

**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

P O Box 33  
Russell Ks 67665

ATTN: Allen Bangert

**5-11s-20w Ellis Ks**

**Richards-Fisher Unit #1-5**

Start Date: 2002.08.18 @ 18:34:32

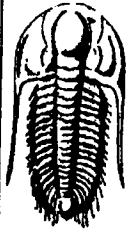
End Date: 2002.08.18 @ 23:59:31

Job Ticket #: 16448                      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

Mai Oil Operations Inc  
P O Box 33  
Russell Ks 67665  
ATTN: Allen Bangert

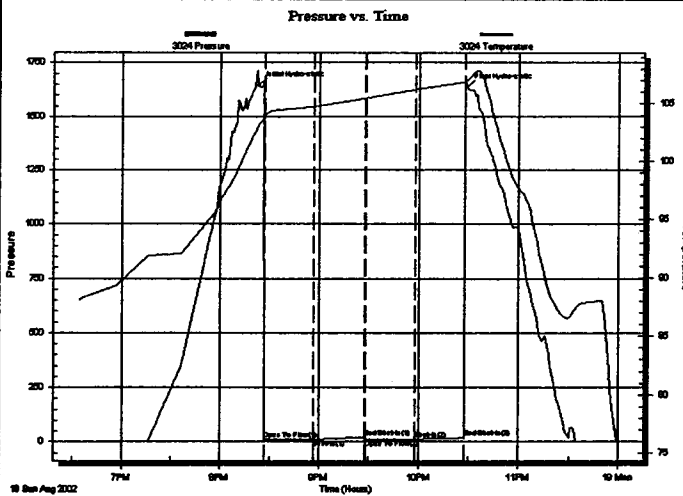
**Richards-Fisher Unit #1-5**  
**5-11s-20w Ellis Ks**  
Job Ticket: 16448      DST#: 1  
Test Start: 2002.08.18 @ 18:34:32

## GENERAL INFORMATION:

Formation: **LKC "C"**  
Deviated: **No Whipstock:**                      ft (KB)  
Time Tool Opened: 20:26:31  
Time Test Ended: 23:59:31  
Interval: **3399.00 ft (KB) To 3425.00 ft (KB) (TVD)**  
Total Depth: **3425.00 ft (KB) (TVD)**  
Hole Diameter: **7.85 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Ray Schwager**  
Unit No: **16**  
Reference Elevations: **2088.00 ft (KB)**  
**2083.00 ft (CF)**  
KB to GR/CF: **5.00 ft**

**Serial #: 3024      Inside**  
Press@RunDepth: **12.34 psig @ 3400.01 ft (KB)**  
Start Date: **2002.08.18**      End Date: **2002.08.18**  
Start Time: **18:34:32**      End Time: **23:59:31**  
Capacity: **7000.00 psig**  
Last Calib.: **2002.08.19**  
Time On Btrr: **2002.08.18 @ 20:23:01**  
Time Off Btrr: **2002.08.18 @ 22:29:01**

**TEST COMMENT:** FFP-wk surface bl died in 10 min  
FFP-no bl  
Times 30-30-30-30



## PRESSURE SUMMARY

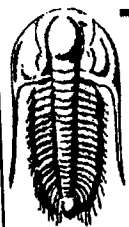
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1645.40	103.01	Initial Hydro-static
4	9.78	103.69	Open To Flow (1)
34	12.92	104.75	Shut-In(1)
65	20.49	105.47	End Shut-In(1)
65	12.12	105.48	Open To Flow (2)
95	12.34	106.22	Shut-In(2)
125	17.97	106.89	End Shut-In(2)
126	1637.47	106.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w/show of oil	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16448

DST#: 1

ATTN: Allen Bangert

Test Start: 2002.08.18 @ 18:34:32

## Tool Information

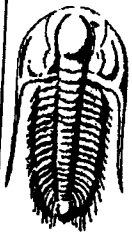
Drill Pipe:	Length: 3278.00 ft	Diameter: 3.80 inches	Volume: 45.98 bbl
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl
			<u>Total Volume: 46.57 bbl</u>

Tool Weight:	2200.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	50000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	41000.00 lb
Final	41000.00 lb

Drill Pipe Above KB: 20.00 ft  
 Depth to Top Packer: 3399.00 ft  
 Depth to Bottom Packer: ft  
 Interval between Packers: 26.02 ft  
 Tool Length: 47.02 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			3379.00	
Shut In Tool	5.00			3384.00	
Hydraulic tool	5.00			3389.00	
Packer	5.00			3394.00	21.00      Bottom Of Top Packer
Packer	5.00			3399.00	
Stubb	1.00			3400.00	
Recorder	0.01	3024	Inside	3400.01	
Perforations	22.00			3422.01	
Recorder	0.01	11085	Outside	3422.02	
Bullnose	3.00			3425.02	26.02      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>47.02</b>				



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mai Oil Operations Inc

**Richards-Fisher Unit #1-5**

P O Box 33  
Russell Ks 67665

**5-11s-20w Ellis Ks**

Job Ticket: 16448

**DST#: 1**

ATTN: Allen Bangert

Test Start: 2002.08.18 @ 18:34:32

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.90 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

deg API

Water Salinity:

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w/show of oil	0.005

Total Length: 1.00 ft

Total Volume: 0.005 bbl

Num Fluid Samples: 0

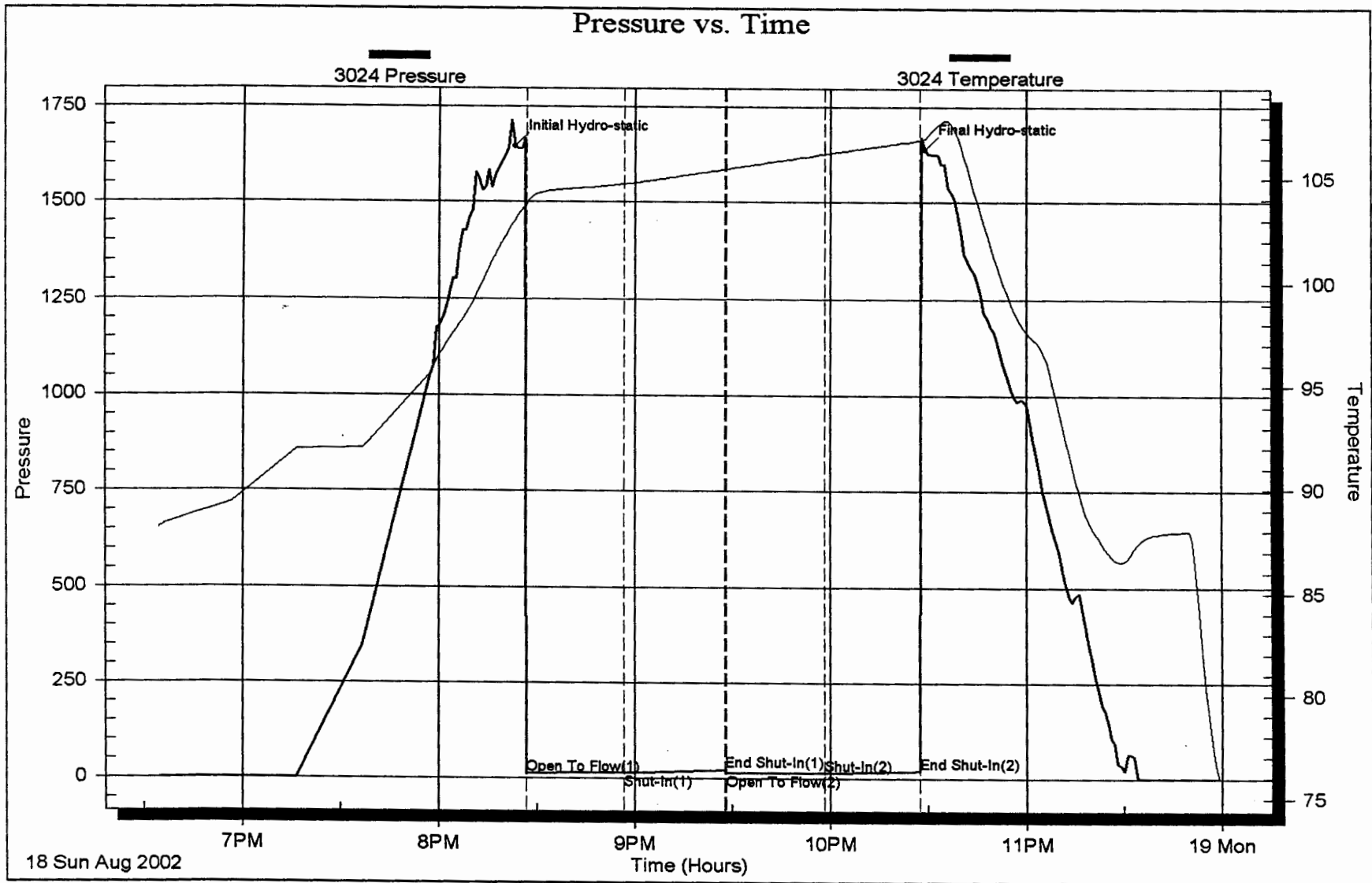
Num Gas Bombs: 0

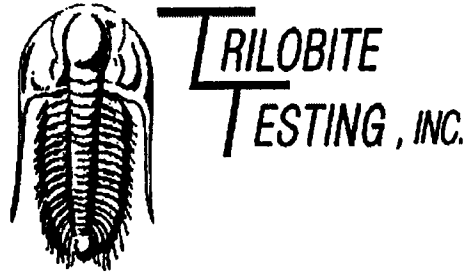
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

P O Box 33  
Russell Ks 67665

ATTN: Allen Bangert

**5-11s-20w Ellis Ks**

**Richards-Fisher Unit #1-5**

Start Date: 2002.08.19 @ 07:36:40

End Date: 2002.08.19 @ 13:05:09

Job Ticket #: 16449                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

5-11s-20w Ellis Ks

DST # 2

LKC "F"

2002.08.19



**TRIOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16449

DST#: 2

ATTN: Allen Bangert

Test Start: 2002.08.19 @ 07:36:40

### GENERAL INFORMATION:

Formation: LKC "F"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:30:09

Time Test Ended: 13:05:09

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 16

Interval: 3442.00 ft (KB) To 3463.00 ft (KB) (TVD)

Total Depth: 3463.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Good

Reference Elevations: 2088.00 ft (KB)

2083.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 3024

Inside

Press@RunDepth: 77.39 psig @ 3443.01 ft (KB)

Capacity: 7000.00 psig

Start Date: 2002.08.19

End Date: 2002.08.19

Last Calib.: 2002.08.19

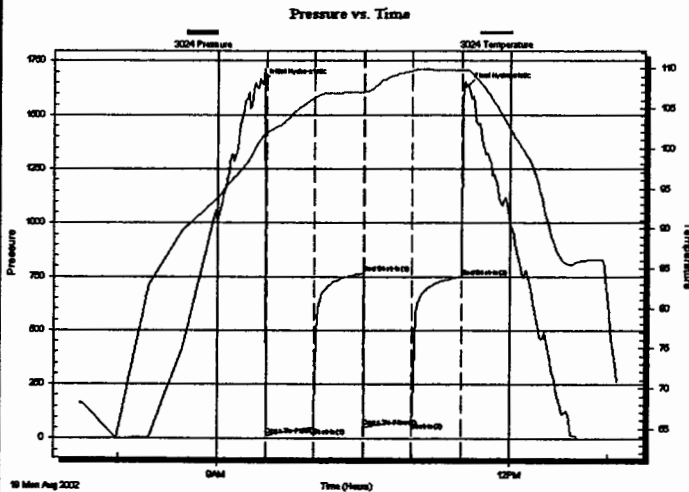
Start Time: 07:36:40

End Time: 13:05:09

Time On Btrn: 2002.08.19 @ 09:27:09

Time Off Btrn: 2002.08.19 @ 11:33:09

TEST COMMENT: FFP-w k bl thru-out 1/4" bl  
FFP-w k surface bl thru-out  
Times 30-30-30-30



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1651.07	101.32	Initial Hydro-static
3	13.93	101.95	Open To Flow (1)
33	52.62	106.32	Shut-In(1)
63	765.09	107.09	End Shut-In(1)
64	54.38	107.12	Open To Flow (2)
93	77.39	109.73	Shut-In(2)
124	750.11	109.80	End Shut-In(2)
126	1631.31	109.79	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
45.00	SOCWM 1%oil 49%w ater 50%mud	0.22
90.00	MW 25%mud 75%w ater w/show of oil	0.58

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations Inc  
P O Box 33  
Russell Ks 67665  
ATTN: Allen Bangert

**Richards-Fisher Unit #1-5**  
**5-11s-20w Ellis Ks**  
Job Ticket: 16449      DST#: 2  
Test Start: 2002.08.19 @ 07:36:40

**Tool Information**

Drill Pipe:	Length: 3306.00 ft	Diameter: 3.80 inches	Volume: 46.37 bbl	Tool Weight: 2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume: 46.96 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3442.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.02 ft			
Tool Length:	42.02 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			3422.00	
Shut In Tool	5.00			3427.00	
Hydraulic tool	5.00			3432.00	
Packer	5.00			3437.00	21.00      Bottom Of Top Packer
Packer	5.00			3442.00	
Stubb	1.00			3443.00	
Recorder	0.01	3024	Inside	3443.01	
Perforations	17.00			3460.01	
Recorder	0.01	11085	Outside	3460.02	
Bullnose	3.00			3463.02	21.02      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.02</b>				



**TRILOBITE  
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# DRILL STEM TEST REPORT

## FLUID SUMMARY

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16449      DST#: 2

ATTN: Allen Bangert

Test Start: 2002.08.19 @ 07:36:40

### 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: 48000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.90 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

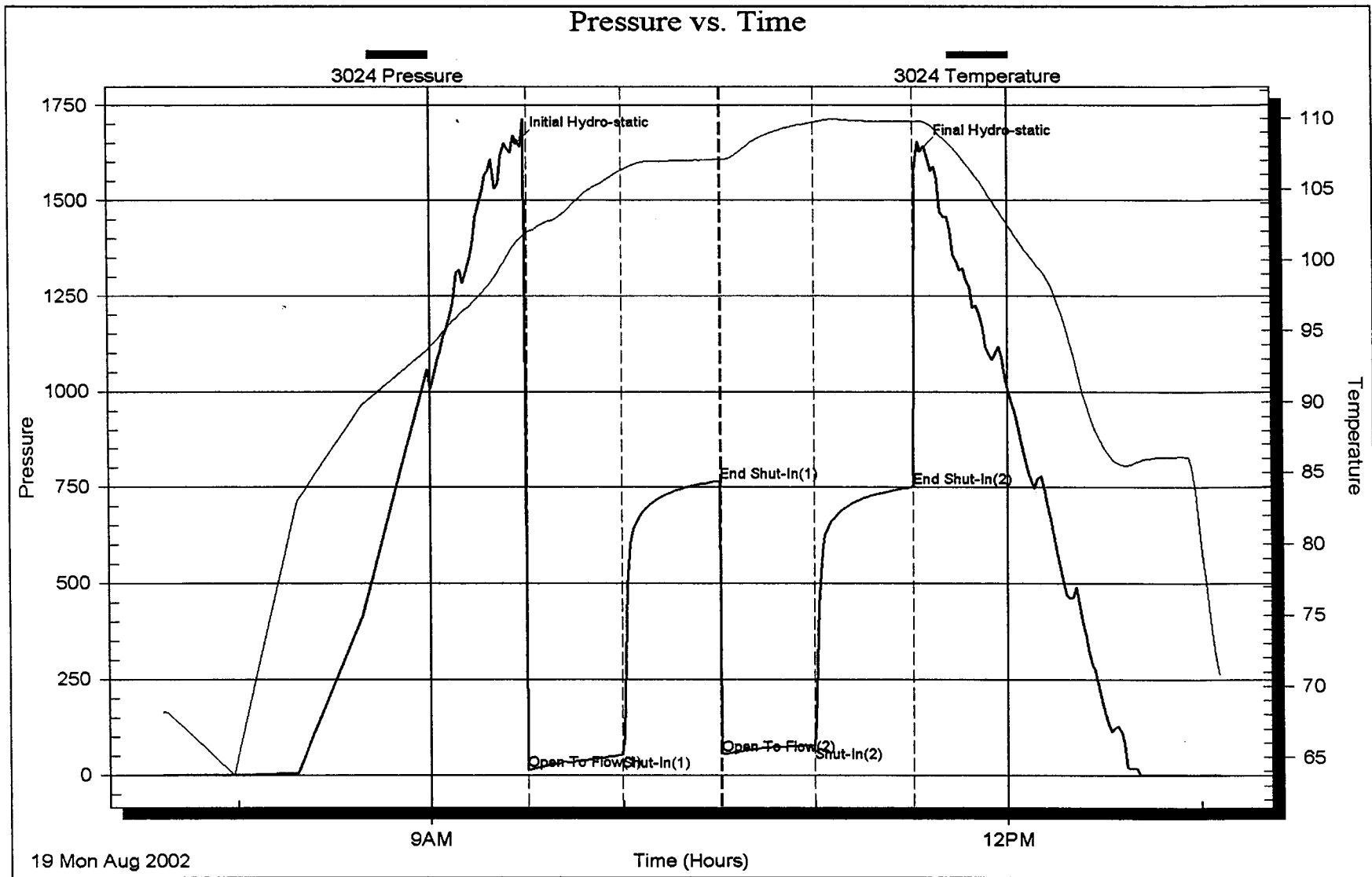
Length ft	Description	Volume bbl
45.00	SOCWM 1%oil 49%water 50%mud	0.221
90.00	MW 25%mud 75%water w/show of oil	0.579

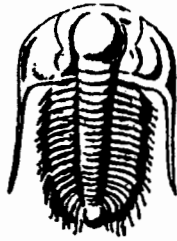
Total Length: 135.00 ft      Total Volume: 0.800 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .17@70





**TRILOBITE  
TESTING, INC.**

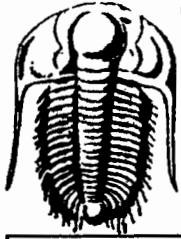
**DRILL STEM TEST REPORT**

Prepared for

Mai Oil Operations, Inc.  
PO Box 33  
Russell, SK 67665

Richards-Fisher Unit #1-5  
5-11S-20W  
Ellis Co. Kansas

Trilobite Testing, Inc  
PO Box 362 - Hays, Kansas - 67601  
ph: 785-625-4778 fax: 785-625-5620  
e-mail: [trilobite@eaglecom.net](mailto:trilobite@eaglecom.net)



# TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT  
 Mai Oil Operations, Inc  
 PO Box 33, Russell, KS 67665

Well name#:	Richards-Fisher Unit #1-5	Date:	8/19/2002
Location#:	5-11S-20W / Ellis Co. KS	Ticket #:	16450
		DST#:	3

**General Informaion:**

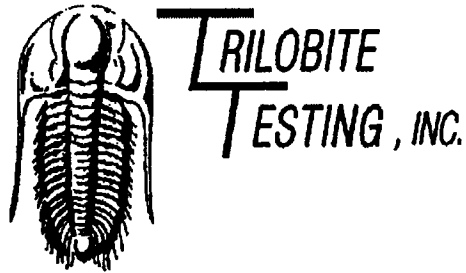
Formation:	LKC H-I-J	Test Type:	Conventional	BHT:	107
Interval:	3497-3560	Tester:	Ray Schwager	OIL API:	
Total Depth:	3560	Elevation:	2088 ft(KB)	H2O Salinity:	
Hole Diameter:	7 7/8"		2083 ft(CF)		
Start Date:	8/19/2002	Tool Weight:	2200	Mud Type:	Chem.
Start Time:	22:30:00	Weight Set on Packers:	25000	Mud Weight:	9.1
Time tool opened:	0:35:00	Weight to Pull Loose:	55000	Viscosity:	57
Time Off Btm:	3:20:00	Initial String Weight:	41000	Water Loss:	8.8
End Date:	8/20/02	Final String Weight:	41000	Resistivity:	
End Time:	5:20:00	Drill Pipe Length:	3368	Salinity:	
		Drill Collar Length:	120		

Test Comment:	IFP - Weak blow throughout 1/4" to surface blow FFP - Weak surface blow throughout
---------------	---

Recovery Length(ft):	20' O&GCM 5%G 15%O 80%M 5' CO
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**Gas Volume Report**

Recorder #:	11085	Open	Min:	Ins. Of water	Orifice	MCF/D
Pressure Summary:	Time:(min)			PSIG	size	
Initial Hydro-static:	1712					
Open to Flow (1):	110 45					
Shut-in (1):	121 45					
End Shut-in (1):	165					
Open to Flow (2):	121 45					
Shut-in (2):	132 45					
End Shut-in (2):	165					
Final Hydro-static:	1690					



## DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

P O Box 33  
Russell Ks 67665

ATTN: Allen Bangert

**5-11s-20w Ellis Ks**

**Richards-Fisher Unit #1-5**

Start Date: 2002.08.20 @ 09:41:59

End Date: 2002.08.20 @ 15:03:28

Job Ticket #: 16676                      DST #: 4

Trilobite Testing, Inc

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16676

DST#: 4

ATTN: Allen Bangert

Test Start: 2002.08.20 @ 09:41:59

## GENERAL INFORMATION:

Formation: **LKC "K"**

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

Time Tool Opened: 11:31:58

Time Test Ended: 15:03:28

Test Type: **Conventional Bottom Hole**

Tester: **Ray Schwager**

Unit No: **16**

Interval: **3557.00 ft (KB) To 3578.00 ft (KB) (TVD)**

Reference Elevations: **2088.00 ft (KB)**

Total Depth: **3578.00 ft (KB) (TVD)**

**2083.00 ft (CF)**

Hole Diameter: **7.85 inches** Hole Condition: **Good**

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

Serial #: **3024** Inside

Press@RunDepth: **16.67 psig @ 3558.01 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2002.08.20** End Date: **2002.08.20**

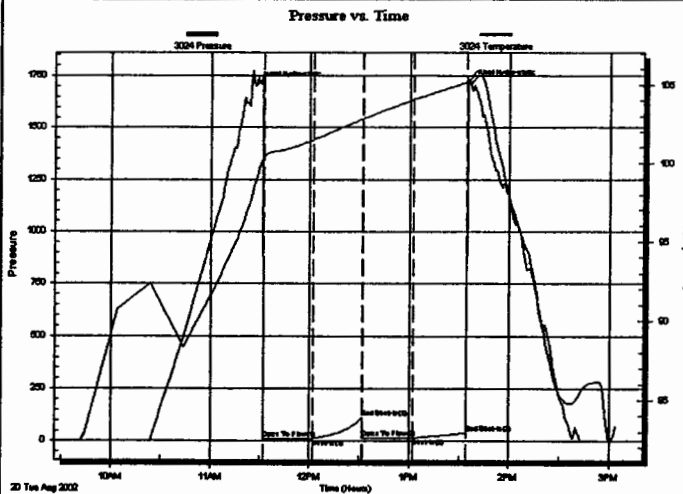
Last Calib.: **2002.08.20**

Start Time: **09:41:59** End Time: **15:03:28**

Time On Btm: **2002.08.20 @ 11:27:28**

Time Off Btm: **2002.08.20 @ 13:36:28**

TEST COMMENT: **FFP-wk surface bl died in 25 min**  
**FFP-no bl**  
**Times 30-30-30-30**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.43	98.99	Initial Hydro-static
5	12.46	100.37	Open To Flow (1)
35	13.69	101.53	Shut-In(1)
64	112.26	102.82	End Shut-In(1)
65	14.43	102.86	Open To Flow (2)
95	16.67	104.07	Shut-In(2)
127	40.12	105.17	End Shut-In(2)
129	1713.64	105.40	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM 12% oil 88% mud	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations Inc  
P O Box 33  
Russell Ks 67665  
ATTN: Allen Bangert

Richards-Fisher Unit #1-5  
5-11s-20w Ellis Ks  
Job Ticket: 16676      DST#: 4  
Test Start: 2002.08.20 @ 09:41:59

**Tool Information**

Drill Pipe:	Length: 3431.00 ft	Diameter: 3.80 inches	Volume: 48.13 bbl	Tool Weight: 2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
		Total Volume: 48.72 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3557.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.02 ft			
Tool Length:	42.02 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			3537.00	
Shut In Tool	5.00			3542.00	
Hydraulic tool	5.00			3547.00	
Packer	5.00			3552.00	21.00      Bottom Of Top Packer
Packer	5.00			3557.00	
Stubb	1.00			3558.00	
Recorder	0.01	3024	Inside	3558.01	
Perforations	17.00			3575.01	
Recorder	0.01	13547	Outside	3575.02	
Bullnose	3.00			3578.02	21.02      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.02</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mai Oil Operations Inc

**Richards-Fisher Unit #1-5**

P O Box 33  
Russell Ks 67665

**5-11s-20w Ellis Ks**

Job Ticket: 16676

**DST#: 4**

ATTN: Allen Bangert

Test Start: 2002.08.20 @ 09:41:59

### 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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OCM 12%oil88%mud	0.025

Total Length:

5.00 ft

Total Volume:

0.025 bbl

Num Fluid Samples: 0

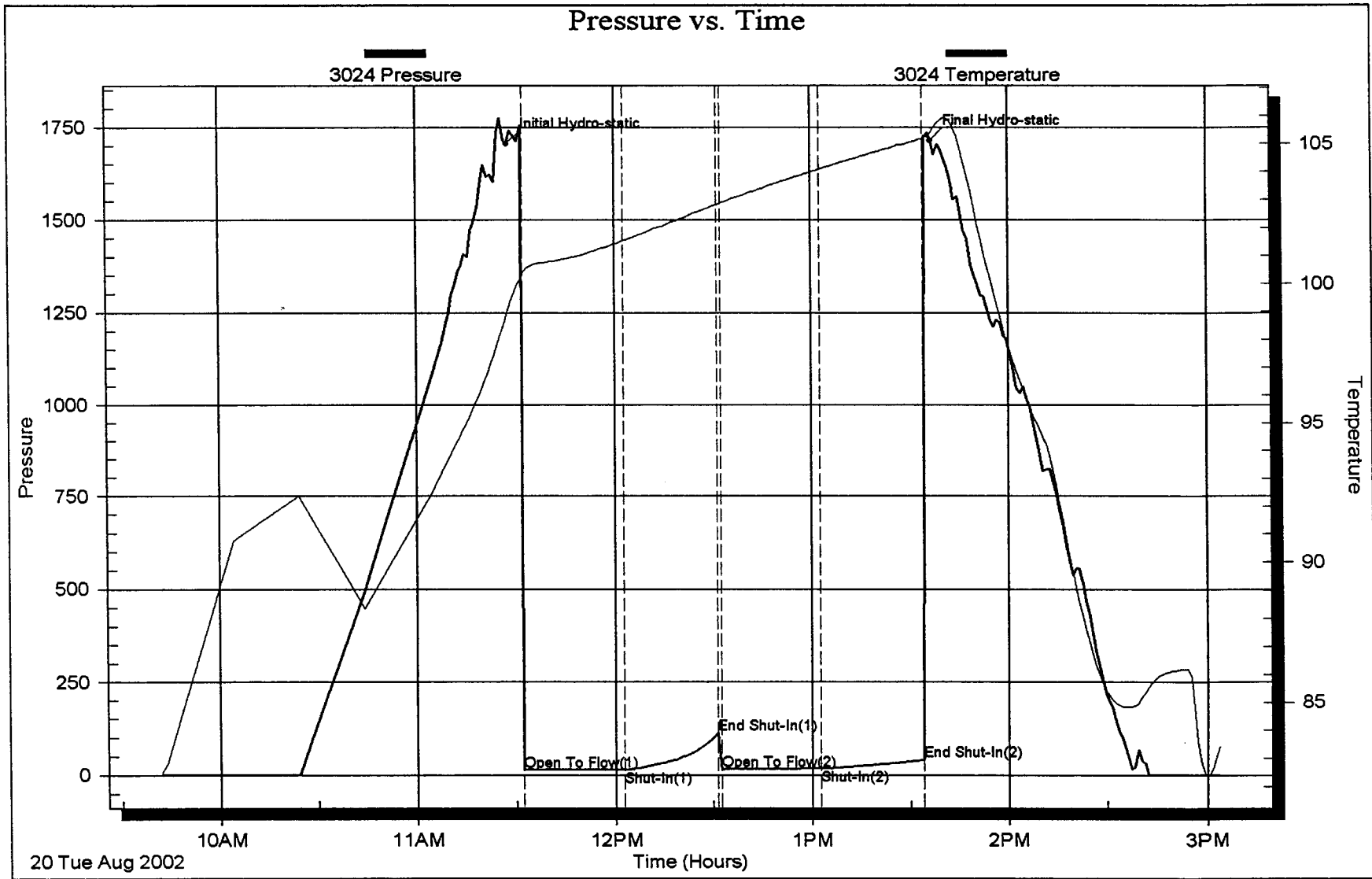
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

P O Box 33  
Russell Ks 67665

ATTN: Allen Bangert

**5-11s-20w Ellis Ks**

**Richards-Fisher Unit #1-5**

Start Date: 2002.08.21 @ 03:34:32

End Date: 2002.08.21 @ 08:05:00

Job Ticket #: 16677                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

5-11s-20w Ellis Ks

DST # 5

Arbuckle

2002.08.21





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations Inc

**Richards-Fisher Unit #1-5**

P O Box 33  
Russell Ks 67665

**5-11s-20w Ellis Ks**

Job Ticket: 16677

**DST#: 5**

ATTN: Allen Bangert

Test Start: 2002.08.21 @ 03:34:32

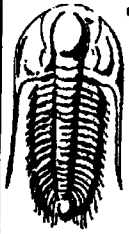
**Tool Information**

Drill Pipe:	Length: 3494.00 ft	Diameter: 3.80 inches	Volume: 49.01 bbl	Tool Weight: 2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
		<b>Total Volume:</b>	<b>49.60 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3621.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.02 ft			
Tool Length:	85.02 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			3601.00	
Shut In Tool	5.00			3606.00	
Hydraulic tool	5.00			3611.00	
Packer	5.00			3616.00	21.00 Bottom Of Top Packer
Packer	5.00			3621.00	
Stubb	1.00			3622.00	
Perforations	5.00			3627.00	
Change Over Sub	1.00			3628.00	
Recorder	0.01	3024	Inside	3628.01	
Blank Spacing	31.00			3659.01	
Change Over Sub	1.00			3660.01	
Recorder	0.01	11085	Outside	3660.02	
Perforations	22.00			3682.02	
Bullnose	3.00			3685.02	64.02 Bottom Packers & Anchor

**Total Tool Length: 85.02**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mai Oil Operations Inc

**Richards-Fisher Unit #1-5**

P O Box 33  
Russell Ks 67665

**5-11s-20w Ellis Ks**

Job Ticket: 16677

**DST#: 5**

ATTN: Allen Bangert

Test Start: 2002.08.21 @ 03:34:32

### 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: 7.91 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7000.00 ppm			
Filter Cake: 2.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud w/show of oil	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

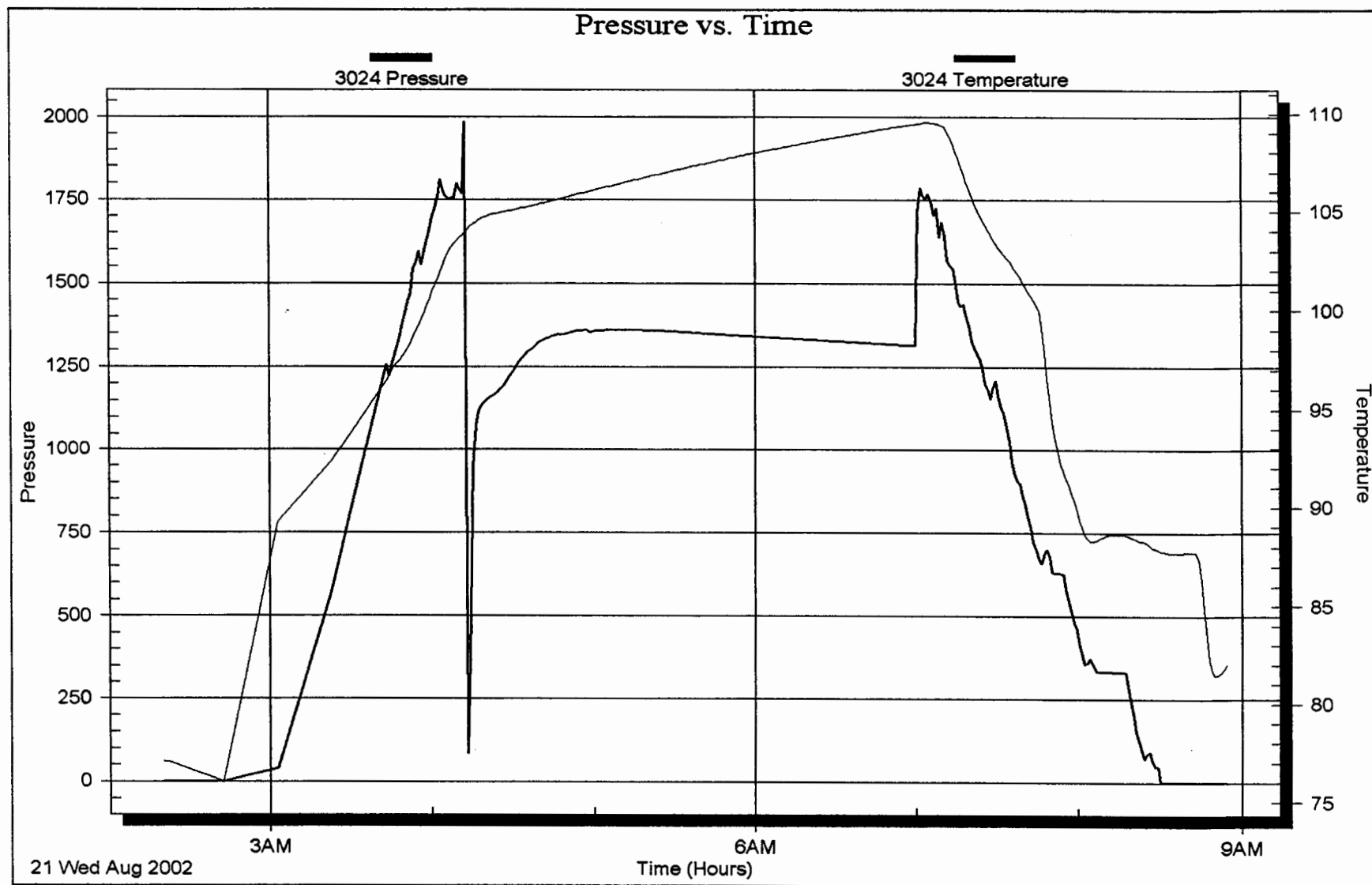
Num Gas Bombs: 0

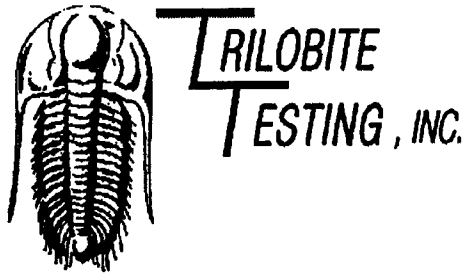
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

P O Box 33  
Russell Ks 67665

ATTN: Allen Bangert

**5-11s-20w Ellis Ks**

**Richards-Fisher Unit #1-5**

Start Date: 2002.08.21 @ 13:10:31

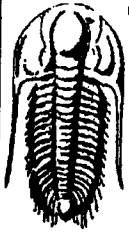
End Date: 2002.08.21 @ 19:56:30

Job Ticket #: 16678                      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

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16678

DST#: 6

ATTN: Allen Bangert

Test Start: 2002.08.21 @ 13:10:31

## GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 14:44:00

Time Test Ended: 19:56:30

Test Type: **Conventional Bottom Hole**

Tester: **Ray Schwager**

Unit No: **16**

Interval: **3623.00 ft (KB) To 3687.00 ft (KB) (TVD)**

Total Depth: **3687.00 ft (KB) (TVD)**

Hole Diameter: **7.85 inches** Hole Condition: **Good**

Reference Elevations: **2088.00 ft (KB)**

**2083.00 ft (CF)**

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

Serial #: **3024** Inside

Press@RunDepth: **189.42 psig @ 3630.01 ft (KB)**

Start Date: **2002.08.21**

End Date:

**2002.08.21**

Start Time: **13:10:31**

End Time:

**19:56:30**

Capacity: **7000.00 psig**

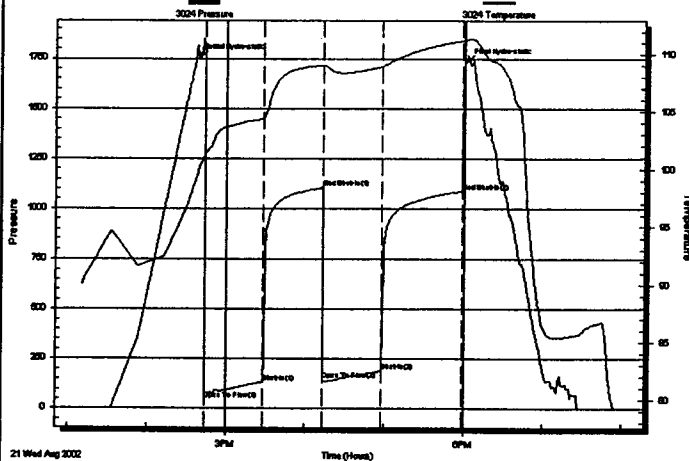
Last Calib.: **2002.08.21**

Time On Btm: **2002.08.21 @ 14:39:30**

Time Off Btm: **2002.08.21 @ 18:01:30**

TEST COMMENT: **FP-w k to strg in 23 min  
FFP-w k to a gd bl 1/2" to 9 1/2" bl  
Times 45-45-45-60**

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1751.69	100.20	Initial Hydro-static
5	45.33	101.37	Open To Flow (1)
49	132.25	104.51	Shut-In (1)
94	1103.39	109.04	End Shut-In (1)
94	144.66	109.06	Open To Flow (2)
139	189.42	108.97	Shut-In (2)
199	1086.12	111.19	End Shut-In (2)
202	1733.44	111.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	MGO 5%gas 90%oil 5%mud	1.43
120.00	MGO 5%gas 80%oil 15%mud	1.68
90.00	MGO 5%gas 65%oil 30%mud	1.26
10.00	CO	0.14
60.00	GP	0.84

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16678      DST#: 6

ATTN: Allen Bangert

Test Start: 2002.08.21 @ 13:10:31

### Tool Information

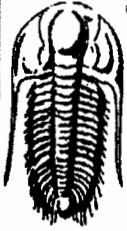
Drill Pipe:	Length: 3492.00 ft	Diameter: 3.80 inches	Volume: 48.98 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3623.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.02 ft			
Tool Length:	85.02 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			3603.00	
Shut In Tool	5.00			3608.00	
Hydraulic tool	5.00			3613.00	
Packer	5.00			3618.00	21.00      Bottom Of Top Packer
Packer	5.00			3623.00	
Stubb	1.00			3624.00	
Perforations	5.00			3629.00	
Change Over Sub	1.00			3630.00	
Recorder	0.01	3024	Inside	3630.01	
Blank Spacing	31.00			3661.01	
Change Over Sub	1.00			3662.01	
Recorder	0.01	11085	Outside	3662.02	
Perforations	22.00			3684.02	
Bullnose	3.00			3687.02	64.02      Bottom Packers & Anchor

**Total Tool Length: 85.02**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mai Oil Operations Inc

Richards-Fisher Unit #1-5

P O Box 33  
Russell Ks 67665

5-11s-20w Ellis Ks

Job Ticket: 16678                      DST#: 6

ATTN: Allen Bangert

Test Start: 2002.08.21 @ 13:10:31

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7000.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

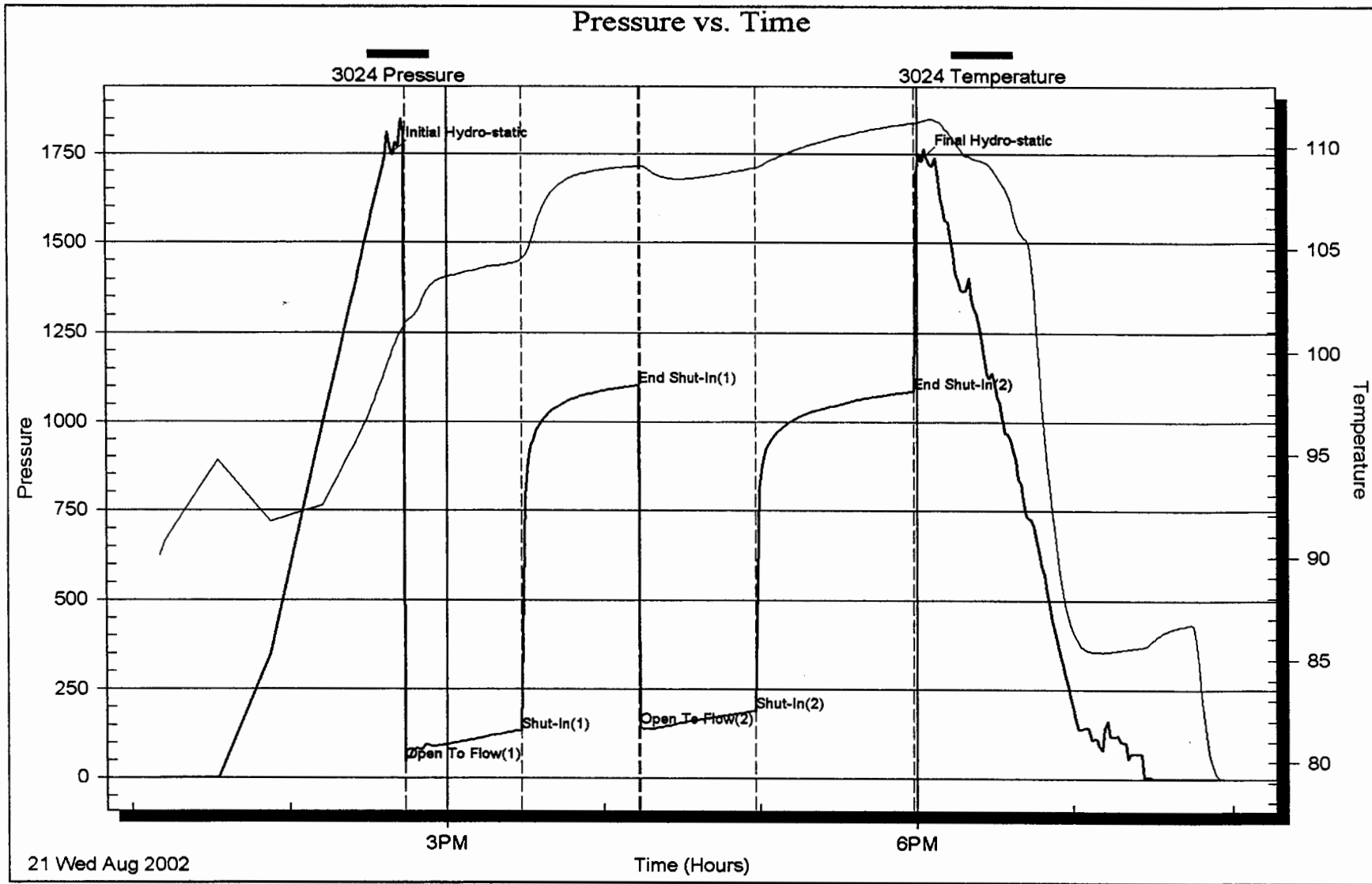
Length ft	Description	Volume bbl
180.00	MGO 5%gas 90%oil 5%mud	1.432
120.00	MGO 5%gas 80%oil 15%mud	1.683
90.00	MGO 5%gas 65%oil 30%mud	1.262
10.00	CO	0.140
60.00	GIP	0.842

Total Length: 460.00 ft                      Total Volume: 5.359 bbl

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

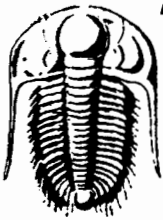
Laboratory Name:                      Laboratory Location:

Recovery Comments:



21 Wed Aug 2002

Time (Hours)



# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

*Handwritten:* Wash #5104 #2260

No 16448

## Test Ticket

Well Name & No. Richards-Fisher Unit #1-5 Test No. 1 Date B-18-02  
 Company Mar Oil Operations, Inc Zone Tested LKC 'C'  
 Address P.O. Box 33 Russell, Ko 67665 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Mor Cont. Murfin rig 8 Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>s</sup> Rge. 20<sup>w</sup> Co. Ellis State Ko  
 No. of Copies Req Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3399-3425 Initial Str Wt./Lbs. 41000 Unseated Str Wt./Lbs. 41000  
 Anchor Length 26 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 50000  
 Top Packer Depth 3394 Tool Weight 2200  
 Bottom Packer Depth 3399 Hole Size 7 7/8" yes Rubber Size 6 3/4" yes  
 Total Depth 3425 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 9.1 LCM Te Vis. 50 WL 8 Drill Pipe Size 4 1/2 XH Ft. Run 3278  
 Blow Description IFF - Weak surface Blow died in 10 min  
FFP - NO BLOW

Recovery — Total Feet 1 GIP - Ft. in DC 1 Ft. in DP -  
 Rec. 1 Feet Of Mud %gas %oil %water %mud  
 Rec. \_\_\_\_\_ Feet Of w/show of oil %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 - @ - °F Chlorides - ppm Recovery Chlorides 3000 ppm System

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud		<u>1645</u>	<u>3024</u>	<u>1800</u>
(B) First Initial Flow Pressure		<u>9</u>	(depth) <u>3400</u>	T-Started <u>1834</u>
(C) First Final Flow Pressure		<u>12</u>	PSI Recorder No. <u>11085</u>	T-Open <u>2025</u>
(D) Initial Shut-In Pressure		<u>20</u>	(depth) <u>3422</u>	T-Pulled <u>2225</u>
(E) Second Initial Flow Pressure		<u>12</u>	PSI Recorder No. <u>-</u>	T-Out <u>2350</u>
(F) Second Final Flow Pressure		<u>12</u>	(depth) <u>-</u>	T-Off Location <u>0015</u>
(G) Final Shut-in Pressure		<u>17</u>	PSI Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/> <span style="float: right;">700</span>
(Q) Final Hydrostatic Mud		<u>1637</u>	PSI Initial Shut-in <u>30</u>	Jars _____
			Final Flow <u>30</u>	Safety Joint _____
			Final Shut-in <u>30</u>	Straddle _____

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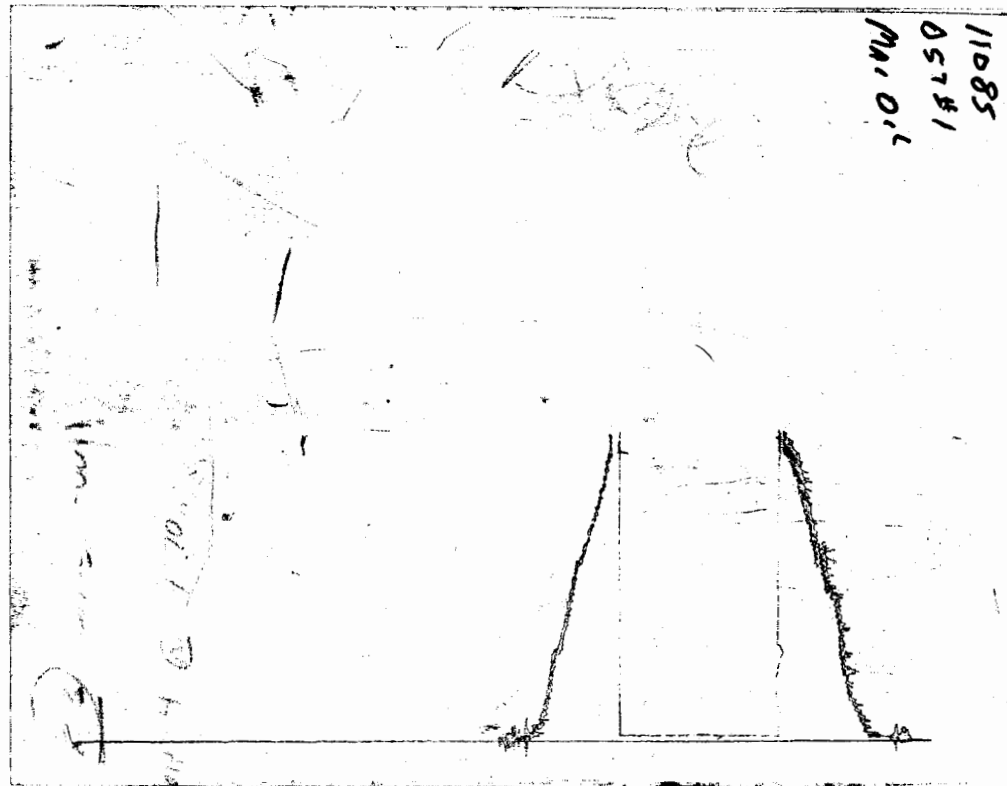
Approved By \_\_\_\_\_

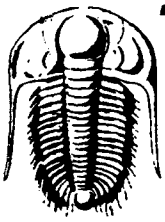
Our Representative Ray Schwager Thankyou

Extra Packer \_\_\_\_\_  
 Elec. Rec.   
 Mileage 32  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ 150  
32  
4.882

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 16449

## Test Ticket

Well Name & No. Richards-Fisher Unit #1-5 Test No. 2 Date 8-19-02  
 Company MAI Oil Operations Inc Zone Tested LKC 'F'  
 Address P.O. Box 33 Russell, Mo 67665 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Margenstein Cont. Murfin B Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>s</sup> Rge. 20<sup>w</sup> Co. ELLIS State K  
 No. of Copies Reg Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3442-3463 Initial Str Wt./Lbs. 41000 Unseated Str Wt./Lbs. 41000  
 Anchor Length 21 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 50000  
 Top Packer Depth 3437 Tool Weight 2200  
 Bottom Packer Depth 3442 Hole Size — 7 7/8" yes Rubber Size — 6 3/4" yes  
 Total Depth 3463 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 8.9 LCM #8 Vis. 5B WL 8 Drill Pipe Size 4 1/2 XH Ft. Run 3306  
 Blow Description IFP - WEAK BLOW THROUGHOUT 1/4" BLOW  
FFP - WEAK SURFACE BLOW THROUGHOUT

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
<u>135</u>	<u>-</u>	<u>120</u>	<u>15</u>
Rec. <u>45</u> Feet Of <u>SOC WM</u>	%gas <u>1</u> %oil <u>49</u> %water <u>50</u> %mud		
Rec. <u>90</u> Feet Of <u>MW w/show of oil</u>	%gas <u>-</u> %oil <u>75</u> %water <u>25</u> %mud		
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud		
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud		
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud		

BHT 109 °F Gravity - °API D@ - °F Corrected Gravity - °API  
 RW .17 @ 70 °F Chlorides 48000 ppm Recovery Chlorides 3000 ppm System

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud		<u>1651</u>	<u>3024</u>	<u>0715</u>
(B) First Initial Flow Pressure		<u>13</u>	(depth) <u>3443</u>	T-Started <u>0736</u>
(C) First Final Flow Pressure		<u>52</u>	PSI Recorder No. <u>11085</u>	T-Open <u>0925</u>
(D) Initial Shut-In Pressure		<u>765</u>	(depth) <u>3460</u>	T-Pulled <u>1125</u>
(E) Second Initial Flow Pressure		<u>54</u>	PSI Recorder No. <u>-</u>	T-Out <u>1300</u>
(F) Second Final Flow Pressure		<u>77</u>	(depth) <u>-</u>	T-Off Location <u>1315</u>
(G) Final Shut-in Pressure		<u>750</u>	PSI Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud		<u>1631</u>	PSI Initial Shut-in <u>30</u>	Jars _____
			Final Flow <u>30</u>	Safety Joint _____
			Final Shut-in <u>30</u>	Straddle _____
				Circ. Sub _____
				Sampler _____
				Extra Packer _____
				Elec. Rec. <input checked="" type="checkbox"/>
				Mileage <u>32</u>
				Other _____
				TOTAL PRICE \$ <u>✓</u>

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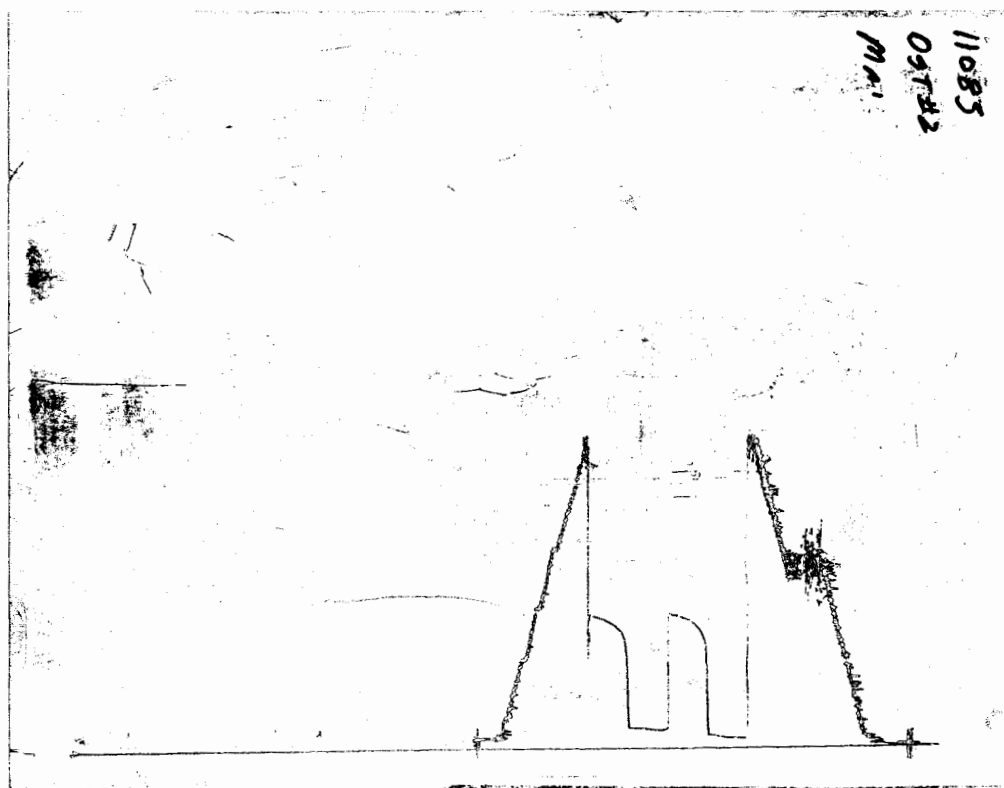
Approved By Todd E. Margenstein

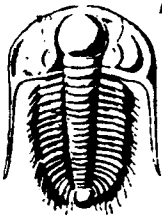
Our Representative RAY SCHWAGER Thank you

700  
150  
32  
82

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 16450

## Test Ticket

Well Name & No. Richards-Fisher Unit #1-5 Test No. 3 Date 8-19-02  
 Company MAJOIL OPERATIONS Inc Zone Tested LKC H-I-J  
 Address P.O. Box 33 Russell, Ka 67665 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Morgerstein Cont. MURFIN B Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>S</sup> Rge. 20<sup>W</sup> Co. ELLIS State Ka  
 No. of Copies 105 Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3490 - 3560 Initial Str Wt./Lbs. 41000 Unseated Str Wt./Lbs. 41000  
 Anchor Length 70 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 55000  
 Top Packer Depth 3485 Tool Weight 2200  
 Bottom Packer Depth 3490 Hole Size — 7 7/8" yes Rubber Size — 6 3/4" yes  
 Total Depth 3560 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 9.1 LCM 1<sup>st</sup> Vis. 57 WL 8.8 Drill Pipe Size 4 1/2 XH Ft. Run 3368  
 Blow Description IFP - WEAK Blow throughout 1/4" TO surface Blow  
FFP - WEAK surface Blow throughout

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
<u>25</u>	<u>95</u>	<u>25</u>	<u>-</u>
Rec. <u>5</u> Feet Of <u>CO</u>	%gas	%oil	%water %mud
Rec. <u>20</u> Feet Of <u>0+6 CM</u>	<u>5</u> %gas	<u>15</u> %oil	<u>80</u> %water %mud
Rec. _____ Feet Of _____	%gas	%oil	%water %mud
Rec. _____ Feet Of _____	%gas	%oil	%water %mud
Rec. _____ Feet Of _____	%gas	%oil	%water %mud

BHT 107 °F Gravity - °API D@ - °F Corrected Gravity - °API  
 RW - @ - °F Chlorides - ppm Recovery Chlorides 4000 ppm System

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>1712</u>		<u>3024</u>	<u>2275</u>
(B) First Initial Flow Pressure	<u>110</u>		(depth) <u>3496</u>	T-Started <u>223</u>
(C) First Final Flow Pressure	<u>121</u>		PSI Recorder No. <u>11085</u>	T-Open <u>0035</u>
(D) Initial Shut-In Pressure	<u>165</u>		PSI (depth) <u>3528</u>	T-Pulled <u>0320</u>
(E) Second Initial Flow Pressure	<u>121</u>		PSI Recorder No. <u>-</u>	T-Out <u>0520</u>
(F) Second Final Flow Pressure	<u>132</u>		PSI (depth) <u>-</u>	T-Off Location <u>0545</u>
(G) Final Shut-in Pressure	<u>165</u>		PSI Initial Opening <u>45</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud	<u>1690</u>		PSI Initial Shut-in <u>45</u>	Jars _____
			Final Flow <u>45</u>	Safety Joint _____
			Final Shut-in <u>45</u>	Straddle _____

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

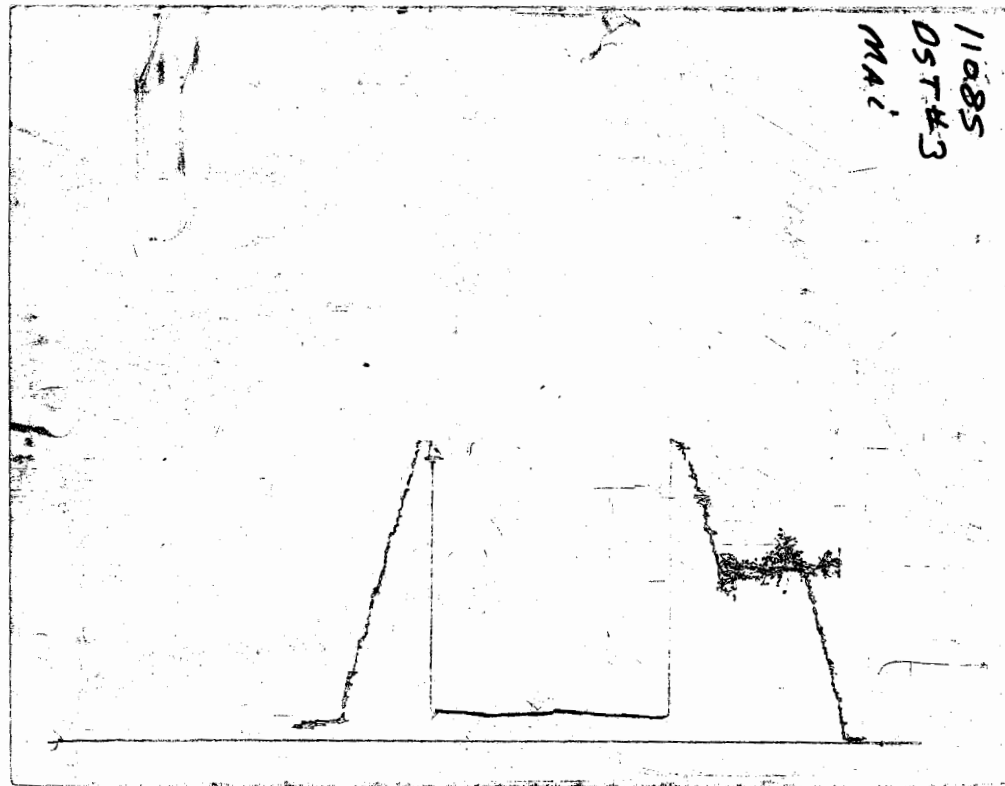
Our Representative Ray Schwager Thankyou

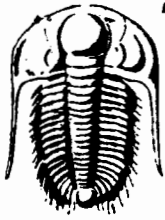
Mileage 32  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ ✓

700  
 150  
 30  
 882

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 16676

## Test Ticket

Well Name & No. Richards-Fisher UNIT #1-5 Test No. 4 Date 8-20-02  
 Company MAI OIL OPERATIONS Inc Zone Tested LKC "K"  
 Address P.O. Box 33 Russell, Ks 67665 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Morgenstern Cont. MURFIN 8 Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>s</sup> Rge. 20<sup>w</sup> Co. ELLIS State Ks  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3557-3578 Initial Str Wt./Lbs. 42000 Unseated Str Wt./Lbs. 42000  
 Anchor Length 21 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 55000  
 Top Packer Depth 3552 Tool Weight 2200  
 Bottom Packer Depth 3557 Hole Size — 7 7/8" yes Rubber Size — 6 3/4" yes  
 Total Depth 3578 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 9.1 LCM TR Vis. 51 WL 8 Drill Pipe Size 4 1/2 XH Ft. Run 3431  
 Blow Description TFP - WEAK SURFACE Blow died in 25 min  
FFP - NO BLOW

Recovery — Total Feet 5 GIP - Ft. in DC 5 Ft. in DP -  
 Rec. 5 Feet Of OCM %gas 12 %oil \_\_\_\_\_ %water 88 %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 4000 ppm System

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud		<u>1704</u>	<u>3024</u>	<u>1036</u>
(B) First Initial Flow Pressure		<u>12</u>	(depth) <u>3558</u>	T-Started <u>1041</u>
(C) First Final Flow Pressure		<u>13</u>	PSI Recorder No. <u>19587</u>	T-Open <u>1250</u>
(D) Initial Shut-In Pressure		<u>112</u>	(depth) <u>3575</u>	T-Pulled <u>1450</u>
(E) Second Initial Flow Pressure		<u>14</u>	PSI Recorder No. <u>-</u>	T-Out <u>1615</u>
(F) Second Final Flow Pressure		<u>16</u>	(depth) <u>-</u>	T-Off Location <u>1630</u>
(G) Final Shut-in Pressure		<u>40</u>	PSI Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud		<u>1713</u>	PSI Initial Shut-in <u>30</u>	Jars _____
			Final Flow <u>30</u>	Safety Joint _____
			Final Shut-in <u>30</u>	Straddle _____

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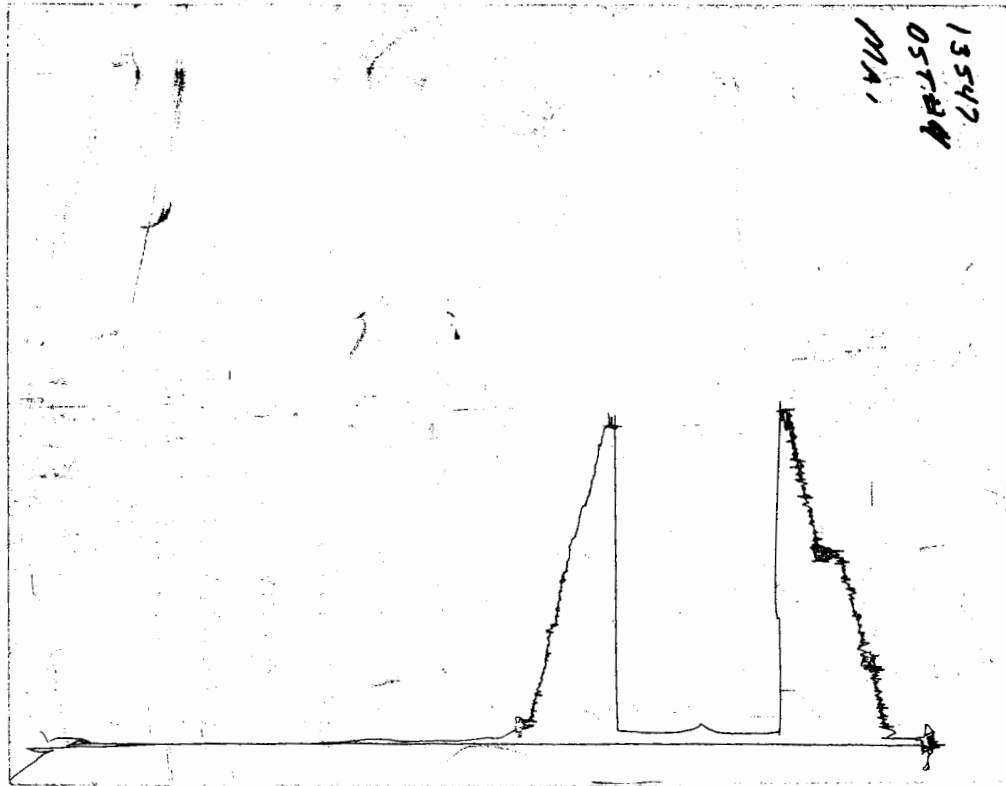
Approved By \_\_\_\_\_

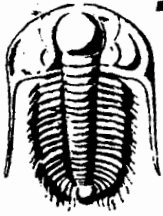
Our Representative RAY SCHWAGER THANK YOU

Mileage 32  
 Other \_\_\_\_\_  
 TOTAL PRICE \$

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 16677

## Test Ticket

Well Name & No. Richards-Fisher Unit #1-5 Test No. 5 Date 8-21-02  
 Company MAI OIL OPERATIONS INC Zone Tested Arbuckle  
 Address P.O. Box 33 Russell, Ks 67665 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Morgenstern Cont. Murfin B Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>s</sup> Rge. 20<sup>w</sup> Co. ELLIS State Ks  
 No. of Copies Reg Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3621-3685 Initial Str Wt./Lbs. 43000 Unseated Str Wt./Lbs. 43000  
 Anchor Length 64 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 65000  
 Top Packer Depth 3616 Tool Weight 2200  
 Bottom Packer Depth 3621 Hole Size — 7 7/8" yes Rubber Size — 6 3/4" yes  
 Total Depth 3685 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 9.3 LCM TR Vis. 54 WL 8 Drill Pipe Size 4 1/2 X H Ft. Run 3494  
 Blow Description IFP - Weak Blow throughout 1" decreased to surface slow  
FFP - NO Blow

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
<u>20</u>	<u>-</u>	<u>20</u>	<u>-</u>
Rec. <u>20</u> Feet Of <u>mud</u>	%gas	%oil	%water
Rec. _____ Feet Of <u>w/show of oil</u>	%gas	%oil	%water
Rec. _____ Feet Of _____	%gas	%oil	%water
Rec. _____ Feet Of <u>misrun</u>	%gas	%oil	%water
Rec. _____ Feet Of <u>plugged</u>	%gas	%oil	%water
BHT <u>110</u> °F Gravity <u>-</u> °API D@ <u>-</u> °F Corrected Gravity <u>-</u> °API			
RW <u>-</u> @ <u>-</u> °F Chlorides <u>-</u> ppm Recovery Chlorides <u>2000</u> ppm System			

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud			<u>3024</u>	<u>0300</u>
(B) First Initial Flow Pressure			(depth) <u>3628</u>	T-Started <u>0320</u>
(C) First Final Flow Pressure			PSI Recorder No. <u>11085</u>	T-Open <u>0520</u>
(D) Initial Shut-In Pressure			PSI (depth) <u>3660</u>	T-Pulled <u>0805</u>
(E) Second Initial Flow Pressure			PSI Recorder No. <u>-</u>	T-Out <u>0950</u>
(F) Second Final Flow Pressure			PSI (depth) <u>-</u>	T-Off Location <u>1015</u>
(G) Final Shut-in Pressure			PSI Initial Opening <u>45</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud			PSI Initial Shut-in <u>45</u>	Jars _____
			Final Flow <u>30</u>	Safety Joint _____
			Final Shut-in <u>45</u>	Straddle _____

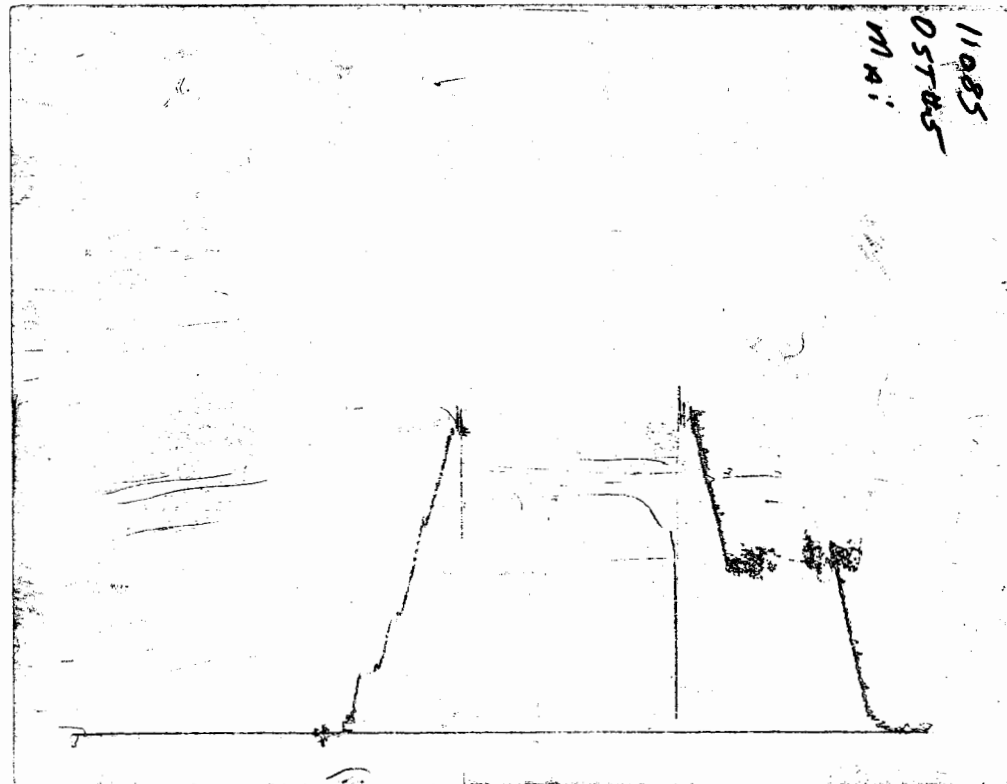
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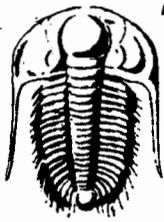
Approved By \_\_\_\_\_  
 Our Representative RAY SCHWAGER THANK YOU

Extra Packer \_\_\_\_\_  
 Elec. Rec.   
 Mileage 32  
 Other \_\_\_\_\_  
 TOTAL PRICE \$

# CHART PAGE

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 16678

## Test Ticket

Well Name & No. Richards-Fisher Unit #1-5 Test No. 6 Date 8-21-02  
 Company MAI OIL OPERATIONS INC Zone Tested Arbuckle  
 Address P.O. Box 33 Russell, Ks 67666 Elevation 2088 KB 2083 GL  
 Co. Rep / Geo. Todd Morgenstern Cont. Murfin 8 Est. Ft. of Pay - Por. - %  
 Location: Sec. 5 Twp. 11<sup>s</sup> Rge. 20<sup>w</sup> Co. ELLIS State Ks  
 No. of Copies Reg Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 3623-3687 Initial Str Wt./Lbs. 44000 Unseated Str Wt./Lbs. 45000  
 Anchor Length 64 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 60000  
 Top Packer Depth 3618 Tool Weight 2200  
 Bottom Packer Depth 3623 Hole Size — 7 7/8" yes Rubber Size — 6 3/4" yes  
 Total Depth 3687 Wt. Pipe Run - Drill Collar Run 120  
 Mud Wt. 9.2 LCM 2# Vis. 50 WL 8.8 Drill Pipe Size 4 1/2 XH Ft. Run 3492  
 Blow Description IFP - WEAK TO A STRONG BLOW IN 23 MIN  
FFP - WEAK TO A GOOD BLOW 1/2" TO 9 1/2" BLOW  
WEAK BLOW ON SHUT-IN

Recovery — Total Feet 400 GIP 60 Ft. in DC 120 Ft. in DP 280  
 Rec. 180 Feet Of MGO 5 %gas 90 %oil %water 5 %mud  
 Rec. 120 Feet Of MGO 5 %gas 80 %oil %water 15 %mud  
 Rec. 90 Feet Of MGO 5 %gas 65 %oil %water 30 %mud  
 Rec. 10 Feet Of CO %gas %oil %water %mud  
 Rec. \_\_\_\_\_ Feet Of \_\_\_\_\_ %gas %oil %water %mud  
 BHT 111 °F Gravity 29 °API D@ 70 °F Corrected Gravity 28 °API  
 RW - @ - °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 7000 ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud		<u>1751</u>		<u>3024</u>	<u>1300</u>
(B) First Initial Flow Pressure		<u>45</u>		(depth) <u>3630</u>	T-Started <u>1440</u>
(C) First Final Flow Pressure		<u>132</u>		Recorder No. <u>11085</u>	T-Open <u>1620</u>
(D) Initial Shut-In Pressure		<u>1103</u>		(depth) <u>3662</u>	T-Pulled <u>1935</u>
(E) Second Initial Flow Pressure		<u>144</u>		Recorder No. <u>-</u>	T-Out <u>2135</u>
(F) Second Final Flow Pressure		<u>189</u>		(depth) <u>-</u>	T-Off Location <u>2215</u>
(G) Final Shut-in Pressure		<u>1086</u>		PSI Initial Opening <u>45</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud		<u>1733</u>		PSI Initial Shut-in <u>45</u>	Jars _____
				Final Flow <u>45</u>	Safety Joint _____
				Final Shut-in <u>60</u>	Straddle _____

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Approved By Todd E. Morgenstern  
 Our Representative Ray Schwager Thatt 904

700  
 Mileage n/c  
 Other \_\_\_\_\_  
 TOTAL PRICE

# CHART PAGE

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

