.30
Time On Btm: 2006.03.30 @ 09:09:21
Time Off Btm: 2006.03.30 @ 12:13:21

TEST COMMENT: IFP-weak blow thru-out 1/2"to 2 1/4"blow
FFP-no blow first 6min,then surface blow thru-out
No blow on shut in
Times 30-60-30-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1984.84	109.56	Initial Hydro-static
3	28.00	109.11	Open To Flow (1)
34	87.21	114.49	Shut-In(1)
93	1108.22	114.88	End Shut-In(1)
93	90.49	114.67	Open To Flow (2)
124	109.14	117.91	Shut-In(2)
184	1051.60	117.48	End Shut-In(2)
184	1905.49	117.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 15%M 85%W	0.59
75.00	WM 40%W 60%M w/show of oil	1.05

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24811 **DST#: 1**

Test Start: 2006.03.30 @ 06:08:22

Tool Information

Drill Pipe:	Length:	4011.00 ft	Diameter:	3.80 inches	Volume:	56.26 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	
					Total Volume:	56.85 bbl	

Drill Pipe Above KB:	30.00 ft
Depth to Top Packer:	4129.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	58.02 ft
Tool Length:	86.02 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2200.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	75000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	46000.00 lb
Final	46000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4102.00		
Shut In Tool	5.00			4107.00		
Hydraulic tool	5.00			4112.00		
Jars	5.00			4117.00		
Safety Joint	2.00			4119.00		
Packer	5.00			4124.00	28.00	Bottom Of Top Packer
Packer	5.00			4129.00		
Stubb	1.00			4130.00		
Perforations	1.00			4131.00		
Change Over Sub	1.00			4132.00		
Recorder	0.01	8167	Inside	4132.01		
Blank Spacing	31.00			4163.01		
Change Over Sub	1.00			4164.01		
Recorder	0.01	13534	Outside	4164.02		
Perforations	20.00			4184.02		
Bullnose	3.00			4187.02	58.02	Bottom Packers & Anchor
Total Tool Length:	**86.02**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24811 **DST#: 1**

Test Start: 2006.03.30 @ 06:08:22

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:	21000 ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.17 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

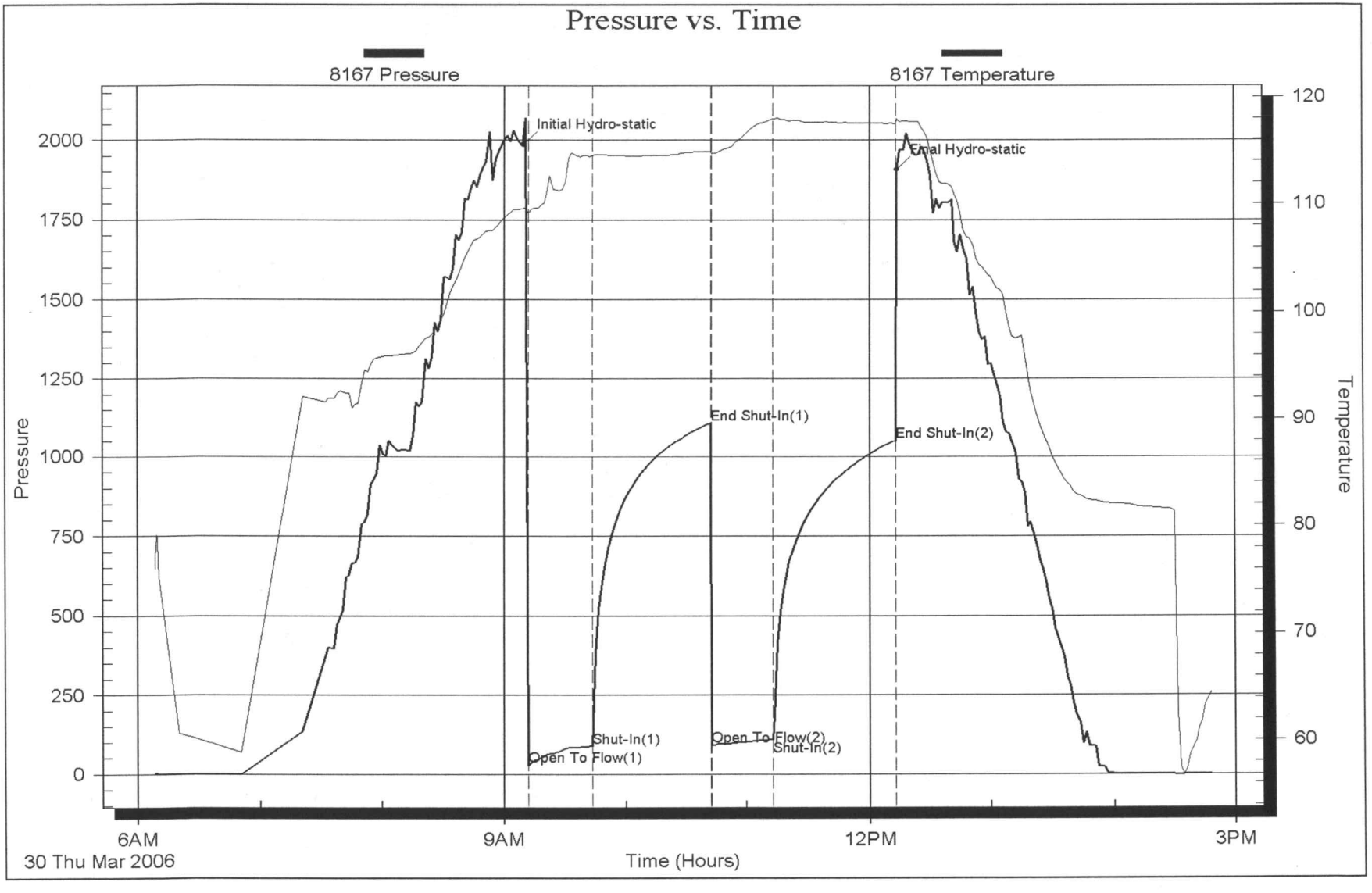
Length ft	Description	Volume bbl
120.00	MW 15%M 85%W	0.590
75.00	WM 40%W 60%M w/show of oil	1.052

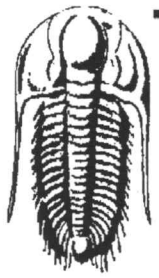
Total Length: 195.00 ft Total Volume: 1.642 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .35@66F


Pressure vs. Time
8167 Pressure
8167 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
120
110
100
90
80
70
60
6AM
9AM
12PM
3PM
30 Thu Mar 2006
Time (Hours)



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

16-15s-22w Trego KS

Werth #1-16

Start Date: 2006.03.30 @ 23:41:30
End Date: 2006.03.31 @ 08:12:29
Job Ticket #: 24812 DST #: 2

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

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24812 **DST#: 2**

Test Start: 2006.03.30 @ 23:41:30

GENERAL INFORMATION:

Formation: **Cher Sd**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:58:29
Time Test Ended: 08:12:29

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 28

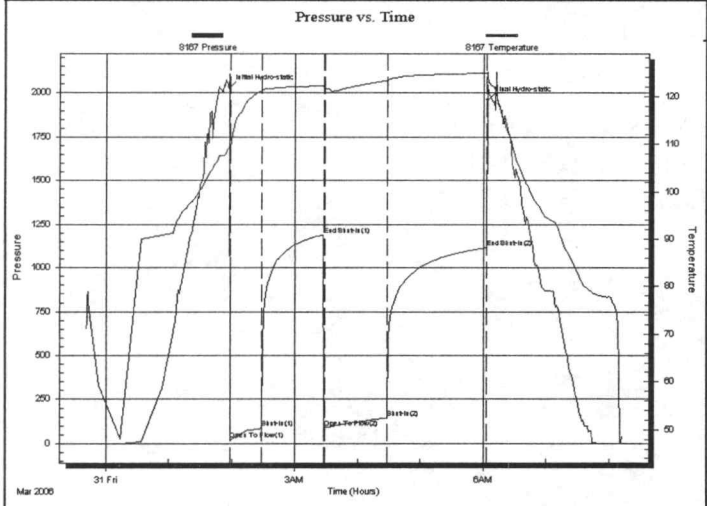
Interval: 4200.00 ft (KB) To 4207.00 ft (KB) (TVD)
Total Depth: 4207.00 ft (KB) (TVD)
Hole Diameter: 6.75 inches Hole Condition: Fair

Reference Elevations: 2270.00 ft (KB)
2265.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8167 **Inside**
Press@RunDepth: 145.33 psig @ 4201.01 ft (KB)
Start Date: 2006.03.30 End Date: 2006.03.31
Start Time: 23:41:30 End Time: 08:12:29

Capacity: 7000.00 psig
Last Calib.: 2006.03.31
Time On Btm: 2006.03.31 @ 01:56:59
Time Off Btm: 2006.03.31 @ 06:03:29

TEST COMMENT: IFP-weak to a fair blow 1/4"to 4 1/4"blow
FFP-weak blow thru-out 1/4"to 1/2"blow
Times 30-60-60-90
no blow on shut-in



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2025.20	109.21	Initial Hydro-static
2	19.51	109.43	Open To Flow (1)
32	88.11	121.17	Shut-In(1)
91	1190.86	122.18	End Shut-In(1)
92	90.10	121.79	Open To Flow (2)
151	145.33	123.25	Shut-In(2)
246	1116.33	124.79	End Shut-In(2)
247	1960.35	125.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
300.00	Water RW .47 @ 45F	3.12

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24812 **DST#: 2**

Test Start: 2006.03.30 @ 23:41:30

Tool Information

Drill Pipe:	Length:	4077.00 ft	Diameter:	3.80 inches	Volume:	57.19 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	
					Total Volume:	57.78 bbl	

Drill Pipe Above KB:	25.00 ft
Depth to Top Packer:	4200.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	7.02 ft
Tool Length:	35.02 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2200.00 lb
Weight set on Packer:		25000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	44000.00 lb
	Final	46000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4173.00		
Shut In Tool	5.00			4178.00		
Hydraulic tool	5.00			4183.00		
Jars	5.00			4188.00		
Safety Joint	2.00			4190.00		
Packer	5.00			4195.00	28.00	Bottom Of Top Packer
Packer	5.00			4200.00		
Stubb	1.00			4201.00		
Recorder	0.01	8167	Inside	4201.01		
Perforations	3.00			4204.01		
Recorder	0.01	13534	Outside	4204.02		
Bullnose	3.00			4207.02	7.02	Bottom Packers & Anchor
Total Tool Length:	**35.02**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita Ks 67202

ATTN: David Doyel

Werth #1-16

16-15s-22w Trego KS

Job Ticket: 24812 **DST#: 2**

Test Start: 2006.03.30 @ 23:41:30

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:	24000 ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3200.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

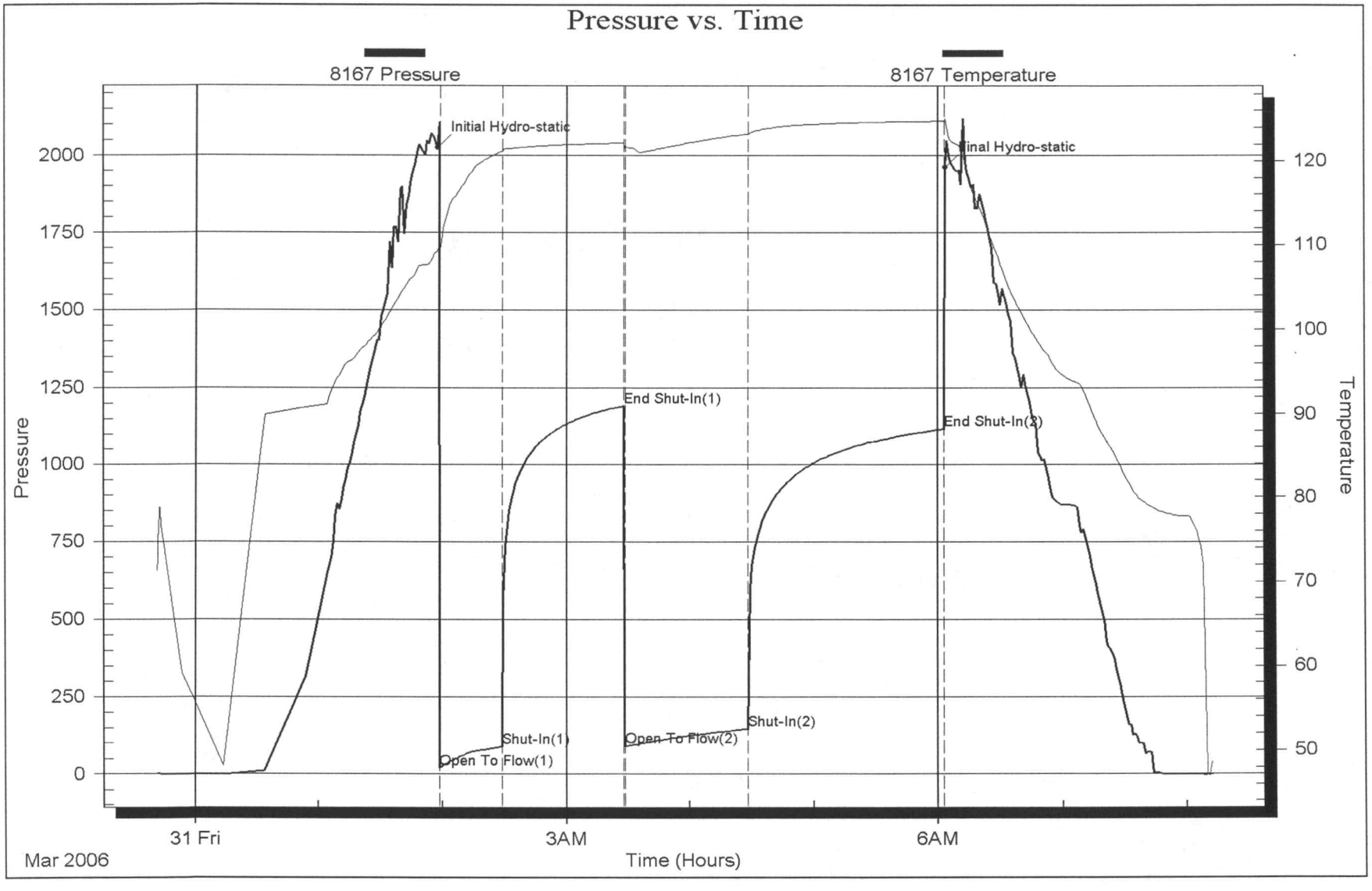
Length ft	Description	Volume bbl
300.00	Water RW .47 @ 45F	3.115

Total Length: 300.00 ft Total Volume: 3.115 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8167 Pressure
8167 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
120
110
100
90
80
70
60
50
31 Fri
3AM
6AM
Mar 2006
Time (Hours)

TRILOBITE TESTING INC.
P.O. Box 362 • Hays, Kansas 67601

10/05

8587

No 24811

Test Ticket

Well Name & No. WERTH #1-16 Test No. 1 Date 3-30-06

Company MURFIN DRILLING CO INC Zone Tested CHER SD

Address 250 N. WATER, SUITE 300 WICHITA, KS 67202 Elevation 2270 KB 2265 GL

Co. Rep / Geo. JEFF CHRISTIAN Rig MURFIN 24

Location: Sec. 16 Twp. 15S Rge. 22W Co. TREGO State KS

Comment: Release date / time:

Interval Tested 4129 - 4187 Initial Str Wt./Lbs. 46000 Unseated Str Wt/Lbs. 46000

Anchor Length 58 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 75000

Top Packer Depth 4124 Tool Weight 2200

Bottom Packer Depth 4129 Hole Size 7 7/8" — Rubber Size 6 3/4" —

Total Depth 4187 Wt. Pipe Run — Drill Collar Run 120

Mud Wt. 9.1 LCM — Vis. 50 WL 7.2 Drill Pipe Size 4½XH Ft. Run

Blow Description IFP - WEAK BLOW THRU-OUT ½" TO 2¼" BLOW
FFP - NO BLOW FIRST 6 MIN, THEN SURFACE BLOW THRU-OUT
NO BLOW ON SHUT-IN

Recovery - Total Feet 195 GIP — Ft. in DC 120 Ft. in DP 75

Rec. 120	Feet of MW	%gas	%oil	85	%water	15	%mud
Rec. 75	Feet of WM w/show of oil	%gas	%oil	40	%water	60	%mud
Rec.	Feet of	%gas	%oil		%water		%mud
Rec.	Feet of	%gas	%oil		%water		%mud
Rec.	Feet of	%gas	%oil		%water		%mud

BHT 117 °F Gravity °API D @ °F Corrected Gravity °API

RW .38 @ 66 °F Chlorides 21000 ppm Recovery Chlorides 3000 ppm System

	AK-1	Alpine					
(A) Initital Hydrostatic Mud		1984 PSI	Recorder No.	8167	Test ✓	1100
(B) First Initial Flow Pressure		28 PSI	(depth)	4132	Jars ✓	250
(C) First Final Flow Pressure		87 PSI	Recorder No.	13534	Safety Jt ✓	75
(D) Initial Shut-In Pressure		1108 PSI	(depth)	4164	Circ Sub	
(E) Second Initial Flow Pressure		90 PSI	Recorder No.	—	Sampler	
(F) Second Final Flow Pressure		109 PSI	(depth)	—	Straddle	
(G) Final Shut-In Pressure		1051 PSI	**Initial Opening**	30	Ext. Packer	
(Q) Final Hydrostatic Mud		1954 PSI	Initial Shut-In	60	Shale Packer	
			Final Flow	30	Ruined Packer	
			Final Shut-In	60	Mileage ✓ 102 RT	127.50
			T-On Location	0445	Sub Total:	1552.50
			T-Started	0608	Std. By 1hr	50
			T-Open	0920	Acc. Chg:	
			T-Pulled	1220	Other:	
			T-Out	1447	Total:	1602.50

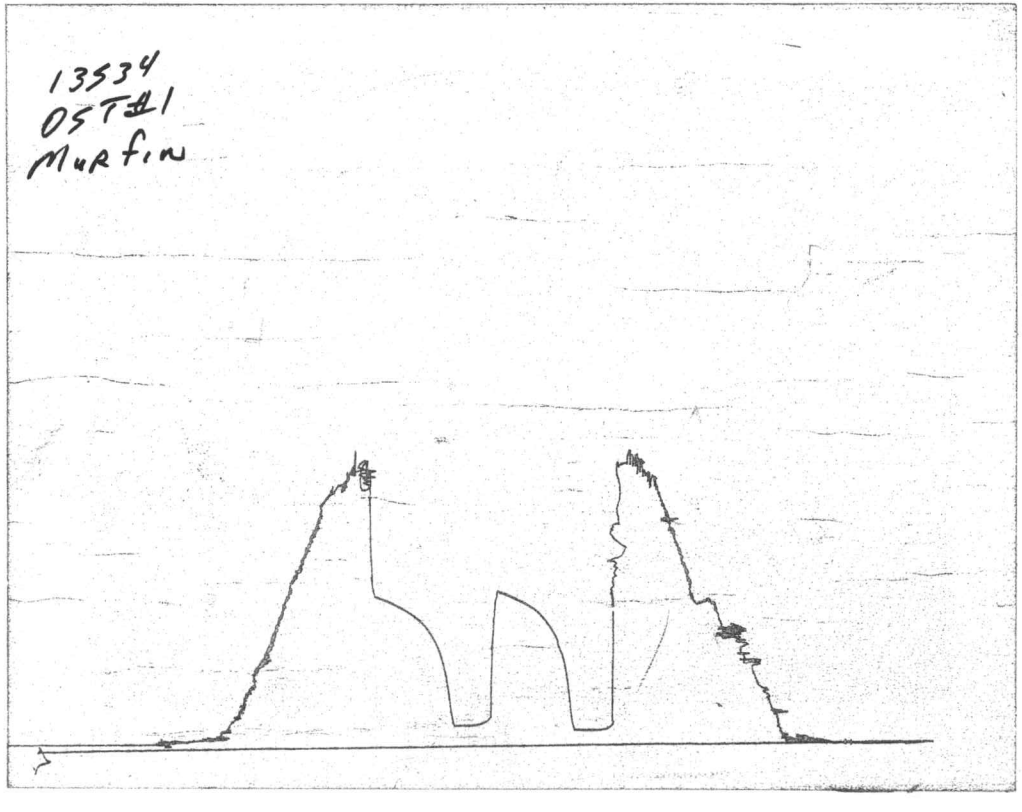
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

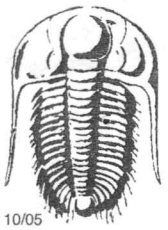
Approved By Jeff Christian

Our Representative RAY SCHWAGER THANK YOU

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

10/05

№ 24812

Test Ticket

Well Name & No. Werth #1-16 Test No. 2 Date 3-30-06

Company Murfin Drilling Co. Inc Zone Tested Cher Sd

Address 250 N. Water, suite 300 Wichita, Ks 67202 Elevation 2270 KB 2265 GL

Co. Rep / Geo. Jeff Christian Rig Murfin 24

Location: Sec. 16 Twp. 15s Rge. 22w Co. Trego State Ks

Comment: Release date / time:

Interval Tested 4200-4207 Initial Str Wt./Lbs. 44000 Unseated Str Wt/Lbs. 46000

Anchor Length 7 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 70000

Top Packer Depth 4195 Tool Weight 2200

Bottom Packer Depth 4200 Hole Size 7 7/8" — Rubber Size 6 3/4" —

Total Depth 4207 Wt. Pipe Run — Drill Collar Run 120

Mud Wt. 9.3 LCM 2# Vis. 50 WL 6.8 Drill Pipe Size 4½XH Ft. Run 4077

Blow Description IFP - Weak to a fair Blow ¼" to 4 ¼" Blow
FFP - Weak Blow thru-out ¼ to ½" Blow
No Blow on shut-in

Recovery - Total Feet 300 GIP — Ft. in DC 120 Ft. in DP 280

Rec. 300 Feet of Water %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

Rec. Feet of %gas %oil %water %mud

BHT 125 °F Gravity °API D @ °F Corrected Gravity °API

RW .47 @ 45 °F Chlorides 24000 ppm Recovery Chlorides 3200 ppm System

	AK-1	Alpine					
(A) Initital Hydrostatic Mud		2025	PSI	Recorder No.	8167	Test ✓	1100
(B) First Initial Flow Pressure		19	PSI	(depth)	4201	Jars ✓	250
(C) First Final Flow Pressure		88	PSI	Recorder No.	13534	Safety Jt. ✓	75
(D) Initial Shut-In Pressure		1190	PSI	(depth)	4204	Circ Sub	
(E) Second Initial Flow Pressure		90	PSI	Recorder No.	—	Sampler	
(F) Second Final Flow Pressure		145	PSI	(depth)	—	Straddle	
(G) Final Shut-In Pressure		1116	PSI	**Initial Opening**	30	Ext. Packer	
(Q) Final Hydrostatic Mud		1947	PSI	Initial Shut-In	60	Shale Packer	
				Final Flow	60	Ruined Packer	
				Final Shut-In	90	Mileage ✓ 102 RT	127.50
				T-On Location	2300	Sub Total:	1552.50
				T-Started	2341	Std. By	—
				T-Open	0200	Acc. Chg:	
				T-Pulled	0600	Other: 9 extra Copies	
				T-Out	0812	Total:	

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Approved By Jeff Christian

Our Representative Ray Schwager Thank you

CHART PAGE

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

