

PB93-184760



NOAA Data Report ERL AOML-22

**HYDROGRAPHIC OBSERVATIONS IN THE WESTERN TROPICAL
AND SUBTROPICAL NORTH ATLANTIC OCEAN: ATLANTIC
CLIMATE CHANGE PROGRAM (ACCP) AND WESTERN
TROPICAL ATLANTIC EXPERIMENT
(WESTRAX) DURING 1990**

Elizabeth Johns
Anne Marie Wilburn

Atlantic Oceanographic and Meteorological Laboratory
Miami, Florida
March 1993

**UNITED STATES
DEPARTMENT OF COMMERCE**

**NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION**

Environmental Research
Laboratories

QC
802
U6
A5
no. 22
c. 2

REPRODUCED BY: **NTIS**
U.S. Department of Commerce
National Technical Information Service
Springfield, Virginia 22161





3 9282 1000 5323 9

QC
802
U6
A5
NO. 22
C. 2

NOTICE

Mention of a commercial company or product does not constitute an endorsement by the NOAA Environmental Research Laboratories. Use of information from this publication concerning proprietary products or the tests of such products for publicity or advertising purposes is not authorized.

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. DATA COLLECTION AND ANALYSIS.....	1
A. CTD DATA.....	1
1. System Description.....	1
2. Calibration.....	5
B. XBT Data.....	15
III. REFERENCES.....	16
IV. ACKNOWLEDGMENTS.....	17
APPENDIX A: CTD DATA.....	18
APPENDIX B: XBT DATA.....	89

I. INTRODUCTION

Atlantic Oceanographic and Meteorological Laboratory cruises during 1990 were directed at meeting the objectives of the Western Tropical Atlantic Experiment (WESTRAX, Brown et al., 1992) and the Atlantic Climate Change Program (ACCP, Gordon et al., 1992). Both programs have similar objectives with somewhat different areas of interest. WESTRAX is interested in the western tropical Atlantic Ocean and the ACCP, for now, is interested in the subtropical gyre of the North Atlantic.

The primary objectives of both programs are to increase our understanding of the dynamics of the regional circulation and the role of ocean circulation in global climate, to develop the capability to monitor the climatically important processes, and to provide data needed in the development of the coupled ocean-atmosphere general circulation models to be used for global climate prediction. In particular, the mechanisms by which the ocean transports heat to balance the net radiation deficit at northerly latitudes are being studied.

During January and September 1990, the WESTRAX cruises considered western boundary currents in the tropical Atlantic to study cross-equatorial transports of heat, mass, salt and momentum. Tracklines are shown in Figures 1 and 3. During June, 1990, the ACCP considered western boundary currents in the subtropical Atlantic (Figure 2). In addition to CTD data, XBT data were taken along these transects. Herein, we describe CTD data reduction procedures and list the reduced data from these cruises.

II. DATA COLLECTION AND ANALYSIS

Data from WESTRAX and ACCP cruises conducted on the NOAA ships MT MITCHELL and MALCOLM BALDRIGE during three cruises in 1990 are contained in this report. Table 1 shows the type of data collected on each cruise. Techniques used to reduce the CTD and XBT data to final form are shown below.

Table 1. Types of Data Collected by Cruise

Cruise	Vessel	Dates	CTD	XBT
January 1990 (MM-90-01-STACS)	MT MITCHELL	1/22 - 3/03/90	38	114
June 1990 (MB-90-04-STACS)	MALCOLM BALDRIGE	6/15 - 7/11/90	67	53
September 1990	MALCOLM BALDRIGE	9/07 - 10/10/90	50	169

A. CTD Data

1. System Description

The Neil Brown Instrument Mark III CTD system used in WESTRAX and ACCP includes pressure, temperature, conductivity and oxygen sensors. The instrument scans at a rate of 30 scans per second. The descent rate is approxi-

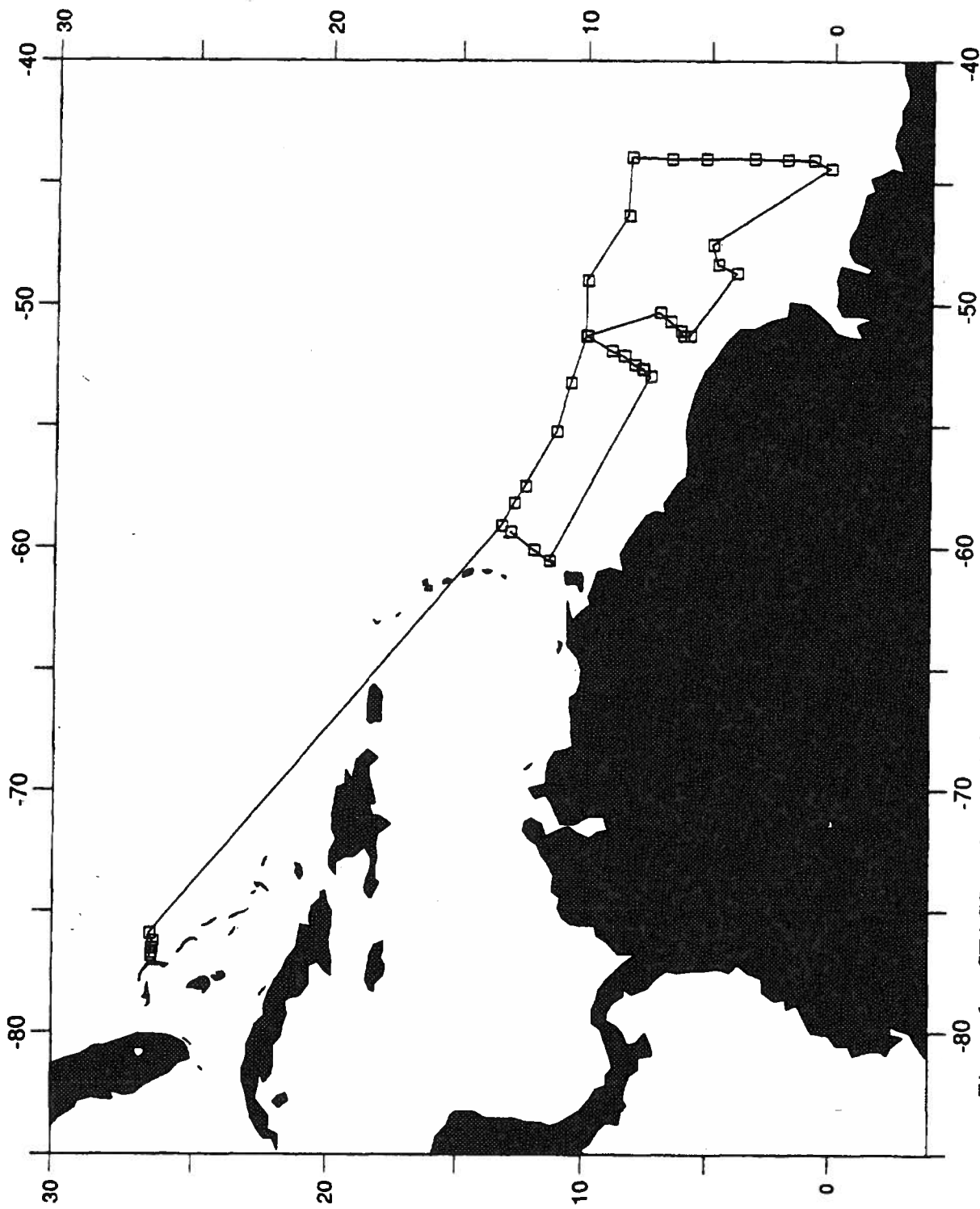


Figure 1. STACS cruise track for January 1990 showing CTD sampling stations.

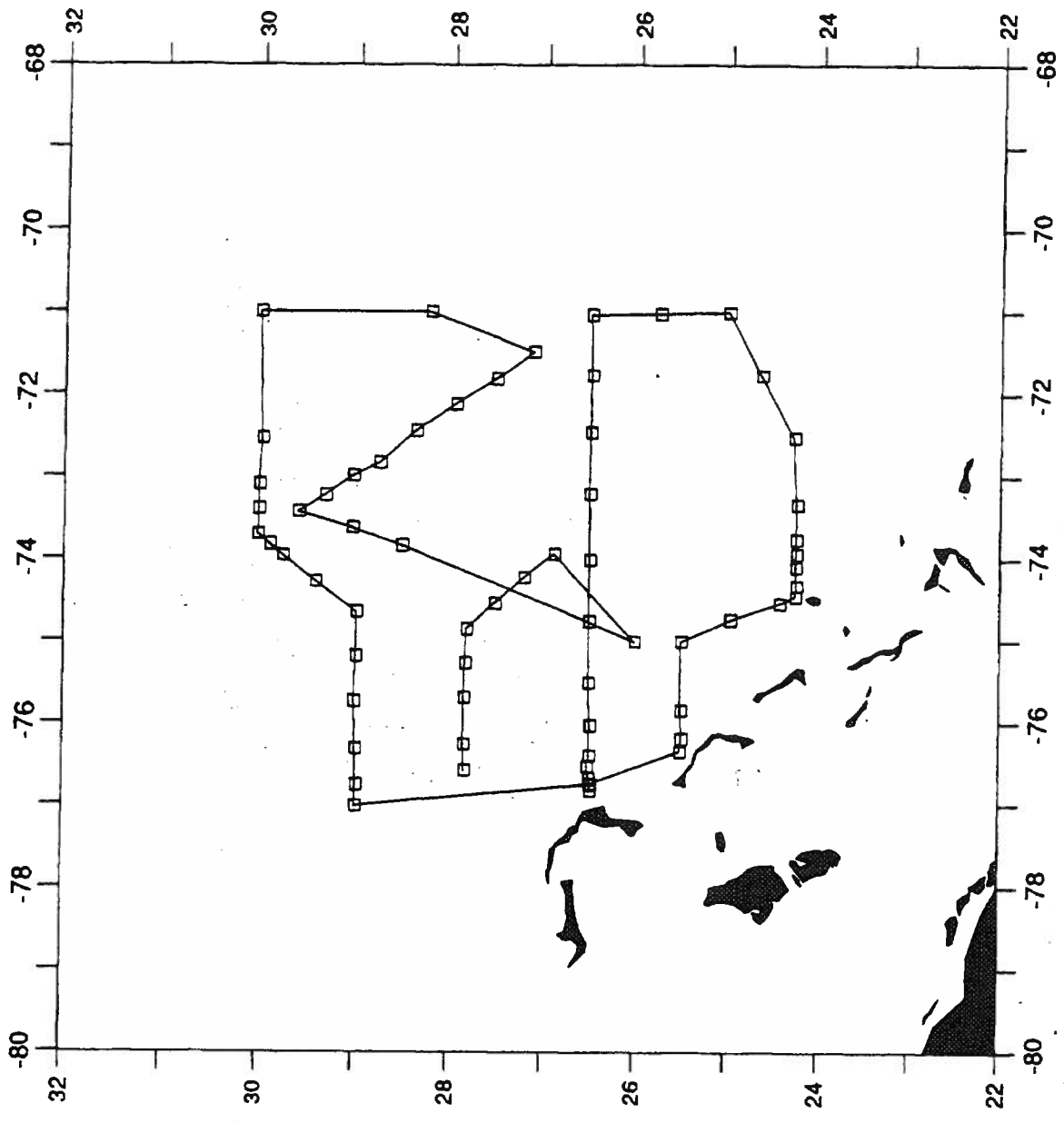


Figure 2. STACS cruise track for June 1990 showing CTD sampling stations.

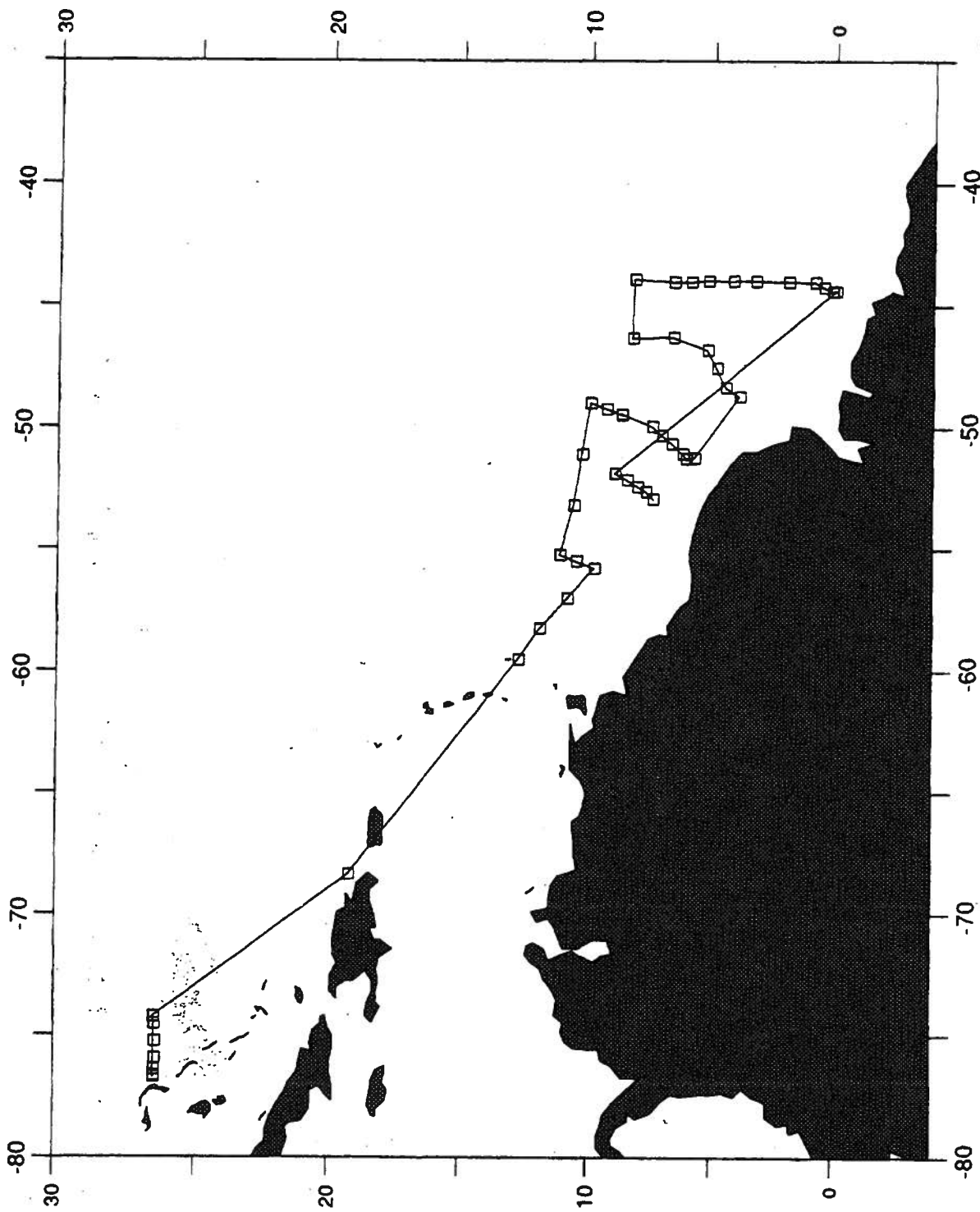


FIGURE 3. STACS cruise track for September 1990 showing ctd sampling stations.

mately 30 meters per minute to a depth of 200 meters then increases to 60 meters per minute for the remainder of the cast. The CTD data are averaged in one decibar increments. Appendix A contains graphic representations of CTD profiles arranged by cruise and cast number. CTD values are listed at selected pressures. Because of problems with the CTD oxygen sensors, these data are not included in this report.

2. Calibration

Laboratory calibrations are used for the CTD pressure and temperature sensors. CTD pressures are assumed to be accurate to within ± 6.5 db and CTD temperatures to within $\pm .005^\circ\text{C}$. Bottle salinities are collected using a Rosette sampler lowered with the CTD, with the final values determined using a Guildline Autosol unit. Bottle salinity accuracies are on the order of $\pm .002$ psu. The bottle salinities are used for calibration of the raw CTD data using the methodology described below.

- a. The bottle salinities are edited for obvious bad values by graphical temperature-salinity comparisons with previous regional hydrographic studies (Wilburn *et al.*, 1987a,b, 1988, 1989; Williams, 1986a,b) and by examination of the residual differences between bottle and CTD salinities.
- b. The uncalibrated CTD salinity profiles are examined for conductivity sensor changes by examination of the time history of the residual differences between the edited bottle salinities and the CTD salinities, and divided into calibration subgroups if necessary. An iterative least squares regression is run on the residual (bottle minus CTD) salinity vs. pressure data for each subgroup, and linear or polynomial corrections are obtained over appropriate portions of the water column.
- c. The uncalibrated CTD salinity profiles are corrected using the results of the regressions. The temperature-salinity correlation of the calibrated CTD salinities is again compared with the bottle salinities and the historical data set as a final quality check. The calibrated CTD salinity and temperature data are despiked, and a final data set subsampled to 1 db spacing is produced.

Discussions of the bottle salinity quality and CTD performance for the individual cruises, and tabulation of the respective calibration corrections, follow.

January 1990:

The January 1990 cruise included 38 CTD casts, of which only 34 yielded useable data due to problems with the CTD wire. Therefore there are no casts 12-15 for this cruise. Casts 1-33 were taken in the western tropical North Atlantic, and casts 34-38 along 26.5°N east of Abaco, the Bahamas. A number of problems occurred during this cruise, including difficulties with both autosals (repaired at sea) and leaky Niskin bottles. In addition, the January 1990 cruise was the first of what would turn out to be a series of four cruises (January 1990, June 1990, September 1990 and January 1991) during which the CTD conductivity calibration changed more frequently than normal (sometimes cast-to-cast). The problem could not be reproduced during many laboratory calibrations at the manufacturer until after the January 1991 cruise. At that time a small crack in the conductivity sensor was detected

and the sensor was replaced. Fortunately, the quality of the bottle salinity data was high and cast-to-cast corrections were possible.

There was a depth dependence to the distribution of bottle salinity minus uncalibrated CTD salinity, with values at the surface approximately .010 psu fresher than found at 1500 db. Below 1500 db there was a constant offset between the bottle and uncalibrated CTD salinities. Figure 4 shows the time history of the bottle minus uncalibrated CTD salinity for pressure greater than 1000 db. The CTD was observed to drift somewhat during the first half of the cruise especially, within the range of .001 to .004, and then stabilize at .002 to .003 for most of the remainder of the cruise. A polynomial fit was determined for the upper water column over the entire 34 casts, and matched at 1500 db to the time-varying correction in the deep water for each cast.

The polynomial correction and the constant corrections applied to the CTD below 1500 db are tabulated below:

P < 1500 db:

$$S = S - .007 + .870e-05 * P - .296e-08 * P * P + .298e-12 * P * P * P$$

P > 1500 db:

<u>Casts</u>	<u>Correction</u>
1	.001
2	.012
3	.006
4-6	.004
7-9	.002
10-18	.003
19-20	.001
21-24	.002
25-33	.003
34-37	.002
38	.004

Figure 5 shows the bottle salinity minus the final calibrated CTD salinity vs. pressure. The upcast bottle values were matched with the downcast CTD data by potential temperature, not pressure, to eliminate noise produced by internal waves, etc. These residuals were then plotted vs the pressure at which each bottle was tripped. For the 34 good CTD casts, there were a total of 228 bottle values and the standard deviation of the calibrated CTD data minus the bottle salinities was $\pm .003$ psu, with much of the scatter found in the upper water (Figure 5).

June 1990:

The June 1990 cruise included 67 CTD casts, of which only 64 yielded useable data due to problems with the CTD wire. Therefore there are no casts 3, 9, and 10 for this cruise. The entire cruise was conducted east of Abaco, the Bahamas, between 20°N and 30°N.

A number of problems were experienced during this cruise, including a loose conductivity board and bad slip rings, both repaired at sea. Leaky Niskin bottles also were detected and repaired. The conductivity sensor

JAN90

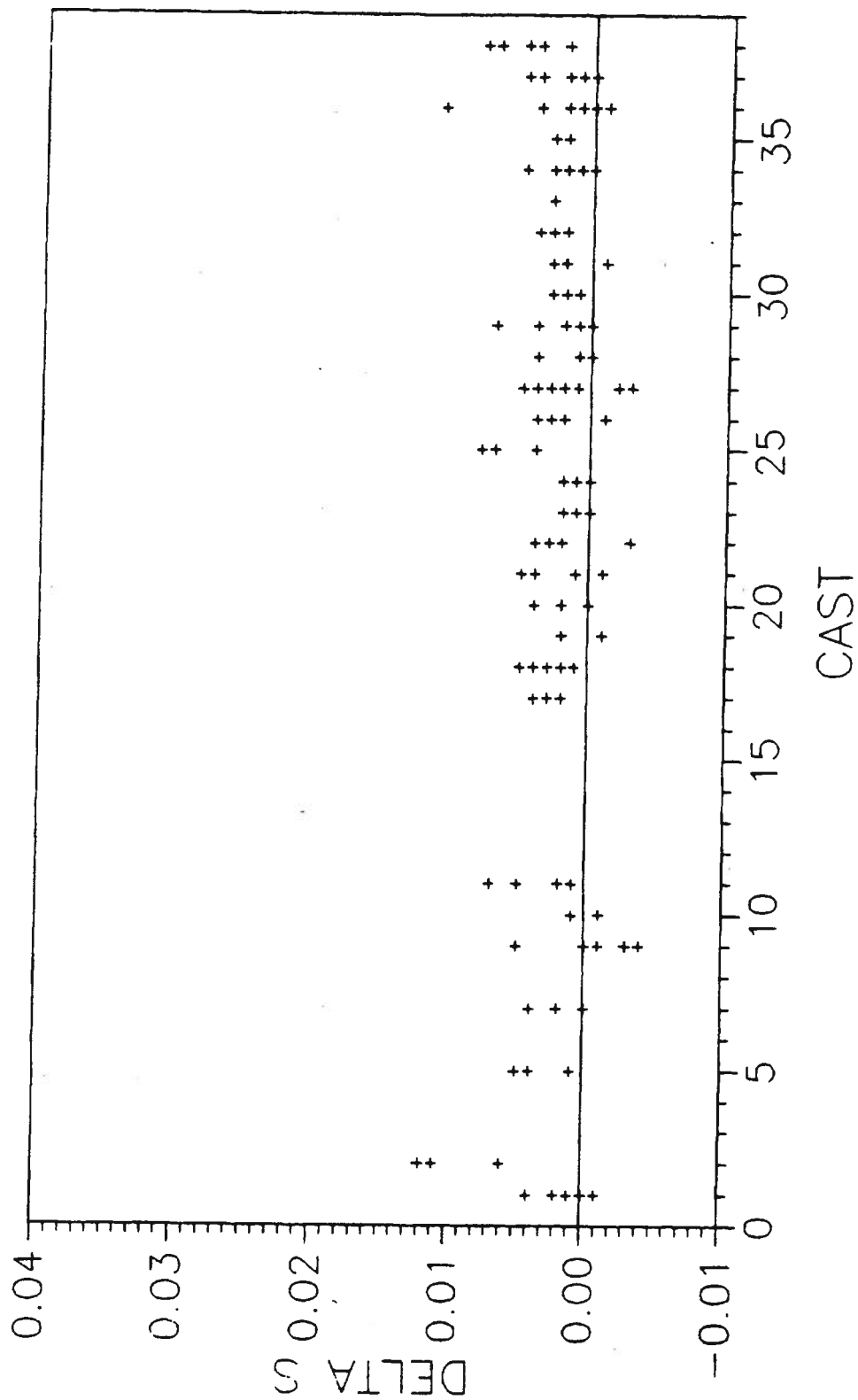


Figure 4. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the January 1990 cruise.

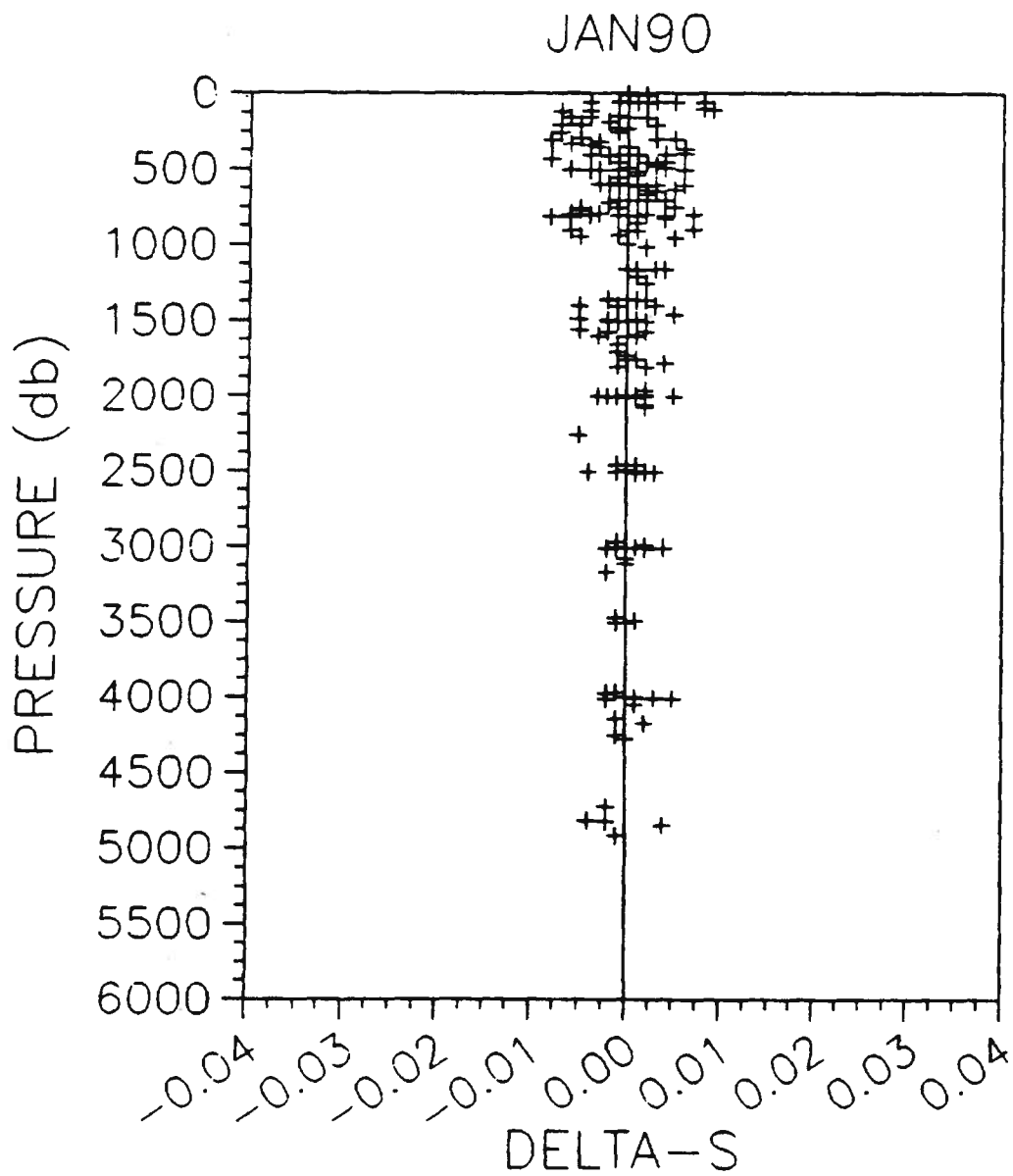


Figure 5. Bottle salinity minus calibrated CTD salinity vs. pressure for the January 1990 cruise.

failed on casts 2 and 3, and the slip ring problem caused the loss of casts 9-11.

There was a similar depth dependence to the distribution of bottle salinity minus uncalibrated CTD salinity as seen during January 1990, with values at the surface approximately .010 psu fresher than found at 1400 db. Below 1400 db there was a constant offset between the bottle and uncalibrated CTD salinities.

Figure 6 shows the time history of the bottle minus uncalibrated CTD salinity for pressure greater than 1000 db. The CTD salinity was observed to drift within the range of -.005 to .006 psu. A polynomial fit was determined for the upper water column over the entire 64 casts, and matched to the time-varying correction in the deep water for each cast. The bottle minus CTD salinity were examined cast by cast vs pressure and vs potential temperature both graphically (not shown) and statistically and confirmed the drift in the CTD conductivity sensor.

The polynomial correction and the constant corrections applied to the CTD below 1400 db are tabulated below:

P < 1400 db:

$$S = S - .0075 - .130e-04 * P + .253e-087 * P * P - .878e-11 * P * P * P$$

P > 1400 db:

<u>Casts</u>	<u>Correction</u>
1-2	-.002
4	-.004
5-7	-.002
8	-.005
11-12	-.003
13	-.002
14-15	.000
16	-.005
17-18	.000
19	.001
20-23	.002
24-31	.006
32-35	-.003
36-40	-.004
41	-.003
42-45	-.005
46	-.004
47	-.005
48-50	-.004
51	-.005
52-55	-.003
56	.000
57	-.002
58-61	-.003
62-63	-.002
64-65	.000
66-67	-.001

JUN90

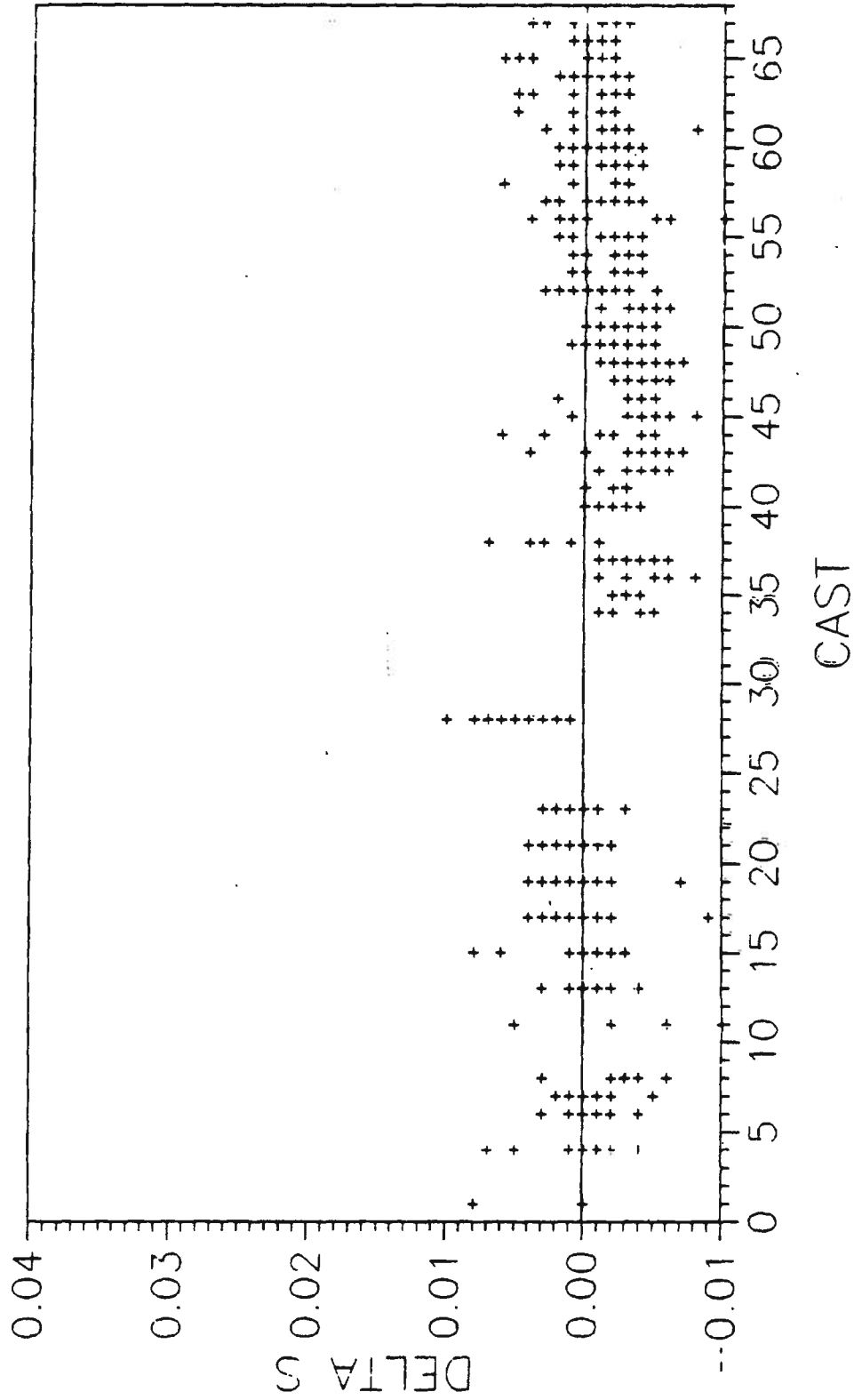


Figure 6. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the June 1990 cruise.

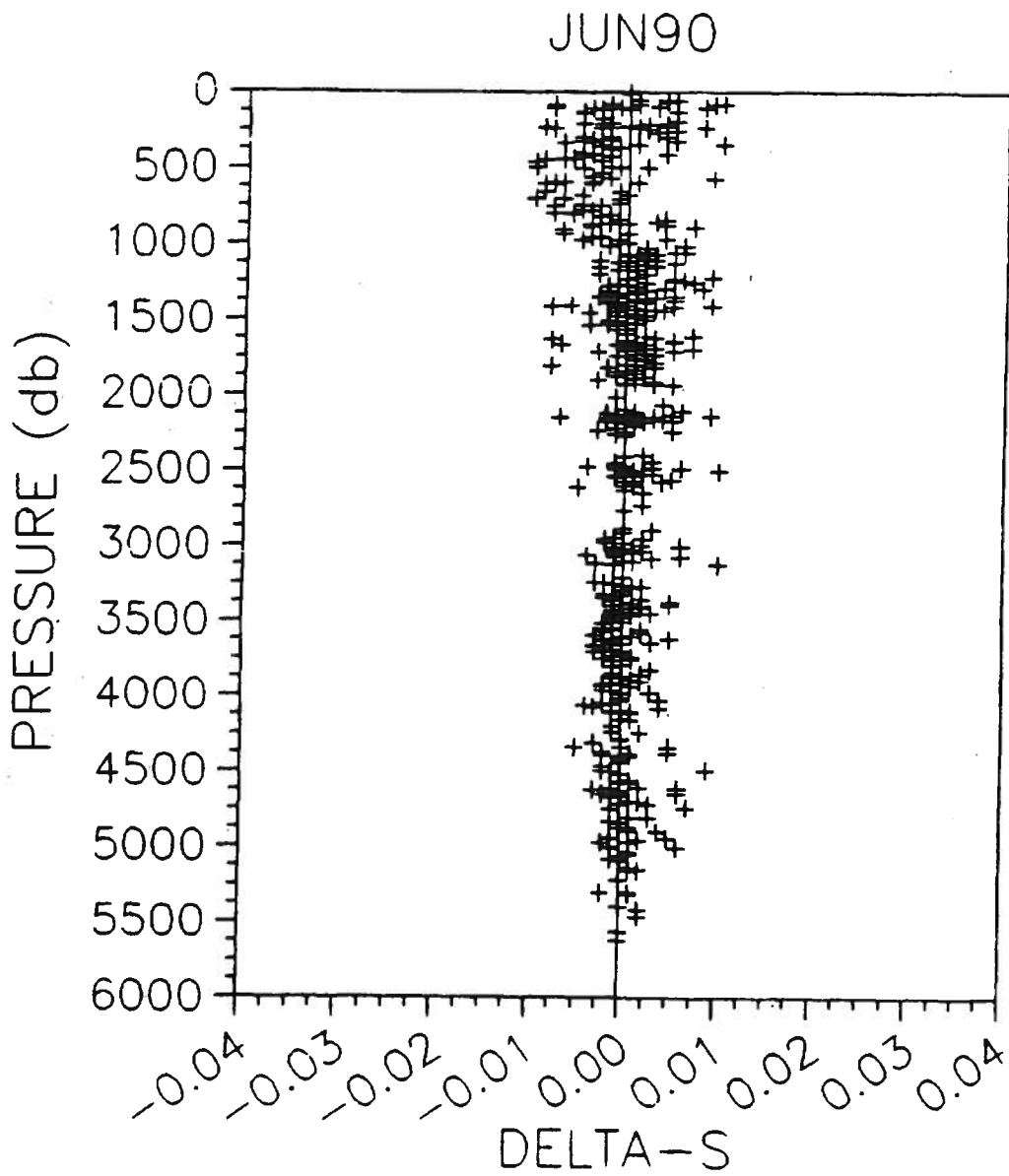


Figure 7. Bottle salinity minus calibrated CTD salinity vs. pressure for the June 1990 cruise.

Figure 7 shows the bottle salinity minus the final calibrated CTD salinity vs. pressure. As during January, the upcast bottle values were matched with the downcast CTD data by potential temperature, not pressure. These residuals were then plotted vs the pressure at which each bottle was tripped. For the 64 good CTD casts, there were a total of 578 bottle values and the standard deviation of the calibrated CTD data minus the bottle salinities was $\pm .002$ psu.

September 1990:

The September 1990 cruise included 50 CTD casts. Casts 1-8 were taken along 26.5°N east of Abaco, the Bahamas, and the remainder between Barbados and the equator off northern Brazil.

The CTD experienced problems at the start of the cruise, rendering the first five casts unuseable. In addition, the worsening problem with the conductivity cell caused the calibration to drift and change much more than during the previous two cruises, requiring a cast-by-cast calibration.

There was a more pronounced depth dependence to the distribution of bottle salinity minus uncalibrated CTD salinity than seen during January and June 1990, with values at the surface .019 psu fresher than found at 1000 db. Below 1000 db there was a constant offset between the bottle and uncalibrated CTD salinities.

Figure 8 shows the time history of the bottle minus uncalibrated CTD salinity for pressure greater than 1000 db. The CTD salinity was observed to drift within the range of .000 to .031 psu. A polynomial fit was determined for the upper water column over the entire 50 casts, and matched to the time-varying correction in the deep water for each cast. The bottle minus CTD salinity were examined cast by cast vs pressure and vs potential temperature, as above. (Note that cast 16 is included in the data report, but may be suspect because there were no salinity bottles taken during this cast, and a correction of $-.075$ was needed to bring the deep temperature-salinity correlation into consistency with the surrounding casts. The actual CTD trace looks good, but a correction as large as $-.075$ is not reasonable and remains a mystery.)

The polynomial correction and the constant corrections applied to the CTD below 1000 db are tabulated below:

P < 1000 db:

$$S = S - .019 + .511e-04 * P - .442e-07 * P * P + .116e-10 * P * P * P$$

P > 1000 db:

<u>Casts</u>	<u>Correction</u>
1-5	.000
6-7	.005
8-10	.006
11	.015
12-13	.016
14-15	.014
16	-.075

SEP90

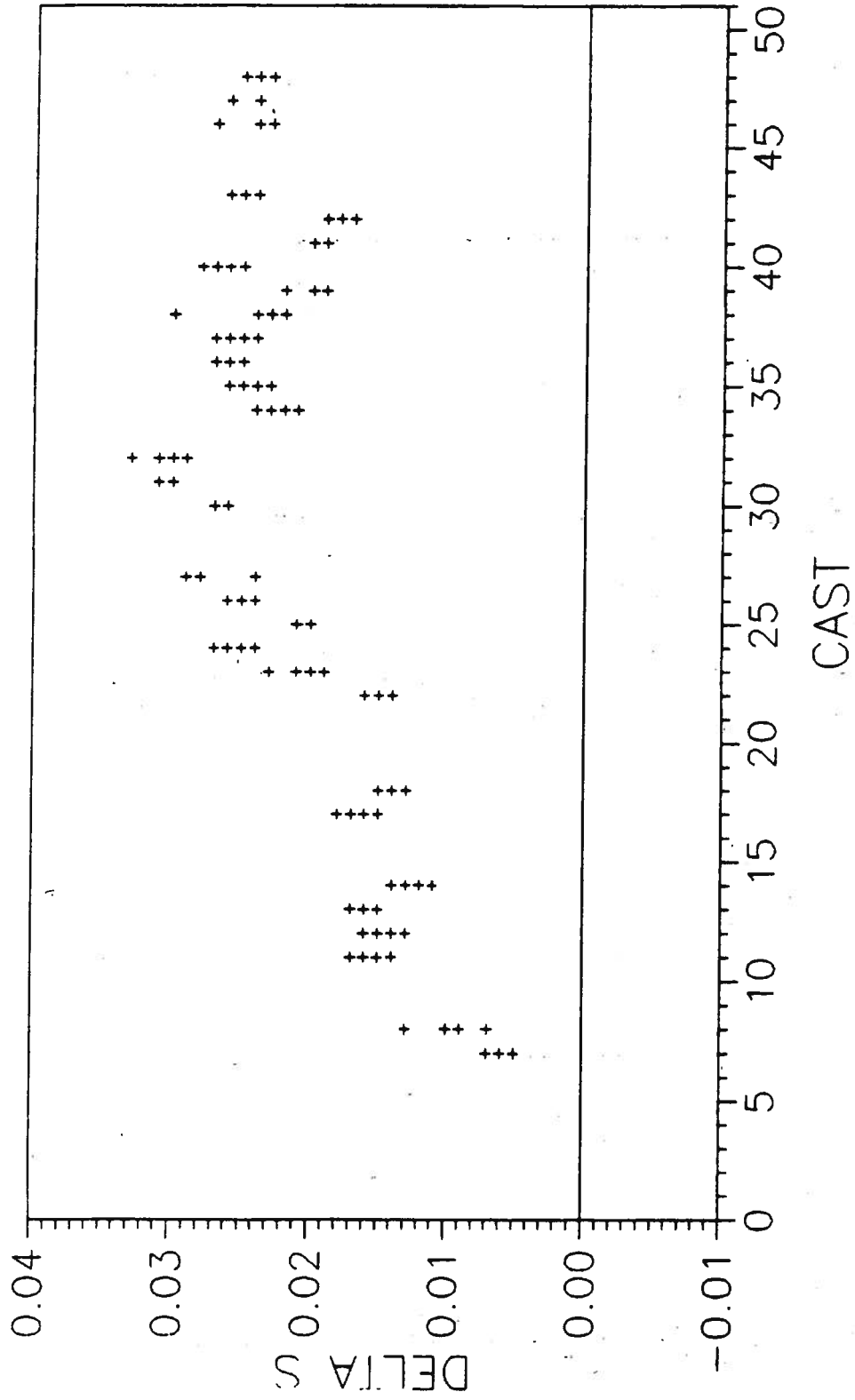


Figure 8. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the September 1990 cruise.

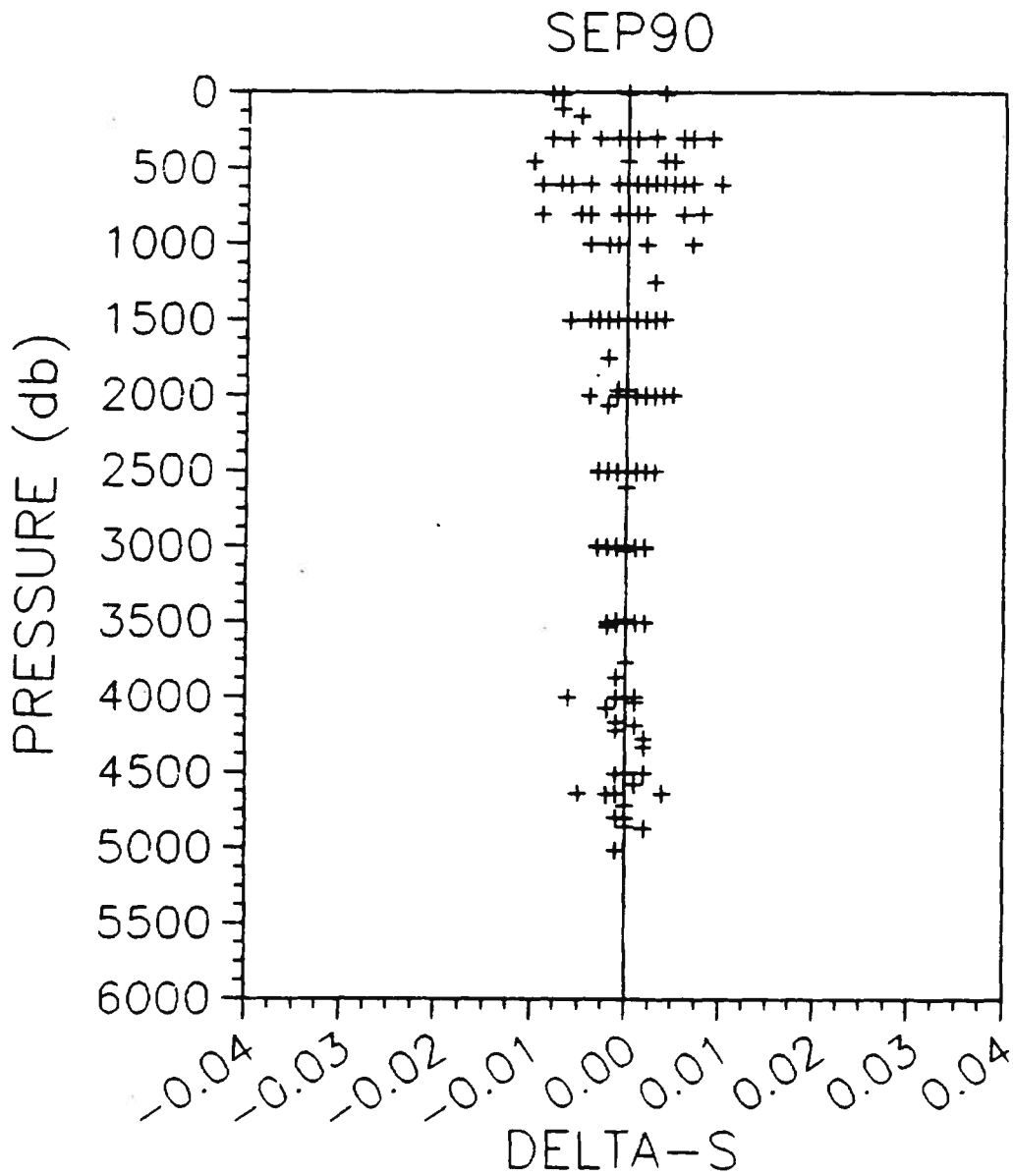


Figure 9. Bottle salinity minus calibrated CTD salinity vs. pressure for the September 1990 cruise.

<u>Casts</u>	<u>Corrections</u>
17	.016
18	.015
19-21	.000
22	.016
23	.019
24	.027
25	.020
26	.026
27-30	.028
31-32	.031
33	.020
34	.023
35	.024
36-37	.026
38	.024
39	.021
40	.026
41	.019
42	.017
43	.024
44-46	.023
47-50	.025

Figure 9 shows the bottle salinity minus the final calibrated CTD salinity vs. pressure. For the 50 CTD casts, there were a total of 219 bottle values and the standard deviation of the calibrated CTD data minus the bottle salinities was $\pm .002$ psu.

B. XBT Data

Appendix B presents XBT data by cruise and cast number.

III. REFERENCES

- Brown, W.S. et al., 1992. A Western Tropical Atlantic Experiment (WESTRAX). *Oceanography*, 5, 75-77.
- Gordon A. L., S. E. Zebiak and K. Bryan, 1992. Climate variability and the Atlantic Ocean. *EOS, Trans. Amer. Geophys. Un.*, 15, 161, 164-165.
- Wilburn, A. M., E. Johns, and M. Bushnell, 1987a. Current velocity and hydrographic observations in the Straits of Florida, the Caribbean Sea and offshore of the Antillean Archipelago: Subtropical Atlantic Climate Studies (STACS), 1984 and 1985. NOAA Data Report ERL AOML-8, 194 pp.
- Wilburn, A. M., E. Johns, and M. Bushnell, 1987b. Current velocity and hydrographic observations in the Straits of Florida, the Caribbean Sea and offshore of the Antillean Archipelago: Subtropical Atlantic Climate Studies (STACS), 1986. NOAA Data Report ERL AOML-10, 247 pp.
- Wilburn, A. M., E. Johns, and M. Bushnell, 1988. Current velocity and hydrographic observations in the southwestern North Atlantic Ocean: Subtropical Atlantic Climate Studies (STACS), 1987. NOAA Data Report ERL AOML-12, 86 pp.
- Wilburn, A. M., E. Johns, and M. Bushnell, 1989. Current velocity and hydrographic observations in the southwestern North Atlantic Ocean: Subtropical Atlantic Climate Studies (STACS), 1988. NOAA Data Report ERL AOML-13, 83 pp.
- Williams, R.T., 1986. Transient Tracers in the Ocean, North Atlantic Study. Shipboard Physical and Chemical Data Report. Physical and Chemical Oceanographic Data Facility, Scripps Institution of Oceanography. University of California, San Diego. SIO Reference No. 86-15, 714 pp.
- Williams, R.T., 1986. Transient Tracers in the Ocean, Tropical Atlantic Study. Shipboard Physical and Chemical Data Report. Physical and Chemical Oceanographic Data Facility, Scripps Institution of Oceanography. University of California, San Diego. SIO Reference No. 86-16, 300 pp.

IV. ACKNOWLEDGMENTS

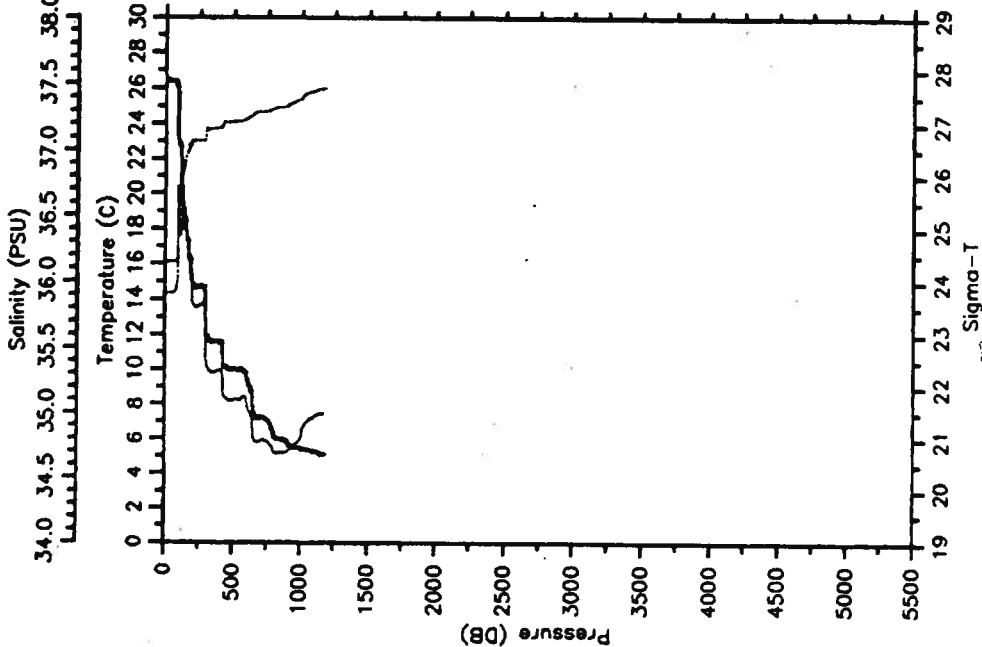
The extensive efforts of the officers and crew of the NOAA Ships MT MITCHELL and MALCOLM BALDRIGE are gratefully acknowledged. Contributions by scientific and technical personnel Bob Molinari, Mark Bushnell, Doug Anderson, Bob Roddy, Warren Krug, Mike Minton, and Dave Bitterman are greatly appreciated.

APPENDIX A: CTD DATA

Casts are presented by cruise and increasing cast number. Julian day and time, cruise number and vessel, and position are given at the top of each plot. Temperature, salinity, and sigma-t profiles are shown for each cast.

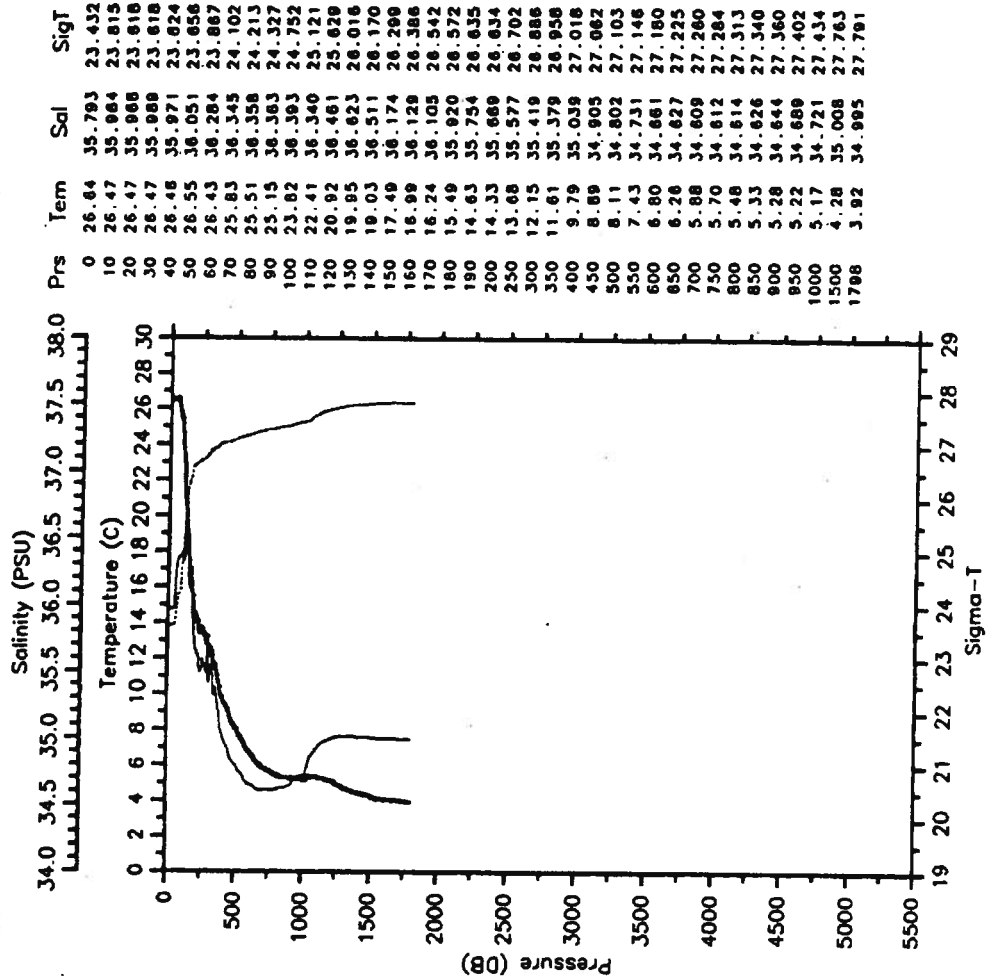
BAL-STACS35-90 CTD 1 BALDRIGE
 Date 01 31 90 Latitude 13.008N
 Time 0852 Z Longitude 59.347W

— Tem — Sal
 SigT



BAL-STACS35-90 CTD 2 BALDRIGE
 Date 01 31 90 Latitude 12.065N
 Time 1716 Z Longitude 60.083W

— Tem — Sal
 SigT



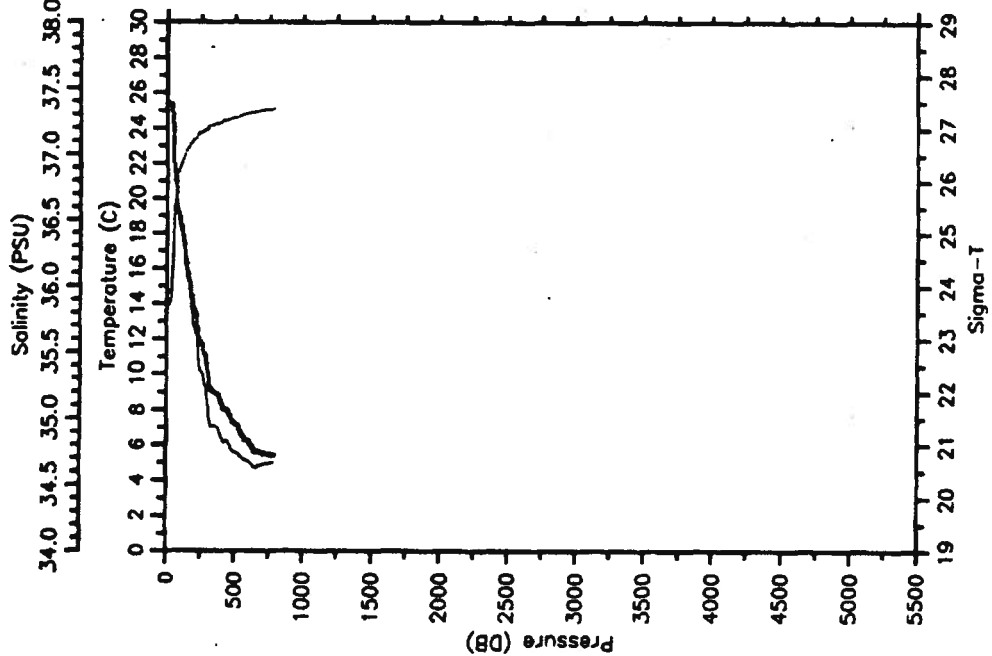
Reproduced from
 best available copy.

BAL-STACS35-90 CTD 3 BALDRIGE

Date 02 01 90 Latitude 11.453N

Time 0005 Z Longitude 60.528W

--- Tem --- Sal
..... SigT



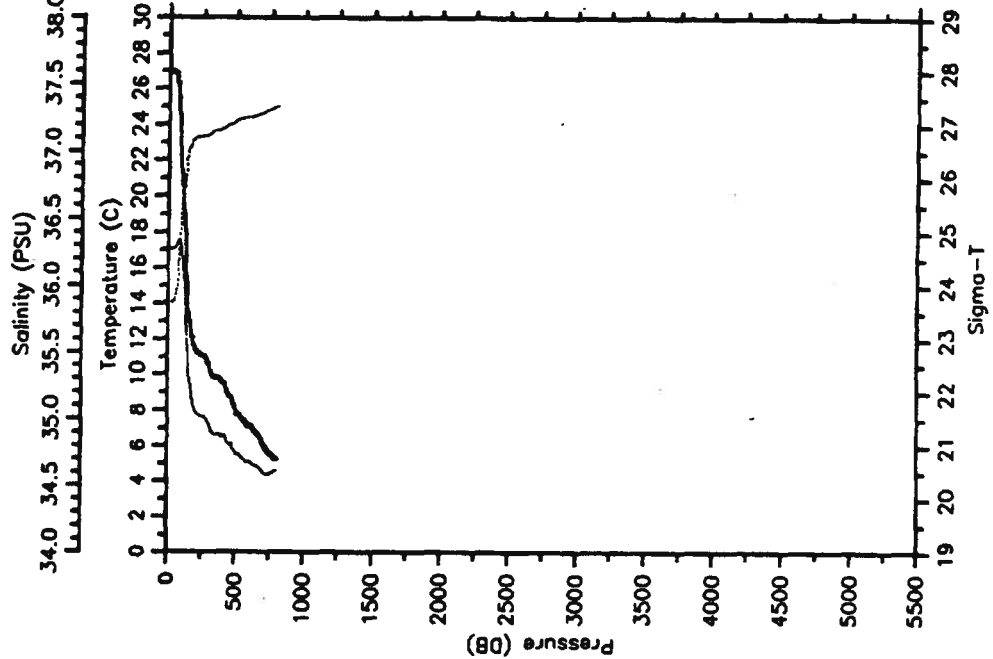
Prs	Tem	Sal	SigT
0	25.32	35.856	23.894
10	25.33	35.854	23.887
20	25.34	35.860	23.890
30	25.33	35.894	23.917
40	24.88	36.048	24.143
50	22.08	36.416	25.271
60	21.33	36.595	25.620
70	20.85	36.804	25.813
80	19.34	36.997	26.158
90	18.90	36.946	26.231
100	18.45	36.495	26.307
110	18.20	36.455	26.338
120	17.74	36.388	26.398
130	17.25	36.311	26.462
140	16.36	36.175	26.570
150	15.81	36.072	26.618
160	15.51	36.011	26.637
170	15.02	35.925	26.681
180	14.47	35.826	26.728
190	14.16	35.773	26.746
200	13.64	35.683	26.791
250	11.75	35.356	26.913
300	10.11	35.098	27.010
350	8.95	34.838	27.076
400	6.33	34.654	27.110
450	7.96	34.818	27.152
500	7.17	34.743	27.163
550	6.98	34.707	27.243
600	6.25	34.681	27.269
650	5.83	34.629	27.307
700	5.56	34.649	27.331
750	5.47	34.680	27.350
789	5.44	34.670	27.362

BAL-STACS35-90 CTD 4 BALDRIGE

Date 02 03 90 Latitude 7.467N

Time 0253 Z Longitude 52.953W

--- Tem --- Sal
..... SigT



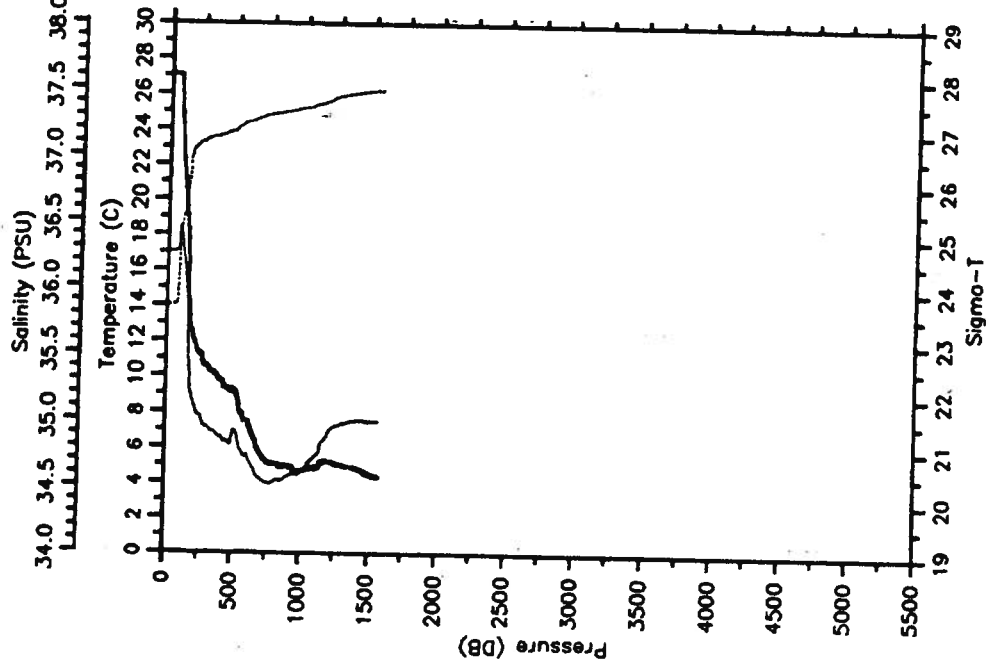
Prs	Tem	Sal	SigT
0	26.98	36.238	23.857
10	26.99	36.269	23.879
20	26.99	36.271	23.880
30	26.96	36.272	23.884
40	26.95	36.276	23.888
50	26.85	36.278	23.731
60	26.35	36.295	23.901
70	26.08	36.333	24.015
80	24.48	36.316	24.485
90	22.38	36.330	25.123
100	21.07	36.272	25.446
110	20.27	36.190	25.600
120	18.61	36.015	25.848
130	17.57	35.878	26.053
140	15.11	35.578	26.393
150	13.67	35.393	26.552
160	13.01	35.269	26.599
170	12.43	35.216	26.673
180	12.10	35.144	26.682
190	11.66	35.092	26.726
200	11.45	35.083	26.743
250	11.08	35.018	26.776
300	10.59	34.885	26.823
350	9.64	34.686	26.891
400	9.34	34.673	26.930
450	8.81	34.812	27.002
500	8.01	34.751	27.077
550	7.55	34.713	27.114
600	7.17	34.676	27.141
650	6.79	34.851	27.173
700	6.10	34.606	27.229
750	5.55	34.576	27.274
800	5.26	34.612	27.337
805	5.26	34.614	27.339

BAL-STACS35-90 CTD 5 BALDRIGE

Date 02 03 90 Latitude 7.769N

Time 1508 Z Longitude 52.641W

— Term — Sal
 --- SigT

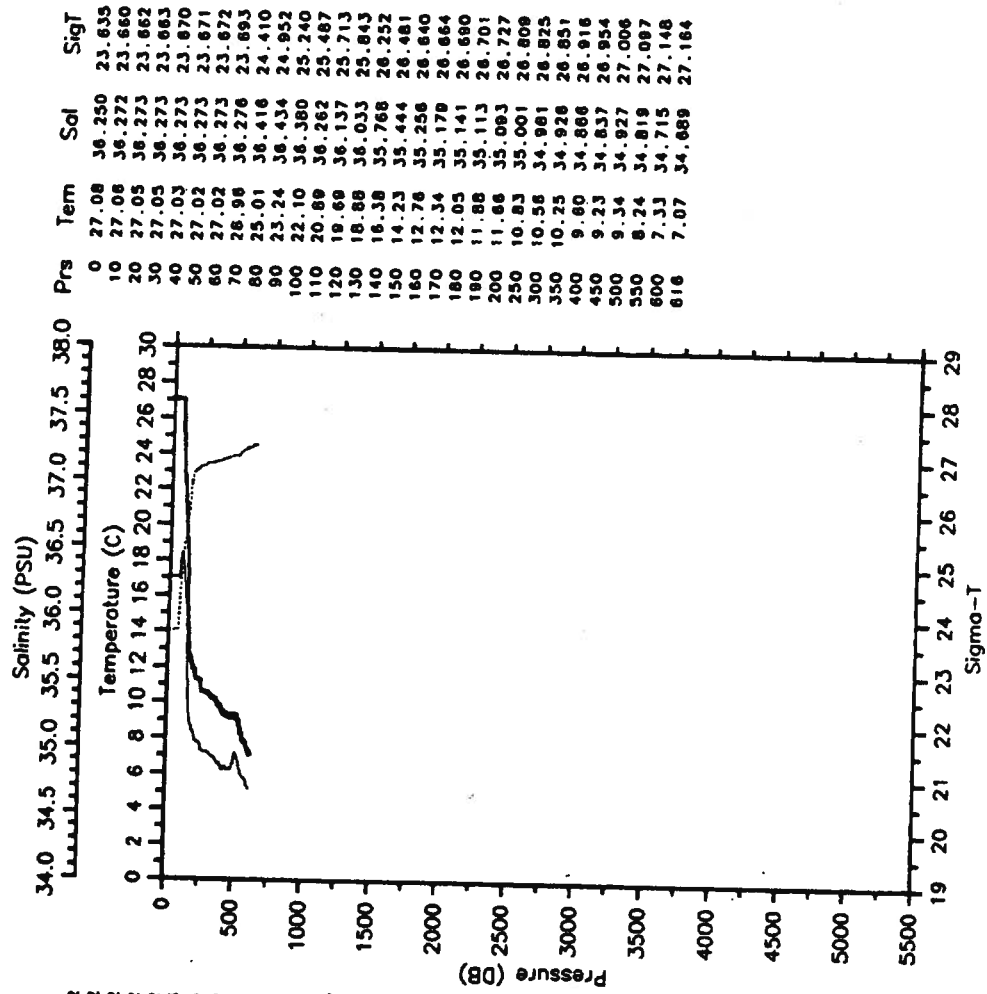


BAL-STACS35-90 CTD 6 BALDRIGE

Date 02 03 90 Latitude 7.797N

Time 1813 Z Longitude 52.657W

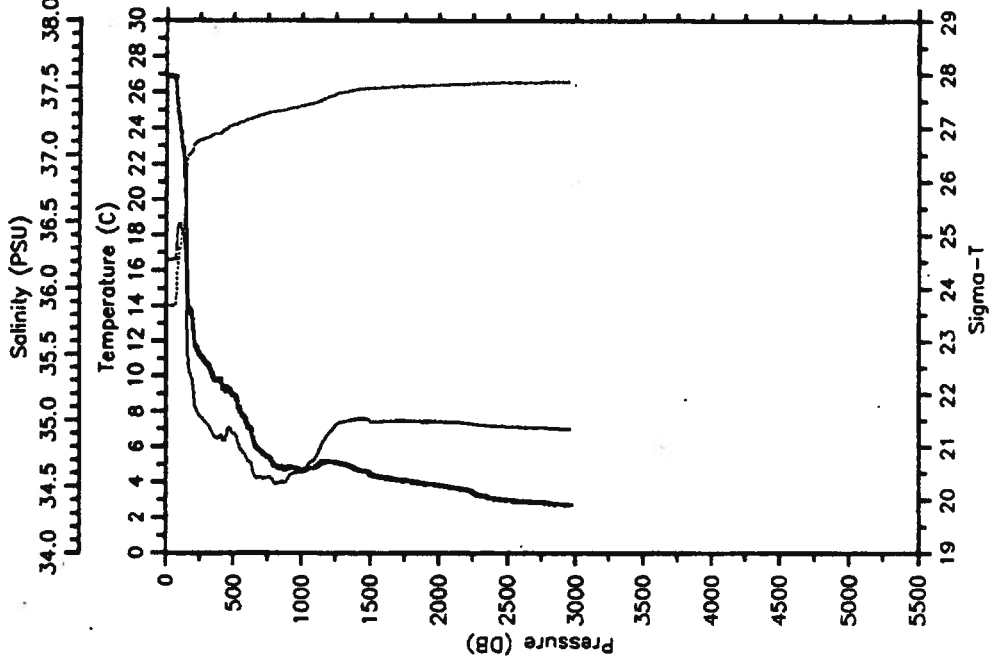
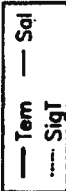
— Term — Sal
 --- SigT



BAL-STACS35-90 CTD 7 BALDRIGE

Date 02 04 90 Latitude 8.122N

Time 0012 Z Longitude 52.472W

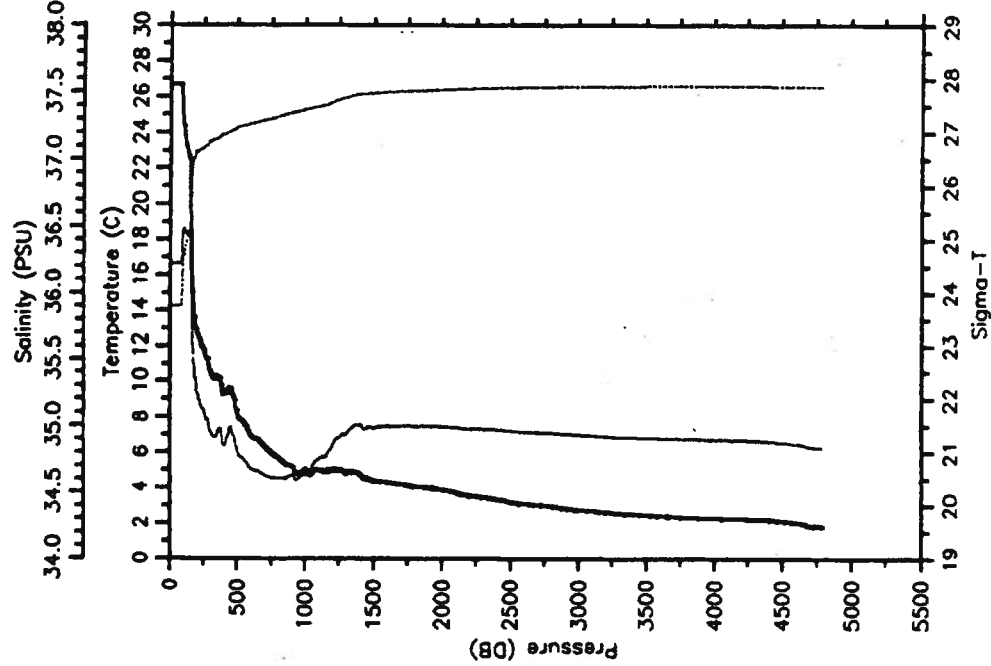
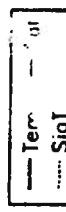


Prs	Temp	Sal	SigT
0	26.85	36.227	23.692
10	26.87	36.217	23.677
20	26.87	36.216	23.677
30	26.88	36.216	23.675
40	26.88	36.217	23.675
50	26.88	36.217	23.678
60	26.88	36.218	23.681
70	26.88	36.220	23.684
80	25.61	36.357	24.181
90	24.78	36.473	24.524
100	24.28	36.492	24.688
110	23.53	36.479	24.902
120	22.90	36.421	25.042
130	22.49	36.393	25.136
140	21.39	36.288	25.370
150	18.72	35.993	25.853
160	14.43	35.491	26.478
170	13.90	35.381	26.504
180	13.71	35.345	26.515
190	13.47	35.318	26.546
200	12.88	35.258	26.617
250	11.18	35.028	26.766
300	10.73	34.979	26.809
350	9.80	34.888	26.860
400	9.80	34.877	26.891
450	8.30	34.882	26.986
500	8.94	34.900	27.050
550	7.94	34.780	27.111
600	7.17	34.702	27.160
650	6.20	34.581	27.198
700	5.77	34.571	27.242
750	5.48	34.570	27.280
800	4.95	34.527	27.305
850	4.82	34.535	27.327
900	4.81	34.562	27.350
950	4.81	34.597	27.377
1000	4.68	34.627	27.415
1500	4.42	34.988	27.732
2000	3.84	34.982	27.797
2500	2.99	34.950	27.646
2865	2.75	34.935	27.855

BAL-STACS35-90 CTD 8 BALDRIGE

Date 02 04 90 Latitude 8.530N

Time 1333 Z Longitude 52.112W

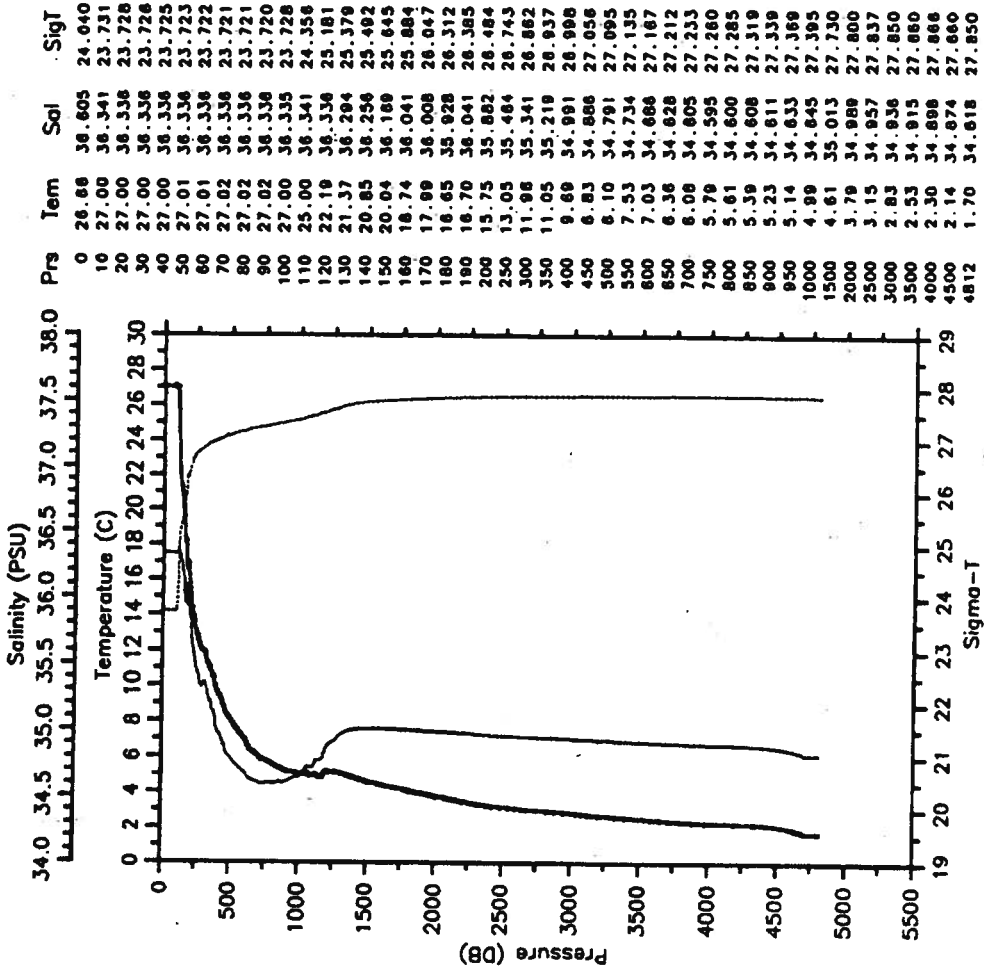


Prs	Temp	Sal	SigT
0	26.68	36.217	23.746
10	26.68	36.217	23.746
20	26.68	36.217	23.745
30	26.68	36.217	23.745
40	26.68	36.217	23.744
50	26.67	36.217	23.744
60	26.67	36.217	23.743
70	26.67	36.218	23.743
80	26.67	36.218	23.744
90	25.81	36.311	24.085
100	24.44	36.482	24.634
110	23.90	36.486	24.799
120	23.30	36.441	24.941
130	22.93	36.445	25.052
140	22.64	36.437	25.130
150	22.36	36.410	25.190
160	18.75	36.001	25.851
170	15.15	35.589	26.394
180	13.68	35.371	26.541
190	13.10	35.358	26.648
200	12.81	35.244	26.622
250	11.90	35.116	26.719
300	10.55	34.958	26.824
350	10.23	34.943	26.868
400	9.26	34.852	26.960
450	9.63	34.992	27.008
500	6.23	34.815	27.094
550	7.58	34.742	27.133
600	6.94	34.671	27.166
650	6.74	34.855	27.193
700	6.34	34.629	27.215
750	6.01	34.608	27.242
800	5.72	34.604	27.276
850	5.39	34.605	27.316
900	5.21	34.624	27.353
950	4.78	34.599	27.383
1000	5.01	34.680	27.421
1500	4.42	34.983	27.728
2000	3.91	34.983	27.791
2500	3.20	34.961	27.835
3000	2.76	34.933	27.854
3500	2.45	34.910	27.863
4000	2.27	34.896	27.866
4500	2.13	34.874	27.860
4788	1.83	34.835	27.853

BAL-STACS35-90 CTD 9 BALDRIGE

Date 02 05 90 Latitude 9.032N
 Time 0521 Z Longitude 51.902W

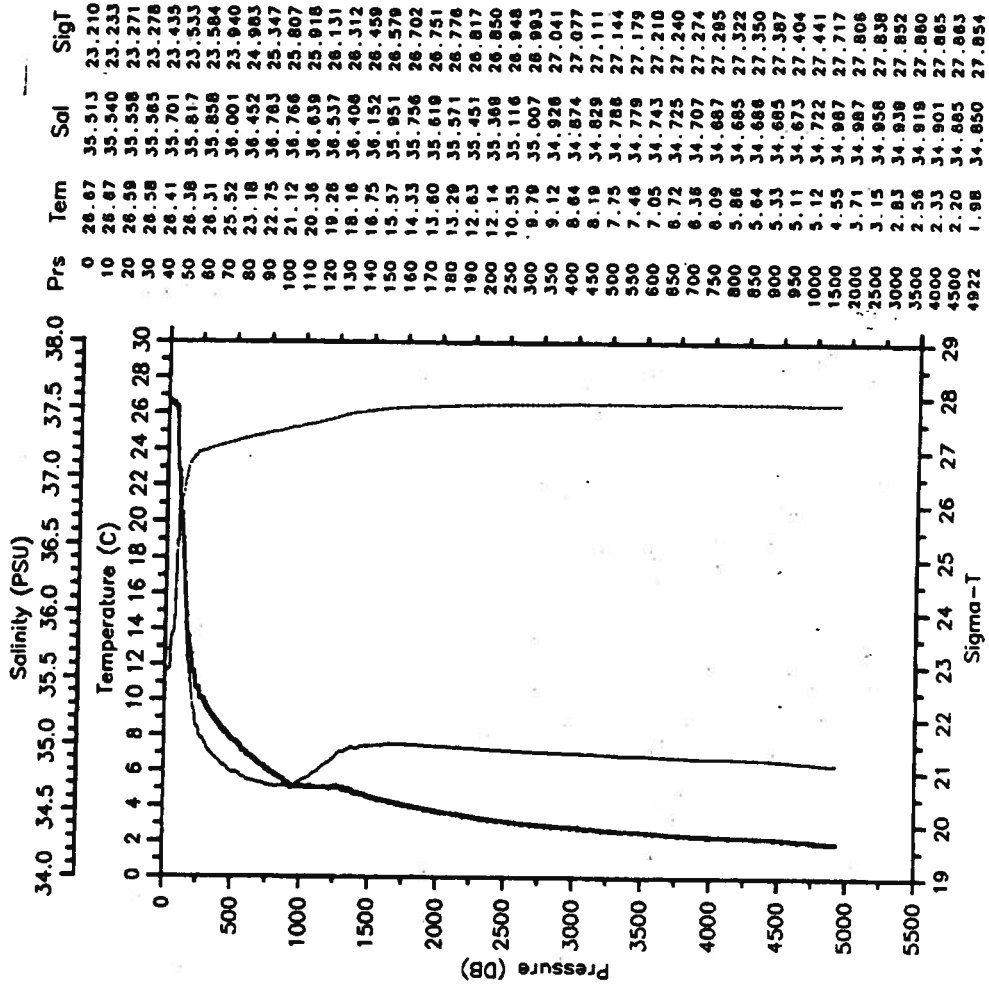
— Tem — Sol
 SigT



BAL-STACS35-90 CTD 10 BALDRIGE

Date 02 05 90 Latitude 9.990N
 Time 2118 Z Longitude 51.278W

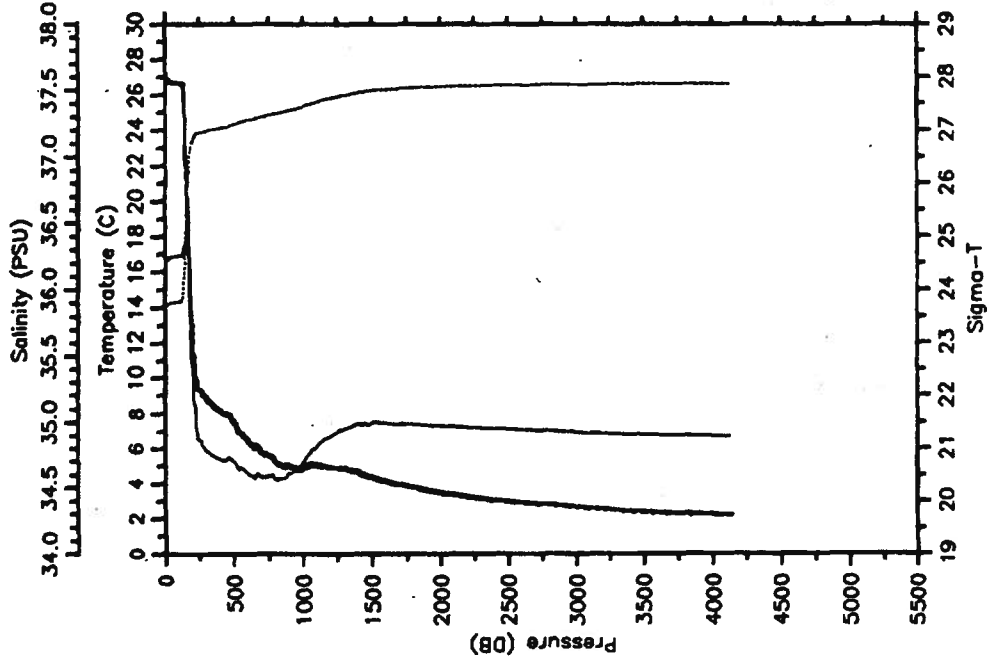
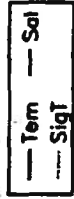
— Tem — Sol
 SigT



BAL-STACS35-90 CTD 11 BALDRICE

Date 02 06 90 Latitude 7.088N

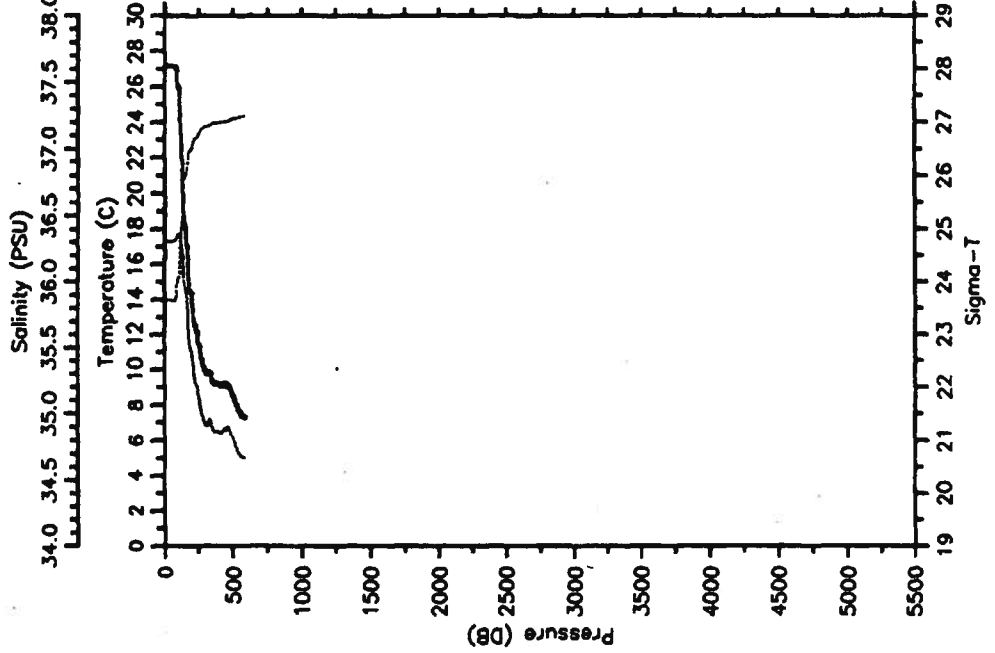
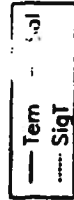
Time 2147 Z Longitude 50.315W



BAL-STACS35-90 CTD 16 BALDRICE

Date 02 09 90 Latitude 3.942N

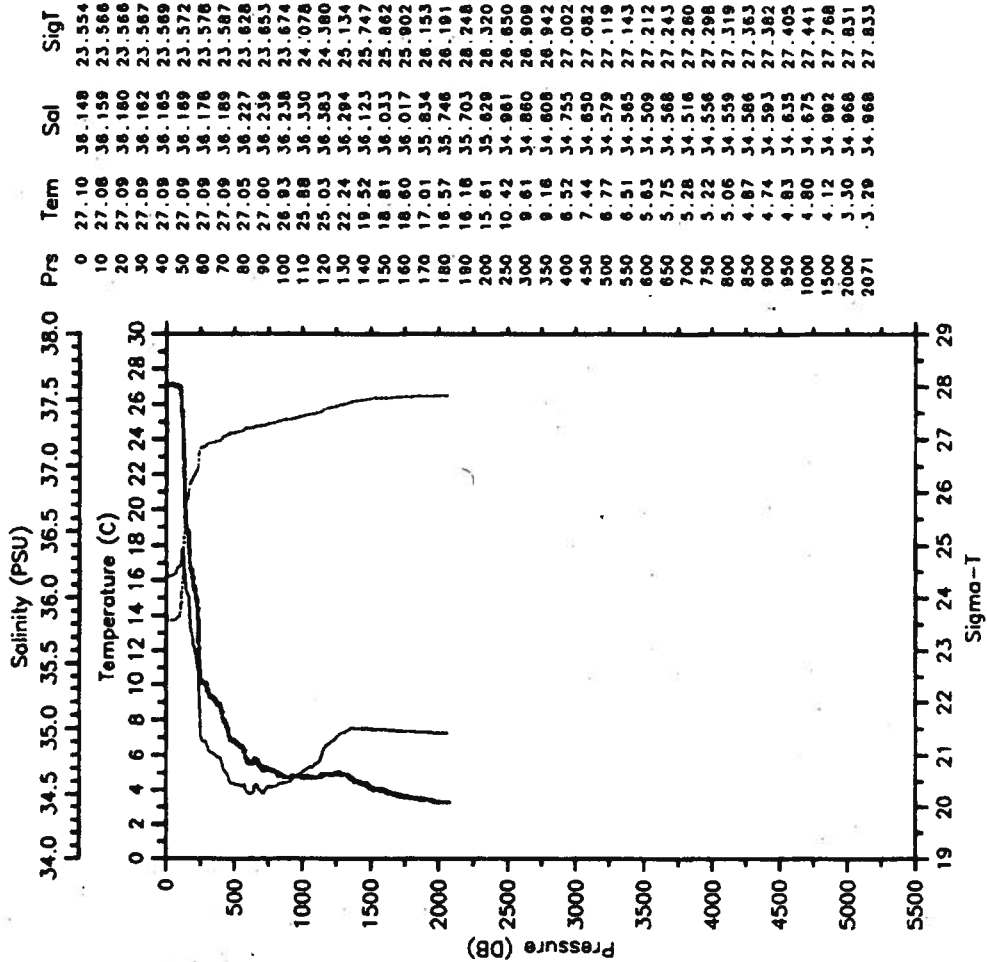
Time 0424 Z Longitude 48.712W



BAL-STACS35-90 CTD 17 BALDRIGE

Date 02 09 90 Latitude 4.718N
 Time 1305 Z Longitude 48.348W

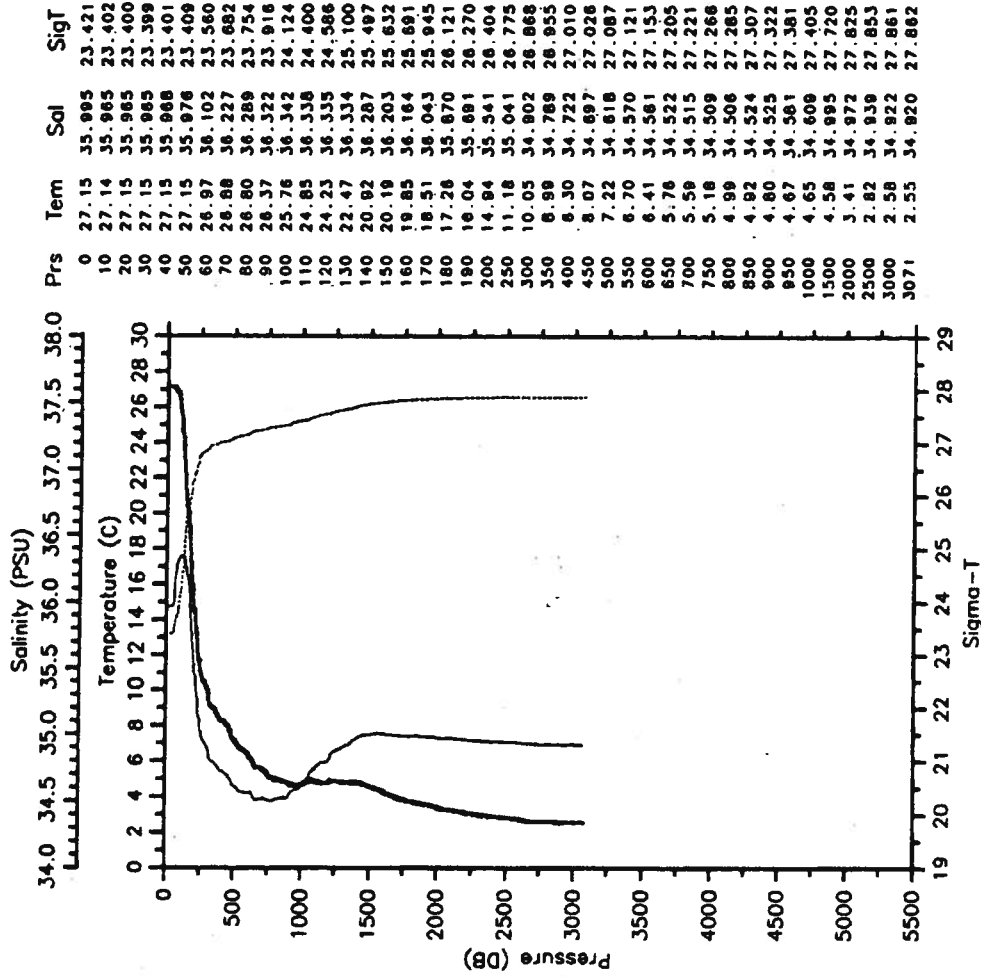
--- Tem --- Sal
 SigT



BAL-STACS35-90 CTD 18 BALDRIGE

Date 02 10 90 Latitude 4.938N
 Time 0146 Z Longitude 47.532W

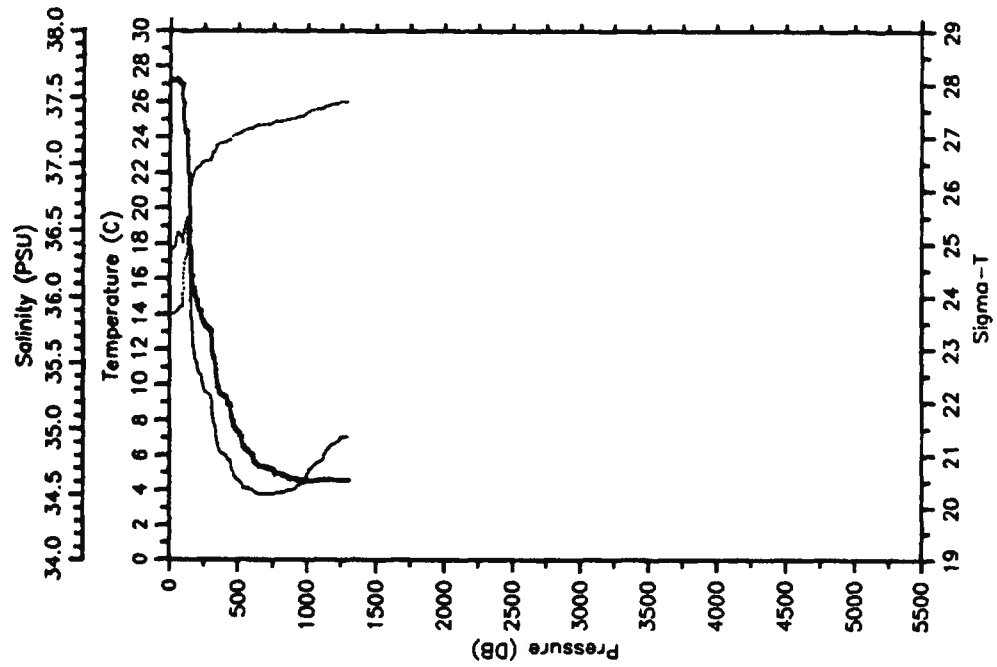
--- Tem --- Sal
 SigT



BAL-STACS35-90 CTD 19 BALDRIGE

Date 02 11 90 Latitude 0.155N
 Time 1400 Z Longitude 44.410W

--- Tem --- Sal
 SigT

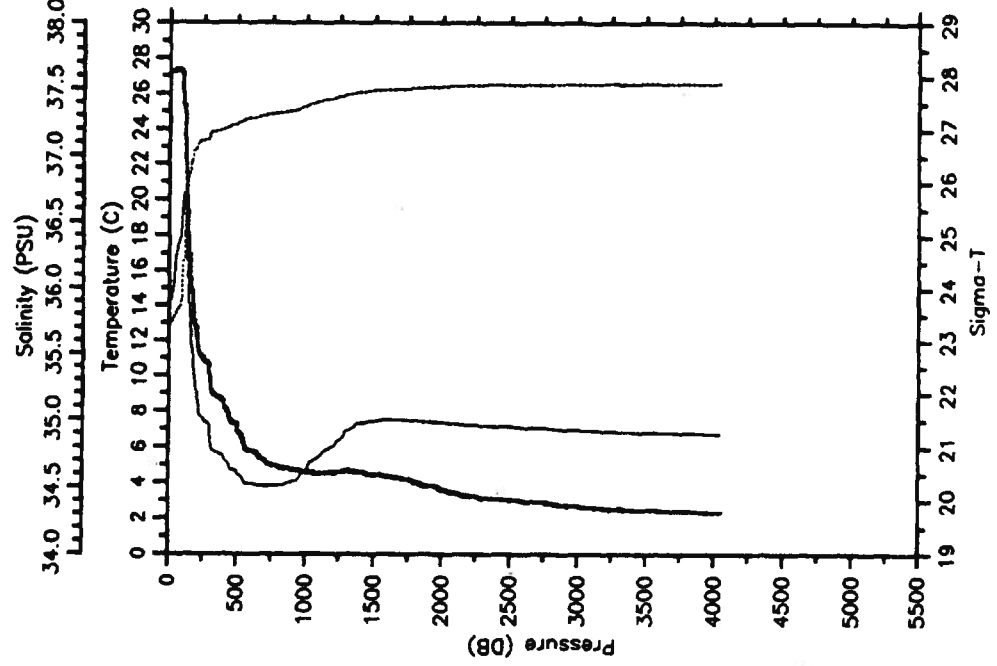


Prs	Tem	Sal	SigT
0	27.31	36.282	23.587
10	27.24	36.353	23.683
20	27.23	36.361	23.671
30	27.23	36.369	23.677
40	27.23	36.388	23.680
50	27.25	36.422	23.711
60	27.27	36.484	23.750
70	27.11	36.476	23.795
80	27.05	36.464	23.806
90	27.01	36.456	23.815
100	25.75	36.406	24.175
110	24.32	36.534	24.709
120	24.34	36.564	24.726
130	23.46	36.585	24.889
140	21.87	36.459	25.365
150	19.24	36.228	25.893
160	17.17	35.856	26.133
170	15.84	35.670	26.302
180	15.33	35.577	26.345
190	14.85	35.520	26.384
200	14.75	35.485	26.402
250	13.47	35.305	26.534
300	13.04	35.248	26.576
350	8.93	34.871	26.863
400	9.34	34.806	26.911
450	8.37	34.720	26.996
500	7.34	34.608	27.083
550	6.36	34.541	27.143
600	6.06	34.534	27.177
650	5.39	34.508	27.240
700	5.31	34.503	27.245
750	5.16	34.504	27.263
800	4.93	34.511	27.296
850	4.78	34.523	27.322
900	4.67	34.536	27.344
950	4.61	34.580	27.386
1000	4.55	34.660	27.456
1297	4.62	34.846	27.676

BAL-STACS35-90 CTD 20 BALDRIGE

Date 02 11 90 Latitude 0.855N
 Time 2252 Z Longitude 44.072W

--- Tem --- Sal
 SigT

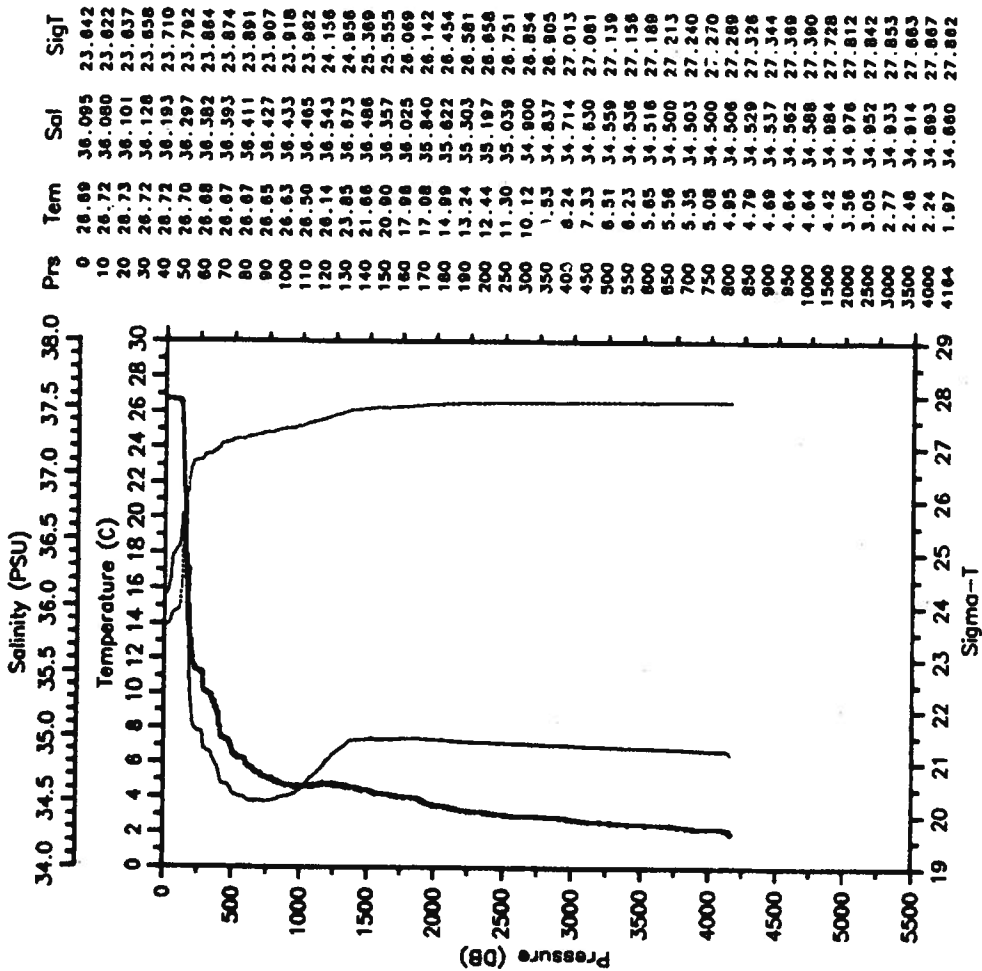


Prs	Tem	Sal	SigT
0	27.19	35.944	23.371
10	27.20	35.905	23.336
20	27.20	35.923	23.351
30	27.21	36.003	23.407
40	27.24	36.082	23.457
50	27.31	36.191	23.517
60	27.35	36.305	23.589
70	27.35	36.344	23.620
80	27.29	36.370	23.658
90	27.10	36.422	23.780
100	25.84	36.595	24.286
110	25.31	36.708	24.540
120	22.75	36.648	25.257
130	20.82	36.388	25.656
140	18.84	36.134	25.932
150	16.94	35.827	26.164
160	15.88	35.706	26.323
170	14.83	35.515	26.407
180	13.59	35.373	26.562
190	12.90	35.250	26.607
200	12.59	35.208	26.636
250	10.89	35.006	26.783
300	9.84	34.876	26.916
350	8.83	34.761	26.959
400	8.53	34.735	26.965
450	7.43	34.636	27.071
500	6.95	34.608	27.116
550	6.16	34.544	27.172
600	5.78	34.522	27.203
650	5.56	34.514	27.223
700	5.25	34.507	27.255
750	5.00	34.508	27.266
800	4.89	34.511	27.300
850	4.81	34.520	27.317
900	4.60	34.545	27.336
950	4.70	34.567	27.366
1000	4.57	34.624	27.426
1500	4.44	34.890	27.731
2000	3.62	34.980	27.810
2500	3.05	34.951	27.842
3000	2.69	34.928	27.855
3500	2.44	34.911	27.864
4000	2.35	34.900	27.864
4040	2.34	34.900	27.864

BAL-STAC35-90 CTD 21 BALDRIGE

Date 02 12 90 Latitude 1.945N
 Time 1212 Z Longitude 44.046W

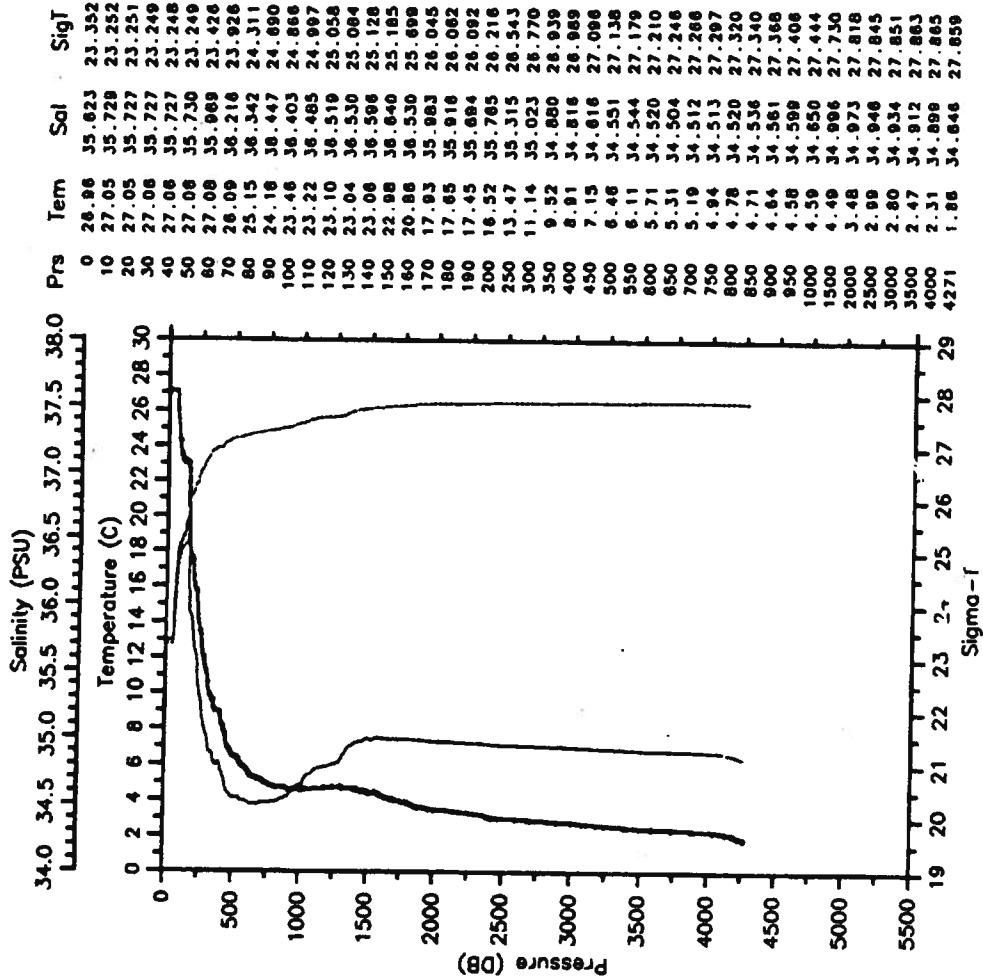
--- Tem --- Sal
 SigT



BAL-STAC35-90 CTD 22 BALDRIGE

Date 02 13 90 Latitude 3.285N
 Time 2235 Z Longitude 44.002W

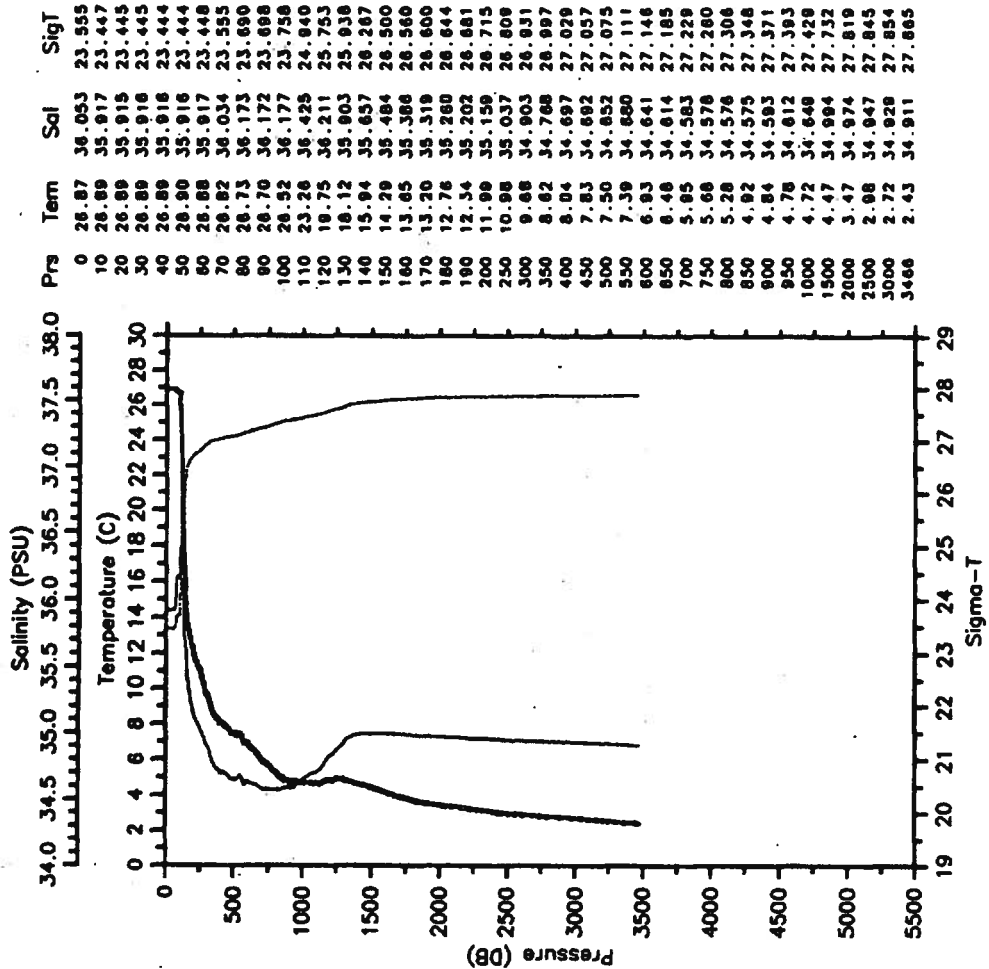
--- Tem --- Sal
 SigT



BAL-STACS35-90 CTD 23 BALDRIGE

Date 02 13 90 Latitude 5.248N
 Time 2318 Z Longitude 44.002W

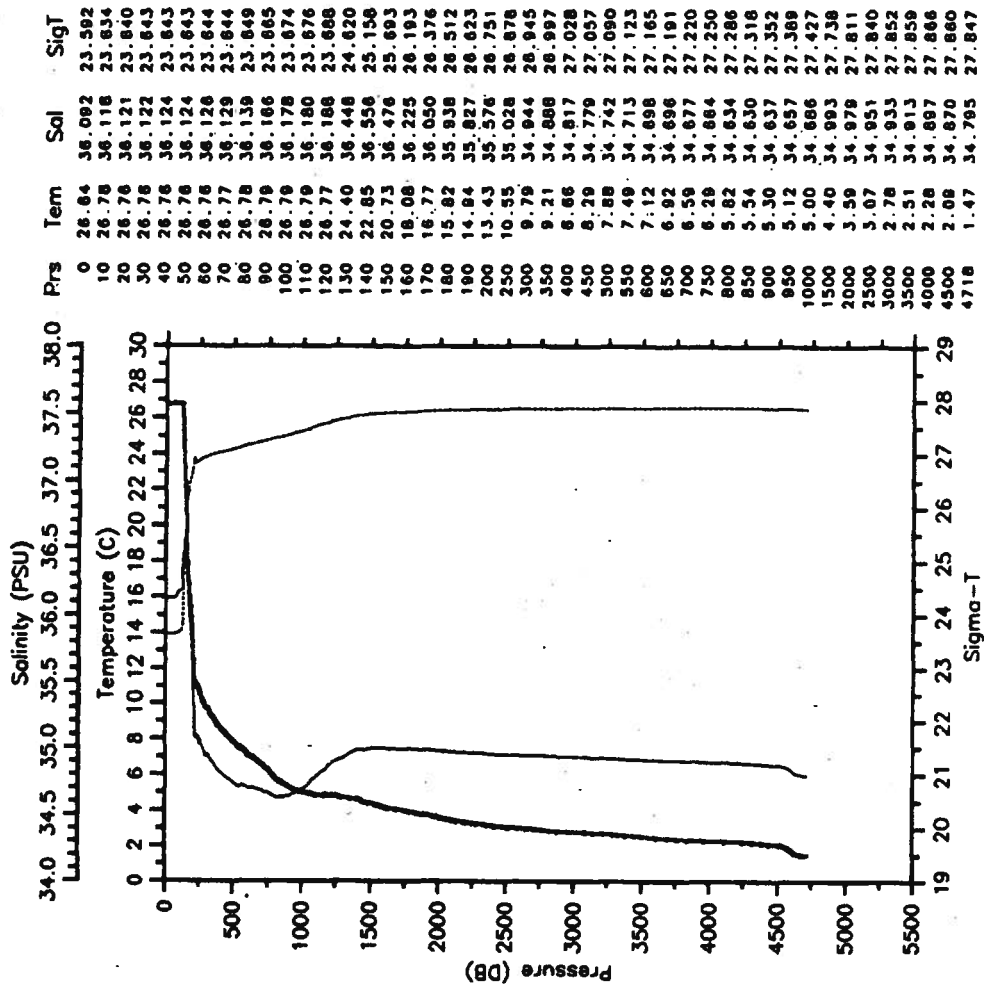
— Tem — Sal
 — SigT



BAL-STACS35-90 CTD 24 BALDRIGE

Date 02 14 90 Latitude 6.675N
 Time 1457 Z Longitude 44.022W

— Tem — Sal
 — SigT

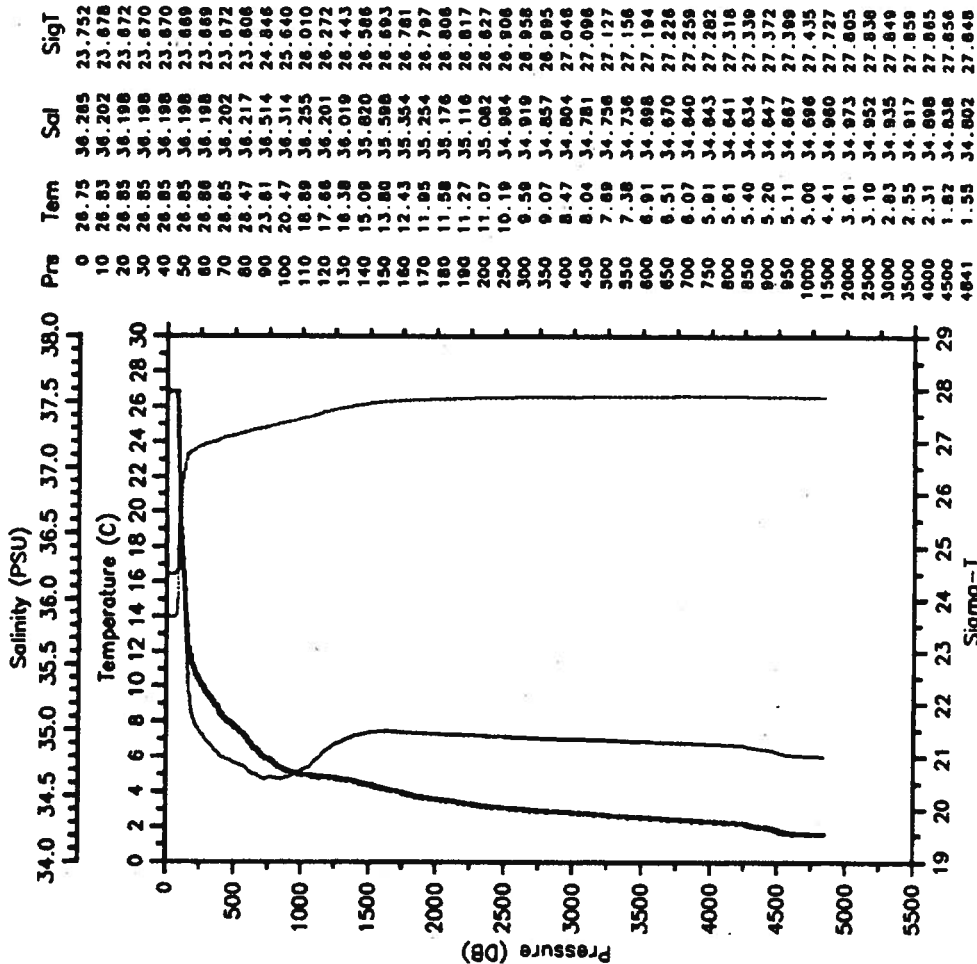


BAL-STACS35-90 CTD 25 BALDRIGE

Date 02 15 90 Latitude 8.283N

Time 0904 Z Longitude 43.940W

--- Tem --- Sal
--- SigT

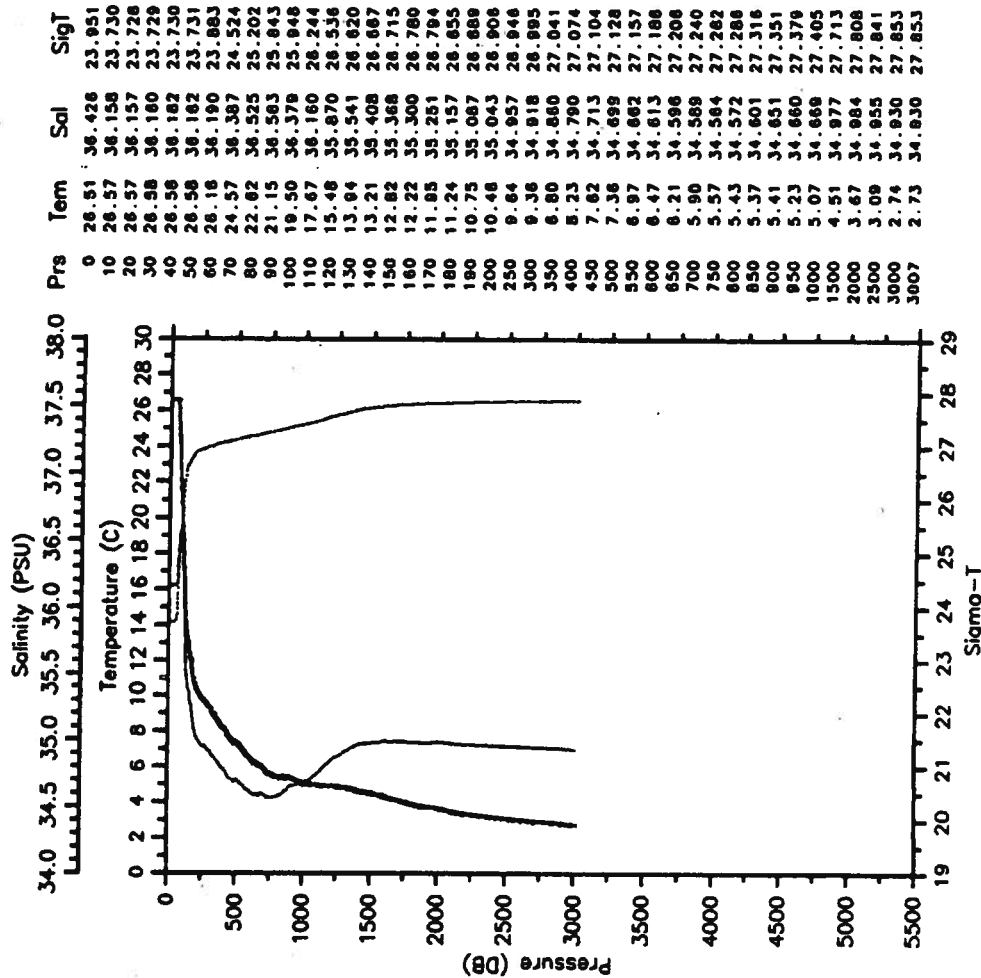


BAL-STACS35-90 CTD 26 BALDRIGE

Date 02 16 90 Latitude 8.372N

Time 0500 Z Longitude 46.338W

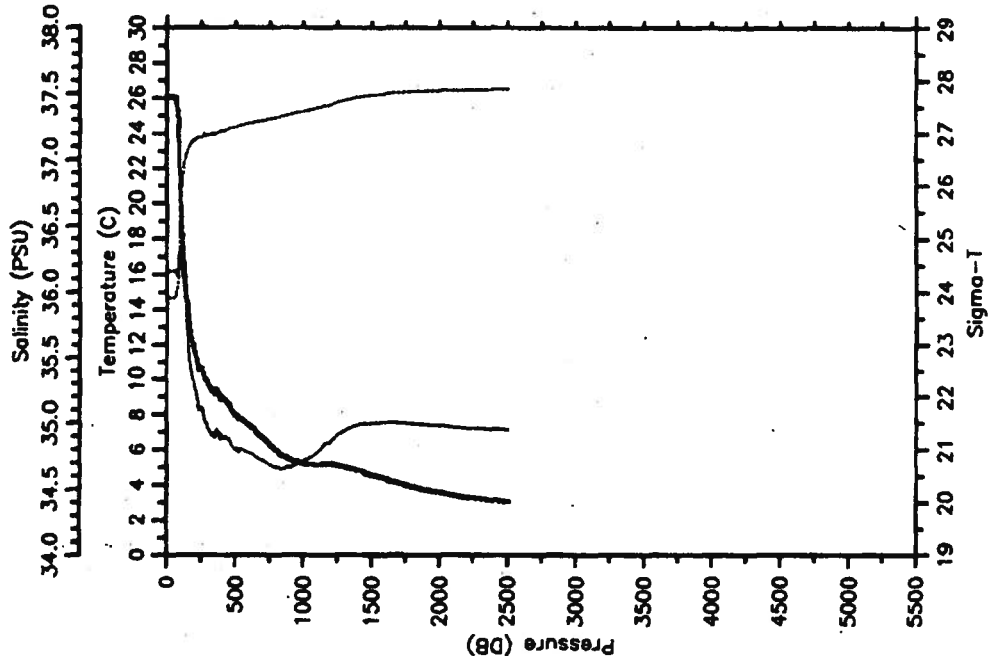
--- Tem --- Sal
--- SigT



BAL-STACS35-90 CTD 27 BALDRICE
 Date 02 17 90 Latitude 10.003N
 Time 0055 Z Longitude 49.012W

--- Tem --- Sal
 --- SigT

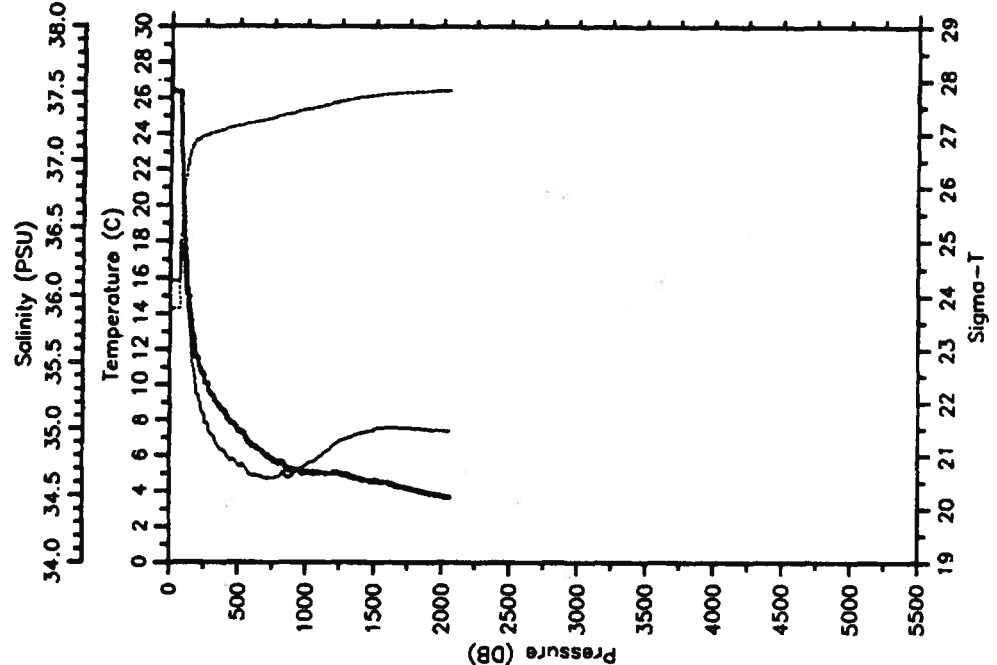
Prs	Tem	Sal	SigT
0	25.93	36.459	24.160
10	26.04	36.162	23.899
20	26.05	36.157	23.894
30	26.05	36.160	23.894
40	26.05	36.160	23.894
50	26.04	36.158	23.895
60	26.02	36.156	23.902
70	25.78	36.147	23.970
80	25.32	36.127	24.097
90	23.12	36.263	24.859
100	20.39	36.326	25.671
110	18.55	36.152	28.017
120	17.36	36.090	28.257
130	16.39	35.975	28.409
140	14.85	35.785	26.599
150	14.17	35.672	26.672
160	13.38	35.545	26.739
170	12.76	35.441	26.783
180	12.25	35.387	26.842
190	11.95	35.328	26.854
200	11.58	35.288	26.878
250	10.67	35.121	26.929
300	9.84	34.954	26.978
350	9.20	34.889	27.000
400	8.84	34.897	27.083
450	8.56	34.879	27.094
500	7.99	34.795	27.115
550	7.67	34.799	27.164
600	7.35	34.776	27.194
650	6.98	34.746	27.221
700	6.67	34.717	27.241
750	6.28	34.686	27.270
800	5.98	34.669	27.284
850	5.62	34.654	27.326
900	5.48	34.671	27.357
950	5.29	34.688	27.394
1000	5.25	34.713	27.419
1500	4.57	34.999	27.724
2000	3.61	34.984	27.814
2500	3.07	34.954	27.842
2506	3.06	34.955	27.844



BAL-STACS35-90 CTD 28 BALDRICE
 Date 02 17 90 Latitude 10.026N
 Time 1444 Z Longitude 51.299W

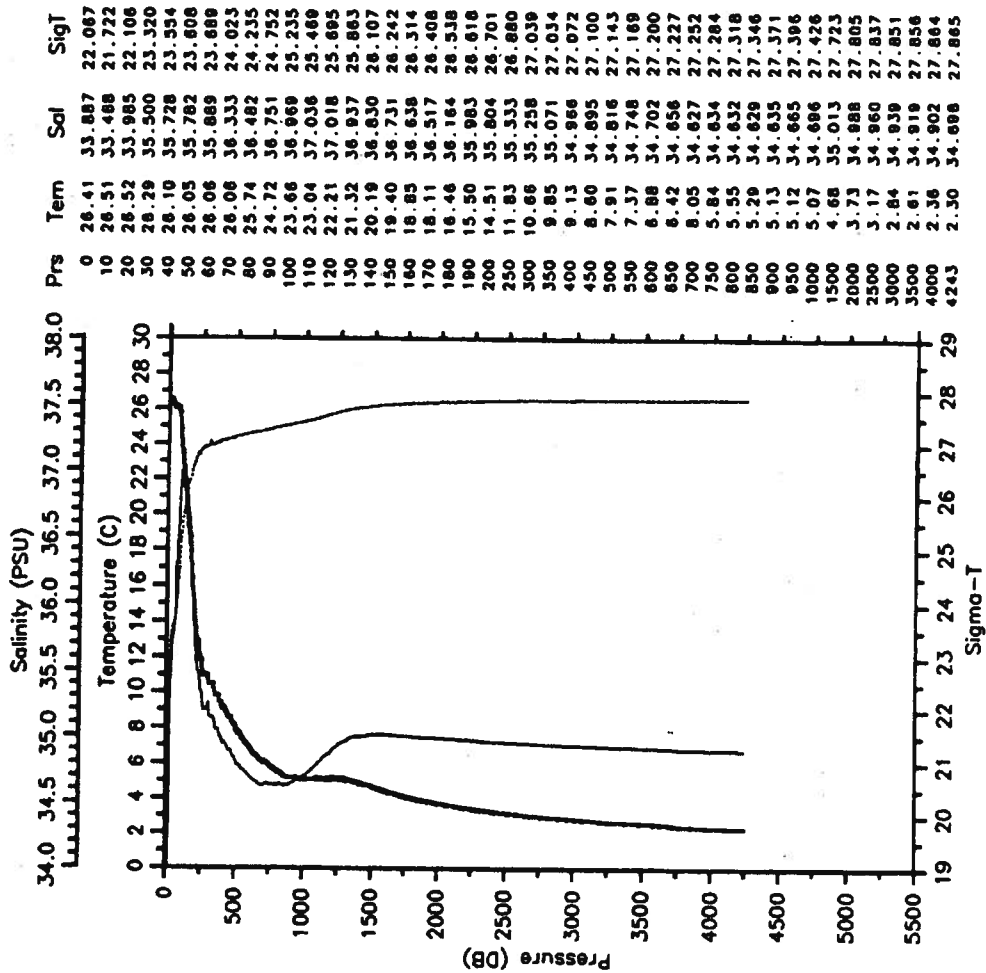
--- Tem --- Sal
 --- SigT

Prs	Tem	Sal	SigT
0	26.40	36.100	23.740
10	26.38	36.109	23.752
20	26.38	36.111	23.754
30	26.37	36.111	23.757
40	26.37	36.111	23.758
50	26.36	36.111	23.759
60	26.36	36.111	23.760
70	26.21	36.120	23.815
80	22.81	36.383	25.041
90	21.11	36.313	25.484
100	19.22	36.230	25.907
110	17.91	36.079	26.123
120	16.78	35.966	26.315
130	15.60	35.878	26.516
140	14.78	35.792	26.633
150	14.06	35.688	26.709
160	13.28	35.564	26.774
170	12.78	35.461	26.800
180	12.25	35.390	26.844
190	11.62	35.278	26.879
200	11.59	35.262	26.872
250	10.18	35.074	26.960
300	9.49	34.980	27.007
350	8.82	34.885	27.042
400	8.37	34.829	27.084
450	7.86	34.768	27.112
500	7.38	34.723	27.148
550	7.04	34.707	27.182
600	6.56	34.647	27.201
650	6.34	34.646	27.230
700	6.05	34.630	27.254
750	5.80	34.633	27.288
800	5.56	34.642	27.325
850	5.30	34.636	27.352
900	5.16	34.648	27.378
950	5.13	34.699	27.420
1000	5.03	34.724	27.453
1500	4.57	34.999	27.723
2000	3.73	34.988	27.805
2056	3.65	34.987	27.812



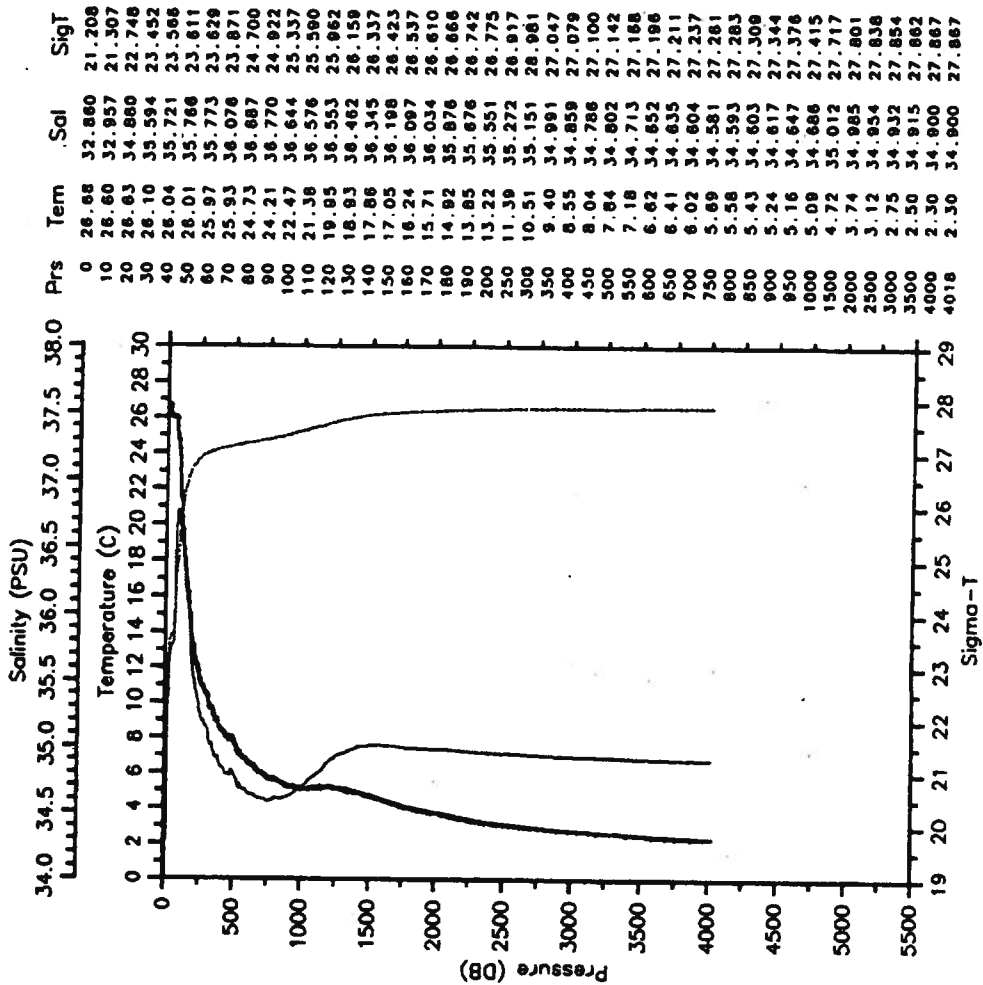
BAL-STACS35-90 CTD 29 BALDRIGE
 Date 02 18 90 Latitude 10.643N
 Time 0357 Z Longitude 53.205W

— Tem — Sal
 SigT



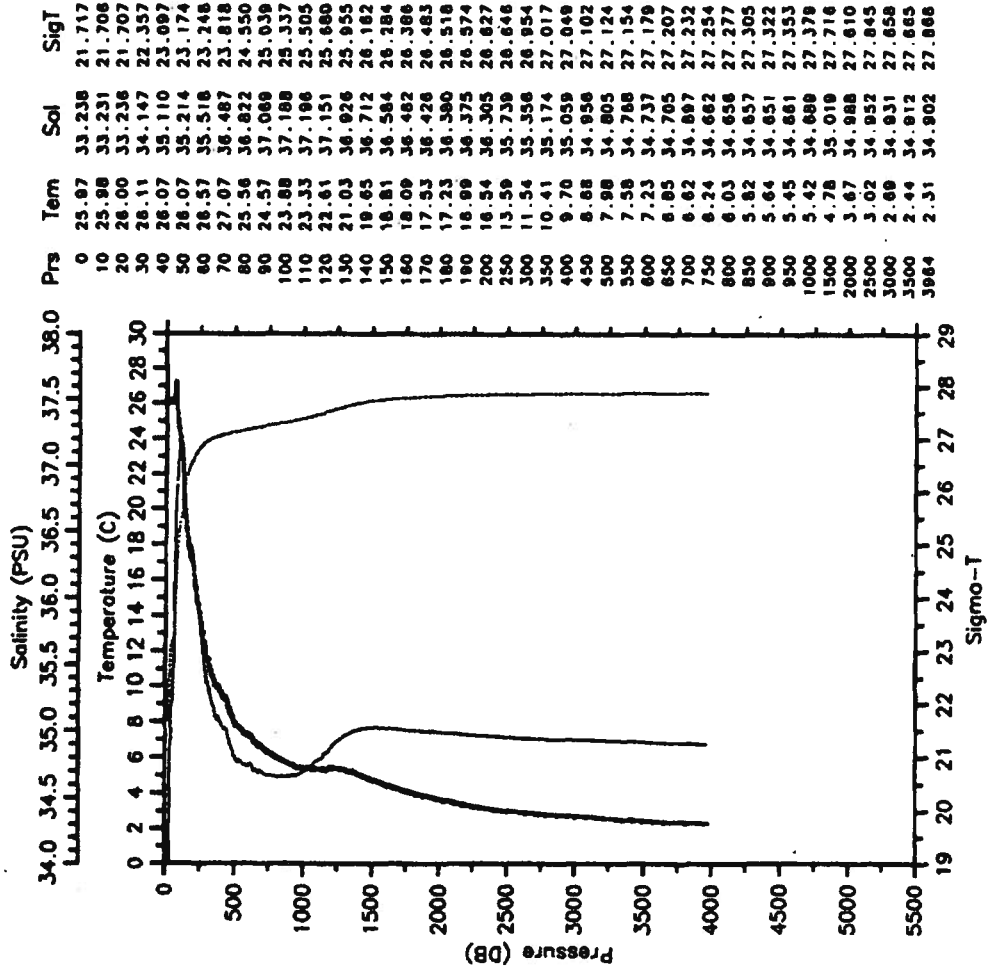
BAL-STACS35-90 CTD 30 BALDRIGE
 Date 02 18 90 Latitude 11.206N
 Time 1700 Z Longitude 55.223W

— Tem — Sal
 SigT



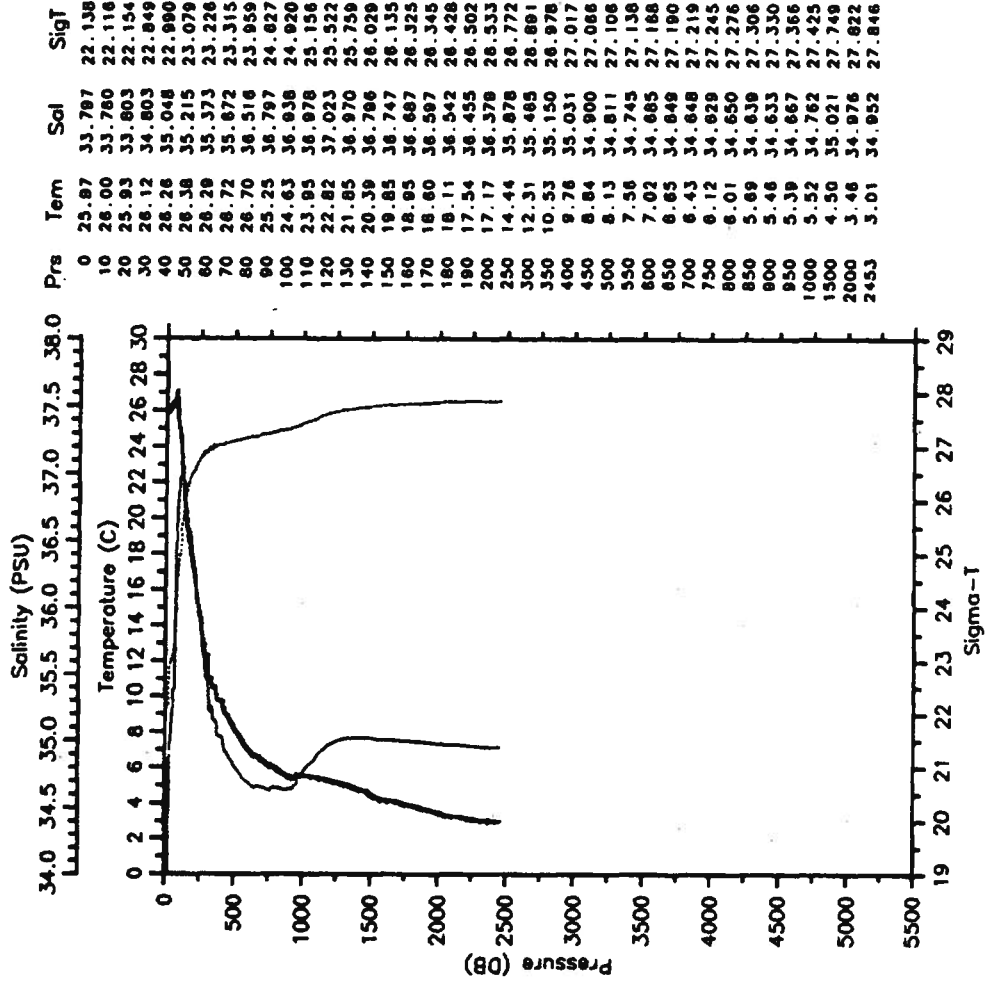
BAL-STACS35-90 CTD 31 BALDRIGE
 Date 02 19 90 Latitude 12.448N
 Time 0630 Z Longitude 57.465W

---Tem ---Sol
 ---SigT



BAL-STACS35-90 CTD 32 BALDRIGE
 Date 02 19 90 Latitude 12.880N
 Time 1399 Z Longitude 58.163W

---Tem ---Sol
 ---SigT

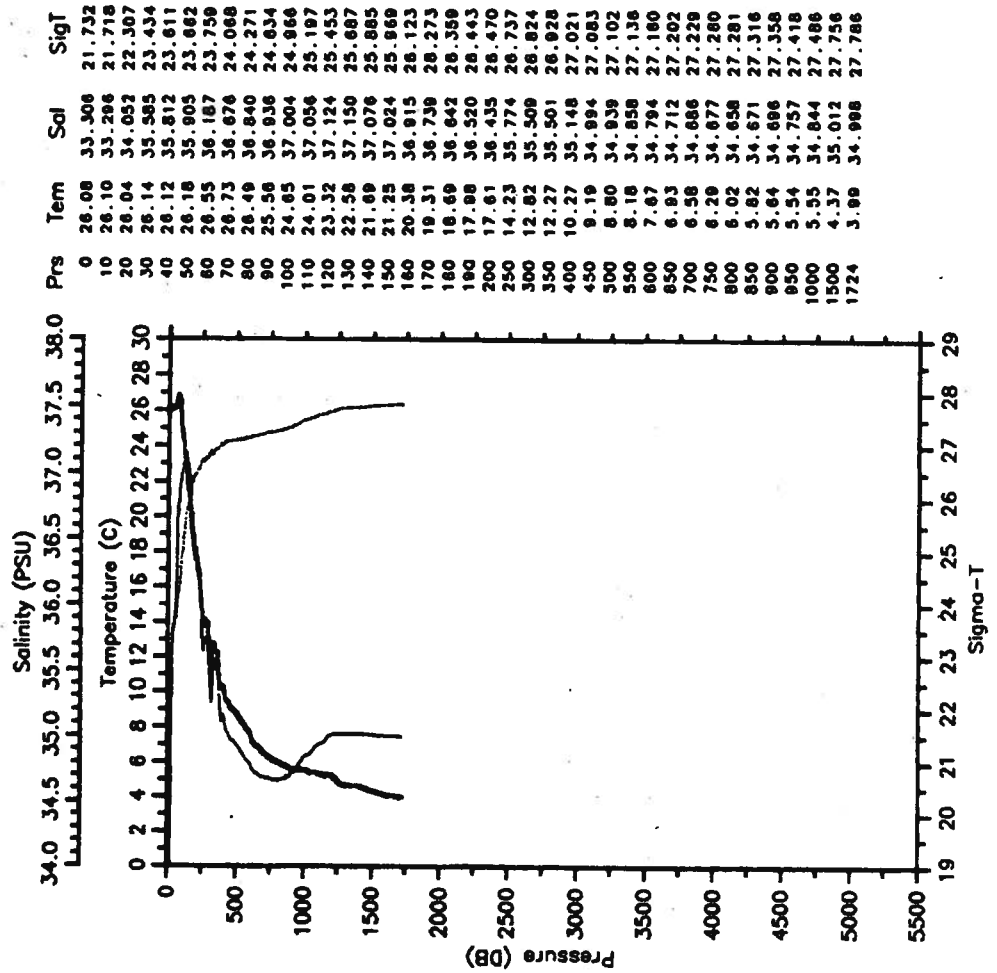


BAL-STACS35-90 CTD 33 BALDRIGE

Date 02 19 90 Latitude 13.368N

Time 1906 Z Longitude 59.088W

— Tem — Sal
--- SigT

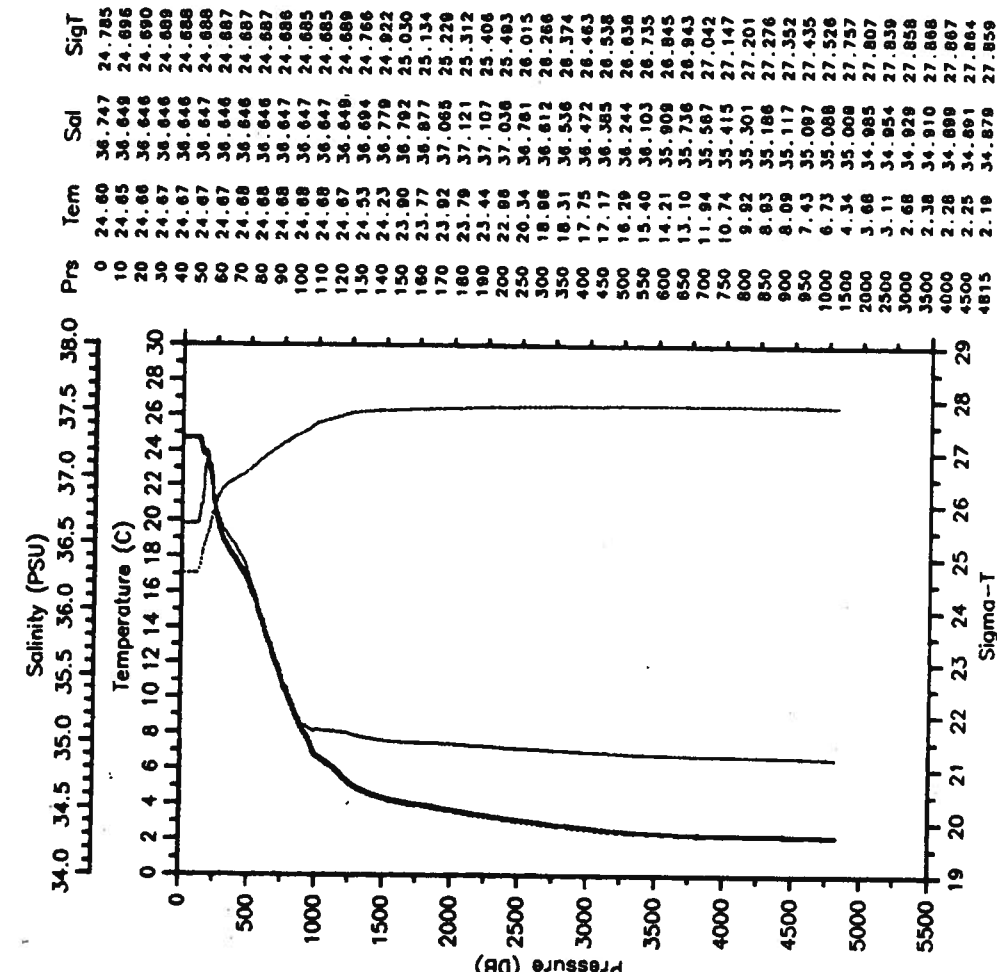


BAL-STACS35-90 CTD 34 BALDRIGE

Date 02 27 90 Latitude 26.610N

Time 2254 Z Longitude 75.918W

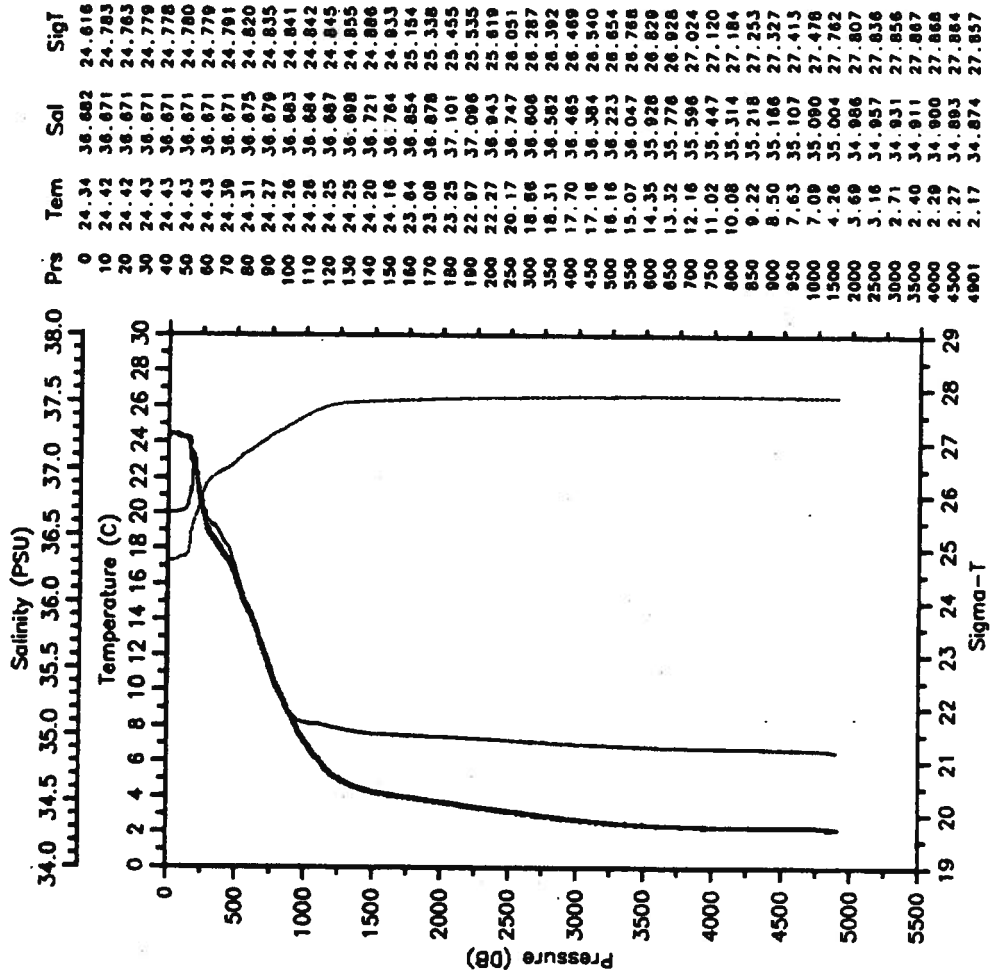
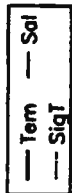
— Tem — Sal
--- SigT



BAL-STACS35-90 CTD 35 BALDRIGE

Date 02 28 90 Latitude 26.492N

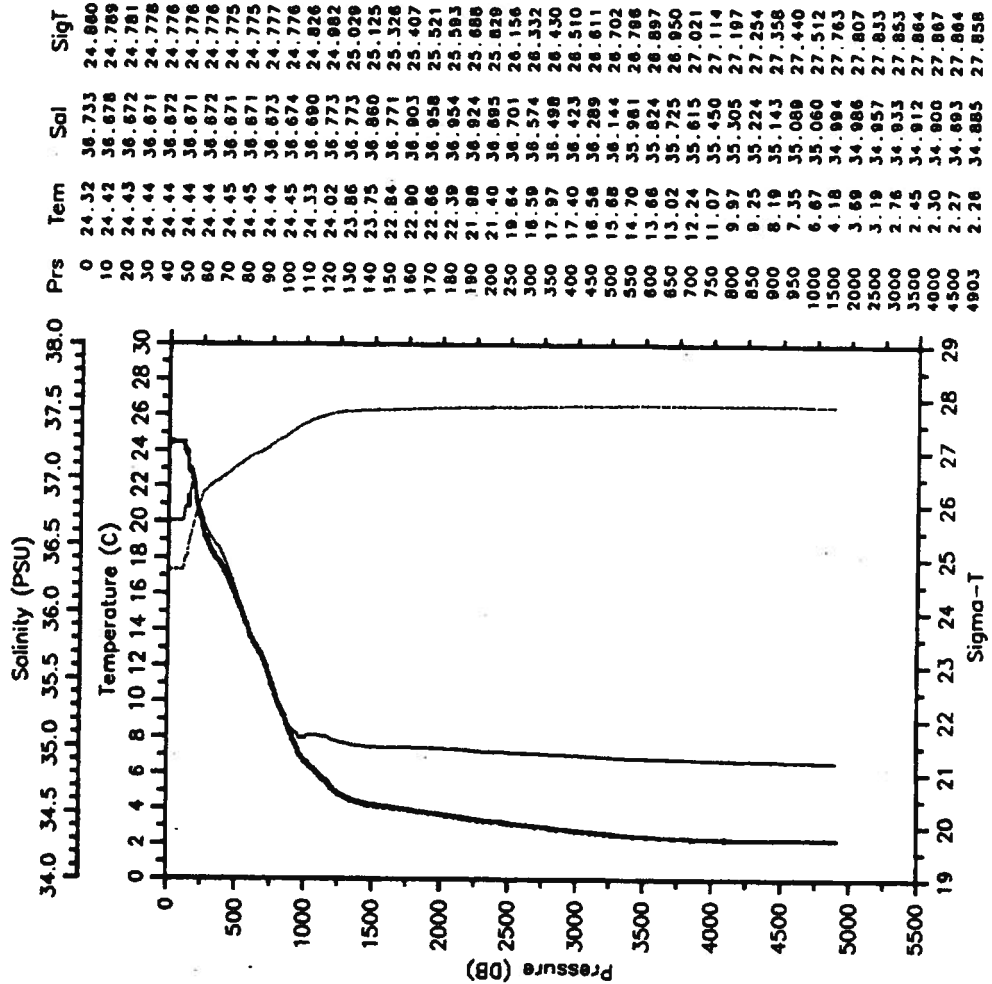
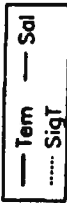
Time 0345 Z Longitude 76.232W



BAL-STACS35-90 CTD 36 BALDRIGE

Date 02 28 90 Latitude 26.540N

Time 0815 Z Longitude 76.528W

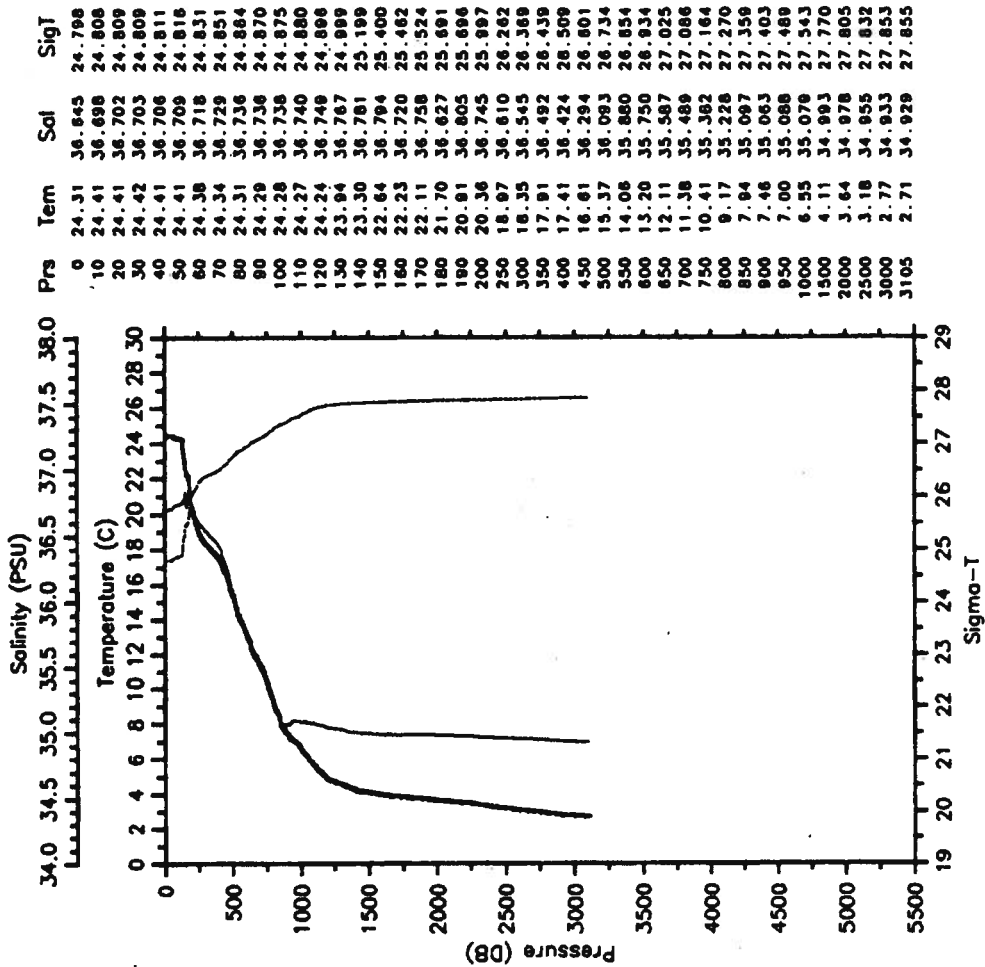


BAL-STACS35-90 CTD 37 BALDRIGE

Date 02 28 90 Latitude 26.553N

Time 1239 Z Longitude 76.745W

--- Term --- Sal
 - - - - - SigT

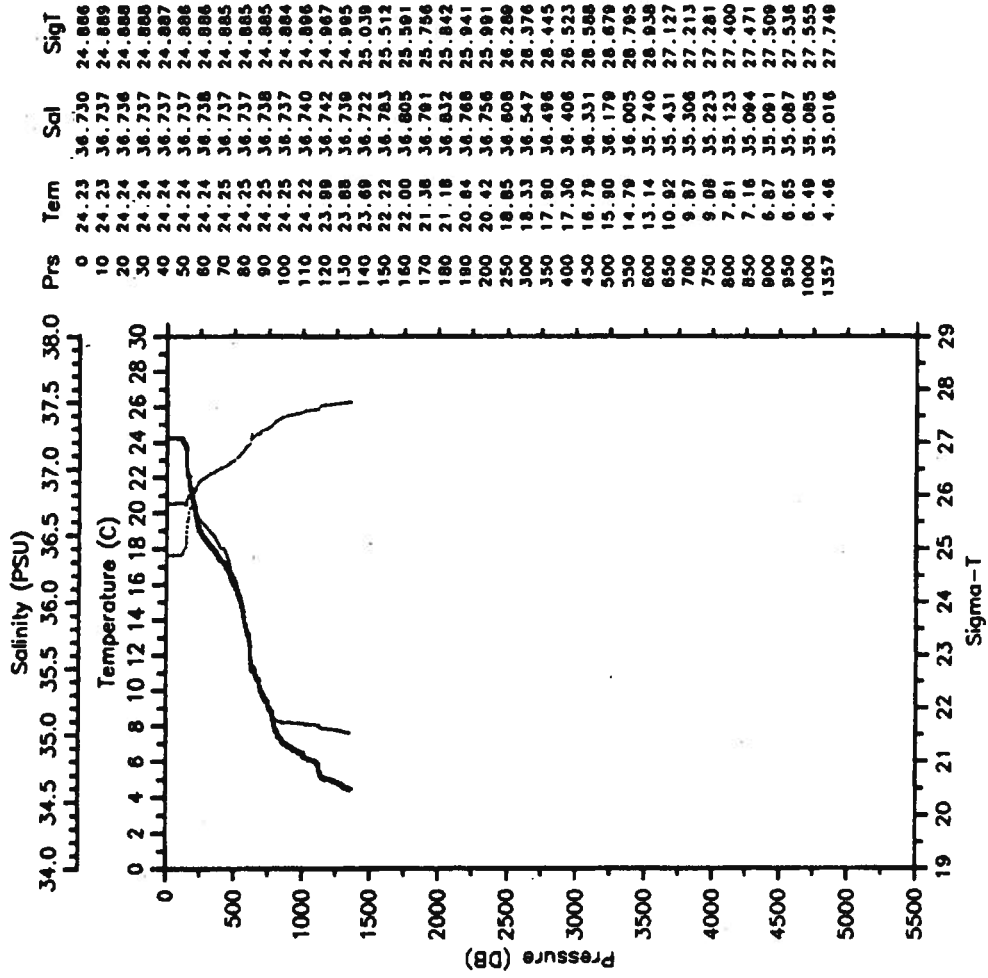


BAL-STACS35-90 CTD 38 BALDRIGE

Date 02 28 90 Latitude 26.568N

Time 1516 Z Longitude 76.846W

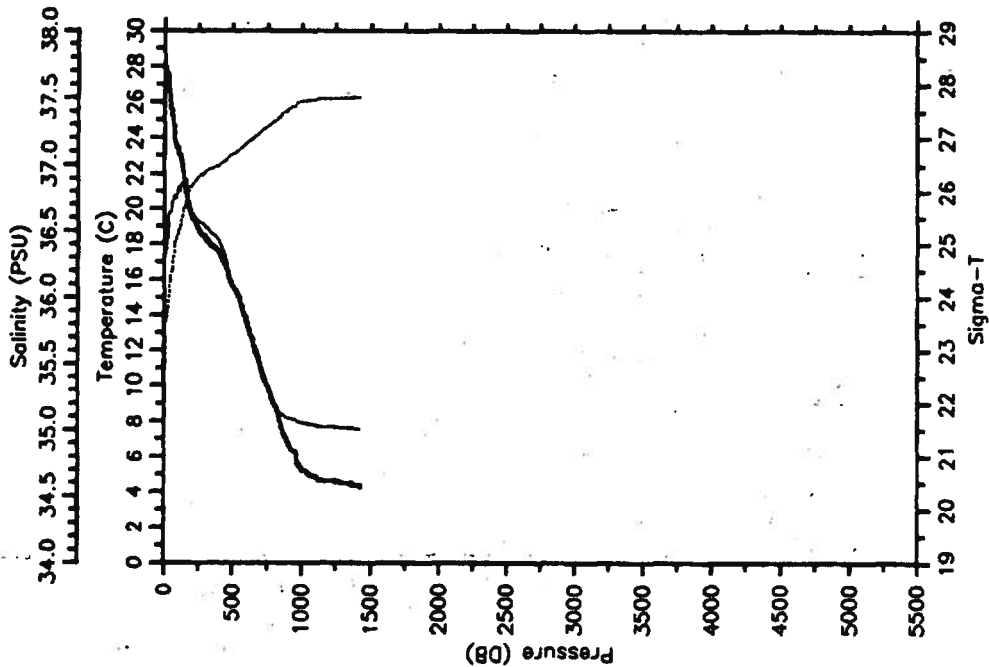
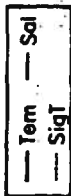
--- Term --- Sal
 - - - - - SigT



BAL-STACS36-90 CTD 1 BALDRICE

Date 06 18 90 Latitude 26.488N

Time 0138 Z Longitude 76.822W

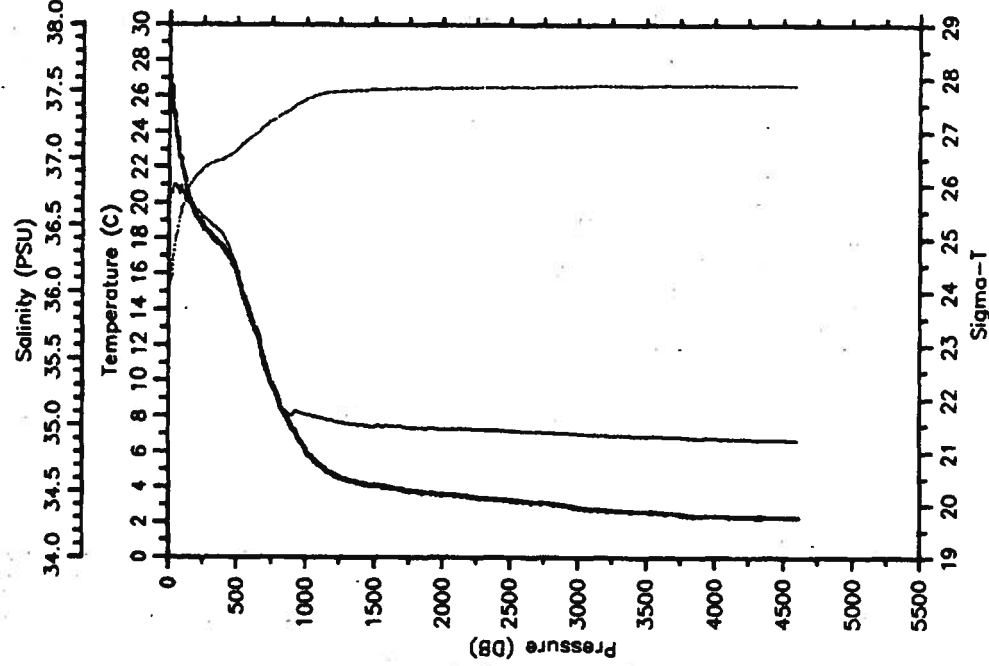
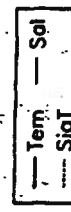


Prs	Tem	Sal	SigT
0	27.97	36.261	23.354
10	27.59	36.310	23.493
20	27.53	36.416	23.616
30	27.01	36.602	23.925
40	26.16	36.830	24.217
50	25.58	36.939	24.400
60	25.14	36.737	24.814
70	24.34	36.765	24.879
80	23.63	36.748	25.077
90	23.44	36.788	25.147
100	23.38	36.834	25.217
110	23.02	36.789	25.286
120	22.83	36.855	25.363
130	22.48	36.873	25.513
140	21.89	36.857	25.661
150	21.53	36.845	25.755
160	20.85	36.768	25.893
170	20.40	36.672	25.932
180	20.11	36.681	26.016
190	19.84	36.654	26.089
200	19.59	36.638	26.122
250	18.73	36.573	26.295
300	18.28	36.528	26.372
350	17.89	36.477	26.433
400	17.50	36.424	26.488
450	16.98	36.300	26.588
500	15.86	36.120	26.880
550	14.98	36.022	26.766
600	13.71	35.823	26.985
650	12.30	35.610	27.005
700	11.08	35.448	27.114
750	9.98	35.316	27.203
800	8.94	35.214	27.286
850	7.75	35.119	27.406
900	6.90	35.080	27.517
950	6.28	35.078	27.577
1000	5.26	35.055	27.689
1426	4.30	35.008	27.760

BAL-STACS36-90 CTD 4 BALDRICE

Date 06 20 90 Latitude 26.500N

Time 0344 Z Longitude 76.667W

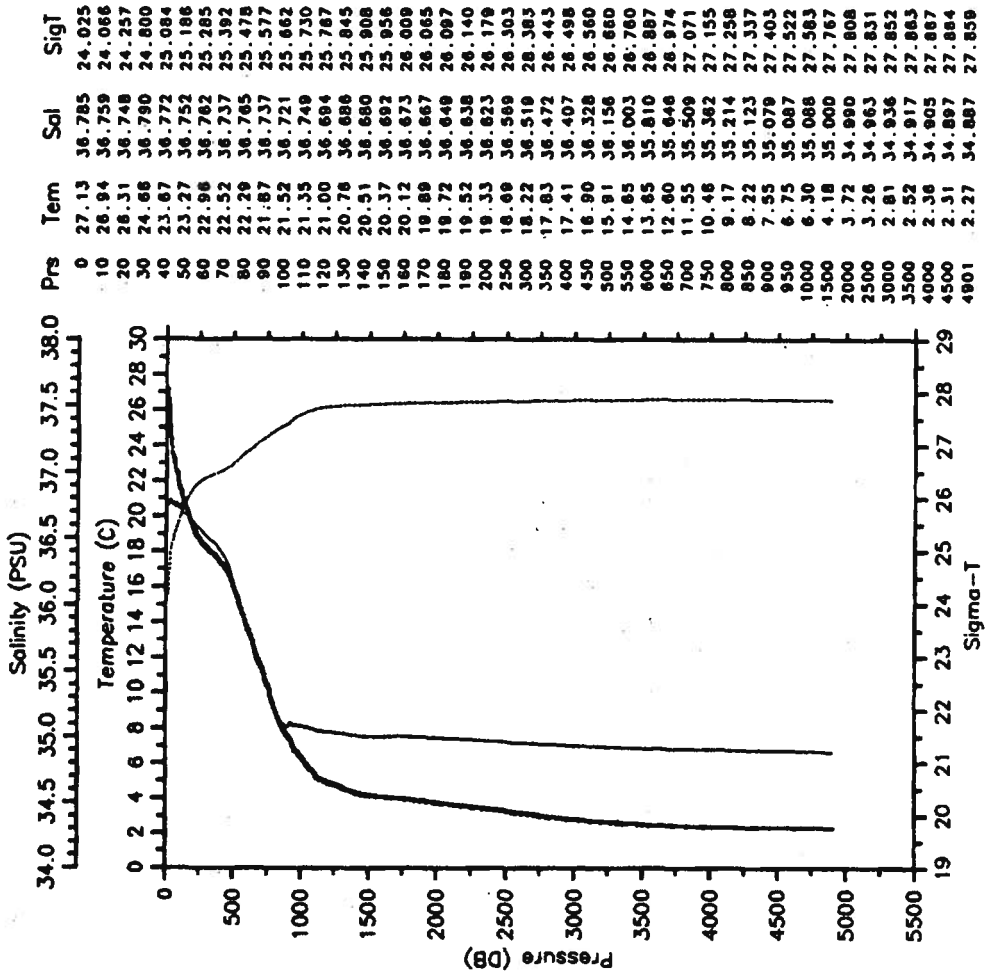


Prs	Tem	Sal	SigT
0	27.05	36.791	24.055
10	26.60	36.741	24.156
20	26.38	36.751	24.244
30	25.23	36.788	24.824
40	24.74	36.807	24.789
50	24.01	36.798	25.003
60	23.55	36.774	25.120
70	22.99	36.756	25.272
80	22.55	36.743	25.387
90	22.38	36.800	25.486
100	21.81	36.758	25.611
110	21.47	36.728	25.683
120	21.08	36.726	25.768
130	20.67	36.682	25.867
140	20.38	36.677	25.941
150	20.18	36.670	25.989
160	19.99	36.659	26.031
170	18.83	36.656	26.071
180	18.62	36.648	26.121
190	18.42	36.633	26.161
200	18.26	36.617	26.192
250	18.63	36.565	26.315
300	18.25	36.523	26.378
350	17.84	36.473	26.440
400	17.45	36.418	26.494
450	16.82	36.317	26.569
500	15.96	36.176	26.664
550	14.72	35.970	26.782
600	13.72	35.805	26.870
650	12.62	35.659	26.981
700	10.98	35.423	27.113
750	9.86	35.289	27.202
800	8.91	35.184	27.277
850	8.12	35.113	27.345
900	7.36	35.073	27.423
950	6.74	35.098	27.533
1000	6.04	35.077	27.609
1500	4.03	34.983	27.768
2000	3.58	34.974	27.808
2500	3.27	34.958	27.827
3000	2.85	34.938	27.850
3500	2.59	34.921	27.859
4000	2.34	34.907	27.867
4500	2.28	34.894	27.864
4607	2.28	34.892	27.863

BAL-STACS36-90 CTD 5 BALDRIGE

Date 06 20 90 Latitude 26.518N
 Time 1018 Z Longitude 76.525W

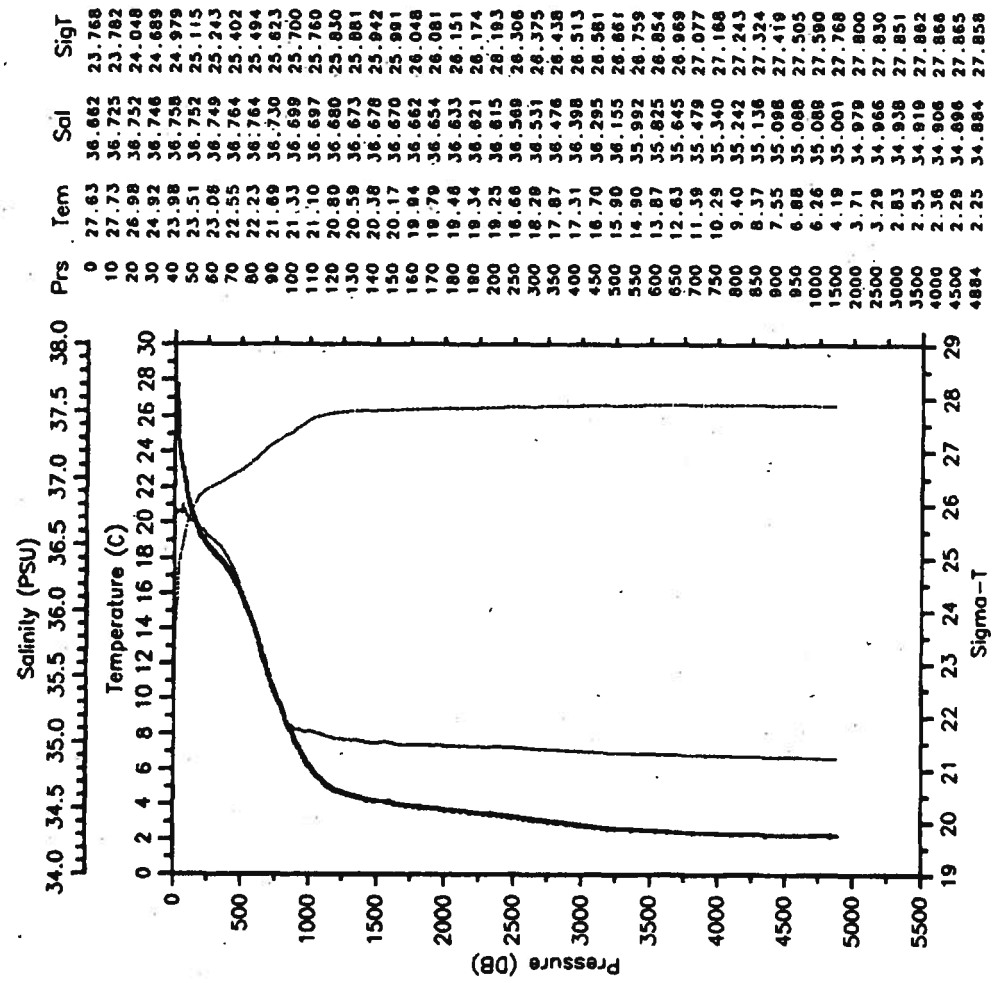
--- Tem --- Sal
 SigT



BAL-STACS36-90 CTD 6 BALDRIGE

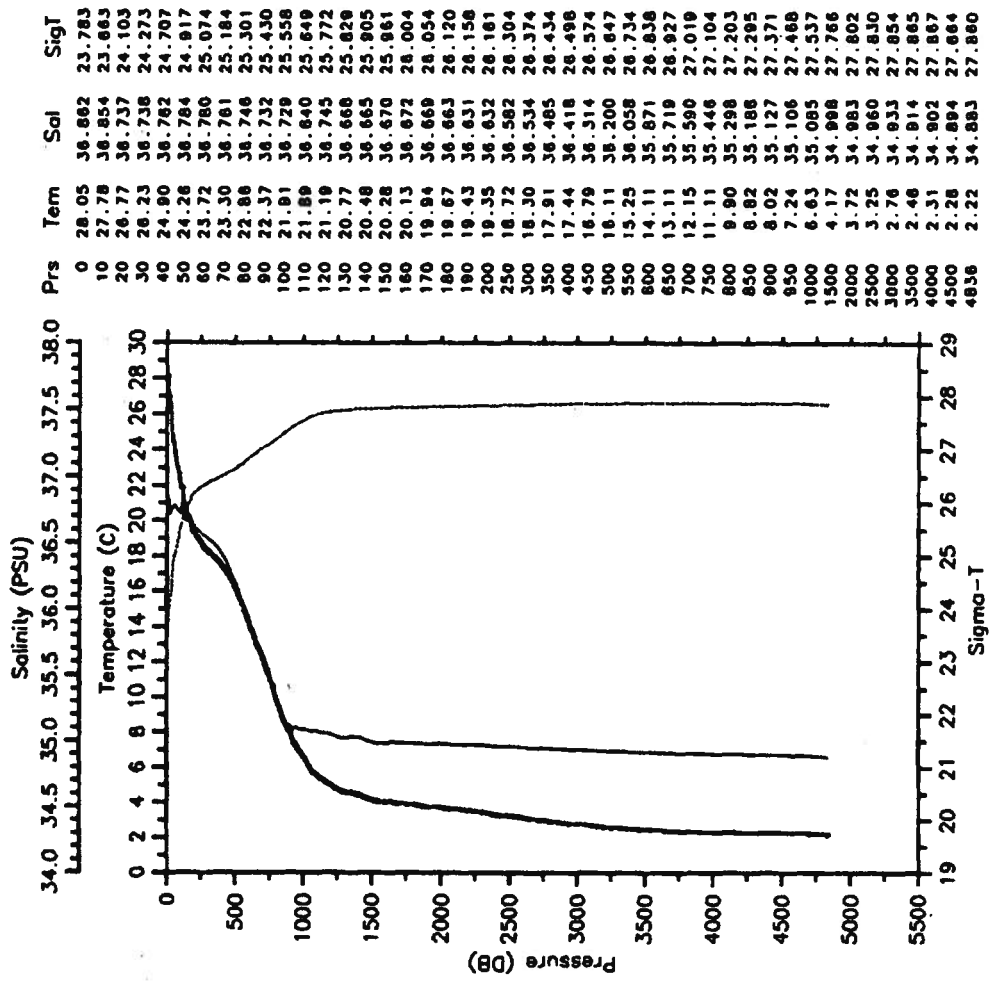
Date 06 21 90 Latitude 26.497N
 Time 0546 Z Longitude 76.400W

--- Tem --- Sal
 SigT



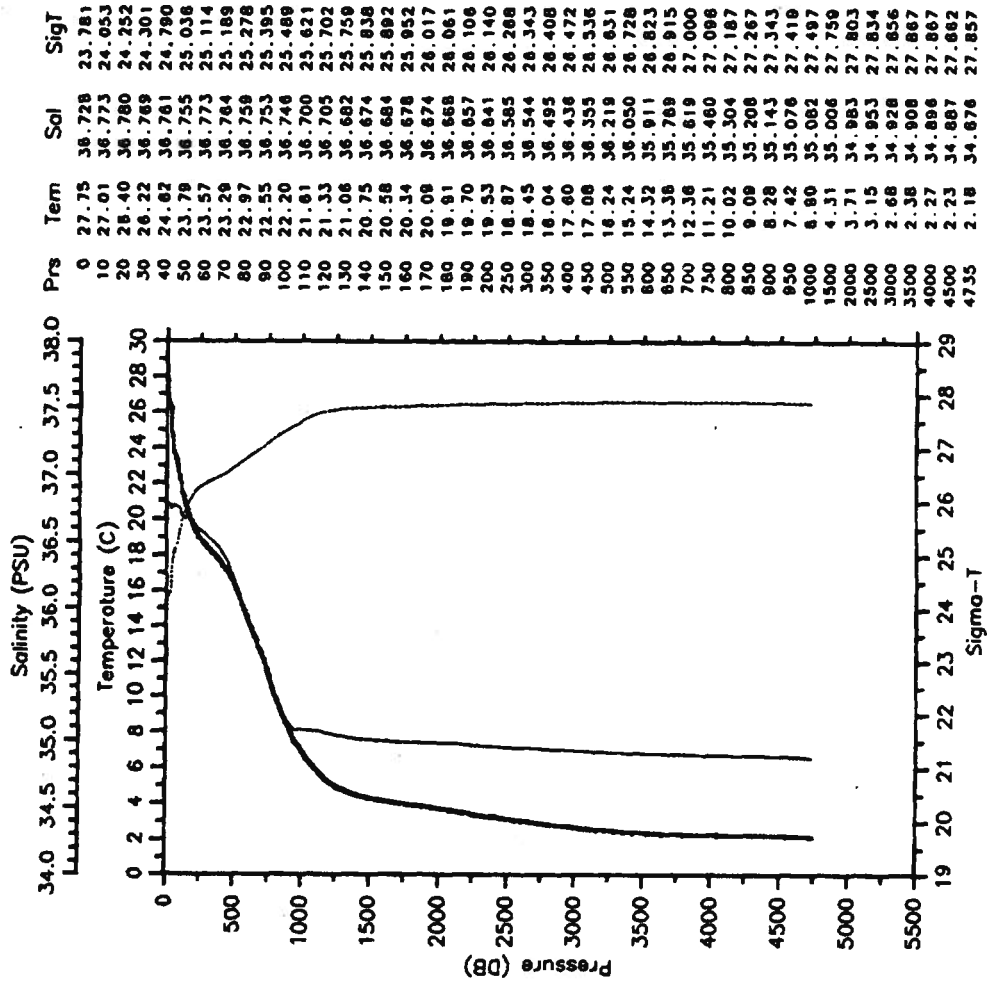
BAL-STACS36-90 CTD 7 BALDRIGE
 Date 06 22 90 Latitude 26.495N
 Time 0449 Z Longitude 76.027W

— Tem — Sal
SigT



BAL-STACS36-90 CTD 8 BALDRIGE
 Date 06 22 90 Latitude 26.507N
 Time 1301 Z Longitude 75.507W

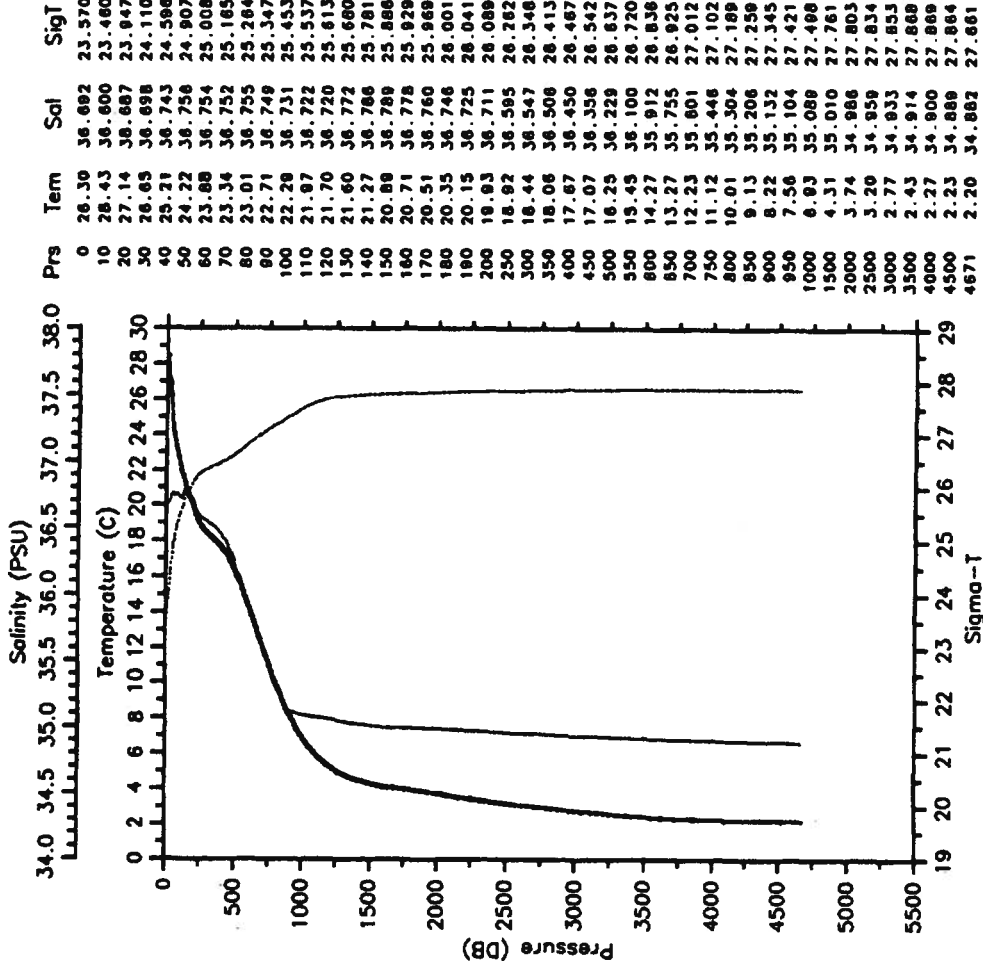
— Tem — Sal
SigT



BAL-STACS36-90 CTD 11 BALDRIGE

Date 06 23 90 Latitude 26.507N
 Time 0131 Z Longitude 74.007W

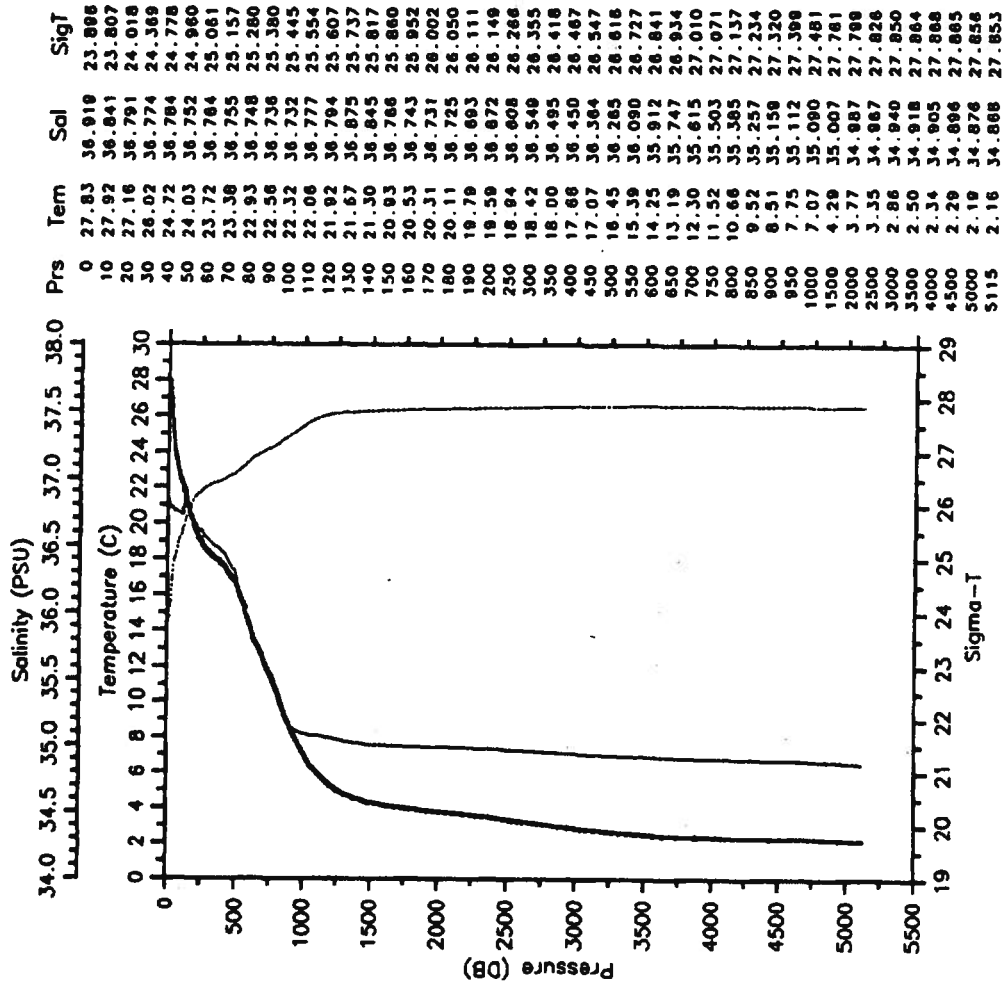
--- Tem --- Sal
 --- SigT



BAL-STACS36-90 CTD 12 BALDRIGE

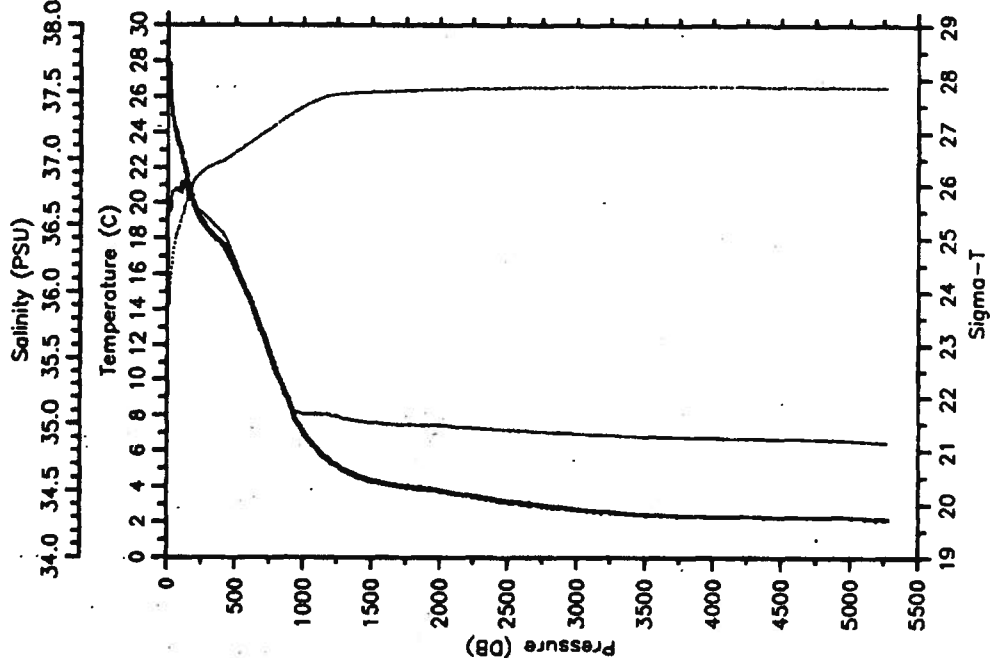
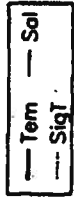
Date 06 24 90 Latitude 26.510N
 Time 1002 Z Longitude 73.210W

--- Tem --- Sal
 --- SigT



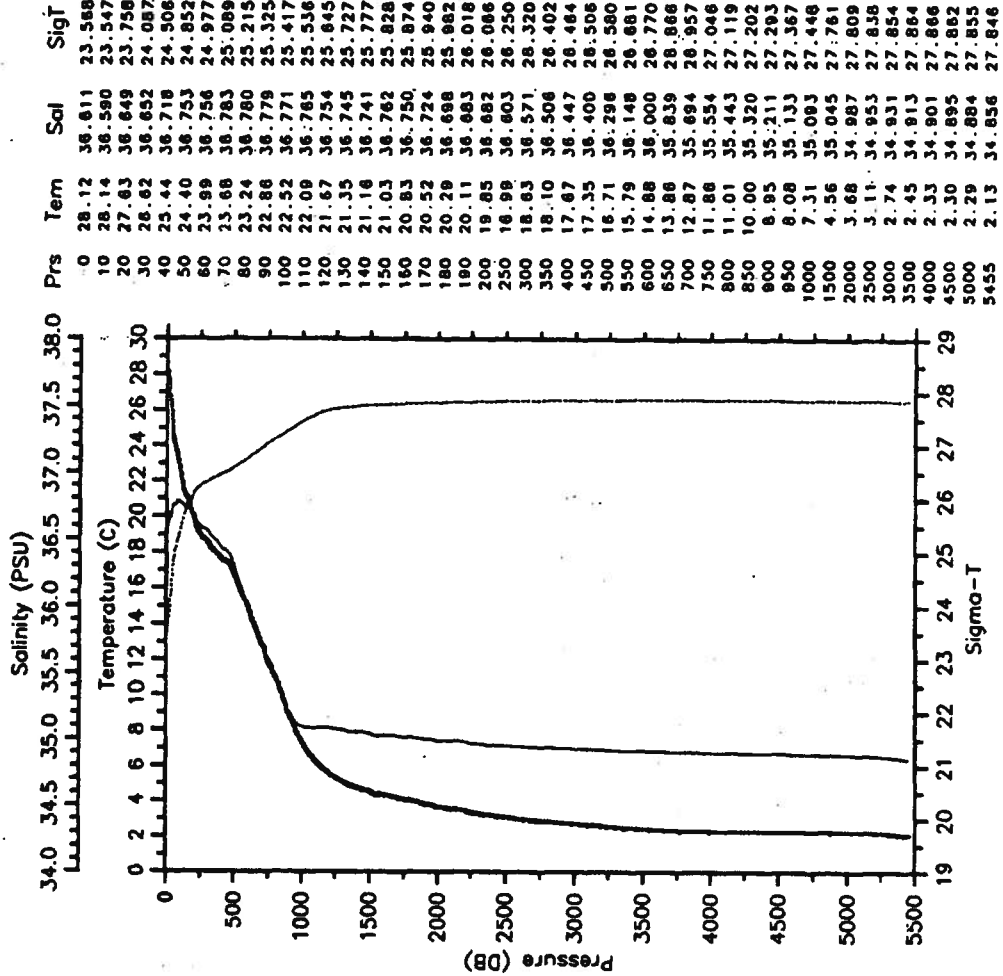
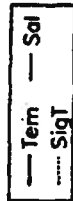
BAL-STACS36-90 CTD 13 BALDRIGE

Date 06 24 90 Latitude 26.508N
 Time 1718 Z Longitude 72.463W



BAL-STACS36-90 CTD 14 BALDRIGE

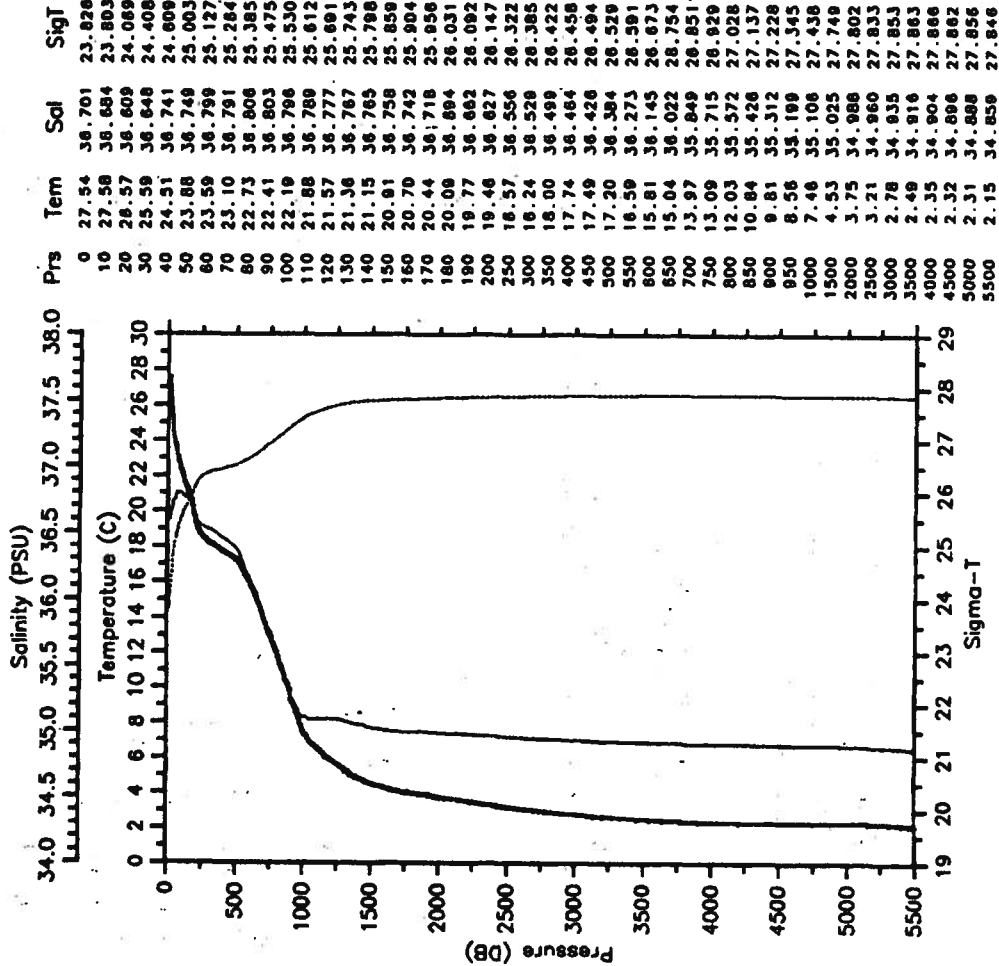
Date 06 25 90 Latitude 26.500N
 Time 0256 Z Longitude 71.772W



BAL-STACS36-90 CTD 15 BALDRIGE

Date 06 25 90 Latitude 26.505N
 Time 1103 Z Longitude 71.037W

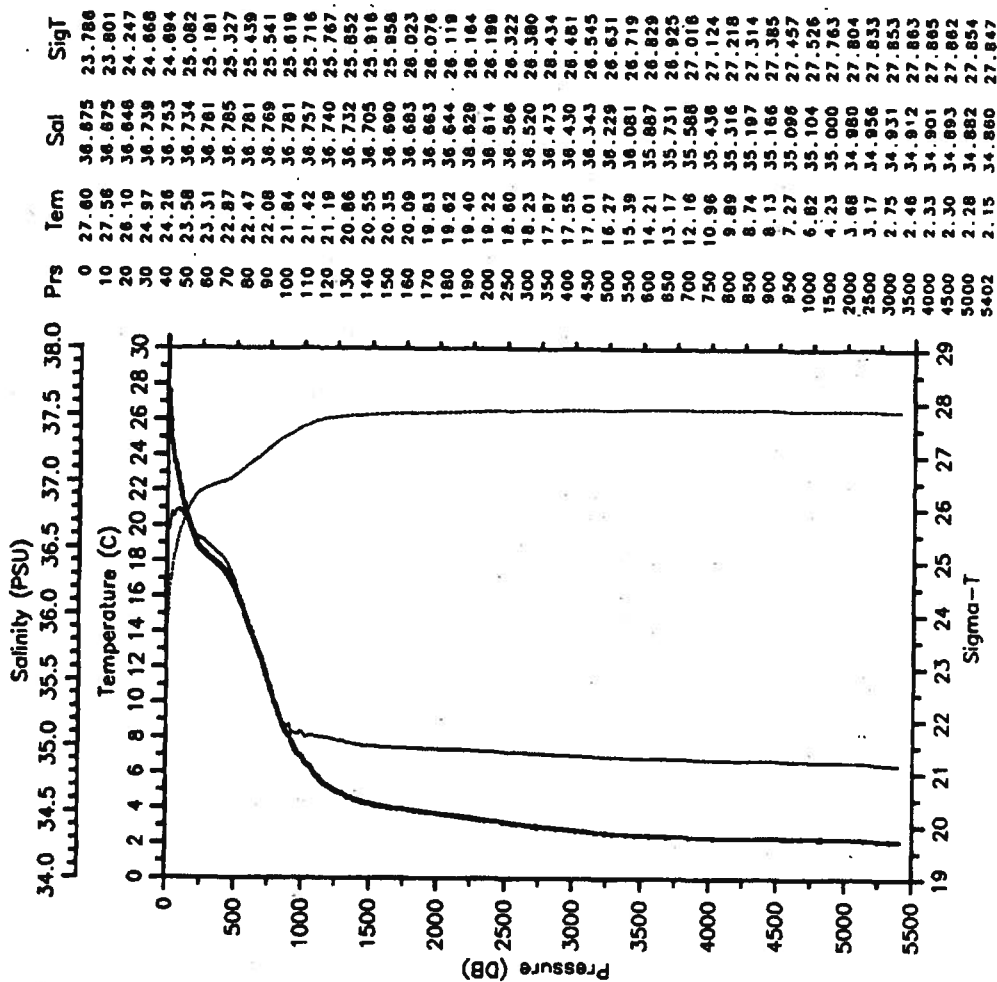
— Tem — Sal
 --- SigT



BAL-STACS36-90 CTD 16 BALDRIGE

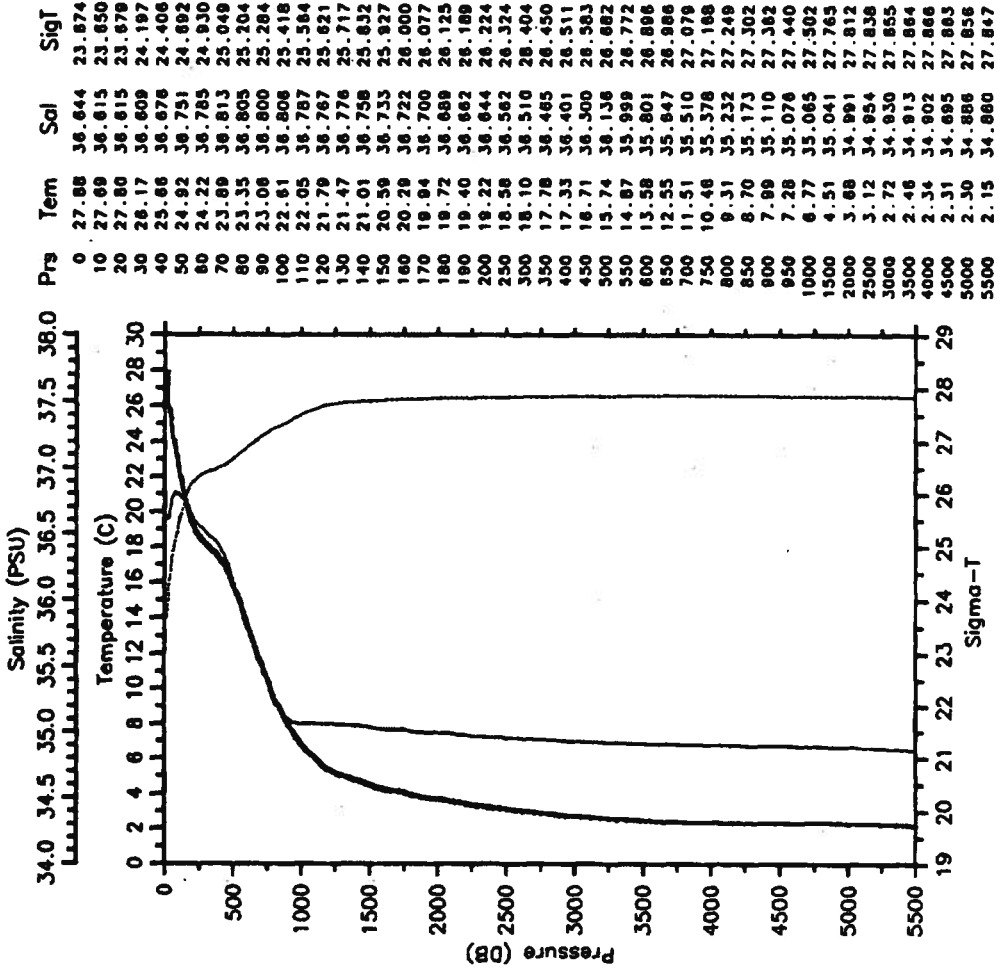
Date 06 25 90 Latitude 25.758N
 Time 1926 Z Longitude 71.022W

— Tem — Sal
 --- SigT



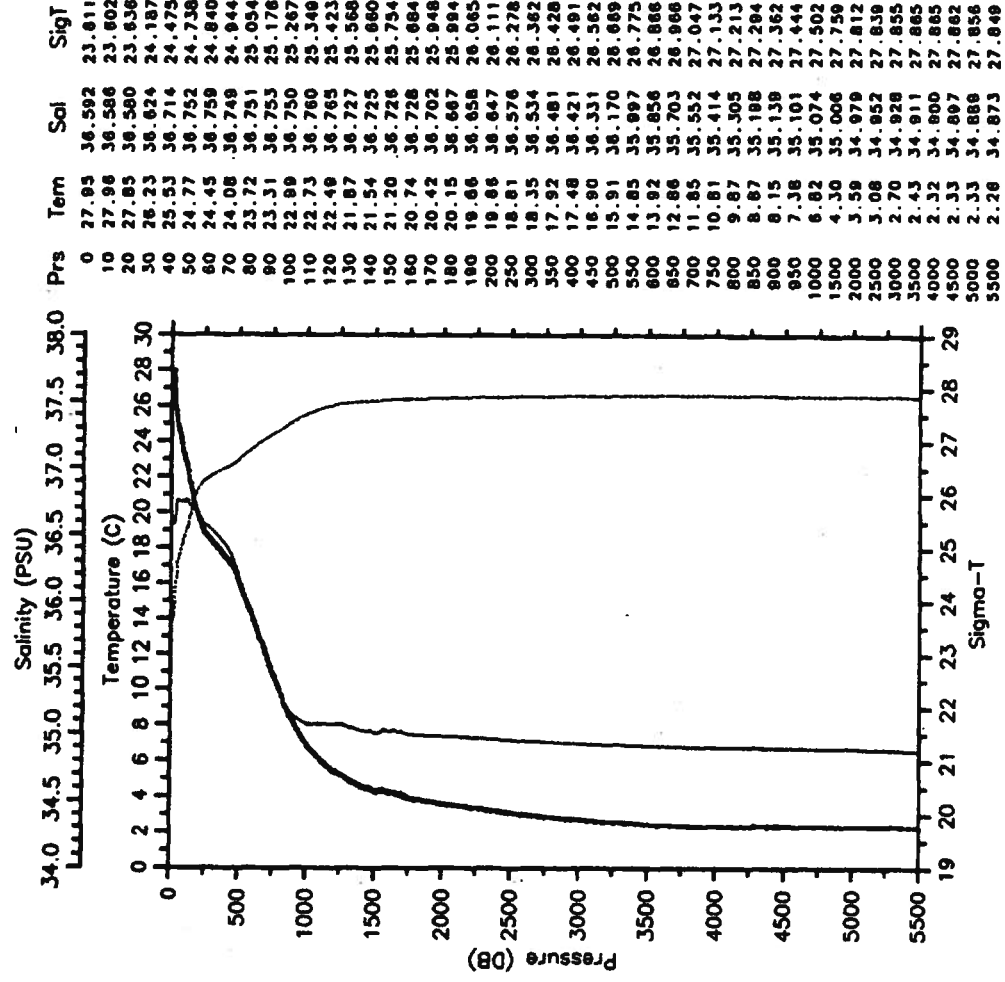
BAL-STACS36-90 CTD 17 BALDRIGE
 Date 06 26 90 Latitude 25.008N
 Time 0333 Z Longitude 71.002W

--- Tem --- Sal
 ---- SigT



BAL-STACS36-90 CTD 18 BALDRIGE
 Date 06 26 90 Latitude 24.650N
 Time 1209 Z Longitude 71.772W

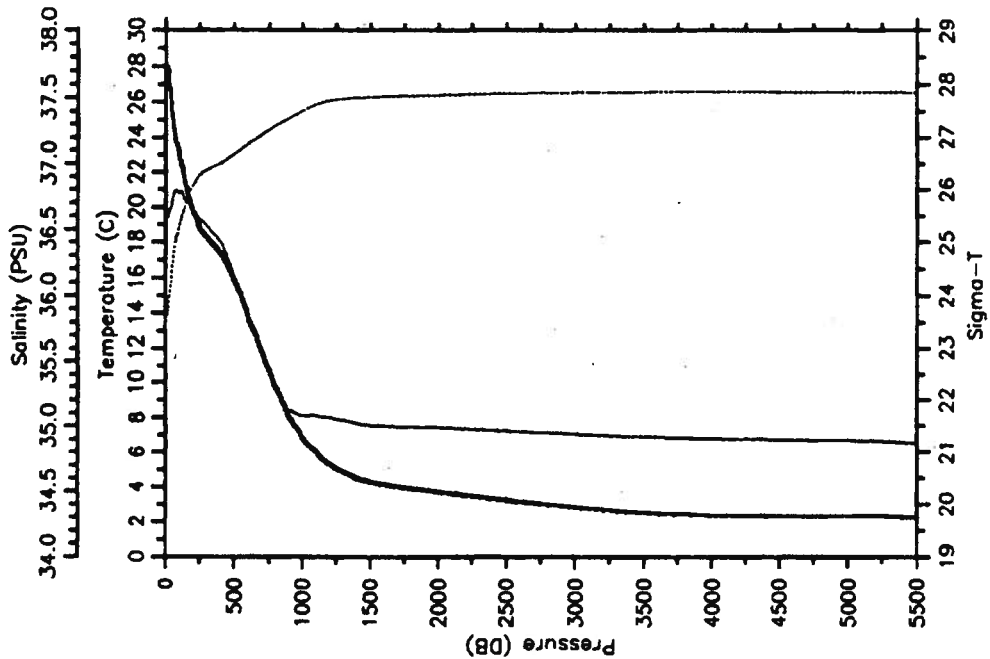
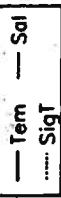
--- Tem --- Sal
 ---- SigT



BAL-STACS36-90 CTD 19 BALDRIGE

Date 06 26 90 Latitude 24.288N

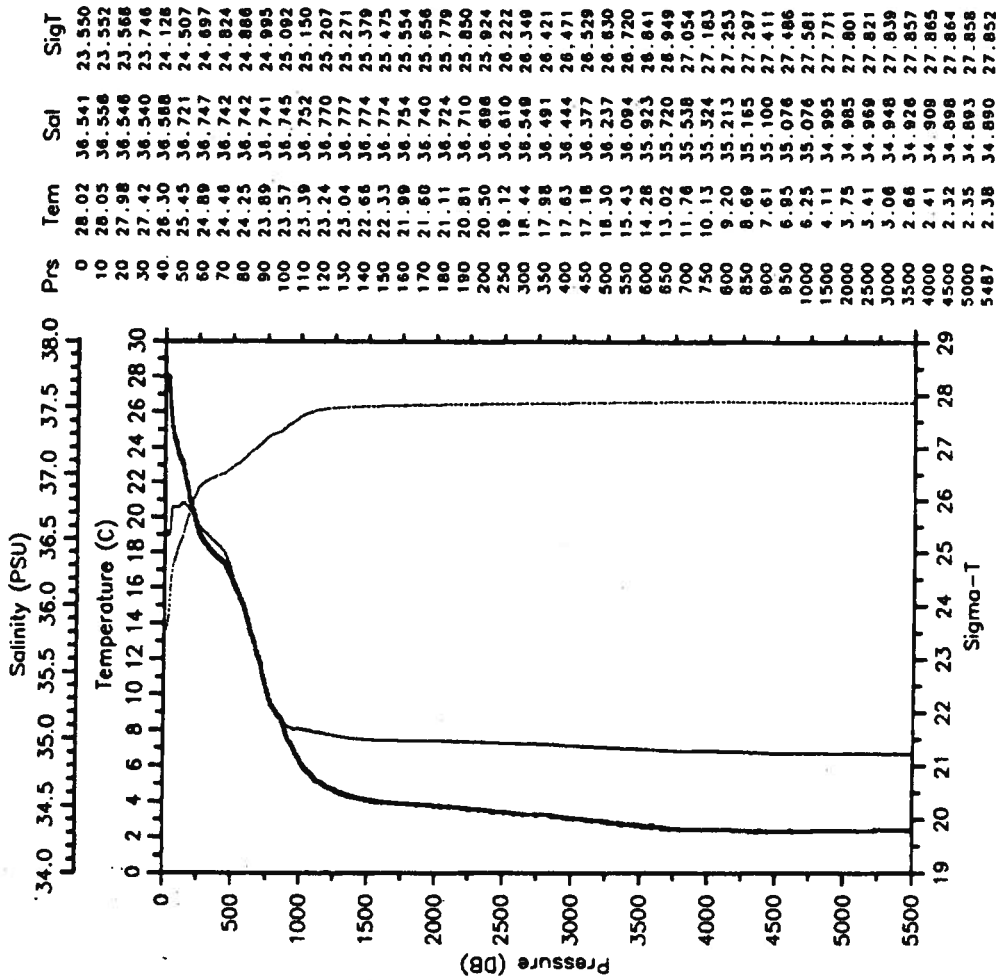
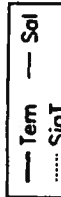
Time 1920 Z Longitude 72.522W



BAL-STACS36-90 CTD 20 BALDRIGE

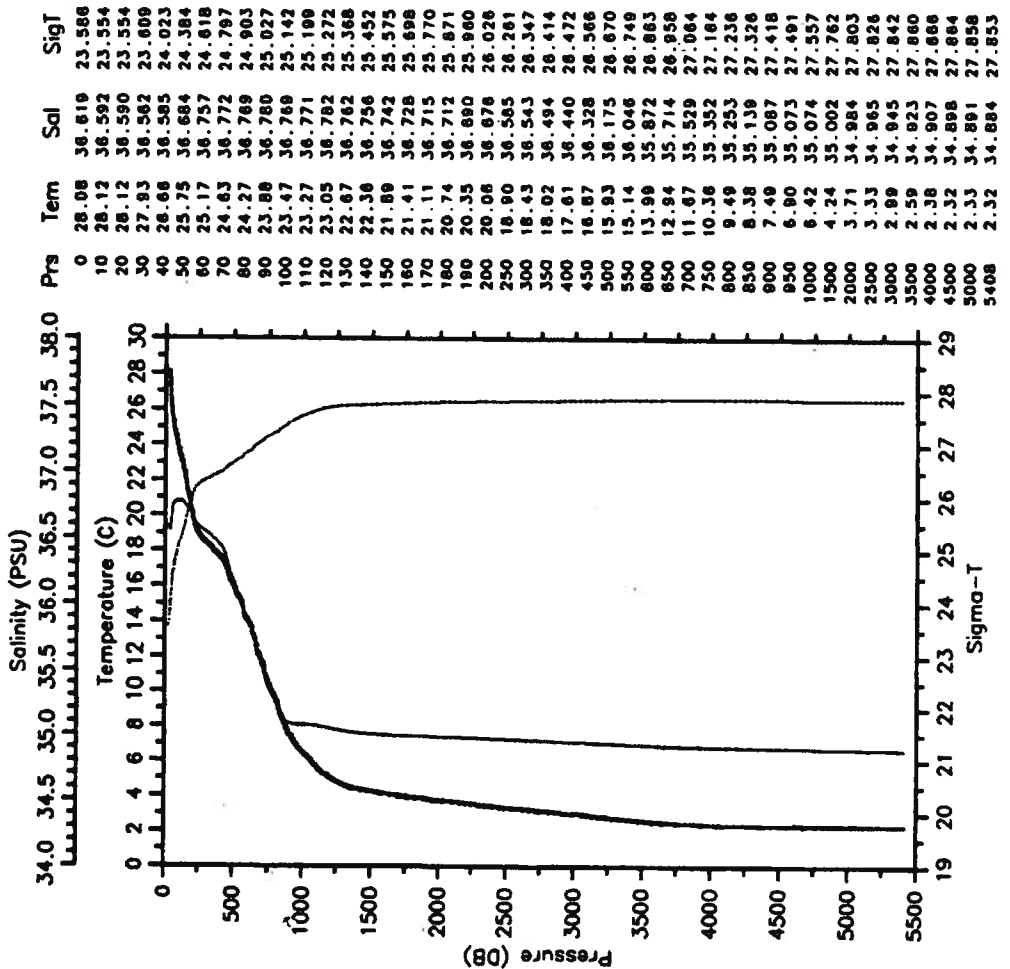
Date 06 27 90 Latitude 24.250N

Time 0234 Z Longitude 73.333W



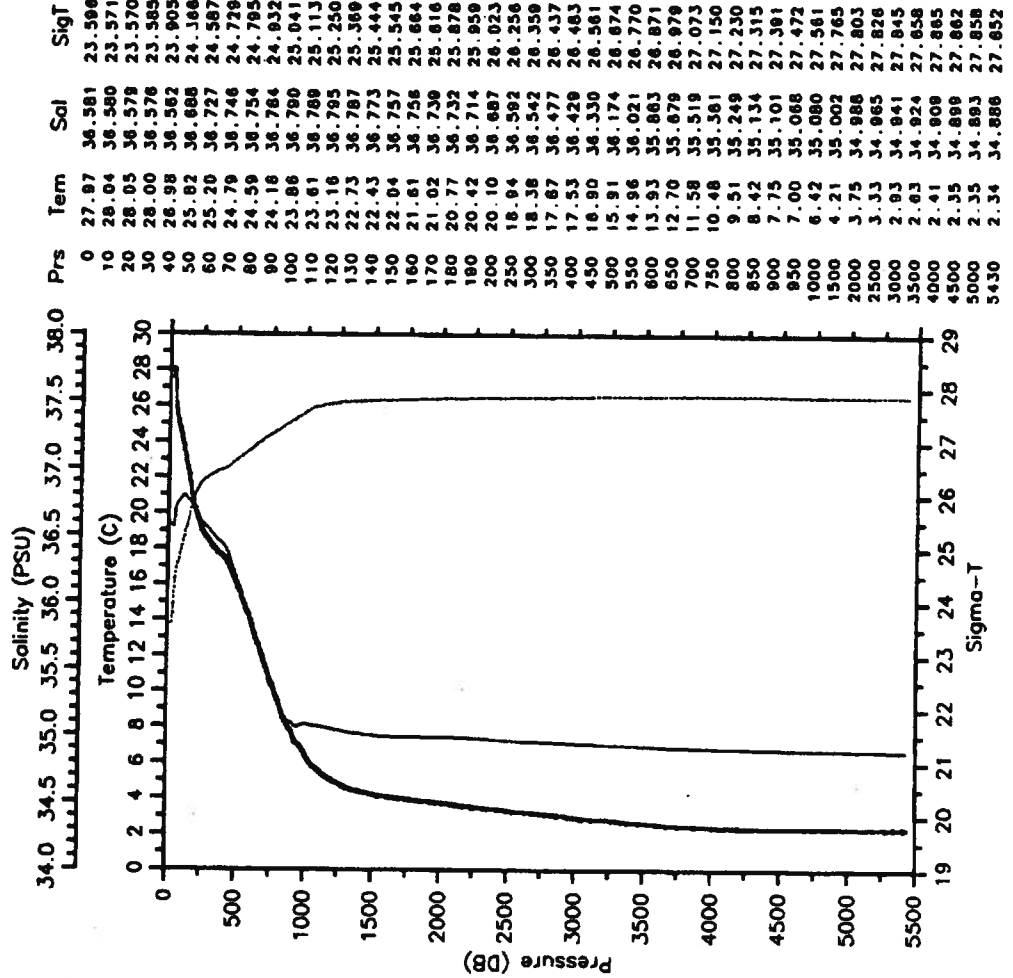
BAL-STACS36-90 CTD 21 BALDRIGE
 Date 06 27 90 Latitude 24.255N
 Time 0752 Z Longitude 73.757W

— Tem — Sal
 SigT



BAL-STACS36-90 CTD 22 BALDRIGE
 Date 06 27 90 Latitude 24.253N
 Time 1256 Z Longitude 73.933W

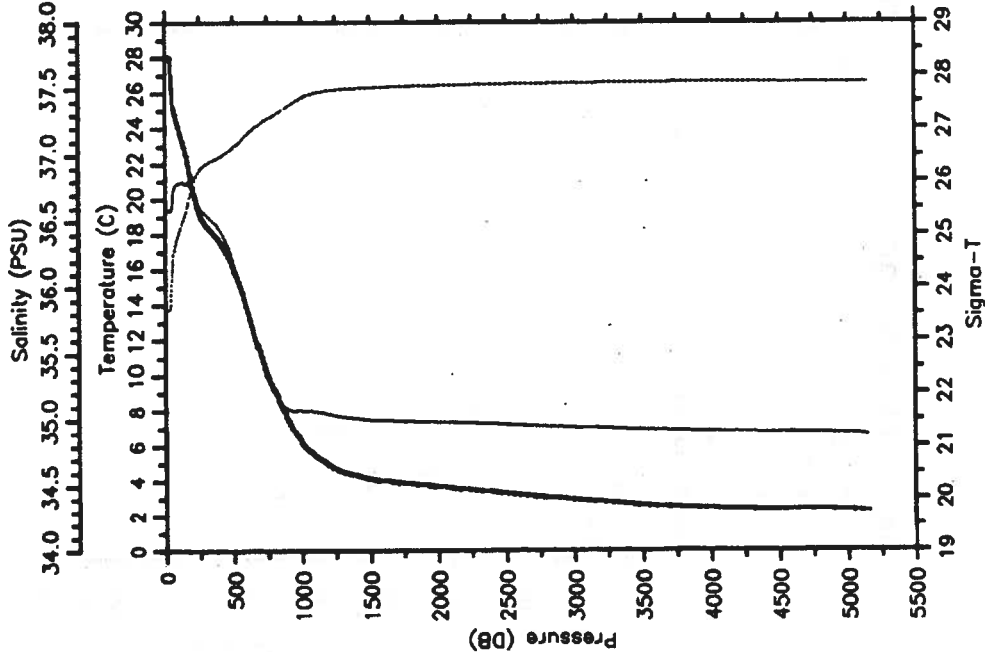
— Tem — Sal
 SigT



BAL-STACS36-90 CTD 23 BALDRICE

Date 06 27 90 Latitude 24.258N
 Time 1705 Z Longitude 74.095W

--- Tem --- Sal
 --- SigT

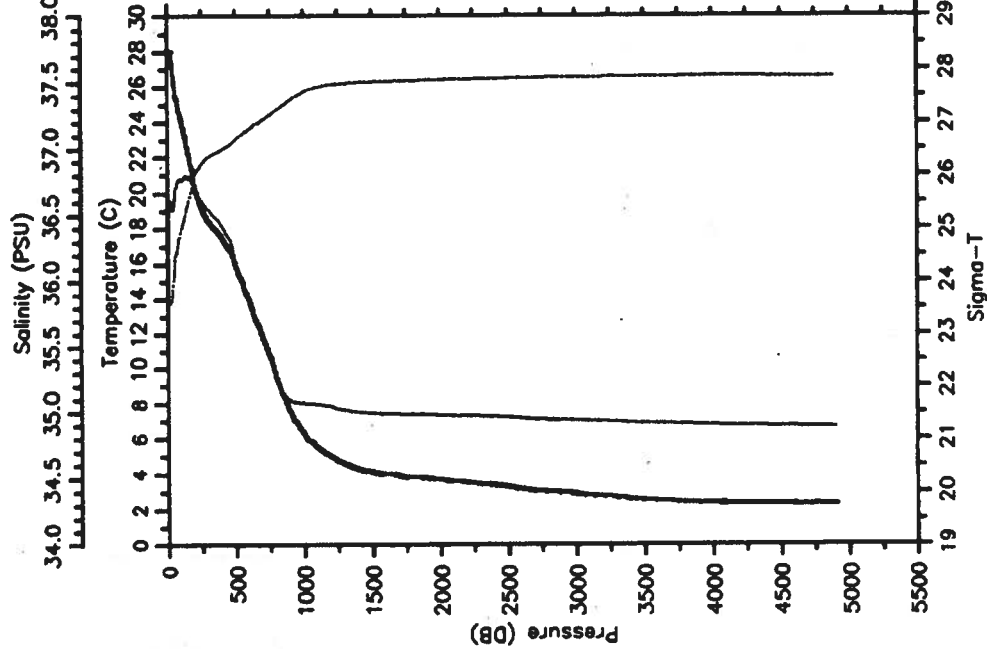


Prs	Tem	Sal	SigT
0	28.01	36.617	23.809
10	28.05	36.592	23.578
20	28.04	36.592	23.581
30	28.01	36.590	23.580
40	27.17	36.588	23.802
50	26.04	36.643	24.263
60	25.04	36.748	24.652
70	24.68	36.773	24.783
80	24.36	36.780	24.884
90	24.12	36.784	24.956
100	23.85	36.793	25.045
110	23.58	36.791	25.125
120	23.33	36.787	25.204
130	23.09	36.786	25.271
140	22.84	36.791	25.339
150	22.50	36.772	25.424
160	22.14	36.788	25.540
170	21.89	36.787	25.605
180	21.28	36.785	25.760
190	20.91	36.743	25.848
200	20.58	36.732	25.928
250	19.14	36.615	26.220
300	18.47	36.552	26.344
350	18.03	36.498	26.413
400	17.55	36.432	26.483
450	16.80	36.335	26.564
500	15.86	36.185	26.689
550	14.85	36.022	26.772
600	13.70	35.820	26.885
650	12.21	35.608	27.021
700	11.27	35.471	27.093
750	10.04	35.311	27.188
800	9.21	35.210	27.249
850	8.27	35.131	27.336
900	7.48	35.085	27.417
950	6.81	35.071	27.500
1000	6.22	35.070	27.579
1500	4.16	34.988	27.768
2000	3.72	34.984	27.803
2500	3.34	34.966	27.826
3000	2.94	34.941	27.844
3500	2.60	34.923	27.860
4000	2.41	34.908	27.885
4500	2.35	34.888	27.902
5000	2.30	34.889	27.858
5150	2.24	34.878	27.854

BAL-STACS36-90 CTD 24 BALDRICE

Date 06 27 90 Latitude 24.253N
 Time 2149 Z Longitude 74.325W

--- Tem --- Sal
 --- SigT

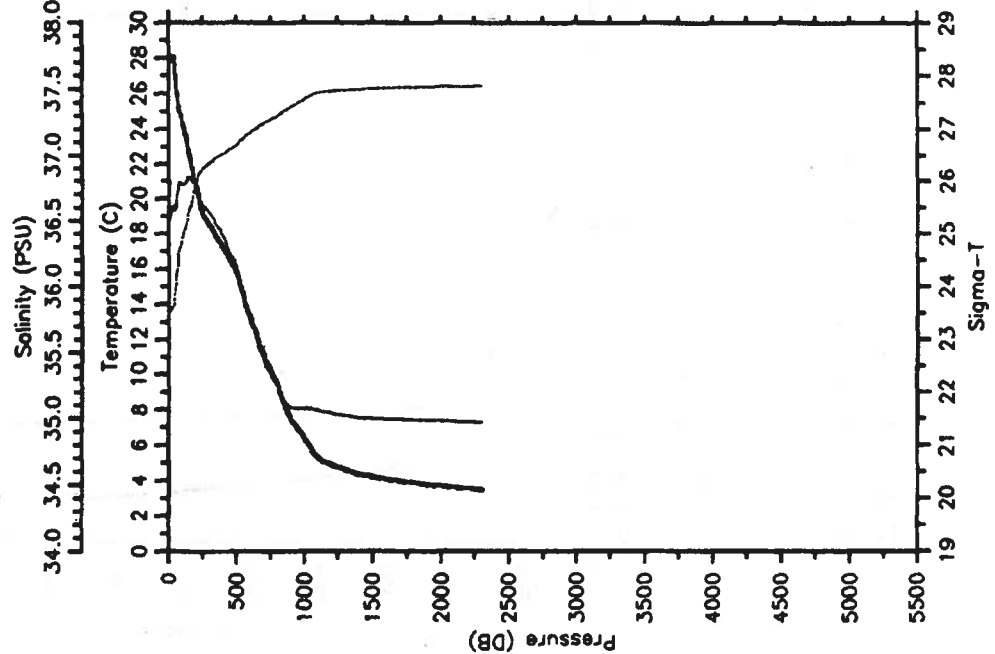


Prs	Tem	Sal	SigT
0	27.88	36.506	23.588
10	28.04	36.580	23.558
20	28.03	36.603	23.593
30	27.83	36.598	23.655
40	26.74	36.842	23.966
50	26.08	36.836	24.252
60	25.40	36.716	24.518
70	25.11	36.745	24.628
80	24.67	36.771	24.762
90	24.28	36.774	24.902
100	24.00	36.766	24.982
110	23.65	36.768	25.088
120	23.34	36.791	25.184
130	23.05	36.801	25.286
140	22.59	36.783	25.405
150	22.20	36.776	25.512
160	21.94	36.798	25.603
170	21.45	36.759	25.710
180	21.32	36.803	25.779
190	20.67	36.789	25.933
200	20.25	36.717	26.006
250	19.11	36.614	26.227
300	18.44	36.546	26.346
350	17.93	36.487	26.428
400	17.40	36.413	26.504
450	16.87	36.335	26.573
500	15.81	36.180	26.685
550	14.83	36.008	26.788
600	13.78	35.841	26.885
650	12.67	35.686	26.978
700	11.69	35.531	27.061
750	10.72	35.408	27.143
800	9.38	35.245	27.249
850	8.41	35.151	27.330
900	7.52	35.098	27.422
950	6.86	35.081	27.498
1000	6.27	35.076	27.578
1500	4.17	34.987	27.766
2000	3.73	34.982	27.800
2500	3.31	34.961	27.825
3000	2.83	34.940	27.843
3500	2.58	34.921	27.860
4000	2.38	34.894	27.863
4500	2.34	34.887	27.862
4905	2.33	34.880	27.857

BAL-STACS36-90 CTD 25 BALDRIGE

Date 06 28 90 Latitude 24.257N
 Time 0034 Z Longitude 74.452W

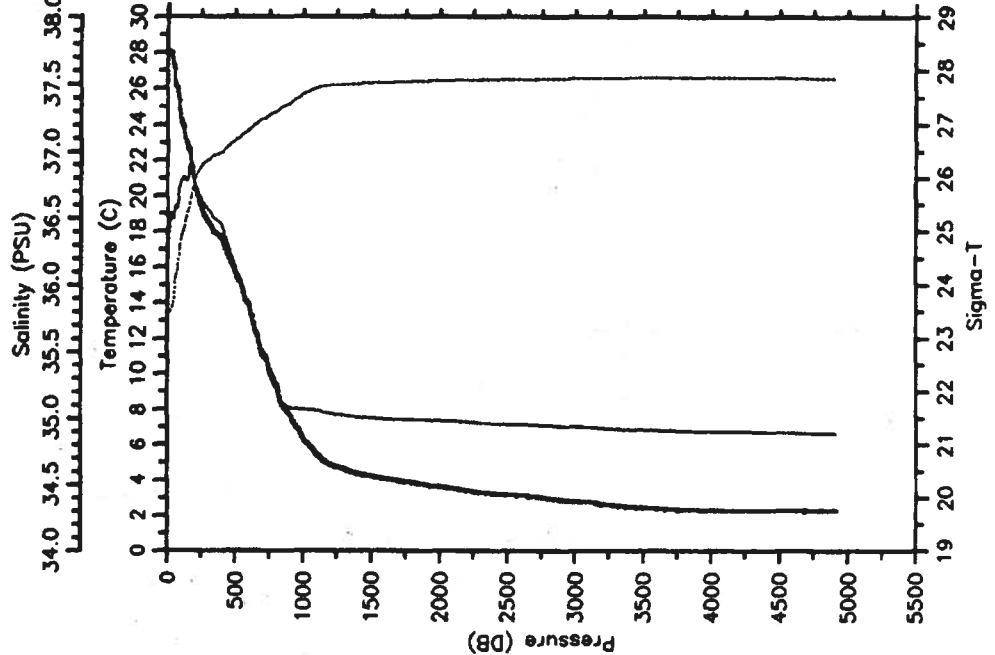
— Tem — Sal
 ———— SigT



BAL-STACS36-90 CTD 26 BALDRIGE

Date 06 28 90 Latitude 24.433N
 Time 0401 Z Longitude 74.538W

— Tem — Sal
 ———— SigT

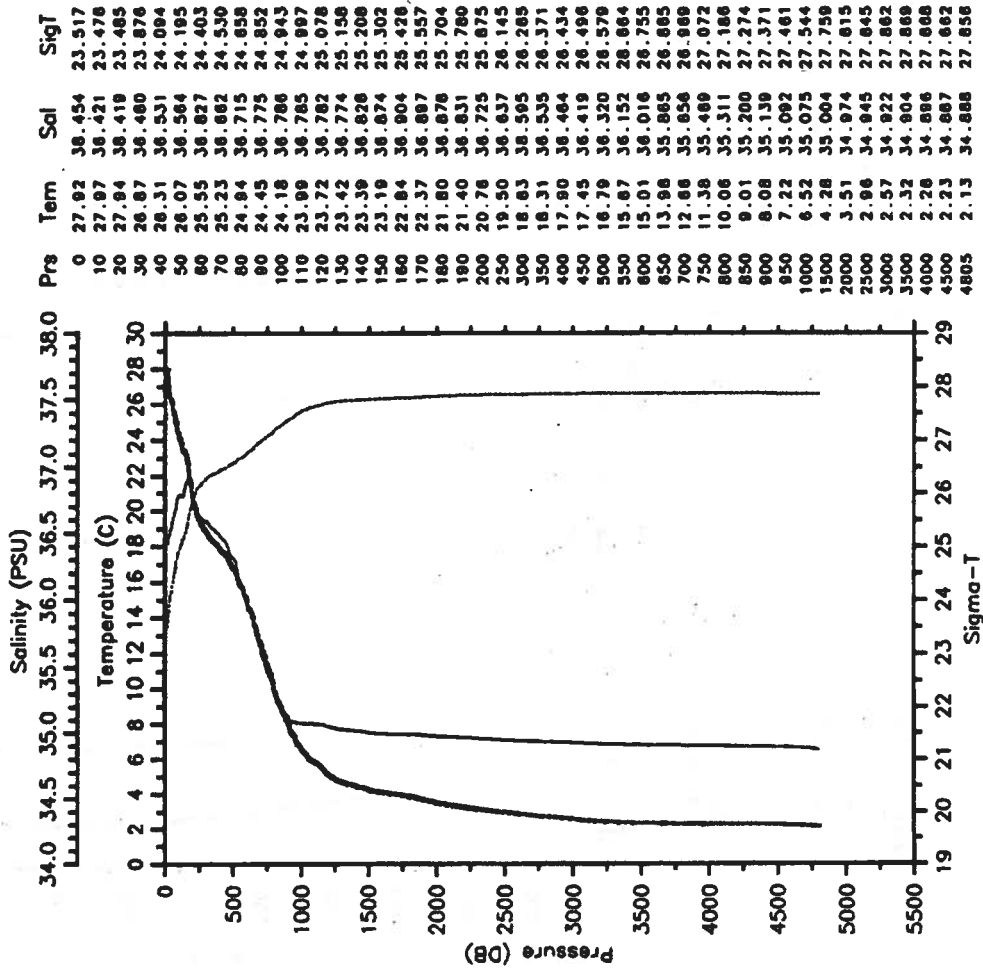


BAL-STACS36-90 CTD 27 BALDRIGE

Date 06 28 90 Latitude 24.967N

Time 0936 Z Longitude 74.735W

--- Tem --- Sal
..... SigT

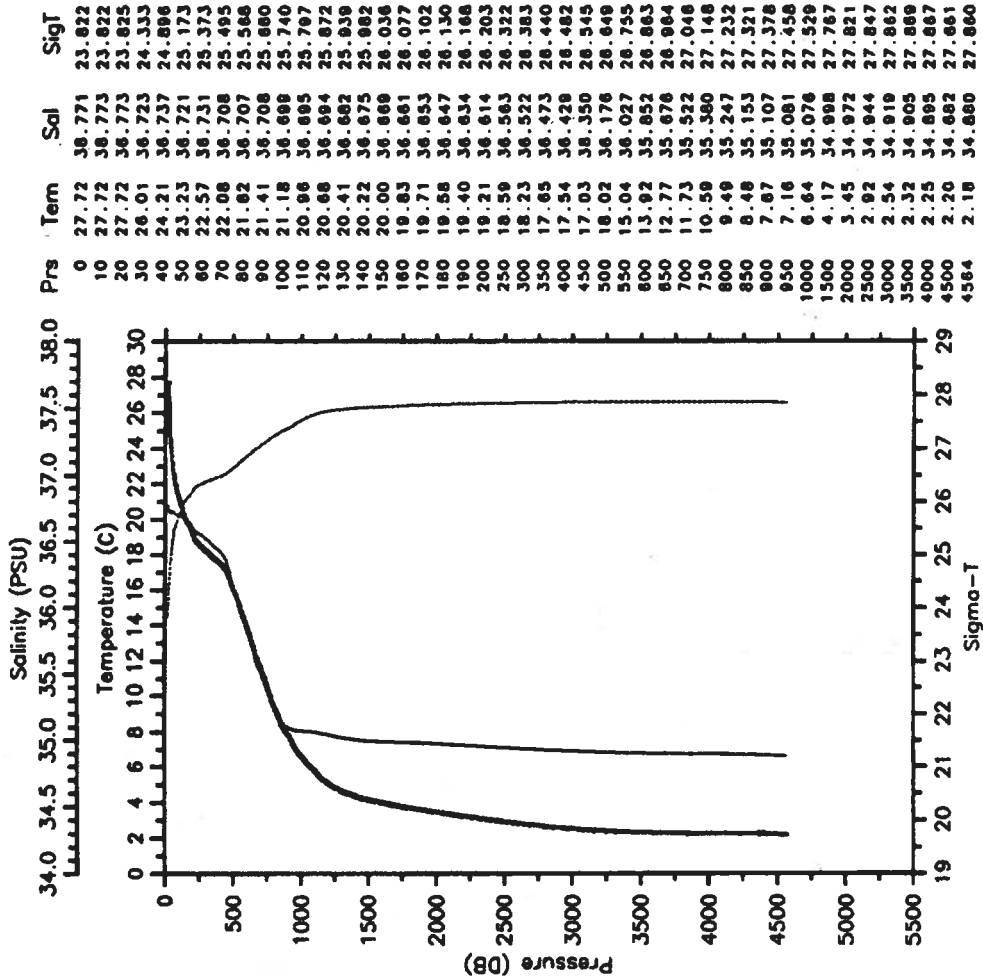


BAL-STACS36-90 CTD 28 BALDRIGE

Date 06 28 90 Latitude 25.502N

Time 1505 Z Longitude 75.002W

--- Tem --- Sal
..... SigT

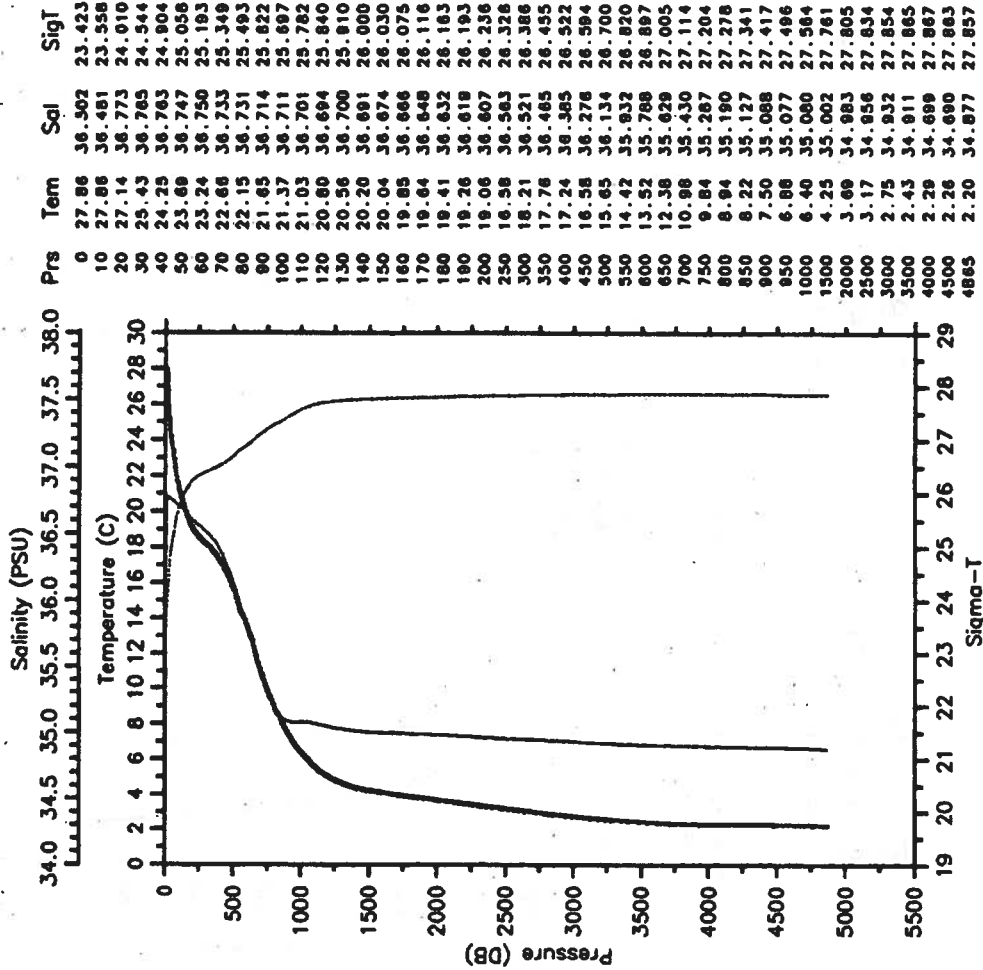


BAL-STAC36-90 CTD 29 BALDRIGE

Date 06 28 90 Latitude 25.500N

Time 2157 Z Longitude 75.843W

— Tem — Sal
— SigT

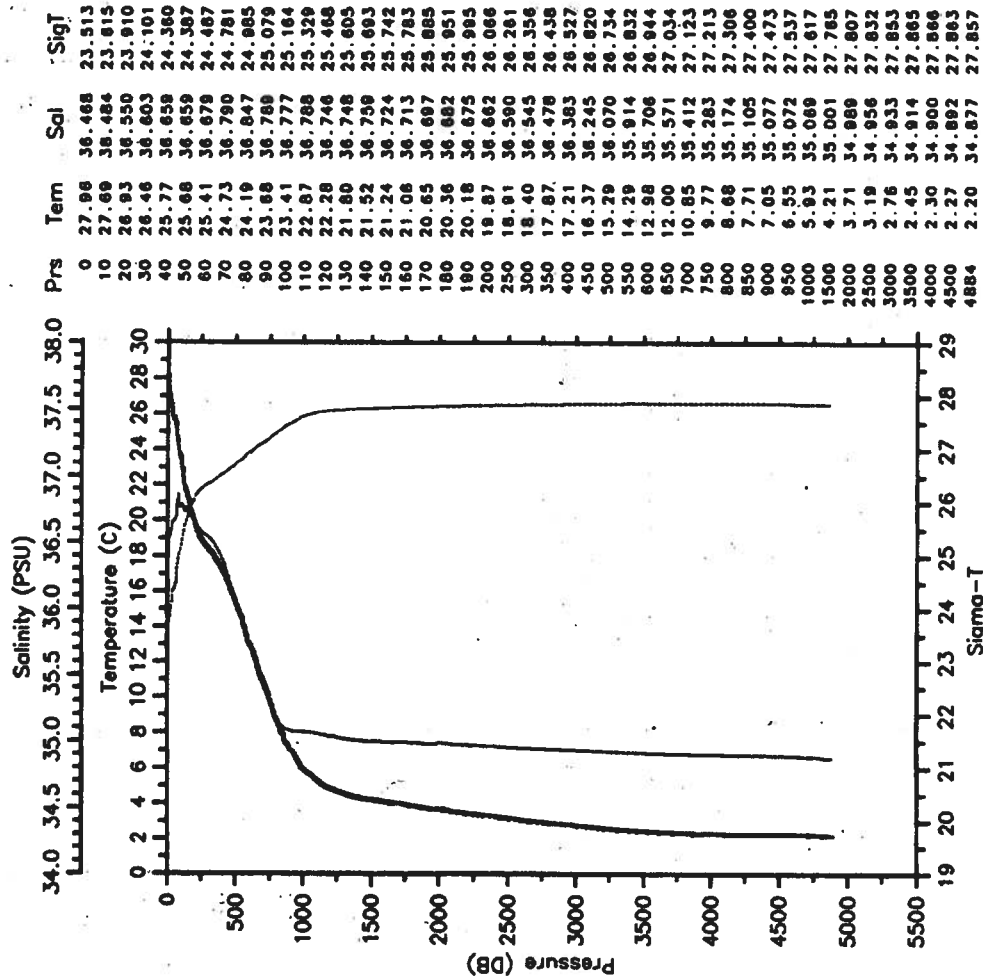


BAL-STAC36-90 CTD 30 BALDRIGE

Date 06 29 90 Latitude 25.490N

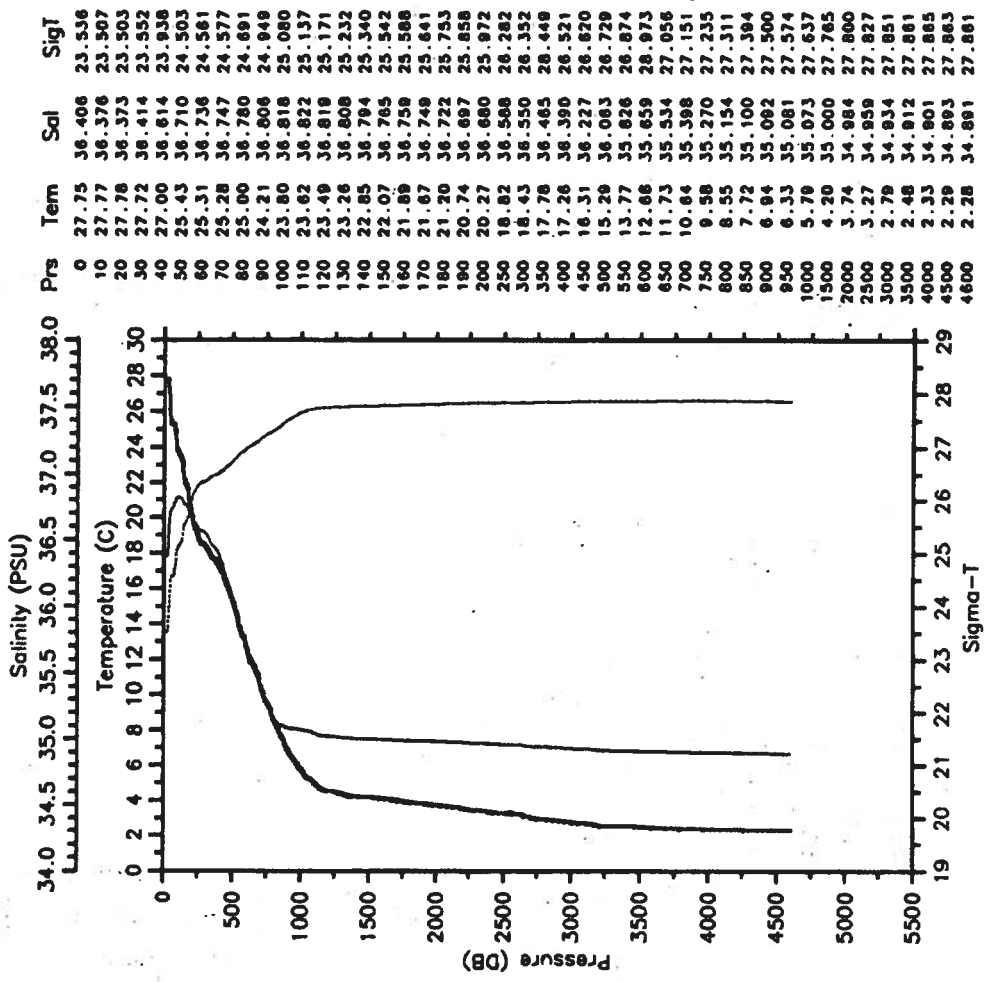
Time 0247 Z Longitude 76.188W

— Tem — Sal
— SigT



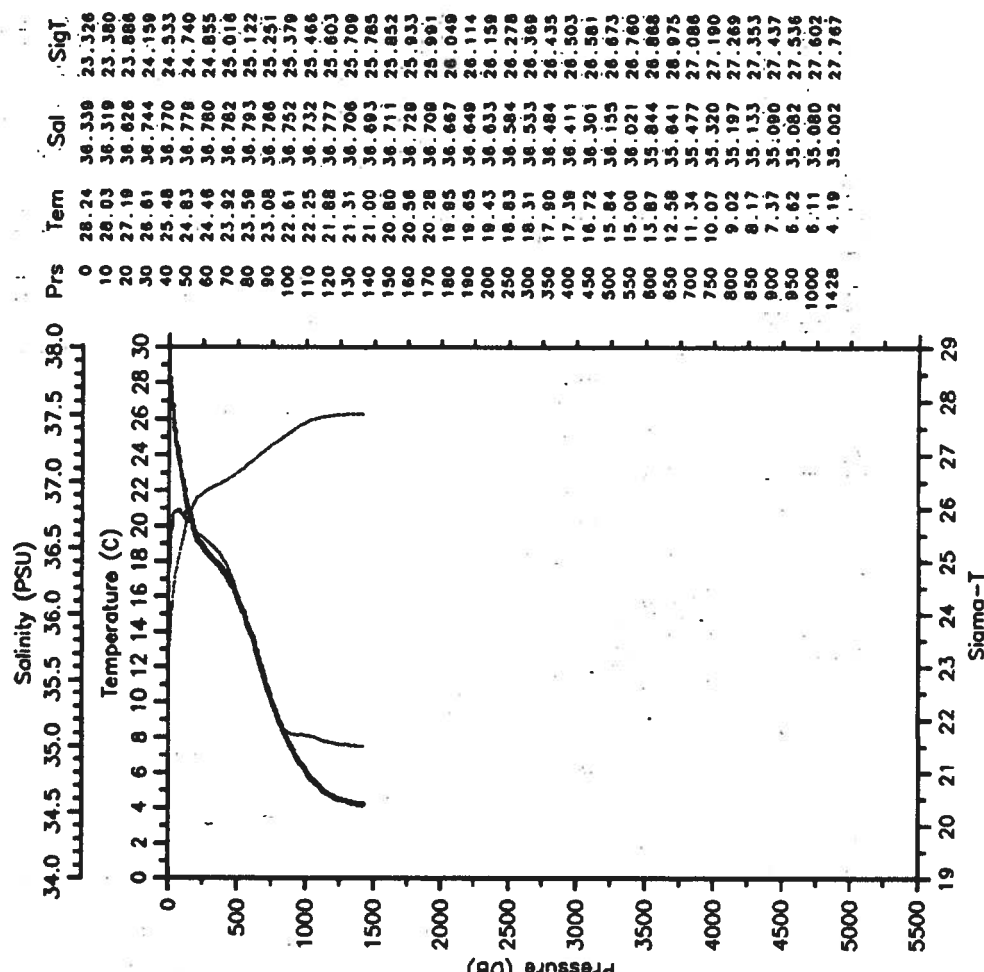
BAL-STACS36-90 CTD 31 BALDRIGE
 Date 06 29 90 Latitude 25.507N
 Time 0702 Z Longitude 76.347W

— Tem — Sal
 - - - SigT



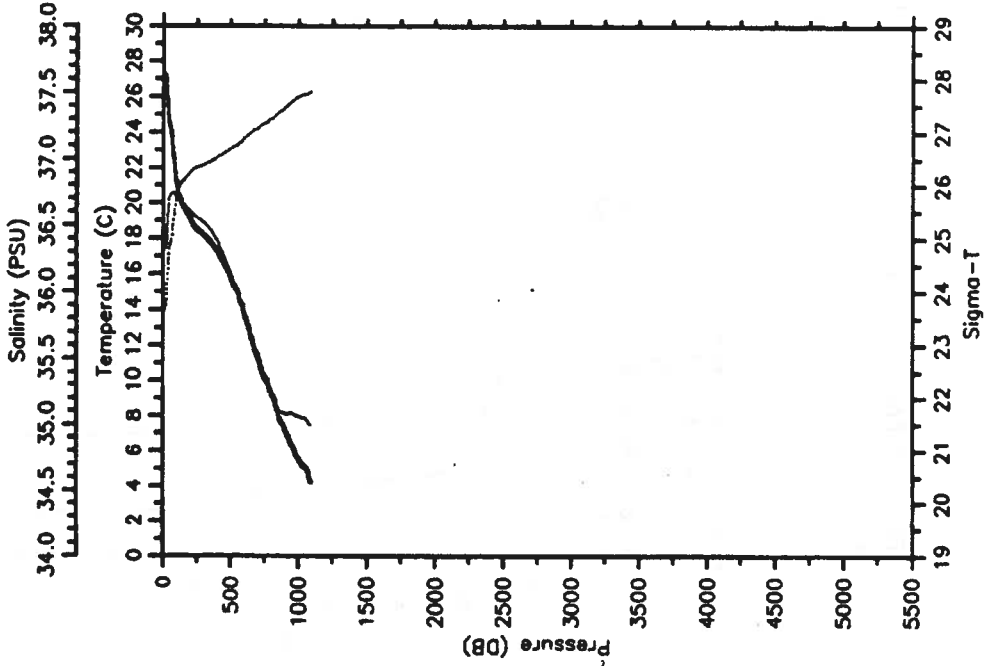
BAL-STACS36-90 CTD 32 BALDRIGE
 Date 06 30 90 Latitude 26.492N
 Time 0006 Z Longitude 76.738W

— Tem — Sal
 - - - SigT



BAL-STACS36-90 CTD 33 BALDRIGE

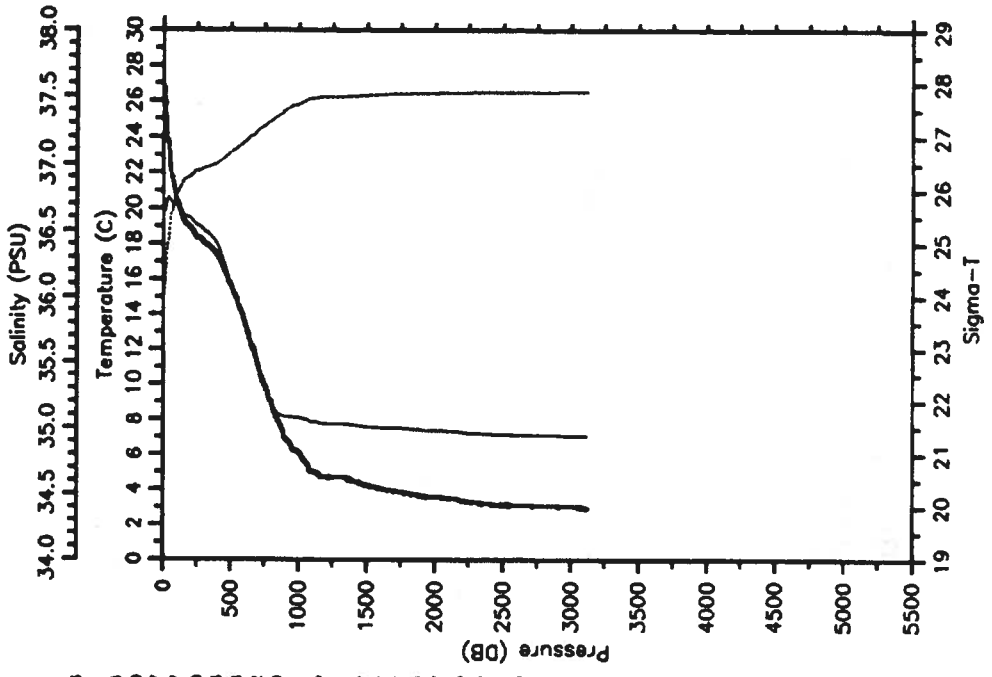
Date 06 30 90 Latitude 28.995N
 Time 1302 Z Longitude 77.005W



Prs	Tem	Sal	Sigt
0	27.29	36.298	23.804
10	27.12	36.328	23.681
20	27.09	36.330	23.694
30	26.10	36.452	24.100
40	25.00	36.647	24.587
50	24.39	36.718	24.827
60	23.99	36.736	24.960
70	23.18	36.742	25.203
80	22.52	36.747	25.398
90	21.68	36.728	25.622
100	21.12	36.690	25.750
110	20.74	36.699	25.661
120	20.35	36.684	25.855
130	20.09	36.690	26.021
140	19.87	36.663	26.066
150	19.78	36.654	26.084
160	19.67	36.653	26.112
170	19.45	36.639	26.159
180	19.35	36.630	26.177
190	19.22	36.620	26.203
200	19.03	36.607	26.245
250	18.51	36.556	26.337
300	18.18	36.517	26.390
350	17.77	36.463	26.451
400	17.25	36.387	26.519
450	16.54	36.271	26.601
500	15.72	36.139	26.689
550	14.99	36.021	26.783
600	13.84	35.811	26.691
650	12.49	35.634	26.607
700	11.49	35.485	27.064
750	10.28	35.331	27.162
800	9.24	35.221	27.252
850	8.24	35.138	27.347
900	7.18	35.082	27.459
950	6.34	35.084	27.575
1000	5.52	35.063	27.663
1091	4.21	34.985	27.780

BAL-STACS36-90 CTD 34 BALDRIGE

Date 06 30 90 Latitude 28.990N
 Time 1550 Z Longitude 76.748W

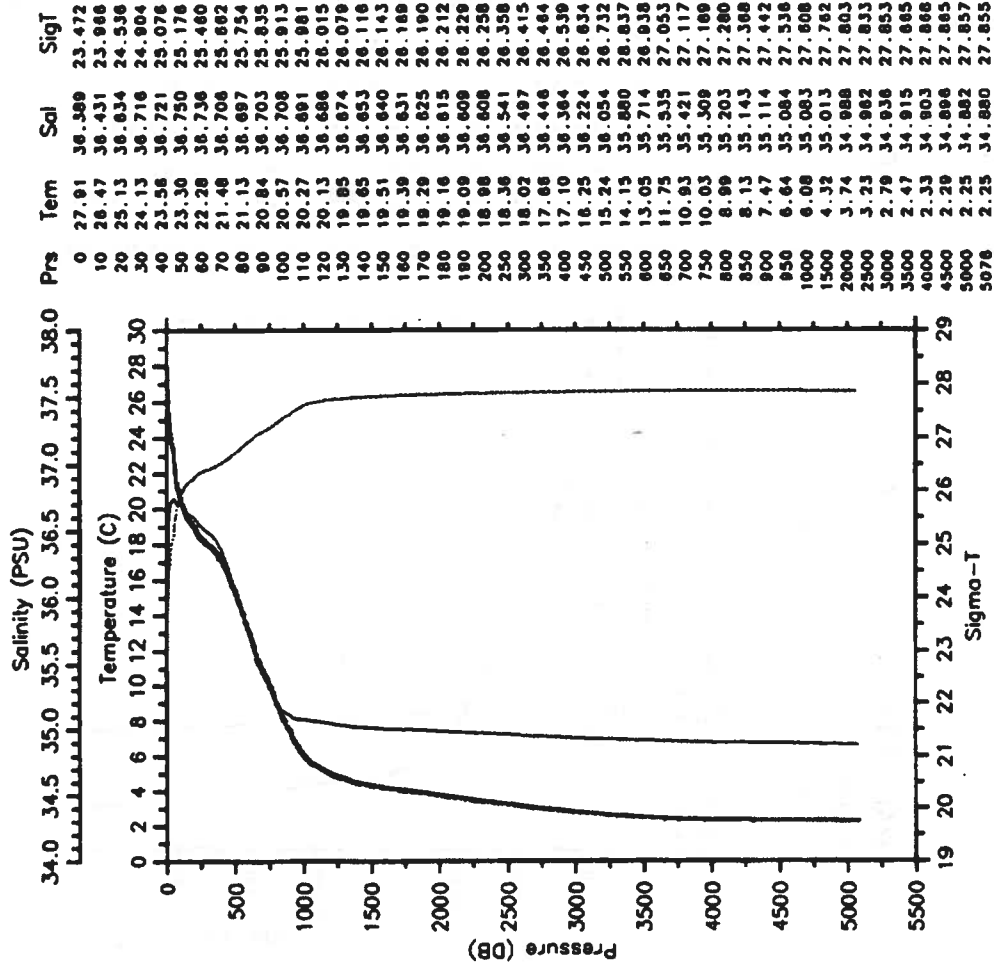


Prs	Tem	Sal	Sigt
0	26.68	36.646	24.064
10	26.50	36.636	24.114
20	25.35	36.661	24.491
30	24.01	36.725	24.947
40	23.64	36.747	25.075
50	22.61	36.736	25.365
60	21.84	36.720	25.570
70	21.55	36.705	25.643
80	21.17	36.701	25.745
90	20.63	36.697	25.889
100	20.41	36.694	25.945
110	20.29	36.688	25.975
120	20.00	36.667	26.036
130	19.75	36.656	26.093
140	19.51	36.638	26.144
150	19.32	36.623	26.180
160	19.18	36.615	26.210
170	19.09	36.606	26.228
180	19.04	36.602	26.238
190	19.00	36.600	26.246
200	18.80	36.594	26.268
250	18.37	36.541	26.361
300	18.06	36.501	26.409
350	17.78	36.483	26.448
400	17.32	36.398	26.510
450	16.50	36.265	26.606
500	15.61	36.119	26.698
550	14.58	35.954	26.802
600	13.53	35.792	26.899
650	12.23	35.595	27.007
700	11.04	35.440	27.111
750	9.89	35.294	27.201
800	9.00	35.200	27.278
850	7.93	35.115	27.375
900	6.94	35.088	27.497
950	6.32	35.064	27.579
1000	6.14	35.081	27.599
1500	4.24	35.007	27.768
2000	3.60	34.983	27.814
2500	3.12	34.952	27.836
3000	3.03	34.945	27.838
3119	2.82	34.938	27.643

BAL-STACS36-90 CTD 35 BALDRIGE

Date 06 30 90 Latitude 28.995N
 Time 2030 Z Longitude 76.310W

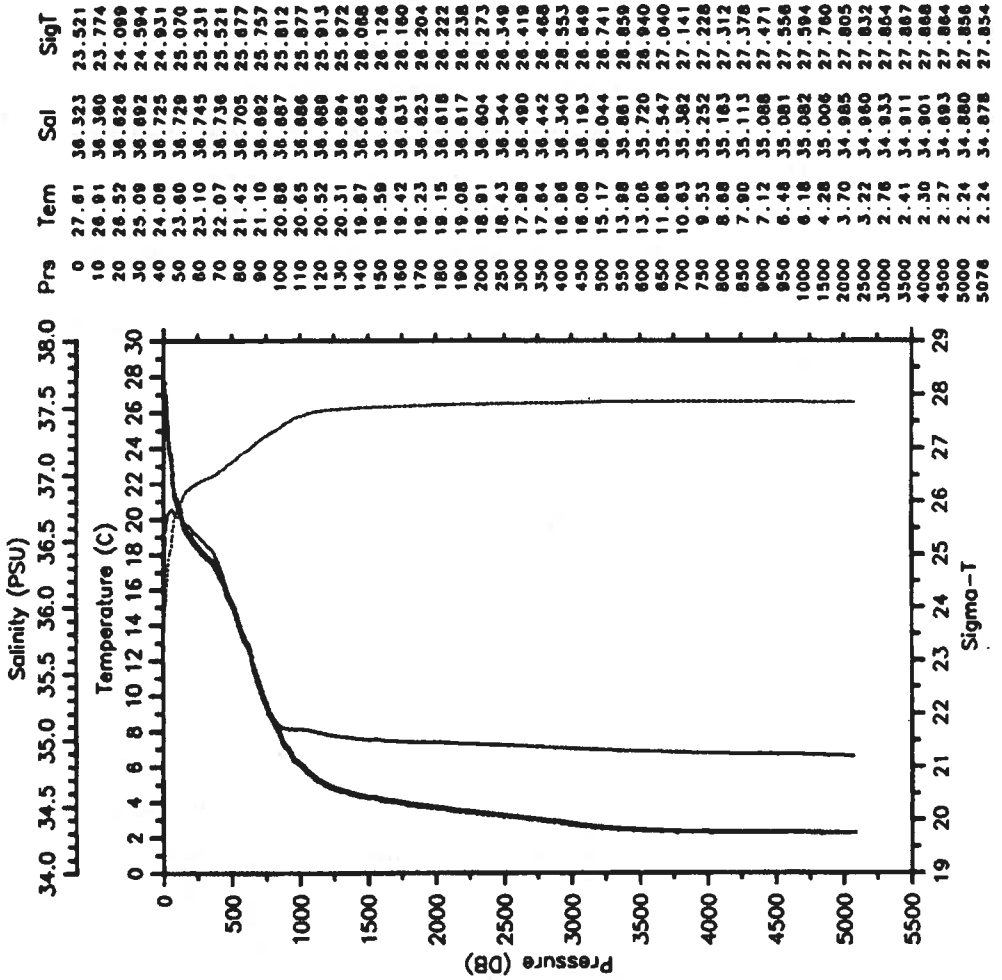
— Tem — Sal
 SigT



BAL-STACS36-90 CTD 36 BALDRIGE

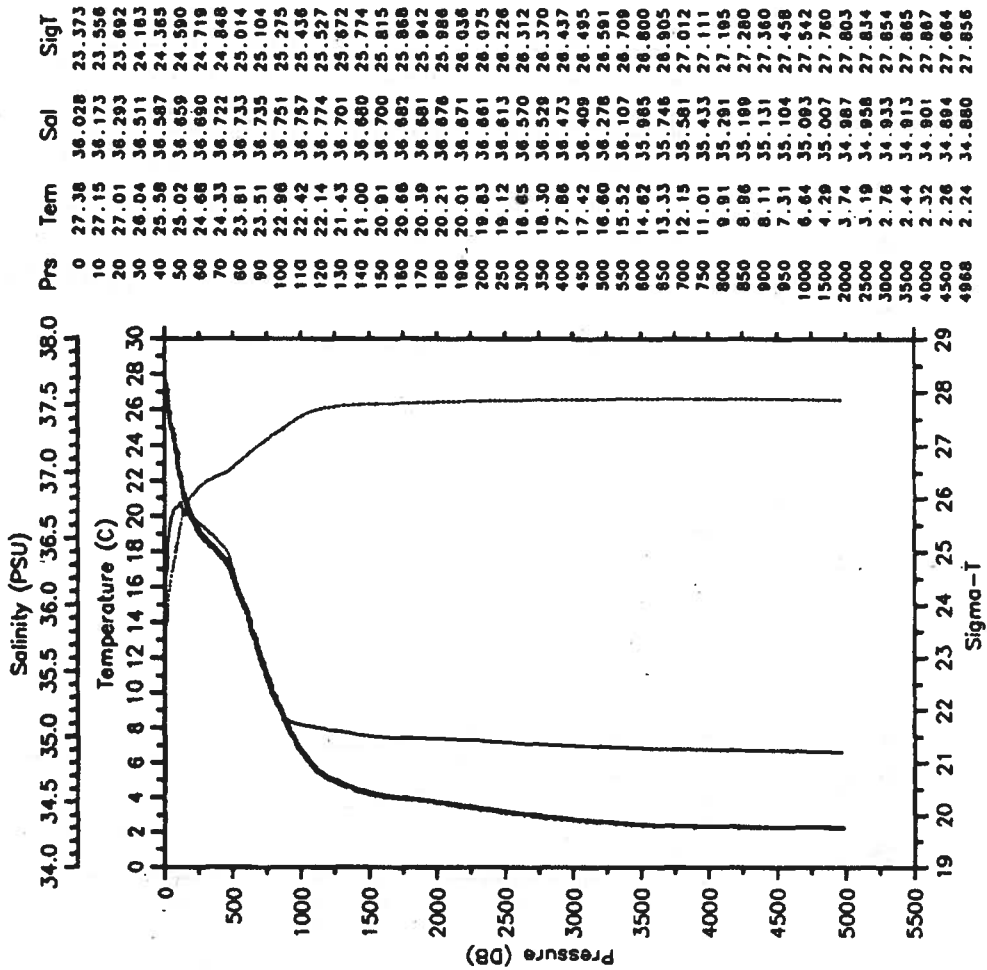
Date 07 01 90 Latitude 29.018N
 Time 0204 Z Longitude 75.735W

— Tem — Sal
 SigT



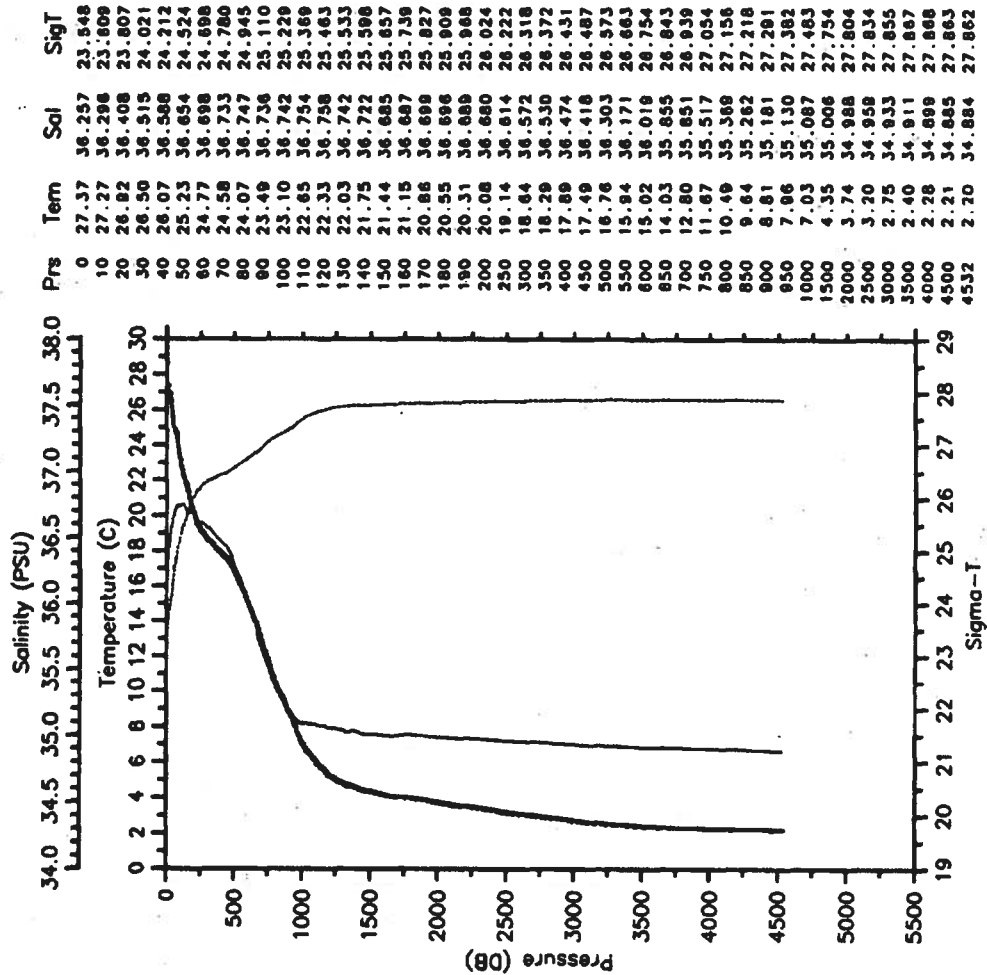
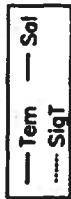
BAL-STACS36-90 CTD 37 BALDRIGE

Date 07 01 90 Latitude 29.003N
 Time 0746 Z Longitude 75.182W



BAL-STACS36-90 CTD 38 BALDRIGE

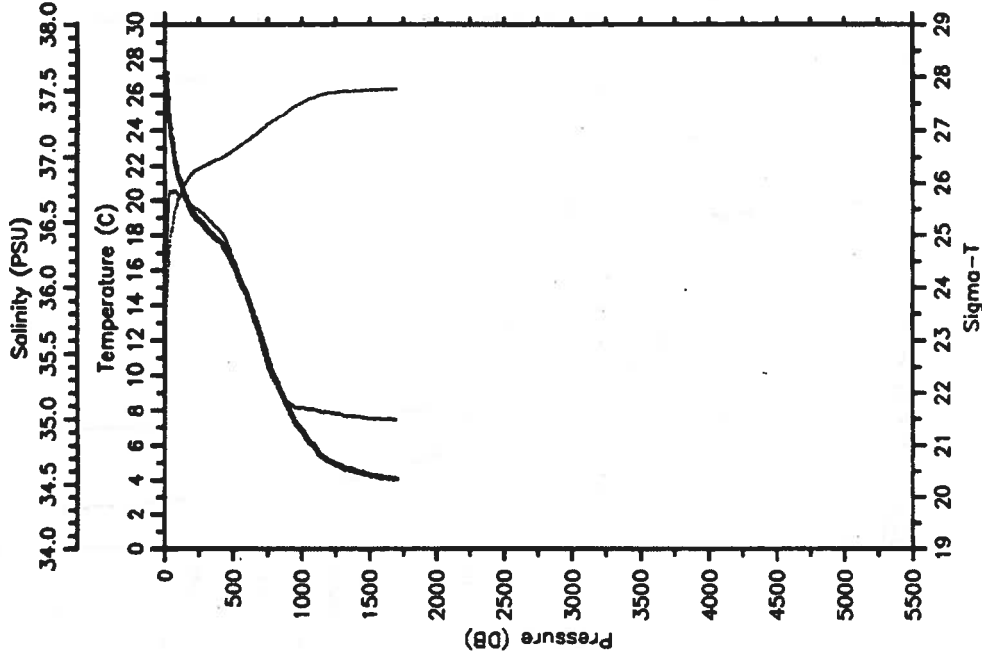
Date 07 01 90 Latitude 28.997N
 Time 1301 Z Longitude 74.642W



BAL-STACS36-90 CTD 39 BALDRIGE

Date 07 01 90 Latitude 29.423N
 Time 1918 Z Longitude 74.270W

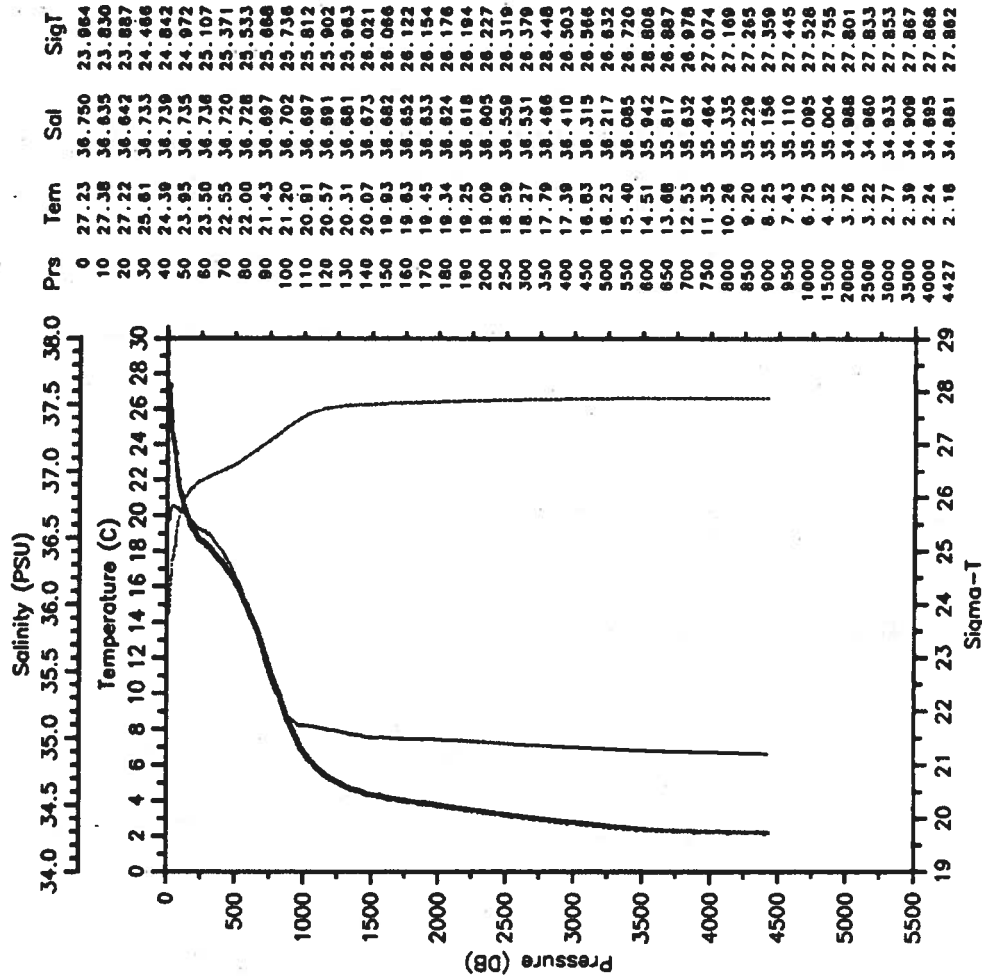
— Tem — Sal
 ---- SigT



BAL-STACS36-90 CTD 40 BALDRIGE

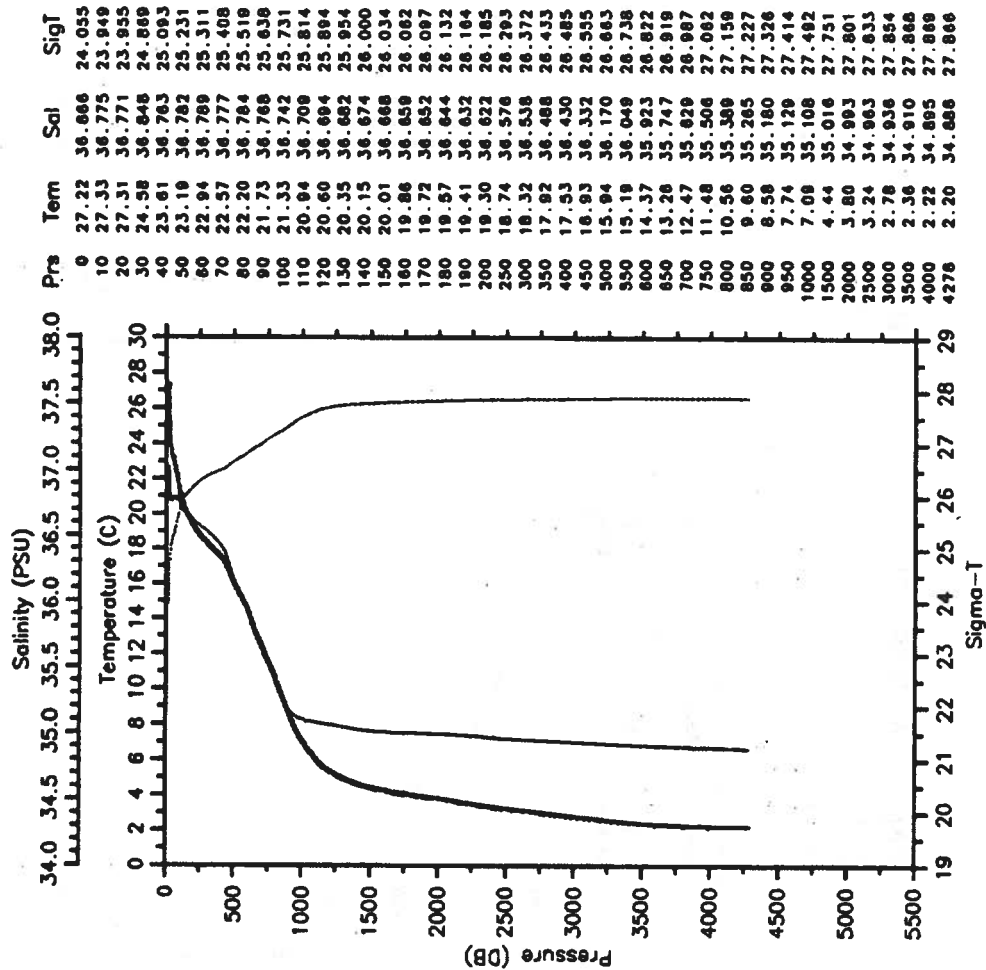
Date 07 02 90 Latitude 29.760N
 Time 0031 Z Longitude 73.950W

— Tem — Sal
 ---- SigT



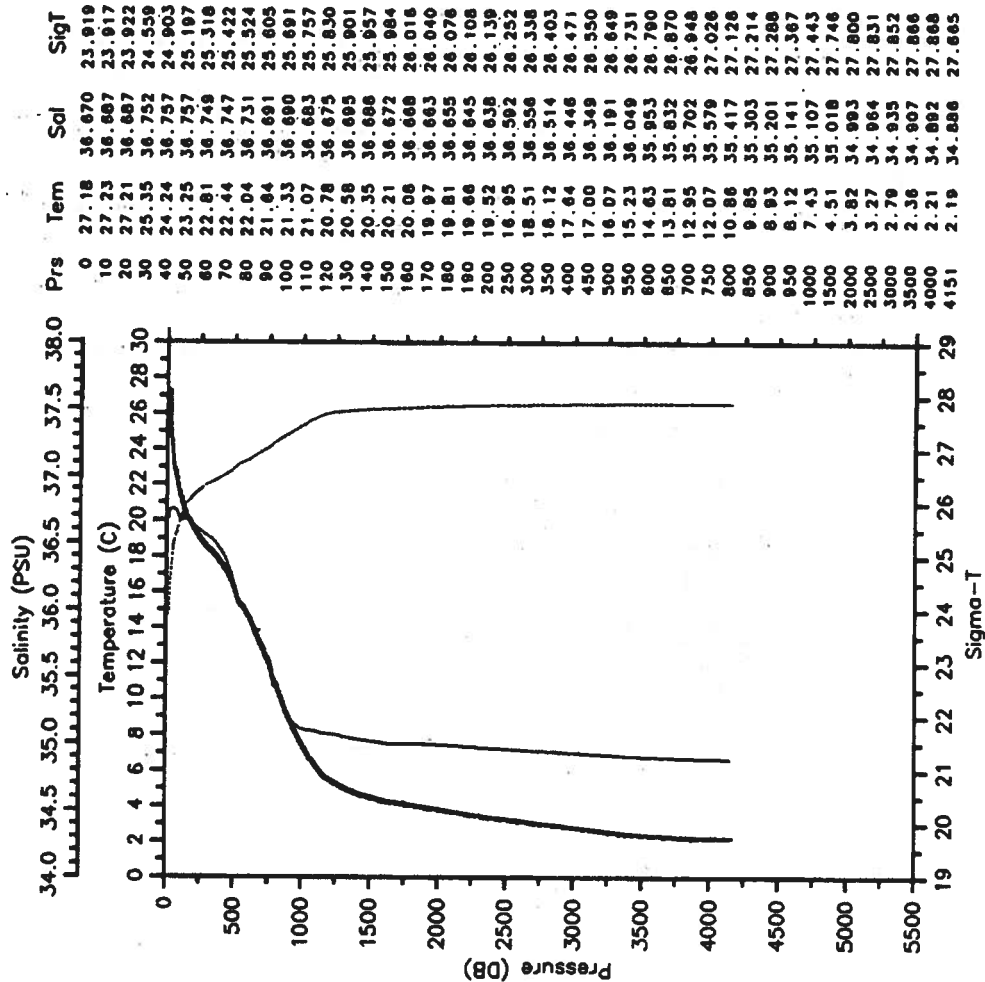
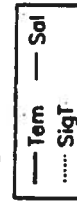
BAL-STACS36-90 CTD 41 BALDRIGE

Date 07 02 90 Latitude 29.897N
 Time 0435 Z Longitude 73.822W



BAL-STACS36-90 CTD 42 BALDRIGE

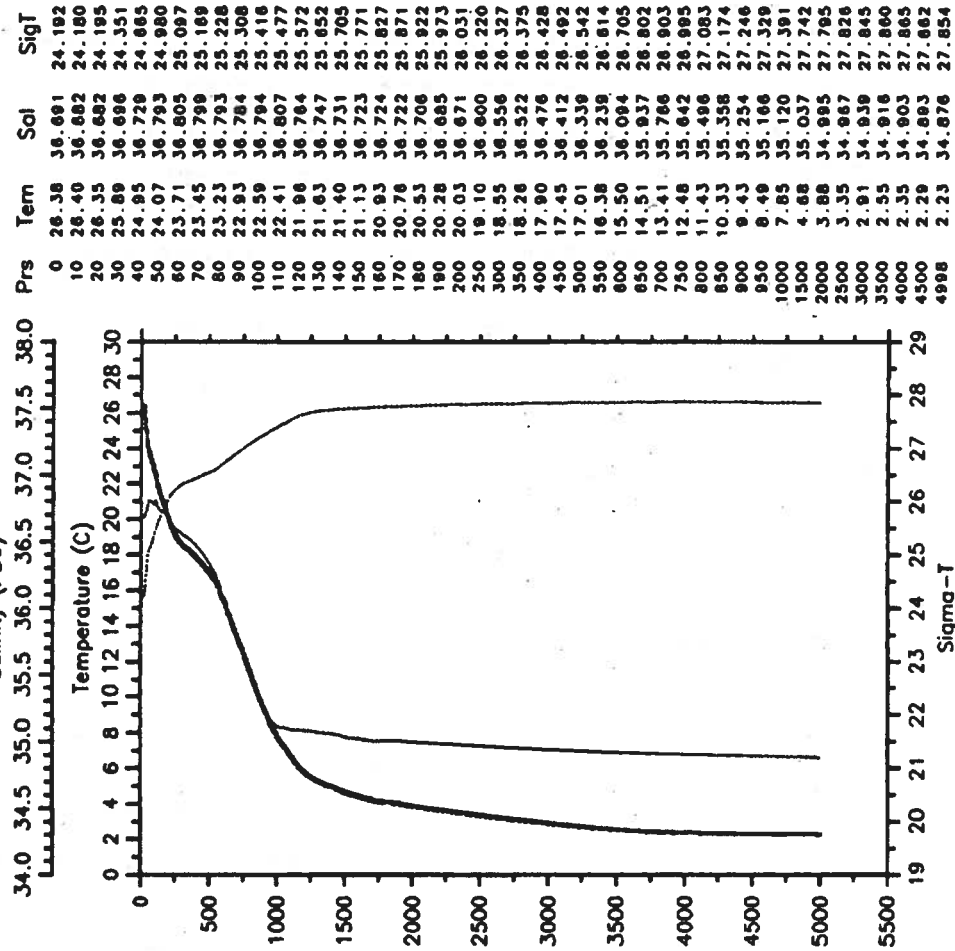
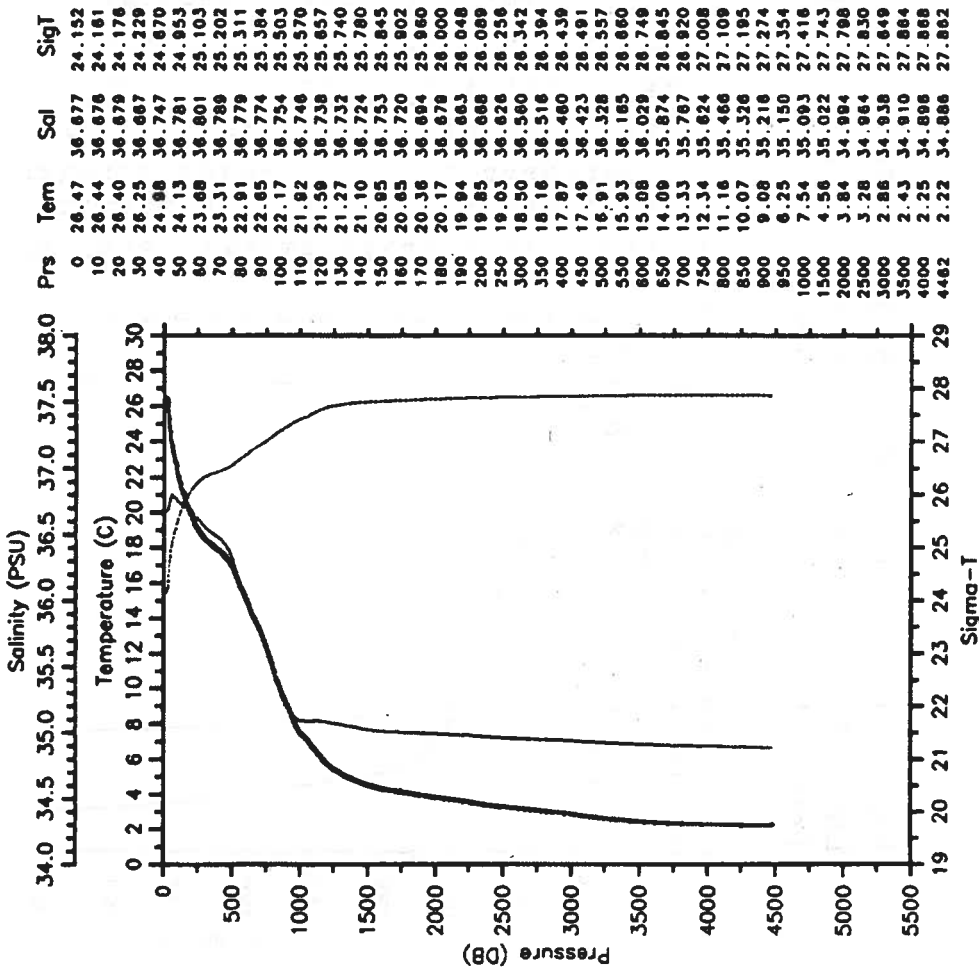
Date 07 02 90 Latitude 30.028N
 Time 0855 Z Longitude 73.695W



BAL-STACS36-90 CTD 43 BALDRICE

Date 07 02 90 Latitude 30.023N
 Time 1328 Z Longitude 73.388W

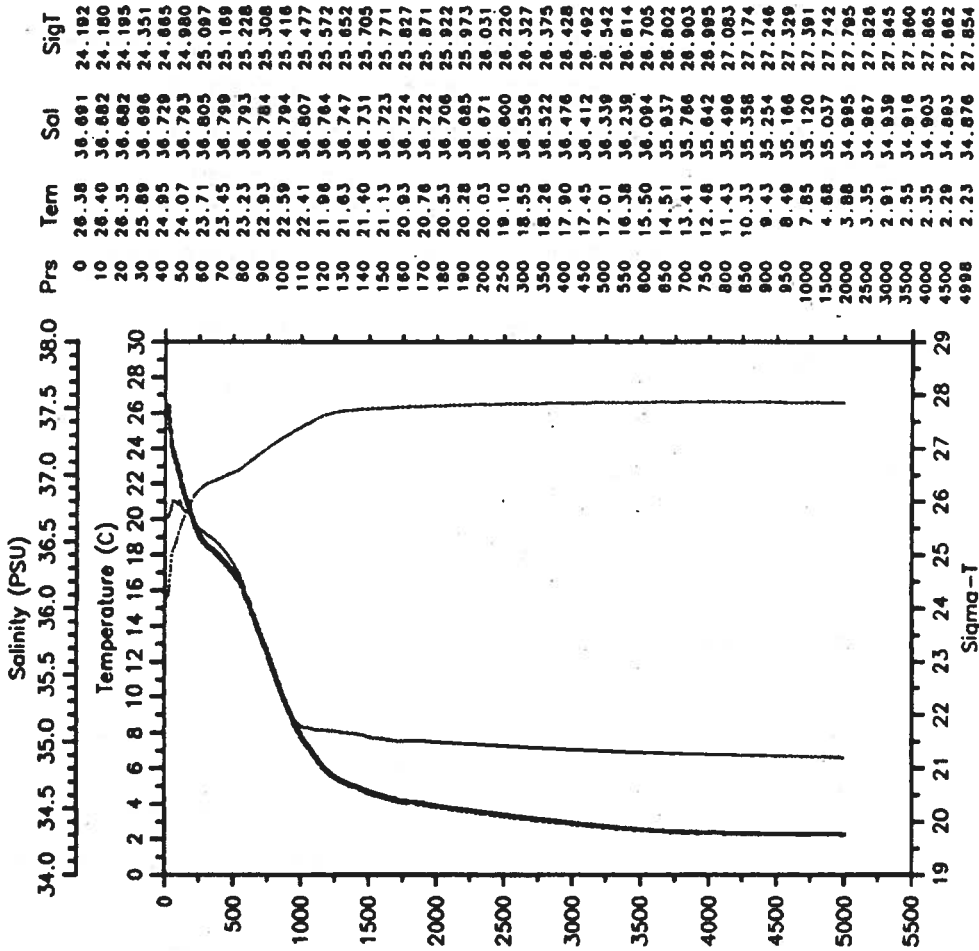
--- Tem --- Sal
 SigT



BAL-STACS36-90 CTD 44 BALDRICE

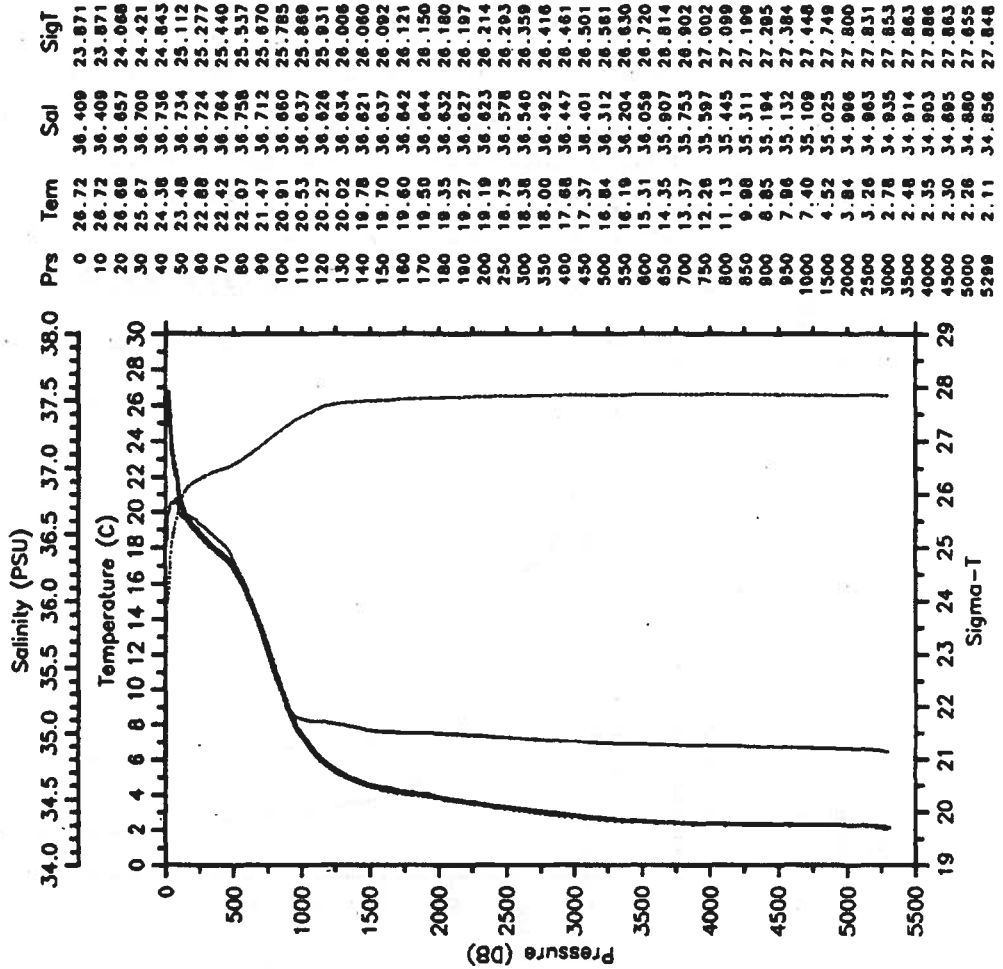
Date 07 02 90 Latitude 30.015N
 Time 1833 Z Longitude 73.092W

--- Tem --- Sal
 SigT



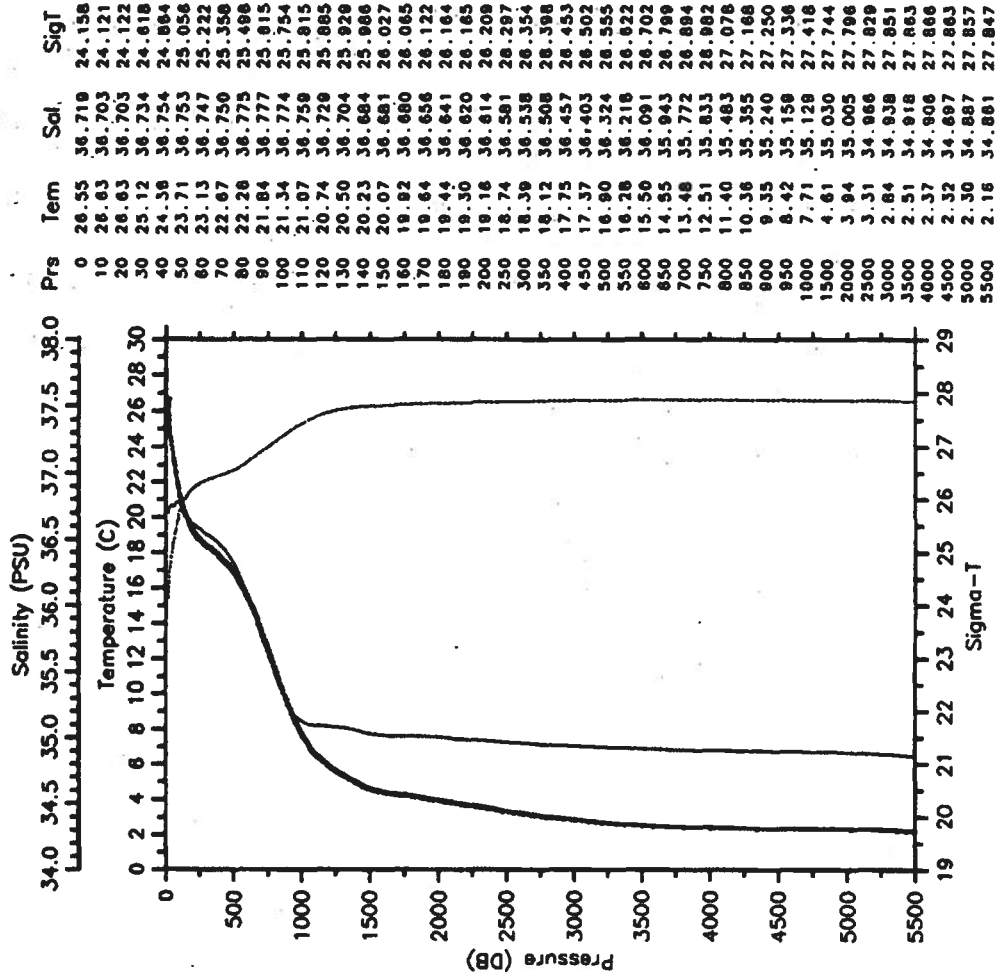
BAL-STACS36-90 CTD 45 BALDRIGE
 Date 07 03 90 Latitude 29.990N
 Time 0043 Z Longitude 72.535W

— Tem — Sal
 ---- SigT



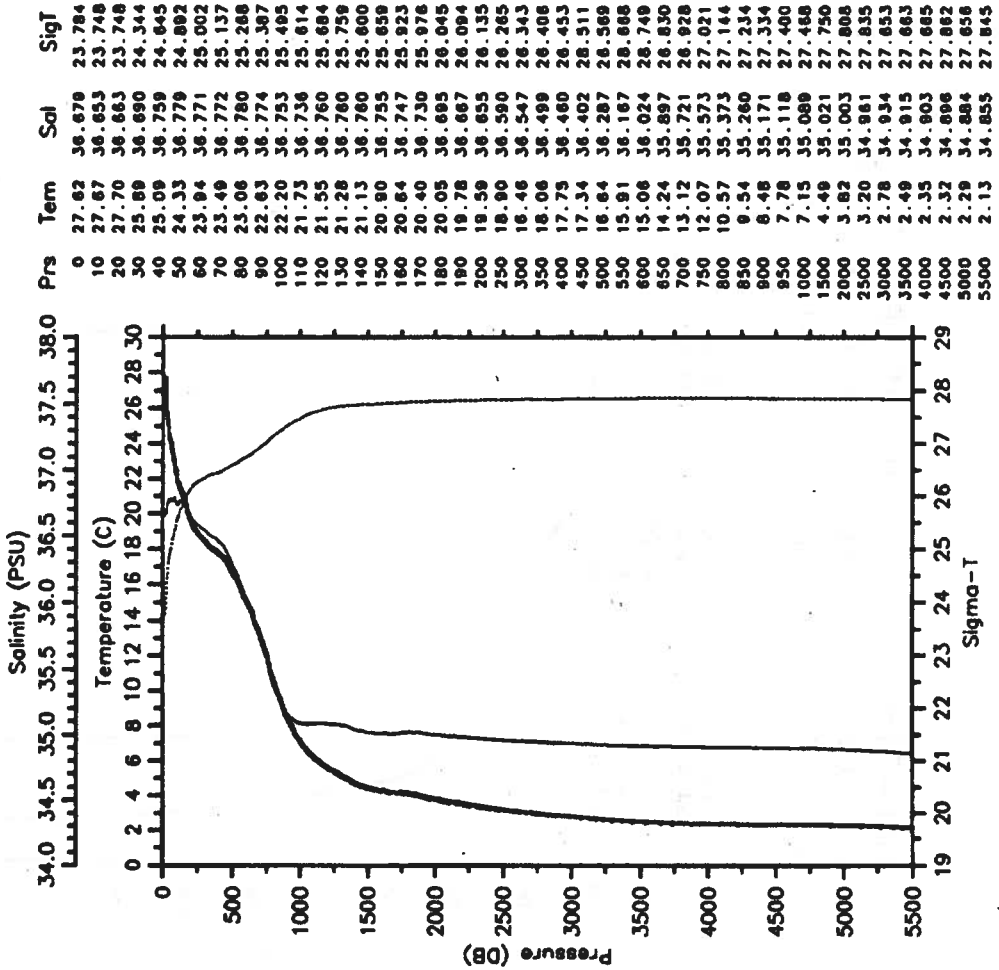
BAL-STACS36-90 CTD 46 BALDRIGE
 Date 07 03 90 Latitude 30.012N
 Time 1237 Z Longitude 70.998W

— Tem — Sal
 ---- SigT



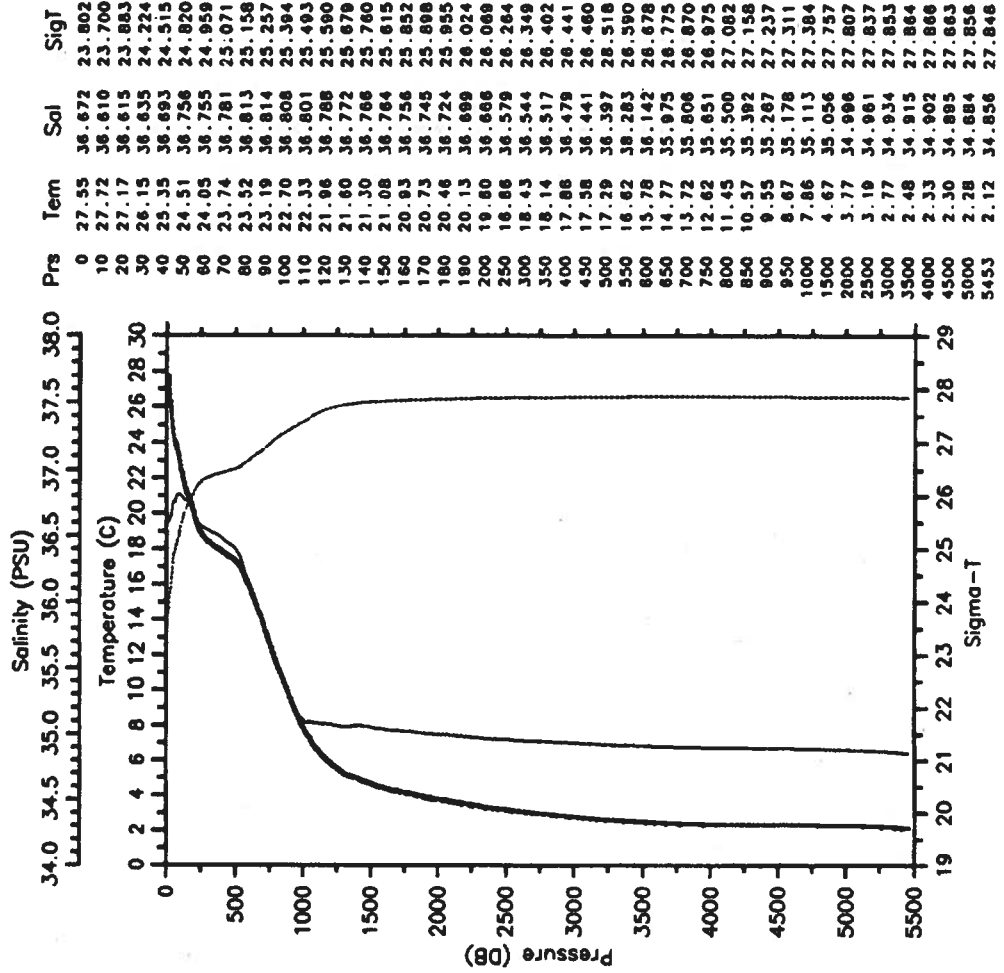
BAL-STACS36-90 CTD 47 BALDRIGE

Date 07 04 90 Latitude 28.238N
 Time 0021 Z Longitude 70.998W



BAL-STACS36-90 CTD 48 BALDRIGE

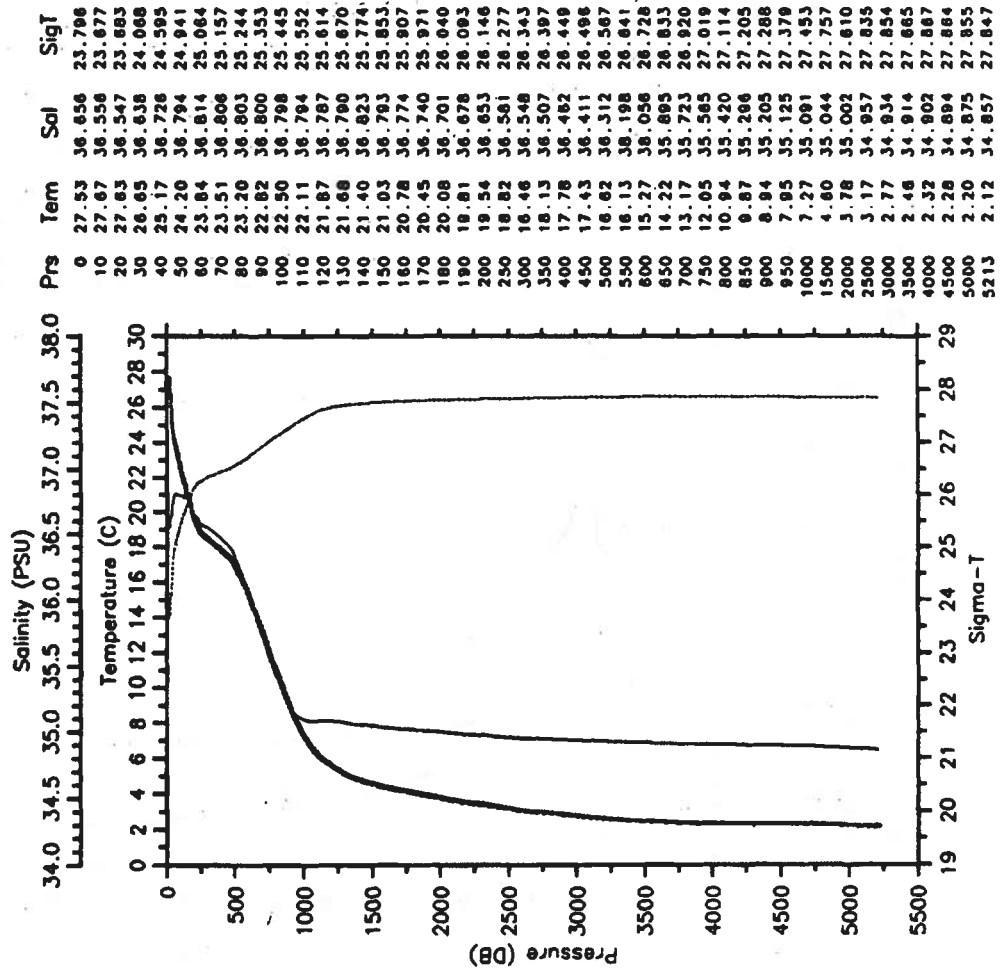
Date 07 04 90 Latitude 27.135N
 Time 0941 Z Longitude 71.488W



BAL-STACS36-90 CTD 49 BALDRIGE

Date 07 04 90 Latitude 27.535N
Time 1541 Z Longitude 71.815W

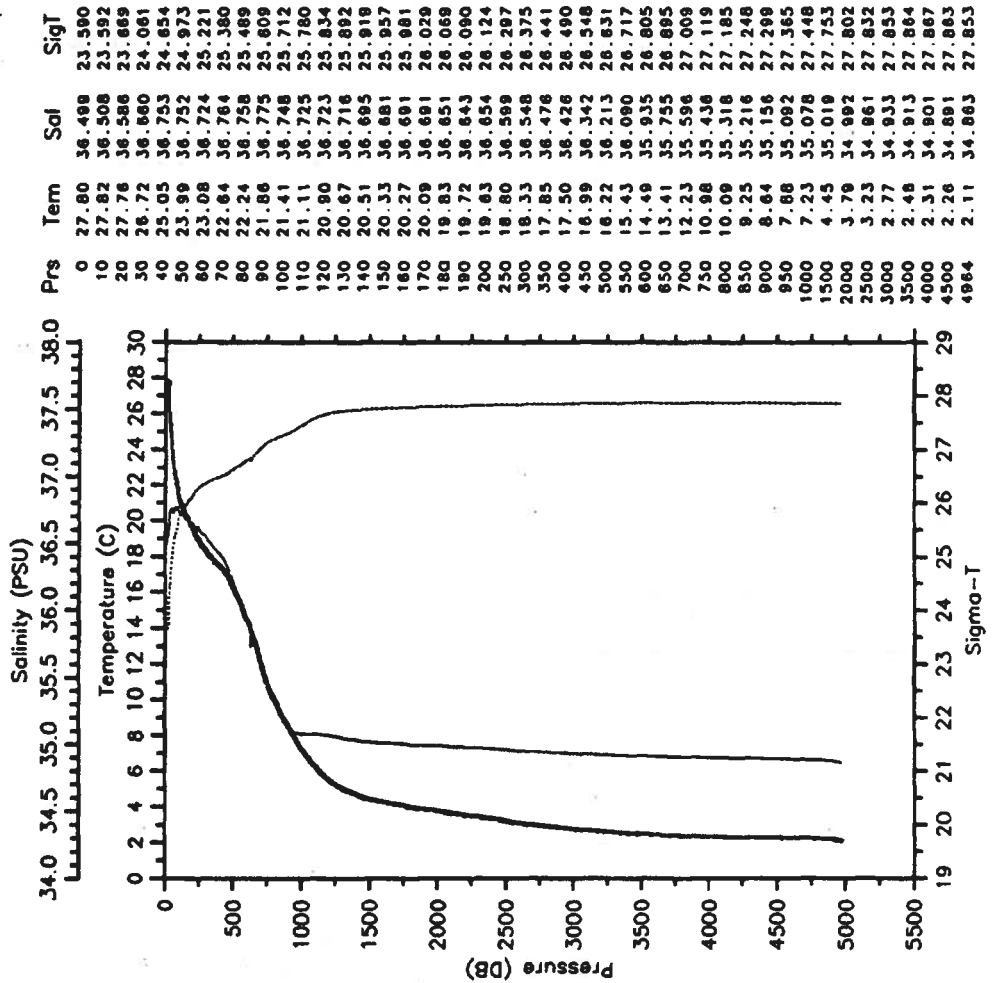
--- Tem --- Sal
..... SigT



BAL-STACS36-90 CTD 50 BALDRIGE

Date 07 04 90 Latitude 27.960N
Time 2141 Z Longitude 72.122W

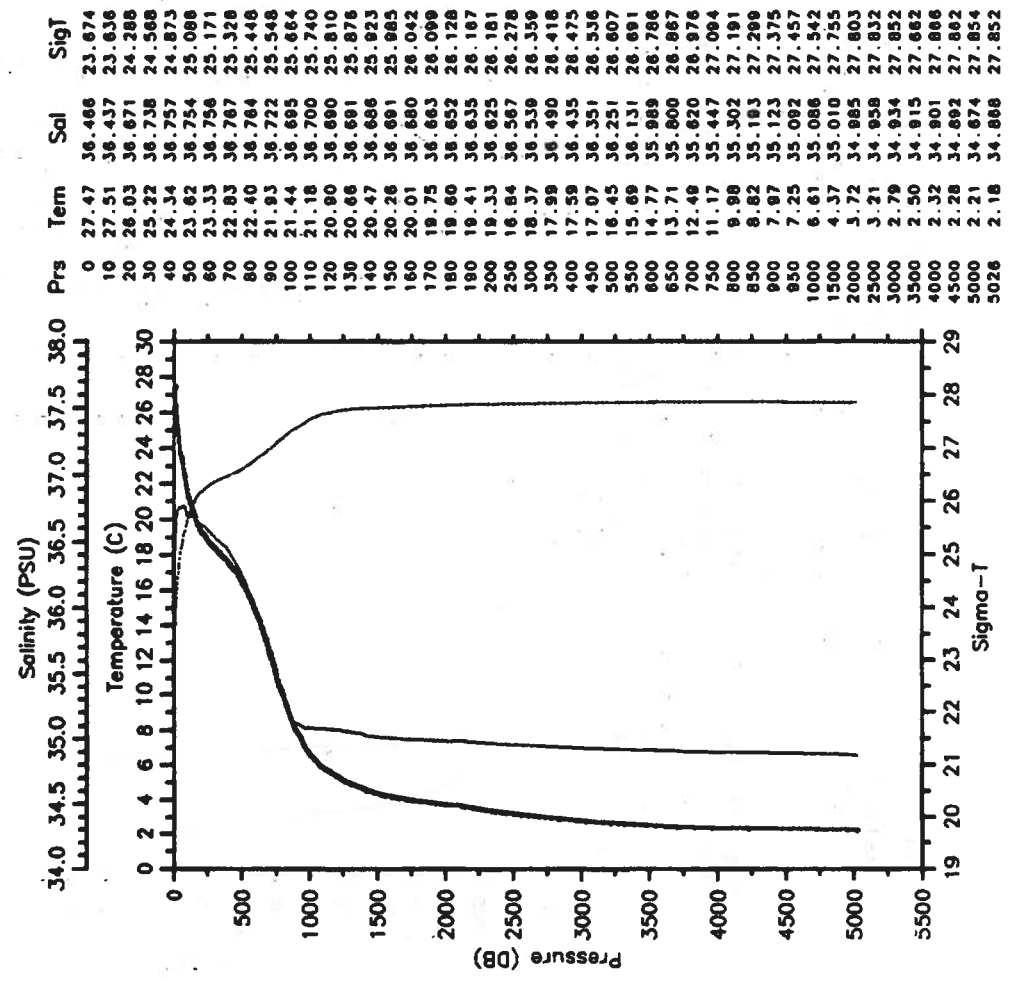
--- Tem --- Sal
..... SigT



BAL-STACS36-90 CTD 51 BALDRIGE

Date 07 05 90 Latitude 28.382N
Time 0324 Z Longitude 72.447W

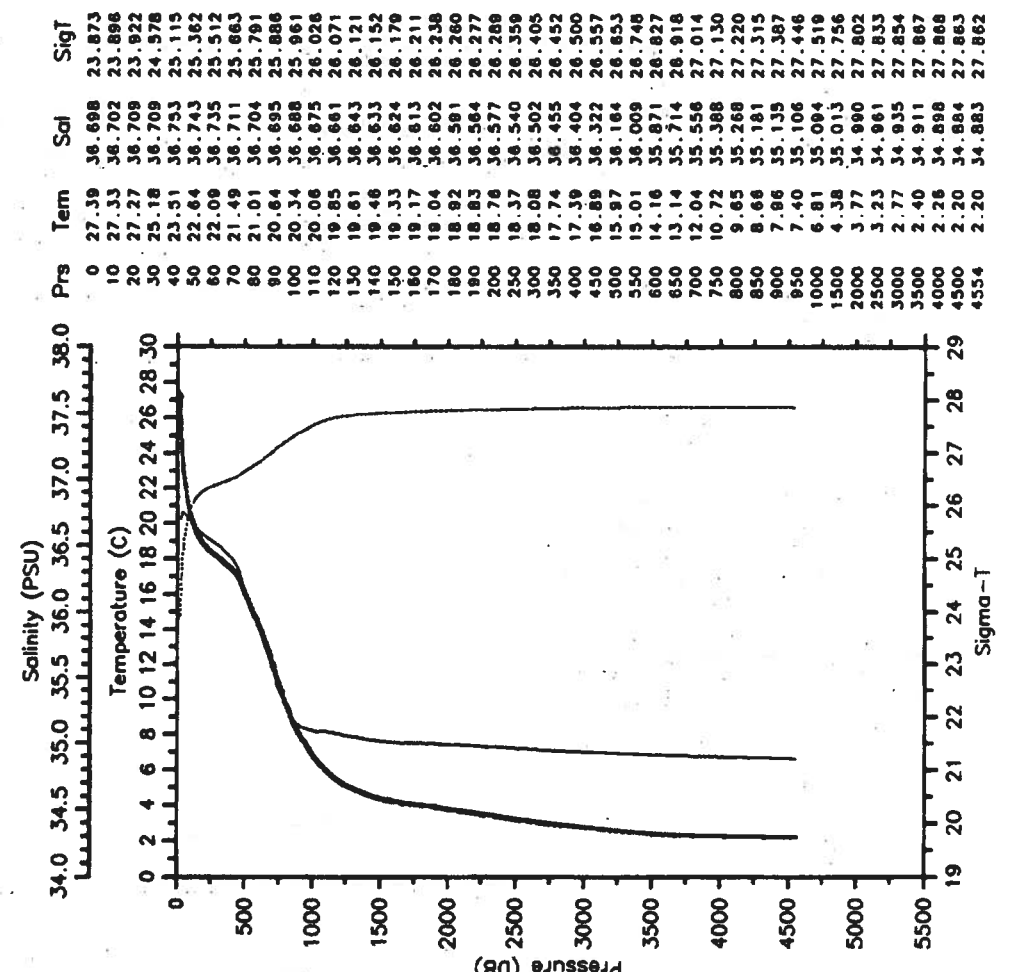
— Tem — Sal
..... SigT



BAL-STACS36-90 CTD 52 BALDRIGE

Date 07 05 90 Latitude 28.763N
Time 1139 Z Longitude 72.828W

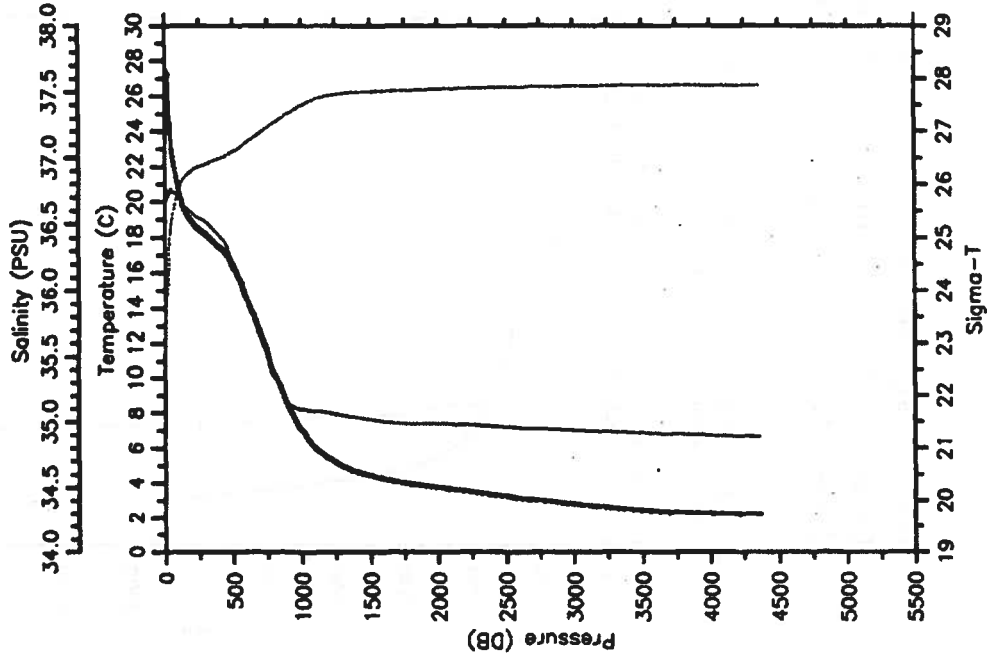
— Tem — Sal
..... SigT



BAL-STACS36-90 CTD 53 BALDRIGE

Date 07 05 90 Latitude 29.040N
 Time 1619 Z Longitude 72.990W

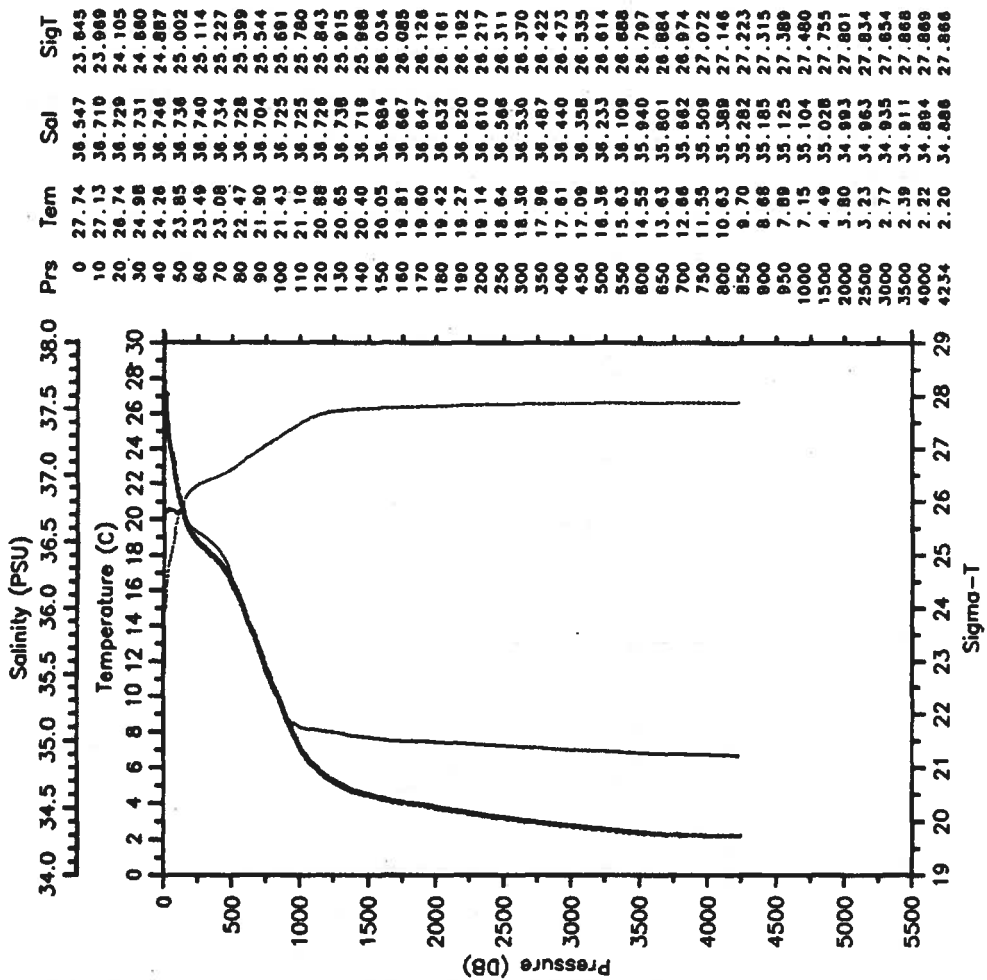
— Tem — Sal
 - - - - - SigT



BAL-STACS36-90 CTD 54 BALDRIGE

Date 07 05 90 Latitude 29.325N
 Time 2055 Z Longitude 73.227W

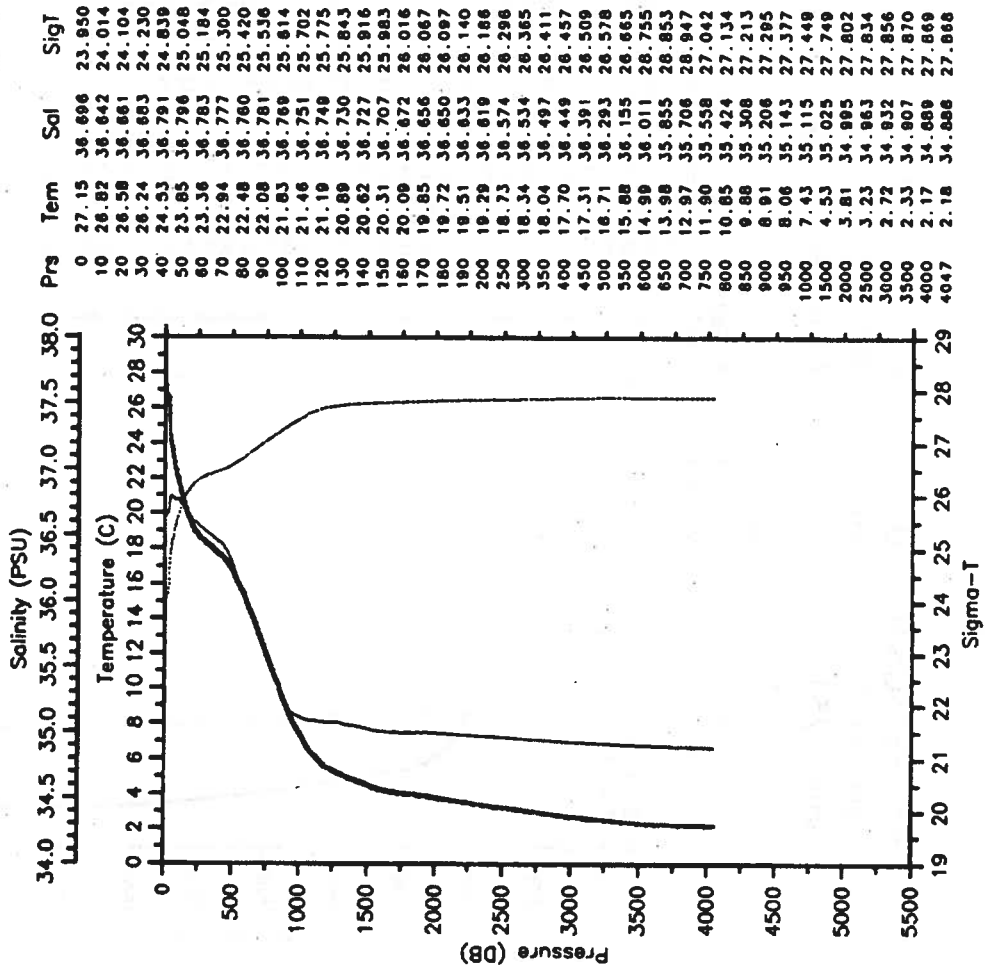
— Tem — Sal
 - - - - - SigT



BAL-STACS36-90 CTD 55 BALDRIGE

Date 07 06 90 Latitude 29.605N

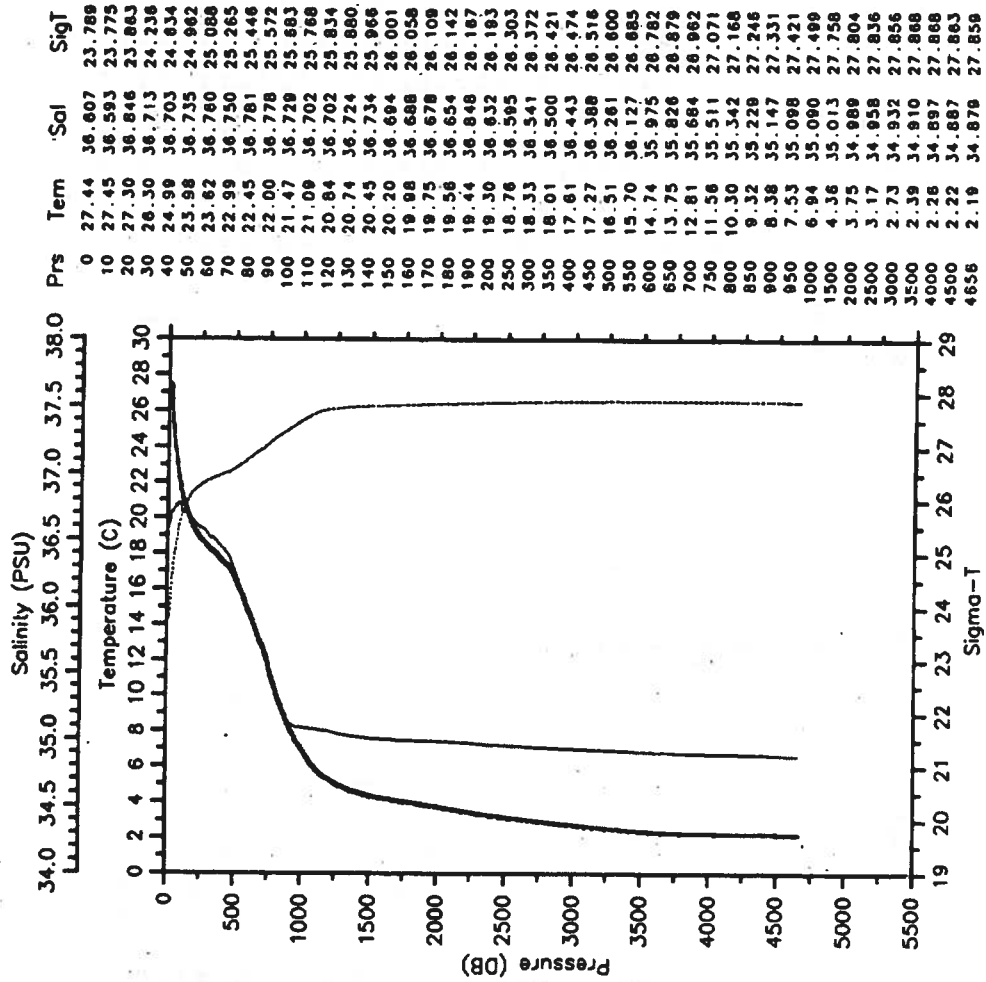
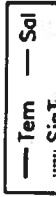
Time 0111 Z Longitude 73.423W



BAL-STACS36-90 CTD 56 BALDRIGE

Date 07 06 90 Latitude 29.047N

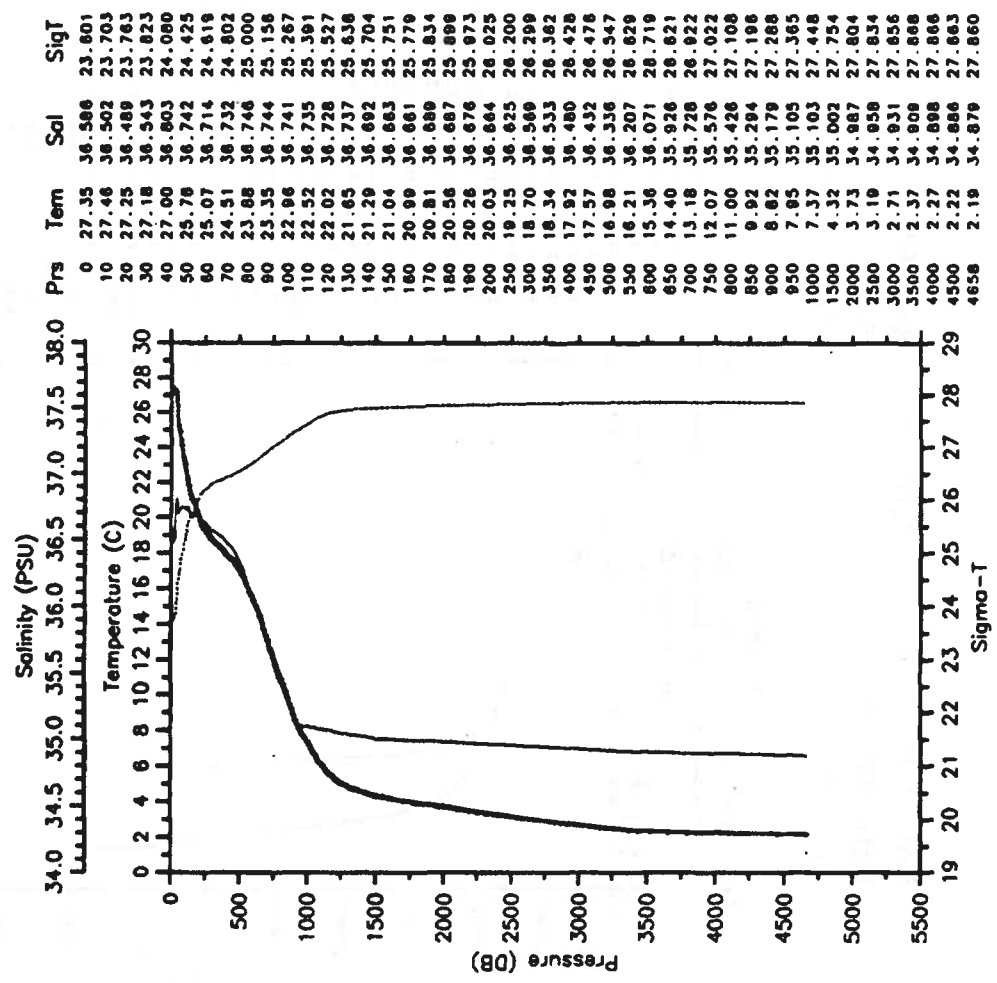
Time 0656 Z Longitude 73.622W



BAL-STACS36-90 CTD 57 BALDRIGE

Date 07 06 90 Latitude 28.520N
 Time 1251 Z Longitude 73.835W

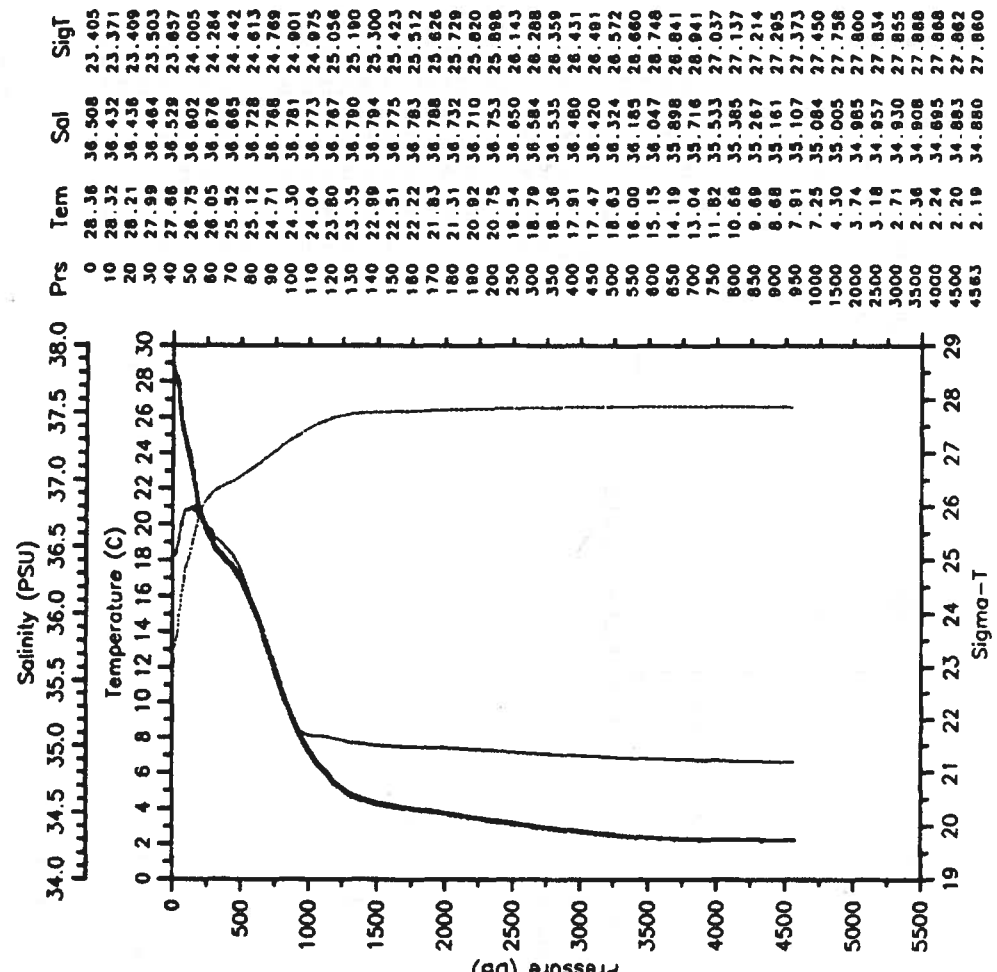
— Tem — Sal
 - - - - - SigT



BAL-STACS36-90 CTD 58 BALDRIGE

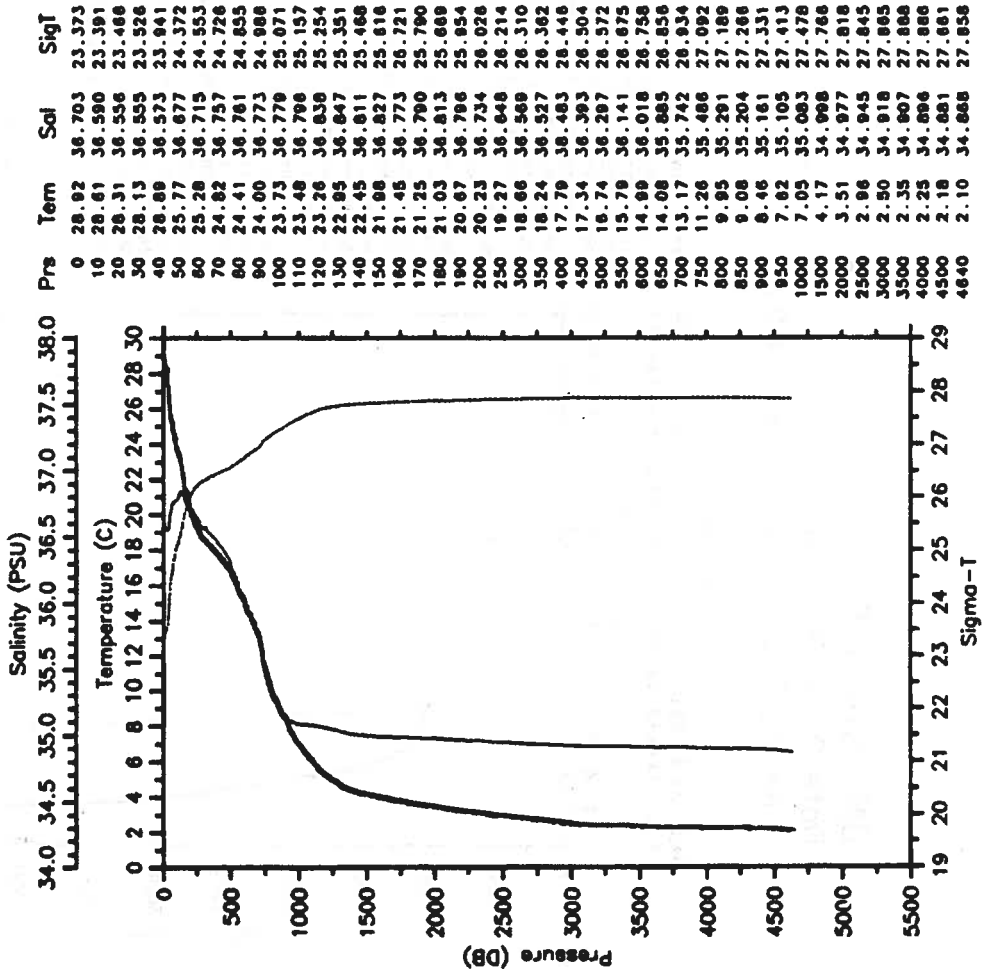
Date 07 07 90 Latitude 26.510N
 Time 0058 Z Longitude 74.755W

— Tem — Sal
 - - - - - SigT



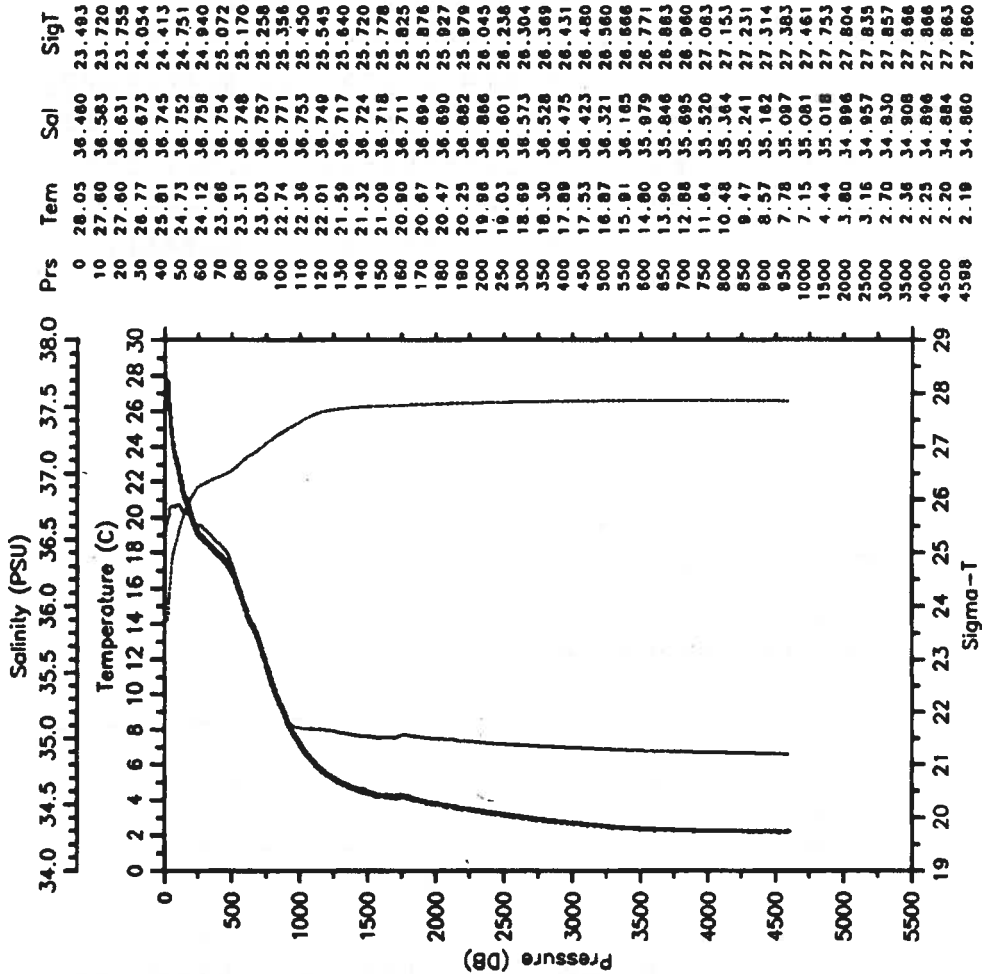
BAL-STACS36-90 CTD 59 BALDRIGE
 Date 07 07 90 Latitude 26.018N
 Time 0650 Z Longitude 75.003W

--- Tem --- Sal
 --- SigT



BAL-STACS36-90 CTD 60 BALDRIGE
 Date 07 07 90 Latitude 26.893N
 Time 1613 Z Longitude 73.937W

--- Tem --- Sal
 --- SigT

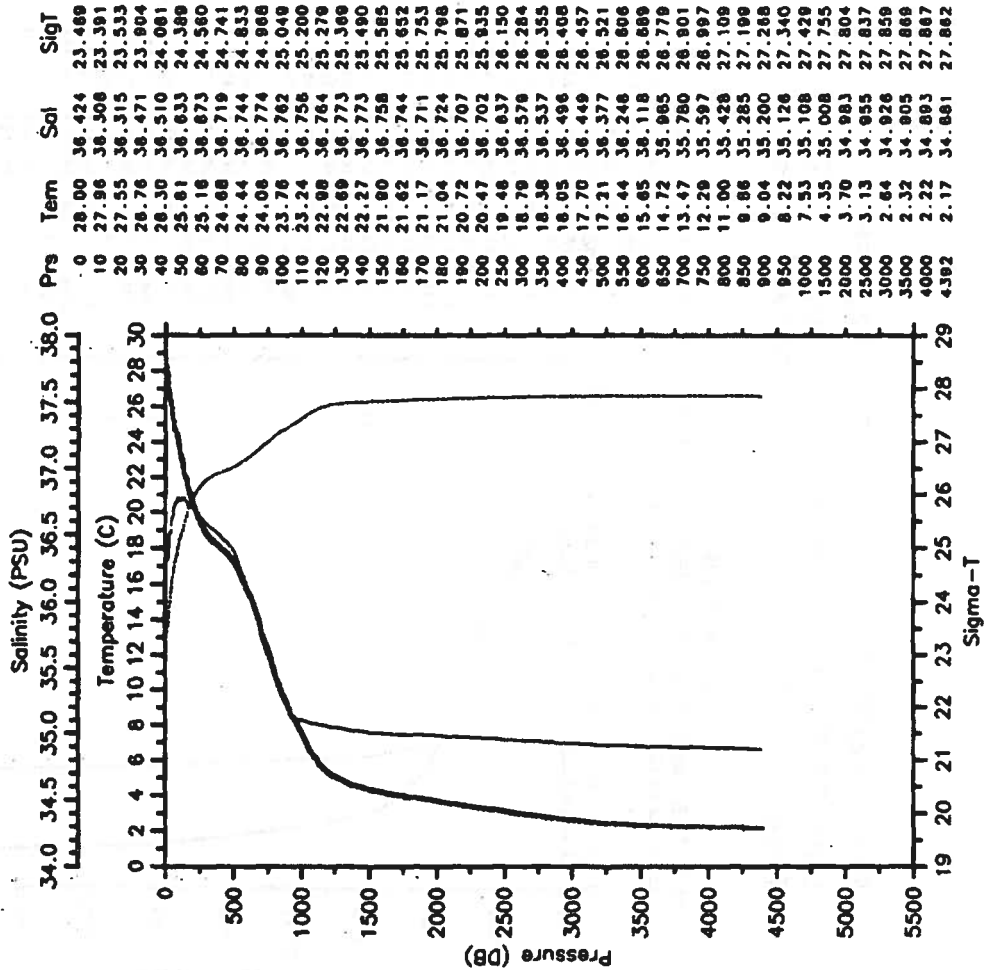


BAL-STACS36-90 CTD 61 BALDRIGE

Date 07 07 90 Latitude 27.218N

Time 2217 Z Longitude 74.220W

— Tem — Sal
— SigT

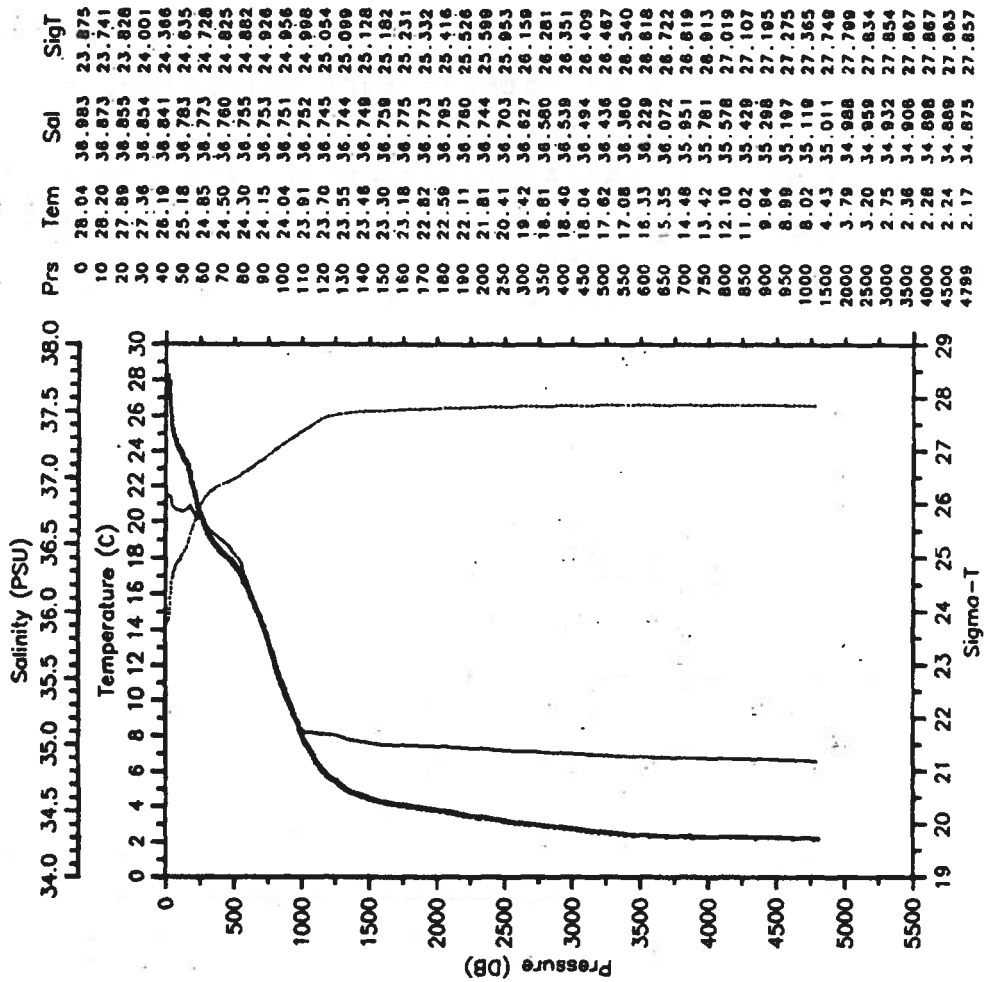


BAL-STACS36-90 CTD 62 BALDRIGE

Date 07 08 90 Latitude 27.527N

Time 0328 Z Longitude 74.540W

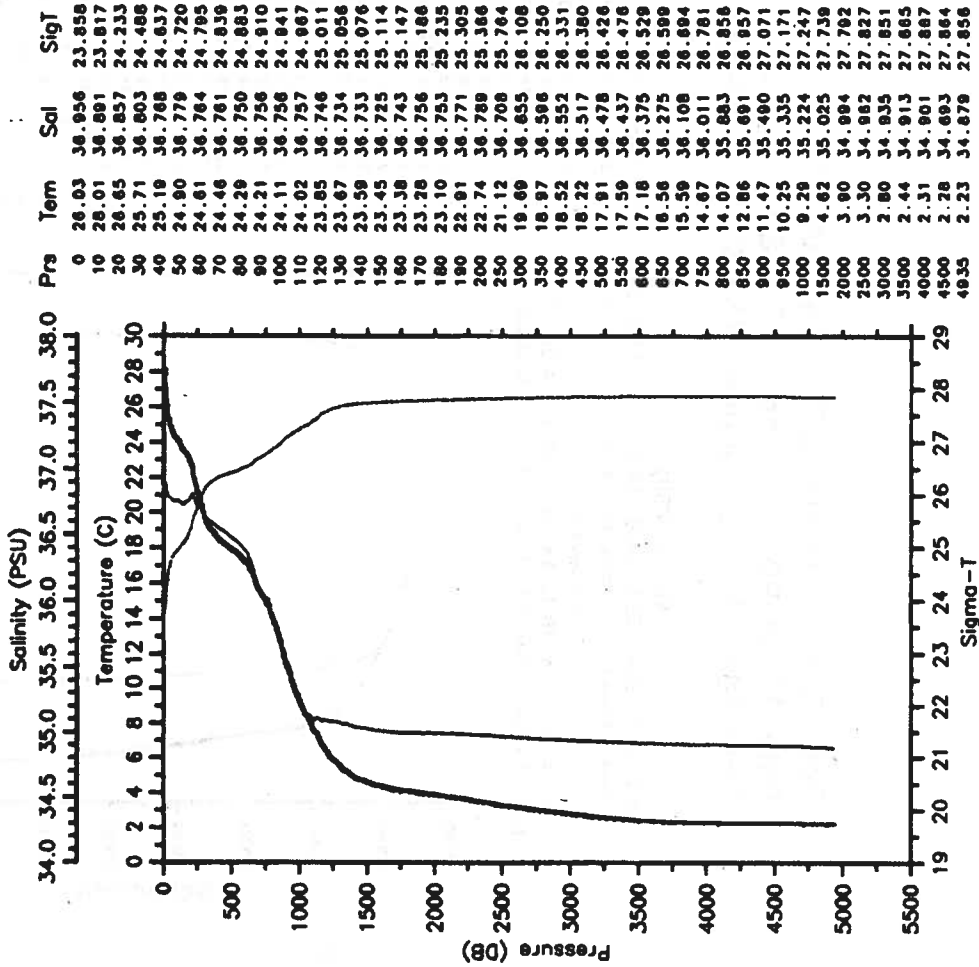
— Tem — Sal
— SigT



BAL-STACS36-90 CTD 63 BALDRIGE

Date 07 08 90 Latitude 27.830N
 Time 0850 Z Longitude 74.848W

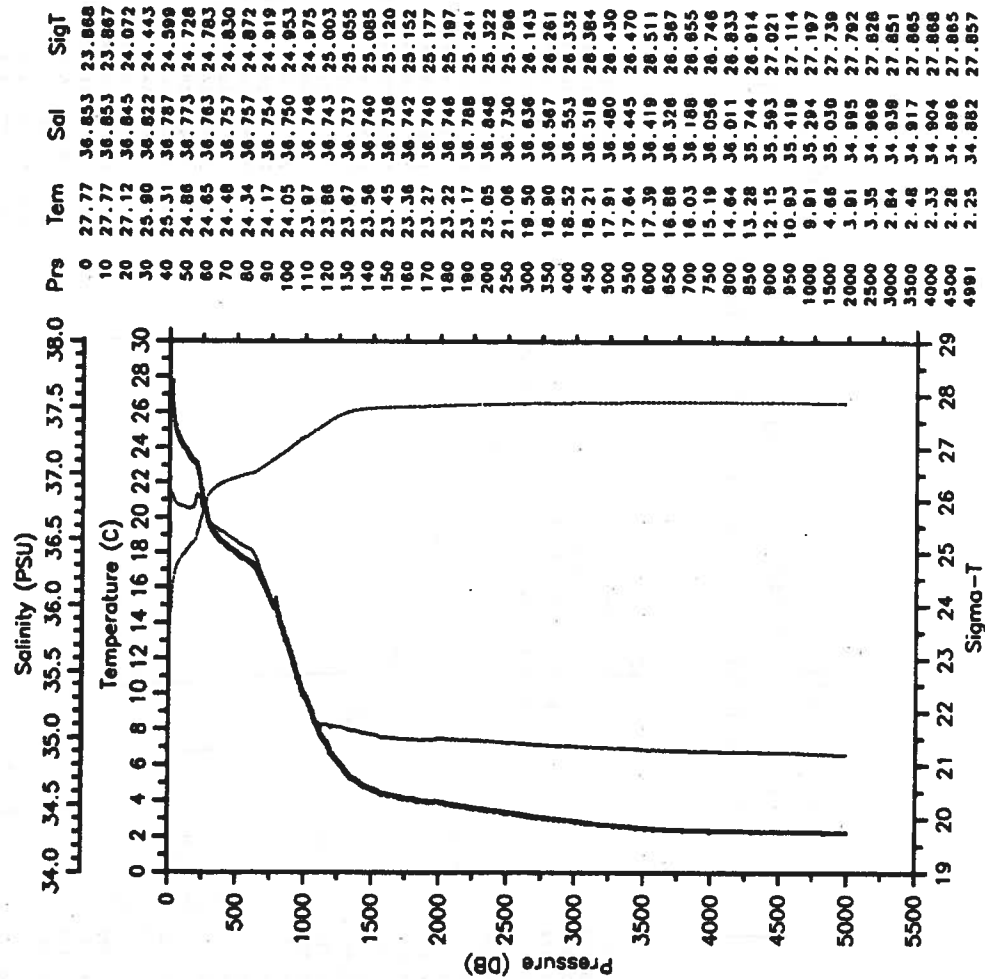
--- Tem --- Sal
 --- Sigt



BAL-STACS36-90 CTD 64 BALDRIGE

Date 07 08 90 Latitude 27.843N
 Time 1349 Z Longitude 75.267W

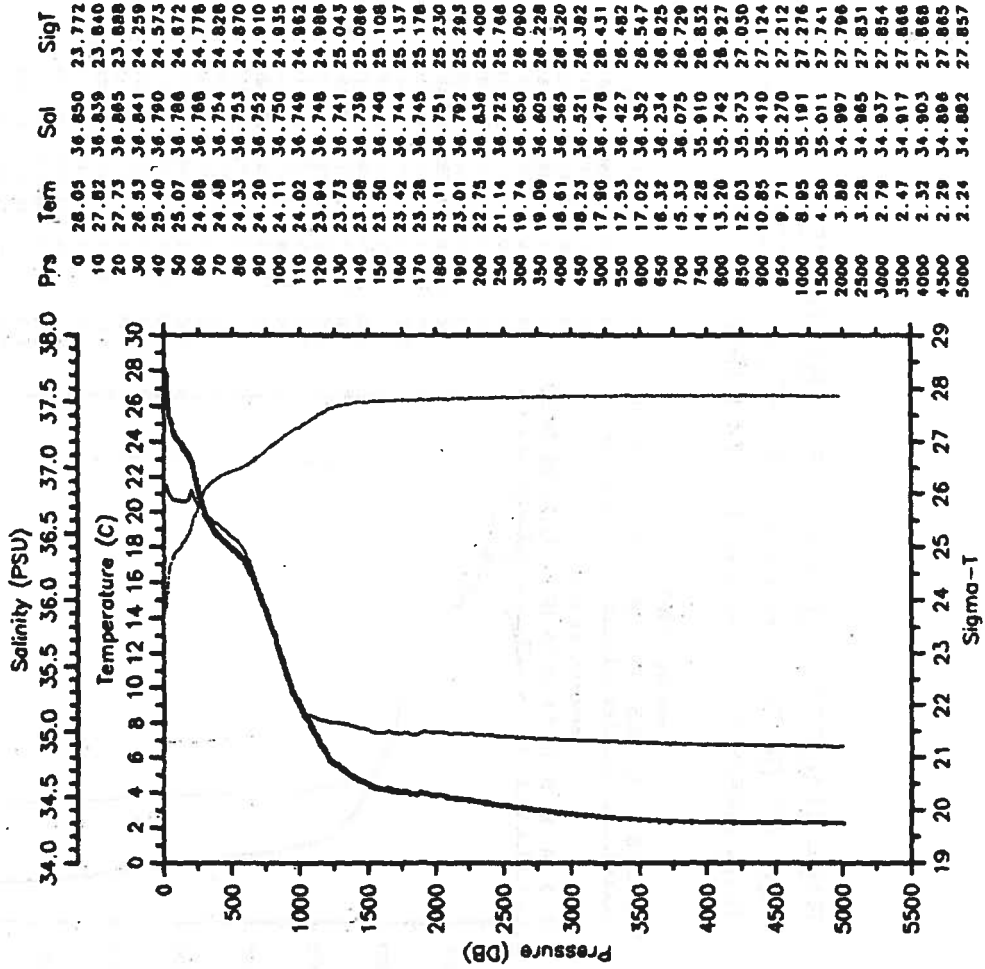
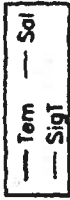
--- Tem --- Sal
 --- Sigt



BAL-STACS36-90 CTD 65 BALDRIGE

Date 07 08 90 Latitude 27.848N

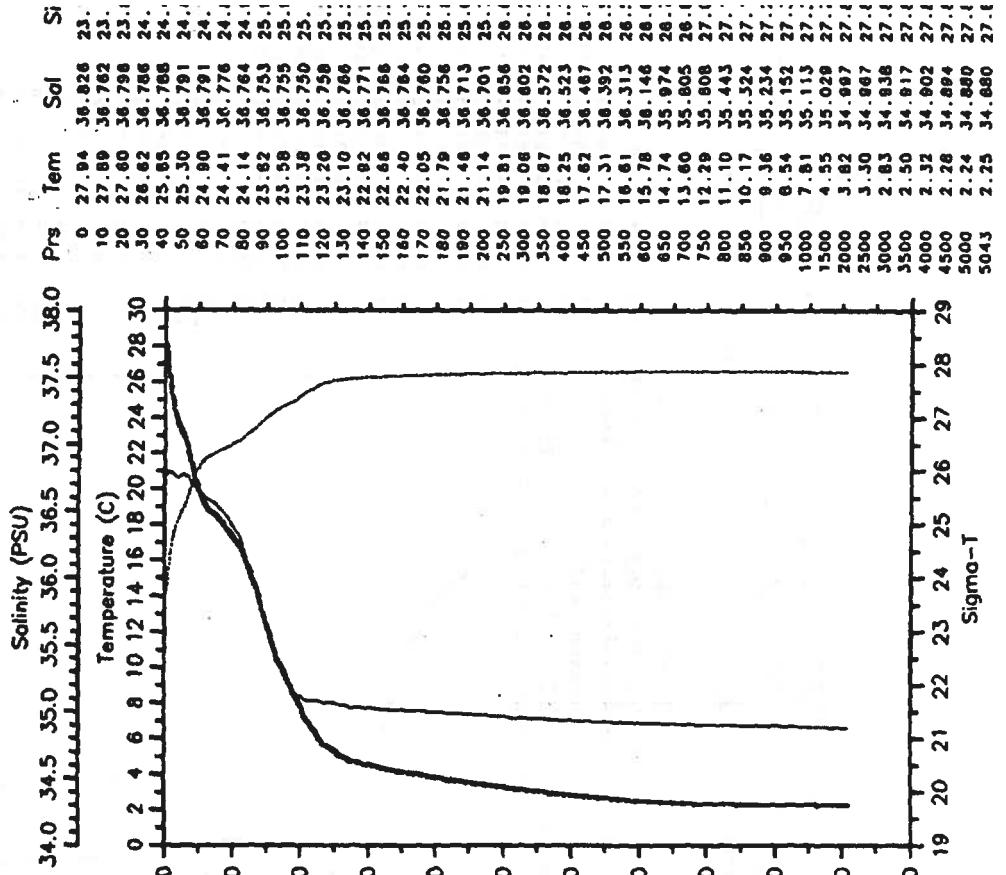
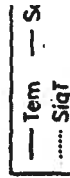
Time 1848 Z Longitude 75.688W



BAL-STACS36-90 CTD 66 BALDRIGE

Date 07 09 90 Latitude 27.848N

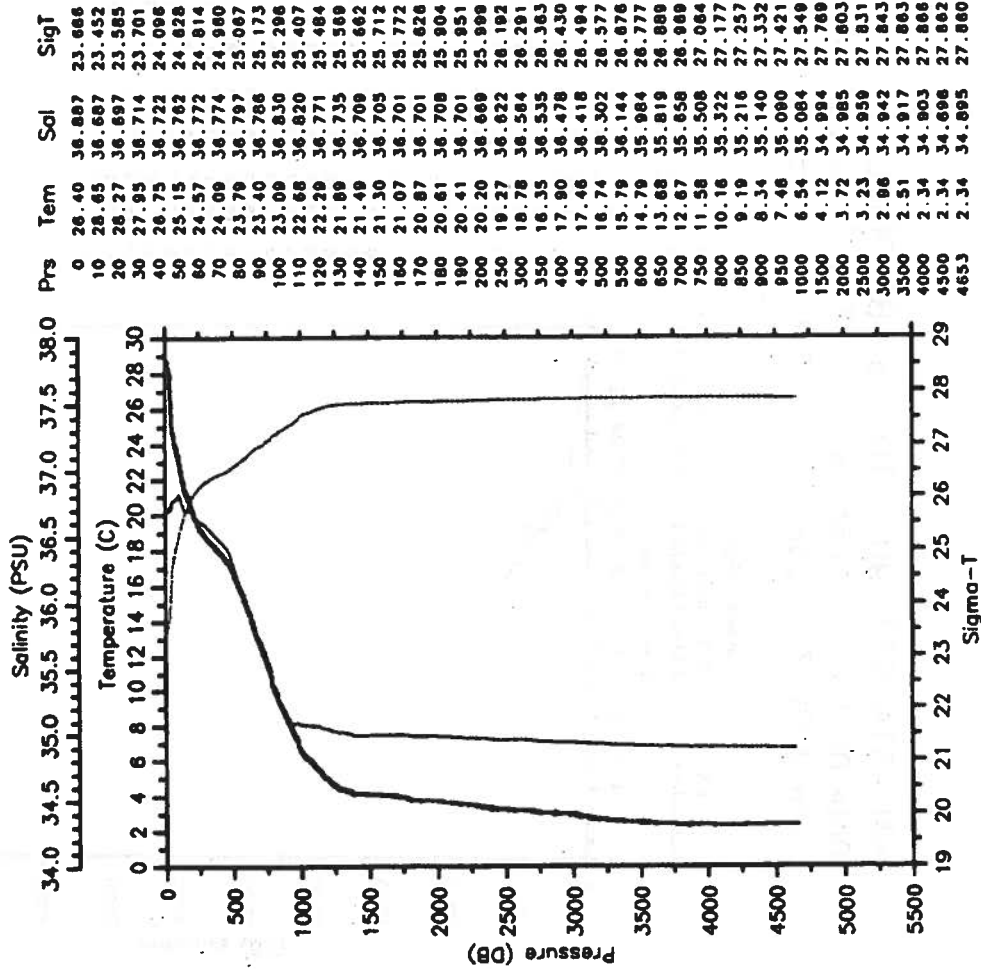
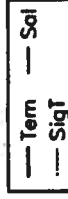
Time 0031 Z Longitude 76.255W



BAL-STACS36-90 CTD 67 BALDRIGE

Date 07 09 90 Latitude 27.843N

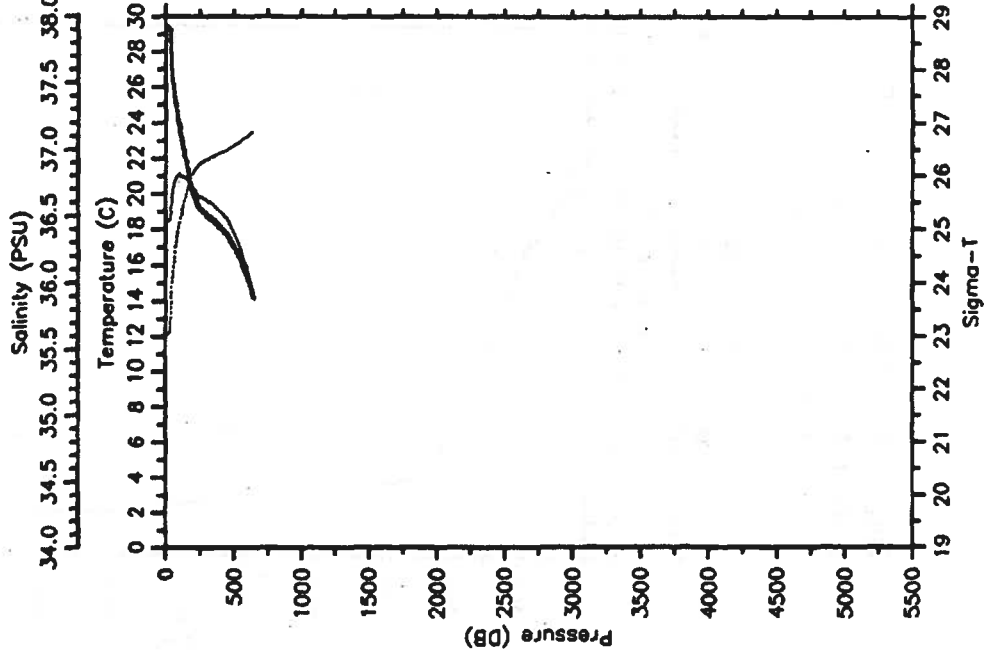
Time 0330 Z Longitude 76.577W



BAL-STACS37-90 CTD 6 BALDRIGE

Date 09 09 90 Latitude 26.477N
 Time 2308 Z Longitude 75.225W

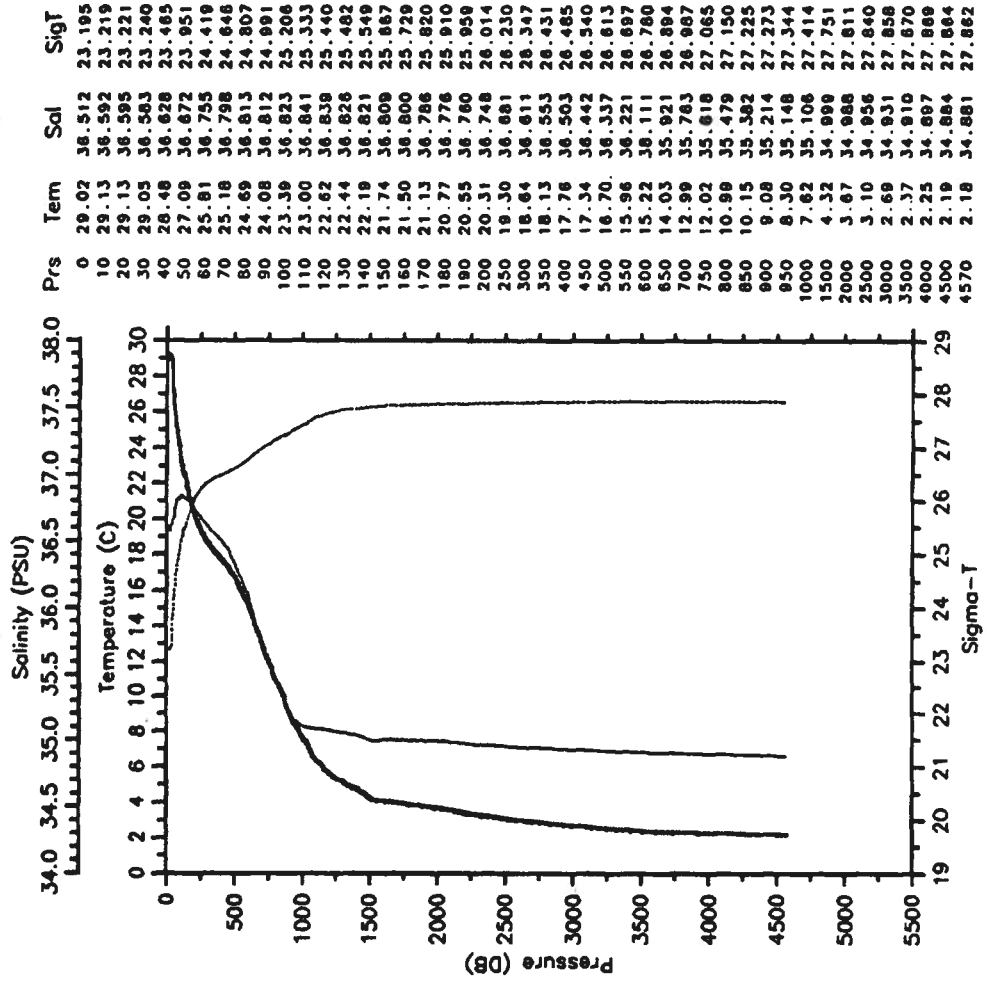
--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 7 BALDRIGE

Date 09 10 90 Latitude 26.481N
 Time 0516 Z Longitude 74.515W

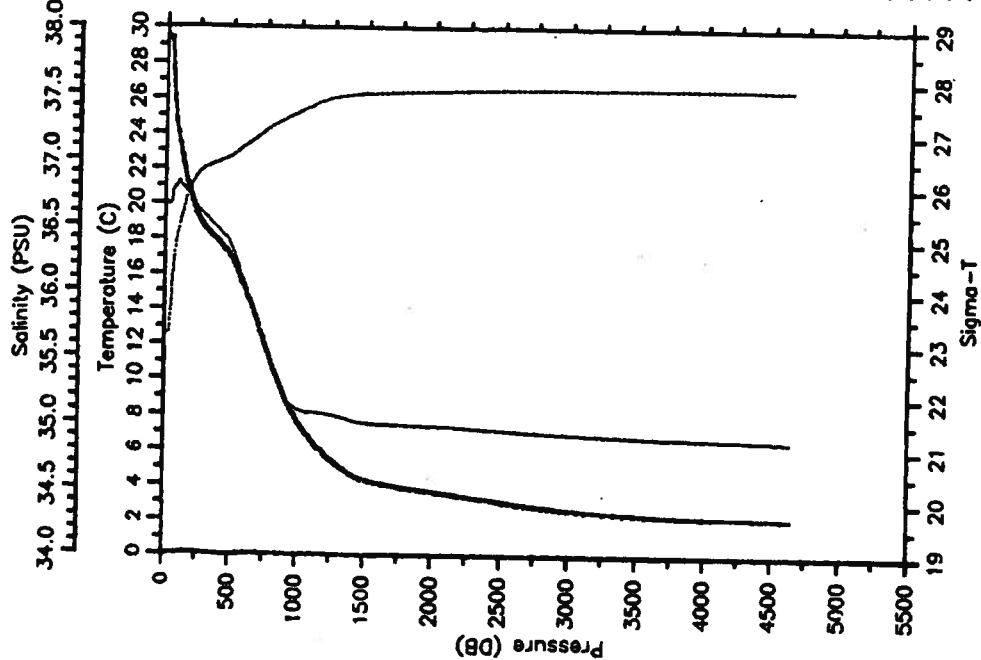
--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 8 BALDRIGE

Date 09 10 90 Latitude 26.490N
 Time 0936 Z Longitude 74.203W

--- Tem --- Sal
 - - - - - SigT

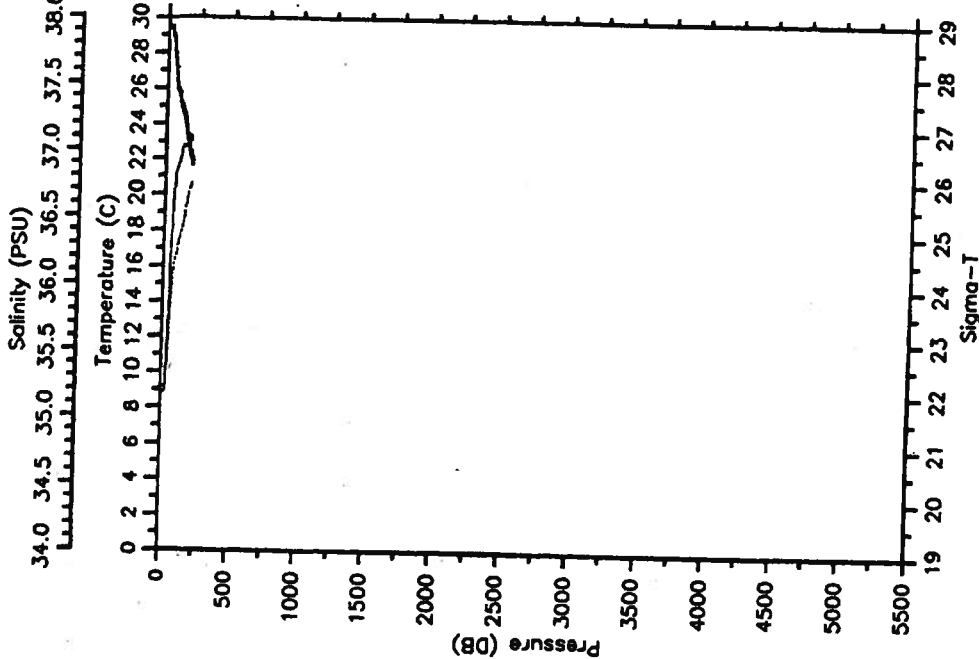


Prs	Tem	Sal	SigT
0	29.36	36.661	23.192
10	29.37	36.662	23.190
20	29.39	36.662	23.185
30	29.38	36.652	23.186
40	28.69	36.865	23.422
50	27.58	36.709	23.819
60	26.17	36.764	24.315
70	25.24	36.787	24.621
80	24.51	36.782	24.841
90	24.04	36.804	24.996
100	23.64	36.827	25.134
110	23.25	36.825	25.247
120	22.76	36.798	25.370
130	22.47	36.780	25.447
140	22.12	36.782	25.541
150	21.69	36.774	25.655
160	21.25	36.751	25.759
170	21.07	36.750	25.809
180	20.83	36.749	25.874
190	20.56	36.734	25.935
200	20.25	36.715	26.005
250	19.17	36.626	26.222
300	18.58	36.571	26.331
350	18.20	36.522	26.380
400	17.83	36.476	26.445
450	17.42	36.416	26.501
500	16.90	36.345	26.573
550	16.11	36.214	26.658
600	15.15	36.062	26.759
650	14.20	35.910	26.848
700	13.11	35.739	26.943
750	11.91	35.571	27.051
800	10.87	35.424	27.129
850	9.81	35.298	27.218
900	8.99	35.205	27.280
950	8.22	35.137	27.349
1000	7.61	35.103	27.414
1500	4.30	35.008	27.759
2000	3.65	34.983	27.809
2500	3.09	34.953	27.840
3000	2.65	34.928	27.858
3500	2.39	34.910	27.867
4000	2.26	34.886	27.867
4500	2.21	34.865	27.862
4639	2.16	34.875	27.859

BAL-STACS37-90 CTD 9 BALDRIGE

Date 09 13 90 Latitude 19.300N
 Time 1219 Z Longitude 68.358W

--- Tem --- Sal
 - - - - - SigT



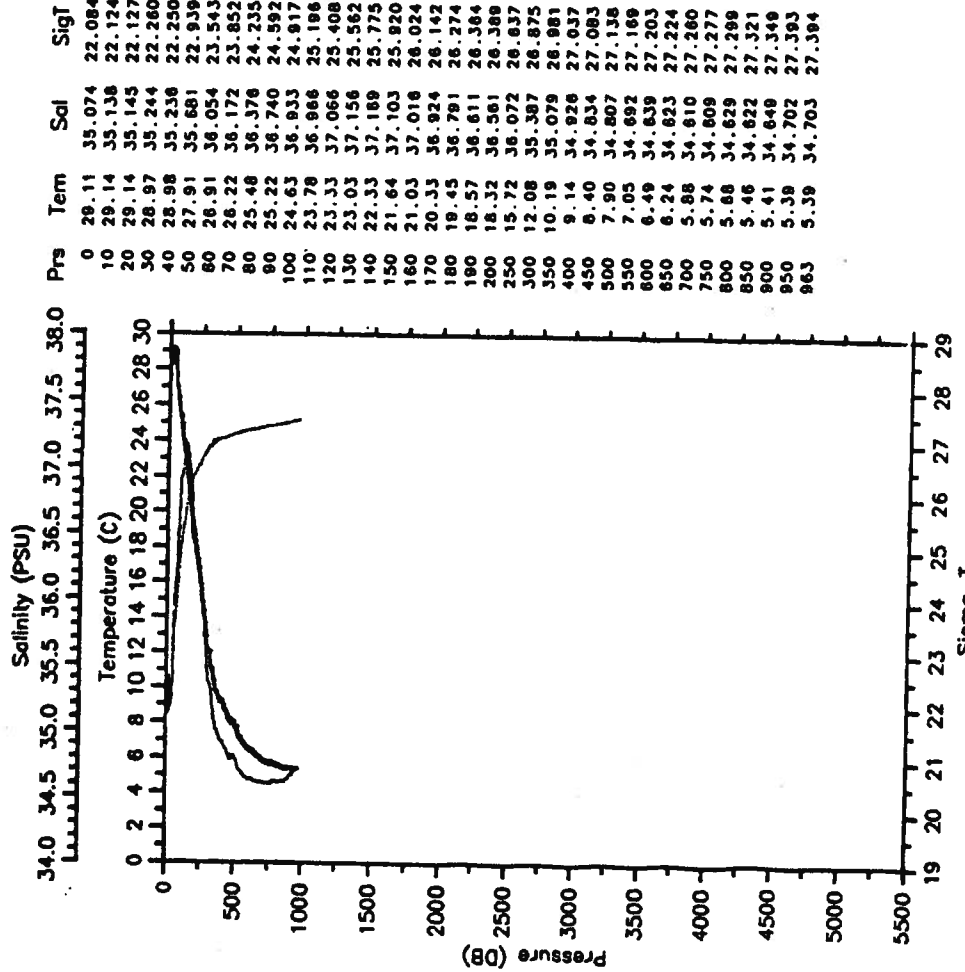
Prs	Tem	Sal	SigT
0	29.48	35.177	22.040
10	29.47	35.184	22.045
20	28.47	35.188	22.046
30	29.42	35.188	22.067
40	28.94	35.340	22.492
50	28.54	35.994	22.891
60	27.59	36.413	23.593
70	26.84	36.627	23.997
80	25.99	36.795	24.393
90	25.78	36.855	24.505
100	25.43	36.882	24.635
110	25.00	36.922	24.796
120	24.79	36.963	24.891
130	24.55	37.020	25.008
140	24.27	37.032	25.103
150	23.77	37.020	25.241
160	23.14	37.042	25.444
170	22.82	37.073	25.533
180	22.38	37.090	25.705
190	22.03	37.103	25.809
198	21.65	37.084	25.867

BAL-STACS37-90 CTD 10 BALDRICE

Date 09 17 90 Latitude 12.788N

Time 1339 Z Longitude 59.532W

— Tem — Sal
--- SigT

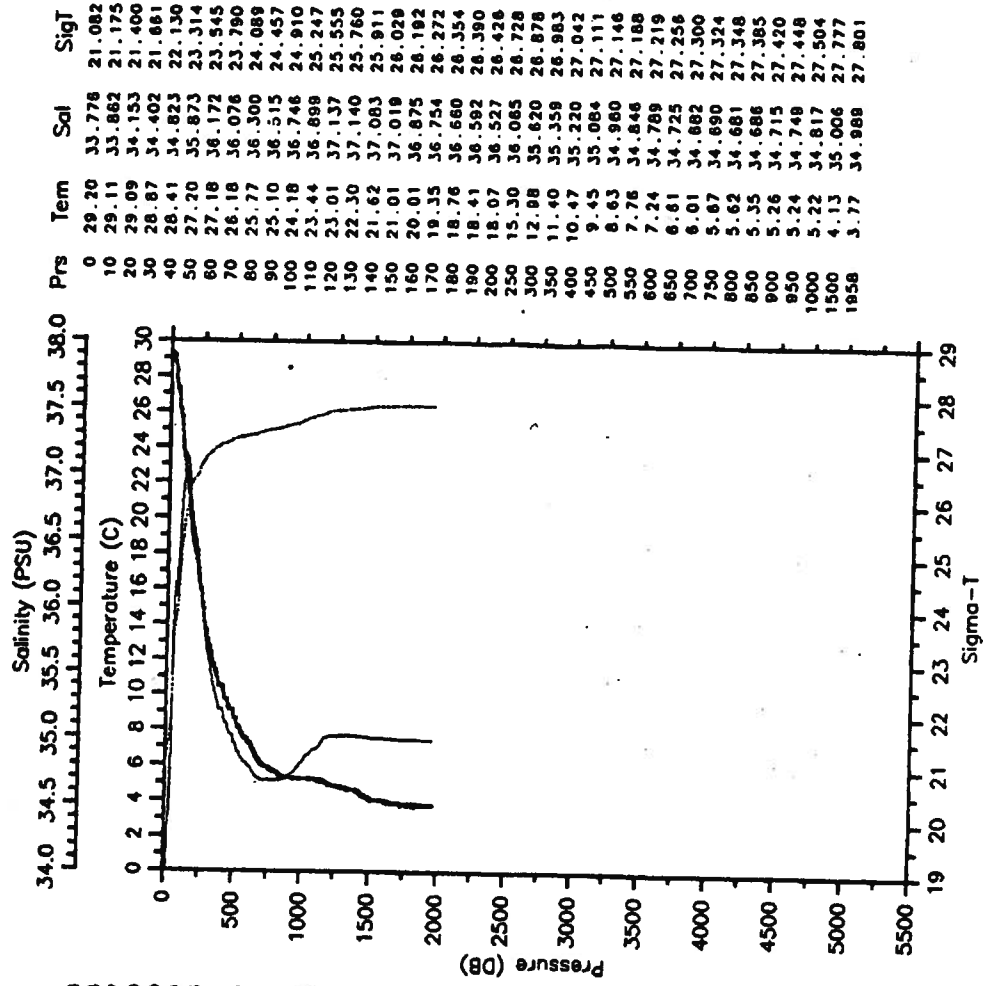


BAL-STACS37-90 CTD 11 BALDRICE

Date 09 17 90 Latitude 11.954N

Time 2209 Z Longitude 58.251W

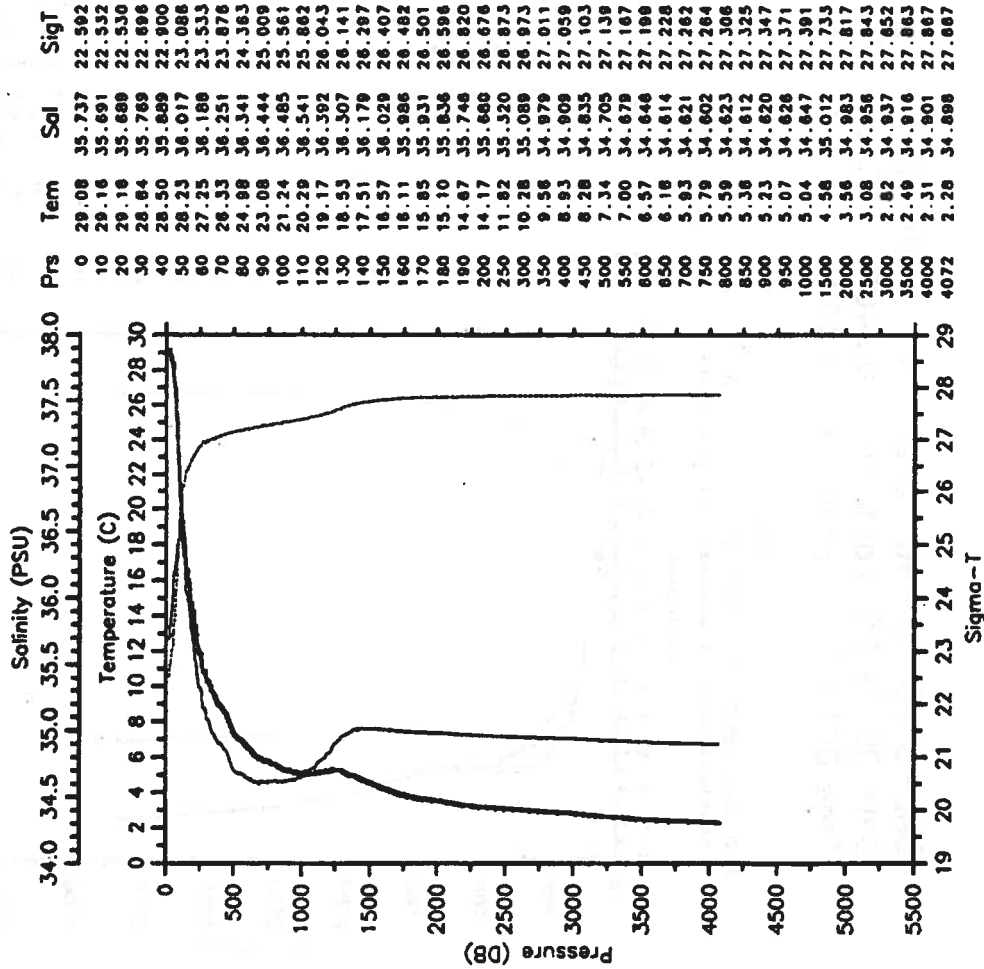
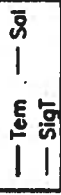
— Tem — Sal
--- SigT



BAL-STACS37-90 CTD 12 BALDRIGE

Date 09 18 90 Latitude 10.874N

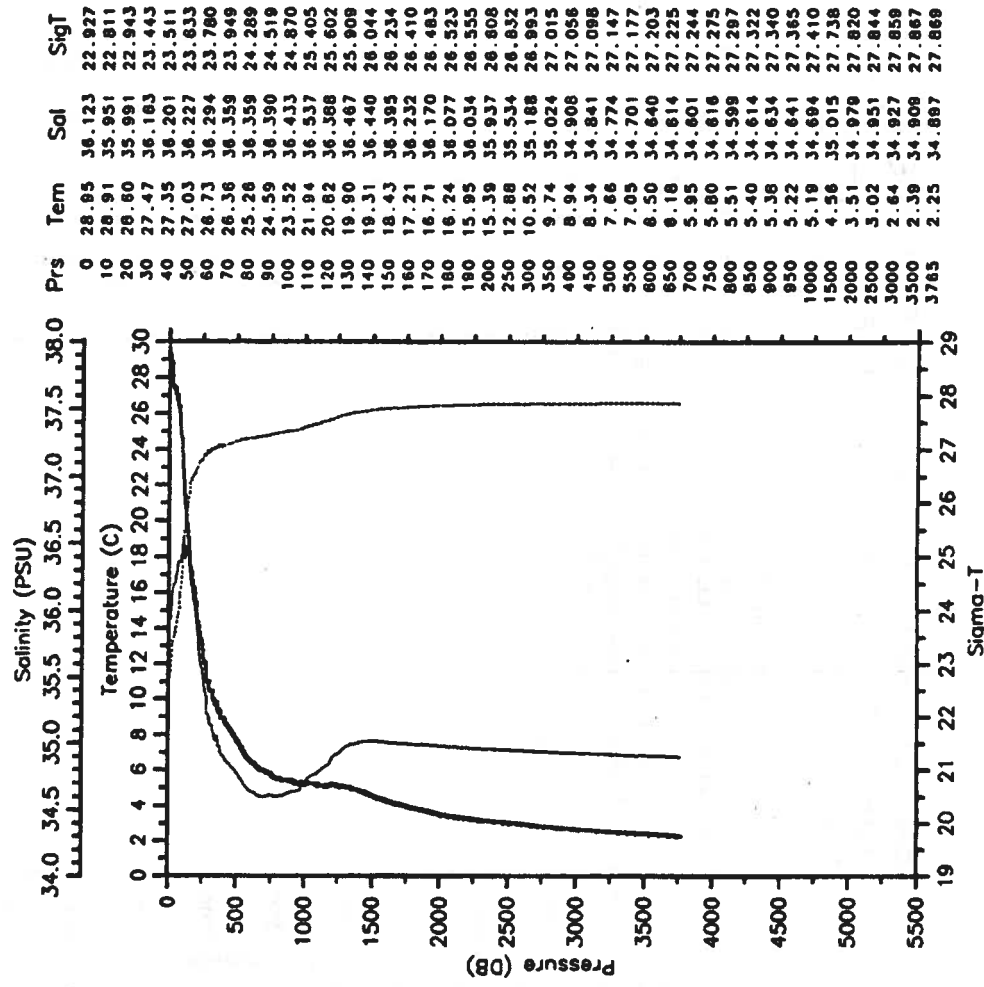
Time 0739 Z Longitude 57.007W



BAL-STACS37-90 CTD 13 BALDRIGE

Date 09 18 90 Latitude 9.844N

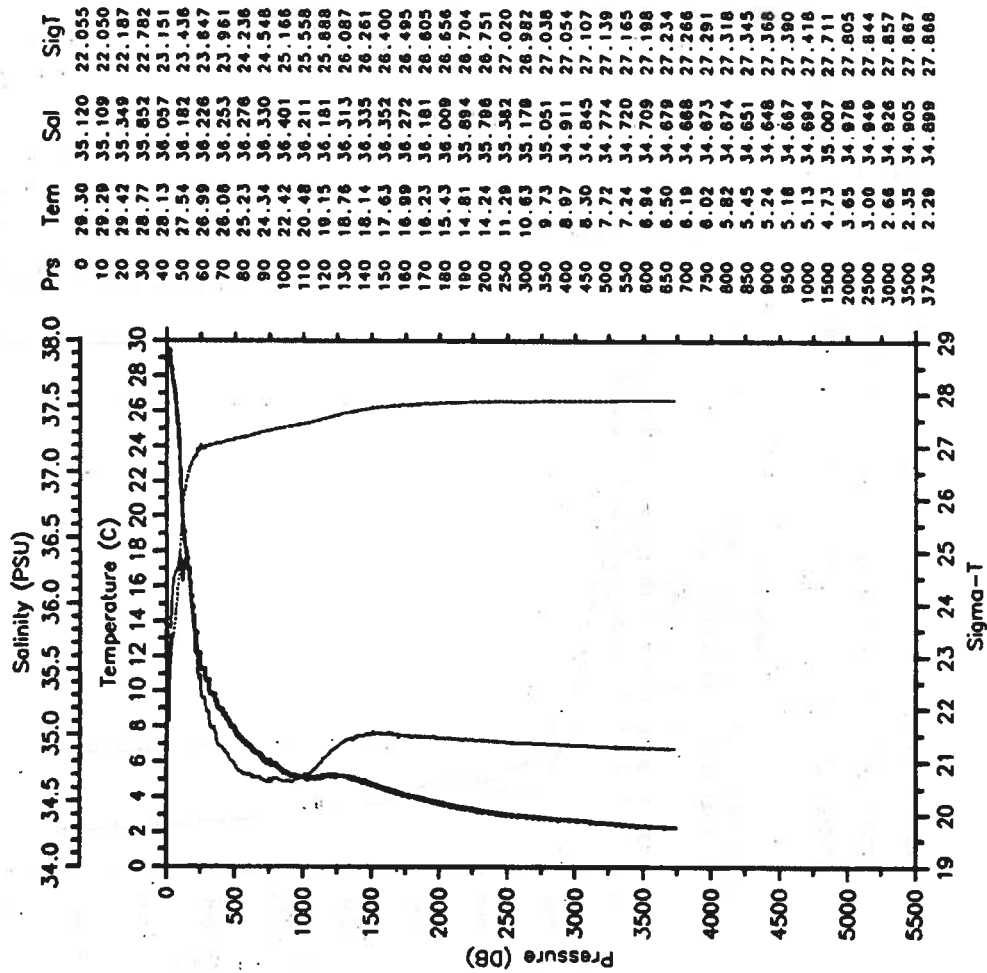
Time 1802 Z Longitude 55.804W



BAL-STACS37-90 CTD 14 BALDRIGE

Date 09 19 90 Latitude 10.540N
 Time 0019 Z Longitude 55.499W

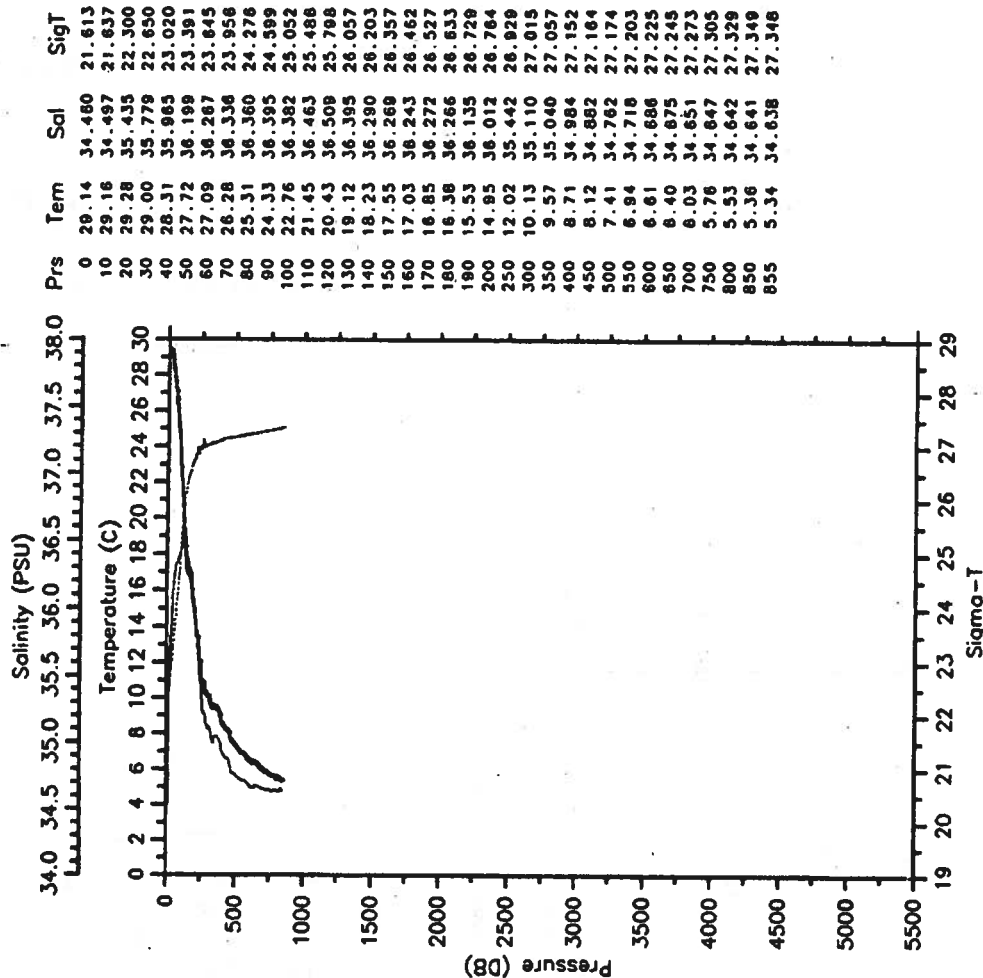
--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 15 BALDRIGE

Date 09 19 90 Latitude 11.185N
 Time 0727 Z Longitude 55.237W

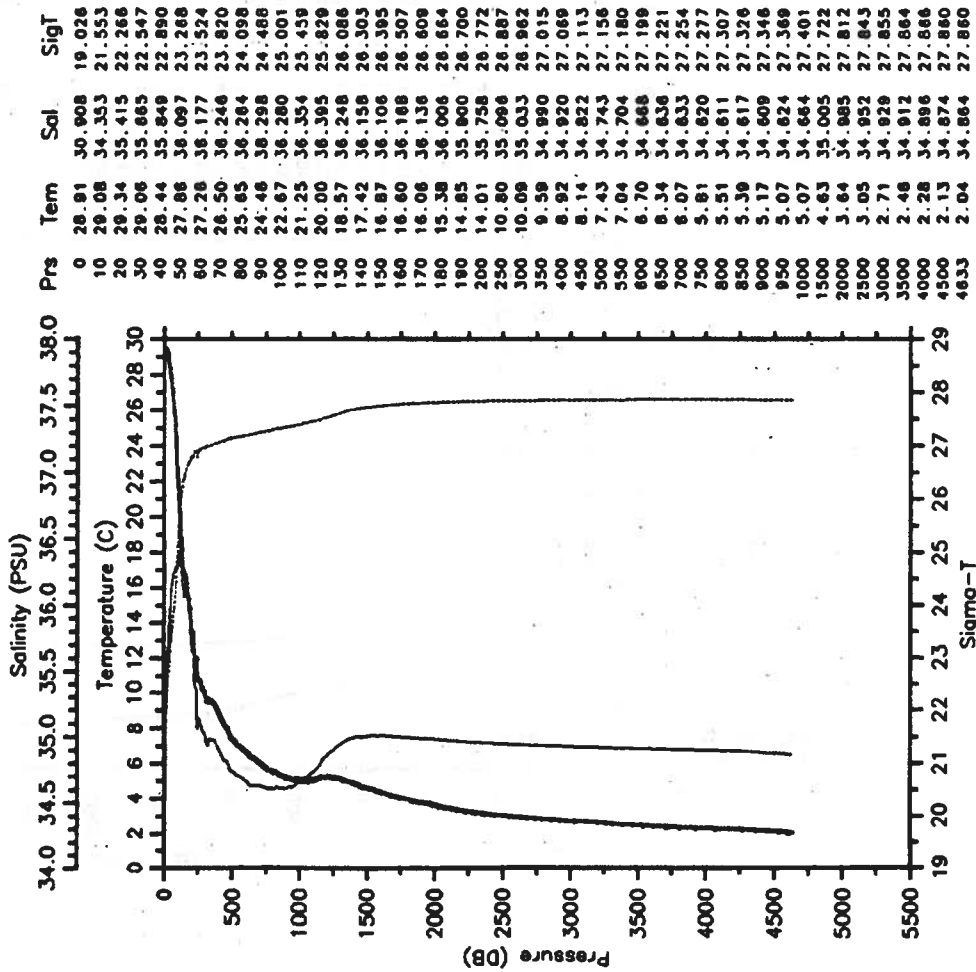
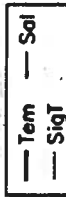
--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 16 BALDRIGE

Date 09 19 90 Latitude 11.186N

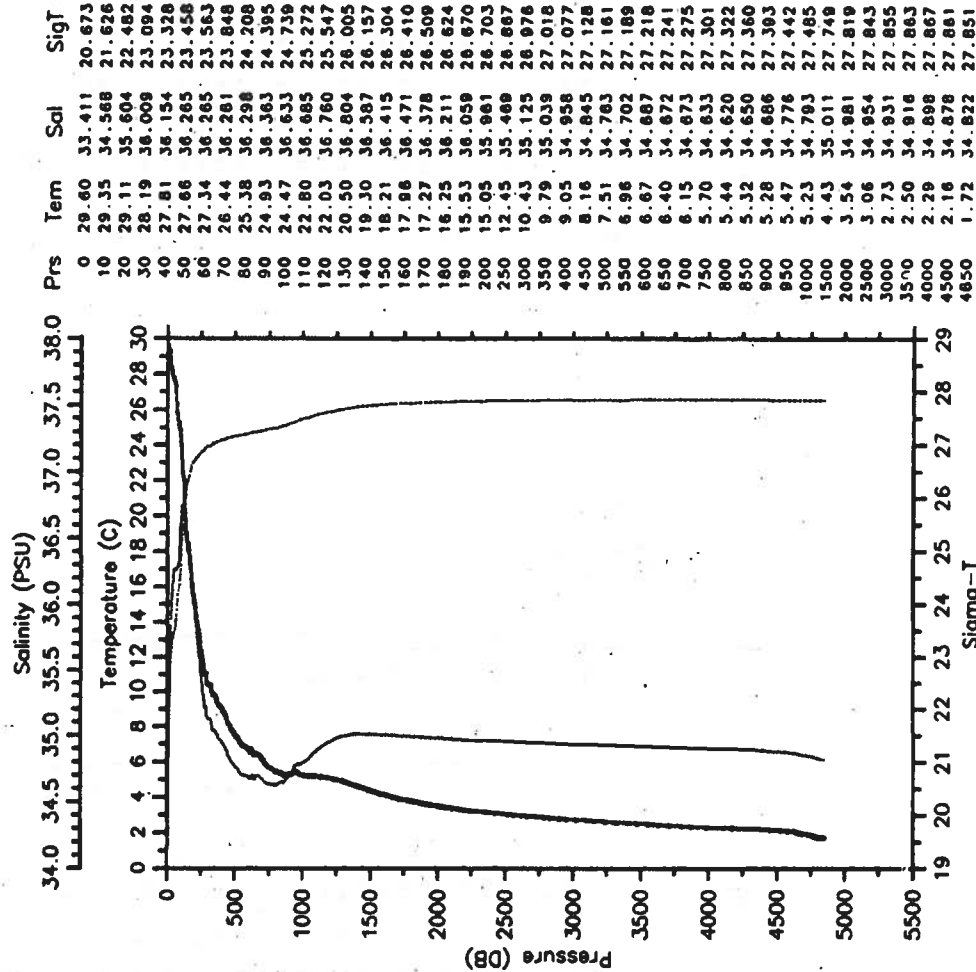
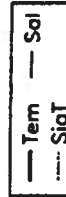
Time 1216 Z Longitude 55.239W



BAL-STACS37-90 CTD 17 BALDRIGE

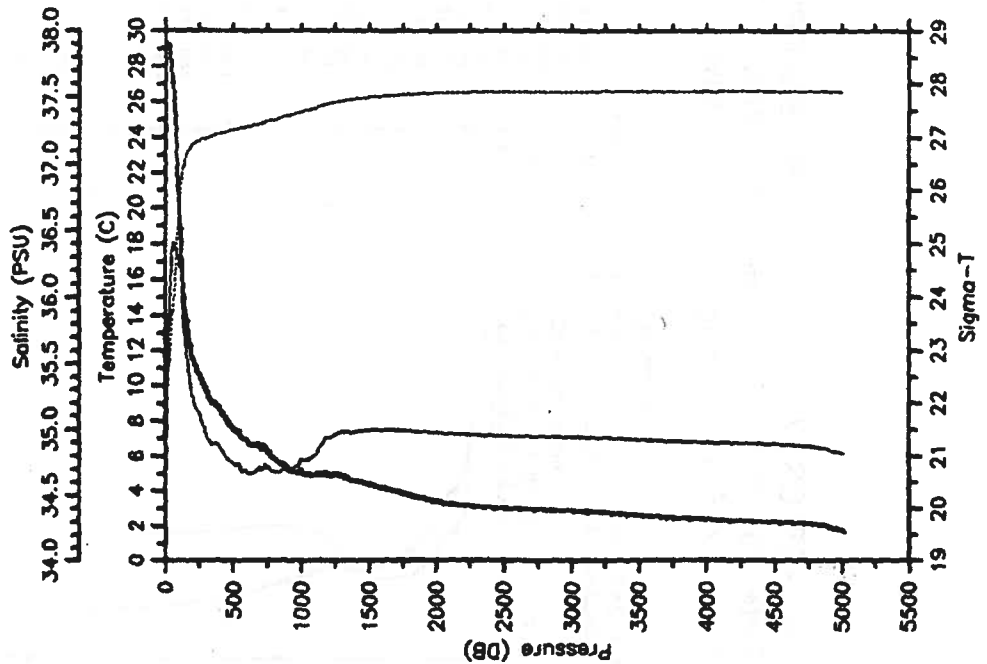
Date 09 20 90 Latitude 10.647N

Time 0136 Z Longitude 53.213W



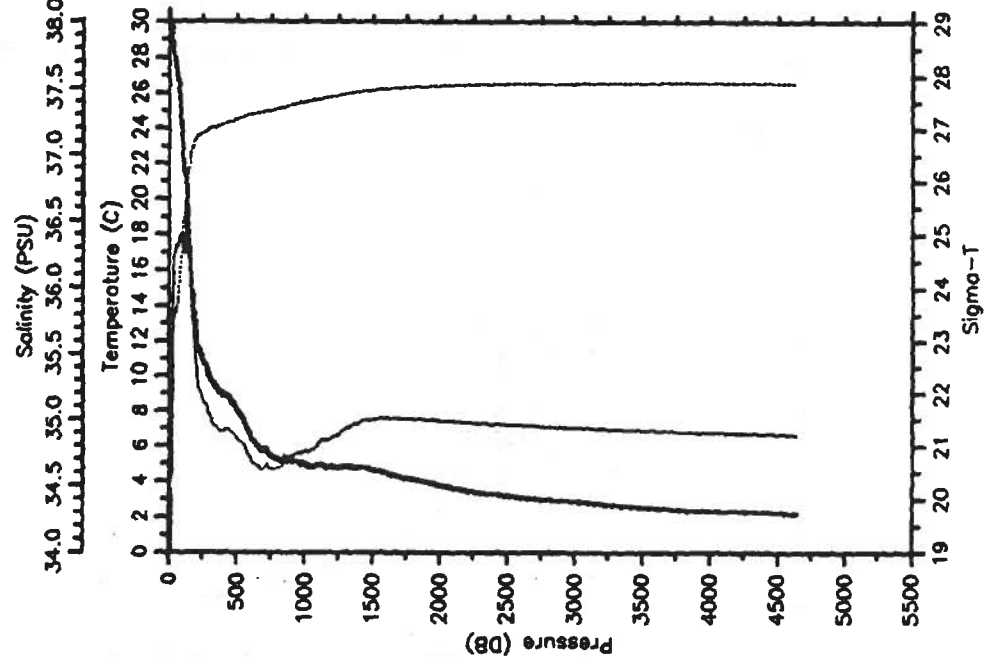
BAL-STACS37-90 CTD 18 BALDRIGE
 Date 09 20 90 Latitude 10.330N
 Time 1511 Z Longitude 51.110W

— Tem — Sal
 --- SigT



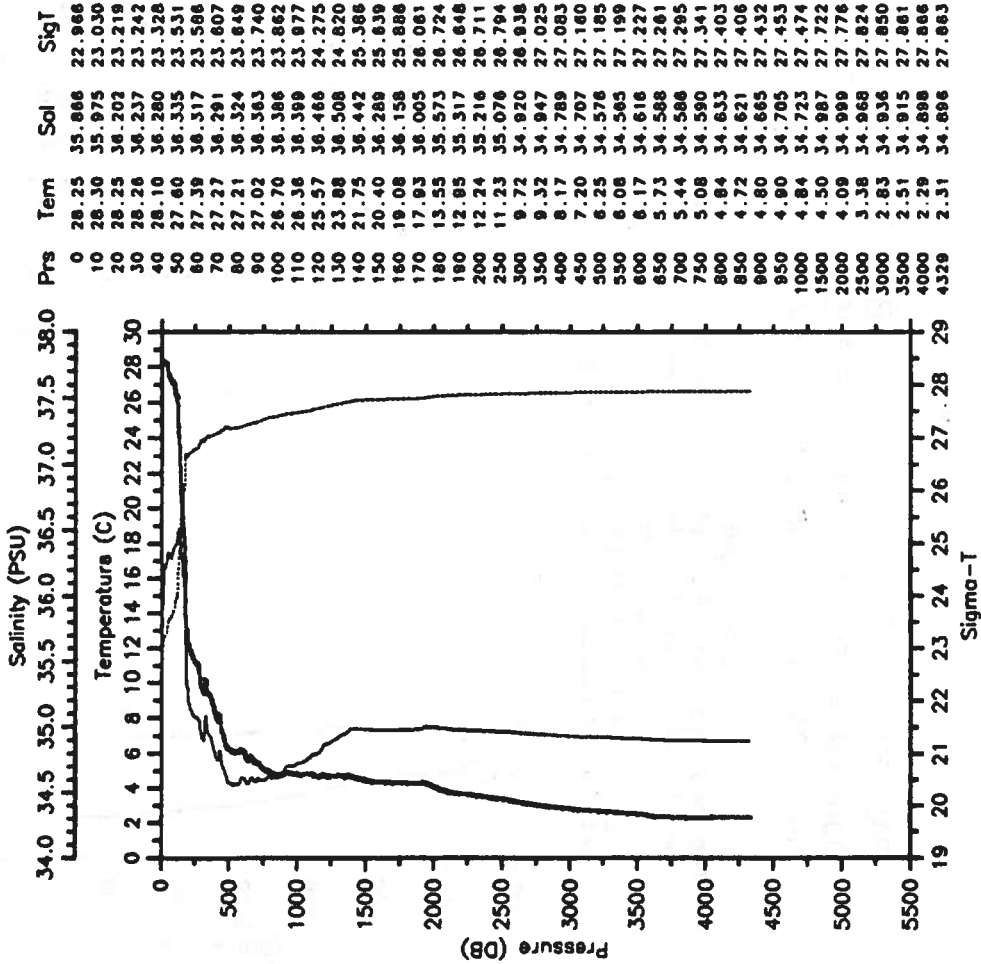
BAL-STACS37-90 CTD 22 BALDRIGE
 Date 09 21 90 Latitude 8.789N
 Time 2323 Z Longitude 49.468W

— Tem —
 --- SigT



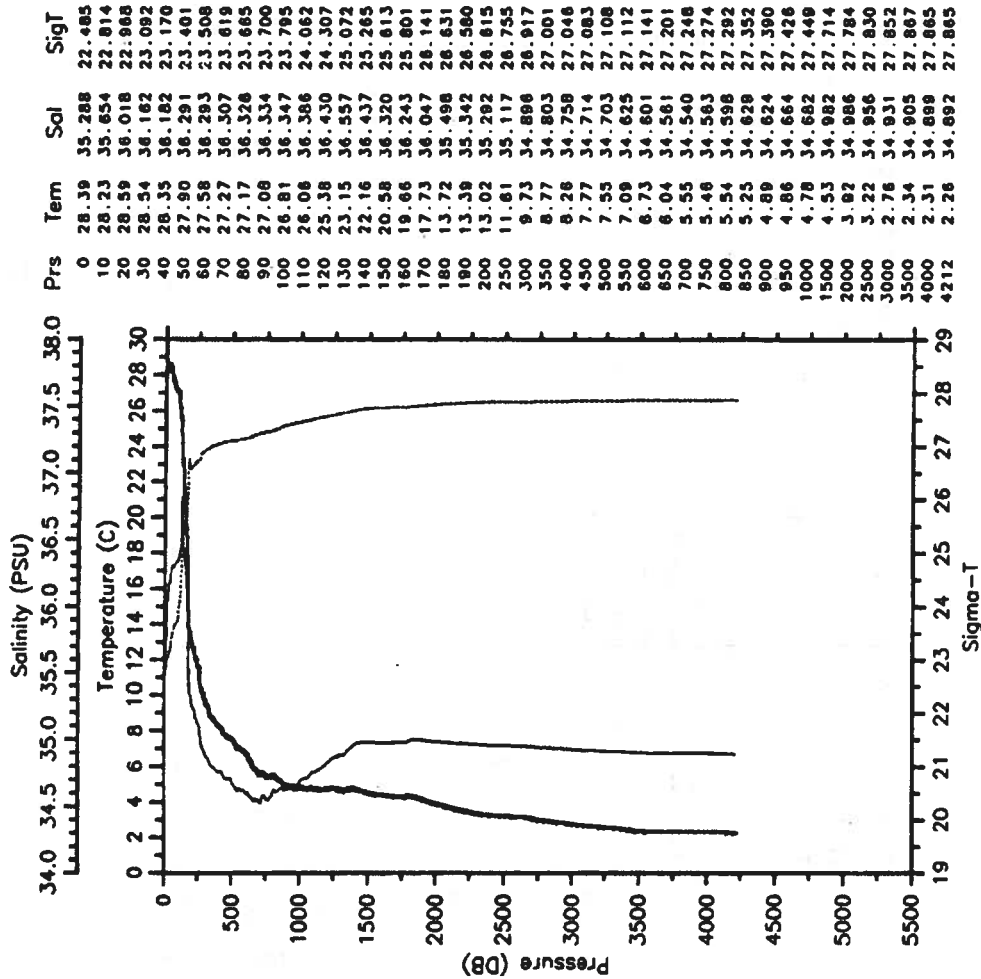
BAL-STACS37-90 CTD 23 BALDRIGE

Date 09 22 90 Latitude 7.534N
 Time 1047 Z Longitude 49.954W



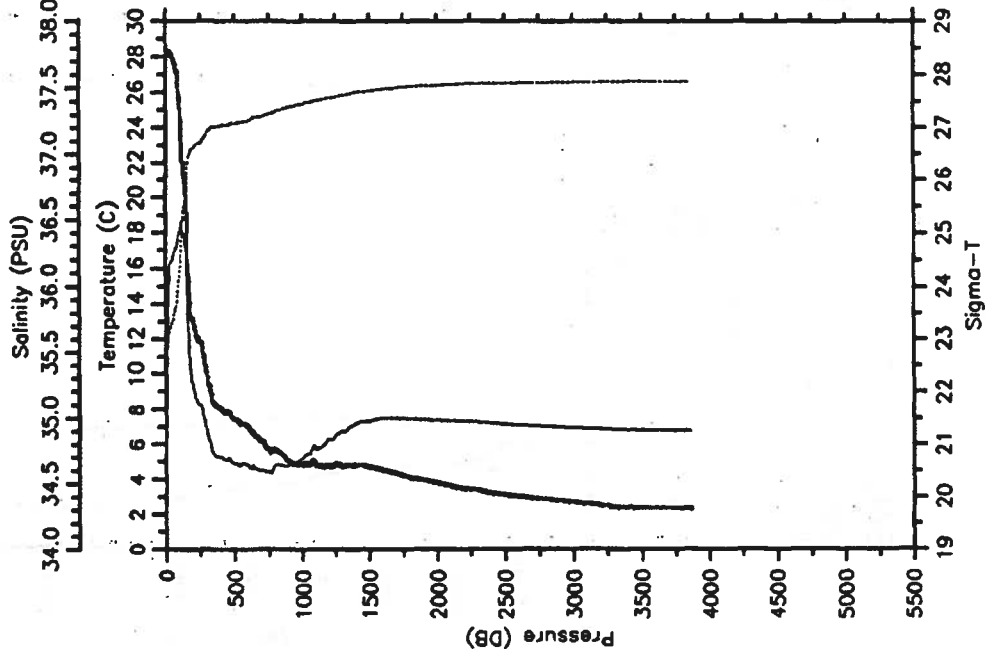
BAL-STACS37-90 CTD 24 BALDRIGE

Date 09 22 90 Latitude 7.124N
 Time 1833 Z Longitude 50.320W



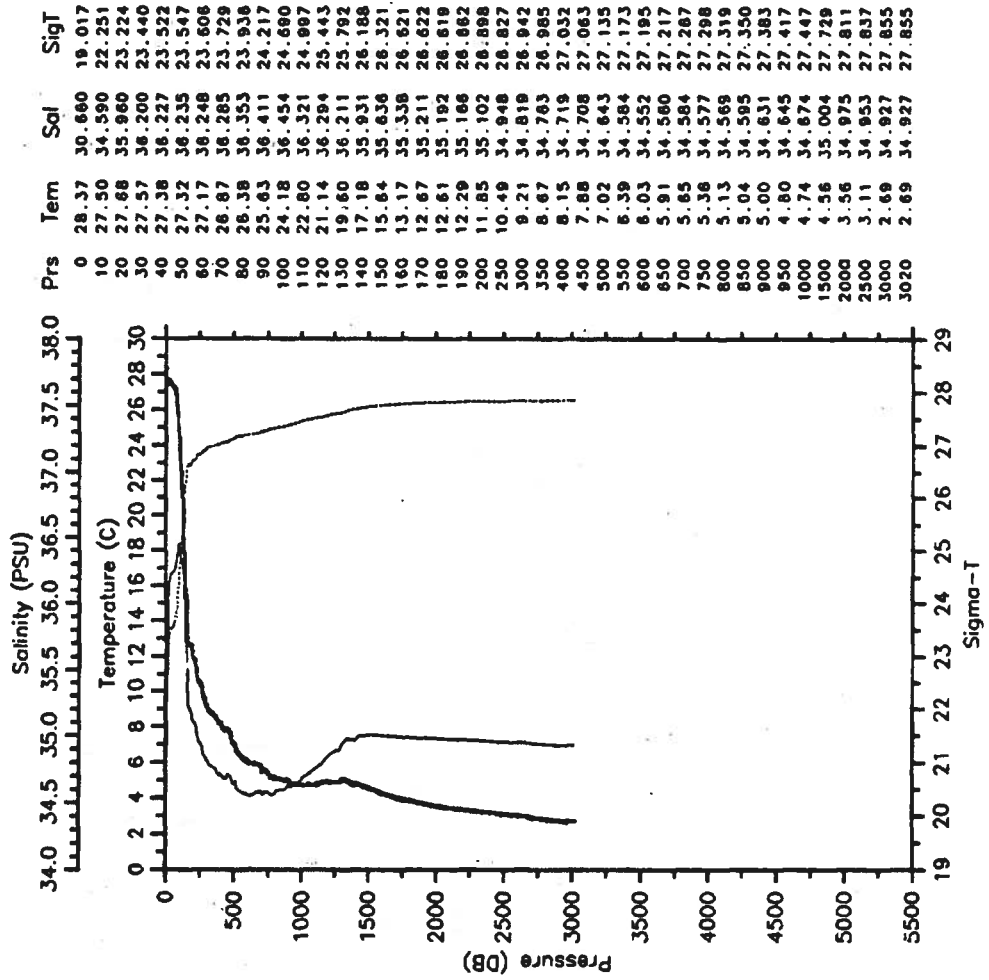
BAL-STACS37-90 CTD 25 BALDRIGE
 Date 09 23 90 Latitude 6.705N
 Time 0217 Z Longitude 50.672W

--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 26 BALDRIGE
 Date 09 23 90 Latitude 6.268N
 Time 1045 Z Longitude 51.075W

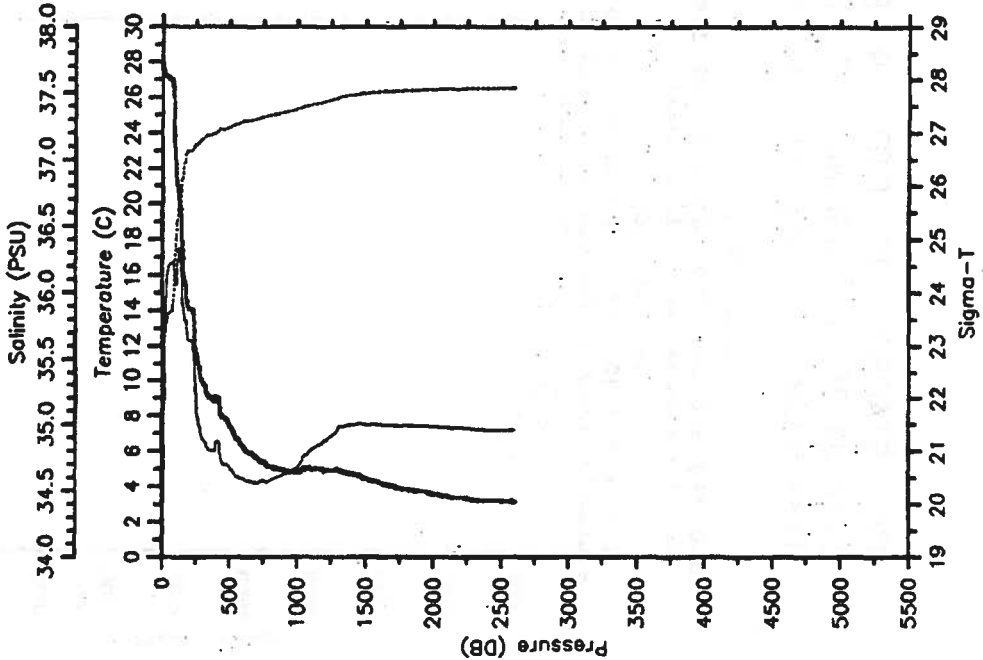
--- Tem --- Sal
 SigT



BAL-STACS37-90 CTD 27 BALDRIGE

Date 09 23 90 Latitude 6.124N
 Time 1612 Z Longitude 51.279W

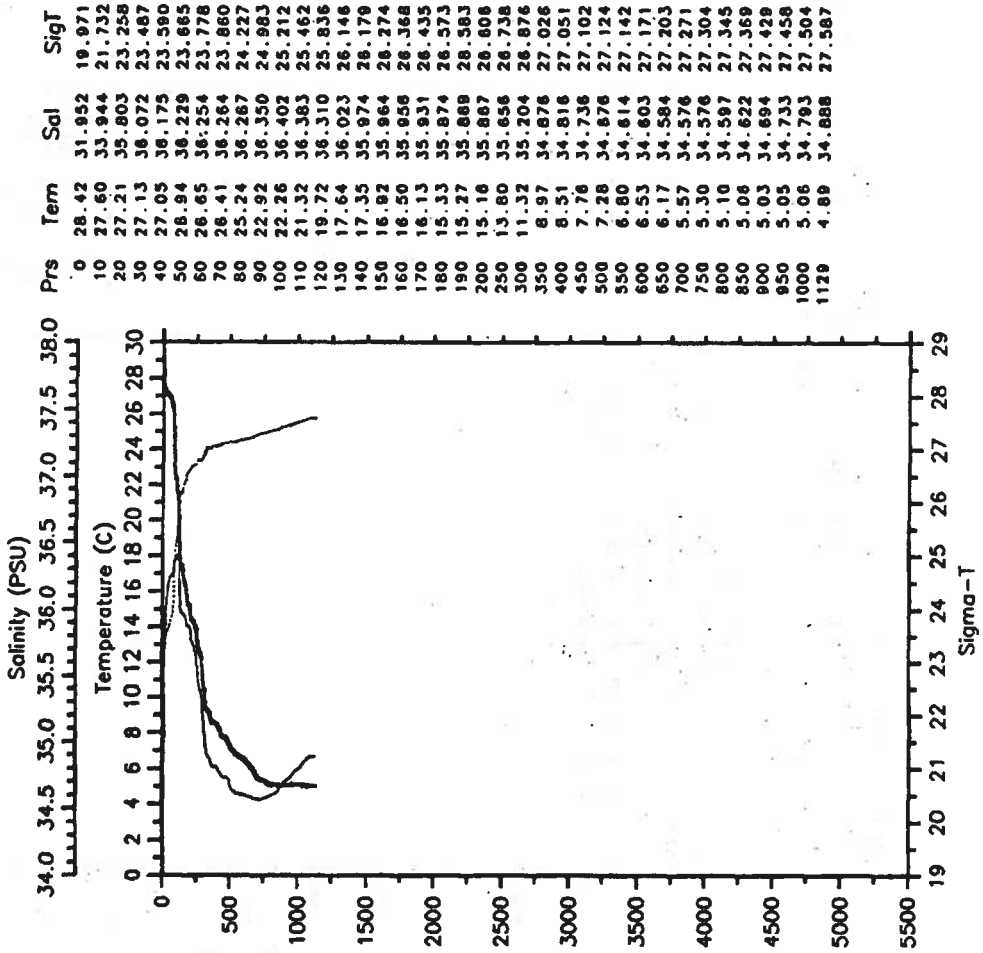
— Tem — Sal
 SigT



BAL-STACS37-90 CTD 28 BALDRIGE

Date 09 23 90 Latitude 5.793N
 Time 2050 Z Longitude 51.250W

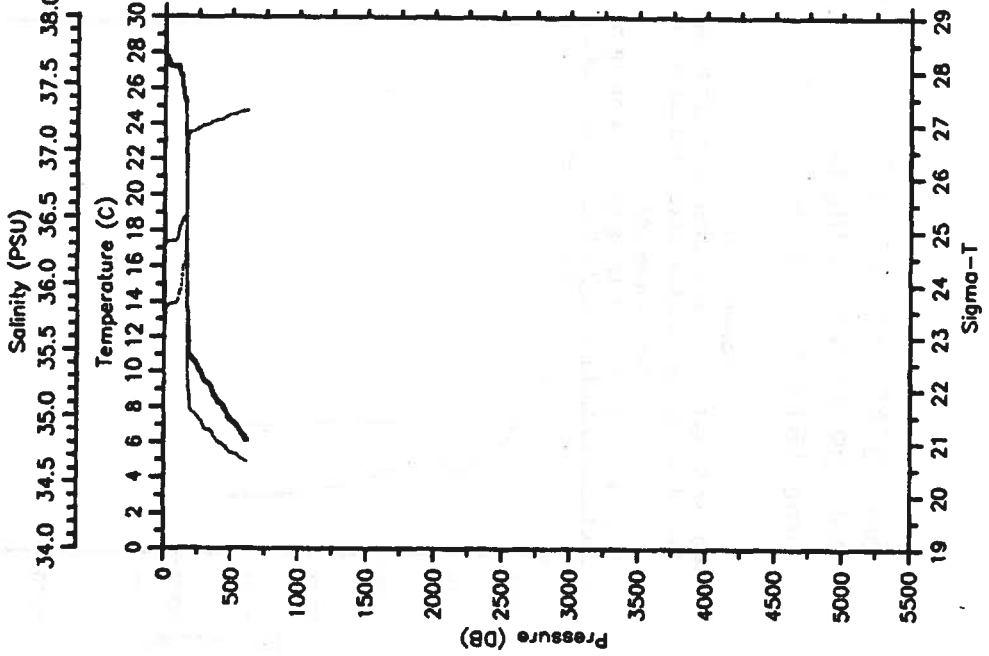
— Tem — Sal
 SigT



BAL-STACS37-90 CTD 29 BALDRIGE

Date 09 25 90 Latitude 3.965N
 Time 0338 Z Longitude 48.743W

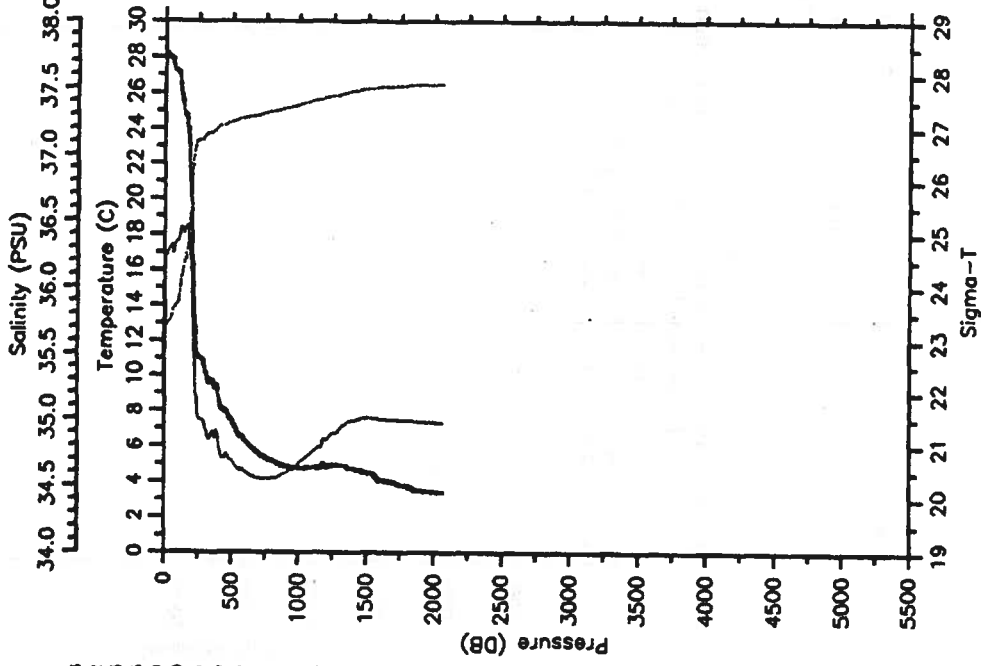
— Tem — Sal
 - - - - - SigT



BAL-STACS37-90 CTD 30 BALDRIGE

Date 09 25 90 Latitude 4.534N
 Time 0952 Z Longitude 48.356W

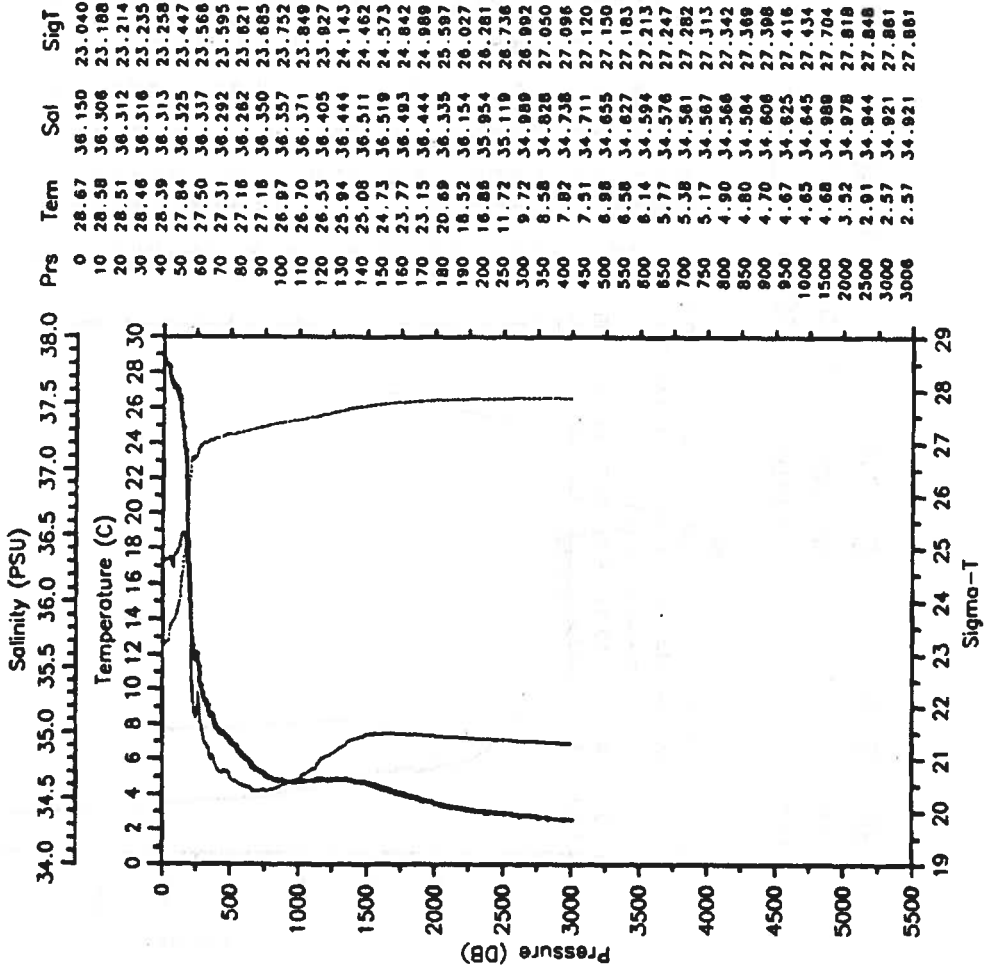
— Tem — Sal
 - - - - - SigT



BAL-STACS37-90 CTD 31 BALDRIGE

Date 09 25 90 Latitude 4.908N
 Time 1741 Z Longitude 47.555W

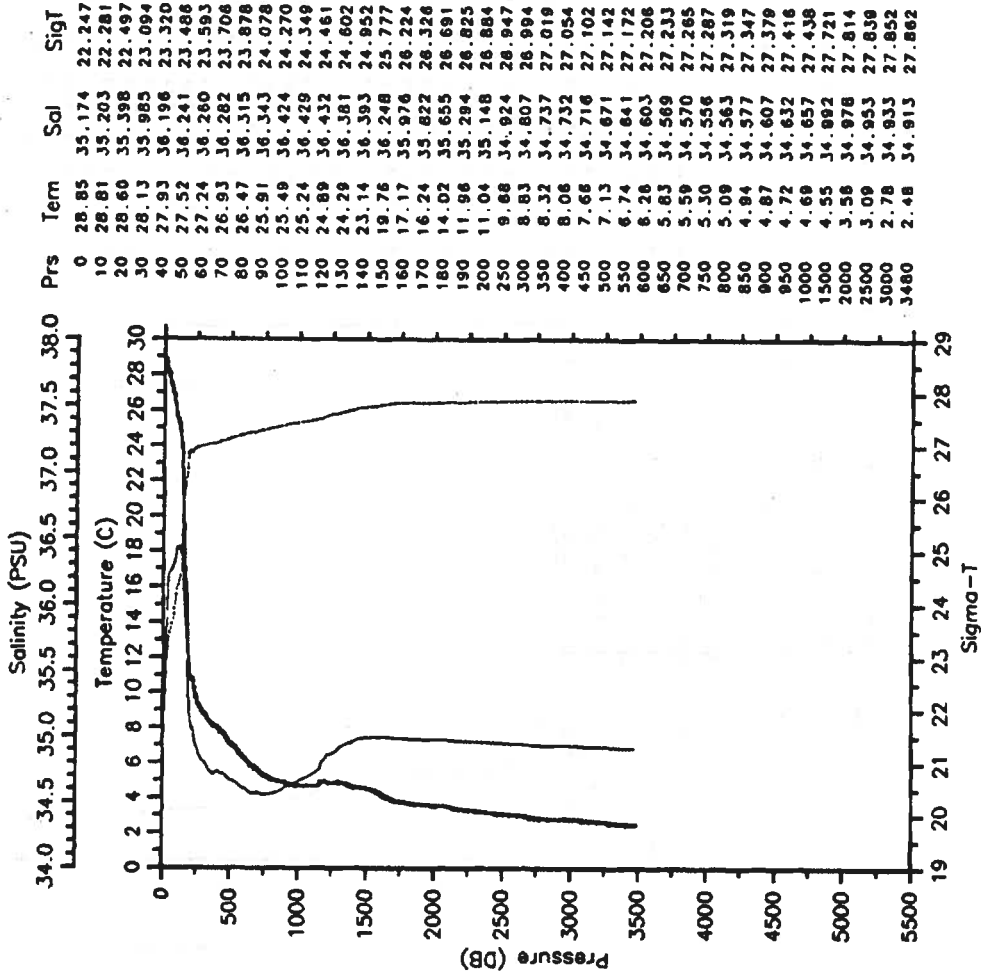
— Tem — Sol
 --- SigT



BAL-STACS37-90 CTD 32 BALDRIGE

Date 09 26 90 Latitude 5.299N
 Time 0605 Z Longitude 46.811W

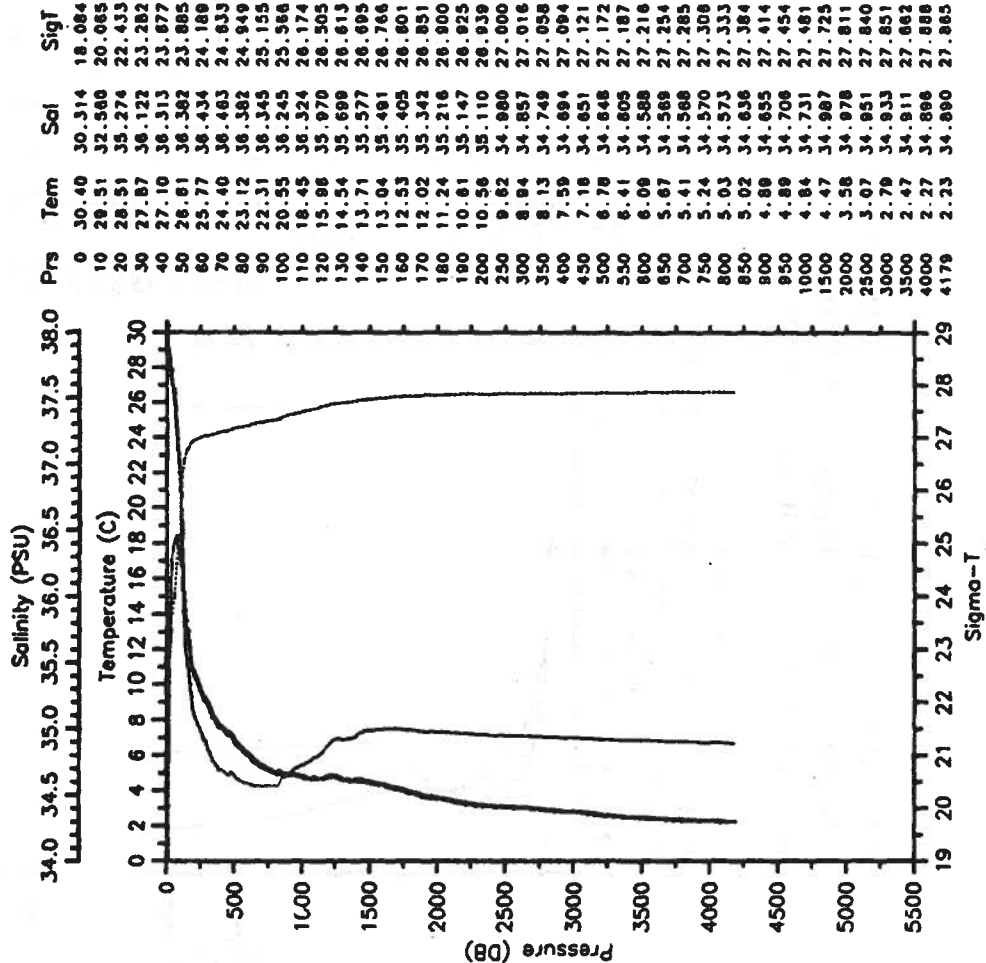
— Tem — Sol
 --- SigT



BAL-STACS37-90 CTD 33 BALDRIGE

Date 09 26 90 Latitude 6.695N
 Time 1944 Z Longitude 46.324W

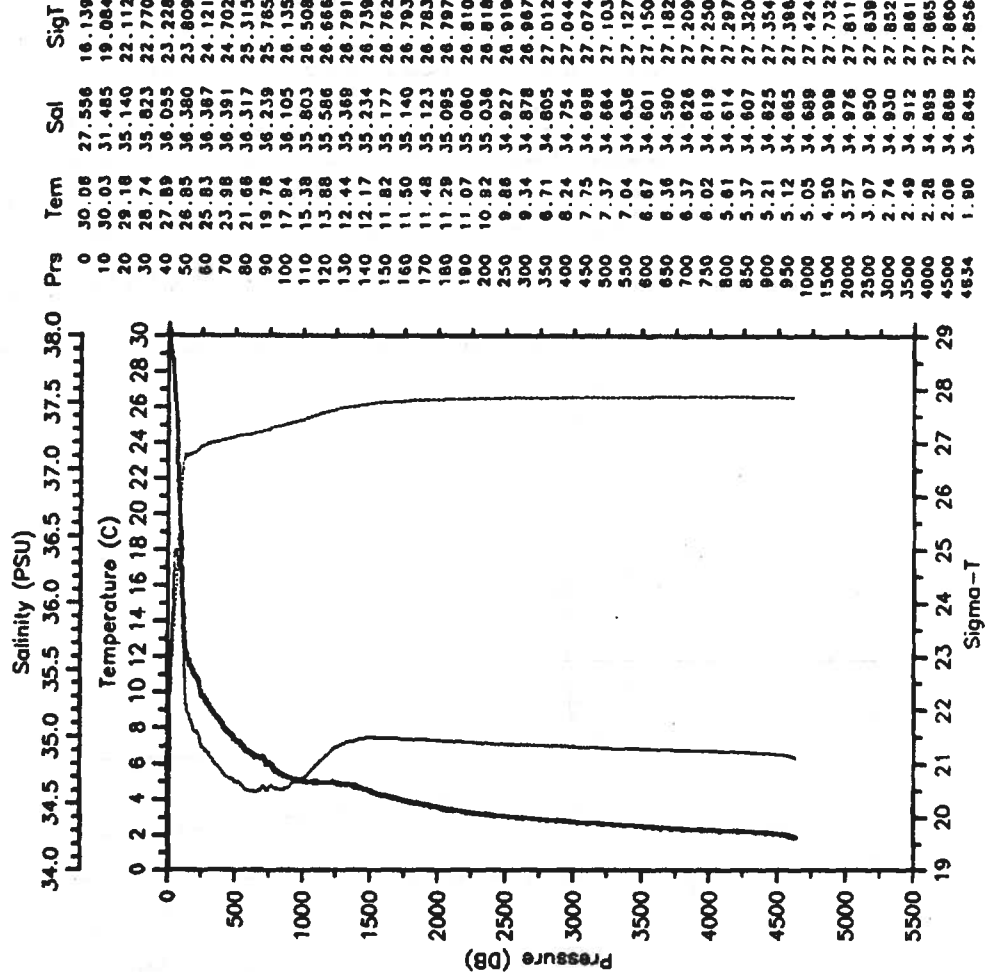
— Tem — Sal
 SigT



BAL-STACS37-90 CTD 34 BALDRIGE

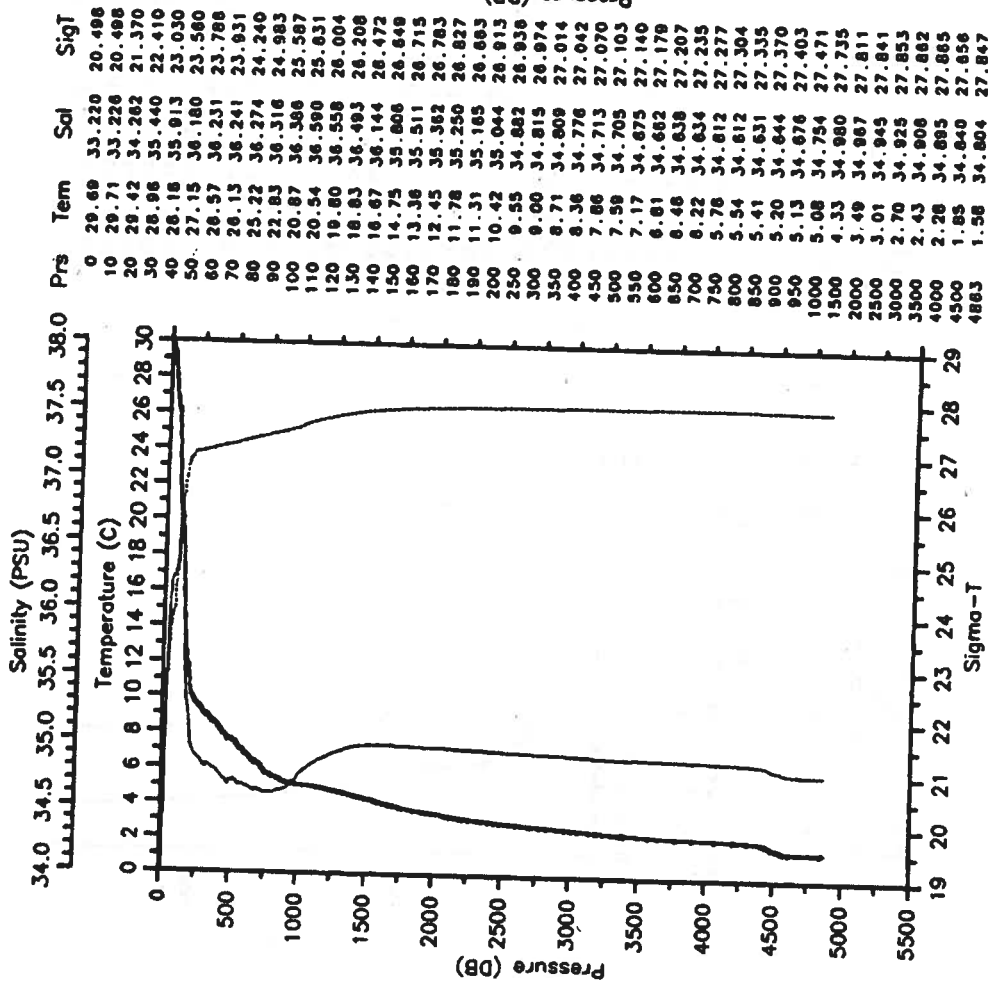
Date 09 27 90 Latitude 8.355N
 Time 0804 Z Longitude 46.330W

— Tem — Sal
 SigT



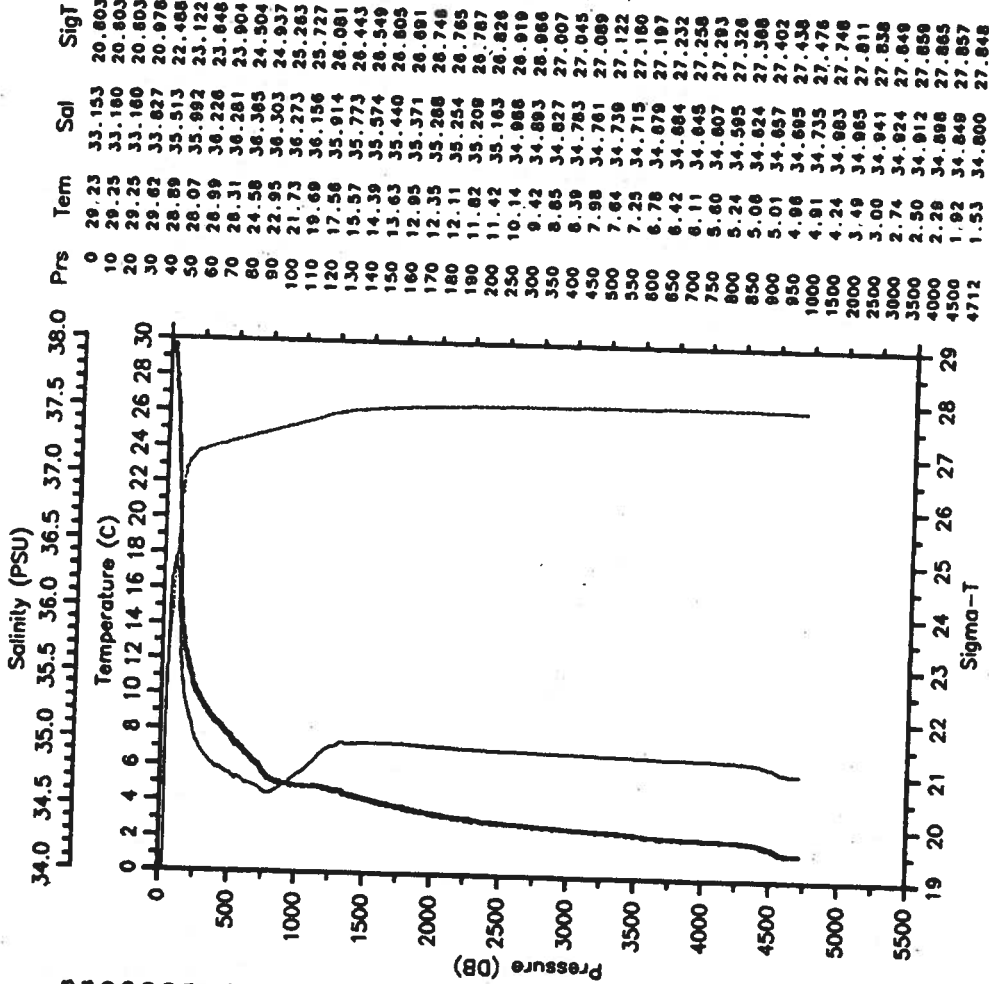
BAL-STACS37-90 CTD 35 BALDRICE
 Date 09 27 90 Latitude 8.284N
 Time 2324 Z Longitude 43.943W

— Tem — Sal
 --- SigT



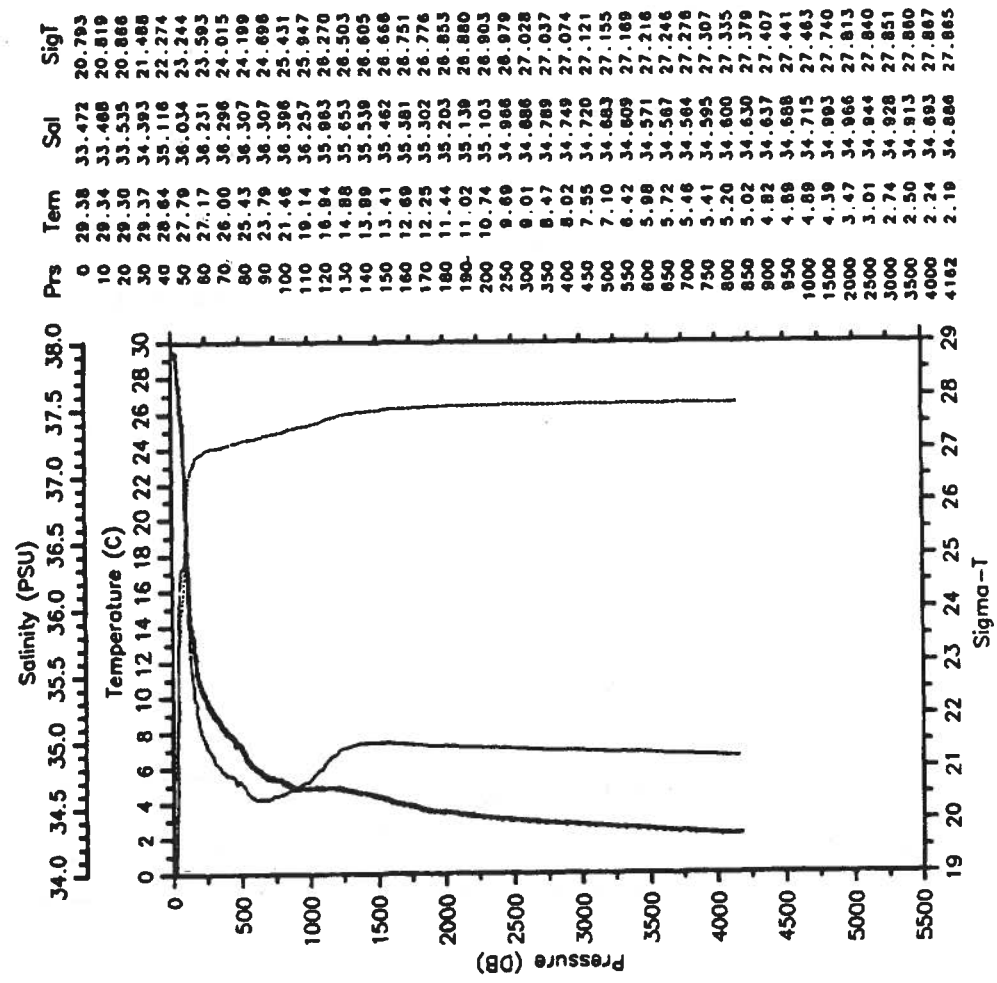
BAL-STACS37-90 CTD 36 BALDRICE
 Date 09 28 90 Latitude 6.674N
 Time 1155 Z Longitude 44.044W

— Tem — Sal
 --- SigT



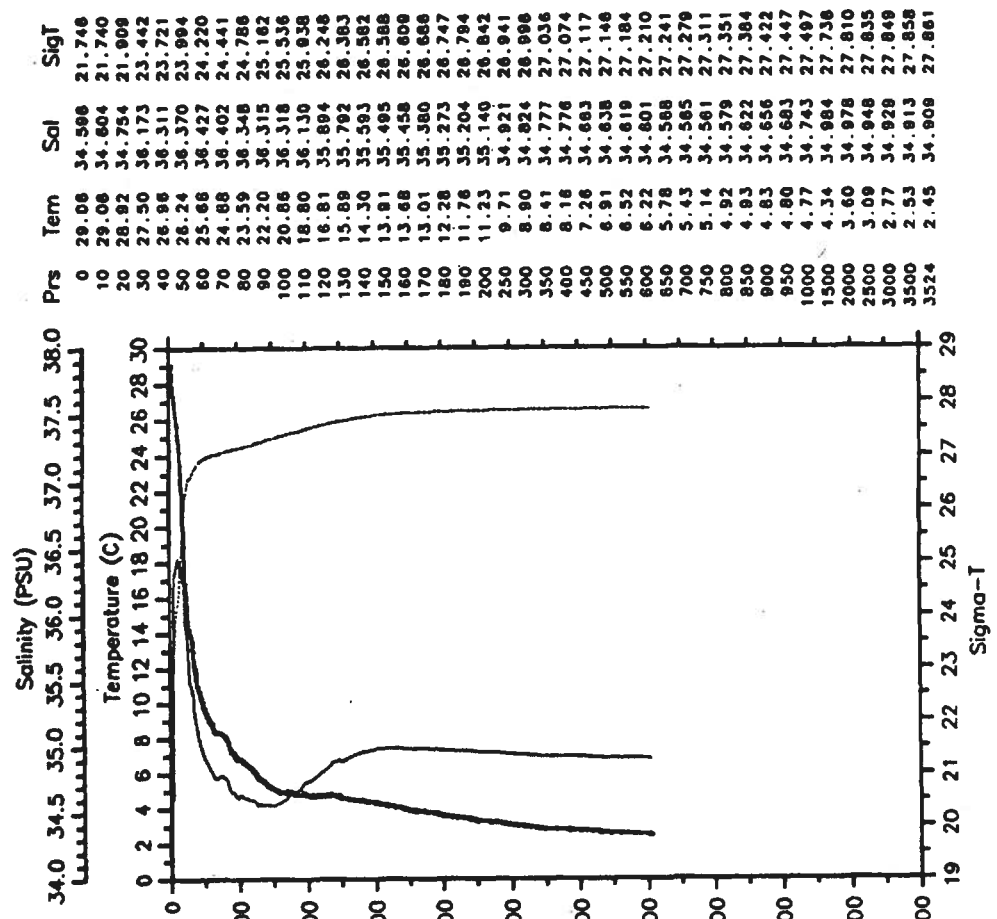
BAL-STACS37-90 CTD 37 BALDRIGE
 Date 09 28 90 Latitude 5.977N
 Time 2120 Z Longitude 44.033W

--- Tem --- Sal
 --- SigT



BAL-STACS37-90 CTD 38 BALDRIGE
 Date 09 29 90 Latitude 5.262N
 Time 0329 Z Longitude 43.989W

--- Tem --- Sal
 --- SigT

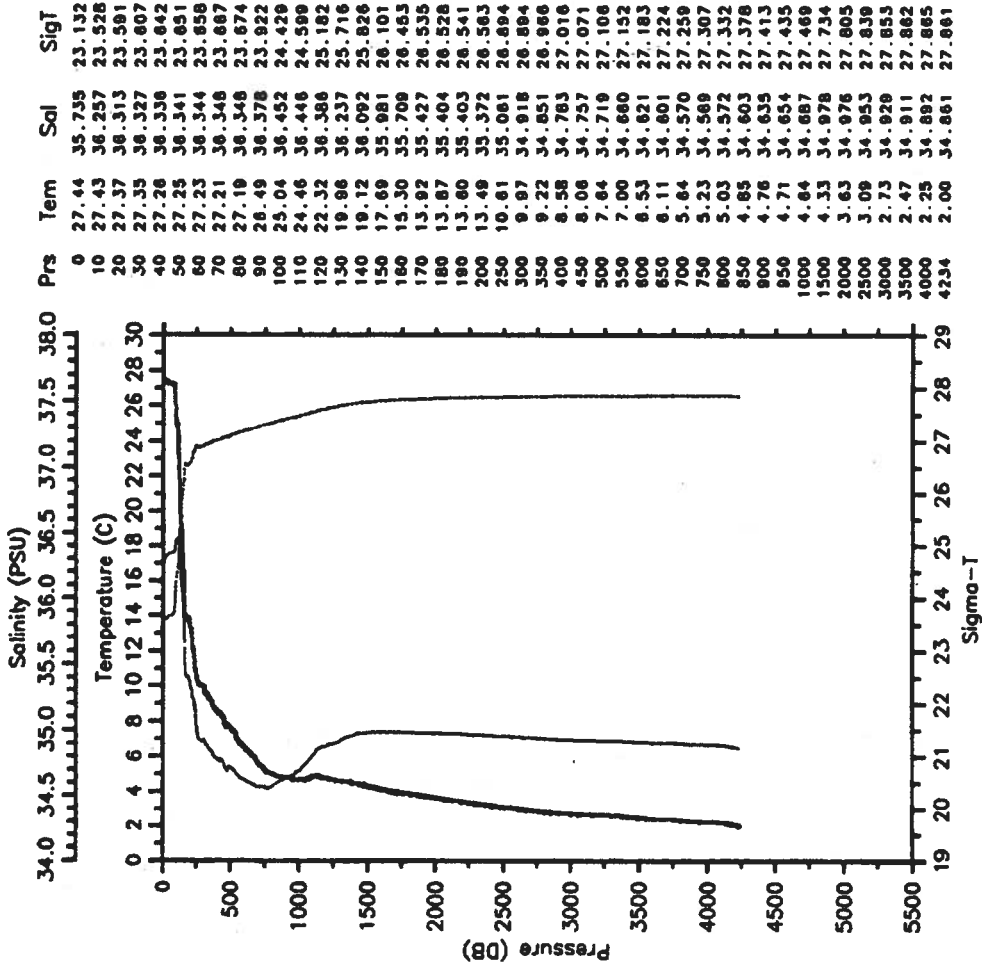


BAL-STACS37-90 CTD 39 BALDRIGE

Date 09 29 90 Latitude 4.233N

Time 2302 Z Longitude 44.006W

--- Tem --- Sal
--- SigT

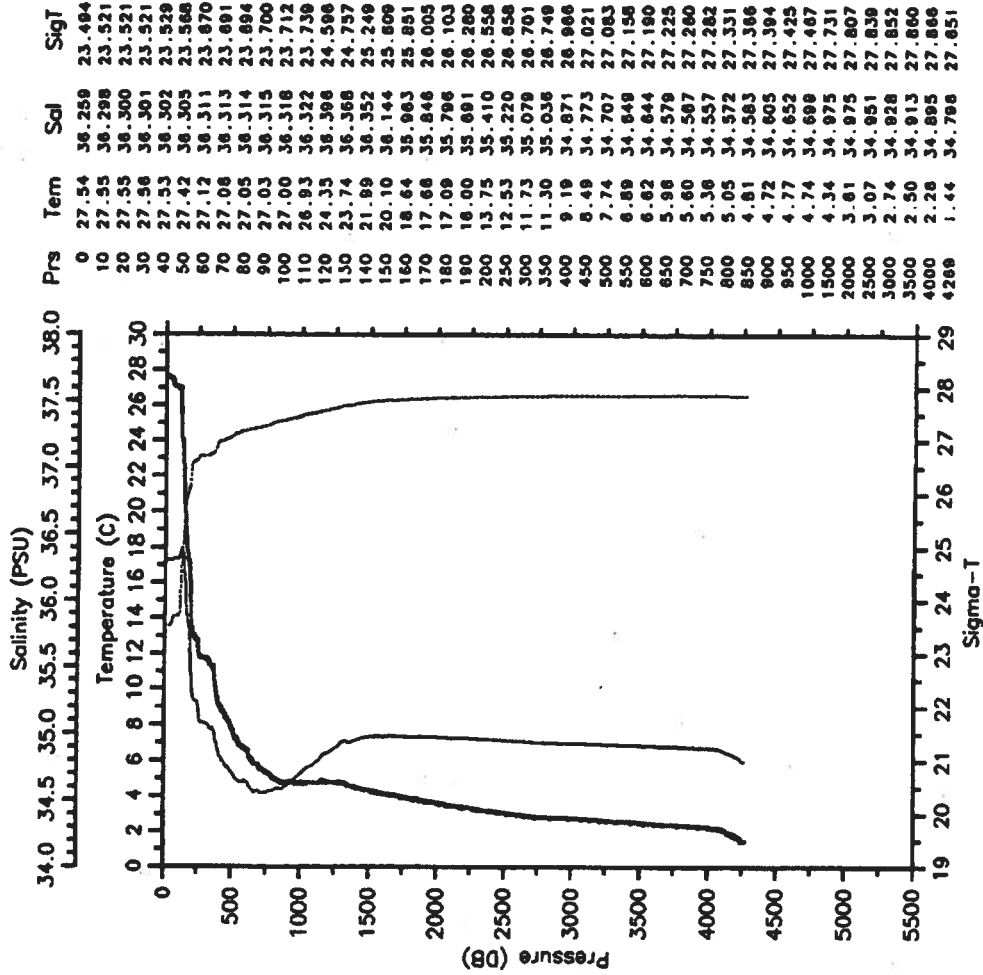


BAL-STACS37-90 CTD 40 BALDRIGE

Date 09 30 90 Latitude 3.305N

Time 0821 Z Longitude 44.005W

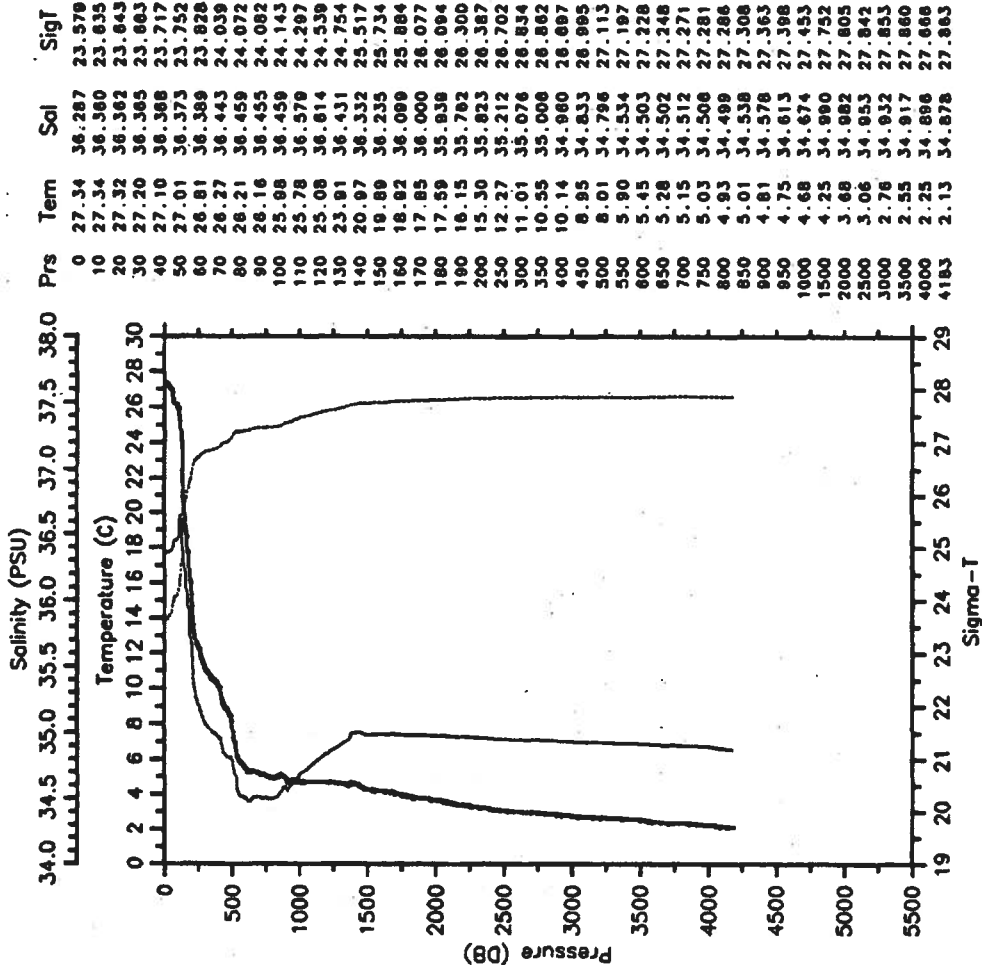
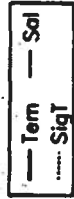
--- Tem --- Sal
--- SigT



BAL-STACS37-90 CTD 41 BALDRIGE

Date 09 30 90 Latitude 1.957N

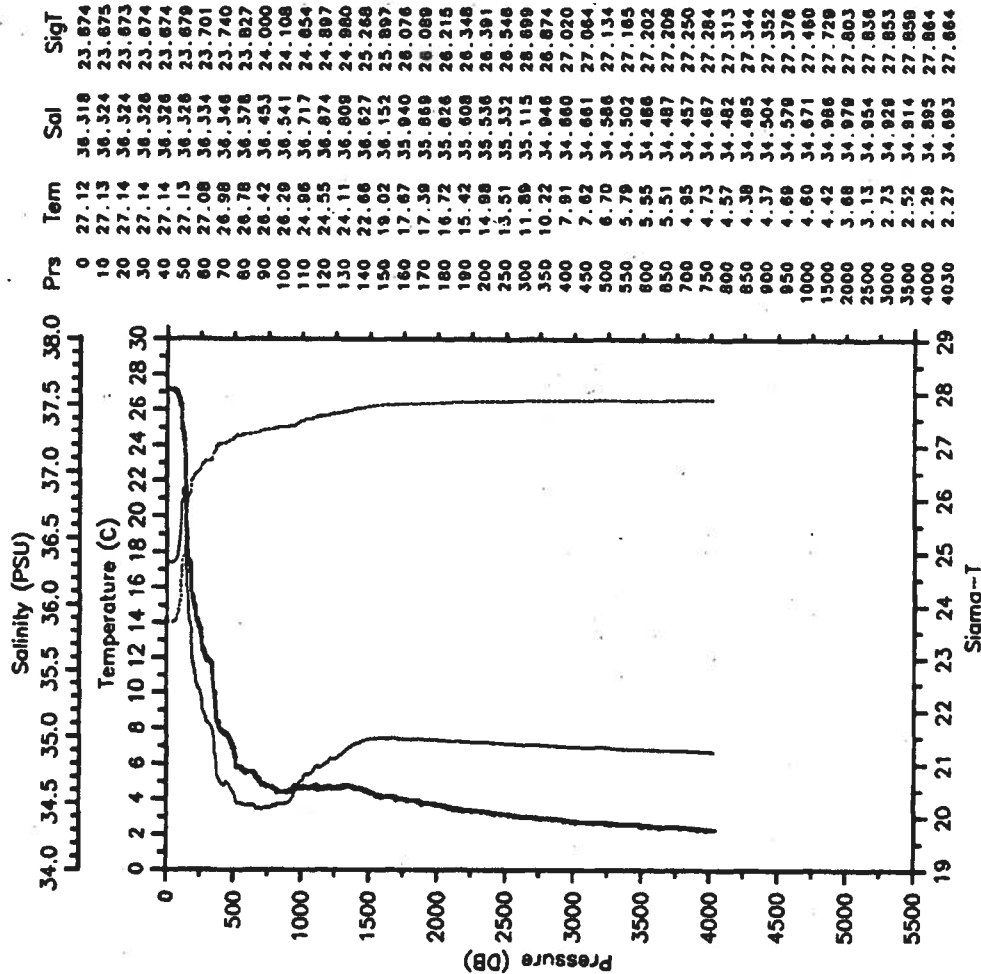
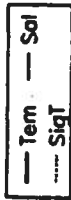
Time 2042 Z Longitude 44.029W



BAL-STACS37-90 CTD 42 BALDRIGE

Date 10 01 90 Latitude 0.868N

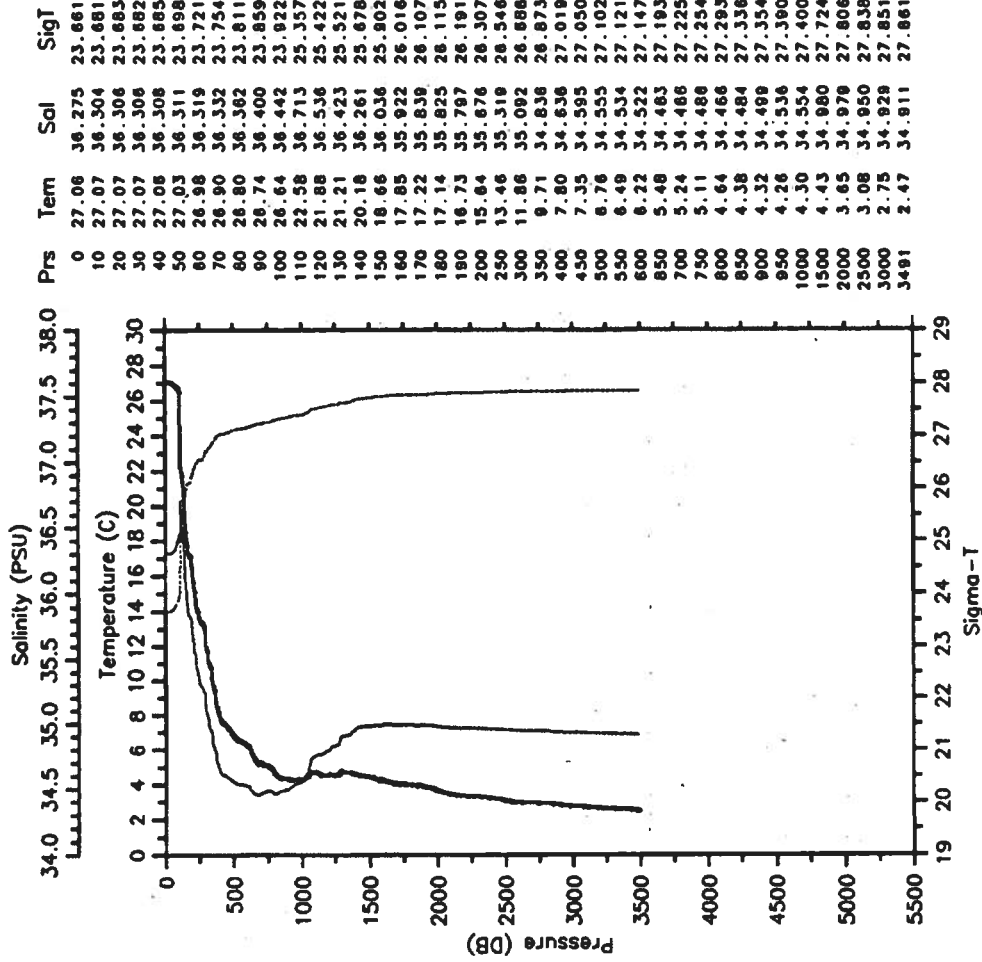
Time 0635 Z Longitude 44.050W



BAL-STACS37-90 CTD 43 BALDRIGE

Date 10 01 90 Latitude 0.498N
 Time 1300 Z Longitude 44.258W

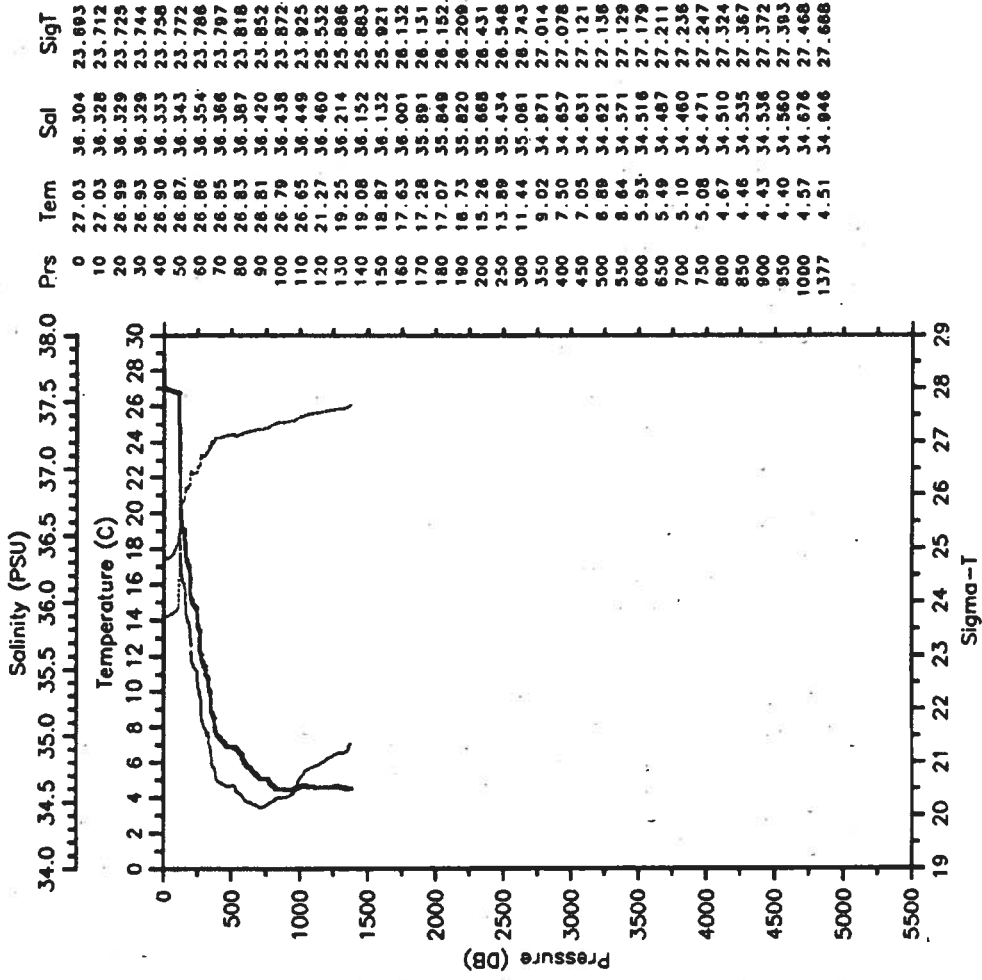
— Tem — Sal
 - - - - - SigT



BAL-STACS37-90 CTD 44 BALDRIGE

Date 10 01 90 Latitude 0.142N
 Time 1820 Z Longitude 44.422W

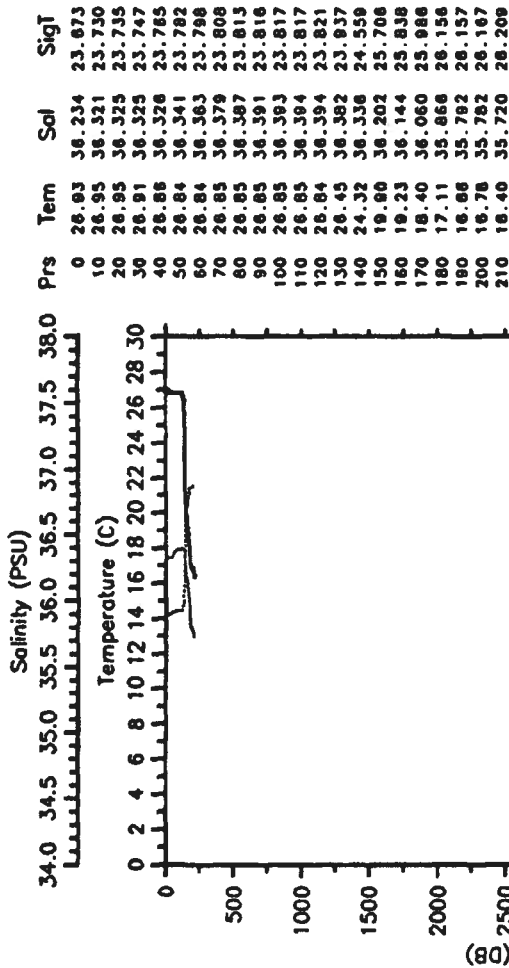
— Tem — Sal
 - - - - - SigT



BAL-STACS37-90 CTD 45 BALDRIGE

Date 10 01 90 Latitude 0.000N
 Time 2004 Z Longitude 44.410W

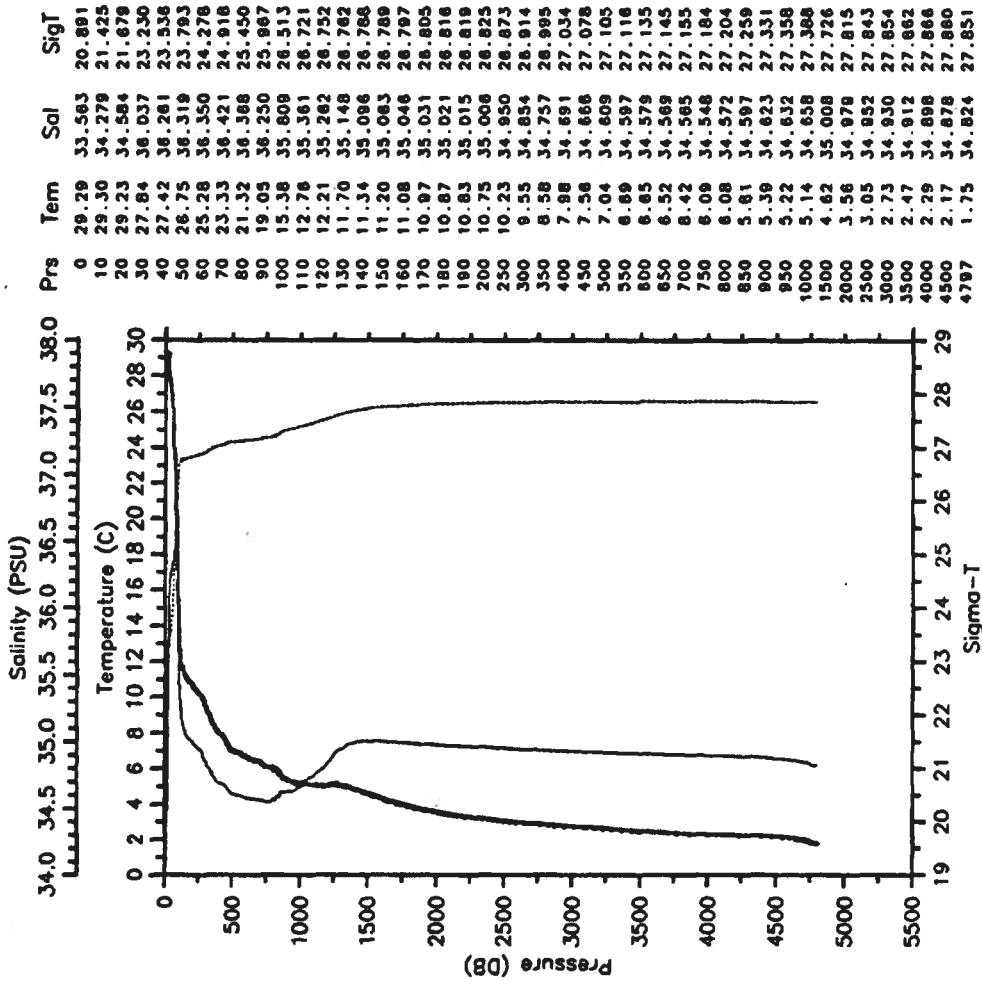
--- Tem --- Sal
 --- SigT



BAL-STACS37-90 CTD 46 BALDRIGE

Date 10 03 90 Latitude 9.036N
 Time 1948 Z Longitude 51.910W

--- Tem --- Sal
 --- SigT

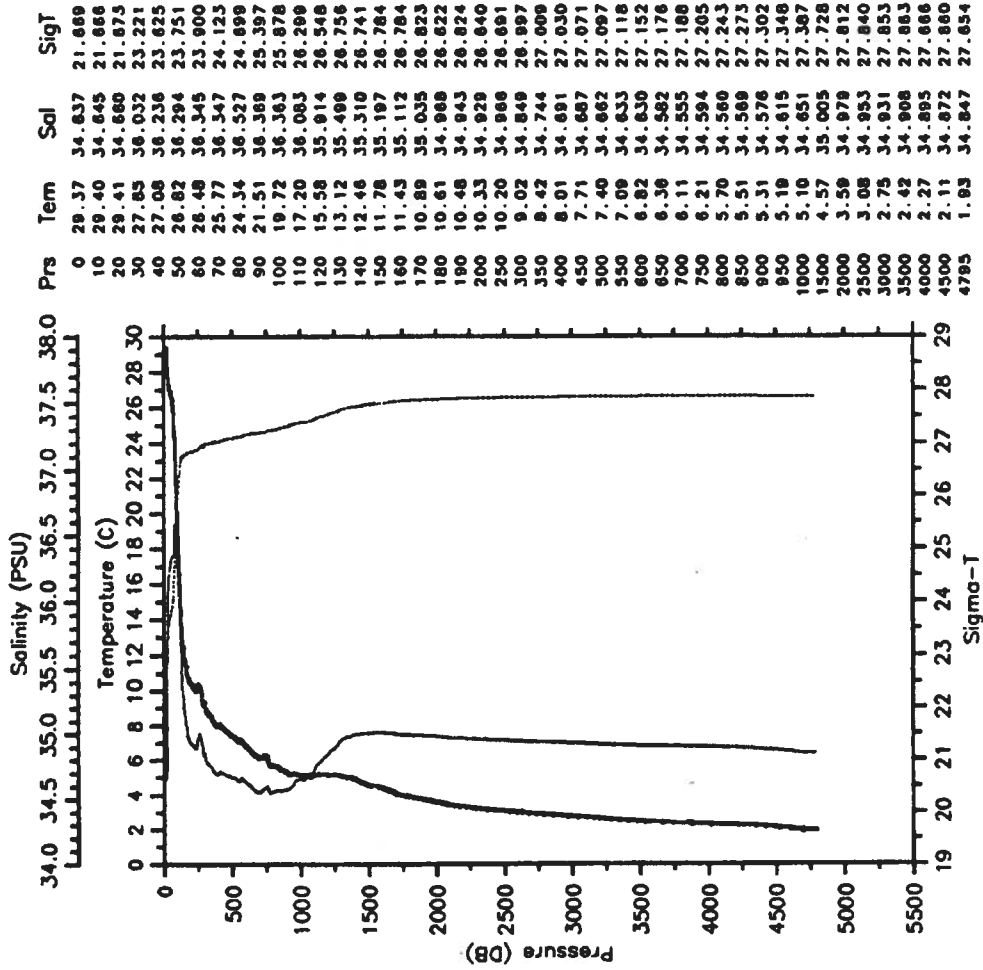


BAL-STACS37-90 CTD 47 BALDRICE

Date 10 04 90 Latitude 8.563N

Time 0357 Z Longitude 52.158W

— Tem — Sal
 ---- SigT

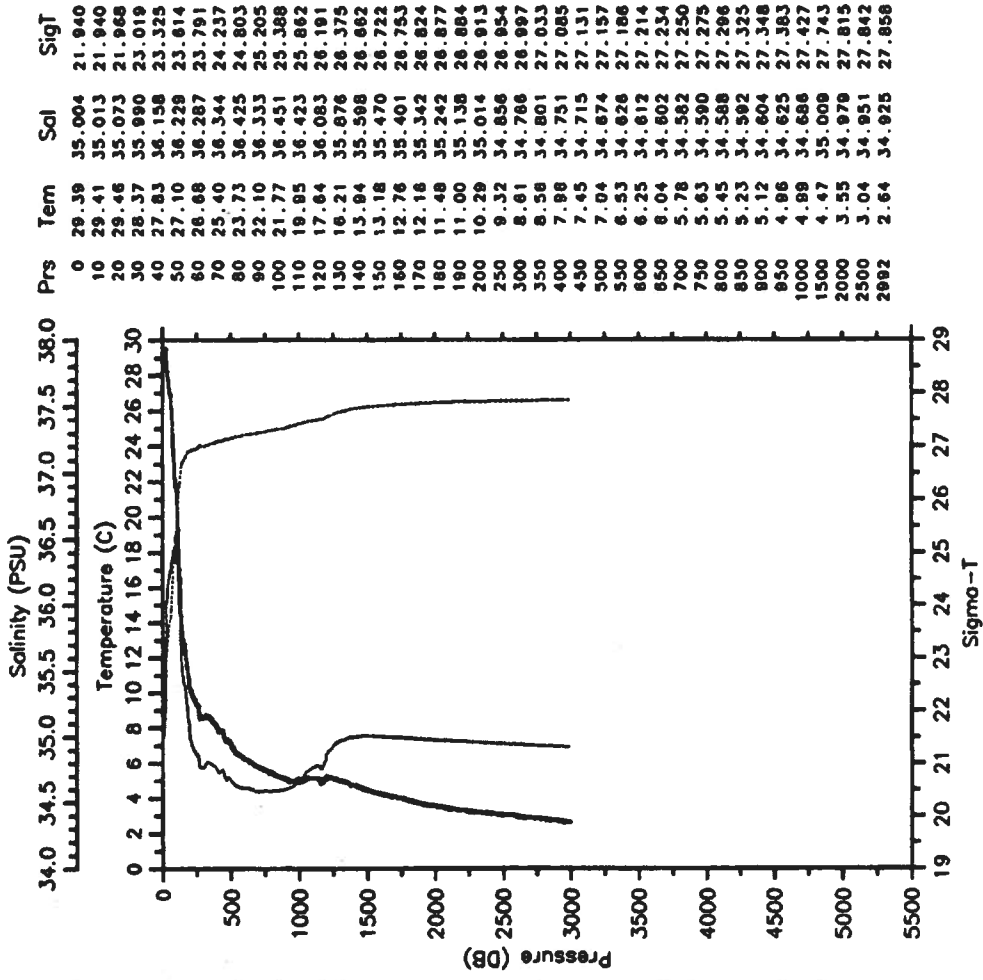


BAL-STACS37-90 CTD 48 BALDRICE

Date 10 04 90 Latitude 8.117N

Time 0902 Z Longitude 52.455W

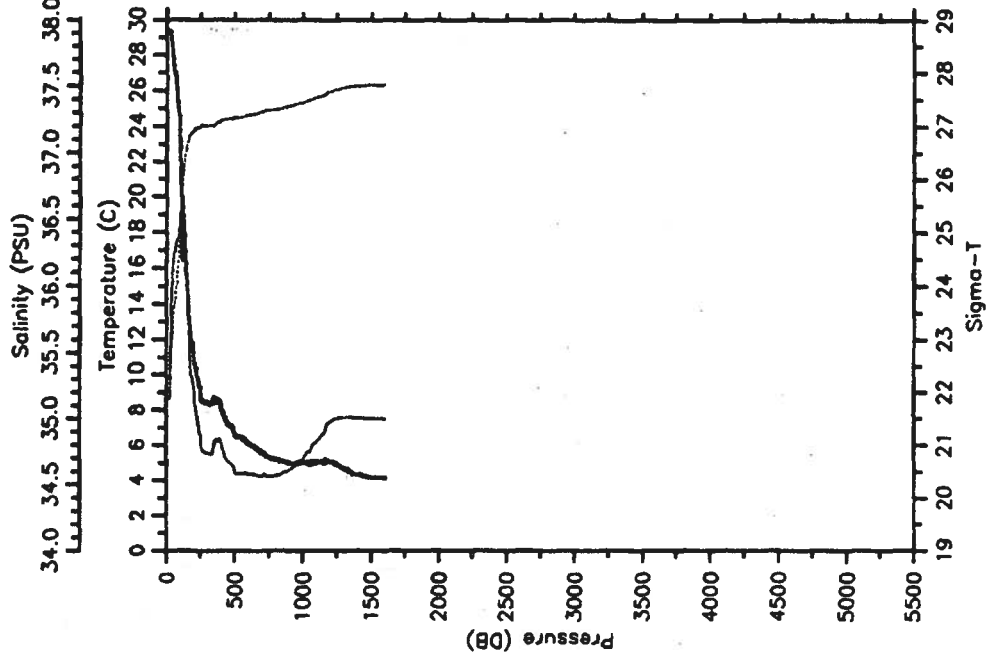
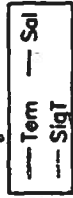
— Tem — Sal
 ---- SigT



BAL-STACS37-90 CTD 49 BALDRIGE

Date 10 04 90 Latitude 7.773N

Time 1358 Z Longitude 52.646W

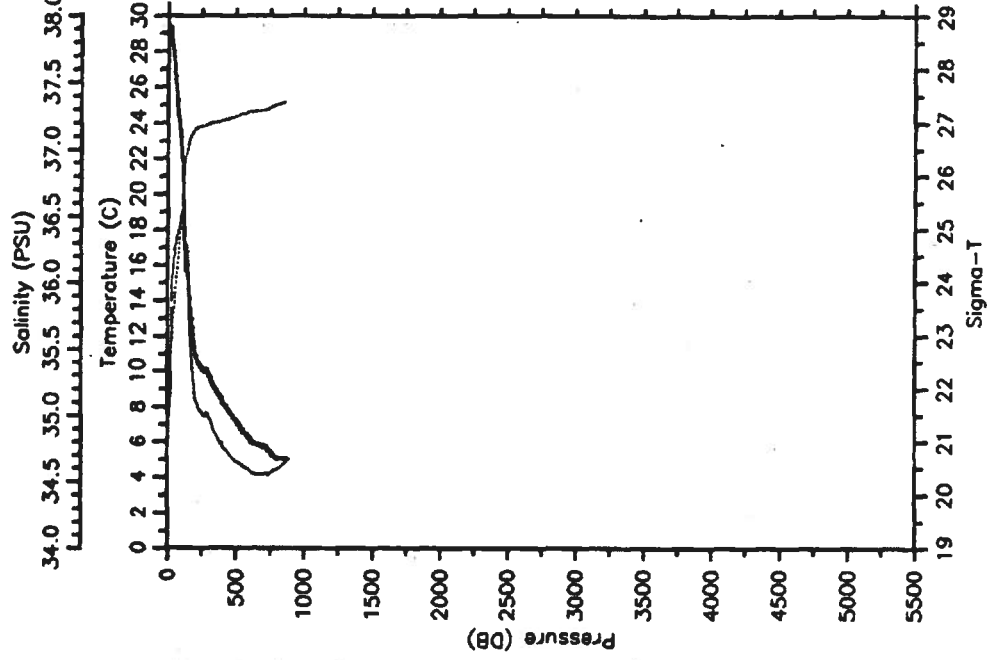
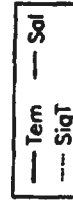


Prs	Tem	Sal	Sigt
0	28.43	35.147	22.032
10	29.35	35.152	22.064
20	29.33	35.155	22.072
30	29.27	35.394	22.273
40	28.45	35.895	22.997
50	27.48	36.199	23.468
60	26.98	36.261	23.684
70	26.27	36.321	23.947
80	25.44	36.351	24.229
90	24.53	36.389	24.537
100	22.98	36.510	25.088
110	20.27	36.295	25.680
120	18.29	36.366	25.892
130	18.22	36.356	26.259
140	16.56	36.135	26.492
150	15.02	35.915	26.674
160	13.99	35.715	26.744
170	12.81	35.522	26.836
180	12.03	35.376	26.875
190	11.76	35.294	26.864
200	11.23	35.236	26.819
250	9.23	34.875	26.984
300	8.45	34.743	27.003
350	8.72	34.826	27.027
400	8.15	34.817	27.107
450	7.22	34.874	27.132
500	6.56	34.596	27.161
550	6.40	34.568	27.176
600	6.09	34.584	27.212
650	5.89	34.578	27.235
700	5.57	34.559	27.256
750	5.28	34.560	27.294
800	5.18	34.566	27.311
850	5.12	34.580	27.337
900	4.99	34.613	27.370
950	4.83	34.648	27.402
1000	5.01	34.693	27.430
1500	4.18	35.000	27.768
1600	4.10	34.991	27.769

BAL-STACS37-90 CTD 50 BALDRIGE

Date 10 04 90 Latitude 7.475N

Time 1807 Z Longitude 52.938W



Prs	Tem	Sal	Sigt
0	29.43	34.982	21.909
10	29.39	35.000	21.936
20	29.33	35.108	22.037
30	28.56	35.608	22.819
40	27.98	36.129	23.286
50	27.16	36.236	23.600
60	26.11	36.294	23.978
70	25.32	36.351	24.268
80	24.39	36.397	24.585
90	23.47	36.445	24.894
100	22.54	36.530	25.220
110	21.51	36.508	25.504
120	19.09	36.248	25.953
130	17.08	36.090	26.334
140	16.62	36.054	26.414
150	15.64	35.969	26.377
160	14.40	36.730	26.666
170	13.12	35.513	26.766
180	12.53	35.397	26.785
190	11.73	35.255	26.839
200	11.03	35.162	26.896
250	10.17	35.029	26.947
300	9.73	34.990	26.991
350	8.99	34.863	27.012
400	8.33	34.791	27.060
450	7.78	34.715	27.083
500	7.20	34.649	27.115
550	6.58	34.816	27.176
600	6.15	34.581	27.202
650	5.85	34.553	27.216
700	5.74	34.551	27.231
750	5.46	34.564	27.275
800	5.09	34.590	27.340
850	5.06	34.627	27.373
875	5.03	34.667	27.408

APPENDIX B: XBT DATA

Casts are represented by cruise and increasing cast number. Isotherm depths in meters are listed at temperatures ranging from 28°C to 6°C.

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	1	2	3	4	5	6	7
YEAR	90	90	90	90	90	90	90
MONTH	1	1	1	1	1	1	1
DAY (GMT)	30	31	31	31	31	31	31
TIME (GMT)	1956	0749	1141	1405	1416	1631	2054
LAT (N)	14.25	13.00	12.68	12.38	12.38	12.05	11.73
LON (W)	60.90	59.00	59.60	59.87	59.87	60.06	60.30
SURF T (C)	26.4	26.2	26.6	26.6	26.5	26.6	25.9
28							
27							
26	61	91	93	75	74	72	
25	79	100	108	92	91	94	64
24	90	102	118	104	103	101	71
23	97	103	127	115	114	111	75
22	107	115	132	120	118	115	81
21	142	120	136	124	122	122	88
20	158	127	151	128	126	134	92
19	194	143	161	141	139	144	100
18	217	162	167	147	146	149	124
17	231	179	172	157	157	165	154
16	246	202	184	175	176	175	169
15	267	214	194	180	181	188	192
14	286	307	204	198	198	218	236
13	291	309	215	217	217	236	266
12	331	317	225	249	249	322	257
11	348	459	305	274	274	355	281
10	388	543	431	403	395	322	
9	409	664	555	497	444	354	
8		694	748	562	517	434	
7		789	786	701	596		
6		862	884	789	766		

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	15	16	17	18	19	20	21
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	2	3	4	5	5	6	6
TIME (GMT)	1820	2130	1022	1456	1645	1438	1712
LAT (N)	7.58	7.99	8.33	9.36	9.67	8.05	7.50
LON (W)	54.13	52.58	52.32	51.69	51.50	50.67	50.54
SURF T (C)	25.5	27.0	26.6	26.4	26.7	26.5	26.8
28							
27		69					
26		77	76	90	69	124	143
25	16	82	86	99	77	131	146
24	31	94	107	103	83	138	148
23	35	101	121	109	96	141	150
22	44	121	133	115	100	145	153
21	57	126	135	128	107	148	155
20	81	137	137	131	113	153	158
19	109	139	139	145	119	157	165
18	116	139	143	152	129	163	170
17	127	140	148	160	142	180	178
16	136	141	150	181	148	184	181
15	149	142	152	192	158	188	186
14	159	143	159	205	170	201	193
13	165	165	172	219	184	206	199
12	227	198	202	227	199	230	208
11	260	337	269	261	226	245	223
10	349	345	319	277	268	235	
9	498	417	388	359	364	289	
8	544	536	459	436	422	383	
7	609	585	563	526	475	481	
6	663	684	749	678	569	616	

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	8	9	10	11	12	13	14
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	1	1	1	2	2	2	2
TIME (GMT)	0837	1444	2158	0413	0749	1121	1453
LAT (N)	10.52	9.70	8.73	7.85	7.78	7.72	7.65
LON (W)	59.58	58.70	57.72	56.75	56.08	55.43	54.78
SURF T (C)	26.2	26.2	26.5	26.6	26.2	26.3	26.6
28							
27							33
26	82	65	68	59	61	65	42
25	103	78	76	63	72	70	47
24	111	96	85	78	75	78	56
23	121	107	90	81	82	81	73
22	141	117	94	83	88	85	82
21	154	125	99	85	100	94	88
20	171	133	113	88	110	107	101
19	184	135	120	94	119	121	118
18	215	142	133	99	127	127	136
17	235	173	137	105	133	146	152
16	250	185	143	110	140	159	176
15	274	204	151	151	155	176	213
14	299	223	162	162	170	190	234
13	317	235	175	178	177	200	268
12	336	268	197	234	181	229	300
11	351	298	227	254	186	258	316
10	368	321	318	325	243	306	398
9	394	369	369	350	301	353	500
8				452	432	412	566
7				489	522	514	628
6				573	610	609	

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	22	23	24	25	26	27	28
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	6	6	6	6	6	7	7
TIME (GMT)	0810	1035	1248	1438	1712	0139	0621
LAT (N)	9.50	8.97	8.47	8.05	7.50	6.85	6.43
LON (W)	51.10	50.92	50.74	50.67	50.54	50.58	50.85
SURF T (C)	26.7	26.5	26.9	26.5	26.8	27.0	27.0
28							
27							19
26	62	92	110	124	143	142	141
25	75	95	121	131	146	147	145
24	91	108	126	138	148	150	148
23	98	112	131	141	150	152	158
22	108	116	135	145	153	154	161
21	114	124	148	148	155	158	164
20	121	137	153	153	158	163	169
19	127	144	156	157	165	167	171
18	134	164	164	163	170	175	175
17	148	175	168	180	178	178	183
16	155	187	171	184	181	182	189
15	166	199	175	188	186	186	193
14	178	221	179	201	193	191	198
13	192	239	200	206	199	195	208
12	209		211	230	208	203	220
11	234		242	245	223	215	261
10	287		312	268	235	232	276
9	345		383	364	289	272	361
8	481		454	422	383	419	418
7	592		535	475	481	505	460
6	718			569	616	636	559

ISOTHERM DEPTHS (M)

R/V MT MITCHELL

RN-STACS35-90

XBT NO.	29	30	31	32	33	34	35
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	8	8	8	8	8	9	9
TIME (GMT)	0926	1230	1551	1853	2202	0650	1945
LAT (N)	5.52	5.20	4.84	4.52	4.20	4.18	4.68
LOX (W)	50.90	50.46	49.99	49.59	49.15	48.53	47.94
SURF T (C)	27.1	27.4	27.5	27.1	27.2	27.0	27.1
28							
27	24	44	65	49	65	63	62
26	84	100	102	107	77	105	98
25	98	104	115	127	107	109	105
24	106	108	119	135	123	111	108
23	110	113	122	137	126	113	111
22	119	122	133	140	128	114	113
21	125	142	140	143	129	115	116
20	129	144	146	145	130	118	126
19	136	147	160	161	134	125	145
18	140	153	164	169	136	135	149
17	145	159	171	177	138	143	158
16	157	163	187	180	144	167	177
15	160	170	192	183	157	186	185
14	162	177	204	187	165	207	209
13	171	208	237	214	196	212	216
12	184	220	255	228	216	229	232
11	333	231	272	257	257	281	243
10		274	316	270	336	307	263
9		323	348	330	374	390	359
8			394	372	468	426	391
7			464	428	479	468	482
6			578	579	550	621	559

ISOTHERM DEPTHS (M)

R/V MT MITCHELL

RN-STACS35-90

XBT NO.	36	37	38	39	40	41	42
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	10	10	10	10	10	10	11
TIME (GMT)	0710	1028	1339	1649	2008	2328	0242
LAT (N)	4.30	3.72	3.17	2.62	2.05	1.47	0.92
LOX (W)	47.15	46.79	46.44	46.07	45.70	45.34	44.95
SURF T (C)	27.0	26.9	27.0	27.2	27.2	27.1	27.4
28							
27		85		73	99	113	87
26		99	101	91	99	103	98
25	103	104	104	125	104	125	107
24	118	109	109	131	105	126	109
23	123	-121	121	136	106	129	110
22	133	128	126	140	107	132	112
21	136	136	129	142	109	133	118
20	143	140	145	144	111	134	119
19	153	146	157	147	120	136	121
18	163	157	165	169	124	138	122
17	169	164	167	183	126	143	125
16	181	168	175	212	146	148	131
15	201	183	181	216	171	166	137
14	209	191	199	223	180	179	151
13	213	196	214	232	184	196	160
12	224	202	225	246	211	205	164
11	265	226	240	258	226	231	176
10	294	260	260	289	280	321	270
9	311	345	311	359	343	396	335
8	441	429	397	447	385	437	417
7	507	512	566	502	419	515	512
6	596	618	639	562	497	565	569

ISOTHERM DEPTHS (M)

R/V MT MITCHELL

RN-STACS35-90

XBT NO.	43	44	45	46	47	48	49
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	11	11	12	12	12	12	13
TIME (GMT)	0546	1615	0446	0638	1843	2103	1202
LAT (N)	0.35	0.45	1.20	1.55	2.35	2.79	3.92
LOX (W)	44.63	44.25	44.00	44.00	44.00	43.99	44.00
SURF T (C)	27.4	27.6	27.0	27.1	26.9	27.1	27.0
28							
27	80	63	93	28		50	
26	87	99	97	101	89	58	70
25	112	109	103	108	123	122	76
24	129	111	105	110	128	124	82
23	131	113	106	115	132	127	85
22	134	114	107	122	141	142	89
21	146	116	110	129	150	144	102
20	149	127	115	135	152	145	107
19	153	138	119	140	153	146	119
18	156	140	135	147	154	147	141
17	161	144	146	155	159	154	151
16	166	147	151	162	168	168	173
15	187	149	158	165	175	179	181
14	205	172	164	169	179	189	186
13	225	218	170	176	189	201	212
12	233	227	190	189	207	256	218
11	251	256	239	257	270	268	230
10	297	343	302	295	314	316	253
9	347	451	328	336	344	356	309
8	381	528	392	392	381	388	373
7	467	635	491	450	463	415	451
6	515		564	564	555	560	549

ISOTHERM DEPTHS (M)

R/V MT MITCHELL

RN-STACS35-90

XBT NO.	50	51	52	53	54	55	56
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	13	14	14	14	15	15	15
TIME (GMT)	1532	0547	0805	2250	0129	1650	1857
LAT (N)	4.58	5.72	6.20	7.23	8.33	8.33	8.33
LOX (W)	44.00	44.00	44.00	44.00	44.00	44.47	44.93
SURF T (C)	27.0	26.9	26.8	27.0	27.0	26.7	27.0
28							
27		91					
26		106	105	115	106	102	86
25	109	109	119	113	108	89	95
24	116	112	124	116	114	94	97
23	119	116	132	118	116	99	100
22	123	119	134	123	117	103	106
21	136	122	136	129	119	107	112
20	138	125	137	131	122	111	117
19	141	129	139	133	127	120	123
18	146	134	144	140	134	127	127
17	152	136	147	144	141	134	131
16	160	138	152	149	145	143	135
15	168	140	158	154	150	147	140
14	171	144	161	165	155	152	151
13	183	150	164	176	163	161	161
12	191	165	174	192	174	176	174
11	219	210	198	219	209	193	195
10	260	246	225	268	276	244	243
9	316	299	267	348	385	336	320
8	385	371	407	479	499	461	420
7	549	483	506	607	598	585	538
6			682	710	724	695	623

ISOTHERM DEPTBS (M)

		R/V MT MITCHELL				NM-STACS35-90		
XBT NO.		57	58	59	60	61	62	63
YEAR		90	90	90	90	90	90	90
MONTH		2	2	2	2	2	2	2
DAY (GMT)		15	16	16	16	16	16	16
TIME (GMT)		2136	0004	0950	1209	1425	1645	1850
LAT (N)		8.36	8.33	8.63	8.88	9.09	9.44	9.72
LOX (W)		45.38	45.87	46.78	47.22	47.66	48.01	48.55
SURF T (C)		27.0	27.1	26.6	26.6	26.1	26.4	26.2
28								
27		78	50					
26		93	90	54	59	44	53	64
25		97	94	57	61	45	57	67
24		100	98	61	64	46	61	69
23		104	101	65	67	48	63	71
22		107	105	71	76	51	67	76
21		111	109	75	80	56	73	83
20		116	112	80	82	60	77	90
19		120	116	85	87	66	87	102
18		124	122	90	95	76	100	108
17		129	127	96	102	82	107	114
16		135	131	103	134	90	114	124
15		142	139	118	119	96	125	131
14		151	156	131	125	104	137	141
13		163	169	143	137	112	154	156
12		181	183	152	151	127	167	177
11		217	215	162	178	159	198	214
10		276	267	185	222	220	265	295
9		364	310	287	301	297	351	378
8		450	390	398	411	395	475	474
7		550	496	481	563	526	602	607
6		645	675	641	716	659	735	

ISOTHERM DEPTBS (M)

		R/V MT MITCHELL				NM-STACS35-90		
XBT NO.		64	65	66	67	68	69	70
YEAR		90	90	90	90	90	90	90
MONTH		2	2	2	2	2	2	2
DAY (GMT)		17	17	17	17	17	17	18
TIME (GMT)		0438	0655	0904	1757	2020	2245	0933
LAT (N)		10.00	10.00	10.00	10.15	10.29	10.46	10.73
LOX (W)		49.05	50.00	50.50	51.68	52.26	52.78	53.67
SURF T (C)		25.7	25.1	26.0	26.6	26.5	26.4	26.6
28								
27								
26					64	47	58	69
25		75	88	81	72	69	79	86
24		79	91	83	77	78	90	91
23		80	93	85	89	85	100	100
22		83	96	88	97	90	108	118
21		87	98	94	105	95	117	124
20		92	103	98	117	107	128	134
19		98	108	103	126	122	140	144
18		108	114	108	133	134	153	157
17		114	122	114	141	144	166	166
16		121	132	122	151	156	179	169
15		133	148	145	166	164	191	179
14		145	158	158	176	177	204	189
13		152	169	176	193	196	218	202
12		164	182	184	220	202	230	221
11		203	213	204	254	239	284	254
10		263	266	258	284	296	326	312
9		378	328	313	322	374	405	393
8		446	402	393	433	448	480	460
7		546	500	516	543	535	574	525
6		690	719	702	713	626	688	719

ISOTHERM DEPTBS (M)

		R/V MT MITCHELL				NM-STACS35-90		
XBT NO.		71	72	73	74	75	76	77
YEAR		90	90	90	90	90	90	90
MONTH		2	2	2	2	2	2	2
DAY (GMT)		18	18	18	19	19	19	19
TIME (GMT)		1158	1205	1348	0106	0322	0527	0739
LAT (N)		10.89	10.89	11.01	11.40	11.65	11.90	12.15
LOX (W)		54.17	54.17	54.57	55.60	56.05	56.50	56.93
SURF T (C)		26.4	26.3	26.2	26.3	26.3	26.2	25.9
28								
27								64
26		53	67	38	38	67	71	70
25		81	82	78	71	76	78	78
24		89	89	83	76	87	88	87
23		98	97	88	81	92	94	105
22		104	103	92	91	97	104	118
21		119	123	102	95	104	112	127
20		138	135	109	108	113	119	140
19		146	142	126	116	118	129	147
18		152	147	132	124	130	140	157
17		159	153	138	132	139	155	173
16		167	163	151	145	149	163	184
15		176	173	158	159	164	177	200
14		189	187	166	173	168	193	213
13		200	198	181	200	180	209	228
12			217	200	214	192	216	264
11			245	213	250	207	234	298
10			310	252	295	255	291	337
9			362	323	343	310	336	408
8			417	372	462	444	413	482
7			527	457	527	535	528	545
6			688	602	687	707	666	700

ISOTHERM DEPTBS (M)

		R/V MT MITCHELL				NM-STACS35-90		
XBT NO.		78	79	80	81	82	83	84
YEAR		90	90	90	90	90	90	90
MONTH		2	2	2	2	2	2	2
DAY (GMT)		19	19	20	20	20	20	23
TIME (GMT)		1503	2005	0149	0406	0609	0813	1621
LAT (N)		12.72	13.11	13.59	13.82	14.05	14.27	14.87
LOX (W)		57.93	58.60	59.54	60.00	60.47	60.89	61.51
SURF T (C)		26.0	26.3	25.8	26.1	25.7	26.1	26.3
28								
27								
26		81	84	83	87	111	95	89
25		92	95	89	107	132	119	127
24		104	104	92	121	148	129	138
23		117	121	97	133	157	138	145
22		130	134	115	143	168	157	155
21		139	150	129	160	174	162	163
20		148	159	155	168	180	169	174
19		161	175	162	178	195	175	195
18		178	197	167	196	208	180	214
17		192	207	181	234	216	189	242
16		207	227	208	253	231	197	264
15		221	249	229	259	247	212	279
14		240	273	263	266	251	224	299
13		265	297	287	272	258	229	325
12		287	343	320	285	268	238	363
11		314	390	362	298	284	256	398
10		363	445	433	319	303	328	418
9		429	493	472	381	341	358	454
8		492	546	538	421	388		499
7		630	629	580	516	468		613
6			686		618	561		

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	85	86	87	88	89	90	91
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	23	23	23	23	24	24	24
TIME (GMT)	1847	1943	2108	2324	0121	0354	0608
LAT (N)	15.18	12.37	15.50	15.92	16.13	16.43	16.75
LOX (W)	61.93	0.00	62.33	62.73	63.13	63.54	63.94
SURF T (C)	26.0	25.8	25.7	25.6	25.7	25.7	25.5
28							
27							
26	19		82				
25	105	107	89	104	118	90	84
24	114	116	104	114	135	107	101
23	131	132	128	128	144	136	122
22	162	146	142	146	157	161	143
21	170	153	155	163	177	183	157
20	183	171	173	187	185	201	177
19	195	190	203	211	206	222	206
18	223		235	238	225	245	232
17	257		273	262	255	269	265
16	283		294	287	277	289	299
15	298		326	310	312	310	334
14	321		350	331	338	343	364
13	363		387	348	364	383	386
12	407		420	372	395	411	432
11				393	434		
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	92	93	94	95	96	97	98
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	24	24	24	24	24	24	25
TIME (GMT)	0856	1045	1310	1802	2012	2243	0056
LAT (N)	17.13	17.37	17.79	18.66	18.93	19.30	19.63
LOX (W)	64.48	64.78	65.04	65.48	65.85	66.22	66.63
SURF T (C)	25.8	25.6	25.6	25.5	25.4	25.3	25.5
28							
27							
26						84	
25	105	103	112	85	102	106	107
24	123	111	137	109	116	126	135
23	137	131	156	125	136	155	154
22	153	147	169	144	151	167	170
21	170	173	187	161	171	188	185
20	185	198	211	181	186	210	199
19	208	223	230	197	212	237	229
18	235	244	259	255	271	280	277
17	267	273	295	307	310	313	327
16	300	313	321	350	357	347	361
15	339	352	350	392	400	395	396
14	381	381	386	441	431	424	441
13	417	426	432				
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	99	100	101	102	103	104	105
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	25	25	25	25	25	25	25
TIME (GMT)	0303	0607	0809	1048	1305	1518	1746
LAT (N)	20.20	20.30	20.56	20.90	21.49	21.29	21.90
LOX (W)	67.08	67.07	67.96	68.33	69.34	69.21	69.64
SURF T (C)	25.4	25.5	25.4	25.3	25.2	25.4	25.4
28							
27							
26		99	94	85			
25	115	116	108	107	52	80	91
24	142	130	129	119	119	118	138
23	167	157	148	139	144	144	154
22	185	173	179	158	165	161	178
21	200	201	193	179	187	178	197
20	221	224	213	197	213	217	219
19	249	258	244	233	247	257	247
18	287	301	304	300	303	316	318
17	344	337	356	371	374	381	392
16	387	372	397	423	418	431	
15	417	421					
14							
13							
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

R/V MT MITCHELL		MM-STACS35-90					
XBT NO.	106	107	108	109	110	111	112
YEAR	90	90	90	90	90	90	90
MONTH	2	2	2	2	2	2	2
DAY (GMT)	25	25	25	26	26	26	26
TIME (GMT)	1956	2159	2349	0227	0441	0659	0923
LAT (N)	22.24	22.50	22.83	23.12	23.42	23.74	24.01
LOX (W)	70.07	70.40	70.83	71.28	71.72	72.10	72.60
SURF T (C)	25.8	25.6	25.6	25.2	25.2	25.0	24.4
28							
27							
26		91					
25	103	69	42	37	49	52	
24	122	124	113	119	120	107	56
23	140	153	158	159	156	128	108
22	160	169	176	182	176	151	156
21	187	194	192	203	193	167	183
20	212	213	217	230	209	200	216
19	244	266	260	267	253	245	263
18	337	361	358	360	348	349	376
17	415	436			438		
16							
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (m)

R/V RT MITCHELL

RM-STAC535-90

XBT NO.	113	114
YEAR	90	90
MONTH	2	2
DAY (GMT)	26	26
TIME (GMT)	1144	1419
LAT (N)	24.33	24.65
LCN (M)	73.00	73.42
SURF T (C)	24.6	24.8
28		
27		
26		
25		
24	107	159
23	145	196
22	183	207
21	196	218
20	212	241
19	248	278
18	376	382
17		
16		
15		
14		
13		
12		
11		
10		
9		
8		
7		
6		

ISOTHERM DEPTHS (M)

		R/V N BALDRIGE			MB-STACS36-90		
XBT NO.	1	2	3	4	5	6	7
YEAR	90	90	90	90	90	90	90
MONTH	6	6	6	6	6	6	6
DAY (GMT)	15	16	17	18	19	20	21
TIME (GMT)	1748	1730	1702	1729	1711	1541	1721
LAT (N)	26.30	27.02	26.62	26.52	26.54	26.49	26.50
LON (W)	79.97	79.87	76.85	76.85	76.47	76.12	75.68
SURF T (C)	28.8	28.5	27.8	28.2	27.1	27.5	28.2
28	17	27		2			2
27	46	39	40	26	4	20	17
26	51	46	49	46	28	24	32
25	54	53	69	63	35	29	40
24	57	63	82	83	49	37	65
23	59	70	111	119	70	59	85
22	63	75	145	143	89	86	110
21	69	81	167	166	117	118	137
20	75	86	200	193	151	156	192
19	83	94	246	243	215	213	241
18	97	103	325	339	315	333	355
17	108	110	411	422	418	431	
16	115	120					
15	127	130					
14	134	146					
13	142	157					
12	152	171					
11	159	182					
10	172	208					
9	188						
8							
7							
6							

ISOTHERM DEPTHS (M)

		R/V N BALDRIGE			MB-STACS36-90		
XBT NO.	8	9	10	11	12	13	14
YEAR	90	90	90	90	90	90	90
MONTH	6	6	6	6	6	6	6
DAY (GMT)	22	23	24	24	24	25	25
TIME (GMT)	1710	1543	0517	1255	2313	0641	1457
LAT (N)	26.50	26.50	26.52	26.50	26.50	26.51	26.13
LON (W)	75.50	73.82	73.68	72.88	72.14	71.40	71.02
SURF T (C)	28.3	28.0	28.1	28.0	28.3	27.6	27.4
28	5	7	13	15	14		
27	11	24	27	28	30	25	21
26	31	30	35	40	36	34	31
25	40	36	41	46	44	41	42
24	57	48	59	58	69	54	56
23	85	84	80	94	89	79	80
22	109	112	124	131	116	106	101
21	132	157	150	148	140	149	133
20	181	197	178	194	174	174	174
19	237	264	231	253	232	211	236
18	339	331	333	364	346	353	353
17	441	439	426				
16							
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

		R/V N BALDRIGE			MB-STACS36-90		
XBT NO.	15	16	17	18	19	20	21
YEAR	90	90	90	90	90	90	90
MONTH	6	6	6	6	6	6	6
DAY (GMT)	25	26	26	26	27	27	28
TIME (GMT)	2305	0749	1534	2255	0452	1734	1725
LAT (N)	25.38	24.84	24.47	24.26	24.25	24.26	25.50
LON (W)	71.00	71.36	72.12	72.88	73.51	74.09	75.13
SURF T (C)	27.9	27.9	28.1	28.2	28.0	27.8	28.1
28		19	13	15	22	30	9
27	18	28	24	26	35	37	28
26	23	35	31	34	49	54	30
25	37	47	46	47	66	67	32
24	52	67	68	78	94	102	36
23	67	95	95	119	123	139	46
22	86	119	119	149	143	158	63
21	118	151	146	173	169	174	87
20	154	186	184	196	196	202	131
19	214	238	233	255	243	241	194
18	338	347	338	358	357	346	324
17	423	441	435	428		429	426
16							
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

		R/V N BALDRIGE			MB-STACS36-90		
XBT NO.	22	23	24	25	26	27	28
YEAR	90	90	90	90	90	90	90
MONTH	6	6	6	6	6	6	6
DAY (GMT)	29	30	30	30	30	30	30
TIME (GMT)	1325	0312	0438	0636	0735	0856	1041
LAT (N)	26.48	26.74	27.07	27.55	27.78	28.12	28.55
LON (W)	76.88	76.91	77.00	77.02	77.01	76.99	76.99
SURF T (C)	28.1	28.0	27.7	28.0	27.9	27.6	27.5
28	7						
27	43	27	14	25	15	21	13
26	52	35	26	38	34	26	39
25	69	51	36	58	47	39	49
24	94	69	52	74	66	78	71
23	117	89	73	90	90	117	88
22	139	111	94	113	115	141	105
21	164	143	123	142	144	169	126
20	203	187	164	175	180	204	164
19	266	241	221	244	240	268	232
18	362	342	355	345	377	366	352
17	428	431		442			429
16							
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

		R/V R BALDRIGE				MB-STACS36-90			
XBT NO.	29	30	31	32	33	34	35		
YEAR	90	90	90	90	90	90	90		
MONTH	6	7	7	7	7	7	7		
DAY (GMT)	30	1	2	3	3	3	3		
TIME (GMT)	1138	1546	1555	0653	0859	1630	1820		
LAT (N)	28.87	29.20	30.02	29.98	30.00	29.59	29.17		
LOX (W)	77.00	74.45	73.18	72.05	71.48	71.00	71.00		
SURF T (C)	27.1	27.3	26.3	26.6	26.9	26.9	27.0		
28									
27	5	11							
26	39	35	31	21	20	26	20		
25	45	41	39	24	34	34	30		
24	58	57	54	36	46	48	47		
23	68	74	90	43	71	64	66		
22	81	91	120	55	95	90	83		
21	102	109	154	79	120	119	111		
20	138	149	197	120	159	152	153		
19	209	251	245	182	228	215	227		
18	321	373	381	323	356	367	357		
17	417								
16									
15									
14									
13									
12									
11									
10									
9									
8									
7									
6									

ISOTHERM DEPTHS (M)

		R/V R BALDRIGE				MB-STACS36-90			
XBT NO.	36	37	38	39	40	41	42		
YEAR	90	90	90	90	90	90	90		
MONTH	7	7	7	7	7	7	7		
DAY (GMT)	3	4	4	4	4	5	6		
TIME (GMT)	2008	0408	0543	1826	1355	0340	0953		
LAT (N)	28.75	27.90	27.57	27.70	28.88	29.39	28.82		
LOX (W)	70.99	71.17	71.32	71.94	72.90	73.50	73.70		
SURF T (C)	27.4	27.6	27.8	27.9	27.6	27.6	27.2		
28									
27	19	28	25	30	24	23	24		
26	23	36	32	33	27	29	34		
25	35	43	47	41	30	37	44		
24	47	59	65	52	36	54	57		
23	68	90	88	68	45	73	77		
22	91	117	119	86	59	93	102		
21	133	175	152	115	78	117	128		
20	171	206	188	154	105	156	178		
19	242	255	249	214	168	218	244		
18	367	382	372	336	301	344	356		
17					424				
16									
15									
14									
13									
12									
11									
10									
9									
8									
7									
6									

ISOTHERM DEPTHS (M)

		R/V R BALDRIGE				MB-STACS36-90			
XBT NO.	43	44	45	46	47	48	49		
YEAR	90	90	90	90	90	90	90		
MONTH	7	7	7	7	7	7	7		
DAY (GMT)	6	6	6	6	7	7	7		
TIME (GMT)	1624	1801	1945	2128	0346	1034	1229		
LAT (N)	28.09	27.71	27.32	26.92	26.28	26.31	26.61		
LOX (W)	74.03	74.21	74.41	74.57	74.88	74.70	74.28		
SURF T (C)	28.0	27.8	28.3	27.9	28.5	28.4	28.1		
28	4	14			34	30	23		
27	27	25	28	26	48	44	36		
26	35	31	32	38	68	61	49		
25	51	52	51	55	88	87	68		
24	97	105	98	91	101	106	88		
23	143	156	154	148	133	134	125		
22	171	180	184	178	153	151	153		
21	191	206	210	209	184	181	187		
20	227	246	253	247	216	215	233		
19	293	309	315	310	268	274	282		
18	415	435	433	431	382	373	385		
17									
16									
15									
14									
13									
12									
11									
10									
9									
8									
7									
6									

ISOTHERM DEPTHS (M)

		R/V R BALDRIGE				MB-STACS36-90			
XBT NO.	50	51	52	53					
YEAR	90	90	90	90					
MONTH	7	7	7	7					
DAY (GMT)	8	8	9	10					
TIME (GMT)	1555	2143	1555	1557					
LAT (N)	27.83	27.86	27.48	27.00					
LOX (W)	75.42	75.96	78.99	79.28					
SURF T (C)	28.0	28.3	29.0	29.0					
28	0	9	39	31					
27	21	32	54	59					
26	25	39	65	90					
25	38	56	86	121					
24	111	111	112	140					
23	184	164	135	153					
22	220	198	152	163					
21	241	232	163	180					
20	272	267	189	201					
19	327	326	234	234					
18				299					
17				350					
16				386					
15				427					
14									
13									
12									
11									
10									
9									
8									
7									
6									

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		1	2	3	4	5	6	7
YEAR		90	90	90	90	90	90	90
MONTH		9	9	9	9	9	9	9
DAY (GMT)		7	7	8	9	10	11	12
TIME (GMT)		1754	1759	1755	1741	1748	1751	1752
LAT (N)		26.01	26.02	26.42	26.47	26.48	22.77	18.59
LOX (W)		79.47	79.45	76.63	75.93	73.26	69.97	67.52
SURF T (C)		29.7	29.9	29.4	29.3	29.1	29.9	29.7
28		122	71	46	42	32	56	56
27		137	87	54	53	36	62	70
26		155	109	62	63	43	73	86
25		171	124	74	73	57	88	100
24		195	136	94	92	71	114	125
23		224	155	119	113	92	136	142
22		266	170	143	134	111	155	173
21		294	190	169	169	142	177	202
20		323	208	207	197	171	205	226
19		378	235	250	266	220	251	262
18		408	267	361	372	350	341	300
17			298				417	330
16			324					394
15			371					419
14			398					438
13			415					
12			436					
11								
10								
9								
8								
7								
6								

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		15	16	17	18	19	20	21
YEAR		90	90	90	90	90	90	90
MONTH		9	9	9	9	9	9	9
DAY (GMT)		17	17	18	18	18	18	18
TIME (GMT)		1956	2003	0009	0127	0146	0151	0304
LAT (N)		12.18	12.18	11.94	11.73	11.73	11.73	11.52
LOX (W)		58.50	58.50	58.25	58.00	58.00	58.00	57.75
SURF T (C)		29.3	29.4	29.1	29.3	29.3	29.4	29.3
28		54	52	45	38	34	40	37
27		59	59	61	49	44	49	56
26		67	70	72	68	68	82	69
25		91	86	90	89	88	97	91
24		105	104	98	100	100	105	99
23		123	123	111	117	113	120	108
22		137	137	126	129	127	132	113
21		150	153	148	139	136	141	124
20		163	160	159	155	153	147	134
19		181	186	173	161	165	165	149
18		200	202	188	176	179	182	170
17		213	216	207	194	198	201	191
16		225	234	225	213	212	221	209
15		244	258	242	232	233	237	226
14		287	296	253	250	259	260	249
13		317	323	284	282	278	281	266
12		338	350	316	314	305	308	287
11		364	374	364	359	344	351	310
10		402	407	406	390	356	365	339
9		451	450		434	421	427	401
8		481	482				508	
7			566				598	
6			700				724	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90			
XBT NO.		8	9	10	11	12	13	14	
YEAR		90	90	90	90	90	90	90	
MONTH		9	9	9	9	9	9	9	
DAY (GMT)		13	14	17	17	17	17	17	
TIME (GMT)		1747	0601	0236	1406	1523	1649	1818	
LAT (N)		16.60	15.14	14.23	12.79	12.80	12.60	12.38	
LOX (W)		63.18	61.71	61.11	59.53	59.25	59.00	58.75	
SURF T (C)		29.4	29.2	29.0	29.2	29.3	29.5	29.5	
28		51	55	50	45	36	40	38	
27		60	67	57	53	47	54	48	
26		70	81	72	68	72	66	71	
25		86	101	85	90	96	93	91	
24		128	117	104	109	121	114	112	
23		156	125	116	128	129	128	129	
22		170	139	128	145	145	136	141	
21		180	158	138	157	156	147	148	
20		196	171	142	172	164	160	164	
19		215	185	159	183	176	170	177	
18		244	195	169	197	193	182	189	
17		287	216	179	210	207	204	203	
16		312	242	186	224	226	226	230	
15		354	269	214	236	251	243	268	
14		382	291	238	250	274	260	285	
13		397	316	274	263	294	279	303	
12		430	337	292	281	316	309	318	
11			389	372	305	335	346	340	
10					326	373	394	384	
9					390	443	455	426	
8							490		
7							614		
6							714		

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90			
XBT NO.		22	23	24	25	26	27	28	
YEAR		90	90	90	90	90	90	90	
MONTH		9	9	9	9	9	9	9	
DAY (GMT)		18	18	18	18	18	18	18	
TIME (GMT)		0423	0605	1025	1120	1231	1405	1532	
LAT (N)		11.30	11.07	10.82	10.68	10.48	10.28	10.05	
LOX (W)		57.50	57.22	56.94	56.78	56.53	56.28	56.02	
SURF T (C)		29.6	29.5	29.0	29.2	29.4	29.2	29.1	
28		36	44	44	45	44	34	24	
27		54	56	56	60	55	54	45	
26		69	64	70	66	64	69	60	
25		83	73	76	74	78	76	69	
24		88	81	83	81	81	81	79	
23		97	91	86	86	88	84	86	
22		109	99	90	94	96	87	103	
21		114	104	98	97	100	91	110	
20		121	111	111	103	120	103	132	
19		131	141	126	113	138	124	142	
18		143	145	136	123	147	169	156	
17		153	153	145	143	156	176	171	
16		167	172	155	156	174	182	178	
15		187	186	164	164	180	193	189	
14		210	197	179	176	188	205	203	
13		239	217	195	192	196	220	223	
12		272	230	211	206	214	229	248	
11		307	260	236	225	244	262	282	
10		350	295	262	255	293	318	319	
9		383	339	353	348	364	395	374	
8		437	394	415	414	460	465	465	
7		523				572	564	564	
6		662				721	699	699	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		29	30	31	32	33	34	35
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	18	18	19	19	19	19	19	19
TIME (GMT)	1904	2115	0145	0346	1330	1648	2000	
LAT (N)	9.85	10.24	10.54	10.87	11.19	11.00	10.82	
LON (W)	55.80	55.63	55.51	55.32	55.24	54.55	53.87	
SURF T (C)	29.3	29.2	29.3	28.8	29.1	29.6	29.6	
28	17	22	39	52	50	44	25	
27	47	60	59	64	69	61	54	
26	67	76	71	78	77	75	72	
25	76	84	81	88	87	86	85	
24	88	93	90	96	92	94	97	
23	94	101	96	103	96	107	101	
22	104	109	103	108	103	120	107	
21	111	119	109	115	109	127	134	
20	124	129	114	121	118	135	140	
19	140	139	132	130	125	153	147	
18	148	156	149	137	132	164	158	
17	159	169	170	152	150	172	172	
16	182	183	182	167	166	183	190	
15	196	194	196	175	177	196	209	
14	207	206	213	189	195	205	233	
13	233	220	231	206	208	222	249	
12	258	230	259	221	217	246	271	
11	280	262	287	259	236	273	318	
10	323	321	321	305	301	327	360	
9	383	422	390	399	367	411	418	
8		520		472	433	481	475	
7		614		619		553	531	
6						693	678	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		36	37	38	39	40	41	42
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	20	20	20	20	20	21	21	21
TIME (GMT)	0357	0915	1637	1939	2232	0838	1005	
LAT (N)	10.64	10.48	10.33	10.23	10.10	10.01	9.70	
LON (W)	53.22	52.13	51.11	50.45	49.76	49.03	49.14	
SURF T (C)	29.4	29.2	29.1	29.5	29.4	29.3	29.4	
28	43	37	38	39	39	35	40	
27	62	59	55	46	44	43	46	
26	77	67	64	51	49	50	55	
25	92	79	71	56	50	61	65	
24	108	88	77	70	66	68	69	
23	114	99	83	78	71	78	75	
22	128	103	86	86	79	84	80	
21	133	109	92	91	89	88	86	
20	139	117	100	96	99	92	96	
19	147	122	107	101	104	101	102	
18	161	134	121	107	108	111	108	
17	177	145	126	111	110	118	114	
16	191	153	130	116	114	122	119	
15	202	158	140	122	128	128	131	
14	213	165	150	129	142	139	139	
13	227	181	165	153	164	149	150	
12	248	198	182	174	192	167	161	
11	291	239	218	215	218	193	187	
10	326	351	276	293	256	247	259	
9	394	402	354	389	360	315	335	
8		480		483	467	392	416	
7		589		577	603	536	536	
6				710	709	682	682	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		43	44	45	46	47	48	49
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	21	21	22	22	22	22	22	22
TIME (GMT)	1158	1322	0205	0347	0504	0657	0953	
LAT (N)	9.38	9.07	8.79	8.45	8.14	7.84	7.53	
LON (W)	49.26	49.38	49.46	49.61	49.72	49.82	49.96	
SURF T (C)	29.2	29.7	29.8	29.5	29.5	29.0	28.3	
28	41	37	39	37	24	45	45	
27	53	52	58	64	74	97	99	
26	59	76	71	86	98	117	123	
25	67	82	81	109	107	121	127	
24	71	86	89	114	117	128	134	
23	79	94	93	116	124	133	139	
22	83	99	98	120	127	137	143	
21	87	109	116	125	132	143	148	
20	100	122	121	135	142	150	155	
19	104	129	123	144	146	152	162	
18	109	139	130	148	151	156	170	
17	117	144	141	156	156	164	174	
16	122	149	149	171	168	172	175	
15	132	157	157	184	176	190	176	
14	142	167	167	196	179	198	178	
13	151	183	181	204	183	207	187	
12	167	205	198	213	195	216	206	
11	199	229	235	223	216	231	263	
10	271	290	286	282	265	266	284	
9	351	372	365	335	312	292	361	
8	450	497		438	362	343	399	
7	520	578		500	441	402	435	
6	668	681		589	562	522	575	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		50	51	52	53	54	55	56
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	22	22	22	22	23	23	23	23
TIME (GMT)	1515	2105	2232	2301	0533	0709	1349	
LAT (N)	7.30	7.13	6.94	6.85	6.73	6.47	6.22	
LON (W)	50.13	50.32	50.47	50.52	50.67	50.83	51.06	
SURF T (C)	28.7	28.6	28.4	28.5	27.9	27.8	28.2	
28	49	48	56	61	35	44	5	
27	102	90	98	92	74	74	65	
26	111	101	105	101	81	81	81	
25	125	106	111	108	98	95	87	
24	131	108	113	111	103	100	93	
23	136	110	114	113	108	110	102	
22	141	121	117	114	115	118	107	
21	144	129	124	127	126	129	116	
20	149	138	151	147	134	139	122	
19	163	142	155	150	137	142	125	
18	169	145	157	151	140	145	129	
17	171	147	158	153	142	148	132	
16	173	148	159	154	147	157	134	
15	174	149	160	155	158	162	140	
14	176	152	167	169	166	164	143	
13	182	172	187	185	177	177	150	
12	220	208	219	222	202	211	175	
11	245	226	246	258	245	252	216	
10	264	247	268	283	269	261	274	
9	327	291	293	314	293	300	312	
8	381	380	379	386	354	422	407	
7	455		533	573		557		
6	587		615	642		650		

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				NB-STACS37-90		
XBT NO.	57	58	59	60	61	62	63	
YEAR	90	90	90	90	90	90	90	
MONTH	9	9	9	9	9	9	9	
DAY (GMT)	23	23	23	23	23	24	24	
TIME (GMT)	1433	1901	1955	2147	2314	0024	0244	
LAT (N)	6.16	6.10	5.96	5.80	5.56	5.38	5.05	
LOX (W)	51.17	51.27	51.26	51.26	51.25	51.10	50.75	
SURF T (C)	28.9	28.4	28.7	28.5	28.4	28.9	28.6	
28	9	7	10	7	6	7	10	
27	59	60	68	52	51	59	58	
26	83	87	77	75	61	68	73	
25	88	89	80	80	70	72	92	
24	94	92	85	83	74	77	94	
23	98	97	90	90	82	81	95	
22	100	100	96	100	92	84	97	
21	103	110	113	109		98		
20	109	127	121	113				
19	115	135	124	119				
18	125	139	129	125				
17	132	144	140	141				
16	143	147	161	161				
15	149	156	185	190				
14	152	193	215	223				
13	158	217	230	241				
12	188	226	241	277				
11	234	245	274	291				
10	271	267	308	304				
9	316	329	342	328				
8	442		429	396				
7	510		506					
6	619							

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				NB-STACS37-90		
XBT NO.	64	65	66	67	66	69	70	
YEAR	90	90	90	90	90	90	90	
MONTH	9	9	9	9	9	9	9	
DAY (GMT)	24	24	24	25	25	25	25	
TIME (GMT)	0549	0834	1325	0354	0531	1158	1320	
LAT (N)	4.68	4.30	3.87	3.97	4.22	4.54	4.66	
LOX (W)	50.32	49.90	49.12	48.74	48.53	48.36	48.09	
SURF T (C)	27.7	27.3	27.6	28.1	28.2	28.3	28.5	
28				6	23	46	72	
27	73	72	86	104	100	107	112	
26	79	103	130	131	133	122	125	
25	94	107	150	154	161	140	153	
24			154	158	173	164	162	
23			157	160	174	170	178	
22			160	161	175	175	180	
21			162	162	176	182	183	
20			163	162	177	186	195	
19			163	163	177	189	202	
18			164	164	178	191	204	
17			165	165	178	193	206	
16			166	166	179	196	211	
15				167	180	200	215	
14				168	181	202	218	
13				170	183	205	224	
12				176	191	212	229	
11				190	214	241	266	
10				267	287	279	313	
9				340	348	353	332	
8				426	391	383	426	
7					491		493	
6					619		591	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				NB-STACS37-90		
XBT NO.	71	72	73	74	75	76	77	
YEAR	90	90	90	90	90	90	90	
MONTH	9	9	9	9	9	9	9	
DAY (GMT)	25	25	25	25	25	26	26	
TIME (GMT)	1441	2045	2150	2309	2316	0934	1056	
LAT (N)	4.80	4.91	5.02	5.18	5.18	5.33	5.64	
LOX (W)	47.83	47.53	47.32	47.06	47.06	46.81	46.70	
SURF T (C)	28.8	29.0	29.1	28.9	28.9	28.9	29.0	
28	55	58	67	59	51	34	18	
27	109	104	112	94	89	77	50	
26	135	129	135	115	108	95	83	
25	149	139	144	129	118	121	106	
24	162	150	157	137	130	134	117	
23	167	161	163	141	134	138	128	
22	172	165	165	145	138	141	134	
21	179	169	167	149	141	143	136	
20	182	173	169	152	145	146	137	
19	188	176	172	155	148	148	140	
18	192	183	177	164	158	151	145	
17	200	187	183	171	165	157	149	
16	205	190	191	175	170	161	153	
15	207	193	194	177	173	166	157	
14	210	196	197	183	177	168	163	
13	217	201	206	188	183	172	168	
12	227	221	221	196	191	179	172	
11	276	258	240	222	219	195	194	
10	304	277	268	253	253	219	221	
9	342	320	308	304	309	268	254	
8	423	375	394	412	412	380	344	
7	513		494	496	496			
6	607		612	599	599			

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				NB-STACS37-90		
XBT NO.	78	79	80	81	82	83	84	
YEAR	90	90	90	90	90	90	90	
MONTH	9	9	9	9	9	9	9	
DAY (GMT)	26	26	26	27	27	27	27	
TIME (GMT)	1241	1416	2236	0037	0043	0237	0423	
LAT (N)	5.98	6.32	6.70	7.10	7.10	7.52	7.94	
LOX (W)	46.58	46.46	46.32	46.33	46.33	46.33	46.33	
SURF T (C)	29.8	30.1	30.4	29.8	30.1	30.7	30.3	
28	40	38	37	36	30	39	39	
27	59	48	48	49	47	52	50	
26	77	74	63	54	53	59	58	
25	86	81	74	61	57	64	63	
24	91	89	83	70	63	67	67	
23	97	99	89	77	71	70	69	
22	103	108	97	89	76	73	74	
21	108	111	99	97	82	81	80	
20	112	112	106	100	91	85	84	
19	114	114	111	106	94	89	90	
18	115	117	114		97	97	96	
17	118	124	119		101	102	100	
16	123	133	122		105	110	106	
15	132	139	130		117	119	110	
14	141	143	143		128	130	117	
13	146	151	149		138	136	126	
12	156	159	162		153	146	135	
11	187	182	192		171	163	158	
10	211	214	254		208	202	208	
9	254	298	329		301	277	273	
8	380	379	405		363	371	366	
7	501				475		510	
6	598				603		617	

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		85	86	87	88	89	90	91
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	27	27	27	27	27	27	27	28
TIME (GMT)	1129	1415	1635	1913	1913	1920	0328	
LAT (N)	8.37	8.35	8.32	8.31	8.31	8.31	8.29	
LOX (W)	46.33	45.73	45.13	44.56	44.56	44.56	43.94	
SURF T (C)	29.9	29.4	29.7	29.7	29.7	29.9	29.8	
28	35	43	49	54	54	48	38	
27	44	52	59	69	69	60	46	
26	53	56	65	75	75	67	53	
25	59	61	68	80	80	73	59	
24	62	65	75	83	83	78	62	
23	65	70	79	89	89	84	67	
22	69	79	86	95	95	89	70	
21	74	86	92	103	103	98	81	
20	81	90	96	107	107	100	100	
19	87	95	100	111	111	103	109	
18	92	100	104	118	118	107	114	
17	95	103	119	128		111	120	
16	98	110	129			124	125	
15	103	122	142			131	130	
14	107	133	150			136	136	
13	114	150	166			154	145	
12	130	170	186			172	167	
11	186	214	230			201	184	
10	229	268	306			248	263	
9	316	362	381			312	374	
8	396	487				462		
7		629				580		
6						694		

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		92	93	94	95	96	97	98
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	28	28	28	28	28	28	28	28
TIME (GMT)	0456	0515	0653	0845	1536	1726	2243	
LAT (N)	7.88	7.88	7.51	7.08	6.66	6.30	5.98	
LOX (W)	43.97	43.97	43.99	44.03	44.06	44.03	44.03	
SURF T (C)	29.3	28.9	29.3	28.8	29.2	29.2	29.3	
28	59	51	46	47	45	49	54	
27	77	73	53	60	53	59	61	
26	83	78	59	64	60	63	66	
25	88	83	64	69	63	69	72	
24	91	88	68	74	69	73	76	
23	96	92	76	77	73	78	79	
22	104	99	81	81	77	84	86	
21	108	104	87	87	86	88	90	
20	117	110	92	92	90	91	97	
19	125	123	97	97	95	94	101	
18	130	129	103	103	101	100	105	
17	133	135	111	110	107	106	108	
16	138	142	120	119	112	110	111	
15	148	148	126	127	120	113	119	
14	160	157	135	138	132	123	130	
13	171	168	148	149	144	135	147	
12	186	187	168	162	162	151	159	
11	207	210	186	182	195	176	181	
10		251	241	226	237	225	234	
9		338	328	306	319	313	306	
8		454		426	427	400		
7		586		522		512		
6		700		663		618		

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		99	100	101	102	103	104	105
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	9	9	9	9
DAY (GMT)	29	29	29	29	30	30	30	30
TIME (GMT)	0035	0041	0603	1506	0233	0442	1154	
LAT (N)	5.55	5.53	5.26	4.75	4.22	3.78	3.30	
LOX (W)	44.02	44.02	43.99	44.01	44.01	43.99	43.98	
SURF T (C)	28.9	28.8	29.0	28.2	27.5	27.5	27.6	
28	48	47	27	20		96	99	
27	57	55	40	59	98			
26	67	66	57	75	106	101	109	
25	79	78	73	93	115	105	111	
24	88	85	82	112	123	107	116	
23	91	90	87	116	127	111	124	
22	95	93	95	120	129	113	127	
21	101	97	102	123	132	116	130	
20	107	104	106	130	134	129	134	
19	111	110	108	133	150	146	140	
18	115	113	110	135	153	149	145	
17	117	120	116	138	156	152	159	
16	121	124	124	144	161	160	166	
15	125	129	129	150	165	163	169	
14	133	139	136	154	189	171	174	
13	139	147	150	159	215	200	204	
12	156	161	167	169	234	244	238	
11	175	181	182	194	243	341	363	
10	225	227	222	231	329	350	378	
9	284	285	272	305	385	389	408	
8	333	391	376	362		465		
7		489		479		545		
6		597		581		649		

ISOTHERM DEPTHS (M)

		R/V MALCOLM BALDRIGE				MB-STACS37-90		
XBT NO.		106	107	108	109	110	111	112
YEAR	90	90	90	90	90	90	90	90
MONTH	9	9	9	9	10	10	10	10
DAY (GMT)	30	30	30	30	1	1	1	1
TIME (GMT)	1405	1416	1617	0006	0136	0320	0333	
LAT (N)	2.85	2.85	2.40	1.95	1.63	1.23	1.23	
LOX (W)	44.00	44.00	44.02	44.02	44.06	44.07	44.07	
SURF T (C)	27.6	27.7	27.7	27.3	27.2	27.3	27.0	
28		82	80	66	65	66	86	82
27		108	101	100	120	98	104	102
26								
25	115	114	111	126	138	145	144	
24	123	122	121	132	140	147	146	
23	125	124	125	135	142	148	147	
22	128	125	129	137	144	149	148	
21	153	128	136	144	146	150	149	
20	158	137	140	151	153	153	152	
19	165	152	148	164	158	156	156	
18	179	159	157	175	172	175	178	
17	186	168	162	179	185	190	192	
16	194	181	176	189	193	199	199	
15		188	189	195	199	210	213	
14		196	205	205	212	233	242	
13		235	234	223	237	263	262	
12		290	274	258	258	331	273	
11		363	321	328	292	337	334	
10		389	364	401	370	373	341	
9		438	446		421	471	424	
8		476	490		501		539	
7		558	539		523		623	
6		639	576		576			

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								MB-STACS37-90							
XBT NO.	113	114	115	116	117	118	119	XBT NO.	120	121	122	123	124	125	126
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GMT)	1	1	1	1	1	1	1	DAY (GMT)	1	2	2	2	2	2	2
TIME (GMT)	1021	1046	1403	1450	1837	1923	2018	TIME (GMT)	2254	0136	0420	0726	1012	1256	1306
LAT (N)	0.82	0.68	0.50	0.32	0.13	0.07	0.00	LAT (N)	0.49	0.85	1.56	2.16	2.67	3.20	3.20
LOX (W)	44.08	44.15	44.22	44.29	44.37	44.42	44.42	LOX (W)	44.94	45.30	45.92	46.48	47.00	47.55	47.55
SURF T (C)	27.2	27.3	27.1	27.2	27.1	27.1	27.1	SURF T (C)	27.2	27.3	27.1	27.2	27.0	27.0	27.0
28								28							
27	86	77	73	73	70	30	113	27	98	90	63	74	61	0	
26	114	110	112	108	95	112	131	26	112	106	85	111	113	120	120
25	118	112	114	110	97	114	133	25	114	107	115	133	118	139	137
24	133	116	115	114	99	116	134	24	115	109	139	139	145	164	149
23	145	137	116	116	100	119	135	23	115	112	136	151	162	169	168
22	148	147	120	117	102	128	136	22	117	127	152	164	168	172	171
21	150	150	139	119	105	131	137	21	118	157	165	171	174	174	173
20	153	152	146	132	109	133	144	20	121	173	173	175	180	178	176
19	159	155	153	159	133	149	157	19	133	177	176	179	190	181	180
18	165	159	163	162	149	175	167	18	185	180	181	181	196	184	183
17	180	177	187	191	194	207	187	17	204	185	190	183	199	199	186
16	187	185	196	205	204	214	215	16	223	192	199	191	202	191	191
15	208	204	214	212	242	236	236	15	270	211	203	202	208	194	194
14	235	231	236	256	254	246	246	14	281	226	222	224	217	200	200
13	255	255	285	281	267			13	287	258	262	238	241	211	211
12	315	298	300	322	301			12	294	261	280	274	250	224	224
11	322	308	324	344	316			11	298	267	302	301	265	240	240
10	348	334	343	352	340			10	301	286	318	309	319	256	256
9	356	350	362	373	358			9	335	306	376	370	330	286	286
8	393	373	382	402	378			8	378					381	381
7		453		480				7							
6		564		599				6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								MB-STACS37-90							
XBT NO.	127	128	129	130	131	132	133	XBT NO.	134	135	136	137	138	139	140
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GMT)	2	2	2	2	3	3	3	DAY (GMT)	3	3	3	3	3	3	4
TIME (GMT)	1545	1839	2039	2227	0015	0217	0423	TIME (GMT)	0615	0822	1015	1205	1415	1620	0005
LAT (N)	3.75	4.22	4.64	5.02	5.43	5.84	6.29	LAT (N)	6.66	7.11	7.51	7.92	8.33	8.73	9.03
LOX (W)	48.07	48.53	48.83	49.09	49.34	49.66	49.96	LOX (W)	50.23	50.53	50.81	51.13	51.42	51.70	51.90
SURF T (C)	27.4	28.0	28.3	28.3	28.4	28.5	28.1	SURF T (C)	28.0	27.8	27.8	28.1	29.4	29.5	29.1
28								28							
27	127	99	31	36	39	34	33	27	59			27	40	32	32
26	134	150	154	160	151	149	126	26	110	60	76	52	53	50	52
25	157	171	162	173	168	154	137	25	118	95	91	68	73	72	69
24	170	189	176	185	172	160	139	24	121	99	104	81	79	79	71
23	174	191	193	195	185	167	141	23	123	105	109	86	81	84	74
22	175	192	203	208	195	191	144	22	126	114	112	99	83	86	78
21	177	193	207	216	231	223	173	21	142	120	118	106	89	91	82
20	178	194	213	227	245	232	200	20	164	125	125	110	94	94	85
19	183	195	215	233	259	258	205	19	169	127	137	124	102	96	88
18	186	197	217	235	268	262	210	18	177	129	143	129	105	97	90
17	195	198	218	236	280	286	212	17	179	132	148	131	106	99	92
16	199	199	219	238	282	289	218	16	184	138	151	136	109	101	95
15	203	201	220	241	286	294	227	15	188	144	153	141	115	104	104
14	208	208	222	243	295	299	230	14	201	151	158	158	117	107	106
13	211	211	224	264	334	303	252	13	223	171	192	172	124	110	110
12	214	218	232	270	349	317	281	12	271	230	232	200	145	120	118
11	228	229	275	281	382	347	299	11	296	263	272	239	191	179	152
10	253	310	317	335	418	380	335	10	340	306	317	300	352	279	261
9	307	367	372	396				9	392	366		385	393	349	302
8								8							388
7								7							
6								6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								MB-STACS37-90							
XBT NO.	134	135	136	137	138	139	140	XBT NO.	134	135	136	137	138	139	140
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GMT)	3	3	3	3	3	3	3	DAY (GMT)	3	3	3	3	3	3	4
TIME (GMT)	0615	0822	1015	1205	1415	1620	0005	TIME (GMT)	0615	0822	1015	1205	1415	1620	0005
LAT (N)	6.66	7.11	7.51	7.92	8.33	8.73	9.03	LAT (N)	6.66	7.11	7.51	7.92	8.33	8.73	9.03
LOX (W)	50.23	50.53	50.81	51.13	51.42	51.70	51.90	LOX (W)	50.23	50.53	50.81	51.13	51.42	51.70	51.90
SURF T (C)	28.0	27.8	27.8	28.1	29.4	29.5	29.1	SURF T (C)	28.0	27.8	27.8	28.1	29.4	29.5	29.1
28								28							
27	59			27	40	32	32	27	95	60	76	52	53	50	52
26	110	76	86	60	62	67	63	26	110	76	86	60	62	67	63
25	118	95	91	68	73	72	69	25	118	95	91	68	73	72	69
24	121	99	104	81	79	79	71	24	121	99	104	81	79	79	71
23	123	105	109	86	81	84	74	23	123	105	109	86	81	84	74
22	126	114	112	99	83	86	78	22	126	114	112	99	83	86	78
21	142	120	118	106	89	91	82	21	142	120	118	106	89	91	82
20	164	125	125	110	94	94	85	20	164	125	125	110	94	94	85
19	169	127	137	124	102	96	88	19	169	127	137	124	102	96	88
18	177	129	143	129	105	97	90	18	177	129	143	129	105	97	90
17	179	132	148	131	106	99	92	17	179	132	148	131	106	99	92
16	184	138	151	136	109	101	95	16	184	138	151	136	109	101	95
15	188	144	153	141	115	104	104	15	188	144	153	141	115	104	104
14	201	151	158	158	117	107	106	14	201	1					

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								NB-STACS37-90							
RBT NO.	141	142	143	144	145	146	147	RBT NO.	148	149	150	151	152	153	154
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GRT)	4	4	4	4	4	4	4	DAY (GRT)	4	4	4	4	4	5	5
TIME (GRT)	0112	0525	0631	1111	1221	1230	1517	TIME (GRT)	1622	1658	2003	2105	1316	1620	1935
LAT (N)	8.82	8.55	8.33	8.11	7.95	7.95	7.79	LAT (N)	7.63	7.47	7.26	7.07	6.83	6.60	6.37
LOX (W)	52.03	52.17	52.31	52.45	52.55	52.55	52.64	LOX (W)	52.79	52.93	53.04	53.17	56.00	56.60	57.18
SURF T (C)	29.3	29.2	29.5	29.4	30.7	29.4	29.5	SURF T (C)	29.5	29.6	29.7	29.6	29.2	29.2	30.0
28	29	29	33	40	63	37	41	28	45	36	56	44	43	40	46
27	42	41	51	59	73	52	56	27	59	47	65	52	94	56	55
26	59	60	63	70	80	67	71	26	80	58	78	64	110	77	67
25	62	67	72	80	86	73	79	25	87	69	84	79	119	90	76
24	66	77	81	86	93	79	88	24	93	83	98	91	122	98	86
23	70	79	86	93	98	86	95	23	100	93	106	108	127	100	93
22	75	82	90	98	106	91	100	22	110	103	112	116	130	104	101
21	77	86	93	110	116	96	103	21	113	107	115	119	141	114	113
20	79	92	99	114	121	104	110	20	115	111	119	123	169	131	121
19	82	96	108	120	126	115	120	19	118	117	123	127	176	153	127
18	84	101	112	124	130	119	127	18	121	120	140	131	186	164	142
17	87	106	115	128	137	124	131	17	136	130	146	174	194	173	150
16	90	111	120	135	145	130	138	16	140	145	152	183	199	183	161
15	92	116	127	139	156	137	144	15	146	152	159	195	213	195	172
14	95	122	140	145	145	145	154	14	150	160	163	197	227	204	181
13	100	134	151	155	155	161	161	13	158	170	168	198	245	223	200
12	112	150	180	175	161	175	175	12	183	182	178	199	260	246	221
11	143	166	226	197	192	197	197	11	195	199	194	200	273	263	247
10	223	259	274	220	215	216	216	10	234	258	228	228	333	309	305
9	276	296	349	252	233	242	242	9	255	342	334	334	373	381	370
8	379	394	429	377				8	352	409	390	390			
7								7							
6								6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								NB-STACS37-90							
RBT NO.	148	149	150	151	152	153	154	RBT NO.	155	156	157	158	159	160	161
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GRT)	4	4	4	4	4	5	5	DAY (GRT)	5	6	6	6	6	6	6
TIME (GRT)	1622	1658	2003	2105	1316	1620	1935	TIME (GRT)	2236	0150	0506	0834	1655	1847	1905
LAT (N)	7.63	7.47	7.26	7.07	6.83	6.60	6.37	LAT (N)	10.85	11.33	11.81	12.32	13.83	14.20	14.26
LOX (W)	52.79	52.93	53.04	53.17	56.00	56.60	57.18	LOX (W)	57.72	58.30	58.90	59.53	60.75	60.93	60.97
SURF T (C)	29.5	29.6	29.7	29.6	29.2	29.2	30.0	SURF T (C)	29.6	29.5	29.2	29.1	29.2	29.3	29.2
28	45	36	56	44	43	40	46	28	40	39	48	41	58	49	49
27	59	47	65	52	94	56	55	27	54	52	53	47	85	67	54
26	80	58	78	64	110	77	67	26	64	67	62	51	77	86	70
25	87	69	84	79	119	90	76	25	72	84	79	72	95	102	103
24	93	83	98	91	122	98	86	24	84	94	100	92	123	113	109
23	100	93	106	108	127	100	93	23	87	102	106	108	133	118	123
22	110	103	112	116	130	104	101	22	94	107	109	121	142	123	134
21	113	107	115	119	141	114	113	21	105	119	112	138	151	129	141
20	115	111	119	123	169	131	121	20	112	133	123	149	163	143	149
19	118	117	123	127	176	153	127	19	122	141	128	167	174	152	155
18	121	120	140	131	186	164	142	18	133	150	140	180	188	160	186
17	136	130	146	174	194	173	150	17	140	173	148	195	209	181	205
16	140	145	152	183	199	183	161	16	151	187	184	210	242	213	211
15	146	152	159	195	213	195	172	15	166	201	203	227	264	230	230
14	150	160	163	197	227	204	181	14	181	216	216	271	282	252	252
13	158	170	168	198	245	223	200	13	197	233	245	288	307	286	281
12	183	182	178	199	260	246	221	12	209	242	265	313	340		299
11	195	199	194	200	273	263	247	11	232	261	295	349	412		327
10	234	258	228	228	333	309	305	10	284	323	311	406	433		379
9	255	342	334	334	373	381	370	9	374	369	396				436
8	352	409	390	390				8							
7								7							
6								6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE								NB-STACS37-90							
RBT NO.	162	163	164	165	166	167	168	RBT NO.	162	163	164	165	166	167	168
YEAR	90	90	90	90	90	90	90	YEAR	90	90	90	90	90	90	90
MONTH	10	10	10	10	10	10	10	MONTH	10	10	10	10	10	10	10
DAY (GRT)	6	6	6	6	6	6	6	DAY (GRT)	6	6	6	7	8	9	10
TIME (GRT)	1930	1949	2006	1655	1656	1655	1655	TIME (GRT)	1930	1949	2006	1655	1656	1655	1655
LAT (N)	14.34	14.42	14.46	16.70	16.97	19.46	22.54	LAT (N)	14.34	14.42	14.46	16.70	16.97	19.46	22.54
LOX (W)	61.01	61.07	61.10	65.25	71.13	74.14	77.97	LOX (W)	61.01	61.07	61.10	65.25	71.13	74.14	77.97
SURF T (C)	29.3	29.0	29.1	30.0	29.6	29.4	29.1	SURF T (C)	29.3	29.0	29.1	30.0	29.6	29.4	29.1
28	43	26	30	57	64	64	75	28	43	26	30	57	64	64	75
27	62	61	43	97	75	88	87	27	62	61	43	97	75	88	87
26	75	76	57	124	84	109	109	26	75	76	57	124	84	109	109
25	95	87	67	148	93	144	128	25	95	87	67	148	93	144	128
24	119	102	83	161	103	162	153	24	119	102	83	161	103	162	153
23	128	110	100	169	122	170	174	23	128	110	100	169	122	170	174
22	135	114	103	179	140	177	190	22	135	114	103	179	140	177	190
21	143	122	109	186	156	191	205	21	143	122	109	186	156	191	205
20	151	134	120	201	174	212	230	20	151	134	120	201	174	212	230
19	165	141	146	219	190	235	274	19	165	141	146	219	190	235	274
18	178	156	173	238	222	267	329	18	178	156	173	238	222	267	329
17	205	171	200	263	256	304	386	17	205	171	200	263	256	304	386
16	221	188	218	287	293	339	417	16	221	188	218	287	293	339	417
15	237														

ISOTHERM DEPTBS (m)

R/V MALCOLM BALDRIGE

MB-STACS37-90

XBT NO.	169
YEAR	90
MONTH	10
DAY (GMT)	11
TIME (GMT)	0614
LAT (N)	25.03
LOX (W)	79.79
SURF T (C)	28.7
28	50
27	78
26	101
25	115
24	132
23	144
22	162
21	179
20	197
19	219
18	239
17	261
16	280
15	299
14	328
13	350
12	375
11	393
10	438
9	
8	
7	
6	