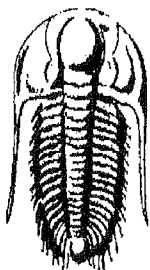


15-051-25448

10-11s-20w



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **IAOC**

900 N Tyler Rd #14
Wichita Ks 67212

ATTN: Hal Porter

10-11s-20w Ellis

Hazel #10-1

Start Date: 2005.12.19 @ 13:20:37

End Date: 2005.12.19 @ 17:13:36

Job Ticket #: 22746 DST #: 1

15-051-25448-0000

RECEIVED

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KCC WICHITA

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

IAOC

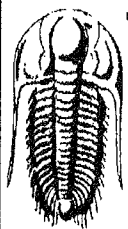
Hazel #10-1

10-11s-20w Ellis

DST # 1

LKC "C-D"

2005.12.19



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

IAOC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22746 DST#: 1
Test Start: 2005.12.19 @ 13:20:37

GENERAL INFORMATION:

Formation: **LKC "C-D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:35:00
Time Test Ended: 17:13:36

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 28

Interval: **3311.00 ft (KB) To 3360.00 ft (KB) (TVD)**
Total Depth: 3360.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 1996.00 ft (KB)
1991.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8167

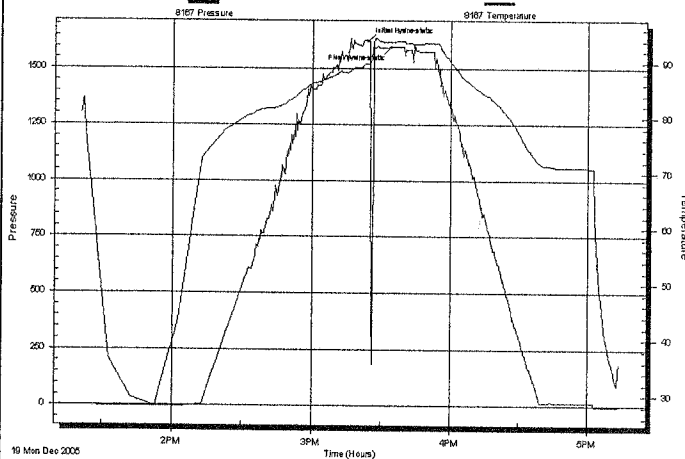
Inside

Press@RunDepth: psig @ 3314.01 ft (KB)
Start Date: 2005.12.19 End Date: 2005.12.19
Start Time: 13:20:37 End Time: 17:13:36

Capacity: 7000.00 psig
Last Calib.: 2005.12.19
Time On Btm: 2005.12.19 @ 15:24:06
Time Off Btm: 2005.12.19 @ 15:34:06

TEST COMMENT: IFP-set packer did not hold

Pressure vs. Time



PRESSURE SUMMARY

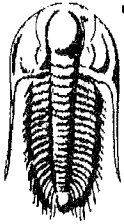
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1625.07	89.82	Initial Hydro-static
10	1597.42	93.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
210.00	mud	2.67

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IAOC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22746 **DST#: 1**
Test Start: 2005.12.19 @ 13:20:37

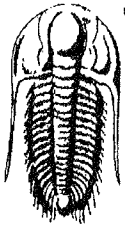
Tool Information

Drill Pipe:	Length: 3266.00 ft	Diameter: 3.80 inches	Volume: 45.81 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 45.96 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	3311.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.02 ft				
Tool Length:	70.02 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			3291.00	
Shut In Tool	5.00			3296.00	
Hydraulic tool	5.00			3301.00	
Packer	5.00			3306.00	21.00 Bottom Of Top Packer
Packer	5.00			3311.00	
Stubb	1.00			3312.00	
Perforations	2.00			3314.00	
Recorder	0.01	8167	Inside	3314.01	
Blank Spacing	31.00			3345.01	
Perforations	12.00			3357.01	
Recorder	0.01	13534	Outside	3357.02	
Bullnose	3.00			3360.02	49.02 Bottom Packers & Anchor

Total Tool Length: 70.02



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IAOC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22746 DST#: 1
Test Start: 2005.12.19 @ 13:20:37

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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.92 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
210.00	mud	2.672

Total Length: 210.00 ft Total Volume: 2.672 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

DST Test Number: 1

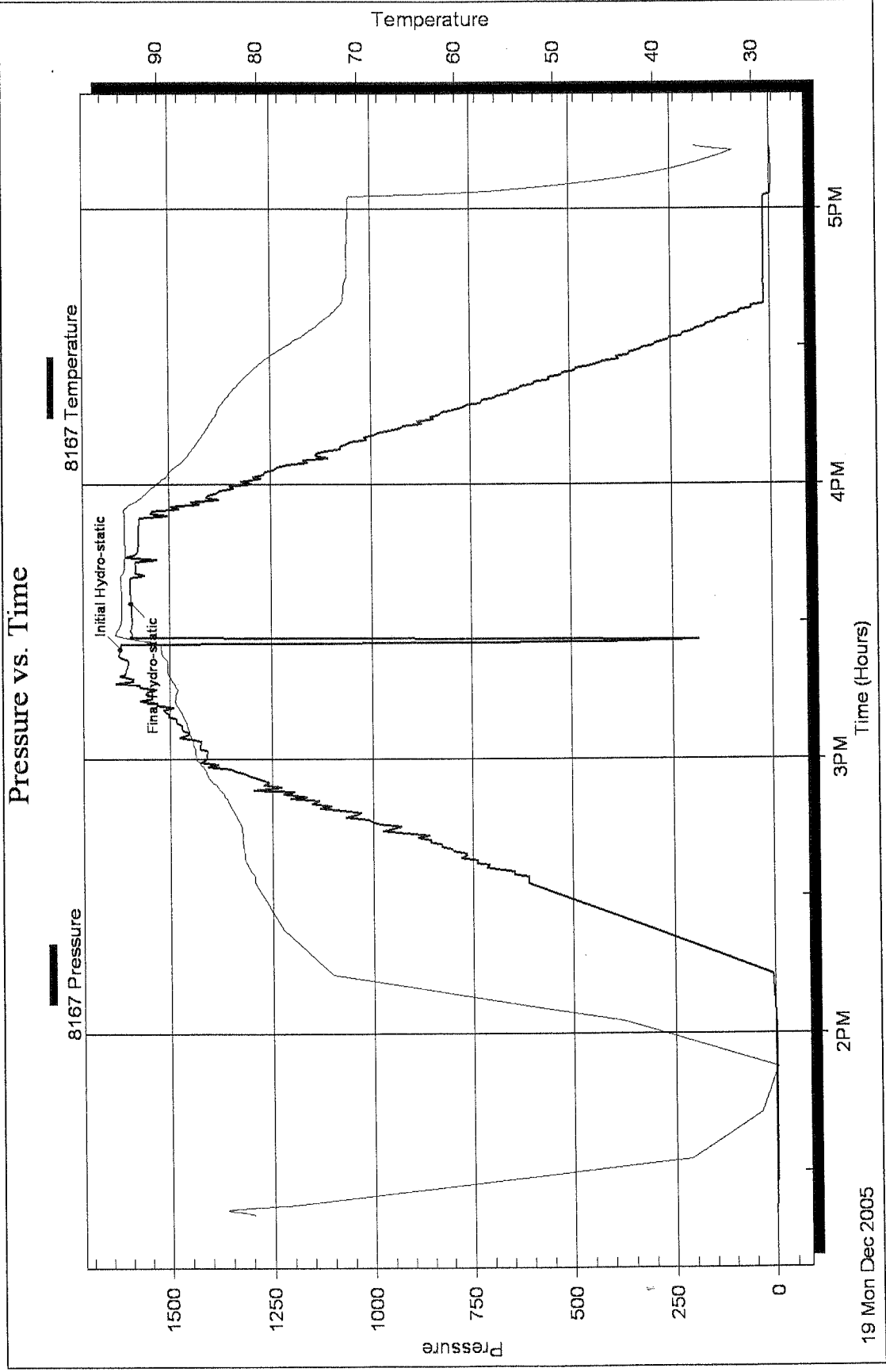
10-11s-20w Ellis

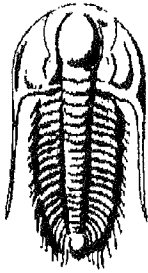
IAOC

Inside

Serial #: 8167

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IAOC**

900 N Tyler Rd #14
Wichita Ks 67212

ATTN: Hal Porter

10-11s-20w Ellis

Hazel #10-1

Start Date: 2005.12.19 @ 17:20:45

End Date: 2005.12.19 @ 23:27:44

Job Ticket #: 22746 DST #: 2

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

IAOC

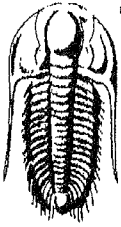
Hazel #10-1

10-11s-20w Ellis

DST # 2

LKC "C-D"

2005.12.19



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IAOC

Hazel #10-1

900 N Tyler Rd #14
Wichita Ks 67212

10-11s-20w Ellis

Job Ticket: 22746

DST#: 2

ATTN: Hal Porter

Test Start: 2005.12.19 @ 17:20:45

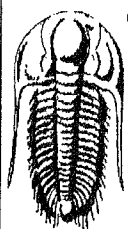
Tool Information

Drill Pipe:	Length: 3265.00 ft	Diameter: 3.80 inches	Volume: 45.80 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 45.95 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	3299.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	61.02 ft				
Tool Length:	82.02 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			3279.00	
Shut In Tool	5.00			3284.00	
Hydraulic tool	5.00			3289.00	
Packer	5.00			3294.00	21.00 Bottom Of Top Packer
Packer	5.00			3299.00	
Stubb	1.00			3300.00	
Perforations	2.00			3302.00	
Recorder	0.01	8167	Inside	3302.01	
Blank Spacing	31.00			3333.01	
Perforations	24.00			3357.01	
Recorder	0.01	13534	Outside	3357.02	
Bullnose	3.00			3360.02	61.02 Bottom Packers & Anchor

Total Tool Length: 82.02



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

IAOC

Hazel #10-1

900 N Tyler Rd #14
Wichita Ks 67212

10-11s-20w Ellis

Job Ticket: 22746

DST#: 2

ATTN: Hal Porter

Test Start: 2005.12.19 @ 17:20:45

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: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.92 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	O&GCM 5%G5%O 90%M	1.480
180.00	O&GCM 5%G10%O 85%M	2.525

Total Length: 305.00 ft Total Volume: 4.005 bbl

Num Fluid Samples: 0

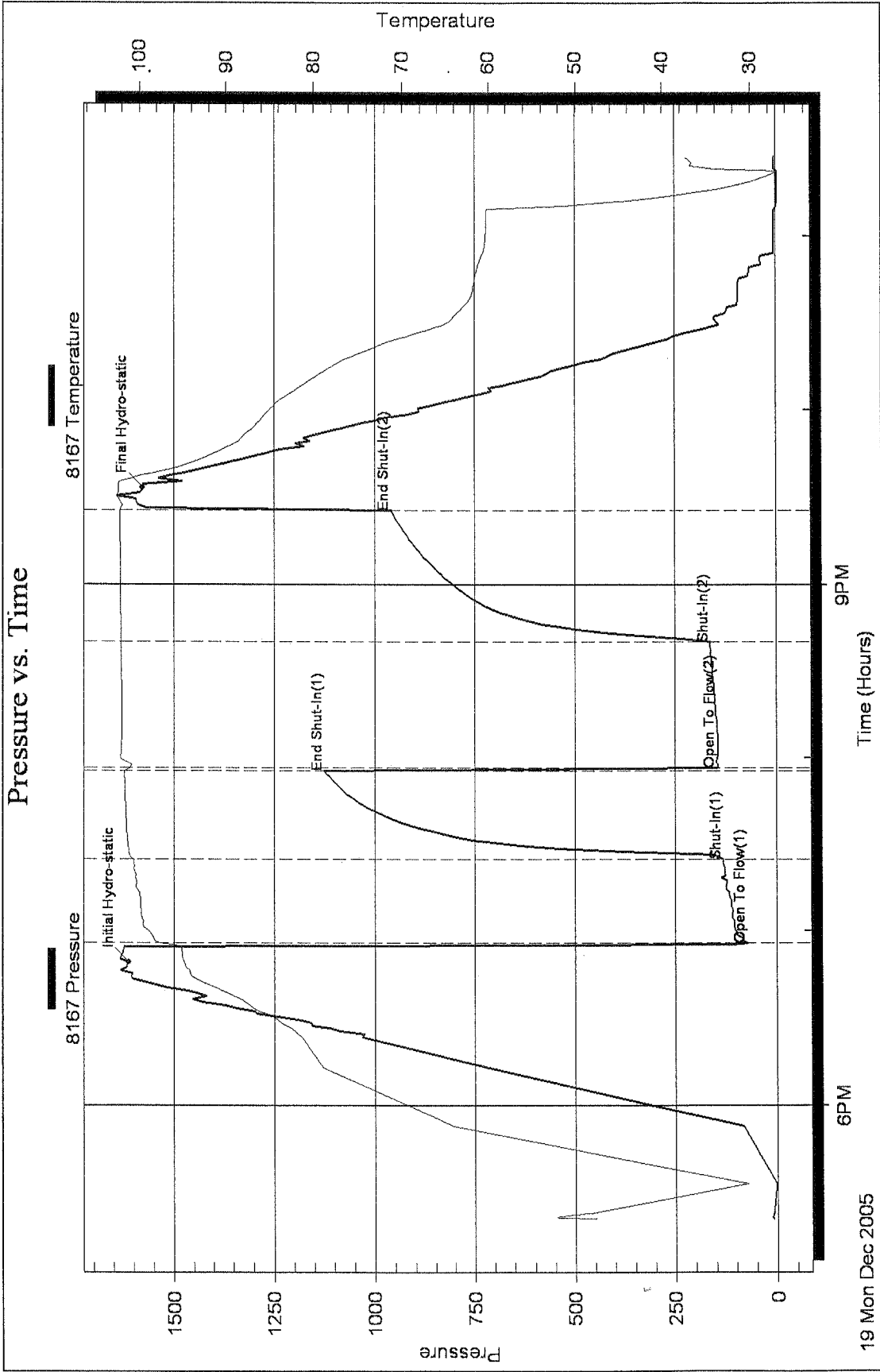
Num Gas Bombs: 0

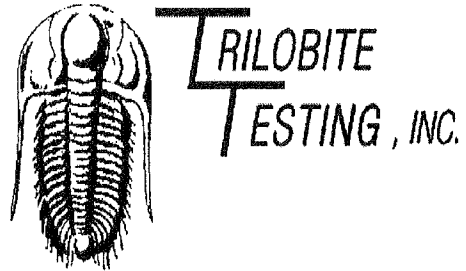
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **IAOC**

900 N Tyler Rd #14
Wichita Ks 67212

ATTN: Hal Porter

10-11s-20w Ellis

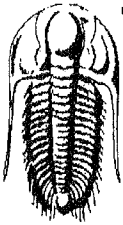
Hazel #10-1

Start Date: 2005.12.20 @ 06:57:31

End Date: 2005.12.20 @ 13:59:00

Job Ticket #: 22748 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

TOOL DIAGRAM

IAOC

Hazel #10-1

900 N Tyler Rd #14
Wichita Ks 67212

10-11s-20w Ellis

Job Ticket: 22748

DST#: 3

ATTN: Hal Porter

Test Start: 2005.12.20 @ 06:57:31

Tool Information

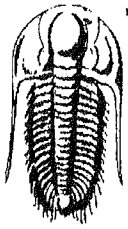
Drill Pipe:	Length: 3328.00 ft	Diameter: 3.80 inches	Volume: 46.68 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 46.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3352.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.02 ft			
Tool Length:	69.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3332.00	
Shut In Tool	5.00			3337.00	
Hydraulic tool	5.00			3342.00	
Packer	5.00			3347.00	21.00 Bottom Of Top Packer
Packer	5.00			3352.00	
Stubb	1.00			3353.00	
Perforations	1.00			3354.00	
Recorder	0.01	8167	Inside	3354.01	
Blank Spacing	31.00			3385.01	
Perforations	12.00			3397.01	
Recorder	0.01	13534	Outside	3397.02	
Bullnose	3.00			3400.02	48.02 Bottom Packers & Anchor

Total Tool Length: 69.02



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

IADC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22748 DST#: 3
Test Start: 2005.12.20 @ 06:57:31

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 22 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 89000 ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.90 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	SOCMV 2%O90%W 8%M	1.410
60.00	SO&GCMV 5G 5%O 70%W 20M	0.842
90.00	HO&GCVM 10G 20%O30%W 40%M	1.262
0.00	150'GIP	0.000

Total Length: 270.00ft Total Volume: 3.514 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW.17@36F

Serial #: 8167

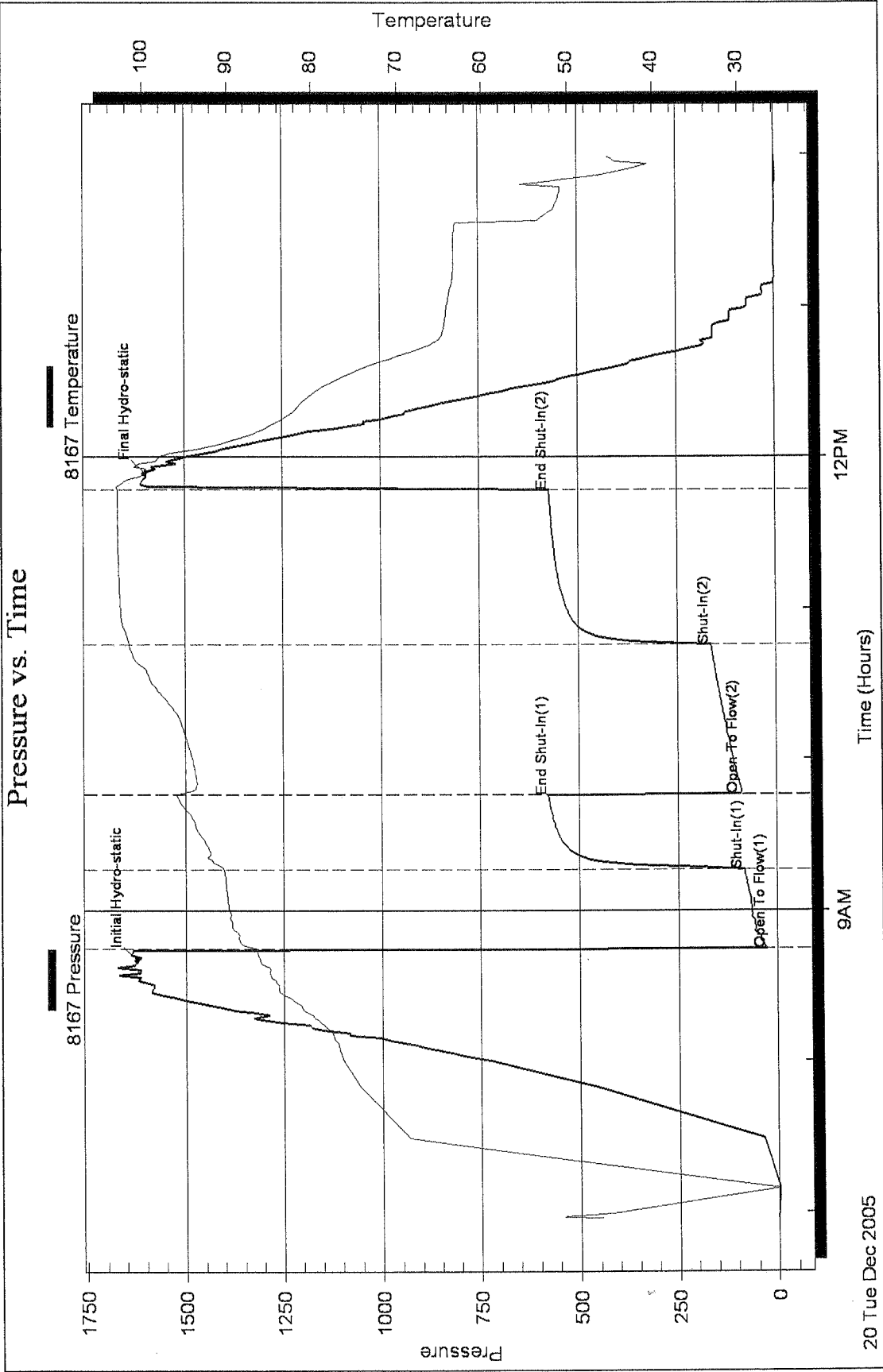
Inside

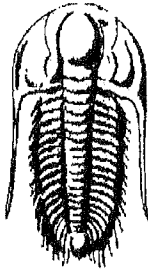
IACC

10-11s-20w Ellis

DST Test Number: 3

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **IAOC**

900 N Tyler Rd #14
Wichita Ks 67212

ATTN: Hal Porter

10-11s-20w Ellis

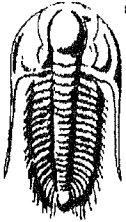
Hazel #10-1

Start Date: 2005.12.20 @ 23:31:25

End Date: 2005.12.21 @ 06:23:24

Job Ticket #: 22749 DST #: 4

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

IAOC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

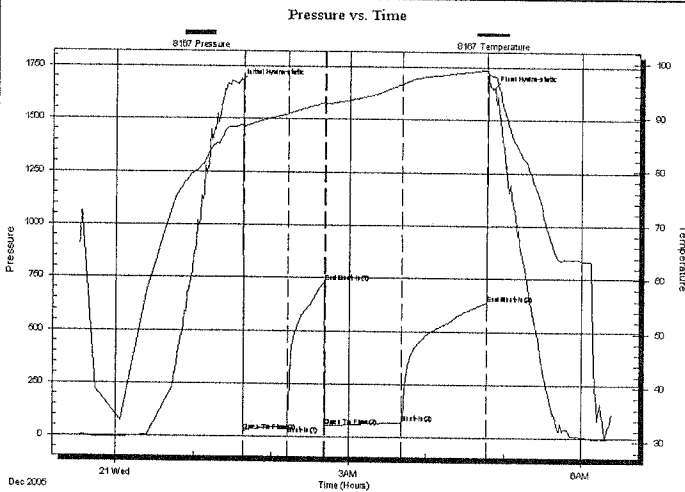
Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22749 **DST#: 4**
Test Start: 2005.12.20 @ 23:31:25

GENERAL INFORMATION:

Formation: **Lower KC**
 Deviated: **No** Whipstock: ft (KB)
 Time Tool Opened: 01:37:54
 Time Test Ended: 06:23:24
 Test Type: Conventional Bottom Hole
 Tester: Ray Schwager
 Unit No: 28
 Interval: **3405.00 ft (KB) To 3510.00 ft (KB) (TVD)**
 Total Depth: 3510.00 ft (KB) (TVD)
 Reference Elevations: 1996.00 ft (KB)
 1991.00 ft (CF)
 Hole Diameter: 7.85 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8167 **Inside**
 Press@RunDepth: 70.97 psig @ 3416.01 ft (KB) Capacity: 7000.00 psig
 Start Date: 2005.12.20 End Date: 2005.12.21 Last Calib.: 2005.12.21
 Start Time: 23:31:25 End Time: 06:23:24 Time On Btm: 2005.12.21 @ 01:33:54
 Time Off Btm: 2005.12.21 @ 04:50:54

TEST COMMENT: IFF-w k bl thru-out 1/2" to 2" bl
 FFP-w k bl thru-out 1/2" bl
 Times 30-30-60-60



PRESSURE SUMMARY

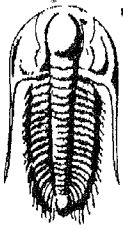
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1668.58	88.20	Initial Hydro-static
4	25.20	87.94	Open To Flow (1)
38	50.76	90.46	Shut-In (1)
67	728.38	92.55	End Shut-In (1)
68	53.29	92.43	Open To Flow (2)
127	70.97	96.11	Shut-In (2)
193	634.26	98.85	End Shut-In (2)
197	1648.01	97.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	mud	1.13

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IAOC
900 N Tyler Rd #14
Wichita Ks 67212

ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22749 **DST#: 4**
Test Start: 2005.12.20 @ 23:31:25

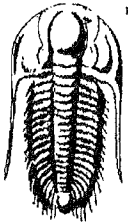
Tool Information

Drill Pipe:	Length: 3386.00 ft	Diameter: 3.80 inches	Volume: 47.50 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 47.65 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3405.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	105.02 ft			
Tool Length:	126.02 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			3385.00	
Shut In Tool	5.00			3390.00	
Hydraulic tool	5.00			3395.00	
Packer	5.00			3400.00	21.00 Bottom Of Top Packer
Packer	5.00			3405.00	
Stubb	1.00			3406.00	
Perforations	10.00			3416.00	
Recorder	0.01	8167	Inside	3416.01	
Blank Spacing	63.00			3479.01	
Perforations	28.00			3507.01	
Recorder	0.01	13534	Outside	3507.02	
Bullnose	3.00			3510.02	105.02 Bottom Packers & Anchor

Total Tool Length: 126.02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

IAOC
900 N Tyler Rd #14
Wichita Ks 67212
ATTN: Hal Porter

Hazel #10-1
10-11s-20w Ellis
Job Ticket: 22749 **DST#: 4**
Test Start: 2005.12.20 @ 23:31:25

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: 8.76 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	mud	1.129

Total Length: 100.00 ft Total Volume: 1.129 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8167

Inside

IACC

10-11s-20w Ellis

DST Test Number: 4

Pressure vs. Time

