

FINAL REPORT

Data Synthesis and Analysis

Nitrogen Processes Study (NIPS)

Nutrient Distributions and Dynamics in Lavaca, San Antonio and
Nueces/Corpus Christi Bays in Relation to Freshwater Inflow

Part III: Data Plots

by

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for

Bays and Estuaries Program
Environmental Systems Section
Texas Water Development Board
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Austin, Texas 78711-3231

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ACKNOWLEDGEMENT

In response to House Bill 2 (1985) and Senate Bill 683(1987), as enacted by the Texas Legislature, the Texas Parks and Wildlife Department and the Texas Water Development Board must maintain a continuous data collection and analytical study program on the effects of and needs for freshwater inflow to the State's bays and estuaries. As part of the mandated study program. This research project was funded through the Board's Water Research and Planning Fund, authorized under Texas Water Code Sections 15.402 and 16.058(e), and administered by the Department under interagency cooperative contract Nos. 9-483-705, 9-483-706, and 8-483-607.

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Time Series Plots - San Antonio Bay (NIPS-I)

Station A

18-19 November 1986
27-28 January 1987
6-8 April 1987
13-15 July 1987

Station C

28-29 January 1987
8-10 April 1987
15-17 July 1987
7-8 July 1988

Time Series Plots - Nueces/Corpus Christi Bays (NIPS-II)

Station A

20-21 October 1987
8-9 December 1987
16-17 February 1988
9-10 May 1988
11-12 July 1988

Station B

21 October 1987
9-10 December 1987
17-18 February 1988
12-13 April 1988
11-12 May 1988
10-11 July 1988

Station C

19-20 October 1987
7-8 December 1987
15-16 February 1988
11-12 April 1988

Station D

22 October 1987
10 December 1987
18-19 February 1988
14-15 April 1988
12-13 May 1988
13-14 July 1988

Property - Property Plots - San Antonio Bay

Nitrate - Salinity (November 1986 - July 1988)
Nitrate - Chlorophyll (November 1986 - July 1988)

Property - Property Plots - Nueces/Corpus Christi Bay

Nitrate - Salinity (September 1987 - August 1988)
Nitrate - Chlorophyll (September 1987 - August 1988)

INTRODUCTION

This volume contains time series data plots obtained on experimental stations during intensive process oriented samplings. Suitable shipboard space was not available during the initial phase of NIPS-I in San Antonio Bay so the temporal resolution was relatively poor. Later samplings at station locations A and C improved to hourly samples for as long as 24 hours, however sites B and D were still sampled by small boat so darkness and inclement weather prevented some collections. Better ship availability reduced these problems during NIPS-II in Nueces/Corpus Christi Bays. Additional details of sampling and analysis methods are given in Volume 1 of this report and tabular listings are contained in Part III.

The other parts of this final report are:

Part I - Results and Discussion

Parts II - Hydrography, Nutrient and Chlorophyll data Tables

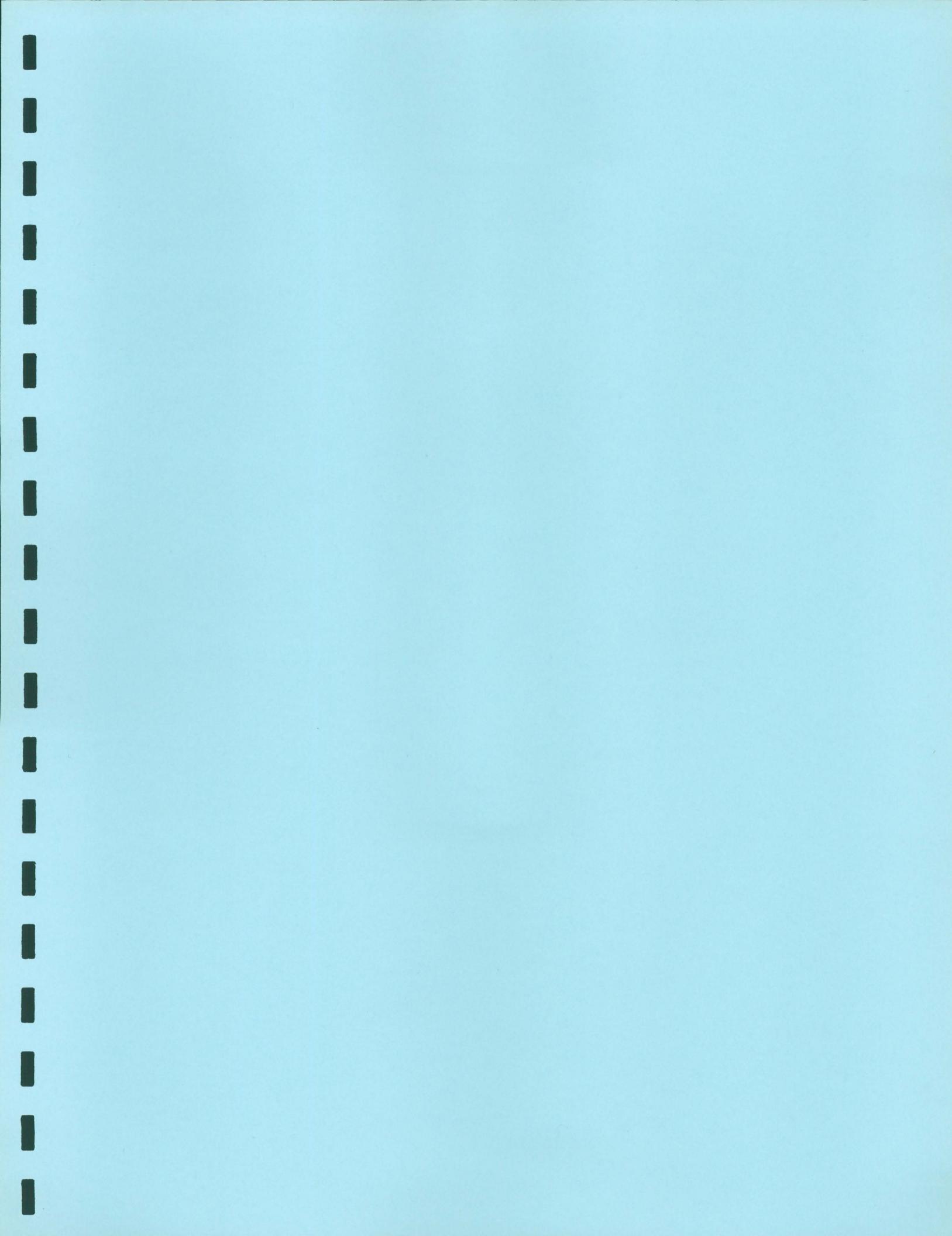
STA	DATE m	TIME local	LAT N	LON W	TEMP °C	SAL ppt	SIGMA-t density
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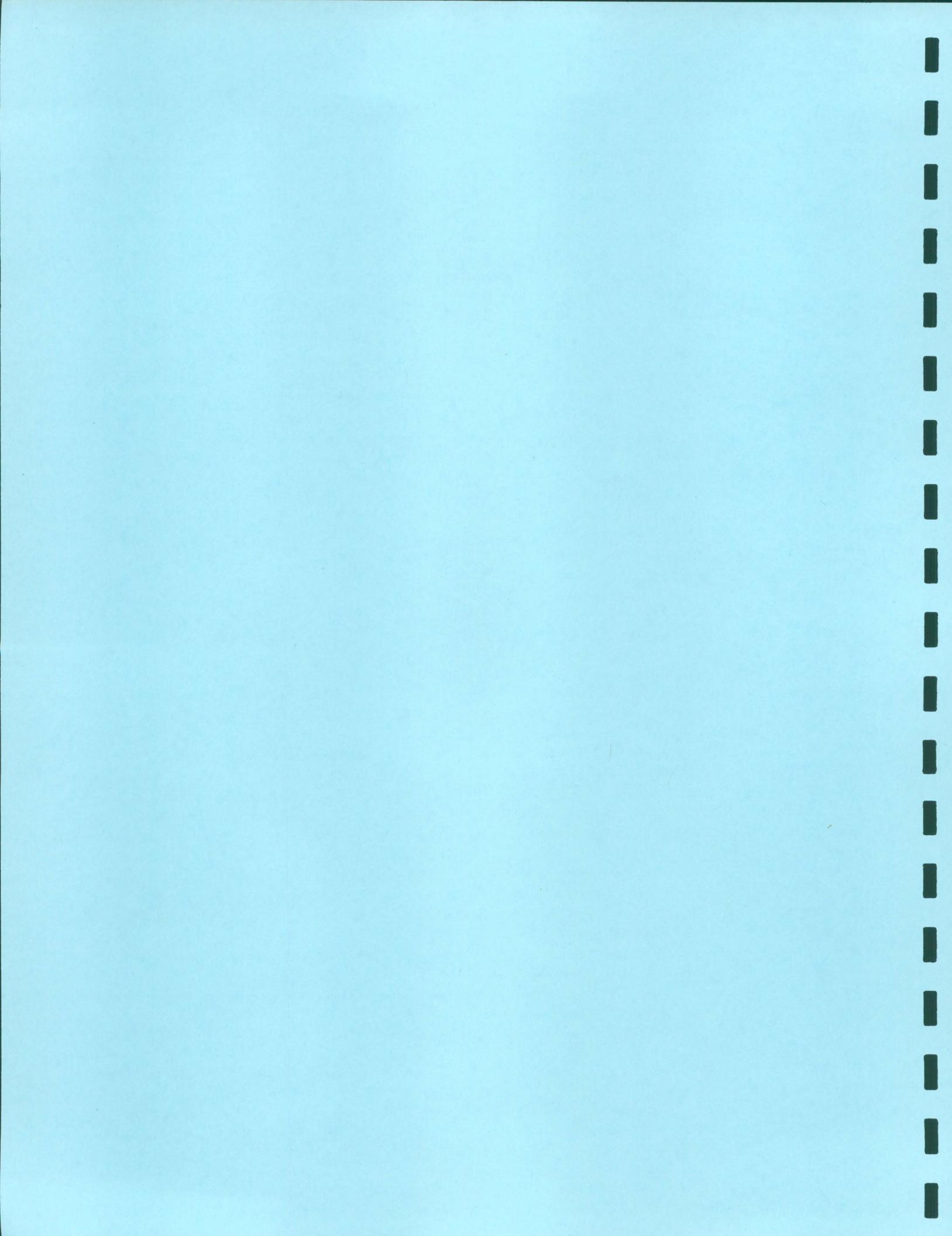
NO ₃ μmole/l	NO ₂ μmole/l	NH ₄ μmole/l	PO ₄ μmole/l	SIO ₄ μmole/l	Chl a ug/l1	Phaeo ug/l	Oxygen ppm
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Secchi cm	Trans percent	Depth m
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Note: Salinity was measured with several often simultaneous techniques. Each type is listed separately in the data tables under the following classifications.

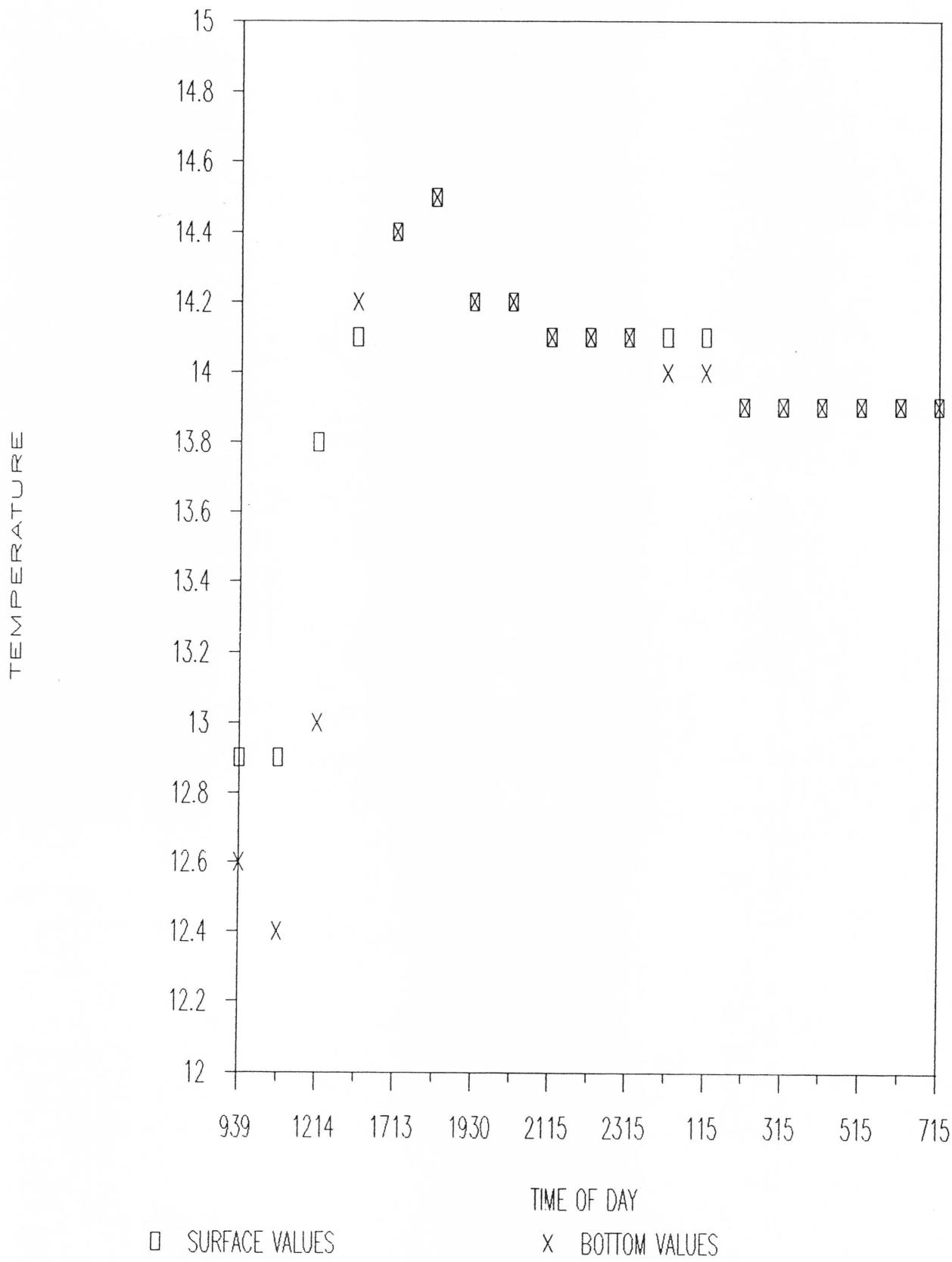
- Sal-C This is an *in situ* measurement of conductivity from the model 4000 Hydrolab which is corrected to 25°C. The conductivity was then converted to salinity using the practical salinity scale.
- Sal-CTD This is an *in situ* measurement of conductivity from the Seabird model Seacat which is a new high precision instrument (0.003 ppt). Salinity is then calculated as a function of depth (pressure) and temperature.
- Sal-R This is salinity as determined by a hand refractometer.
- Sal-B This is salinity as determined from bottle samples that were collected in the field and returned to the lab and analyzed for conductivity ratio by the AGE Minisal salinometer. The best accuracy is about 0.0005 ppt.





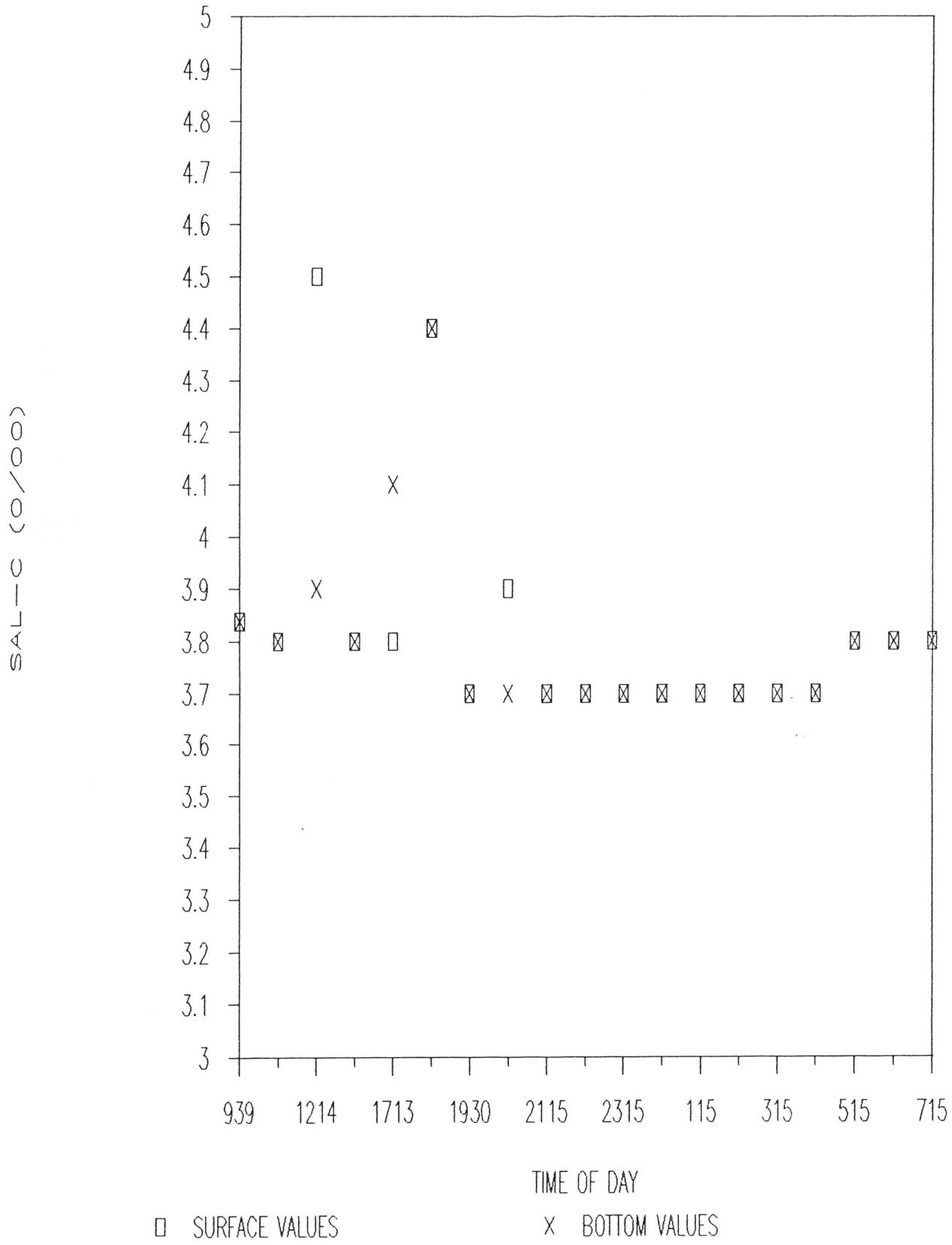
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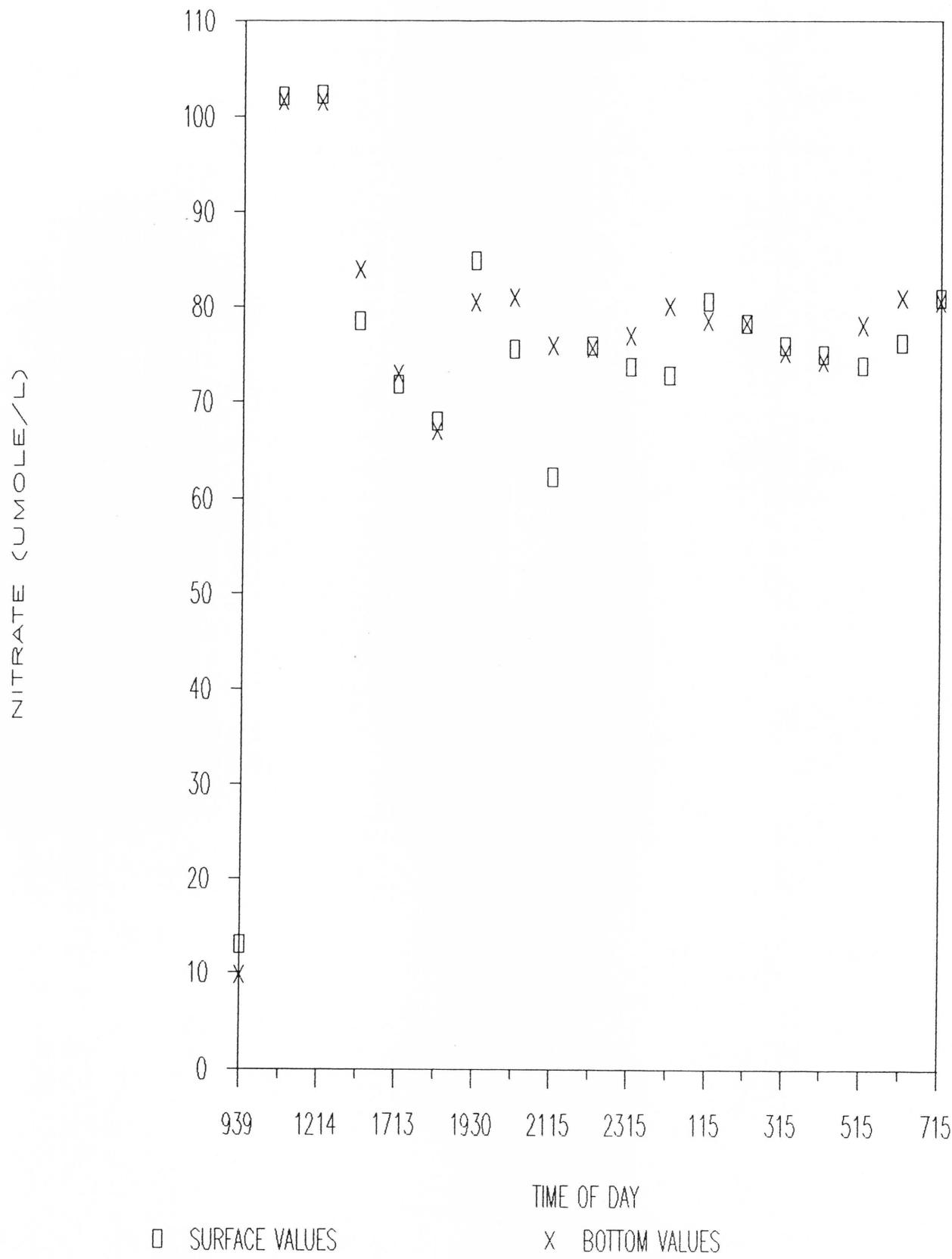
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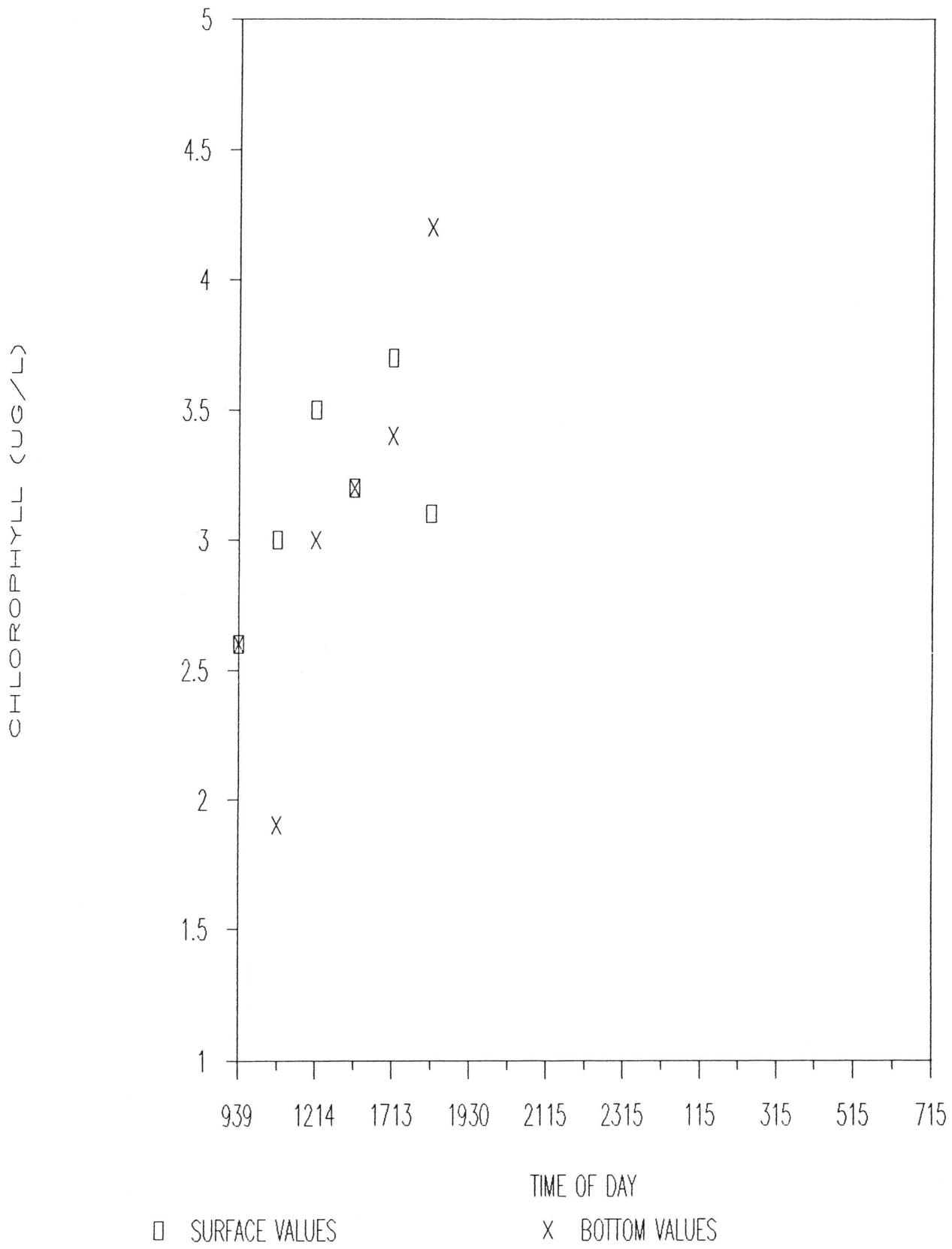
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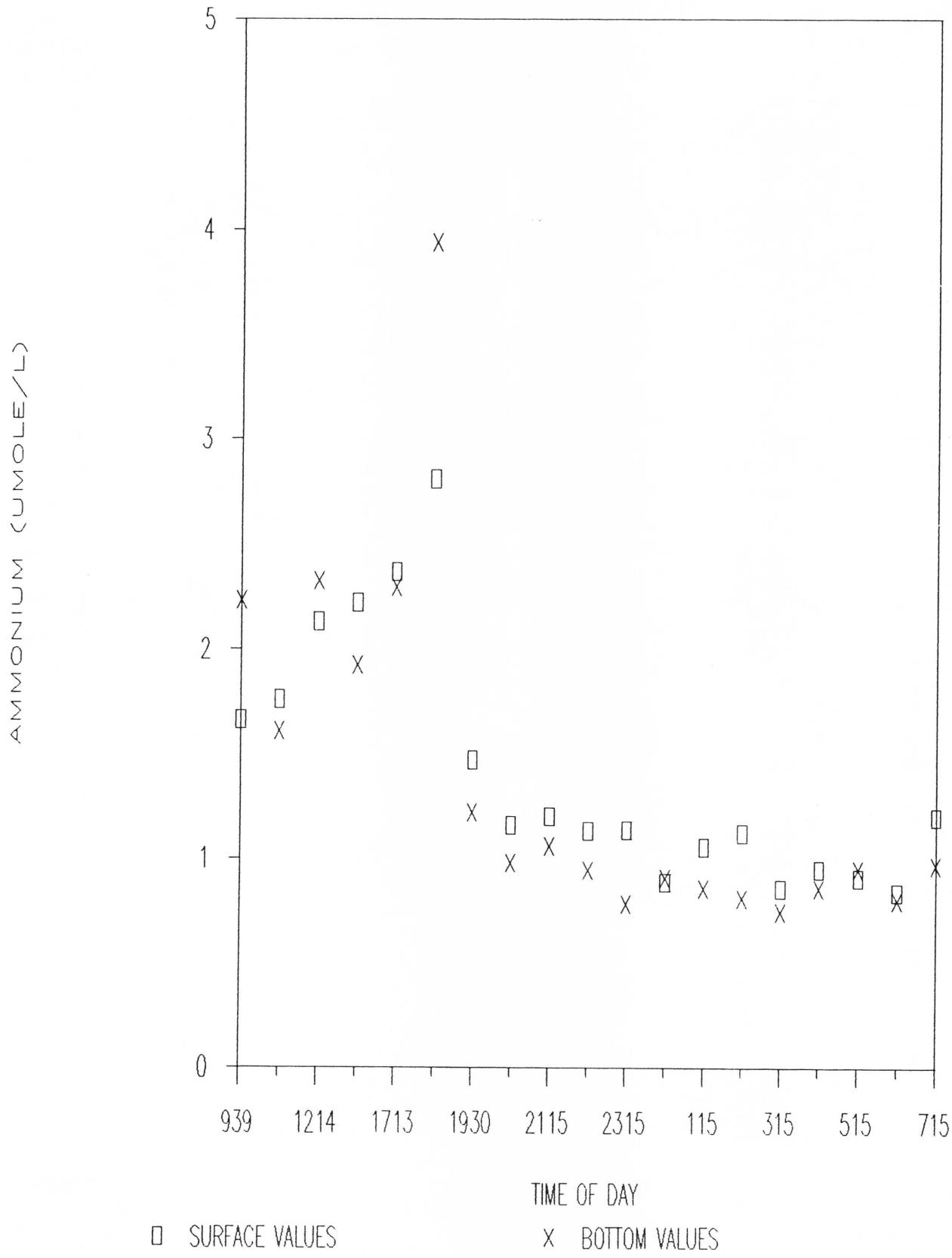
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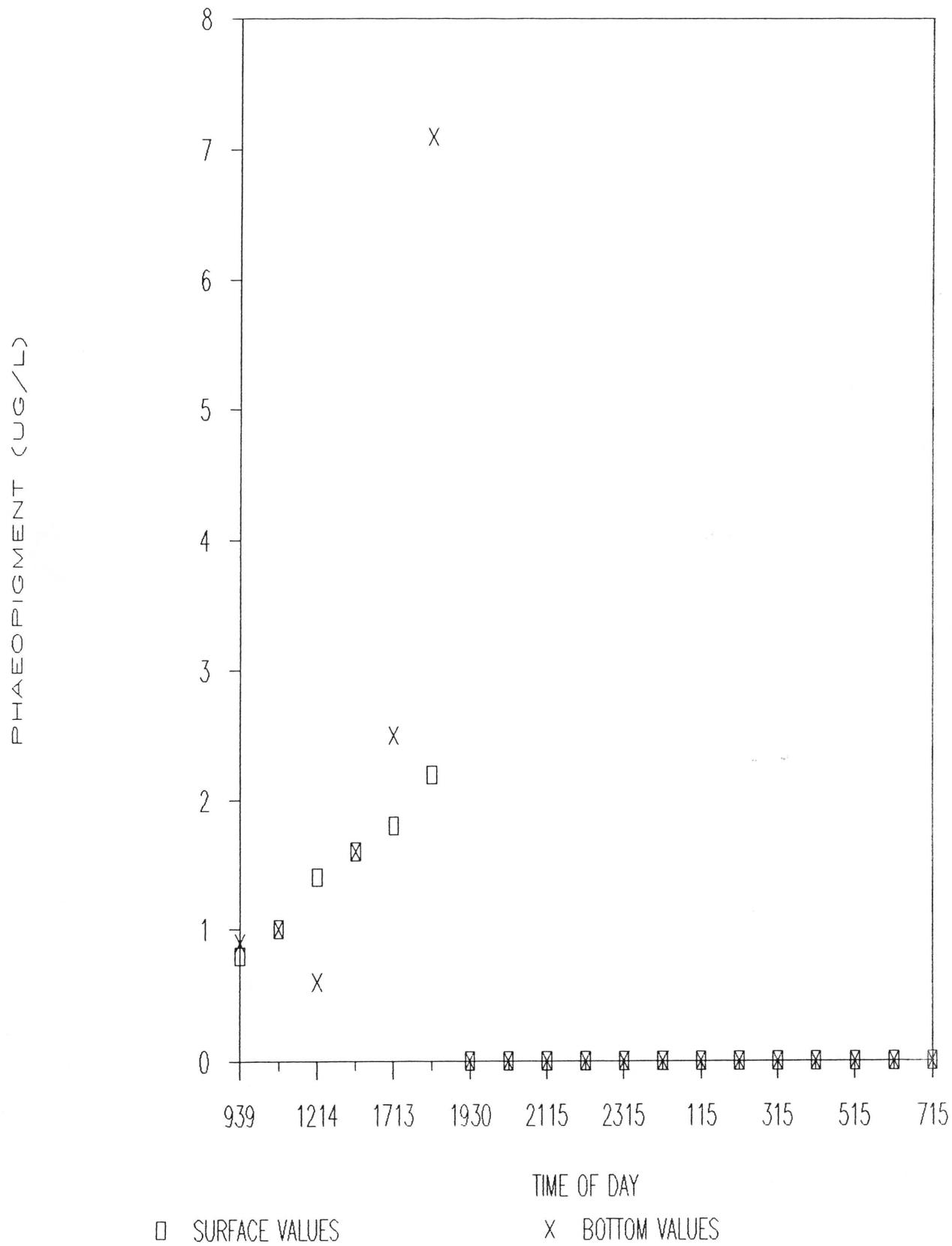
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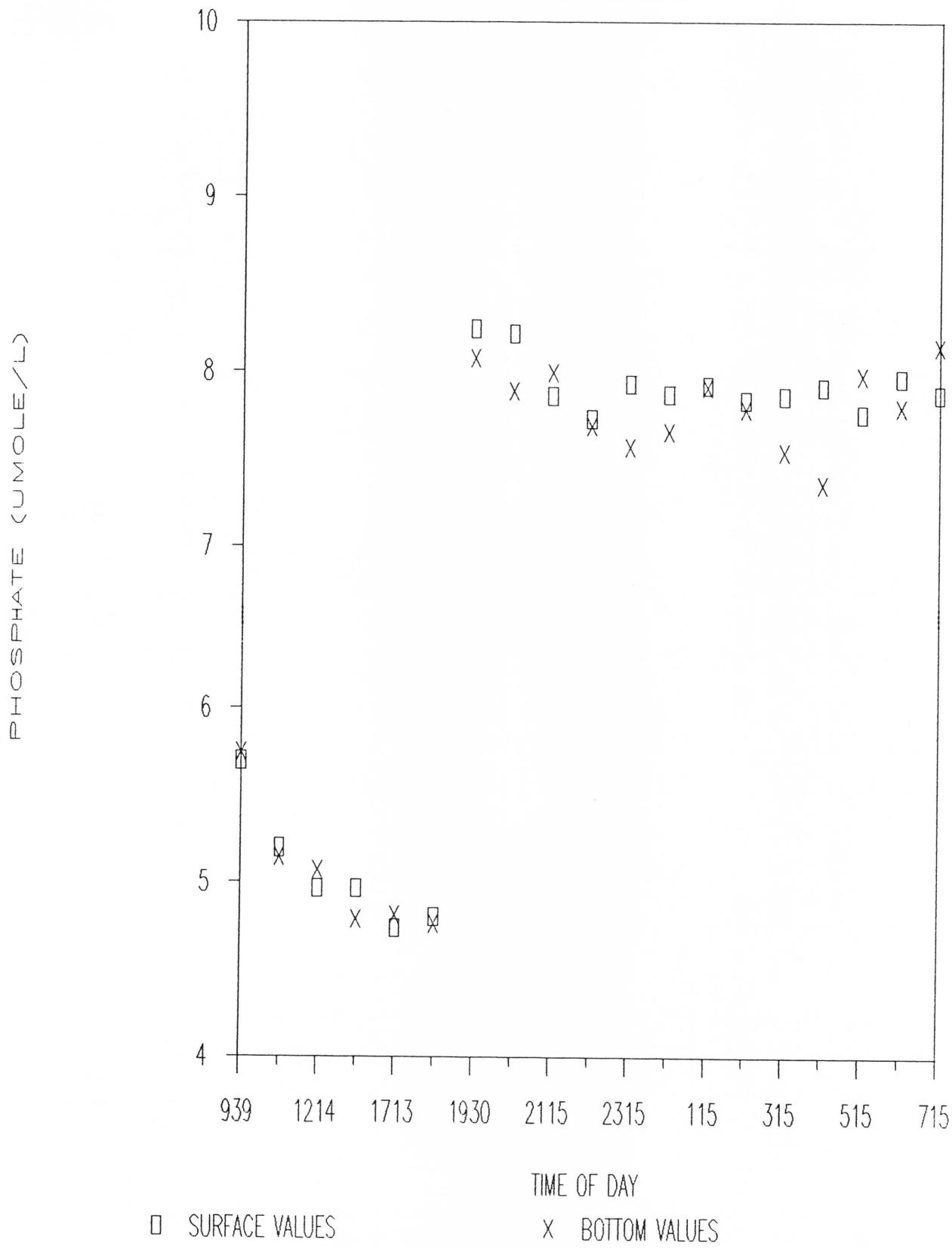
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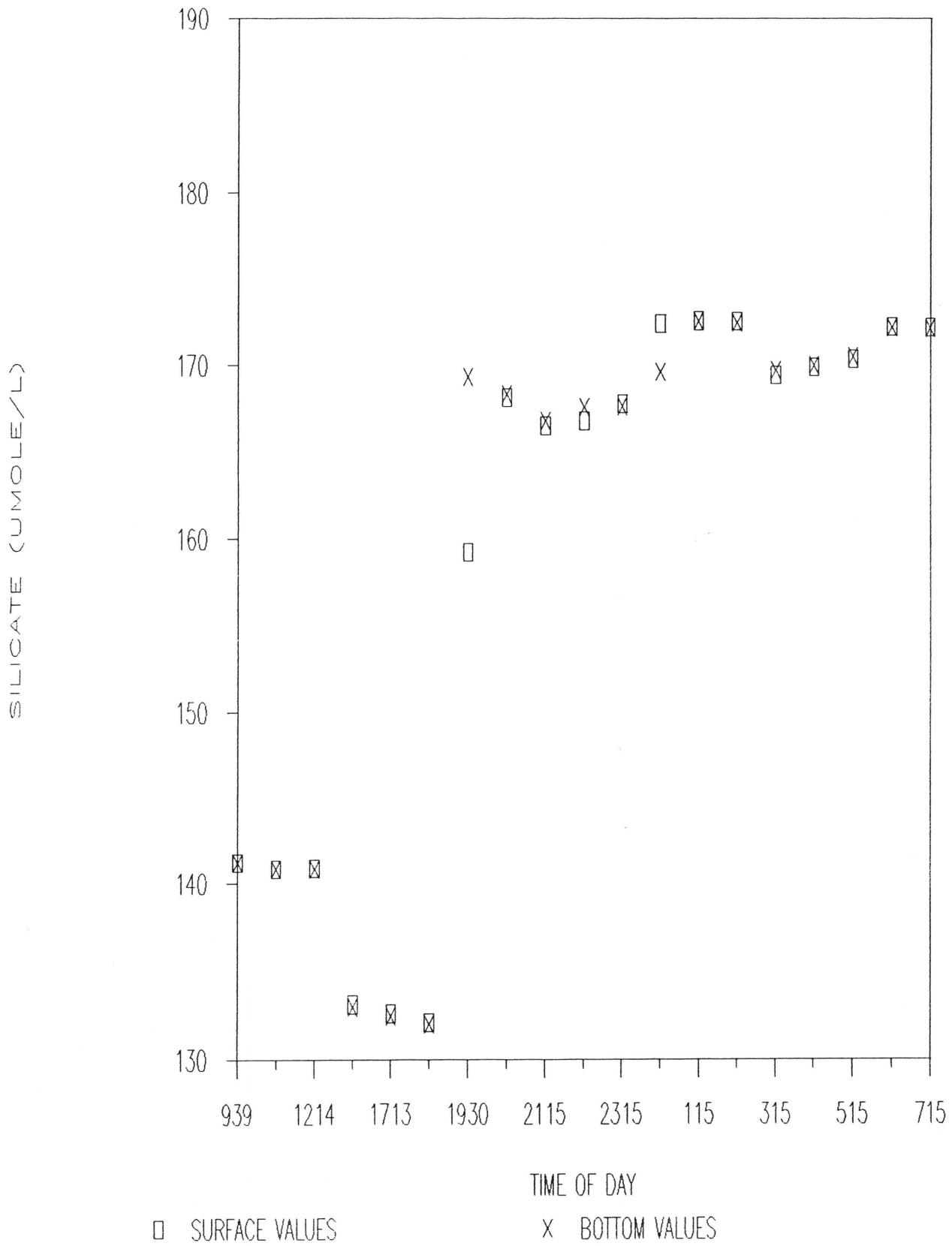
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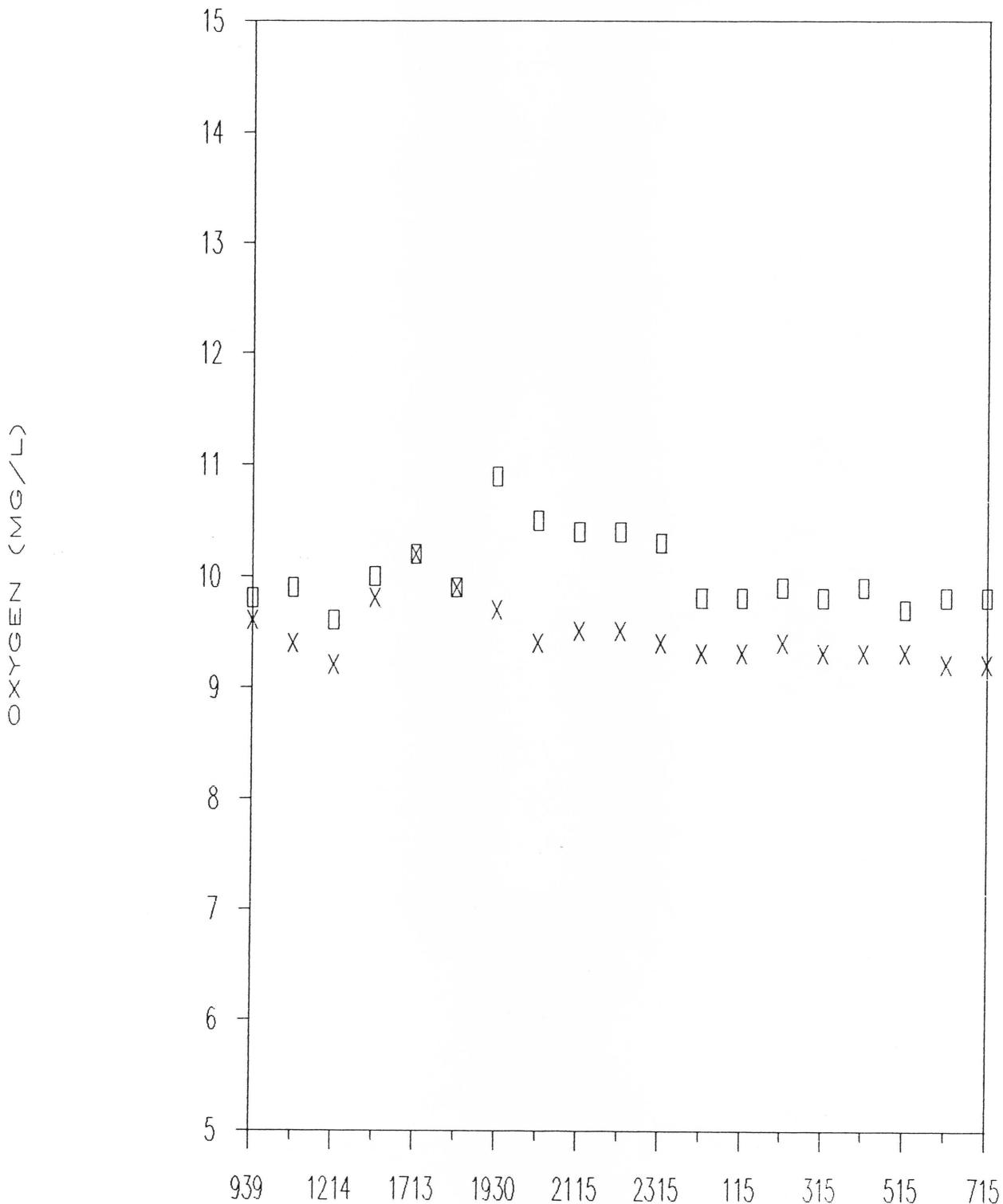
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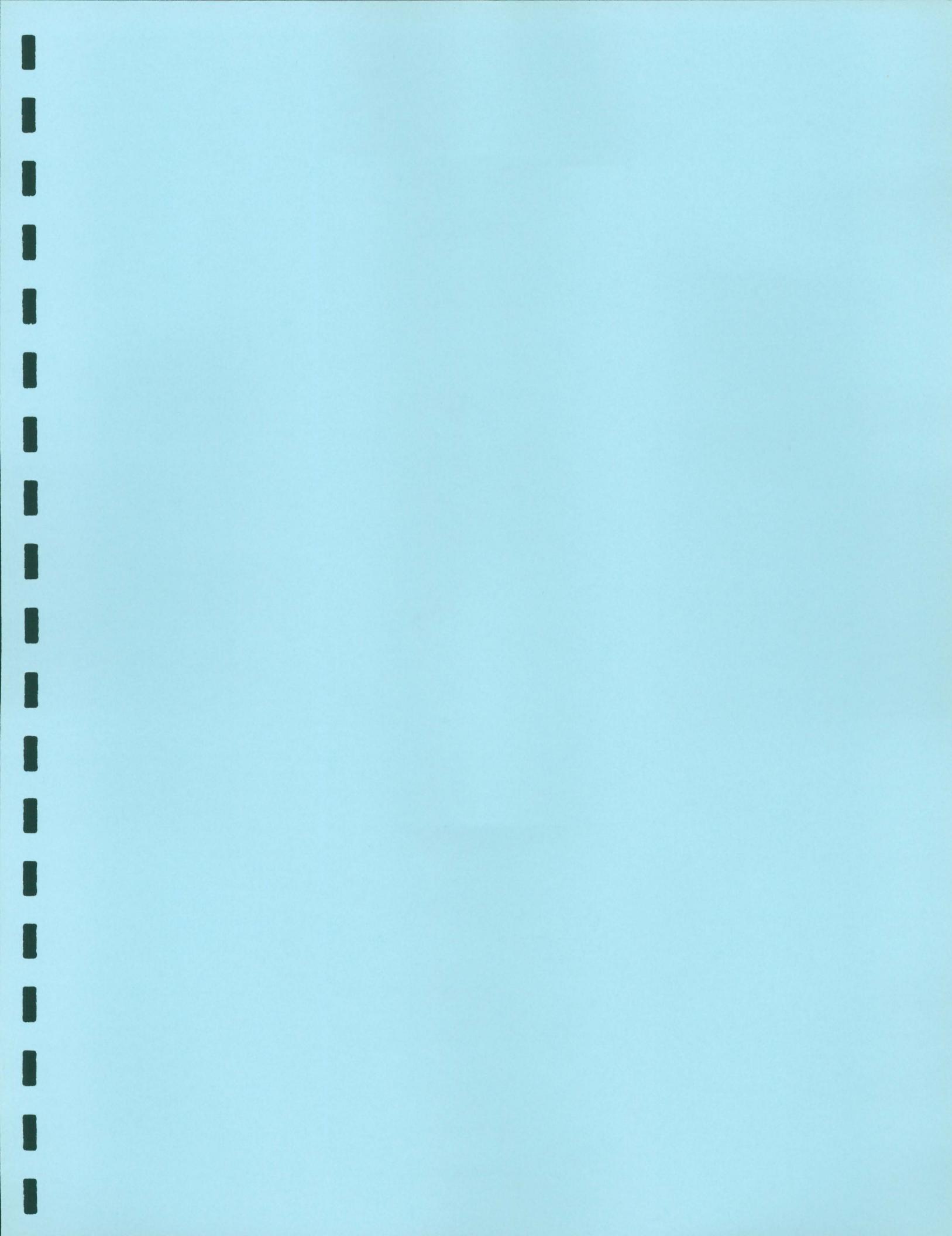
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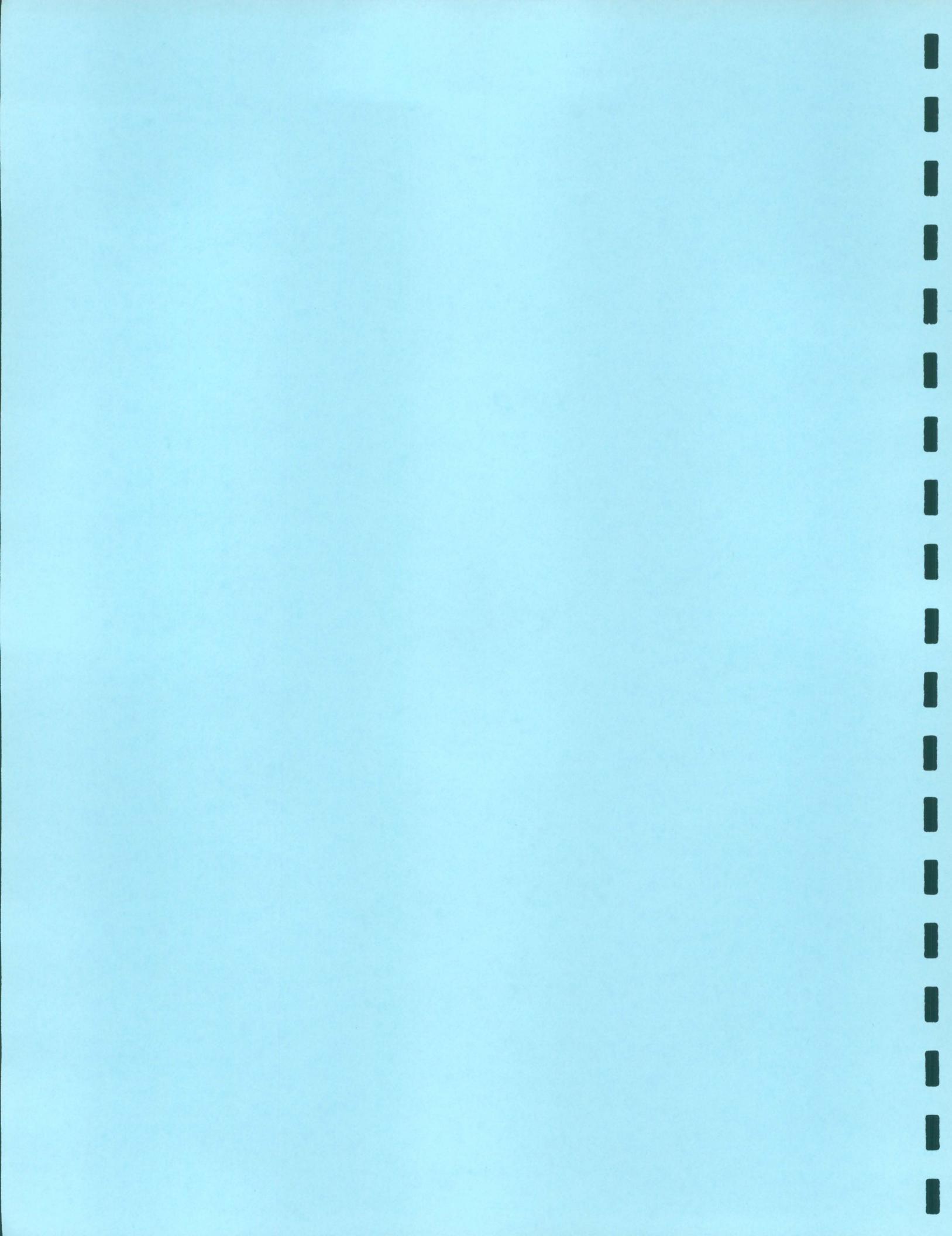


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X BOTTOM VALUES



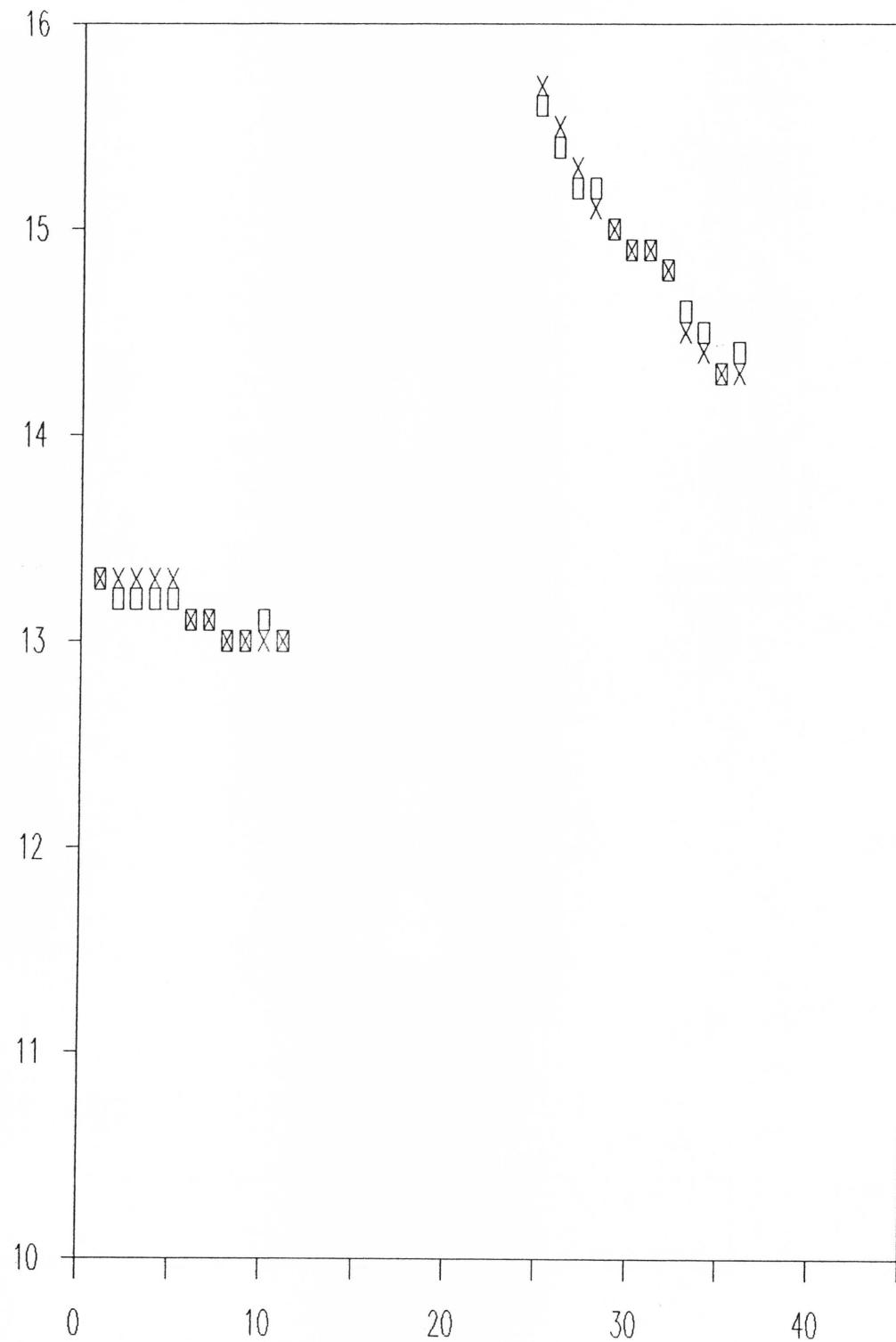




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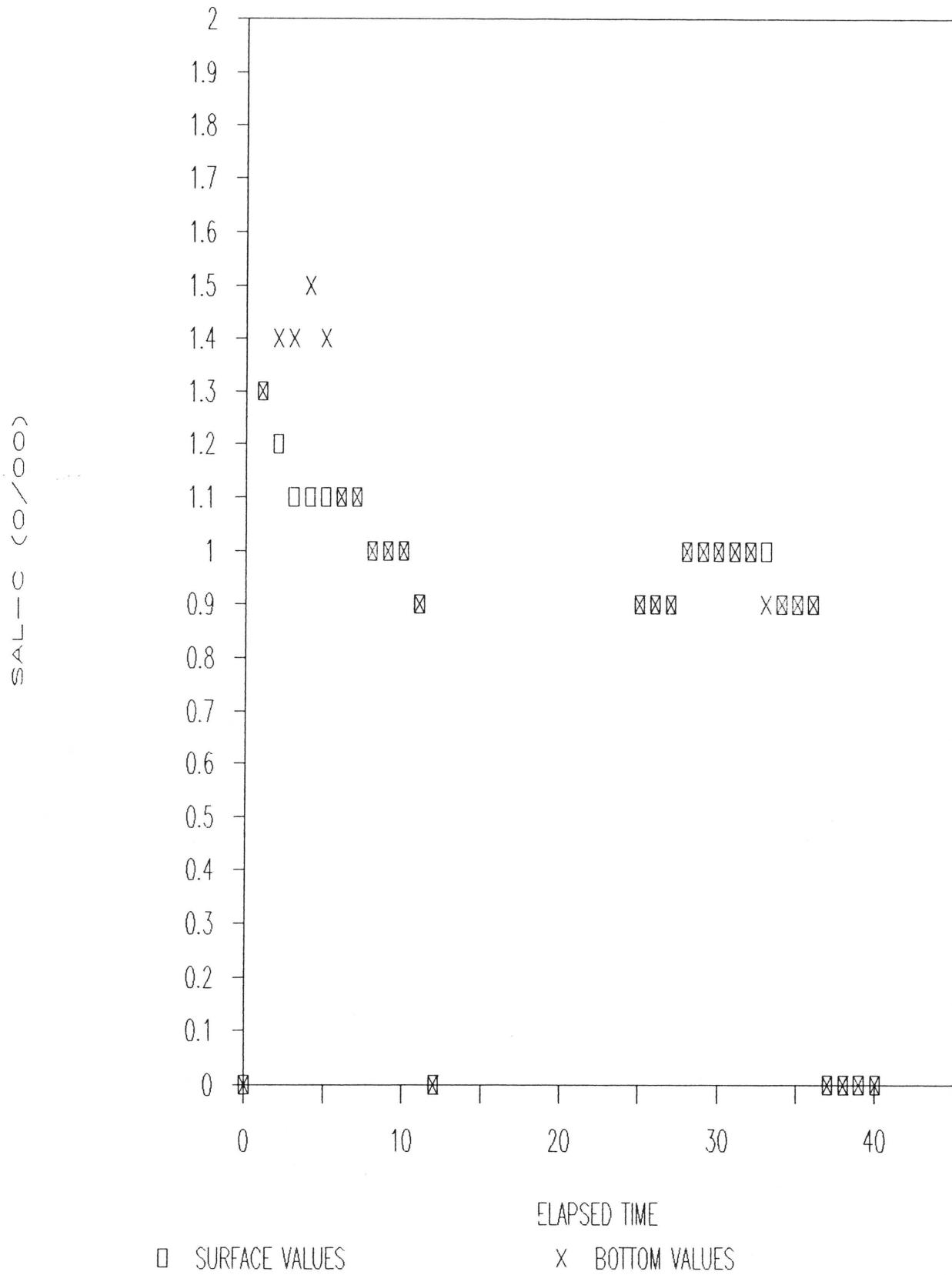
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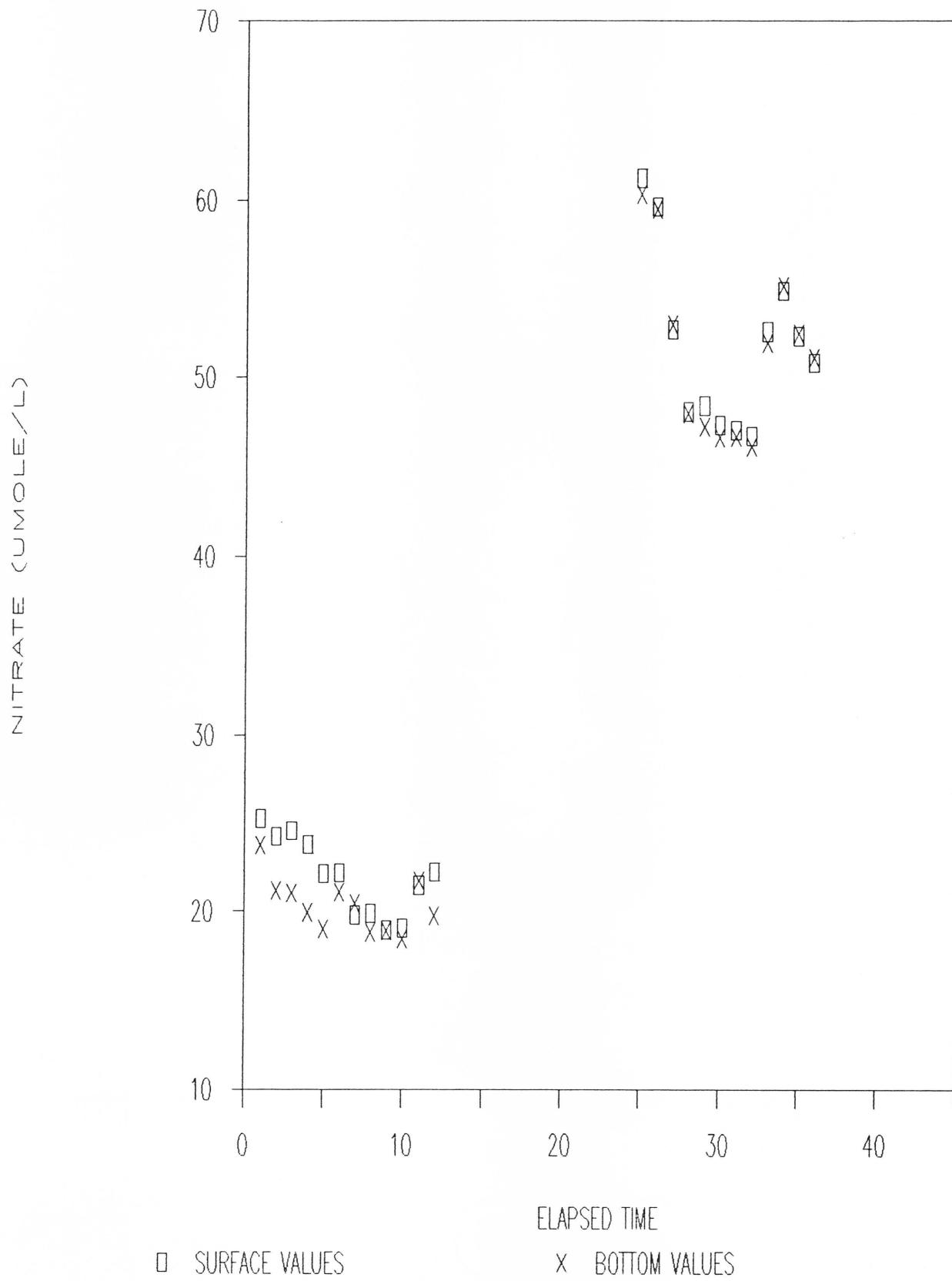
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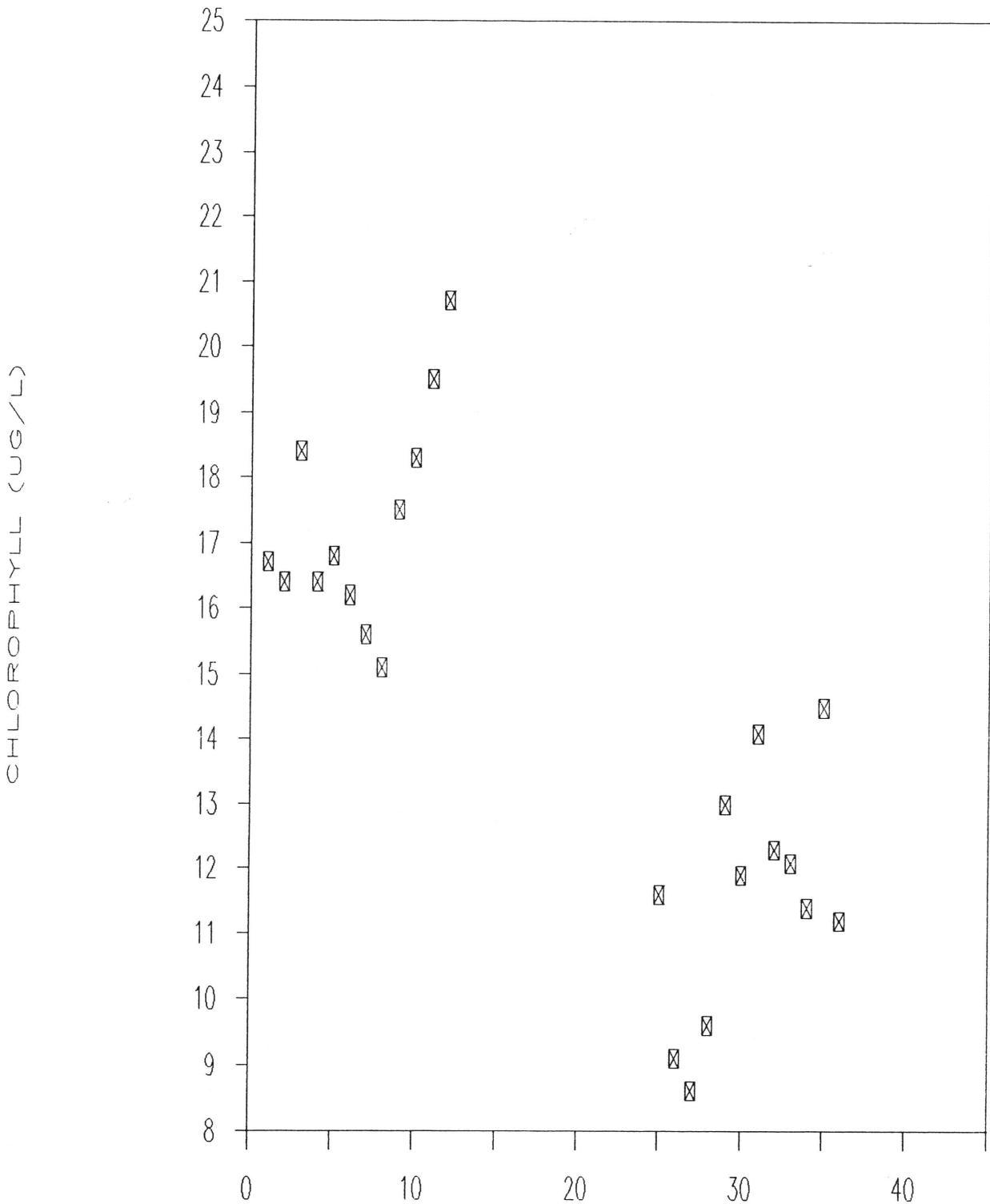
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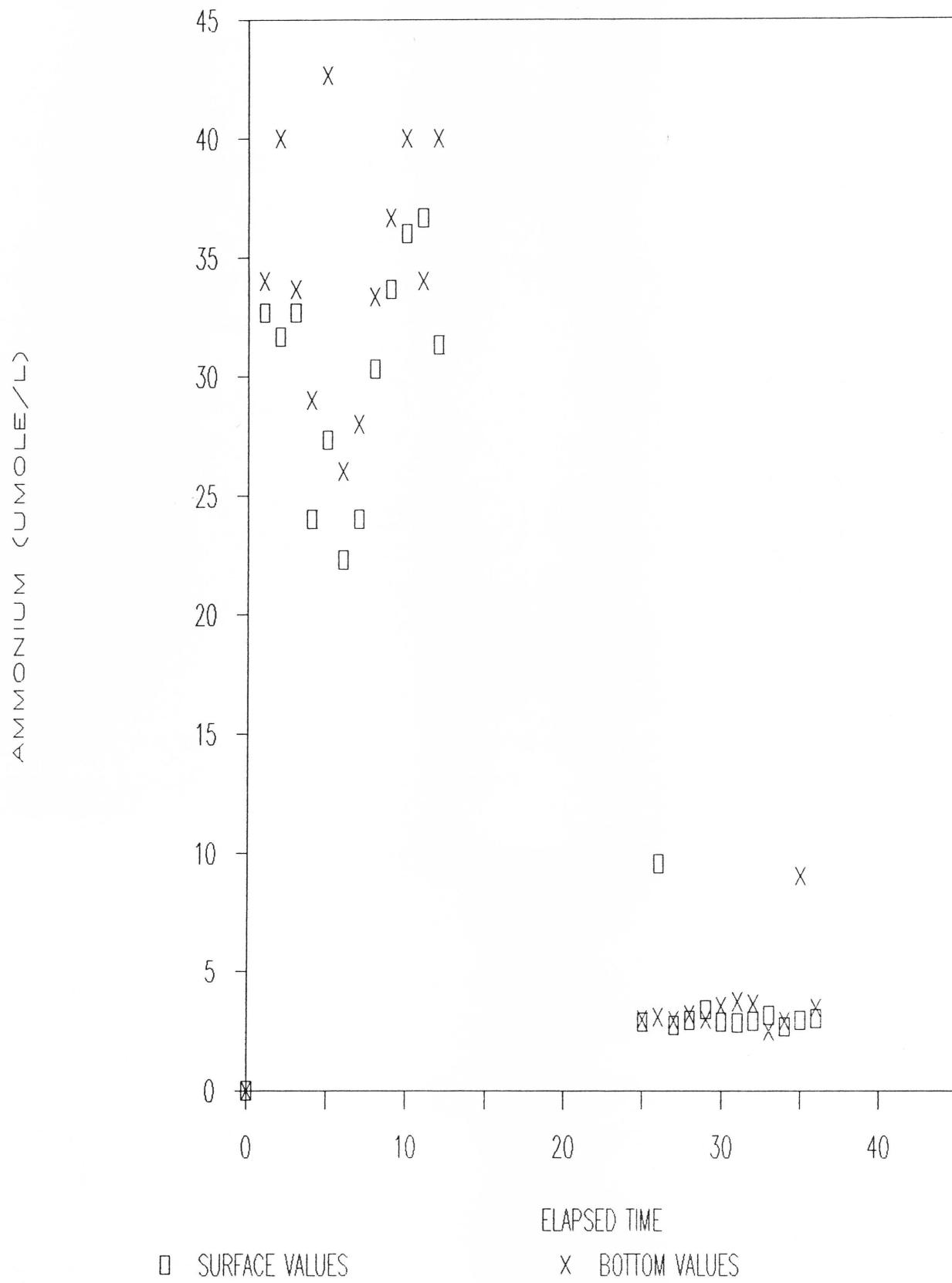
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□ SURFACE VALUES

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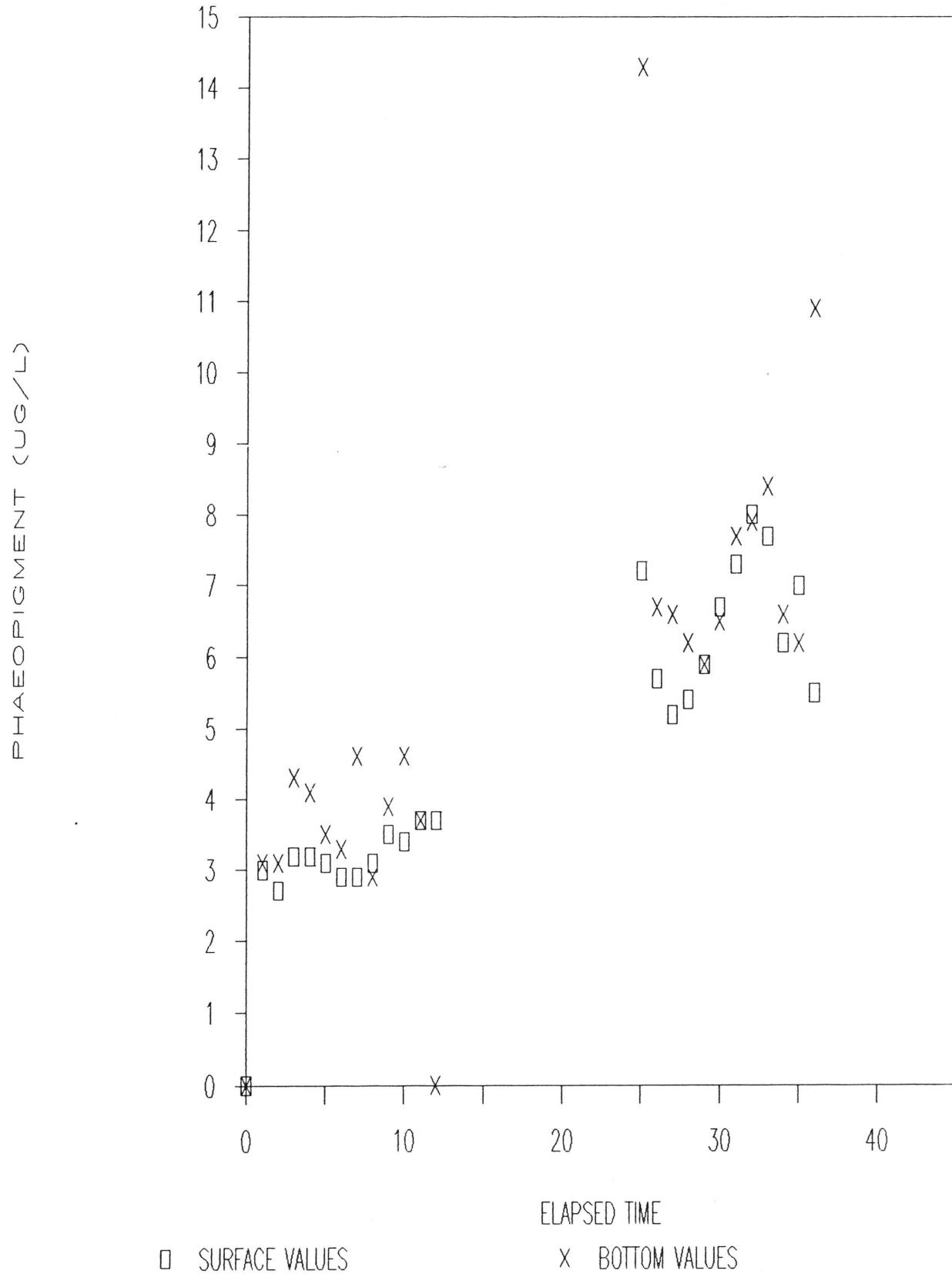
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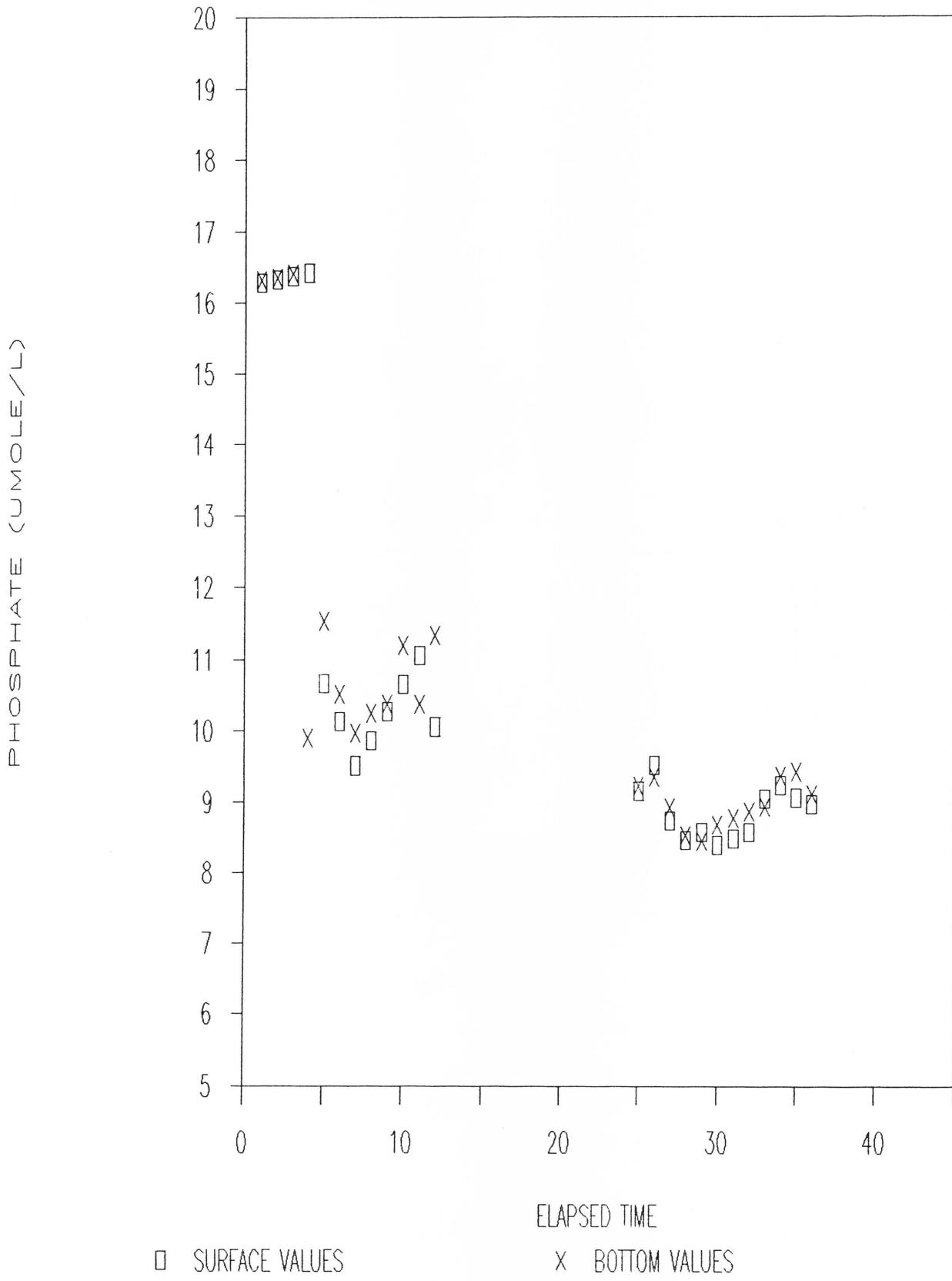
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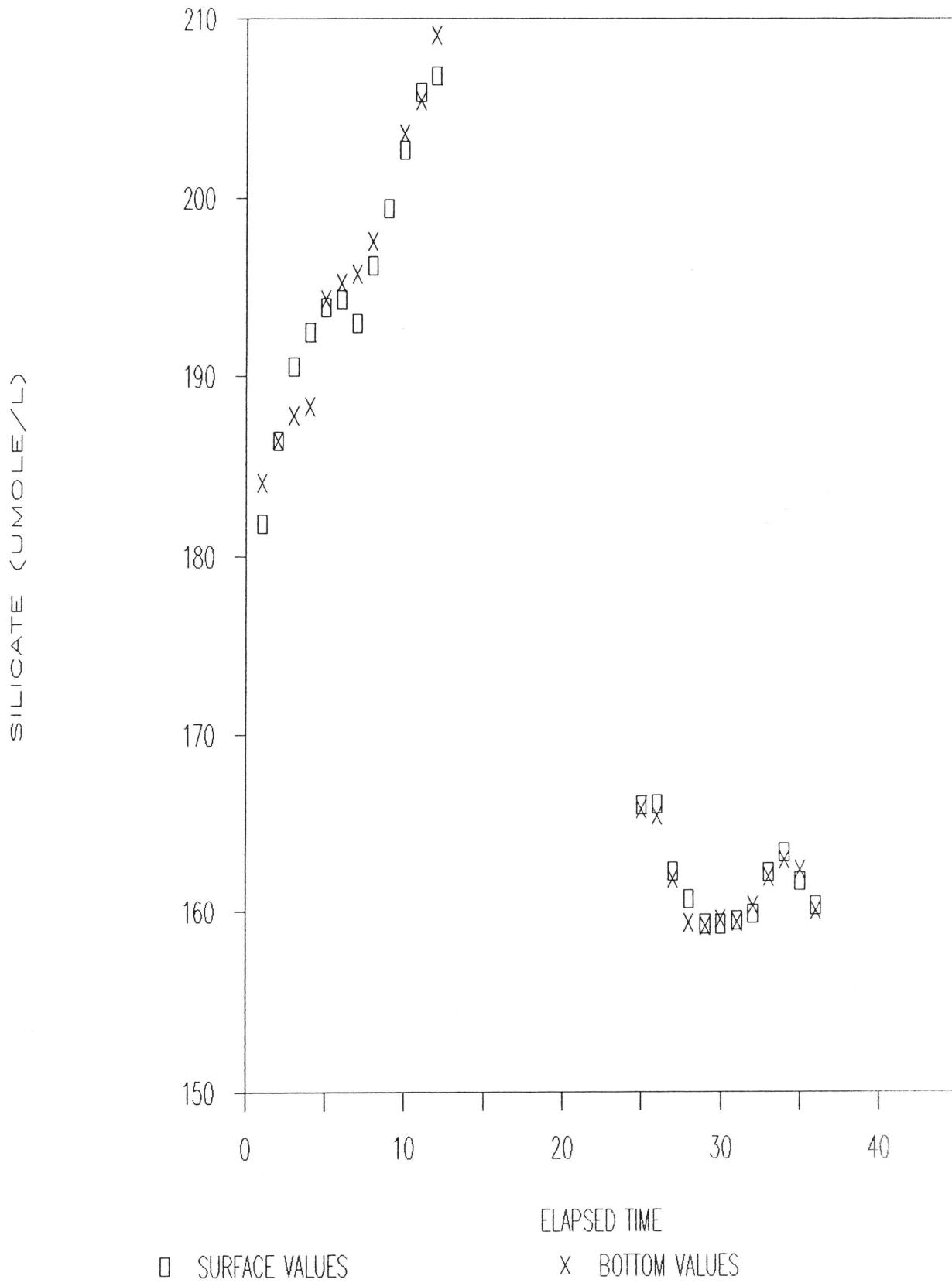
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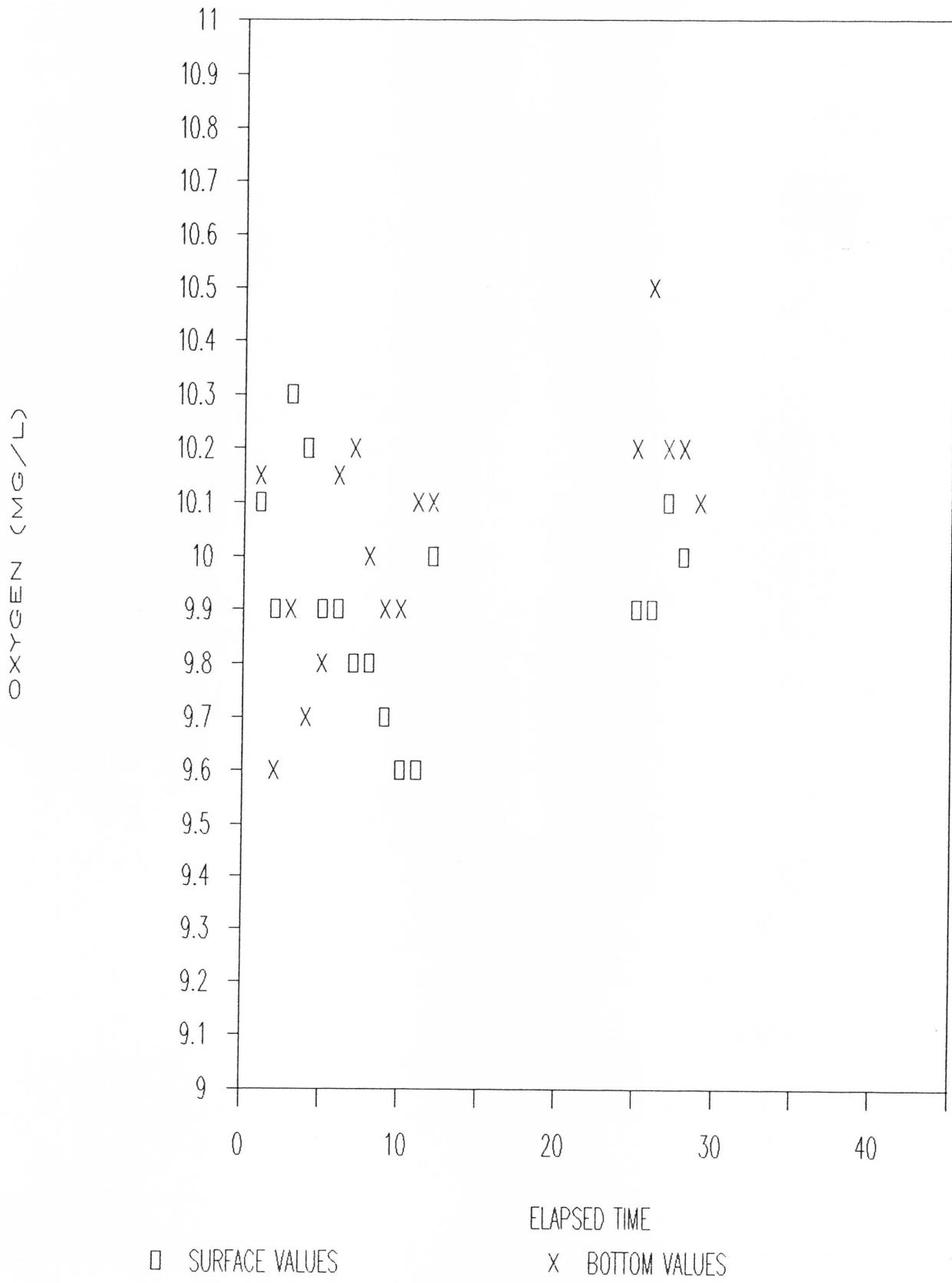
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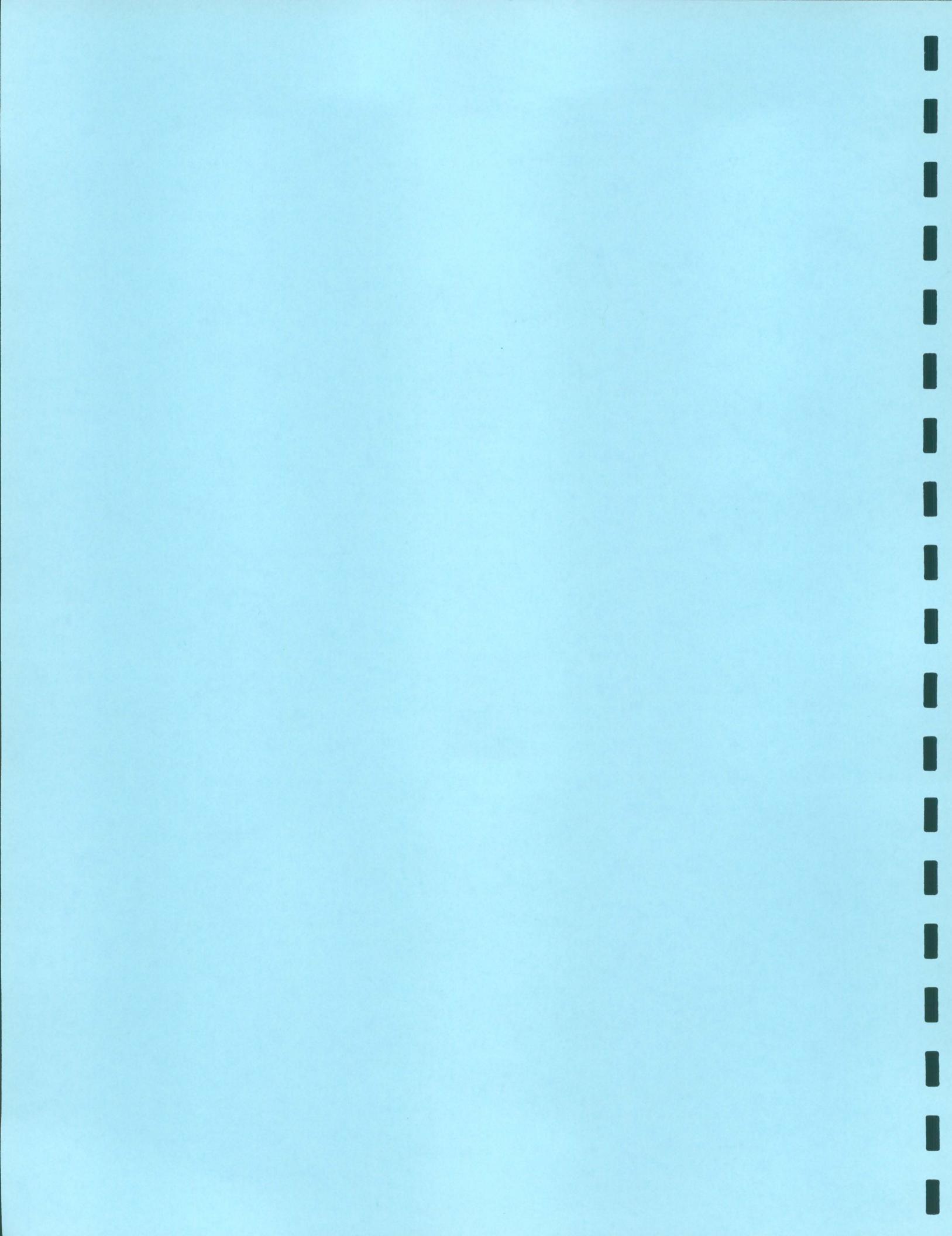


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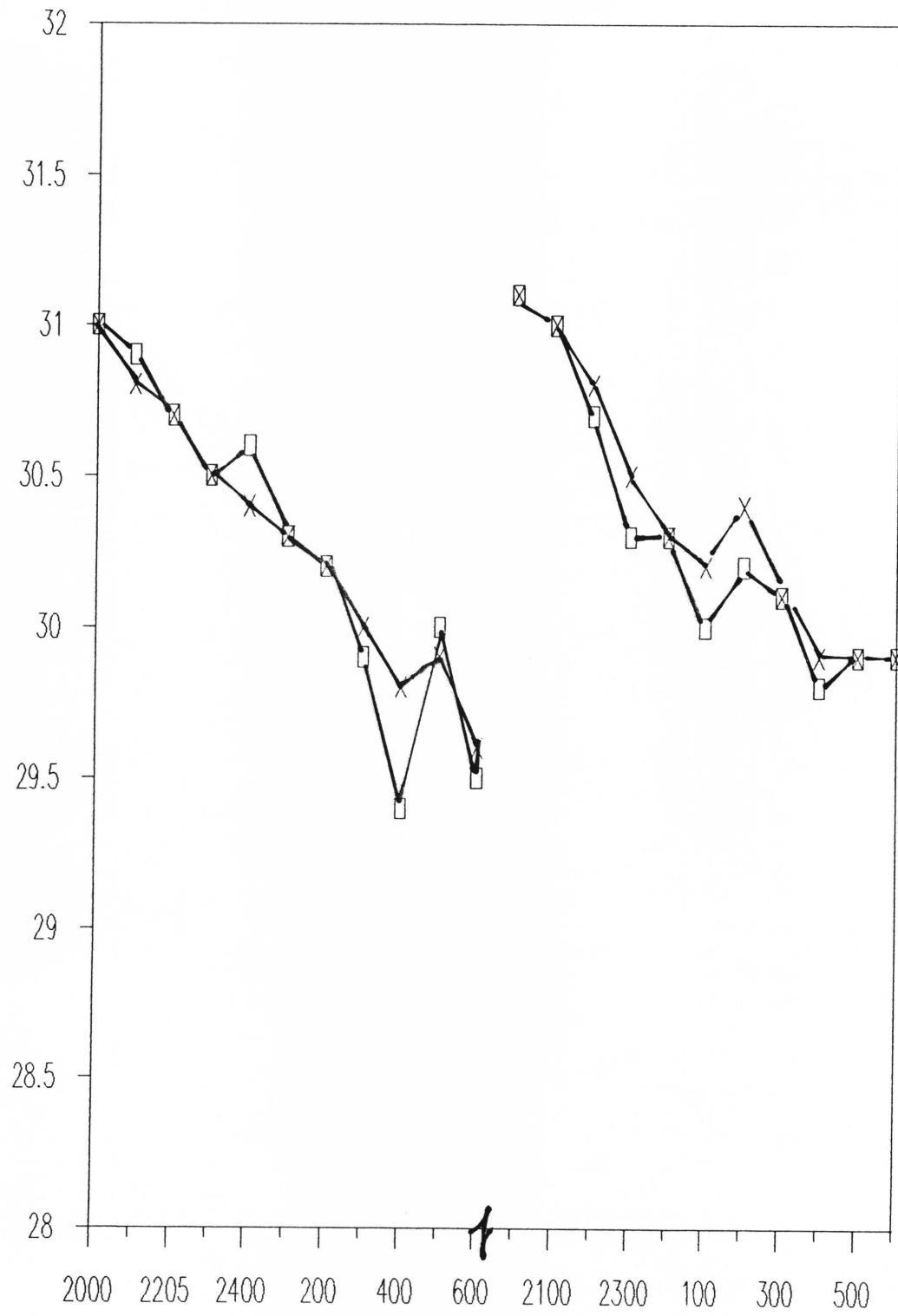




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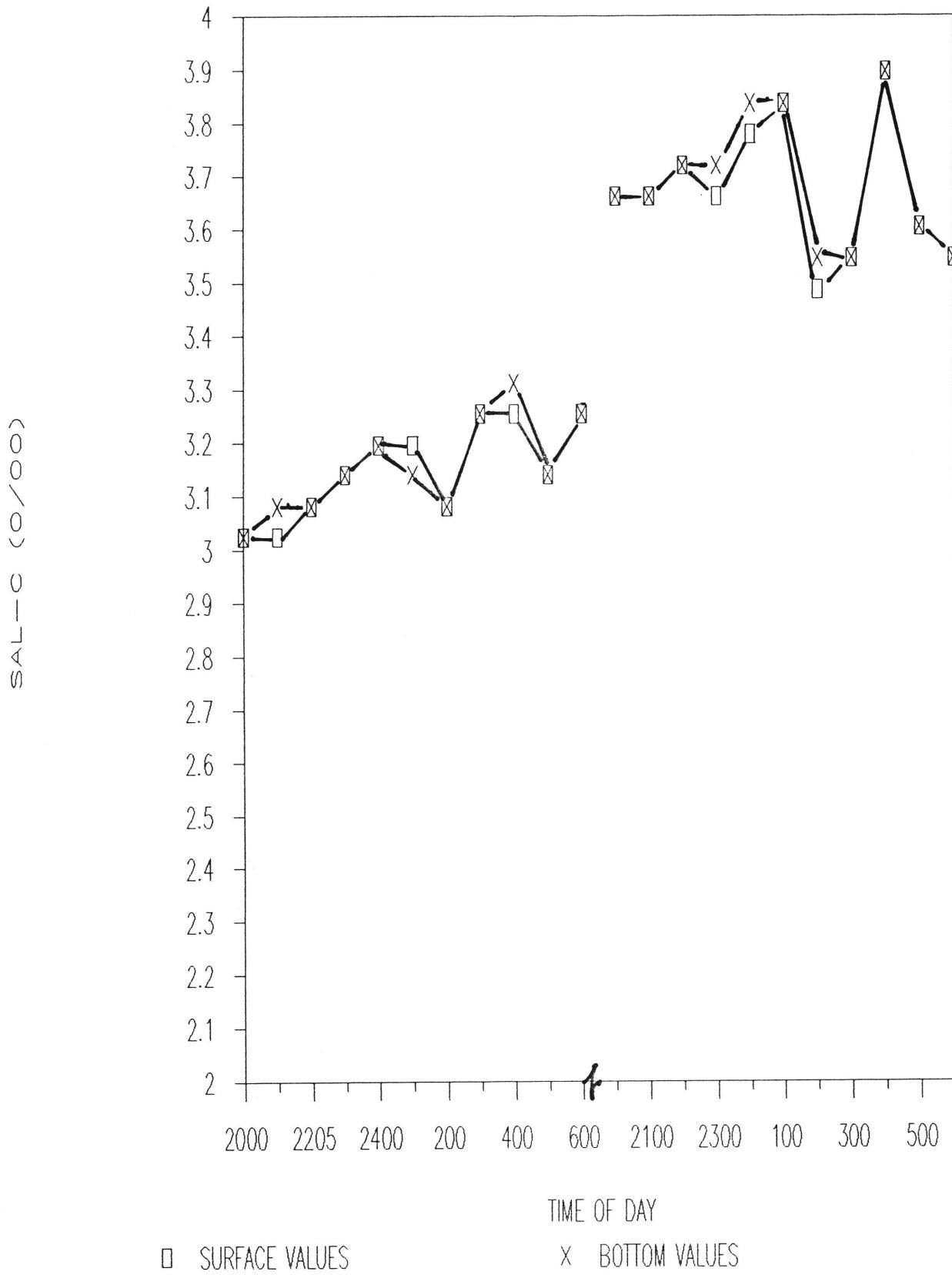
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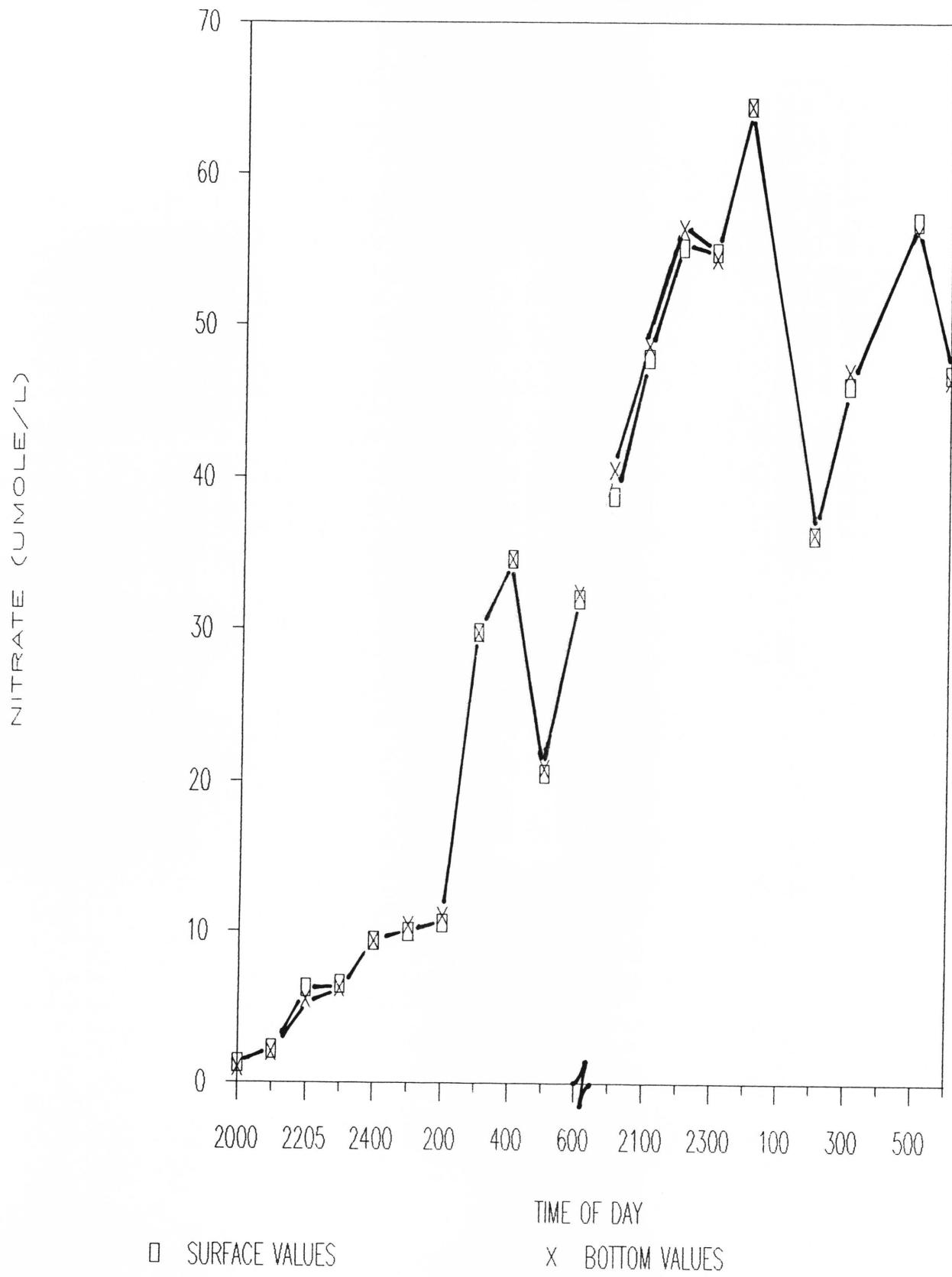
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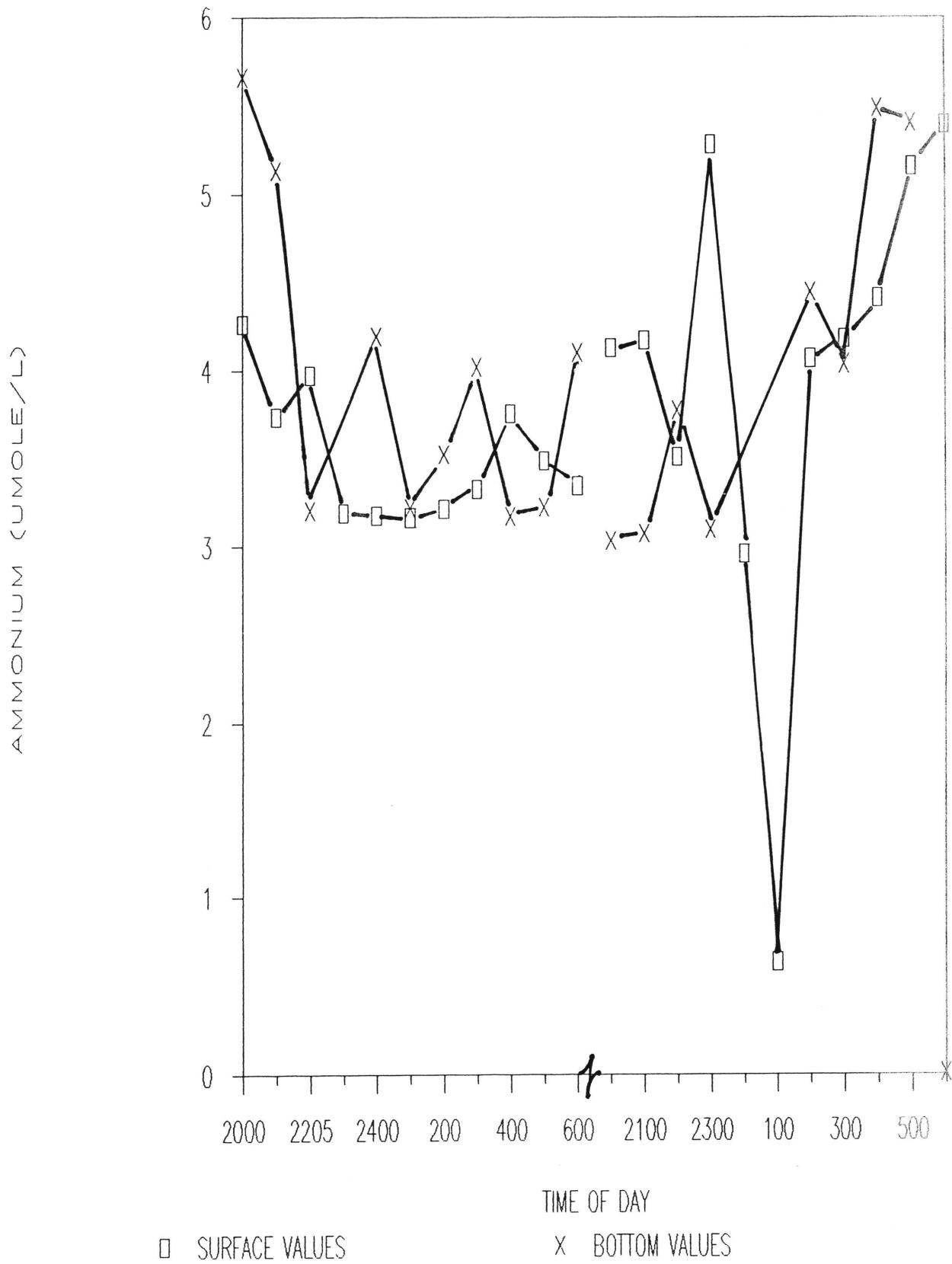
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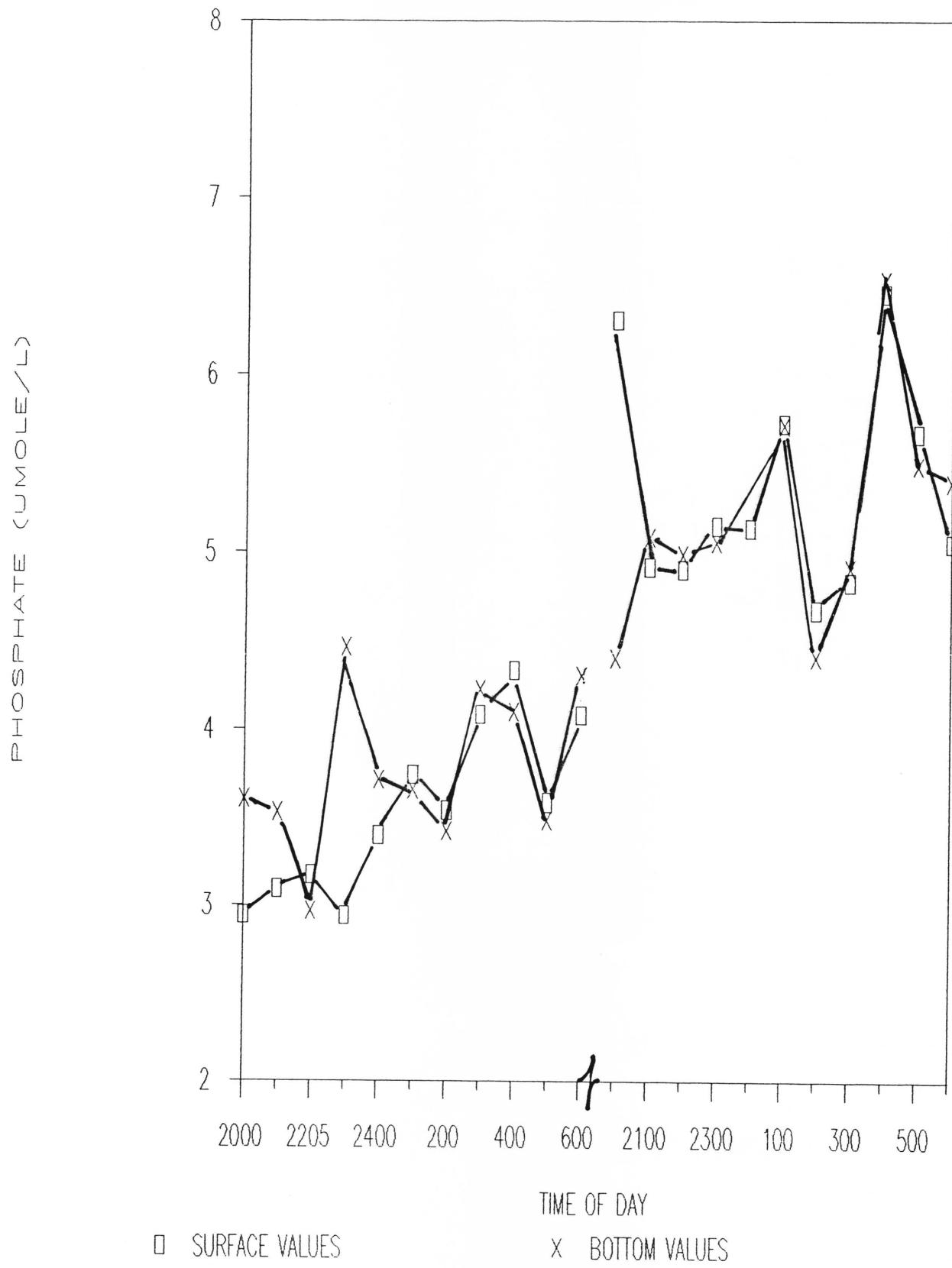
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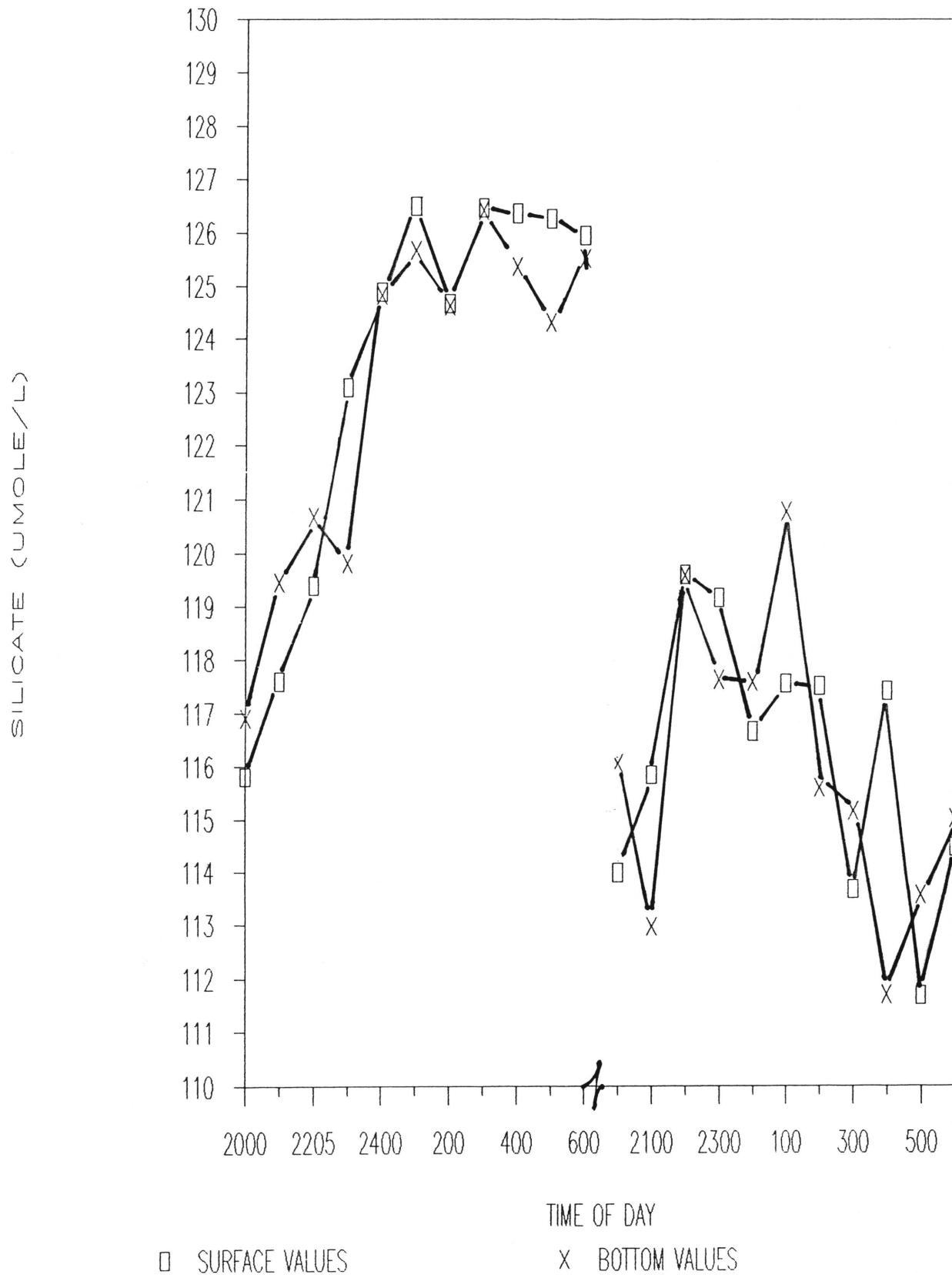
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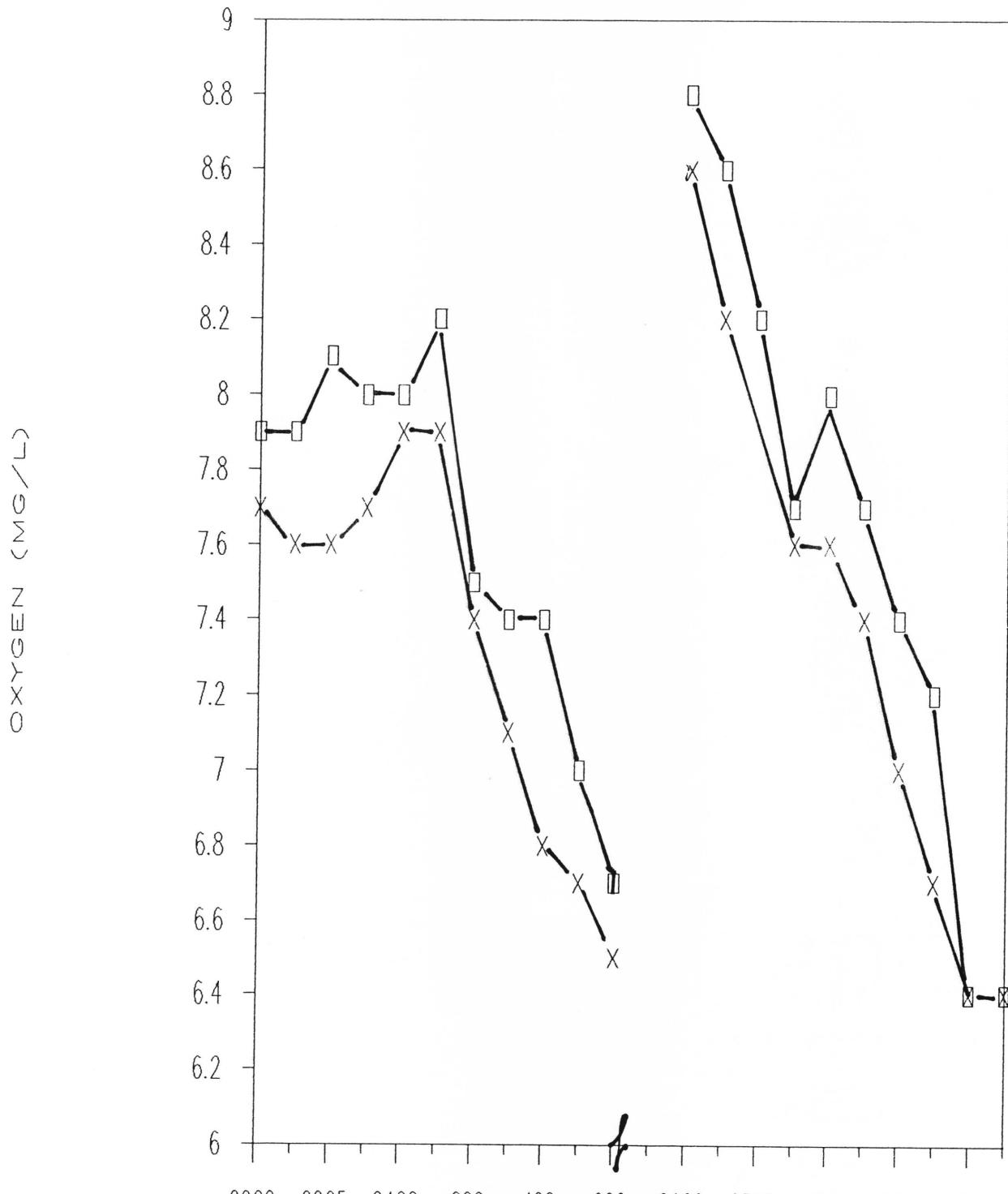
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Х BOTTOM VALUES

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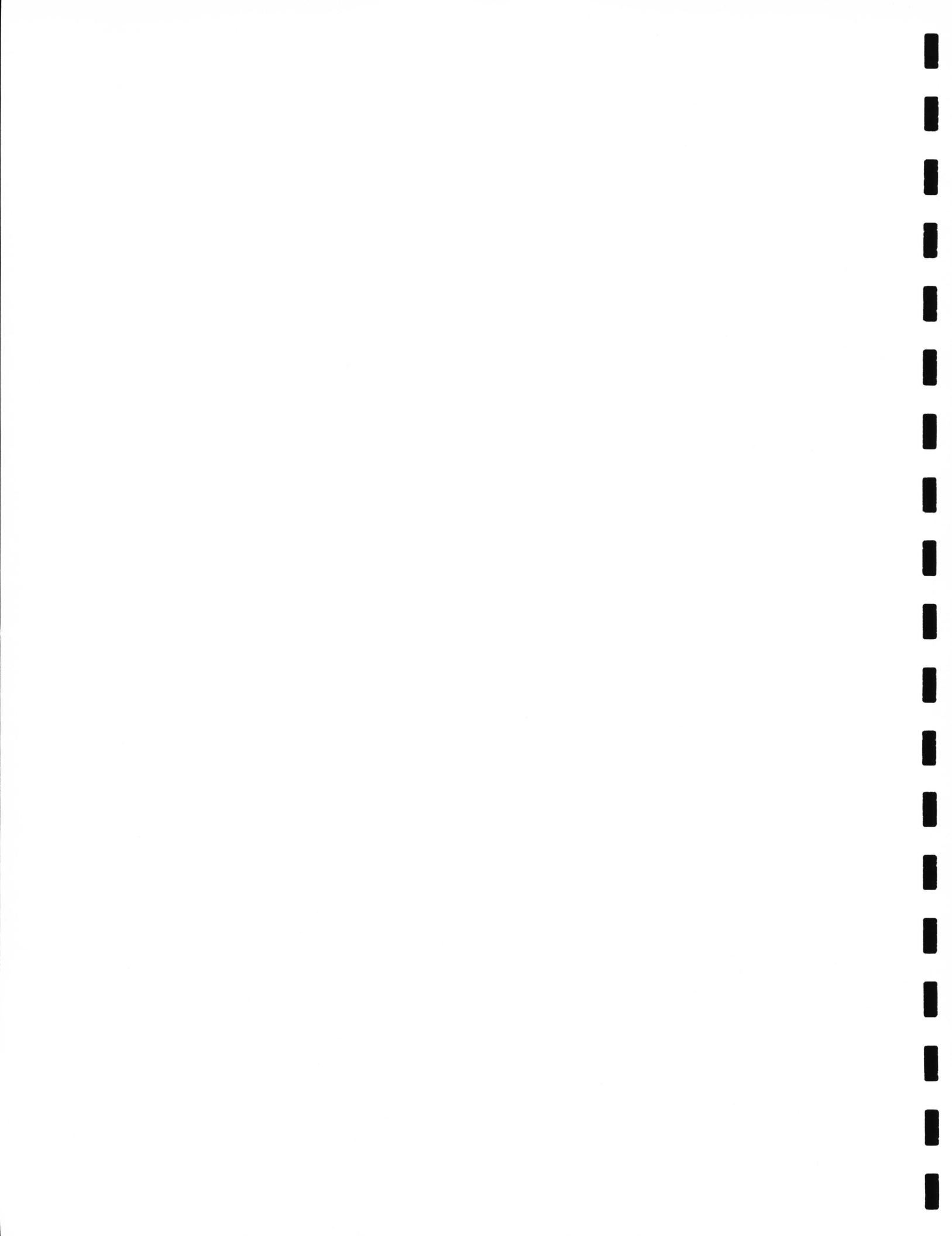
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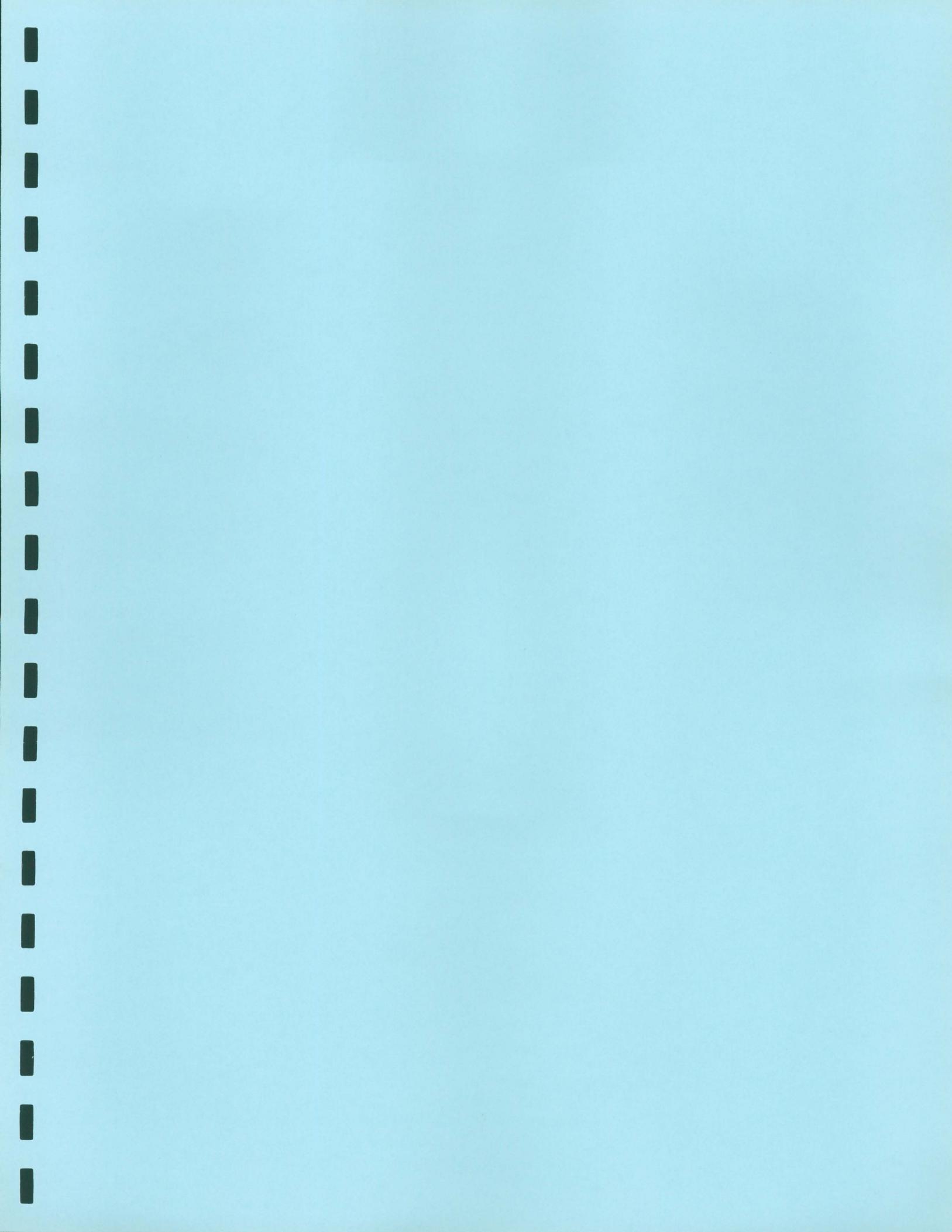


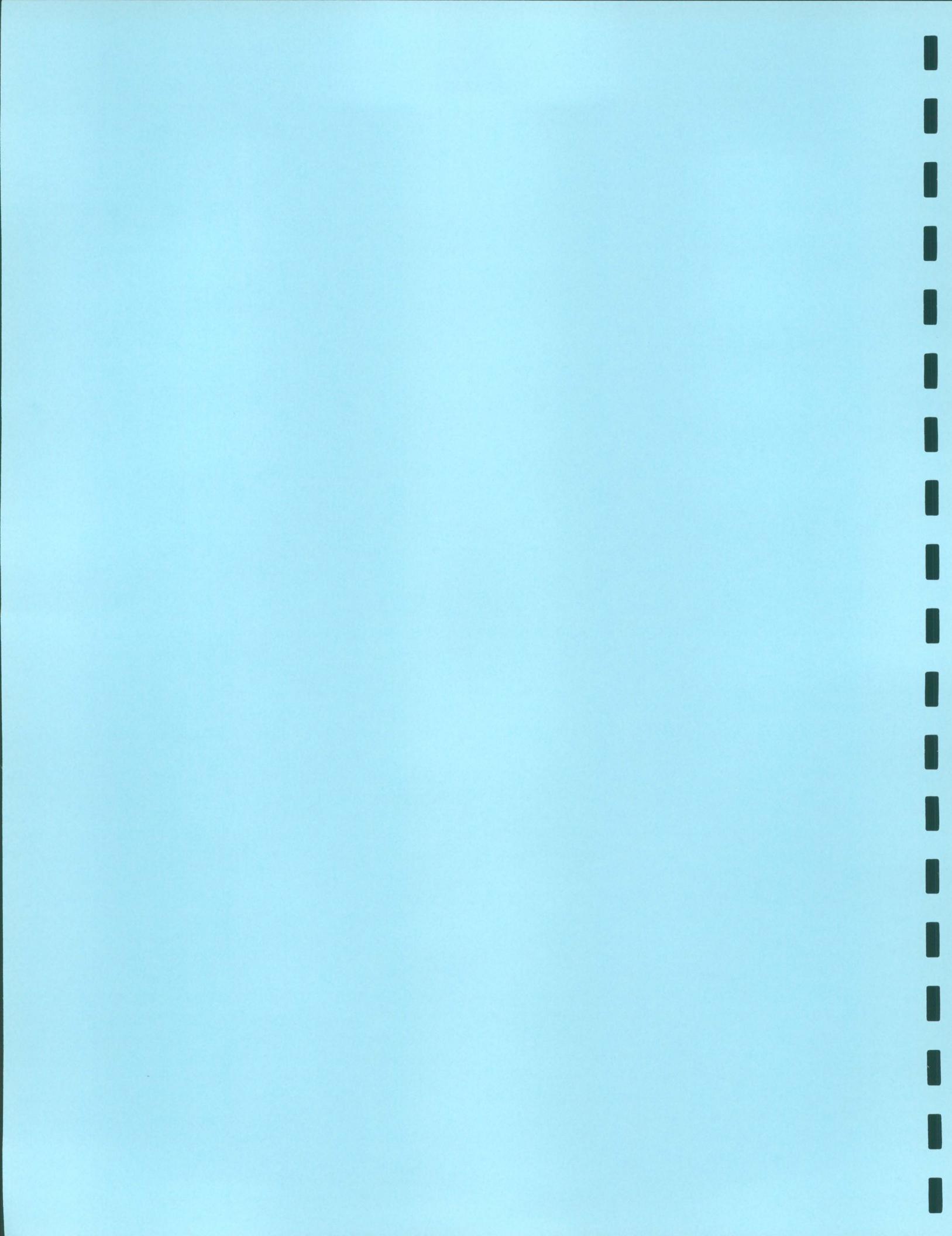
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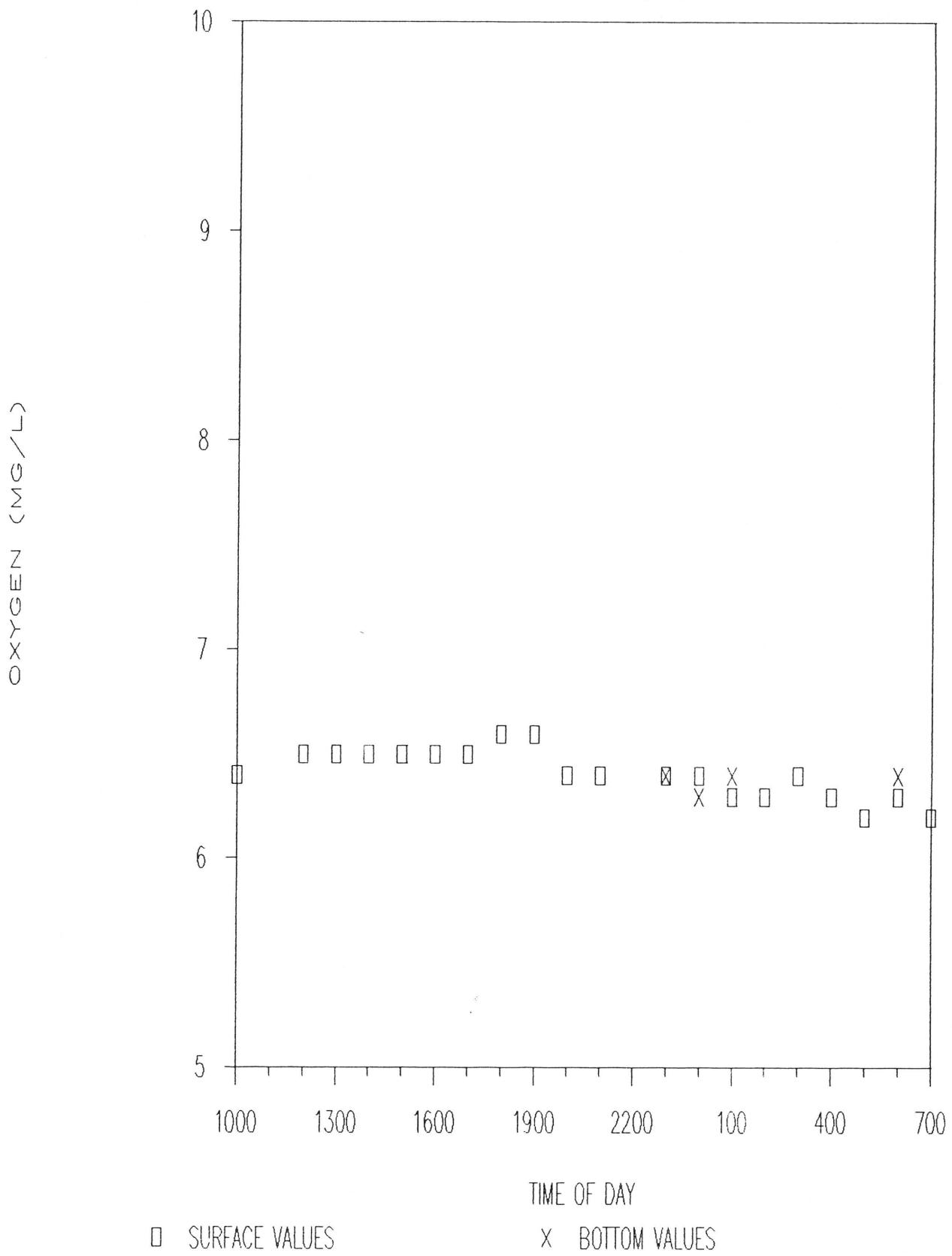






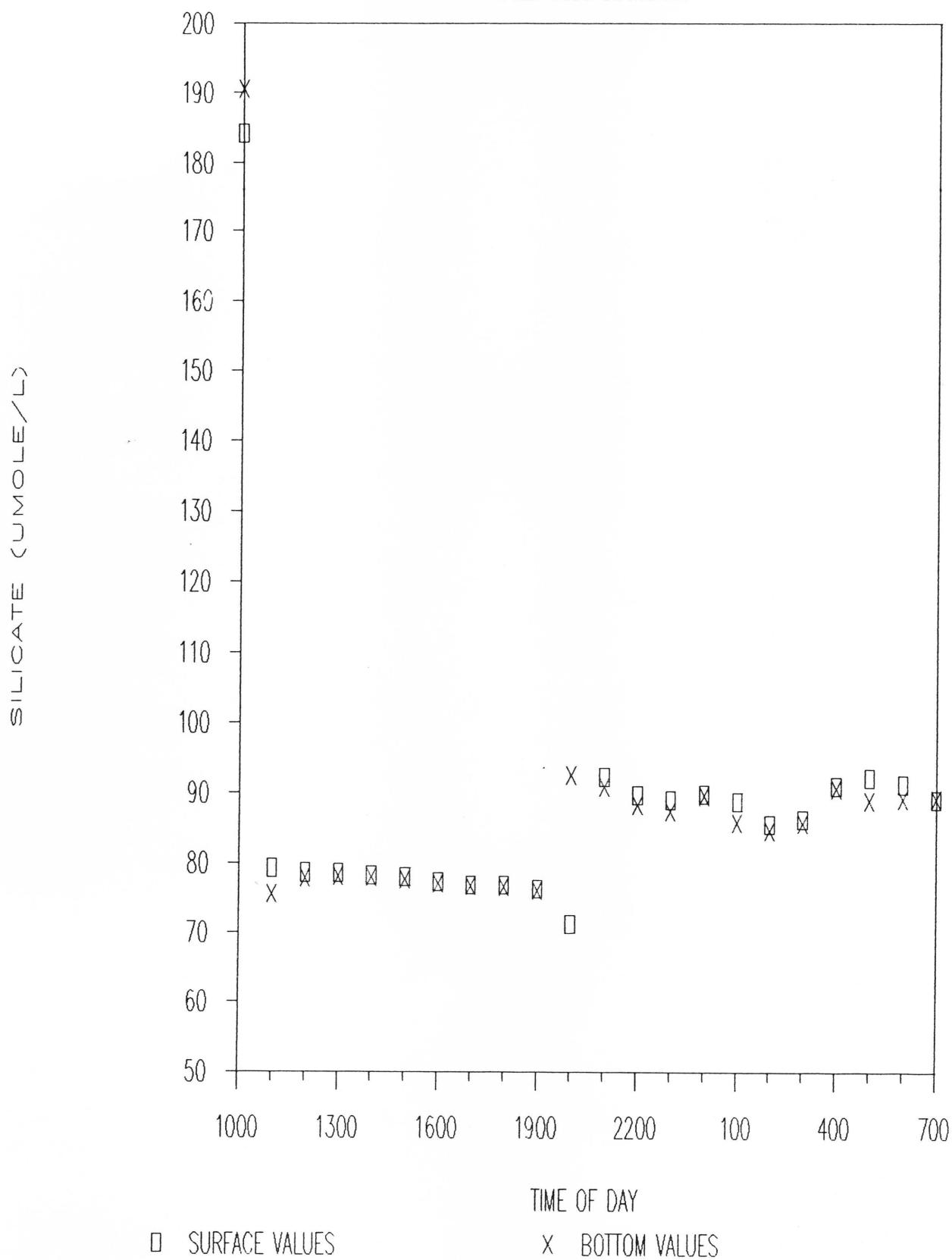
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JULY 1988 STATION A



CORPUS CHRISTI/NUECES BAYS

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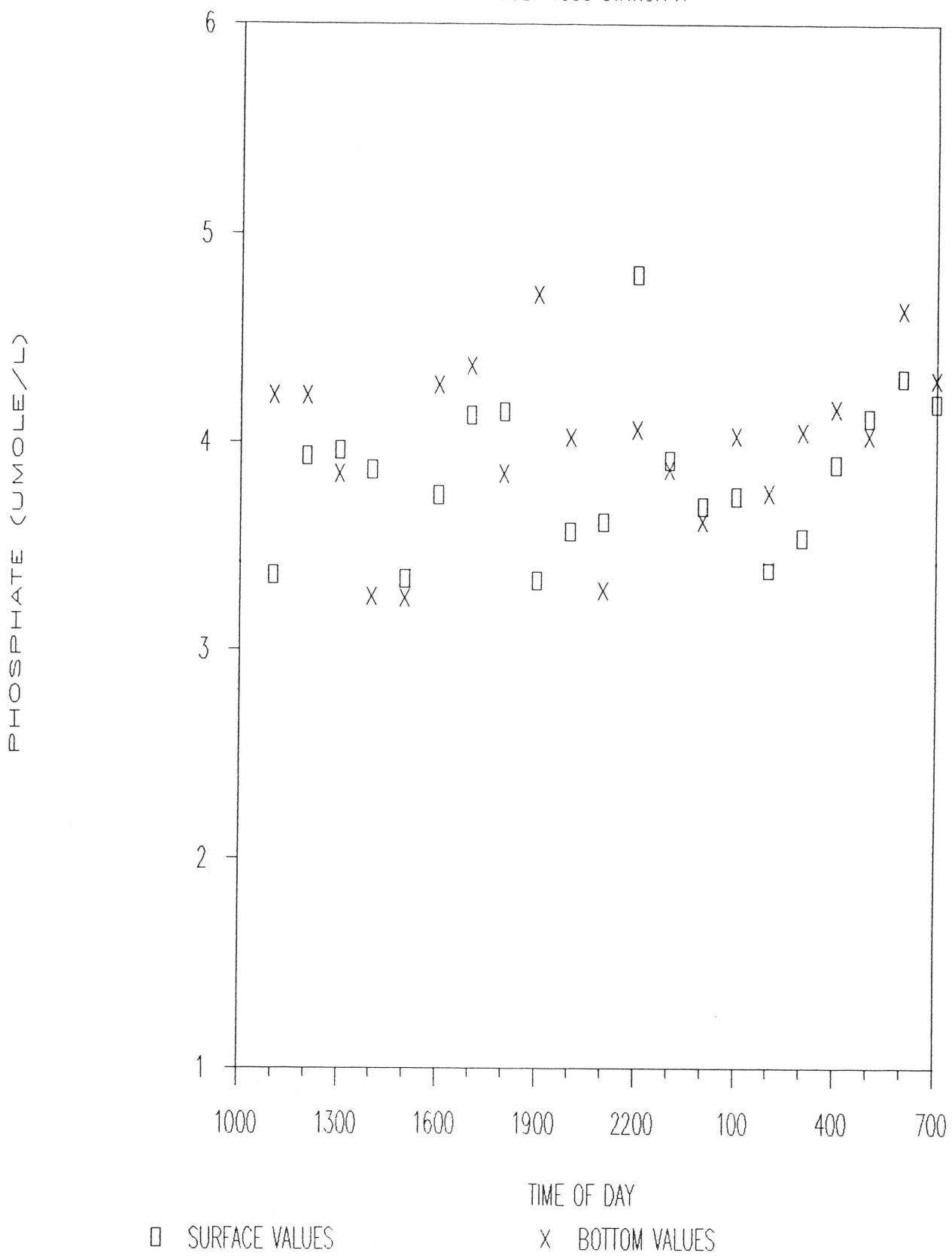
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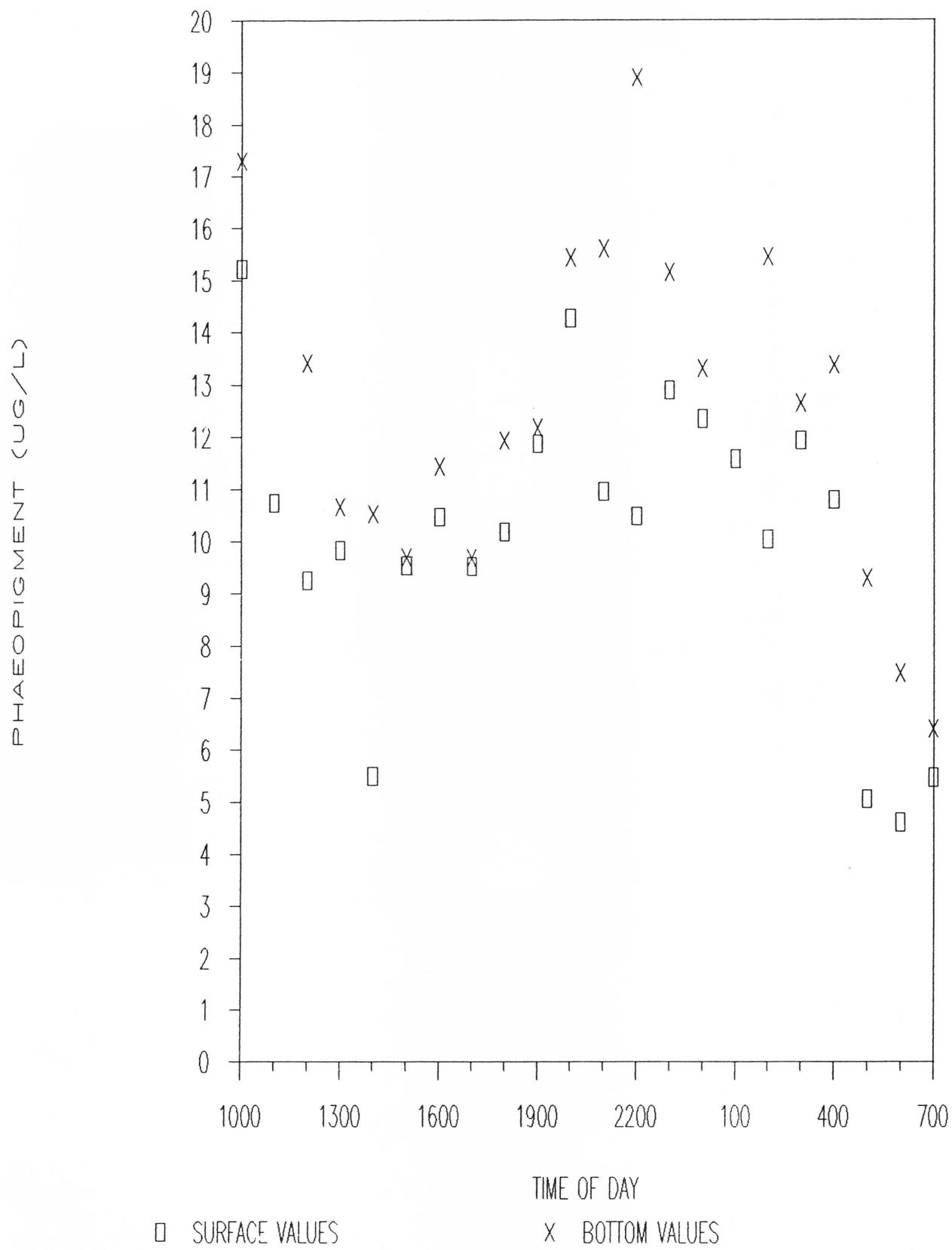
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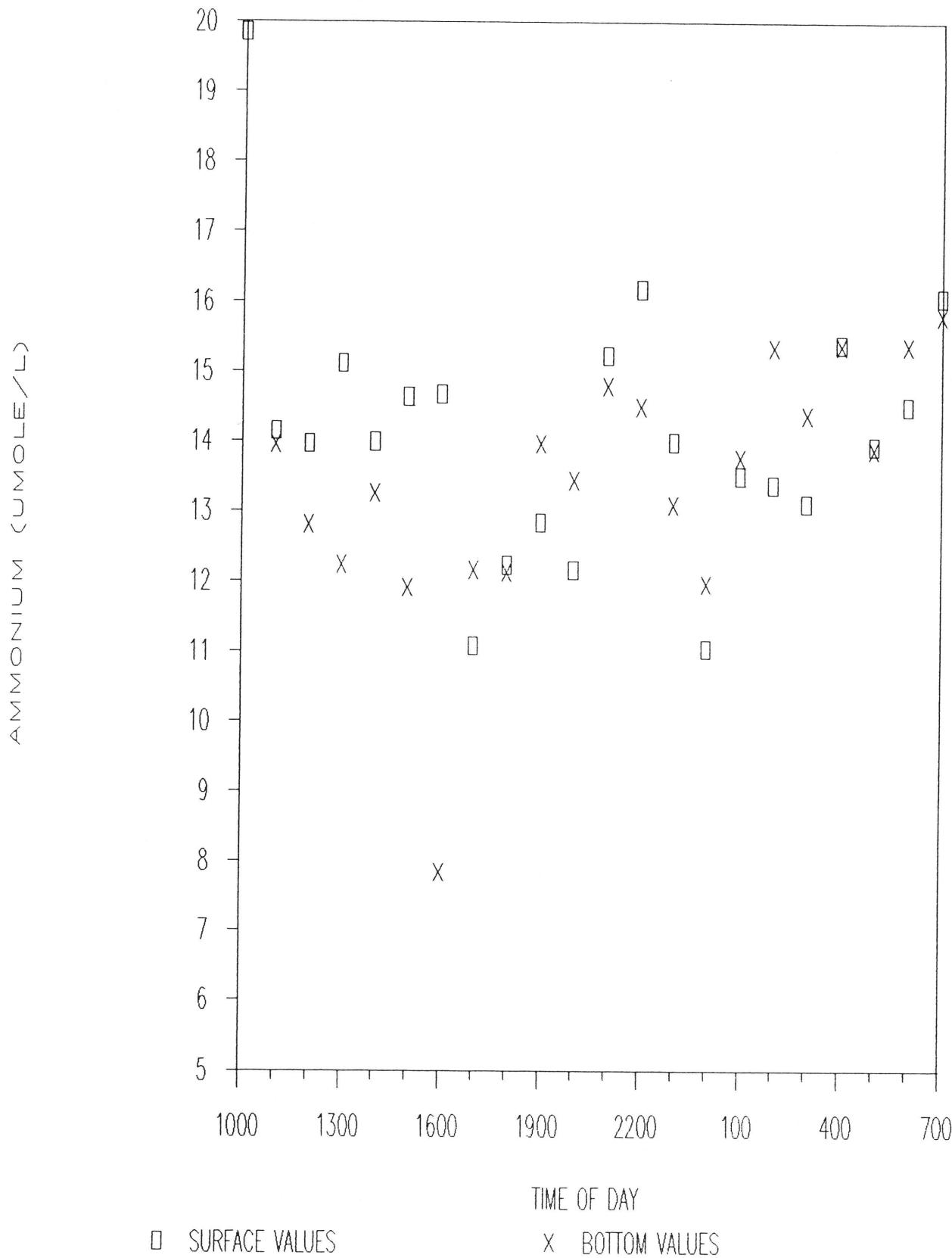
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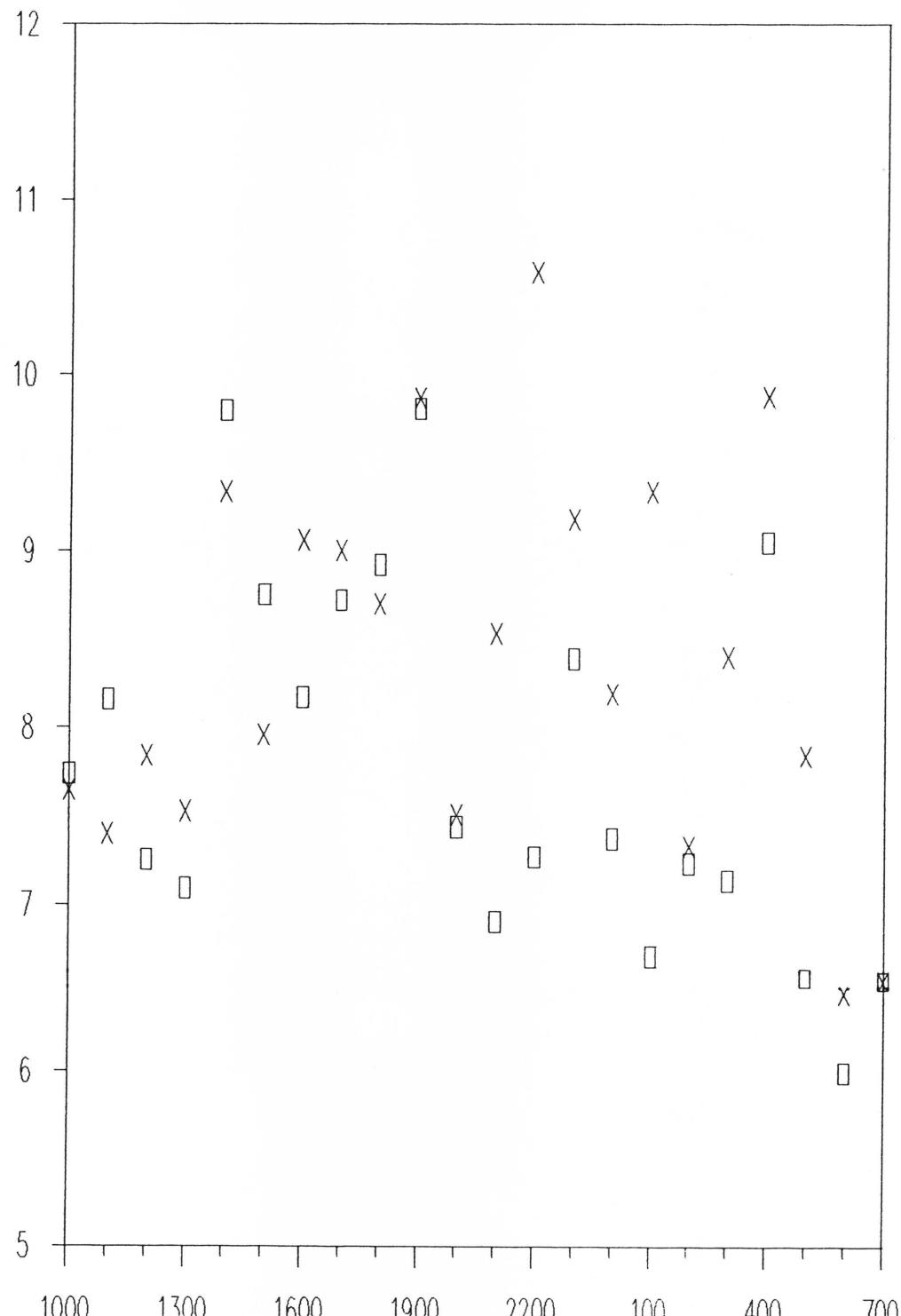
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CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION A

TIME OF DAY



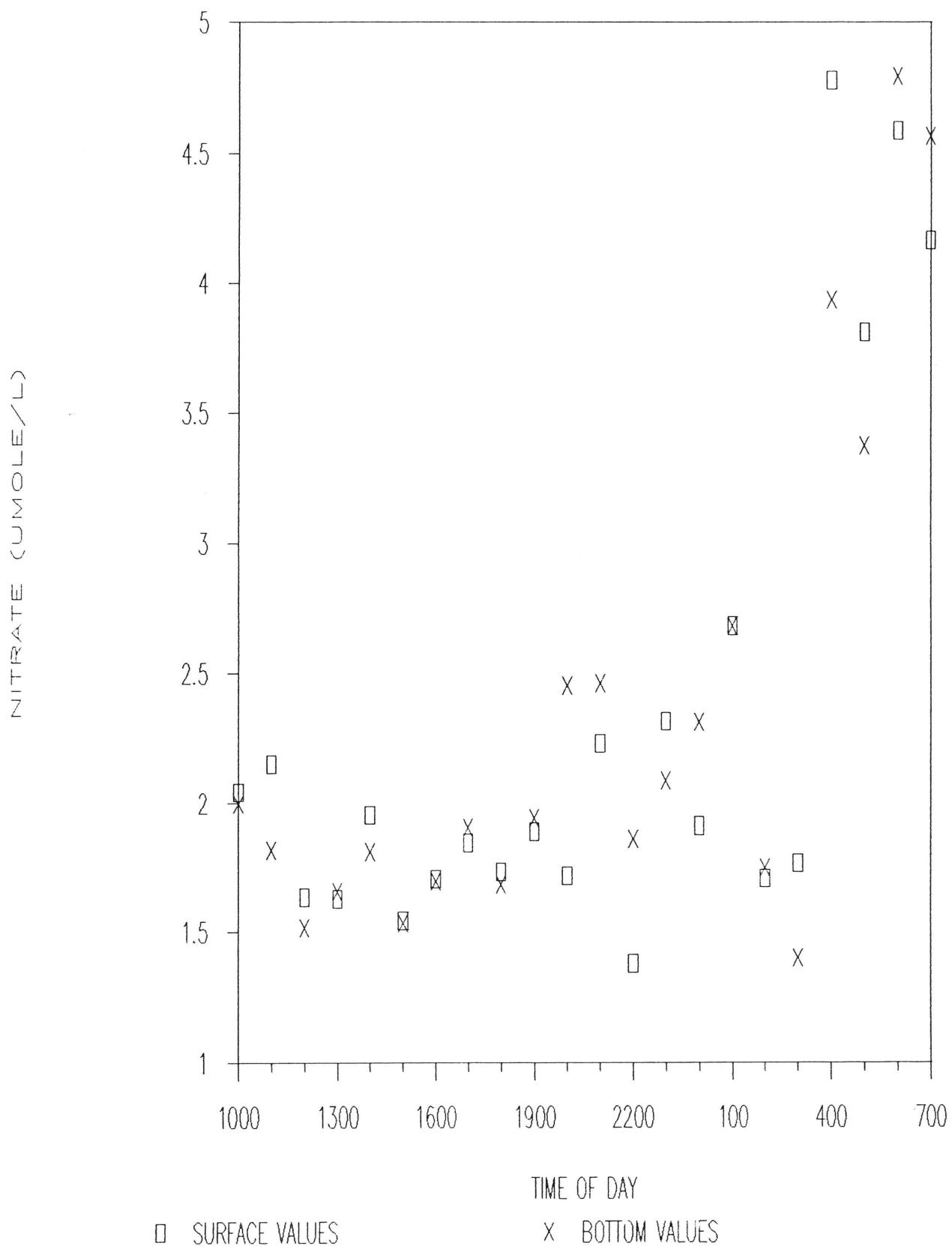
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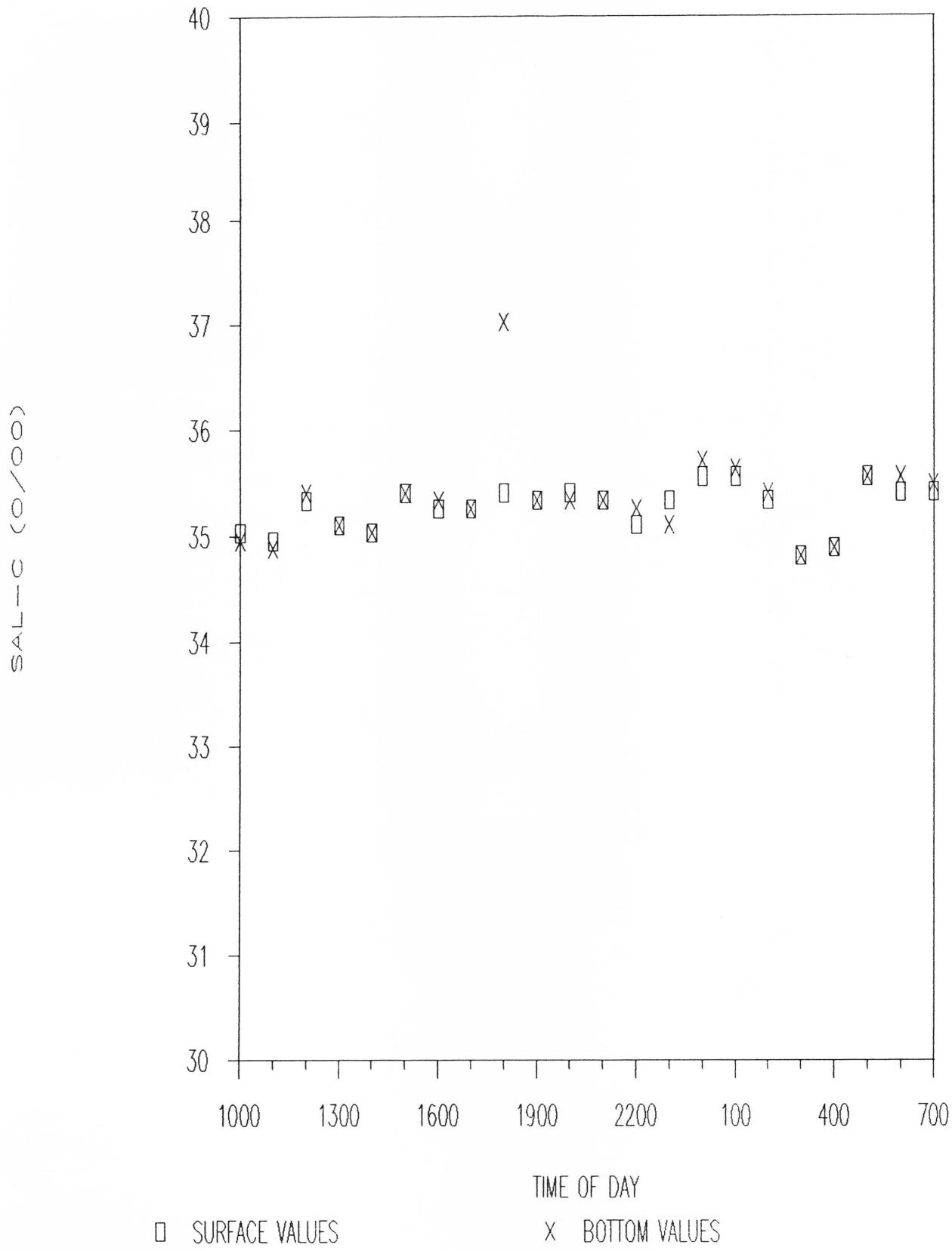
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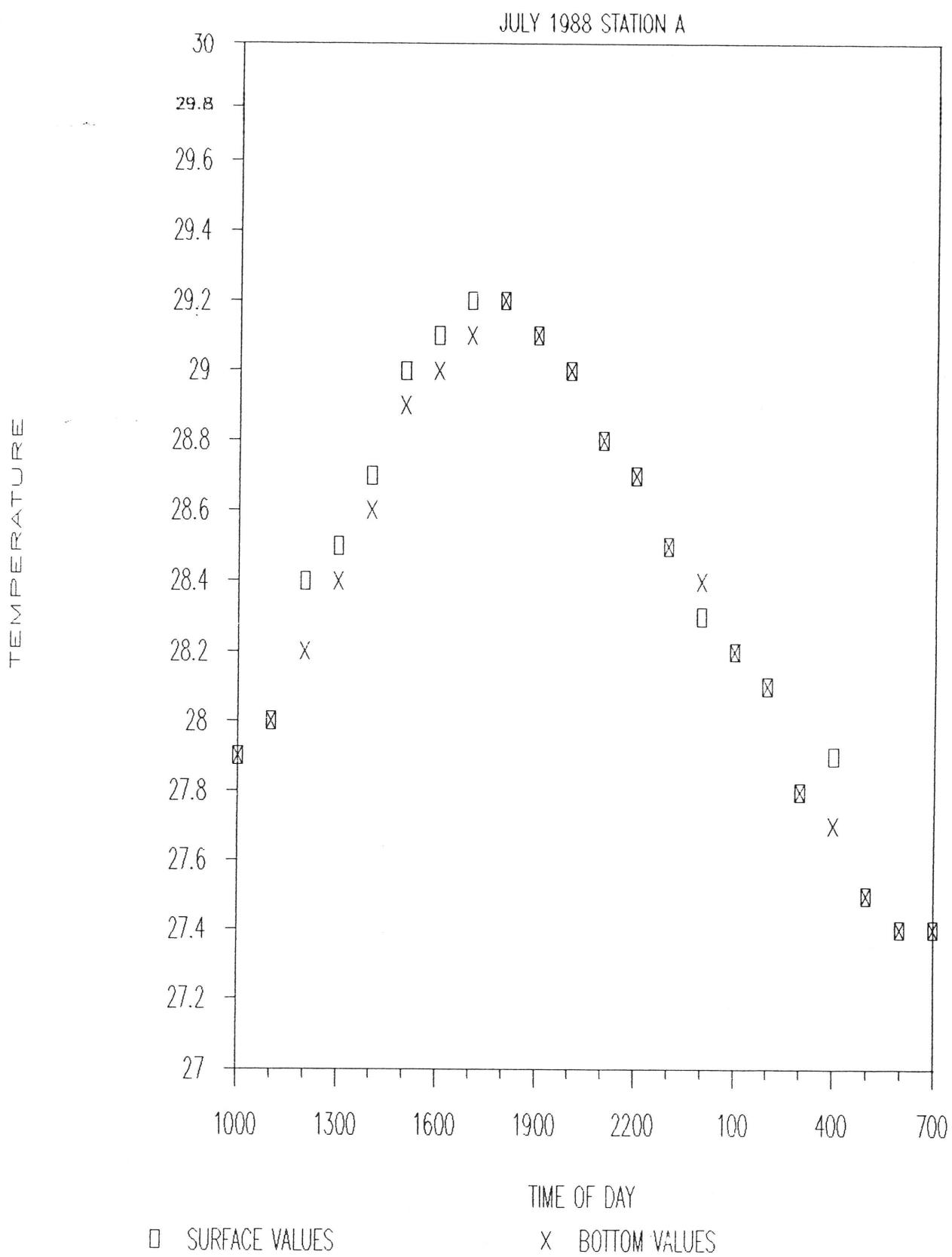


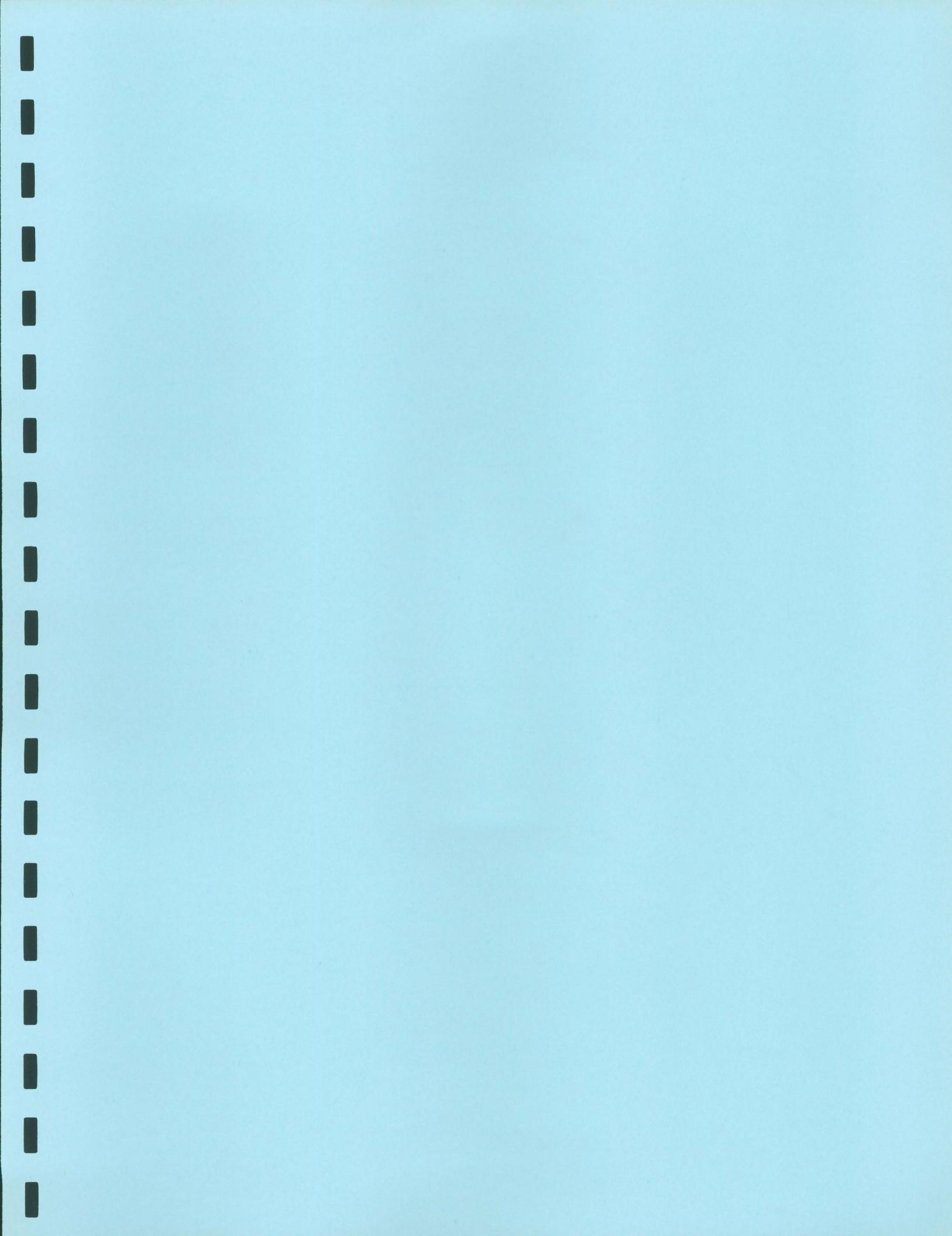
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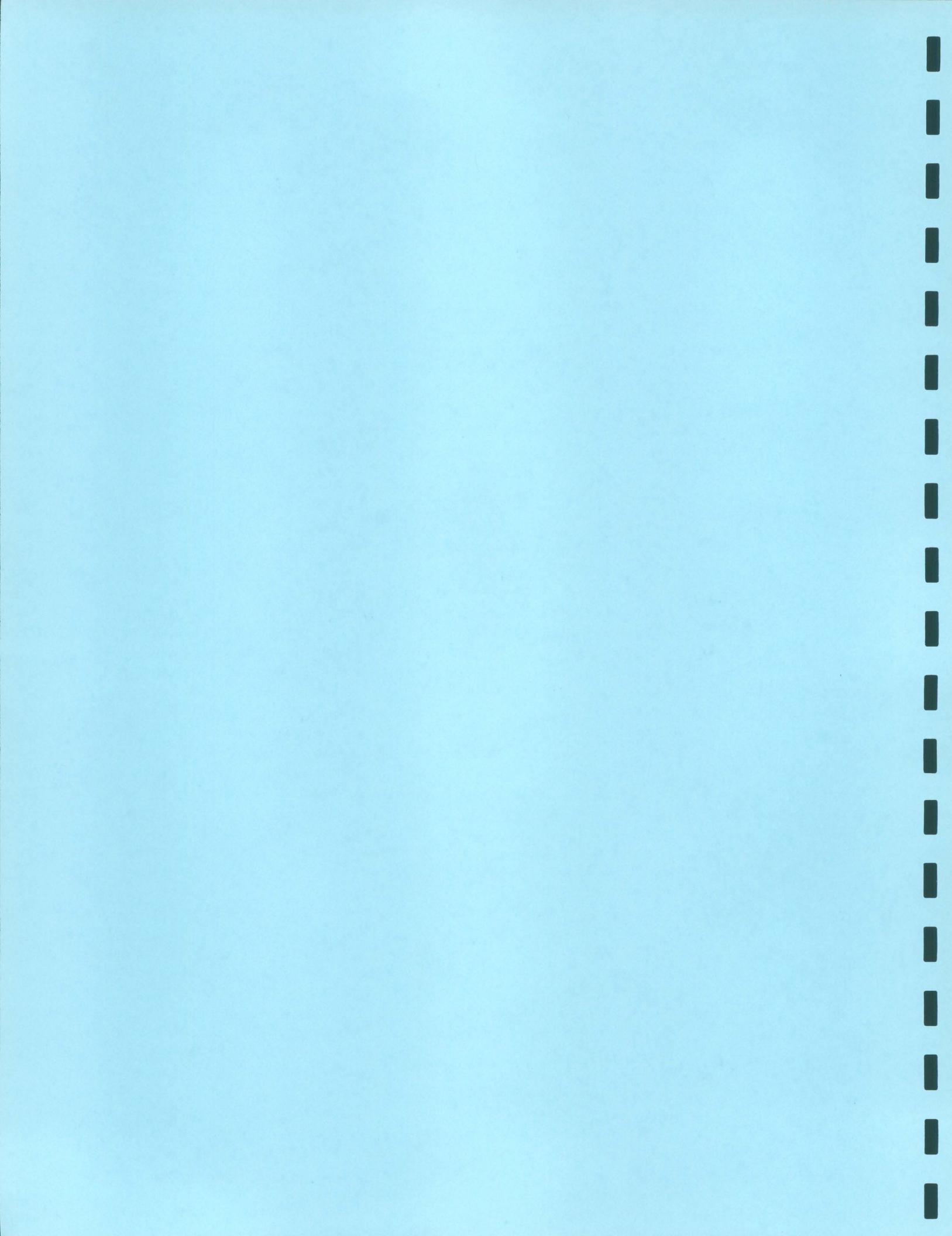
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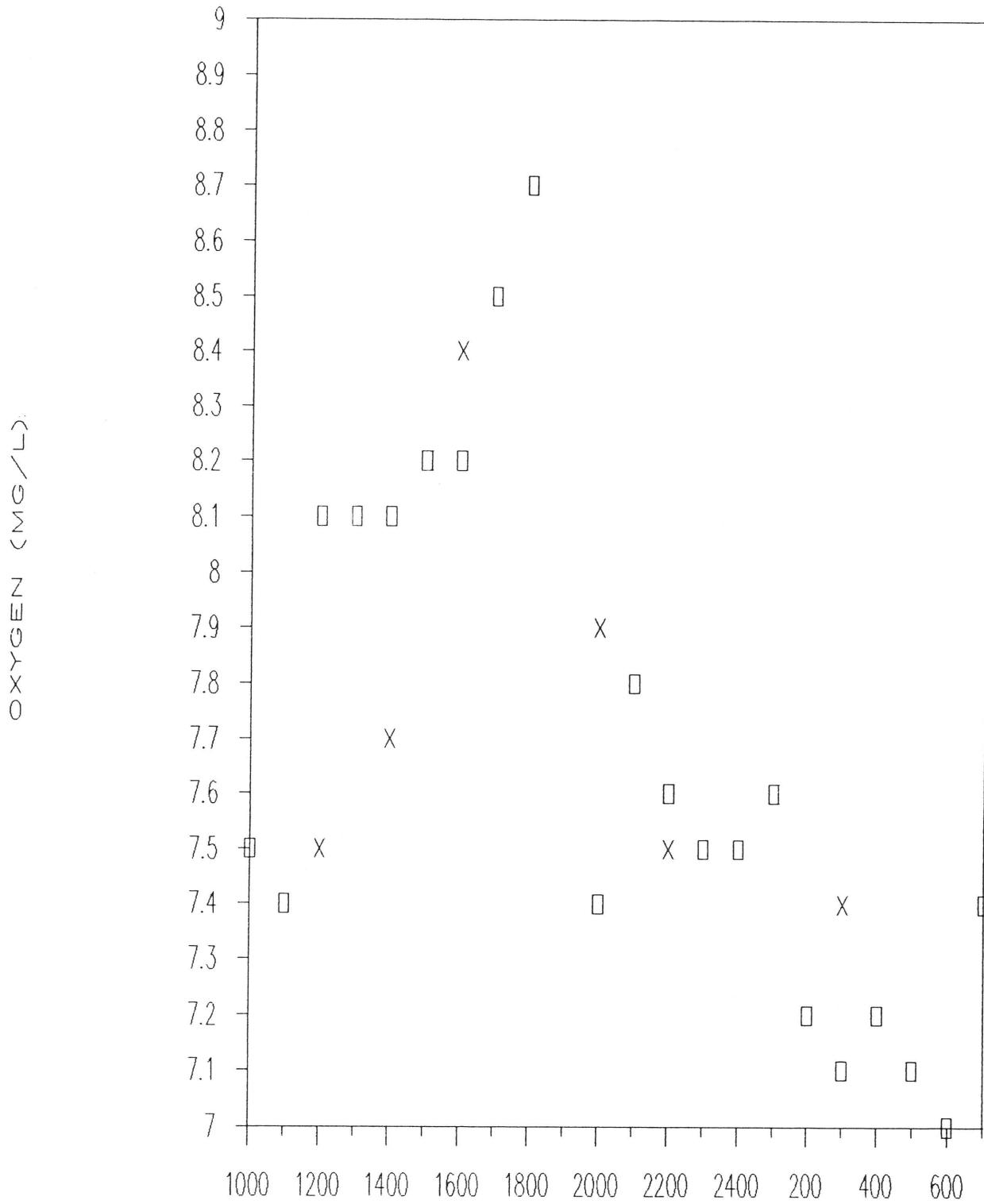






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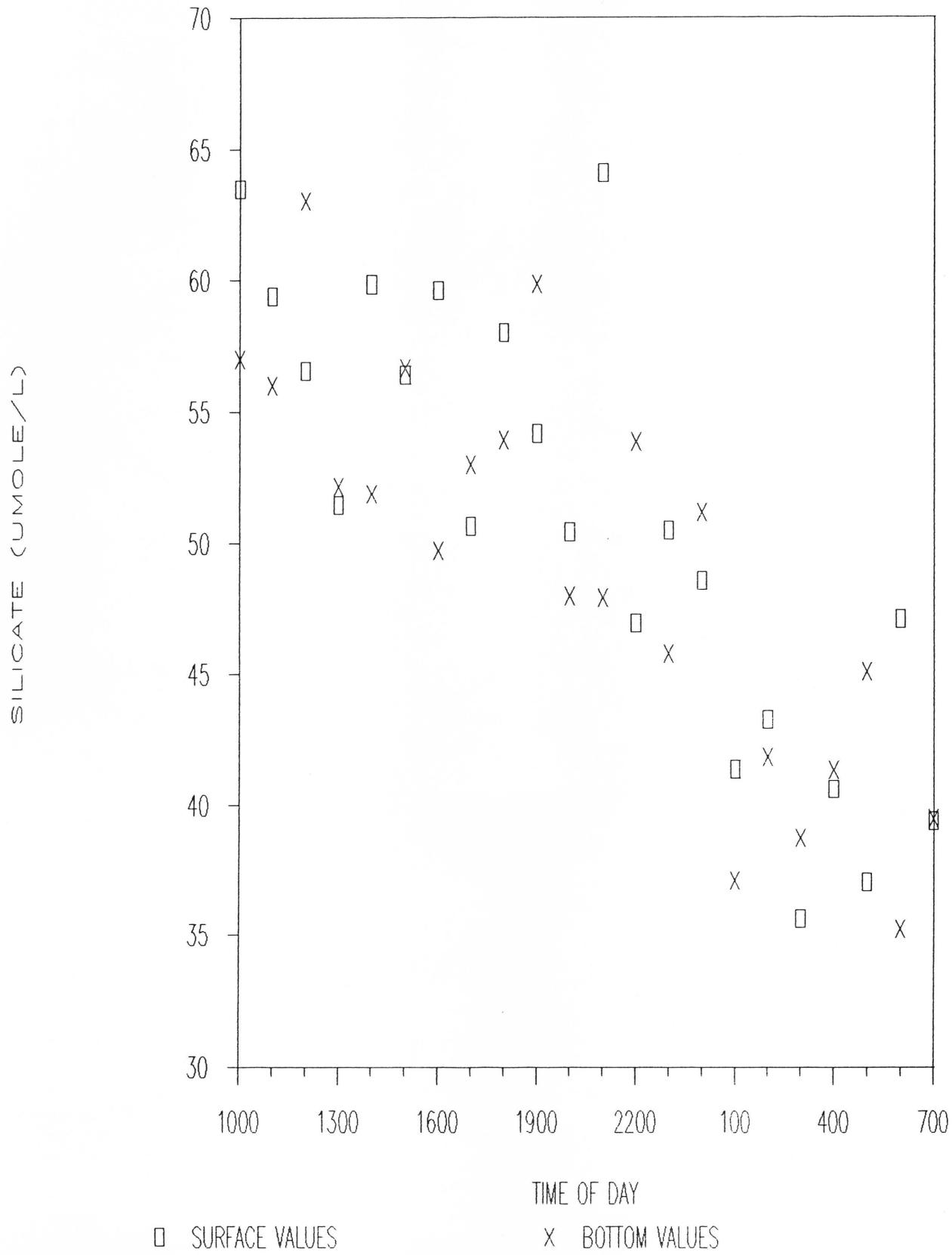
TIME OF DAY

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X BOTTOM VALUES

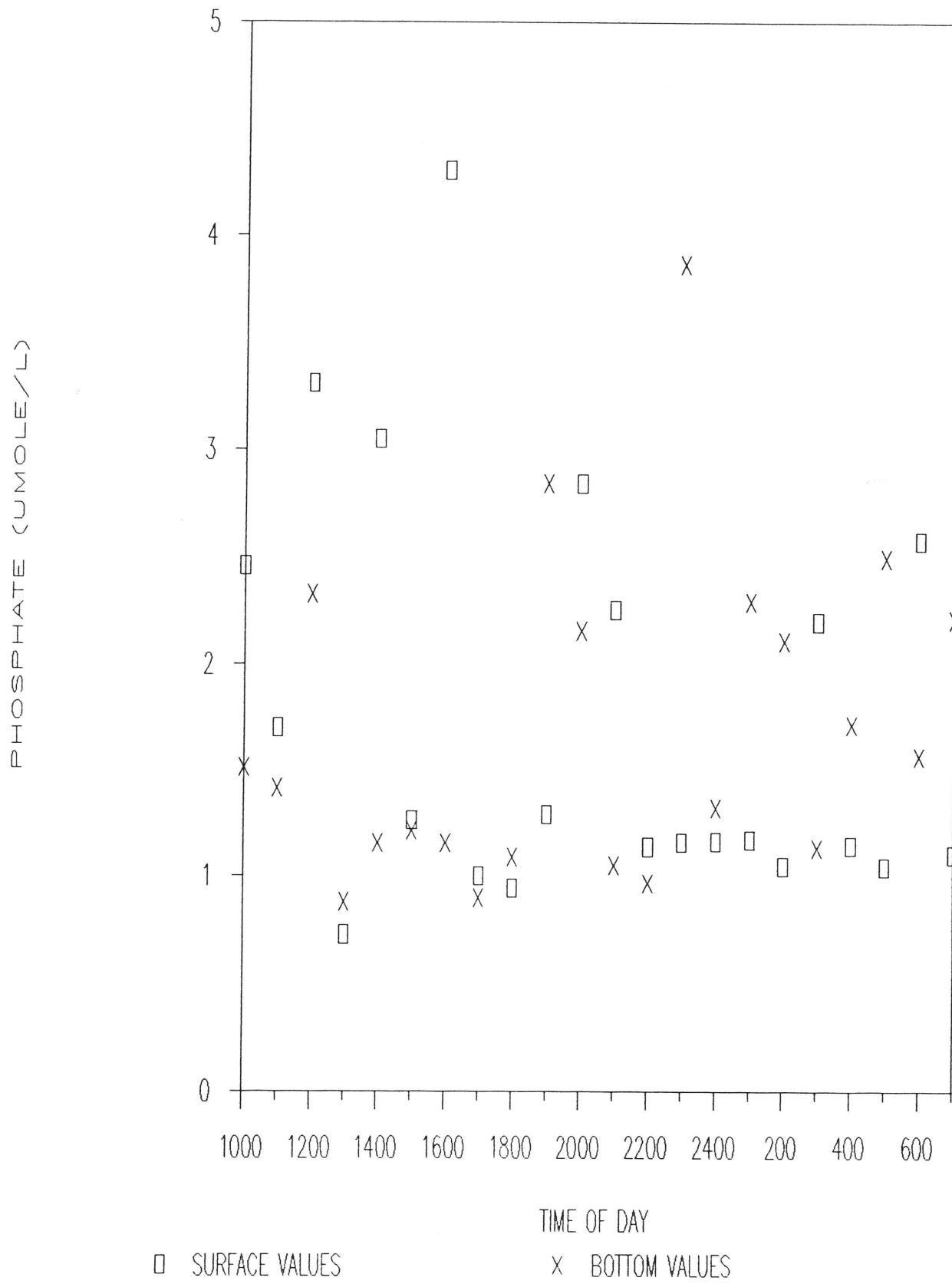
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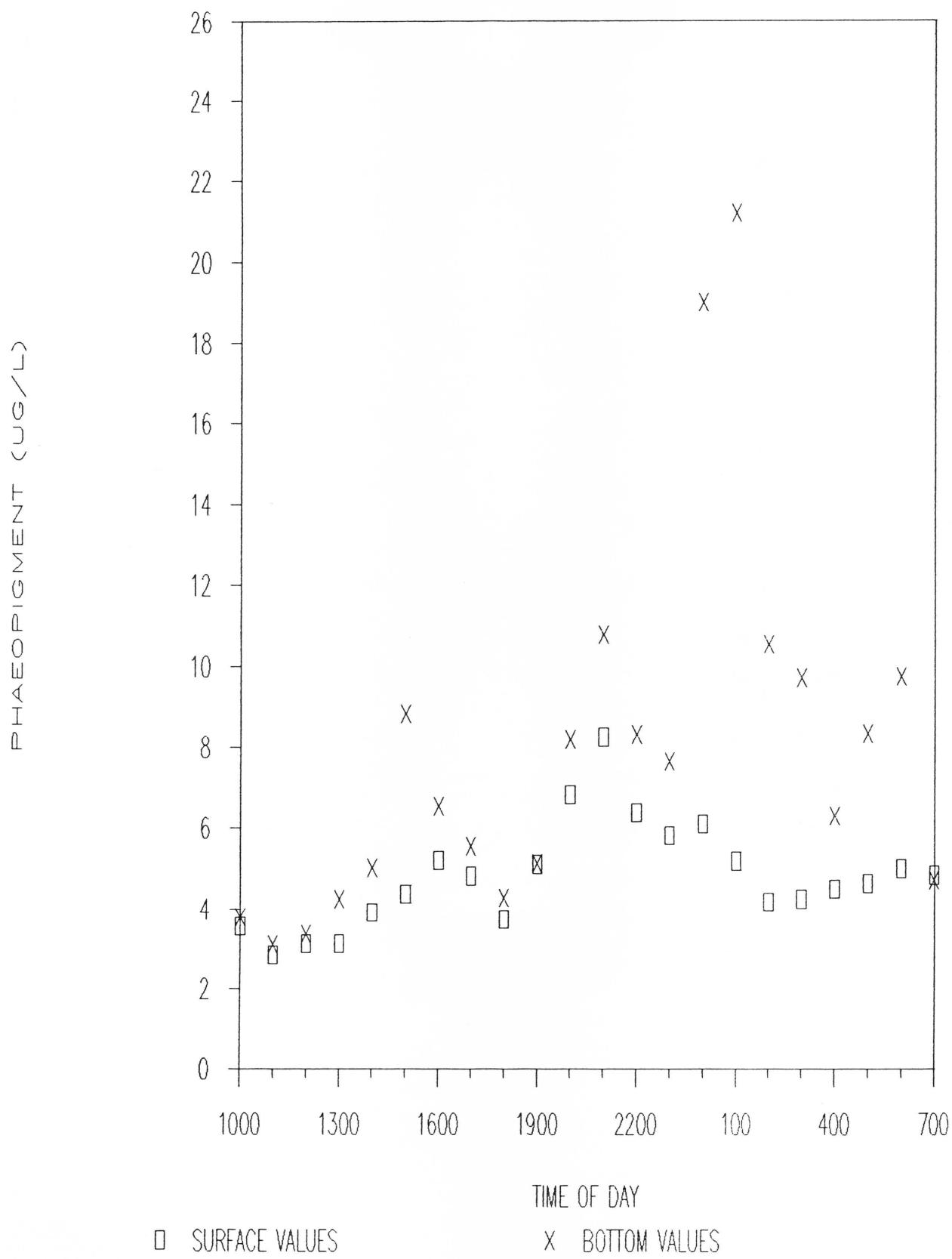
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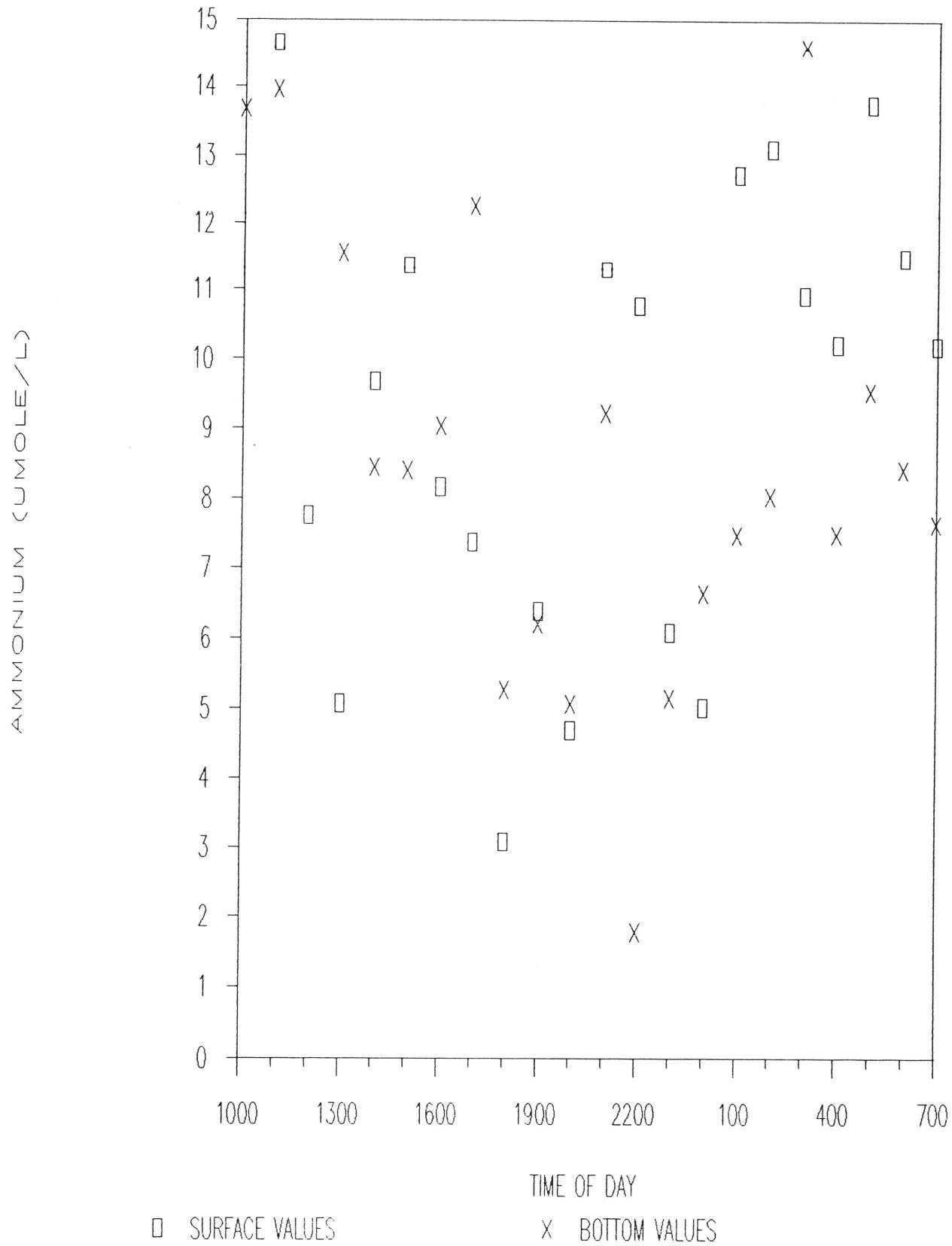
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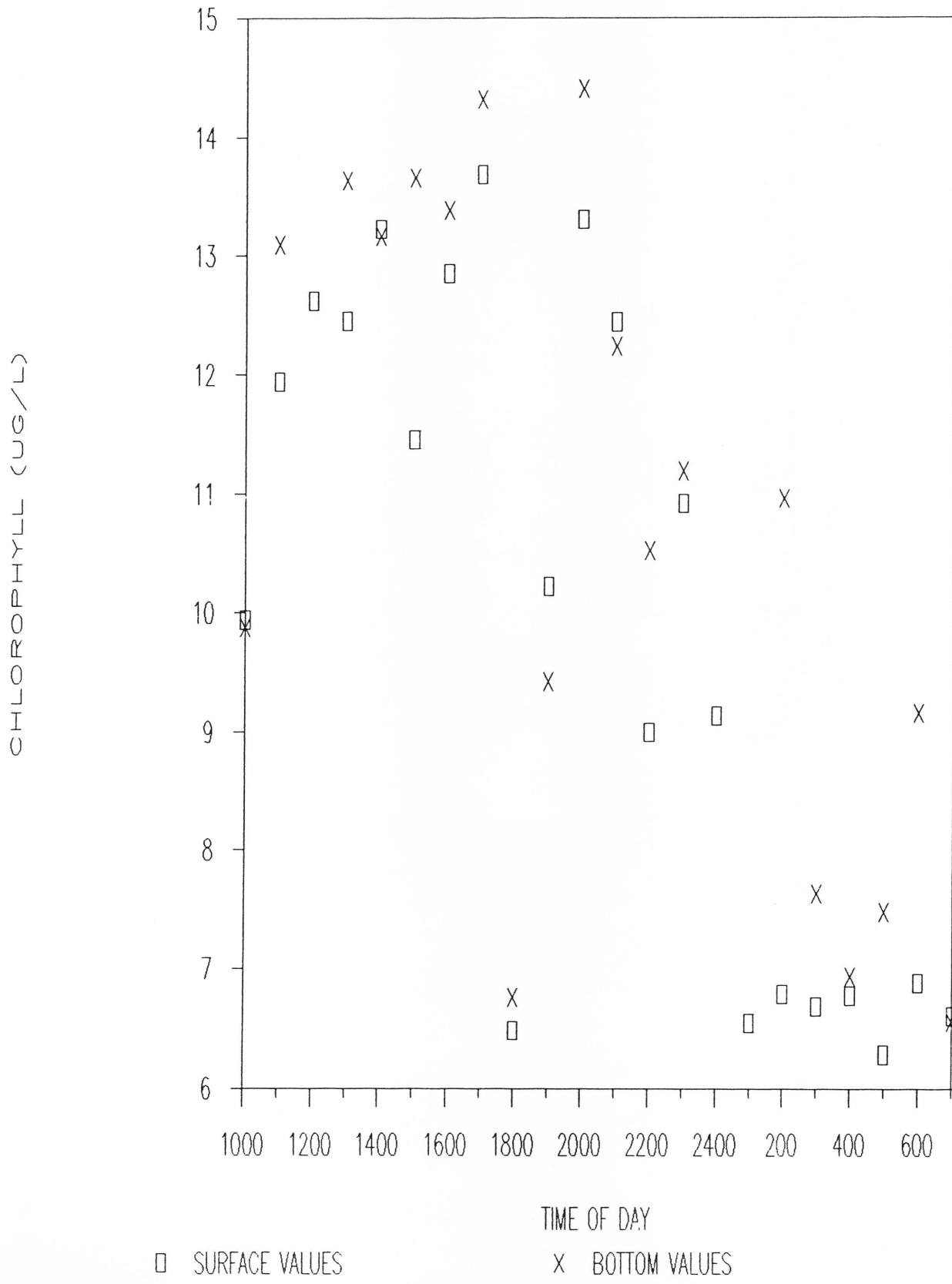
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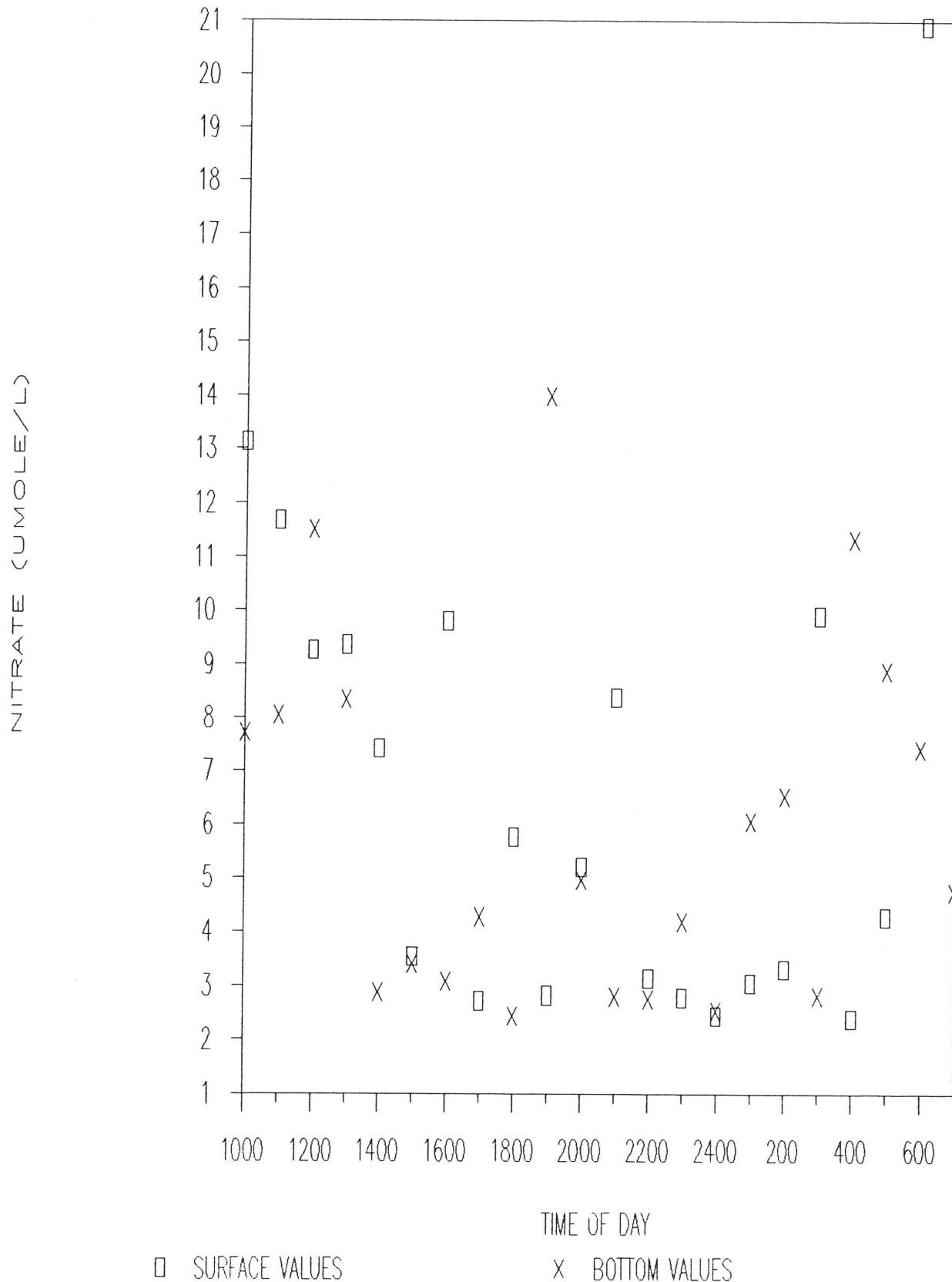
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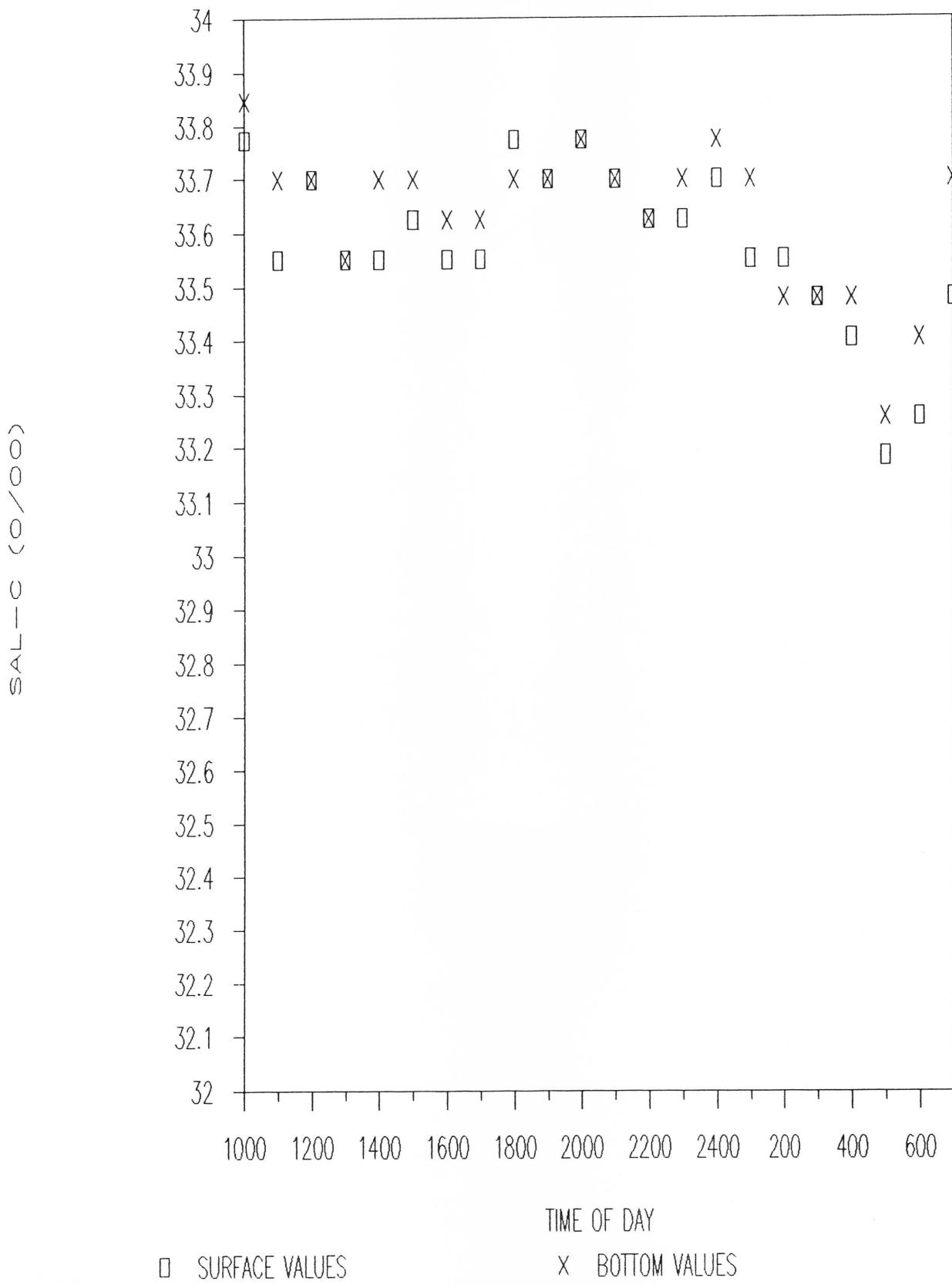
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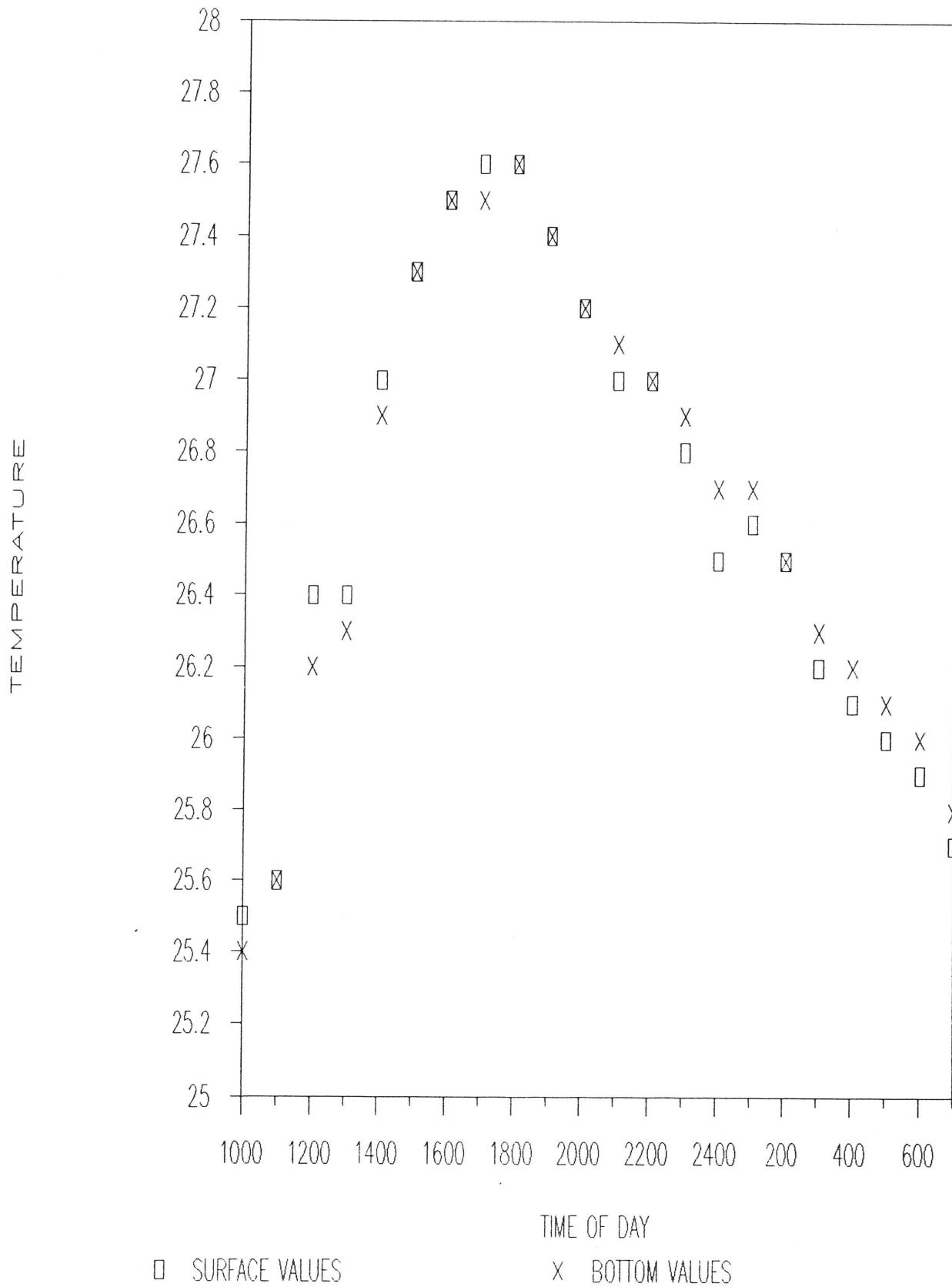
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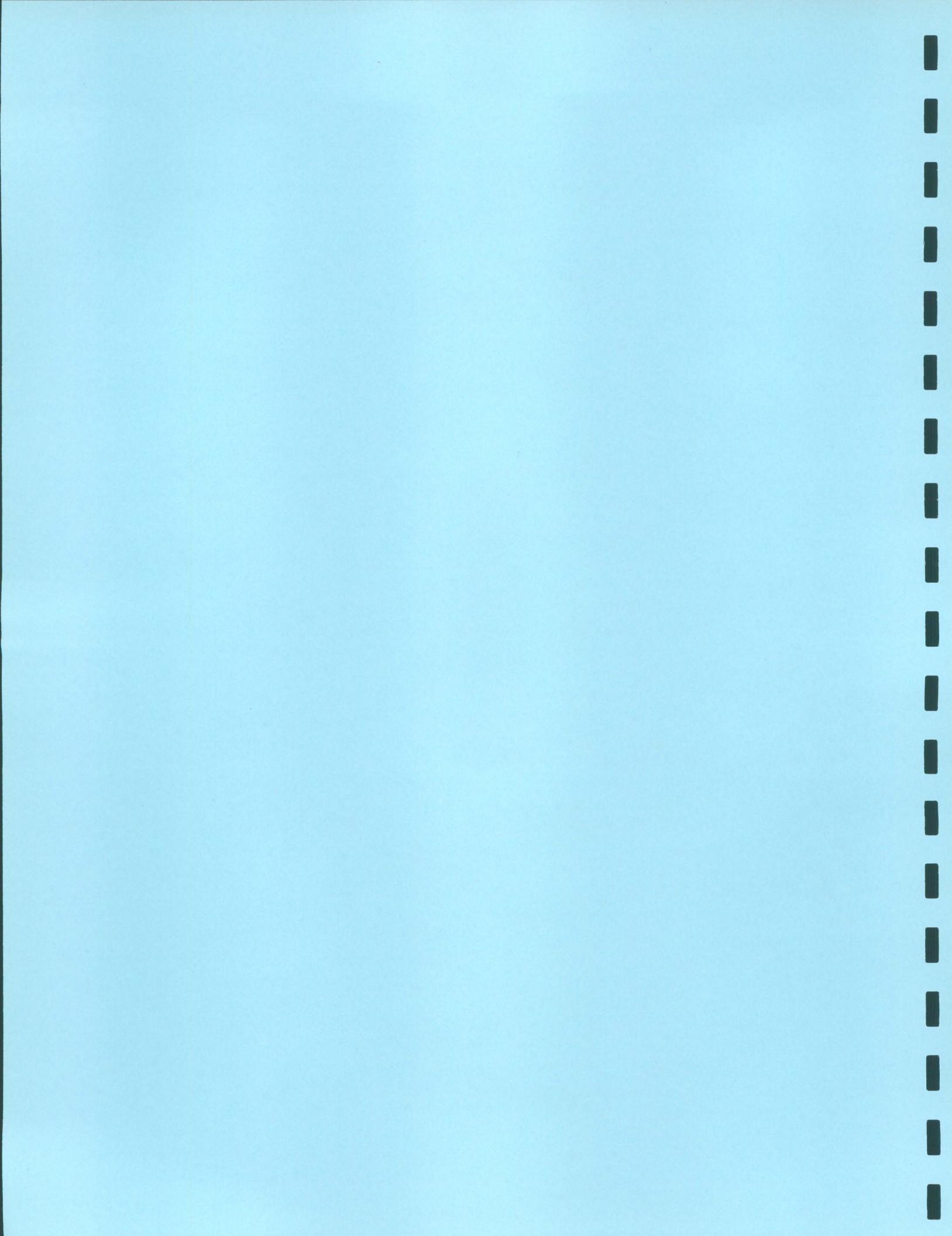
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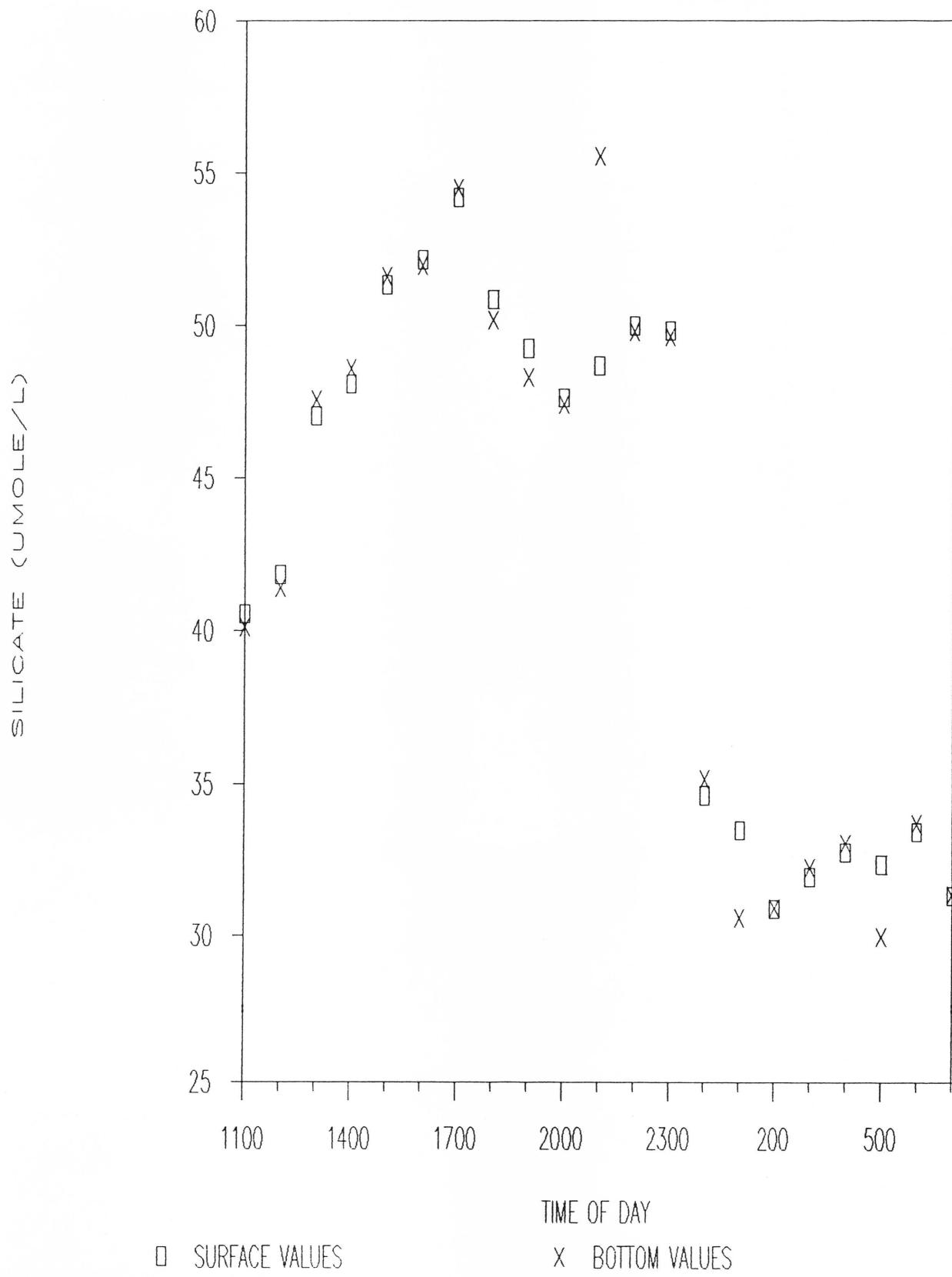
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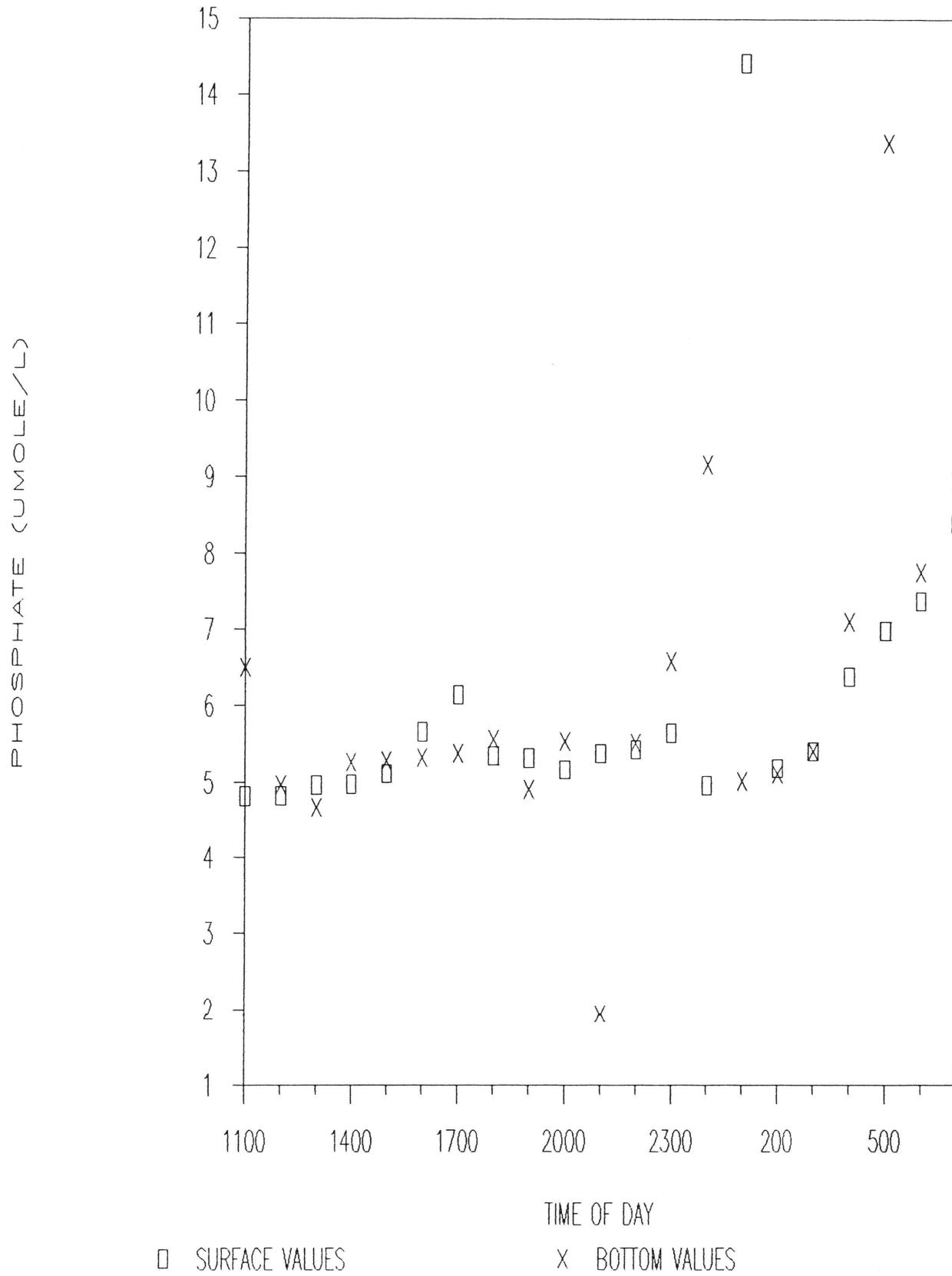
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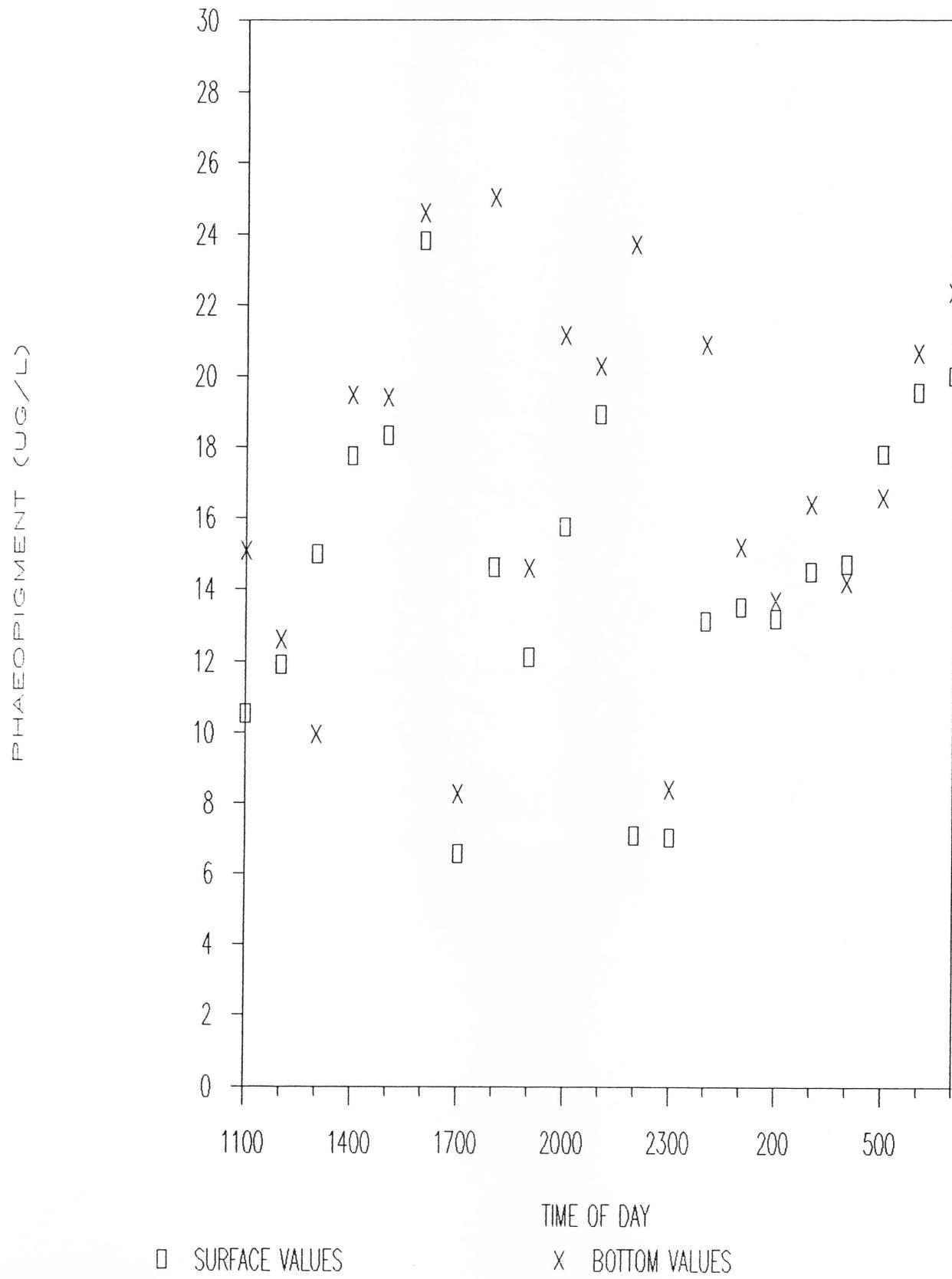
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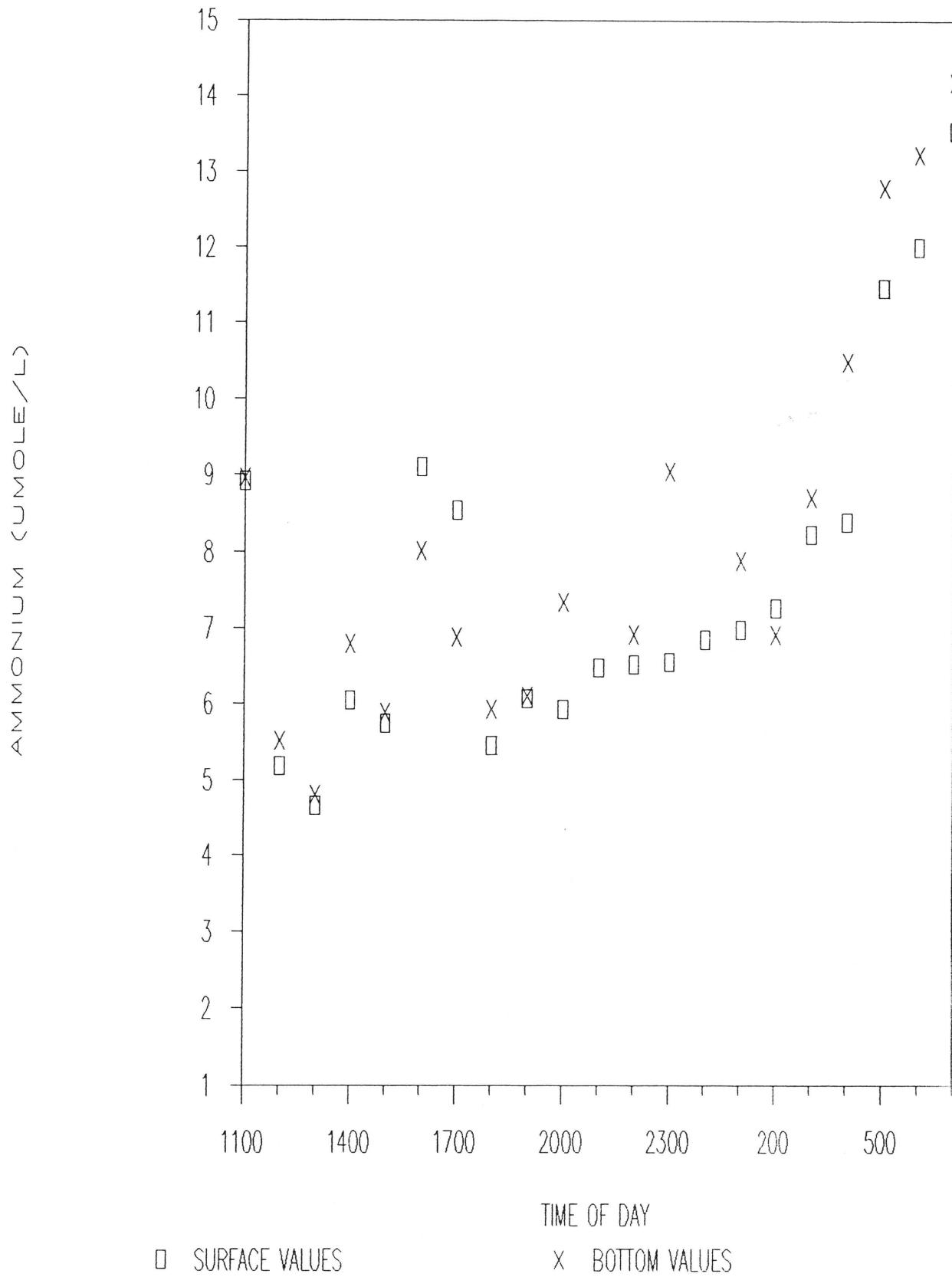
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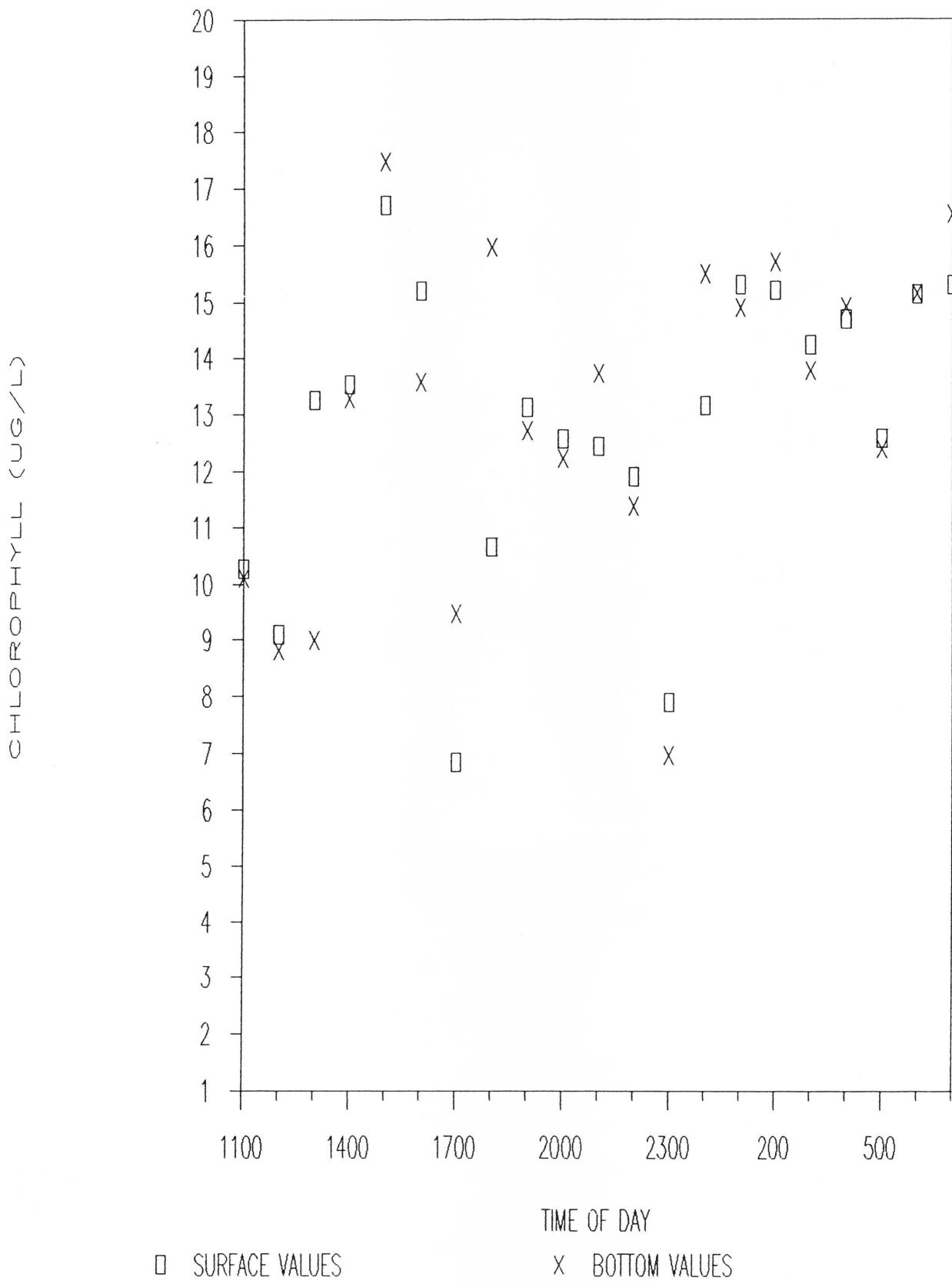
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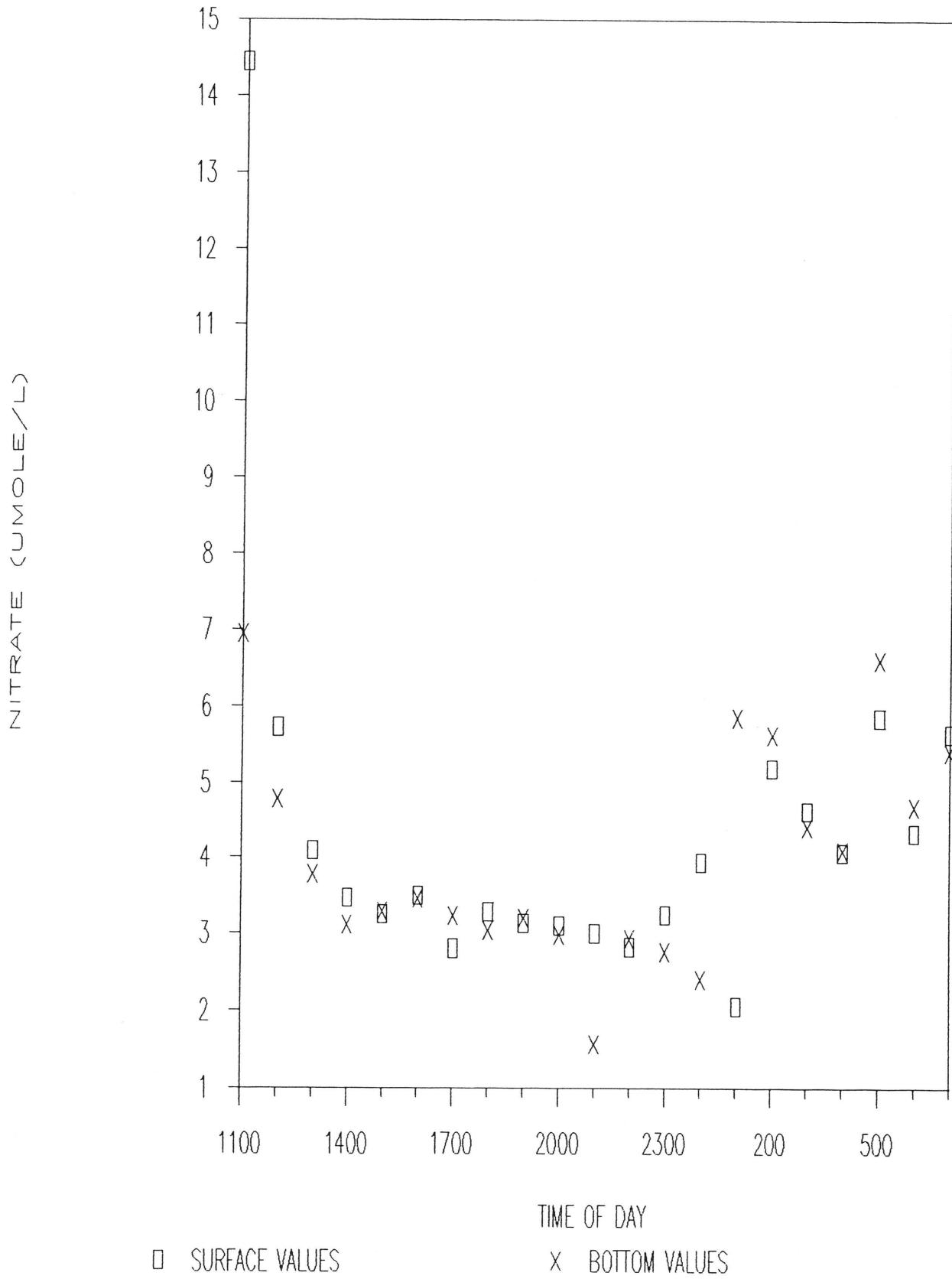
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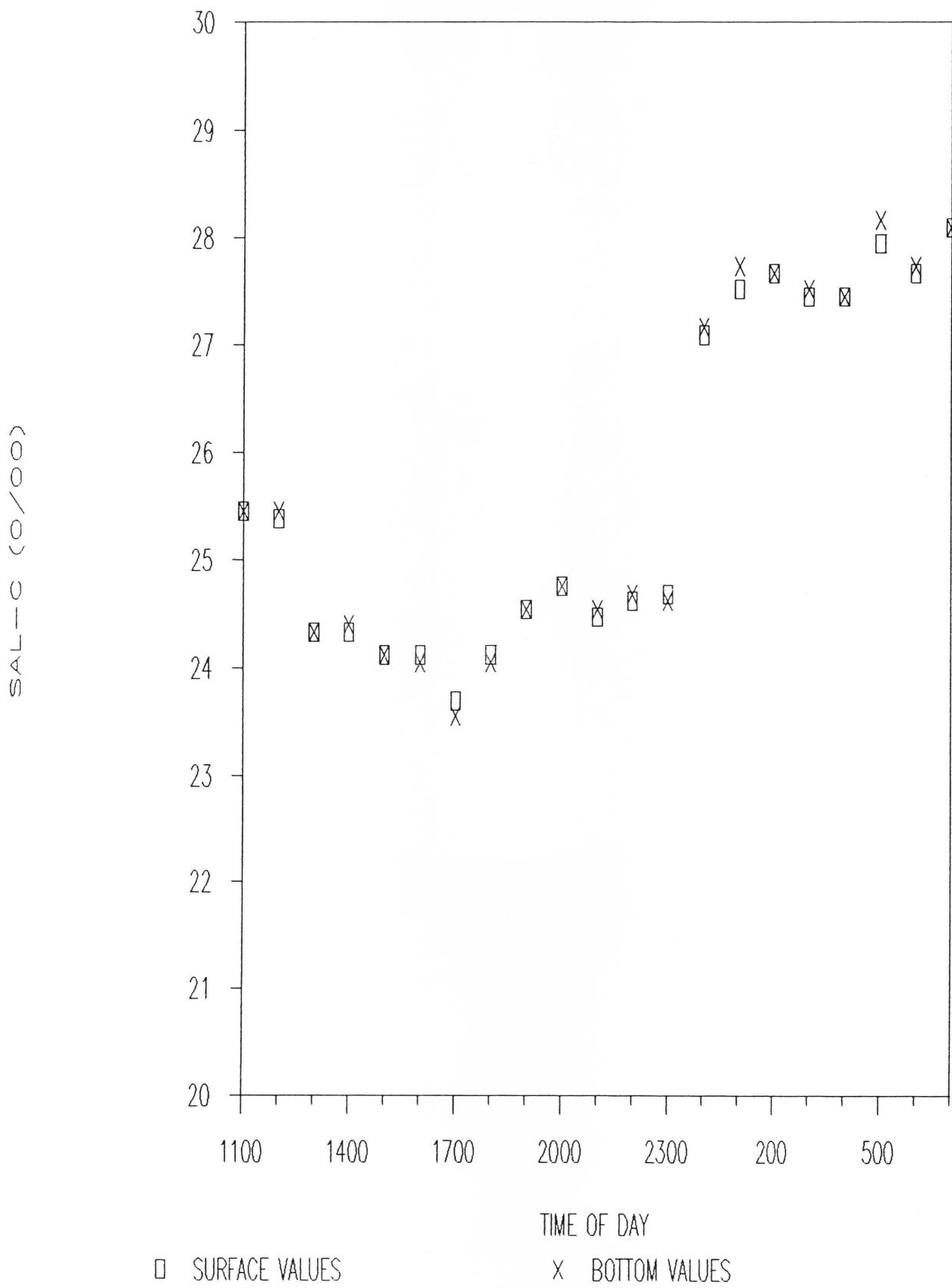
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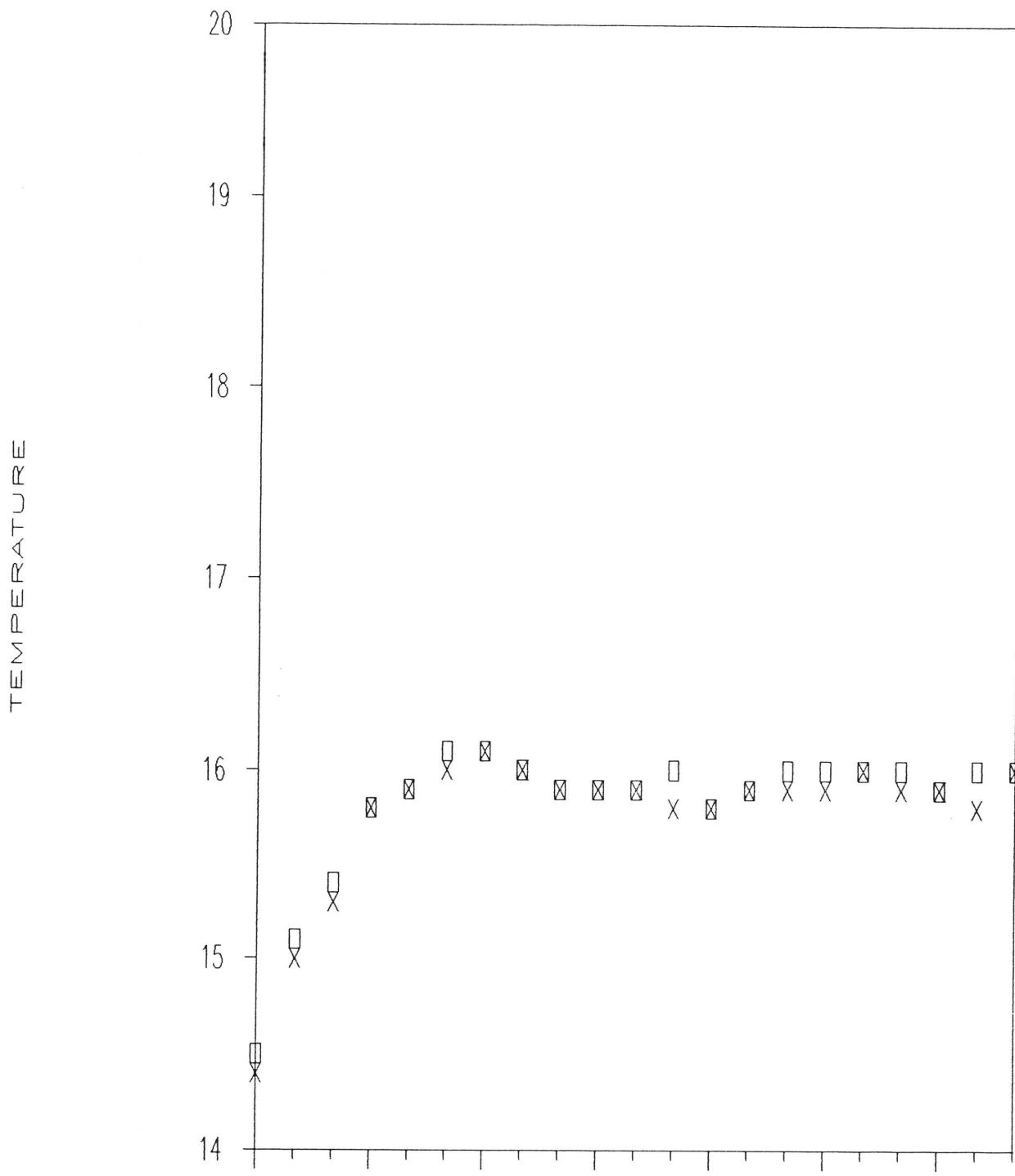
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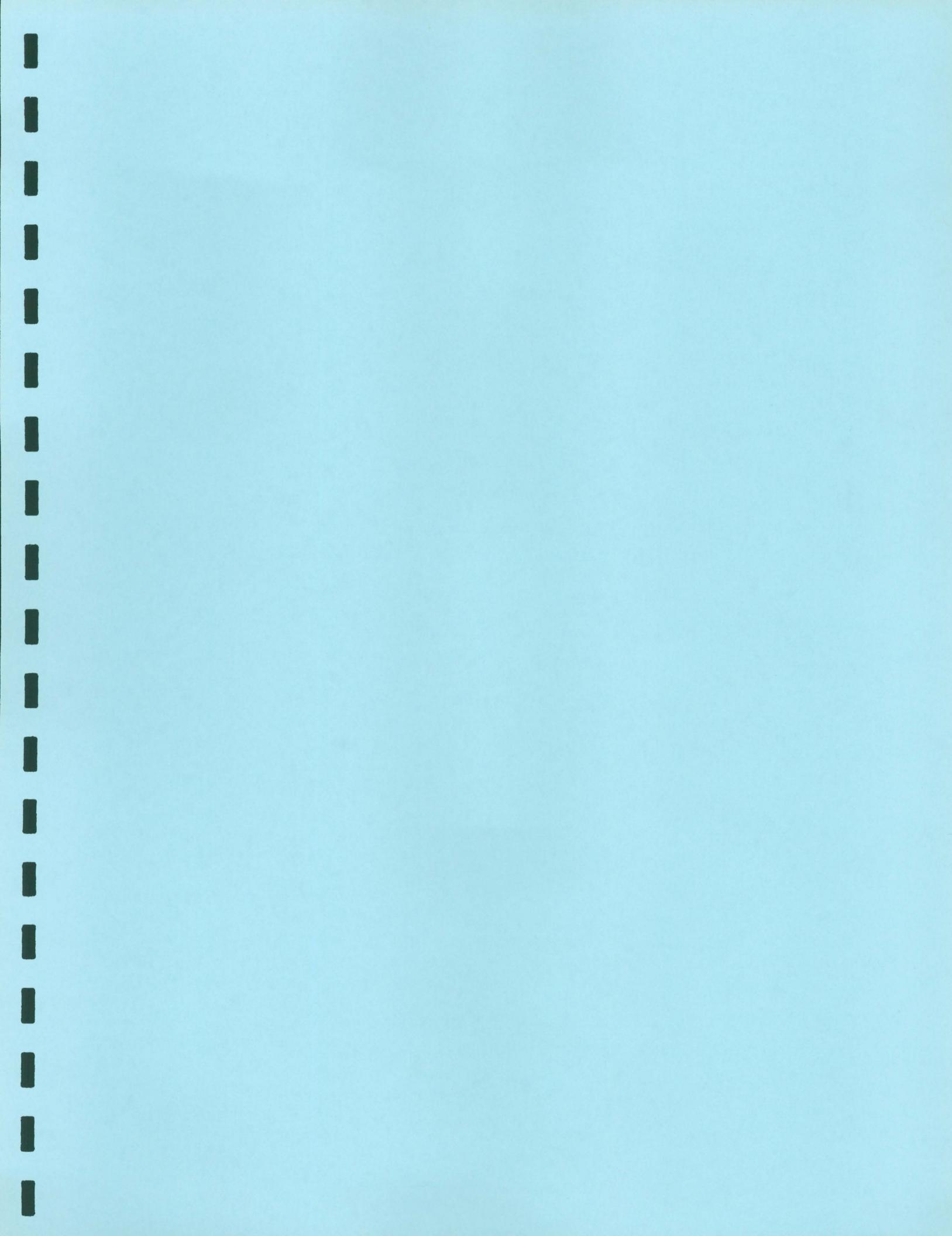
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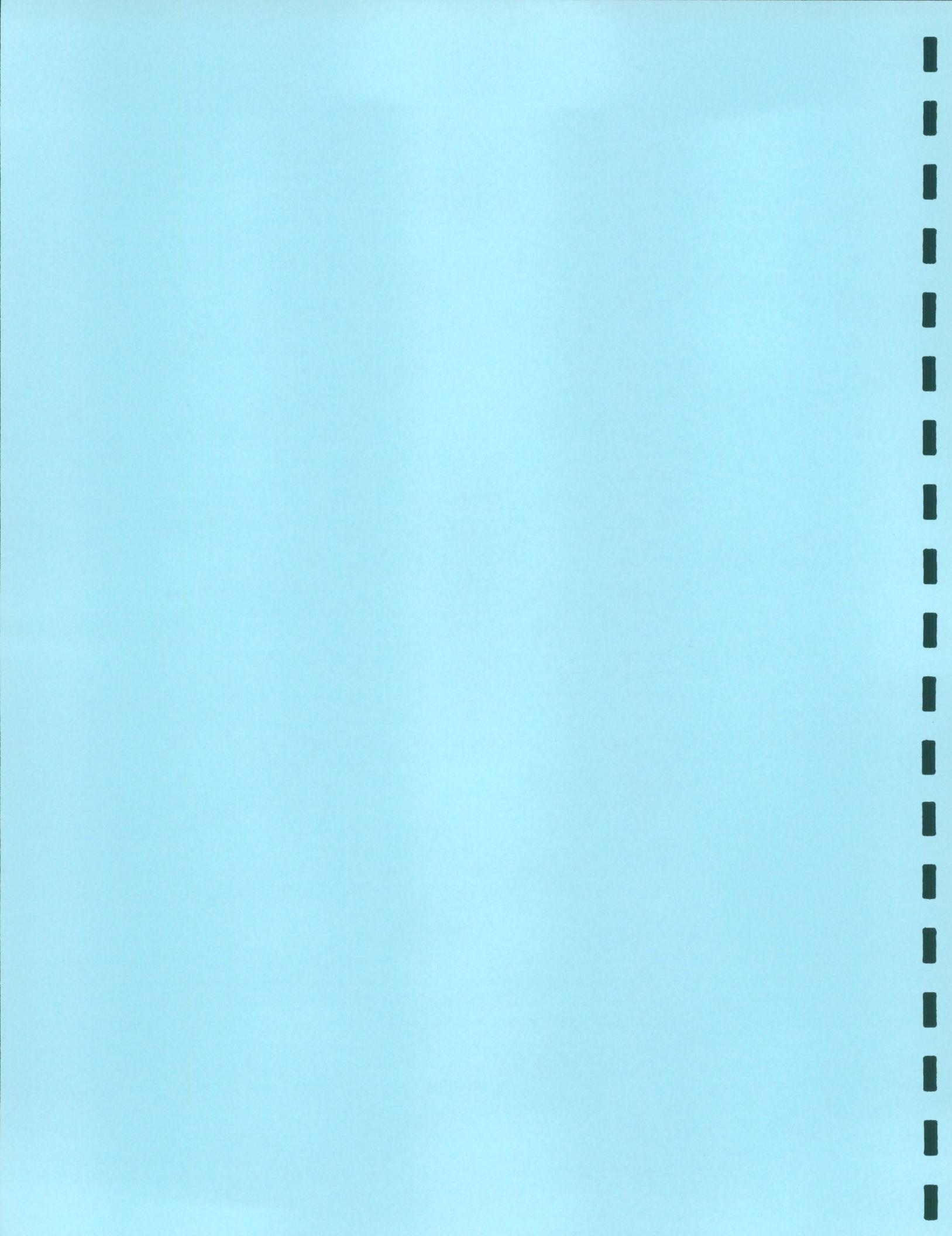


TIME OF DAY

□ SURFACE VALUES

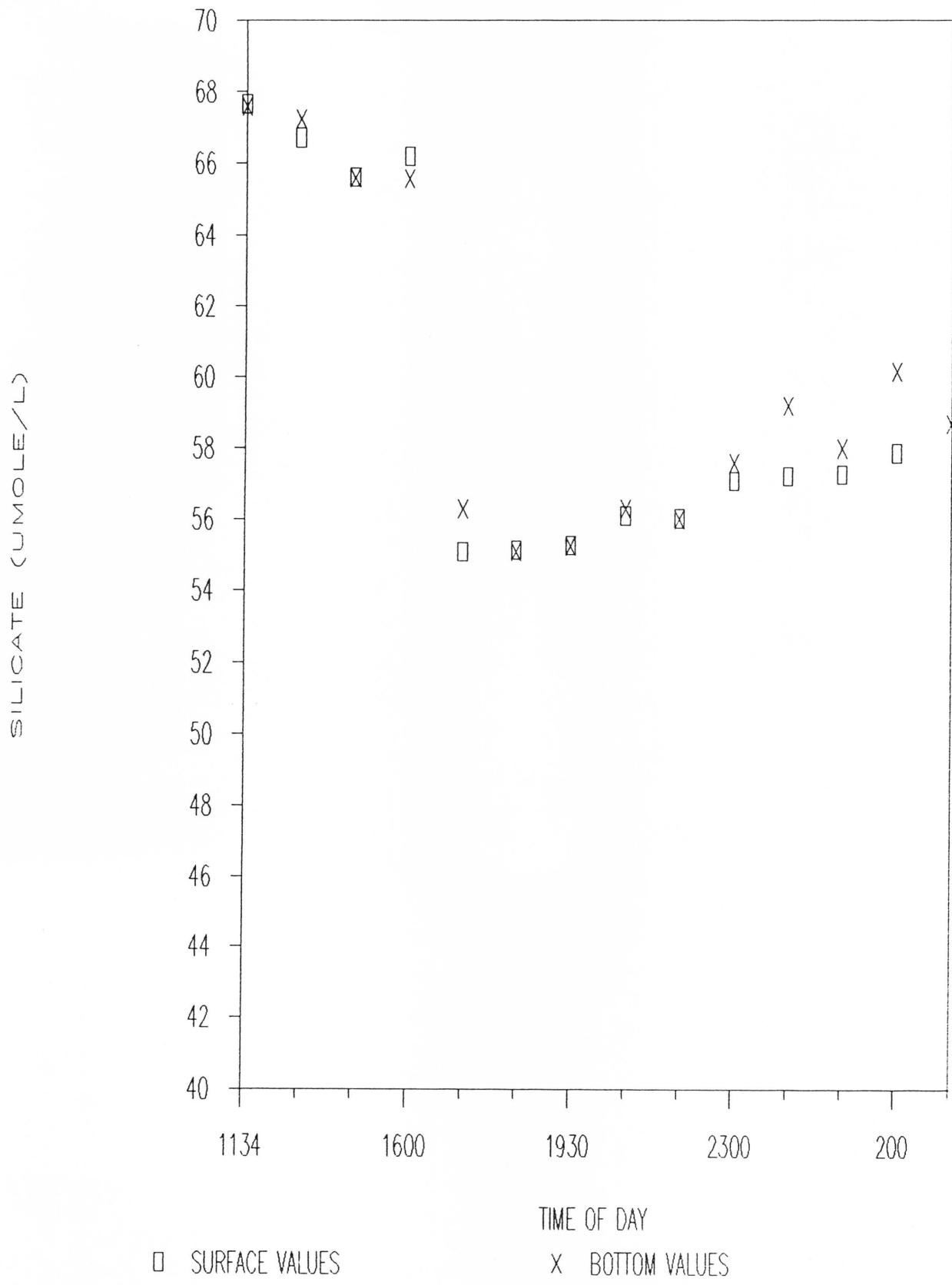
X BOTTOM VALUES





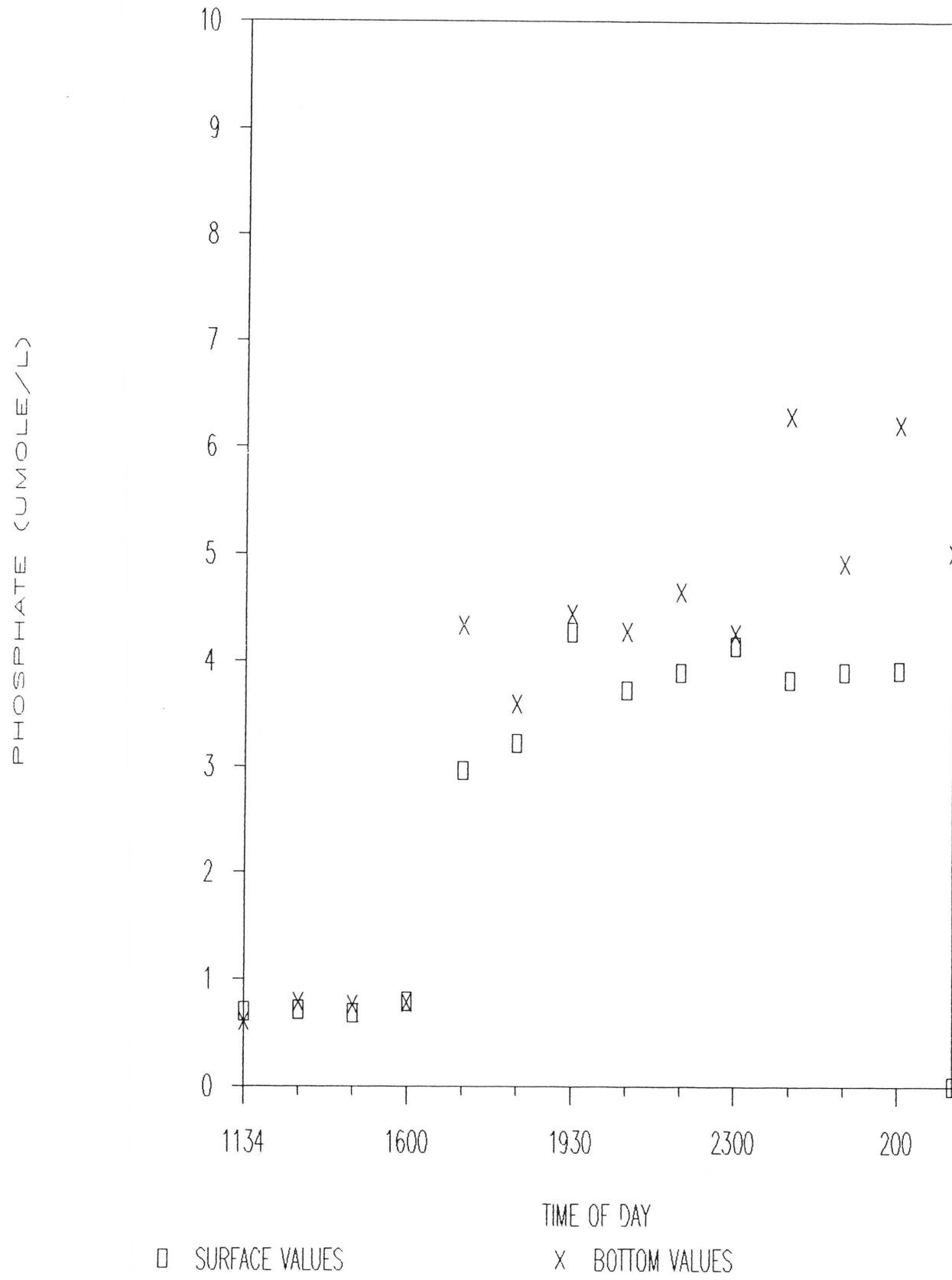
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION A



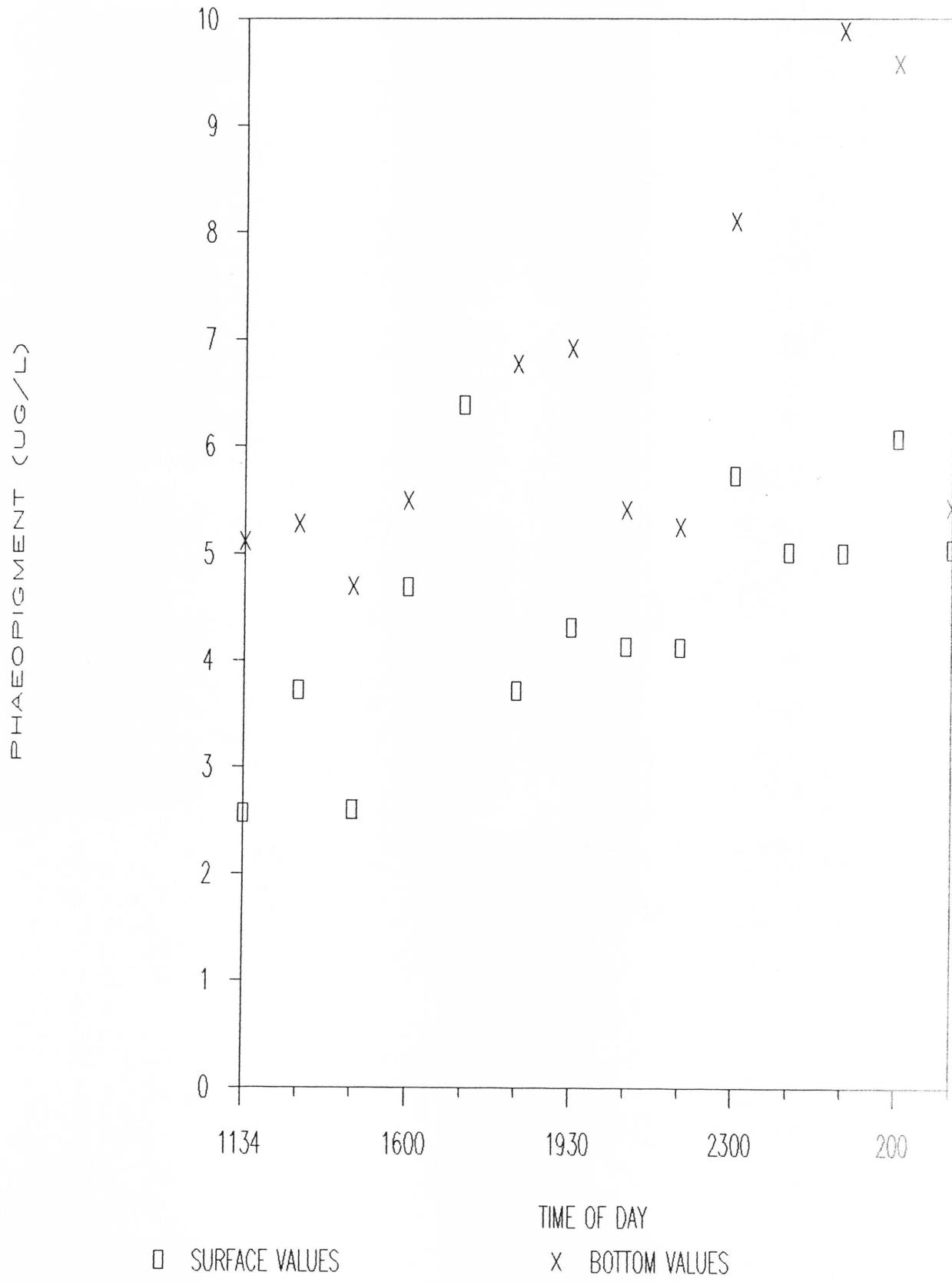
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION A



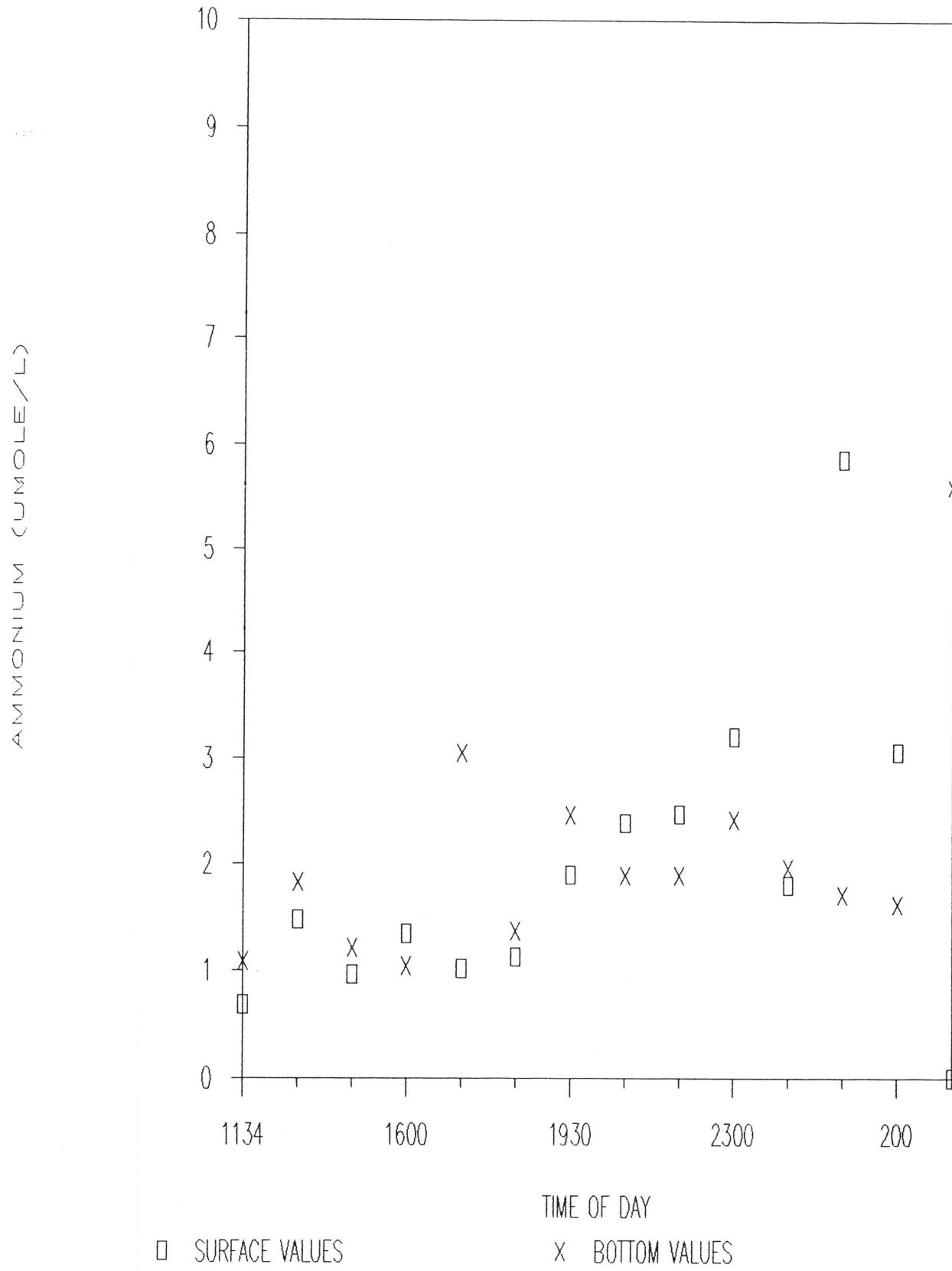
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION A



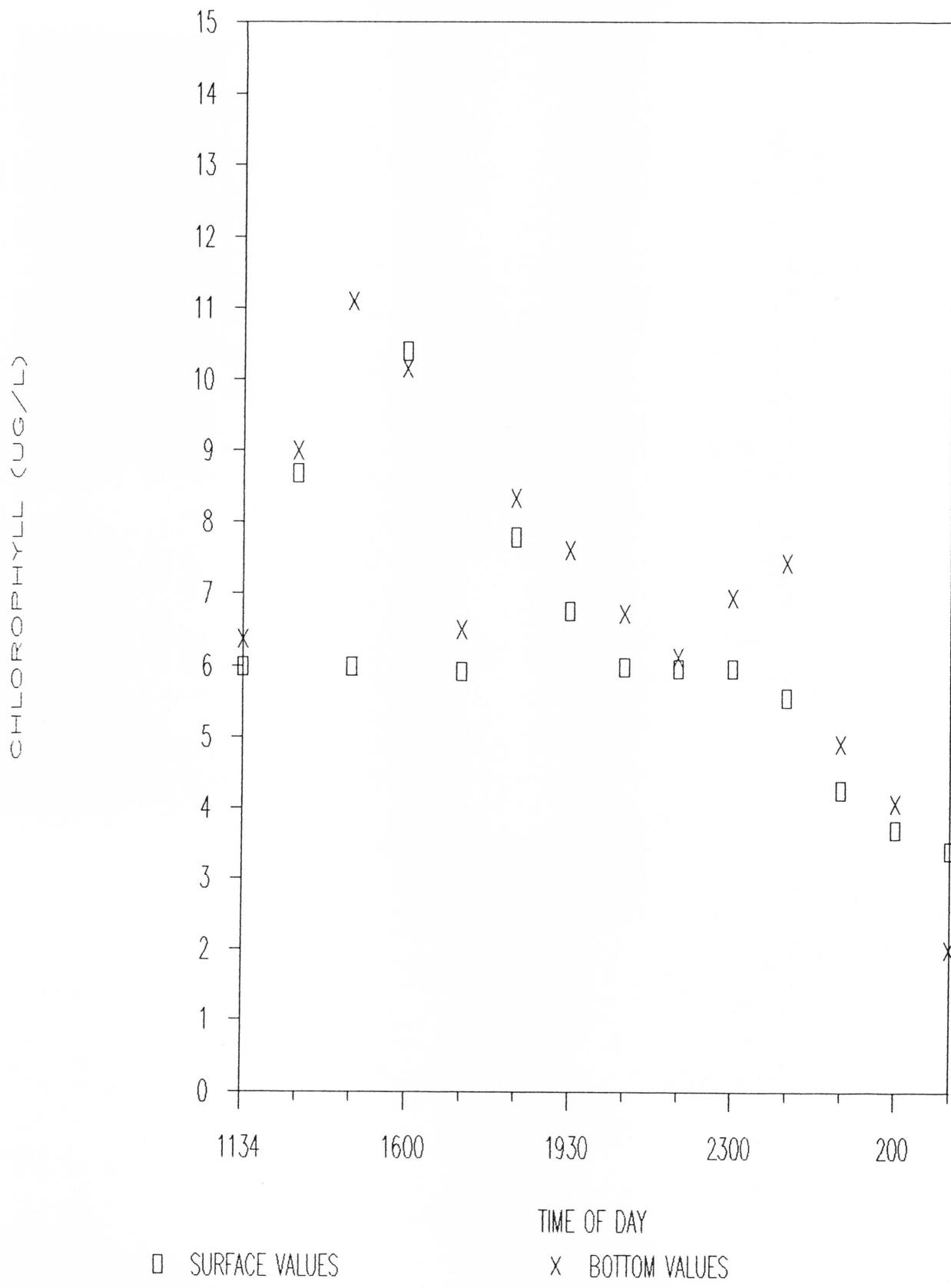
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OCT 1987 STATION A



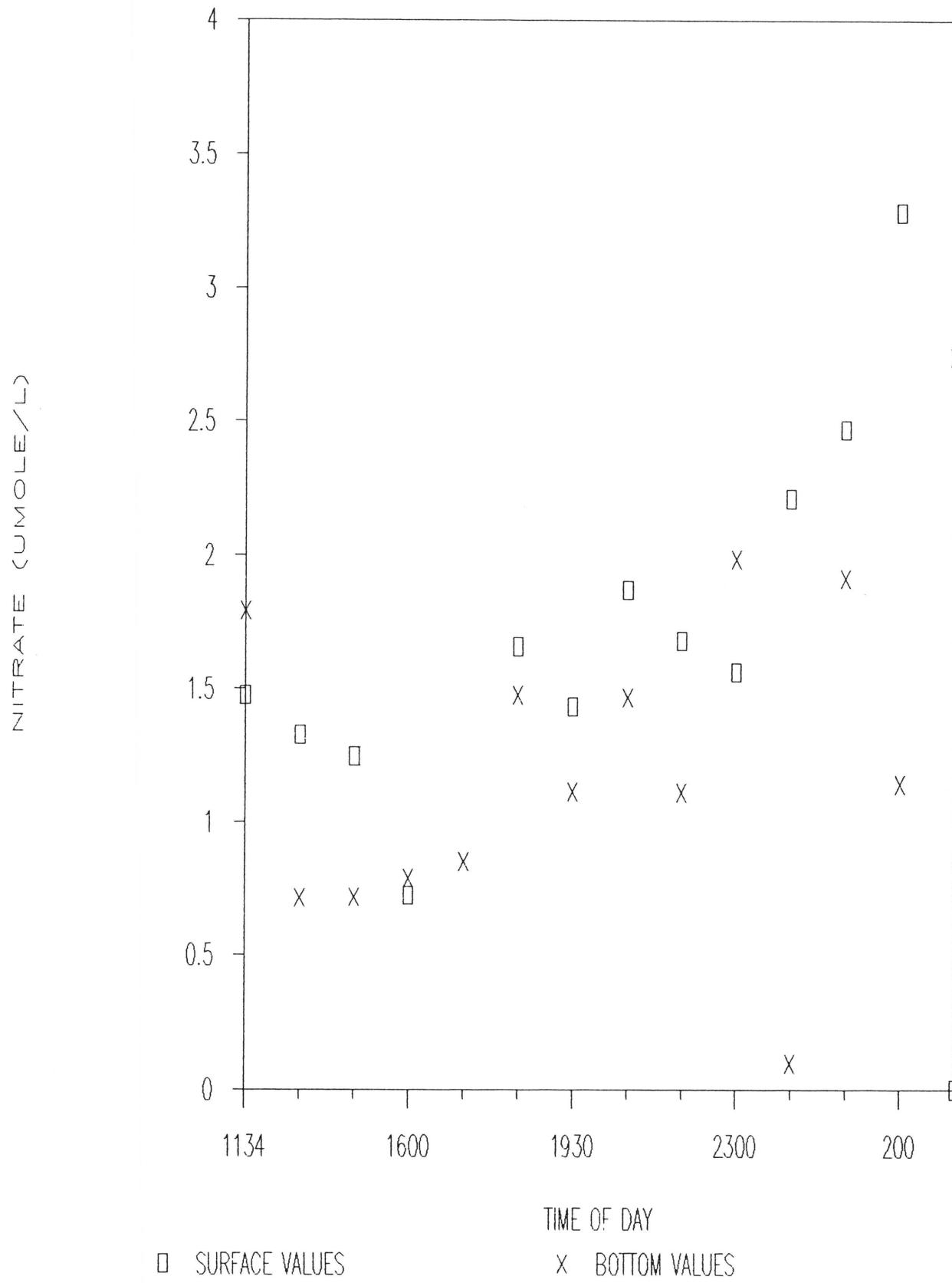
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OCT 1987 STATION A



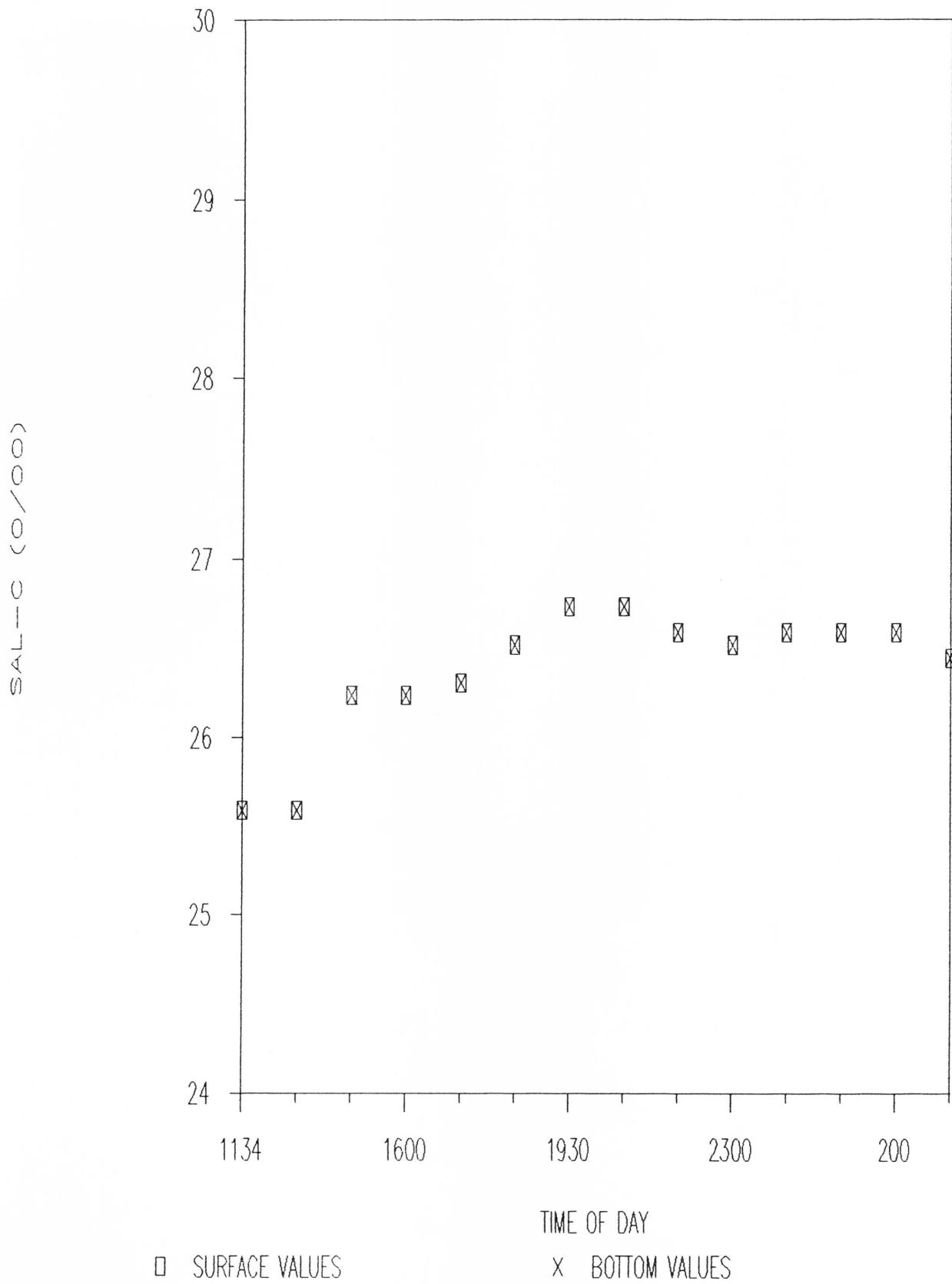
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OCT 1987 STATION A



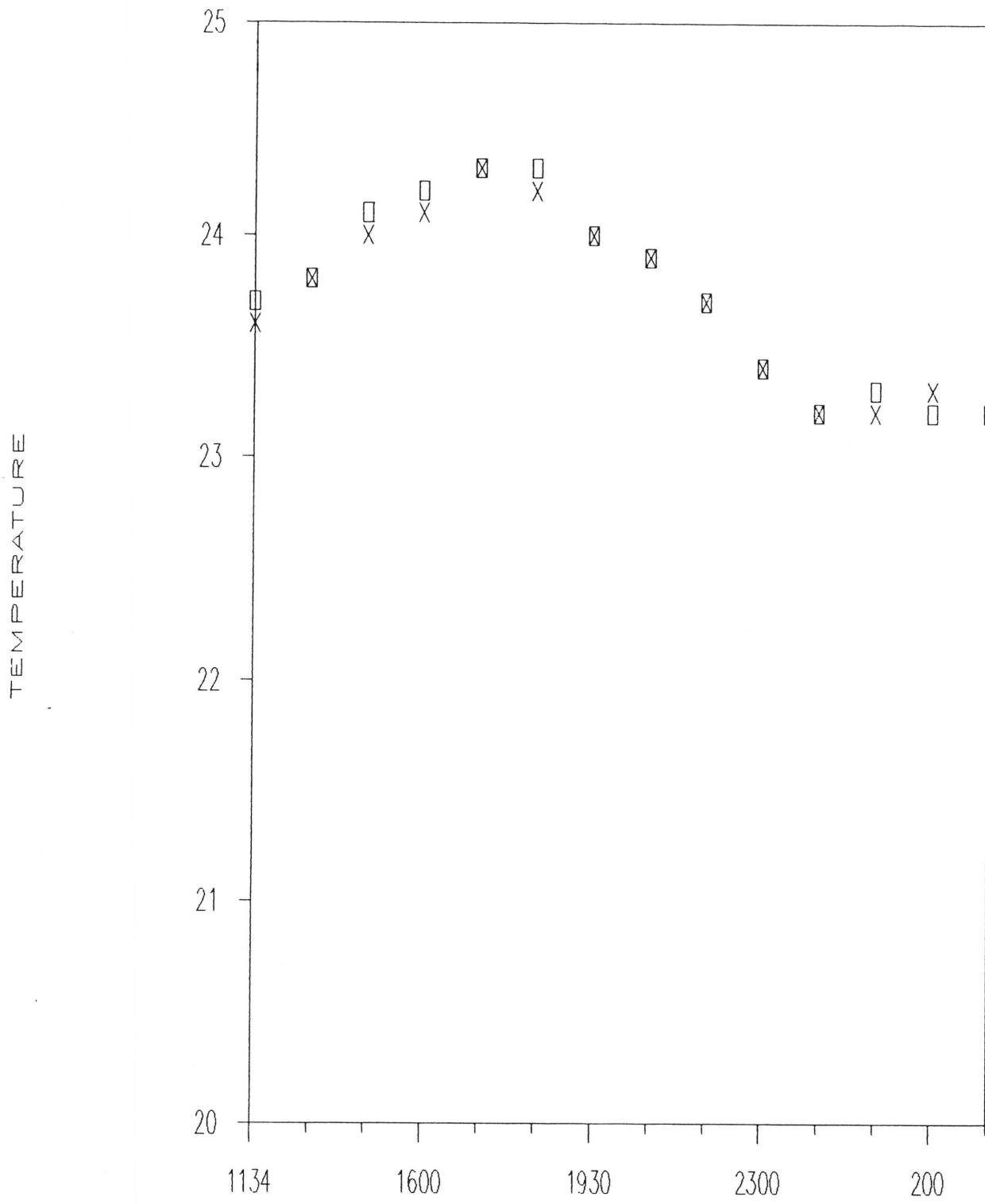
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION A



CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION A



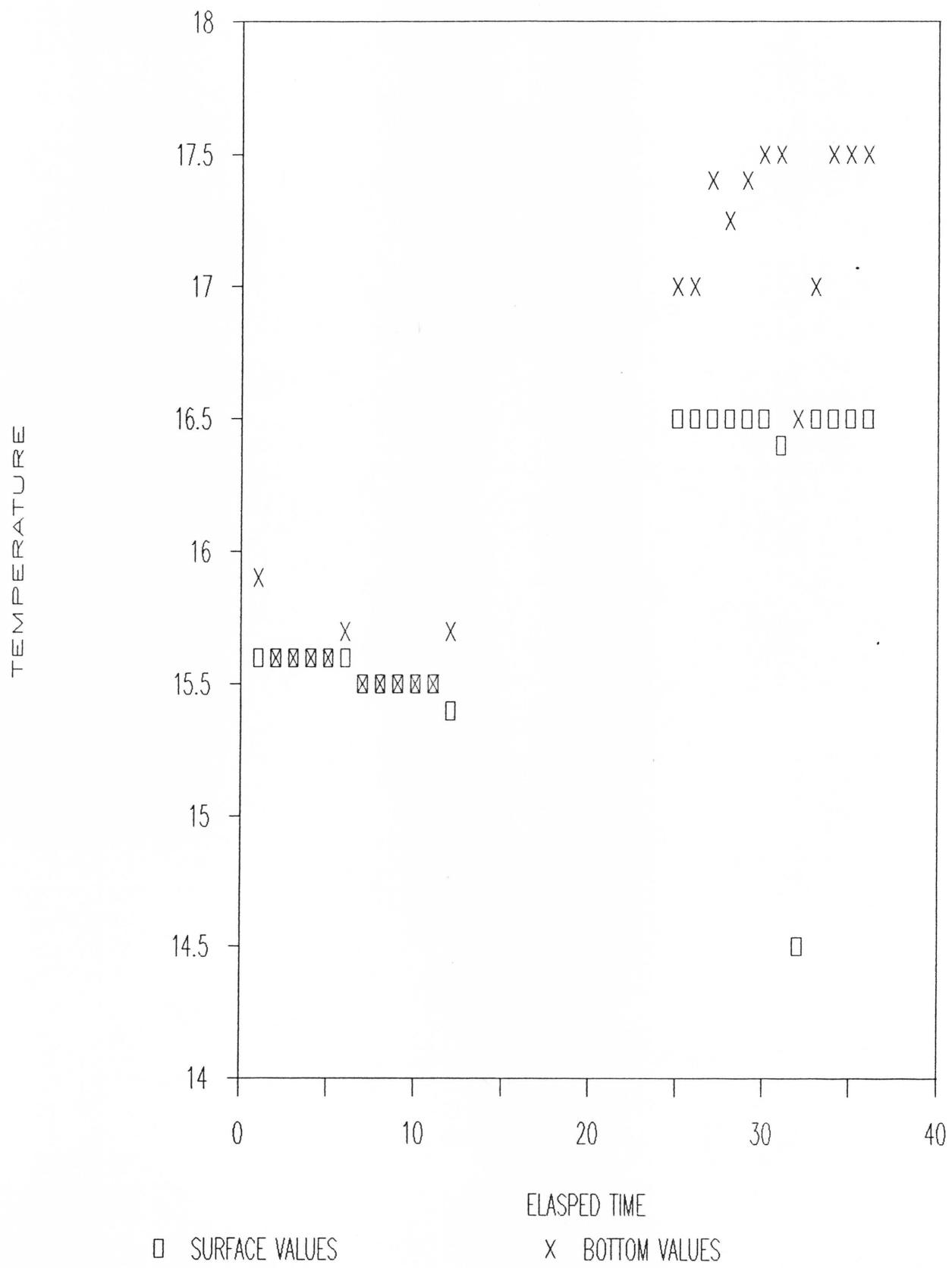
□ SURFACE VALUES

X BOTTOM VALUES

7

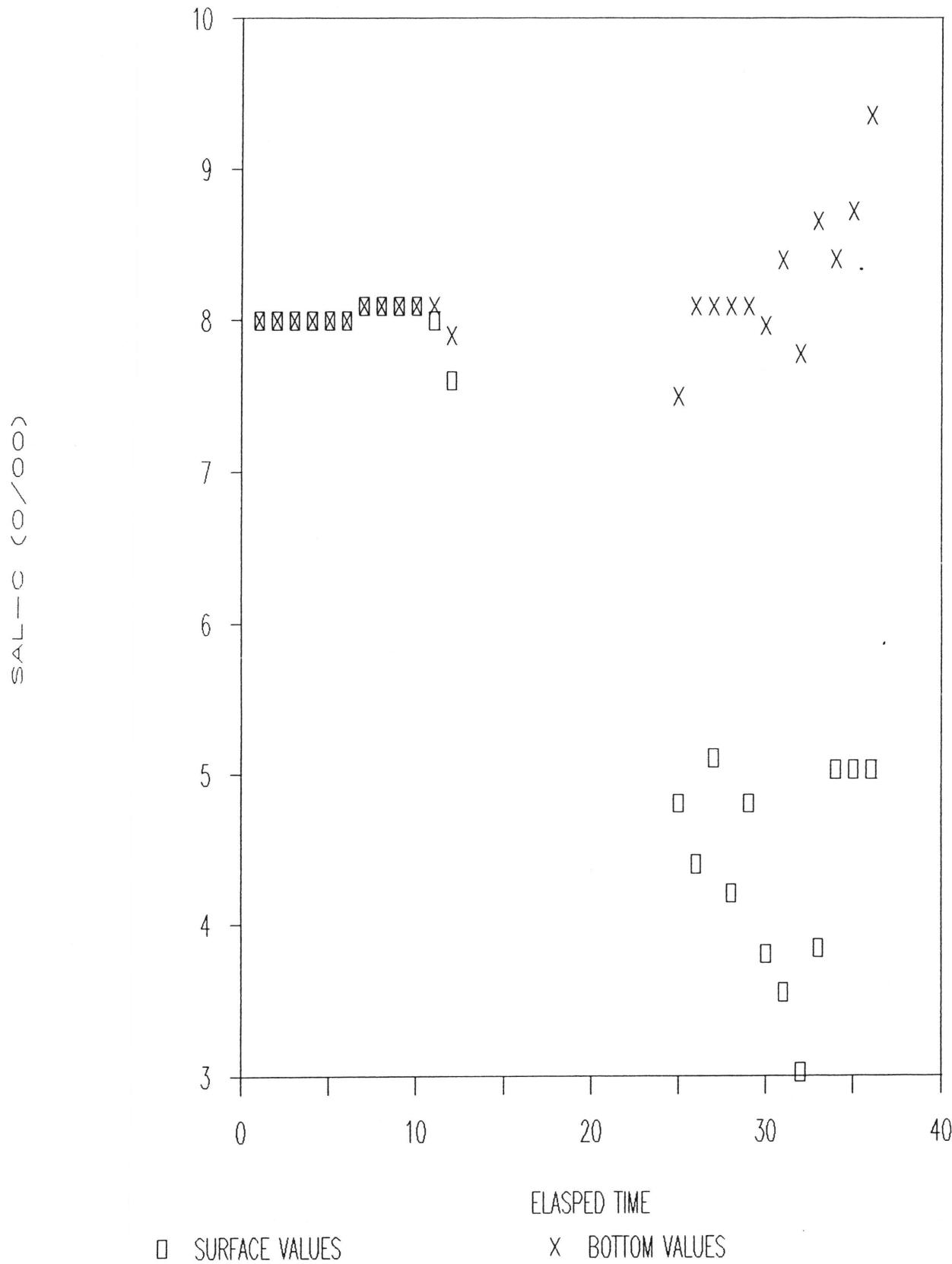
SAN ANTONIO BAY

JAN 1987 STATION C



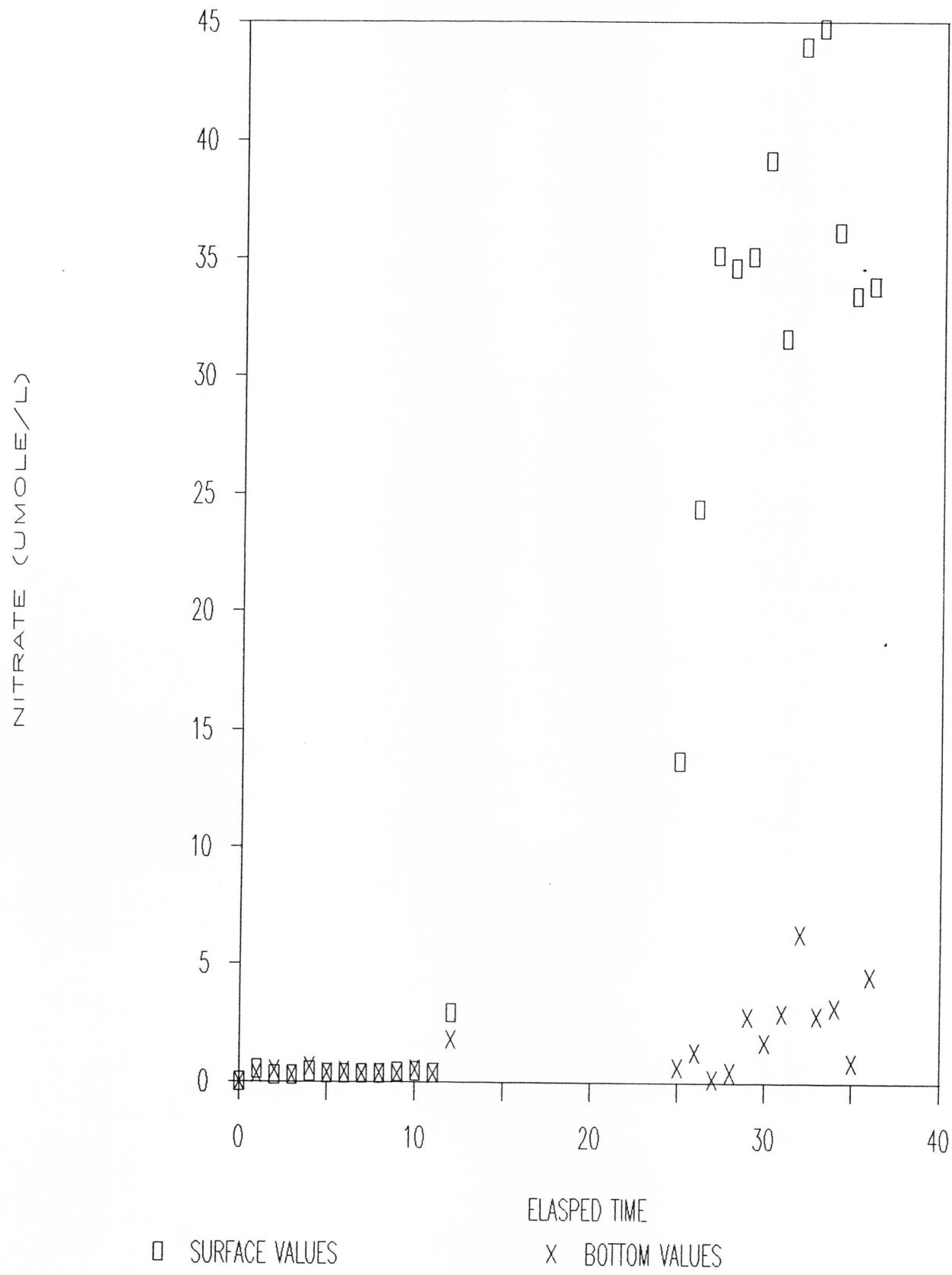
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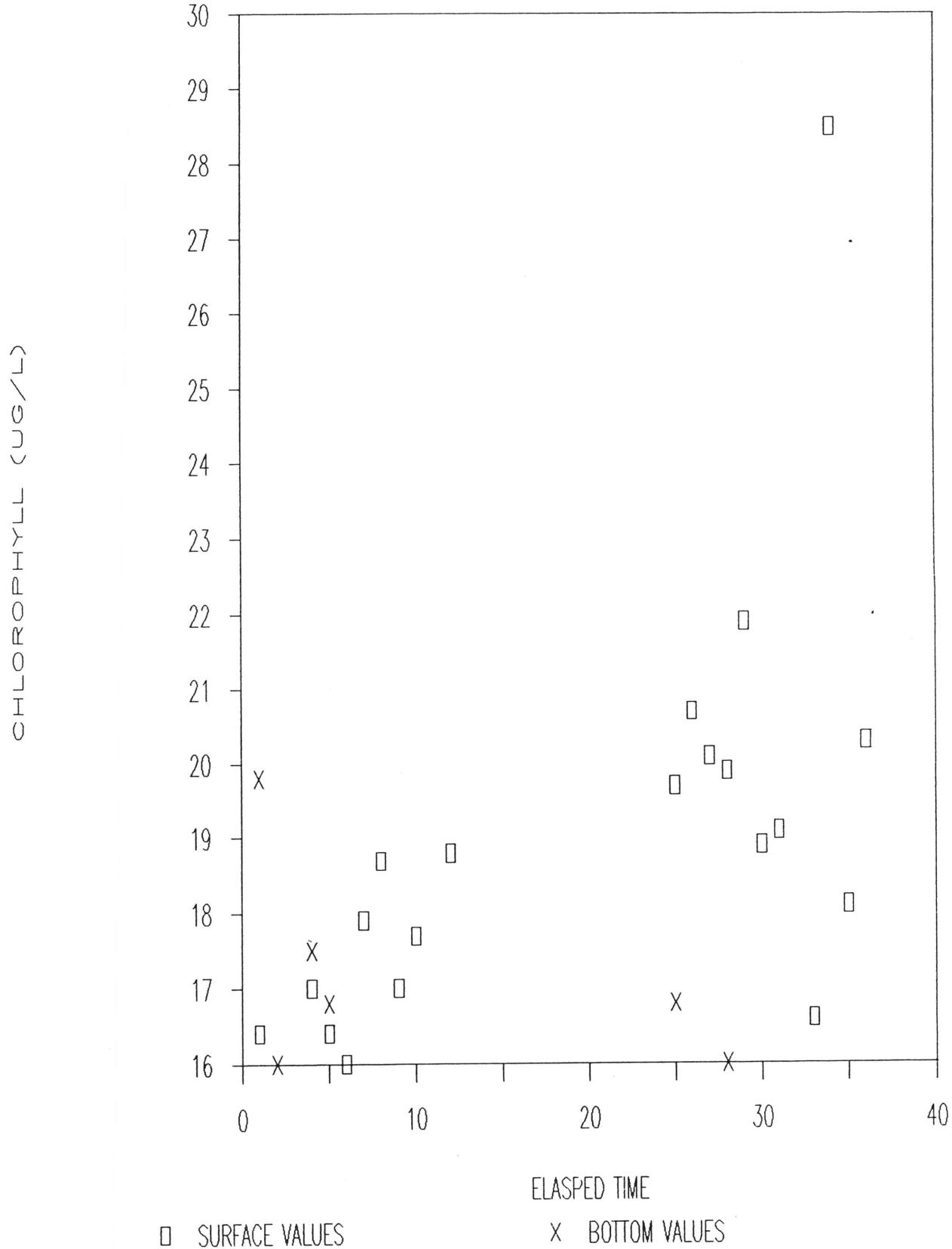
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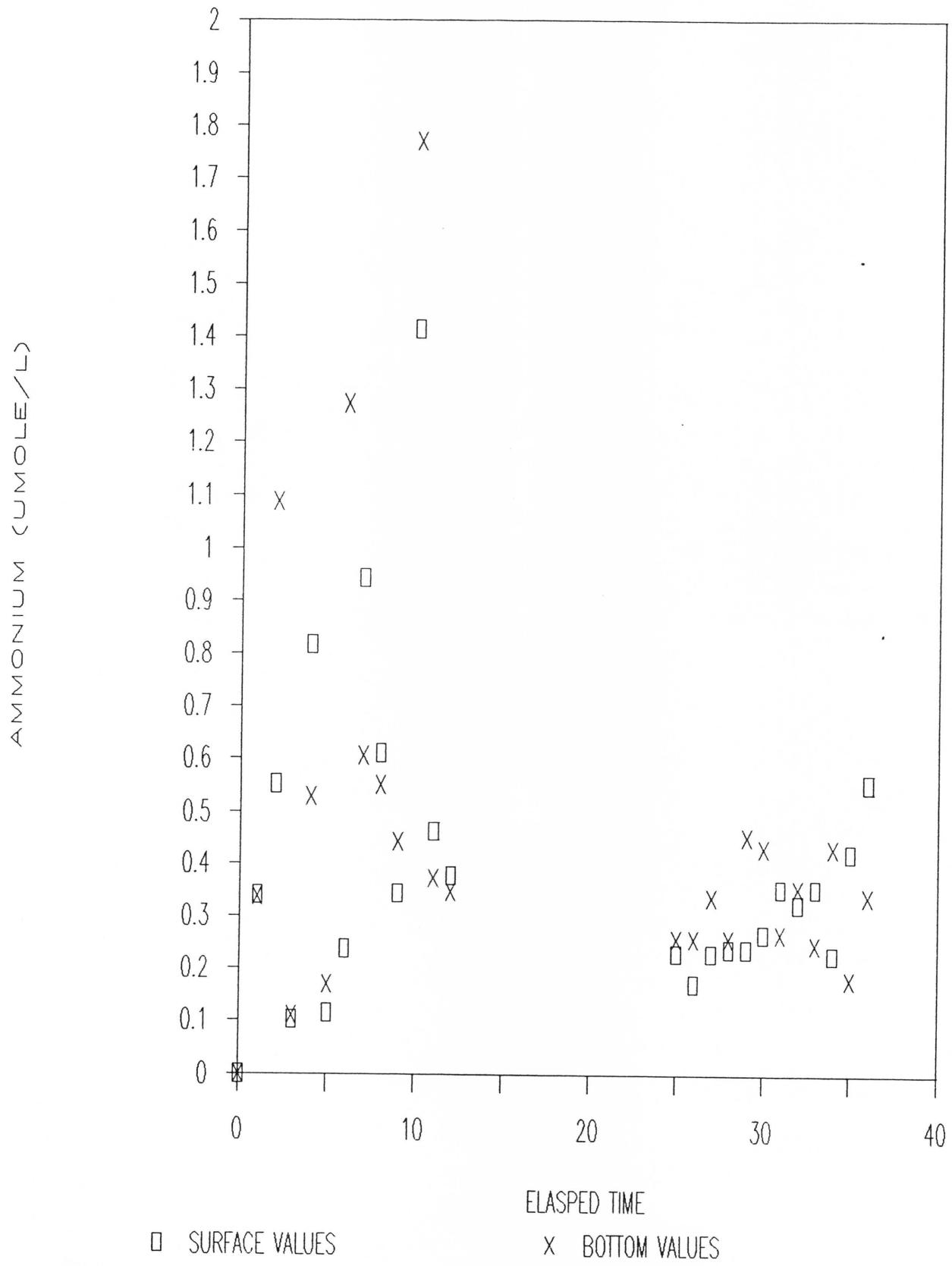
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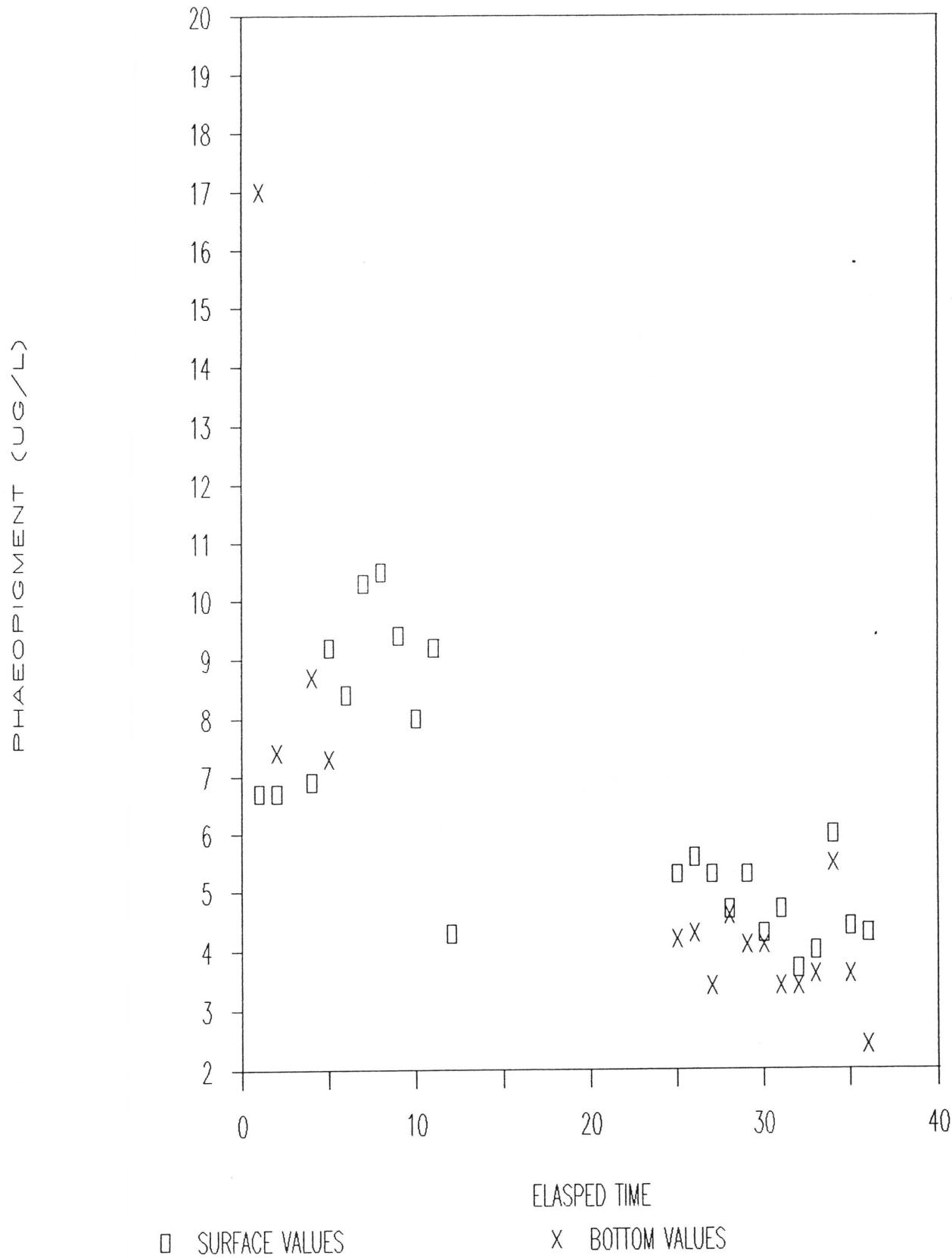
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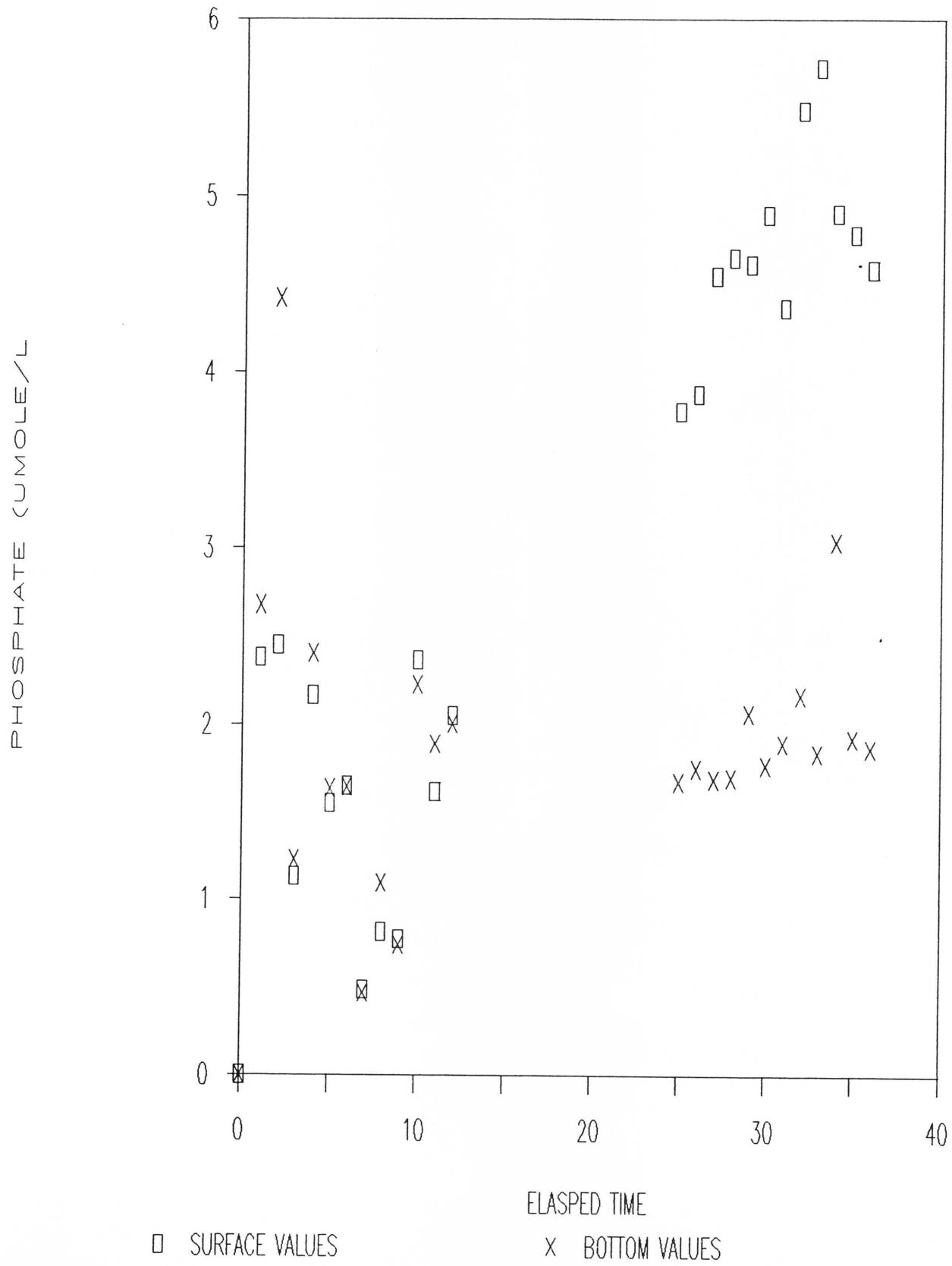
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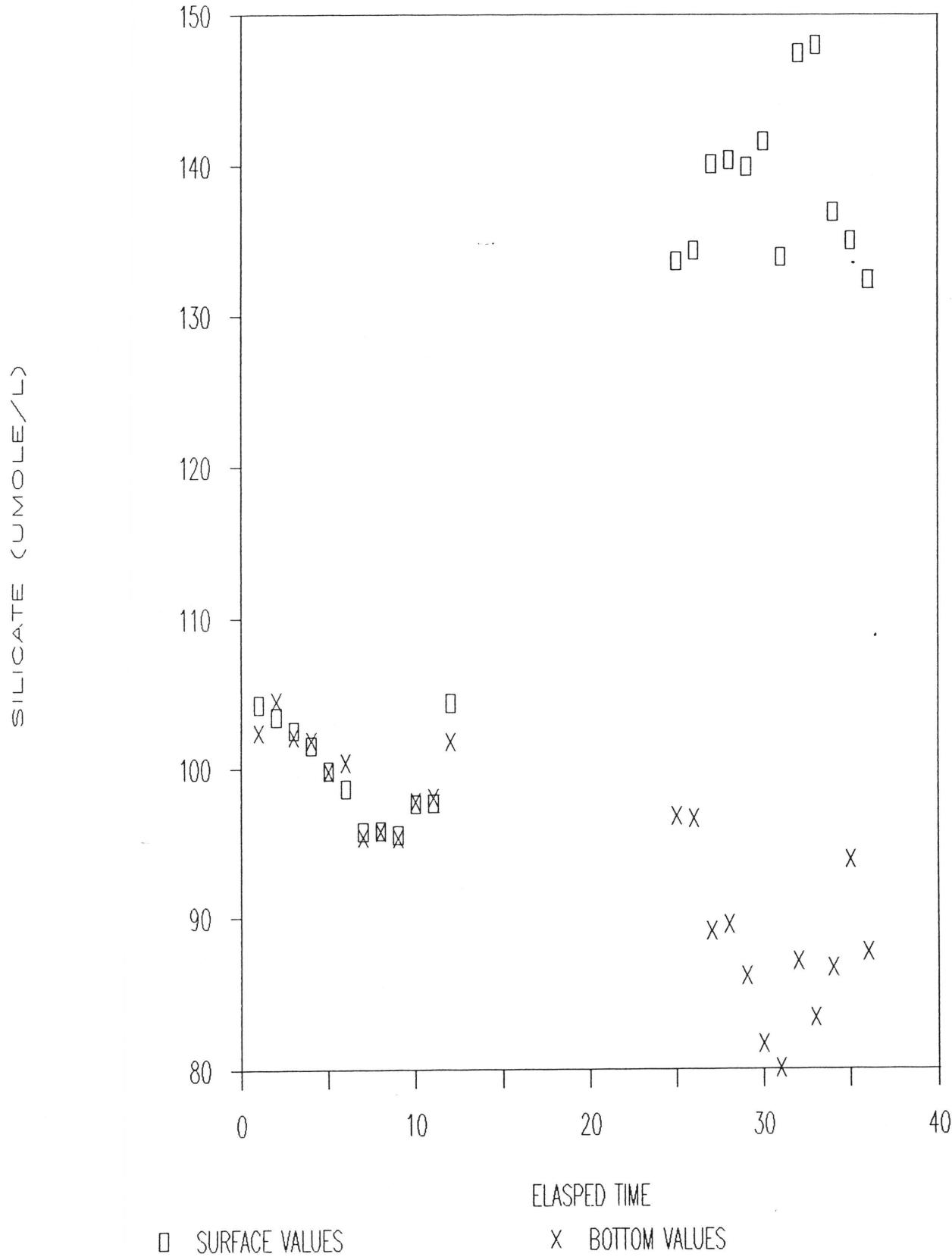
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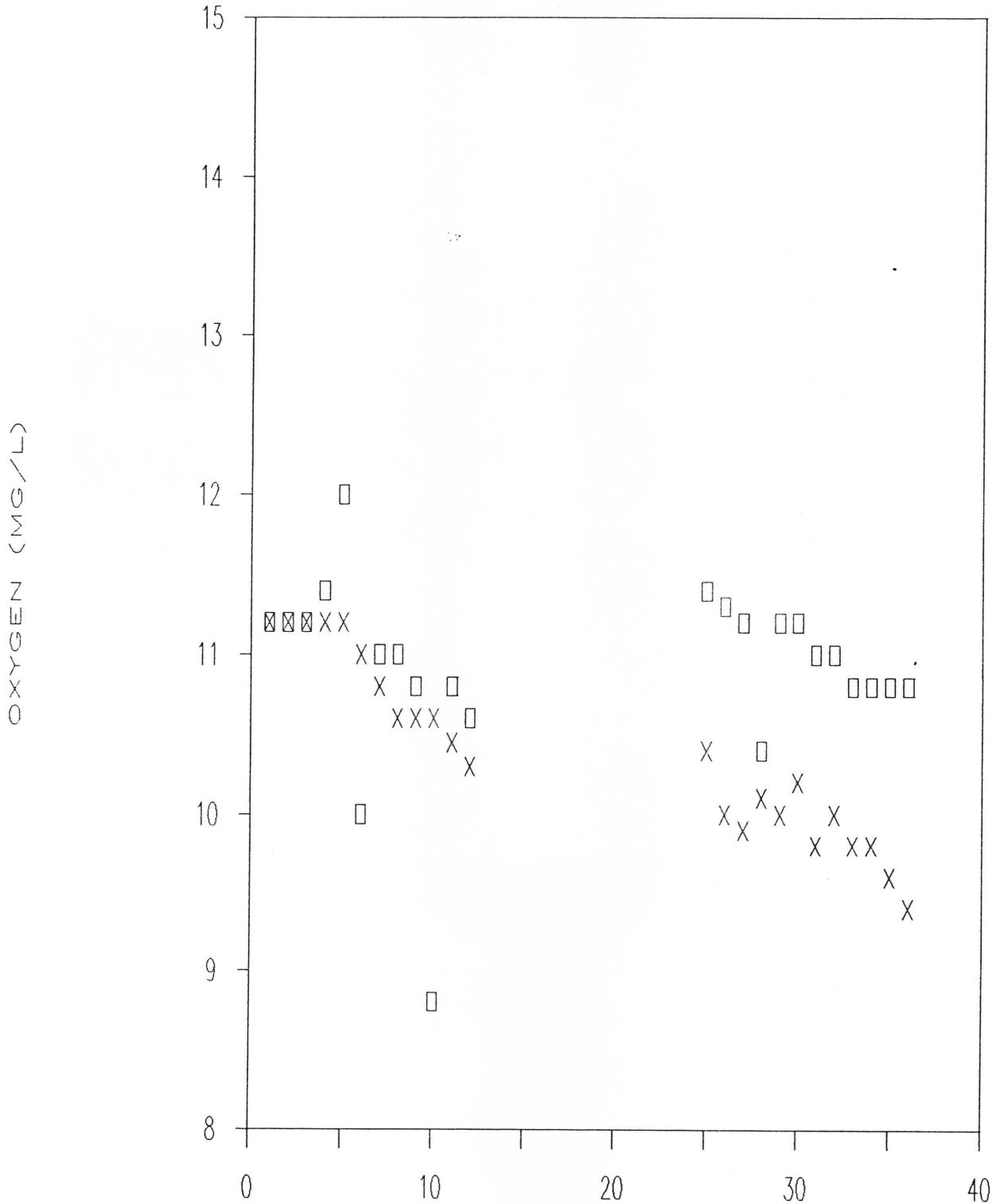
SAN ANTONIO BAY

JAN 1987 STATION C



SAN ANTONIO BAY

JAN 1987 STATION C

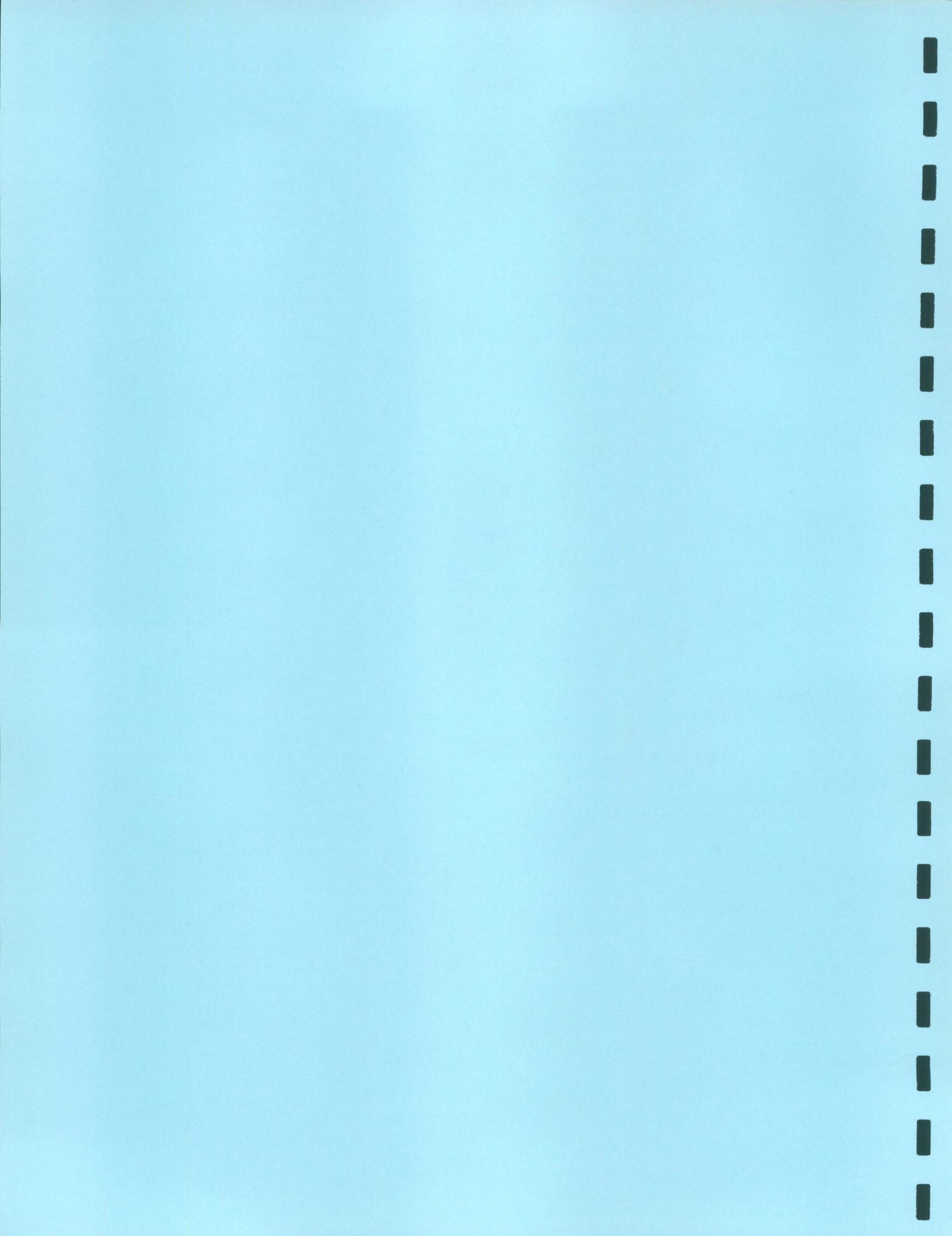


ELASPED TIME

SURFACE VALUES

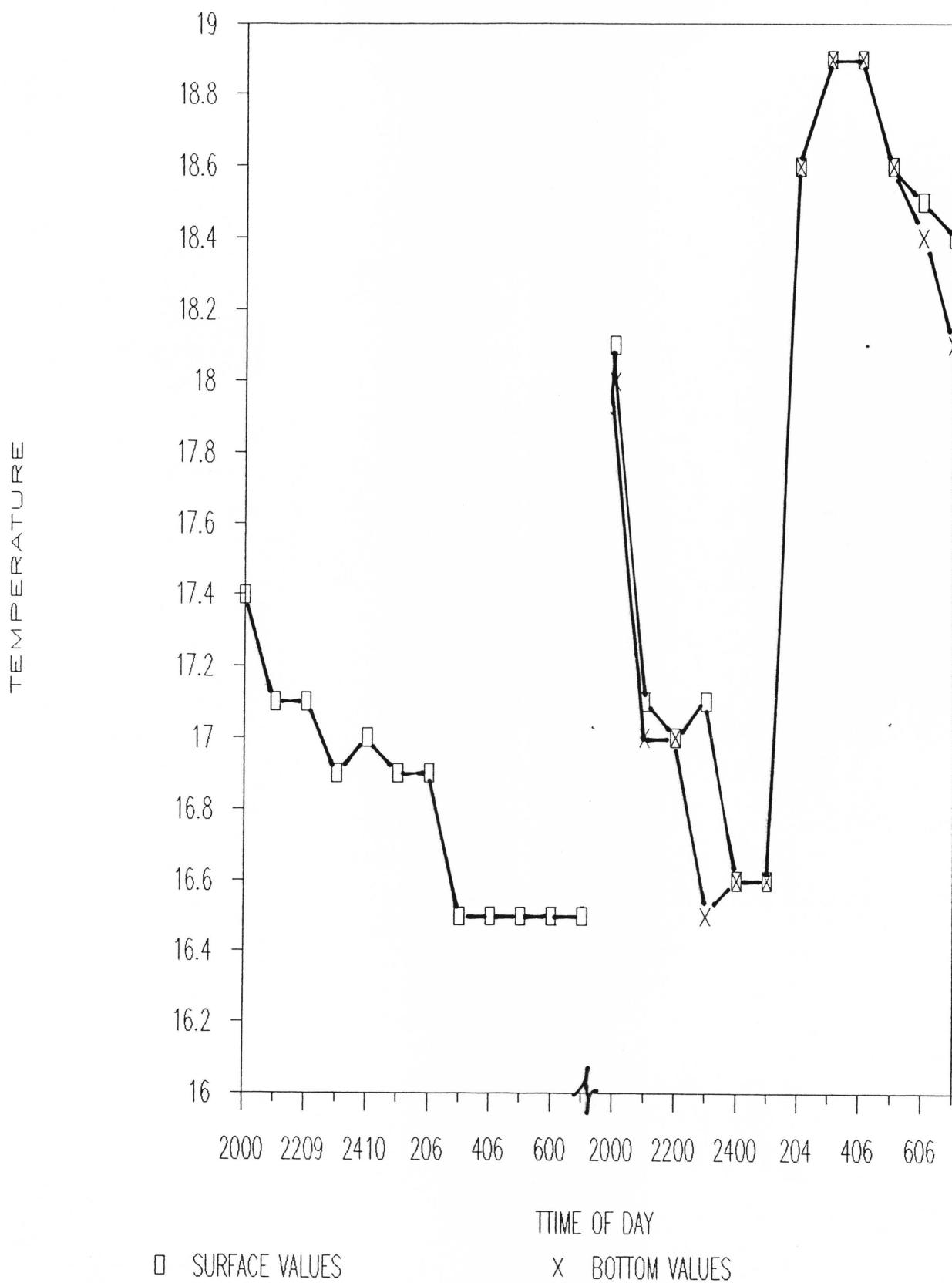
X BOTTOM VALUES





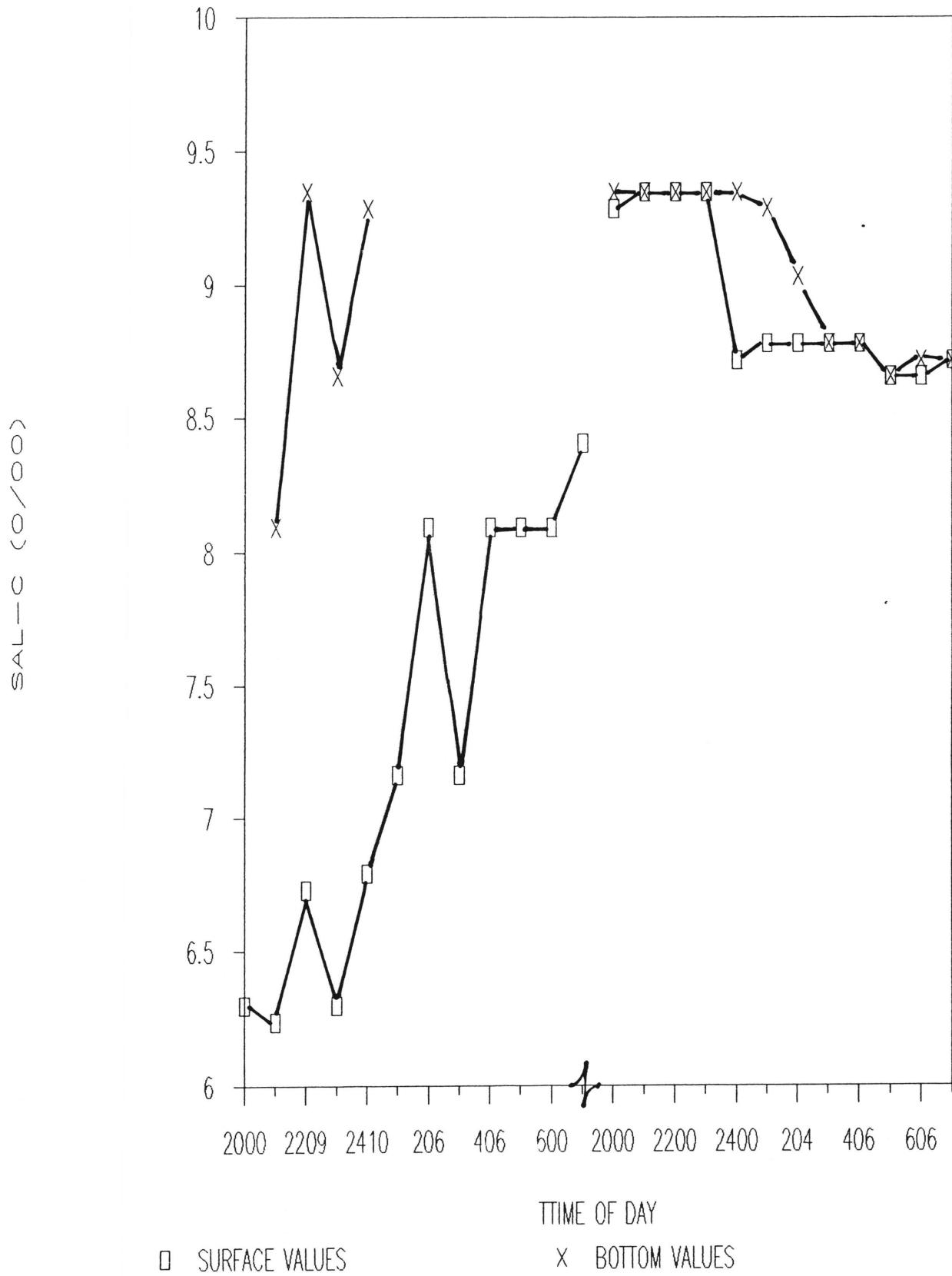
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APRIL 1987 STATION C



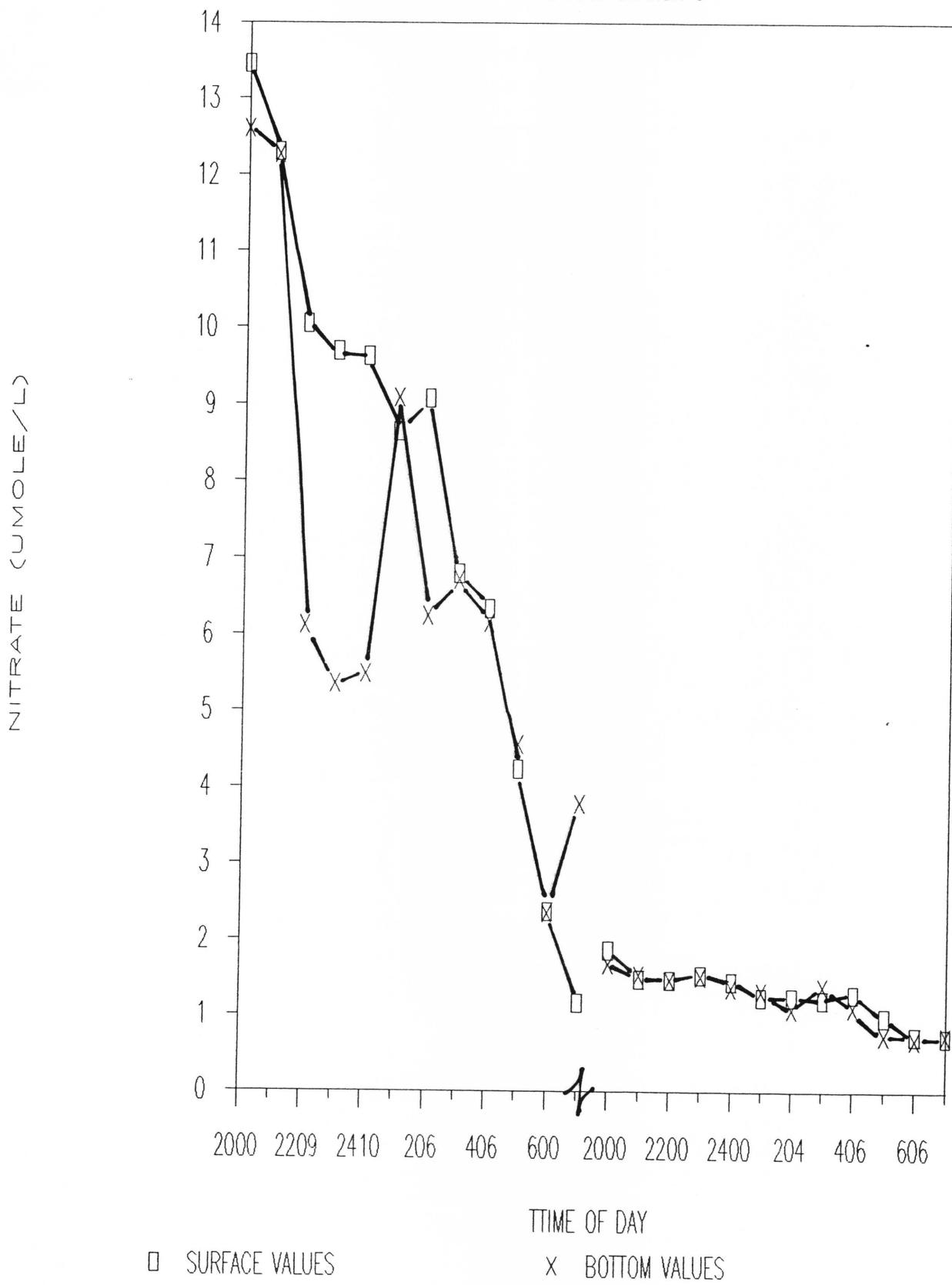
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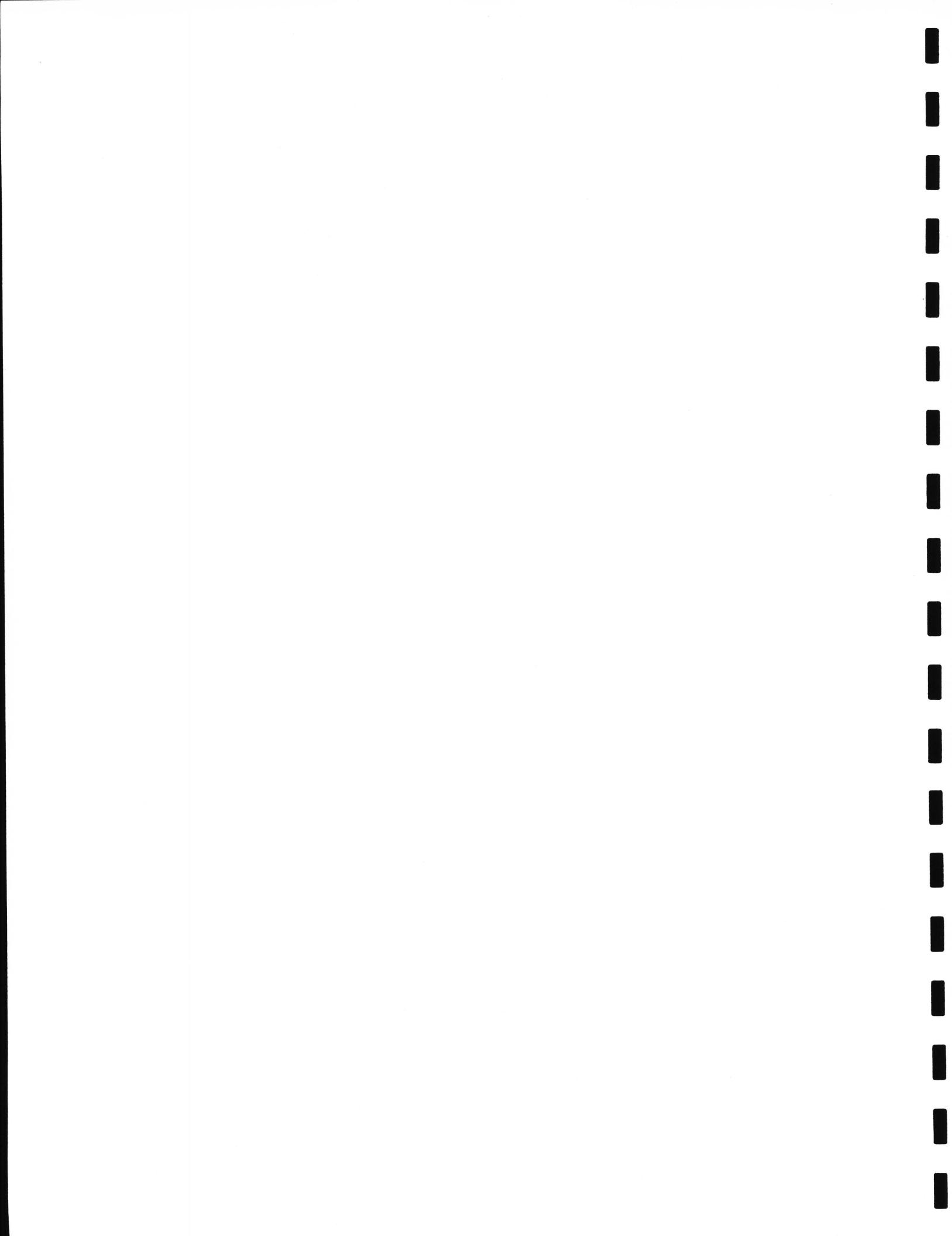
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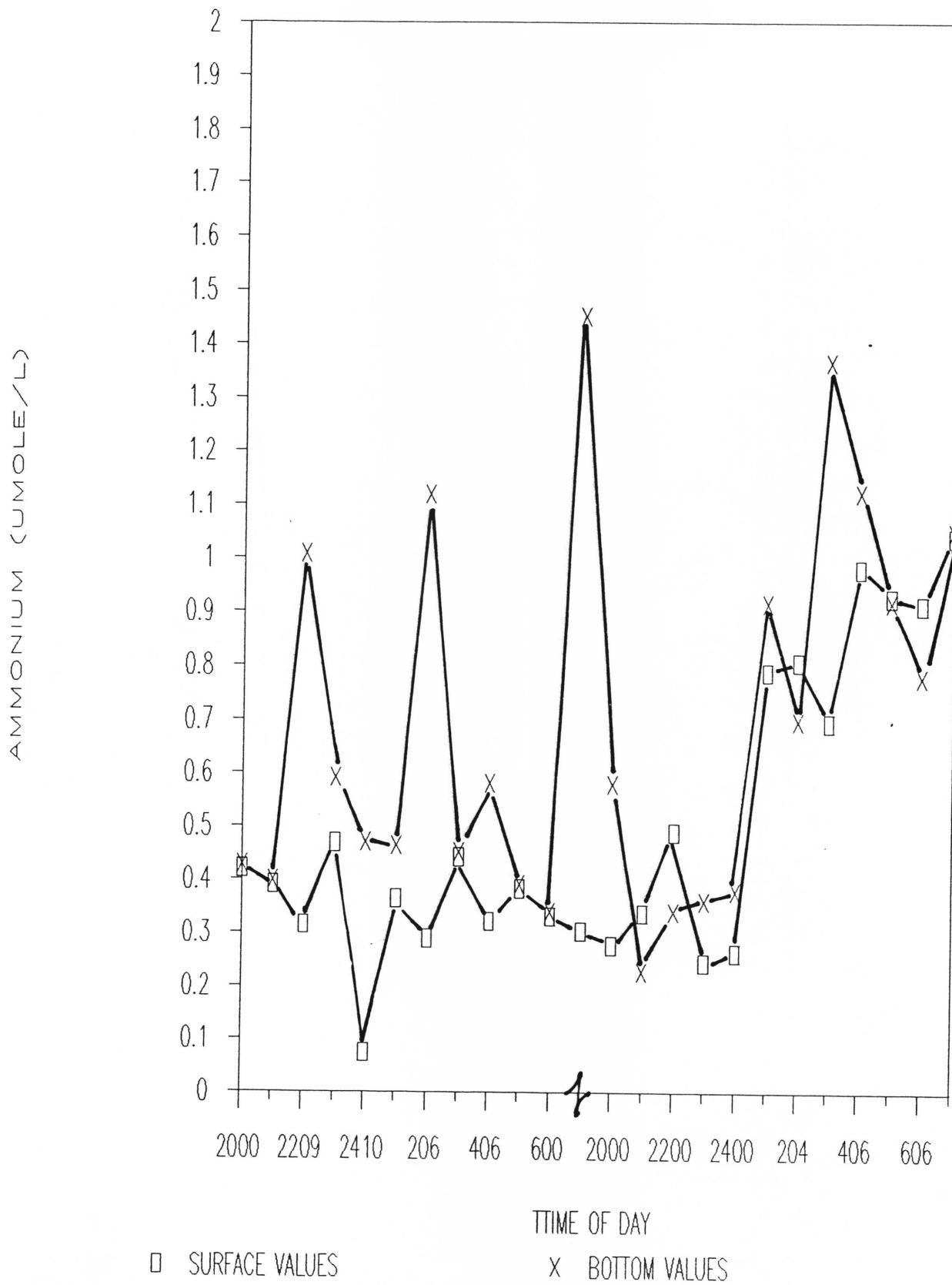
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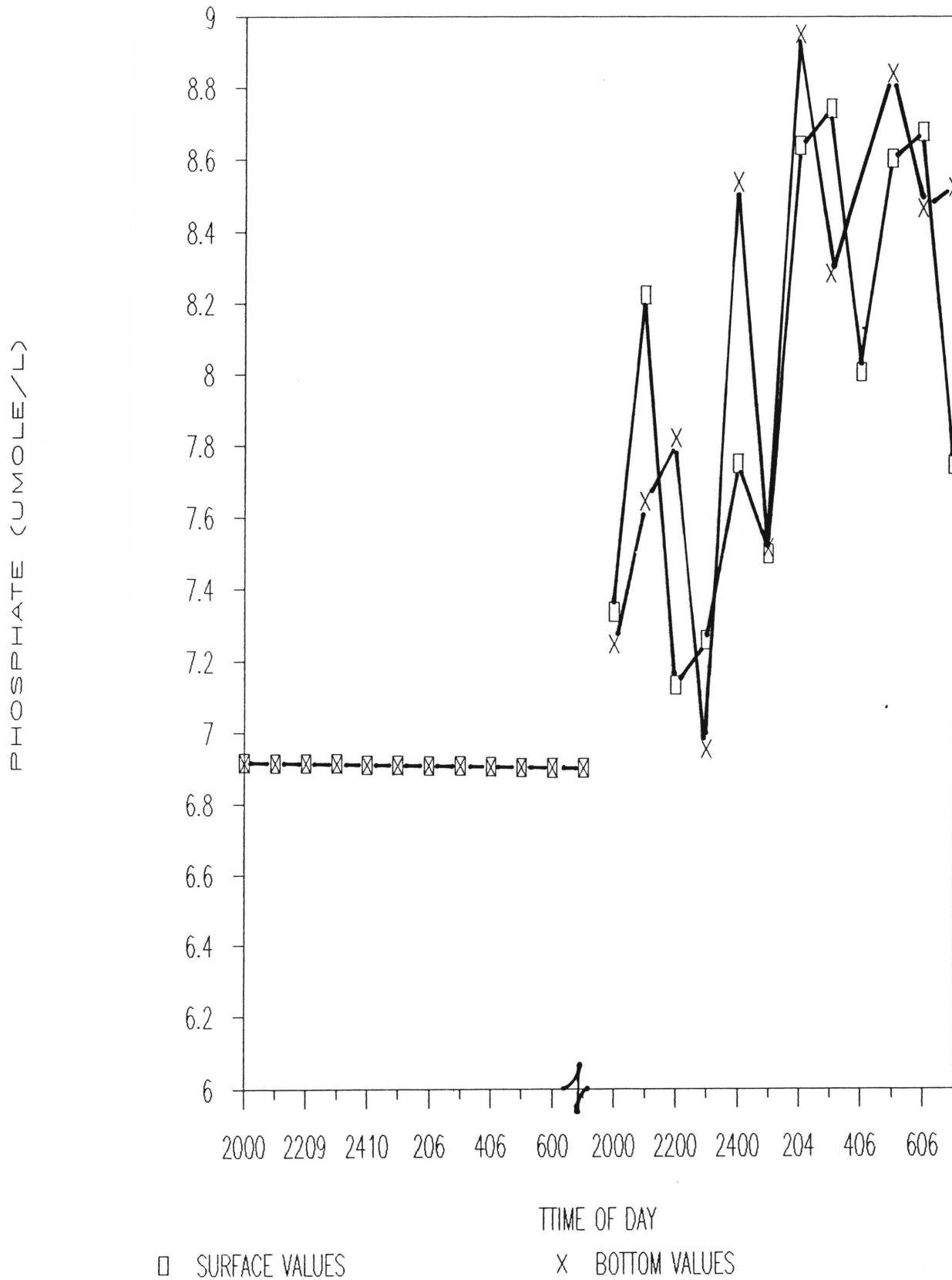
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APRIL 1987 STATION C



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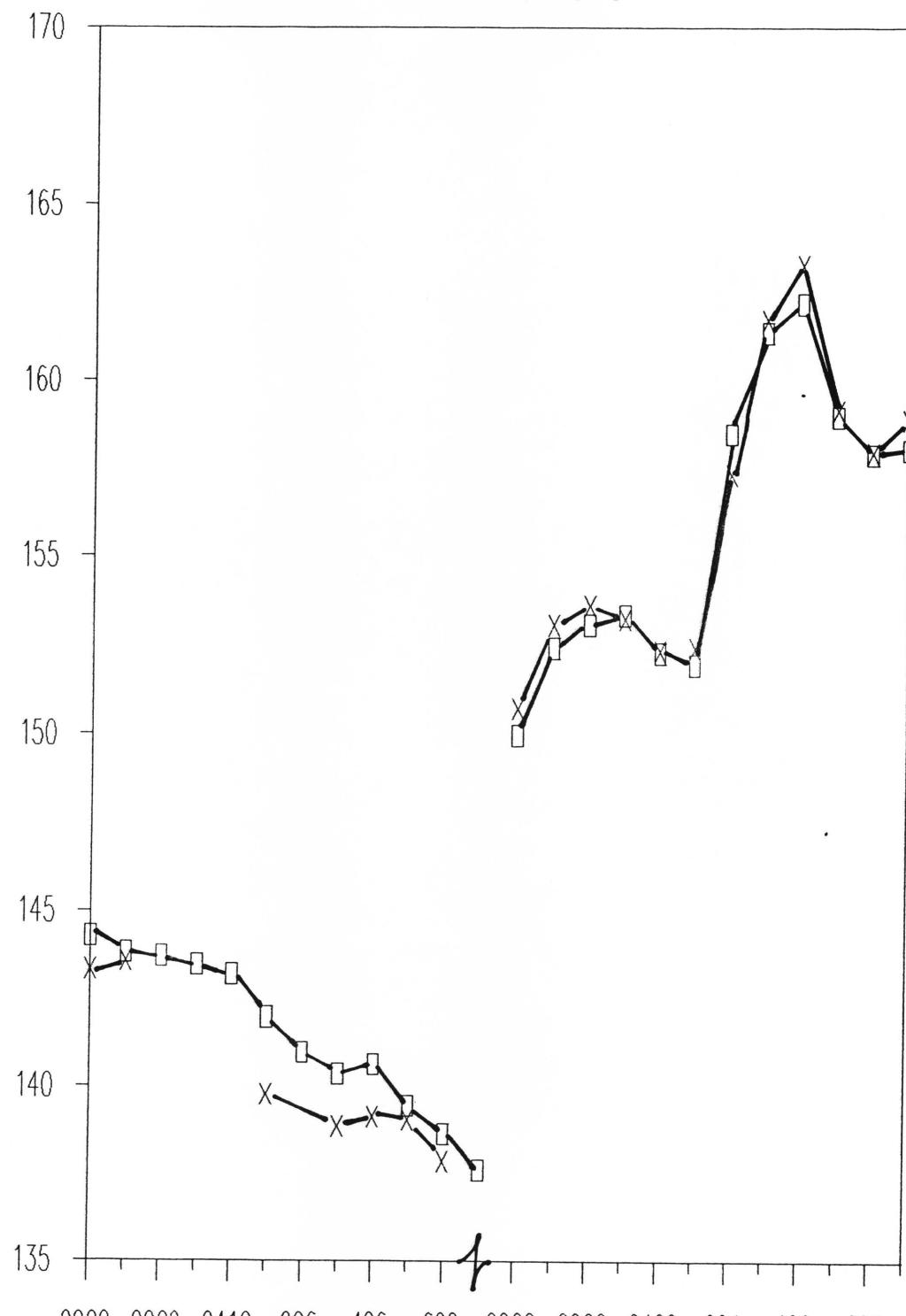
APRIL 1987 STATION C



SAN ANTONIO BAY

APRIL 1987 STATION C

SILICATE (UMOLE/L)



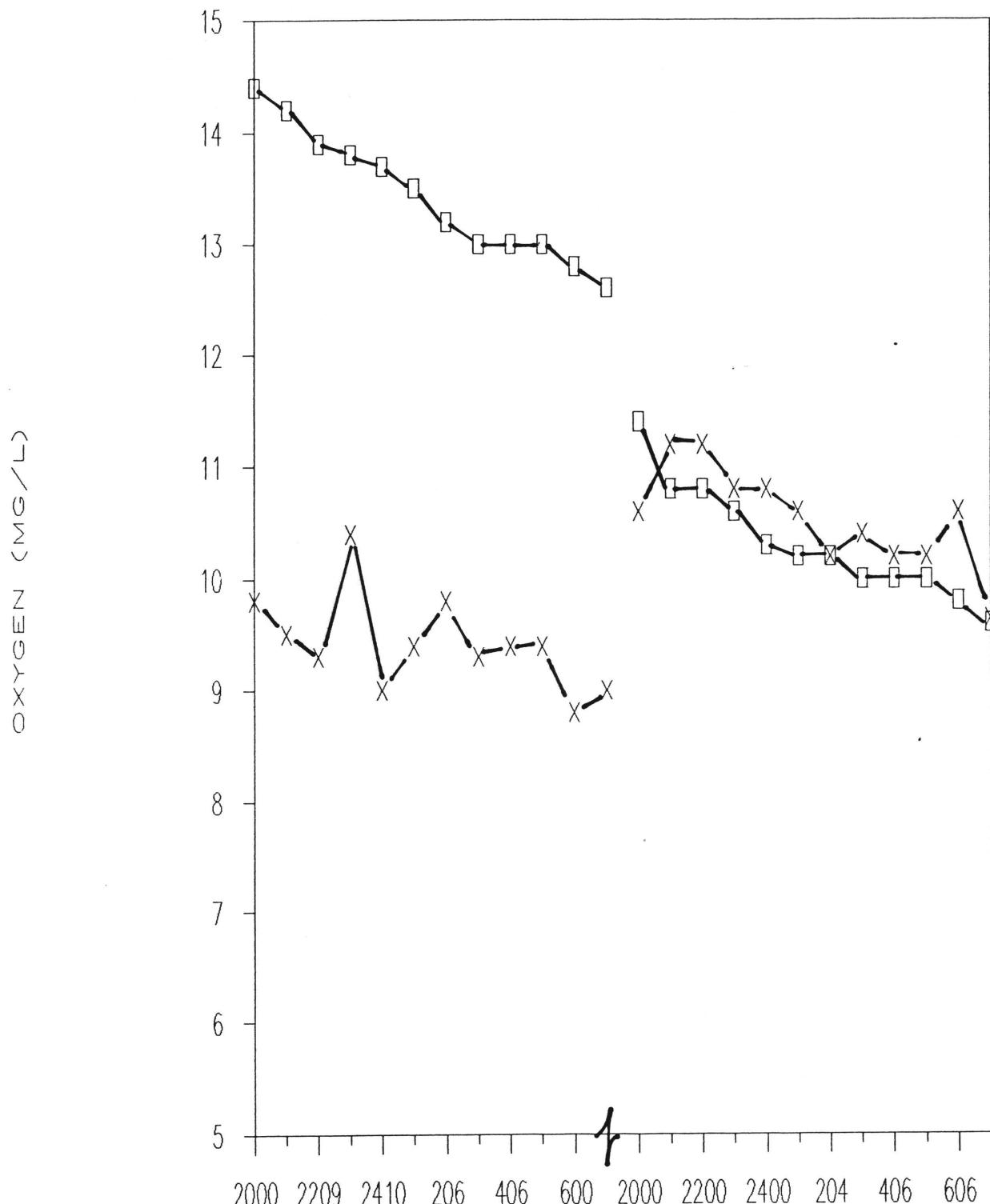
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

SAN ANTONIO BAY

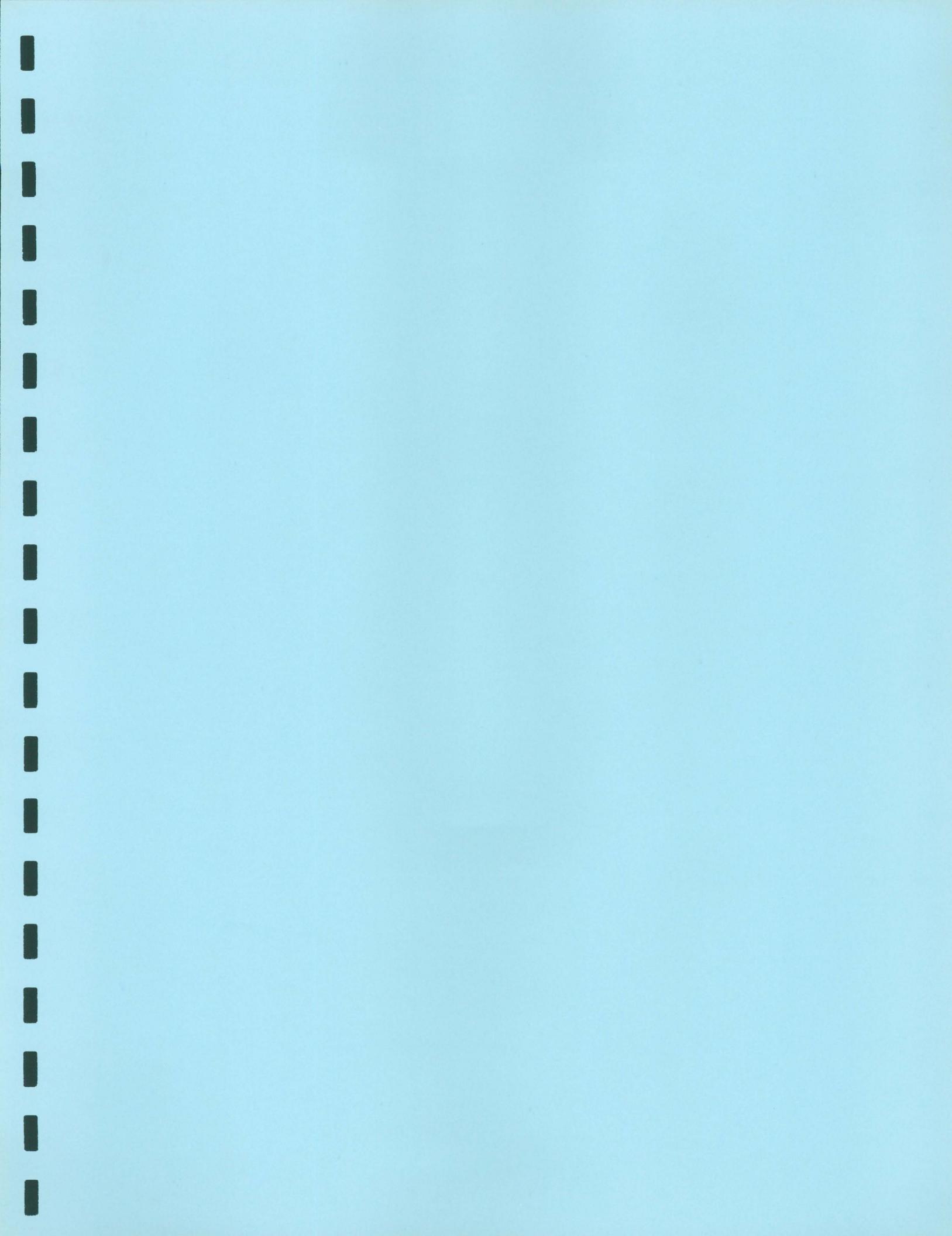
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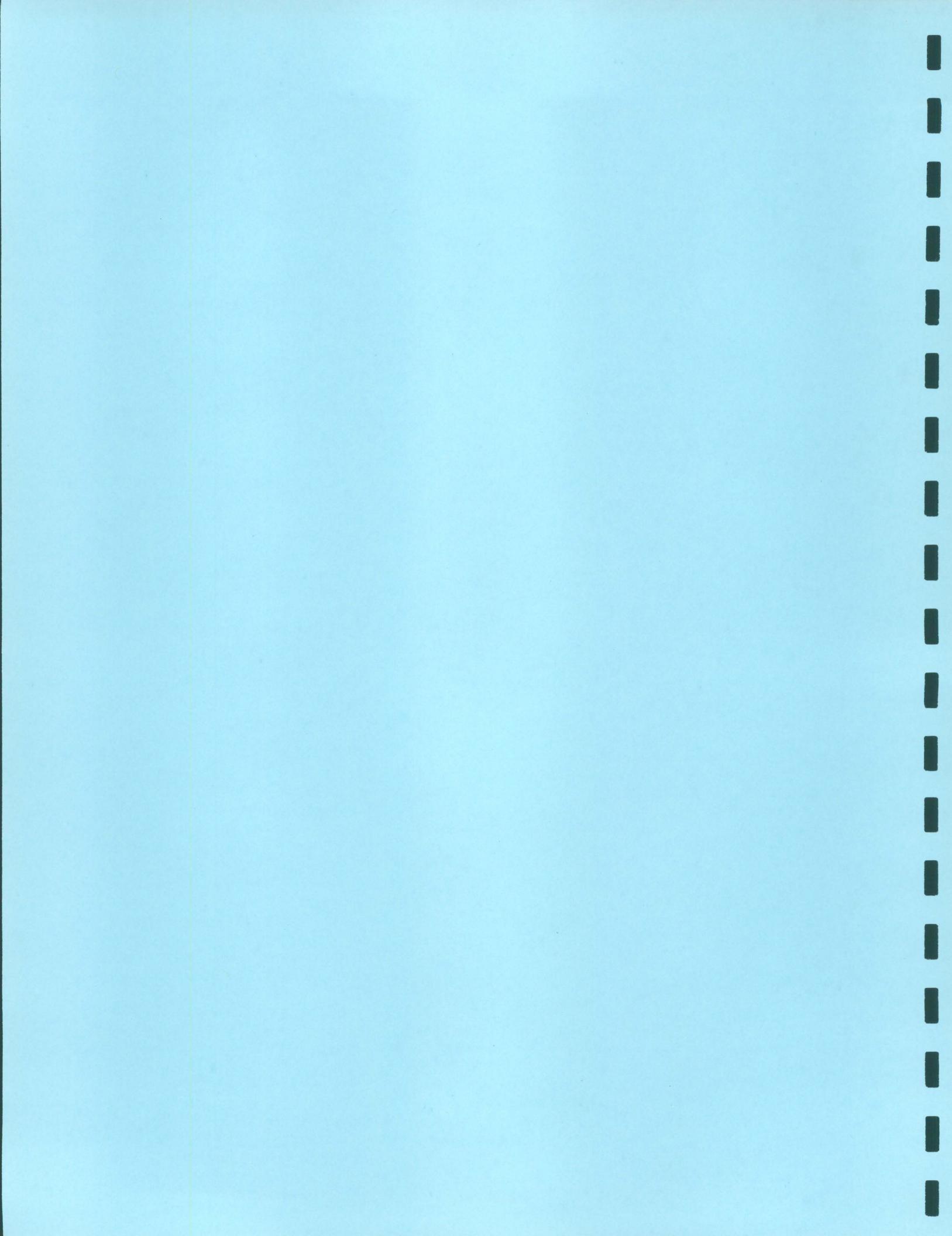


TIME OF DAY

□ SURFACE VALUES

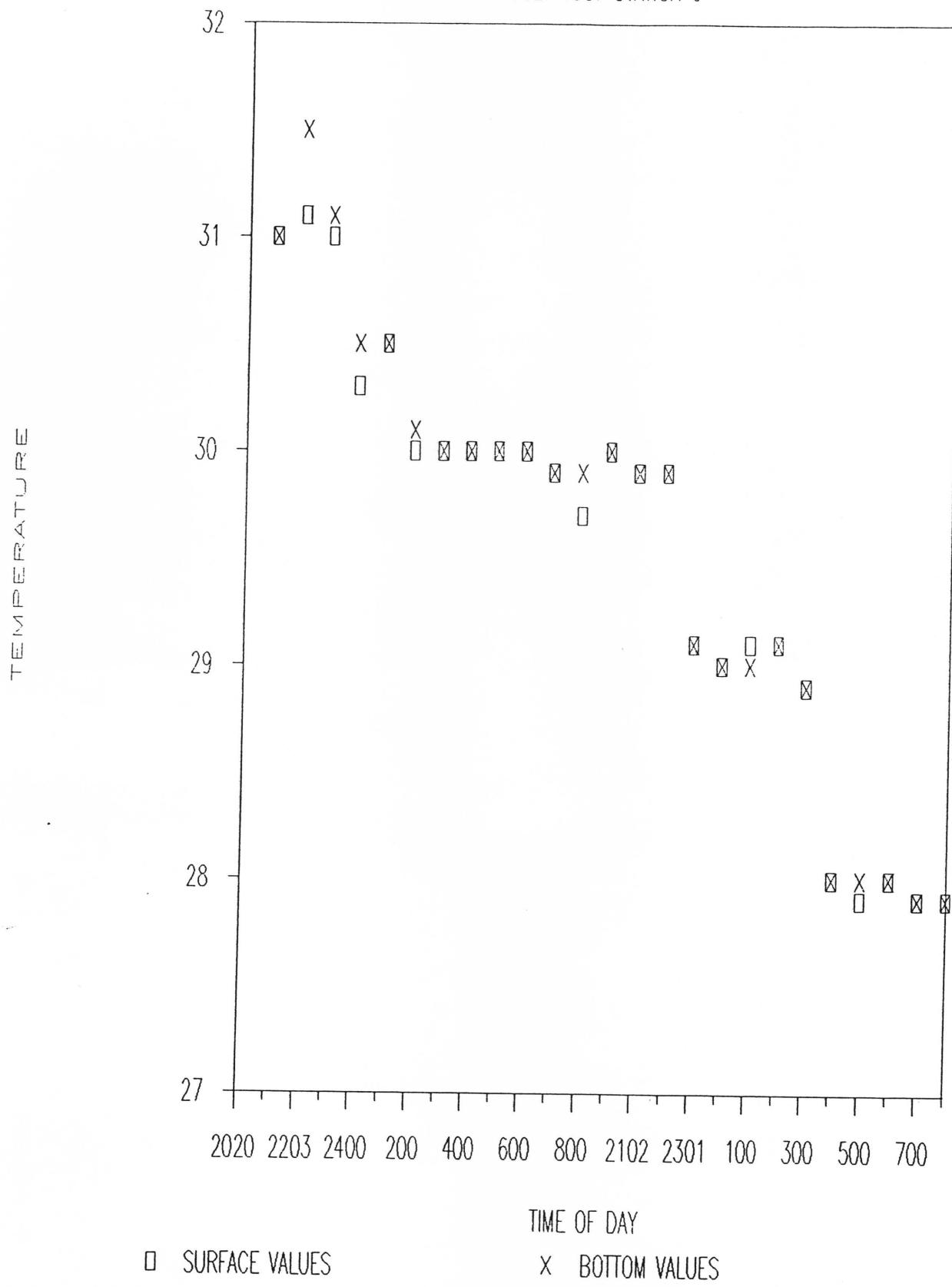
X BOTTOM VALUES





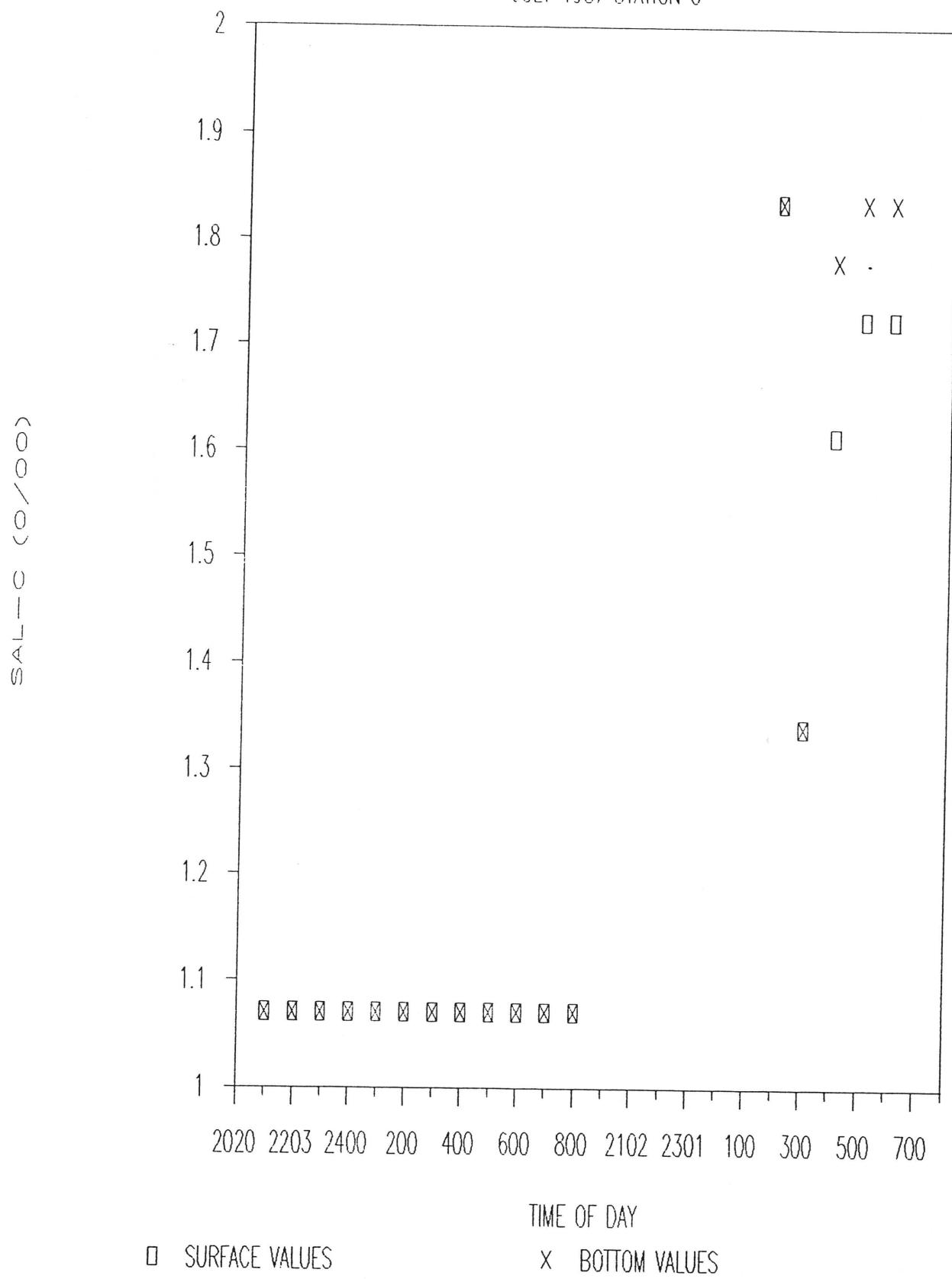
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JULY 1987 STATION C



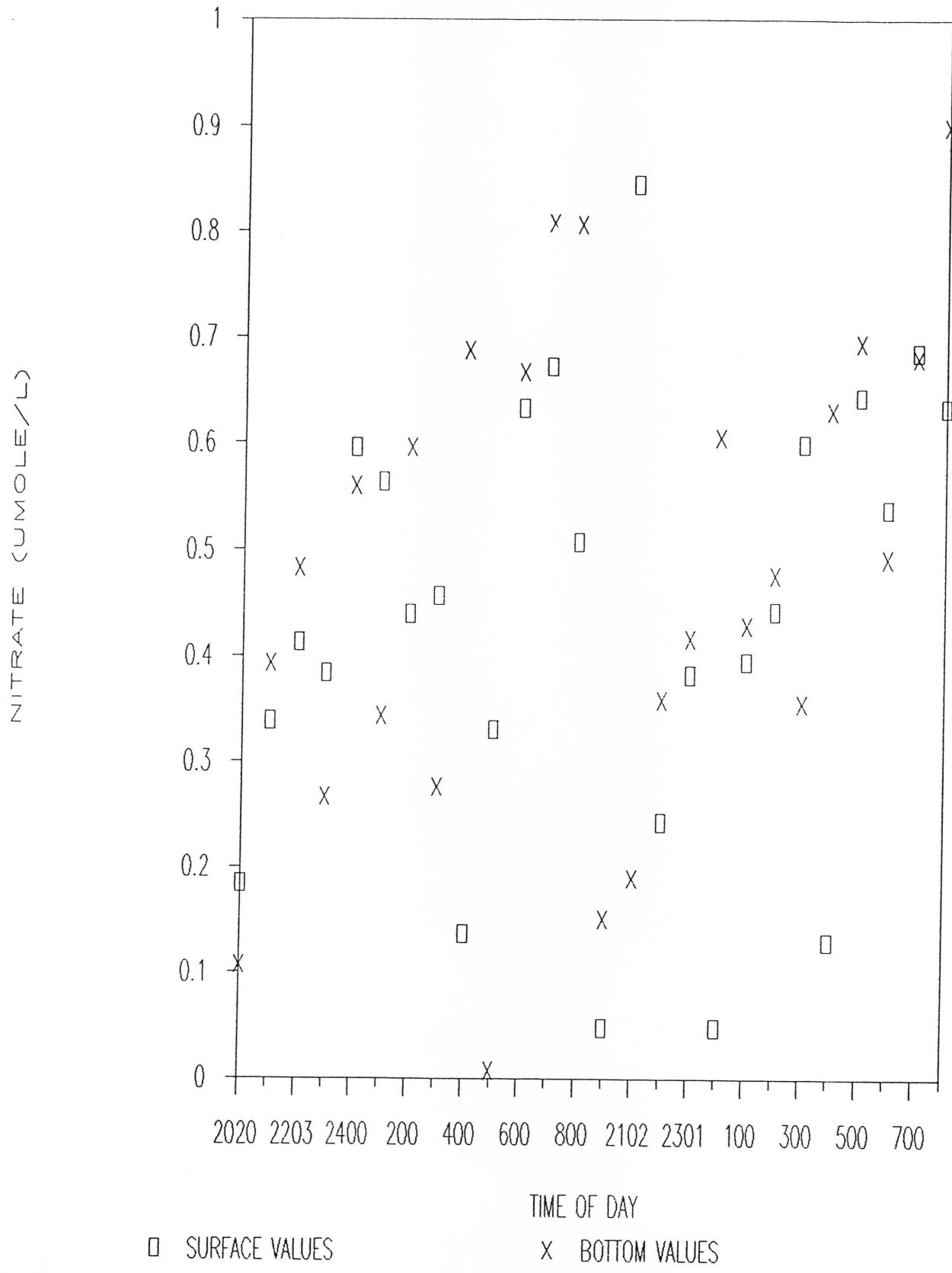
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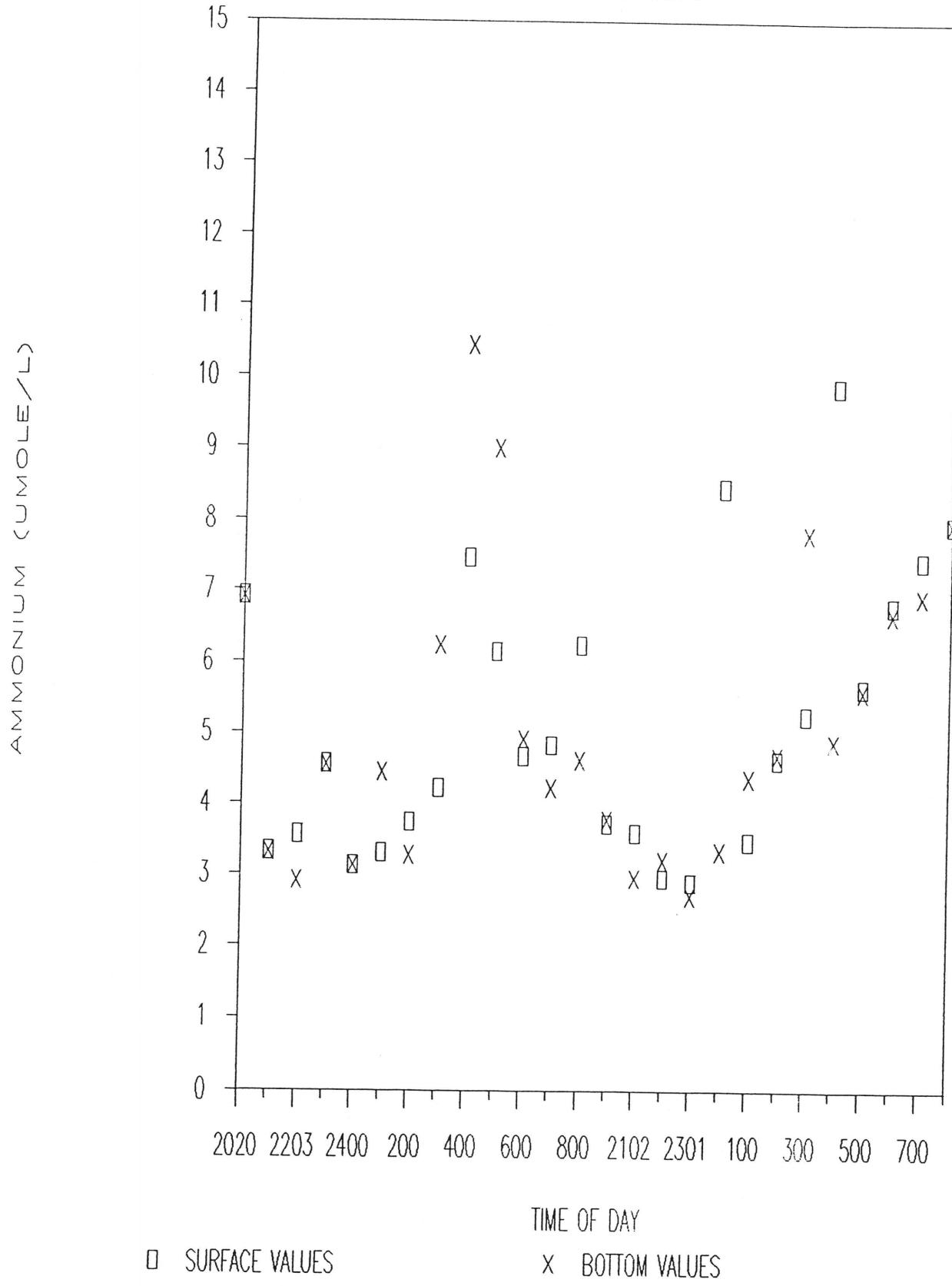
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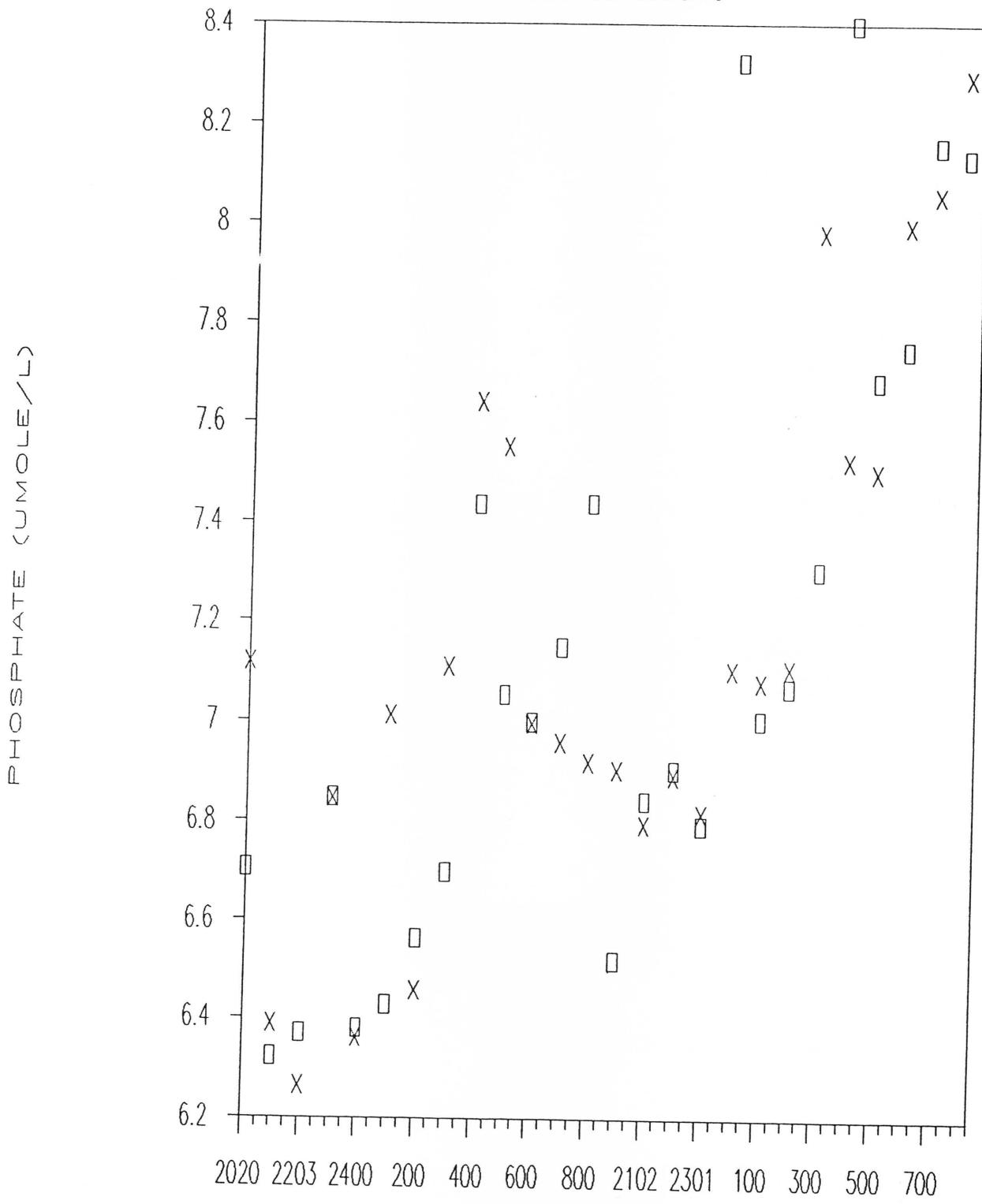
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JULY 1987 STATION C



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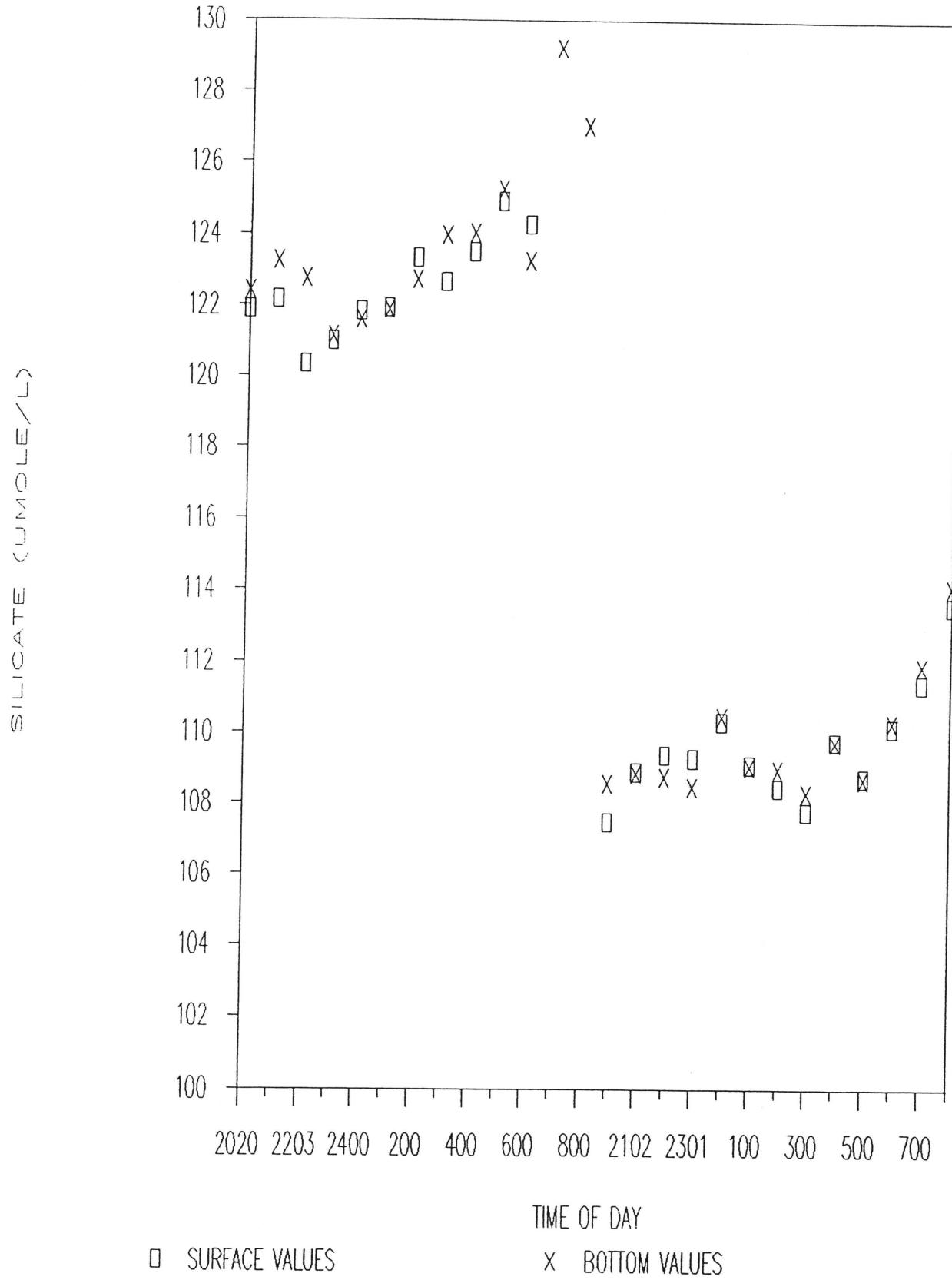


□ SURFACE VALUES

× BOTTOM VALUES

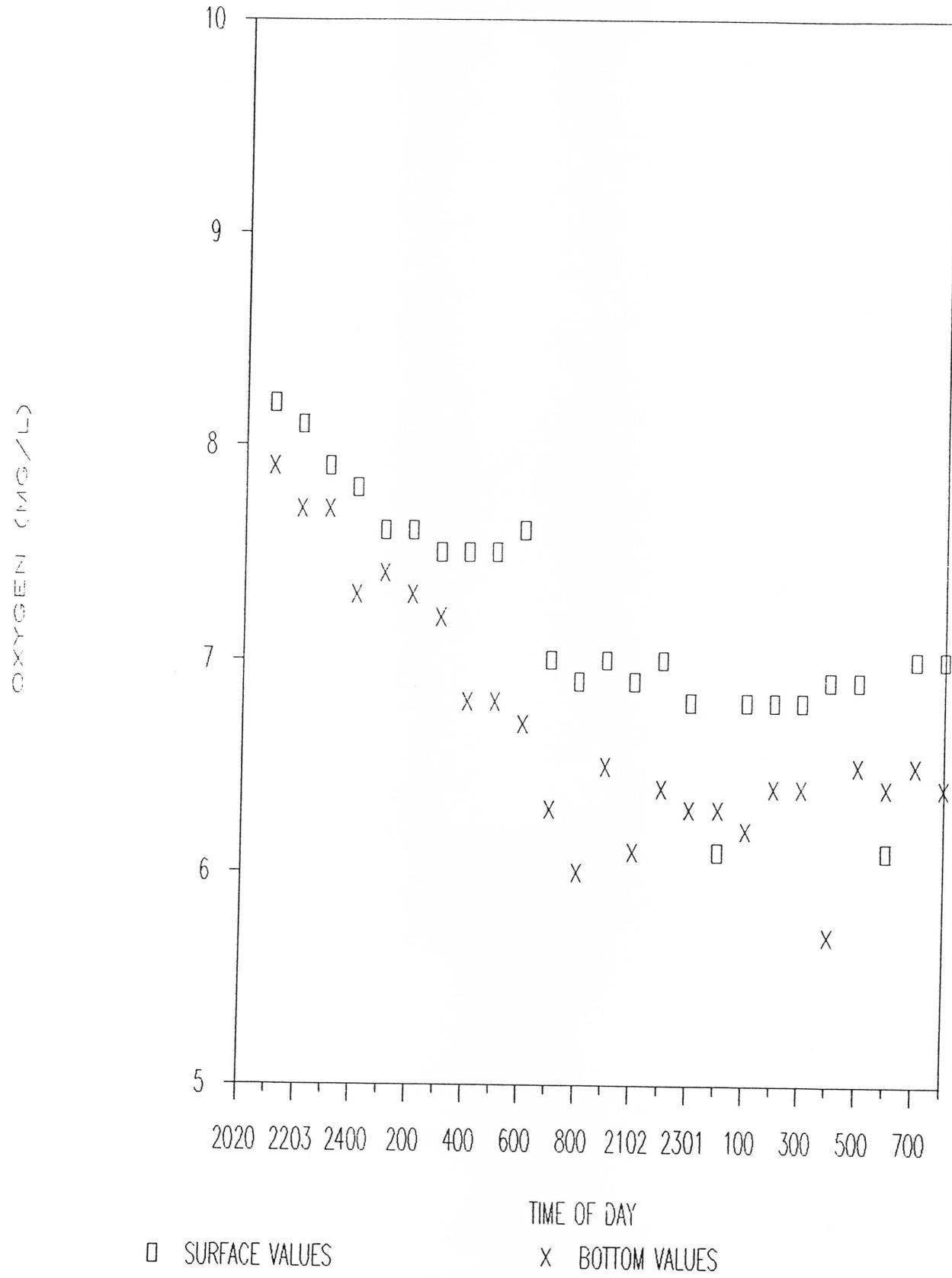
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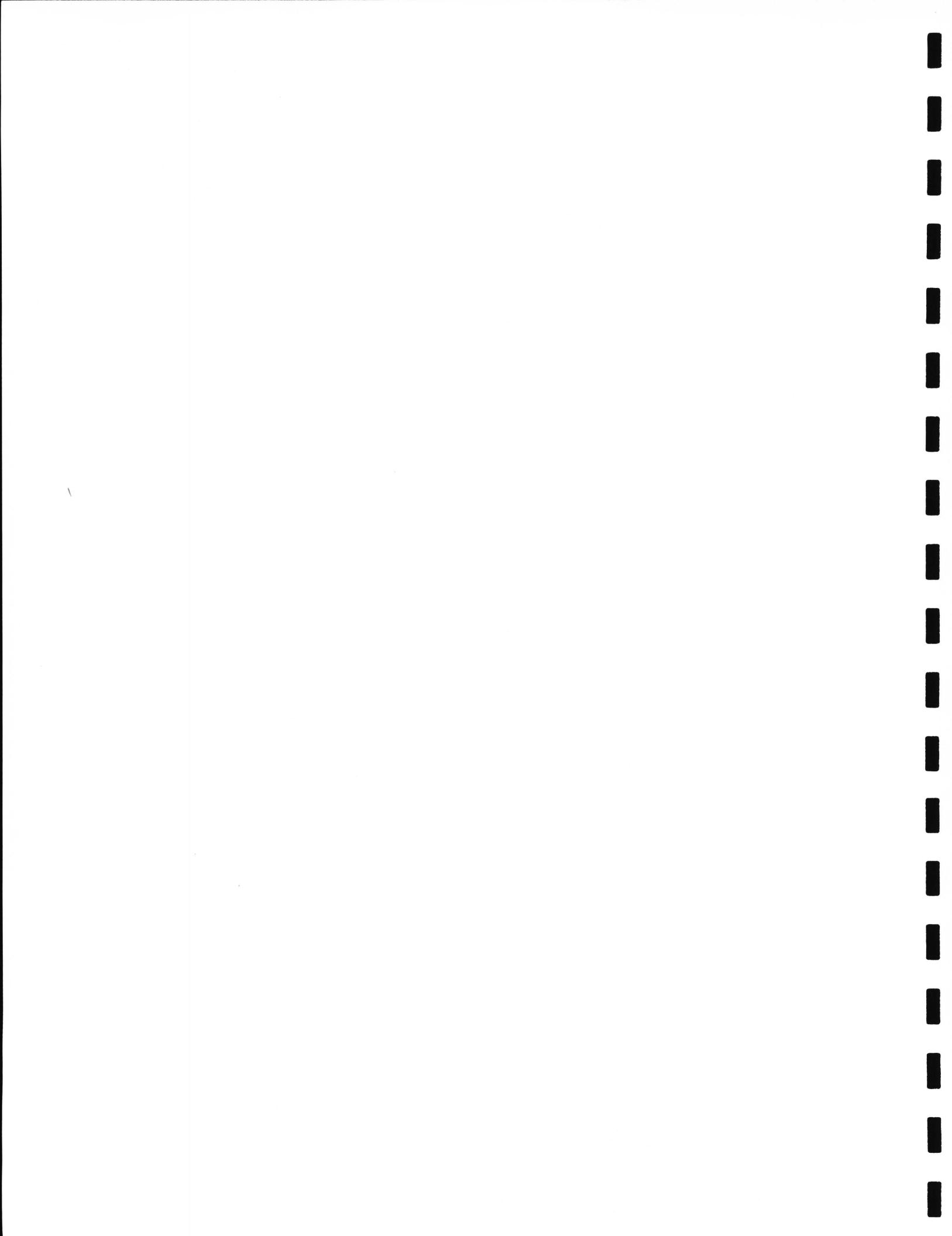
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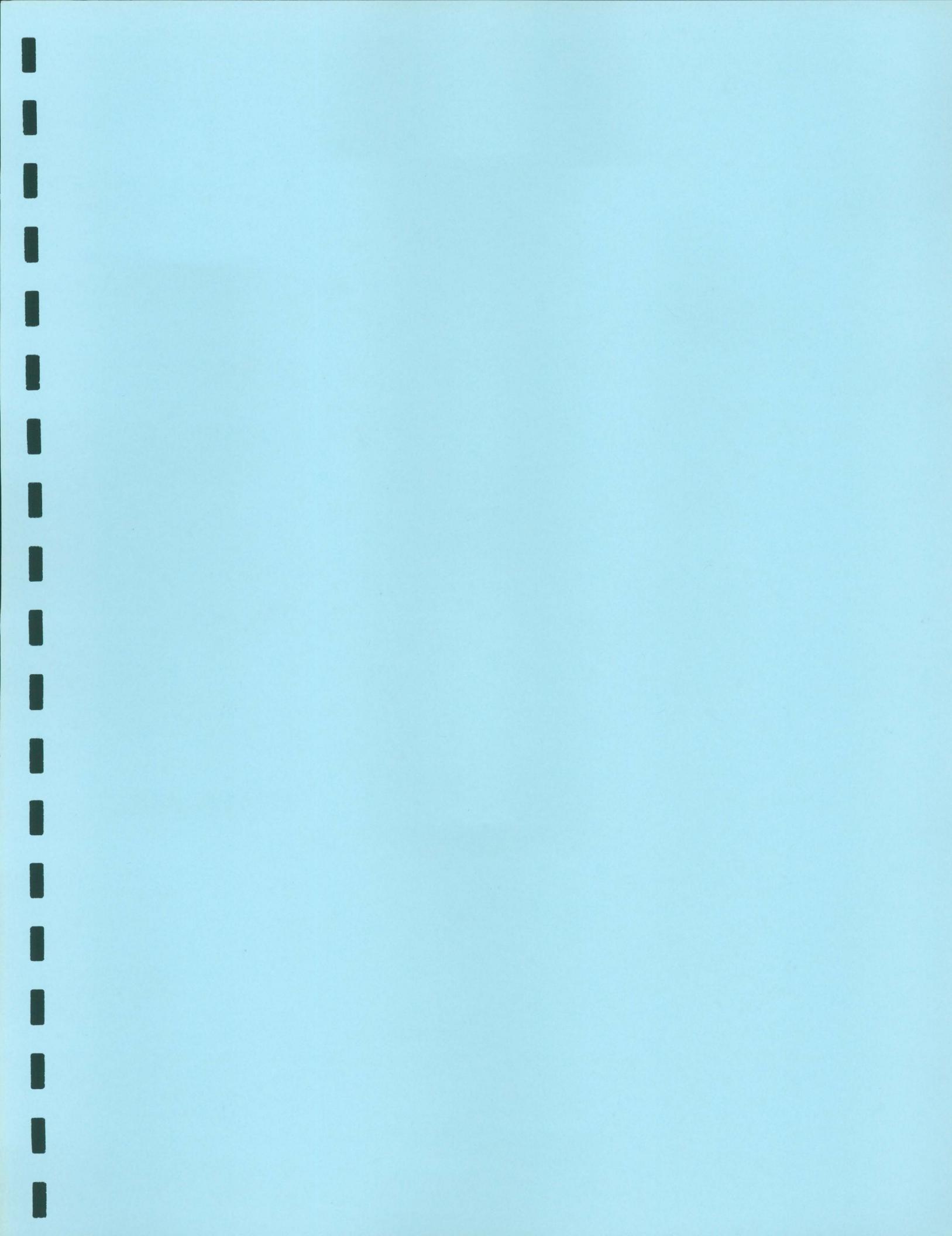


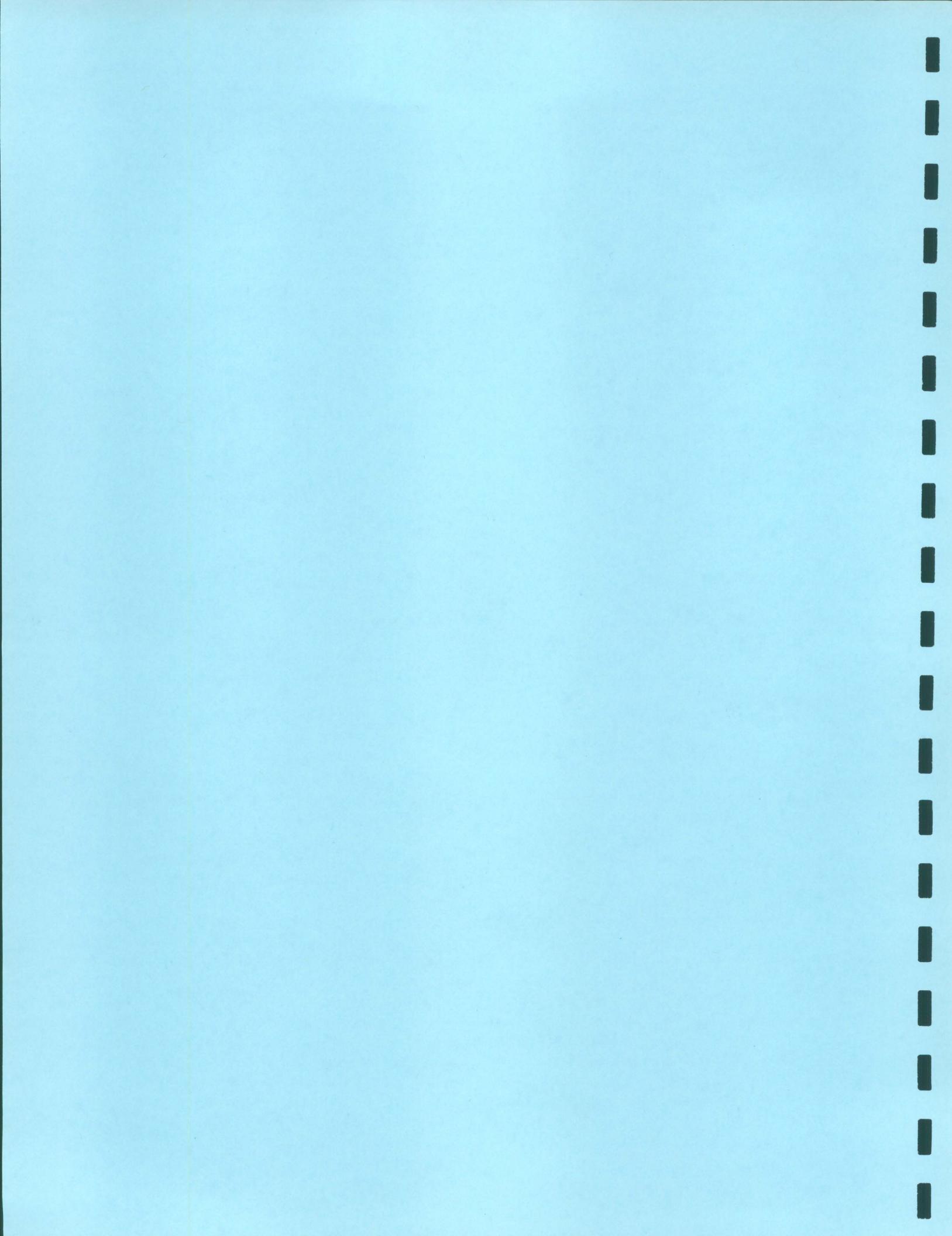
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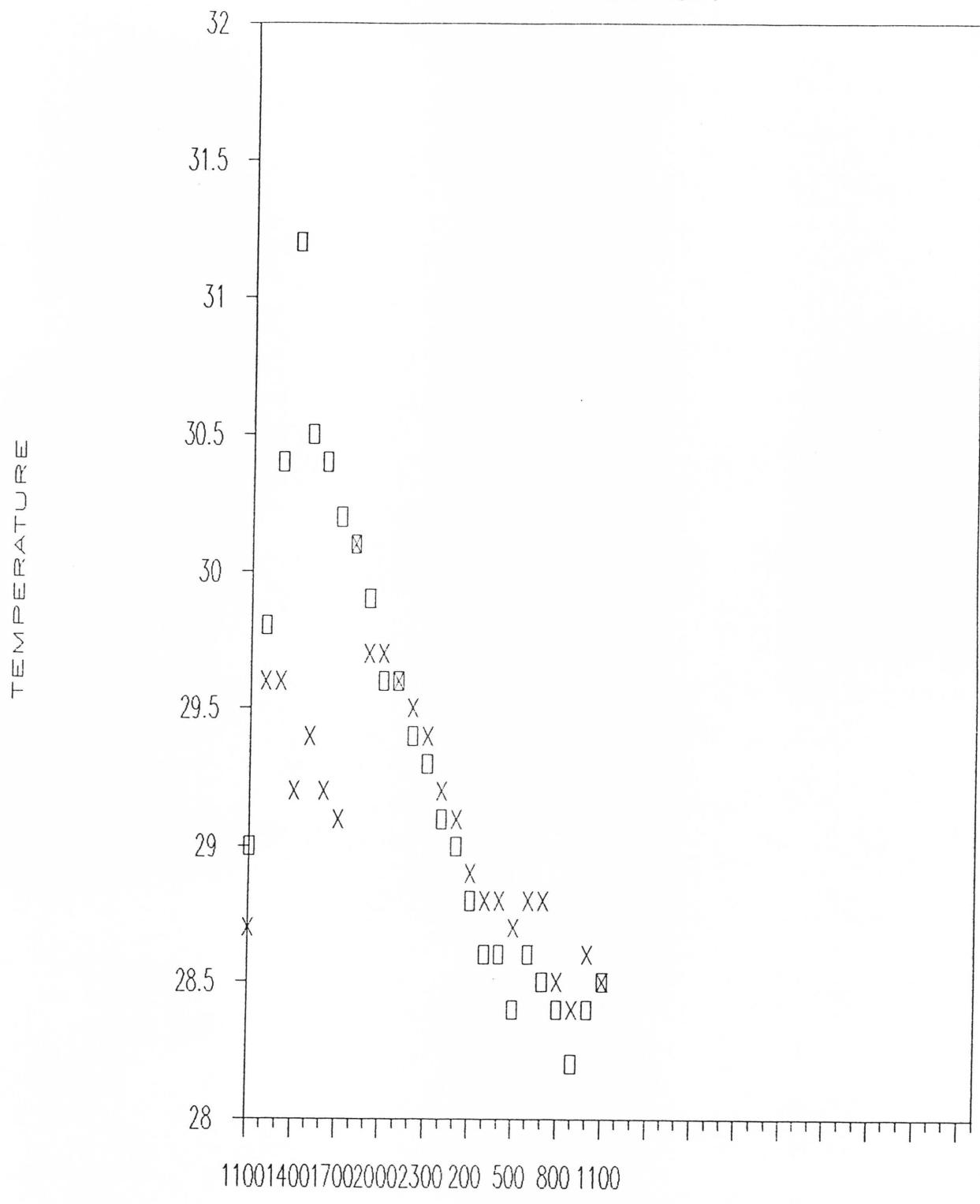






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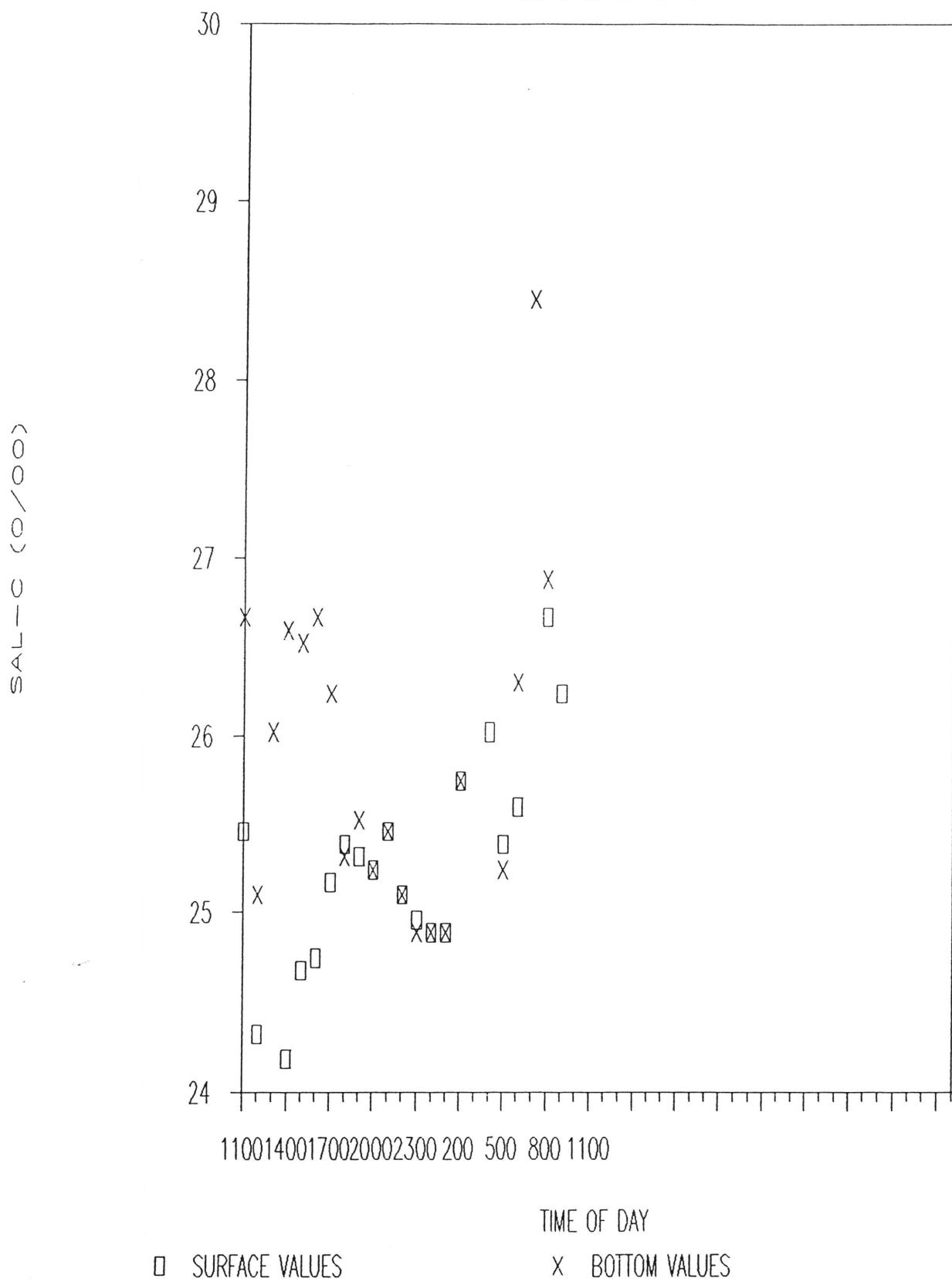
TIME OF DAY

SURFACE VALUES

X BOTTOM VALUES

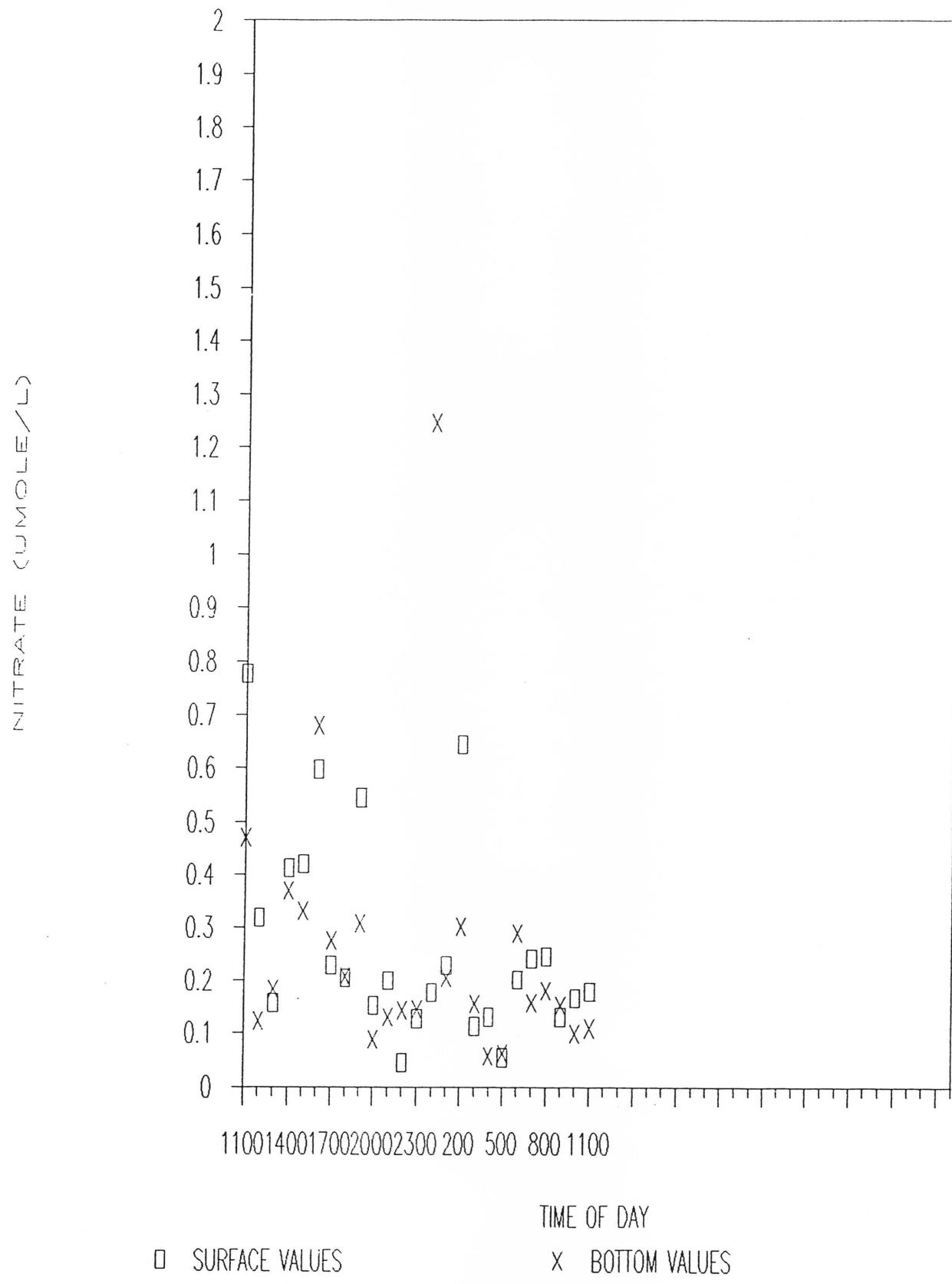
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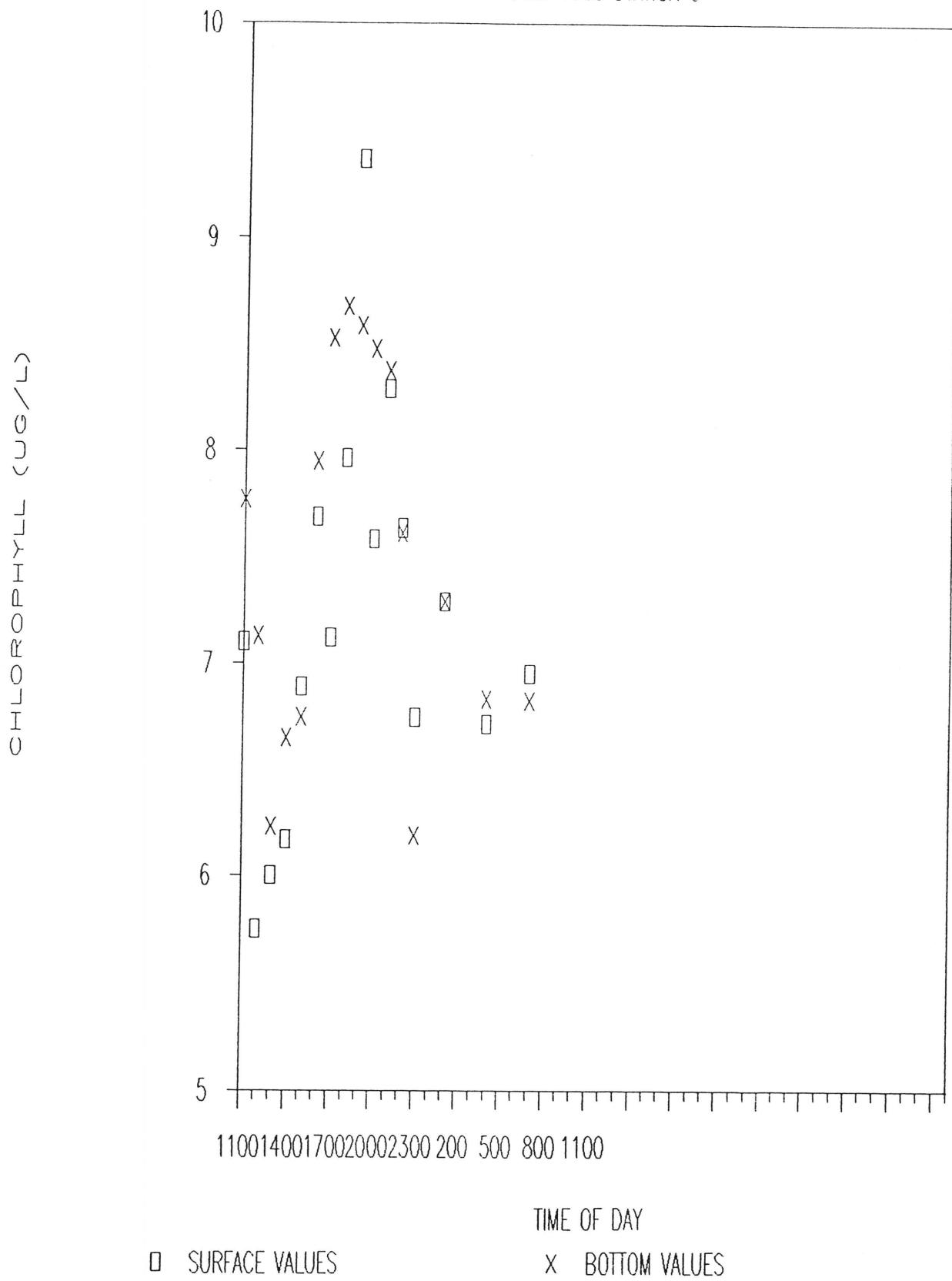
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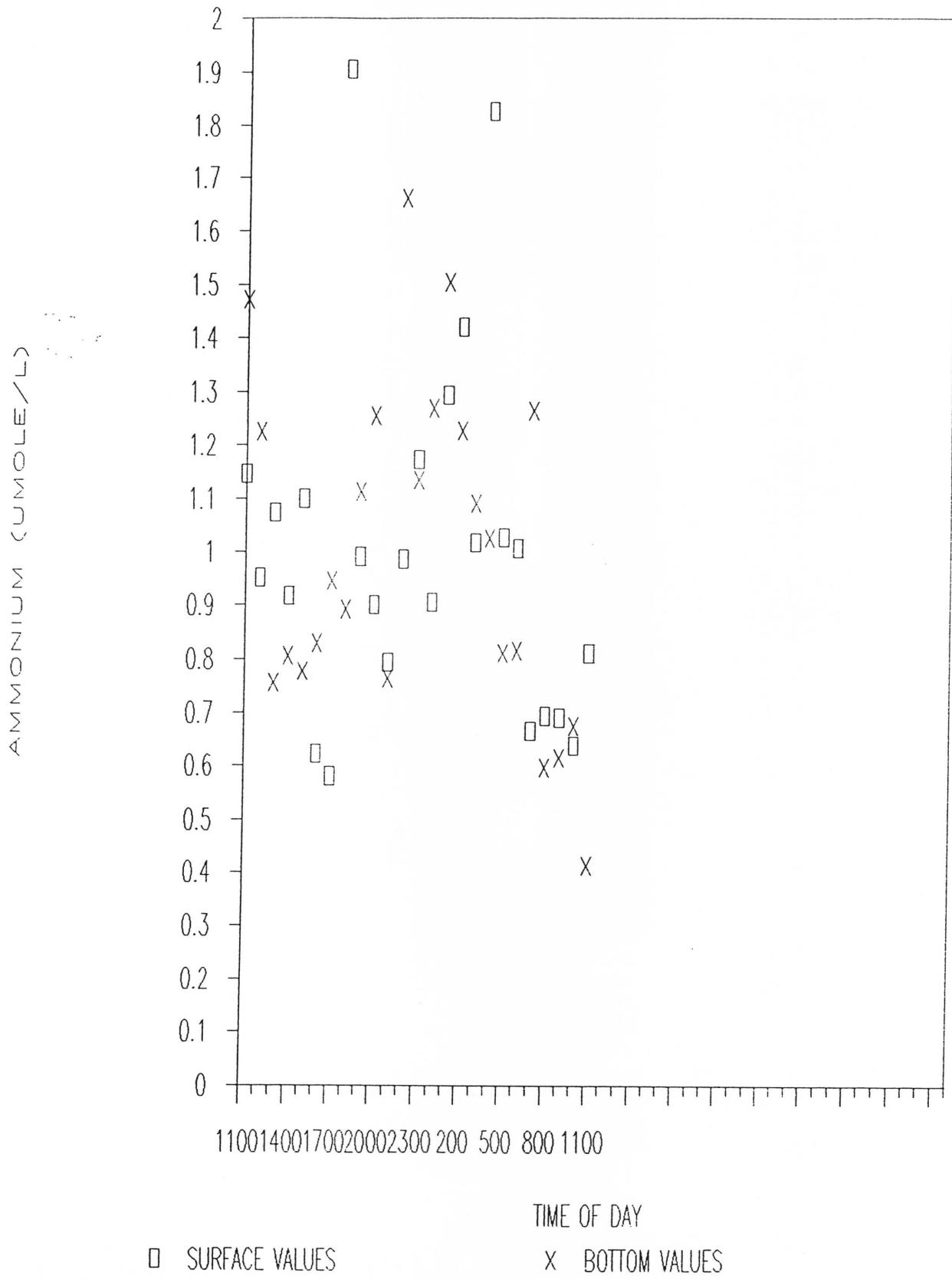
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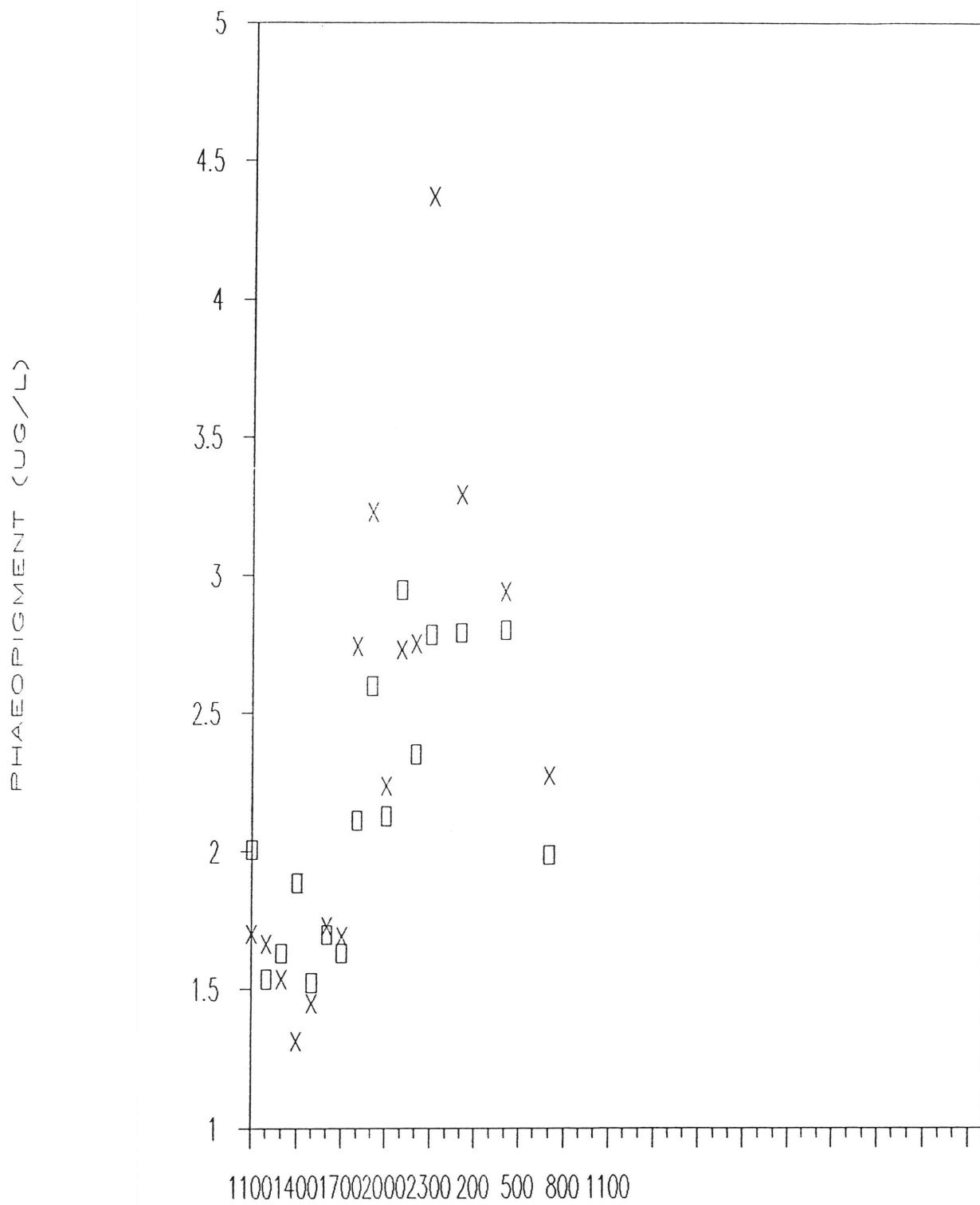
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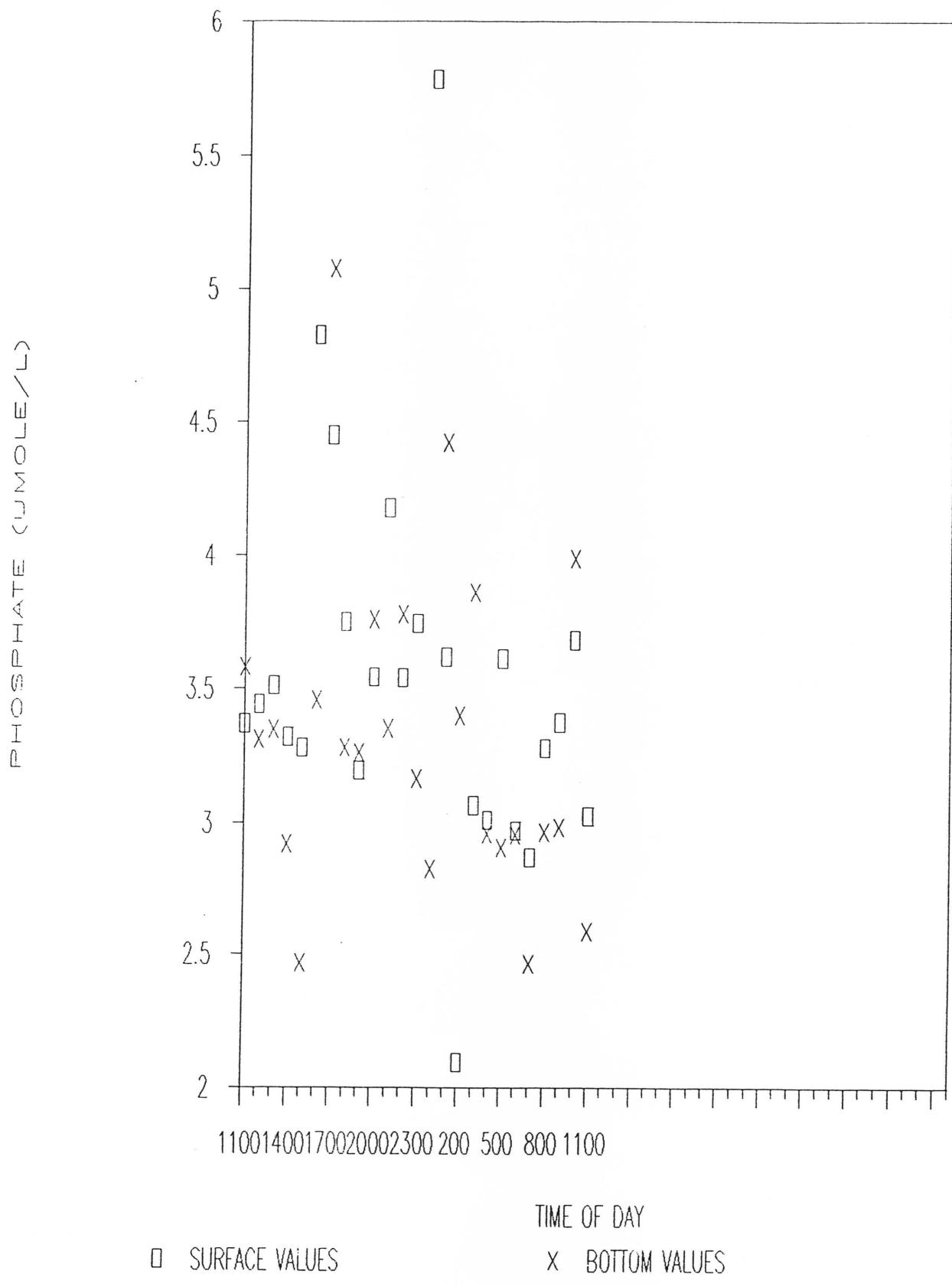
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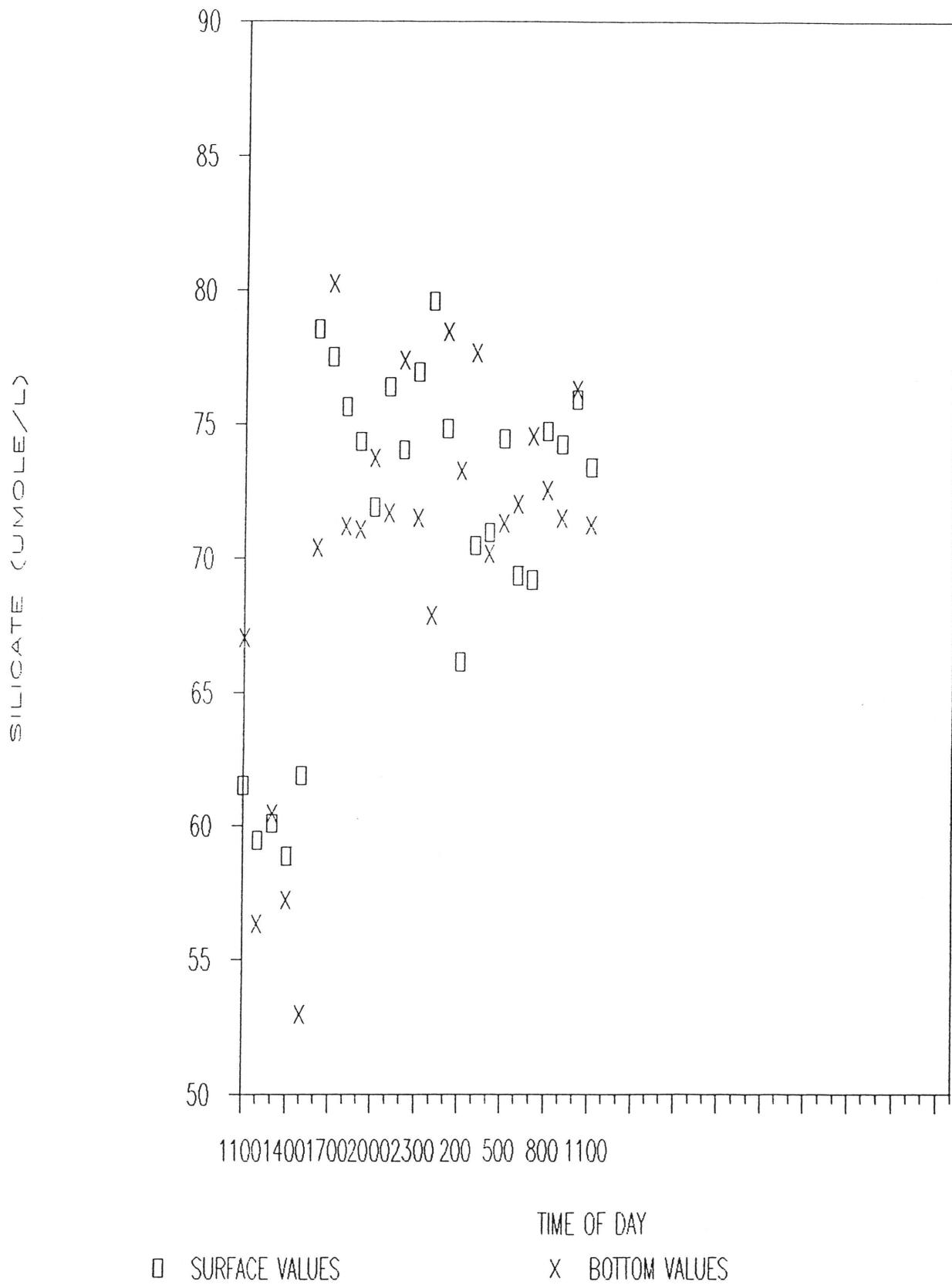
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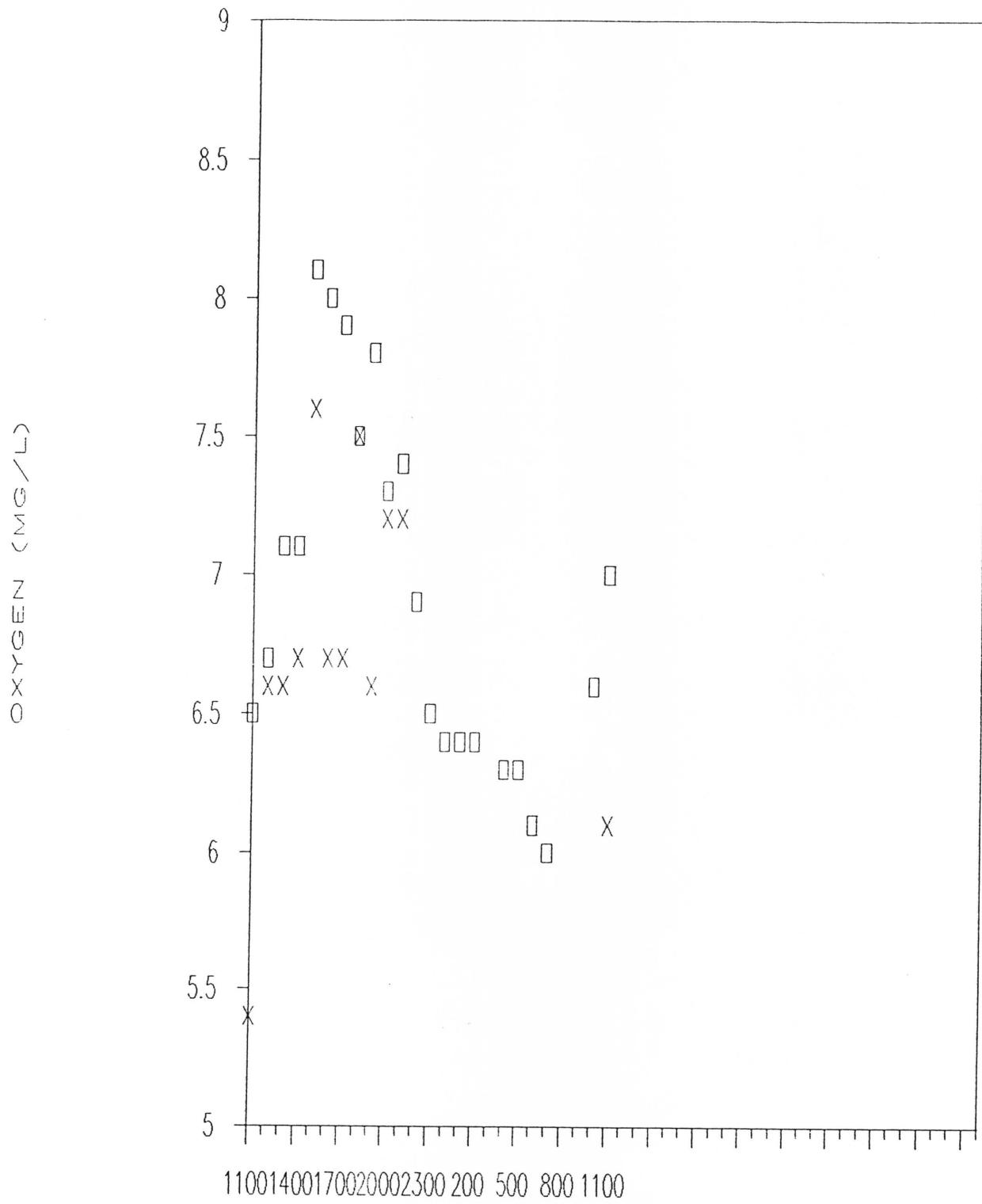
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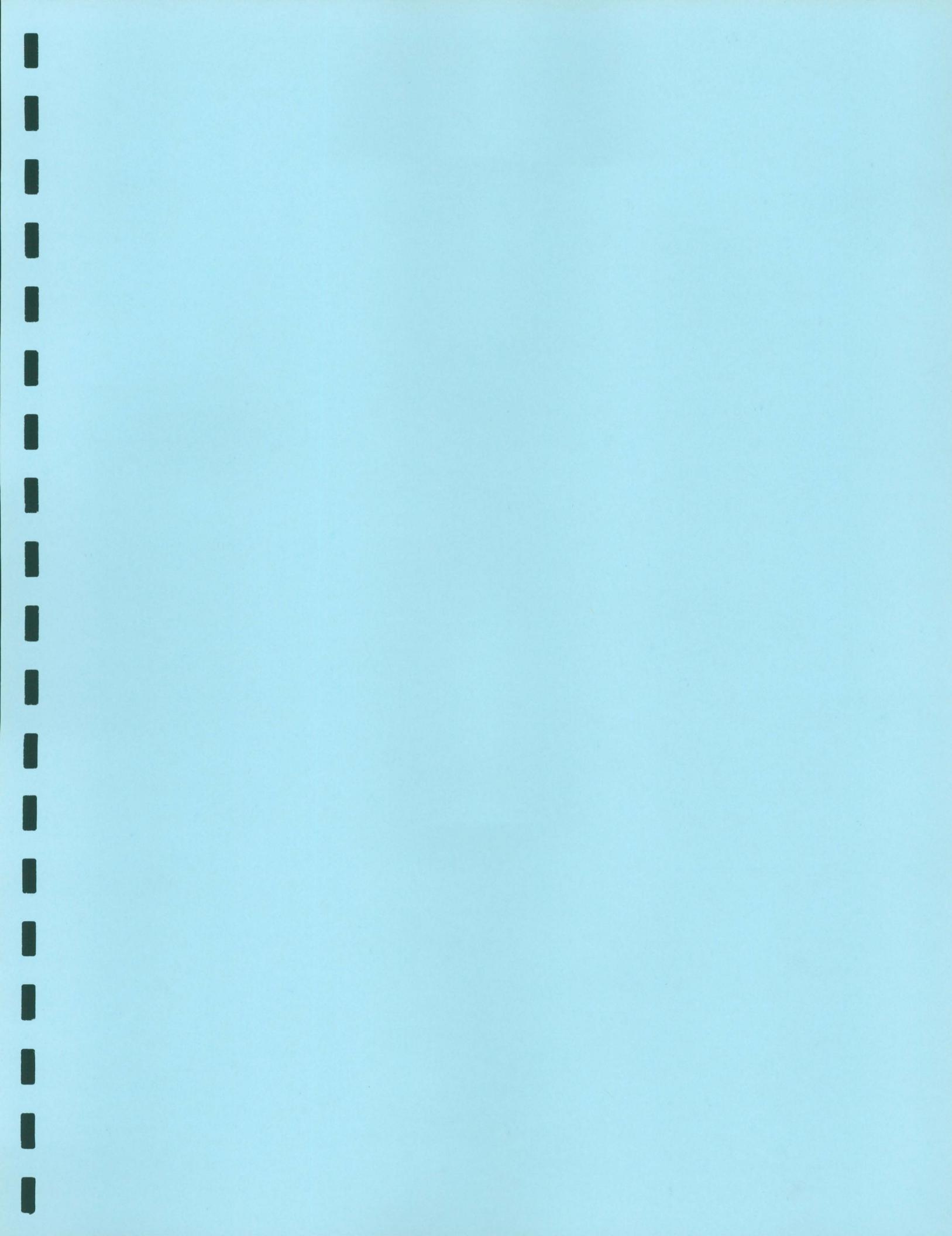
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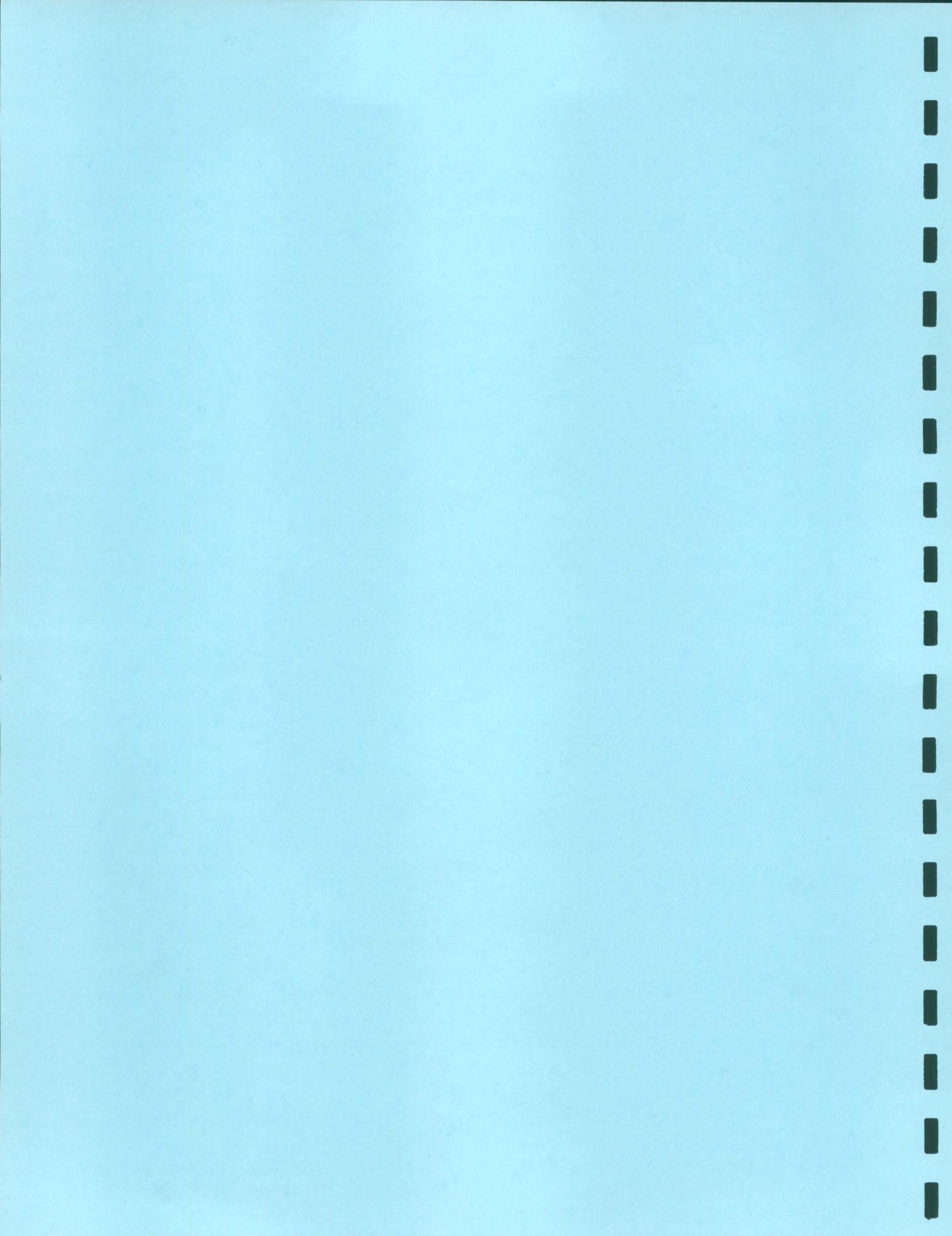


□ SURFACE VALUES

X BOTTOM VALUES



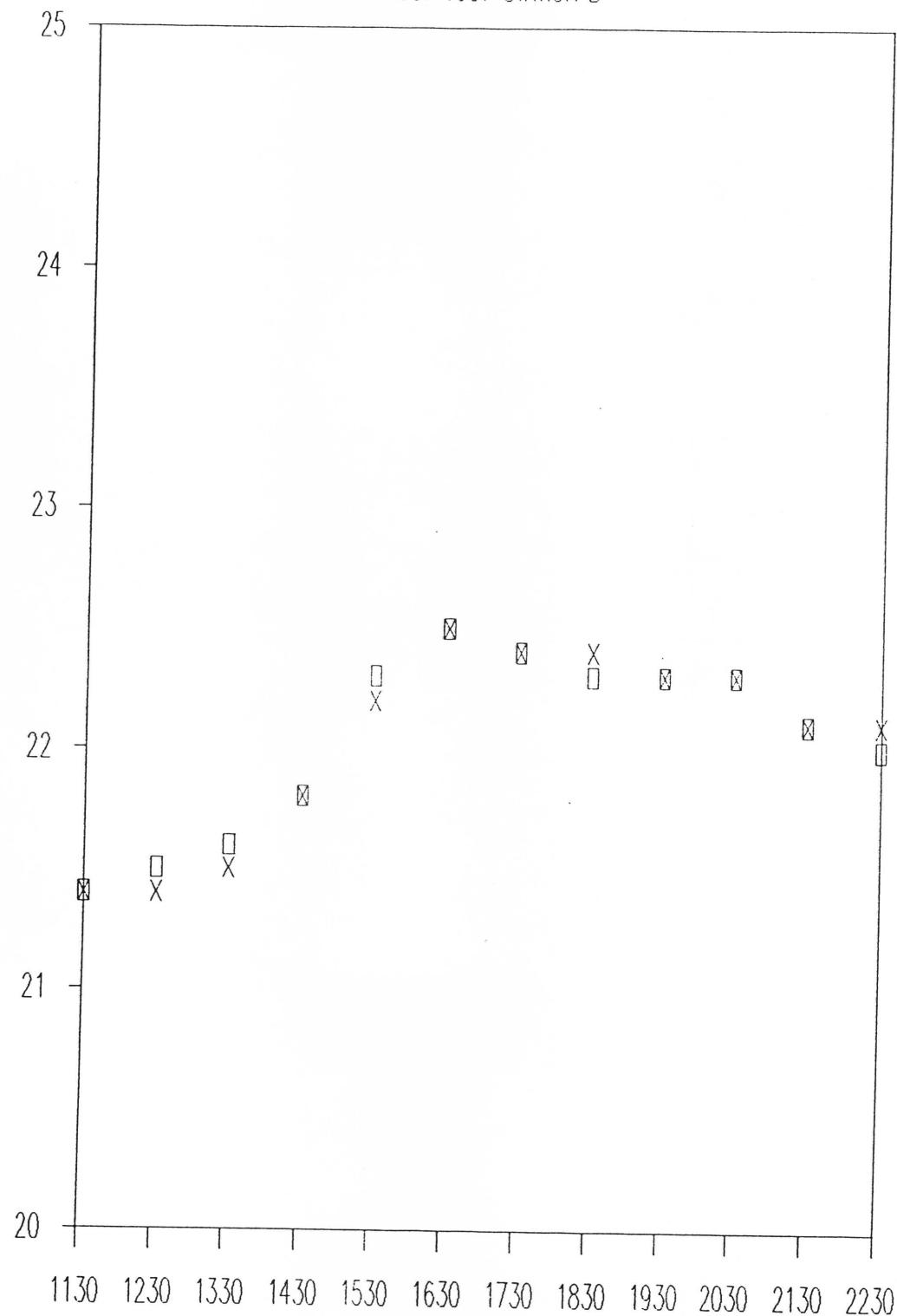




CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B

TEMPERATURE

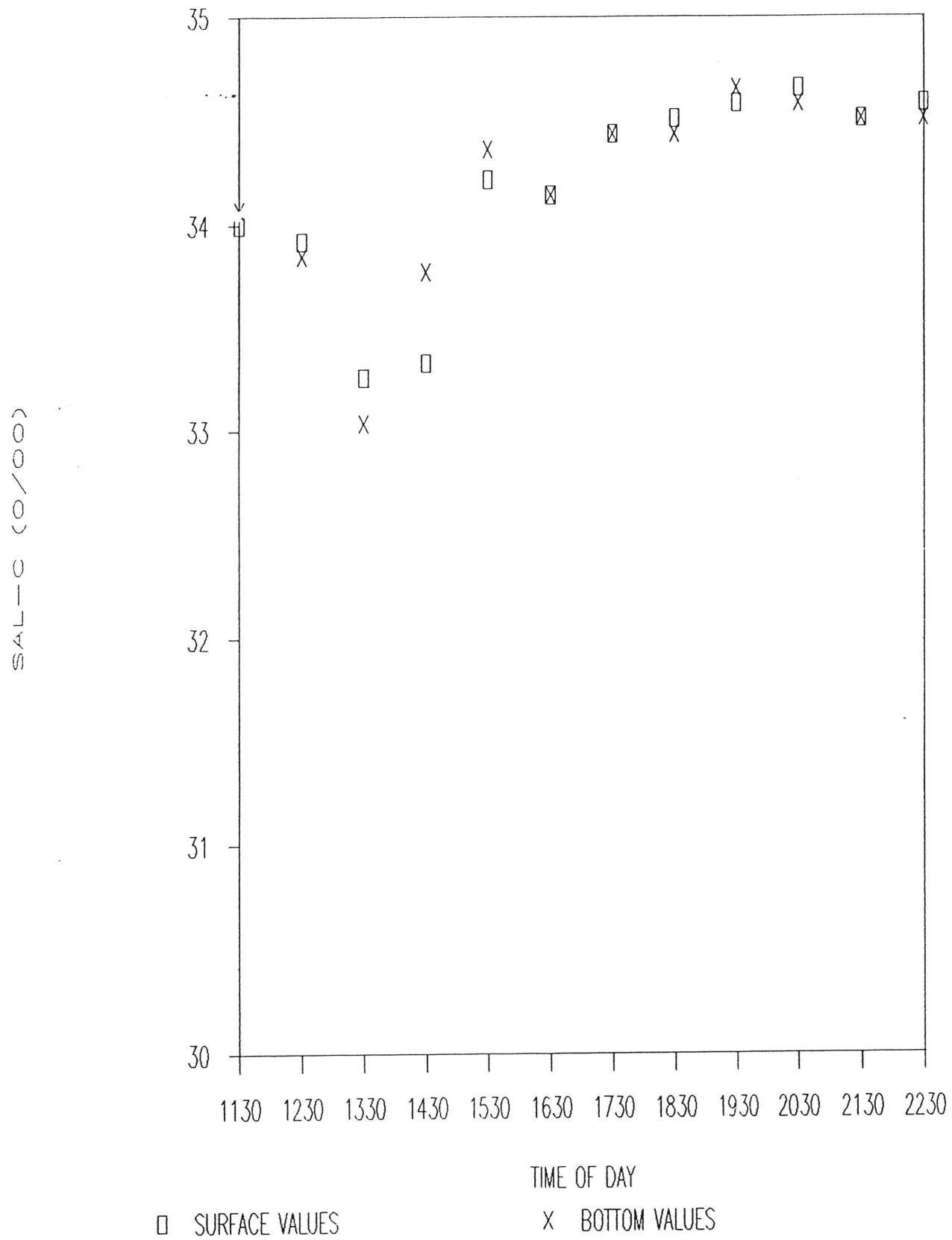


□ SURFACE VALUES

X BOTTOM VALUES

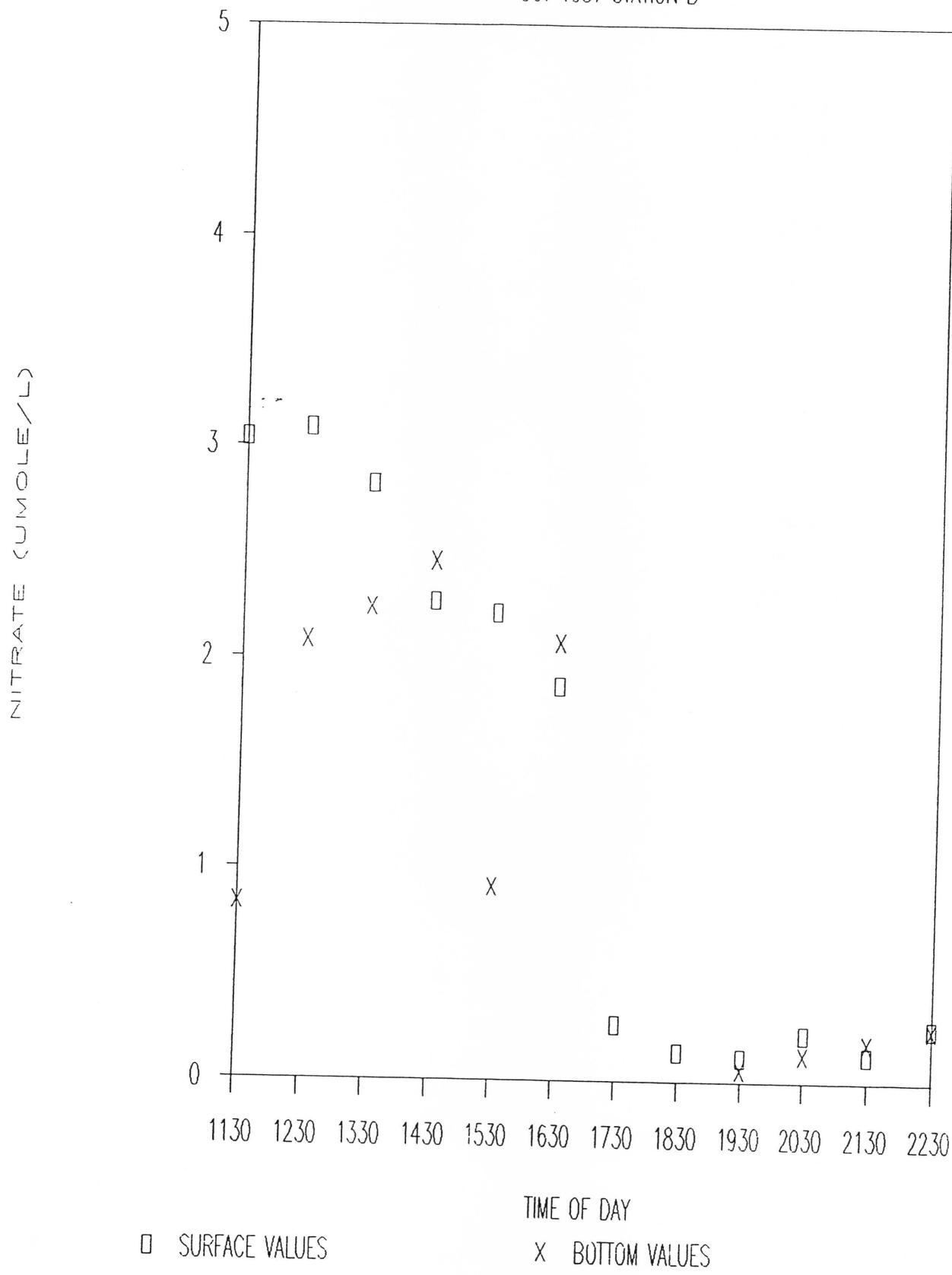
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B



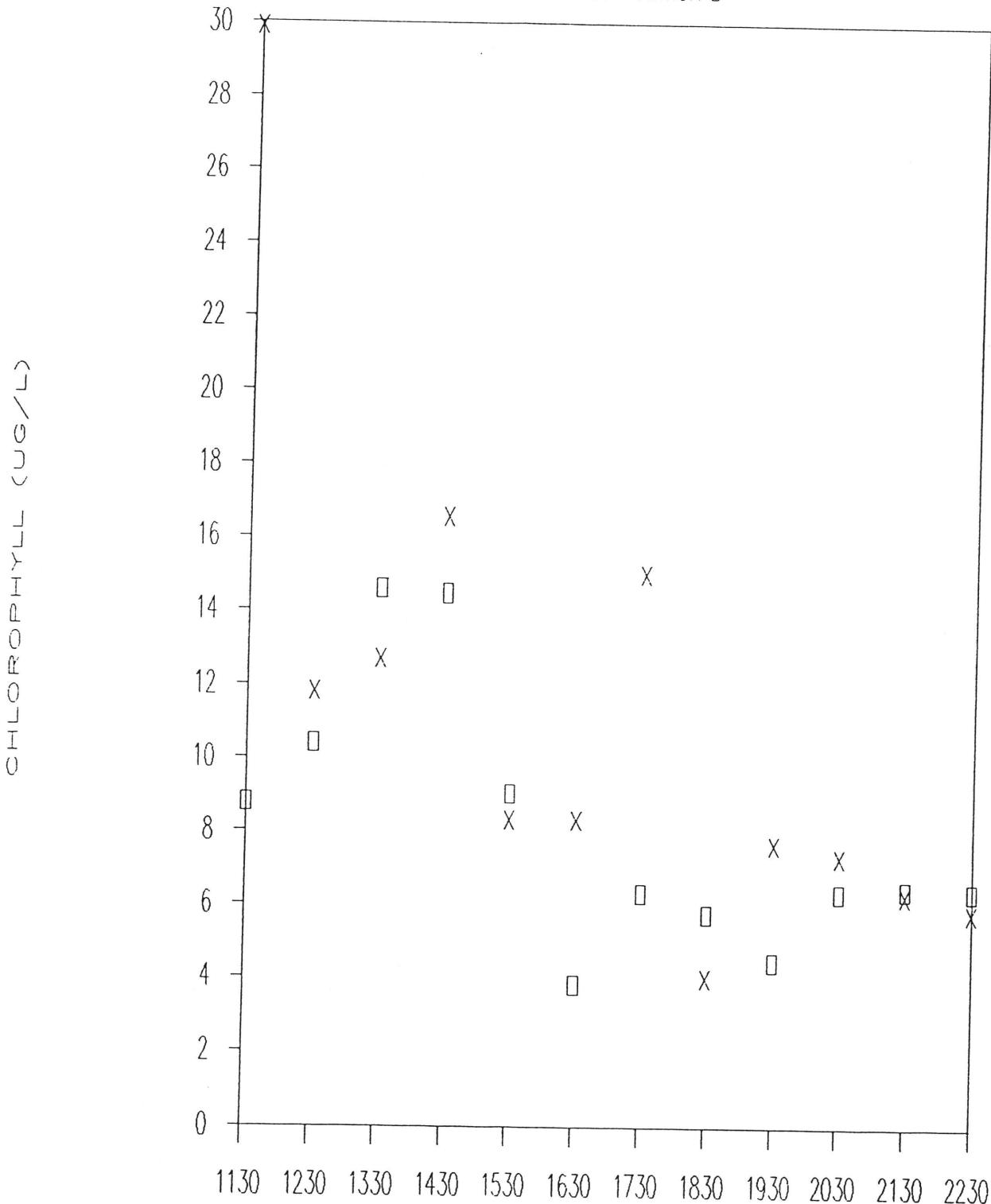
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B



CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B

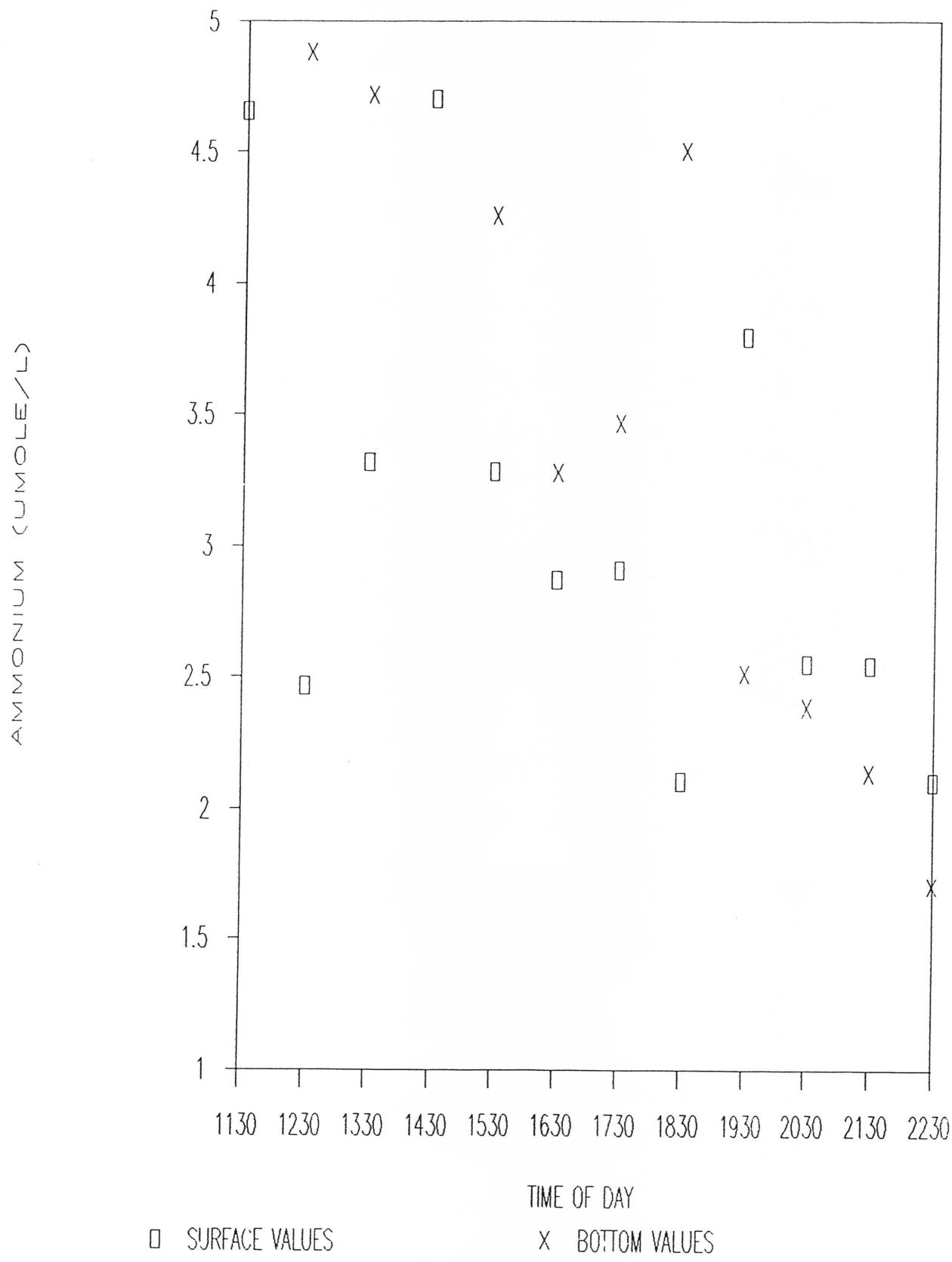


□ SURFACE VALUES

X BOTTOM VALUES

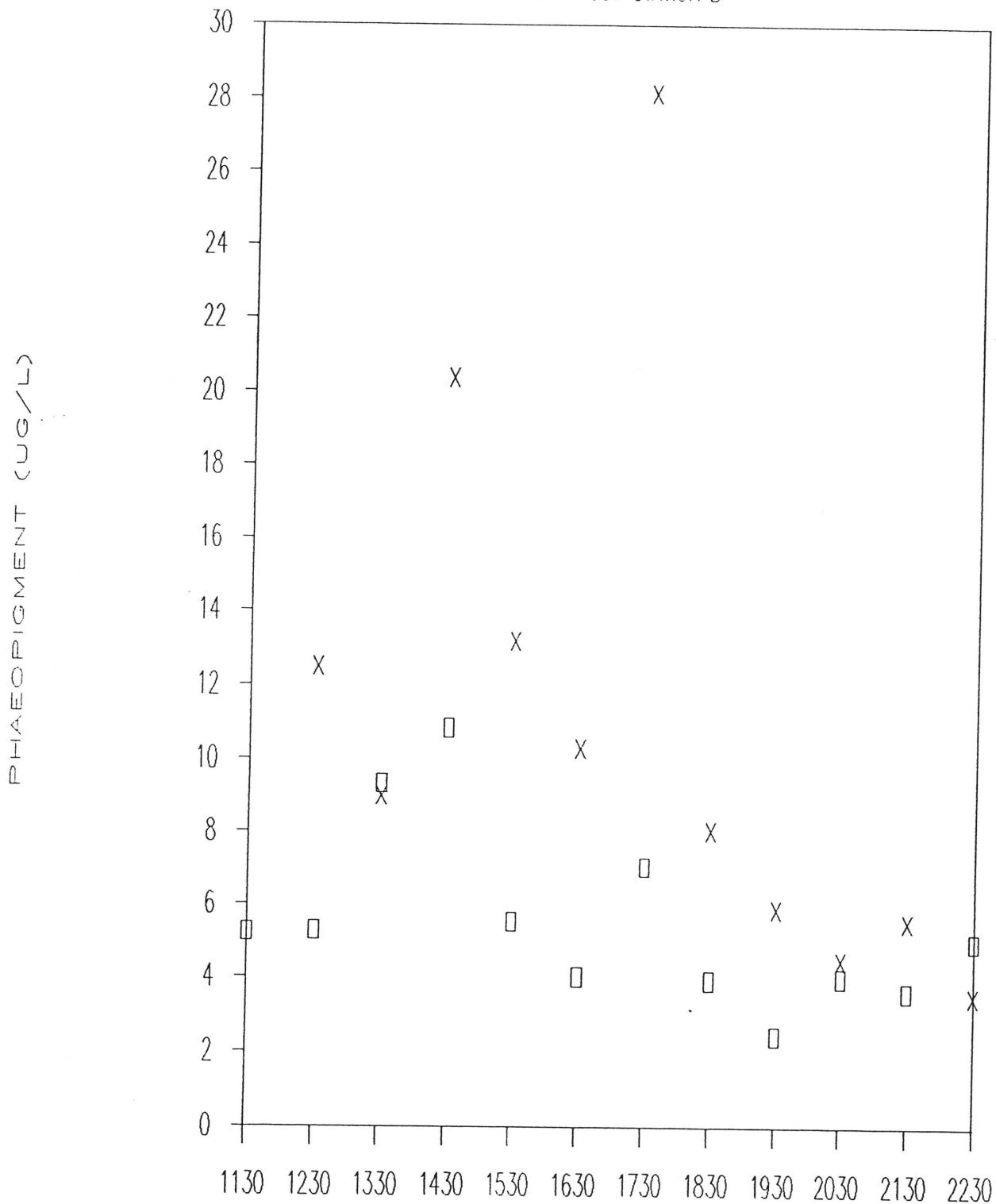
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B



CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION B

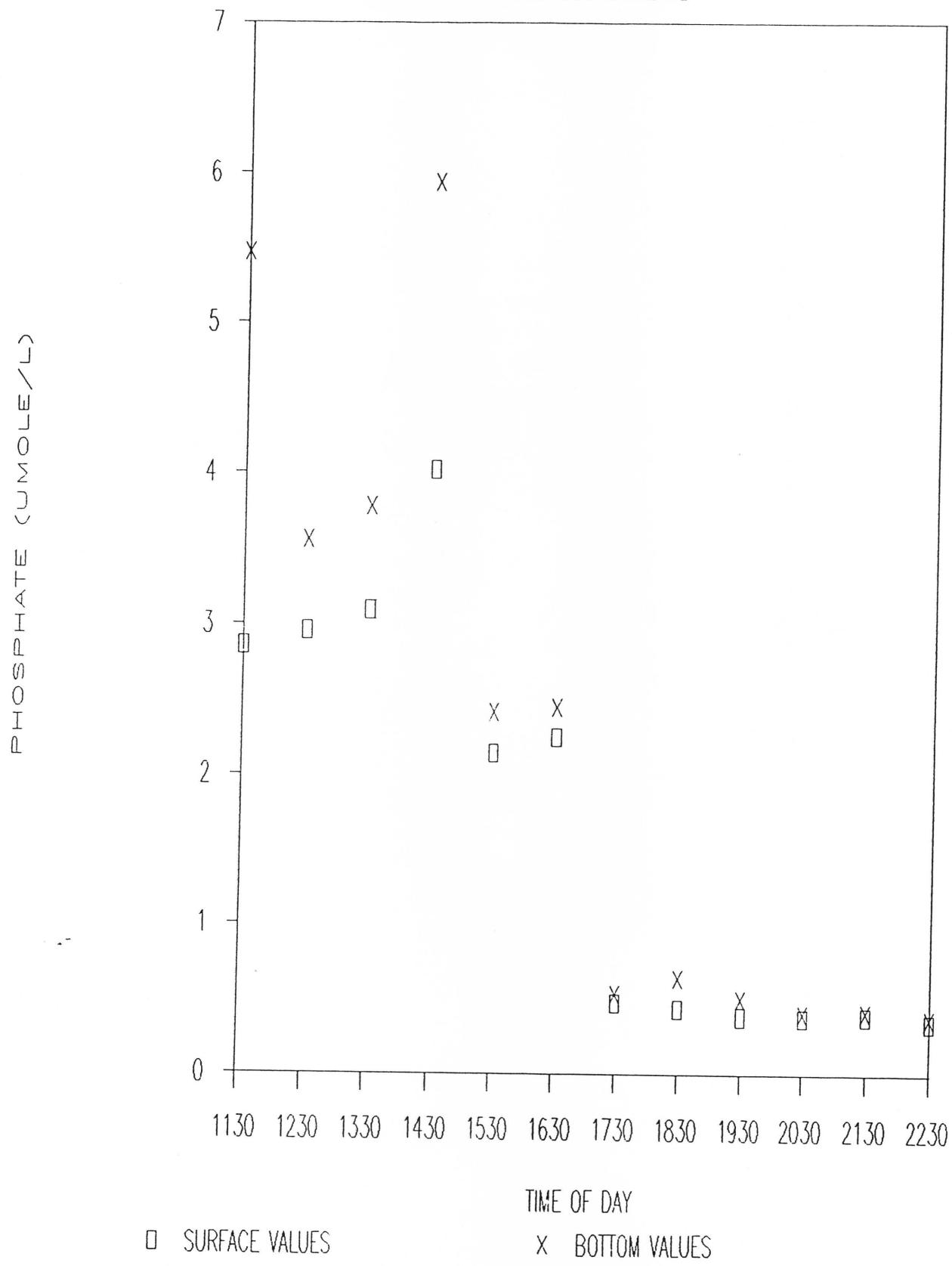


□ SURFACE VALUES

X BOTTOM VALUES

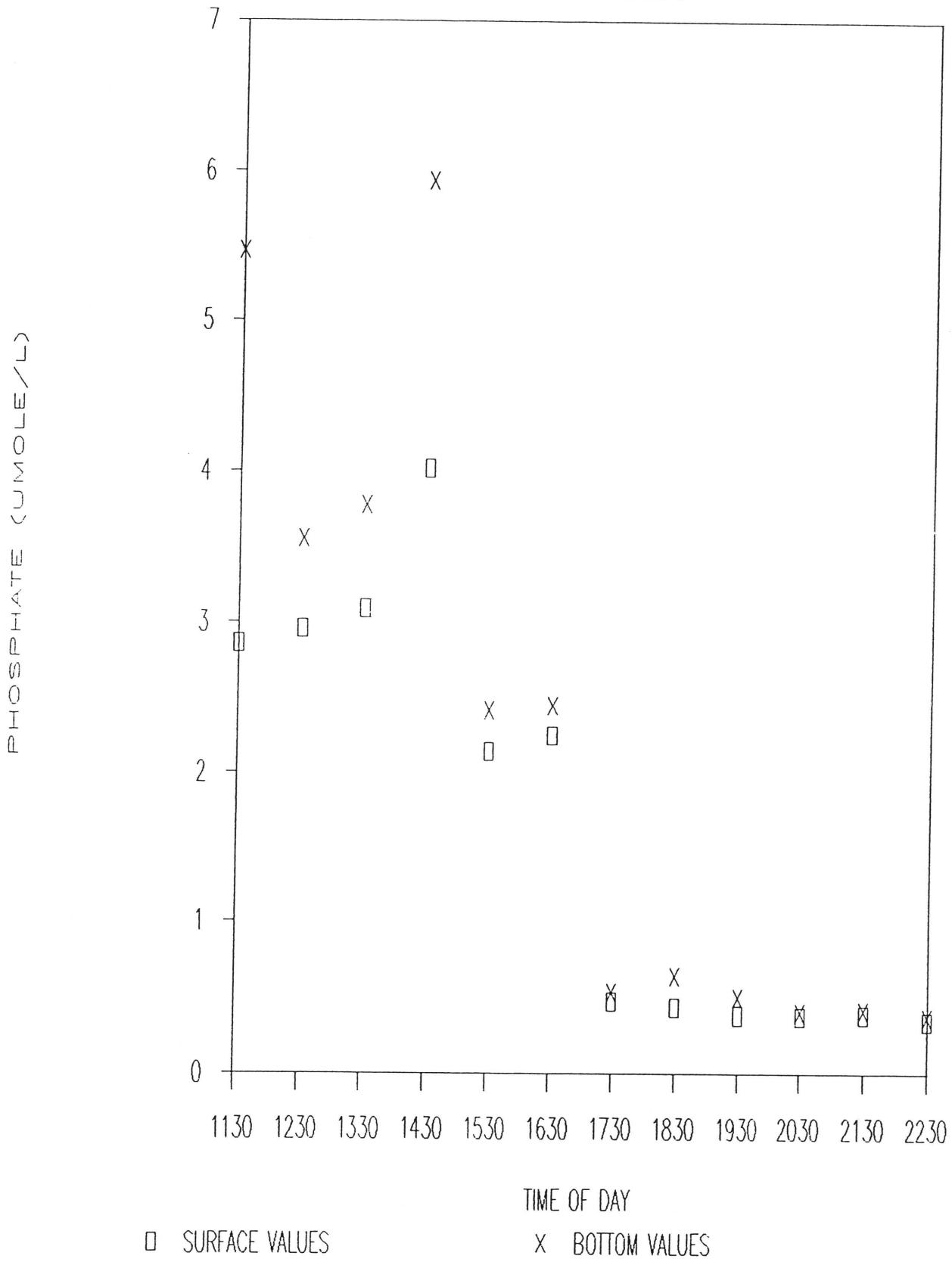
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OCT 1987 STATION B



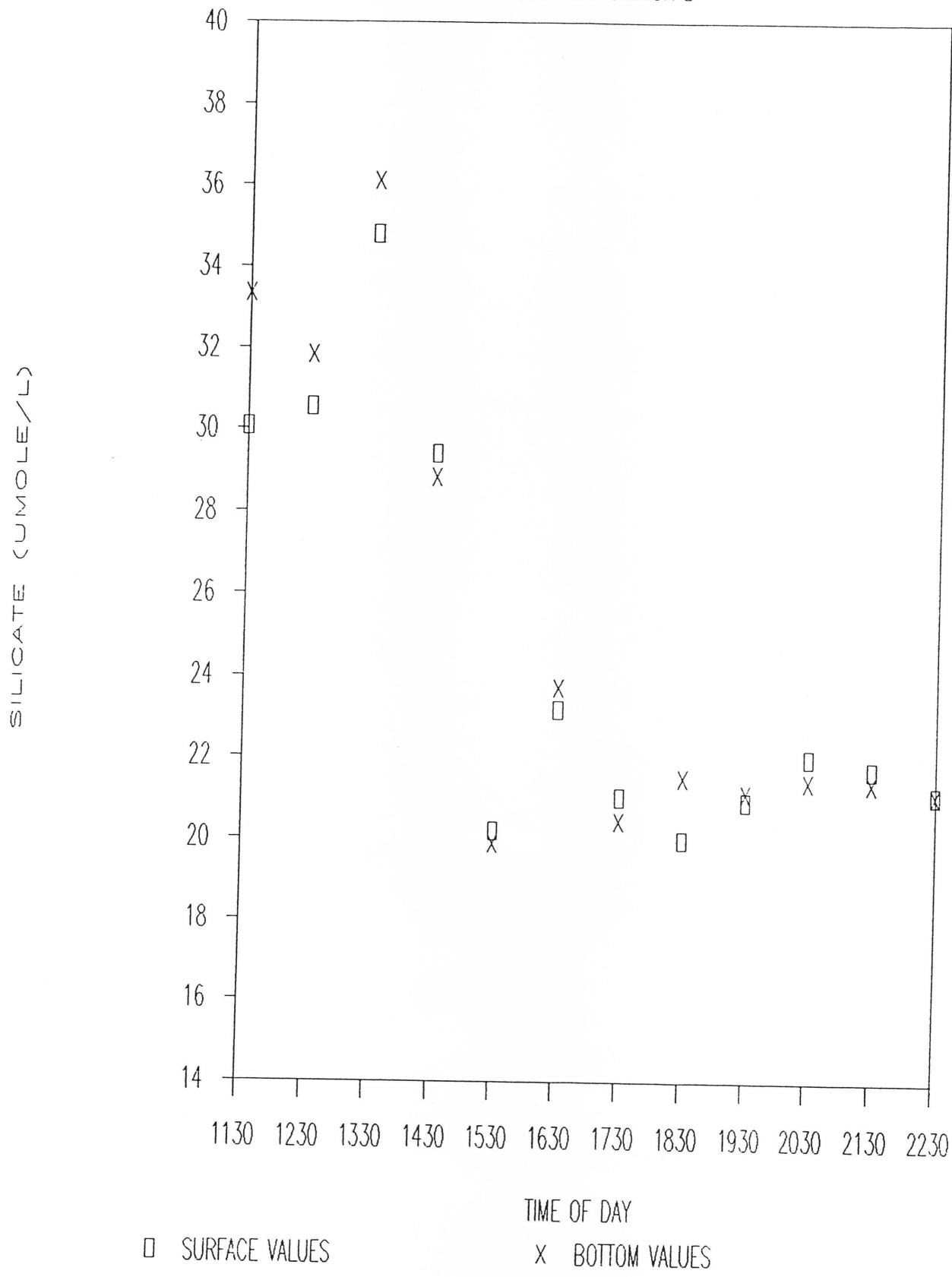
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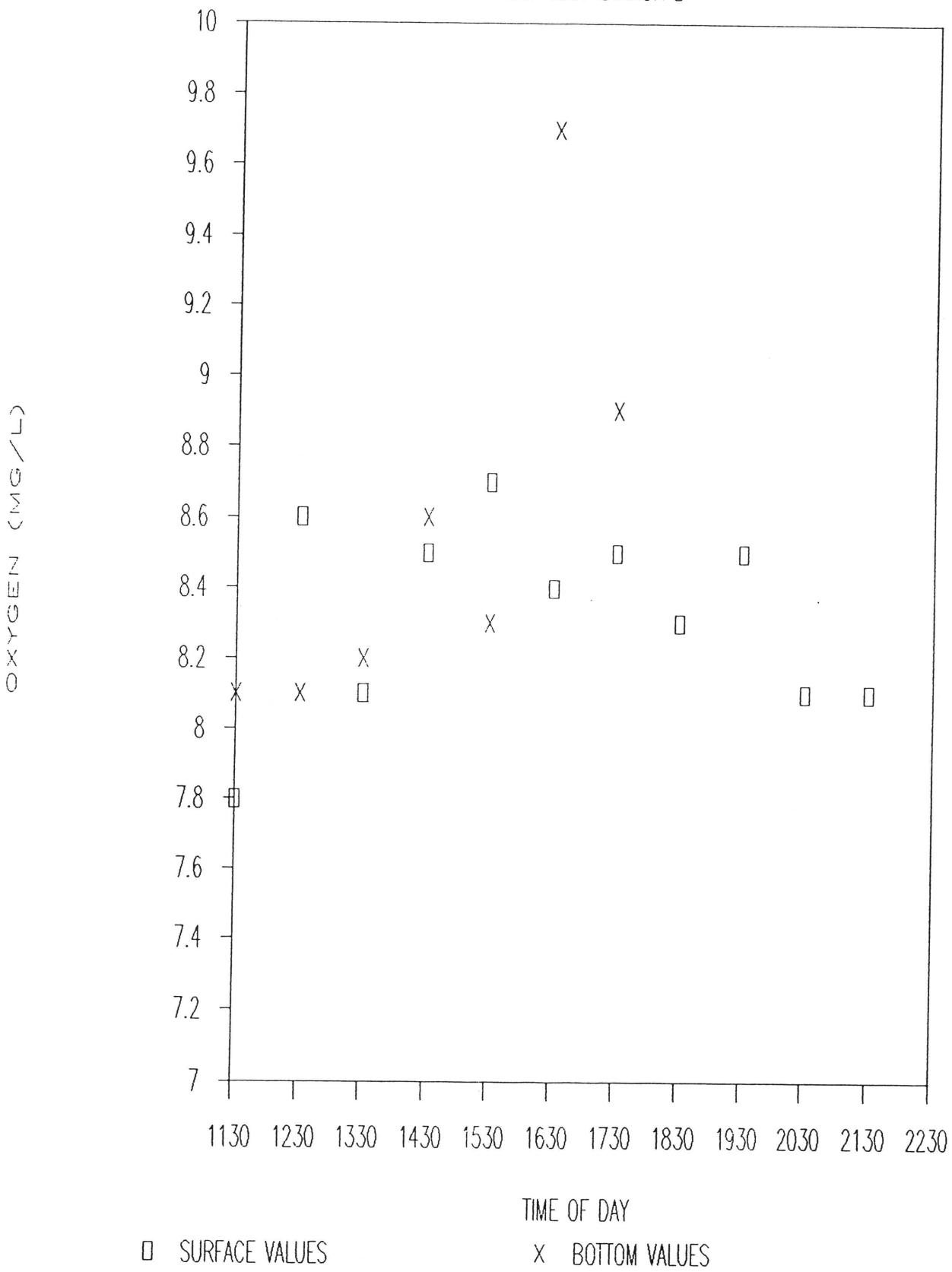
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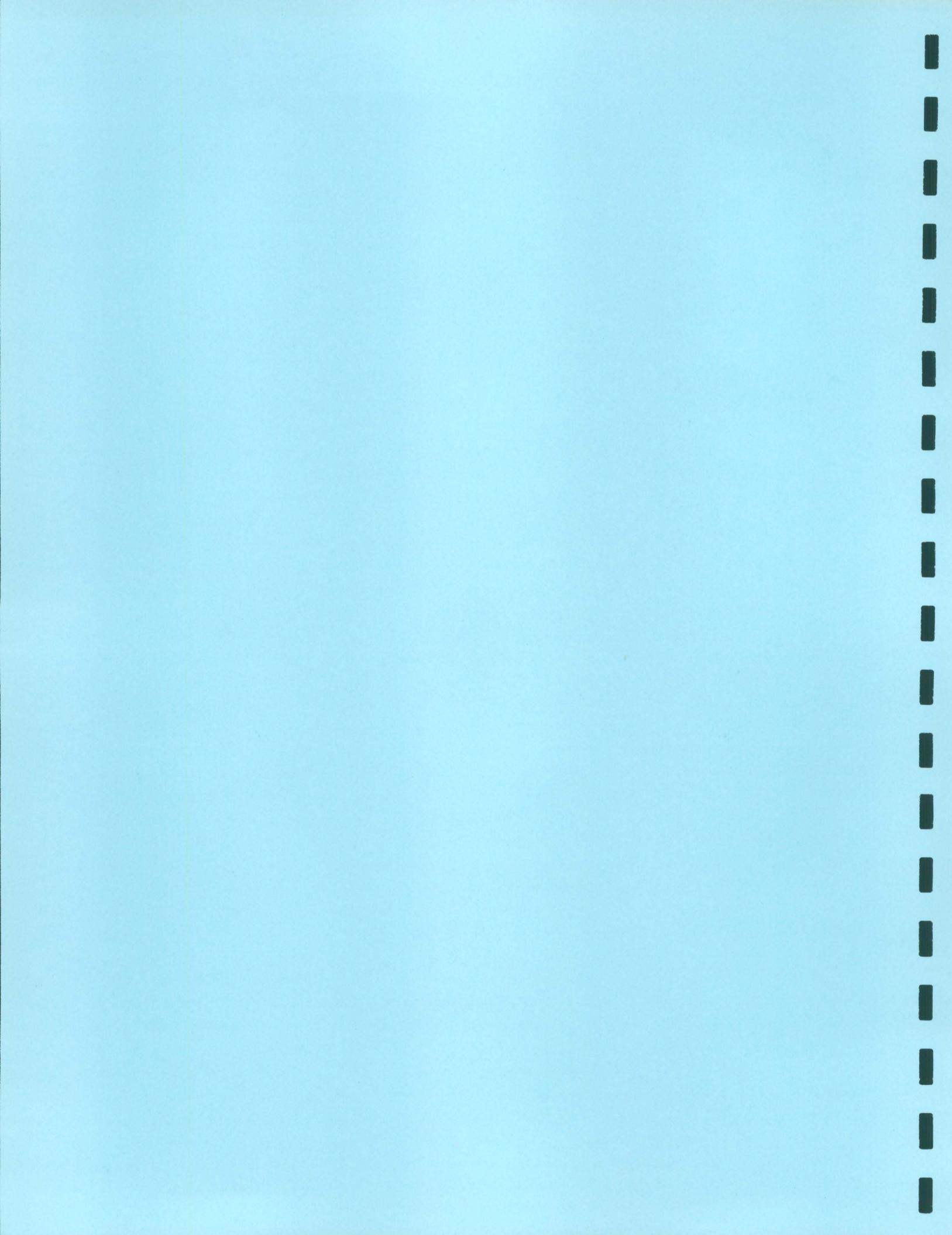
OCT 1987 STATION B



CORPUS CHRISTI/NUECES BAYS

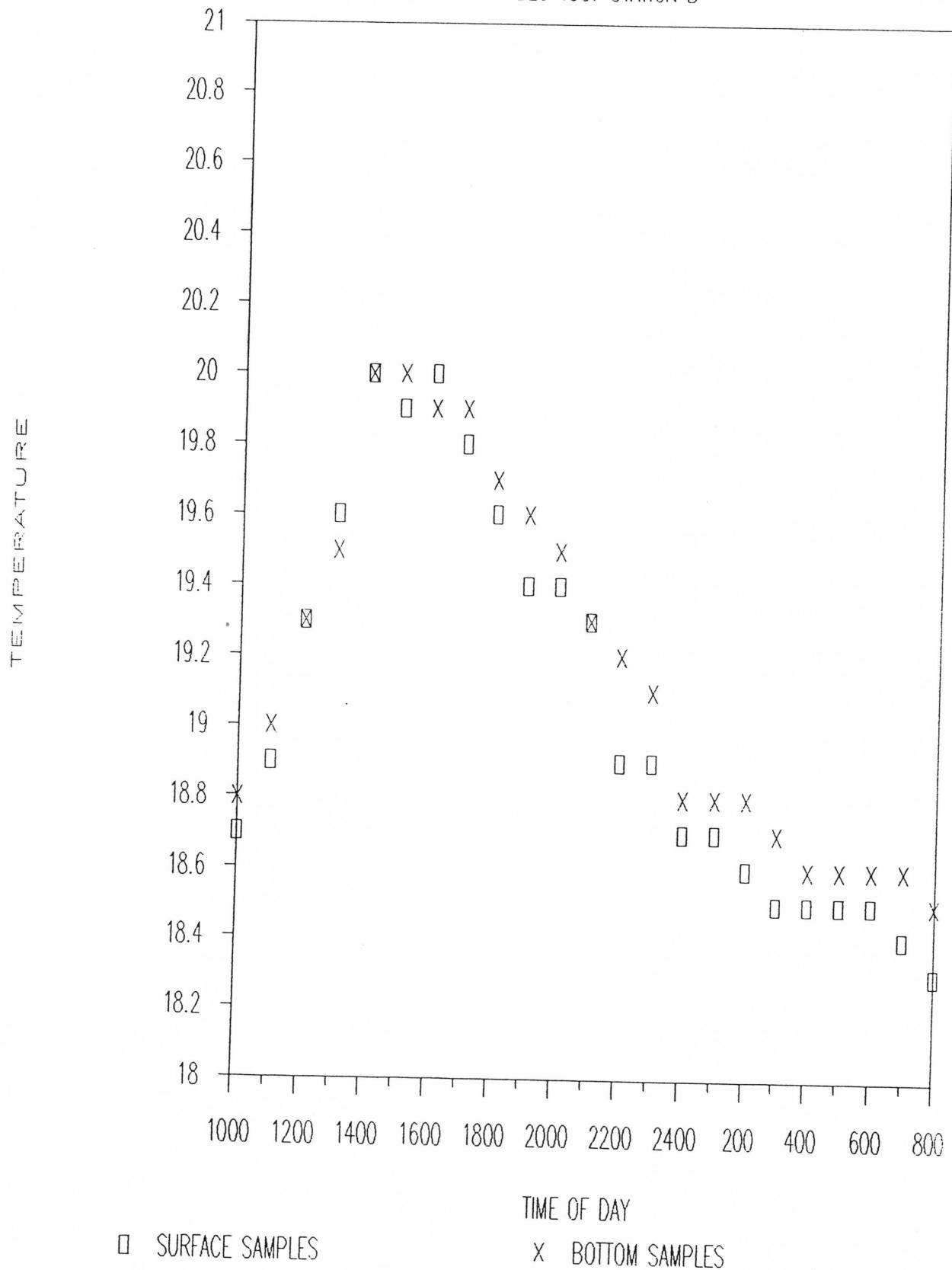
OCT 1987 STATION B





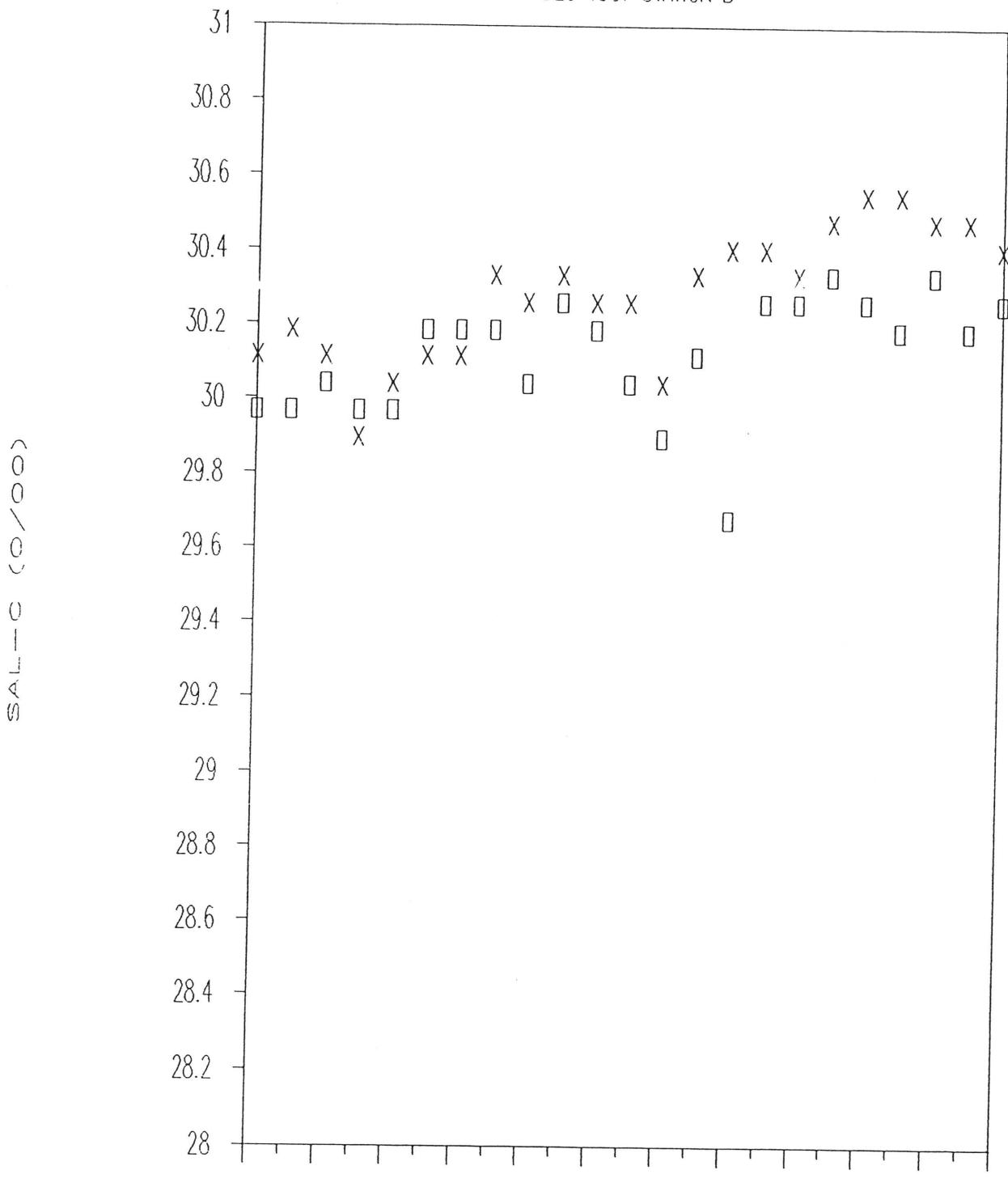
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



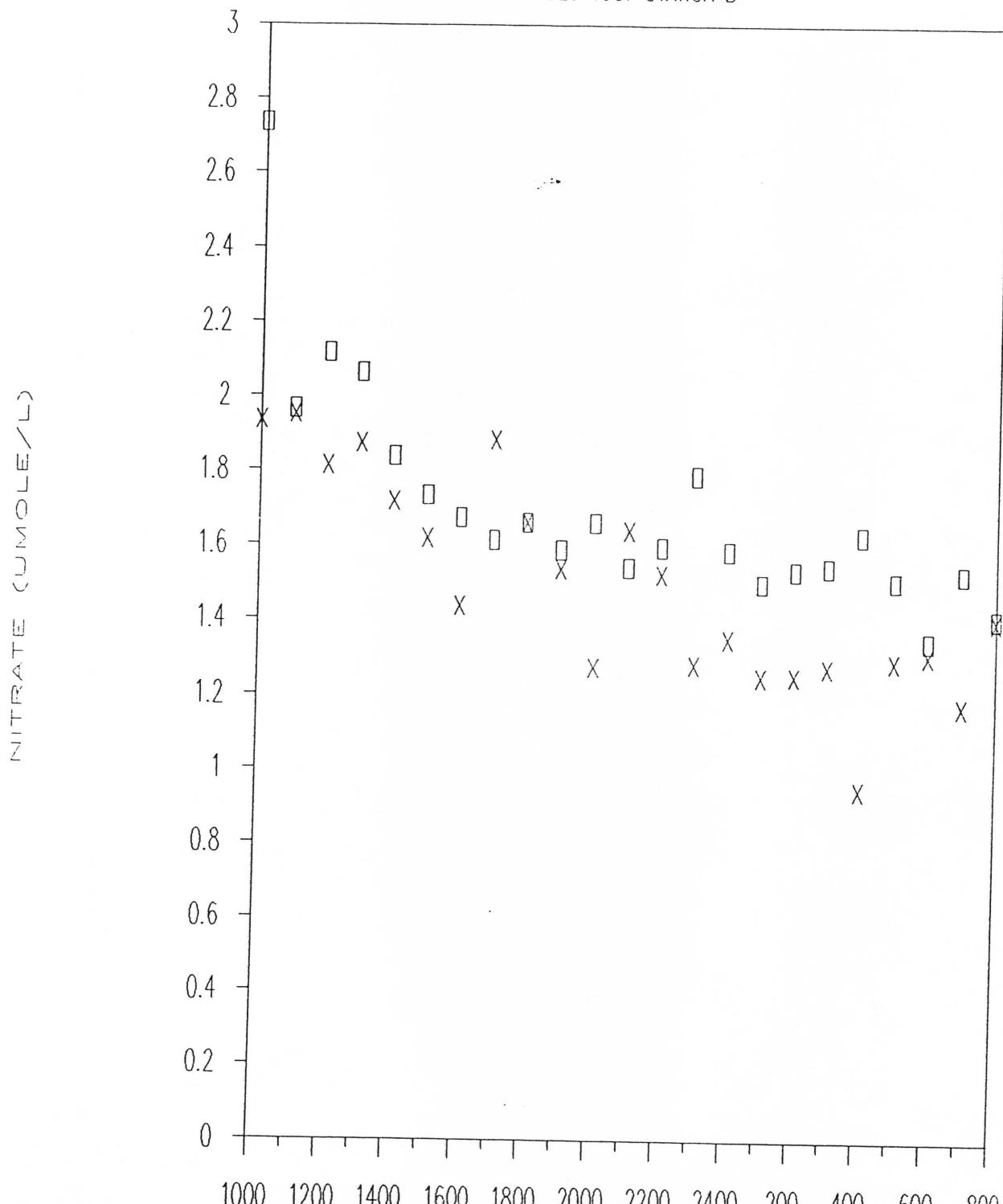
TIME OF DAY

□ SURFACE SAMPLES

X BOTTOM SAMPLES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



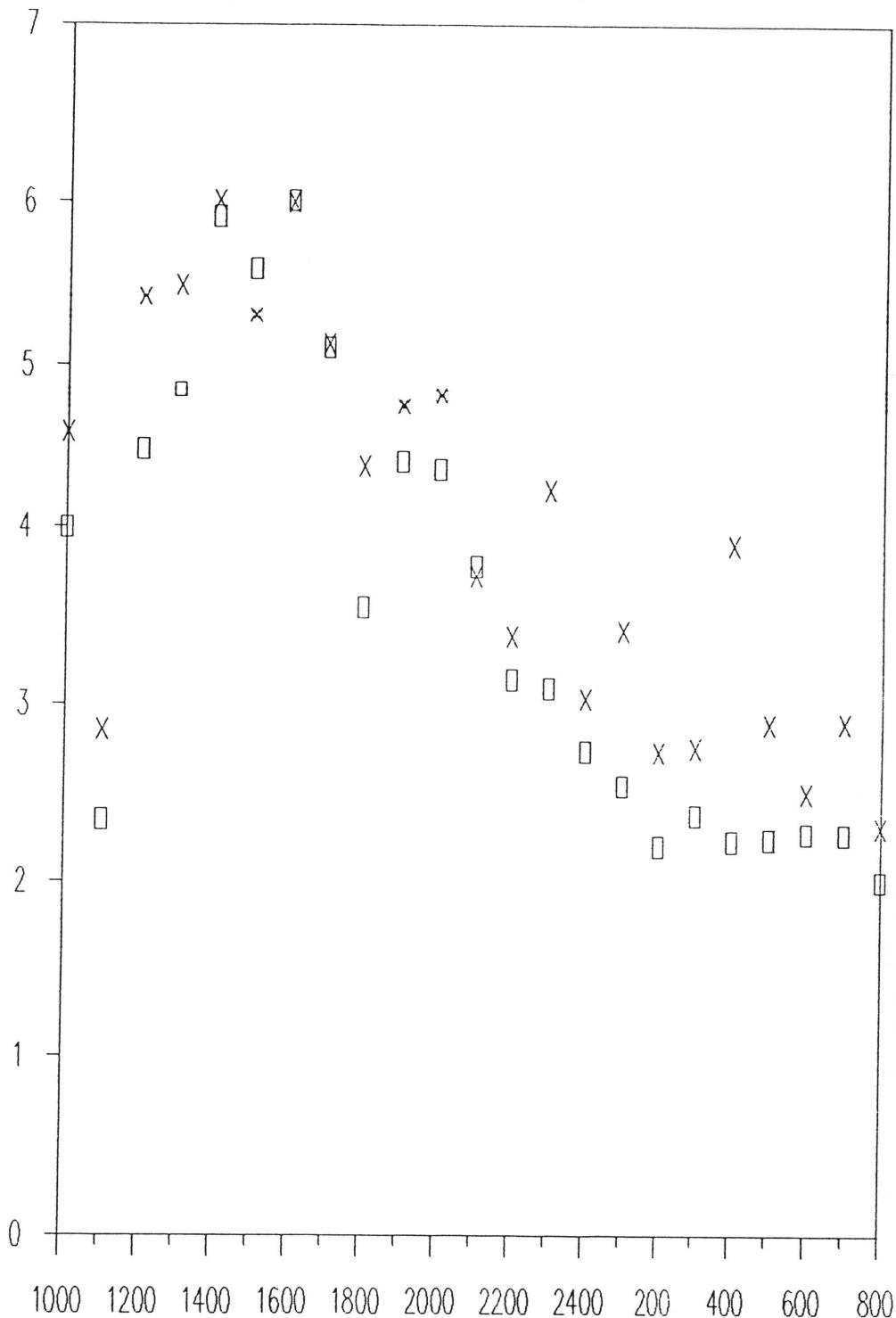
□ SURFACE SAMPLES

X BOTTOM SAMPLES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B

CHLOROPHYLL (µG/L)



TIME OF DAY

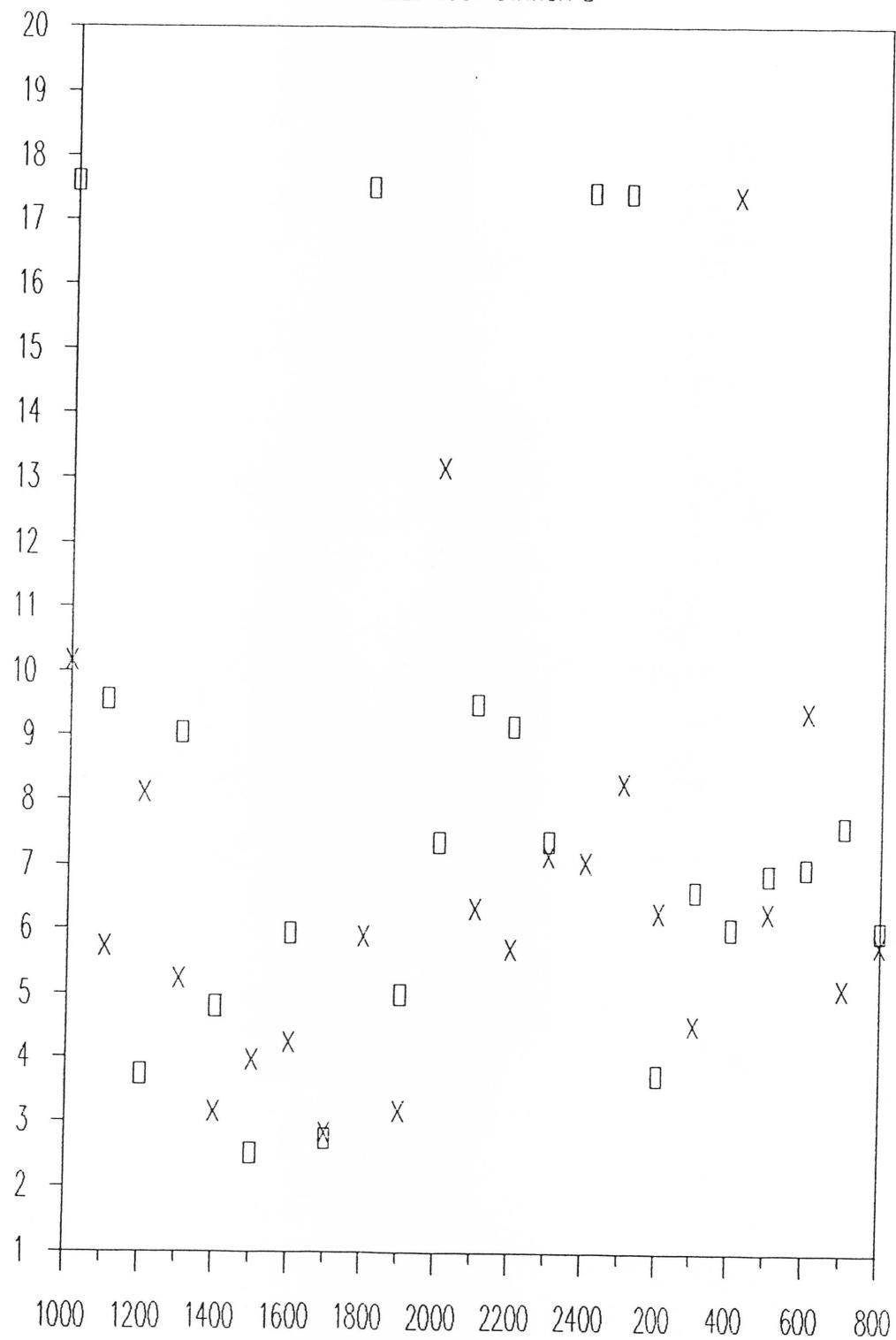
□ SURFACE SAMPLES

× BOTTOM SAMPLES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B

AMMONIUM (MICROMOLE/L)



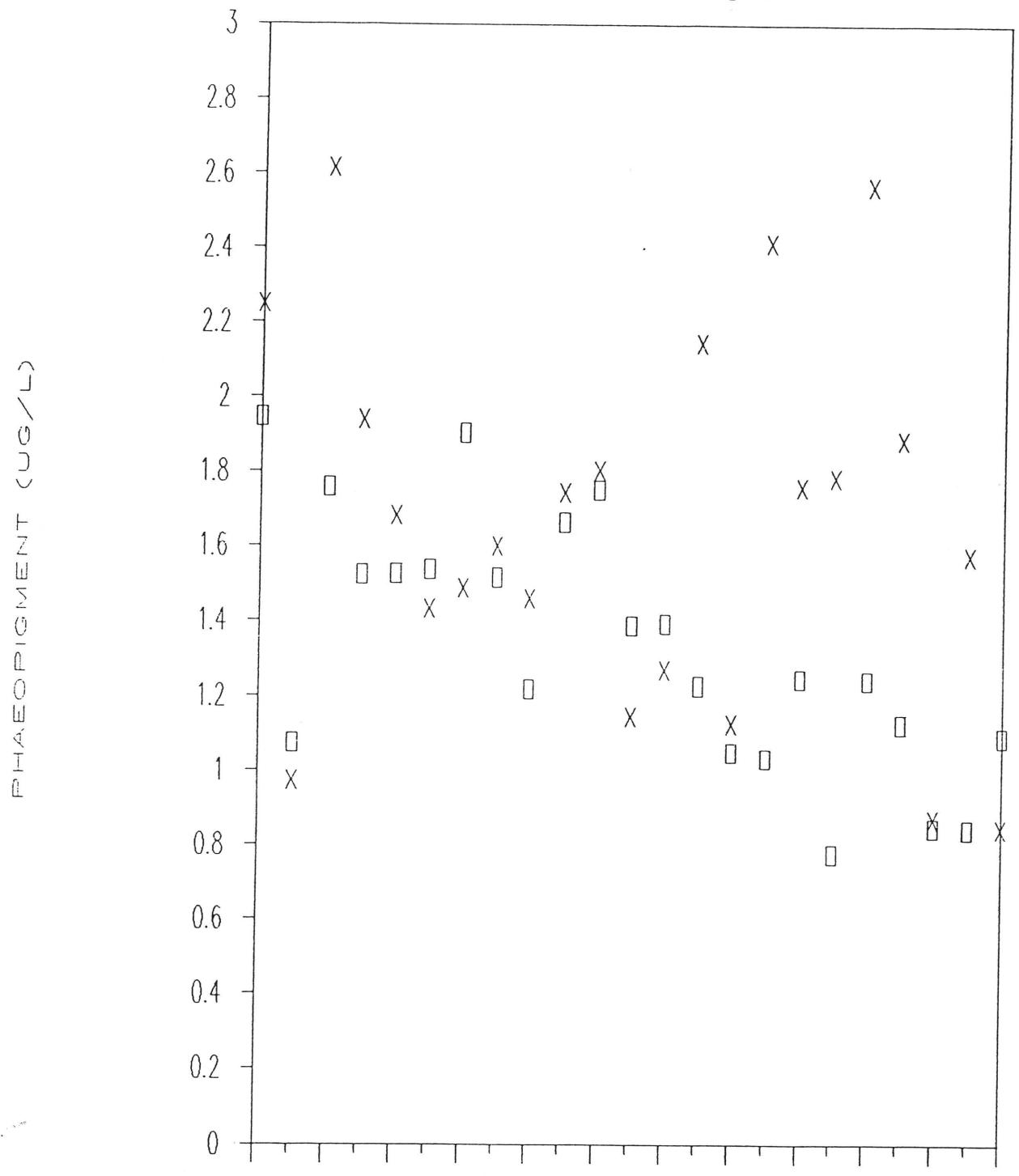
TIME OF DAY

□ SURFACE SAMPLES

X BOTTOM SAMPLES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



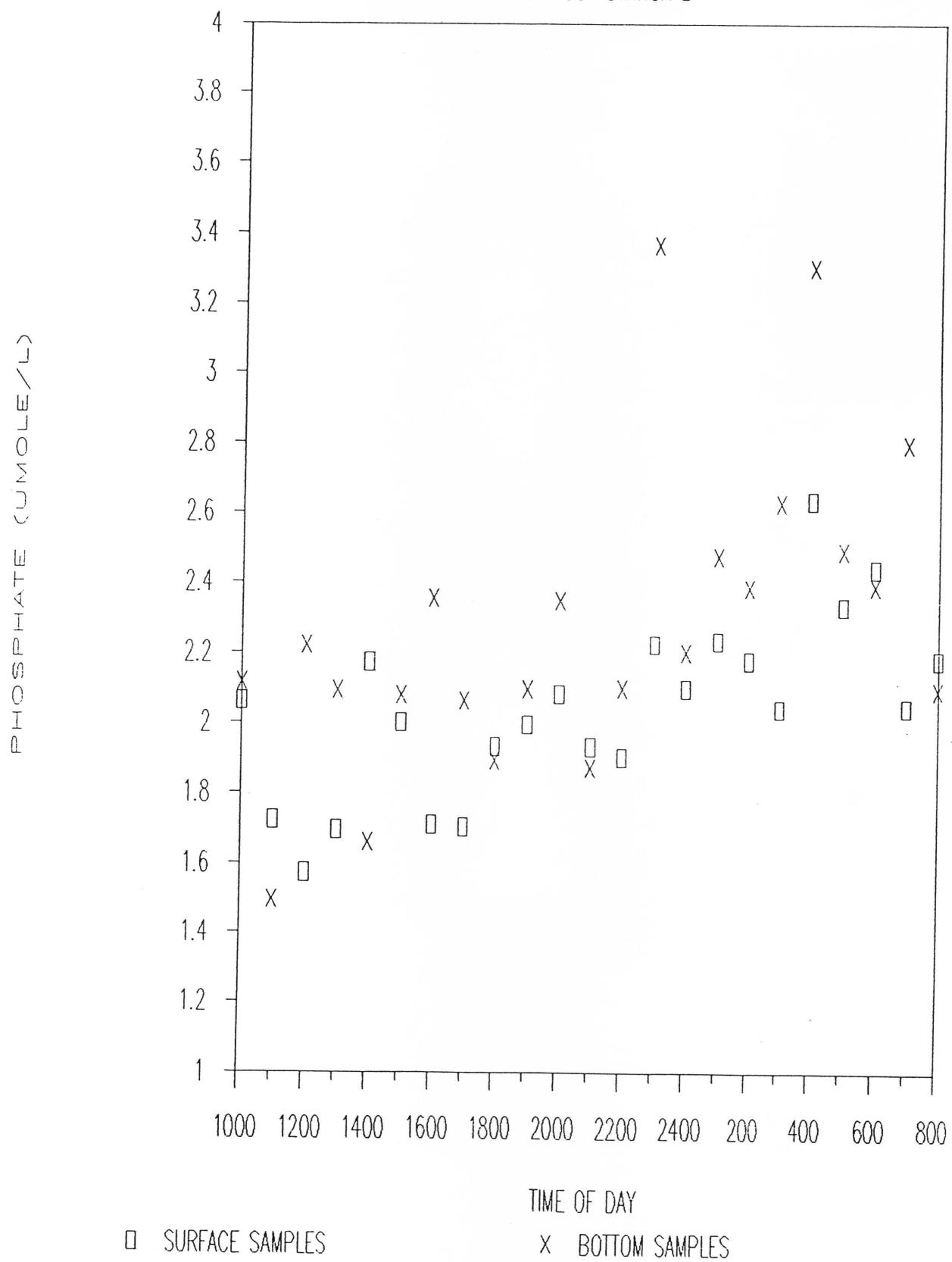
TIME OF DAY

\square SURFACE SAMPLES

\times BOTTOM SAMPLES

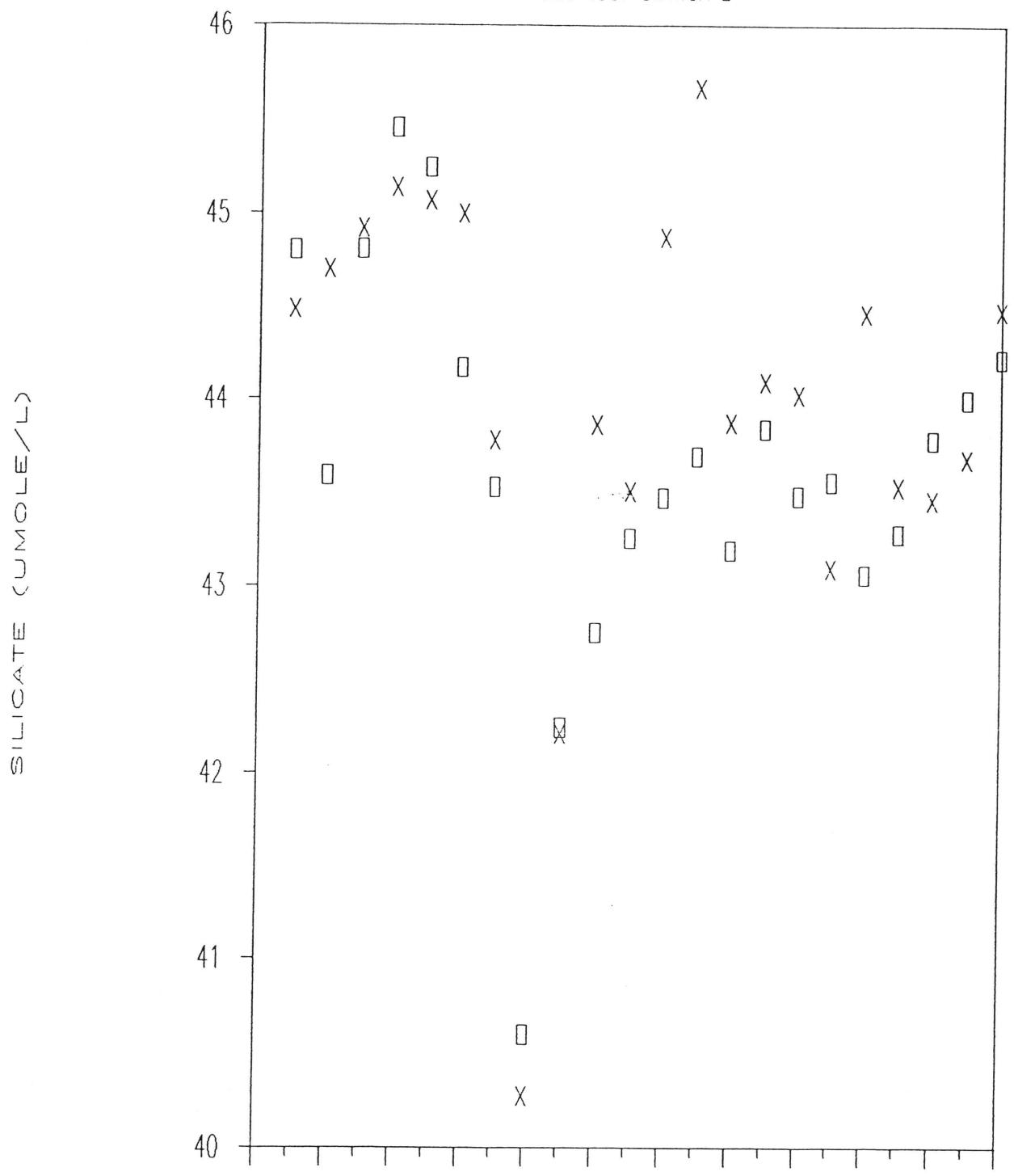
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B



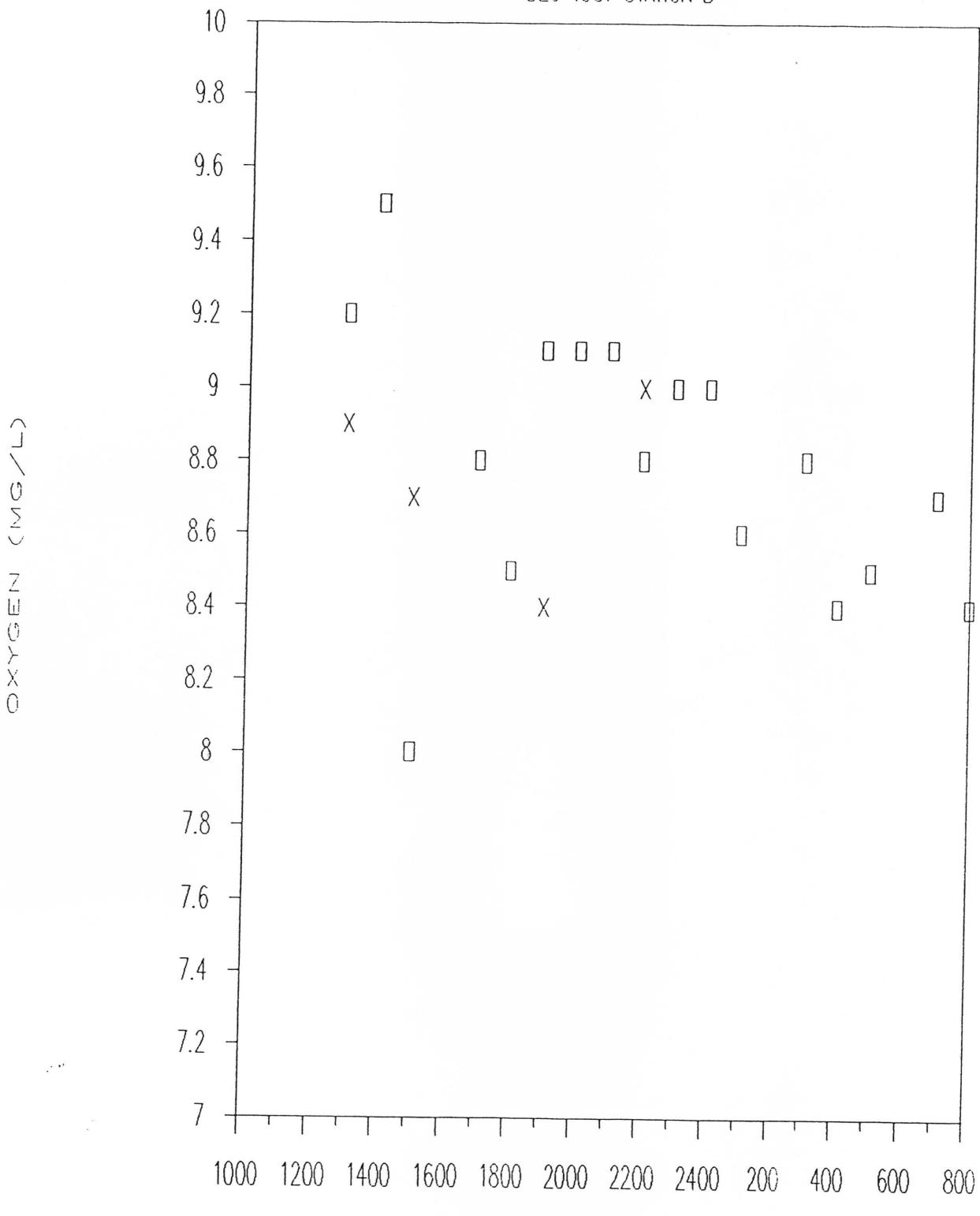
TIME OF DAY

□ SURFACE SAMPLES

X BOTTOM SAMPLES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION B

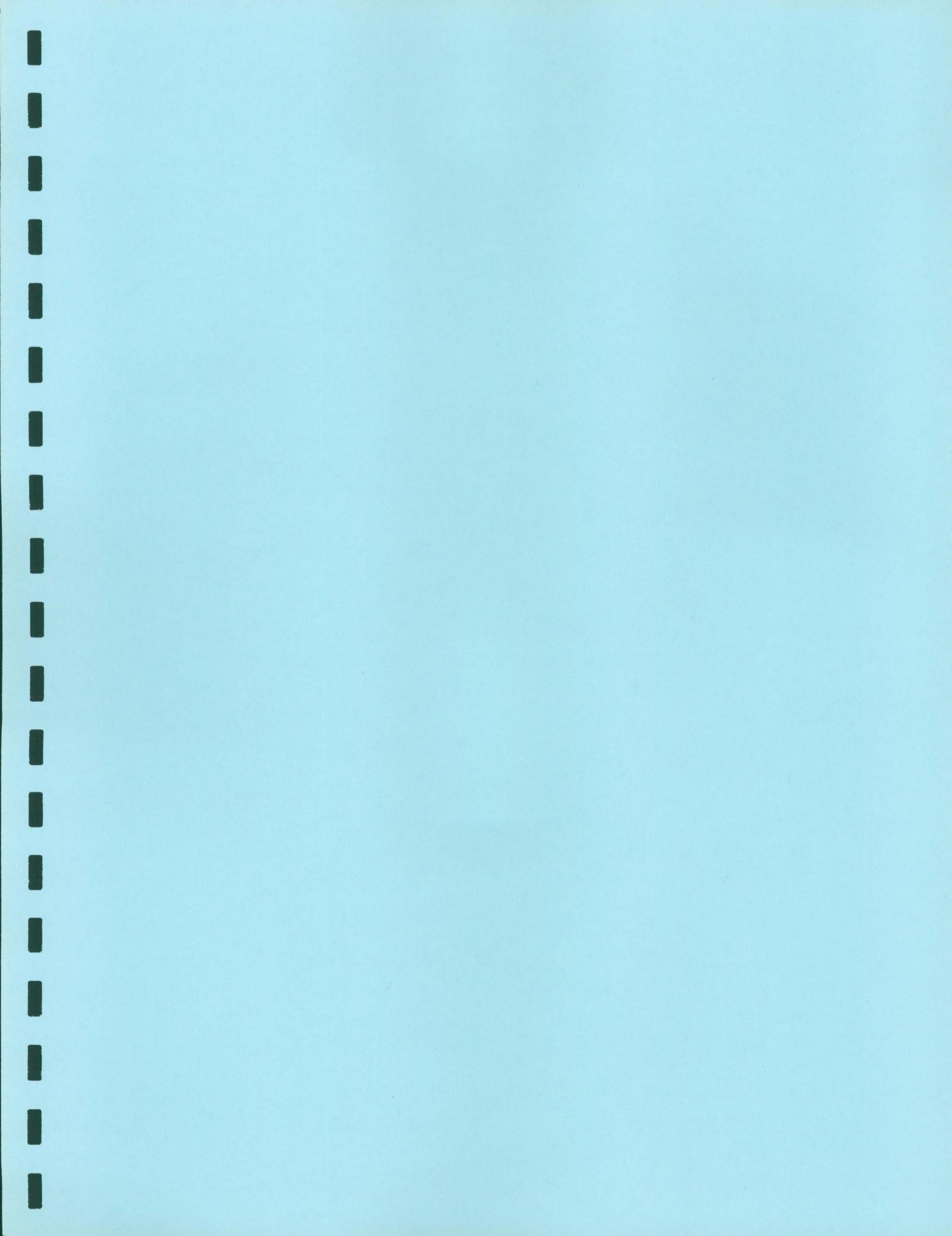


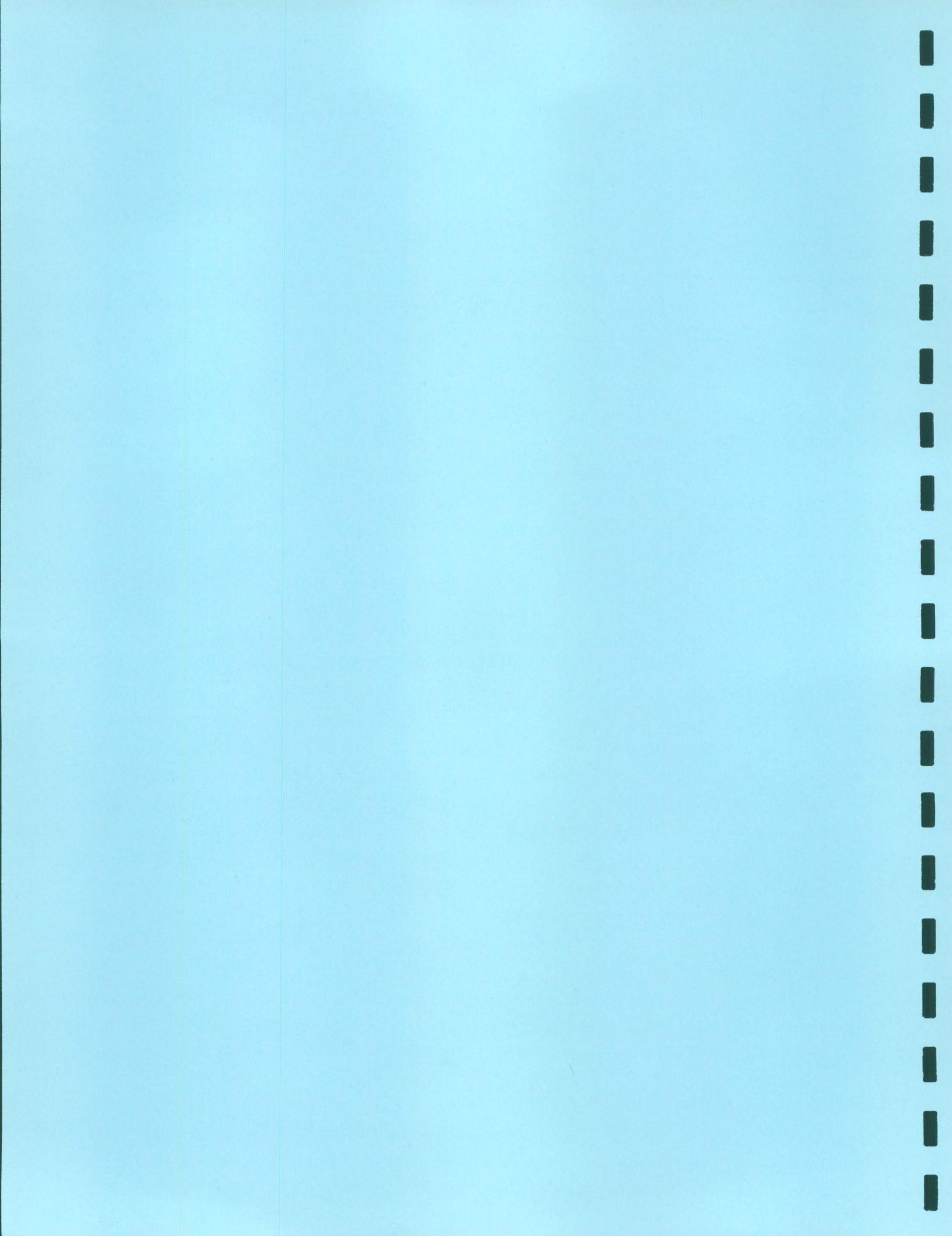
TIME OF DAY

SURFACE SAMPLES

X BOTTOM SAMPLES

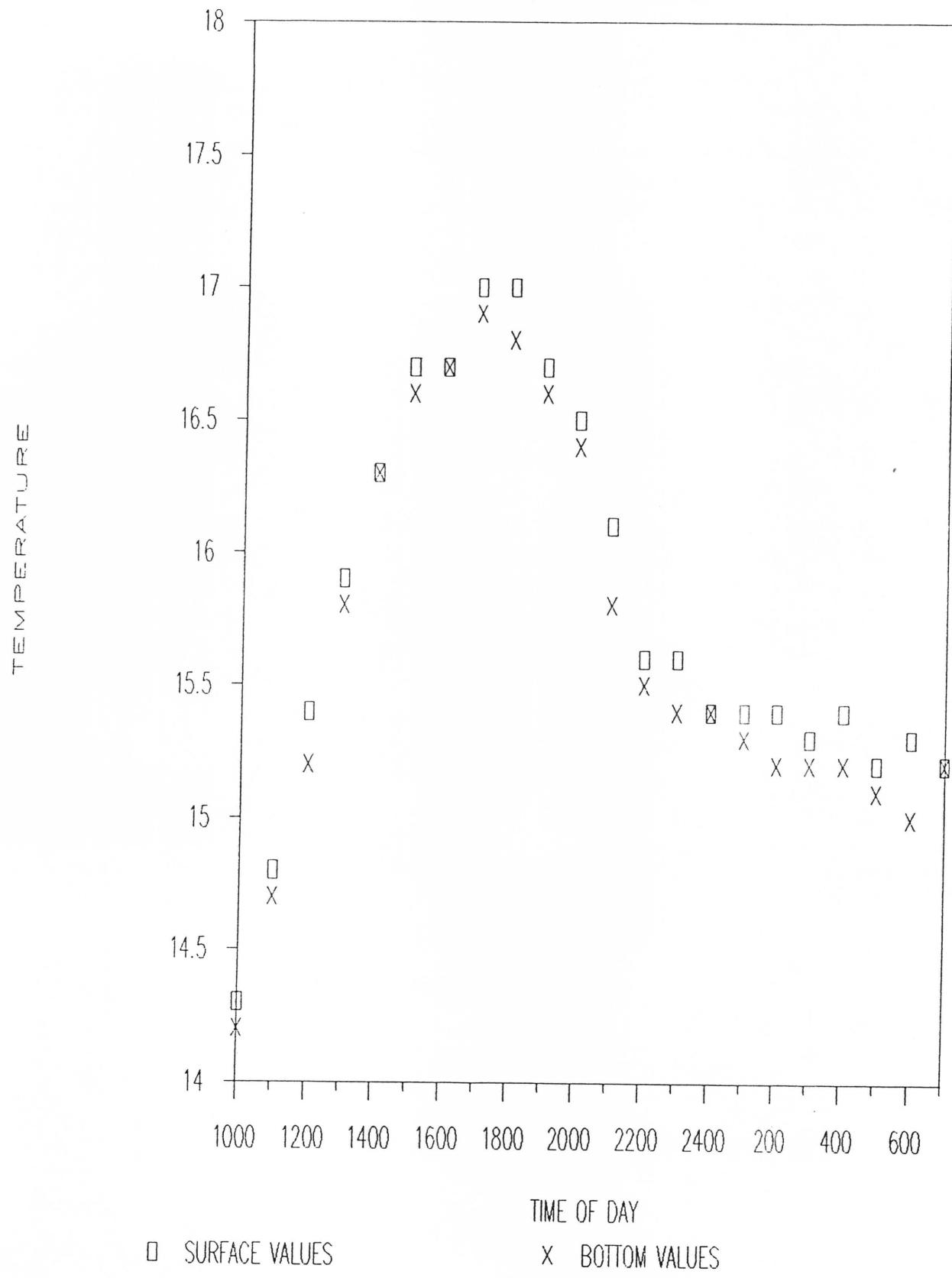






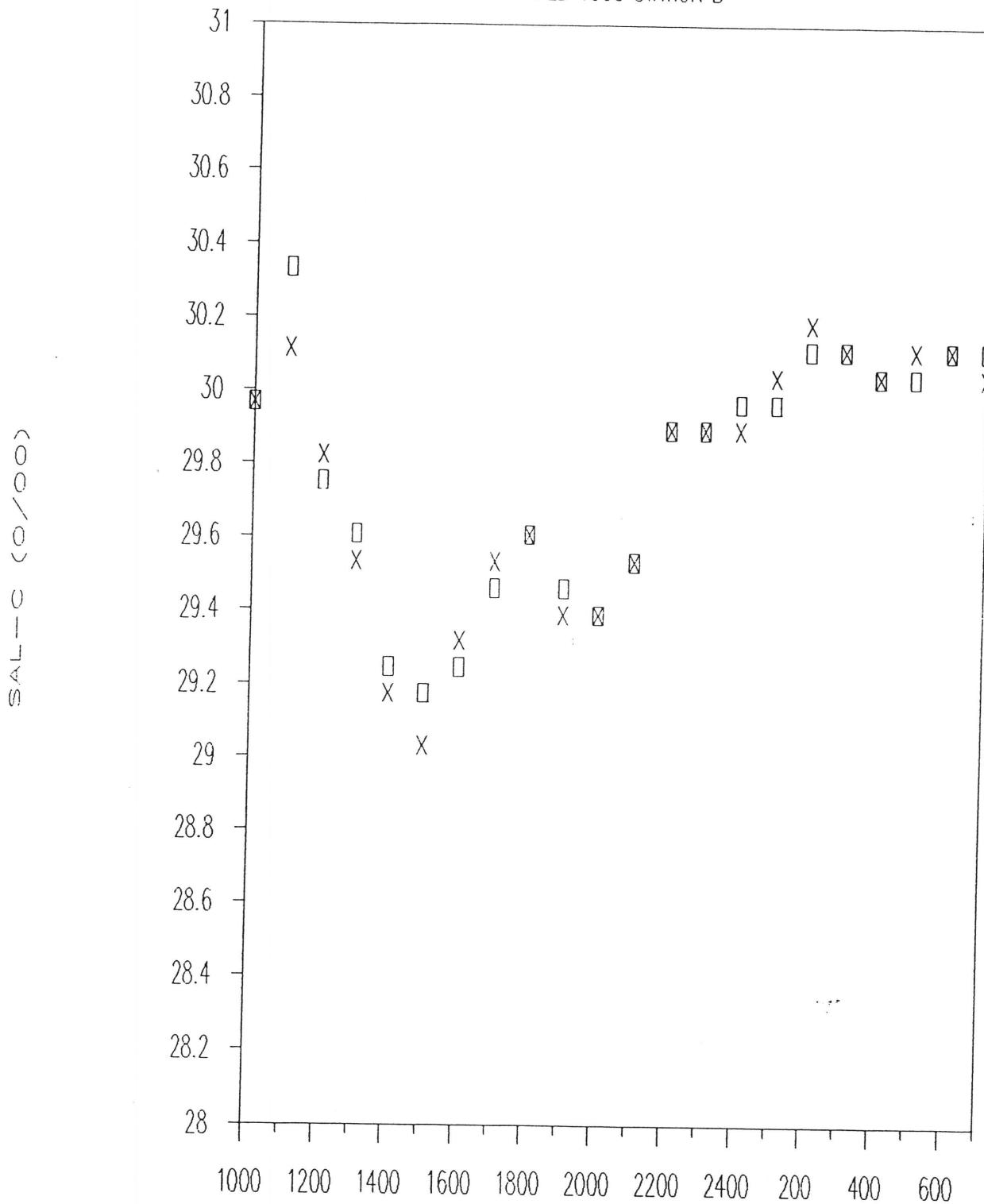
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B



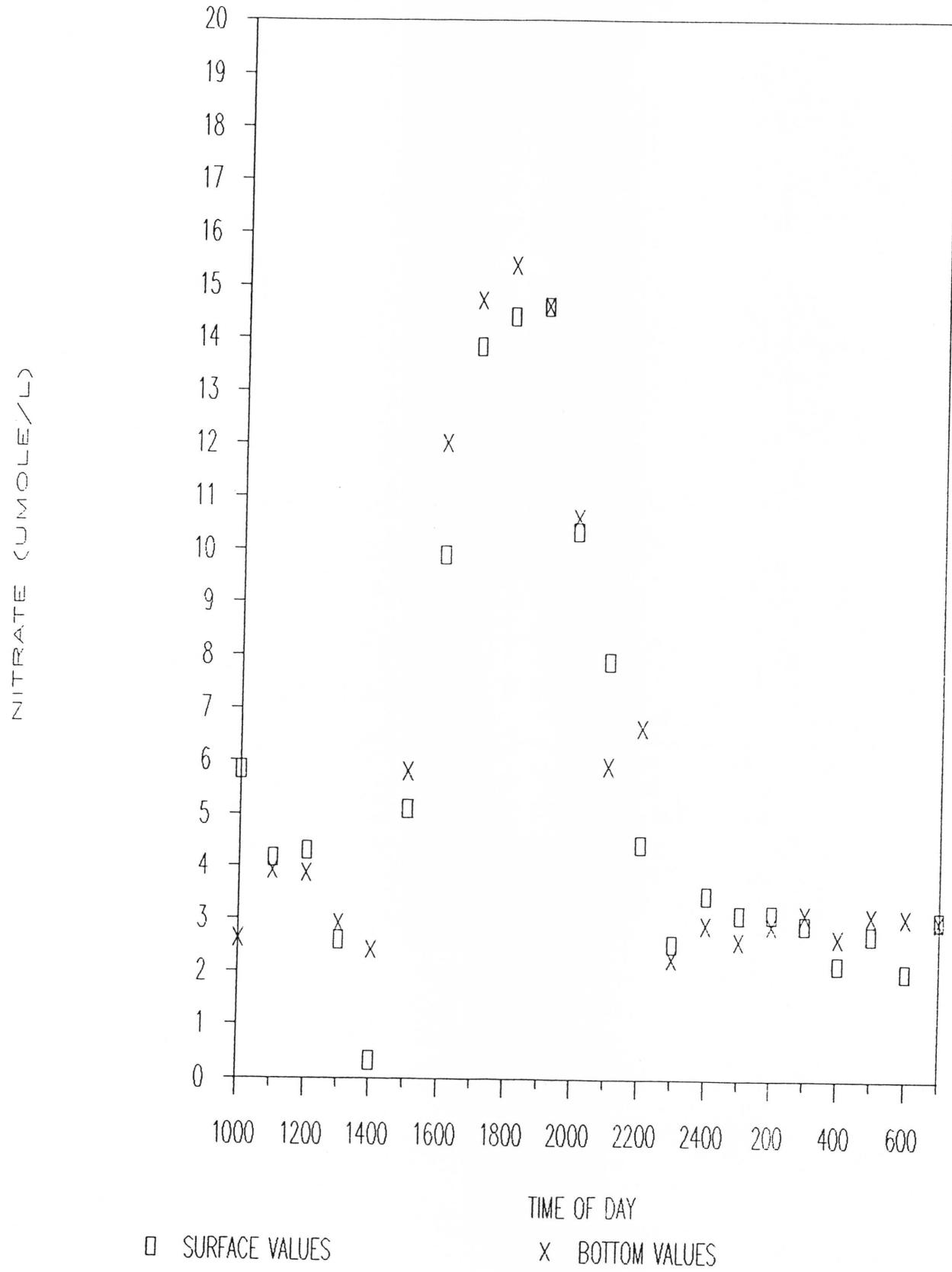
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

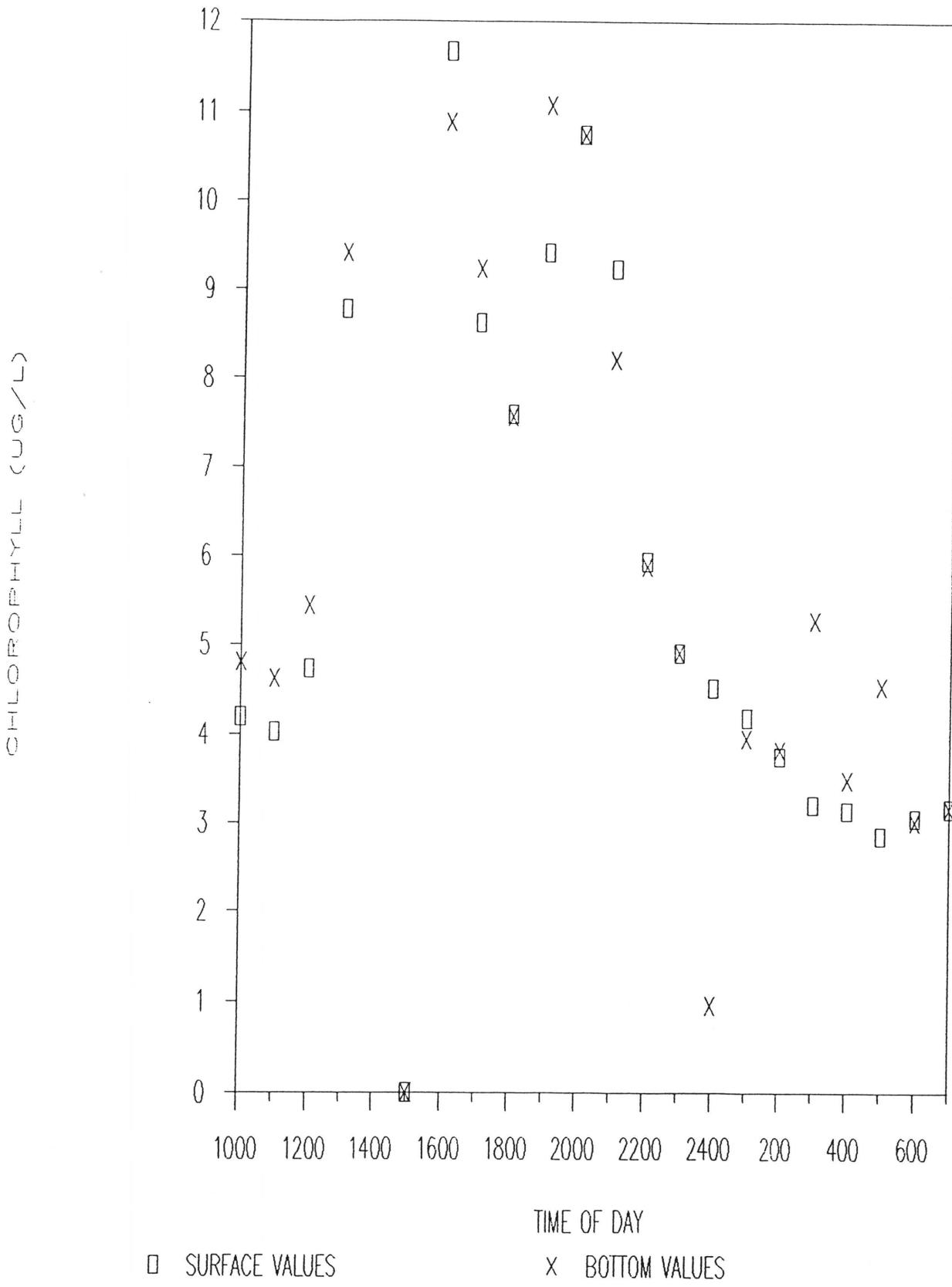
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

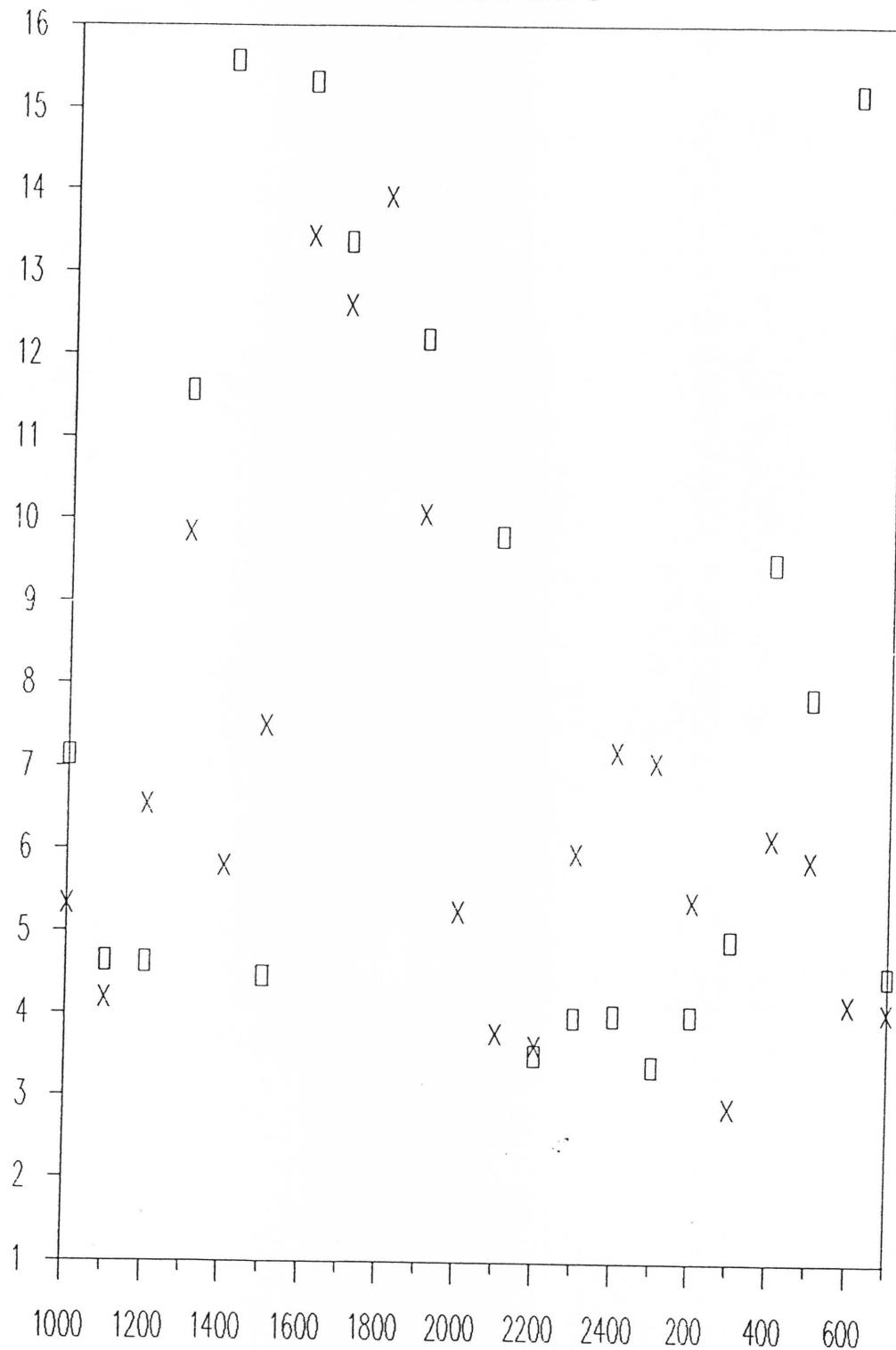
FEB 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B

ANALYSIS OF SURFACE AND BOTTOM



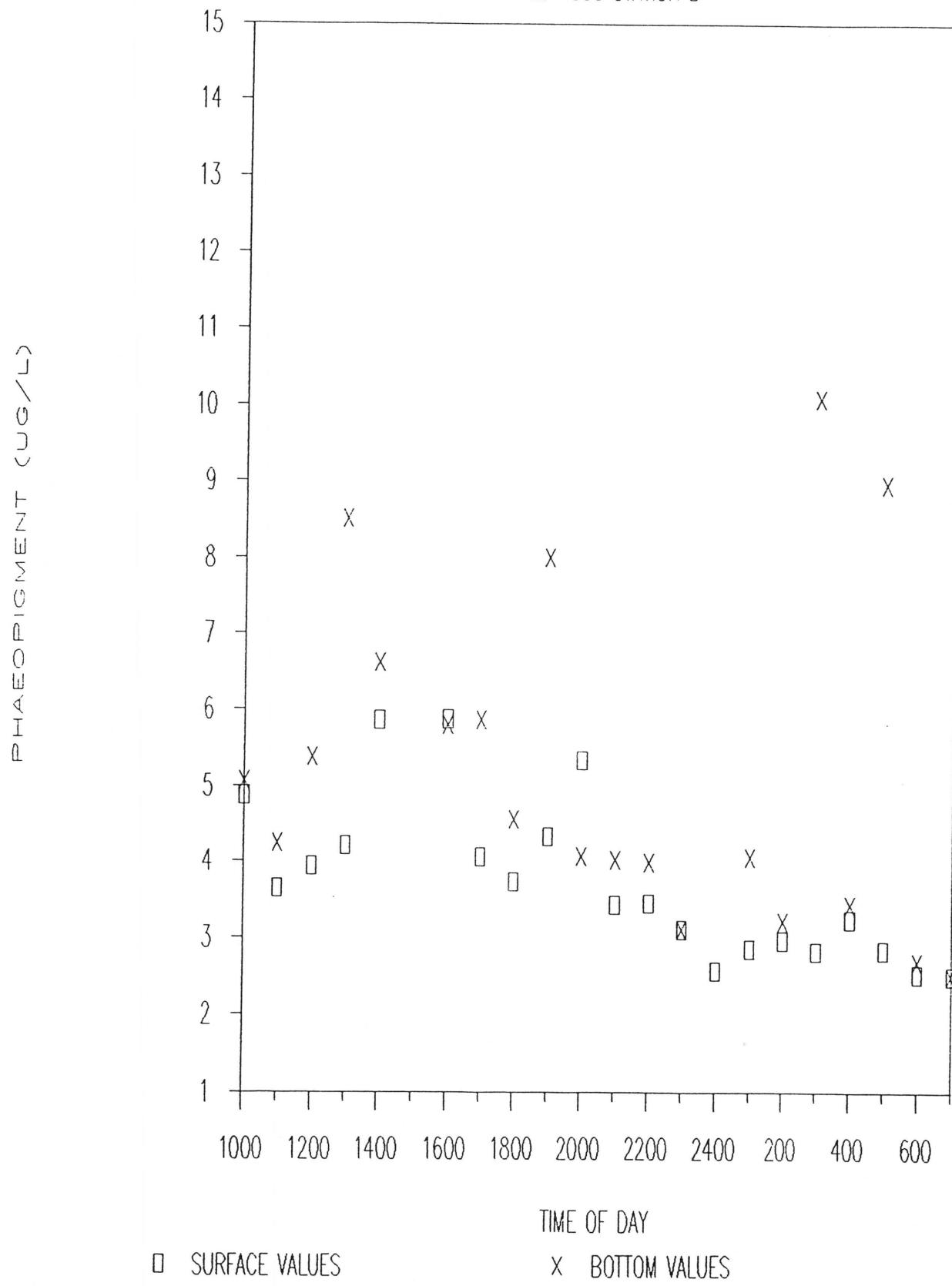
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

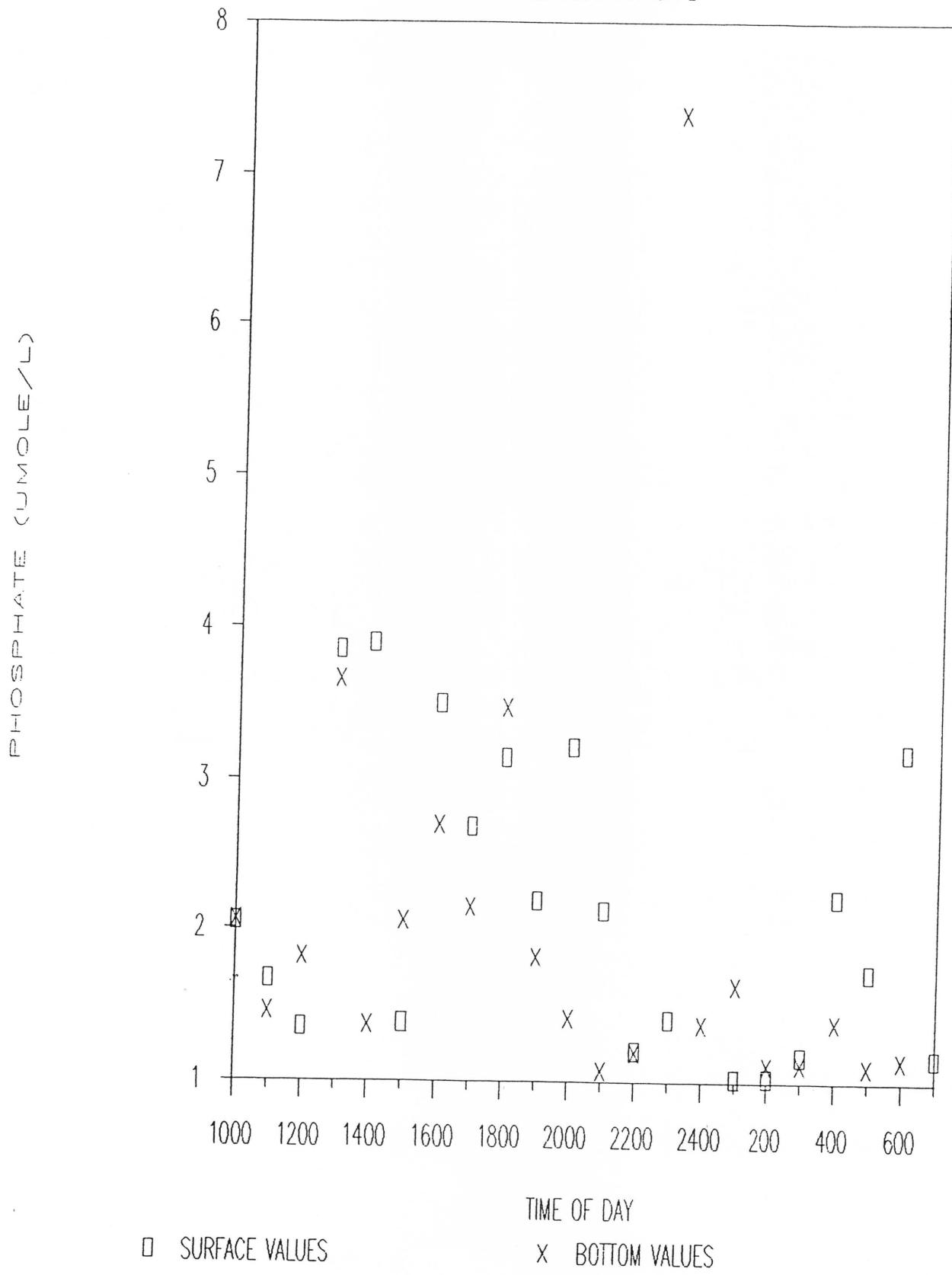
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B



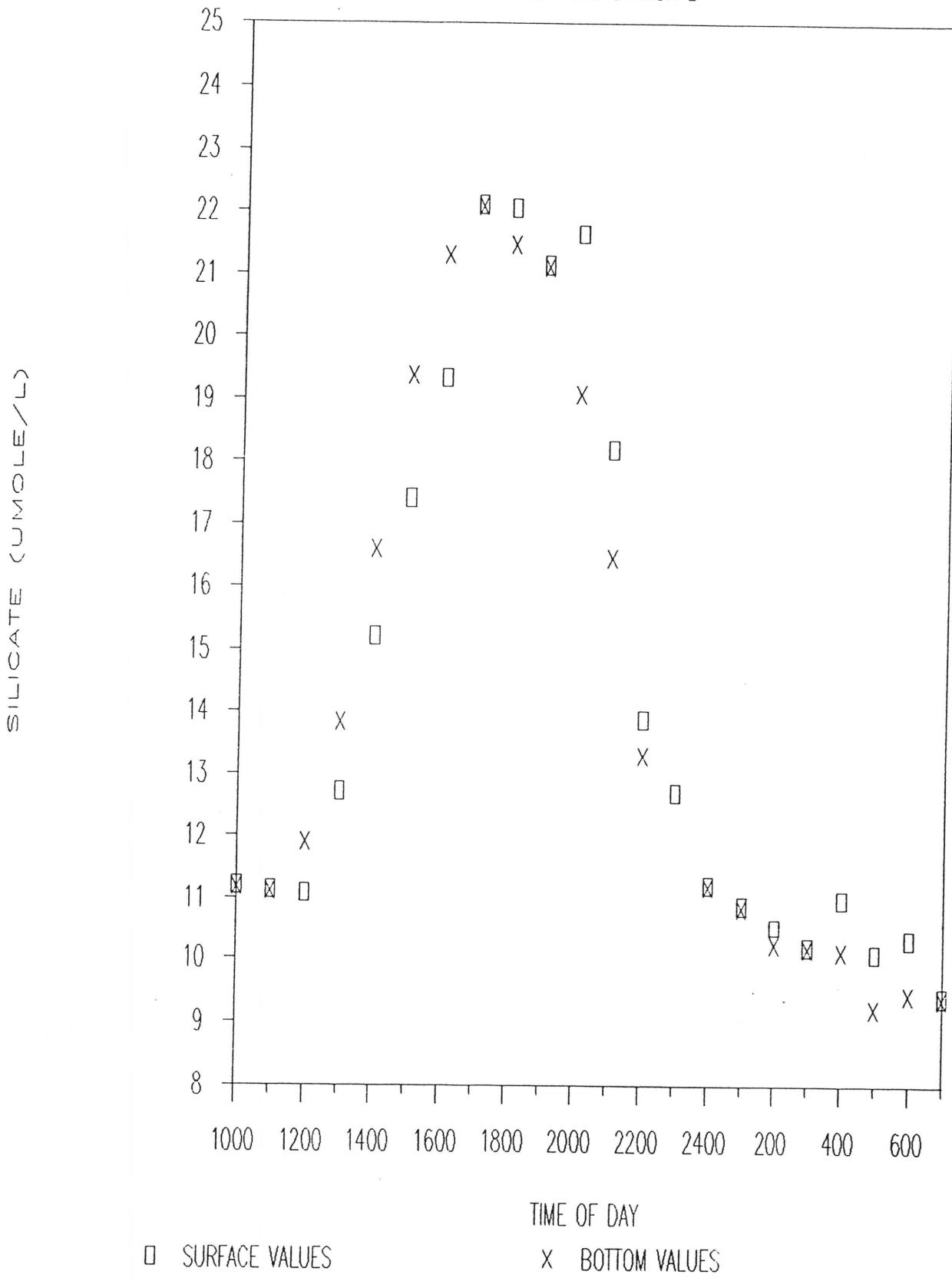
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FEB 1988 STATION B



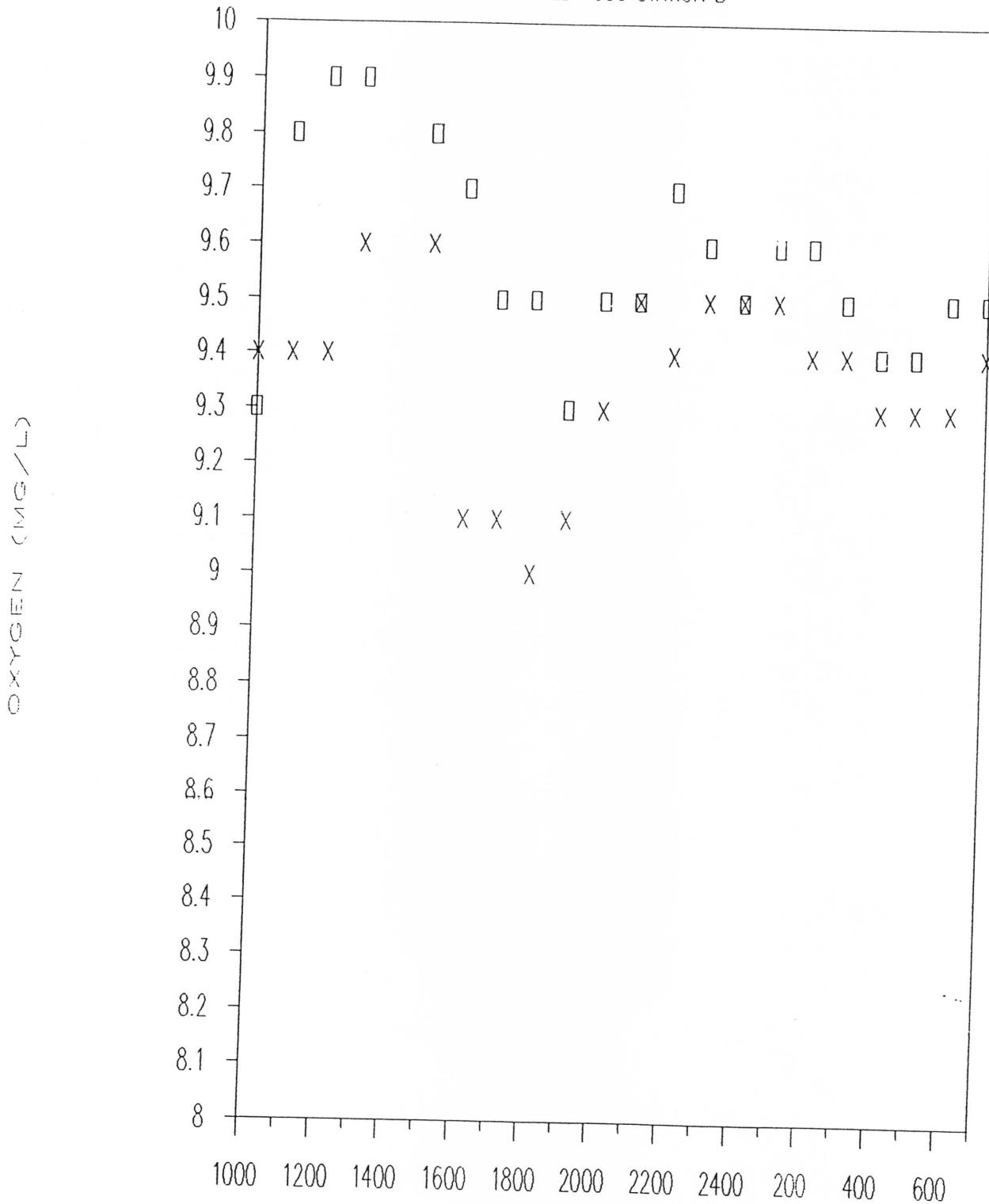
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

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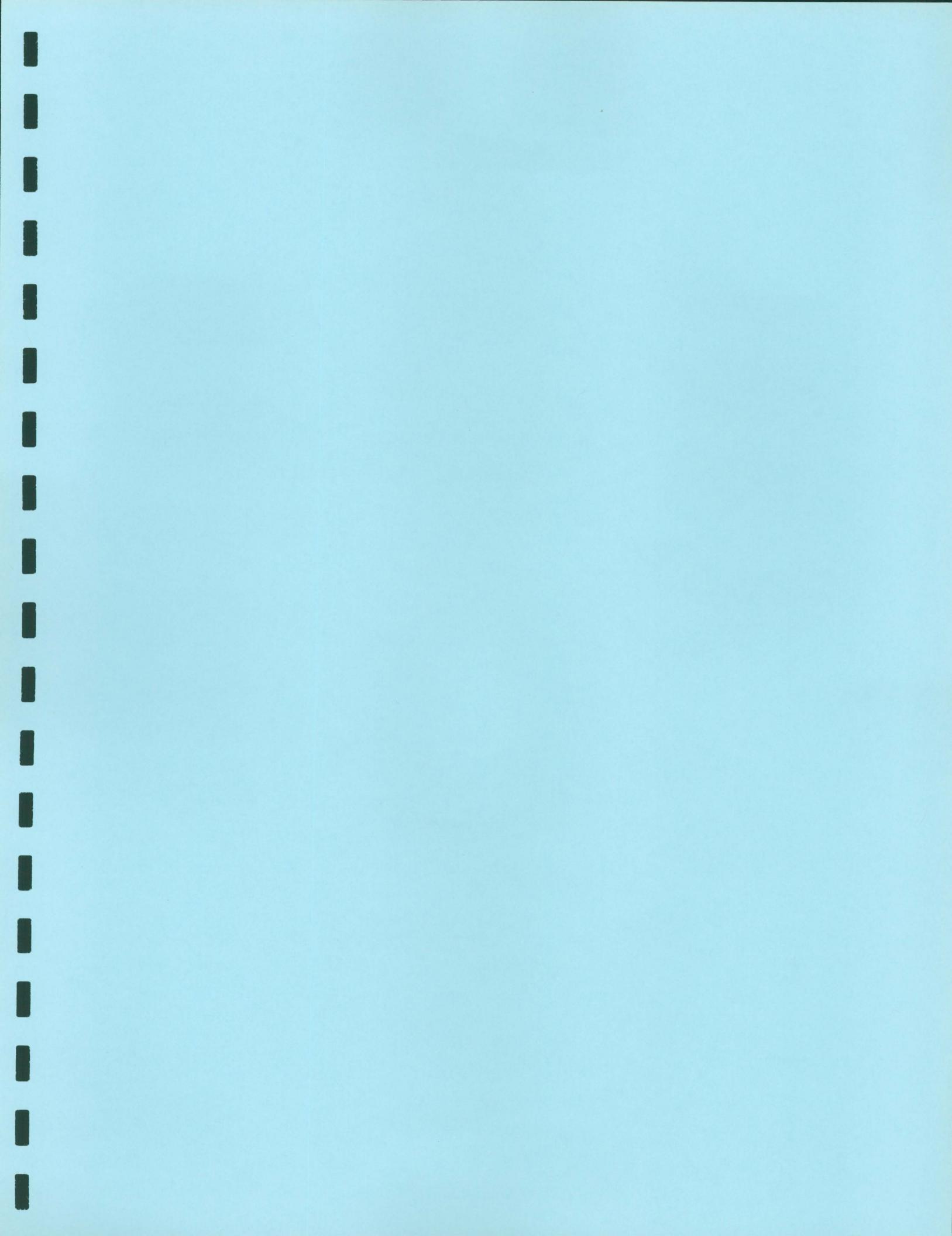


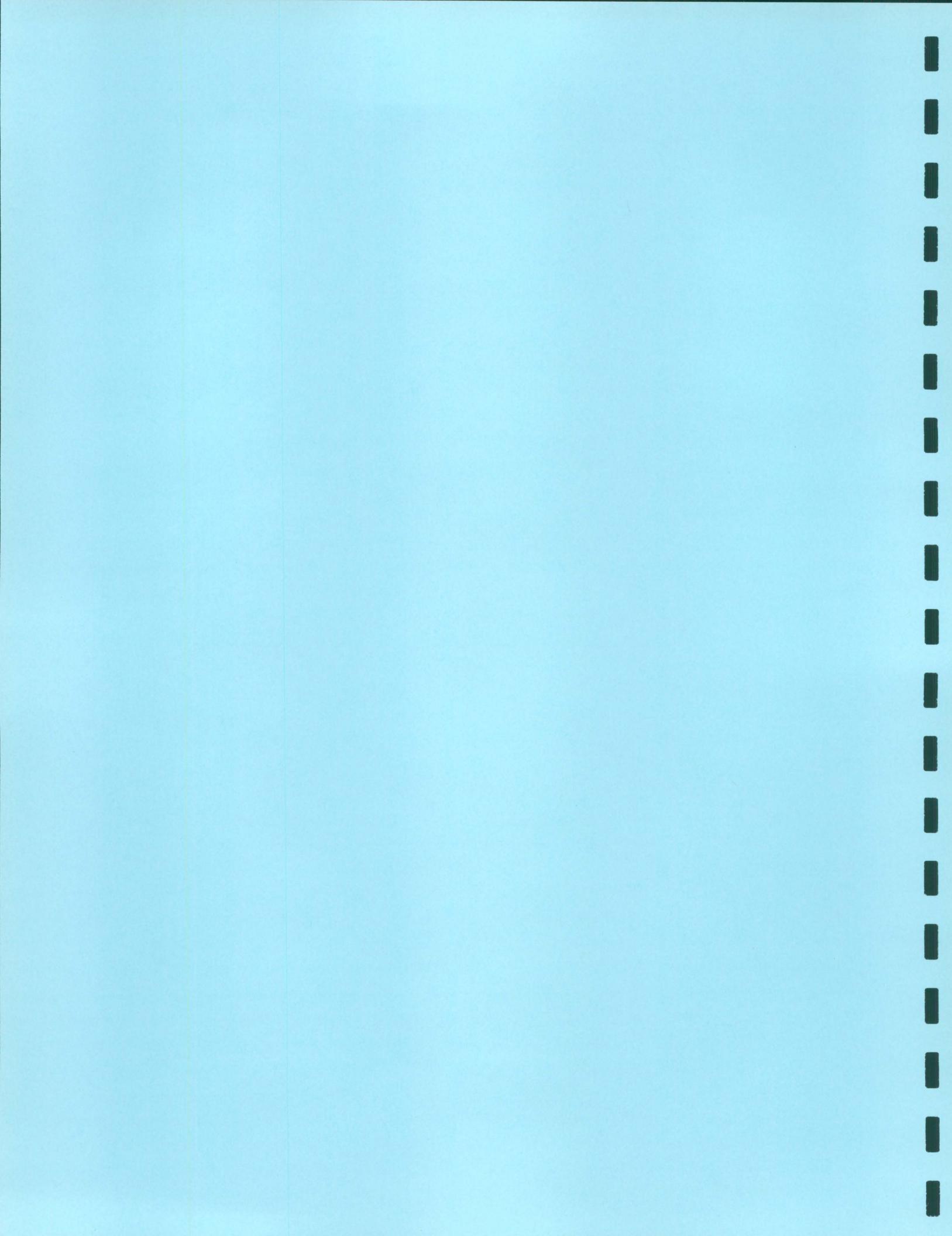
TIME OF DAY

SURFACE VALUES

X BOTTOM VALUES



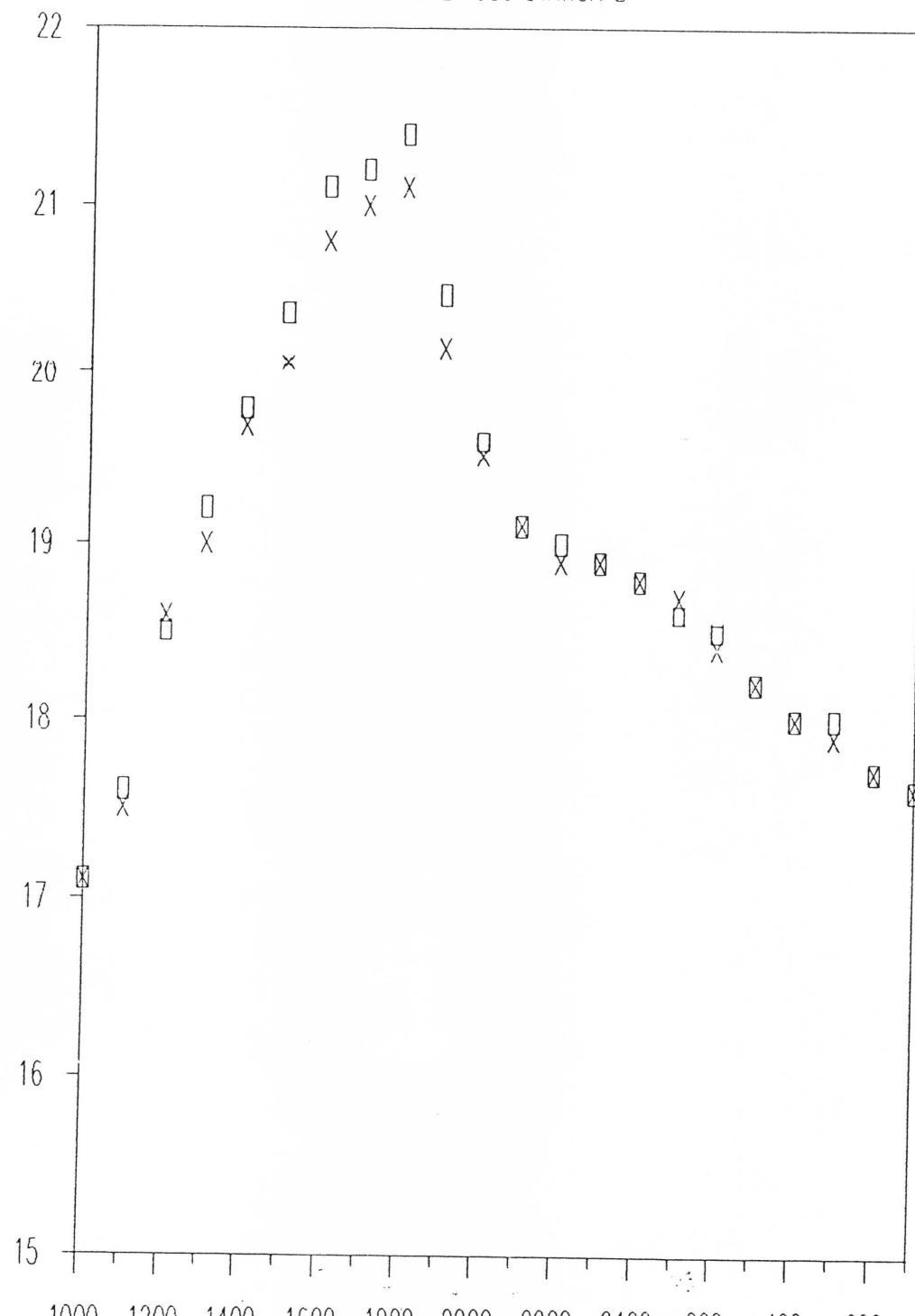




CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION B

TEMPERATURE



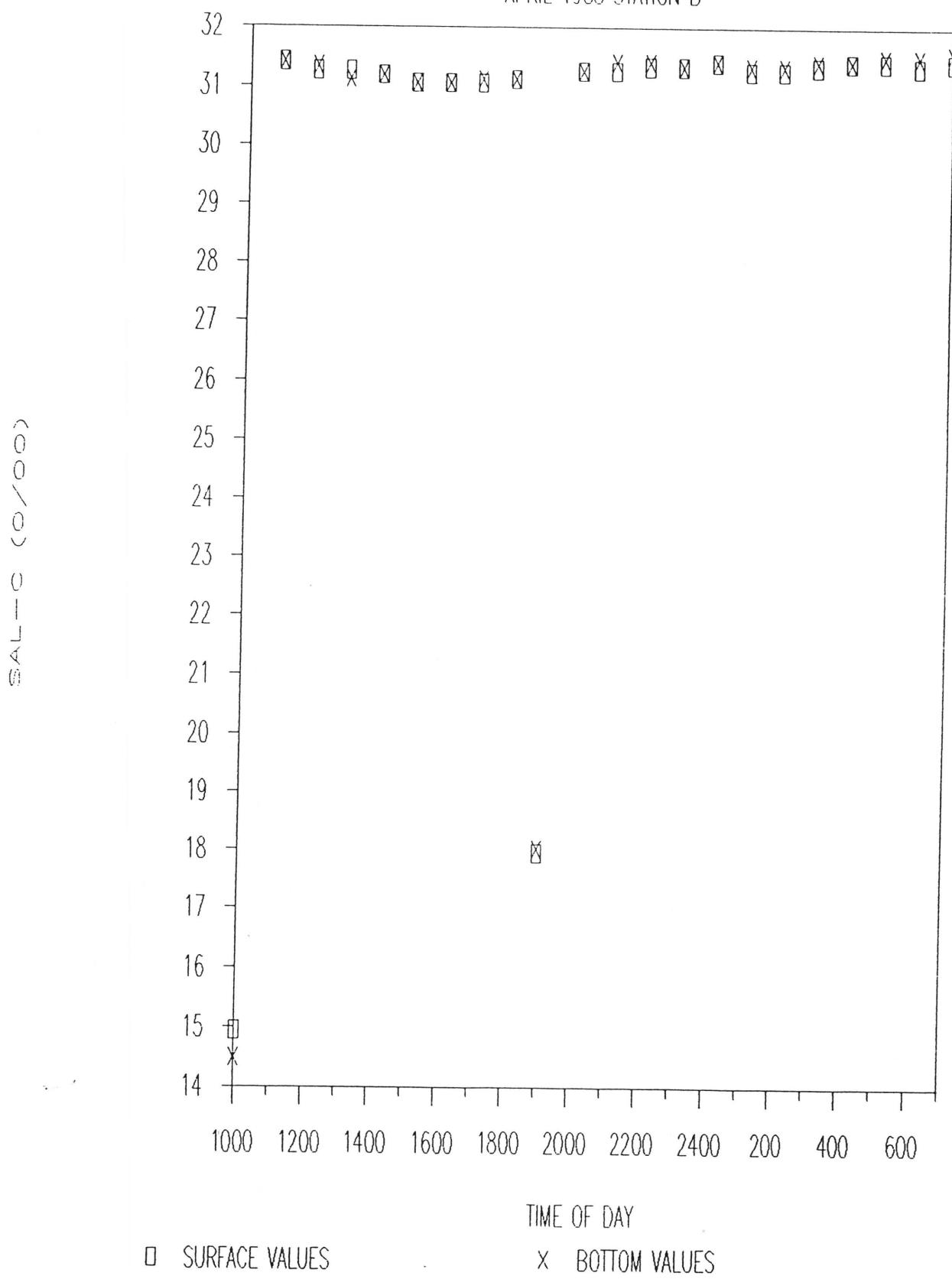
TIME OF DAY

□ SURFACE VALUES

× BOTTOM VALUES

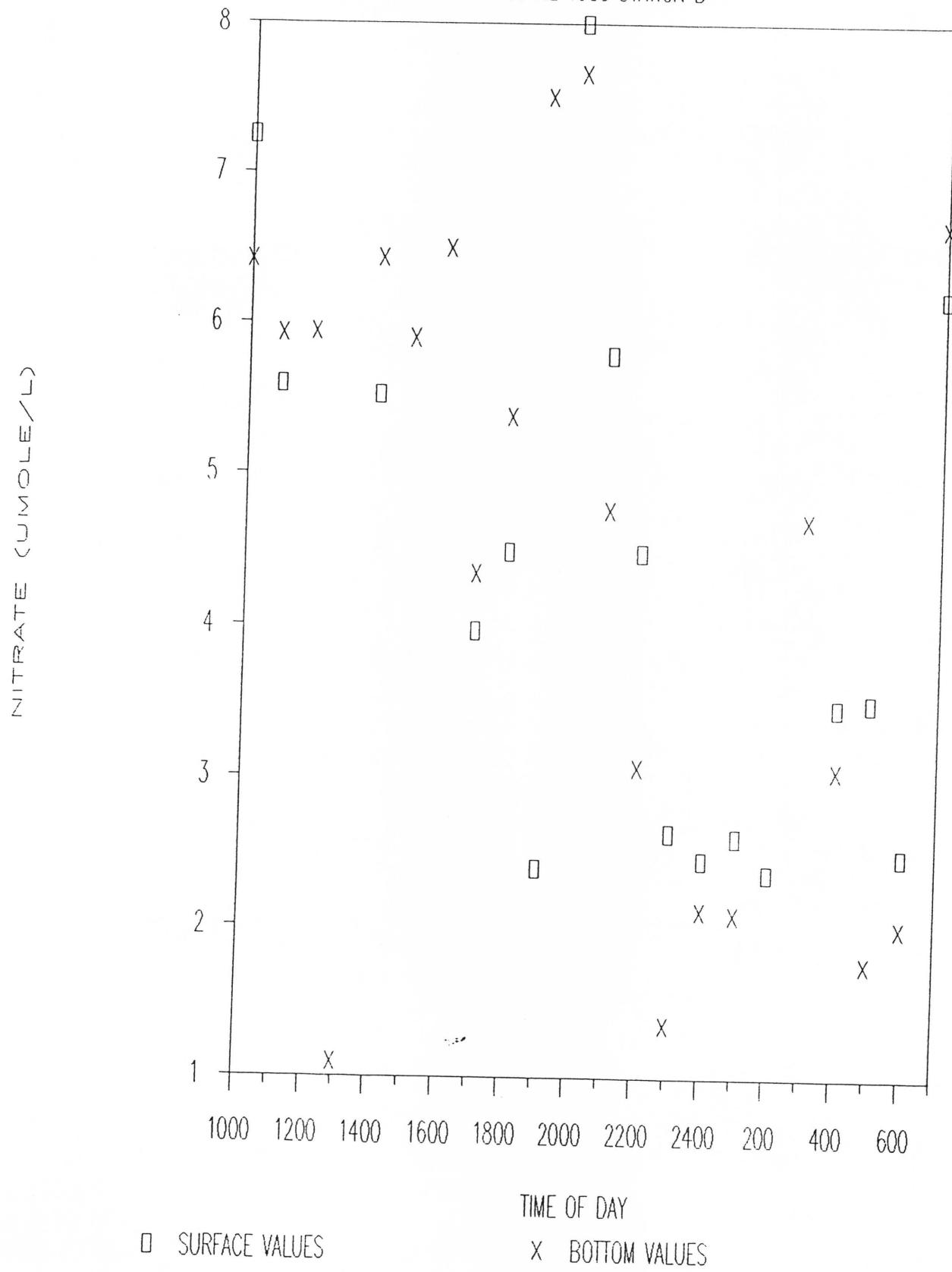
CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION B



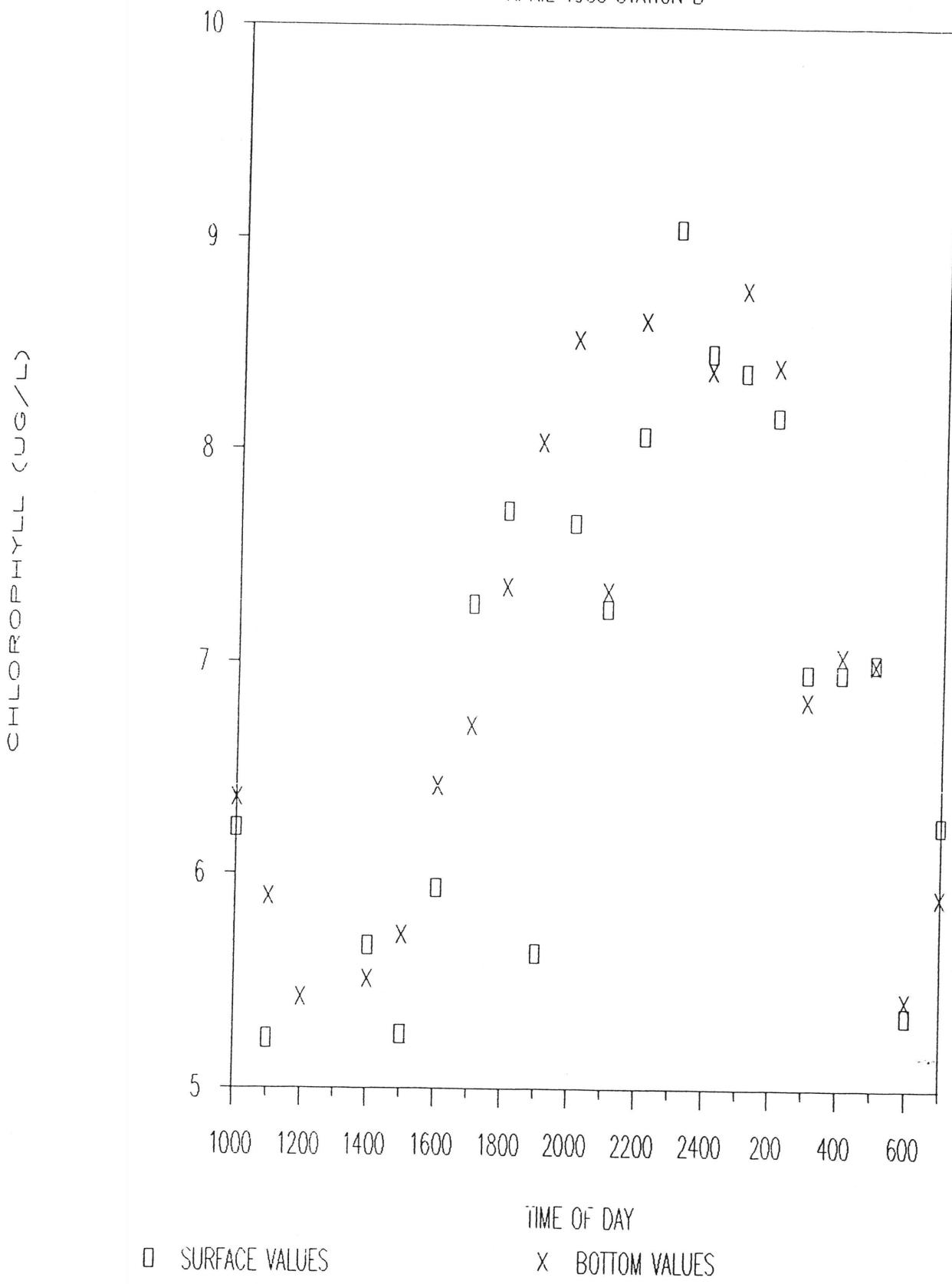
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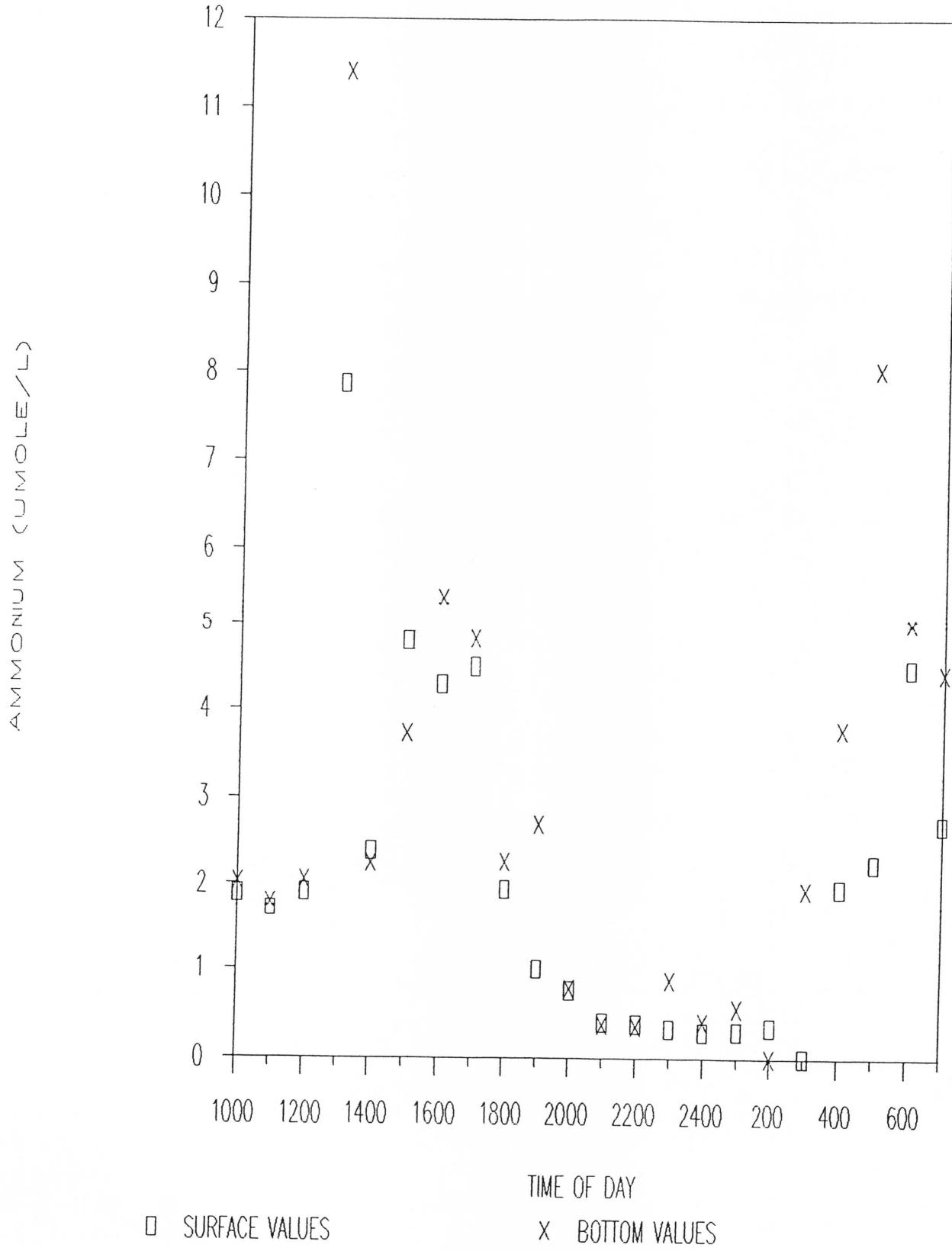
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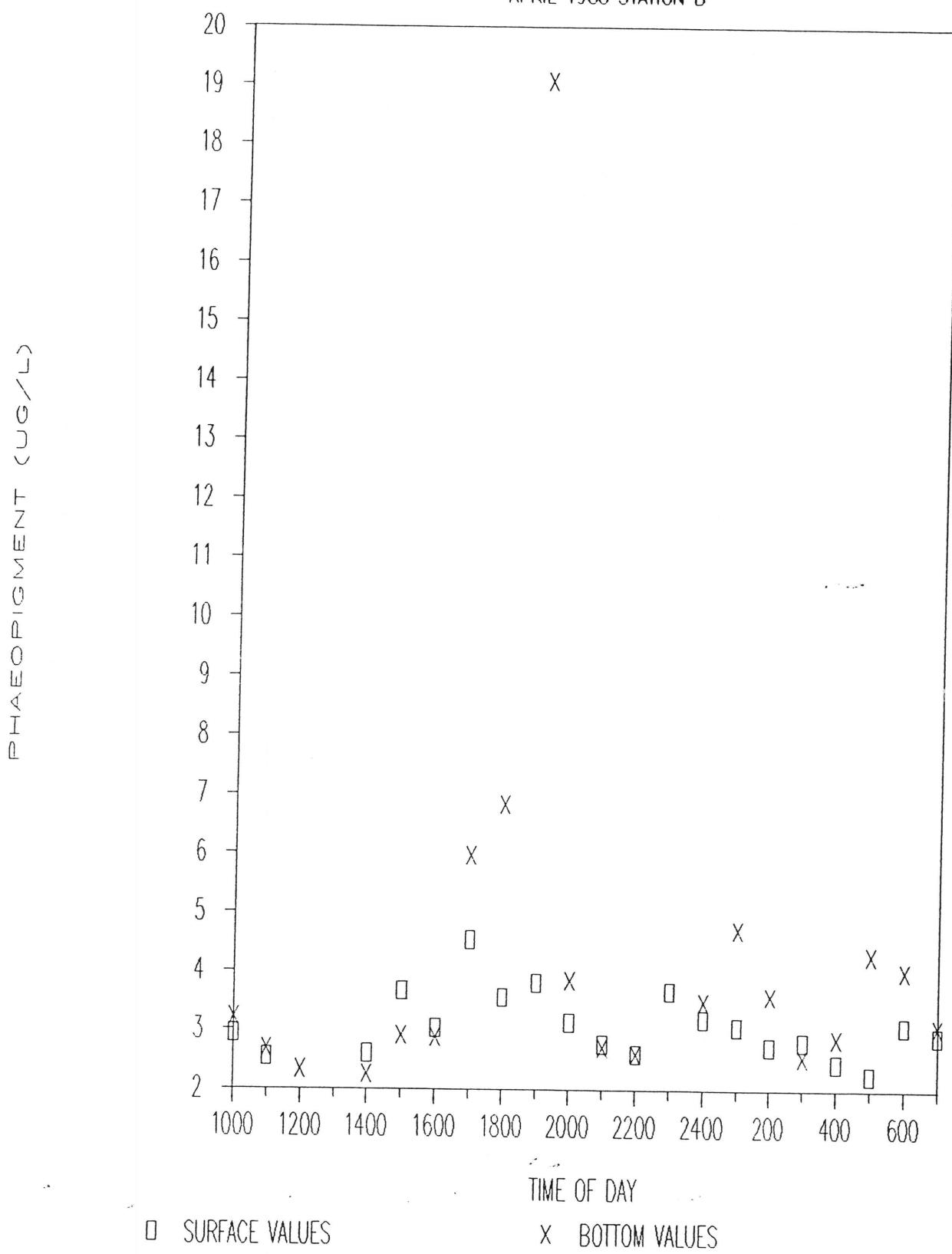
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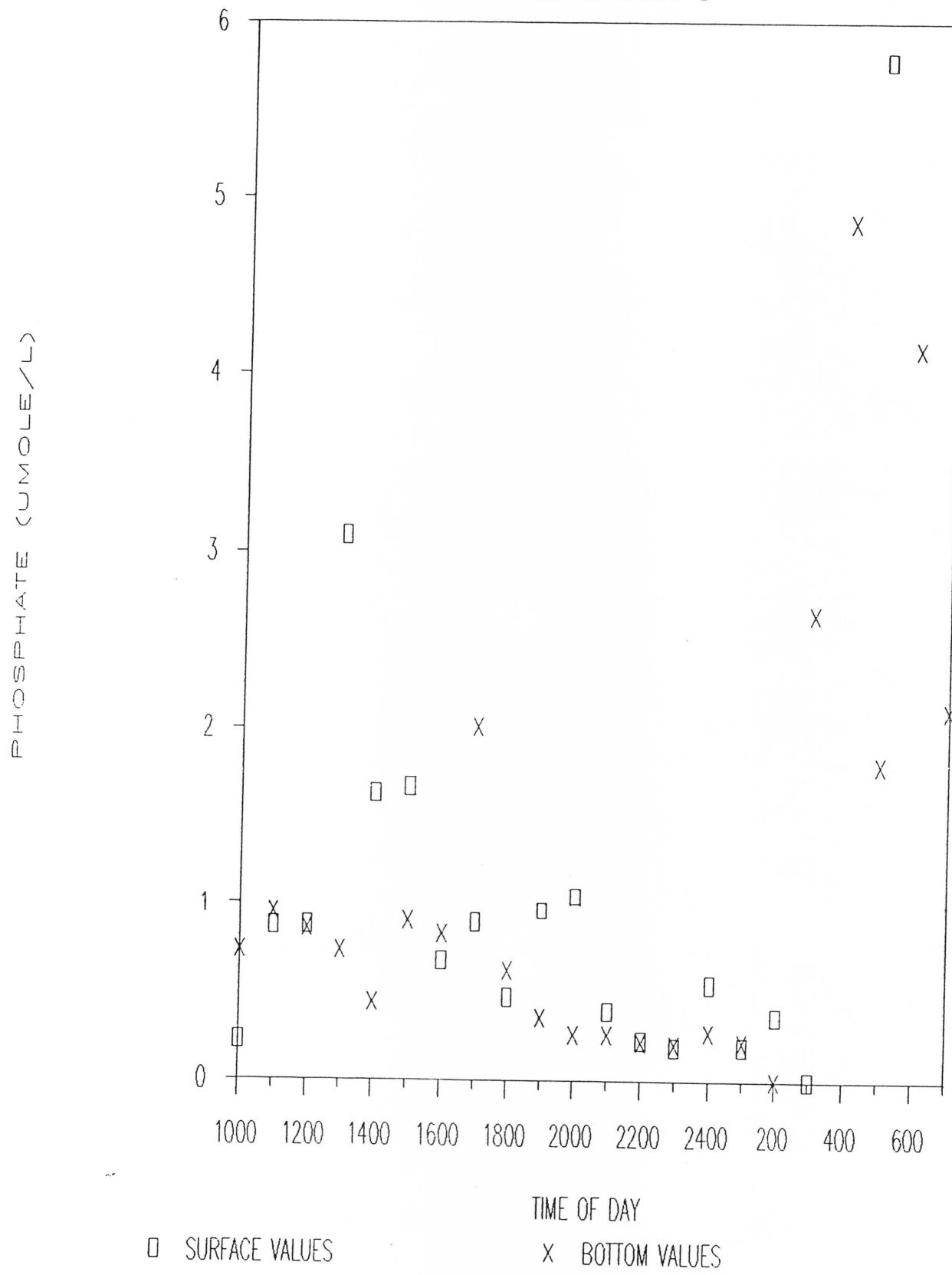
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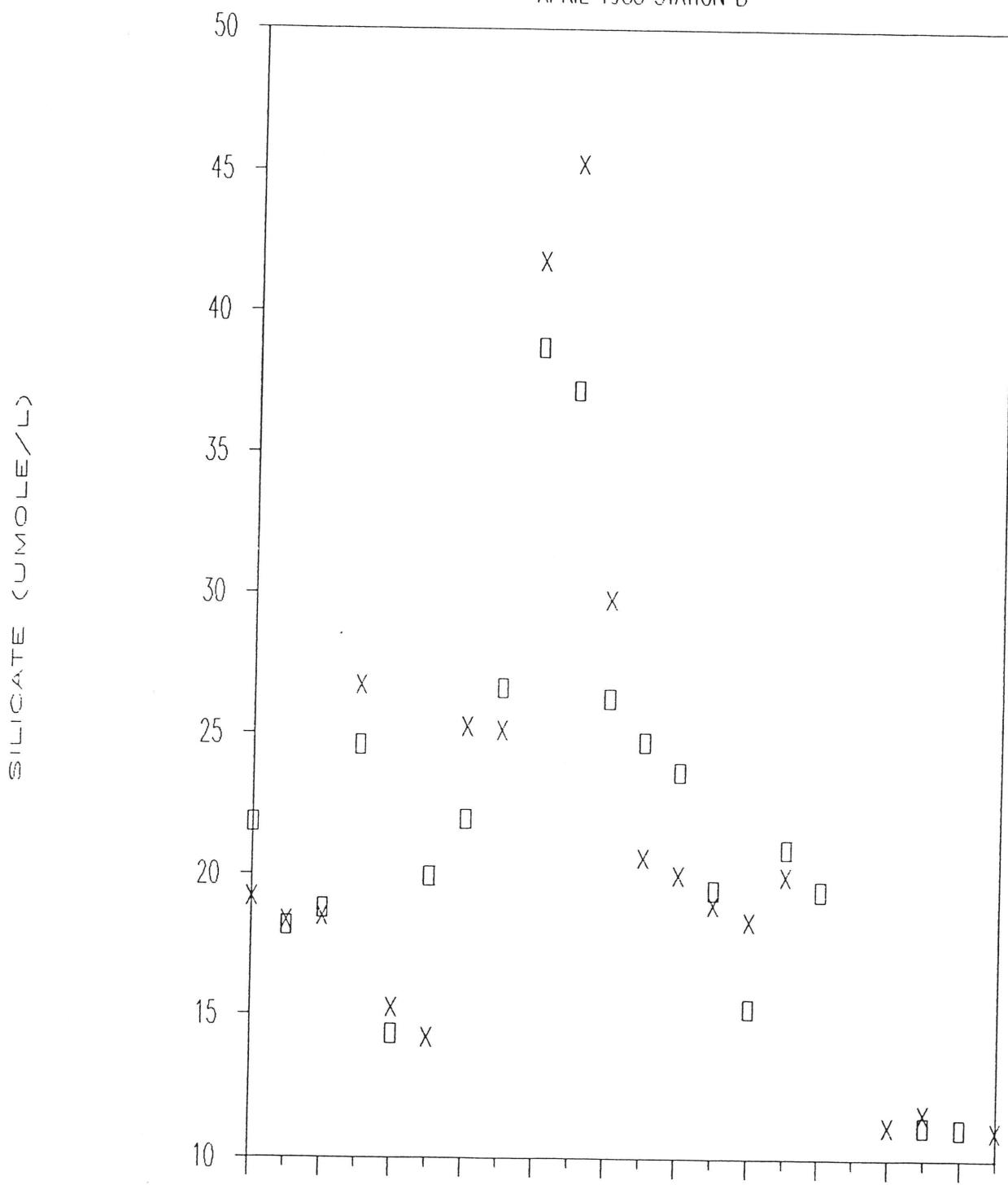
CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION B



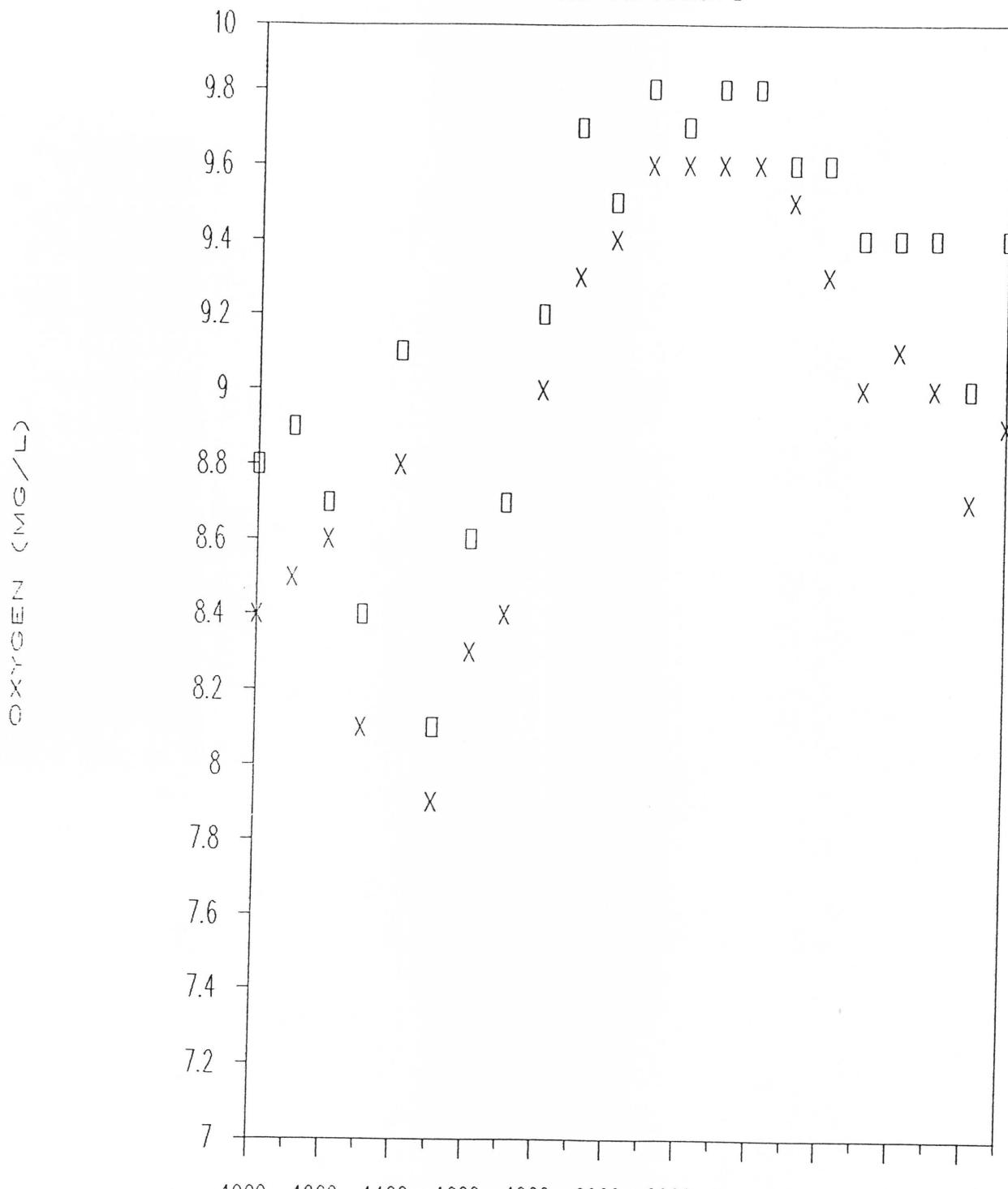
TIME OF DAY

□ SURFACE VALUES

✗ BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION B

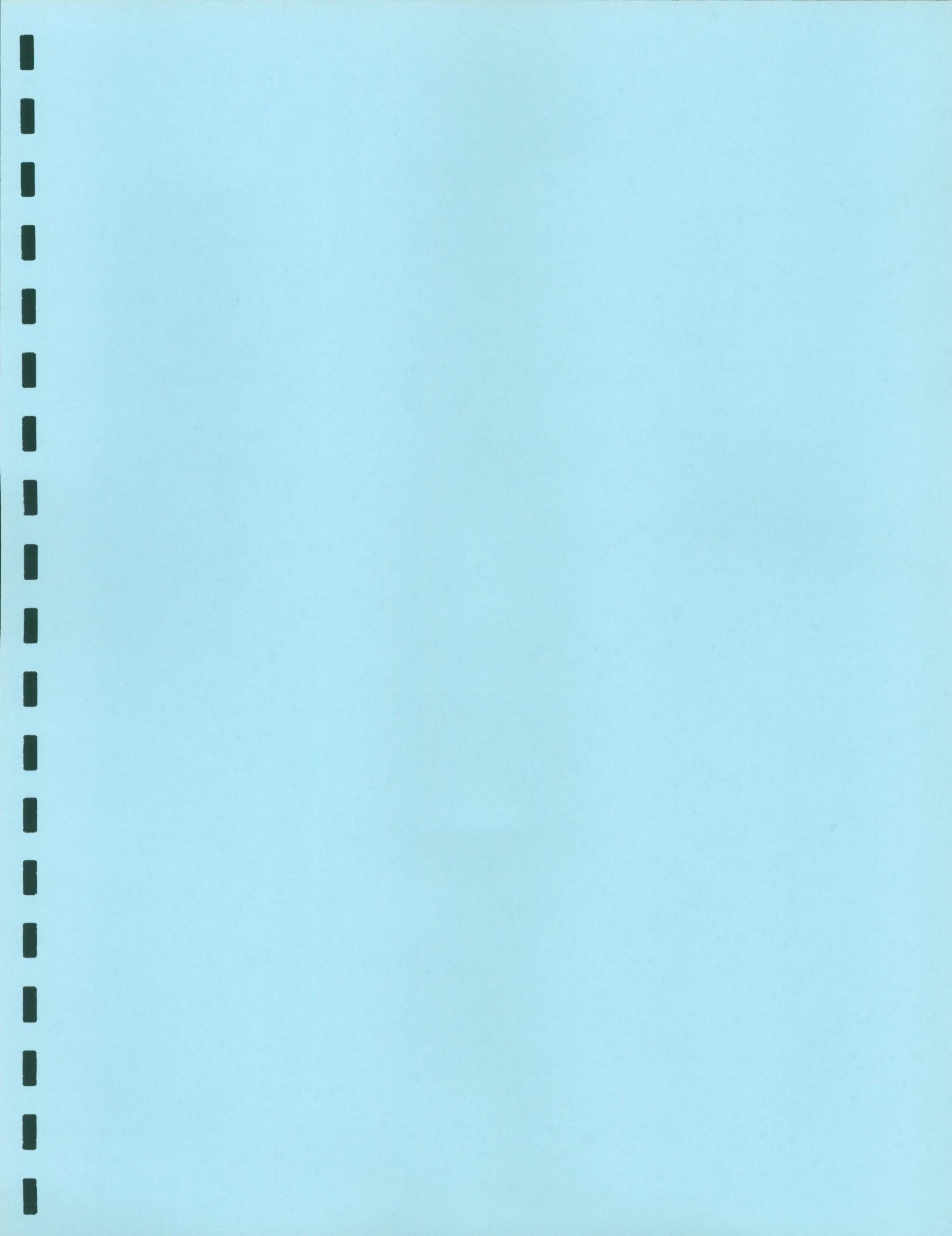


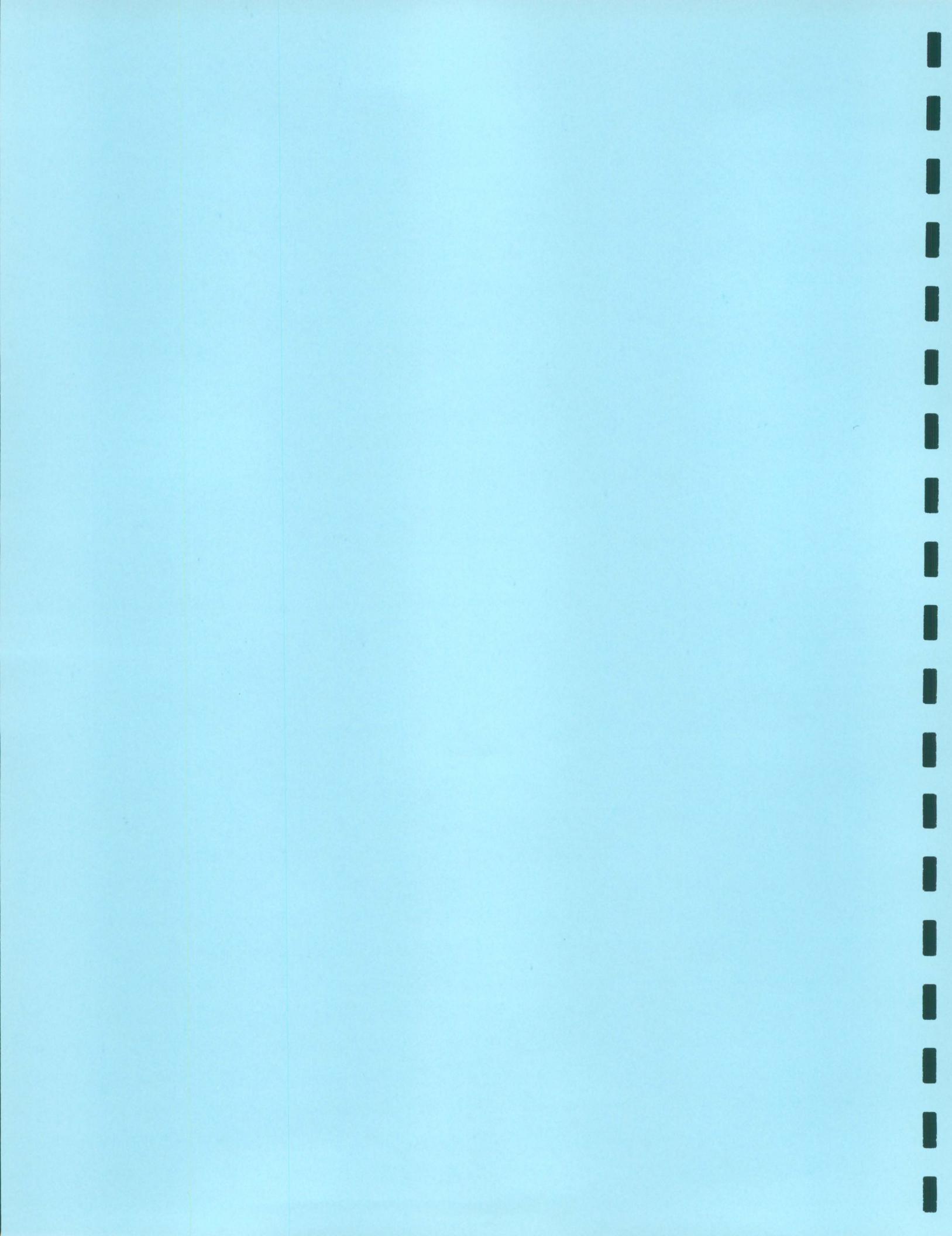
TIME OF DAY

□ SURFACE VALUES

× BOTTOM VALUES

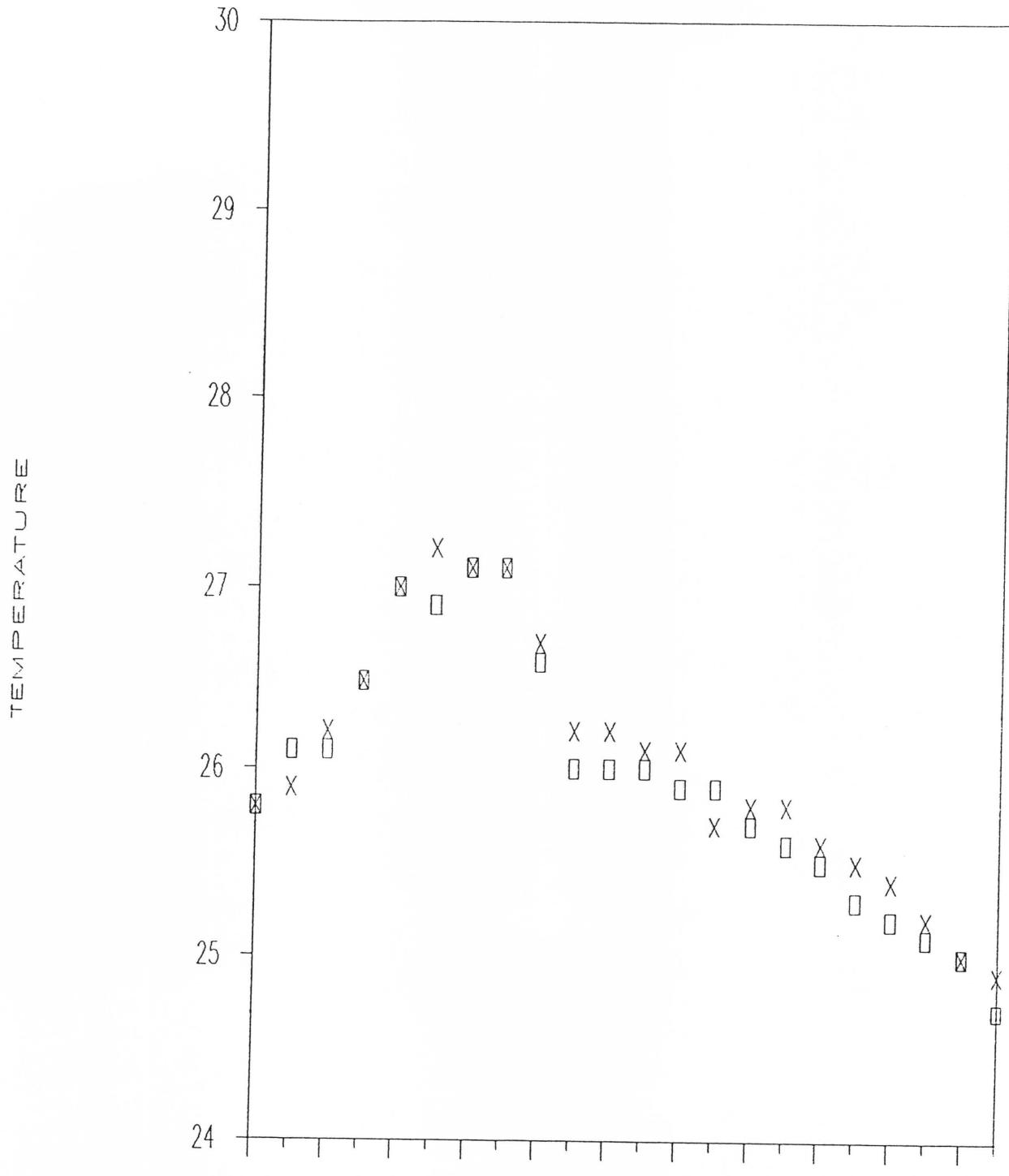






CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION B



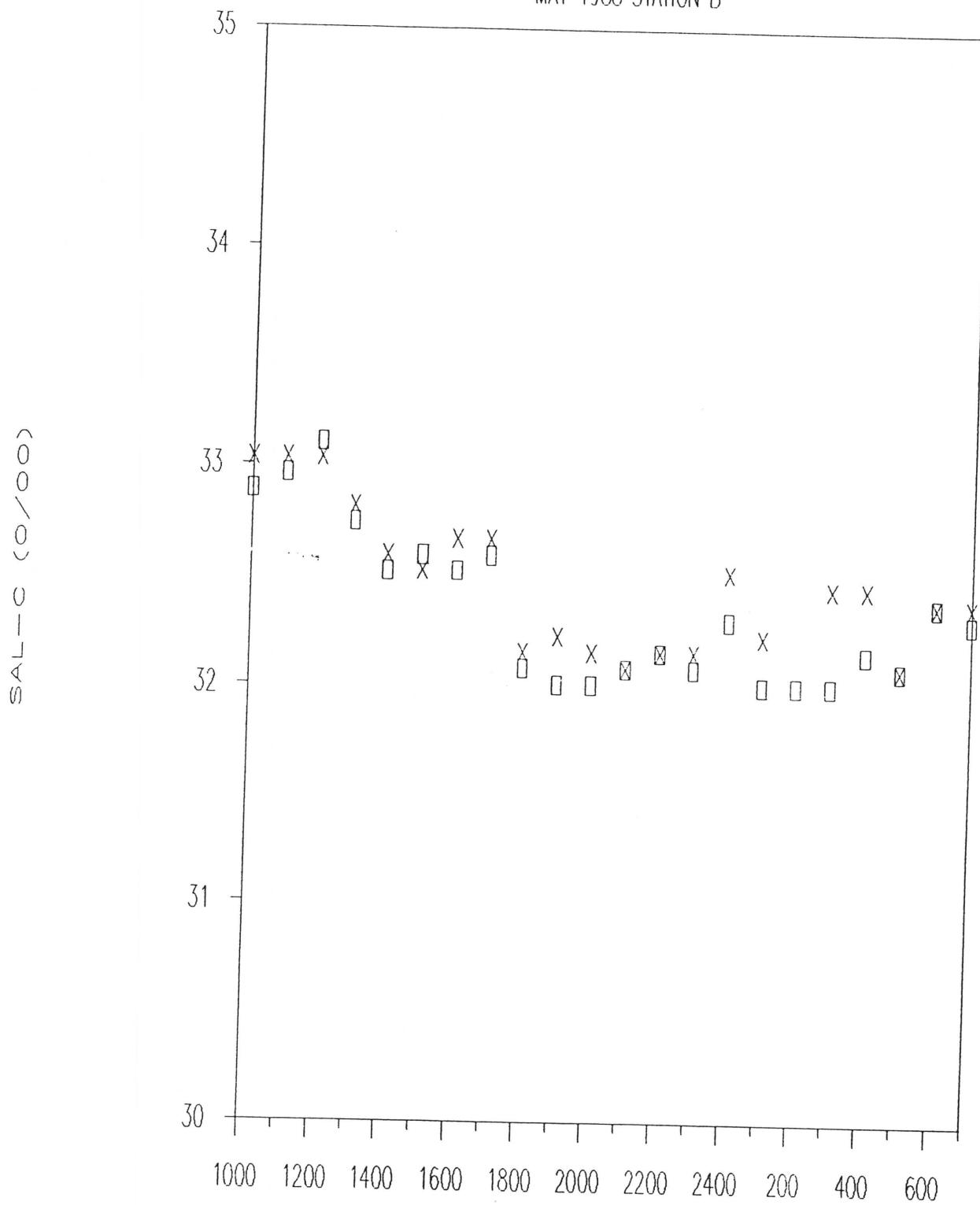
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION B

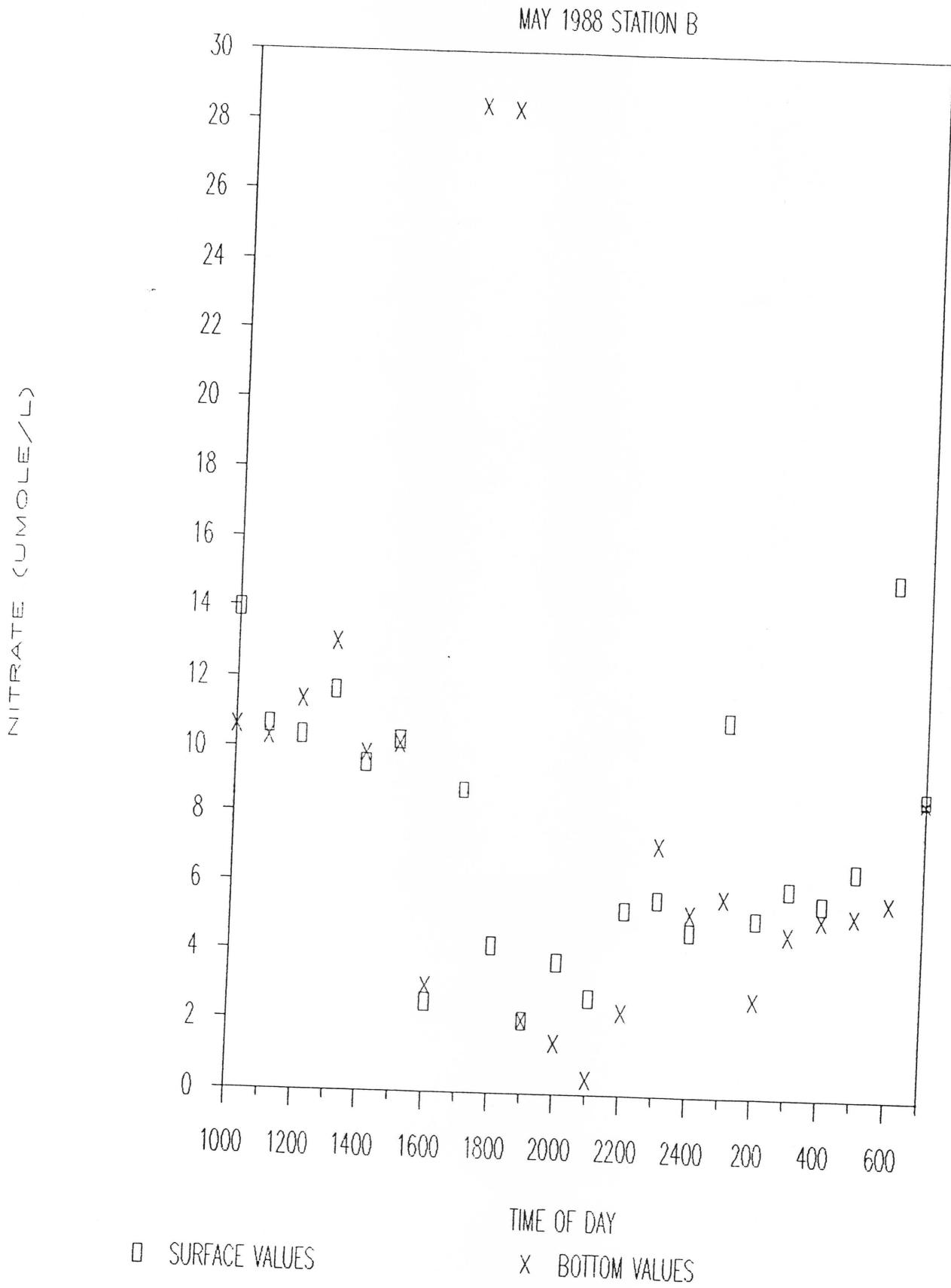


TIME OF DAY

□ SURFACE VALUES

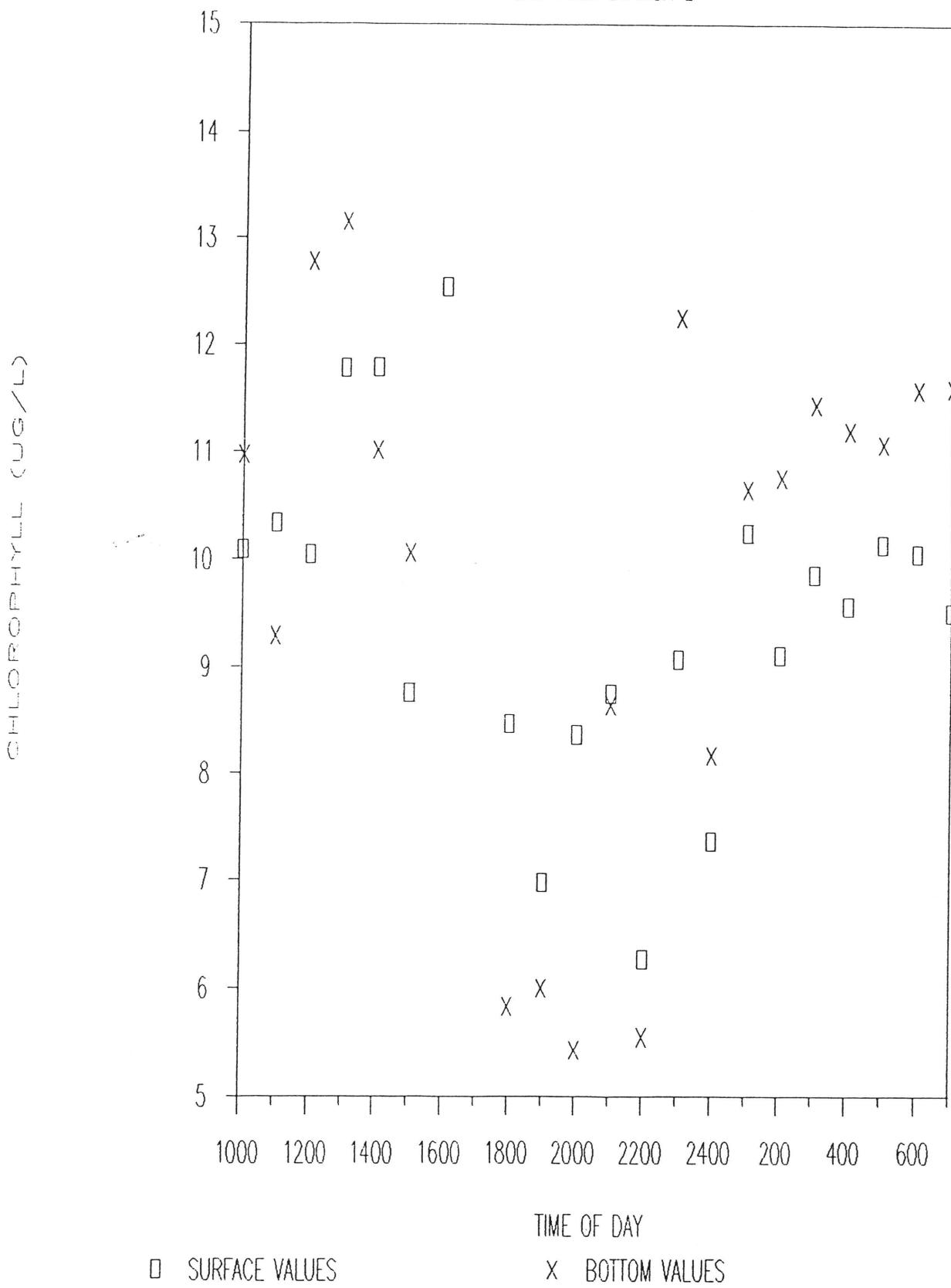
X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS



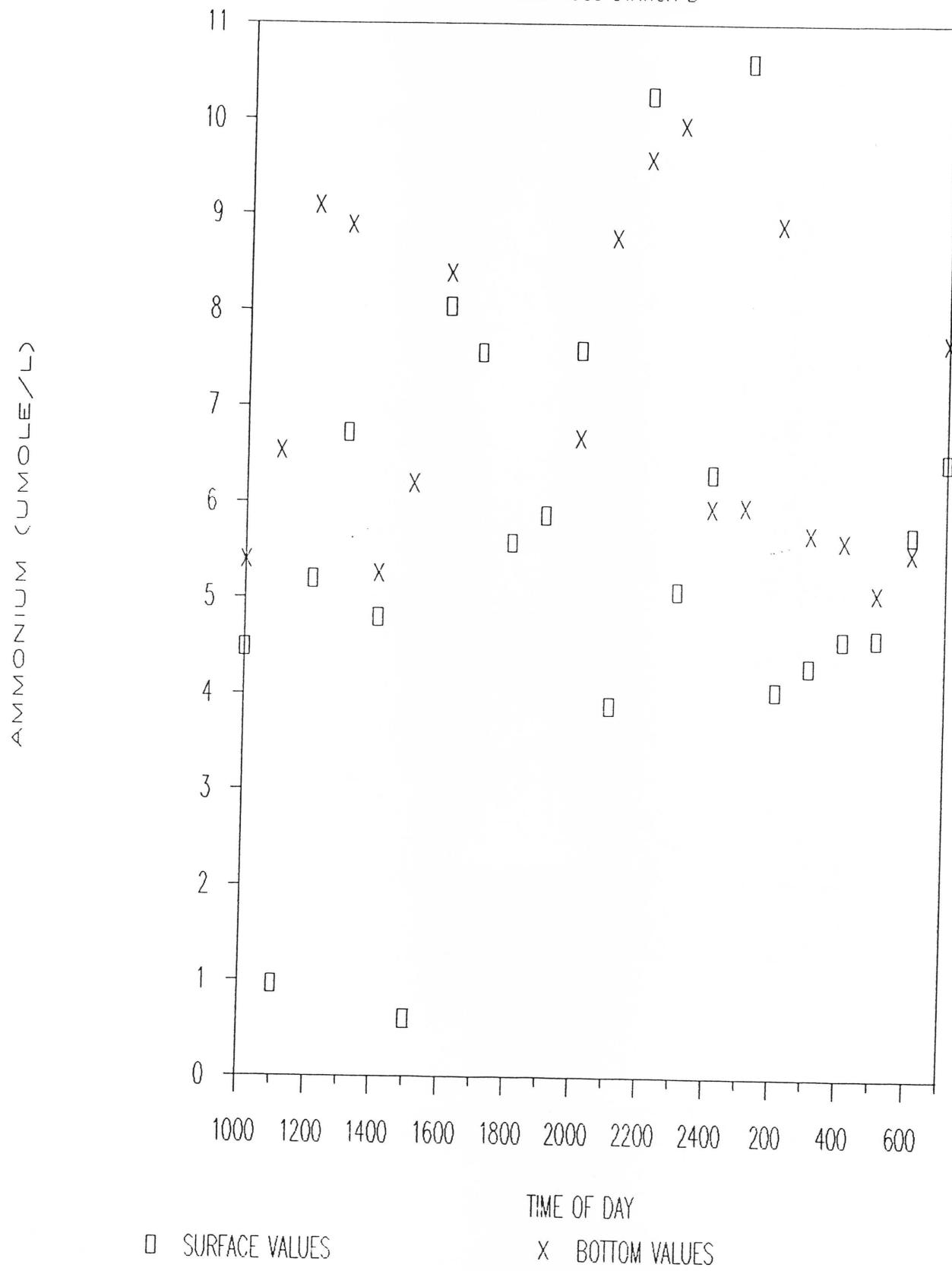
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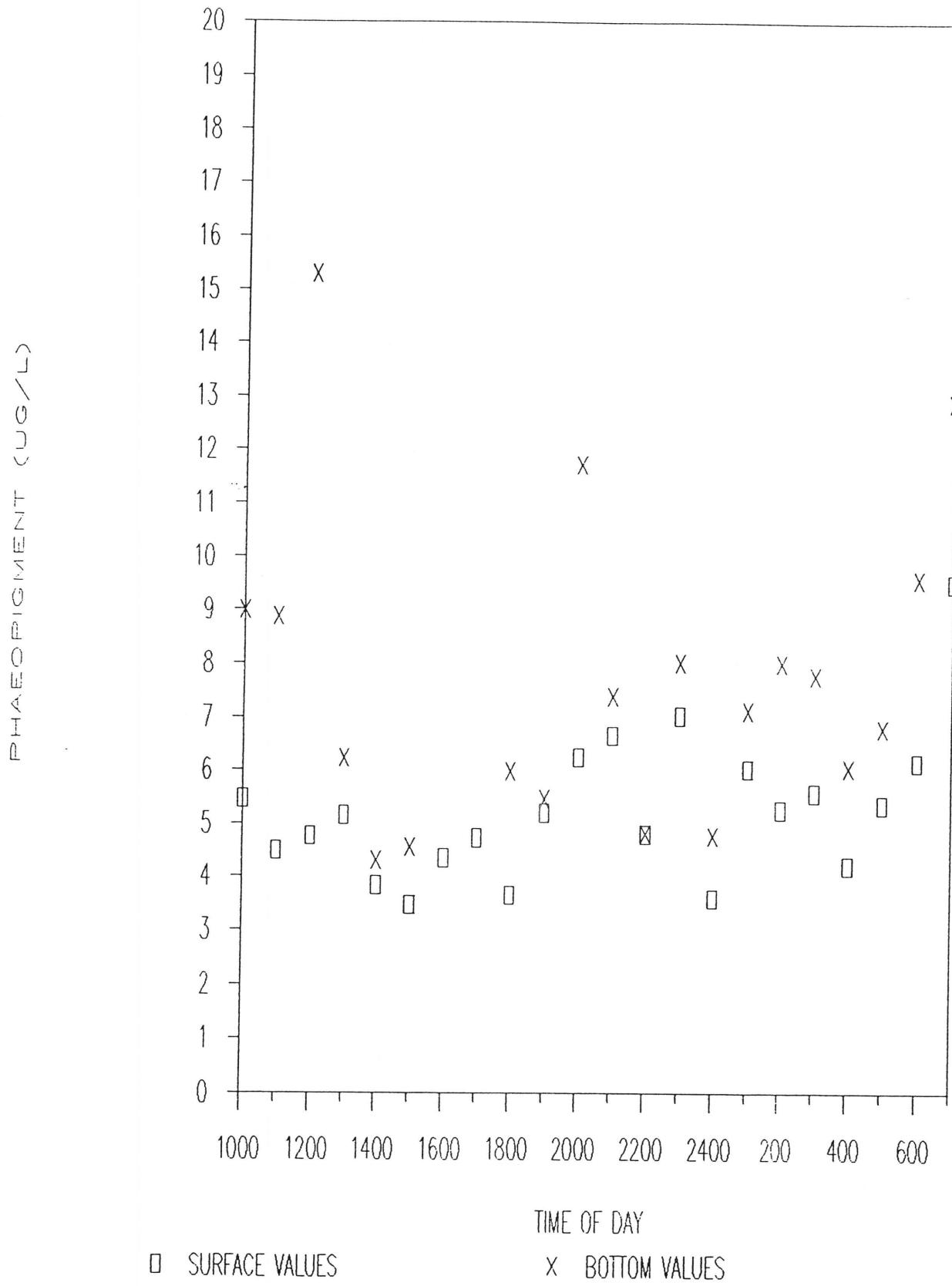
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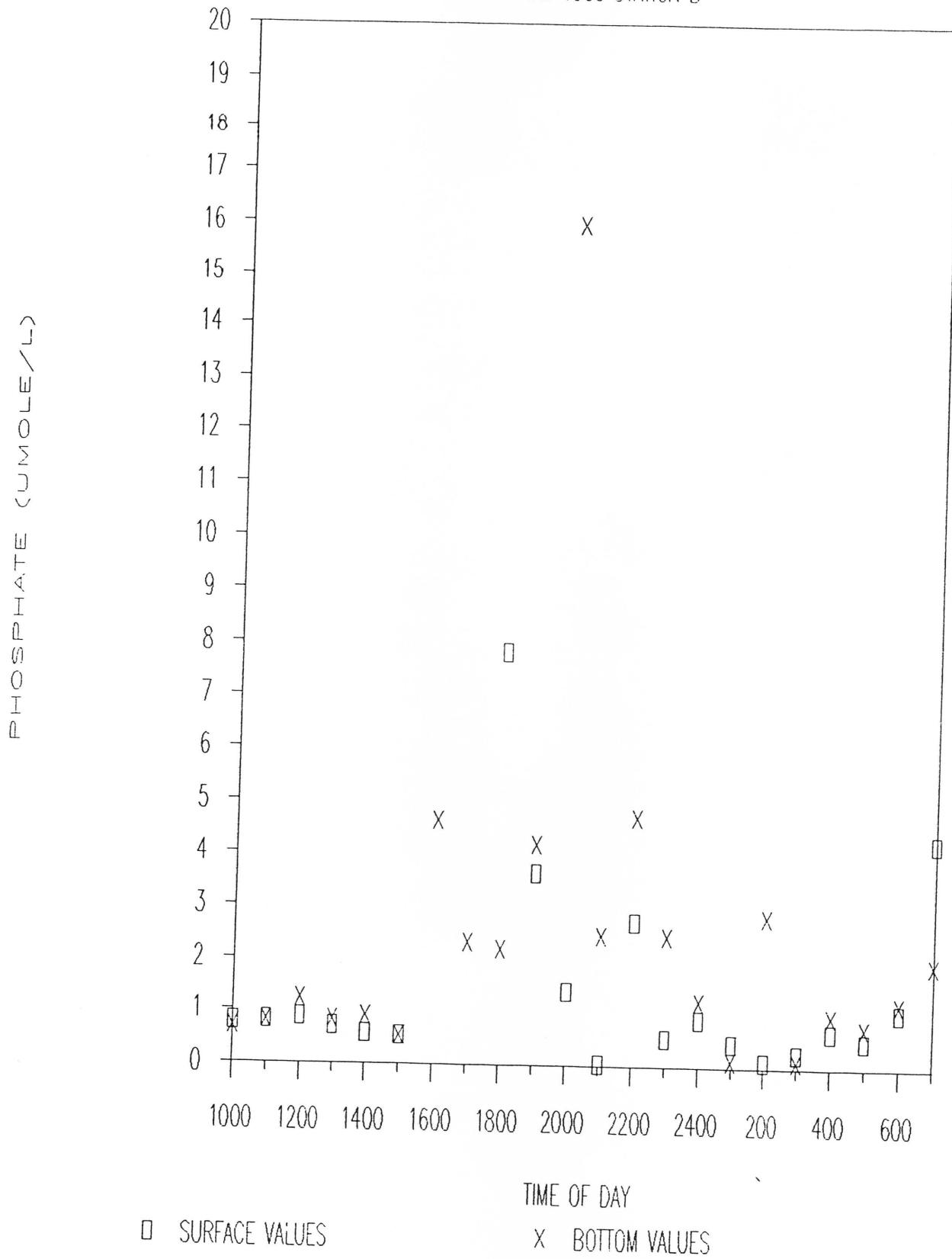
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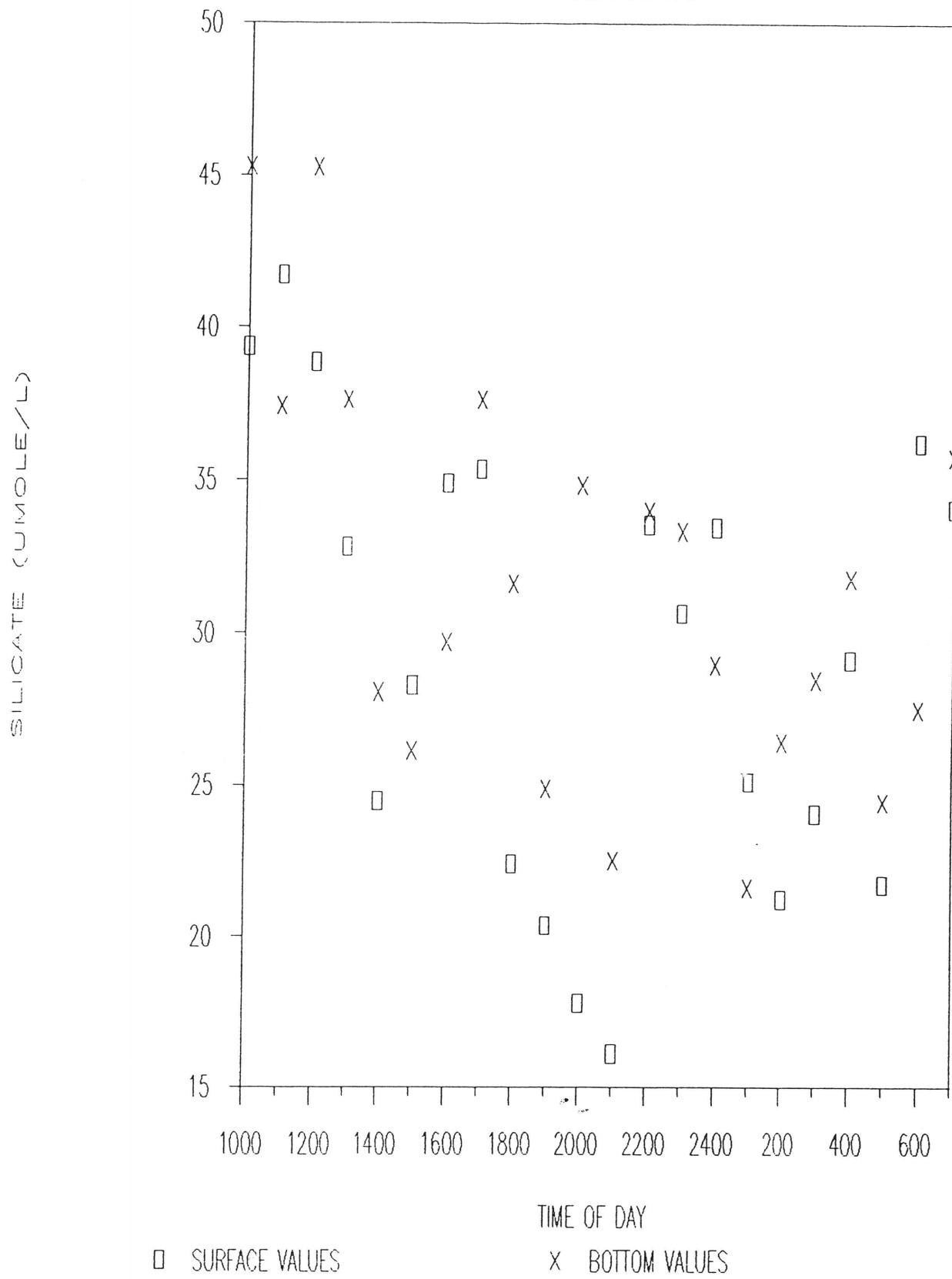
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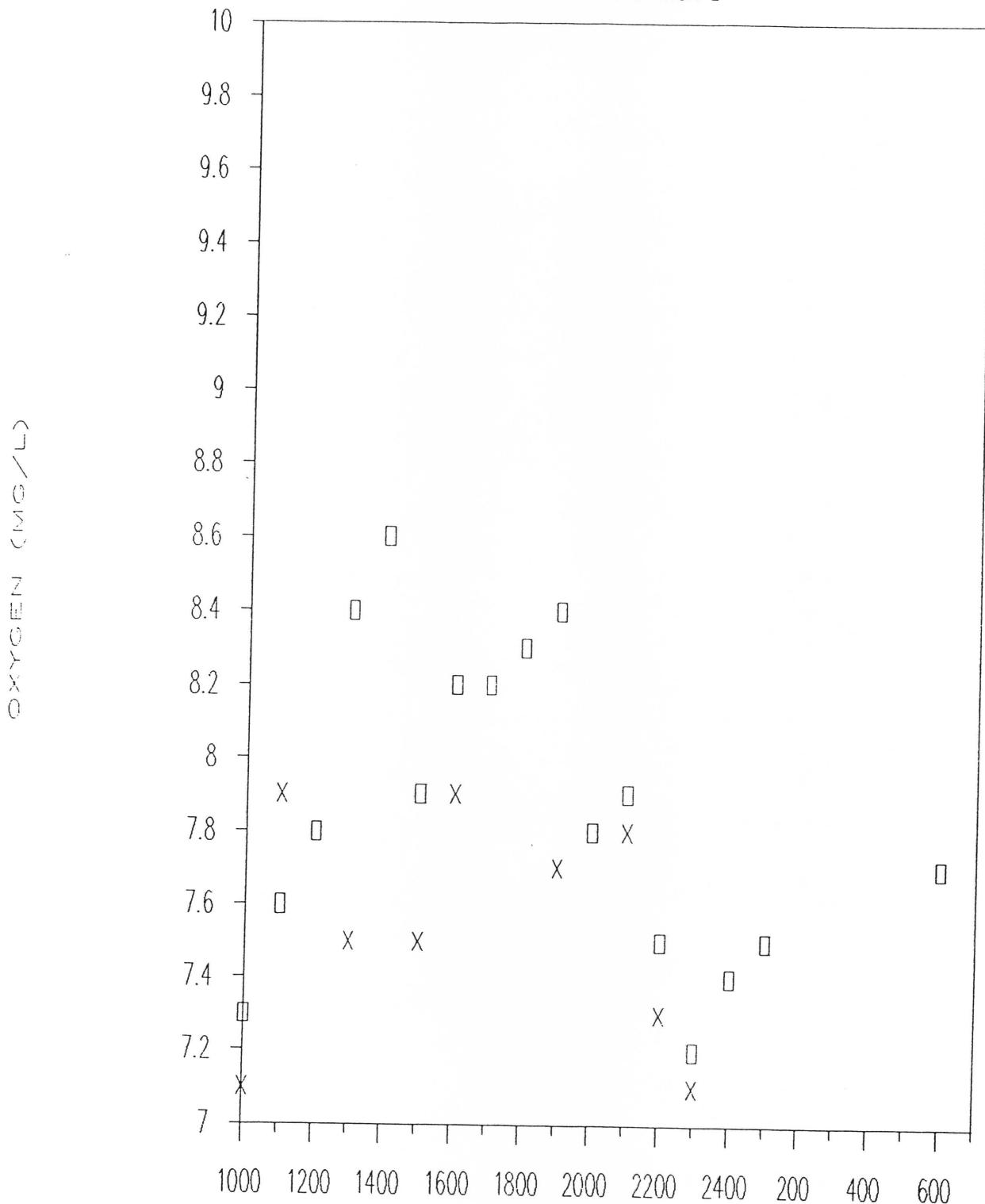
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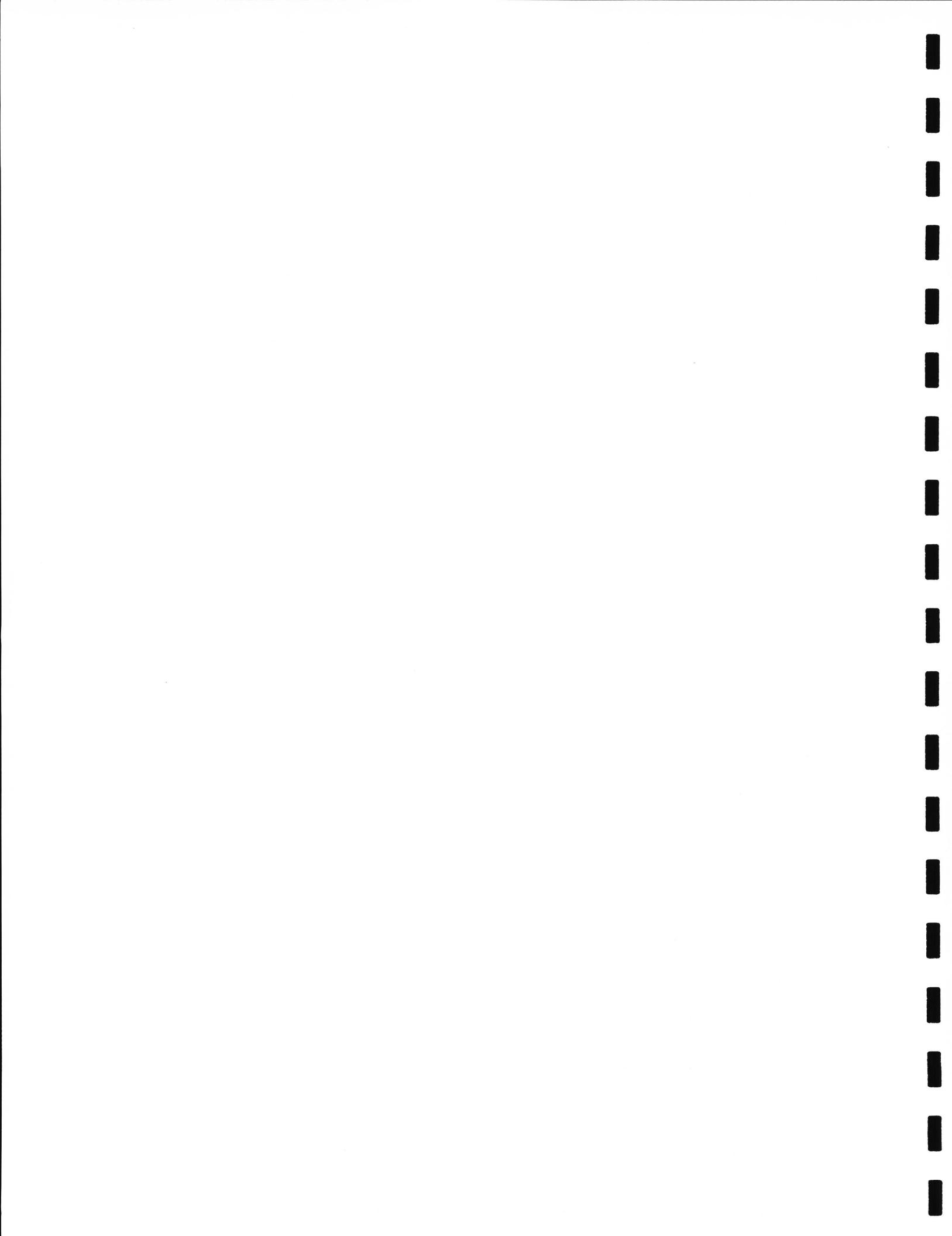
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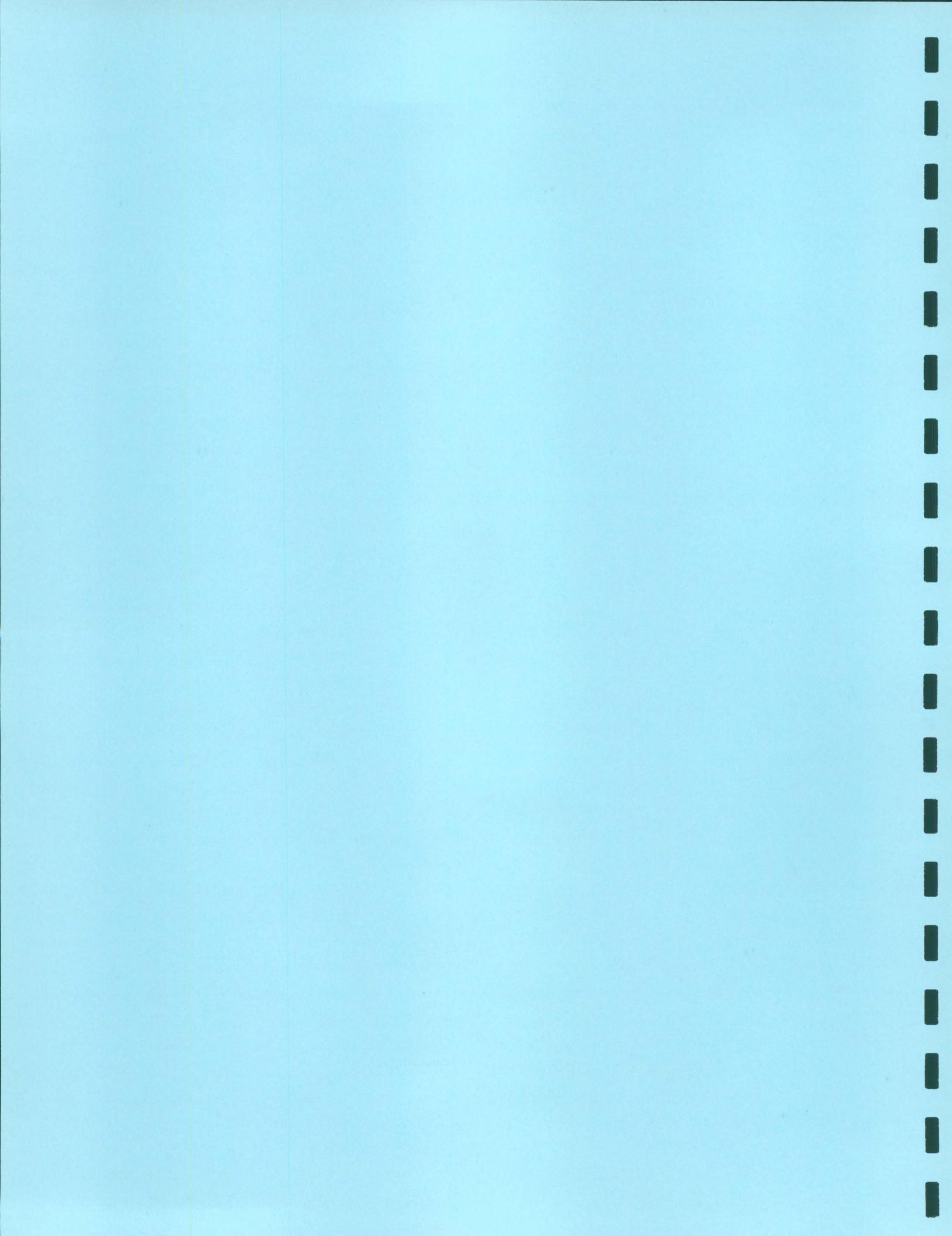
MAY 1988 STATION B



□ SURFACE VALUES

X BOTTOM VALUES

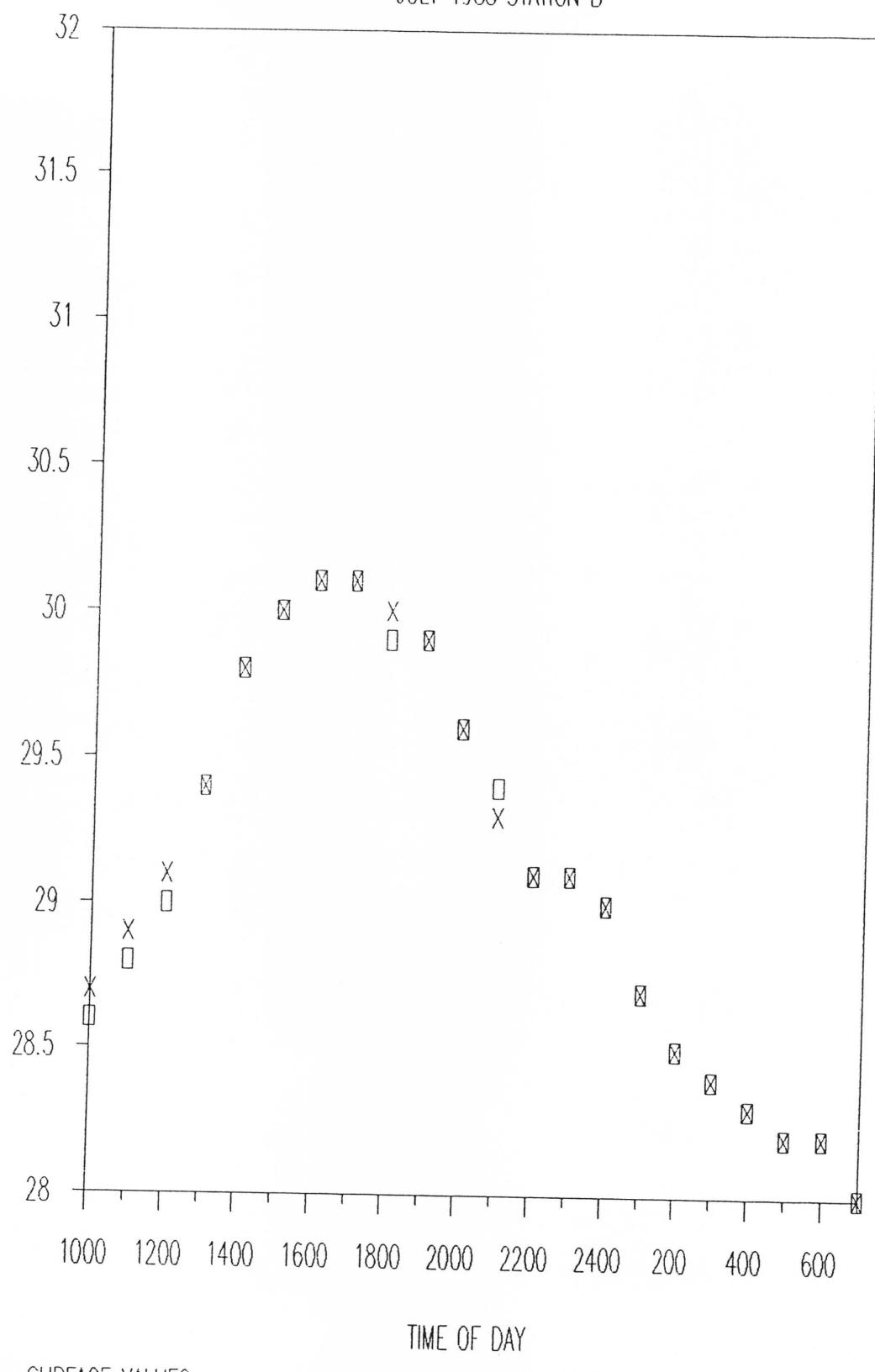




CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B

TEMPERATURE



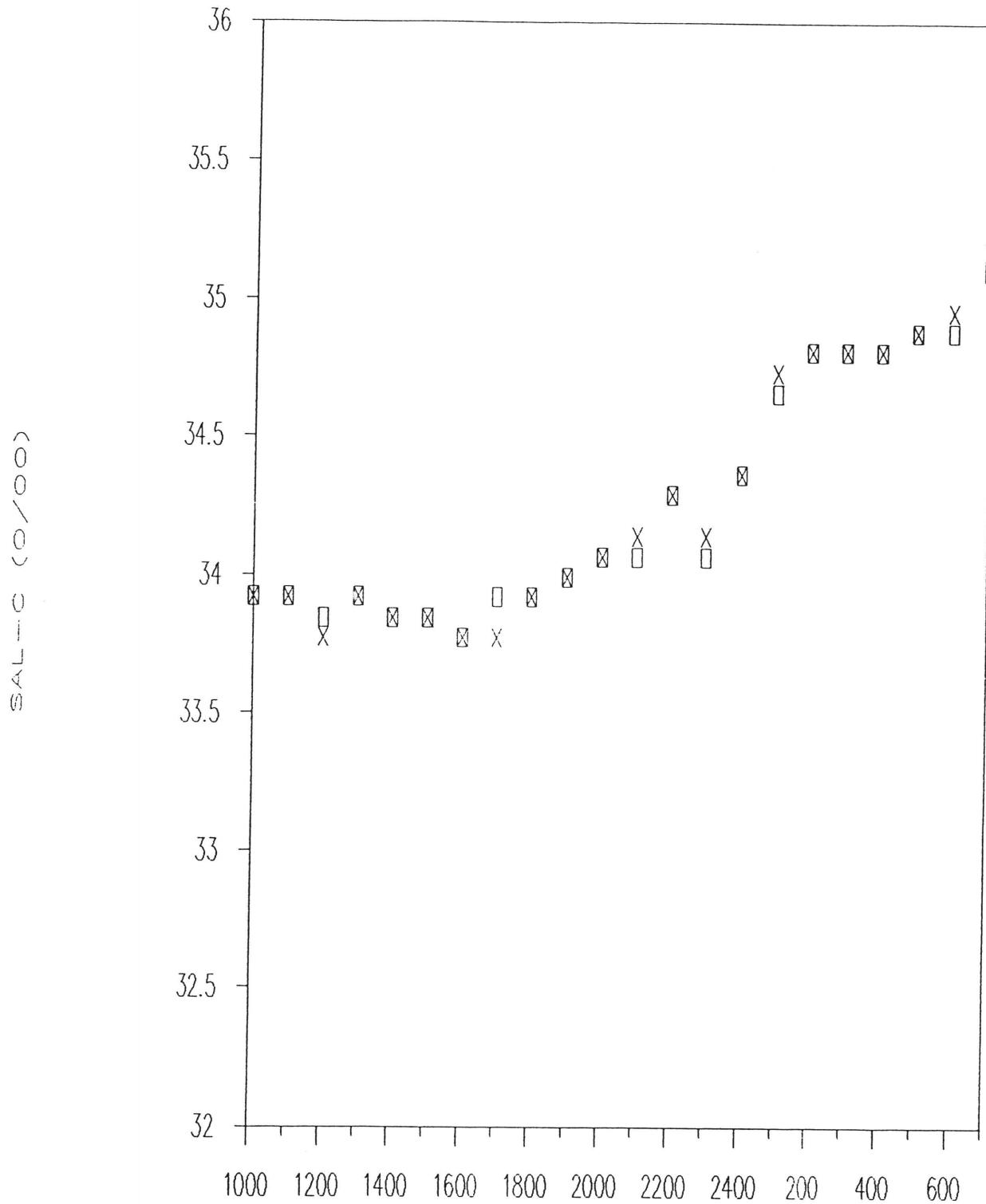
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B



TIME OF DAY

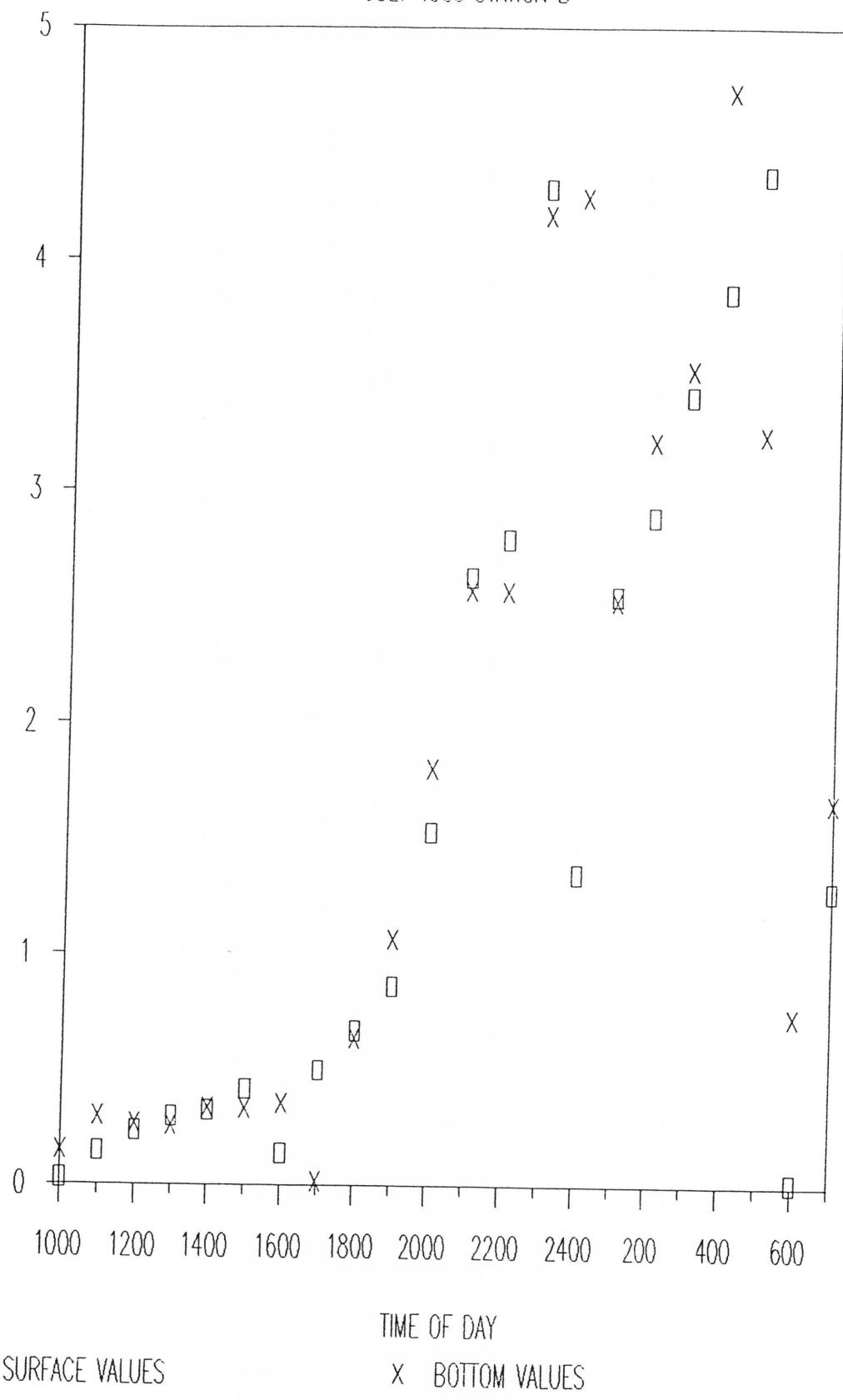
□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

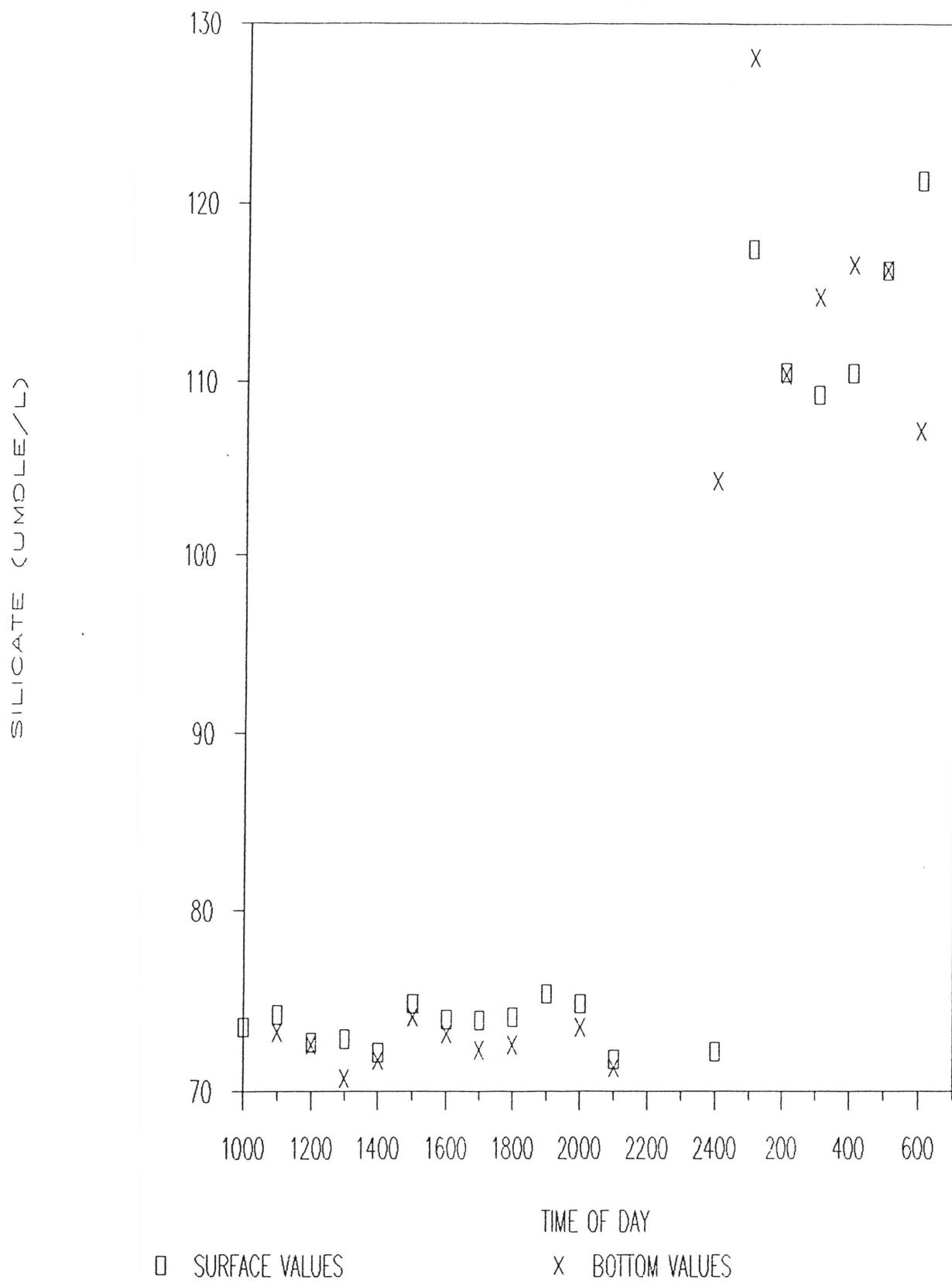
JULY 1988 STATION B

INFRATE (UMOLE/L)



CORPUS CHRISTI/NUECES BAYS

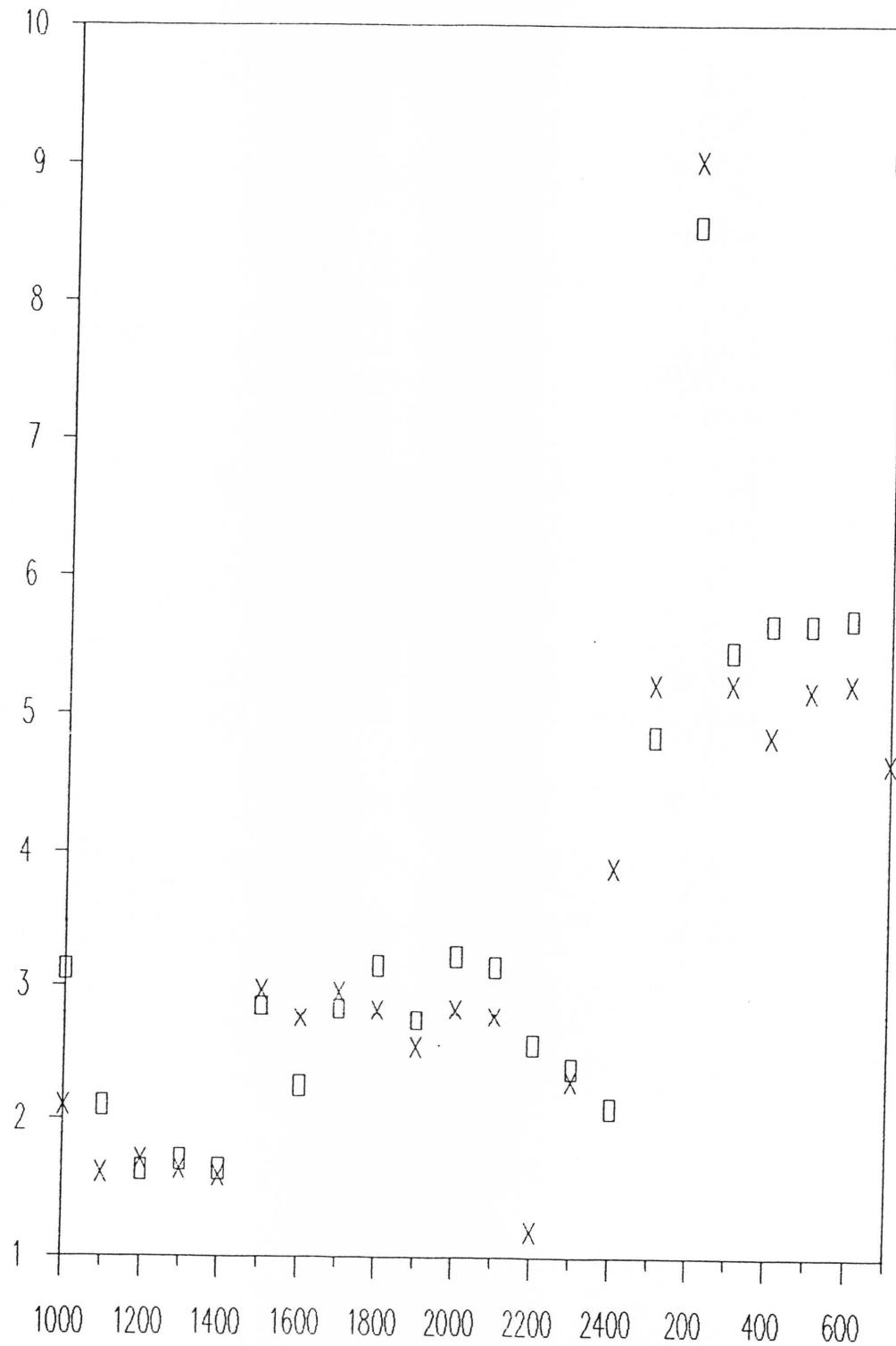
JULY 1988 STATION B



CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B

POLYPHOSPHATE (UMOLE/L)

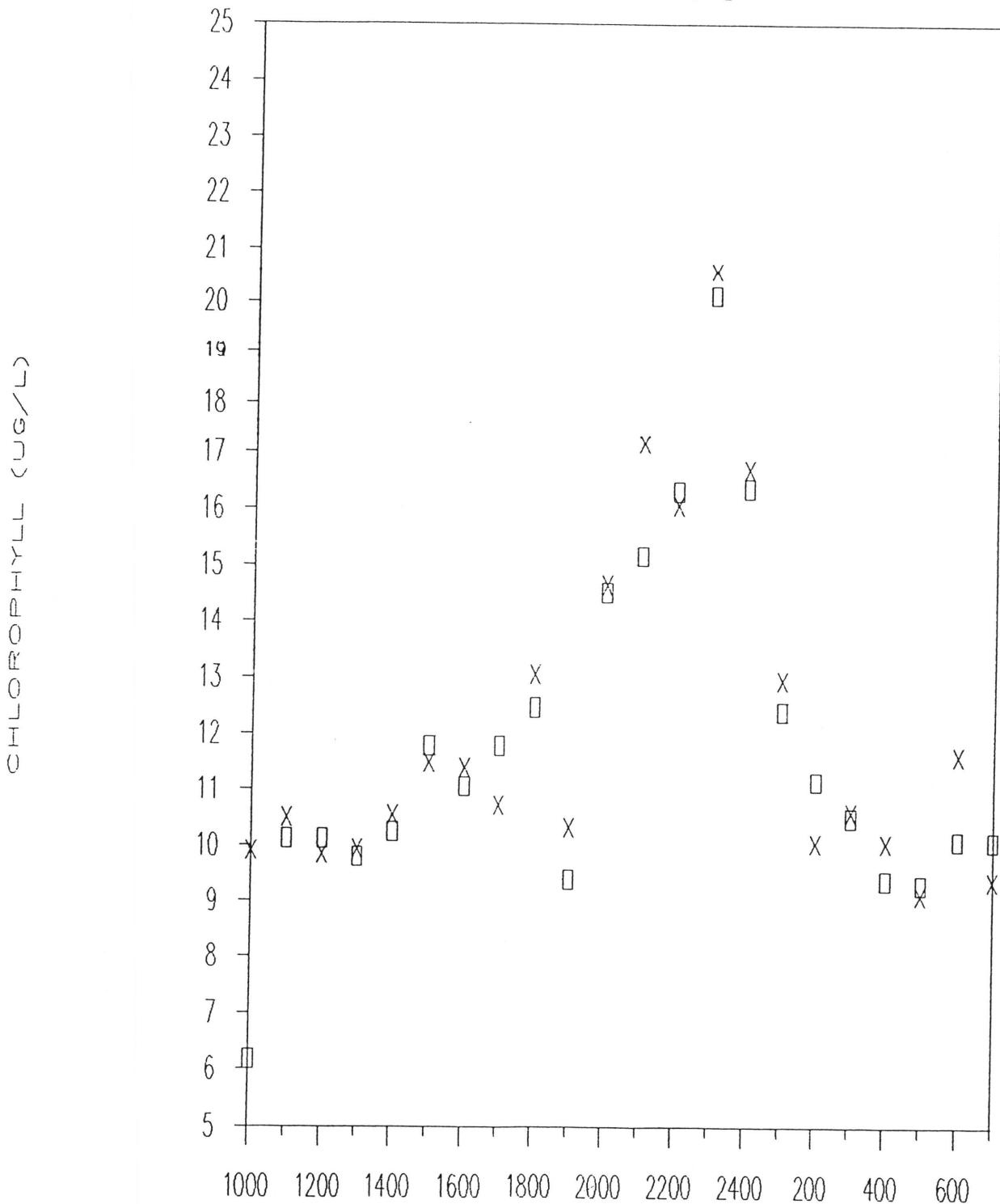


□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B



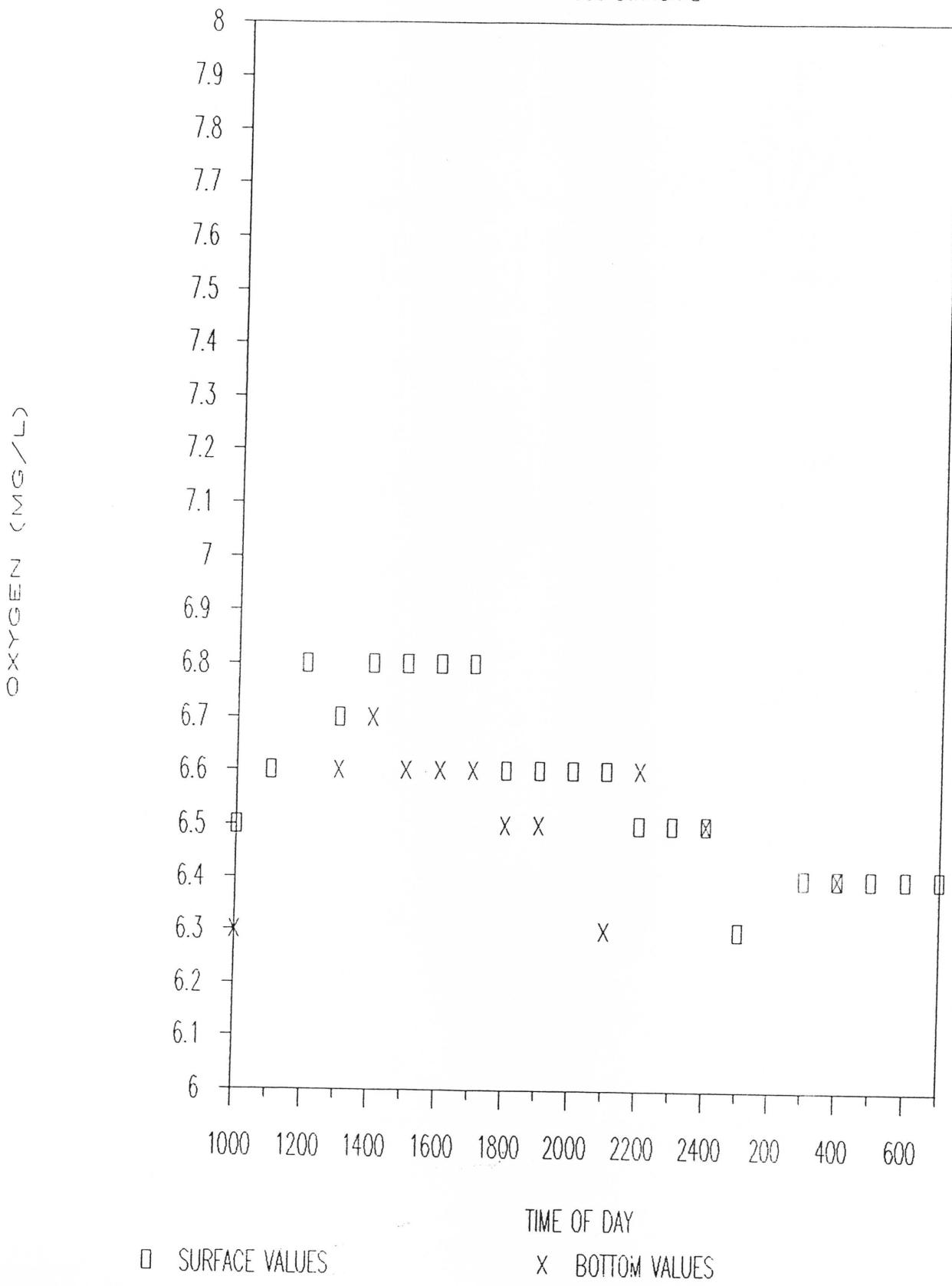
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B



TIME OF DAY

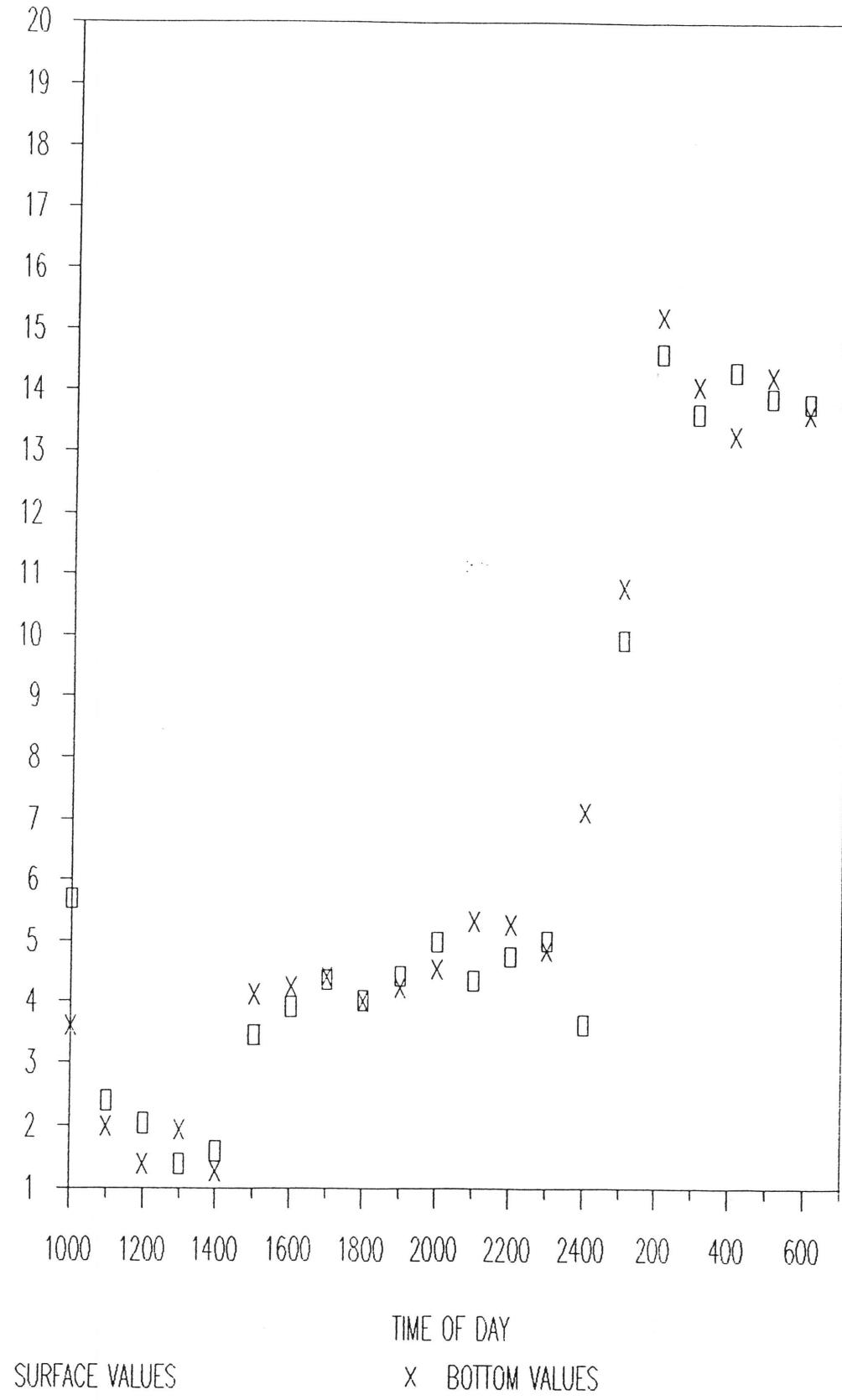
□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

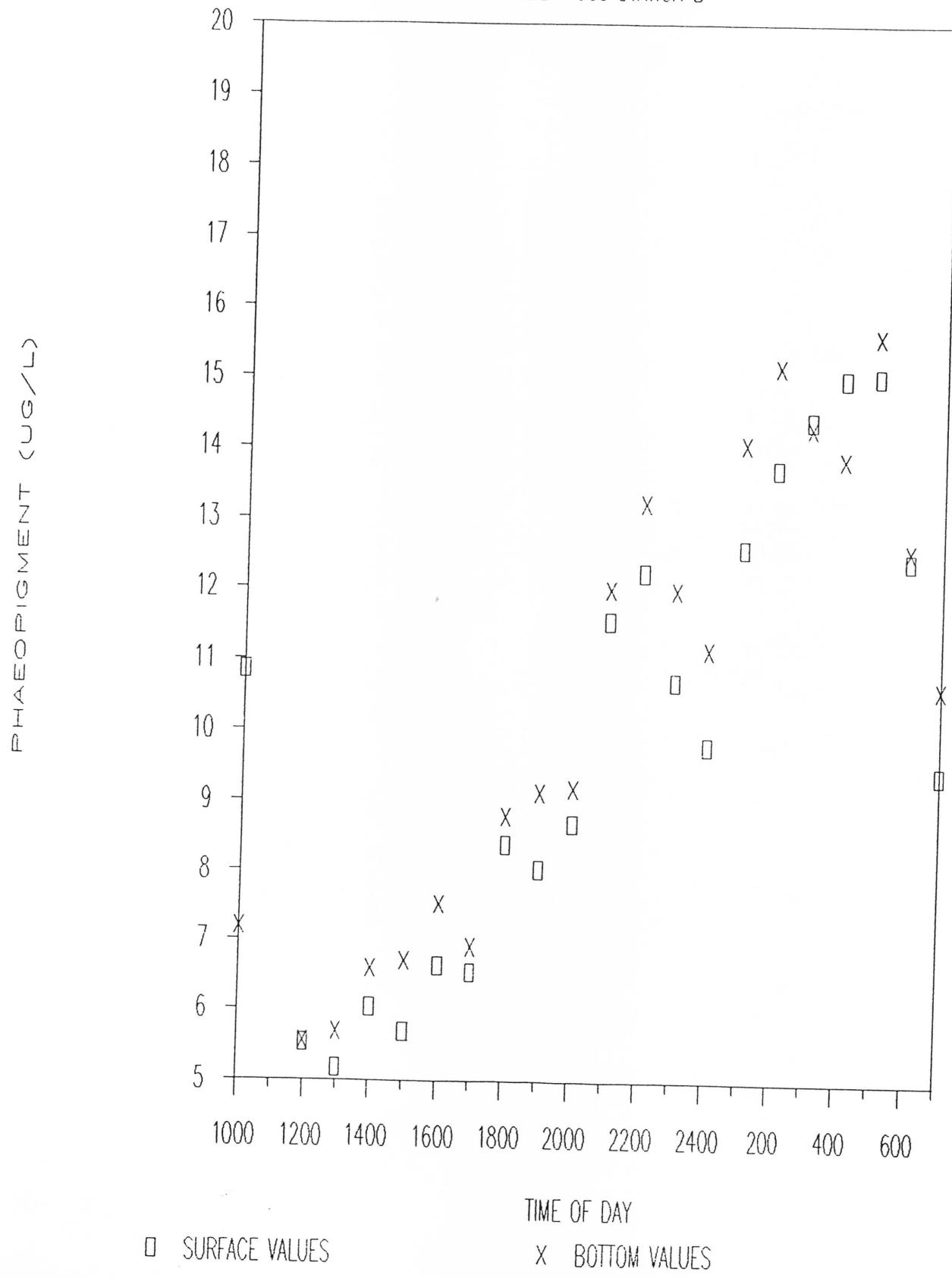
JULY 1988 STATION B

AMMONIUM (CUMOLE/L)

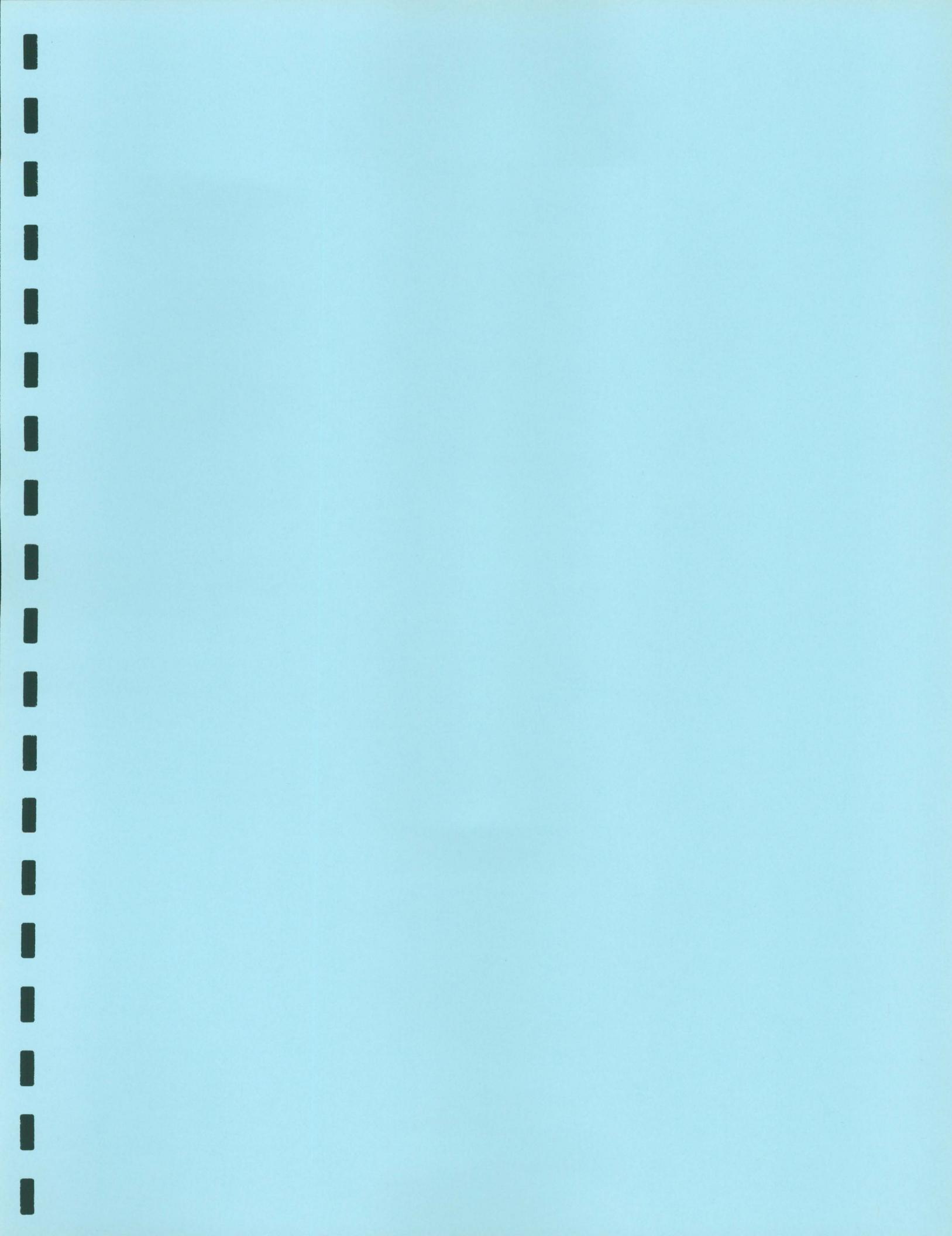


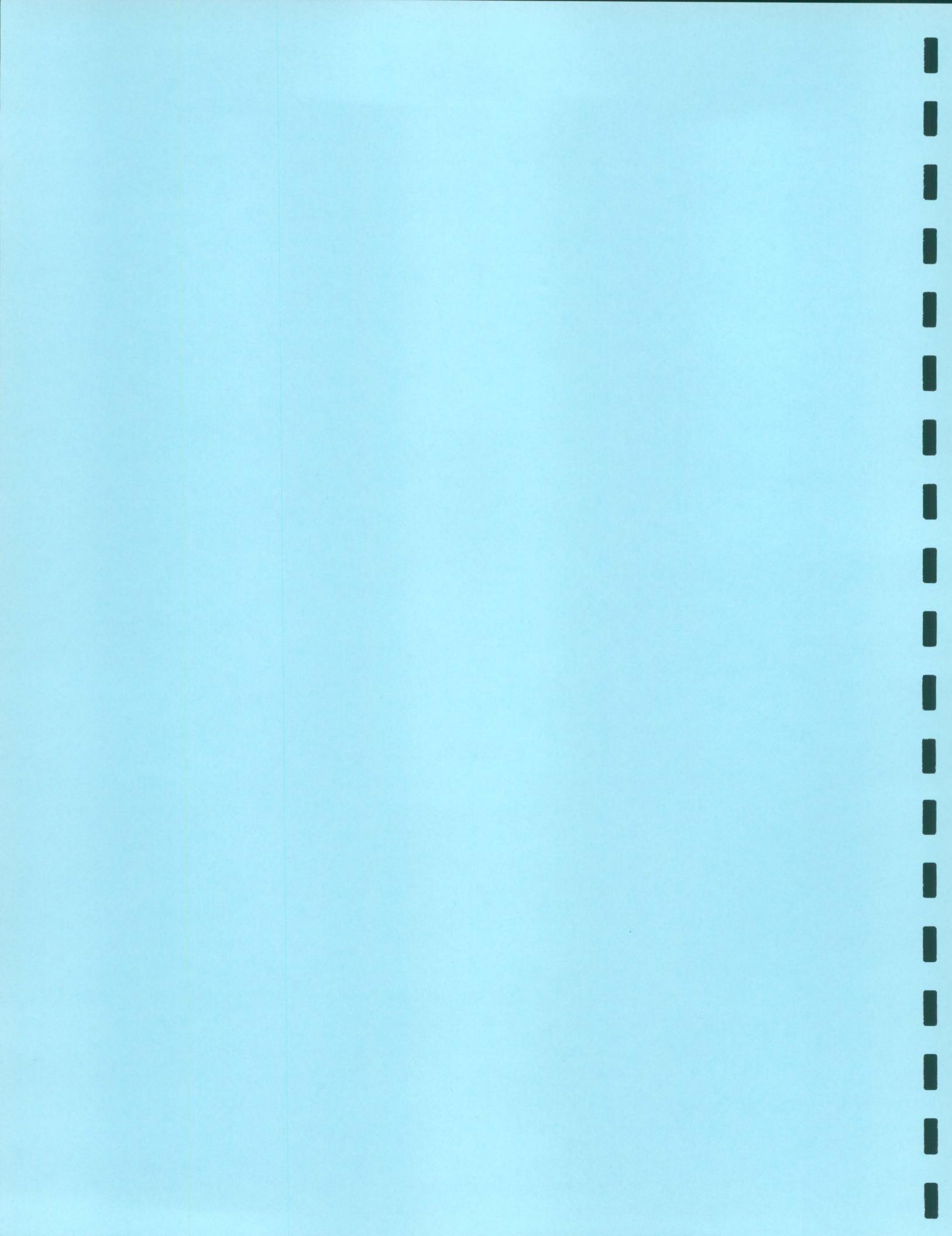
CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION B





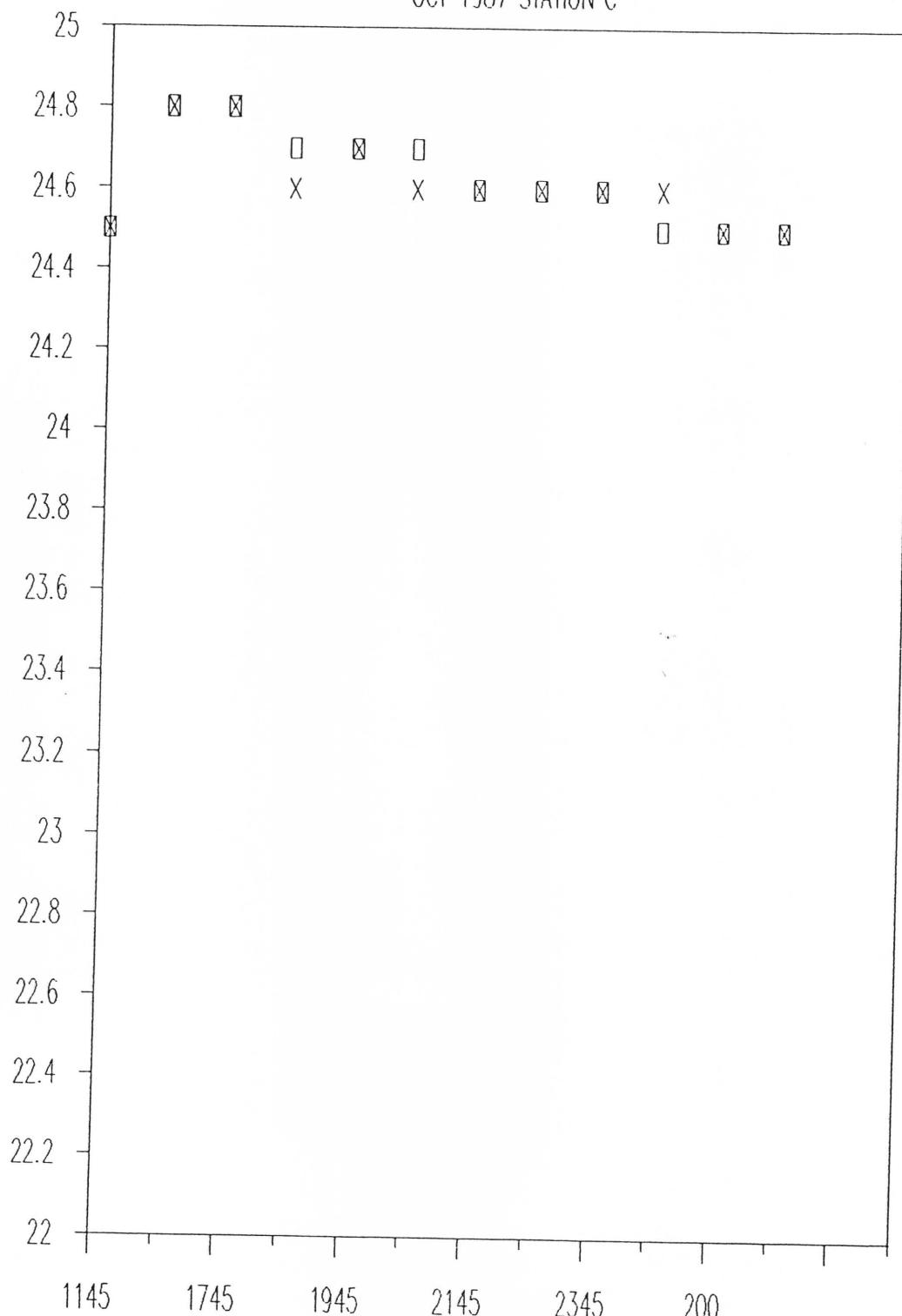




CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION C

TEMPERATURE

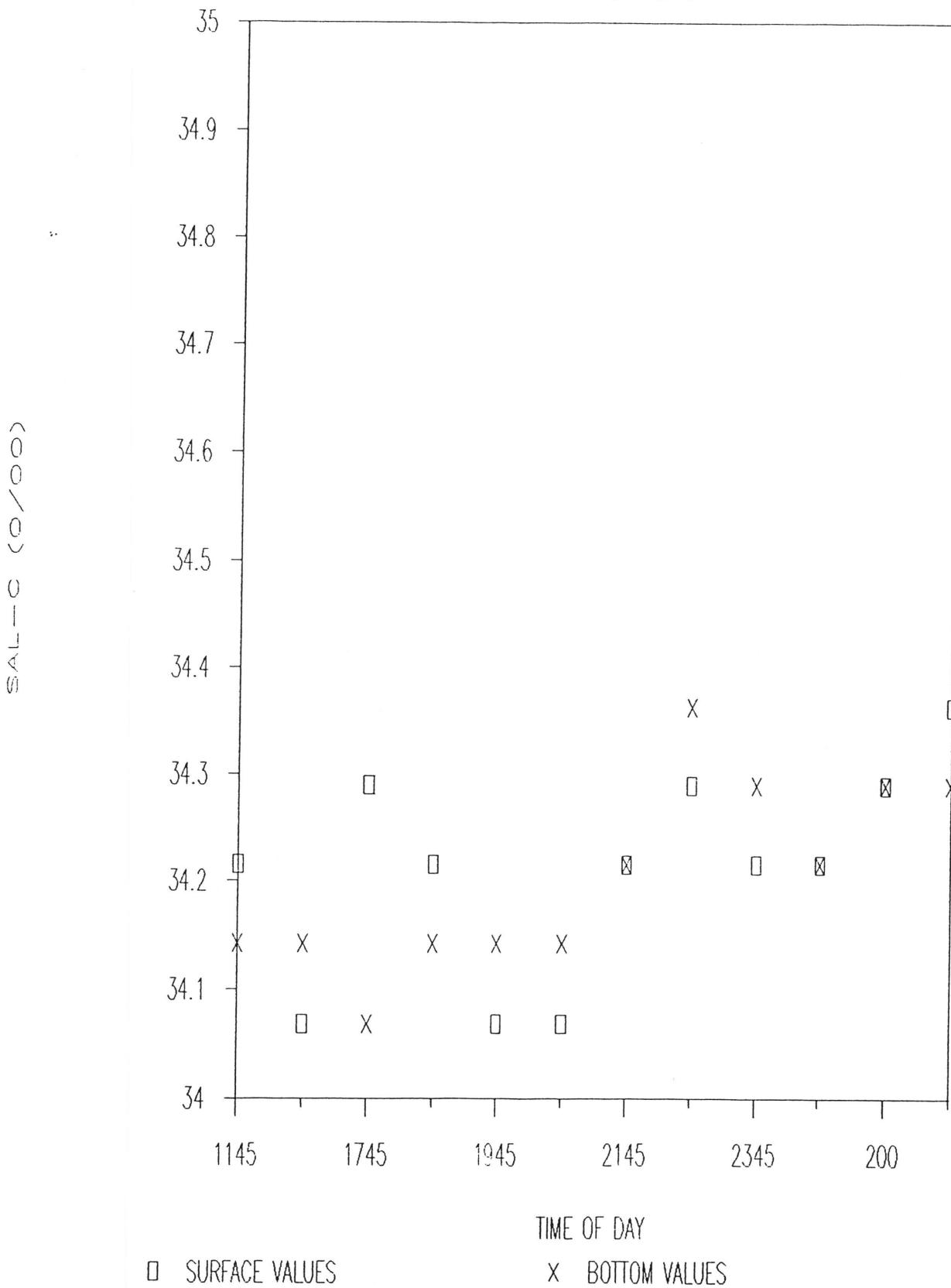


□ SURFACE VALUES

X BOTTOM VALUES

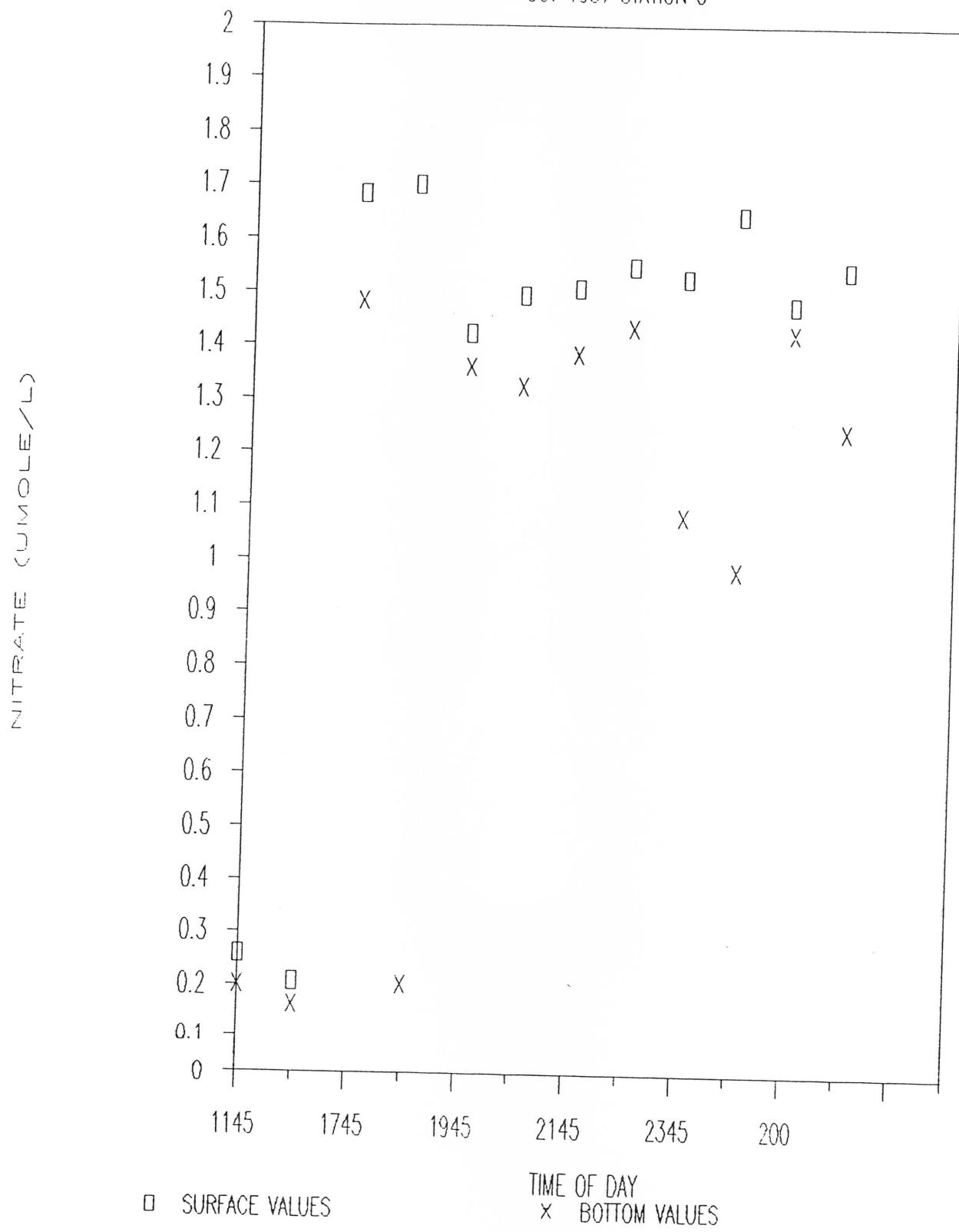
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION C



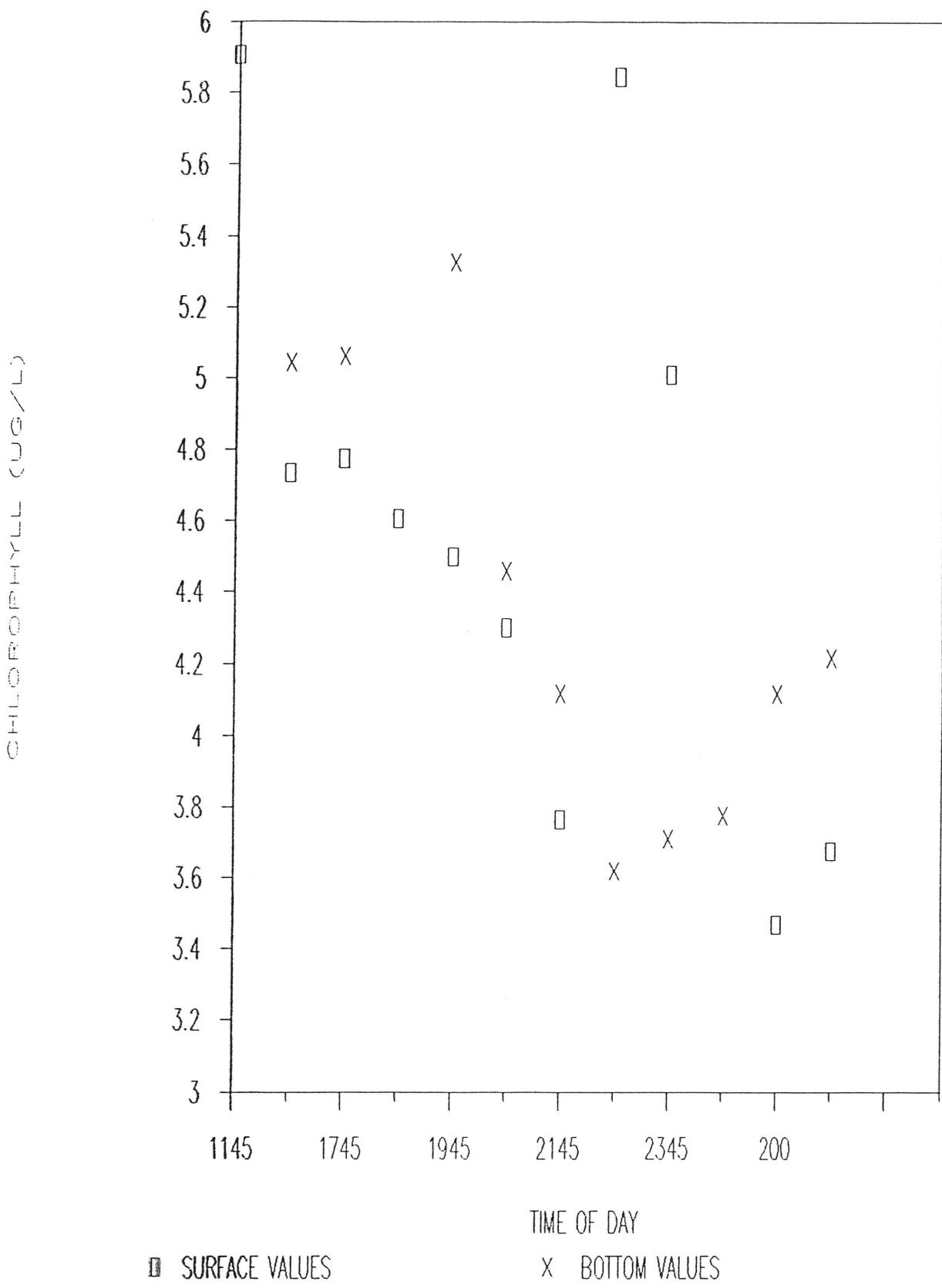
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OCT 1987 STATION C



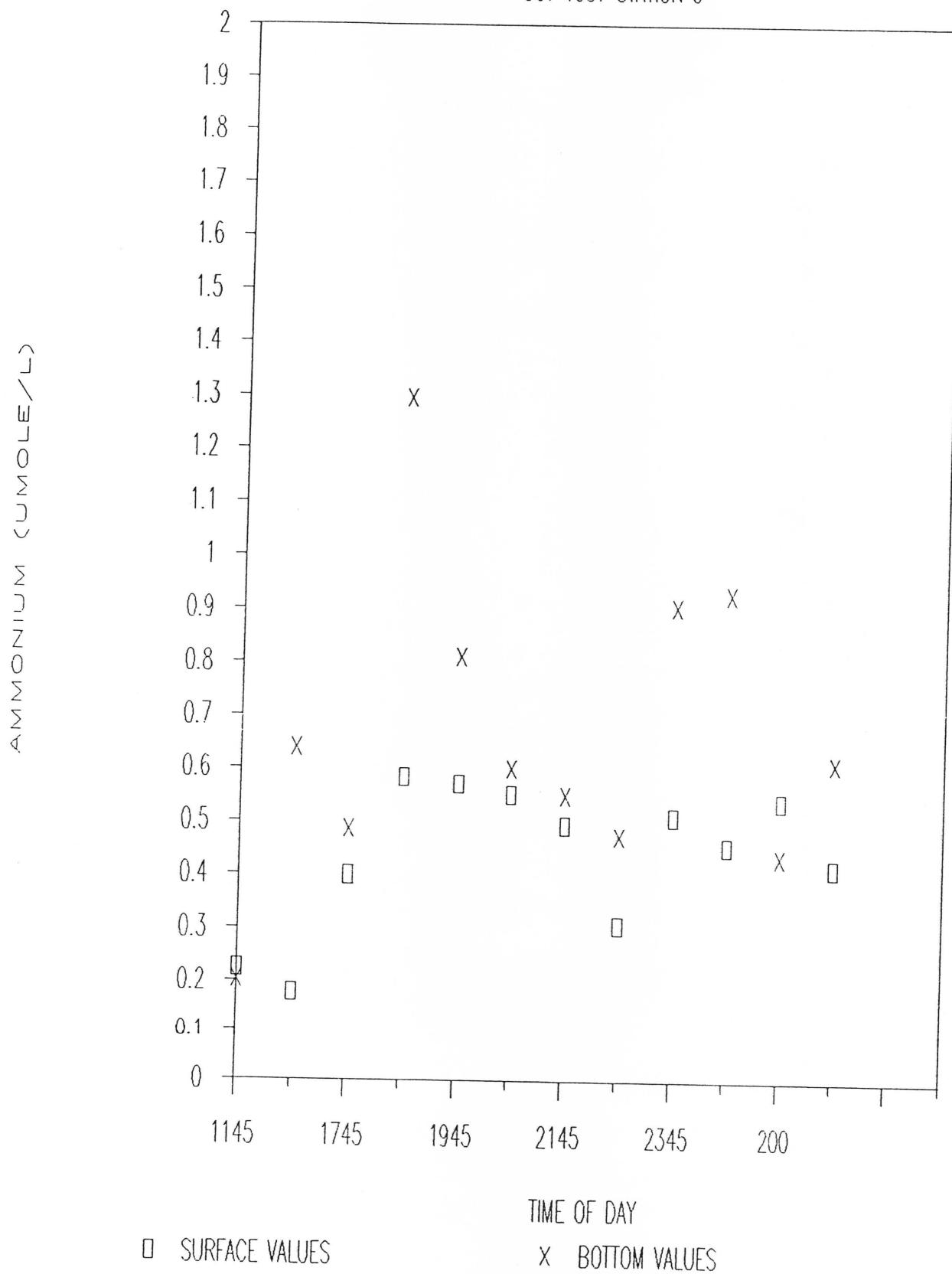
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION C



CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION C



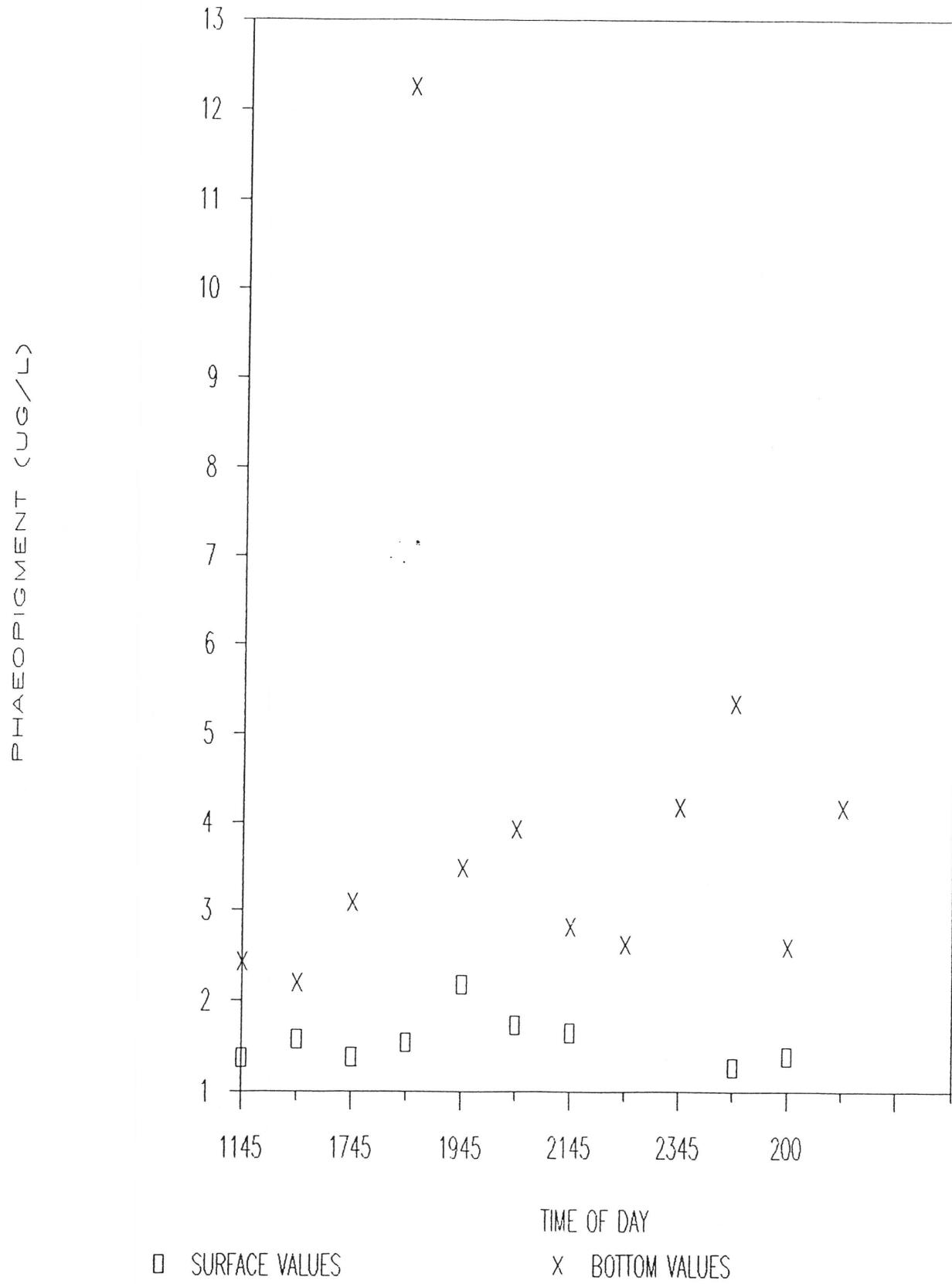
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

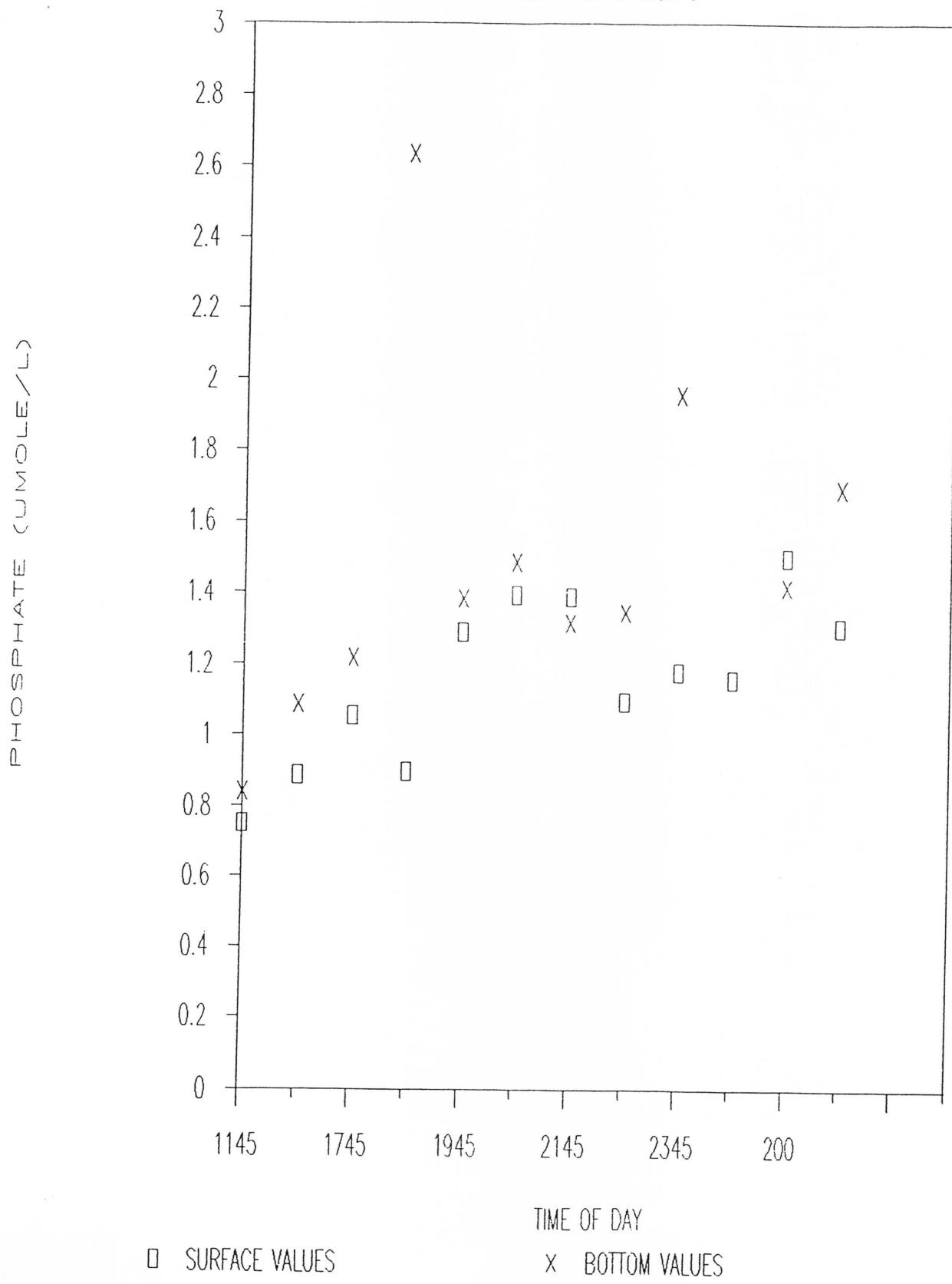
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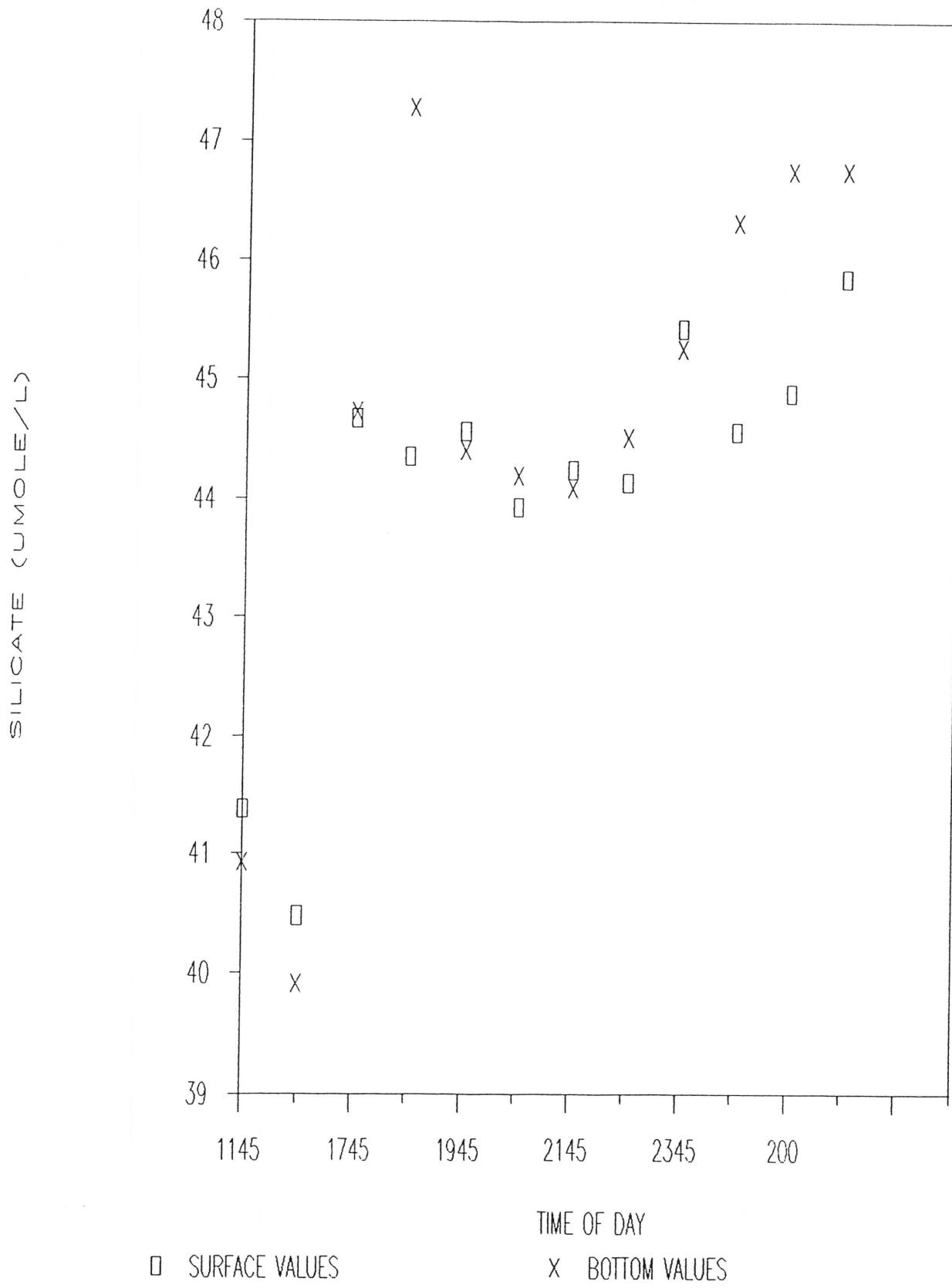
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OCT 1987 STATION C



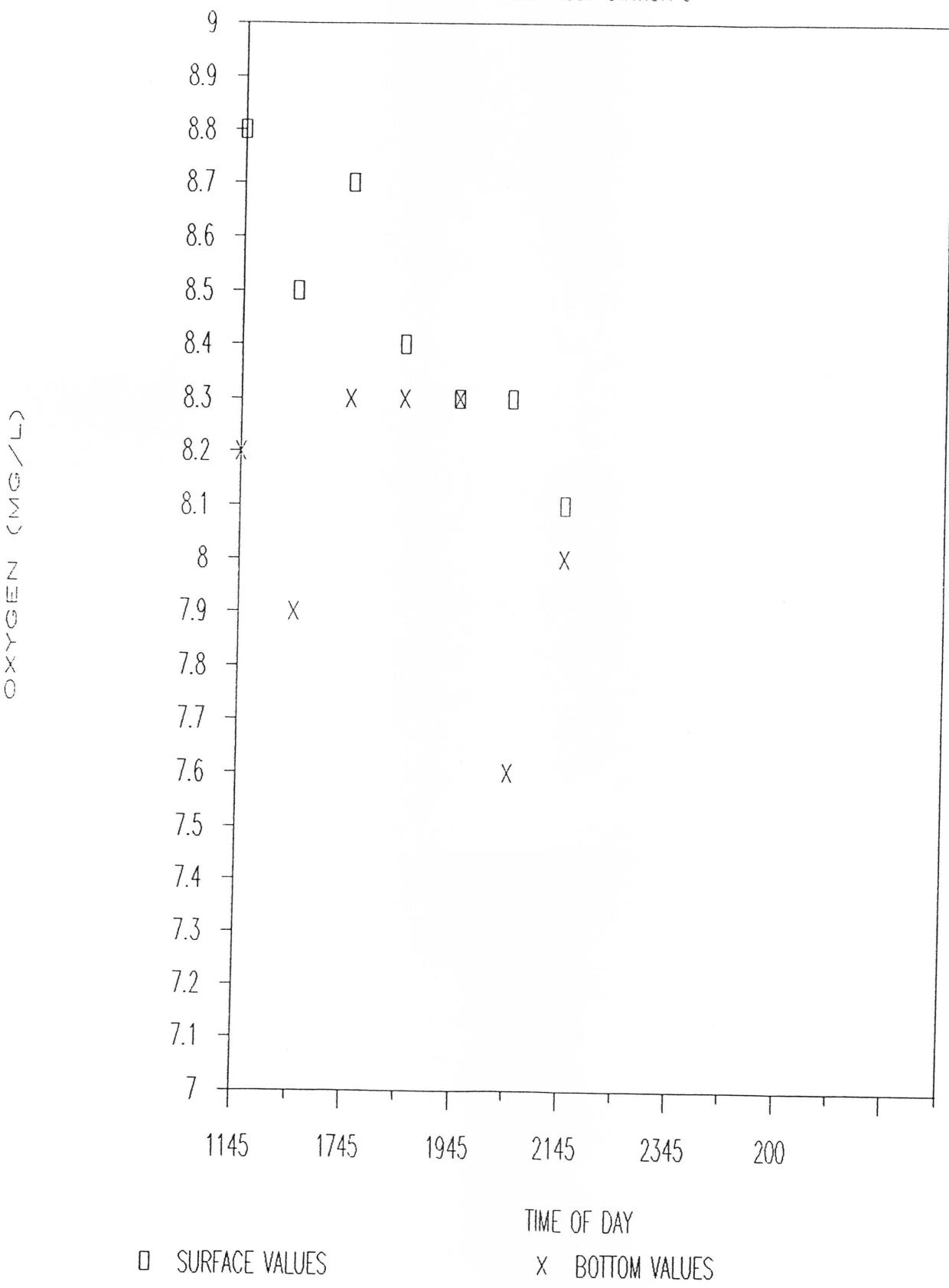
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OCT 1987 STATION C

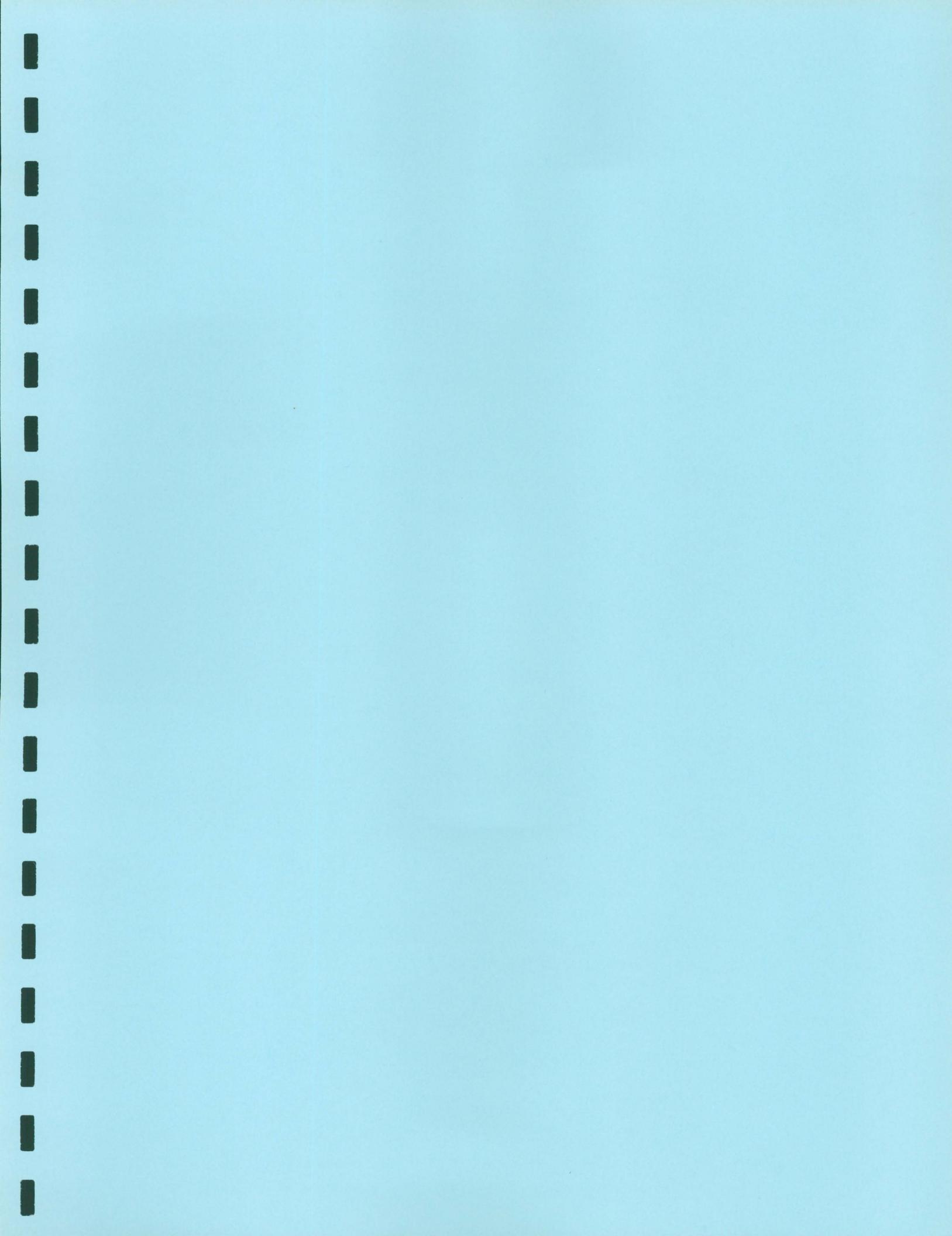


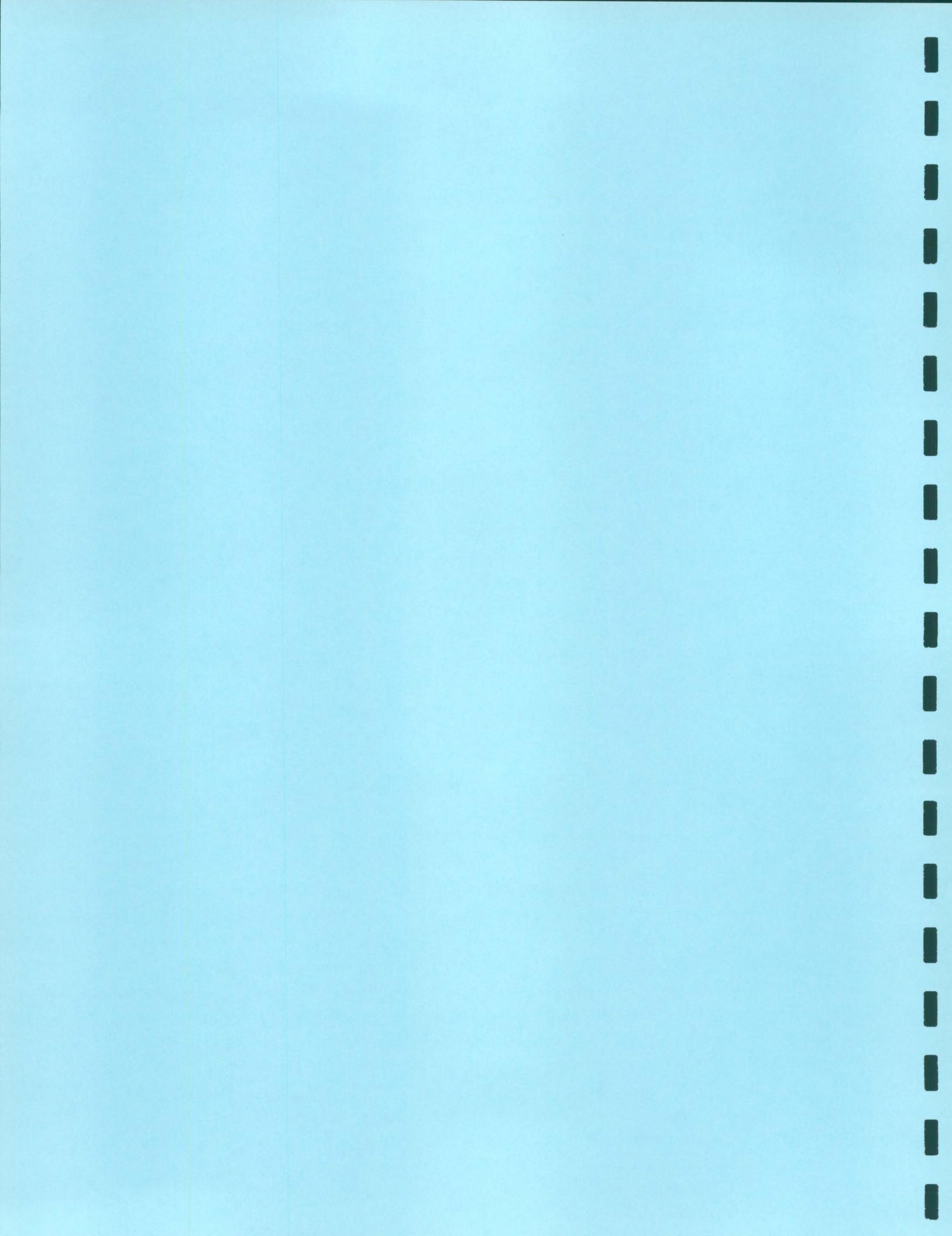
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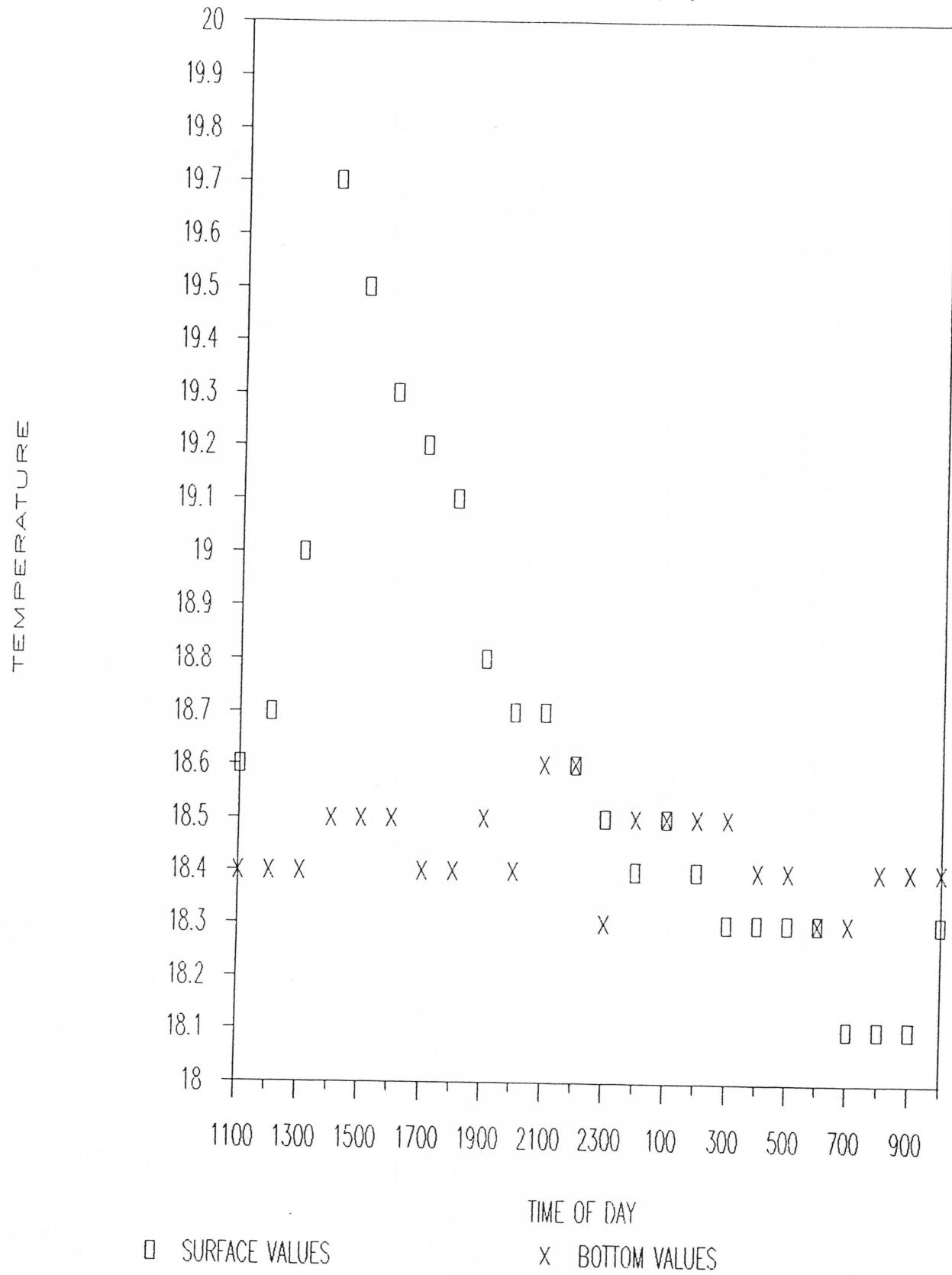






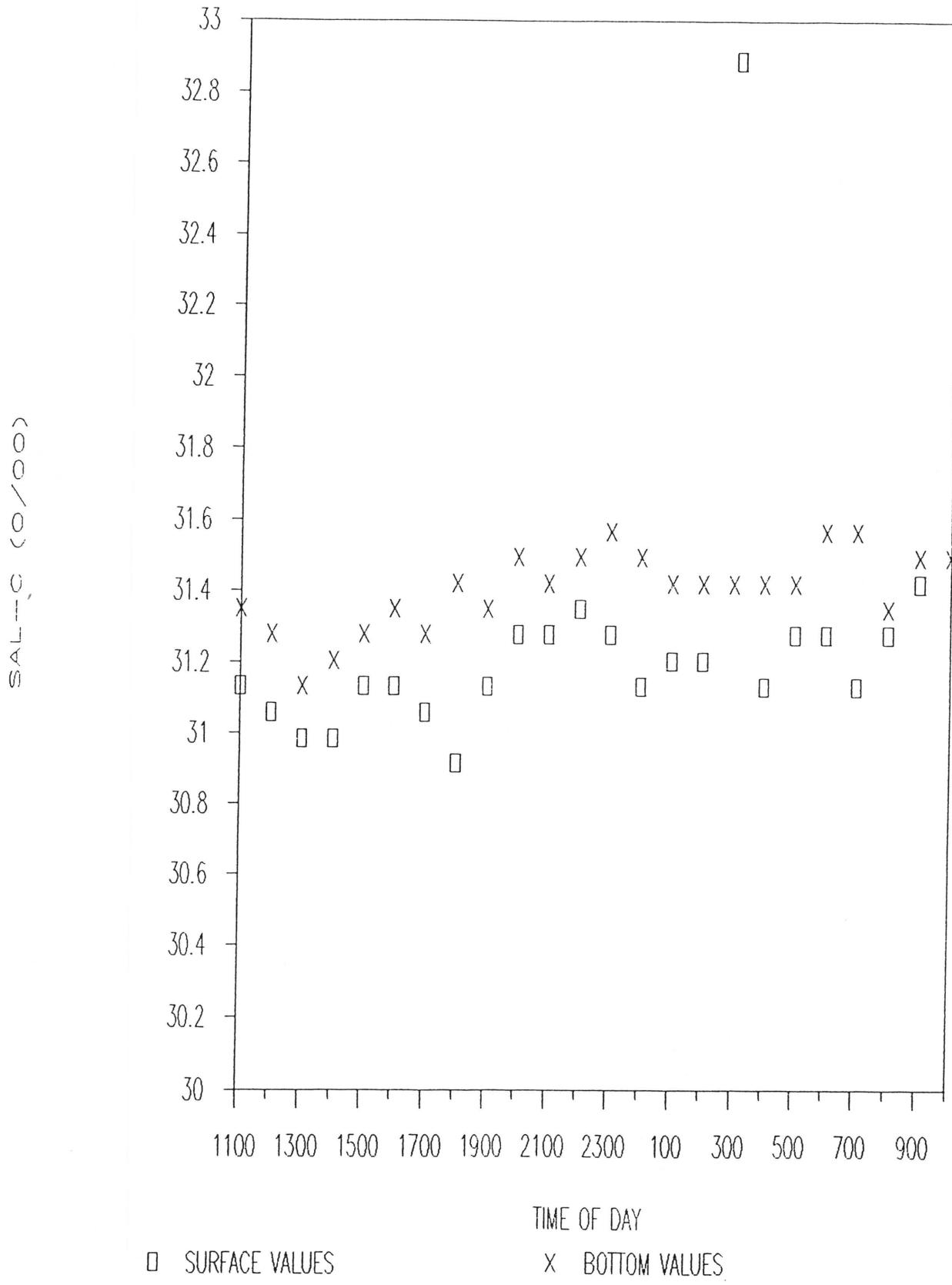
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C



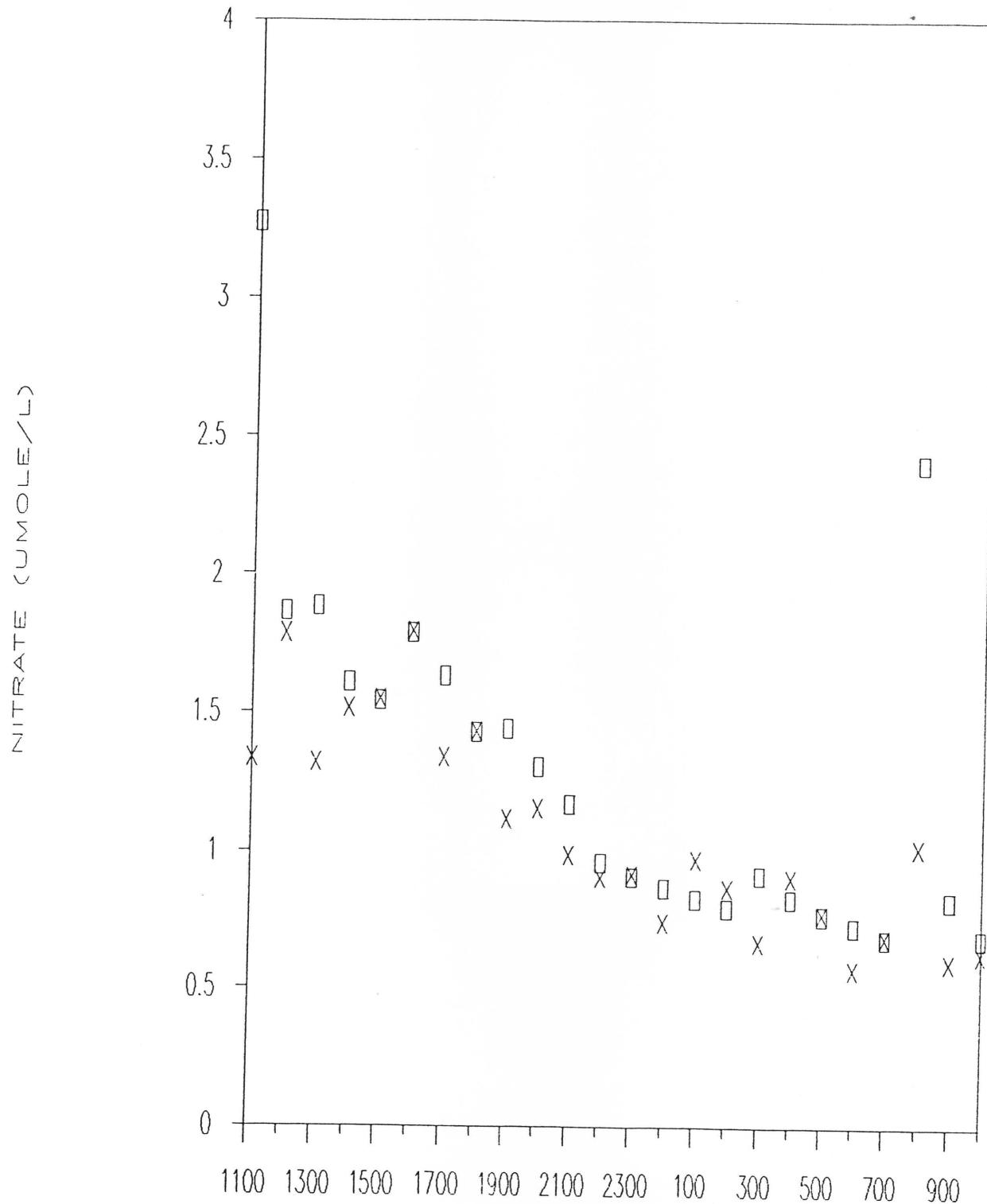
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C

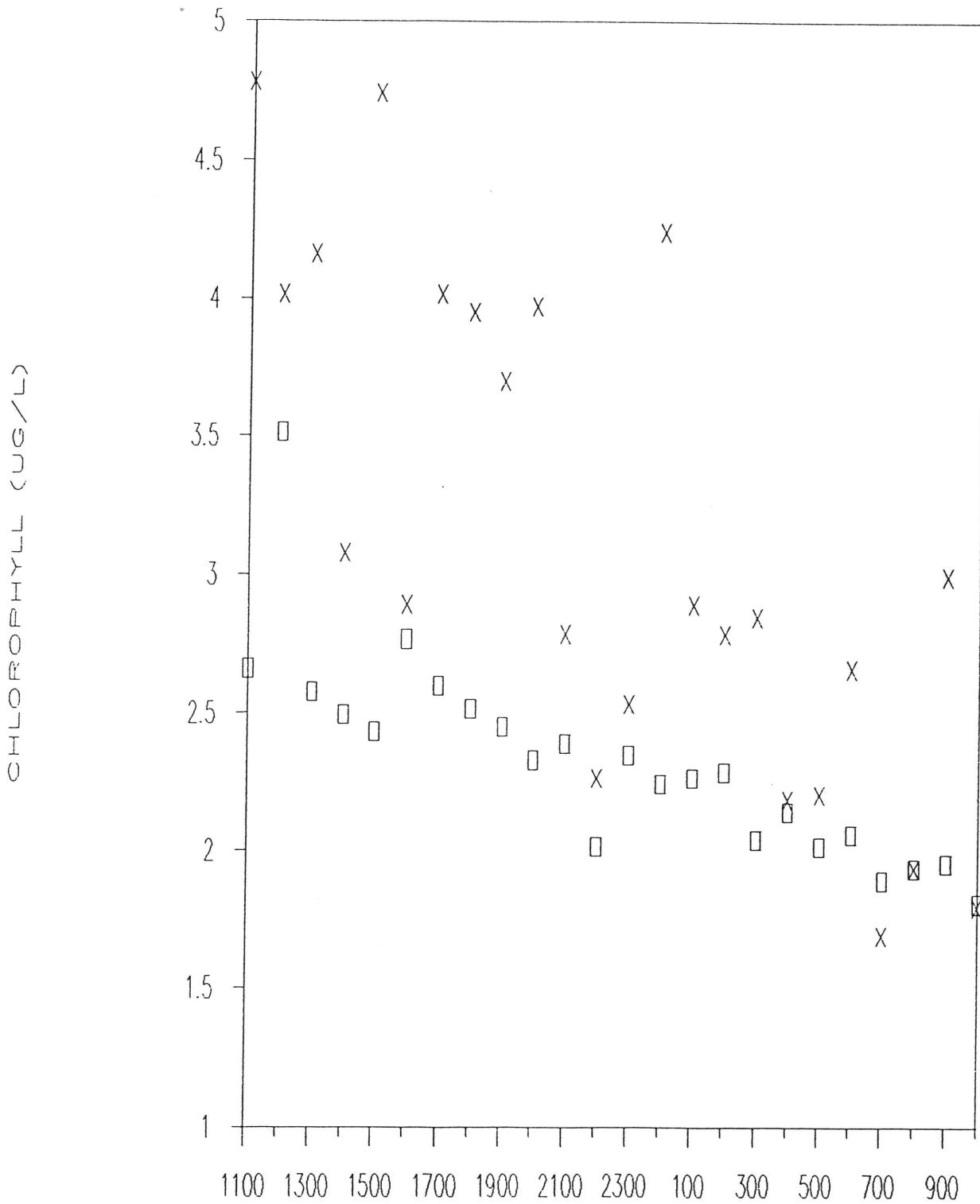


□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C



TIME OF DAY

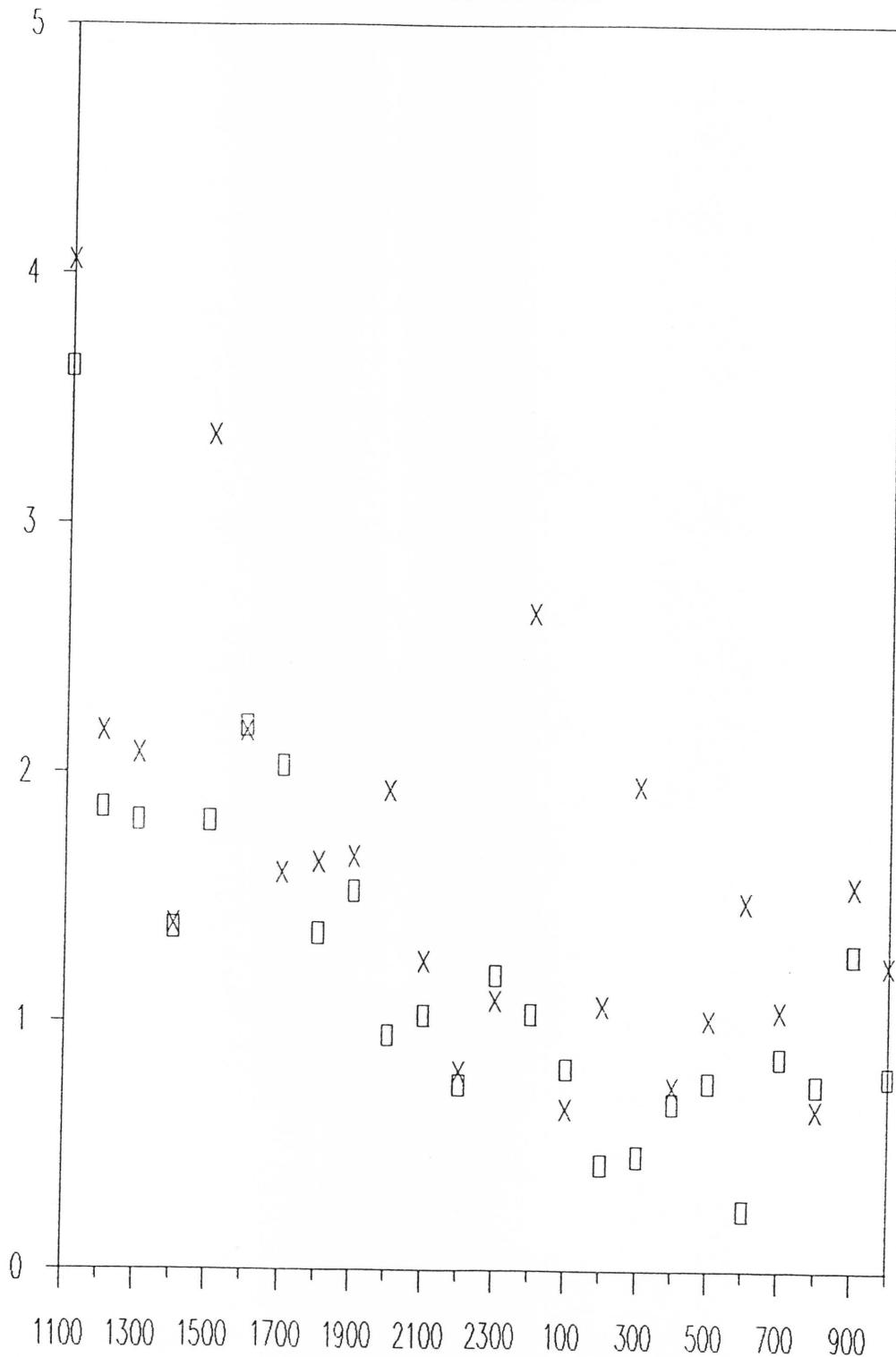
□ SURFACE VALUES

X BOTTOM VALUES

AMMONIUM (U.M.O.L.E./L.)

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C

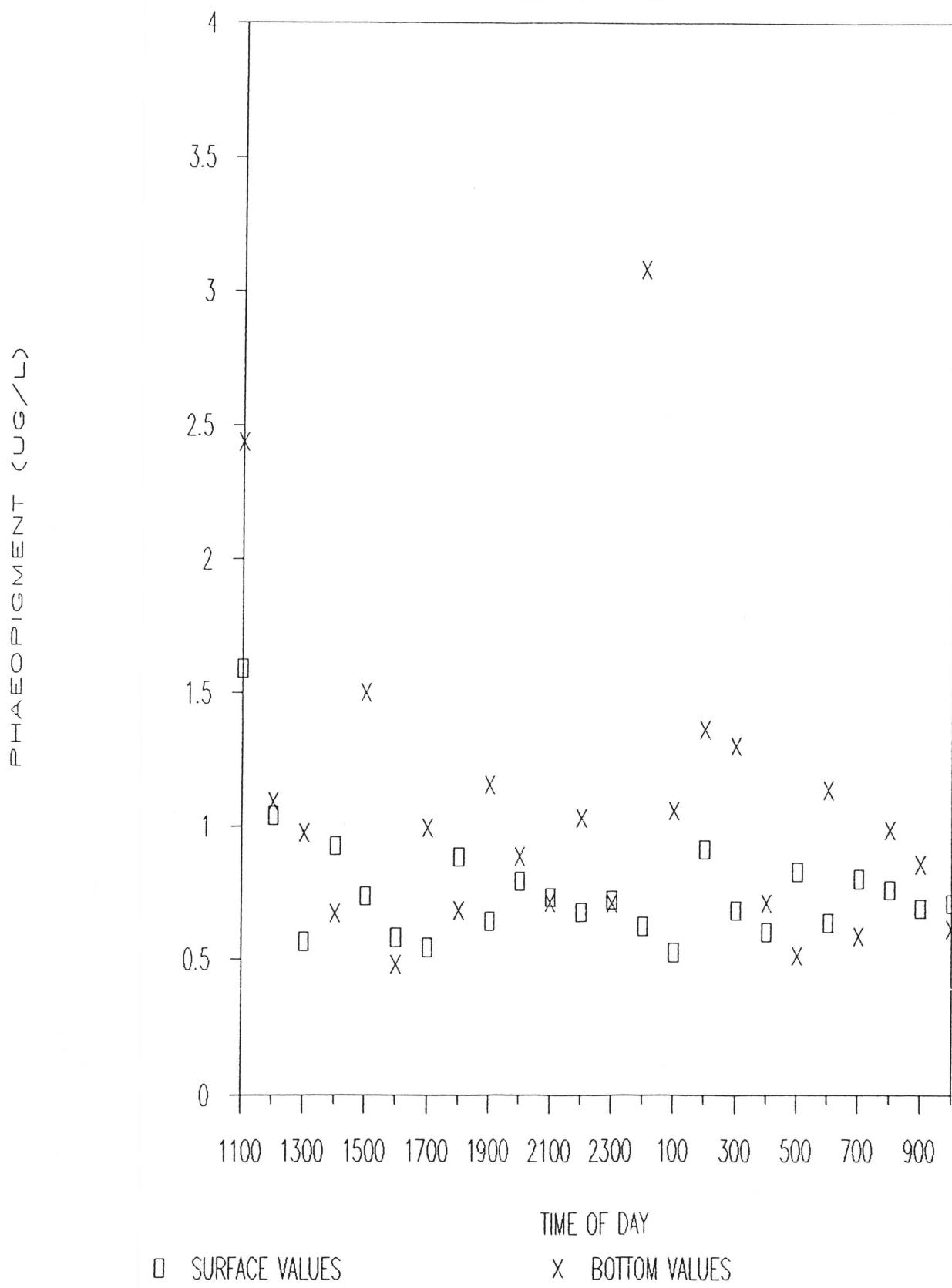


□ SURFACE VALUES

X BOTTOM VALUES

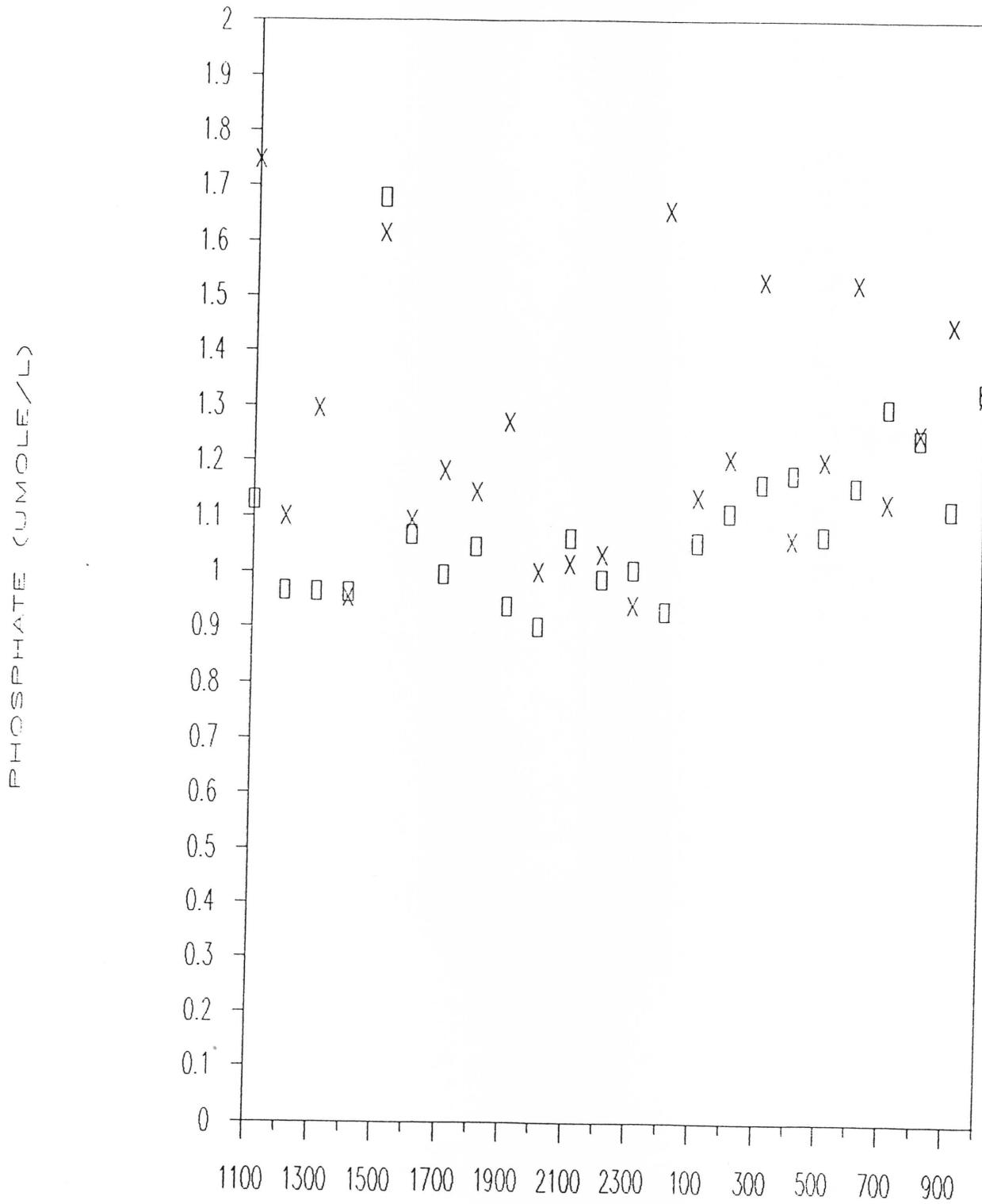
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C

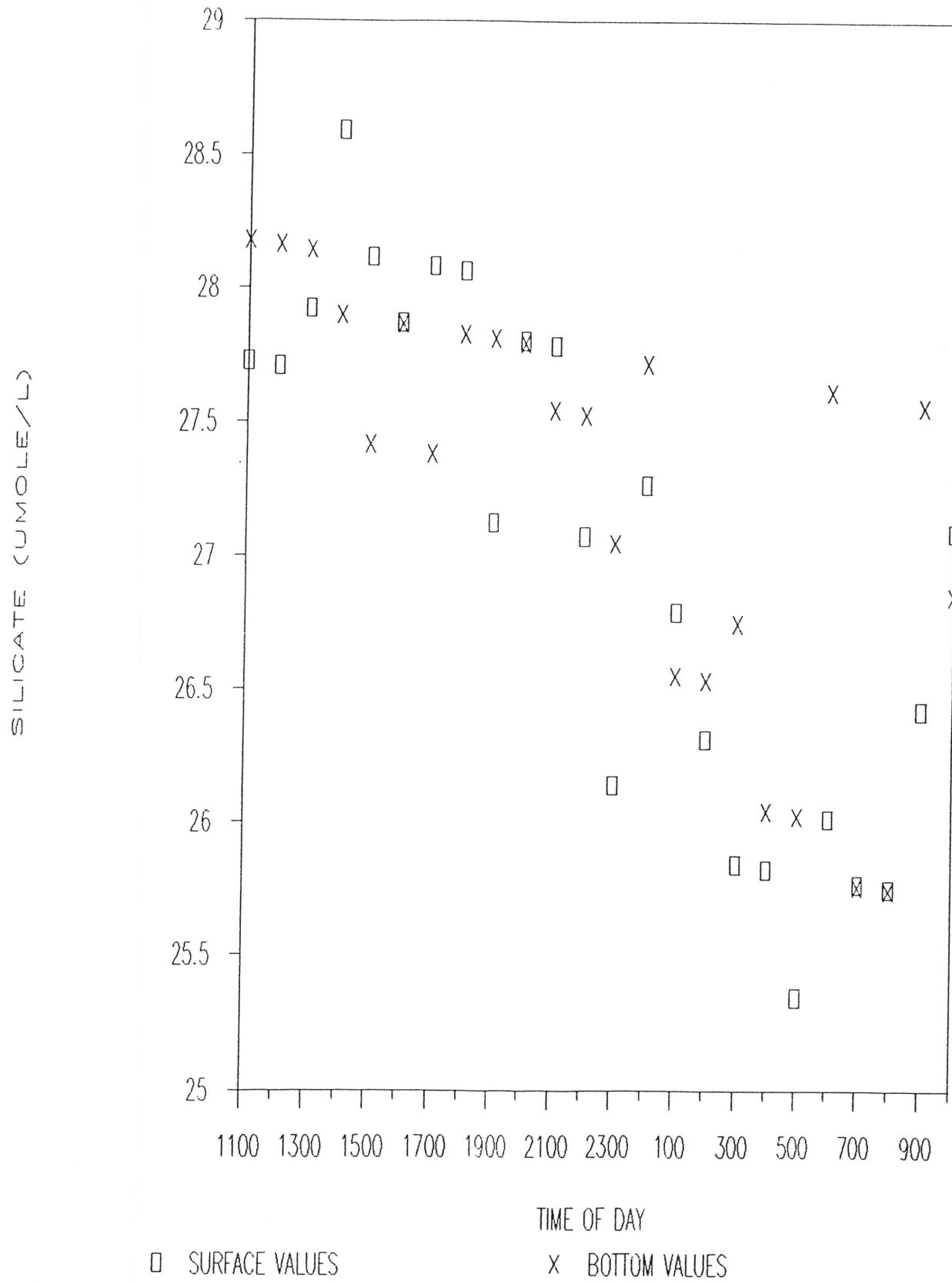


□ SURFACE VALUES

X BOTTOM VALUES

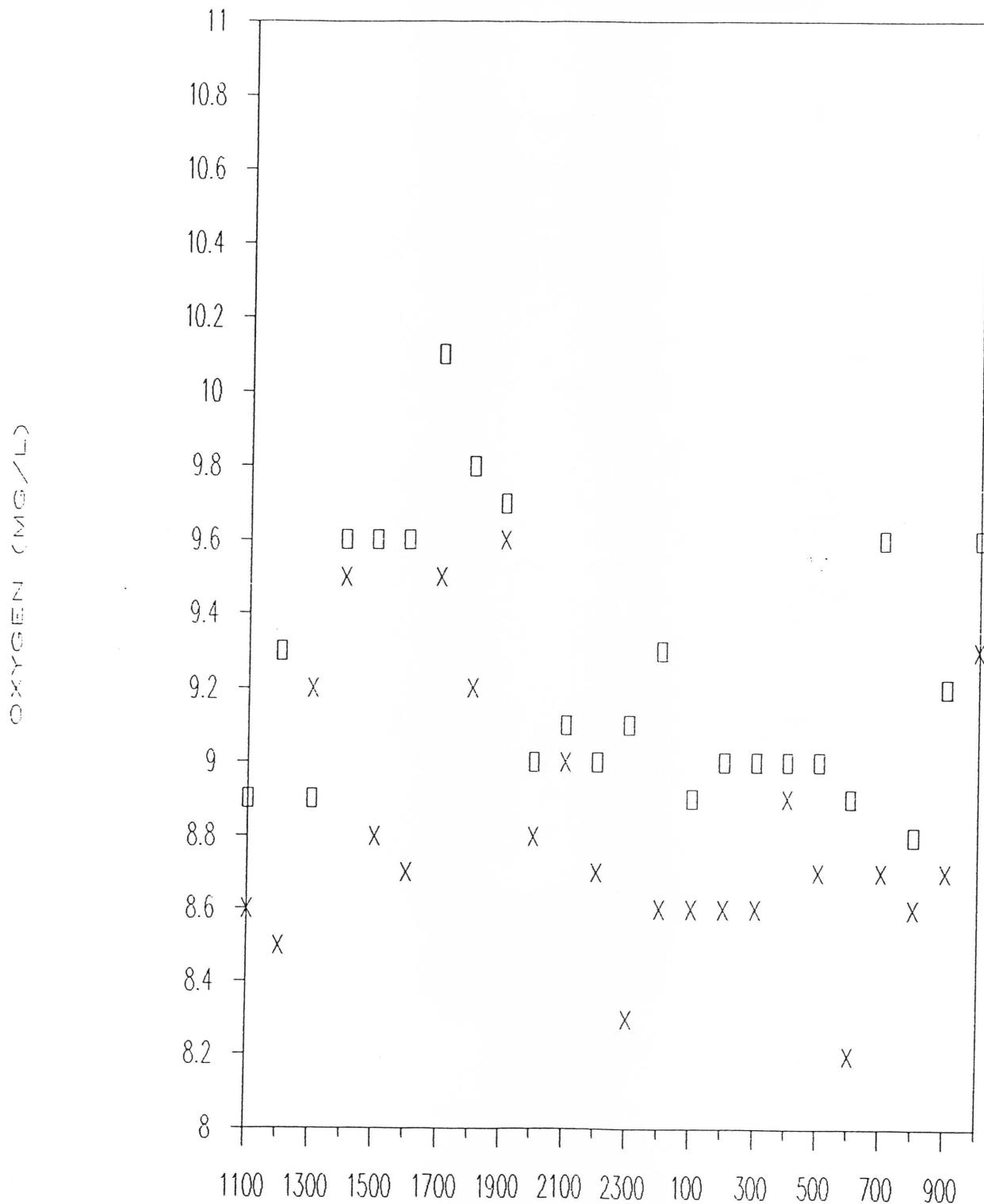
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION C

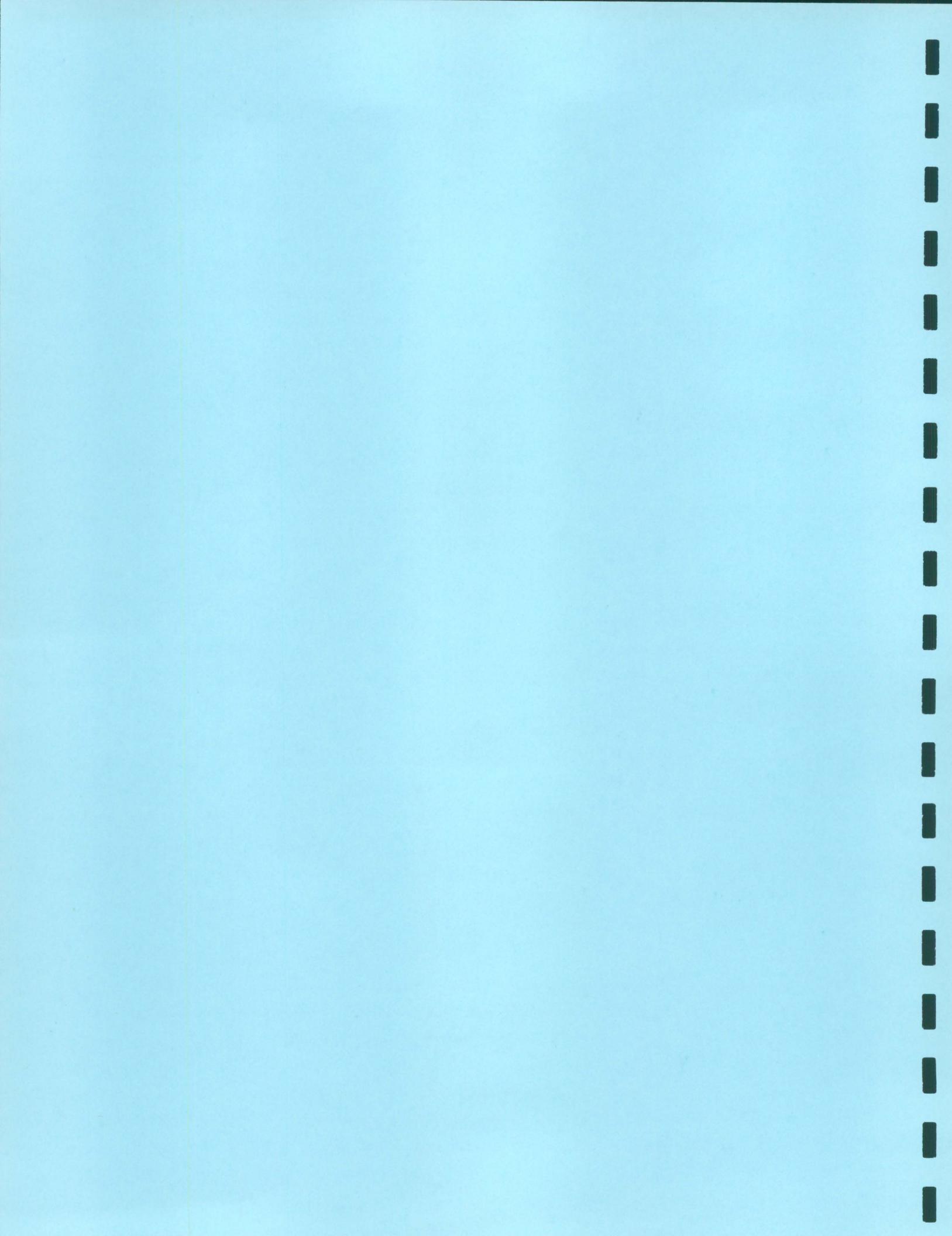


TIME OF DAY

□ SURFACE VALUES

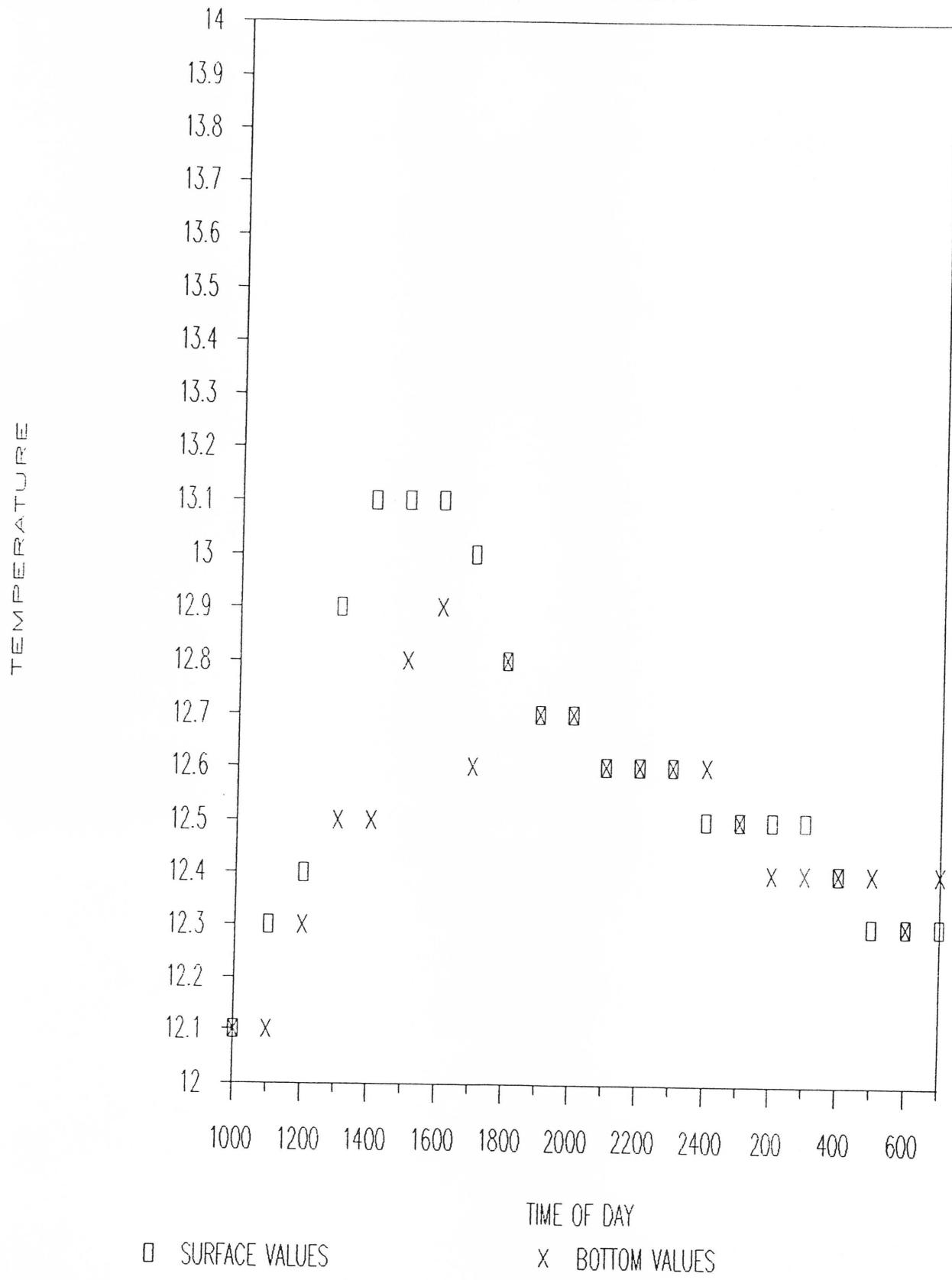
X BOTTOM VALUES





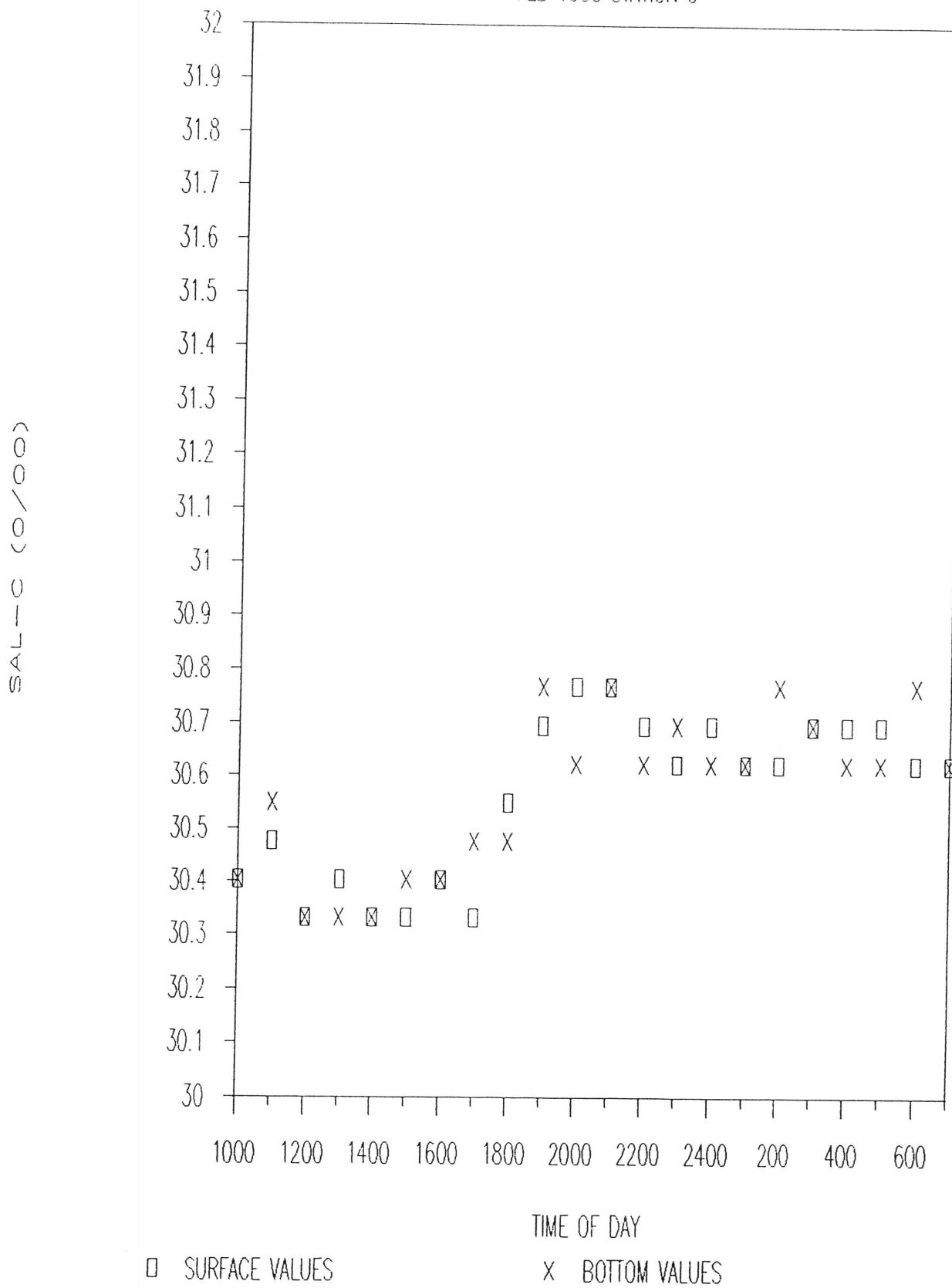
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION C



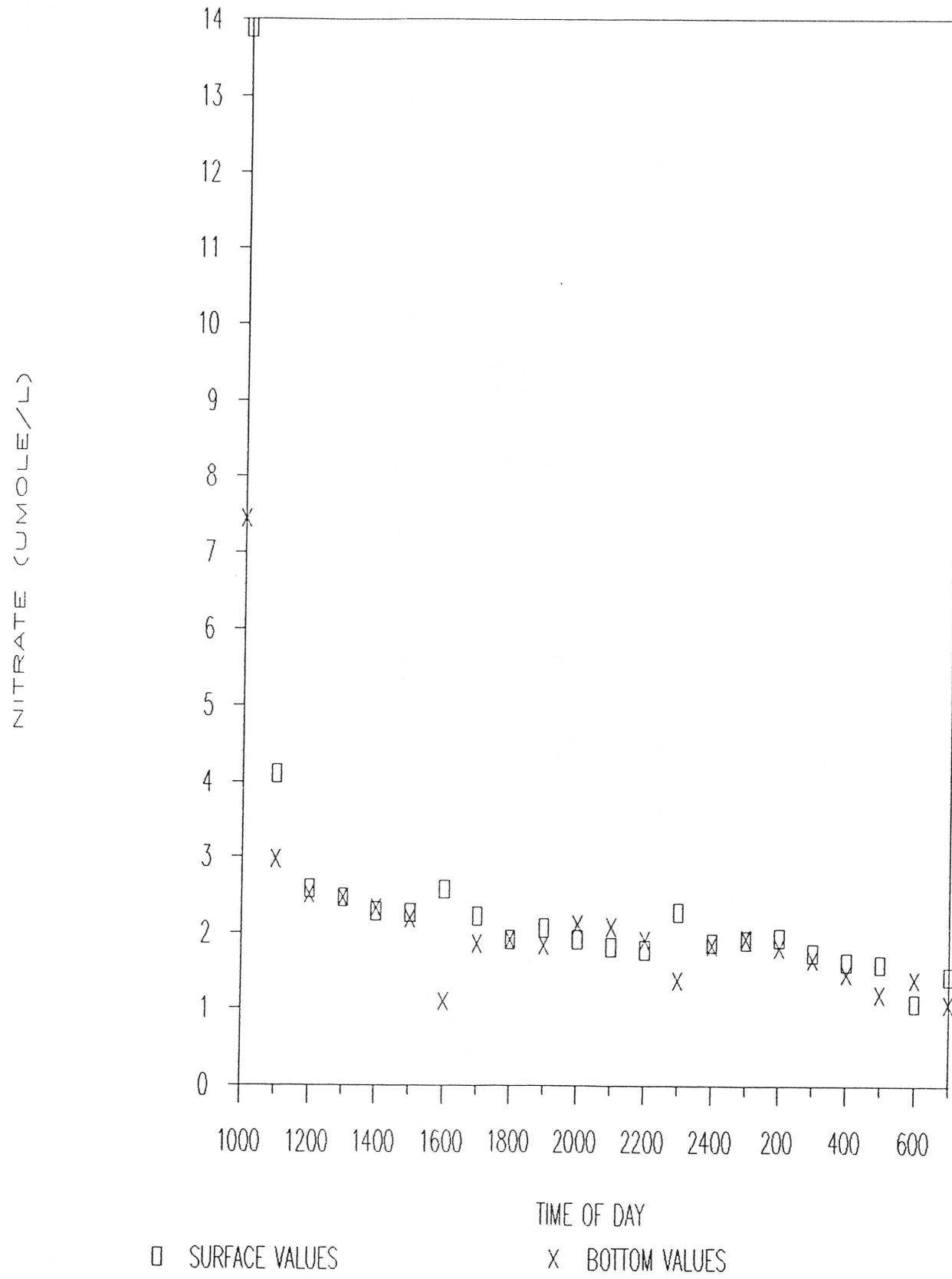
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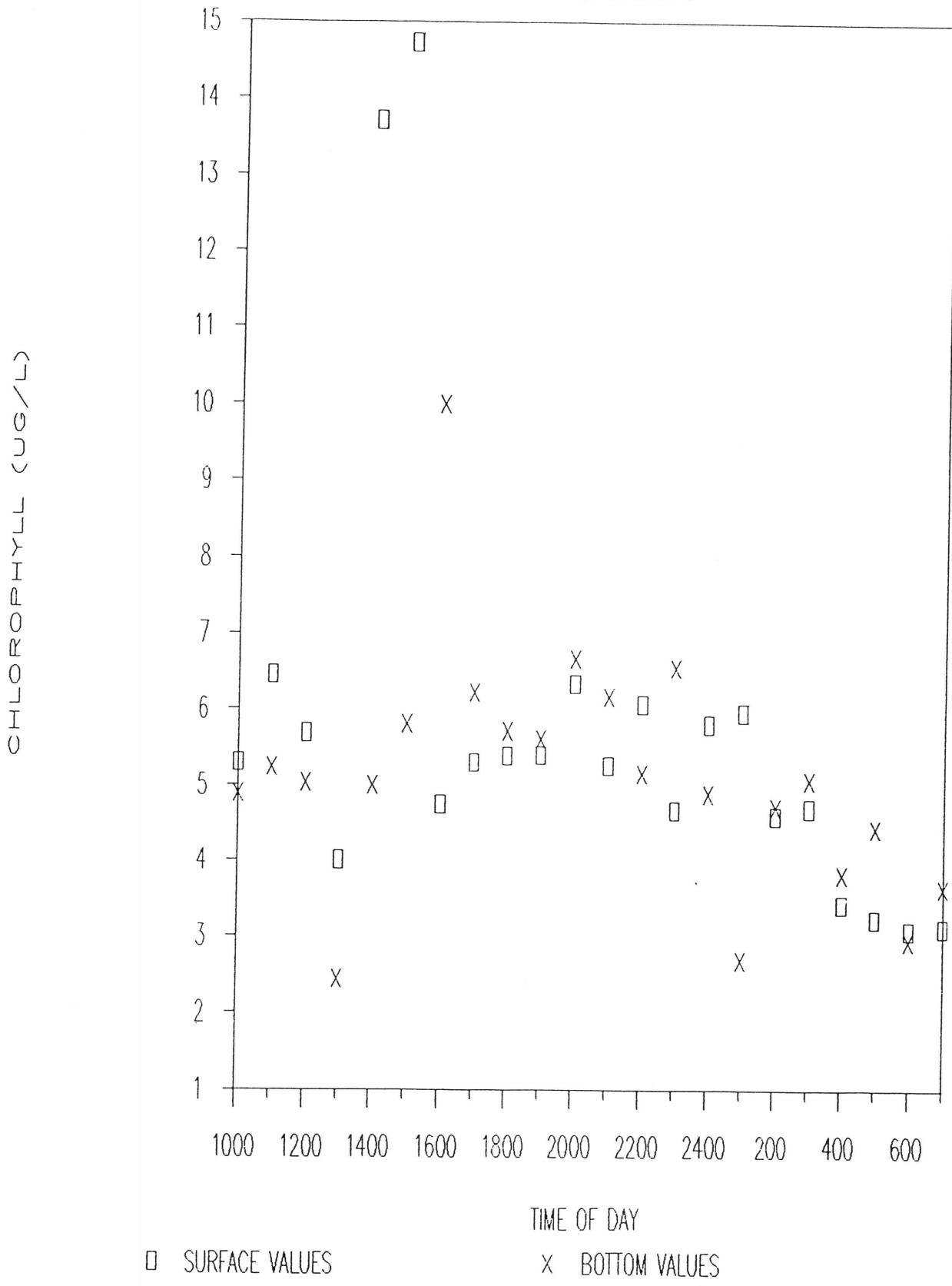
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION C



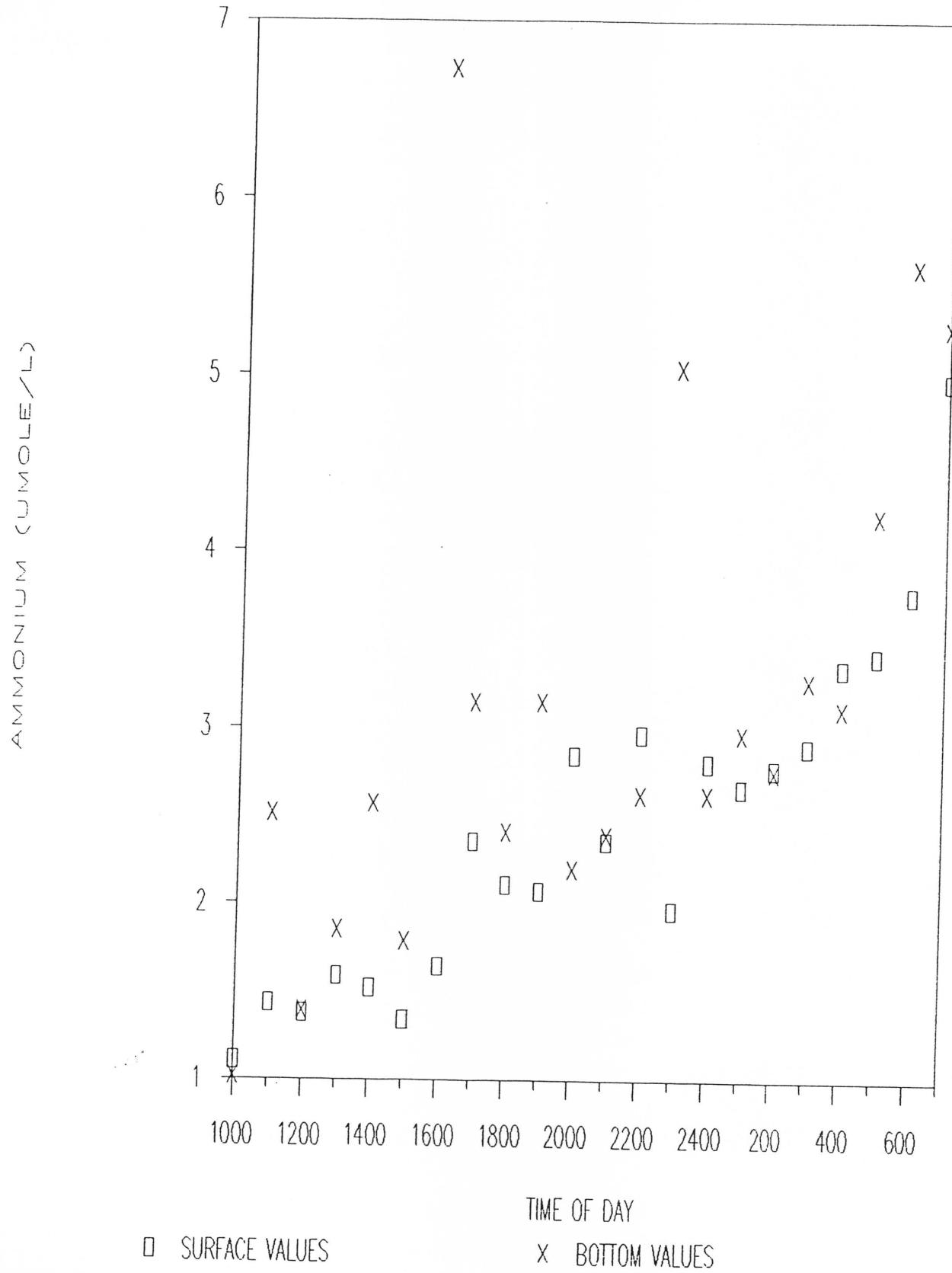
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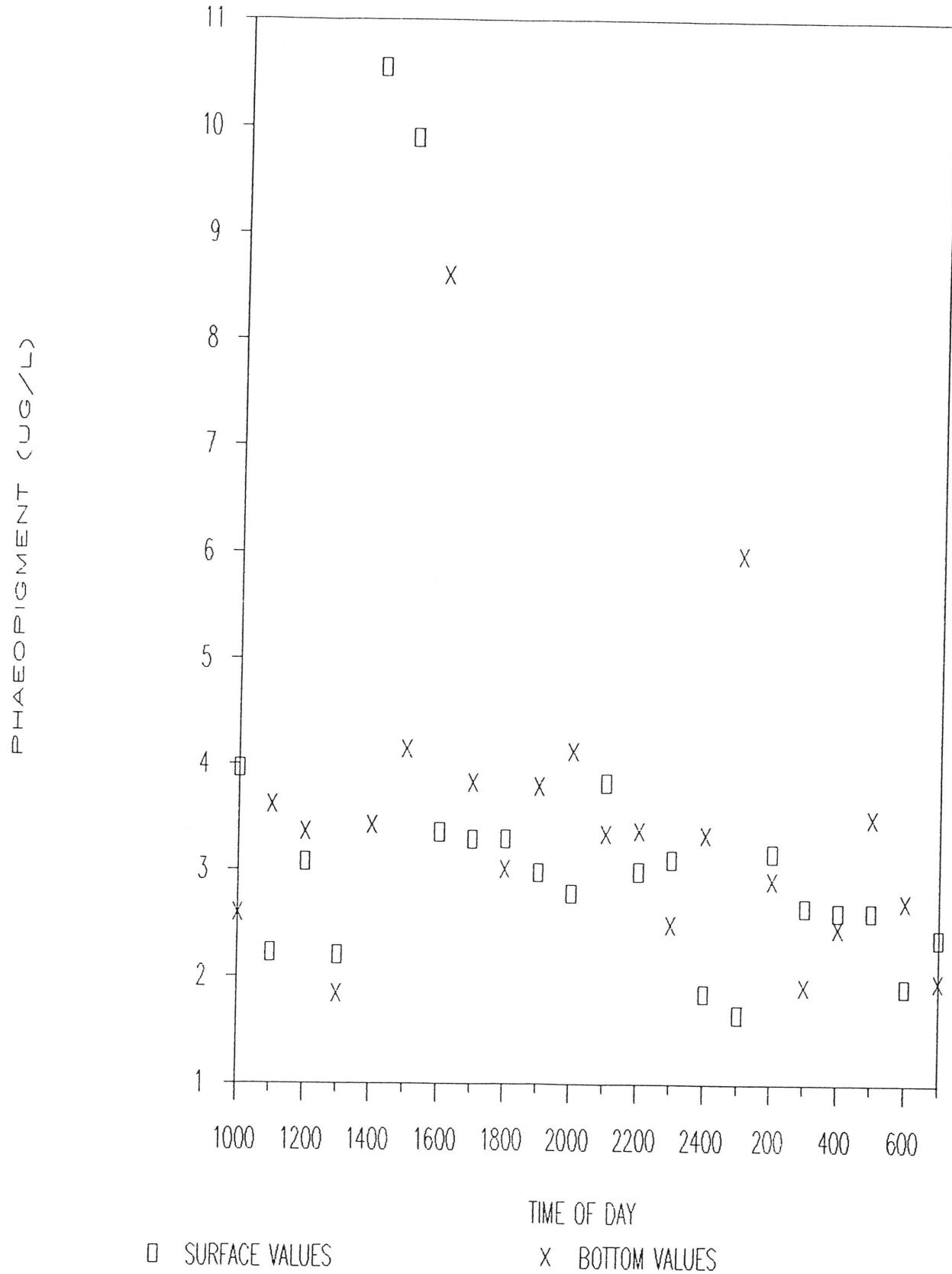
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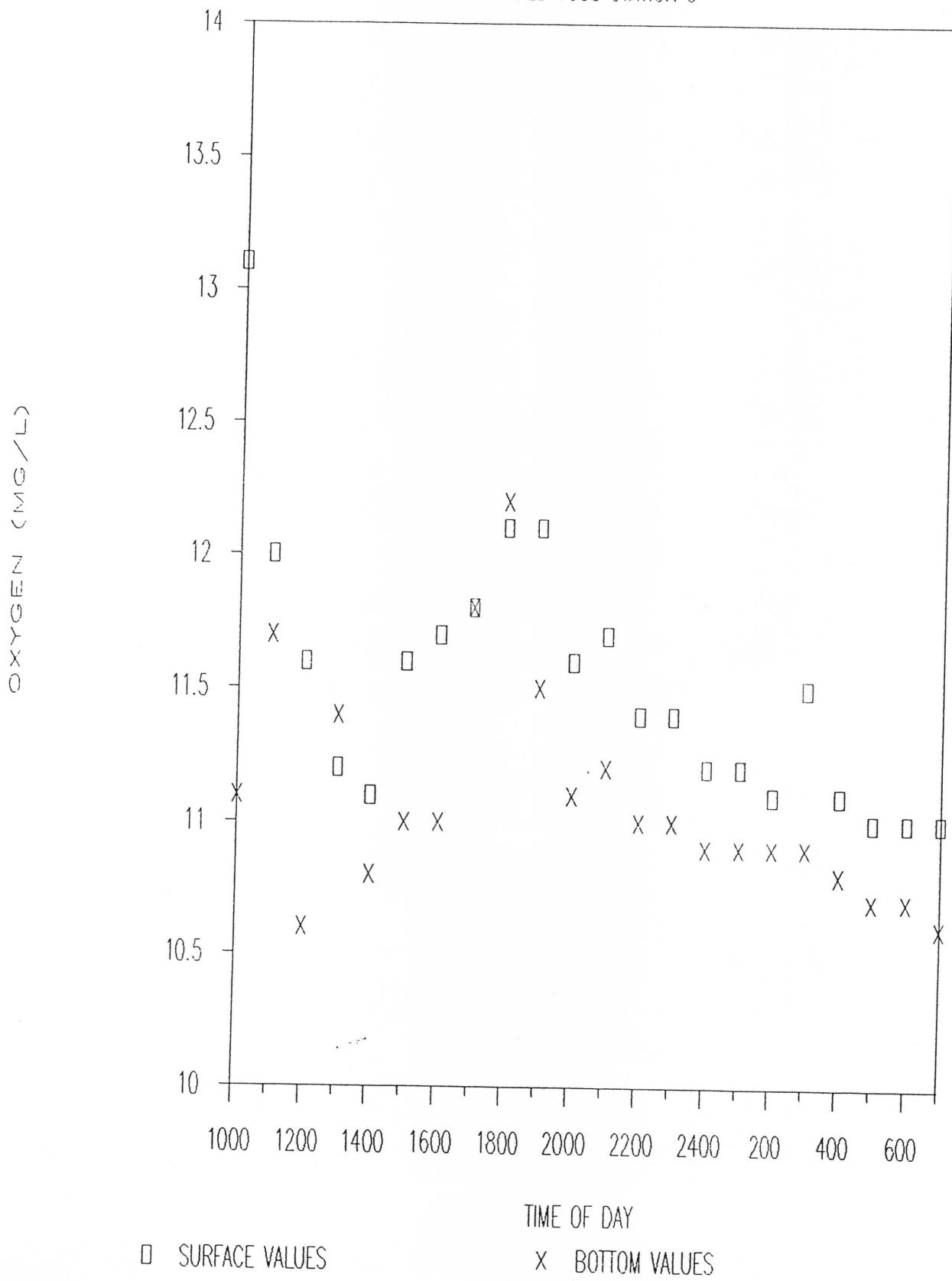
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION C



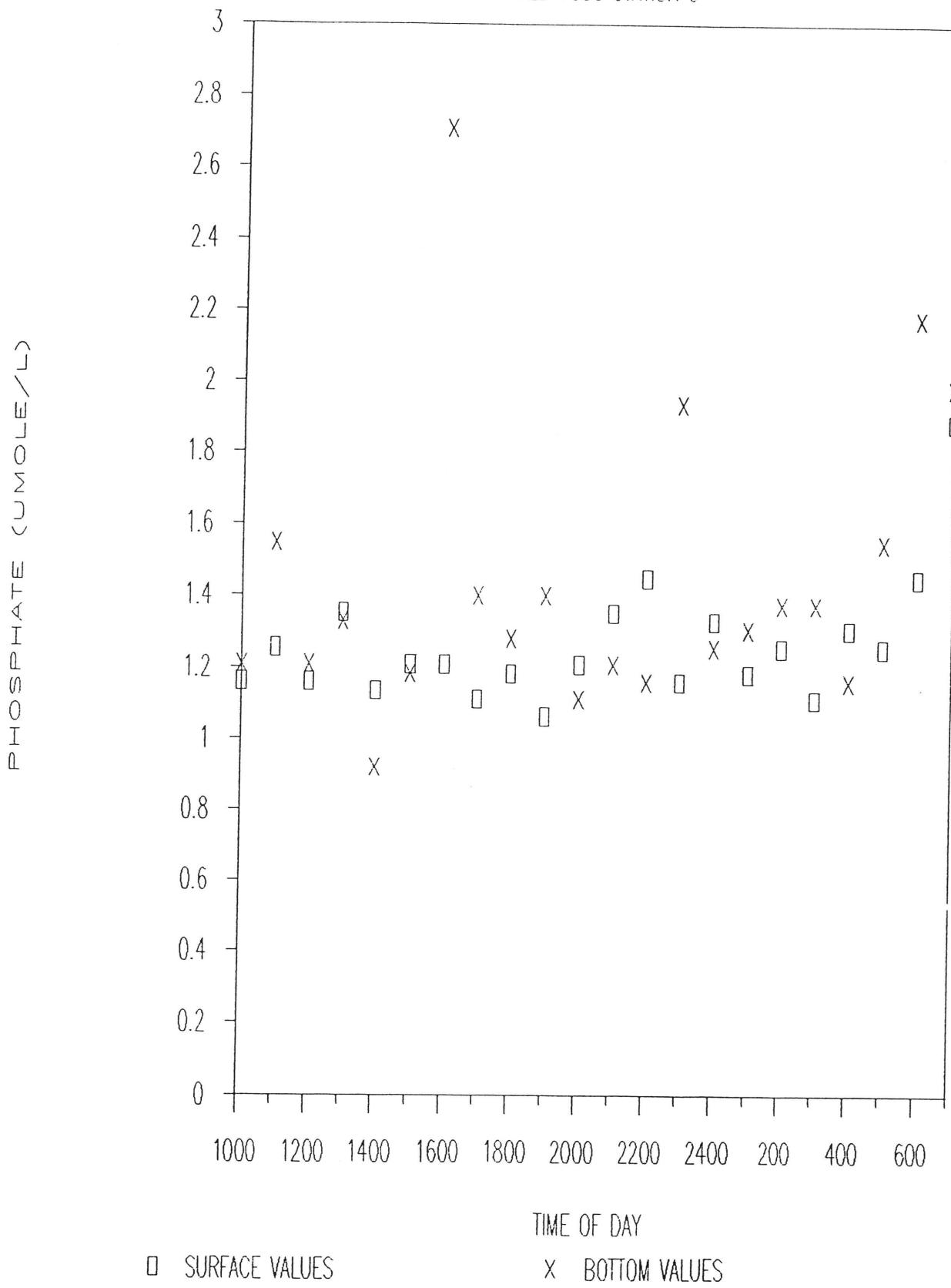
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION C



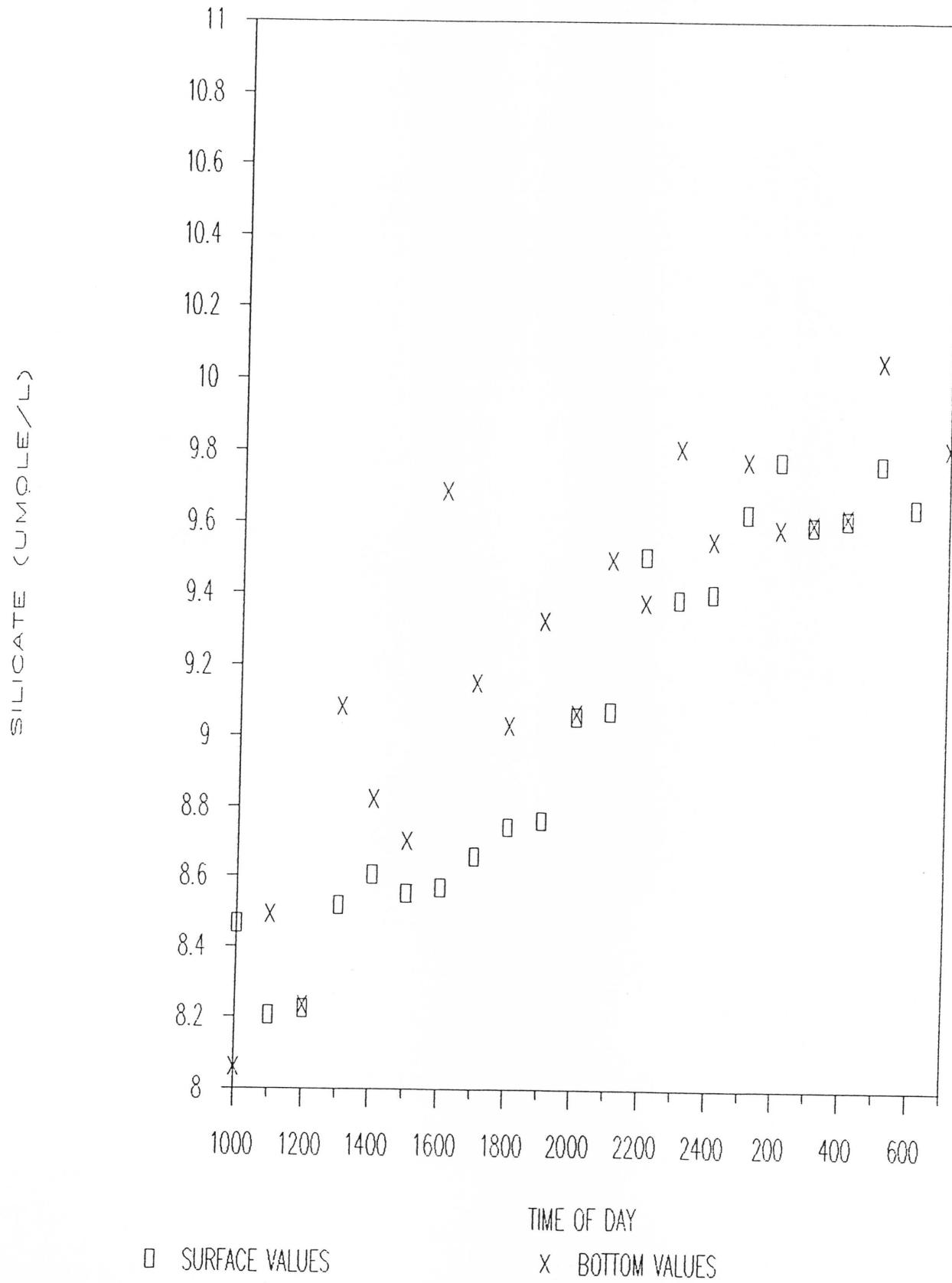
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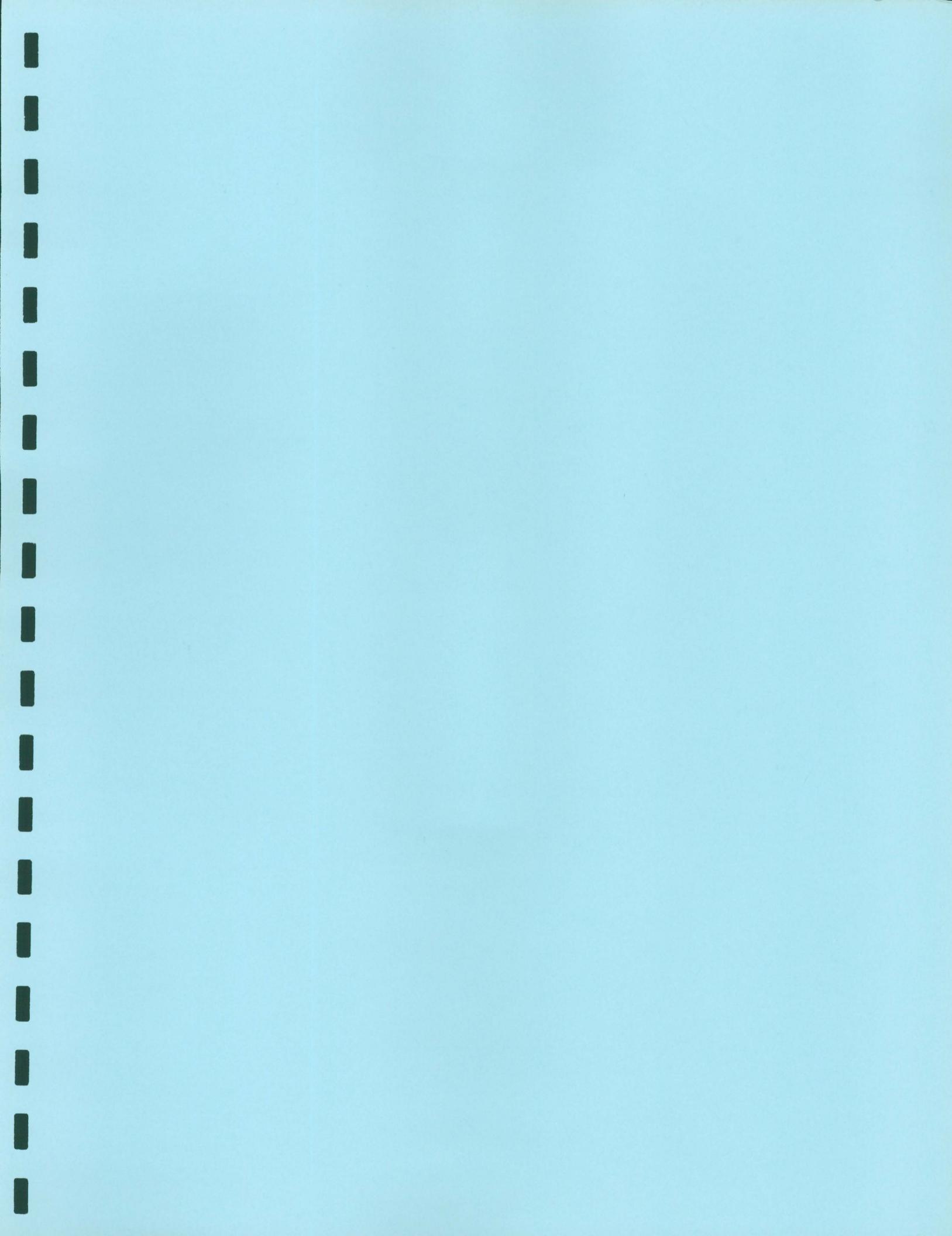


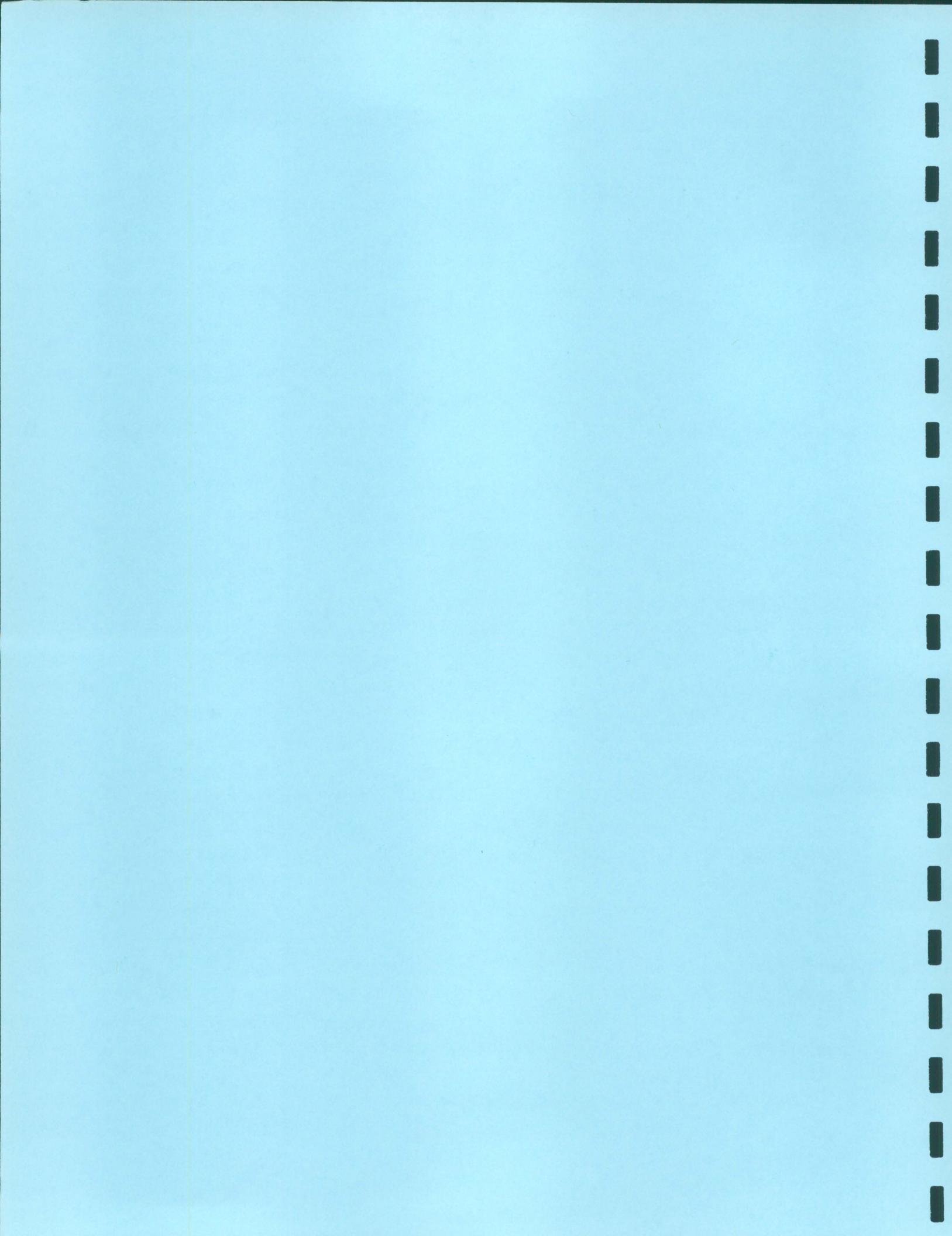
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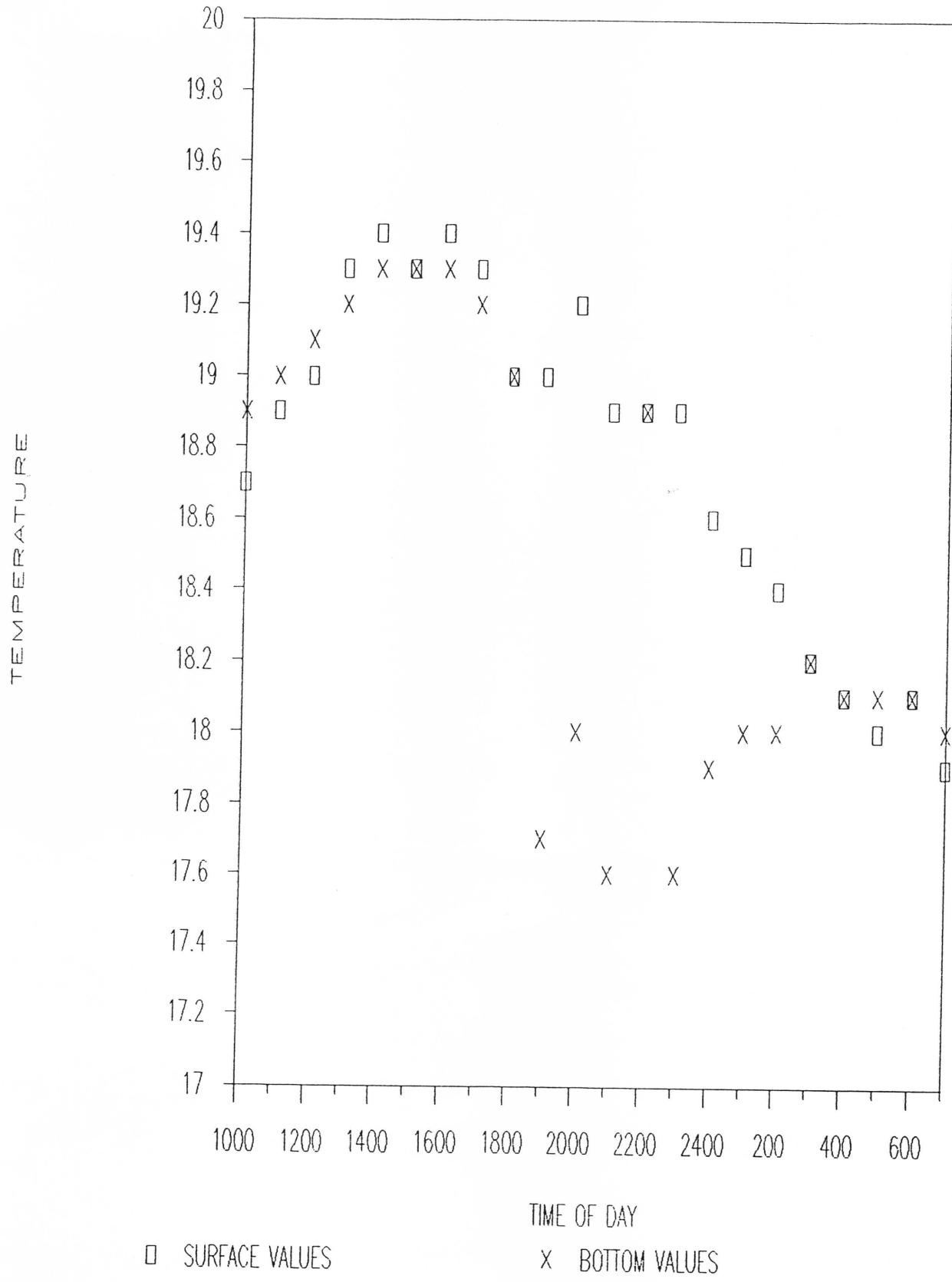






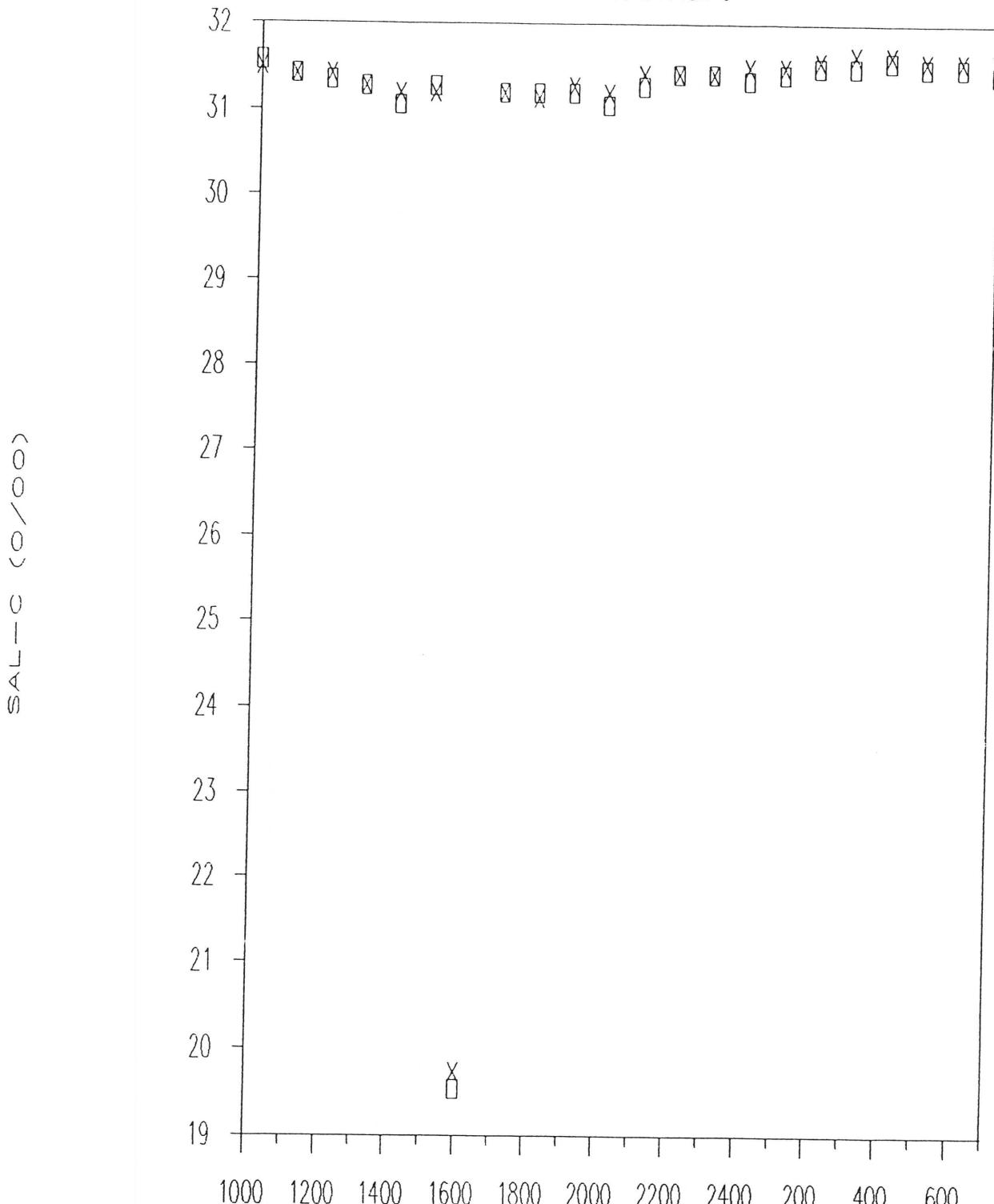
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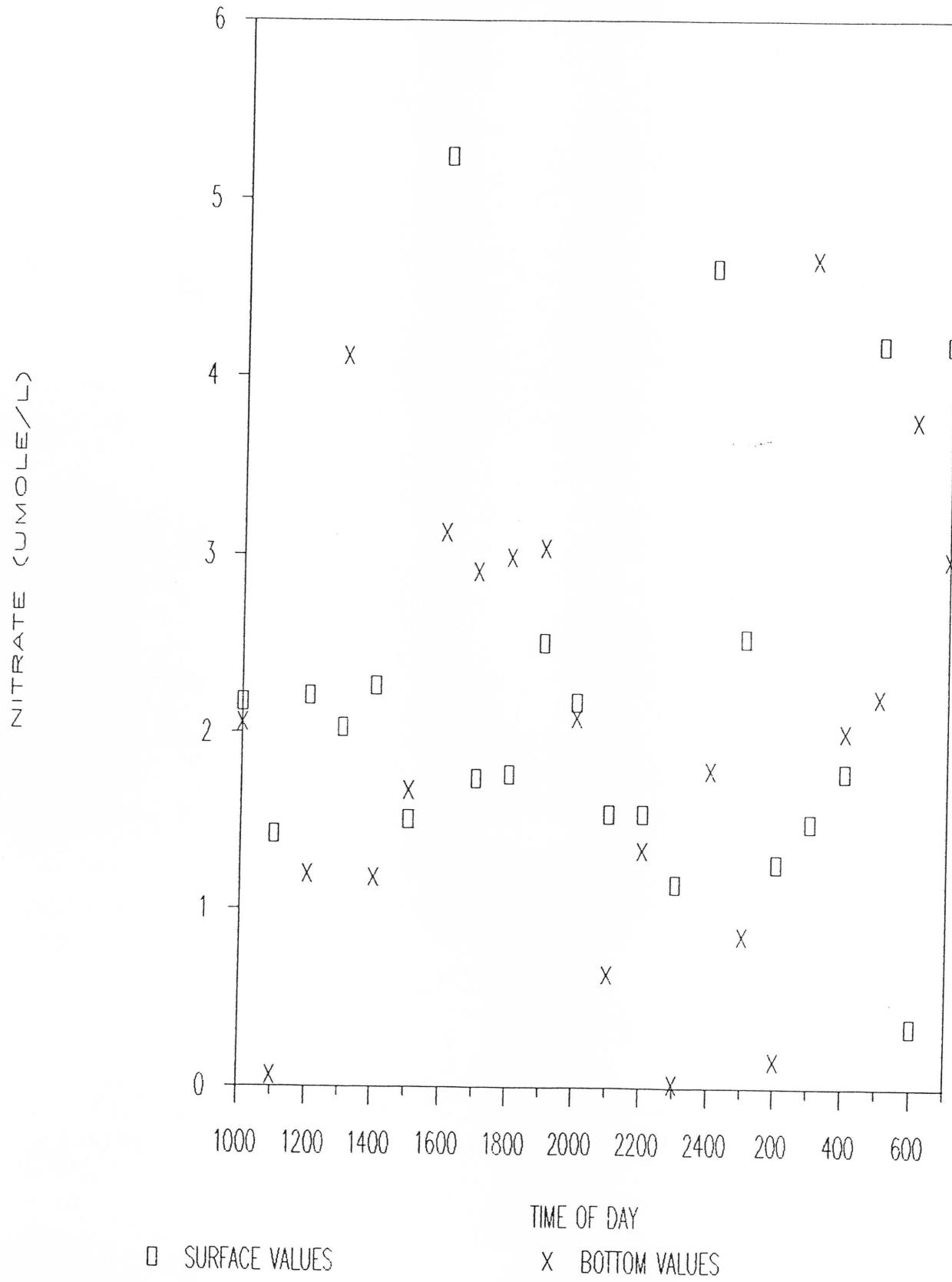
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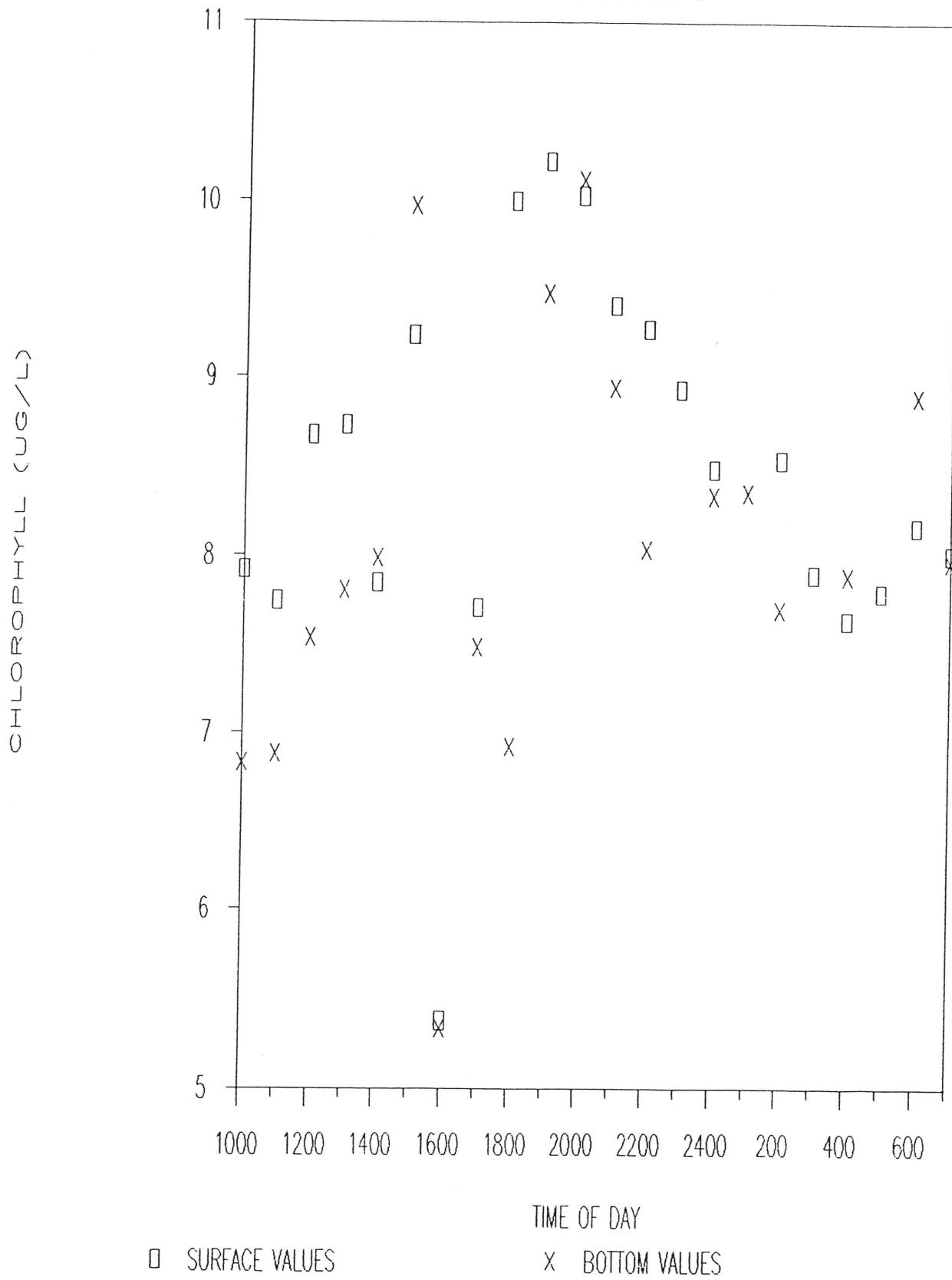
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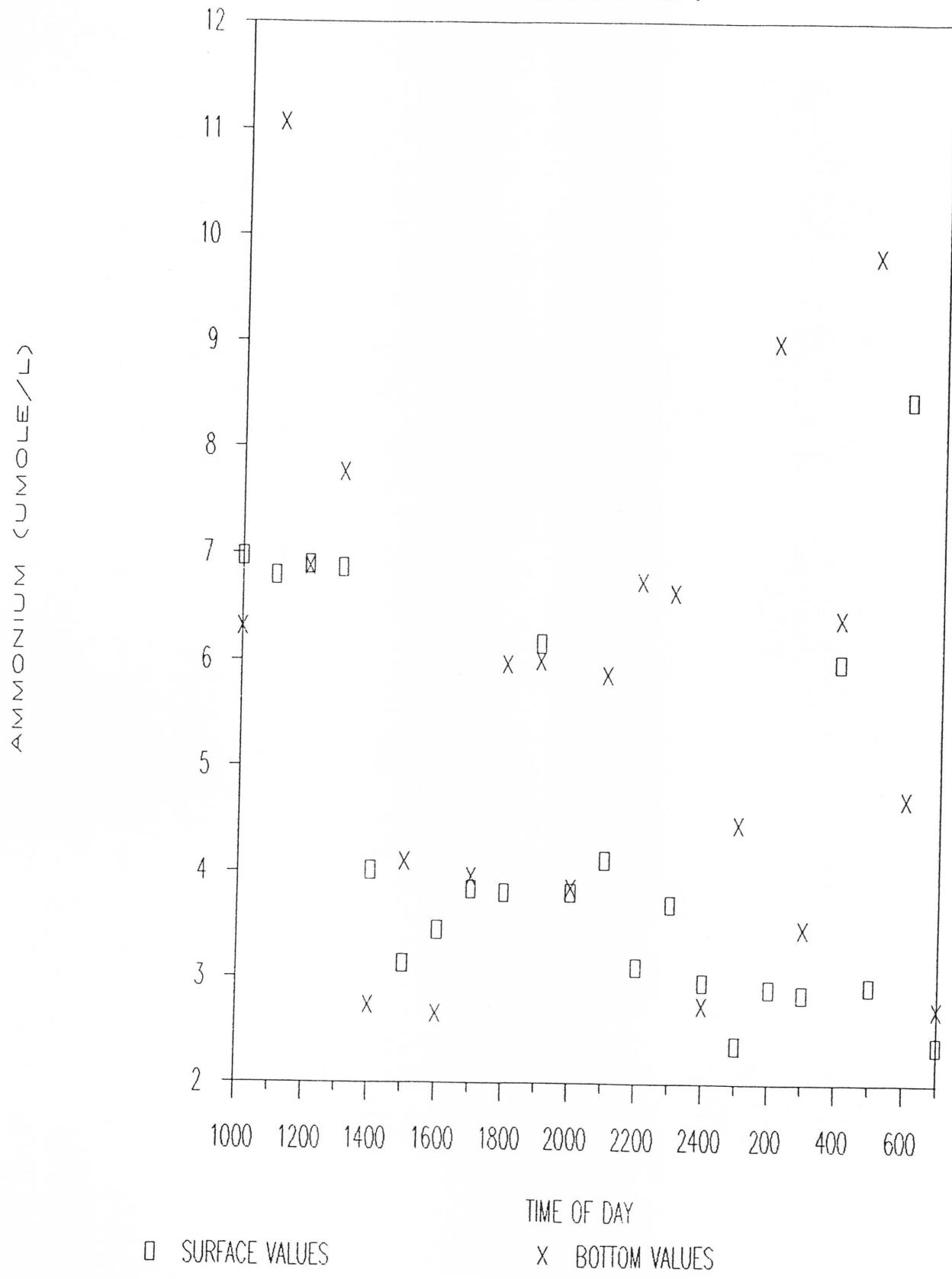
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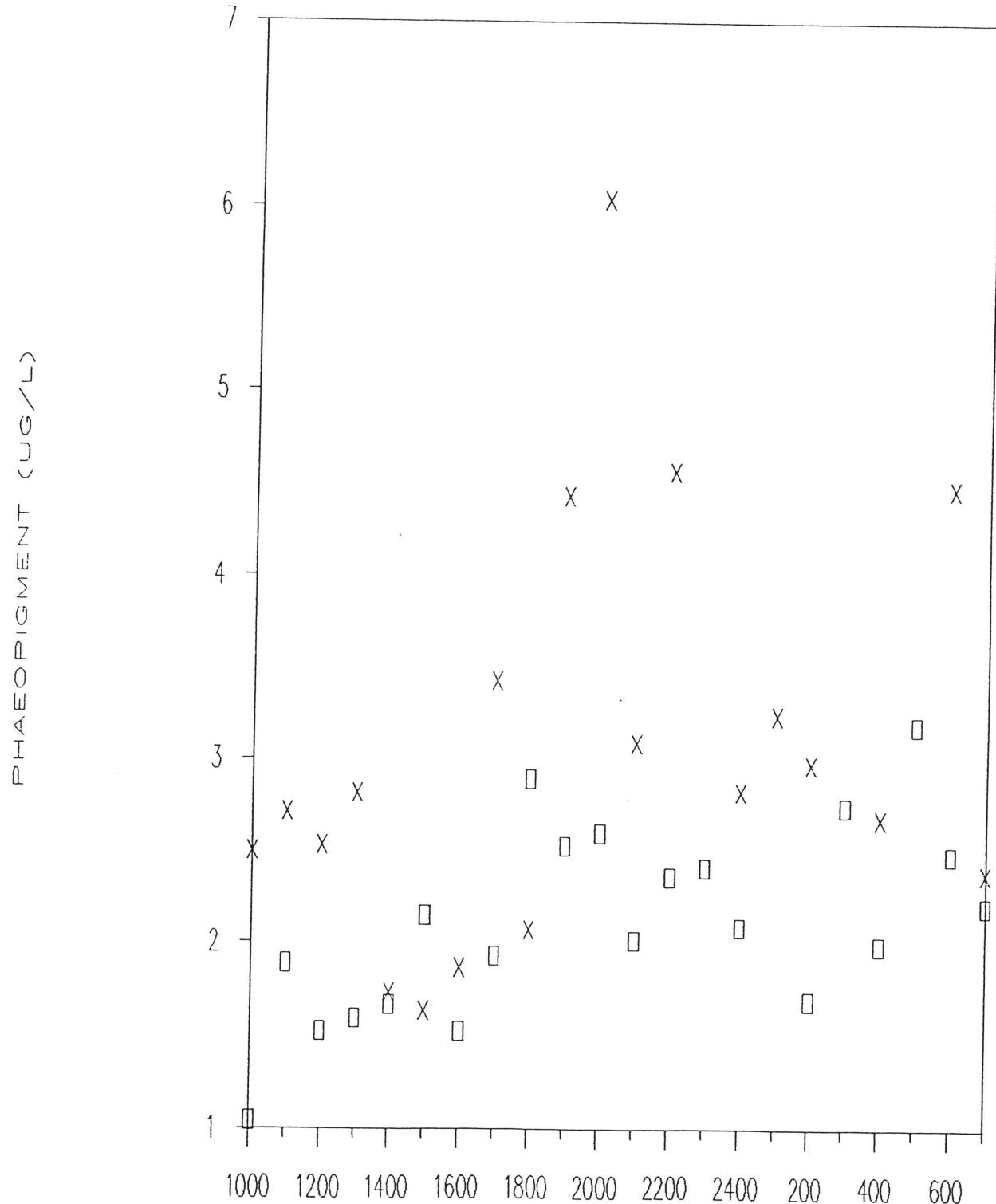
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CORPUS CHRISTI/NUECES BAYS

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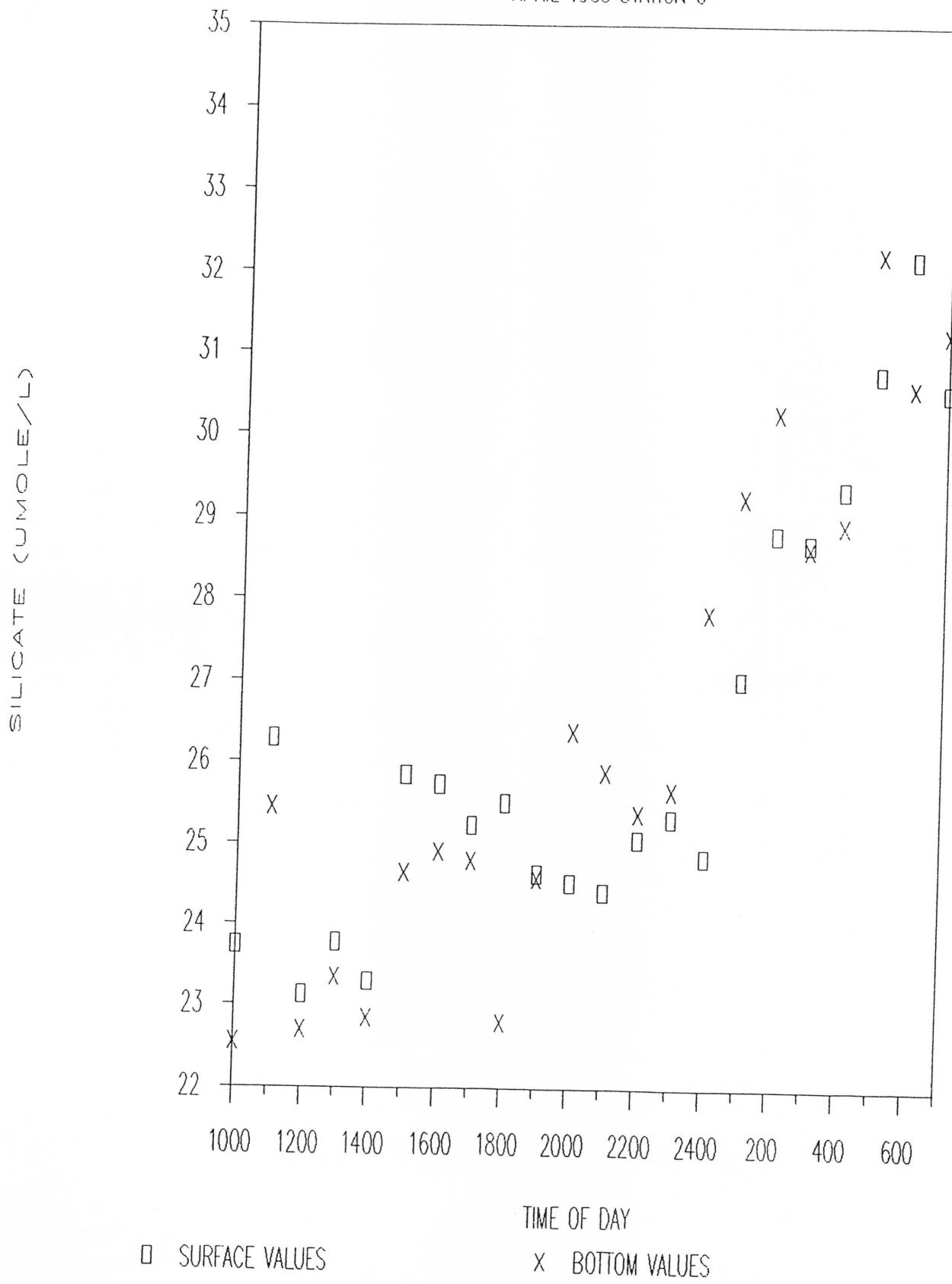
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

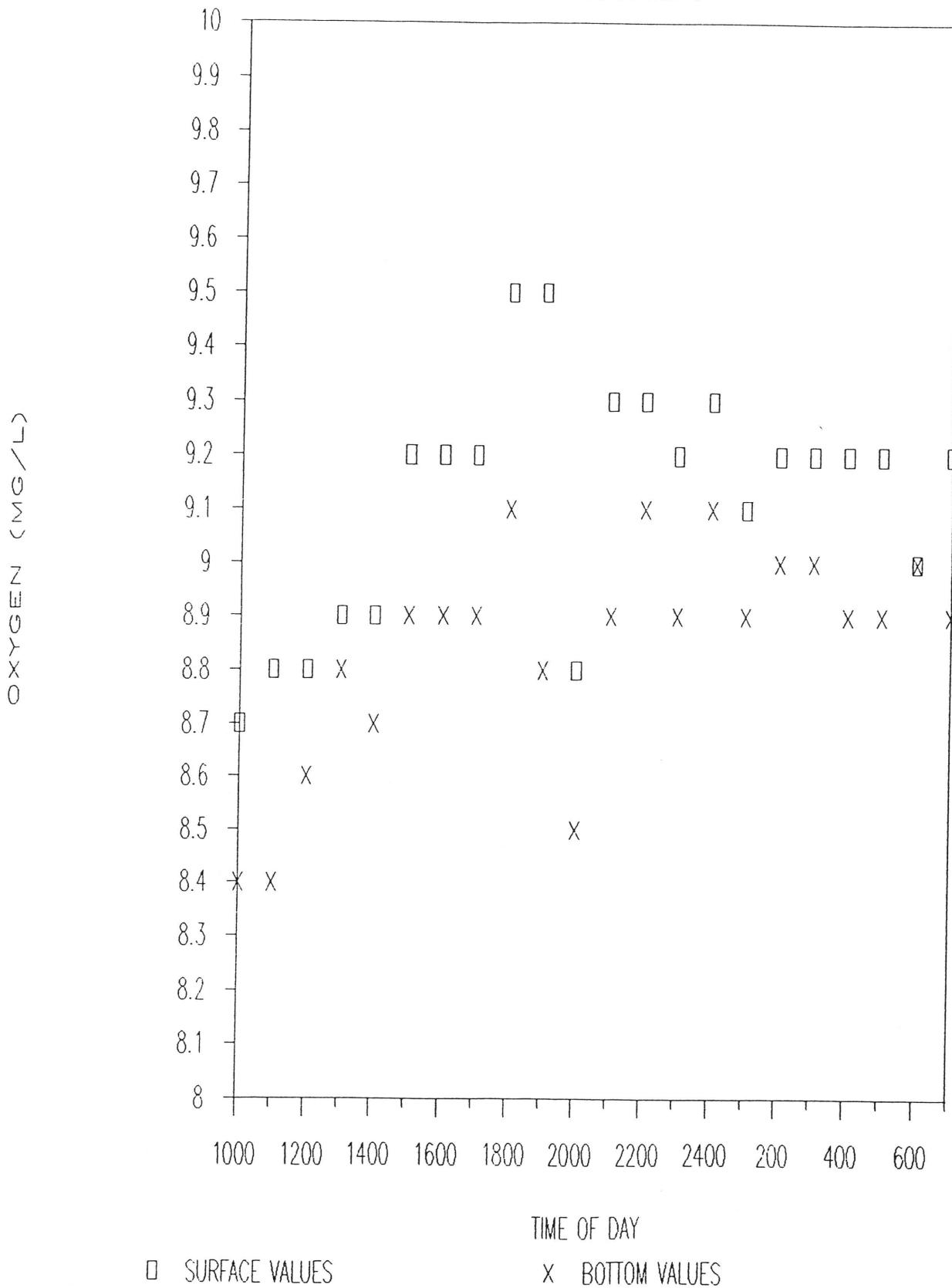
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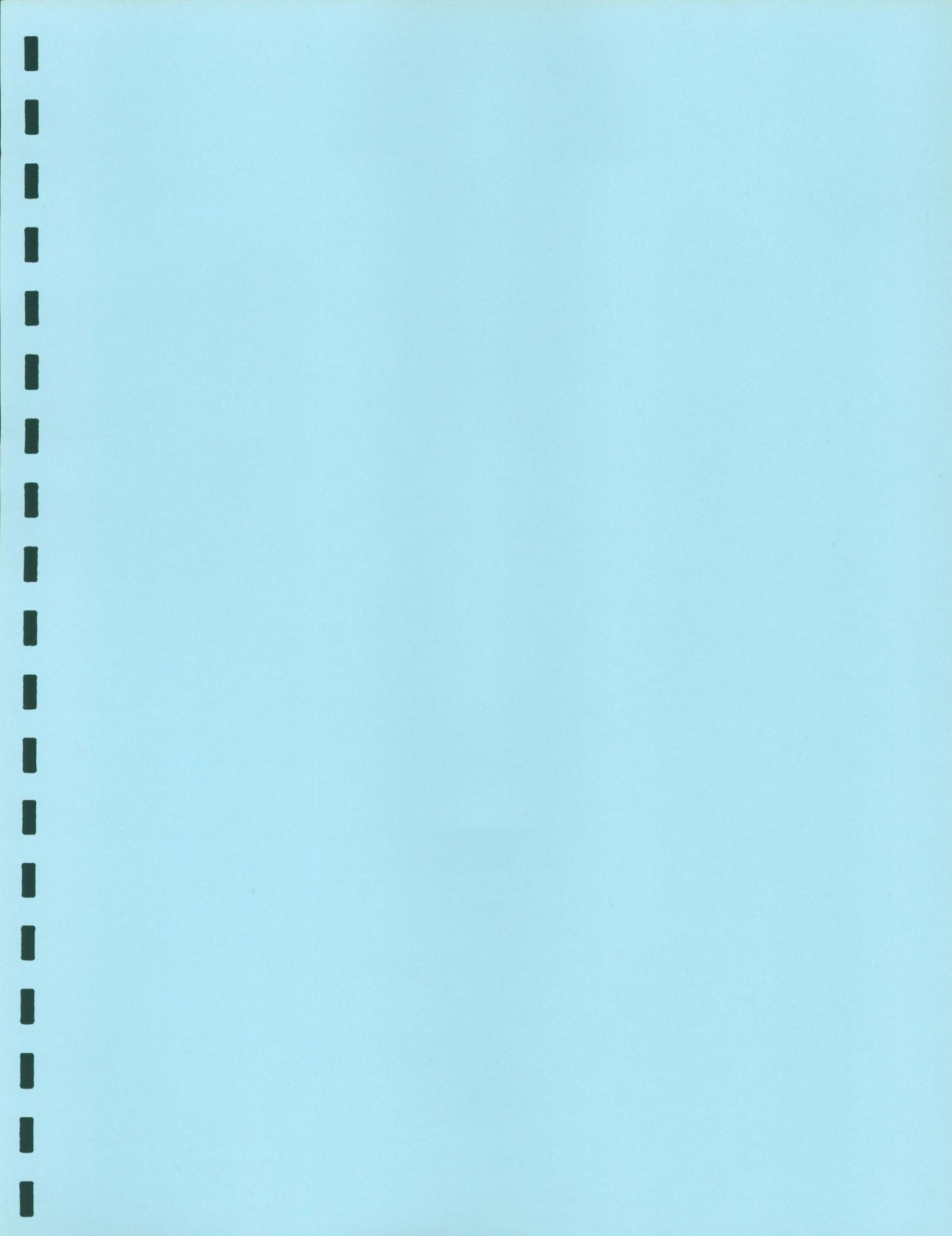
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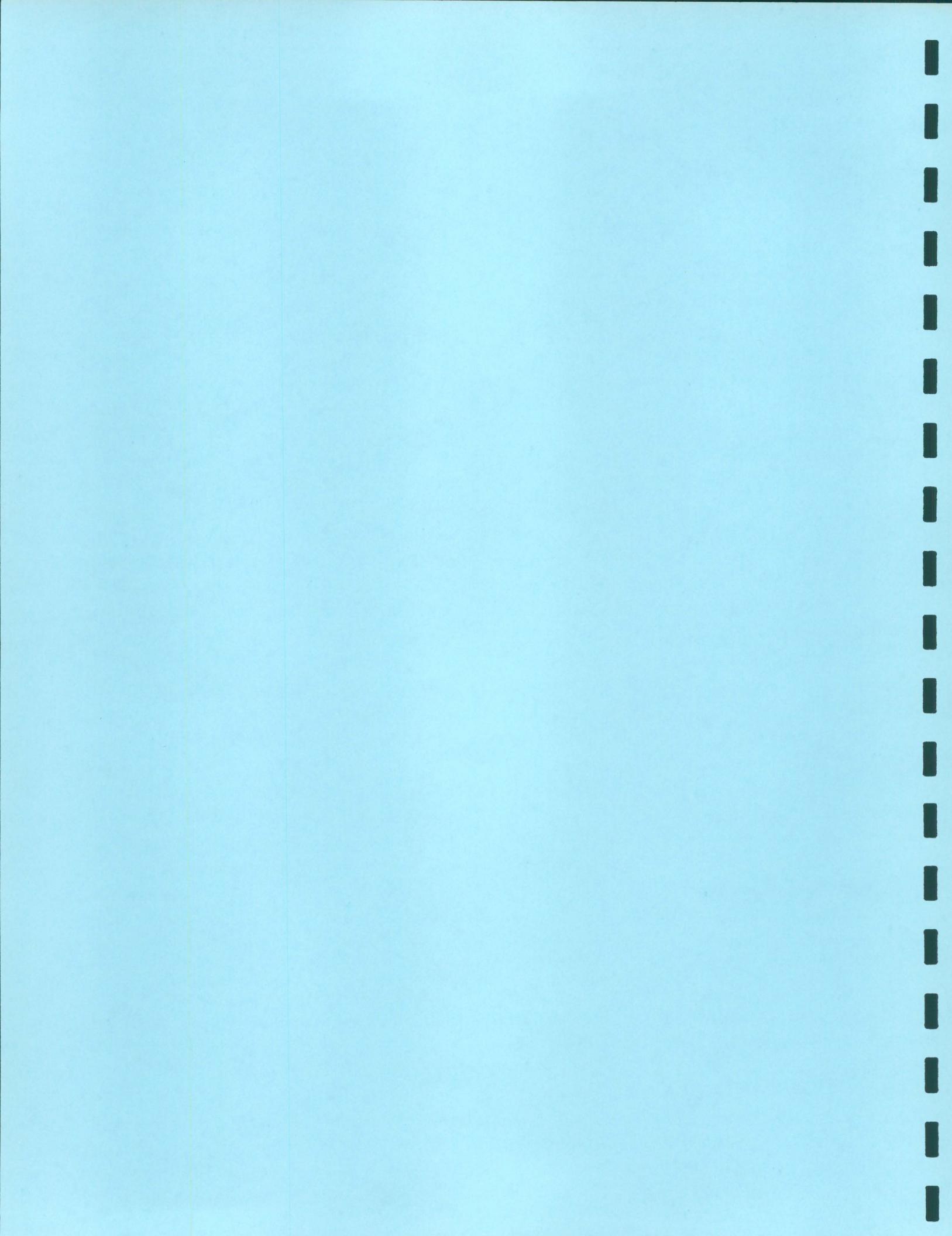


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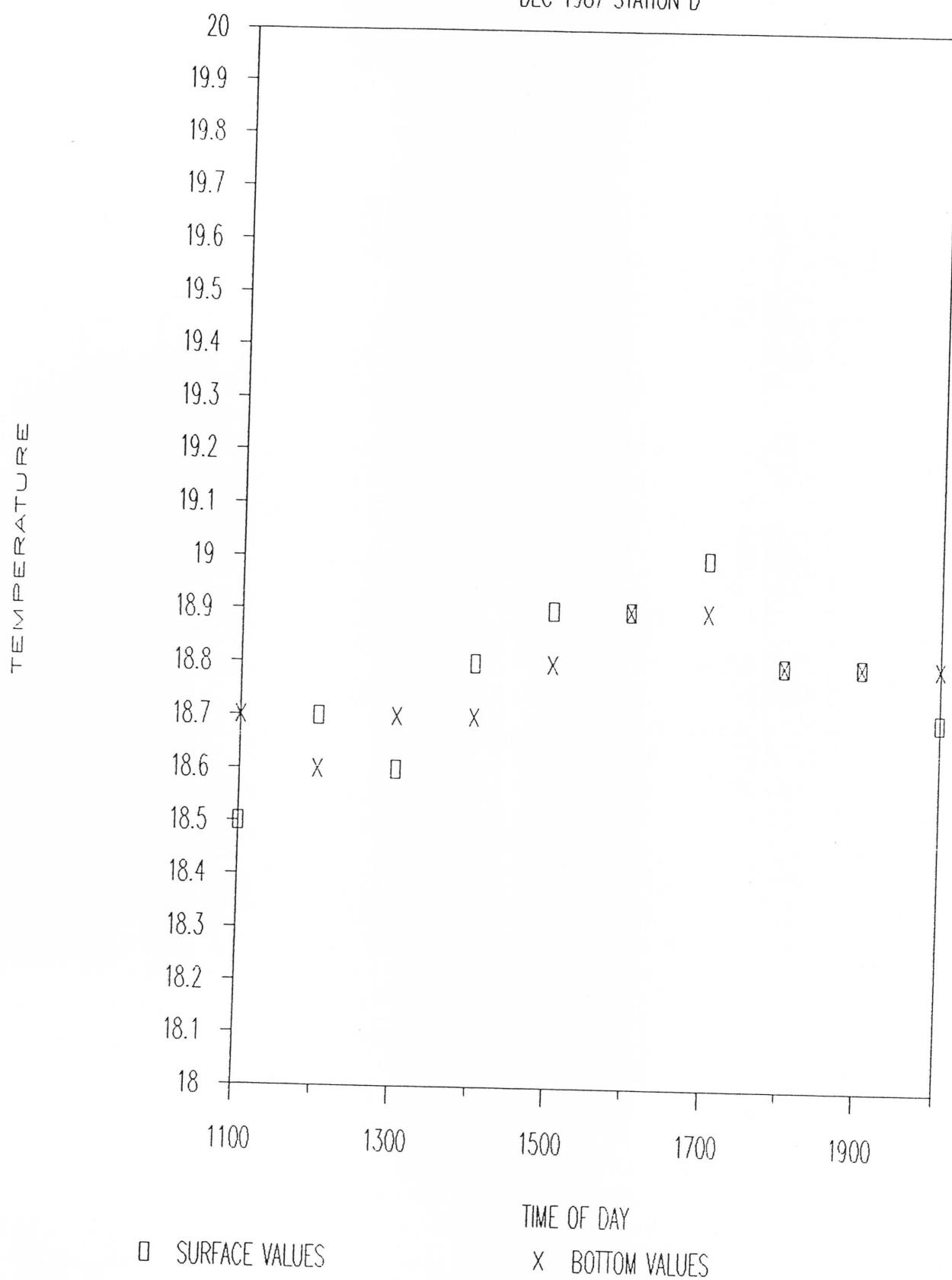






CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION D

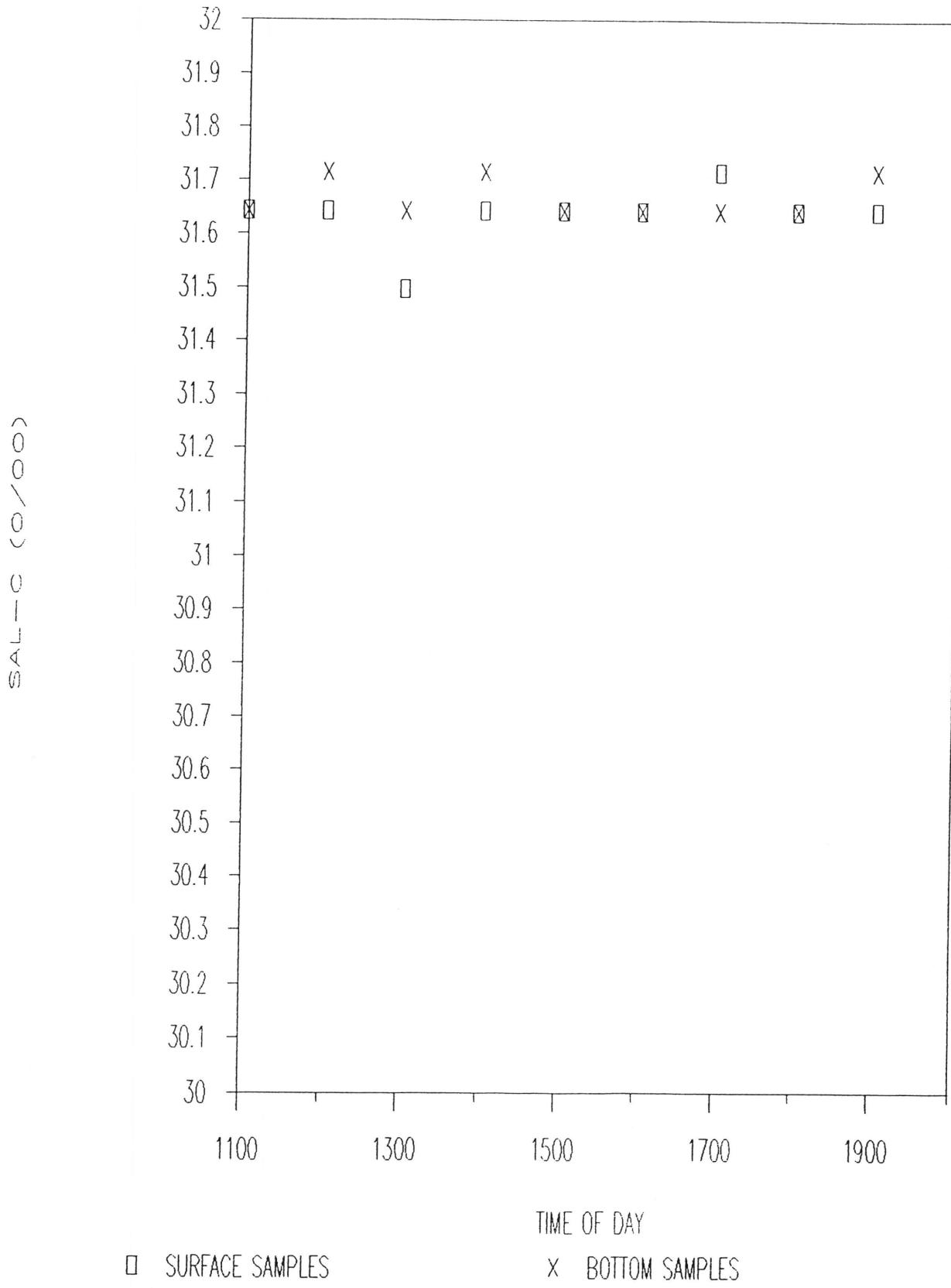


□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

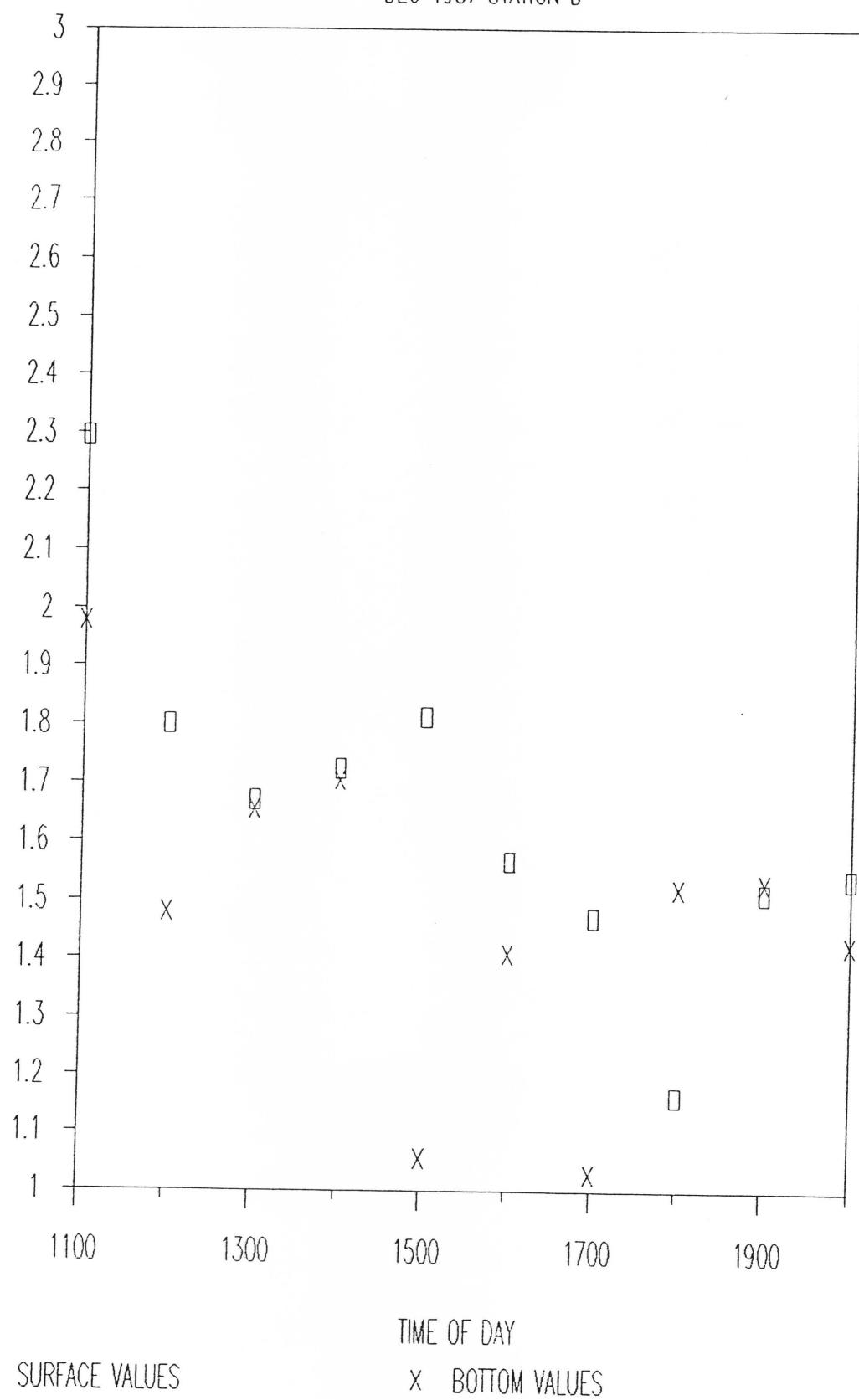
DEC 1987 STATION D



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION D

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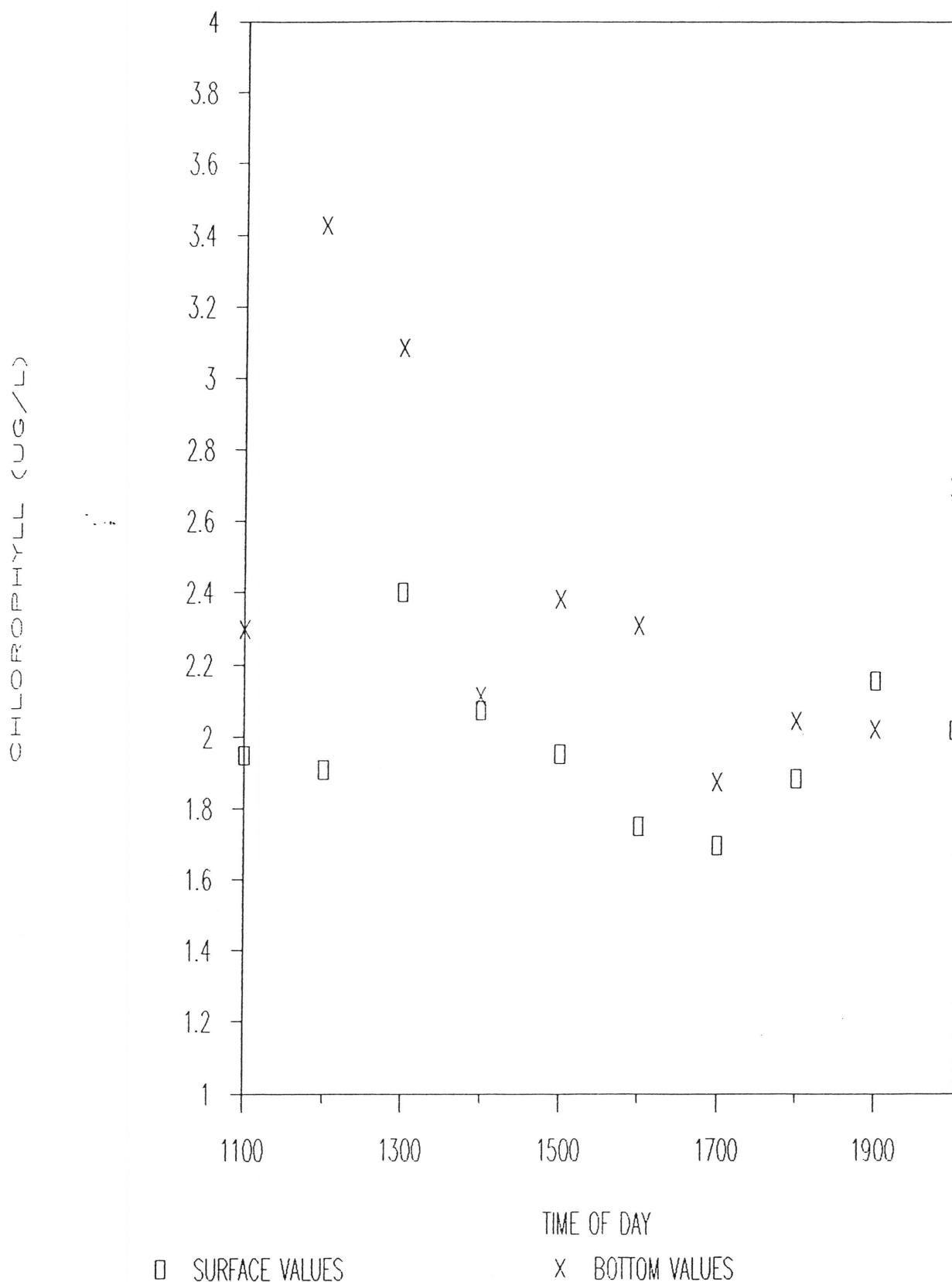


□ SURFACE VALUES

× BOTTOM VALUES

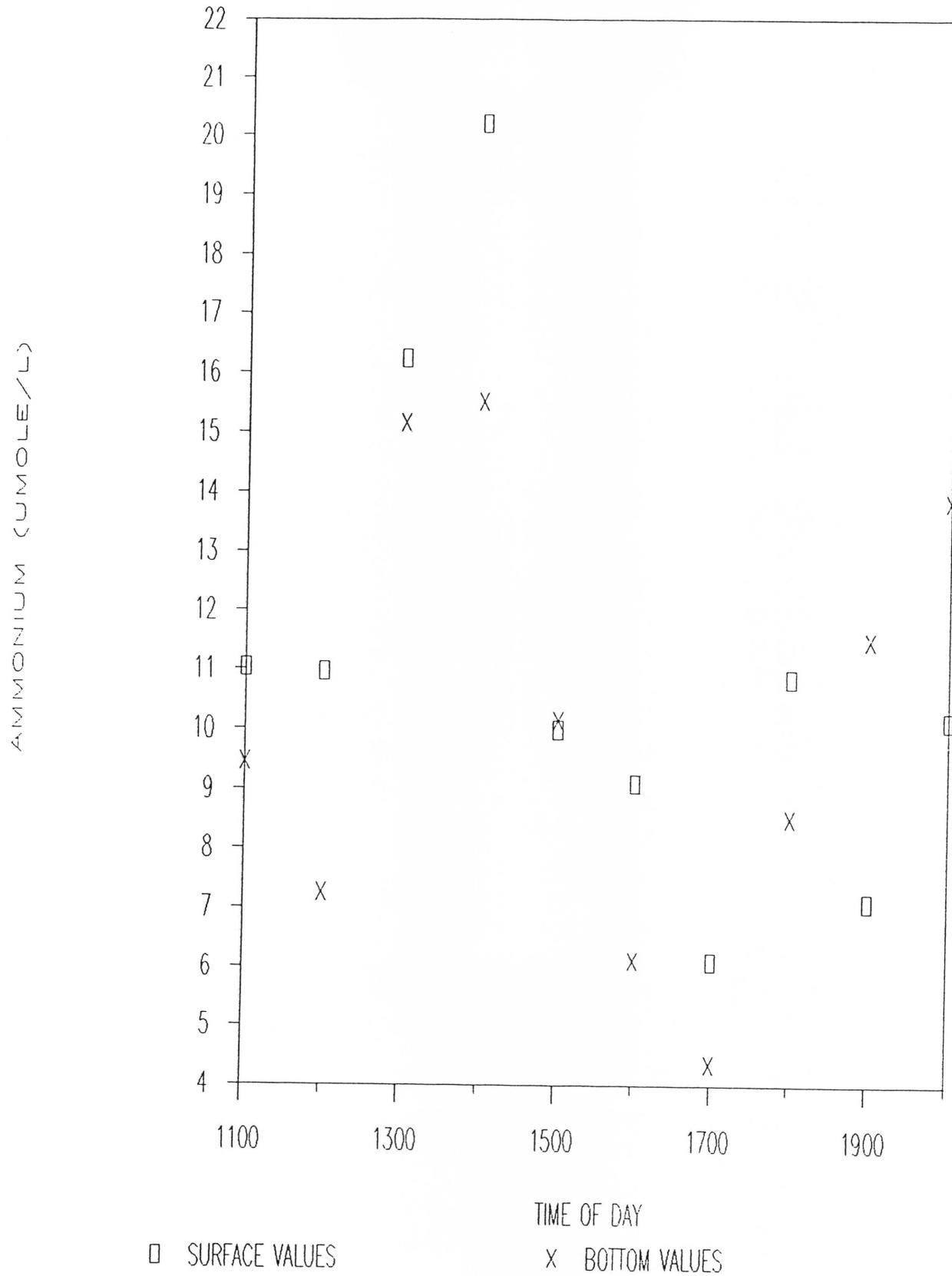
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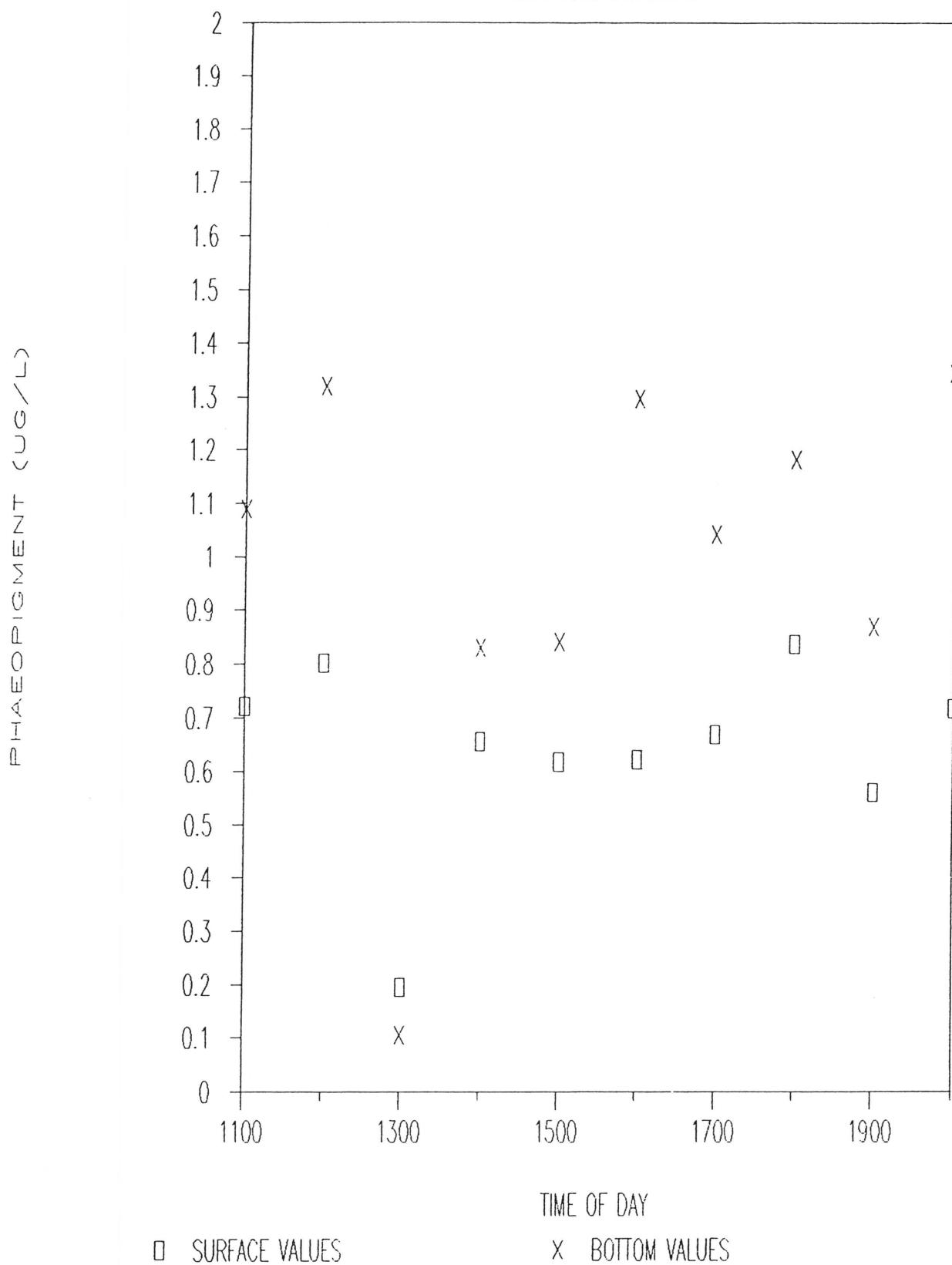
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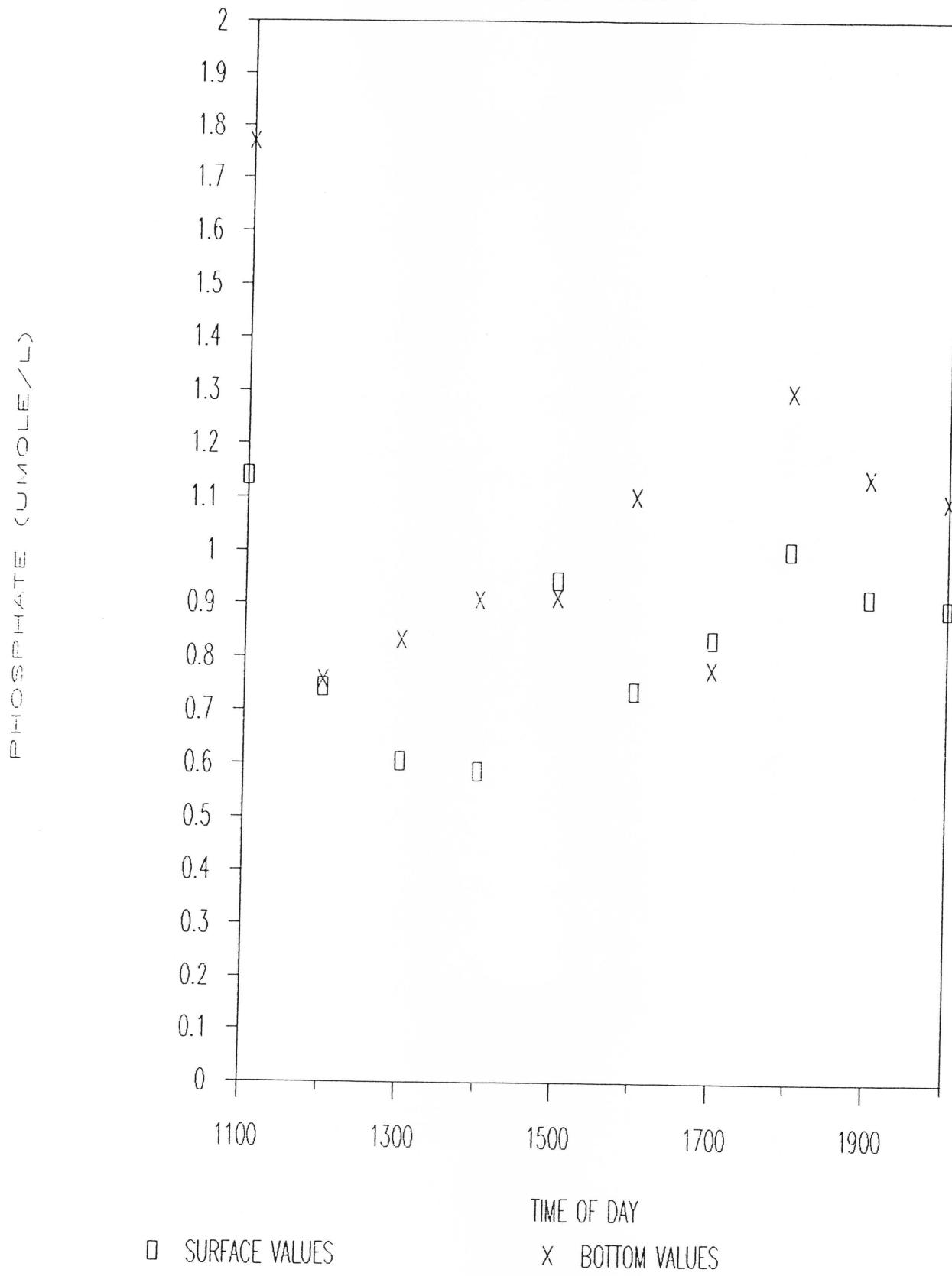
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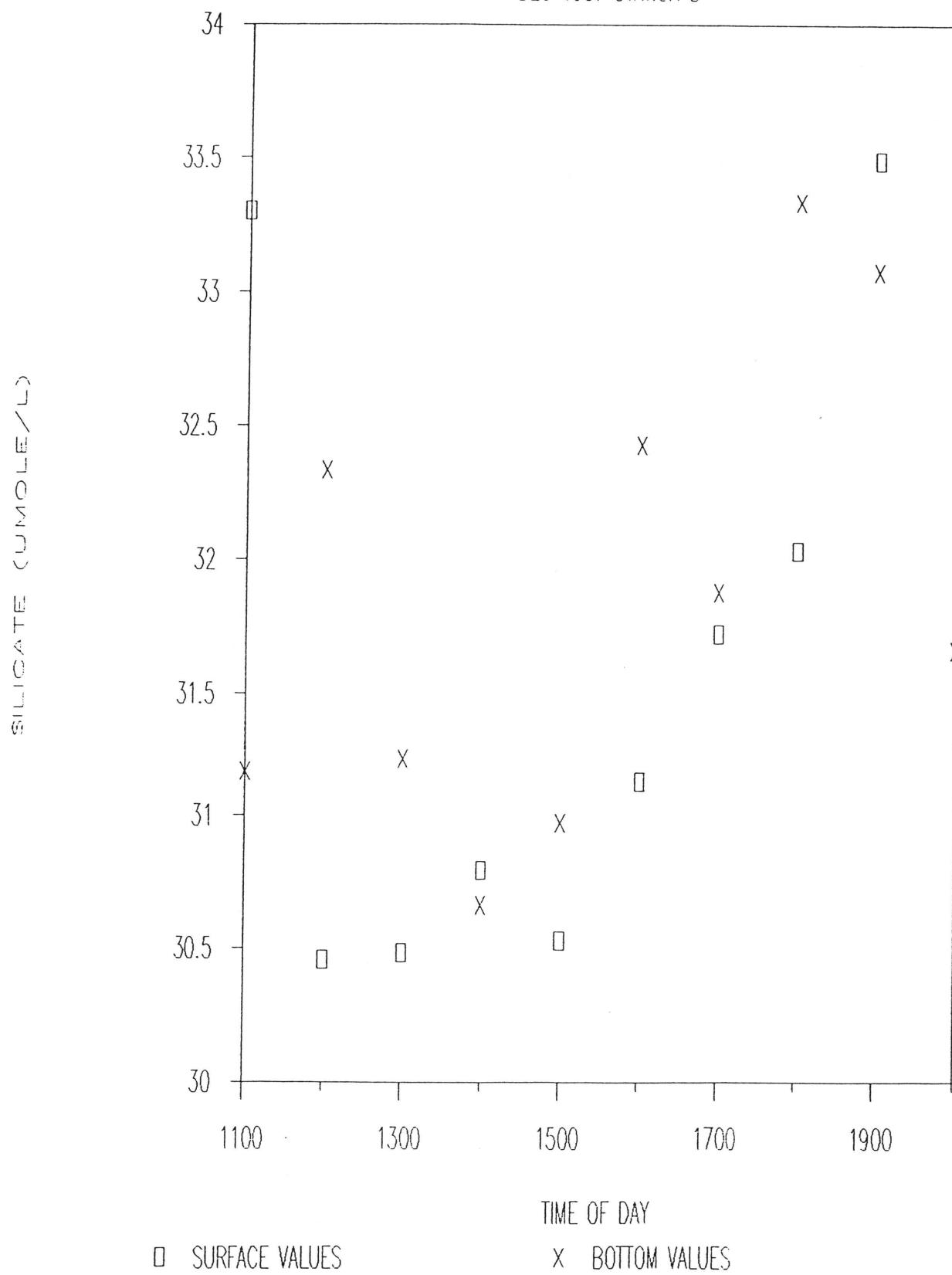
CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION D



CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION D



TIME OF DAY

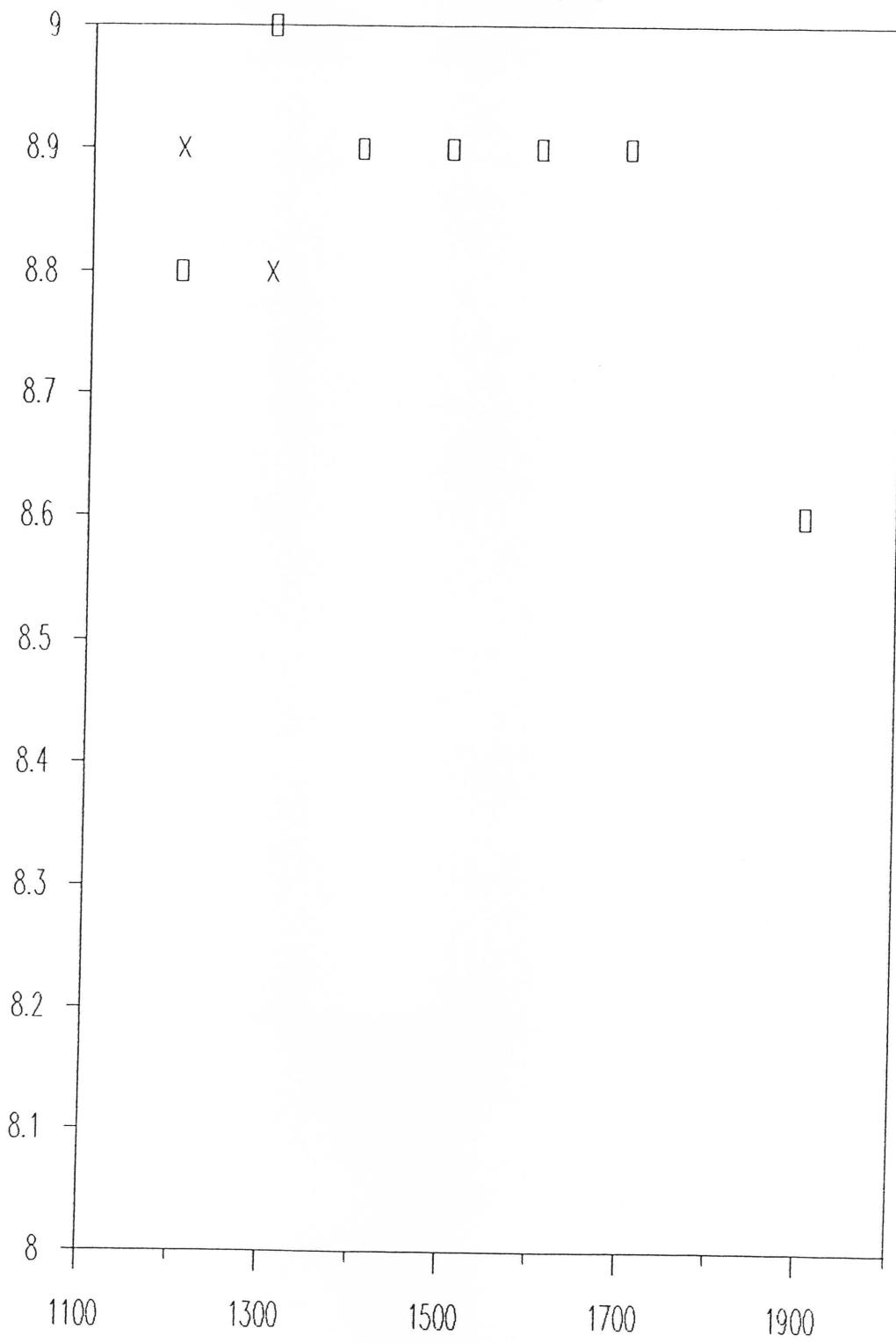
□ SURFACE VALUES

× BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

DEC 1987 STATION D

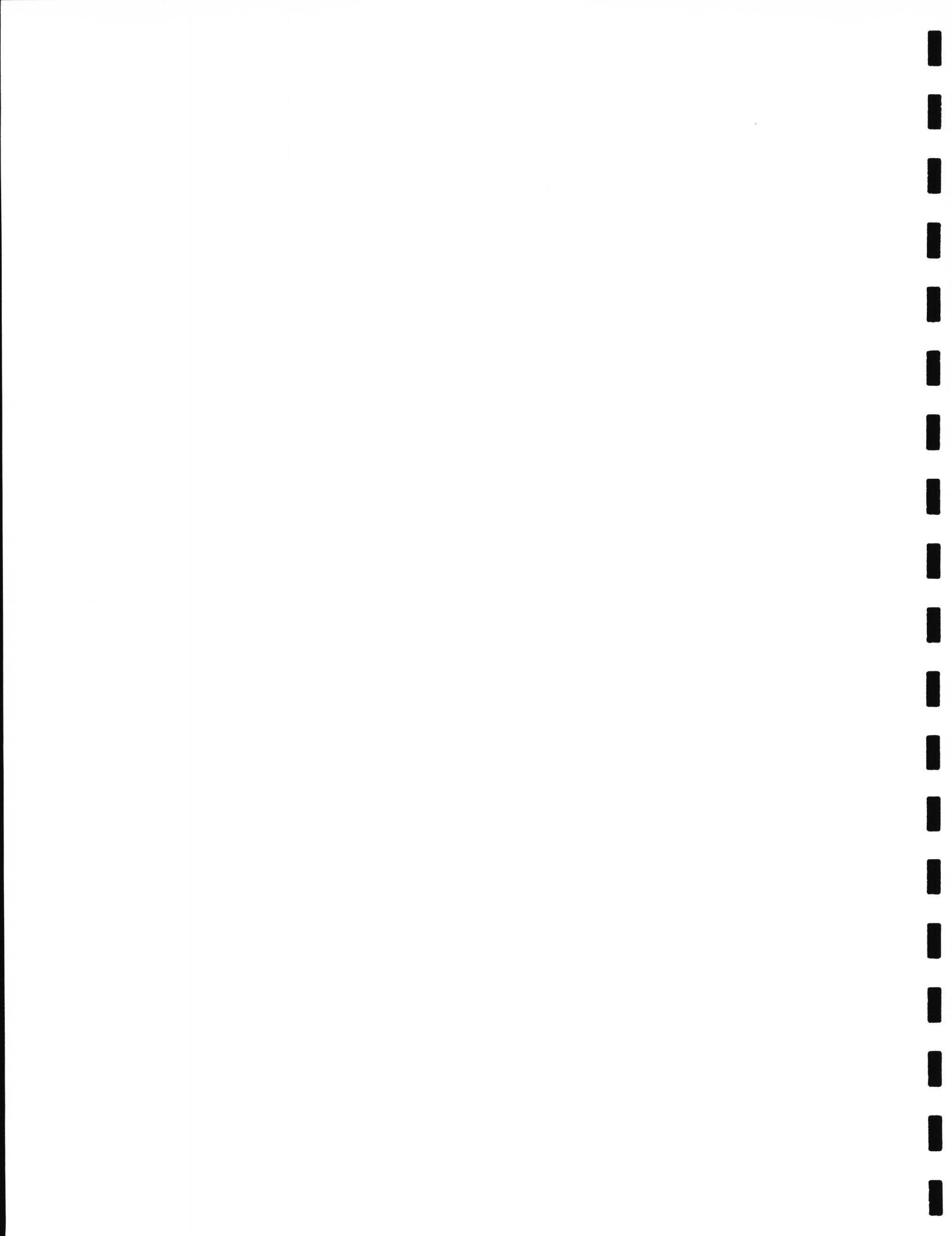
TIME OF DAY (MOS/UT)

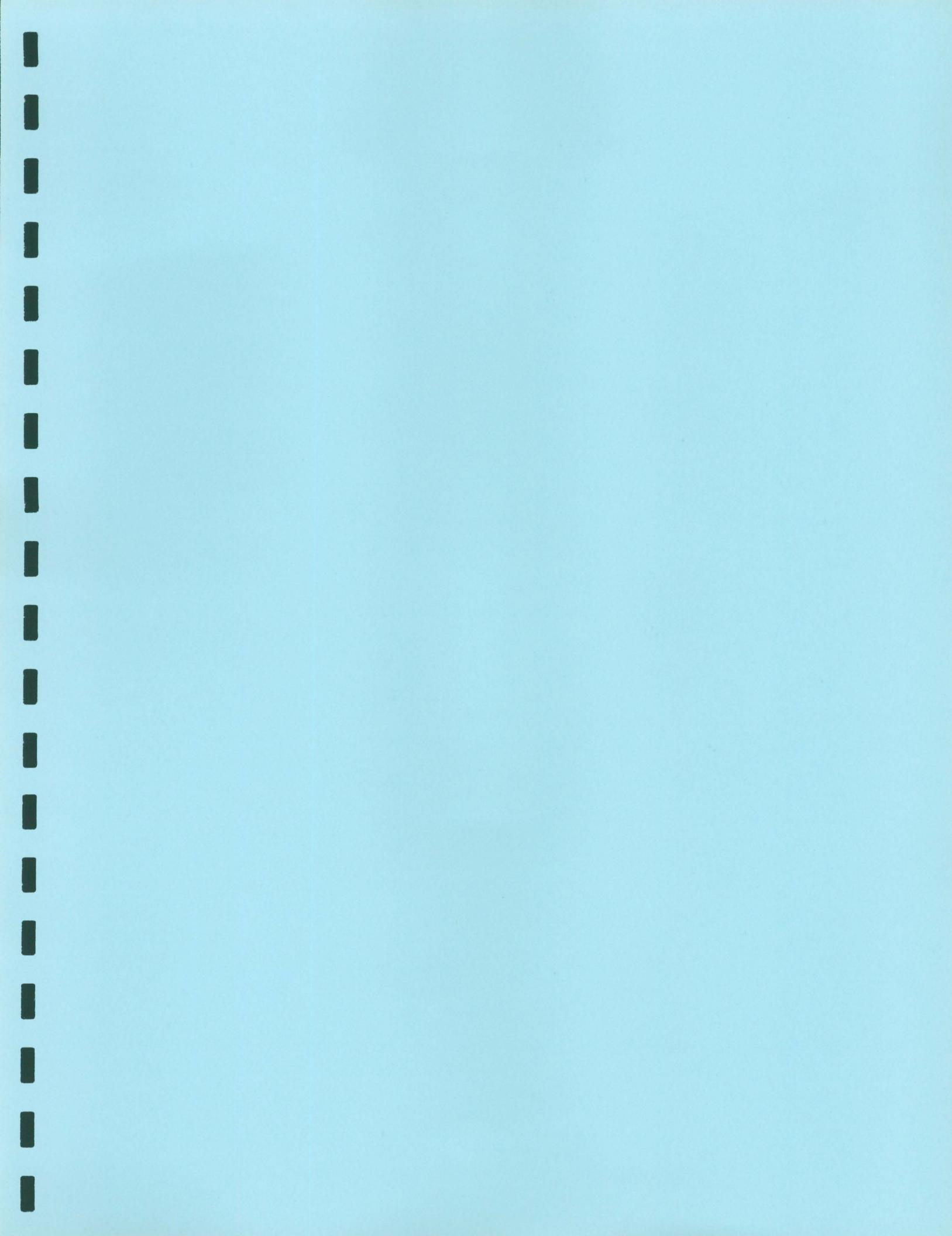


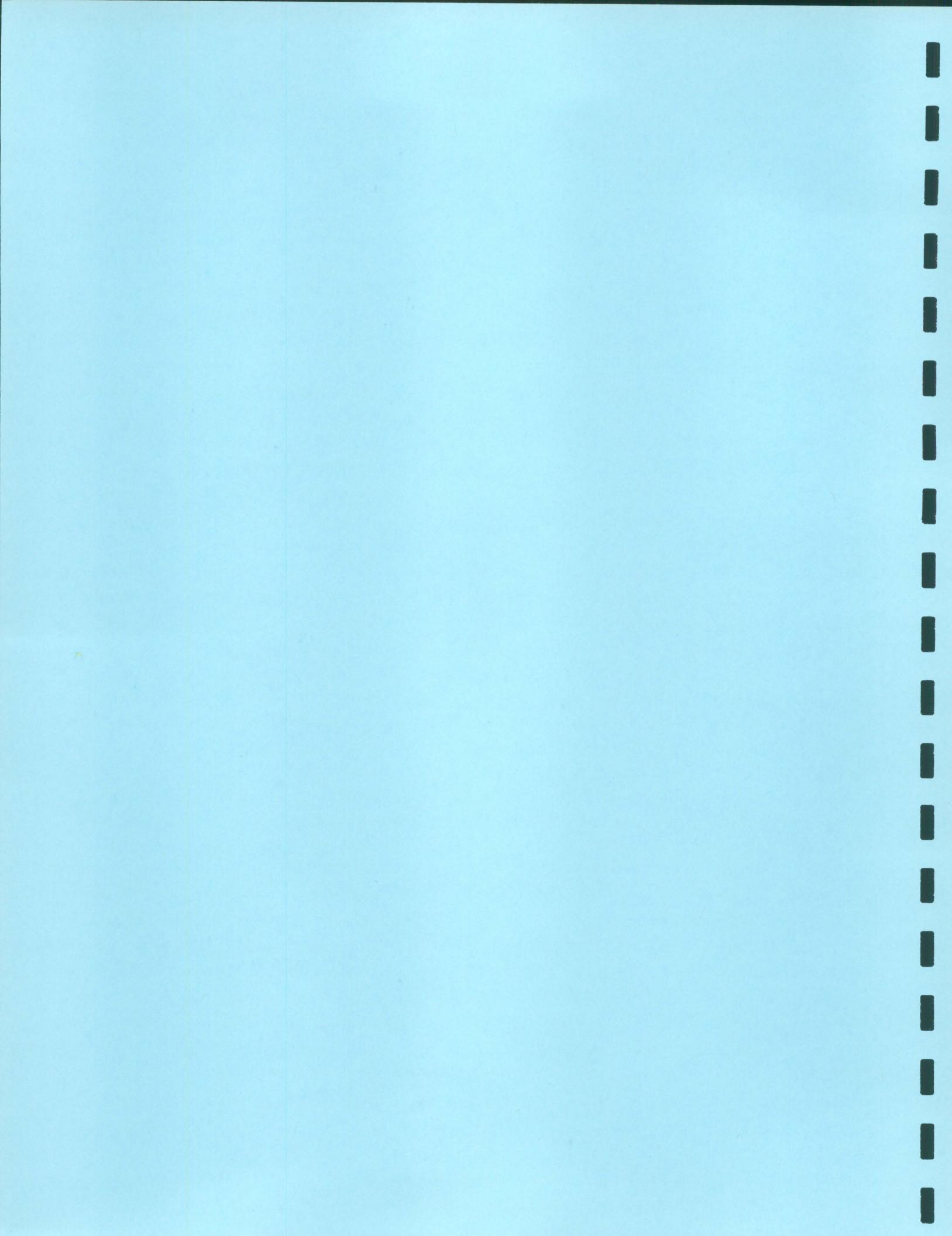
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

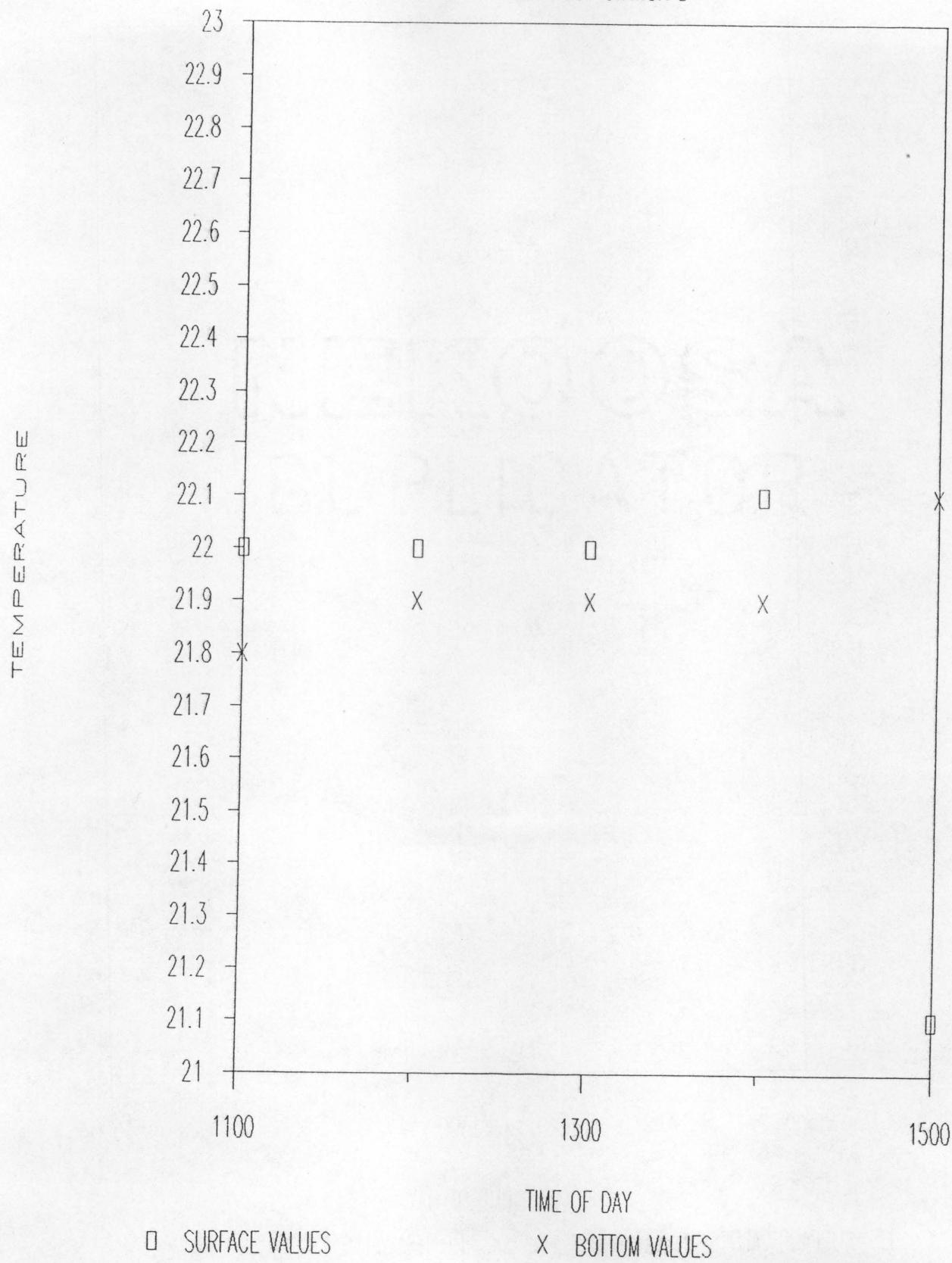






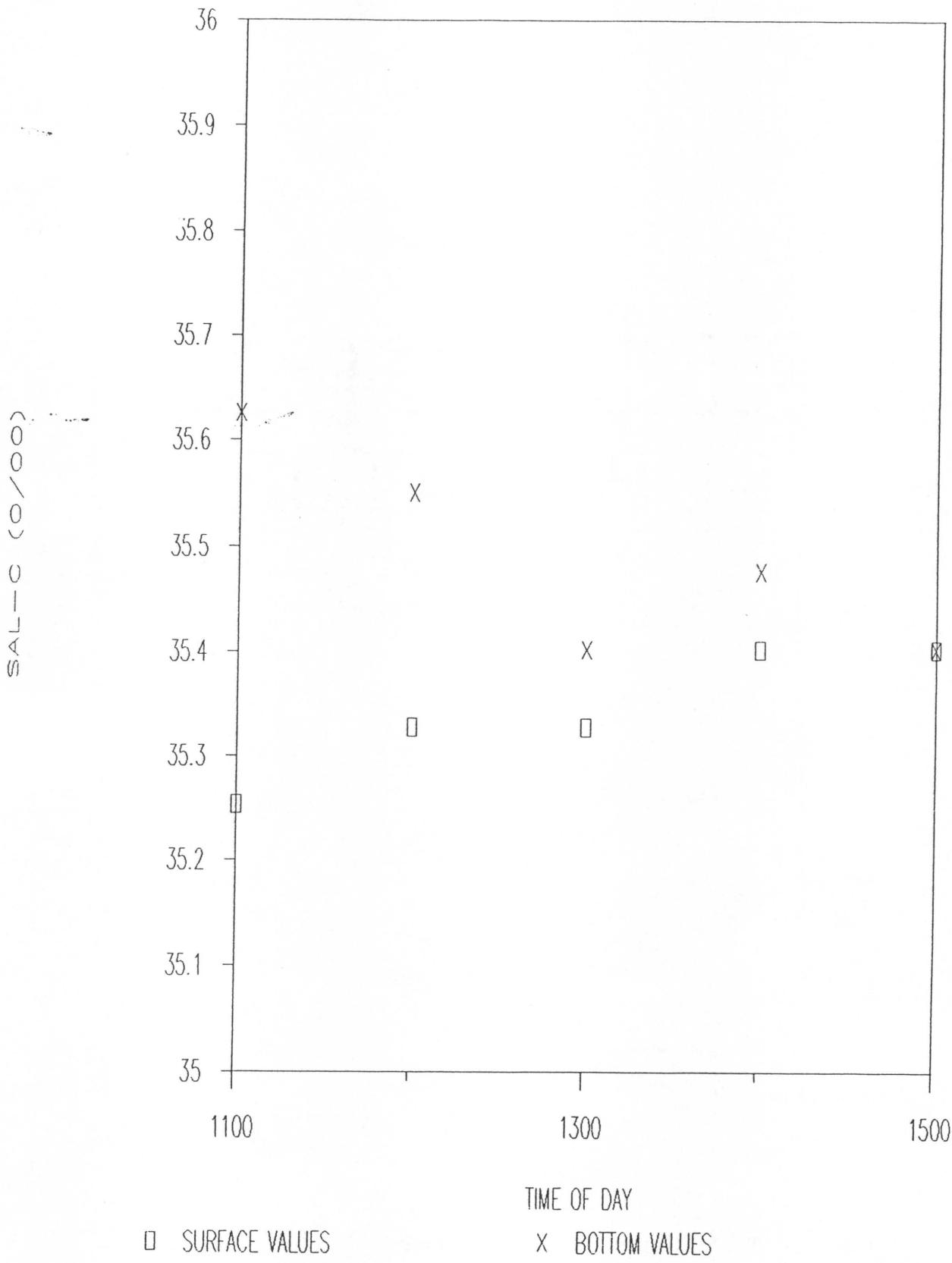
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OCT 1987 STATION D



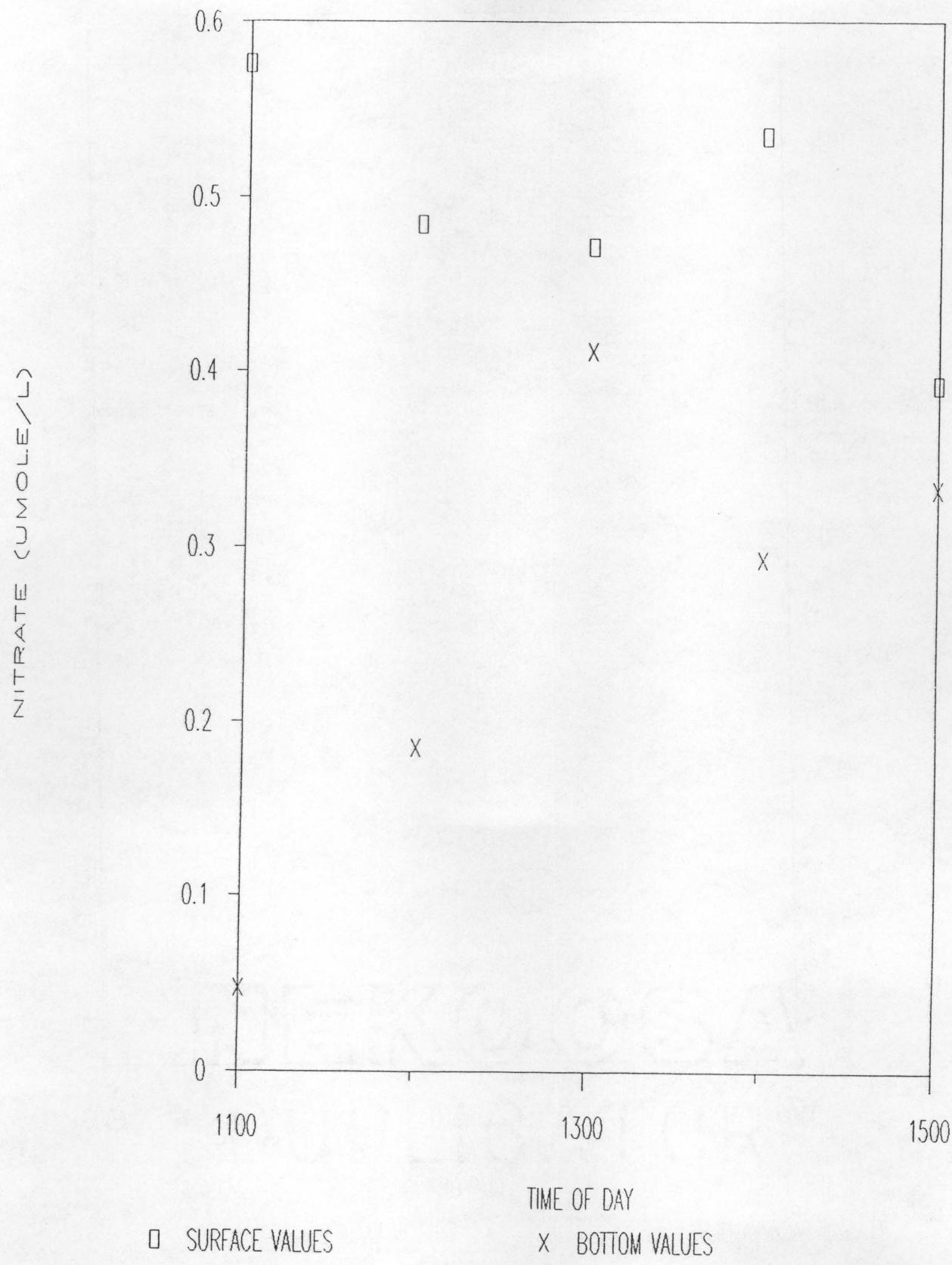
CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION D



CORPUS CHRISTI/NUECES BAYS

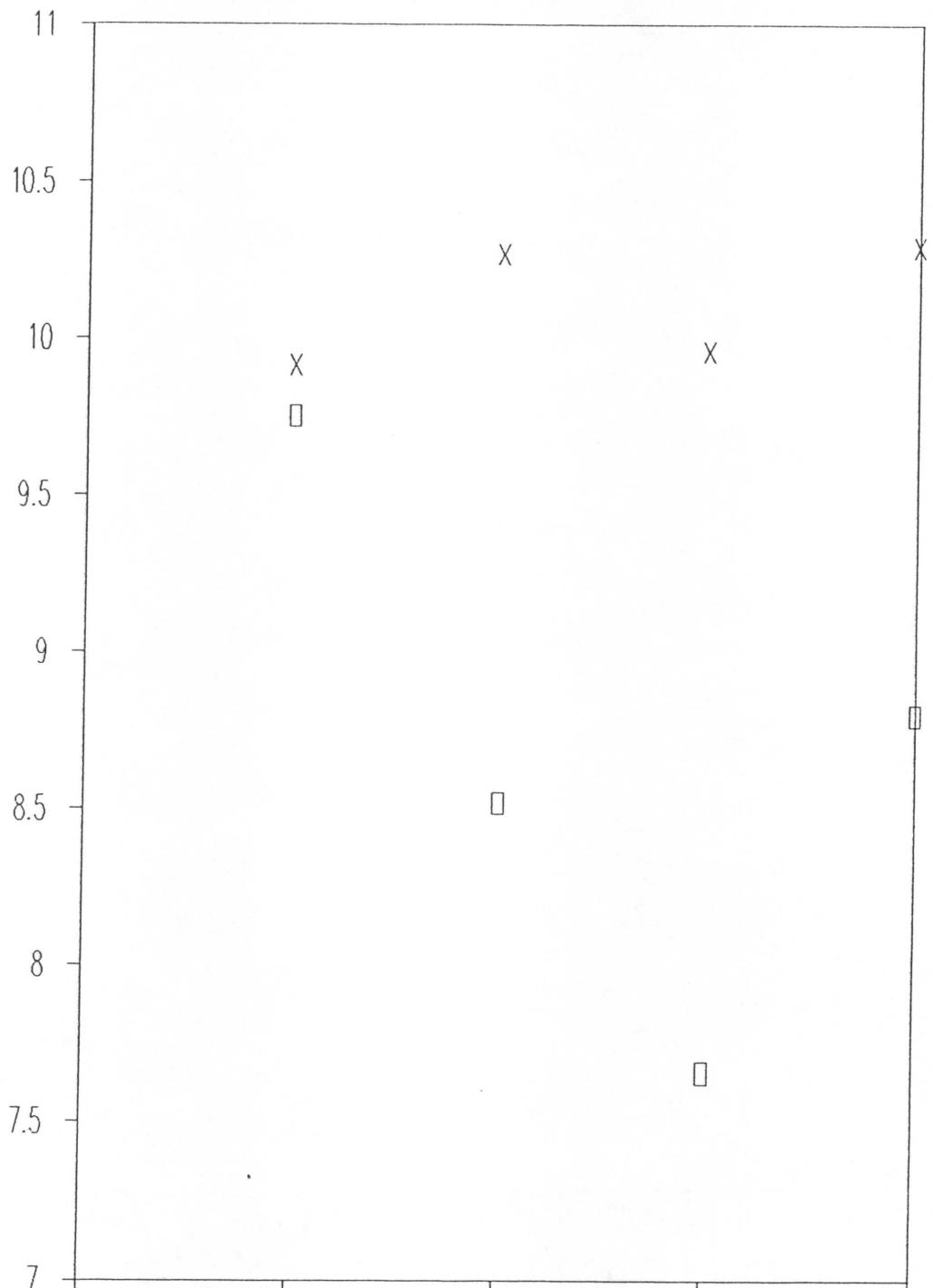
OCT 1987 STATION D



CORPUS CHRISTI/NUECES BAYS

OCT 1987 STATION D

TIME OF DAY



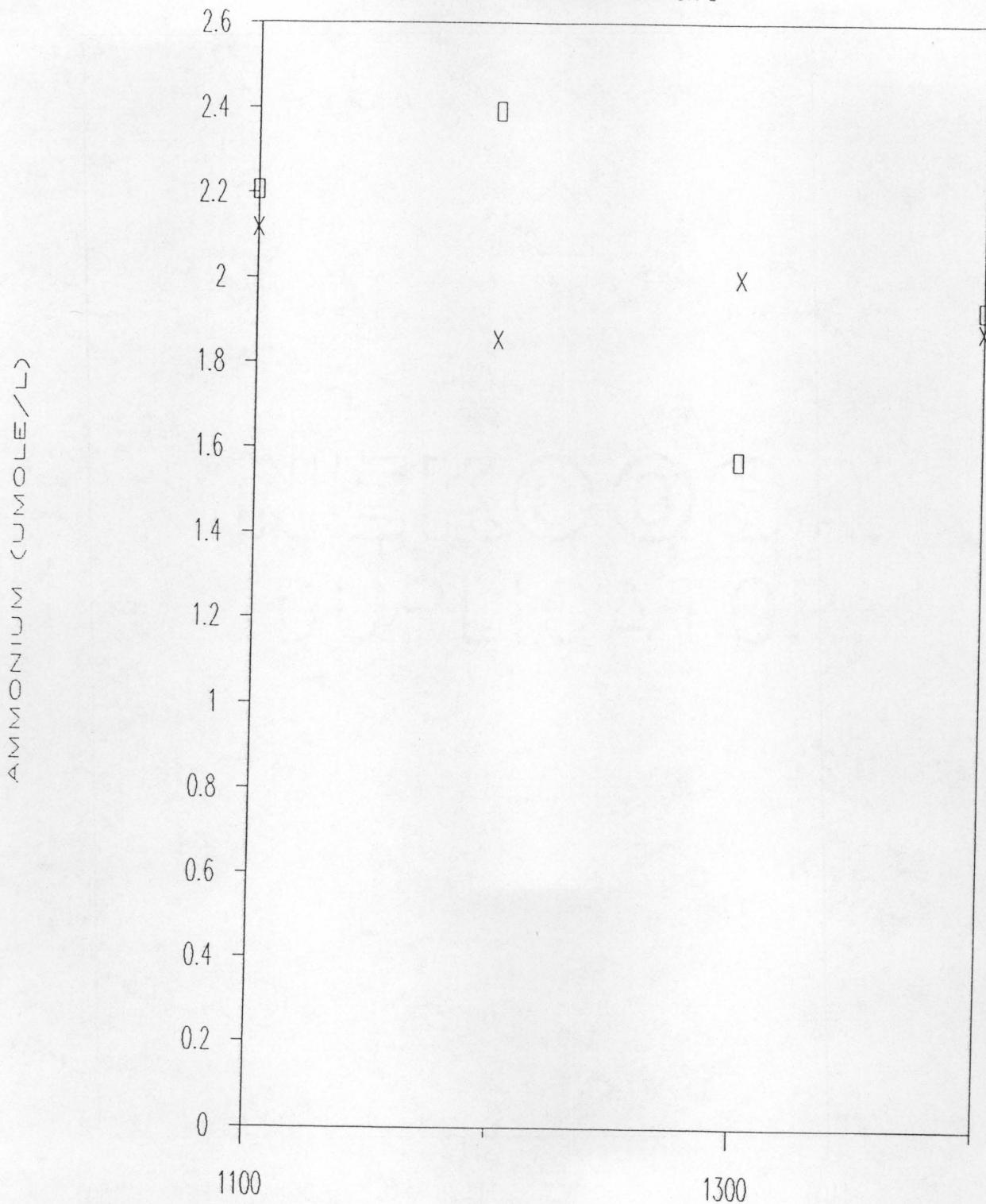
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

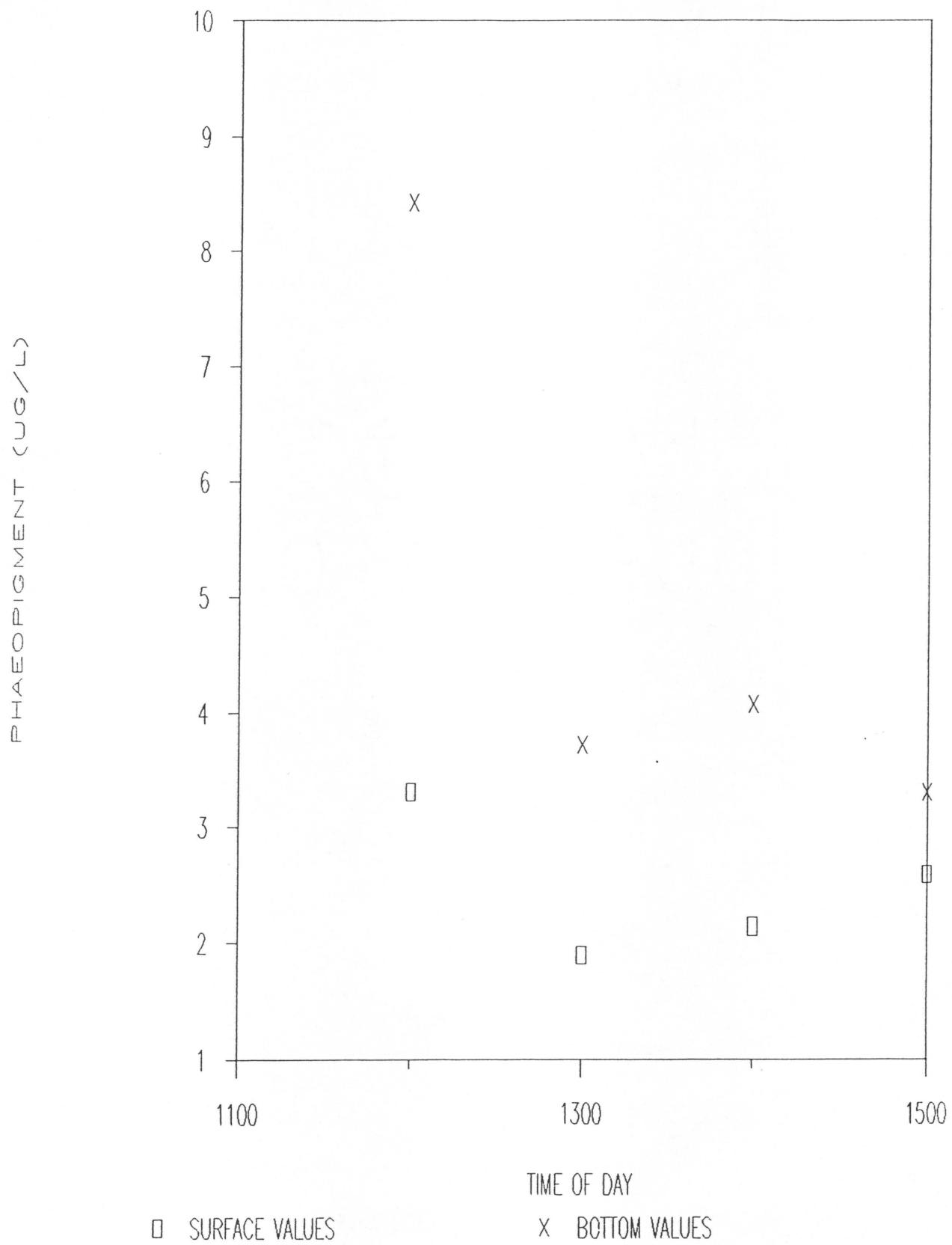
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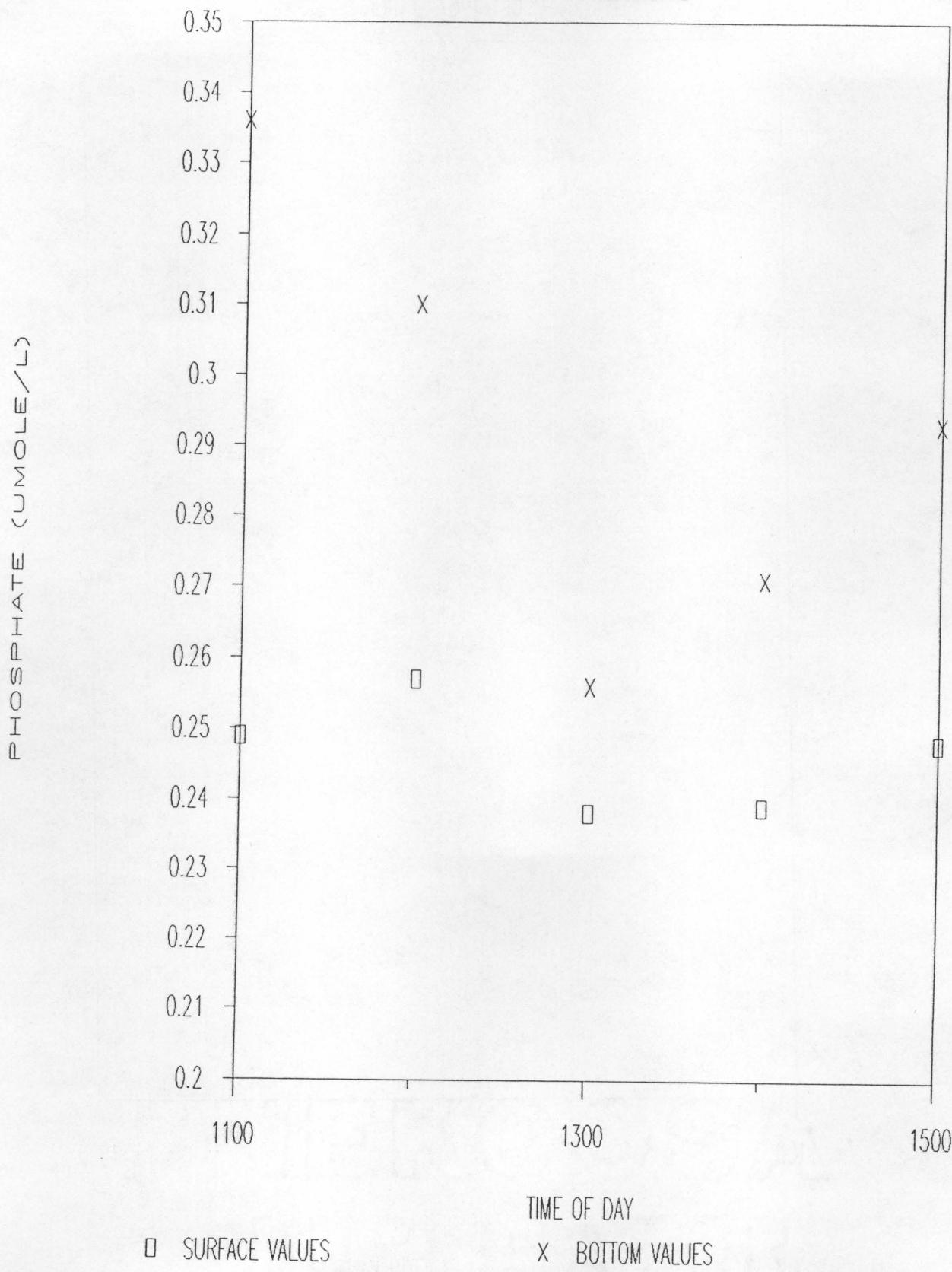
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OCT 1987 STATION D



CORPUS CHRISTI/NUECES BAYS

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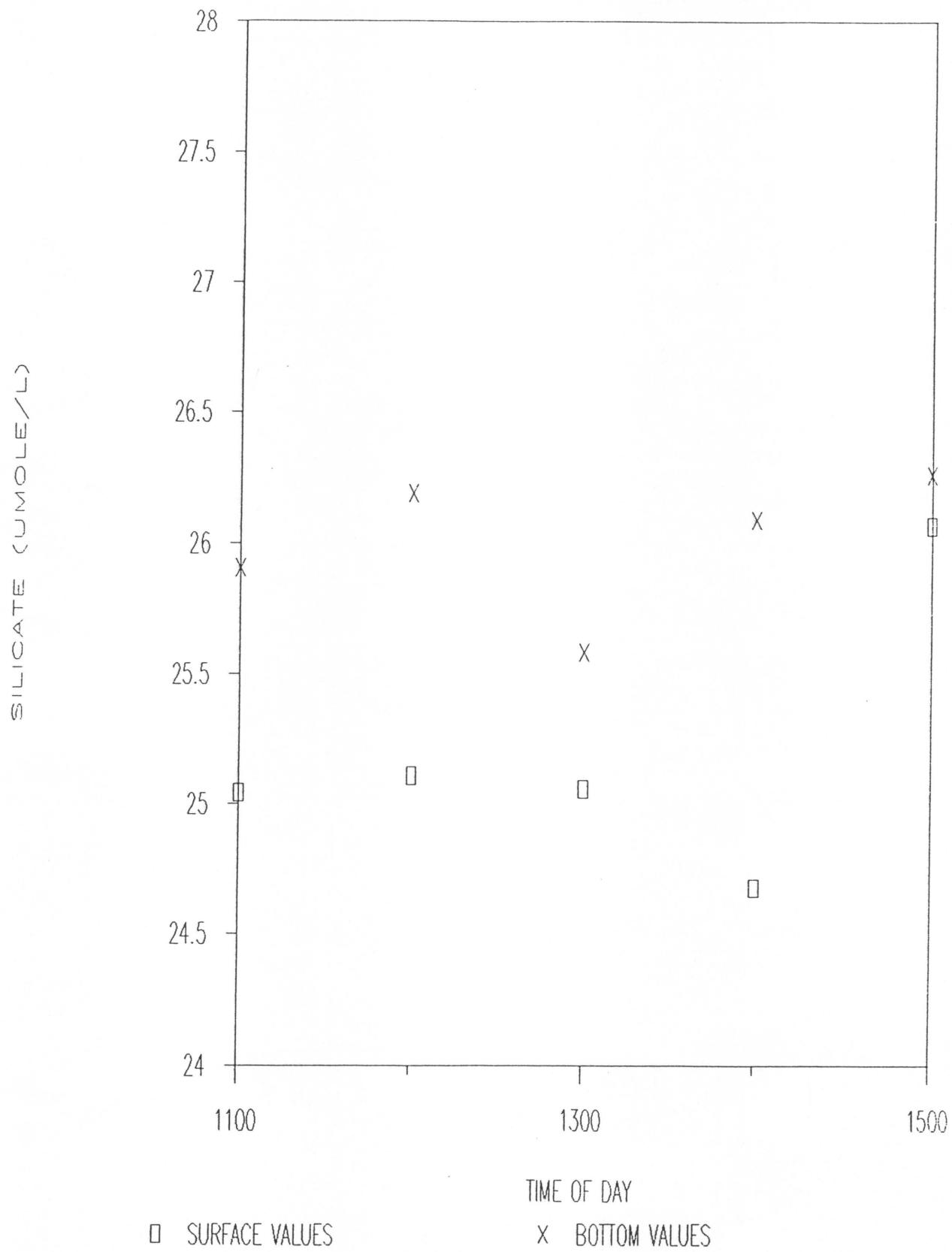


□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

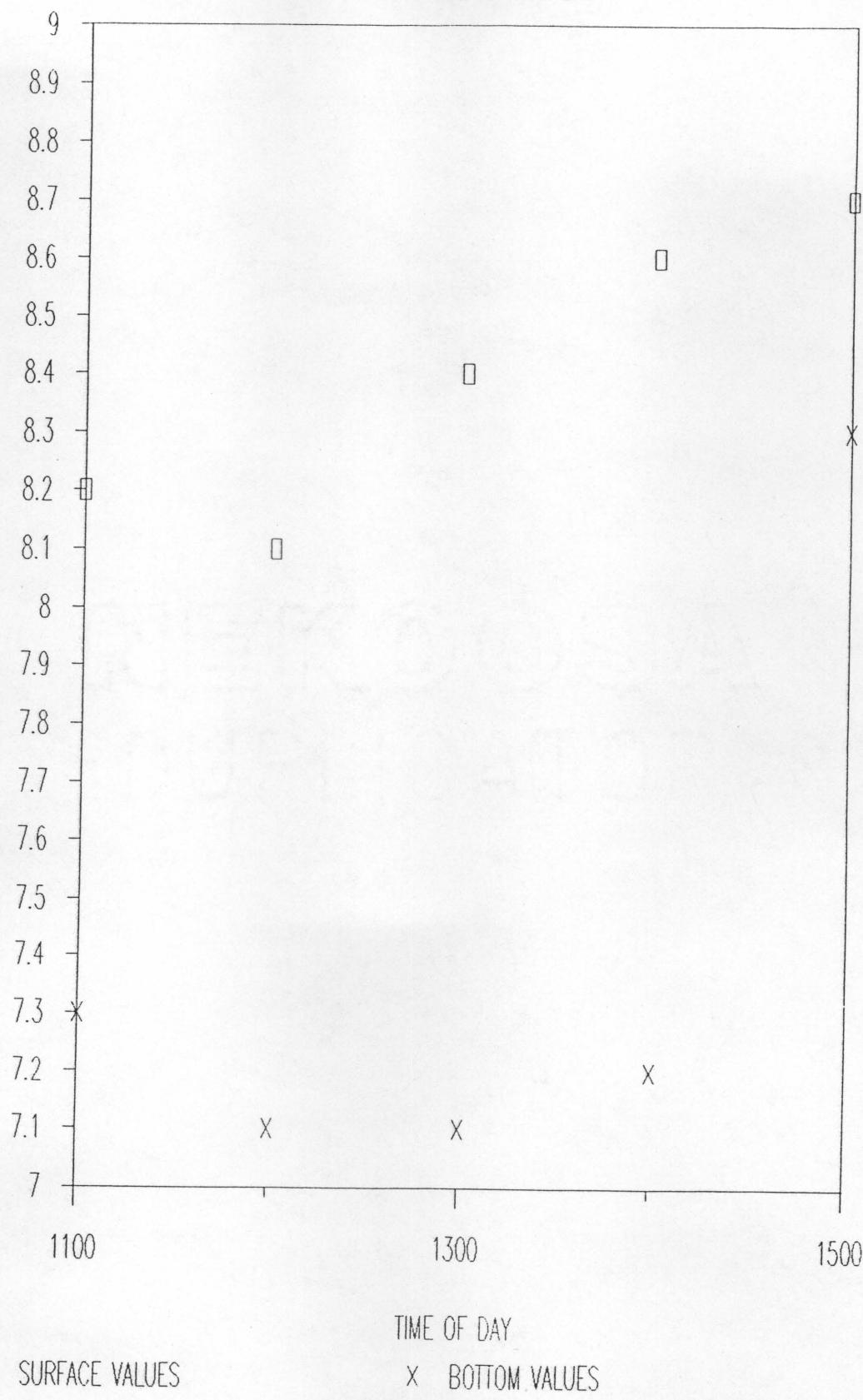
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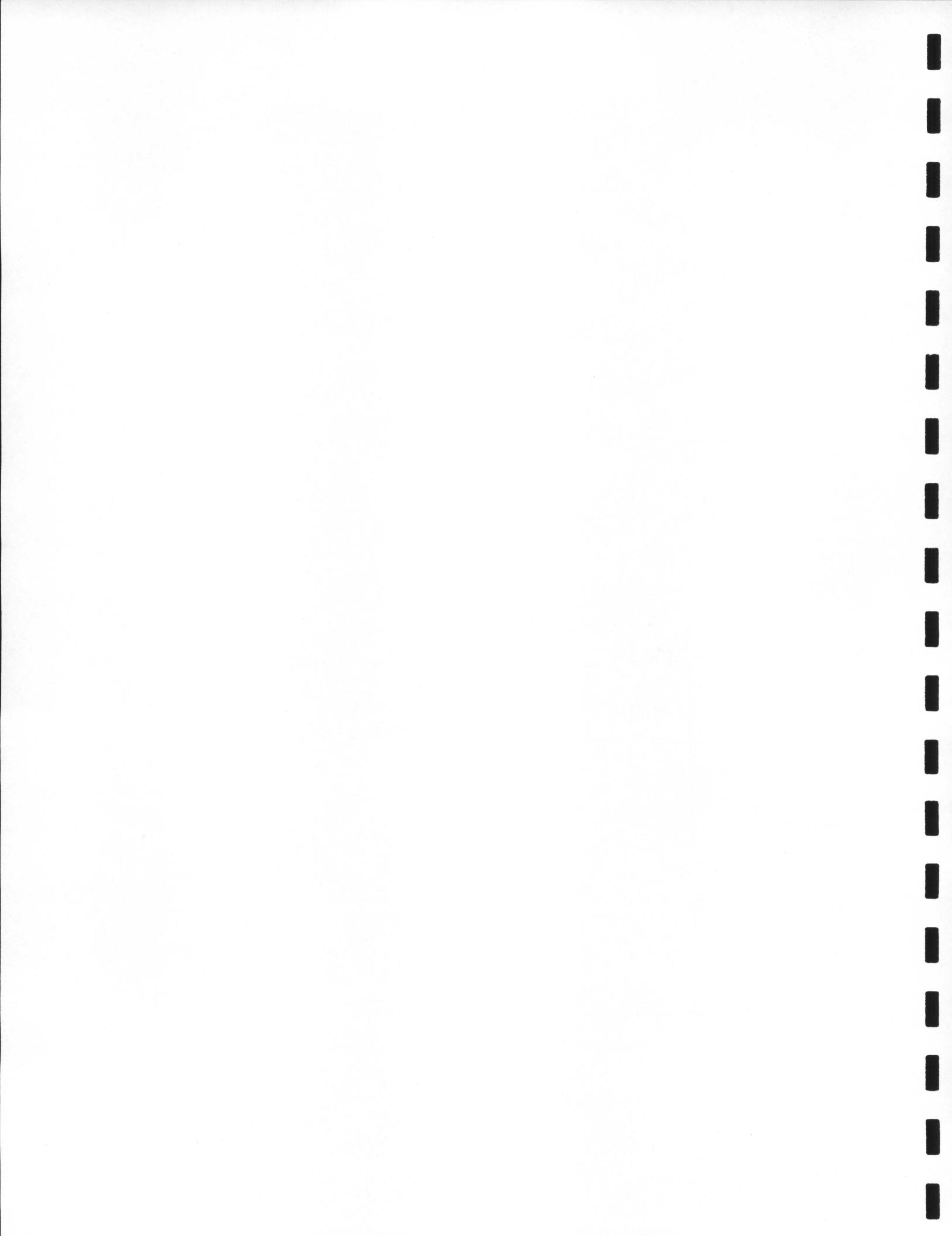


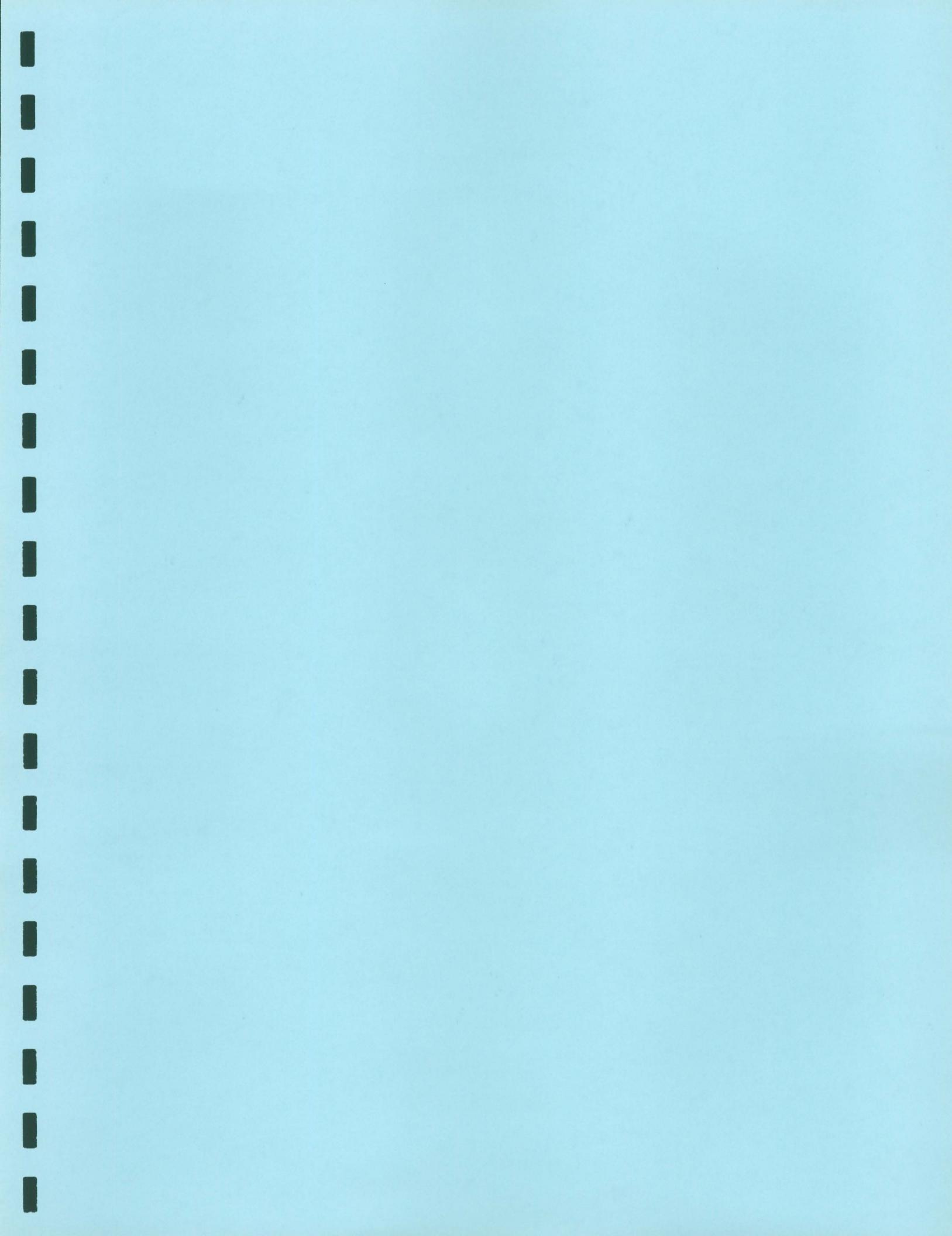
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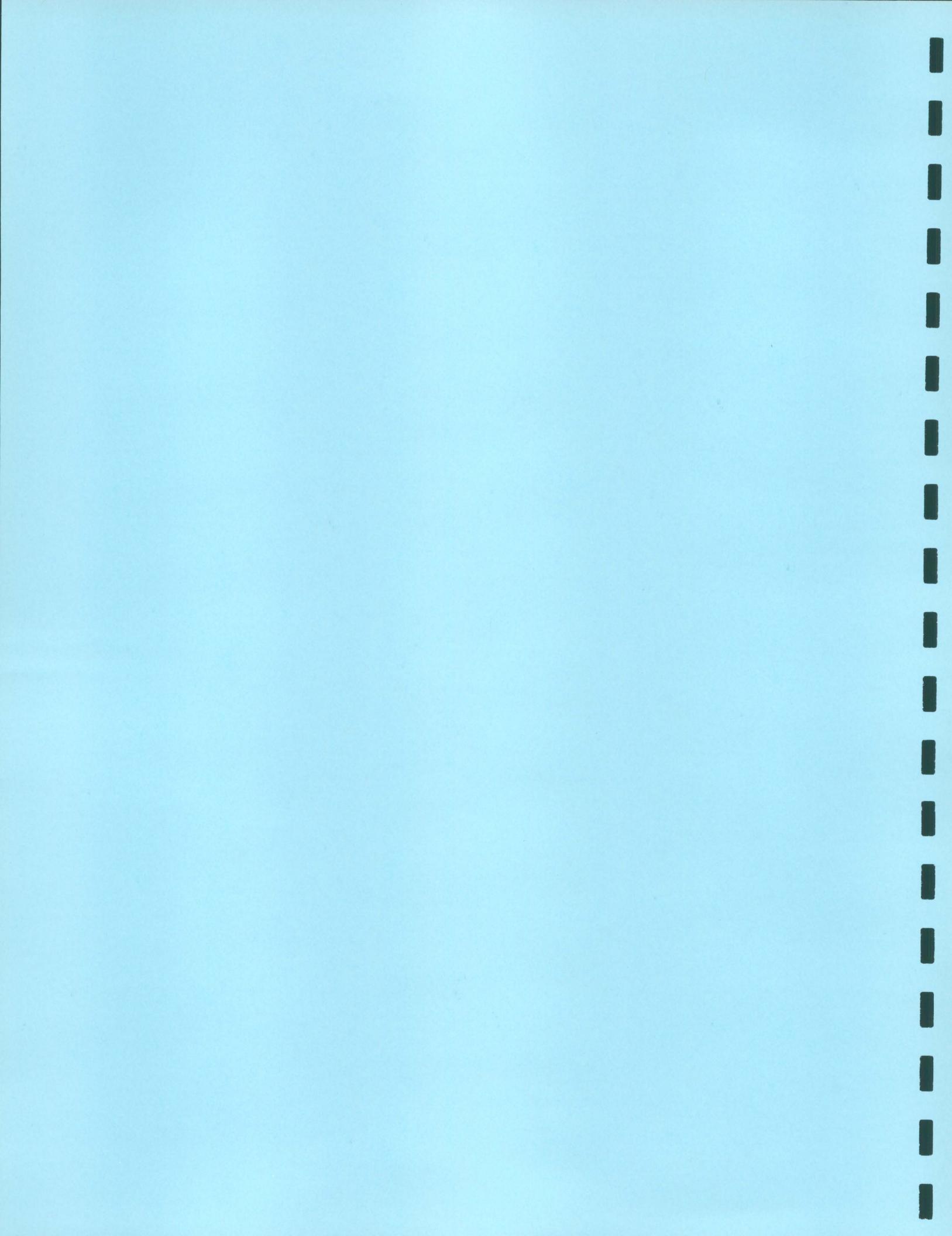
OCT 1987 STATION D

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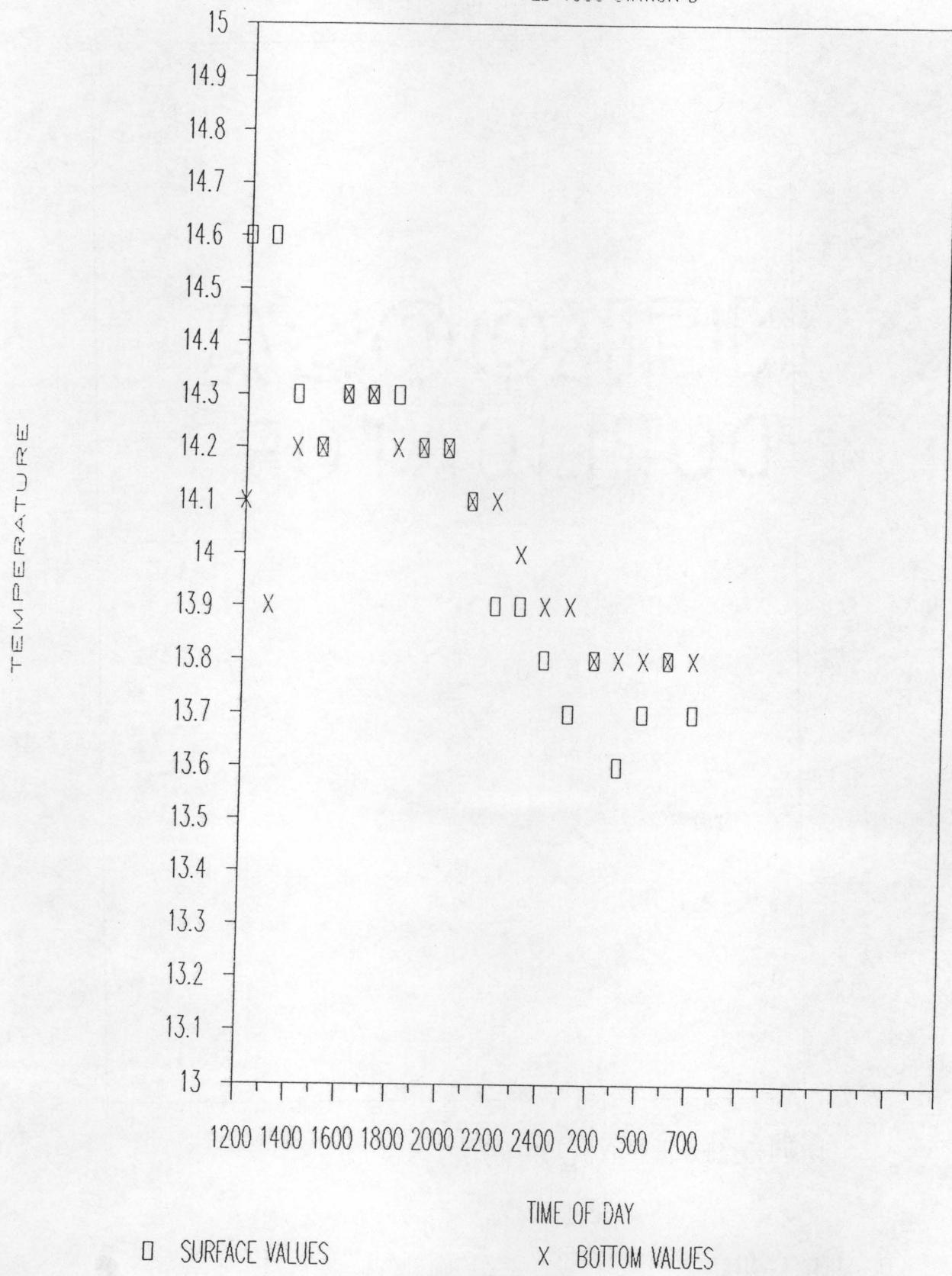






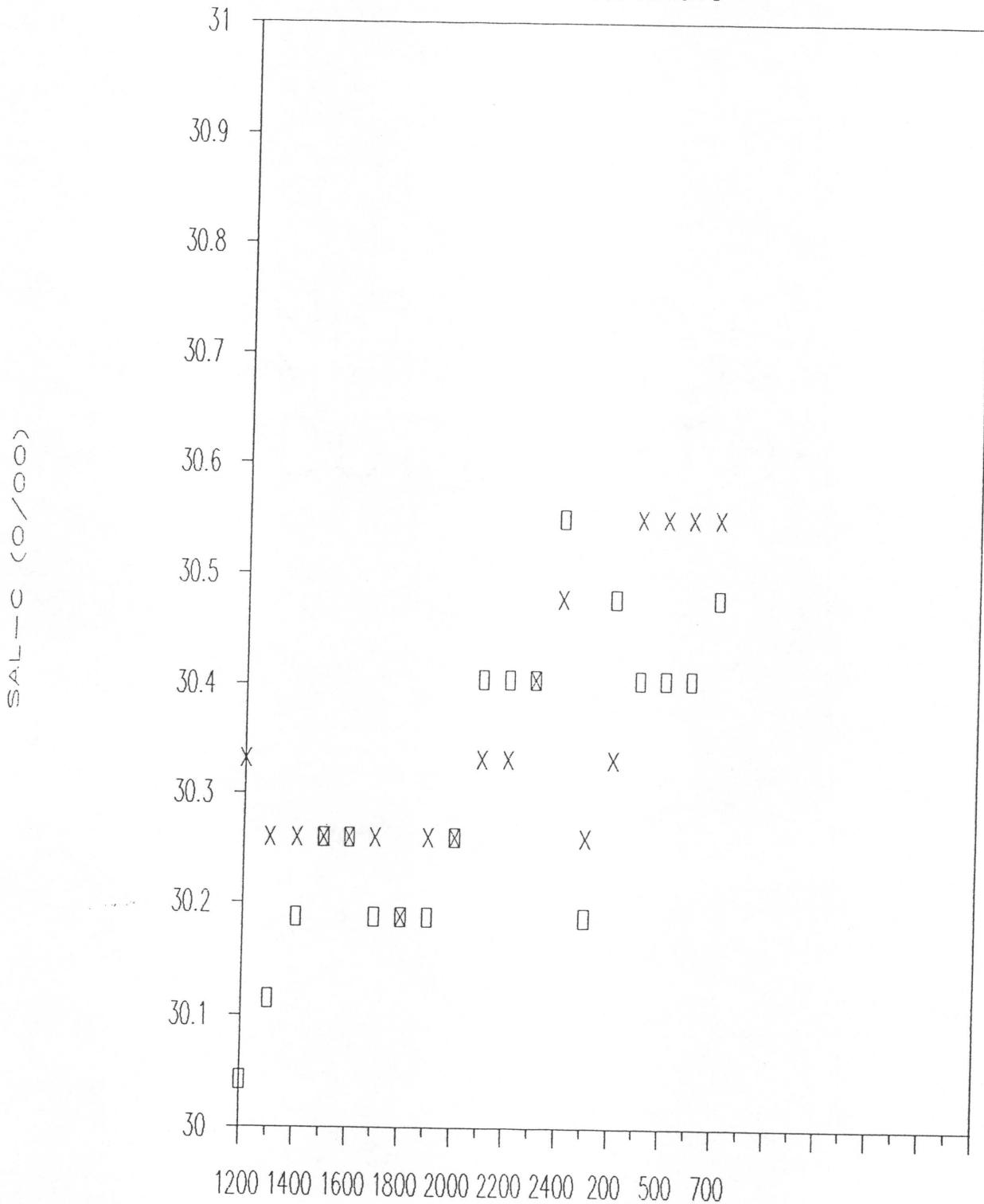
CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION D



CORPUS CHRISTI/NUECES BAYS

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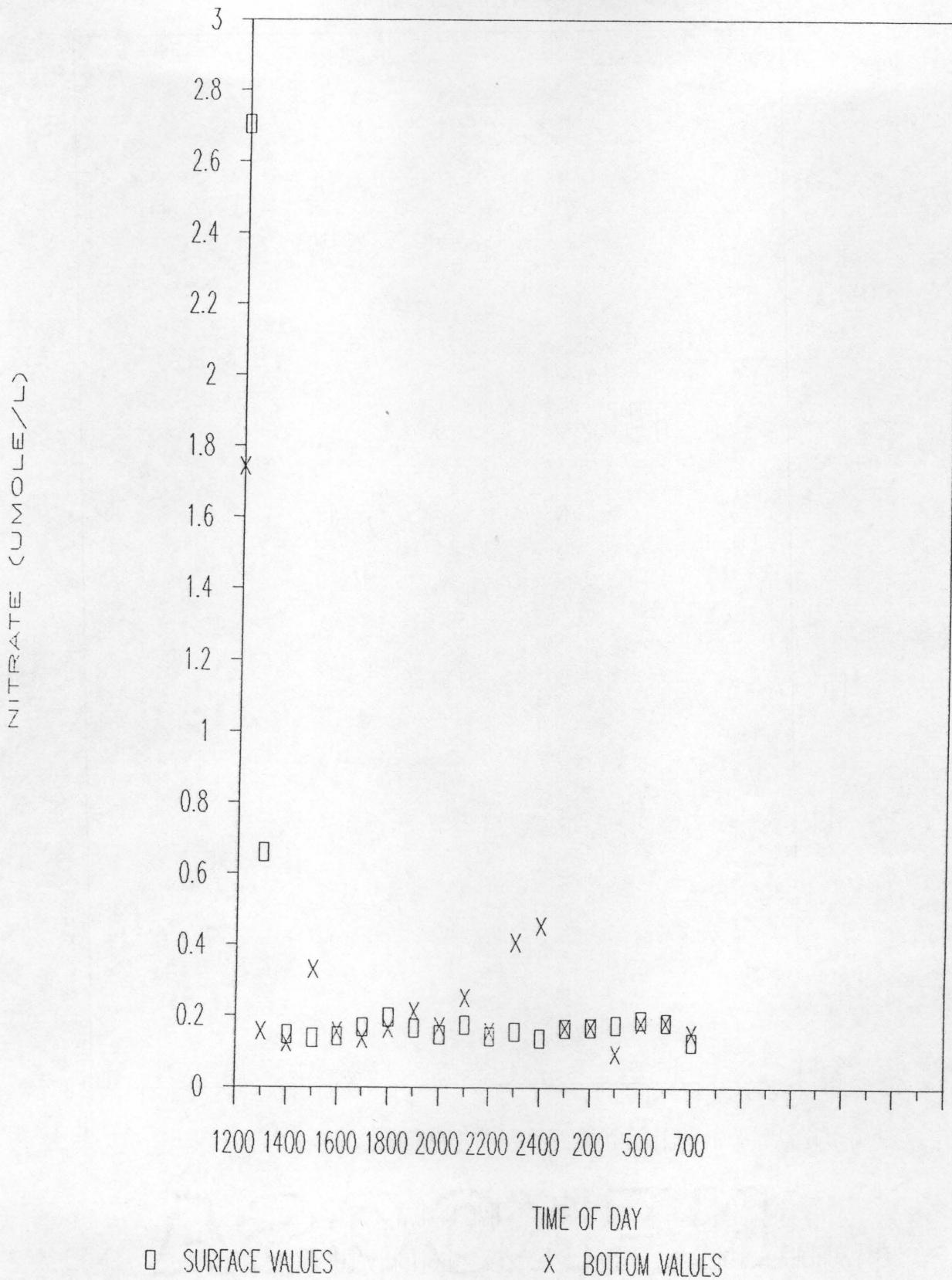
TIME OF DAY

SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

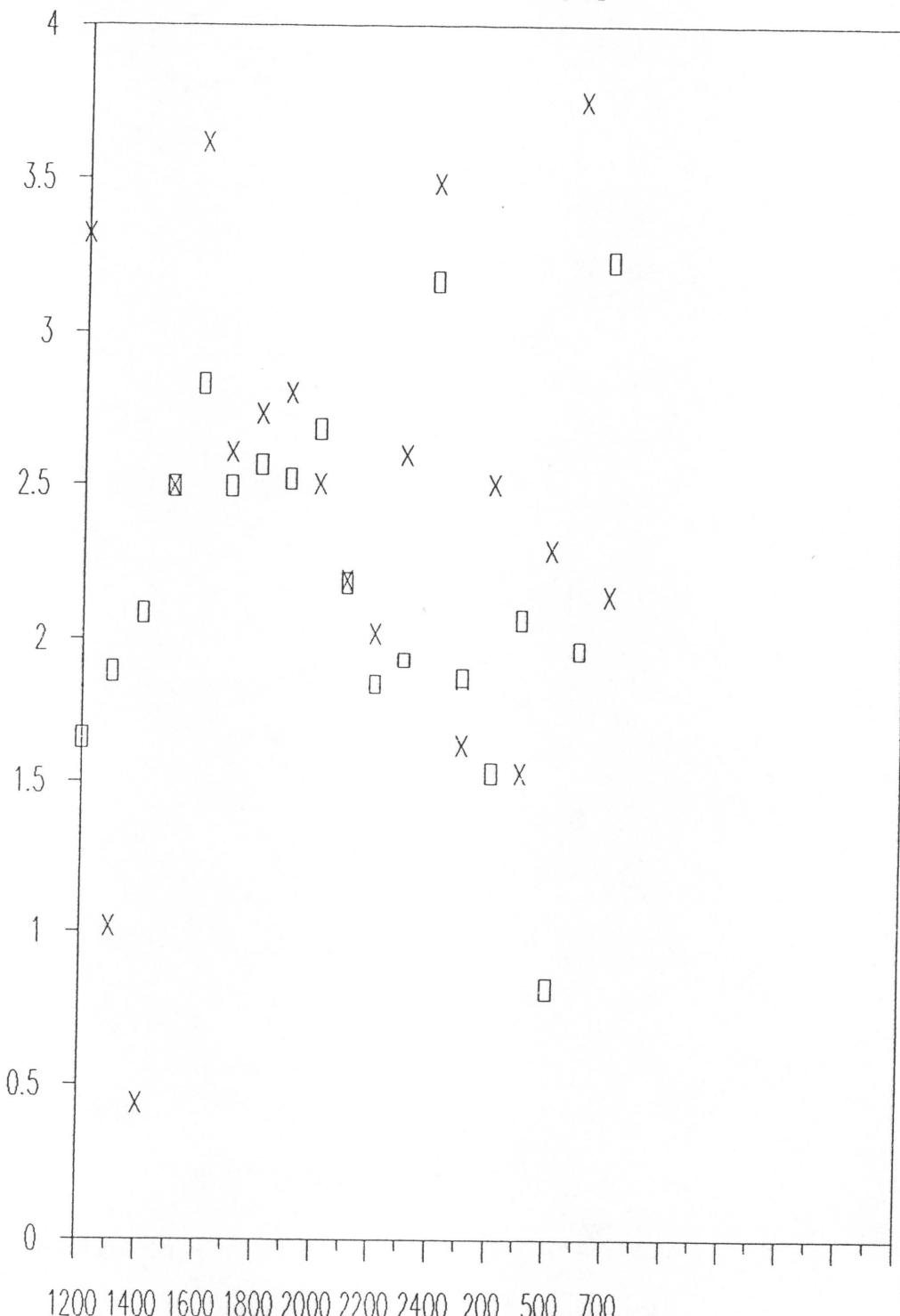
FEB 1988 STATION D



CORPUS CHRISTI/NUECES BAYS

FEB 1988 STATION D

TIME OF DAY



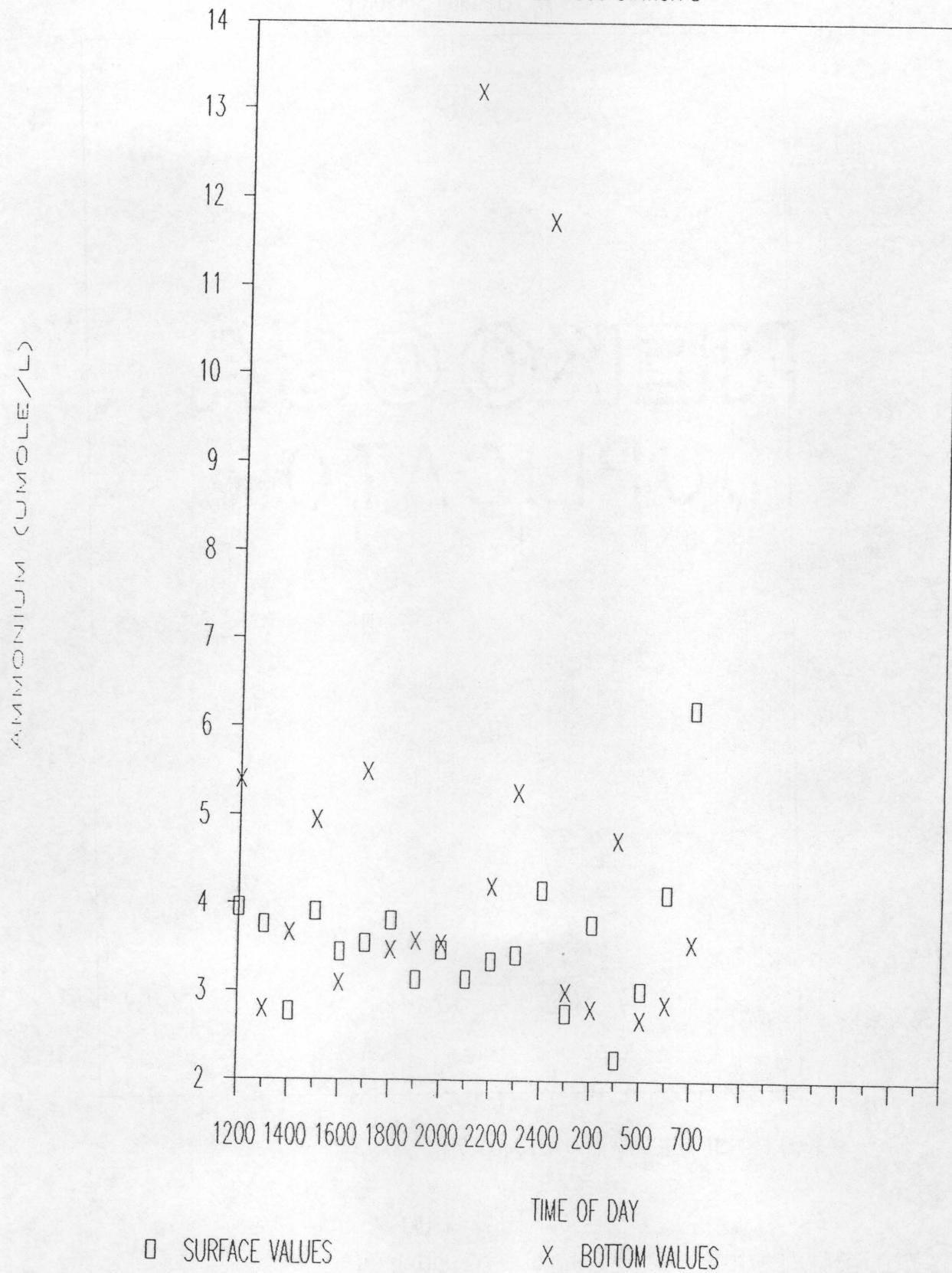
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

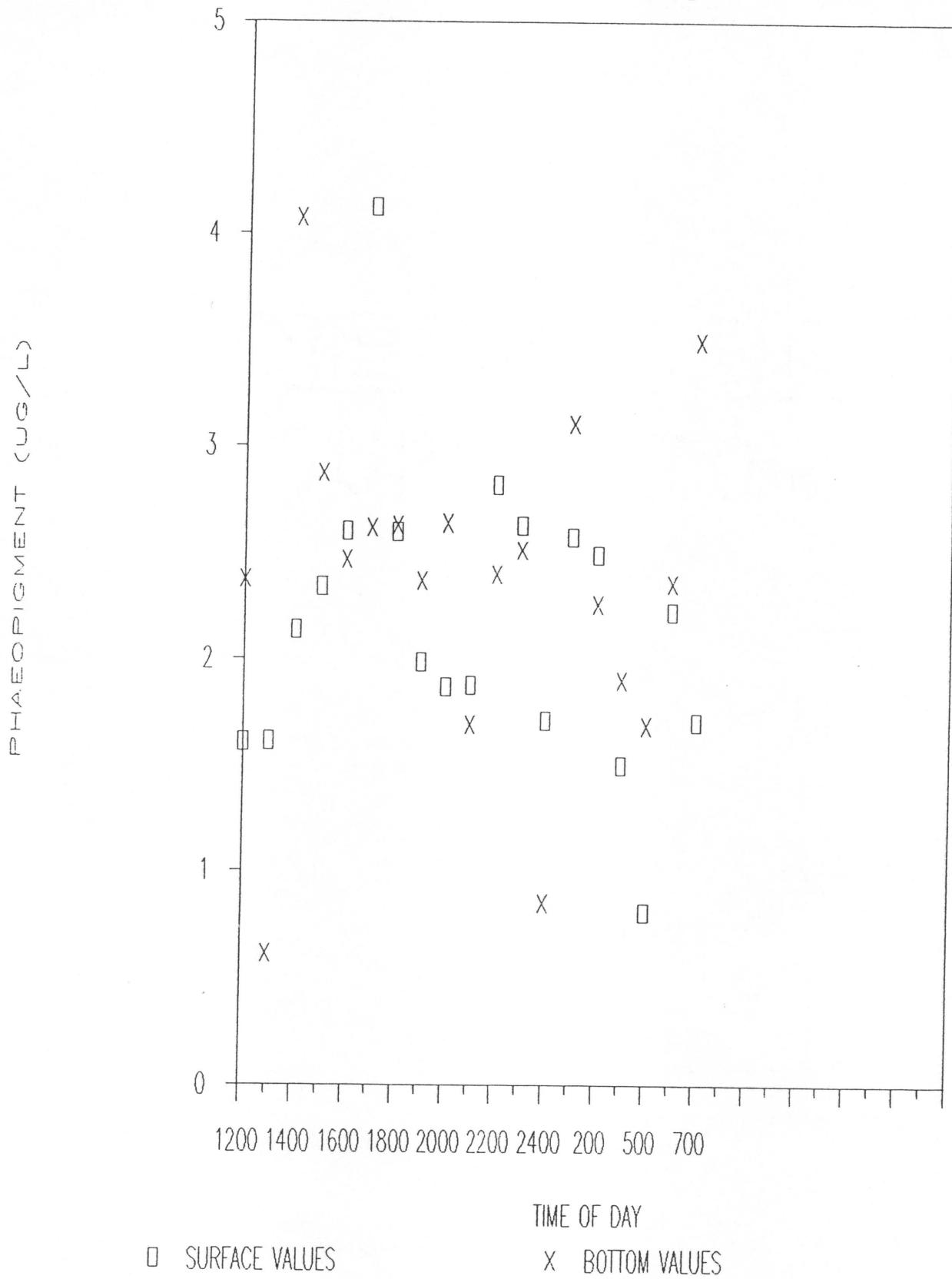
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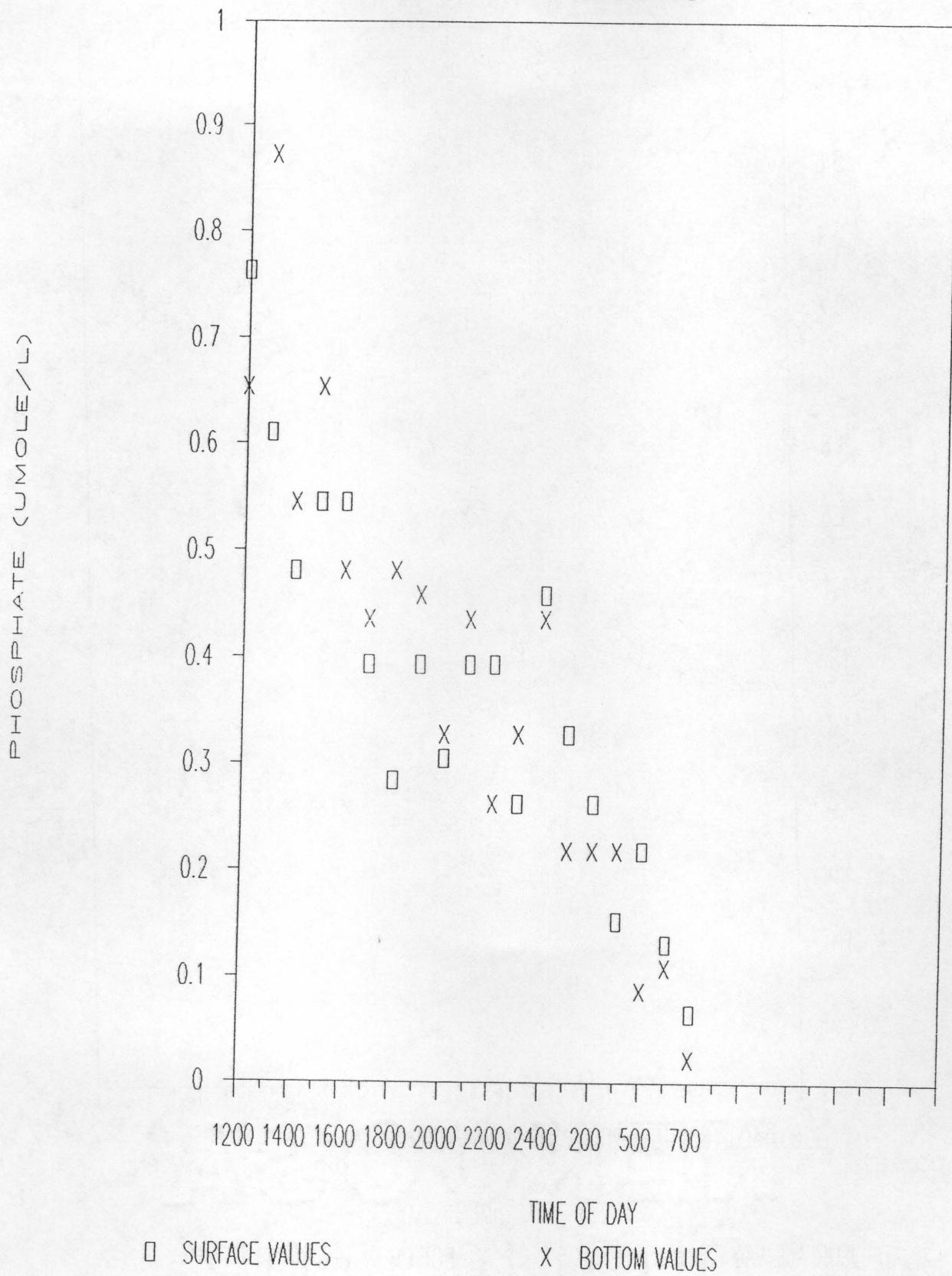
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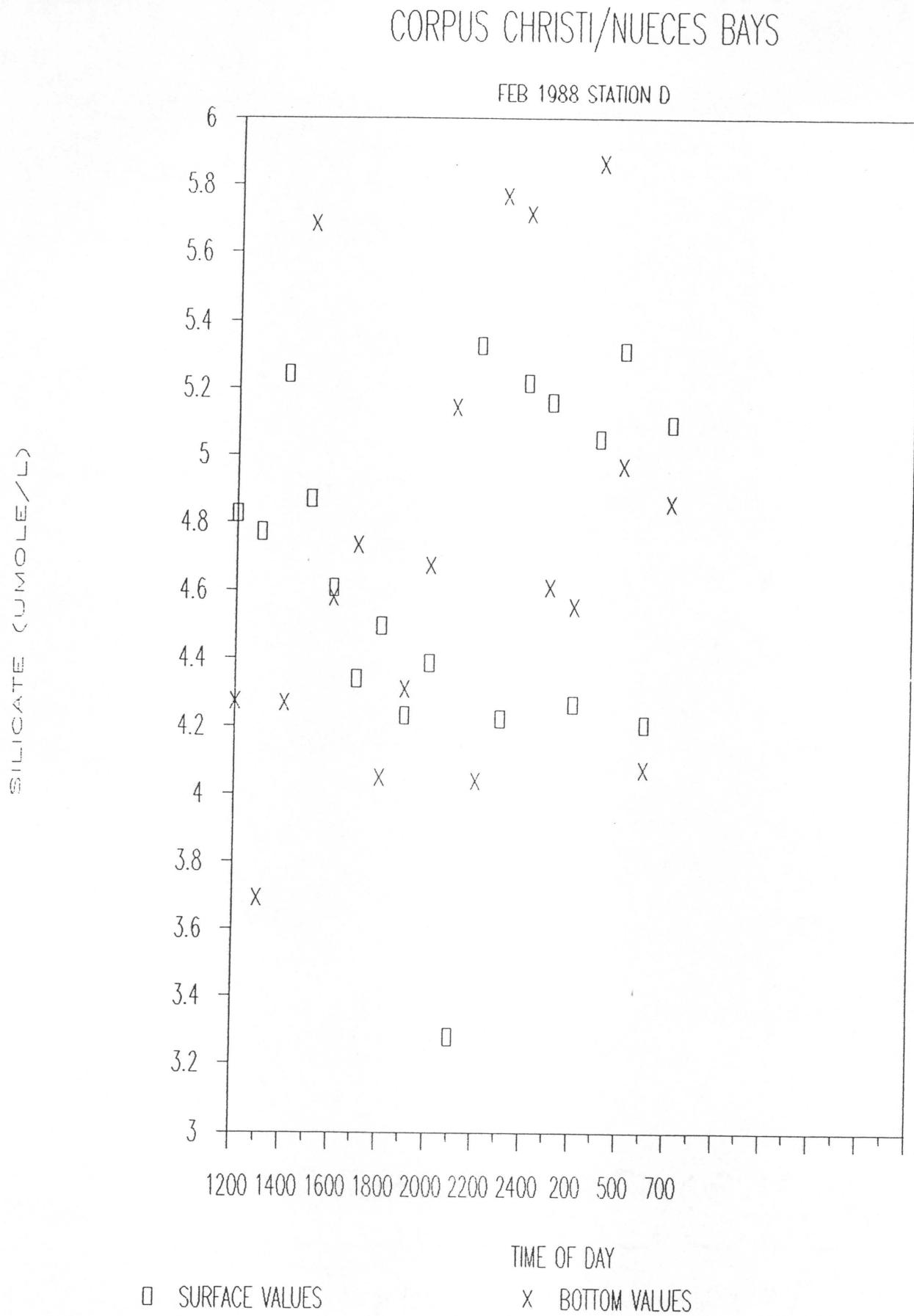
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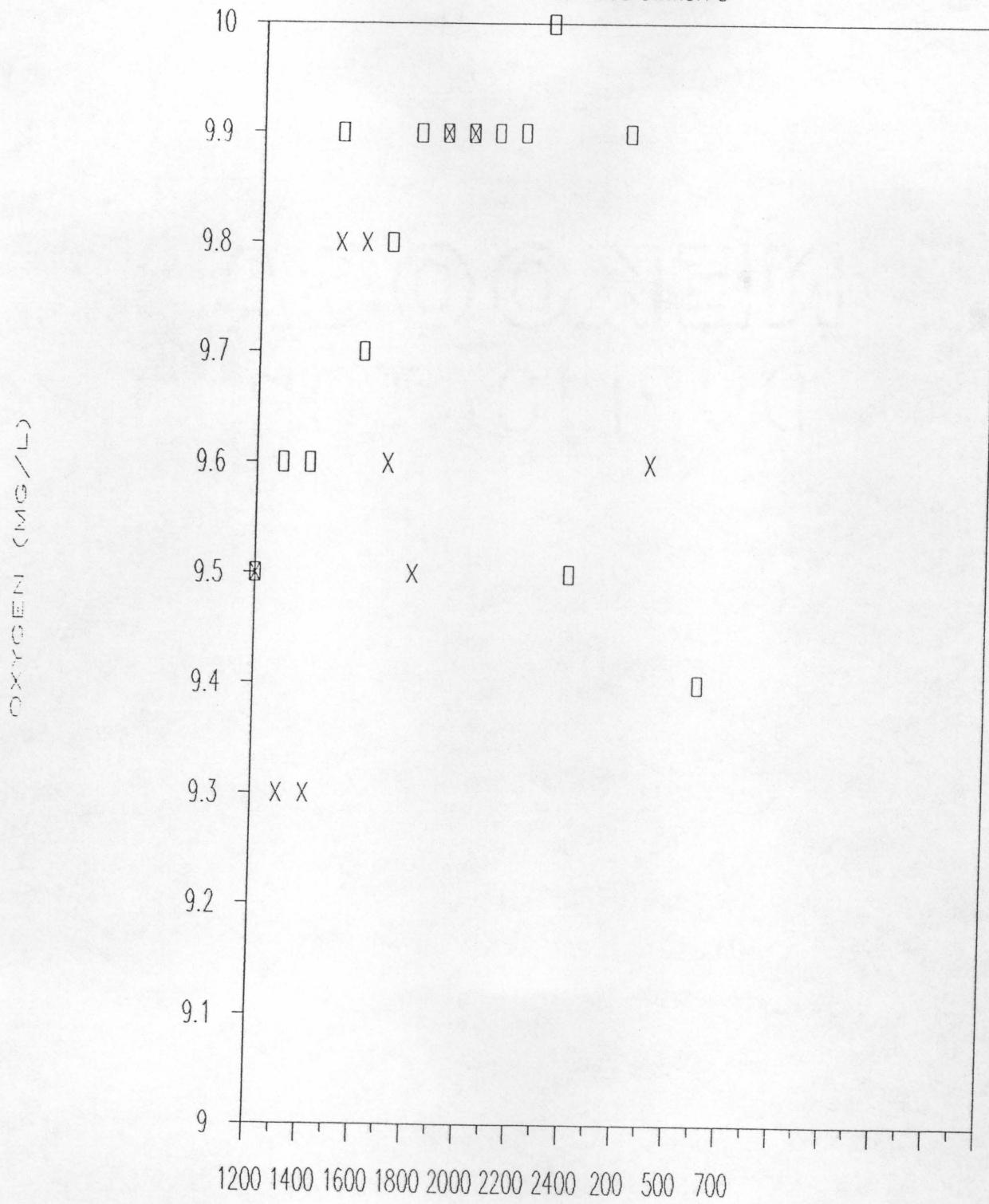
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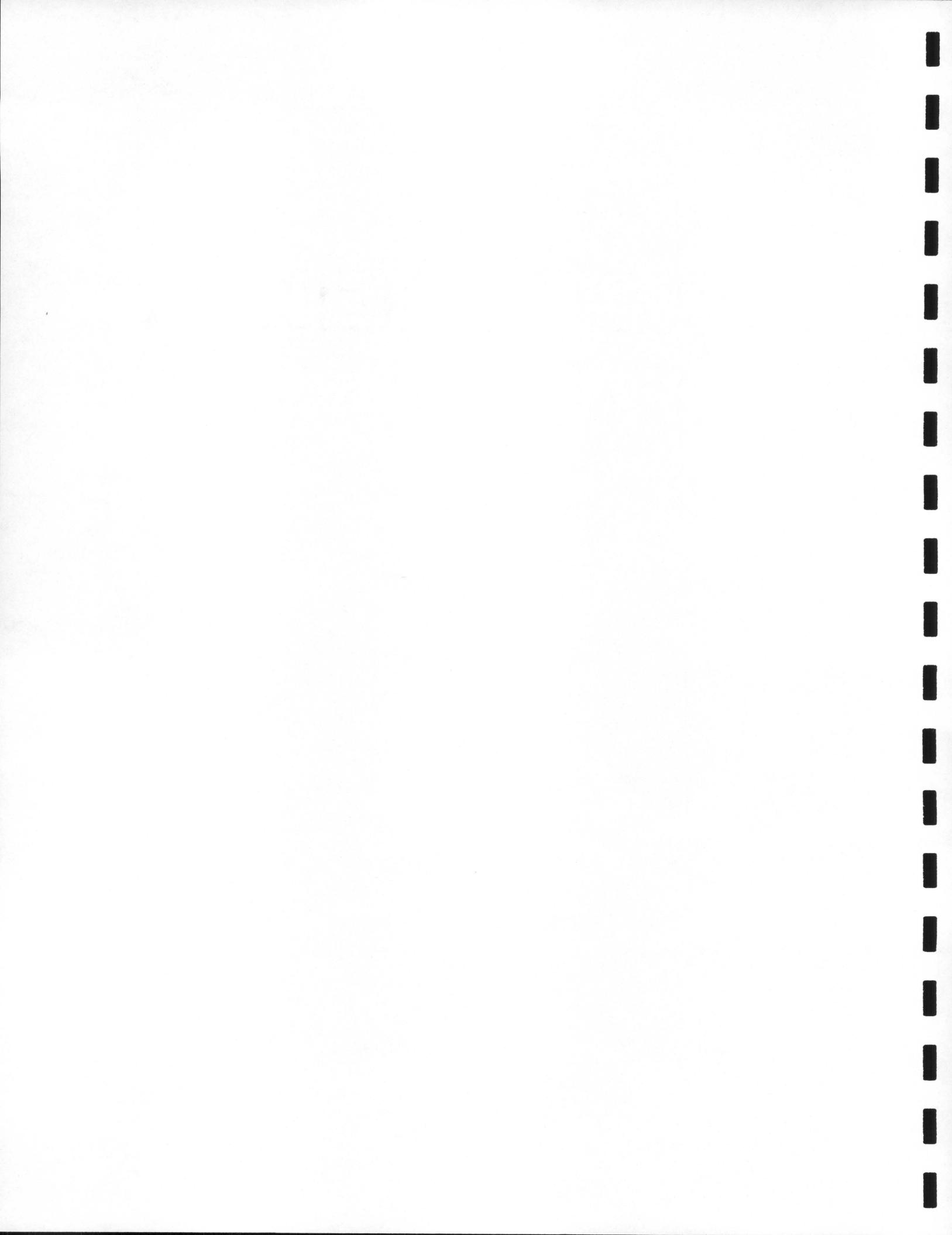
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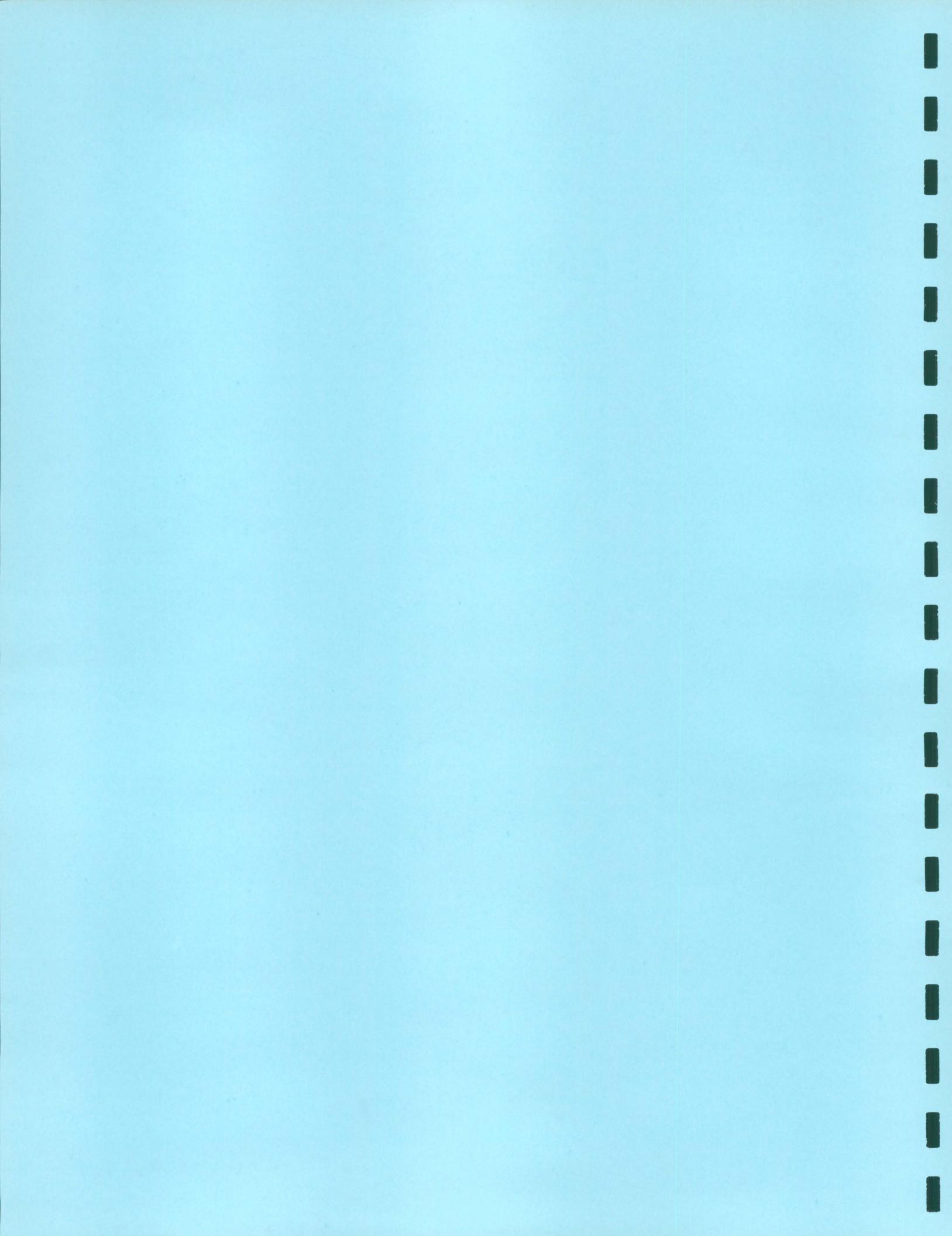


TIME OF DAY

□ SURFACE VALUES

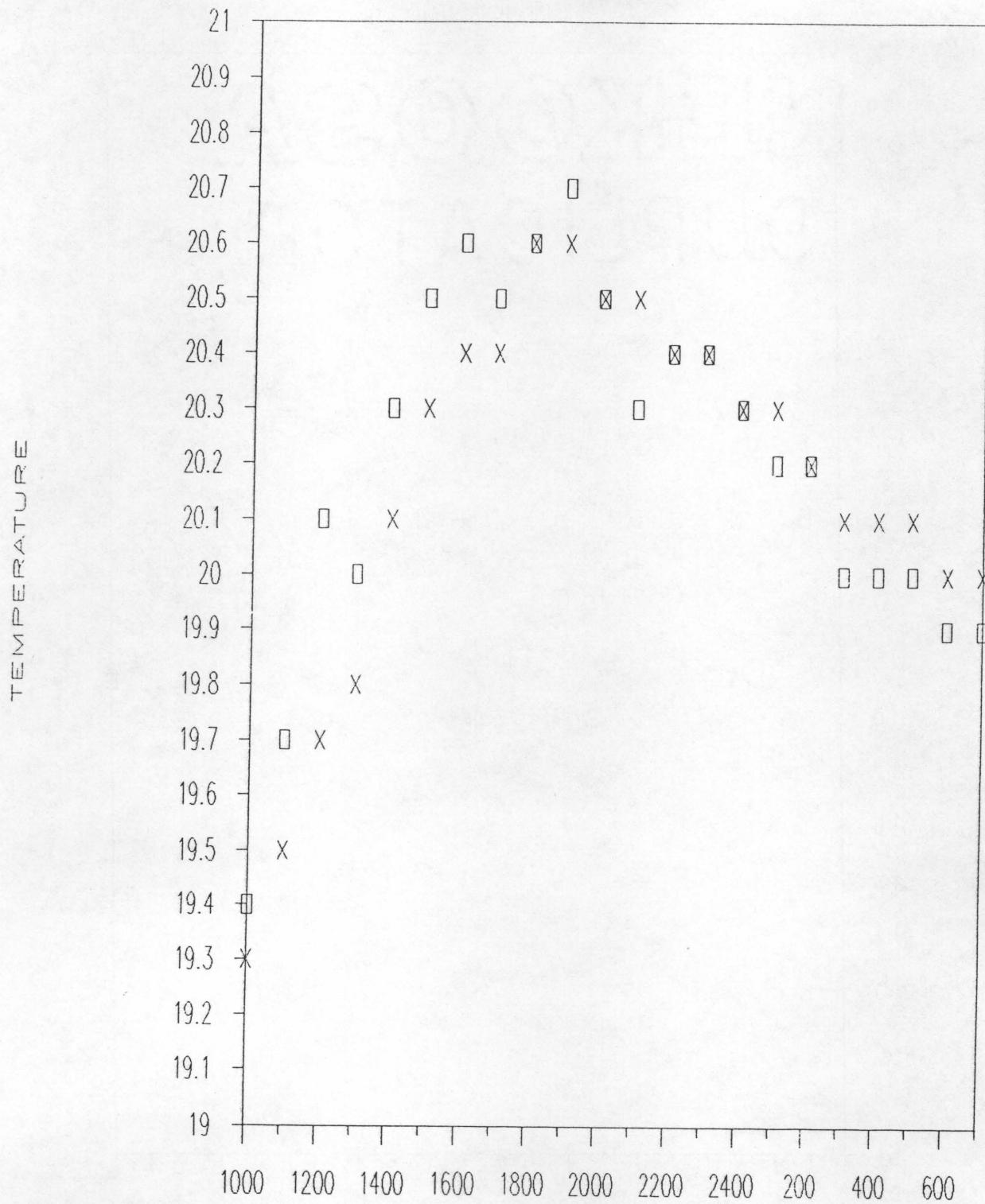
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CORPUS CHRISTI/NUECES BAYS

APRIL 1988 STATION D



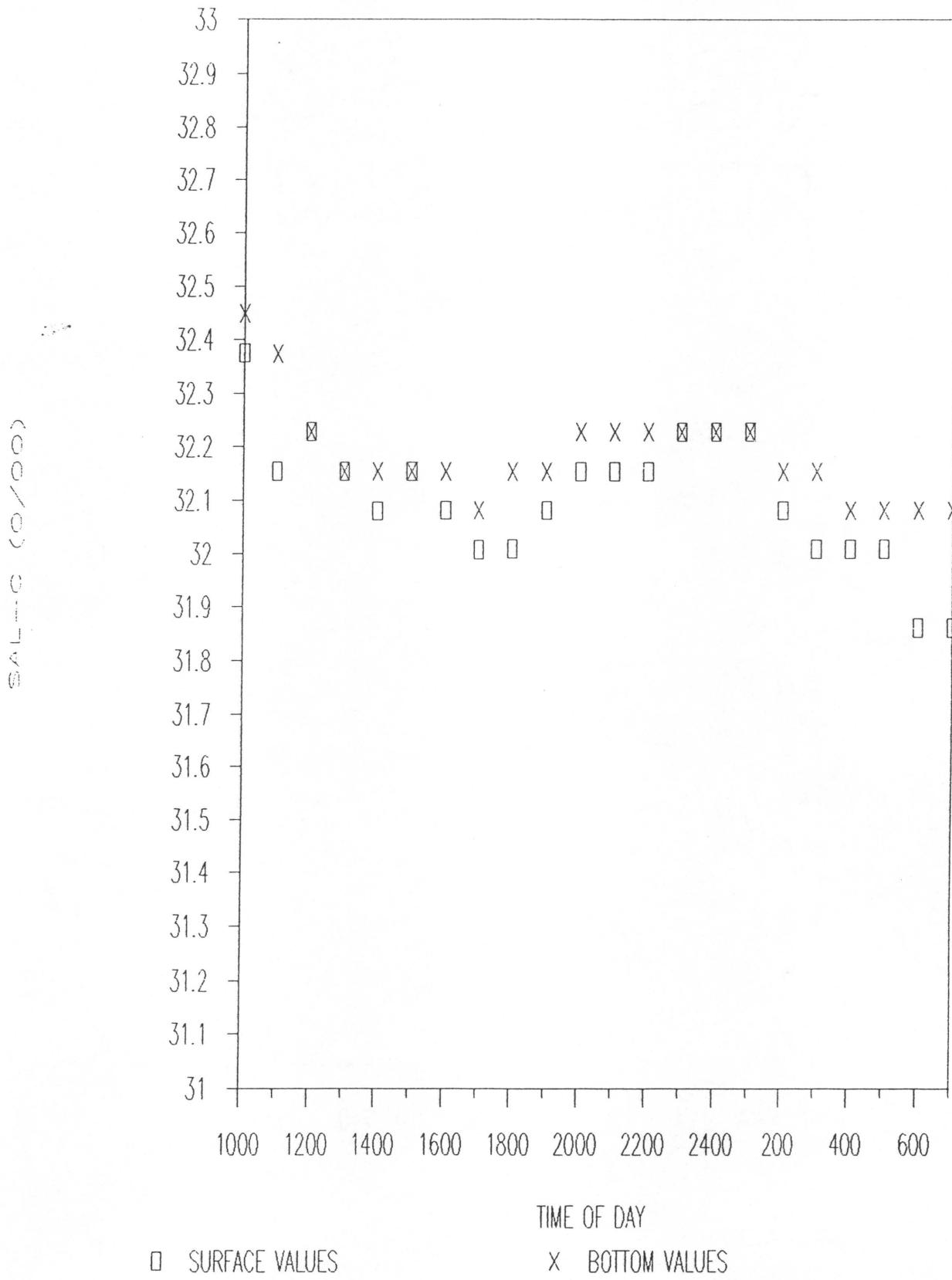
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

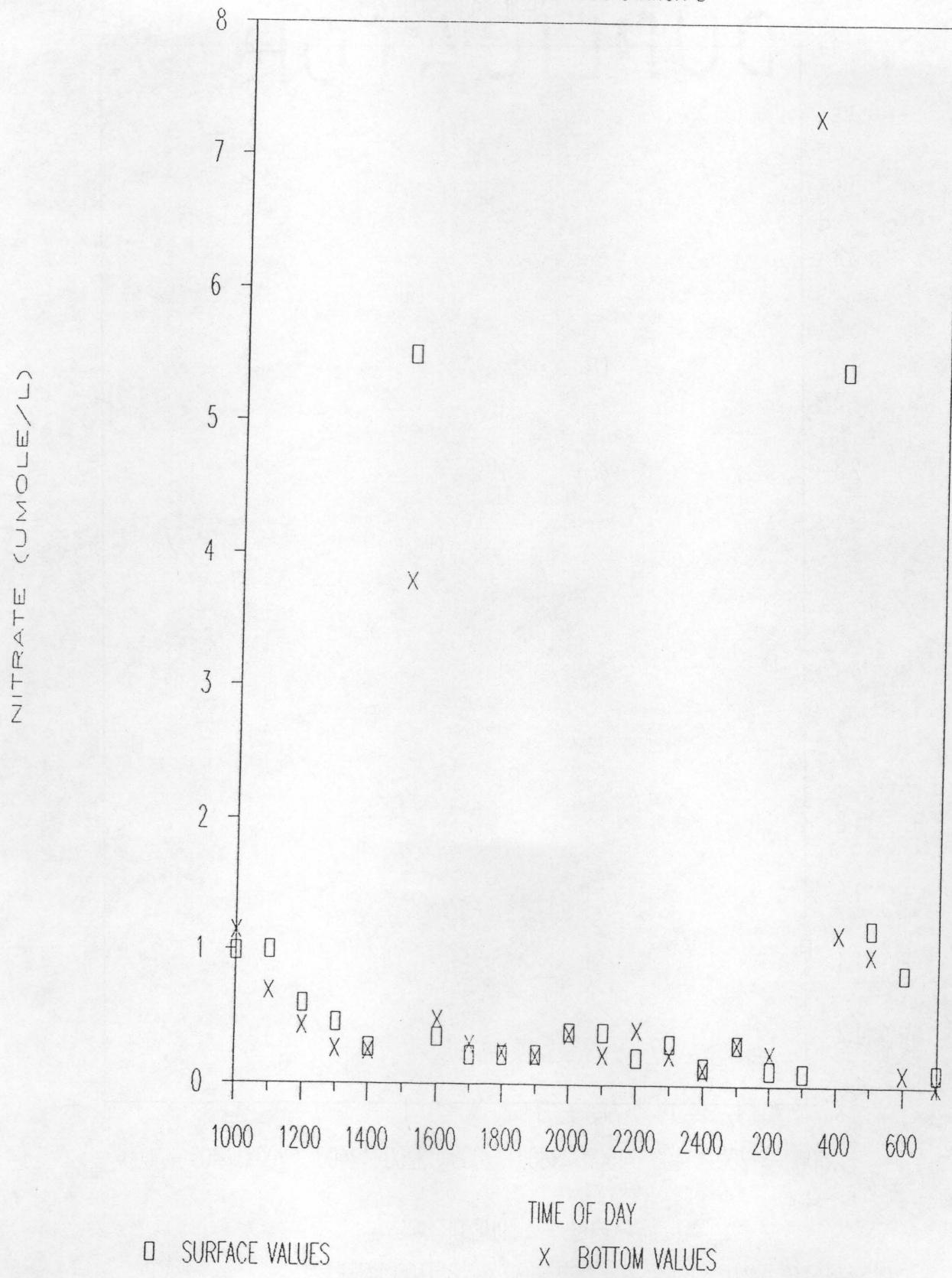
CORPUS CHRISTI/NUECES BAYS

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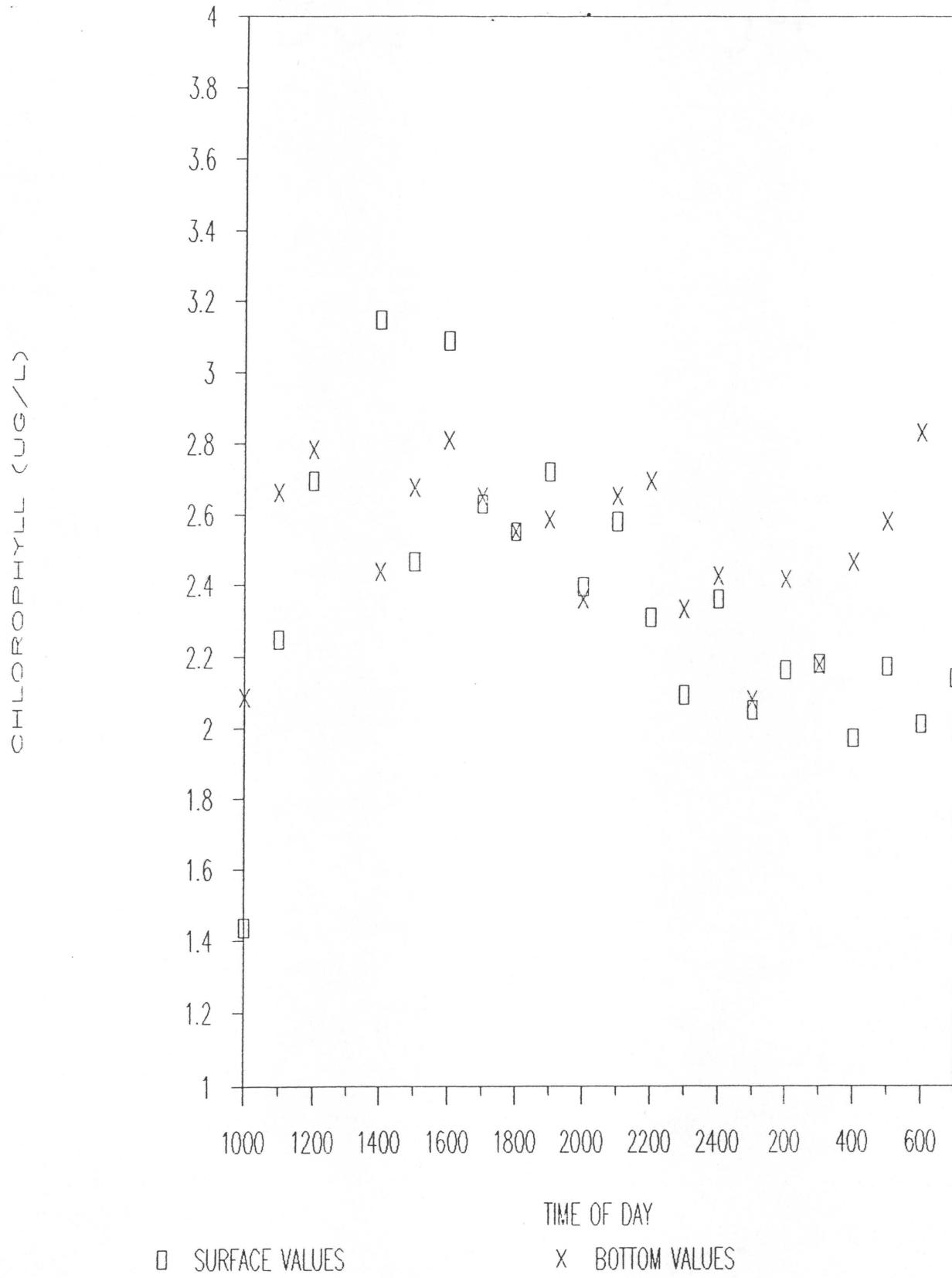
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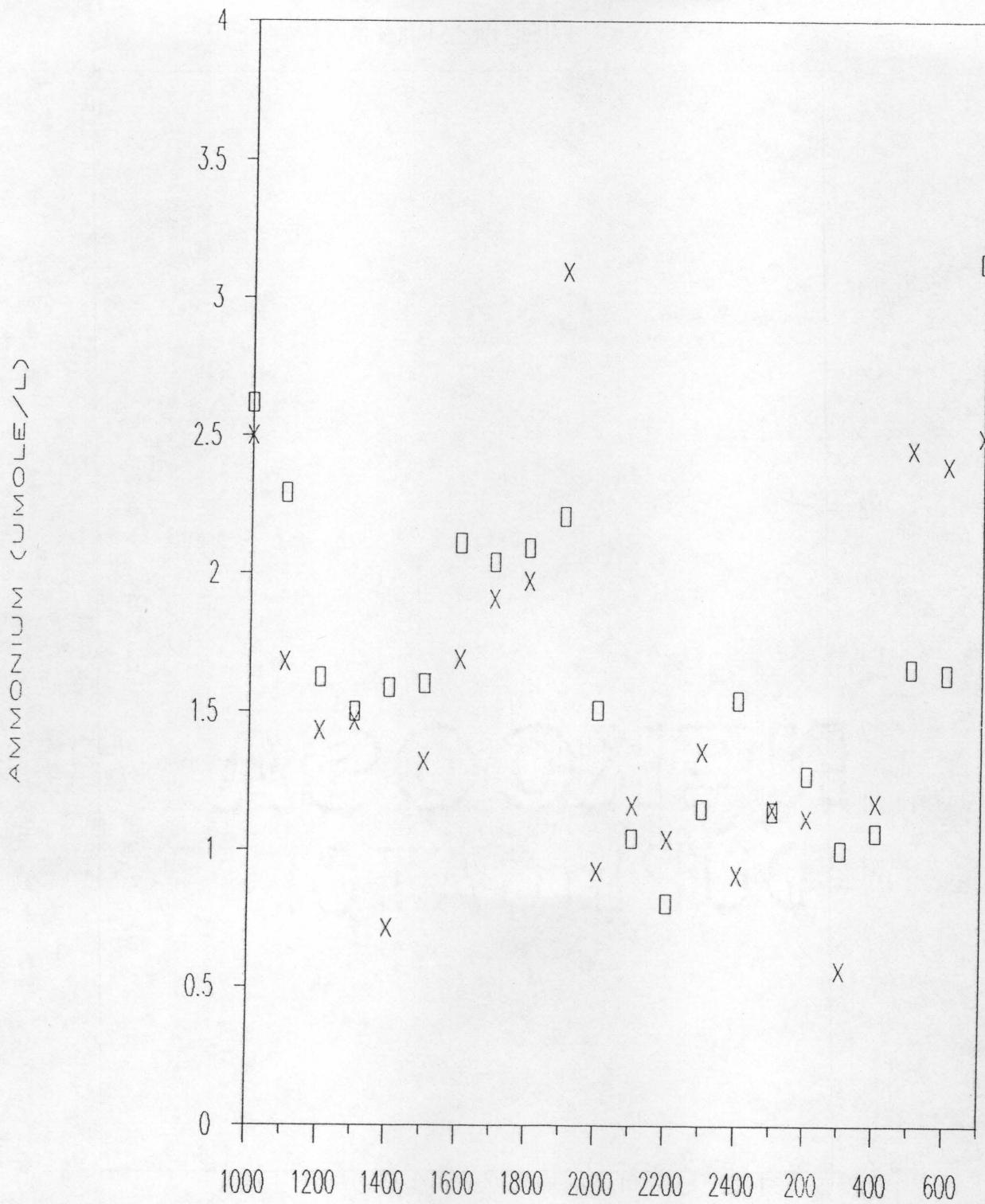
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APRIL 1988 STATION D



CORPUS CHRISTI/NUECES BAYS

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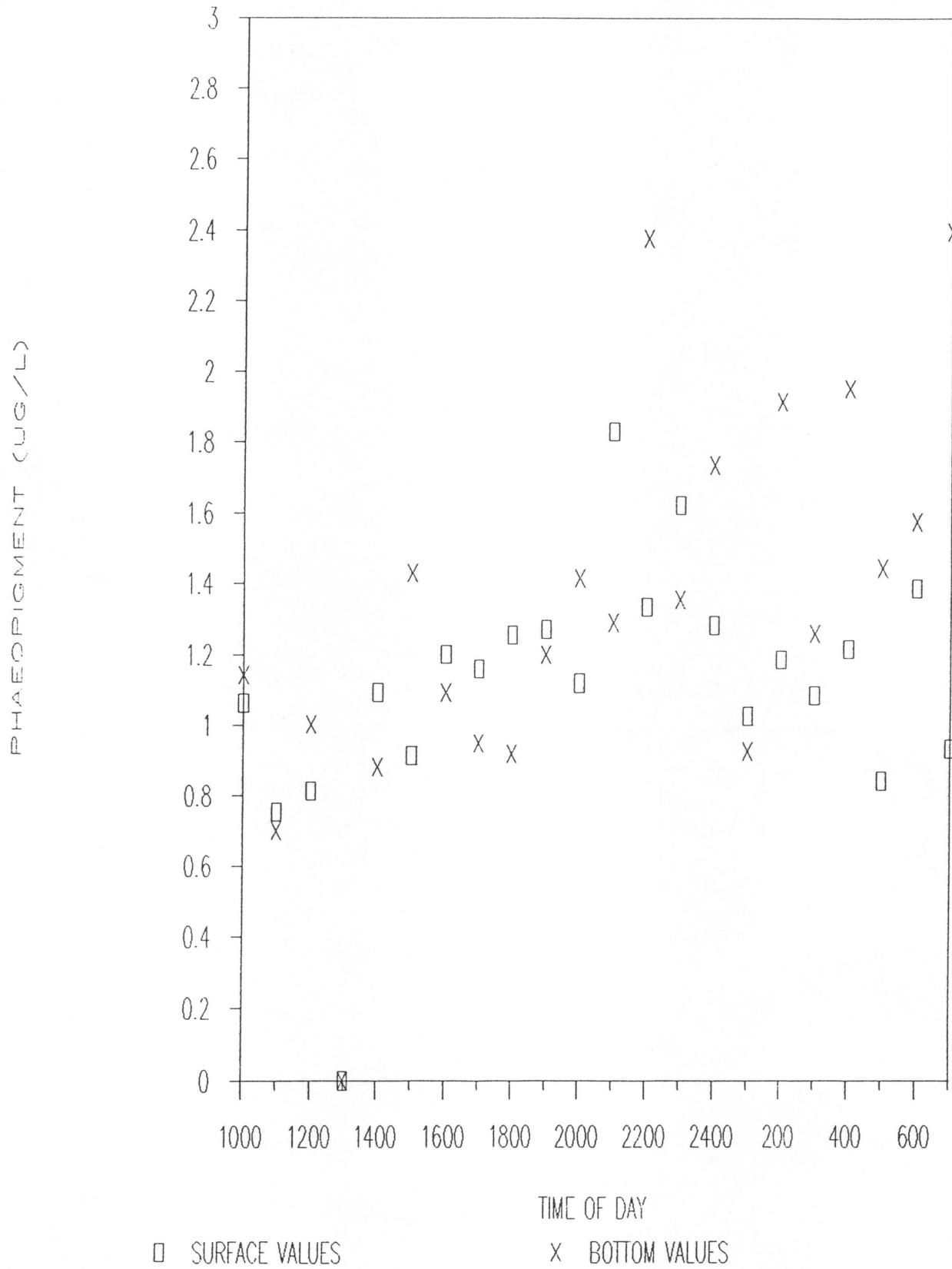
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

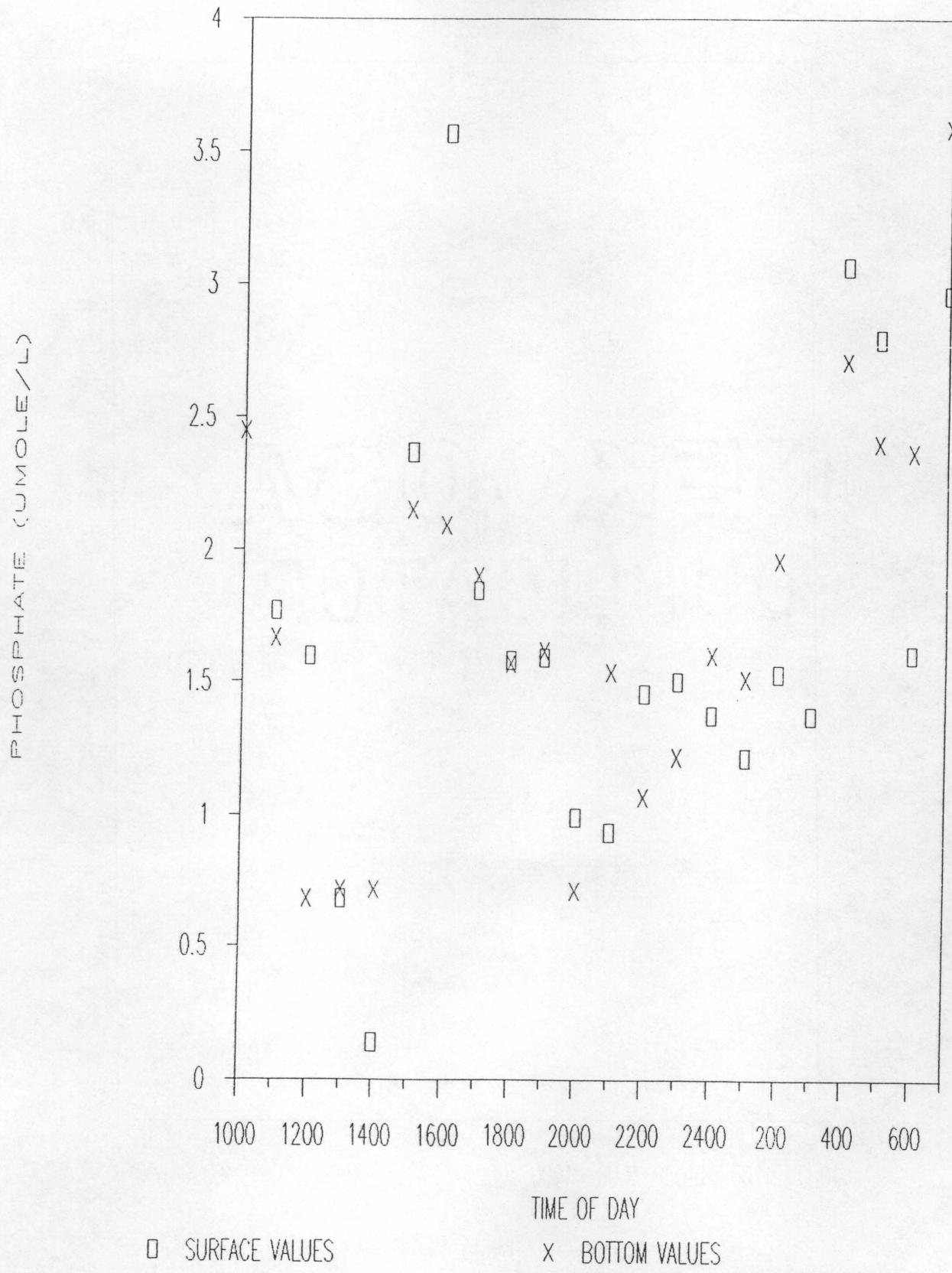
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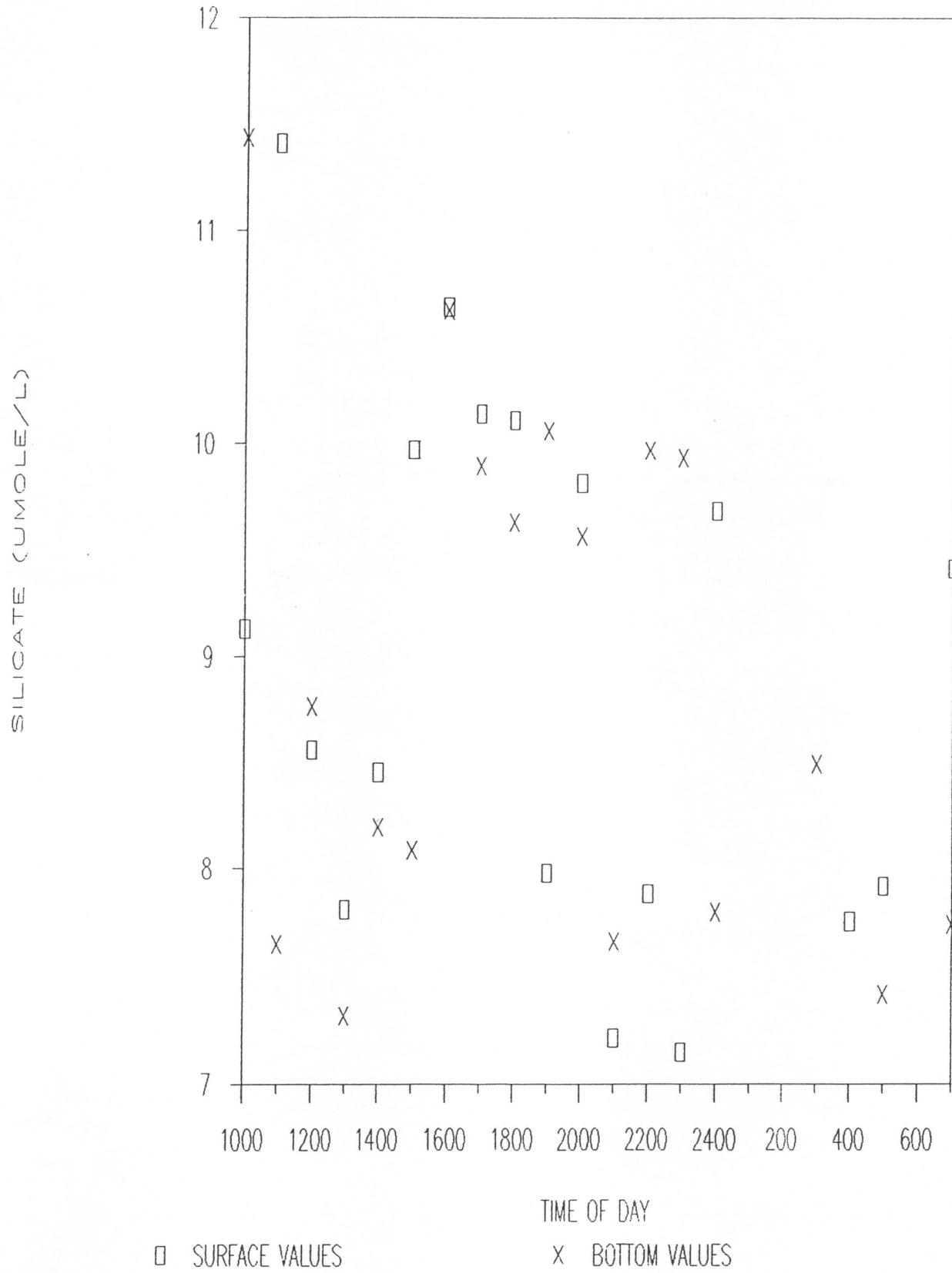
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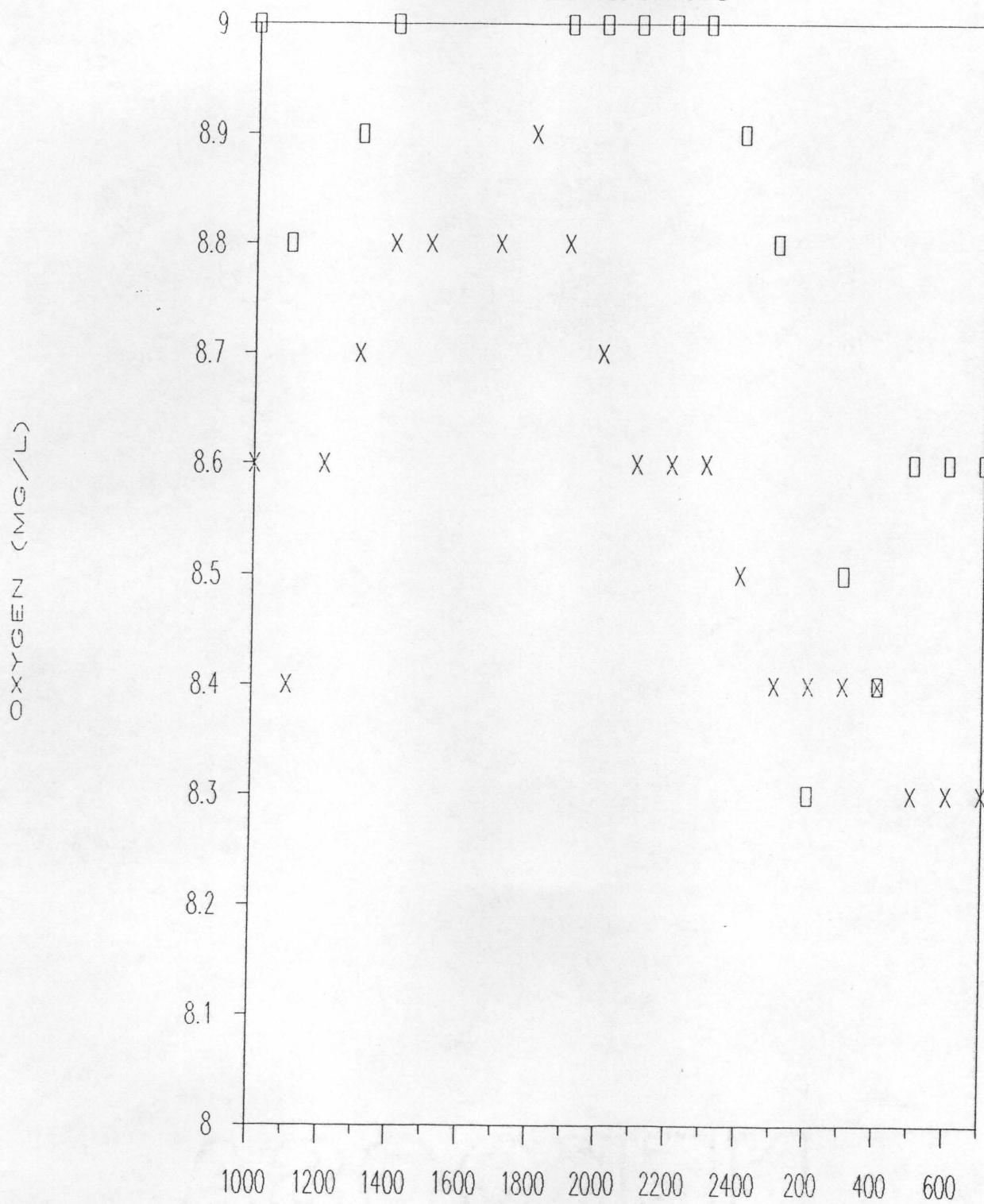
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CORPUS CHRISTI/NUECES BAYS

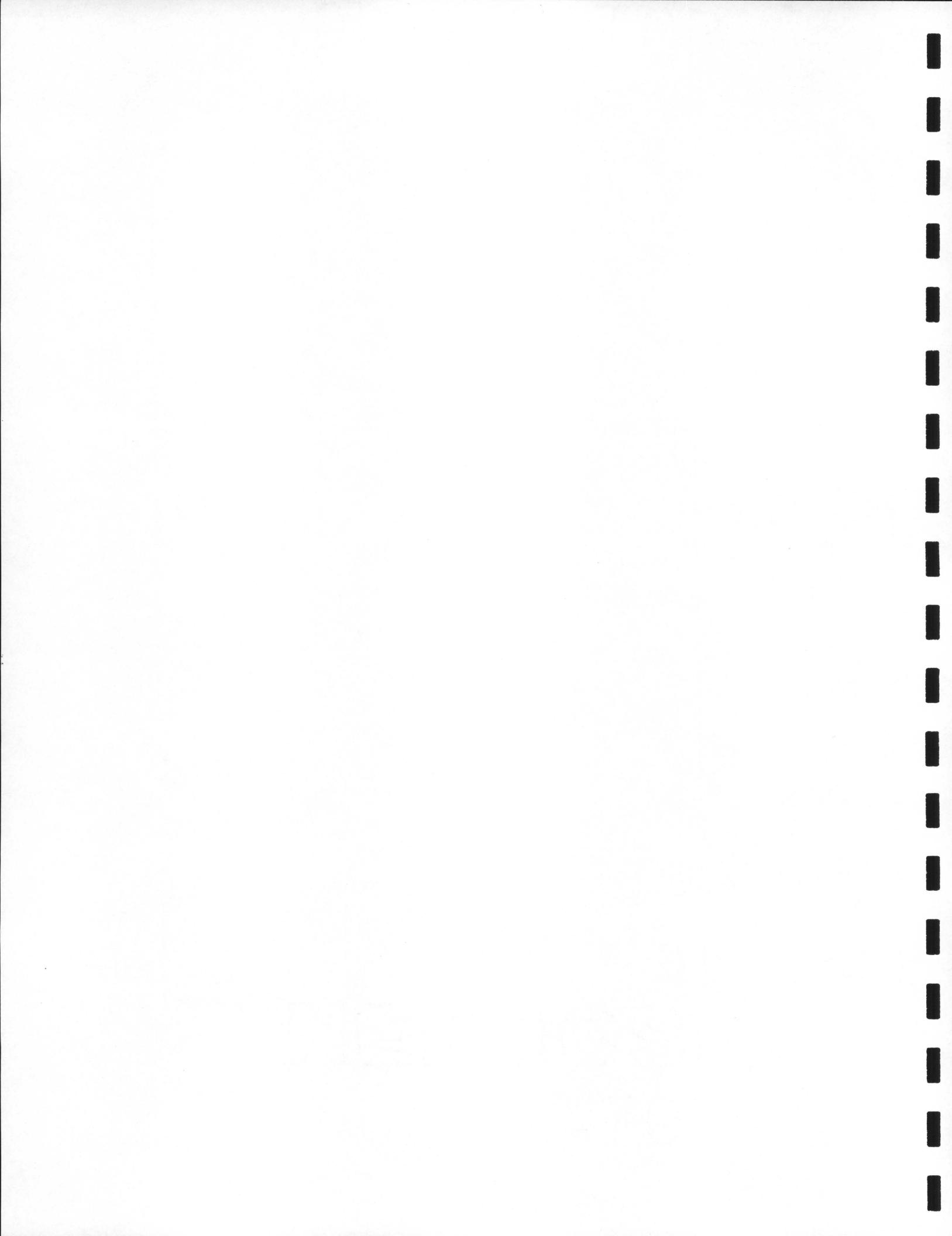
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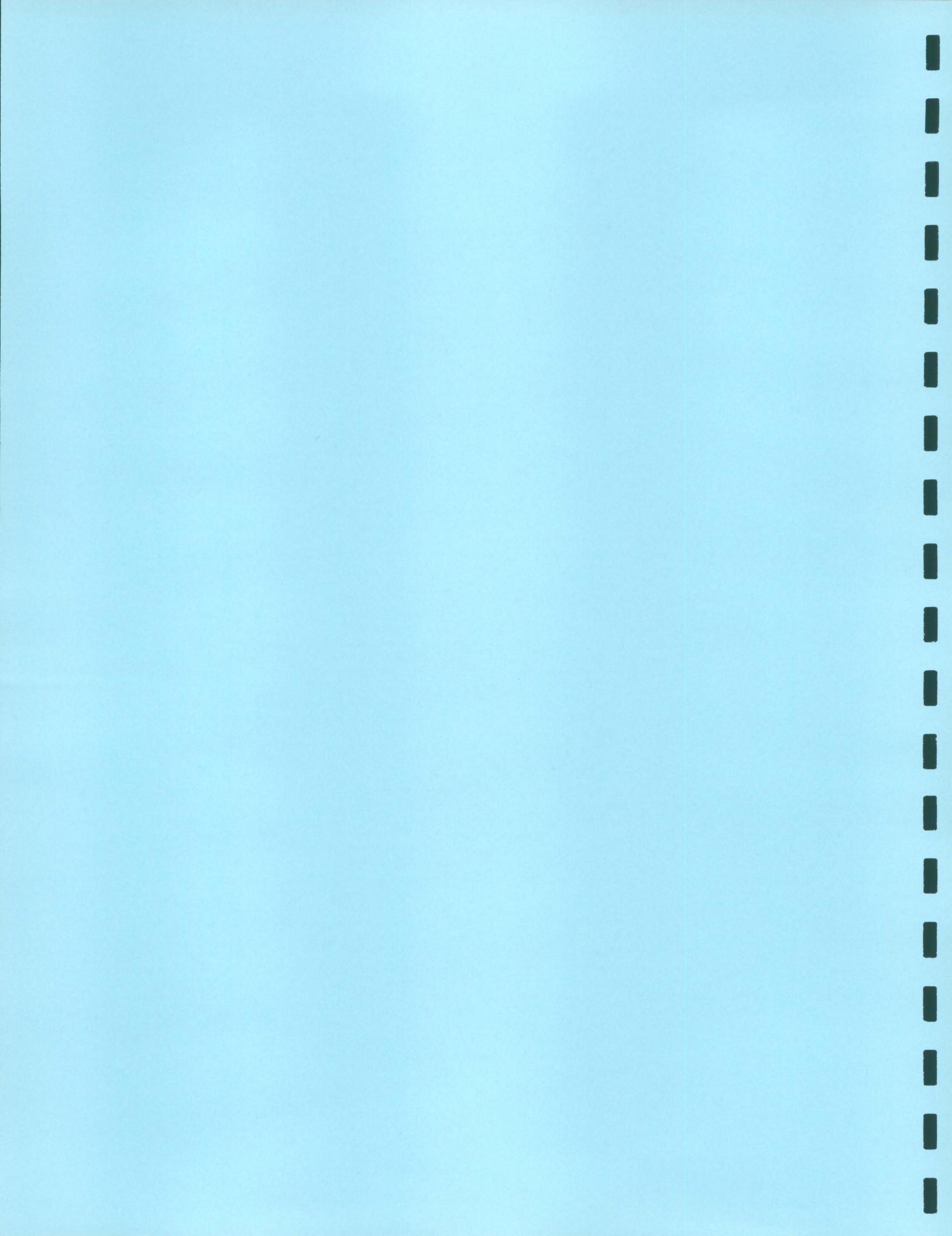


TIME OF DAY

□ SURFACE VALUES

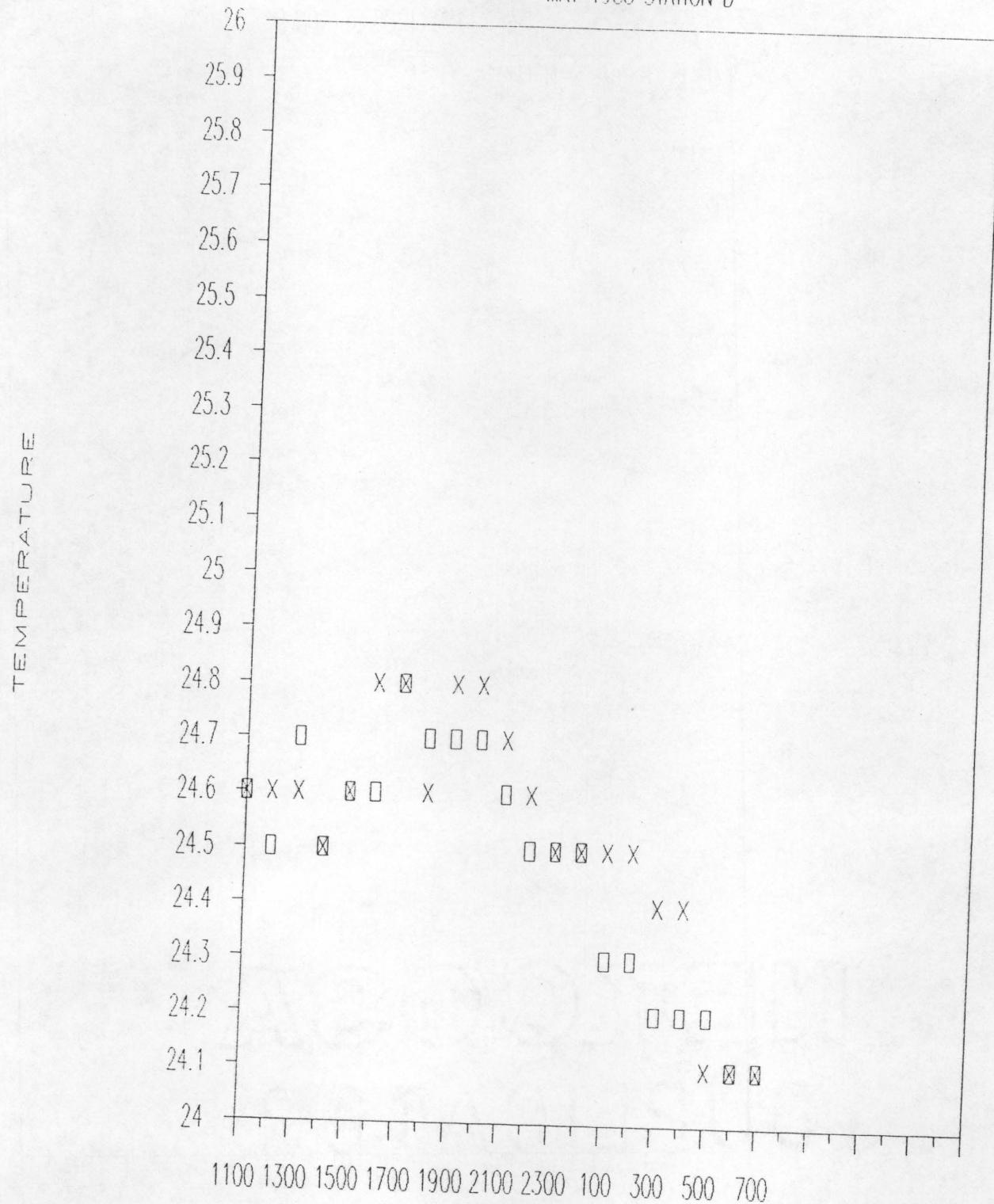
X BOTTOM VALUES





CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D



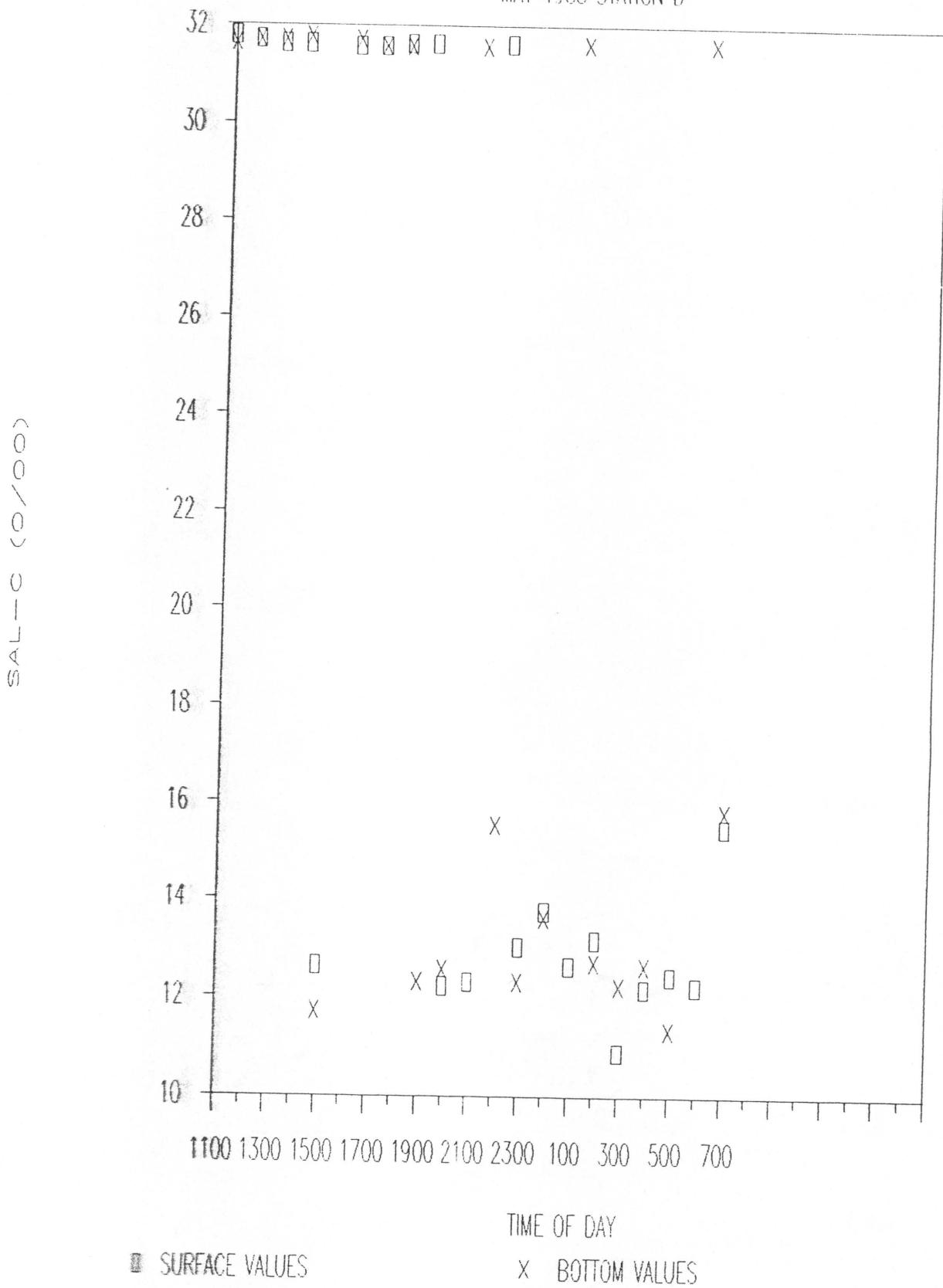
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

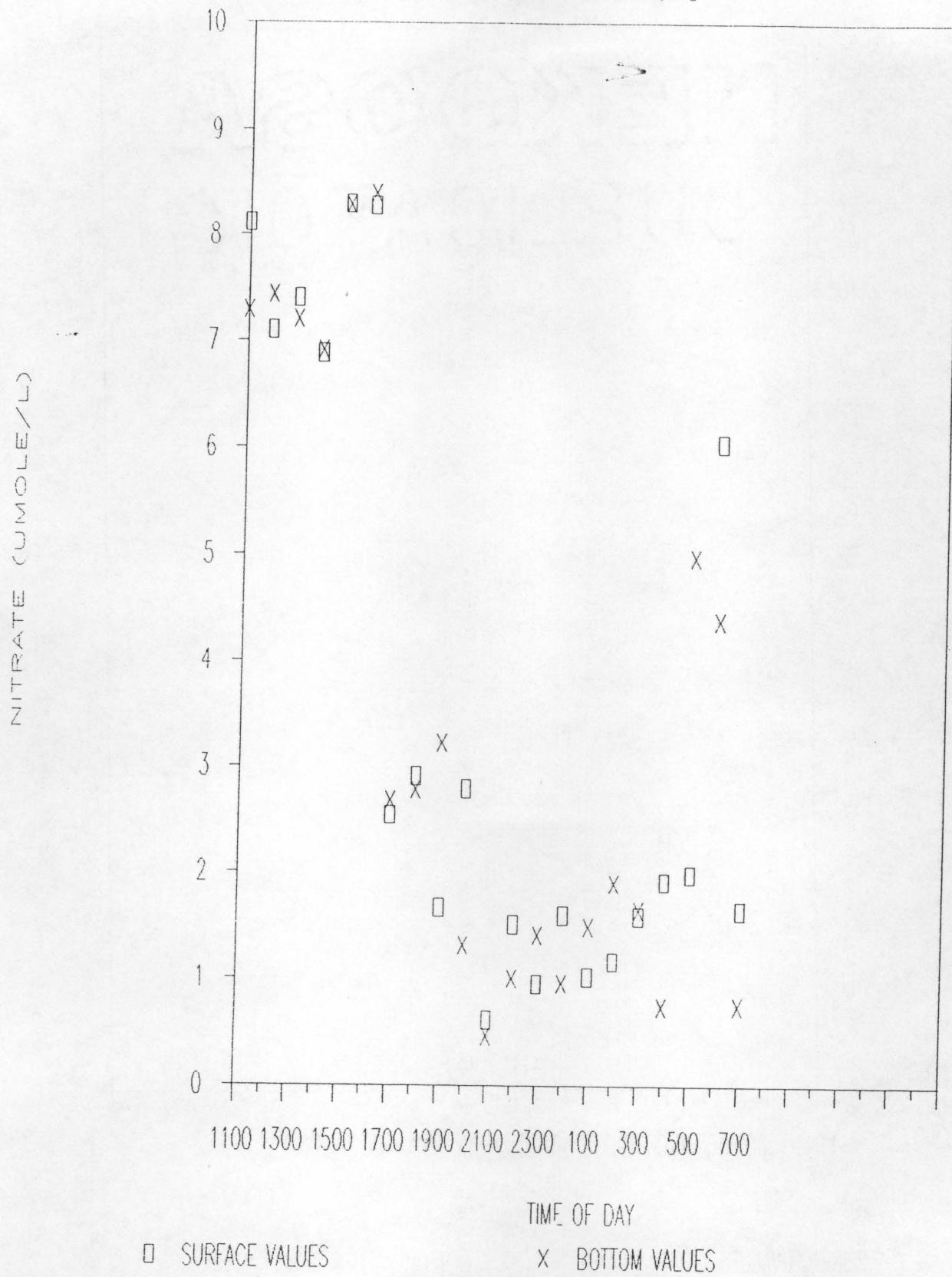
CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D



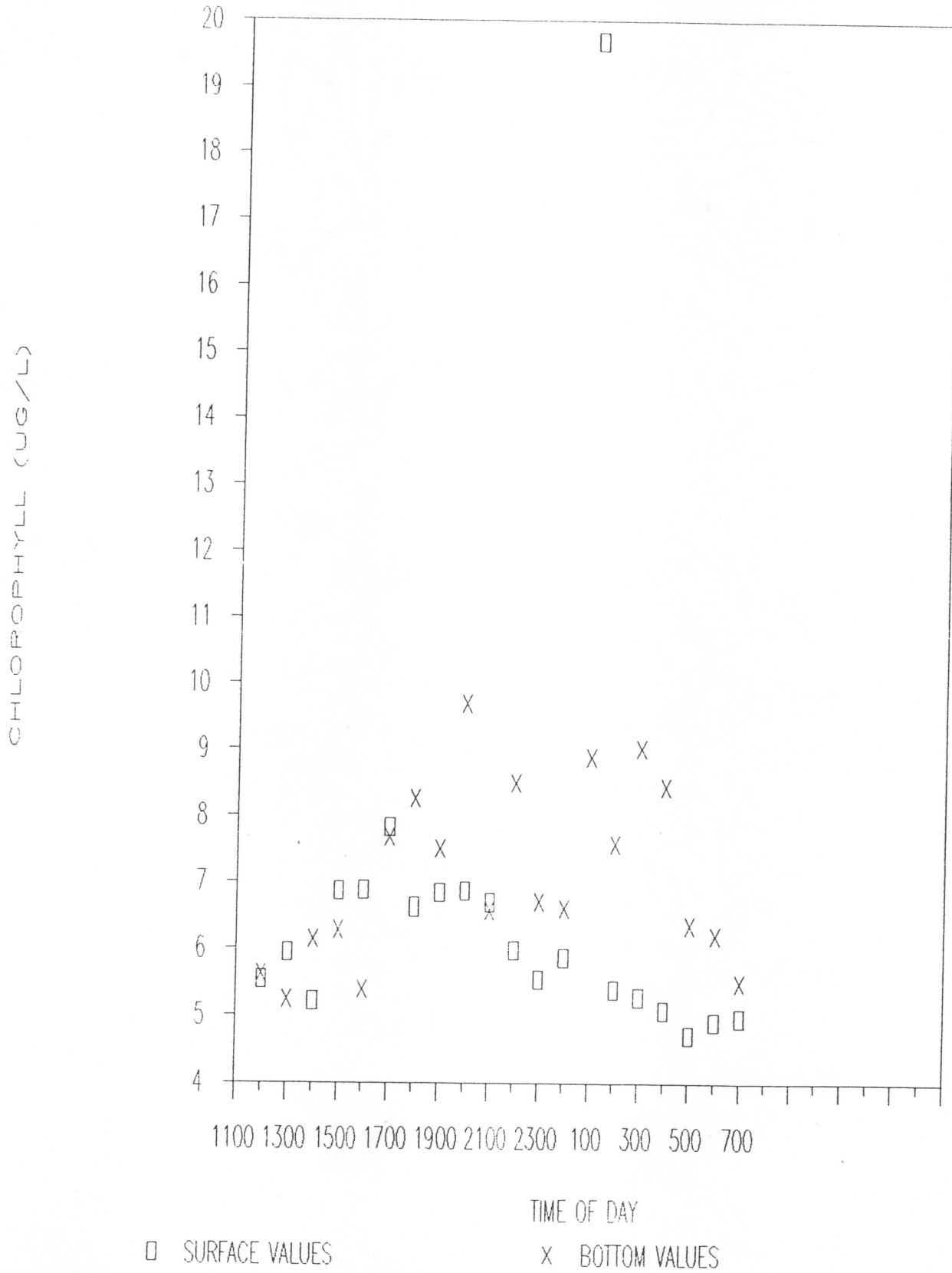
CORPUS CHRISTI/NUECES BAYS

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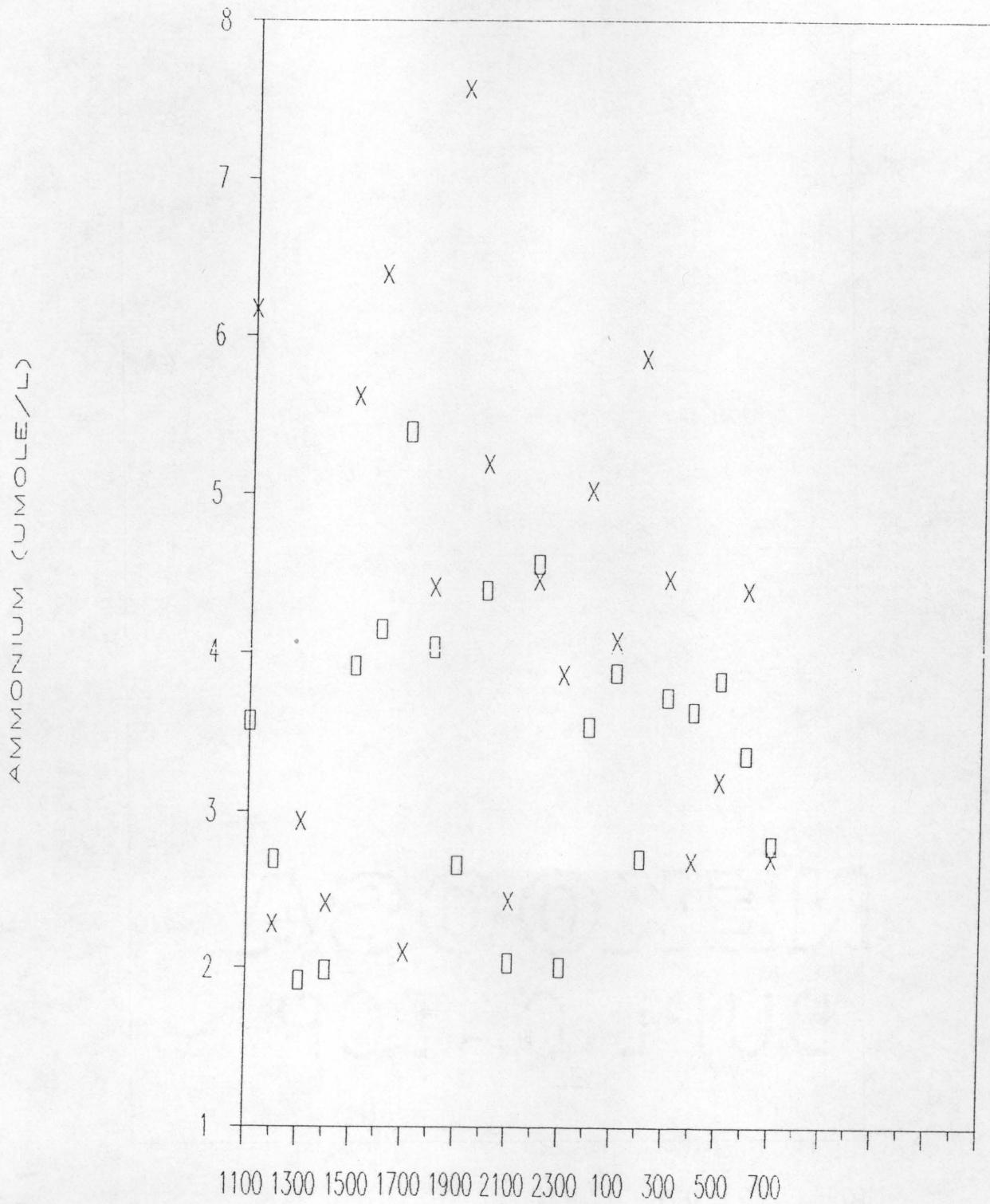
CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D



CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D



TIME OF DAY

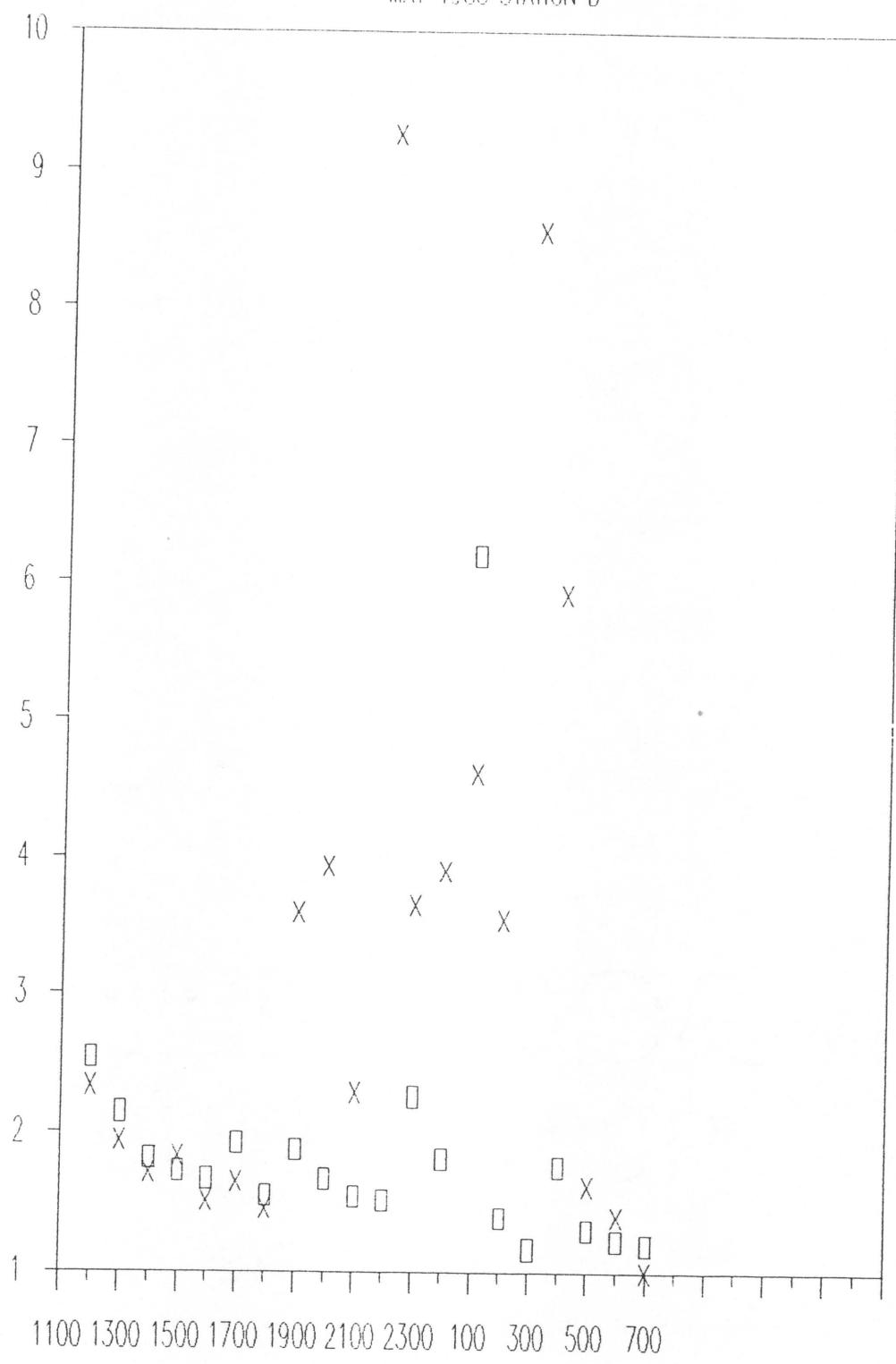
□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D

PHAEOPIGMENT (UG/L)



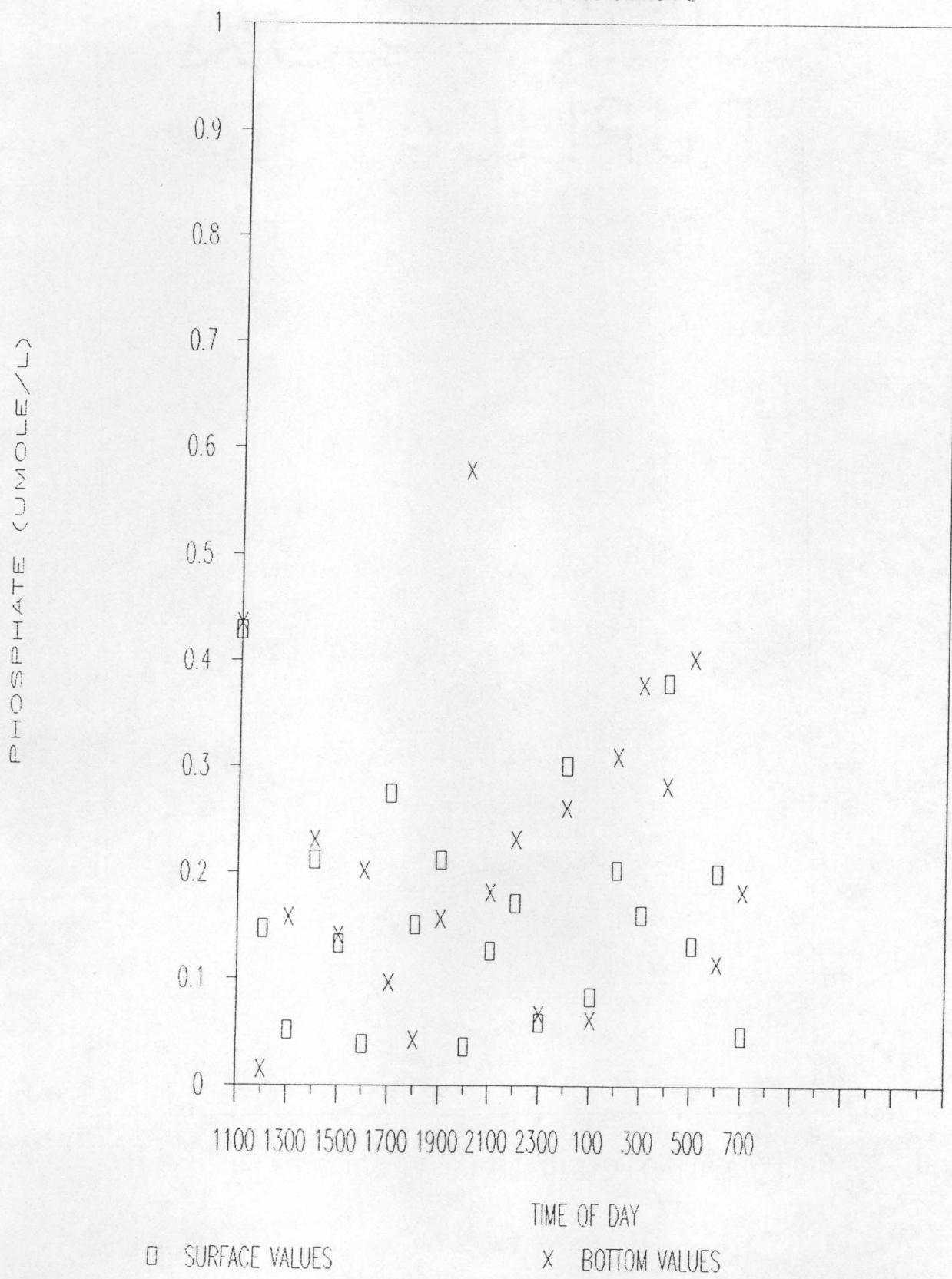
TIME OF DAY

□ SURFACE VALUES

X BOTTOM VALUES

CORPUS CHRISTI/NUECES BAYS

MAY 1988 STATION D

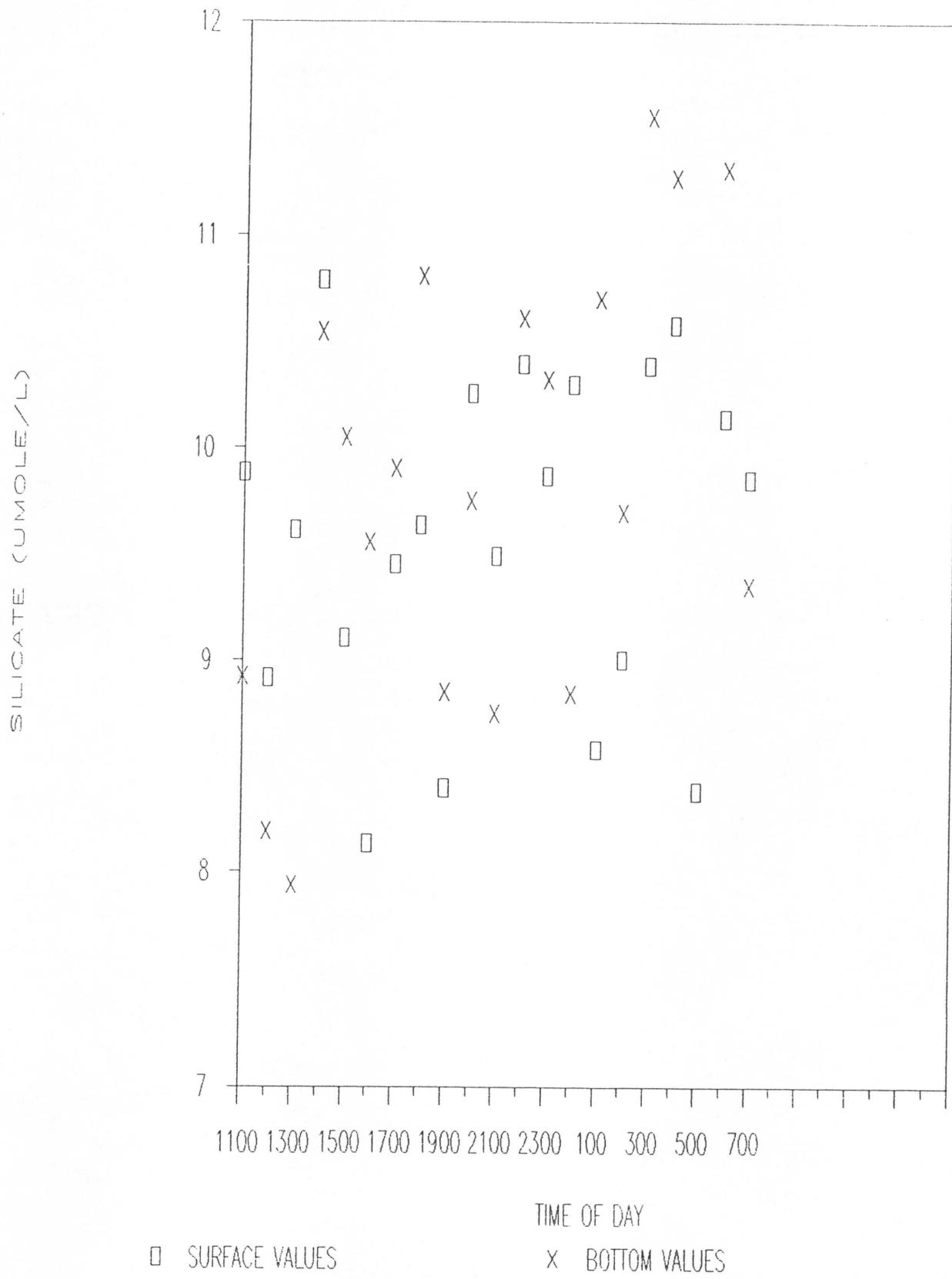


□ SURFACE VALUES

✗ BOTTOM VALUES

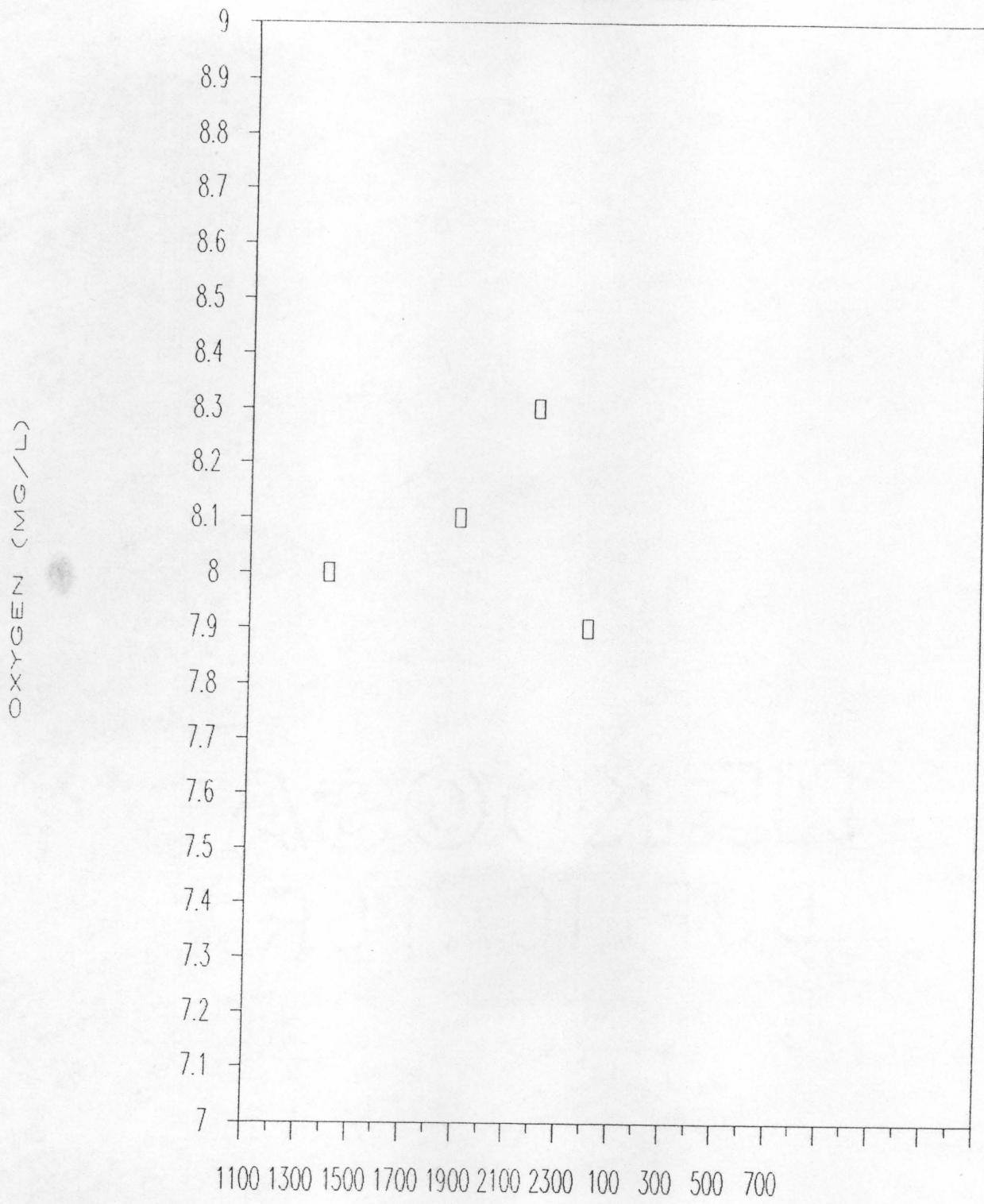
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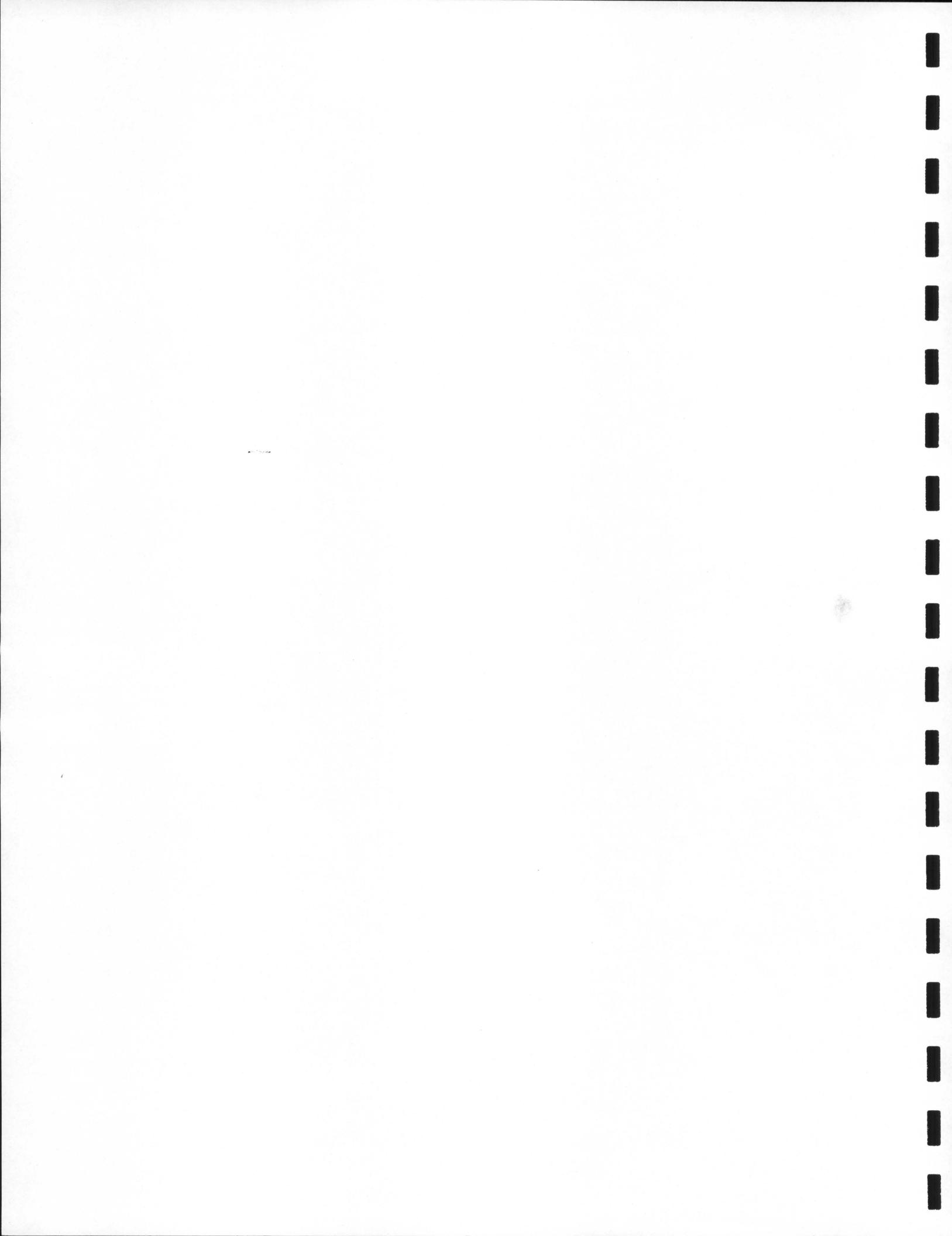
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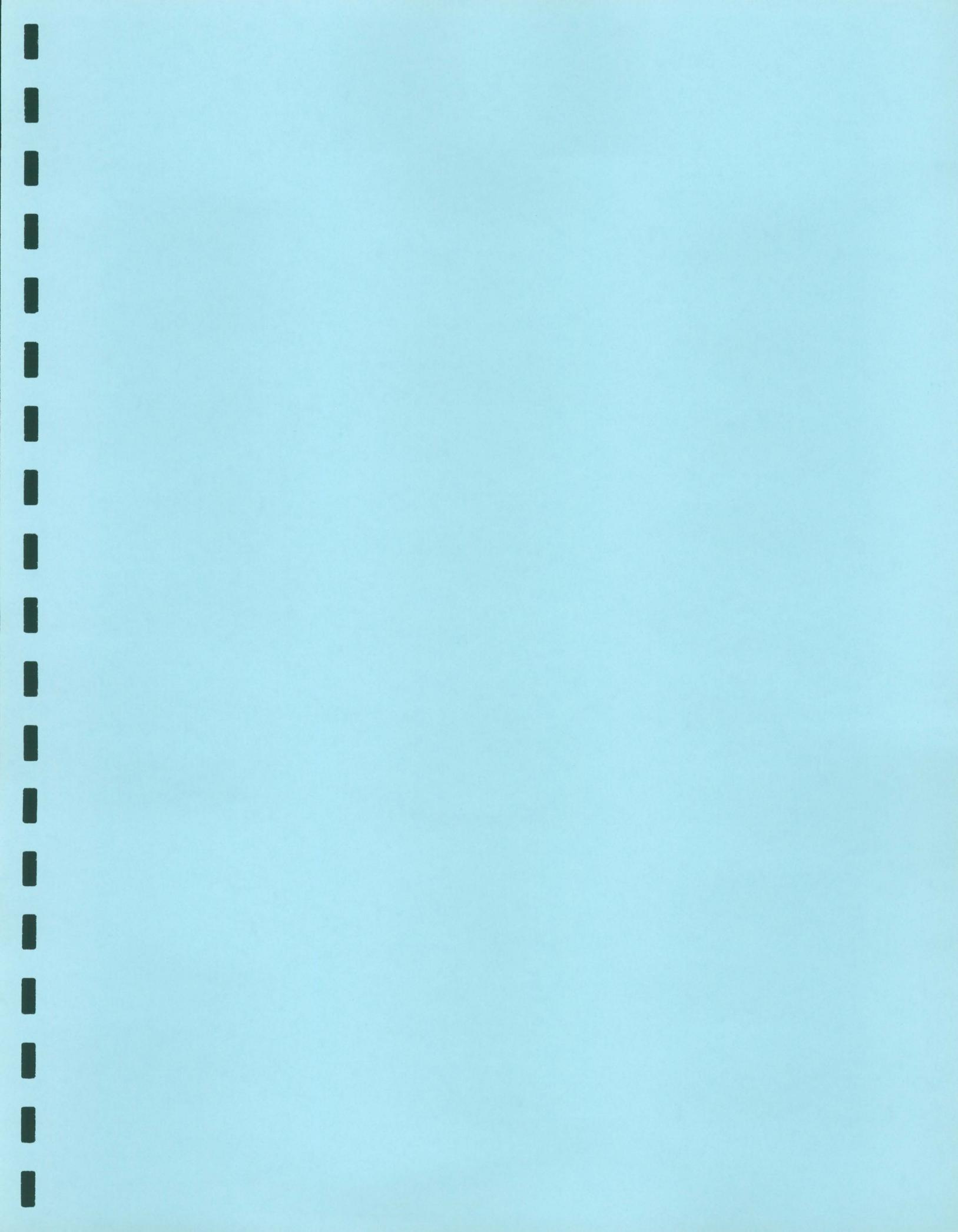
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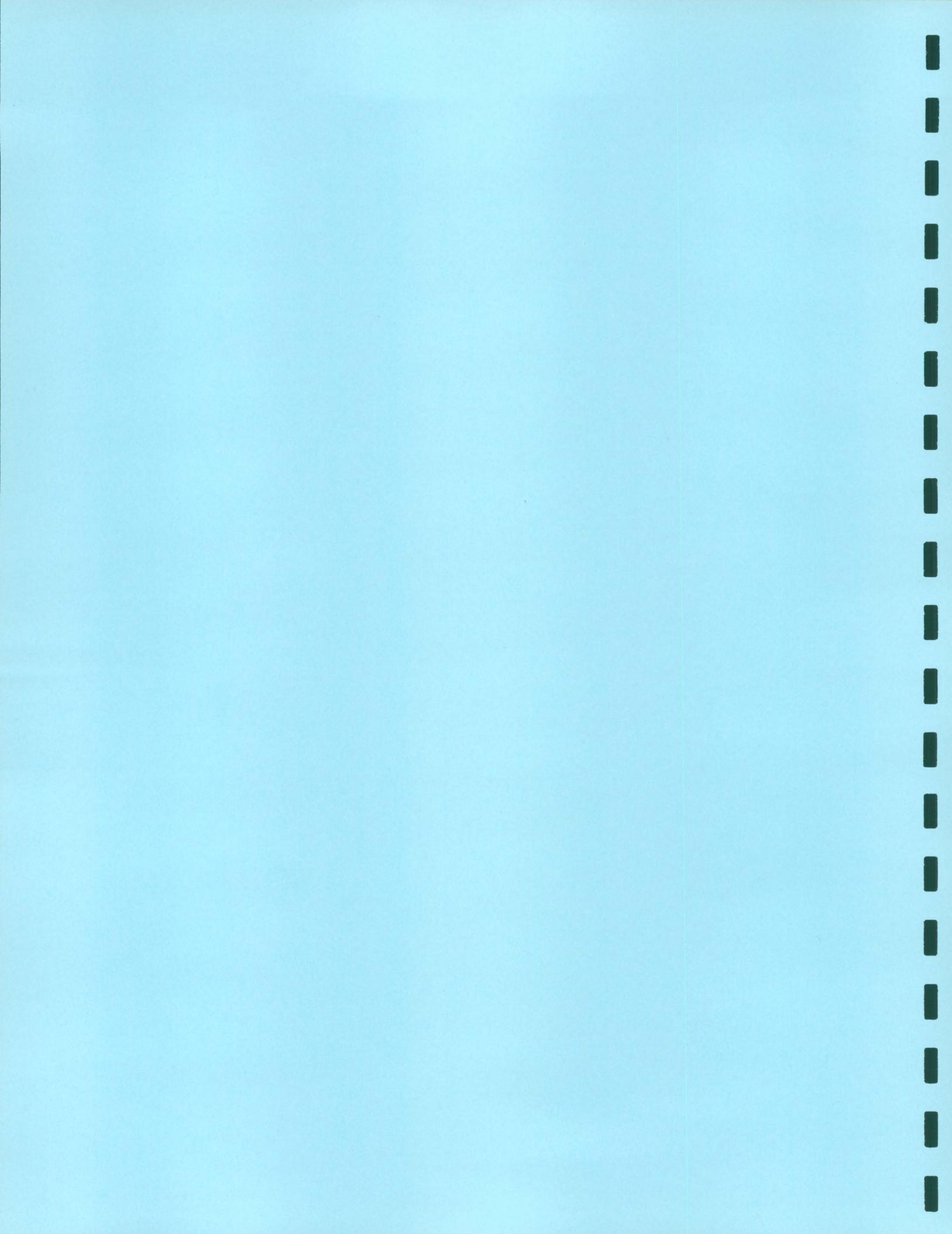


□ SURFACE VALUES

X BOTTOM VALUES

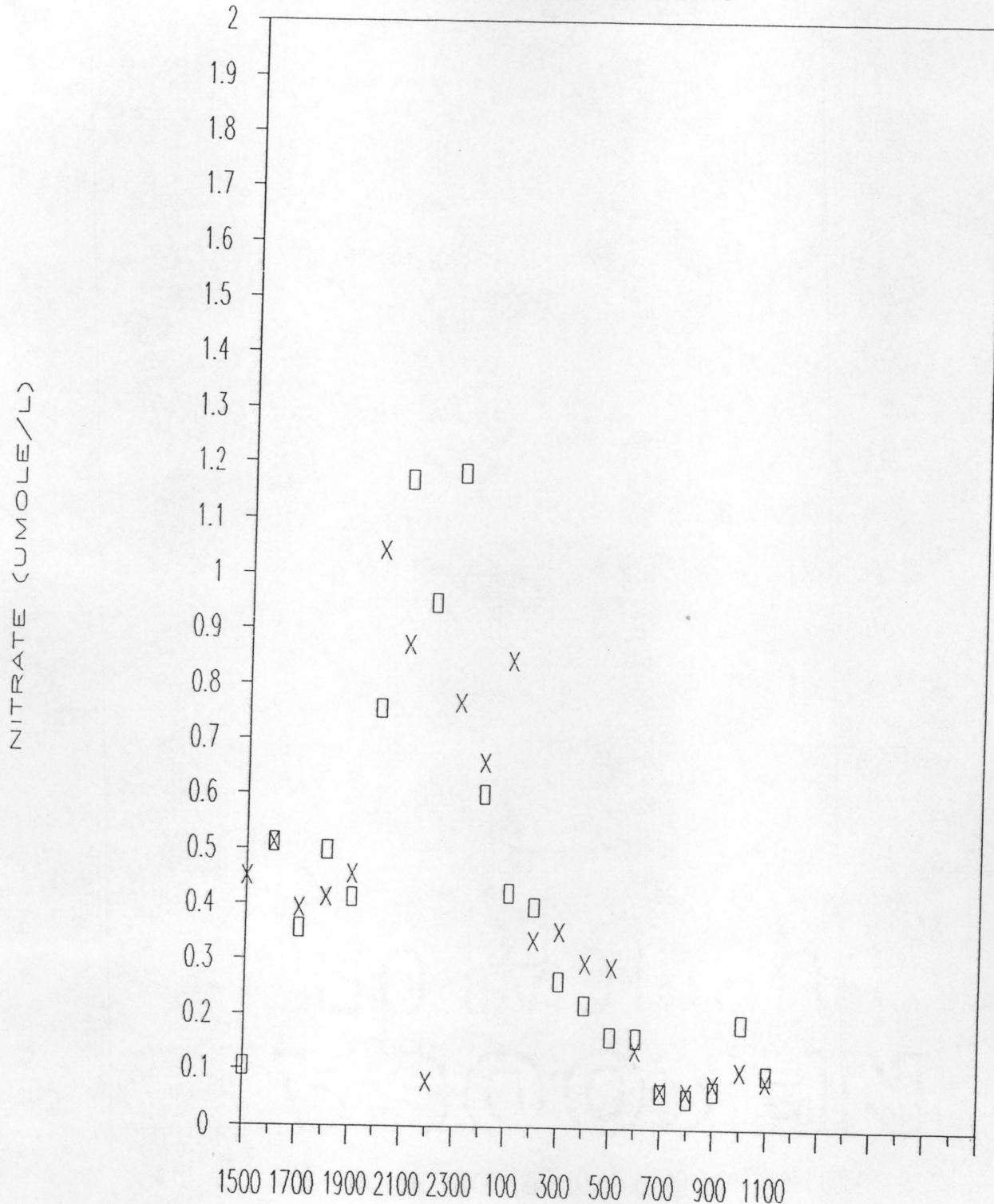






CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION D

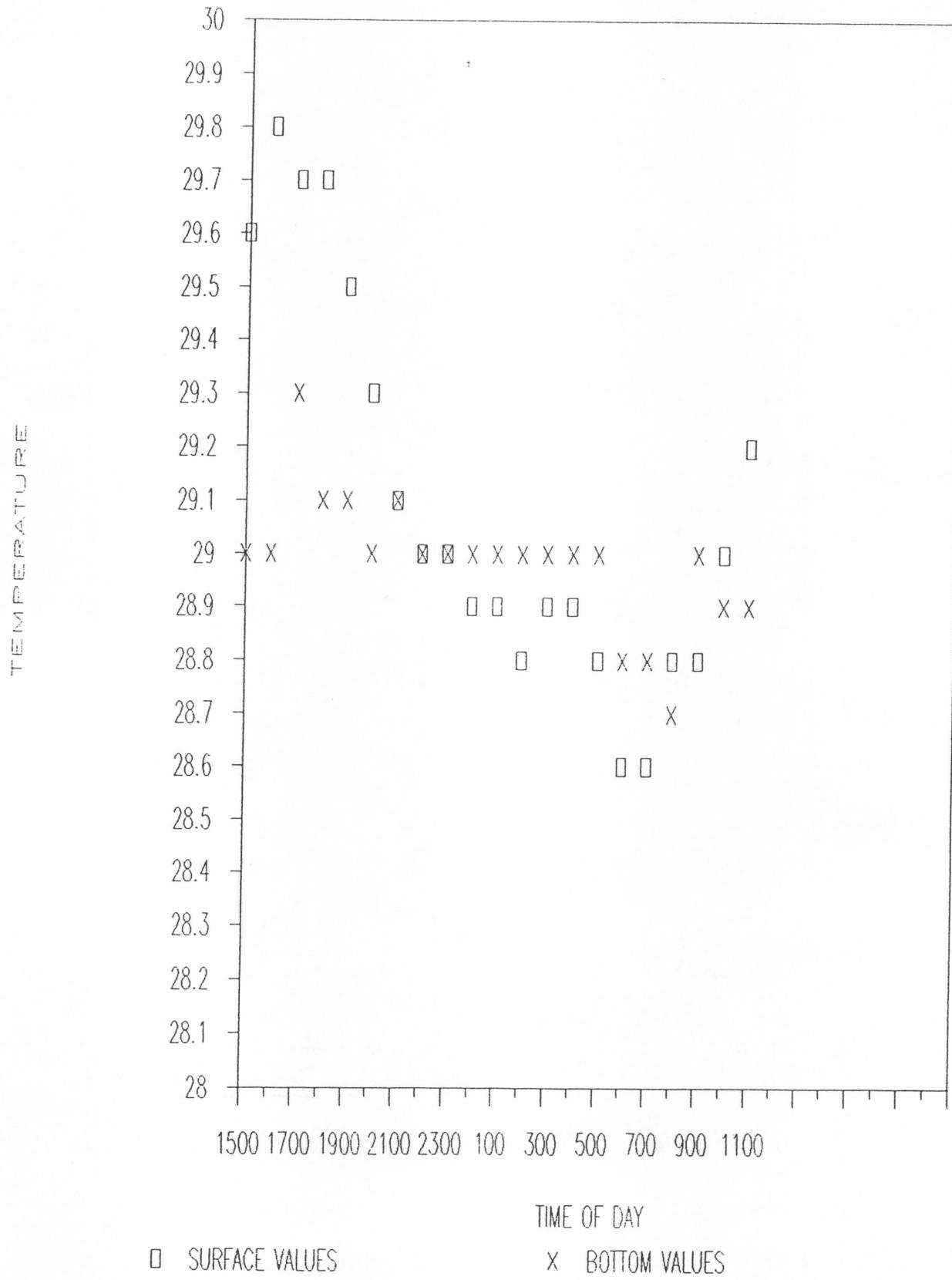


□ SURFACE VALUES

TIME OF DAY
X BOTTOM VALUES

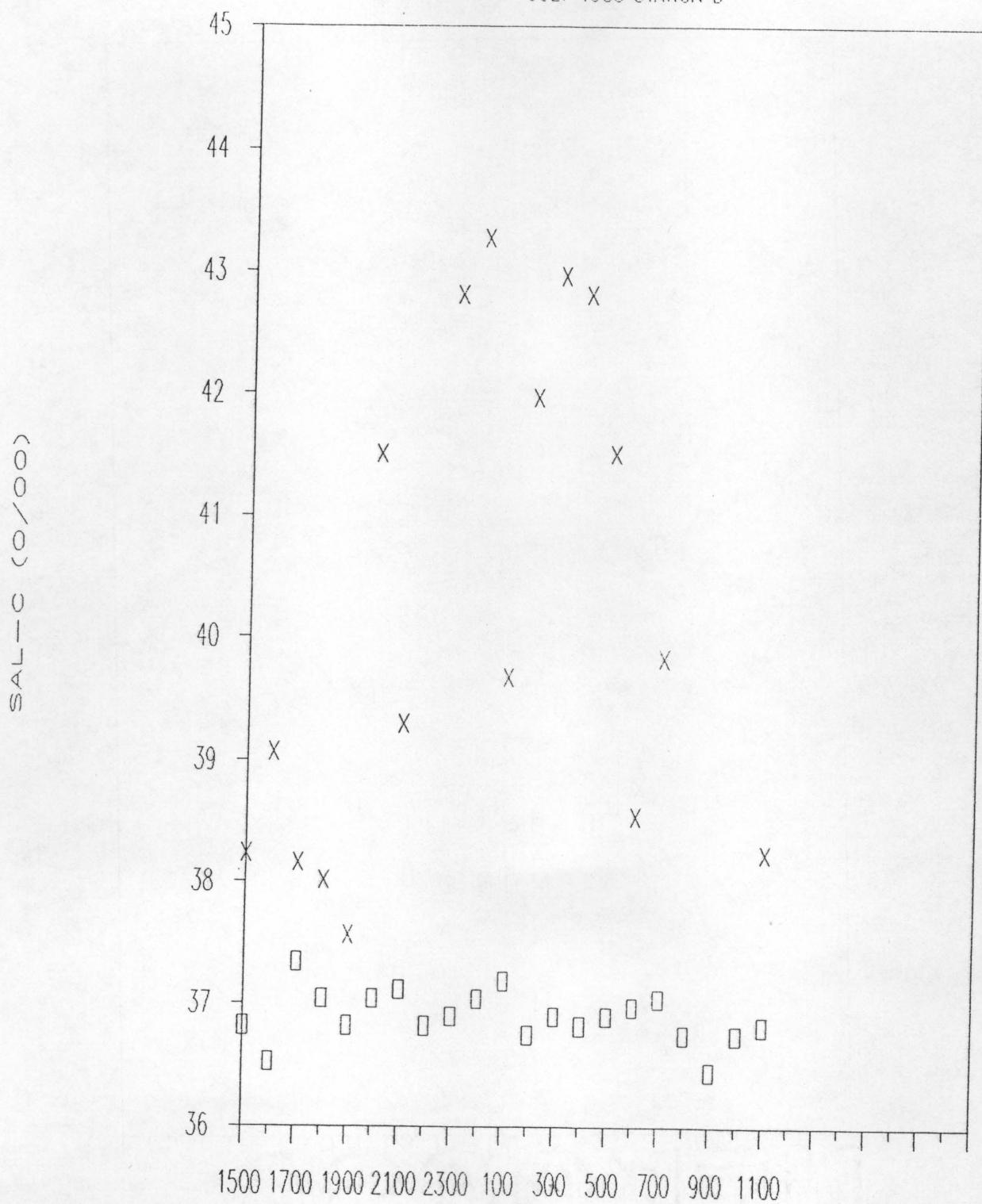
CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION D



CORPUS CHRISTI/NUECES BAYS

JULY 1988 STATION D

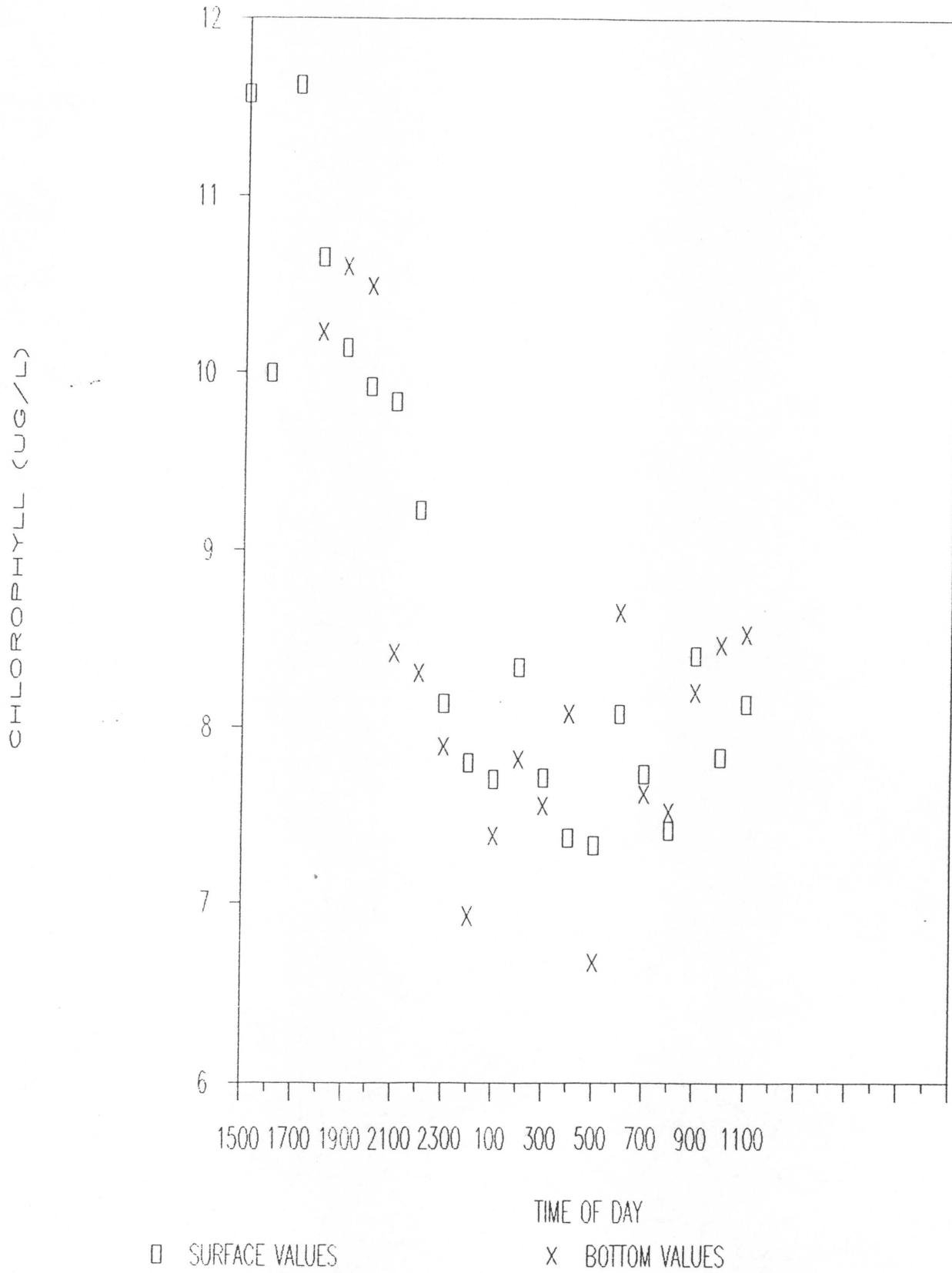


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X BOTTOM VALUES

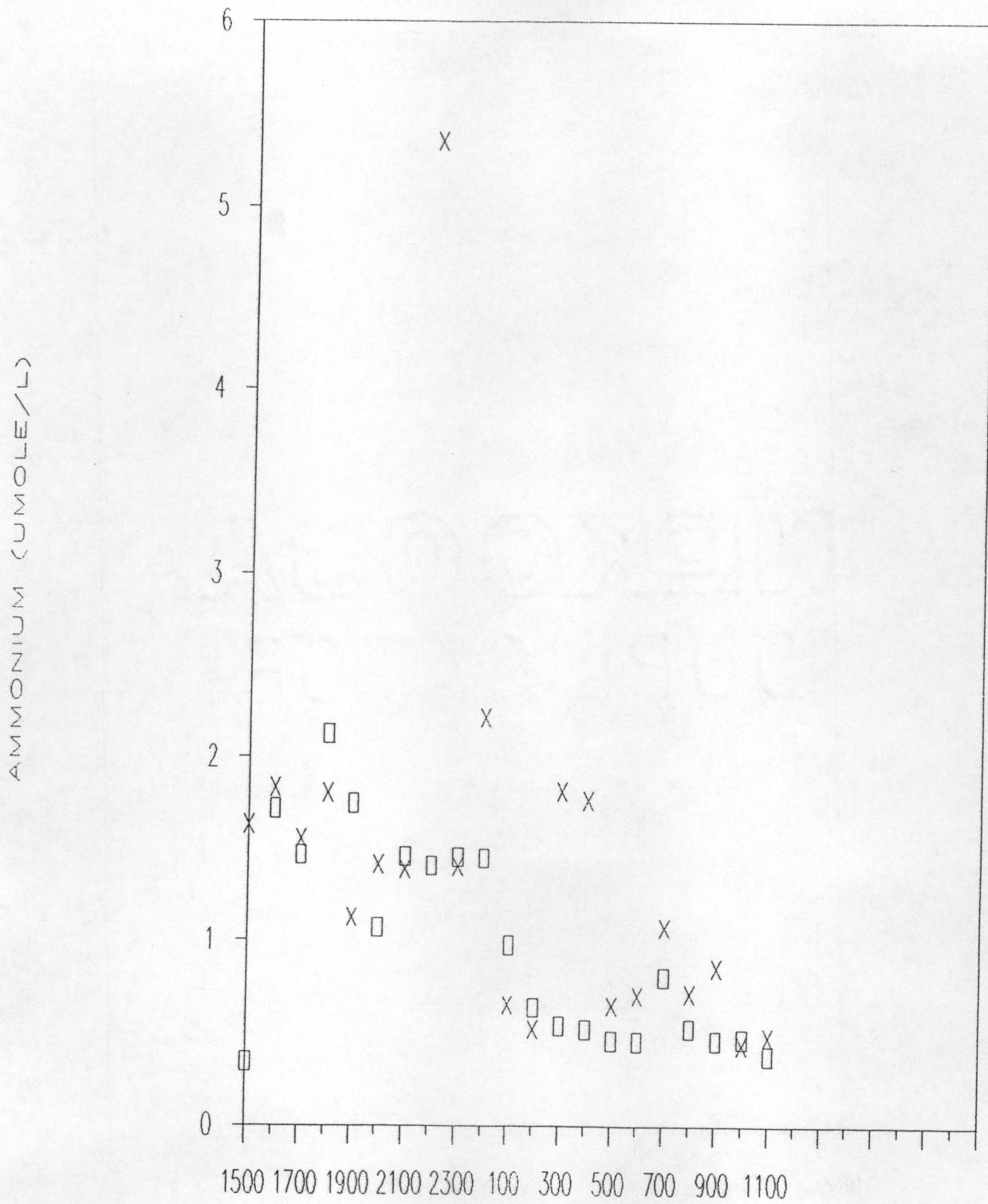
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CORPUS CHRISTI/NUECES BAYS

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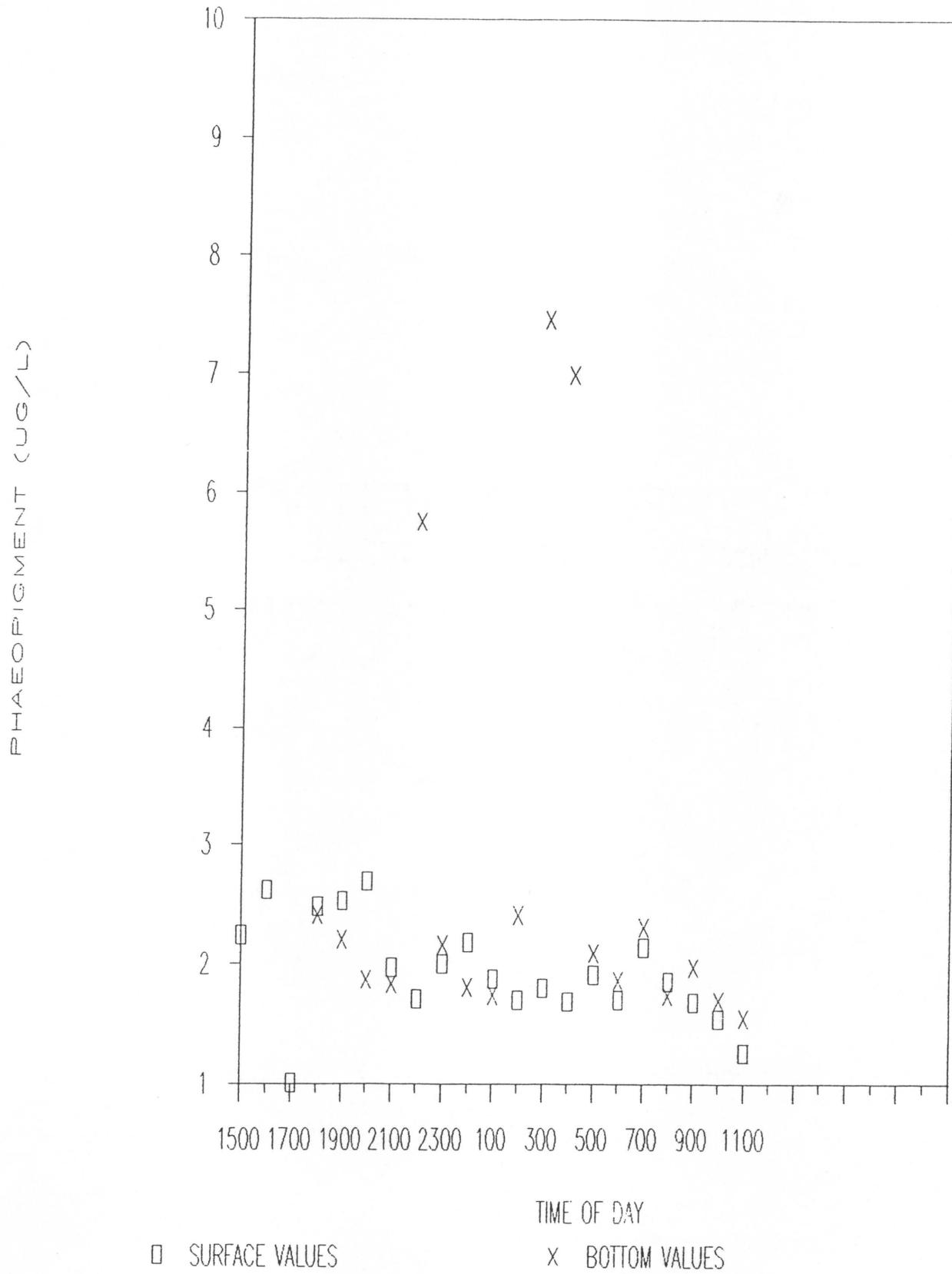


□ SURFACE VALUES

TIME OF DAY
X BOTTOM VALUES

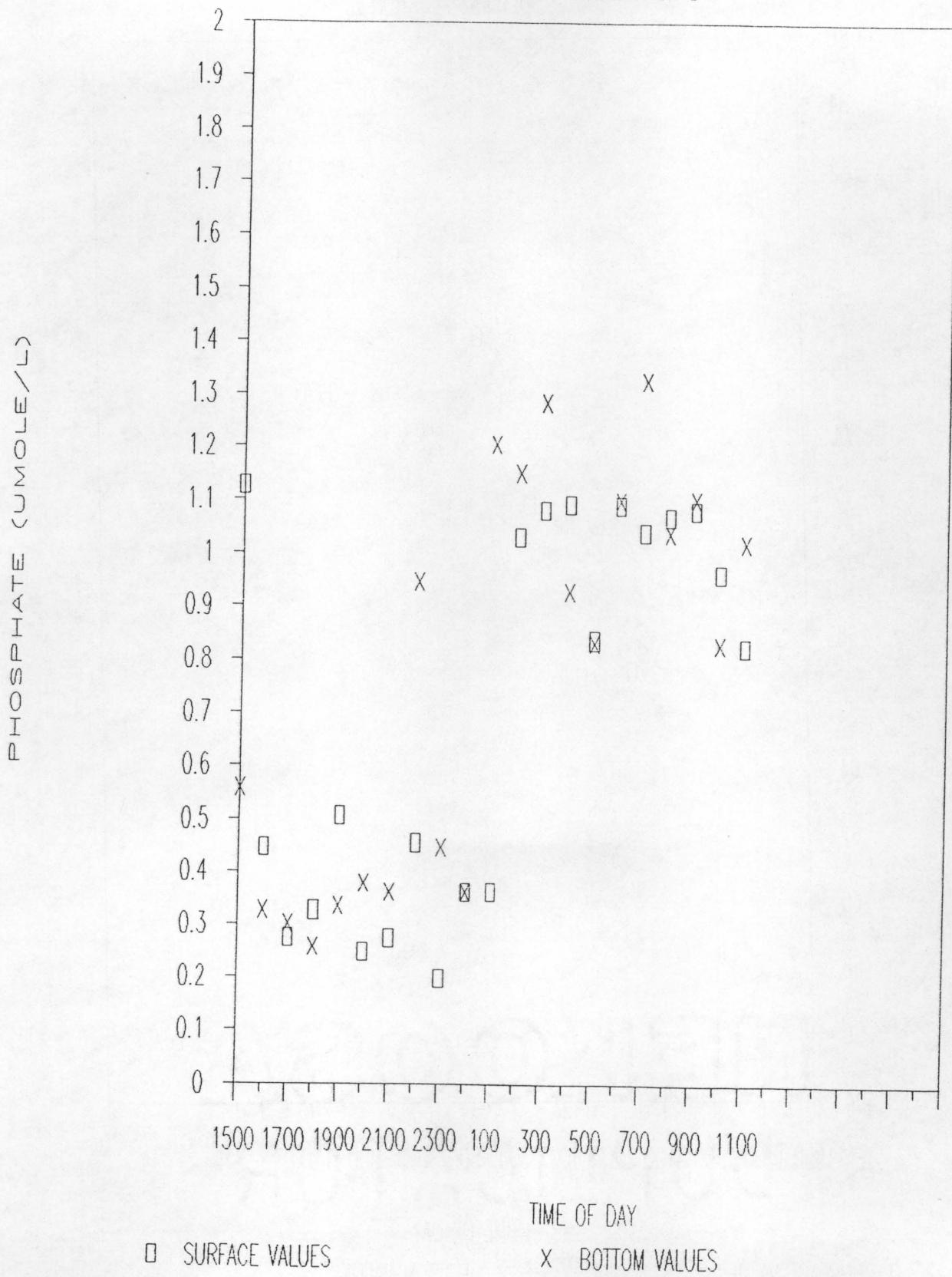
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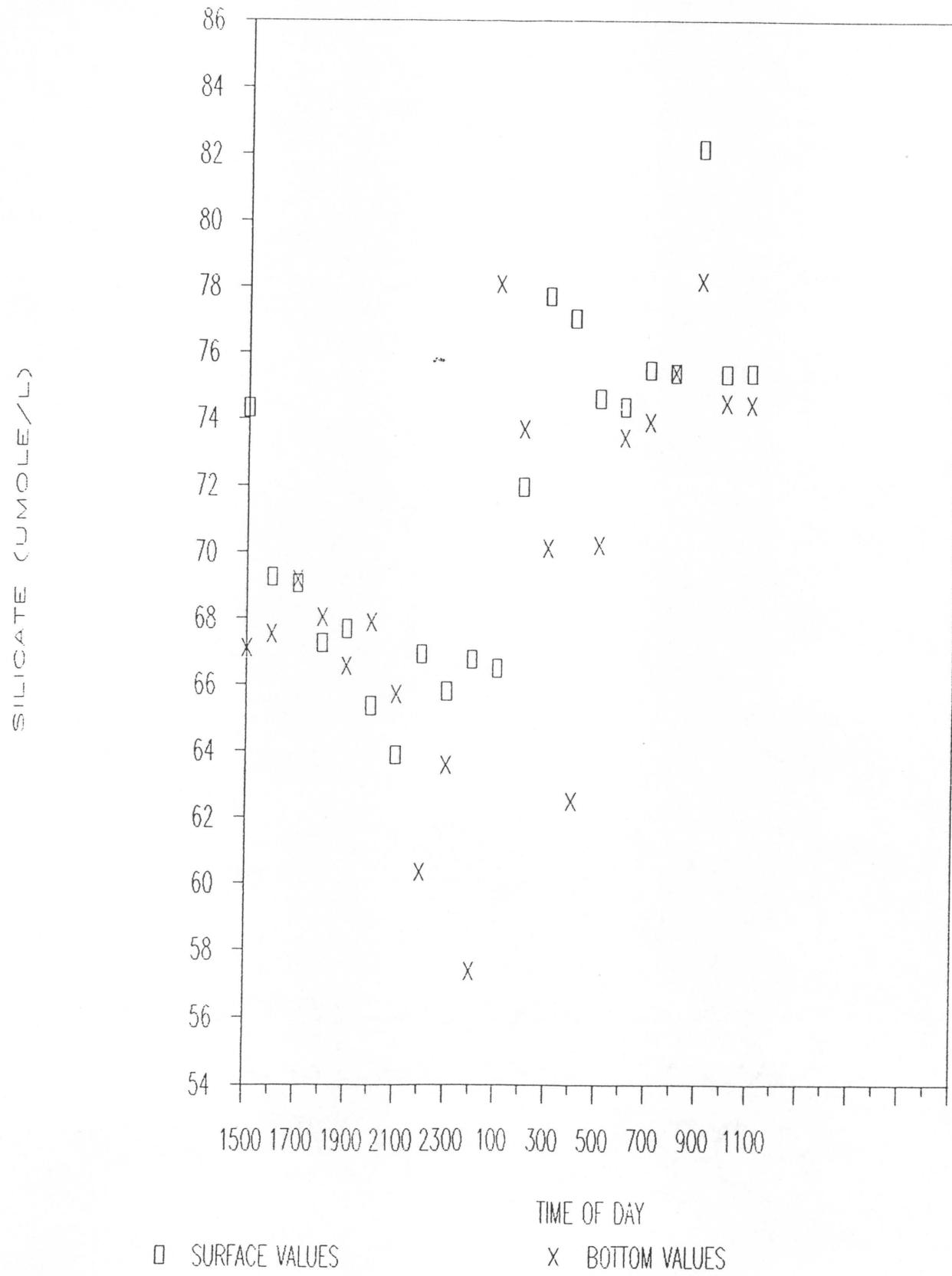
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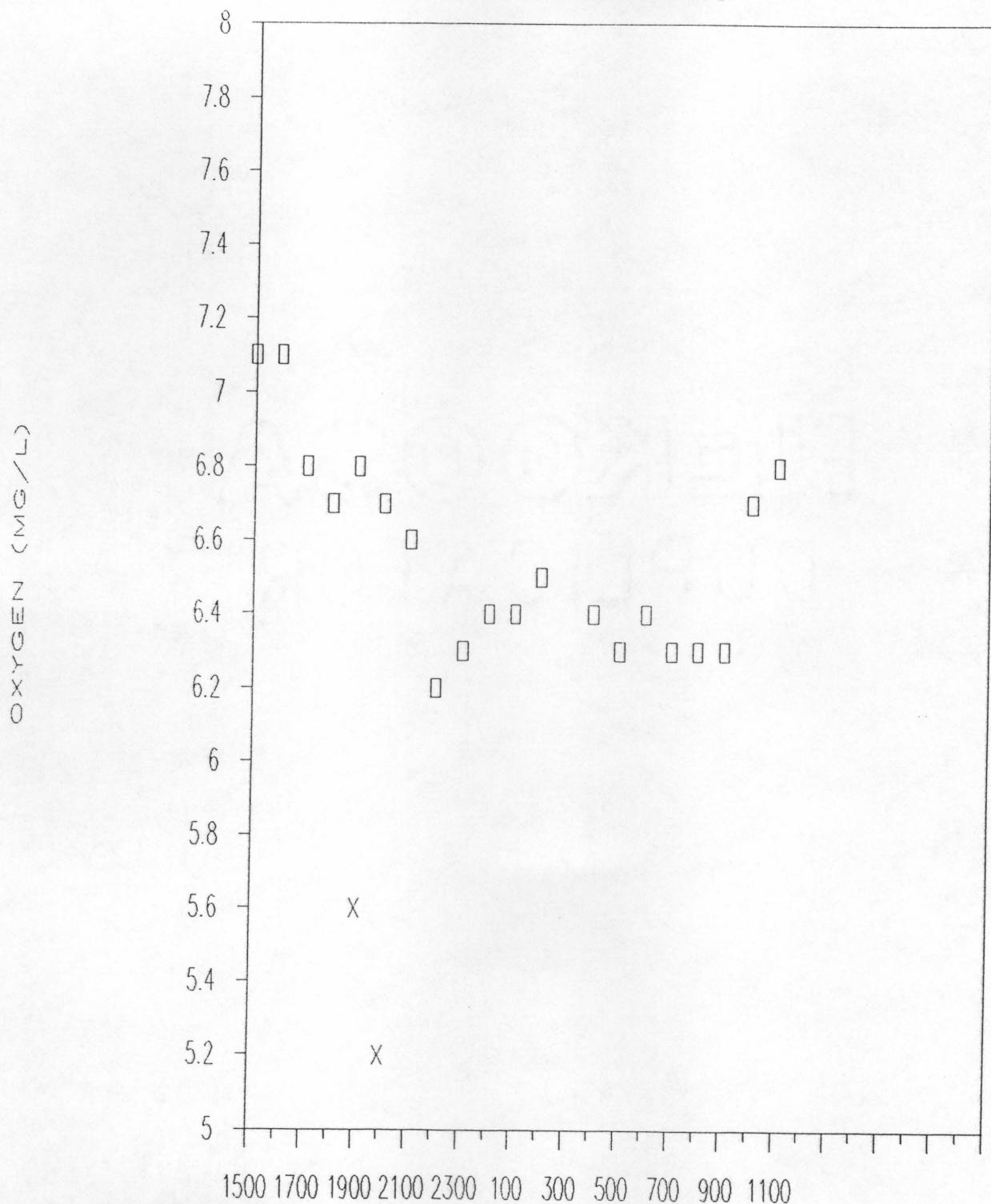
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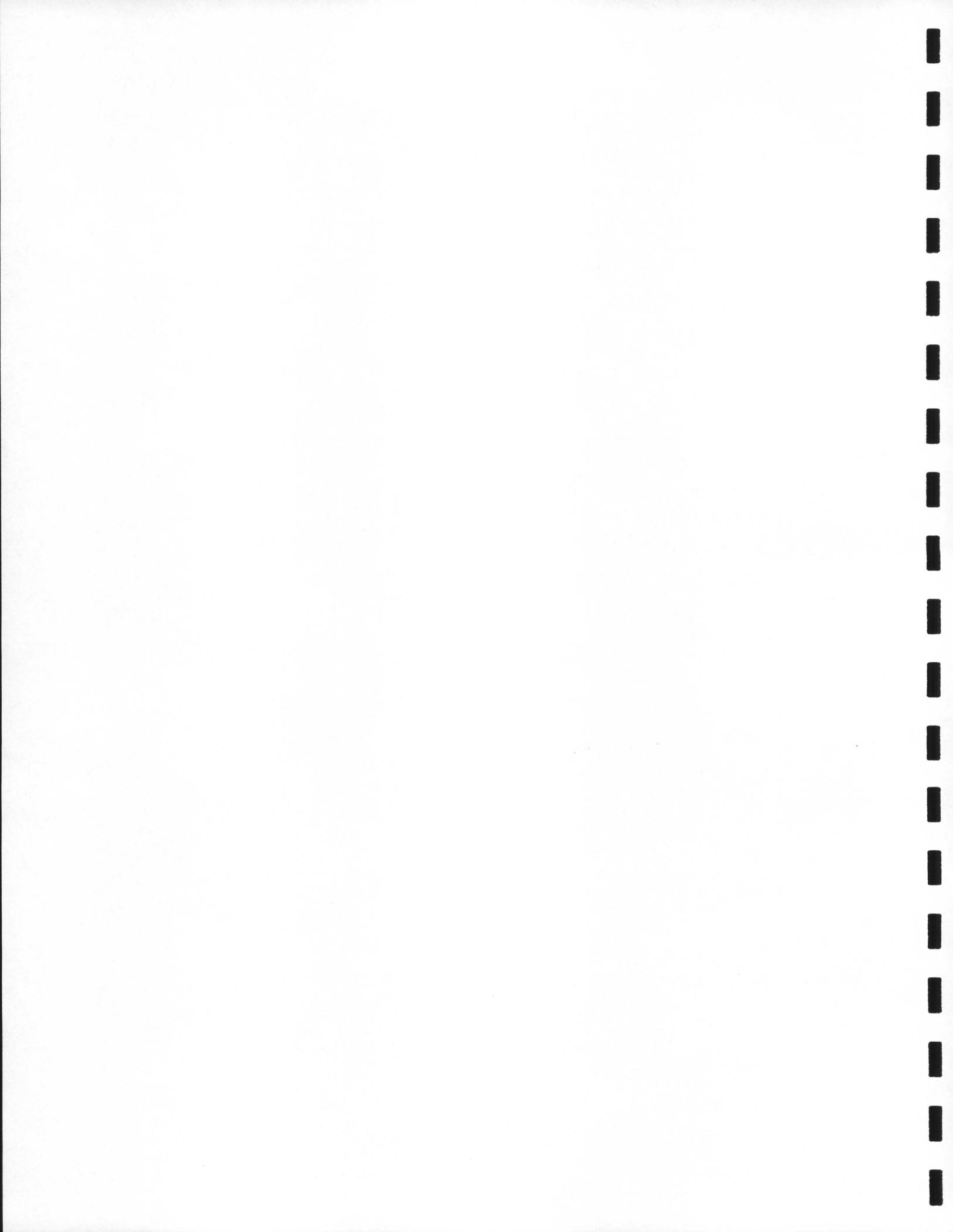
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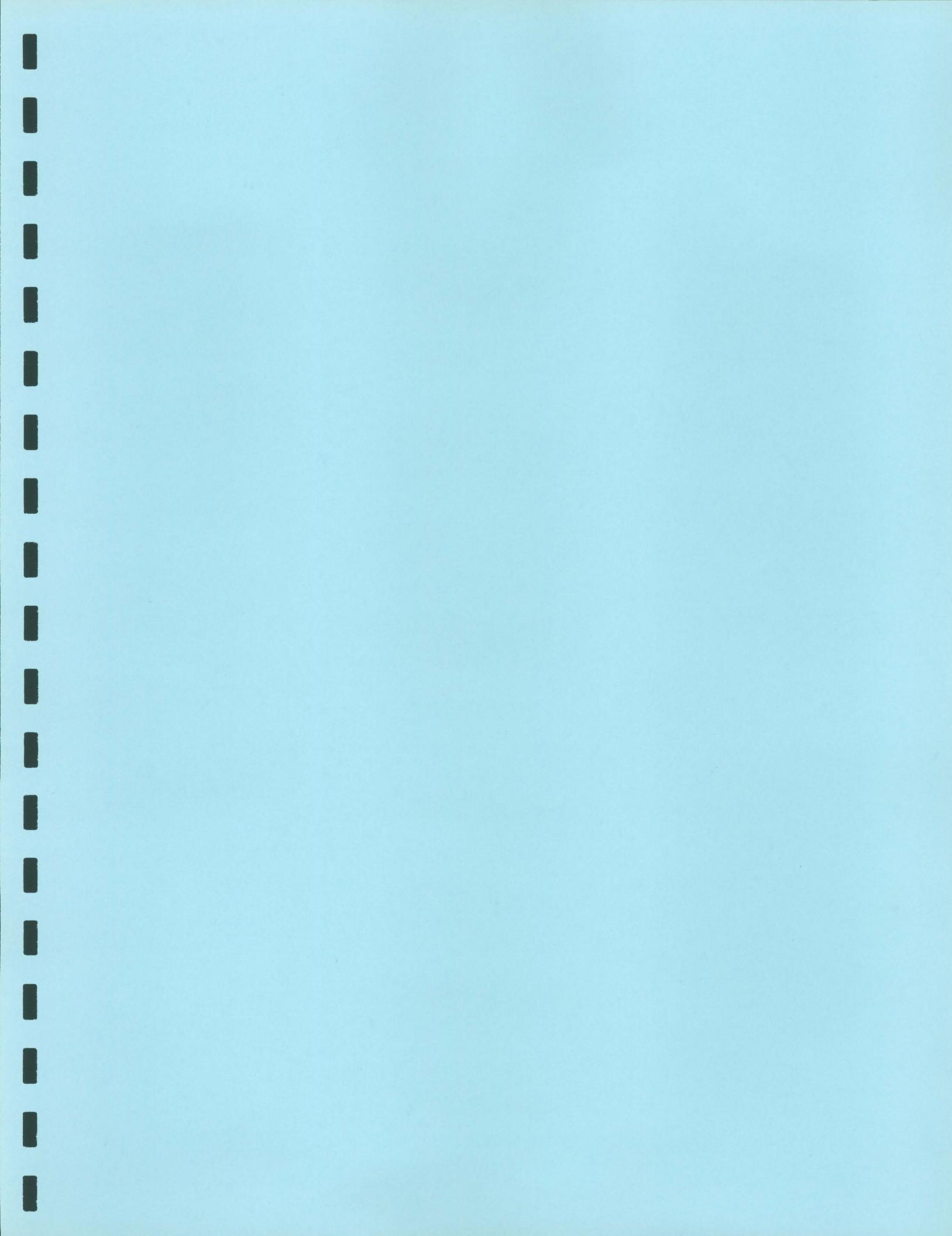
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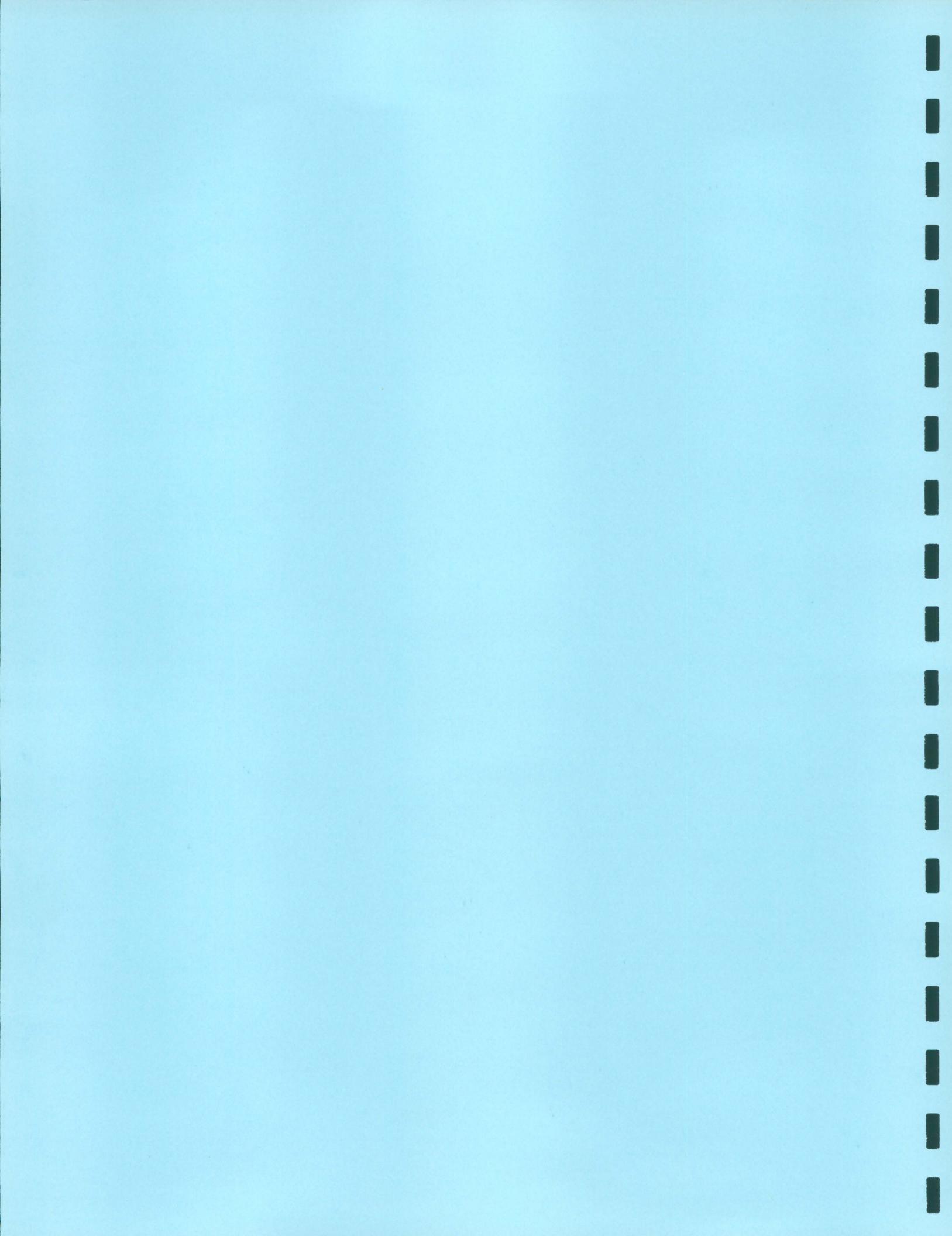


□ SURFACE VALUES

X BOTTOM VALUES

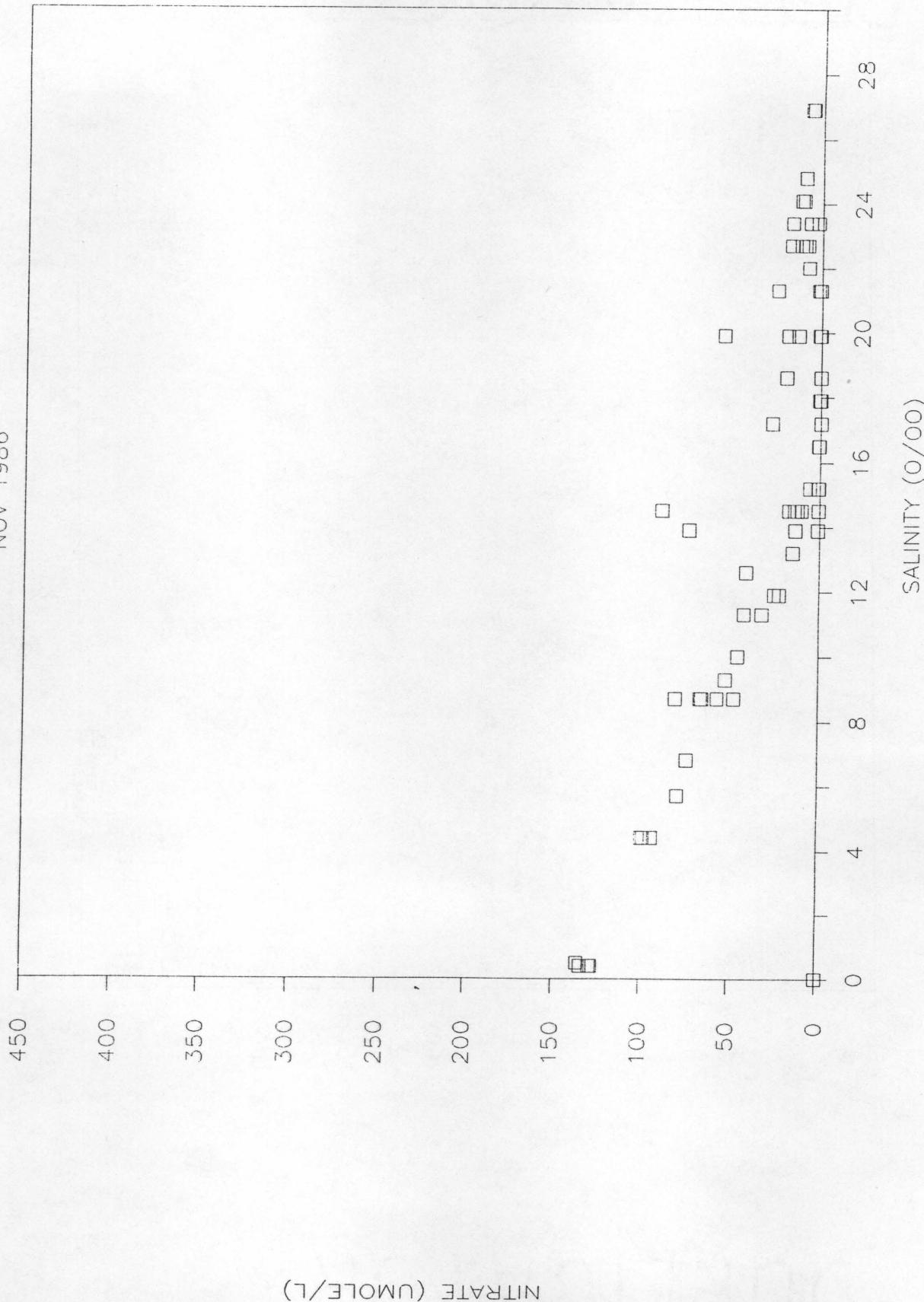






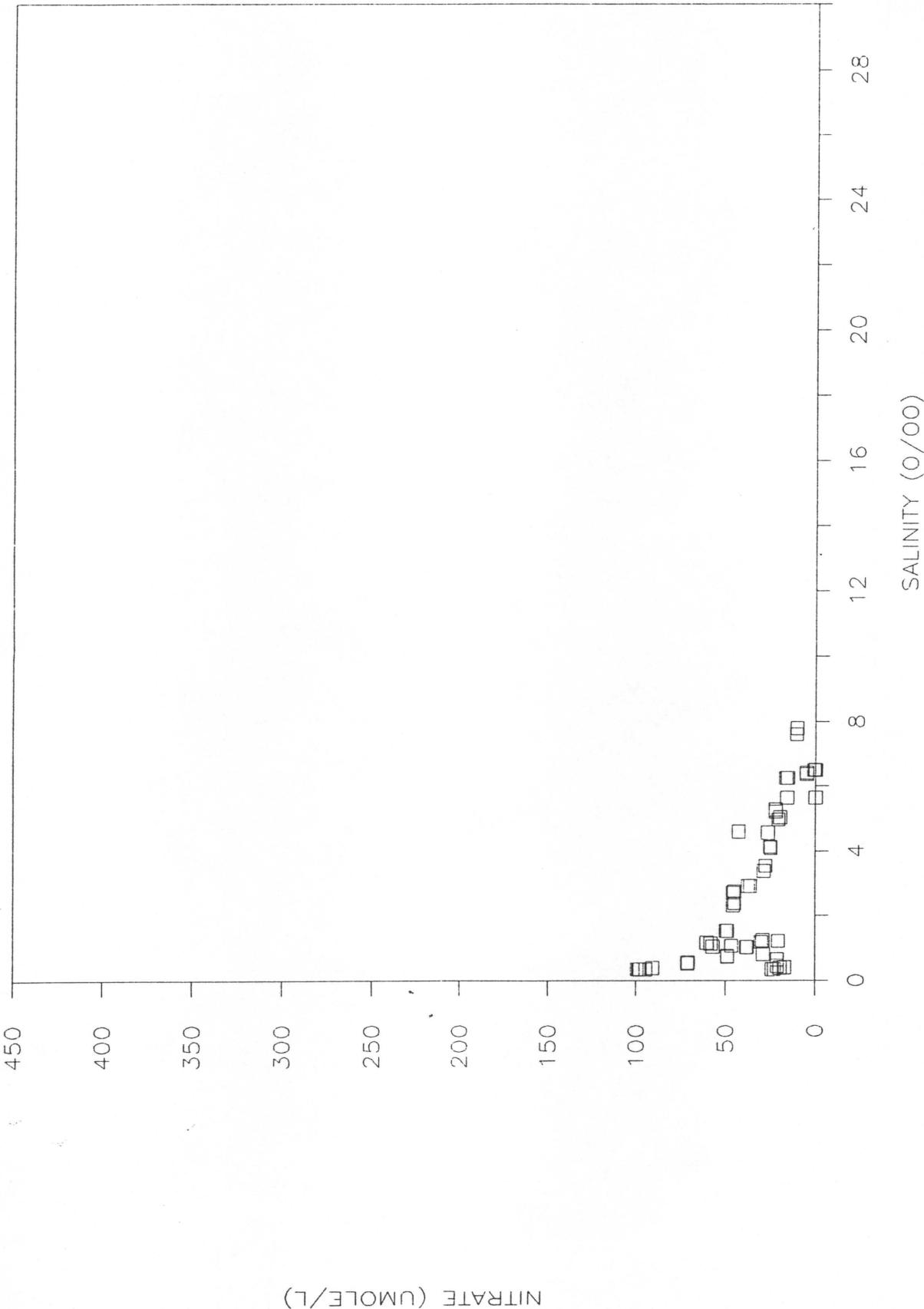
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NOV 1986



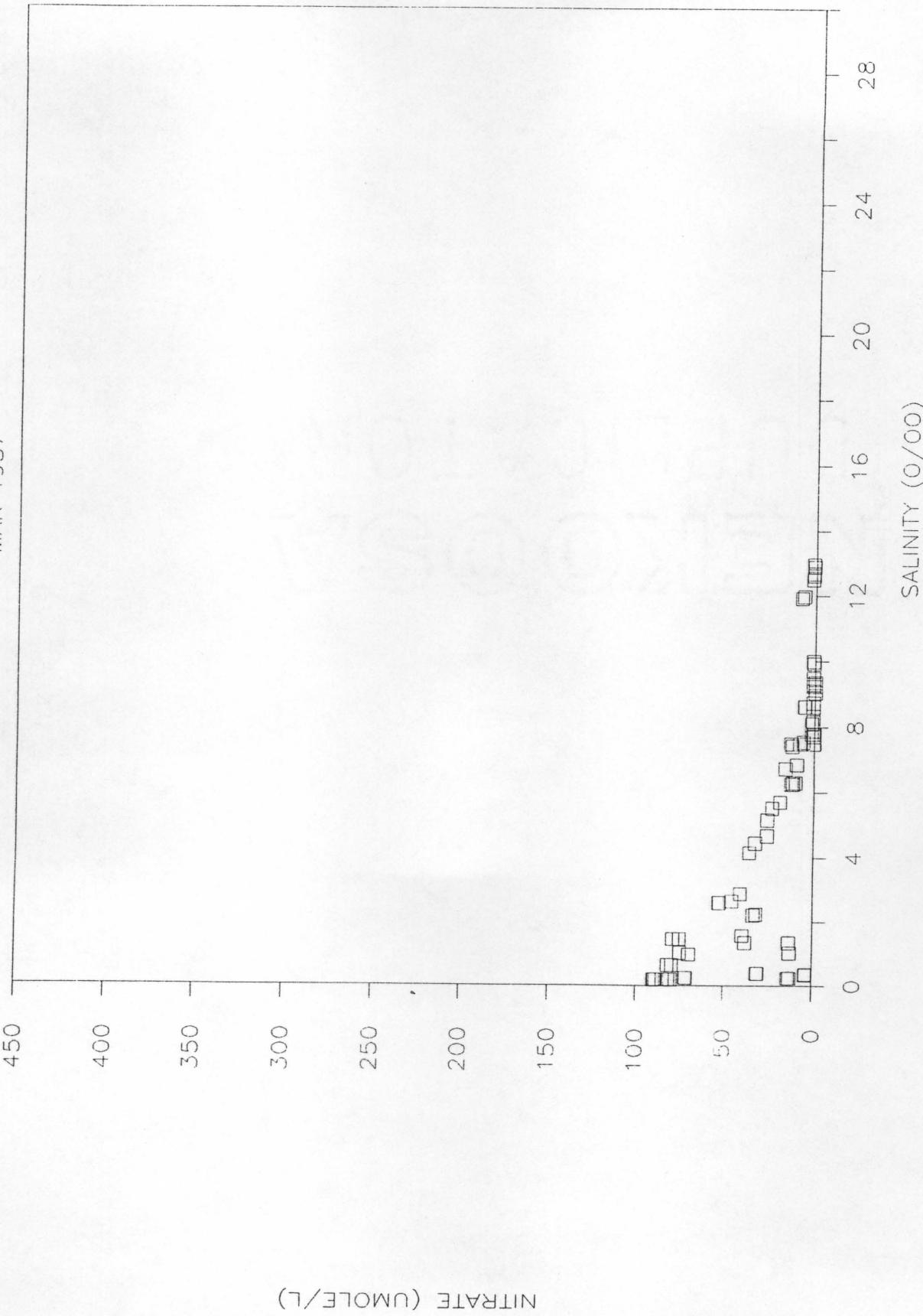
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JAN 1987



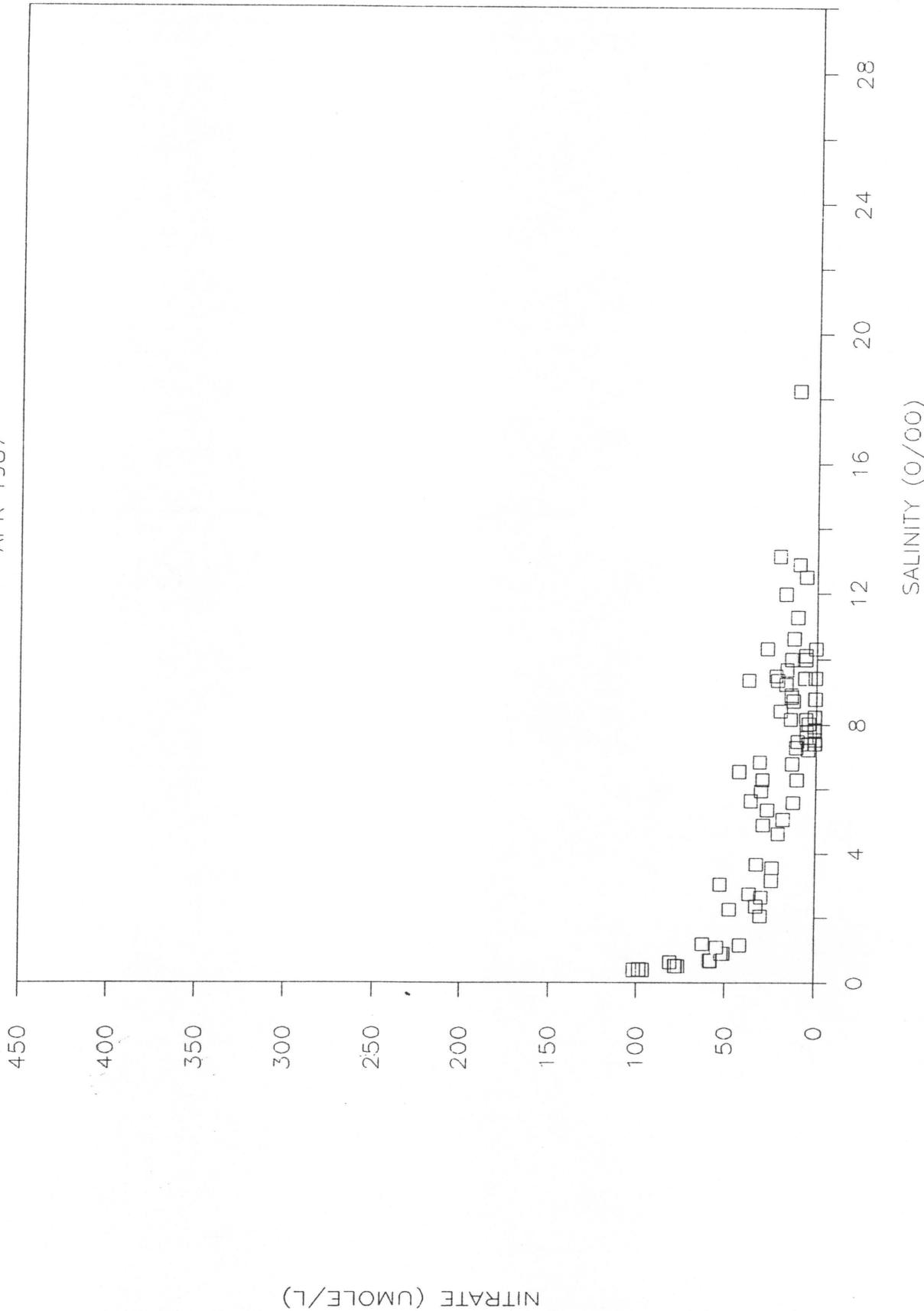
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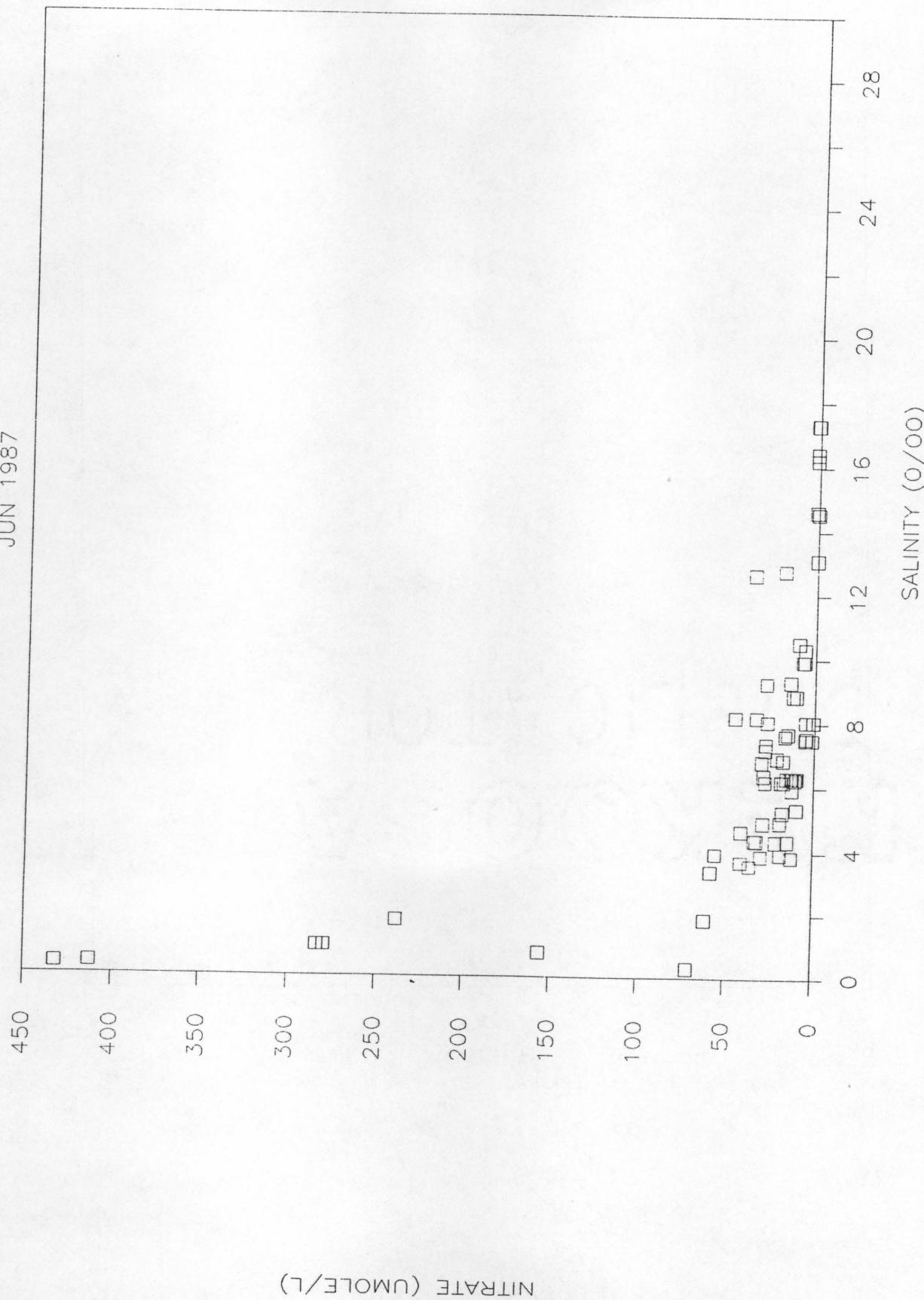


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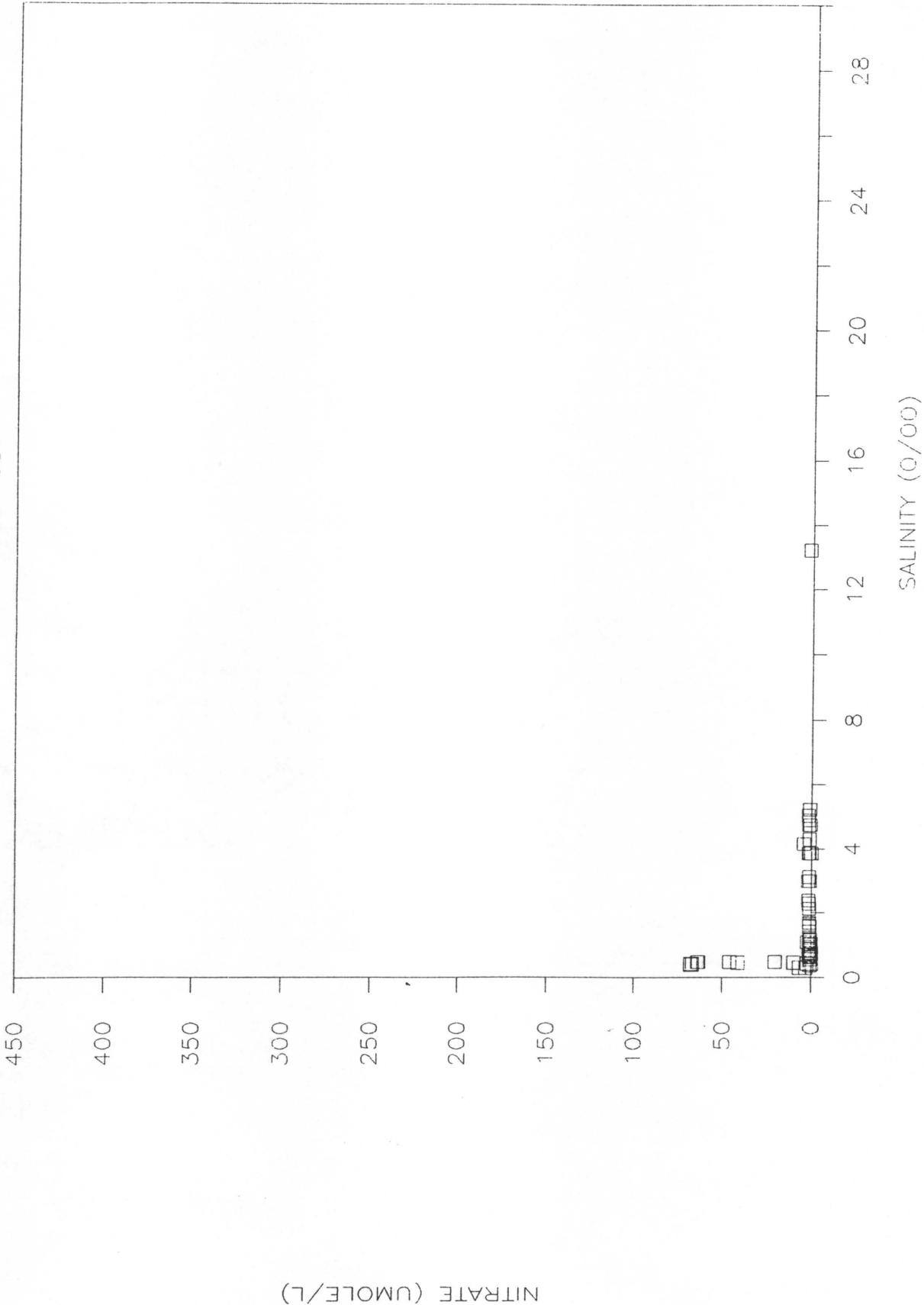


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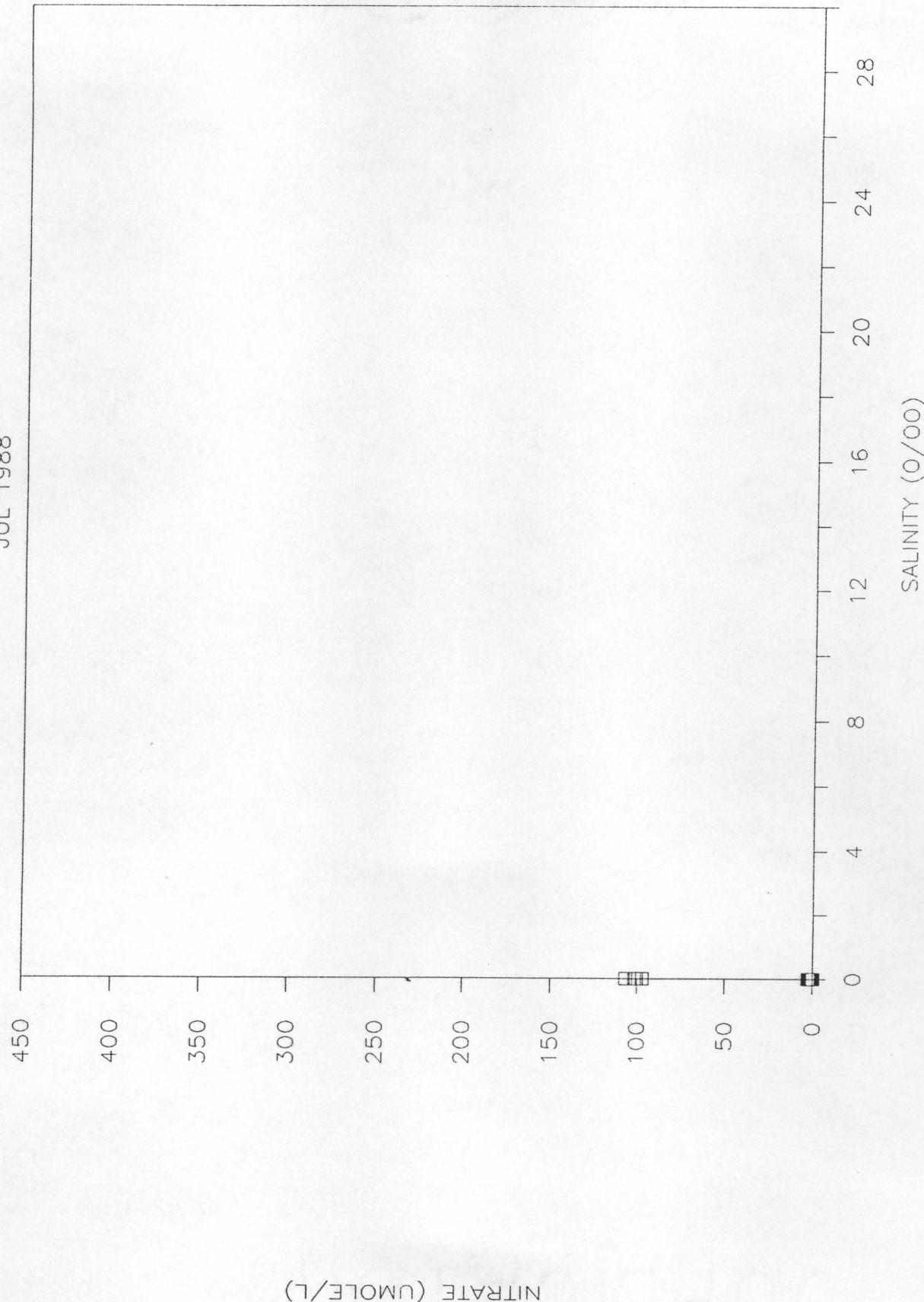
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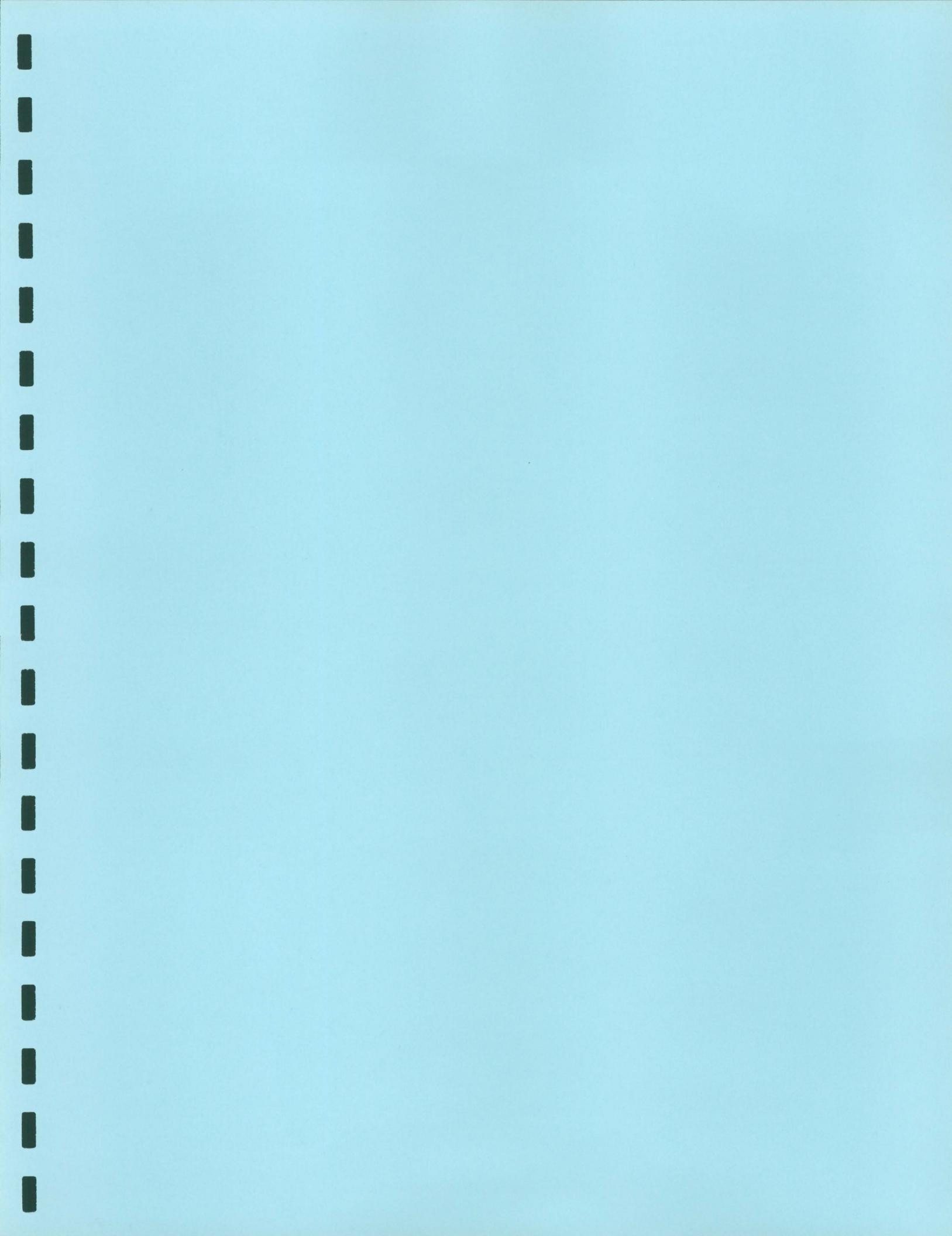


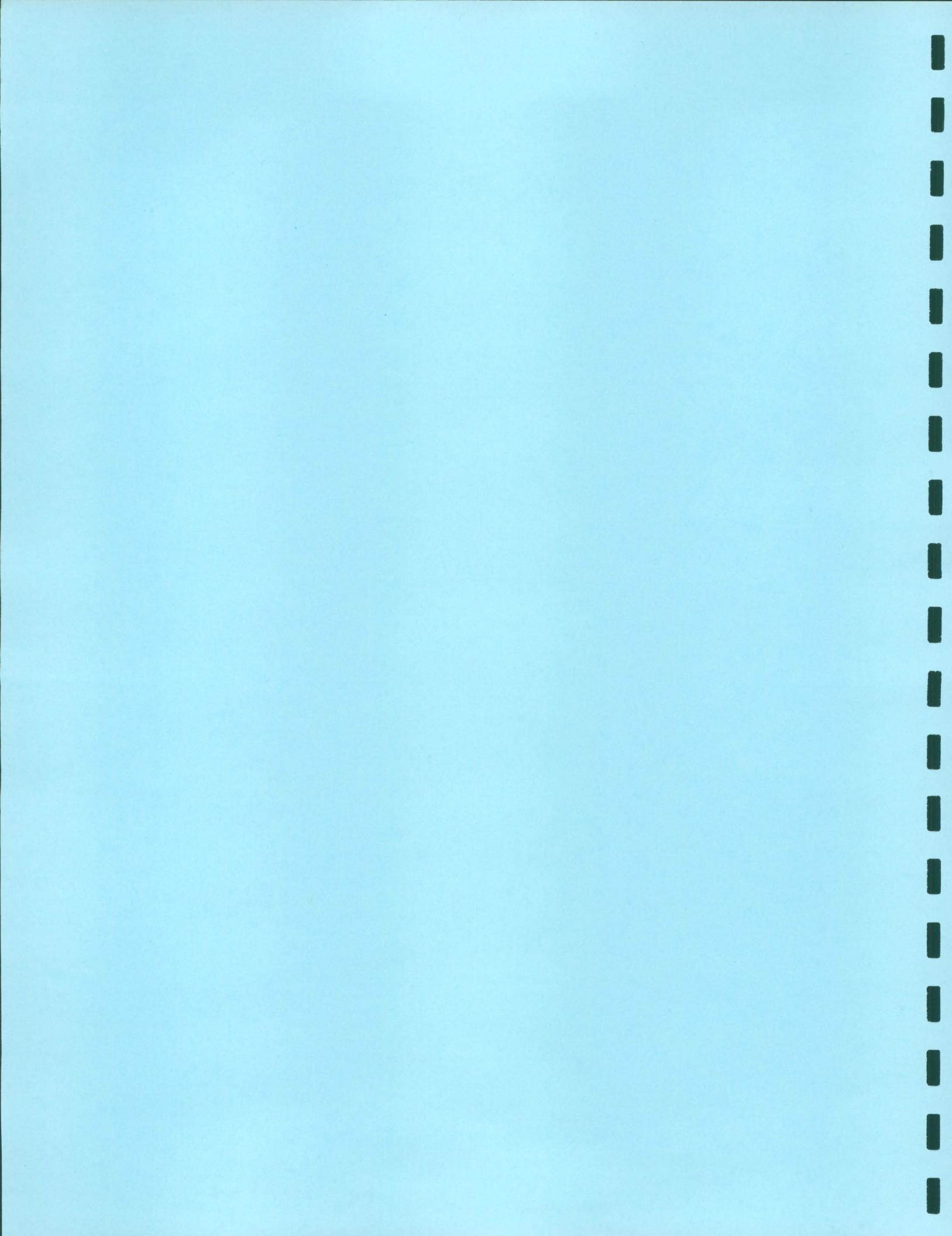
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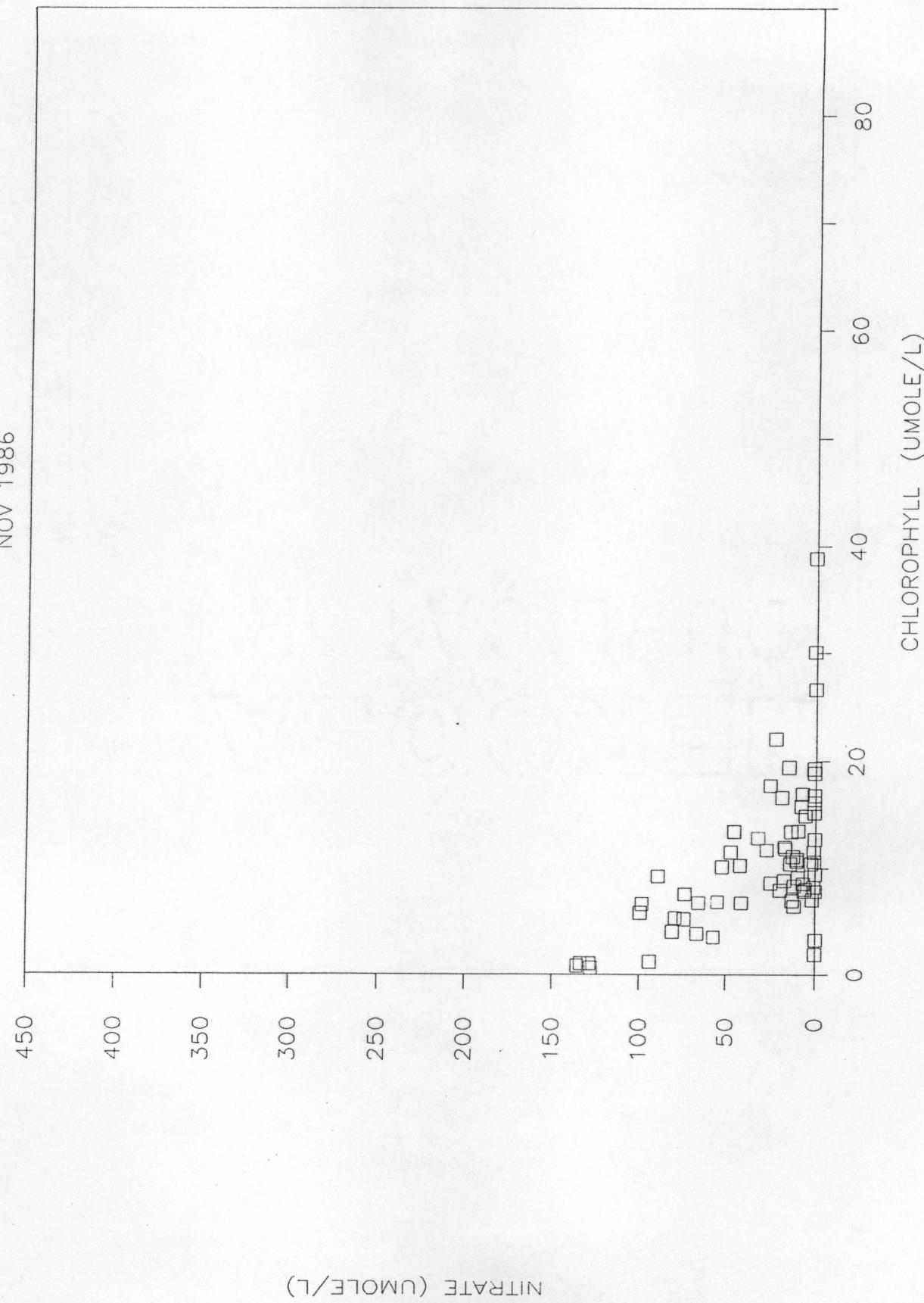






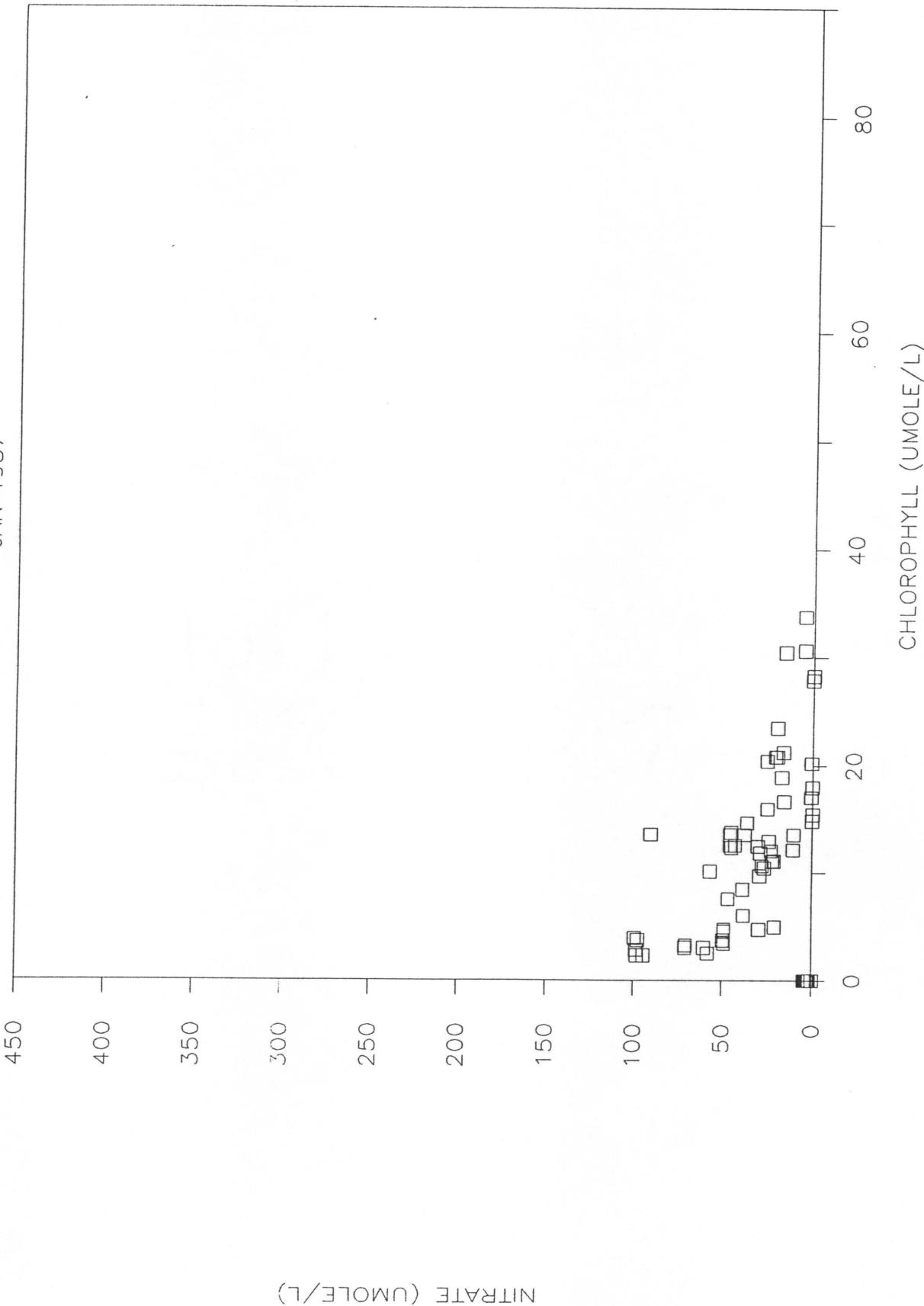


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NOV 1986



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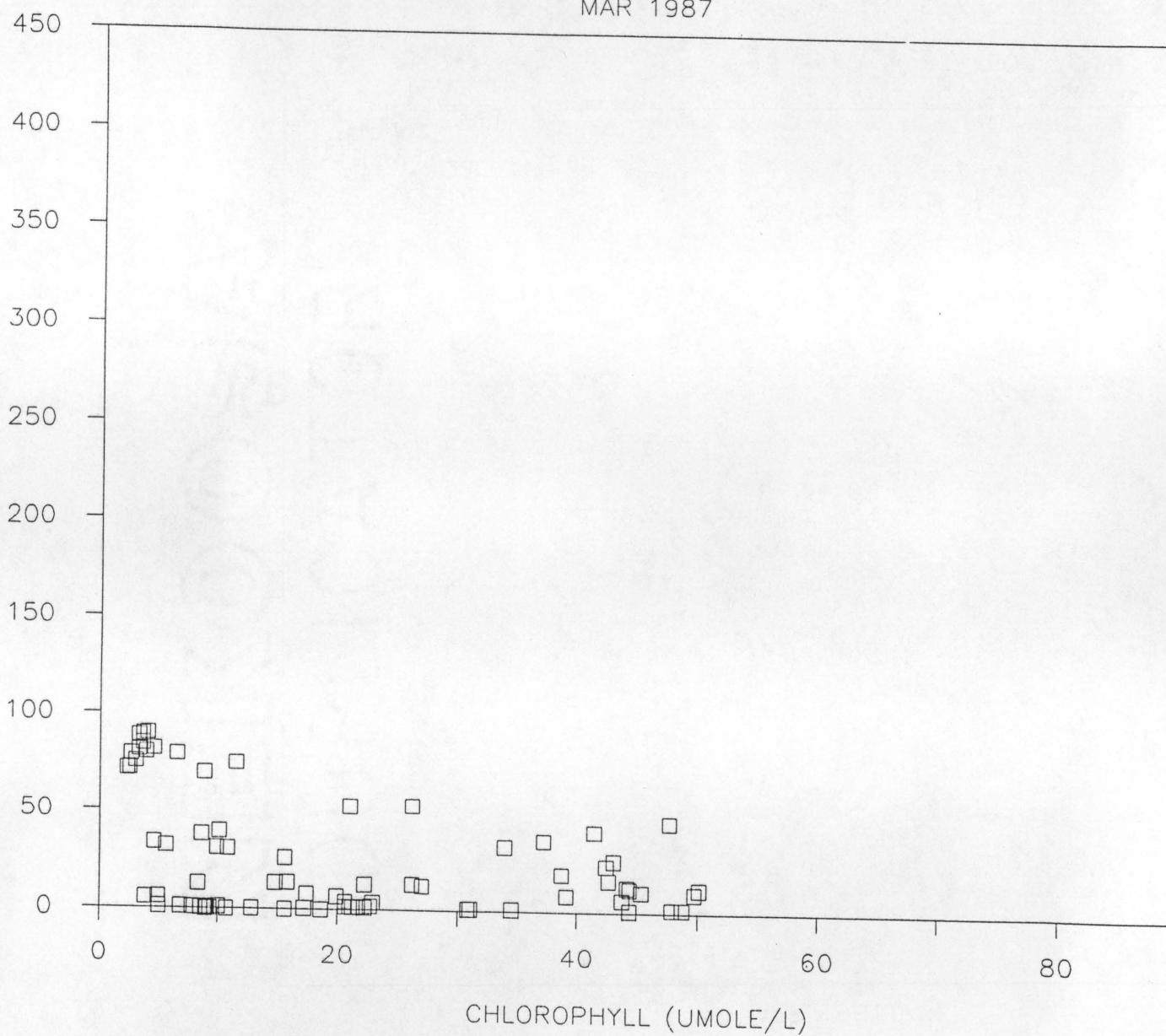
JAN 1987



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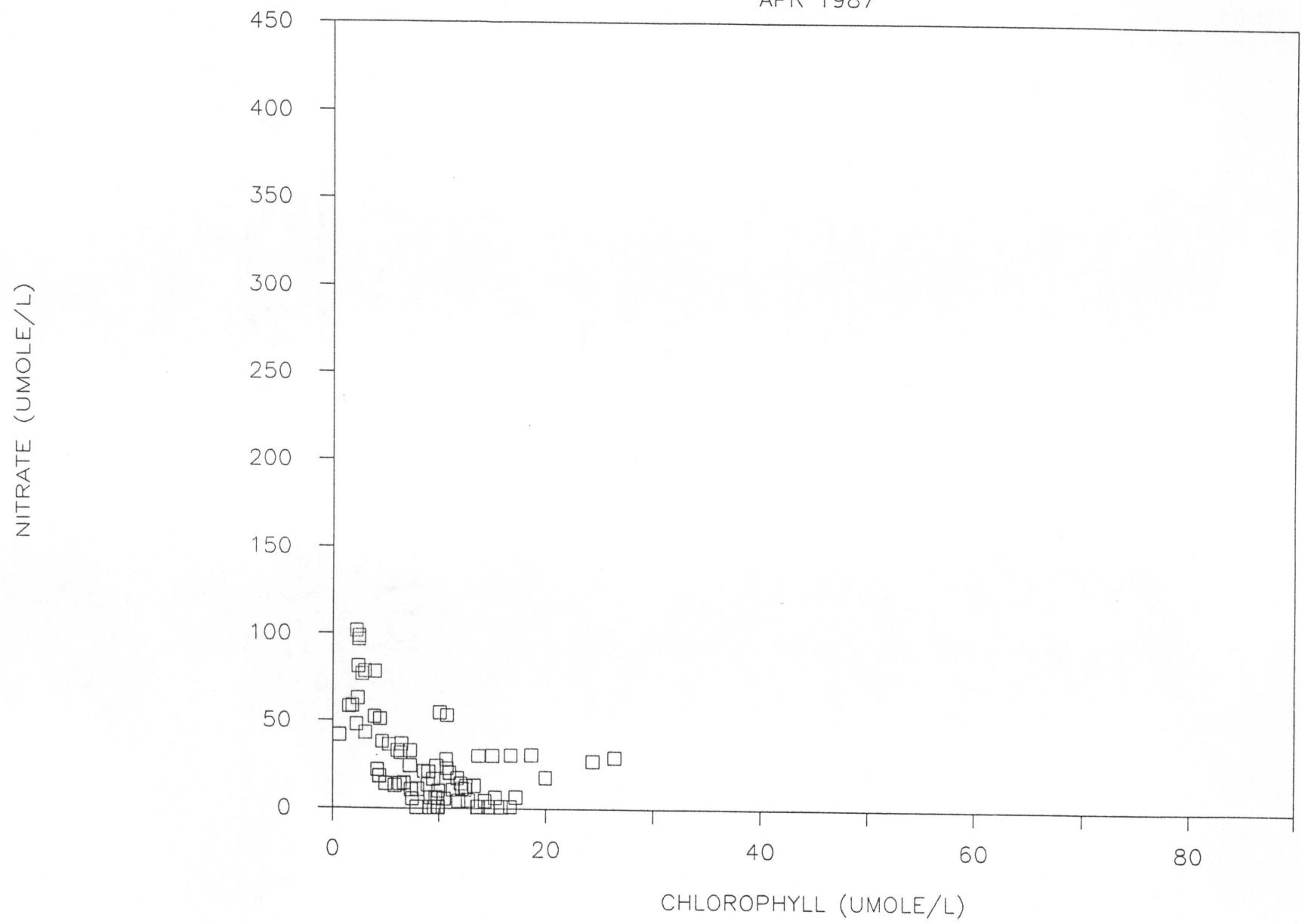
MAR 1987

NITRATE (UMOLE/L)

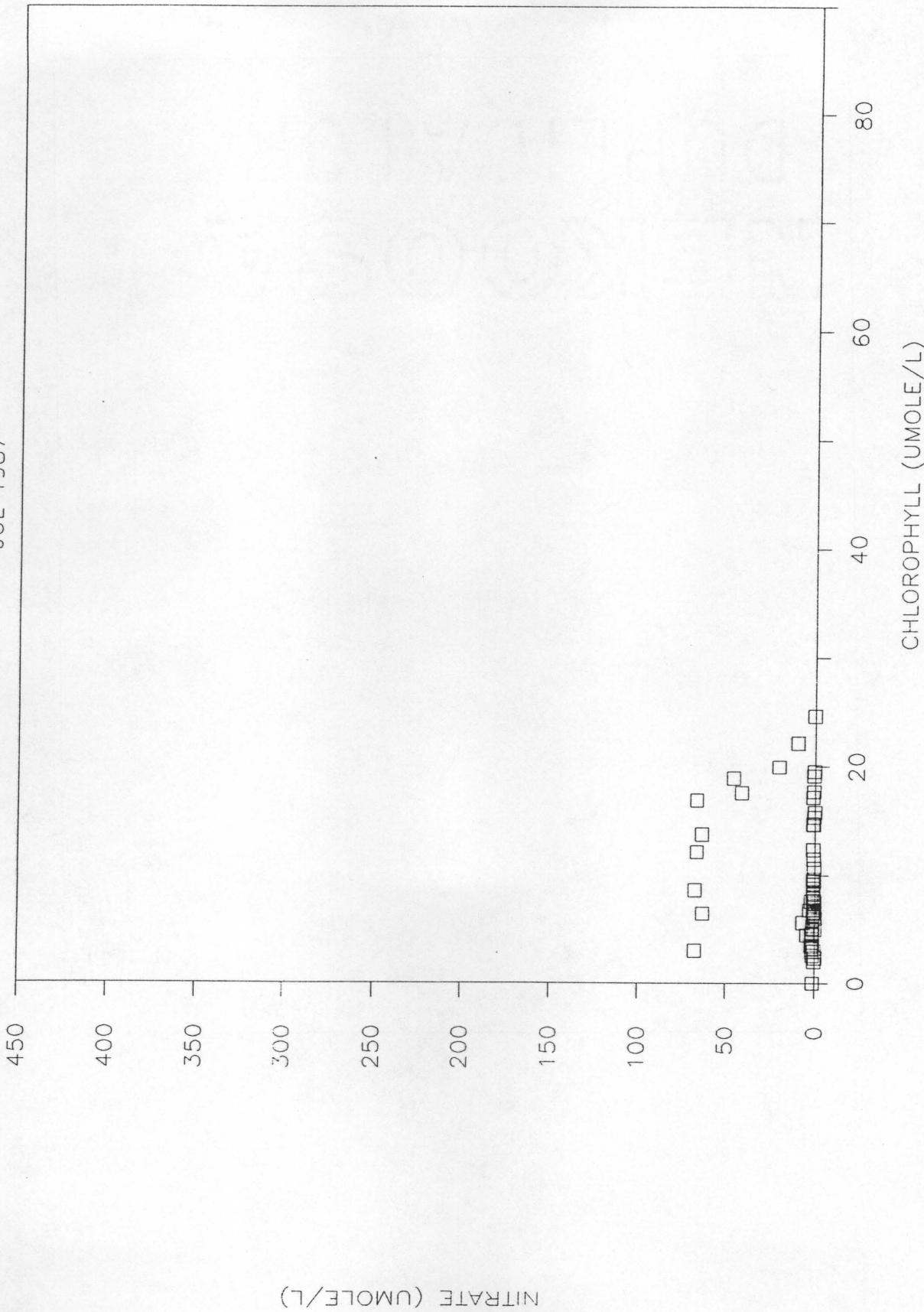


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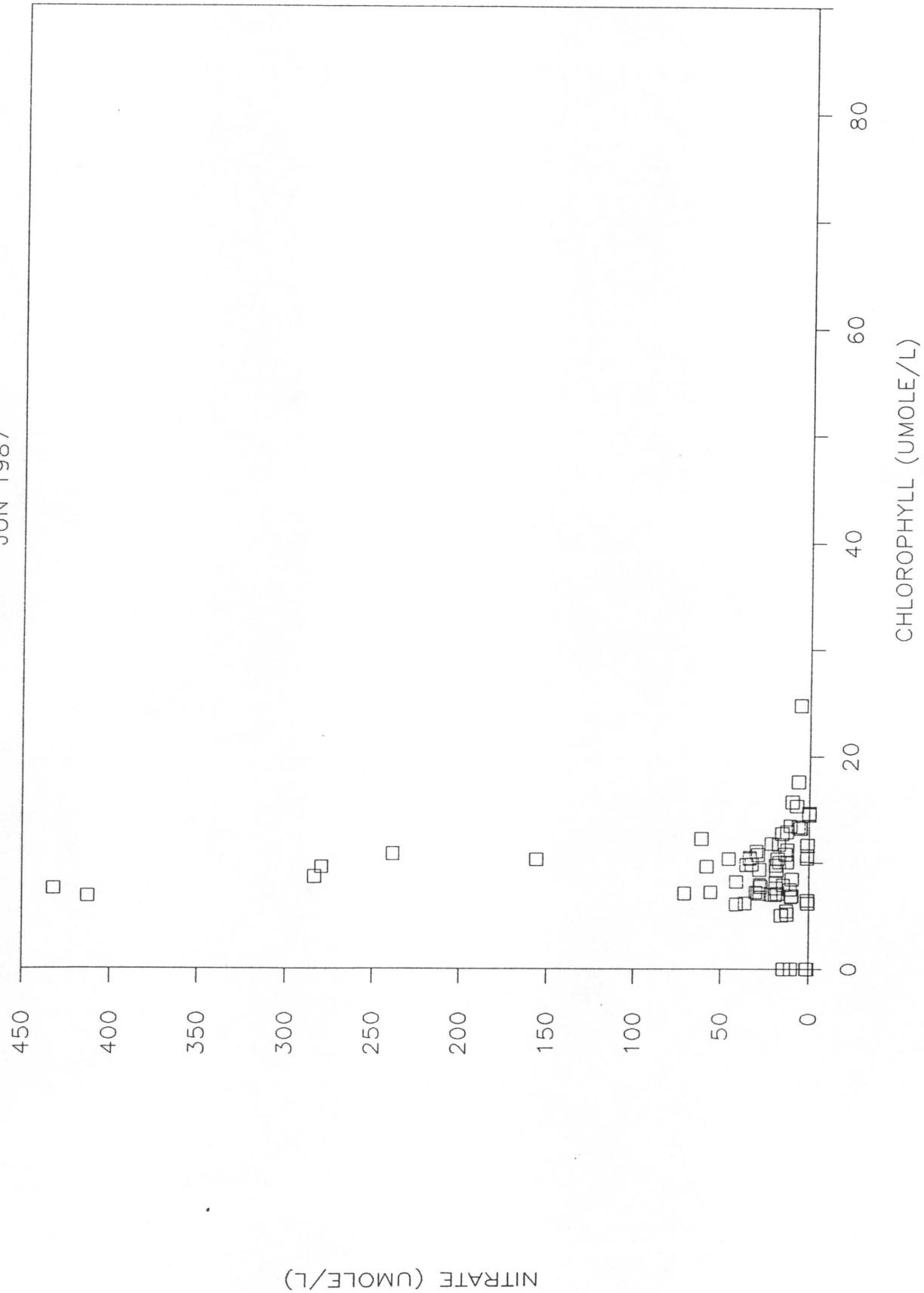
APR 1987



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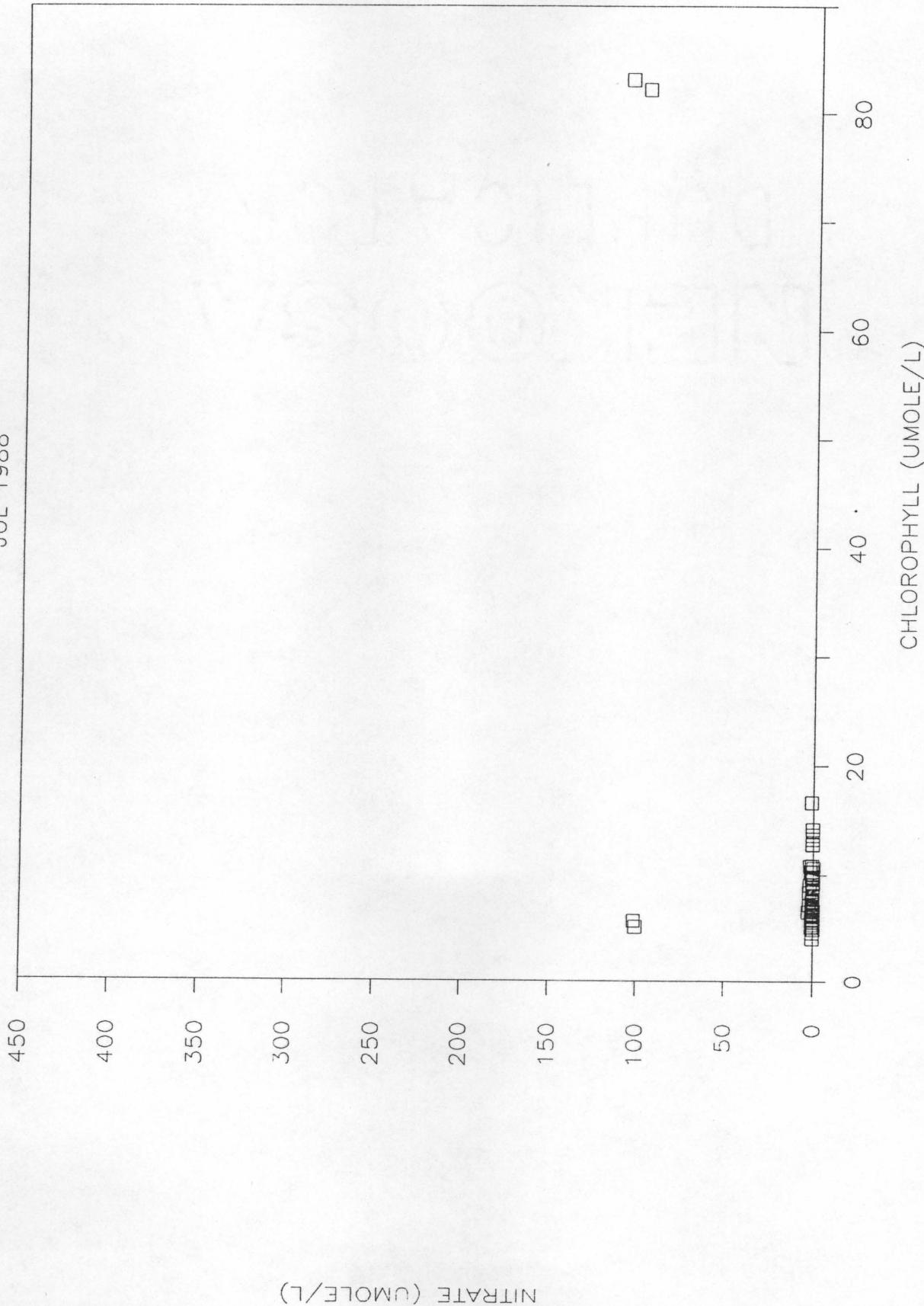


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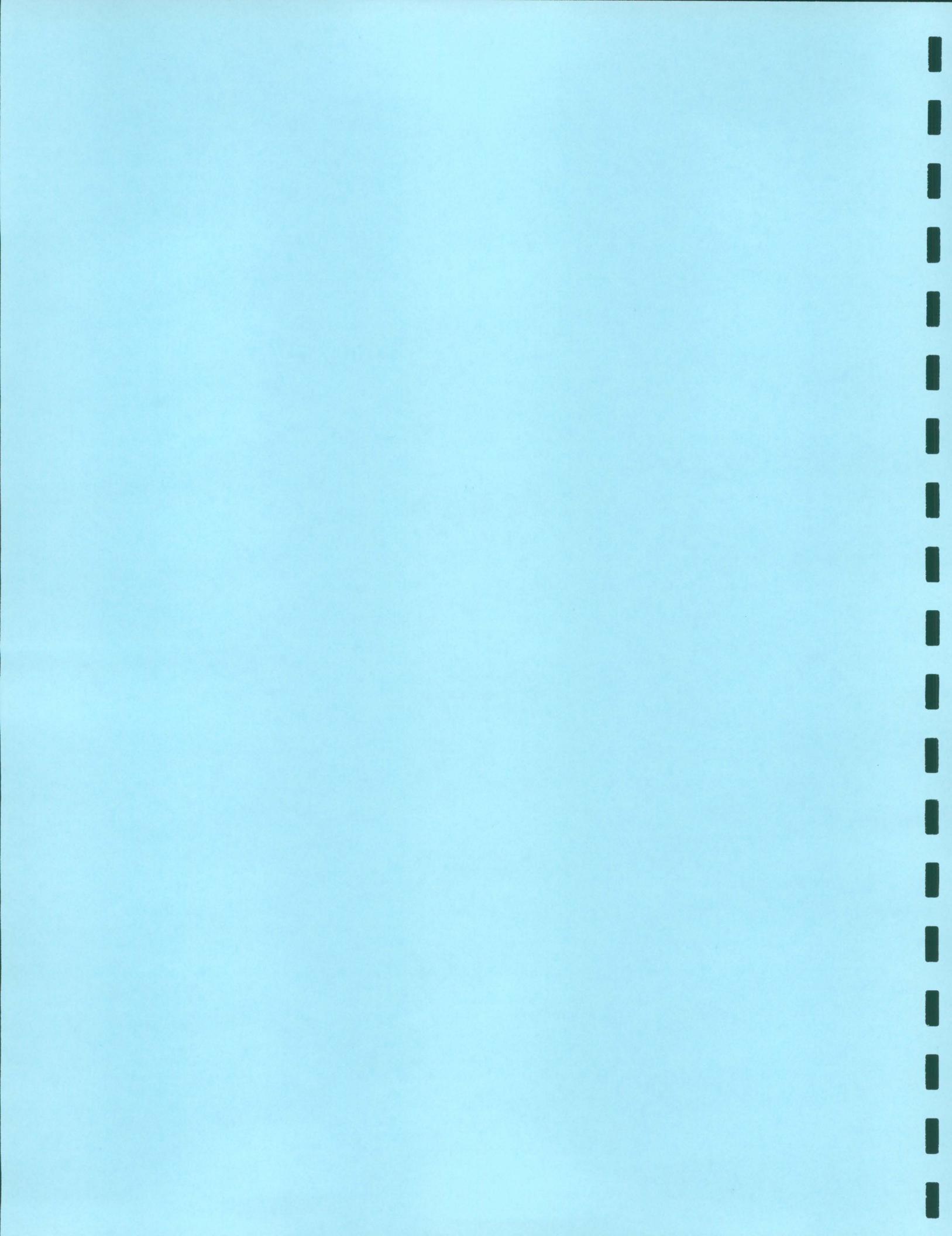
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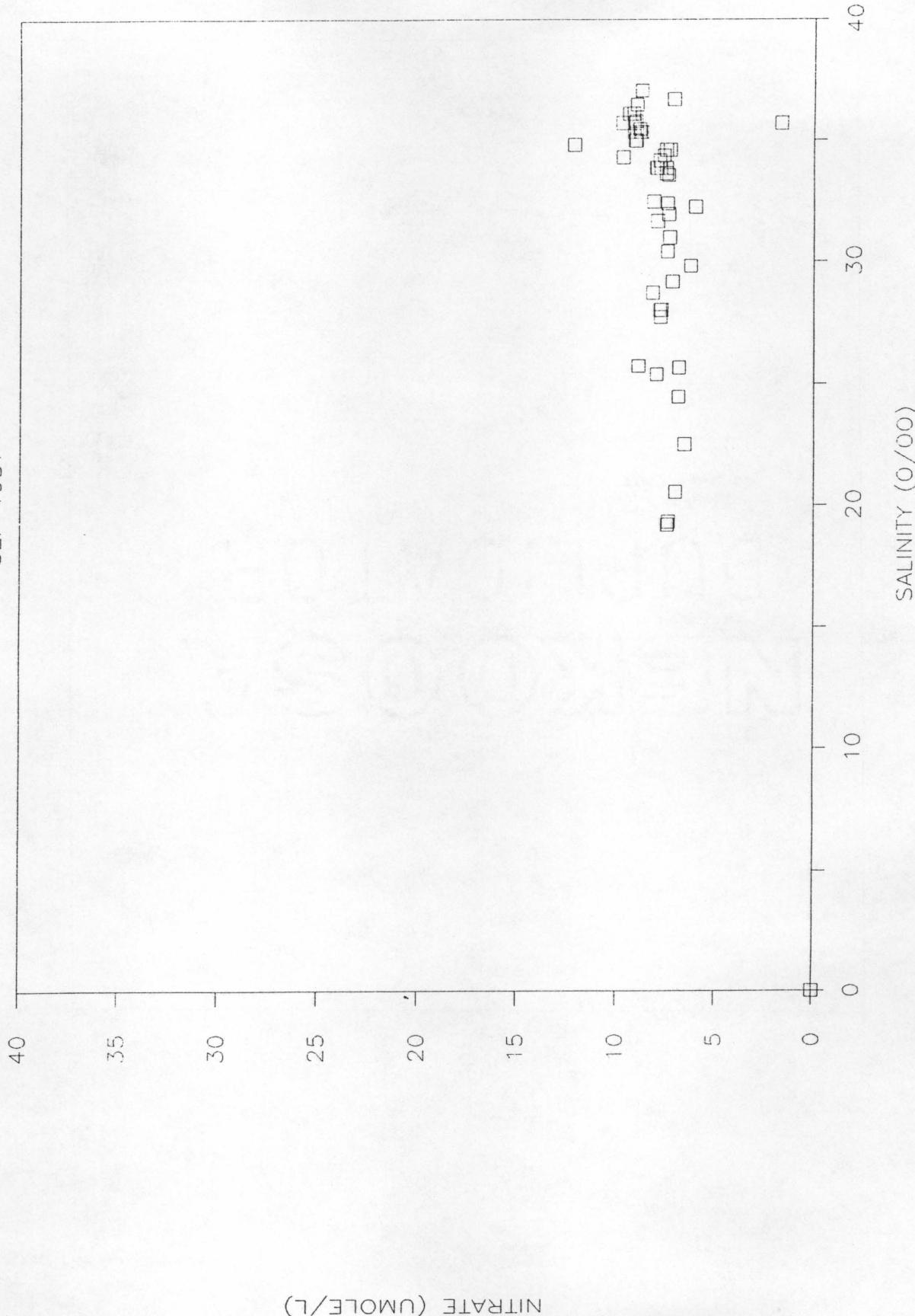




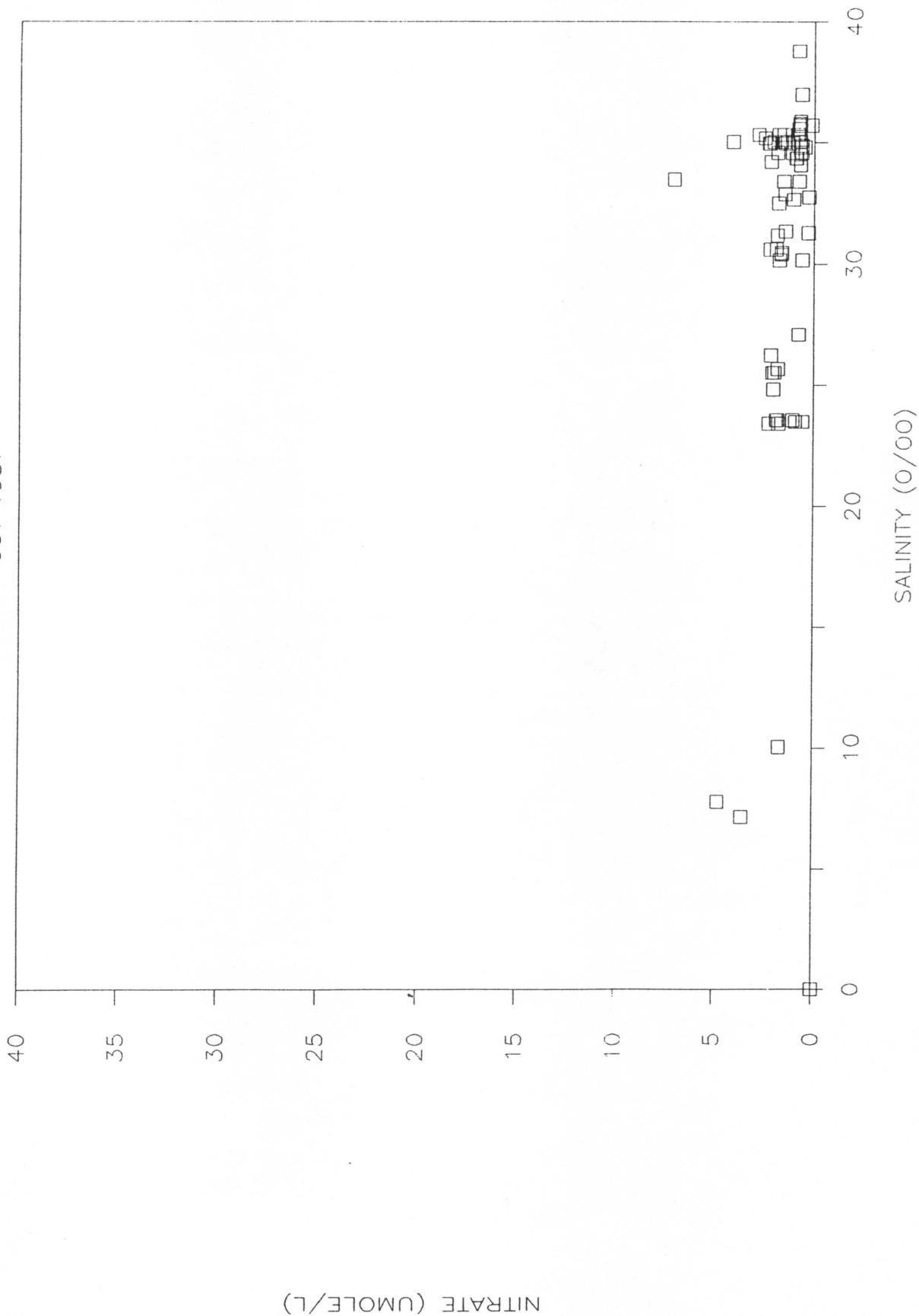


NIPS-II

SEP 1987

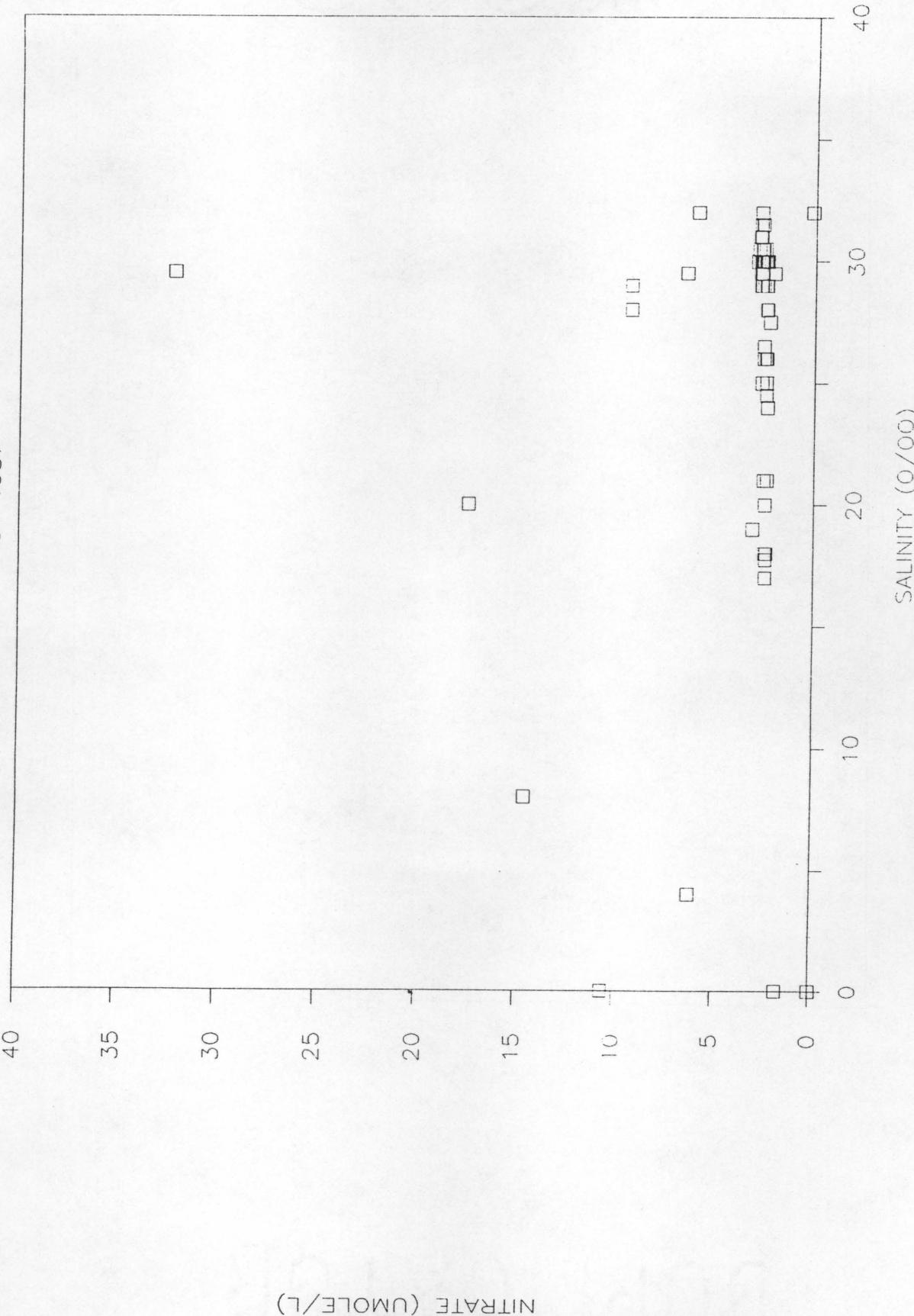


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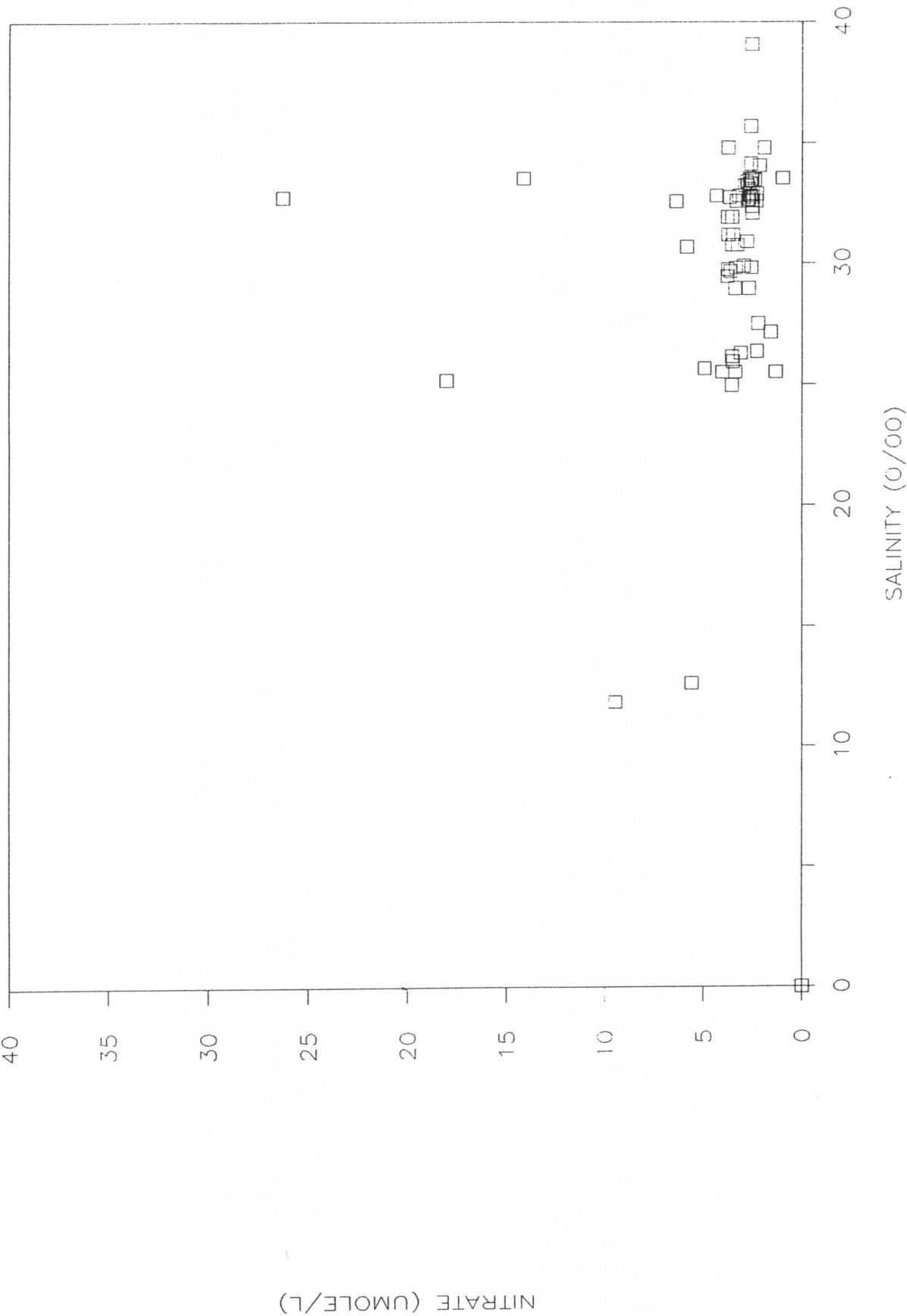
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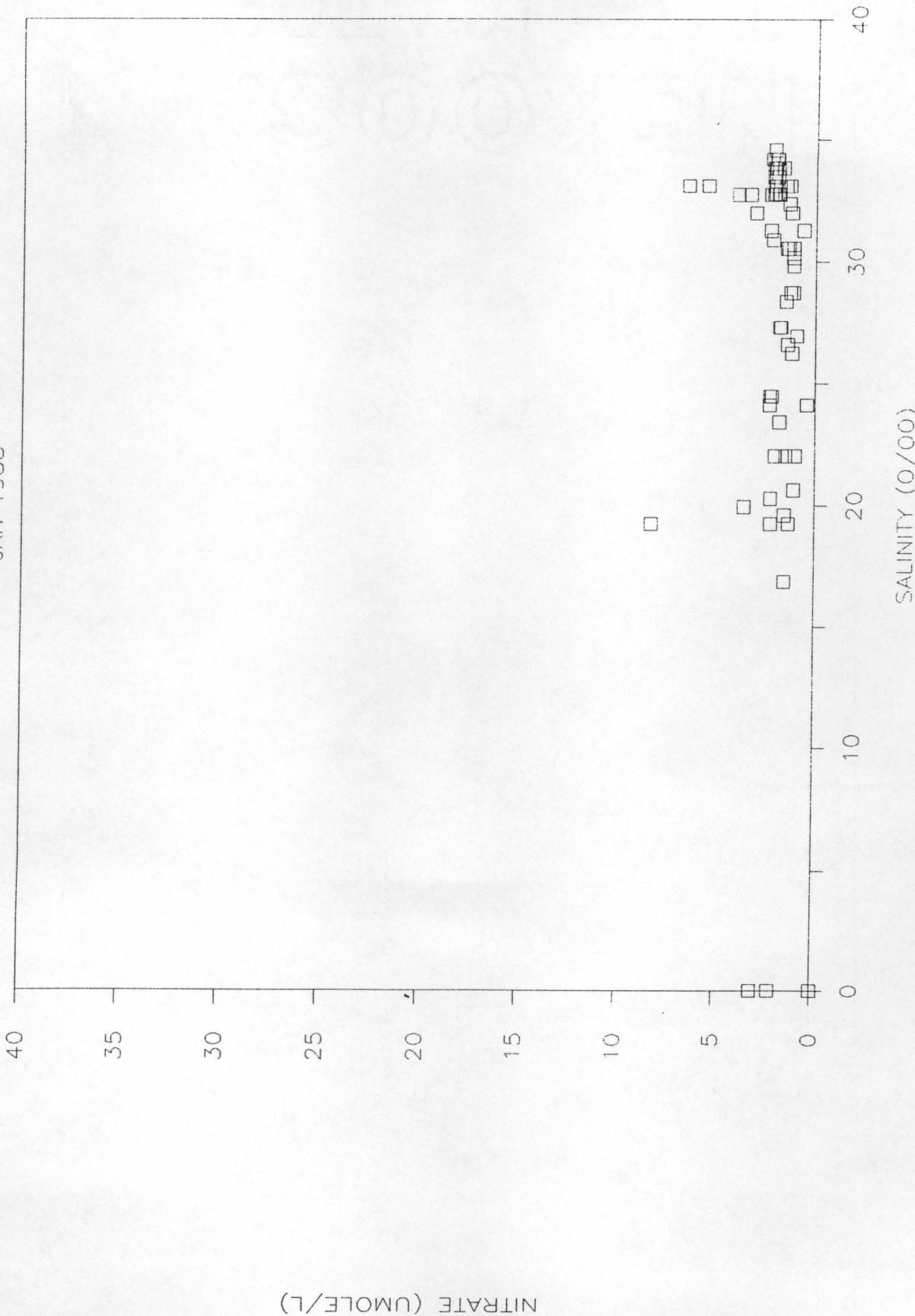
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DEC 1987



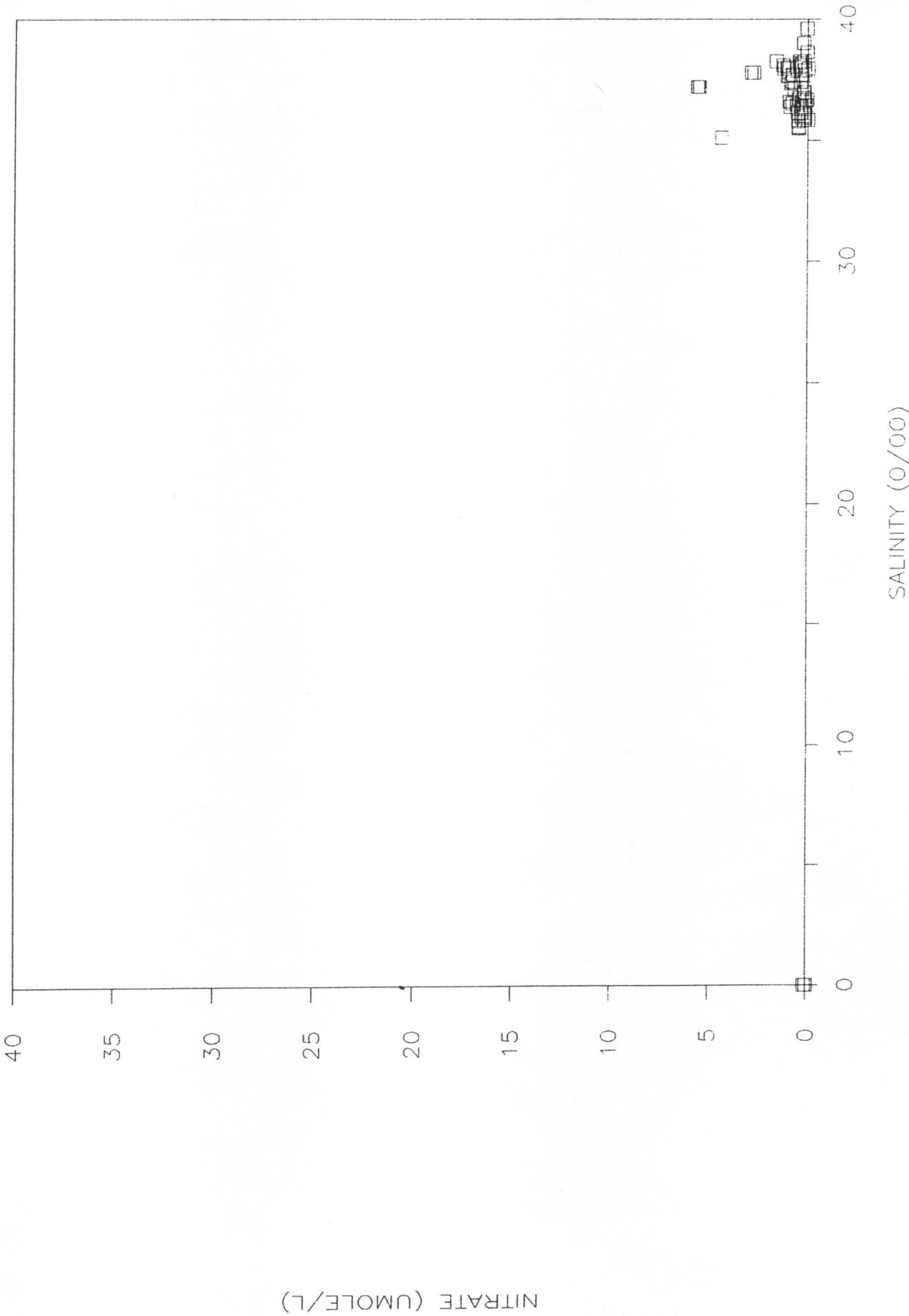
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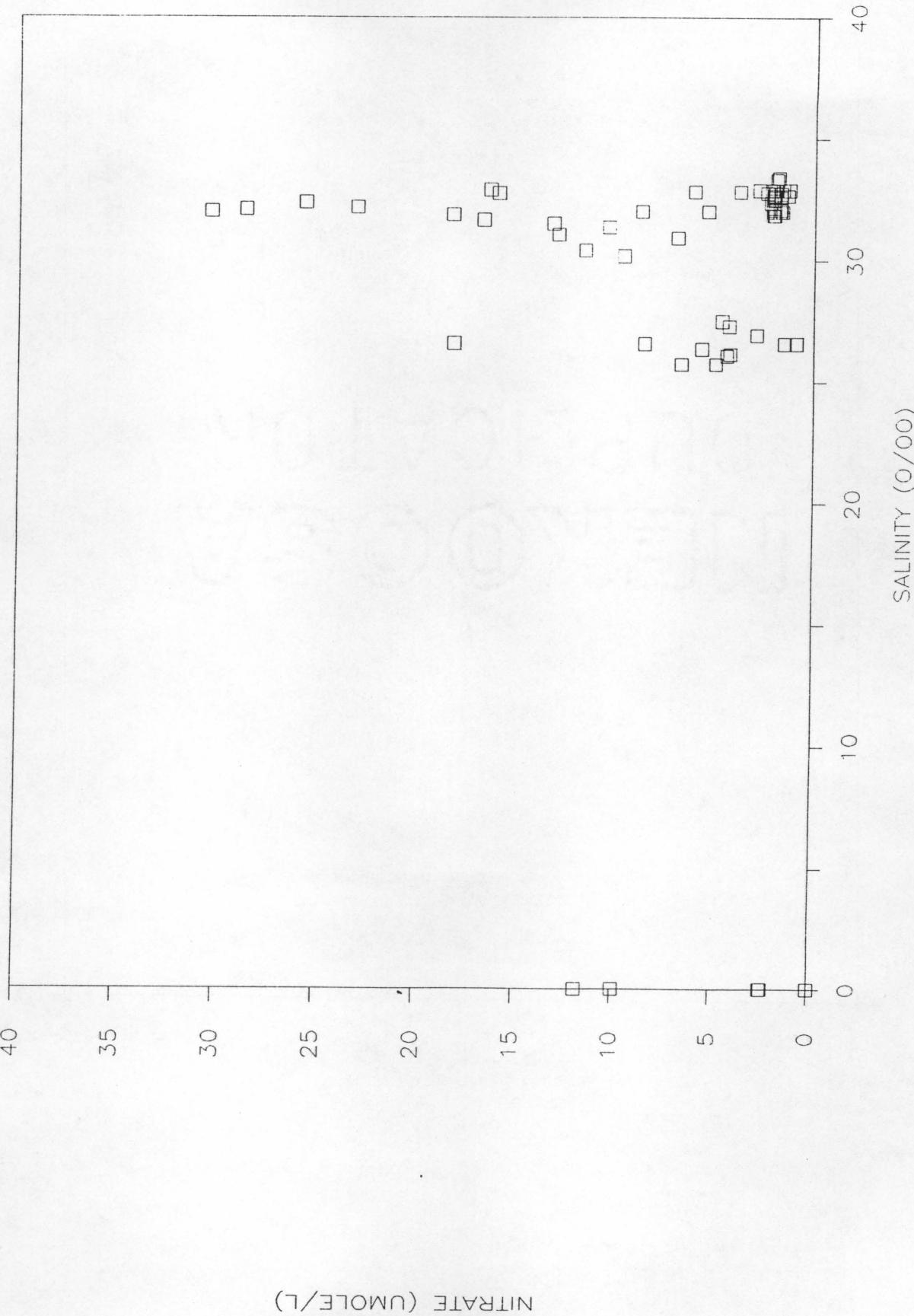
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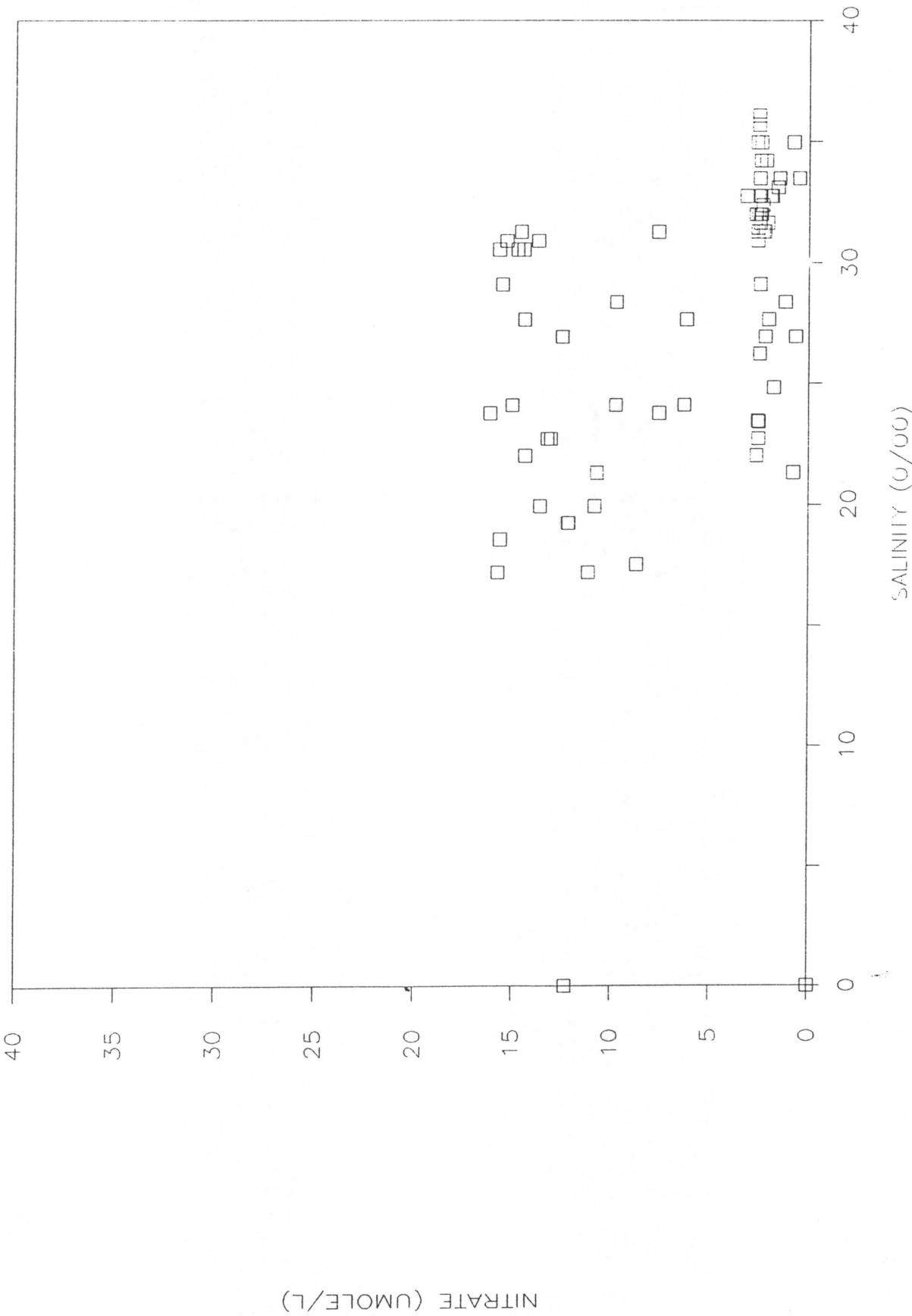
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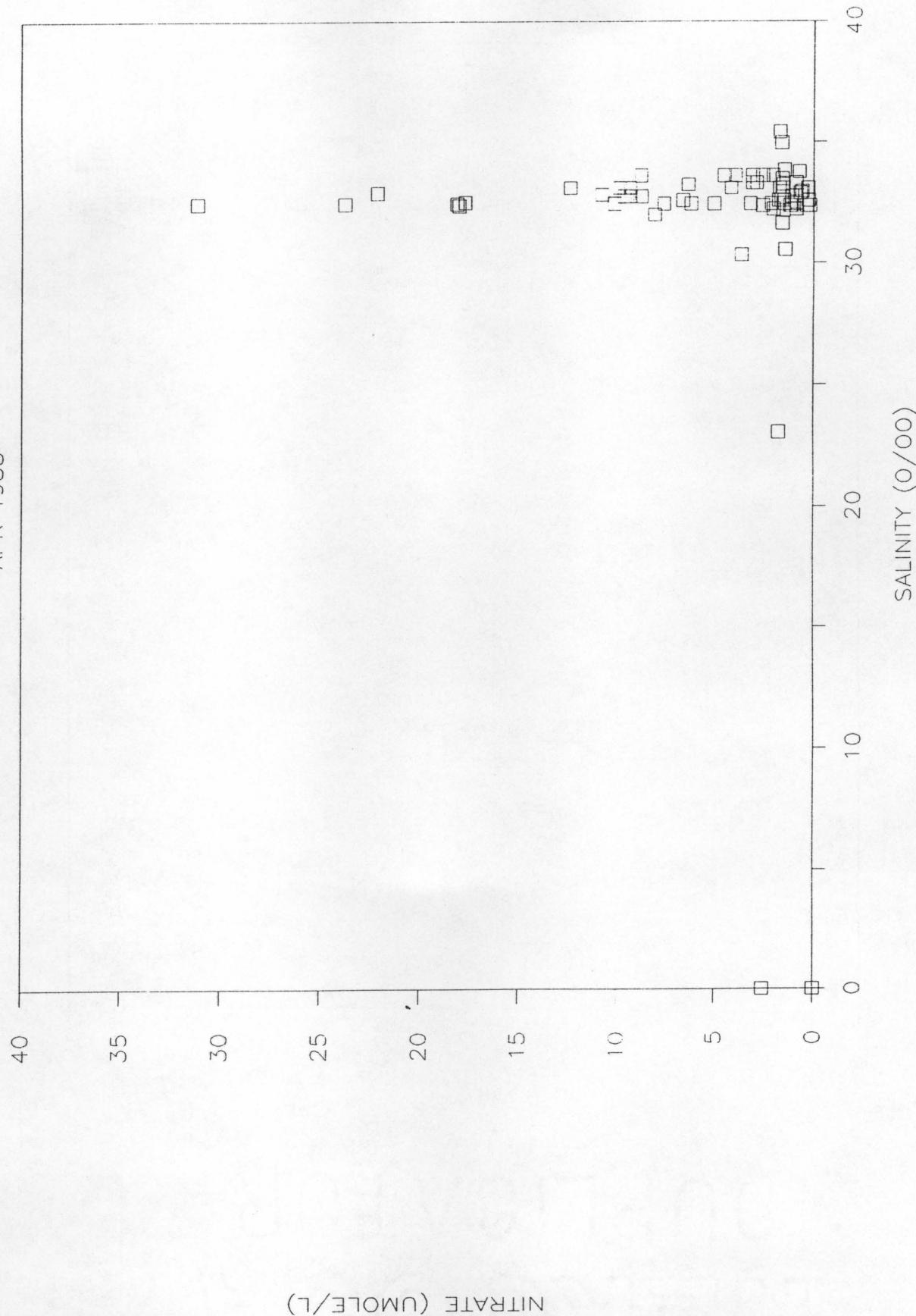


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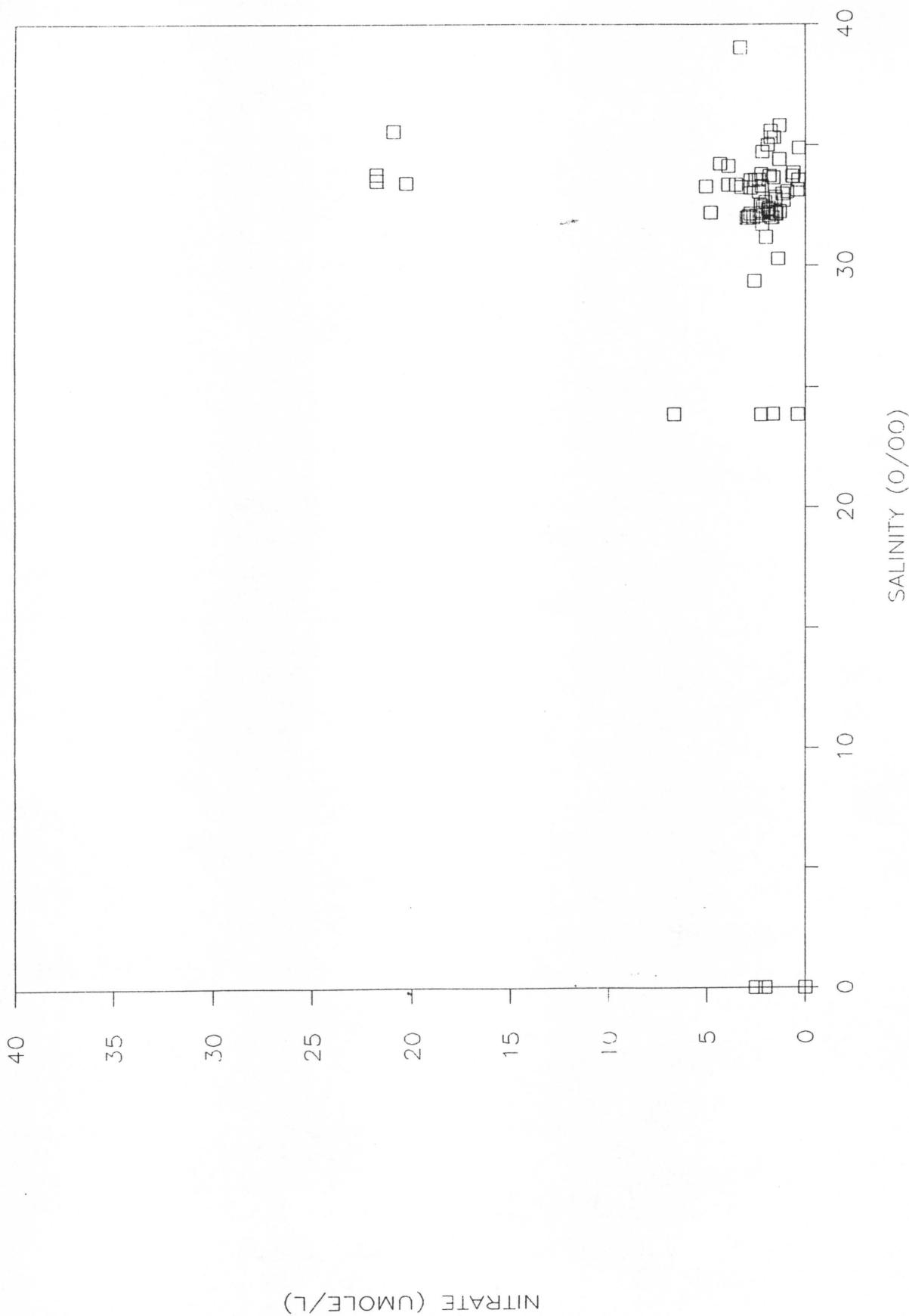


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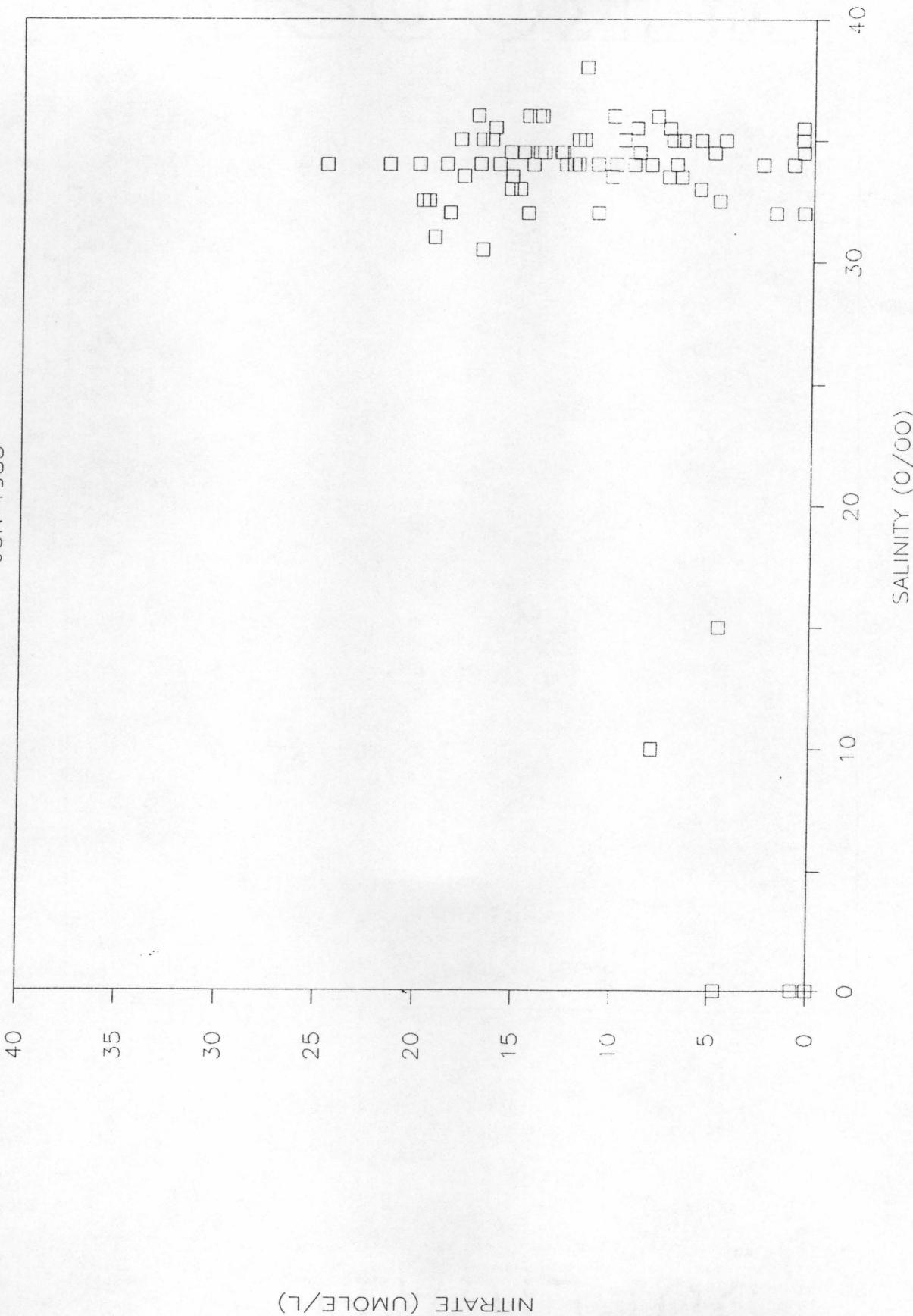


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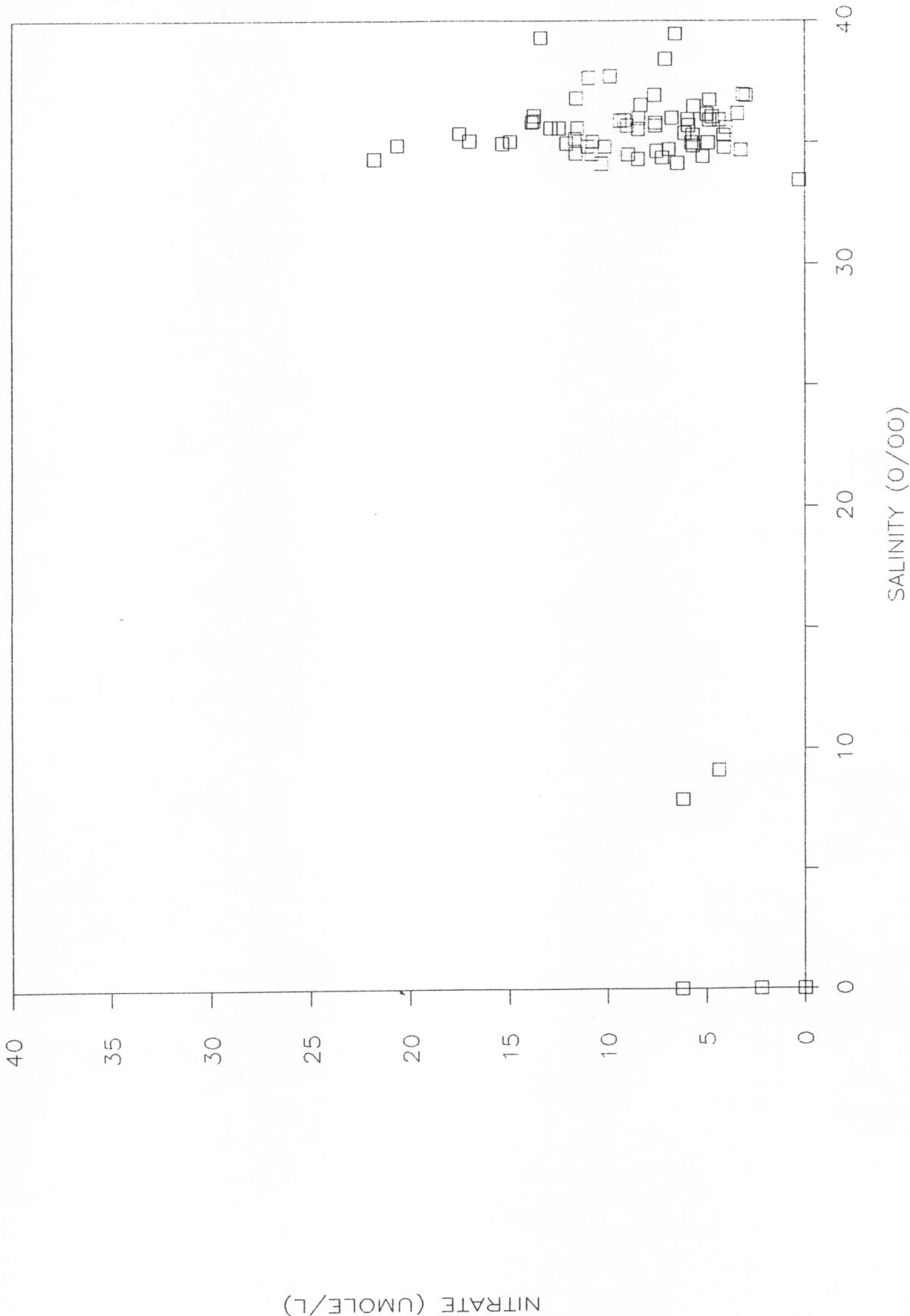


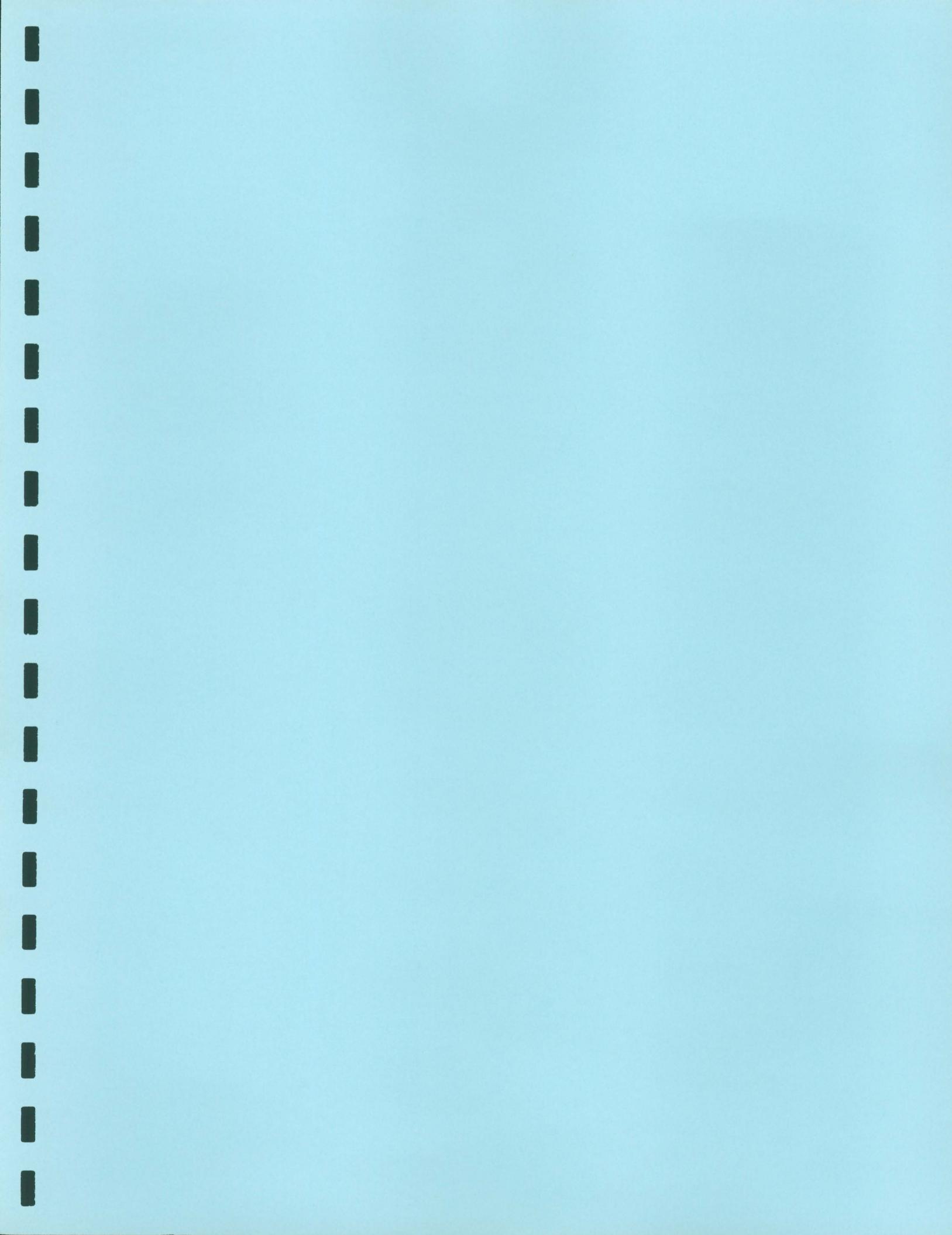
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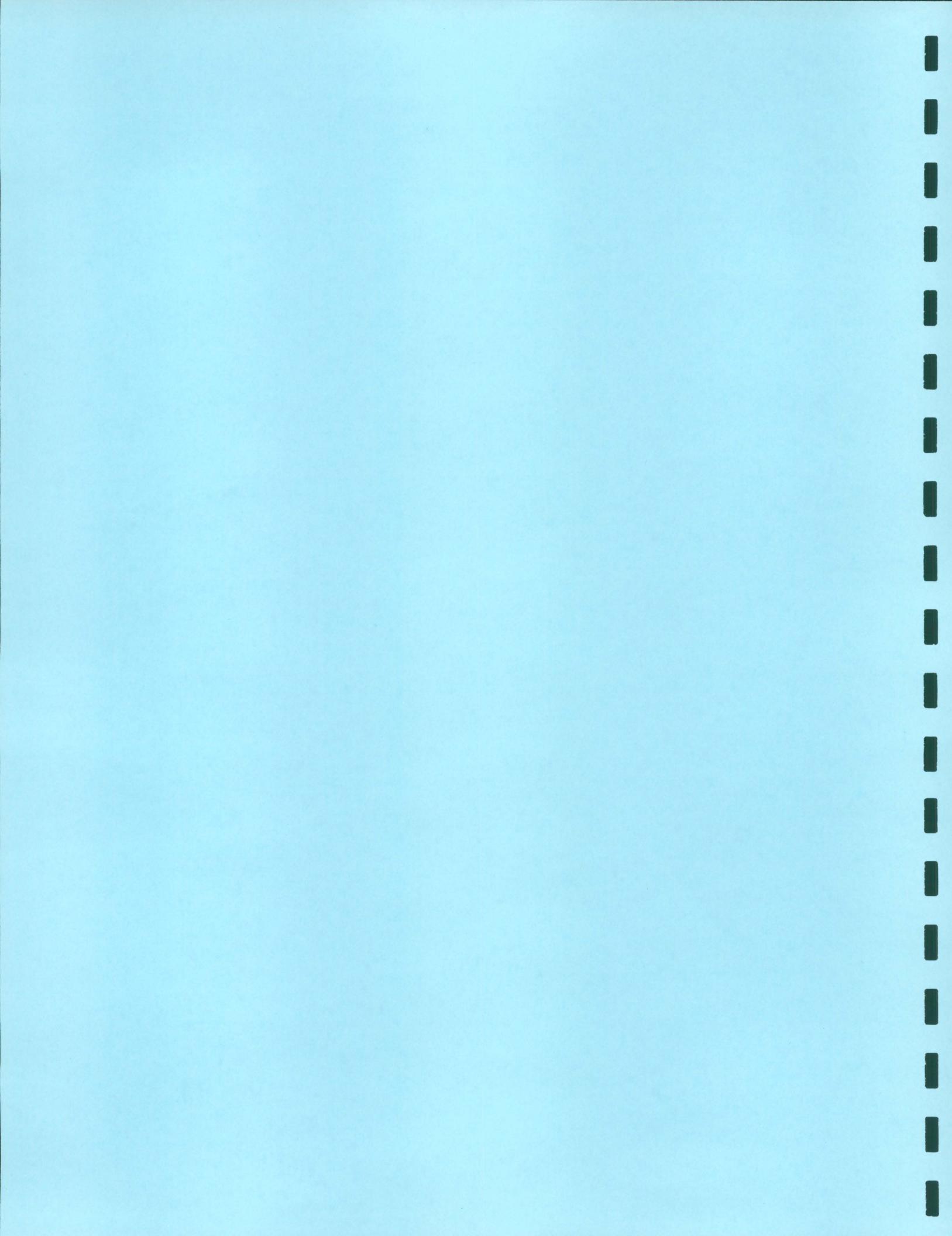


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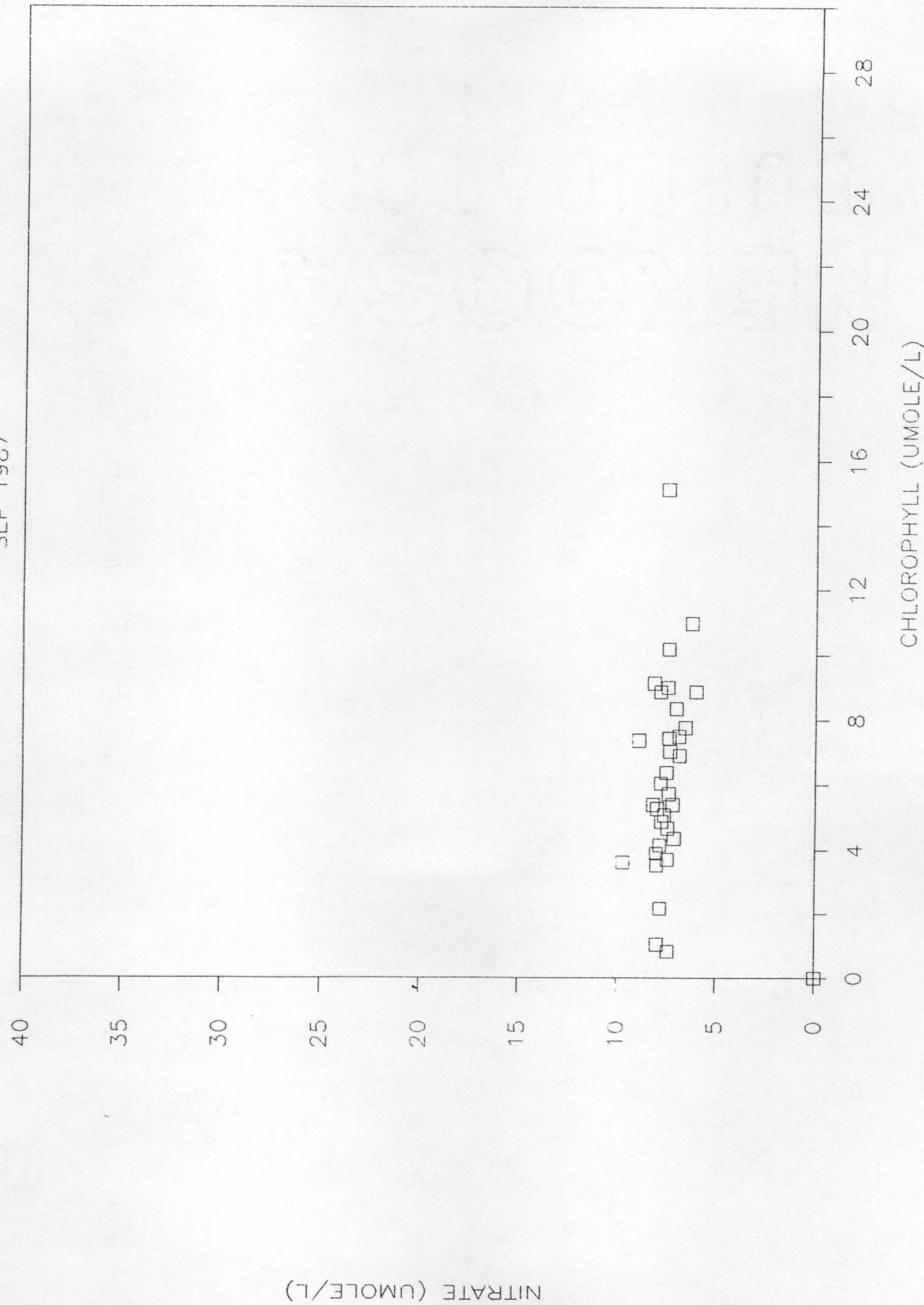
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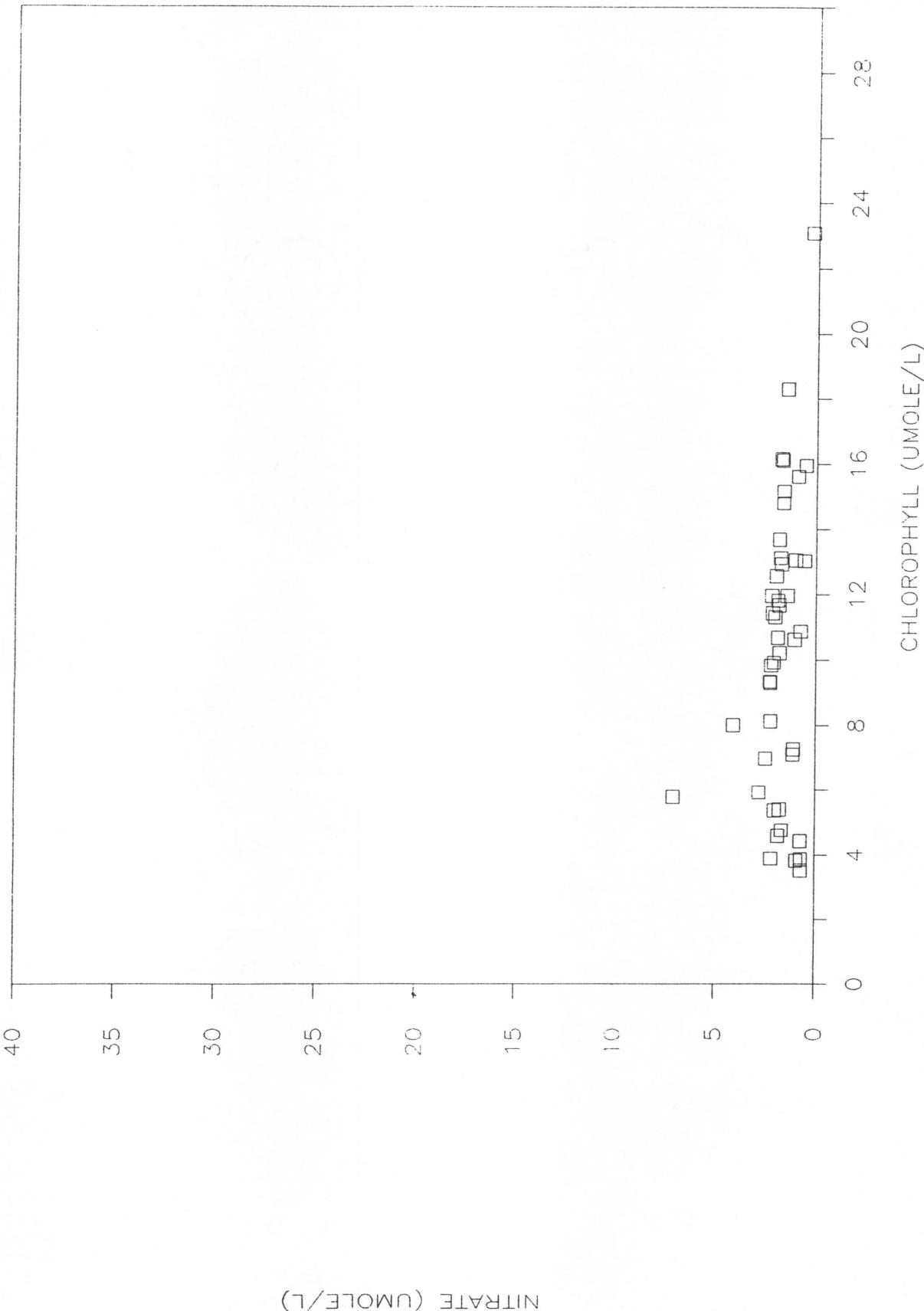


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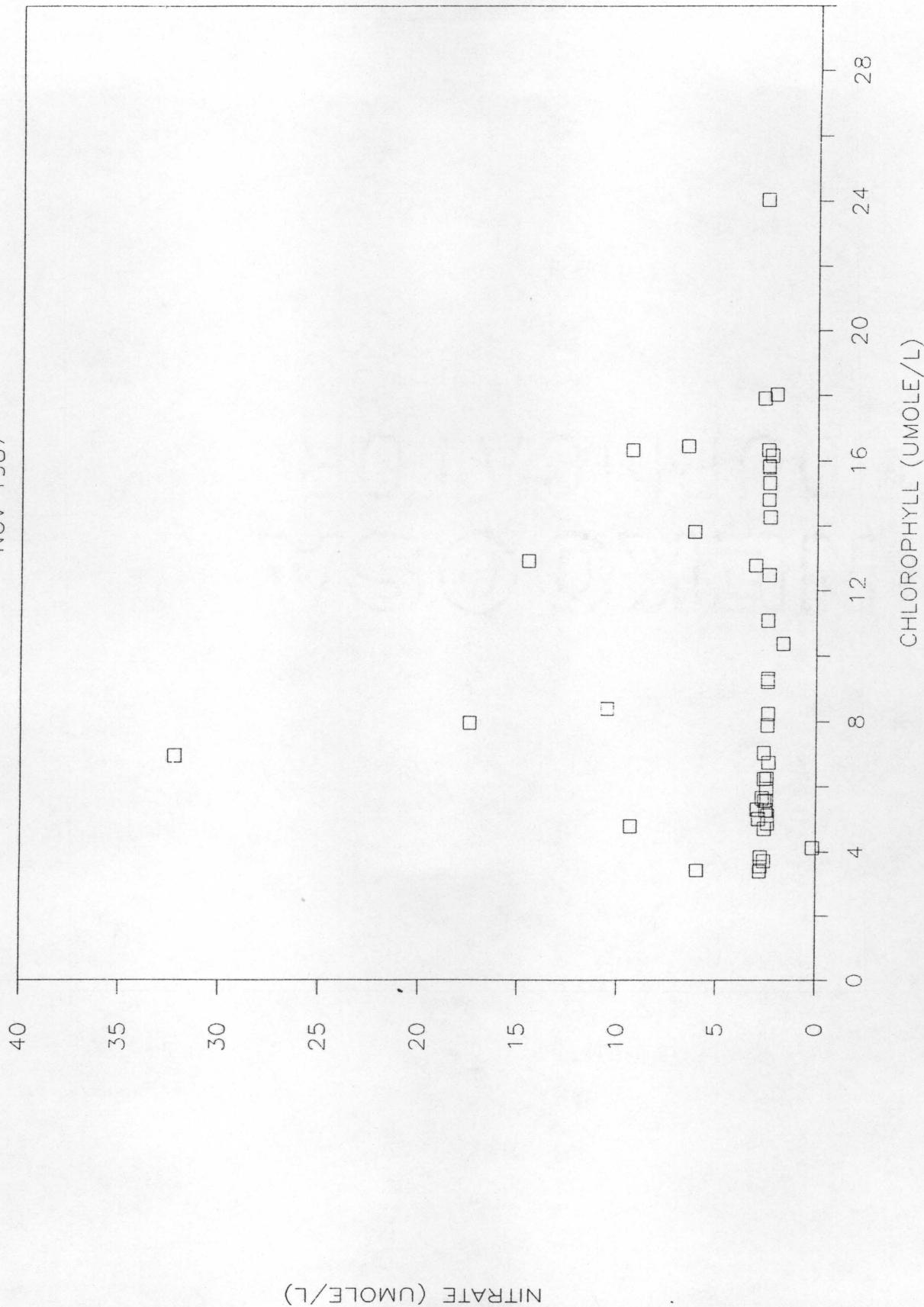
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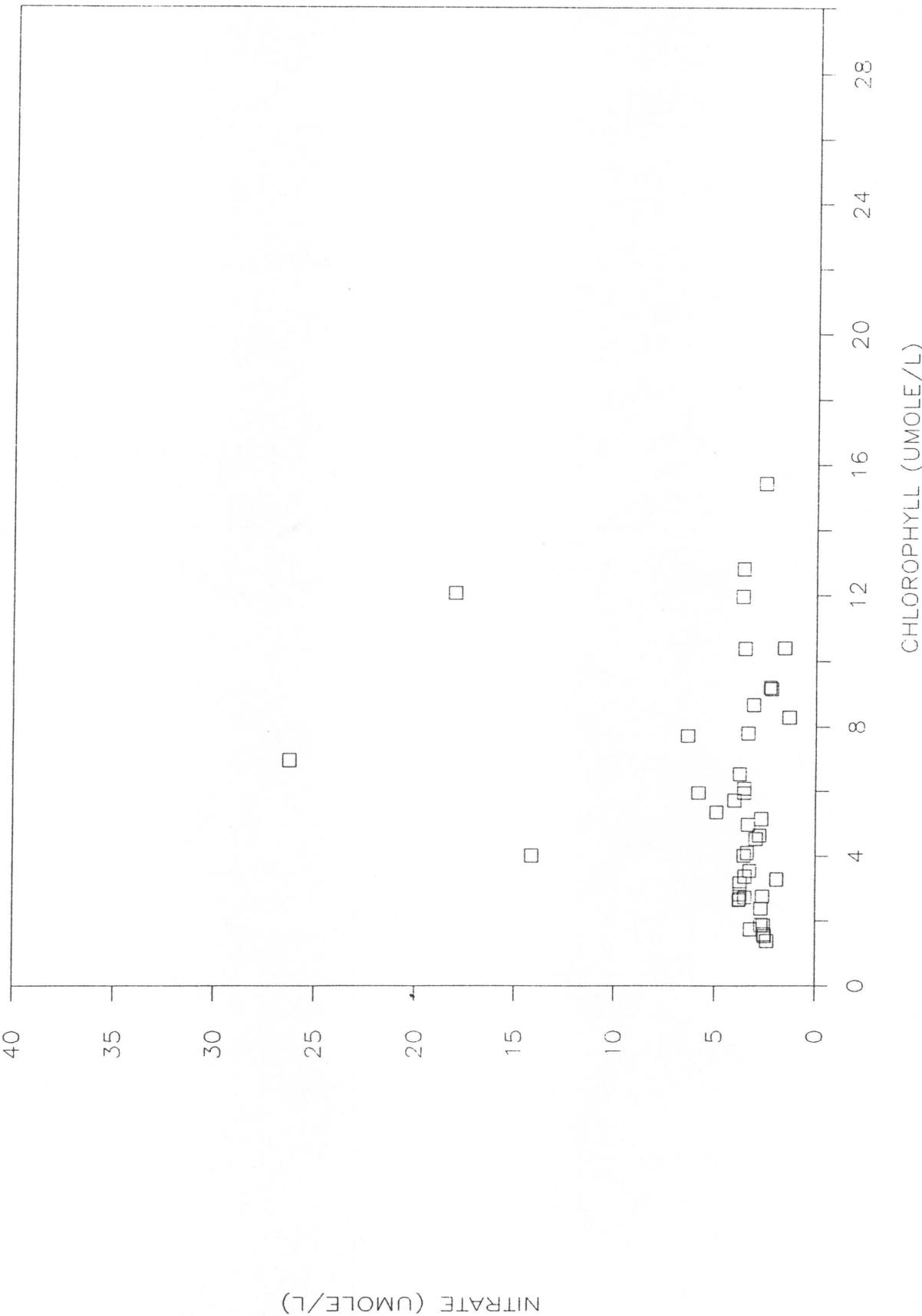
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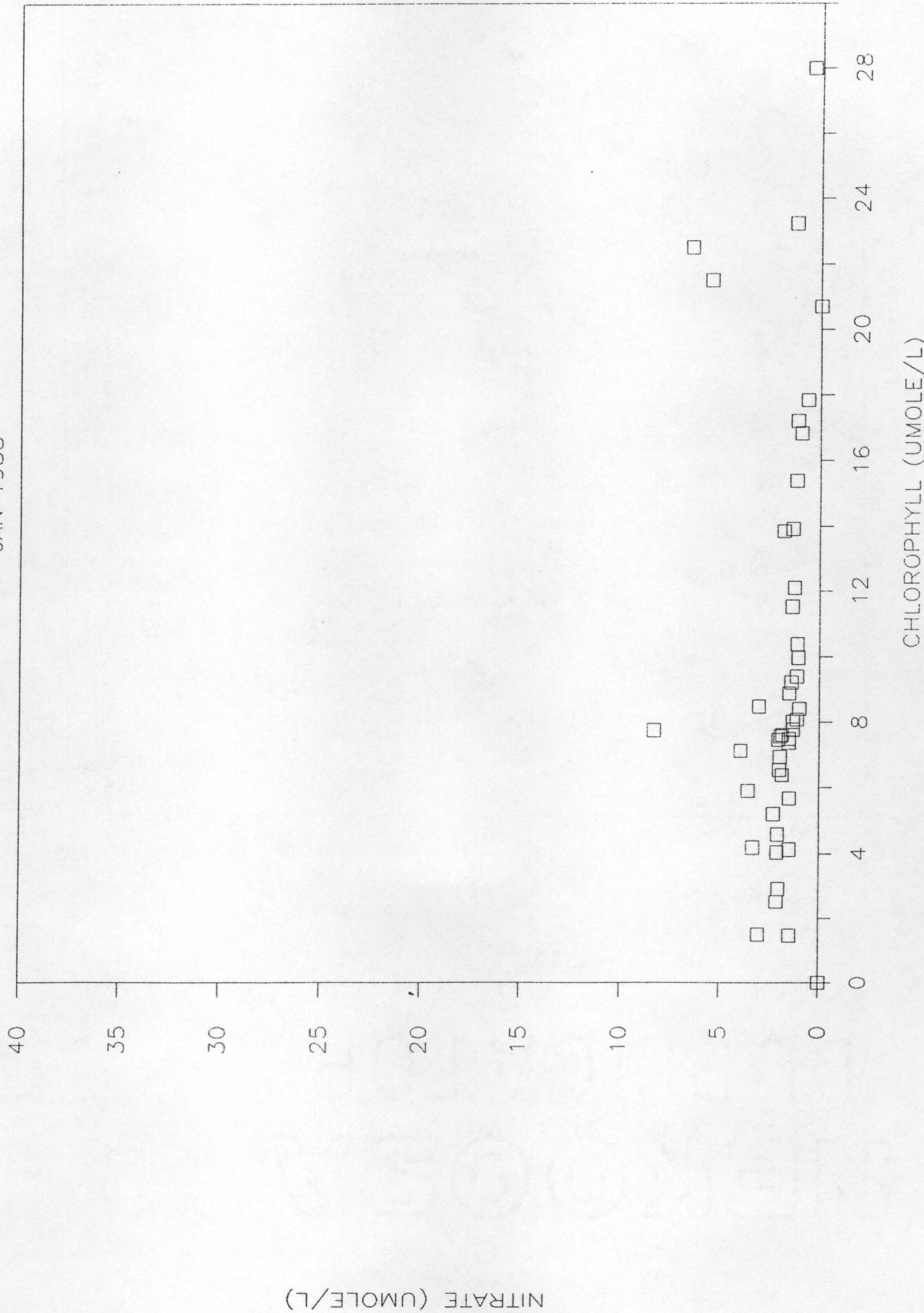
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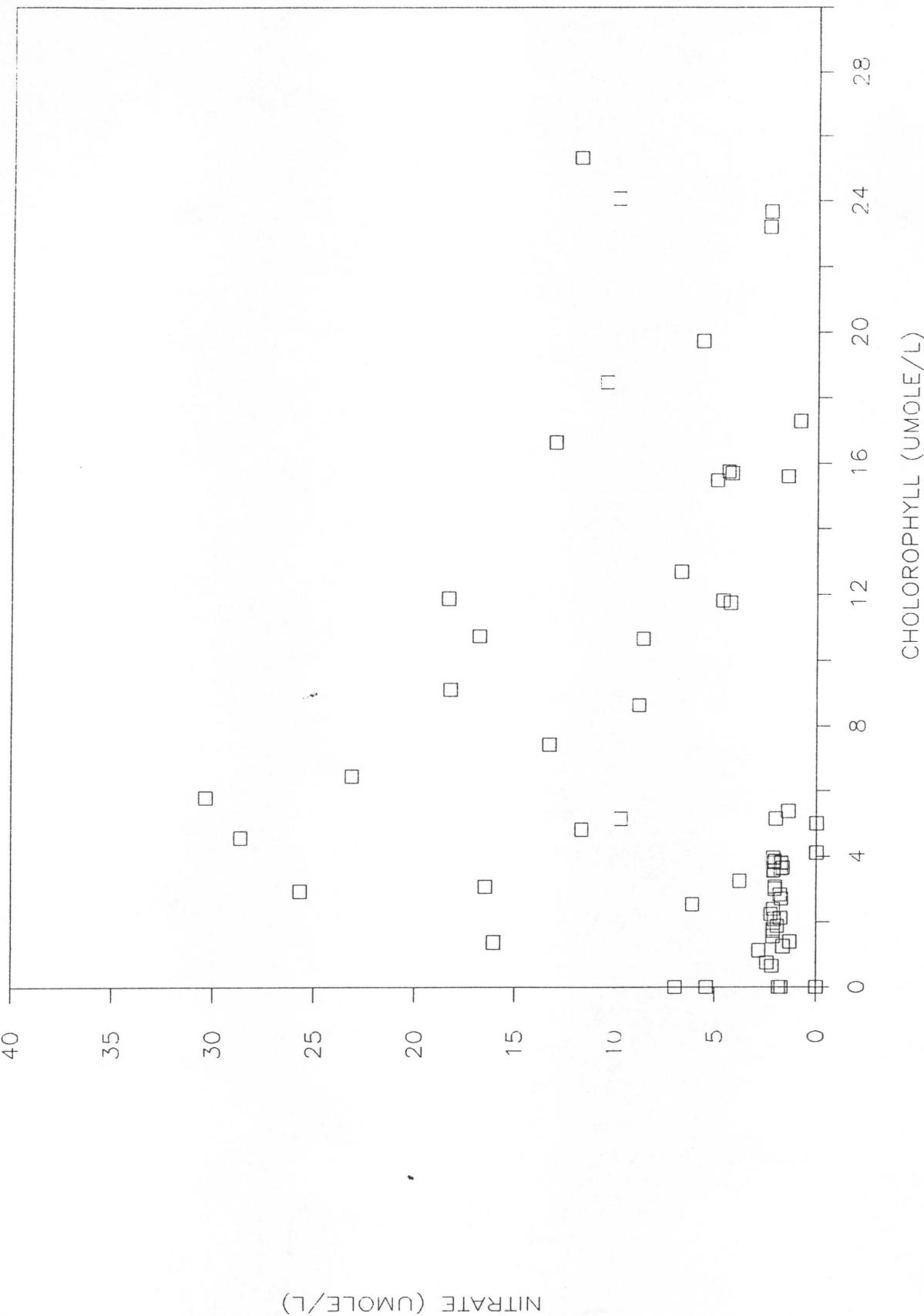
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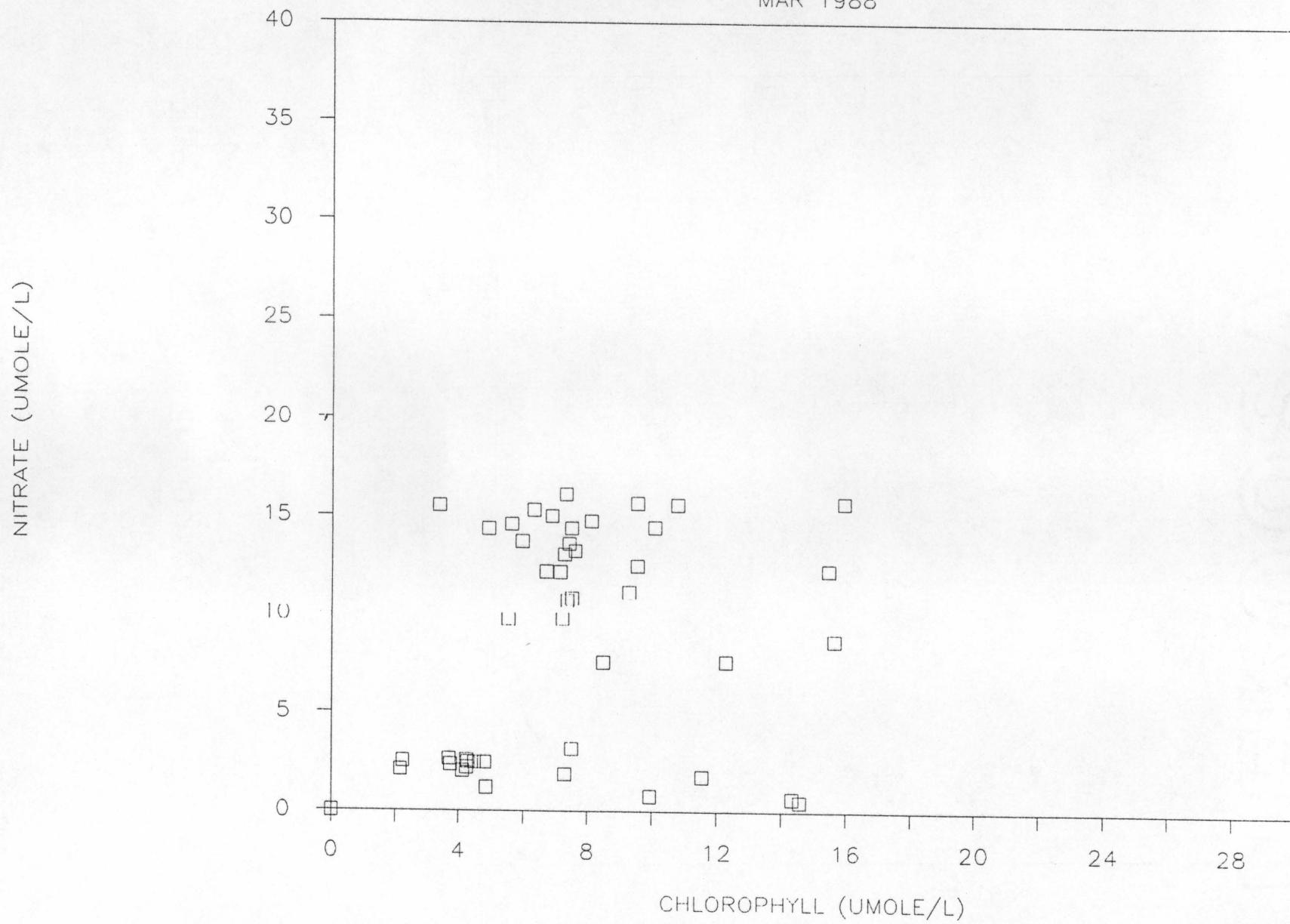
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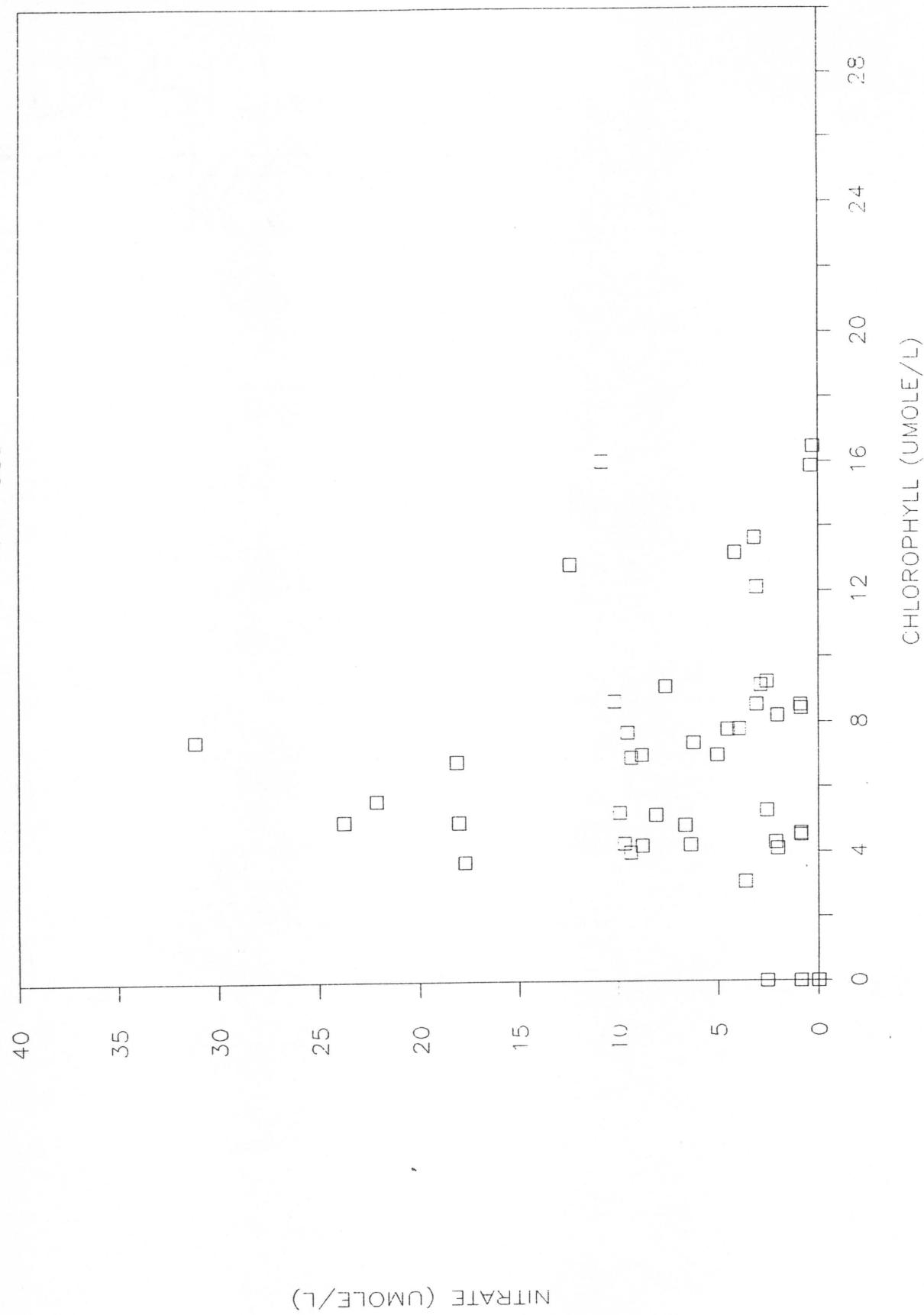
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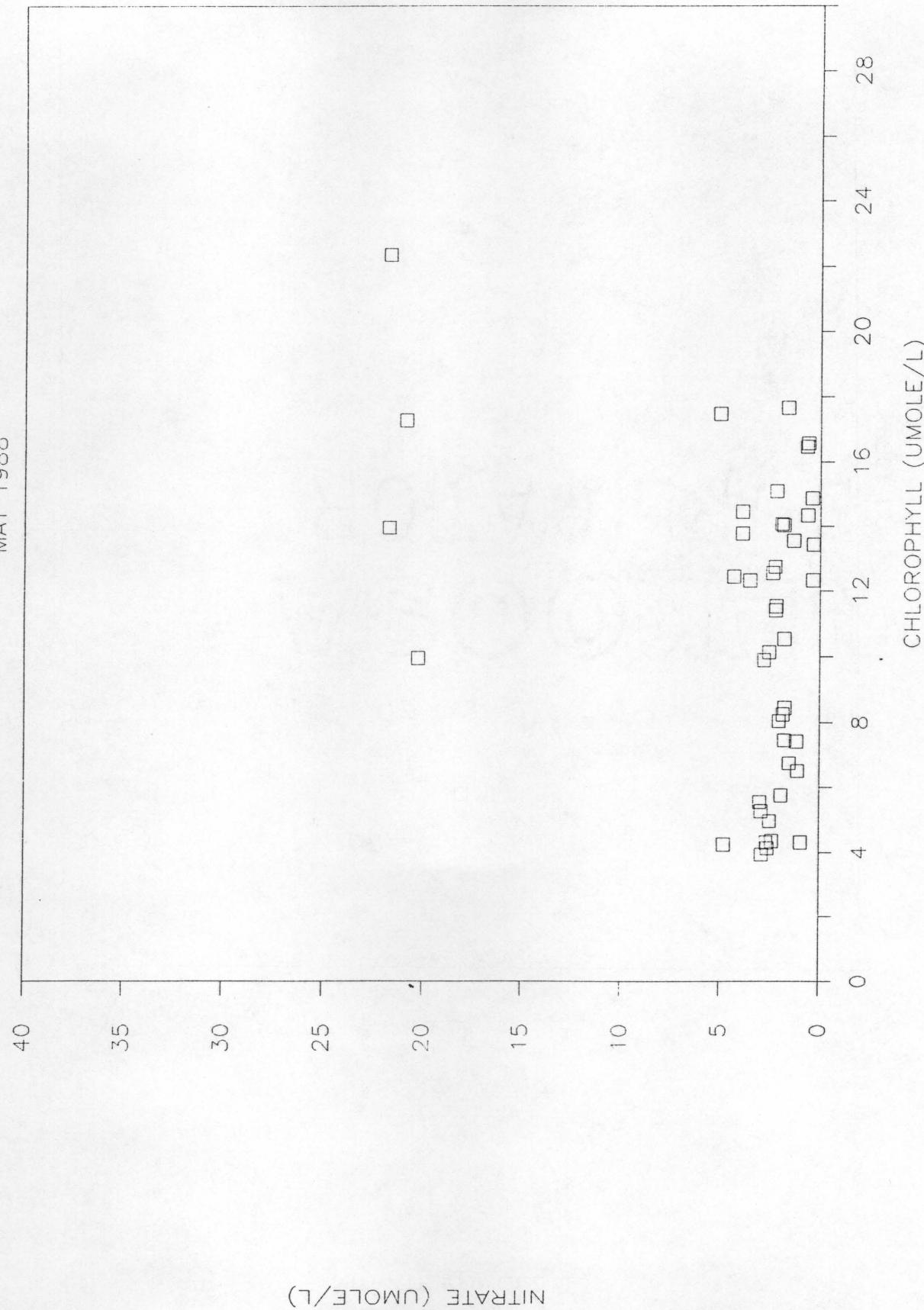


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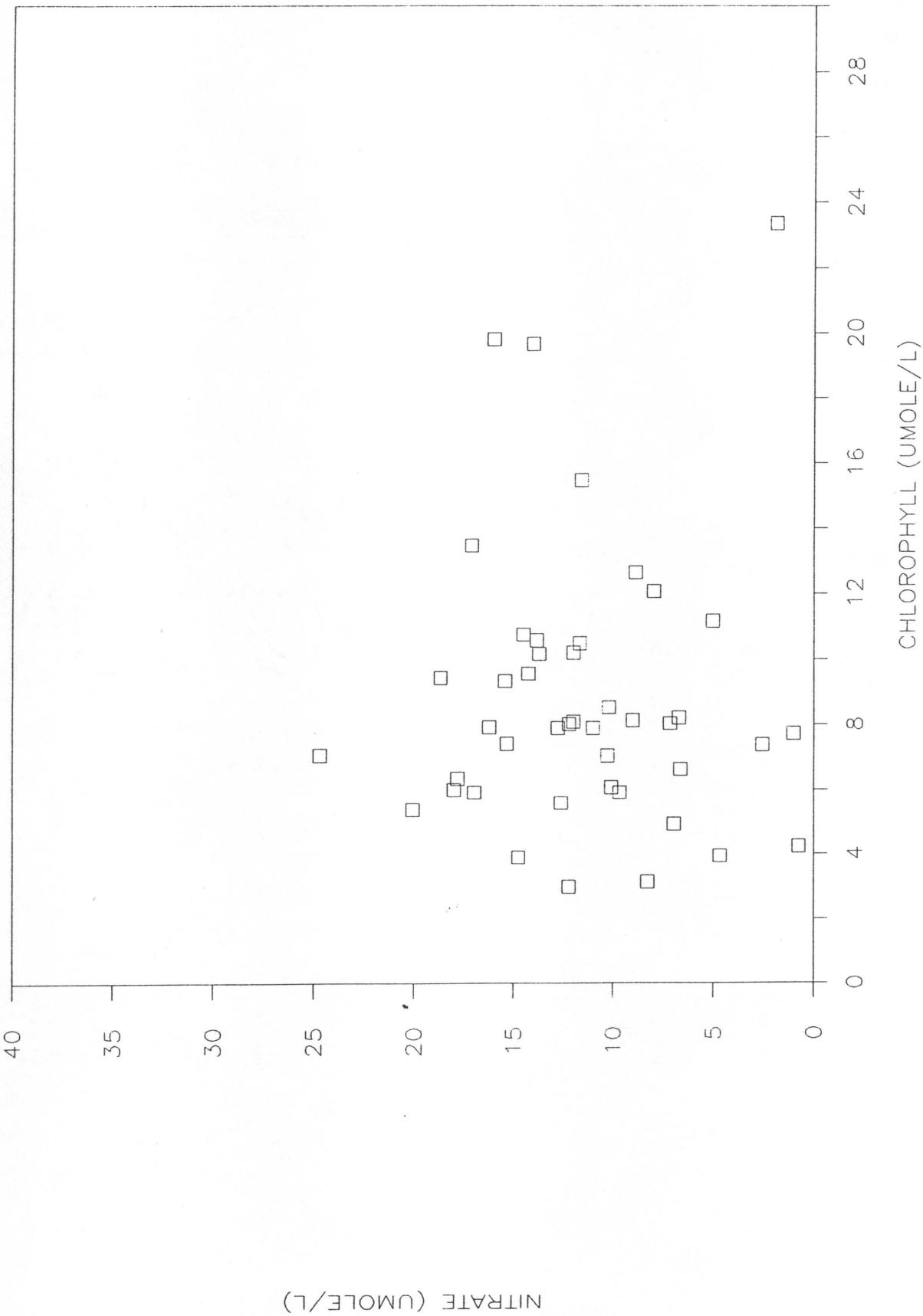


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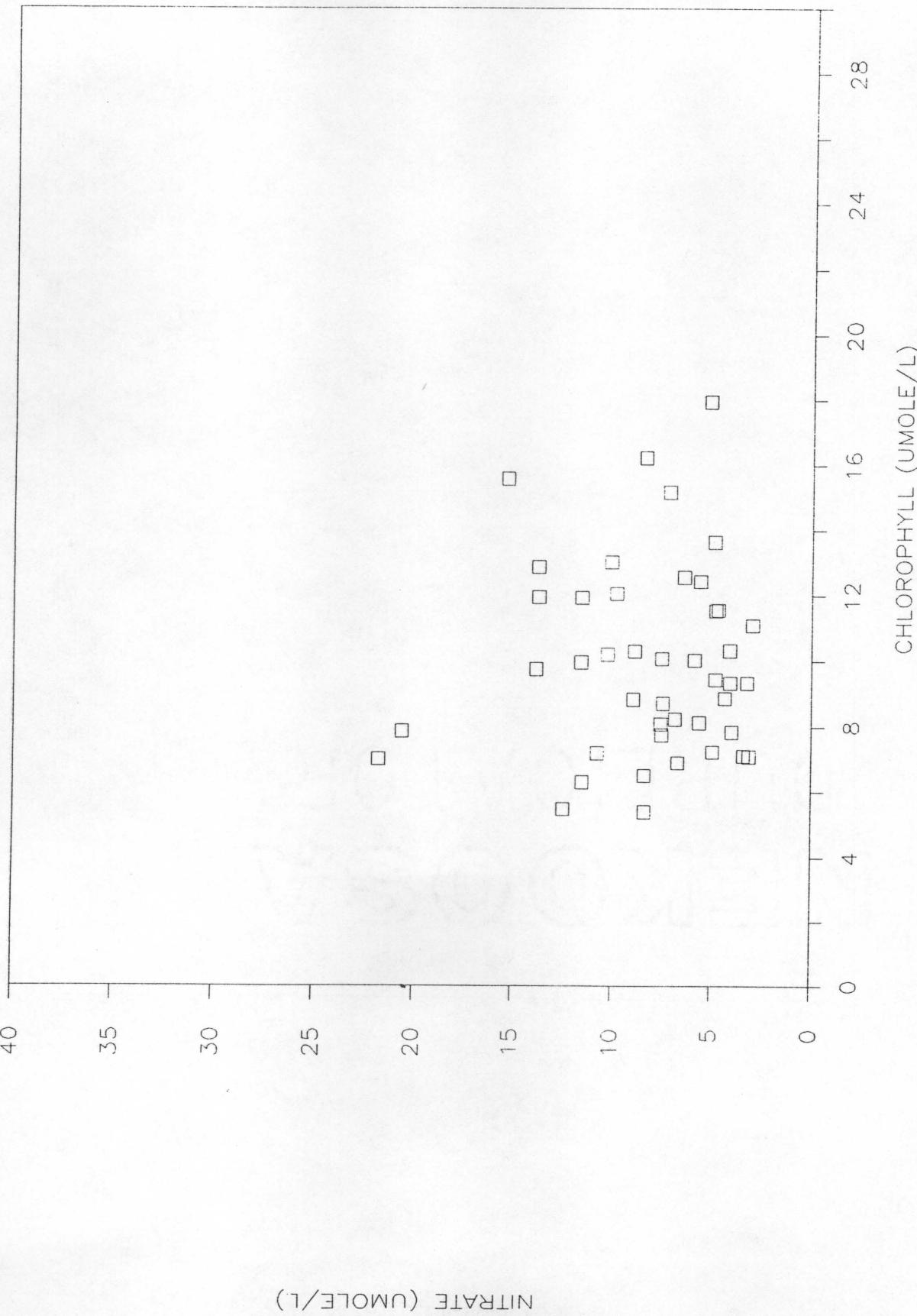
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JUN 1988



NIPSS-II

JUL 1988



NIPS-II

AUG 1988

NITRATE (UMOLE/L)

