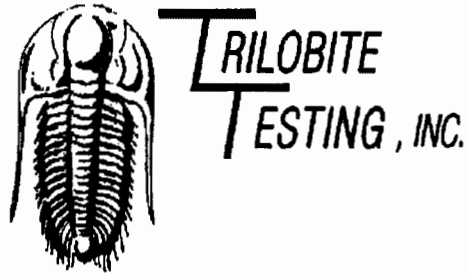


15-009-24786

24-16s-14w



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

**Nettleingham-Holland # 1-24**

Start Date: 2004.02.20 @ 03:35:58

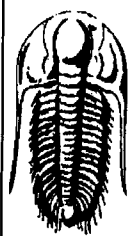
End Date: 2004.02.20 @ 10:20:28

Job Ticket #: 18247                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita Ks 67202  
ATTN: David Doyel

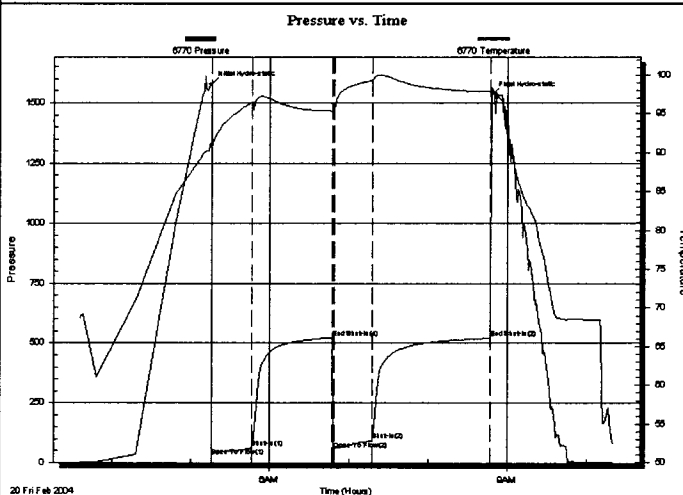
**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18247      **DST#: 1**  
Test Start: 2004.02.20 @ 03:35:58

### GENERAL INFORMATION:

Formation: "A" LKC  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 05:15:58  
Time Test Ended: 10:20:28  
Test Type: Conventional Bottom Hole  
Tester: Dan Bangle  
Unit No: 21  
Interval: 3183.00 ft (KB) To 3198.00 ft (KB) (TVD)  
Reference Elevations: 1967.00 ft (KB)  
Total Depth: 3198.00 ft (KB) (TVD) 1962.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 6770**      **Inside**  
Press@RunDepth: 93.64 psig @ 3184.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2004.02.20      End Date: 2004.02.20      Last Calib.: 2004.02.20  
Start Time: 03:35:59      End Time: 10:20:28      Time On Btm: 2004.02.20 @ 05:14:58  
Time Off Btm: 2004.02.20 @ 08:47:58

**TEST COMMENT:** F-Strong BOB in 3 min  
IS-Weak building to 3"  
FF-Strong BOB in 2 min  
FSI-Weak building to 2"



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1577.34	91.16	Initial Hydro-static
1	26.80	90.53	Open To Flow (1)
32	62.31	96.47	Shut-in(1)
92	523.11	95.33	End Shut-in(1)
94	55.65	95.56	Open To Flow (2)
123	93.64	99.36	Shut-in(2)
213	521.27	97.81	End Shut-in(2)
213	1532.75	98.30	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCGsyM 15%g 30%o 55%m	0.61
124.00	CGsyO 15%g 85%o	1.74
0.00	2604 GIP	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 18247

**DST#: 1**

ATTN: David Doyel

Test Start: 2004.02.20 @ 03:35:58

**Tool Information**

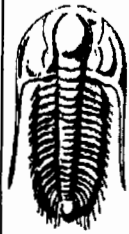
Drill Pipe:	Length: 3049.00 ft	Diameter: 3.80 inches	Volume: 42.77 bbl	Tool Weight: 1100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 75000.00 lb
			<b>Total Volume: 43.38 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3183.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3163.00	
Shut In Tool	5.00			3168.00	
Hydraulic tool	5.00			3173.00	
Packer	5.00			3178.00	21.00 Bottom Of Top Packer
Packer	5.00			3183.00	
Stubb	1.00			3184.00	
Recorder	0.00	6770	Inside	3184.00	
Perforations	11.00			3195.00	
Recorder	0.00	13254	Outside	3195.00	
Bullnose	3.00			3198.00	15.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>36.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 18247

**DST#: 1**

ATTN: David Doyel

Test Start: 2004.02.20 @ 03:35:58

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.45 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	OCGsyM 15%g 30%o 55%m	0.610
124.00	CGsyO 15%g 85%o	1.739
0.00	2604 GIP	0.000

Total Length: 248.00 ft

Total Volume: 2.349 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

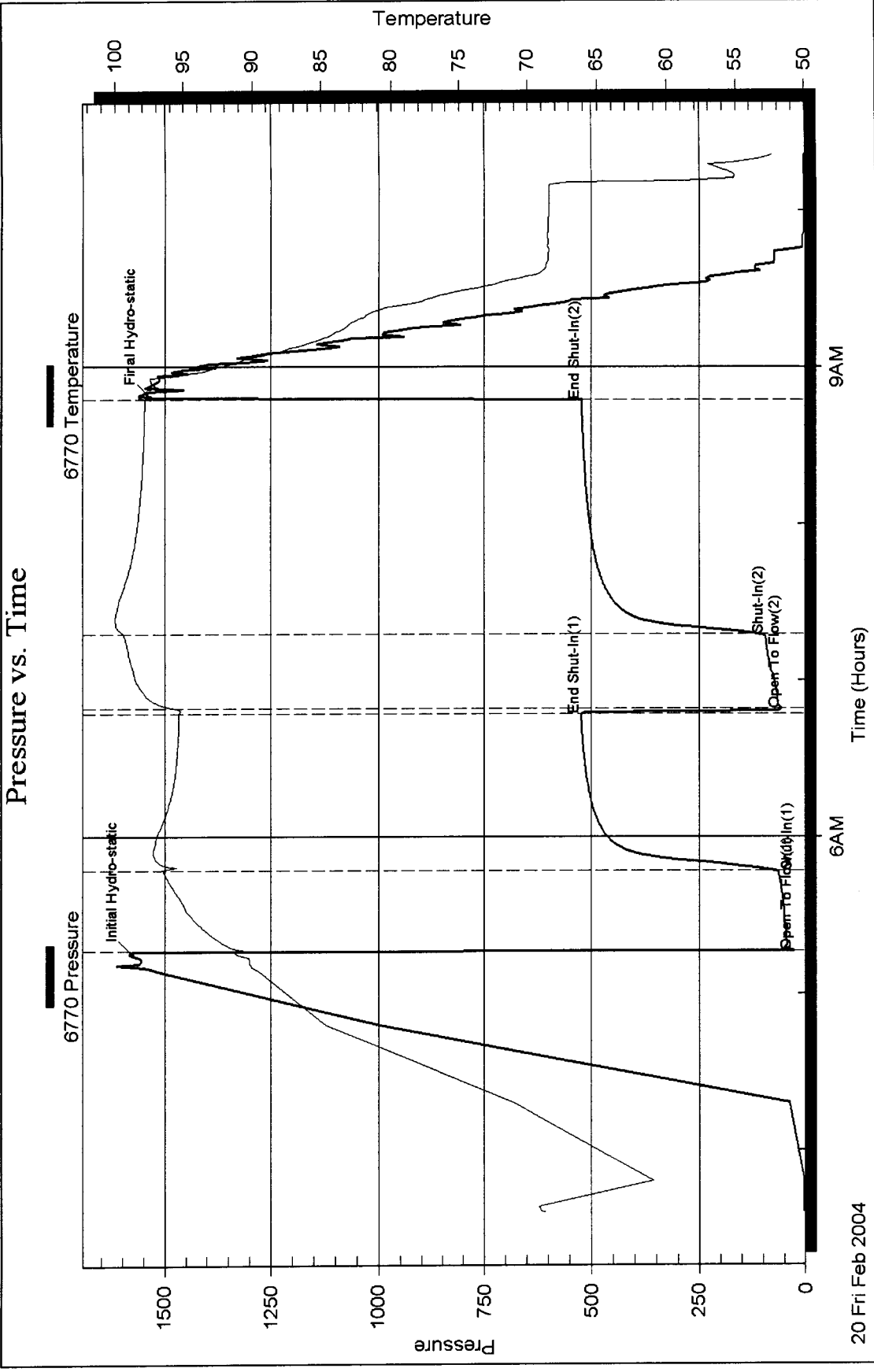
Inside

Murfin Drilling Co Inc

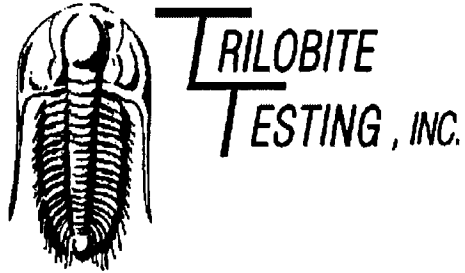
24-16-14-Barton-Ks

DST Test Number: 1

### Pressure vs. Time



20 Fri Feb 2004



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

**Nettleingham-Holland # 1-24**

Start Date: 2004.02.20 @ 15:42:08

End Date: 2004.02.20 @ 22:36:23

Job Ticket #: 18248                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co Inc

Nettleingham-Holland # 1-24

24-16-14-Barton-Ks

DST # 2

"B"

LKC

2004.02.20



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita Ks 67202  
ATTN: David Doyel

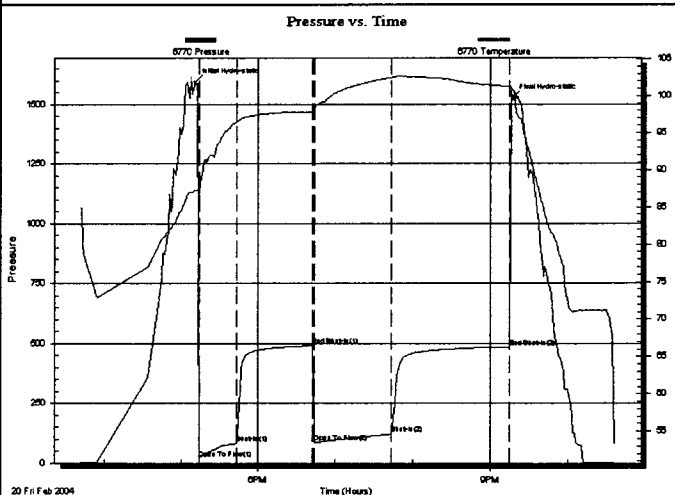
**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18248      **DST#: 2**  
Test Start: 2004.02.20 @ 15:42:08

### GENERAL INFORMATION:

Formation: **"B" LKC**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 17:13:53  
Time Test Ended: 22:36:23  
Test Type: Conventional Bottom Hole  
Tester: Dan Bangle  
Unit No: 21  
Interval: **3198.00 ft (KB) To 3206.00 ft (KB) (TVD)**  
Reference Elevations: 1967.00 ft (KB)  
Total Depth: 3206.00 ft (KB) (TVD)                      1962.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good                      KB to GR/CF: 5.00 ft

**Serial #: 6770      Inside**  
Press@RunDepth: 121.40 psig @ 3199.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2004.02.20      End Date: 2004.02.20      Last Calib.: 2004.02.20  
Start Time: 15:42:09      End Time: 22:36:23      Time On Btm: 2004.02.20 @ 17:10:53  
Time Off Btm: 2004.02.20 @ 21:16:53

**TEST COMMENT:** F-Weak building to 3 1/2"  
FF-Weak building to 2"  
Times-30-60-60-90



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1594.42	87.27	Initial Hydro-static
3	18.41	86.83	Open To Flow (1)
33	81.55	96.46	Shut-In (1)
92	490.30	97.86	End Shut-In (1)
93	85.56	97.84	Open To Flow (2)
153	121.40	102.48	Shut-In (2)
244	485.03	101.27	End Shut-In (2)
246	1527.46	100.83	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
235.00	Mdy Wtr 80%w 10%m	2.17
5.00	CO	0.07
0.00	60 GIP	0.00

### 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

**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18248      DST#: 2  
Test Start: 2004.02.20 @ 15:42:08

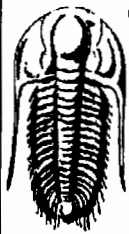
### Tool Information

Drill Pipe:	Length: 3080.00 ft	Diameter: 3.80 inches	Volume: 43.20 bbl	Tool Weight: 1000.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 75000.00 lb
		<b>Total Volume:</b>	<b>43.81 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3198.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	29.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3178.00	
Shut In Tool	5.00			3183.00	
Hydraulic tool	5.00			3188.00	
Packer	5.00			3193.00	21.00      Bottom Of Top Packer
Packer	5.00			3198.00	
Stubb	1.00			3199.00	
Recorder	0.00	6770	inside	3199.00	
Perforations	4.00			3203.00	
Recorder	0.00	13254	Outside	3203.00	
Bullnose	3.00			3206.00	8.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>29.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita Ks 67202  
ATTN: David Doyel

**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18248      **DST#: 2**  
Test Start: 2004.02.20 @ 15:42:08

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 7.98 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 5000.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 48000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
235.00	Mdy Wtr 80%w 10%m	2.167
5.00	CO	0.070
0.00	60 GIP	0.000

Total Length: 240.00 ft      Total Volume: 2.237 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

Serial #: 6770

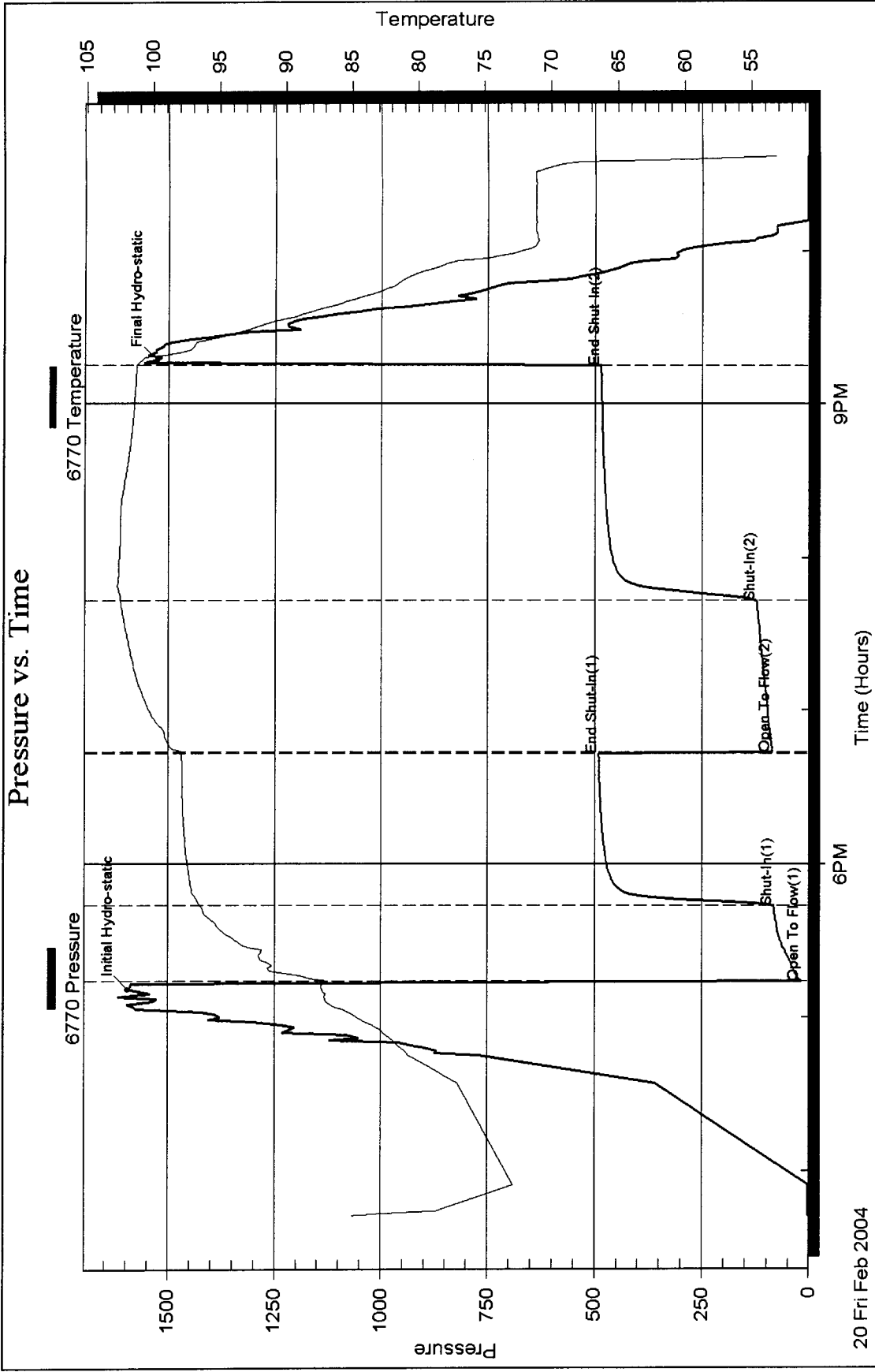
Inside

Murfin Drilling Co Inc

24-16-14-Barton-Ks

DST Test Number: 2

### Pressure vs. Time



20 Fri Feb 2004

Trilobite Testing, Inc

Ref. No: 18248

Printed: 2004.02.25 @ 13:38:33 Page 5



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

**Nettleingham-Holland # 1-24**

Start Date: 2004.02.21 @ 07:00:44

End Date: 2004.02.21 @ 13:49:14

Job Ticket #: 18249                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co Inc

Nettleingham-Holland # 1-24

24-16-14-Barton-Ks

DST # 3

D-E-F-

LKC

2004.02.21



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**Nettleingham-Holland # 1-24**

**24-16-14-Barton-Ks**

Job Ticket: 18249

DST#: 3

Test Start: 2004.02.21 @ 07:00:44

### GENERAL INFORMATION:

Formation: **D-E-F- LKC**

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

Time Tool Opened: 08:24:44

Time Test Ended: 13:49:14

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **3244.00 ft (KB) To 3274.00 ft (KB) (TVD)**

Total Depth: **3274.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1967.00 ft (KB)**

**1962.00 ft (CF)**

KB to GR/CF: **5.00 ft**

**Serial #: 6770**

**Inside**

Press@RunDepth: **138.85 psig @ 3245.00 ft (KB)**

Start Date: **2004.02.21**

End Date:

**2004.02.21**

Start Time: **07:00:45**

End Time:

**13:49:14**

Capacity: **7000.00 psig**

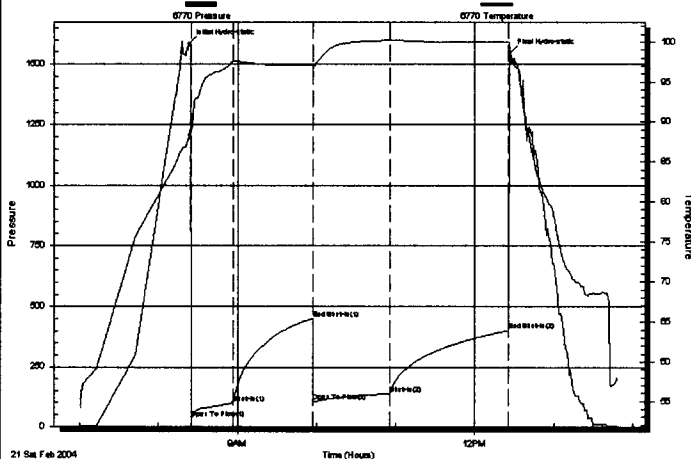
Last Calib.: **2004.02.21**

Time On Btm: **2004.02.21 @ 08:23:14**

Time Off Btm: **2004.02.21 @ 12:26:59**

**TEST COMMENT:** IF-Weak building to BOB in 25 min  
FF-Weak building to BOB in 45 min  
Times-30-60-60-90

Pressure vs. Time



### PRESSURE SUMMARY

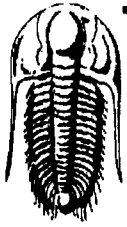
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1586.66	88.87	Initial Hydro-static
2	35.35	88.70	Open To Flow (1)
34	98.89	97.59	Shut-in(1)
94	451.12	97.14	End Shut-in(1)
95	104.60	96.88	Open To Flow (2)
153	138.85	100.24	Shut-in(2)
243	400.19	99.99	End Shut-in(2)
244	1549.66	98.26	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
268.00	Mdy Wtr 70%w 30%m	2.63
15.00	CO	0.21
0.00	186 GIP	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 18249

**DST#: 3**

ATTN: David Doyel

Test Start: 2004.02.21 @ 07:00:44

**Tool Information**

Drill Pipe:	Length: 3110.00 ft	Diameter: 3.80 inches	Volume: 43.63 bbl	Tool Weight:	1500.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 44.24 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3244.00 ft			Final	69000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	51.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

**Tool Description**

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3224.00	
Shut In Tool	5.00			3229.00	
Hydraulic tool	5.00			3234.00	
Packer	5.00			3239.00	21.00 Bottom Of Top Packer
Packer	5.00			3244.00	
Stubb	1.00			3245.00	
Recorder	0.00	6770	Inside	3245.00	
Perforations	26.00			3271.00	
Recorder	0.00	13254	Outside	3271.00	
Bullnose	3.00			3274.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>51.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Nettleingham-Holland # 1-24

250 N Water Ste 300  
Wichita Ks 67202

24-16-14-Barton-Ks

Job Ticket: 18249

DST#: 3

ATTN: David Doyel

Test Start: 2004.02.21 @ 07:00:44

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 63000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 6100.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
268.00	Mdy Wtr 70%w 30%m	2.630
15.00	CO	0.210
0.00	186 GIP	0.000

Total Length: 283.00 ft      Total Volume: 2.840 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

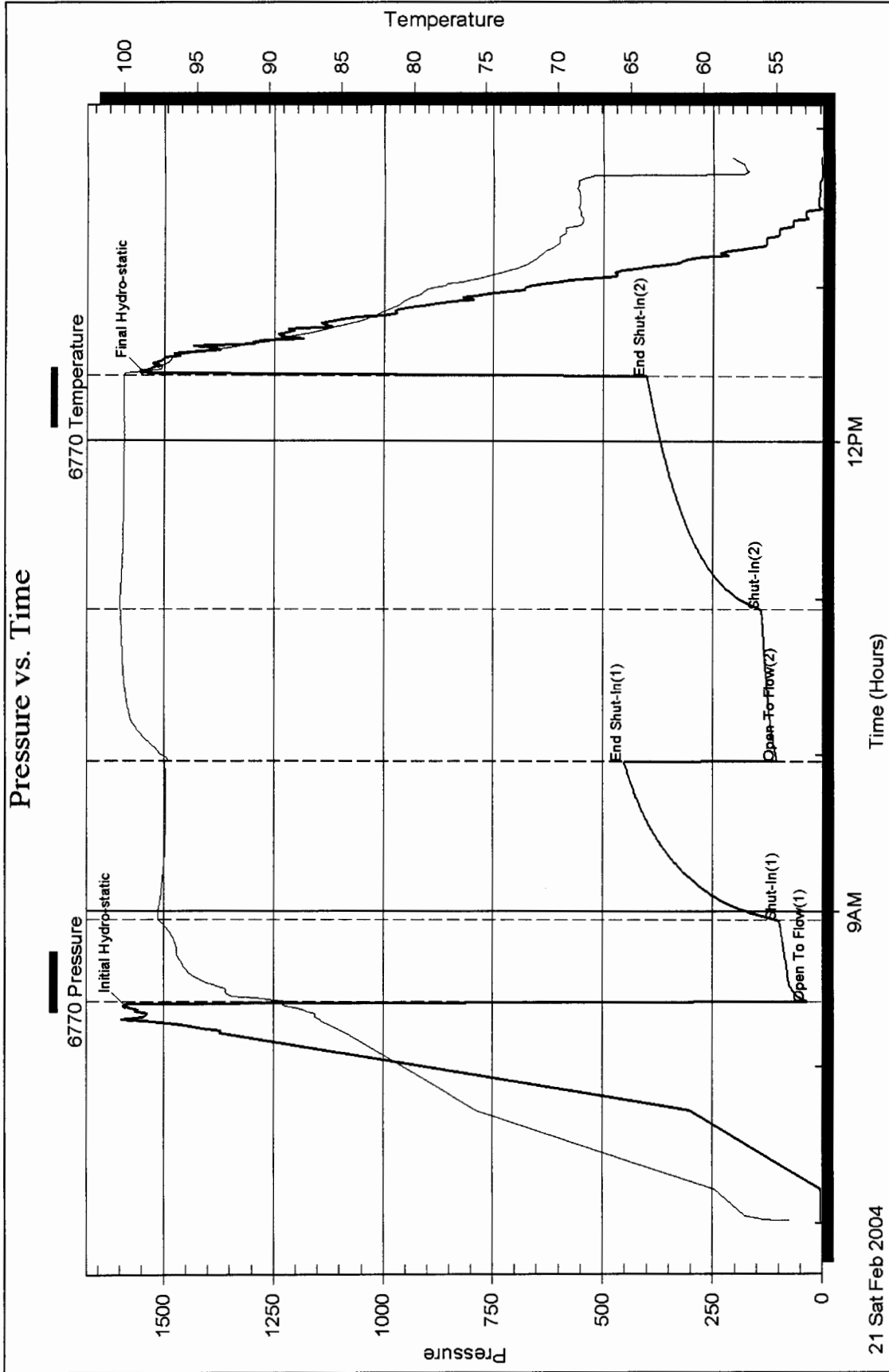
Inside

Murfin Drilling Co Inc

24-16-14-Barton-Ks

DST Test Number: 3

### Pressure vs. Time

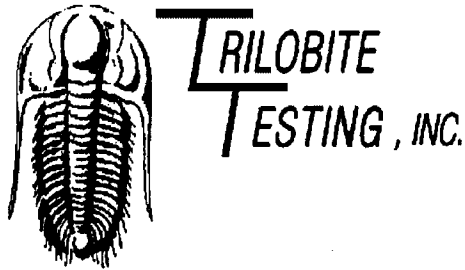


21 Sat Feb 2004

9AM

12PM

Time (Hours)



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

**Nettleingham-Holland # 1-24**

Start Date: 2004.02.22 @ 02:15:43

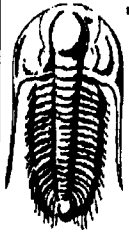
End Date: 2004.02.22 @ 09:03:13

Job Ticket #: 18250                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita Ks 67202  
ATTN: David Doyel

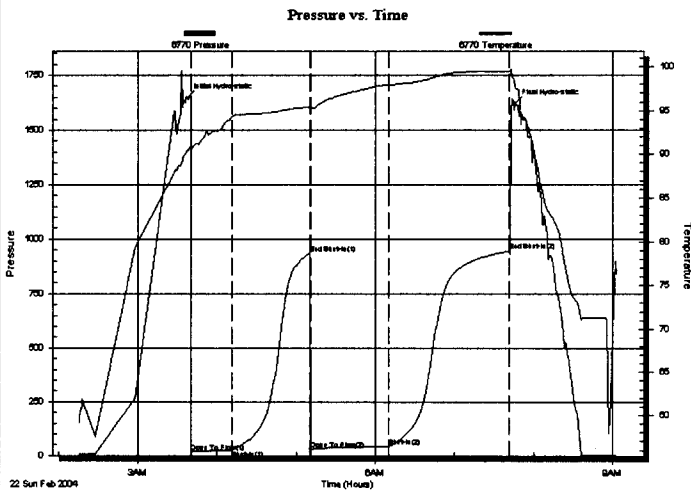
**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18250      DST#: 4  
Test Start: 2004.02.22 @ 02:15:43

## GENERAL INFORMATION:

Formation: "J" LKC  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 03:40:43  
Time Test Ended: 09:03:13  
Interval: 3358.00 ft (KB) To 3380.00 ft (KB) (TVD)  
Total Depth: 3380.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Dan Bangle  
Unit No: 21  
Reference Elevations: 1967.00 ft (KB)  
1962.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 6770 Inside**  
Press@RunDepth: 43.96 psig @ 3359.00 ft (KB) Capacity: 7000.00 psig  
Start Date: 2004.02.22 End Date: 2004.02.22 Last Calib.: 2004.02.22  
Start Time: 02:15:44 End Time: 09:03:13 Time On Btmr: 2004.02.22 @ 03:37:28  
Time Off Btmr: 2004.02.22 @ 07:45:43

TEST COMMENT: F-Weak building to 3/4"  
FF-Weak building to 3"  
Times-30-60-60-90



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1647.01	90.43	Initial Hydro-static
4	17.85	90.57	Open To Flow (1)
35	26.64	94.34	Shut-In(1)
93	935.26	95.43	End Shut-In(1)
94	29.93	95.34	Open To Flow (2)
153	43.96	97.94	Shut-In(2)
245	944.86	99.51	End Shut-In(2)
249	1623.08	97.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	OCM 30%o 70% m	0.32
0.00	60 GIP	0.00

## 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

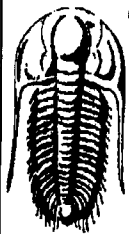
**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 18250      **DST#: 4**  
Test Start: 2004.02.22 @ 02:15:43

**Tool Information**

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 bbl	Tool Weight: 1300.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 45.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3358.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	43.00 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			3338.00	
Shut In Tool	5.00			3343.00	
Hydraulic tool	5.00			3348.00	
Packer	5.00			3353.00	21.00      Bottom Of Top Packer
Packer	5.00			3358.00	
Stubb	1.00			3359.00	
Recorder	0.00	6770	Inside	3359.00	
Perforations	18.00			3377.00	
Recorder	0.00	13254	Outside	3377.00	
Bullnose	3.00			3380.00	22.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 18250

**DST#: 4**

ATTN: David Doyel

Test Start: 2004.02.22 @ 02:15:43

### 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: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 6100.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	OCM 30%o 70%m	0.320
0.00	60 GIP	0.000

Total Length: 65.00 ft      Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

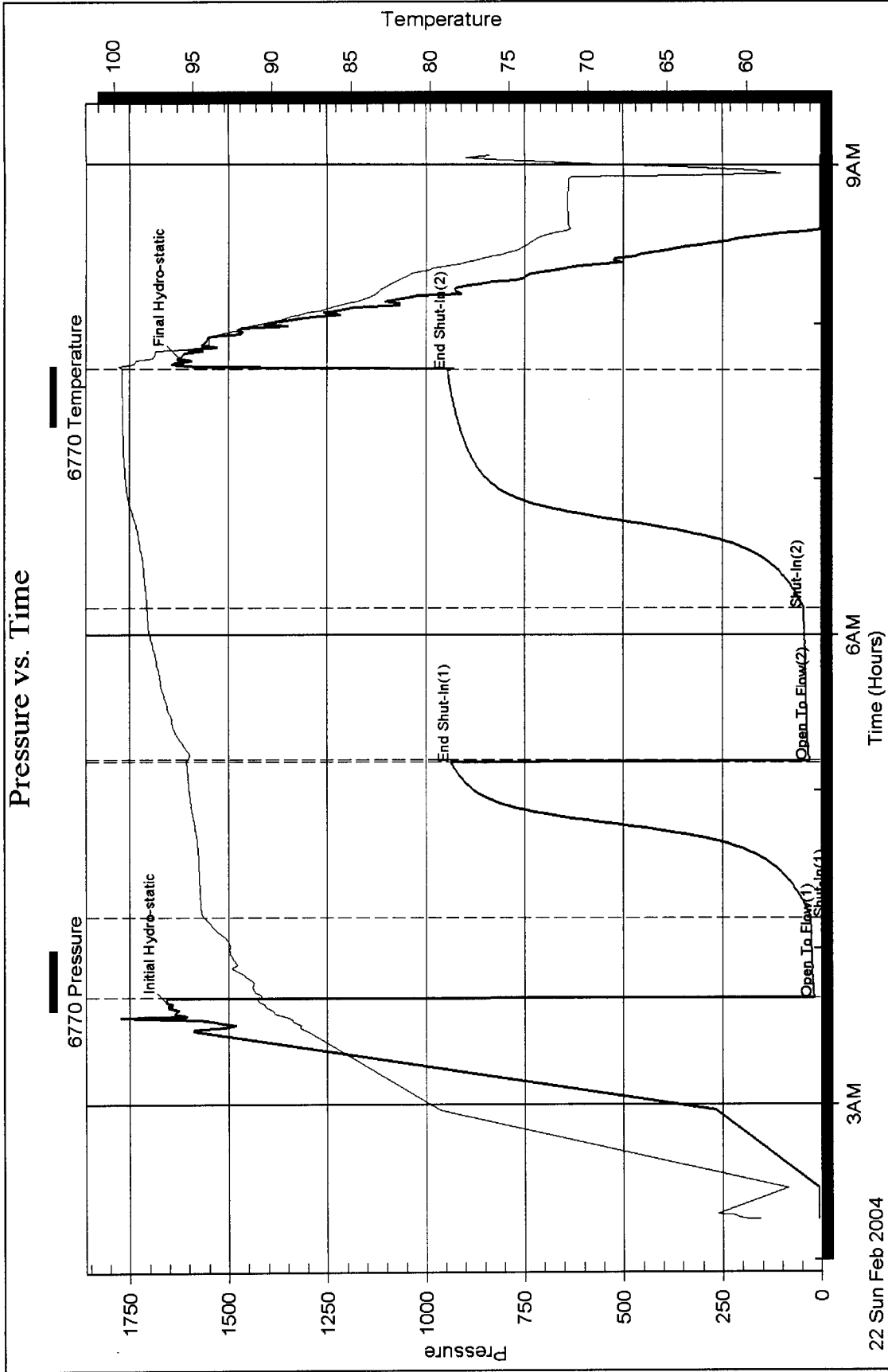
Inside

Murfin Drilling Co Inc

24-16-14-Barton-Ks

DST Test Number: 4

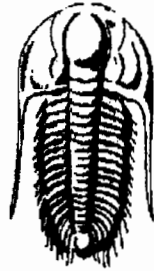
### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 18250

Printed: 2004.02.25 @ 13:39:21 Page 5



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

**Nettleingham-Holland # 1-24**

Start Date: 2004.02.22 @ 18:17:05

End Date: 2004.02.22 @ 23:22:05

Job Ticket #: 19776                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co Inc

Nettleingham-Holland # 1-24

24-16-14-Barton-Ks

DST # 5

Arbuckle

2004.02.22



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**Nettleingham-Holland # 1-24**

**24-16-14-Barton-Ks**

Job Ticket: 19776

**DST#: 5**

Test Start: 2004.02.22 @ 18:17:05

### GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 19:56:50

Time Test Ended: 23:22:05

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **3406.00 ft (KB) To 3435.00 ft (KB) (TVD)**

Total Depth: **3435.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1967.00 ft (KB)**

**1962.00 ft (CF)**

KB to GR/CF: **5.00 ft**

**Serial #: 6770**

**Inside**

Press@RunDepth: **25.07 psig @ 3407.00 ft (KB)**

Start Date: **2004.02.22**

Start Time: **18:17:06**

End Date: **2004.02.22**

End Time: **23:22:05**

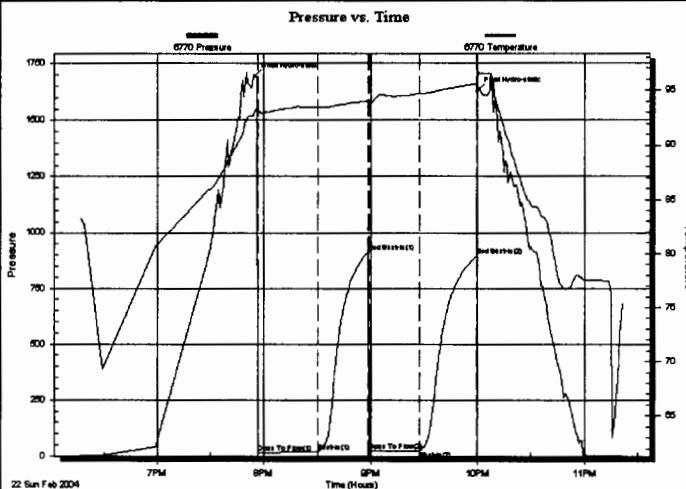
Capacity: **7000.00 psig**

Last Calib.: **2004.02.22**

Time On Btm: **2004.02.22 @ 19:54:35**

Time Off Btm: **2004.02.22 @ 21:59:50**

**TEST COMMENT:** IF-Weak died in 22 min  
FF-No blow  
Times-30-30-30-30



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1694.02	93.00	Initial Hydro-static
3	16.57	93.03	Open To Flow (1)
36	20.25	93.41	Shut-In(1)
64	913.03	94.04	End Shut-In(1)
65	23.04	93.76	Open To Flow (2)
93	25.07	94.67	Shut-In(2)
125	896.30	95.61	End Shut-In(2)
126	1626.60	95.86	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 20%o 80%m	0.05

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 19776

**DST#: 5**

ATTN: David Doyel

Test Start: 2004.02.22 @ 18:17:05

### Tool Information

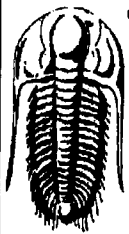
Drill Pipe:	Length: 3267.00 ft	Diameter: 3.80 inches	Volume: 45.83 bbl	Tool Weight: 1400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 46.44 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3406.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 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**

Change Over Sub	1.00			3386.00	
Shut In Tool	5.00			3391.00	
Hydraulic tool	5.00			3396.00	
Packer	5.00			3401.00	21.00 Bottom Of Top Packer
Packer	5.00			3406.00	
Stubb	1.00			3407.00	
Recorder	0.00	6770	Inside	3407.00	
Perforations	25.00			3432.00	
Recorder	0.00	13254	Outside	3432.00	
Bullnose	3.00			3435.00	29.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE**  
TESTING, INC

## DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Nettleingham-Holland # 1-24

250 N Water Ste 300  
Wichita Ks 67202

24-16-14-Barton-Ks

Job Ticket: 19776

DST#: 5

ATTN: David Doyel

Test Start: 2004.02.22 @ 18:17:05

### 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: 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: 6700.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 20%o 80%m	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

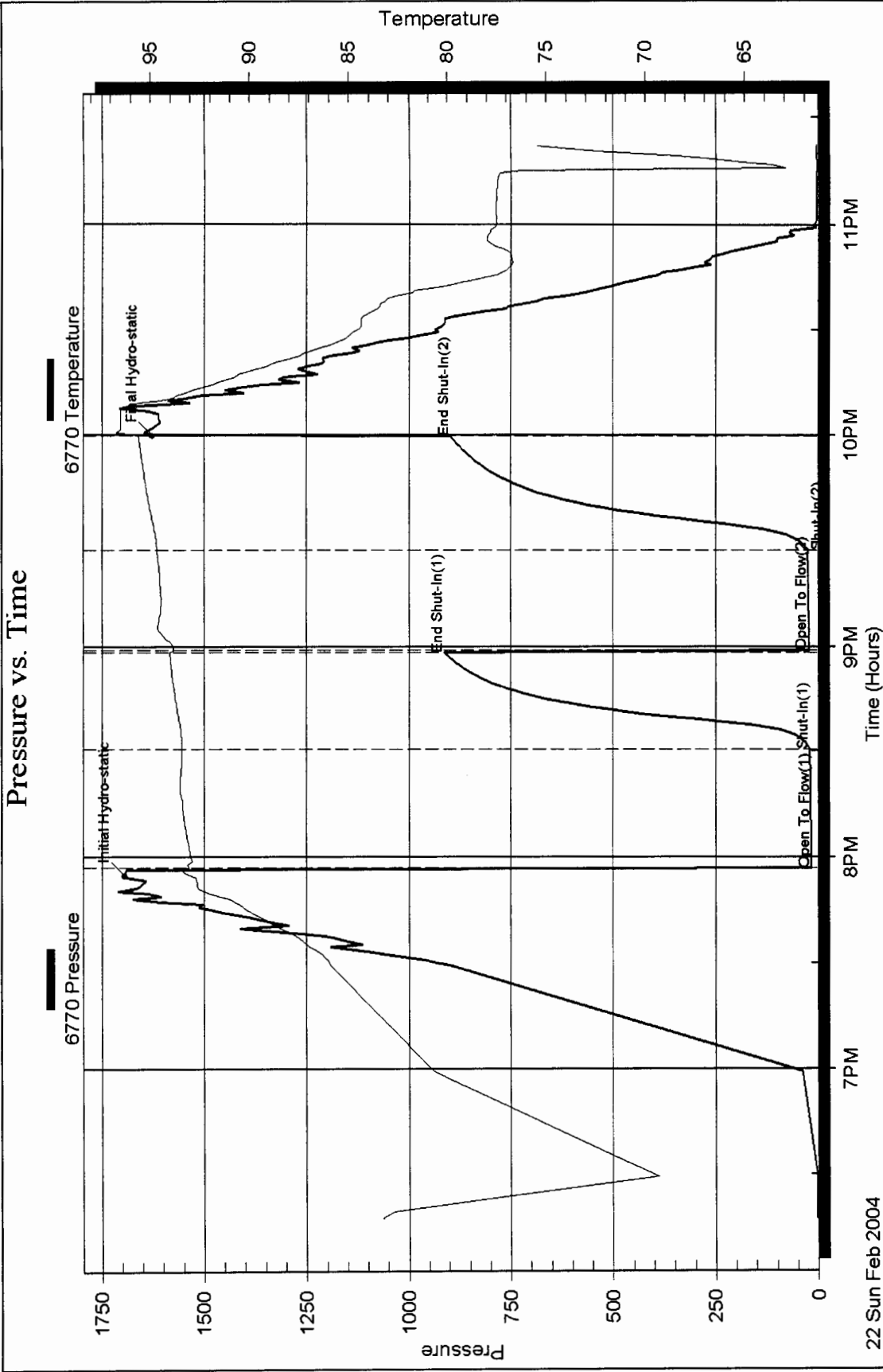
Serial #: 6770

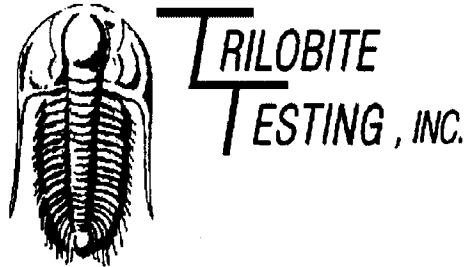
Inside

Murfin Drilling Co Inc

24-16-14-Barton-Ks

DST Test Number: 5





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**24-16-14-Barton-Ks**

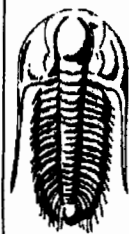
**Nettleingham-Holland # 1-24**

Start Date: 2004.02.23 @ 06:00:33

End Date: 2004.02.23 @ 13:36:48

Job Ticket #: 19777                      DST #: 6

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300  
Wichita Ks 67202

ATTN: David Doyel

**Nettleingham-Holland # 1-24**

**24-16-14-Barton-Ks**

Job Ticket: 19777

**DST#: 6**

Test Start: 2004.02.23 @ 06:00:33

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:54:03

Time Test Ended: 13:36:48

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3435.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Total Depth: 3450.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1967.00 ft (KB)

1962.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6770**

**Inside**

Press@RunDepth: 271.49 psig @ 3436.00 ft (KB)

Start Date: 2004.02.23

End Date:

2004.02.23

Capacity: 7000.00 psig

Last Calib.:

2004.02.23

Start Time: 06:00:34

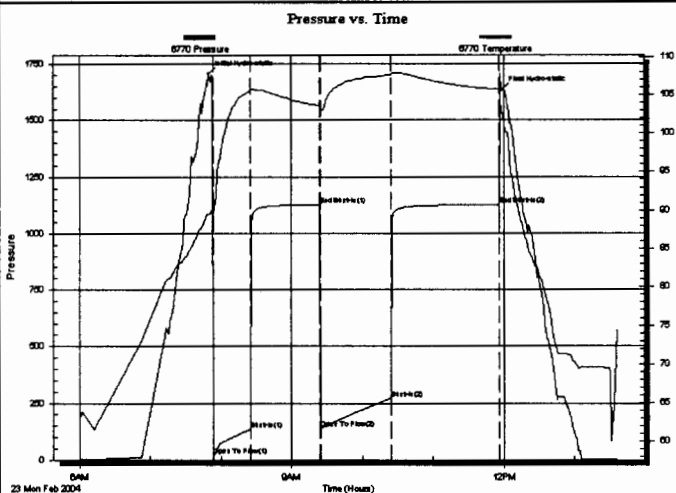
End Time:

13:36:48

Time On Btm: 2004.02.23 @ 07:50:03

Time Off Btm: 2004.02.23 @ 11:58:03

**TEST COMMENT:** IF-Strong BOB in 14 min  
FF-Strong BOB in 25 min  
Times-30-60-60-90



### PRESSURE SUMMARY

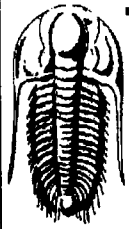
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.80	89.52	Initial Hydro-static
4	20.94	89.60	Open To Flow (1)
36	136.45	105.47	Shut-In(1)
94	1127.29	103.61	End Shut-In(1)
95	138.81	103.28	Open To Flow (2)
154	271.49	107.57	Shut-In(2)
246	1126.69	105.66	End Shut-In(2)
248	1631.41	102.76	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
516.00	Mdy Wtr	6.11
15.00	CO	0.21

### 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

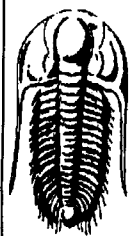
**Nettleingham-Holland # 1-24**  
**24-16-14-Barton-Ks**  
Job Ticket: 19777      **DST#: 6**  
Test Start: 2004.02.23 @ 06:00:33

**Tool Information**

Drill Pipe:	Length: 3298.00 ft	Diameter: 3.80 inches	Volume: 46.26 bbl	Tool Weight: 1000.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 46.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3435.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	36.00 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			3415.00	
Shut In Tool	5.00			3420.00	
Hydraulic tool	5.00			3425.00	
Packer	5.00			3430.00	21.00      Bottom Of Top Packer
Packer	5.00			3435.00	
Stubb	1.00			3436.00	
Recorder	0.00	6770	Inside	3436.00	
Perforations	11.00			3447.00	
Recorder	0.00	13254	Outside	3447.00	
Bullnose	3.00			3450.00	15.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>36.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**Nettleingham-Holland # 1-24**

250 N Water Ste 300  
Wichita Ks 67202

**24-16-14-Barton-Ks**

Job Ticket: 19777

**DST#: 6**

ATTN: David Doyel

Test Start: 2004.02.23 @ 06:00:33

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

18000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
516.00	Mdy Wtr	6.109
15.00	CO	0.210

Total Length: 531.00 ft

Total Volume: 6.319 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

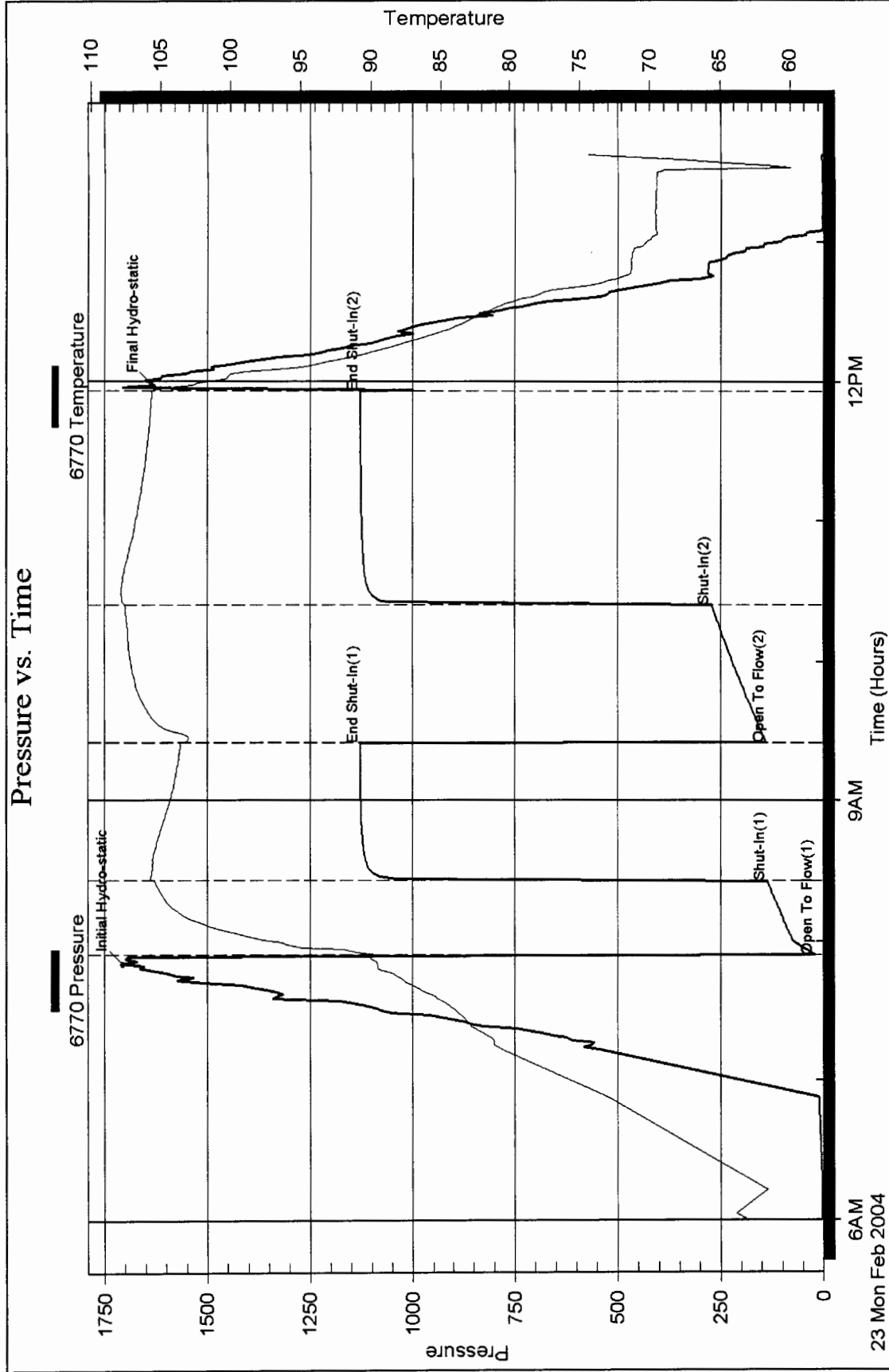
Serial #: 6770

Inside

Murfin Drilling Co Inc

24-16-14-Barton-Ks

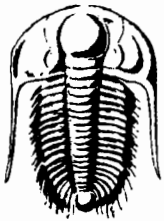
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 19777

Printed: 2004.02.25 @ 13:41:16 Page 5



# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 18247

05/03

## Test Ticket

INV 6217

Well Name & No. Nettleingham-Holland #1-24 Test No. 1 Date 2-20-04  
 Company Murfin Drilling Co. Zone Tested 'A' hkc  
 Address 250 N. Water, Ste 300, Wichita, Ks. 67202 Elevation 1967 KB 1962 GL  
 Co. Rep / Geo. Bob O'Dell Cont. Murfin #16 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State Ks  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3183 - 3198 Initial Str Wt./Lbs. 68,000 Unseated Str Wt/Lbs. 69,000  
 Anchor Length 10' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 75,000  
 Top Packer Depth 3178 Tool Weight 1100  
 Bottom Packer Depth 3183 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3198 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9 LCM Y2 Vis. 49 WL 10.05 Drill Pipe Size 4.5XH Ft. Run 3049

Blow Description I.F. Strong - B.O.B. in 3 min.  
ISI - Weak building to 3"  
F.I. Strong - B.O.B. in 2 min.  
FSI - Weak building to 2"

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>248</u>	<u>2604</u>	<u>124</u>	<u>124</u>
Rec. <u>124</u>	Feet of <u>CBsyo</u>	<u>15%</u> gas <u>85%</u> oil	%water %mud
Rec. <u>124</u>	Feet of <u>OCBsym</u>	<u>16%</u> gas <u>30%</u> oil	%water <u>55%</u> mud
Rec. _____	Feet of _____	%gas %oil	%water %mud
Rec. _____	Feet of _____	%gas %oil	%water %mud
Rec. _____	Feet of _____	%gas %oil	%water %mud

BHT 97 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity 36 °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 5000 ppm System

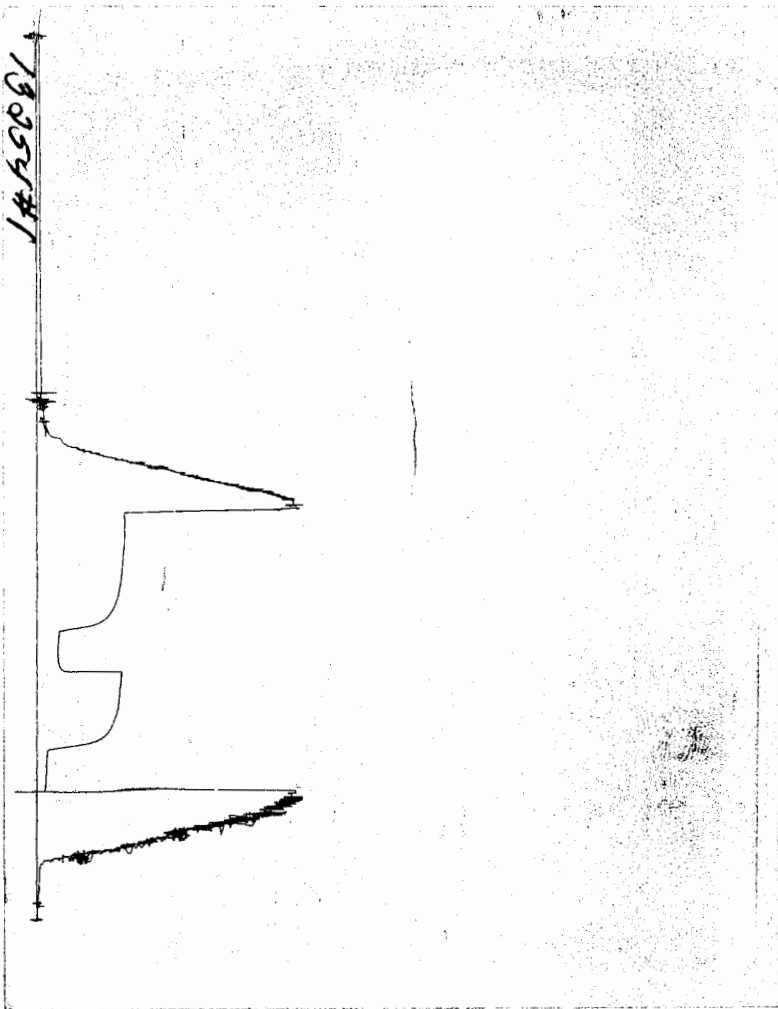
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1577</u> PSI		<u>6770</u>	<u>700</u>
(B) First Initial Flow Pressure	<u>26</u> PSI		(depth) <u>3184</u>	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>62</u> PSI		Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>523</u> PSI		(depth) <u>3195</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>50</u> PSI		Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>93</u> PSI		(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>521</u> PSI	Initial Opening <u>30</u>		Straddle _____
(Q) Final Hydrostatic Mud	<u>1532</u> PSI	Initial Shut-In <u>60</u>		Ext. Packer _____
		Final Flow <u>30</u>		Shale Packer _____
		Final Shut-In <u>90</u>		Mileage <u>46 (92)</u> <u>78.20</u>
		T-On Location <u>02:50</u>		Sub Total: <u>928.20</u>
		T-Started <u>03:45</u>		Std. By _____
		T-Open <u>05:27</u>		Other _____
		T-Pulled <u>08:57</u>		Total: _____
		T-Out <u>10:20</u>		

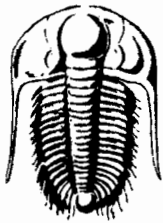
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

Approved By Bob O'Dell  
 Our Representative Dan Banfle

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N<sup>o</sup> 18248

05/03

## Test Ticket

Well Name & No. Nettleingham-Holland #1-24 Test No. 2 Date 2-20-04  
 Company Murfin Drilg Co. Inc Zone Tested "B" LKC  
 Address \_\_\_\_\_ Elevation 1967 KB 1962 GL  
 Co. Rep / Geo. Bob O'Dell Cont. Murfin #16 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State Ks  
 No. of Copies \_\_\_\_\_ Disbtribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3198 - 3206 Initial Str Wt./Lbs. 68,000 Unseated Str Wt./Lbs. 68,000  
 Anchor Length 8' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 27,000  
 Top Packer Depth \_\_\_\_\_ 3193 Tool Weight 1000  
 Bottom Packer Depth 3198 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3206 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9.3 LCM 1 Vis. 60 WL 8 Drill Pipe Size 4.5XH Ft. Run 3080  
 Blow Description F.F. weak - building to 3 1/2"

F.F. Weak - building to 2"

Recovery - Total Feet 240 GIP 60 Ft. in DC 124 Ft. in DP 116  
 Rec. 5' Feet of CO %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. 235' Feet of MDY WTP %gas \_\_\_\_\_ %oil 80 %water 10 %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 .17 @ 25 °F Chlorides 48,000 ppm Recovery \_\_\_\_\_ Chlorides 5000 ppm System

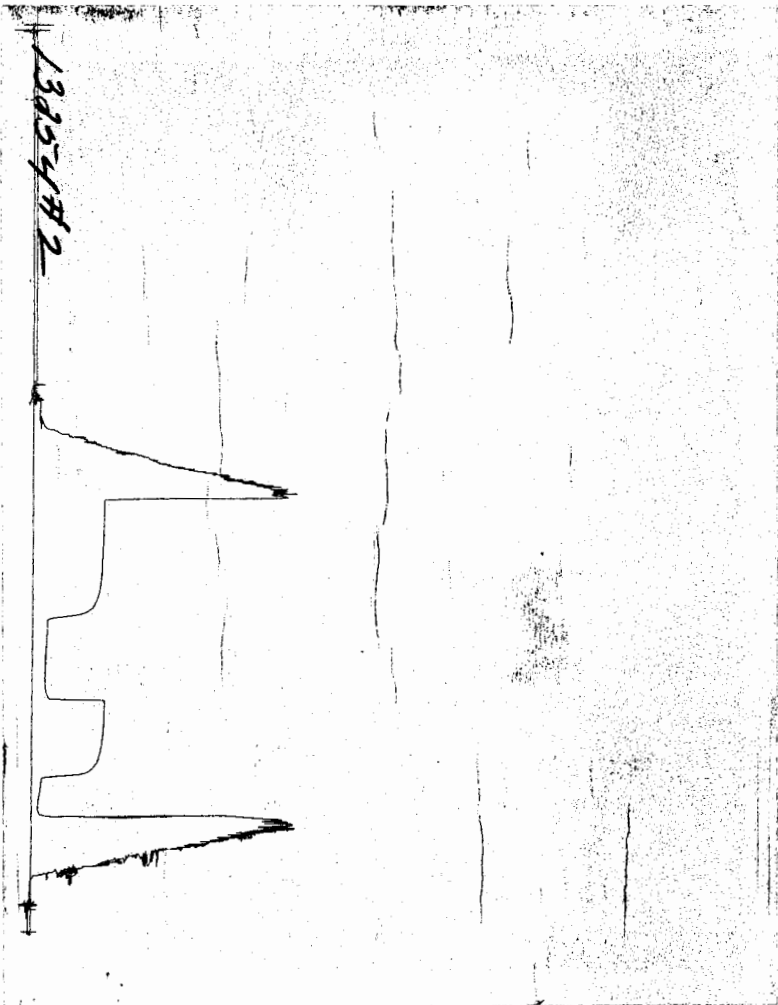
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1594</u>	PSI	<u>6770</u>	_____
(B) First Initial Flow Pressure	<u>18</u>	PSI	(depth) <u>3199</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>81</u>	PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>490</u>	PSI	(depth) <u>3203</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>85</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>121</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>485</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1527</u>	PSI	Initial Shut-In <u>60</u>	Ext. Packer _____
			Final Flow <u>60</u>	Shale Packer _____
			Final Shut-In <u>90</u>	Mileage <u>46</u>
			T-On Location <u>15:40</u>	Sub Total: <u>928.20</u>
			T-Started <u>15:42</u>	Std. By _____
			T-Open <u>17:13</u>	Other _____
			T-Pulled <u>21:13</u>	Total: _____
			T-Out <u>22:36</u>	

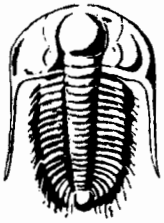
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Approved By Bob O'Dell  
 Our Representative Dan Bangle

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N<sup>o</sup> 18249

05/03

## Test Ticket

Well Name & No. Nettleingham-Holland #1-24 Test No. 3 Date 2-21-04  
 Company Murfin Drilg Co. Inc Zone Tested D-E-F-LKC  
 Address \_\_\_\_\_ Elevation 1967 KB 1962 GL \_\_\_\_\_  
 Co. Rep / Geo. Bob o'Dell Cont. Murfin #16 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State Ks  
 No. of Copies \_\_\_\_\_ Disbtribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3244 — 3274 Initial Str Wt./Lbs 68,000 Unseated Str Wt/Lbs. 68,000  
 Anchor Length 30 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 89,000  
 Top Packer Depth \_\_\_\_\_ 3239 Tool Weight 1500  
 Bottom Packer Depth 3244 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3274 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9.1 LCM 1/2 Vis. 54 WL 8 Drill Pipe Size 4.5 XH Ft. Run 3110  
 Blow Description I.F. Weak-building to B.O.B. in 25 min.

F.F. Weak-building to B.O.B. in 45 min.

Recovery - Total Feet 283 GIP 186 Ft. in DC 124 Ft. in DP 159  
 Rec. 15 Feet of CO %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. 268 Feet of mdy wtr. %gas \_\_\_\_\_ %oil 70 %water 30 %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 BHT 99 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity 38 °API \_\_\_\_\_  
 RW .19 @ 80 °F Chlorides 63,000 ppm Recovery \_\_\_\_\_ Chlorides 6100 ppm System \_\_\_\_\_

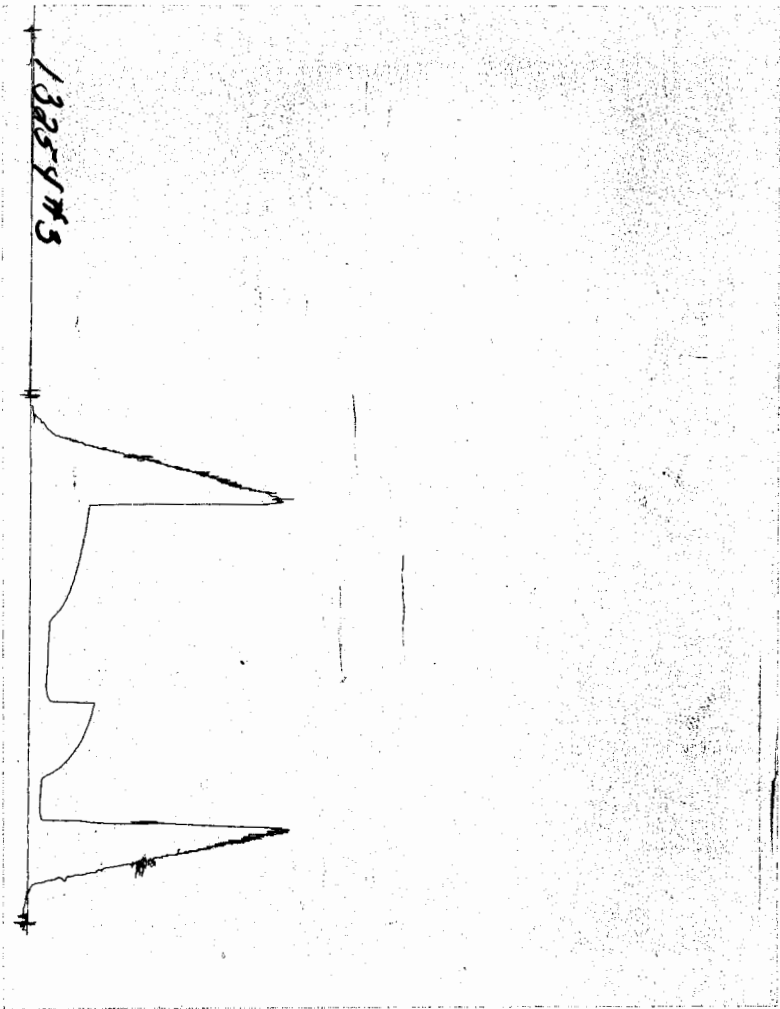
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1086</u>	PSI	<u>6270</u>	<u>700</u>
(B) First Initial Flow Pressure	<u>35</u>	PSI	(depth) <u>3245</u>	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>98</u>	PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>451</u>	PSI	(depth) <u>3271</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>104</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>138</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>400</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1549</u>	PSI	Initial Shut-In <u>60</u>	Ext. Packer _____
			Final Flow <u>60</u>	Shale Packer _____
			Final Shut-In <u>90</u>	Mileage <u>17 (34)</u> <u>28.90</u>
			T-On Location <u>06:45</u>	Sub Total: <u>878.90</u>
			T-Started <u>07:00</u>	Std. By _____
			T-Open <u>08:20</u>	Other _____
			T-Pulled <u>12:25</u>	Total: _____
			T-Out <u>13:49</u>	

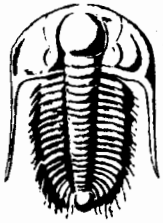
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Approved By Bob o'Dell  
 Our Representative Dan Bangle

# CHART PAGE

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# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 18250

05/03

## Test Ticket

Well Name & No. Nettleingham-Holland #1-24 Test No. 4 Date 2-22-04  
 Company Murfin Drilg. Co. Inc Zone Tested "J" hkc  
 Address \_\_\_\_\_ Elevation 1967 KB 1962 GL \_\_\_\_\_  
 Co. Rep / Geo. Bob O'Dell Cont. Murfin #16 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State Ks  
 No. of Copies \_\_\_\_\_ Disbtribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3358 — 3380 Initial Str Wt./Lbs. 69,000 Unseated Str Wt./Lbs. 20,000  
 Anchor Length 22 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 85,000  
 Top Packer Depth 3353 Tool Weight 1300  
 Bottom Packer Depth 3358 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3380 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9.1 LCM Y2 Vis. 54 WL 8 Drill Pipe Size 4.5 XH Ft. Run 3234  
 Blow Description I.F. Weak-building to 3/4"

F.F. Weak-building to 3"

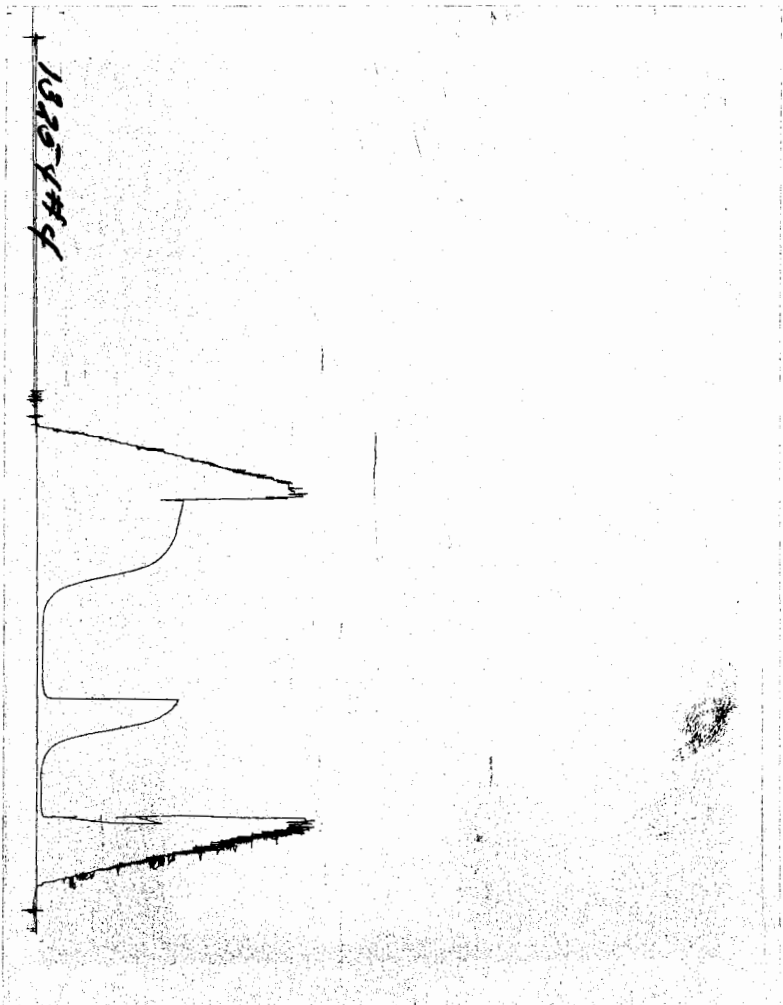
Recovery - Total Feet 65 GIP 60 Ft. in DC 65 Ft. in DP \_\_\_\_\_  
 Rec. 65 Feet of OCM %gas 30 %oil \_\_\_\_\_ %water 70 %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_ %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 BHT 99 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API \_\_\_\_\_  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 6100 ppm System \_\_\_\_\_

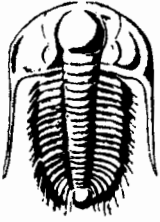
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>1647</u> PSI	<u>6770</u>	
(B) First Initial Flow Pressure		<u>17</u> PSI	(depth) <u>3359</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure		<u>26</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>935</u> PSI	(depth) <u>3377</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>29</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>43</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>944</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1623</u> PSI	Initial Shut-In <u>60</u>	Ext. Packer _____
			Final Flow <u>60</u>	Shale Packer _____
			Final Shut-In <u>90</u>	Mileage <u>17</u>
			T-On Location <u>02:00</u>	Sub Total: <u>878.90</u>
			T-Started <u>02:15</u>	Std. By _____
			T-Open <u>03:40</u>	Other _____
			T-Pulled <u>07:40</u>	Total: _____
			T-Out <u>09:03</u>	

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 Bob O'Dell  
 Our Representative Dan Rangle

**CHART PAGE**  
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# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19776

05/03

## Test Ticket

Well Name & No. Nettleingham-Holland #1-24 Test No. 5 Date 2-22-04  
 Company Murfin Drilg Co. Inc Zone Tested Arbuckle  
 Address \_\_\_\_\_ Elevation 1967 KB 1962 GL \_\_\_\_\_  
 Co. Rep / Geo. Bob O'Dell Cont. Murfin #16 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3406 — 3435 Initial Str Wt./Lbs. 74000 Unseated Str Wt./Lbs. 70000  
 Anchor Length 29 Wt. Set Lbs. 30000 Wt. Pulled Loose/Lbs. 85000  
 Top Packer Depth \_\_\_\_\_ Tool Weight 1400  
 Bottom Packer Depth 3401 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3435 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9.2 LCM 1/2 Vis. 48 WL 8 Drill Pipe Size 4.5XH Ft. Run 3267  
 Blow Description I.F. Weak - Diced in 22 min.

F.F. No blow

Recovery - Total Feet 10 GIP \_\_\_\_\_ Ft. in DC 10 Ft. in DP \_\_\_\_\_  
 Rec. 10 Feet of OCM %gas 20 %oil \_\_\_\_\_ %water 80 %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 95 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API \_\_\_\_\_  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 6700 ppm System \_\_\_\_\_

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>1694</u> PSI	<u>6770</u>	
(B) First Initial Flow Pressure		<u>16</u> PSI	(depth) <u>3407</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure		<u>20</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>913</u> PSI	(depth) <u>3432</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>23</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>20</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>896</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1626</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
			Final Flow <u>30</u>	Shale Packer _____
			Final Shut-In <u>30</u>	Mileage <u>46</u>
			T-On Location <u>18:00</u>	Sub Total: <u>928.20</u>
			T-Started <u>18:17</u>	Std. By _____
			T-Open <u>19:58</u>	Other _____
			T-Pulled <u>22:58</u>	Total: _____
			T-Out <u>23:22</u>	

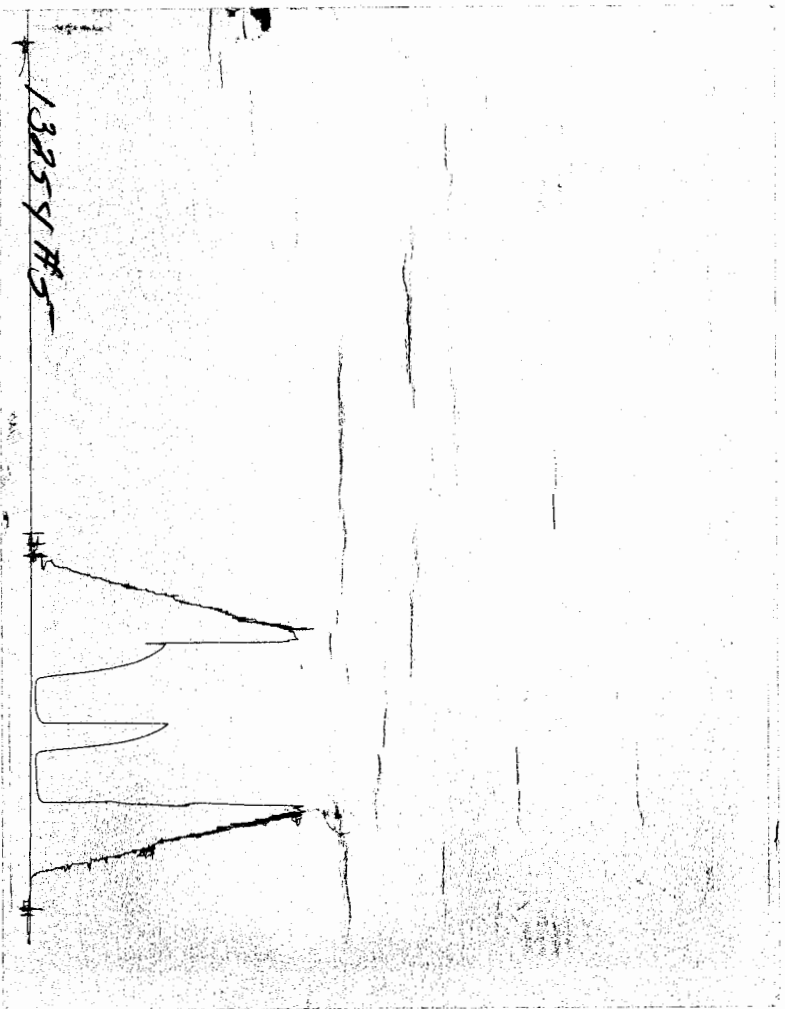
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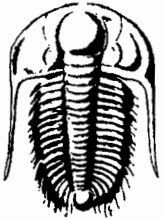
Approved By \_\_\_\_\_

Our Representative Dan Bangle

# CHART PAGE

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# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19777

05/03

## Test Ticket

Well Name & No. Nettleingham-Holland #1-24 Test No. 6 Date 2-23-04  
 Company Murfin Drilg Co. Inc Zone Tested Arbuckle  
 Address \_\_\_\_\_ Elevation 1967 KB 1962 GL \_\_\_\_\_  
 Co. Rep / Geo. Bob O'Dell Cont. Murfin #26 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 24 Twp. 16 Rge. 14 Co. Barton State Ks  
 No. of Copies \_\_\_\_\_ Disbtribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3435 — 3450 Initial Str Wt./Lbs. 70,000 Unseated Str Wt./Lbs. 72,000  
 Anchor Length 15 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 75,000  
 Top Packer Depth 3430 Tool Weight 1000  
 Bottom Packer Depth 3435 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 3450 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run 124  
 Mud Wt. 9.3 LCM TR Vis. 45 WL 85088 Drill Pipe Size 4.5XH Ft. Run 3298  
 Blow Description I.F. Strong - b.o.b. in 14 min.

F.F. Strong - b.o.b. in 25 min.

Recovery - Total Feet 531 GIP \_\_\_\_\_ Ft. in DC 124 Ft. in DP 407  
 Rec. 15 Feet of CO %gas \_\_\_\_\_ %oil \_\_\_\_\_ %water \_\_\_\_\_ %mud \_\_\_\_\_  
 Rec. 516 Feet of mdy wtr. %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 105 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity 36 °API  
 RW .40 @ 71 °F Chlorides 18,000 ppm Recovery \_\_\_\_\_ Chlorides 7000 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>1705</u>	PSI	Recorder No.	<u>6770</u>	Test _____
(B) First Initial Flow Pressure	<u>20</u>	PSI	(depth)	<u>3436</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>136</u>	PSI	Recorder No.	<u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>1127</u>	PSI	(depth)	<u>3447</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>138</u>	PSI	Recorder No.	_____	Circ Sub _____
(F) Second Final Flow Pressure	<u>271</u>	PSI	(depth)	_____	Sampler _____
(G) Final Shut-In Pressure	<u>1126</u>	PSI	Initial Opening	<u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1631</u>	PSI	Initial Shut-In	<u>60</u>	Ext. Packer _____
			Final Flow	<u>60</u>	Shale Packer _____
			Final Shut-In	<u>90</u>	Mileage <u>46</u>
			T-On Location	<u>05:50</u>	Sub Total: <u>928.20</u>
			T-Started	<u>06:00</u>	Std. By _____
			T-Open	<u>07:55</u>	Other _____
			T-Pulled	<u>11:55</u>	Total: _____
			T-Out	<u>13:36</u>	

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Approved By Bob O'Dell  
 Our Representative Don Kangle

**CHART PAGE**

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