

DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

8-14-17-Ellis-Ks

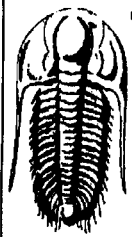
Hoffman # 2-8

Start Date: 2004.04.23 @ 19:40:15

End Date: 2004.04.24 @ 02:00:45

Job Ticket #: 19892 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

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19892

DST#: 1

ATTN: David Hertel

Test Start: 2004.04.23 @ 19:40:15

GENERAL INFORMATION:

Formation: **B-C-D L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:20:45

Time Test Ended: 02:00:45

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3331.00 ft (KB) To 3390.00 ft (KB) (TVD)**

Total Depth: 3390.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2017.00 ft (KB)

2009.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6770

Inside

Press@RunDepth: 103.19 psig @ 3338.00 ft (KB)

Start Date: 2004.04.23

End Date:

2004.04.24

Start Time: 19:40:16

End Time:

01:58:45

Capacity: 7000.00 psig

Last Calib.: 2004.04.24

Time On Btm: 2004.04.23 @ 21:21:15

Time Off Btm: 2004.04.24 @ 00:25:15

TEST COMMENT:

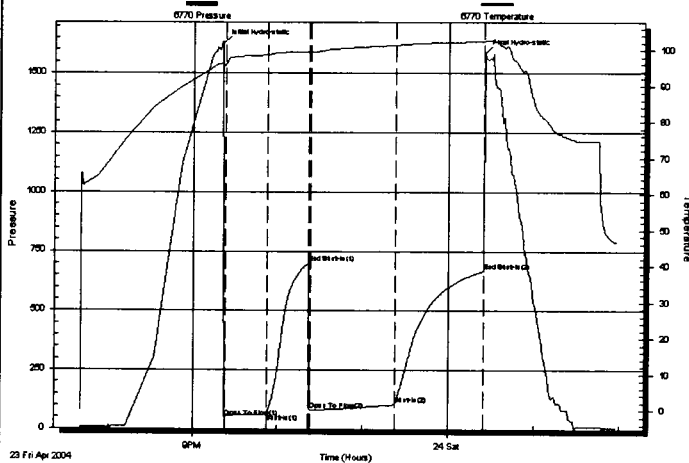
IF-Strong B-B in 15 min

IS-Weak steady surface blow

FF-Strong B-B in 15 min

FS-Weak steady surface blow

Pressure vs. Time



PRESSURE SUMMARY

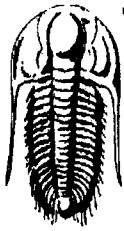
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1626.60	96.34	Initial Hydro-static
2	48.76	96.03	Open To Flow (1)
31	63.48	98.66	Shut-In(1)
61	698.51	99.65	End Shut-In(1)
62	78.80	99.48	Open To Flow (2)
121	103.19	101.39	Shut-In(2)
183	666.17	102.40	End Shut-In(2)
184	1584.32	102.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	HOCgsym 10%g 30%o 60%m	2.25
90.00	HMCgsyO 10%g 60%o 30%m	1.26
0.00	710 GIP	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

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19892

DST#: 1

ATTN: David Hertel

Test Start: 2004.04.23 @ 19:40:15

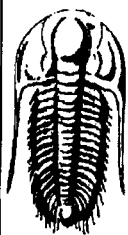
Tool Information

Drill Pipe:	Length: 3293.00 ft	Diameter: 3.80 inches	Volume: 46.19 bbl	Tool Weight: 2300.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 46.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3331.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	80.00 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			3311.00	
Shut In Tool	5.00			3316.00	
Hydraulic tool	5.00			3321.00	
Packer	5.00			3326.00	21.00 Bottom Of Top Packer
Packer	5.00			3331.00	
Stubb	1.00			3332.00	
Perforations	5.00			3337.00	
Change Over Sub	1.00			3338.00	
Recorder	0.00	6770	Inside	3338.00	
Drill Pipe	31.00			3369.00	
Change Over Sub	1.00			3370.00	
Recorder	0.00	13254	Outside	3370.00	
Perforations	17.00			3387.00	
Bullnose	3.00			3390.00	59.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19892

DST#: 1

ATTN: David Hertel

Test Start: 2004.04.23 @ 19:40:15

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: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	HOCGsyM 10%g 30%o 60%m	2.252
90.00	HMCgsyO 10%g 60%o 30%m	1.262
0.00	710 GIP	0.000

Total Length: 270.00 ft Total Volume: 3.514 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

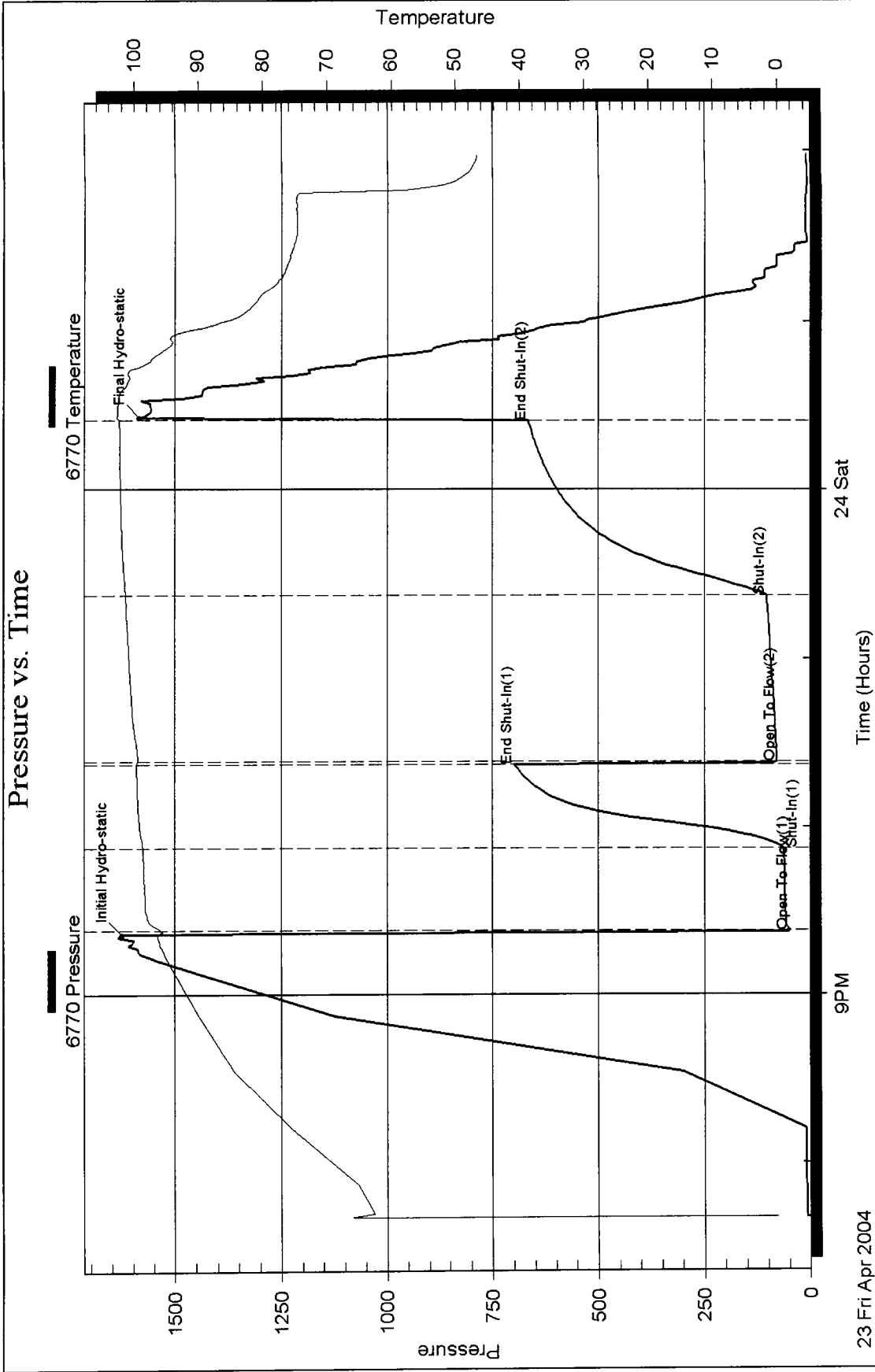
Inside

Hertel Oil Co LLC

8-14-17-Ellis-Ks

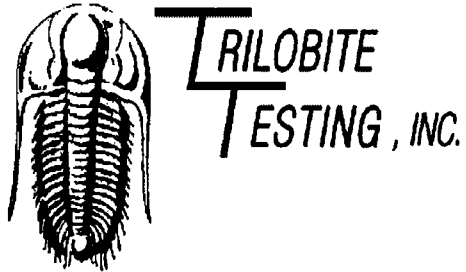
DST Test Number: 1

Pressure vs. Time



23 Fri Apr 2004 9PM

24 Sat



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

8-14-17-Ellis-Ks

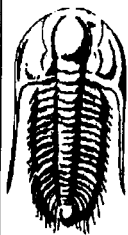
Hoffman # 2-8

Start Date: 2004.04.24 @ 09:30:35

End Date: 2004.04.24 @ 15:23:05

Job Ticket #: 19893 DST #: 2

Trilobite Testing, Inc
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19893

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.24 @ 09:30:35

GENERAL INFORMATION:

Formation: **E-F-G LKC**

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

Time Tool Opened: 11:15:05

Time Test Ended: 15:23:05

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: 3390.00 ft (KB) To 3427.00 ft (KB) (TVD)

Reference Elevations: **2017.00 ft (KB)**

Total Depth: **3427.00 ft (KB) (TVD)**

2009.00 ft (CF)

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

KB to GR/CF: **8.00 ft**

Serial #: 6770

Inside

Press@RunDepth: **46.37 psig @ 3396.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2004.04.24**

End Date:

2004.04.24

Last Calib.:

2004.04.24

Start Time: **09:30:36**

End Time:

15:23:05

Time On Btm:

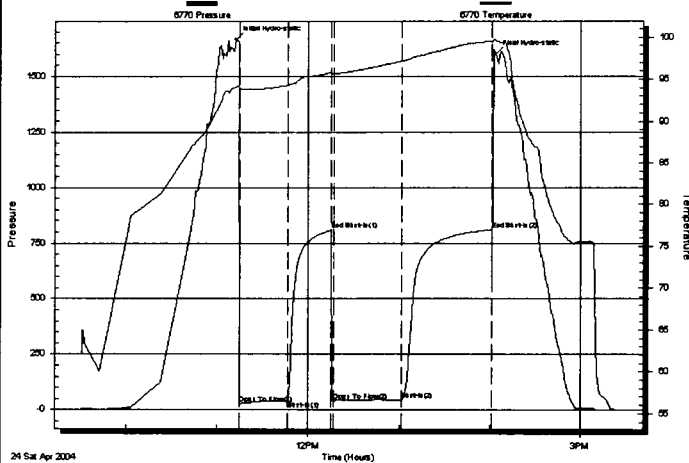
2004.04.24 @ 11:12:35

Time Off Btm:

2004.04.24 @ 14:03:35

TEST COMMENT: IF-Weak building to 1/2"
FF-Weak building to 1/2"
Times-30-30-45-60

Pressure vs. Time



PRESSURE SUMMARY

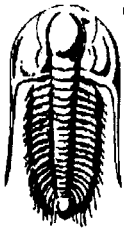
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1664.20	94.05	Initial Hydro-static
3	28.44	93.85	Open To Flow (1)
34	39.84	94.29	Shut-In(1)
63	807.75	95.85	End Shut-In(1)
64	41.85	95.66	Open To Flow (2)
109	46.37	97.18	Shut-In(2)
169	809.87	99.52	End Shut-In(2)
171	1600.51	99.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud w/ few oil spots	0.43

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19893

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.24 @ 09:30:35

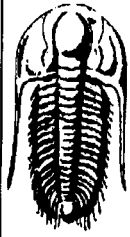
Tool Information

Drill Pipe:	Length: 3356.00 ft	Diameter: 3.80 inches	Volume: 47.08 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: 40000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3390.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	58.00 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			3370.00	
Shut In Tool	5.00			3375.00	
Hydraulic tool	5.00			3380.00	
Packer	5.00			3385.00	21.00 Bottom Of Top Packer
Packer	5.00			3390.00	
Stubb	1.00			3391.00	
Perforations	5.00			3396.00	
Recorder	0.00	6770	Inside	3396.00	
Perforations	28.00			3424.00	
Recorder	0.00	13254	Outside	3424.00	
Bullnose	3.00			3427.00	37.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19893

DST#: 2

ATTN: David Hertel

Test Start: 2004.04.24 @ 09:30:35

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: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	Mud w / few oil spots	0.428

Total Length: 50.00 ft Total Volume: 0.428 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 6770

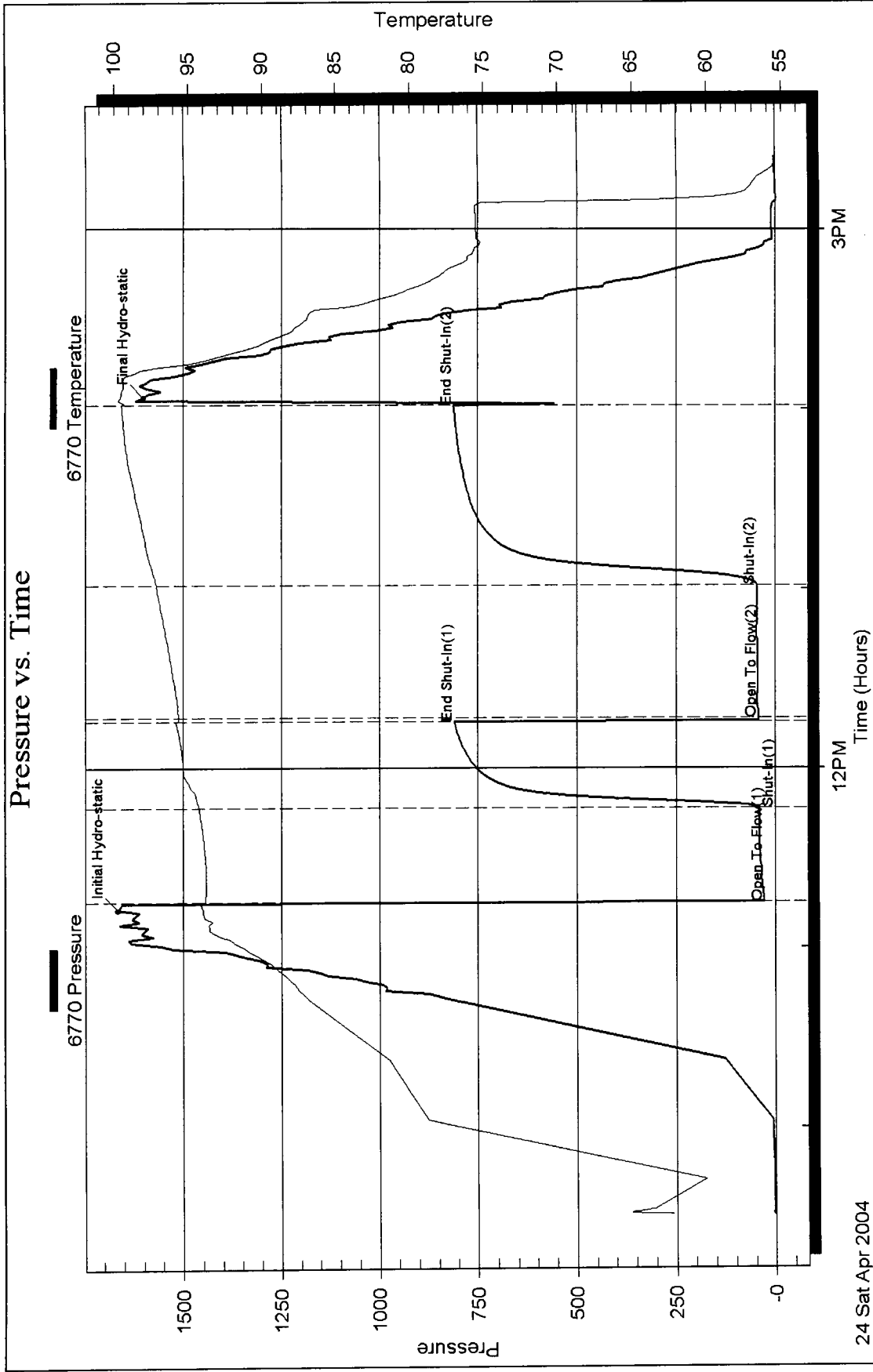
Inside

Hertel Oil Co LLC

8-14-17-Ellis-Ks

DST Test Number: 2

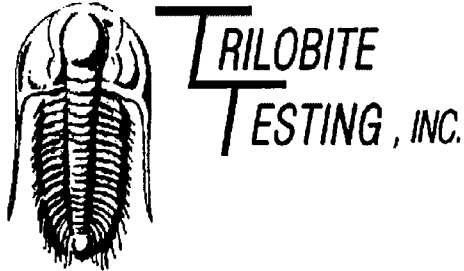
Pressure vs. Time



24 Sat Apr 2004

12PM

3PM



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

8-14-17-Ellis-Ks

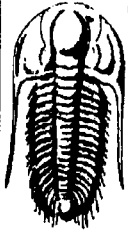
Hoffman # 2-8

Start Date: 2004.04.25 @ 06:20:30

End Date: 2004.04.25 @ 12:19:30

Job Ticket #: 19894 DST #: 3

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



**TRIOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19894

DST#: 3

ATTN: David Hertel

Test Start: 2004.04.25 @ 06:20:30

GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 07:57:30

Time Test Ended: 12:19:30

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **3551.00 ft (KB) To 3577.00 ft (KB) (TVD)**

Total Depth: **3577.00 ft (KB) (TVD)**

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

Reference Elevations: **2017.00 ft (KB)**

2009.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 6770

Inside

Press@RunDepth: **48.93 psig @ 3552.00 ft (KB)**

Start Date: **2004.04.25**

End Date:

2004.04.25

Start Time: **06:20:31**

End Time:

12:19:30

Capacity: **7000.00 psig**

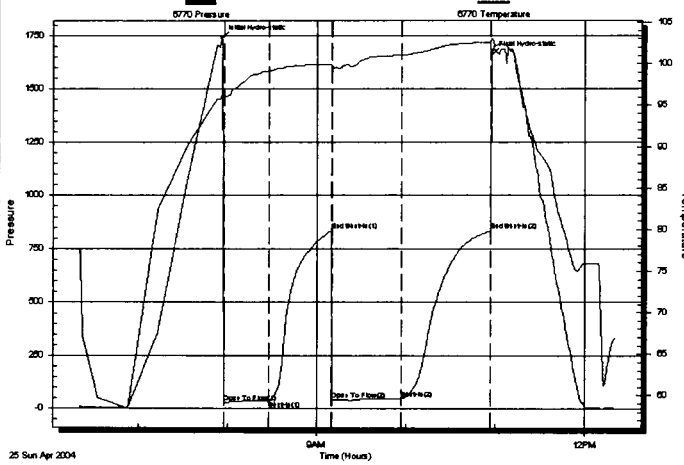
Last Calib.: **2004.04.25**

Time On Btm: **2004.04.25 @ 07:55:30**

Time Off Btm: **2004.04.25 @ 10:57:30**

TEST COMMENT: **IF-Weak building to 1 1/2"**
FF-Weak building to 1/2"
Times-30-45-45-90

Pressure vs. Time



PRESSURE SUMMARY

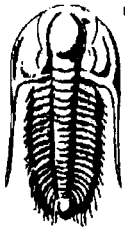
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.28	96.14	Initial Hydro-static
2	27.98	96.01	Open To Flow (1)
33	37.65	99.17	Shut-In (1)
75	834.72	99.95	End Shut-In (1)
75	42.54	99.86	Open To Flow (2)
121	48.93	101.06	Shut-In (2)
182	833.69	102.63	End Shut-In (2)
182	1656.96	103.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCO 80% 20% m	0.57

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19894

DST#: 3

ATTN: David Hertel

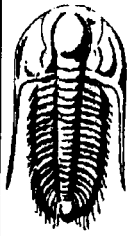
Test Start: 2004.04.25 @ 06:20:30

Tool Information

Drill Pipe:	Length: 3511.00 ft	Diameter: 3.80 inches	Volume: 49.25 bbl	Tool Weight: 1800.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3551.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	47.00 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			3531.00	
Shut In Tool	5.00			3536.00	
Hydraulic tool	5.00			3541.00	
Packer	5.00			3546.00	21.00 Bottom Of Top Packer
Packer	5.00			3551.00	
Stubb	1.00			3552.00	
Recorder	0.00	6770	Inside	3552.00	
Perforations	22.00			3574.00	
Recorder	0.00	13254	Outside	3574.00	
Bullnose	3.00			3577.00	26.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19894

DST#: 3

ATTN: David Hertel

Test Start: 2004.04.25 @ 06:20:30

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MCO 80%o 20%m	0.568

Total Length: 60.00 ft Total Volume: 0.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

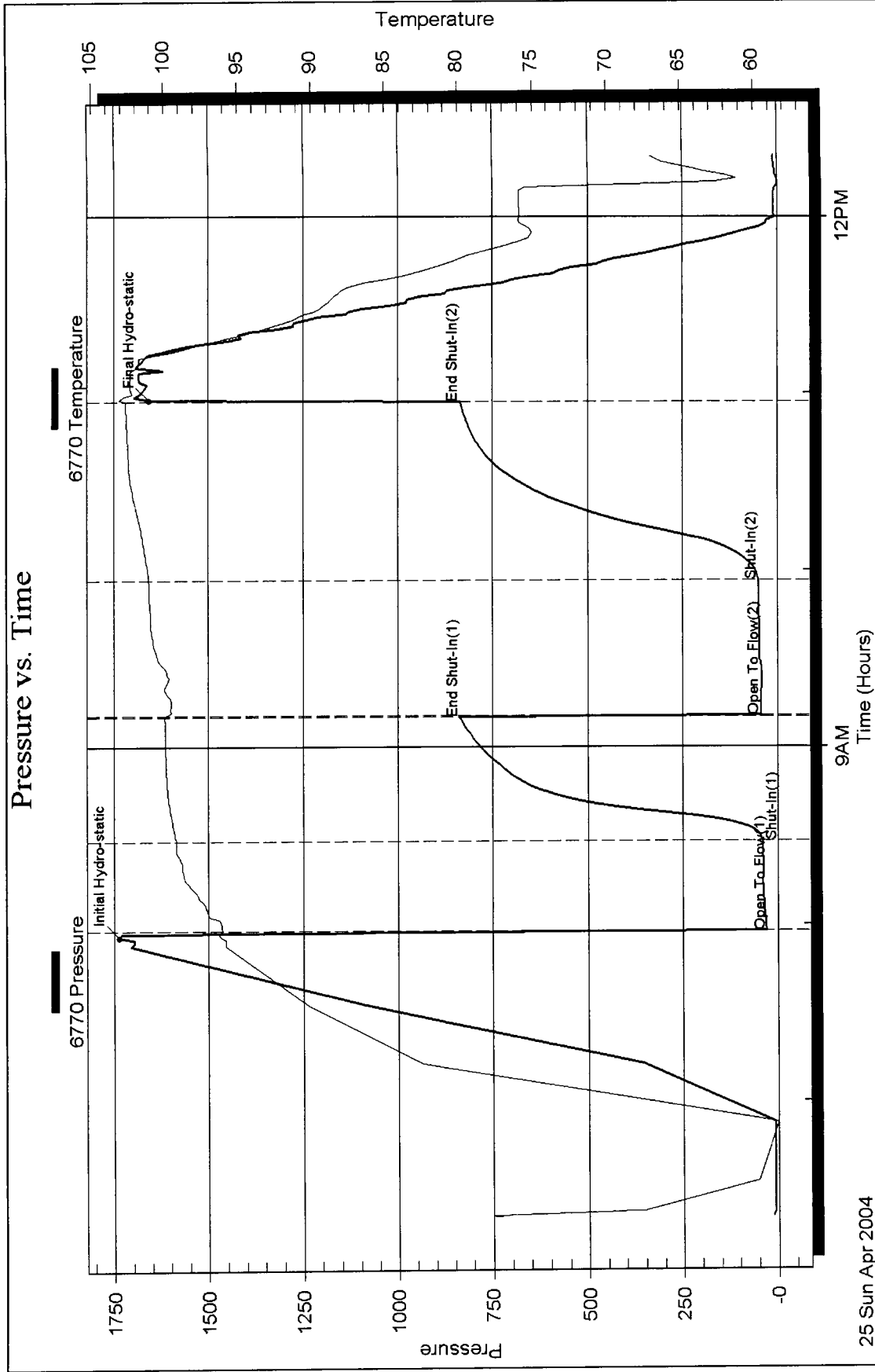
Inside

Hertel Oil Co LLC

8-14-17-Ellis-Ks

DST Test Number: 3

Pressure vs. Time

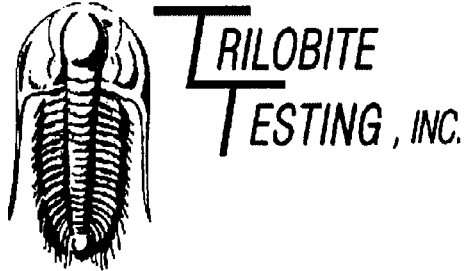


25 Sun Apr 2004

12PM

9AM

Time (Hours)



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

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ATTN: David Hertel

8-14-17-Ellis-Ks

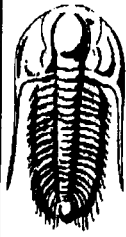
Hoffman # 2-8

Start Date: 2004.04.25 @ 17:15:32

End Date: 2004.04.25 @ 22:59:32

Job Ticket #: 19895 DST #: 4

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



**TRILOBITE
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DRILL STEM TEST REPORT

Hertel Oil Co LLC

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

Hoffman # 2-8

8-14-17-Ellis-Ks

Job Ticket: 19895

DST#: 4

Test Start: 2004.04.25 @ 17:15:32

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:49:02

Time Test Ended: 22:59:32

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3577.00 ft (KB) To 3587.00 ft (KB) (TVD)**

Total Depth: 3587.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2017.00 ft (KB)

2009.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6770

Inside

Press@RunDepth: 52.04 psig @ 3578.00 ft (KB)

Start Date: 2004.04.25

End Date:

2004.04.25

Capacity: 7000.00 psig

Last Calib.: 2004.04.25

Start Time: 17:15:33

End Time:

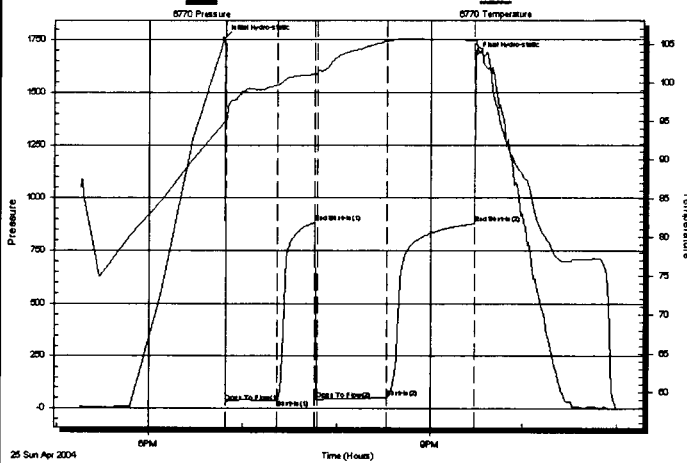
22:59:32

Time On Btm: 2004.04.25 @ 18:47:32

Time Off Btm: 2004.04.25 @ 21:29:32

TEST COMMENT: IF-Weak building to 2 1/2"
FF-Weak building to 1 1/2"
Times-30-30-45-60

Pressure vs. Time



PRESSURE SUMMARY

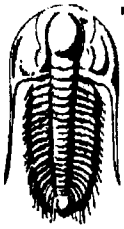
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1756.27	94.96	Initial Hydro-static
2	31.53	94.79	Open To Flow (1)
34	40.58	99.71	Shut-In(1)
58	881.15	101.10	End Shut-In(1)
60	43.16	101.31	Open To Flow (2)
104	52.04	105.34	Shut-In(2)
162	875.75	105.52	End Shut-In(2)
162	1674.52	105.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MCO 80%o 20%m	0.15
50.00	CO	0.70

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19895

DST#: 4

ATTN: David Hertel

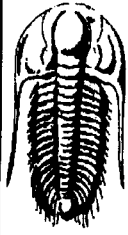
Test Start: 2004.04.25 @ 17:15:32

Tool Information

Drill Pipe:	Length: 3542.00 ft	Diameter: 3.80 inches	Volume: 49.68 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 49.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3577.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	31.00 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			3557.00	
Shut In Tool	5.00			3562.00	
Hydraulic tool	5.00			3567.00	
Packer	5.00			3572.00	21.00 Bottom Of Top Packer
Packer	5.00			3577.00	
Stubb	1.00			3578.00	
Recorder	0.00	6770	Inside	3578.00	
Perforations	6.00			3584.00	
Recorder	0.00	13254	Outside	3584.00	
Bullnose	3.00			3587.00	10.00 Bottom Packers & Anchor
Total Tool Length:	31.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19895

DST#: 4

ATTN: David Hertel

Test Start: 2004.04.25 @ 17:15:32

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	34 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	10000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	MCO 80%o 20%m	0.148
50.00	CO	0.701

Total Length: 80.00 ft Total Volume: 0.849 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6770

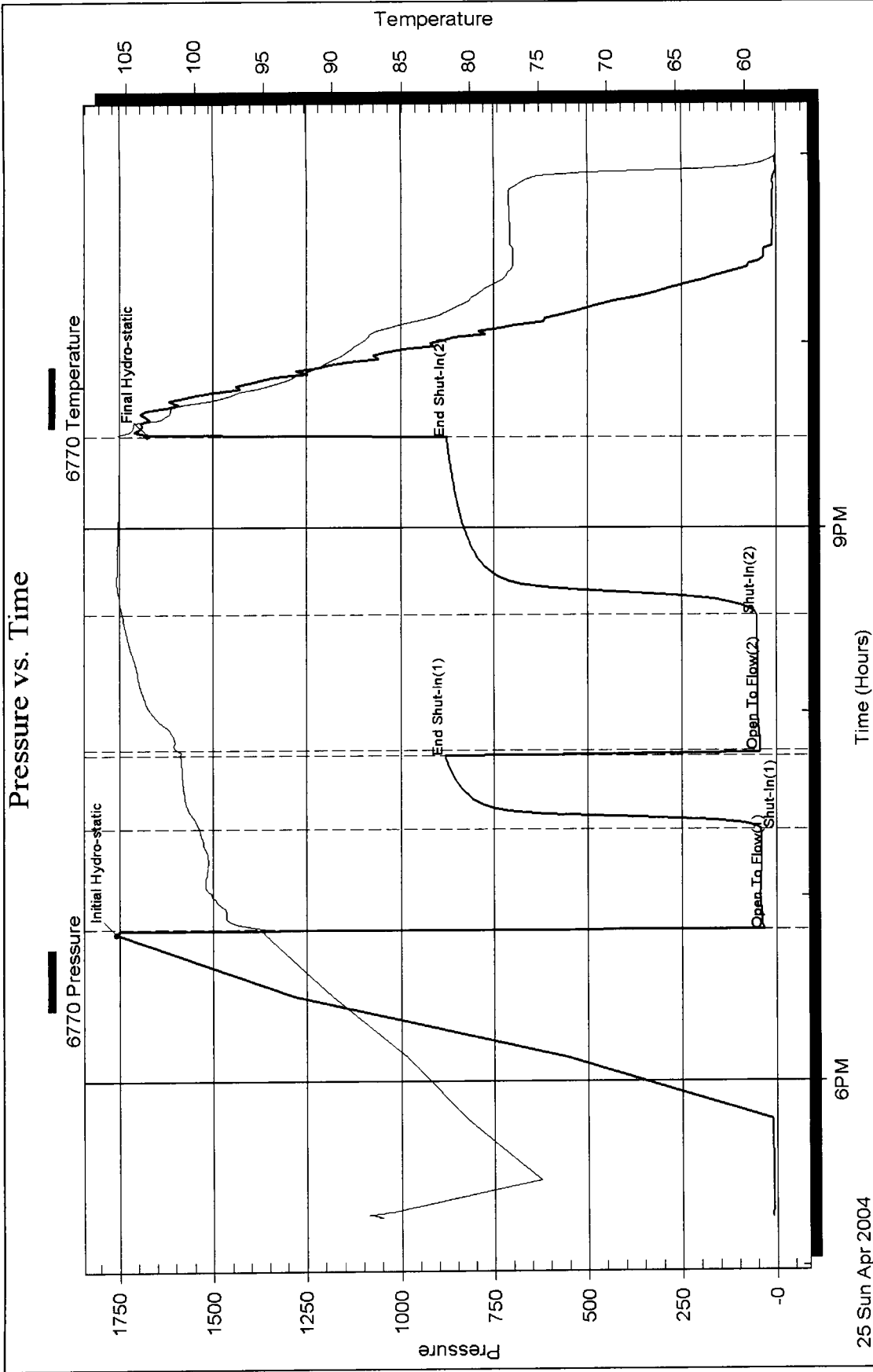
Inside

Hertel Oil Co LLC

8-14-17-Elis-Ks

DST Test Number: 4

Pressure vs. Time

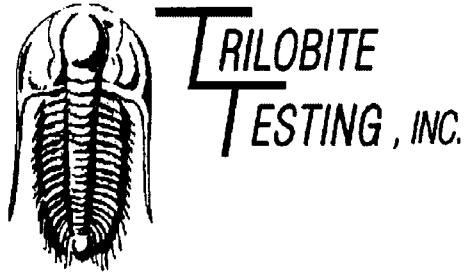


25 Sun Apr 2004

6PM

9PM

Time (Hours)



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 E 12th St
Hays Ks 67601

ATTN: David Hertel

8-14-17-Ellis-Ks

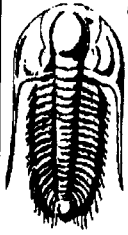
Hoffman # 2-8

Start Date: 2004.04.26 @ 04:26:01

End Date: 2004.04.26 @ 10:27:01

Job Ticket #: 19896 DST #: 5

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

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19896

DST#: 5

ATTN: David Hertel

Test Start: 2004.04.26 @ 04:26:01

GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 05:57:01

Time Test Ended: 10:27:01

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **3587.00 ft (KB) To 3610.00 ft (KB) (TVD)**

Reference Elevations: **2017.00 ft (KB)**

Total Depth: **3610.00 ft (KB) (TVD)**

2009.00 ft (CF)

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

KB to GR/CF: **8.00 ft**

Serial #: 6770 **Inside**

Press@RunDepth: **334.45 psig @ 3588.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2004.04.26**

End Date:

2004.04.26

Last Calib.: **2004.04.26**

Start Time: **04:26:02**

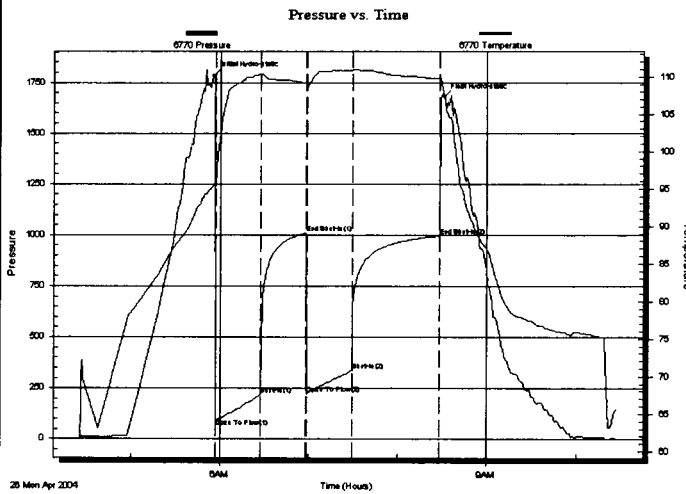
End Time:

10:27:01

Time On Btm: **2004.04.26 @ 05:55:31**

Time Off Btm: **2004.04.26 @ 08:30:31**

TEST COMMENT: **F-Strong B-B in 5 min**
FF-Strong B-B in 11 min
Times-30-30-30-60



PRESSURE SUMMARY

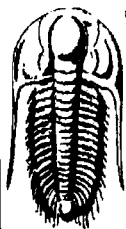
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1784.53	95.48	Initial Hydro-static
2	59.26	95.37	Open To Flow (1)
32	215.46	110.35	Shut-In (1)
63	1008.56	109.17	End Shut-In (1)
63	221.18	108.84	Open To Flow (2)
94	334.45	110.91	Shut-In (2)
153	994.86	109.79	End Shut-In (2)
155	1678.15	108.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	Wtr	4.08
186.00	OCWtr 40%o 60%w	2.61
320.00	WtrCO 80%o 20%w	4.49
40.00	CO	0.56
0.00	60 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19896

DST#: 5

ATTN: David Hertel

Test Start: 2004.04.26 @ 04:26:01

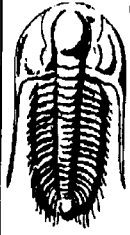
Tool Information

Drill Pipe:	Length: 3542.00 ft	Diameter: 3.80 inches	Volume: 49.68 bbl	Tool Weight: 1300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3587.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3567.00	
Shut In Tool	5.00			3572.00	
Hydraulic tool	5.00			3577.00	
Packer	5.00			3582.00	21.00 Bottom Of Top Packer
Packer	5.00			3587.00	
Stubb	1.00			3588.00	
Recorder	0.00	6770	Inside	3588.00	
Perforations	19.00			3607.00	
Recorder	0.00	13254	Outside	3607.00	
Bullnose	3.00			3610.00	23.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Hoffman # 2-8

704 E 12th St
Hays Ks 67601

8-14-17-Ellis-Ks

Job Ticket: 19896

DST#: 5

ATTN: David Hertel

Test Start: 2004.04.26 @ 04:26:01

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	Wtr	4.075
186.00	OCWtr 40%o 60%w	2.609
320.00	WtrCO 80%o 20%w	4.489
40.00	CO	0.561
0.00	60 GIP	0.000

Total Length: 856.00 ft Total Volume: 11.734 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 6770

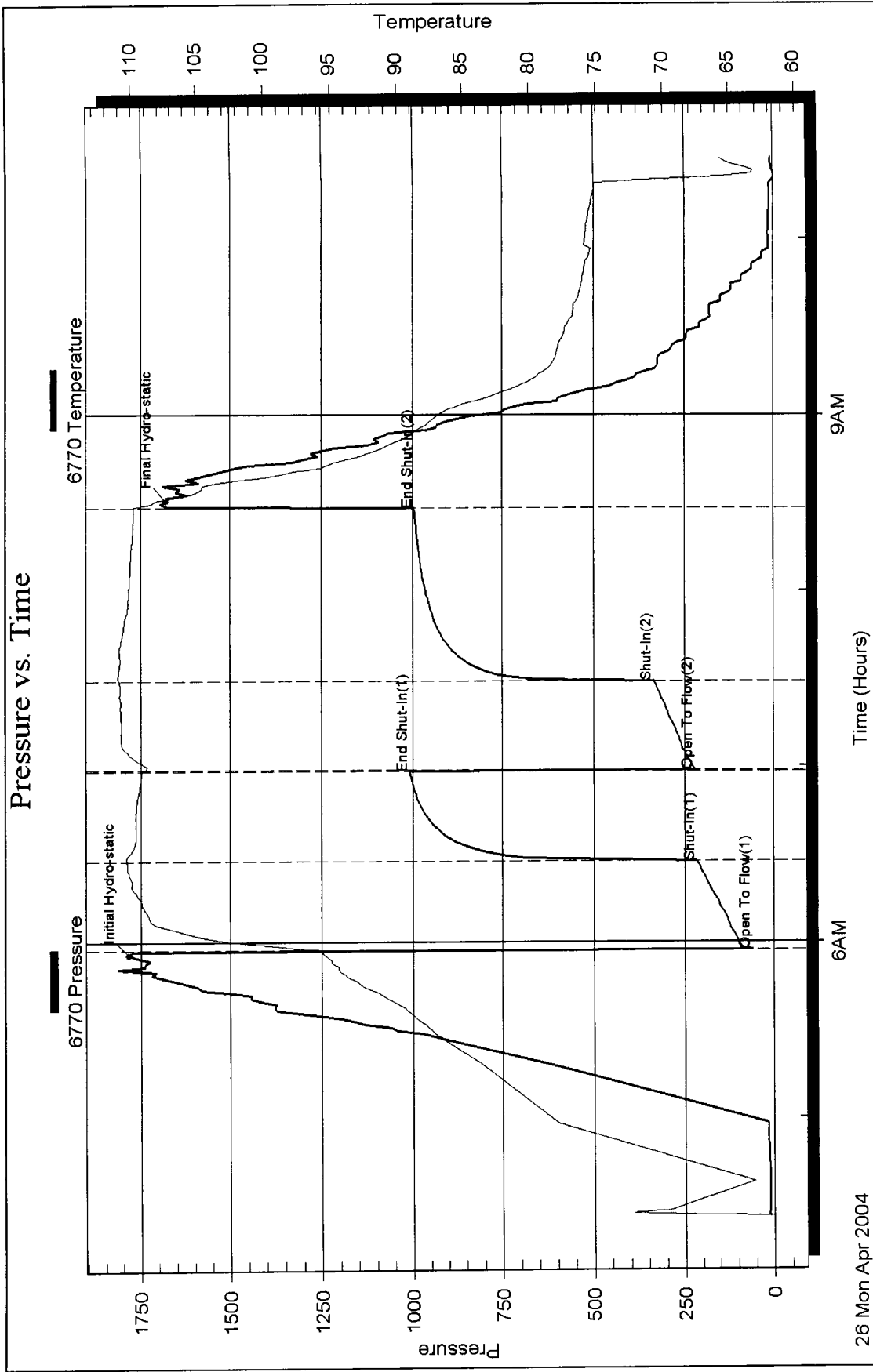
Inside

Hertel Oil Co LLC

8-14-17-Ellis-Ks

DST Test Number: 5

Pressure vs. Time

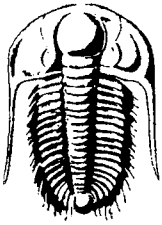


26 Mon Apr 2004

6AM

9AM

Time (Hours)



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV
6371

No. 19892

05/03

Test Ticket

Well Name & No. Hoffman #2-8 Test No. 1 Date 4-23-04
 Company Hertel Oil Co, LLC Zone Tested B-C-D hkc
 Address 704 E. 12th St. Hays, Ks. 67601 Elevation 2017 KB 2009 GL
 Co. Rep / Geo. Kevin Davis Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 8 Twp. 14 Rge. 17 Co. Ellis State Ks.
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3331 — 3390 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 40,000
 Anchor Length 59 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 50,000
 Top Packer Depth 3326 Tool Weight 2300
 Bottom Packer Depth 3331 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3390 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 8.9 LCM 1/8" Vis. 46 WL 8 Drill Pipe Size 4.5 X 1 1/2 Ft. Run 3293

Blow Description I.F. Strong - B-B in 15 min.
ISI - weak steady surface blow
F.F. Strong - B-B in 15 min.
FSI - weak steady surface blow

Recovery - Total Feet 270 GIP 710 Ft. in DC 30 Ft. in DP _____
 Rec. 90 Feet of HOC Gsym 10% gas 60% oil %water 30 %mud
 Rec. 180 Feet of HOC Gsym 10% gas 30% oil %water 60 %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 4,000 ppm System

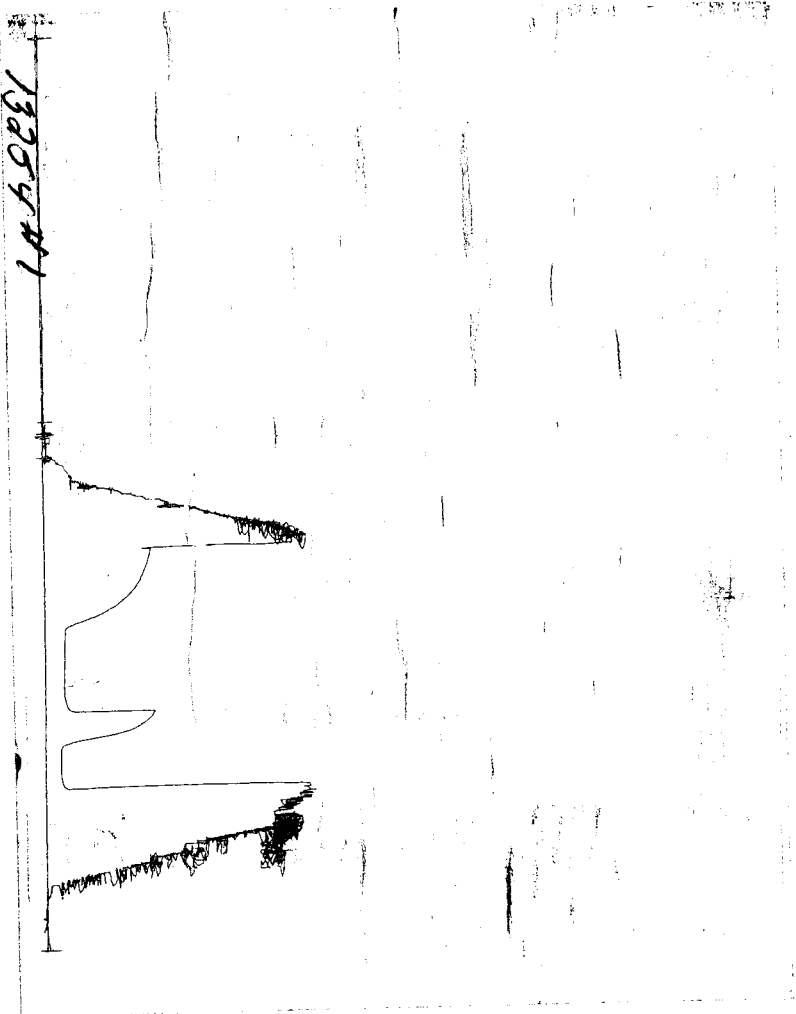
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>1626</u> PSI	<u>6770</u>	<u>700</u>
(B) First Initial Flow Pressure		<u>48</u> PSI	(depth) <u>3338</u>	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure		<u>63</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>698</u> PSI	(depth) <u>3370</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>78</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>103</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>666</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1584</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
			Final Flow <u>60</u>	Shale Packer _____
			Final Shut-In <u>60</u>	Mileage <u>6</u> <u>10.20</u>
			T-On Location <u>18:45</u>	Sub Total: <u>860.20</u>
			T-Started <u>19:40</u>	Std. By _____
			T-Open <u>21:20</u>	Other _____
			T-Pulled <u>00:20</u>	Total: _____
			T-Out <u>02:00</u>	

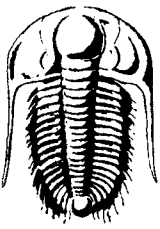
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST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

Approved By [Signature]
 Our Representative Dan Randle

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 19893

05/03

Test Ticket

Well Name & No. Hoffman #2-8 Test No. 2 Date 4-24-04
 Company Hertel Oil Co LLC Zone Tested E-F-G
 Address _____ Elevation 2017 KB 2009 GL
 Co. Rep / Geo. Kevin Davis Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 8 Twp. 14 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3390 — 3427 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 40,000
 Anchor Length 37 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth _____ Tool Weight 2500
 Bottom Packer Depth 3385 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3390 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 8.9 LCM 48# Vis. 46 WL 8 Drill Pipe Size 4.5XH Ft. Run 3356
 Blow Description I.F. Weak-building to 1/2"

E.F. Weak-building to 1/2"

Recovery - Total Feet 50 GIP _____ Ft. in DC 30 Ft. in DP 30
 Rec. 50 Feet of D.M w/few oil spots %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 99 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 4,000 ppm System

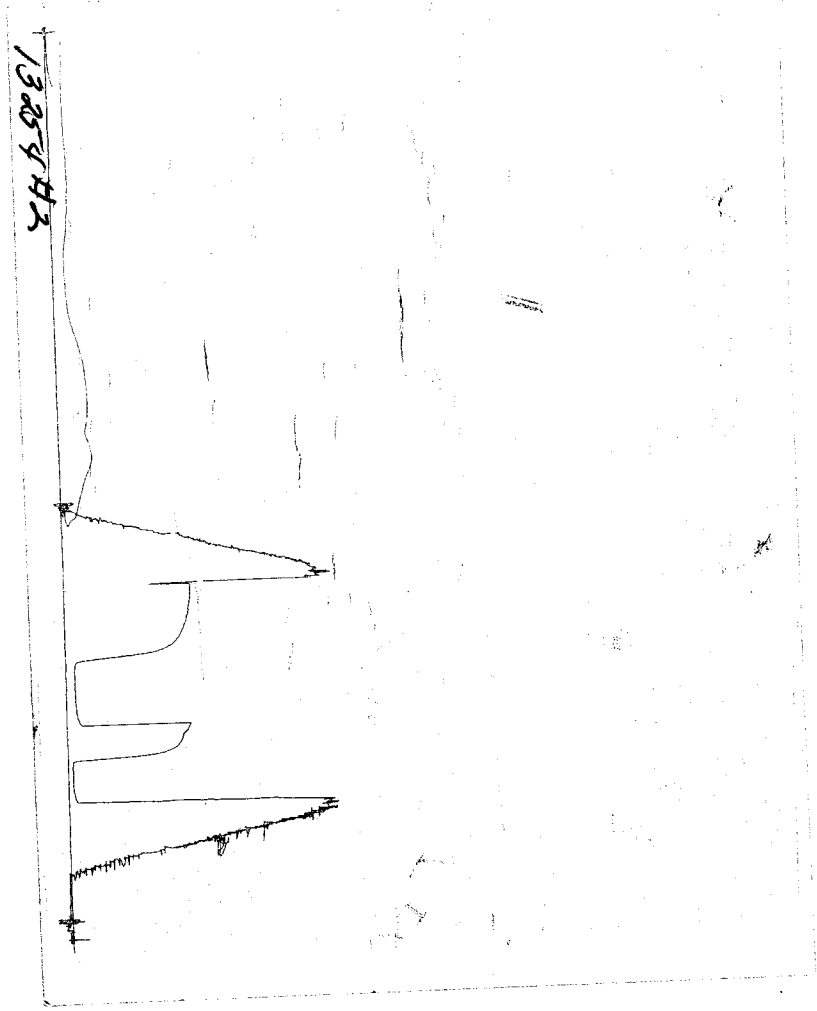
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1664</u>	PSI	<u>6770</u>	_____
(B) First Initial Flow Pressure	<u>28</u>	PSI	(depth) <u>3396</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>39</u>	PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>807</u>	PSI	(depth) <u>3424</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>41</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>46</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>809</u>	PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1600</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>6</u>
			T-On Location <u>09:00</u>	Sub Total: <u>860.20</u>
			T-Started <u>09:30</u>	Std. By _____
			T-Open <u>11:15</u>	Other _____
			T-Pulled <u>14:00</u>	Total: _____
			T-Out <u>15:23</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.

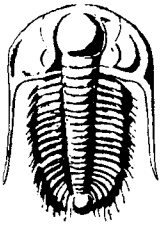
Approved By _____
 Our Representative Dan Bangle

CHART PAGE

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



1325942



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19894

05/03

Test Ticket

Well Name & No. Hoffman #2-8 Test No. 3 Date 4-25-04
 Company Hertel Oil Co. LLC Zone Tested Arbuckle
 Address _____ Elevation 2017 KB 2009 GL
 Co. Rep / Geo. Kevin Davis Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 8 Twp. 14 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3551 — 3577 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 40,000
 Anchor Length 26 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth 3546 Tool Weight 1800
 Bottom Packer Depth 3551 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3577 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 8.9 LCM _____ Vis. 55 WL 8.8 Drill Pipe Size 4.5XH Ft. Run 3511
 Blow Description I.F. Weak - building to 1 1/2"

F.F. Weak - building to 1/2"

Recovery - Total Feet 60 GIP _____ Ft. in DC 30 Ft. in DP 30
 Rec. 60 Feet of MCO %gas 80 %oil _____ %water 20 %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 6,000 ppm System

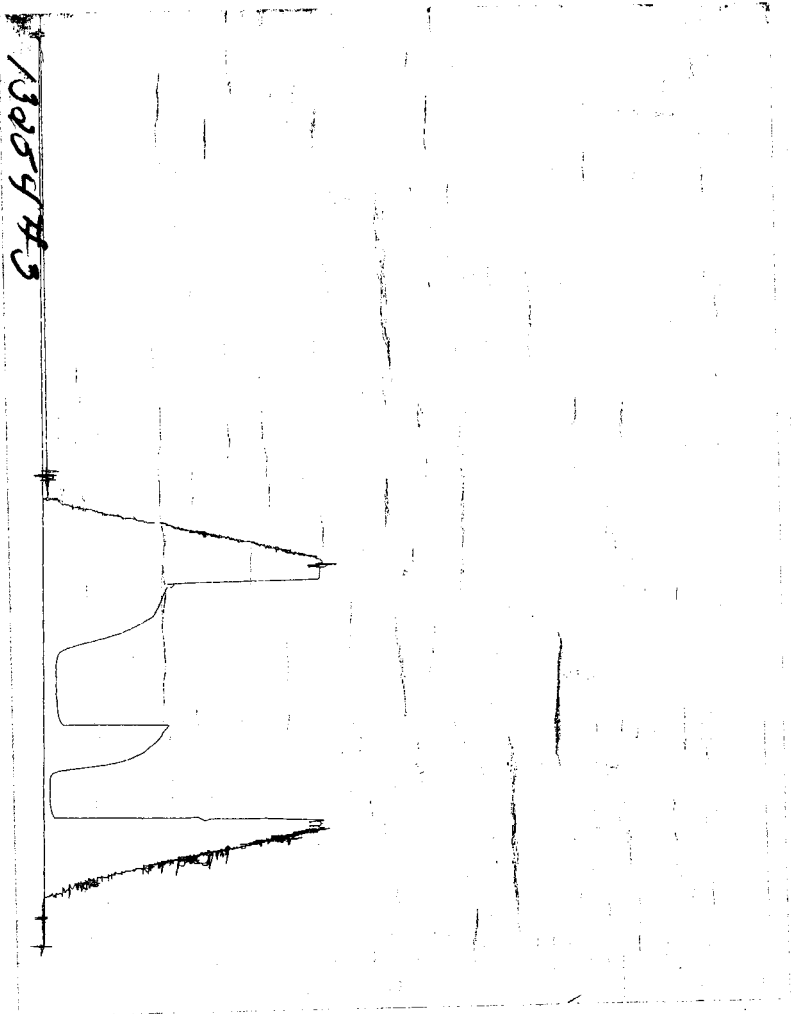
	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>1736</u>	PSI	Recorder No.	<u>6770</u>	Test _____
(B) First Initial Flow Pressure	<u>27</u>	PSI	(depth)	<u>3552</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>37</u>	PSI	Recorder No.	<u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>834</u>	PSI	(depth)	<u>3574</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>43</u>	PSI	Recorder No.	_____	Circ Sub _____
(F) Second Final Flow Pressure	<u>48</u>	PSI	(depth)	_____	Sampler _____
(G) Final Shut-In Pressure	<u>833</u>	PSI	Initial Opening	<u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1656</u>	PSI	Initial Shut-In	<u>45</u>	Ext. Packer _____
			Final Flow	<u>45</u>	Shale Packer _____
			Final Shut-In	<u>80</u>	Mileage <u>6</u>
			T-On Location	<u>06:00</u>	Sub Total: <u>360.20</u>
			T-Started	<u>06:20</u>	Std. By _____
			T-Open	<u>07:50</u>	Other _____
			T-Pulled	<u>10:20</u>	Total: _____
			T-Out	<u>12:19</u>	

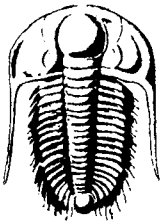
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Approved By _____
 Our Representative Dan Rangle

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 19895

05/03

Test Ticket

Well Name & No. Hoffman # 2-8 Test No. 4 Date 4-25-04
 Company Hertel Oil Co. LLC Zone Tested Arbuckle
 Address _____ Elevation 2017 KB 2009 GL _____
 Co. Rep / Geo. Kevin Davis Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 8 Twp. 14 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3577 — 3587 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 40,000
 Anchor Length 10' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 65,000
 Top Packer Depth 3572 Tool Weight 1100
 Bottom Packer Depth 3577 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3587 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 9.2 LCM _____ Vis. 48 WL 8.8 Drill Pipe Size 4.5 XH Ft. Run 3542
 Blow Description I.F. Weak - building to 2 1/2"

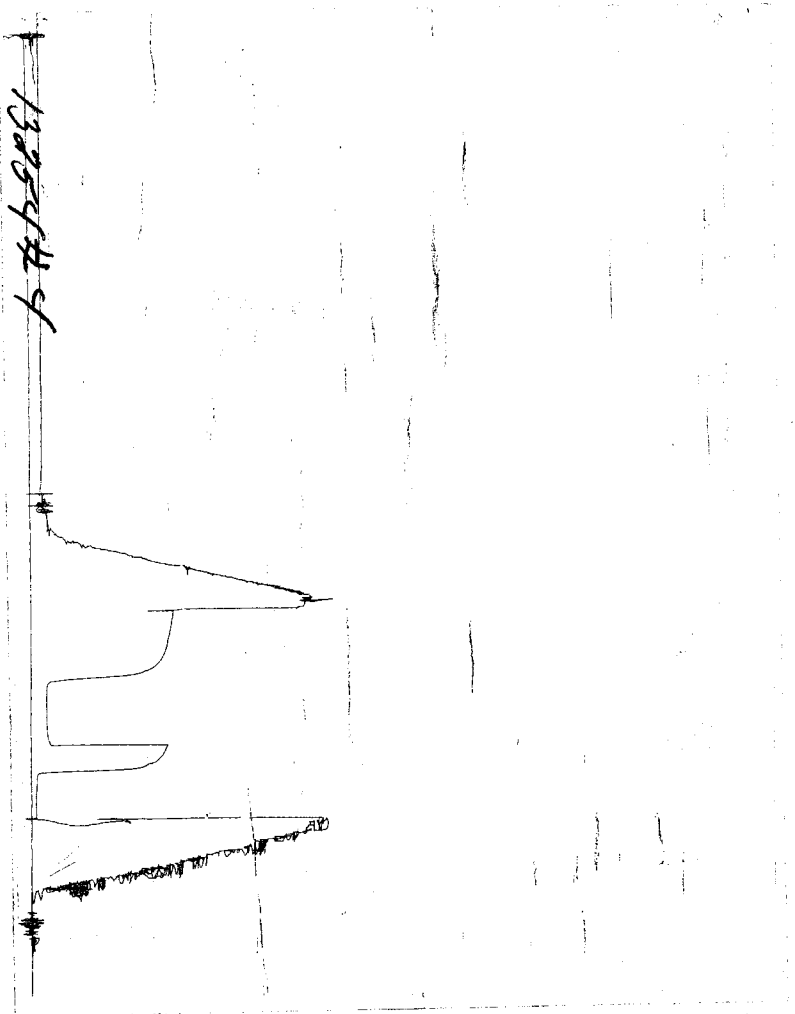
E.F. Weak - building to 1 1/2"

Recovery - Total Feet 80 GIP _____ Ft. in DC 30 Ft. in DP 50
 Rec. 50 Feet of CO %gas _____ %oil _____ %water _____ %mud _____
 Rec. 30 Feet of MCO %gas 80 %oil _____ %water 20 %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 34 °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 10,000 ppm System

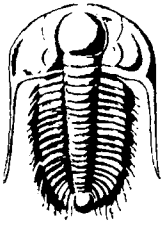
AK-1	Alpine	Recorder No.	<u>6770</u>	Test	_____
(A) Initial Hydrostatic Mud	<u>1756</u> PSI	(depth)	<u>3578</u>	Elec. Rec.	<u>X</u>
(B) First Initial Flow Pressure	<u>31</u> PSI	Recorder No.	<u>13254</u>	Jars	_____
(C) First Final Flow Pressure	<u>40</u> PSI	(depth)	<u>3584</u>	Safety Jt.	_____
(D) Initial Shut-In Pressure	<u>881</u> PSI	Recorder No.	_____	Circ Sub	_____
(E) Second Initial Flow Pressure	<u>43</u> PSI	(depth)	_____	Sampler	_____
(F) Second Final Flow Pressure	<u>52</u> PSI	Initial Shut-In	<u>30</u>	Straddle	_____
(G) Final Shut-In Pressure	<u>875</u> PSI	Final Flow	<u>45</u>	Ext. Packer	_____
(Q) Final Hydrostatic Mud	<u>1674</u> PSI	Final Shut-In	<u>60</u>	Shale 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.		T-On Location	<u>17:00</u>	Mileage	<u>6</u>
Approved By _____	T-Started	<u>17:15</u>	Sub Total:	<u>860.20</u>	
Our Representative <u>Dan Dangle</u>	T-Open	<u>18:45</u>	Std. By	_____	
	T-Pulled	<u>21:30</u>	Other	_____	
	T-Out	<u>22:59</u>	Total:	_____	

CHART PAGE

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



13059444



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19896

05/03

Test Ticket

Well Name & No. Hoffman # 2-8 Test No. 5 Date 4-26-04
 Company Hertel Oil Co LLC Zone Tested Arbuckle
 Address _____ Elevation 2017 KB 2009 GL _____
 Co. Rep / Geo. Kevin Davis Cont. Discovery # 2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 8 Twp. 14 Rge. 17 Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3587 — 3610 Initial Str Wt./Lbs. 49000 Unseated Str Wt./Lbs. 45000
 Anchor Length 23 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth 3582 Tool Weight 1300
 Bottom Packer Depth 3587 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3610 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 9.2 LCM _____ Vis. 48 WL 8.8 Drill Pipe Size 4.5XH Ft. Run 3542
 Blow Description I.F. Strong B-B in 5 min.

F.F. Strong - B-B in 11 min.

Recovery - Total Feet 856 GIP 60 Ft. in DC 30 Ft. in DP 826
 Rec. 40 Feet of CO %gas _____ %oil _____ %water _____ %mud _____
 Rec. 320 Feet of WTR CO %gas 80%oil 20%water _____ %mud _____
 Rec. 186 Feet of OC WTR %gas 40%oil 60%water _____ %mud _____
 Rec. 310 Feet of WTR. %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT 109 °F Gravity _____ °API D @ _____ °F Corrected Gravity 34 °API
 RW .19 @ 78 °F Chlorides 32000 ppm Recovery _____ Chlorides 19,000 ppm System

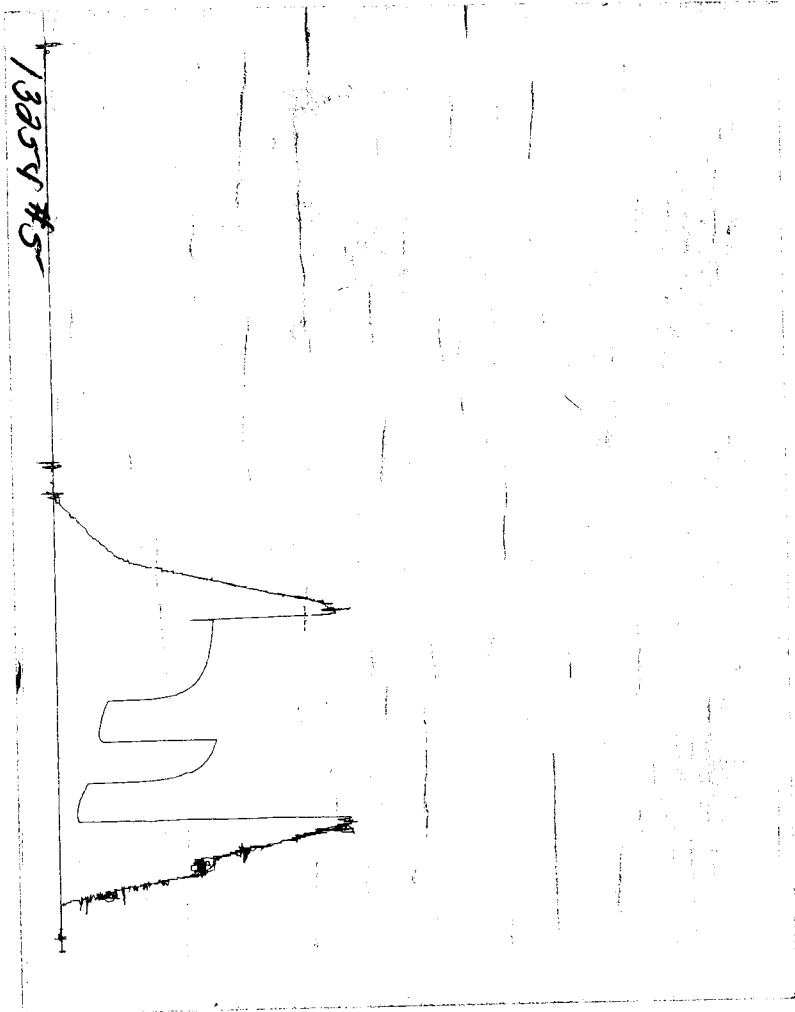
(A) Initial Hydrostatic Mud	<u>1784</u> PSI	Recorder No.	<u>6770</u>	Test	_____
(B) First Initial Flow Pressure	<u>59</u> PSI	(depth)	<u>3588</u>	Elec. Rec.	<u>X</u>
(C) First Final Flow Pressure	<u>215</u> PSI	Recorder No.	<u>13254</u>	Jars	_____
(D) Initial Shut-In Pressure	<u>1008</u> PSI	(depth)	<u>3607</u>	Safety Jt.	_____
(E) Second Initial Flow Pressure	<u>221</u> PSI	Recorder No.	_____	Circ Sub	_____
(F) Second Final Flow Pressure	<u>334</u> PSI	(depth)	_____	Sampler	_____
(G) Final Shut-In Pressure	<u>994</u> PSI	Initial Opening	<u>30</u>	Straddle	_____
(Q) Final Hydrostatic Mud	<u>1678</u> PSI	Initial Shut-In	<u>30</u>	Ext. Packer	_____
		Final Flow	<u>30</u>	Shale Packer	_____
		Final Shut-In	<u>60</u>	Mileage	<u>6</u>
		T-On Location	<u>04:00</u>	Sub Total:	<u>860.20</u>
		T-Started	<u>04:26</u>	Std. By	_____
		T-Open	<u>05:58</u>	Other	_____
		T-Pulled	<u>08:28</u>	Total:	_____
		T-Out	<u>10:27</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



13354 #5