

DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

19-12-17-Ellis-Ks

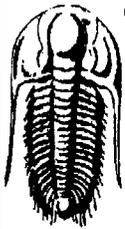
Karlin #1

Start Date: 2004.04.28 @ 22:55:14

End Date: 2004.04.29 @ 07:03:44

Job Ticket #: 19897 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

Hertel Oil Co LLC

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

Karlin #1

19-12-17-Ellis-Ks

Job Ticket: 19897

DST#: 1

Test Start: 2004.04.28 @ 22:55:14

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:35:14

Time Test Ended: 07:03:44

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3595.00 ft (KB) To 3668.00 ft (KB) (TVD)**

Reference Elevations: 2118.00 ft (KB)

Total Depth: 3668.00 ft (KB) (TVD)

2113.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6770 Inside

Press@RunDepth: 50.98 psig @ 3602.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2004.04.28

End Date:

2004.04.29

Last Calib.: 2004.04.29

Start Time: 22:55:15

End Time:

07:03:44

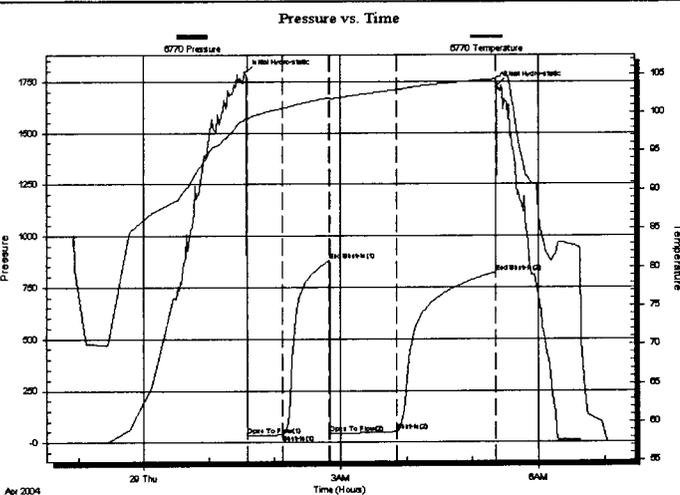
Time On Btm: 2004.04.29 @ 01:33:14

Time Off Btm: 2004.04.29 @ 05:23:14

TEST COMMENT: IF-Weak building to 1 1/2"

FF-Weak building to 1"

Times-30-45-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1791.96	99.12	Initial Hydro-static
2	34.93	99.06	Open To Flow (1)
34	36.94	100.53	Shut-In(1)
77	877.89	101.89	End Shut-In(1)
78	41.60	101.74	Open To Flow (2)
138	50.98	102.92	Shut-In(2)
228	822.06	104.31	End Shut-In(2)
230	1732.52	104.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCO 60%o 40%r	0.84
15.00	CO	0.21

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19897

DST#: 1

ATTN: David Hertel

Test Start: 2004.04.28 @ 22:55:14

Tool Information

Drill Pipe:	Length: 3600.00 ft	Diameter: 3.80 inches	Volume: 50.50 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 39000.00 lb
			<u>Total Volume: 50.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3595.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.00 ft			
Tool Length:	94.00 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			3575.00	
Shut In Tool	5.00			3580.00	
Hydraulic tool	5.00			3585.00	
Packer	5.00			3590.00	21.00 Bottom Of Top Packer
Packer	5.00			3595.00	
Stubb	1.00			3596.00	
Perforations	5.00			3601.00	
Change Over Sub	1.00			3602.00	
Recorder	0.00	6770	Inside	3602.00	
Drill Pipe	62.00			3664.00	
Change Over Sub	1.00			3665.00	
Recorder	0.00	13254	Outside	3665.00	
Bullnose	3.00			3668.00	73.00 Bottom Packers & Anchor
Total Tool Length:	94.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19897

DST#: 1

ATTN: David Hertel

Test Start: 2004.04.28 @ 22:55:14

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MCO 60%o 40%m	0.842
15.00	CO	0.210

Total Length: 75.00 ft

Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

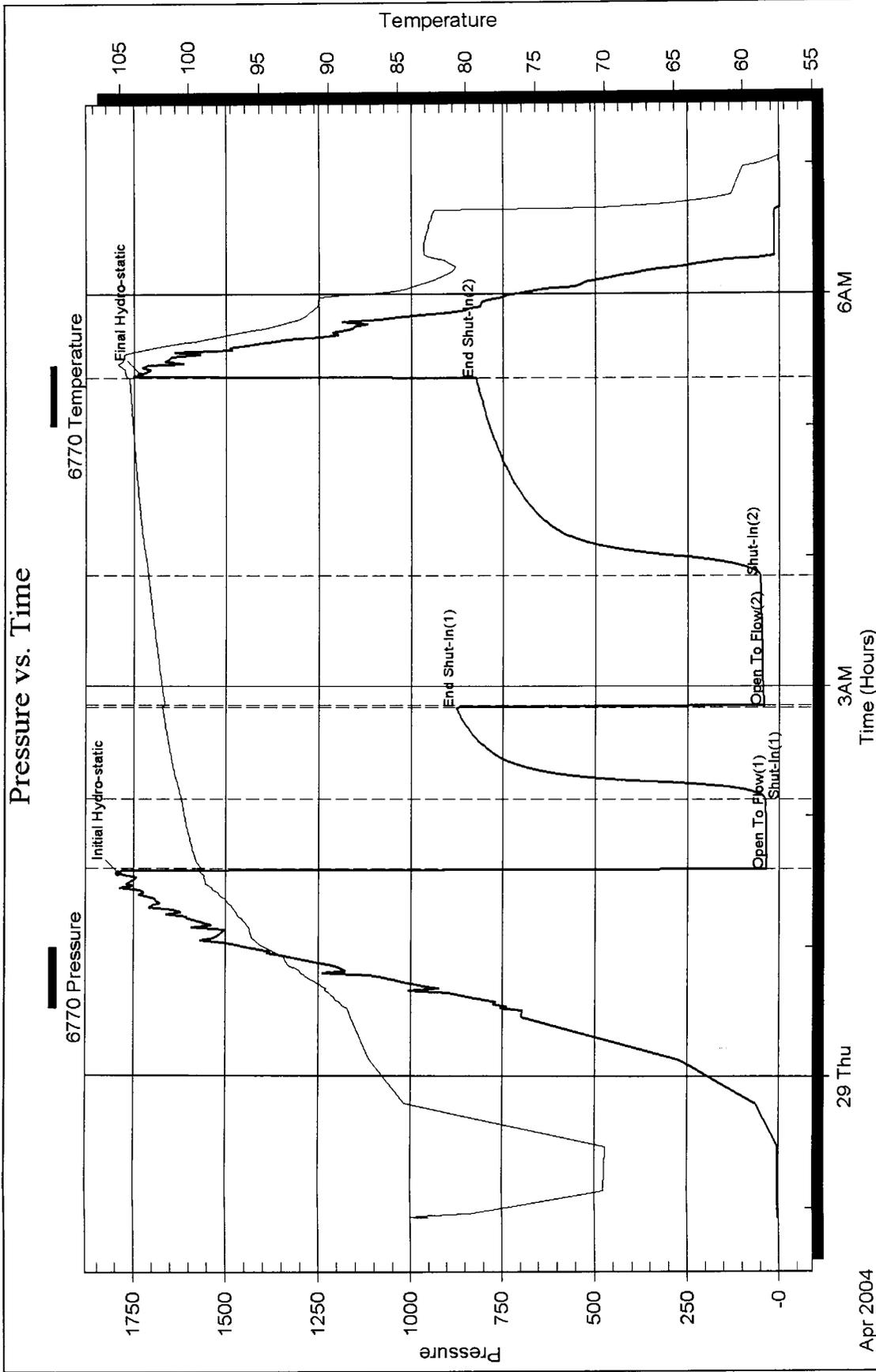
Serial #: 6770

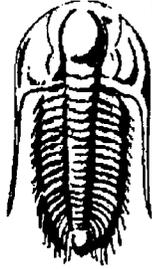
Inside

Hertel Oil Co LLC

19-12-17-Ellis-Ks

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

19-12-17-Ellis-Ks

Karlin #1

Start Date: 2004.04.29 @ 13:15:59

End Date: 2004.04.29 @ 19:20:59

Job Ticket #: 19898 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Hertel Oil Co LLC

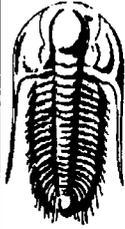
Karlin #1

19-12-17-Ellis-Ks

DST # 2

Arbuckle

2004.04.29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19898

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.29 @ 13:15:59

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:59:59

Time Test Ended: 19:20:59

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3666.00 ft (KB) To 3673.00 ft (KB) (TVD)**

Reference Elevations: 2118.00 ft (KB)

Total Depth: 3673.00 ft (KB) (TVD)

2113.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6770 Inside

Press@RunDepth: 26.95 psig @ 3667.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2004.04.29

End Date:

2004.04.29

Last Calib.: 2004.04.29

Start Time: 13:16:00

End Time:

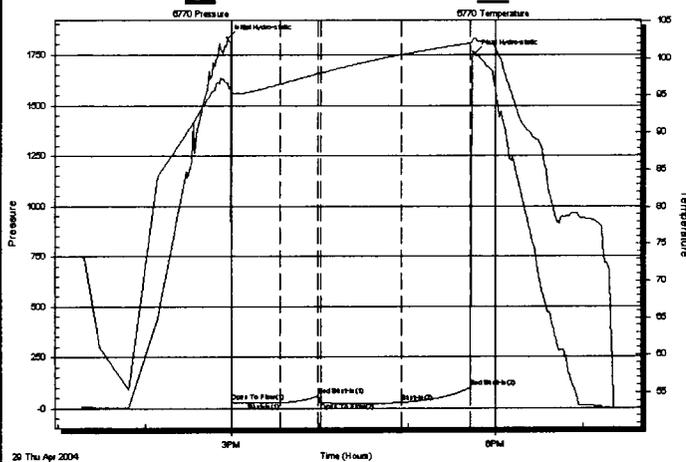
19:20:59

Time On Btrn: 2004.04.29 @ 14:56:59

Time Off Btrn: 2004.04.29 @ 17:45:59

TEST COMMENT: IF-Weak died in 10 min
FF-No blow
Times-30-30-45-60

Pressure vs. Time



PRESSURE SUMMARY

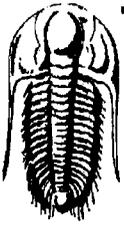
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1831.53	96.75	Initial Hydro-static
3	29.81	95.36	Open To Flow (1)
37	25.87	96.58	Shut-in(1)
62	58.66	97.98	End Shut-in(1)
64	26.90	98.07	Open To Flow (2)
119	26.95	100.49	Shut-in(2)
166	99.15	102.06	End Shut-in(2)
169	1756.56	102.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Silty OCM 2% @ 98% m	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19898

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.29 @ 13:15:59

Tool Information

Drill Pipe:	Length: 3661.00 ft	Diameter: 3.80 inches	Volume: 51.35 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 51.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3666.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	28.00 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			3646.00	
Shut In Tool	5.00			3651.00	
Hydraulic tool	5.00			3656.00	
Packer	5.00			3661.00	21.00 Bottom Of Top Packer
Packer	5.00			3666.00	
Stubb	1.00			3667.00	
Recorder	0.00	6770	Inside	3667.00	
Perforations	3.00			3670.00	
Recorder	0.00	13254	Outside	3670.00	
Bullnose	3.00			3673.00	7.00 Bottom Packers & Anchor
Total Tool Length:	28.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19898

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.29 @ 13:15:59

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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in³

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
2.00	Silty OCM 2%o 98%m	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 6770

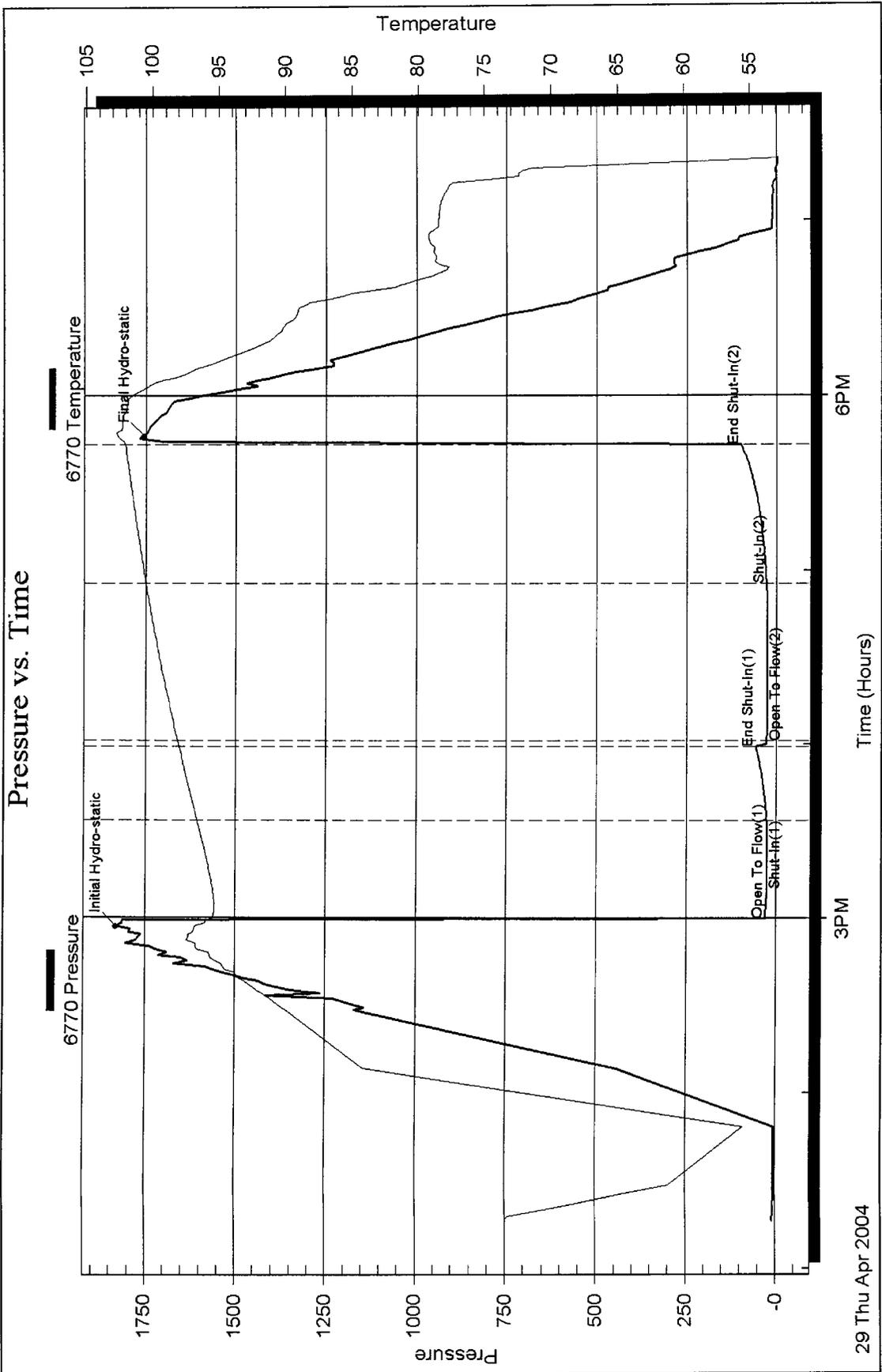
Inside

Hertel Oil Co LLC

19-12-17-Ellis-Ks

DST Test Number: 2

Pressure vs. Time

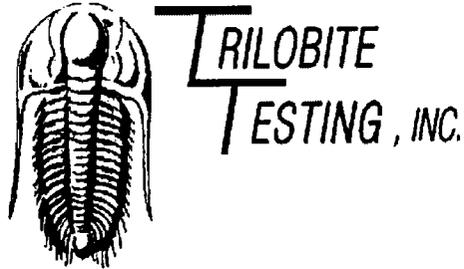


29 Thu Apr 2004

Trilobite Testing, Inc

Ref. No: 19898

Printed: 2004.05.04 @ 13:41:21 Page 5



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

19-12-17-Ellis-Ks

Karlin #1

Start Date: 2004.04.30 @ 02:20:21

End Date: 2004.04.30 @ 09:18:21

Job Ticket #: 19899 DST #: 3

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

ATTN: David Hertel

Job Ticket: 19899

DST#: 3

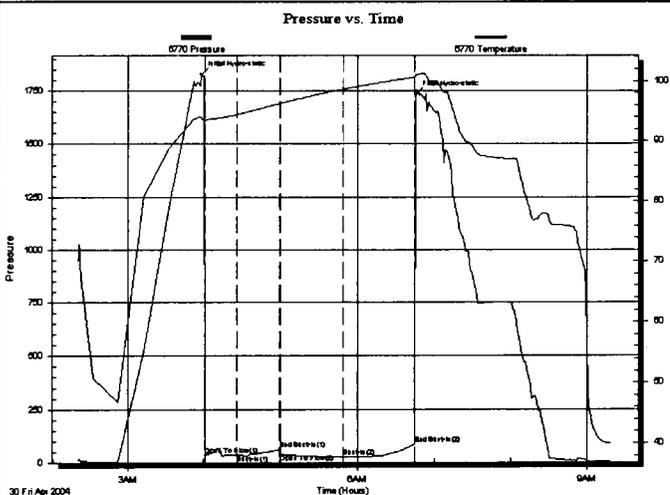
Test Start: 2004.04.30 @ 02:20:21

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:01:21
 Time Test Ended: 09:18:21
 Interval: **3673.00 ft (KB) To 3681.00 ft (KB) (TVD)**
 Total Depth: 3681.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Dan Bangle
 Unit No: 21
 Reference Elevations: 2118.00 ft (KB)
 2113.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6770 Inside
 Press@RunDepth: 27.00 psig @ 3674.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2004.04.30 End Date: 2004.04.30 Last Calib.: 2004.04.30
 Start Time: 02:20:22 End Time: 09:18:21 Time On Btm: 2004.04.30 @ 03:58:21
 Time Off Btm: 2004.04.30 @ 06:45:21

TEST COMMENT: IF-Weak died in 10 min
 FF-No blow
 Times-30-30-45-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1829.18	94.03	Initial Hydro-static
3	34.11	93.44	Open To Flow (1)
29	35.92	94.44	Shut-In(1)
62	62.59	96.26	End Shut-In(1)
62	38.53	96.27	Open To Flow (2)
111	27.00	98.62	Shut-In(2)
166	83.68	100.61	End Shut-In(2)
167	1731.33	101.01	Final Hydro-static

Recovery

Length (ft)	Description	Volums (bbl)
2.00	Sltly OCM 2%o 98% m	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19899

DST#: 3

ATTN: David Hertel

Test Start: 2004.04.30 @ 02:20:21

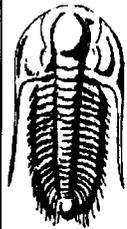
Tool Information

Drill Pipe:	Length: 3659.00 ft	Diameter: 3.80 inches	Volume: 51.33 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 51.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3673.00 ft			Final 34000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3653.00	
Shut In Tool	5.00			3658.00	
Hydraulic tool	5.00			3663.00	
Packer	5.00			3668.00	21.00 Bottom Of Top Packer
Packer	5.00			3673.00	
Stubb	1.00			3674.00	
Recorder	0.00	6770	Inside	3674.00	
Perforations	4.00			3678.00	
Recorder	0.00	13254	Outside	3678.00	
Bullnose	3.00			3681.00	8.00 Bottom Packers & Anchor
Total Tool Length:	29.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19899

DST#: 3

ATTN: David Hertel

Test Start: 2004.04.30 @ 02:20:21

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: 7.98 in³

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
2.00	Silty OCM 2%o 98%m	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

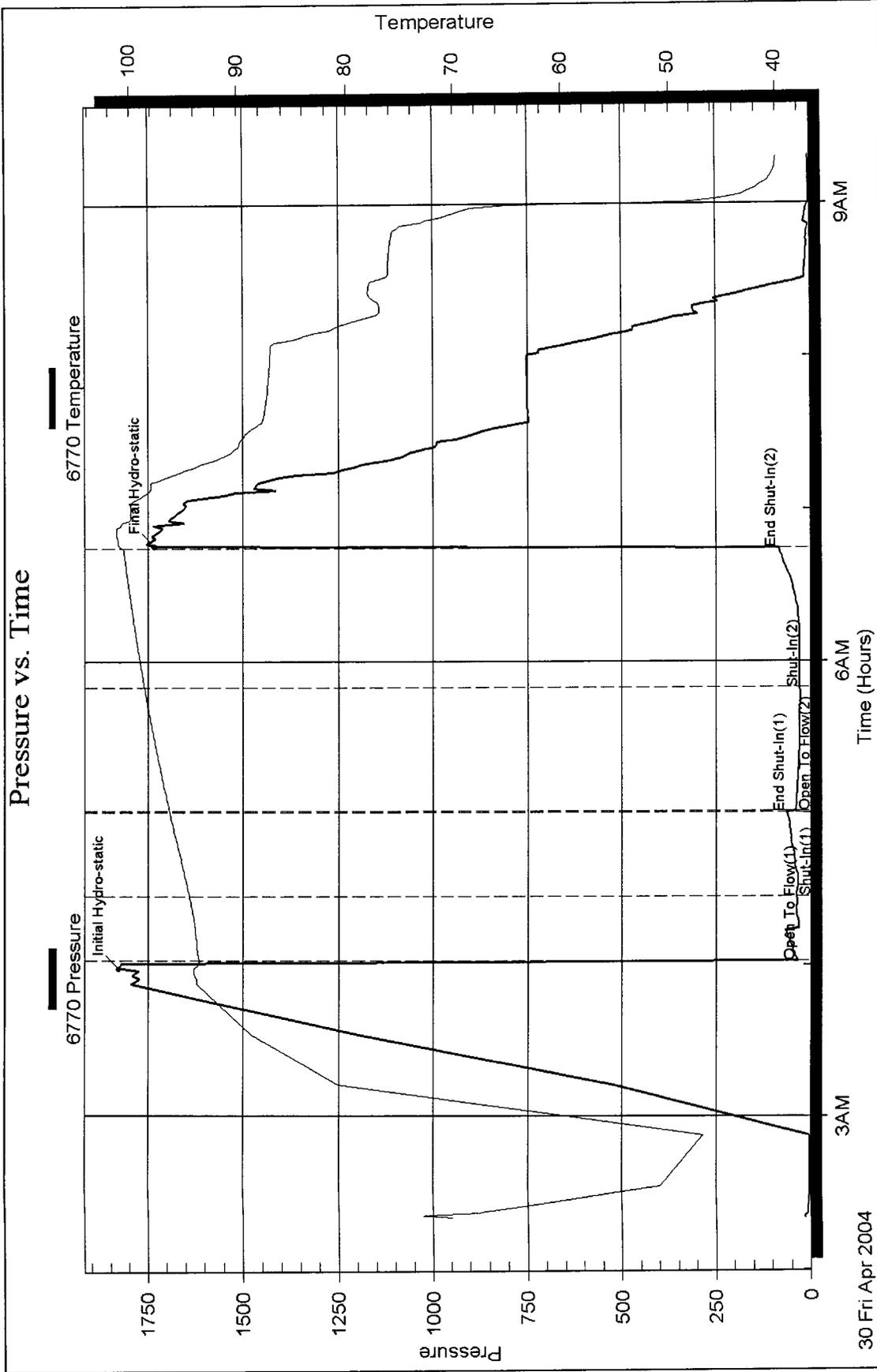
Inside

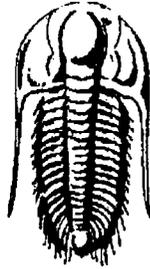
Hertel Oil Co LLC

19-12-17-Ellis-Ks

DST Test Number: 3

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

19-12-17-Ellis-Ks

Karlin #1

Start Date: 2004.04.30 @ 19:54:21

End Date: 2004.05.01 @ 00:42:51

Job Ticket #: 19990 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Hertel Oil Co LLC

Karlin #1

19-12-17-Ellis-Ks

DST # 4

Arbuckle

2004.04.30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19990

DST#: 4

ATTN: David Hertel

Test Start: 2004.04.30 @ 19:54:21

GENERAL INFORMATION:

Formation: **Arbukle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:56:21

Time Test Ended: 00:42:51

Test Type: Conventional Straddle

Tester: Paul Simpson

Unit No: 21

Interval: **3677.00 ft (KB) To 3708.00 ft (KB) (TVD)**

Reference Elevations: 2118.00 ft (KB)

Total Depth: 3725.00 ft (KB) (TVD)

2113.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6770

Inside

Press@RunDepth: 40.40 psig @ 3688.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2004.04.30

End Date:

2004.05.01

Last Calib.: 1899.12.30

Start Time: 19:54:22

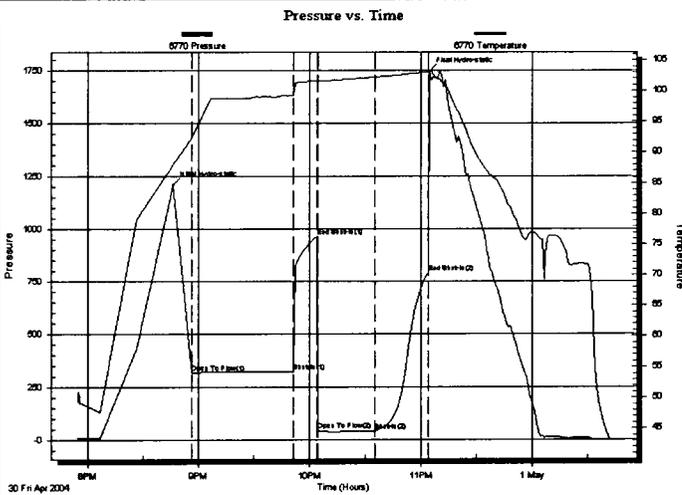
End Time:

00:42:51

Time On Btm: 2004.04.30 @ 20:46:21

Time Off Btm: 2004.04.30 @ 23:04:21

TEST COMMENT: F- weak 1/2" blow building to 3/4"
FF surface blow building to 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1208.89	88.08	Initial Hydro-static
10	319.62	92.33	Open To Flow (1)
65	321.01	99.29	Shut-In(1)
78	964.28	101.70	End Shut-In(1)
78	44.36	101.47	Open To Flow (2)
109	40.40	102.24	Shut-In(2)
138	788.51	103.07	End Shut-In(2)
138	1745.98	103.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	muddy oil	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19990

DST#: 4

ATTN: David Hertel

Test Start: 2004.04.30 @ 19:54:21

Tool Information

Drill Pipe:	Length: 3659.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
		<u>Total Volume:</u>	0.00 bbl	Tool Chased ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3677.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	3708.00 ft			
Interval between Packers:	31.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3657.00	
Shut In Tool	5.00			3662.00	
Hydraulic tool	5.00			3667.00	
Packer	5.00			3672.00	21.00 Bottom Of Top Packer
Packer	5.00			3677.00	
Stubb	1.00			3678.00	
Perforations	10.00			3688.00	
Recorder	0.00	6770	Inside	3688.00	
Perforations	15.00			3703.00	
Recorder	0.00	13254	Outside	3703.00	
Blank Off Sub	5.00			3708.00	31.00 Tool Interval
Packer	5.00			3713.00	
Anchor	13.00			3726.00	
Recorder	0.00	13248	Below	3726.00	
Bullnose	3.00			3729.00	21.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Karlin #1

704 E 12th St
Hays Ks 67601

19-12-17-Ellis-Ks

Job Ticket: 19990

DST#: 4

ATTN: David Hertel

Test Start: 2004.04.30 @ 19:54:21

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	muddy oil	0.000

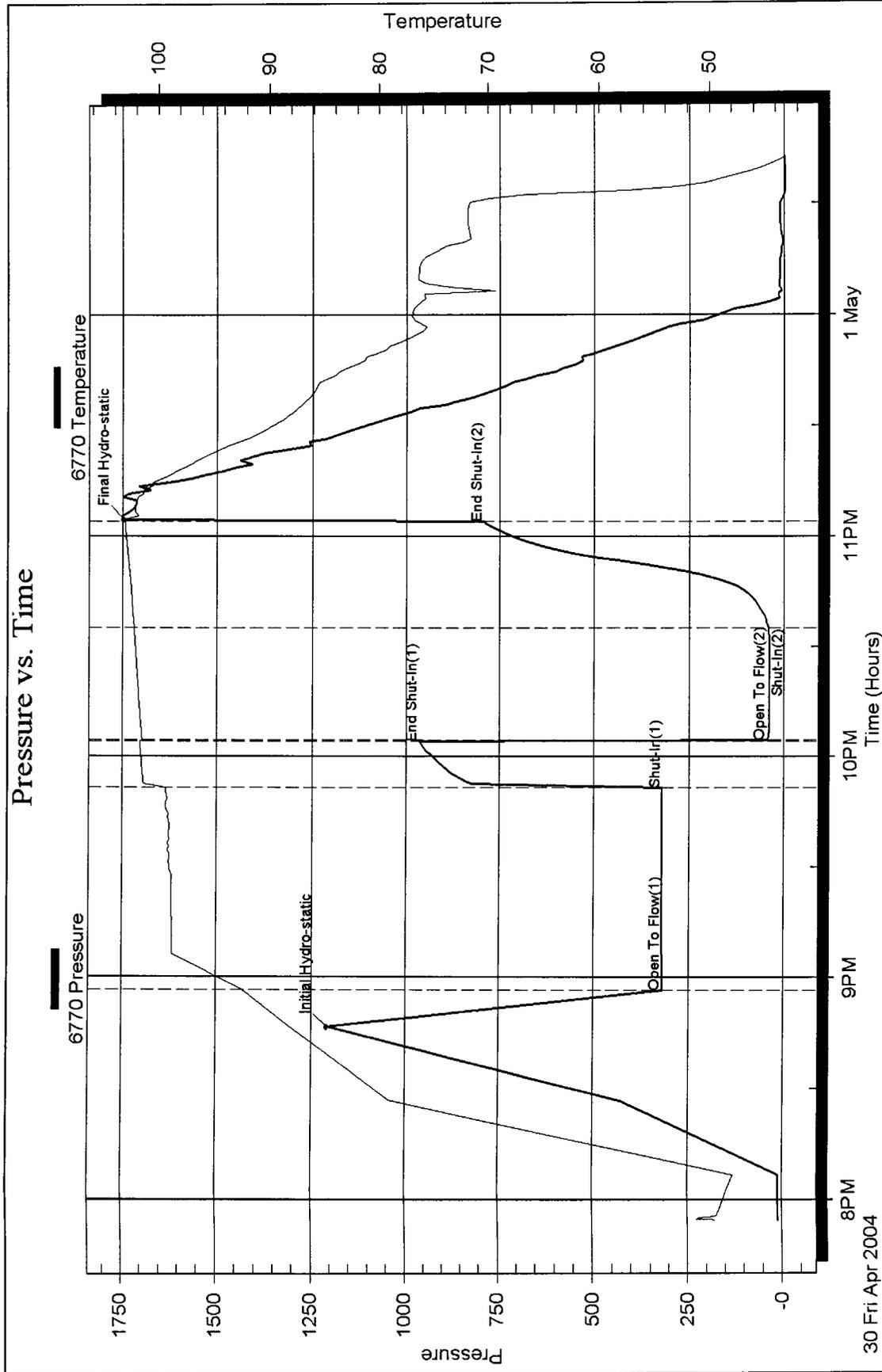
Total Length: 30.00 ft Total Volume: bbl

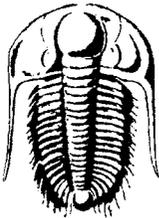
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 6379

No 19897

05/03

Test Ticket

Well Name & No. Karlin #1 Test No. 1 Date 4-28-04
 Company Hertel Oil Co. LLC Zone Tested Arbuckle
 Address 704 E. 12th St. Hays KS 67601 Elevation 2118 KB 2113 GL
 Co. Rep / Geo. Randy Kilian Cont. Vanfaldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 19 Twp. 12 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3595 — 3668 Initial Str Wt./Lbs. 34,000 Unseated Str Wt./Lbs. 34,000
 Anchor Length 73 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 39,200
 Top Packer Depth _____ Tool Weight 1100
 Bottom Packer Depth 3595 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3668 Wt. Pipe Run _____ Drill Collar Run _____
 Mud Wt. 9.2 LCM _____ Vis. 45 WL 8 Drill Pipe Size 4.5 x 1 1/2 Ft. Run 3600
 Blow Description I.F. Weak-building to 1 1/2"

F.F. Weak-building to 1"

Recovery - Total Feet 75 GIP _____ Ft. in DC _____ Ft. in DP 75
 Rec. 15 Feet of CO %gas _____ %oil _____ %water _____ %mud _____
 Rec. 60 Feet of MCO %gas 60 %oil _____ %water _____ %mud 40
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT 104 °F Gravity _____ °API D @ _____ °F Corrected Gravity 32 °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 4500 ppm System

	AK-1	Alpine	PSI	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>1791</u>		<u>6770</u>	
(B) First Initial Flow Pressure		<u>34</u>		(depth) <u>3602</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure		<u>36</u>		Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>877</u>		(depth) <u>3665</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>41</u>		Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>50</u>		(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>822</u>		Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1732</u>		Initial Shut-In <u>45</u>	Ext. Packer _____
				Final Flow <u>60</u>	Shale Packer _____
				Final Shut-In <u>90</u>	Mileage <u>16</u>

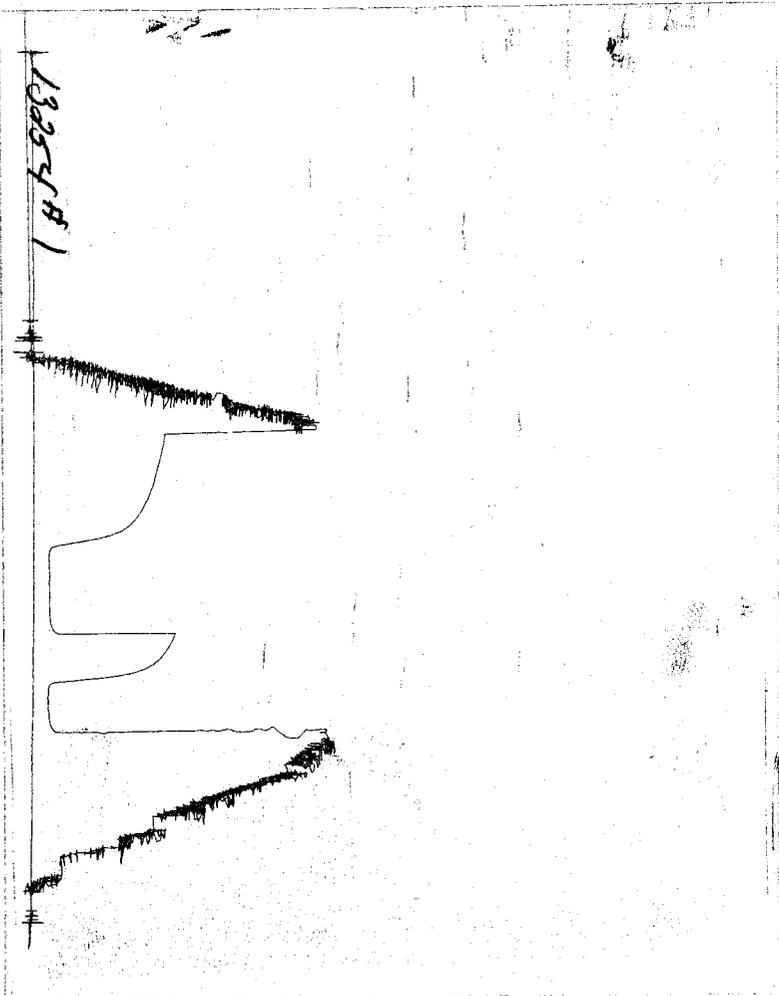
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

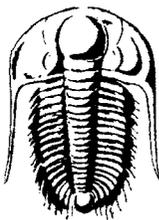
T-On Location 22:30 Sub Total: 877.20
 T-Started 22:55 Std. By 1/2 hr 15
 T-Open 01:35 Other _____
 T-Pulled 05:20 Total: _____
 T-Out 07:03

Approved By _____
 Our Representative Dan Bunchle

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19898

05/03

Test Ticket

Well Name & No. Korlin #1 Test No. 2 Date 4-29-04
 Company Hertel Oil Co. LLC Zone Tested Arbockle
 Address _____ Elevation 2118 KB 2113 GL _____
 Co. Rep / Geo. Randy Kilian Cont. Vonfeldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 19 Twp. 12 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3666 — 3673 Initial Str Wt./Lbs. 34,000 Unseated Str Wt./Lbs. 34,000
 Anchor Length 7 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 40,000
 Top Packer Depth 3661 Tool Weight 1000
 Bottom Packer Depth 3666 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3673 Wt. Pipe Run _____ Drill Collar Run _____
 Mud Wt. 9.3 LCM _____ Vis. 50 WL 8 Drill Pipe Size 4.5 XH Ft. Run 3661
 Blow Description E.F. Weak - Dried in 10 min.

E.F. No blow

Recovery - Total Feet 2 GIP _____ Ft. in DC _____ Ft. in DP 2
 Rec. 2 Feet of 5174 OCM %gas 2 %oil _____ %water 98 %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 102 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 5,000 ppm System

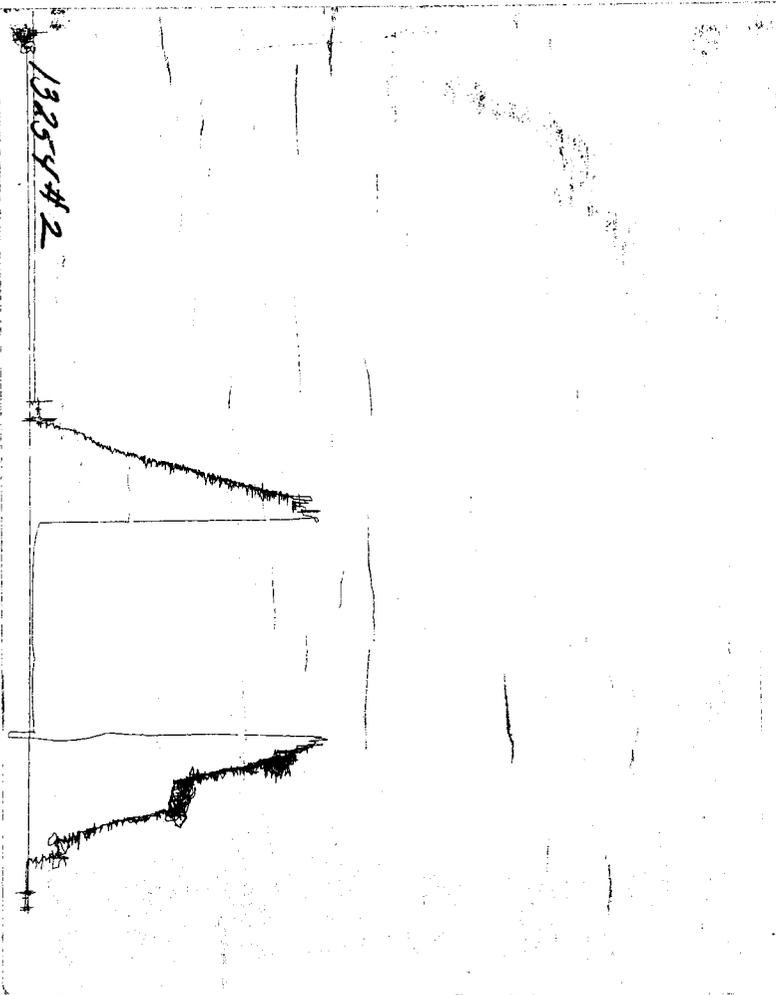
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>1831</u> PSI	<u>6770</u>	
(B) First Initial Flow Pressure		<u>29</u> PSI	(depth) <u>3667</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure		<u>25</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>58</u> PSI	(depth) <u>3670</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>26</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>26</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>99</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1756</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
			Final Flow <u>45</u>	Shale Packer _____
			Final Shut-In <u>60</u>	Mileage <u>16</u>
			T-On Location <u>12:45</u>	Sub Total: <u>877.20</u>
			T-Started <u>13:15</u>	Std. By _____
			T-Open <u>15:00</u>	Other _____
			T-Pulled <u>17:45</u>	Total: _____
			T-Out <u>19:20</u>	

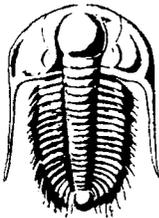
Approved By _____

Our Representative Dan Rangle

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 19899

05/03

Test Ticket

Well Name & No. Karlin #1 Test No. 3 Date 4-30-04
 Company Hertel Oil Co. LLC Zone Tested Arbuckle
 Address _____ Elevation 2118 KB 2113 GL _____
 Co. Rep / Geo. Randy Kilian Cont. Vonfeld J Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 19 Twp. 12 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3673 — 3681 Initial Str Wt./Lbs. 34,000 Unseated Str Wt/Lbs. 34,000
 Anchor Length 8 Wt. Set Lbs. 25,200 Wt. Pulled Loose/Lbs. 40,000
 Top Packer Depth _____ Tool Weight 1000
 Bottom Packer Depth 3673 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3681 Wt. Pipe Run _____ Drill Collar Run _____
 Mud Wt. 9.3 LCM _____ Vis. 50 WL 8 Drill Pipe Size 4.5 X 14 Ft. Run 3659
 Blow Description F.F. Weak - Died in 10 min.

F.F. No blow

Recovery - Total Feet 2 GIP _____ Ft. in DC _____ Ft. in DP 2
 Rec. 2 Feet of Silly Oil %gas 2 %oil _____ %water 98 %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 100 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 5000 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1829</u>	PSI	<u>6770</u>	
(B) First Initial Flow Pressure	<u>34</u>	PSI	(depth) <u>3674</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>35</u>	PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>62</u>	PSI	(depth) <u>3678</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>38</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>27</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>83</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1731</u>	PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
			Final Flow <u>45</u>	Shale Packer _____
			Final Shut-In <u>60</u>	Mileage <u>16</u>
			T-On Location <u>02:00</u>	Sub Total: <u>277.20</u>
			T-Started <u>02:20</u>	Std. By _____
			T-Open <u>04:00</u>	Other _____
			T-Pulled <u>06:45</u>	Total: _____
			T-Out <u>09:18</u>	

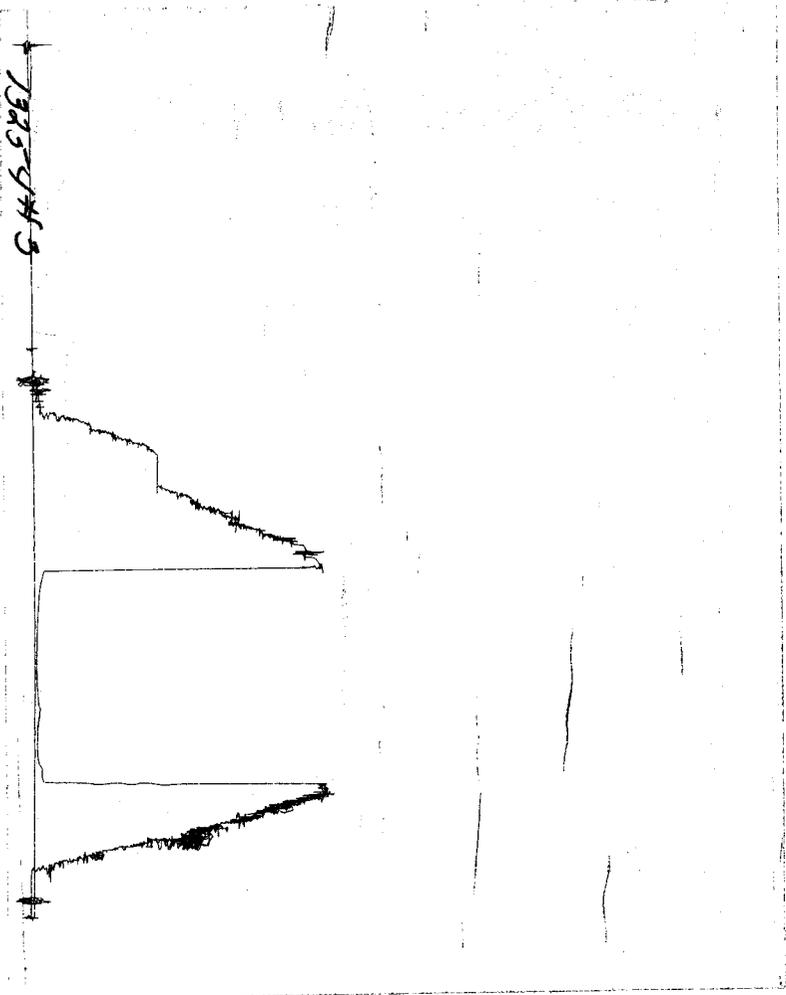
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

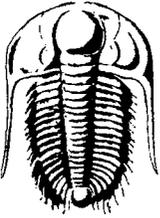
Approved By _____

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

No. 19900

05/03

Test Ticket

Well Name & No. <u>Karlin A1</u>	Test No. <u>4</u>	Date <u>4/30/04</u>
Company <u>Hertel Oil Co</u>	Zone Tested <u>Arbuckle</u>	
Address _____	Elevation <u>2118</u>	KB <u>2113</u> GL _____
Co. Rep / Geo. <u>Randy Kilian</u>	Cont. <u>Vanfeldt</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>19</u> Twp. <u>12s</u> Rge. <u>12w</u> Co. <u>Ellis</u> State <u>Ky</u>		
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3677-3708</u>	Initial Str Wt./Lbs. <u>35,000</u>	Unseated Str Wt./Lbs. <u>35,000</u>
Anchor Length <u>31</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. <u>45,000</u>
Top Packer Depth <u>3672-3677</u>	Tool Weight <u>3000</u>	
Bottom Packer Depth <u>3708</u>	Hole Size <u>7 7/8"</u>	Rubber Size <u>6 3/4"</u>
Total Depth <u>3725</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9.5</u> LCM _____ Vis. <u>52</u> WL <u>12</u>	Drill Pipe Size <u>4 1/2 HT</u>	Ft. Run <u>3659</u>
Blow Description <u>weak blow building to 3/4"</u>		

RF - surface blow building to 1/4"

Recovery - Total Feet <u>30</u>	GIP _____	Ft. in DC _____	Ft. in DP _____
Rec. <u>30</u> Feet of <u>MO</u>	%gas <u>60</u>	%oil _____	%water <u>40</u>
Rec. _____ Feet of _____	%gas _____	%oil _____	%water _____
Rec. _____ Feet of _____	%gas _____	%oil _____	%water _____
Rec. _____ Feet of _____	%gas _____	%oil _____	%water _____
Rec. _____ Feet of _____	%gas _____	%oil _____	%water _____
BHT _____ °F Gravity _____	*API D @ _____	*F Corrected Gravity _____	*API _____
RW _____ @ _____ °F	Chlorides _____ ppm	Recovery _____	Chlorides _____ ppm System _____

(A) Initial Hydrostatic Mud _____	PSI _____	Recorder No. <u>6770</u>	Test <u>y</u>
(B) First Initial Flow Pressure _____	PSI _____	(depth) <u>3688</u>	Elec. Rec. <u>y</u>
(C) First Final Flow Pressure _____	PSI _____	Recorder No. <u>13248</u>	Jars _____
(D) Initial Shut-In Pressure _____	PSI _____	(depth) <u>3672</u>	Safety Jt. _____
(E) Second Initial Flow Pressure _____	PSI _____	Recorder No. <u>13754</u>	Circ Sub _____
(F) Second Final Flow Pressure _____	PSI _____	(depth) <u>3722</u>	Sampler _____
(G) Final Shut-In Pressure _____	PSI _____	Initial Opening <u>30</u>	Straddle <u>y</u>
(Q) Final Hydrostatic Mud _____	PSI _____	Initial Shut-In <u>30</u>	Ext. Packer <u>y</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 _____	T-Started <u>1754</u>	Mileage _____
Our Representative <u>Paul Simpson</u>	T-Open <u>1905</u>	Sub Total: <u>1277.20</u>
	T-Pulled <u>2105</u>	Std. By _____
	T-Out _____	Other _____
		Total: _____

CHART PAGE

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

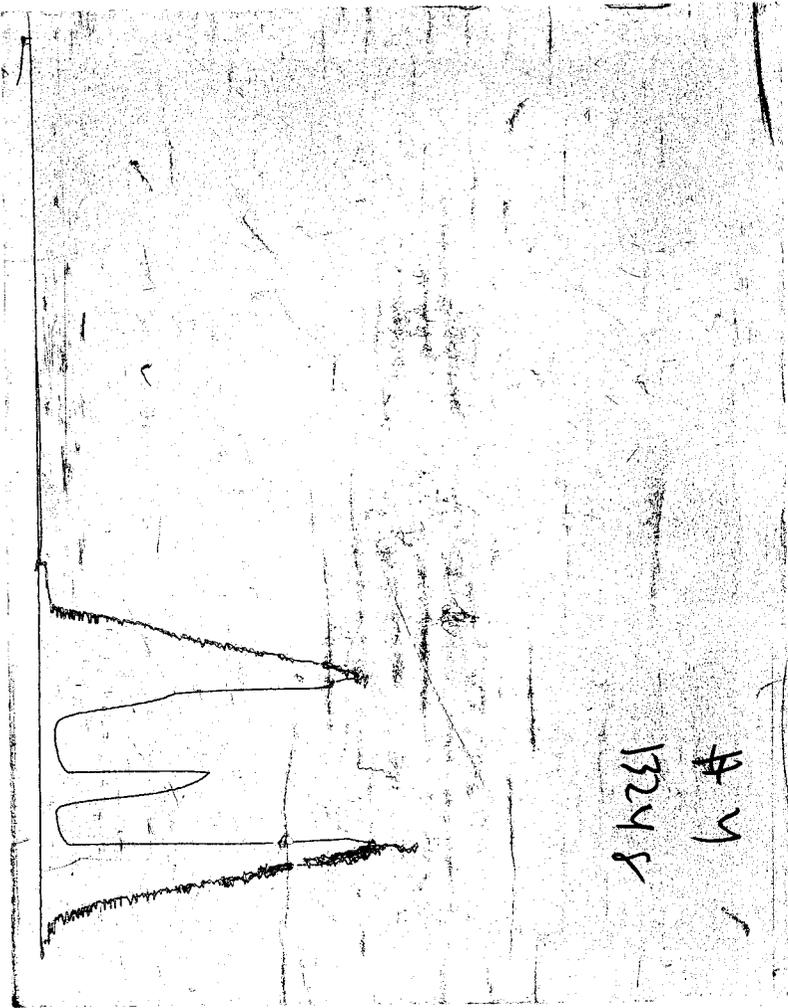


CHART PAGE

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

