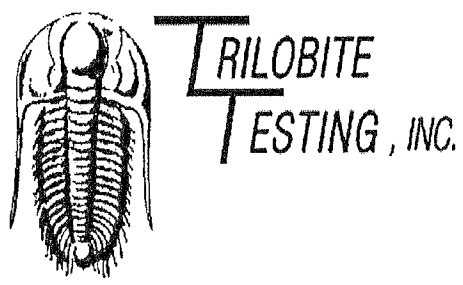


15-14s-16w



DRILL STEM TEST REPORT

Prepared For: **DNOC**

PO Box 372
Hays KS 67601

ORIGINAL

ATTN: Ron Nelson

15-14s16w Ellis

Sanders- Dortmund Unit 1-15

Start Date: 2005.09.23 @ 04:21:09

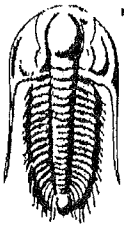
End Date: 2005.09.23 @ 11:19:24

Job Ticket #: 23564 DST #: 1

15-051-25446-00-00

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

DNOC
Sanders- Dortmund Unit 1-15
15-14s16w Ellis
DST # 1
LKC
2005.09.23



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DNOC
PO Box 372
Hays KS 67601

ATTN: Ron Nelson

Sanders- Portland Unit 1-15

15-14s16w Ellis

Job Ticket: 23564

DST#: 1

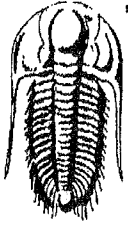
Test Start: 2005.09.23 @ 04:21:09

Tool Information

Drill Pipe:	Length: 3081.00 ft	Diameter: 3.80 inches	Volume: 43.22 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 43000.00 lb
		<u>Total Volume:</u>	<u>43.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3109.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3089.00	
Shut In Tool	5.00			3094.00	
Hydraulic tool	5.00			3099.00	
Packer	5.00			3104.00	21.00 Bottom Of Top Packer
Packer	5.00			3109.00	
Blank Spacing	1.00			3110.00	
Recorder	0.00	8166	Inside	3110.00	
Perforations	31.00			3141.00	
Recorder	0.00	10991	Outside	3141.00	
Bullnose	3.00			3144.00	35.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC
PO Box 372
Hays KS 67601
ATTN: Ron Nelson

Sanders- Dortmund Unit 1-15
15-14s16w Ellis
Job Ticket: 23564 **DST#: 1**
Test Start: 2005.09.23 @ 04:21:09

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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.37 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
135.00	Muddy Salt water	1.620

Total Length: 135.00 ft Total Volume: 1.620 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8166

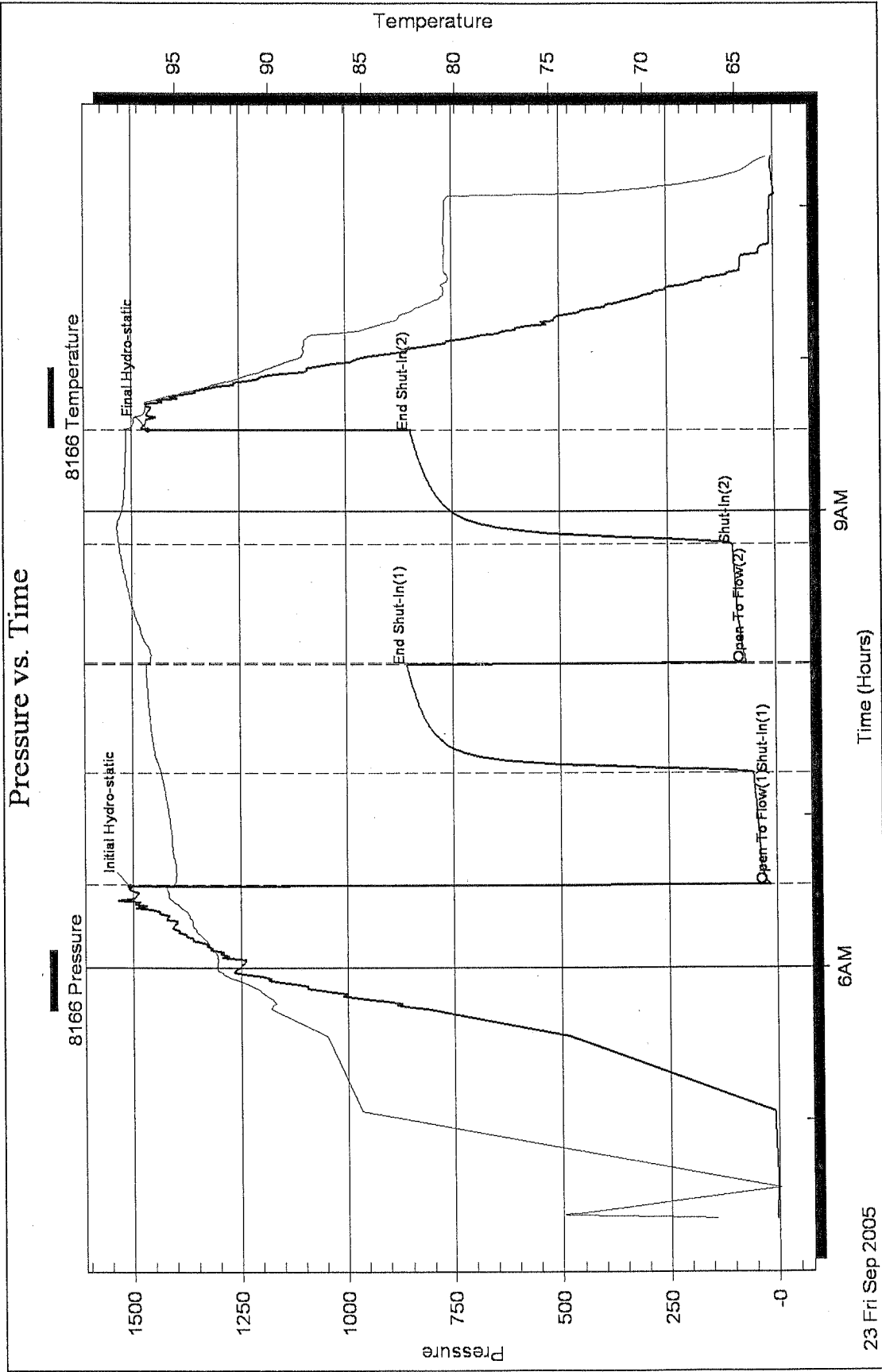
Inside

DNOC

15-14s16w Ellis

DST Test Number: 1

Pressure vs. Time

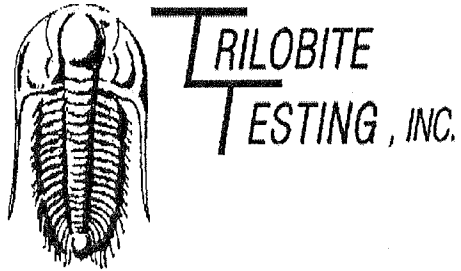


23 Fri Sep 2005

Trilobite Testing, Inc

Ref. No: 23564

Printed: 2005.09.30 @ 09:46:38 Page 5



DRILL STEM TEST REPORT

Prepared For: **DNOC**

PO Box 372
Hays KS 67601

ATTN: Ron Nelson

15-14s16w Ellis

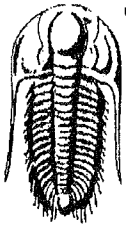
Sanders- Dortmund Unit 1-15

Start Date: 2005.09.23 @ 17:39:57

End Date: 2005.09.23 @ 23:28:12

Job Ticket #: 23565 DST #: 2

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

DNOC
PO Box 372
Hays KS 67601

ATTN: Ron Nelson

Sanders- Portland Unit 1-15

15-14s16w Ellis

Job Ticket: 23565 **DST#: 2**

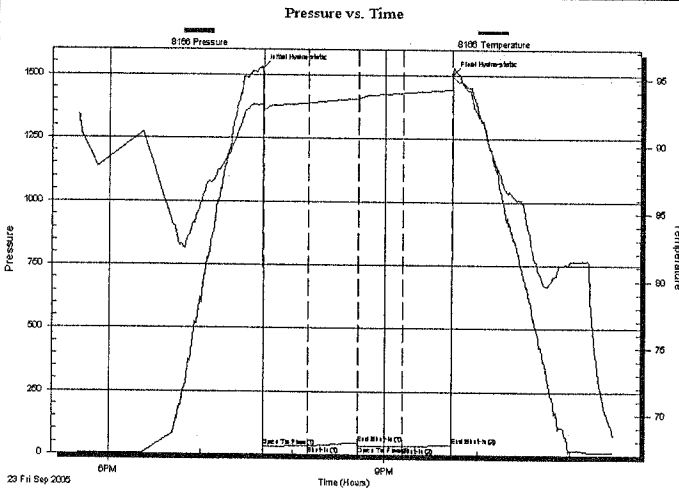
Test Start: 2005.09.23 @ 17:39:57

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: **No** Whipstock: ft (KB)
 Time Tool Opened: 19:40:12
 Time Test Ended: 23:28:12
 Interval: **3143.00 ft (KB) To 3176.00 ft (KB) (TVD)**
 Total Depth: **3176.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Michael**
 Unit No: **22**
 Reference Elevations: **1923.00 ft (KB)**
1915.00 ft (CF)
 KB to GR/CF: **8.00 ft**

Serial #: 8166 **Inside**
 Press@RunDepth: **31.15 psig @ 3144.00 ft (KB)**
 Start Date: **2005.09.23** End Date: **2005.09.23**
 Start Time: **17:39:58** End Time: **23:28:12**
 Capacity: **7000.00 psig**
 Last Calib.: **2005.09.23**
 Time On Btm: **2005.09.23 @ 19:39:42**
 Time Off Btm: **2005.09.23 @ 21:43:27**

TEST COMMENT: IF- Weak surface blow died after 20m
 IS- No blow
 FF- No blow
 FS- No blow



PRESSURE SUMMARY

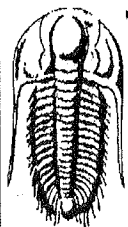
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1526.20	93.12	Initial Hydro-static
1	29.88	92.76	Open To Flow (1)
31	32.40	93.19	Shut-In(1)
63	45.15	93.55	End Shut-In(1)
63	33.43	93.58	Open To Flow (2)
92	31.15	93.96	Shut-In(2)
124	36.08	94.23	End Shut-In(2)
124	1503.14	95.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drilling mud	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DNOC
PO Box 372
Hays KS 67601

ATTN: Ron Nelson

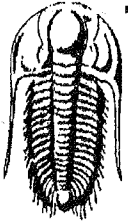
Sanders- Portland Unit 1-15
15-14s16w Ellis
Job Ticket: 23565 **DST#: 2**
Test Start: 2005.09.23 @ 17:39:57

Tool Information

Drill Pipe:	Length: 3110.00 ft	Diameter: 3.80 inches	Volume: 43.63 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 43.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3143.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	54.00 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			3123.00	
Shut In Tool	5.00			3128.00	
Hydraulic tool	5.00			3133.00	
Packer	5.00			3138.00	21.00 Bottom Of Top Packer
Packer	5.00			3143.00	
Blank Spacing	1.00			3144.00	
Recorder	0.00	8166	Inside	3144.00	
Perforations	29.00			3173.00	
Recorder	0.00	10991	Outside	3173.00	
Bullnose	3.00			3176.00	33.00 Bottom Packers & Anchor
Total Tool Length:	54.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC
PO Box 372
Hays KS 67601
ATTN: Ron Nelson

Sanders- Dortmund Unit 1-15
15-14s16w Ellis
Job Ticket: 23565 **DST#: 2**
Test Start: 2005.09.23 @ 17:39:57

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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.36 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

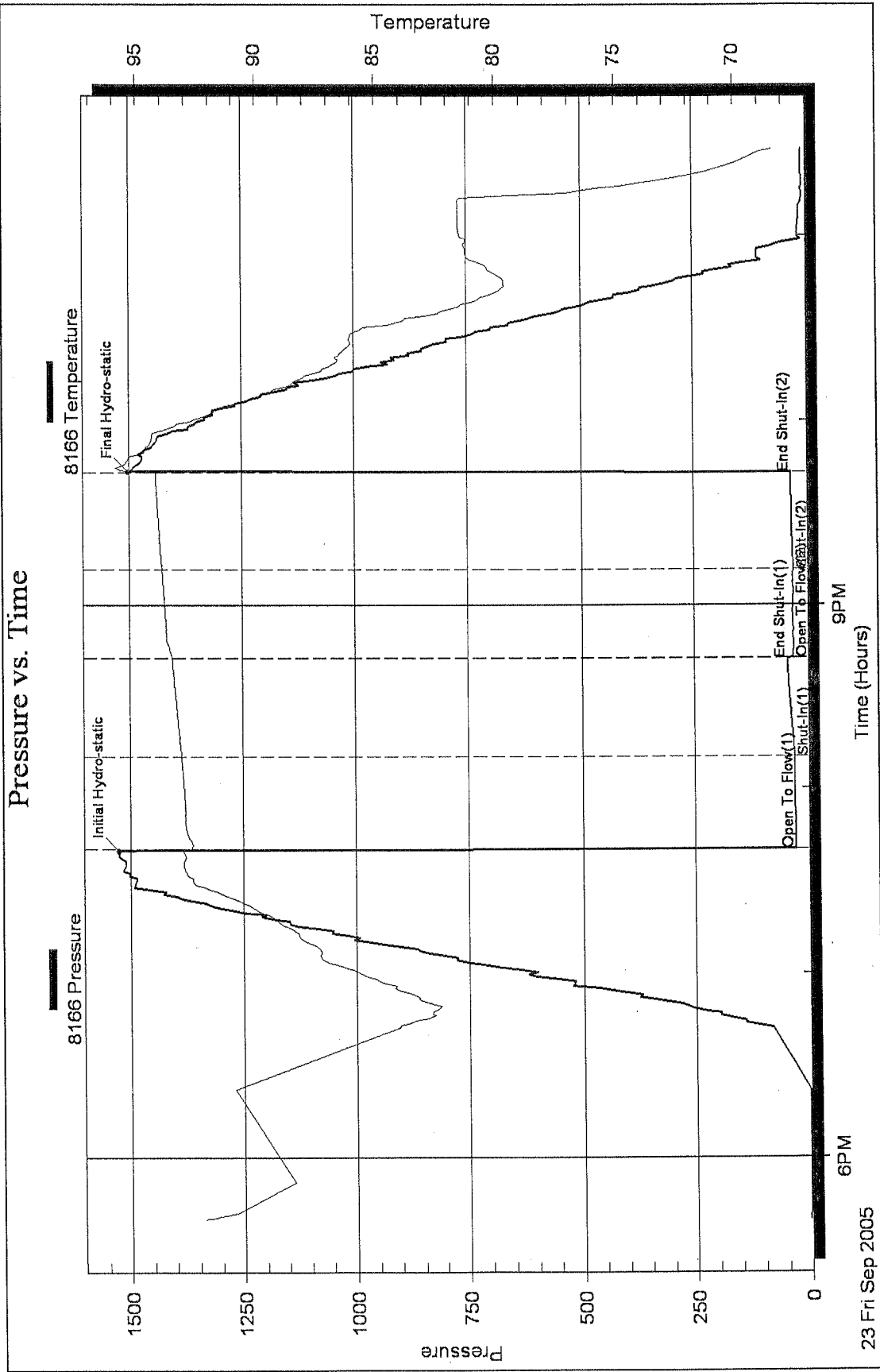
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Drilling mud	0.074

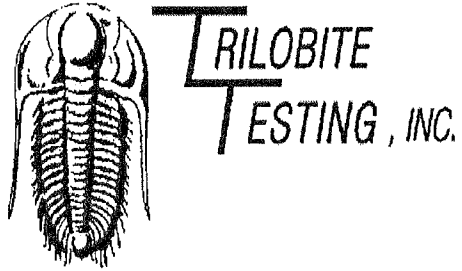
Total Length: 15.00 ft Total Volume: 0.074 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time



23 Fri Sep 2005

6PM 9PM
Time (Hours)



DRILL STEM TEST REPORT

Prepared For: **DNOC**

PO Box 372
Hays KS 67601

ATTN: Ron Nelson

15-14s16w Ellis

Sanders- Dortmund Unit 1-15

Start Date: 2005.09.24 @ 19:06:08

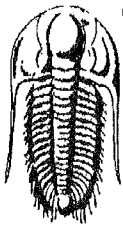
End Date: 2005.09.25 @ 02:06:23

Job Ticket #: 23566 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

DNOC

Sanders- Portland Unit 1-15

PO Box 372
Hays KS 67601

15-14s16w Ellis

Job Ticket: 23566

DST#: 3

ATTN: Ron Nelson

Test Start: 2005.09.24 @ 19:06:08

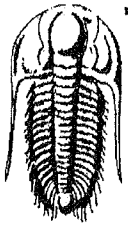
Tool Information

Drill Pipe:	Length: 3139.00 ft	Diameter: 3.80 inches	Volume: 44.03 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 44.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3170.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	71.00 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			3150.00	
Shut In Tool	5.00			3155.00	
Hydraulic tool	5.00			3160.00	
Packer	5.00			3165.00	21.00 Bottom Of Top Packer
Packer	5.00			3170.00	
Blank Spacing	1.00			3171.00	
Perforations	9.00			3180.00	
Change Over Sub	1.00			3181.00	
Recorder	0.00	8166	Inside	3181.00	
Drill Pipe	30.00			3211.00	
Change Over Sub	1.00			3212.00	
Recorder	0.00	10991	Outside	3212.00	
Perforations	5.00			3217.00	
Bullnose	3.00			3220.00	50.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC
PO Box 372
Hays KS 67601

Sanders- Portland Unit 1-15
15-14s16w Ellis
Job Ticket: 23566 **DST#: 3**
Test Start: 2005.09.24 @ 19:06:08

ATTN: Ron Nelson

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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

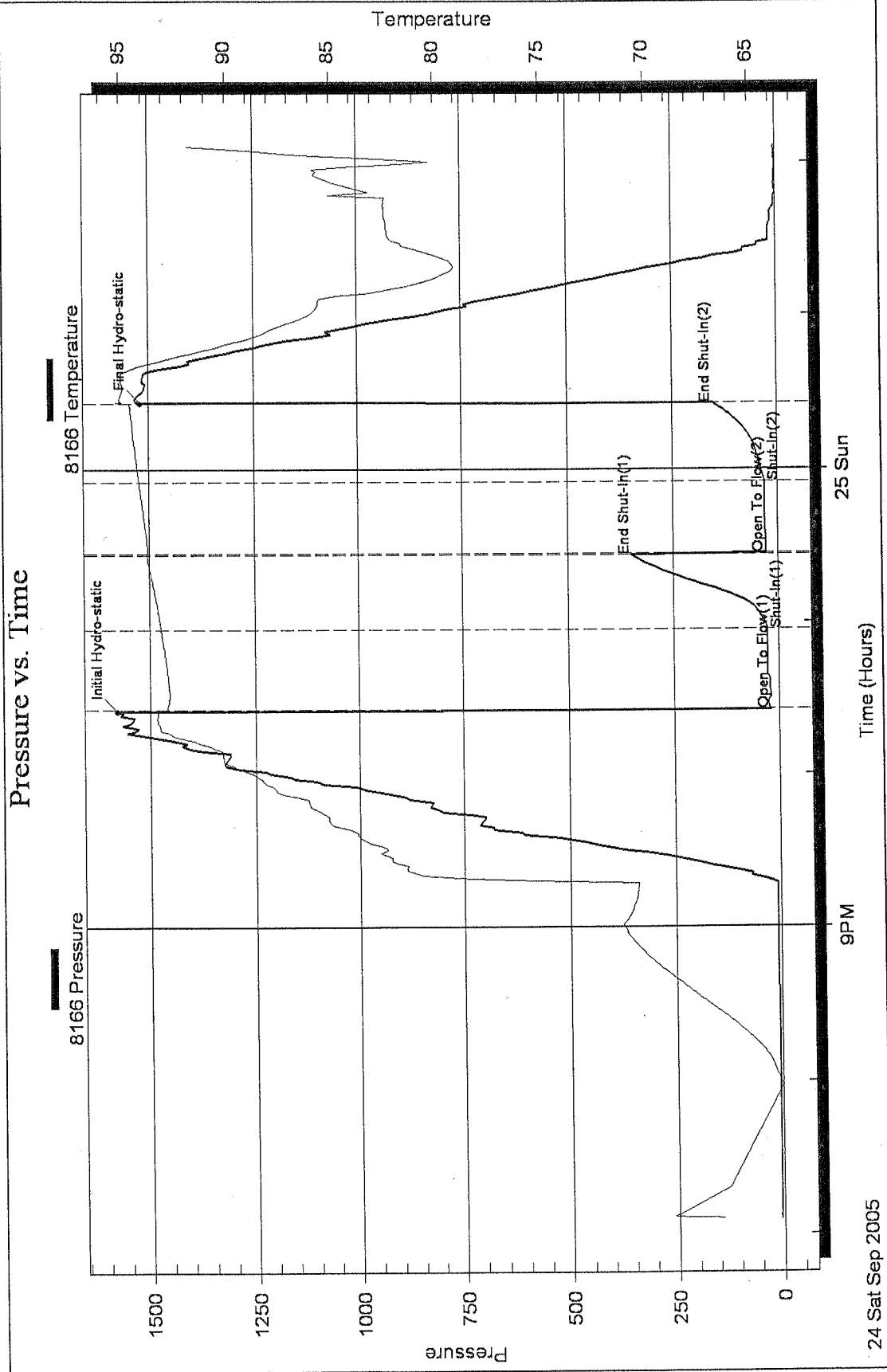
Recovery Information

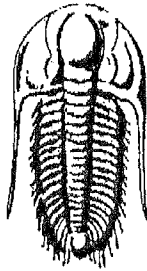
Recovery Table

Length ft	Description	Volume bbl
5.00	Slightly oil spotted drilling mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **DNOC**

PO Box 372
Hays KS 67601

ATTN: Ron Nelson

15-14s16w Ellis

Sanders- Dortmund Unit 1-15

Start Date: 2005.09.25 @ 20:20:37

End Date: 2005.09.26 @ 02:13:22

Job Ticket #: 23567 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

DNOC

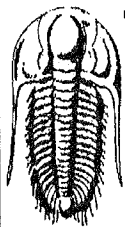
Sanders- Dortmund Unit 1-15

15-14s16w Ellis

DST # 4

ARB

2005.09.25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DNOC

Sanders- Portland Unit 1-15

PO Box 372
Hays KS 67601

15-14s16w Ellis

Job Ticket: 23567

DST#: 4

ATTN: Ron Nelson

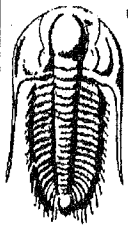
Test Start: 2005.09.25 @ 20:20:37

Tool Information

Drill Pipe:	Length: 3390.00 ft	Diameter: 3.80 inches	Volume: 47.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 47.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3430.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	3450.00 ft			
Interval between Packers:	20.00 ft			
Tool Length:	130.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3415.00	
Hydraulic tool	5.00			3420.00	
Packer	5.00			3425.00	20.00 Bottom Of Top Packer
Packer	5.00			3430.00	
Change Over Sub	1.00			3431.00	
Stubb	1.00			3432.00	
Recorder	0.00	8166	Inside	3432.00	
Perforations	17.00			3449.00	
Recorder	0.00	10991	Outside	3449.00	
Blank Off Sub	1.00			3450.00	20.00 Tool Interval
Packer	5.00			3455.00	
Stubb	1.00			3456.00	
Anchor	19.00			3475.00	
Change Over Sub	1.00			3476.00	
Recorder	0.00	11090	Below	3476.00	
Drill Pipe	64.00			3540.00	90.00 Bottom Packers & Anchor
Total Tool Length:	130.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC
PO Box 372
Hays KS 67601
ATTN: Ron Nelson

Sanders- Dortmund Unit 1-15
15-14s16w Ellis
Job Ticket: 23567 **DST#: 4**
Test Start: 2005.09.25 @ 20:20:37

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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.36 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
945.00	Salt water	12.983

Total Length: 945.00 ft Total Volume: 12.983 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8166

Inside

DNOC

15-14s16w Ellis

DST Test Number: 4

Pressure vs. Time

