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DEMONSTRATION OF BIOVENTING FOR REMEDIATION OF CHLORINATED SOLVENT CONTAMINATION AT HILL AIR FORCE BASE OGDEN, UTAH

DATA PACKAGE

VOLUME II

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ENVIRONMENTAL RESTORATION DEPARTMENT
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COLUMBUS OH 43201-2693

25 JANUARY 1999

FINAL REPORT: 1 JUNE 1995 - 31 JANUARY 1999

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13. ABSTRACT *(Maximum 200 words)*

This report describes the evaluation of the application of bioventing technology to non-petroleum hydrocarbon impacted soils. Bioventing has been thoroughly demonstrated to be a cost-effective remediation technology for a variety of petroleum hydrocarbons. This work included a laboratory column study and a field pilot-scale demonstration to evaluate the potential for applying bioventing to treat dichlorobenzenes in order to expand the list of contaminants impacting Air Force and other Department of Defense Installations beyond petroleum hydrocarbons. A pilot-scale bioventing system consisting of a single vent well and eight tri-level in situ soil gas monitoring points was installed at Hill Air Force Base, Utah. The system was designed to provide oxygen to an anoxic volume of soil and for monitoring the aeration effectiveness and conducting in situ respiration rates. Soil samples were collected at system installation and after approximately one year of system operation. Significant reductions in dichlorobenzene concentrations were observed over the one year demonstration, only a small portion of which could be accounted for by volatilization. In situ respiration tests indicated that significant biodegradation and supported the results observed in the field. The demonstration was supported by personnel in the Hill Air Force Base Environmental Management Office.
This volume contains the data and supporting analysis for the project.

14. SUBJECT TERMS
Bioventing, Solvent Remediation, Nonpetroleum Hydrocarbons, DCB

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PLAN VIEW SLICES

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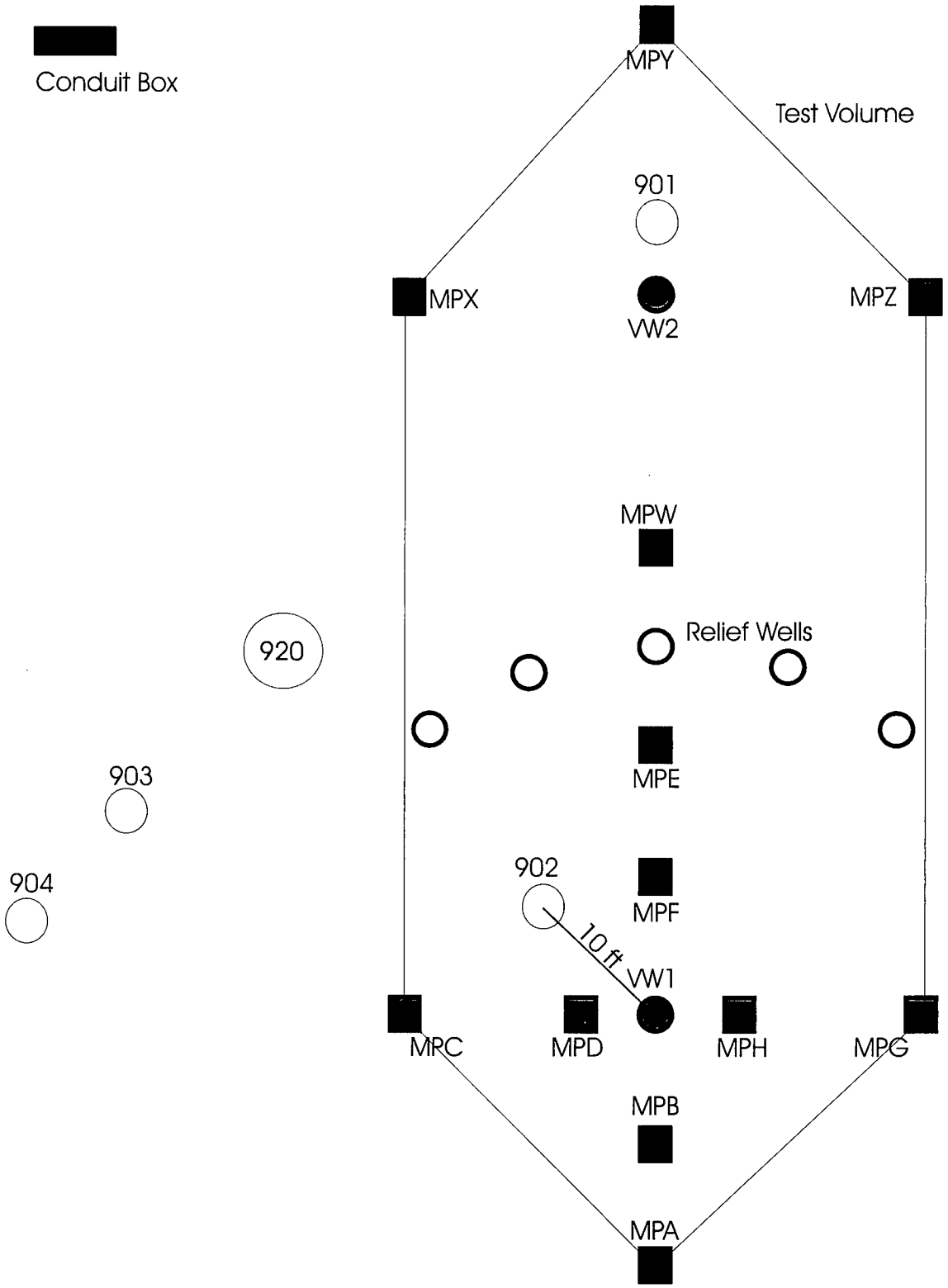
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10 ft
VW1
MPC
MPD
MPH
MPG
MPB
MPA

Cross Sectional View Slices through 3D Block Diagrams of 1,2-DCB along Wells MP-A - MP-Y **A**) July '97, **B**) July '98

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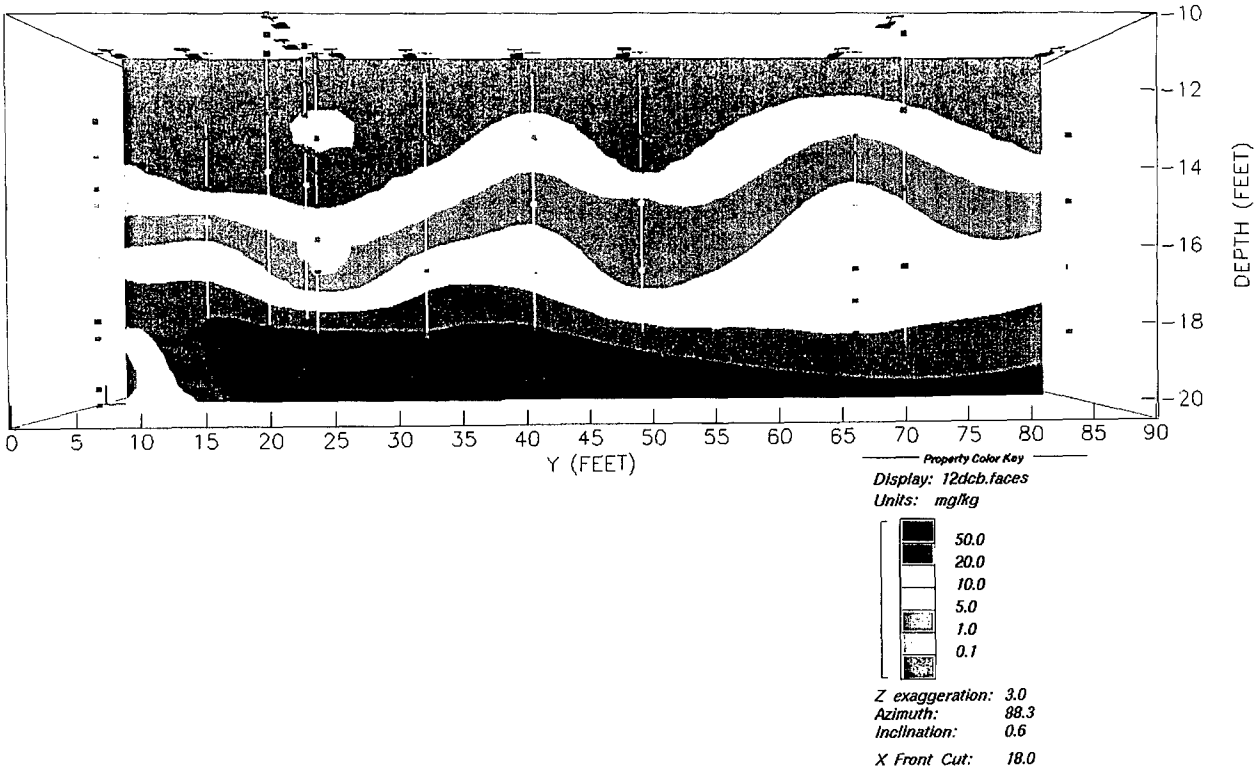

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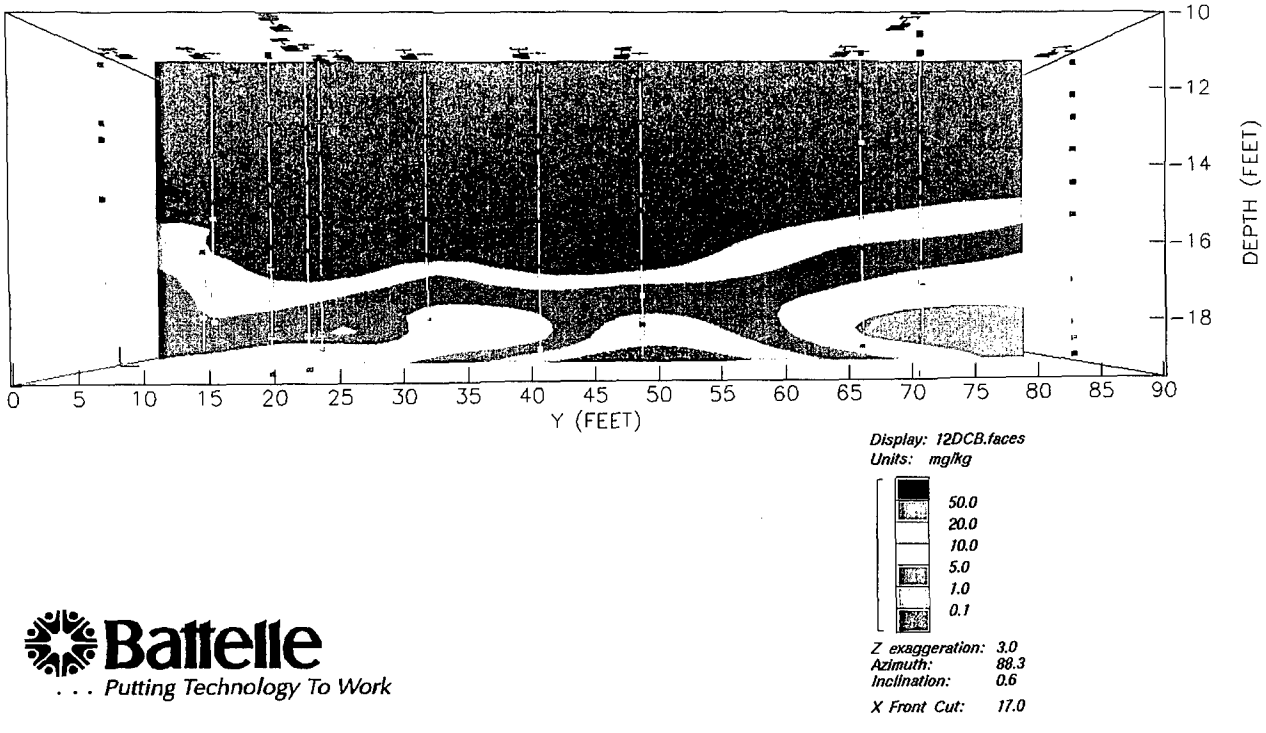

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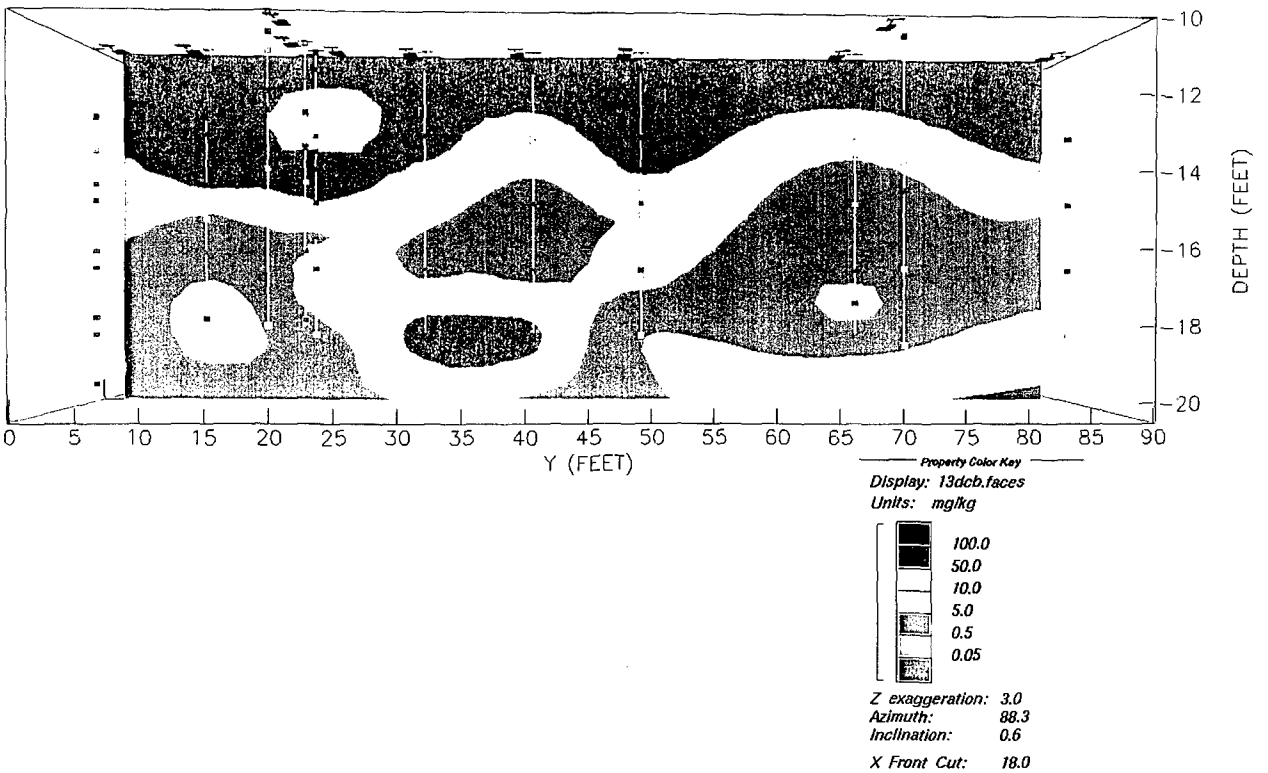

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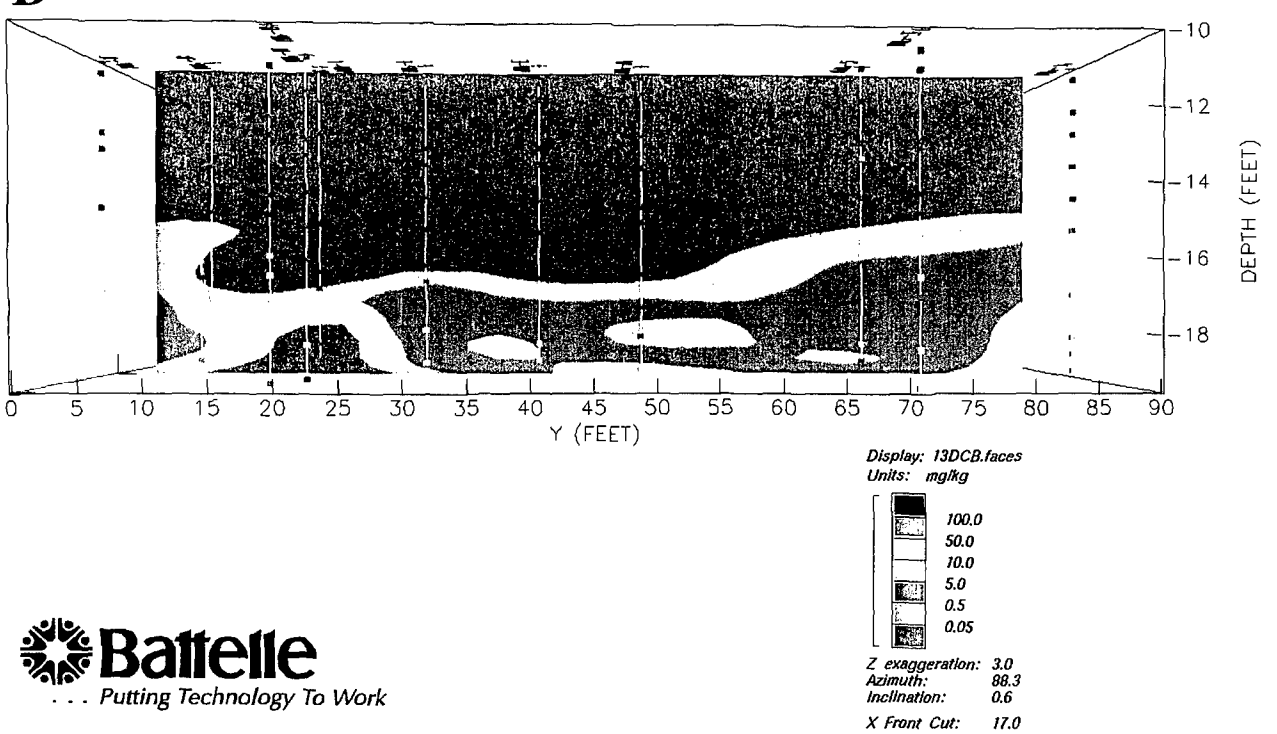

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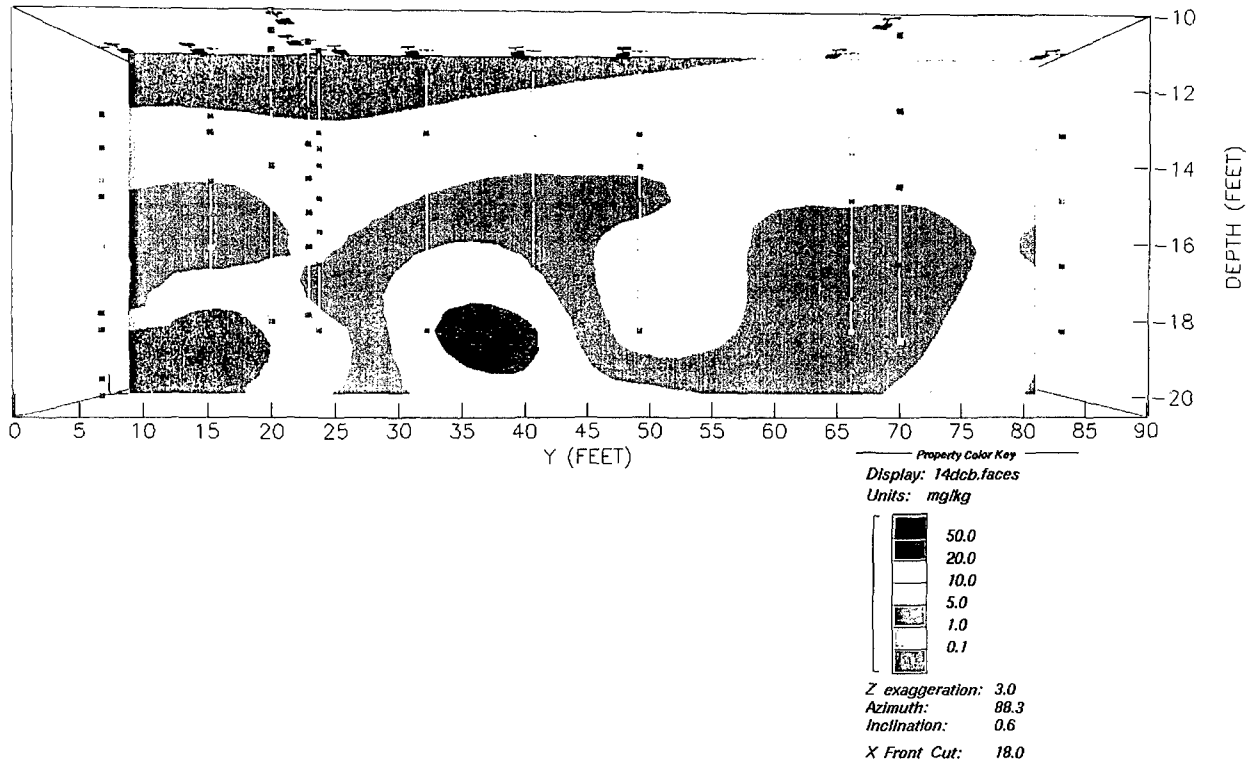

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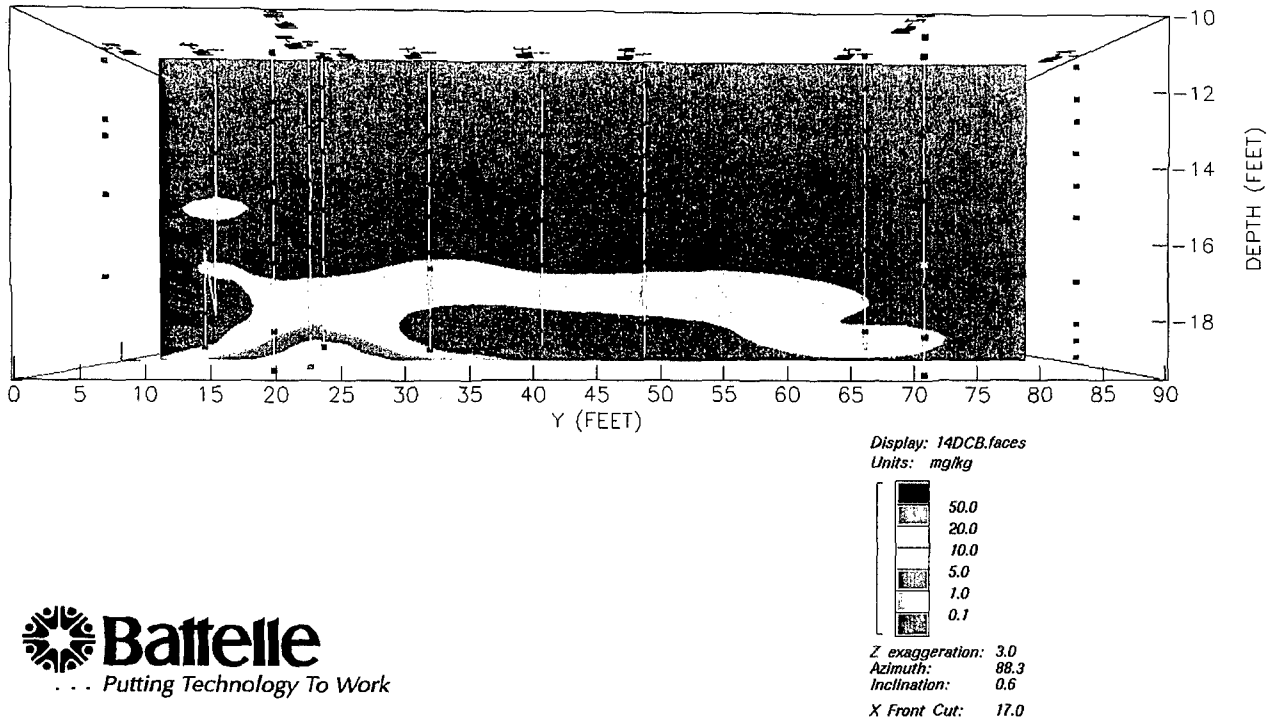

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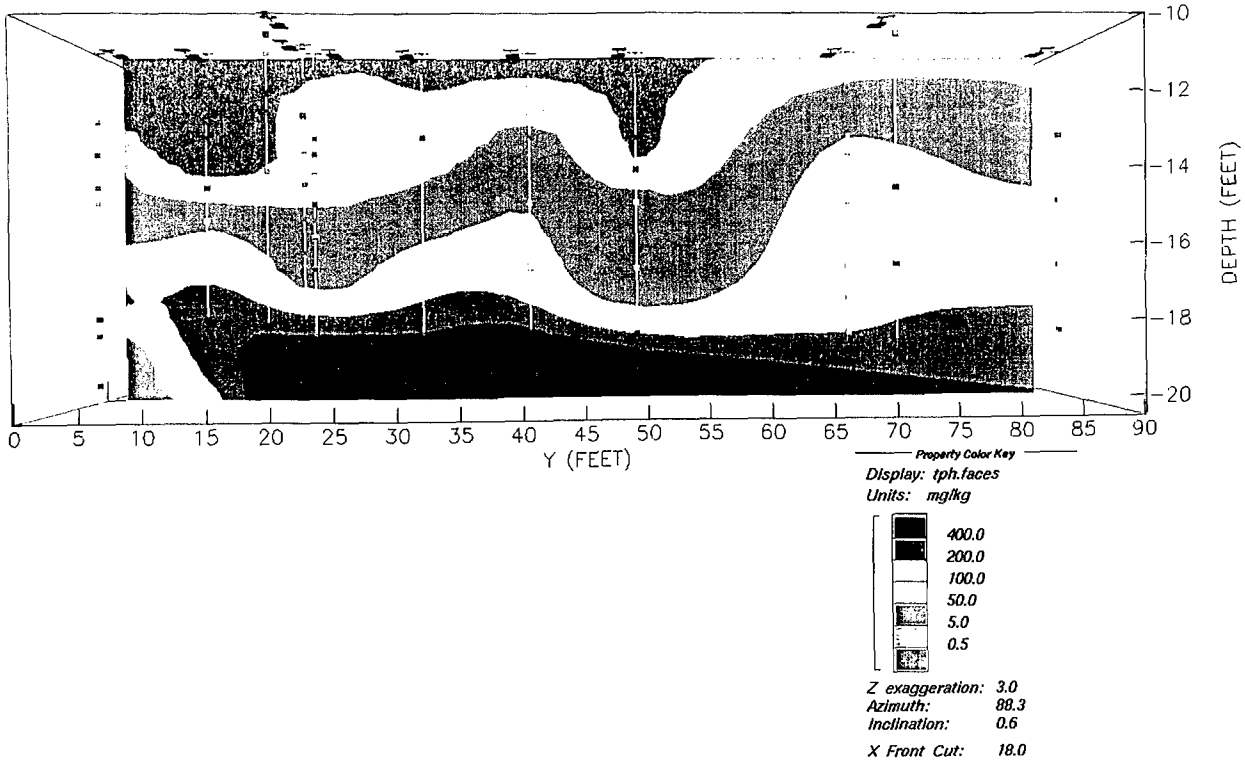

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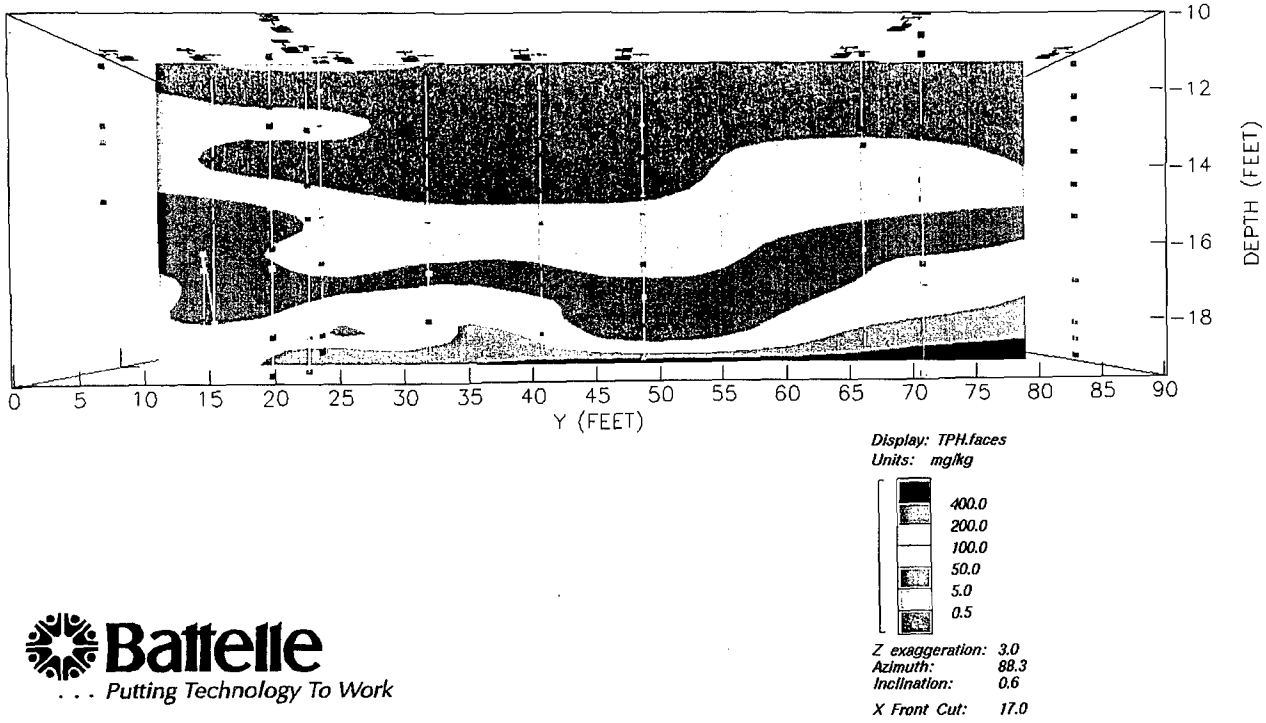

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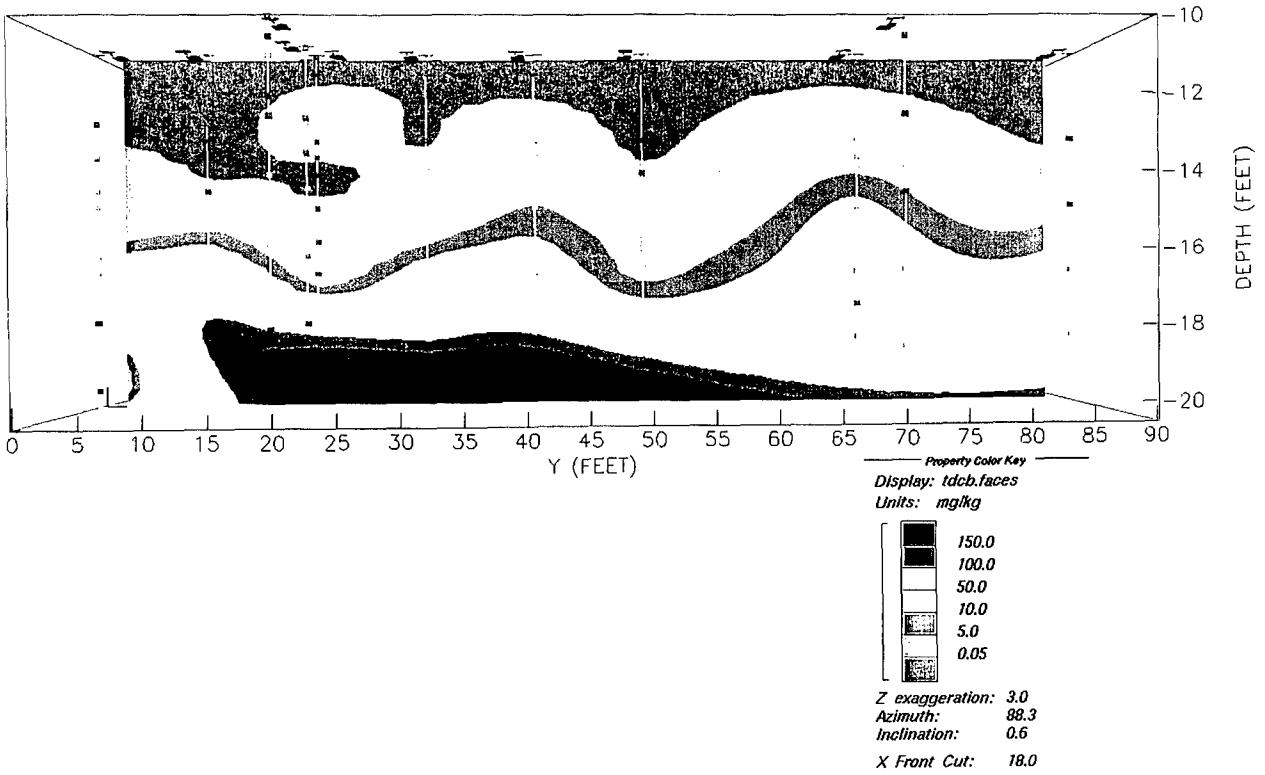

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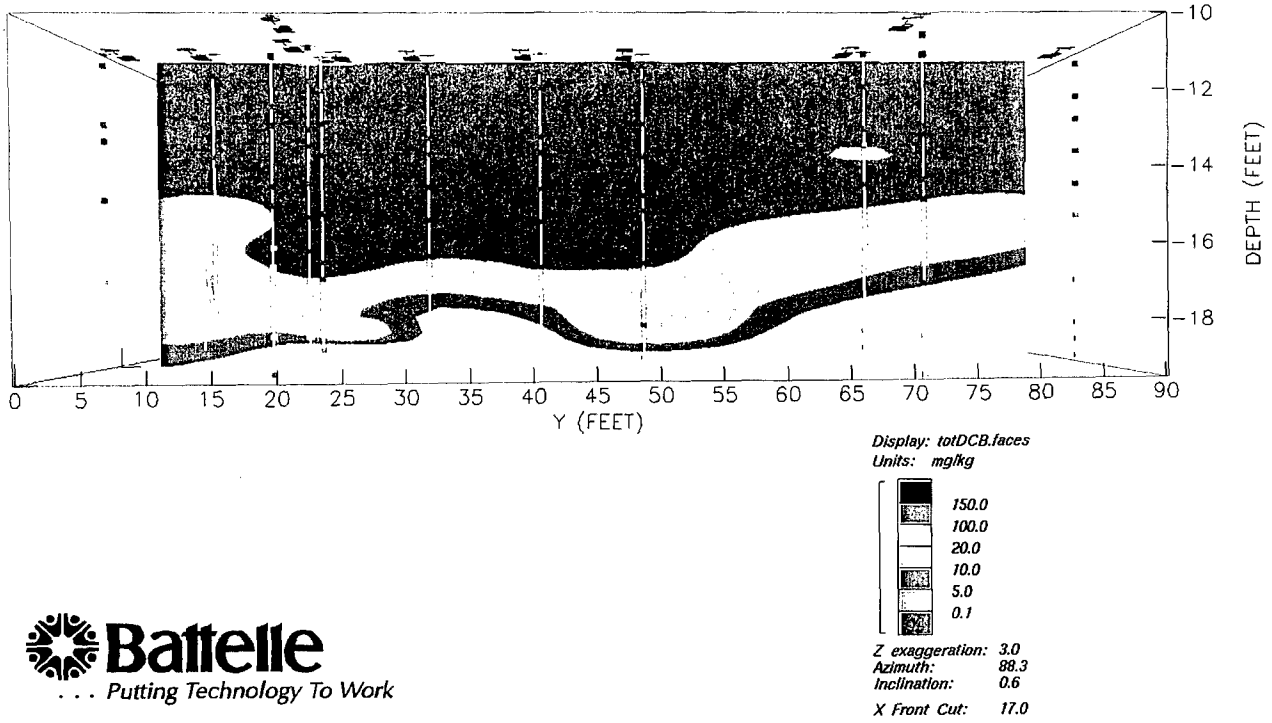

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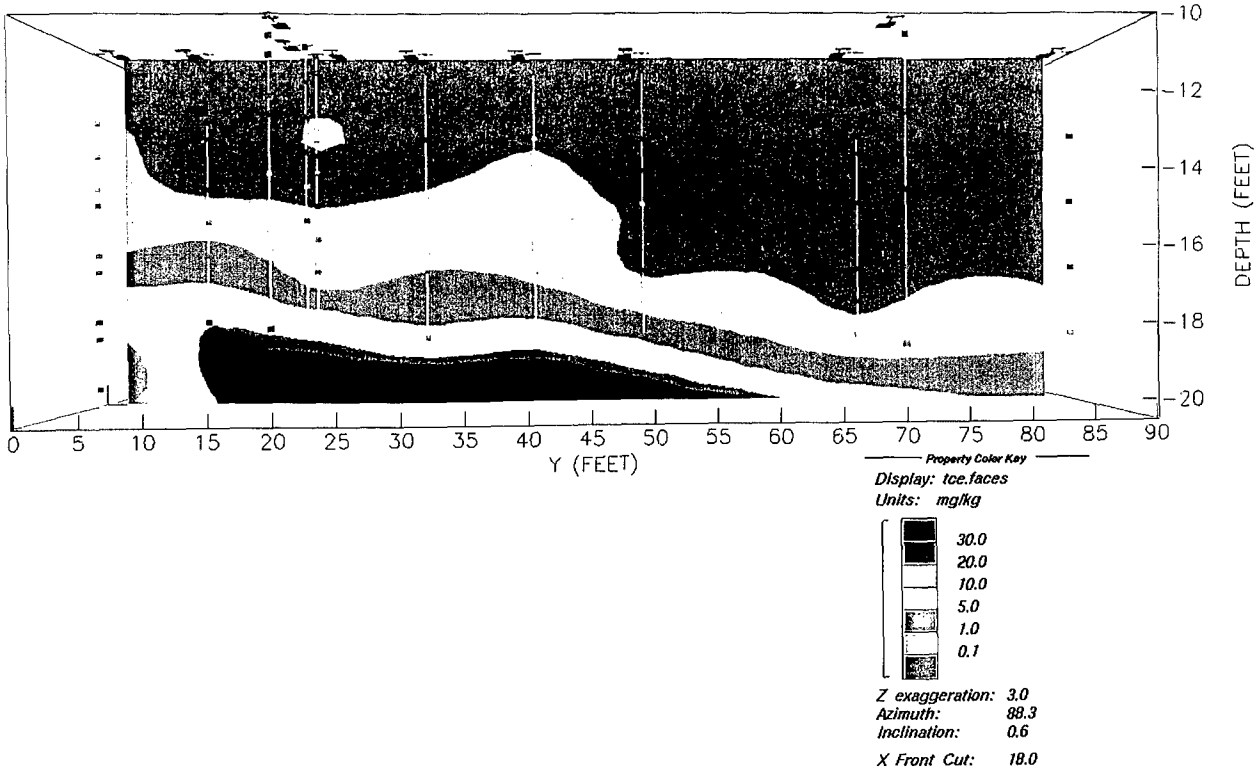

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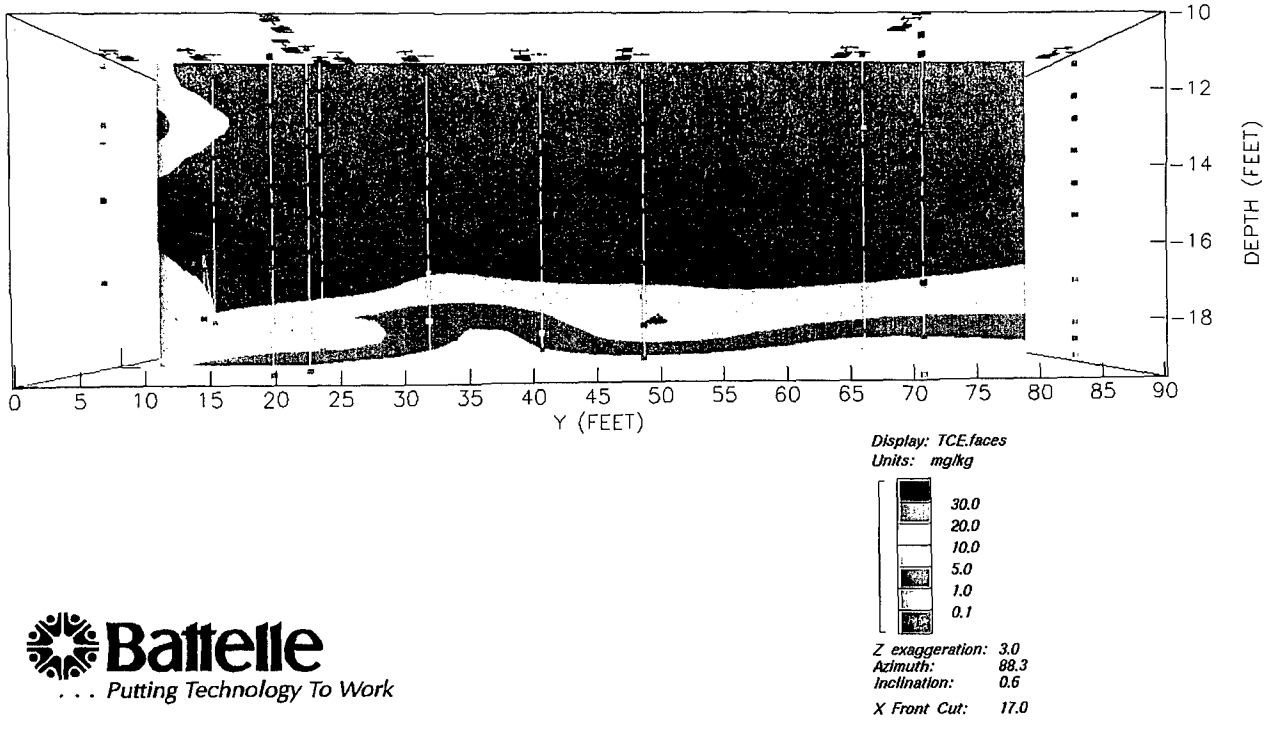

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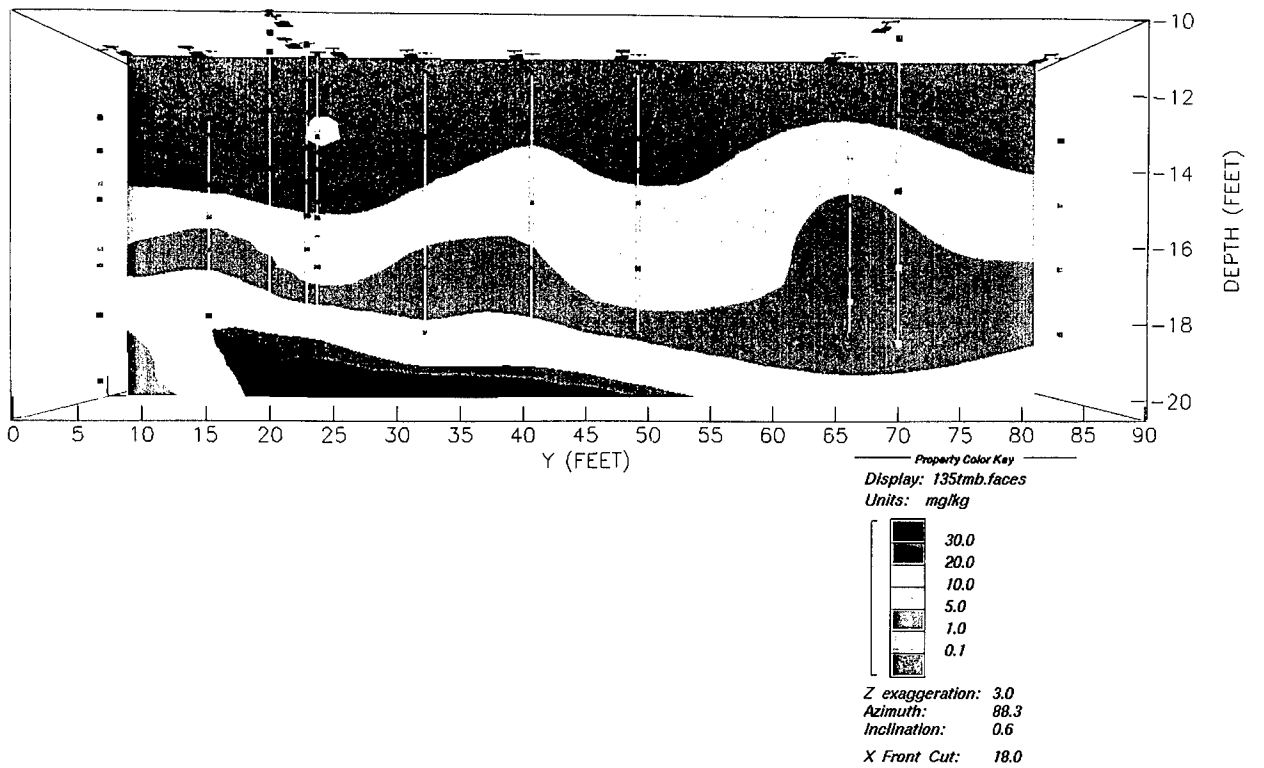

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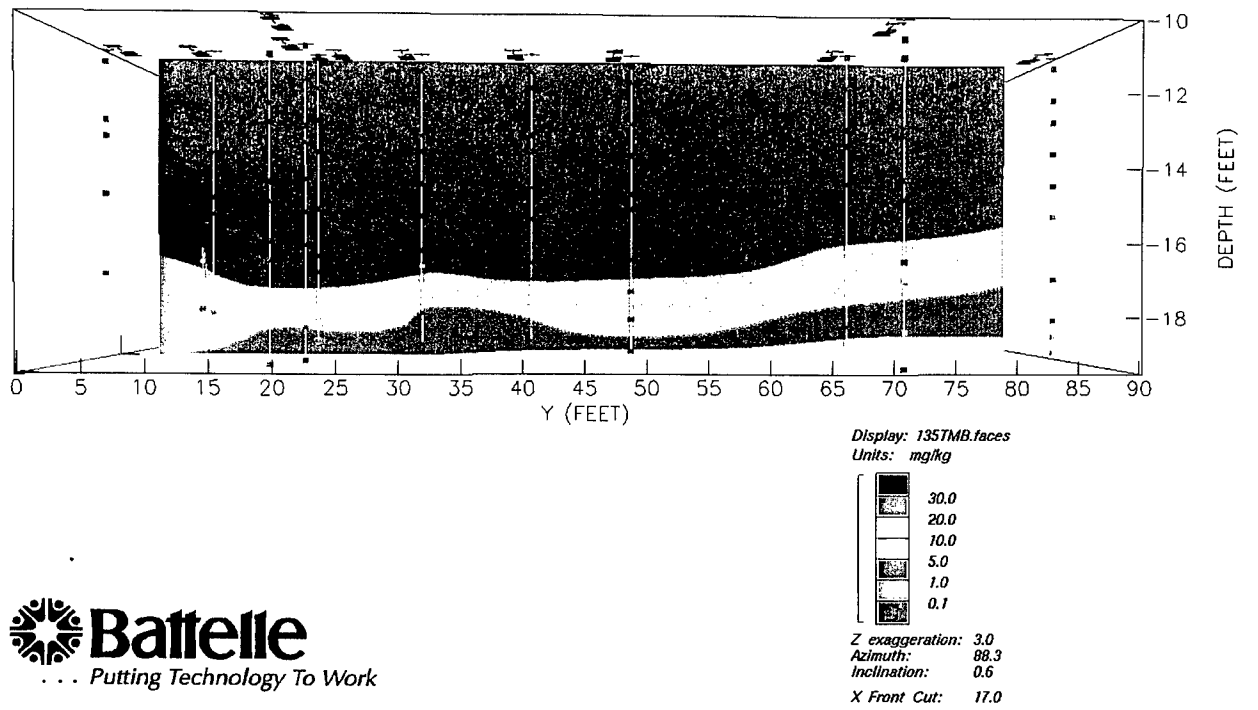

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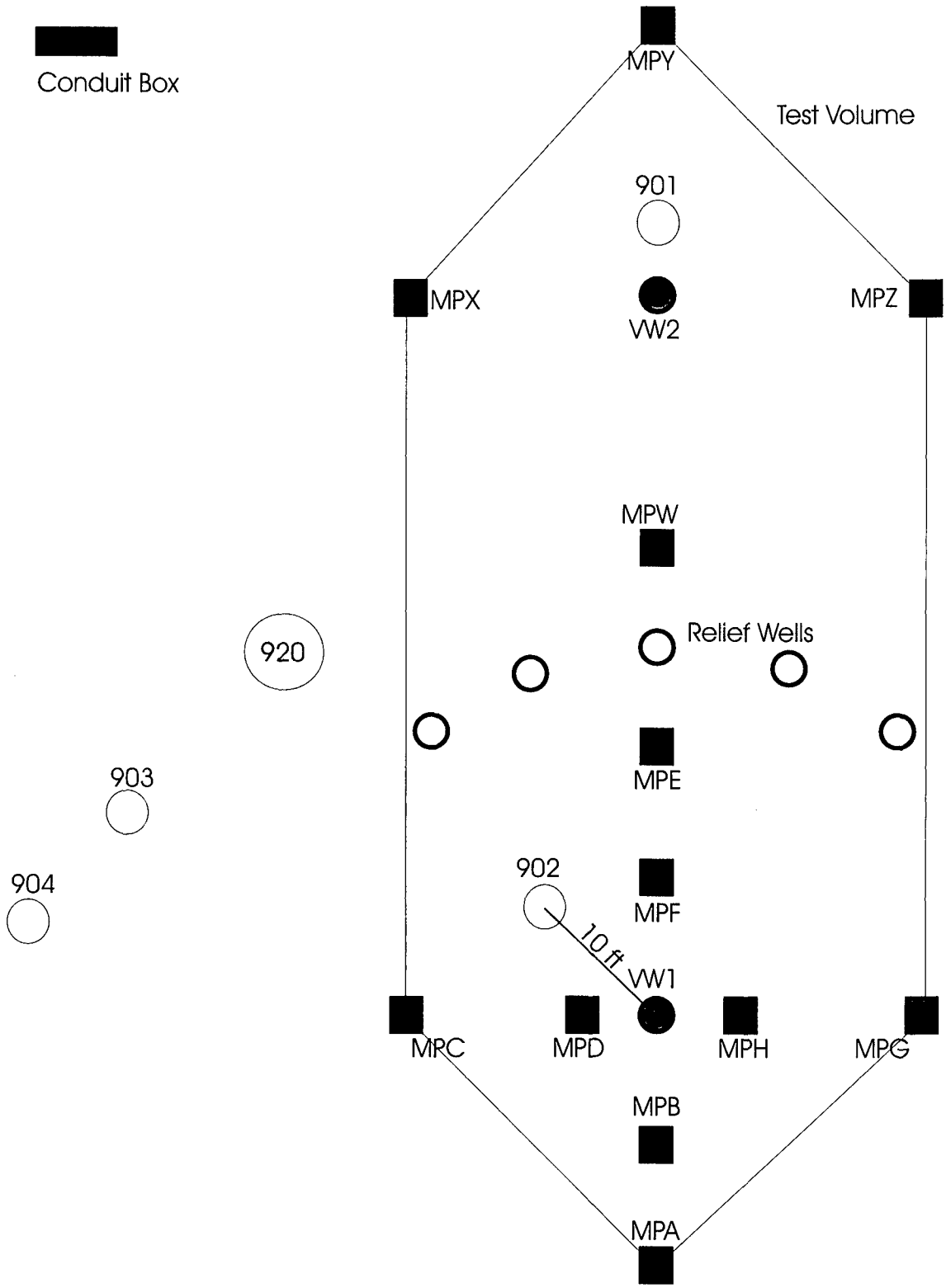
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PlanView Slices through 3D Block Diagrams of 1,4-DCB at 12' BLS A) July '97, B) July '98

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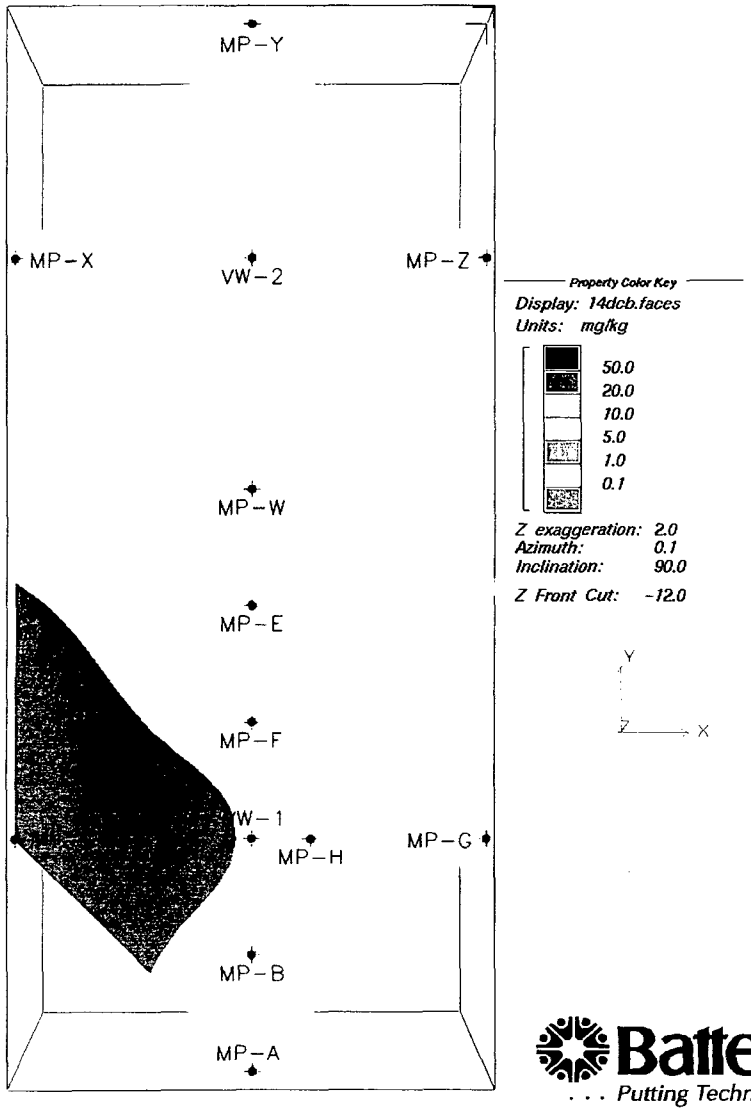

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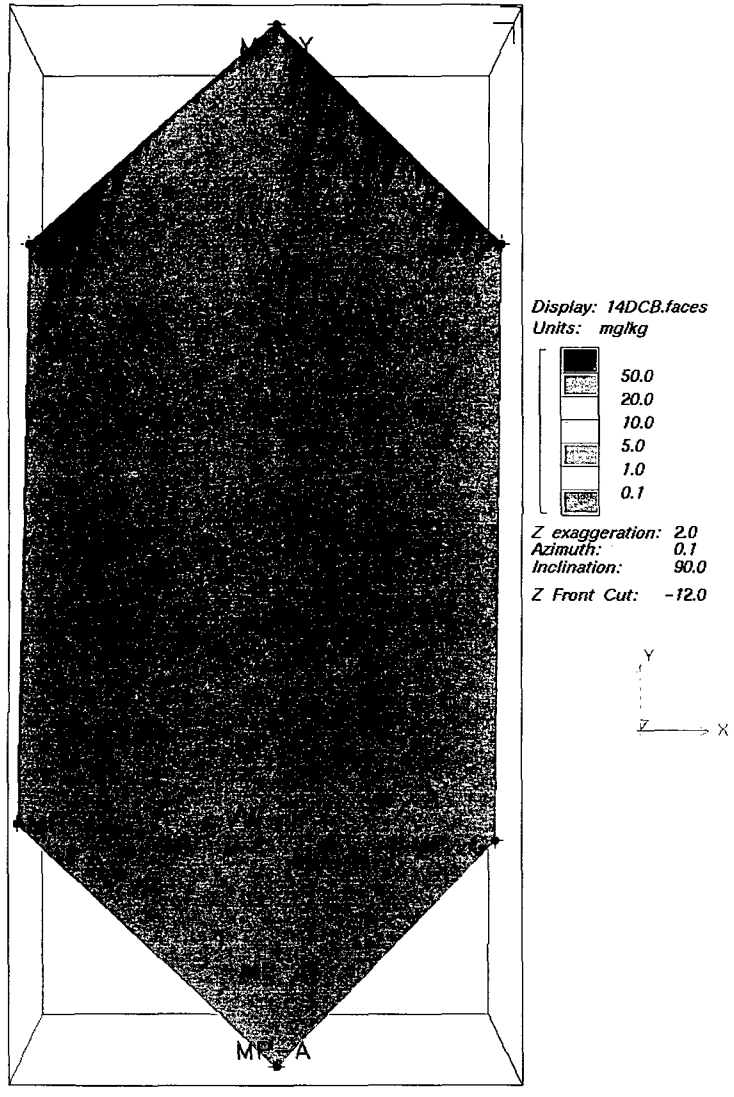

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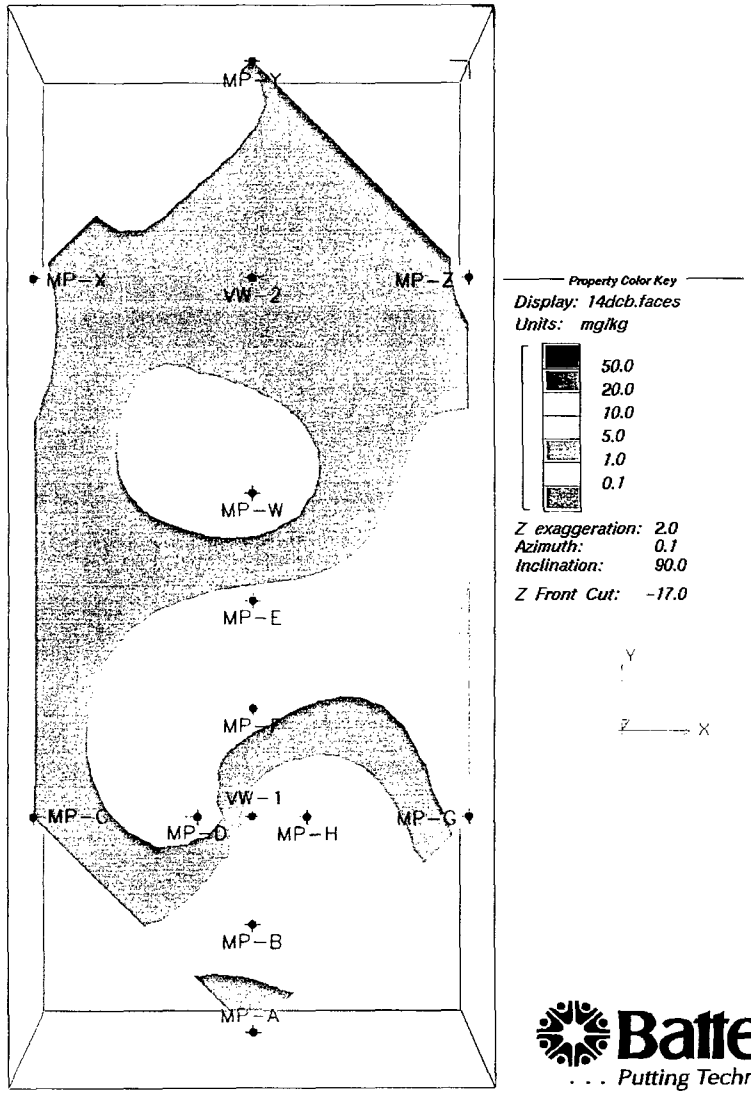

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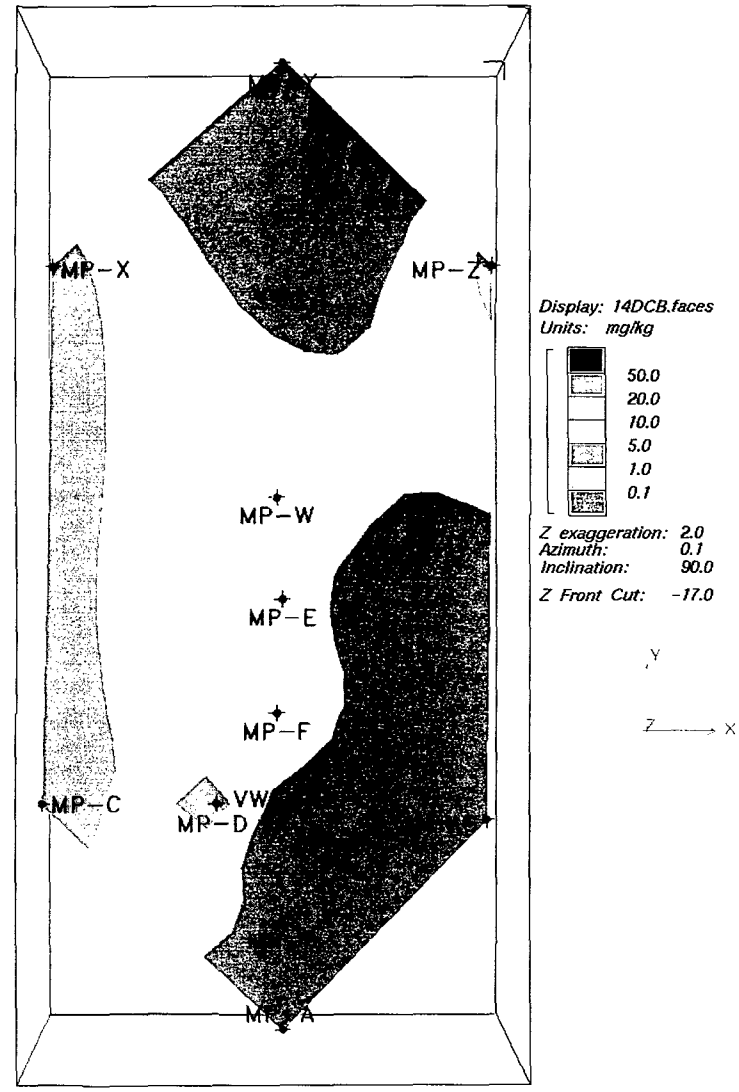

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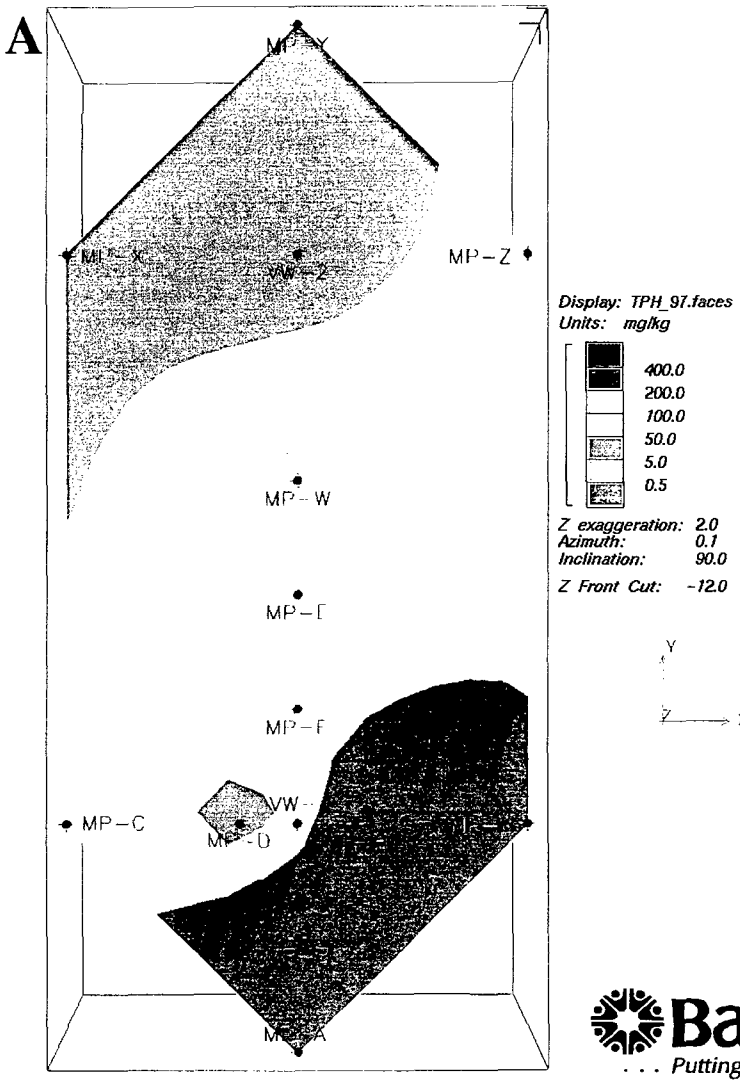

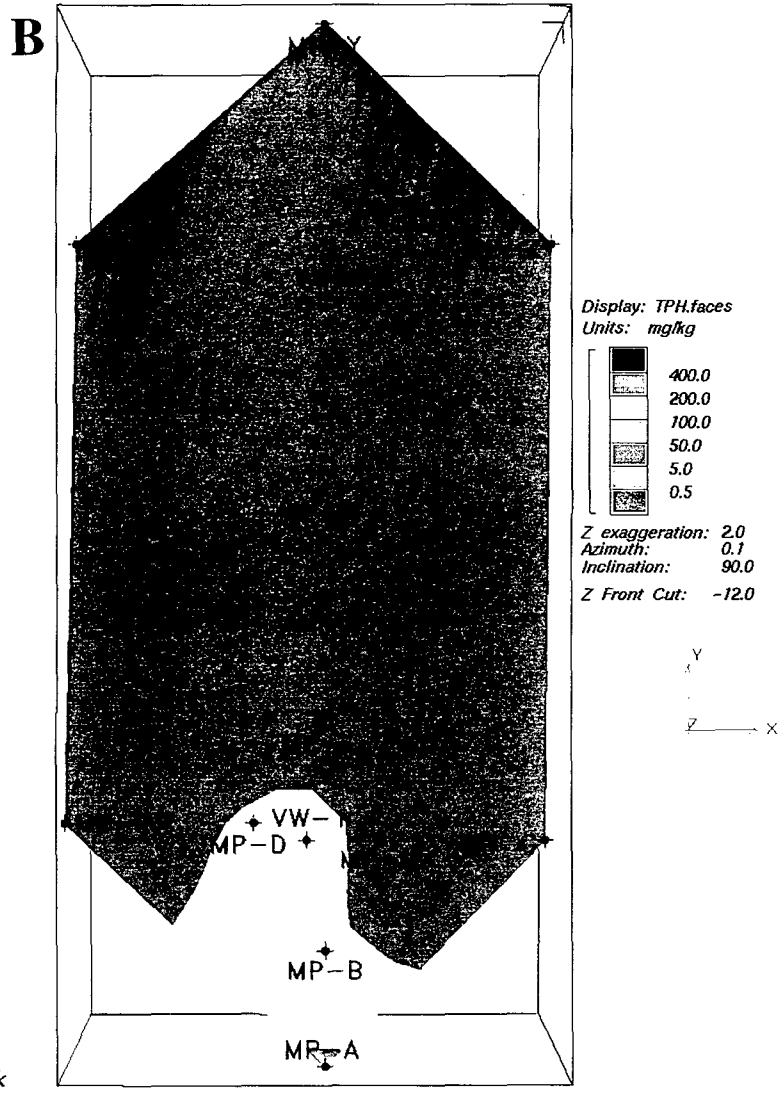

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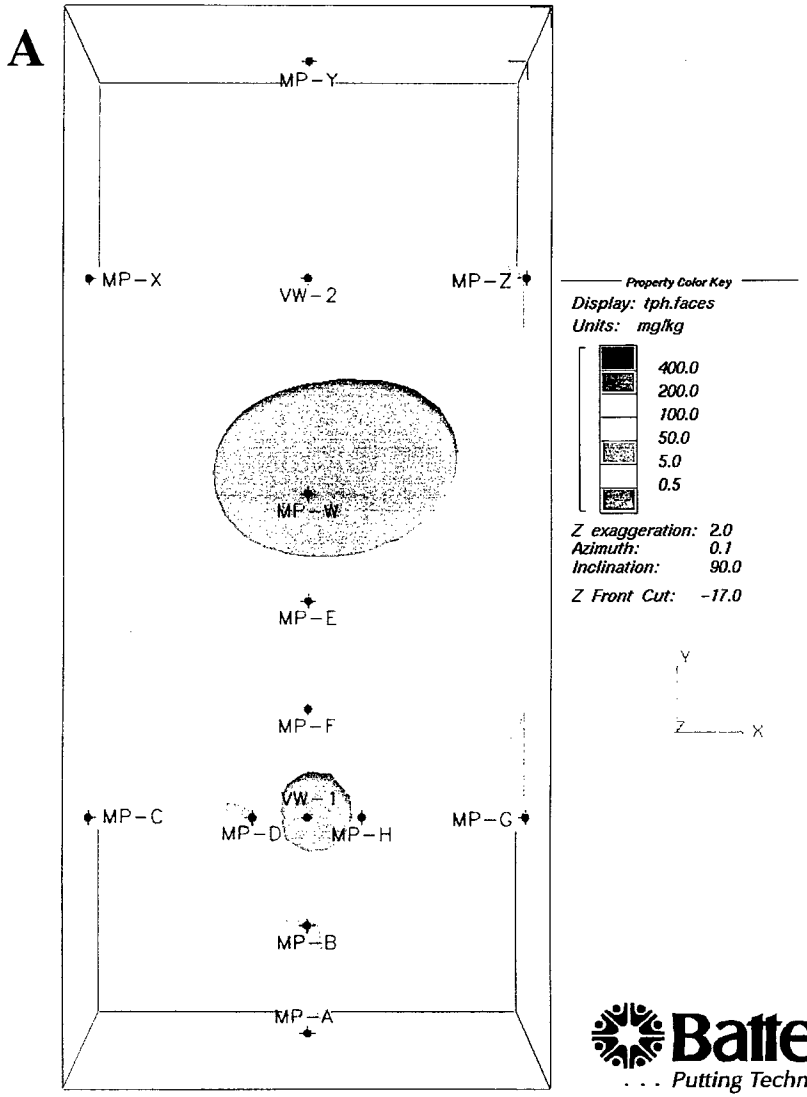

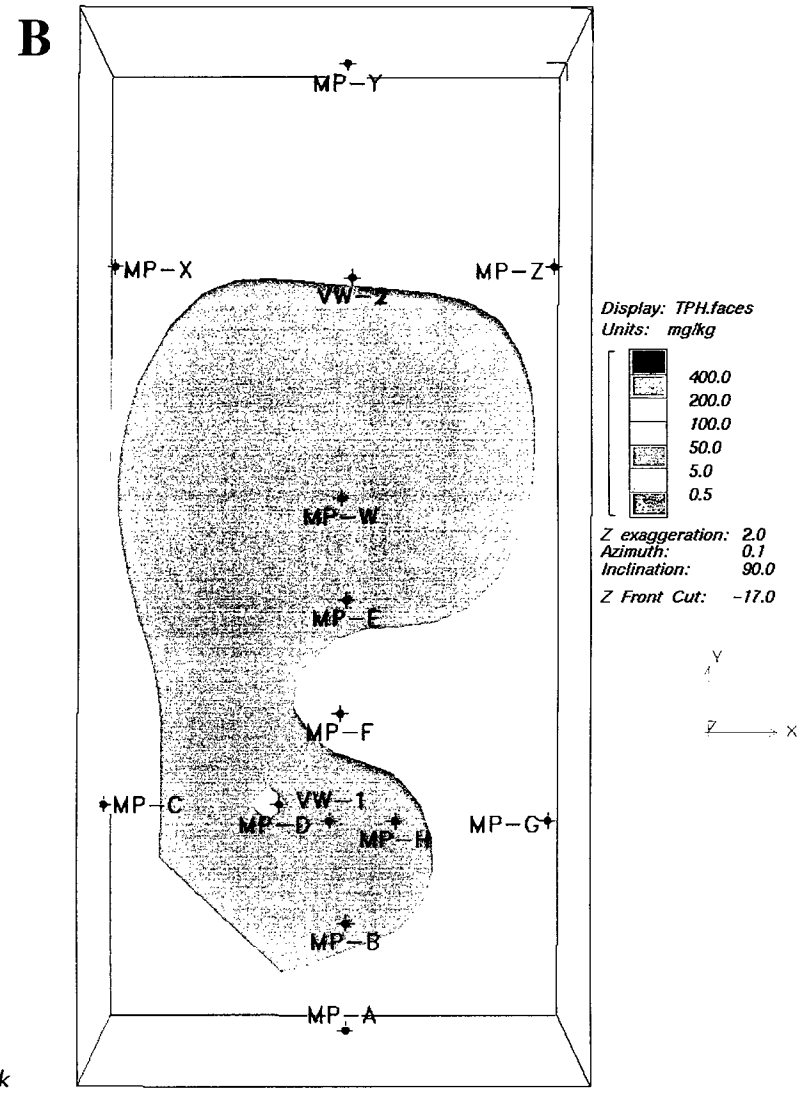

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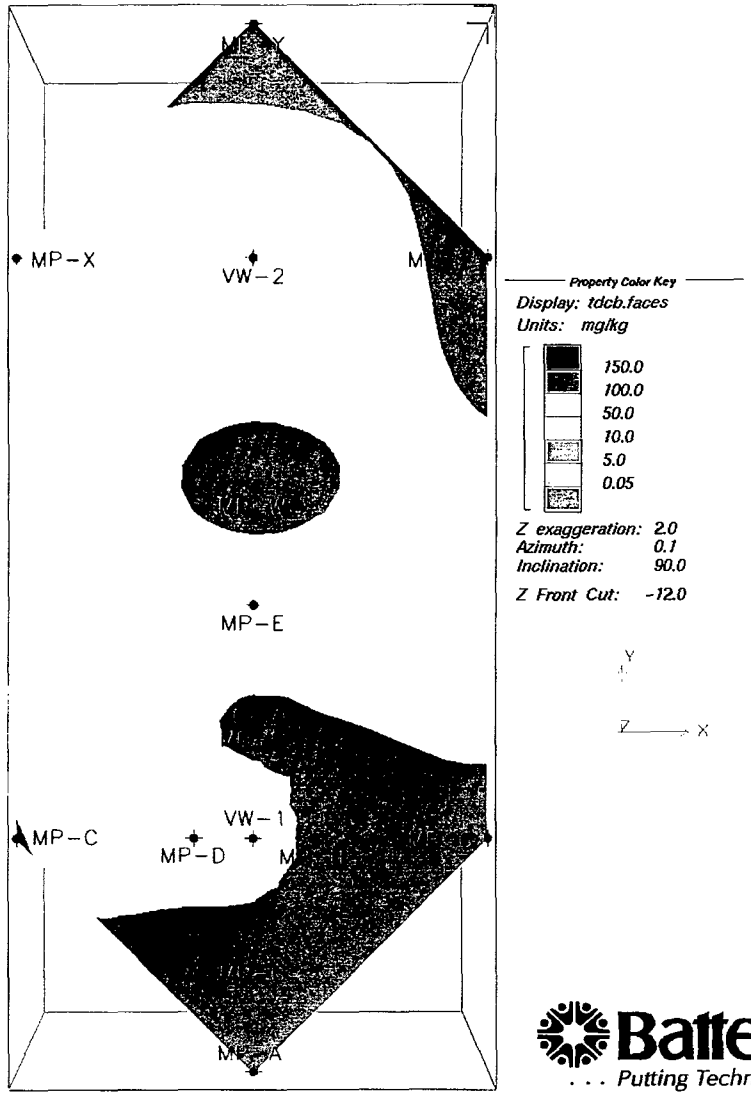

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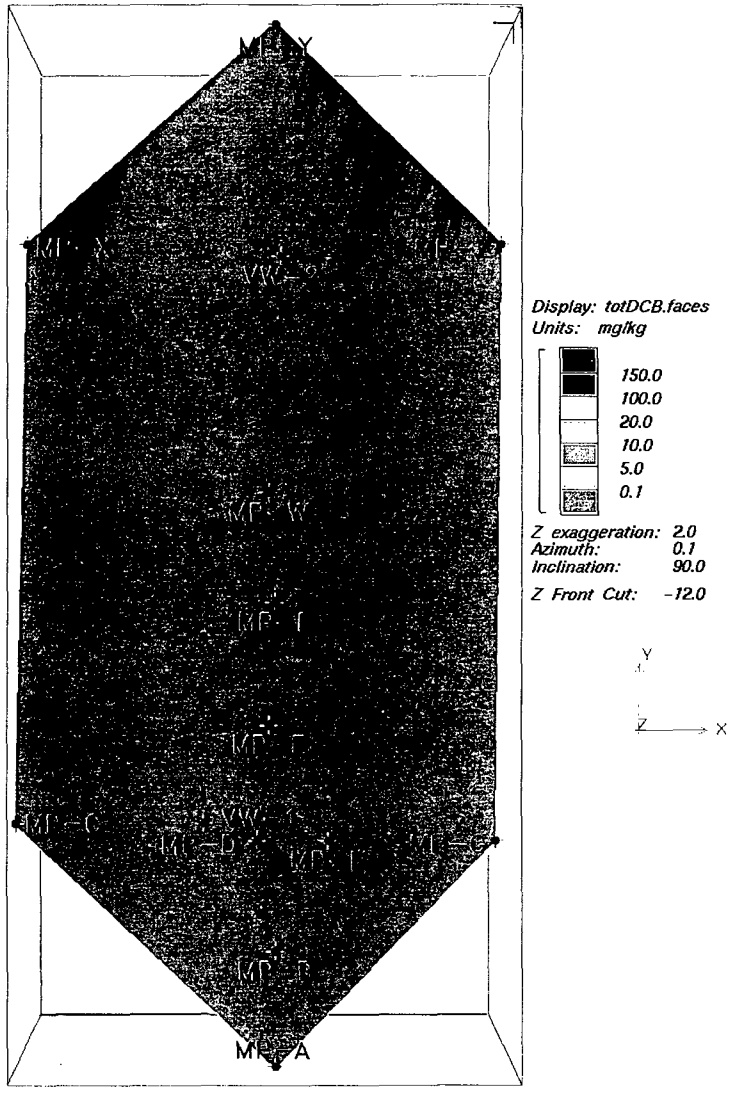

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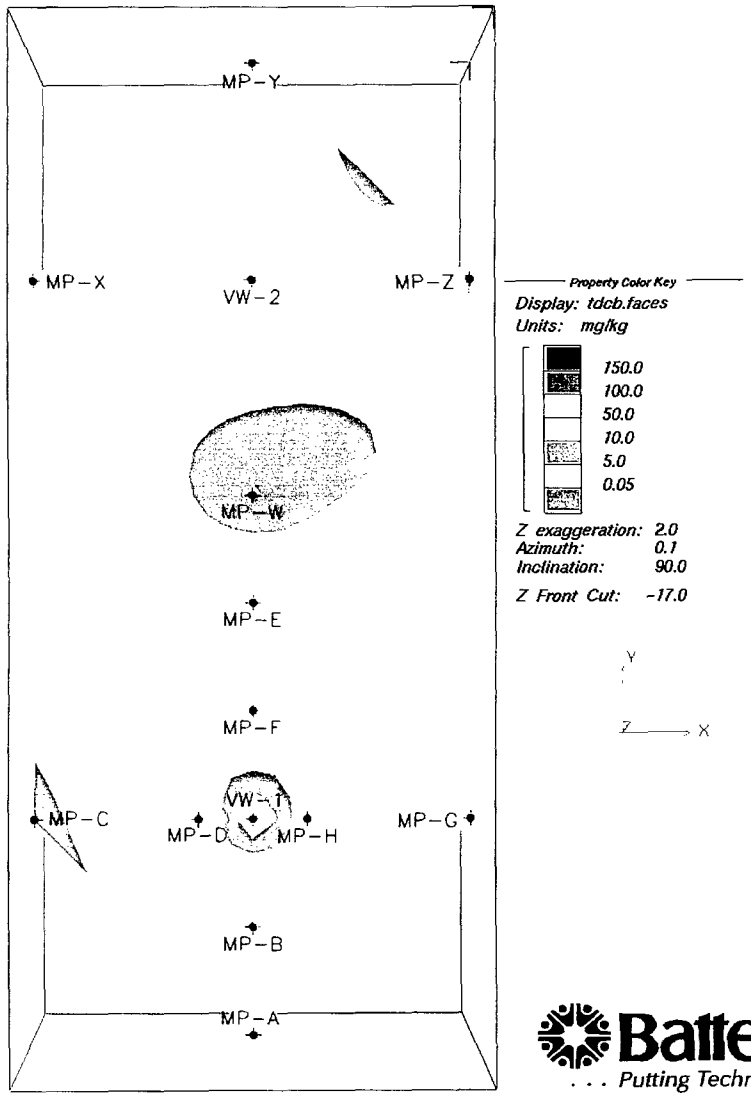

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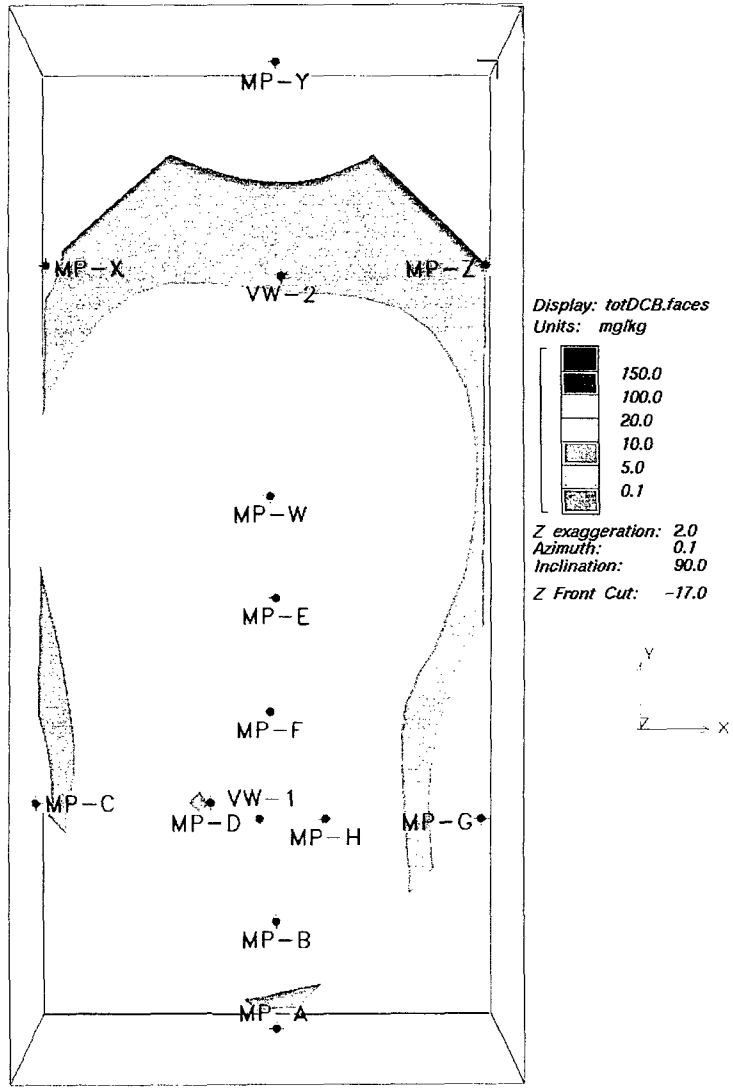

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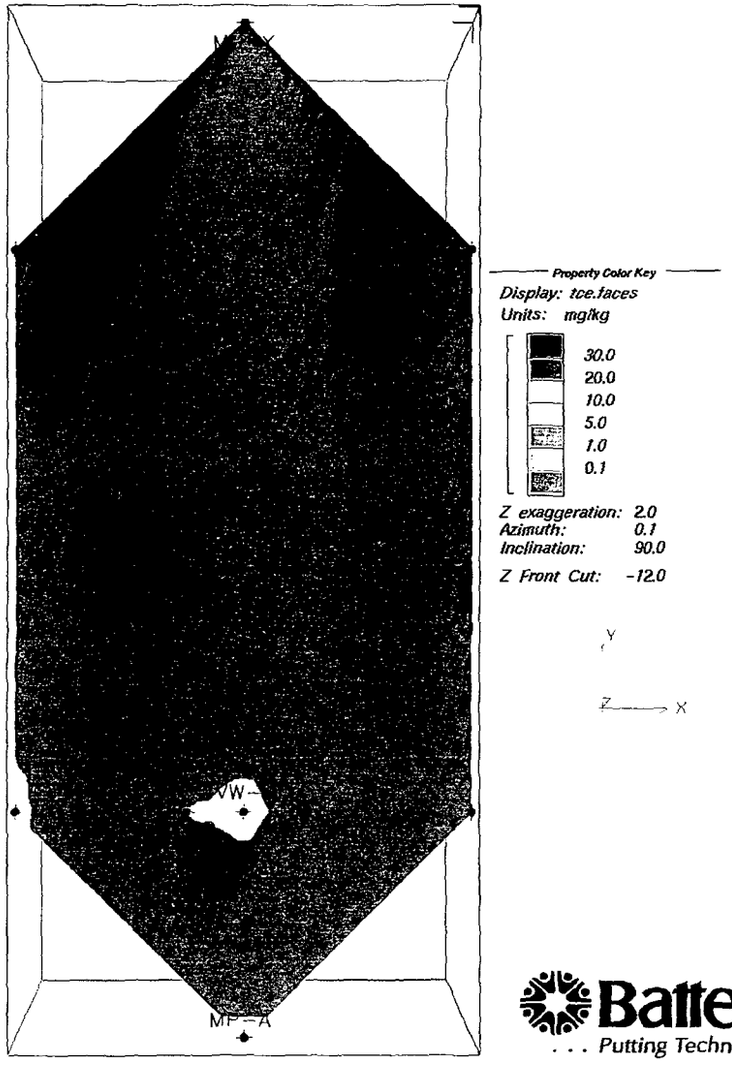

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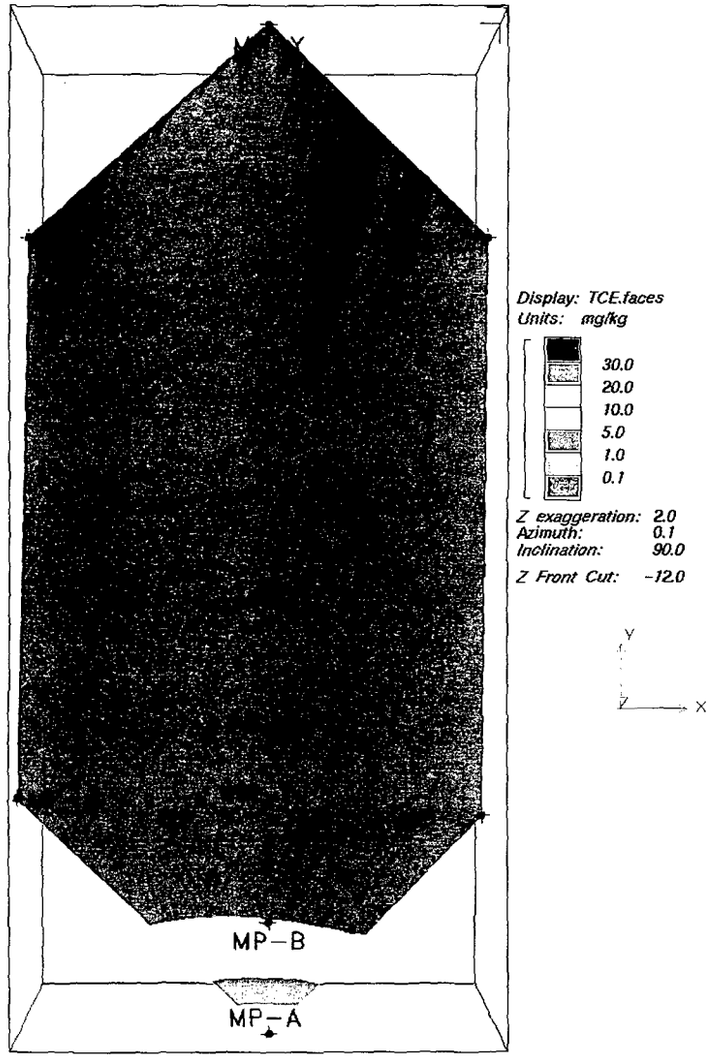

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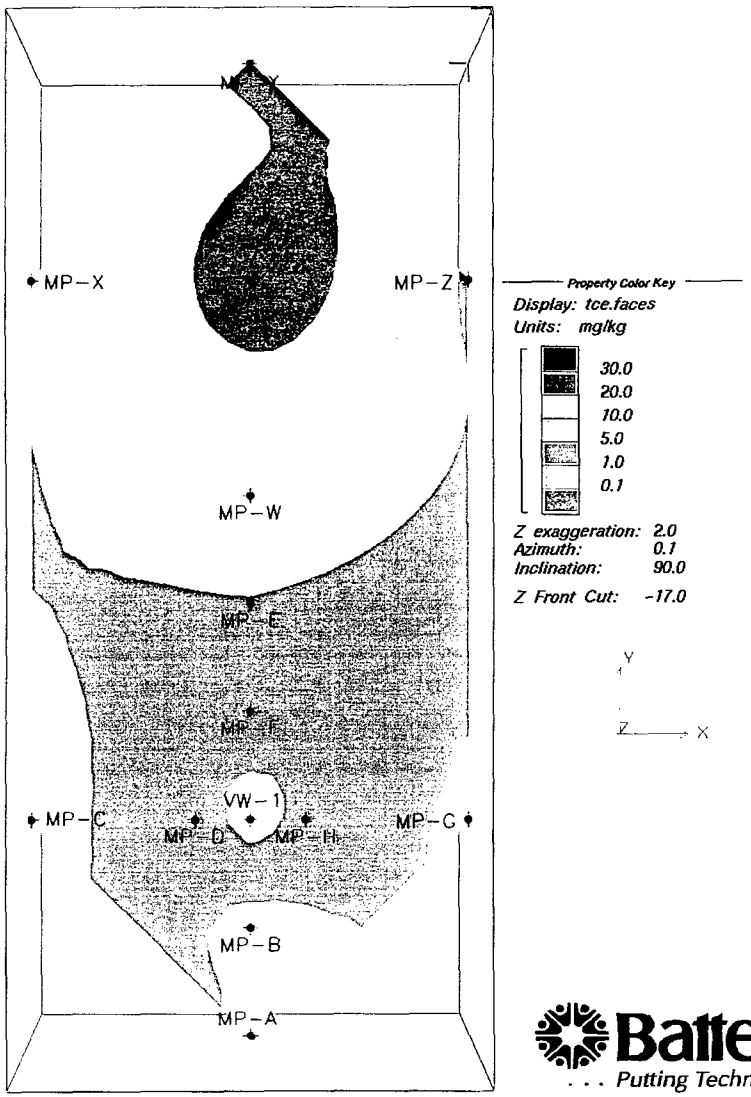

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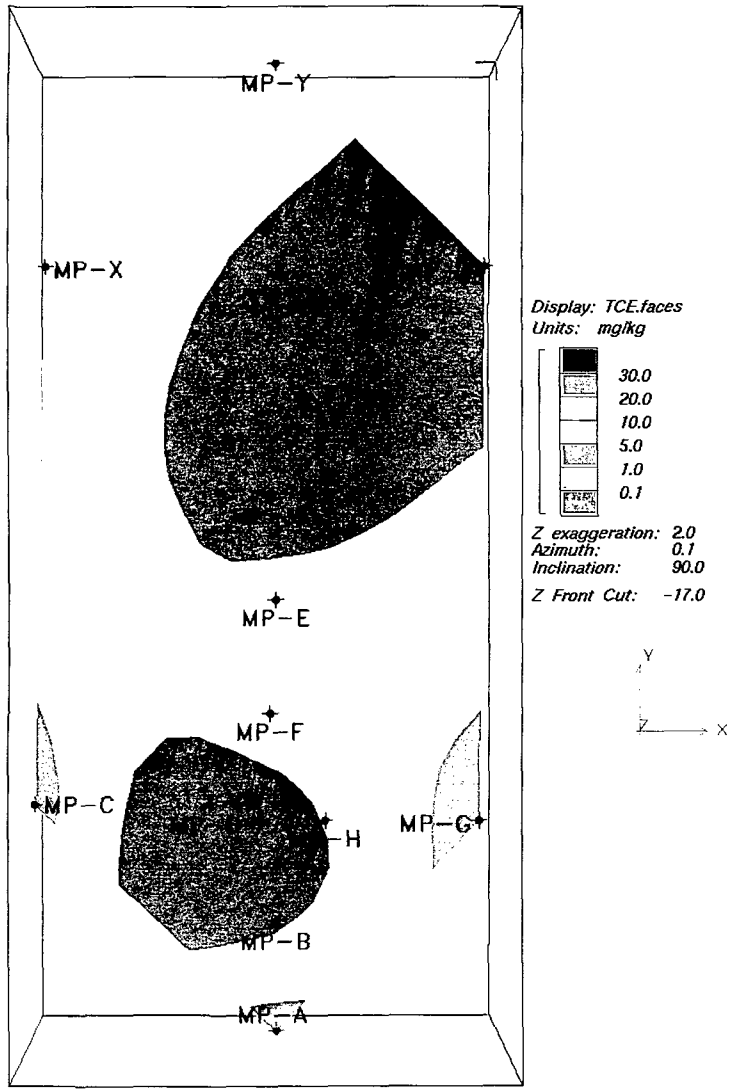

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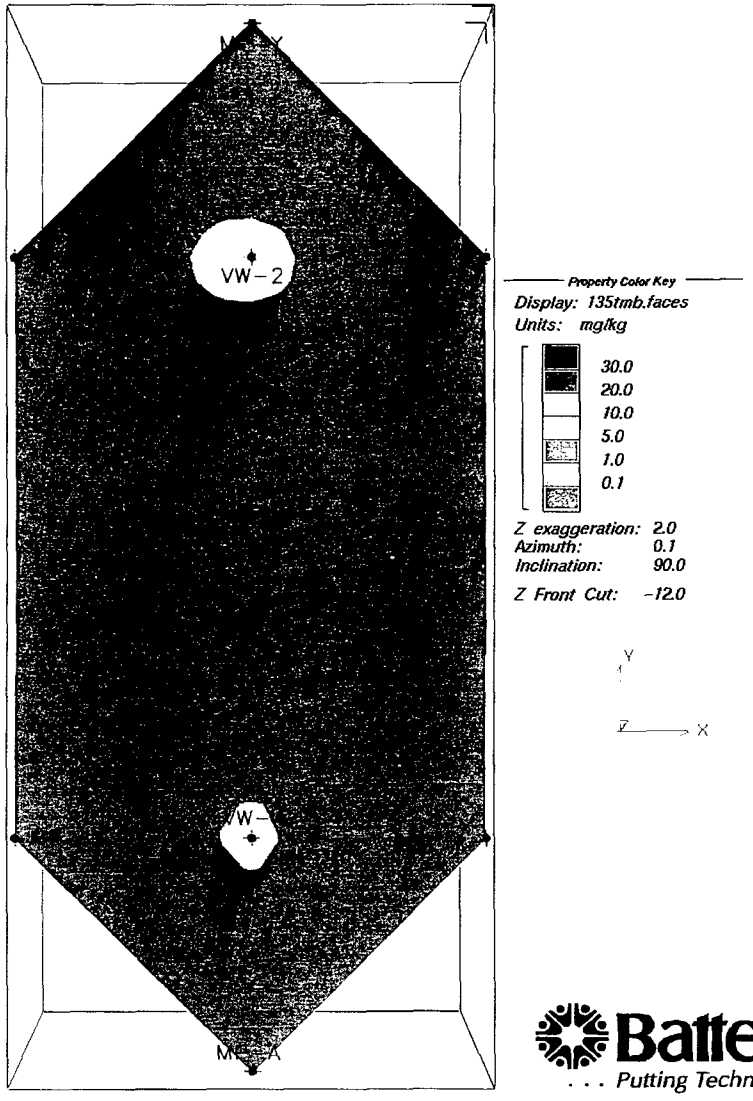

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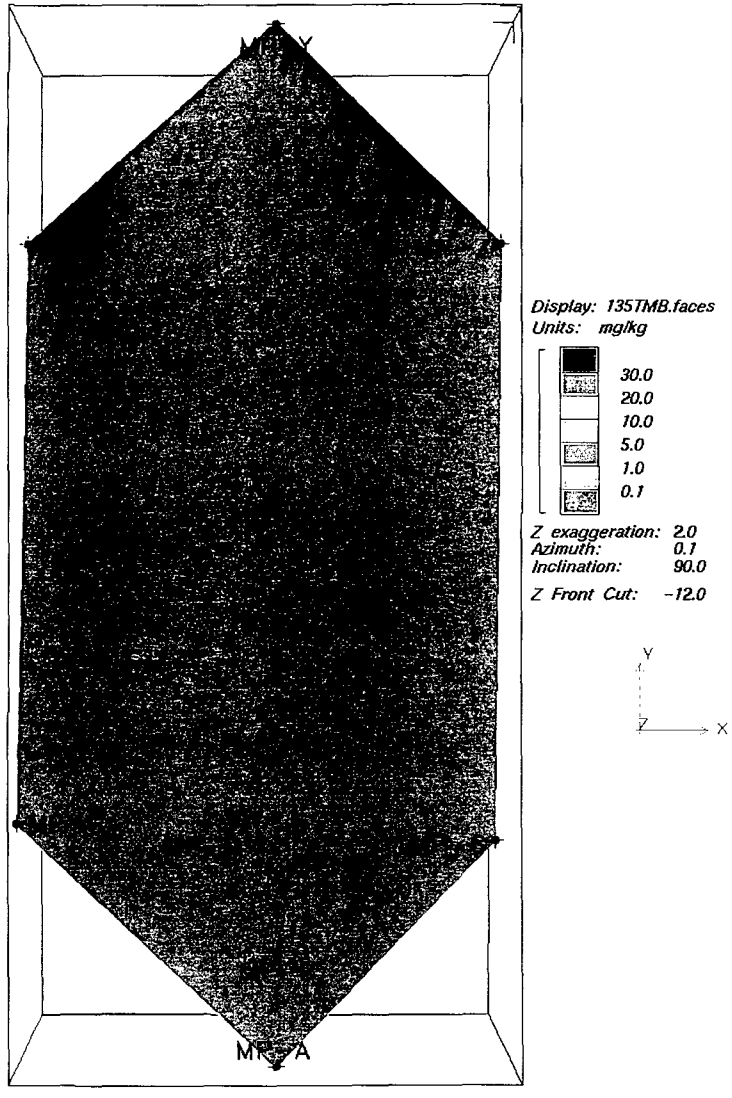

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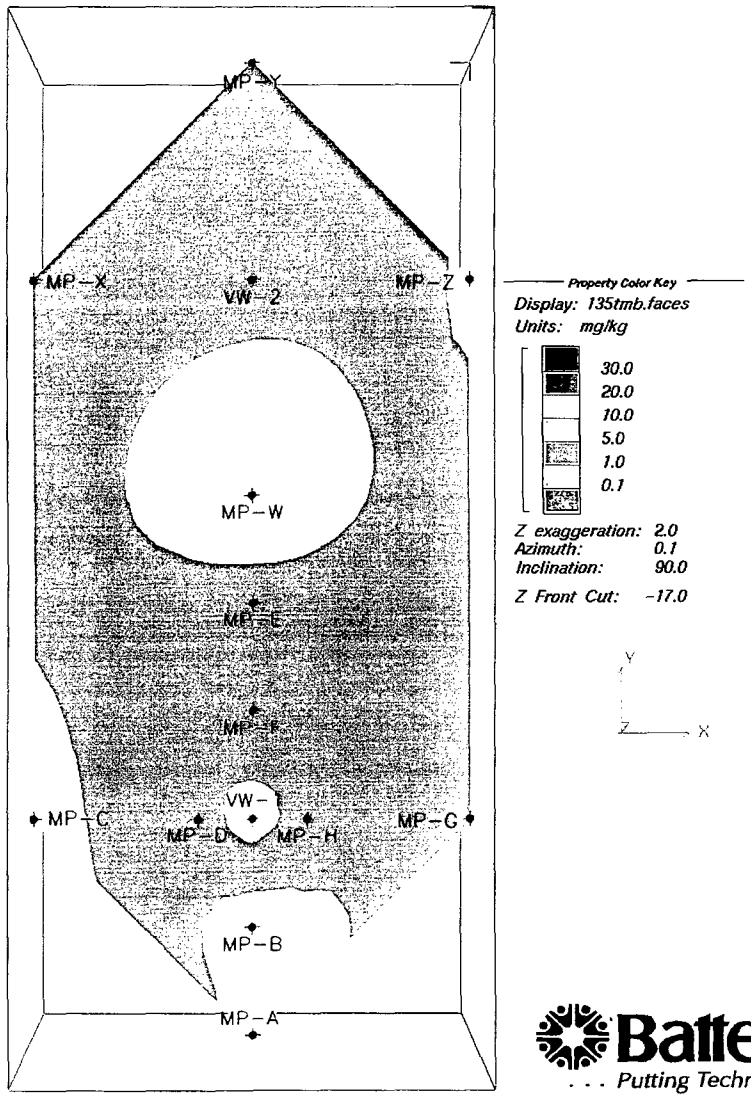

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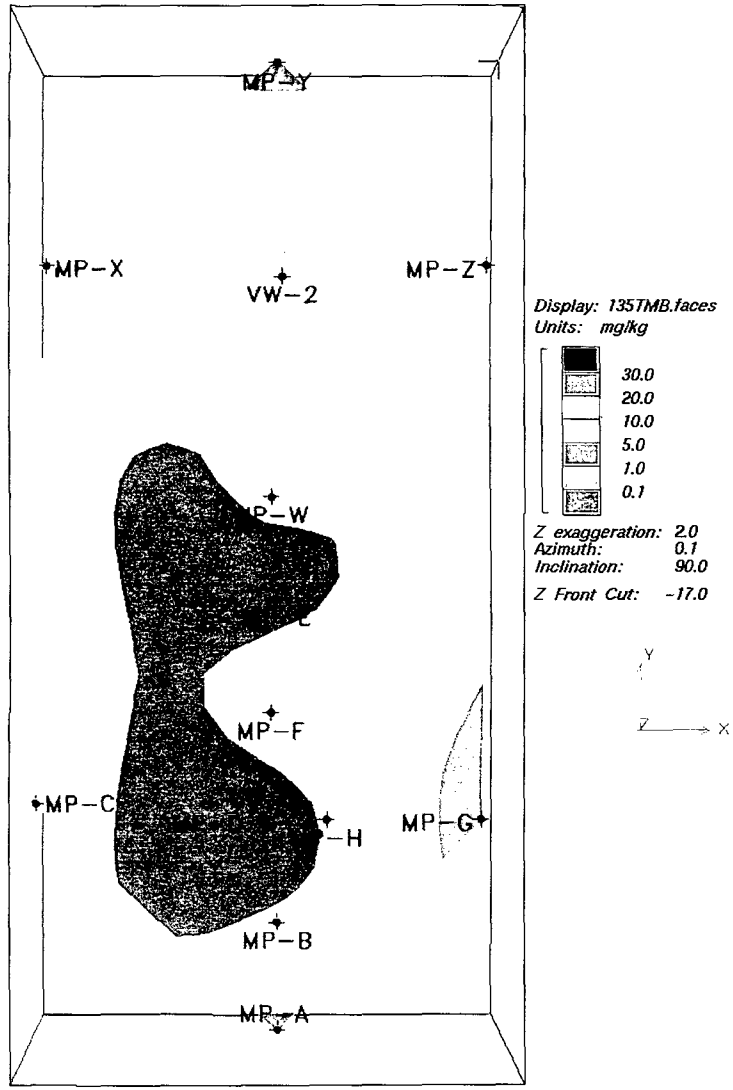

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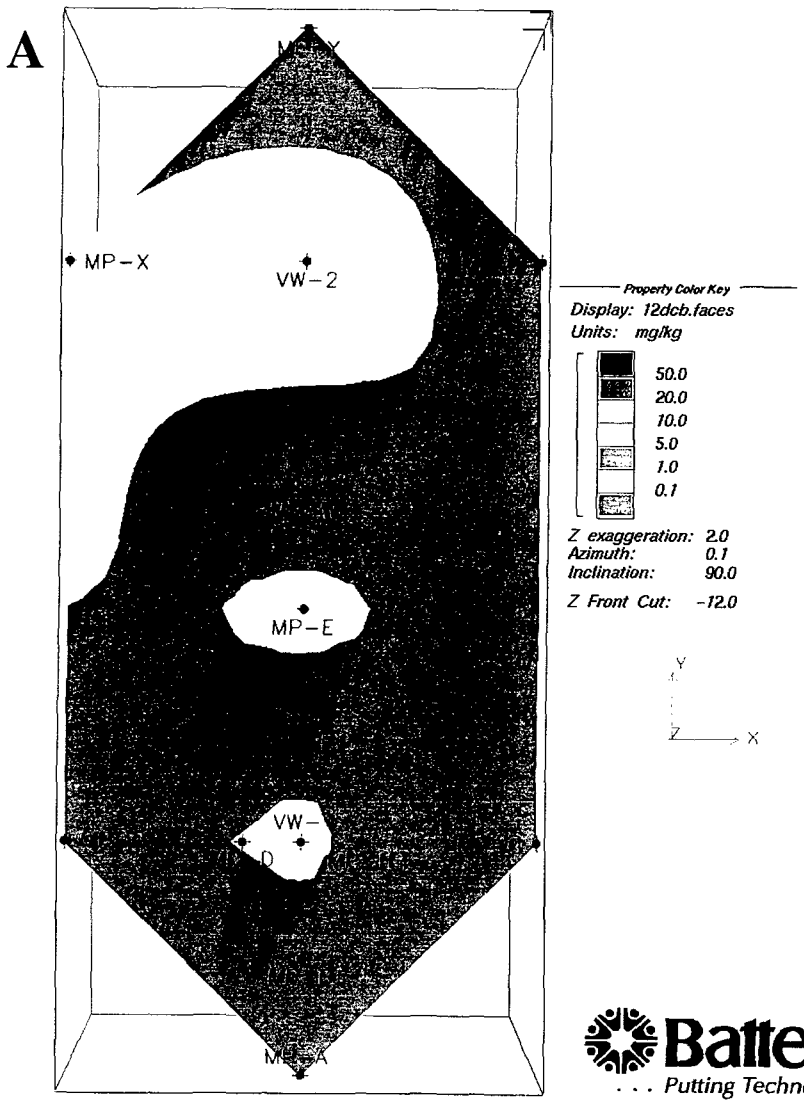
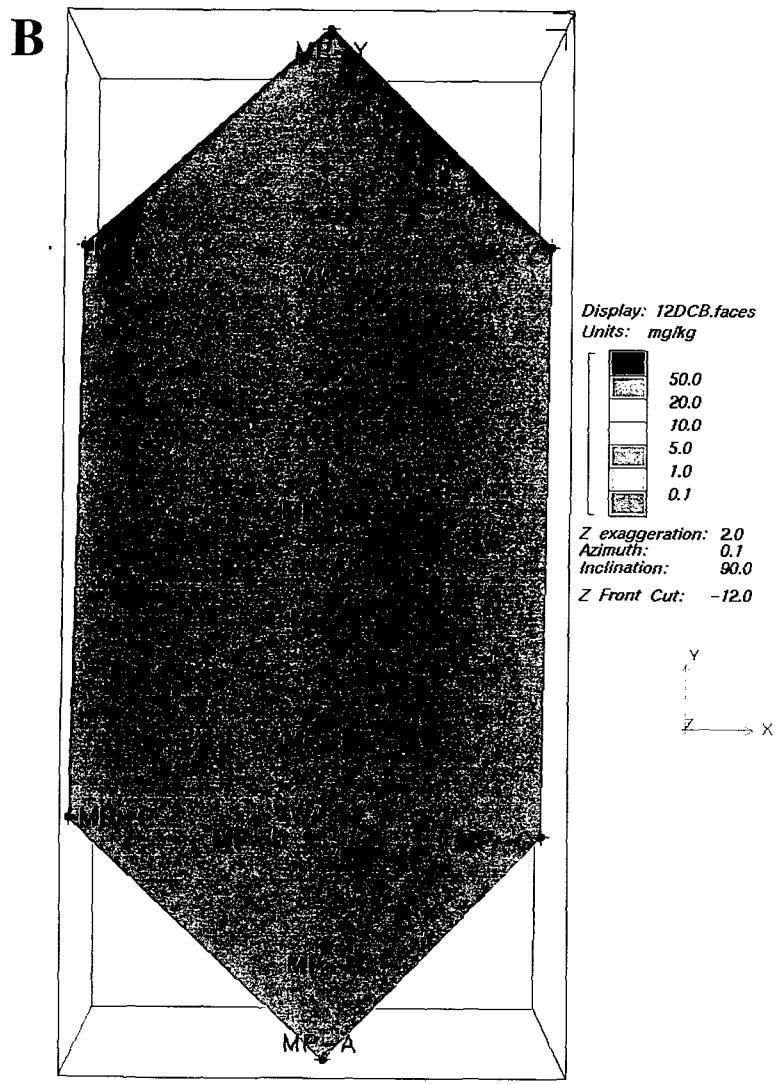
PlanView Slices through 3D Block Diagrams of 1,2-DCB at 12' BLS A) July '97, B) July '98





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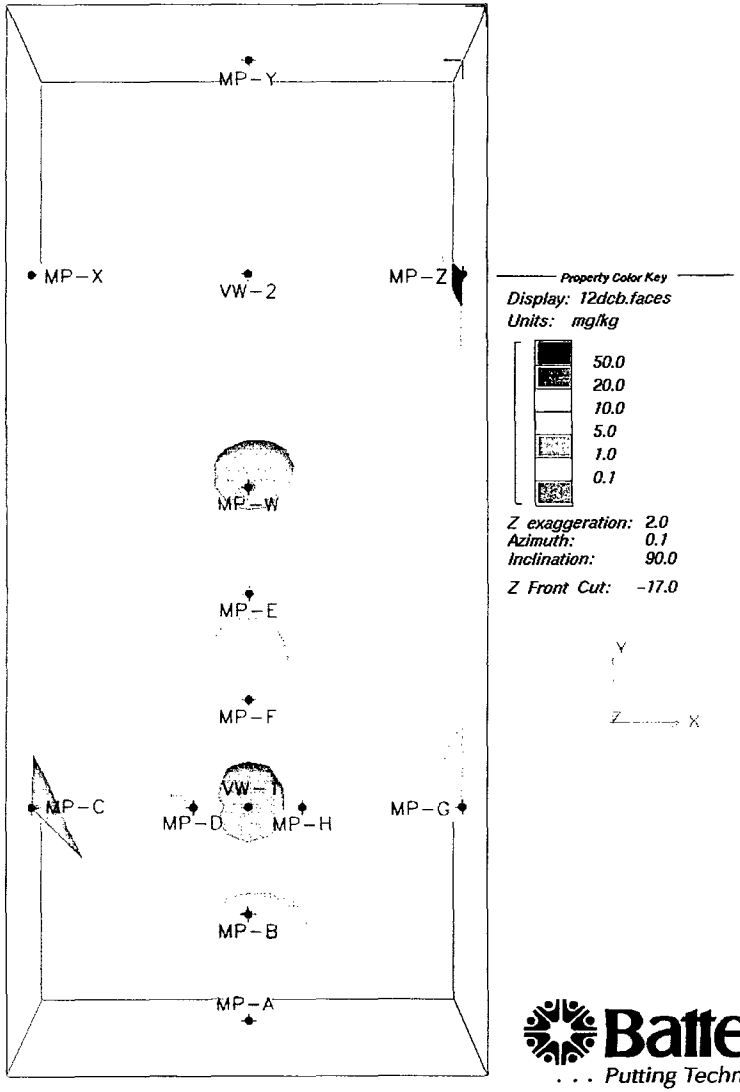
PlanView Slices through 3D Block Diagrams of 1,2-DCB at 17' BLS A) July '97, B) July '98

A



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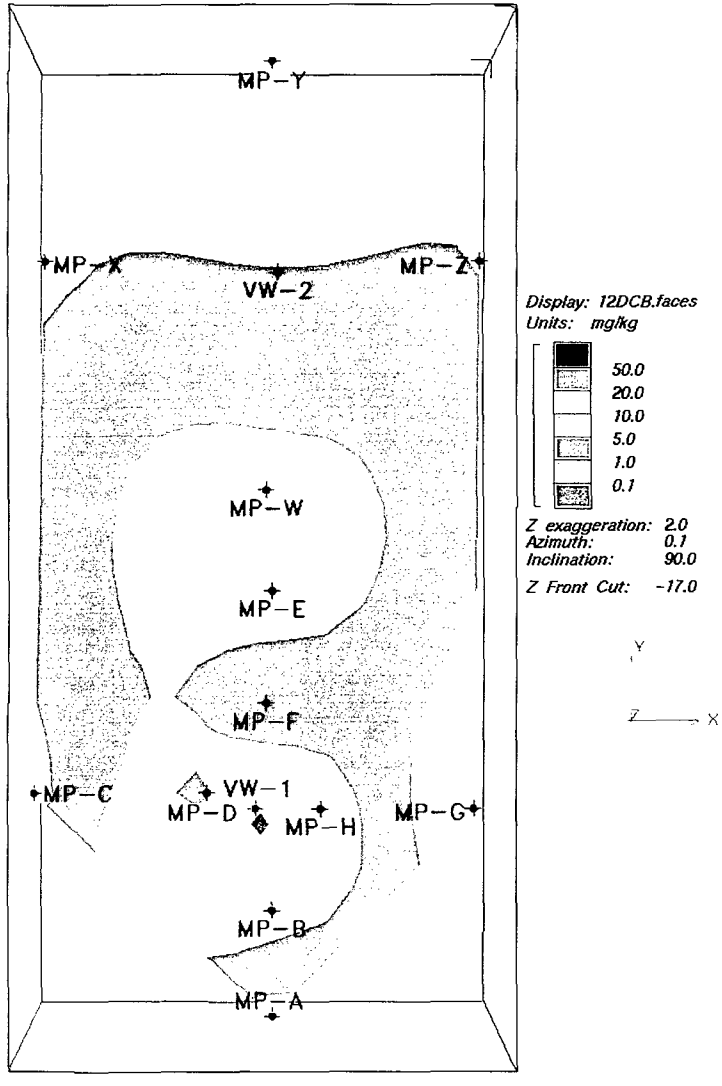

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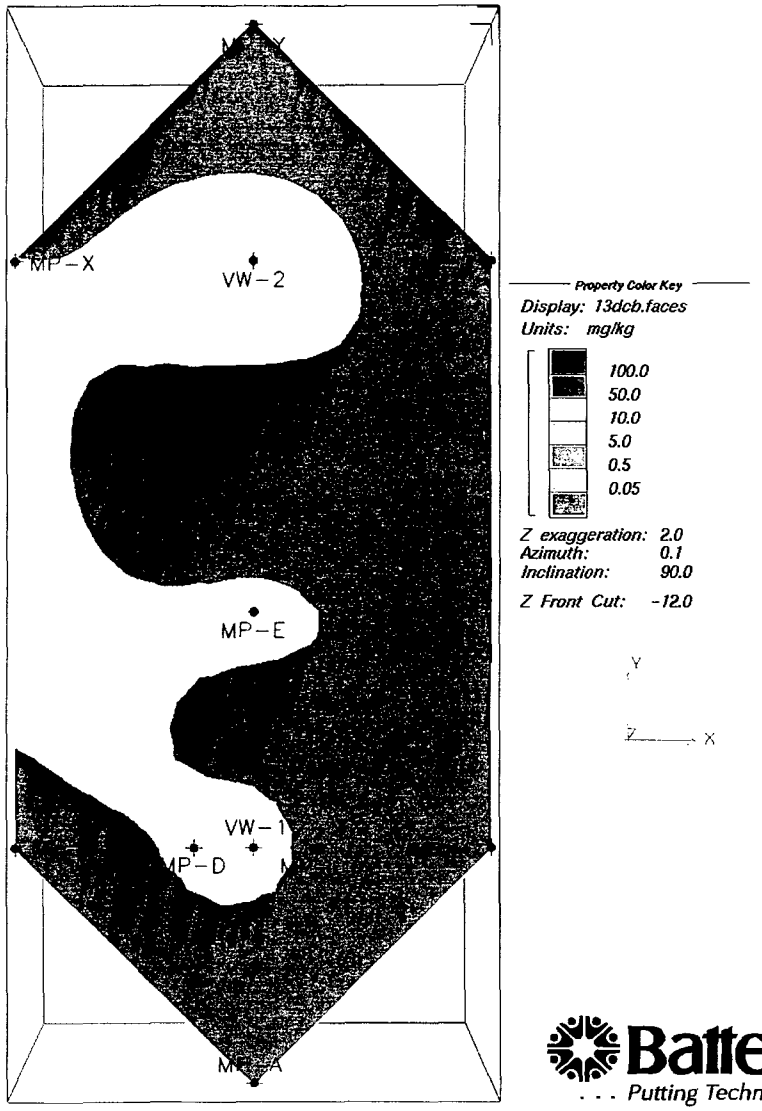
. . . Putting Technology To Work

PlanView Slices through 3D Block Diagrams of 1,3-DCB at 12' BLS A) July '97, B) July '98

A



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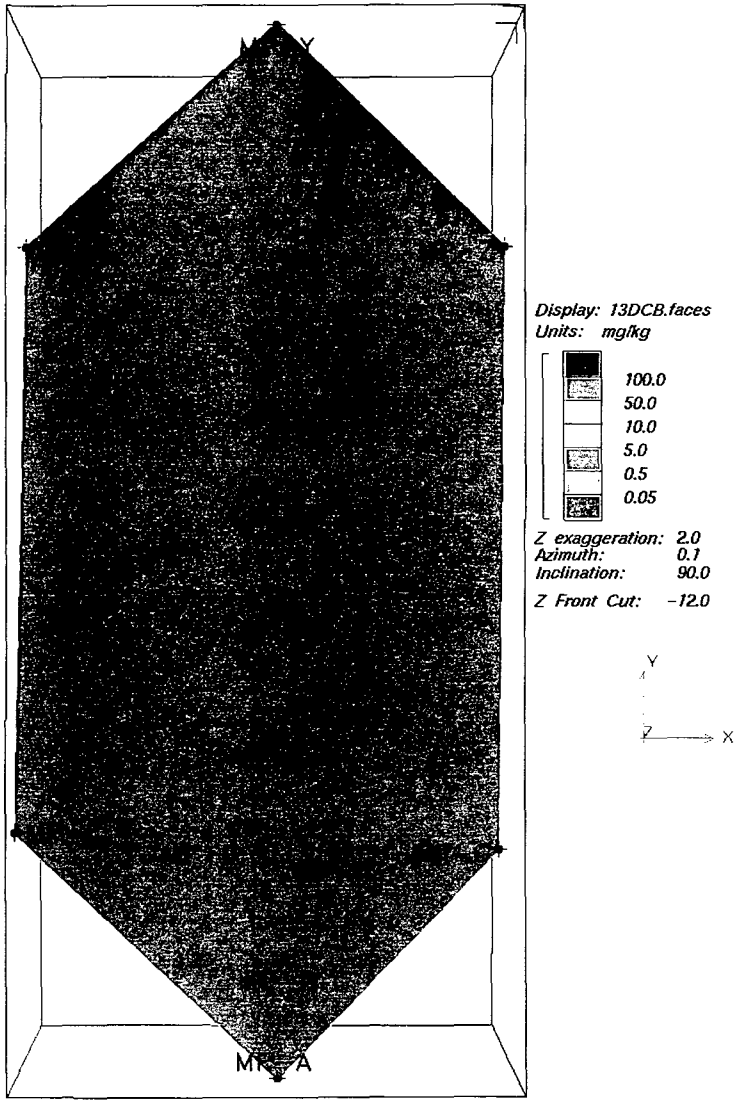

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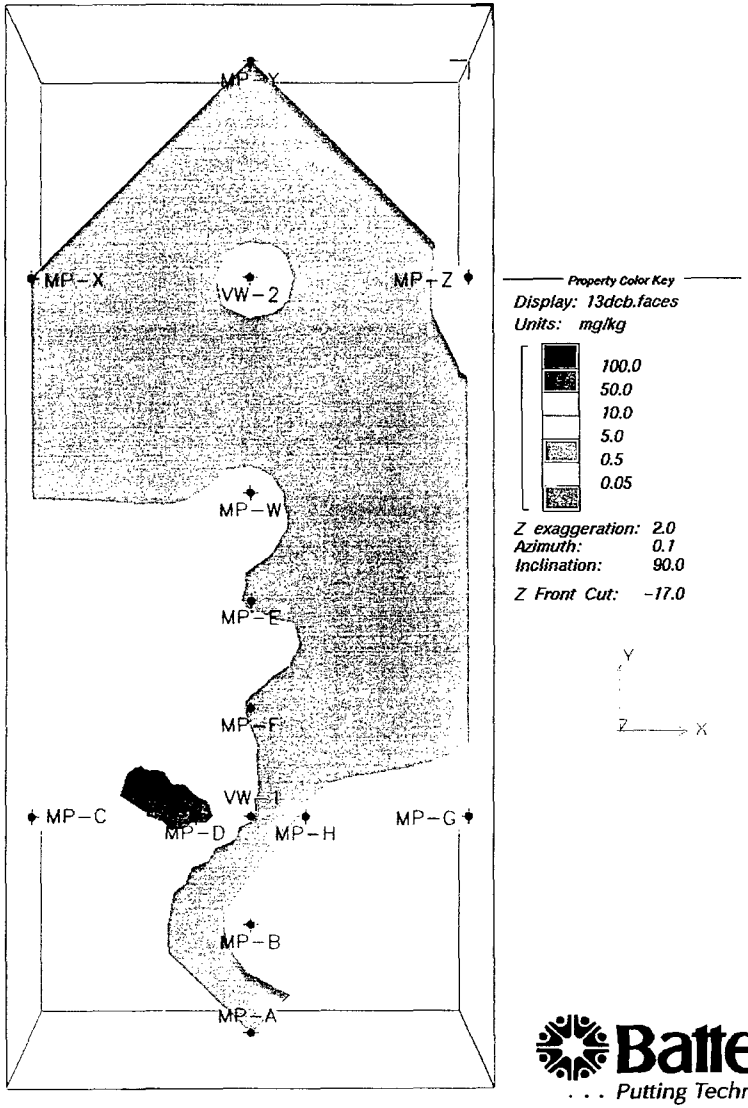
. . . Putting Technology To Work

PlanView Slices through 3D Block Diagrams of 1,3-DCB at 17' BLS A) July '97, B) July '98

A



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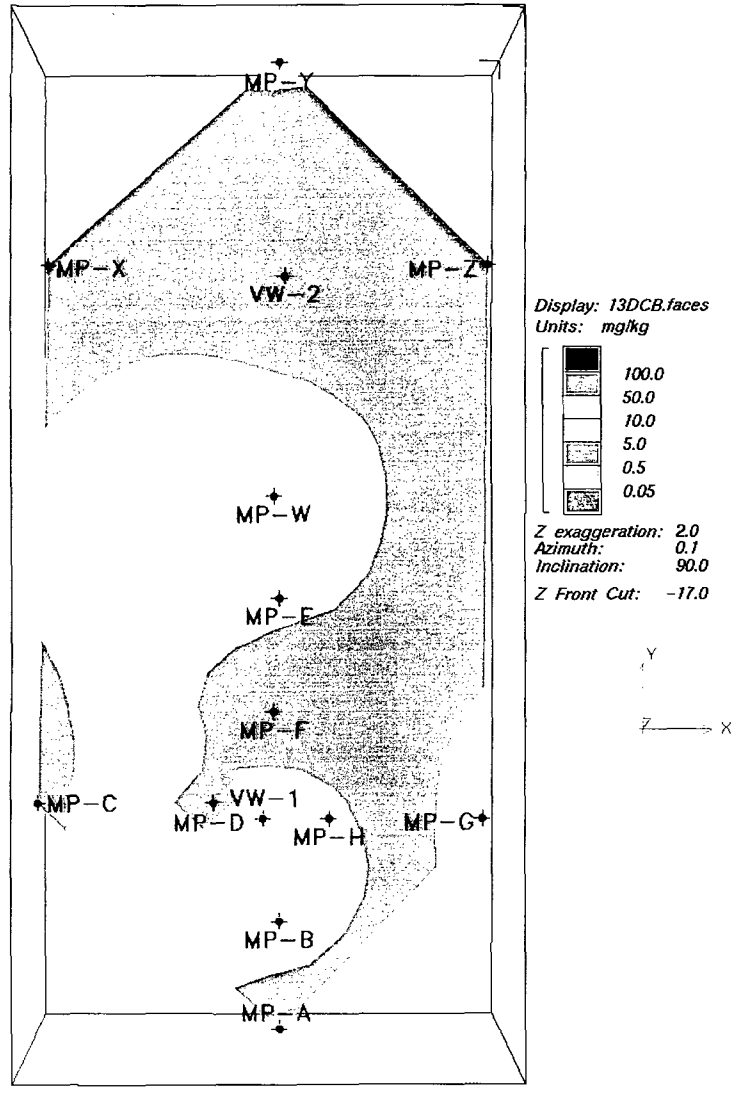


Battelle
. . . Putting Technology To Work

OXYGEN UTILIZATION PLOTS

MONITORED BY

MANUAL METHOD

DURING RESPIRATION TESTING

July 1997

October 1997

January 1998

April 1998

August 1998

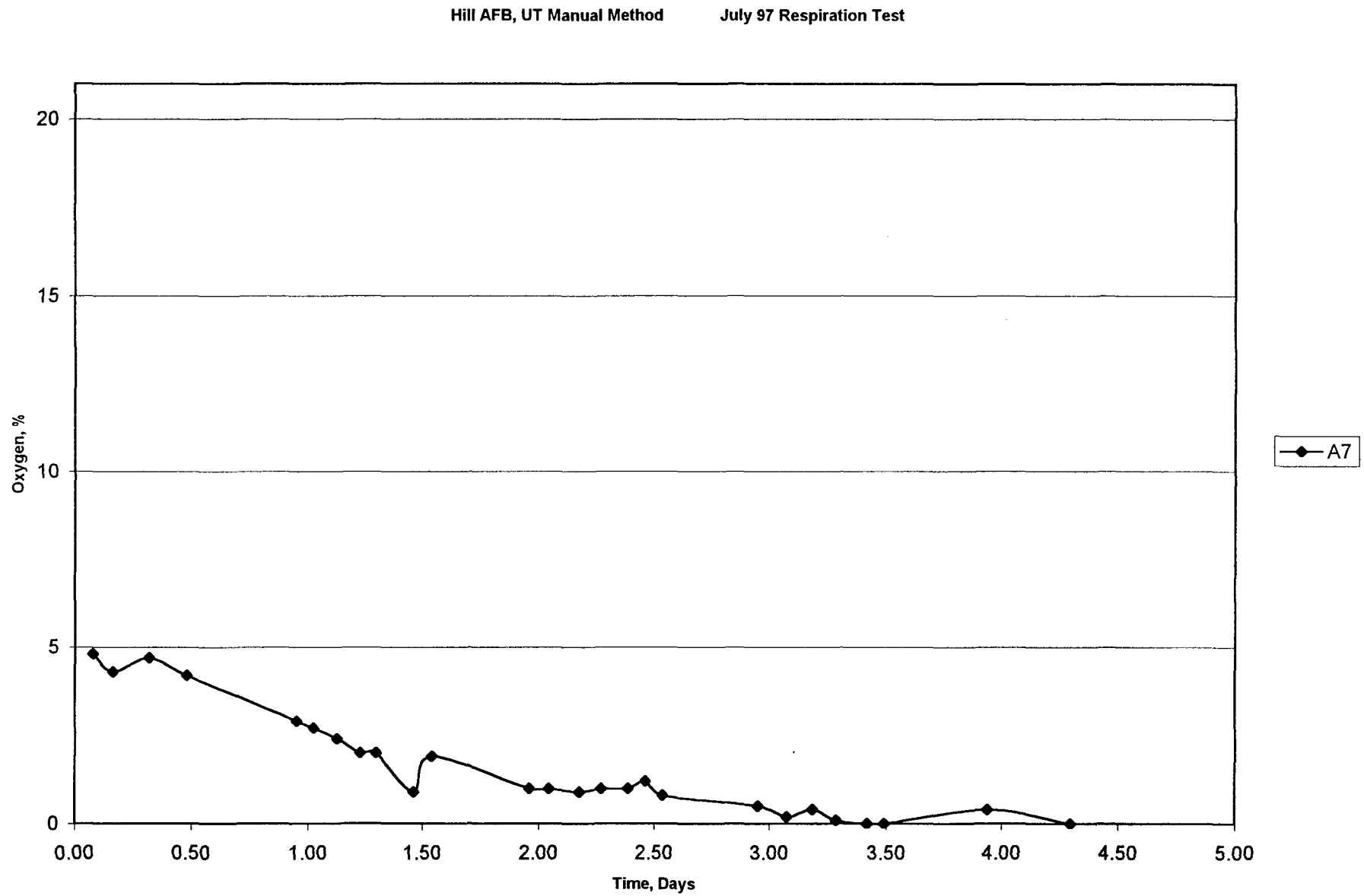
OXYGEN UTILIZATION PLOTS

MONITORED BY

MANUAL METHOD

DURING RESPIRATION TESTING

July 1997


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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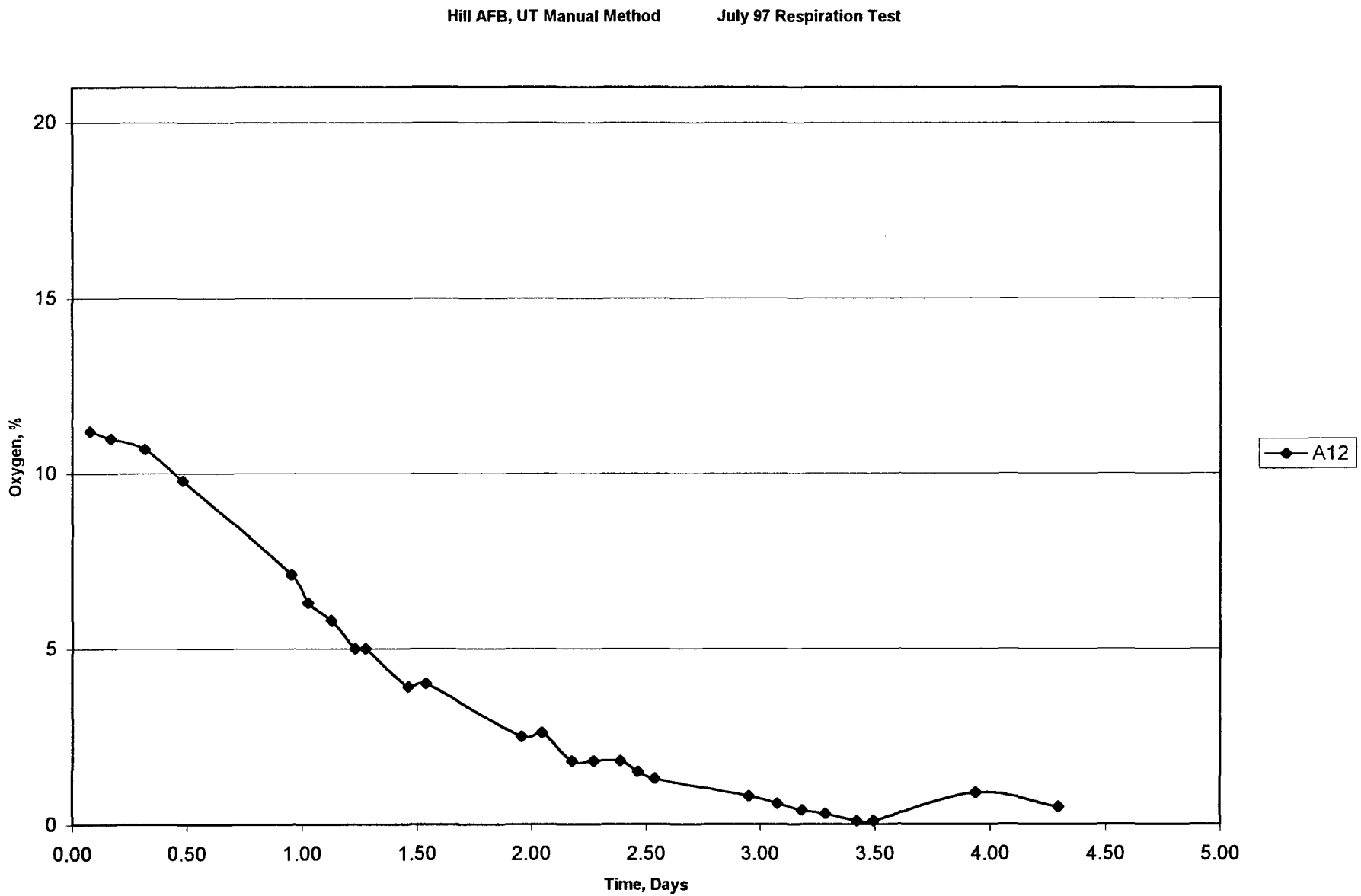
Time, Days
A7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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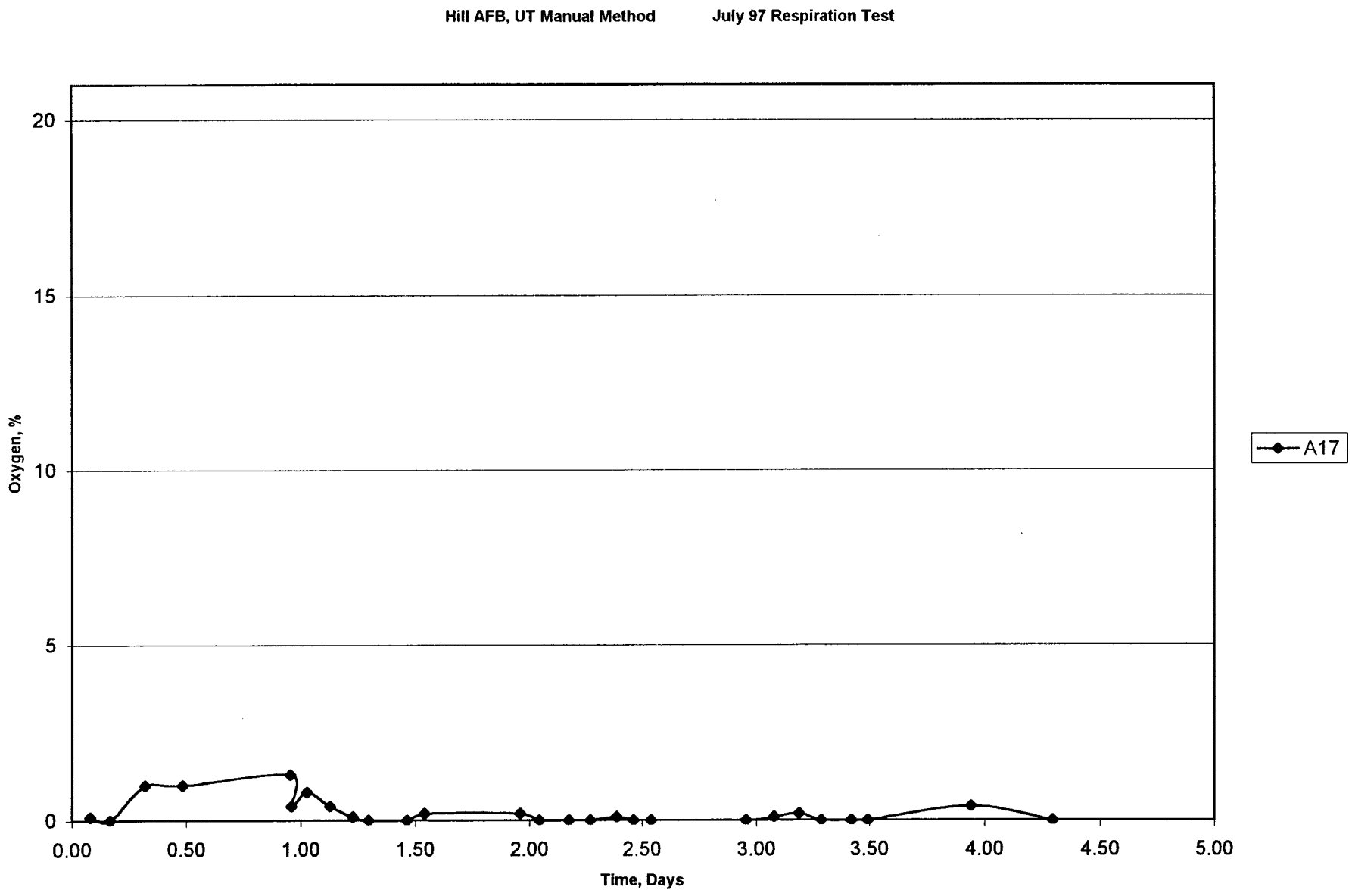
Time, Days
A12


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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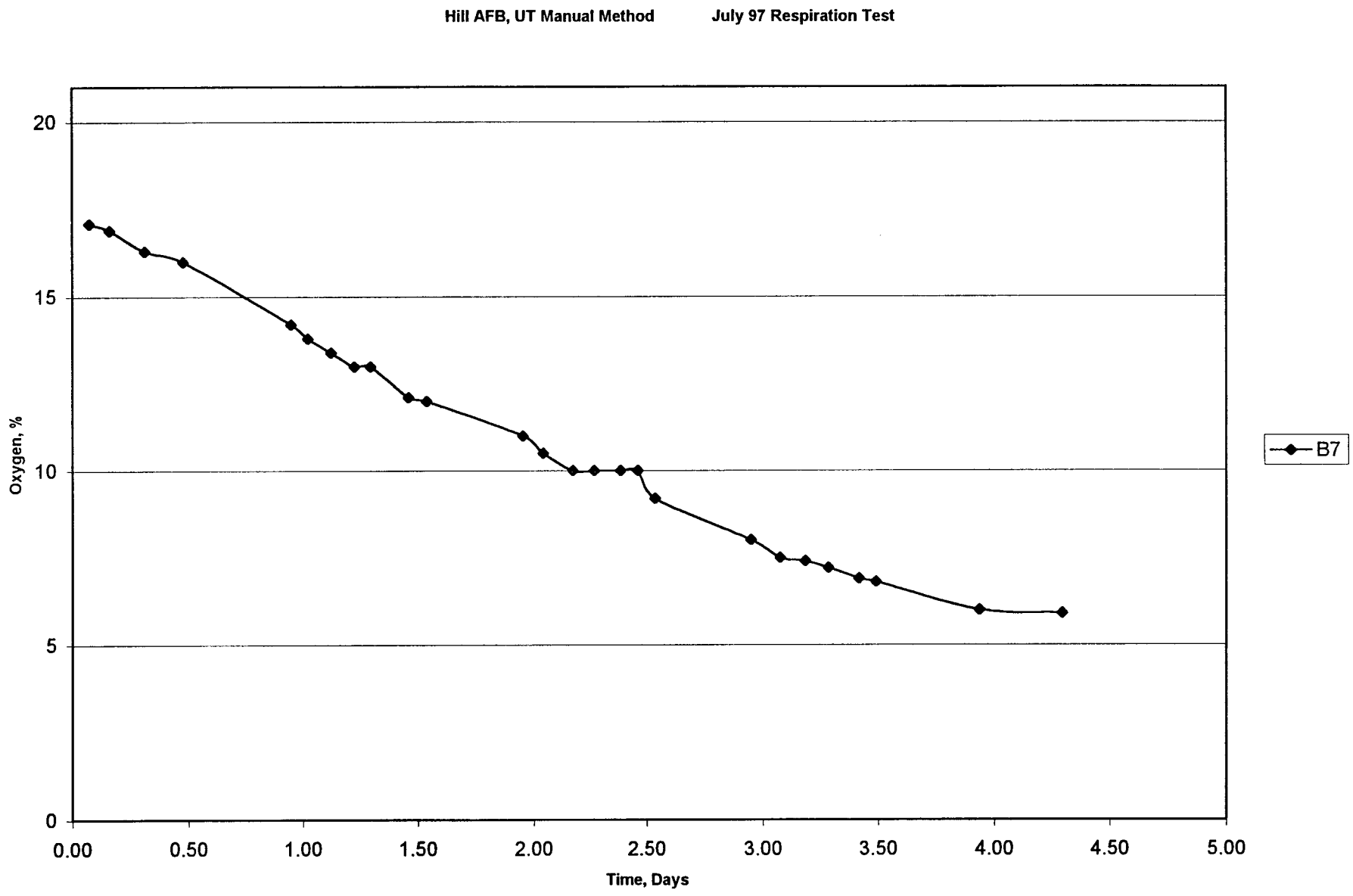
Time, Days
A17


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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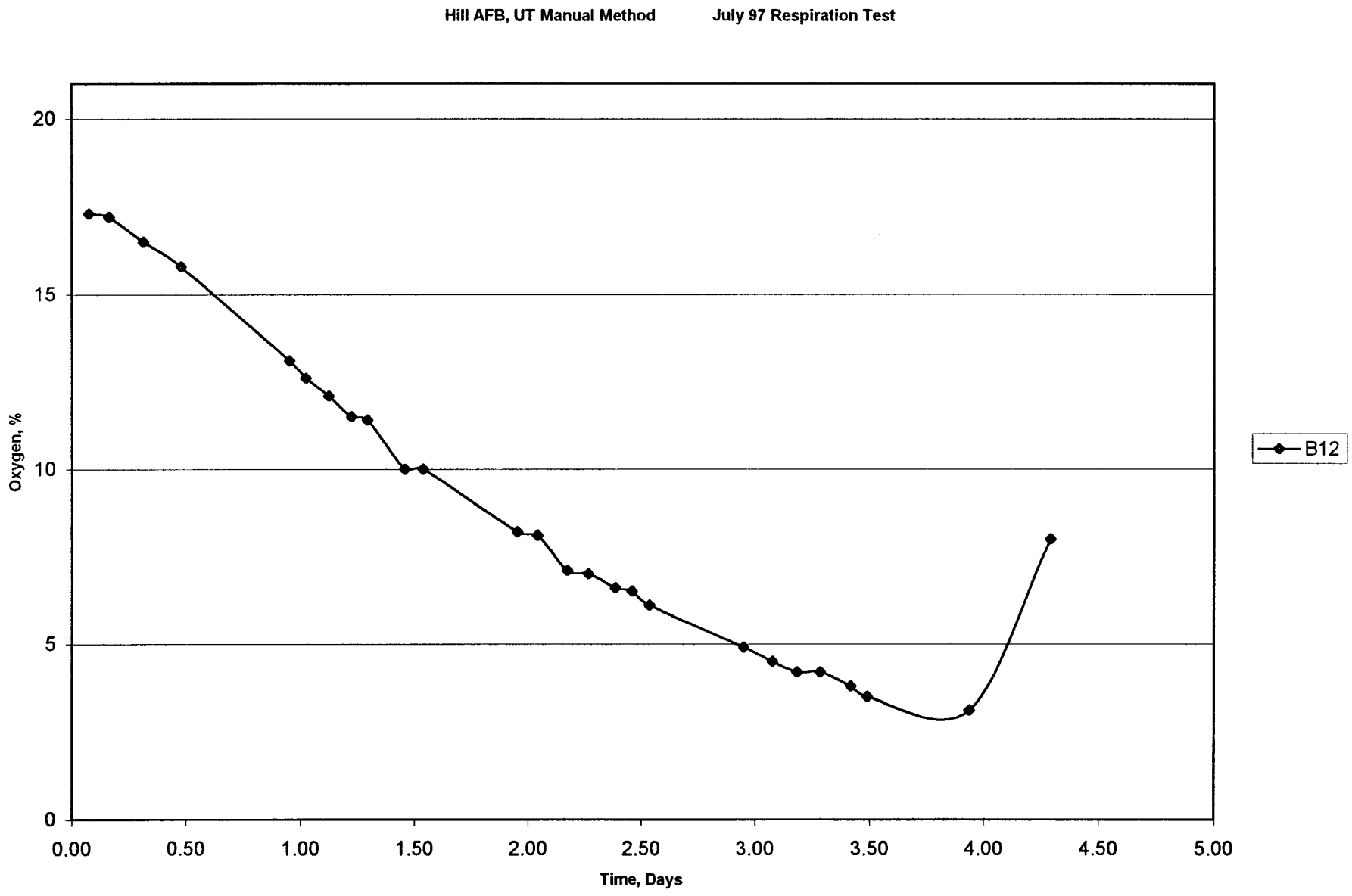
Time, Days
B7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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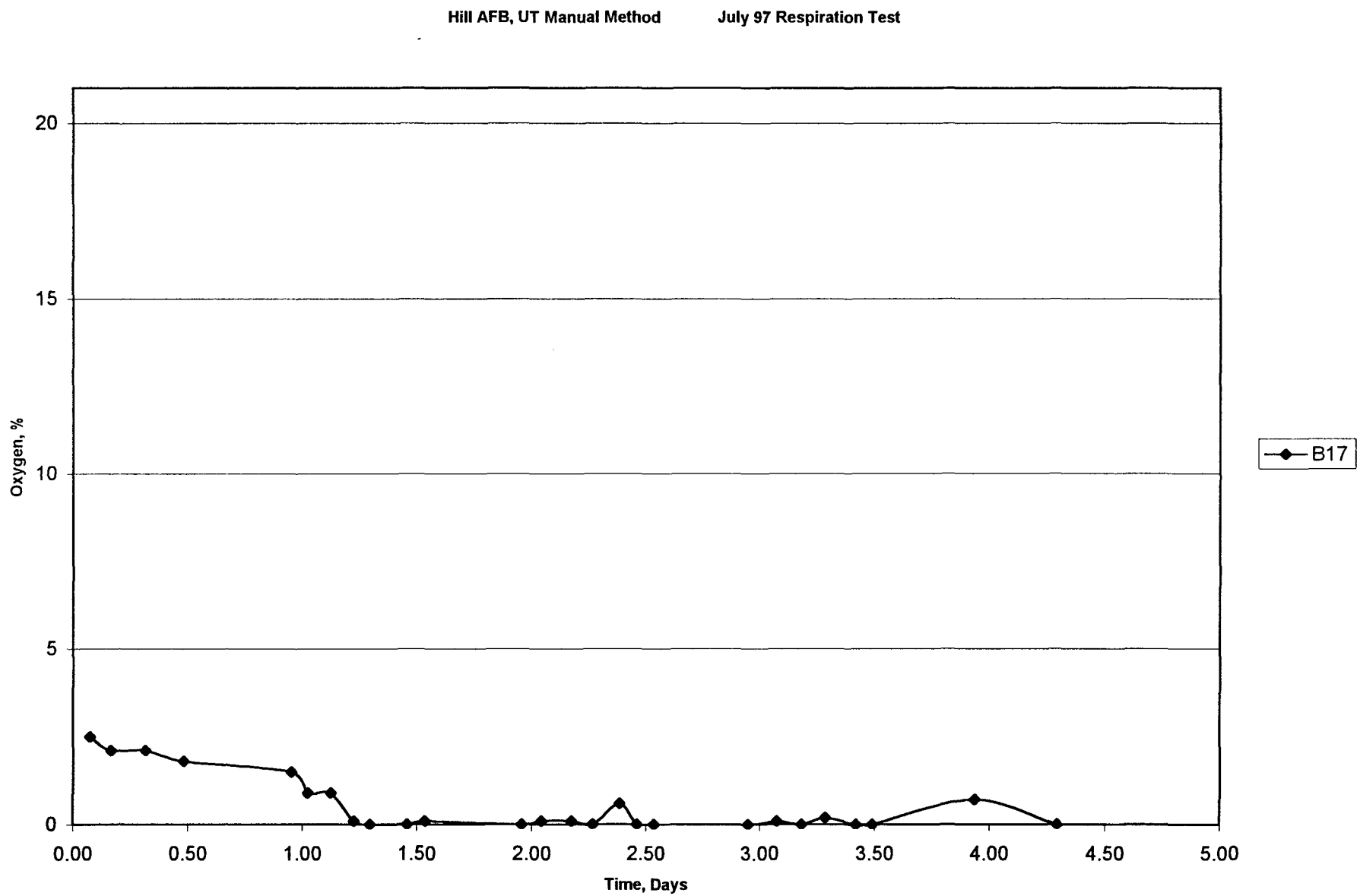
Time, Days
B12


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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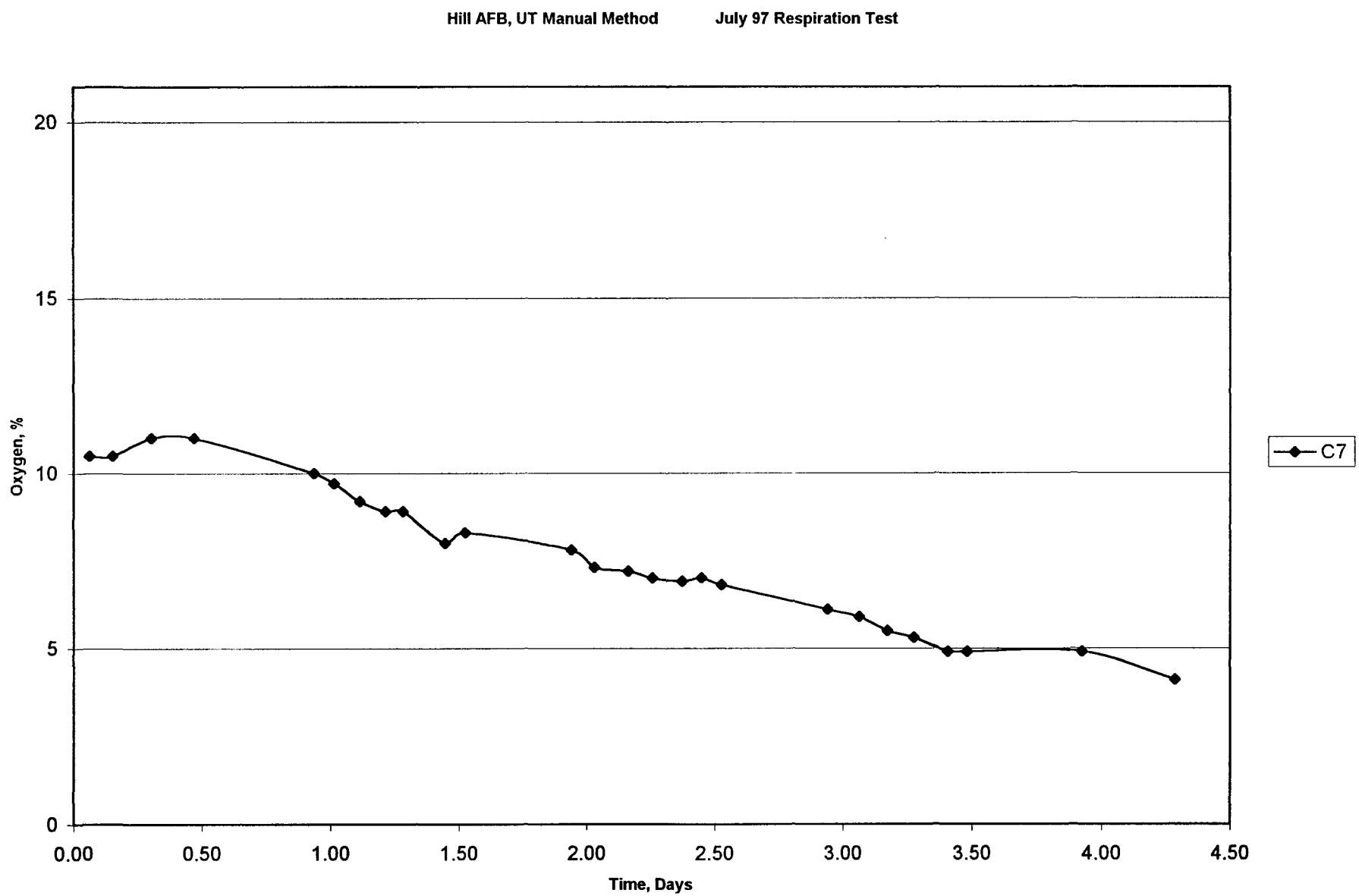
Time, Days
B17


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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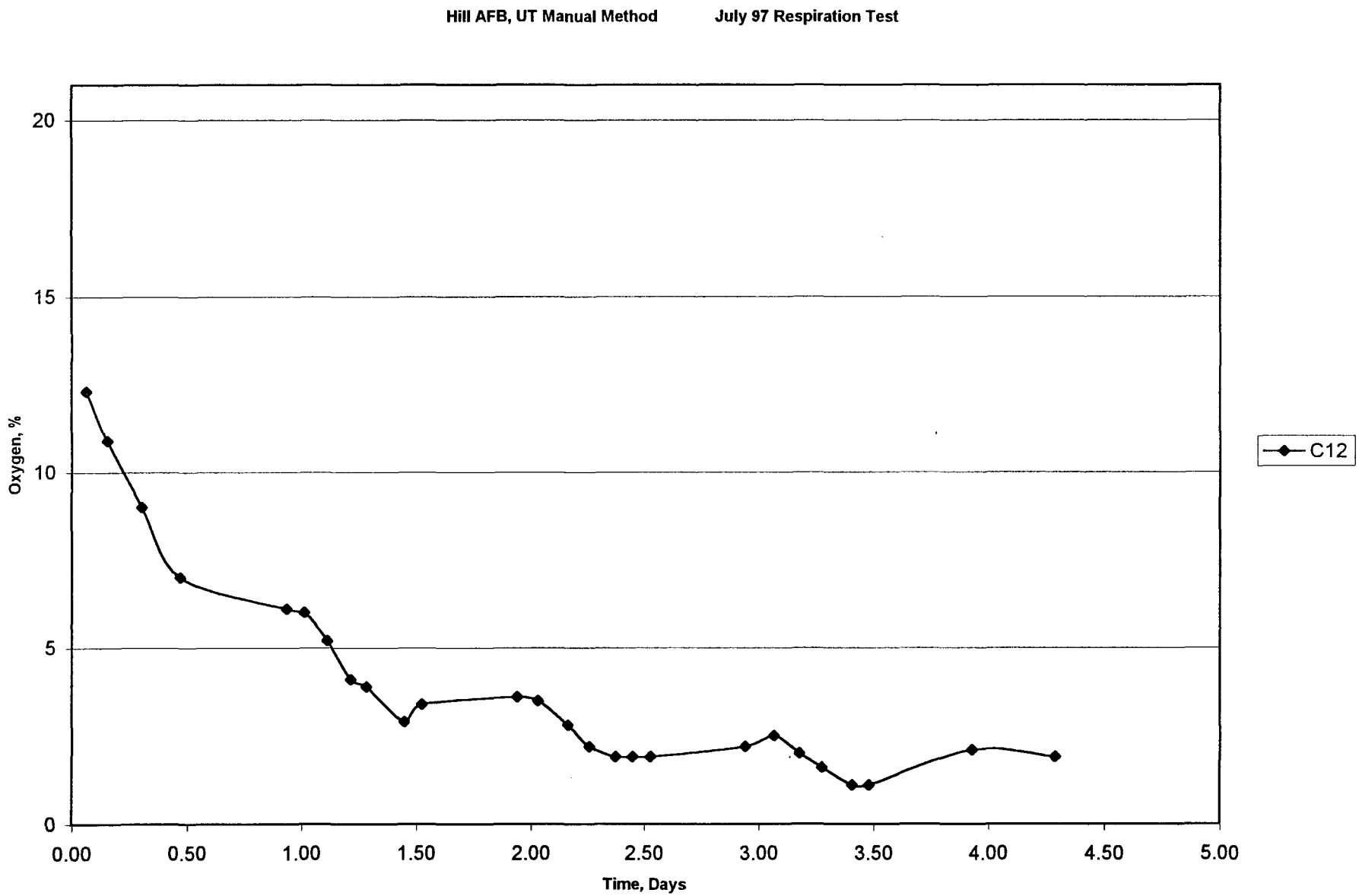
Time, Days
C7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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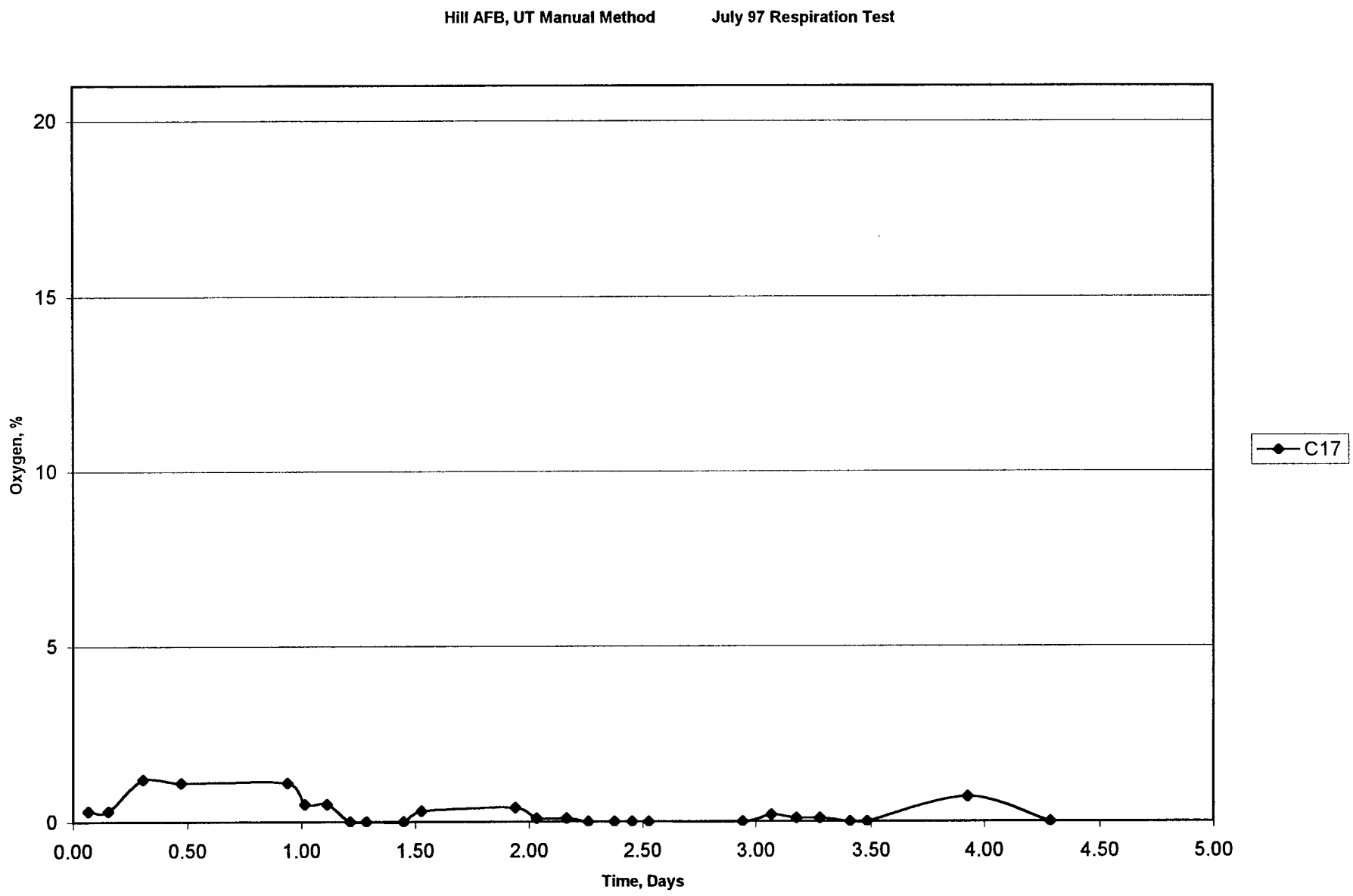
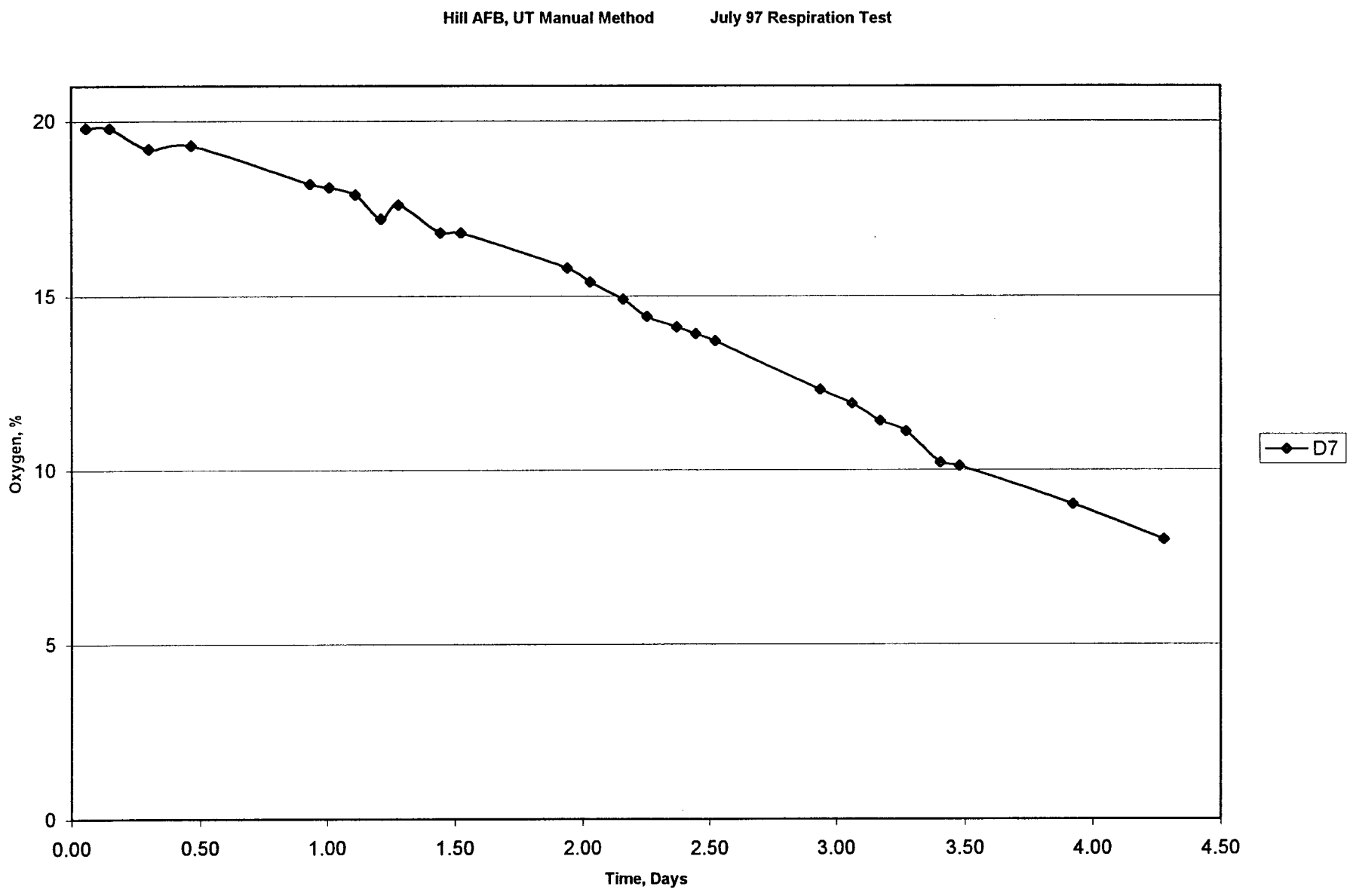
Time, Days
C12

Hill AFB, UT Manual Method July 97 Respiration Test




Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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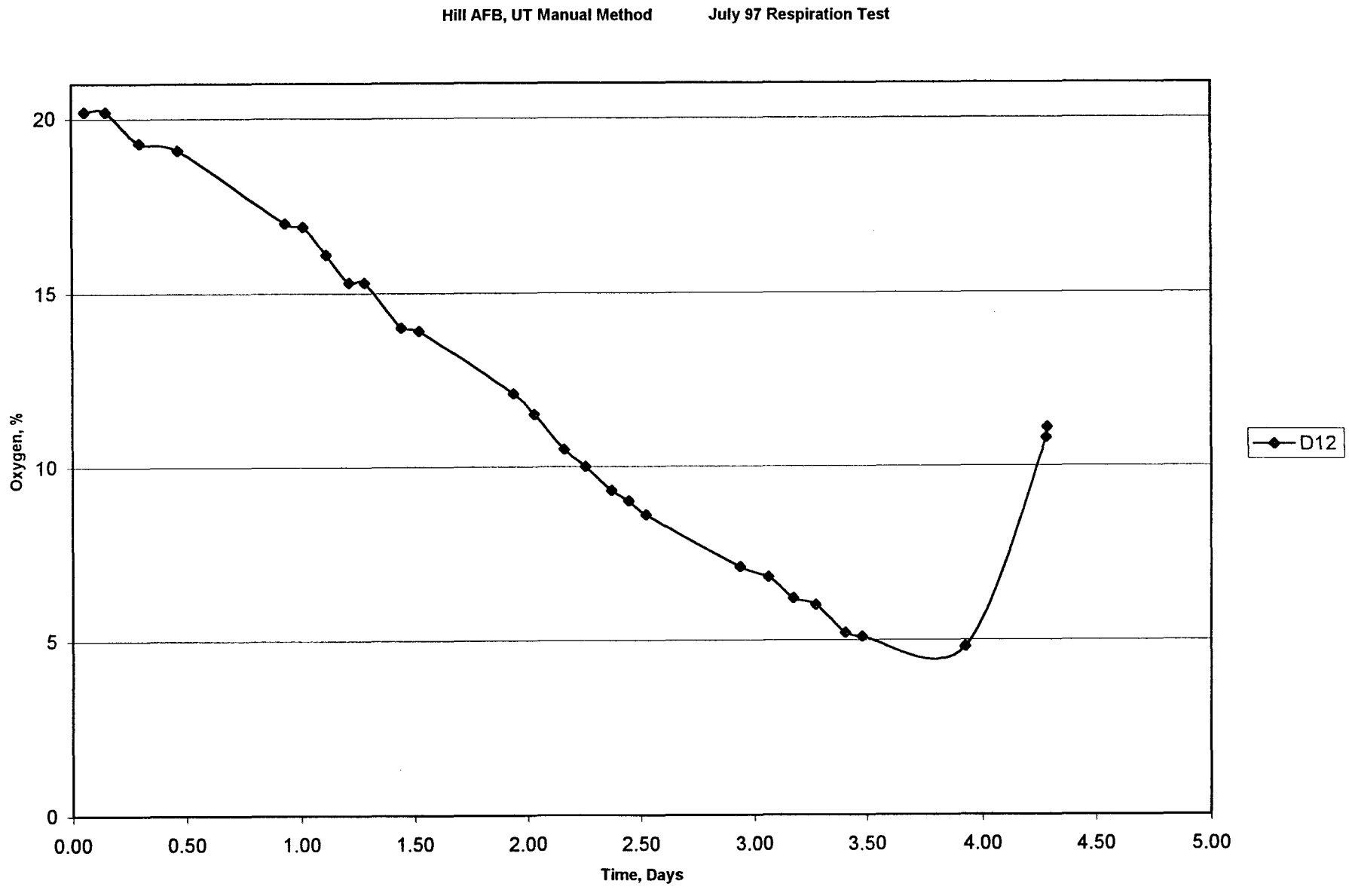
Time, Days
D7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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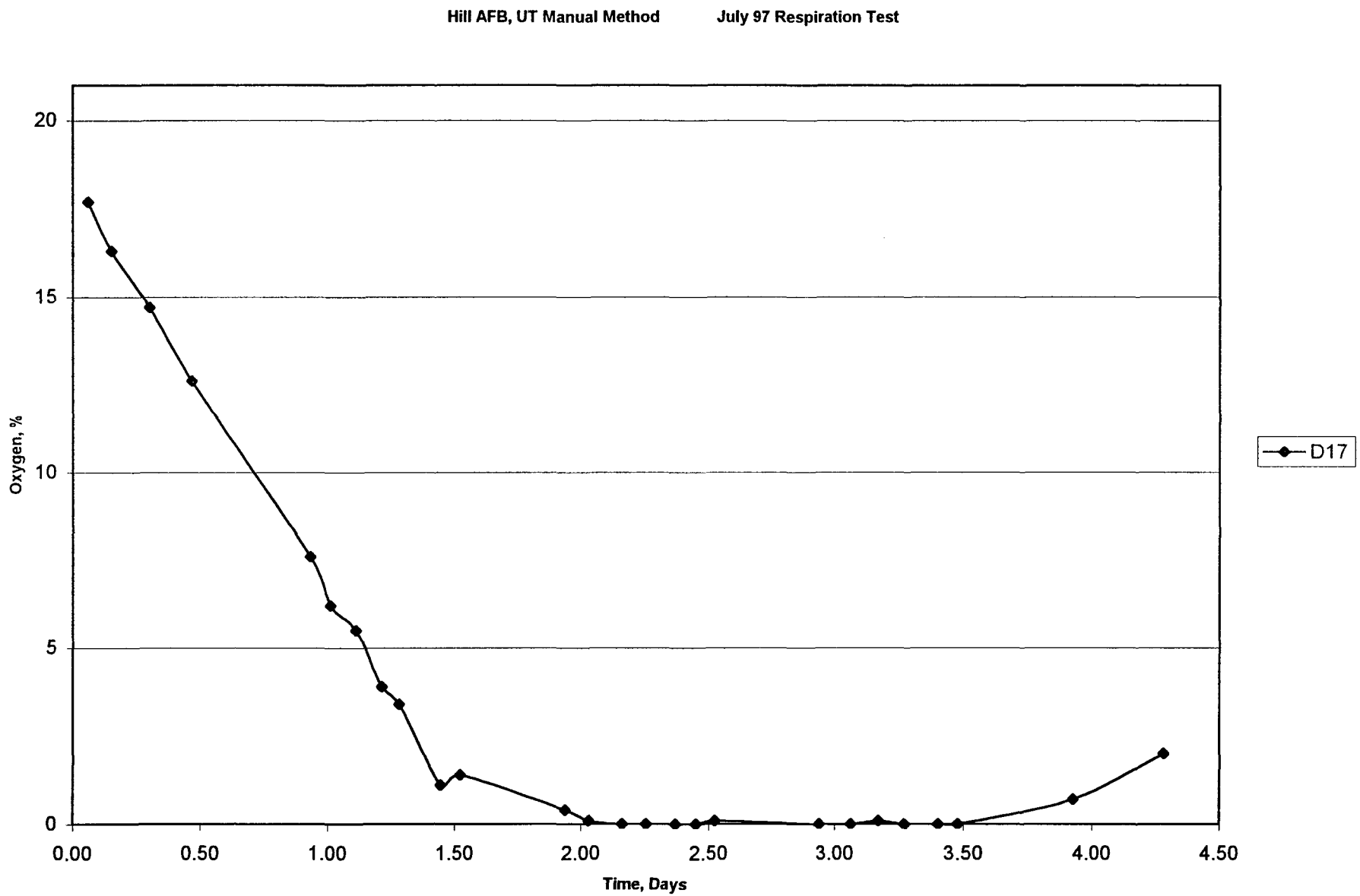
Time, Days
D12


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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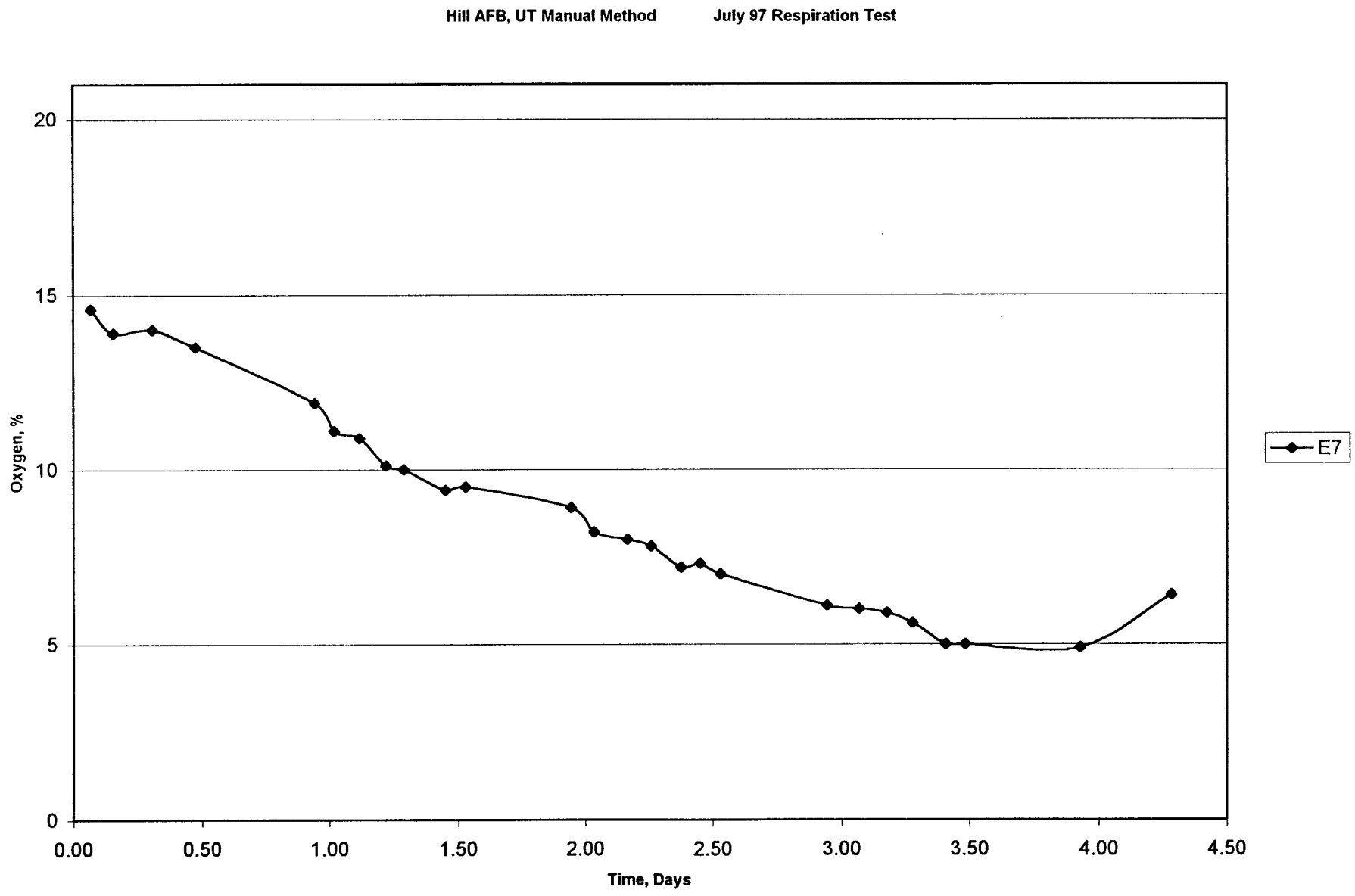
Time, Days
D17


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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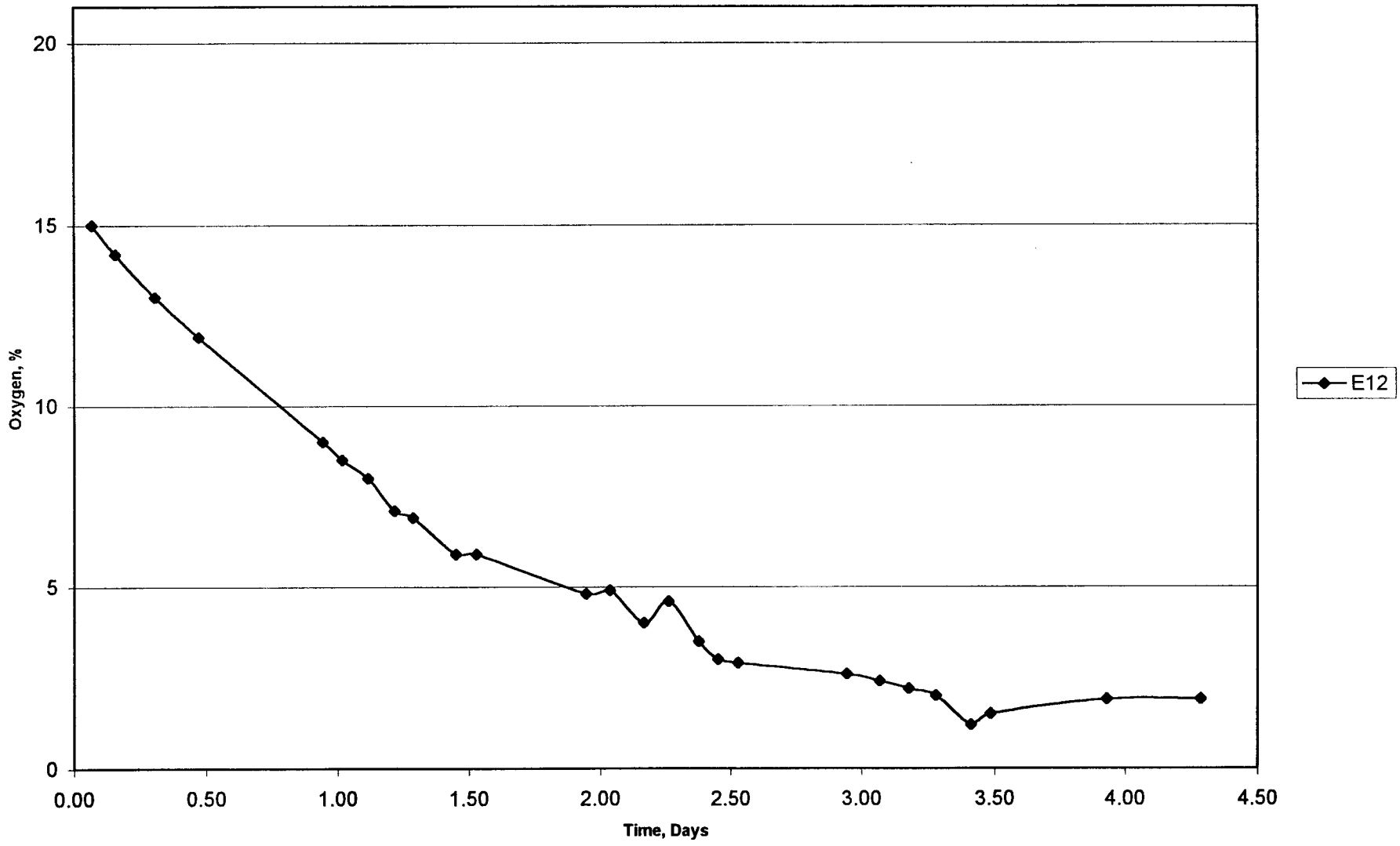
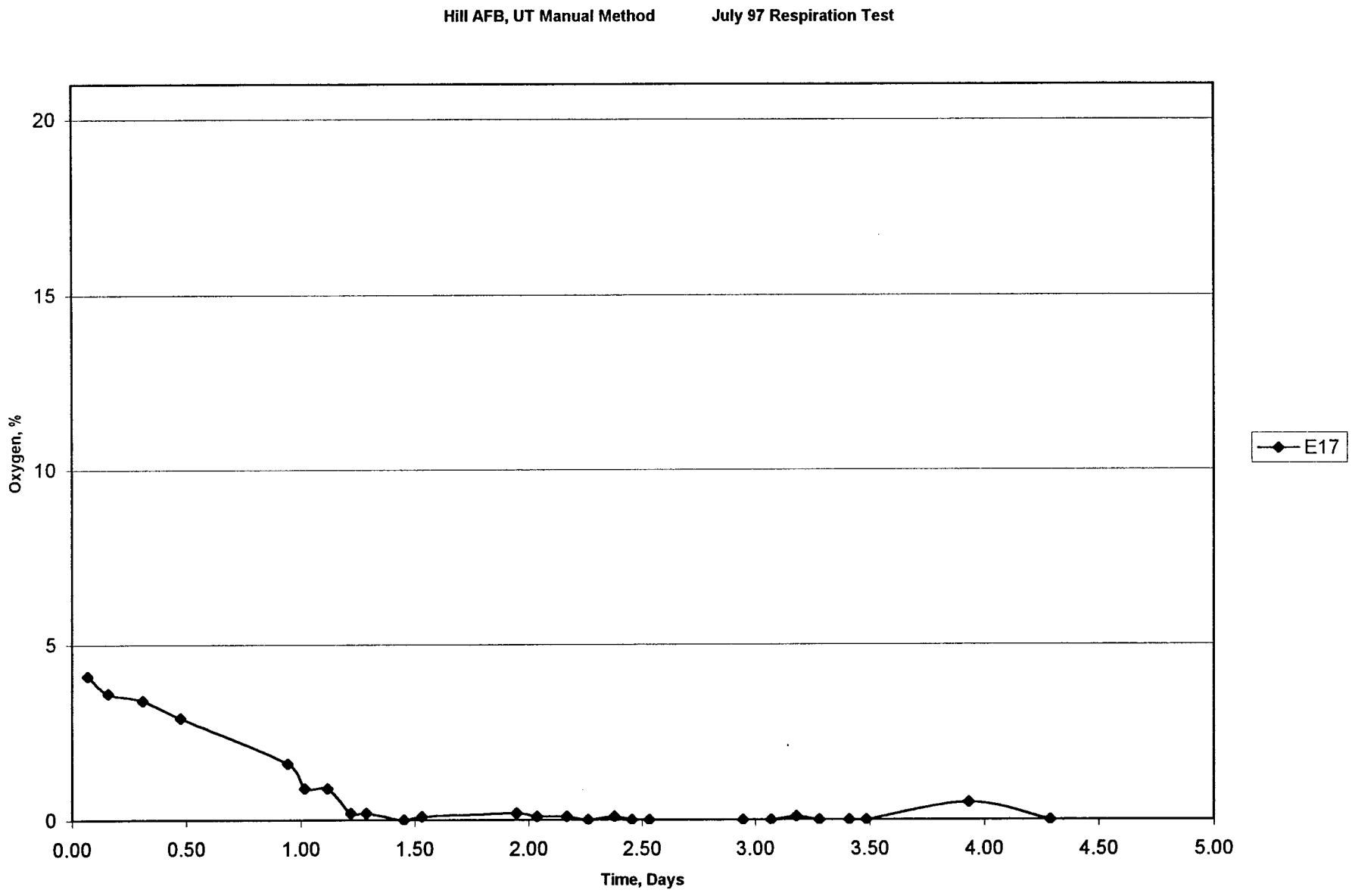
Time, Days
E7

Hill AFB, UT Manual Method July 97 Respiration Test




Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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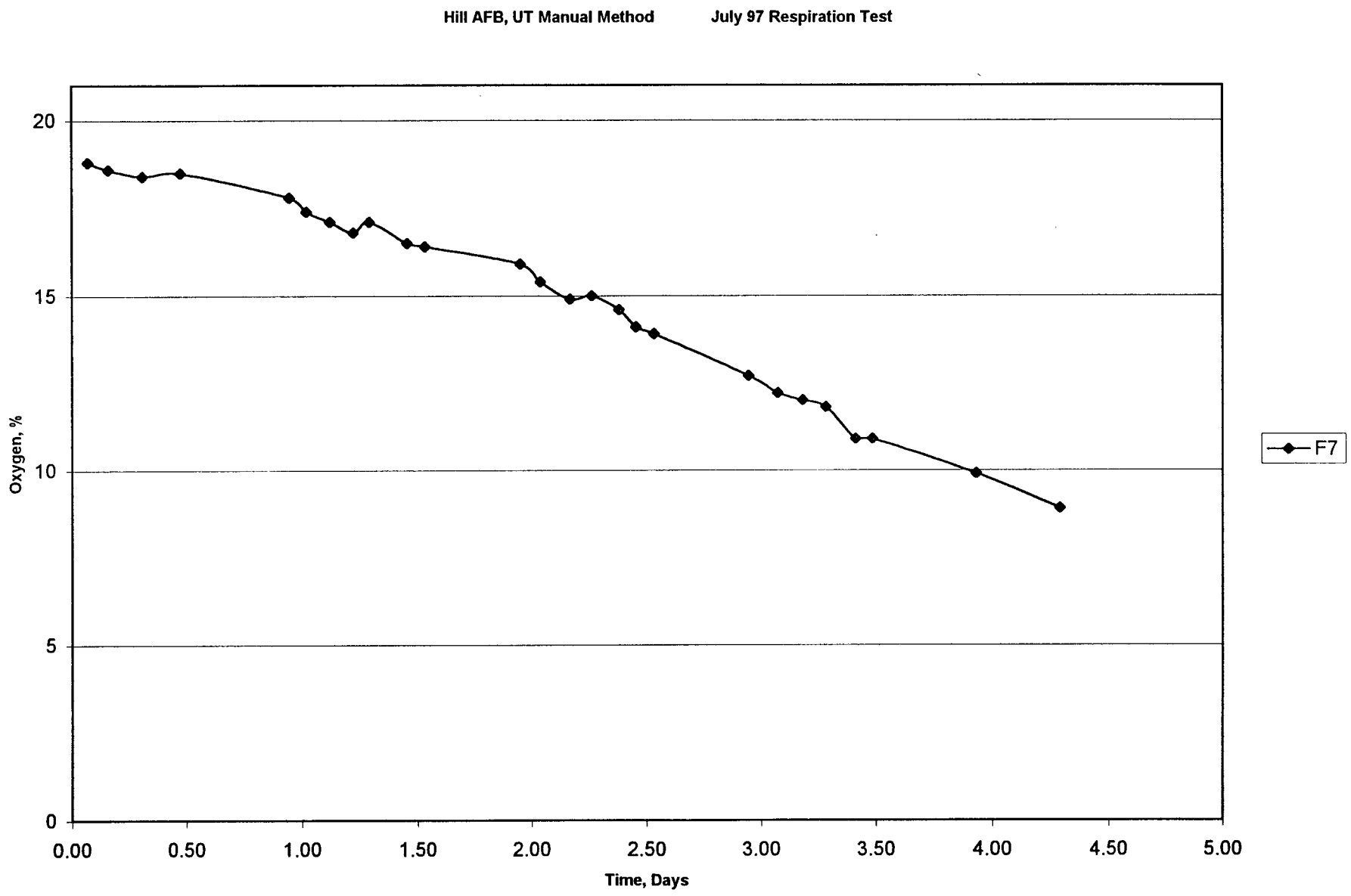
Time, Days
E17


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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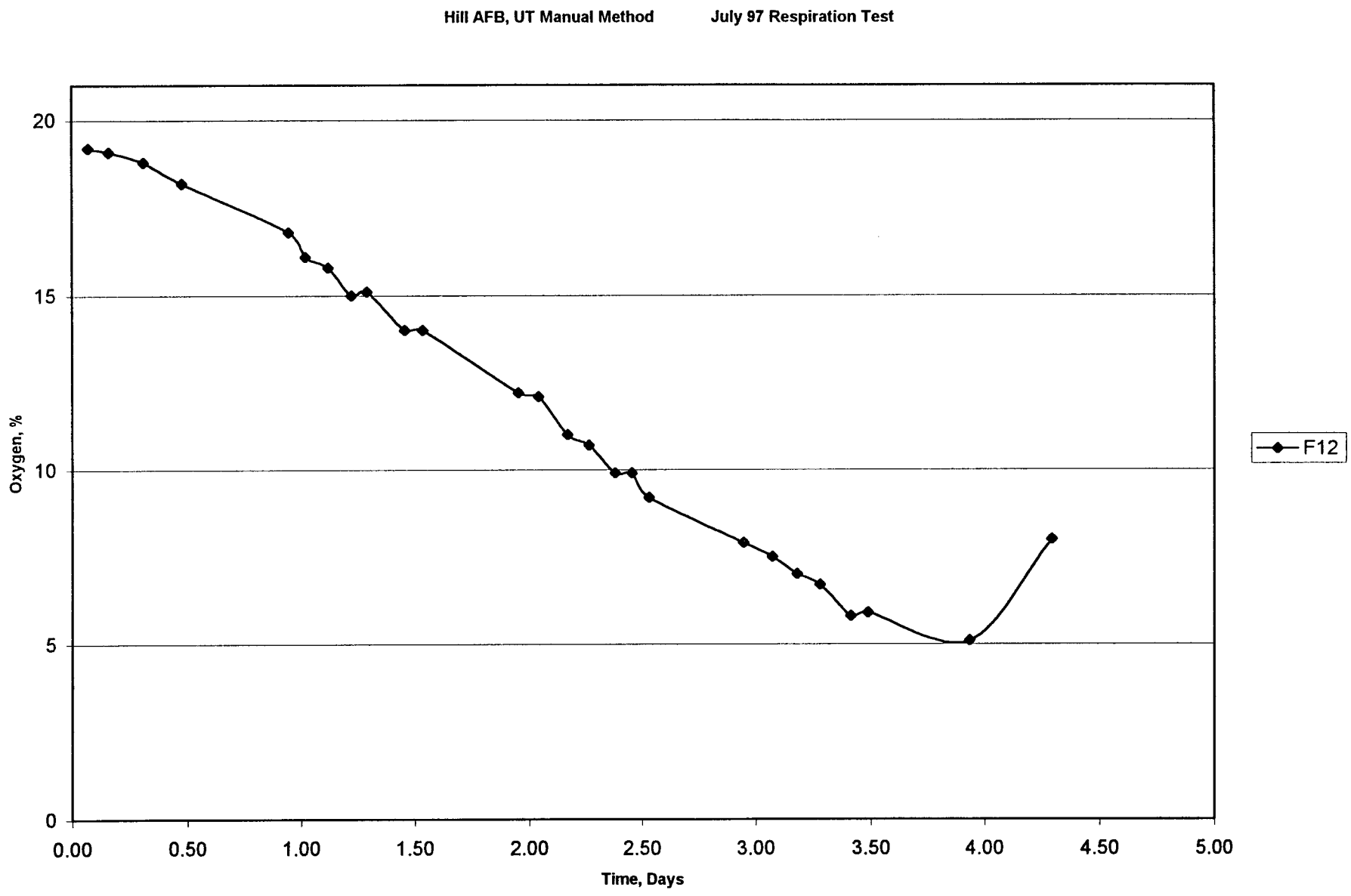
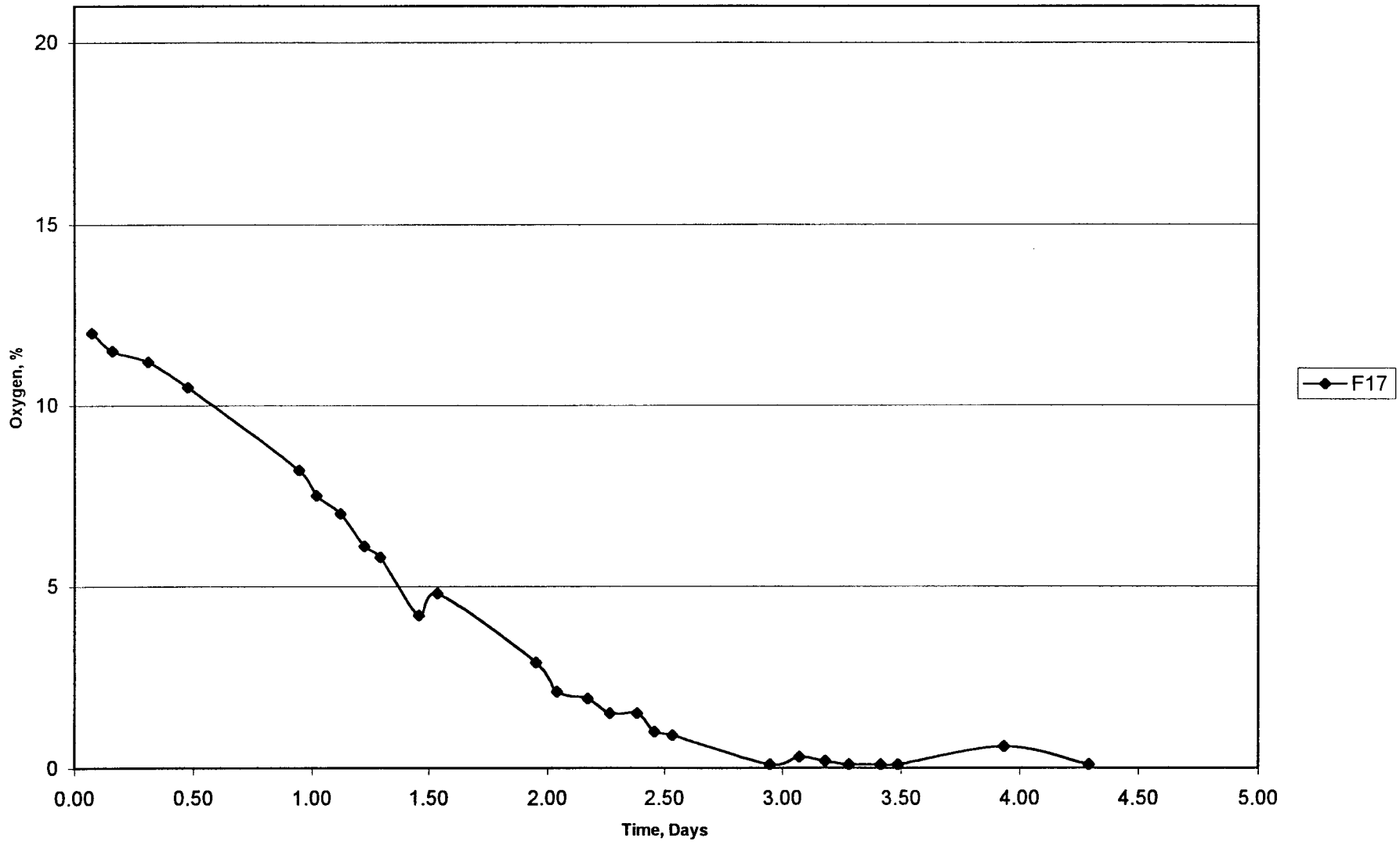
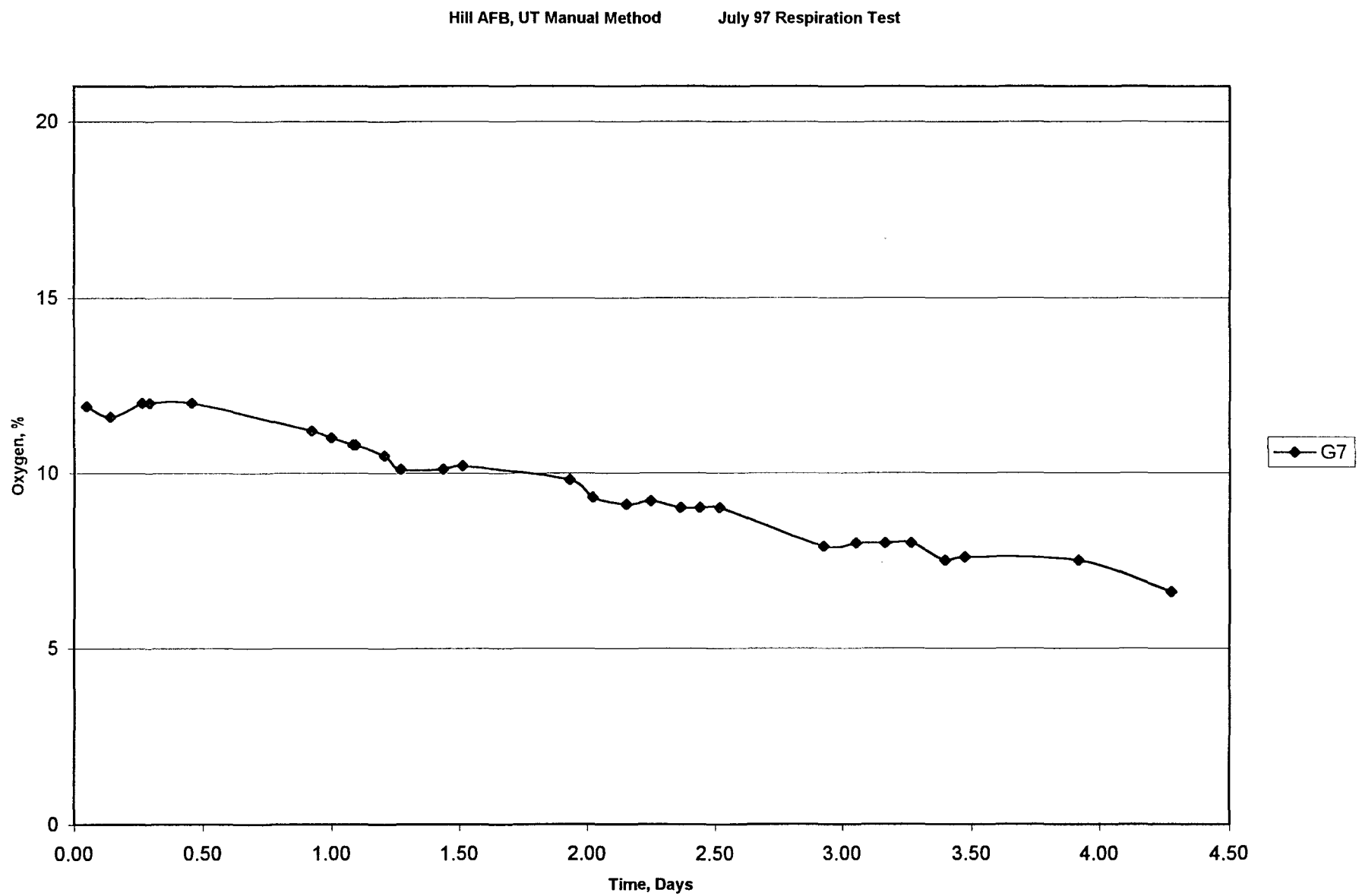
Time, Days
F7

Hill AFB, UT Manual Method July 97 Respiration Test



Hill AFB, UT Manual Method July 97 Respiration Test




Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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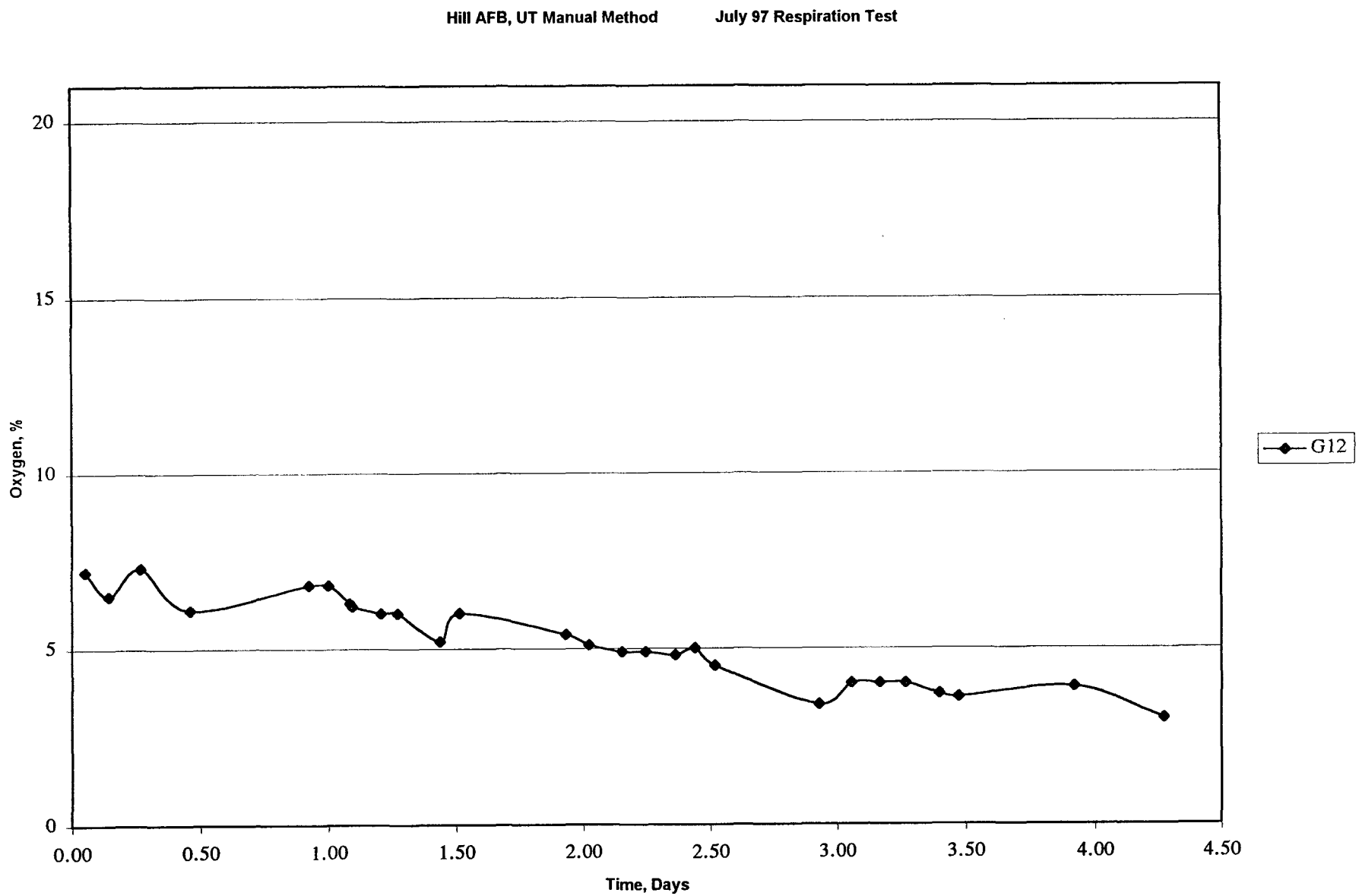
3.00
3.50
4.00
4.50
Time, Days
G7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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15
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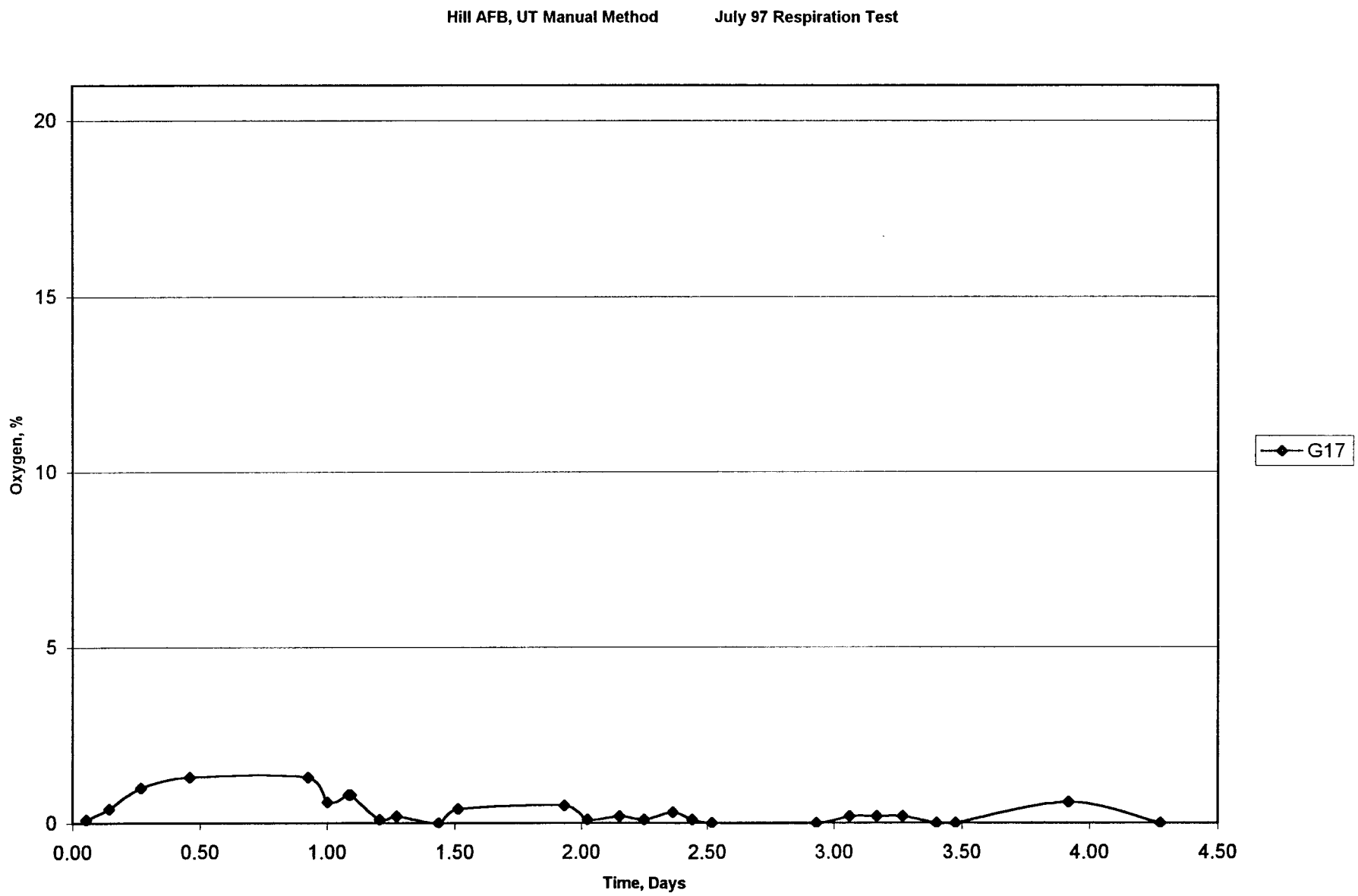
Time, Days
G12


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
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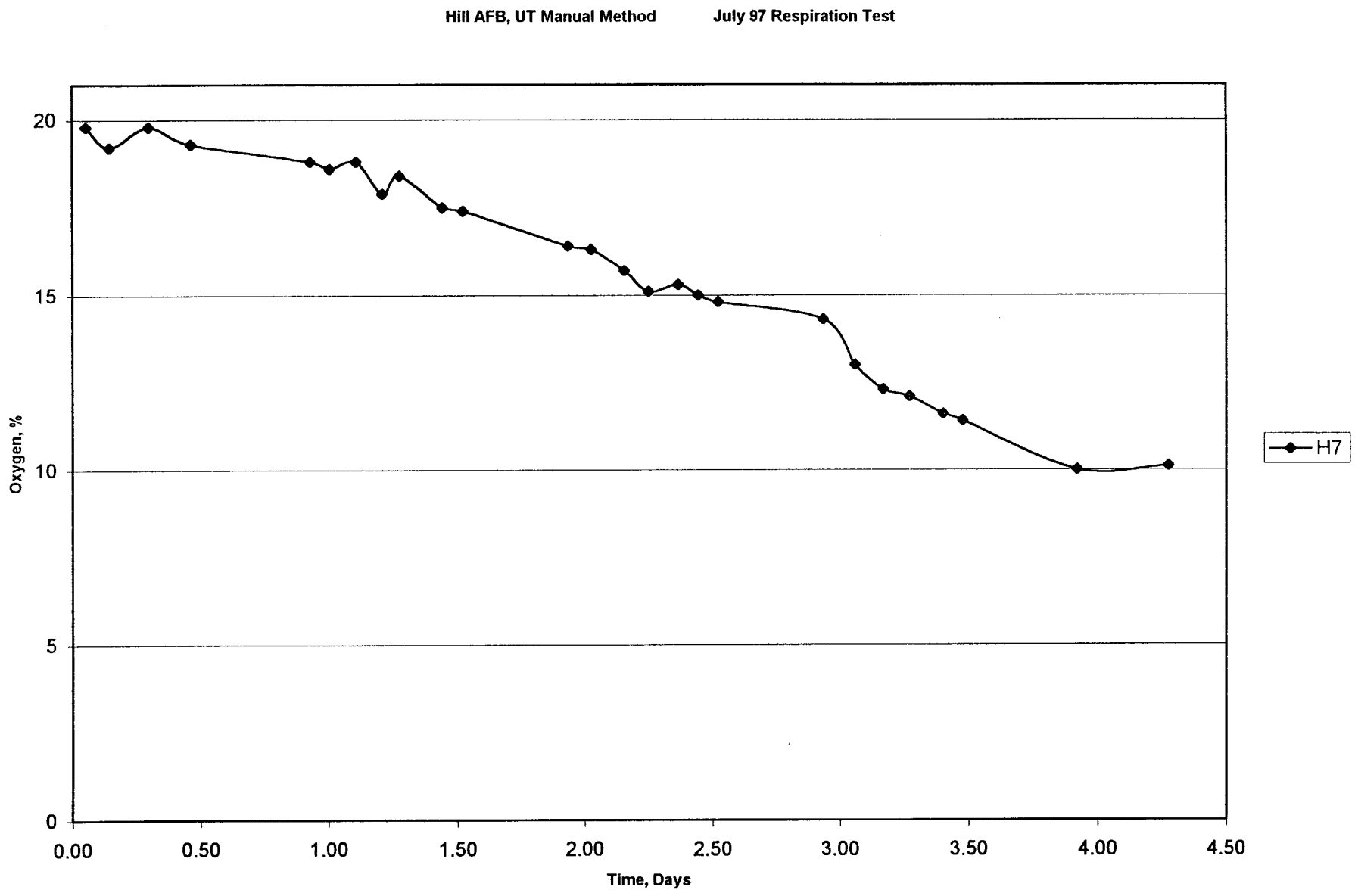
4.00
4.50
Time, Days
G17


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
20
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3.00
3.50
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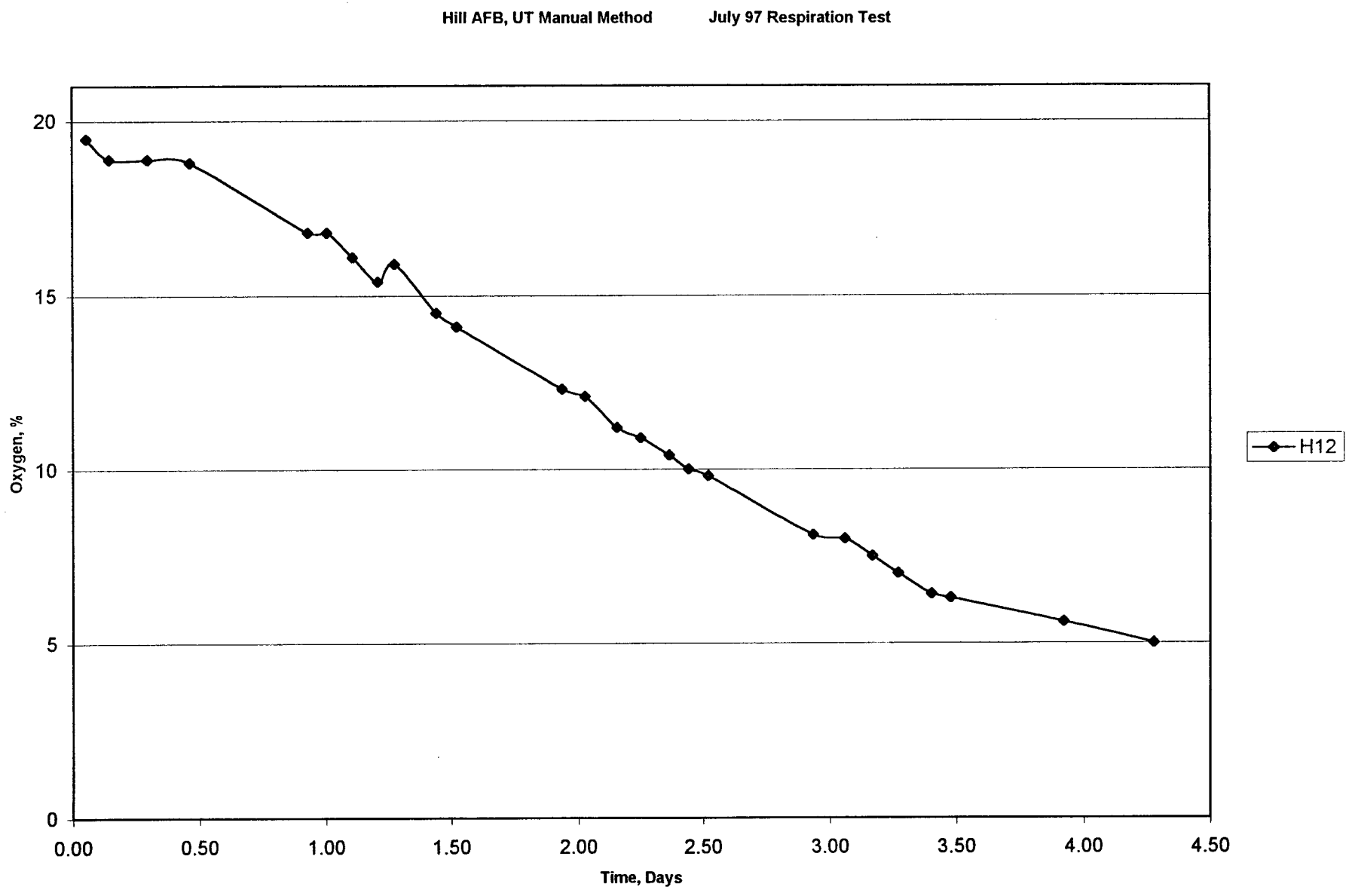
4.50
Time, Days
H7


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
20
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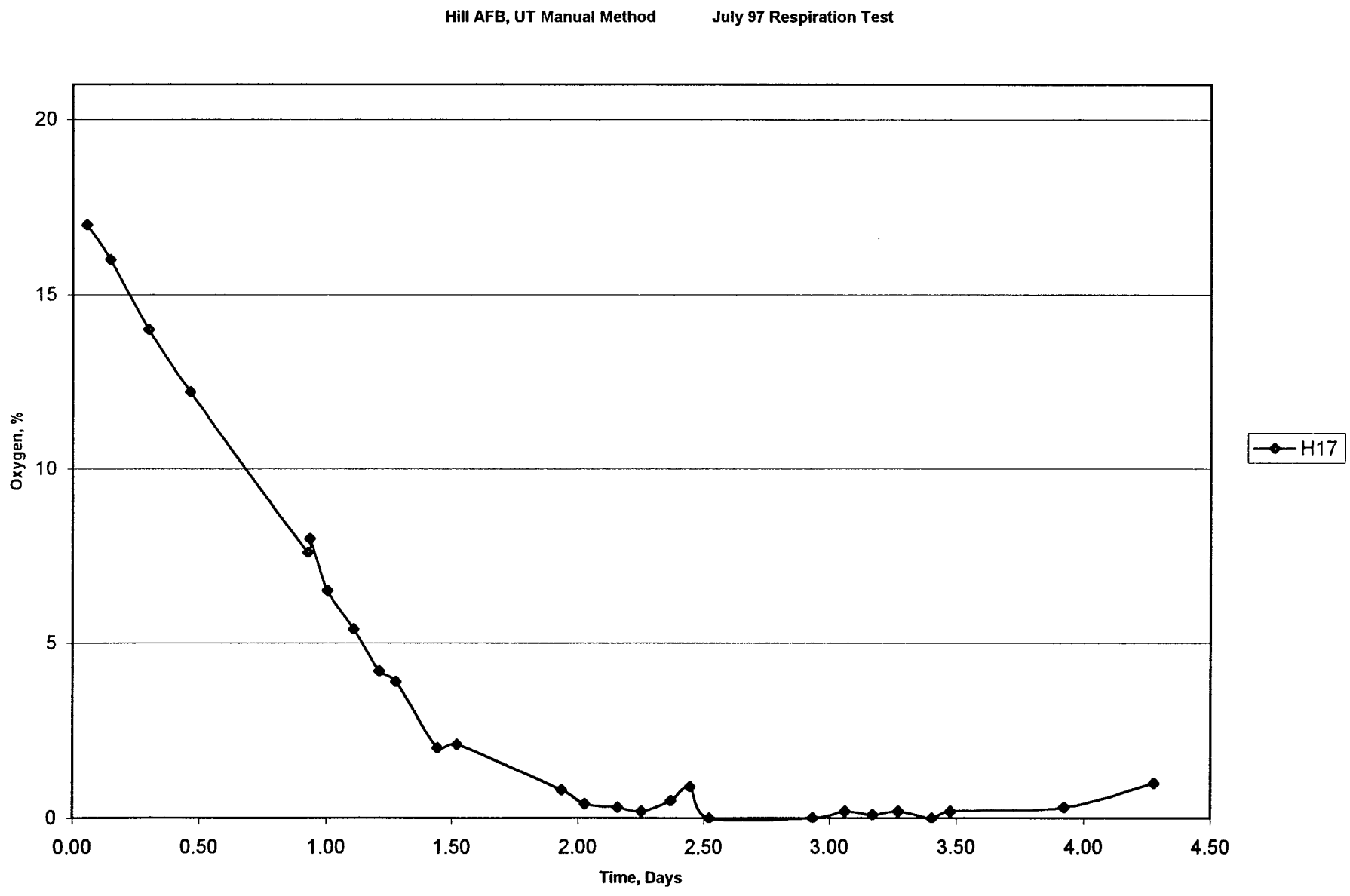
4.00
4.50
Time, Days
H12


Hill AFB, UT Manual Method
July 97 Respiration Test
Oxygen, %
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
Time, Days
H17

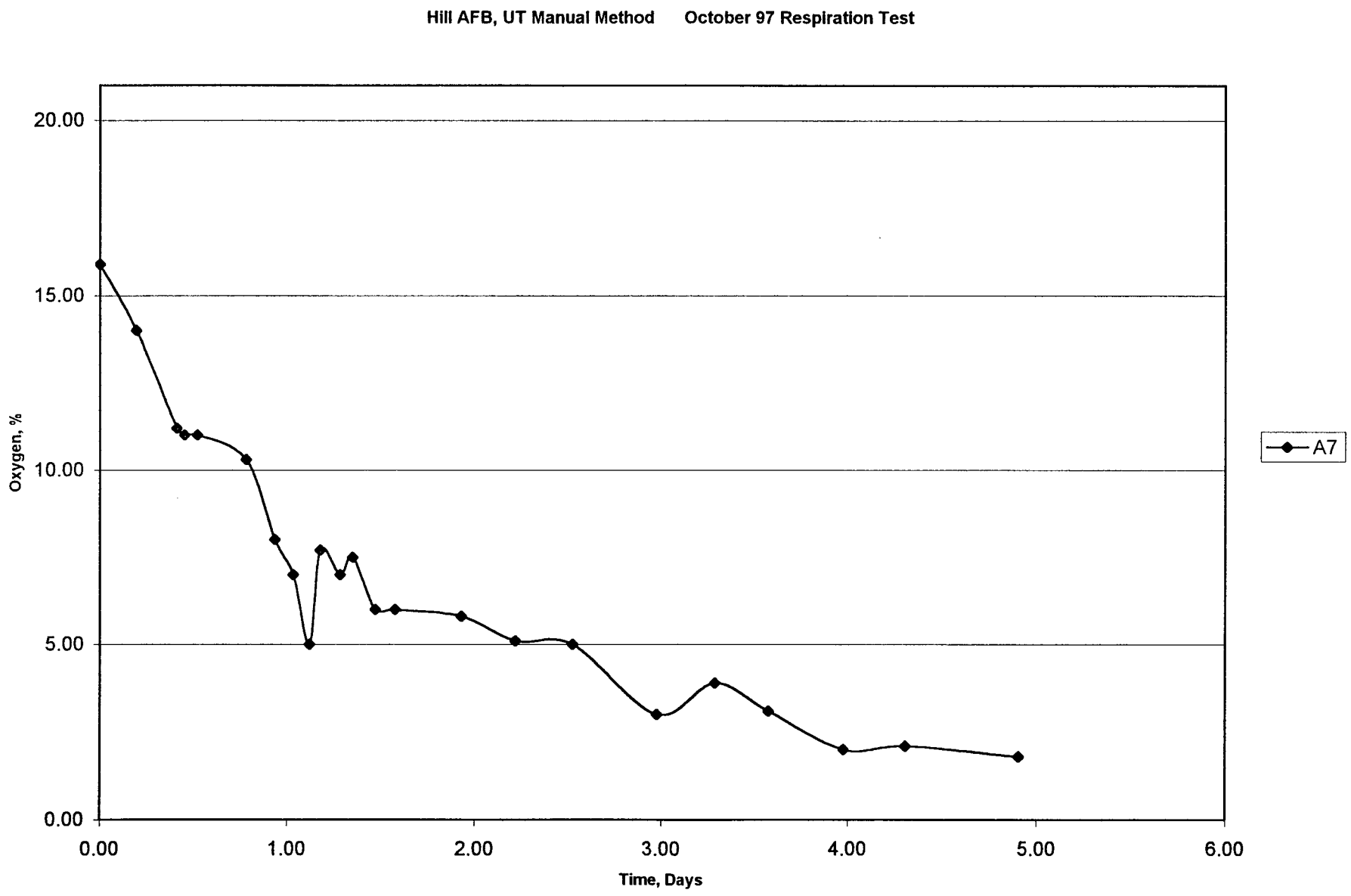
OXYGEN UTILIZATION PLOTS

MONITORED BY

MANUAL METHOD

DURING RESPIRATION TESTING

October 1997


Hill AFB, UT Manual Method October 97 Respiration Test
20.00
15.00
10.00
5.00
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Oxygen, %
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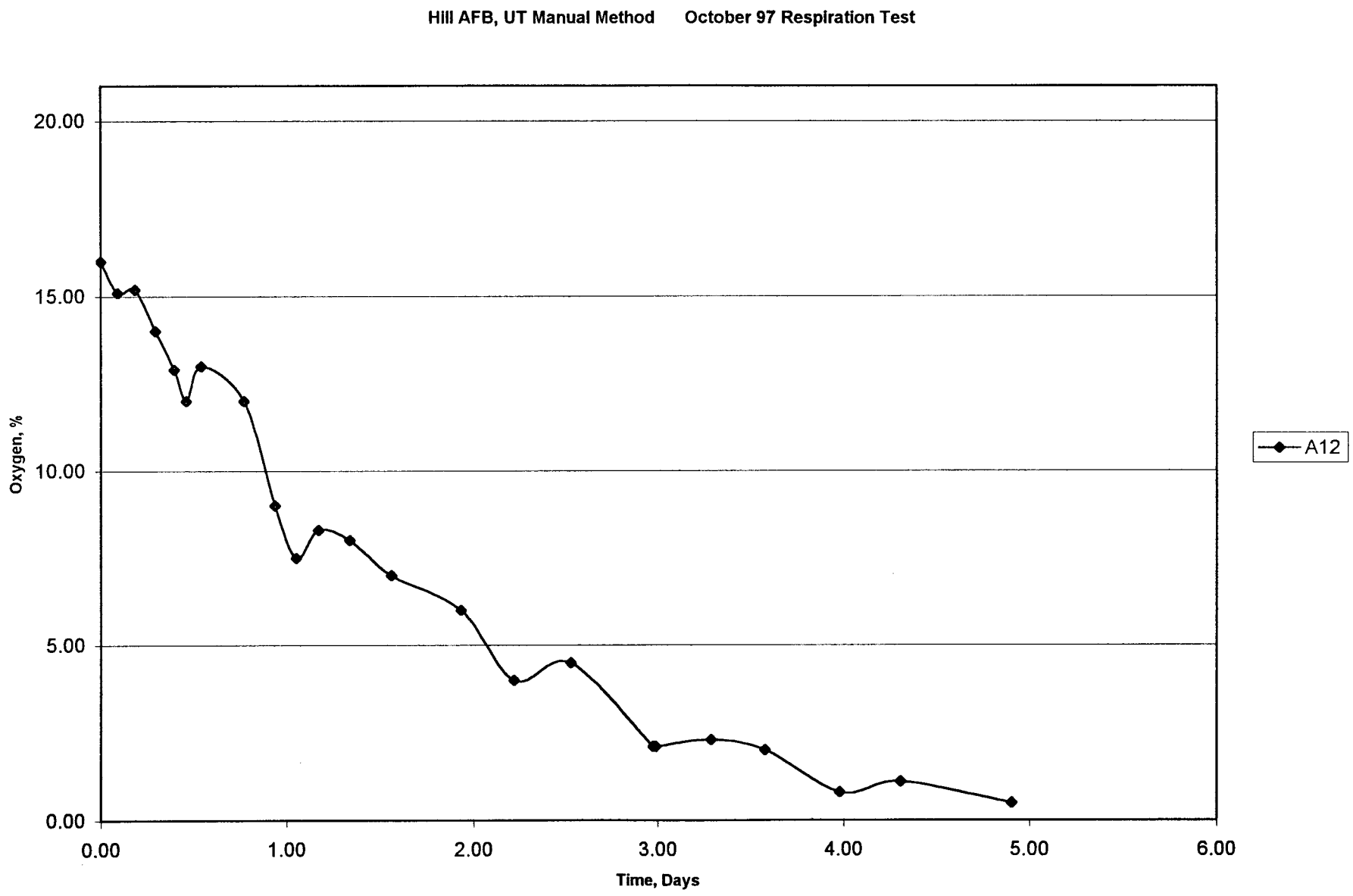
2.00
3.00
4.00
5.00
6.00
Time, Days
A7


Hill AFB, UT Manual Method October 97 Respiration Test
20.00
15.00
10.00
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Oxygen, %
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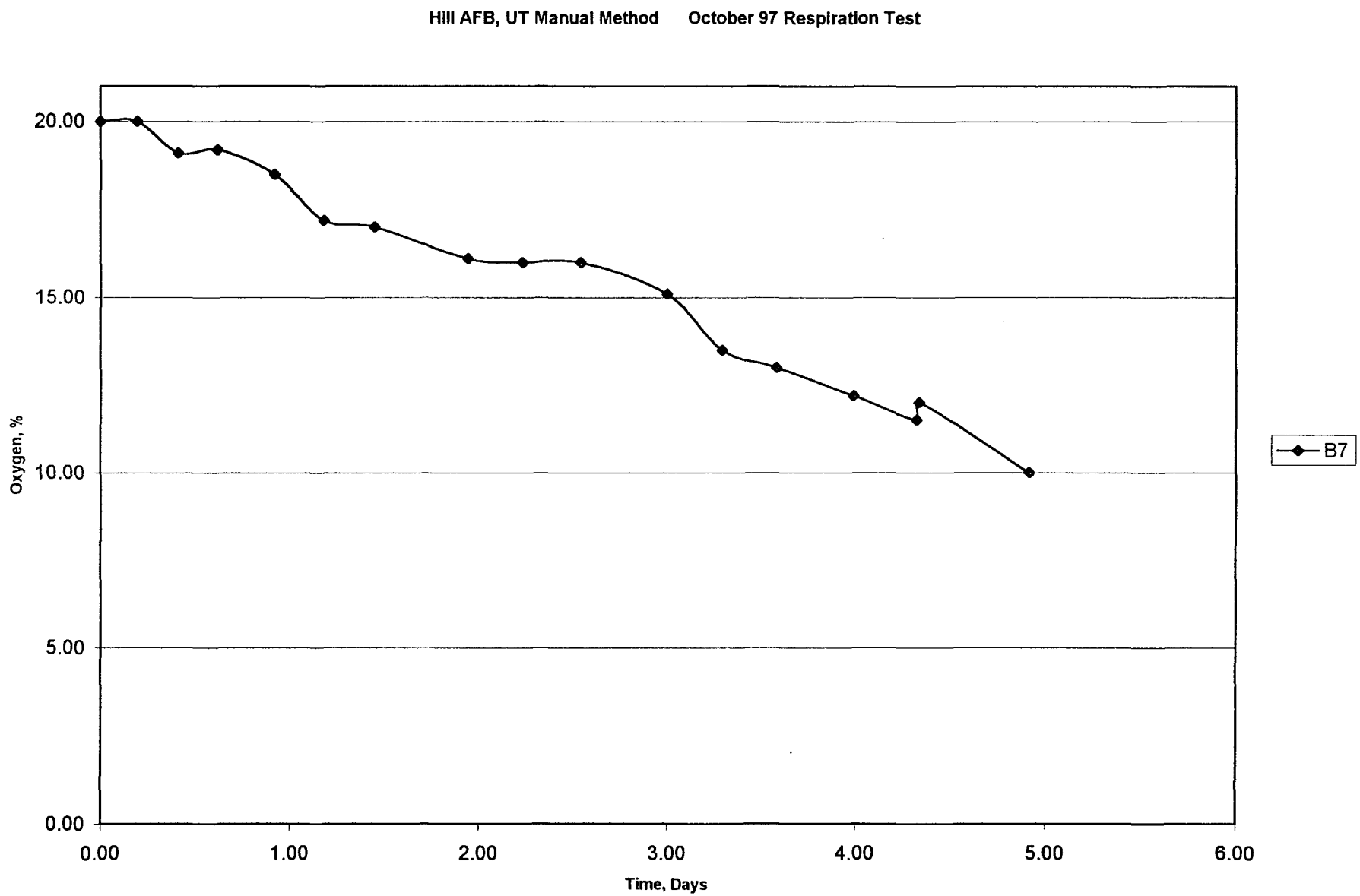
Time, Days
A12


Hill AFB, UT Manual Method October 97 Respiration Test
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Oxygen, %
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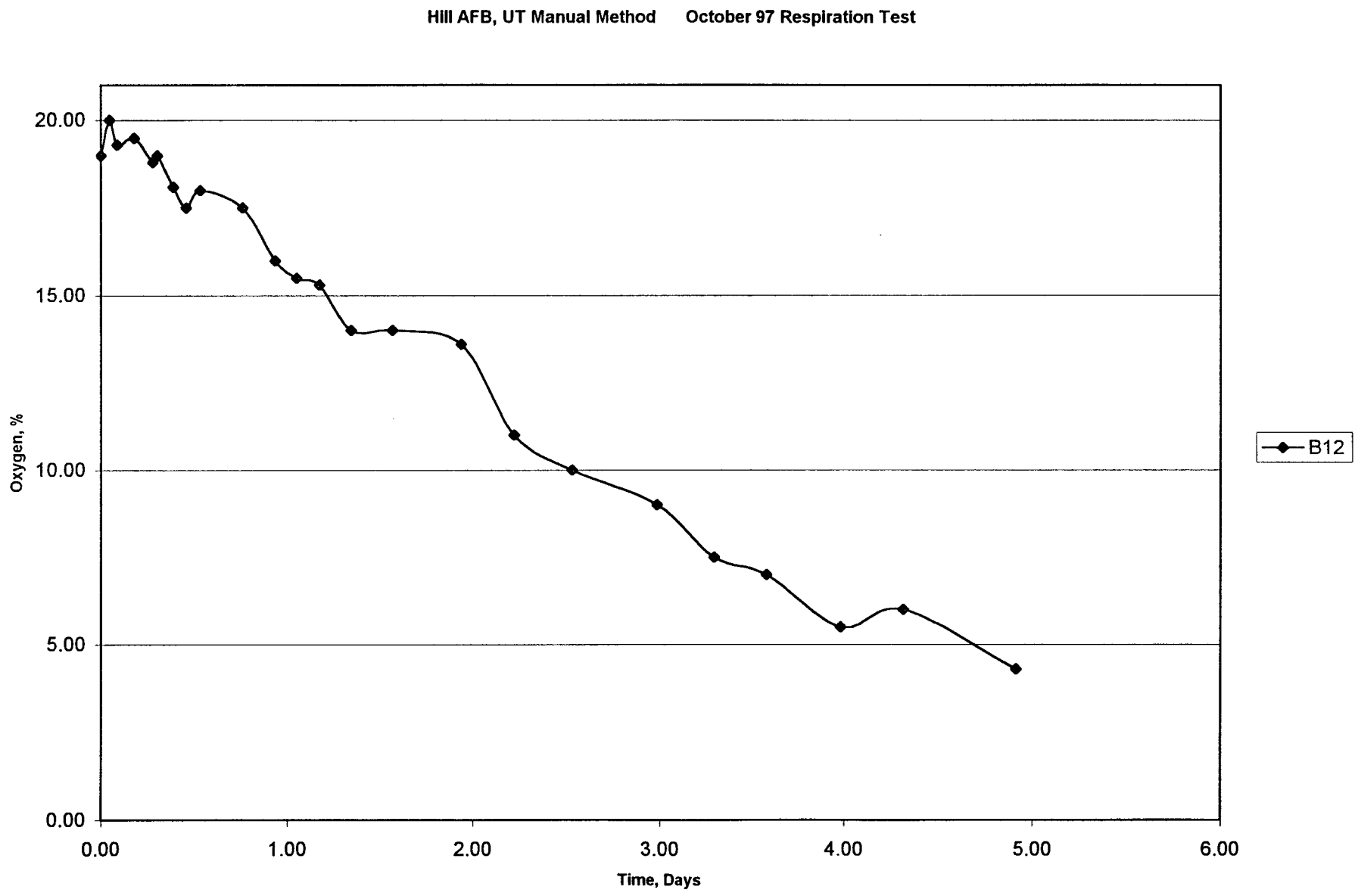
6.00
Time, Days
B7


Hill AFB, UT Manual Method October 97 Respiration Test
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15.00
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Oxygen, %
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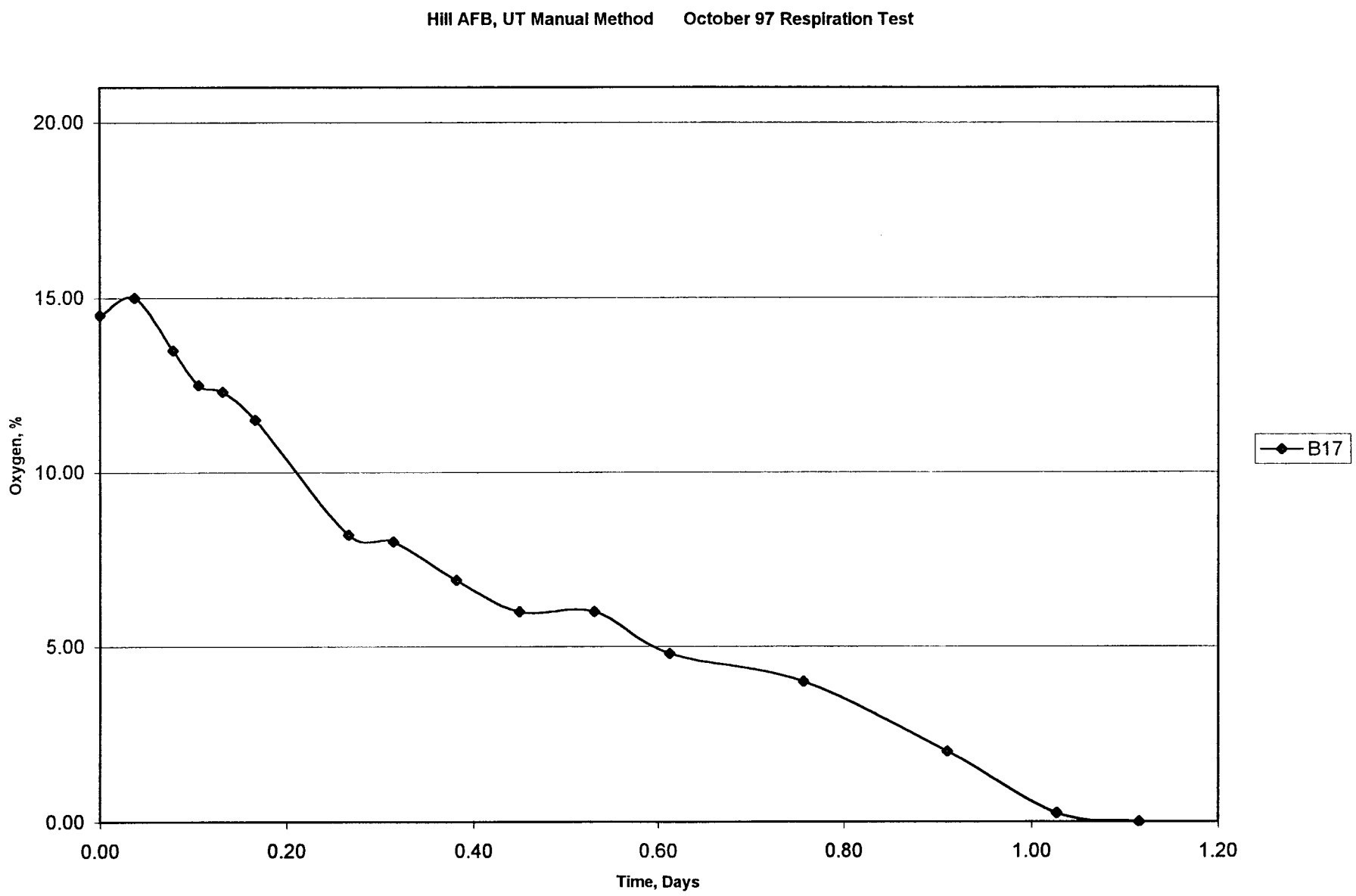
6.00
Time, Days
B12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10.00
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Oxygen, %
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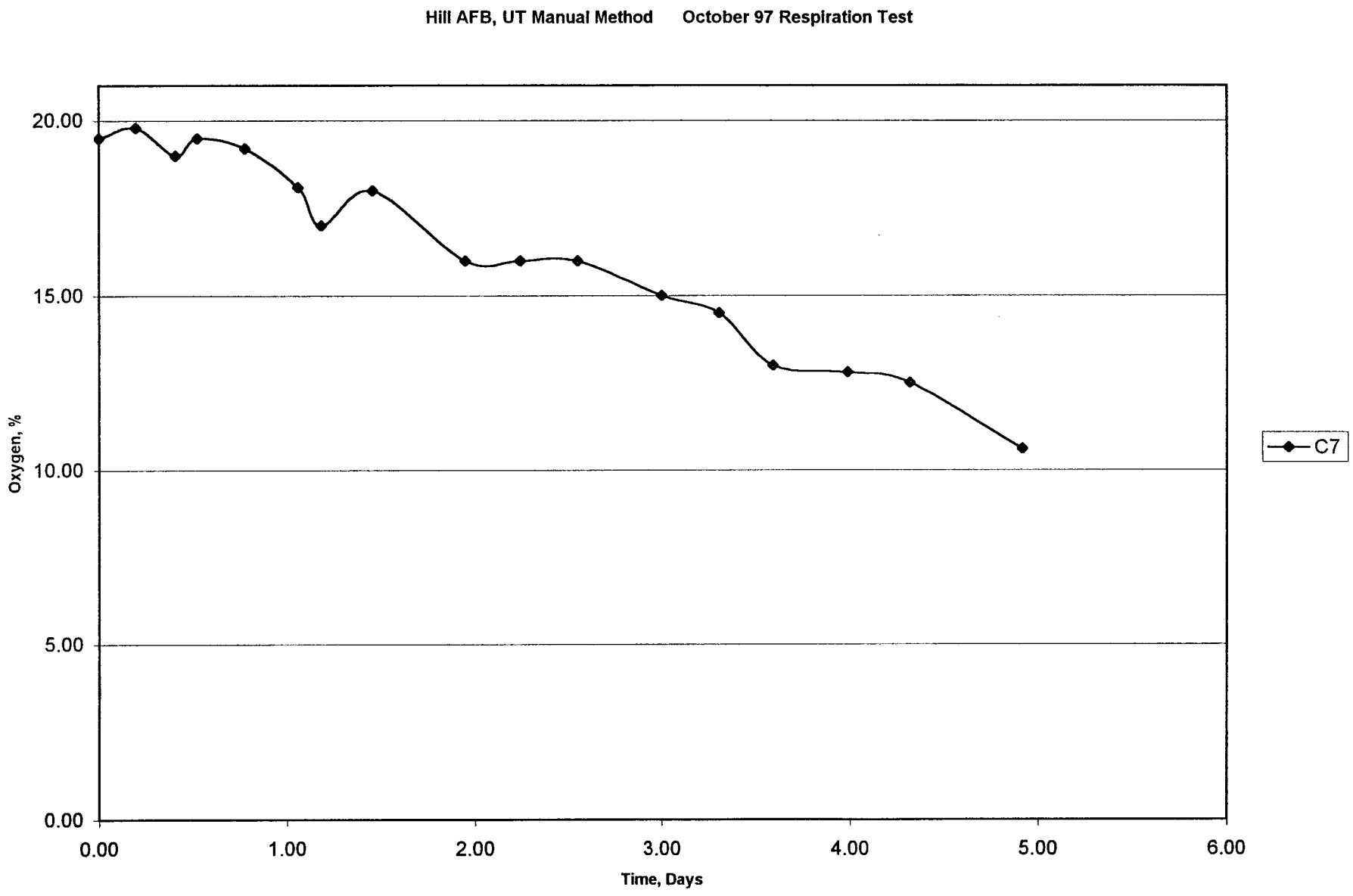
0.80
1.00
1.20
Time, Days
B17


Hill AFB, UT Manual Method October 97 Respiration Test
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15.00
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Oxygen, %
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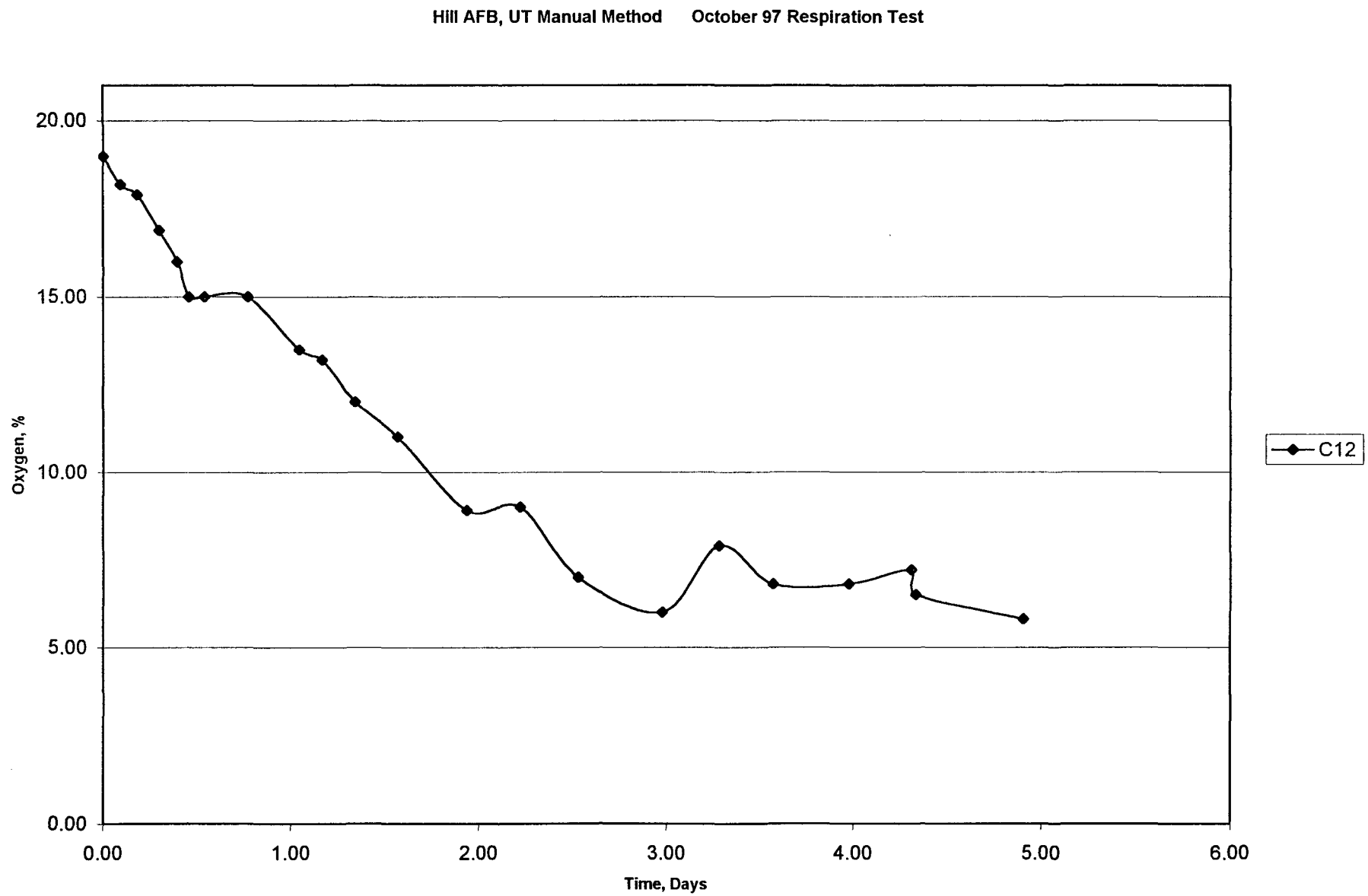
6.00
Time, Days
C7


Hill AFB, UT Manual Method October 97 Respiration Test
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Oxygen, %
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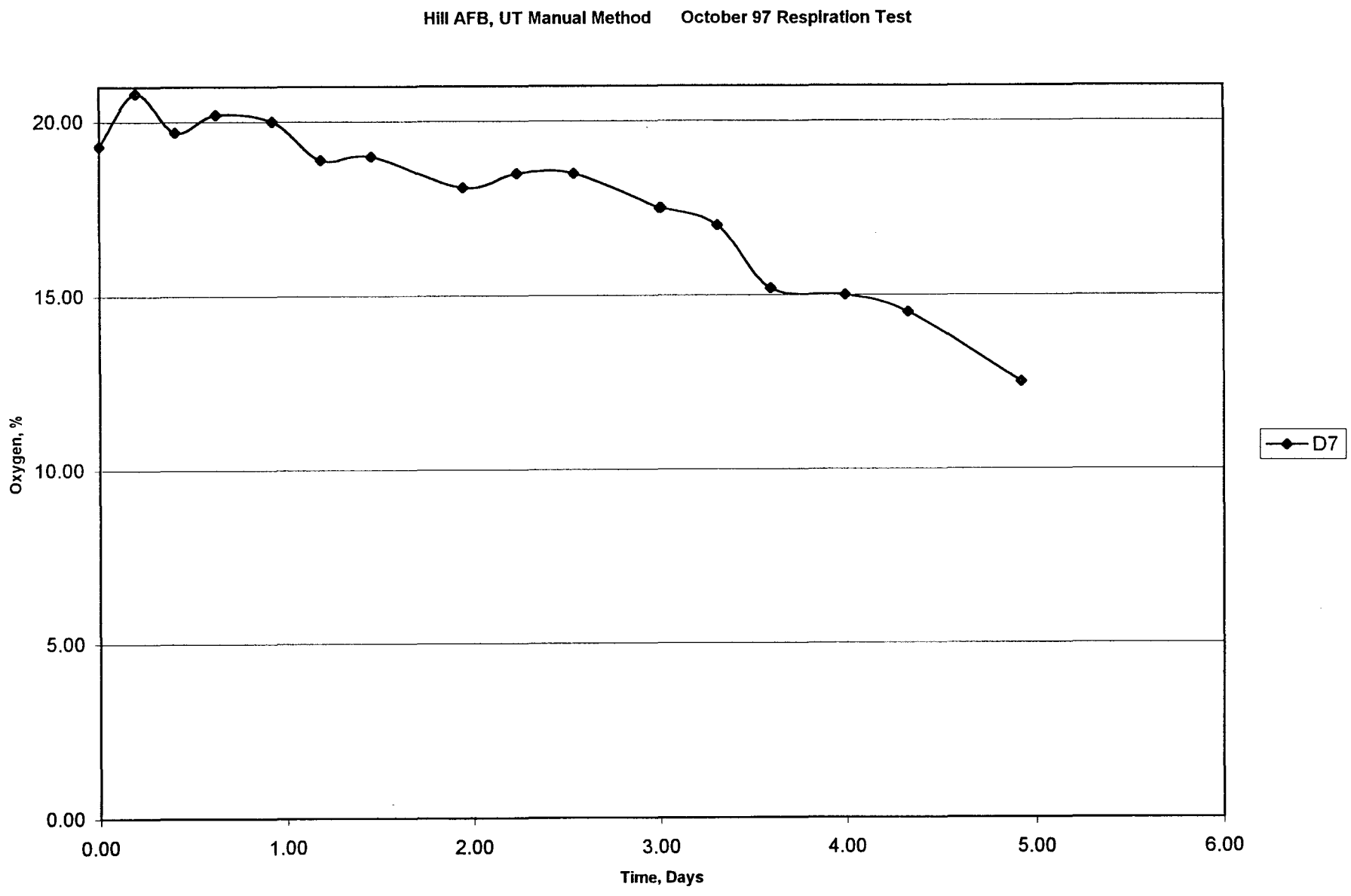
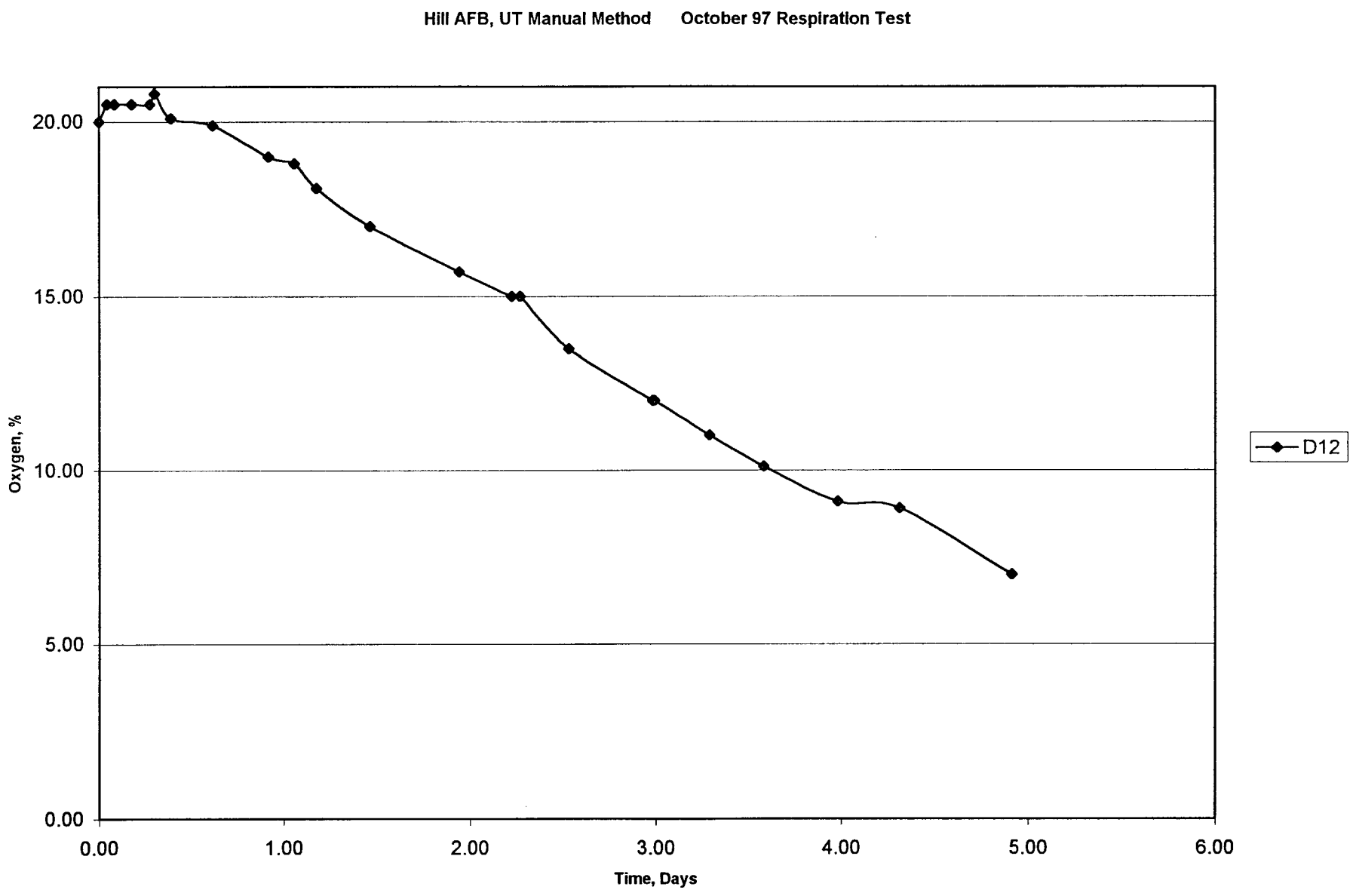
Time, Days
C12


Hill AFB, UT Manual Method October 97 Respiration Test
20.00
15.00
10.00
5.00
0.00
Oxygen, %
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time, Days
D7


Hill AFB, UT Manual Method October 97 Respiration Test
Oxygen, %
20.00
15.00
10.00
5.00
0.00
0.00
1.00
2.00
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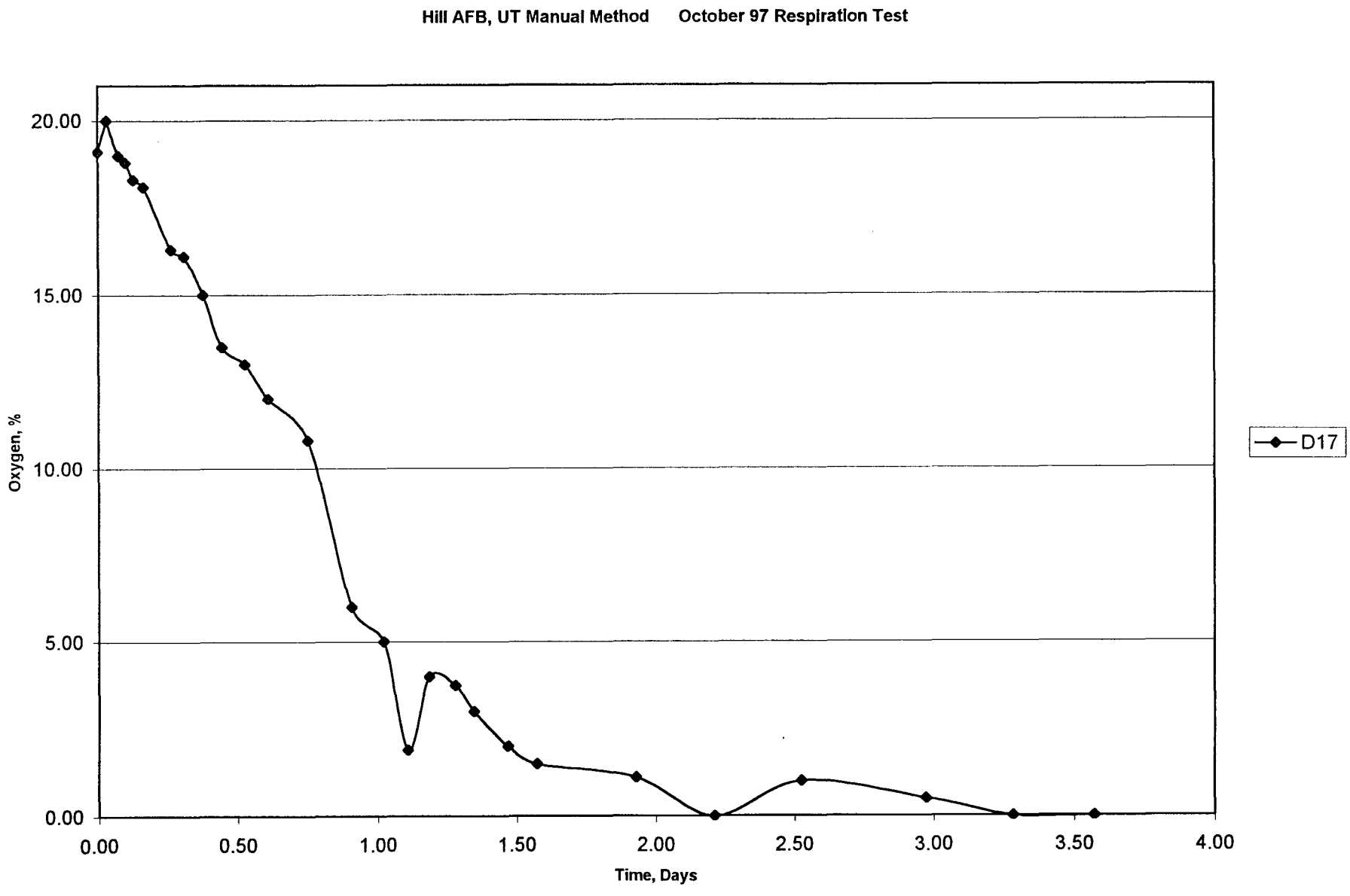
4.00
5.00
6.00
Time, Days
D12


Hill AFB, UT Manual Method October 97 Respiration Test
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15.00
10.00
5.00
0.00
Oxygen, %
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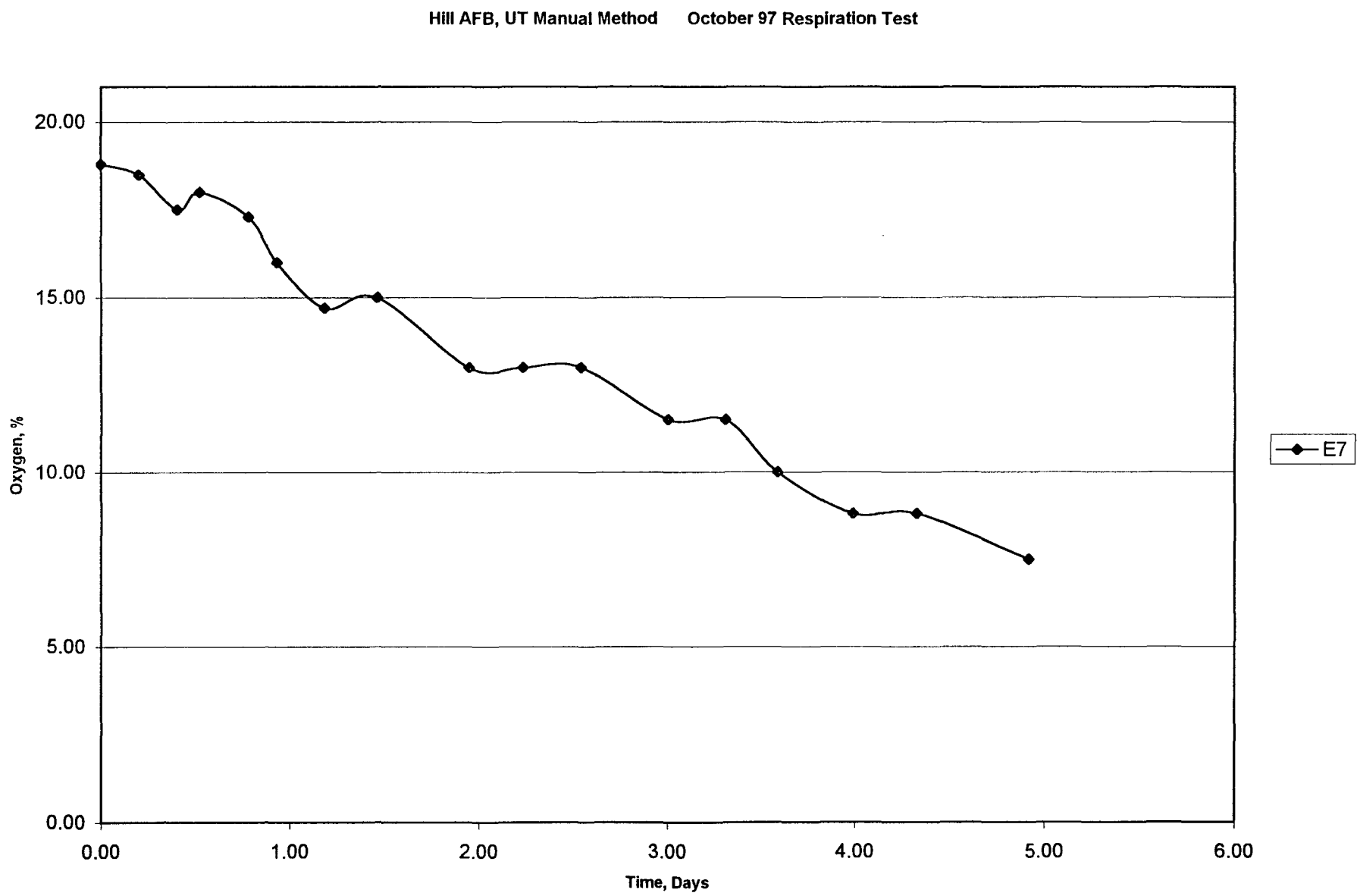
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
Time, Days
D17


Hill AFB, UT Manual Method October 97 Respiration Test
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15.00
10.00
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0.00
Oxygen, %
0.00
1.00
2.00
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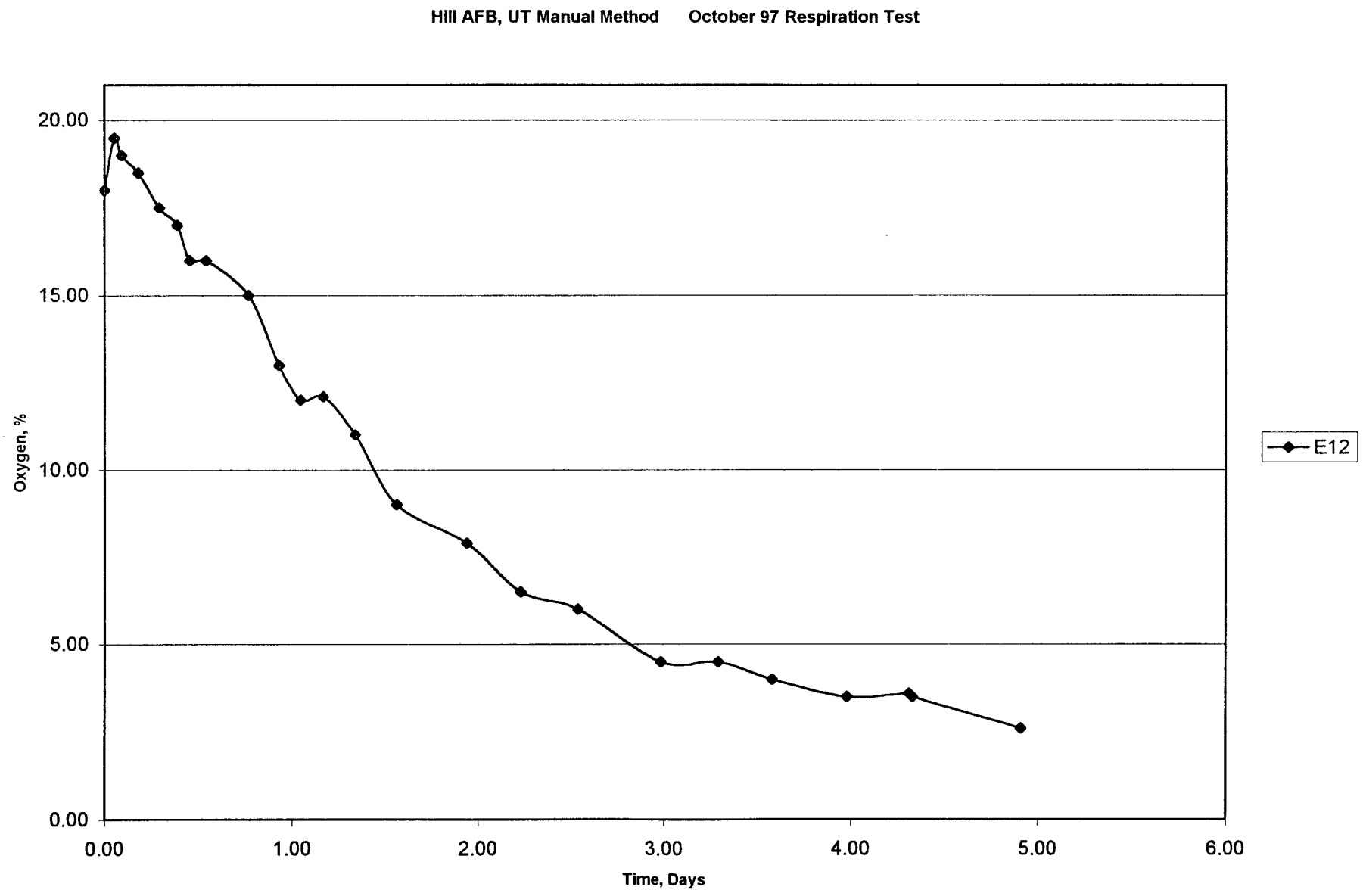
4.00
5.00
6.00
Time, Days
E7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Oxygen, %
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4.00
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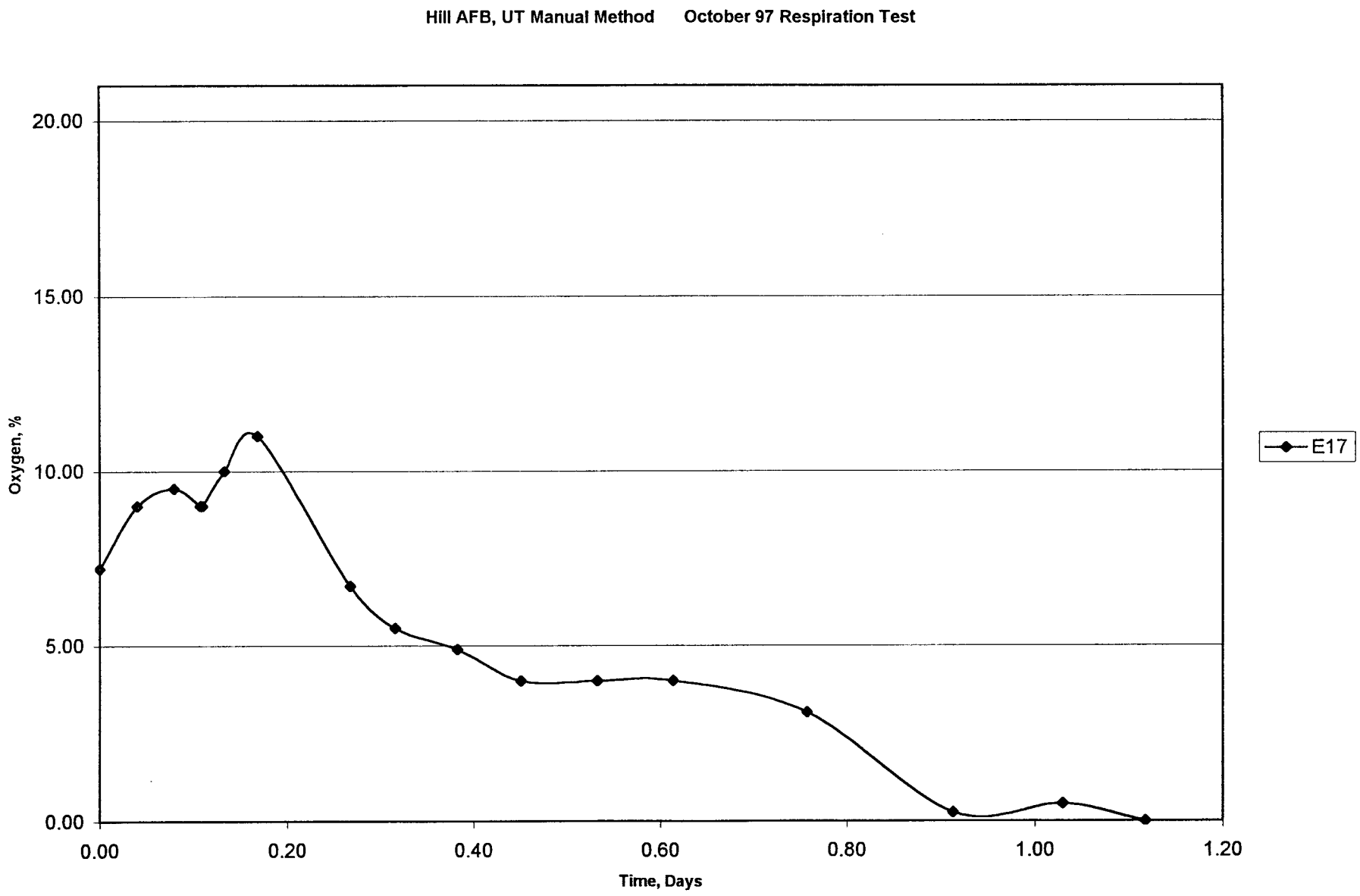
6.00
Time, Days
E12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Oxygen, %
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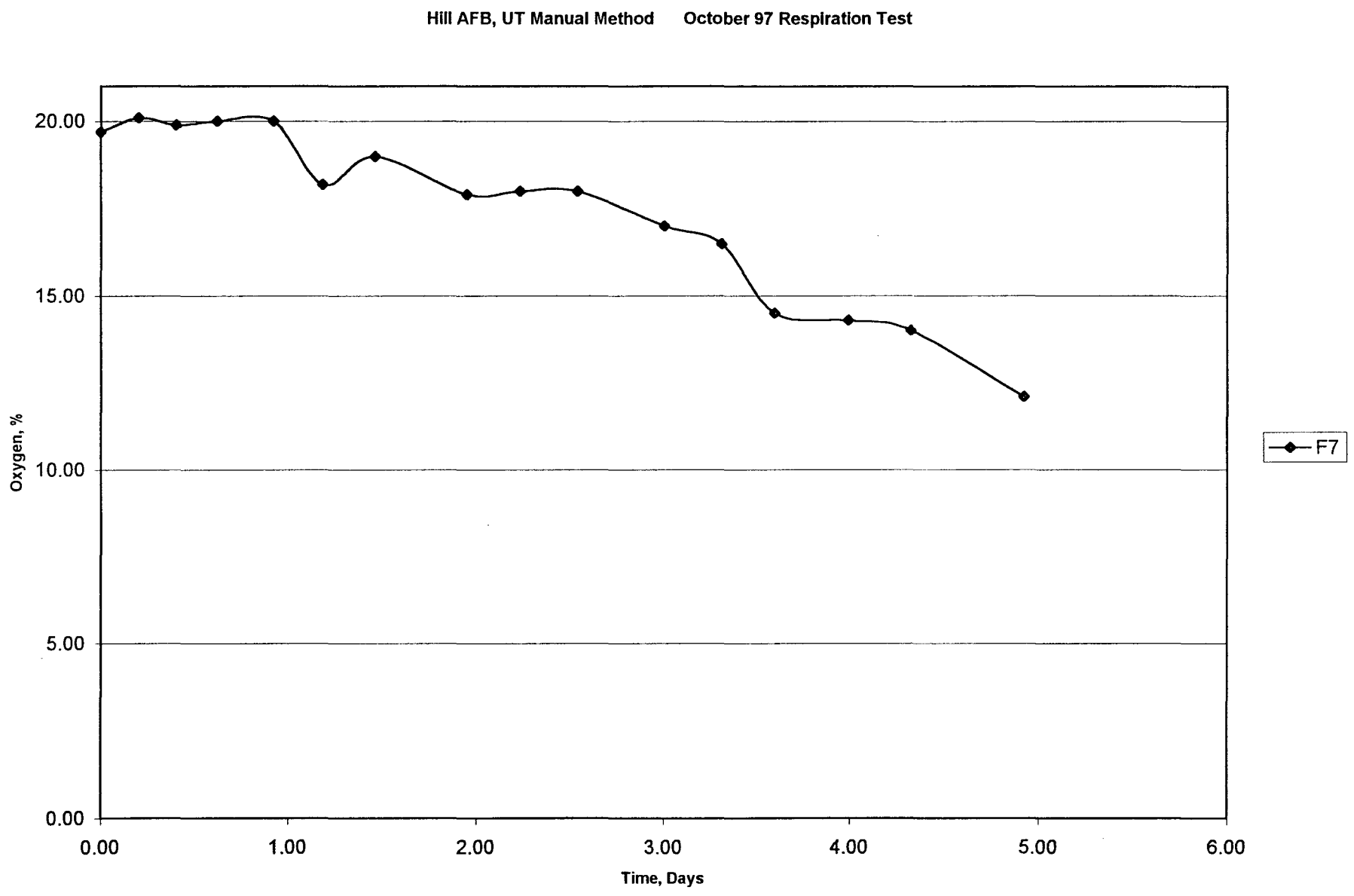
1.00
1.20
Time, Days
E17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10.00
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Oxygen, %
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1.00
2.00
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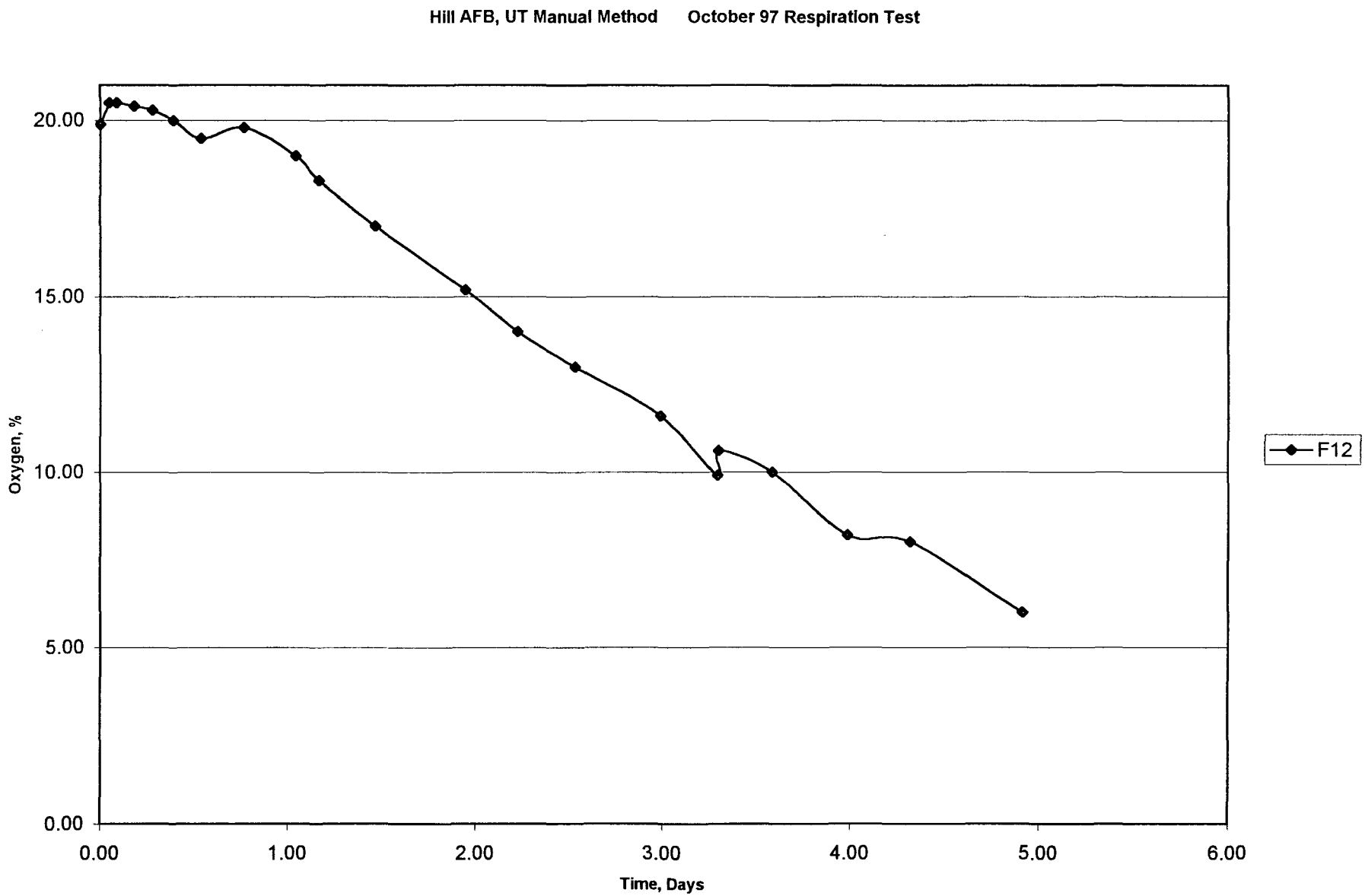
4.00
5.00
6.00
Time, Days
F7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10.00
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Oxygen, %
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1.00
2.00
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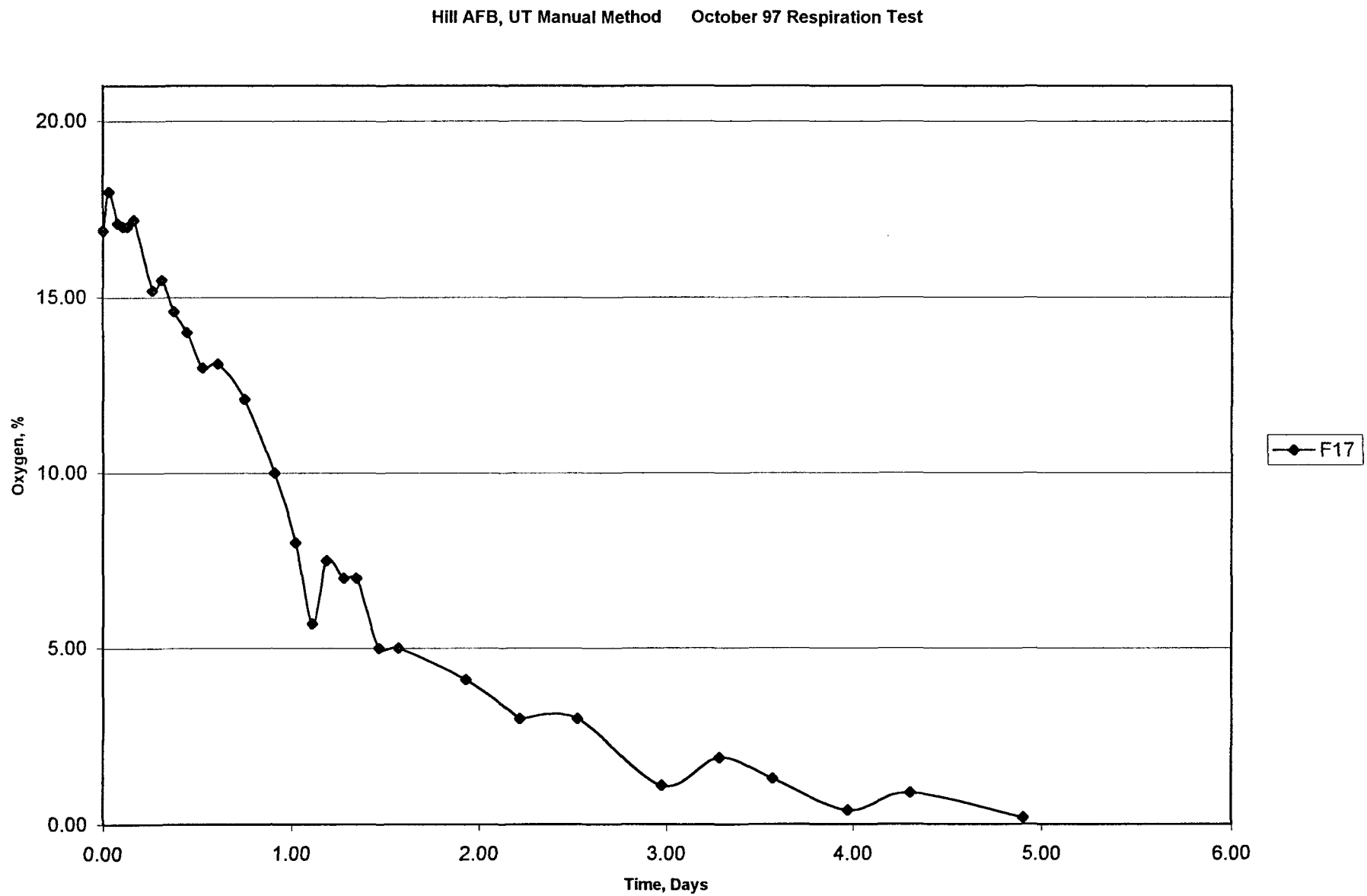
4.00
5.00
6.00
Time, Days
F12


Hill AFB, UT Manual Method October 97 Respiration Test
Oxygen, %
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15.00
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0.00
1.00
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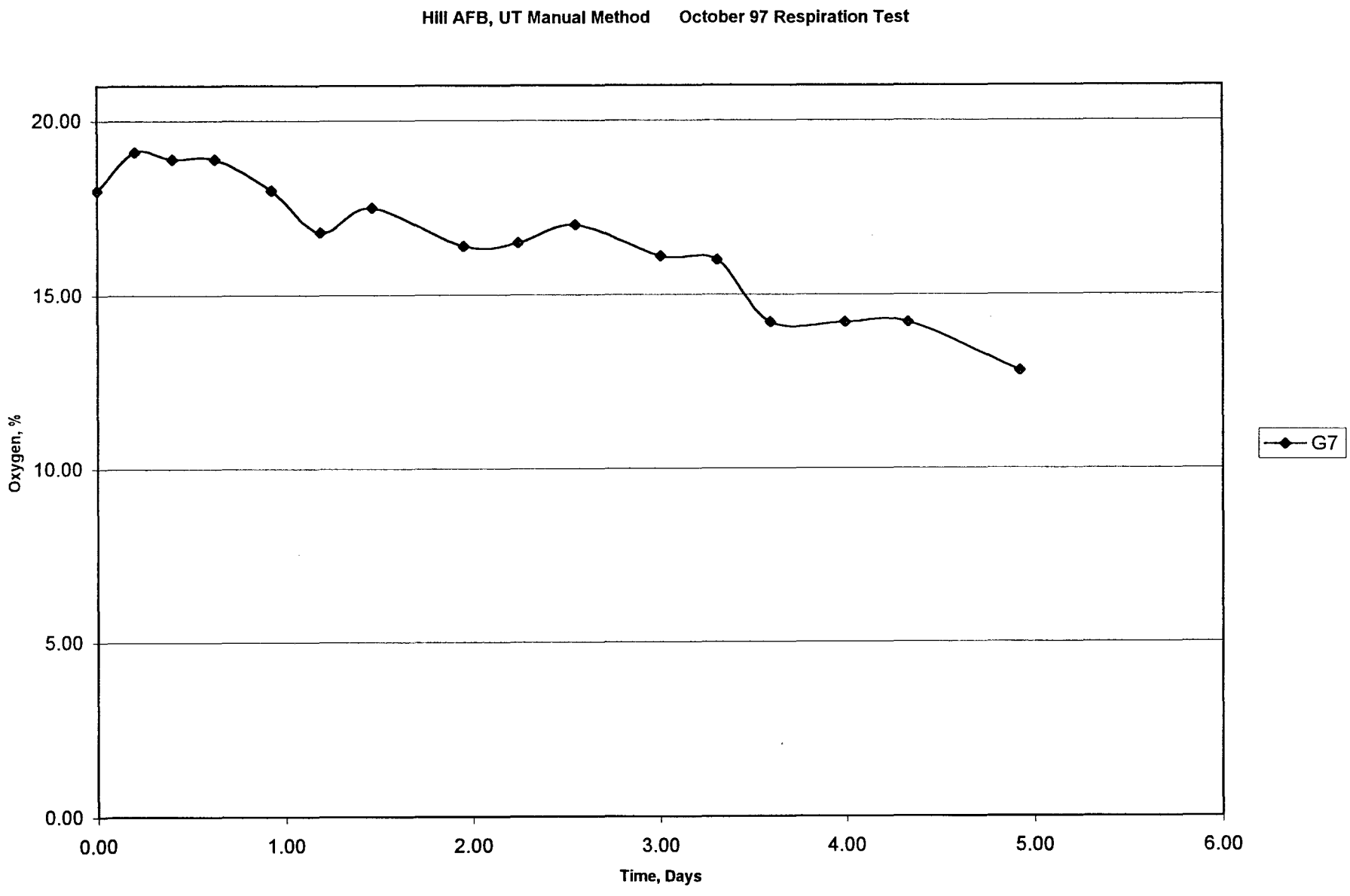
5.00
6.00
Time, Days
F17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Oxygen, %
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1.00
2.00
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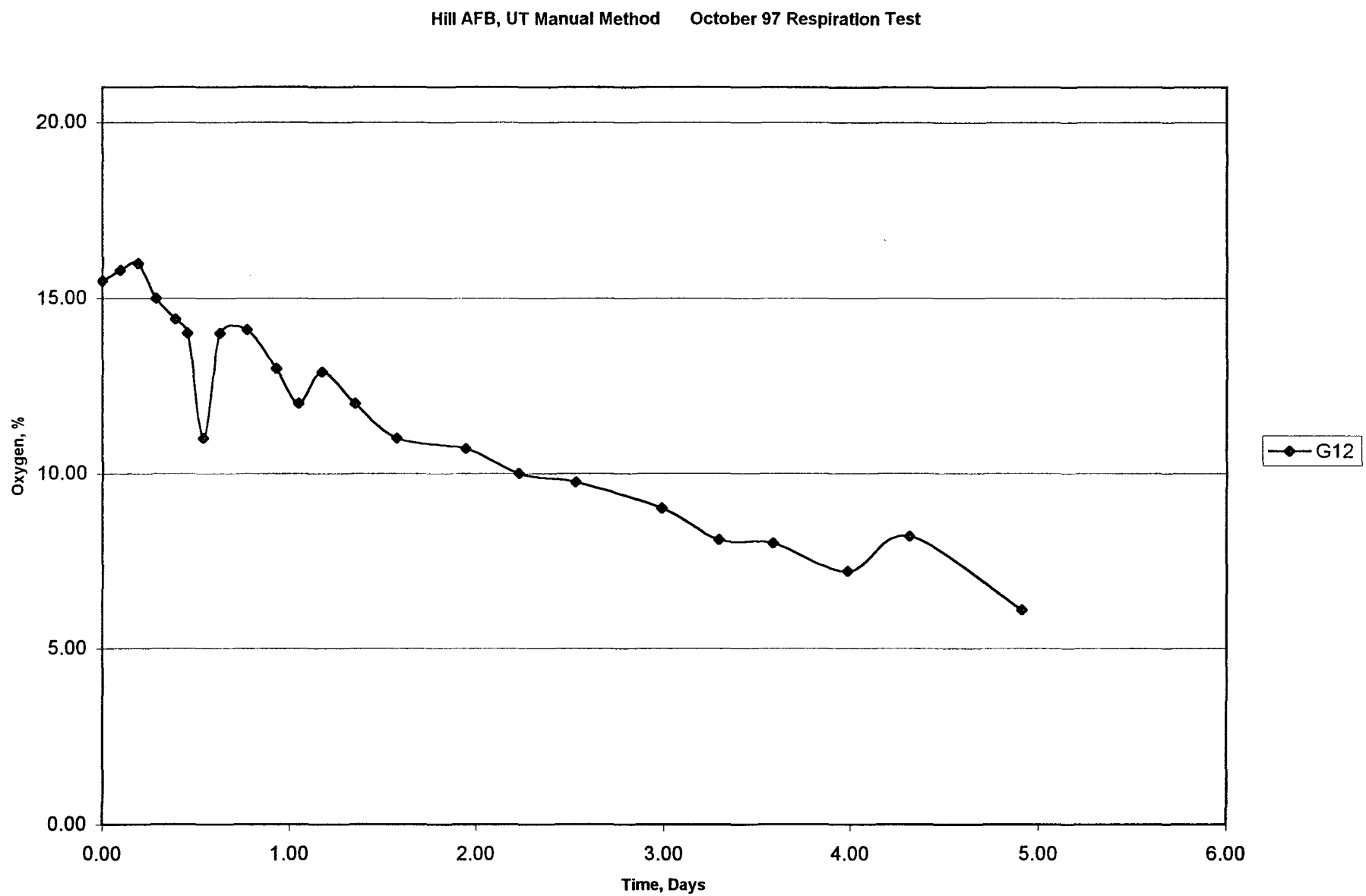
4.00
5.00
6.00
Time, Days
G7


Hill AFB, UT Manual Method October 97 Respiration Test
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15.00
10.00
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Oxygen, %
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2.00
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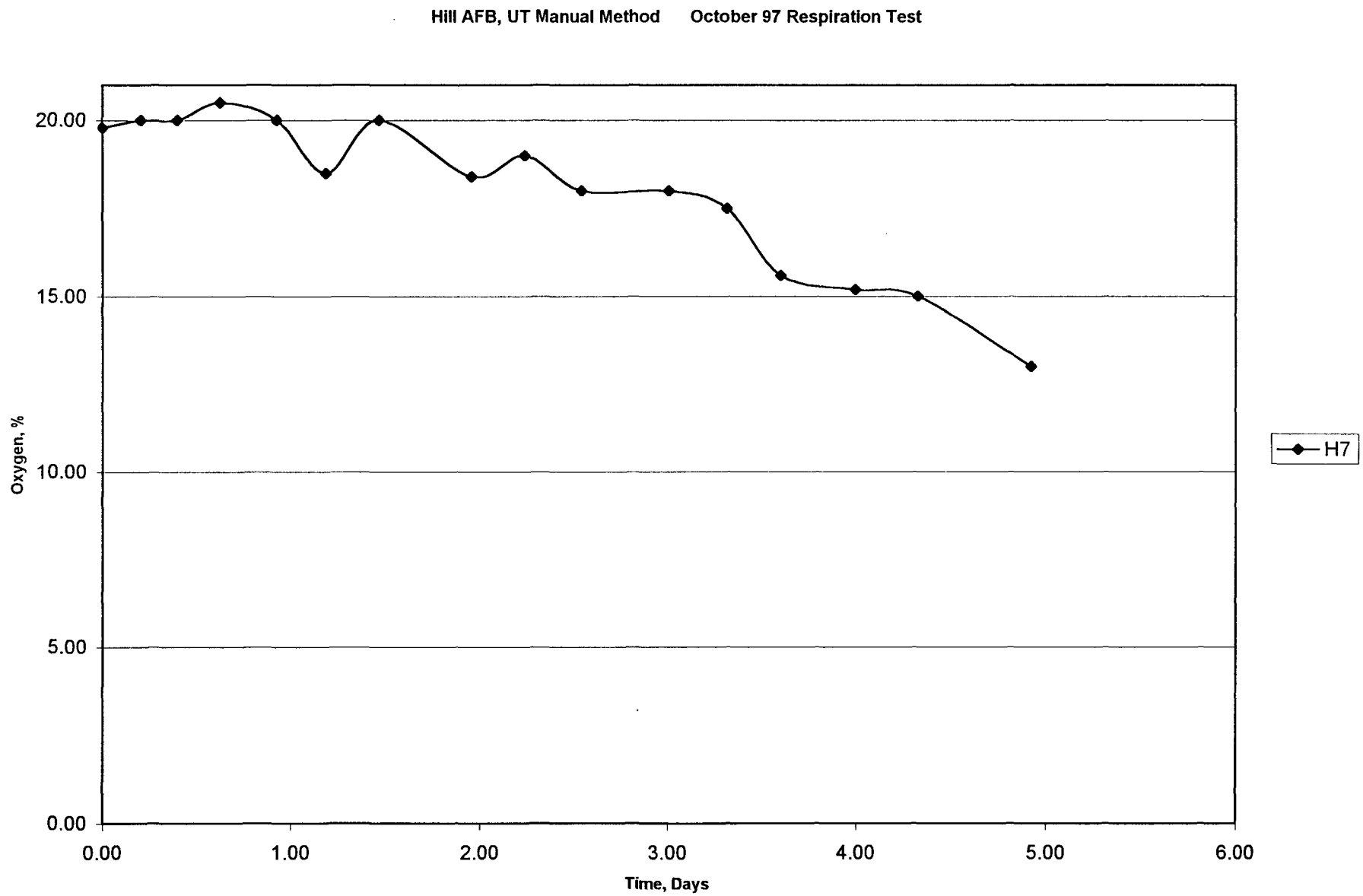
4.00
5.00
6.00
Time, Days
G12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10.00
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Oxygen, %
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1.00
2.00
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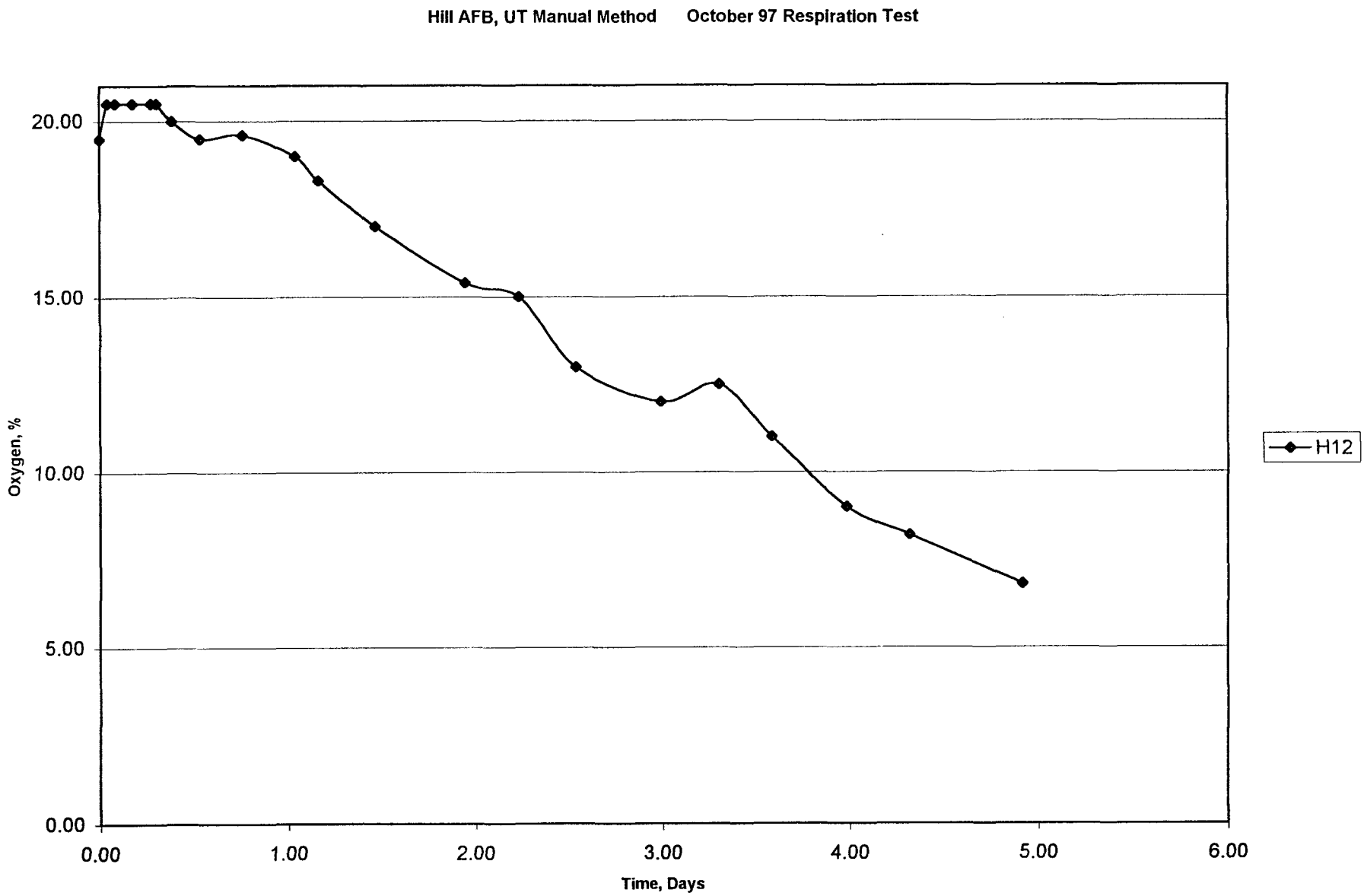
4.00
5.00
6.00
Time, Days
H7


Hill AFB, UT Manual Method October 97 Respiration Test
Oxygen, %
20.00
15.00
10.00
5.00
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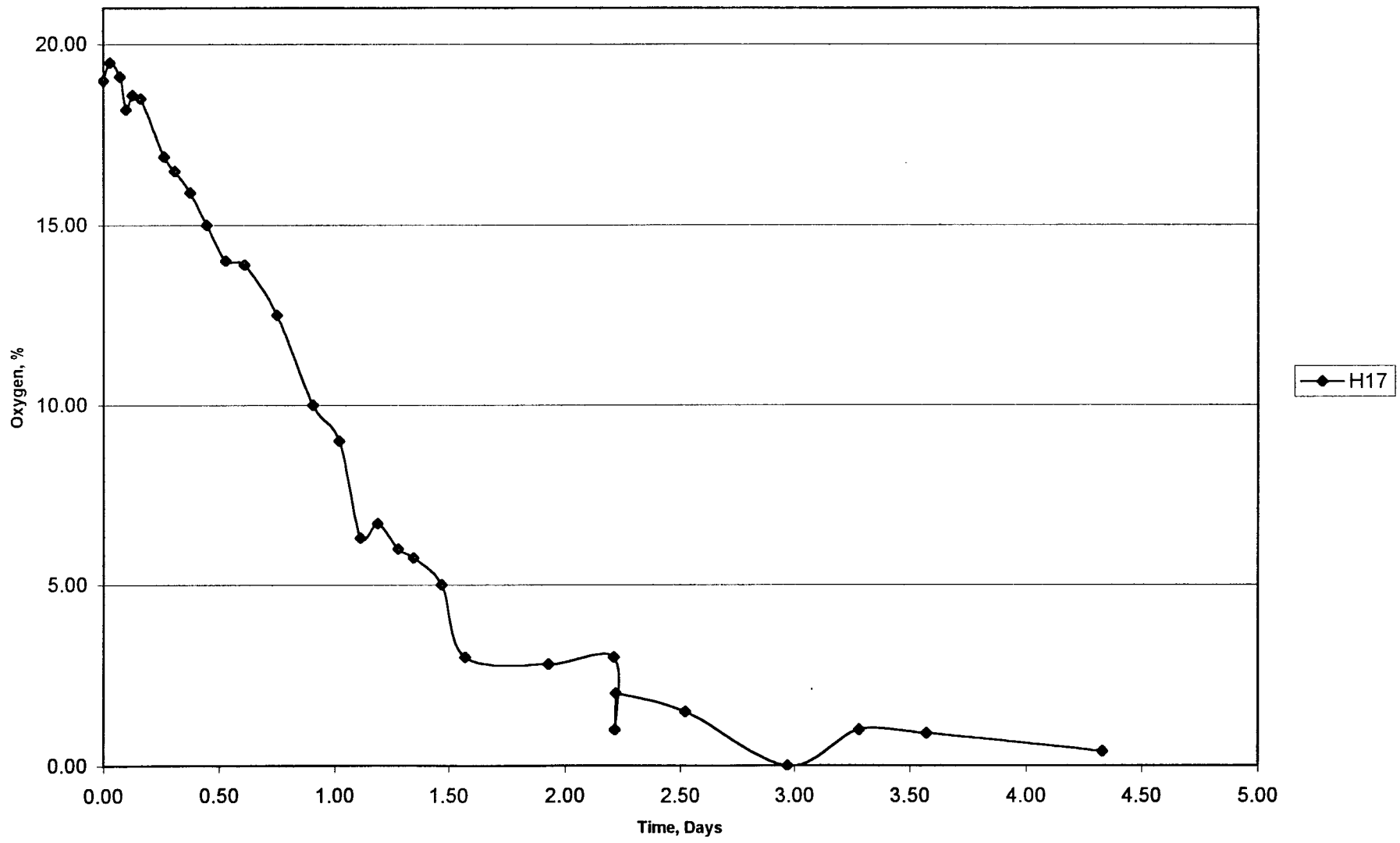
2.00
3.00
4.00
5.00
6.00
Time, Days
H12

Hill AFB, UT Manual Method October 97 Respiration Test



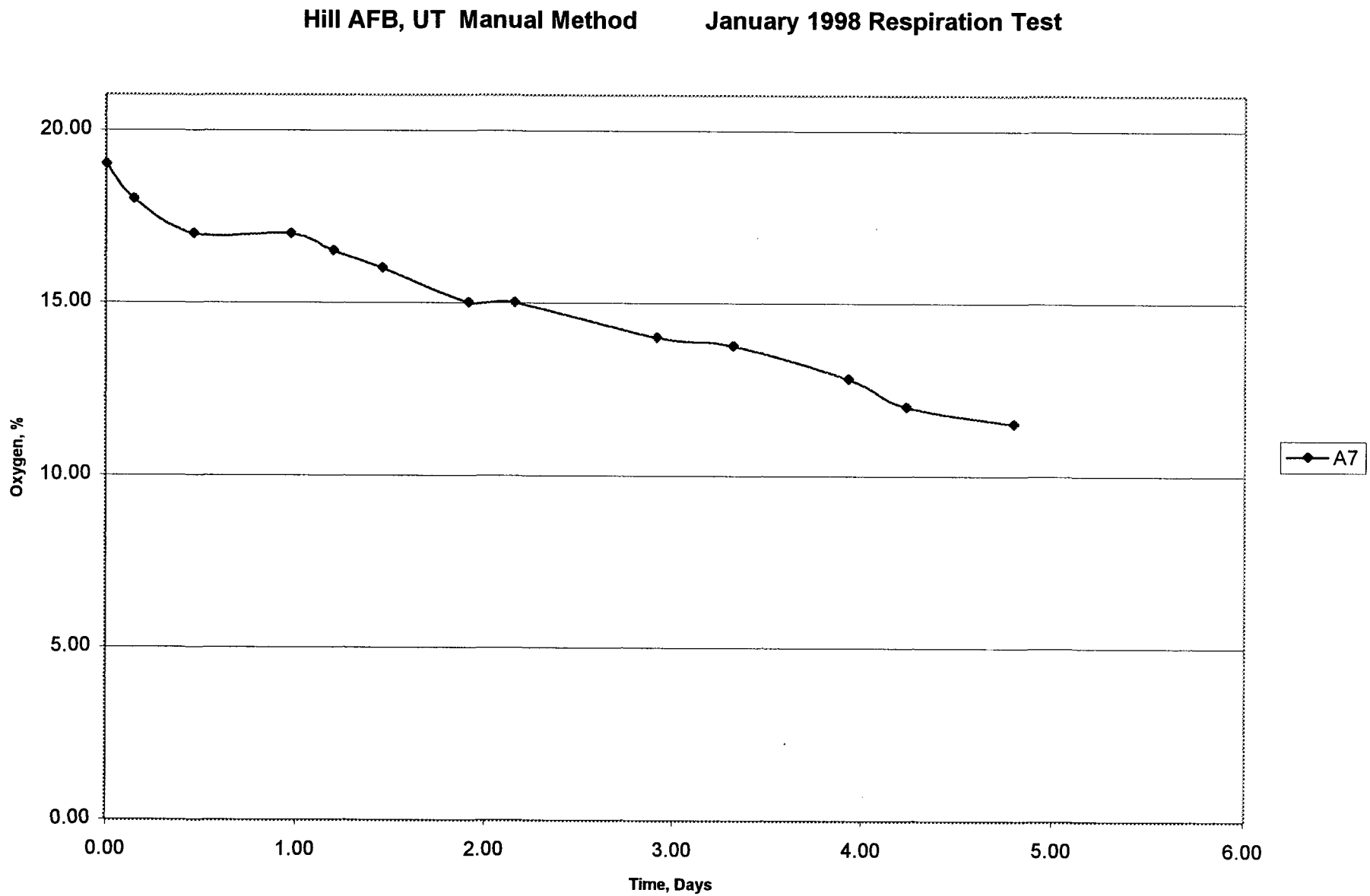
OXYGEN UTILIZATION PLOTS

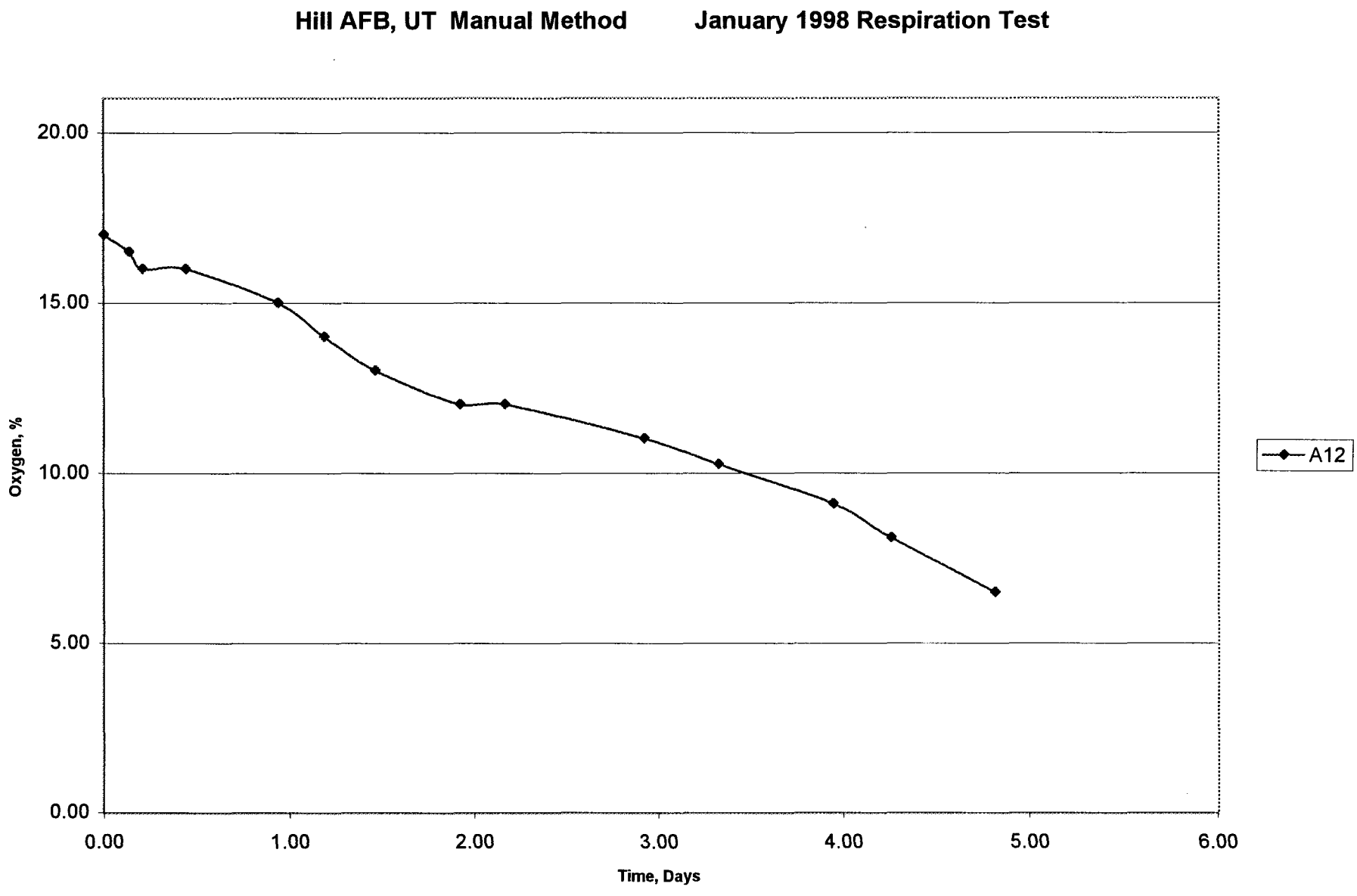
MONITORED BY

MANUAL METHOD

DURING RESPIRATION TESTING

January 1998


Hill AFB, UT Manual Method January 1998 Respiration Test
20.00
15.00
10.00
5.00
0.00
Oxygen, %
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time, Days
A7


Hill AFB, UT Manual Method January 1998 Respiration Test
20.00
15.00
10.00
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Oxygen, %
0.00
1.00
2.00
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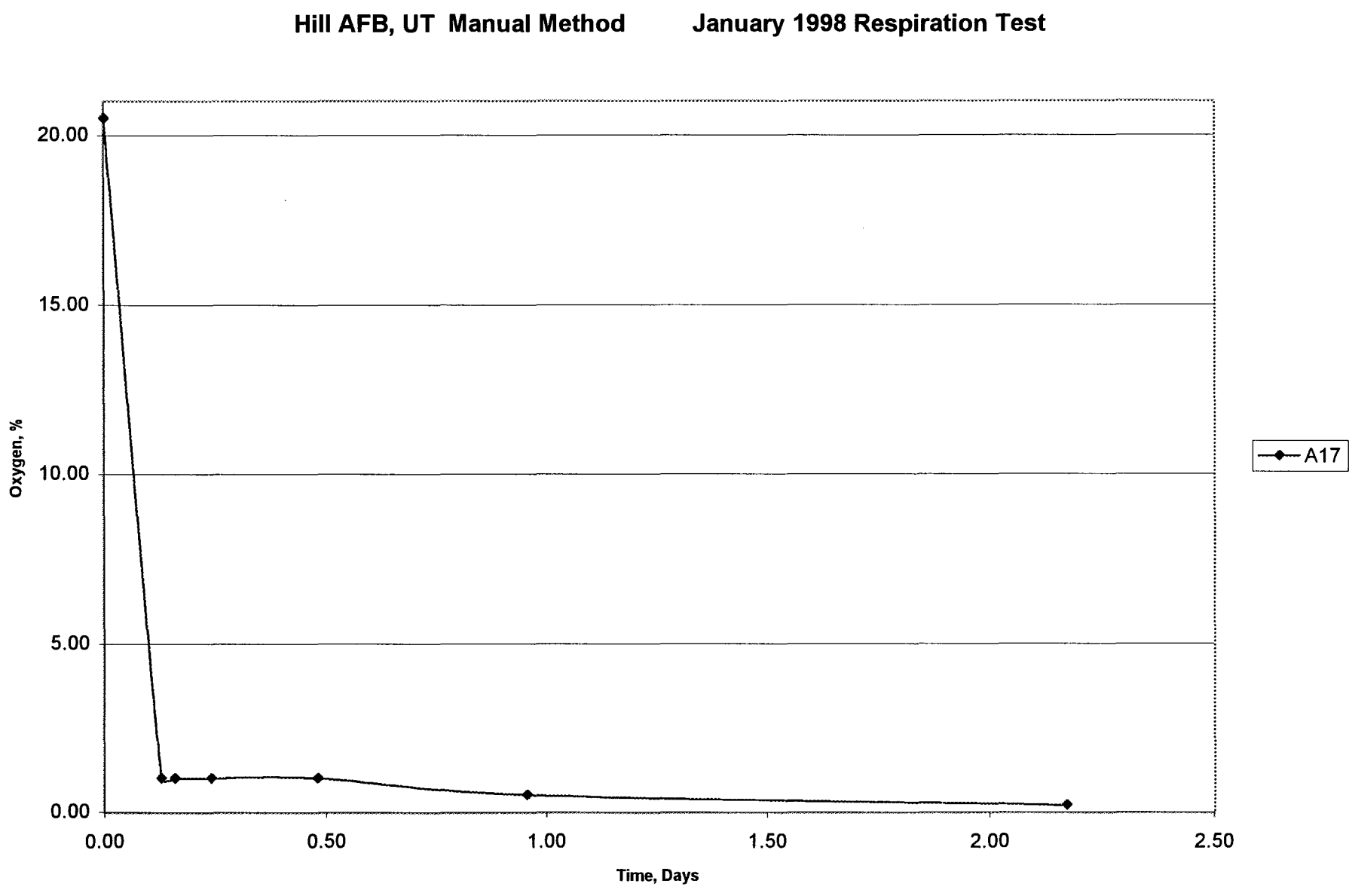
5.00
6.00
Time, Days
A12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Oxygen, %
20.00
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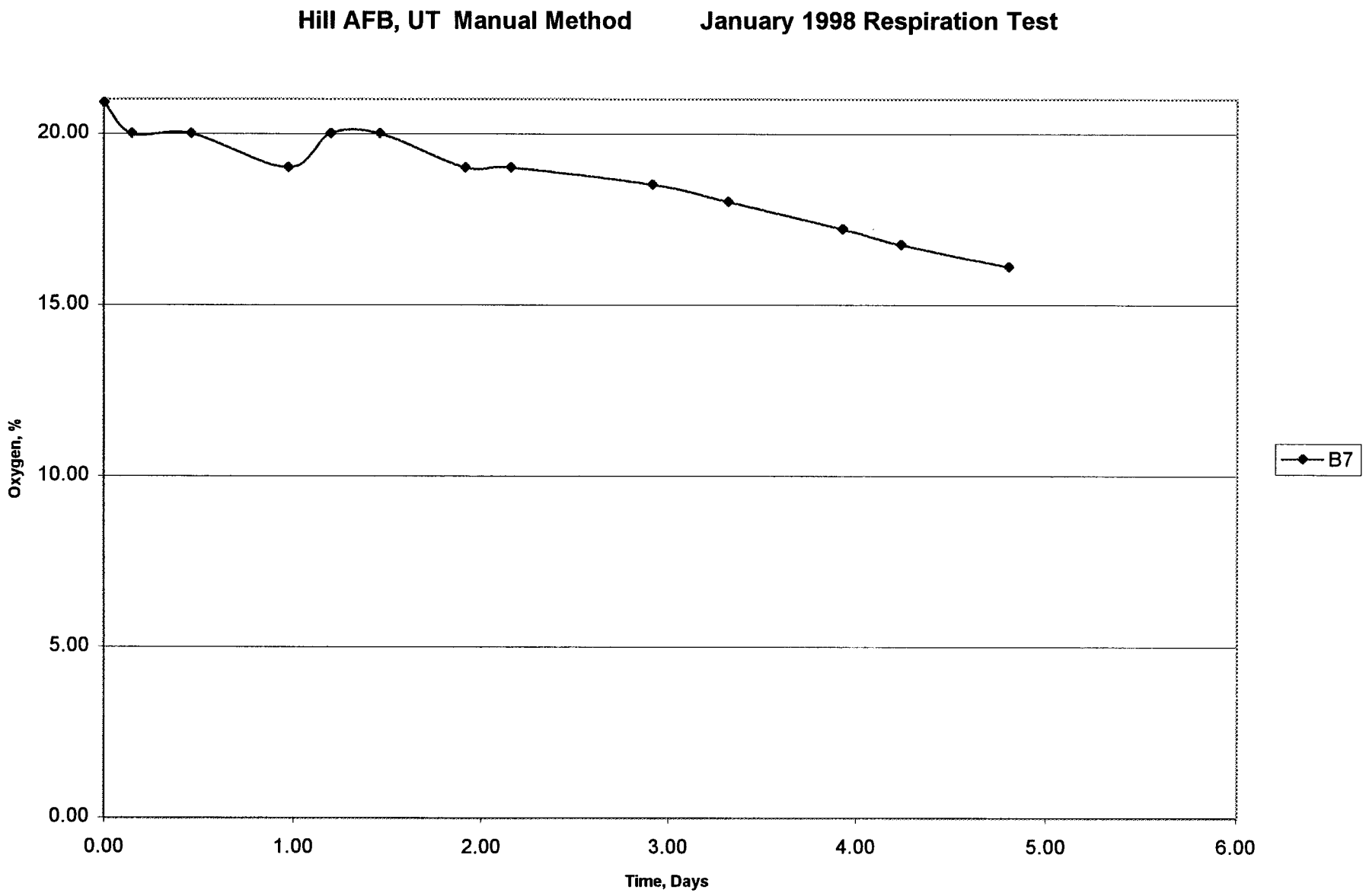
5.00
0.00
0.00
0.50
1.00
1.50
2.00
2.50
Time, Days
A17


Hill AFB, UT Manual Method January 1998 Respiration Test
Oxygen, %
20.00
15.00
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0.00
1.00
2.00
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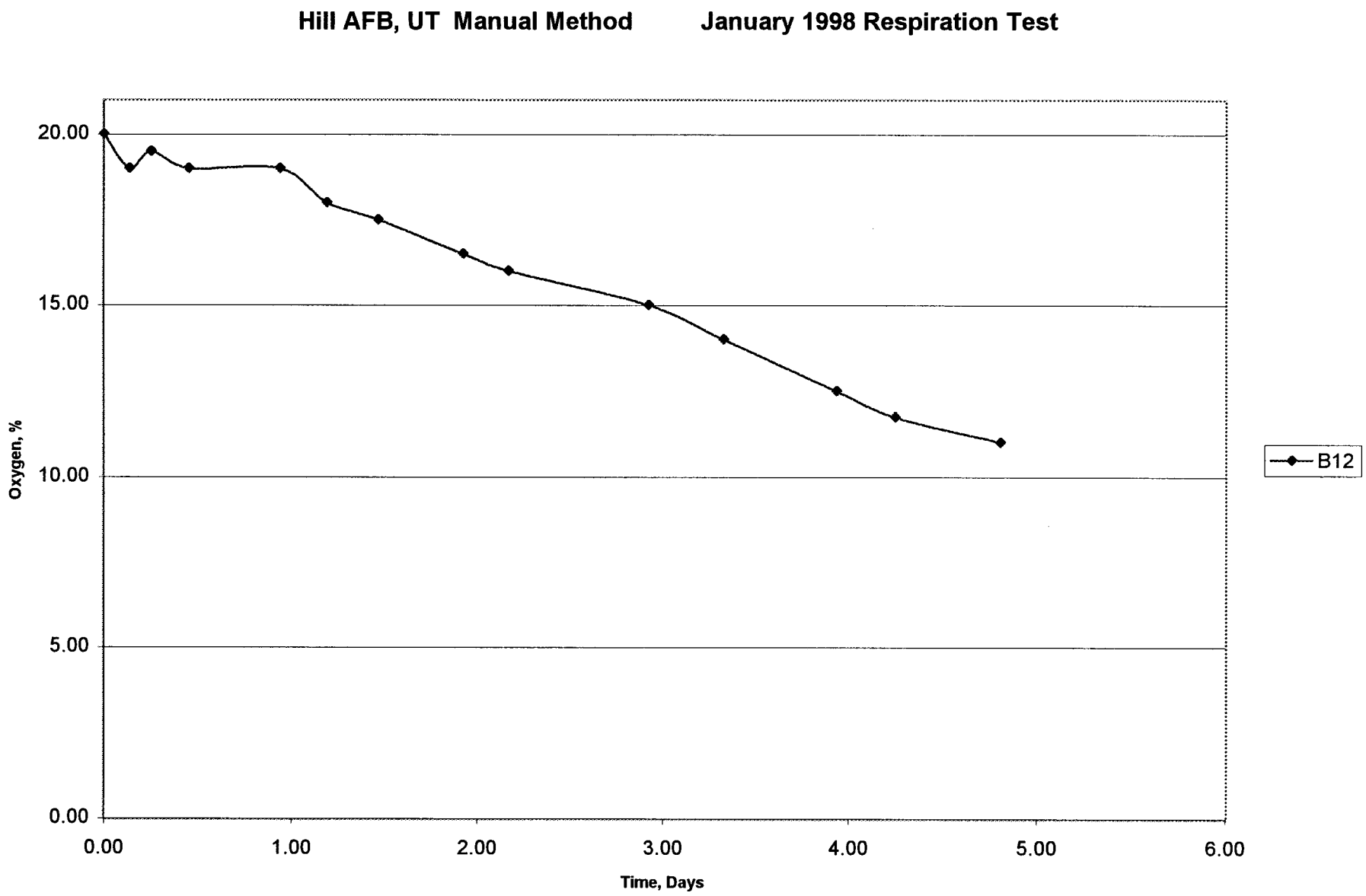
5.00
6.00
Time, Days
B7


Hill AFB, UT Manual Method January 1998 Respiration Test
Oxygen, %
20.00
15.00
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0.00
1.00
2.00
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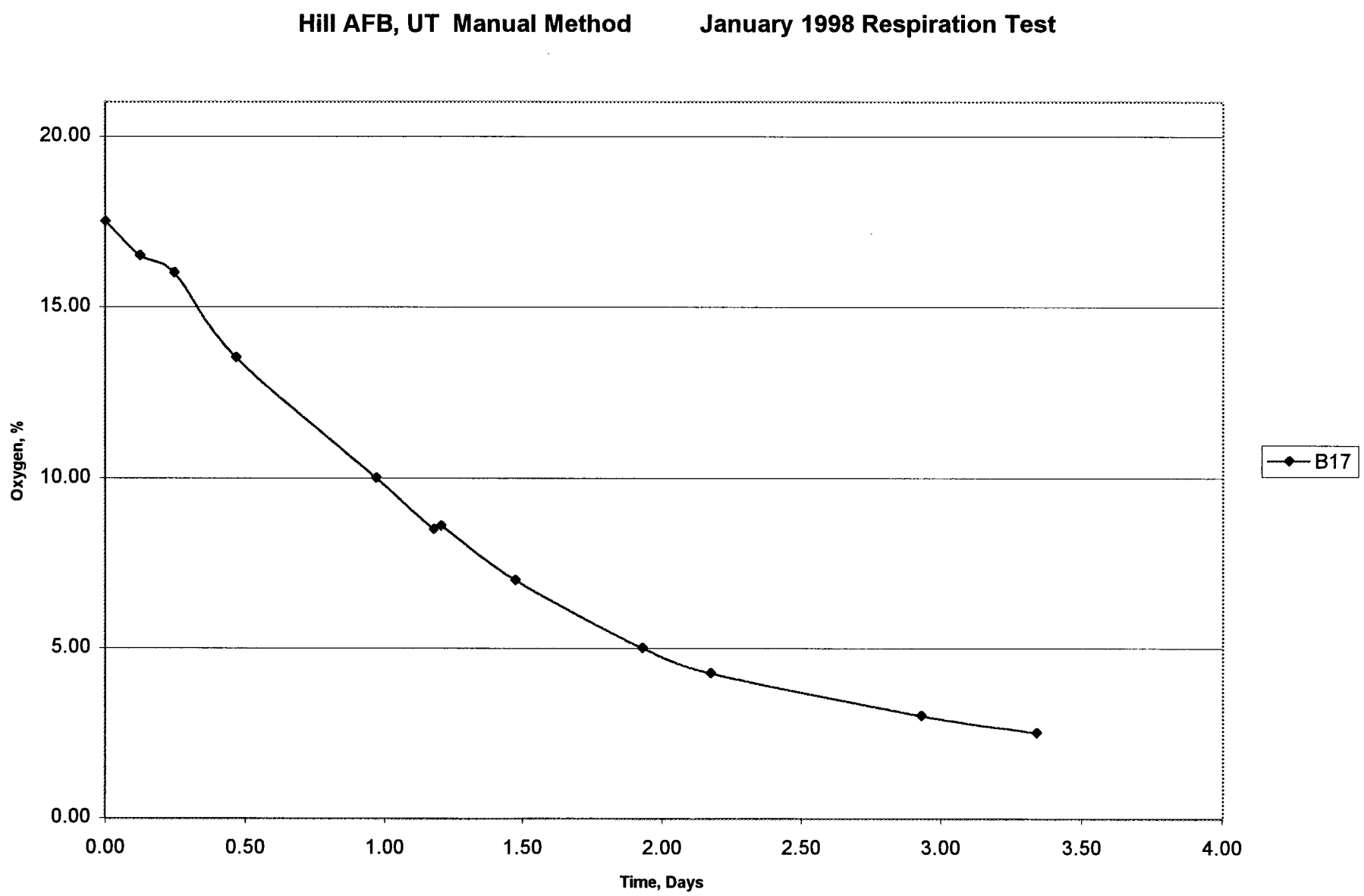
5.00
6.00
Time, Days
B12


Hill AFB, UT Manual Method January 1998 Respiration Test
Oxygen, %
20.00
15.00
10.00
5.00
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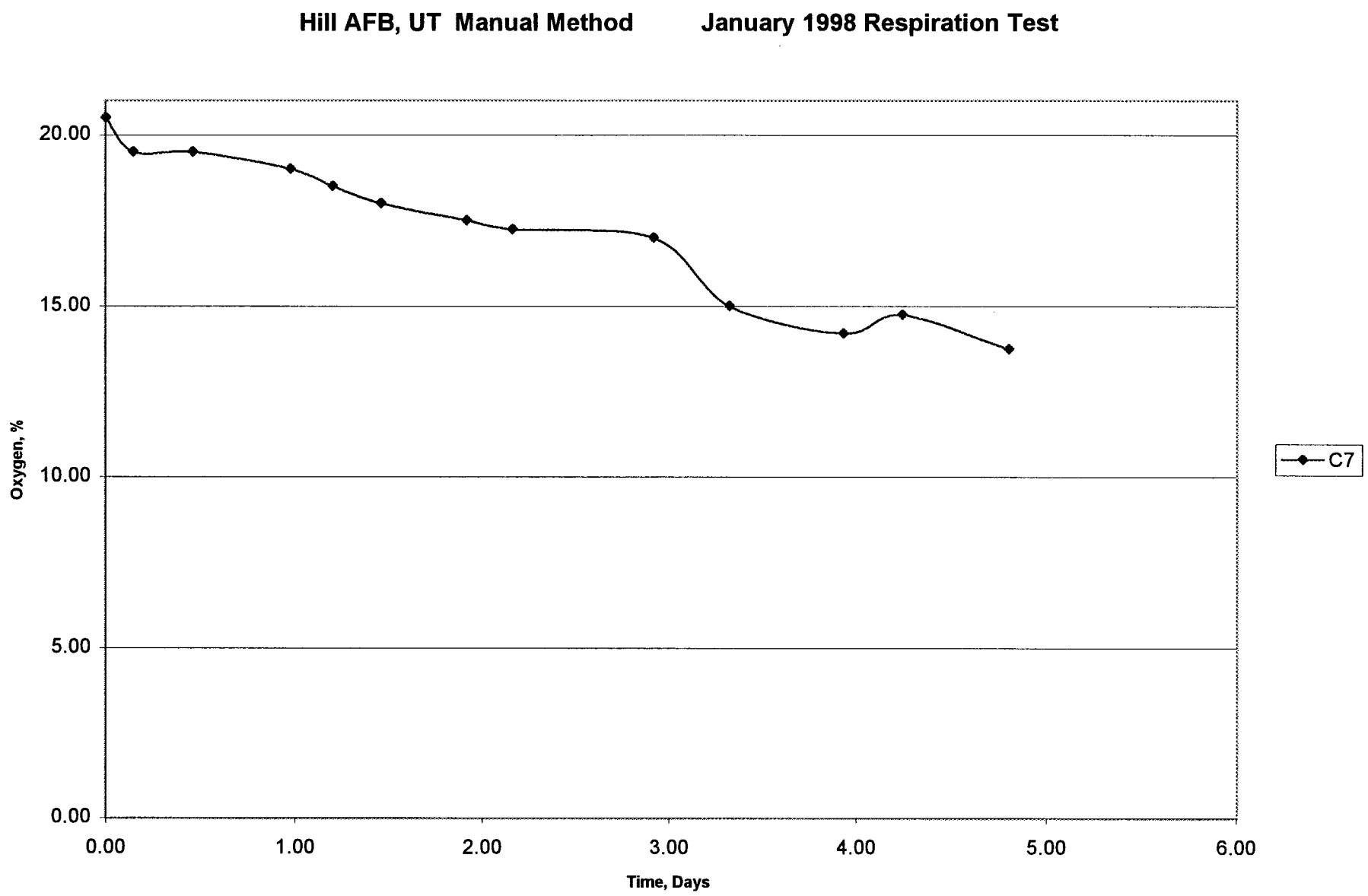
1.00
1.50
2.00
2.50
3.00
3.50
4.00
Time, Days
B17


Hill AFB, UT Manual Method
January 1998 Respiration Test
Oxygen, %
20.00
15.00
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0.00
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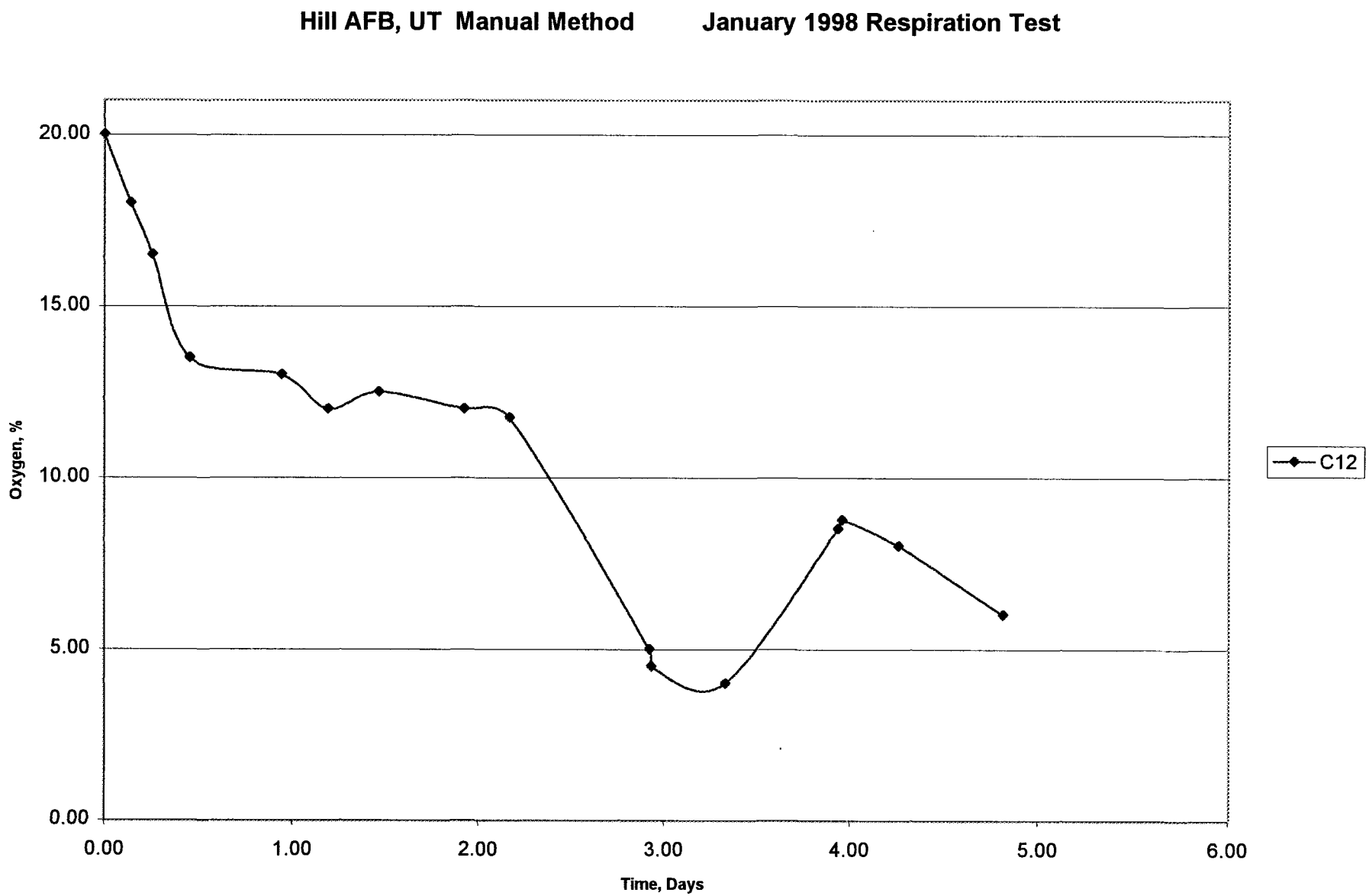
5.00
6.00
Time, Days
C7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15.00
10.00
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Oxygen, %
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1.00
2.00
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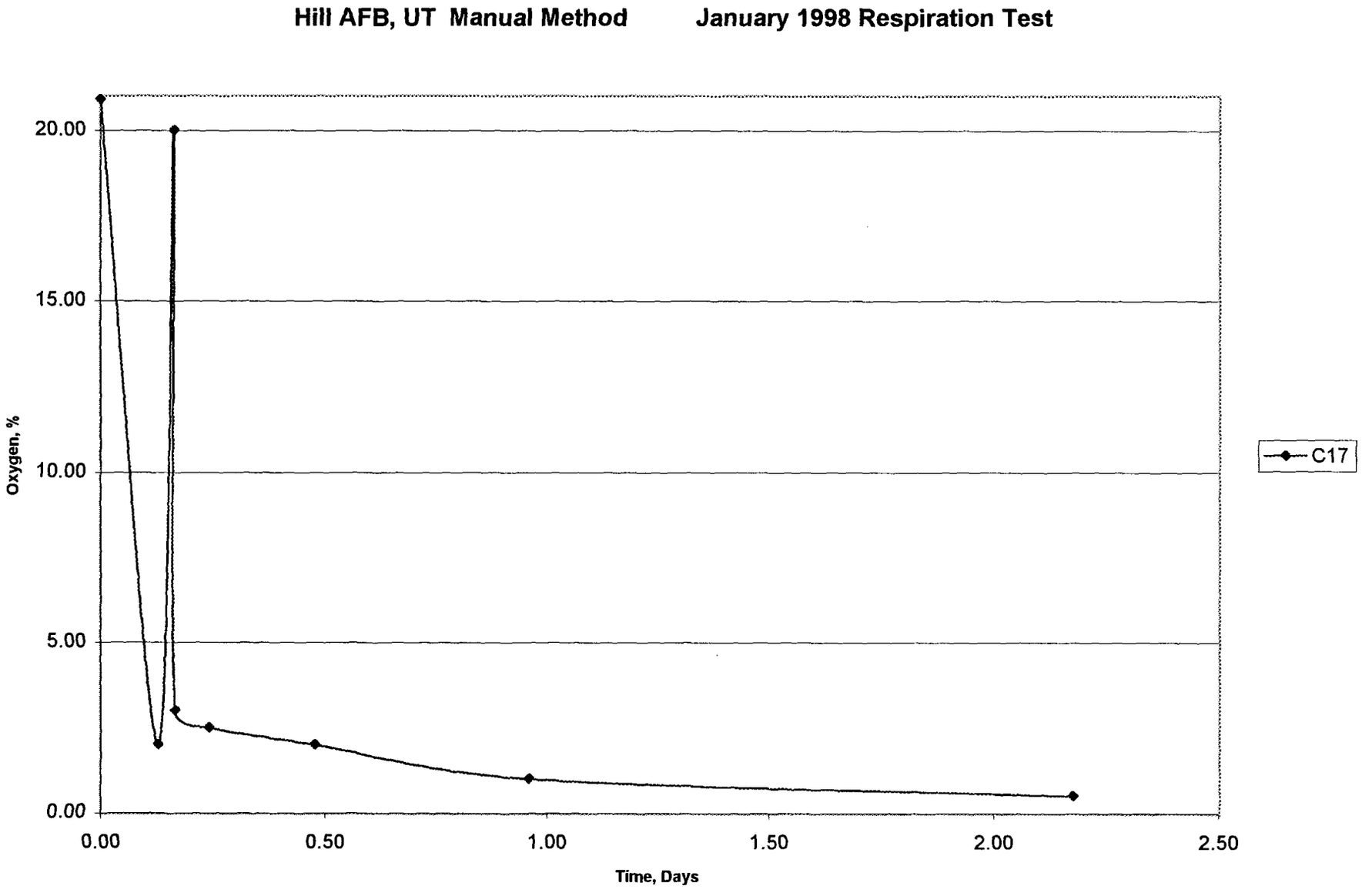
5.00
6.00
Time, Days
C12


Hill AFB, UT Manual Method January 1998 Respiration Test
Oxygen, %
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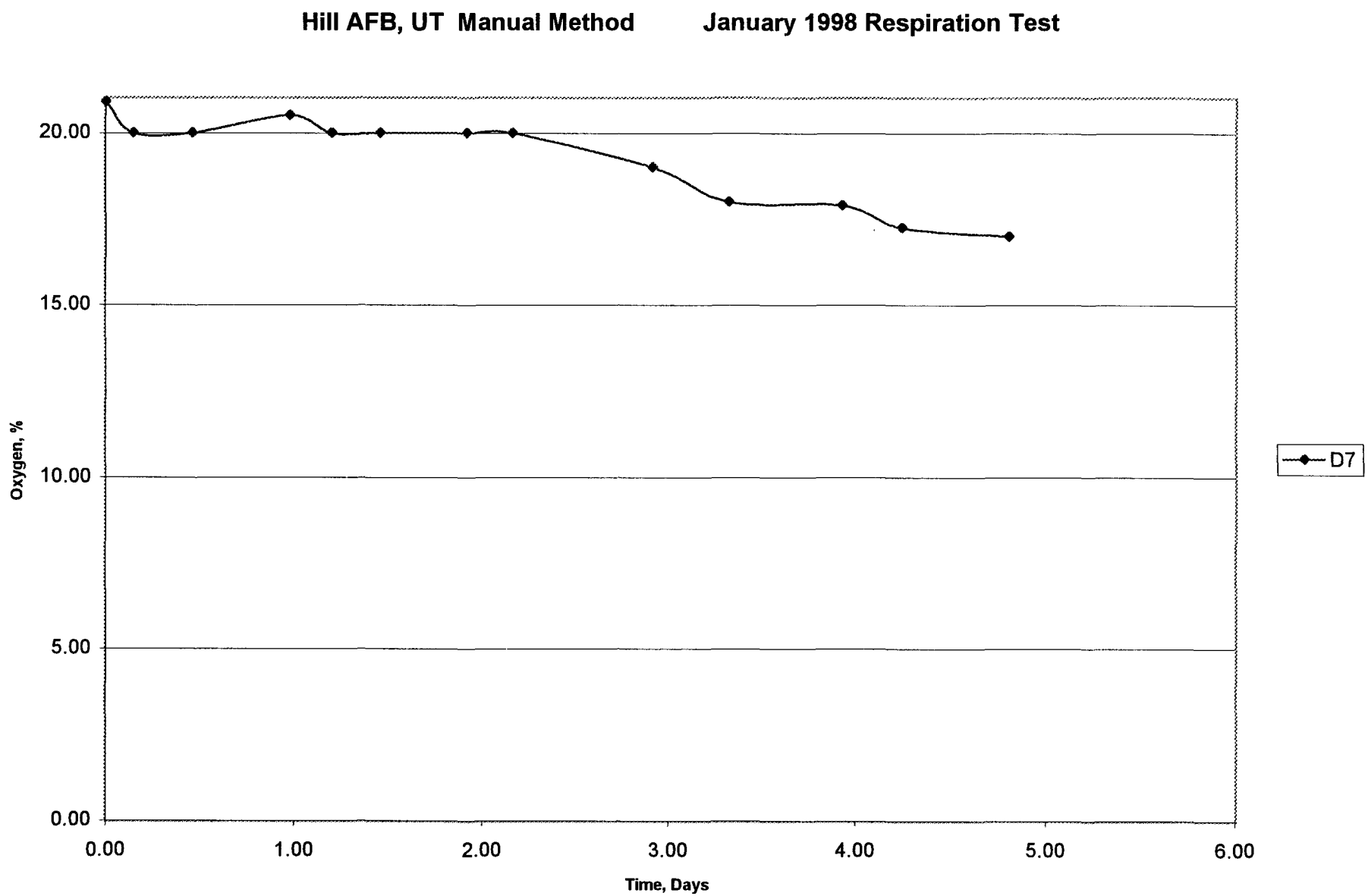
1.50
2.00
2.50
Time, Days
C17


Hill AFB, UT Manual Method January 1998 Respiration Test
Oxygen, %
20.00
15.00
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1.00
2.00
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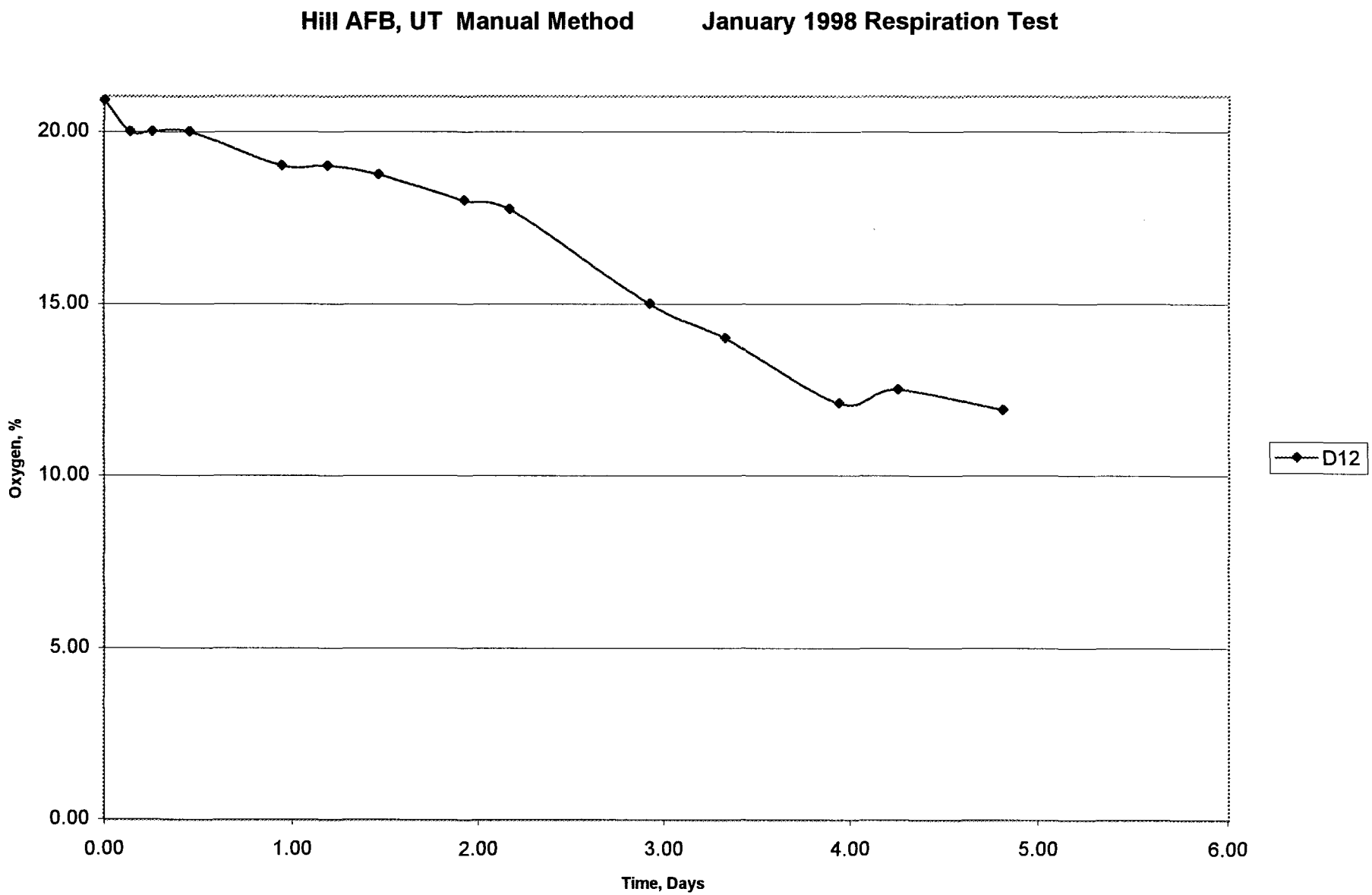
4.00
5.00
6.00
Time, Days
D7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Oxygen, %
20.00
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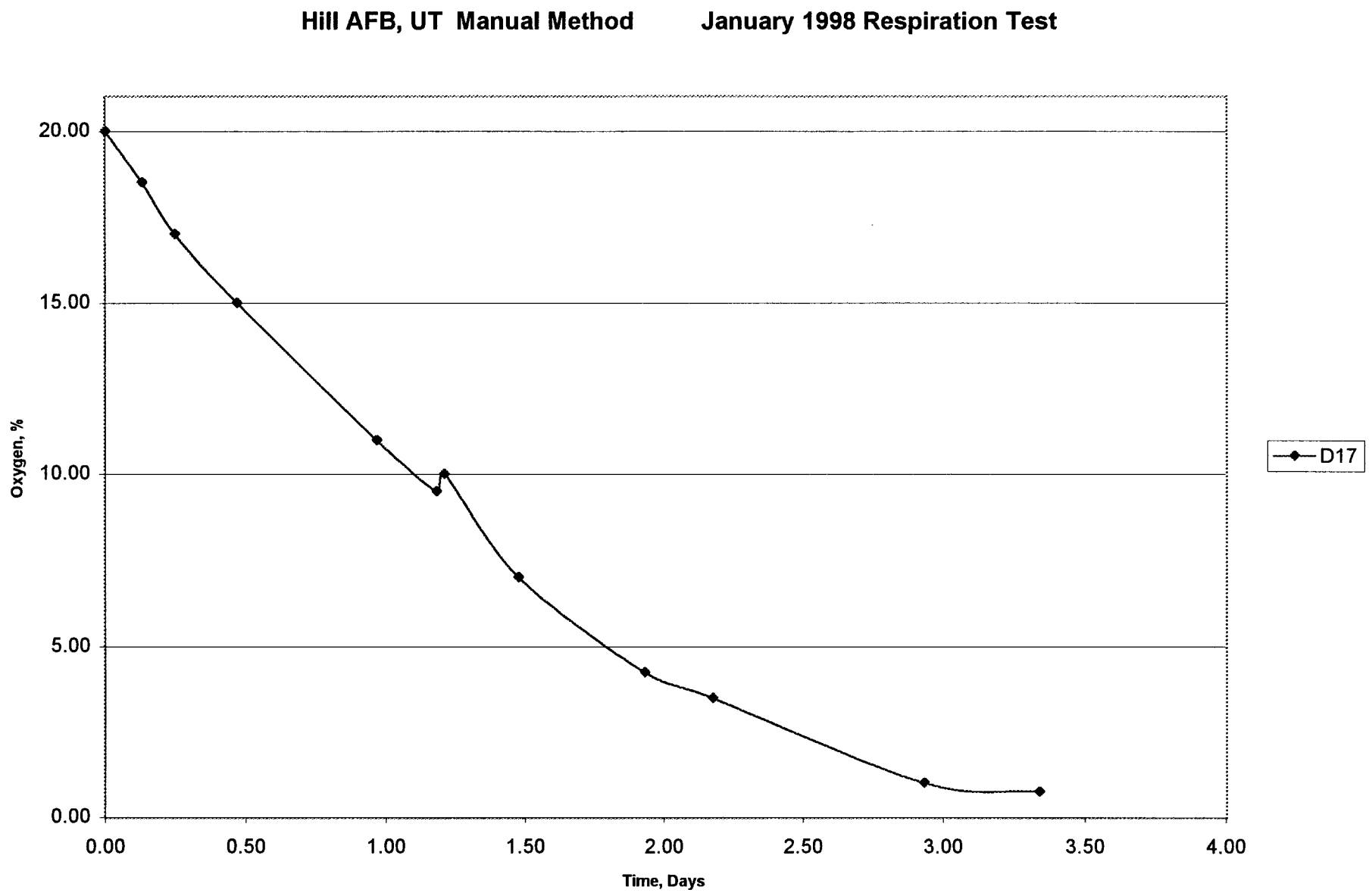
5.00
6.00
Time, Days
D12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Oxygen, %
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2.00
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3.00
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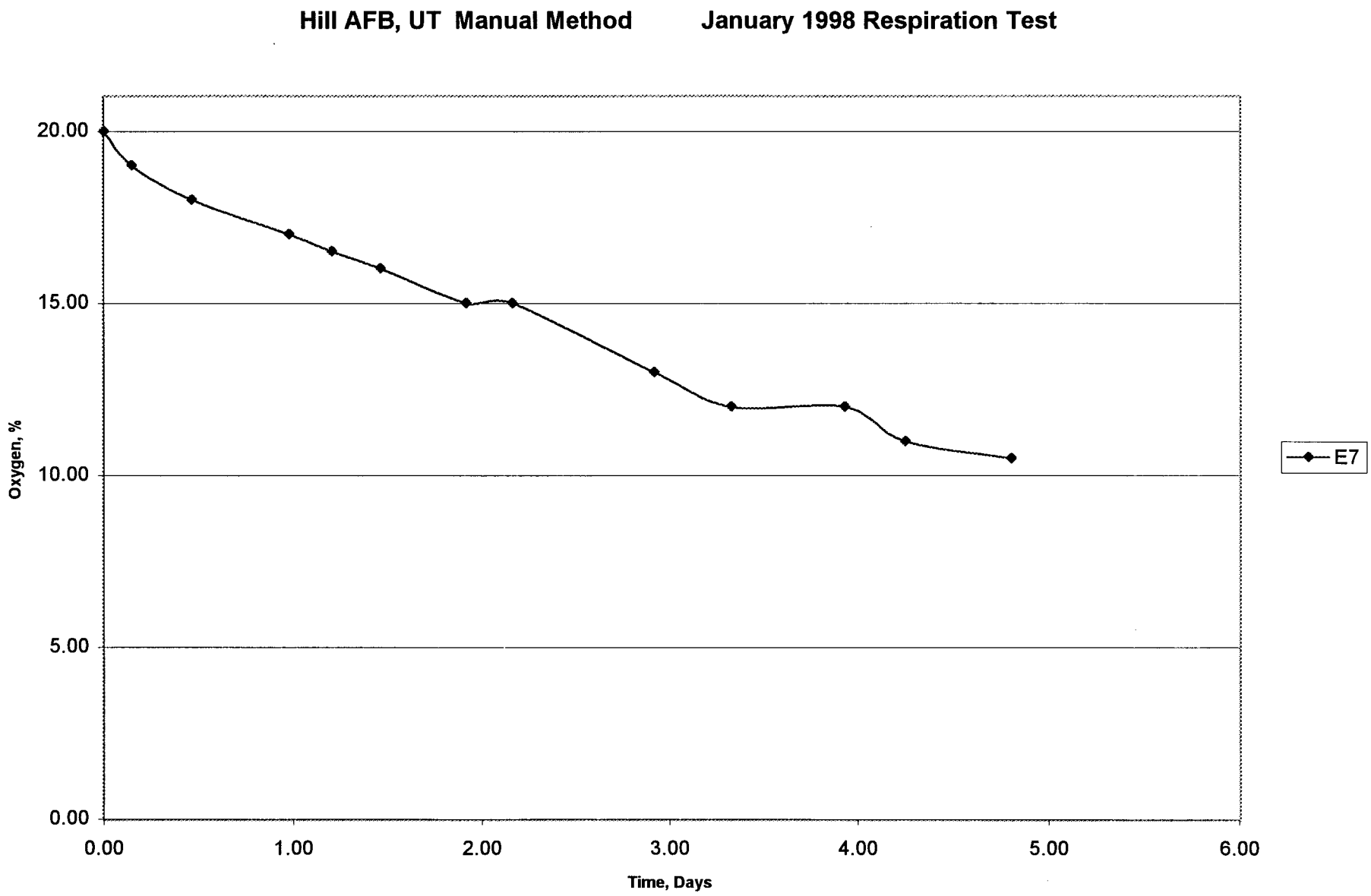
4.00
Time, Days
D17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Oxygen, %
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1.00
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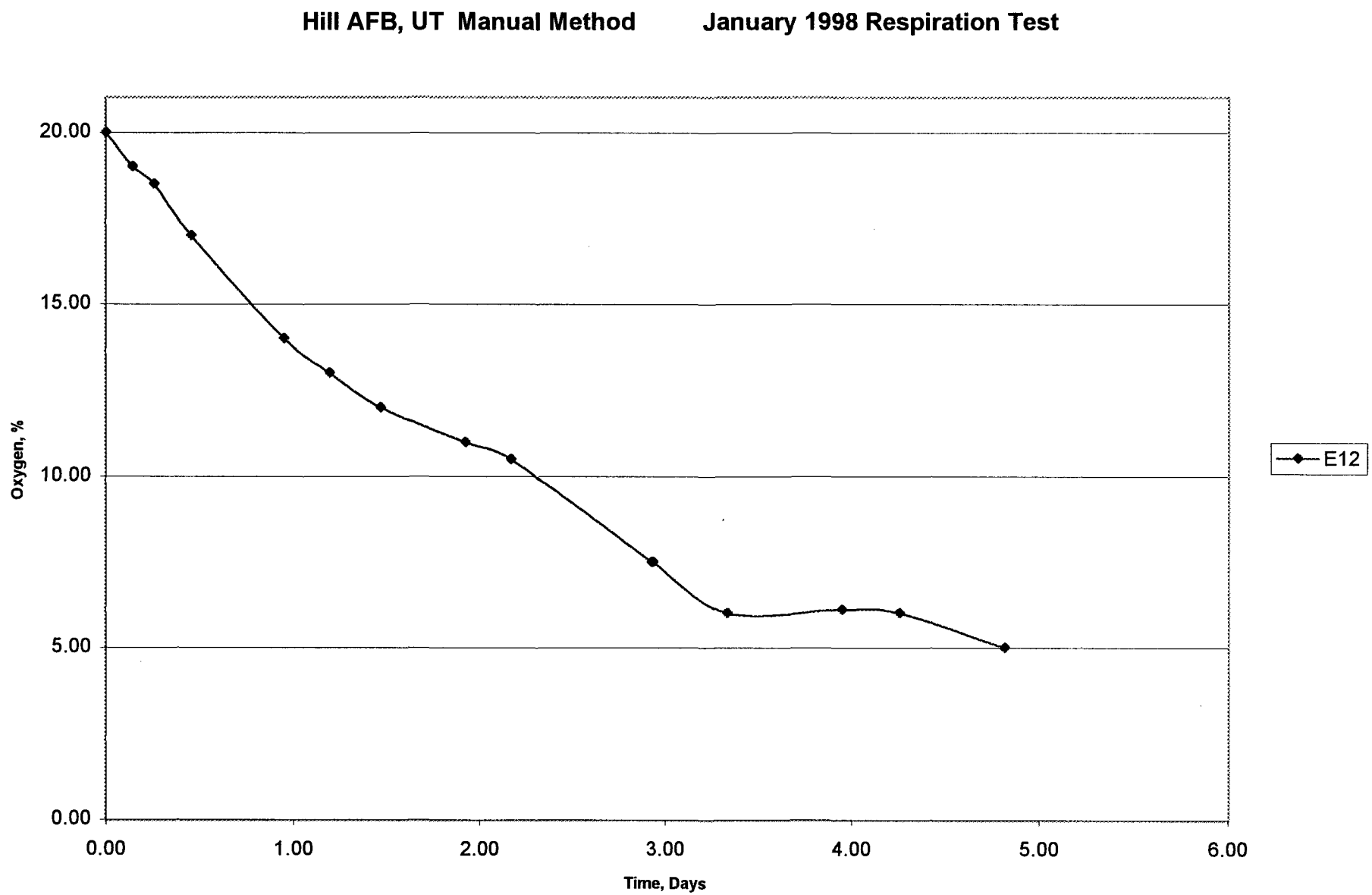
5.00
6.00
Time, Days
E7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Oxygen, %
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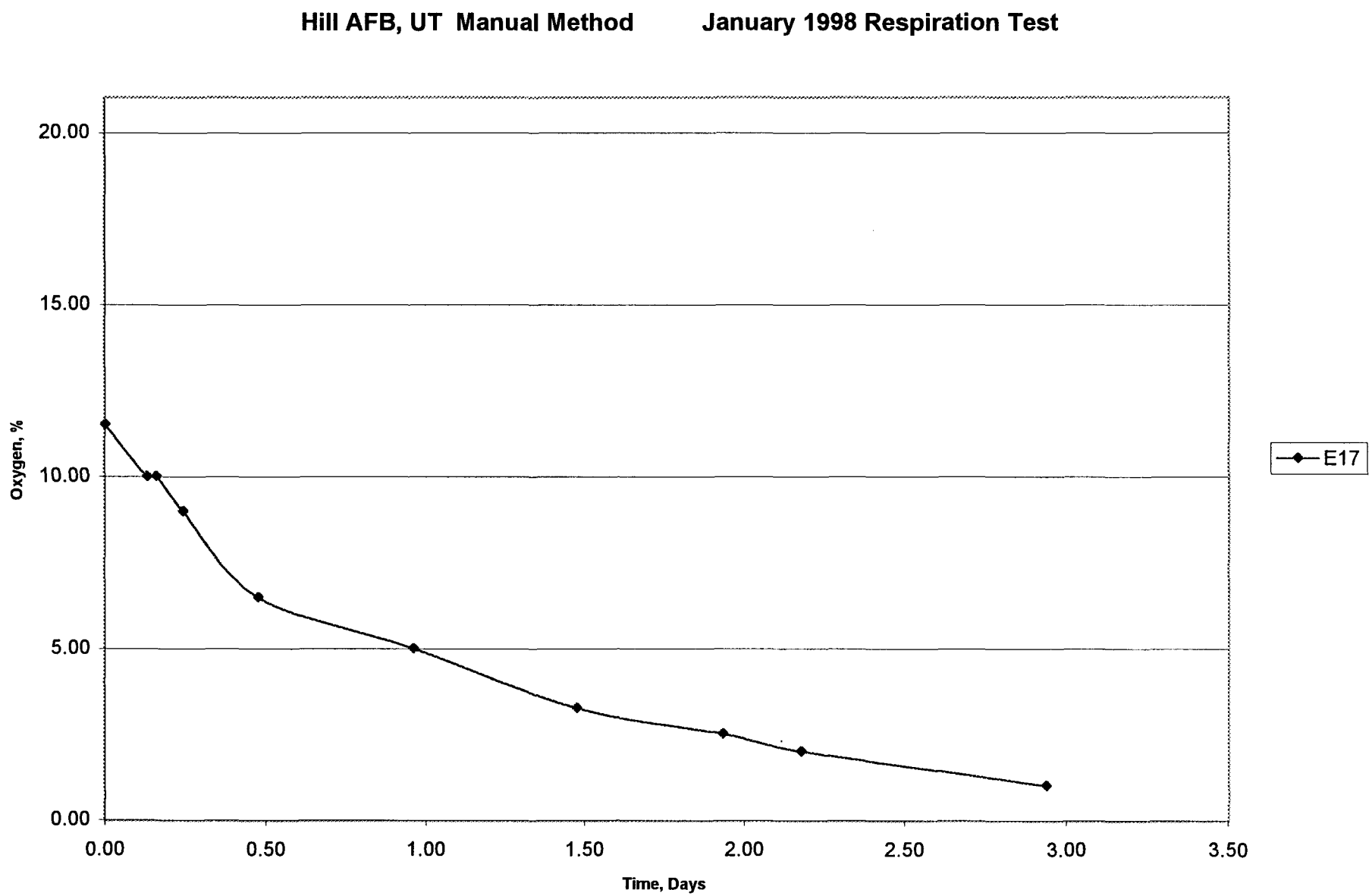
5.00
6.00
Time, Days
E12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10.00
5.00
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Oxygen, %
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0.50
1.00
1.50
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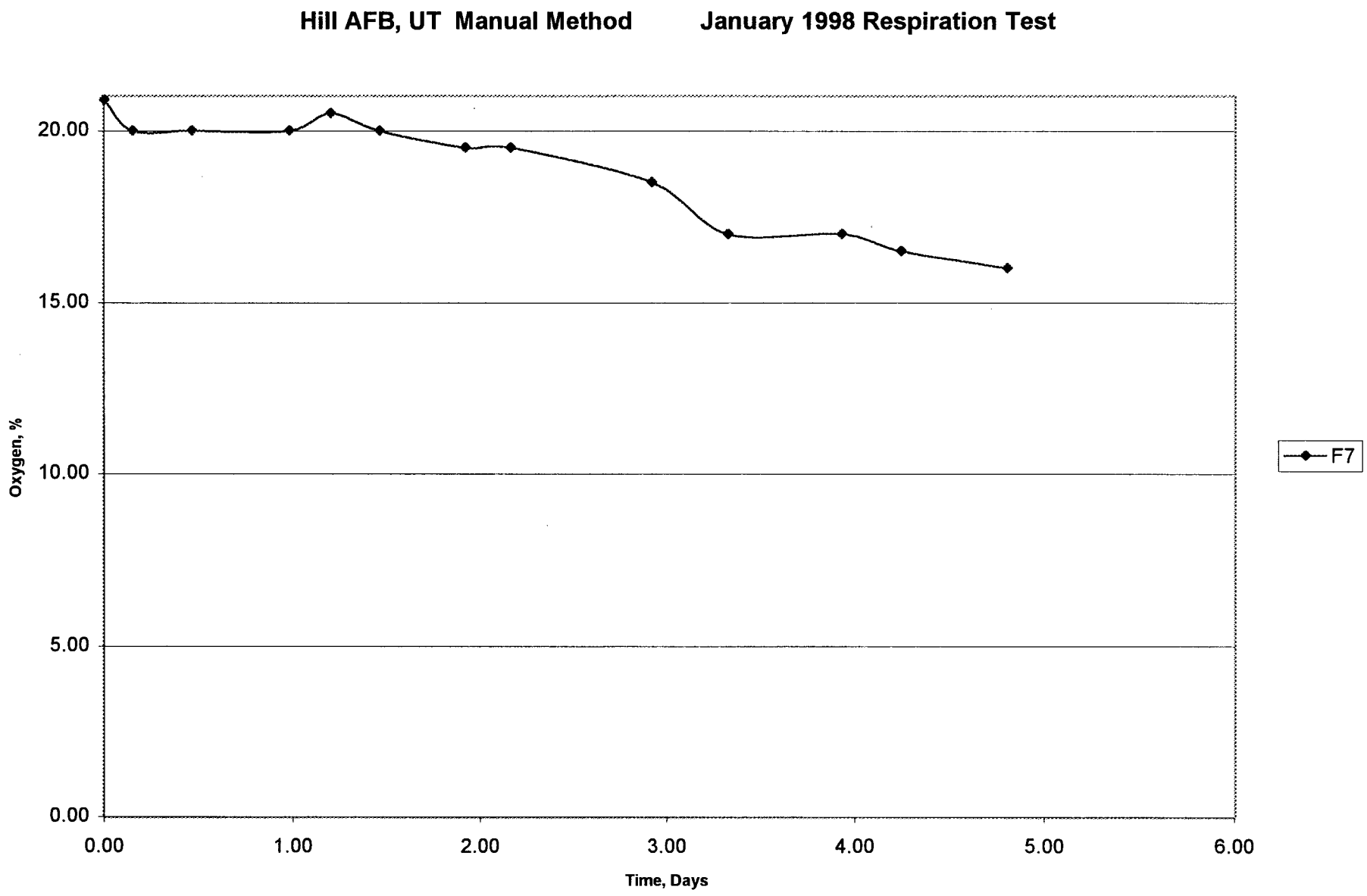
2.50
3.00
3.50
Time, Days
E17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Oxygen, %
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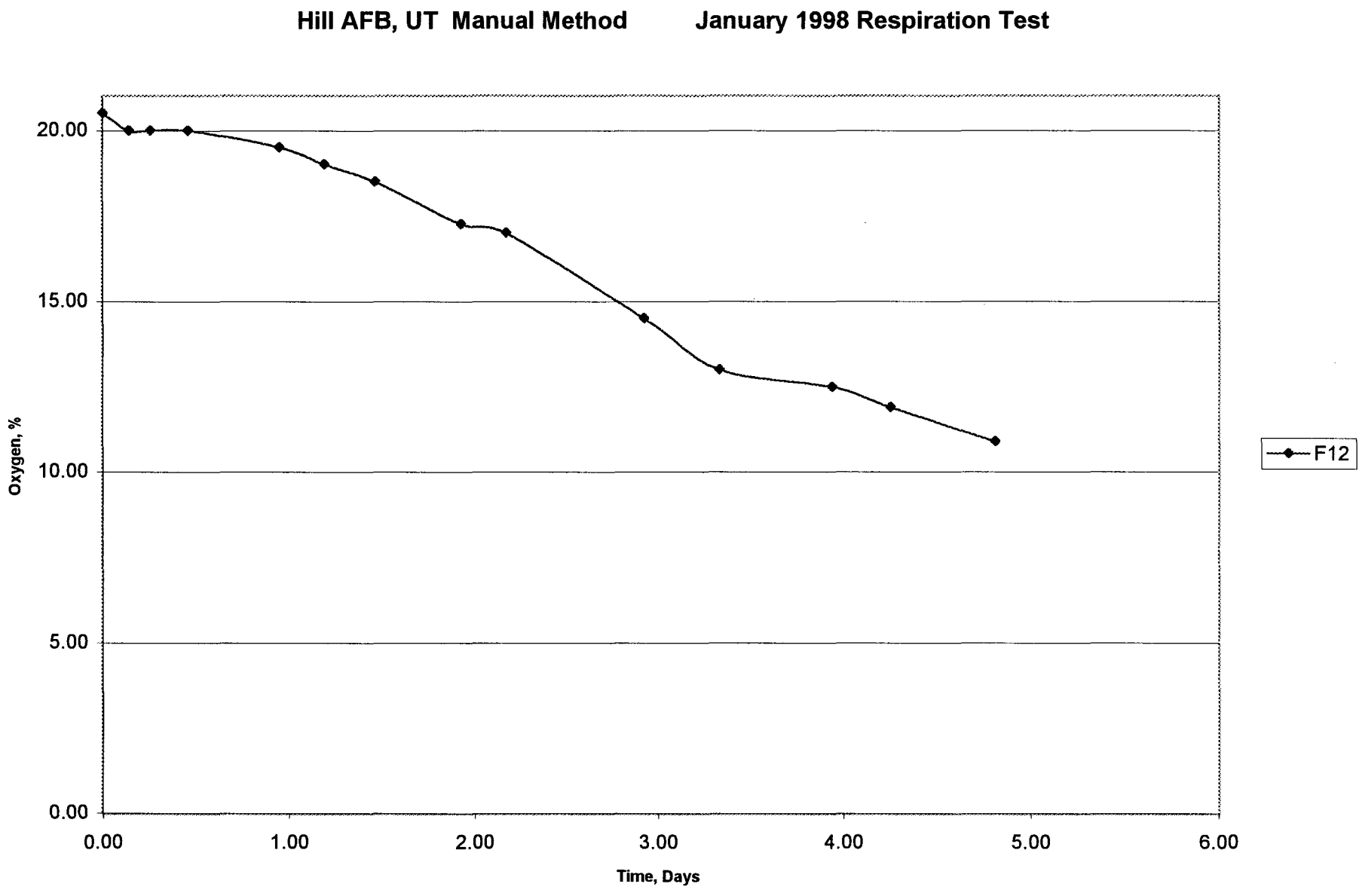
Time, Days
F7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Oxygen, %
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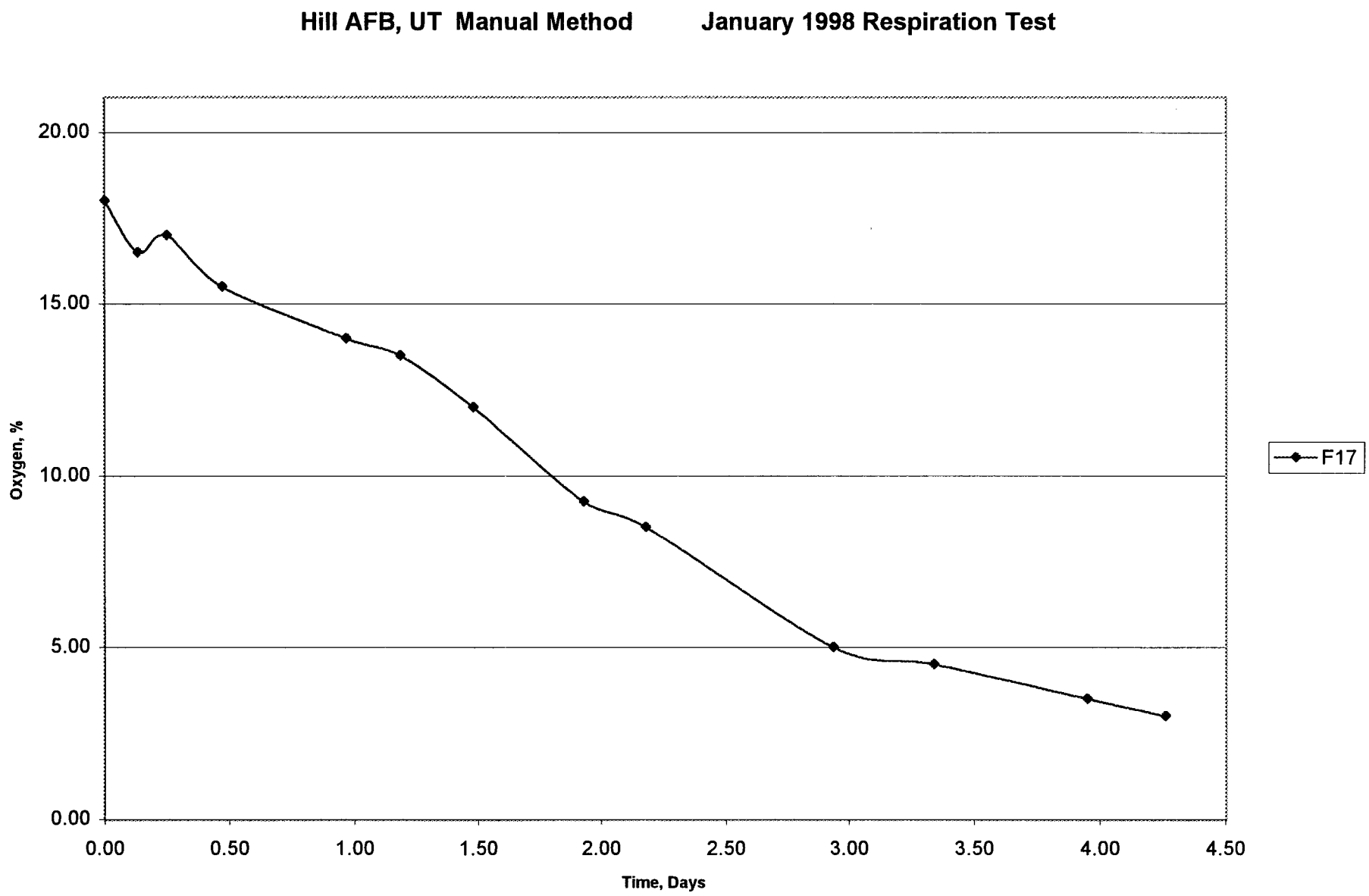
Time, Days
F12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Oxygen, %
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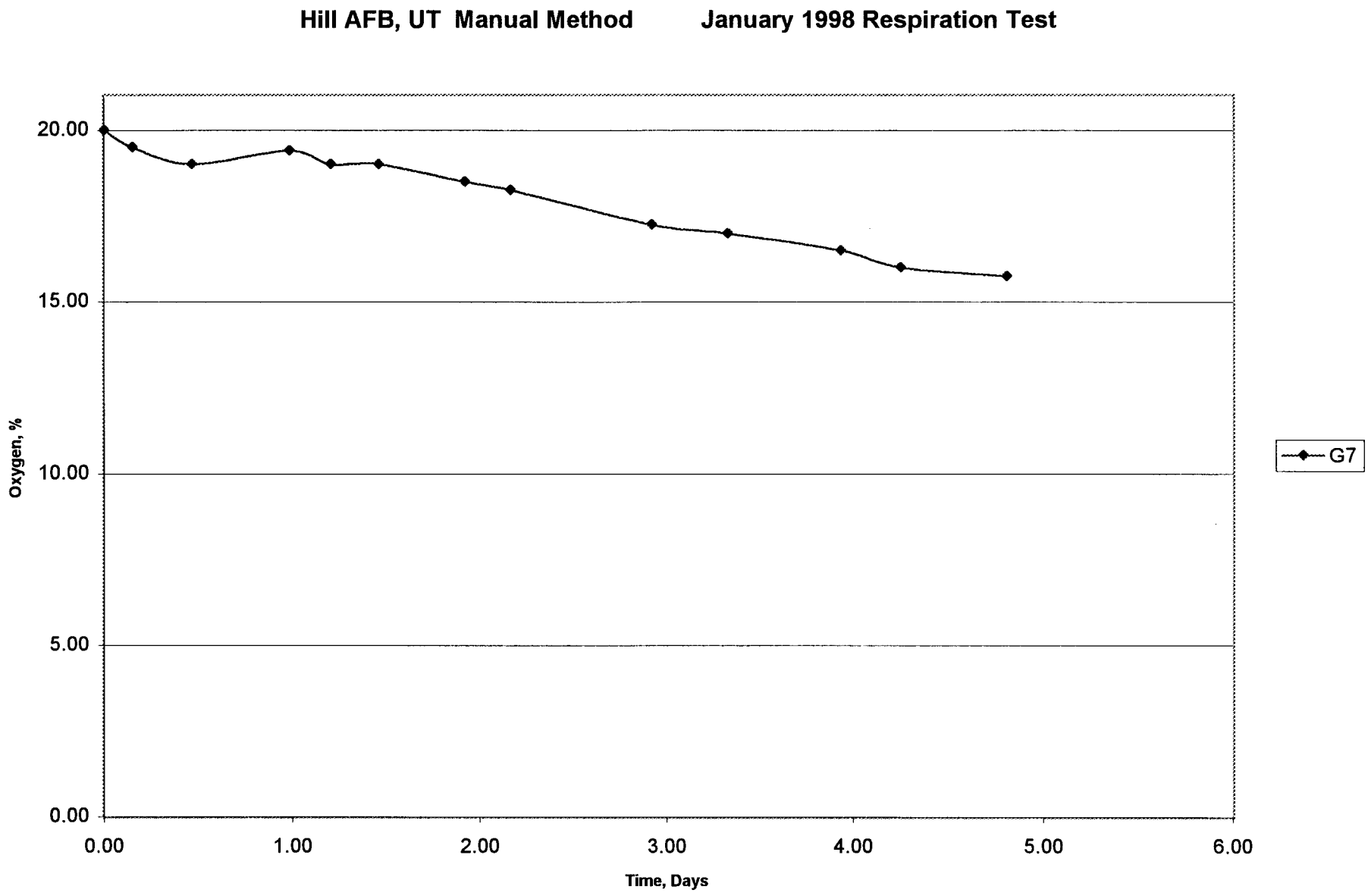
4.50
Time, Days
F17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Time, Days
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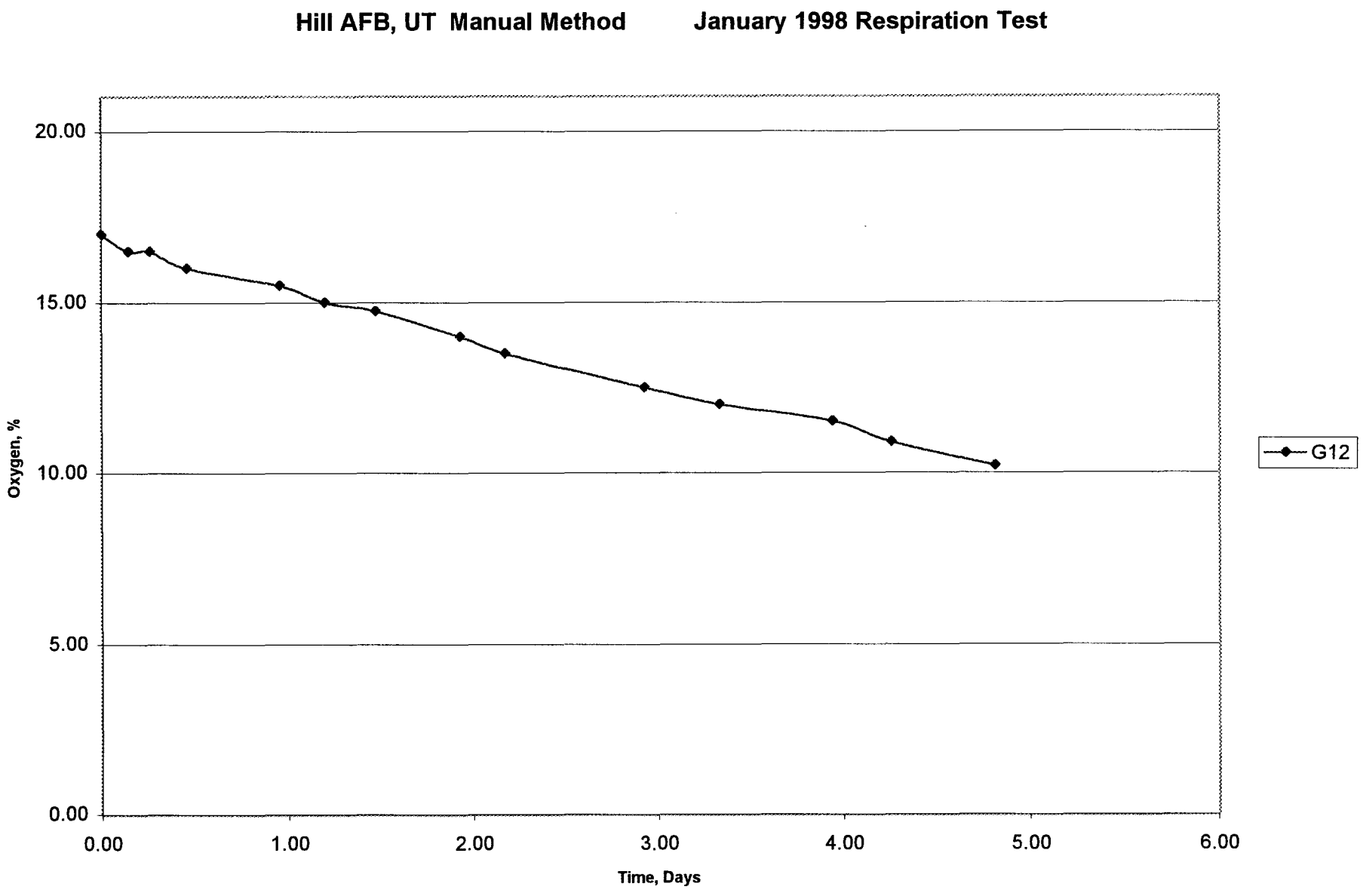
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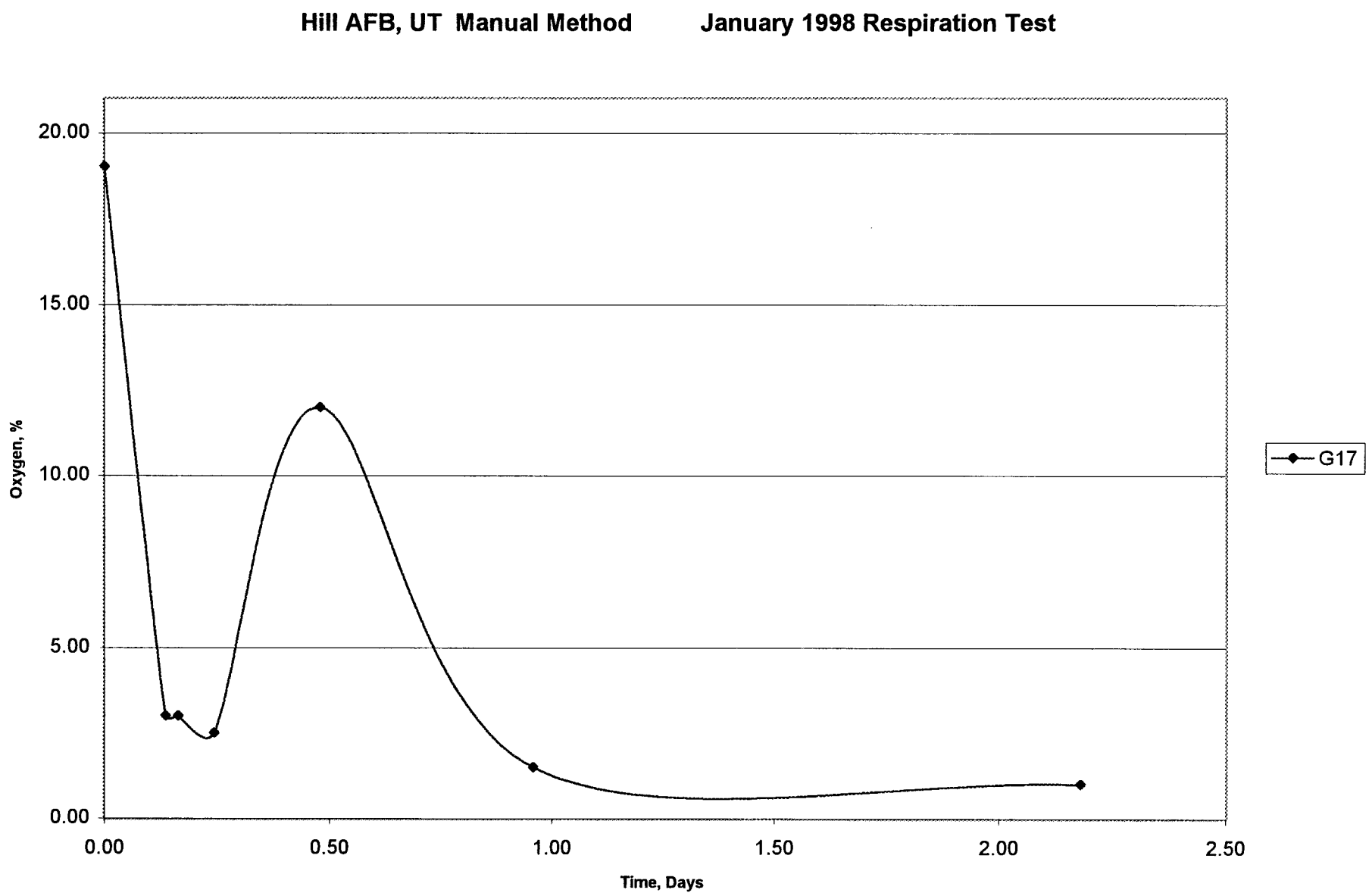
Time, Days
G12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15.00
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Oxygen, %
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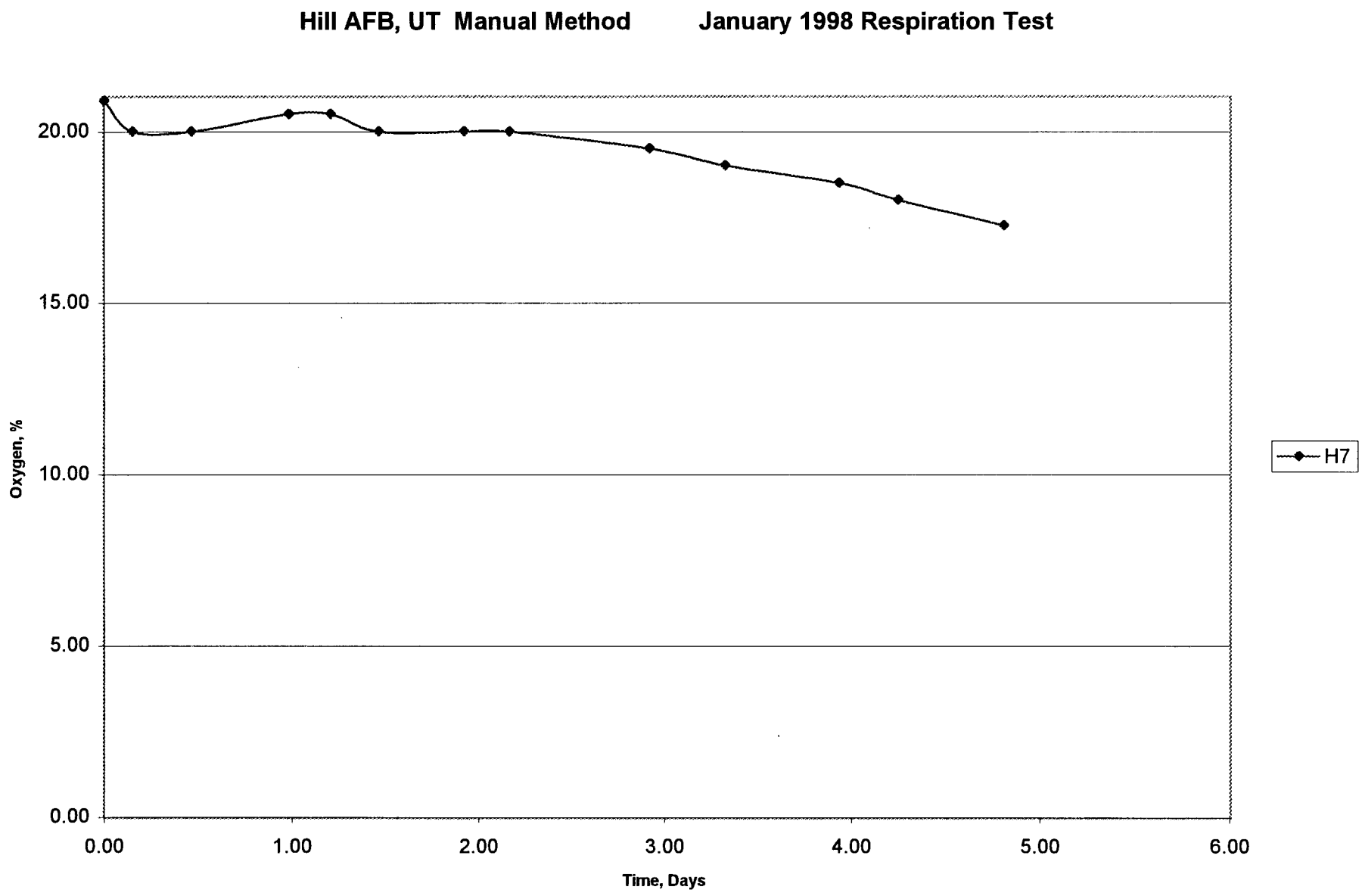
1.00
1.50
2.00
2.50
Time, Days
G17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Oxygen, %
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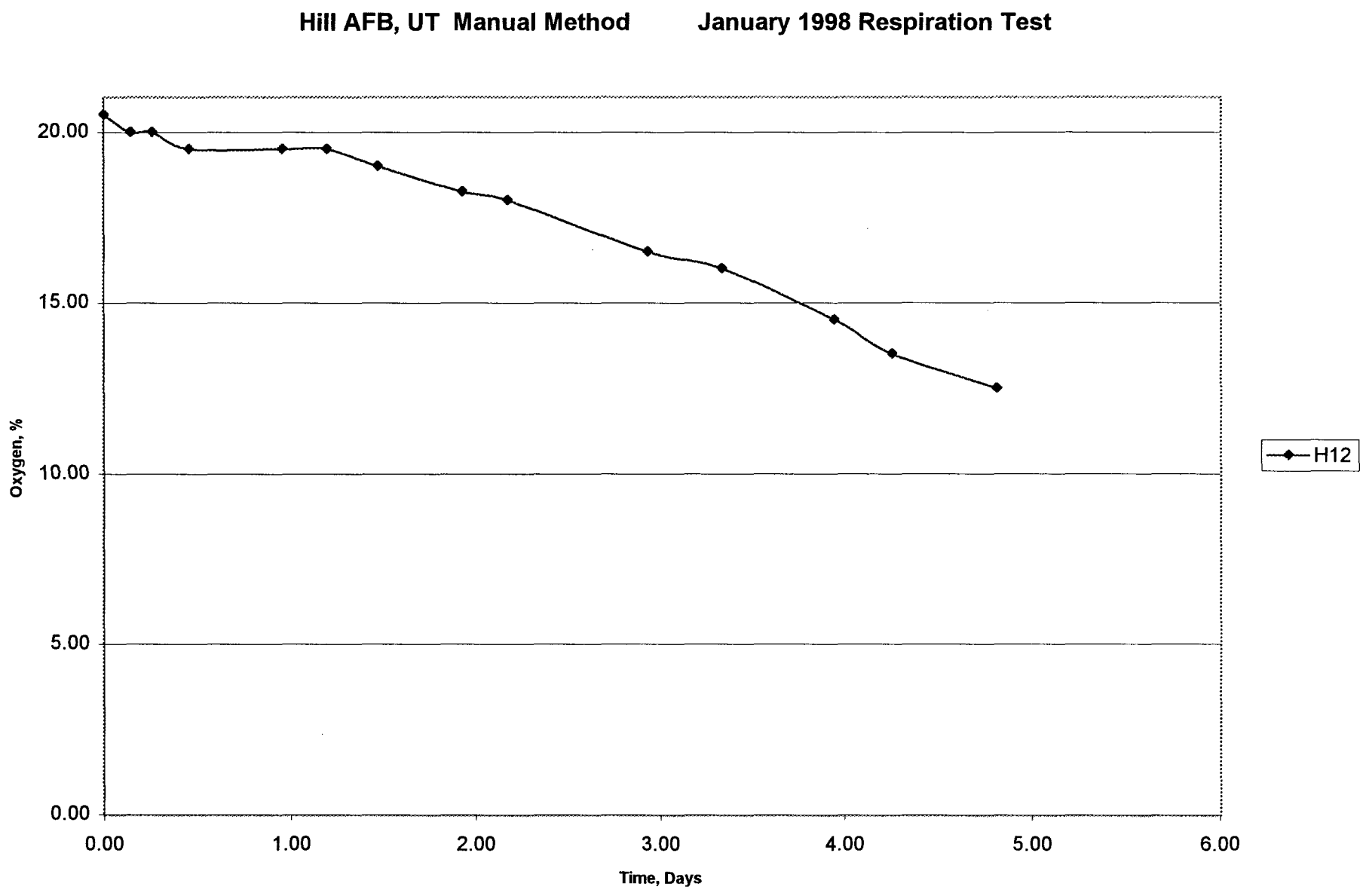
6.00
Time, Days
H7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Oxygen, %
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2.00
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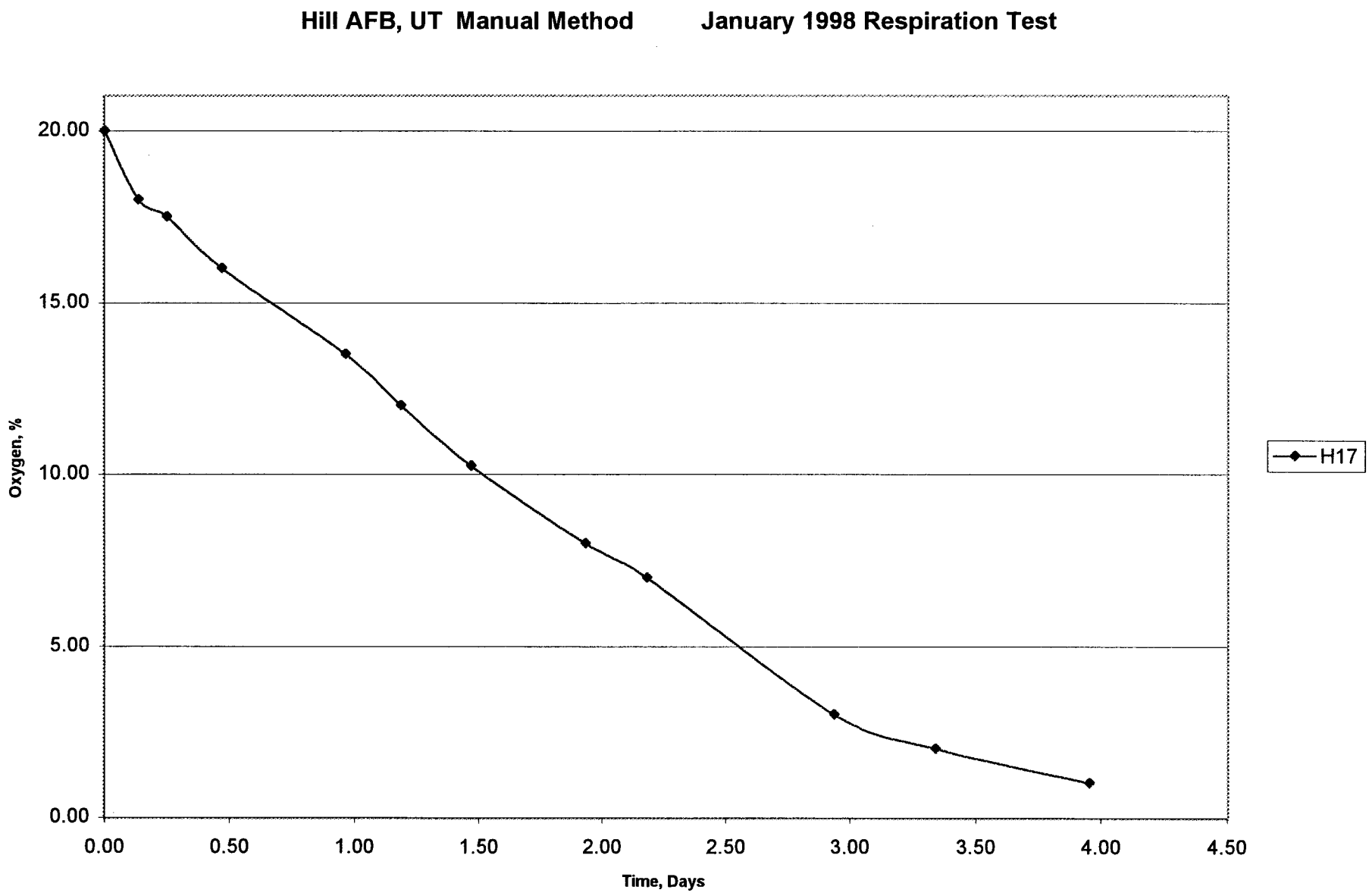
4.00
5.00
6.00
Time, Days
H12


Hill AFB, UT Manual Method January 1998 Respiration Test
20.00
15.00
10.00
5.00
0.00
Oxygen, %
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
Time, Days
H17

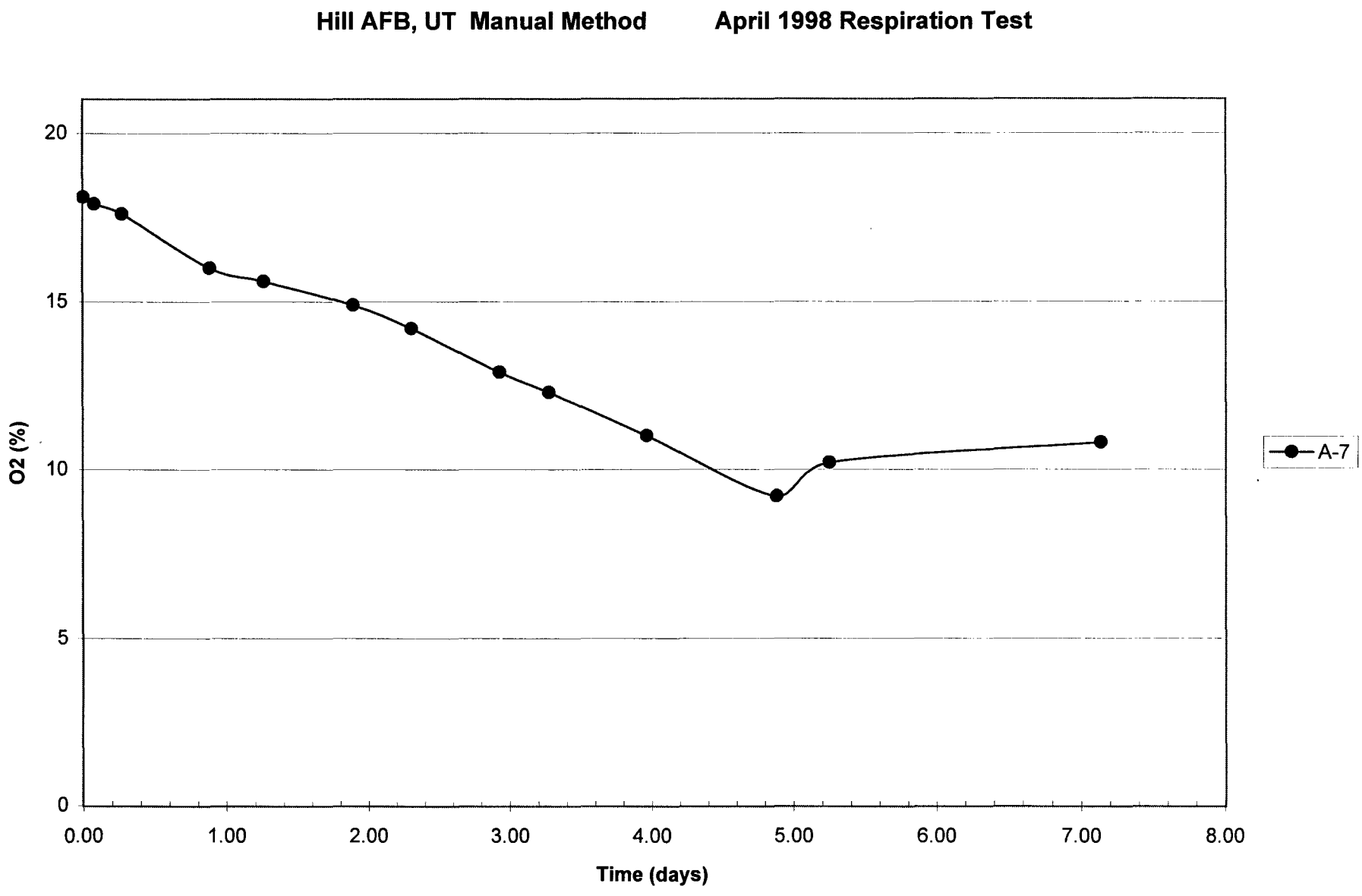
OXYGEN UTILIZATION PLOTS

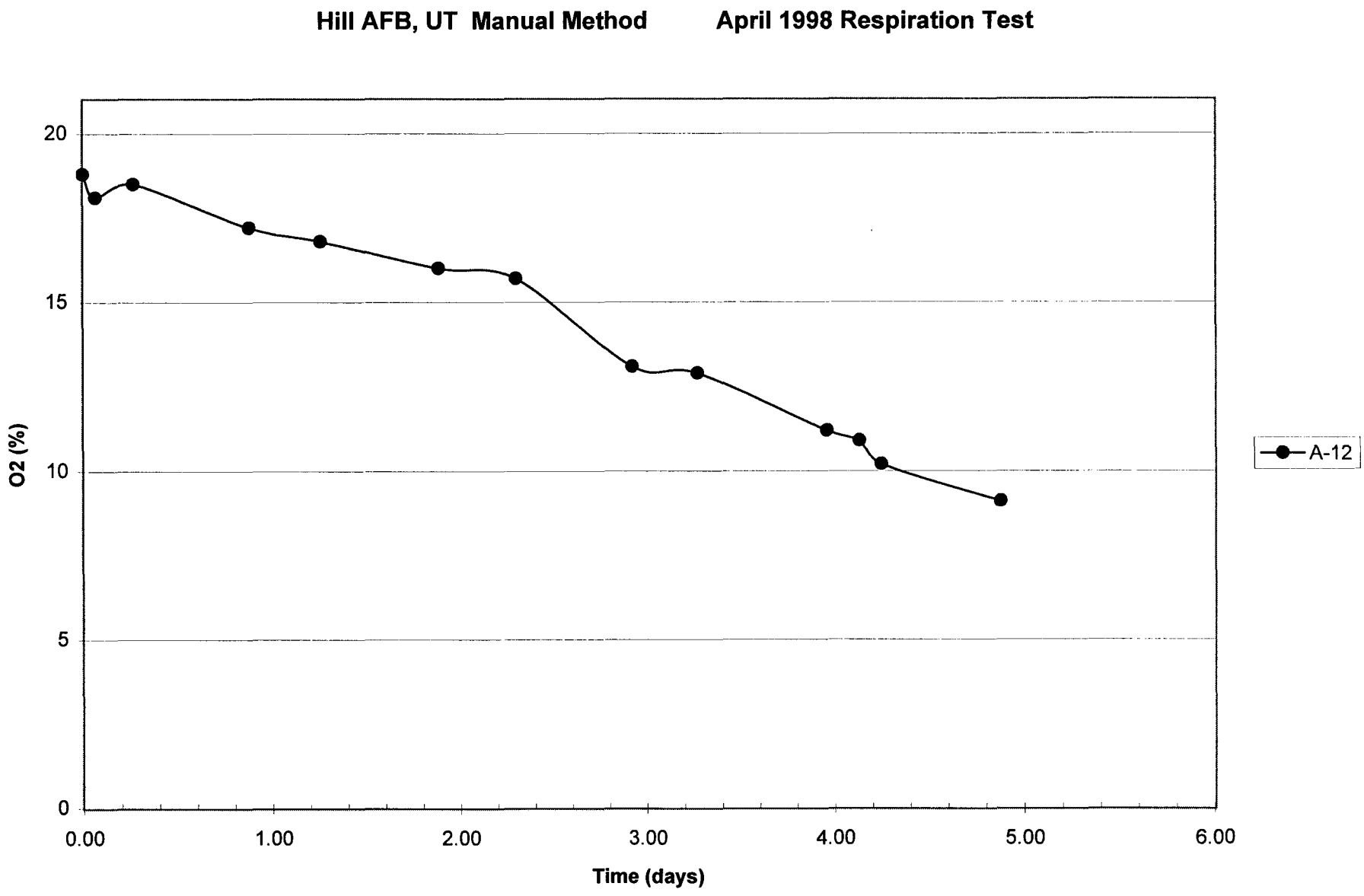
MONITORED BY

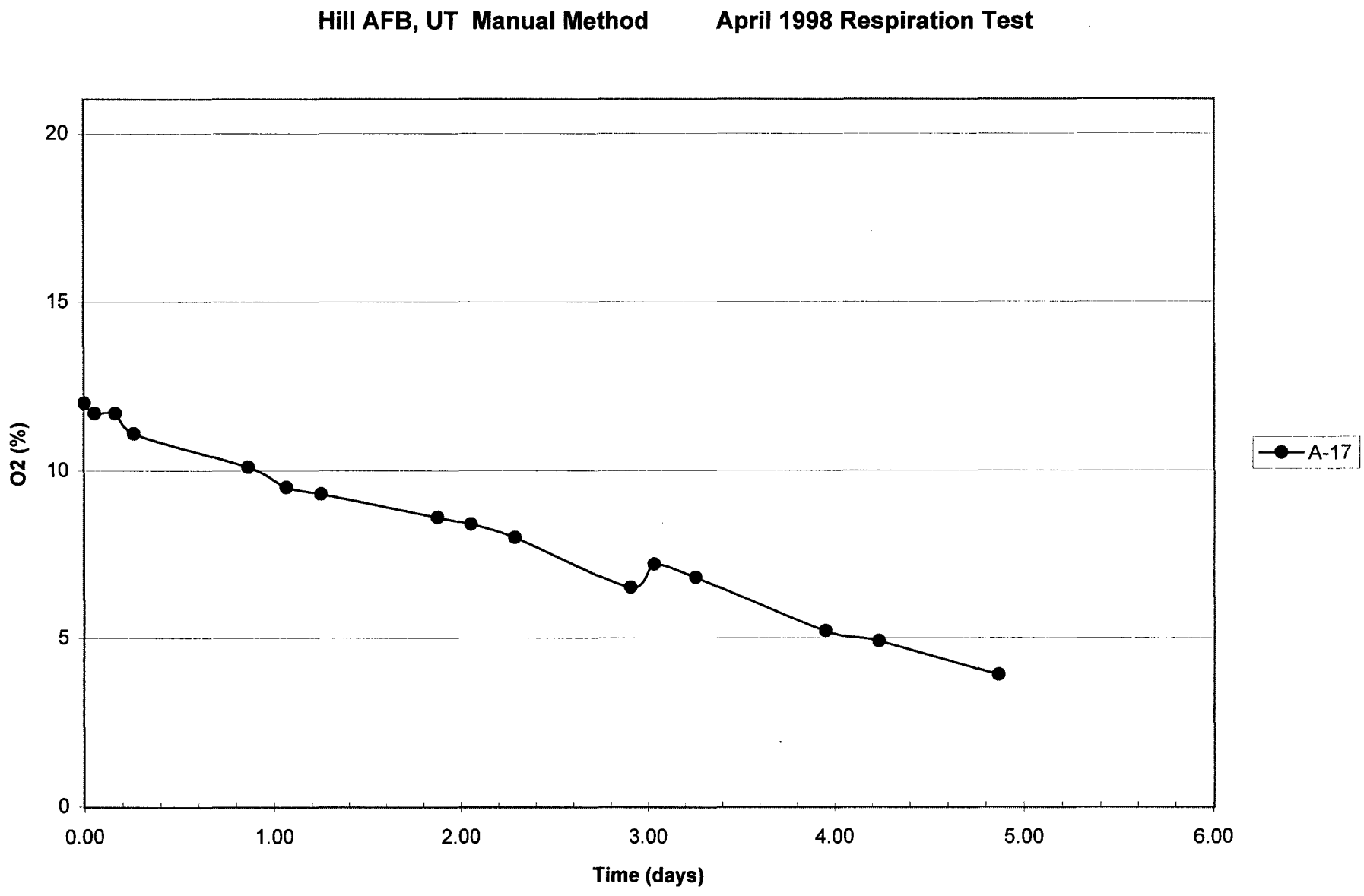
MANUAL METHOD

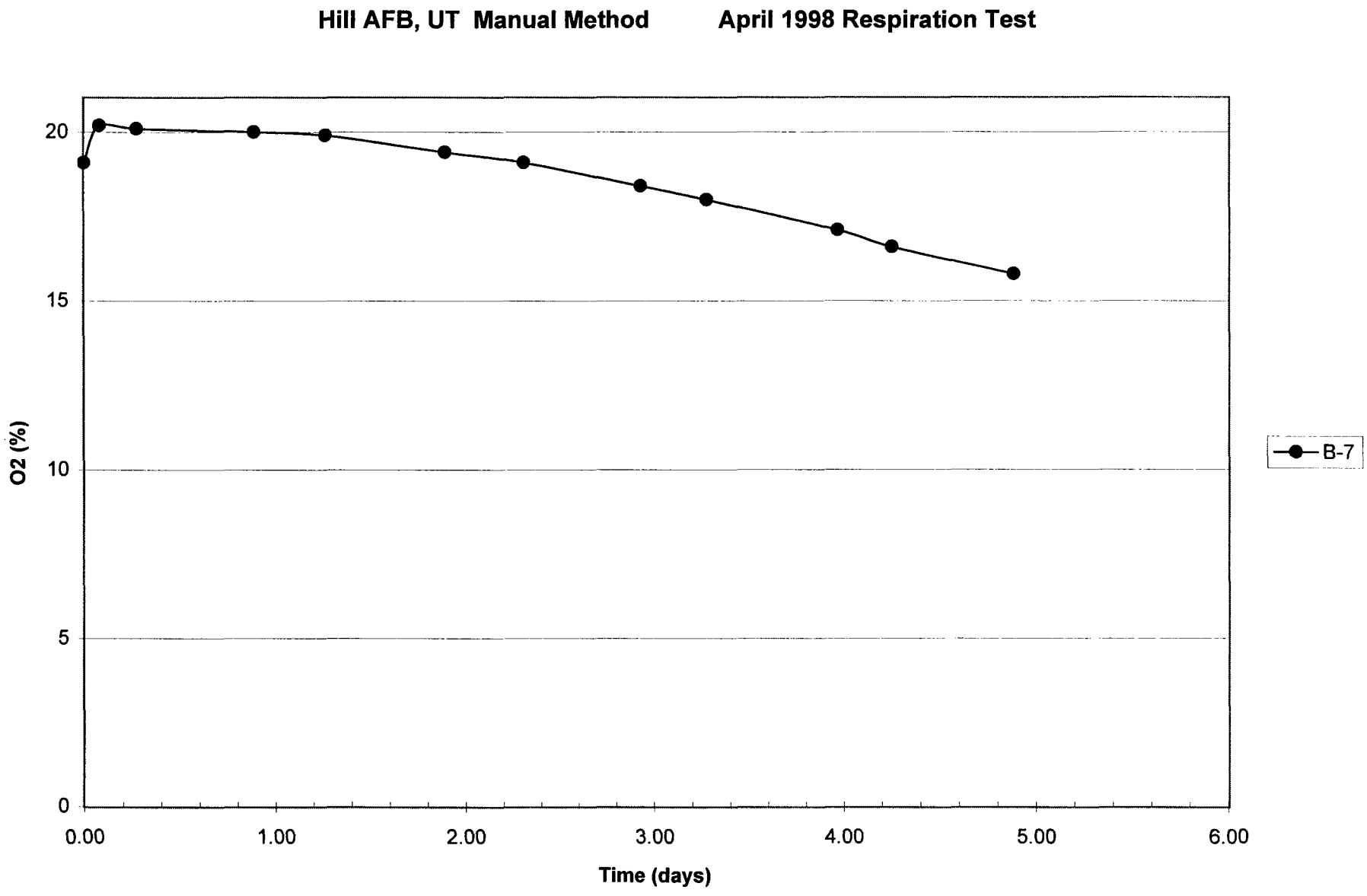
DURING RESPIRATION TESTING

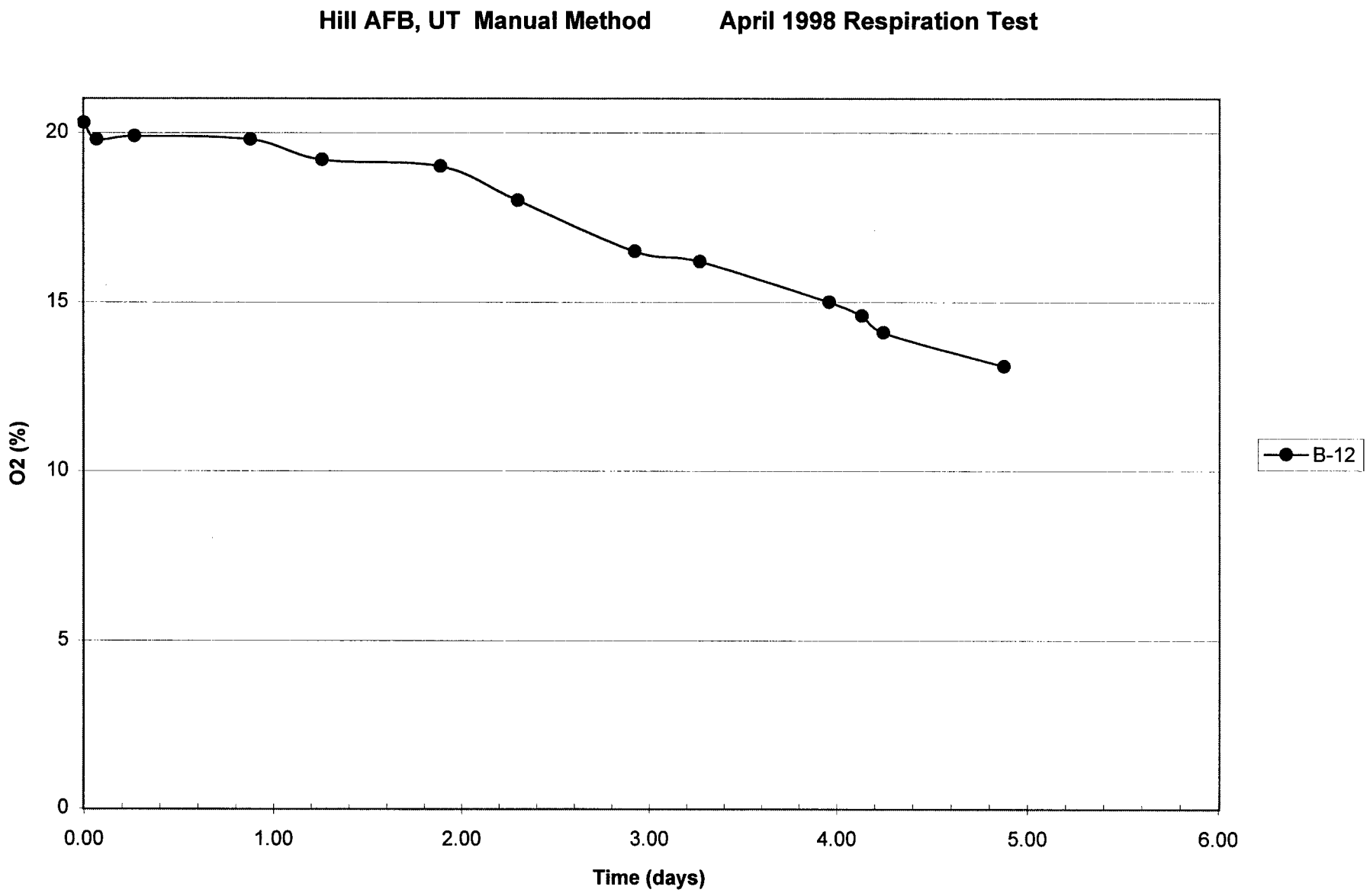
April 1998

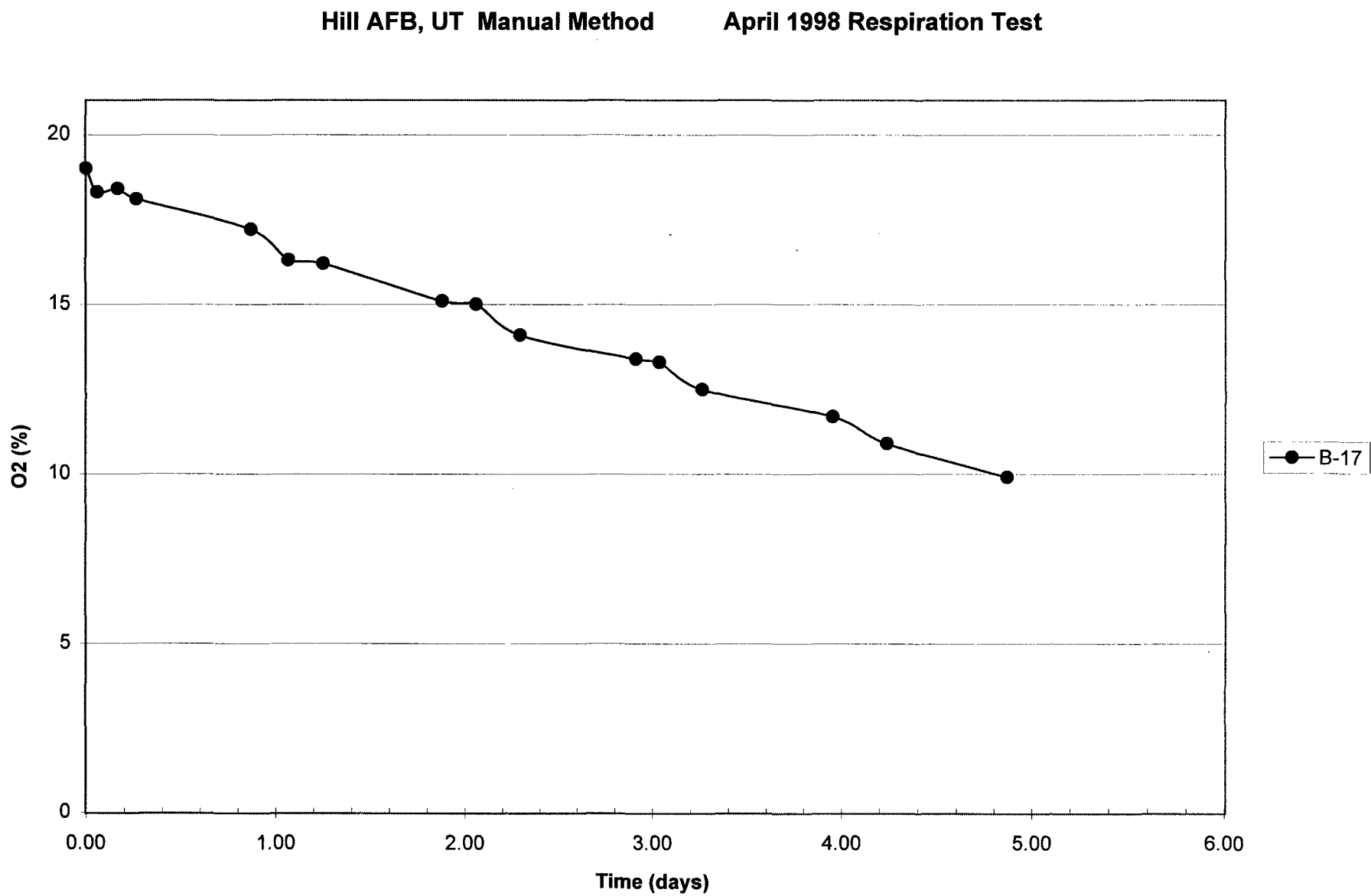

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Time (days)
A-7

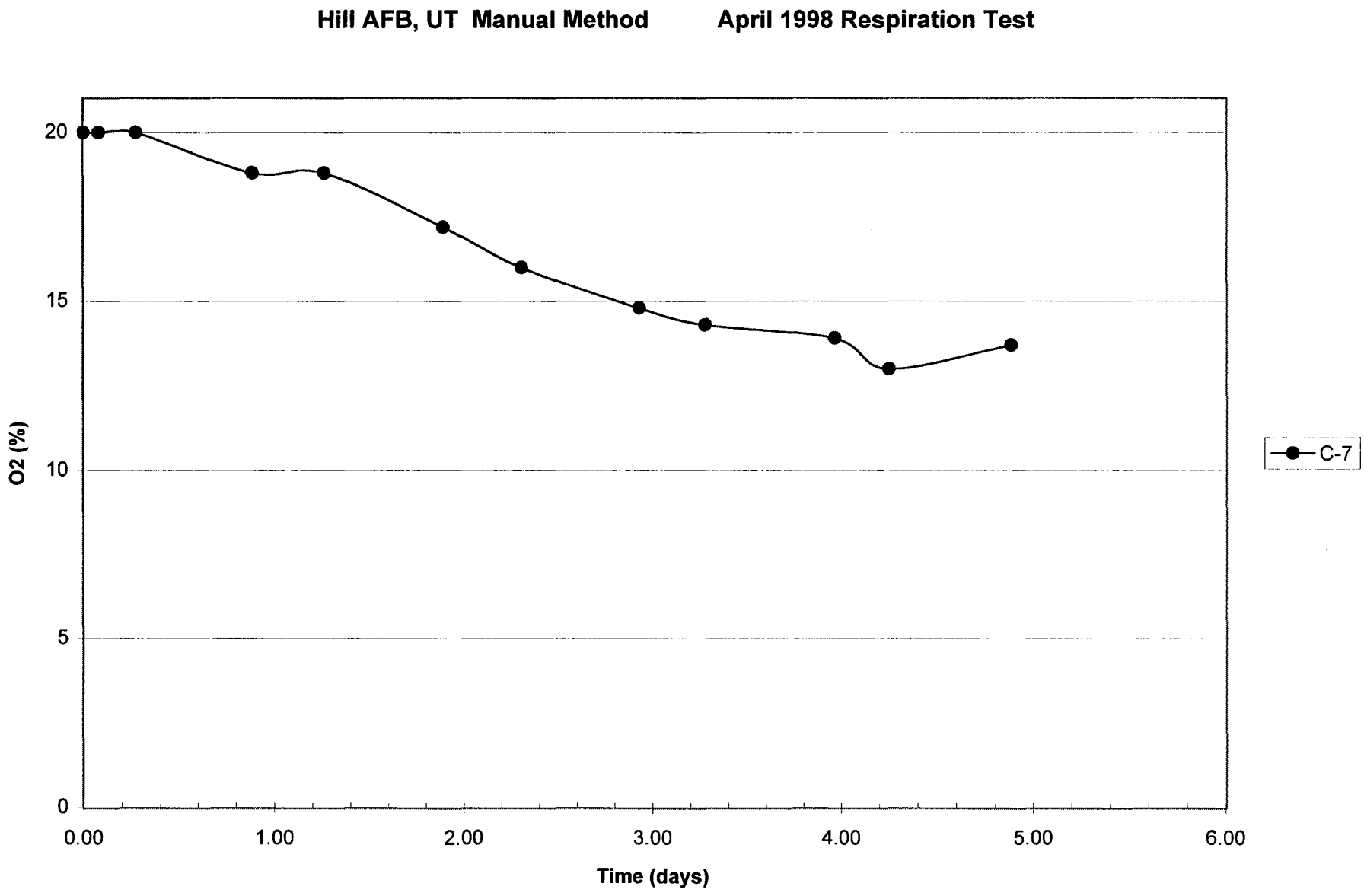

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
A-12

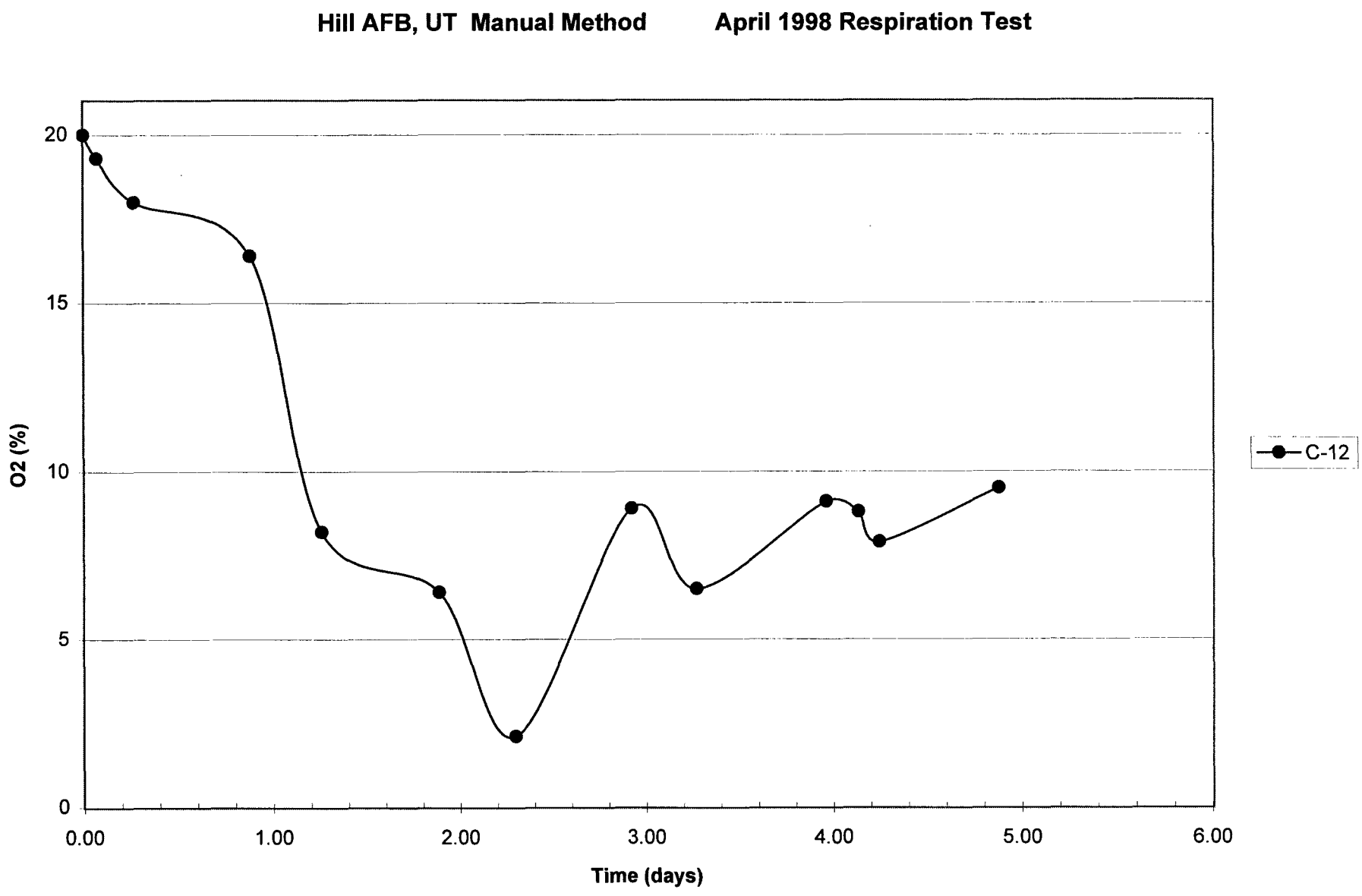

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
A-17

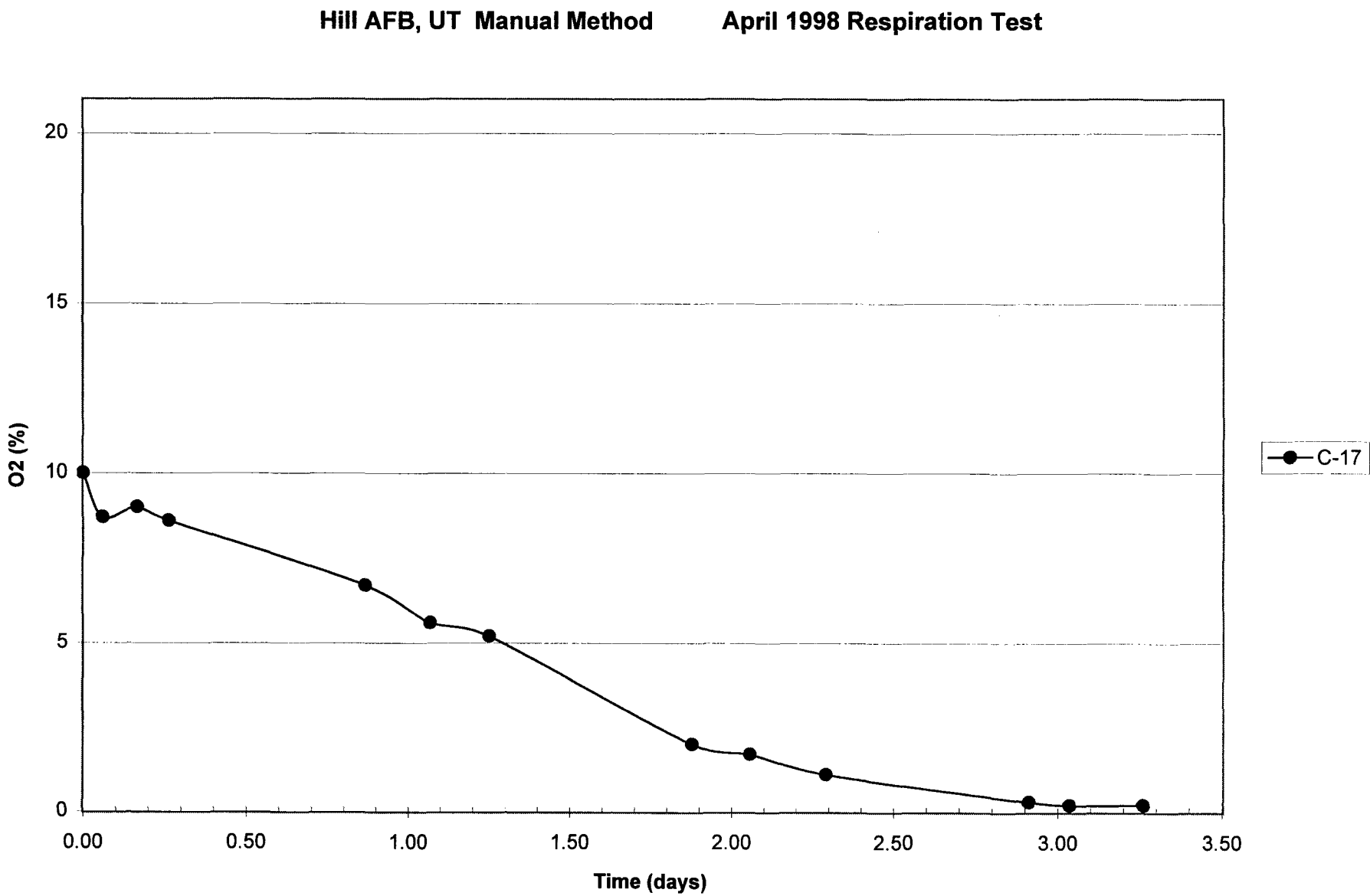

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
B-7

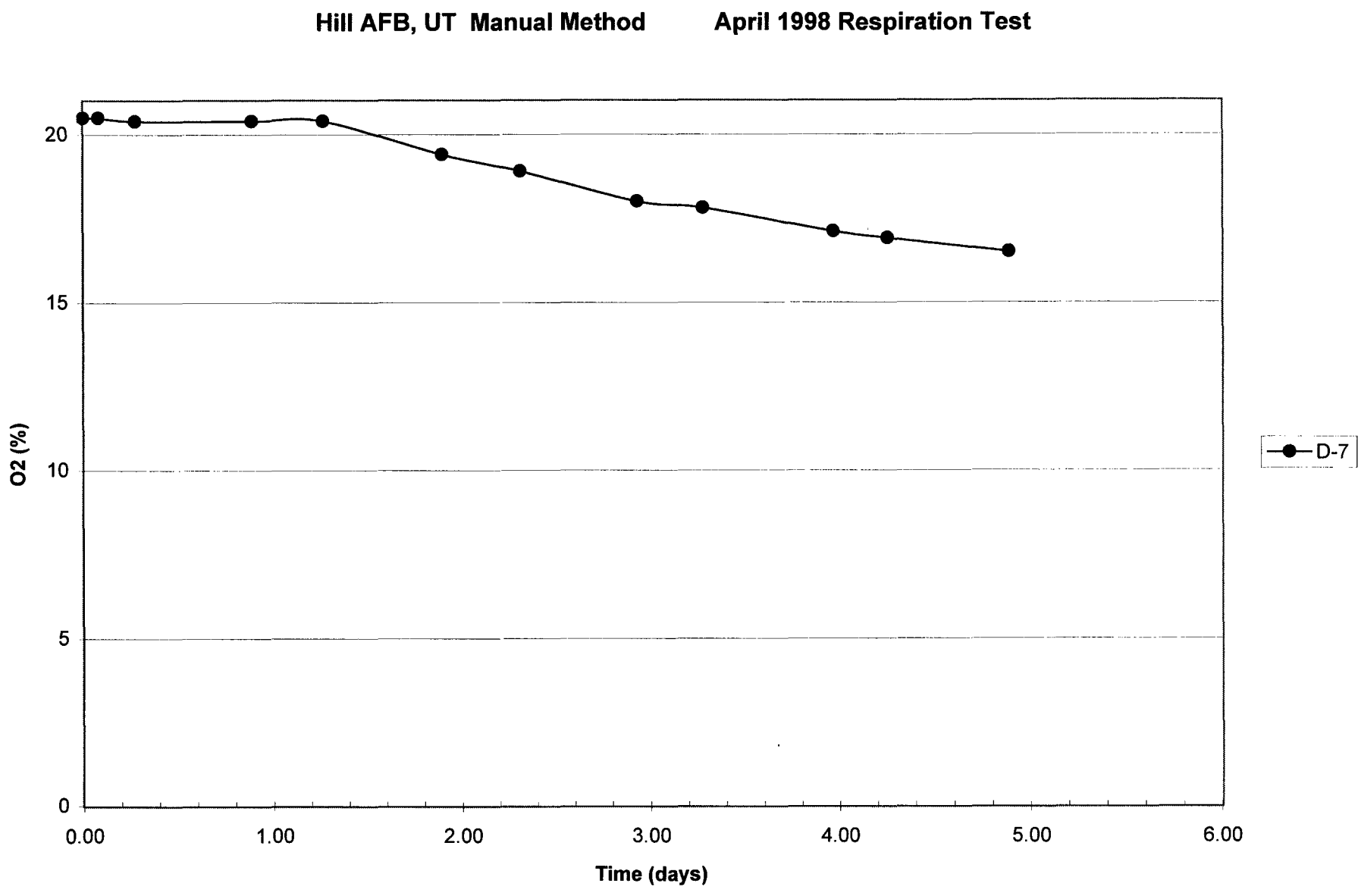

Hill AFB, UT Manual Method
April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
B-12

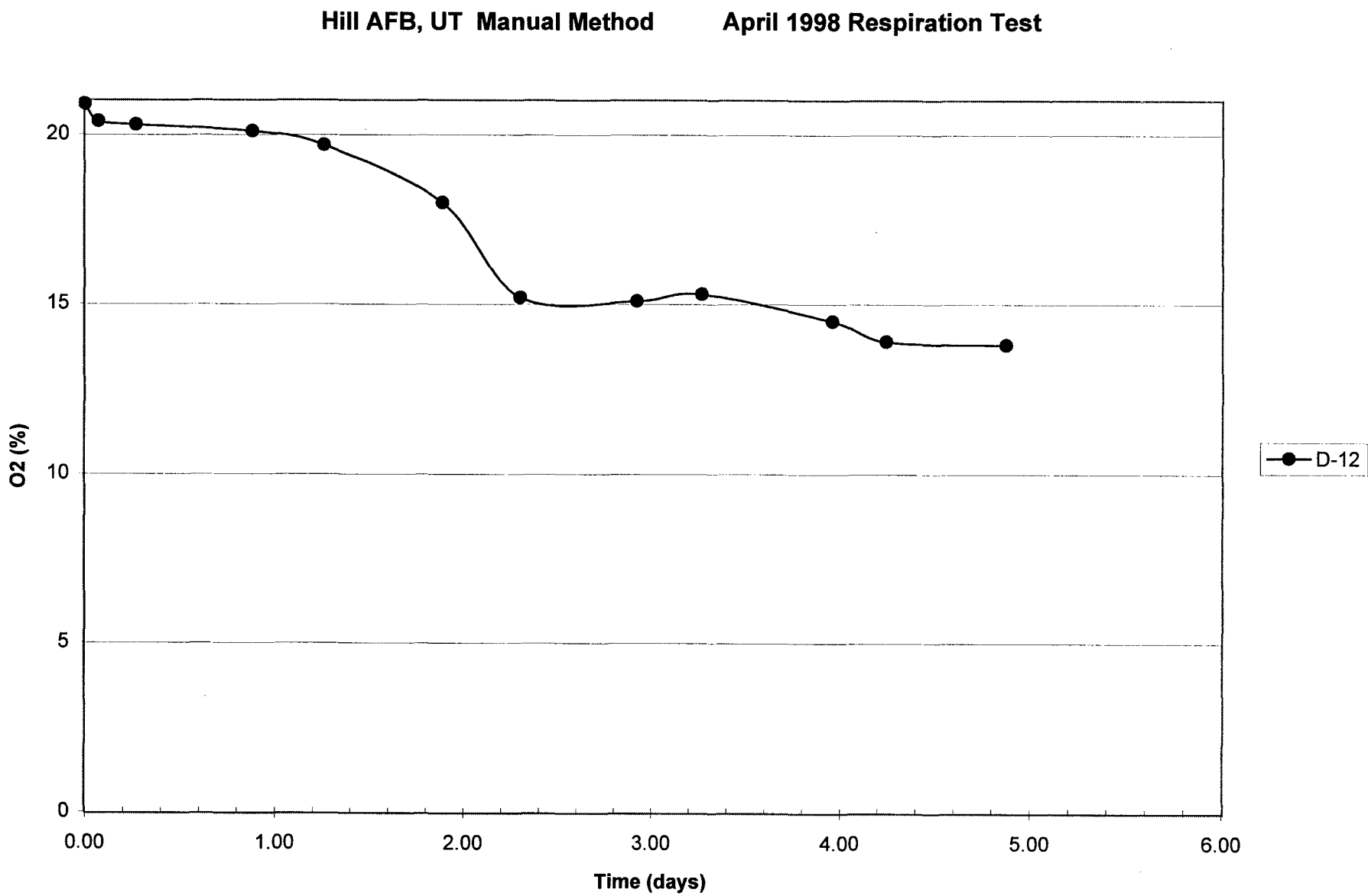

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
B-17

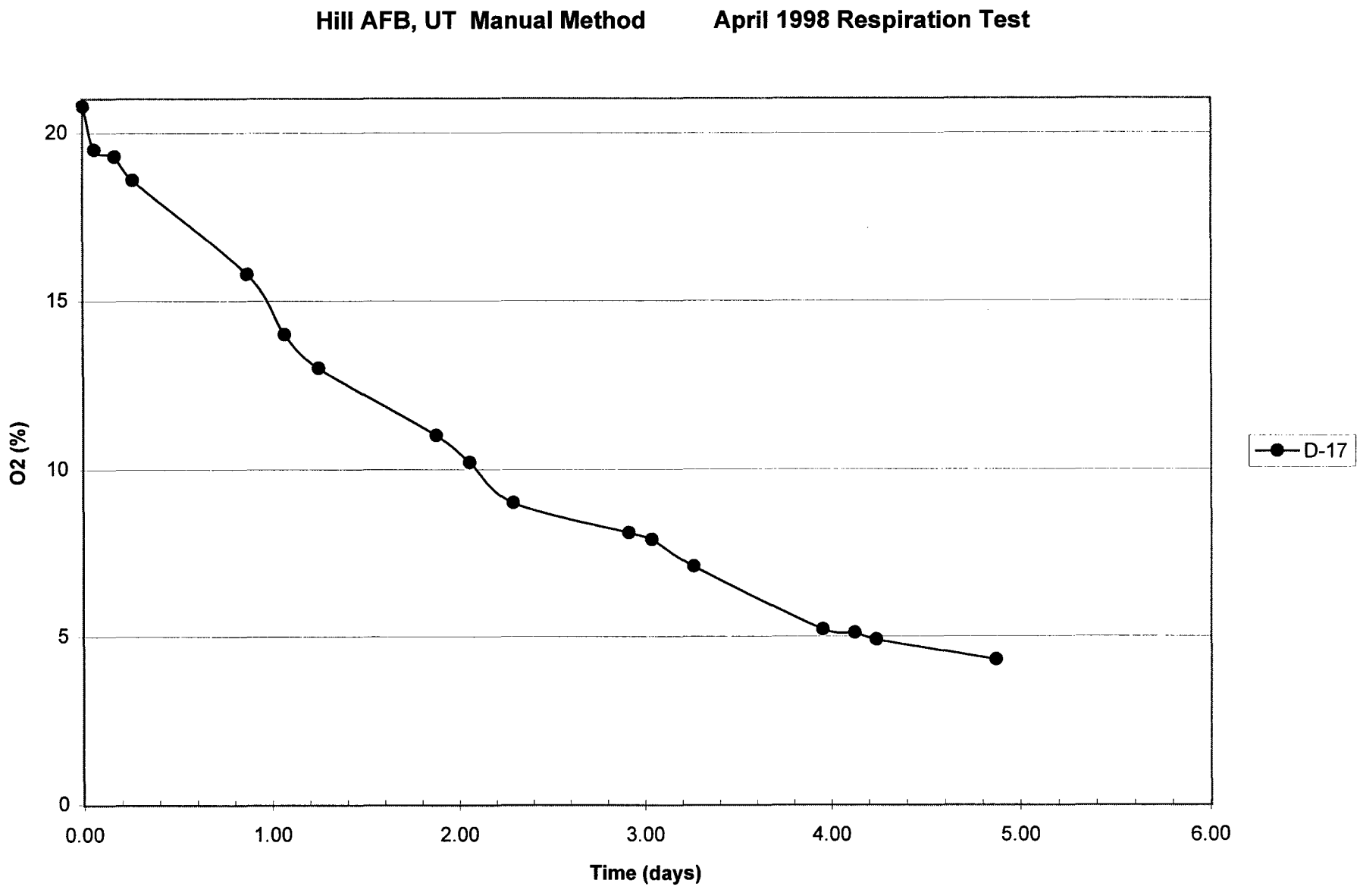

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
C-7

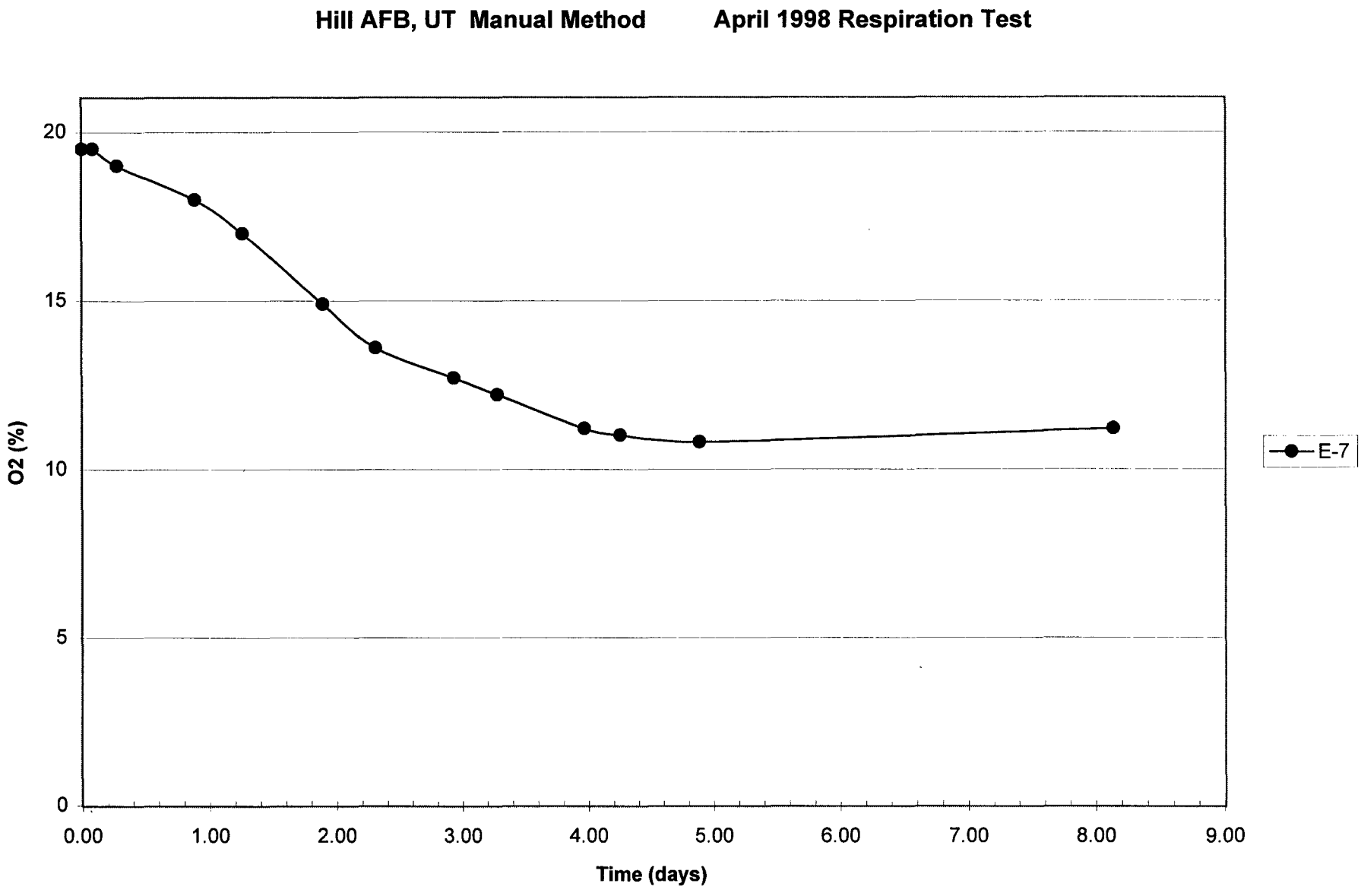

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
C-12

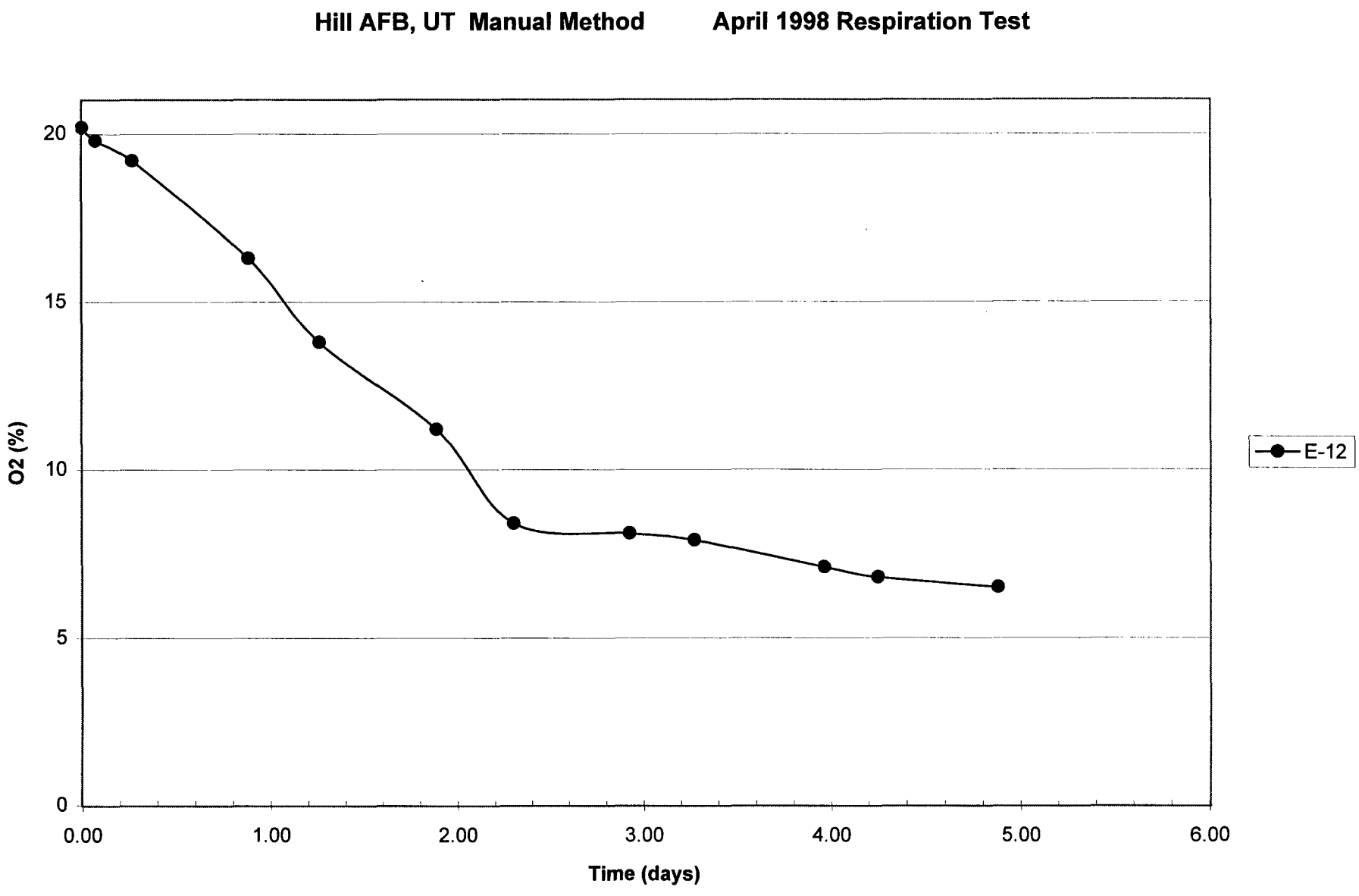

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
Time (days)
C-17

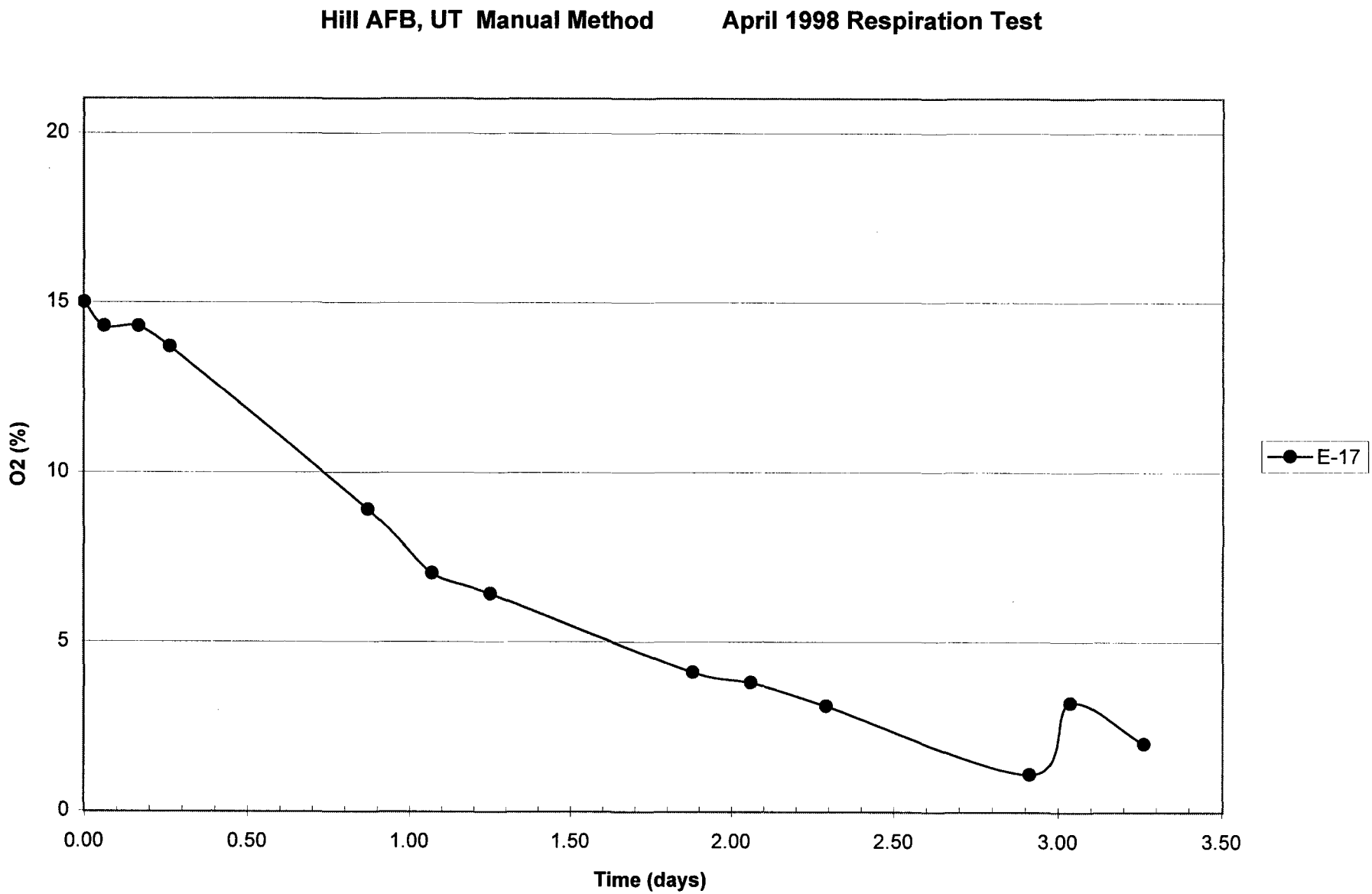

Hill AFB, UT Manual Method
April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
D-7

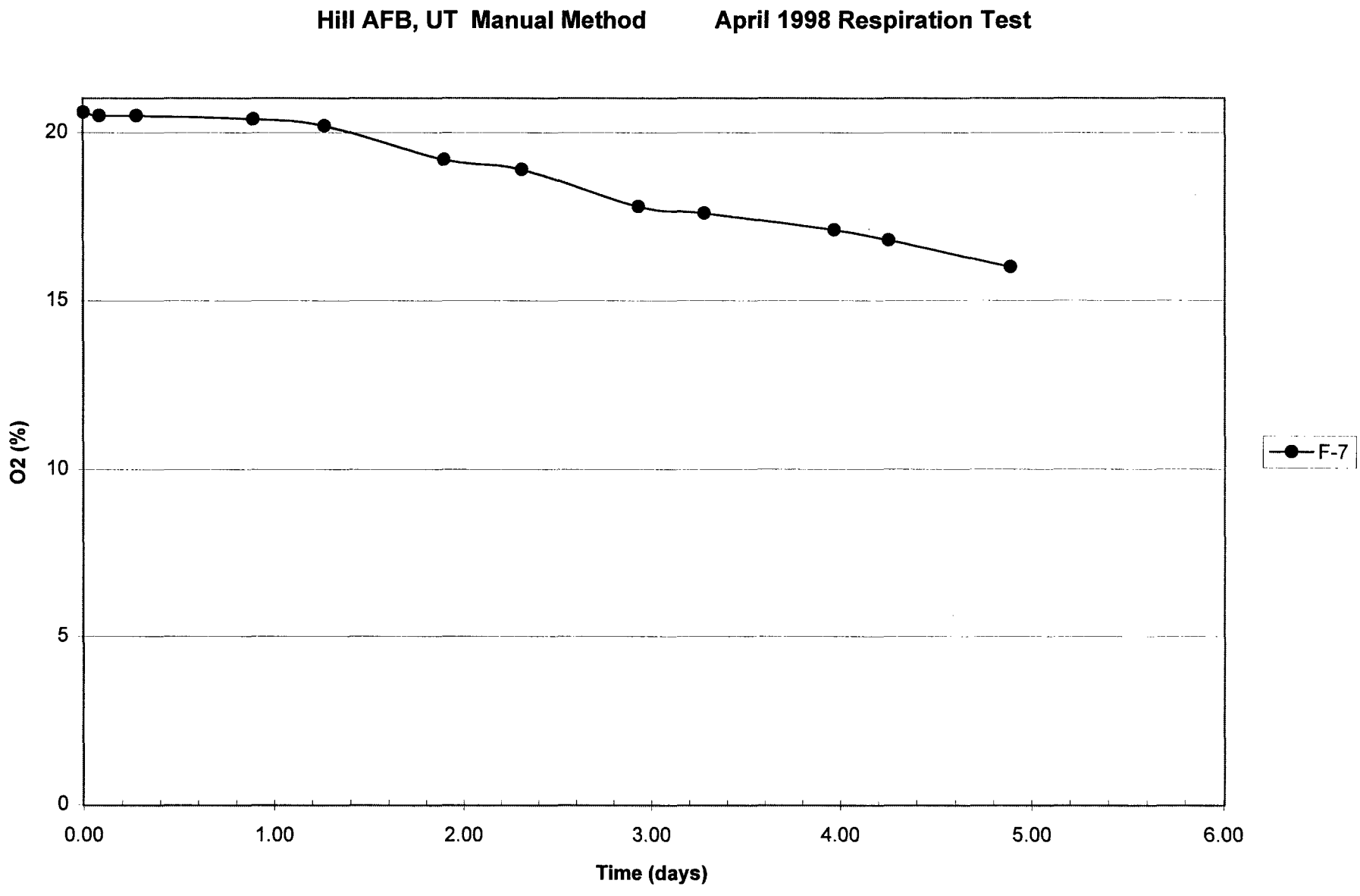

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
D-12

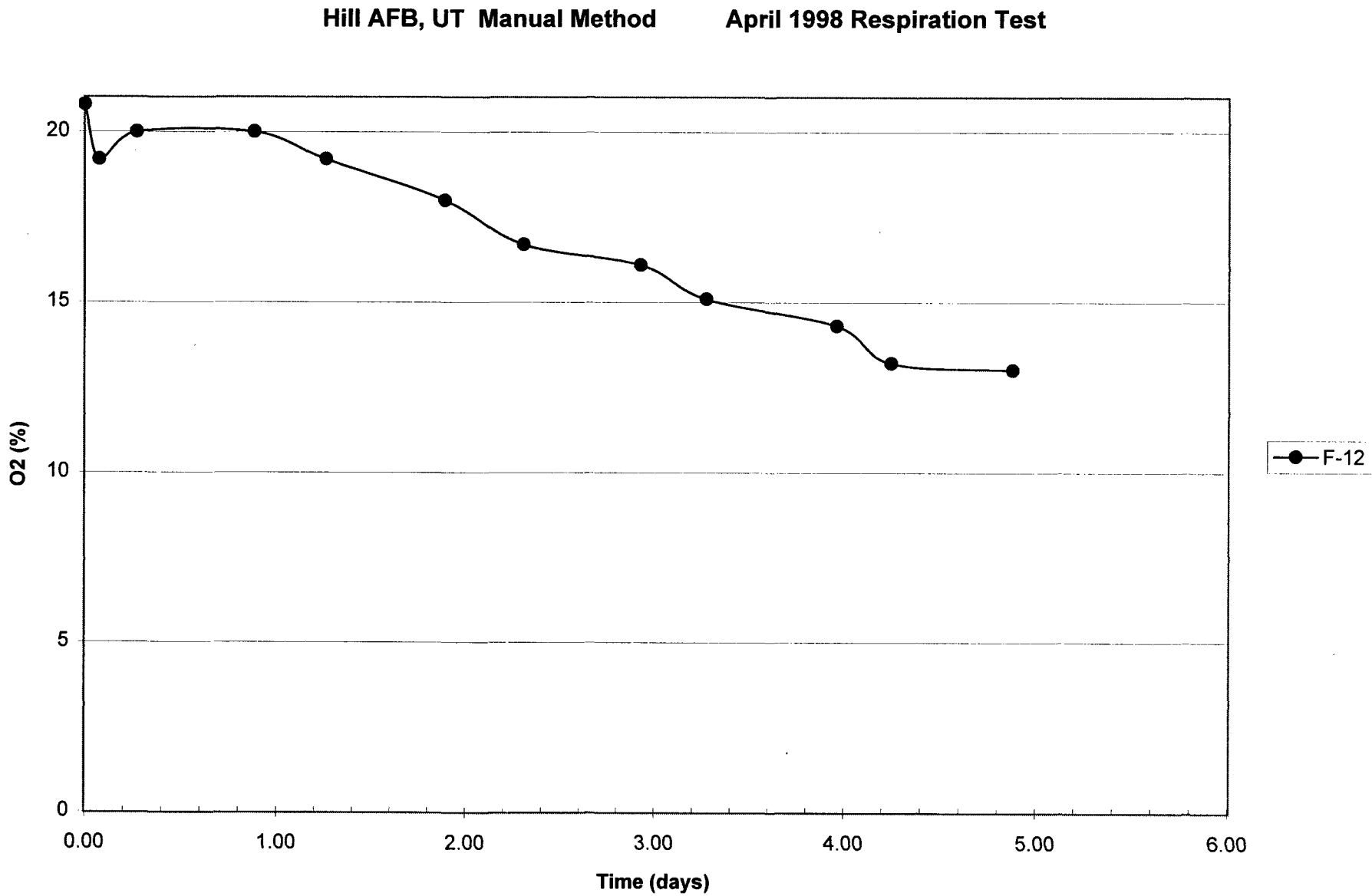

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
D-17

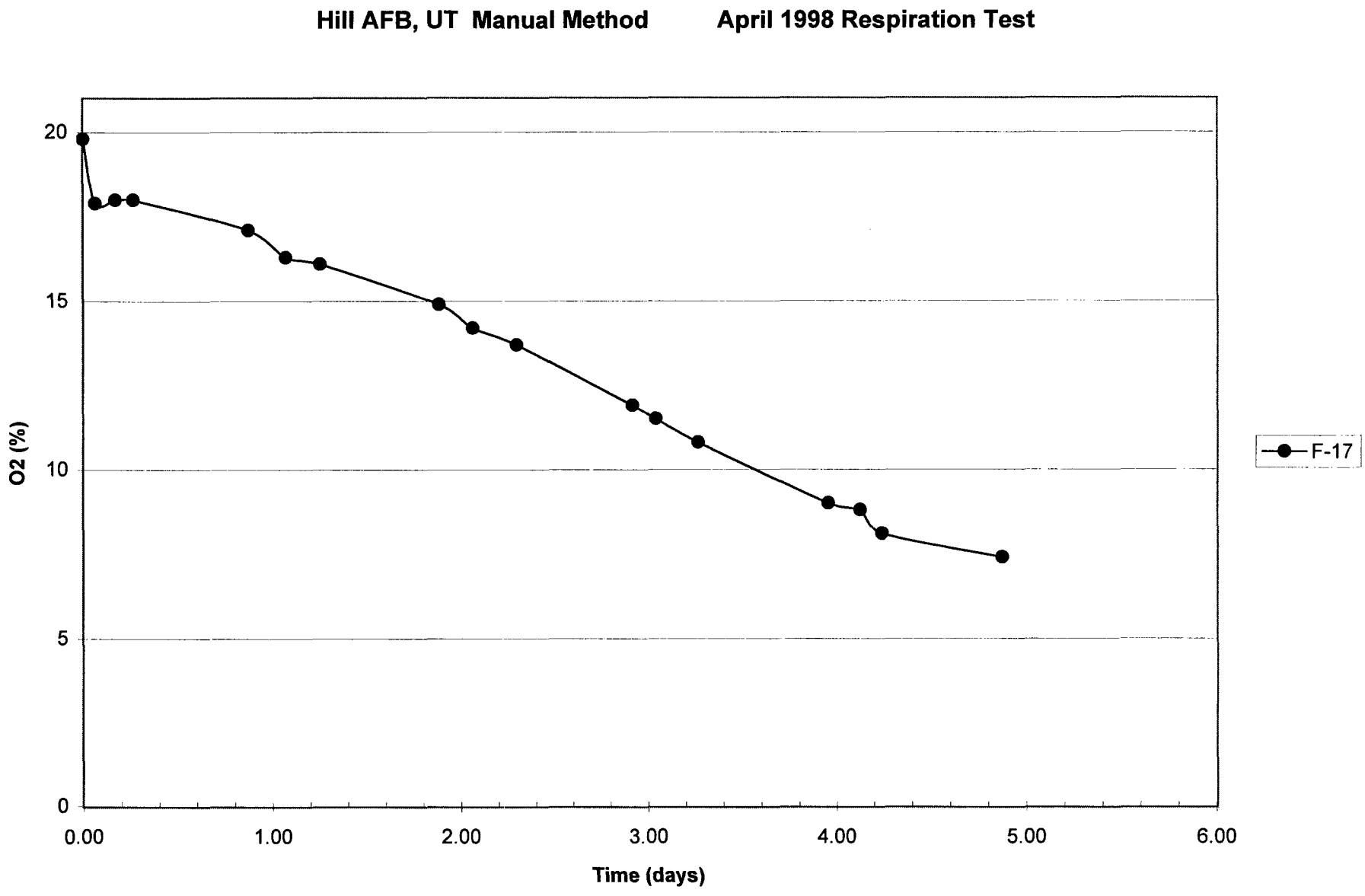

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
Time (days)
E-7

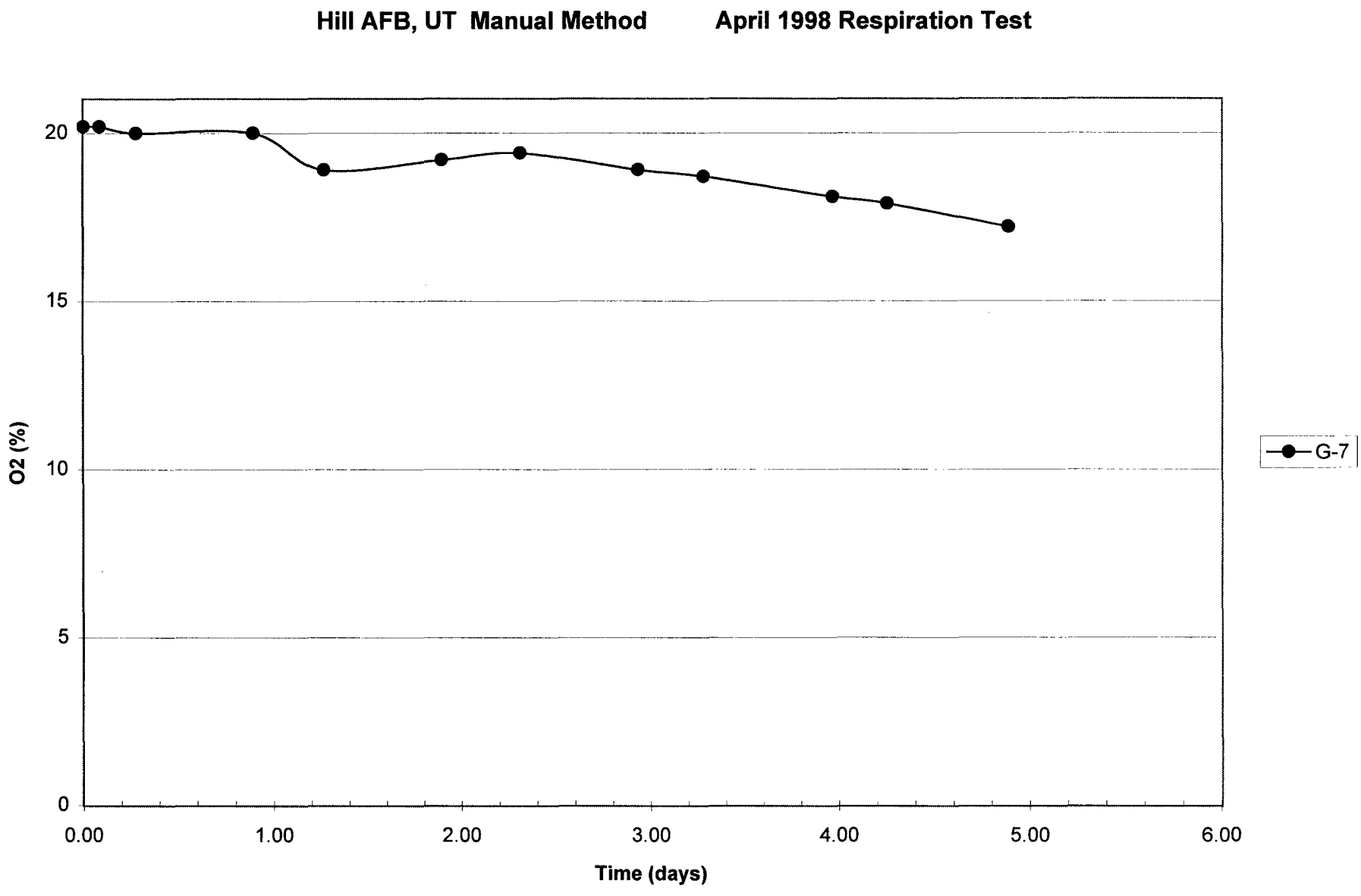

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
E-12

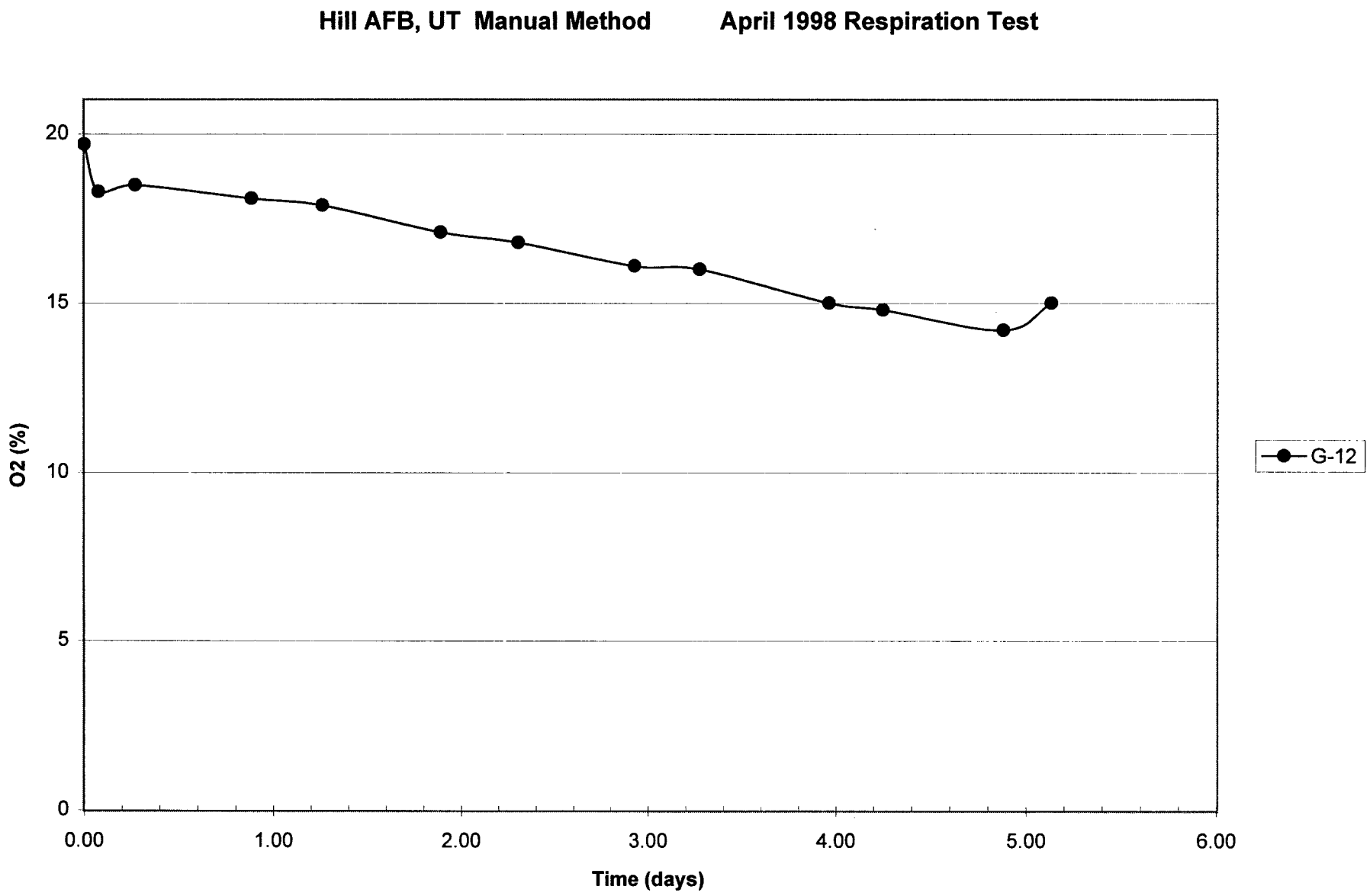

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
Time (days)
E-17

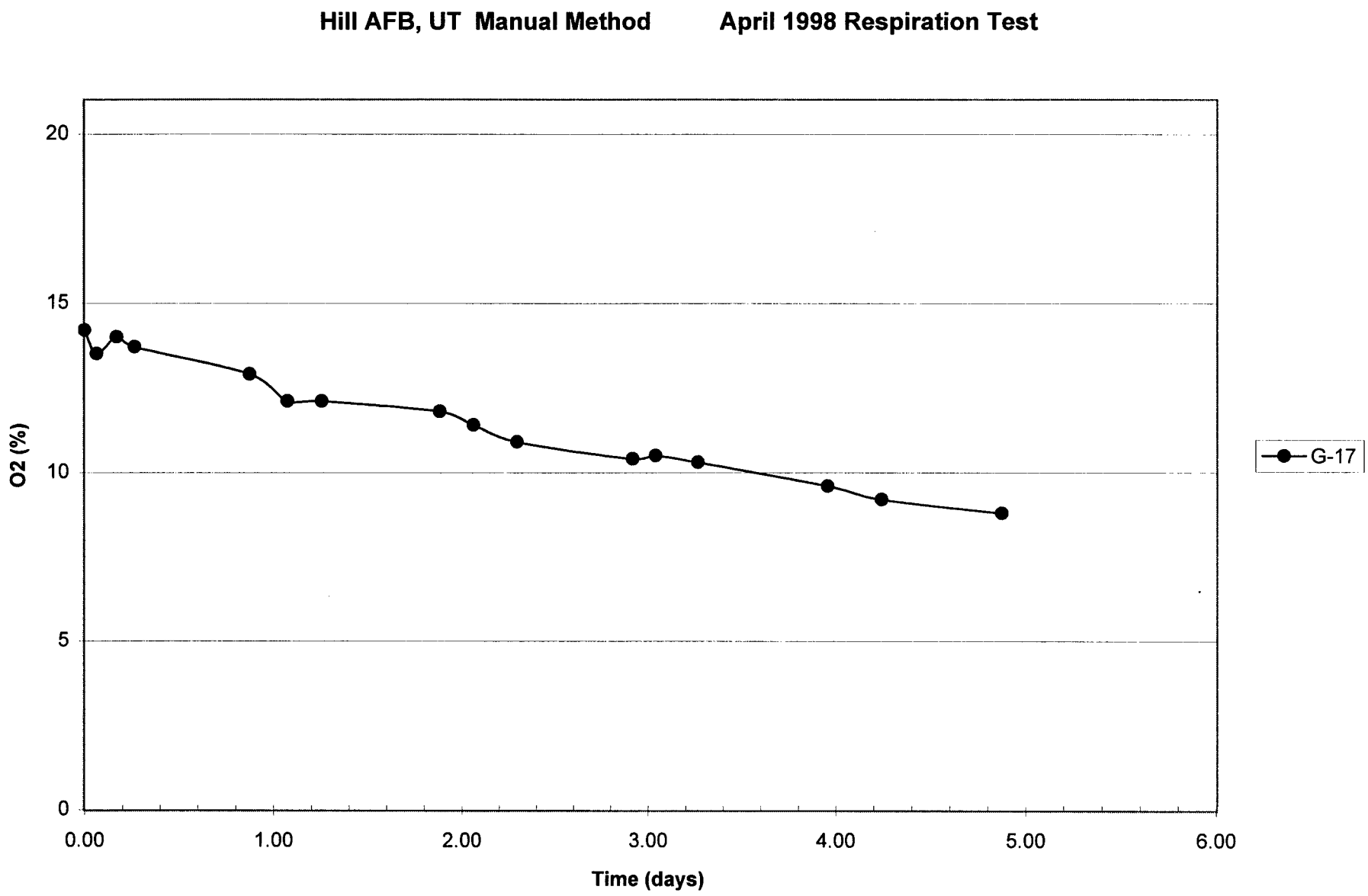

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
F-7

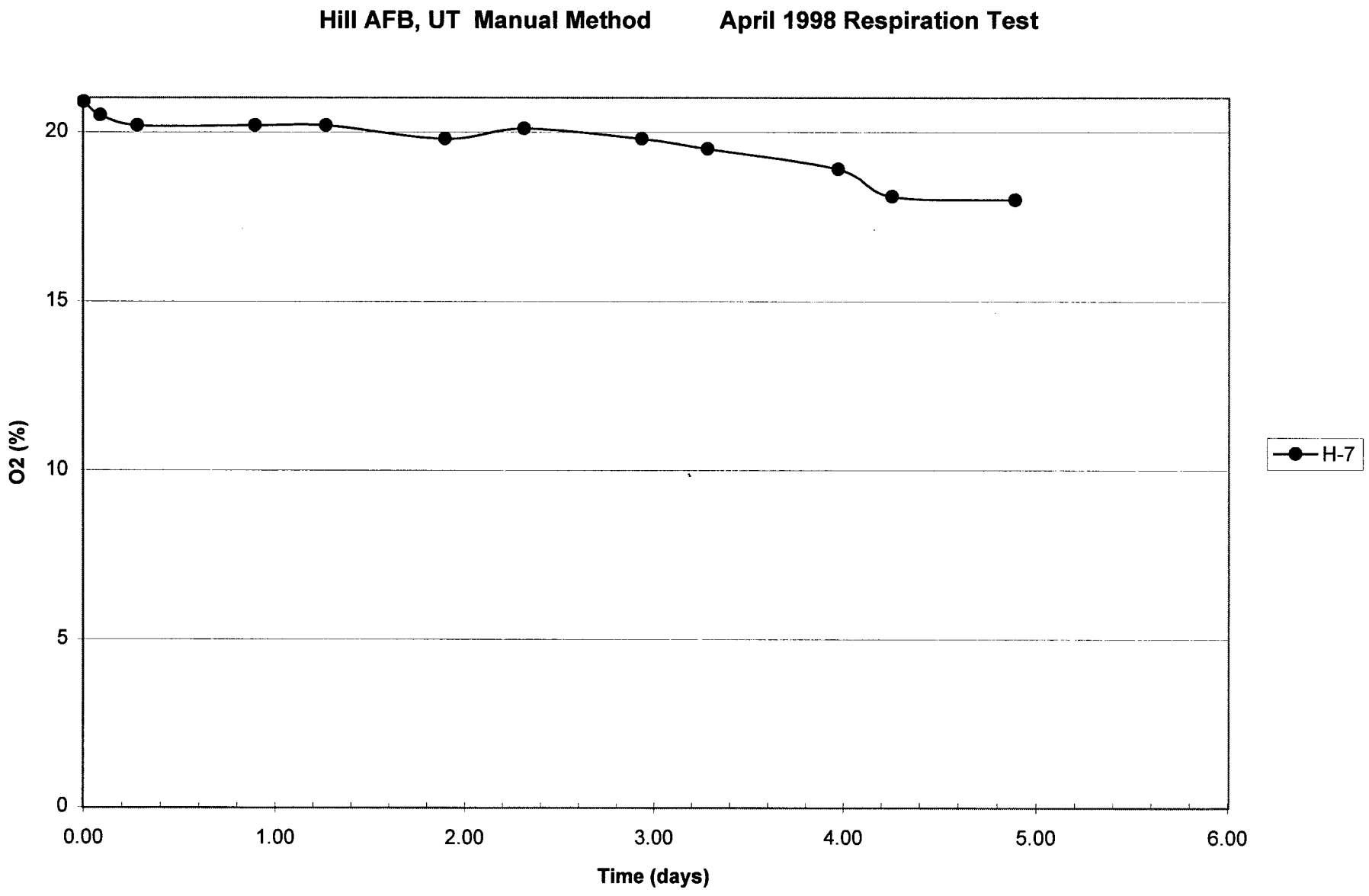

Hill AFB, UT Manual Method
April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
F-12

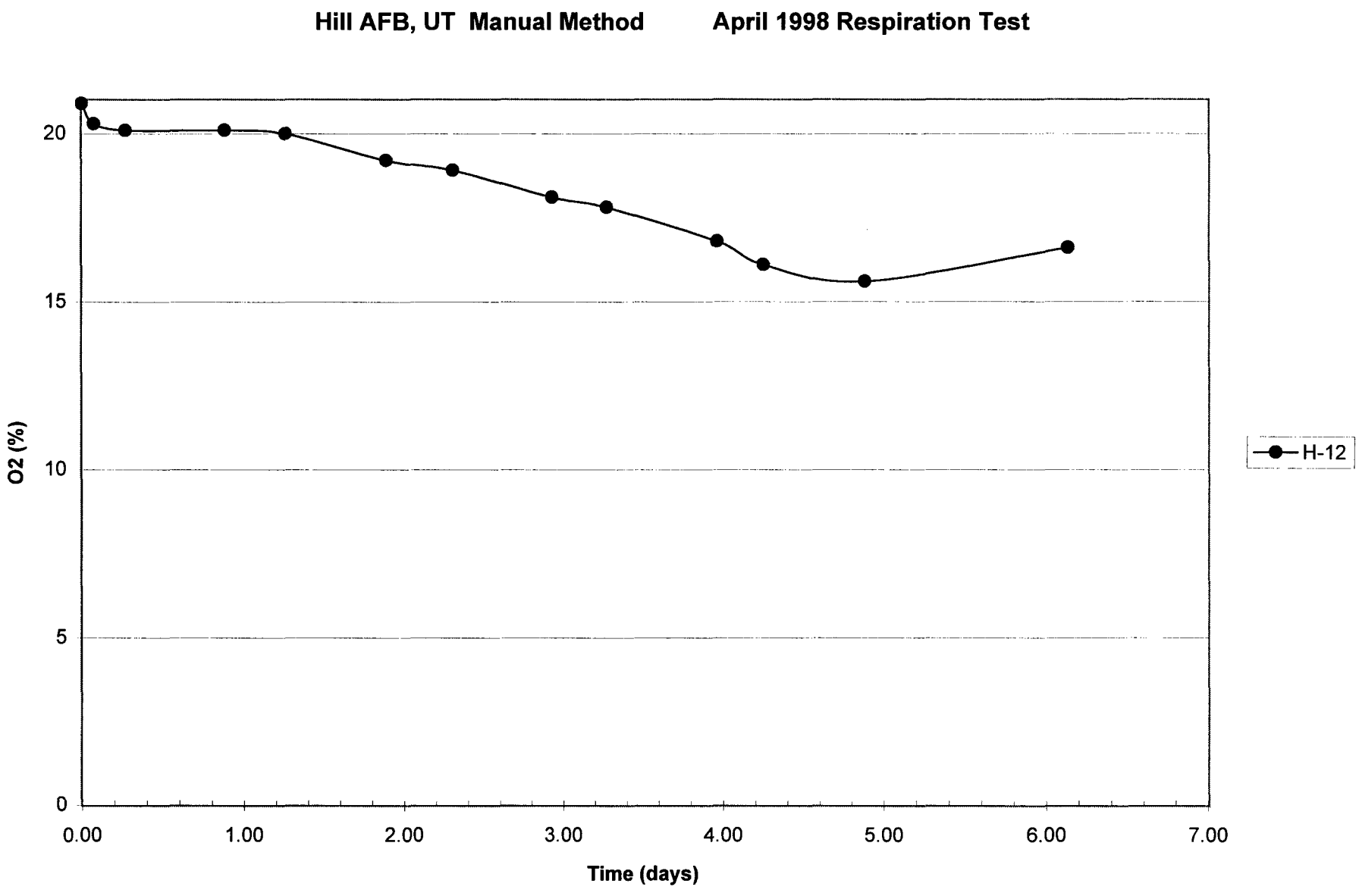

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
F-17

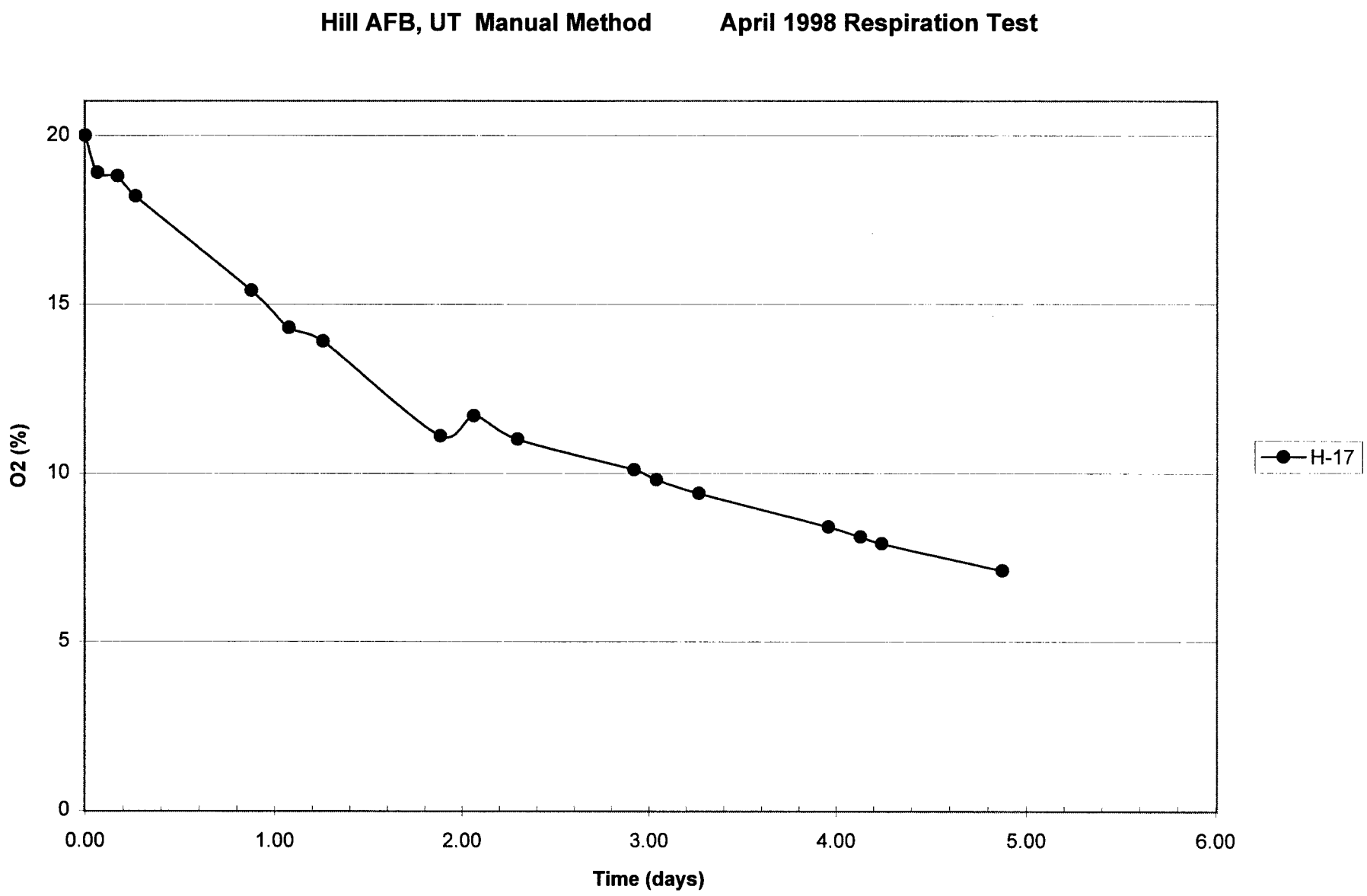

Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
G-7


Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
G-12


Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
G-17


Hill AFB, UT Manual Method
April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
H-7


Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
H-12


Hill AFB, UT Manual Method April 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Time (days)
H-17

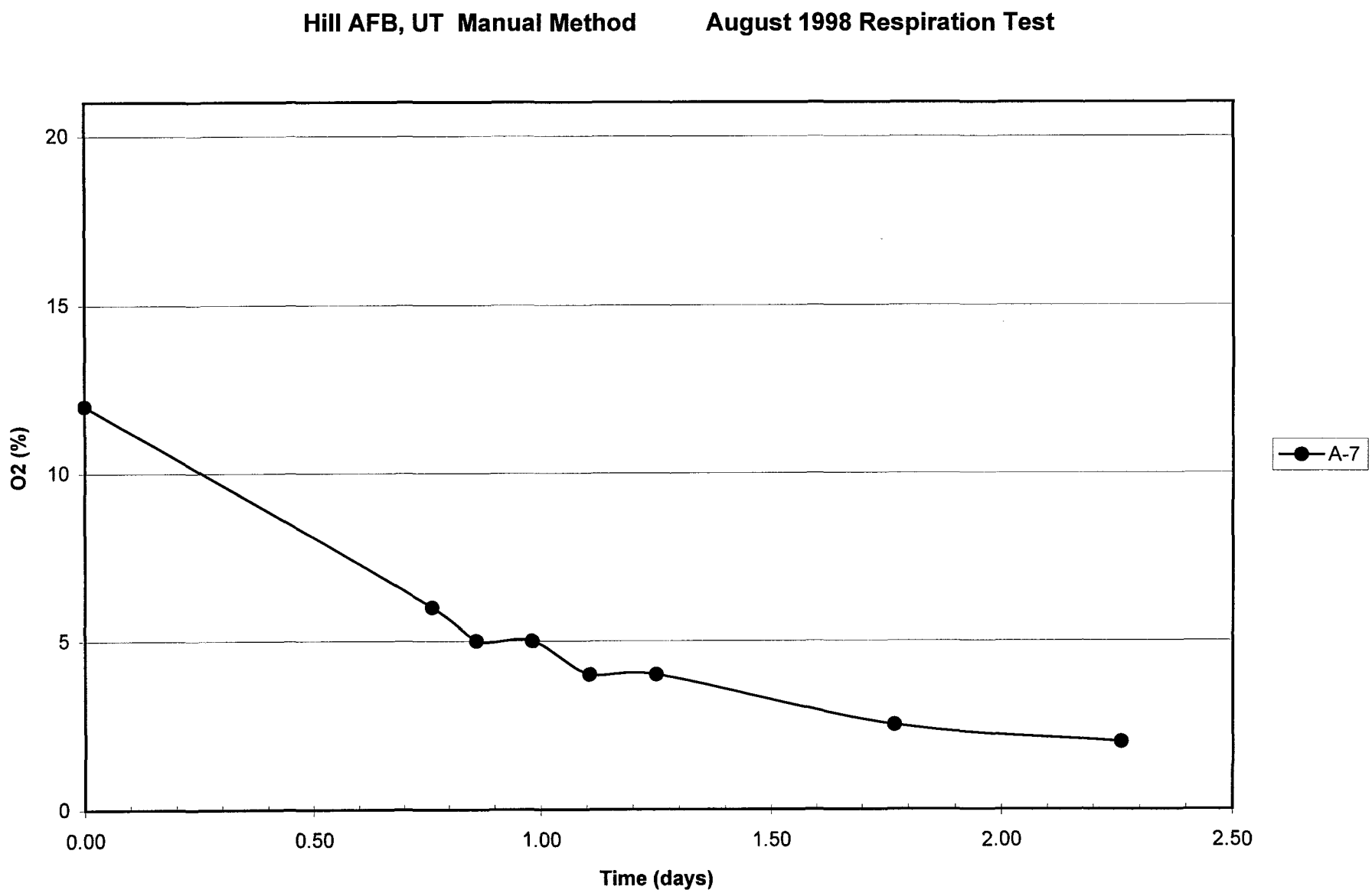
OXYGEN UTILIZATION PLOTS

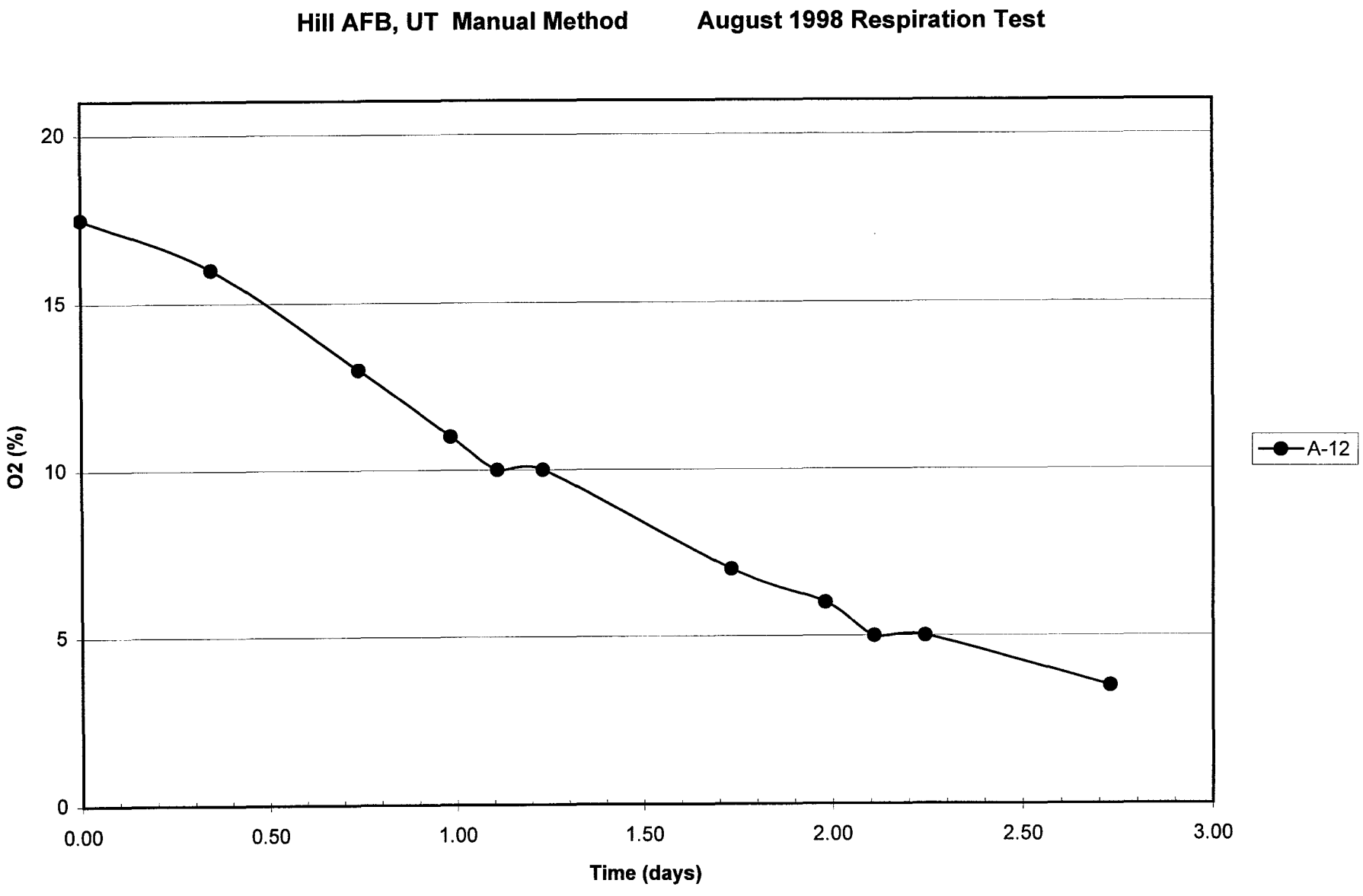
MONITORED BY

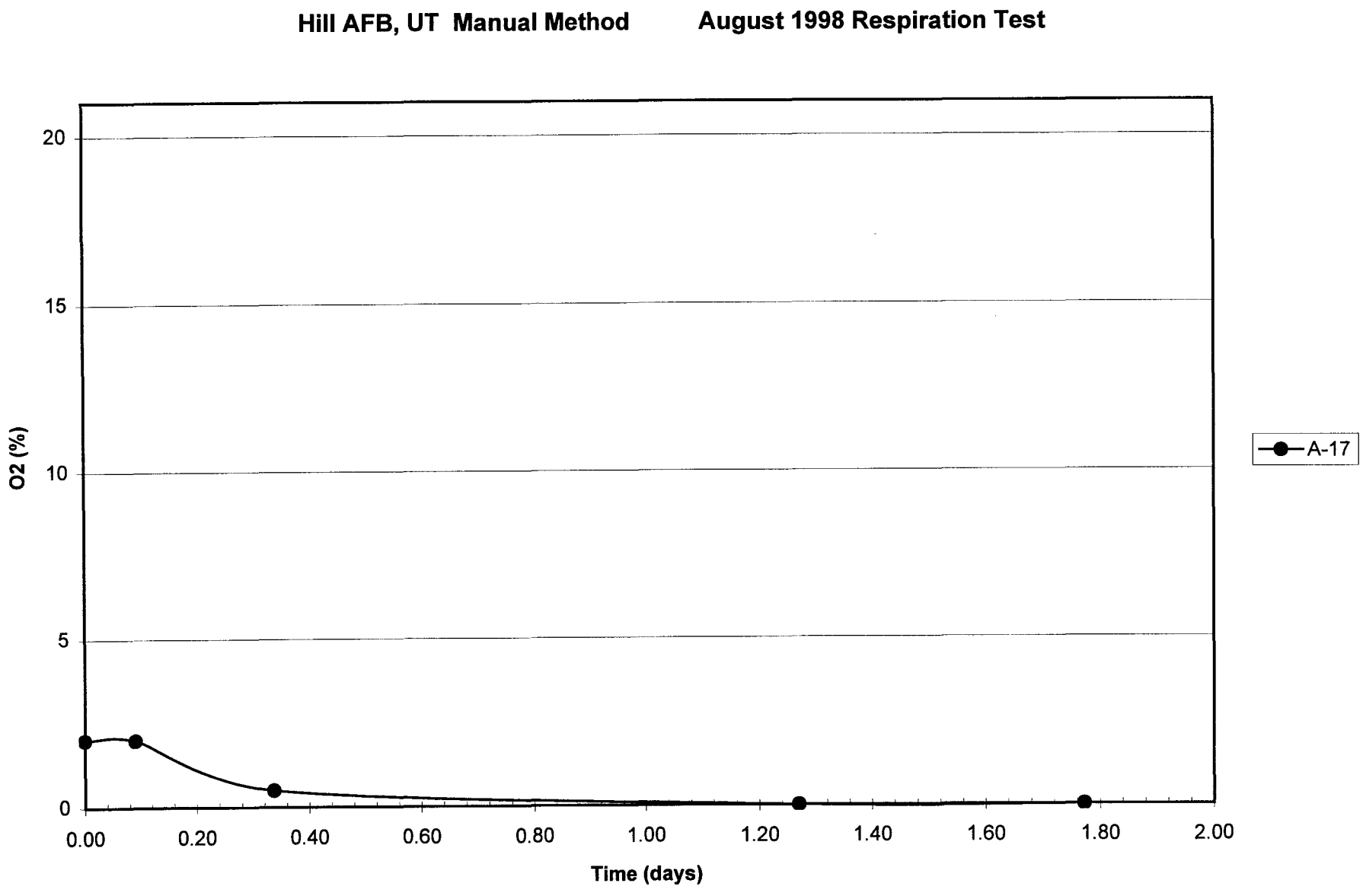
MANUAL METHOD

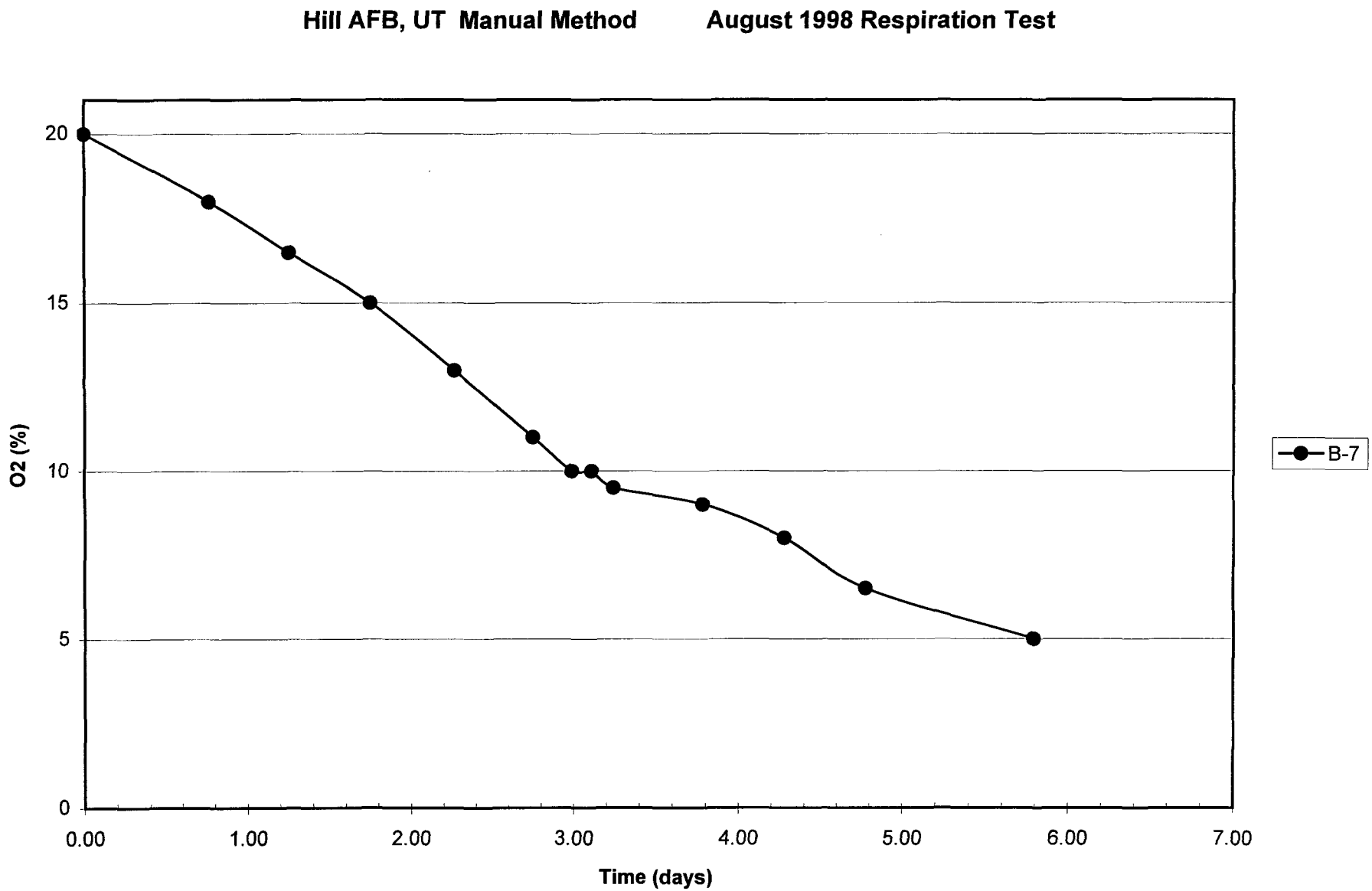
DURING RESPIRATION TESTING

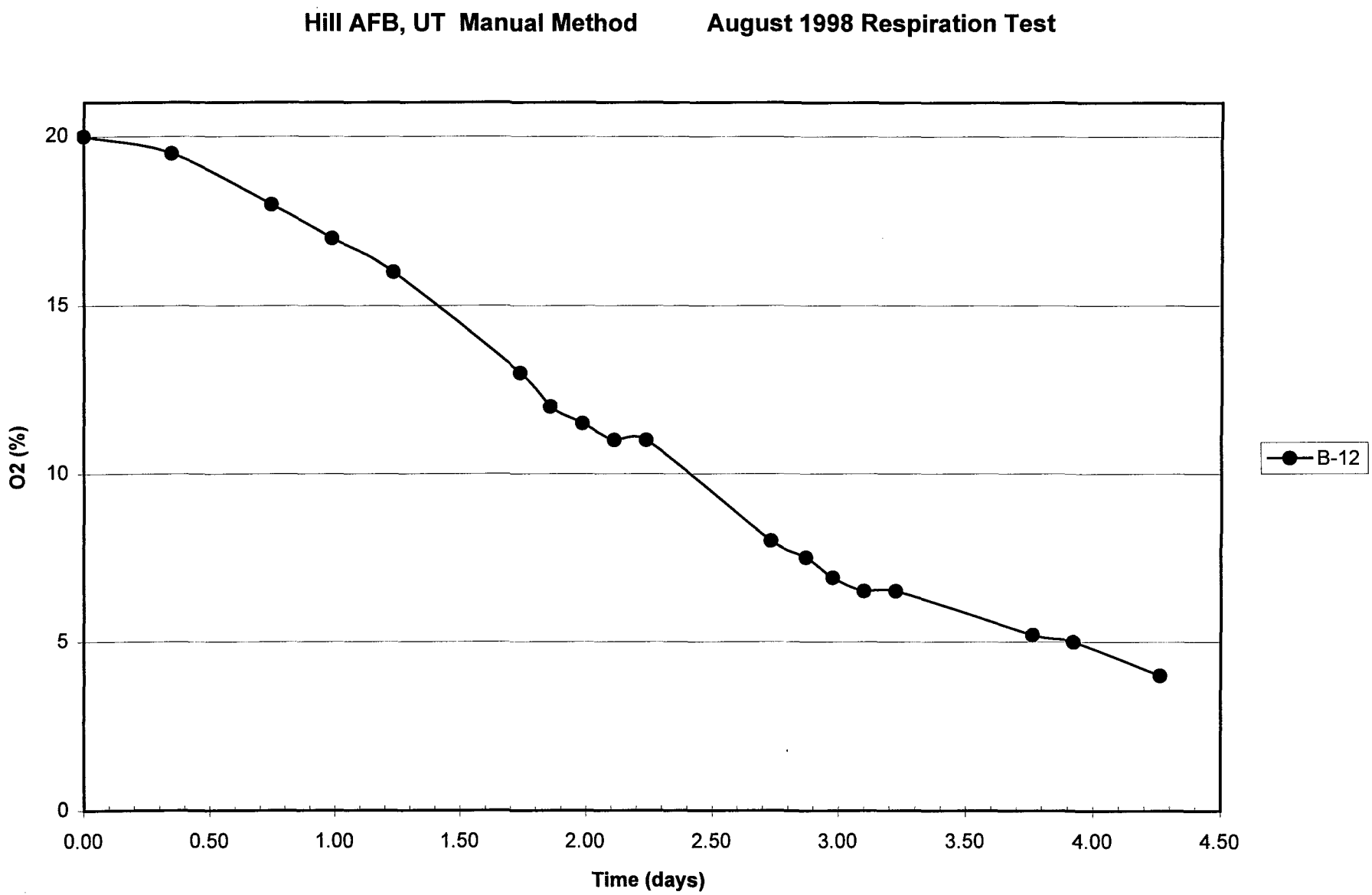
August 1998

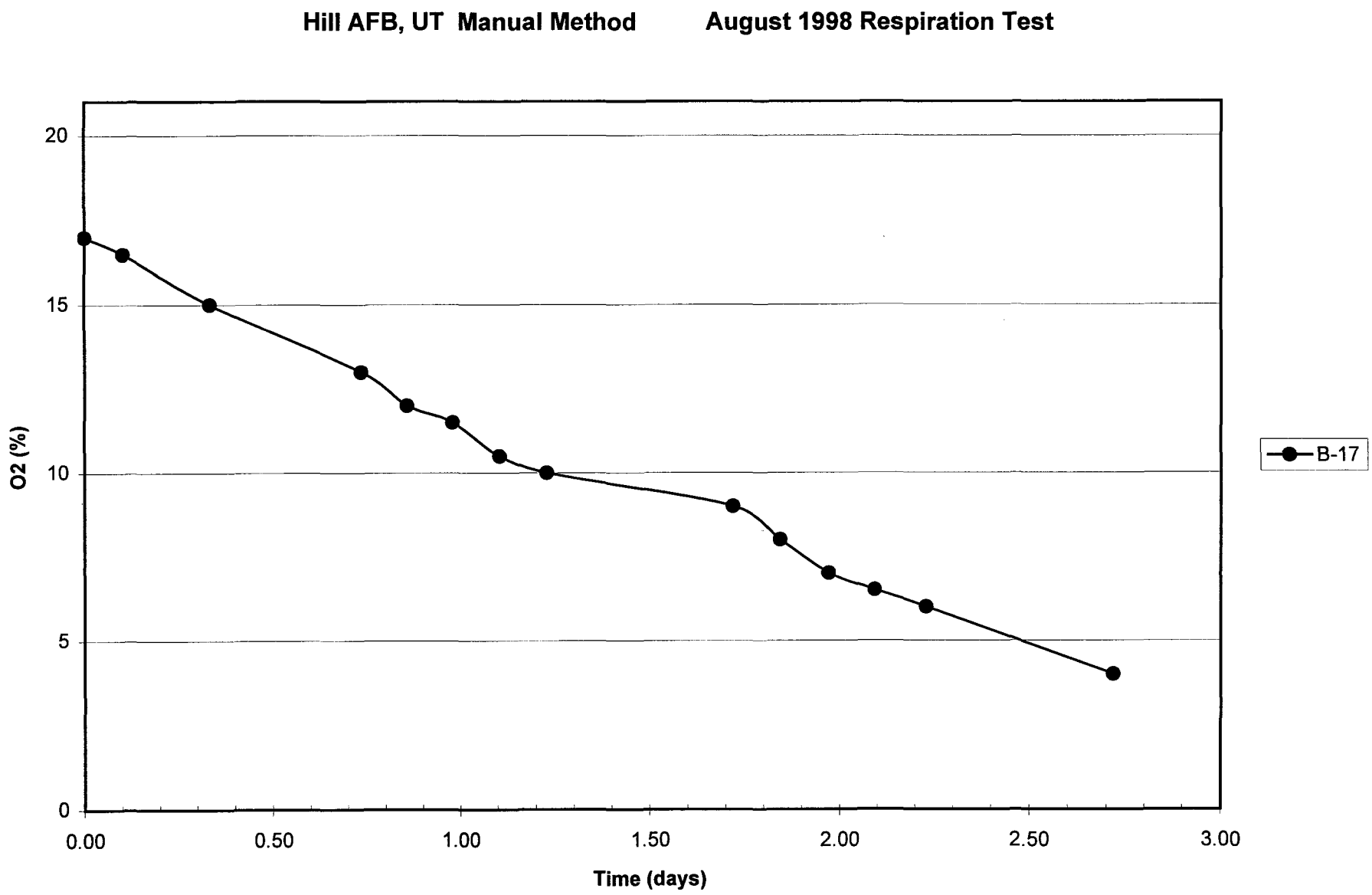

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
Time (days)
A-7

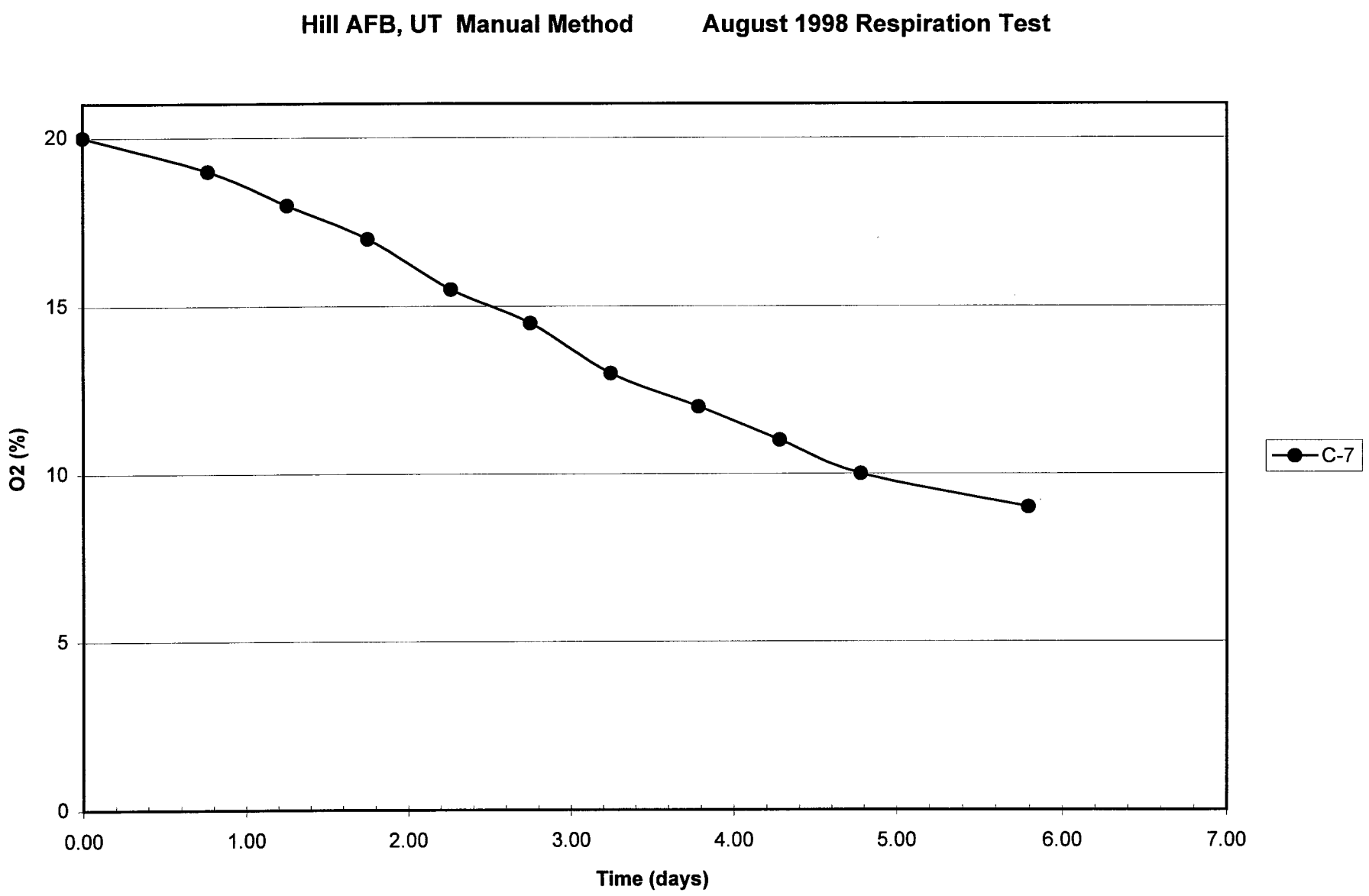

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
Time (days)
A-12

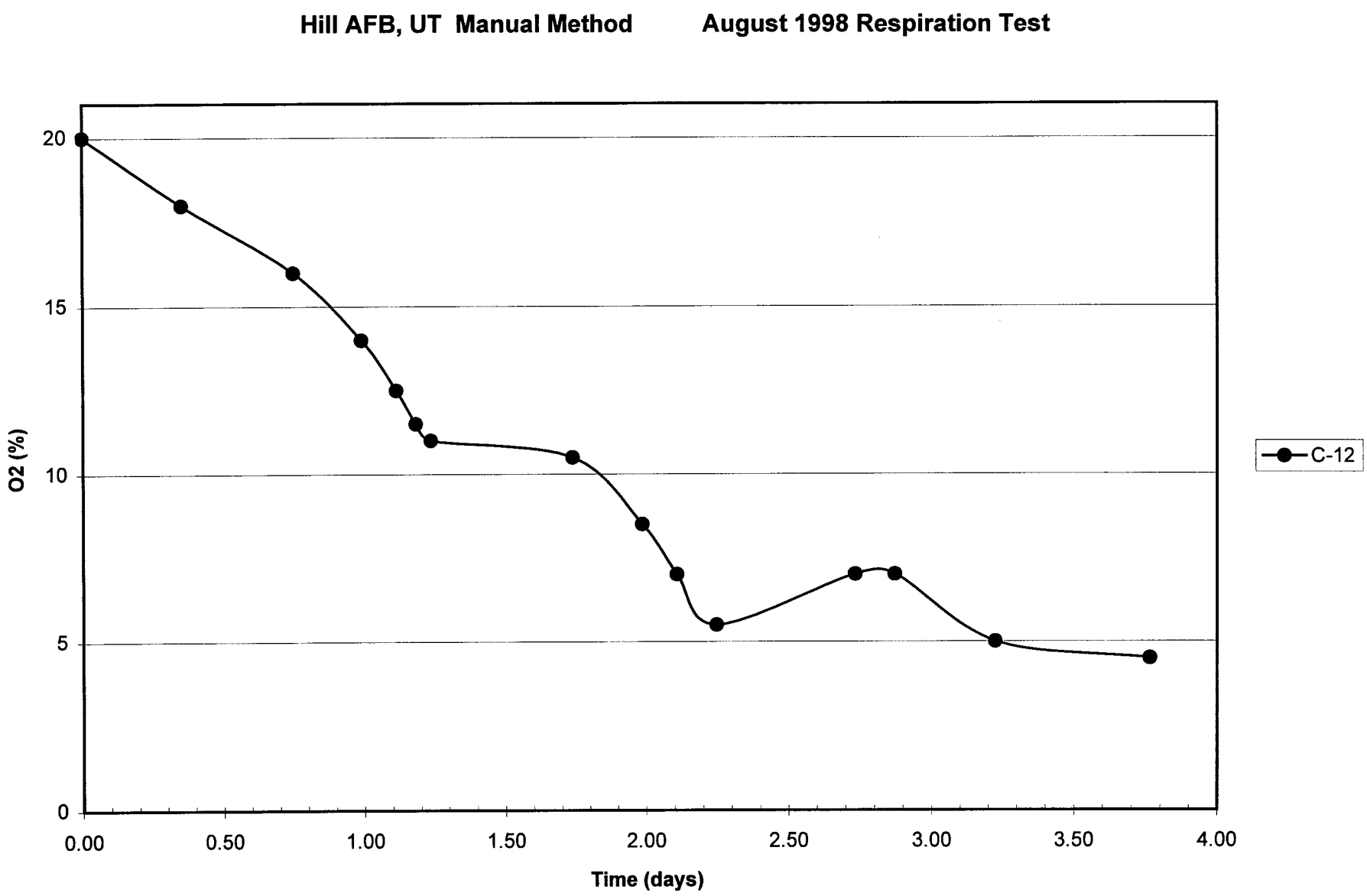

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
Time (days)
A-17

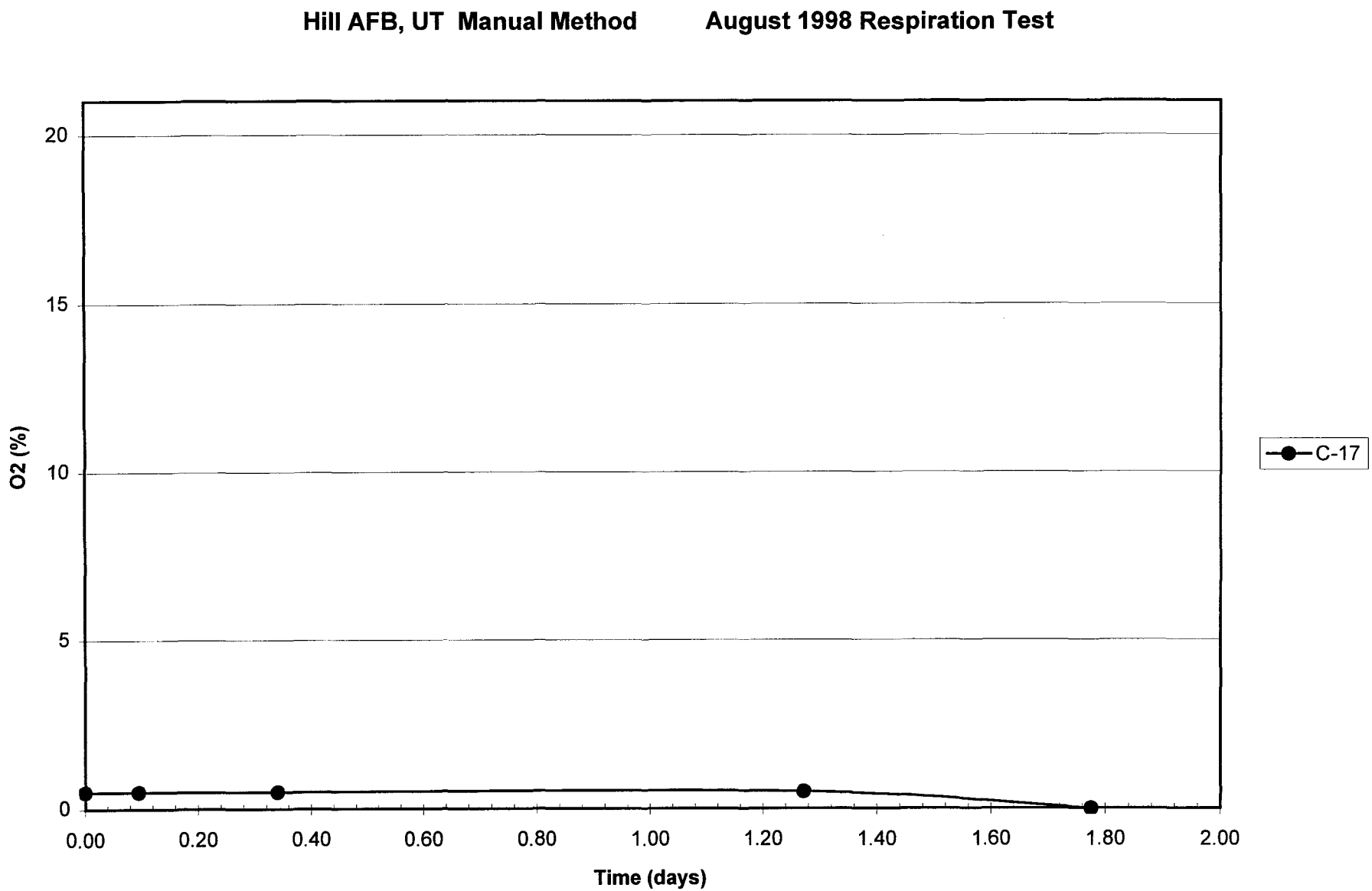

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
B-7

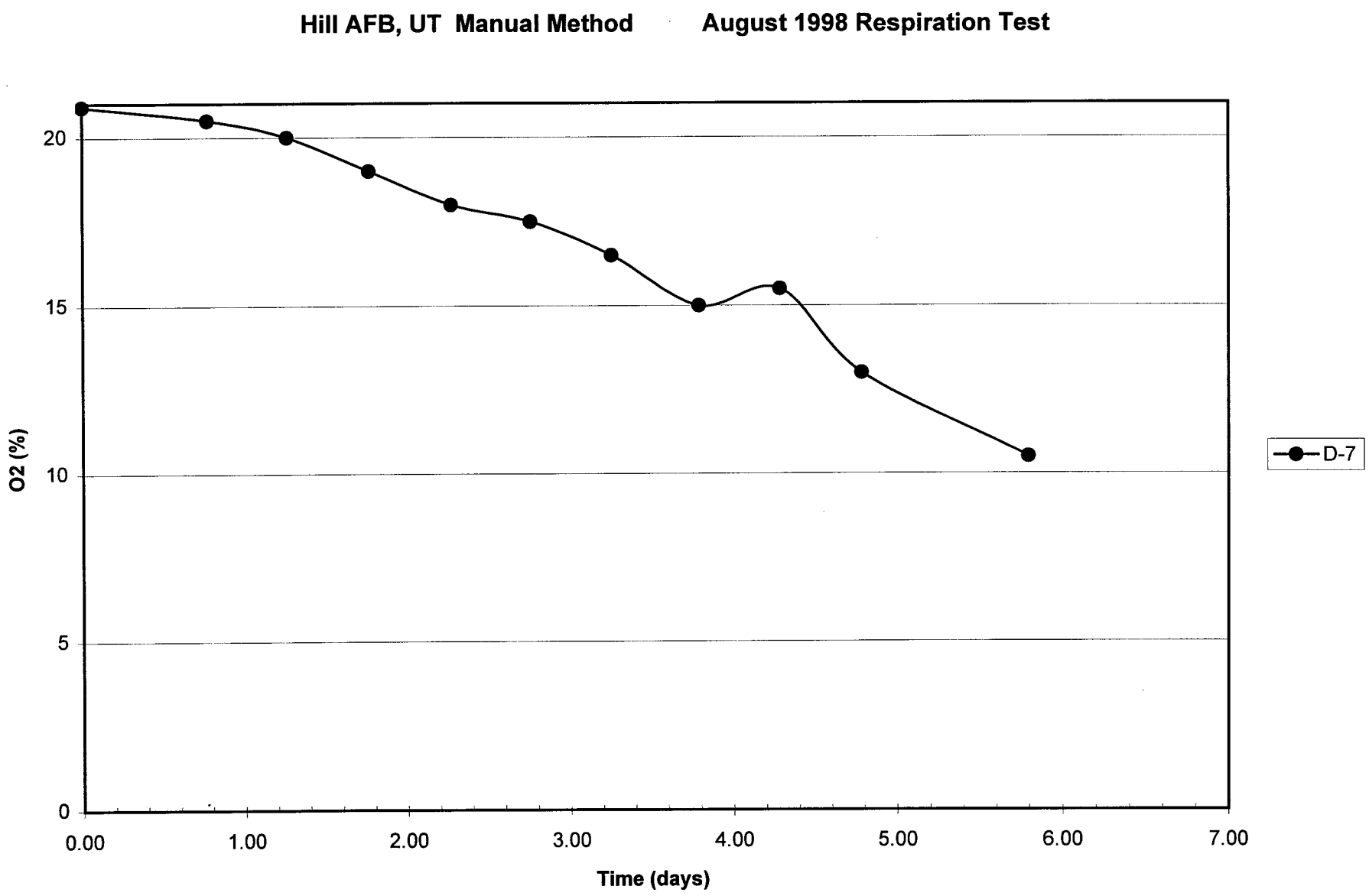

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
Time (days)
B-12

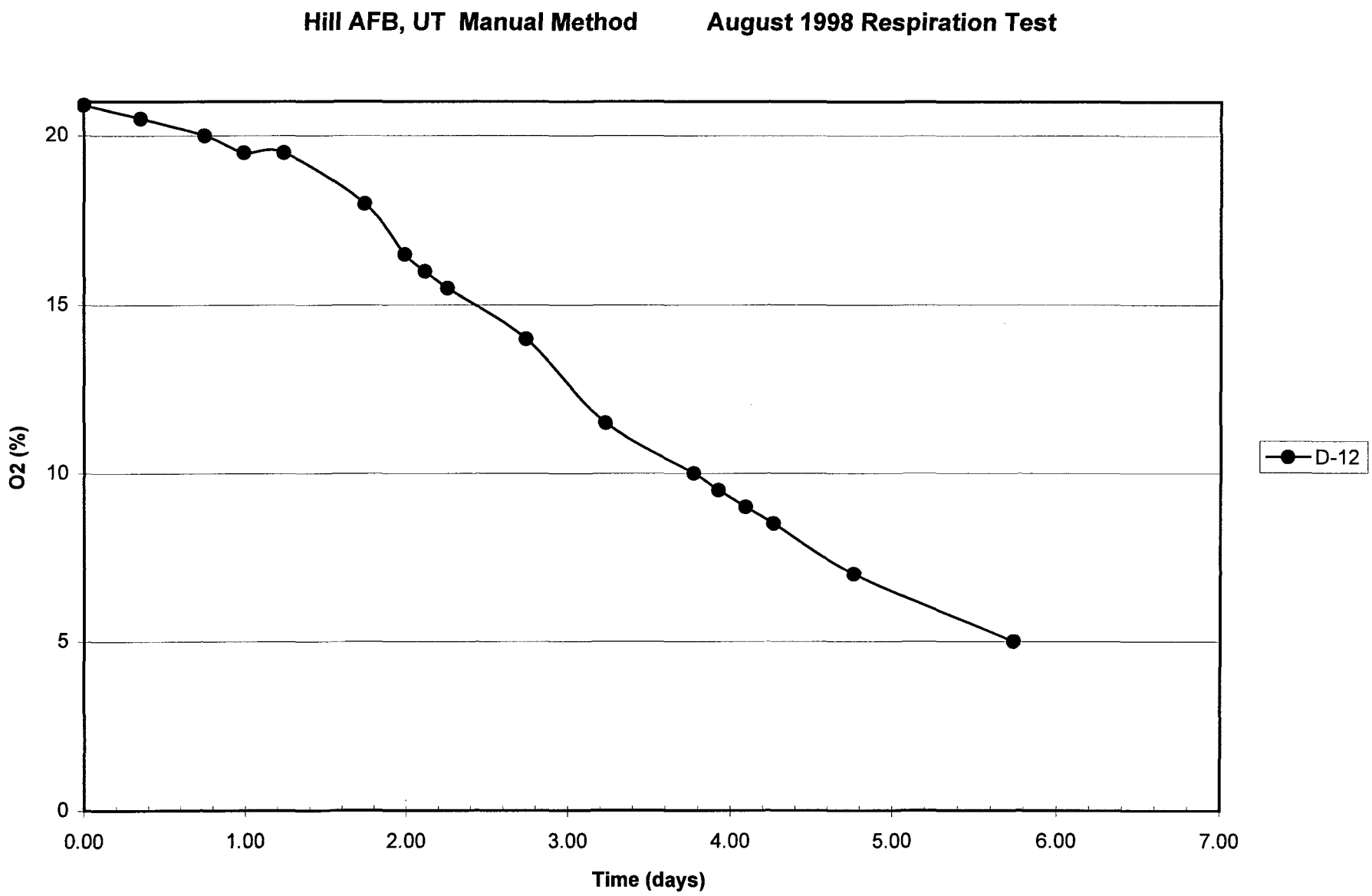

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
Time (days)
B-17

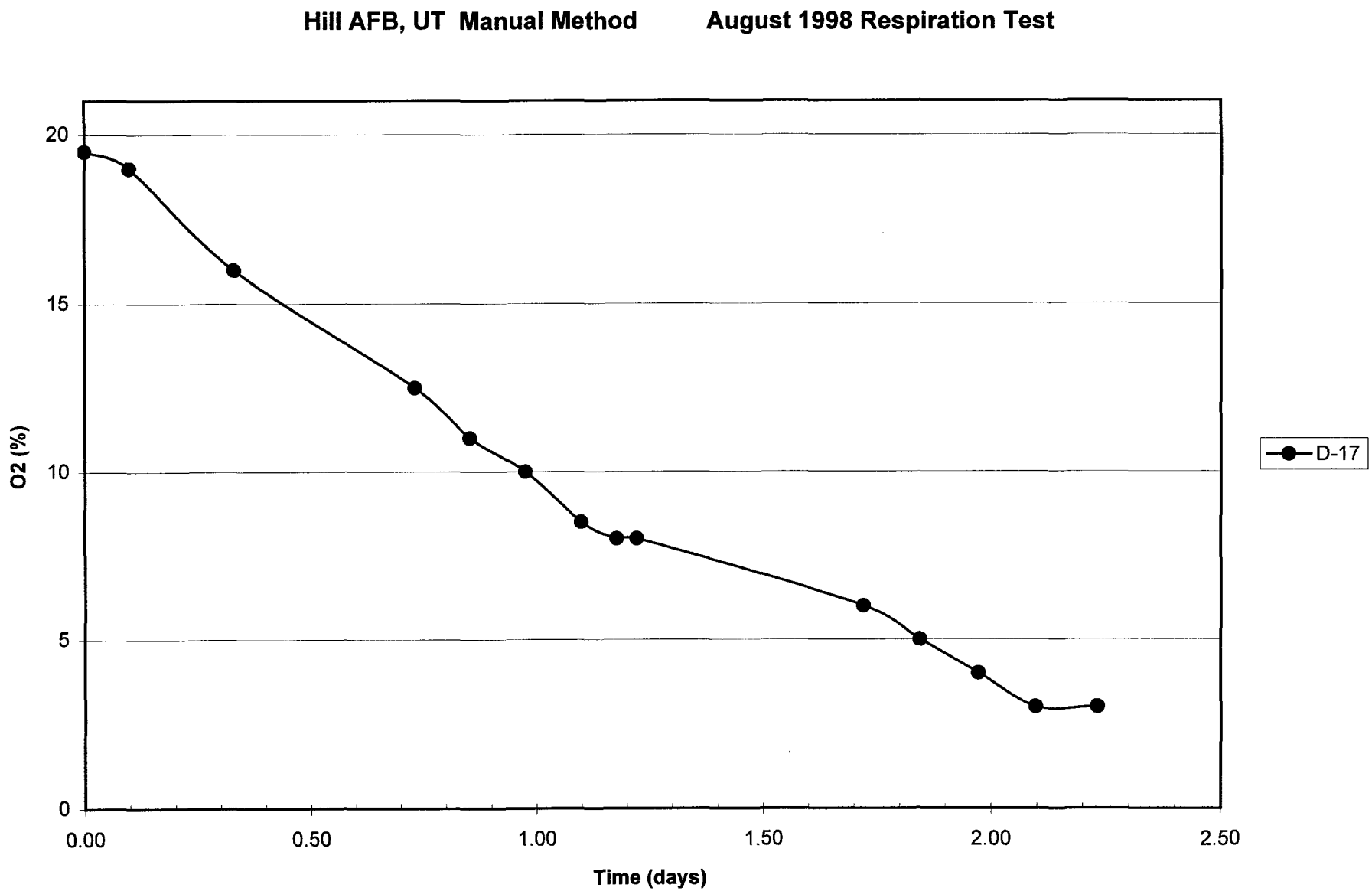

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
C-7

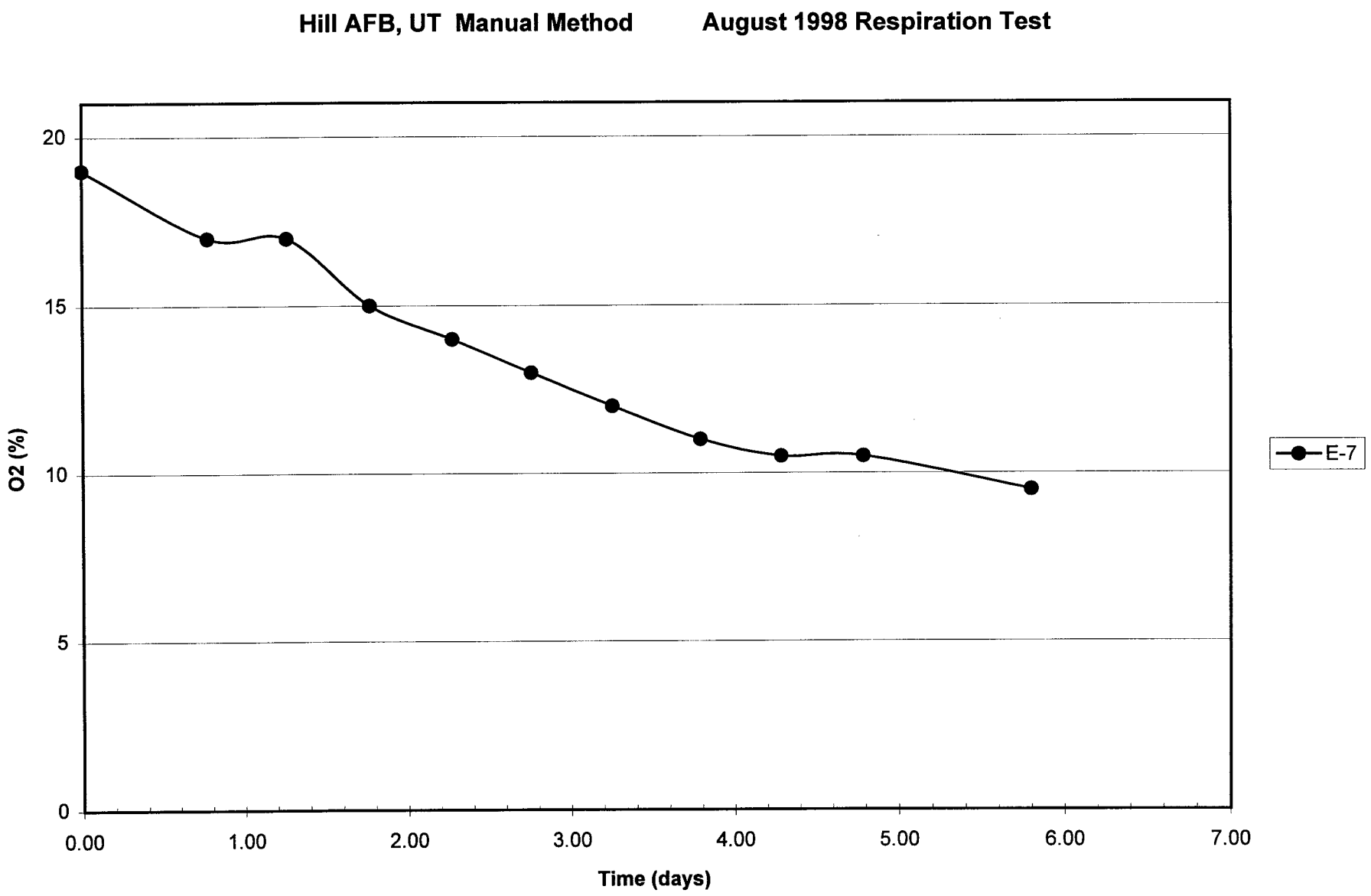

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
Time (days)
C-12

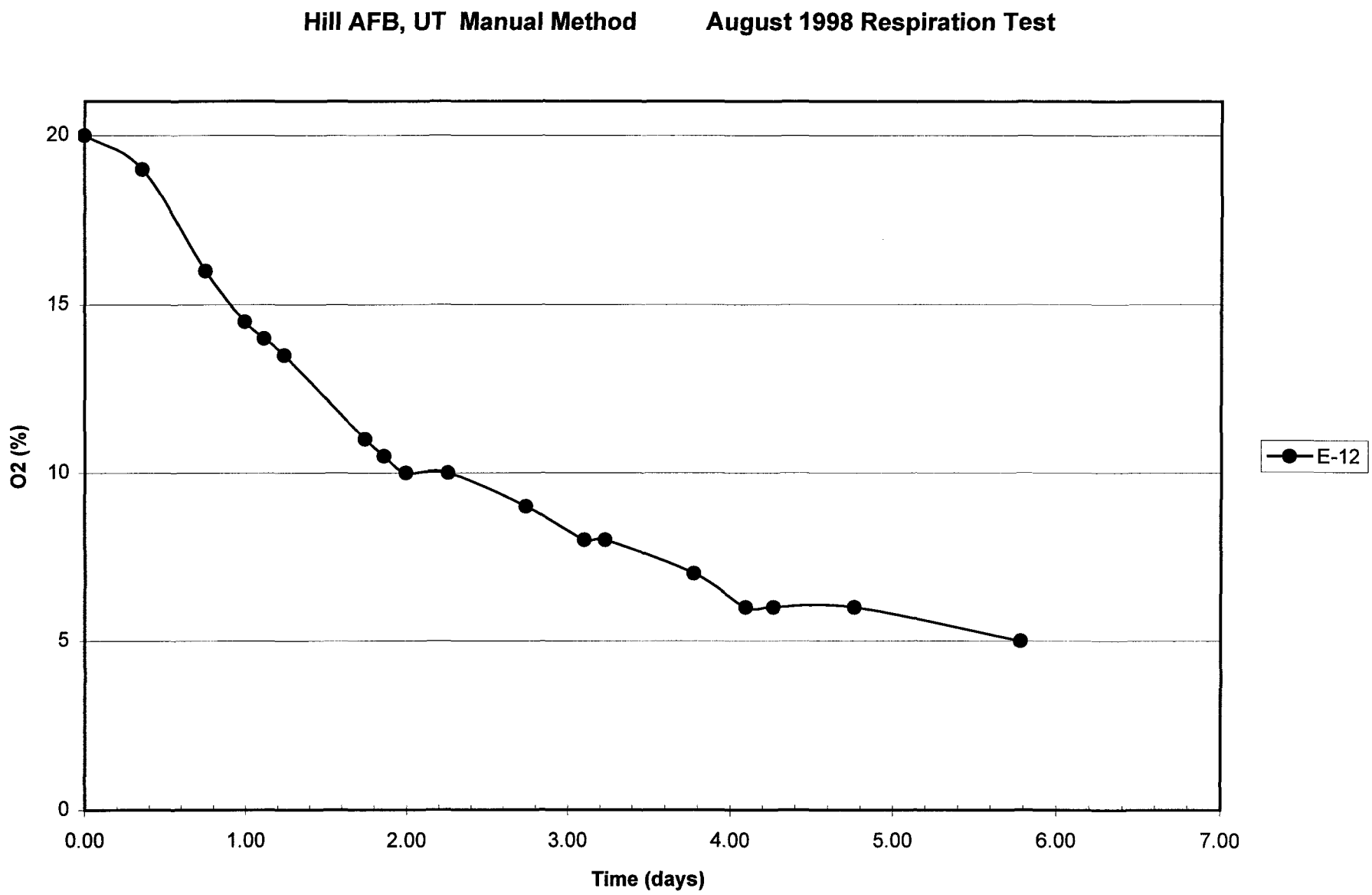

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
Time (days)
C-17

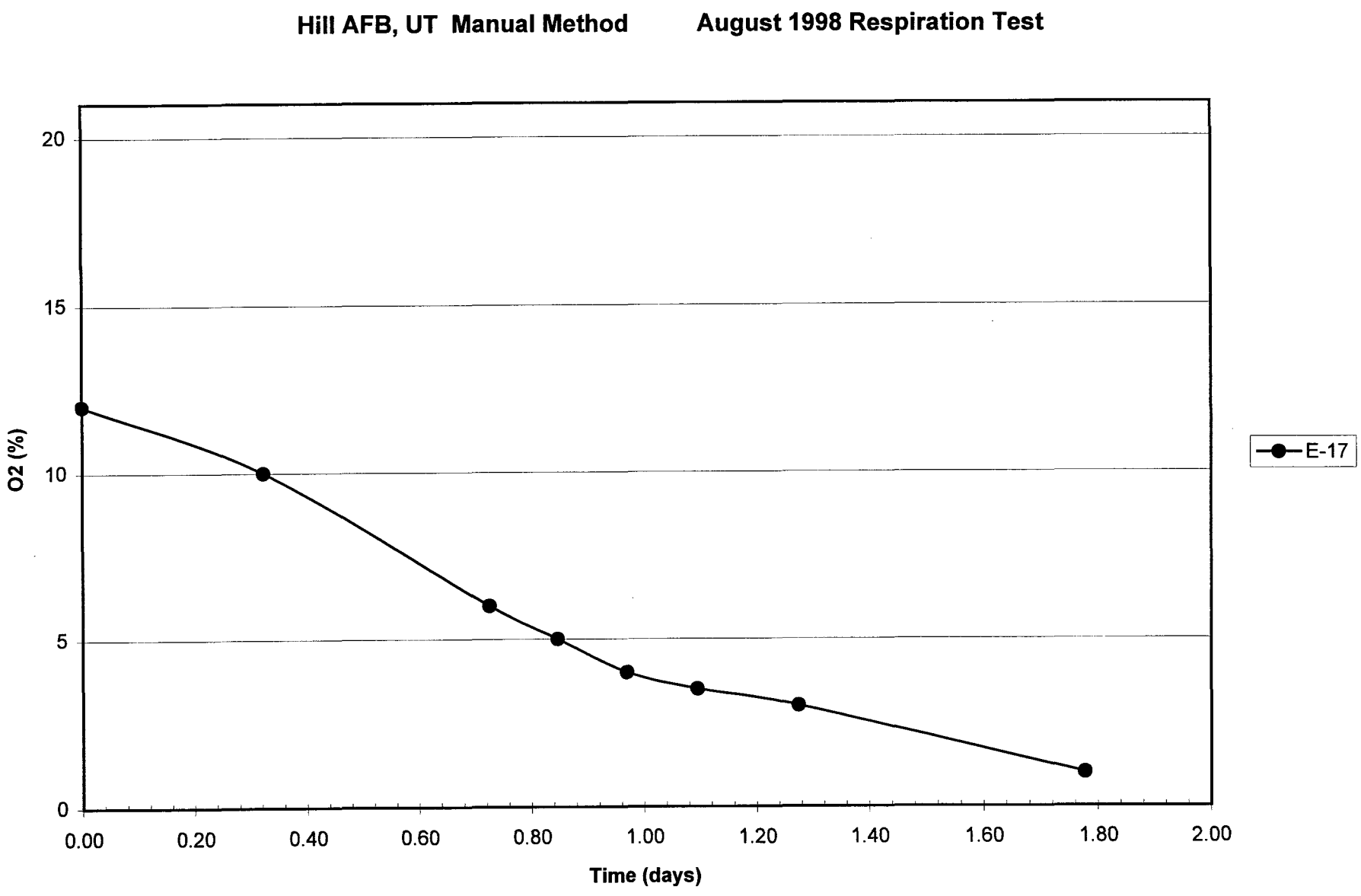

Hill AFB, UT Manual Method
August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
D-7

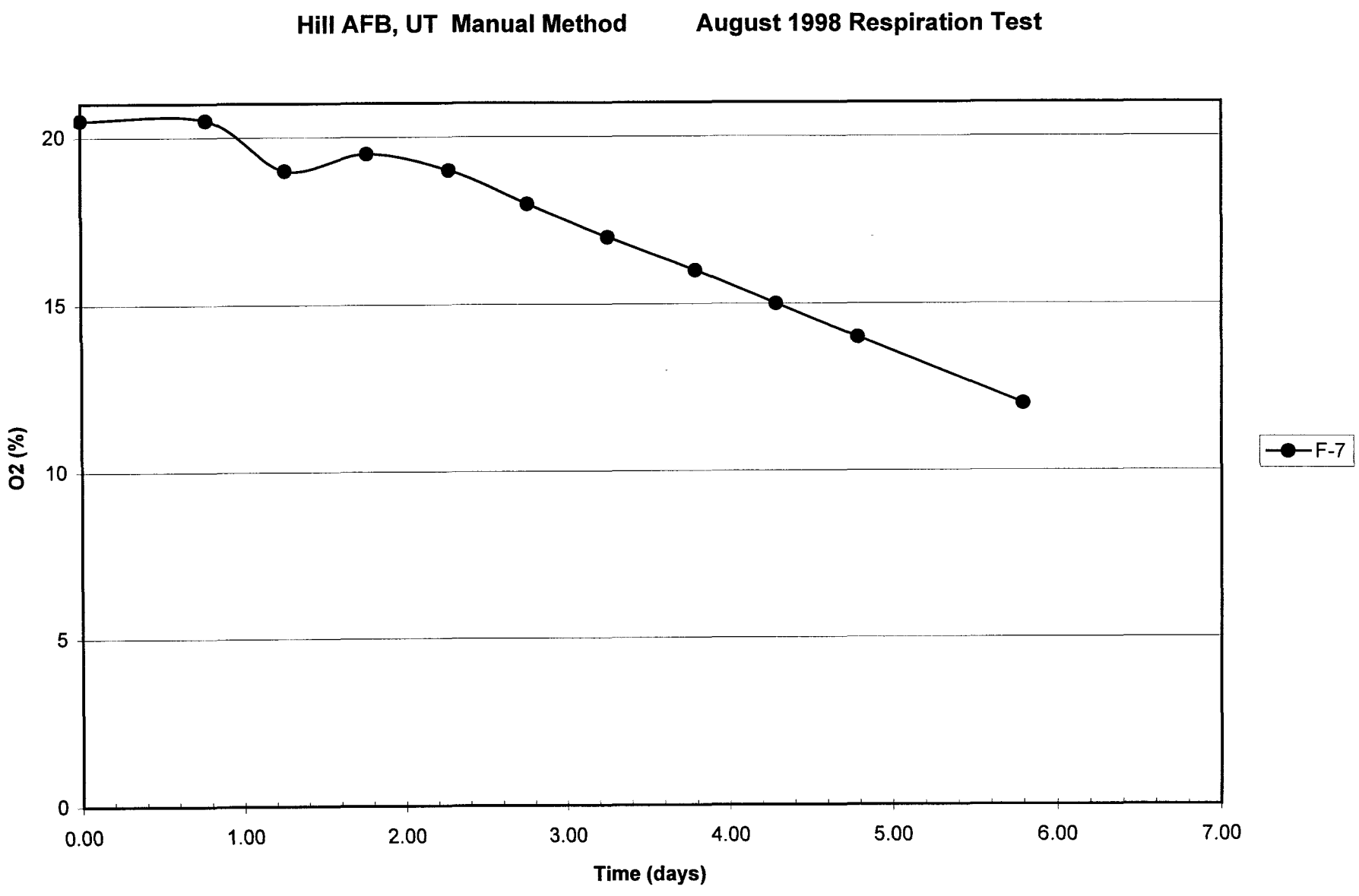

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
D-12

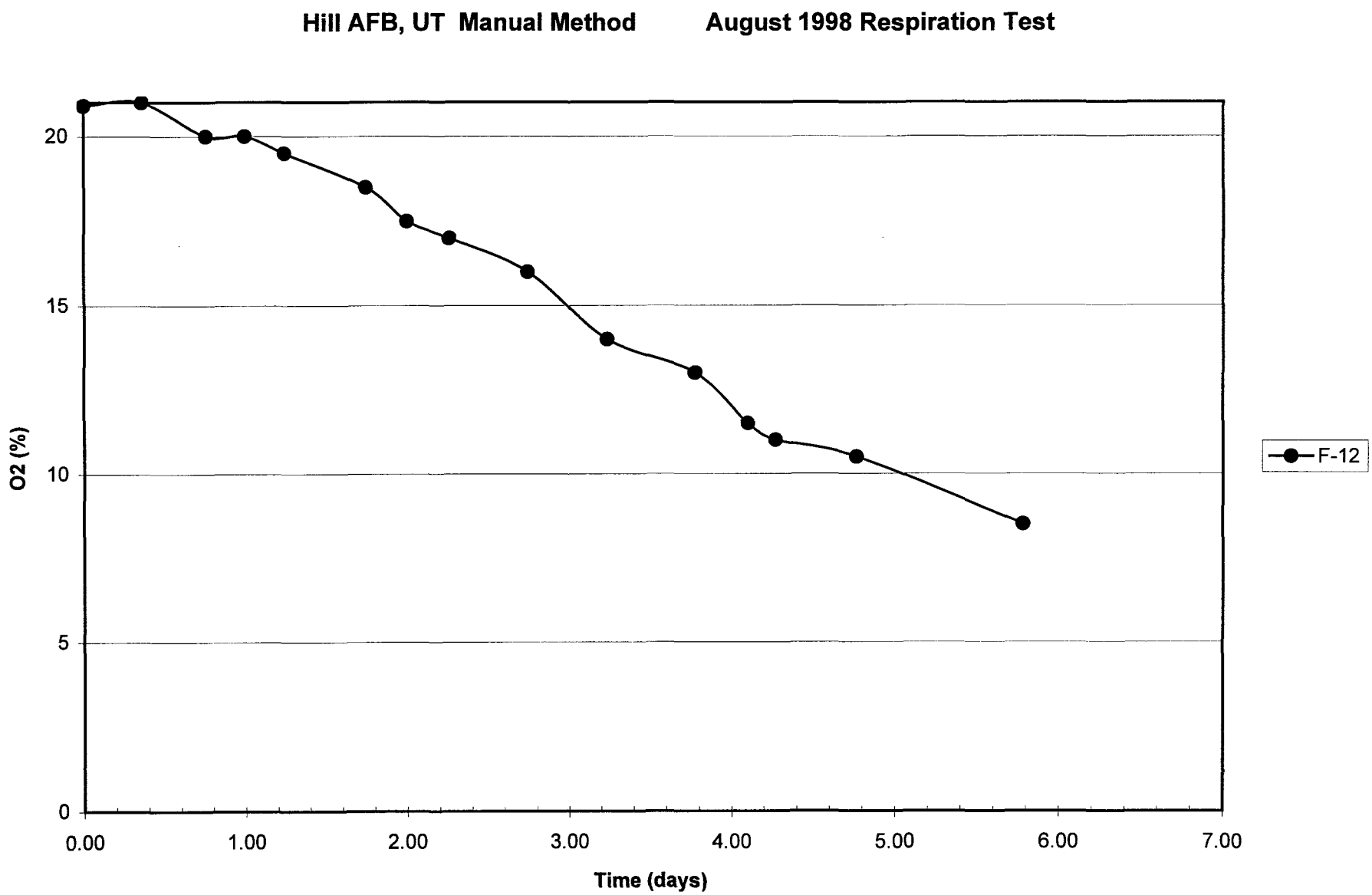

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
Time (days)
D-17

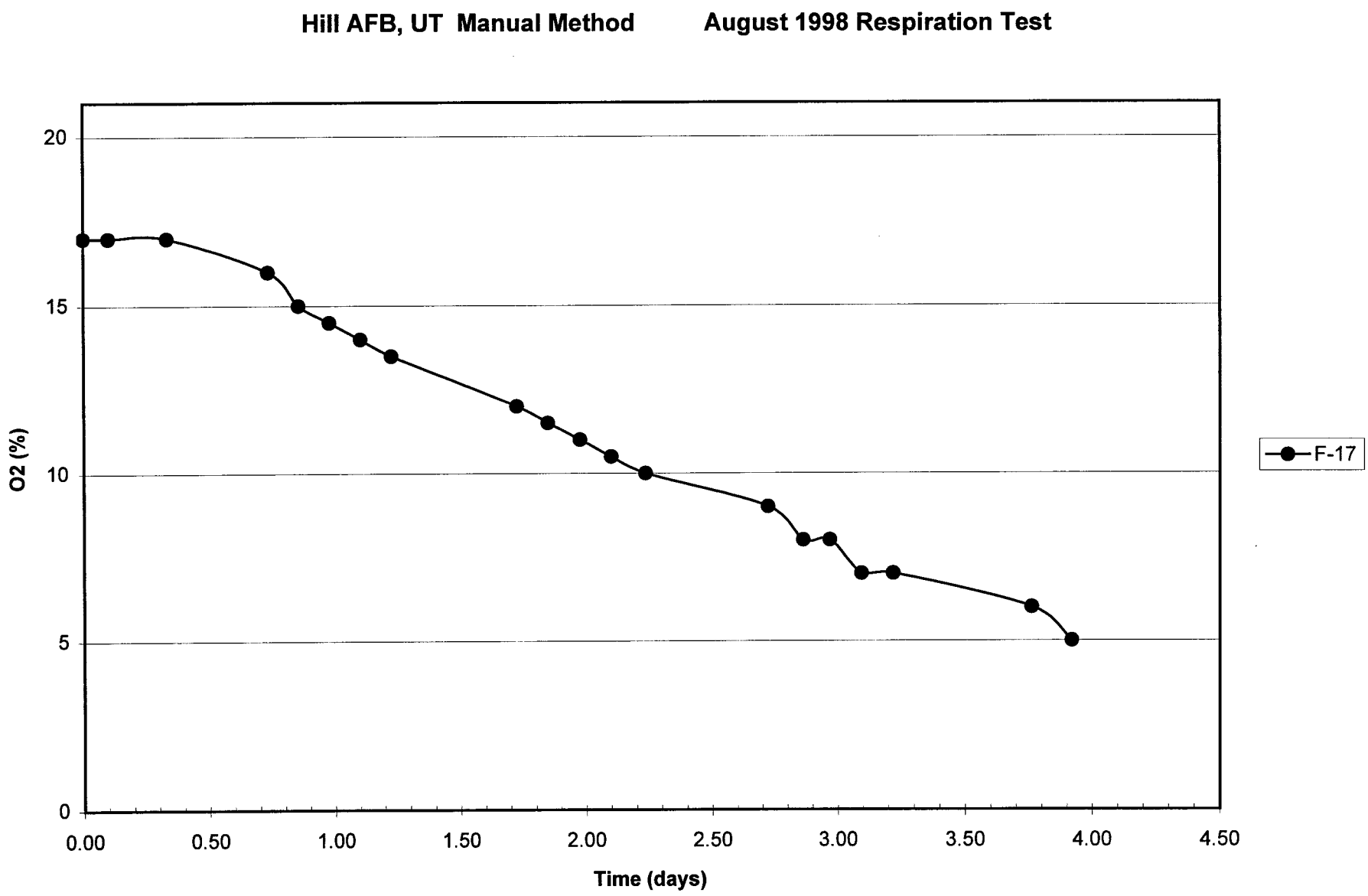

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
E-7

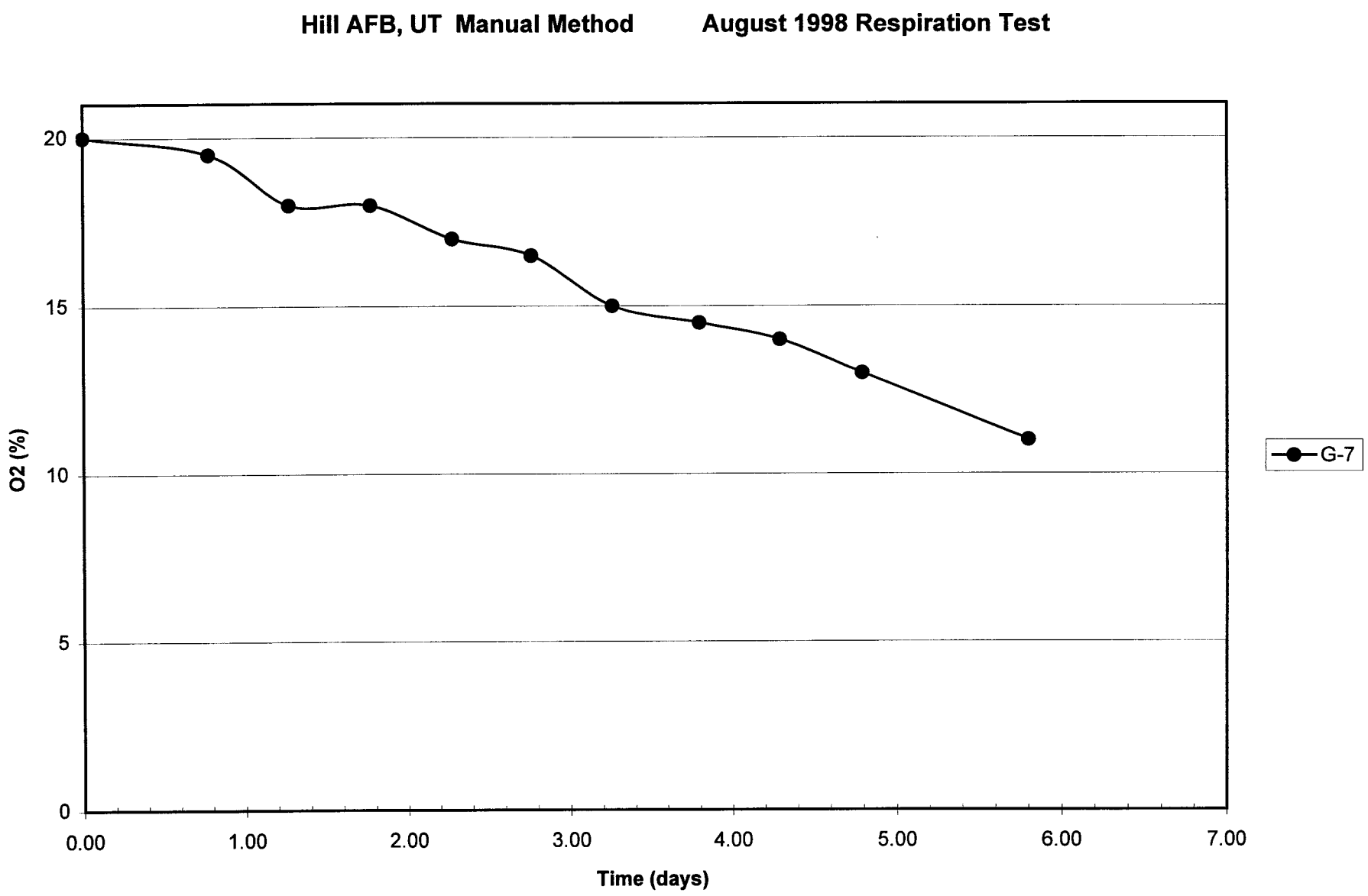

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
E-12

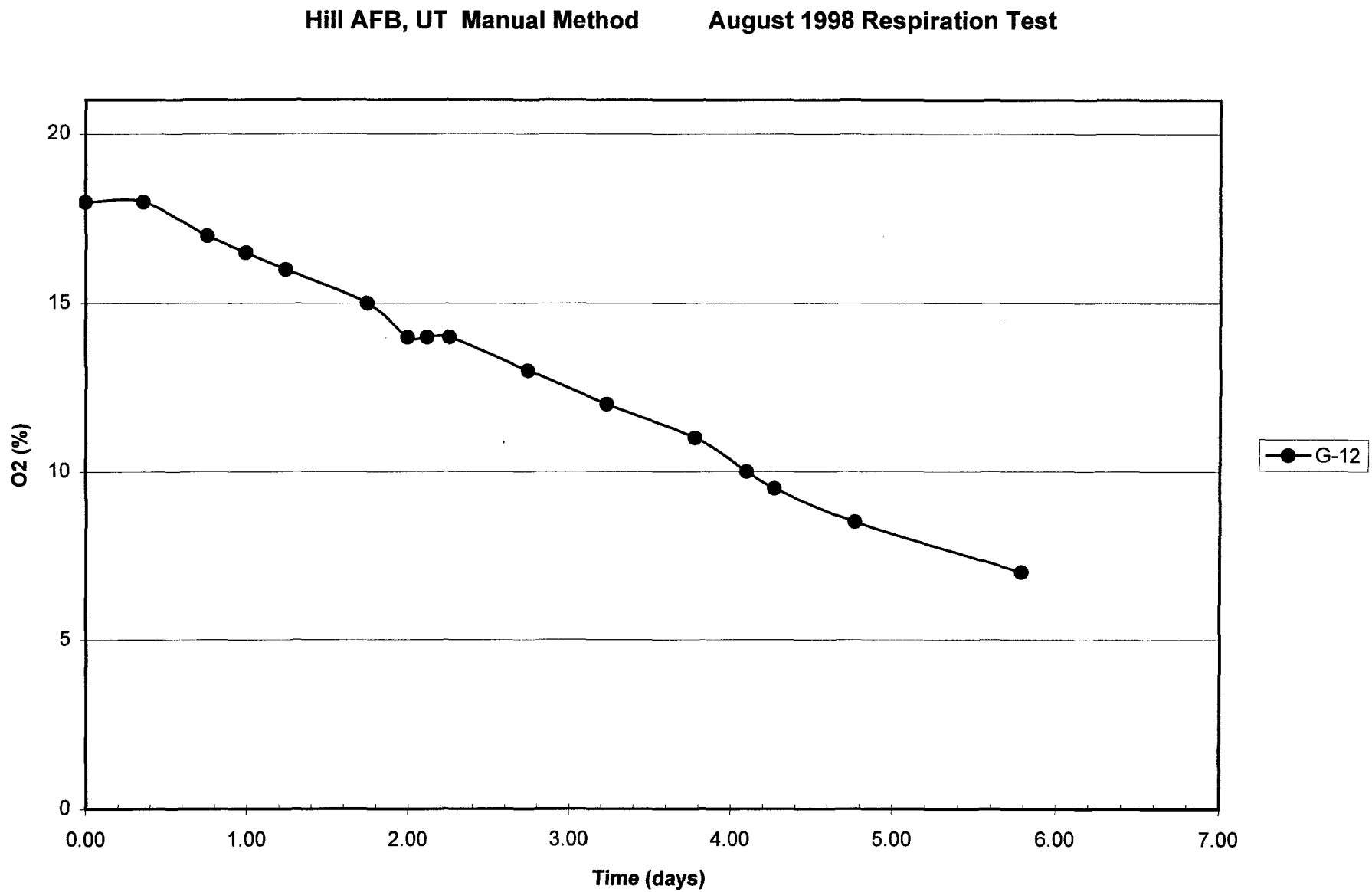

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
Time (days)
E-17

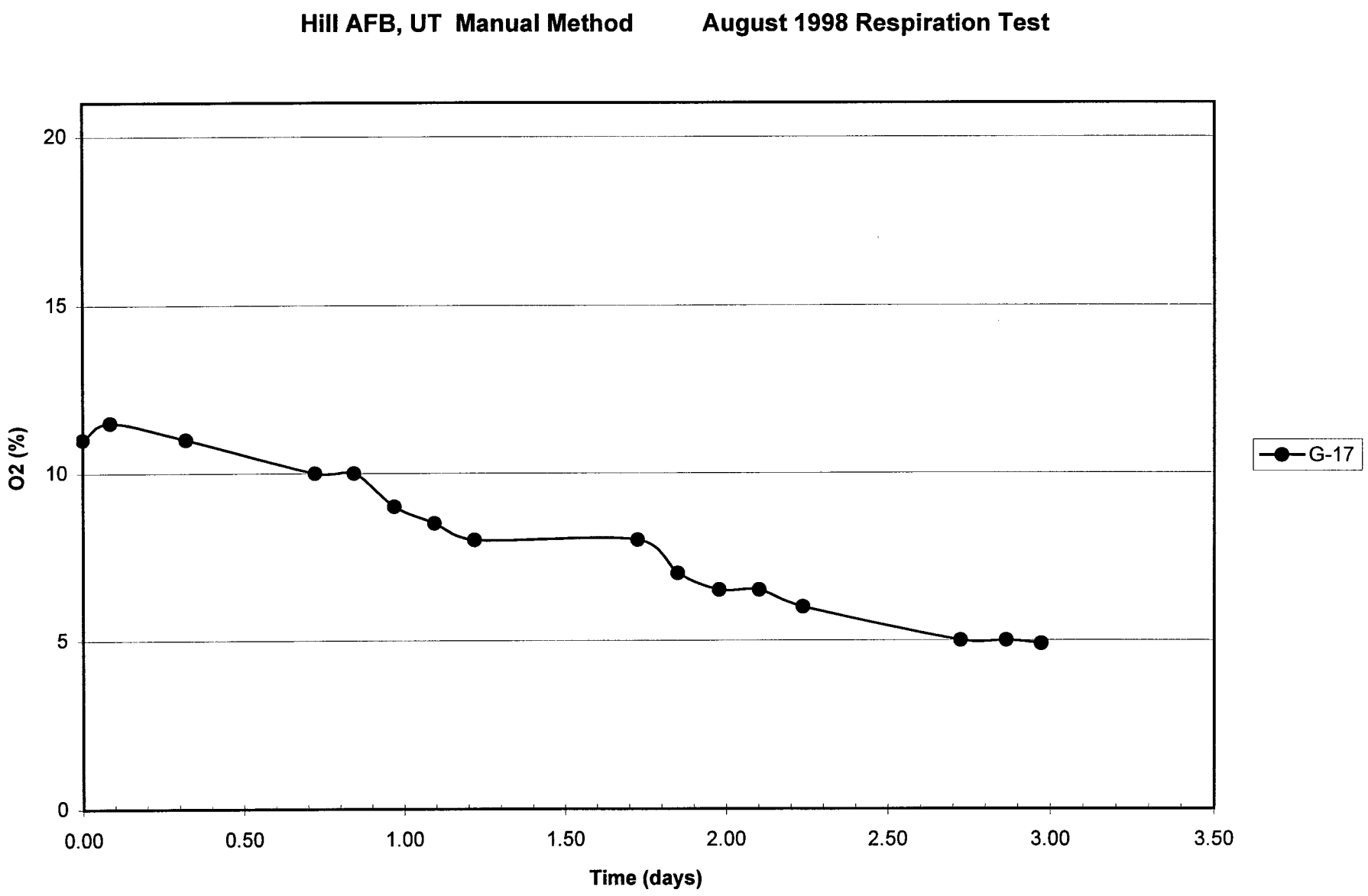

Hill AFB, UT Manual Method
August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
F-7

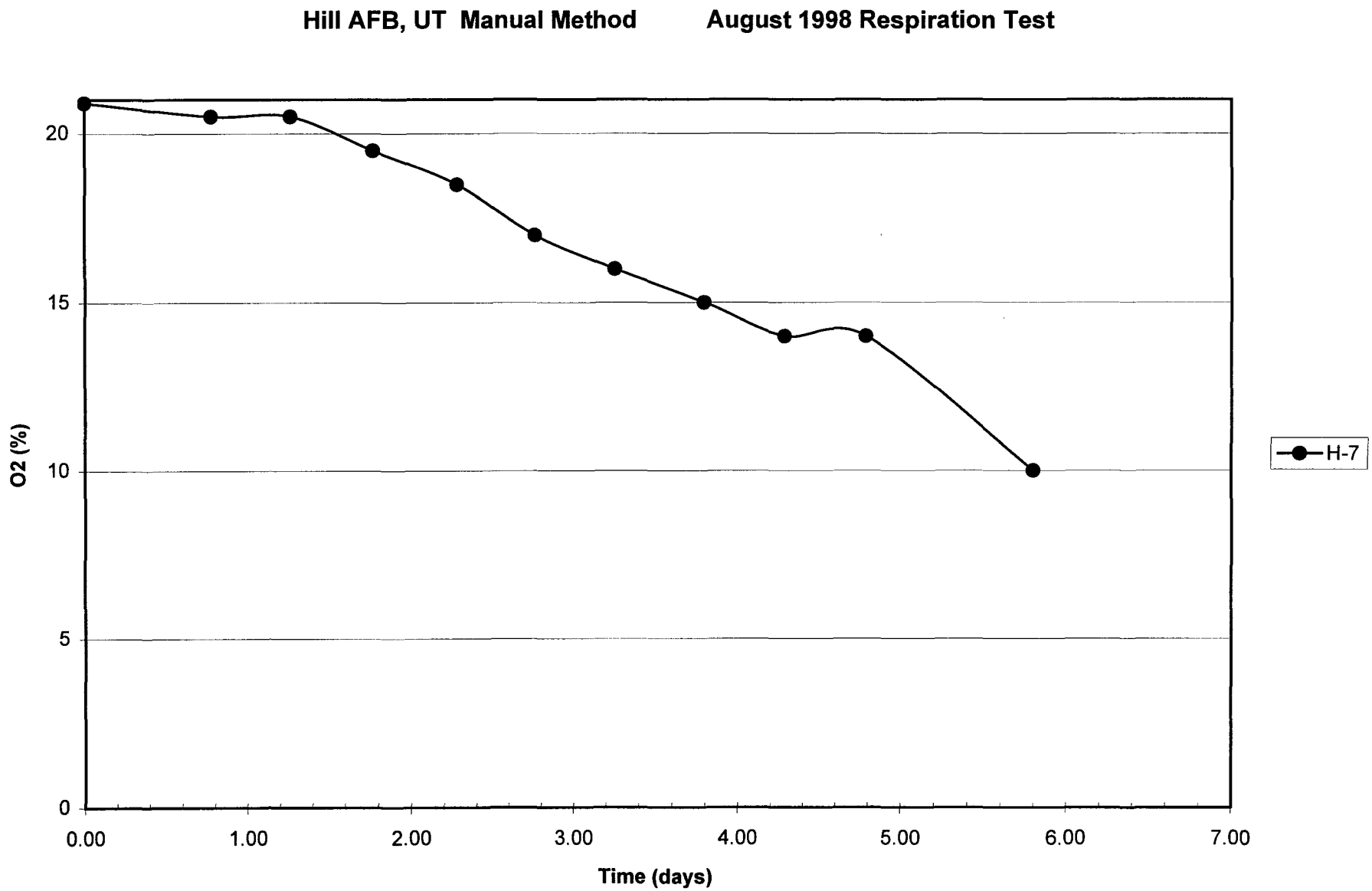

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
F-12

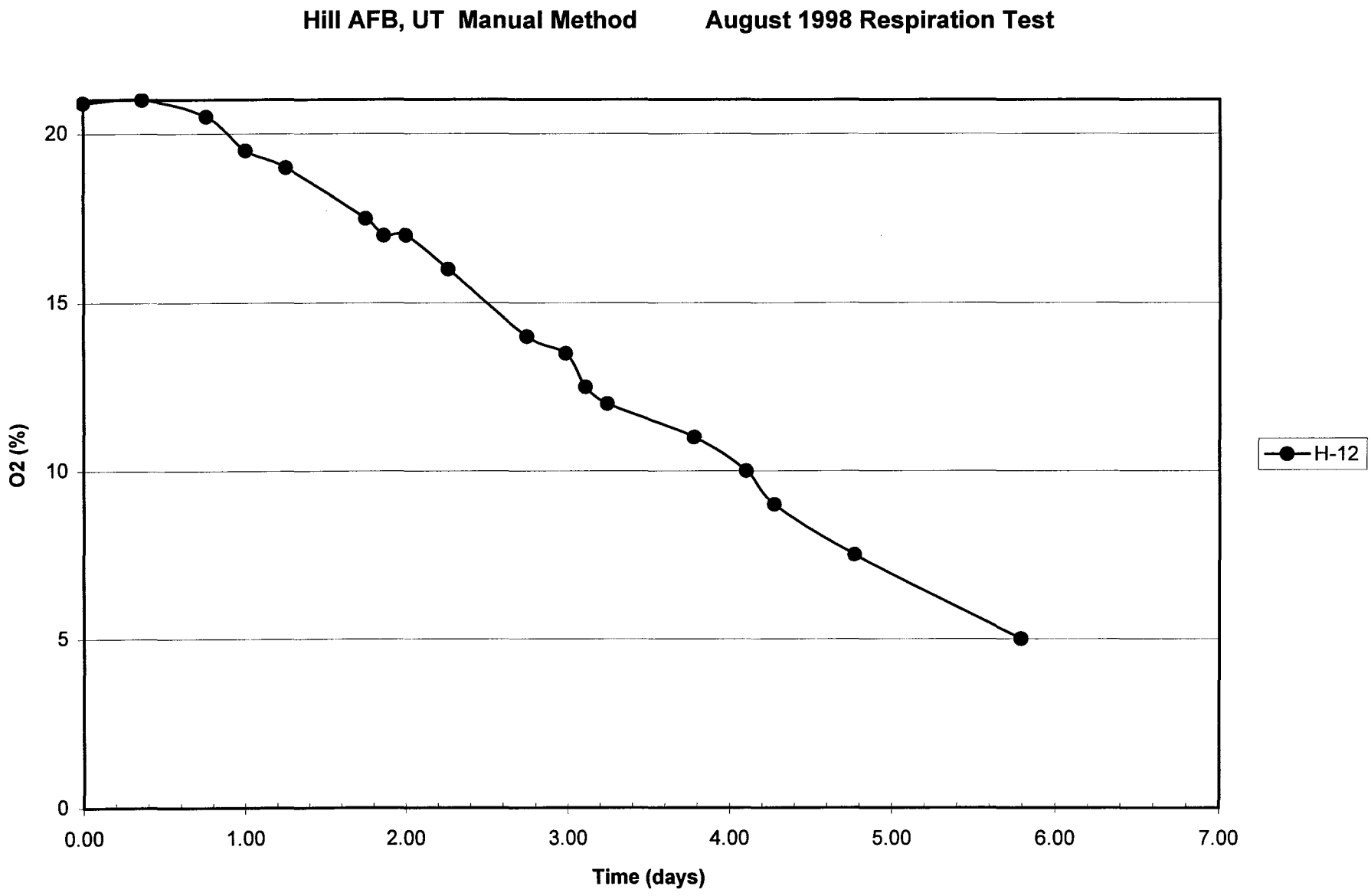

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
Time (days)
F-17

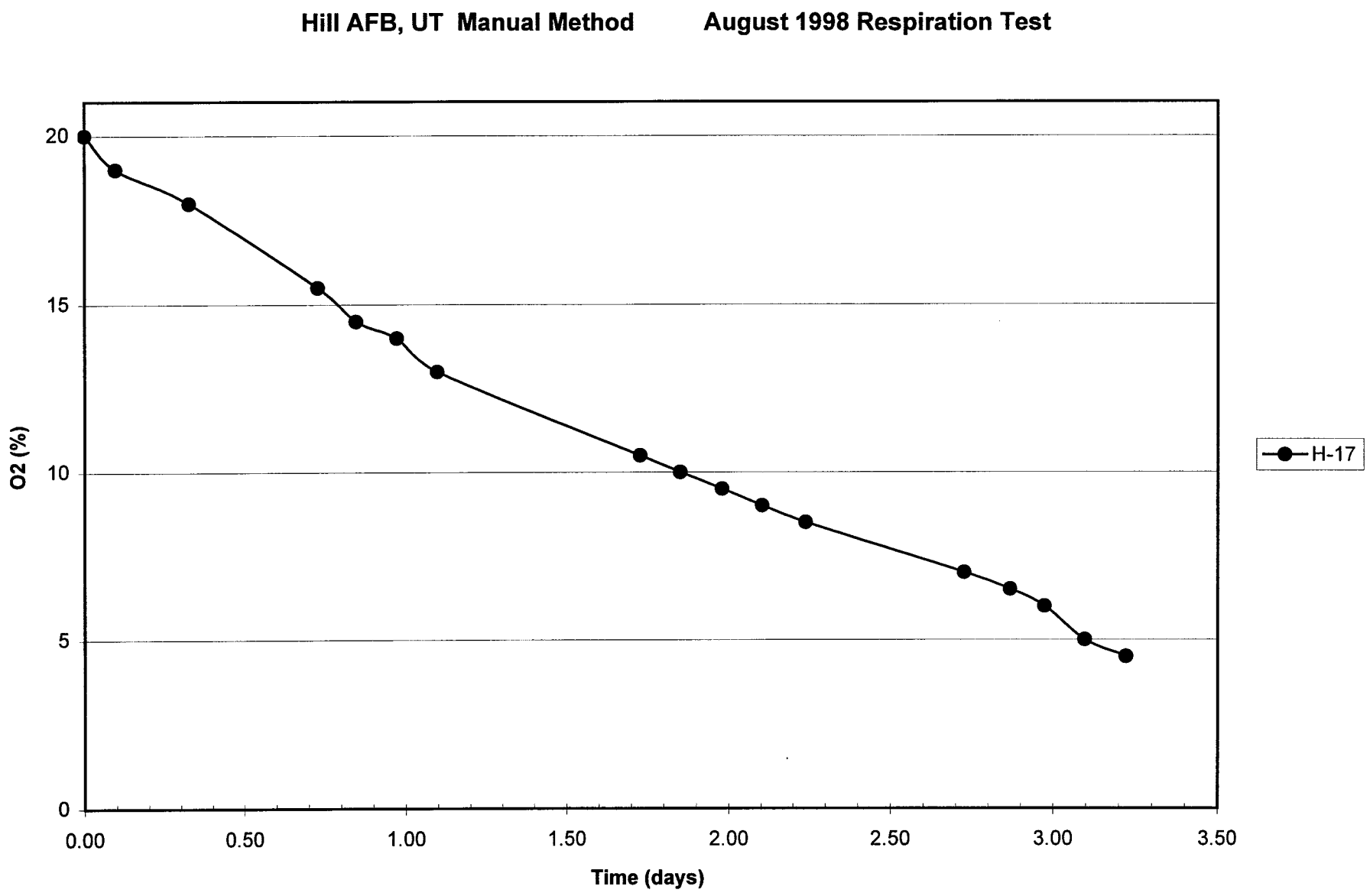

Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
G-7


Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
G-12


Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
Time (days)
G-17


Hill AFB, UT Manual Method
August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
H-7


Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Time (days)
H-12


Hill AFB, UT Manual Method August 1998 Respiration Test
O2 (%)
20
15
10
5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
Time (days)
H-17

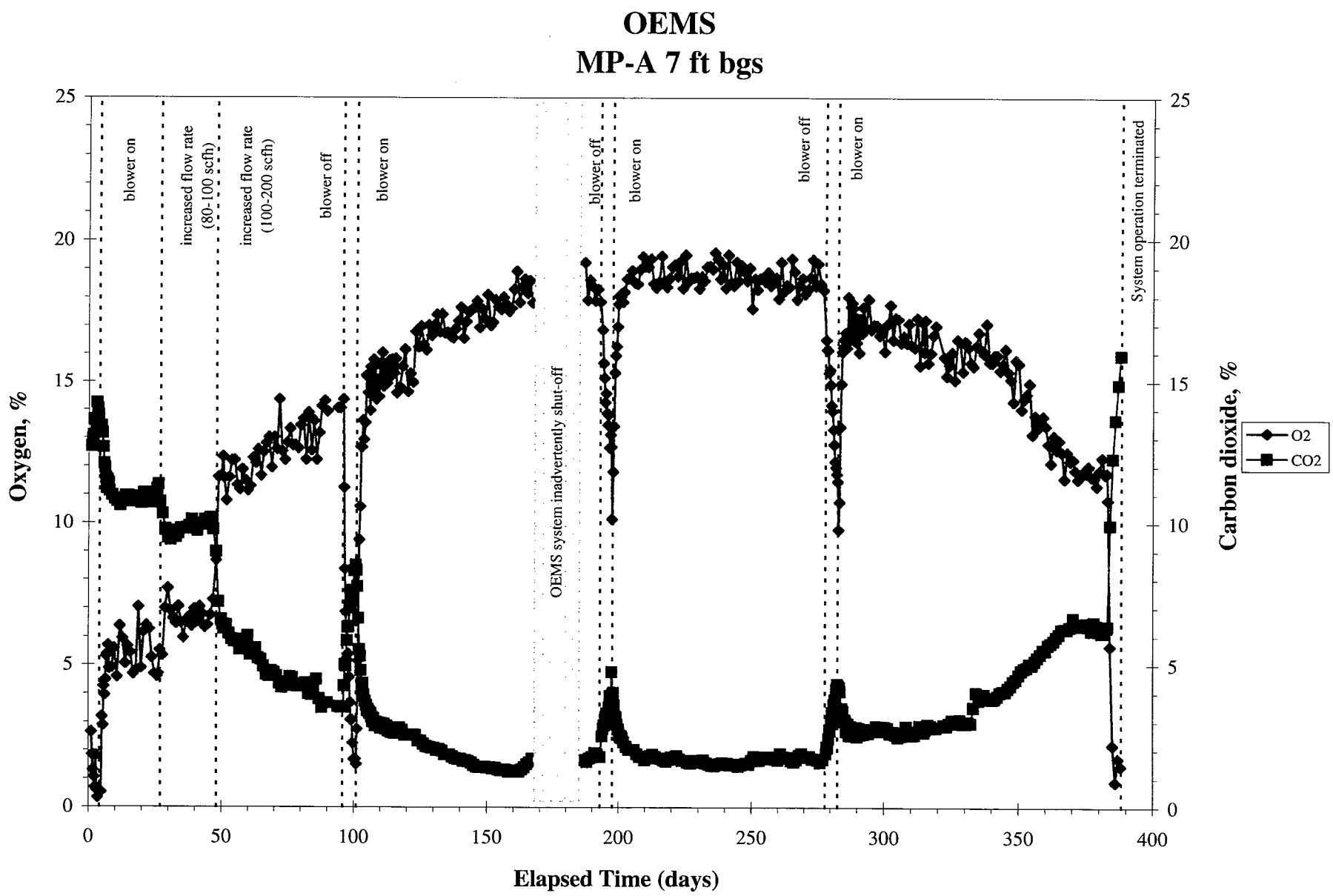
PLOTS OF RESPIRATION GASES (OXYGEN and CARBON DIOXIDE)

MONITORED BY

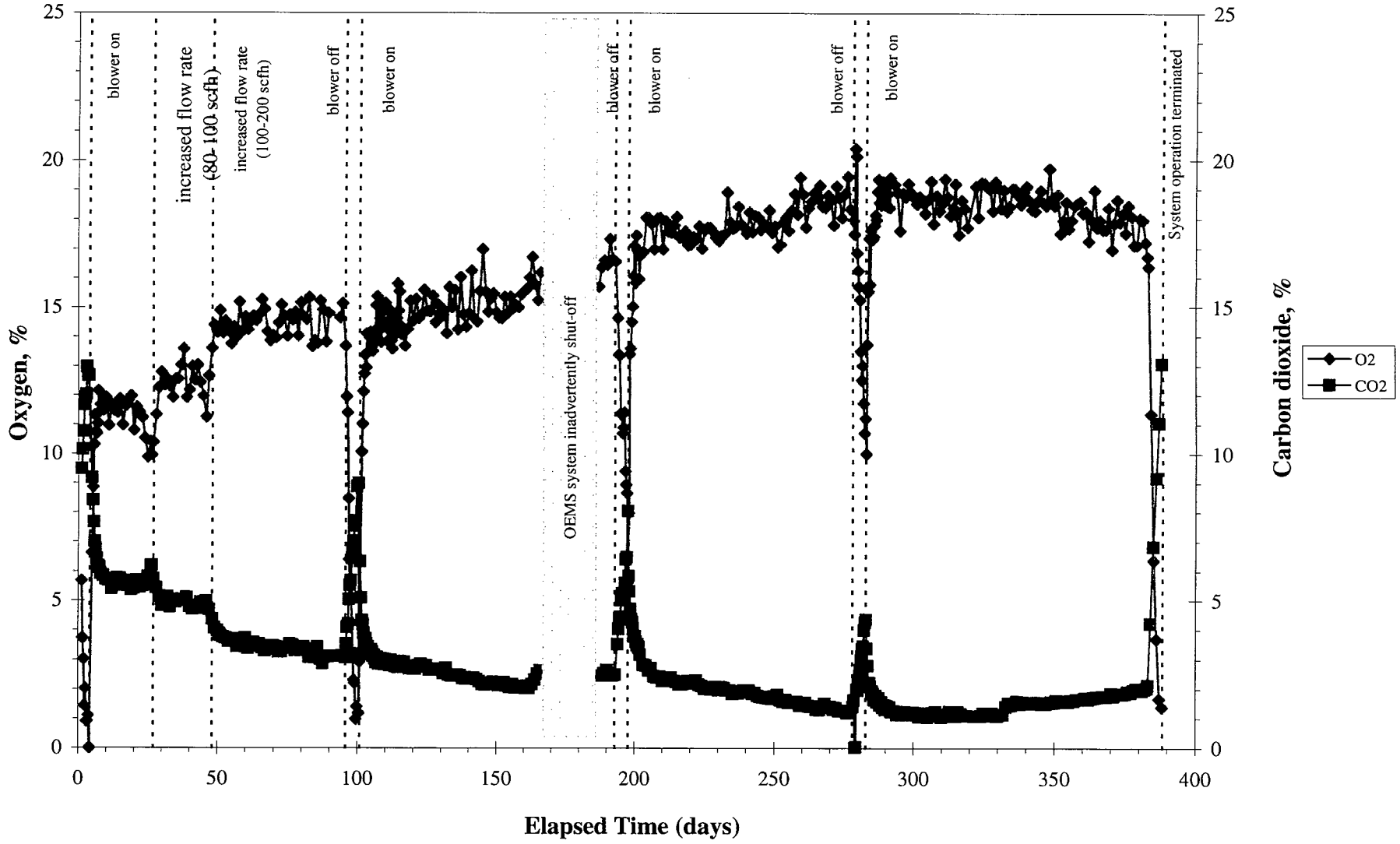
OEMS

DURING BIOVENTING

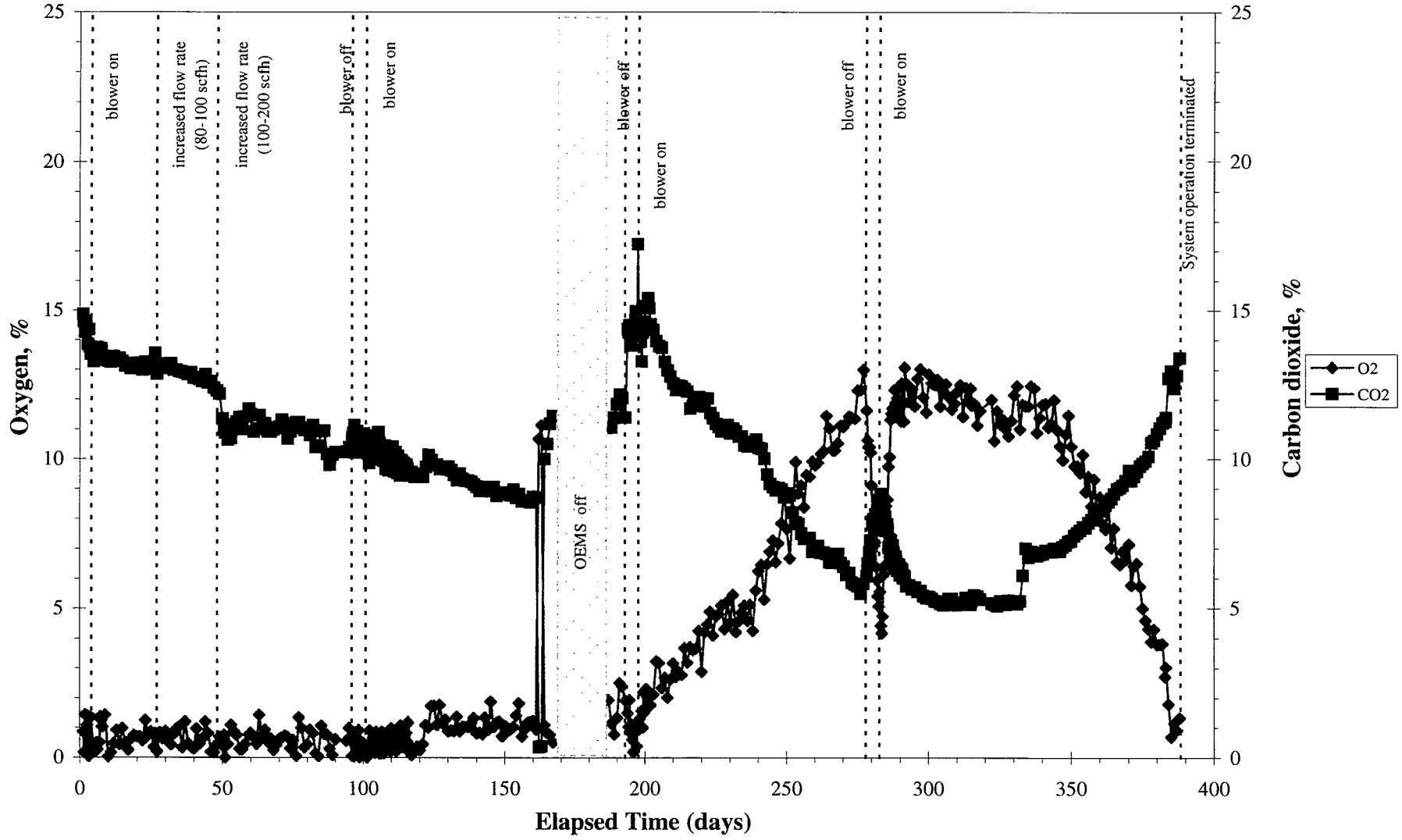
July 1997 to July 1998

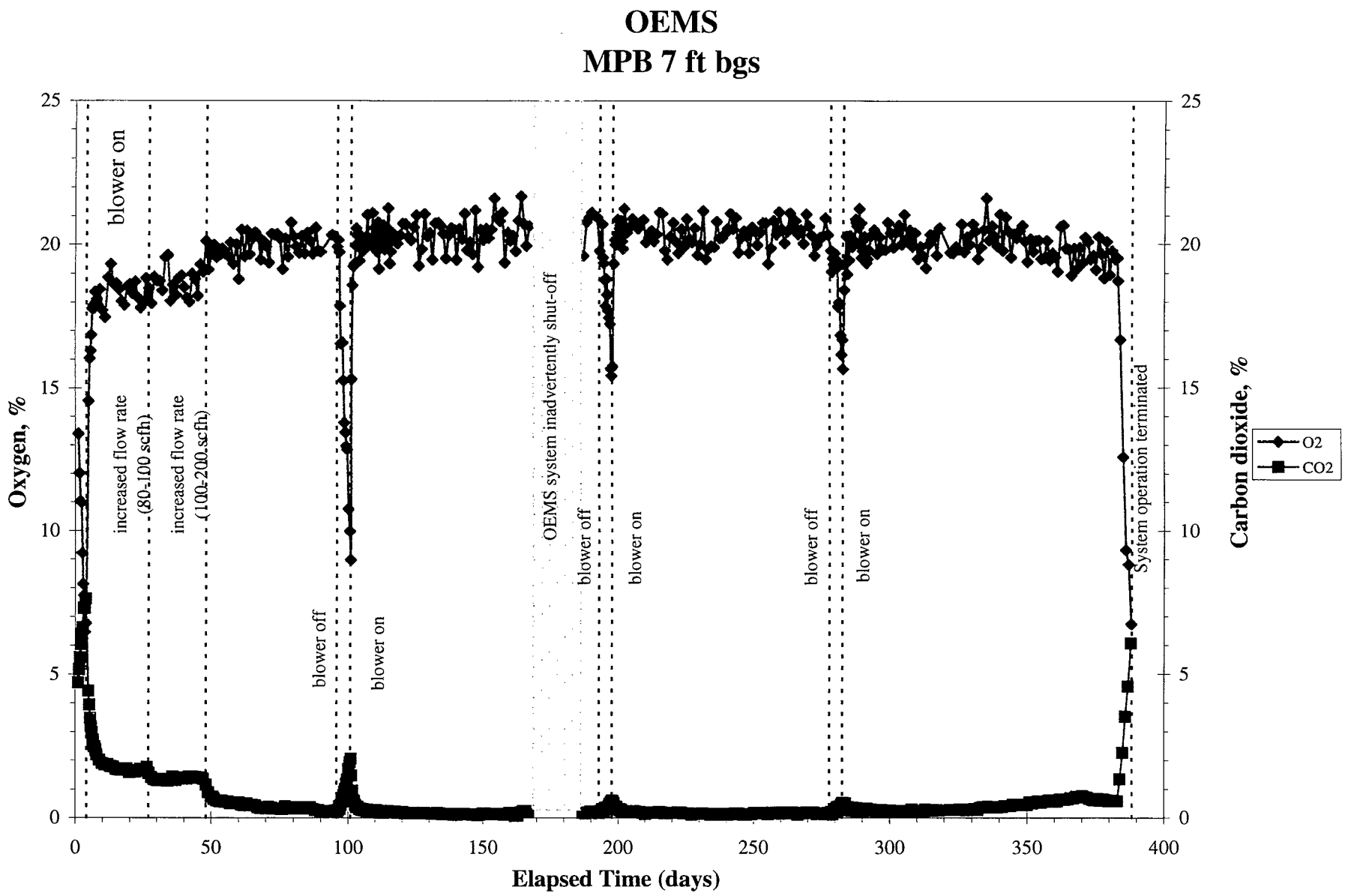

OEMS
MP-A 7 ft bgs
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

OEMS
MPA 12 ft bgs

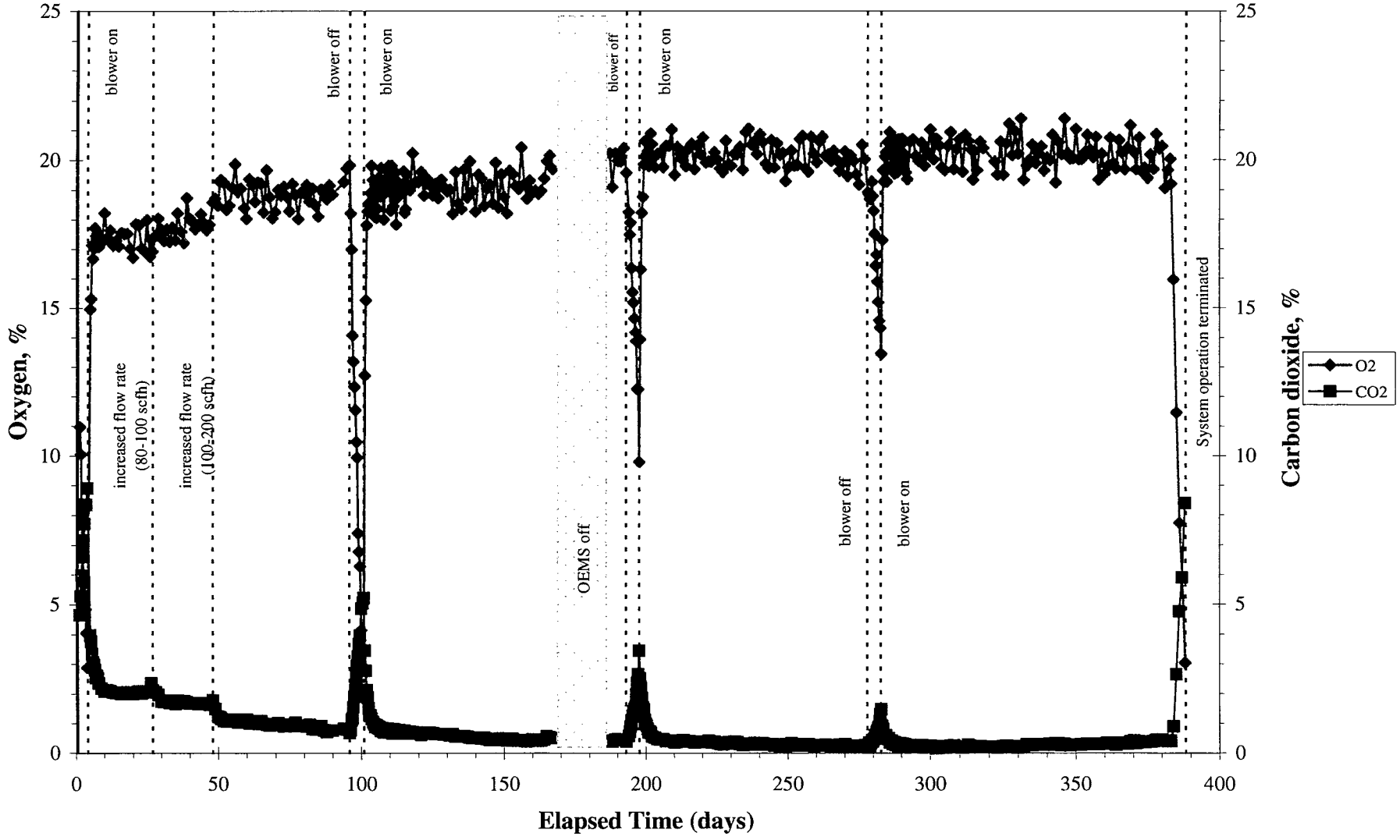


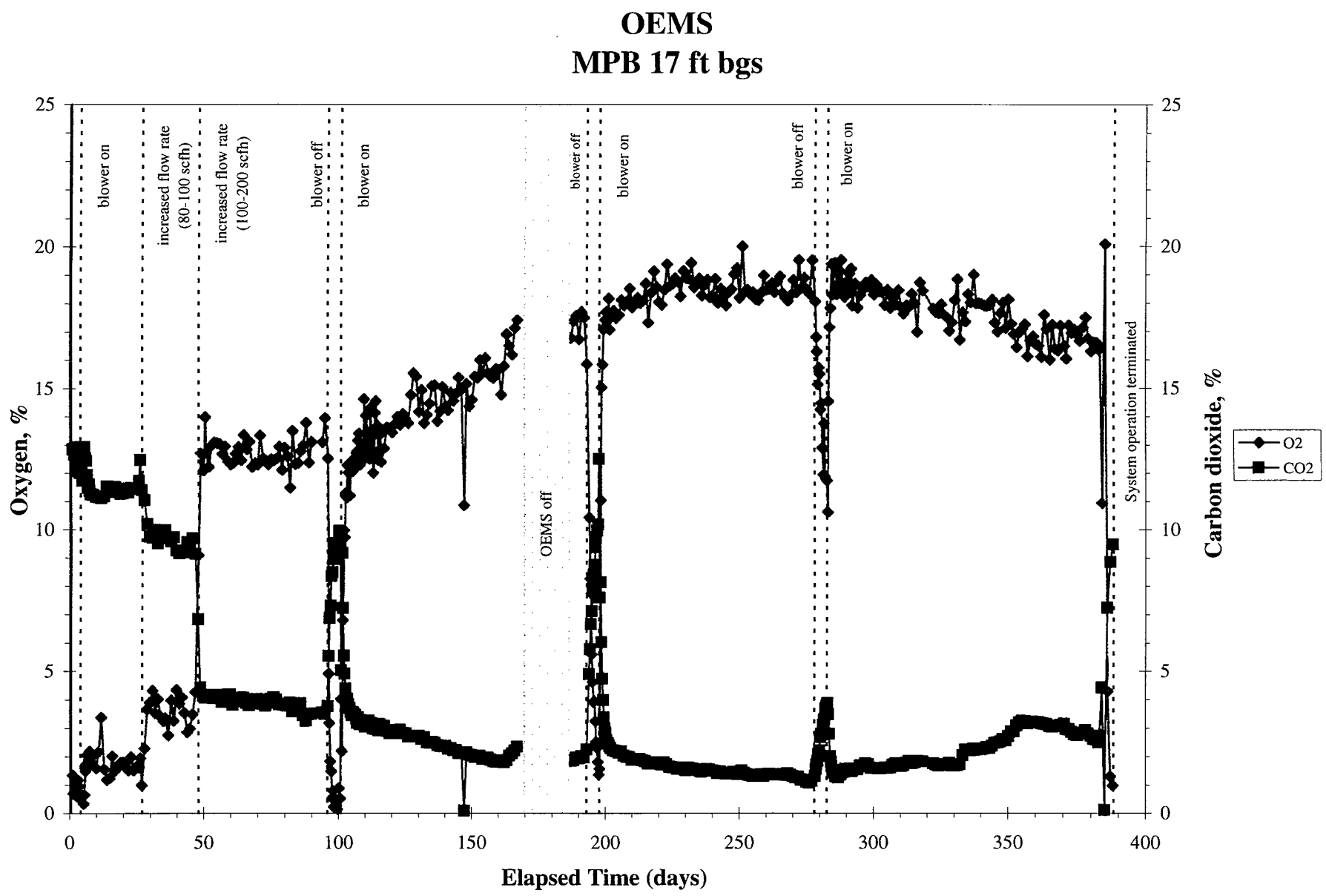
OEMS
MPA 17 ft bgs

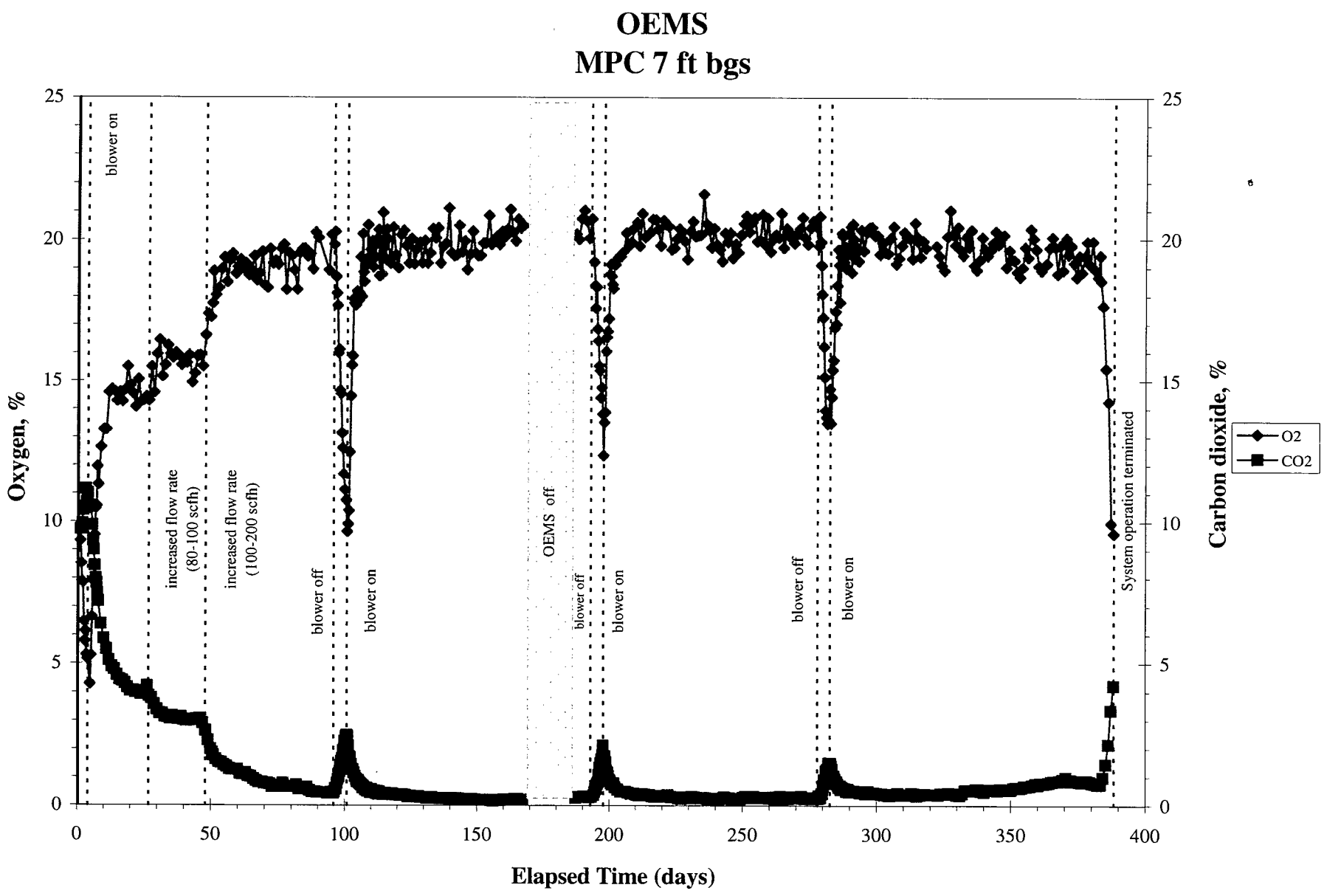


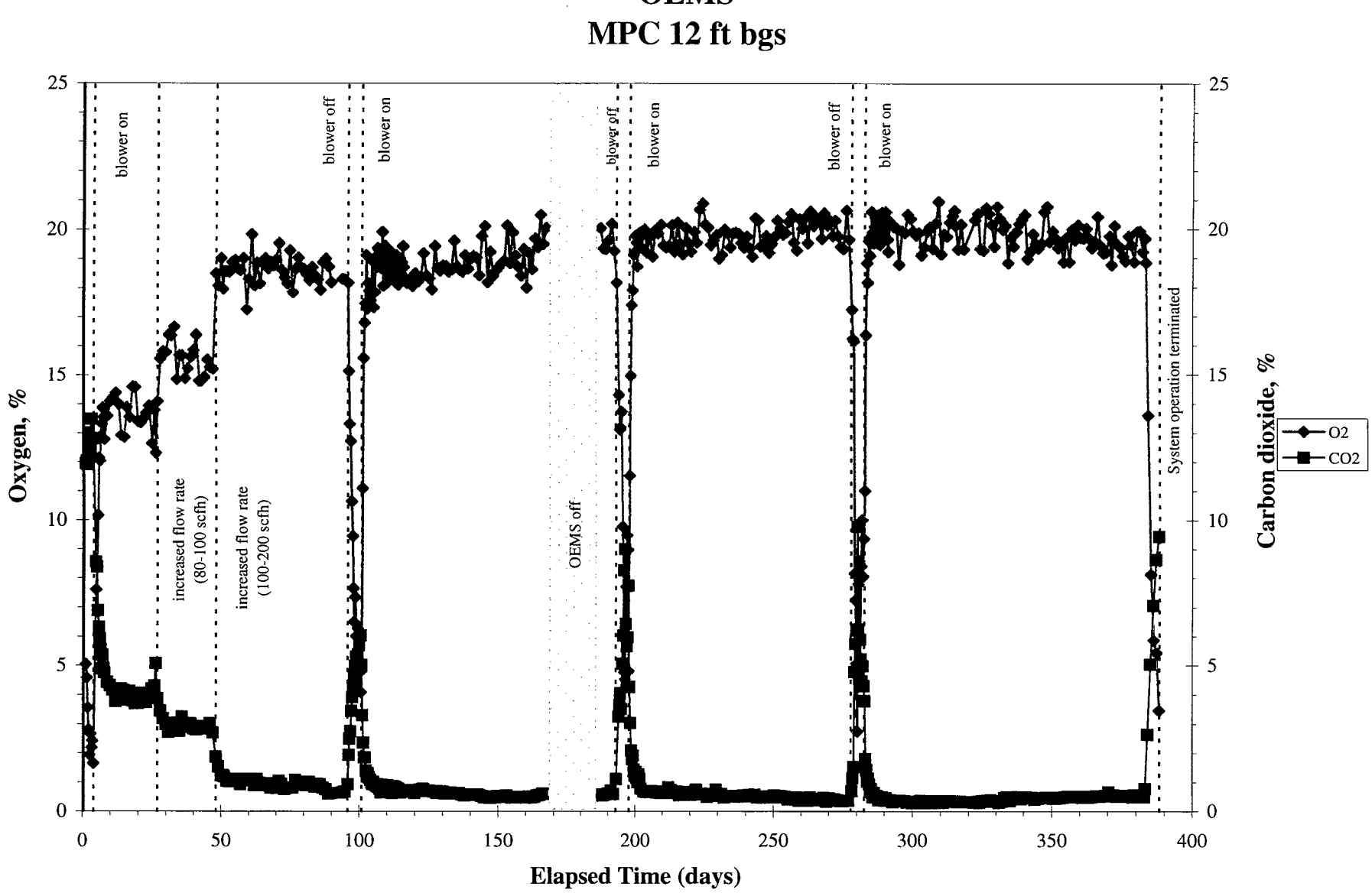

OEMS
MPB 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2

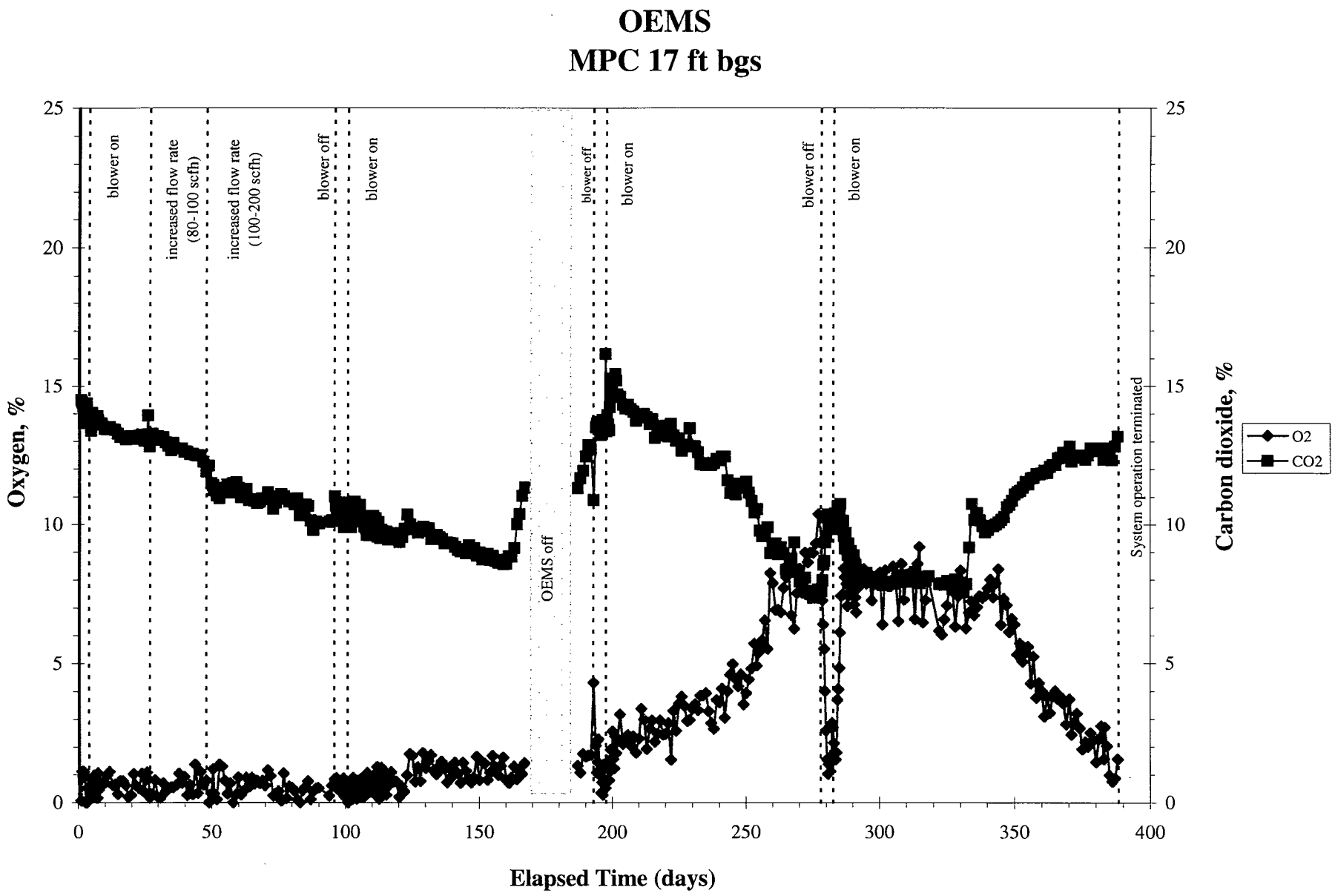
OEMS
MPB 12 ft bgs

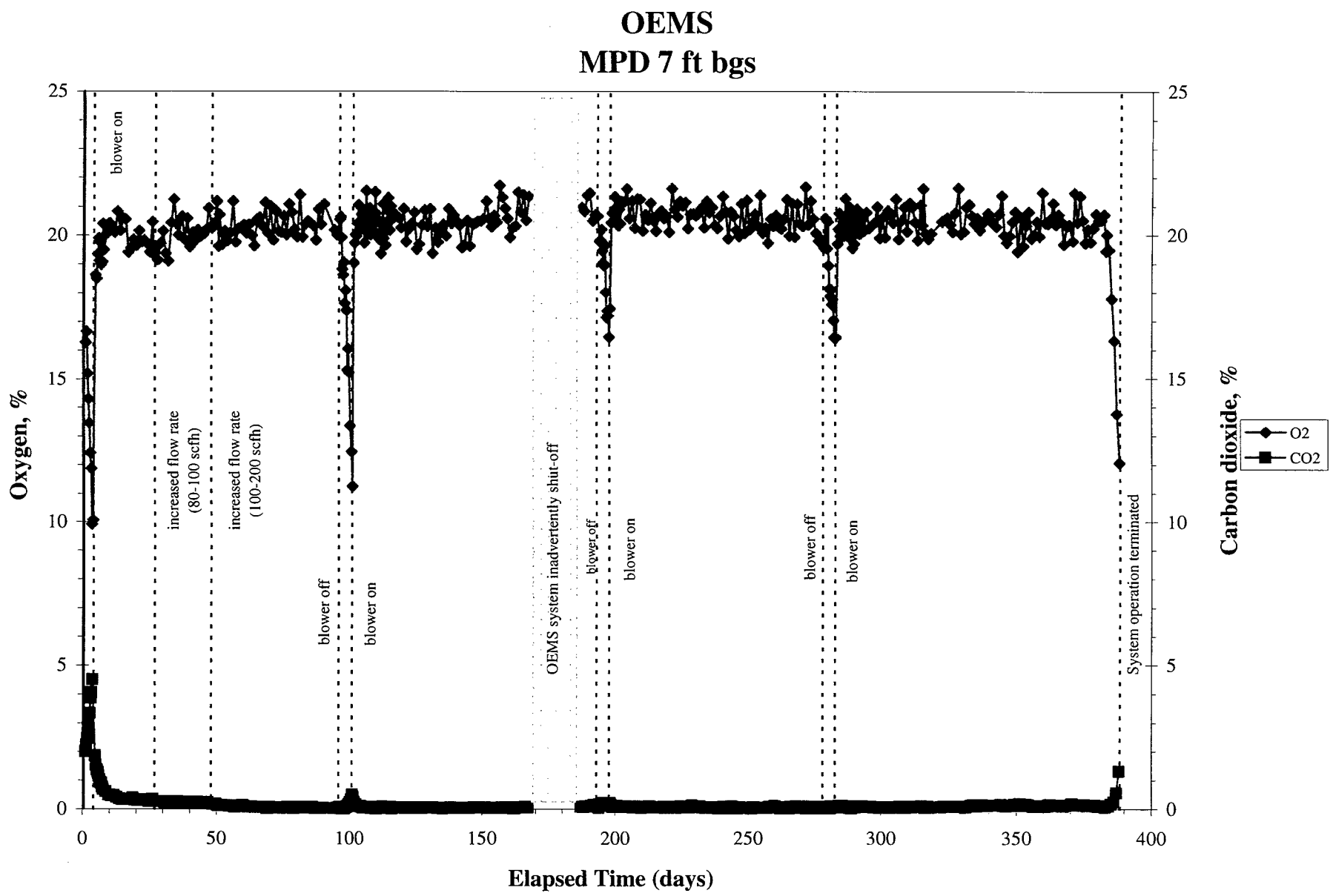


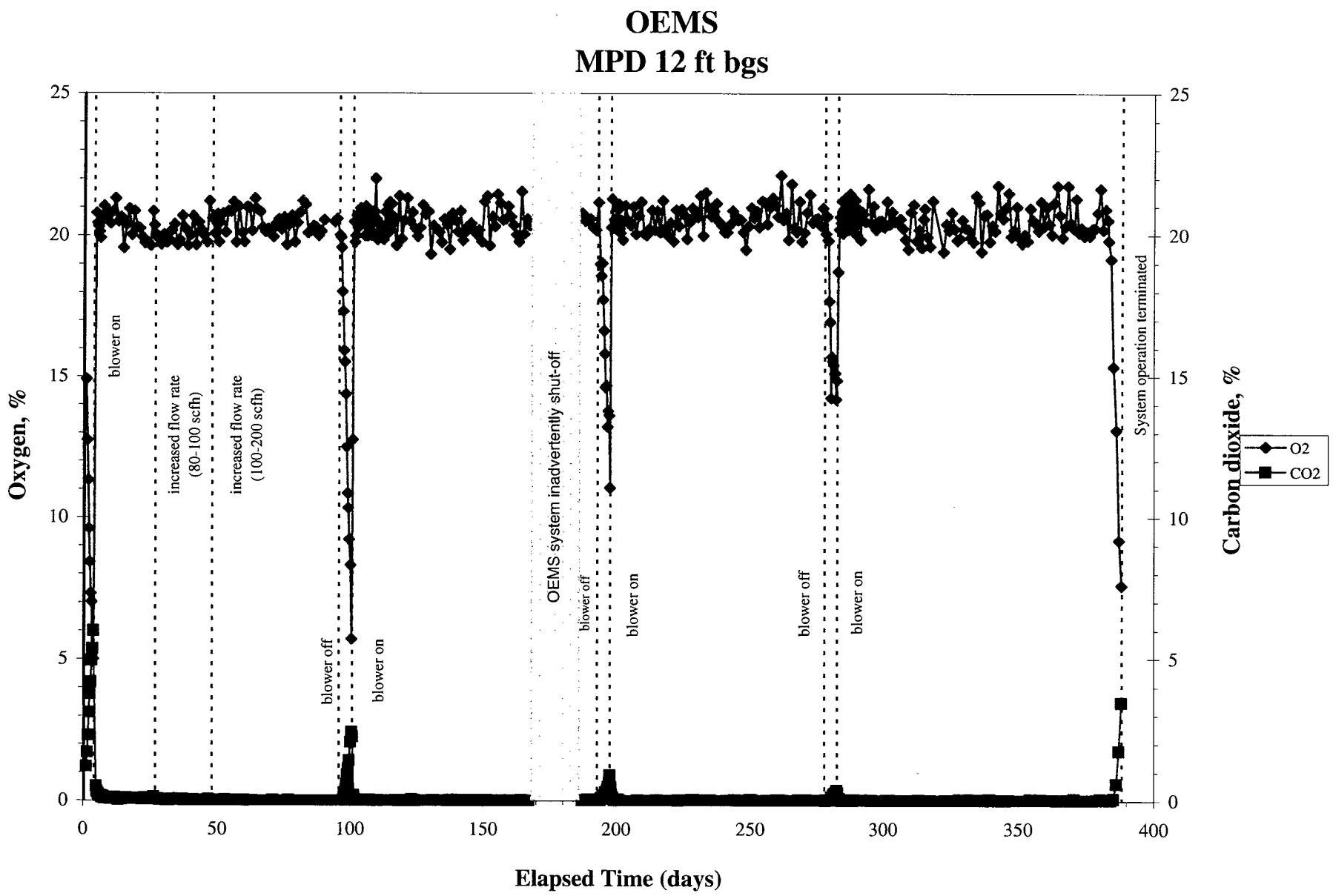

OEMS
MPB 17 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

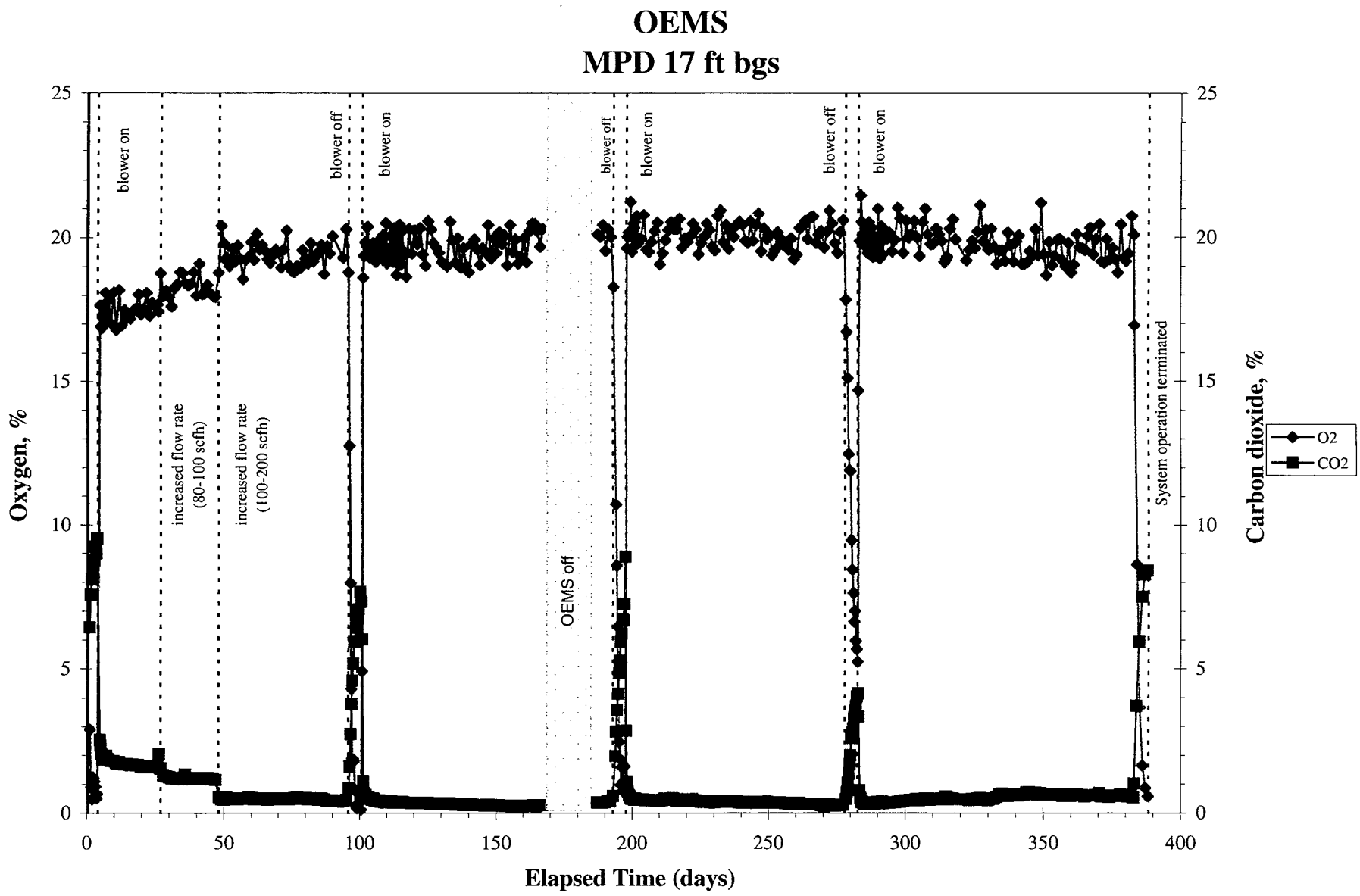

OEMS
MPC 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2

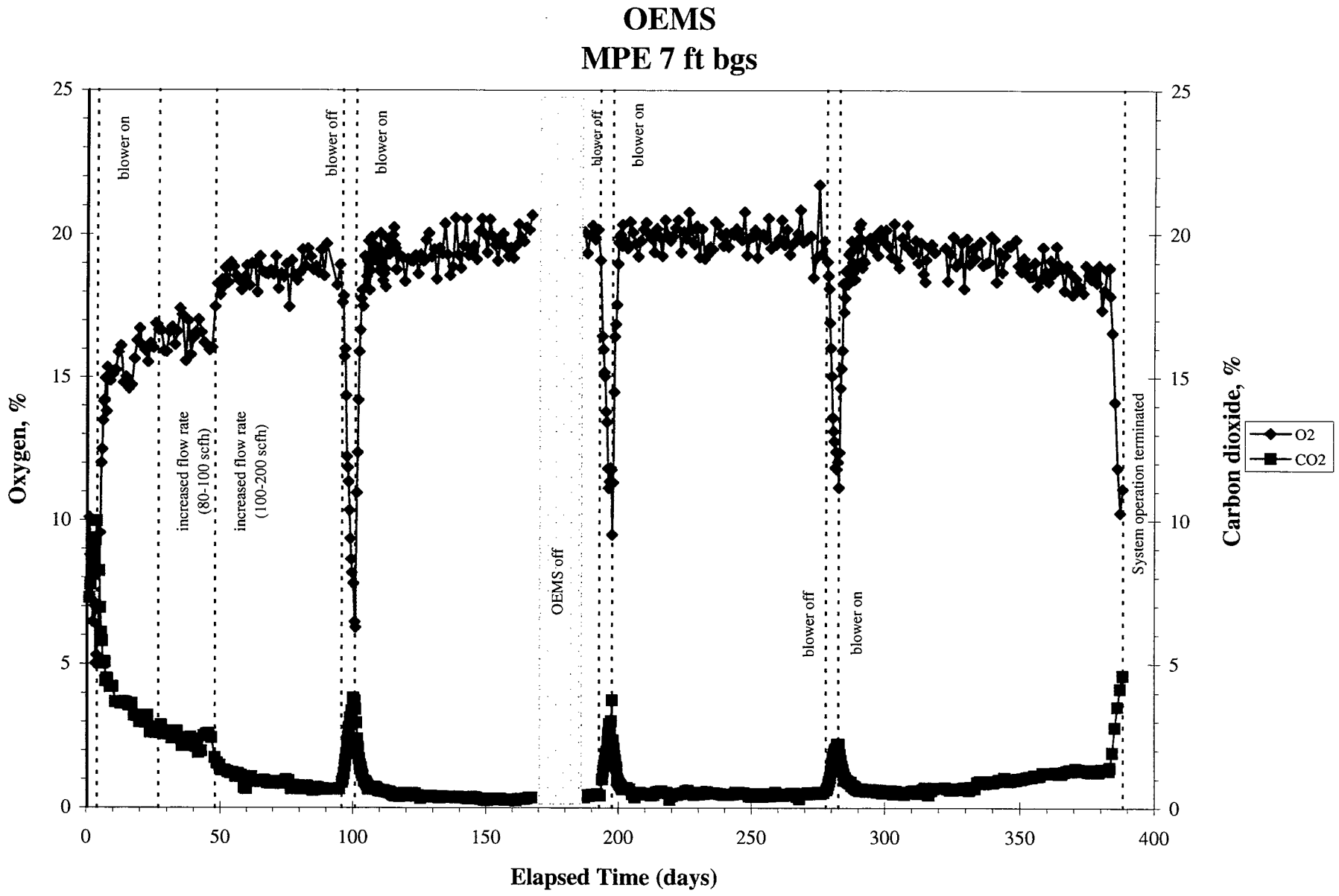

OEMS
MPC 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2

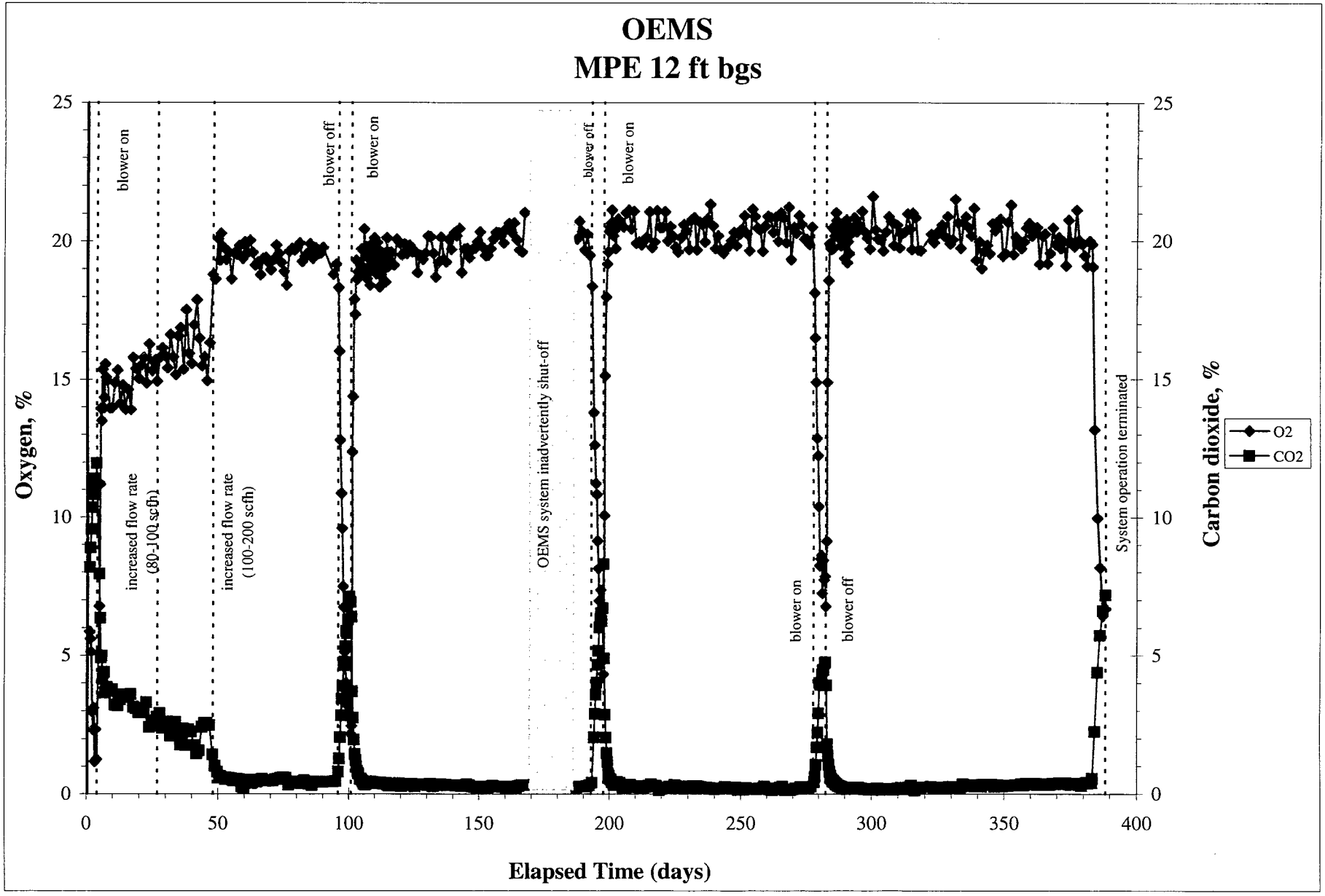

OEMS
MPC 17 ft bgs
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

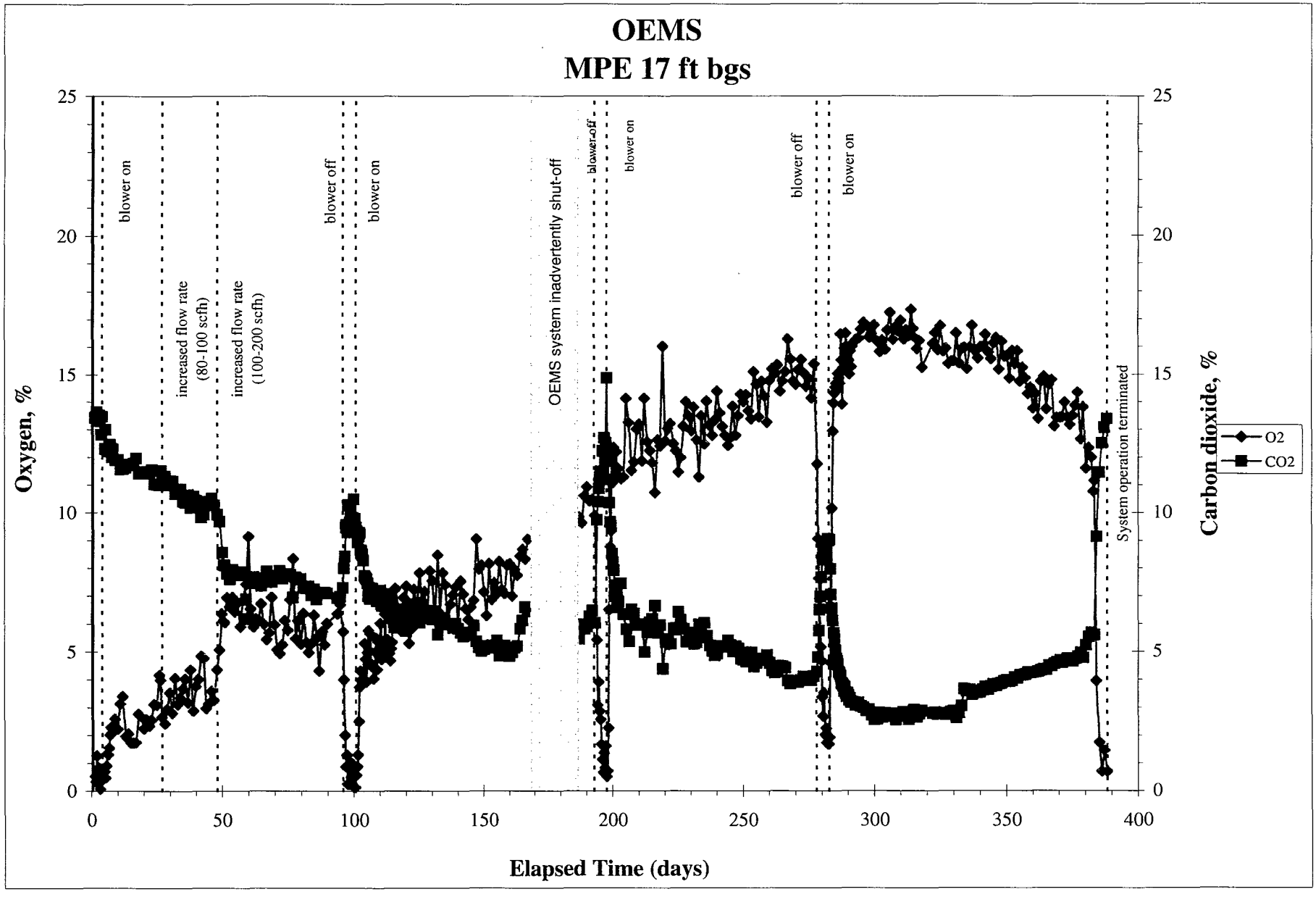

OEMS
MPD 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2

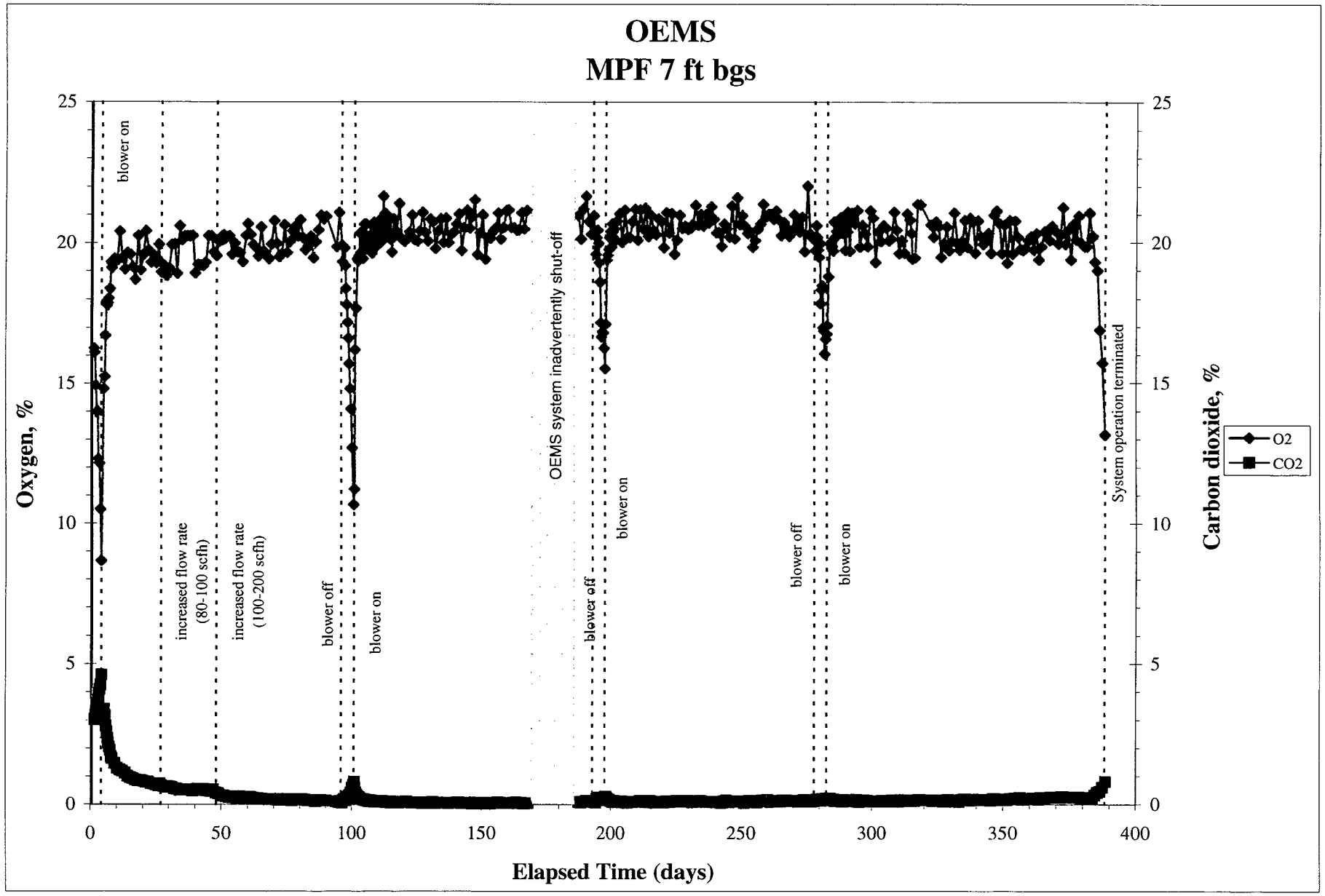

OEMS
MPD 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2

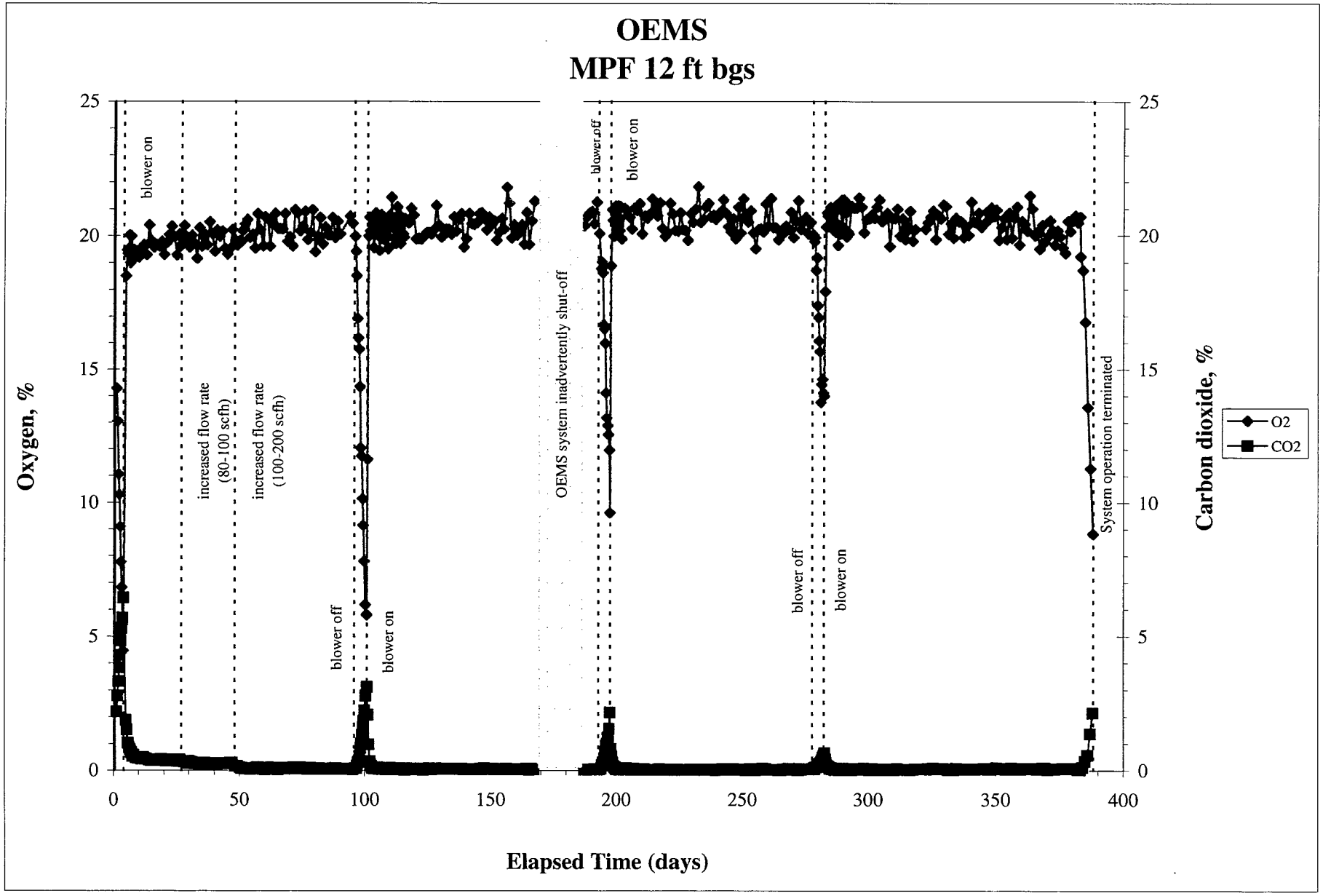

OEMS
MPD 17 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

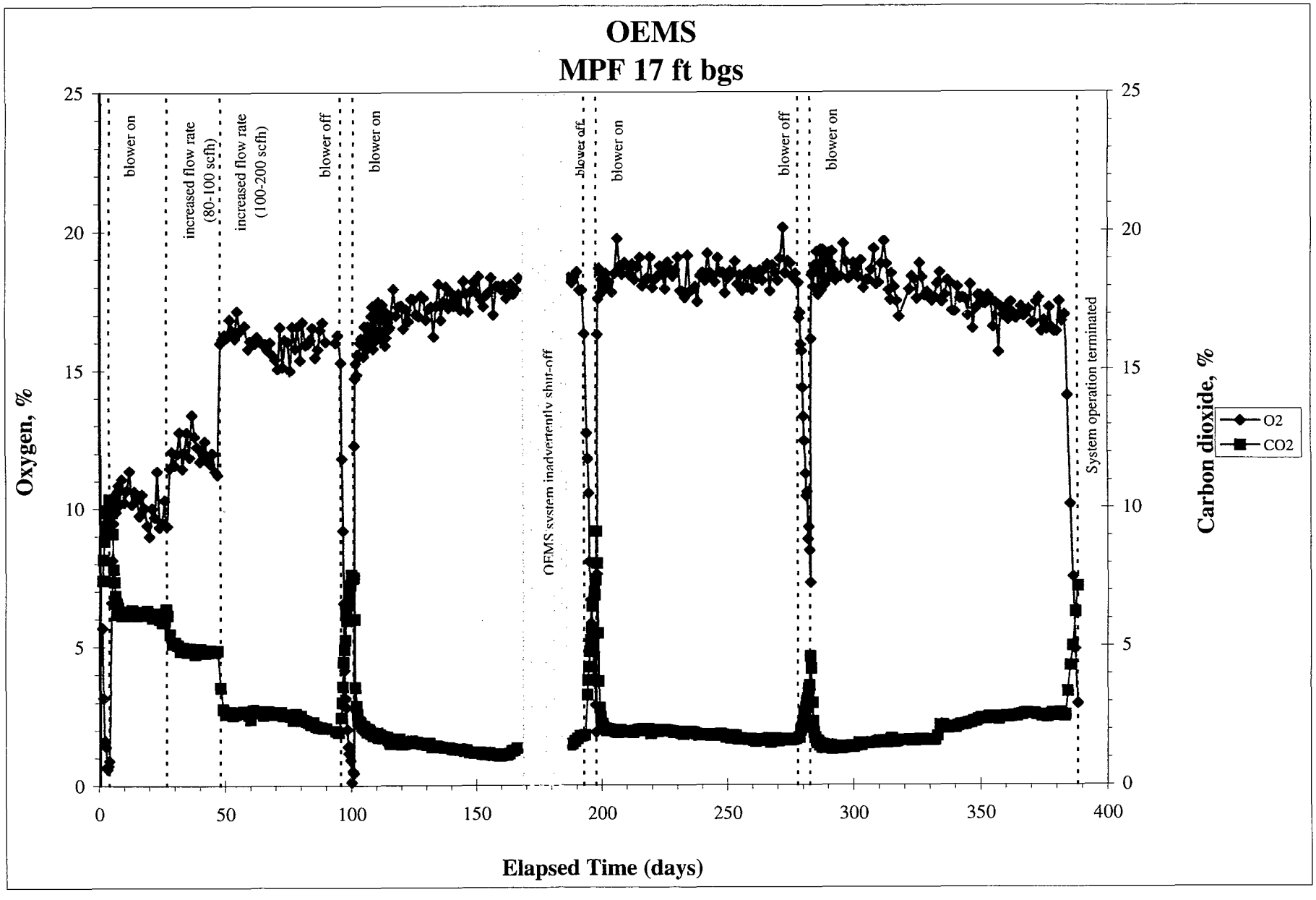

OEMS
MPE 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS off
blower off
blower on
blower off
blower on
System operation terminated
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

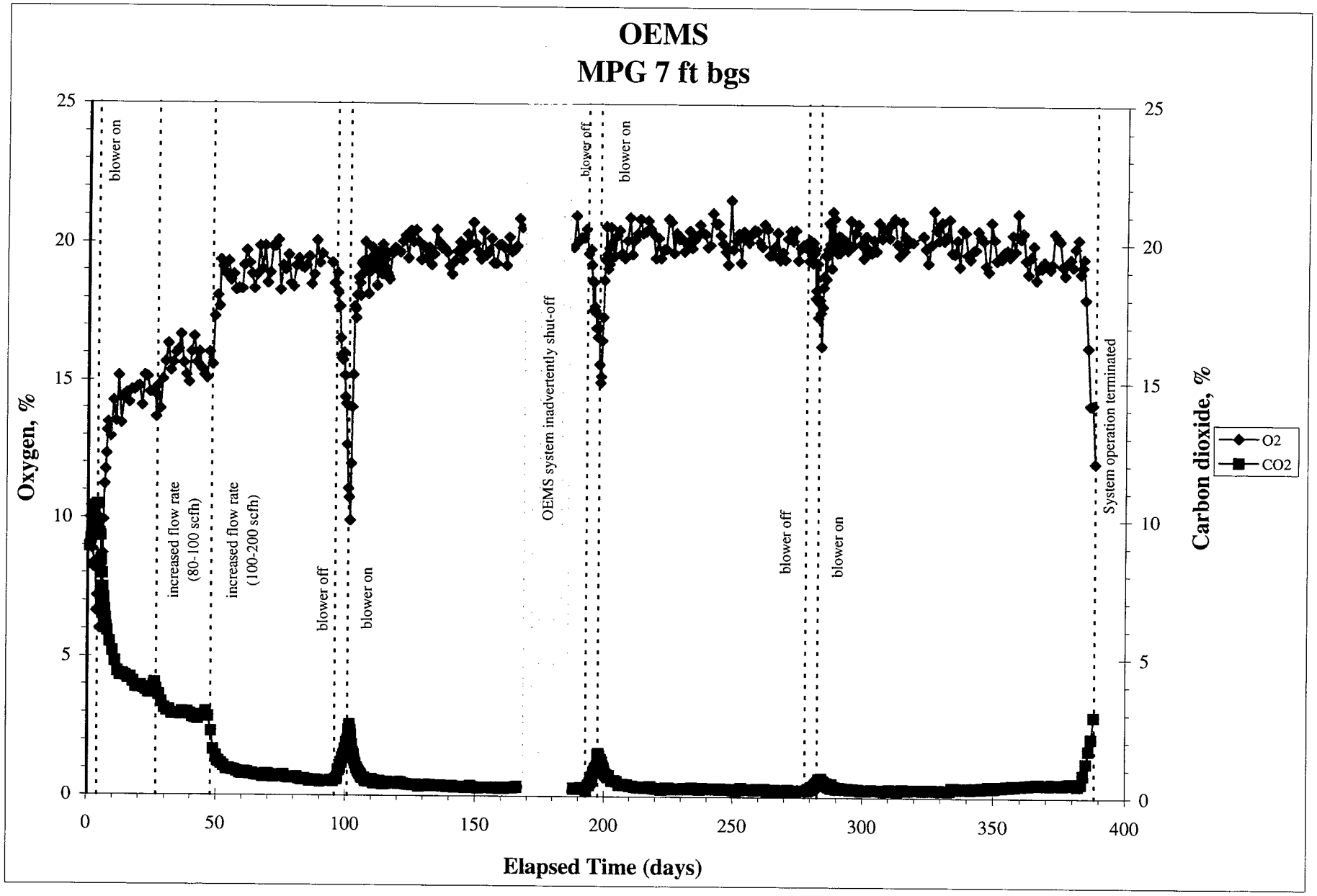

OEMS
MPE 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower on
blower off
System operation terminated
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

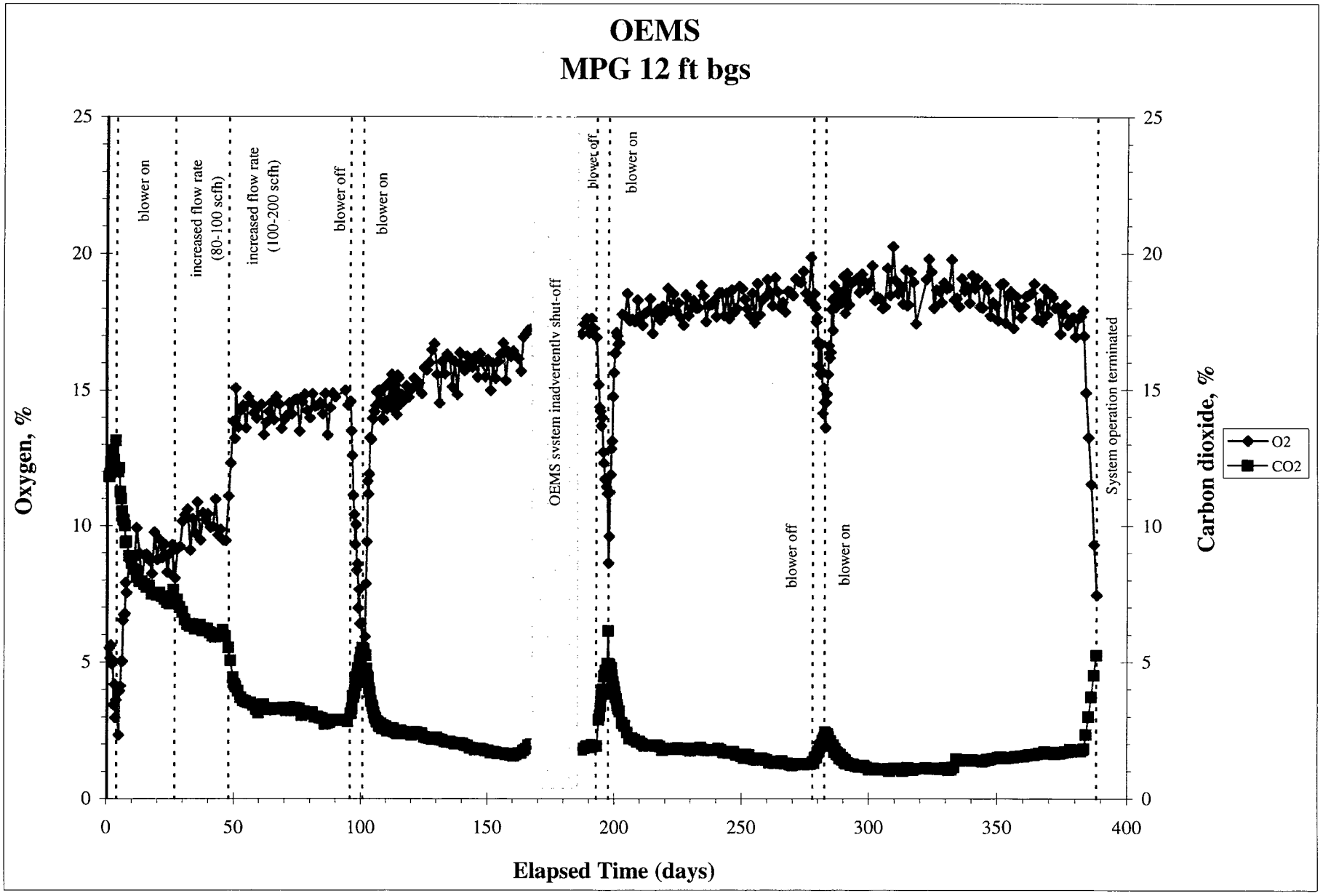

OEMS
MPE 17 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

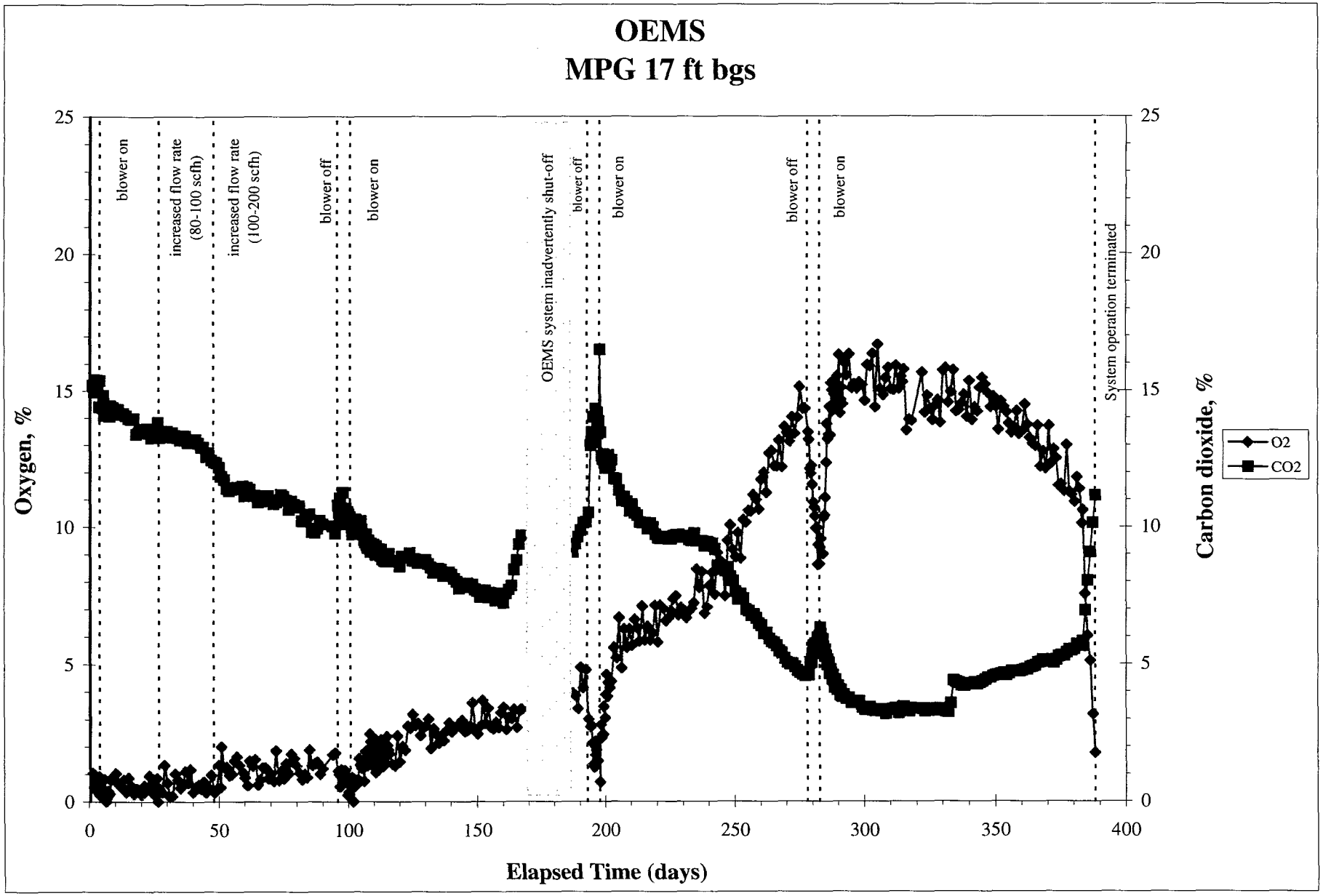

OEMS
MPF 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

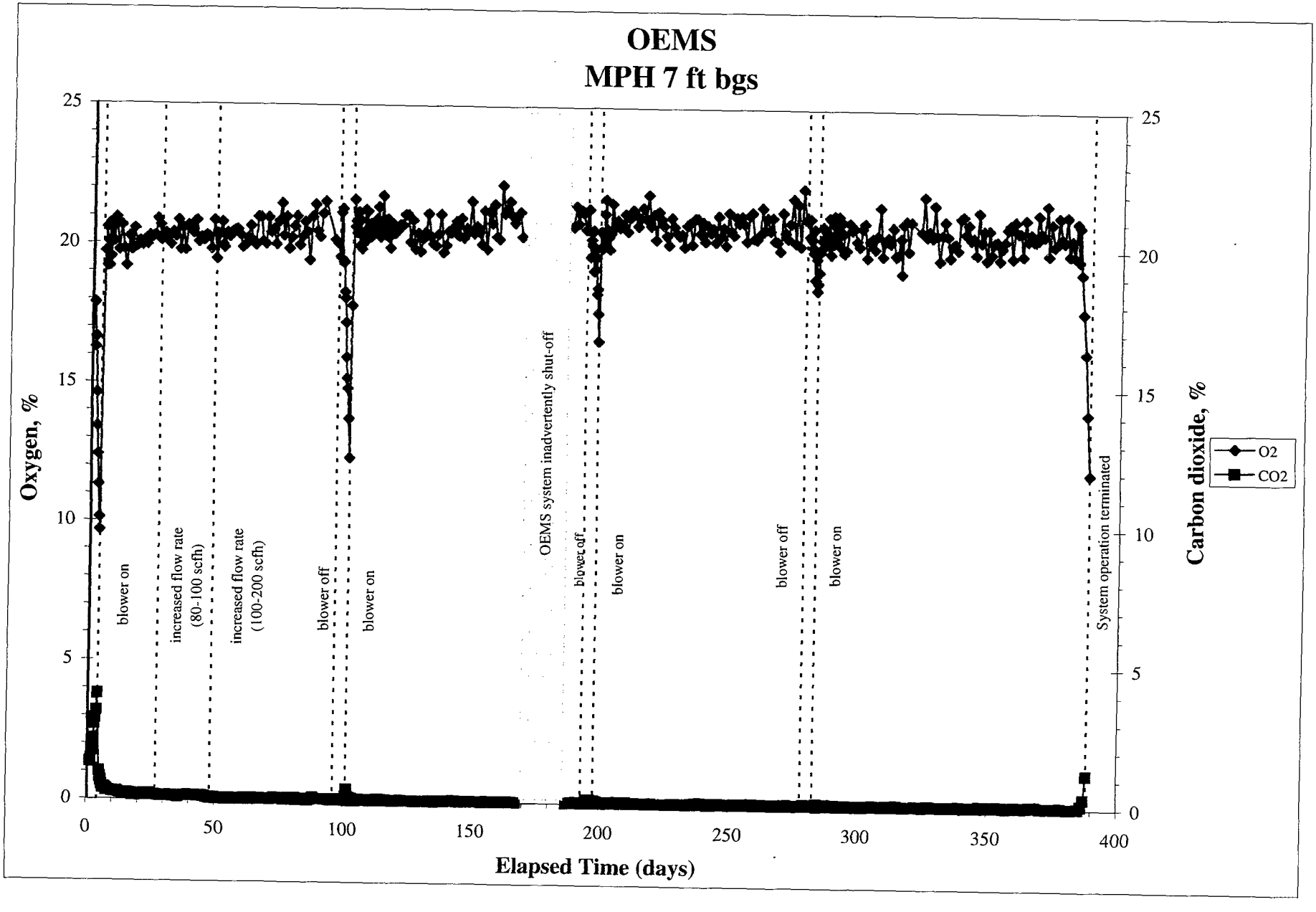

OEMS
MPF 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

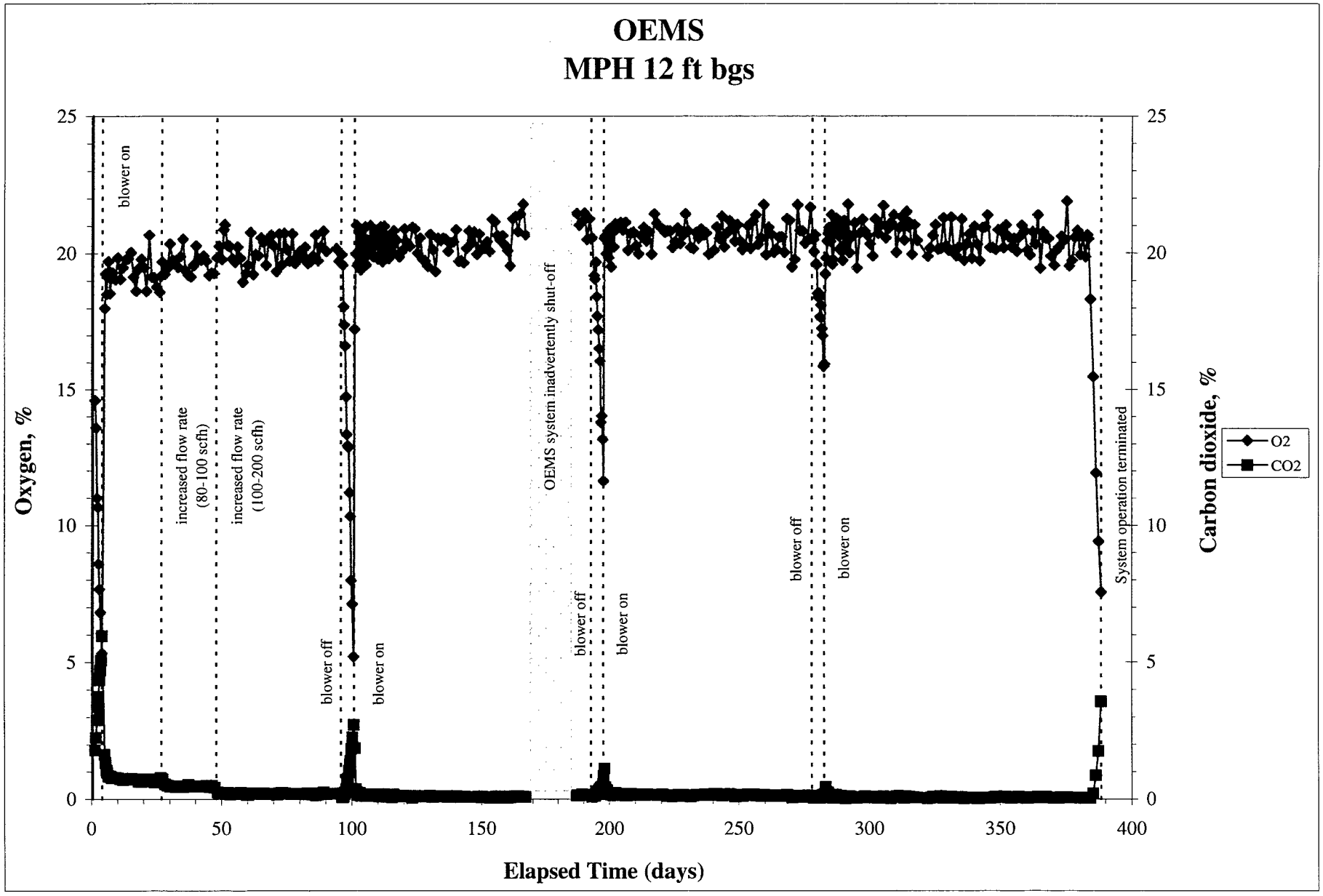

OEMS
MPF 17 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

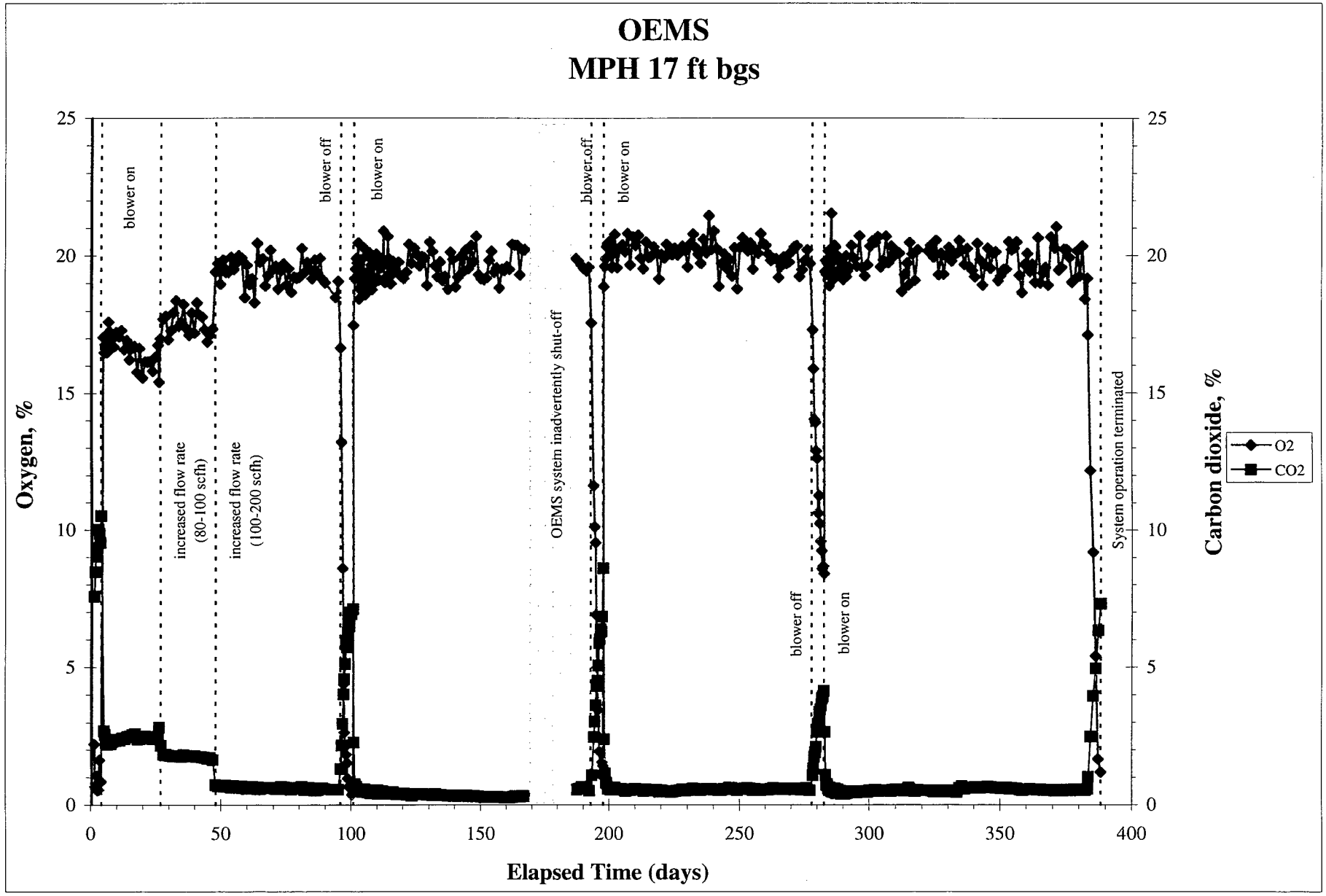

OEMS
MPG 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2


OEMS
MPG 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2


OEMS
MPG 17 ft bgs
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400


OEMS
MPH 7 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2


OEMS
MPH 12 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
O2
CO2


OEMS
MPH 17 ft bgs
Oxygen, %
Carbon dioxide, %
Elapsed Time (days)
O2
CO2
blower on
increased flow rate (80-100 scfh)
increased flow rate (100-200 scfh)
blower off
blower on
OEMS system inadvertently shut-off
blower off
blower on
blower off
blower on
System operation terminated
0
5
10
15
20
25
0
50
100
150
200
250
300
350
400

PLOTS OF PERIODIC SOIL GAS MONITORING RESULTS

for

1,2 DCB

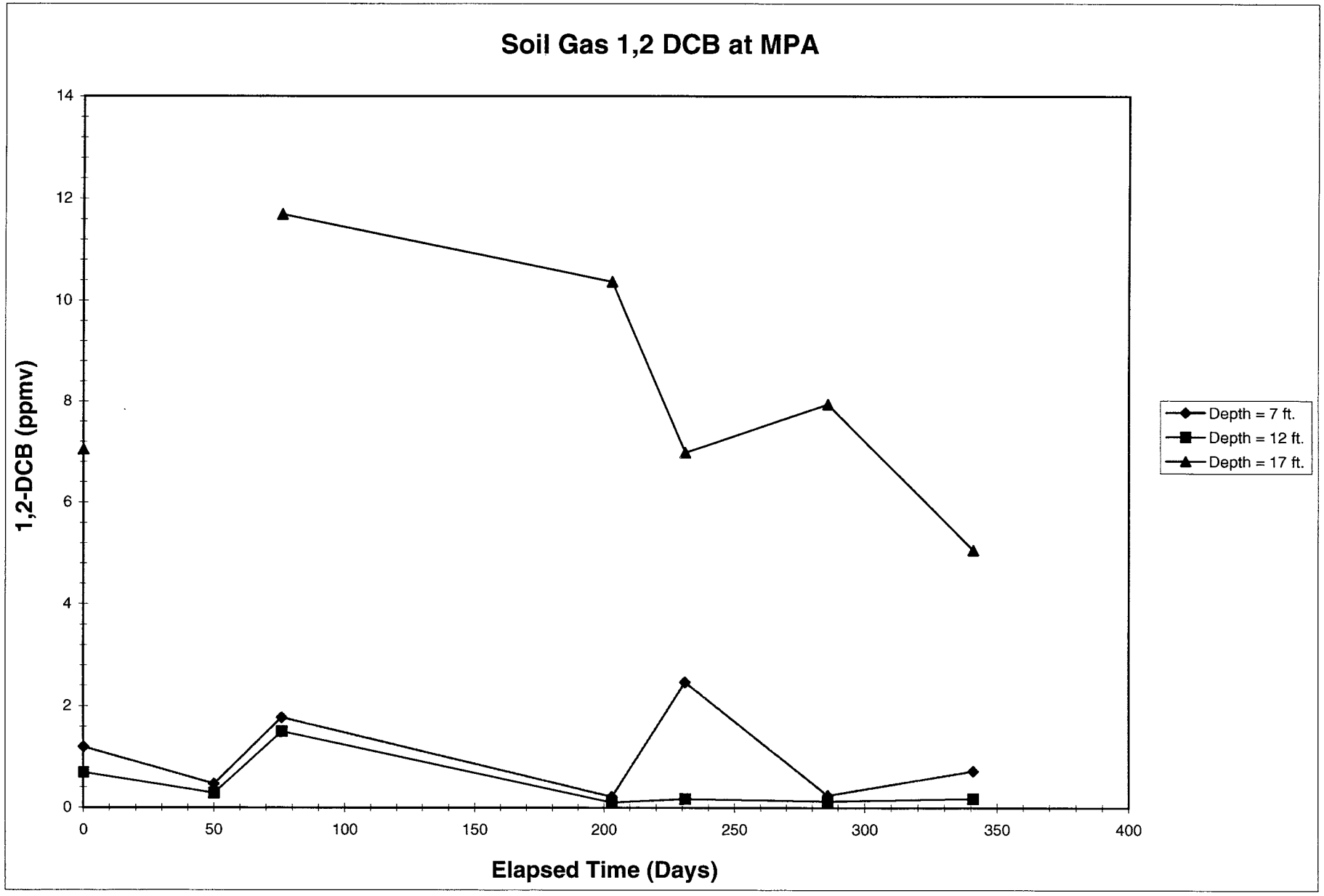
1,3 DCB

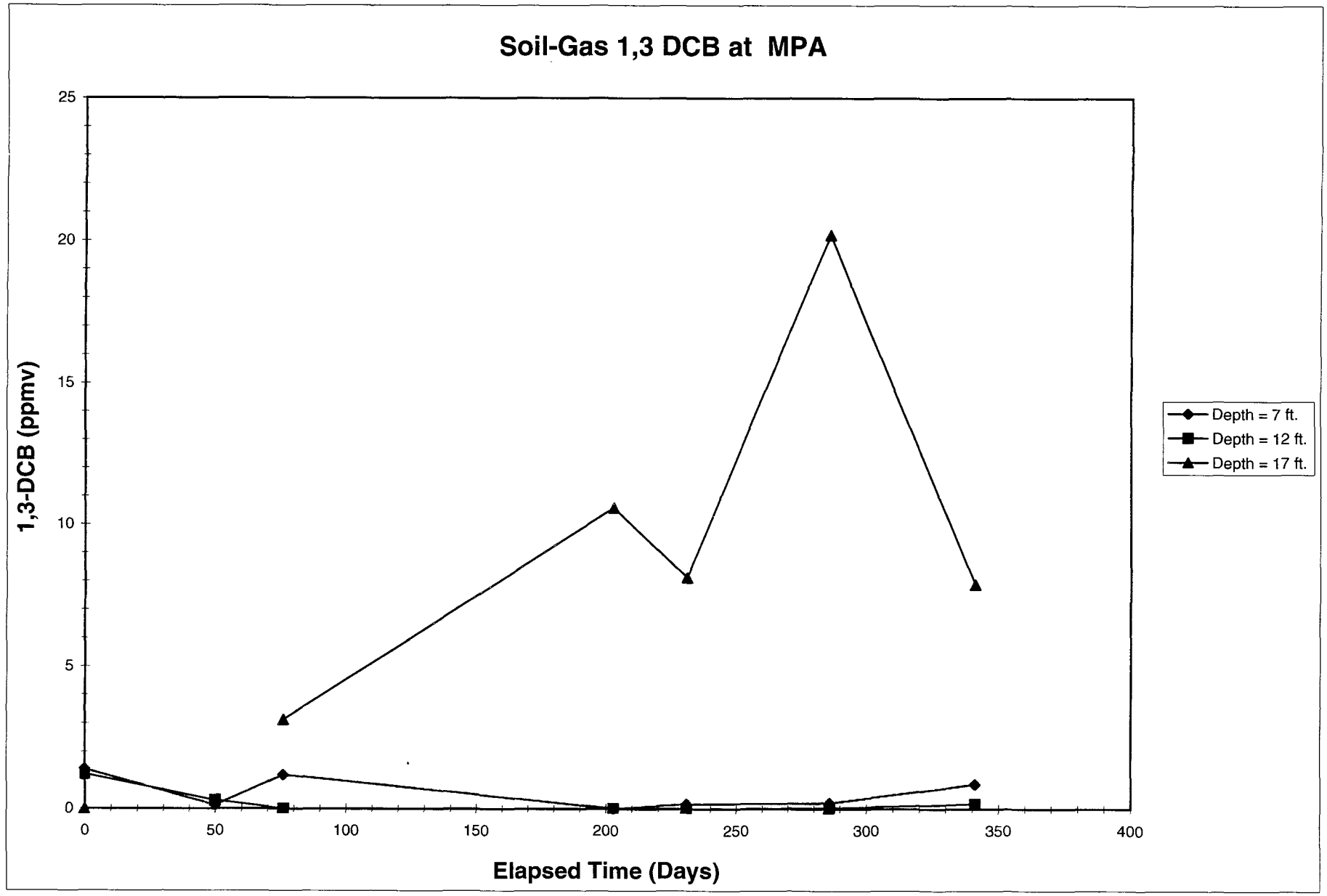
1,4 DCB

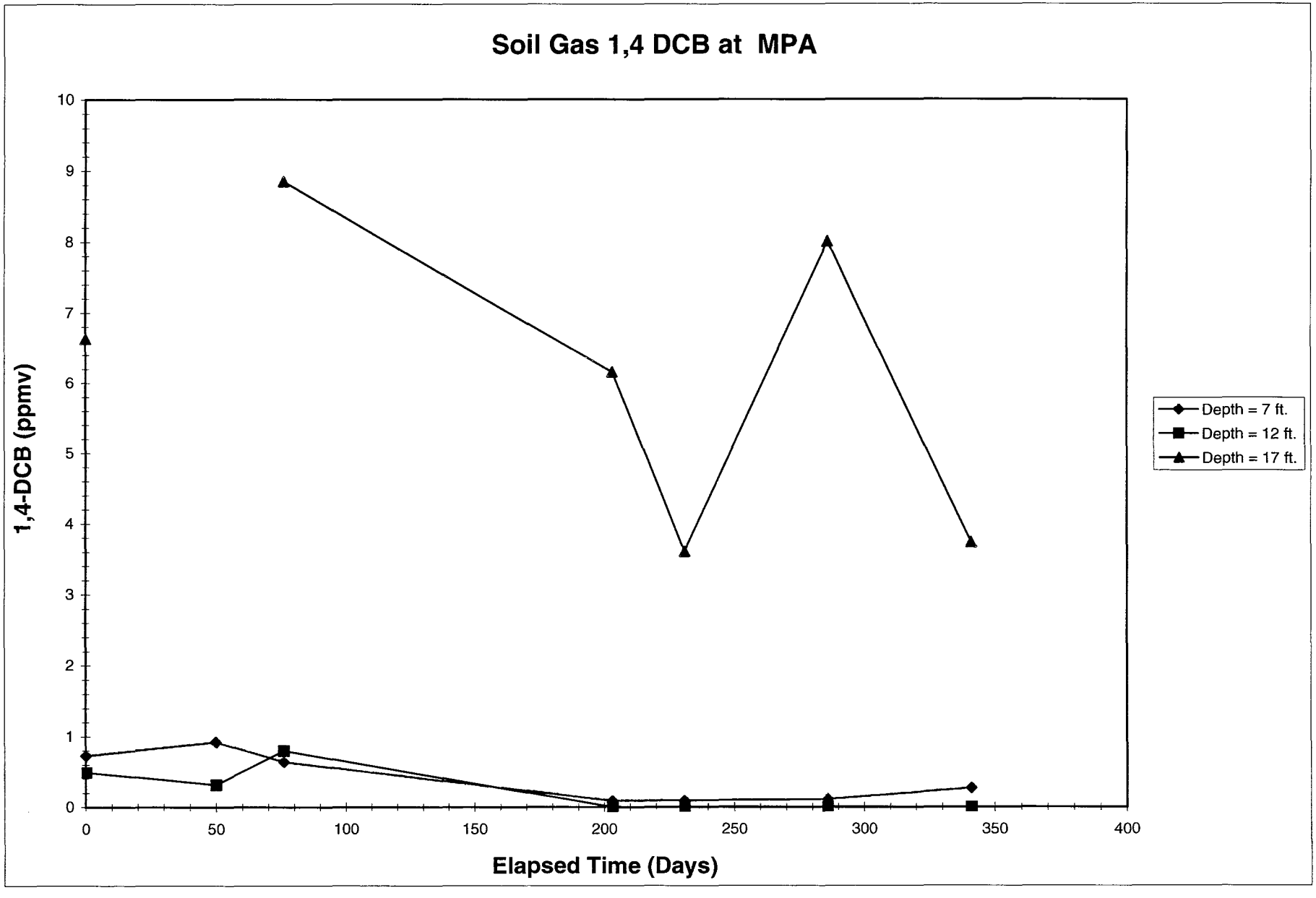
TPH

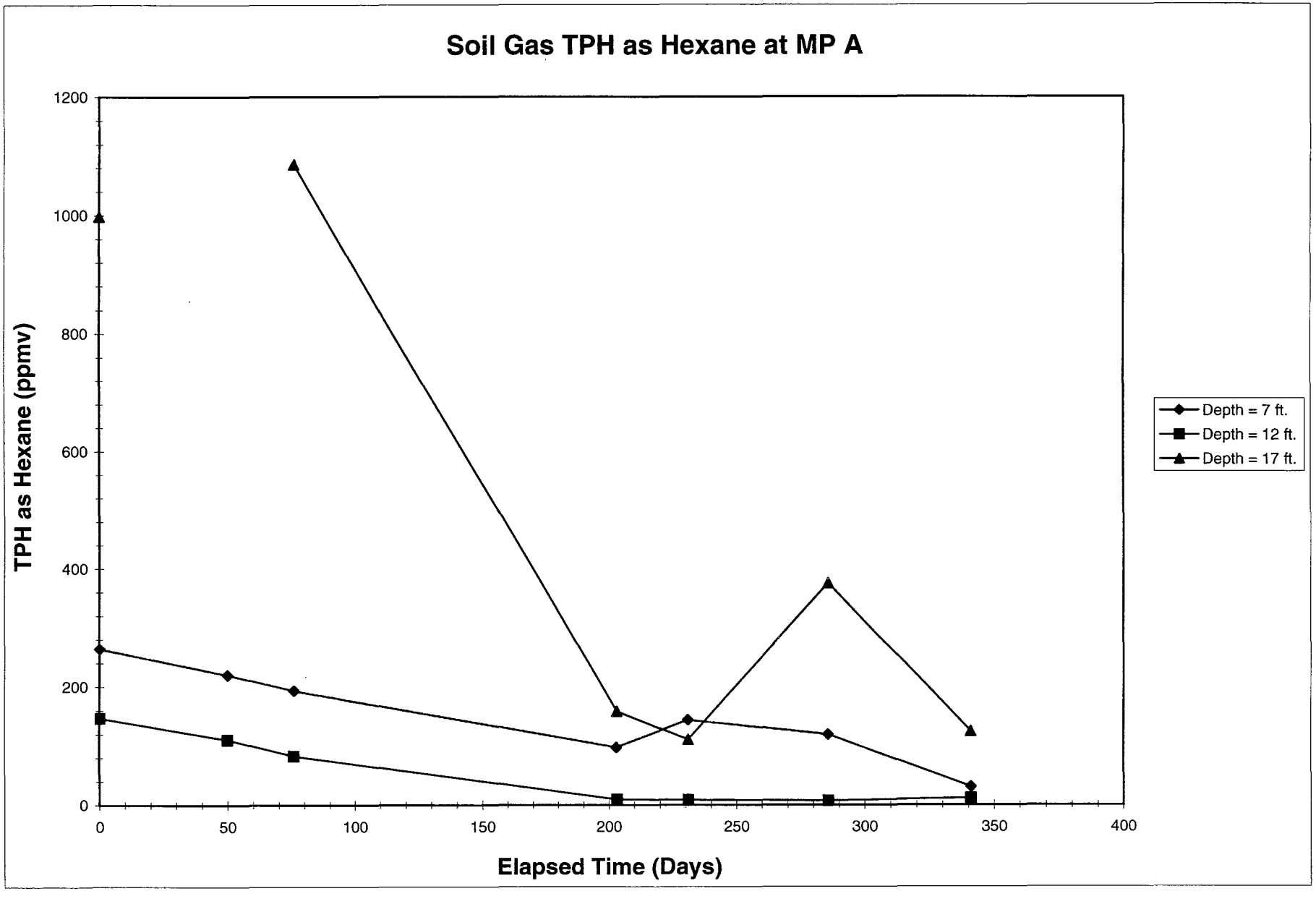
DURING BIOVENTING

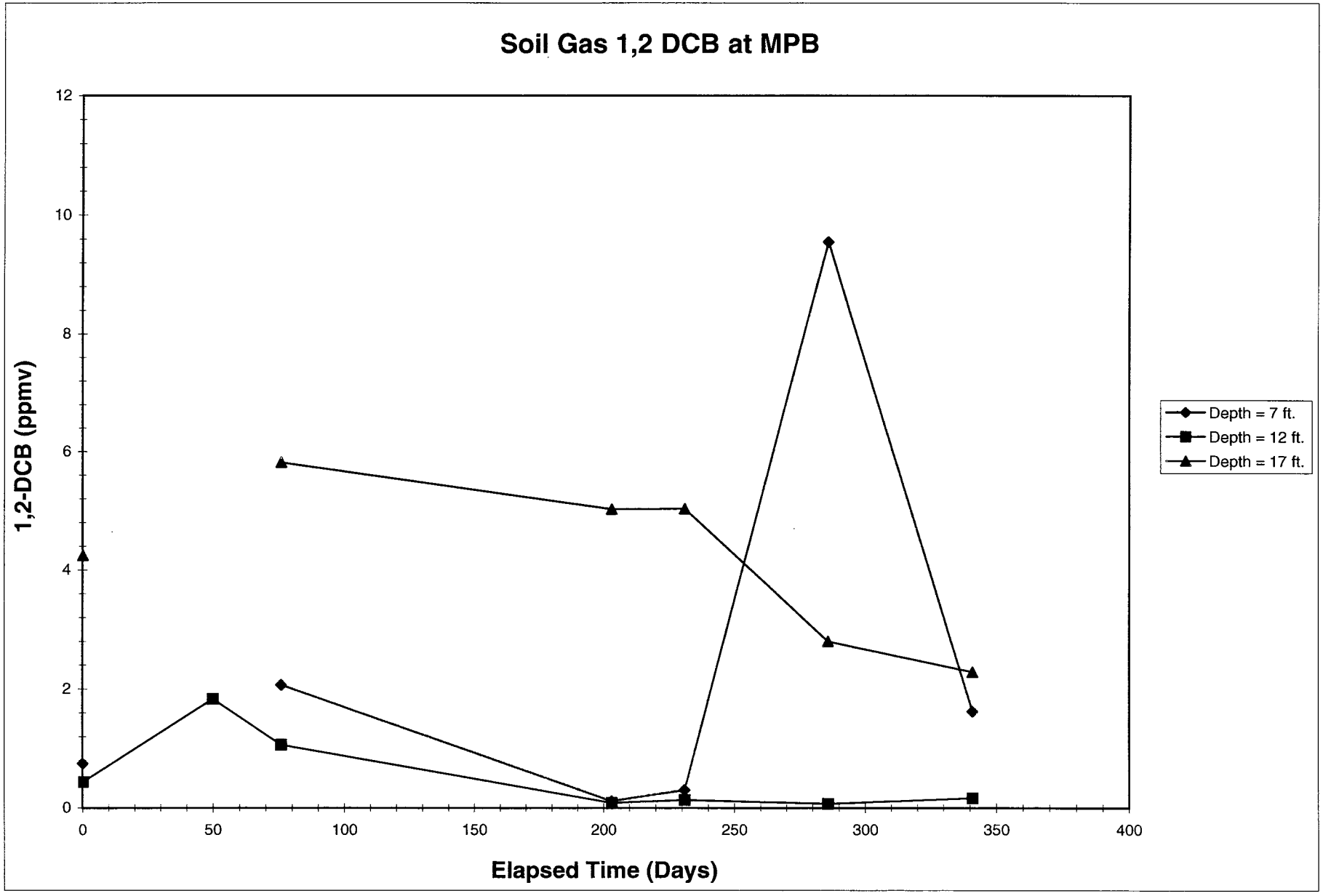
July 1997 to July 1998

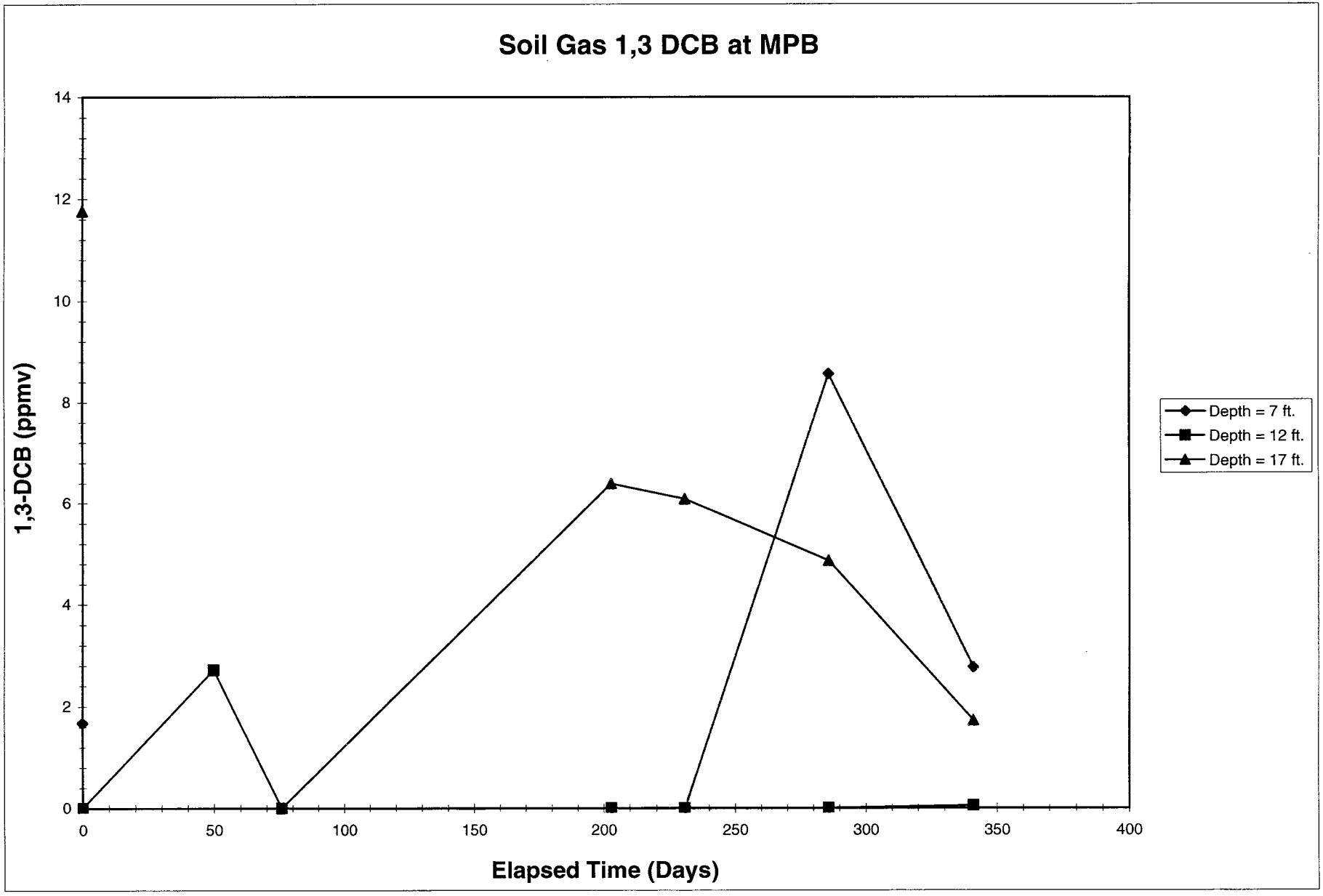

Soil Gas 1,2 DCB at MPA
1,2-DCB (ppmv)
14
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

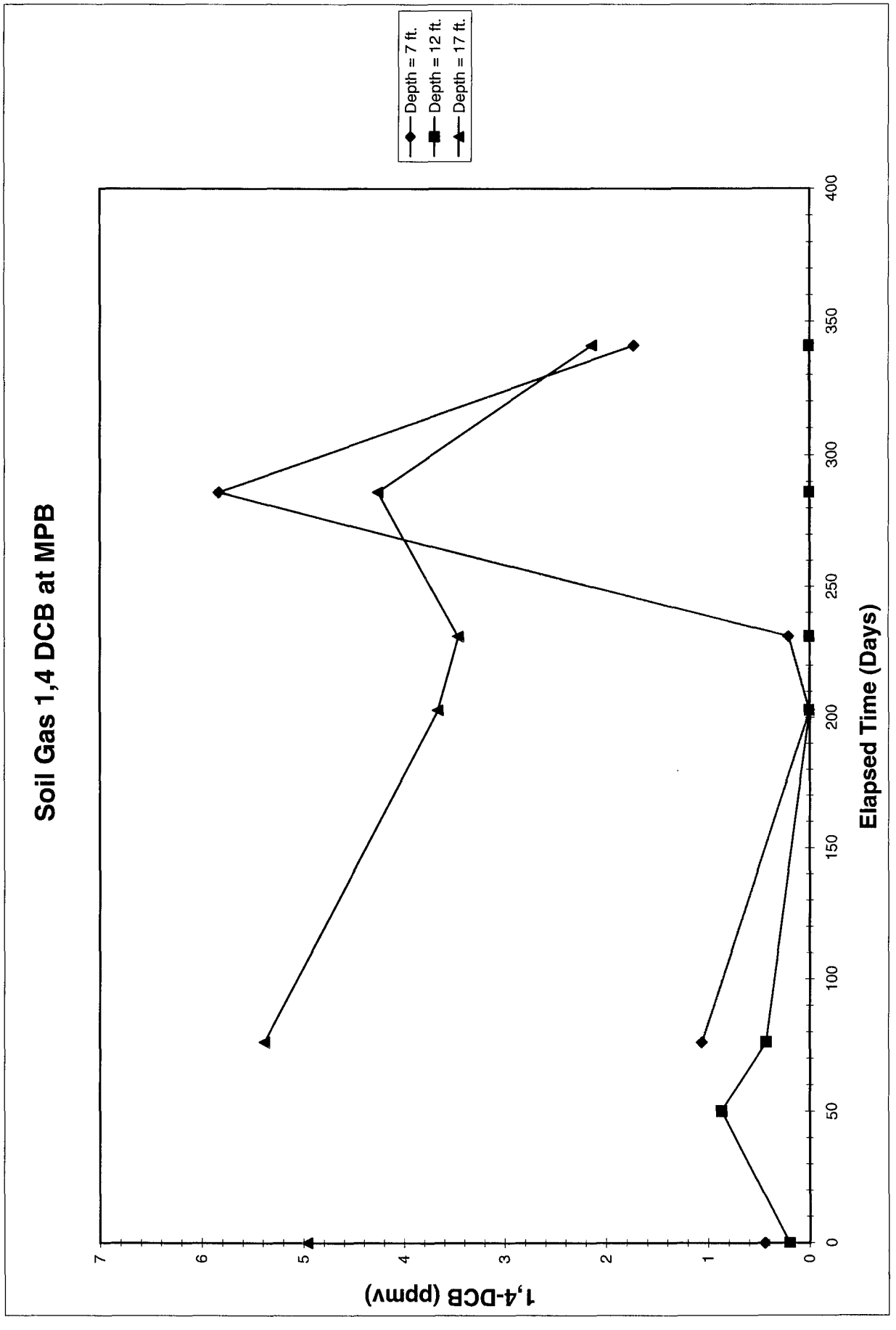

Soil-Gas 1,3 DCB at MPA
1,3-DCB (ppmv)
25
20
15
10
5
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

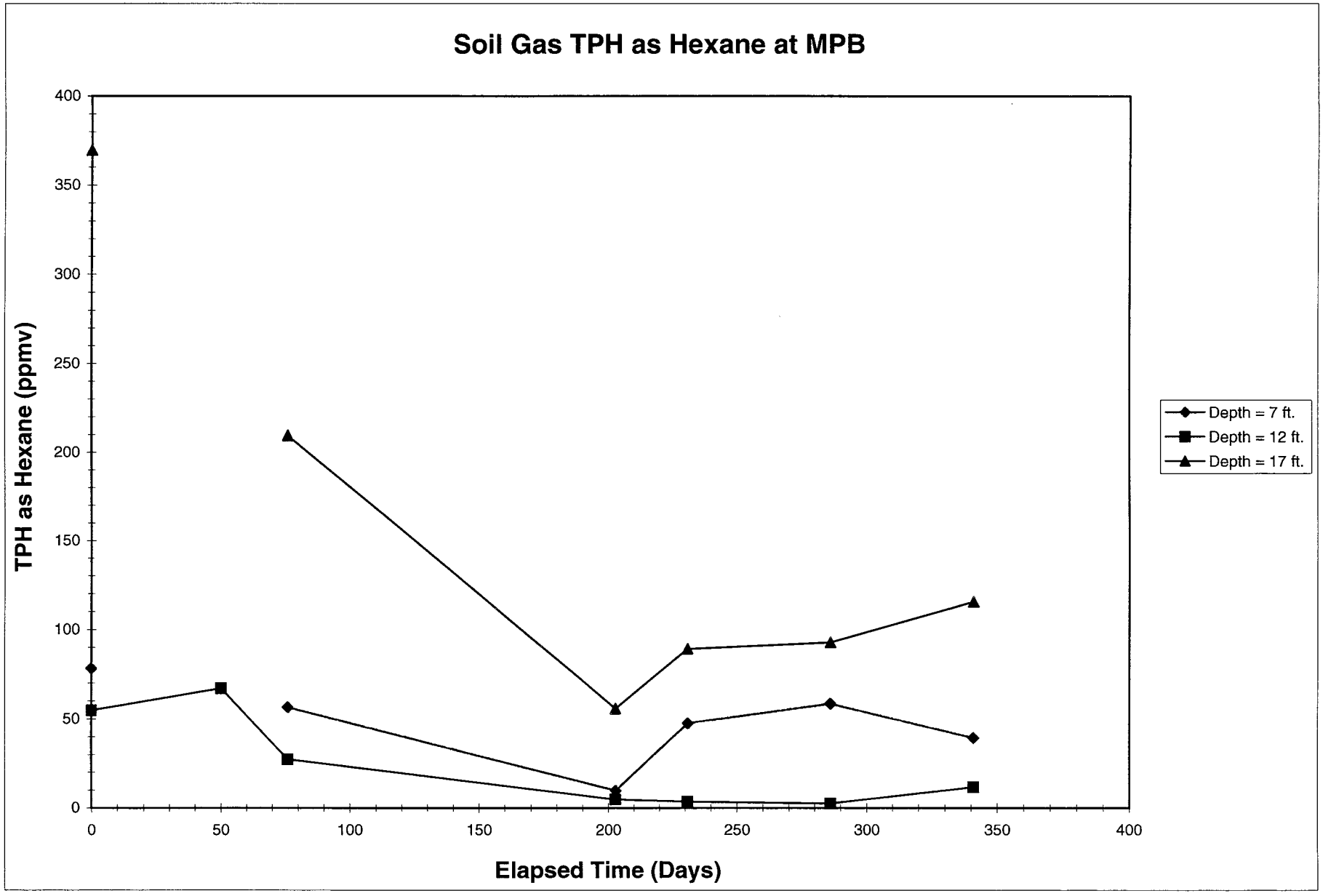

Soil Gas 1,4 DCB at MPA
1,4-DCB (ppmv)
10
9
8
7
6
5
4
3
2
1
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

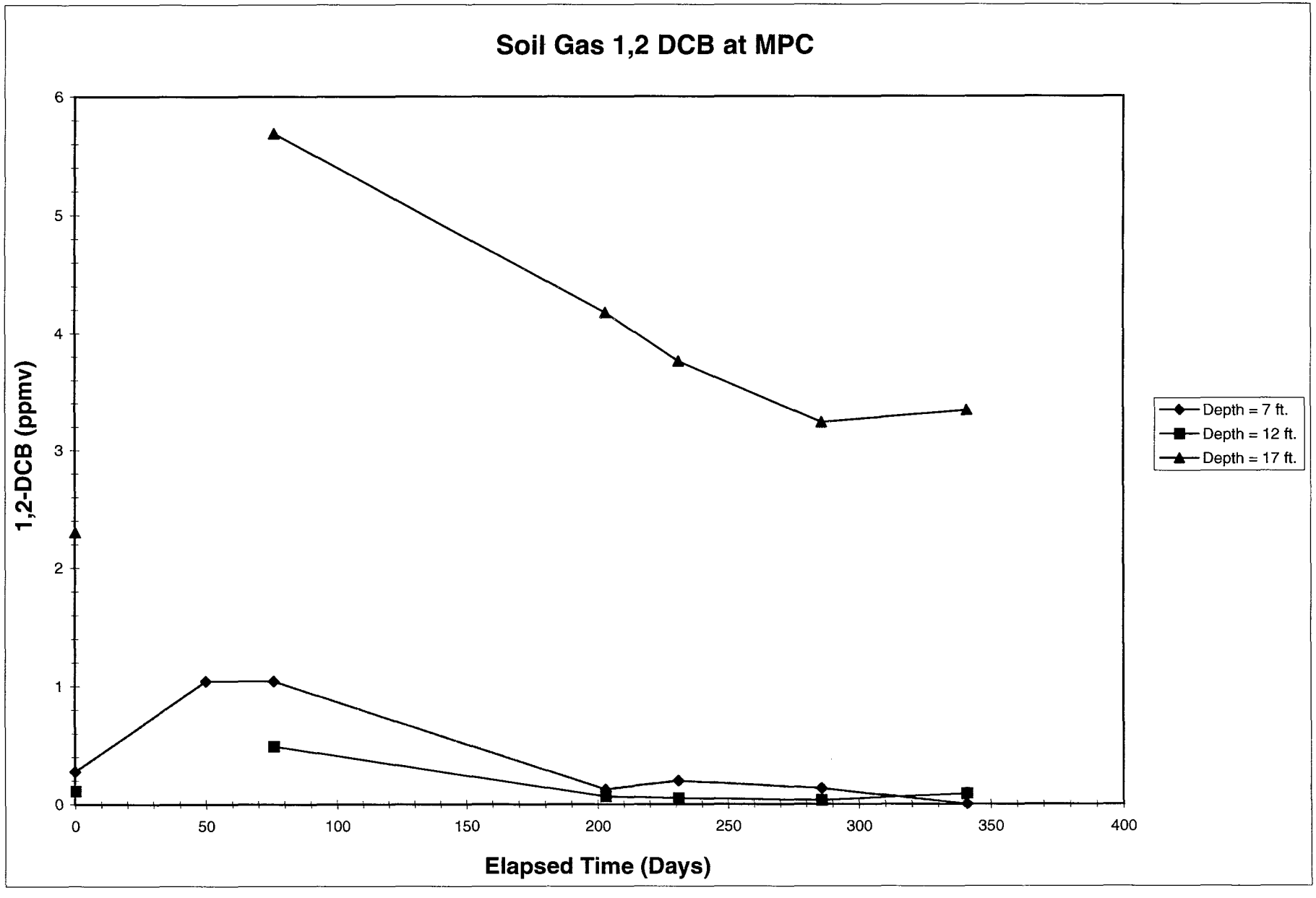

Soil Gas TPH as Hexane at MP A
TPH as Hexane (ppmv)
1200
1000
800
600
400
200
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

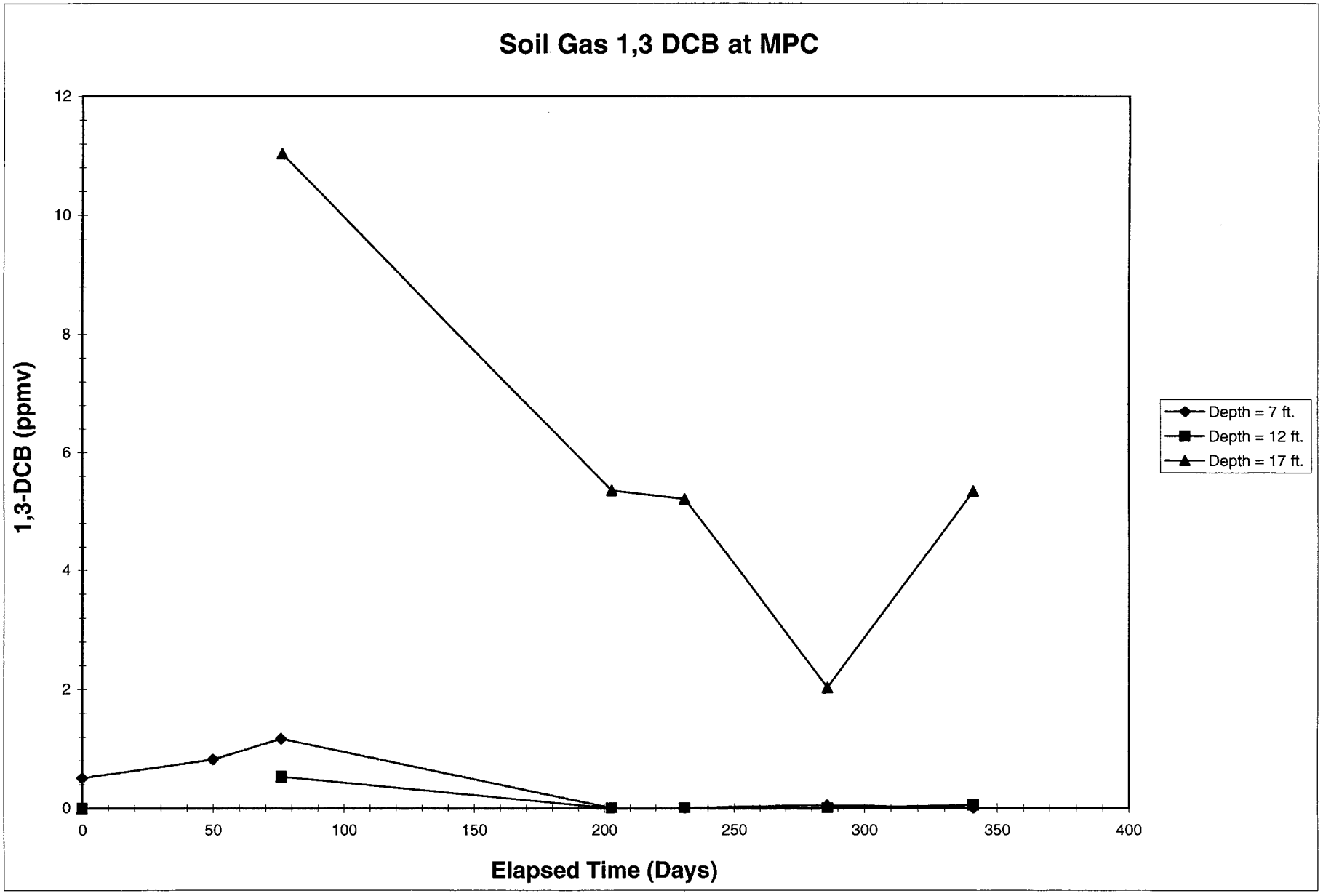

Soil Gas 1,2 DCB at MPB
1,2-DCB (ppmv)
0
2
4
6
8
10
12
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

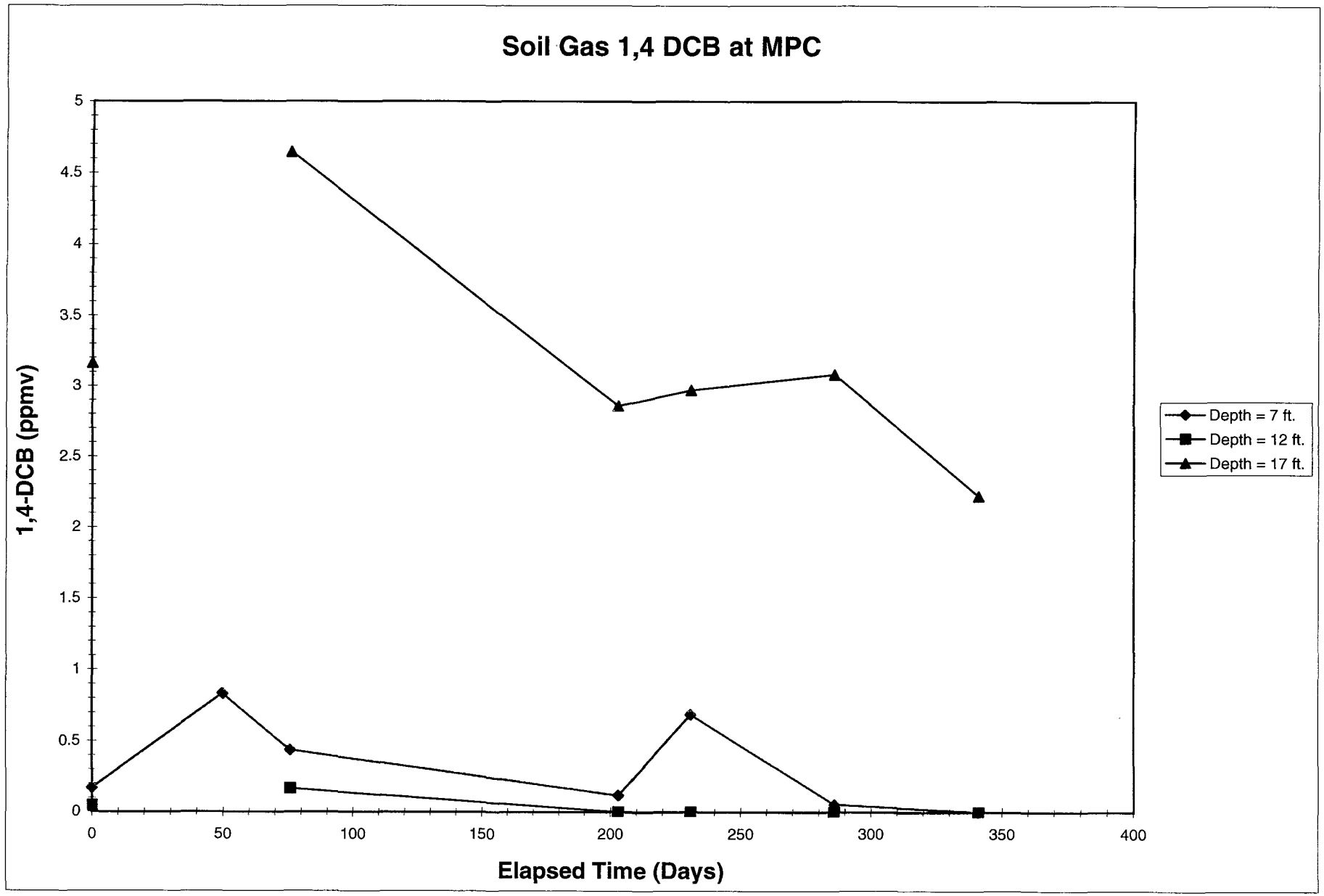

Soil Gas 1,3 DCB at MPB
1,3-DCB (ppmv)
14
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

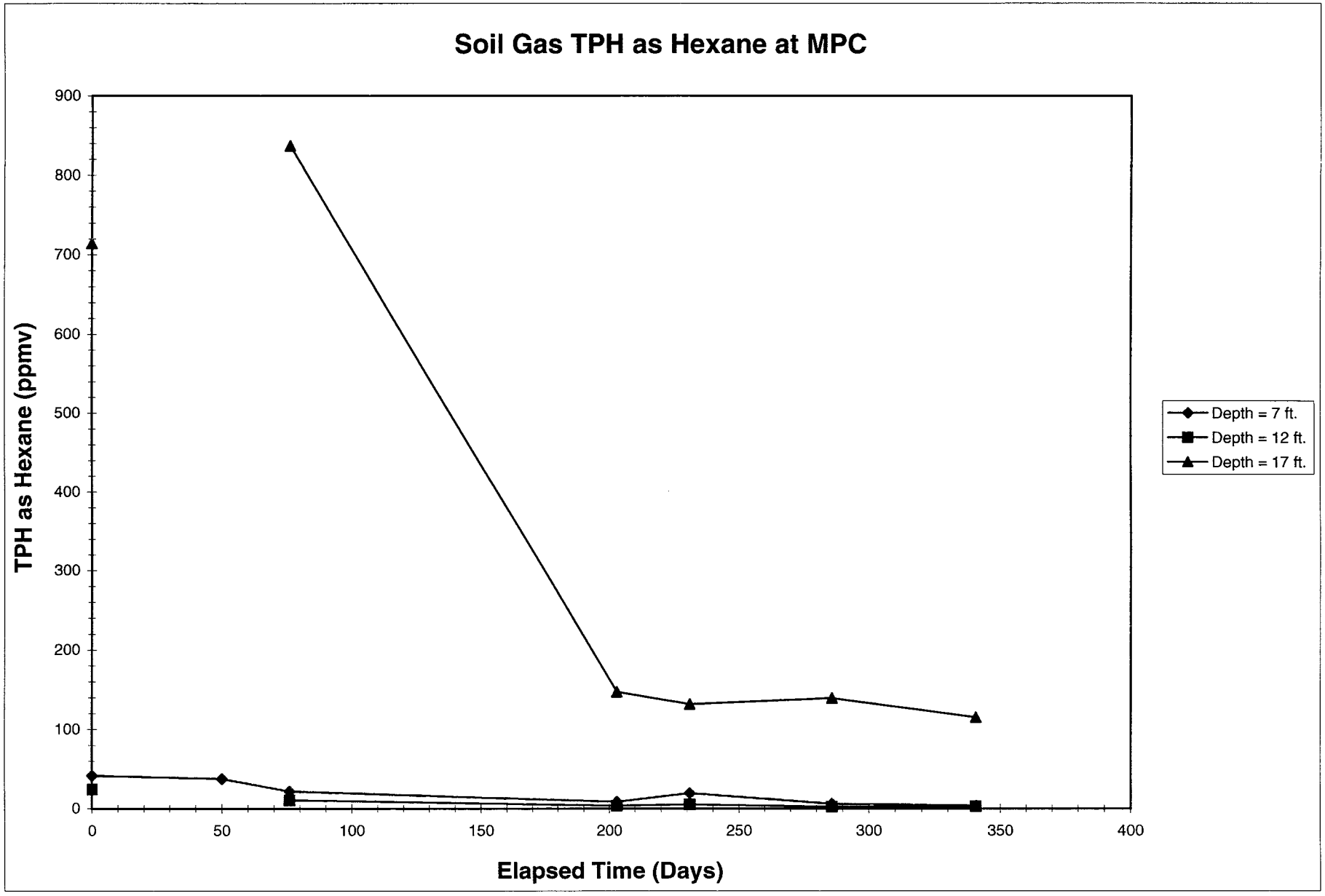

Soil Gas 1,4 DCB at MPB
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
Elapsed Time (Days)
0
50
100
150
200
250
300
350
400

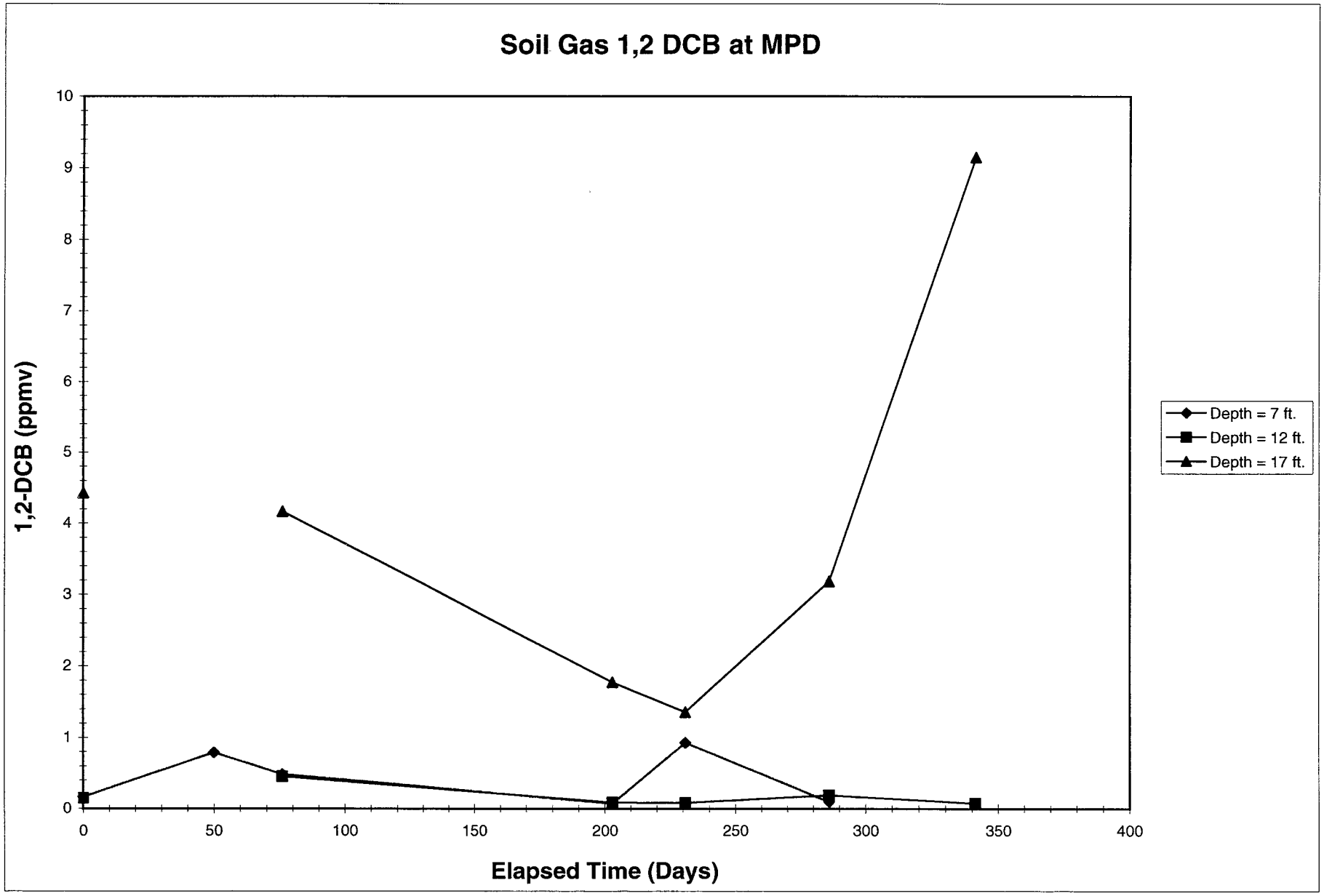

Soil Gas TPH as Hexane at MPB
TPH as Hexane (ppmv)
400
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

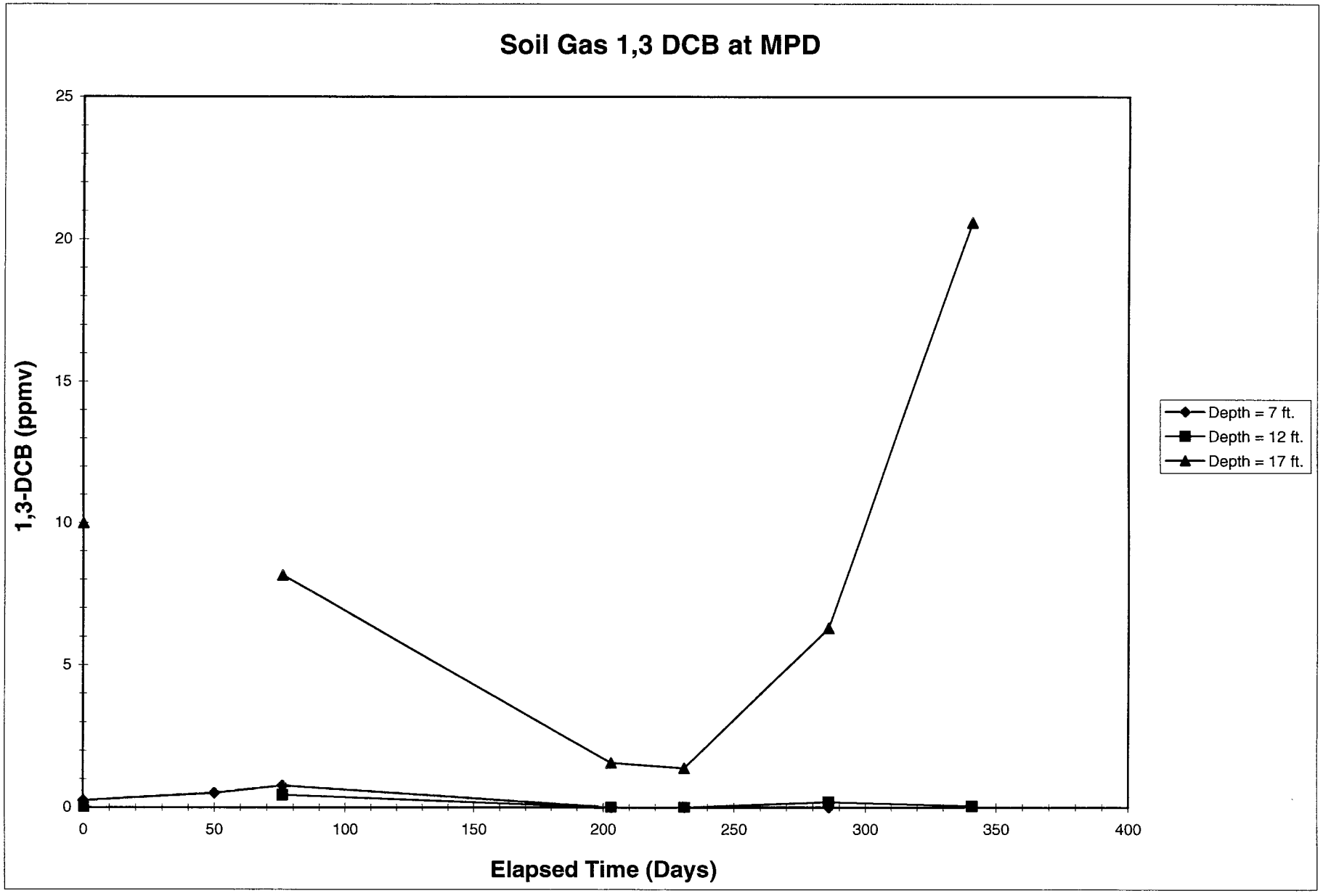

Soil Gas 1,2 DCB at MPC
1,2-DCB (ppmv)
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

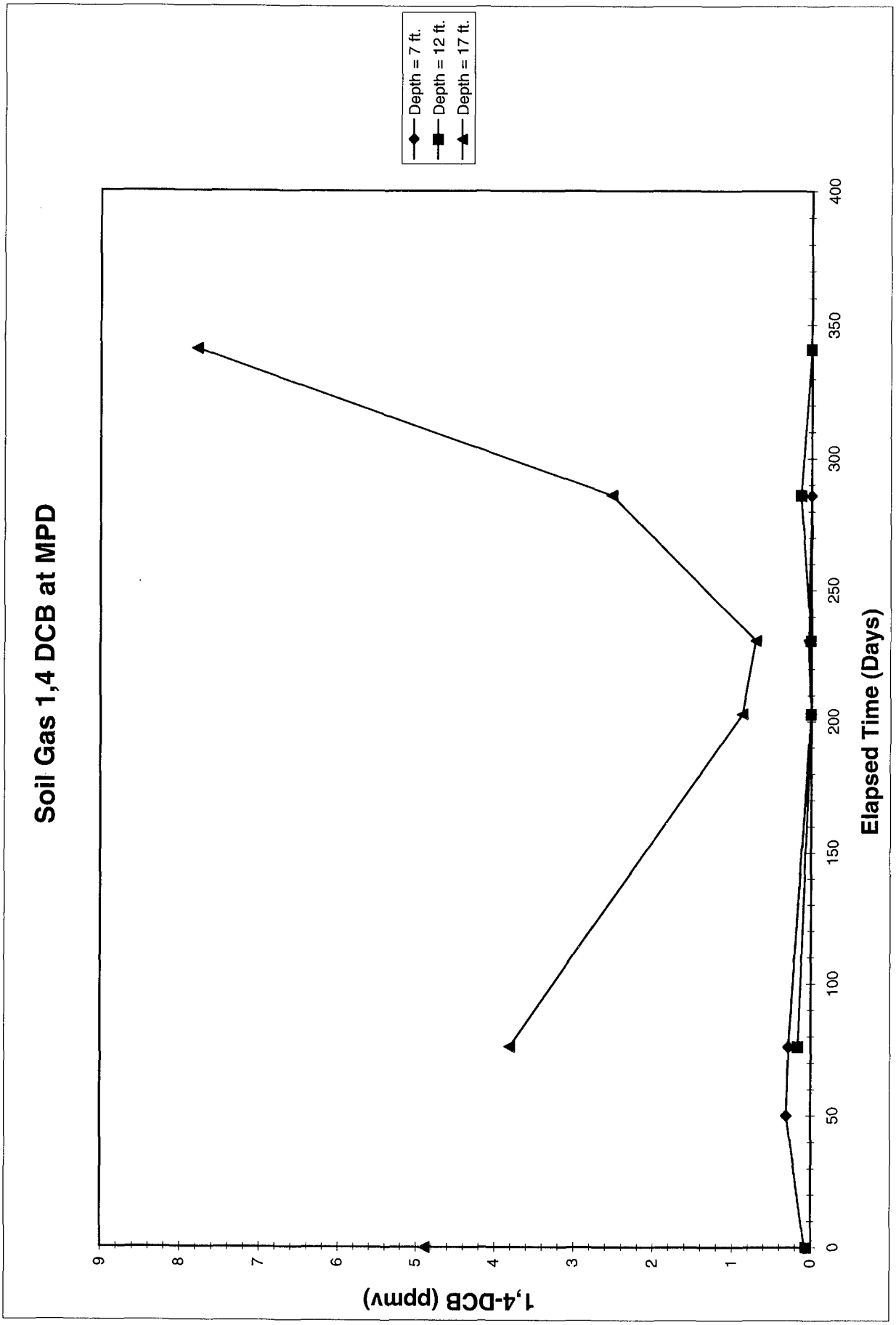

Soil Gas 1,3 DCB at MPC
1,3-DCB (ppmv)
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

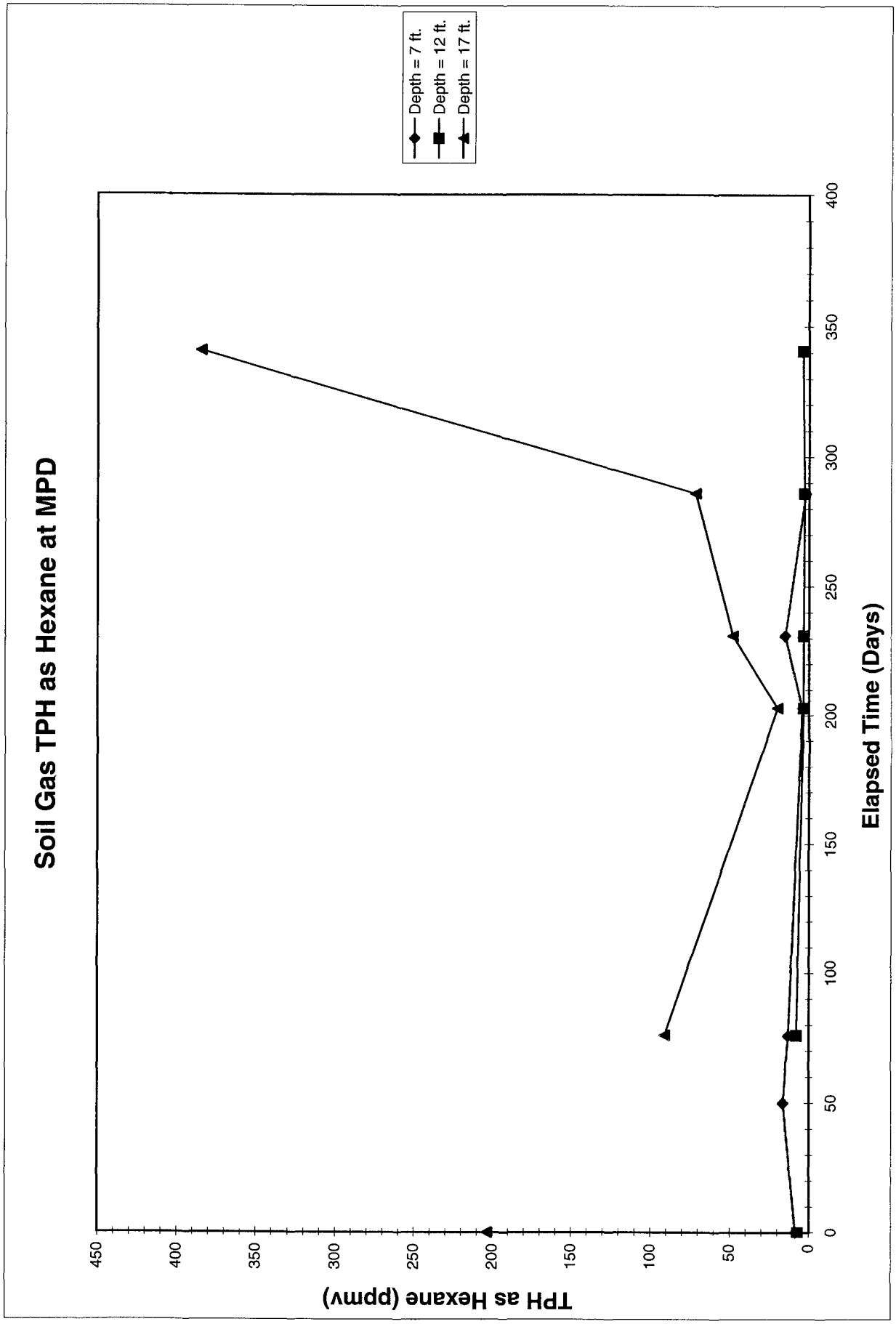

Soil Gas 1,4 DCB at MPC
1,4-DCB (ppmv)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

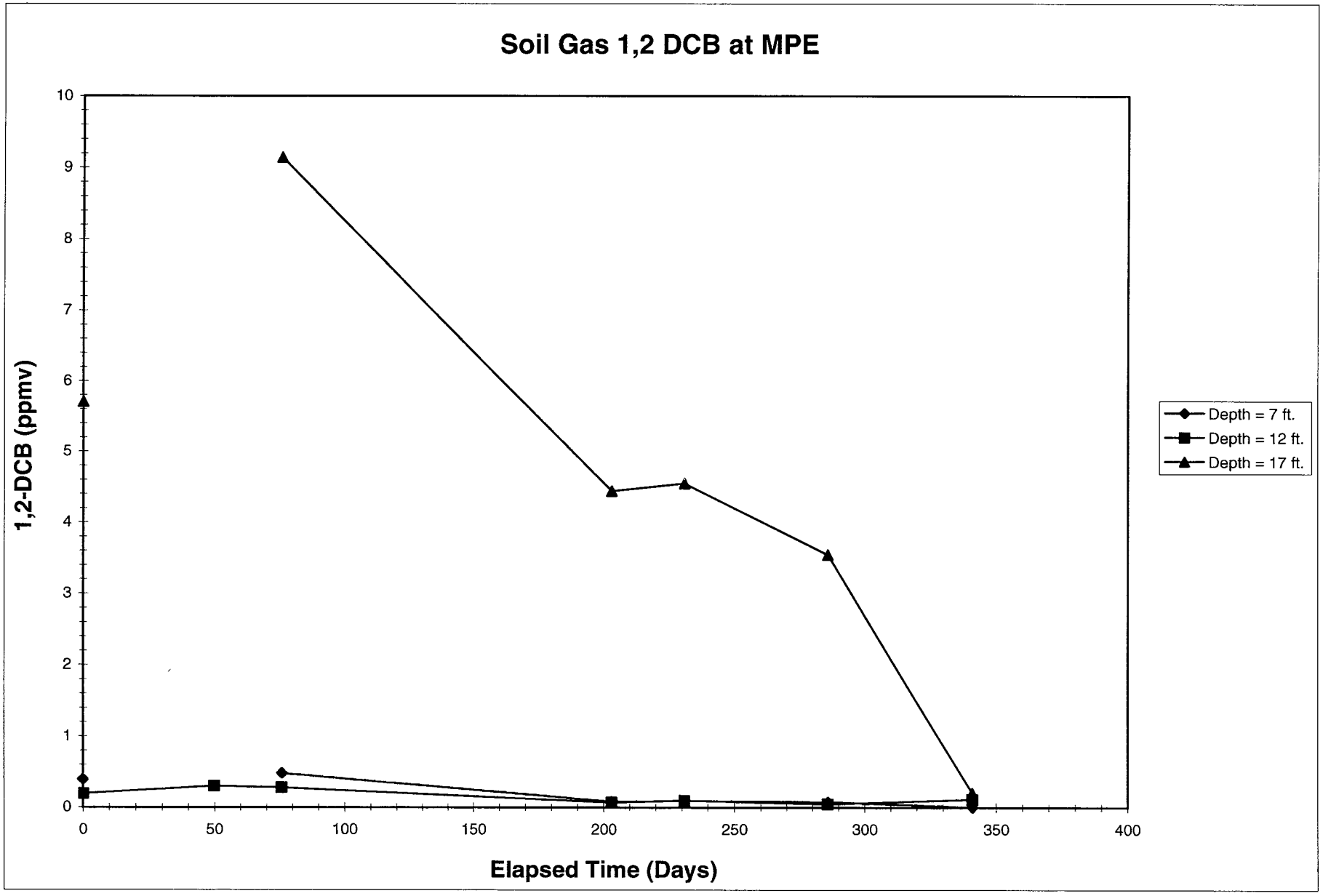

Soil Gas TPH as Hexane at MPC
TPH as Hexane (ppmv)
900
800
700
600
500
400
300
200
100
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

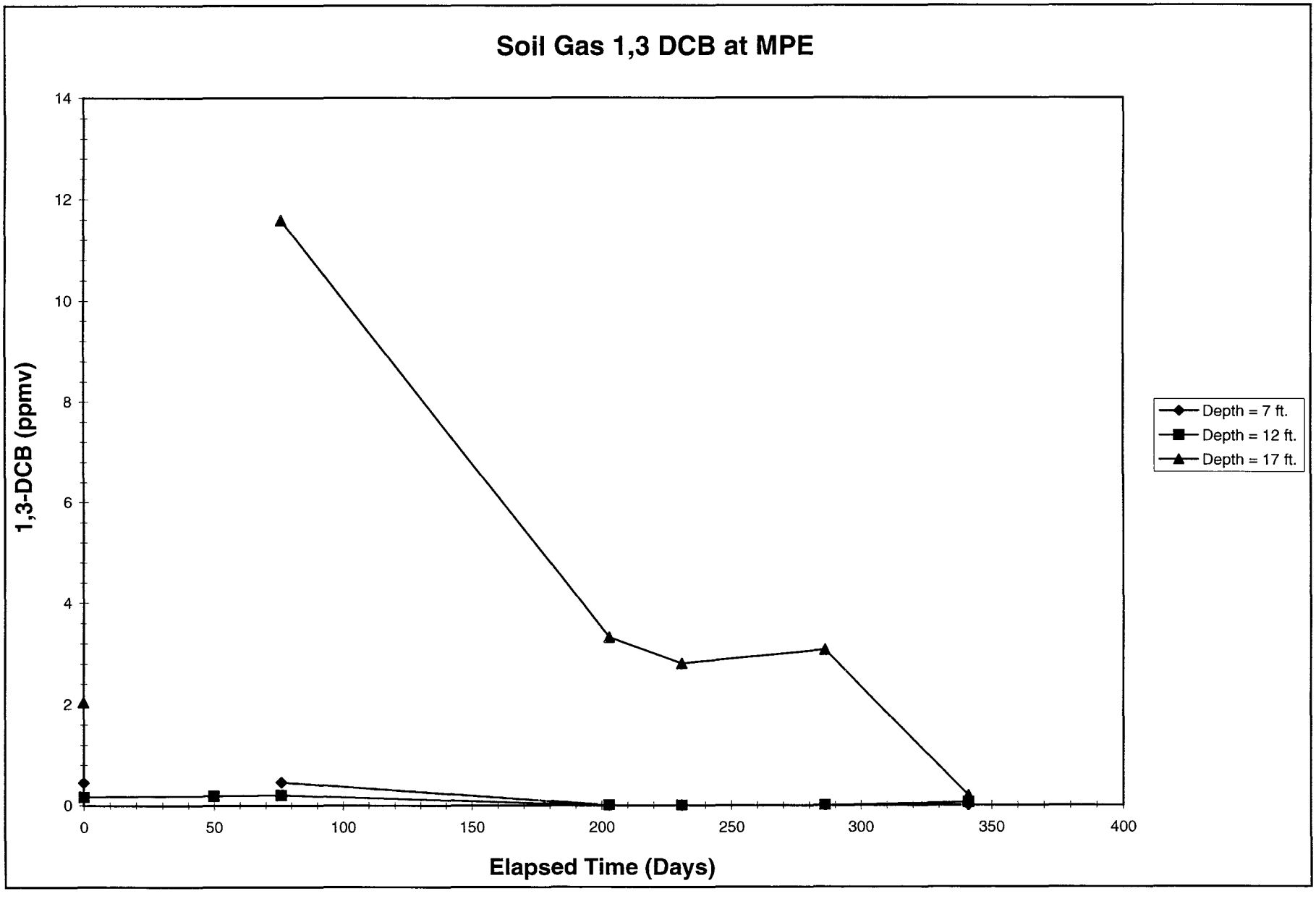

Soil Gas 1,2 DCB at MPD
1,2-DCB (ppmv)
Elapsed Time (Days)
0
1
2
3
4
5
6
7
8
9
10
0
50
100
150
200
250
300
350
400
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

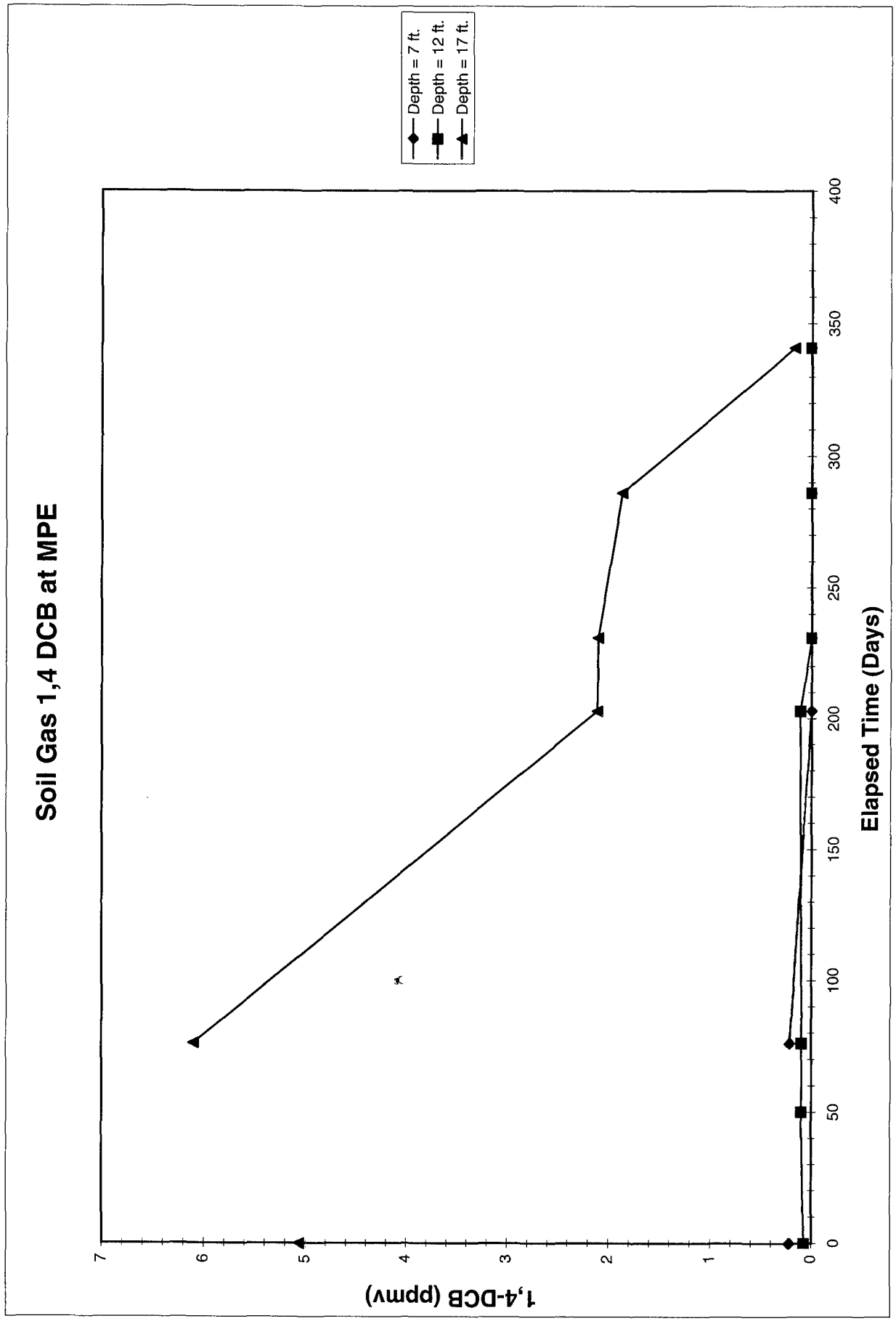

Soil Gas 1,3 DCB at MPD
1,3-DCB (ppmv)
25
20
15
10
5
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

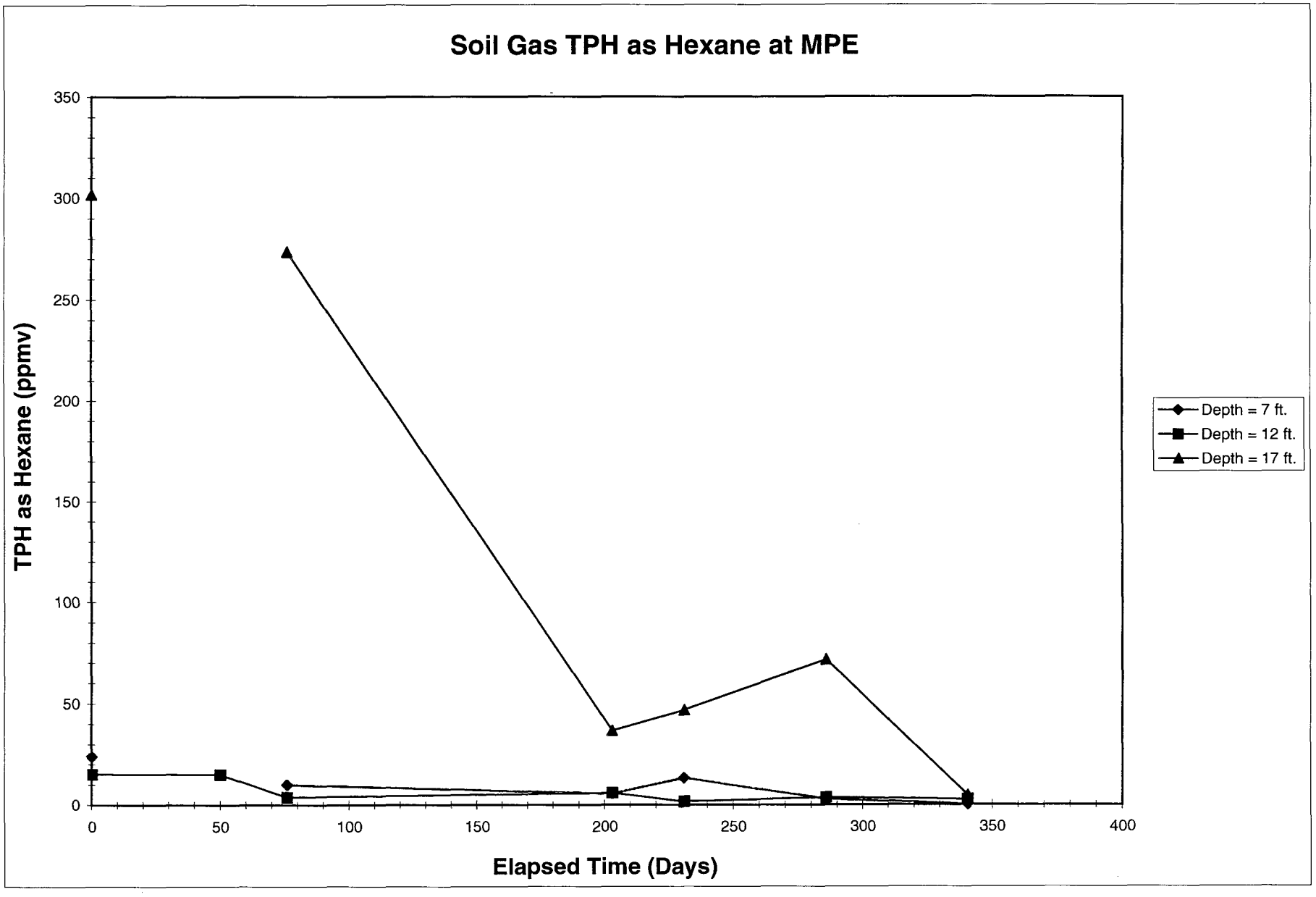

Soil Gas 1,4 DCB at MPD
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
8
9
Elapsed Time (Days)
0
50
100
150
200
250
300
350
400

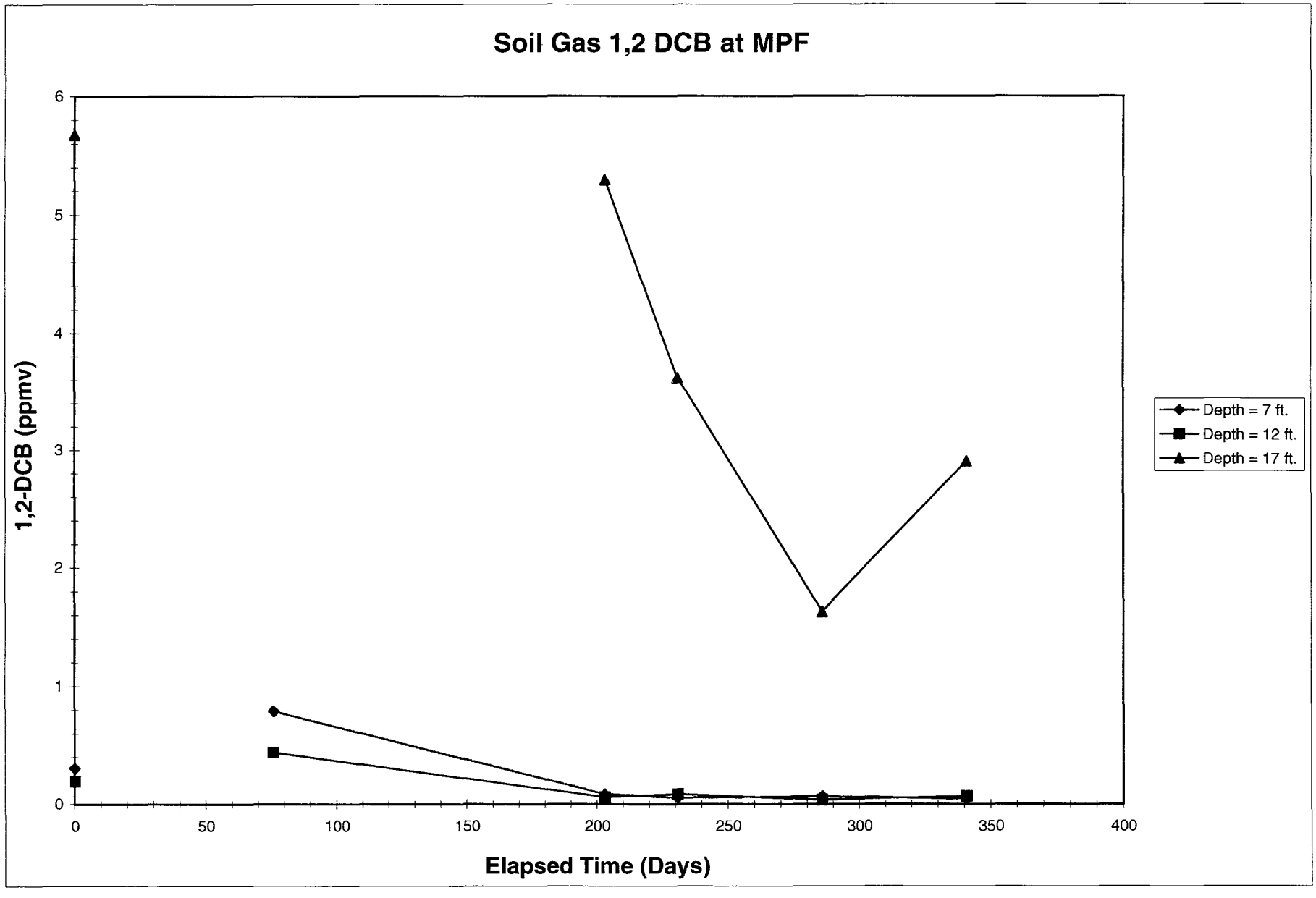

Soil Gas TPH as Hexane at MPD
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.
TPH as Hexane (ppmv)
450
400
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)

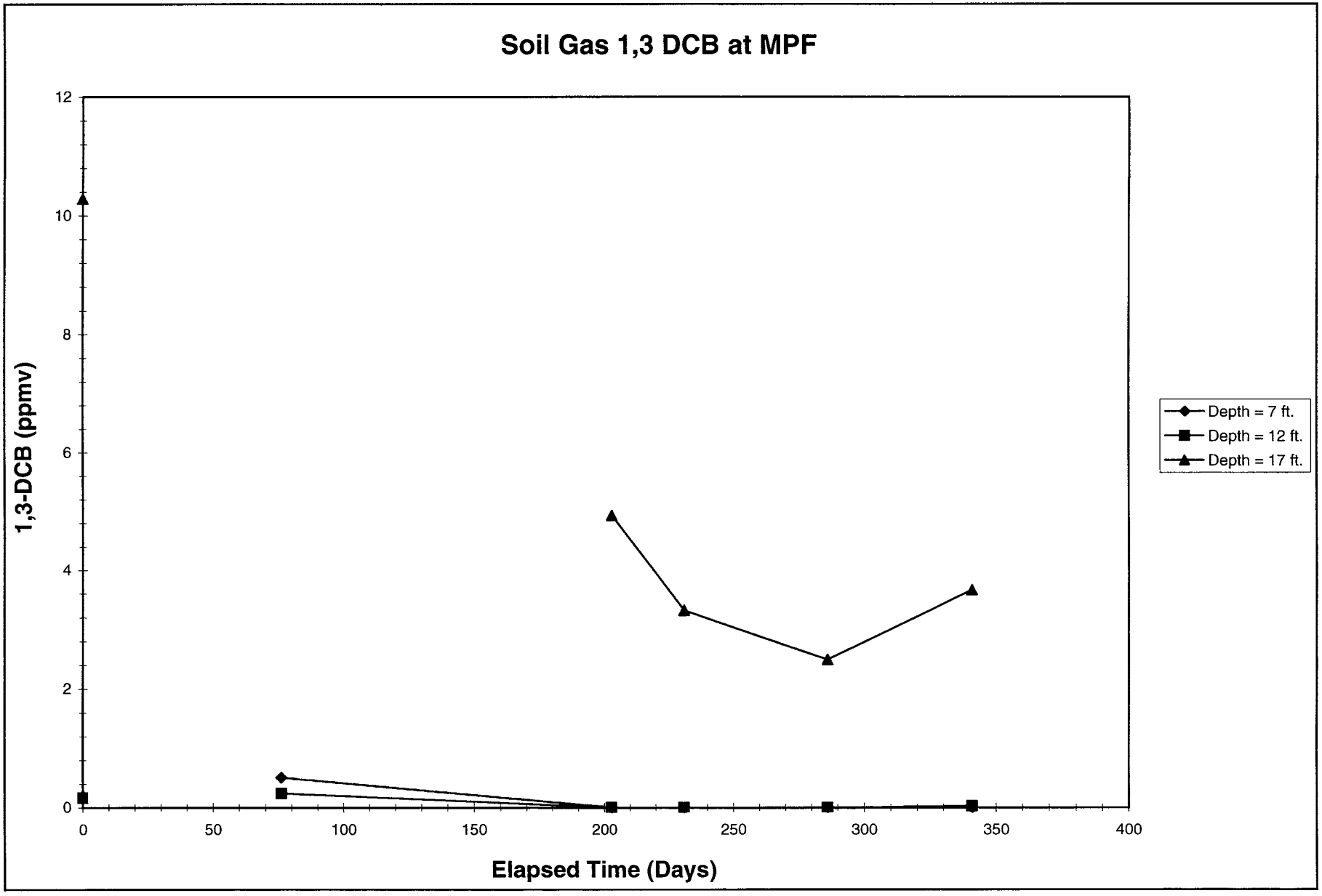

Soil Gas 1,2 DCB at MPE
1,2-DCB (ppmv)
10
9
8
7
6
5
4
3
2
1
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

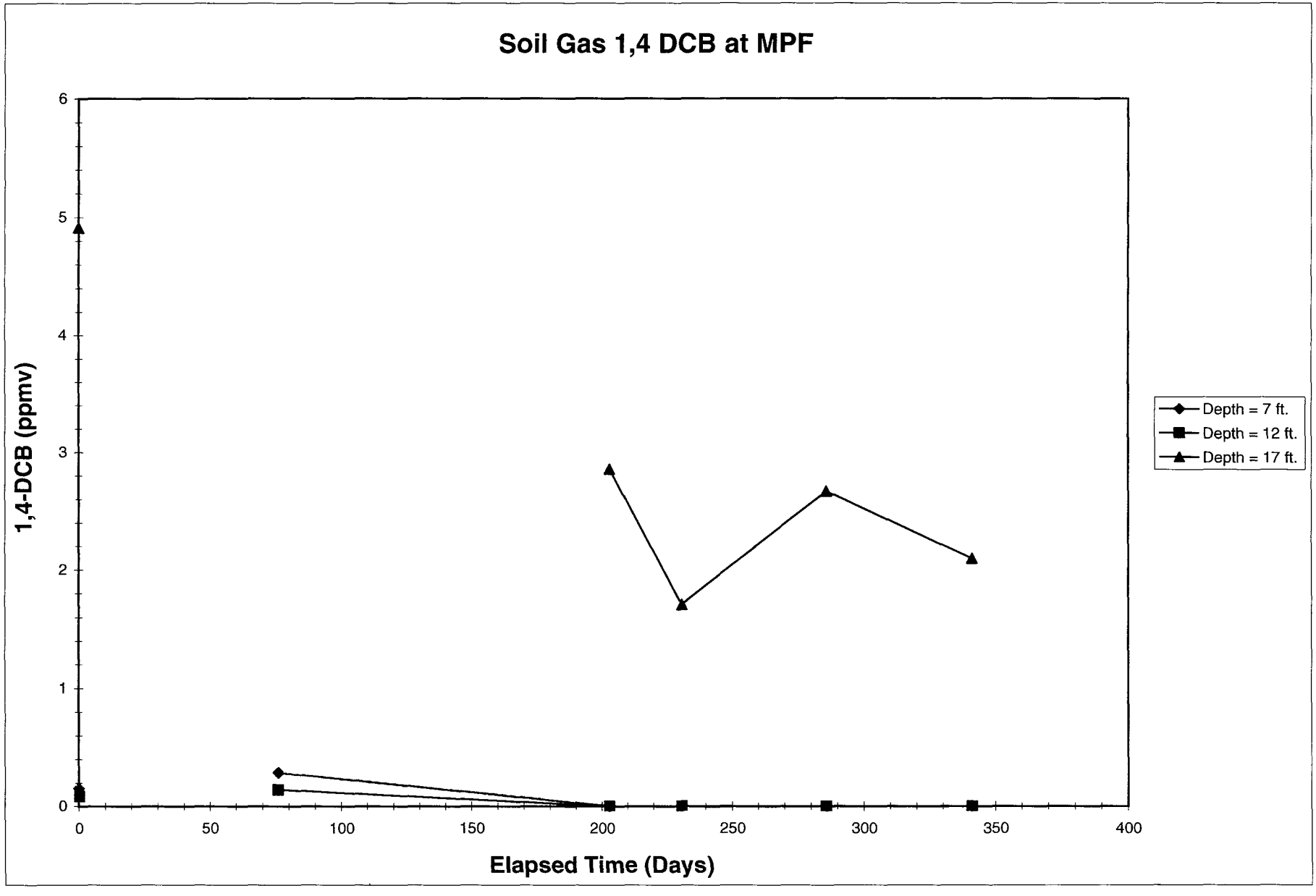

Soil Gas 1,3 DCB at MPE
1,3-DCB (ppmv)
14
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

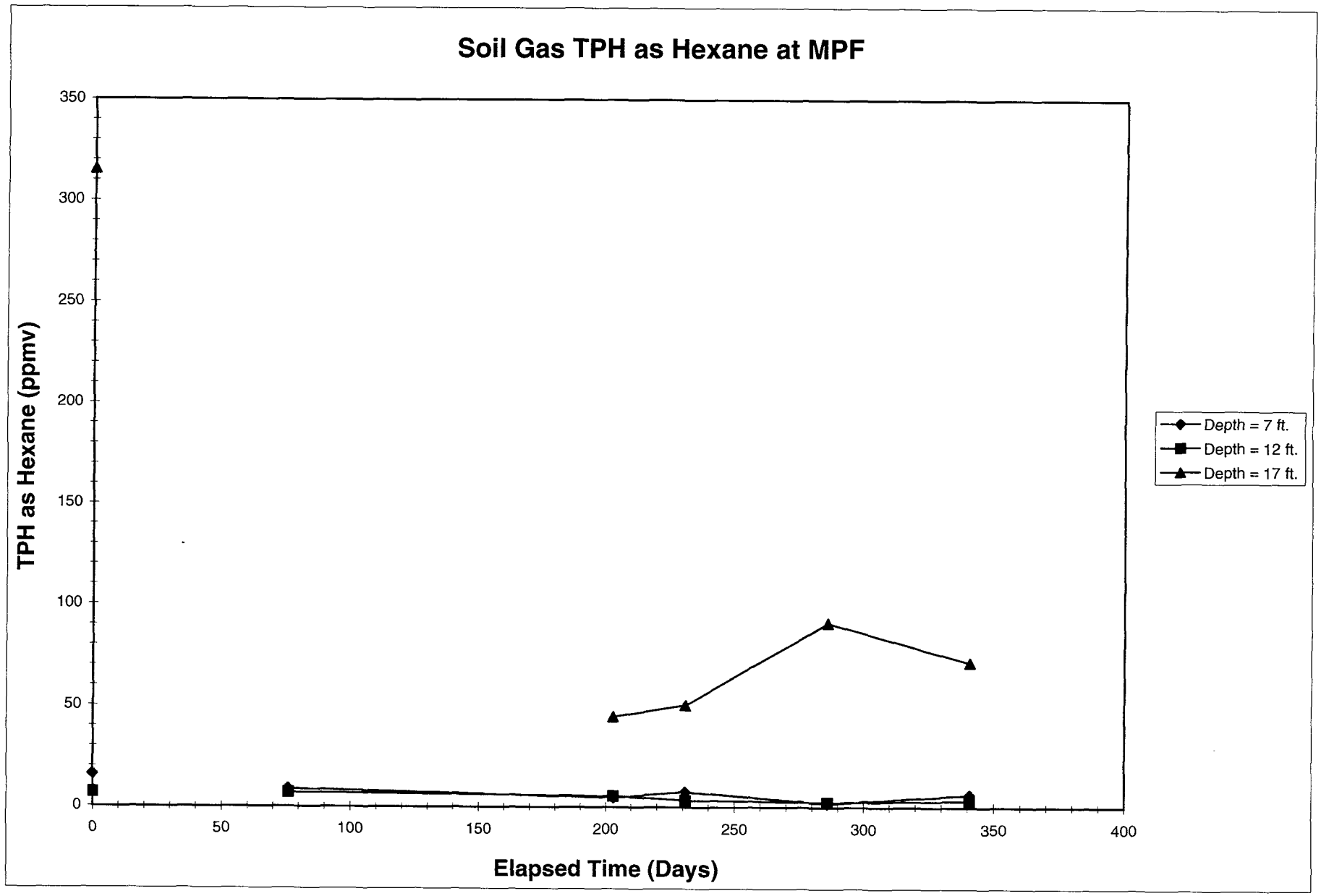

Soil Gas 1,4 DCB at MPE
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
Elapsed Time (Days)
0
50
100
150
200
250
300
350
400

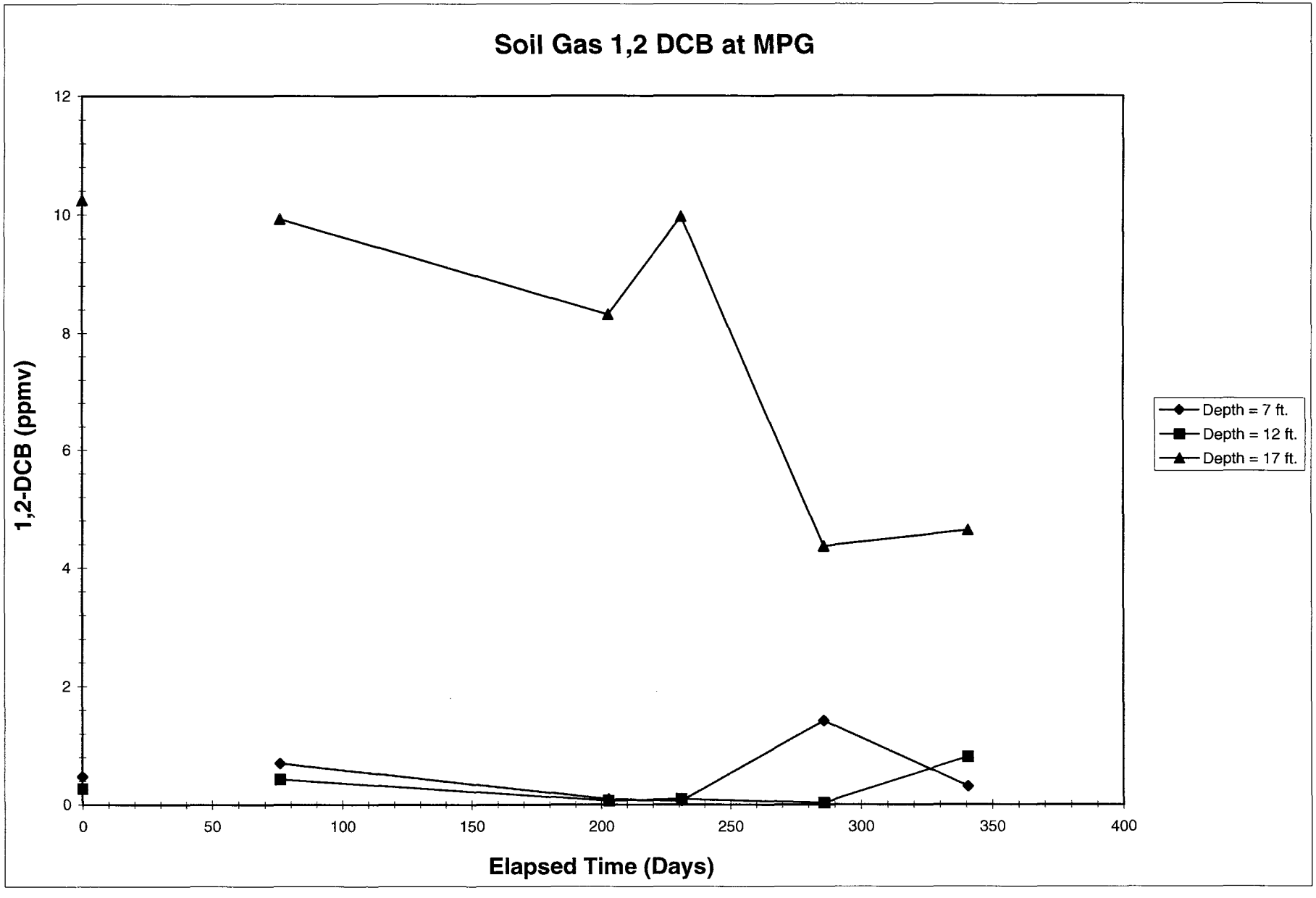

Soil Gas TPH as Hexane at MPE
TPH as Hexane (ppmv)
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

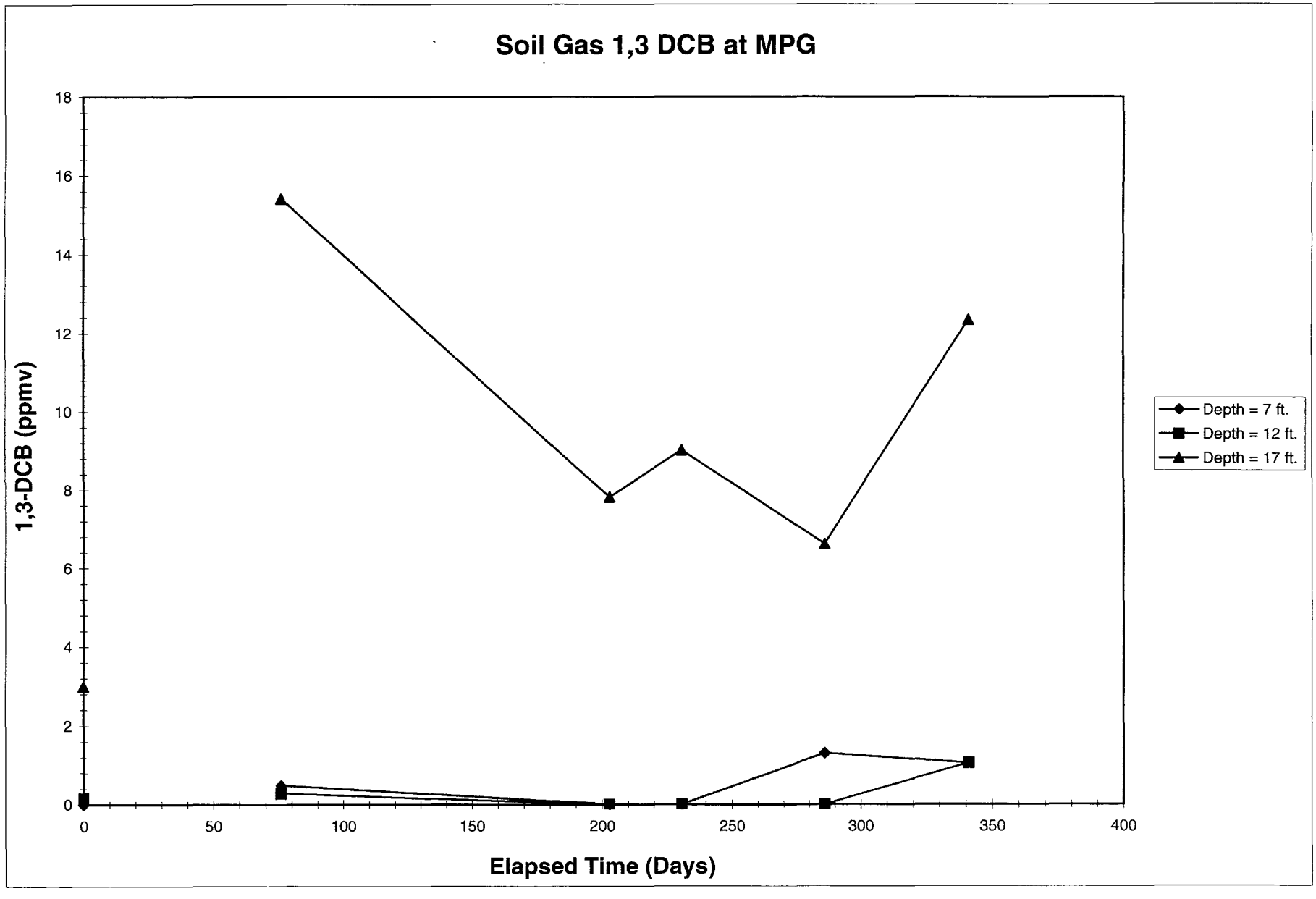

Soil Gas 1,2 DCB at MPF
1,2-DCB (ppmv)
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

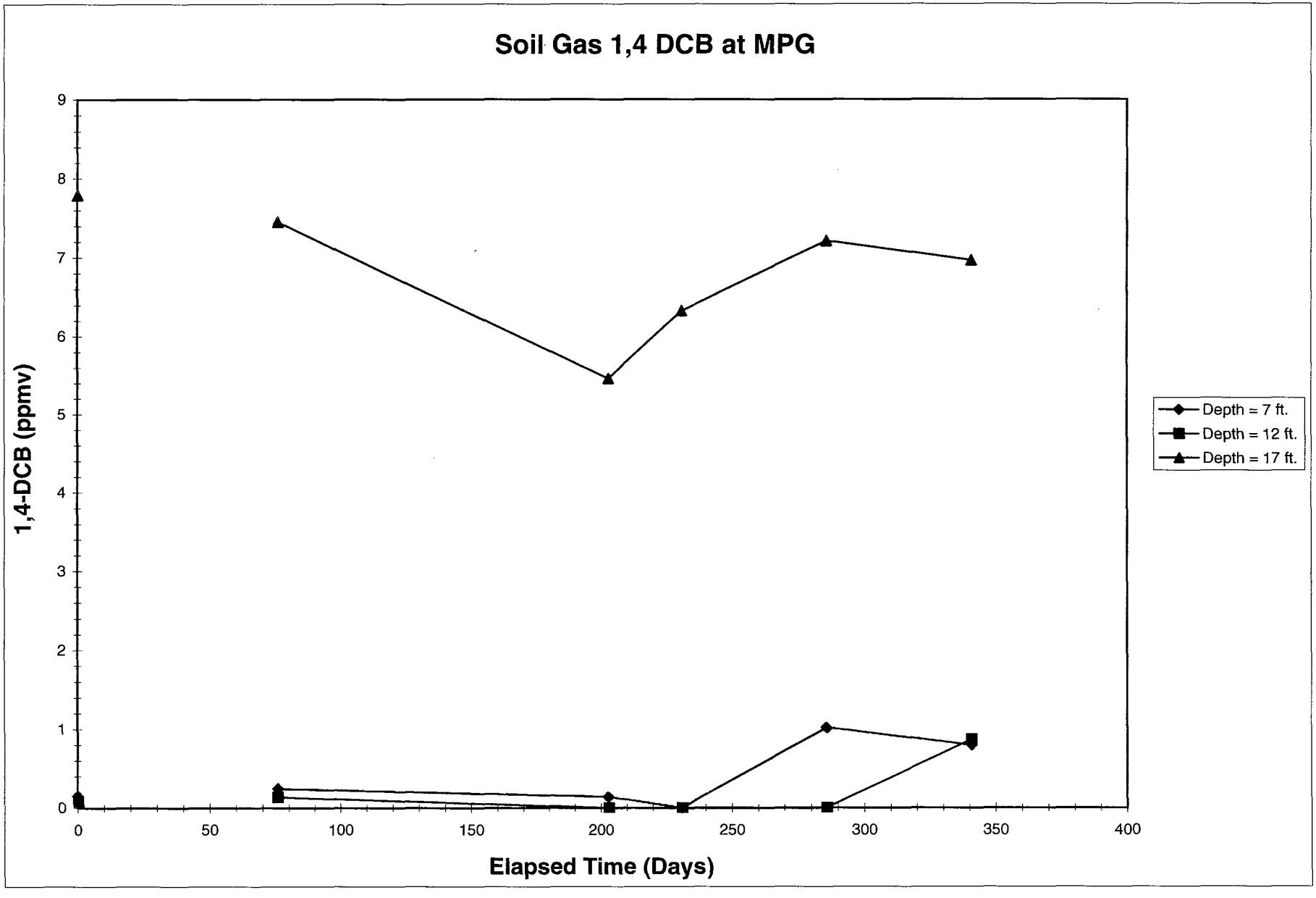

Soil Gas 1,3 DCB at MPF
1,3-DCB (ppmv)
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

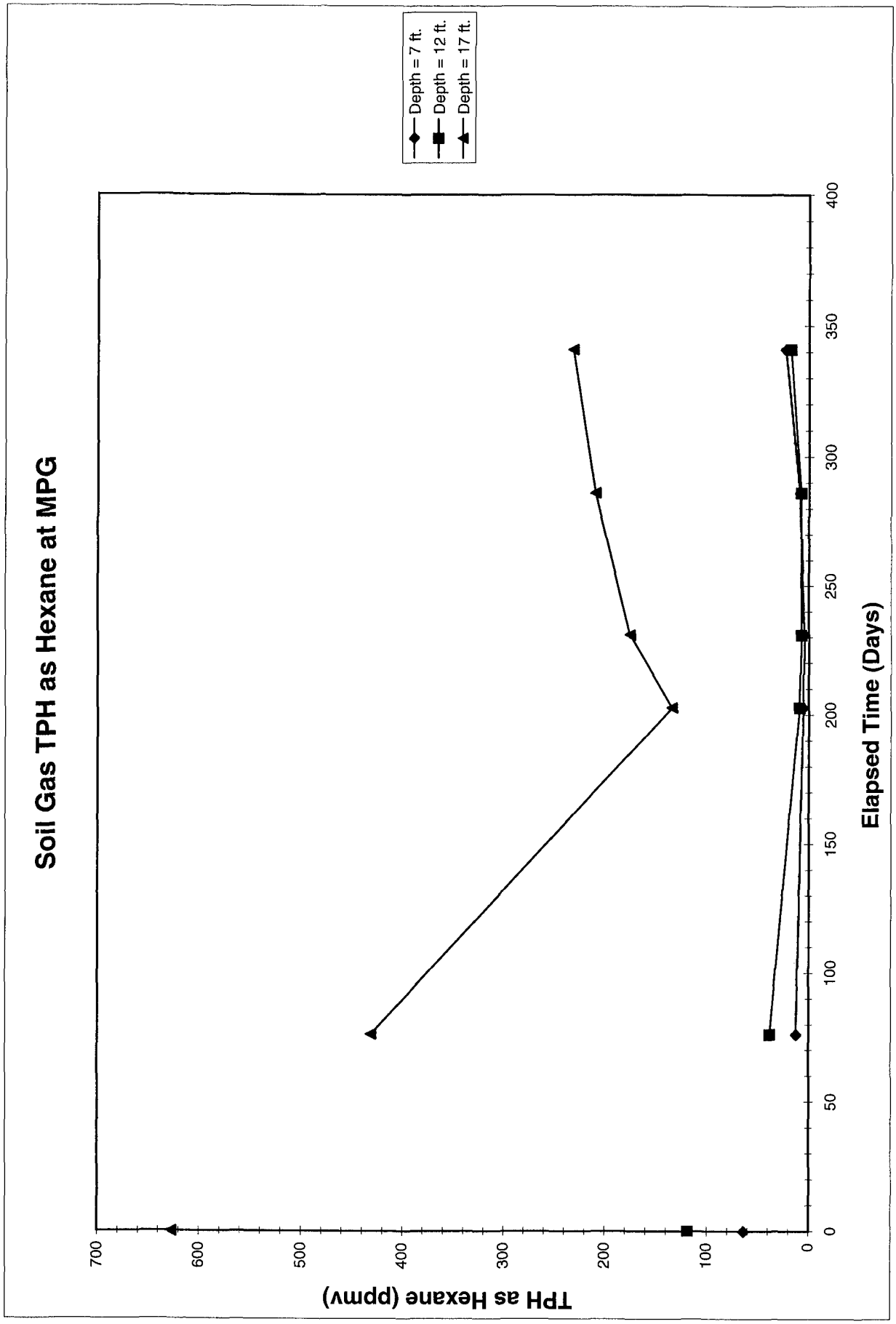

Soil Gas 1,4 DCB at MPF
1,4-DCB (ppmv)
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

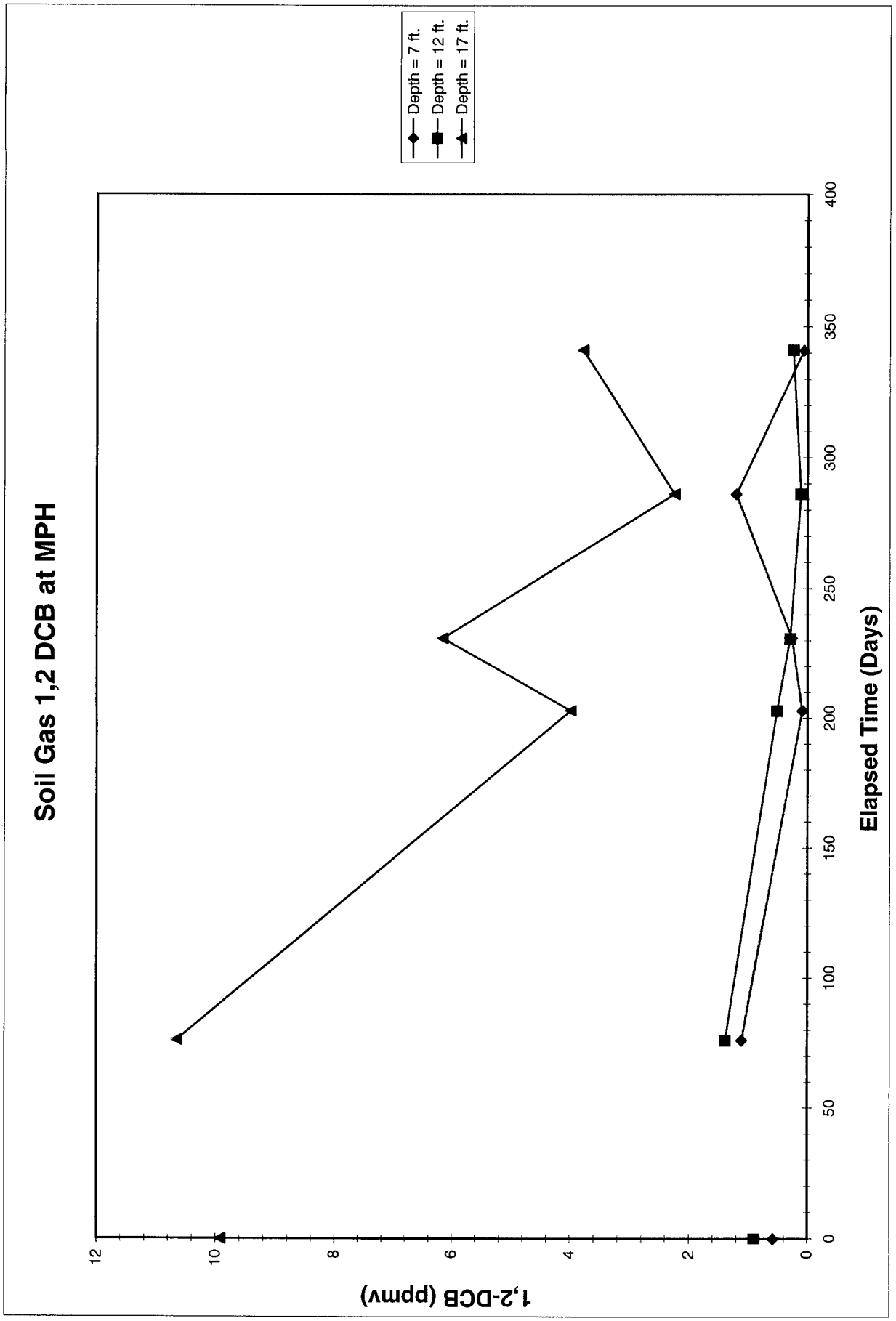

Soil Gas TPH as Hexane at MPF
TPH as Hexane (ppmv)
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

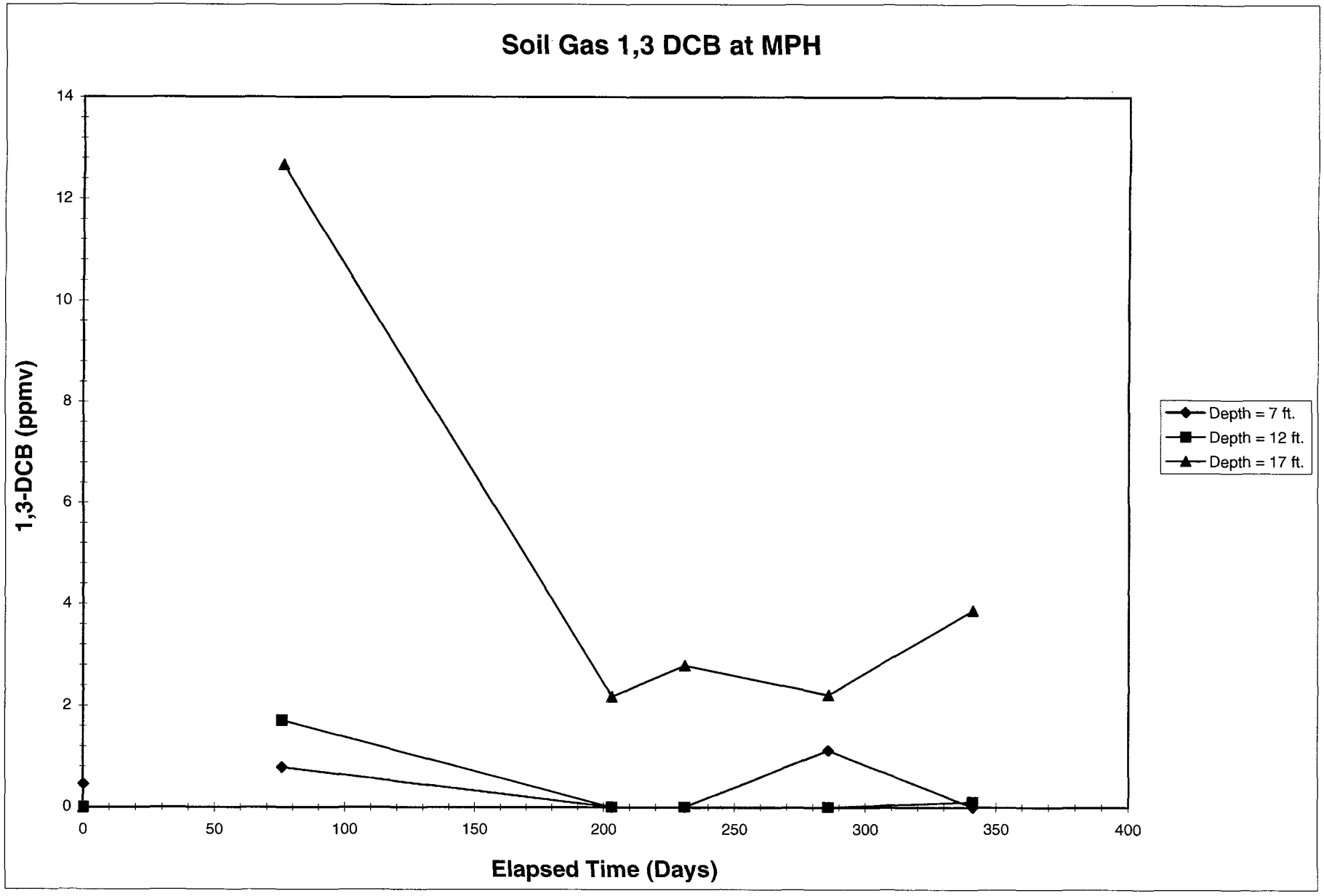

Soil Gas 1,2 DCB at MPG
1,2-DCB (ppmv)
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

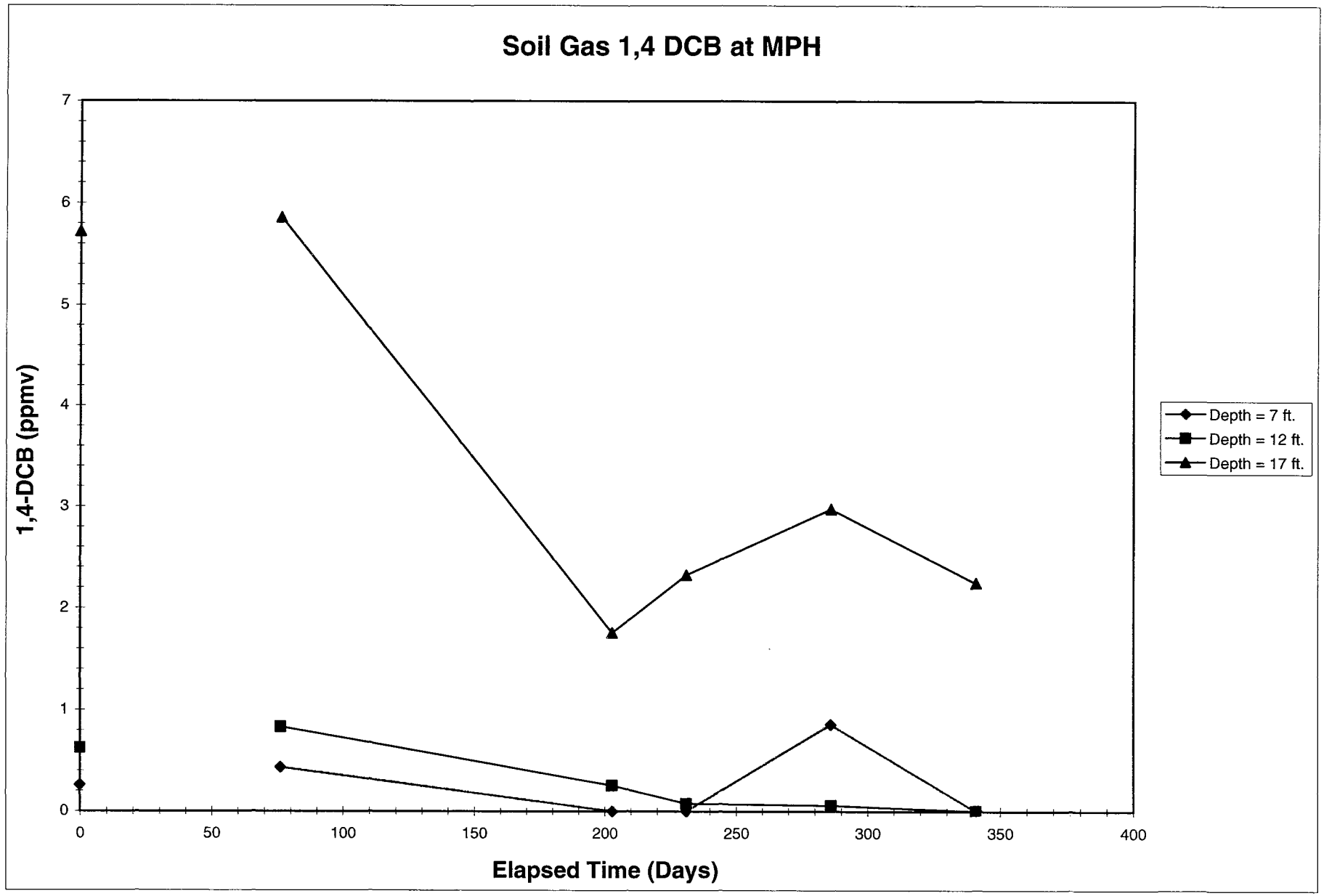

Soil Gas 1,3 DCB at MPG
1,3-DCB (ppmv)
18
16
14
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

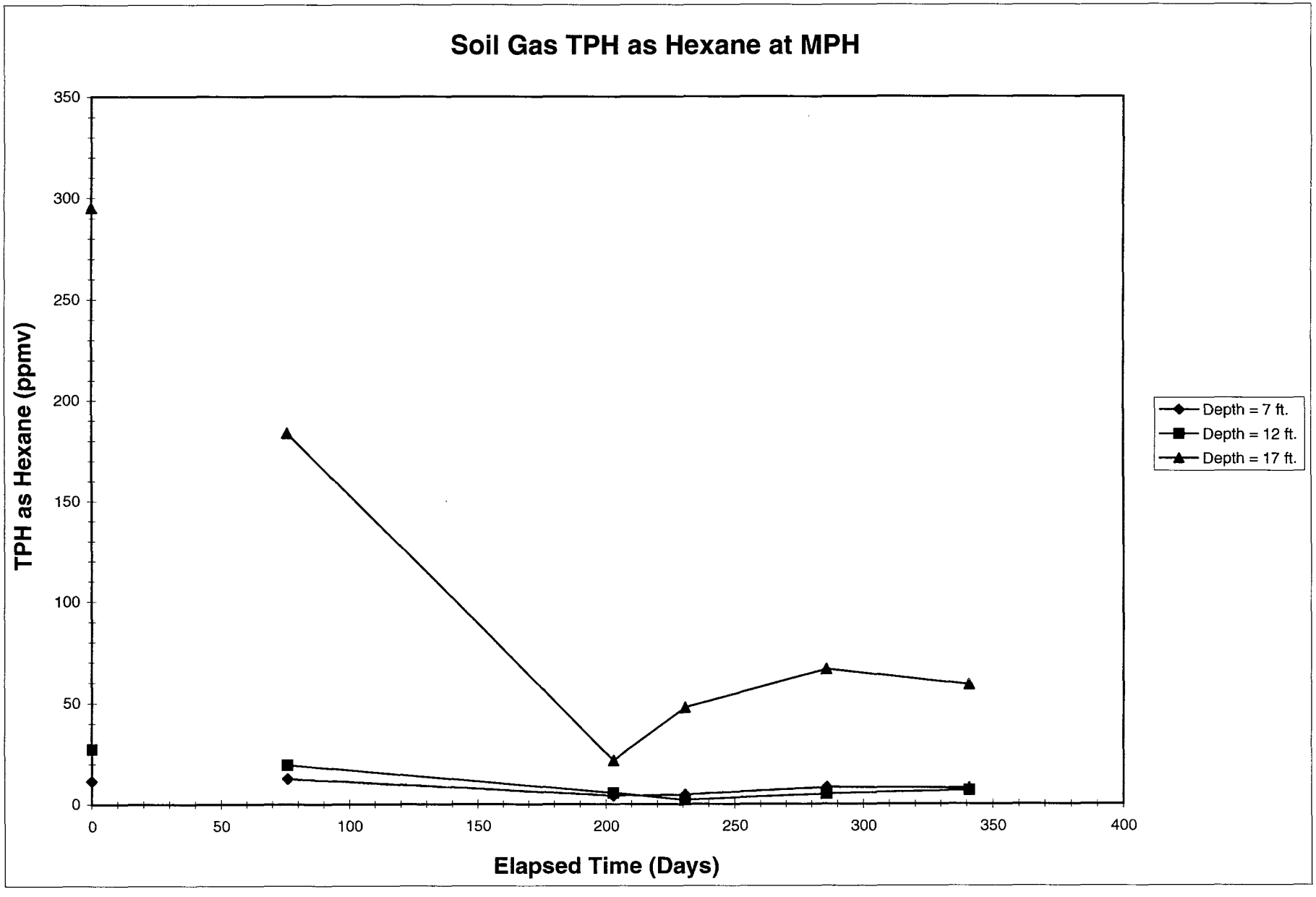

Soil Gas 1,4 DCB at MPG
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
8
9
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

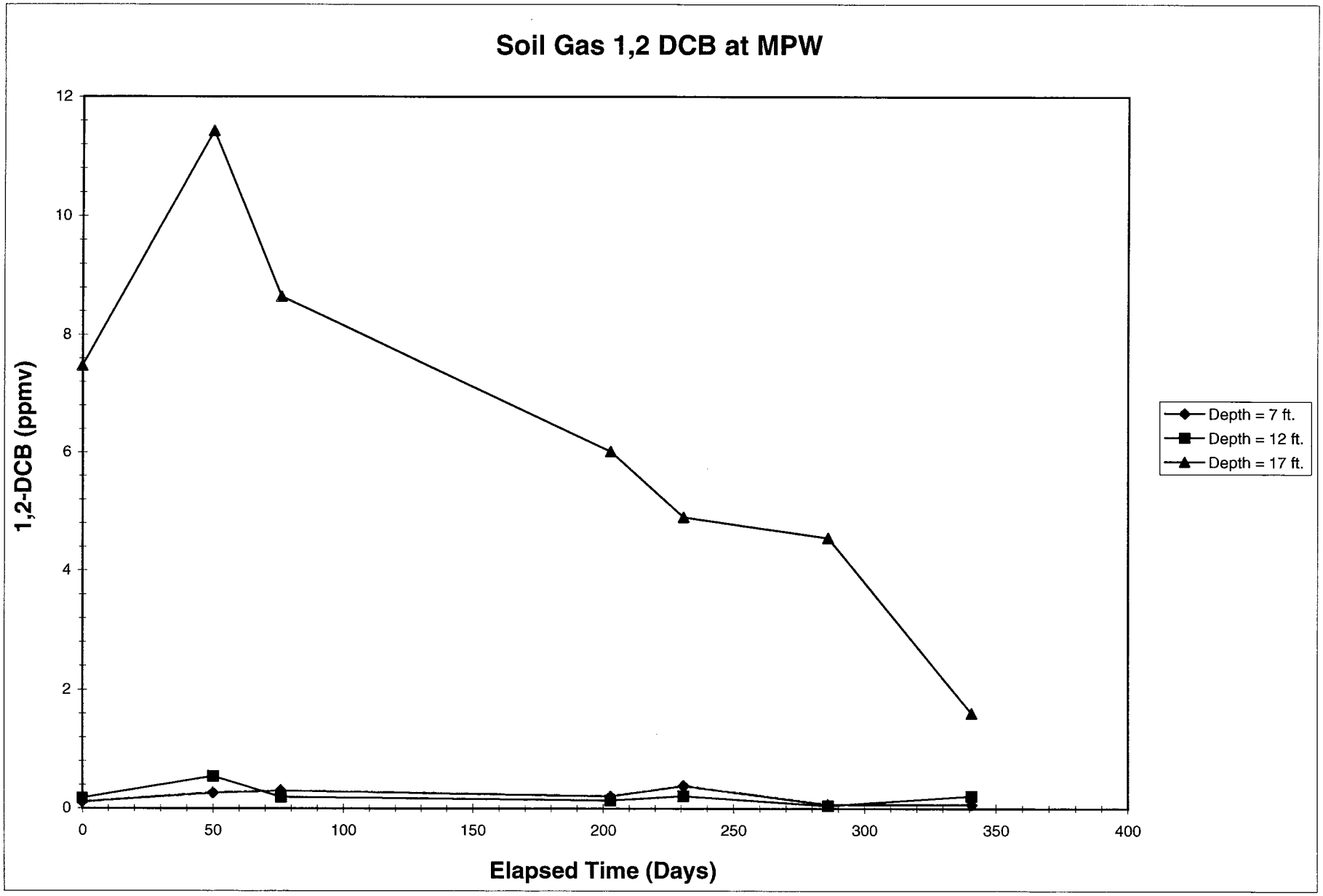

Soil Gas TPH as Hexane at MPG
TPH as Hexane (ppmv)
700
600
500
400
300
200
100
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

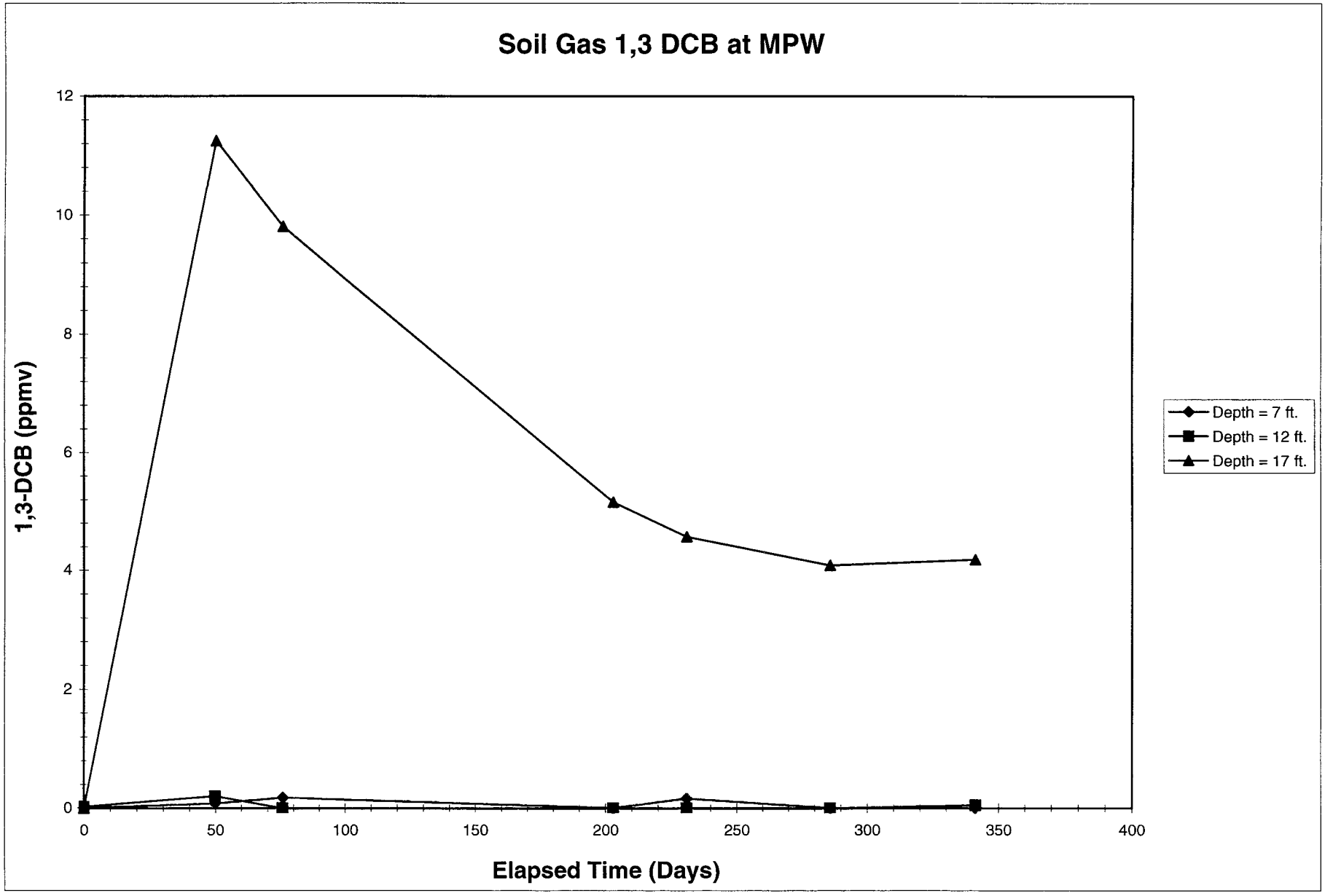

Soil Gas 1,2 DCB at MPH
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.
1,2-DCB (ppmv)
0
2
4
6
8
10
12
Elapsed Time (Days)
0
50
100
150
200
250
300
350
400

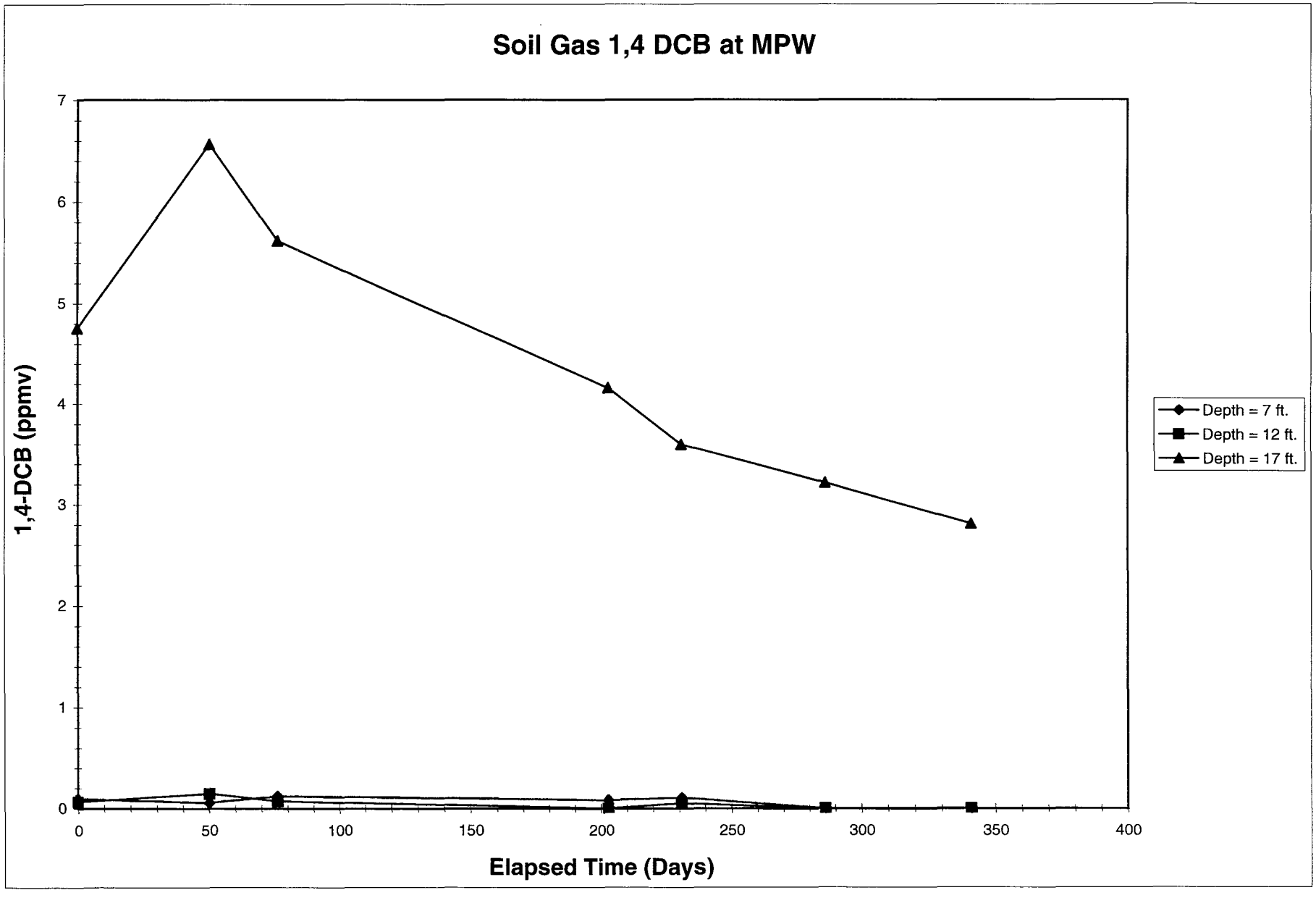

Soil Gas 1,3 DCB at MPH
1,3-DCB (ppmv)
14
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

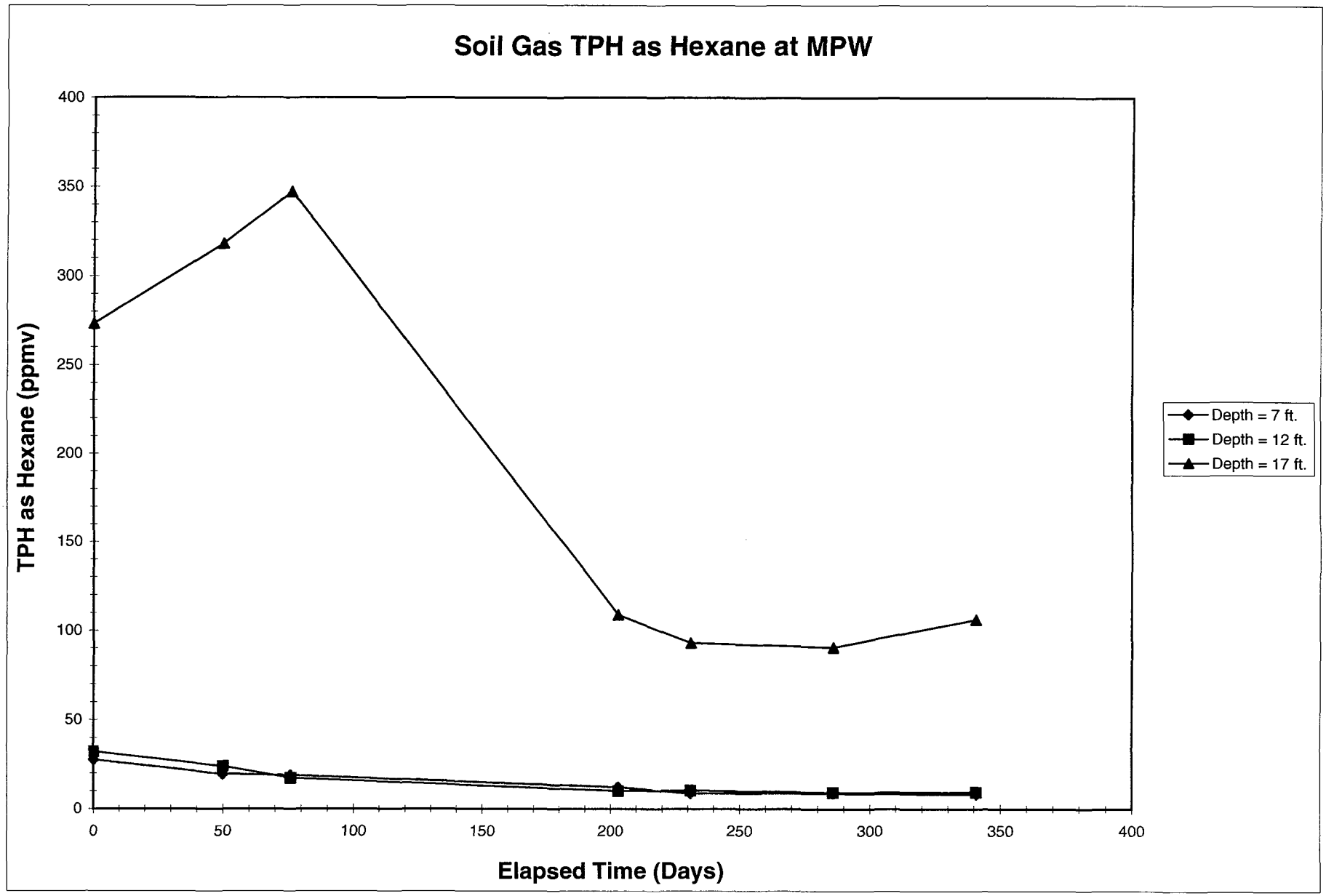

Soil Gas 1,4 DCB at MPH
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

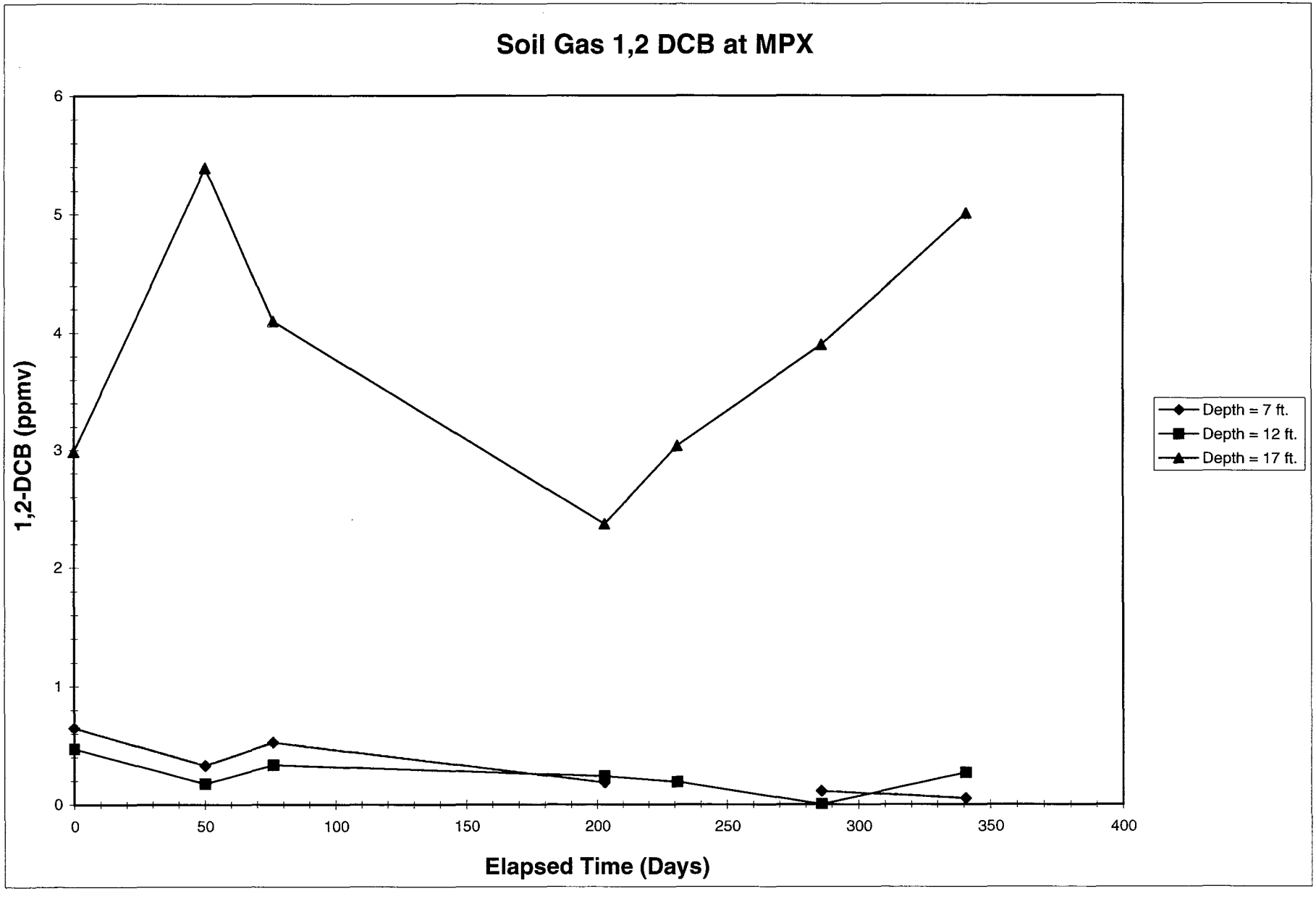

Soil Gas TPH as Hexane at MPH
TPH as Hexane (ppmv)
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

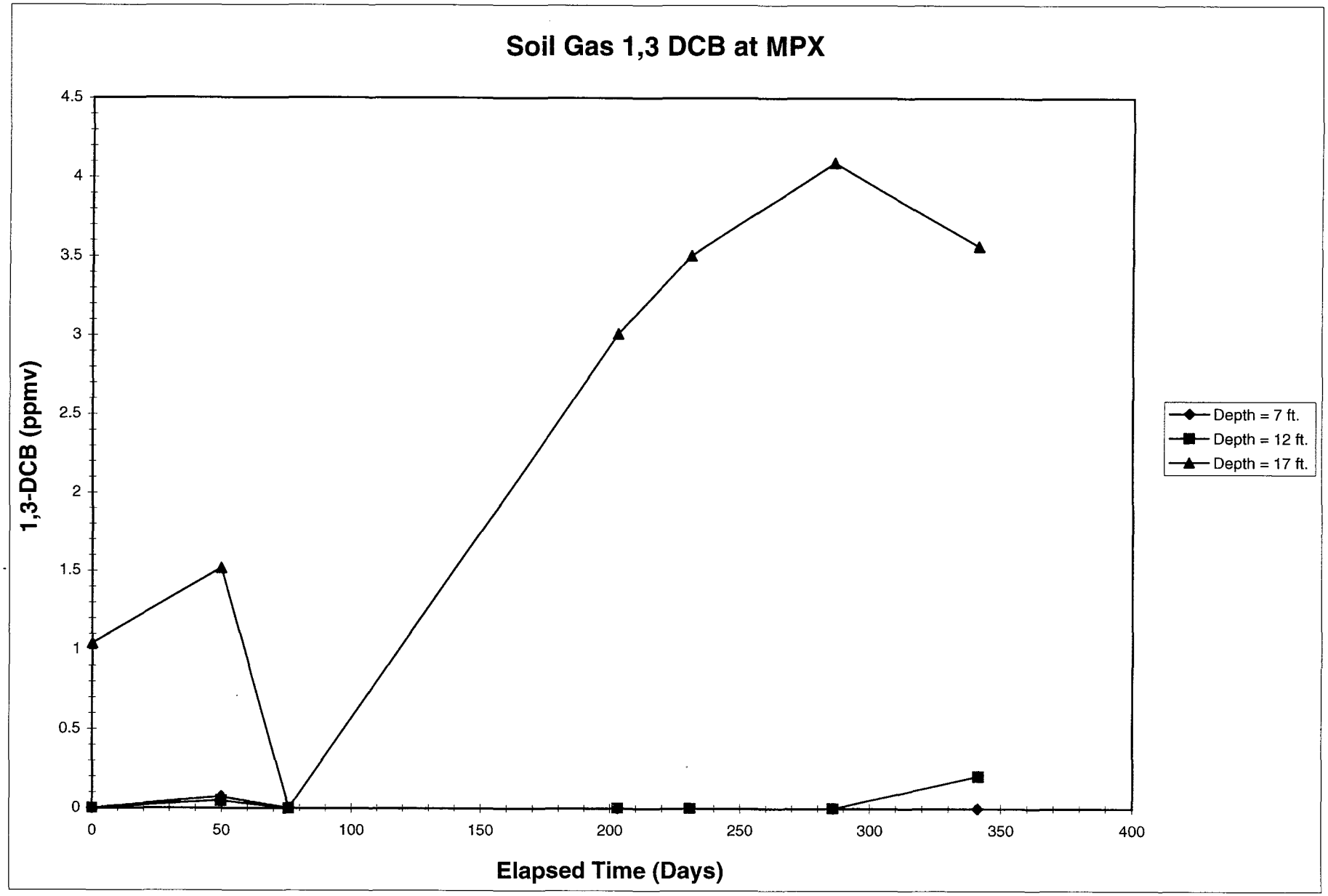

Soil Gas 1,2 DCB at MPW
1,2-DCB (ppmv)
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

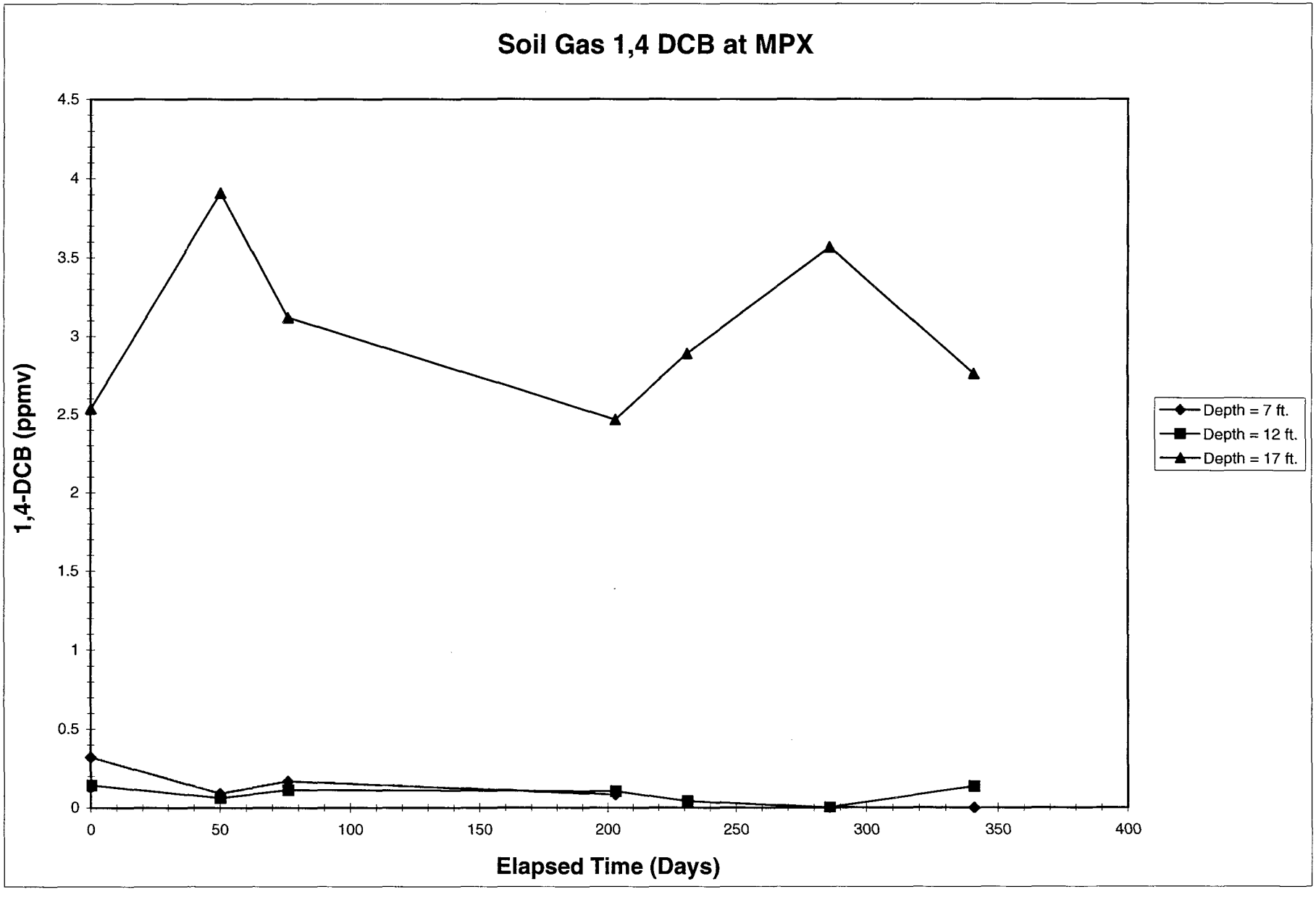

Soil Gas 1,3 DCB at MPW
1,3-DCB (ppmv)
12
10
8
6
4
2
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

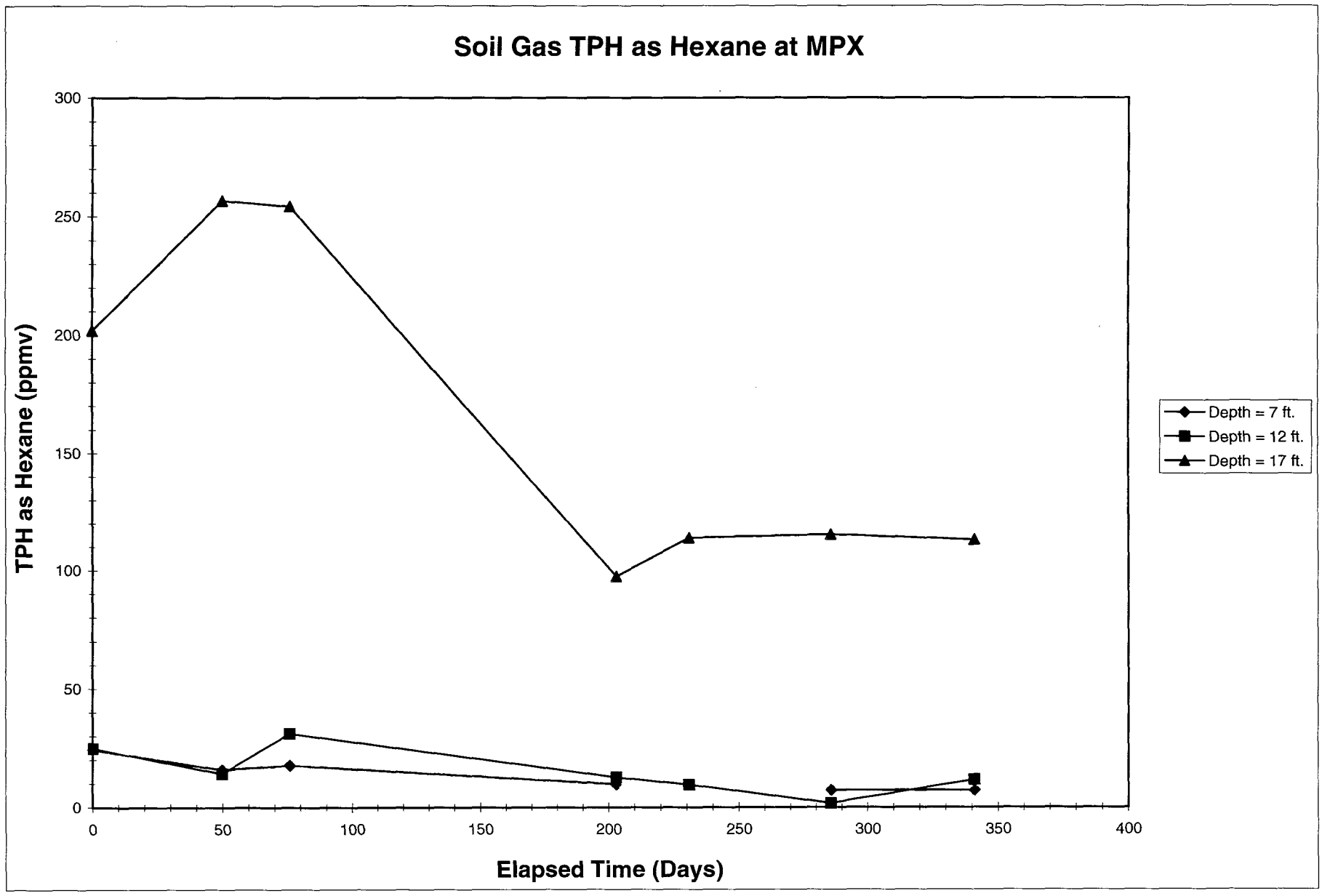

Soil Gas 1,4 DCB at MPW
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

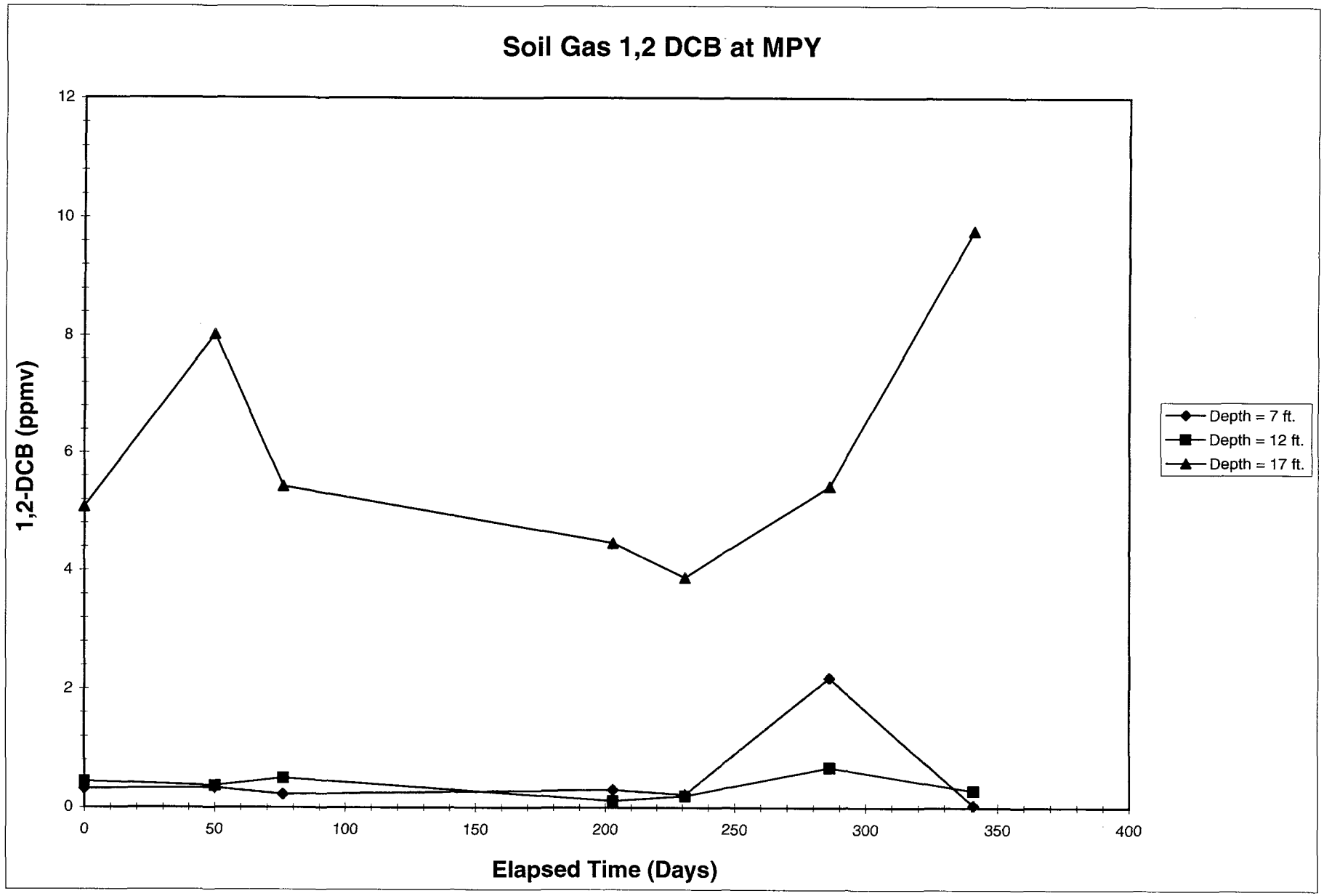

Soil Gas TPH as Hexane at MPW
TPH as Hexane (ppmv)
400
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

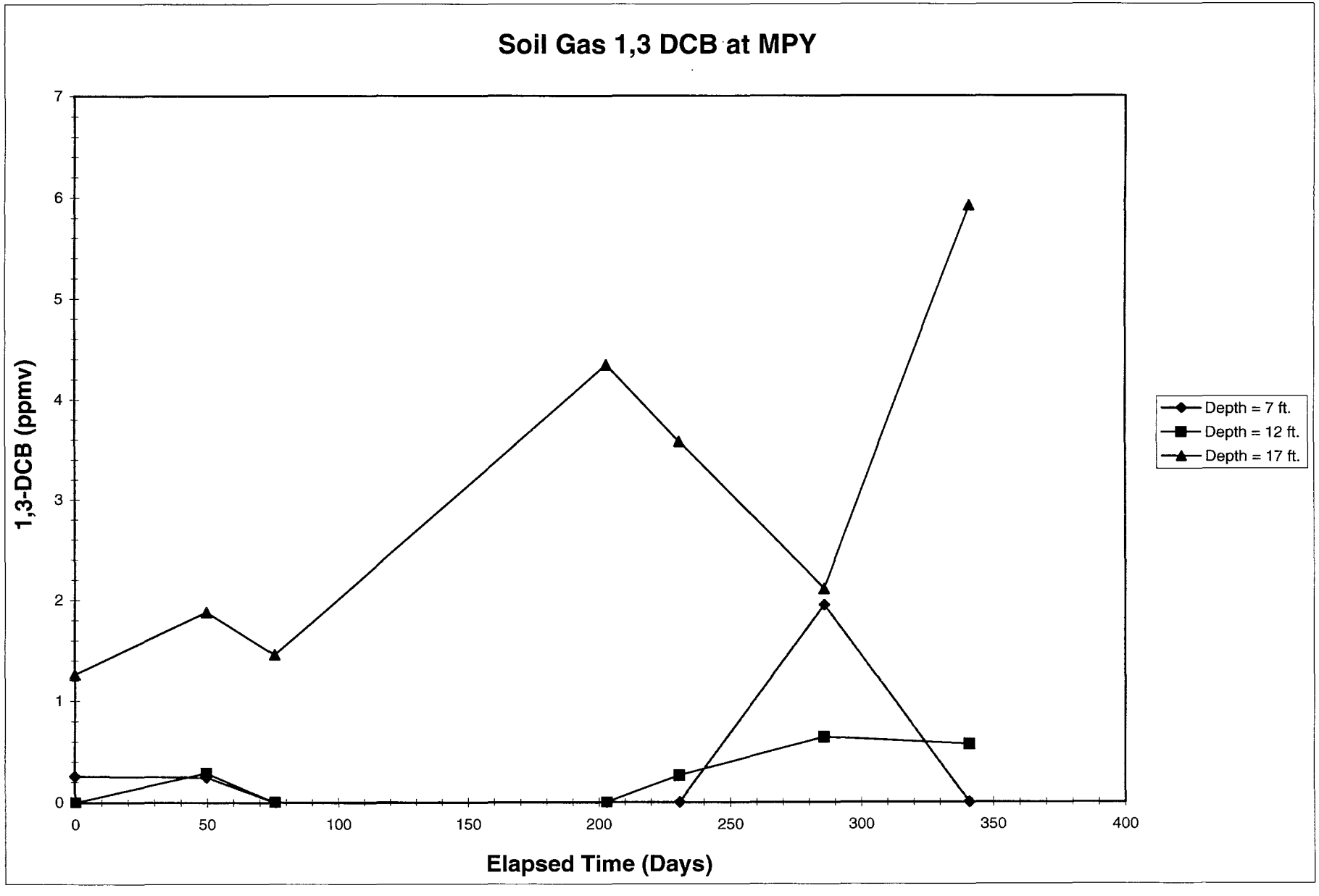

Soil Gas 1,2 DCB at MPX
1,2-DCB (ppmv)
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

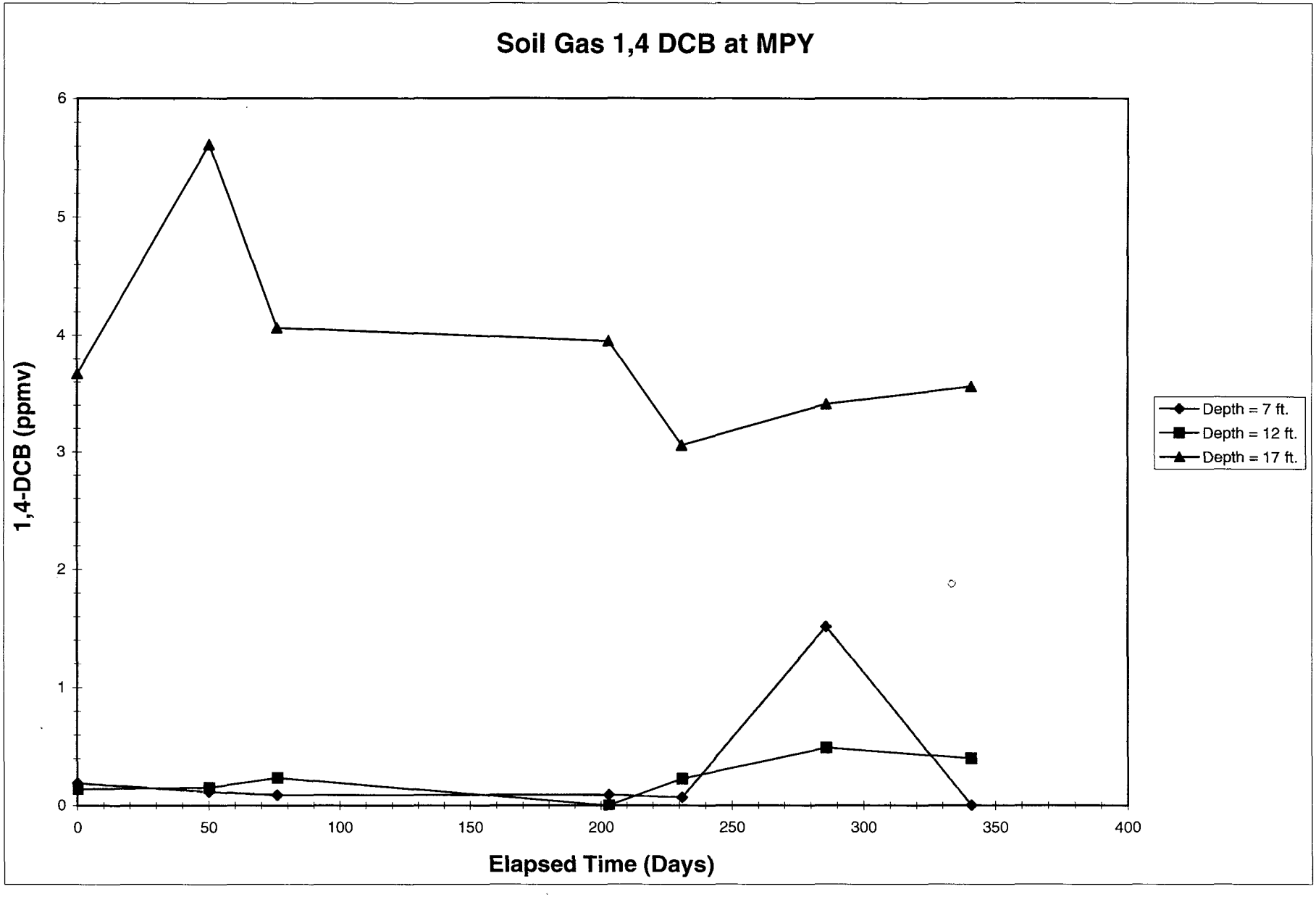

Soil Gas 1,3 DCB at MPX
1,3-DCB (ppmv)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

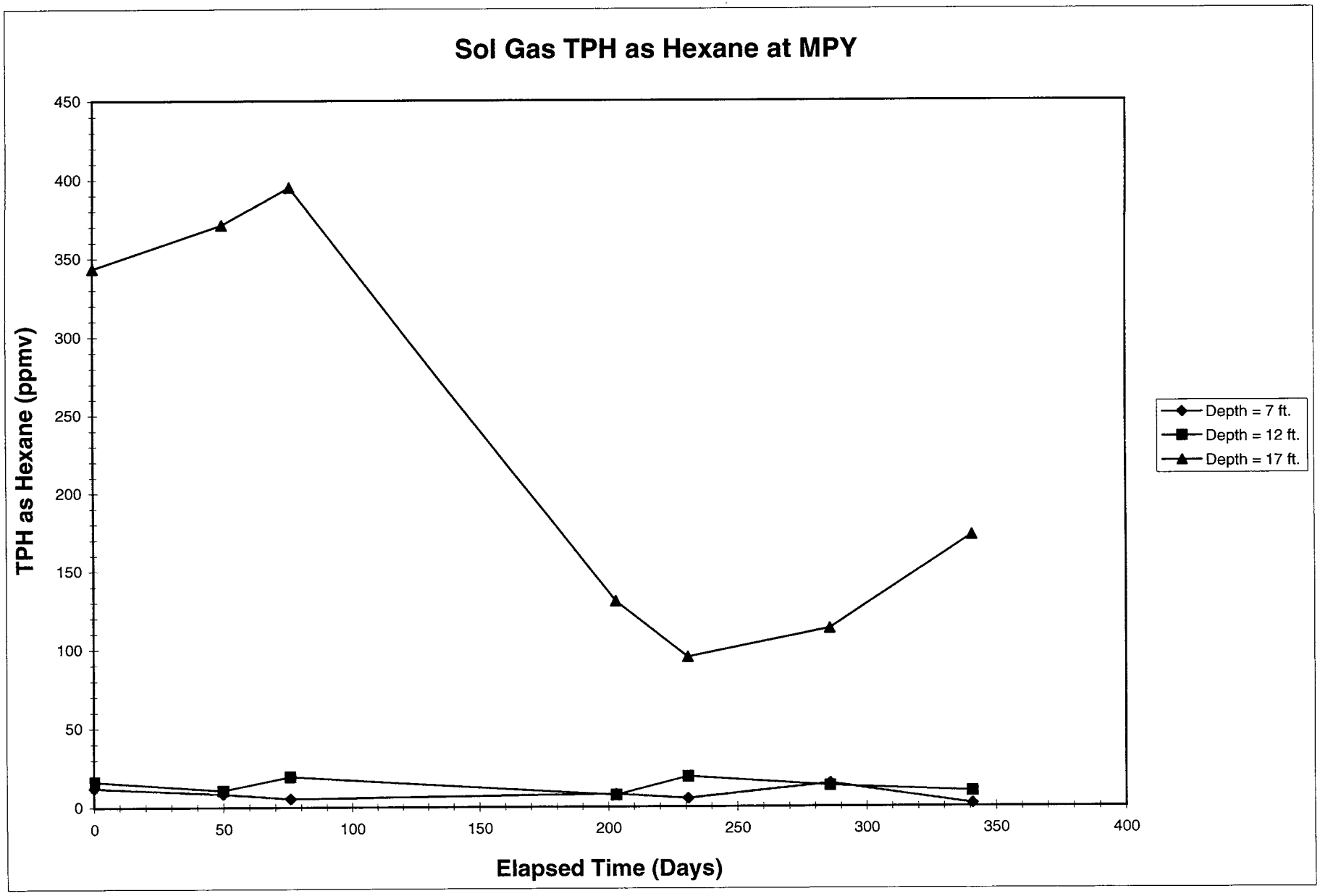

Soil Gas 1,4 DCB at MPX
1,4-DCB (ppmv)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

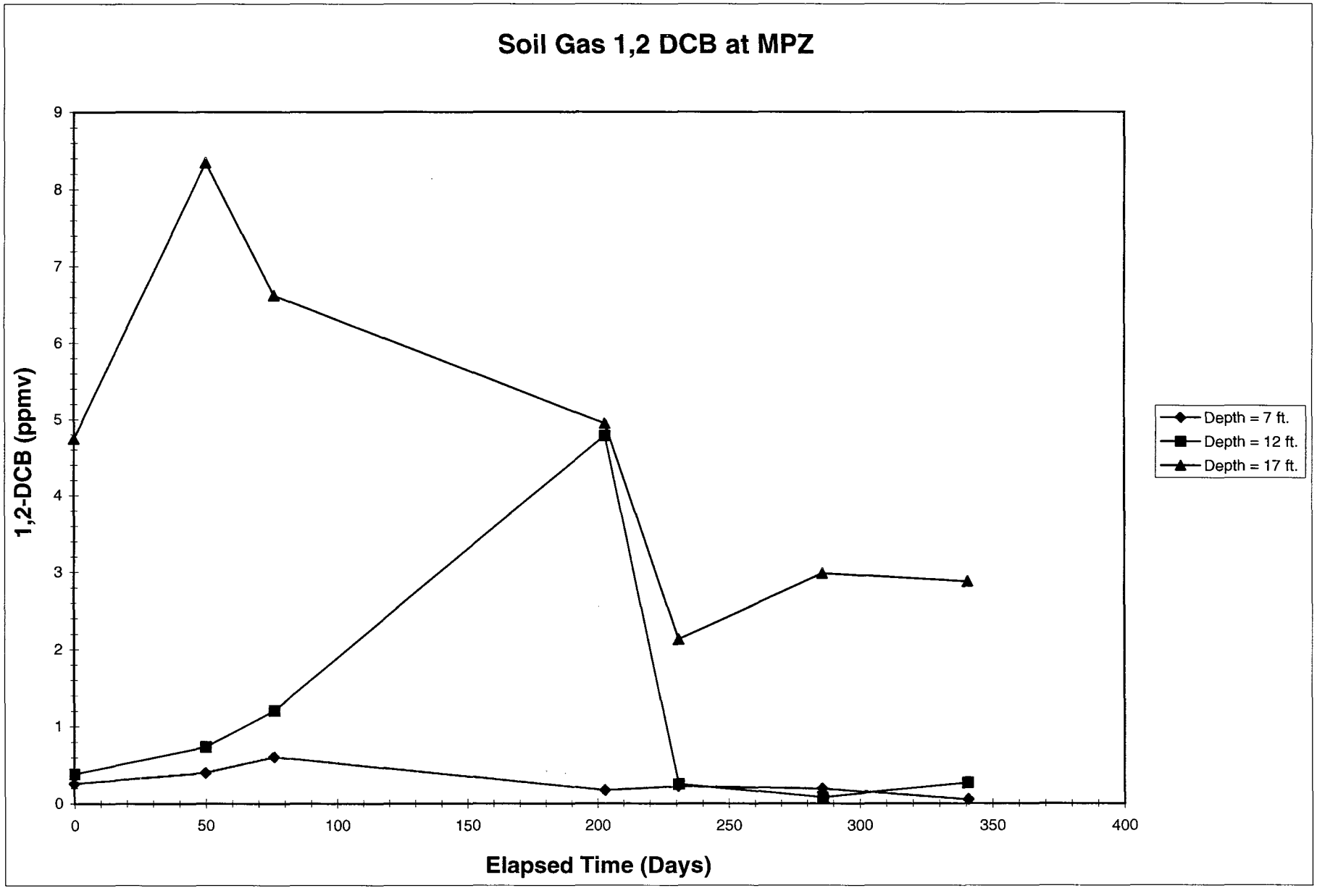

Soil Gas TPH as Hexane at MPX
TPH as Hexane (ppmv)
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

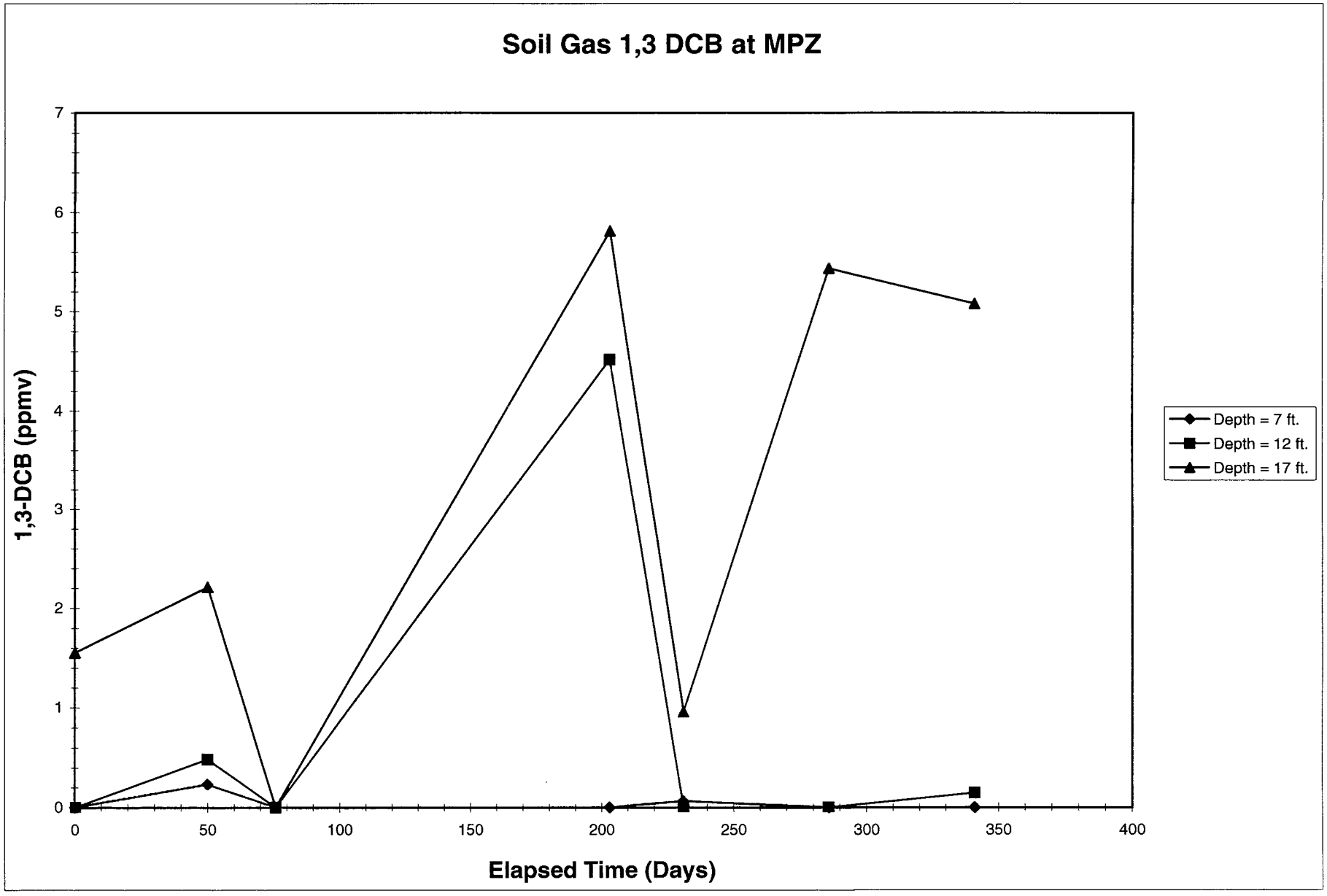

Soil Gas 1,2 DCB at MPY
1,2-DCB (ppmv)
0
2
4
6
8
10
12
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

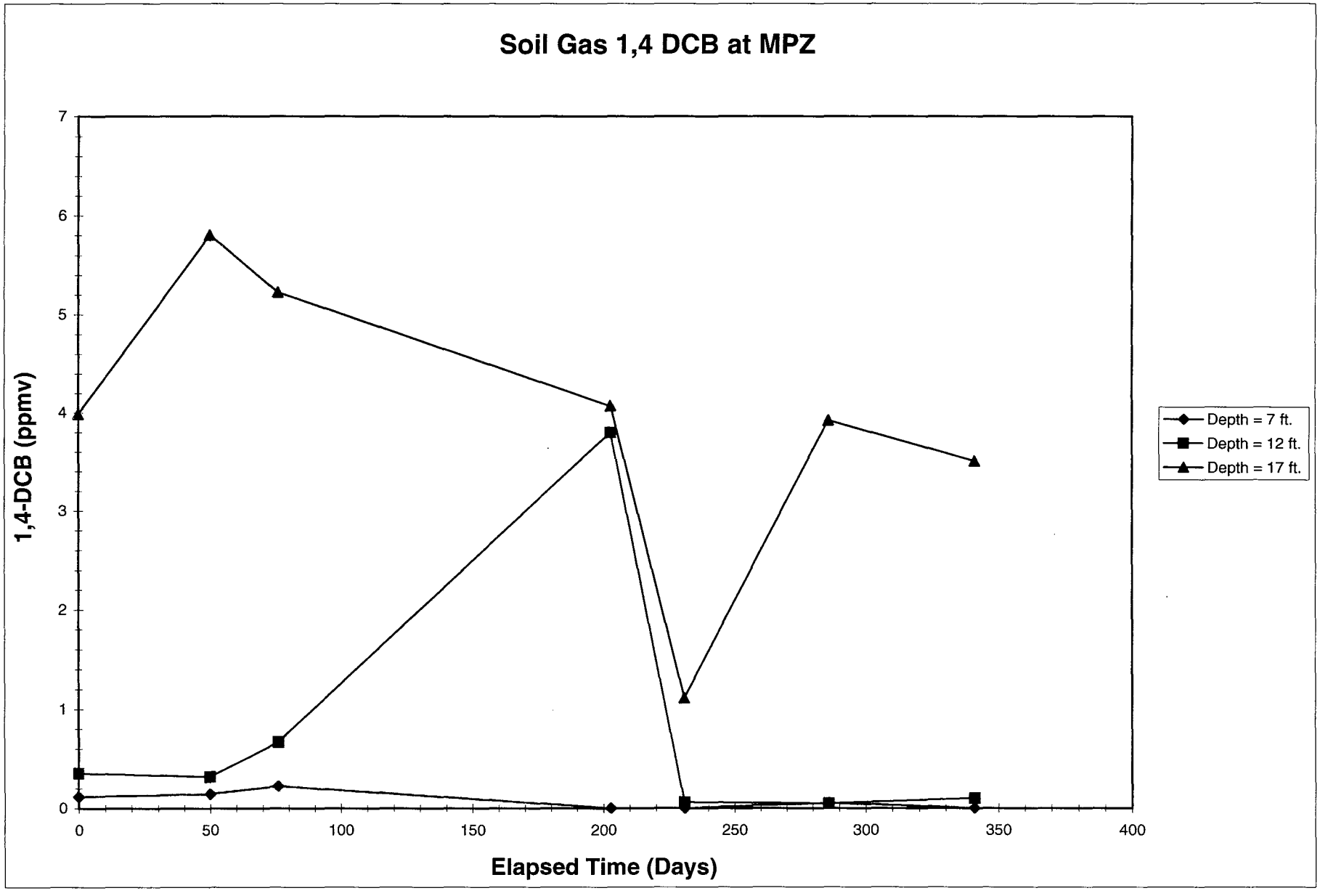

Soil Gas 1,3 DCB at MPY
1,3-DCB (ppmv)
0
1
2
3
4
5
6
7
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

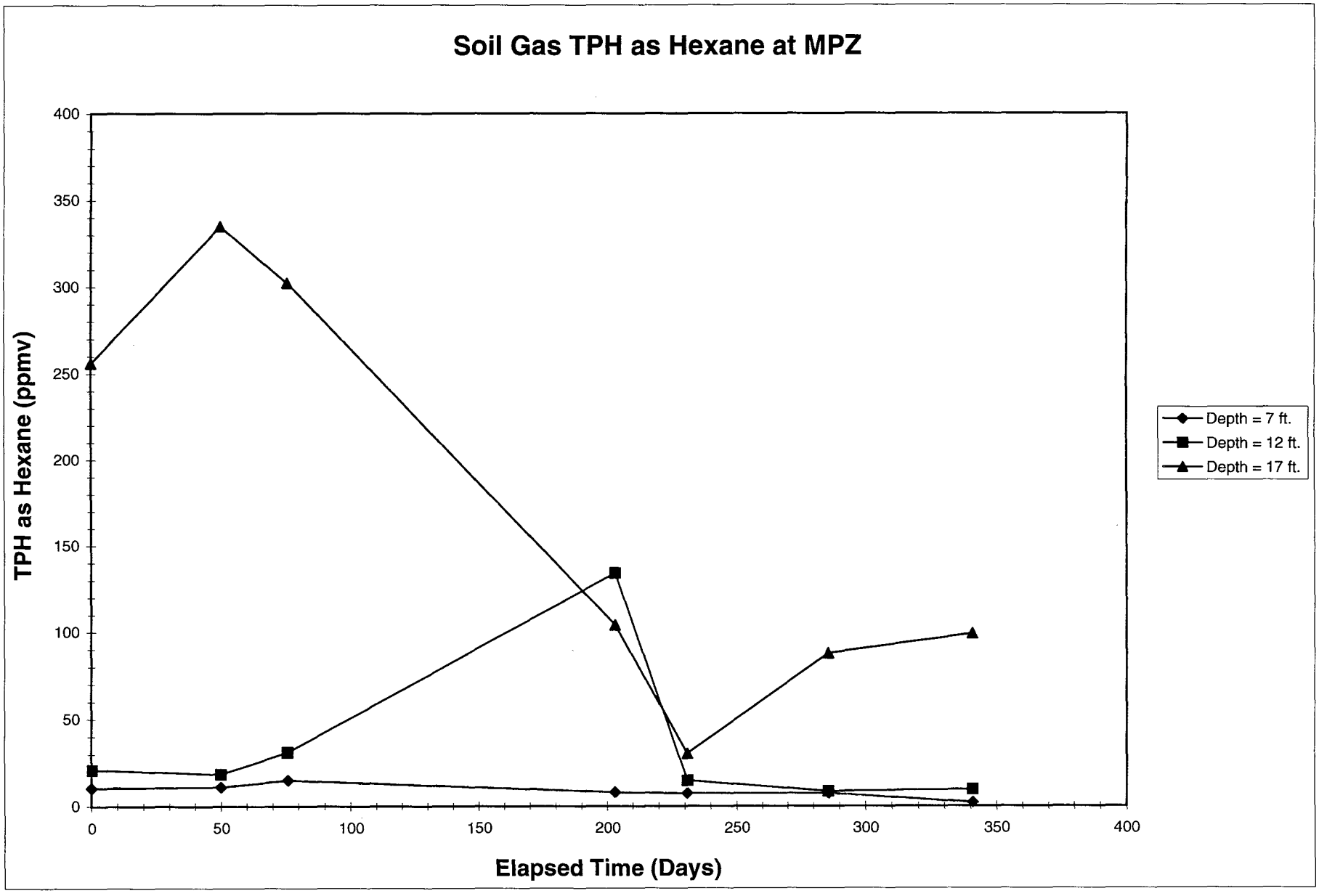

Soil Gas 1,4 DCB at MPY
1,4-DCB (ppmv)
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.


Sol Gas TPH as Hexane at MPY
TPH as Hexane (ppmv)
450
400
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.


Soil Gas 1,2 DCB at MPZ
1,2-DCB (ppmv)
0
1
2
3
4
5
6
7
8
9
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.


Soil Gas 1,3 DCB at MPZ
1,3-DCB (ppmv)
0
1
2
3
4
5
6
7
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.


Soil Gas 1,4 DCB at MPZ
1,4-DCB (ppmv)
0
1
2
3
4
5
6
7
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.


Soil Gas TPH as Hexane at MPZ
TPH as Hexane (ppmv)
400
350
300
250
200
150
100
50
0
0
50
100
150
200
250
300
350
400
Elapsed Time (Days)
Depth = 7 ft.
Depth = 12 ft.
Depth = 17 ft.

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

July 1997

October 1997

January 1998

April 1998

August 1998

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

July 1997

SUMMARY OUTPUT **MPA 7 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.998
R Square	0.997
Adjusted R Square	0.996
Standard Error	0.065
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	6.77	6.77	1621	1.78E-07
Residual	5	0.02	0.0042		
Total	6	6.79			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	5.6	0.0689	80.95	5.45E-09	5.40	5.76	5.40	5.76
X Variable 1	-2.8	0.0703	-40.26	1.78E-07	-3.01	-2.65	-3.01	-2.65

SUMMARY OUTPUT **MPA 12 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.998
R Square	0.997
Adjusted R Square	0.996
Standard Error	0.151
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	40.22	40.224	1770	1.21E-08
Residual	6	0.14	0.023		
Total	7	40.36			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.7	0.152	83.55	1.98E-10	12.30	13.05	12.30	13.05
X Variable 1	-6.1	0.144	-42.07	1.21E-08	-6.43	-5.72	-6.43	-5.72

SUMMARY OUTPUT

MPB 7 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.995
Adjusted R Square	0.994
Standard Error	0.186
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	82.53	82.526	2377.59	4.15E-16
Residual	13	0.45	0.035		
Total	14	82.98			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.33	0.10	180.72	1.72E-23	17.13	17.54	17.13	17.54
X Variable 1	-3.36	0.07	-48.76	4.15E-16	-3.51	-3.21	-3.51	-3.21

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.995
Adjusted R Square	0.994
Standard Error	0.220
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	82.20	82.199	1693	1.4726E-11
Residual	9	0.44	0.049		
Total	10	82.64			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.08	0.15	121.21	8.99E-16	17.74	18.41	17.74	18.41
X Variable 1	-5.25	0.13	-41.15	1.47E-11	-5.54	-4.96	-5.54	-4.96

SUMMARY OUTPUT

MPC 7 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.978
R Square	0.956
Adjusted R Square	0.951
Standard Error	0.273
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	16.025	16.025	215.3	4.32455E-08
Residual	10	0.744	0.074		
Total	11	16.769			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.77	0.23	51.28	1.92E-13	11.26	12.28	11.26	12.28
X Variable 1	-2.18	0.15	-14.67	4.32E-08	-2.52	-1.85	-2.52	-1.85

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.999
R Square	0.997
Adjusted R Square	0.996
Standard Error	0.147
Observations	4

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	15.90	15.897	732.7	1.36E-03
Residual	2	0.04	0.022		
Total	3	15.94			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	13.00	0.14	93.39	1.15E-04	12.40	13.59	12.40	13.59
X Variable 1	-12.91	0.48	-27.07	1.36E-03	-14.96	-10.86	-14.96	-10.86

SUMMARY OUTPUT **MPD 7 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.985
Standard Error	0.426
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	305.83	305.834	1688.7	9.30E-24
Residual	24	4.35	0.181		
Total	25	310.18			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.81	0.17	124.87	2.80E-35	20.46	21.15	20.46	21.15
X Variable 1	-2.92	0.07	-41.09	9.30E-24	-3.07	-2.78	-3.07	-2.78

SUMMARY OUTPUT

MPD 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.995
Adjusted R Square	0.995
Standard Error	0.362
Observations	24

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	577.53	577.532	4400.7	7.78E-27
Residual	22	2.89	0.131		
Total	23	580.42			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.96	0.15	139.46	6.45E-34	20.65	21.27	20.65	21.27
X Variable 1	-4.68	0.07	-66.34	7.78E-27	-4.82	-4.53	-4.82	-4.53

SUMMARY OUTPUT

MPD 17 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.999
R Square	0.999
Adjusted R Square	0.999
Standard Error	0.213
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	315.80	315.796	6933.6	4.83E-13
Residual	8	0.36	0.046		
Total	9	316.16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.23	0.13	139.38	7.85E-15	17.93	18.53	17.93	18.53
X Variable 1	-11.70	0.14	-83.27	4.83E-13	-12.02	-11.38	-12.02	-11.38

SUMMARY OUTPUT **MPE 7 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.988
R Square	0.976
Adjusted R Square	0.974
Standard Error	0.393
Observations	18

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	98.37	98.371	638.1	2.55E-14
Residual	16	2.47	0.154		
Total	17	100.84			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.32	0.20	70.00	2.48E-21	13.89	14.75	13.89	14.75
X Variable 1	-2.94	0.12	-25.26	2.55E-14	-3.19	-2.70	-3.19	-2.70

SUMMARY OUTPUT

MPE 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.999
R Square	0.998
Adjusted R Square	0.997
Standard Error	0.162
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	78.90	78.896	3008.8	1.75E-10
Residual	7	0.18	0.026		
Total	8	79.08			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.19	0.10	147.97	1.70E-13	14.95	15.43	14.95	15.43
X Variable 1	-6.55	0.12	-54.85	1.75E-10	-6.83	-6.27	-6.83	-6.27

SUMMARY OUTPUT **MPF 7 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.988
R Square	0.975
Adjusted R Square	0.974
Standard Error	0.468
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	207.72	207.718	947.6	8.41E-21
Residual	24	5.26	0.219		
Total	25	212.98			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.78	0.18	107.44	1.03E-33	19.40	20.16	19.40	20.16
X Variable 1	-2.41	0.08	-30.78	8.41E-21	-2.57	-2.25	-2.57	-2.25

SUMMARY OUTPUT

MPF 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.996
Adjusted R Square	0.996
Standard Error	0.289
Observations	24

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	447.11	447.106	5343.7	9.28E-28
Residual	22	1.84	0.084		
Total	23	448.95			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.09	0.12	166.71	1.28E-35	19.84	20.34	19.84	20.34
X Variable 1	-4.12	0.06	-73.10	9.28E-28	-4.23	-4.00	-4.23	-4.00

SUMMARY OUTPUT

MPF 17 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.983
Standard Error	0.294
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	36.16	36.156	417.9	8.91E-07
Residual	6	0.52	0.087		
Total	7	36.68			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.72	0.23	54.77	2.49E-09	12.15	13.29	12.15	13.29
X Variable 1	-5.18	0.25	-20.44	8.91E-07	-5.80	-4.56	-5.80	-4.56

SUMMARY OUTPUT

MPG 7 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.990
R Square	0.980
Adjusted R Square	0.979
Standard Error	0.231
Observations	28

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	68.23	68.232	1276.7	1.25E-23
Residual	26	1.39	0.053		
Total	27	69.62			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.16	0.08	146.25	1.93E-39	11.99	12.33	11.99	12.33
X Variable 1	-1.31	0.04	-35.73	1.25E-23	-1.39	-1.24	-1.39	-1.24

SUMMARY OUTPUT

MPG 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.958
R Square	0.918
Adjusted R Square	0.914
Standard Error	0.363
Observations	27

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	36.69	36.686	278.6	4.59E-15
Residual	25	3.29	0.132		
Total	26	39.98			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7.19	0.14	52.17	4.90E-27	6.91	7.47	6.91	7.47
X Variable 1	-1.00	0.06	-16.69	4.59E-15	-1.12	-0.88	-1.12	-0.88

SUMMARY OUTPUT **MPH 7 ft bgs Regression of linear portion of *Oxygen versus time* plot**

Regression Statistics	
Multiple R	0.983
R Square	0.965
Adjusted R Square	0.964
Standard Error	0.589
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	231.97	231.973	669.3	4.85E-19
Residual	24	8.32	0.347		
Total	25	240.29			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.88	0.23	90.69	5.94E-32	20.40	21.35	20.40	21.35
X Variable 1	-2.55	0.10	-25.87	4.85E-19	-2.75	-2.34	-2.75	-2.34

SUMMARY OUTPUT

MPH 12 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.995
Adjusted R Square	0.995
Standard Error	0.281
Observations	22

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	345.75	345.754	4373.0	6.75E-25
Residual	20	1.58	0.079		
Total	21	347.34			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.57	0.14	146.14	9.06E-32	20.28	20.87	20.28	20.87
X Variable 1	-4.19	0.06	-66.13	6.75E-25	-4.32	-4.06	-4.32	-4.06

SUMMARY OUTPUT

MPH 17 ft bgs Regression of linear portion of *Oxygen versus time* plot

Regression Statistics	
Multiple R	0.999
R Square	0.997
Adjusted R Square	0.997
Standard Error	0.278
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	267.32	267.324	3456.5	6.00E-13
Residual	9	0.70	0.077		
Total	10	268.02			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.45	0.17	103.04	3.88E-15	17.07	17.84	17.07	17.84
X Variable 1	-10.73	0.18	-58.79	6.00E-13	-11.14	-10.32	-11.14	-10.32

MPA 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.08	11.2	7.3	400
0.17	11.0	7.5	435
0.32	10.7	7.5	410
0.48	9.8	7.8	350
0.95	7.1	9.2	460
1.03	6.3	9.8	480
1.13	5.8	10.0	560
1.23	5.0	10.1	620
1.27	5.0	10.5	620
1.46	3.9	11.0	550
1.54	4.0	10.8	625
1.96	2.5	12.0	520
2.04	2.6	12.0	680
2.18	1.8	12.3	500
2.27	1.8	12.8	510
2.39	1.8	12.4	625
2.46	1.5	12.8	650
2.54	1.3	12.9	620
2.95	0.8	15.0	720
3.08	0.6	14.1	NT
3.19	0.4	14.1	NT
3.29	0.3	14.5	NT
3.42	0.1	14.9	NT
3.49	0.1	15.1	NT
3.94	0.9	15.1	NT
4.30	0.5	15.6	NT

MPA 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.08	0.1	18.0	760
0.17	0.0	18.9	720
0.32	1.0	16.9	770
0.48	1.0	16.9	680
0.96	1.3	16.0	760
0.96	0.4	18.1	805
1.03	0.8	17.7	800
1.13	0.4	16.1	930
1.23	0.1	17.9	1000
1.30	0.0	18.3	1000
1.46	0.0	17.9	940
1.54	0.2	16.9	990
1.96	0.2	16.8	820
2.05	0.0	16.9	1000
2.18	0.0	16.2	805
2.27	0.0	16.4	800
2.39	0.1	16.0	935
2.46	0.0	16.2	950
2.54	0.0	16.2	970
2.95	0.0	17.6	1200
3.08	0.1	16.8	NT
3.19	0.2	16.1	NT
3.29	0.0	16.4	NT
3.42	0.0	17.0	NT
3.49	0.0	17.0	NT
3.94	0.4	16.5	NT
4.30	0.0	17.0	NT

MPA 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.08	4.8	19.8	470
0.16	4.3	13.0	450
0.32	4.7	12.2	475
0.48	4.2	12.5	425
0.95	2.9	14.0	495
1.03	2.7	14.1	520
1.13	2.4	14.0	590
1.23	2.0	14.8	670
1.30	2.0	14.8	670
1.46	0.9	15.1	590
1.54	1.9	14.5	650
1.96	1.0	15.1	475
2.04	1.0	15.1	680
2.17	0.9	15.1	520
2.27	1.0	15.1	520
2.39	1.0	15.0	625
2.46	1.2	15.0	645
2.54	0.8	15.9	625
2.95	0.5	17.0	715
3.08	0.2	16.8	NT
3.19	0.4	16.1	NT
3.29	0.1	16.5	NT
3.42	0.0	17.1	NT
3.49	0.0	17.8	NT
3.94	0.4	17.1	NT
4.30	0.0	18.1	NT

MPB 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	17.3	2.8	195
0.16	17.2	3.0	195
0.31	16.5	3.1	200
0.48	15.8	3.3	160
0.95	13.1	4.5	285
1.02	12.6	4.7	295
1.12	12.1	4.8	350
1.22	11.5	5.0	405
1.29	11.4	5.1	405
1.46	10.0	5.8	370
1.54	10.0	5.7	445
1.95	8.2	6.6	365
2.04	8.1	6.6	520
2.17	7.1	7.0	390
2.27	7.0	7.1	380
2.38	6.6	7.1	480
2.46	6.5	7.2	520
2.54	6.1	7.5	485
2.95	4.9	9.0	590
3.07	4.5	8.9	NT
3.18	4.2	8.9	NT
3.28	4.2	8.9	NT
3.42	3.8	9.2	NT
3.49	3.5	9.6	NT
3.94	3.1	10.1	NT
4.29	8.0	8.1	NT

MPB 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	2.5	11.9	650
0.16	2.1	12.2	630
0.31	2.1	12.1	660
0.48	1.8	12.7	605
0.95	1.5	13.8	690
1.02	0.9	14.2	720
1.12	0.9	14.0	810
1.23	0.1	14.8	910
1.30	0.0	15.0	910
1.46	0.0	15.0	835
1.54	0.1	14.2	870
1.96	0.0	14.4	730
2.04	0.1	14.2	905
2.17	0.1	14.0	730
2.27	0.0	14.1	720
2.39	0.6	13.5	835
2.46	0.0	14.0	855
2.54	0.0	14.1	865
2.95	0.0	15.1	960
3.08	0.1	14.3	NT
3.18	0.0	14.1	NT
3.29	0.2	14.0	NT
3.42	0.0	14.5	NT
3.49	0.0	15.0	NT
3.94	0.7	14.1	NT
4.29	0.0	15.0	NT

MPB 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	17.1	3.4	220
0.16	16.9	3.7	230
0.31	16.3	3.8	240
0.48	16.0	3.9	200
0.95	14.2	4.9	285
1.02	13.8	5.0	300
1.12	13.4	5.0	360
1.22	13.0	5.2	405
1.29	13.0	5.3	410
1.46	12.1	5.8	370
1.54	12.0	5.7	430
1.95	11.0	6.2	340
2.04	10.5	6.4	500
2.17	10.0	6.4	355
2.27	10.0	6.6	345
2.38	10.0	6.3	440
2.46	10.0	6.4	460
2.53	9.2	6.9	440
2.95	8.0	7.9	530
3.07	7.5	15.5	NT
3.18	7.4	7.8	NT
3.28	7.2	7.8	NT
3.42	6.9	8.1	NT
3.49	6.8	8.5	NT
3.93	6.0	8.8	NT
4.29	5.9	9.1	NT

MPC 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	12.3	7.1	330
0.15	10.9	7.9	330
0.30	9.0	9.0	370
0.47	7.0	10.7	400
0.94	6.1	11.5	410
1.01	6.0	11.8	440
1.11	5.2	11.9	520
1.22	4.1	12.9	510
1.28	3.9	13.1	605
1.45	2.9	13.8	500
1.53	3.4	13.0	580
1.94	3.6	13.0	445
2.03	3.5	13.1	565
2.16	2.8	13.7	470
2.26	2.2	14.0	480
2.37	1.9	14.1	520
2.45	1.9	14.1	580
2.53	1.9	14.6	600
2.94	2.2	15.1	640
3.07	2.5	14.4	NT
3.17	2.0	14.8	NT
3.28	1.6	15.0	NT
3.41	1.1	15.5	NT
3.48	1.1	15.9	NT
3.93	2.1	14.2	NT
4.29	1.9	15.2	NT

MPC 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	0.3	17.2	665
0.15	0.3	17.9	620
0.30	1.2	16.1	645
0.47	1.1	16.1	640
0.94	1.1	16.8	620
1.01	0.5	17.0	700
1.11	0.5	16.8	800
1.22	0.0	17.1	815
1.28	0.0	17.4	905
1.45	0.0	17.1	840
1.53	0.3	16.1	840
1.94	0.4	16.1	690
2.03	0.1	16.2	810
2.16	0.1	16.0	700
2.26	0.0	16.1	725
2.38	0.0	16.0	780
2.45	0.0	16.0	820
2.53	0.0	16.1	860
2.94	0.0	17.2	920
3.07	0.2	16.8	NT
3.18	0.1	16.1	NT
3.28	0.1	16.1	NT
3.41	0.0	17.1	NT
3.48	0.0	17.0	NT
3.93	0.7	15.9	NT
4.29	0.0	17.0	NT

MPC 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	10.5	10.3	440
0.15	10.5	10.5	400
0.30	11.0	9.8	395
0.47	11.0	9.8	425
0.93	10.0	10.1	375
1.01	9.7	10.5	440
1.11	9.2	10.2	520
1.21	8.9	10.6	510
1.28	8.9	10.8	590
1.45	8.0	11.0	505
1.52	8.3	10.5	565
1.94	7.8	10.8	440
2.03	7.3	11.1	555
2.16	7.2	10.8	480
2.26	7.0	11.0	490
2.37	6.9	11.0	465
2.45	7.0	10.8	565
2.53	6.8	11.1	575
2.94	6.1	12.0	625
3.06	5.9	12.0	NT
3.17	5.5	11.0	NT
3.28	5.3	12.0	NT
3.41	4.9	12.4	NT
3.48	4.9	12.9	NT
3.93	4.9	12.1	NT
4.28	4.1	13.0	NT

MPD 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	20.2	0.5	30
0.15	20.2	0.6	20
0.30	19.3	0.6	20
0.47	19.1	0.7	10
0.93	17.0	0.8	10
1.01	16.9	0.9	60
1.11	16.1	1.0	110
1.21	15.3	1.2	80
1.28	15.3	1.3	140
1.44	14.0	1.7	110
1.52	13.9	1.8	205
1.94	12.1	2.5	115
2.03	11.5	2.8	260
2.16	10.5	3.1	145
2.25	10.0	3.3	225
2.37	9.3	3.5	205
2.45	9.0	3.7	330
2.52	8.6	3.9	320
2.94	7.1	4.8	370
3.06	6.8	4.9	NT
3.17	6.2	5.1	NT
3.27	6.0	5.3	NT
3.40	5.2	5.9	NT
3.48	5.1	6.1	NT
3.92	4.8	6.5	NT
4.28	10.8	5.9	NT
4.29	11.1	5.7	NT

MPD 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	17.7	2.2	380
0.15	16.3	2.7	380
0.30	14.7	3.1	410
0.47	12.6	3.7	450
0.93	7.6	5.4	485
1.01	6.2	5.9	570
1.11	5.5	6.1	670
1.21	3.9	6.7	695
1.28	3.4	6.9	770
1.45	1.1	7.7	740
1.52	1.4	7.8	780
1.94	0.4	8.3	665
2.03	0.1	8.9	770
2.16	0.0	8.8	680
2.26	0.0	9.0	720
2.37	0.0	9.0	720
2.45	0.0	9.1	770
2.53	0.1	9.2	830
2.94	0.0	10.1	890
3.06	0.0	10.0	NT
3.17	0.1	10.0	NT
3.27	0.0	10.0	NT
3.41	0.0	10.3	NT
3.48	0.0	10.7	NT
3.92	0.7	10.1	NT
4.28	2.0	10.7	NT

MPD 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	19.8	1.2	140
0.15	19.8	1.3	125
0.30	19.2	4.8	110
0.47	19.3	1.5	60
0.93	18.2	2.0	110
1.01	18.1	2.1	160
1.11	17.9	2.1	210
1.21	17.2	2.2	200
1.28	17.6	2.2	240
1.44	16.8	2.5	230
1.52	16.8	2.5	280
1.94	15.8	2.8	150
2.03	15.4	3.0	280
2.16	14.9	3.0	170
2.25	14.4	3.0	270
2.37	14.1	3.1	230
2.45	13.9	3.2	340
2.52	13.7	3.3	310
2.94	12.3	3.8	360
3.06	11.9	3.8	NT
3.17	11.4	4.0	NT
3.27	11.1	4.1	NT
3.40	10.2	4.4	NT
3.48	10.1	4.7	NT
3.92	9.0	4.9	NT
4.28	8.0	5.5	NT

MPE 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	15.0	10.9	255
0.16	14.2	4.9	240
0.31	13.0	5.2	270
0.47	11.9	6.0	275
0.94	9.0	7.7	280
1.02	8.5	7.9	355
1.12	8.0	8.0	420
1.22	7.1	2.6	390
1.29	6.9	8.9	490
1.45	5.9	9.1	440
1.53	5.9	9.2	495
1.95	4.8	10.1	345
2.04	4.9	10.0	525
2.17	4.0	10.4	390
2.26	4.6	10.8	420
2.38	3.5	10.7	480
2.45	3.0	11.0	590
2.53	2.9	11.5	525
2.94	2.6	12.8	605
3.07	2.4	12.2	NT
3.18	2.2	12.1	NT
3.28	2.0	12.2	NT
3.41	1.2	13.0	NT
3.48	1.5	13.2	NT
3.93	1.9	13.1	NT
4.28	1.9	13.0	NT

MPE 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	4.1	13.2	500
0.16	3.6	13.9	460
0.31	3.4	13.1	490
0.47	2.9	13.8	460
0.94	1.6	15.0	460
1.02	0.9	15.5	530
1.12	0.9	15.0	620
1.22	0.2	15.8	580
1.29	0.2	15.9	685
1.45	0.0	16.0	645
1.53	0.1	15.2	660
1.95	0.2	15.1	540
2.04	0.1	15.1	665
2.17	0.1	15.0	510
2.26	0.0	15.1	540
2.38	0.1	14.9	620
2.45	0.0	15.0	665
2.53	0.0	15.1	660
2.95	0.0	16.1	740
3.07	0.0	15.9	NT
3.18	0.1	15.1	NT
3.28	0.0	15.1	NT
3.41	0.0	15.9	NT
3.49	0.0	15.9	NT
3.93	0.5	15.2	NT
4.29	0.0	15.9	NT

MPE 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	14.6	6.2	315
0.15	13.9	6.5	300
0.31	14.0	6.2	320
0.47	13.5	6.5	300
0.94	11.9	7.3	300
1.02	11.1	7.7	370
1.12	10.9	7.7	440
1.22	10.1	7.9	400
1.29	10.0	8.1	495
1.45	9.4	8.1	440
1.53	9.5	8.0	495
1.94	8.9	8.4	360
2.03	8.2	8.8	505
2.17	8.0	8.8	390
2.26	7.8	8.9	405
2.38	7.2	9.0	425
2.45	7.3	9.0	520
2.53	7.0	9.3	500
2.94	6.1	10.2	560
3.07	6.0	10.1	NT
3.18	5.9	10.1	NT
3.28	5.6	10.1	NT
3.41	5.0	10.8	NT
3.48	5.0	10.9	NT
3.93	4.9	11.0	NT
4.28	6.4	9.2	NT

MPF 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	19.2	0.8	70
0.16	19.1	0.9	65
0.31	18.8	1.1	75
0.48	18.2	1.2	40
0.95	16.8	1.9	145
1.02	16.1	2.0	140
1.12	15.8	2.1	180
1.22	15.0	2.3	95
1.29	15.1	2.5	200
1.45	14.0	2.8	185
1.53	14.0	2.9	270
1.95	12.2	3.4	230
2.04	12.1	3.5	350
2.17	11.0	3.7	200
2.26	10.7	3.9	230
2.38	9.9	4.1	300
2.46	9.9	4.2	380
2.53	9.2	4.4	340
2.95	7.9	5.2	400
3.07	7.5	5.3	NT
3.18	7.0	5.5	NT
3.28	6.7	5.6	NT
3.41	5.8	6.2	NT
3.49	5.9	6.4	NT
3.93	5.1	6.9	NT
4.29	8.0	6.1	NT

MPF 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	12.0	5.9	480
0.16	11.5	6.0	460
0.31	11.2	6.0	480
0.48	10.5	6.2	430
0.95	8.2	7.1	550
1.02	7.5	7.5	550
1.12	7.0	7.5	640
1.22	6.1	15.5	710
1.29	5.8	8.0	710
1.46	4.2	8.4	675
1.53	4.8	8.1	720
1.95	2.9	9.0	615
2.04	2.1	9.3	770
2.17	1.9	9.3	625
2.27	1.5	9.7	620
2.38	1.5	9.3	720
2.46	1.0	10.0	740
2.53	0.9	11.1	750
2.95	0.1	11.2	830
3.07	0.3	11.0	NT
3.18	0.2	10.8	NT
3.28	0.1	10.7	NT
3.42	0.1	10.9	NT
3.49	0.1	11.2	NT
3.93	0.6	11.1	NT
4.29	0.1	11.7	NT

MPF 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.07	18.8	2.0	200
0.16	18.6	3.0	190
0.31	18.4	8.0	195
0.47	18.5	3.0	155
0.94	17.8	3.2	140
1.02	17.4	3.3	220
1.12	17.1	3.3	265
1.22	16.8	3.4	180
1.29	17.1	3.4	285
1.45	16.5	3.6	250
1.53	16.4	3.4	320
1.95	15.9	3.7	245
2.04	15.4	3.7	265
2.17	14.9	3.7	205
2.26	15.0	3.7	235
2.38	14.6	3.7	290
2.46	14.1	3.9	360
2.53	13.9	4.0	320
2.95	12.7	4.3	370
3.07	12.2	4.3	NT
3.18	12.0	4.3	NT
3.28	11.8	4.4	NT
3.41	10.9	4.8	NT
3.49	10.9	4.8	NT
3.93	9.9	5.1	NT
4.29	8.9	5.3	NT

MPG 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.05	7.2	12.2	545
0.14	6.5	13.2	520
0.27	7.3	11.9	525
0.46	6.1	12.6	525
0.92	6.8	12.9	580
1.00	6.8	13.0	585
1.08	6.3	12.9	435
1.09	6.2	12.9	660
1.20	6.0	13.2	730
1.27	6.0	13.5	780
1.44	5.2	13.7	700
1.51	6.0	12.9	680
1.93	5.4	13.0	575
2.02	5.1	13.2	630
2.15	4.9	13.1	620
2.25	4.9	13.1	640
2.36	4.8	13.0	675
2.44	5.0	13.0	675
2.52	4.5	13.3	720
2.93	3.4	14.2	800
3.05	4.0	14.0	NT
3.17	4.0	14.1	NT
3.27	4.0	13.9	NT
3.40	3.7	14.1	NT
3.47	3.6	14.8	NT
3.92	3.9	14.9	NT
4.27	3.0	15.2	NT

MPG 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.05	0.1	19.0	700
0.14	0.4	19.0	655
0.27	1.0	17.0	670
0.46	1.3	17.5	650
0.93	1.3	17.9	705
1.00	0.6	19.0	740
1.08	0.8	18.1	560
1.09	0.8	18.0	820
1.21	0.1	19.0	925
1.27	0.2	18.9	945
1.44	0.0	19.0	910
1.51	0.4	17.9	870
1.93	0.5	17.8	730
2.02	0.1	18.1	800
2.15	0.2	17.5	750
2.25	0.1	17.8	800
2.37	0.3	17.1	830
2.44	0.1	17.1	800
2.52	0.0	17.9	905
2.93	0.0	19.1	995
3.06	0.2	18.1	NT
3.17	0.2	17.9	NT
3.27	0.2	17.9	NT
3.40	0.0	18.5	NT
3.47	0.0	18.9	NT
3.92	0.6	17.1	NT
4.28	0.0	19.0	NT

MPG 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.05	11.9	9.5	500
0.14	11.6	9.7	460
0.27	12.0	8.8	280
0.29	12.0	9.1	460
0.46	12.0	9.1	530
0.92	11.2	9.7	510
1.00	11.0	10.0	510
1.08	10.8	9.8	380
1.09	10.8	9.9	570
1.20	10.5	10.1	620
1.27	10.1	10.1	690
1.44	10.1	10.2	600
1.51	10.2	10.0	615
1.93	9.8	10.1	520
2.02	9.3	10.2	560
2.15	9.1	10.2	540
2.25	9.2	10.0	550
2.36	9.0	10.1	595
2.44	9.0	10.3	600
2.52	9.0	10.5	645
2.93	7.9	11.1	720
3.05	8.0	11.0	NT
3.17	8.0	11.0	NT
3.27	8.0	10.9	NT
3.40	7.5	11.1	NT
3.47	7.6	11.1	NT
3.92	7.5	11.0	NT
4.27	6.6	12.0	NT

MPH 12 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.05	19.5	0.8	120
0.15	18.9	0.8	115
0.30	18.9	0.9	90
0.46	18.8	1.0	45
0.93	16.8	1.4	110
1.00	16.8	1.5	160
1.11	16.1	1.7	770
1.21	15.4	1.8	190
1.28	15.9	1.9	200
1.44	14.5	2.1	195
1.52	14.1	2.2	260
1.93	12.3	2.9	180
2.03	12.1	3.1	290
2.16	11.2	3.2	210
2.25	10.9	3.3	280
2.37	10.4	3.5	265
2.44	10.0	3.6	340
2.52	9.8	3.8	350
2.93	8.1	4.6	405
3.06	8.0	4.7	NT
3.17	7.5	4.8	NT
3.27	7.0	4.9	NT
3.40	6.4	5.2	NT
3.48	6.3	5.4	NT
3.92	5.6	6.0	NT
4.28	5.0	7.4	NT

MPH 17 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.06	17.0	2.6	475
0.15	16.0	3.0	475
0.30	14.0	3.5	490
0.46	12.2	4.0	440
0.93	7.6	5.9	600
0.94	8.0	5.5	555
1.00	6.5	6.5	640
1.11	5.4	6.9	570
1.21	4.2	7.2	815
1.28	3.9	7.5	880
1.44	2.0	8.1	830
1.52	2.1	8.1	850
1.94	0.8	9.3	715
2.03	0.4	9.8	840
2.16	0.3	9.7	760
2.25	0.2	10.0	805
2.37	0.5	9.8	815
2.44	0.9	9.5	820
2.52	0.0	10.1	925
2.94	0.0	11.1	995
3.06	0.2	10.8	NT
3.17	0.1	10.8	NT
3.27	0.2	10.8	NT
3.40	0.0	11.0	NT
3.48	0.2	1.0	NT
3.92	0.3	11.0	NT
4.28	1.0	11.5	NT

MPH 7 ft bgs			
Shut off Blower 7/17/1997 9:33:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.05	19.8	0.8	95
0.14	19.2	0.8	95
0.30	19.8	0.9	25
0.46	19.3	0.9	70
0.93	18.8	1.2	100
1.00	18.6	1.4	160
1.11	18.8	1.4	110
1.21	17.9	1.5	190
1.27	18.4	1.5	190
1.44	17.5	1.6	160
1.52	17.4	1.6	220
1.93	16.4	2.1	140
2.03	16.3	2.1	220
2.16	15.7	2.1	160
2.25	15.1	2.1	240
2.37	15.3	2.1	185
2.44	15.0	2.2	270
2.52	14.8	2.4	260
2.93	14.3	2.9	220
3.06	13.0	3.0	NT
3.17	12.3	3.0	NT
3.27	12.1	3.1	NT
3.40	11.6	3.3	NT
3.48	11.4	3.5	NT
3.92	10.0	3.8	NT
4.28	10.1	4.3	NT

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

October 1997

SUMMARY OUTPUT

MPA 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.973
R Square	0.947
Adjusted R Square	0.938
Standard Error	0.719
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	55.42	55.421	107.3	4.74E-05
Residual	6	3.10	0.516		
Total	7	58.52			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.31	0.48	31.68	6.58E-08	14.13	16.49	14.13	16.49
X Variable 1	-7.88	0.76	-10.36	4.74E-05	-9.74	-6.02	-9.74	-6.02

SUMMARY OUTPUT

MPA 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.967
R Square	0.935
Adjusted R Square	0.929
Standard Error	0.957
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	157.46	157.458	171.8	1.80E-08
Residual	12	11.00	0.917		
Total	13	168.46			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.17	0.45	33.56	3.11E-13	14.19	16.15	14.19	16.15
X Variable 1	-5.28	0.40	-13.11	1.80E-08	-6.16	-4.40	-6.16	-4.40

SUMMARY OUTPUT **MPB 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.992
R Square	0.983
Adjusted R Square	0.982
Standard Error	0.422
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	158.79	158.785	892.1	8.87E-15
Residual	15	2.67	0.178		
Total	16	161.46			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.16	0.18	110.86	2.83E-23	19.77	20.55	19.77	20.55
X Variable 1	-1.96	0.07	-29.87	8.87E-15	-2.10	-1.82	-2.10	-1.82

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.992
R Square	0.983
Adjusted R Square	0.983
Standard Error	0.678
Observations	24

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	594.25	594.251	1292.6	4.89E-21
Residual	22	10.11	0.460		
Total	23	604.37			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.43	0.21	94.61	3.24E-30	19.00	19.86	19.00	19.86
X Variable 1	-3.37	0.09	-35.95	4.89E-21	-3.56	-3.17	-3.56	-3.17

SUMMARY OUTPUT

MPB 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.987
Adjusted R Square	0.983
Standard Error	0.296
Observations	6

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	25.76	25.764	294.6	6.76E-05
Residual	4	0.35	0.087		
Total	5	26.11			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15.90	0.25	63.92	3.59E-07	15.21	16.59	15.21	16.59
X Variable 1	-28.49	1.66	-17.16	6.76E-05	-33.10	-23.88	-33.10	-23.88

SUMMARY OUTPUT **MPC 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.986
R Square	0.972
Adjusted R Square	0.970
Standard Error	0.492
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	126.66	126.662	522.4	4.52E-13
Residual	15	3.64	0.242		
Total	16	130.30			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.04	0.20	98.35	1.70E-22	19.60	20.47	19.60	20.47
X Variable 1	-1.81	0.08	-22.86	4.52E-13	-1.98	-1.64	-1.98	-1.64

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.989
R Square	0.977
Adjusted R Square	0.976
Standard Error	0.545
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	154.68	154.683	520.6	2.98E-11
Residual	12	3.57	0.297		
Total	13	158.25			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.02	0.25	72.97	2.92E-17	17.48	18.56	17.48	18.56
X Variable 1	-4.38	0.19	-22.82	2.98E-11	-4.80	-3.96	-4.80	-3.96

SUMMARY OUTPUT

MPD 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.939
R Square	0.881
Adjusted R Square	0.873
Standard Error	0.815
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	73.62	73.618	111.0	2.51E-08
Residual	15	9.95	0.664		
Total	16	83.57			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.88	0.35	58.89	3.66E-19	20.12	21.63	20.12	21.63
X Variable 1	-1.40	0.13	-10.53	2.51E-08	-1.68	-1.12	-1.68	-1.12

SUMMARY OUTPUT

MPD 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.994
Adjusted R Square	0.993
Standard Error	0.361
Observations	19

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	352.39	352.391	2697.7	3.58E-20
Residual	17	2.22	0.131		
Total	18	354.61			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.60	0.15	141.18	1.55E-27	21.28	21.92	21.28	21.92
X Variable 1	-3.08	0.06	-51.94	3.58E-20	-3.21	-2.95	-3.21	-2.95

SUMMARY OUTPUT

MPD 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.985
Adjusted R Square	0.984
Standard Error	0.592
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	283.83	283.833	808.9	2.21E-12
Residual	12	4.21	0.351		
Total	13	288.04			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.41	0.26	77.49	1.42E-17	19.83	20.98	19.83	20.98
X Variable 1	-14.67	0.52	-28.44	2.21E-12	-15.80	-13.55	-15.80	-13.55

SUMMARY OUTPUT **MPE 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.989
R Square	0.979
Adjusted R Square	0.977
Standard Error	0.554
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	209.62	209.617	683.0	6.34E-14
Residual	15	4.60	0.307		
Total	16	214.22			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.52	0.23	81.15	3.03E-21	18.04	19.01	18.04	19.01
X Variable 1	-2.32	0.09	-26.14	6.34E-14	-2.51	-2.13	-2.51	-2.13

SUMMARY OUTPUT

MPE 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.985
Standard Error	0.511
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	238.42	238.420	911.7	2.00E-13
Residual	13	3.40	0.262		
Total	14	241.82			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.27	0.22	88.05	1.96E-19	18.80	19.74	18.80	19.74
X Variable 1	-6.09	0.20	-30.19	2.00E-13	-6.53	-5.65	-6.53	-5.65

SUMMARY OUTPUT

MPE 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.942
R Square	0.887
Adjusted R Square	0.850
Standard Error	1.063
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	26.68	26.676	23.6	1.67E-02
Residual	3	3.39	1.131		
Total	4	30.07			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.00	1.63	8.58	3.33E-03	8.81	19.20	8.81	19.20
X Variable 1	-23.92	4.92	-4.86	1.67E-02	-39.59	-8.25	-39.59	-8.25

SUMMARY OUTPUT **MPF 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.959
R Square	0.920
Adjusted R Square	0.914
Standard Error	0.737
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	87.51	87.506	160.9	4.57E-09
Residual	14	7.61	0.544		
Total	15	95.12			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.79	0.32	64.72	9.55E-19	20.10	21.47	20.10	21.47
X Variable 1	-1.54	0.12	-12.69	4.57E-09	-1.80	-1.28	-1.80	-1.28

SUMMARY OUTPUT

MPF 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.987
Adjusted R Square	0.986
Standard Error	0.585
Observations	22

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	520.78	520.784	1520.4	2.41E-20
Residual	20	6.85	0.343		
Total	21	527.63			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.09	0.19	111.59	1.98E-29	20.70	21.48	20.70	21.48
X Variable 1	-3.12	0.08	-38.99	2.41E-20	-3.28	-2.95	-3.28	-2.95

SUMMARY OUTPUT

MPF 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.983
R Square	0.966
Adjusted R Square	0.962
Standard Error	0.531
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	64.13	64.126	227.5	3.69E-07
Residual	8	2.26	0.282		
Total	9	66.38			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.34	0.38	48.81	3.44E-11	17.47	19.21	17.47	19.21
X Variable 1	-9.40	0.62	-15.08	3.69E-07	-10.84	-7.97	-10.84	-7.97

SUMMARY OUTPUT **MPG 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.952
R Square	0.906
Adjusted R Square	0.899
Standard Error	0.604
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	48.98	48.977	134.4	1.45E-08
Residual	14	5.10	0.364		
Total	15	54.08			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.03	0.26	72.38	2.00E-19	18.47	19.60	18.47	19.60
X Variable 1	-1.15	0.10	-11.59	1.45E-08	-1.37	-0.94	-1.37	-0.94

SUMMARY OUTPUT

MPG 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.951
R Square	0.905
Adjusted R Square	0.900
Standard Error	0.938
Observations	23

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	175.49	175.486	199.4	3.42E-12
Residual	21	18.48	0.880		
Total	22	193.96			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.87	0.30	49.43	3.22E-23	14.24	15.49	14.24	15.49
X Variable 1	-1.89	0.13	-14.12	3.42E-12	-2.17	-1.61	-2.17	-1.61

SUMMARY OUTPUT

MPH 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.933
R Square	0.870
Adjusted R Square	0.861
Standard Error	0.832
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	65.04	65.044	94.0	1.37E-07
Residual	14	9.69	0.692		
Total	15	74.73			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.91	0.36	57.68	4.76E-18	20.13	21.69	20.13	21.69
X Variable 1	-1.33	0.14	-9.69	1.37E-07	-1.62	-1.03	-1.62	-1.03

SUMMARY OUTPUT

MPH 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.982
Adjusted R Square	0.980
Standard Error	0.417
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	95.22	95.216	547.0	4.62E-10
Residual	10	1.74	0.174		
Total	11	96.96			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.59	0.21	101.37	2.14E-16	21.12	22.07	21.12	22.07
X Variable 1	-3.16	0.13	-23.39	4.62E-10	-3.46	-2.86	-3.46	-2.86

SUMMARY OUTPUT

MPH 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.990
R Square	0.980
Adjusted R Square	0.978
Standard Error	0.579
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	176.34	176.342	525.7	1.23E-10
Residual	11	3.69	0.335		
Total	12	180.03			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.01	0.30	67.11	9.97E-16	19.36	20.67	19.36	20.67
X Variable 1	-11.19	0.49	-22.93	1.23E-10	-12.27	-10.12	-12.27	-10.12

MPA 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	16.0	4.3	365
0.09	15.1	4.2	380
0.18	15.2	4.1	360
0.29	14.0	4.9	380
0.40	12.9	5.1	400
0.46	12.0	5.0	400
0.54	13.0	5.5	410
0.77	12.0	6.1	440
0.94	9.0	6.5	470
1.05	7.5	7.0	440
1.17	8.3	7.0	430
1.34	8.0	7.0	480
1.56	7.0	7.5	480
1.93	6.0	8.2	440
2.22	4.0	9.0	160
2.53	4.5	9.0	190
2.98	2.1	11.0	200
2.99	2.1	10.5	430
3.29	2.3	11.5	240
3.58	2.0	12.5	240
3.98	0.8	13.5	220
4.31	1.1	13.0	210
4.91	0.5	14.5	260

MPA 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	16.0	5.0	460
0.00	15.9	4.9	480
0.19	14.0	5.2	500
0.41	11.2	6.4	560
0.45	11.0	6.5	580
0.52	11.0	6.5	580
0.78	10.3	7.3	620
0.93	8.0	8.0	620
1.03	7.0	8.5	160
1.12	5.0	8.0	200
1.18	7.7	8.4	180
1.28	7.0	8.5	180
1.35	7.5	8.5	240
1.47	6.0	9.0	280
1.58	6.0	9.0	240
1.93	5.8	9.8	180
2.22	5.1	9.9	150
2.53	5.0	10.0	200
2.98	3.0	11.7	210
3.29	3.9	11.5	240
3.57	3.1	12.5	240
3.98	2.0	14.0	220
4.31	2.1	12.5	210
4.91	1.8	13.5	240

MPB 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	1.3	230
0.05	20.0	0.8	170
0.09	19.3	0.8	220
0.18	19.5	1.0	200
0.28	18.8	1.1	0
0.30	19.0	1.1	180
0.39	18.1	1.2	210
0.46	17.5	1.0	210
0.54	18.0	1.3	240
0.76	17.5	1.8	240
0.94	16.0	2.0	260
1.05	15.5	2.0	280
1.17	15.3	2.2	270
1.34	14.0	2.0	360
1.56	14.0	2.5	320
1.94	13.6	1.9	320
2.22	11.0	3.3	300
2.53	10.0	3.5	280
2.99	9.0	4.6	300
3.29	7.5	5.1	350
3.58	7.0	5.9	360
3.98	5.5	6.5	380
4.31	6.0	6.1	390
4.91	4.3	8.0	200

MPB 17 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	15.0	5.2	120
0.00	14.5	5.0	480
0.04	15.0	5.0	440
0.08	13.5	5.0	520
0.11	12.5	5.5	500
0.13	12.3	5.7	500
0.17	11.5	5.9	500
0.27	8.2	7.1	140
0.31	8.0	7.3	490
0.38	6.9	7.8	500
0.45	6.0	8.0	520
0.53	6.0	8.5	540
0.61	4.8	9.5	200
0.76	4.0	10.5	220
0.91	2.0	10.5	200
1.03	0.3	12.0	200
1.12	0.0	11.5	250

MPB 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	7.5	210
0.19	20.0	0.6	130
0.41	19.1	0.7	160
0.62	19.2	0.7	200
0.92	18.5	0.8	180
1.18	17.2	0.8	250
1.45	17.0	0.8	240
1.94	16.1	1.0	200
2.23	16.0	1.0	200
2.54	16.0	1.0	200
3.00	15.1	1.8	220
3.30	13.5	1.8	280
3.59	13.0	2.1	280
3.99	12.2	2.3	300
4.32	11.5	2.5	270
4.33	12.0	2.5	300
4.92	10.0	3.0	320

MPC 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	1.2	200
0.09	18.2	1.2	240
0.18	17.9	1.7	220
0.30	16.9	2.4	240
0.39	16.0	2.8	270
0.46	15.0	3.0	280
0.54	15.0	3.3	280
0.77	15.0	3.8	300
1.04	13.5	4.0	320
1.17	13.2	4.2	320
1.34	12.0	4.5	400
1.56	11.0	5.0	400
1.94	8.9	6.1	320
2.22	9.0	5.3	300
2.53	7.0	7.0	310
2.98	6.0	8.0	140
3.29	7.9	6.8	330
3.58	6.8	7.9	340
3.98	6.8	7.3	340
4.31	7.2	6.5	320
4.33	6.5	7.8	340
4.91	5.8	8.9	200

MPC 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.5	0.7	190
0.20	19.8	0.7	170
0.41	19.0	0.8	170
0.52	19.5	0.8	160
0.78	19.2	0.9	180
1.06	18.1	1.0	190
1.18	17.0	1.0	250
1.45	18.0	1.0	280
1.95	16.0	1.7	220
2.23	16.0	1.5	210
2.54	16.0	1.8	220
3.00	15.0	2.3	220
3.31	14.5	2.5	280
3.59	13.0	3.0	280
3.99	12.8	3.0	280
4.32	12.5	3.0	300
4.92	10.6	3.5	300

MPD 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.2	180
0.04	20.5	0.3	100
0.08	20.5	0.1	175
0.18	20.5	0.1	160
0.28	20.5	0.0	0
0.30	20.8	0.1	100
0.39	20.1	0.2	120
0.62	19.9	0.2	140
0.92	19.0	0.3	160
1.05	18.8	0.4	90
1.17	18.1	0.3	150
1.46	17.0	0.3	210
1.94	15.7	0.5	210
2.22	15.0	2.0	160
2.27	15.0	0.5	50
2.53	13.5	0.5	120
2.98	12.0	5.0	150
2.99	12.0	1.2	160
3.29	11.0	1.6	200
3.58	10.1	2.2	220
3.98	9.1	2.6	260
4.31	8.9	2.7	260
4.91	7.0	3.8	320

MPD 17 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.1	0.8	250
0.03	20.0	0.8	160
0.03	20.0	0.8	180
0.07	19.0	0.9	260
0.10	18.8	1.0	280
0.13	18.3	1.1	220
0.16	18.1	1.4	240
0.26	16.3	1.7	28
0.31	16.1	1.9	300
0.38	15.0	2.2	340
0.45	13.5	2.5	370
0.53	13.0	3.0	400
0.61	12.0	3.1	440
0.75	10.8	3.8	500
0.91	6.0	4.5	480
1.02	5.0	5.0	120
1.11	1.9	5.3	170
1.19	4.0	5.8	170
1.28	3.8	6.0	180
1.35	3.0	6.5	220
1.47	2.0	6.5	300
1.57	1.5	7.0	240
1.93	1.1	8.1	190
2.21	0.0	8.5	180
2.53	1.0	9.0	220
2.97	0.5	9.5	230
3.28	0.0	10.8	280
3.57	0.0	11.0	280

MPD 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.3	0.3	220
0.20	20.8	0.1	110
0.40	19.7	0.1	120
0.62	20.2	0.2	140
0.92	20.0	0.3	80
1.18	18.9	0.2	180
1.45	19.0	0.3	200
1.95	18.1	0.4	120
2.23	18.5	0.3	120
2.54	18.5	0.0	200
3.00	17.5	0.3	80
3.01	17.5	0.3	70
3.31	17.0	0.4	140
3.59	15.2	0.5	140
3.99	15.0	0.5	150
4.32	14.5	0.9	160
4.92	12.5	0.8	210

MPE 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.0	0.7	200
0.05	19.5	0.8	160
0.09	19.0	0.8	210
0.18	18.5	1.0	220
0.29	17.5	1.5	195
0.39	17.0	1.8	220
0.45	16.0	2.0	240
0.54	16.0	2.3	240
0.77	15.0	3.1	280
0.93	13.0	3.8	300
1.05	12.0	3.8	330
1.17	12.1	4.0	310
1.34	11.0	4.5	400
1.57	9.0	5.0	360
1.94	7.9	6.1	320
2.22	6.5	6.5	300
2.53	6.0	7.0	320
2.98	4.5	7.9	320
3.29	4.5	7.4	350
3.58	4.0	9.0	370
3.98	3.5	9.2	360
4.31	3.6	9.1	380
4.33	3.5	9.3	370
4.91	2.6	10.9	220

MPE 17 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	7.2	11.0	200
0.04	9.0	9.5	600
0.08	9.5	8.8	620
0.11	9.0	9.0	600
0.11	9.0	9.0	170
0.13	10.0	8.5	170
0.17	11.0	8.0	160
0.27	6.7	9.9	165
0.32	5.5	10.5	545
0.38	4.9	11.0	570
0.45	4.0	11.0	580
0.53	4.0	11.5	600
0.61	4.0	12.2	215
0.76	3.1	13.0	240
0.91	0.3	14.0	240
1.03	0.5	12.0	200
1.12	0.0	13.5	260

MPE 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.8	1.1	230
0.20	18.5	1.4	180
0.40	17.5	1.5	210
0.52	18.0	1.8	210
0.78	17.3	2.0	230
0.93	16.0	2.3	240
1.18	14.7	2.2	300
1.46	15.0	2.5	360
1.95	13.0	3.3	280
2.23	13.0	3.5	240
2.54	13.0	3.5	280
3.00	11.5	4.2	280
3.31	11.5	4.5	320
3.59	10.0	4.9	330
3.99	8.8	5.0	310
4.32	8.8	5.0	310
4.92	7.5	5.8	340

MPF 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.9	0.3	160
0.05	20.5	0.1	50
0.05	20.5	0.1	120
0.09	20.5	0.3	175
0.18	20.4	0.4	160
0.28	20.3	0.3	0
0.39	20.0	0.5	130
0.54	19.5	0.3	150
0.77	19.8	0.6	110
1.04	19.0	0.5	140
1.16	18.3	0.7	140
1.46	17.0	0.5	260
1.94	15.2	1.1	190
2.23	14.0	1.0	200
2.53	13.0	1.5	220
2.99	11.6	2.3	190
3.30	9.9	2.8	250
3.30	10.6	2.7	290
3.58	10.0	3.2	300
3.98	8.2	3.5	280
4.32	8.0	4.7	280
4.91	6.0	4.8	340

MPF 17 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	16.9	3.1	420
0.03	18.0	2.8	340
0.08	17.1	3.0	430
0.11	17.0	3.0	380
0.13	17.0	3.1	380
0.16	17.2	2.8	360
0.26	15.2	3.5	70
0.31	15.5	3.8	440
0.38	14.6	3.9	450
0.45	14.0	4.0	460
0.53	13.0	4.0	480
0.61	13.1	4.5	490
0.75	12.1	5.0	540
0.91	10.0	5.5	560
1.03	8.0	6.0	120
1.11	5.7	6.1	180
1.19	7.5	6.3	160
1.28	7.0	6.5	180
1.35	7.0	6.5	220
1.47	5.0	7.0	280
1.57	5.0	7.5	220
1.93	4.1	8.2	180
2.22	3.0	8.5	160
2.22	3.0	8.5	160
2.52	3.0	9.0	200
2.98	1.1	10.2	200
3.28	1.9	10.5	240
3.57	1.3	11.0	240
3.97	0.4	11.5	220
4.31	0.9	11.0	210
4.90	0.2	12.0	240

MPF 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.7	0.2	180
0.20	20.1	0.4	110
0.40	19.9	0.4	120
0.62	20.0	0.5	150
0.92	20.0	0.5	120
1.18	18.2	0.5	200
1.46	19.0	0.3	240
1.95	17.9	0.5	140
2.24	18.0	0.3	140
2.54	18.0	0.3	120
3.00	17.0	0.6	110
3.31	16.5	0.7	150
3.59	14.5	0.8	160
3.99	14.3	0.8	180
4.33	14.0	0.8	180
4.92	12.1	1.0	240

MPG 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	15.5	4.0	350
0.10	15.8	3.5	340
0.19	16.0	3.6	320
0.29	15.0	4.1	220
0.39	14.4	4.3	350
0.46	14.0	4.5	360
0.54	11.0	7.0	360
0.63	14.0	4.5	360
0.77	14.1	4.8	370
0.93	13.0	5.0	400
1.05	12.0	5.0	400
1.17	12.9	5.0	380
1.34	12.0	5.0	480
1.57	11.0	5.5	400
1.94	10.7	5.9	340
2.23	10.0	4.0	340
2.53	9.8	6.0	340
2.99	9.0	6.8	350
3.30	8.1	7.0	380
3.58	8.0	7.5	390
3.98	7.2	7.5	400
4.32	8.2	6.5	370
4.91	6.1	8.1	440

MPG 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.0	0.8	220
0.20	19.1	0.7	160
0.40	18.9	0.8	180
0.62	18.9	0.9	200
0.92	18.0	1.3	200
1.18	16.8	1.2	260
1.46	17.5	1.3	310
1.95	16.4	1.8	230
2.24	16.5	1.8	210
2.54	17.0	1.8	220
3.00	16.1	2.2	220
3.31	16.0	2.3	260
3.60	14.2	2.6	270
3.99	14.2	2.7	280
4.33	14.2	2.5	290
4.92	12.8	3.1	340

MPH 12 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.5	0.4	200
0.04	20.5	0.8	180
0.08	20.5	0.4	190
0.17	20.5	0.4	160
0.27	20.5	0.3	0
0.30	20.5	0.4	100
0.38	20.0	0.5	160
0.53	19.5	0.3	160
0.76	19.6	0.6	140
1.04	19.0	0.5	140
1.16	18.3	0.6	120
1.47	17.0	0.5	260
1.94	15.4	0.8	190
2.23	15.0	0.8	190
2.53	13.0	1.0	220
2.99	12.0	1.8	220
3.30	12.5	2.0	280
3.59	11.0	2.5	300
3.99	9.0	3.0	280
4.32	8.2	3.1	300
4.91	6.8	4.0	340

MPH 17 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	0.8	310
0.03	19.5	1.0	240
0.07	19.1	0.9	280
0.10	18.2	1.1	340
0.13	18.6	1.3	270
0.16	18.5	1.3	260
0.26	16.9	1.9	24
0.31	16.5	2.1	330
0.38	15.9	2.4	330
0.45	15.0	2.8	360
0.53	14.0	3.0	380
0.61	13.9	3.3	400
0.75	12.5	3.8	440
0.90	10.0	4.5	460
1.02	9.0	5.0	480
1.11	6.3	4.7	140
1.19	6.7	5.5	150
1.28	6.0	6.0	140
1.35	5.8	6.0	200
1.47	5.0	6.0	660
1.57	3.0	7.0	220
1.93	2.8	7.9	150
2.21	3.0	8.0	580
2.21	1.0	8.0	140
2.22	2.0	8.0	140
2.22	2.0	8.0	140
2.52	1.5	8.5	200
2.97	0.0	10.0	210
3.28	1.0	10.0	220
3.57	0.9	10.8	230
4.33	0.4	10.9	240

MPH 7 ft bgs			
Shut off Blower 10/21/1997 8:03:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.8	0.2	180
0.20	20.0	0.1	100
0.40	20.0	0.2	120
0.63	20.5	0.1	120
0.93	20.0	0.3	74
1.19	18.5	0.0	170
1.47	20.0	0.3	210
1.95	18.4	0.3	86
2.24	19.0	0.0	100
2.54	18.0	0.0	76
3.01	18.0	0.0	70
3.31	17.5	0.0	190
3.60	15.6	0.3	110
3.99	15.2	0.0	120
4.33	15.0	0.0	140
4.92	13.0	0.6	180

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

January 1998

SUMMARY OUTPUT

MPA 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.989
R Square	0.978
Adjusted R Square	0.976
Standard Error	0.356
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	63.01	63.008	497.2	1.66E-10
Residual	11	1.39	0.127		
Total	12	64.40			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.22	0.17	108.64	5.03E-18	17.85	18.59	17.85	18.59
X Variable 1	-1.43	0.06	-22.30	1.66E-10	-1.57	-1.29	-1.57	-1.29

SUMMARY OUTPUT

MPA 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.985
Standard Error	0.411
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	142.06	142.056	841.3	1.76E-12
Residual	12	2.03	0.169		
Total	13	144.08			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.61	0.18	94.10	1.39E-18	16.23	17.00	16.23	17.00
X Variable 1	-2.03	0.07	-29.00	1.76E-12	-2.18	-1.87	-2.18	-1.87

SUMMARY OUTPUT

MPB 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.959
R Square	0.920
Adjusted R Square	0.912
Standard Error	0.428
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	23.05	23.055	125.7	2.33E-07
Residual	11	2.02	0.183		
Total	12	25.07			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.63	0.20	102.24	9.80E-18	20.19	21.08	20.19	21.08
X Variable 1	-0.86	0.08	-11.21	2.33E-07	-1.03	-0.70	-1.03	-0.70

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.987
Adjusted R Square	0.986
Standard Error	0.365
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	118.85	118.852	891.8	1.24E-12
Residual	12	1.60	0.133		
Total	13	120.45			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.03	0.16	127.25	3.72E-20	19.68	20.37	19.68	20.37
X Variable 1	-1.86	0.06	-29.86	1.24E-12	-2.00	-1.72	-2.00	-1.72

SUMMARY OUTPUT

MPB 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.994
Adjusted R Square	0.993
Standard Error	0.345
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	120.53	120.525	1011.5	6.42E-08
Residual	6	0.71	0.119		
Total	7	121.24			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.40	0.20	85.28	1.75E-10	16.90	17.90	16.90	17.90
X Variable 1	-7.34	0.23	-31.80	6.42E-08	-7.91	-6.78	-7.91	-6.78

SUMMARY OUTPUT **MPC 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.983
R Square	0.966
Adjusted R Square	0.963
Standard Error	0.424
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	56.88	56.881	315.9	1.89E-09
Residual	11	1.98	0.180		
Total	12	58.86			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.14	0.20	100.69	1.16E-17	19.70	20.58	19.70	20.58
X Variable 1	-1.36	0.08	-17.77	1.89E-09	-1.53	-1.19	-1.53	-1.19

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	1.000
R Square	0.999
Adjusted R Square	0.999
Standard Error	0.088
Observations	4

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	22.48	22.485	2901.3	3.44E-04
Residual	2	0.02	0.008		
Total	3	22.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.02	0.07	280.72	1.27E-05	19.72	20.33	19.72	20.33
X Variable 1	-14.32	0.27	-53.86	3.44E-04	-15.46	-13.18	-15.46	-13.18

SUMMARY OUTPUT

MPD 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.938
R Square	0.880
Adjusted R Square	0.869
Standard Error	0.469
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	17.74	17.745	80.7	2.13E-06
Residual	11	2.42	0.220		
Total	12	20.16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.88	0.22	94.45	2.34E-17	20.39	21.37	20.39	21.37
X Variable 1	-0.76	0.08	-8.98	2.13E-06	-0.94	-0.57	-0.94	-0.57

SUMMARY OUTPUT

MPD 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.983
R Square	0.966
Adjusted R Square	0.963
Standard Error	0.626
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	133.34	133.345	340.3	3.58E-10
Residual	12	4.70	0.392		
Total	13	138.05			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.98	0.27	77.66	1.38E-17	20.39	21.56	20.39	21.56
X Variable 1	-1.97	0.11	-18.45	3.58E-10	-2.20	-1.74	-2.20	-1.74

SUMMARY OUTPUT

MPD 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.996
R Square	0.992
Adjusted R Square	0.990
Standard Error	0.470
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	157.17	157.174	711.0	1.84E-07
Residual	6	1.33	0.221		
Total	7	158.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.45	0.28	69.90	5.77E-10	18.77	20.13	18.77	20.13
X Variable 1	-8.39	0.31	-26.67	1.84E-07	-9.16	-7.62	-9.16	-7.62

SUMMARY OUTPUT **MPE 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.988
R Square	0.977
Adjusted R Square	0.975
Standard Error	0.490
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	112.85	112.854	469.2	2.27E-10
Residual	11	2.65	0.241		
Total	12	115.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.05	0.23	82.37	1.05E-16	18.54	19.56	18.54	19.56
X Variable 1	-1.91	0.09	-21.66	2.27E-10	-2.11	-1.72	-2.11	-1.72

SUMMARY OUTPUT

MPE 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.988
R Square	0.976
Adjusted R Square	0.974
Standard Error	0.727
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	194.79	194.791	368.7	1.30E-08
Residual	9	4.75	0.528		
Total	10	199.55			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.65	0.39	47.35	4.19E-12	17.75	19.54	17.75	19.54
X Variable 1	-3.90	0.20	-19.20	1.30E-08	-4.35	-3.44	-4.35	-3.44

SUMMARY OUTPUT

MPE 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.997
Adjusted R Square	0.995
Standard Error	0.124
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	13.65	13.654	881.2	8.40E-05
Residual	3	0.05	0.015		
Total	4	13.70			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.52	0.09	127.29	1.07E-06	11.23	11.81	11.23	11.81
X Variable 1	-10.51	0.35	-29.68	8.40E-05	-11.63	-9.38	-11.63	-9.38

SUMMARY OUTPUT

MPF 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.953
R Square	0.909
Adjusted R Square	0.900
Standard Error	0.529
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30.59	30.591	109.5	4.68E-07
Residual	11	3.07	0.279		
Total	12	33.66			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.99	0.25	84.17	8.29E-17	20.44	21.54	20.44	21.54
X Variable 1	-1.00	0.10	-10.47	4.68E-07	-1.21	-0.79	-1.21	-0.79

SUMMARY OUTPUT

MPF 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.989
R Square	0.979
Adjusted R Square	0.977
Standard Error	0.526
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	153.36	153.365	554.7	2.05E-11
Residual	12	3.32	0.276		
Total	13	156.68			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.95	0.23	92.29	1.75E-18	20.46	21.45	20.46	21.45
X Variable 1	-2.11	0.09	-23.55	2.05E-11	-2.31	-1.92	-2.31	-1.92

SUMMARY OUTPUT

MPF 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.985
Standard Error	0.504
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	129.61	129.608	509.5	8.48E-08
Residual	7	1.78	0.254		
Total	8	131.39			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.81	0.29	60.54	8.81E-11	17.11	18.51	17.11	18.51
X Variable 1	-4.26	0.19	-22.57	8.48E-08	-4.70	-3.81	-4.70	-3.81

SUMMARY OUTPUT

MPG 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.984
R Square	0.968
Adjusted R Square	0.965
Standard Error	0.266
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	23.52	23.519	332.9	1.43E-09
Residual	11	0.78	0.071		
Total	12	24.30			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.94	0.13	158.99	7.64E-20	19.66	20.22	19.66	20.22
X Variable 1	-0.87	0.05	-18.25	1.43E-09	-0.98	-0.77	-0.98	-0.77

SUMMARY OUTPUT

MPG 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.996
Adjusted R Square	0.995
Standard Error	0.155
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	65.82	65.823	2742.1	1.55E-15
Residual	12	0.29	0.024		
Total	13	66.11			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.74	0.07	250.20	1.12E-23	16.60	16.89	16.60	16.89
X Variable 1	-1.39	0.03	-52.37	1.55E-15	-1.44	-1.33	-1.44	-1.33

SUMMARY OUTPUT

MPH 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.918
R Square	0.843
Adjusted R Square	0.828
Standard Error	0.443
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	11.58	11.578	58.9	9.65E-06
Residual	11	2.16	0.197		
Total	12	13.74			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.85	0.21	99.66	1.30E-17	20.39	21.31	20.39	21.31
X Variable 1	-0.61	0.08	-7.68	9.65E-06	-0.79	-0.44	-0.79	-0.44

SUMMARY OUTPUT

MPH 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.981
R Square	0.963
Adjusted R Square	0.959
Standard Error	0.528
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	86.11	86.107	309.0	6.26E-10
Residual	12	3.34	0.279		
Total	13	89.45			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.81	0.23	91.25	2.01E-18	20.31	21.31	20.31	21.31
X Variable 1	-1.58	0.09	-17.58	6.26E-10	-1.78	-1.39	-1.78	-1.39

SUMMARY OUTPUT

MPH 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.995
R Square	0.991
Adjusted R Square	0.990
Standard Error	0.468
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	168.47	168.470	770.7	2.02E-08
Residual	7	1.53	0.219		
Total	8	170.00			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.07	0.25	75.77	1.84E-11	18.48	19.67	18.48	19.67
X Variable 1	-5.75	0.21	-27.76	2.02E-08	-6.24	-5.26	-6.24	-5.26

MPA 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.0	3.0	120
0.14	16.5	3.0	100
0.21	16.0	3.0	98
0.44	16.0	3.3	98
0.94	15.0	3.5	NR
1.18	14.0	4.0	320
1.46	13.0	4.0	280
1.92	12.0	4.5	290
2.16	12.0	4.5	290
2.92	11.0	5.8	310
3.33	10.3	5.6	310
3.95	9.1	5.5	650
4.26	8.1	6.2	780
4.82	6.5	6.9	920
0.00	20.5	0.5	400
0.13	1.0	14.5	300
0.16	1.0	13.5	920
0.24	1.0	14.0	820
0.48	1.0	14.0	720
0.96	0.5	14.5	1700
2.17	0.2	14.0	1200

MPA 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	2.0	190
0.14	18.0	2.0	160
0.46	17.0	2.0	160
0.97	17.0	2.5	420
1.20	16.5	2.5	380
1.45	16.0	4.0	340
1.91	15.0	3.0	360
2.15	15.0	3.0	360
2.91	14.0	3.5	360
3.32	13.8	3.3	360
3.93	12.8	3.4	370
4.24	12.0	3.9	360
4.80	11.5	4.0	380

MPB 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.5	70
0.14	19.0	0.5	60
0.25	19.5	0.5	40
0.45	19.0	0.5	54
0.94	19.0	0.5	NR
1.19	18.0	0.8	200
1.46	17.5	0.8	160
1.92	16.5	1.0	170
2.17	16.0	1.0	190
2.92	15.0	1.8	180
3.33	14.0	1.5	200
3.94	12.5	2.2	210
4.25	11.8	2.8	220
4.81	11.0	4.1	220

MPB 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.5	2.5	140
0.13	16.5	2.8	120
0.25	16.0	3.0	110
0.47	13.5	3.5	120
0.97	10.0	4.8	400
1.18	8.5	5.5	380
1.20	8.6	5.5	1000
1.47	7.0	6.5	1000
1.93	5.0	7.5	950
2.17	4.3	7.8	990
2.93	3.0	9.0	1500
3.34	2.5	9.0	880

MPB 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.2	46
0.15	20.0	0.0	48
0.46	20.0	0.0	44
0.97	19.0	0.3	170
1.20	20.0	0.3	180
1.45	20.0	0.5	120
1.91	19.0	0.5	120
2.16	19.0	0.3	120
2.91	18.5	0.6	100
3.32	18.0	0.5	110
3.93	17.2	0.5	105
4.24	16.8	0.6	100
4.80	16.1	0.6	110

MPC 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.5	70
0.14	18.0	1.0	72
0.25	16.5	1.5	72
0.45	13.5	3.0	88
0.94	13.0	3.5	NR
1.19	12.0	4.0	300
1.46	12.5	4.0	260
1.92	12.0	4.0	260
2.17	11.8	4.0	270
2.92	5.0	8.0	300
2.93	4.5	8.5	1400
3.34	4.0	9.0	900
3.94	8.5	5.6	620
3.96	8.8	5.6	680
4.26	8.0	6.0	720
4.81	6.0	6.8	880

MPC 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.3	400
0.13	2.0	14.0	320
0.16	20.0	0.5	0
0.17	3.0	13.0	820
0.24	2.5	13.5	840
0.48	2.0	12.5	660
0.96	1.0	13.0	1600
2.18	0.5	13.5	1100

MPC 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.5	0.3	56
0.15	19.5	0.5	50
0.46	19.5	0.5	52
0.97	19.0	0.5	180
1.20	18.5	0.5	180
1.46	18.0	0.8	140
1.91	17.5	0.8	140
2.16	17.3	0.8	160
2.92	17.0	1.0	130
3.32	15.0	1.1	180
3.93	14.2	1.3	160
4.24	14.8	1.8	160
4.80	13.8	2.0	170

MPD 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	42
0.14	20.0	0.0	48
0.25	20.0	0.0	30
0.45	20.0	0.0	40
0.94	19.0	0.0	NR
1.19	19.0	0.0	160
1.46	18.8	0.3	100
1.92	18.0	0.1	95
2.17	17.8	0.1	100
2.92	15.0	0.6	70
3.33	14.0	0.5	110
3.94	12.1	0.5	110
4.25	12.5	0.8	100
4.81	11.9	0.9	120

MPD 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.5	100
0.13	18.5	0.5	84
0.25	17.0	0.8	72
0.47	15.0	1.0	98
0.97	11.0	2.0	300
1.18	9.5	2.5	300
1.21	10.0	2.5	630
1.47	7.0	3.3	620
1.93	4.3	4.0	620
2.18	3.5	4.3	700
2.93	1.0	6.0	1000
3.34	0.8	6.8	780

Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	34
0.15	20.0	0.0	40
0.46	20.0	0.0	46
0.98	20.5	0.0	140
1.20	20.0	0.0	140
1.46	20.0	0.0	98
1.92	20.0	0.1	96
2.16	20.0	0.0	100
2.92	19.0	0.5	50
3.32	18.0	0.0	68
3.93	17.9	0.0	16
4.25	17.3	0.0	18
4.80	17.0	0.1	14

MPE 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.3	58
0.14	19.0	0.5	58
0.26	18.5	0.5	52
0.45	17.0	1.0	62
0.95	14.0	2.0	NR
1.19	13.0	2.5	280
1.46	12.0	3.5	220
1.92	11.0	4.0	260
2.17	10.5	4.0	260
2.92	7.5	6.0	280
2.93	7.5	6.0	1000
3.34	6.0	6.5	760
3.95	6.1	6.1	660
4.26	6.0	6.8	780
4.82	5.0	7.0	880

MPE 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	11.5	7.0	180
0.13	10.0	7.0	140
0.16	10.0	7.0	480
0.24	9.0	17.0	540
0.47	6.5	8.0	500
0.96	5.0	14.5	1300
1.48	3.3	10.5	1400
1.93	2.5	11.0	1100
2.18	2.0	11.0	1000
2.94	1.0	12.0	1600

MPE 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.5	64
0.15	19.0	0.8	62
0.46	18.0	0.5	62
0.98	17.0	1.0	220
1.20	16.5	1.0	220
1.46	16.0	1.5	180
1.92	15.0	1.8	200
2.16	15.0	1.5	200
2.92	13.0	2.8	210
3.32	12.0	2.8	230
3.93	12.0	2.6	180
4.25	11.0	3.1	200
4.81	10.5	3.5	220

MPF 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.5	0.0	44
0.14	20.0	0.0	44
0.26	20.0	0.0	40
0.46	20.0	0.0	40
0.95	19.5	0.3	NR
1.19	19.0	0.5	180
1.47	18.5	0.5	120
1.92	17.3	0.6	140
2.17	17.0	0.6	240
2.92	14.5	1.0	120
3.33	13.0	1.0	180
3.94	12.5	1.1	160
4.25	11.9	1.6	160
4.81	10.9	2.0	170

MPF 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.0	2.3	140
0.13	16.5	2.8	140
0.25	17.0	2.5	105
0.47	15.5	6.5	105
0.97	14.0	3.0	380
1.18	13.5	3.5	360
1.48	12.0	4.0	720
1.93	9.3	4.5	700
2.18	8.5	4.8	740
2.94	5.0	6.5	1000
3.34	4.5	6.5	600
3.95	3.5	6.7	640
4.26	3.0	7.1	760

MPF 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	44
0.15	20.0	0.0	44
0.46	20.0	0.0	48
0.98	20.0	0.0	160
1.20	20.5	0.5	160
1.46	20.0	0.3	105
1.92	19.5	0.3	100
2.16	19.5	0.1	100
2.92	18.5	0.5	78
3.32	17.0	0.1	100
3.93	17.0	0.1	90
4.25	16.5	0.4	60
4.81	16.0	0.5	64

MPG 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.0	2.5	105
0.14	16.5	2.5	94
0.26	16.5	2.5	84
0.46	16.0	2.5	90
0.95	15.5	3.0	NR
1.19	15.0	3.0	280
1.47	14.8	3.5	260
1.92	14.0	3.8	260
2.17	13.5	3.8	280
2.93	12.5	4.5	270
3.33	12.0	4.3	280
3.94	11.5	4.2	270
4.25	10.9	4.9	280
4.81	10.2	5.0	250

MPG 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	1.0	300
0.13	3.0	12.0	240
0.16	3.0	12.0	740
0.24	2.5	12.0	580
0.48	12.0	2.0	600
0.96	1.5	13.0	1400
2.18	1.0	13.0	1100

MPG 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.3	58
0.15	19.5	0.5	52
0.47	19.0	0.5	62
0.98	19.4	0.5	190
1.20	19.0	0.6	190
1.46	19.0	0.8	120
1.92	18.5	0.8	160
2.16	18.3	0.8	160
2.92	17.3	1.0	160
3.32	17.0	0.9	180
3.93	16.5	0.8	160
4.25	16.0	1.0	150
4.81	15.8	1.3	160

MPH 12 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.5	0.3	50
0.14	20.0	0.0	50
0.26	20.0	0.0	40
0.46	19.5	0.0	46
0.95	19.5	0.0	NR
1.19	19.5	0.3	140
1.47	19.0	0.5	105
1.93	18.3	0.3	105
2.17	18.0	0.3	110
2.93	16.5	0.6	78
3.33	16.0	0.5	120
3.94	14.5	0.5	100
4.25	13.5	0.8	100
4.81	12.5	0.8	110

MPH 17 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.8	120
0.14	18.0	1.0	110
0.25	17.5	1.0	100
0.47	16.0	1.5	100
0.96	13.5	2.5	340
1.19	12.0	2.8	320
1.47	10.3	3.3	280
1.93	8.0	4.0	620
2.18	7.0	4.0	680
2.94	3.0	6.0	1000
3.34	2.0	6.0	760
3.95	1.0	6.0	680

MPH 7 ft bgs			
Shut off Blower 1/26/1998 9:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	32
0.15	20.0	0.0	40
0.47	20.0	0.0	44
0.98	20.5	0.0	150
1.20	20.5	0.0	160
1.46	20.0	0.0	86
1.92	20.0	0.0	100
2.16	20.0	0.0	110
2.92	19.5	0.3	58
3.32	19.0	0.3	100
3.93	18.5	0.0	86
4.25	18.0	0.0	36
4.81	17.3	0.0	26

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

April 1998

SUMMARY OUTPUT **MPA 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.998
R Square	0.995
Adjusted R Square	0.995
Standard Error	0.213
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	85.17	85.167	1873.2	9.37E-12
Residual	9	0.41	0.045		
Total	10	85.58			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.01	0.10	174.51	3.39E-17	17.78	18.25	17.78	18.25
X Variable 1	-1.77	0.04	-43.28	9.37E-12	-1.86	-1.68	-1.86	-1.68

SUMMARY OUTPUT

MPA 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.989
R Square	0.978
Adjusted R Square	0.976
Standard Error	0.530
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	136.65	136.646	485.9	1.88E-10
Residual	11	3.09	0.281		
Total	12	139.74			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.03	0.25	75.29	2.82E-16	18.47	19.59	18.47	19.59
X Variable 1	-1.96	0.09	-22.04	1.88E-10	-2.16	-1.77	-2.16	-1.77

SUMMARY OUTPUT

MPA 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.982
Adjusted R Square	0.980
Standard Error	0.250
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	31.07	31.072	495.5	3.52E-09
Residual	9	0.56	0.063		
Total	10	31.64			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.75	0.12	99.10	5.50E-15	11.49	12.02	11.49	12.02
X Variable 1	-1.75	0.08	-22.26	3.52E-09	-1.93	-1.57	-1.93	-1.57

SUMMARY OUTPUT **MPB 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.926
R Square	0.857
Adjusted R Square	0.843
Standard Error	0.587
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	20.63	20.628	59.9	1.57E-05
Residual	10	3.44	0.344		
Total	11	24.07			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.38	0.28	72.42	6.15E-15	19.75	21.01	19.75	21.01
X Variable 1	-0.80	0.10	-7.74	1.57E-05	-1.03	-0.57	-1.03	-0.57

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.979
R Square	0.958
Adjusted R Square	0.955
Standard Error	0.542
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	74.30	74.303	253.1	6.12E-09
Residual	11	3.23	0.294		
Total	12	77.53			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.69	0.26	80.10	1.43E-16	20.12	21.26	20.12	21.26
X Variable 1	-1.45	0.09	-15.91	6.12E-09	-1.65	-1.25	-1.65	-1.25

SUMMARY OUTPUT

MPB 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.994
Adjusted R Square	0.994
Standard Error	0.224
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	121.54	121.537	2427.6	4.28E-17
Residual	14	0.70	0.050		
Total	15	122.24			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.58	0.09	201.32	1.23E-25	18.38	18.78	18.38	18.78
X Variable 1	-1.80	0.04	-49.27	4.28E-17	-1.88	-1.72	-1.88	-1.72

SUMMARY OUTPUT

MPC 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.983
Adjusted R Square	0.981
Standard Error	0.373
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	71.00	71.003	510.0	3.10E-09
Residual	9	1.25	0.139		
Total	10	72.26			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.29	0.18	109.84	2.18E-15	19.87	20.71	19.87	20.71
X Variable 1	-1.72	0.08	-22.58	3.10E-09	-1.90	-1.55	-1.90	-1.55

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.976
R Square	0.952
Adjusted R Square	0.942
Standard Error	1.734
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	295.58	295.583	98.4	1.78E-04
Residual	5	15.03	3.005		
Total	6	310.61			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.27	0.99	20.48	5.13E-06	17.73	22.81	17.73	22.81
X Variable 1	-7.74	0.78	-9.92	1.78E-04	-9.74	-5.73	-9.74	-5.73

SUMMARY OUTPUT

MPC 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.994
R Square	0.988
Adjusted R Square	0.987
Standard Error	0.381
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	97.48	97.485	672.7	5.24E-09
Residual	8	1.16	0.145		
Total	9	98.64			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.62	0.19	51.06	2.40E-11	9.18	10.05	9.18	10.05
X Variable 1	-3.80	0.15	-25.94	5.24E-09	-4.13	-3.46	-4.13	-3.46

SUMMARY OUTPUT **MPD 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.981
R Square	0.963
Adjusted R Square	0.959
Standard Error	0.319
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	26.12	26.123	256.9	1.85E-08
Residual	10	1.02	0.102		
Total	11	27.14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.86	0.15	136.29	1.11E-17	20.52	21.20	20.52	21.20
X Variable 1	-0.90	0.06	-16.03	1.85E-08	-1.03	-0.78	-1.03	-0.78

SUMMARY OUTPUT

MPD 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.904
R Square	0.818
Adjusted R Square	0.781
Standard Error	0.936
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	19.65	19.654	22.4	5.17E-03
Residual	5	4.38	0.876		
Total	6	24.03			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.13	0.53	39.52	1.96E-07	19.75	22.50	19.75	22.50
X Variable 1	-1.99	0.42	-4.74	5.17E-03	-3.08	-0.91	-3.08	-0.91

SUMMARY OUTPUT

MPD 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.987
Adjusted R Square	0.985
Standard Error	0.527
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	163.65	163.650	588.2	8.92E-09
Residual	8	2.23	0.278		
Total	9	165.88			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.99	0.26	76.57	9.43E-13	19.39	20.59	19.39	20.59
X Variable 1	-4.92	0.20	-24.25	8.92E-09	-5.39	-4.45	-5.39	-4.45

SUMMARY OUTPUT **MPE 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.994
R Square	0.988
Adjusted R Square	0.986
Standard Error	0.349
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	69.31	69.308	569.4	5.77E-08
Residual	7	0.85	0.122		
Total	8	70.16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.69	0.18	106.57	1.69E-12	19.26	20.13	19.26	20.13
X Variable 1	-2.39	0.10	-23.86	5.77E-08	-2.62	-2.15	-2.62	-2.15

SUMMARY OUTPUT

MPE 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.998
R Square	0.996
Adjusted R Square	0.995
Standard Error	0.332
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	126.12	126.124	1141.0	4.28E-07
Residual	5	0.55	0.111		
Total	6	126.68			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.37	0.19	107.22	1.34E-09	19.88	20.86	19.88	20.86
X Variable 1	-5.05	0.15	-33.78	4.28E-07	-5.44	-4.67	-5.44	-4.67

SUMMARY OUTPUT

MPE 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.987
R Square	0.973
Adjusted R Square	0.969
Standard Error	0.766
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	128.42	128.418	218.9	6.00E-06
Residual	6	3.52	0.587		
Total	7	131.94			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.84	0.40	36.99	2.61E-08	13.86	15.83	13.86	15.83
X Variable 1	-6.30	0.43	-14.79	6.00E-06	-7.35	-5.26	-7.35	-5.26

SUMMARY OUTPUT **MPF 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.987
R Square	0.974
Adjusted R Square	0.971
Standard Error	0.283
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30.08	30.078	375.2	2.93E-09
Residual	10	0.80	0.080		
Total	11	30.88			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.90	0.14	153.76	3.32E-18	20.60	21.21	20.60	21.21
X Variable 1	-0.97	0.05	-19.37	2.93E-09	-1.08	-0.86	-1.08	-0.86

SUMMARY OUTPUT

MPF 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.974
R Square	0.949
Adjusted R Square	0.943
Standard Error	0.616
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	63.09	63.090	166.1	4.19E-07
Residual	9	3.42	0.380		
Total	10	66.51			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.62	0.30	67.66	1.70E-13	19.93	21.31	19.93	21.31
X Variable 1	-1.62	0.13	-12.89	4.19E-07	-1.91	-1.34	-1.91	-1.34

SUMMARY OUTPUT

MPF 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.985
Standard Error	0.453
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	205.70	205.698	1001.2	2.00E-14
Residual	14	2.88	0.205		
Total	15	208.57			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.98	0.19	99.56	2.33E-21	18.57	19.39	18.57	19.39
X Variable 1	-2.47	0.08	-31.64	2.00E-14	-2.63	-2.30	-2.63	-2.30

SUMMARY OUTPUT

MPG 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.954
R Square	0.910
Adjusted R Square	0.901
Standard Error	0.306
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	9.47	9.472	101.1	1.51E-06
Residual	10	0.94	0.094		
Total	11	10.41			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.24	0.15	137.65	1.01E-17	19.91	20.57	19.91	20.57
X Variable 1	-0.54	0.05	-10.05	1.51E-06	-0.66	-0.42	-0.66	-0.42

SUMMARY OUTPUT

MPG 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.984
R Square	0.968
Adjusted R Square	0.964
Standard Error	0.320
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30.58	30.581	299.4	8.80E-09
Residual	10	1.02	0.102		
Total	11	31.60			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.99	0.15	123.94	2.87E-17	18.65	19.33	18.65	19.33
X Variable 1	-0.98	0.06	-17.30	8.80E-09	-1.10	-0.85	-1.10	-0.85

SUMMARY OUTPUT

MPG 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.987
R Square	0.975
Adjusted R Square	0.973
Standard Error	0.285
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	44.10	44.103	544.1	1.32E-12
Residual	14	1.13	0.081		
Total	15	45.24			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	13.77	0.12	117.12	2.40E-22	13.52	14.02	13.52	14.02
X Variable 1	-1.08	0.05	-23.33	1.32E-12	-1.18	-0.98	-1.18	-0.98

SUMMARY OUTPUT

MPH 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.926
R Square	0.857
Adjusted R Square	0.843
Standard Error	0.361
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	7.83	7.832	60.0	1.56E-05
Residual	10	1.30	0.130		
Total	11	9.14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.76	0.17	119.63	4.09E-17	20.37	21.14	20.37	21.14
X Variable 1	-0.49	0.06	-7.75	1.56E-05	-0.64	-0.35	-0.64	-0.35

SUMMARY OUTPUT

MPH 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.981
R Square	0.963
Adjusted R Square	0.959
Standard Error	0.358
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	33.15	33.150	259.2	1.77E-08
Residual	10	1.28	0.128		
Total	11	34.43			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.86	0.17	121.66	3.45E-17	20.48	21.25	20.48	21.25
X Variable 1	-1.02	0.06	-16.10	1.77E-08	-1.16	-0.88	-1.16	-0.88

SUMMARY OUTPUT

MPH 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.988
R Square	0.977
Adjusted R Square	0.974
Standard Error	0.535
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	84.93	84.925	296.7	5.46E-07
Residual	7	2.00	0.286		
Total	8	86.93			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.35	0.27	71.11	2.86E-11	18.71	20.00	18.71	20.00
X Variable 1	-4.17	0.24	-17.22	5.46E-07	-4.74	-3.60	-4.74	-3.60

MPA 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.8	1.8	110
0.07	18.1	1.7	130
0.27	18.5	1.8	100
0.88	17.2	2.2	160
1.25	16.8	2.3	160
1.88	16.0	2.8	150
2.30	15.7	2.8	160
2.92	13.1	3.5	180
3.27	12.9	3.5	180
3.96	11.2	4.4	200
4.13	10.9	4.6	240
4.24	10.2	4.6	220
4.88	9.1	5.5	220

MPA 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	12.0	7.1	300
0.05	11.7	6.9	280
0.16	11.7	6.9	280
0.26	11.1	7.0	250
0.86	10.1	7.9	280
1.06	9.5	8.0	320
1.25	9.3	7.9	280
1.88	8.6	8.9	280
2.05	8.4	8.9	280
2.29	8.0	8.9	300
2.91	6.5	9.1	300
3.03	7.2	8.8	290
3.26	6.8	9.2	320
3.95	5.2	10.0	320
4.24	4.9	9.2	340
4.87	3.9	10.2	360

MPA 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.1	2.5	250
0.08	17.9	2.3	260
0.27	17.6	2.4	230
0.88	16.0	3.0	240
1.26	15.6	3.0	250
1.89	14.9	3.6	280
2.30	14.2	3.1	280
2.93	12.9	4.1	310
3.27	12.3	4.2	300
3.96	11.0	5.0	300
4.88	9.2	5.4	340
5.25	10.2	4.8	360
7.14	10.8	4.8	350

MPB 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.3	0.6	53
0.07	19.8	0.5	70
0.27	19.9	0.8	76
0.88	19.8	0.7	100
1.26	19.2	0.7	90
1.88	19.0	0.7	88
2.30	18.0	0.7	100
2.92	16.5	0.8	90
3.27	16.2	0.8	110
3.96	15.0	1.5	100
4.13	14.6	1.4	150
4.24	14.1	1.5	160
4.88	13.1	2.2	140

MPB 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	1.5	96
0.06	18.3	1.5	180
0.16	18.4	1.5	200
0.26	18.1	1.7	150
0.87	17.2	2.2	180
1.07	16.3	2.5	220
1.25	16.2	2.5	210
1.88	15.1	3.1	200
2.06	15.0	3.1	220
2.29	14.1	3.3	220
2.91	13.4	3.7	200
3.04	13.3	3.5	220
3.26	12.5	3.8	240
3.95	11.7	4.3	235
4.24	10.9	4.1	230
4.87	9.9	4.7	240

MPB 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.1	0.4	42
0.08	20.2	0.3	84
0.27	20.1	0.4	74
0.89	20.0	0.5	60
1.26	19.9	0.6	76
1.89	19.4	0.7	78
2.30	19.1	0.6	110
2.93	18.4	0.7	80
3.27	18.0	0.5	90
3.96	17.1	0.8	100
4.25	16.6	0.8	76
4.88	15.8	0.8	84

MPC 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.7	48
0.07	19.3	0.6	90
0.27	18.0	0.8	94
0.88	16.4	1.9	130
1.26	8.2	4.7	160
1.89	6.4	7.1	200
2.30	2.1	10.5	200
2.92	8.9	5.8	180
3.27	6.5	6.7	220
3.96	9.1	5.6	220
4.13	8.8	5.2	190
4.25	7.9	5.6	190
4.88	9.5	5.0	200

MPC 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	10.0	9.1	300
0.06	8.7	3.4	320
0.17	9.0	8.2	320
0.26	8.6	3.4	270
0.87	6.7	9.4	280
1.07	5.6	10.1	330
1.25	5.2	10.0	320
1.88	2.0	11.9	310
2.06	1.7	11.8	300
2.29	1.1	11.2	310
2.91	0.3	12.0	310
3.04	0.2	12.1	340
3.26	0.2	11.9	340

MPC 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.6	32
0.08	20.0	0.5	86
0.27	20.0	0.6	70
0.89	18.8	0.7	68
1.26	18.8	0.7	90
1.89	17.2	0.8	100
2.31	16.0	0.9	96
2.93	14.8	1.3	120
3.28	14.3	1.4	120
3.97	13.9	2.1	120
4.25	13.0	1.9	130
4.88	13.7	1.9	140

MPD 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.1	30
0.07	20.4	0.0	70
0.27	20.3	0.0	66
0.88	20.1	0.2	40
1.26	19.7	0.0	70
1.89	18.0	0.5	60
2.30	15.2	0.3	60
2.92	15.1	0.5	30
3.27	15.3	0.5	64
3.96	14.5	0.7	60
4.25	13.9	0.7	110
4.88	13.8	0.6	58

MPD 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.8	0.7	96
0.06	19.5	0.6	120
0.17	19.3	0.6	120
0.26	18.6	0.6	100
0.87	15.8	1.2	140
1.07	14.0	1.5	200
1.25	13.0	1.7	170
1.88	11.0	2.7	180
2.06	10.2	3.1	200
2.29	9.0	3.0	200
2.91	8.1	3.7	190
3.04	7.9	3.6	210
3.26	7.1	3.8	230
3.95	5.2	4.5	210
4.13	5.1	4.5	230
4.24	4.9	4.3	290
4.87	4.3	5.0	250

MPD 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.5	0.2	27
0.08	20.5	0.1	66
0.28	20.4	0.0	60
0.89	20.4	0.0	48
1.26	20.4	0.0	60
1.89	19.4	0.4	60
2.31	18.9	0.4	58
2.93	18.0	0.3	58
3.28	17.8	0.2	60
3.97	17.1	0.7	50
4.25	16.9	0.5	46
4.89	16.5	0.4	20

MPE 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.2	0.6	70
0.07	19.8	0.5	90
0.27	19.2	0.7	84
0.88	16.3	1.3	110
1.26	13.8	1.8	110
1.89	11.2	3.2	150
2.30	8.4	4.2	180
2.92	8.1	4.8	170
3.27	7.9	4.8	200
3.96	7.1	5.8	230
4.25	6.8	5.4	250
4.88	6.5	5.8	200

MPE 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	15.0	4.8	200
0.06	14.3	4.3	200
0.17	14.3	4.3	190
0.26	13.7	4.6	160
0.87	8.9	6.1	240
1.07	7.0	6.8	160
1.25	6.4	7.0	200
1.88	4.1	8.9	200
2.06	3.8	9.1	220
2.29	3.1	9.0	220
2.91	1.1	9.9	240
3.04	3.2	8.8	240
3.26	2.0	9.8	240

MPE 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.5	0.8	84
0.08	19.5	0.7	110
0.28	19.0	0.8	98
0.89	18.0	1.1	110
1.26	17.0	1.1	120
1.89	14.9	1.7	120
2.31	13.6	2.0	160
2.93	12.7	2.5	180
3.28	12.2	2.4	180
3.97	11.2	3.2	180
4.25	11.0	3.0	160
4.89	10.8	4.4	160
8.14	11.2	3.0	160

MPF 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.8	0.2	48
0.07	19.2	0.0	70
0.27	20.0	0.0	68
0.88	20.0	0.1	46
1.26	19.2	0.2	58
1.89	18.0	0.6	70
2.30	16.7	0.5	68
2.92	16.1	0.7	68
3.27	15.1	0.5	76
3.96	14.3	0.8	95
4.25	13.2	0.9	100
4.88	13.0	1.0	100

MPF 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.8	2.1	185
0.06	17.9	2.0	180
0.17	18.0	1.9	180
0.26	18.0	1.9	130
0.87	17.1	2.3	180
1.07	16.3	2.5	200
1.25	16.1	2.5	170
1.88	14.9	3.1	200
2.06	14.2	3.2	200
2.29	13.7	3.1	210
2.92	11.9	3.5	200
3.04	11.5	3.4	200
3.26	10.8	3.6	210
3.95	9.0	4.1	195
4.13	8.8	4.0	250
4.24	8.1	4.0	260
4.87	7.4	4.5	230

MPF 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.6	0.4	33
0.08	20.5	0.3	78
0.28	20.5	0.3	68
0.89	20.4	0.3	68
1.26	20.2	0.3	62
1.89	19.2	0.6	62
2.31	18.9	0.5	76
2.93	17.8	0.6	30
3.28	17.6	0.4	90
3.97	17.1	0.7	90
4.25	16.8	0.6	60
4.89	16.0	0.5	36

MPG 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.7	1.5	112
0.08	18.3	1.5	130
0.27	18.5	1.5	120
0.88	18.1	1.7	110
1.26	17.9	1.7	130
1.89	17.1	2.2	110
2.30	16.8	2.3	160
2.93	16.1	2.4	120
3.27	16.0	2.3	180
3.96	15.0	3.1	170
4.25	14.8	2.9	170
4.88	14.2	3.2	180
5.13	15.0	2.9	180

MPG 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	14.2	5.4	335
0.06	13.5	5.2	360
0.17	14.0	5.0	360
0.26	13.7	5.2	320
0.87	12.9	5.7	300
1.07	12.1	5.8	360
1.25	12.1	5.9	360
1.88	11.8	6.3	350
2.06	11.4	6.5	360
2.30	10.9	6.4	380
2.92	10.4	6.8	380
3.04	10.5	6.5	350
3.26	10.3	6.3	360
3.96	9.6	7.1	320
4.24	9.2	6.8	290
4.87	8.8	7.2	360

MPG 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.2	0.5	47
0.09	20.2	0.5	86
0.28	20.0	0.6	72
0.89	20.0	0.6	68
1.27	18.9	0.7	74
1.89	19.2	0.8	78
2.31	19.4	0.6	92
2.93	18.9	0.8	46
3.28	18.7	0.6	120
3.97	18.1	0.9	100
4.25	17.9	0.8	98
4.89	17.2	0.8	90

MPH 12 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.3	40
0.08	20.3	0.1	66
0.27	20.1	0.1	60
0.88	20.1	0.2	58
1.26	20.0	0.2	62
1.89	19.2	0.5	60
2.30	18.9	0.4	76
2.93	18.1	0.5	40
3.27	17.8	0.3	44
3.96	16.8	0.6	40
4.25	16.1	0.5	100
4.88	15.6	0.5	56
6.13	16.6	0.7	130

MPH 17 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.8	140
0.07	18.9	0.7	140
0.17	18.8	0.8	150
0.26	18.2	0.9	100
0.88	15.4	1.9	180
1.07	14.3	2.2	180
1.25	13.9	2.2	180
1.88	11.1	3.1	180
2.06	11.7	3.3	220
2.30	11.0	3.4	240
2.92	10.1	3.9	210
3.04	9.8	3.8	210
3.27	9.4	3.9	220
3.96	8.4	4.5	220
4.13	8.1	4.6	230
4.24	7.9	4.6	230
4.87	7.1	5.1	250

MPH 7 ft bgs			
Shut off Blower 4/21/1998 10:45:00 AM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	15
0.09	20.5	0.0	70
0.28	20.2	0.0	56
0.89	20.2	0.0	60
1.27	20.2	0.0	66
1.89	19.8	0.4	56
2.31	20.1	0.3	60
2.93	19.8	0.3	0
3.28	19.5	0.2	80
3.97	18.9	0.6	58
4.25	18.1	0.2	45
4.89	18.0	0.3	10

RESPIRATION TEST DATA

and

LINEAR REGRESSION RESULTS

August 1998

SUMMARY OUTPUT

MPA 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.981
Standard Error	0.438
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	40.62	40.624	211.5	7.05E-04
Residual	3	0.58	0.192		
Total	4	41.20			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.84	0.42	28.03	9.97E-05	10.50	13.19	10.50	13.19
X Variable 1	-7.34	0.50	-14.54	7.05E-04	-8.95	-5.73	-8.95	-5.73

SUMMARY OUTPUT

MPA 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.988
R Square	0.977
Adjusted R Square	0.974
Standard Error	0.745
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	211.23	211.234	380.7	1.13E-08
Residual	9	4.99	0.555		
Total	10	216.23			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.93	0.44	38.12	2.92E-11	15.93	17.94	15.93	17.94
X Variable 1	-5.41	0.28	-19.51	1.13E-08	-6.04	-4.78	-6.04	-4.78

SUMMARY OUTPUT

MPA 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.982
Adjusted R Square	0.980
Standard Error	0.250
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	31.07	31.072	495.5	3.52E-09
Residual	9	0.56	0.063		
Total	10	31.64			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.75	0.12	99.10	5.50E-15	11.49	12.02	11.49	12.02
X Variable 1	-1.75	0.08	-22.26	3.52E-09	-1.93	-1.57	-1.93	-1.57

SUMMARY OUTPUT **MPB 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.989
R Square	0.978
Adjusted R Square	0.976
Standard Error	0.662
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	195.85	195.851	447.3	1.24E-09
Residual	10	4.38	0.438		
Total	11	200.23			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.80	0.41	48.68	3.23E-13	18.90	20.71	18.90	20.71
X Variable 1	-2.95	0.14	-21.15	1.24E-09	-3.26	-2.64	-3.26	-2.64

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.988
R Square	0.976
Adjusted R Square	0.973
Standard Error	0.578
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	97.16	97.159	290.5	5.87E-07
Residual	7	2.34	0.334		
Total	8	99.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.96	0.38	54.82	1.76E-10	20.06	21.87	20.06	21.87
X Variable 1	-4.61	0.27	-17.04	5.87E-07	-5.25	-3.97	-5.25	-3.97

SUMMARY OUTPUT

MPB 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.982
Adjusted R Square	0.980
Standard Error	0.712
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	405.70	405.703	800.8	1.97E-14
Residual	15	7.60	0.507		
Total	16	413.30			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.57	0.37	56.26	7.24E-19	19.79	21.35	19.79	21.35
X Variable 1	-4.33	0.15	-28.30	1.97E-14	-4.65	-4.00	-4.65	-4.00

SUMMARY OUTPUT

MPB 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.986
Adjusted R Square	0.984
Standard Error	0.459
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	160.60	160.601	760.8	1.66E-11
Residual	11	2.32	0.211		
Total	12	162.92			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.55	0.24	68.79	7.61E-16	16.02	17.08	16.02	17.08
X Variable 1	-4.82	0.17	-27.58	1.66E-11	-5.21	-4.44	-5.21	-4.44

SUMMARY OUTPUT **MPC 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.997
R Square	0.994
Adjusted R Square	0.993
Standard Error	0.282
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	107.86	107.865	1358.7	3.22E-10
Residual	8	0.64	0.079		
Total	9	108.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.50	0.17	117.94	2.98E-14	20.10	20.90	20.10	20.90
X Variable 1	-2.21	0.06	-36.86	3.22E-10	-2.35	-2.07	-2.35	-2.07

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.984
R Square	0.968
Adjusted R Square	0.964
Standard Error	0.852
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	196.14	196.142	269.9	5.10E-08
Residual	9	6.54	0.727		
Total	10	202.68			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	19.85	0.53	37.42	3.45E-11	18.65	21.05	18.65	21.05
X Variable 1	-6.13	0.37	-16.43	5.10E-08	-6.97	-5.29	-6.97	-5.29

SUMMARY OUTPUT

MPC 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.986
R Square	0.972
Adjusted R Square	0.965
Standard Error	0.615
Observations	6

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	52.32	52.318	138.1	3.00E-04
Residual	4	1.52	0.379		
Total	5	53.83			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.38	0.50	40.95	2.12E-06	19.00	21.76	19.00	21.76
X Variable 1	-6.92	0.59	-11.75	3.00E-04	-8.56	-5.29	-8.56	-5.29

SUMMARY OUTPUT

MPC 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.994
R Square	0.988
Adjusted R Square	0.987
Standard Error	0.381
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	97.48	97.485	672.7	5.24E-09
Residual	8	1.16	0.145		
Total	9	98.64			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.62	0.19	51.06	2.40E-11	9.18	10.05	9.18	10.05
X Variable 1	-3.80	0.15	-25.94	5.24E-09	-4.13	-3.46	-4.13	-3.46

SUMMARY OUTPUT

MPD 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.981
R Square	0.963
Adjusted R Square	0.956
Standard Error	0.431
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	28.60	28.602	154.2	1.67E-05
Residual	6	1.11	0.186		
Total	7	29.72			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.55	0.29	73.30	4.34E-10	20.83	22.27	20.83	22.27
X Variable 1	-1.58	0.13	-12.42	1.67E-05	-1.89	-1.27	-1.89	-1.27

SUMMARY OUTPUT

MPD 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.991
R Square	0.981
Adjusted R Square	0.980
Standard Error	0.690
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	346.09	346.092	726.7	1.82E-13
Residual	14	6.67	0.476		
Total	15	352.76			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	22.40	0.33	67.41	5.41E-19	21.69	23.11	21.69	23.11
X Variable 1	-3.21	0.12	-26.96	1.82E-13	-3.46	-2.95	-3.46	-2.95

SUMMARY OUTPUT

MPD 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.983
R Square	0.966
Adjusted R Square	0.962
Standard Error	1.047
Observations	13

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	338.66	338.662	308.7	2.14E-09
Residual	11	12.07	1.097		
Total	12	350.73			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.38	0.56	33.02	2.35E-12	17.16	19.61	17.16	19.61
X Variable 1	-7.69	0.44	-17.57	2.14E-09	-8.65	-6.72	-8.65	-6.72

SUMMARY OUTPUT

MPE 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.987
Adjusted R Square	0.985
Standard Error	0.342
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	52.80	52.799	452.0	7.06E-07
Residual	6	0.70	0.117		
Total	7	53.50			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.99	0.23	81.41	2.31E-10	18.42	19.56	18.42	19.56
X Variable 1	-2.14	0.10	-21.26	7.06E-07	-2.39	-1.90	-2.39	-1.90

SUMMARY OUTPUT

MPE 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.995
R Square	0.990
Adjusted R Square	0.989
Standard Error	0.375
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	101.07	101.069	717.3	2.59E-08
Residual	7	0.99	0.141		
Total	8	102.06			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.11	0.25	80.04	1.25E-11	19.52	20.71	19.52	20.71
X Variable 1	-5.23	0.20	-26.78	2.59E-08	-5.70	-4.77	-5.70	-4.77

SUMMARY OUTPUT

MPE 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.995
R Square	0.990
Adjusted R Square	0.986
Standard Error	0.397
Observations	4

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	32.43	32.435	205.7	4.83E-03
Residual	2	0.32	0.158		
Total	3	32.75			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.27	0.34	35.71	7.83E-04	10.80	13.75	10.80	13.75
X Variable 1	-8.50	0.59	-14.34	4.83E-03	-11.05	-5.95	-11.05	-5.95

SUMMARY OUTPUT **MPF 7 ft bgs Regression of linear portion of *oxygen versus time* plot**

Regression Statistics	
Multiple R	0.967
R Square	0.935
Adjusted R Square	0.927
Standard Error	0.615
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	43.49	43.495	114.8	5.05E-06
Residual	8	3.03	0.379		
Total	9	46.53			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.35	0.38	56.15	1.12E-11	20.47	22.23	20.47	22.23
X Variable 1	-1.40	0.13	-10.72	5.05E-06	-1.71	-1.10	-1.71	-1.10

SUMMARY OUTPUT

MPF 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.990
R Square	0.980
Adjusted R Square	0.979
Standard Error	0.557
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	184.61	184.612	595.2	1.36E-11
Residual	12	3.72	0.310		
Total	13	188.33			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	22.06	0.27	80.59	8.88E-18	21.47	22.66	21.47	22.66
X Variable 1	-2.44	0.10	-24.40	1.36E-11	-2.65	-2.22	-2.65	-2.22

SUMMARY OUTPUT

MPF 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.996
R Square	0.992
Adjusted R Square	0.991
Standard Error	0.367
Observations	20

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	287.53	287.528	2137.0	3.68E-20
Residual	18	2.42	0.135		
Total	19	289.95			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.57	0.16	112.83	4.14E-27	17.24	17.90	17.24	17.90
X Variable 1	-3.24	0.07	-46.23	3.68E-20	-3.39	-3.10	-3.39	-3.10

SUMMARY OUTPUT

MPG 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.992
R Square	0.983
Adjusted R Square	0.981
Standard Error	0.326
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	49.88	49.876	470.2	2.16E-08
Residual	8	0.85	0.106		
Total	9	50.73			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.30	0.20	100.83	1.05E-13	19.84	20.77	19.84	20.77
X Variable 1	-1.50	0.07	-21.68	2.16E-08	-1.66	-1.34	-1.66	-1.34

SUMMARY OUTPUT

MPG 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.997
R Square	0.995
Adjusted R Square	0.994
Standard Error	0.235
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	131.21	131.214	2370.1	4.24E-16
Residual	13	0.72	0.055		
Total	14	131.93			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.47	0.11	161.88	7.18E-23	18.22	18.71	18.22	18.71
X Variable 1	-2.05	0.04	-48.68	4.24E-16	-2.14	-1.96	-2.14	-1.96

SUMMARY OUTPUT

MPG 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.985
R Square	0.969
Adjusted R Square	0.967
Standard Error	0.376
Observations	14

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	53.73	53.734	380.4	1.87E-10
Residual	12	1.69	0.141		
Total	13	55.43			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	11.49	0.19	61.62	2.21E-16	11.09	11.90	11.09	11.90
X Variable 1	-2.40	0.12	-19.50	1.87E-10	-2.67	-2.13	-2.67	-2.13

SUMMARY OUTPUT

MPH 7 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.974
R Square	0.949
Adjusted R Square	0.941
Standard Error	0.626
Observations	9

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	50.66	50.664	129.2	9.14E-06
Residual	7	2.74	0.392		
Total	8	53.41			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	21.95	0.41	54.05	1.95E-10	20.99	22.91	20.99	22.91
X Variable 1	-1.77	0.16	-11.37	9.14E-06	-2.13	-1.40	-2.13	-1.40

SUMMARY OUTPUT

MPH 12 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.993
R Square	0.985
Adjusted R Square	0.984
Standard Error	0.544
Observations	17

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	299.38	299.378	1012.1	3.49E-15
Residual	15	4.44	0.296		
Total	16	303.82			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	22.37	0.26	85.42	1.40E-21	21.81	22.92	21.81	22.92
X Variable 1	-3.04	0.10	-31.81	3.49E-15	-3.25	-2.84	-3.25	-2.84

SUMMARY OUTPUT

MPH 17 ft bgs Regression of linear portion of *oxygen versus time* plot

Regression Statistics	
Multiple R	0.992
R Square	0.985
Adjusted R Square	0.984
Standard Error	0.606
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	339.10	339.101	922.0	3.53E-14
Residual	14	5.15	0.368		
Total	15	344.25			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.93	0.28	66.57	6.44E-19	18.32	19.54	18.32	19.54
X Variable 1	-4.56	0.15	-30.36	3.53E-14	-4.88	-4.24	-4.88	-4.24

MPA 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.5	3.5	140
0.35	16.0	3.5	180
0.74	13.0	4.5	220
0.98	11.0	5.5	200
1.11	10.0	5.0	200
1.23	10.0	6.0	220
1.73	7.0	7.0	220
1.98	6.0	8.0	280
2.11	5.0	8.0	260
2.24	5.0	8.0	220
2.73	3.5	11.0	260

MPA 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	2.0	19.0	1400
0.09	2.0	14.5	1600
0.34	0.5	15.0	1600
1.27	0.0	16.0	720
1.77	0.0	15.0	140

MPA 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	12.0	9.0	520
0.76	6.0	11.5	600
0.86	5.0	12.0	1400
0.98	5.0	12.0	1200
1.11	4.0	13.0	1400
1.25	4.0	13.0	620
1.77	2.5	13.5	620
2.26	2.0	14.0	620

MPB 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	1.0	85
0.35	19.5	0.5	100
0.74	18.0	1.0	100
0.99	17.0	1.5	100
1.23	16.0	1.5	120
1.73	13.0	3.0	140
1.85	12.0	3.2	220
1.98	11.5	3.2	200
2.11	11.0	3.5	200
2.24	11.0	5.9	180
2.73	8.0	5.9	220
2.87	7.5	5.9	220
2.98	6.9	5.9	240
3.10	6.5	5.9	200
3.22	6.5	5.9	220
3.76	5.2	7.0	220
3.92	5.0	6.5	240
4.26	4.0	7.0	280

MPB 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.0	4.0	650
0.10	16.5	3.5	680
0.33	15.0	4.0	820
0.73	13.0	5.0	900
0.86	12.0	5.0	900
0.98	11.5	5.5	980
1.10	10.5	5.5	1000
1.23	10.0	6.0	1000
1.72	9.0	6.5	1000
1.84	8.0	6.5	1200
1.97	7.0	6.9	1200
2.09	6.5	7.0	1000
2.23	6.0	7.0	1000
2.72	4.0	8.2	1000

MPB 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	1.0	100
0.76	18.0	1.5	120
1.25	16.5	2.0	140
1.75	15.0	2.5	140
2.26	13.0	3.0	160
2.75	11.0	2.5	180
2.99	10.0	2.5	180
3.11	10.0	3.5	180
3.24	9.5	4.5	220
3.78	9.0	5.1	220
4.28	8.0	5.2	260
4.78	6.5	6.8	260
5.79	5.0	7.5	240

MPC 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	1.0	95
0.35	18.0	1.5	120
0.75	16.0	2.5	140
0.99	14.0	3.5	140
1.11	12.5	4.0	140
1.18	11.5	4.0	200
1.23	11.0	4.5	180
1.74	10.5	5.0	160
1.99	8.5	5.5	200
2.11	7.0	6.5	220
2.25	5.5	7.5	200
2.73	7.0	7.5	220
2.87	7.0	7.5	220
3.23	5.0	8.0	220
3.77	4.5	9.0	220

MPC 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	0.5	22.5	1350
0.10	0.5	16.0	1200
0.34	0.5	15.0	1400
1.27	0.5	16.0	420
1.77	0.0	15.0	1400

MPC 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	1.0	95
0.77	19.0	1.5	100
1.25	18.0	1.5	120
1.75	17.0	1.5	120
2.26	15.5	2.1	120
2.75	14.5	2.0	160
3.25	13.0	3.0	160
3.78	12.0	3.9	180
4.28	11.0	3.9	220
4.78	10.0	4.5	200
5.79	9.0	5.0	200

MPD 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.5	34
0.35	20.5	0.0	82
0.75	20.0	0.0	80
0.99	19.5	0.0	70
1.24	19.5	0.2	78
1.74	18.0	0.5	60
1.99	16.5	0.4	100
2.11	16.0	0.5	100
2.25	15.5	0.5	72
2.74	14.0	0.8	100
3.23	11.5	1.2	120
3.77	10.0	2.0	120
3.92	9.5	2.0	160
4.09	9.0	2.5	160
4.26	8.5	2.6	180
4.76	7.0	3.9	200
5.74	5.0	5.0	200

MPD 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.5	1.0	190
0.10	19.0	1.0	260
0.33	16.0	2.0	460
0.73	12.5	3.5	720
0.85	11.0	4.0	820
0.97	10.0	4.0	900
1.10	8.5	4.5	880
1.18	8.0	5.0	1000
1.22	8.0	5.0	900
1.72	6.0	6.0	740
1.84	5.0	6.0	1000
1.97	4.0	6.5	1000
2.10	3.0	6.9	1000
2.23	3.0	6.9	900

MPD 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	54
0.77	20.5	0.5	80
1.26	20.0	0.5	98
1.76	19.0	0.5	100
2.27	18.0	0.5	98
2.75	17.5	0.6	100
3.25	16.5	0.7	100
3.78	15.0	0.9	100
4.28	15.5	1.0	140
4.78	13.0	1.5	140
5.79	10.5	2.5	160

MPE 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.8	74
0.36	19.0	1.0	100
0.75	16.0	2.5	140
0.99	14.5	3.0	140
1.11	14.0	3.0	140
1.24	13.5	3.5	180
1.74	11.0	4.5	180
1.86	10.5	4.9	240
1.99	10.0	4.9	220
2.25	10.0	5.0	180
2.74	9.0	7.0	200
3.10	8.0	6.5	180
3.23	8.0	6.5	180
3.77	7.0	7.5	180
4.09	6.0	7.0	200
4.26	6.0	6.9	260
4.76	6.0	8.5	240
5.78	5.0	8.1	240

MPE 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	12.0	8.5	920
0.32	10.0	7.0	1000
0.72	6.0	10.0	1000
0.85	5.0	10.5	1000
0.97	4.0	11.0	1200
1.09	3.5	11.0	1000
1.27	3.0	11.5	300
1.78	1.0	12.0	1000

MPE 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	19.0	2.0	110
0.77	17.0	2.5	140
1.26	17.0	2.5	140
1.76	15.0	3.0	140
2.27	14.0	3.5	140
2.75	13.0	4.0	200
3.25	12.0	4.0	200
3.79	11.0	4.9	180
4.28	10.5	4.5	240
4.78	10.5	5.2	220
5.80	9.5	5.5	200

MPF 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	42
0.36	21.0	0.5	70
0.75	20.0	0.5	82
0.99	20.0	0.5	78
1.24	19.5	0.5	92
1.74	18.5	0.5	60
1.99	17.5	0.5	100
2.25	17.0	0.6	64
2.74	16.0	0.8	100
3.23	14.0	0.8	100
3.77	13.0	1.2	100
4.10	11.5	1.5	100
4.27	11.0	1.5	160
4.76	10.5	2.0	140
5.78	8.5	2.8	140

MPF 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	17.0	4.0	500
0.10	17.0	3.0	500
0.33	17.0	3.5	620
0.73	16.0	4.0	720
0.85	15.0	4.0	760
0.98	14.5	4.0	940
1.10	14.0	4.0	680
1.22	13.5	4.0	940
1.72	12.0	4.5	620
1.85	11.5	4.5	1000
1.97	11.0	4.5	1000
2.10	10.5	4.5	1000
2.23	10.0	4.9	800
2.72	9.0	5.5	1000
2.86	8.0	5.9	1000
2.97	8.0	5.9	1000
3.09	7.0	5.9	940
3.22	7.0	6.0	700
3.76	6.0	6.2	740
3.92	5.0	6.2	660

MPF 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.5	0.5	68
0.77	20.5	0.5	100
1.26	19.0	0.5	100
1.76	19.5	0.6	100
2.27	19.0	0.7	100
2.75	18.0	0.7	100
3.25	17.0	0.8	100
3.79	16.0	0.9	100
4.28	15.0	0.9	140
4.79	14.0	1.0	140
5.80	12.0	1.2	120

MPG 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	18.0	2.5	120
0.36	18.0	2.5	120
0.76	17.0	3.0	160
1.00	16.5	3.0	160
1.24	16.0	3.0	160
1.74	15.0	3.2	140
1.99	14.0	3.5	200
2.12	14.0	3.5	140
2.26	14.0	3.5	180
2.74	13.0	4.5	180
3.23	12.0	4.5	180
3.78	11.0	4.9	180
4.10	10.0	4.9	180
4.27	9.5	4.9	240
4.77	8.5	6.0	220
5.79	7.0	6.2	220

MPG 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	11.0	8.5	1000
0.09	11.5	6.9	950
0.32	11.0	7.0	1000
0.72	10.0	8.0	1000
0.84	10.0	7.5	900
0.97	9.0	8.0	1200
1.09	8.5	8.0	1000
1.22	8.0	8.0	1200
1.72	8.0	8.0	1000
1.85	7.0	8.0	1200
1.98	6.5	8.8	1200
2.10	6.5	8.0	1200
2.24	6.0	8.8	1000
2.72	5.0	9.0	1000
2.86	5.0	9.5	1000
2.97	4.9	8.5	1000

MPG 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	0.8	88
0.78	19.5	1.0	100
1.27	18.0	1.2	120
1.77	18.0	1.2	120
2.27	17.0	1.5	120
2.76	16.5	2.0	160
3.25	15.0	2.2	160
3.79	14.5	2.8	160
4.29	14.0	2.8	200
4.79	13.0	3.2	220
5.80	11.0	3.5	200

MPH 12 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	38
0.36	21.0	0.0	52
0.76	20.5	0.0	76
1.00	19.5	0.2	72
1.25	19.0	0.4	76
1.75	17.5	0.4	76
1.86	17.0	0.5	100
2.00	17.0	0.5	100
2.26	16.0	0.6	100
2.74	14.0	1.0	100
2.98	13.5	0.7	100
3.10	12.5	1.0	100
3.24	12.0	1.2	120
3.78	11.0	2.0	140
4.10	10.0	2.0	140
4.27	9.0	2.5	200
4.77	7.5	4.0	200
5.79	5.0	4.9	220

MPH 17 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.0	1.0	220
0.10	19.0	1.0	250
0.33	18.0	1.5	500
0.73	15.5	2.5	580
0.85	14.5	2.5	540
0.97	14.0	3.0	820
1.10	13.0	3.0	620
1.73	10.5	4.0	640
1.85	10.0	4.0	900
1.98	9.5	4.0	1000
2.10	9.0	4.2	1000
2.24	8.5	4.5	680
2.73	7.0	5.5	1000
2.87	6.5	5.5	960
2.97	6.0	5.5	960
3.10	5.0	5.9	700
3.22	4.5	5.9	920

MPH 7 ft bgs			
Shut off Blower 8/4/1998 2:45:00 PM			
Time Elapsed, day	O_2, %	CO_2, %	TPH, ppmv
0.00	20.9	0.0	48
0.78	20.5	0.0	74
1.26	20.5	0.2	76
1.77	19.5	0.2	88
2.27	18.5	0.3	86
2.76	17.0	0.4	100
3.25	16.0	0.5	100
3.79	15.0	0.7	100
4.29	14.0	0.7	120
4.79	14.0	1.0	140
5.80	10.0	2.0	160