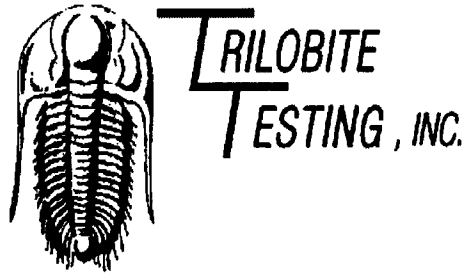


15-039-20932

32-2s-26w



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

**32-2s-26w**

**Hix C&H Unit 1-32**

Start Date: 2004.06.04 @ 14:13:11

End Date: 2004.06.04 @ 21:18:11

Job Ticket #: 19576                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Company Inc.

Hix C&H Unit 1-32

32-2s-26w

DST # 1

Pollnow

2004.06.04



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

**Hix C&H Unit 1-32**

**32-2s-26w**

Job Ticket: 19576

**DST#: 1**

Test Start: 2004.06.04 @ 14:13:11

### GENERAL INFORMATION:

Formation: **Pollnow**

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

Time Tool Opened: 15:50:21

Time Test Ended: 21:18:11

Test Type: **Conventional Bottom Hole**

Tester: **Leroy**

Unit No: **15**

Interval: **3546.00 ft (KB) To 3567.00 ft (KB) (TVD)**

Total Depth: **3567.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Floor**

Reference Elevations: **2634.00 ft (KB)**

**2629.00 ft (CF)**

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

**Serial #: 6724**

**Inside**

Press@RunDepth: **184.21 psig @ 3546.00 ft (KB)**

Start Date: **2004.06.04**

End Date:

**2004.06.04**

Start Time: **14:13:12**

End Time:

**21:18:11**

Capacity: **7000.00 psig**

Last Calib.: **1899.12.30**

Time On Btrm: **2004.06.04 @ 15:50:01**

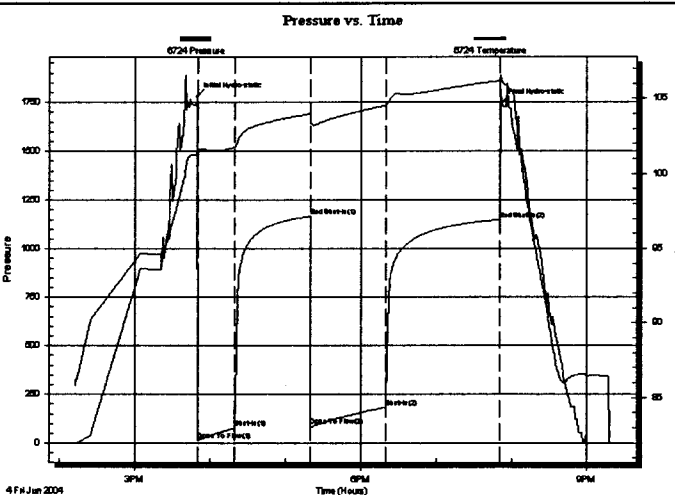
Time Off Btrm: **2004.06.04 @ 19:51:11**

**TEST COMMENT:** F:Weak blow built to 5.5 inches in 28 mins.

IS:Bled off no return.

FF:Weak blow built to 7 inches in 57 mins.

FS:Bled off no return.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.63	101.55	Initial Hydro-static
1	13.38	101.10	Open To Flow (1)
31	78.63	101.79	Shut-In(1)
90	1166.00	104.01	End Shut-In(1)
91	87.19	103.38	Open To Flow (2)
151	184.21	104.56	Shut-In(2)
240	1149.29	106.17	End Shut-In(2)
242	1745.79	106.27	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
367.00	SL. Mud cut w water	1.80

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19576

**DST#: 1**

ATTN: Paul Gunzelman

Test Start: 2004.06.04 @ 14:13:11

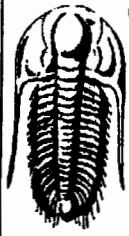
### Tool Information

Drill Pipe:	Length: 3058.00 ft	Diameter: 3.80 inches	Volume: 42.90 bbl	Tool Weight: 2000.00 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: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Full Loose: 60000.00 lb
		Total Volume: 45.29 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3546.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3529.00	
Hydraulic tool	5.00			3534.00	
Safety Joint	3.00			3537.00	
Packer	5.00		Fluid	3542.00	22.00 Bottom Of Top Packer
Packer	4.00			3546.00	
Recorder	0.00	6724	Inside	3546.00	
Recorder	0.00	13849	Inside	3546.00	
Perforations	17.00			3563.00	
Bullnose	4.00			3567.00	21.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19576

**DST#: 1**

ATTN: Paul Gunzelman

Test Start: 2004.06.04 @ 14:13:11

### 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: 6.37 in<sup>3</sup>

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: 0.00 ohm.m

Salinity: 1100.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
367.00	SL. Mud cut water	1.805

Total Length: 367.00 ft

Total Volume: 1.805 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6724

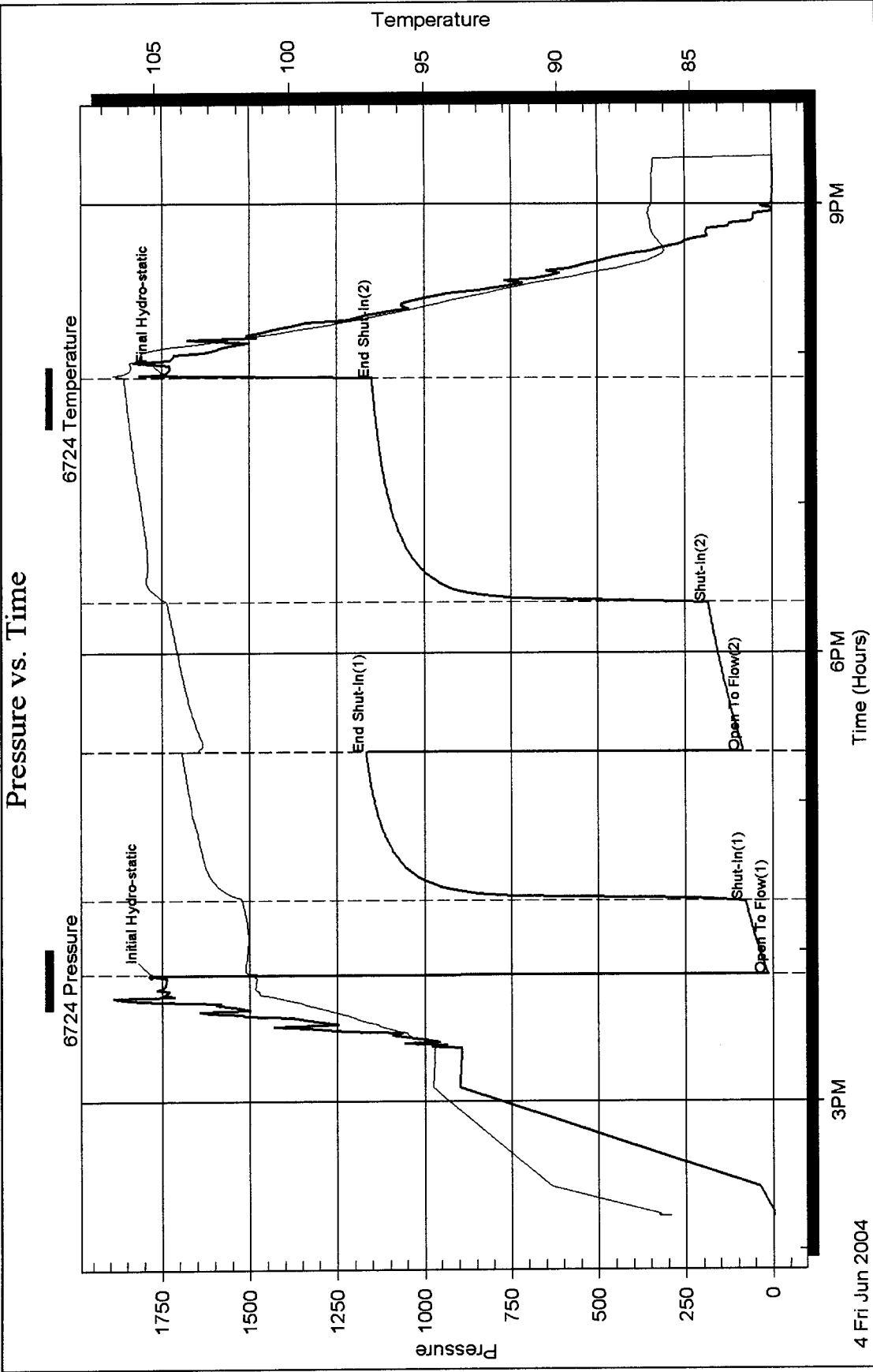
Inside

Murfin Drilling Company Inc.

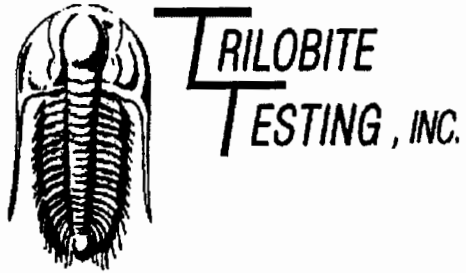
32-2s-26w

DST Test Number: 1

### Pressure vs. Time



4 Fri Jun 2004



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

**32-2s-26w**

**Hix C&H Unit 1-32**

Start Date: 2004.06.05 @ 08:35:00

End Date: 2004.06.05 @ 15:21:45

Job Ticket #: 19577                      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

Murfin Drilling Company Inc.

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

Hix C&H Unit 1-32

32-2s-26w

Job Ticket: 19577

DST#: 2

Test Start: 2004.06.05 @ 08:35:00

## GENERAL INFORMATION:

Formation: **Lansing E&G**

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

Time Tool Opened: 09:54:40

Time Test Ended: 15:21:45

Test Type: **Conventional Bottom Hole**

Tester: **Leroy**

Unit No: **15**

Interval: **3590.00 ft (KB) To 3623.00 ft (KB) (TVD)**

Reference Elevations: **2634.00 ft (KB)**

Total Depth: **3623.00 ft (KB) (TVD)**

**2629.00 ft (CF)**

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

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

**Serial #: 6724**

**Inside**

Press@RunDepth: **42.67 psig @ 3590.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2004.06.05**

End Date:

**2004.06.05**

Last Calib.:

**1899.12.30**

Start Time: **08:35:01**

End Time:

**15:21:45**

Time On Btrm

**2004.06.05 @ 09:54:10**

Time Off Btrm

**2004.06.05 @ 13:55:00**

## TEST COMMENT:

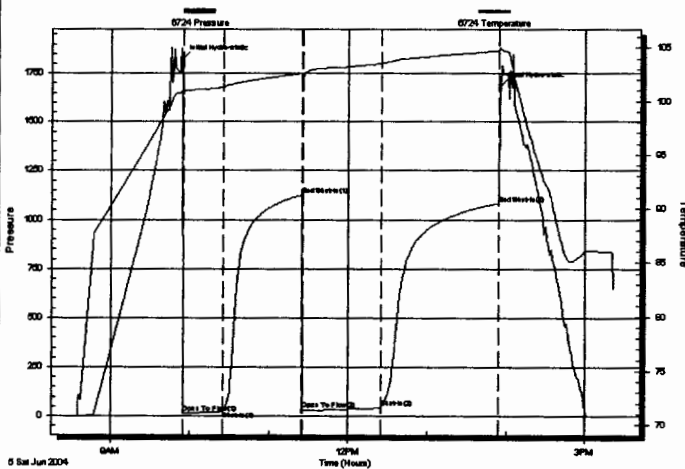
F:Weak blow built to 3 inches in 25 mins.

IS:Bled off no return.

FF:Weak blow built to .5 inches in 10 mins died to surface blow in 45 mins.

FS:Bled off no return.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1824.70	101.12	Initial Hydro-static
1	14.14	100.69	Open To Flow (1)
31	23.30	101.31	Shut-In(1)
91	1125.02	102.62	End Shut-In(1)
91	33.75	102.08	Open To Flow (2)
151	42.67	103.53	Shut-In(2)
241	1083.44	104.71	End Shut-In(2)
241	1686.07	104.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
36.00	Clean oil	0.18
31.00	Oil cut mud	0.15

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19577

**DST#: 2**

ATTN: Paul Gunzelman

Test Start: 2004.06.05 @ 08:35:00

### Tool Information

Drill Pipe:	Length: 3087.00 ft	Diameter: 3.80 inches	Volume: 43.30 bbl	Tool Weight: 2000.00 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: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: lb
		<b>Total Volume:</b>	<b>45.69 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3590.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	56.00 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
Stubb	1.00			3568.00	
Shut In Tool	5.00			3573.00	
Hydraulic tool	5.00			3578.00	
Safety Joint	3.00			3581.00	
Packer	5.00		Fluid	3586.00	23.00 Bottom Of Top Packer
Packer	4.00			3590.00	
Recorder	0.00	6724	Inside	3590.00	
Perforations	29.00			3619.00	
Recorder	0.00	13849	Outside	3619.00	
Bullnose	4.00			3623.00	33.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>56.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19577

**DST#: 2**

ATTN: Paul Gunzelman

Test Start: 2004.06.05 @ 08:35:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
36.00	Clean oil	0.177
31.00	Oil cut mud	0.152

Total Length: 67.00 ft      Total Volume: 0.329 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

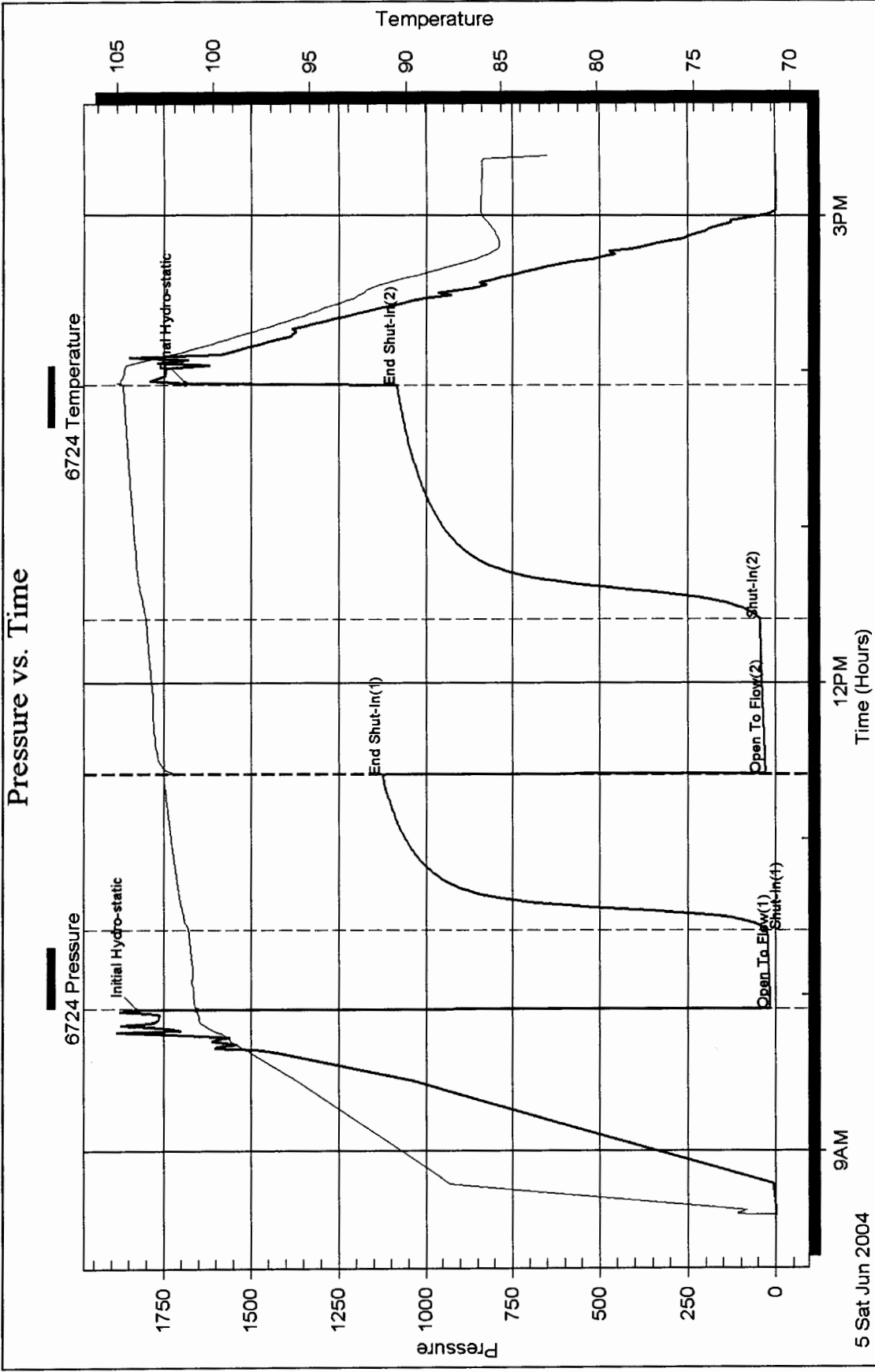
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 38 @ 92deg

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

**32-2s-26w**

**Hix C&H Unit 1-32**

Start Date: 2004.06.06 @ 02:02:00

End Date: 2004.06.06 @ 08:55:45

Job Ticket #: 19578                      DST #: 3

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

Murfin Drilling Company Inc.

Hix C&H Unit 1-32

32-2s-26w

DST # 3

KC "I"

2004.06.06



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

Hix C&H Unit 1-32

250 N. Water Suite 300  
Wichita, Ks 67202

32-2s-26w

Job Ticket: 19578

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2004.06.06 @ 02:02:00

## GENERAL INFORMATION:

Formation: **KC " I"**

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

Time Tool Opened: 03:25:30

Time Test Ended: 08:55:45

Test Type: Conventional Bottom Hole

Tester: Leroy

Unit No: 15

Interval: **3658.00 ft (KB) To 3688.00 ft (KB) (TVD)**

Reference Elevations: 2634.00 ft (KB)

Total Depth: **3688.00 ft (KB) (TVD)**

2629.00 ft (CF)

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

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

## Serial #: 6724

Inside

Press@RunDepth: **43.78 psig @ 3658.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2004.06.06**

End Date:

2004.06.06

Last Calib.: **1899.12.30**

Start Time: **02:02:01**

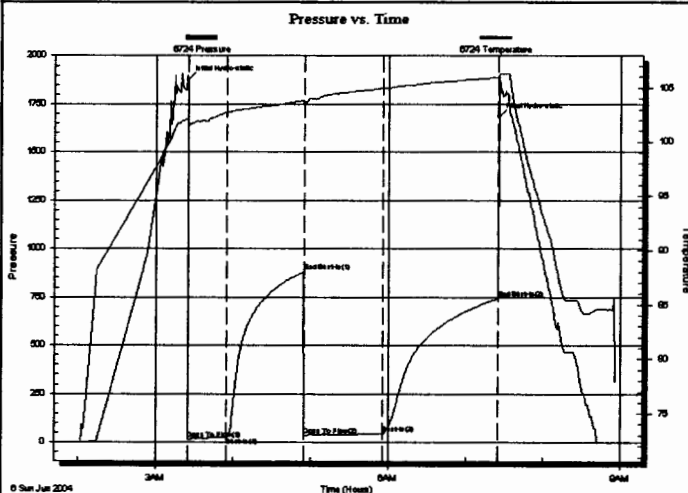
End Time:

08:55:45

Time On Btm: **2004.06.06 @ 03:25:00**

Time Off Btm: **2004.06.06 @ 07:25:30**

TEST COMMENT: **F:Weak blow 1 inch in 25 mins.  
IS:Bled off no return.  
FF:Weak blow died in 1 min.  
FS:Bled off no return.**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1876.38	102.11	Initial Hydro-static
1	13.56	101.24	Open To Flow (1)
30	24.56	102.73	Shut-In(1)
90	881.26	103.85	End Shut-In(1)
91	36.03	103.49	Open To Flow (2)
151	43.78	104.97	Shut-In(2)
240	743.54	105.98	End Shut-In(2)
241	1686.48	106.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Oil spotted mud	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19578

**DST#: 3**

ATTN: Paul Gunzelman

Test Start: 2004.06.06 @ 02:02:00

### Tool Information

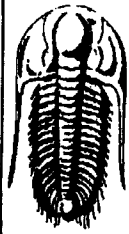
Drill Pipe:	Length: 3181.00 ft	Diameter: 3.80 inches	Volume: 44.62 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.01 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3658.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	53.00 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
Stubb	1.00			3636.00	
Shut In Tool	5.00			3641.00	
Hydraulic tool	5.00			3646.00	
Safety Joint	3.00			3649.00	
Packer	5.00		Fluid	3654.00	23.00 Bottom Of Top Packer
Packer	4.00			3658.00	
Recorder	0.00	6724	Inside	3658.00	
Recorder	0.00	13849	Outside	3658.00	
Perforations	26.00			3684.00	
Bullnose	4.00			3688.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>53.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19578

**DST#: 3**

ATTN: Paul Gunzelman

Test Start: 2004.06.06 @ 02:02:00

### 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: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: 0.00 ohm.m

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Oil spotted mud	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

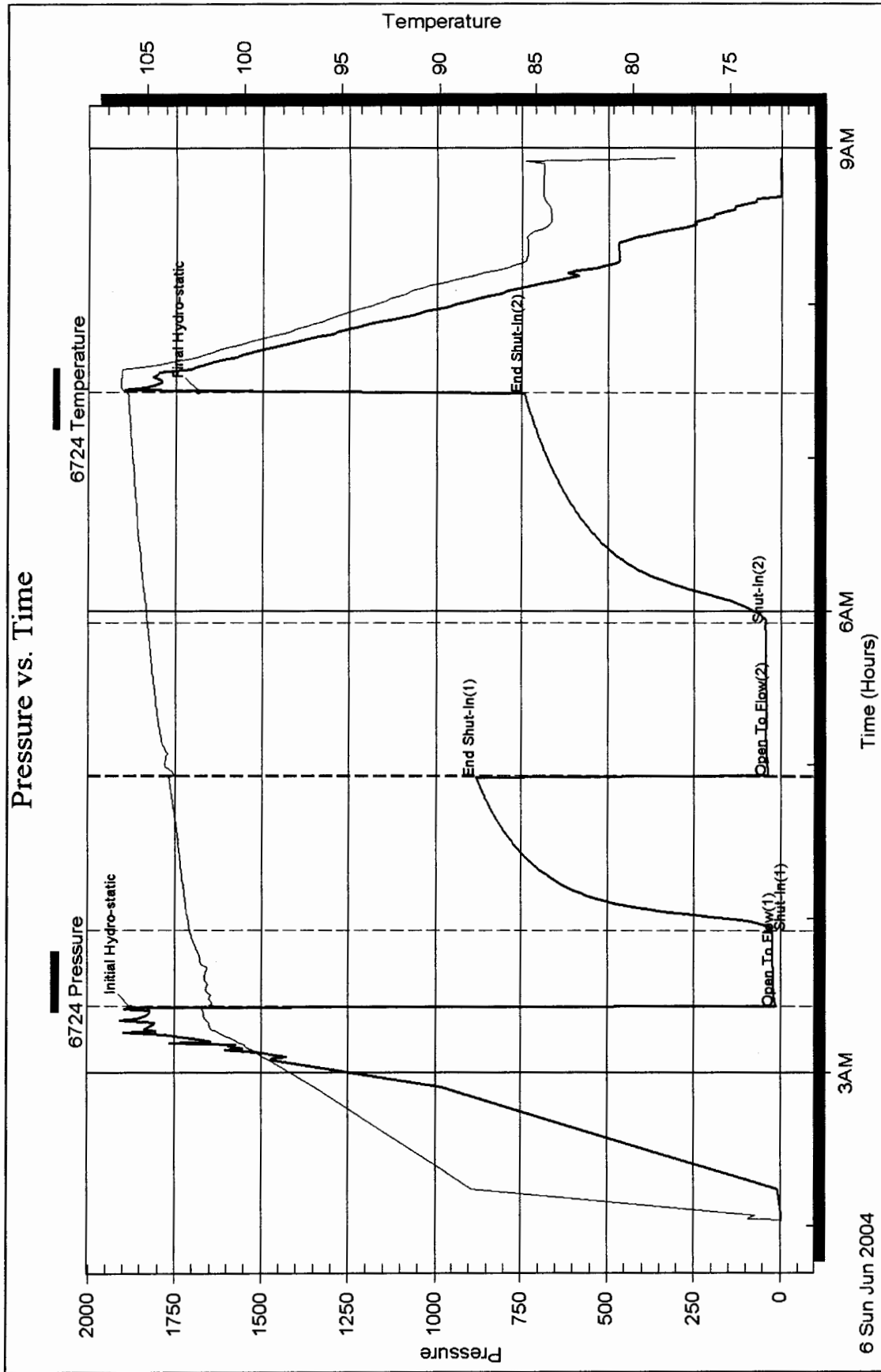
Num Gas Bombs: 0

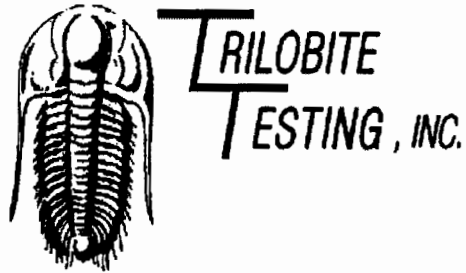
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water Suite 300  
Wichita, Ks 67202

ATTN: Paul Gunzelman

**32-2s-26w**

**Hix C&H Unit 1-32**

Start Date: 2004.06.06 @ 20:05:00

End Date: 2004.06.07 @ 00:54:45

Job Ticket #: 19579                      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 Company Inc.  
 250 N. Water Suite 300  
 Wichita, Ks 67202  
 ATTN: Paul Gunzelman

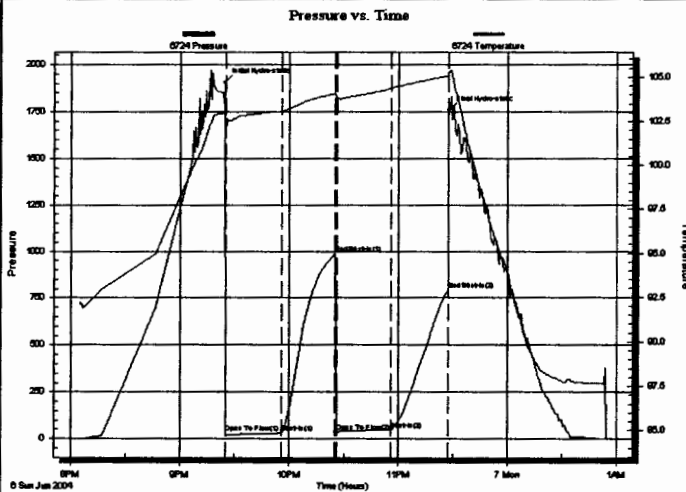
**Hix C&H Unit 1-32**  
**32-2s-26w**  
 Job Ticket: 19579      DST#: 4  
 Test Start: 2004.06.06 @ 20:05:00

## GENERAL INFORMATION:

Formation: **KC "J&K"**  
 Deviated: **No Whipstock:**      ft (KB)  
 Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **21:25:10**  
 Tester: **Leroy**  
 Time Test Ended: **00:54:45**  
 Unit No: **15**  
 Interval: **3689.00 ft (KB) To 3739.00 ft (KB) (TVD)**  
 Reference Elevations: **2634.00 ft (KB)**  
 Total Depth: **3739.00 ft (KB) (TVD)**  
**2629.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **5.00 ft**

**Serial #: 6724      Inside**  
 Press@RunDepth: **48.12 psig @ 3689.00 ft (KB)**  
 Capacity: **7000.00 psig**  
 Start Date: **2004.06.06**      End Date: **2004.06.07**  
 Last Calib.: **1899.12.30**  
 Start Time: **20:05:01**      End Time: **00:54:45**  
 Time On Btrm: **2004.06.06 @ 21:24:40**  
 Time Off Btrm: **2004.06.06 @ 23:27:45**

**TEST COMMENT:** F:Weak blow .5 inchs in 16 mins.  
 IS:Bled off no return.  
 FF:Weak blow died in 1 min.  
 FS:Bled off no return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.47	103.00	Initial Hydro-static
1	33.17	101.83	Open To Flow (1)
32	29.75	103.08	Shut-In(1)
61	988.10	104.07	End Shut-In(1)
62	38.42	103.83	Open To Flow (2)
92	48.12	104.38	Shut-In(2)
123	793.47	105.06	End Shut-In(2)
124	1759.39	105.26	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19579

**DST#: 4**

ATTN: Paul Gunzelman

Test Start: 2004.06.06 @ 20:05:00

**Tool Information**

Drill Pipe:	Length: 3213.00 ft	Diameter: 3.80 inches	Volume: 45.07 bbl	Tool Weight: 2500.00 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: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 47.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3689.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3667.00	
Shut In Tool	5.00			3672.00	
Hydraulic tool	5.00			3677.00	
Safety Joint	3.00			3680.00	
Packer	5.00		Fluid	3685.00	23.00 Bottom Of Top Packer
Packer	4.00			3689.00	
Recorder	0.00	6724	Inside	3689.00	
Change Over Sub	1.00			3690.00	
Blank Spacing	31.00			3721.00	
Change Over Sub	1.00			3722.00	
Perforations	13.00			3735.00	
Recorder	0.00	13849	Outside	3735.00	
Bullnose	4.00			3739.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Hix C&H Unit 1-32**

250 N. Water Suite 300  
Wichita, Ks 67202

**32-2s-26w**

Job Ticket: 19579

**DST#: 4**

ATTN: Paul Gunzelman

Test Start: 2004.06.06 @ 20:05:00

### 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:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	MUD	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6724

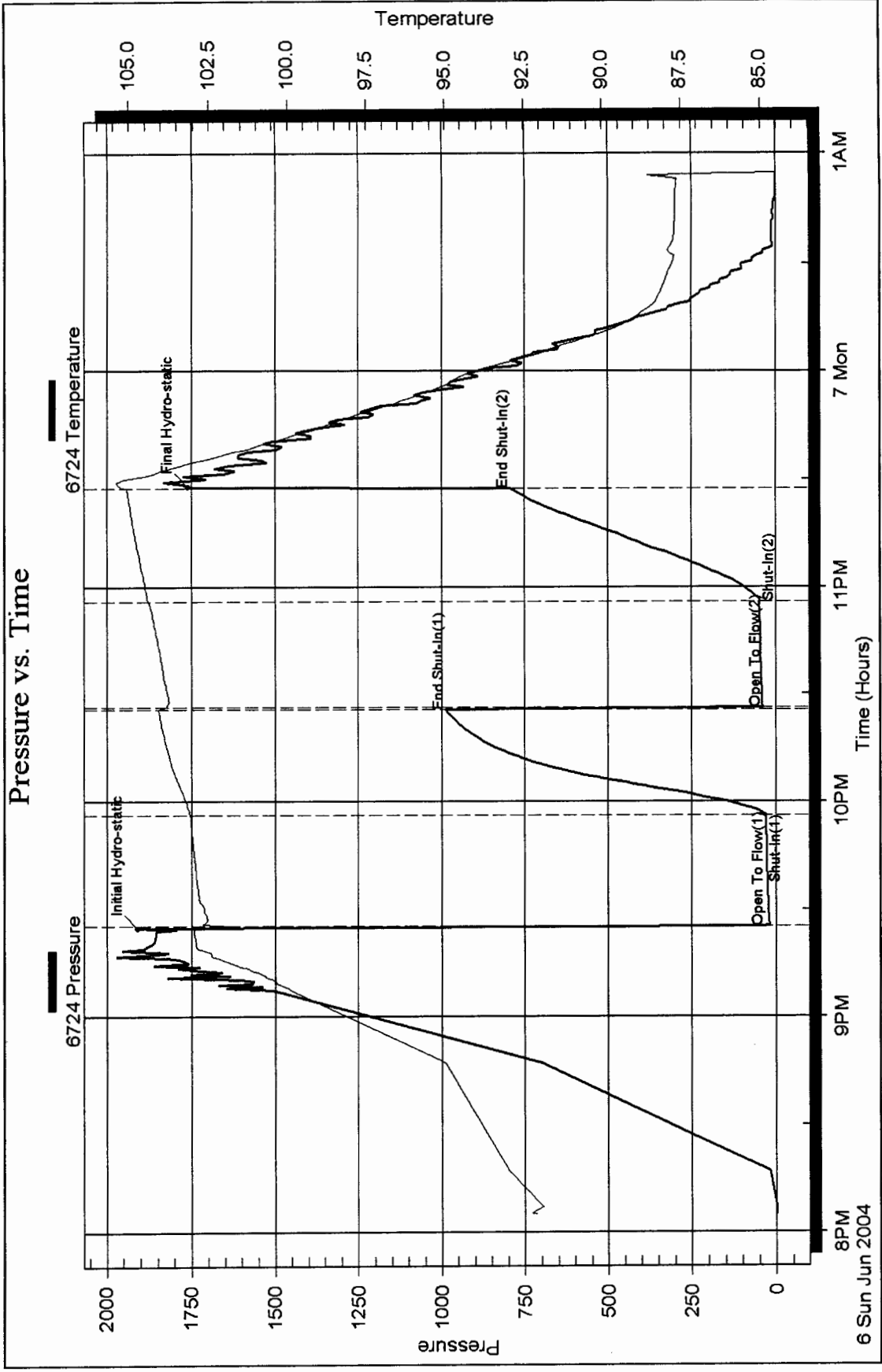
Inside

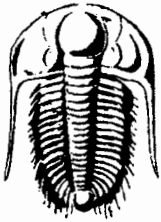
Murfin Drilling Company Inc.

32-2s-26w

DST Test Number: 4

### Pressure vs. Time





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19576

05/03

## Test Ticket

Well Name & No. Hix C+H Unit 1-32 Test No. 1 Date 6-4-04  
 Company Murkin Drilling Company Zone Tested Pallnow  
 Address 250 N. Water Suite 300 Wichita, K 67202 Elevation 2634 KB 2629 GL  
 Co. Rep / Geo. Paul Grunzelman Cont. Murkin # 3 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 32 Twp. 25 Rge. 26W Co. Decatur State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Test 548-3567 Initial Str Wt./Lbs. 55,000 Unseated Str Wt./Lbs. 56,000  
 Anchor Length 21 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 3543 Tool Weight 2,000  
 Bottom Packer Depth 3548 Hole Size 7 7/8" X Rubber Size 6 3/4" X  
 Total Depth 3567 Wt. Pipe Run 0 Drill Collar Run 486  
 Mud Wt. 9.1 LCM Trac Vis. 54 WL 6.4 Drill Pipe Size 4 1/2 x 14 Ft. Run 3058

Blow Description IF: weak Blow Built to 5 1/2 inches in 28 min's  
IS: Bled off no Return  
FF: weak Blow Built to 7 inches in 57 min's  
FS: Bled off no Return

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>367</u>	Feet of <u>SL, Mud cut water</u>	%gas _____ %oil _____	%water <u>90</u> %mud <u>10</u>
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 106 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW 120 @ 42.5 °F Chlorides 6000 ppm Recovery \_\_\_\_\_ Chlorides 1100 ppm System

	AK-1	Alpin	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>17</u>	PSI	<u>6724</u>	<u>700</u>
(B) First Initial Flow Pressure	<u>13</u>	PSI	(depth)	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>7</u>	PSI	Recorder No. <u>13849</u>	Jars _____
(D) Initial Shut-In Pressure	<u>1106</u>	PSI	(depth) <u>3563</u>	Safety Jt. <u>X</u> <u>50</u>
(E) Second Initial Flow Pressure	<u>87</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>184</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>1149</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1745</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>125</u> <u>106.25</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.

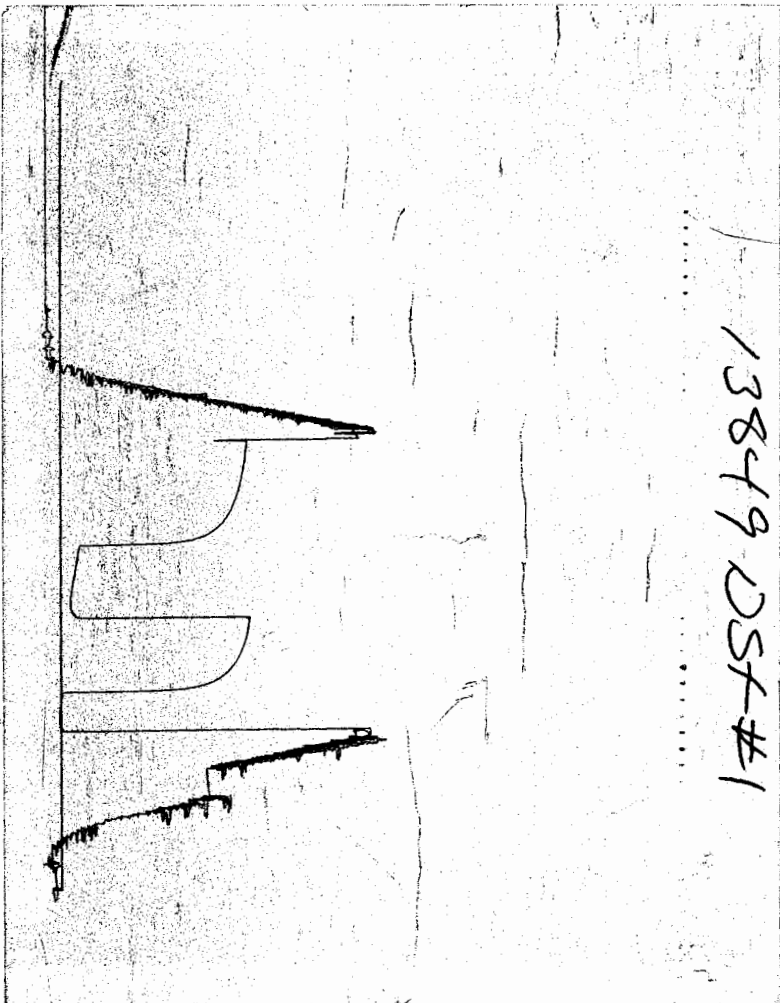
Approved By Paul Grunzelman  
 Our Representative Larry Black

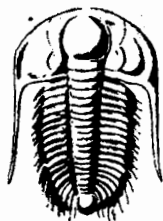
T-On Location 12:30  
 T-Started 14:13  
 T-Open 15:50  
 T-Pulled 19:50  
 T-Out 21:18

Sub Total: 1006.25  
 Std. By 74 22.50  
 Other \_\_\_\_\_  
 Total: 1028.75

**CHART PAGE**

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19577

05/03

## Test Ticket

Well Name & No. Nix C & H Unit 1-32 Test No. 2 Date 6-5-04  
 Company Murkin Drilling Company Zone Tested Lansing E+G  
 Address 250 N. Water Suite 300 Wichita, KS 67202 Elevation 2634 KB 2629 GL  
 Co. Rep / Geo. Paul Gunzelman Cont. Murkin #2 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 32 Twp. 2S Rge. 26W Co. Decatur State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3590-3623 Initial Str Wt./Lbs. 55,000 Unseated Str Wt./Lbs. 56,000  
 Anchor Length 3.3 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 3585 Tool Weight 2000  
 Bottom Packer Depth 3590 Hole Size 7 7/8" X Rubber Size 6 3/4" X  
 Total Depth 3623 Wt. Pipe Run 0 Drill Collar Run 446  
 Mud Wt. 9.3 LCM Trac Vis. 56 WL 6.8 Drill Pipe Size 4 1/2 x 14 Ft. Run 3087

Blow Description FF's weak blow built to 3 inches in 25 mins  
IS: 1/2" off no return  
FF: weak blow built to 1/2 inch 10 mins drilled to surface blow in 45 mins  
FS: 1/2" off

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>36</u>	Feet of <u>Clean oil</u>	<u>10%</u> gas <u>100%</u> oil	%water %mud
Rec. <u>31</u>	Feet of <u>Oil Cut mud</u>	%gas <u>10</u> %oil	%water <u>90</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
Rec. _____	Feet of _____	%gas _____ %oil	%water _____ %mud
BHT <u>104</u>	*F Gravity <u>38</u>	*API D @ <u>92</u>	*F Corrected Gravity <u>34.8</u> *API
RW _____ @ _____ *F	Chlorides _____ ppm	Recovery _____	Chlorides <u>2,000</u> ppm System

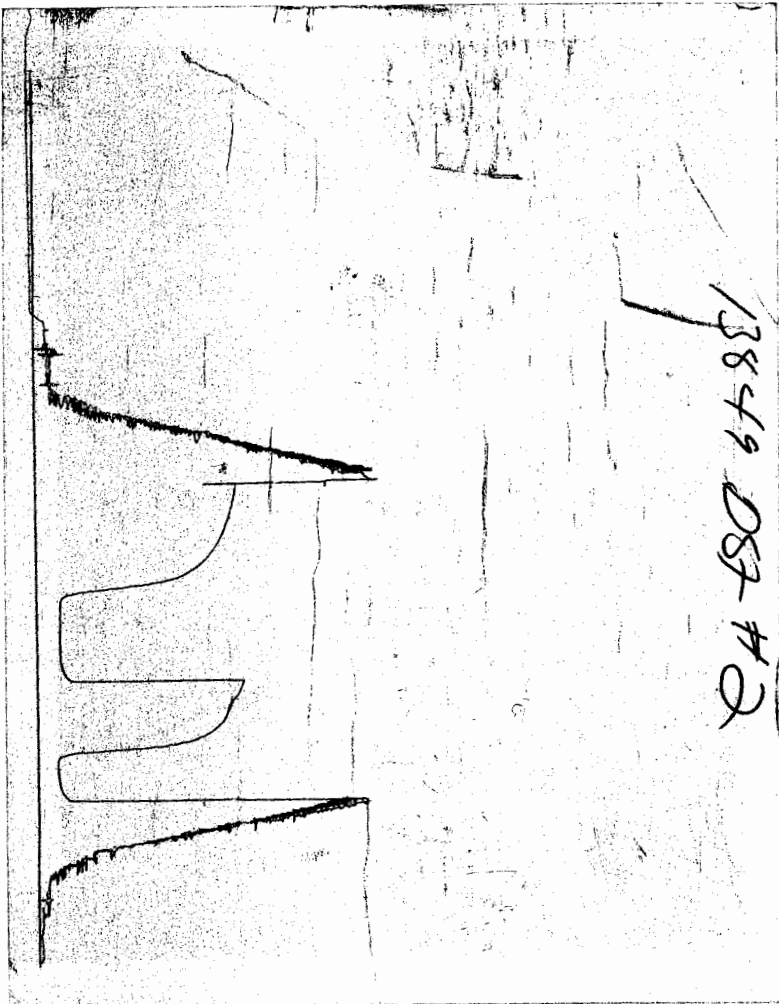
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1824</u>	PSI	<u>6724</u>	<u>700</u>
(B) First Initial Flow Pressure	<u>14</u>	PSI	(depth)	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>23</u>	PSI	Recorder No. <u>13849</u>	Jars _____
(D) Initial Shut-In Pressure	<u>1125</u>	PSI	(depth) <u>3619</u>	Safety Jt. <u>X</u> <u>50</u>
(E) Second Initial Flow Pressure	<u>33</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>42</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>1083</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1686</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>16</u> <u>27.20</u>
			T-On Location <u>7:45</u>	Sub Total: <u>927.20</u>
			T-Started <u>8:35</u>	Std. By _____
			T-Open <u>9:55</u>	Other _____
			T-Pulled <u>13:55</u>	Total: _____
			T-Out <u>15:21</u>	

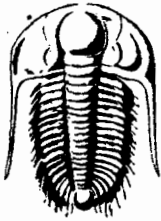
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

Approved By Paul Gunzelman  
 Our Representative Levy Black

**CHART PAGE**

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19578

05/03

## Test Ticket

Well Name & No. Nix C+H Unit 1-31 Test No. 3 Date 6-6-05  
 Company Muffin Drilling Co. Inc. Zone Tested KC "F"  
 Address 250 N Water Suite 300 Wichita, KS 67202 Elevation 2634 KB 2629 GL  
 Co. Rep / Geo. Paul Gunzelman Cont. Muffin #3 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 32 Twp. 25 Rge. 26W Co. Decatur State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3658-3688 Initial Str Wt./Lbs. 55,000 Unseated Str Wt./Lbs. 55,000  
 Anchor Length 30 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 3653 Tool Weight 2000  
 Bottom Packer Depth 3658 Hole Size 7 7/8" X Rubber Size 6 3/4" X  
 Total Depth 3688 Wt. Pipe Run 0 Drill Collar Run 496  
 Mud Wt. 9.3 LCM Trace Vis. 60 WL 6.5 Drill Pipe Size 4 1/2 X H Ft. Run 3181

Blow Description IF: weak blow 1 inch in 25 mins.  
IS: Bled off No Return.  
FF: weak blow Dredged in 1 min.  
FS: Bled off No Return.

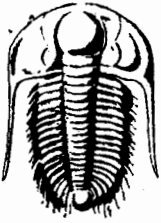
Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>10</u>	Feet of <u>0.1 spotted mud</u>	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud

BHT 105 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud	AK-1	Alpine	PSI	Recorder No.	Test
(B) First Initial Flow Pressure	<u>13</u>	<u>1876</u>	PSI	<u>6724</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>24</u>	<u>13</u>	PSI	<u>13849</u>	Jars _____
(D) Initial Shut-In Pressure	<u>881</u>	<u>24</u>	PSI	<u>3684</u>	Safety Jt. <u>X</u>
(E) Second Initial Flow Pressure	<u>36</u>	<u>881</u>	PSI		Circ Sub _____
(F) Second Final Flow Pressure	<u>43</u>	<u>36</u>	PSI		Sampler _____
(G) Final Shut-In Pressure	<u>743</u>	<u>43</u>	PSI	<b>Initial Opening</b> <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1686</u>	<u>743</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>16</u>
				<b>T-On Location</b> <u>1:00</u>	Sub Total: <u>927.20</u>
				T-Started <u>2:02</u>	Std. By _____
				T-Open <u>3:25</u>	Other _____
				T-Pulled <u>7:25</u>	Total: _____
				T-Out <u>8:55</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 Paul Gunzelman  
 Our Representative Levy B look



# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19579

05/03

## Test Ticket

Well Name & No. Hix C+H Unit 1-31 Test No. 4 Date 6-6-04  
 Company Murphy Drilling Co. Inc. Zone Tested HC "J+K"  
 Address 250 N. Water Suite 300 Wichita, KS 67202 Elevation 2634 KB 2629 GL  
 Co. Rep / Geo. Paul Grunzelman Cont. Murphy #3 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 32 Twp. 2S Rge. 26W Co. Decatur State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3689-3739 Initial Str Wt./Lbs. 50,000 Unseated Str Wt./Lbs. 9,000  
 Anchor Length 50 Wt. Set Lbs. 39,000 Wt. Pulled Loose/Lbs. 76,000  
 Top Packer Depth ~~3704~~ 3684 Tool Weight 2500  
 Bottom Packer Depth 3689 Hole Size 7 7/8" X Rubber Size 6 3/4" X  
 Total Depth 3739 Wt. Pipe Run 0 Drill Collar Run 486  
 Mud Wt. 9.3 LCM Trac Vis. 54 WL 6.8 Drill Pipe Size 4 1/2 X 14 Ft. Run 3213

Blow Description IF: weak blow, 5 inches in 16 mins  
IS: Bled off No Return  
FF: weak blow died 1 min.  
ES: Bled off No Return.

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>5</u>	Feet of <u>mud</u>	%gas _____ %oil _____	%water <u>100</u> %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 105 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 2,000 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1907</u>	PSI	<u>6724</u>	_____
(B) First Initial Flow Pressure	<u>33</u>	PSI	(depth) _____	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>29</u>	PSI	Recorder No. <u>13849</u>	Jars _____
(D) Initial Shut-In Pressure	<u>988</u>	PSI	(depth) <u>3735</u>	Safety Jt. <u>X</u>
(E) Second Initial Flow Pressure	<u>38</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>48</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>793</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1759</u>	PSI	Initial Shut-In <u>30</u>	Ext. Packer _____

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 Paul Grunzelman  
 Our Representative Long Blvd

Final Flow	<u>30</u>	Shale Packer _____
Final Shut-In	<u>30</u>	Mileage <u>16</u>
T-On Location	<u>19:00</u>	Sub Total: <u>927.20</u>
T-Started	<u>20:05</u>	Std. By _____
T-Open	<u>21:26</u>	Other <u>Next a copies 27.50</u>
T-Pulled	<u>23:26</u>	Total: <u>954.70</u>
T-Out	<u>00:54</u>	

**CHART PAGE**

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

