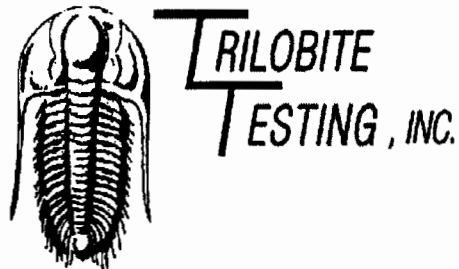


15-065-22965



## DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Road  
Phillipsburg, KS 67661

# ORIGINAL

ATTN: Randy Kilian

**32-9-21- Graham**

**Eichman #1**

Start Date: 2004.04.06 @ 04:38:20

End Date: 2004.04.06 @ 10:37:20

Job Ticket #: 18625                      DST #: 1

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KCC WICHITA

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



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TESTING, INC.**

**DRILL STEM TEST REPORT**

Pioneer Resources  
177 W. Limestone Road  
Phillipsburg, KS 67661  
ATTN: Randy Kilian

**Eichman #1**  
**32-9-21- Graham**  
Job Ticket: 18625      **DST#: 1**  
Test Start: 2004.04.06 @ 04:38:20

**GENERAL INFORMATION:**

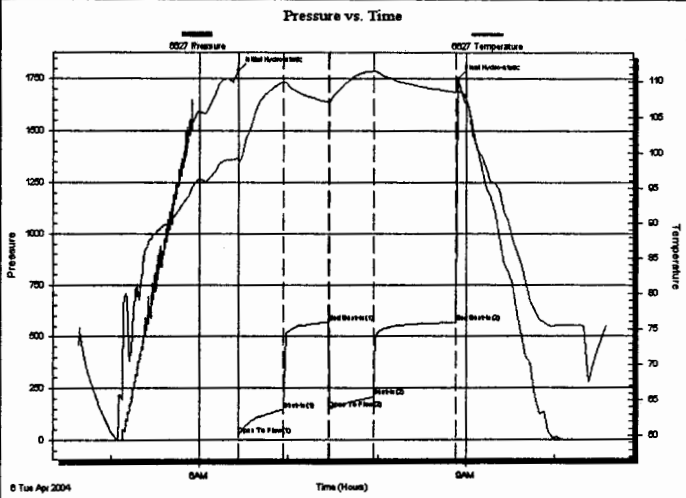
Formation: **LKC-A-C**  
Deviated: **No Whipstock:**      ft (KB)  
Time Tool Opened: 06:26:35  
Time Test Ended: 10:37:20  
Test Type: **Conventional Bottom Hole**  
Tester: **Jason McLemore**  
Unit No: **24**  
Interval: **3562.00 ft (KB) To 3616.00 ft (KB) (TVD)** **KCC WICHITA**  
Reference Elevations:      2340.00 ft (KB)  
Total Depth:      3616.00 ft (KB) (TVD)      2335.00 ft (CF)  
Hole Diameter:      7.80 inches      Hole Condition: **Good**      KB to GR/CF:      5.00 ft

**APR 27 2004**

**Serial #: 6627      Inside**  
Press@RunDepth:      208.69 psig @      3565.00 ft (KB)      Capacity:      7000.00 psig  
Start Date:      2004.04.06      End Date:      2004.04.06      Last Calib.:      1899.12.30  
Start Time:      04:38:22      End Time:      10:37:20      Time On Btm:      2004.04.06 @ 06:26:20  
Time Off Btm:      2004.04.06 @ 08:54:05

TEST COMMENT: **FFP-Good Blow , BOB in 13 min, No Blow**  
**FFP-Fair Blow , BOB in 24 min, Weak Surface Blow back**

**ORIGINAL**



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1789.70	99.09	Initial Hydro-static
1	20.62	98.64	Open To Flow (1)
31	145.97	109.82	Shut-In(1)
61	565.80	107.06	End Shut-In(1)
61	150.32	106.82	Open To Flow (2)
91	208.69	111.41	Shut-In(2)
147	566.27	108.48	End Shut-In(2)
148	1752.46	108.61	Final Hydro-static

**Recovery**

Length (ft)	Description	Volums (bbl)
398.00	Muddy Water	3.92
2.00	Oil	0.03

**Gas Rates**

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



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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Pioneer Resources  
177 W. Limestone Road  
Phillipsburg, KS 67661  
ATTN: Randy Kilian

**Eichman #1**  
**32-9-21- Graham**  
Job Ticket: 18625      **DST#: 1**  
Test Start: 2004.04.06 @ 04:38:20

### Tool Information

Drill Pipe:	Length: 3389.00 ft	Diameter: 3.80 inches	Volume: 47.54 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 48.44 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3562.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	75.00 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			3542.00	
Shut In Tool	5.00			3547.00	
Hydraulic tool	5.00			3552.00	
Packer	5.00			3557.00	21.00      Bottom Of Top Packer
Packer	5.00			3562.00	
Stubb	1.00			3563.00	
Perforations	1.00			3564.00	
Change Over Sub	1.00			3565.00	
Recorder	0.00	6627	Inside	3565.00	
Blank Spacing	32.00			3597.00	
Change Over Sub	1.00			3598.00	
Perforations	15.00			3613.00	
Recorder	0.00	13252	Outside	3613.00	
Bullnose	3.00			3616.00	54.00      Bottom Packers & Anchor

**Total Tool Length: 75.00**

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TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pioneer Resources

**Eichman #1**

177 W. Limestone Road  
Phillipsburg, KS 67661

**32-9-21- Graham**

Job Ticket: 18625

**DST#: 1**

ATTN: Randy Killian

Test Start: 2004.04.06 @ 04:38:20

## 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:

38000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
398.00	Muddy Water	3.916
2.00	Oil	0.028

Total Length: 400.00 ft

Total Volume: 3.944 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

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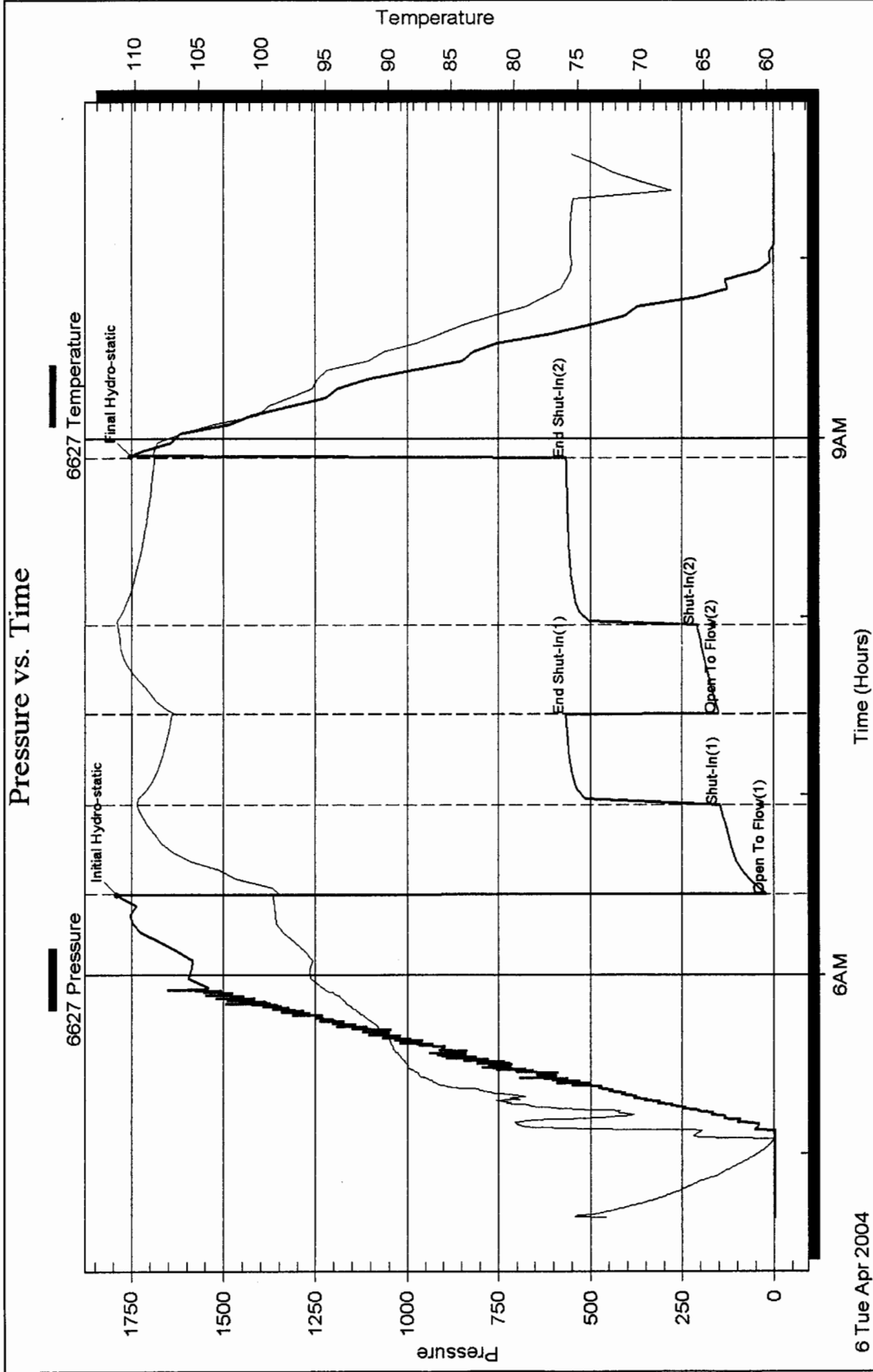
Serial #: 6627

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32-9-21- Graham

DST Test Number: 1



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Ref. No: 18625

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## DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Road  
Phillipsburg, KS 67661

ATTN: Randy Kilian

**32-9-21- Graham**

**Eichman #1**

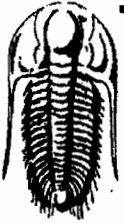
Start Date: 2004.04.07 @ 12:36:08

End Date: 2004.04.07 @ 16:22:23

Job Ticket #: 17379                      DST #: 2

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**KCC WICHITA**

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Pioneer Resources  
 177 W. Limestone Road  
 Phillipsburg, KS 67661  
 ATTN: Randy Kilian

**Eichman #1**  
**32-9-21- Graham**  
 Job Ticket: 17379      **DST#: 2**  
 Test Start: 2004.04.07 @ 12:36:08

**GENERAL INFORMATION:**

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened:  
 Time Test Ended: 16:22:23  
 Interval: **3860.00 ft (KB) To 3928.00 ft (KB) (TVD)**  
 Total Depth: 3928.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good

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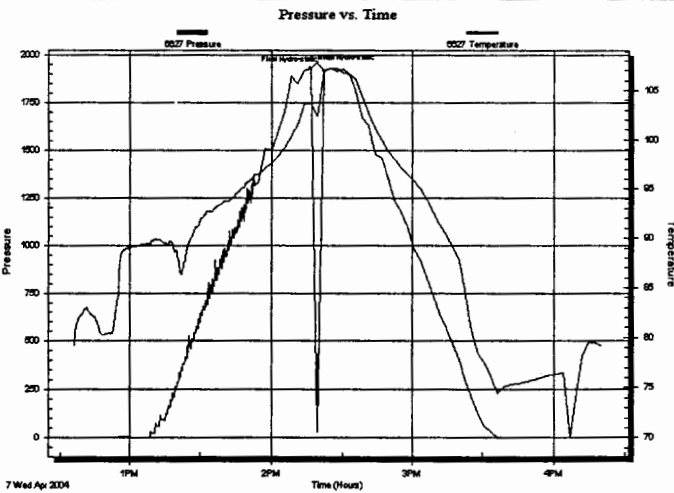
Test Type: Conventional Bottom Hole  
 Tester: Jason McLemore  
 Unit No: 24  
 Reference Elevations: 2340.00 ft (KB)  
 2335.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6627**

Inside

Press@RunDepth: psig @ 3863.00 ft (KB)      Capacity: 7000.00 psig  
 Start Date: 2004.04.07      End Date: 2004.04.07      Last Calib.: 1899.12.30  
 Start Time: 12:36:10      End Time: 16:22:23      Time On Btm: 2004.04.07 @ 14:16:38  
 Time Off Btm: 2004.04.07 @ 14:22:08

TEST COMMENT: IF- Packer Failure



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1932.52	103.62	Initial Hydro-static
6	1921.36	106.97	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
480.00	MJD	5.07

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Pioneer Resources  
177 W. Limestone Road  
Phillipsburg, KS 67661  
ATTN: Randy Kilian

**Eichman #1**  
**32-9-21- Graham**  
Job Ticket: 17379      **DST#: 2**  
Test Start: 2004.04.07 @ 12:36:08

### Tool Information

Drill Pipe:	Length: 3672.00 ft	Diameter: 3.80 inches	Volume: 51.51 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 53000.00 lb
			<u>Total Volume: 52.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3860.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	89.00 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			3840.00	
Shut In Tool	5.00			3845.00	
Hydraulic tool	5.00			3850.00	
Packer	5.00			3855.00	21.00 Bottom Of Top Packer
Packer	5.00			3860.00	
Stubb	1.00			3861.00	
Perforations	1.00			3862.00	
Change Over Sub	1.00			3863.00	
Recorder	0.00	6627	Inside	3863.00	
Blank Spacing	31.00			3894.00	
Change Over Sub	1.00			3895.00	
Perforations	30.00			3925.00	
Recorder	0.00	13252	Outside	3925.00	
Bullnose	3.00			3928.00	68.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**

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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Pioneer Resources  
177 W. Limestone Road  
Phillipsburg, KS 67661  
ATTN: Randy Kilian

**Eichman #1**  
**32-9-21- Graham**  
Job Ticket: 17379      **DST#: 2**  
Test Start: 2004.04.07 @ 12:36:08

**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: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
480.00	MUD	5.066

Total Length: 480.00 ft      Total Volume: 5.066 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

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Serial #: 6627

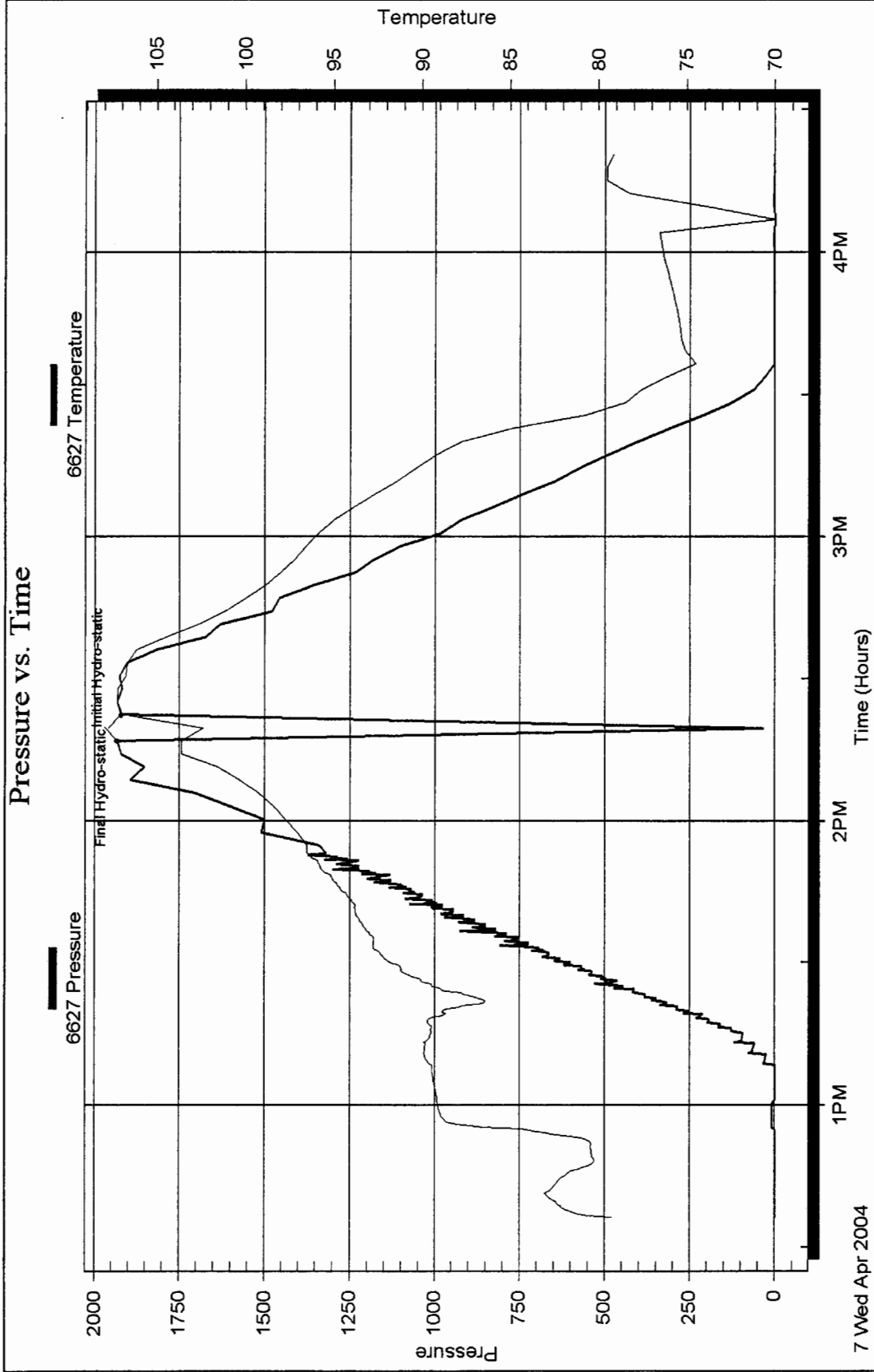
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32-9-21- Graham

DST Test Number: 2

### Pressure vs. Time



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Ref. No: 17379

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