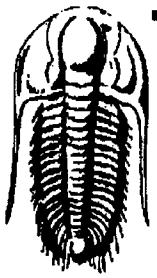
15-023-20527

33-2s-41w



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

33-2S-41W Cheyenne

MLCD #4-33

Start Date: 2003.11.19 @ 08:35:00

End Date: 2003.11.19 @ 15:25:54

Job Ticket #: 17749 DST #: 1

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

Murfin Drilling Company MLCD #4-33 33-2S-41W Cheyenne DST # 1 L/KC "D" 2003.11.19

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17749 **DST#: 1**

Test Start: 2003.11.19 @ 08:35:00

GENERAL INFORMATION:

Formation: **L/KC "D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:19:10
Time Test Ended: 15:25:54

Test Type: Conventional Bottom Hole
Tester: Rod Steinbrink
Unit No: 22

Interval: 4548.00 ft (KB) To 4614.00 ft (KB) (TVD)
Total Depth: 4614.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

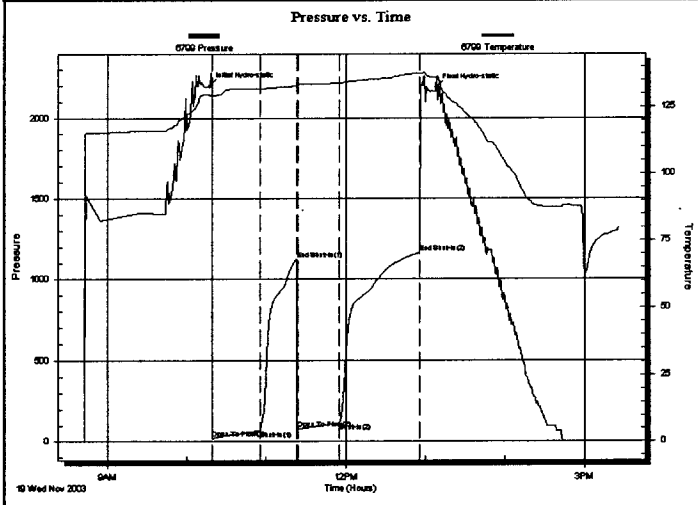
Reference Elevations: 3665.00 ft (KB)
3660.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 115.19 psig @ 4549.00 ft (KB)
Start Date: 2003.11.19 End Date: 2003.11.19
Start Time: 08:42:20 End Time: 15:25:55

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2003.11.19 @ 10:16:55
Time Off Btm: 2003.11.19 @ 13:08:09

TEST COMMENT: Tool Slid 5' at open- IF; Weak 1/2" blow died in 25 mins
FF; No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2196.65	129.49	Initial Hydro-static
3	17.57	128.88	Open To Flow (1)
39	70.00	131.87	Shut-In(1)
66	1120.73	132.97	End Shut-In(1)
67	78.08	133.31	Open To Flow (2)
99	115.19	134.03	Shut-In(2)
159	1161.84	137.49	End Shut-In(2)
172	2187.59	136.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	OCM 25%oil 75%mud	0.69
60.00	FO	0.30

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17749 **DST#: 1**

Test Start: 2003.11.19 @ 08:35:00

Tool Information

Drill Pipe:	Length:	3989.00 ft	Diameter:	3.80 inches	Volume:	55.96 bbl	Tool Weight:		3000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	546.00 ft	Diameter:	2.25 inches	Volume:	2.69 bbl	Weight to Pull Loose:		92000.00 lb
					Total Volume:	58.65 bbl	Tool Chased		5.00 ft
Drill Pipe Above KB:		9.00 ft					String Weight:	Initial	62000.00 lb
Depth to Top Packer:		4548.00 ft						Final	62000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		66.00 ft							
Tool Length:		88.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4531.00		
Hydraulic tool	5.00			4536.00		
Safety Joint	2.00			4538.00		
Packer	5.00			4543.00	22.00	Bottom Of Top Packer
Packer	5.00			4548.00		
Stubb	1.00			4549.00		
Recorder	0.00	6799	Inside	4549.00		
Perforations	26.00			4575.00		
Change Over Sub	1.00			4576.00		
Anchor	32.00			4608.00		
Change Over Sub	1.00			4609.00		
Recorder	0.00	13309	Outside	4609.00		
Bullnose	5.00			4614.00	66.00	Bottom Packers & Anchor
Total Tool Length:	**88.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17749 **DST#: 1**

Test Start: 2003.11.19 @ 08:35:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	29.6 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	5.97 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	700.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

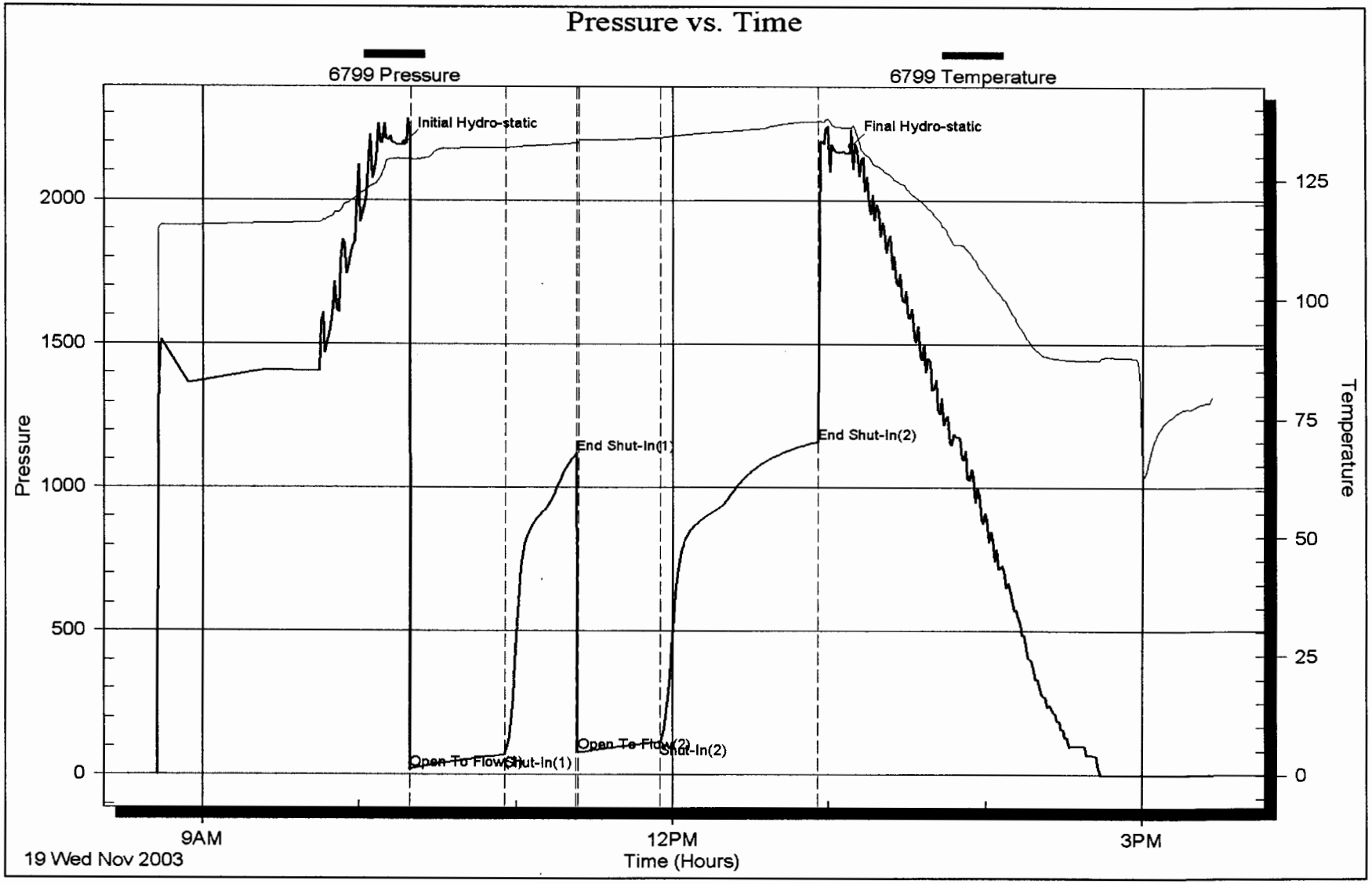
Length ft	Description	Volume bbl
140.00	OCM 25%oil 75%mud	0.688
60.00	FO	0.295

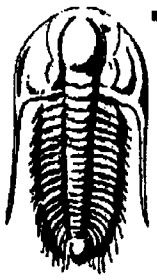
Total Length: 200.00 ft Total Volume: 0.983 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
2000
1500
1000
500
0
125
100
75
50
25
0
9AM
12PM
3PM
19 Wed Nov 2003
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

33-2S-41W Cheyenne

MLCD #4-33

Start Date: 2003.11.20 @ 08:35:10

End Date: 2003.11.20 @ 15:53:40

Job Ticket #: 17750 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 Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17750 **DST#: 2**

Test Start: 2003.11.20 @ 08:35:10

GENERAL INFORMATION:

Formation: **L/KC H thru J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:10:10
Time Test Ended: 15:53:40

Test Type: Conventional Bottom Hole
Tester: Rod Steinbrink
Unit No: 22

Interval: 4666.00 ft (KB) To 4760.00 ft (KB) (TVD)
Total Depth: 4760.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

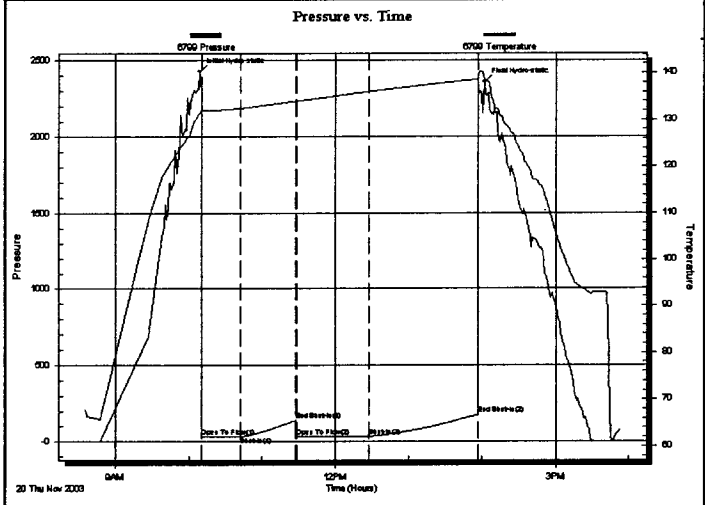
Reference Elevations: 3665.00 ft (KB)
3660.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 36.09 psig @ 4667.00 ft (KB)
Start Date: 2003.11.20 End Date: 2003.11.20
Start Time: 08:35:20 End Time: 15:53:40

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2003.11.20 @ 10:08:40
Time Off Btm: 2003.11.20 @ 14:01:55

TEST COMMENT: Tool slid 3' IF; 1 1/2" blow decreased to 1/2"
FF; No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2425.15	131.30	Initial Hydro-static
2	31.27	131.78	Open To Flow (1)
33	33.81	132.45	Shut-In(1)
80	138.80	133.98	End Shut-In(1)
80	33.87	133.97	Open To Flow (2)
139	36.09	136.00	Shut-In(2)
228	176.28	138.62	End Shut-In(2)
234	2357.46	138.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Drlg. Mud	0.10

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17750 **DST#: 2**

Test Start: 2003.11.20 @ 08:35:10

Tool Information

Drill Pipe:	Length:	4114.00 ft	Diameter:	3.80 inches	Volume:	57.71 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	546.00 ft	Diameter:	2.25 inches	Volume:	2.69 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	60.40 bbl	Tool Chased	3.00 ft
Drill Pipe Above KB:		16.00 ft					String Weight: Initial	62000.00 lb
Depth to Top Packer:		4666.00 ft					Final	62000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		94.00 ft						
Tool Length:		116.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4649.00		
Hydraulic tool	5.00			4654.00		
Safety Joint	2.00			4656.00		
Packer	5.00			4661.00	22.00	Bottom Of Top Packer
Packer	5.00			4666.00		
Stubb	1.00			4667.00		
Recorder	0.00	6799	Inside	4667.00		
Perforations	24.00			4691.00		
Change Over Sub	1.00			4692.00		
Anchor	62.00			4754.00		
Change Over Sub	1.00			4755.00		
Recorder	0.00	13371	Outside	4755.00		
Bullnose	5.00			4760.00	94.00	Bottom Packers & Anchor
Total Tool Length:	**116.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

250 N Water Ste #300
Wichita KS 76202

ATTN: Paul Gunzelman

MLCD #4-33

33-2S-41W Cheyenne

Job Ticket: 17750 **DST#: 2**

Test Start: 2003.11.20 @ 08:35:10

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:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	700.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

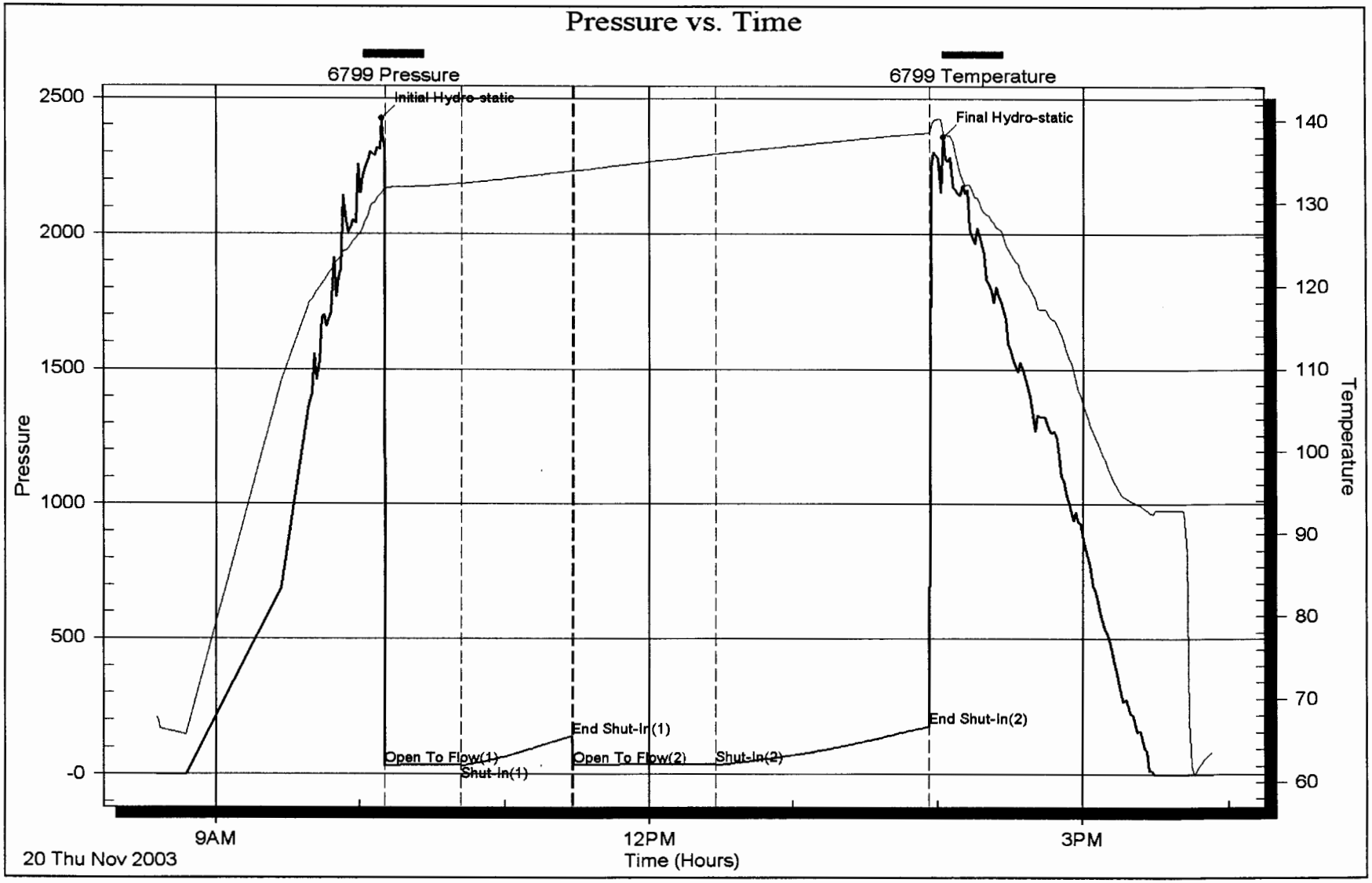
Length ft	Description	Volume bbl
20.00	Drlg. Mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
2500
2000
1500
1000
500
-0
140
130
120
110
100
90
80
70
60
9AM
12PM
3PM
20 Thu Nov 2003
Time (Hours)

TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 6027

№ 17749

12/02

Test Ticket

Well Name & No. MLCD #4-33 Test No. 1 Date 11-19-03

Company Murfin Drilling Company Inc. Zone Tested L/KC 'D'

Address 250 N. Water Ste #300 Wichita, KS. 67202 Elevation 3665 KB 3660 GL

Co. Rep / Geo. Paul Gunzelman Cont. Murfin #3 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 33 Twp. 2S Rge. 41W Co. Cheyenne State KS.

No. of Copies _____ Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4548 - 4614 Initial Str Wt./Lbs. 62,000 Unseated Str Wt/Lbs. 62,000

Anchor Length 66' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 92,000

Top Packer Depth 4543 Tool Weight 3,000

Bottom Packer Depth 4548 Hole Size 7 7/8" Rubber Size 6 3/4"

Total Depth 4614 Wt. Pipe Run — Drill Collar Run 546'

Mud Wt. _____ LCM _____ Vis. _____ WL _____ Drill Pipe Size 4½" XH Ft. Run 3989'

Blow Description IF: Weak ½" blow died in 25 mins.

FF: No return blow.

Recovery - Total Feet 200' GIP — Ft. in DC 200' Ft. in DP —

Rec. _____ Feet of _____

Rec. 60' Feet of FO

Rec. _____ Feet of _____

Rec. 140' Feet of OCM 25% oil 75% mud

Rec. _____ Feet of _____

BHT 137° °F Gravity 31 °API D @ 74° °F Corrected Gravity 29.6 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 700 ppm System

	AK-1	Alpine					
(A) Initital Hydrostatic Mud	2640	2196	PSI	Recorder No.	6799	Test	800
(B) First Initial Flow Pressure	117	17	PSI	(depth)	4549	Elec. Rec.	X 150
(C) First Final Flow Pressure	117	70	PSI	Recorder No.	13371	Jars	
(D) Initial Shut-In Pressure	1313	1120	PSI	(depth)	4609	Safety Jt.	X 50
(E) Second Initial Flow Pressure	176	78	PSI	Recorder No.		Circ Sub	X N/C
(F) Second Final Flow Pressure	176	115	PSI	(depth)		Sampler	
(G) Final Shut-In Pressure	1336	1161	PSI	**Initial Opening**	30	Straddle	
(Q) Final Hydrostatic Mud	2617	2187	PSI	Initial Shut-In	30	Ext. Packer	
				Final Flow	30	Shale Packer	
				Final Shut-In	60	Mileage	1 way 154 154
				T-On Location	0615	Sub Total:	1154.00
				T-Started	0700	Std. By	¾ hr 22.50
				T-Open	1019	Other	
				T-Pulled	1255	Total:	1176.50
				T-Out	1525		

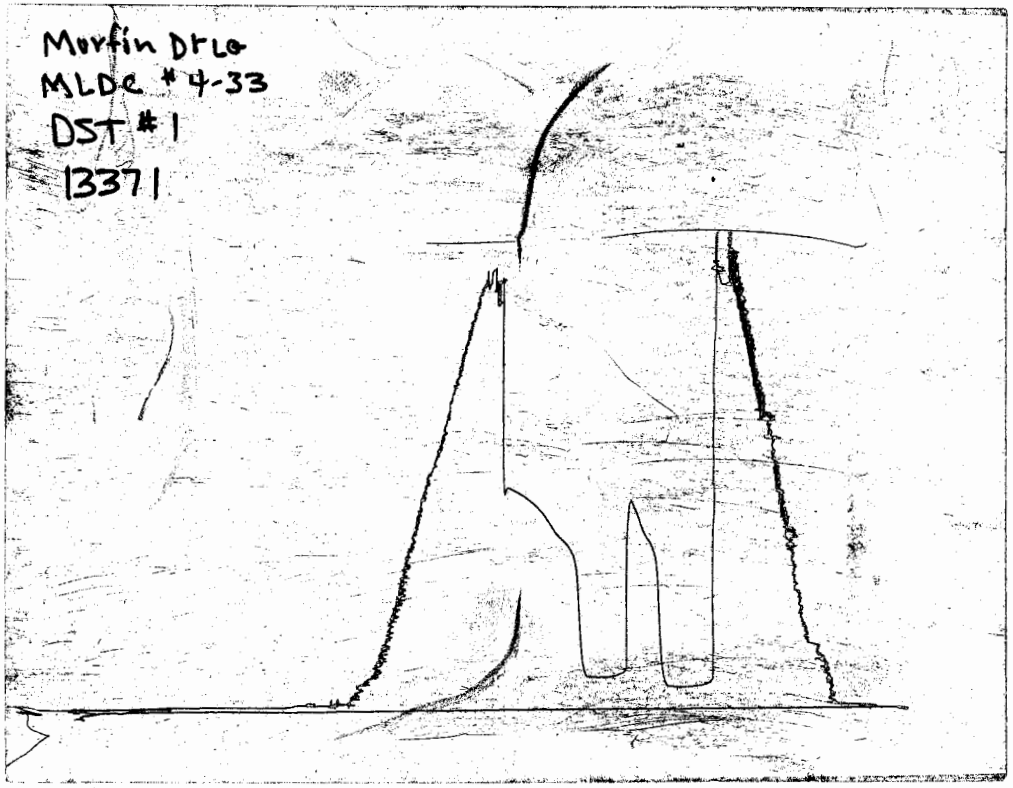
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Approved By Paul Gunzelman

Our Representative Rod Steinbrink

CHART PAGE

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



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

12/02

№ 17750

Test Ticket

Well Name & No. MLCD #4-33 Test No. 2 Date 11-20-03

Company Murfin Drilling Company Inc. Zone Tested L/KC, H & J

Address 250 N Water Ste 300 Wichita, KS. 67202 Elevation 3665 KB 3660 GL

Co. Rep / Geo. Paul Gunzelman Cont. Murfin #3 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 33 Twp. 2S Rge. 41W Co. Cheyenne State KS.

No. of Copies _____ Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4666 - 4760 Initial Str Wt./Lbs. 62,000 Unseated Str Wt/Lbs. 62,000

Anchor Length 94' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 80,000

Top Packer Depth 4661 Tool Weight 3,000

Bottom Packer Depth 4666 Hole Size 7 7/8" Rubber Size 6 3/4"

Total Depth 4760 Wt. Pipe Run — Drill Collar Run 546'

Mud Wt. 9.3 LCM _____ Vis. 58 WL 6.4 Drill Pipe Size 4½" XH Ft. Run 4114'

Blow Description Tool slid 3' IF: 1½" blow decreased to ½"

FF: No return blow

Recovery - Total Feet 20' GIP — Ft. in DC 20' Ft. in DP —

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. 20' Feet of Drlg Mud

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 138° °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 700 ppm System

	AK-1	Alpine
(A)Initital Hydrostatic Mud		2425 PSI
(B) First Initial Flow Pressure		31 PSI
(C) First Final Flow Pressure		33 PSI
(D) Initial Shut-In Pressure		138 PSI
(E) Second Initial Flow Pressure		33 PSI
(F) Second Final Flow Pressure		36 PSI
(G) Final Shut-In Pressure		176 PSI
(Q) Final Hydrostatic Mud		2357 PSI

Recorder No.	6799
(depth)	4667
Recorder No.	13371
(depth)	4755
Recorder No.	
(depth)	
Initial Opening	30
Initial Shut-In	45
Final Flow	60
Final Shut-In	90
T-On Location	0730
T-Started	0835
T-Open	1010
T-Pulled	1356
T-Out	1553
T-Off	1630

Test	800
Elec. Rec.	X 150
Jars	
Safety Jt.	X 50
Circ Sub	X N/C
Sampler	
Straddle	
Ext. Packer	
Shale Packer	
Mileage	1 way 15 15
Sub Total:	1015
Std. By	
Other	
Total:	

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Approved By Paul Gunzelman

Our Representative Rod Steinbrink

CHART PAGE

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

