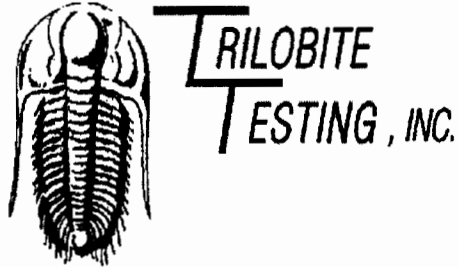


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## DRILL STEM TEST REPORT

Prepared For: **Trich Production, Inc.**

P.O.Box 1408  
Longview TX 75606

*15-097-21512*

ATTN: Terry McLeod

**9-28S-16W**

**Thorp Unit #1-9**

Start Date: 2003.09.27 @ 14:07:41

End Date: 2003.09.27 @ 21:50:41

Job Ticket #: 17107      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

Trich Production, Inc.

Thorp Unit #1-9

P.O.Box 1408  
Longview TX 75606

9-28S-16W

Job Ticket: 17107

DST#: 1

ATTN: Terry McLeod

Test Start: 2003.09.27 @ 14:07:41

## GENERAL INFORMATION:

Formation: **Bern**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:16:26  
 Time Test Ended: 21:50:41

Test Type: Conventional Bottom Hole  
 Tester: Darren L. Amerine  
 Unit No: 19

Interval: **3452.00 ft (KB) To 3490.00 ft (KB) (TVD)**  
 Total Depth: 3490.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2138.00 ft (KB)  
 2133.00 ft (CF)  
 KB to GR/CF: 5.00 ft

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## Serial #: 2346

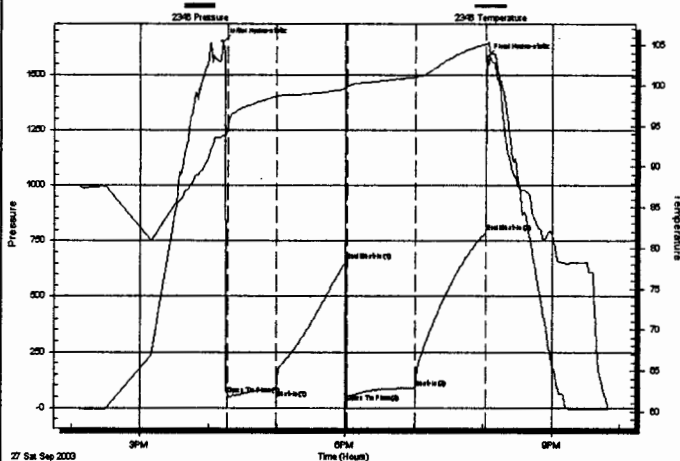
Inside

Press@RunDepth: 89.76 psig @ 3457.00 ft (KB)  
 Start Date: 2003.09.27 End Date: 2003.09.27  
 Start Time: 14:07:43 End Time: 21:50:41

Capacity: 7000.00 psig  
 Last Calib.: 2003.09.27  
 Time On Btm: 2003.09.27 @ 16:12:26  
 Time Off Btm: 2003.09.27 @ 20:03:26

TEST COMMENT: IF: Strong blow b.o.b in 30 sec. GTS in 6 mins. Gauge gas.  
 IS: Bled down n for 20 mins. no blow back.  
 FF: Strong blow b.o.b in 15 sec. Gauge gas.  
 FS: Bled down n for 10 mins. no blow back.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.82	93.73	Initial Hydro-static
4	60.72	95.01	Open To Flow (1)
47	82.17	98.63	Shut-in(1)
109	662.36	99.70	End Shut-in(1)
109	24.87	99.84	Open To Flow (2)
169	89.76	101.00	Shut-in(2)
230	790.05	105.12	End Shut-in(2)
231	1580.43	105.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3261' of gip	0.00
185.00	SGCM 10% gas 90% mud	1.46

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	18.00	118.69
Last Gas Rate	0.38	29.50	160.82
Max. Gas Rate	0.38	29.50	160.82



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Trich Production, Inc.

**Thorp Unit #1-9**

P.O.Box 1408  
Longview TX 75606

**9-28S-16W**

Job Ticket: 17107

**DST#: 1**

ATTN: Terry McLeod

Test Start: 2003.09.27 @ 14:07:41

**Tool Information**

Drill Pipe:	Length: 3321.55 ft	Diameter: 3.80 inches	Volume: 46.59 bbl	Tool Weight: 2100.00 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: 124.45 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume: 47.20 bbl		Tool Chased 8.50 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3452.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3429.00	
Shut In Tool	5.00			3434.00	
Hydraulic tool	5.00			3439.00	
Safety Joint	3.00			3442.00	
Packer	5.00			3447.00	24.00 Bottom Of Top Packer
Packer	5.00			3452.00	
Stubb	1.00			3453.00	
Anchor	4.00			3457.00	
Recorder	0.00	2346	Inside	3457.00	
Anchor	30.00			3487.00	
Recorder	0.00	10991	Outside	3487.00	
Bullnose	3.00			3490.00	38.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Trich Production, Inc.

**Thorp Unit #1-9**

P.O.Box 1408  
Longview TX 75606

**9-28S-16W**

Job Ticket: 17107

**DST#: 1**

ATTN: Terry McLeod

Test Start: 2003.09.27 @ 14:07:41

**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: 9.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.32 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
0.00	3261' of gip	0.000
185.00	SGCM 10%gas 90%mud	1.461

Total Length: 185.00 ft      Total Volume: 1.461 bbl

Num Fluid Samples: 1

Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:

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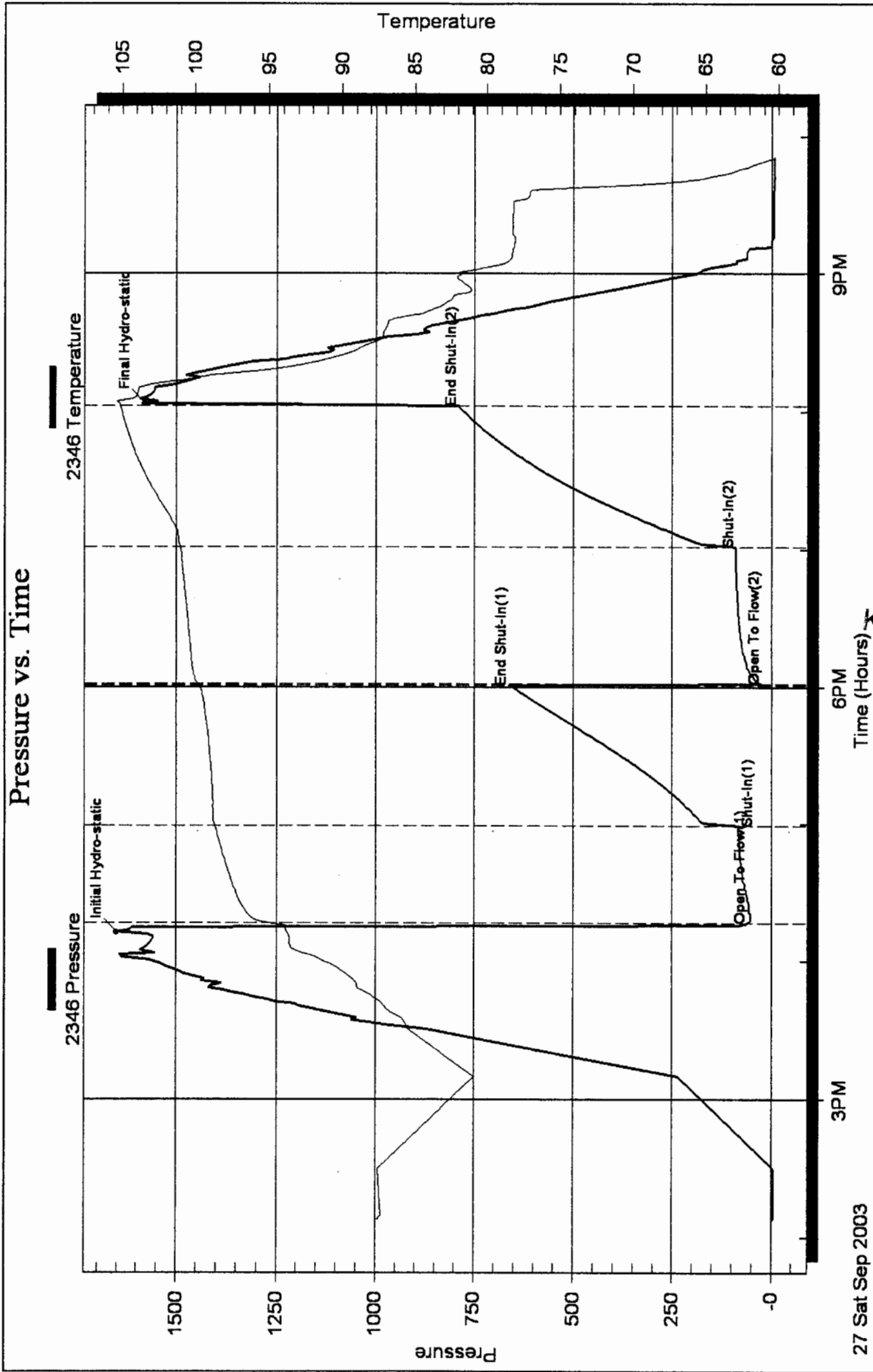
Serial #: 2346

Inside

Trich Production, Inc.

9-28S-16W

DST Test Number: 1



27 Sat Sep 2003

3PM

6PM

9PM

Time (Hours)

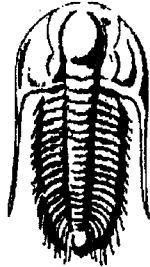
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Trilobite Testing, Inc

Ref. No: 17107

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**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Trich Production, Inc.**

P.O.Box 1408  
Longview TX 75606

ATTN: Terry McLeod

**9-28S-16W**

**Thorp Unit #1-9**

Start Date: 2003.09.30 @ 13:01:28

End Date: 2003.09.30 @ 19:54:56

Job Ticket #: 17108      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**

Trich Production, Inc.  
 P.O.Box 1408  
 Longview TX 75606  
 ATTN: Terry McLeod

**Thorp Unit #1-9**  
**9-28S-16W**  
 Job Ticket: 17108 **DST#:2**  
 Test Start: 2003.09.30 @ 13:01:28

**GENERAL INFORMATION:**

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:02:26  
 Time Test Ended: 19:54:56  
 Interval: **4615.00 ft (KB) To 4690.00 ft (KB) (TVD)**  
 Total Depth: 4690.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole  
 Tester: Darren L.Amerine  
 Unit No: 19  
 Reference Elevations: 2138.00 ft (KB)  
 2133.00 ft (CF)  
 KB to GR/CF: 5.00 ft

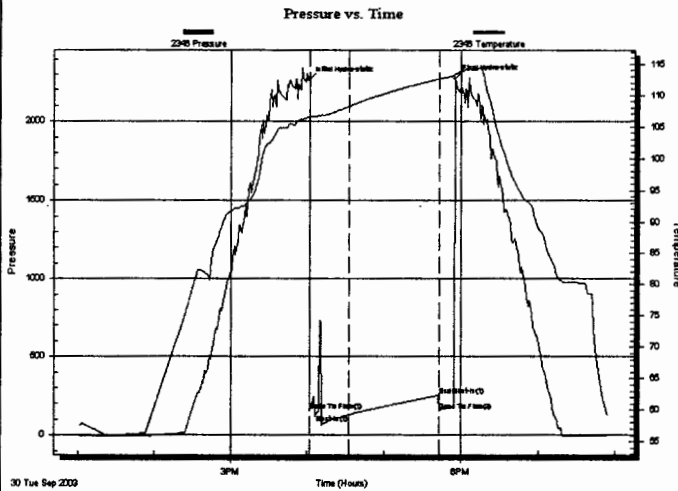
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**Serial #: 2346**

**Inside**

Press@RunDepth: 129.28 psig @ 4625.00 ft (KB) Capacity: 7000.00 psig  
 Start Date: 2003.09.30 End Date: 2003.09.30 Last Calib.: 2003.09.30  
 Start Time: 13:01:28 End Time: 19:54:56 Time On Btm: 2003.09.30 @ 16:01:26  
 Time Off Btm: 2003.09.30 @ 17:55:11

**TEST COMMENT:** IF:Weak surface blow w ait 7 mins.flush tool built to 1/2" in H2O bucket.  
 IS:Bled down n for 5 mins.no blow back.  
 FF:Dead blow pull tool.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2265.98	106.56	Initial Hydro-static
1	152.25	106.63	Open To Flow (1)
32	129.28	108.24	Shut-In (1)
102	252.58	112.60	End Shut-In (1)
102	153.41	112.60	Open To Flow (2)
114	2272.61	113.45	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	100 - Mud	0.07

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Trich Production, Inc.  
P.O.Box 1408  
Longview TX 75606  
ATTN: Terry McLeod

**Thorp Unit #1-9**  
**9-28S-16W**  
Job Ticket: 17108      **DST#: 2**  
Test Start: 2003.09.30 @ 13:01:28

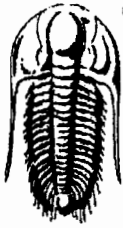
**Tool Information**

Drill Pipe:	Length: 4498.00 ft	Diameter: 3.80 inches	Volume: 63.10 bbl	Tool Weight: 2100.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 63.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4615.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4592.00	
Shut In Tool	5.00			4597.00	
Hydraulic tool	5.00			4602.00	
Safety Joint	3.00			4605.00	
Packer	5.00			4610.00	24.00      Bottom Of Top Packer
Packer	5.00			4615.00	
Stubb	1.00			4616.00	
Anchor	9.00			4625.00	
Recorder	0.00	2346	Inside	4625.00	
Blank Spacing	62.00			4687.00	
Recorder	0.00	10991	Outside	4687.00	
Bullnose	3.00			4690.00	75.00      Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Trich Production, Inc.  
P.O.Box 1408  
Longview TX 75606  
ATTN: Terry McLeod

**Thorp Unit #1-9**  
**9-28S-16W**  
Job Ticket: 17108      **DST#: 2**  
Test Start: 2003.09.30 @ 13:01:28

**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: 11.97 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 1.50 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 0.32 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	100 - 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:

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Serial #: 2346

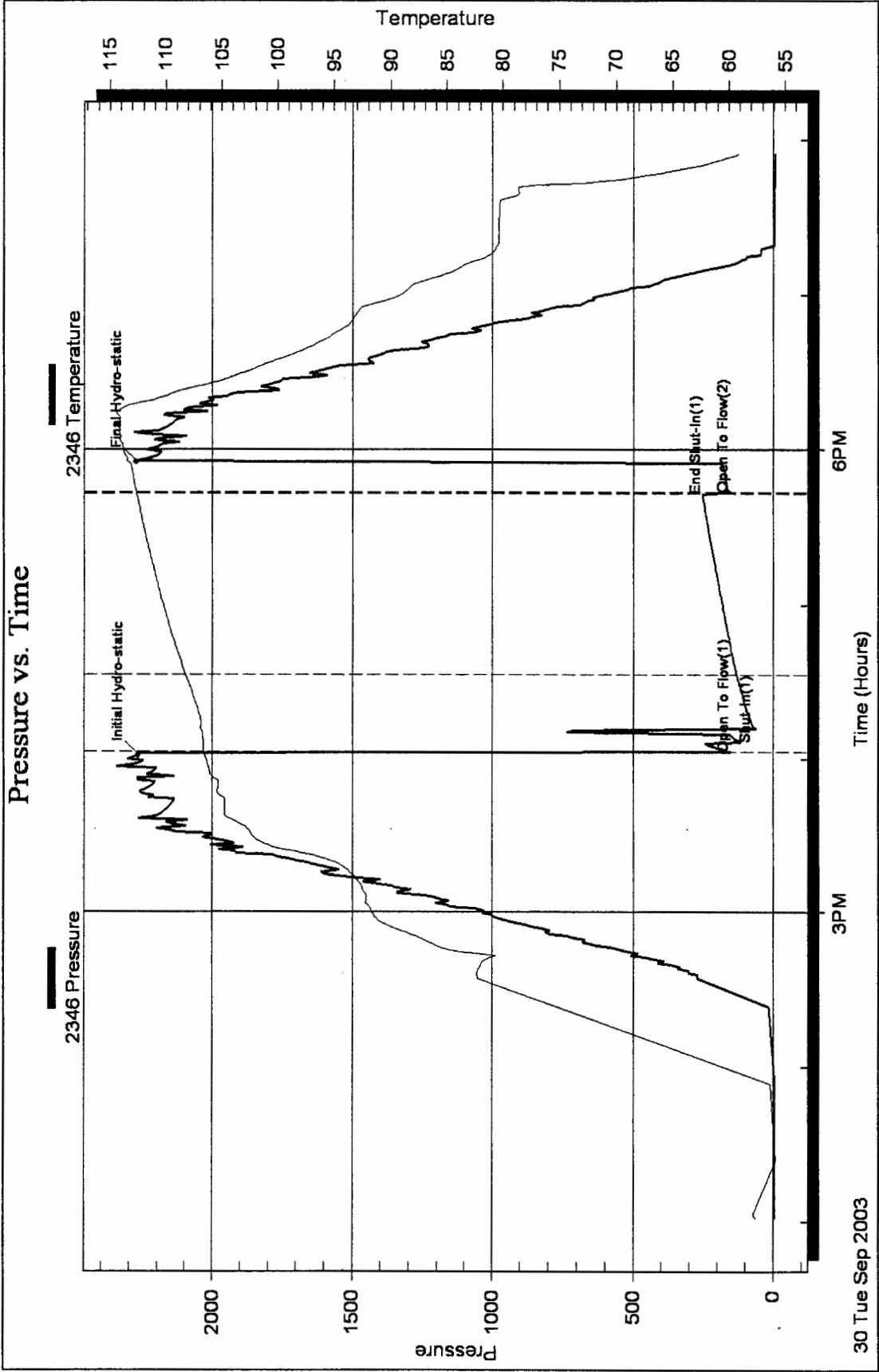
Inside

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9-28S-16W

DST Test Number: 2

### Pressure vs. Time



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Trilobite Testing, Inc

Ref. No: 17108

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