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NOAA Data Report ERL AOML-23

**HYDROGRAPHIC OBSERVATIONS IN THE WESTERN TROPICAL
AND SUBTROPICAL NORTH ATLANTIC OCEAN: ATLANTIC
CLIMATE CHANGE PROGRAM (ACCP) AND WESTERN
TROPICAL ATLANTIC EXPERIMENT
(WESTRAX) DURING 1991**

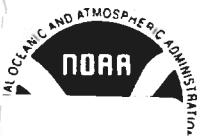
Elizabeth Johns
Anne Marie Wilburn

Atlantic Oceanographic and Meteorological Laboratory
Miami, Florida
March 1993

**UNITED STATES
DEPARTMENT OF COMMERCE**

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I. INTRODUCTION

Atlantic Oceanographic and Meteorological Laboratory cruises during 1991 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, June, and September 1991, 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 1-3. Additionally, during January and June 1991, the ACCP considered western boundary currents at 26.5°N 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/ACCP cruises conducted on the NOAA ship MALCOLM BALDRIGE during three cruises in 1991 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 1991 (MB-91-01-STACS)	MALCOLM BALDRIGE	1/08 - 2/06/91	35	111
June 1991 (MB-91-04-STACS)	MALCOLM BALDRIGE	6/12 - 7/05/91	49	189
September 1991 (MB-91-06-STACS)	MALCOLM BALDRIGE	9/08 - 9/23/91	25	7

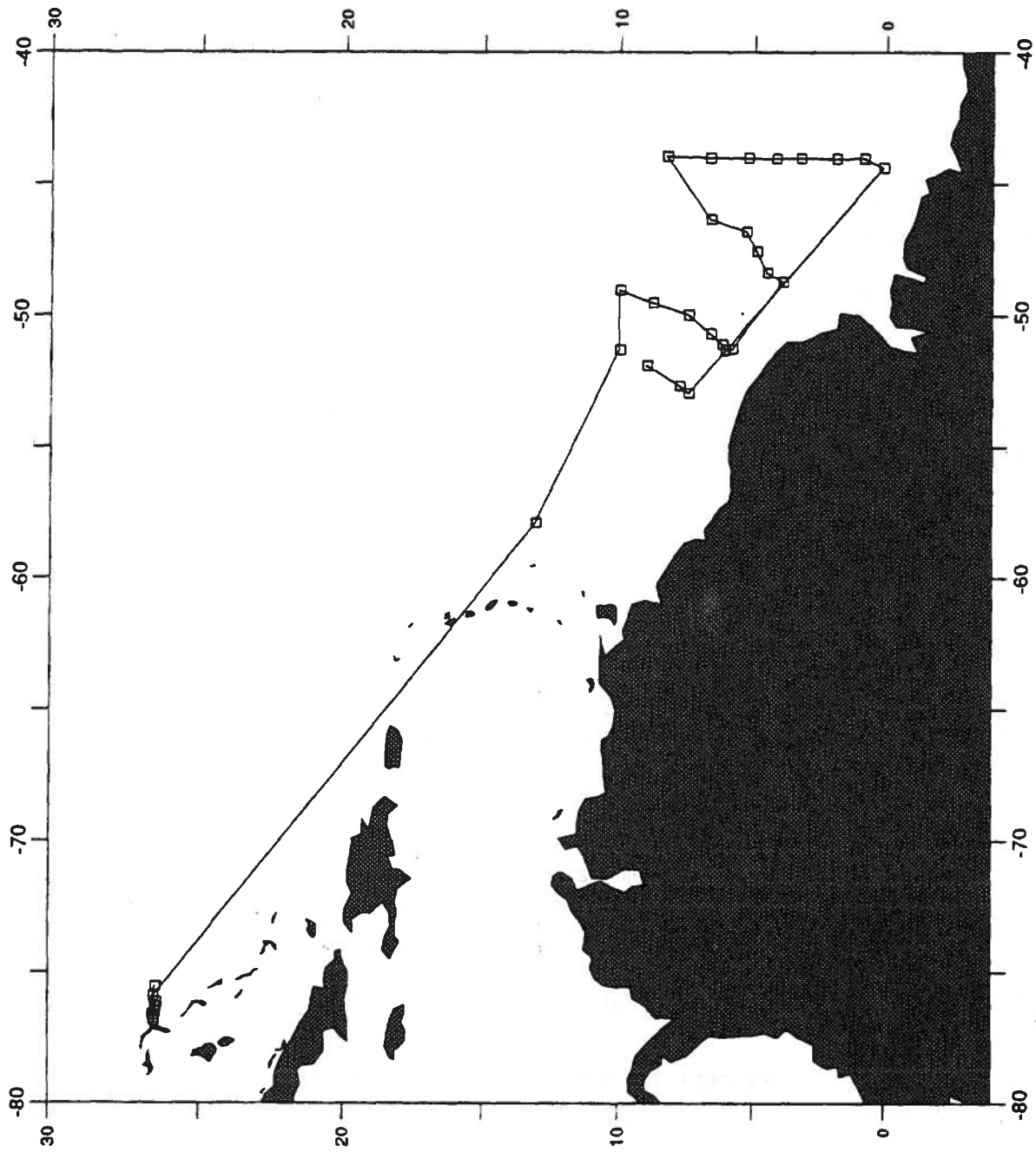


Figure 1. STACS cruise track for January 1991 showing CTD sampling stations.

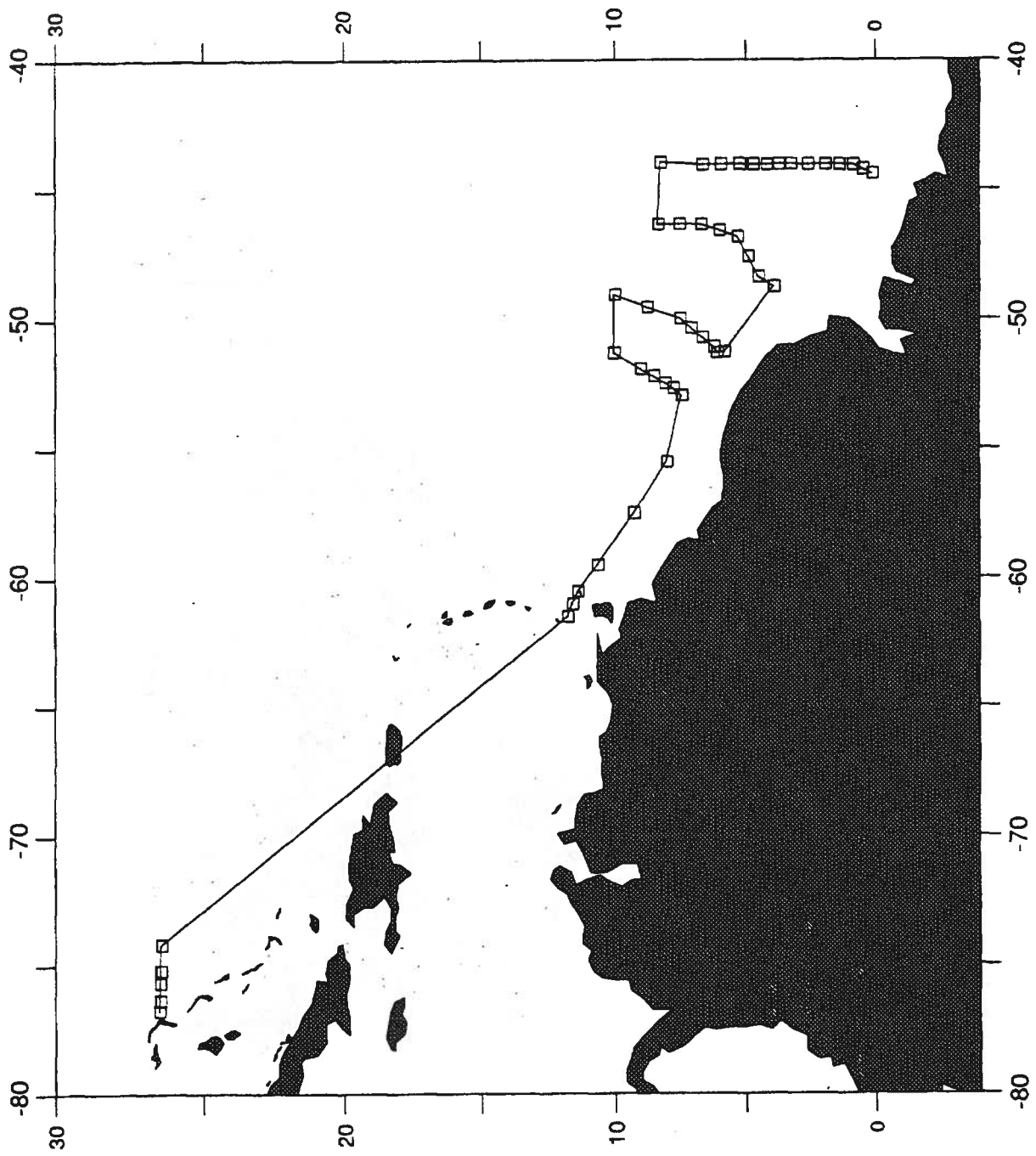


Figure 2. WESTRAX CTD stations for June 1991.

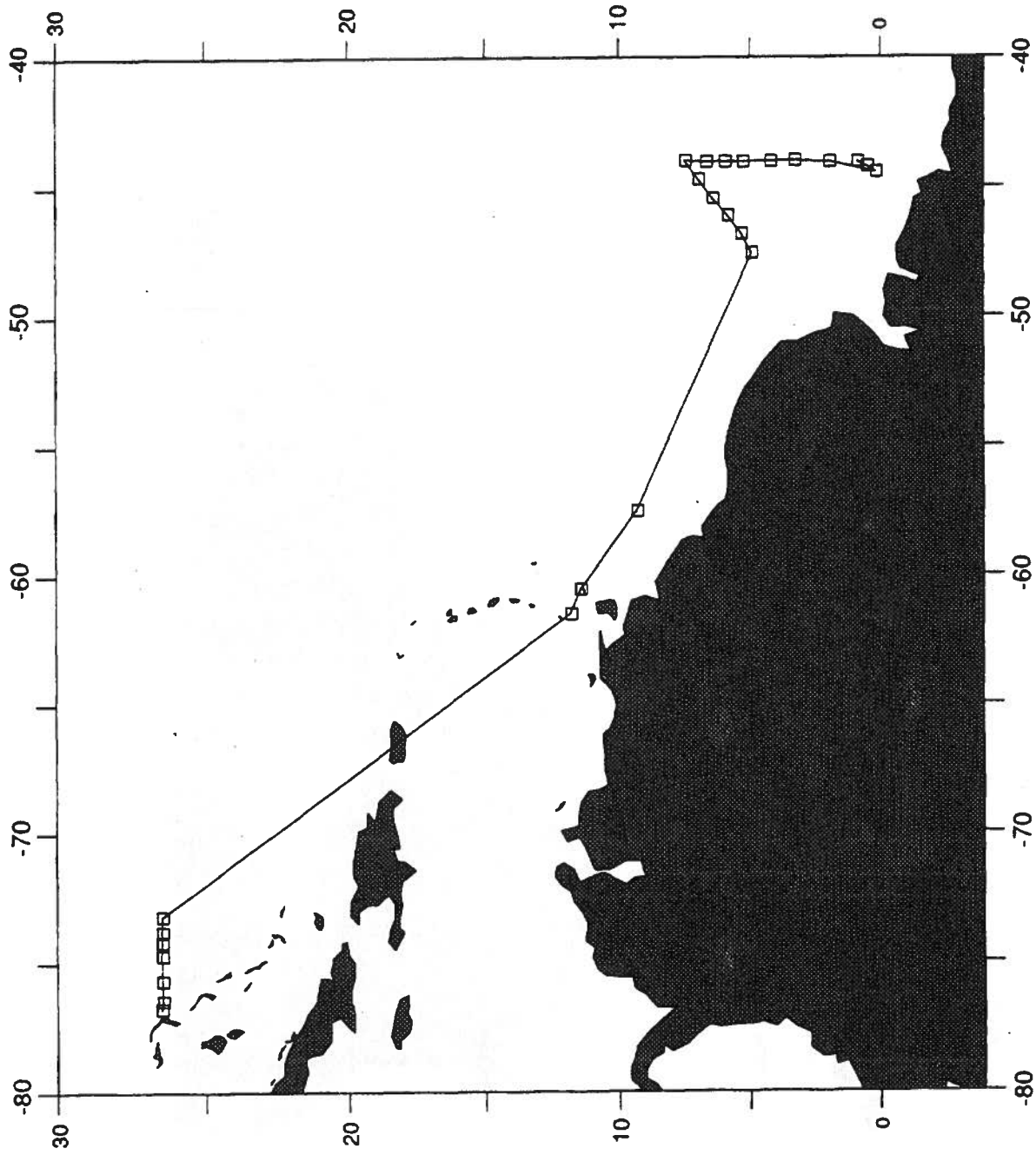


Figure 3. STACS/ACCP cruise track for September 1991 showing CTD sampling stations.

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 approximately 30 m per minute to a depth of 200 m then increases to 60 m 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, and 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 1991:

The January 1991 cruise included 35 CTD casts. Casts 10-35 were taken in the western tropical North Atlantic, and casts 1-9 along 26.5°N east of Abaco, the Bahamas. The CTD performance was marginal again on this cruise, the last to use the faulty CTD instrument (Johns and Wilburn, 1993). The result was

erratic calibration changes, requiring cast-by-cast calibrations similar to the September 1990 cruise. Fortunately the bottle salinity data quality was high.

There was a depth dependence to the distribution of bottle salinity minus uncalibrated CTD salinity, with values at the surface approximately .016 psu fresher than found at 1000 db. Below 1000 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 conductivity drifted erratically within the range of .007 to .034. A polynomial fit was determined for the upper water column over the entire 34 casts, and matched at 1000 db to the time-varying correction in the deep water for each cast. The bottle minus CTD salinities 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 1000 db are tabulated below:

P < 1000 db:

$$S = S - .016 + .289e-04 * P - .157e-07 * P * P + .266e-11 * P * P * P$$

P > 1000 db:

<u>Casts</u>	<u>Correction</u>	<u>Casts</u>	<u>Correction</u>
1-2	.016	20	.018
3-4	.013	21	.017
5	.009	22	.024
6	.012	23	.014
7	.014	24	.017
8	.011	25	.024
9	.007	26	.017
10-11	.013	27	.018
12	.015	28	.033
13	.012	29	.025
14	.013	30	.021
15	.019	31	.026
16	.023	32	.033
17	.030	33	.014
18	.031	34	.025
19	.020	35	.034

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 35 CTD casts, there were a total of 252 bottle values and the standard deviation of the calibrated CTD data minus the bottle salinities was $\pm .003$ psu.

JAN91

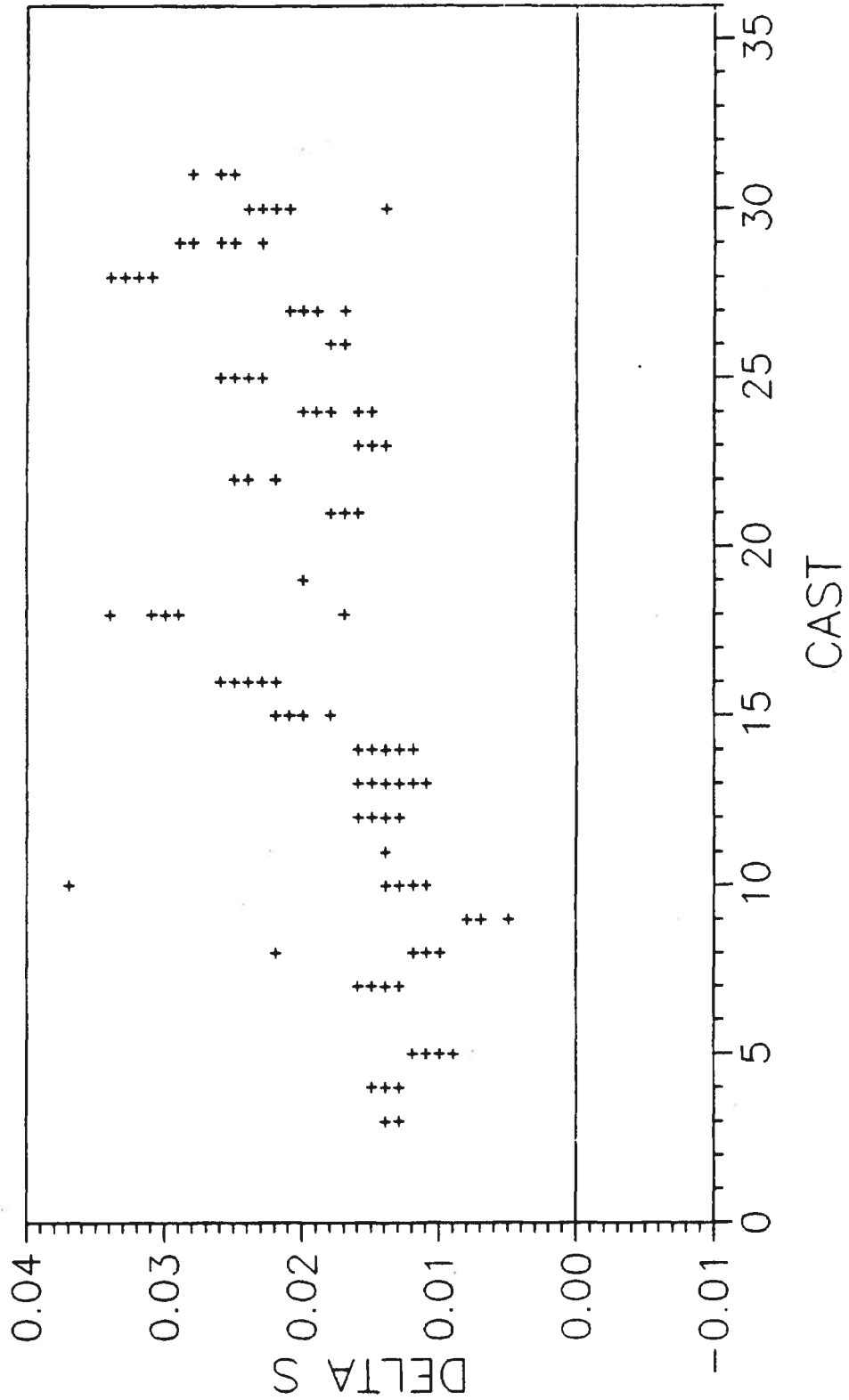


Figure 4. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the January 1991 cruise.

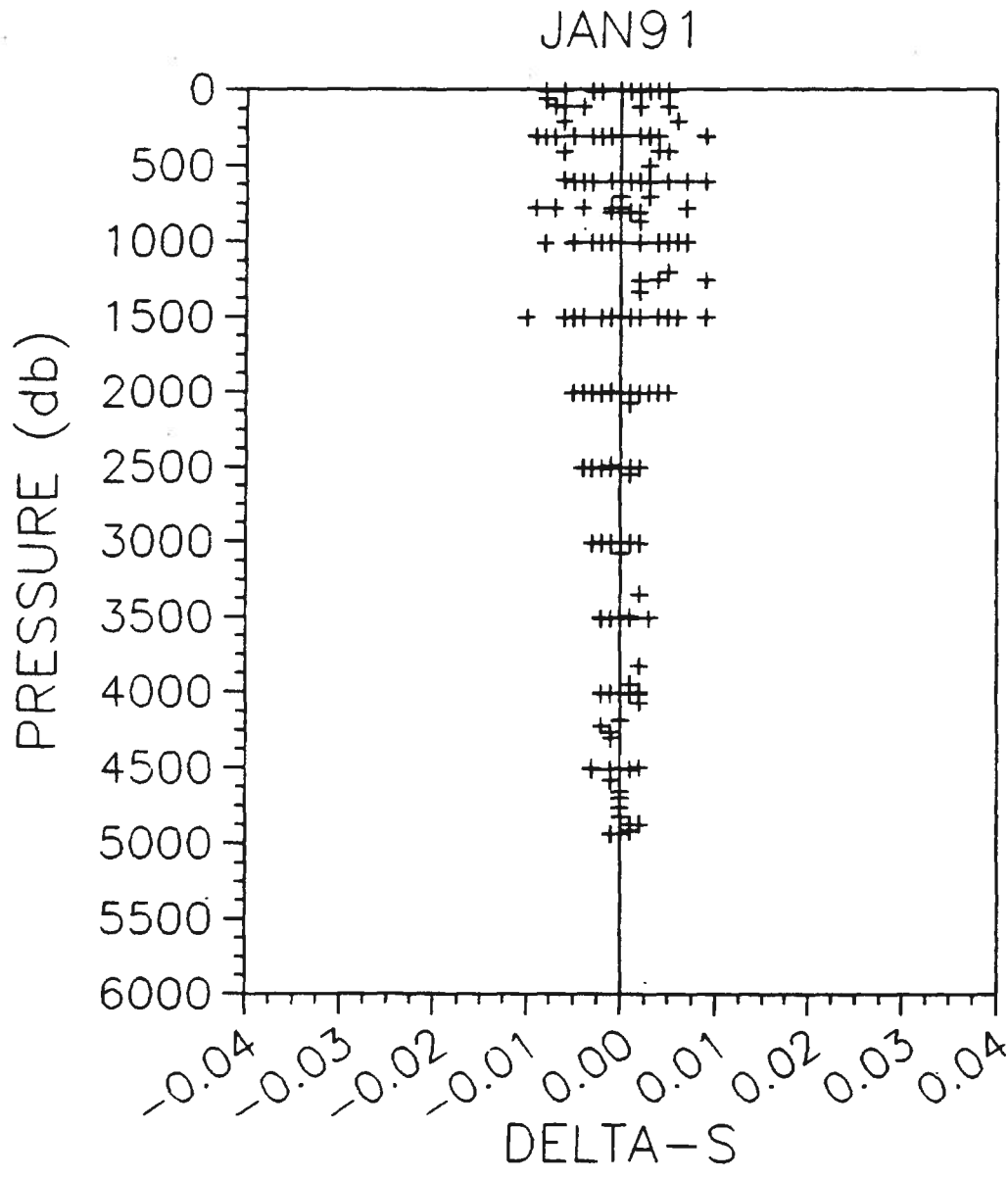


Figure 5. Bottle salinity minus calibrated CTD salinity vs. pressure for the January 1991 cruise.

June 1991:

The June 1991 cruise included 49 CTD casts. Casts 1-6 were taken along 26.5°N east of Abaco, the Bahamas, and the rest between Barbados and the equator off northern Brazil.

A different CTD instrument was used during this cruise than the previous 1990 and 1991 cruises, and the CTD performance was dramatically improved. Unfortunately, problems were experienced with faulty CTD wire, and several thousand meters had to be cut off, causing the remaining CTD casts to be limited to a depth of 4500 m. Autosal problems at the beginning of the cruise required the first 6 casts to be calibrated using the regional historical temperature-salinity correlation in the deep water.

There was no depth dependence to the distribution of bottle salinity minus uncalibrated CTD salinity. In addition, the CTD performance improved to the point that all 49 casts fell within $\pm .003$ of zero; i.e., even without using a post-cruise calibration the CTD was very accurate.

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 slowly within the range of .003 to -.003 psu, and stabilize to -.001 to -.002 for casts 21-49. 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 small drift in the CTD conductivity sensor.

The final salinity corrections used are shown below:

<u>Casts</u>	<u>Correction Applied</u>
1-6	.003
7-15	.000
16-18	-.002
19-20	-.003
21-22	-.002
23-24	-.001
25-33	-.002
34	-.001
35-40	-.002
41-46	-.001
47-49	-.002

Figure 7 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. These residuals were then plotted vs. the pressure at which each bottle was tripped. For the 49 good CTD casts, there were a total of 229 bottle values and the standard deviation of the calibrated CTD data minus the bottle salinities was $\pm .002$ psu.

September 1991:

The September 1991 cruise included 25 CTD casts. Casts 19-25 were taken along 26.5°N east of Abaco, the Bahamas, and 1-18 were taken between Barbados and the equator off northern Brazil.

JUN91

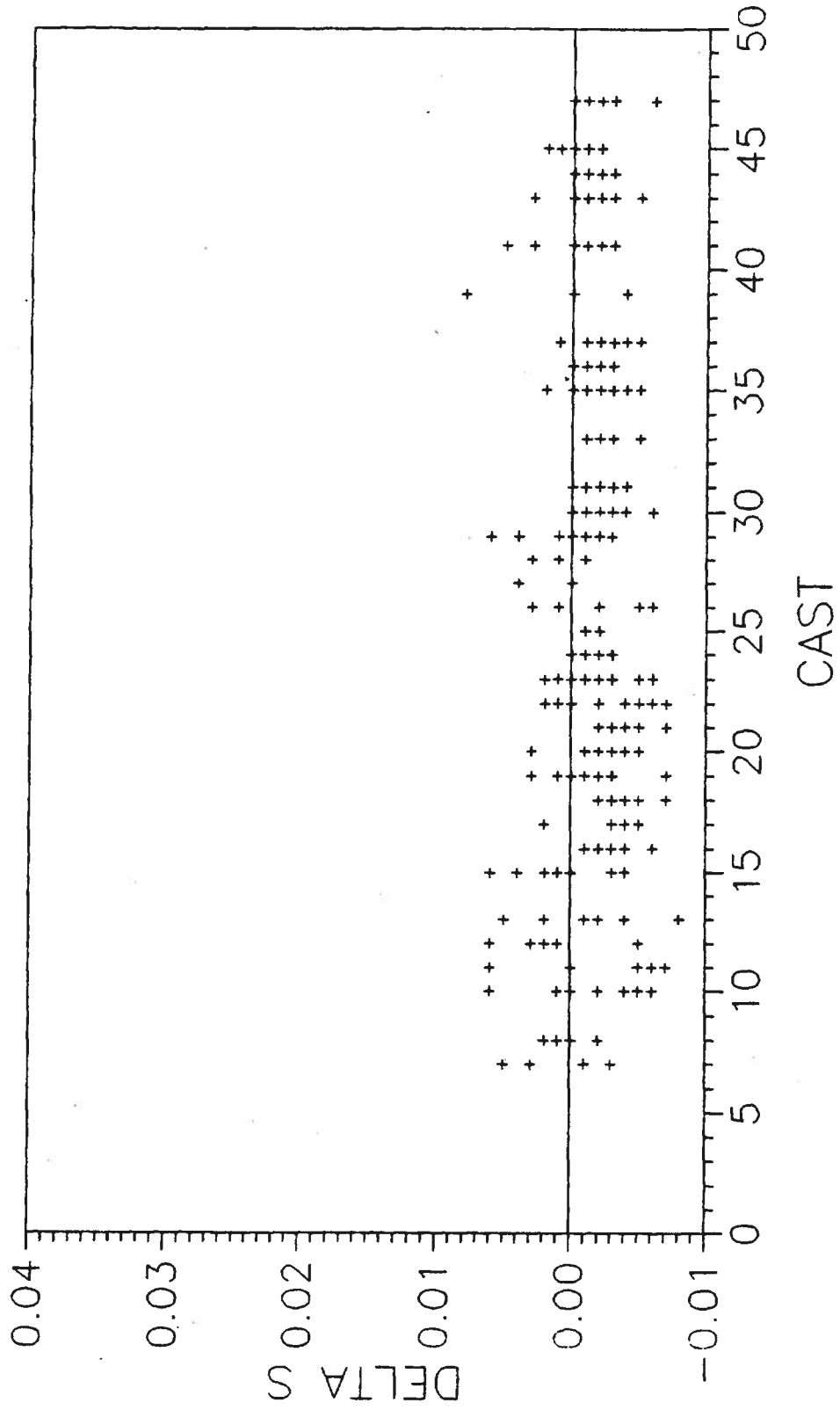


Figure 6. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the June 1991 cruise.

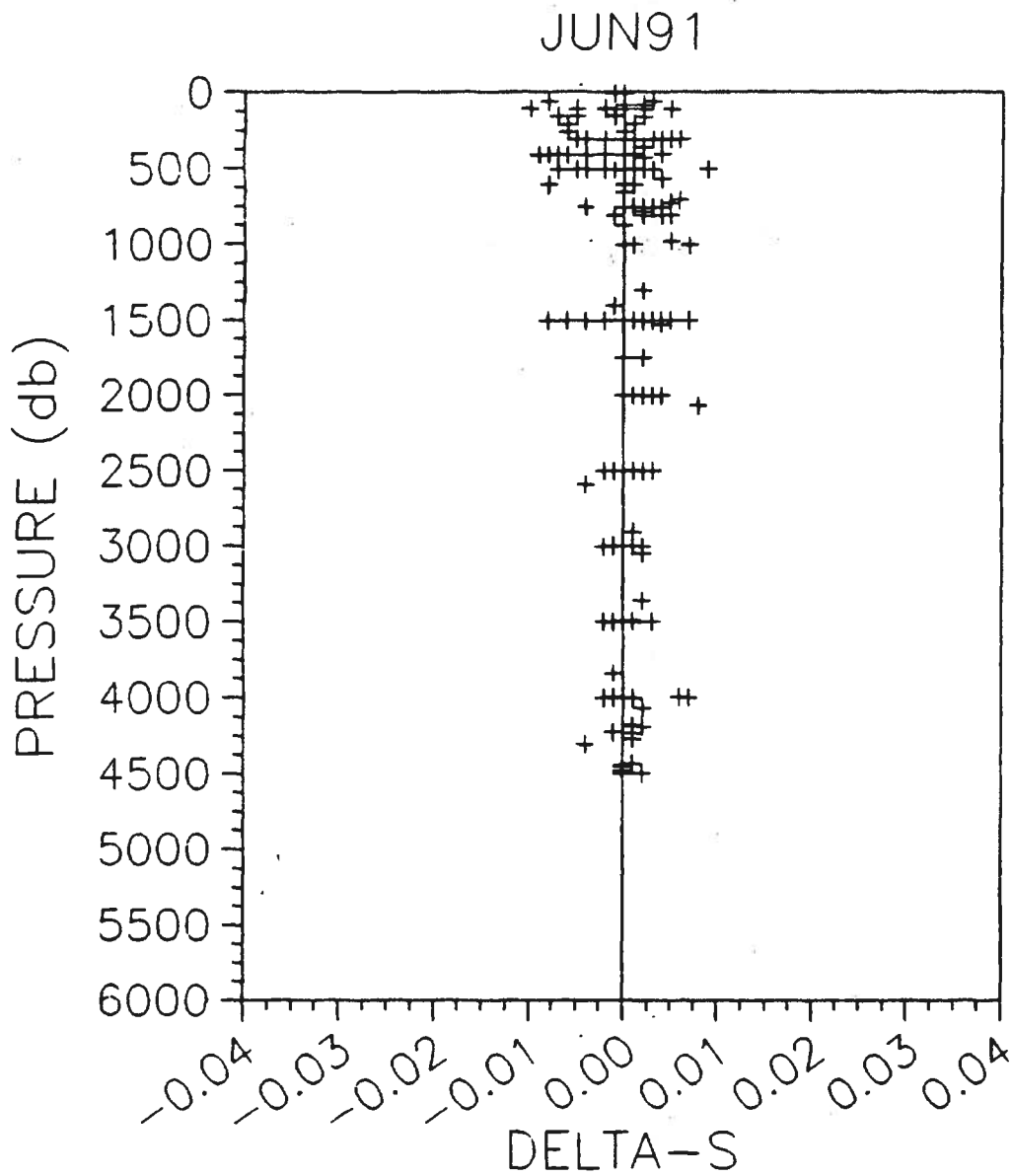


Figure 7. Bottle salinity minus calibrated CTD salinity vs. pressure for the June 1991 cruise.

The CTD performance continued to be good, similarly to the June 1991 cruise. The uncalibrated CTD salinities agreed with the bottle salinities within a $-.002$ to $.001$ psu range. There was no depth dependence to the calibration. Figure 8 shows the time history of the bottle minus uncalibrated CTD salinity for pressure greater than 1000 db.

The constant corrections applied to the CTD are tabulated below:

<u>Casts</u>	<u>Correction</u>
1-3	.000
4-6	-.001
7-8	.001
9	-.001
10-18	.000
19-20	-.001
21-25	-.002

Figure 9 shows the bottle salinity minus the final calibrated CTD salinity vs. pressure. These residuals were then plotted vs the pressure at which each bottle was tripped. For the 25 CTD casts, there were a total of 174 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.

SEP91

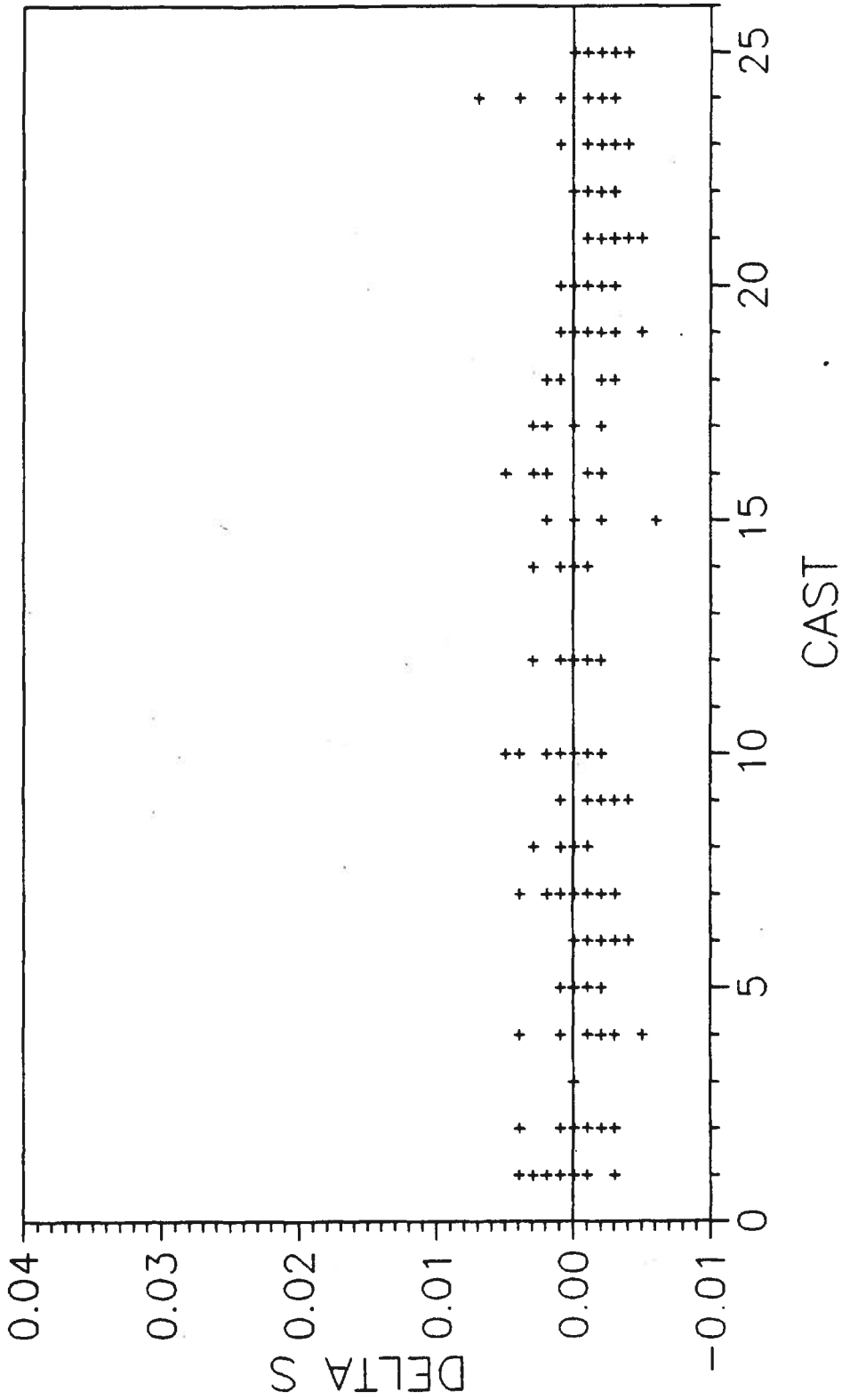


Figure 8. Time history of bottle minus uncalibrated CTD salinity vs. cast number for the September 1991 cruise.

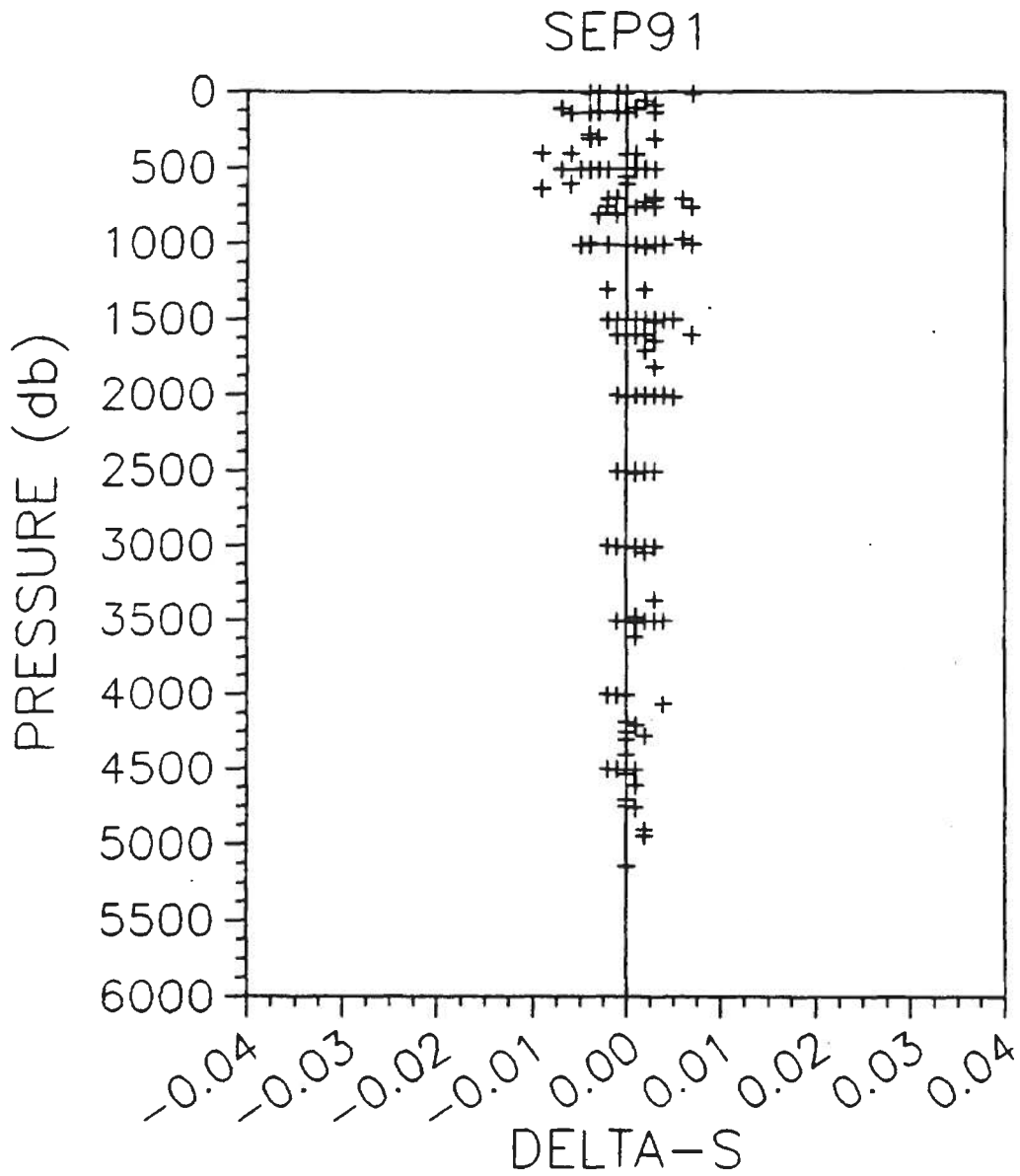


Figure 9. Bottle salinity minus calibrated CTD salinity vs. pressure for the September 1991 cruise.

III. REFERENCES

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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.

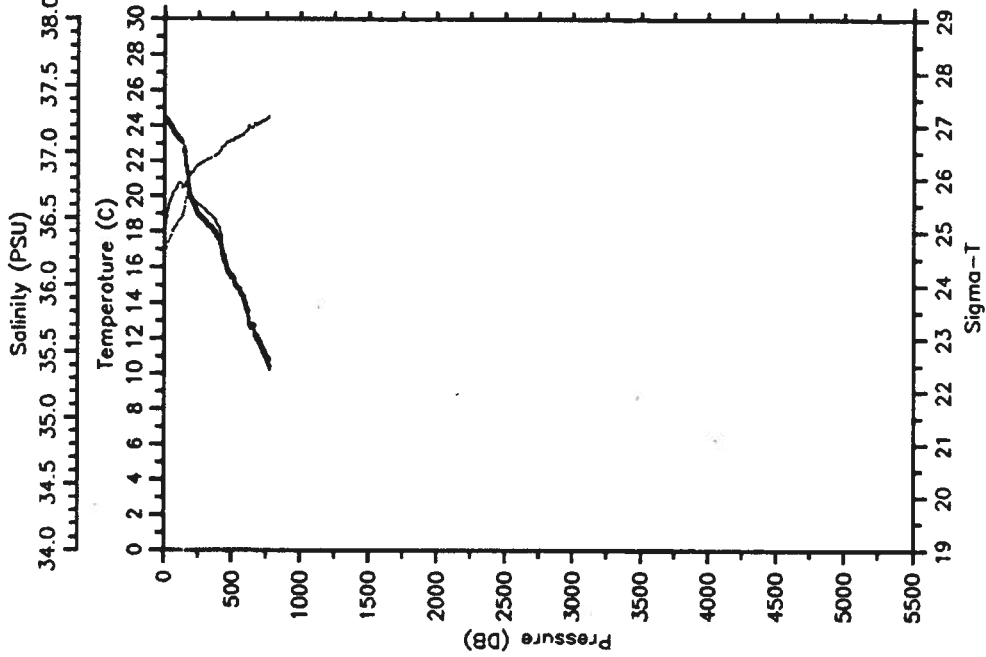
APPENDIX A: CTD DATA

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-STACS38-91 CTD 2 BALDRIGE

Date 01 09 91 Latitude 26.511N
 Time 1442 Z Longitude 76.856W

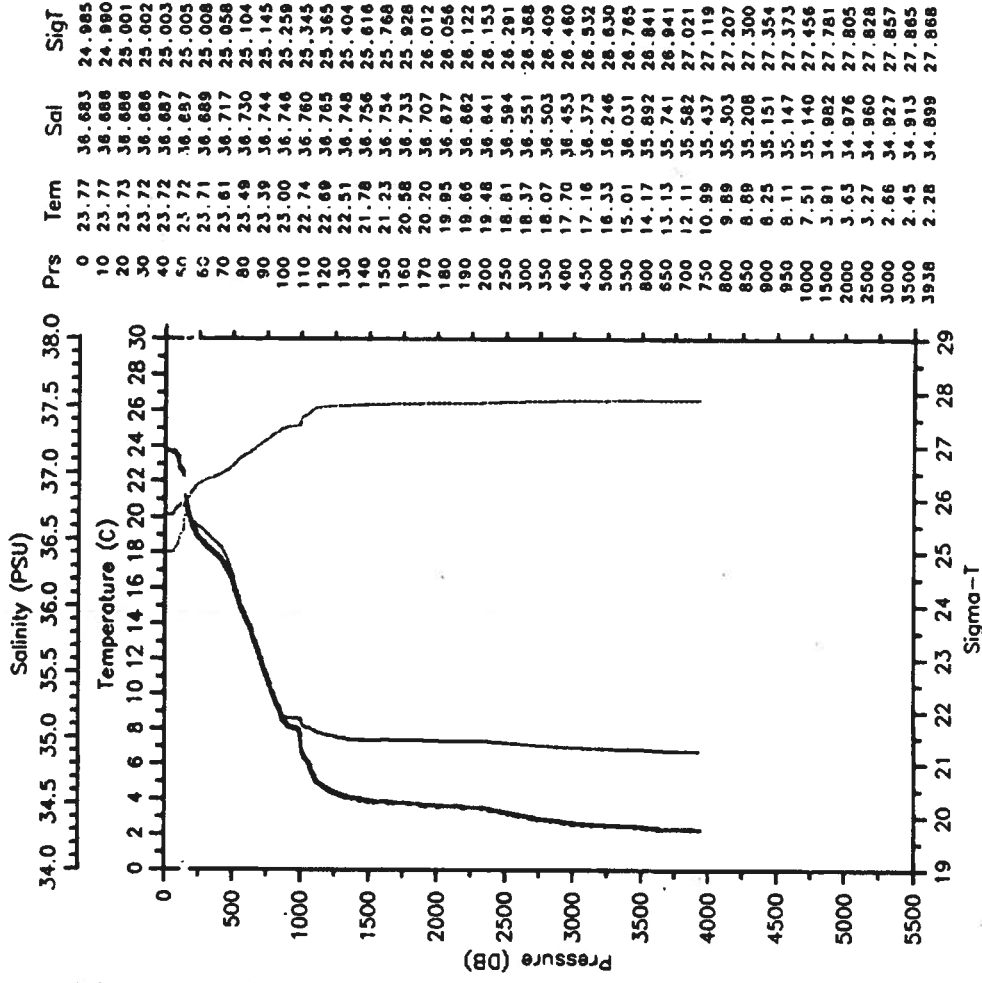
--- Tem --- Sal
 SigT



BAL-STACS38-91 CTD 3 BALDRIGE

Date 01 09 91 Latitude 26.511N
 Time 1706 Z Longitude 76.759W

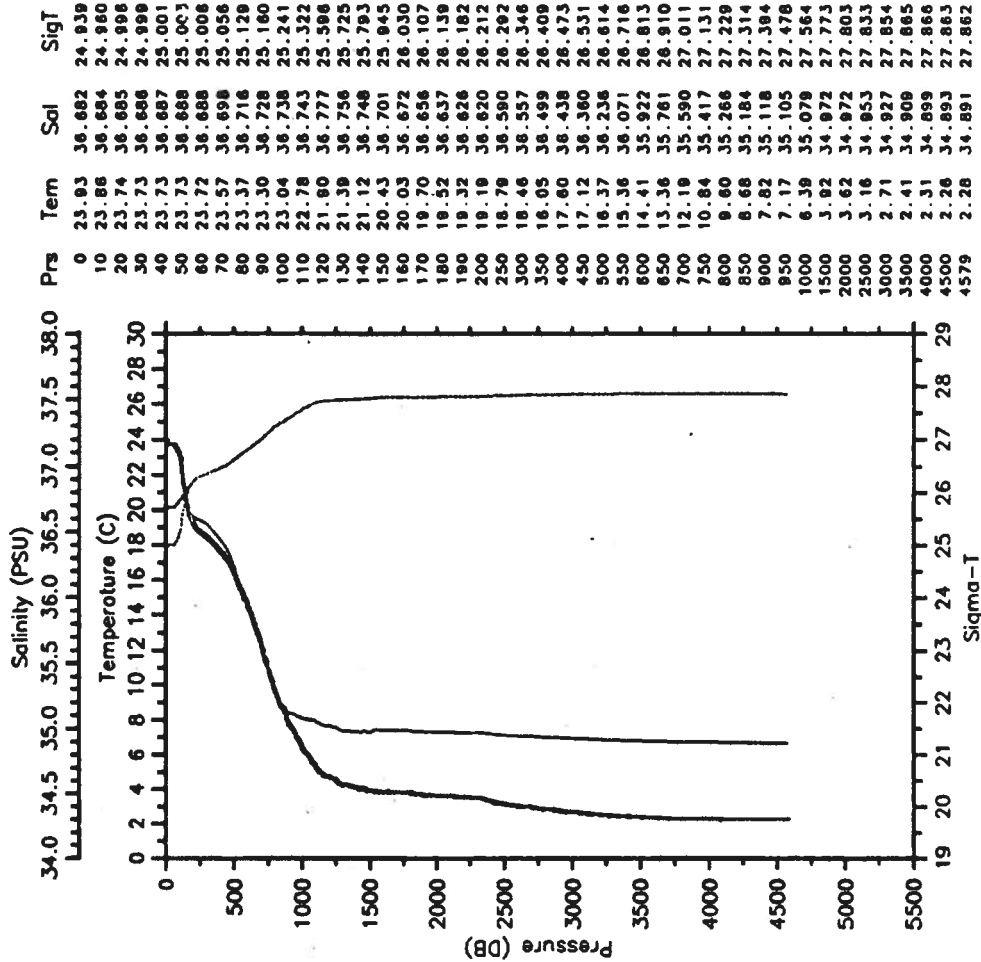
--- Tem --- Sal
 SigT



BAL-STACS38-91 CTD 4 BALDRIGE

Date 01 09 91 Latitude 26.559N
 Time 2126 Z Longitude 76.631W

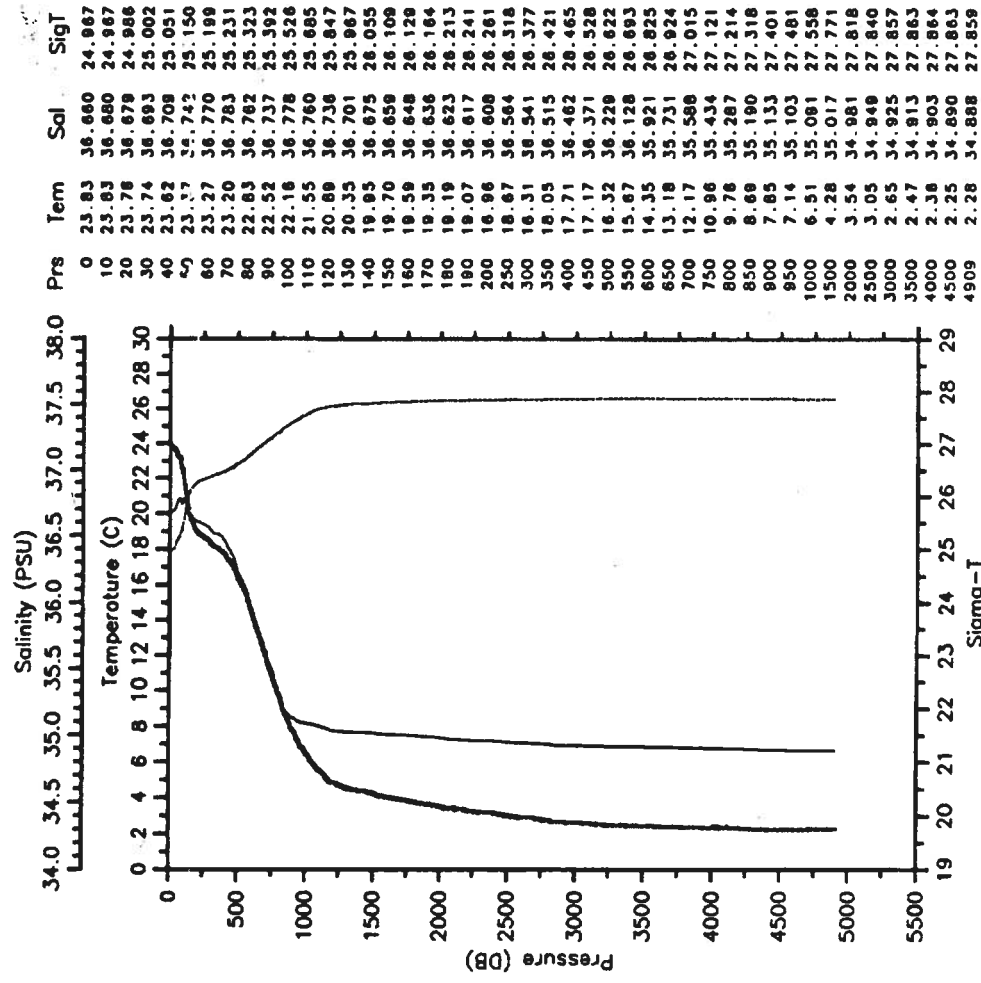
--- Tem --- Sal
 ---- SigT



BAL-STACS38-91 CTD 5 BALDRIGE

Date 01 10 91 Latitude 26.469N
 Time 0203 Z Longitude 76.528W

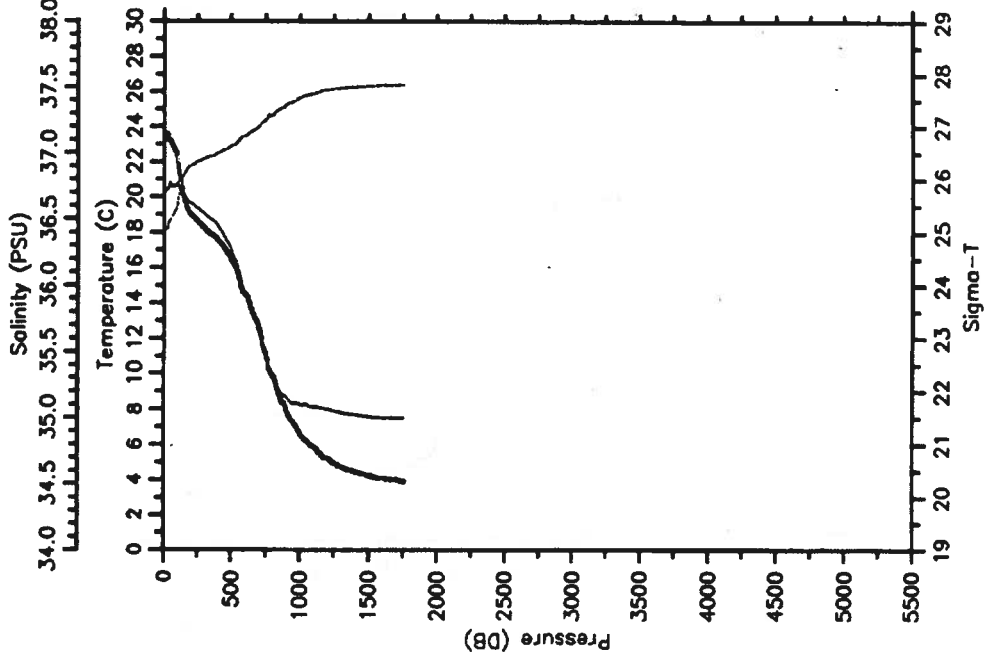
--- Tem --- Sal
 ---- SigT



BAL-STACS38-91 CTD 6 BALDRIGE

Date 01 10 91 Latitude 26.448N
 Time 1007 Z Longitude 76.325W

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

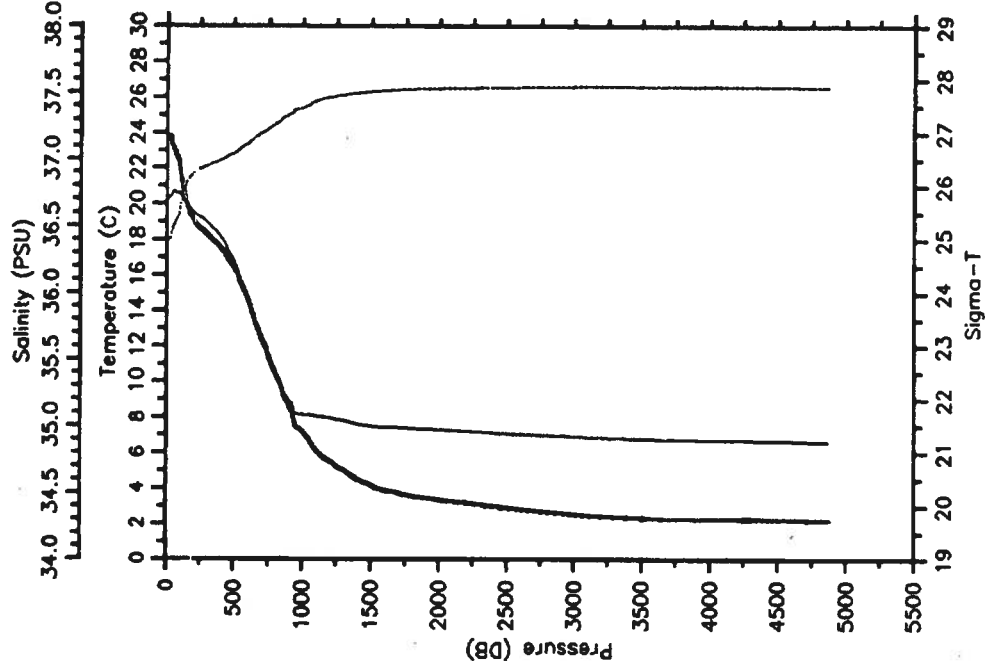


Prs	Tem	Sal	SigT
0	23.63	36.747	25.078
10	23.62	36.716	25.056
20	23.60	36.719	25.064
30	23.58	36.735	25.140
40	23.24	36.778	25.215
50	23.04	36.758	25.259
60	22.88	36.742	25.292
70	22.88	36.754	25.358
80	22.55	36.750	25.394
90	22.39	36.751	25.441
100	21.84	36.766	25.608
110	21.20	36.743	25.766
120	20.62	36.725	25.913
130	20.34	36.714	25.979
140	20.00	36.686	26.058
150	19.74	36.671	26.108
160	19.49	36.658	26.162
170	19.32	36.644	26.196
180	19.17	36.633	26.229
190	19.07	36.625	26.246
200	19.01	36.619	26.257
250	18.59	36.580	26.336
300	18.23	36.541	26.397
350	17.93	36.495	26.437
400	17.56	36.450	26.492
450	17.08	36.367	26.551
500	16.42	36.262	26.623
550	15.49	36.116	26.724
600	14.49	35.948	26.818
650	13.48	35.800	26.915
700	12.50	35.653	27.000
750	10.90	35.481	27.153
800	9.84	35.322	27.232
850	8.69	35.205	27.326
900	7.86	35.156	27.418
950	7.22	35.115	27.478
1000	6.61	35.098	27.550
1500	4.23	35.011	27.770
1734	3.91	34.998	27.794

BAL-STACS38-91 CTD 7 BALDRIGE

Date 01 10 91 Latitude 26.438N
 Time 2016 Z Longitude 76.133W

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

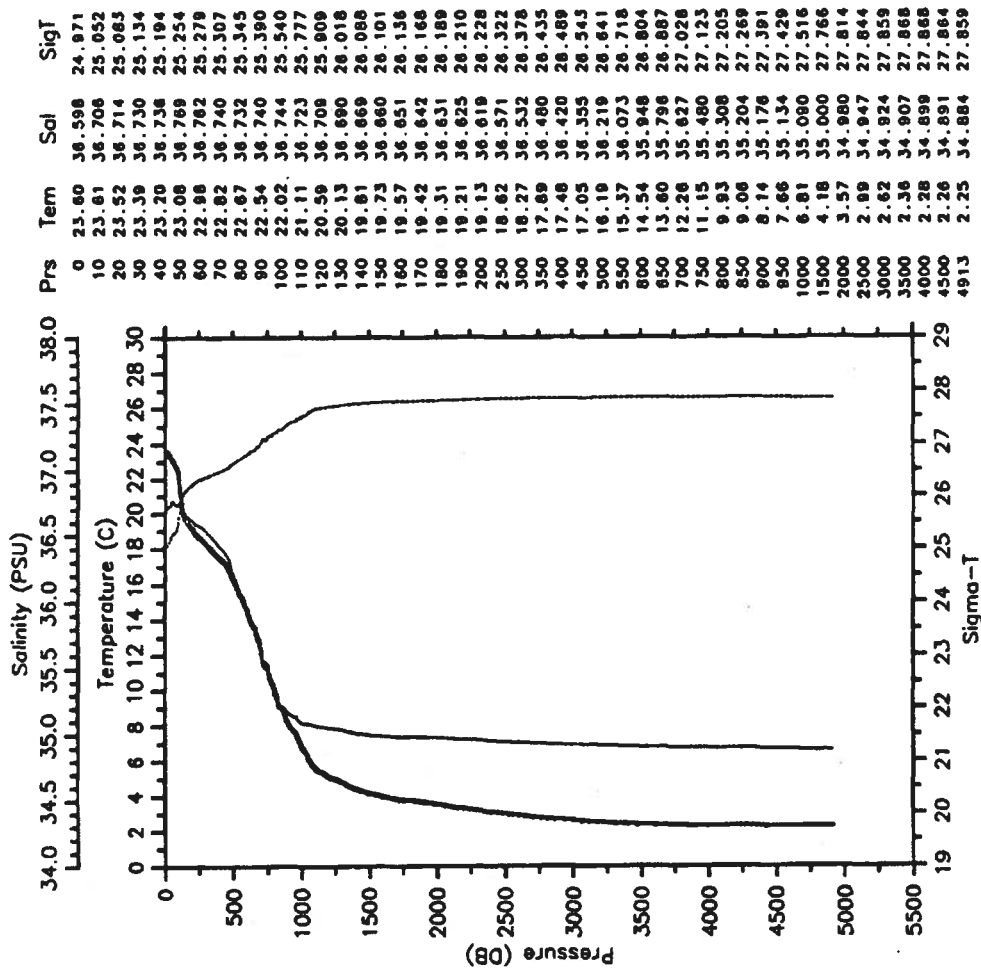


Prs	Tem	Sal	SigT
0	23.76	36.540	24.881
10	23.82	36.707	24.989
20	23.81	36.714	24.997
30	23.68	36.715	25.042
40	23.25	36.738	25.182
50	23.05	36.756	25.255
60	22.88	36.764	25.313
70	22.68	36.741	25.349
80	22.48	36.747	25.410
90	22.30	36.745	25.461
100	21.56	36.730	25.658
110	21.16	36.715	25.758
120	20.77	36.688	25.844
130	20.50	36.691	25.921
140	20.22	36.685	25.989
150	19.84	36.669	26.079
160	19.68	36.657	26.118
170	19.41	36.635	26.165
180	19.36	36.627	26.174
190	19.20	36.618	26.209
200	19.03	36.605	26.243
250	18.62	36.568	26.319
300	18.30	36.531	26.371
350	17.93	36.478	26.423
400	17.53	36.424	26.479
450	16.96	36.337	26.551
500	16.43	36.245	26.607
550	15.50	36.096	26.708
600	14.58	35.948	26.796
650	13.35	35.766	26.916
700	12.38	35.624	27.000
750	11.43	35.486	27.076
800	10.44	35.375	27.169
850	9.47	35.285	27.274
900	8.57	35.182	27.336
950	7.47	35.087	27.430
1000	7.21	35.085	27.457
1500	4.18	34.996	27.785
2000	3.35	34.967	27.825
2500	2.92	34.942	27.846
3000	2.85	34.921	27.863
3500	2.33	34.905	27.868
4000	2.28	34.696	27.868
4500	2.23	34.891	27.864
4869	2.22	34.880	27.858

BAL-STACS38-91 CTD 8 BALDRICE

Date 01 10 91 Latitude 26.486N
 Time 2359 Z Longitude 76.325W

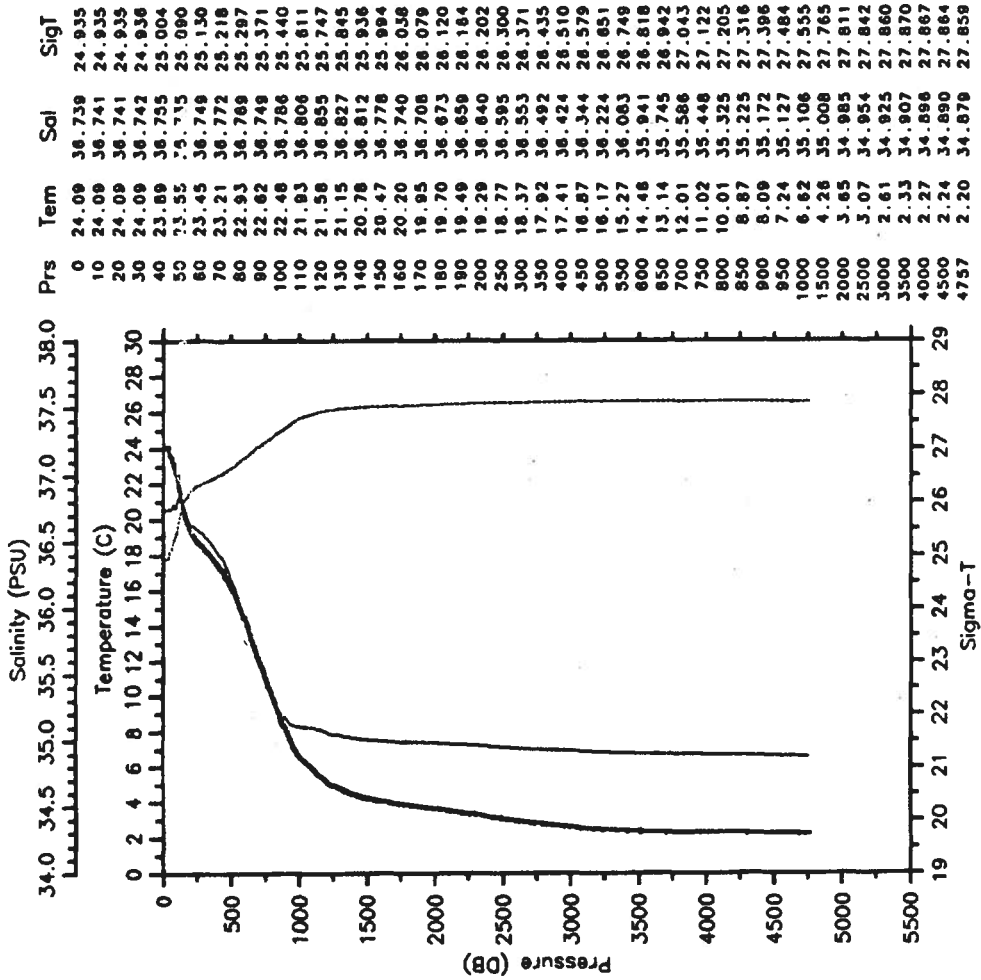
— Tem — Sal
 - - - SigT



BAL-STACS38-91 CTD 9 BALDRICE

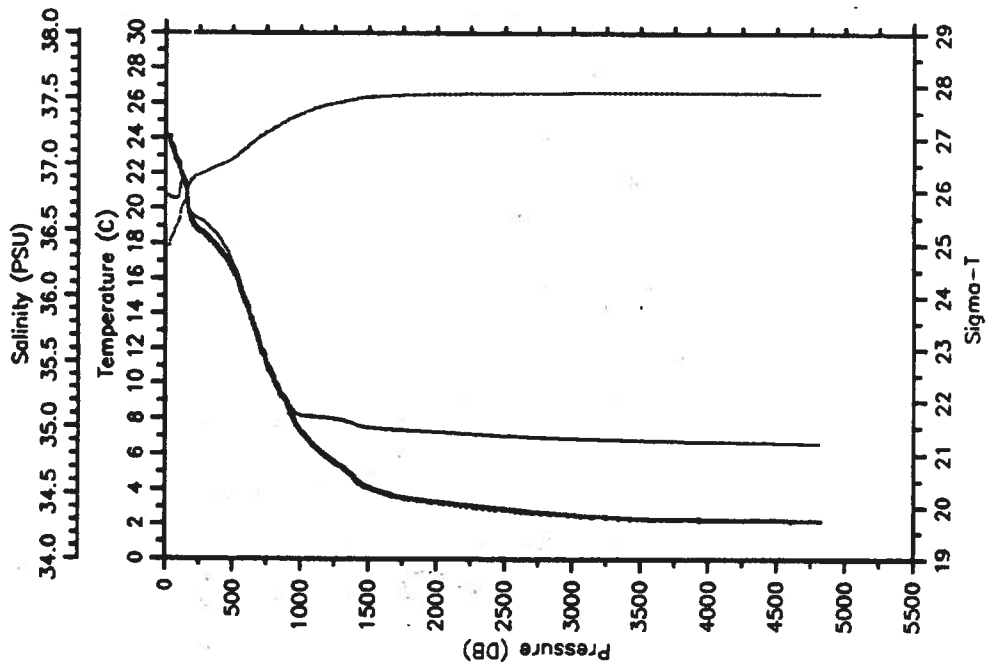
Date 01 11 91 Latitude 26.464N
 Time 0816 Z Longitude 75.537W

— Tem — Sal
 - - - SigT



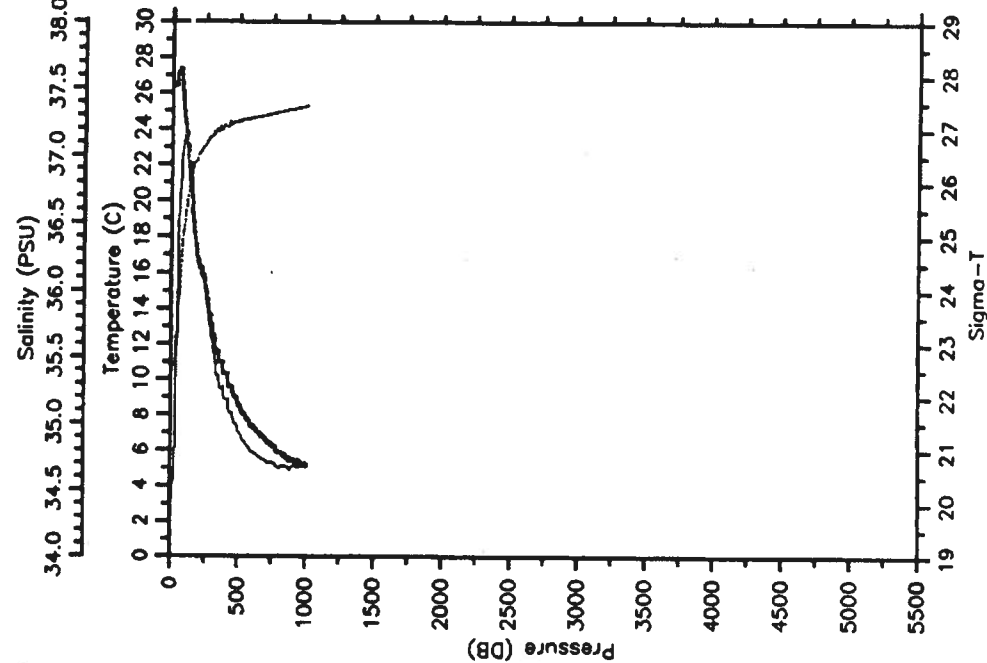
BAL-STACS38-91 CTD 10 BALDRIGE
 Date 01 11 91 Latitude 26.530N
 Time 1633 Z Longitude 75.921W

— Term — Sal
 SigT



BAL-STACS38-91 CTD 11 BALDRIGE
 Date 01 16 91 Latitude 13.080N
 Time 0344 Z Longitude 57.887W

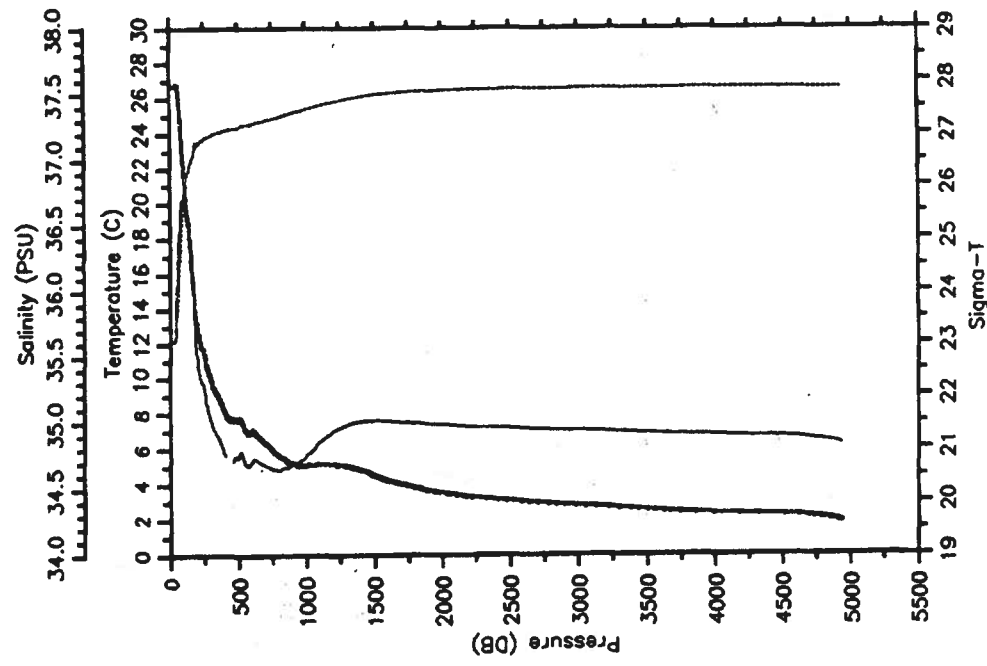
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 SigT



BAL-STACS38-91 CTD 12 BALDRIGE

Date 01 17 91 Latitude 10.014N
 Time 1450 Z Longitude 51.302W

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

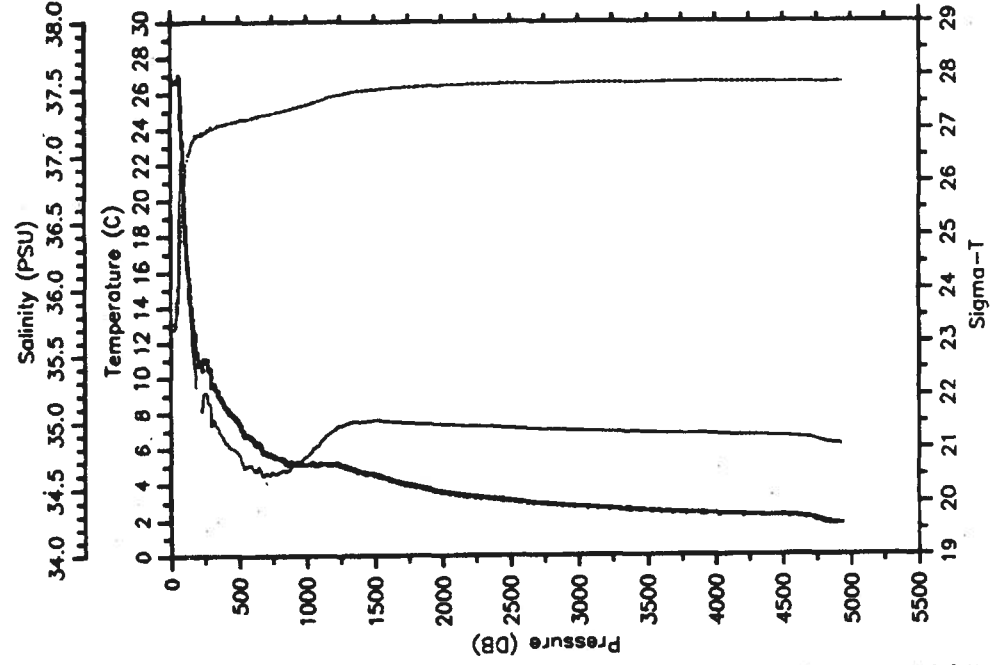


Prs	Tem	Sal	SigT
0	26.71	35.007	23.289
10	26.71	35.618	23.277
20	26.72	35.820	23.277
30	26.72	35.821	23.276
40	26.72	35.852	23.300
50	26.77	36.005	23.549
60	26.44	36.285	23.867
70	25.34	36.476	24.355
80	24.14	36.648	24.849
90	23.71	36.889	25.280
100	21.70	36.885	25.592
110	20.78	36.741	25.887
120	19.48	36.891	26.100
130	18.91	36.596	26.267
140	18.23	36.543	26.388
150	17.27	36.334	26.475
160	16.31	36.168	26.577
170	15.57	36.015	26.628
180	13.88	35.748	26.793
190	13.16	35.528	26.771
200	12.63	35.473	26.835
250	11.28	35.252	26.922
300	9.82	35.011	26.874
350	8.95	34.897	27.045
400	8.01	34.748	27.075
450	7.65	34.711	27.098
500	7.74	34.758	27.123
550	7.05	34.887	27.168
600	7.07	34.724	27.193
650	6.71	34.704	27.228
700	6.34	34.680	27.258
750	5.98	34.656	27.283
800	5.66	34.645	27.315
850	5.41	34.662	27.358
900	5.25	34.685	27.396
950	5.13	34.712	27.432
1000	5.12	34.757	27.468
1500	4.54	35.017	27.741
2000	3.57	34.982	27.816
2500	3.10	34.956	27.841
3000	2.83	34.938	27.852
3500	2.58	34.920	27.859
4000	2.36	34.905	27.866
4500	2.26	34.891	27.863
4931	1.85	34.835	27.852

BAL-STACS38-91 CTD 13 BALDRIGE

Date 01 18 91 Latitude 10.014N
 Time 0726 Z Longitude 49.049W

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

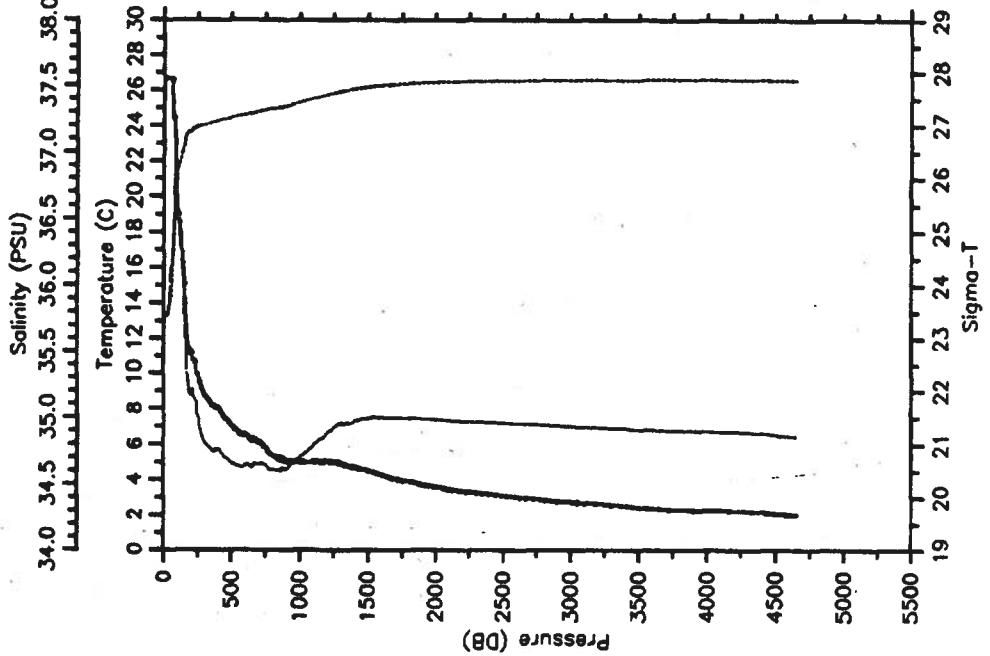


Prs	Tem	Sal	SigT
0	26.61	35.880	23.507
10	26.65	35.705	23.362
20	26.65	35.703	23.359
30	26.66	35.705	23.360
40	26.69	35.788	23.413
50	26.70	35.929	23.522
60	26.97	36.372	23.764
70	25.85	36.772	24.419
80	23.98	36.967	25.158
90	22.59	36.936	25.522
100	20.13	36.598	25.948
110	17.98	36.295	26.270
120	16.85	36.135	26.422
130	15.81	35.970	26.539
140	15.14	35.840	26.590
150	14.19	35.725	26.707
160	13.23	35.540	26.766
170	12.59	35.446	26.822
180	11.73	35.358	26.818
190	11.40	35.207	26.864
200	10.72	35.091	26.897
250	11.05	35.227	26.944
300	9.58	34.878	27.007
350	8.99	34.835	27.069
400	8.38	34.846	27.096
450	7.91	34.801	27.132
500	7.44	34.753	27.162
550	6.75	34.664	27.189
600	6.50	34.657	27.217
650	6.27	34.664	27.253
700	5.80	34.617	27.275
750	5.44	34.627	27.303
800	5.44	34.625	27.328
850	5.22	34.631	27.357
900	5.21	34.672	27.381
950	5.11	34.700	27.425
1000	5.09	34.742	27.460
1500	4.56	35.014	27.737
2000	3.57	34.983	27.817
2500	3.11	34.958	27.841
3000	2.75	34.932	27.854
3500	2.53	34.916	27.860
4000	2.34	34.901	27.865
4500	2.24	34.888	27.861
4926	1.77	34.826	27.850

BAL-STACS38-91 CTD 14 BALDRIGE

Date 01 18 91 Latitude 8.784N

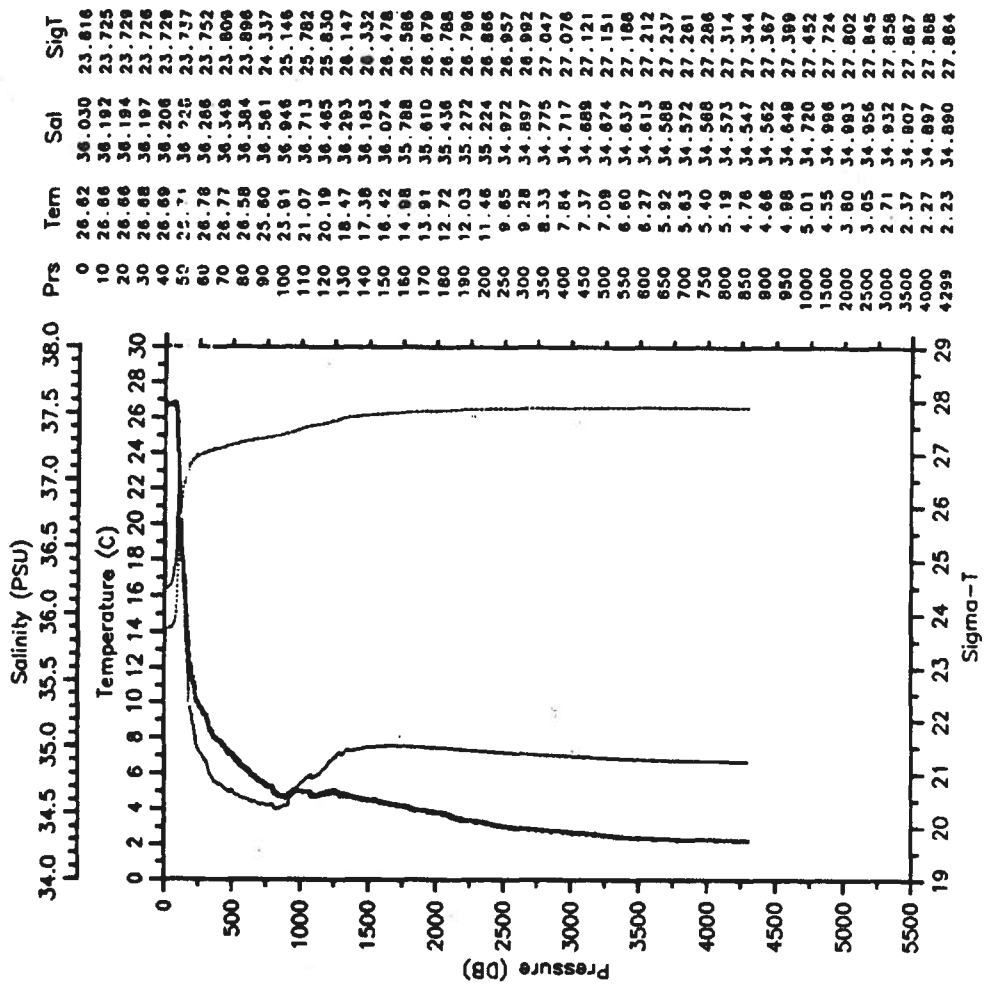
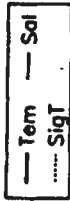
Time 1826 Z Longitude 49.521W



BAL-STACS38-91 CTD 15 BALDRIGE

Date 01 19 91 Latitude 7.479N

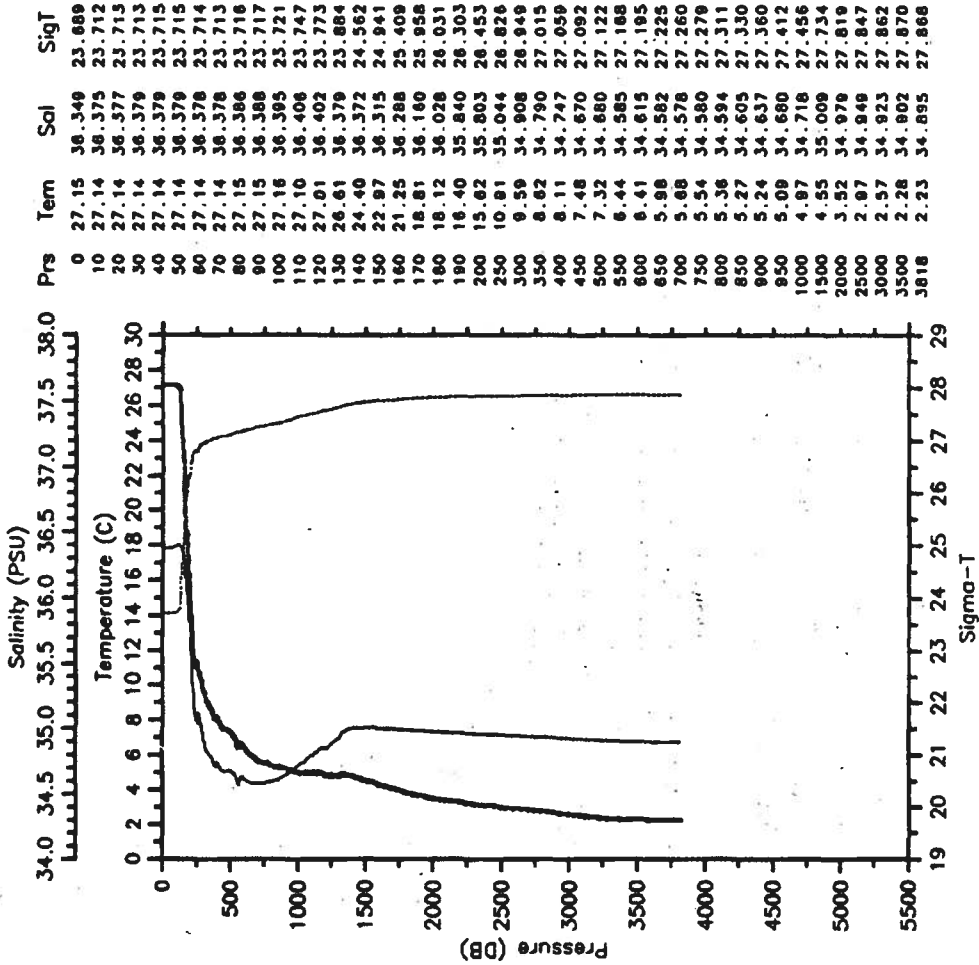
Time 0418 Z Longitude 49.963W



BAL-STACS38-91 CTD 16 BALDRIGE

Date 01 19 91 Latitude 6.669N
Time 1356 Z Longitude 50.690W

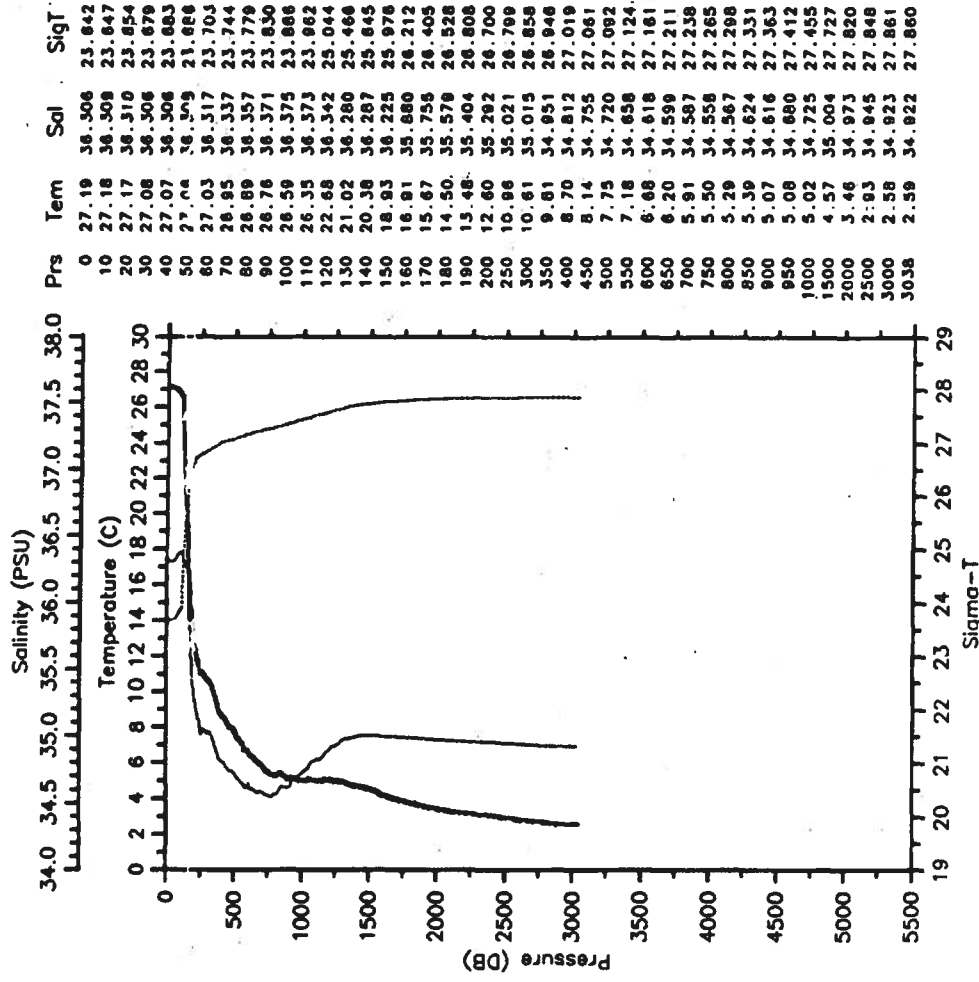
— Tem — Sal
.....SigT



BAL-STACS38-91 CTD 17 BALDRIGE

Date 01 19 91 Latitude 6.234N
Time 2116 Z Longitude 51.083W

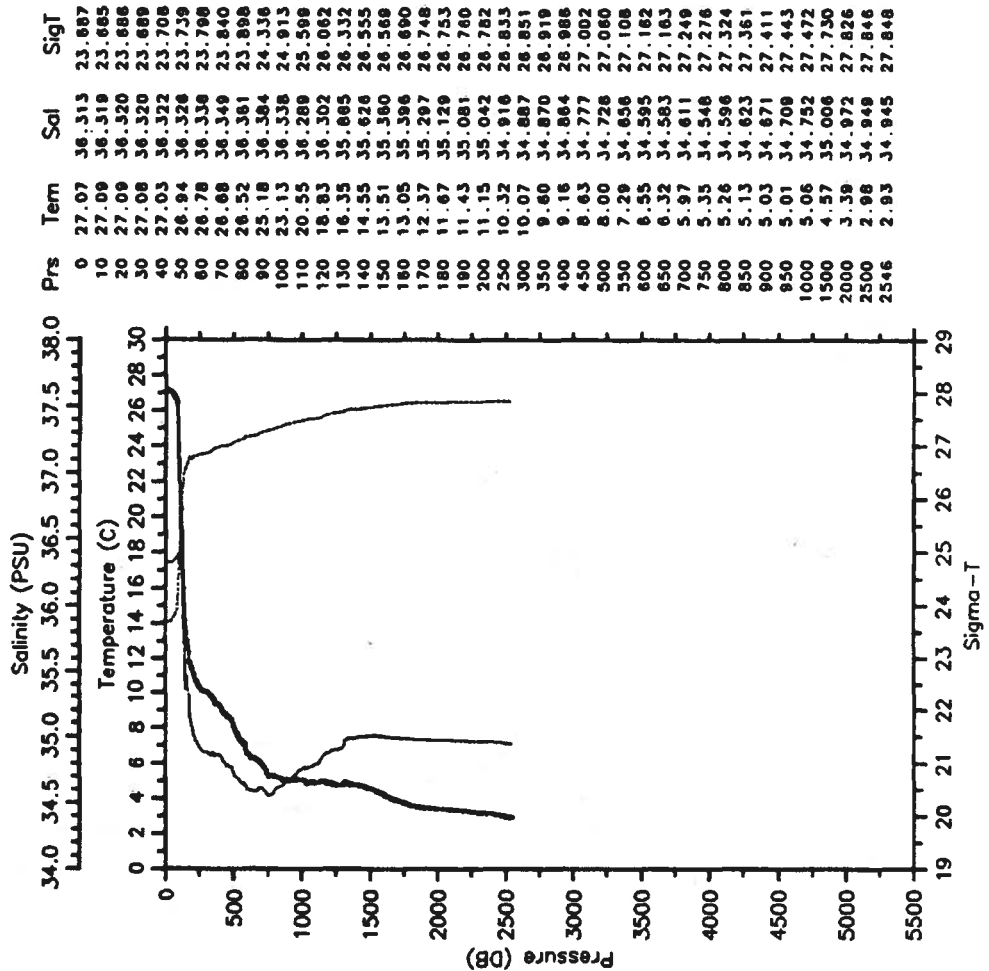
— Tem — Sal
.....SigT



BAL-STACS38-91 CTD 18 BALDRIGE

Date 01 20 91 Latitude 6.120N
 Time 0147 Z Longitude 51.301W

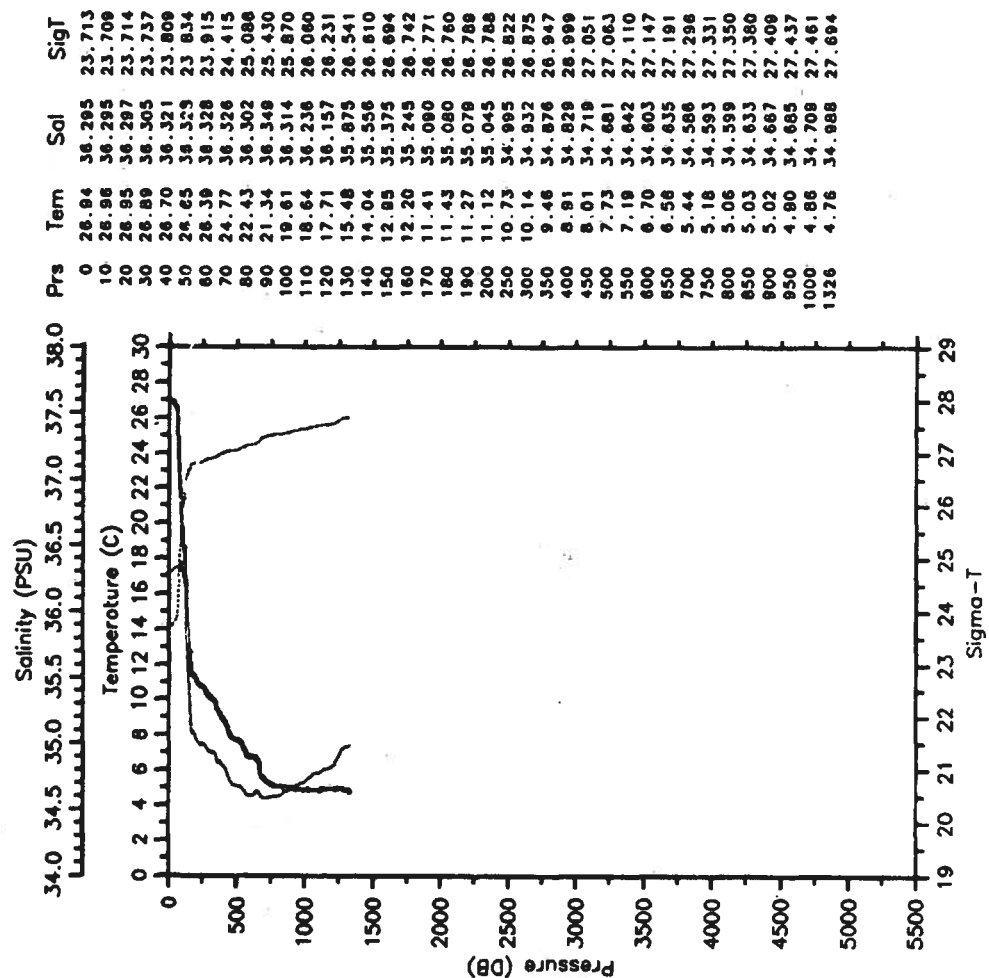
— Tem — Sal
 SigT



BAL-STACS38-91 CTD 19 BALDRIGE

Date 01 20 91 Latitude 5.842N
 Time 0943 Z Longitude 51.277W

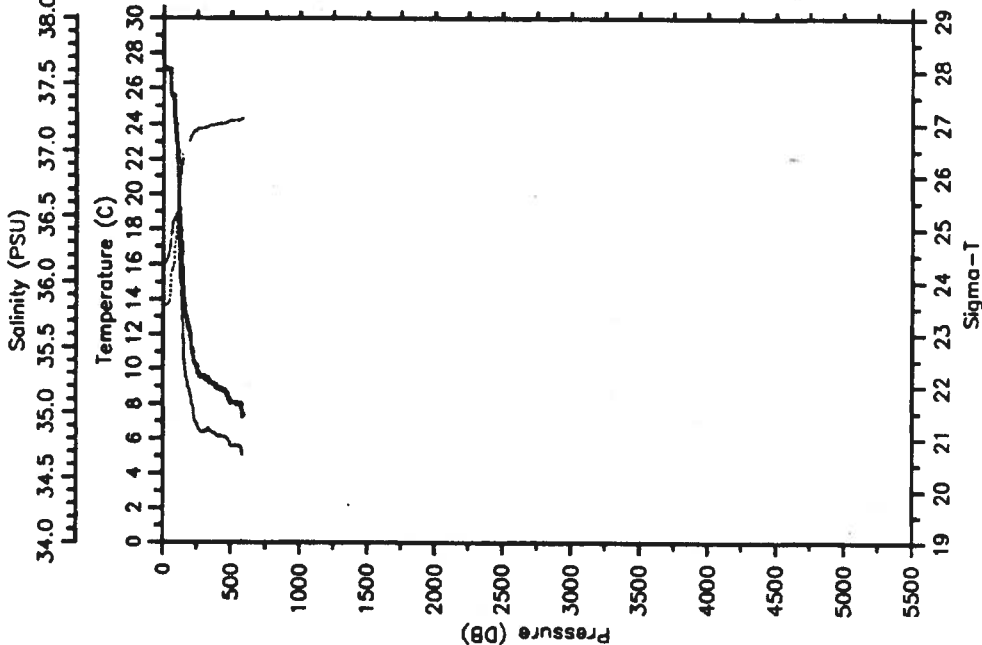
— Tem — Sal
 SigT



BAL-STACS38-91 CTD 20 BALDRIGE

Date 01 21 91 Latitude 3.951N
 Time 0432 Z Longitude 48.720W

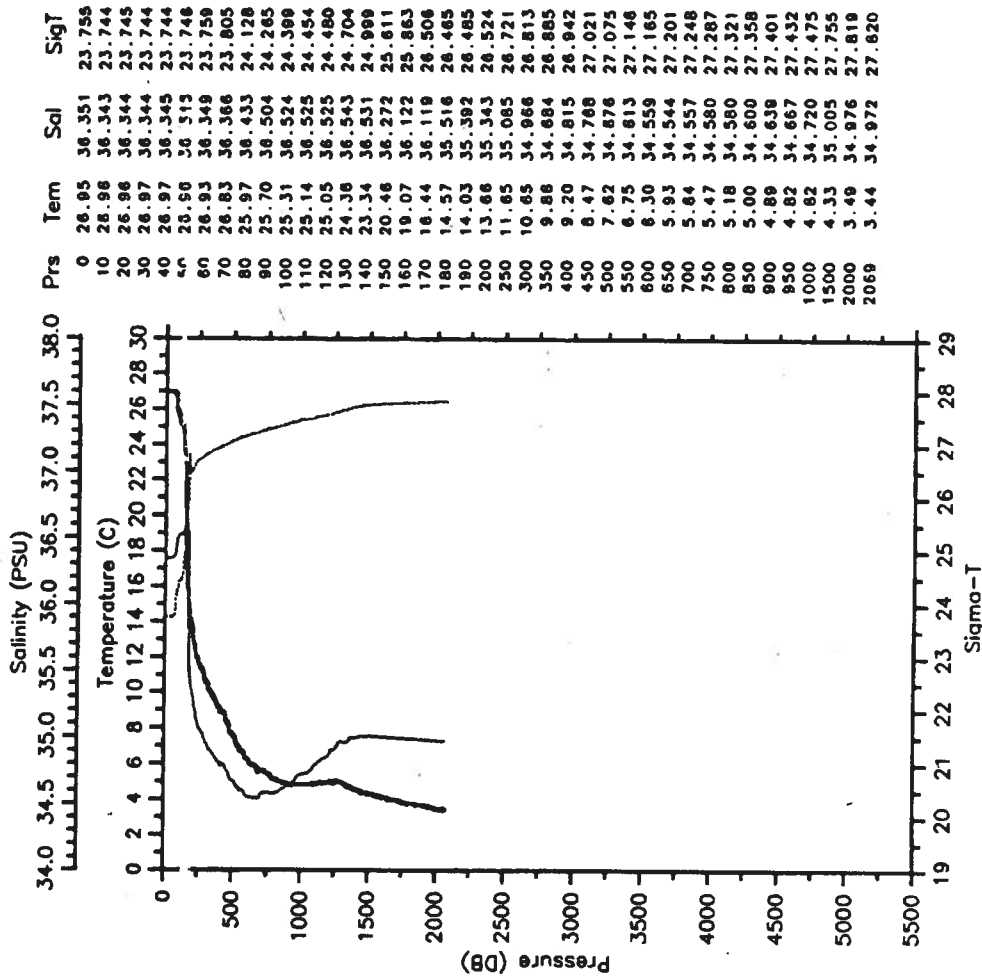
— Tem — Sal
 SigT



BAL-STACS38-91 CTD 21 BALDRIGE

Date 01 21 91 Latitude 4.531N
 Time 0928 Z Longitude 48.363W

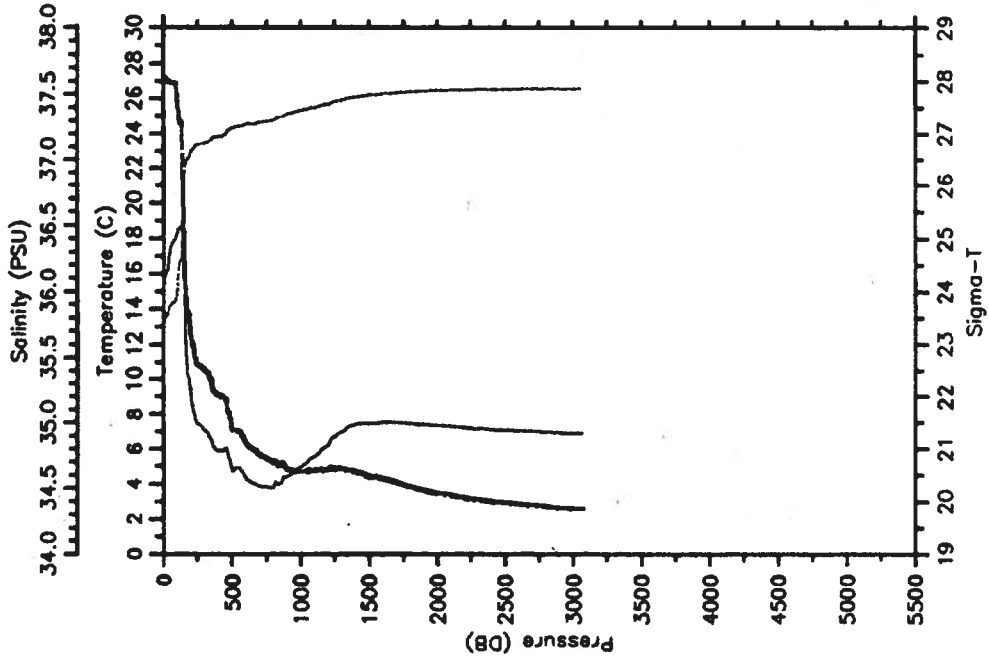
— Tem — Sal
 SigT



BAL-STACS38-91 CTD 22 BALDRIGE

Date 01 21 91 Latitude 4.938N
 Time 2022 Z Longitude 47.563W

— Tem — Sal
 — SigT

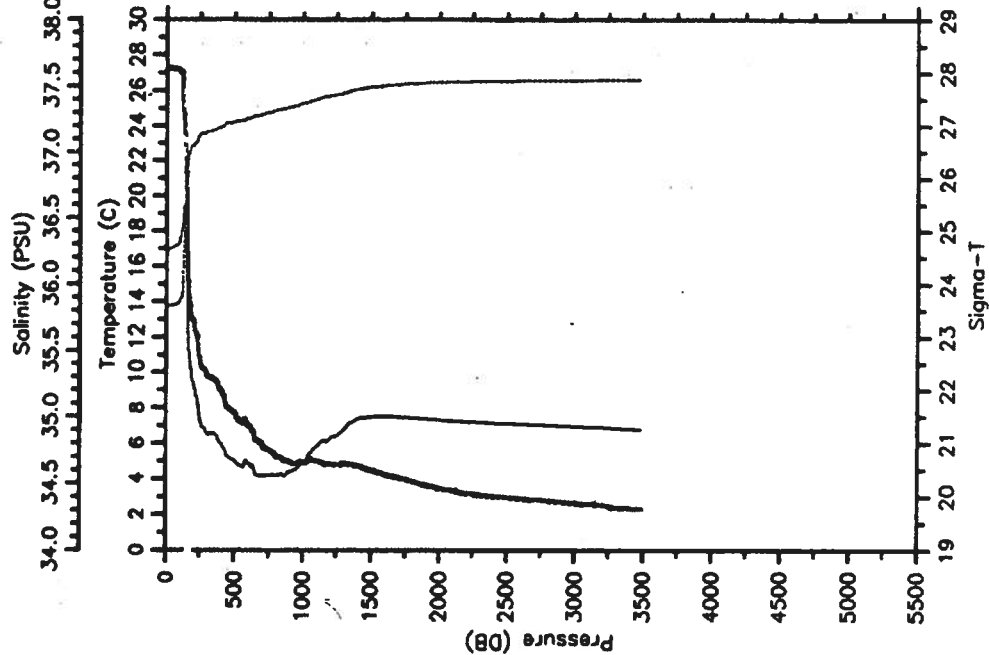


Prs	Tem	Sal	SigT
0	27.21	35.886	23.321
10	27.23	36.091	23.473
20	27.09	36.141	23.549
30	27.06	36.182	23.577
40	26.95	36.289	23.691
50	26.94	36.331	23.742
60	26.82	36.357	23.786
70	26.82	36.378	23.784
80	26.91	36.393	23.800
90	26.87	36.406	23.822
100	26.18	36.449	24.078
110	24.99	36.478	24.462
120	24.64	36.484	24.575
130	24.58	36.498	24.602
140	22.02	36.442	25.308
150	18.54	36.104	25.864
160	15.41	35.650	26.362
170	14.10	35.441	26.507
180	13.75	35.355	26.514
190	13.38	35.315	26.561
200	12.47	35.195	26.651
250	10.87	34.989	26.782
300	10.52	34.944	26.819
350	9.71	34.870	26.900
400	9.13	34.788	26.932
450	8.85	34.685	26.990
500	7.10	34.634	27.116
550	7.05	34.652	27.139
600	6.30	34.583	27.185
650	5.89	34.541	27.192
700	5.71	34.517	27.208
750	5.45	34.512	27.235
800	5.22	34.503	27.256
850	5.04	34.538	27.304
900	4.85	34.581	27.368
950	4.75	34.627	27.408
1000	4.71	34.663	27.442
1500	4.45	34.980	27.730
2000	3.97	34.978	27.822
2500	2.96	34.948	27.847
3000	2.81	34.825	27.861
3071	2.59	34.823	27.860

BAL-STACS38-91 CTD 23 BALDRIGE

Date 01 22 91 Latitude 5.323N
 Time 0417 Z Longitude 46.817W

— Tem — Sal
 — SigT

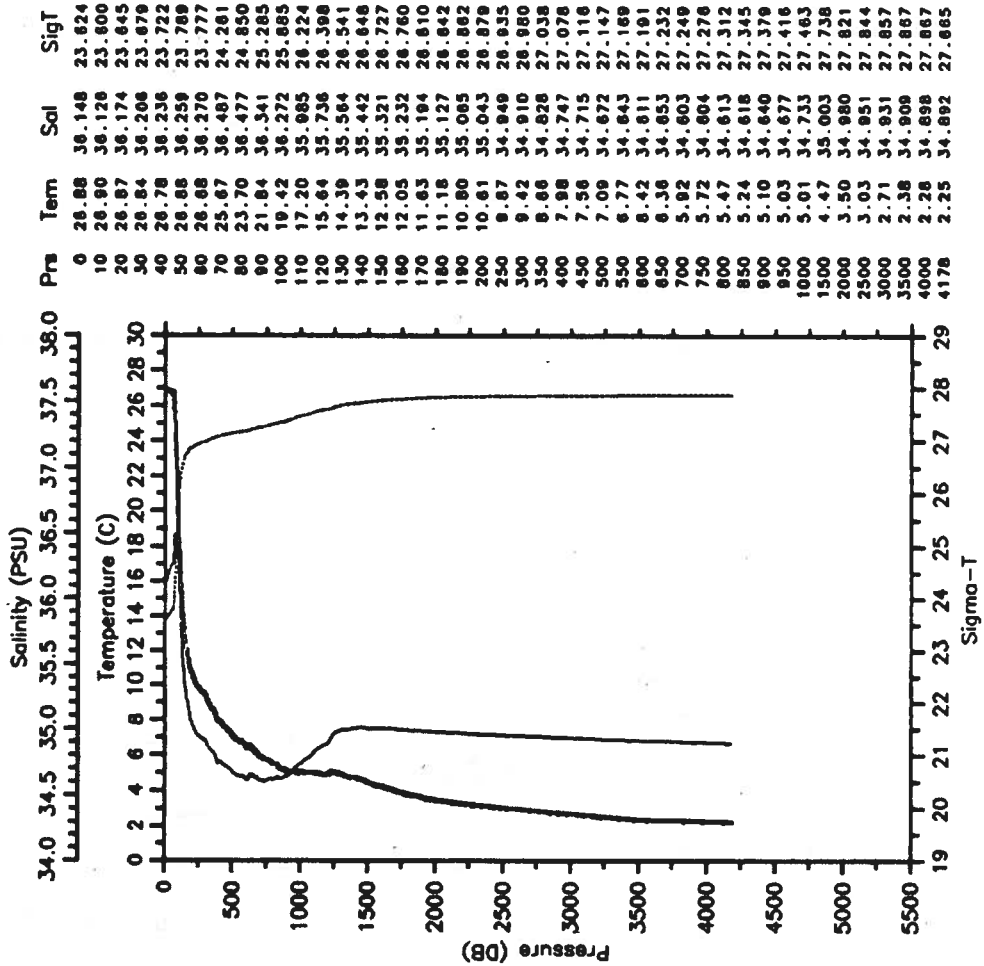


Prs	Tem	Sal	SigT
0	27.27	36.288	23.587
10	27.26	36.232	23.586
20	27.26	36.283	23.586
30	27.27	36.286	23.587
40	27.27	36.288	23.586
50	27.27	36.371	23.593
60	27.26	36.253	23.602
70	27.25	36.290	23.610
80	27.23	36.291	23.617
90	27.18	36.296	23.636
100	27.10	36.338	23.686
110	27.05	36.365	23.749
120	26.33	36.428	24.008
130	24.32	36.573	24.740
140	22.84	36.511	25.127
150	20.72	36.378	25.623
160	15.36	35.658	26.387
170	14.33	35.459	26.474
180	13.86	35.361	26.537
190	13.06	35.294	26.609
200	12.88	35.249	26.610
250	10.58	34.975	26.831
300	9.78	34.874	26.891
350	9.63	34.870	26.814
400	8.99	34.798	26.963
450	8.01	34.702	27.039
500	7.70	34.667	27.057
550	7.21	34.626	27.094
600	6.89	34.641	27.136
650	6.18	34.566	27.187
700	5.90	34.561	27.218
750	5.93	34.556	27.248
800	5.28	34.558	27.292
850	5.08	34.563	27.318
900	4.97	34.583	27.347
950	4.84	34.588	27.377
1000	4.92	34.665	27.418
1500	4.50	34.997	27.731
2000	3.43	34.972	27.822
2500	2.87	34.948	27.848
3000	2.62	34.925	27.860
3489	2.30	34.902	27.868

BAL-STACS38-91 CTD 24 BALDRIGE

Date 01 22 91 Latitude 6.680N
 Time 2150 Z Longitude 46.342W

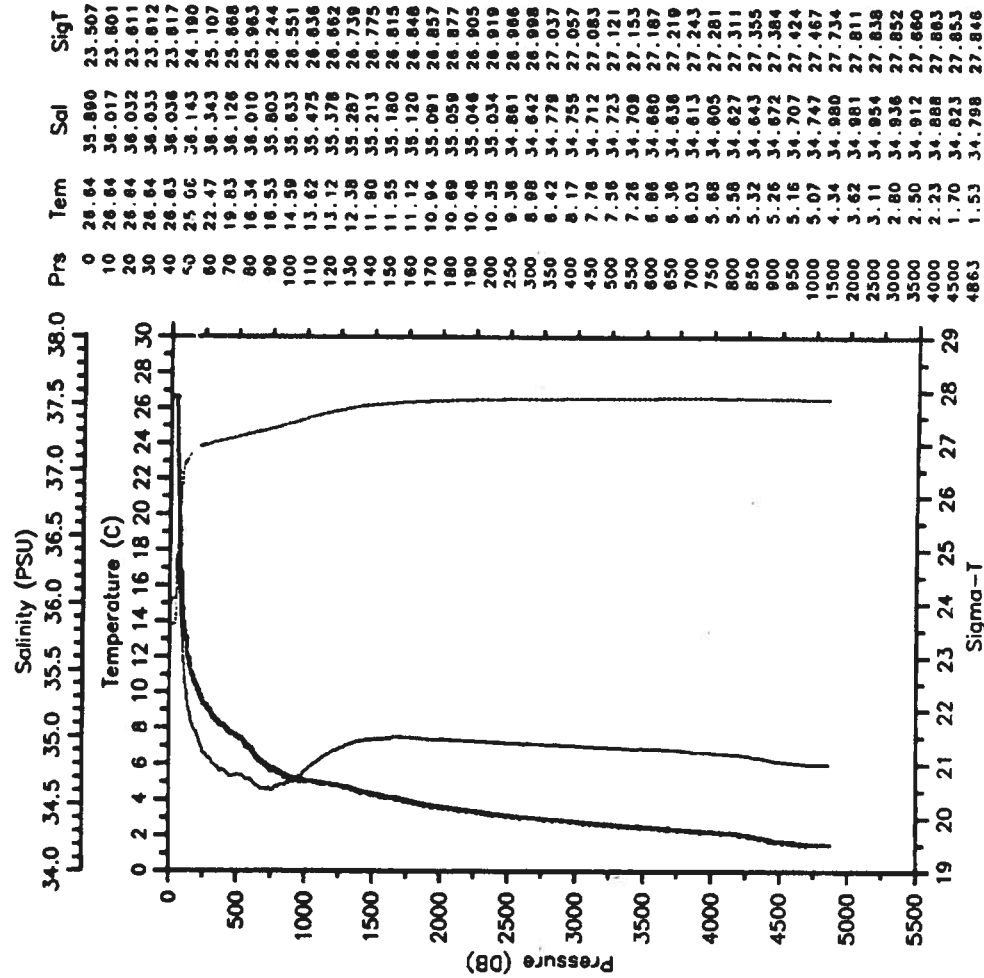
--- Tem --- Sal
 SigT



BAL-STACS38-91 CTD 25 BALDRIGE

Date 01 23 91 Latitude 8.278N
 Time 1400 Z Longitude 43.960W

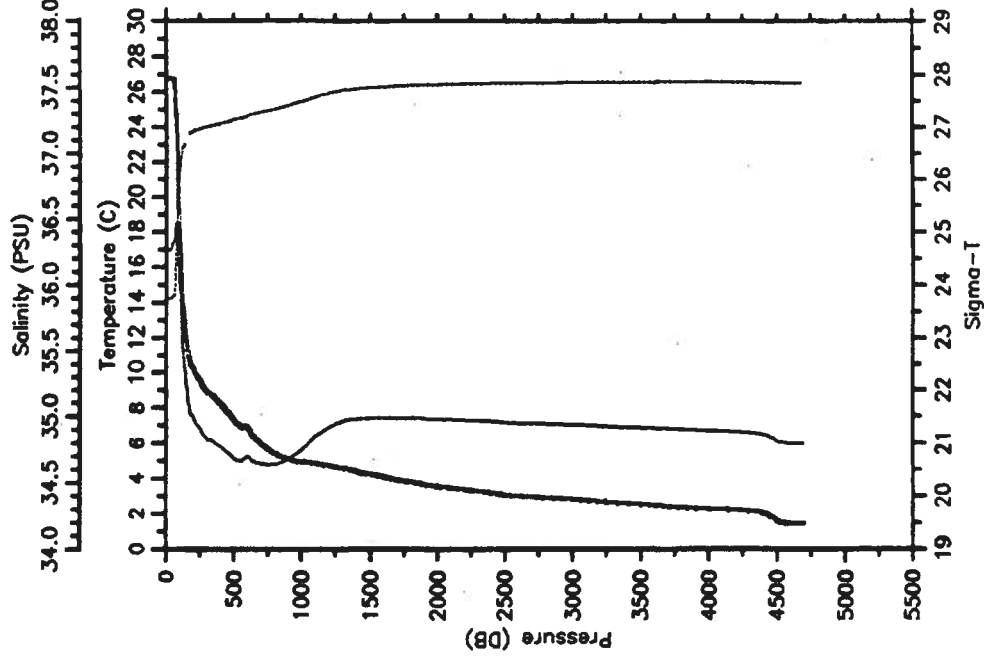
--- Tem --- Sal
 SigT



BAL-STACS38-91 CTD 26 BALDRIGE

Date 01 24 91 Latitude 6.699N
 Time 0246 Z Longitude 44.023W

--- Tem --- Sal
 SigT

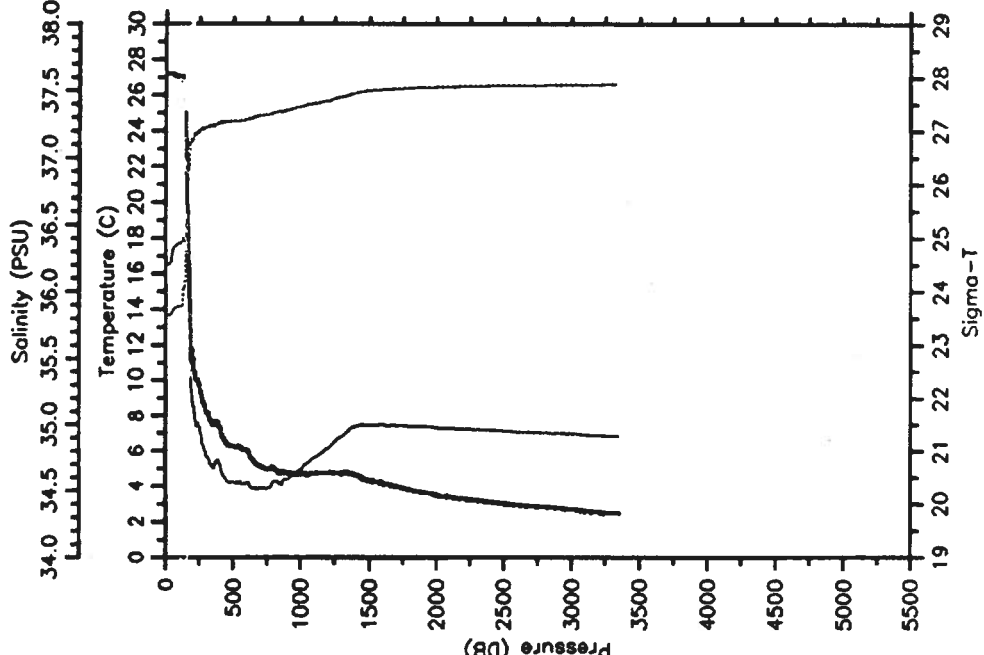


Prs	Tem	Sal	SigT
0	26.77	36.272	23.752
10	26.78	36.280	23.740
20	26.78	36.282	23.741
30	26.78	36.264	23.742
40	26.80	36.269	23.756
50	26.77	36.319	23.744
60	26.52	36.336	23.961
70	24.99	36.450	24.441
80	23.57	36.442	24.884
90	20.36	36.282	25.841
100	17.96	36.002	26.045
110	15.97	35.875	26.429
120	14.26	35.584	26.563
130	13.52	35.424	26.817
140	12.77	35.355	26.714
150	11.87	35.244	26.805
160	11.29	35.159	26.847
170	10.83	35.081	26.870
180	10.48	35.023	26.887
190	10.39	35.007	26.890
200	10.25	35.002	26.910
250	9.58	34.912	26.955
300	8.94	34.837	27.000
350	8.63	34.812	27.030
400	8.23	34.775	27.083
450	7.77	34.731	27.098
500	7.22	34.682	27.137
550	6.91	34.664	27.167
600	6.85	34.701	27.204
650	6.34	34.881	27.241
700	5.92	34.640	27.279
750	5.65	34.834	27.307
800	5.44	34.637	27.336
850	5.22	34.651	27.373
900	5.10	34.675	27.406
950	4.98	34.710	27.450
1000	4.92	34.743	27.481
1500	4.26	34.986	27.747
2000	3.55	34.977	27.814
2500	3.06	34.953	27.842
3000	2.80	34.935	27.852
3500	2.55	34.917	27.860
4000	2.28	34.896	27.867
4500	1.60	34.811	27.852
4694	1.47	34.793	27.847

BAL-STACS38-91 CTD 27 BALDRIGE

Date 01 24 91 Latitude 5.253N
 Time 1408 Z Longitude 44.029W

--- Tem --- Sal
 SigT

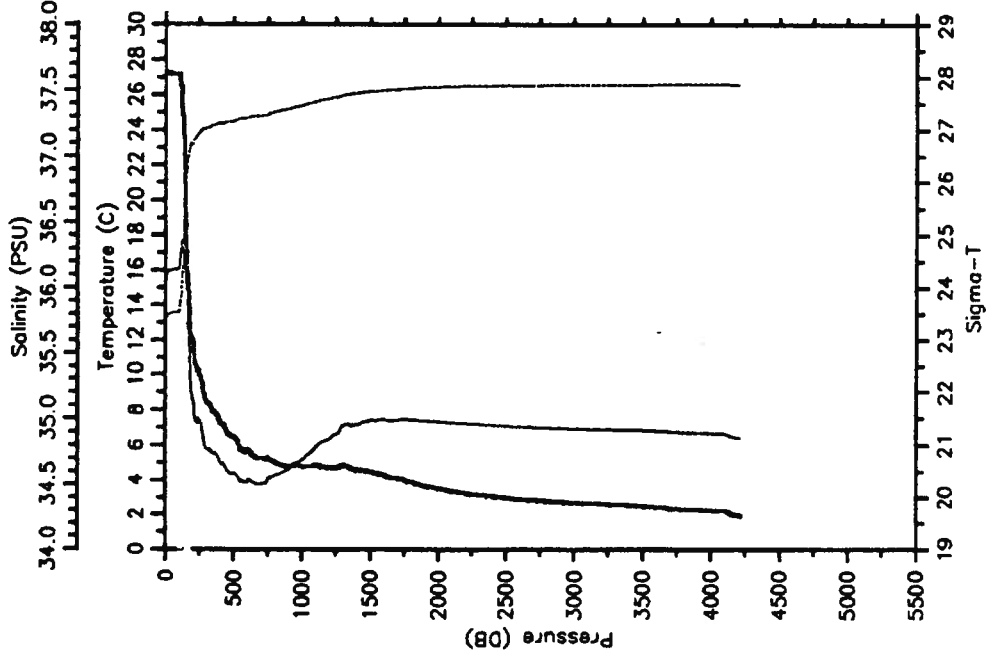


Prs	Tem	Sal	SigT
0	27.19	36.374	23.805
10	27.22	36.208	23.559
20	27.22	36.204	23.557
30	27.21	36.210	23.565
40	27.20	36.226	23.576
50	27.19	35.281	23.632
60	27.14	36.336	23.662
70	27.12	36.344	23.694
80	27.10	36.350	23.704
90	27.08	36.359	23.717
100	27.08	36.364	23.722
110	27.06	36.368	23.726
120	27.07	36.370	23.732
130	26.19	36.406	24.036
140	25.06	36.386	24.095
150	24.06	36.421	24.700
160	20.03	36.331	25.771
170	17.30	36.105	26.291
180	14.37	35.711	26.659
190	11.81	35.259	26.828
200	11.31	35.162	26.844
250	9.68	34.878	26.990
300	8.20	34.757	27.053
350	7.45	34.668	27.095
400	7.28	34.698	27.142
450	6.39	34.577	27.169
500	6.25	34.560	27.174
550	6.18	34.566	27.188
600	6.05	34.560	27.199
650	5.43	34.514	27.238
700	5.15	34.519	27.276
750	5.00	34.516	27.292
800	4.89	34.570	27.336
850	4.70	34.548	27.351
900	4.75	34.585	27.375
950	4.68	34.622	27.411
1000	4.70	34.663	27.443
1500	4.34	34.987	27.748
2000	3.54	34.975	27.813
2500	3.05	34.953	27.843
3000	2.72	34.930	27.855
3349	2.49	34.913	27.881

BAL-STACS38-91 CTD 28 BALDRIGE

Date 01 24 91 Latitude 4.194N

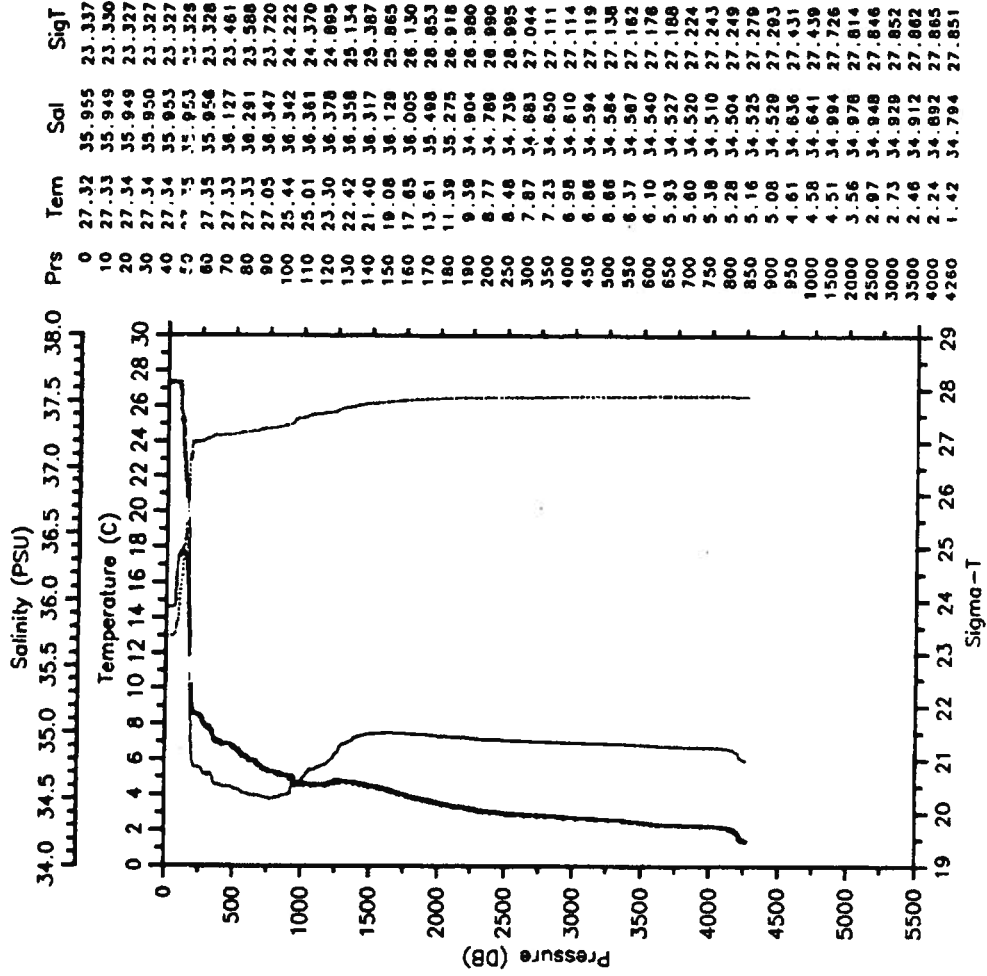
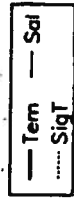
Time 2229 Z Longitude 44.052W



BAL-STACS38-91 CTD 29 BALDRIGE

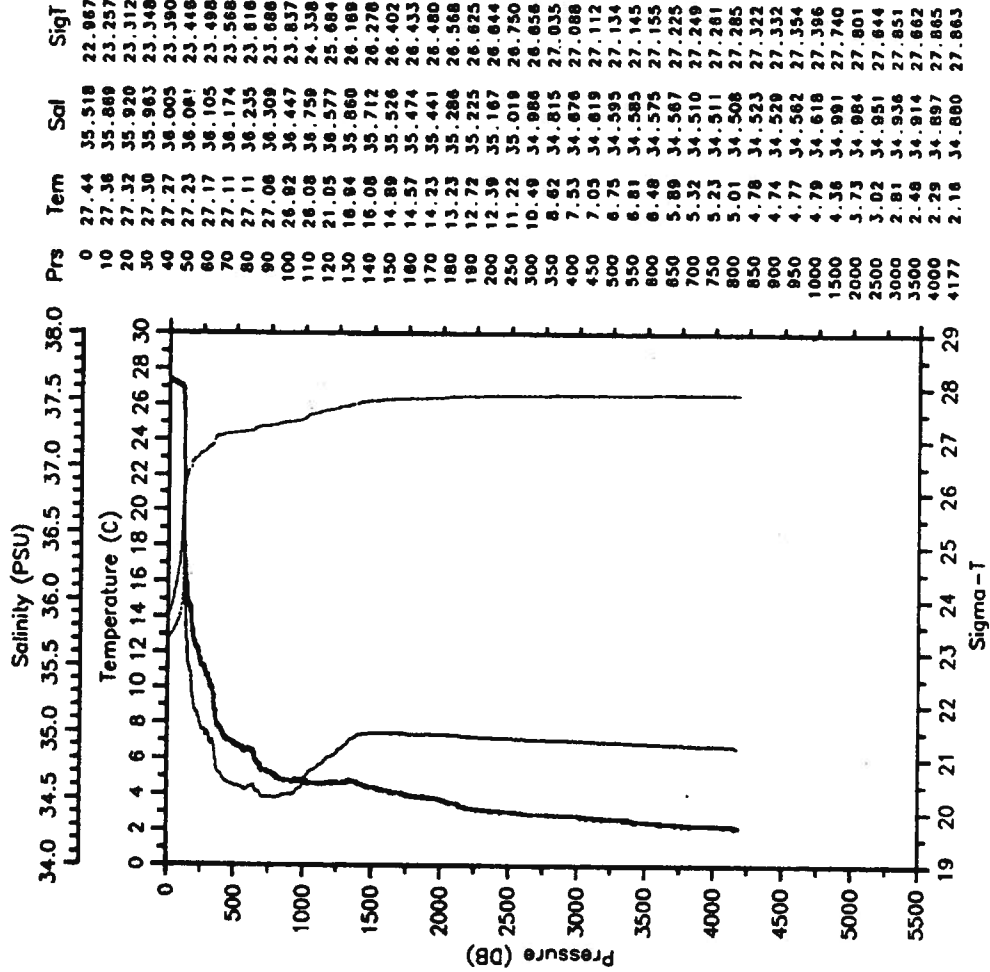
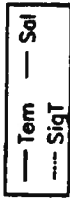
Date 01 25 91 Latitude 3.284N

Time 0722 Z Longitude 44.032W



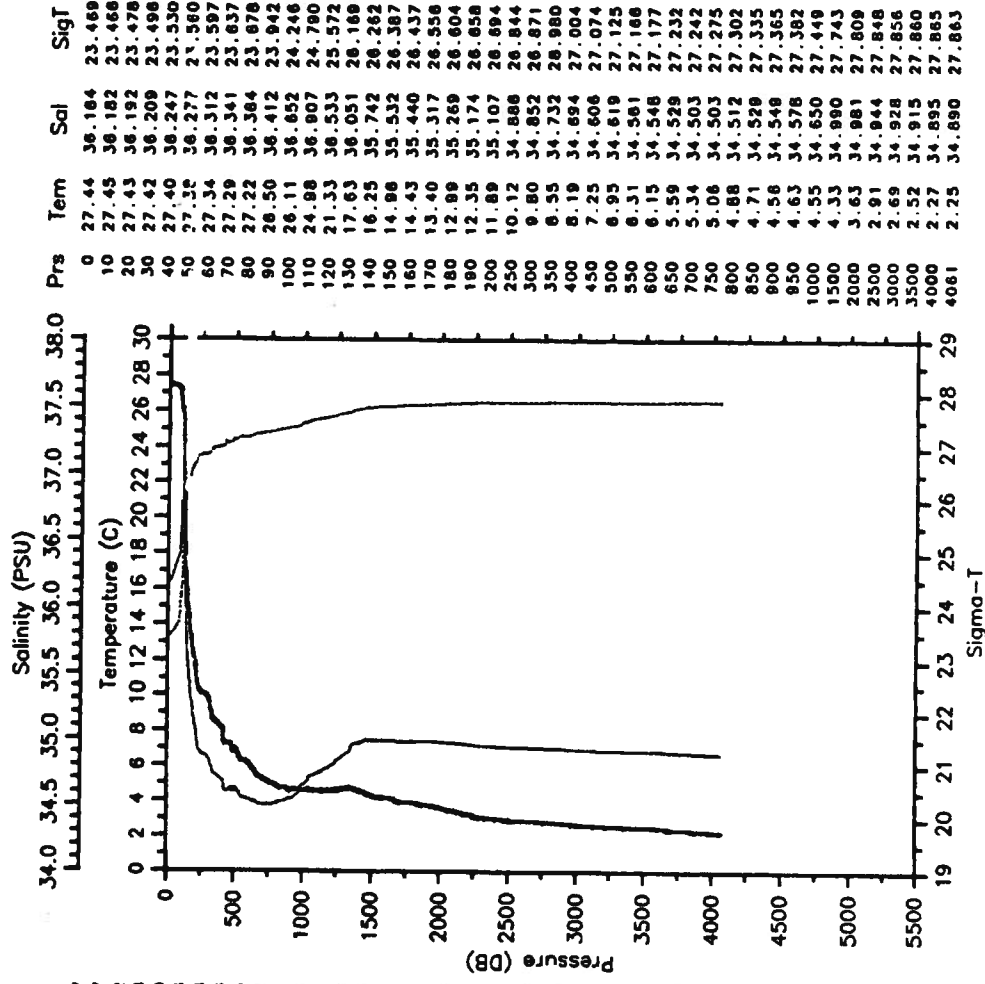
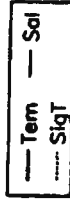
BAL-STACS38-91 CTD 30 BALDRIGE

Date 01 25 91 Latitude 1.939N
 Time 1757 Z Longitude 44.047W



BAL-STACS38-91 CTD 31 BALDRIGE

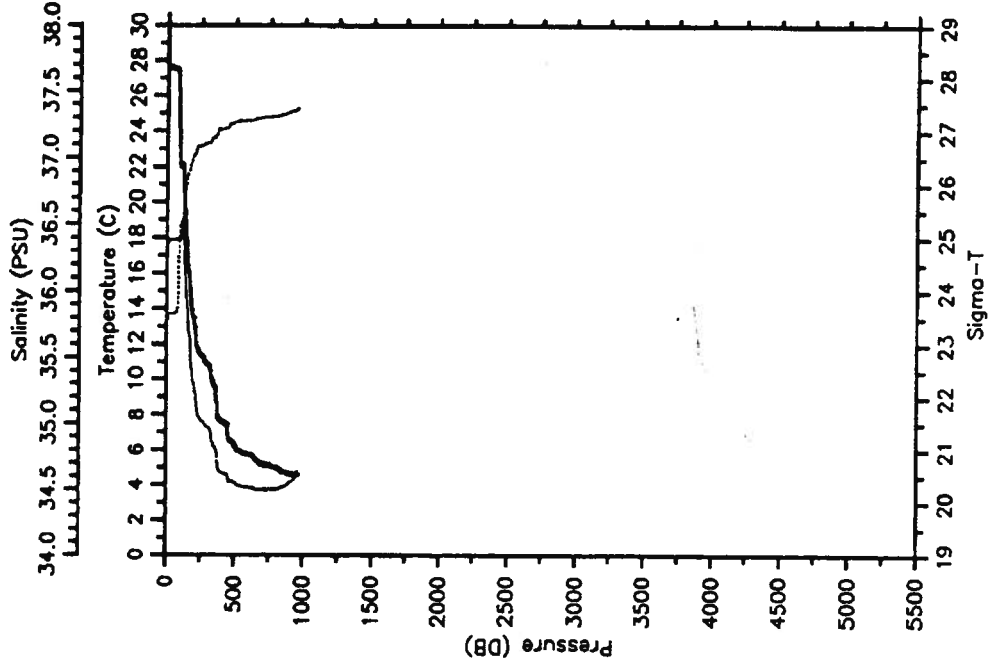
Date 01 26 91 Latitude 0.865N
 Time 0250 Z Longitude 44.045W



BAL-STACS38-91 CTD 32 BALDRIGE

Date 01 26 91 Latitude 0.144N
 Time 0950 Z Longitude 44.387W

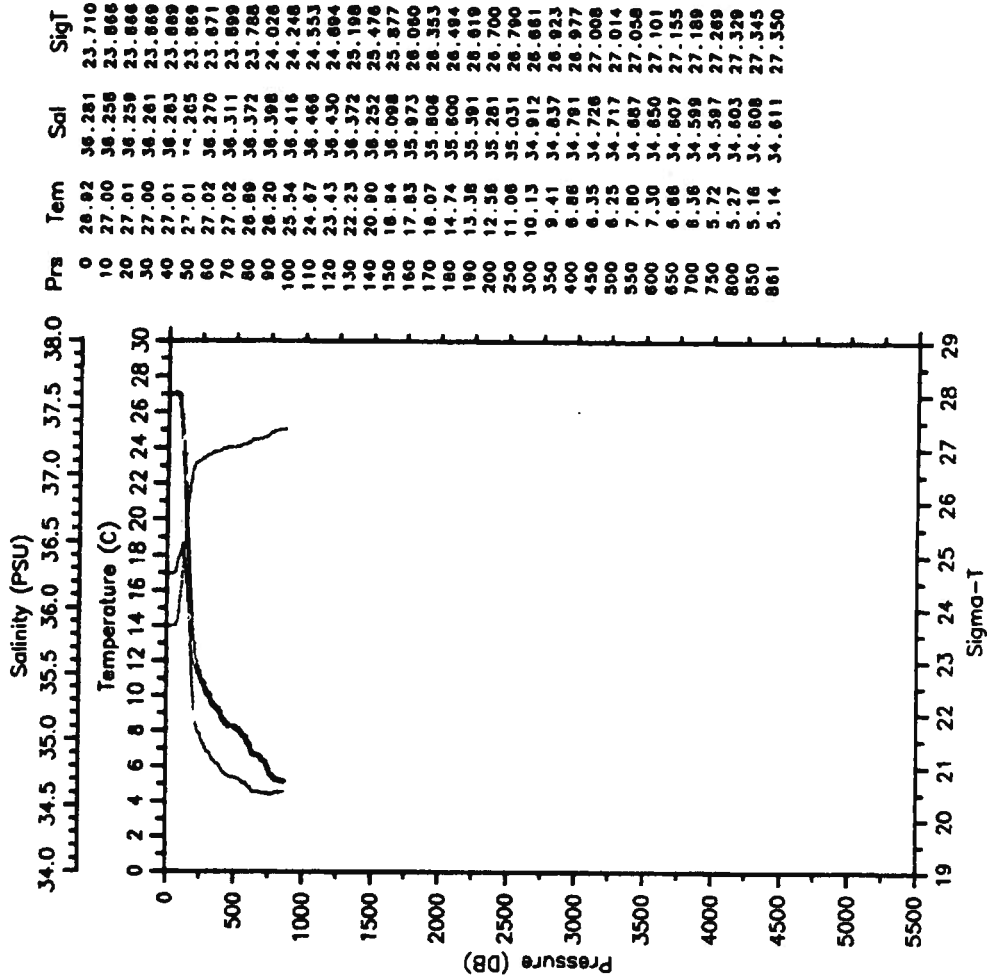
— Tem — Sal
 - - - - - SigT



BAL-STACS38-91 CTD 33 BALDRIGE

Date 01 28 91 Latitude 7.477N
 Time 0607 Z Longitude 52.947W

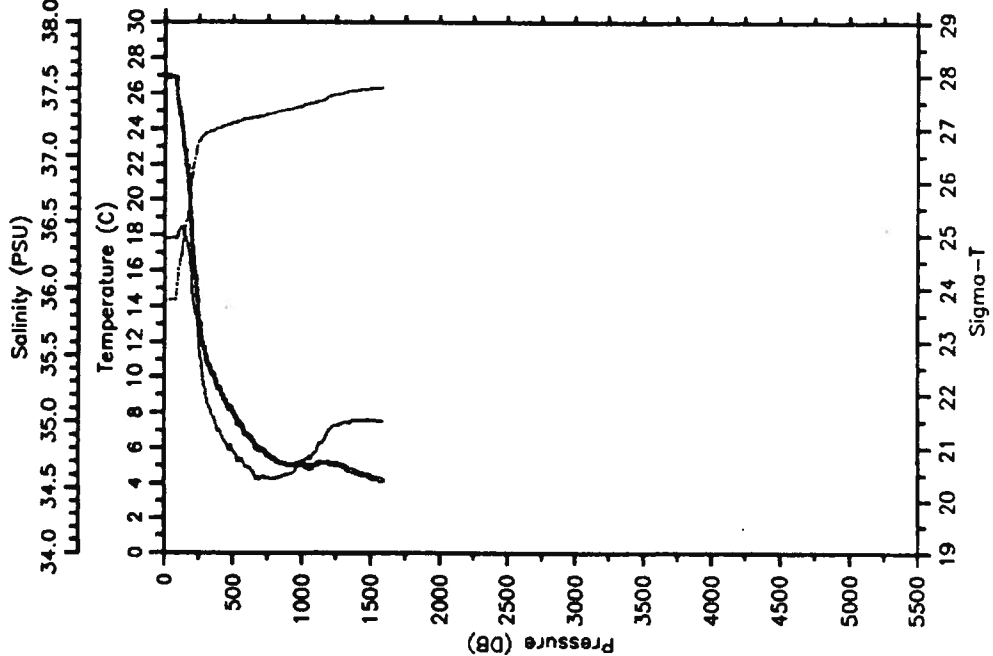
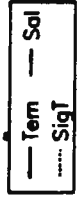
— Tem — Sal
 - - - - - SigT



BAL-STACS38-91 CTD 34 BALDRIGE

Date 01 28 91 Latitude 7.803N

Time 1124 Z Longitude 52.665W

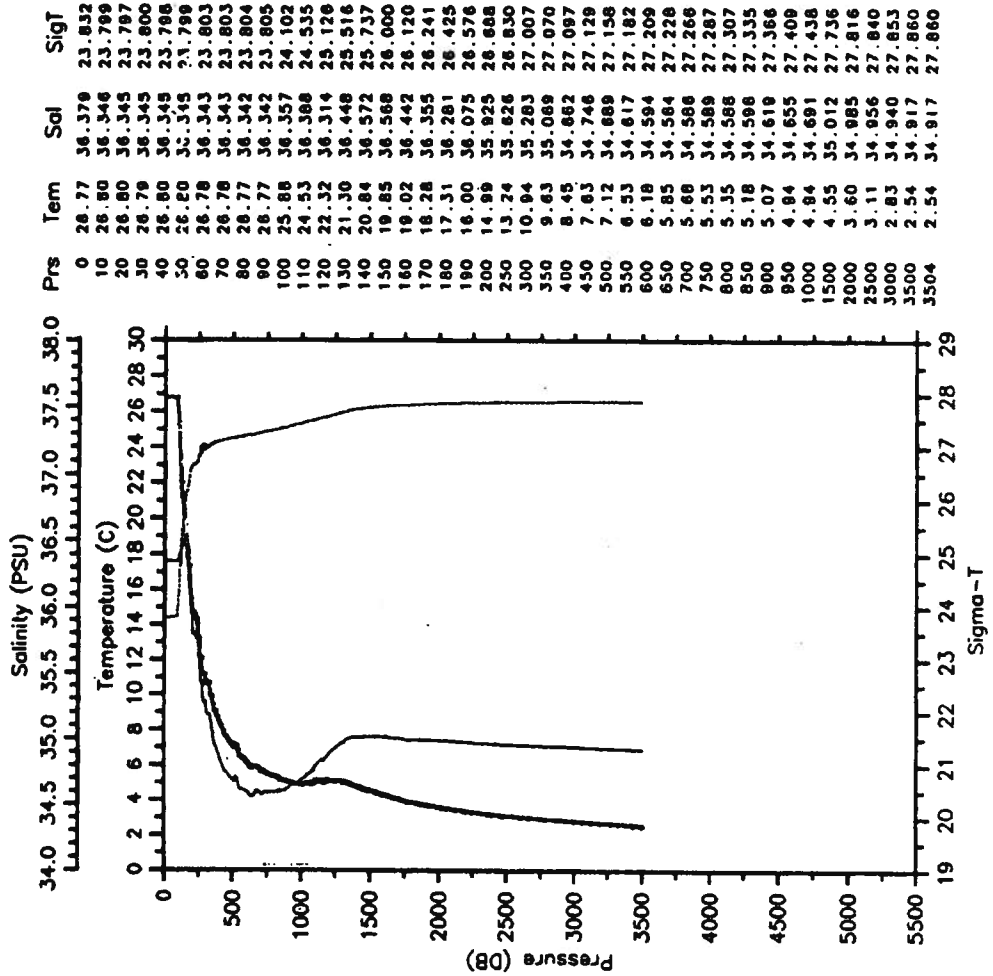
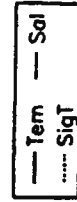


Prs	Temp	Sal	SigT
0	26.88	36.377	23.786
10	26.91	36.374	23.786
20	26.90	36.374	23.787
30	26.91	36.374	23.784
40	26.91	36.375	23.765
50	26.91	36.375	23.784
60	26.92	36.375	23.784
70	26.92	36.376	23.783
80	26.91	36.375	23.765
90	26.26	36.392	24.004
100	25.43	36.404	24.272
110	24.92	36.446	24.462
120	24.60	36.458	24.568
130	23.96	36.457	24.758
140	23.14	36.432	24.980
150	22.75	36.392	25.062
160	21.99	36.362	25.259
170	21.42	36.335	25.397
180	20.90	36.265	25.487
190	19.42	36.147	25.791
200	17.74	35.987	26.094
250	13.26	35.564	26.778
300	11.15	35.204	26.908
350	10.13	35.042	26.982
400	9.42	34.942	27.004
450	8.56	34.835	27.058
500	7.97	34.784	27.109
550	7.28	34.718	27.157
600	6.80	34.655	27.174
650	6.32	34.622	27.213
700	5.90	34.583	27.235
750	5.62	34.569	27.260
800	5.37	34.577	27.296
850	5.14	34.584	27.330
900	5.04	34.602	27.356
950	4.89	34.626	27.380
1000	5.12	34.698	27.422
1500	4.35	35.007	27.754
1567	4.17	35.000	27.769

BAL-STACS38-91 CTD 35 BALDRIGE

Date 01 28 91 Latitude 8.999N

Time 2220 Z Longitude 51.900W

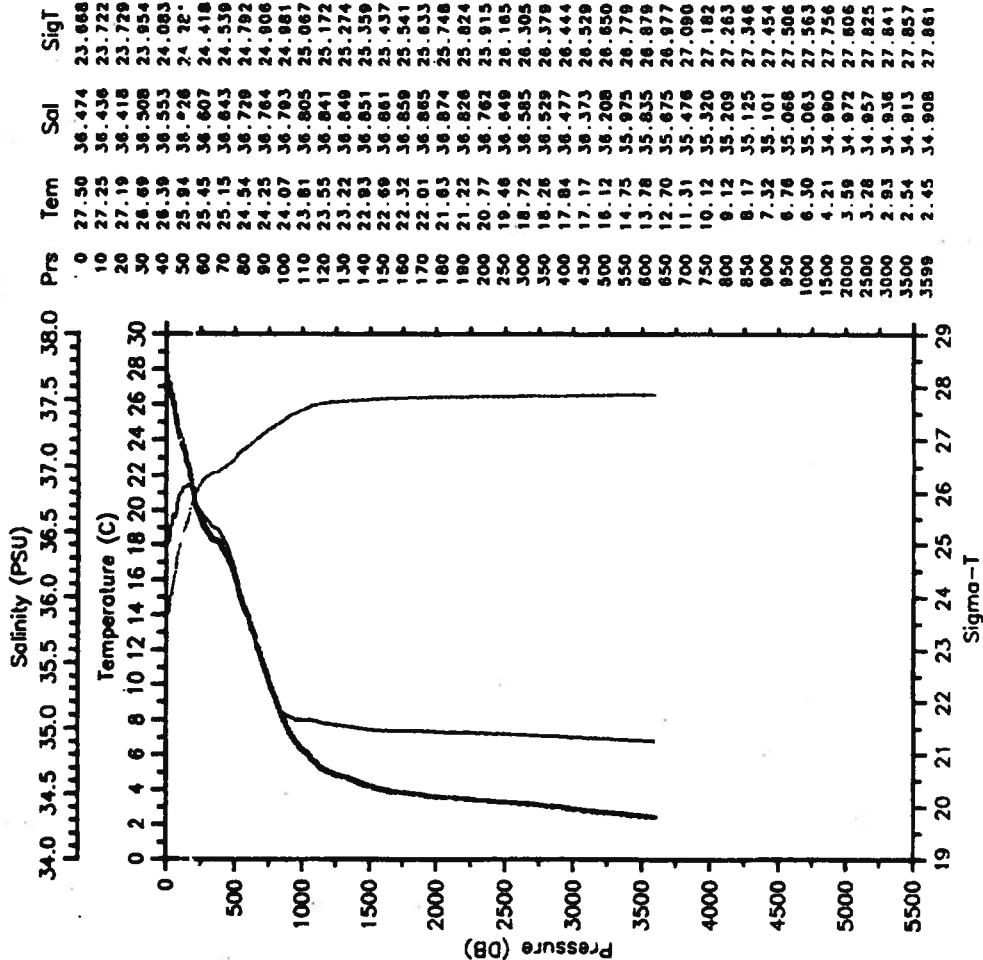


Prs	Temp	Sal	SigT
0	26.77	36.379	23.832
10	26.80	36.346	23.799
20	26.80	36.345	23.797
30	26.78	36.345	23.800
40	26.80	36.345	23.786
50	26.80	36.345	23.798
60	26.78	36.343	23.803
70	26.78	36.343	23.803
80	26.77	36.342	23.804
90	26.77	36.342	23.805
100	25.88	36.357	24.102
110	24.33	36.388	24.535
120	22.32	36.314	25.128
130	21.30	36.448	25.516
140	20.84	36.572	25.737
150	19.85	36.568	26.000
160	19.02	36.442	26.120
170	18.28	36.355	26.241
180	17.31	36.281	26.425
190	16.00	36.075	26.576
200	14.99	35.925	26.688
250	13.74	35.626	26.830
300	10.94	35.283	27.007
350	9.83	35.089	27.070
400	8.45	34.862	27.097
450	7.63	34.746	27.129
500	7.12	34.689	27.158
550	6.53	34.617	27.182
600	6.18	34.594	27.209
650	5.85	34.584	27.228
700	5.68	34.588	27.266
750	5.53	34.589	27.287
800	5.35	34.588	27.307
850	5.18	34.598	27.335
900	5.07	34.610	27.366
950	4.94	34.655	27.409
1000	4.84	34.691	27.438
1500	4.55	35.012	27.736
2000	3.60	34.985	27.816
2500	3.11	34.956	27.840
3000	2.83	34.940	27.853
3500	2.54	34.917	27.860
3504	2.54	34.917	27.860

BAL-STACS39-91 CTD 1 BALDRIGE

Date 06 15 91 Latitude 26.531N
Time 0155 Z Longitude 76.762W

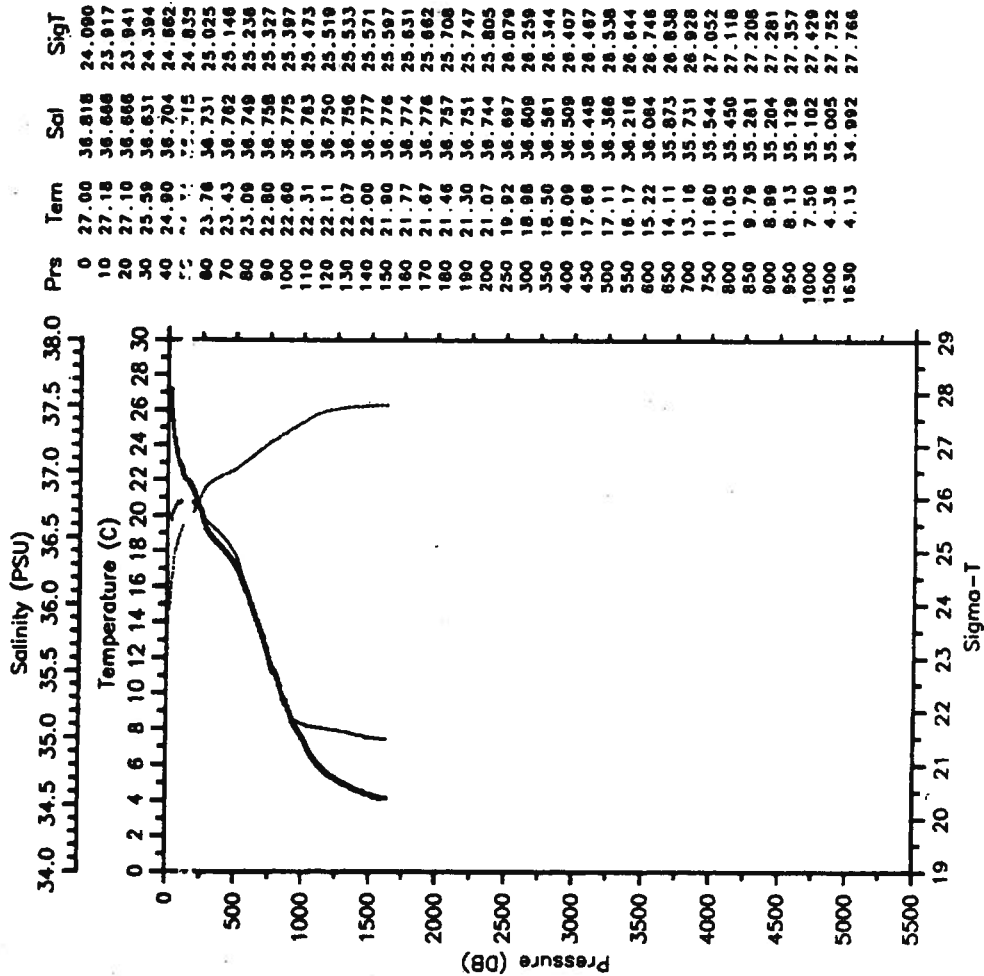
--- Tem --- Sal
..... SigT



BAL-STACS39-91 CTD 2 BALDRIGE

Date 06 15 91 Latitude 26.500N
Time 0715 Z Longitude 76.351W

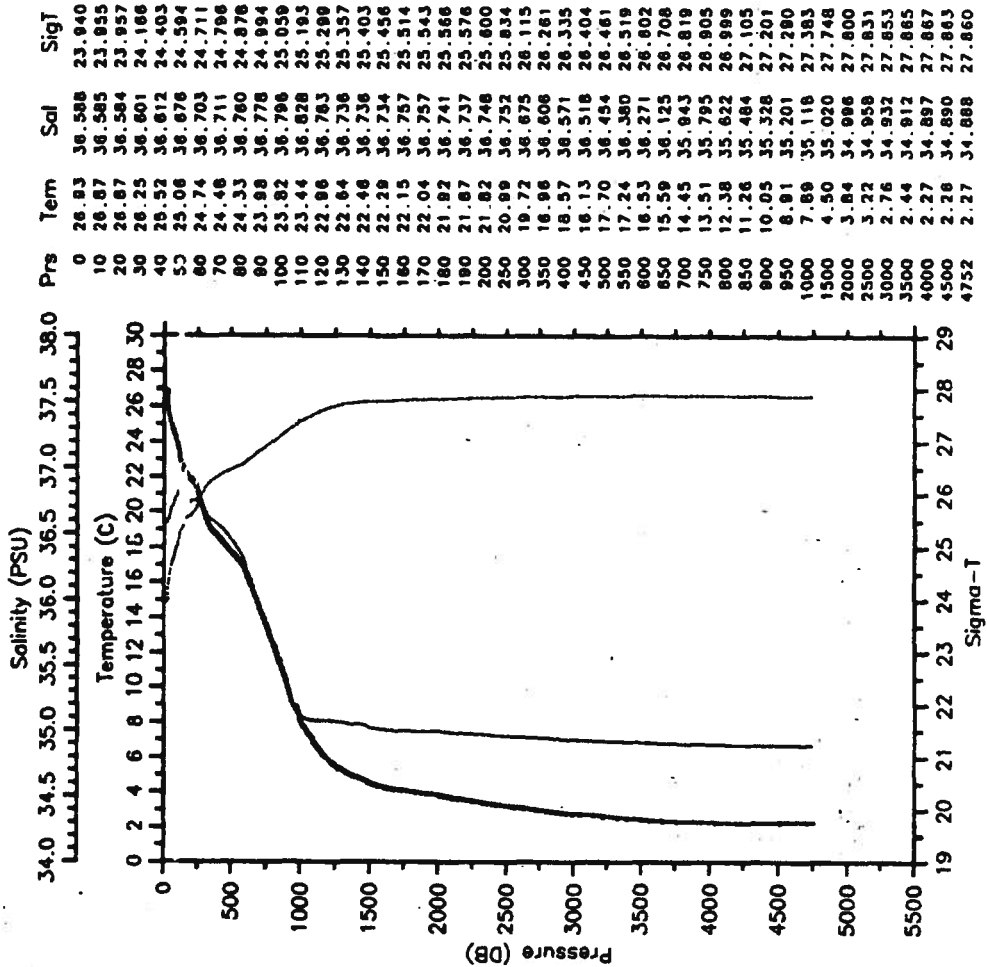
--- Tem --- Sal
..... SigT



BAL-STACS39-91 CTD 3 BALDRIGE

Date 06 15 91 Latitude 26.510N
 Time 1410 Z Longitude 75.692W

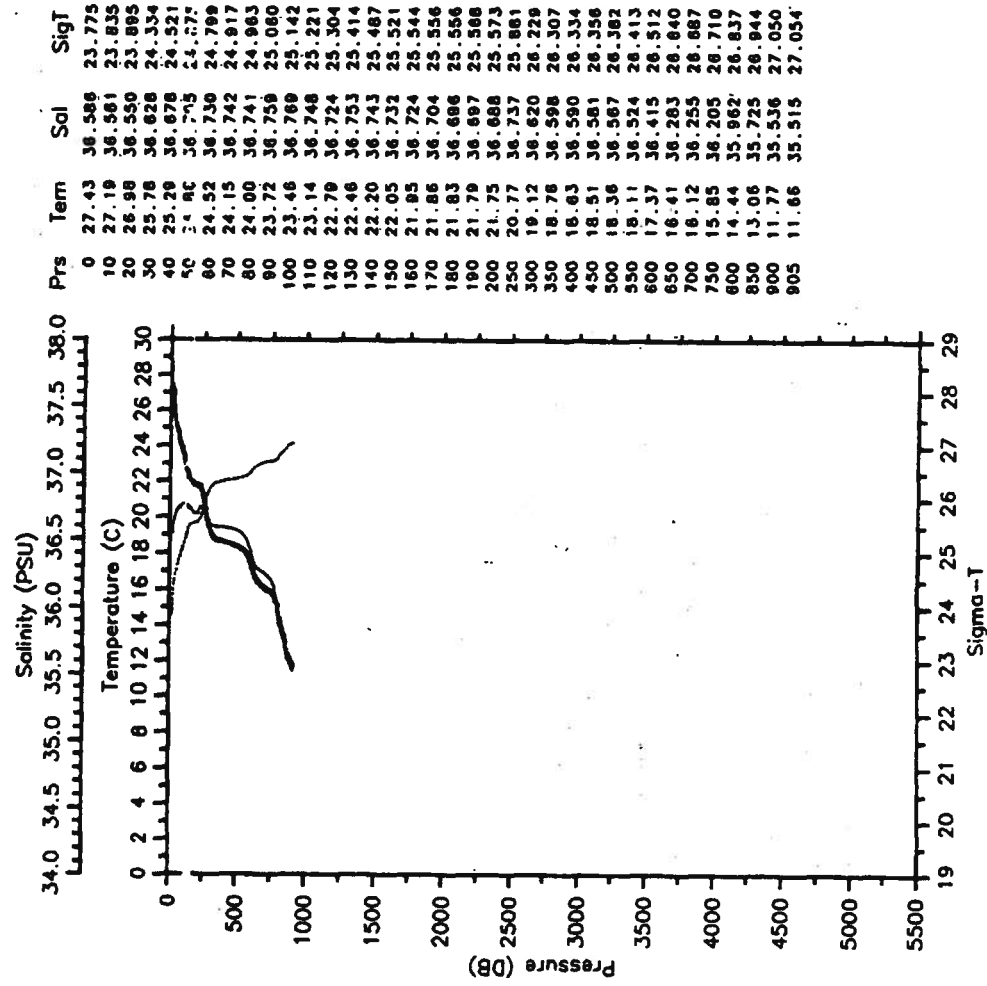
---Tem ---Sal
SigT



BAL-STACS39-91 CTD 4 BALDRIGE

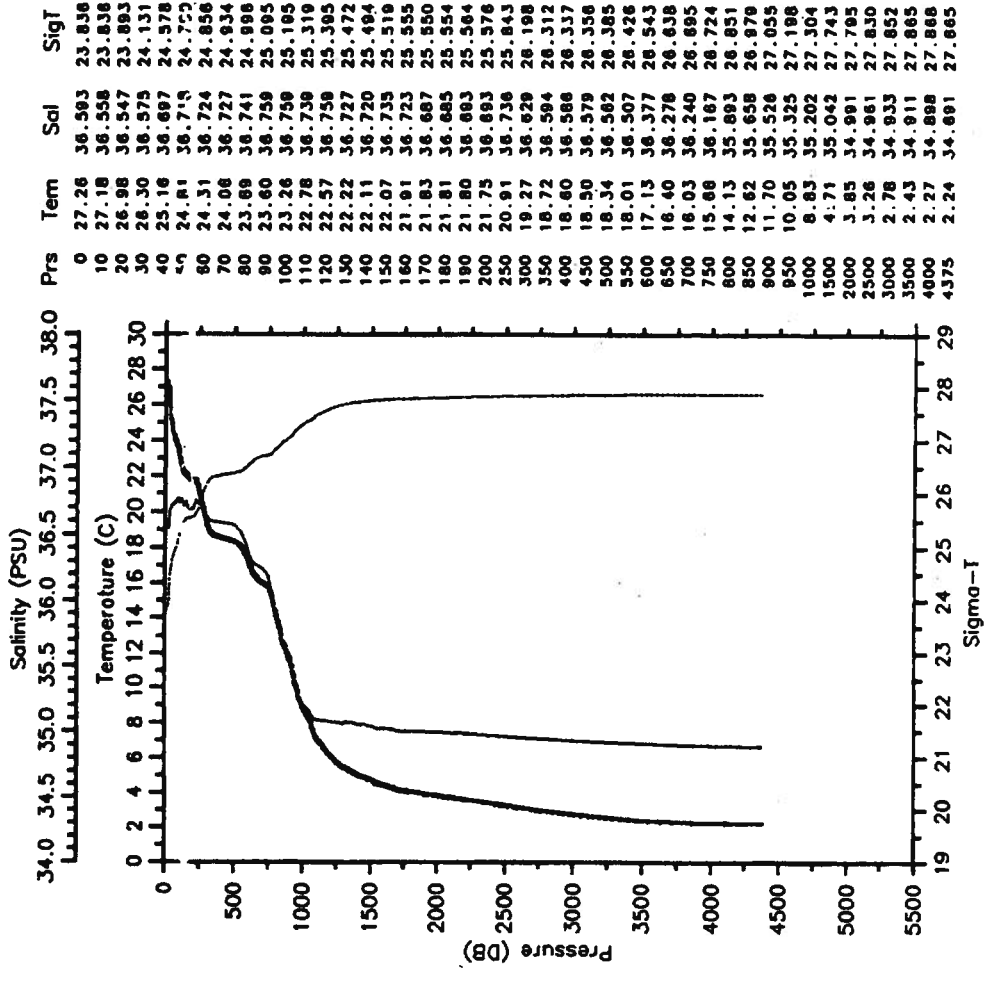
Date 06 15 91 Latitude 26.487N
 Time 1931 Z Longitude 75.198W

---Tem ---Sal
SigT



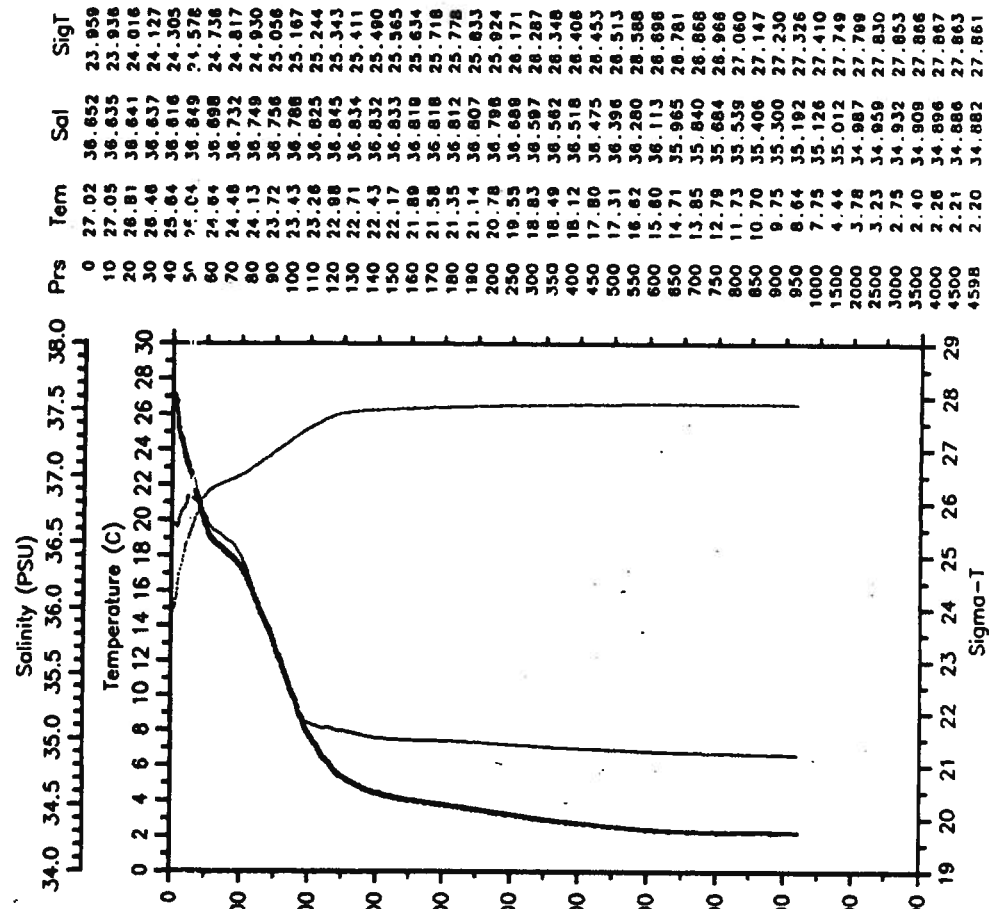
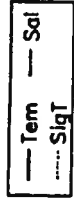
BAL-STACS39-91 CTD 5 BALDRIGE

Date 06 15 91 Latitude 26.479N
 Time 2304 Z Longitude 75.205W



BAL-STACS39-91 CTD 6 BALDRIGE

Date 06 16 91 Latitude 26.478N
 Time 0600 Z Longitude 74.200W

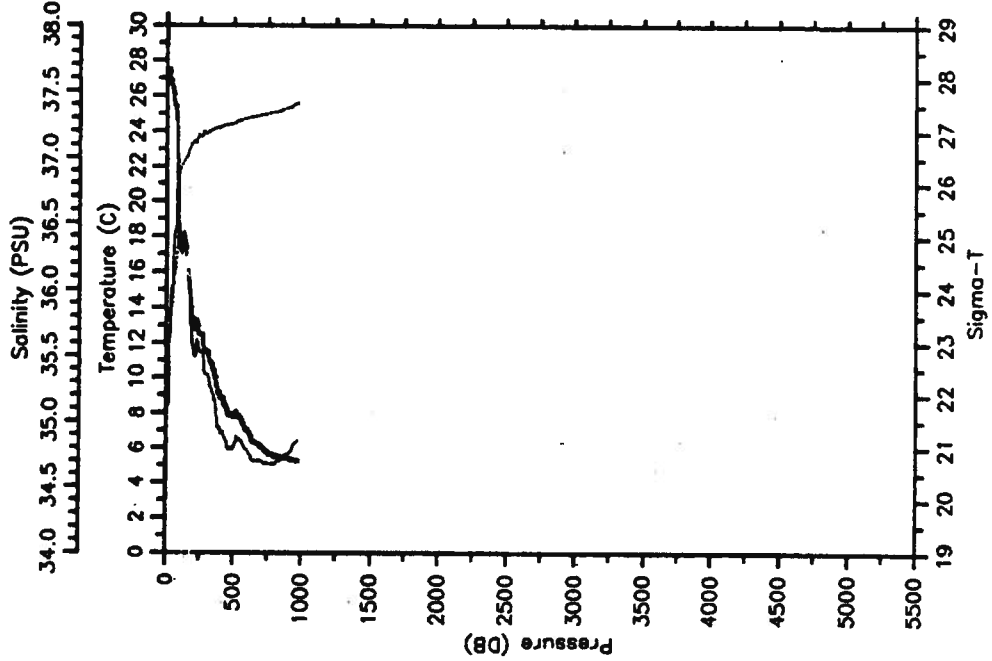


BAL-STACS39-91 CTD 7 BALDRIGE

Date 06 20 91 Latitude 11.795N

Time 0615 Z Longitude 61.512W

— Term — Sal
 SigT

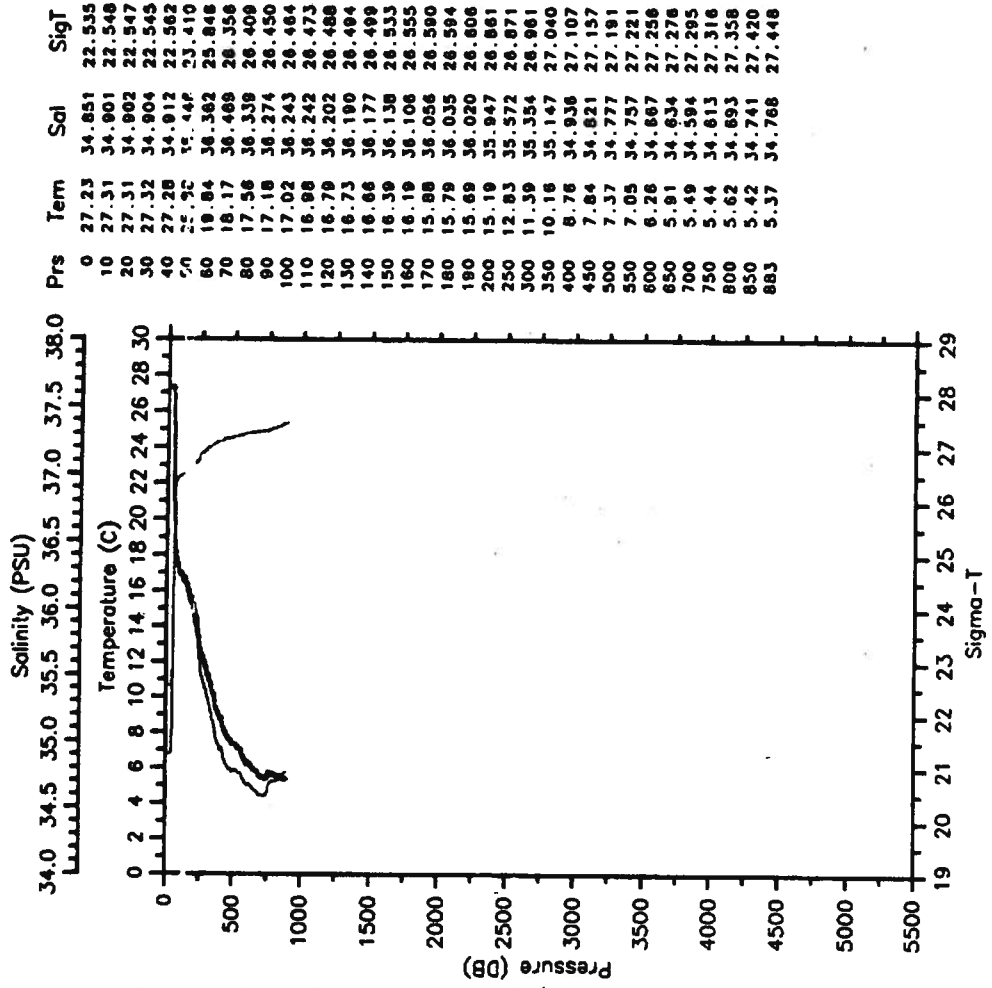


BAL-STACS39-91 CTD 8 BALDRIGE

Date 06 20 91 Latitude 11.615N

Time 1002 Z Longitude 61.018W

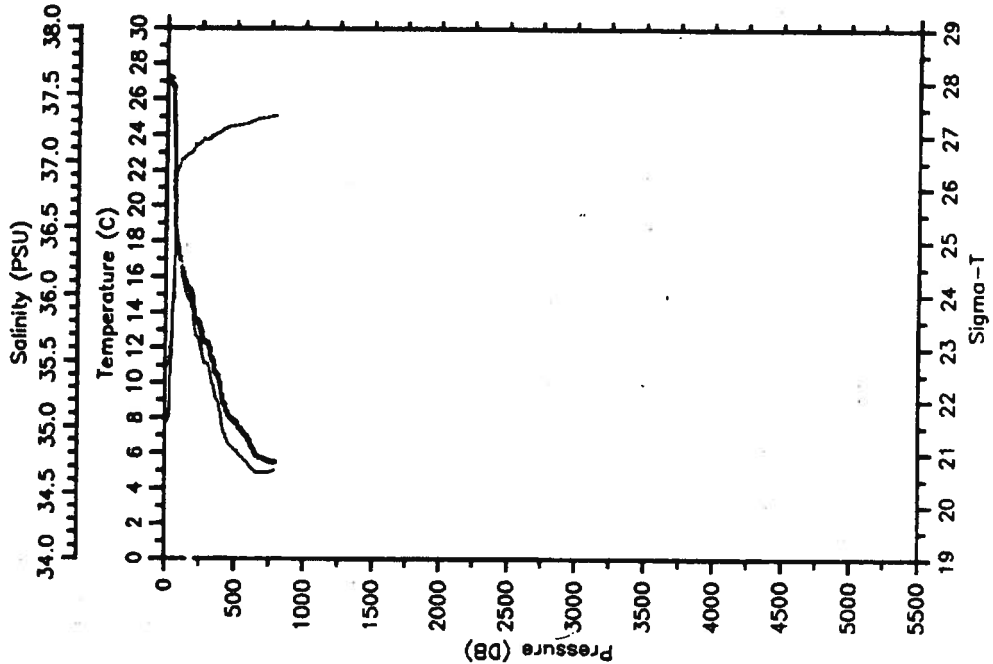
— Term — Sal
 SigT



BAL-STACS39-91 CTD 9 BALDRIGE

Date 06 20 91 Latitude 11.421N
 Time 1328 Z Longitude 60.539W

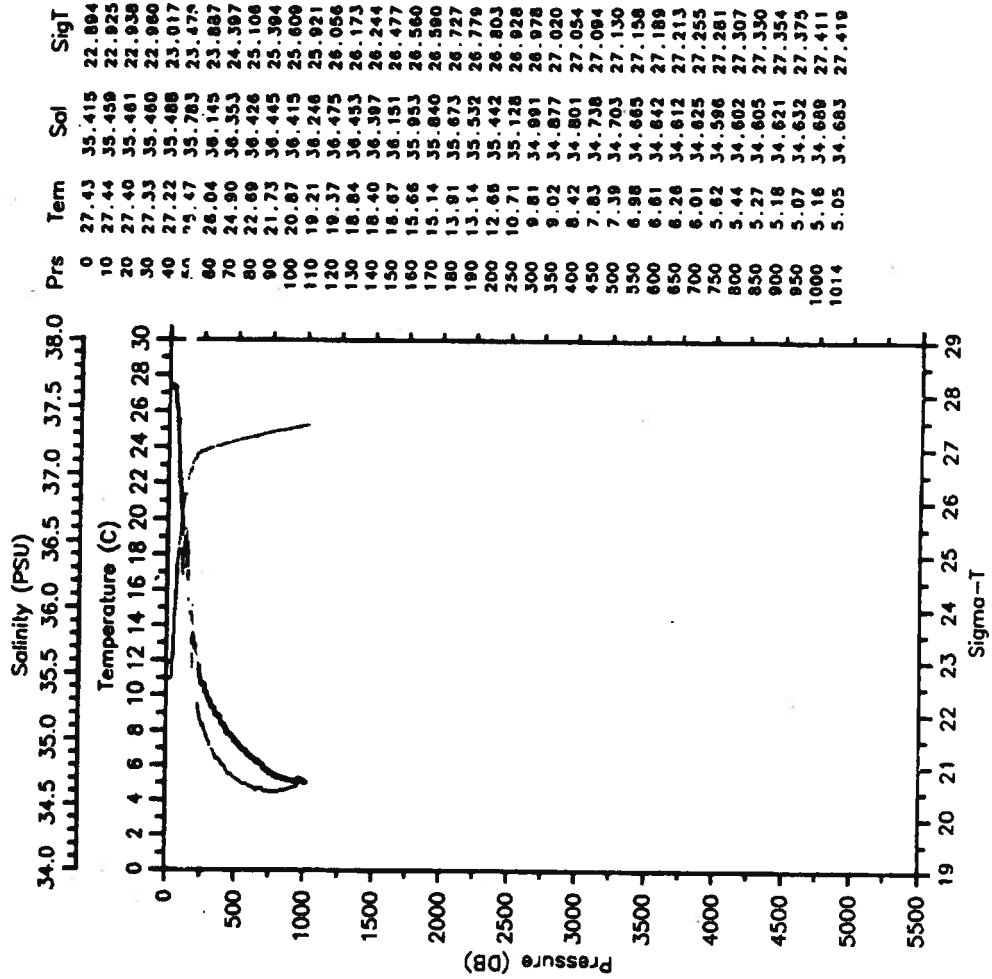
— Term — Sal
 ———— SigT



BAL-STACS39-91 CTD 10 BALDRIGE

Date 06 20 91 Latitude 10.669N
 Time 2024 Z Longitude 59.505W

— Term — Sal
 ———— SigT

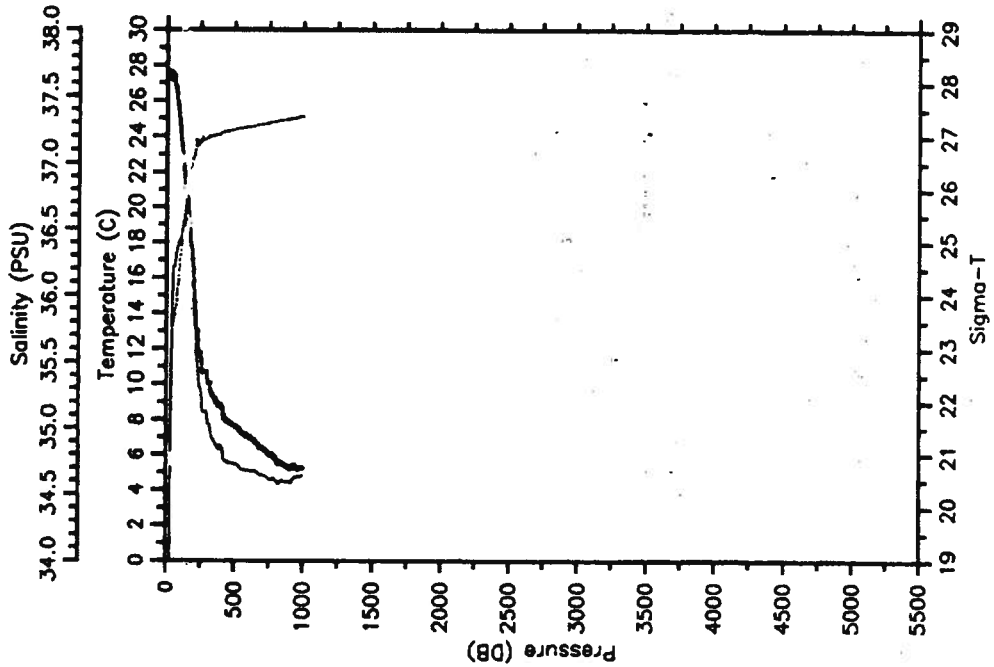


BAL-STACS39-91 CTD 11 BALDRICE

Date 06 21 91 Latitude 9.296N

Time 0909 Z Longitude 57.507W

— Term — Sal
..... SigT



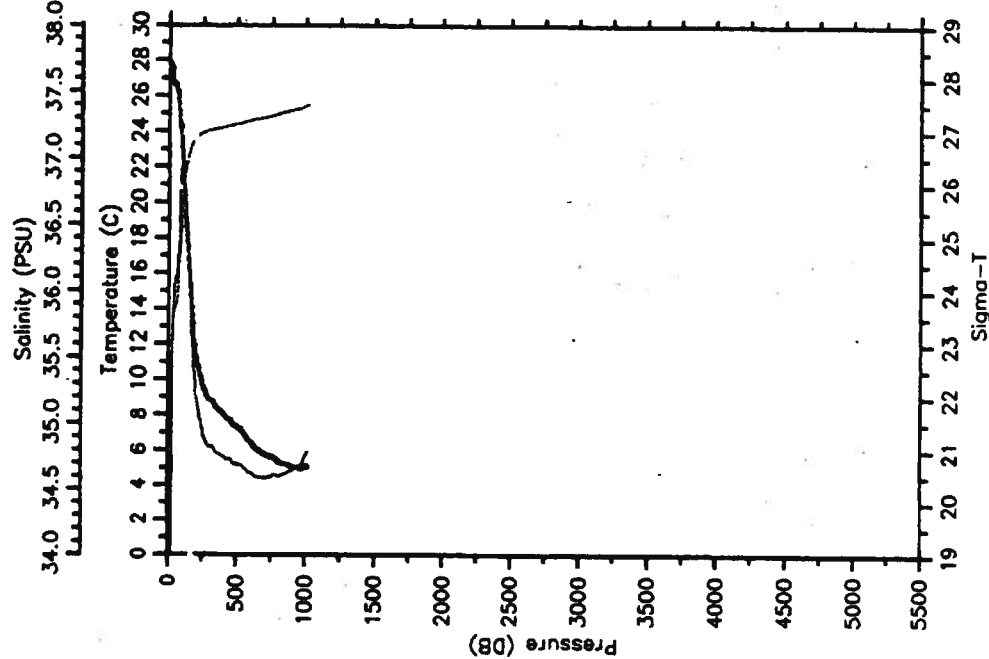
Prs	Tem	Sal	SigT
0	27.53	33.249	21.234
10	27.57	33.223	21.201
20	27.63	33.389	21.306
30	27.30	34.424	22.191
40	27.48	35.538	22.987
50	27.46	36.182	23.457
60	27.03	36.218	23.828
70	26.63	36.284	23.805
80	25.95	36.354	24.072
90	25.21	36.382	24.324
100	24.43	36.424	24.594
110	23.64	36.435	24.839
120	22.88	36.481	25.062
130	22.16	36.575	25.371
140	21.09	36.535	25.639
150	20.68	36.697	25.977
160	20.05	36.738	26.076
170	19.08	36.611	26.234
180	17.97	36.445	26.387
190	17.08	36.271	26.471
200	15.70	36.010	26.595
250	11.77	35.504	26.889
300	10.48	35.108	26.954
350	9.28	34.906	27.003
400	8.82	34.874	27.049
450	7.94	34.740	27.078
500	7.64	34.731	27.115
550	7.25	34.694	27.144
600	7.03	34.682	27.164
650	6.78	34.674	27.198
700	6.42	34.644	27.216
750	6.03	34.611	27.243
800	5.80	34.605	27.266
850	5.51	34.598	27.296
900	5.28	34.589	27.317
950	5.31	34.630	27.345
1000	5.24	34.643	27.363
1002	5.25	34.644	27.364

BAL-STACS39-91 CTD 12 BALDRICE

Date 06 21 91 Latitude 8.032N

Time 2109 Z Longitude 55.503W

— Term — Sal
..... SigT

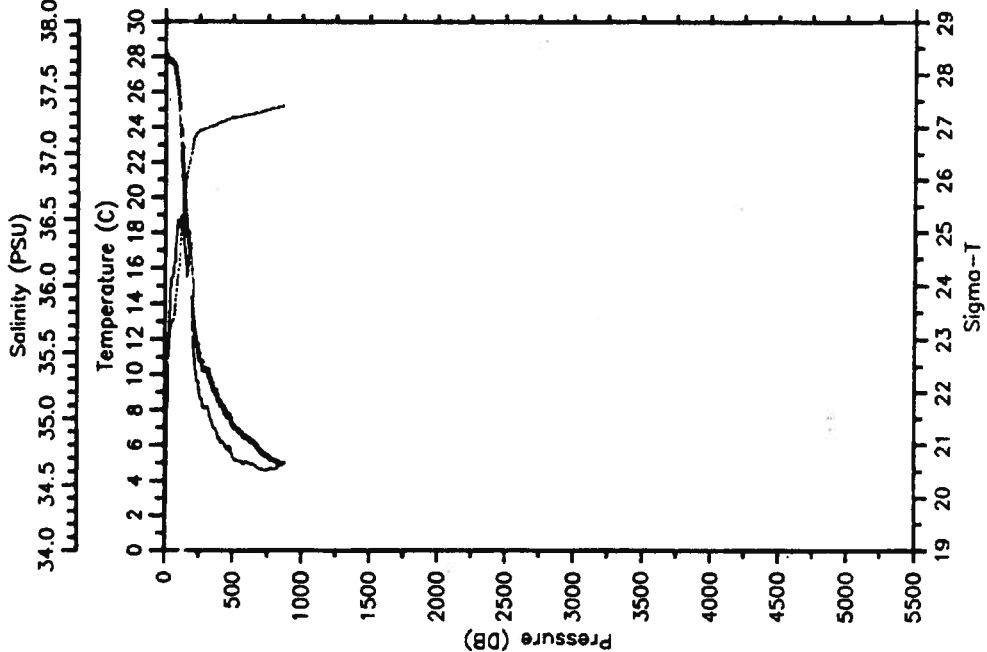
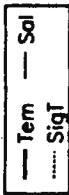


Prs	Tem	Sal	SigT
0	27.79	33.184	21.098
10	27.74	33.186	21.119
20	27.57	33.631	21.506
30	26.80	35.459	23.098
40	26.81	35.977	23.581
50	27.57	35.572	23.684
60	28.29	36.087	23.768
70	25.67	36.216	24.055
80	24.56	36.384	24.523
90	24.18	36.834	24.977
100	22.88	36.922	25.427
110	21.28	36.816	25.874
120	20.17	36.821	26.109
130	18.63	36.603	26.344
140	17.84	36.467	26.437
150	16.59	36.258	26.578
160	15.46	36.047	26.673
170	14.07	35.723	26.733
180	13.15	35.561	26.797
190	12.19	35.391	26.857
200	11.51	35.248	26.874
250	9.79	34.964	26.960
300	8.85	34.826	27.008
350	8.43	34.788	27.042
400	8.10	34.756	27.068
450	7.73	34.733	27.105
500	7.28	34.693	27.136
550	6.95	34.671	27.168
600	6.48	34.631	27.198
650	6.02	34.591	27.228
700	5.80	34.567	27.251
750	5.57	34.592	27.284
800	5.39	34.605	27.317
850	5.23	34.618	27.346
900	5.08	34.640	27.381
950	5.00	34.675	27.418
1000	5.05	34.750	27.471
1020	5.06	34.782	27.504

BAL-STACS39-91 CTD 13 BALDRIGE

Date 06 22 91 Latitude 7.476N

Time 1046 Z Longitude 52.941W

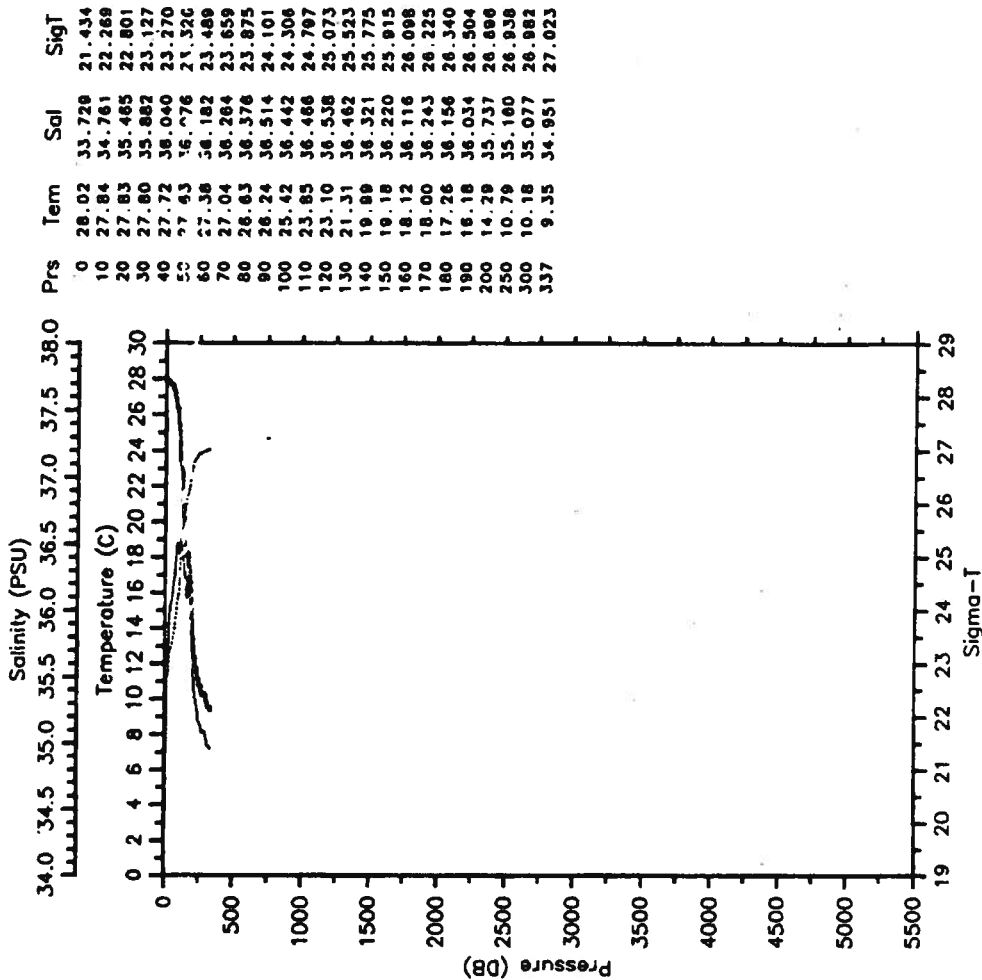
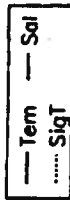


Prs	Tem	Sal	SigT
0	28.16	29.502	18.216
10	27.83	33.710	21.448
20	27.80	34.979	22.447
30	27.86	35.596	22.809
40	27.74	35.970	23.211
50	27.67	34.063	23.304
60	27.57	36.098	23.364
70	27.40	36.177	23.478
80	26.85	36.328	23.768
90	26.29	36.486	24.084
100	25.57	36.480	24.272
110	24.39	36.459	24.631
120	23.18	36.530	25.044
130	21.17	36.484	25.580
140	19.80	36.324	25.802
150	19.09	36.212	25.827
160	17.89	36.063	26.114
170	17.79	36.212	26.255
180	17.18	36.139	26.346
190	16.01	36.010	26.523
200	14.44	35.745	26.670
250	11.03	35.213	26.937
300	10.29	35.093	26.975
350	9.34	34.988	27.038
400	8.53	34.851	27.075
450	7.90	34.789	27.123
500	7.17	34.713	27.169
550	6.79	34.680	27.186
600	6.47	34.677	27.236
650	6.19	34.654	27.254
700	5.67	34.618	27.292
750	5.39	34.613	27.323
800	5.16	34.617	27.353
850	5.01	34.648	27.386
870	5.01	34.654	27.400

BAL-STACS39-91 CTD 14 BALDRIGE

Date 06 22 91 Latitude 7.446N

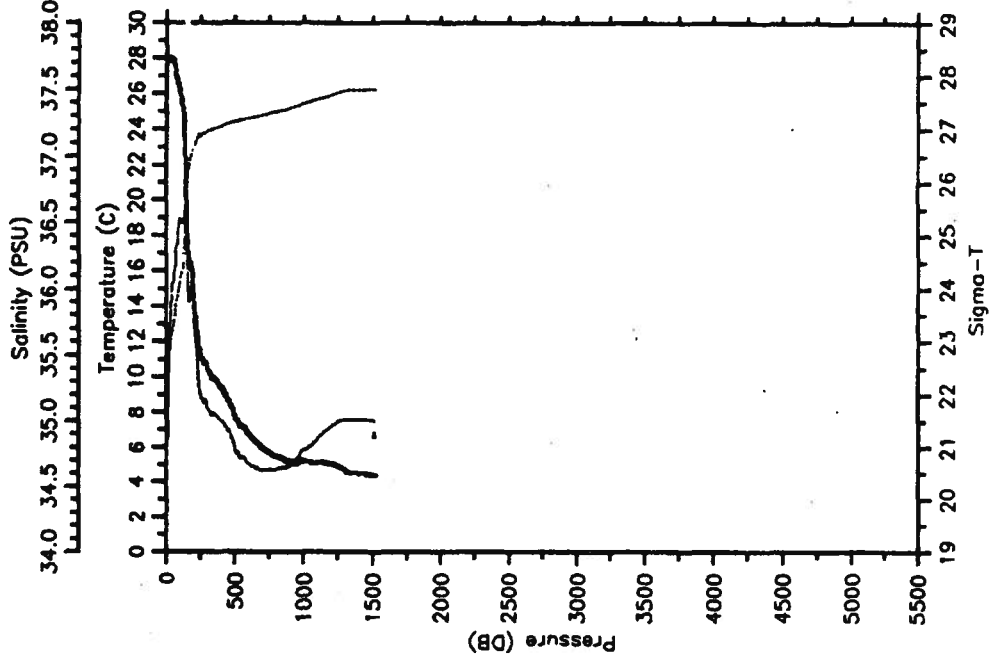
Time 1239 Z Longitude 52.950W



Prs	Tem	Sal	SigT
0	28.02	33.728	21.434
10	27.84	34.761	22.268
20	27.83	35.465	22.801
30	27.80	35.882	23.127
40	27.72	36.040	23.270
50	27.63	36.076	23.320
60	27.38	36.182	23.488
70	27.04	36.264	23.659
80	26.63	36.378	23.875
90	26.24	36.514	24.101
100	25.42	36.442	24.306
110	23.85	36.466	24.797
120	23.10	36.538	25.073
130	21.31	36.462	25.523
140	19.89	36.321	25.775
150	18.18	36.220	25.915
160	18.12	36.116	26.098
170	18.00	36.243	26.225
180	17.26	36.156	26.340
190	16.18	36.034	26.504
200	14.78	35.737	26.896
250	10.79	35.160	26.938
300	10.18	35.077	26.882
337	9.35	34.951	27.023

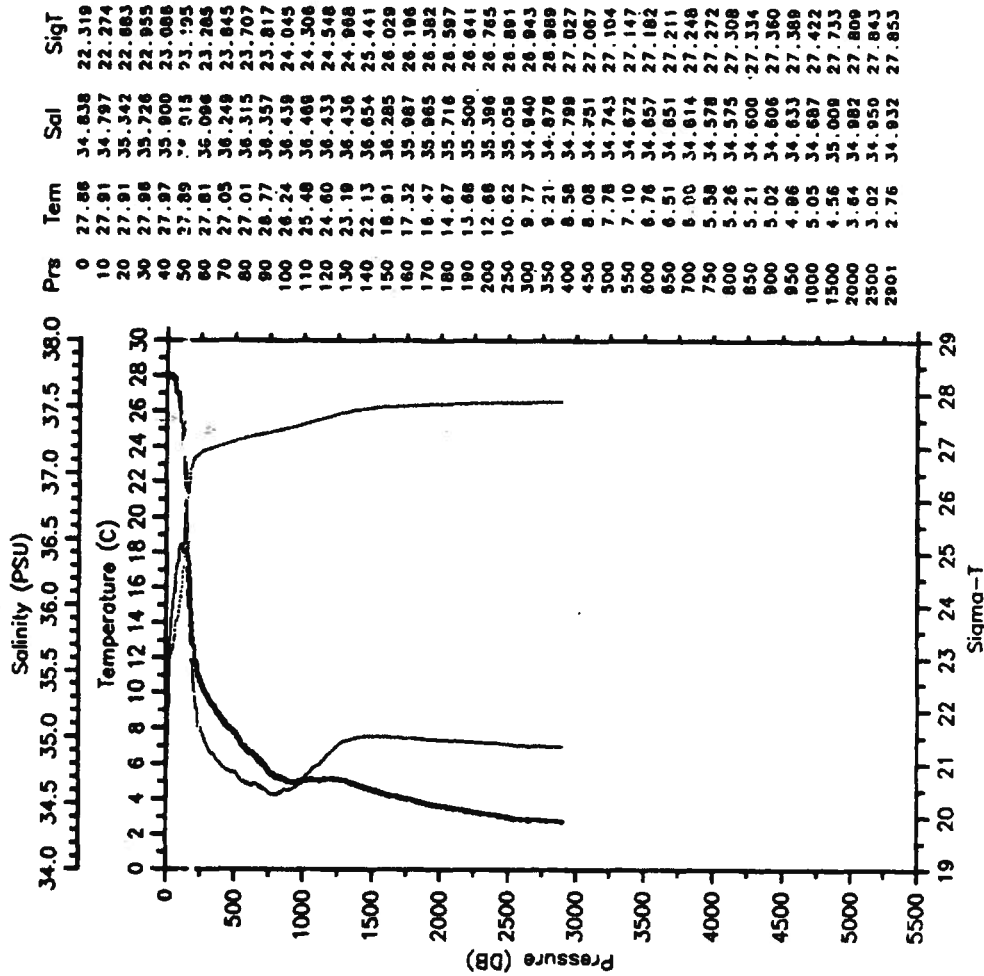
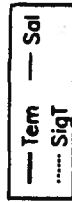
BAL-STACS39-91 CTD 15 BALDRIGE

Date 06 22 91 Latitude 7.793N
 Time 1519 Z Longitude 52.660W



BAL-STACS39-91 CTD 16 BALDRIGE

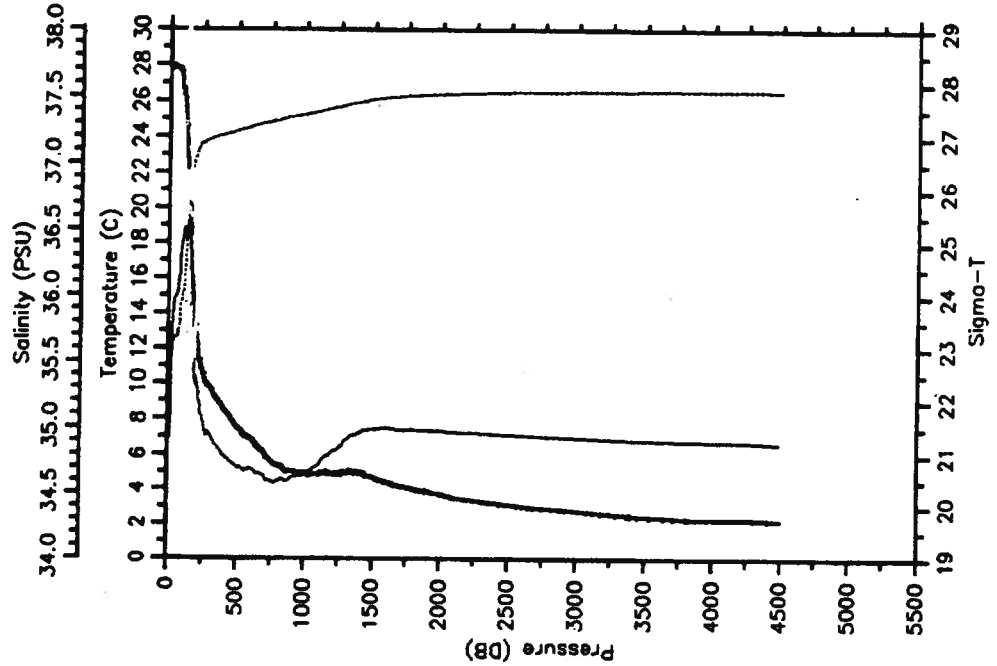
Date 06 22 91 Latitude 8.106N
 Time 1845 Z Longitude 52.458W



BAL-STACS39-91 CTD 17 BALDRICE

Date 06 23 91 Latitude 8.535N
 Time 0202 Z Longitude 52.179W

— Tem — Sal
 - - - - - SigT

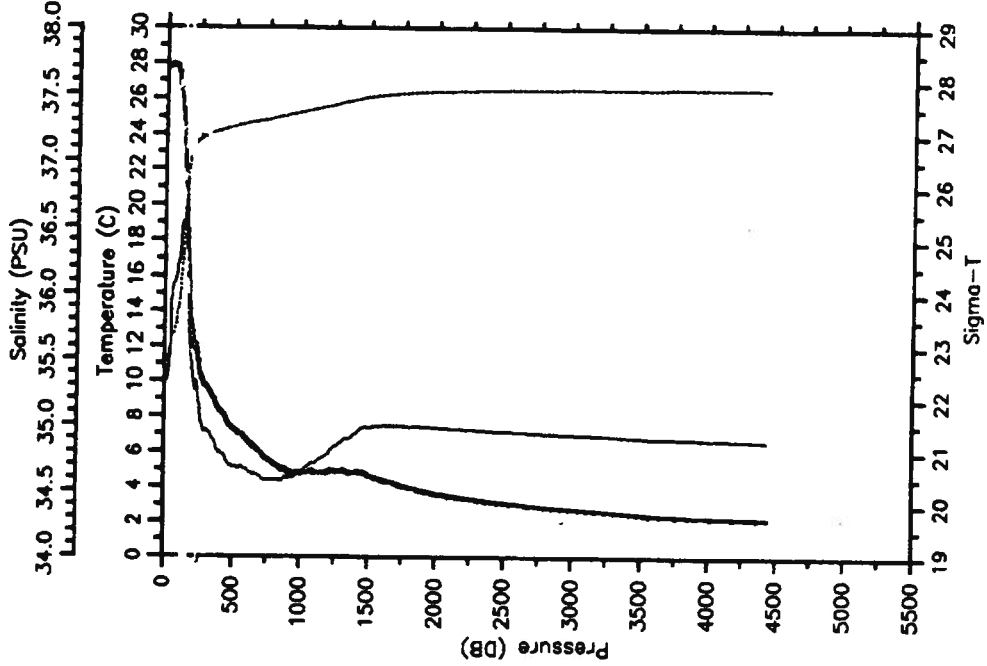


Prs	Tem	Sol	SigT
0	27.74	34.921	22.423
10	27.76	34.916	22.414
20	27.80	34.992	22.455
30	27.91	35.751	22.991
40	27.98	35.949	23.151
50	27.83	35.288	23.194
60	27.80	35.999	23.215
70	27.78	36.054	23.269
80	27.60	36.156	23.397
90	26.75	36.337	23.809
100	26.47	36.405	23.949
110	26.13	36.482	24.112
120	25.14	36.511	24.443
130	23.01	36.430	25.016
140	21.88	36.516	25.407
150	20.84	36.538	25.711
160	19.38	36.350	25.953
170	17.03	36.075	26.334
180	16.11	36.027	26.514
190	13.57	35.406	26.590
200	13.18	35.380	26.649
250	10.52	35.052	26.903
300	9.77	34.957	26.959
350	9.12	34.866	26.994
400	8.53	34.794	27.032
450	8.03	34.745	27.069
500	7.54	34.703	27.109
550	7.14	34.683	27.150
600	6.89	34.689	27.189
650	6.47	34.658	27.221
700	6.10	34.637	27.254
750	5.58	34.592	27.282
800	5.39	34.598	27.309
850	5.15	34.604	27.344
900	5.04	34.618	27.369
950	4.87	34.634	27.389
1000	4.69	34.653	27.413
1500	4.73	34.997	27.704
2000	3.71	34.983	27.803
2500	3.11	34.954	27.839
3000	2.74	34.931	27.853
3500	2.43	34.911	27.865
4000	2.28	34.897	27.866
4493	2.19	34.882	27.861

BAL-STACS39-91 CTD 18 BALDRICE

Date 06 23 91 Latitude 9.035N
 Time 0947 Z Longitude 51.917W

— Tem — Sal
 - - - - - SigT

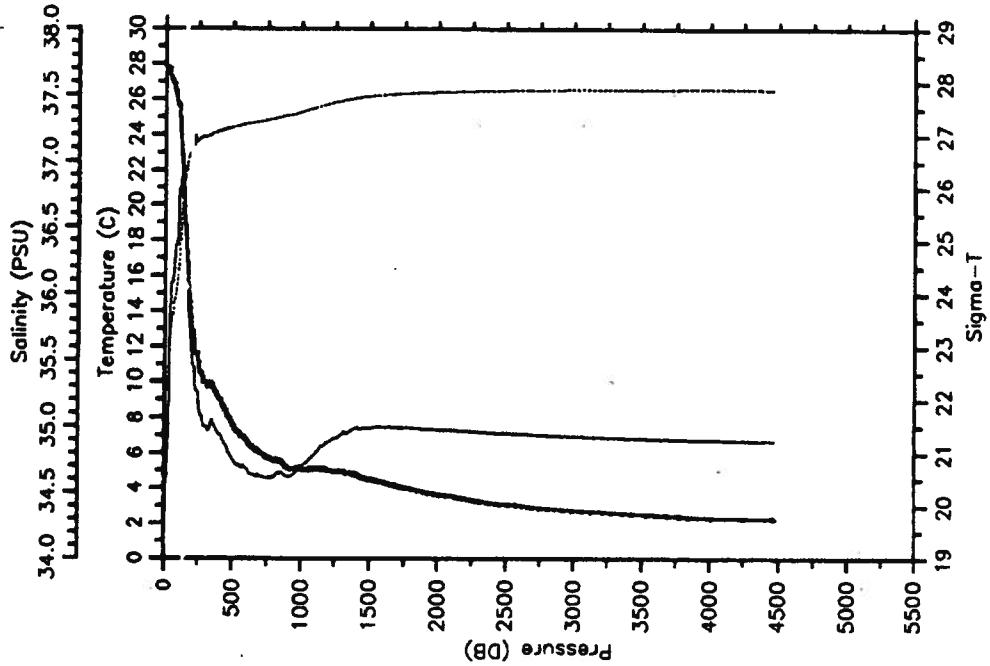


Prs	Tem	Sol	SigT
0	27.69	35.355	22.785
10	27.78	35.330	22.724
20	27.78	35.351	22.734
30	27.82	35.418	22.770
40	27.88	35.578	22.872
50	27.93	35.550	23.124
60	27.91	36.067	23.230
70	27.89	36.078	23.245
80	27.57	36.126	23.365
90	27.08	36.185	23.568
100	26.88	36.236	23.755
110	26.18	36.336	23.986
120	25.41	36.498	24.351
130	24.02	36.495	24.770
140	22.40	36.538	25.276
150	20.98	36.522	25.768
160	18.85	36.279	26.038
170	16.55	35.980	26.382
180	14.68	35.655	26.547
190	13.53	35.513	26.683
200	12.79	35.405	26.750
250	11.11	35.170	26.868
300	9.77	34.867	26.966
350	9.08	34.891	27.020
400	8.33	34.789	27.058
450	7.76	34.736	27.103
500	7.30	34.685	27.129
550	7.02	34.678	27.163
600	6.69	34.667	27.198
650	6.34	34.629	27.216
700	6.00	34.613	27.247
750	5.63	34.598	27.273
800	5.33	34.585	27.308
850	5.07	34.581	27.335
900	4.86	34.603	27.365
950	4.77	34.607	27.390
1000	4.78	34.641	27.417
1500	4.66	34.977	27.696
2000	3.64	34.980	27.807
2500	3.11	34.954	27.838
3000	2.78	34.933	27.852
3500	2.50	34.913	27.860
4000	2.30	34.898	27.865
4436	2.19	34.883	27.862

BAL-STACS39-91 CTD 19 BALDRIGE

Date 06 24 91 Latitude 10.047N
 Time 0039 Z Longitude 51.289W

--- Tem --- Sal
 SigT

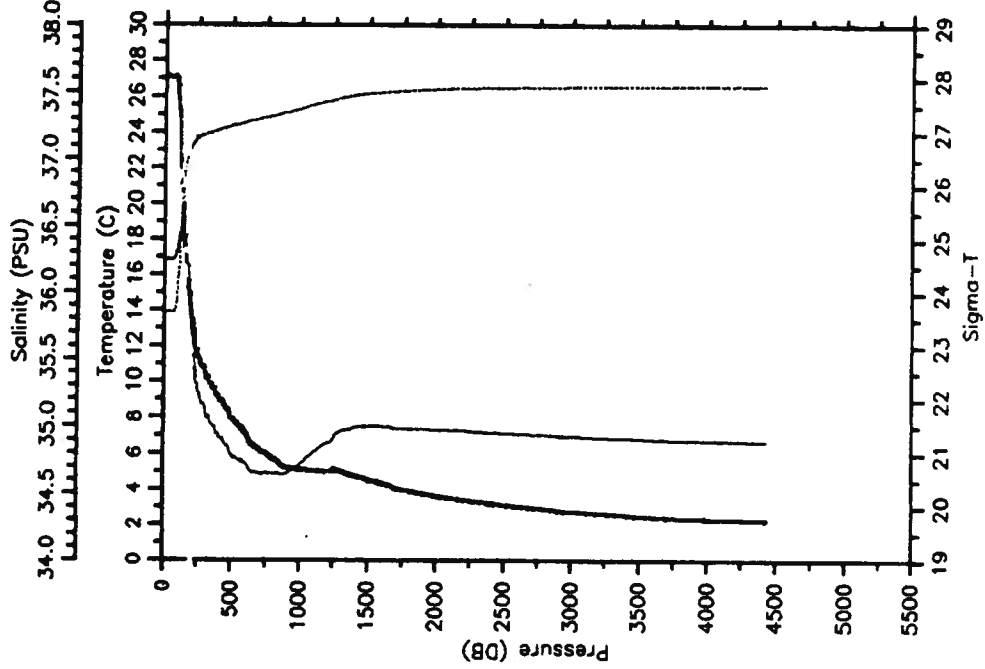


Prs	Tem	Sal	SigT
0	27.64	34.557	22.182
10	27.08	34.556	22.167
20	27.75	34.694	22.249
30	27.67	35.048	22.341
40	27.17	35.898	23.345
50	27.06	36.092	23.517
60	26.89	36.098	23.581
70	28.49	36.268	23.638
80	26.38	36.361	23.842
90	25.85	36.377	24.121
100	25.61	36.590	24.358
110	24.60	36.731	24.774
120	23.08	36.873	25.333
130	21.80	36.845	25.679
140	20.26	36.728	26.011
150	19.00	36.532	26.195
160	17.55	36.308	26.387
170	16.16	36.064	26.530
180	14.97	35.834	26.622
190	14.17	35.687	26.682
200	13.12	35.535	26.783
250	11.19	35.212	26.908
300	9.88	34.898	26.955
350	9.79	35.044	27.022
400	9.05	34.939	27.062
450	8.42	34.861	27.101
500	7.62	34.757	27.140
550	7.13	34.707	27.171
600	6.80	34.686	27.200
650	6.32	34.635	27.223
700	6.05	34.623	27.248
750	5.77	34.608	27.273
800	5.57	34.612	27.301
850	5.54	34.648	27.333
900	5.15	34.622	27.358
950	5.07	34.641	27.383
1000	5.06	34.698	27.428
1500	4.45	34.986	27.727
2000	3.64	34.978	27.806
2500	3.08	34.952	27.839
3000	2.75	34.930	27.852
3500	2.52	34.914	27.859
4000	2.34	34.900	27.864
4472	2.26	34.889	27.862

BAL-STACS39-91 CTD 20 BALDRIGE

Date 06 24 91 Latitude 10.017N
 Time 1555 Z Longitude 49.040W

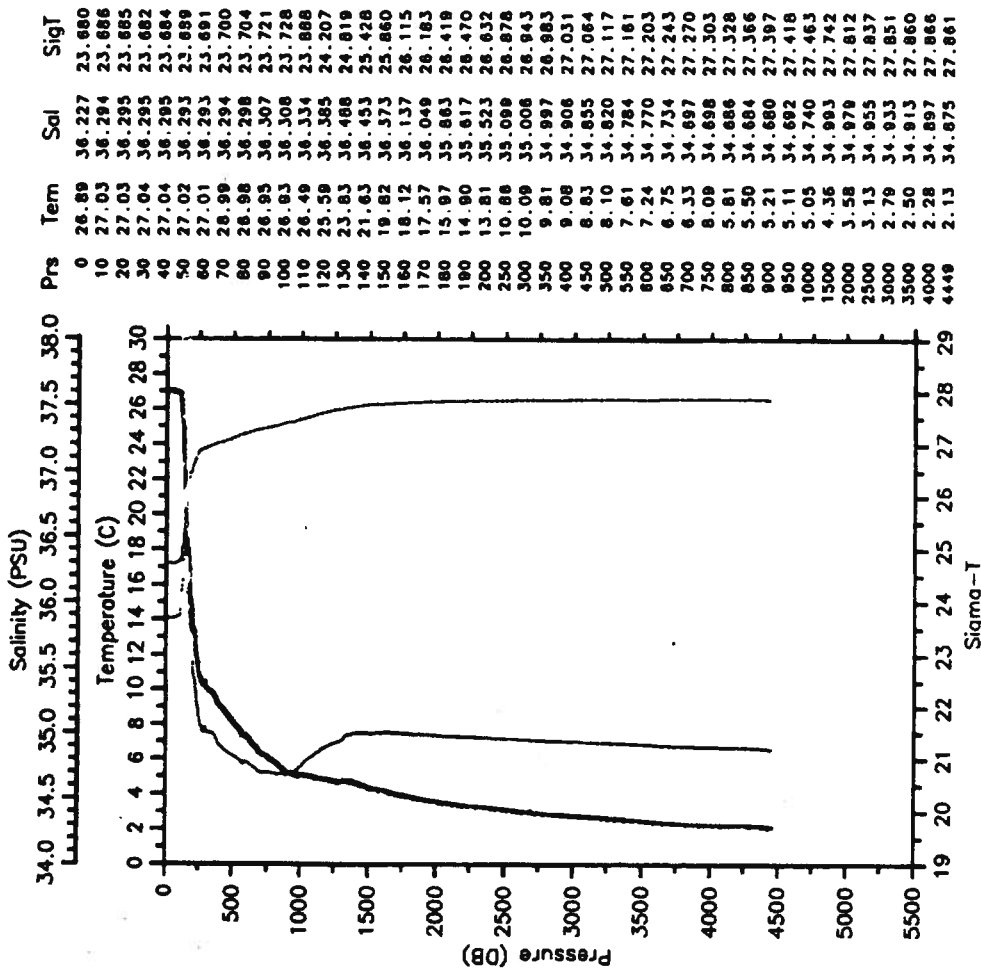
--- Tem --- Sal
 SigT



Prs	Tem	Sal	SigT
0	27.17	36.235	23.585
10	27.16	36.243	23.604
20	27.10	36.246	23.627
30	27.09	36.248	23.631
40	27.09	36.248	23.633
50	27.08	36.248	23.633
60	27.08	36.248	23.634
70	27.09	36.250	23.634
80	27.08	36.262	23.644
90	26.82	36.308	23.763
100	25.82	36.348	24.110
110	25.11	36.422	24.385
120	22.62	36.417	25.119
130	21.29	36.465	25.532
140	19.55	36.402	25.952
150	18.22	36.340	26.245
160	17.42	36.249	26.373
170	16.51	36.121	26.493
180	15.69	36.008	26.596
190	14.88	35.895	26.666
200	14.15	35.778	26.758
250	11.60	35.284	26.895
300	10.78	35.159	26.936
350	9.86	35.017	26.989
400	9.24	34.942	27.034
450	8.89	34.879	27.074
500	7.94	34.785	27.114
550	7.56	34.755	27.146
600	7.15	34.730	27.186
650	6.52	34.660	27.217
700	6.28	34.654	27.247
750	6.00	34.651	27.277
800	5.72	34.650	27.311
850	5.49	34.650	27.341
900	5.24	34.648	27.368
950	5.18	34.676	27.400
1000	5.13	34.716	27.435
1500	4.52	34.995	27.726
2000	3.61	34.972	27.804
2500	3.10	34.950	27.835
3000	2.73	34.927	27.851
3500	2.49	34.908	27.858
4000	2.33	34.898	27.863
4425	2.26	34.889	27.862

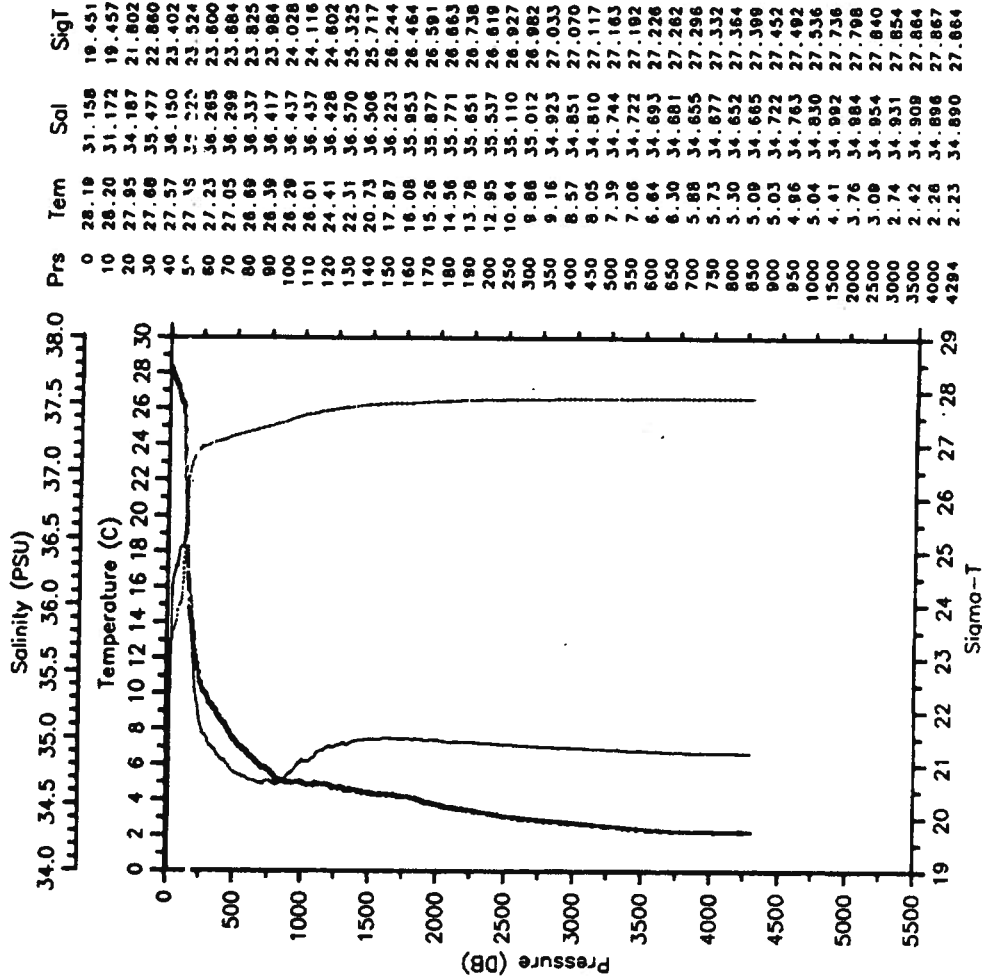
BAL-STACS39-91 CTD 21 BALDRIGE
 Date 06 25 91 Latitude 8.784N
 Time 0123 Z Longitude 49.521W

--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 22 BALDRIGE
 Date 06 25 91 Latitude 7.504N
 Time 1208 Z Longitude 49.970W

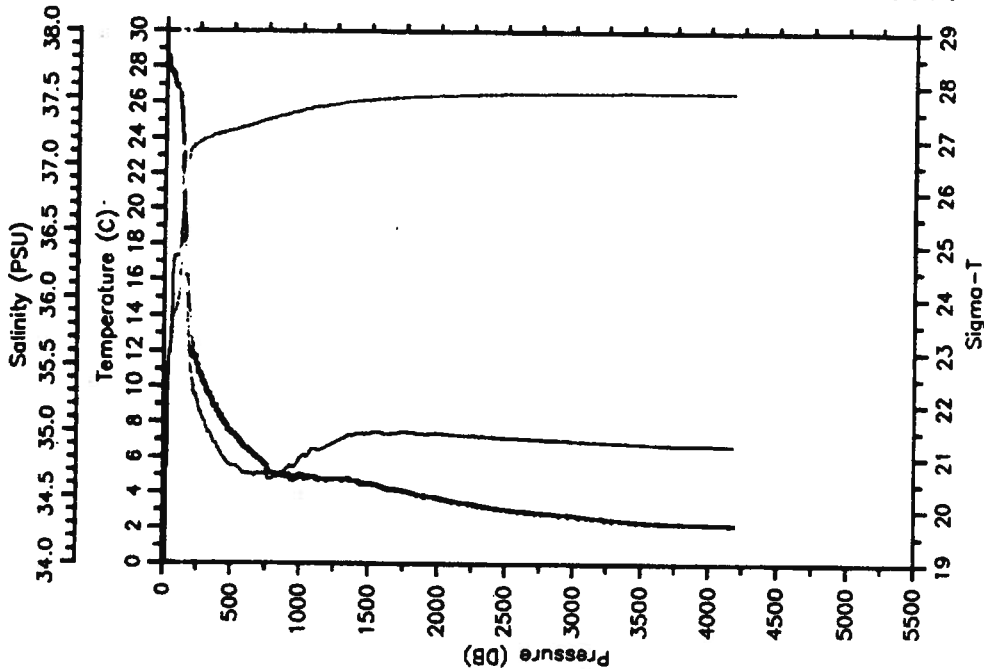
--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 23 BALDRIGE

Date 06 25 91 Latitude 7.098N

Time 1928 Z Longitude 50.331W

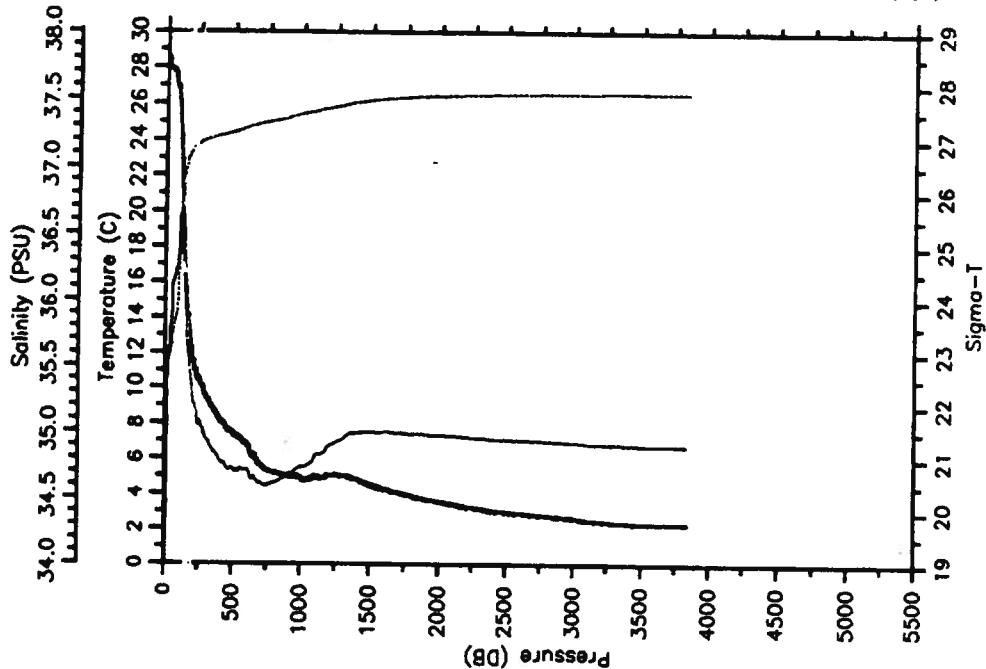
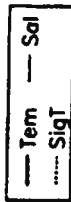


Prs	Tem	Sal	Sigt
0	28.41	17.498	9.189
10	28.36	20.445	11.380
20	28.27	31.943	20.014
30	27.80	35.300	22.887
40	27.73	35.594	22.933
50	27.62	35.858	23.015
60	27.28	35.858	23.352
70	26.98	36.286	23.898
80	26.82	36.310	23.732
90	26.80	36.316	23.777
100	26.44	36.308	23.885
110	25.90	36.340	24.079
120	25.14	36.394	24.355
130	23.90	36.551	24.849
140	21.01	36.518	25.849
150	18.28	36.386	26.817
160	17.32	36.183	26.346
170	15.81	35.985	26.549
180	14.58	35.778	26.888
190	13.22	35.564	26.785
200	12.97	35.433	26.816
250	11.25	35.220	26.902
300	10.20	35.078	26.877
350	9.30	34.985	27.043
400	8.64	34.870	27.075
450	7.94	34.784	27.114
500	7.39	34.735	27.155
550	7.05	34.723	27.194
600	6.56	34.675	27.223
650	6.24	34.673	27.264
700	5.93	34.677	27.307
750	5.62	34.679	27.347
800	5.09	34.642	27.381
850	5.04	34.680	27.417
900	4.84	34.713	27.454
950	4.73	34.723	27.487
1000	4.85	34.798	27.519
1500	4.49	34.987	27.723
2000	3.71	34.985	27.804
2500	3.06	34.951	27.841
3000	2.70	34.927	27.854
3500	2.35	34.905	27.867
4000	2.24	34.885	27.868
4184	2.22	34.889	27.865

BAL-STACS39-91 CTD 24 BALDRIGE

Date 06 26 91 Latitude 6.668N

Time 0302 Z Longitude 50.687W

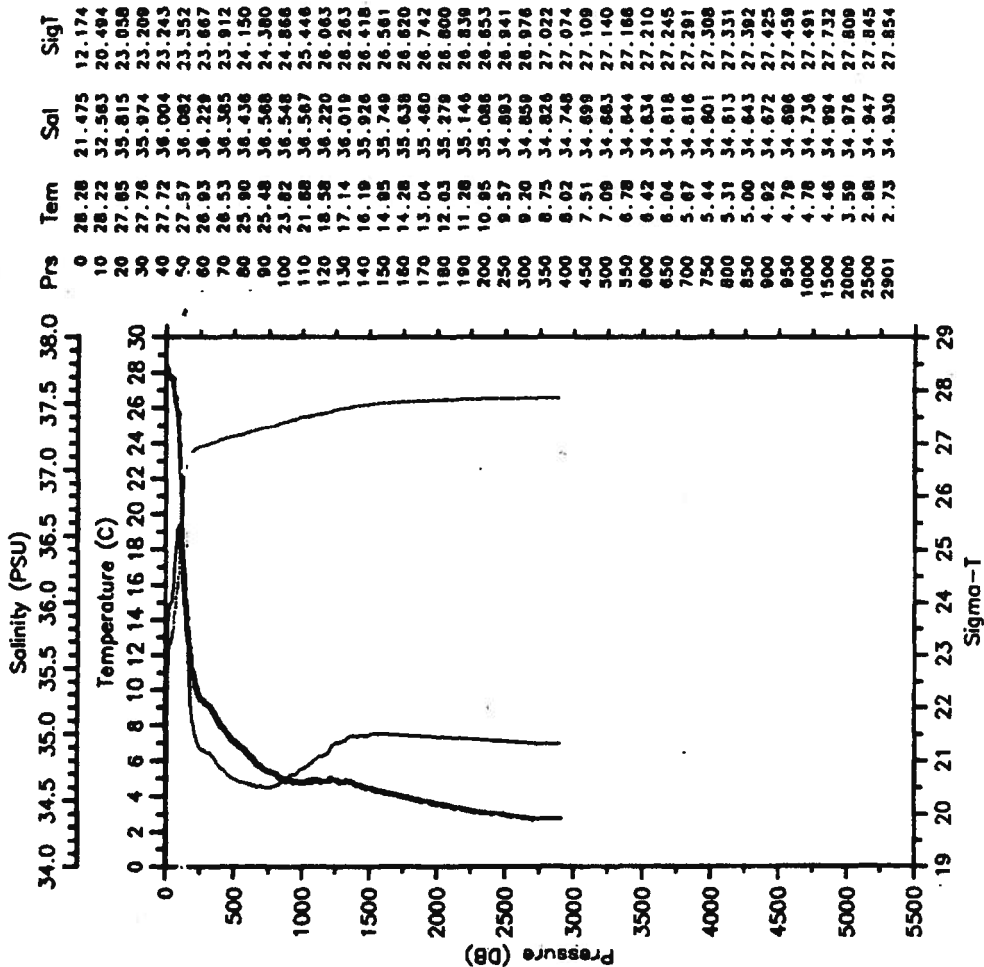


Prs	Tem	Sal	Sigt
0	28.08	14.884	7.312
10	28.48	26.298	15.716
20	27.94	35.278	22.623
30	27.92	35.611	22.882
40	27.87	35.700	22.968
50	27.51	35.495	23.120
60	27.63	36.138	23.375
70	27.12	36.147	23.547
80	26.98	36.222	23.652
90	26.42	36.228	23.831
100	25.62	36.358	24.180
110	23.82	36.642	24.941
120	22.06	36.651	25.457
130	19.58	36.363	25.813
140	18.61	36.380	26.177
150	16.31	36.070	26.501
160	14.80	35.825	26.654
170	14.09	35.640	26.864
180	13.24	35.533	26.758
190	12.66	35.425	26.781
200	12.11	35.343	26.836
250	10.54	35.080	26.921
300	9.52	34.954	26.997
350	8.88	34.868	27.035
400	8.26	34.793	27.072
450	7.78	34.741	27.107
500	7.45	34.725	27.139
550	7.19	34.724	27.174
600	6.81	34.716	27.222
650	6.21	34.658	27.257
700	5.65	34.613	27.280
750	5.31	34.592	27.315
800	5.23	34.616	27.344
850	5.12	34.637	27.374
900	5.04	34.674	27.413
950	4.89	34.707	27.444
1000	4.93	34.742	27.478
1500	4.53	34.985	27.725
2000	3.58	34.976	27.810
2500	3.00	34.948	27.844
3000	2.65	34.925	27.857
3500	2.31	34.903	27.868
3836	2.31	34.900	27.866

BAL-STACS39-91 CTD 25 BALDRIGE

Date 06 26 91 Latitude 6.224N
 Time 1105 Z Longitude 51.060W

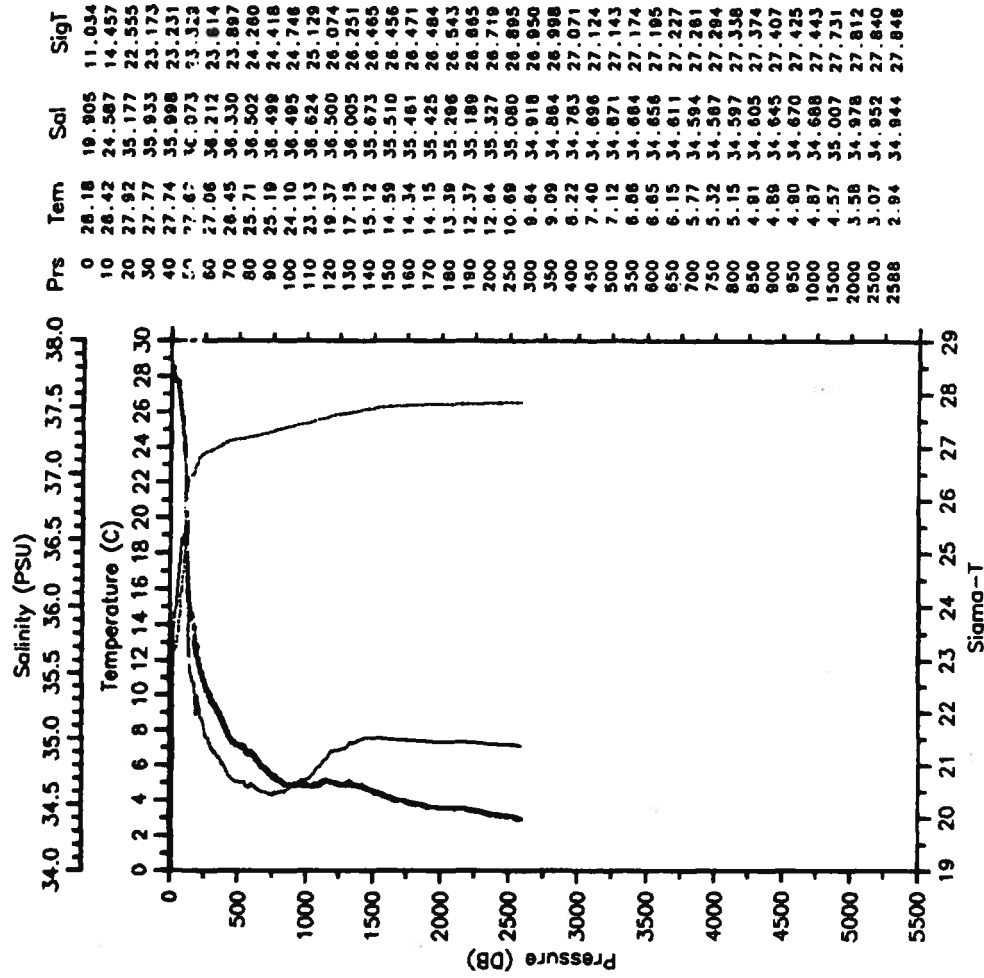
— Tem — Sal
 - - - - - SigT



BAL-STACS39-91 CTD 26 BALDRIGE

Date 06 26 91 Latitude 6.111N
 Time 1556 Z Longitude 51.275W

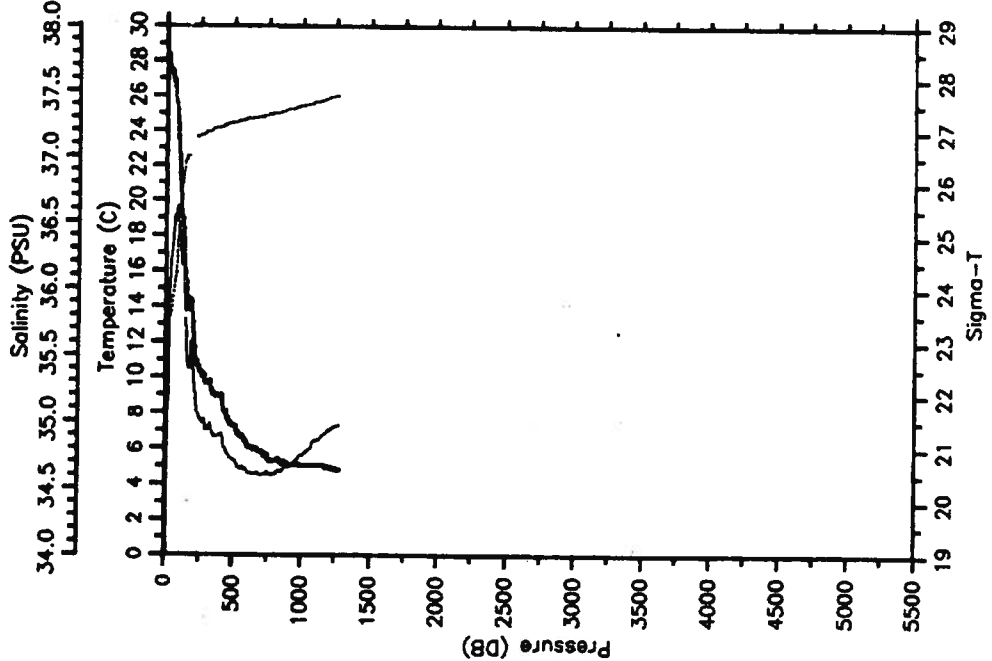
— Tem — Sal
 - - - - - SigT



BAL-STACS39-91 CTD 27 BALDRIGE

Date 06 26 91 Latitude 5.824N

Time 2214 Z Longitude 51.259W

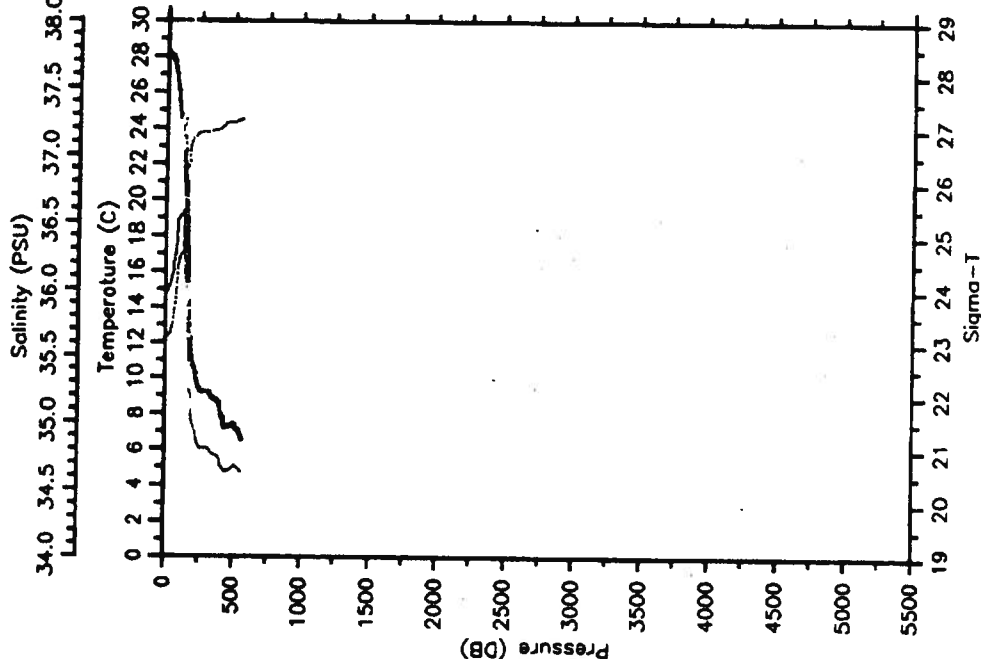
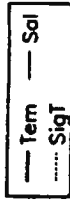


Prs	Tem	Sal	Sigt
0	28.35	21.143	11.908
10	28.30	22.047	12.585
20	27.87	34.490	22.120
30	27.34	36.028	23.364
40	27.34	36.233	23.539
50	26.92	36.324	23.744
60	26.58	36.472	23.971
70	25.87	36.543	24.241
80	25.29	36.600	24.465
90	23.13	36.524	25.054
100	21.98	36.518	25.469
110	20.06	36.346	25.775
120	18.94	36.214	25.966
130	18.08	36.217	26.185
140	16.19	35.908	26.404
150	15.25	35.685	26.446
160	14.04	35.448	26.527
170	13.88	35.395	26.519
180	14.17	35.475	26.519
190	14.24	35.608	26.607
200	13.04	35.452	26.735
250	10.34	35.019	26.909
300	9.63	34.933	26.963
350	9.03	34.894	27.031
400	8.93	34.899	27.051
450	7.80	34.780	27.132
500	7.25	34.710	27.156
550	6.69	34.650	27.186
600	6.12	34.631	27.245
650	5.94	34.607	27.250
700	5.61	34.606	27.286
750	5.44	34.625	27.326
800	5.28	34.607	27.332
850	5.19	34.628	27.358
900	5.06	34.663	27.402
950	5.04	34.702	27.435
1000	5.05	34.746	27.468
1278	4.81	34.878	27.678

BAL-STACS39-91 CTD 28 BALDRIGE

Date 06 27 91 Latitude 3.943N

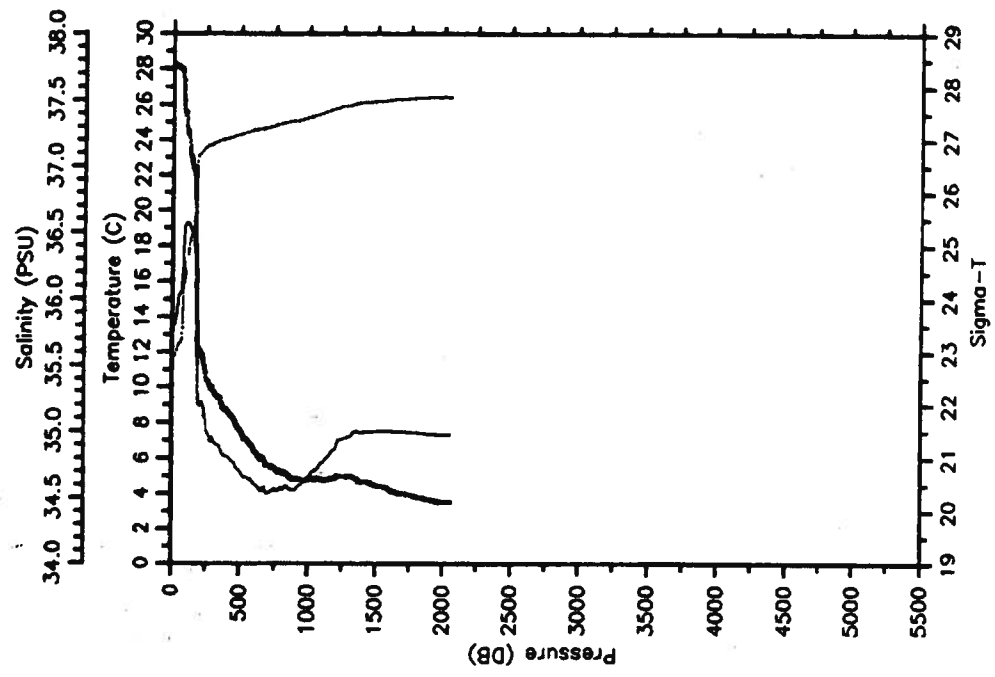
Time 1900 Z Longitude 48.732W



Prs	Tem	Sal	Sigt
0	28.23	36.478	23.434
10	28.16	35.987	23.087
20	28.05	36.004	23.134
30	28.04	36.024	23.155
40	27.83	36.084	23.253
50	27.72	35.966	23.116
60	27.31	36.163	23.495
70	26.73	36.262	23.758
80	26.11	36.342	24.013
90	25.38	36.516	24.371
100	24.77	36.532	24.570
110	24.56	36.552	24.649
120	24.54	36.556	24.660
130	24.35	36.575	24.730
140	21.18	36.284	25.430
150	19.74	36.082	25.658
160	18.98	36.008	25.788
170	15.16	35.585	26.388
180	12.30	35.218	26.701
190	11.22	35.050	26.774
200	10.63	34.975	26.823
250	9.30	34.814	26.925
300	9.24	34.803	26.926
350	8.88	34.787	26.954
400	8.49	34.736	26.992
450	7.22	34.631	27.099
500	7.34	34.680	27.104
550	6.78	34.642	27.167
565	6.54	34.629	27.168

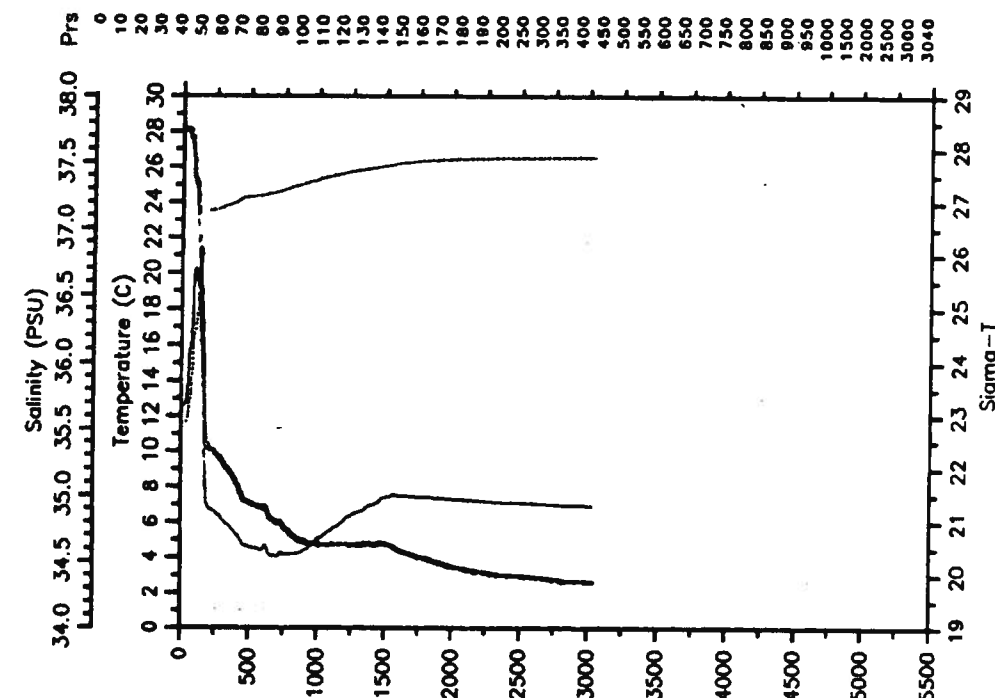
BAL-STACS39-91 CTD 29 BALDRIGE
 Date 06 27 91 Latitude 4.534N
 Time 2314 Z Longitude 48.348W

--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 30 BALDRIGE
 Date 06 28 91 Latitude 4.920N
 Time 0554 Z Longitude 47.555W

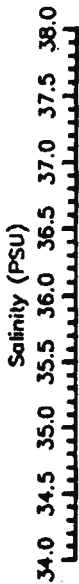
--- Tem --- Sal
 SigT



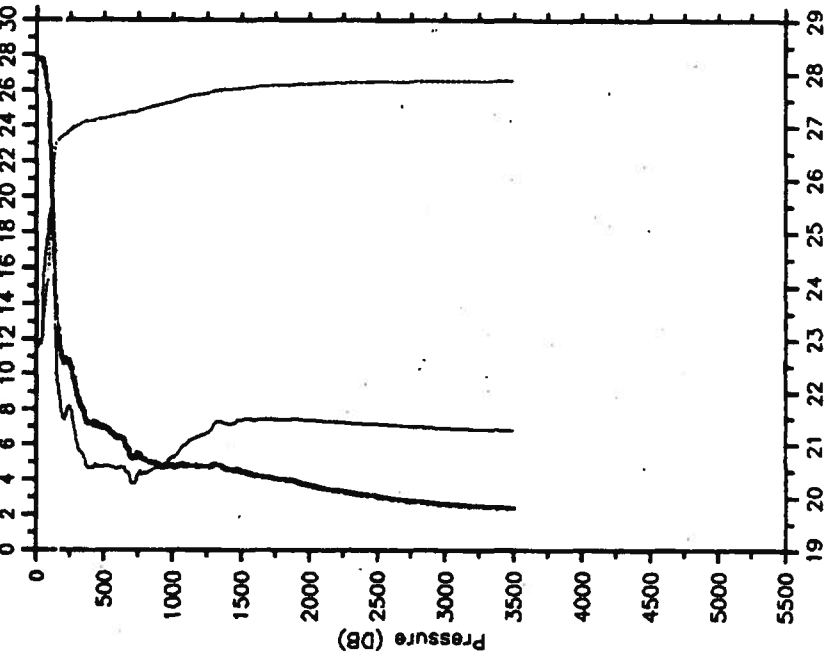
BAL-STACS39-91 CTD 31 BALDRIGE

Date 06 28 91 Latitude 5.330N

Time 1306 Z Longitude 46.817W



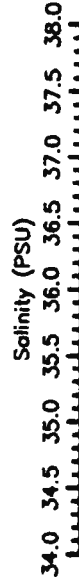
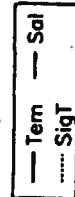
Prs	Tem	Sal	SigT
0	27.76	35.503	22.854
10	27.77	35.534	22.872
20	27.78	35.575	22.902
30	27.78	35.589	22.912
40	27.78	35.599	22.918
50	27.47	35.933	23.271
60	27.23	36.144	23.508
70	26.87	36.288	23.780
80	26.16	36.354	24.006
90	25.55	36.421	24.247
100	23.47	36.554	24.878
110	21.38	36.550	25.568
120	19.60	36.584	25.924
130	16.73	36.062	26.395
140	14.75	35.718	26.583
150	12.97	35.408	26.716
160	12.57	35.248	26.871
170	12.03	35.174	26.719
180	11.30	35.072	26.777
190	10.98	35.016	26.798
200	10.77	35.001	26.818
250	10.59	35.080	26.912
300	8.81	34.821	26.894
350	7.90	34.721	27.070
400	7.23	34.628	27.093
450	7.09	34.630	27.115
500	7.02	34.639	27.132
550	6.71	34.629	27.166
600	6.41	34.614	27.194
650	6.18	34.622	27.235
700	5.24	34.511	27.280
750	5.47	34.578	27.283
800	5.21	34.589	27.325
850	4.89	34.607	27.384
900	4.88	34.634	27.399
950	4.73	34.657	27.435
1000	4.81	34.714	27.471
1500	4.46	34.977	27.718
2000	3.71	34.980	27.901
2500	3.06	34.951	27.841
3000	2.64	34.924	27.857
3490	2.42	34.908	27.864



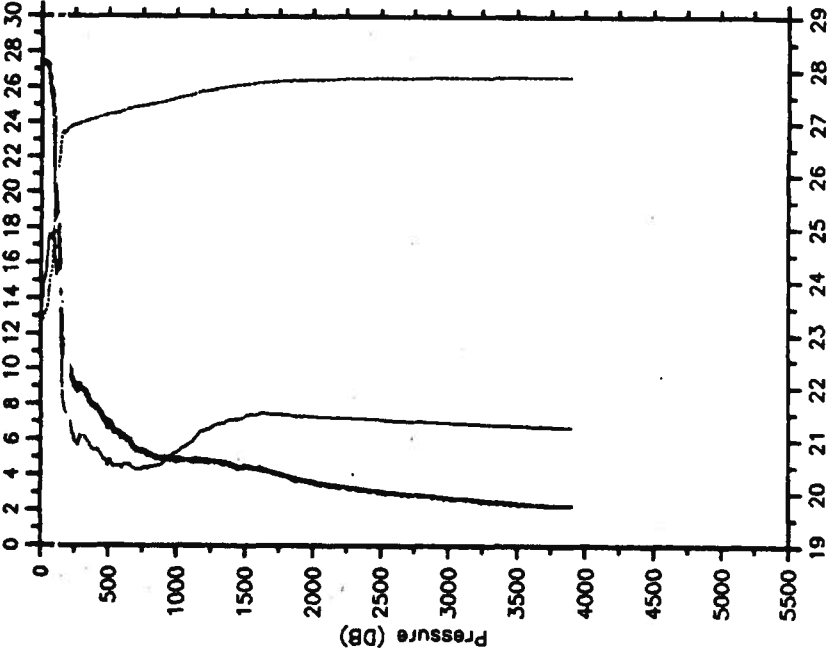
BAL-STACS39-91 CTD 32 BALDRIGE

Date 06 28 91 Latitude 6.014N

Time 2044 Z Longitude 46.572W



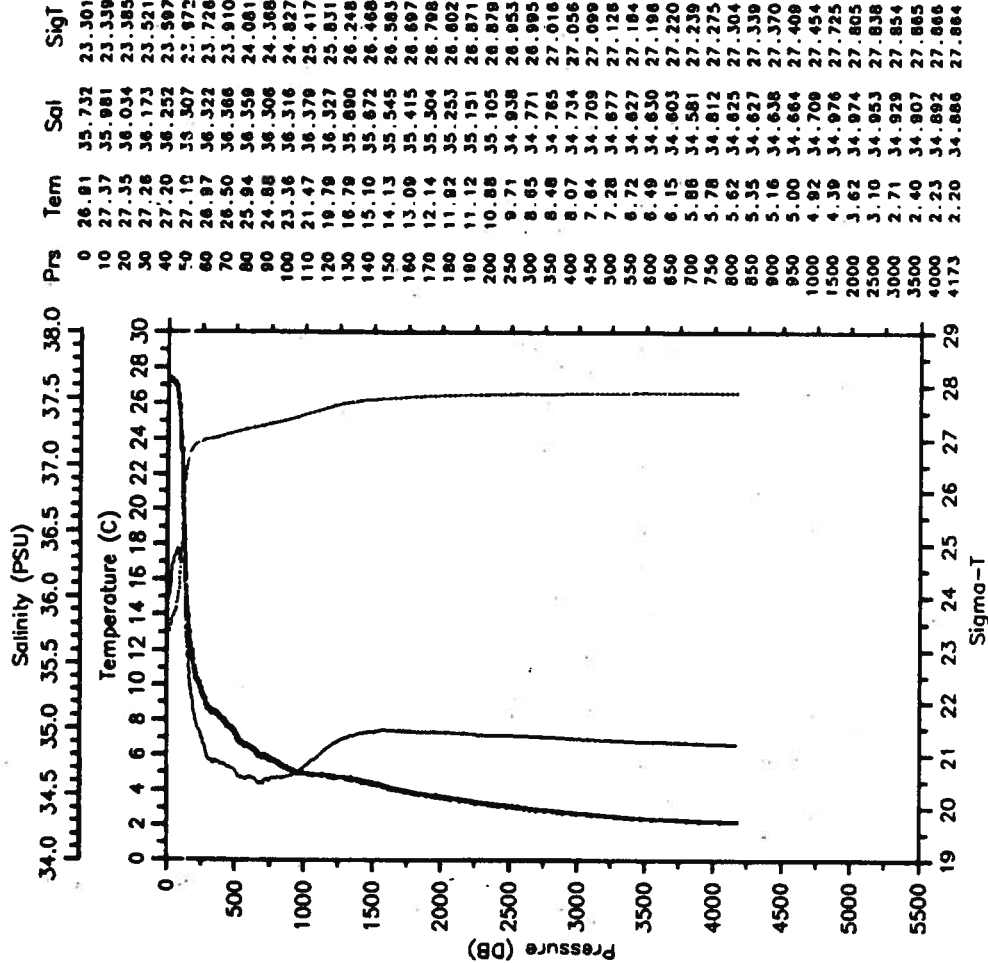
Prs	Tem	Sal	SigT
0	27.33	35.826	23.239
10	27.36	35.888	23.257
20	27.39	36.008	23.355
30	27.32	36.017	23.382
40	27.29	36.093	23.449
50	27.13	36.222	23.464
60	26.55	36.352	23.882
70	25.84	36.333	24.092
80	25.52	36.317	24.179
90	23.95	36.368	24.692
100	21.31	36.235	25.351
110	19.24	36.076	25.783
120	18.53	36.037	25.836
130	17.68	36.126	26.219
140	16.49	36.004	26.407
150	13.42	35.595	26.789
160	11.66	35.141	26.784
170	11.18	35.061	26.780
180	10.78	35.001	26.815
190	10.62	34.992	26.837
200	10.15	34.930	26.872
250	9.09	34.789	26.940
300	8.91	34.617	26.989
350	8.44	34.786	27.040
400	7.92	34.733	27.076
450	7.35	34.674	27.113
500	6.92	34.618	27.142
550	6.45	34.599	27.177
600	6.17	34.591	27.208
650	6.01	34.613	27.248
700	5.47	34.575	27.282
750	5.31	34.577	27.303
800	5.18	34.587	27.328
850	5.01	34.601	27.358
900	4.94	34.622	27.383
950	4.83	34.622	27.383
1000	4.84	34.703	27.458
1500	4.50	34.981	27.717
2000	3.61	34.976	27.807
2500	3.07	34.951	27.839
3000	2.70	34.928	27.854
3500	2.37	34.905	27.865
3897	2.27	34.896	27.868



BAL-STACS39-91 CTD 33 BALDRIGE

Date 06 29 91 Latitude 6.715N
 Time 0238 Z Longitude 46.342W

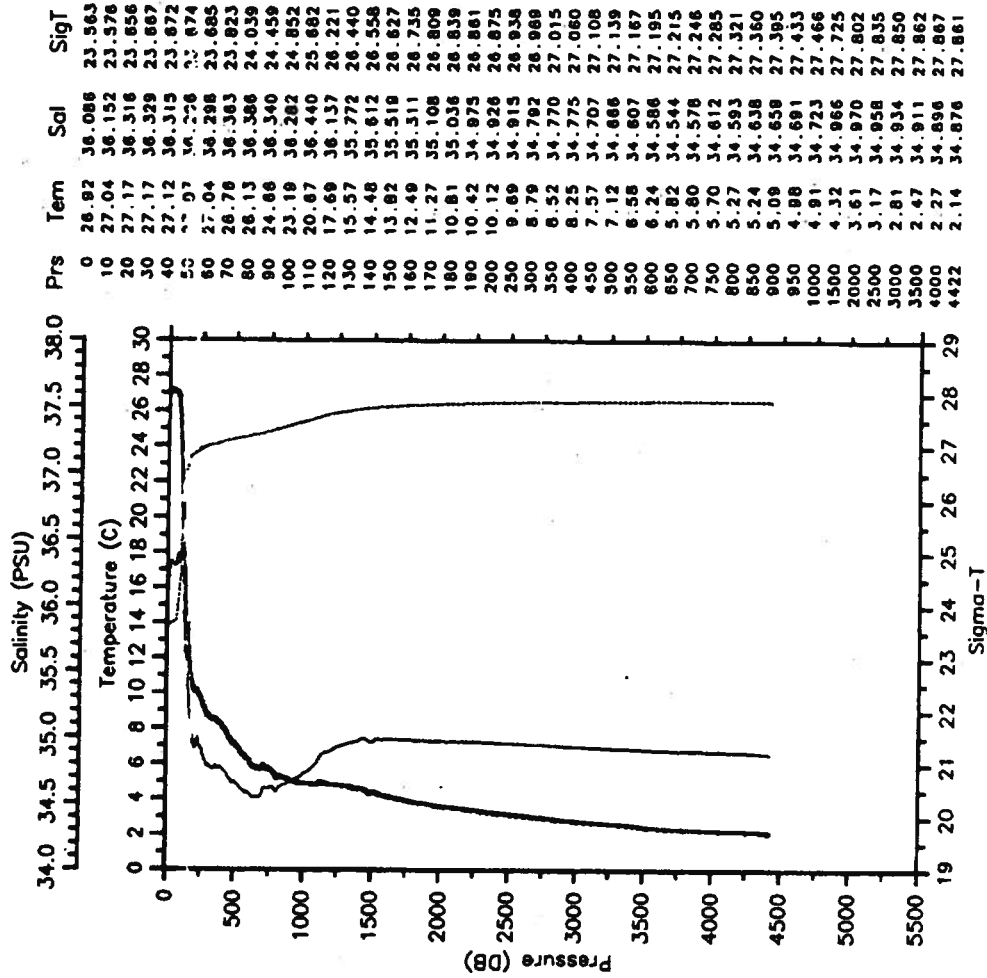
--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 34 BALDRIGE

Date 06 29 91 Latitude 7.537N
 Time 1031 Z Longitude 46.331W

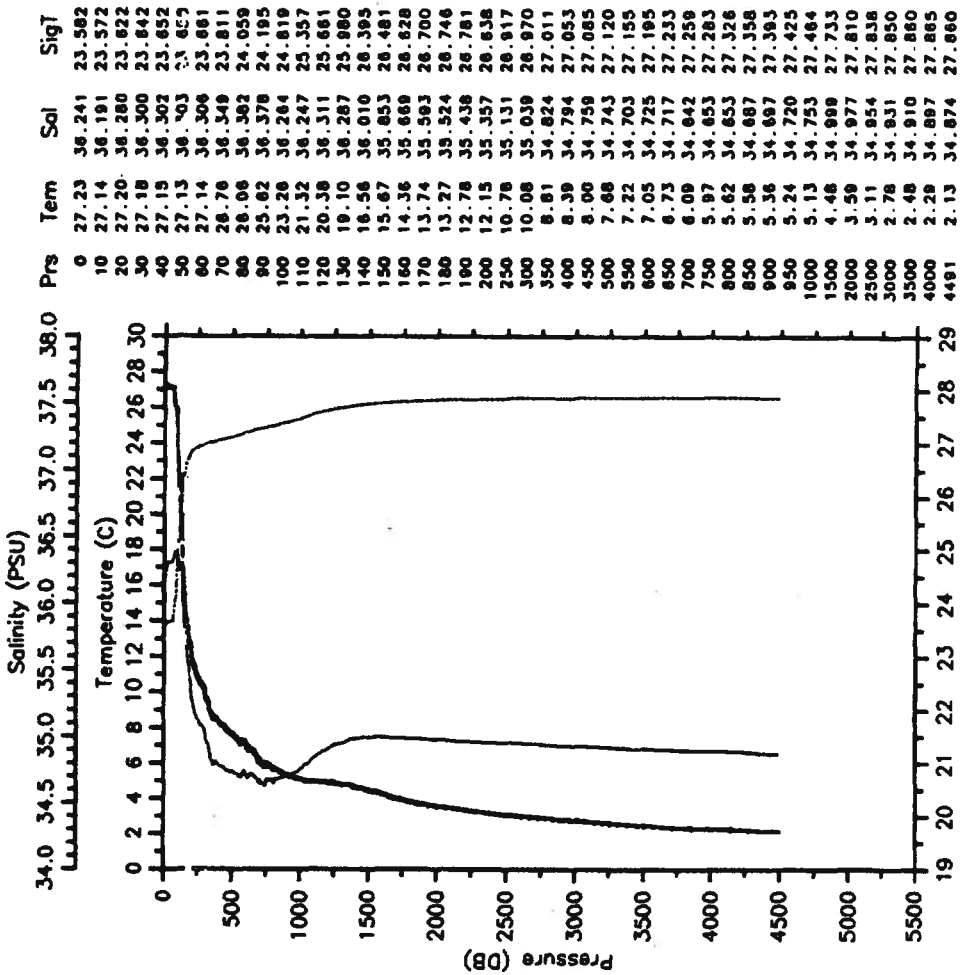
--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 35 BALDRIGE

Date 06 29 91 Latitude 8.370N
 Time 1649 Z Longitude 46.341W

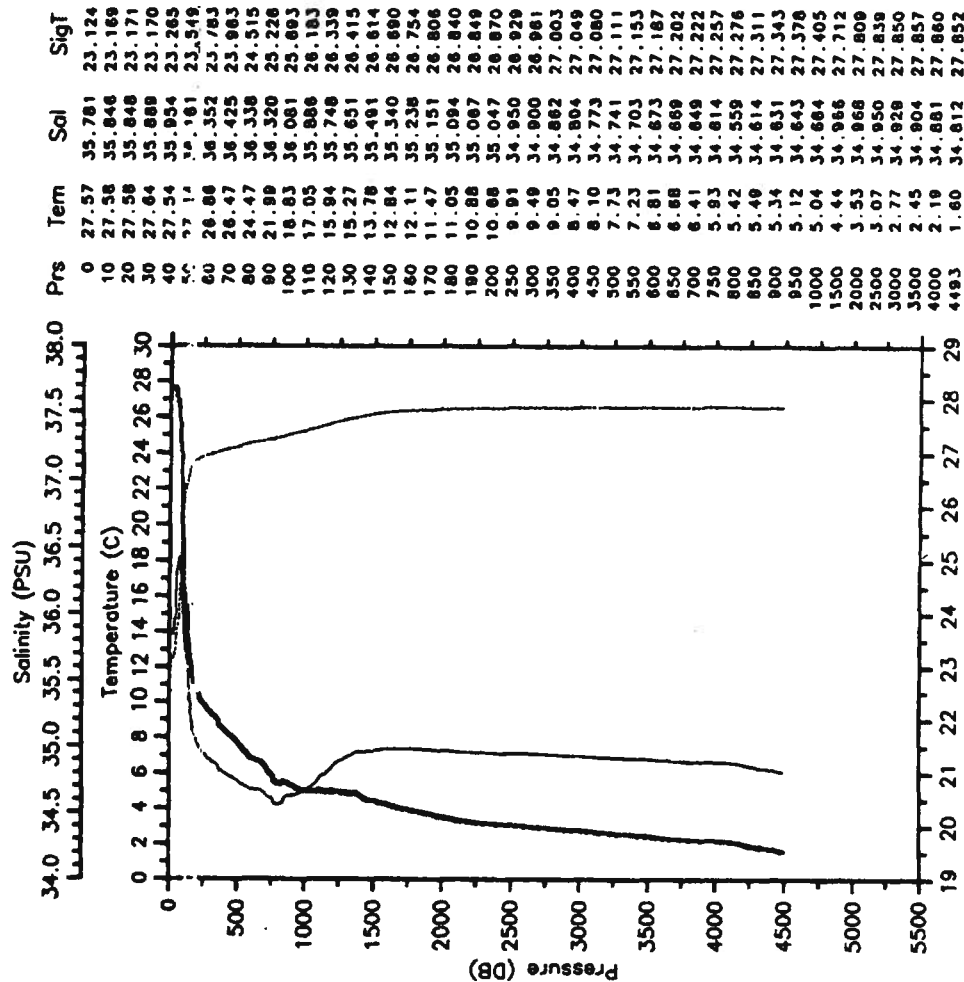
--- Tem --- Sal
 SigT



BAL-STACS39-91 CTD 36 BALDRIGE

Date 06 30 91 Latitude 8.274N
 Time 0917 Z Longitude 43.956W

--- Tem --- Sal
 SigT

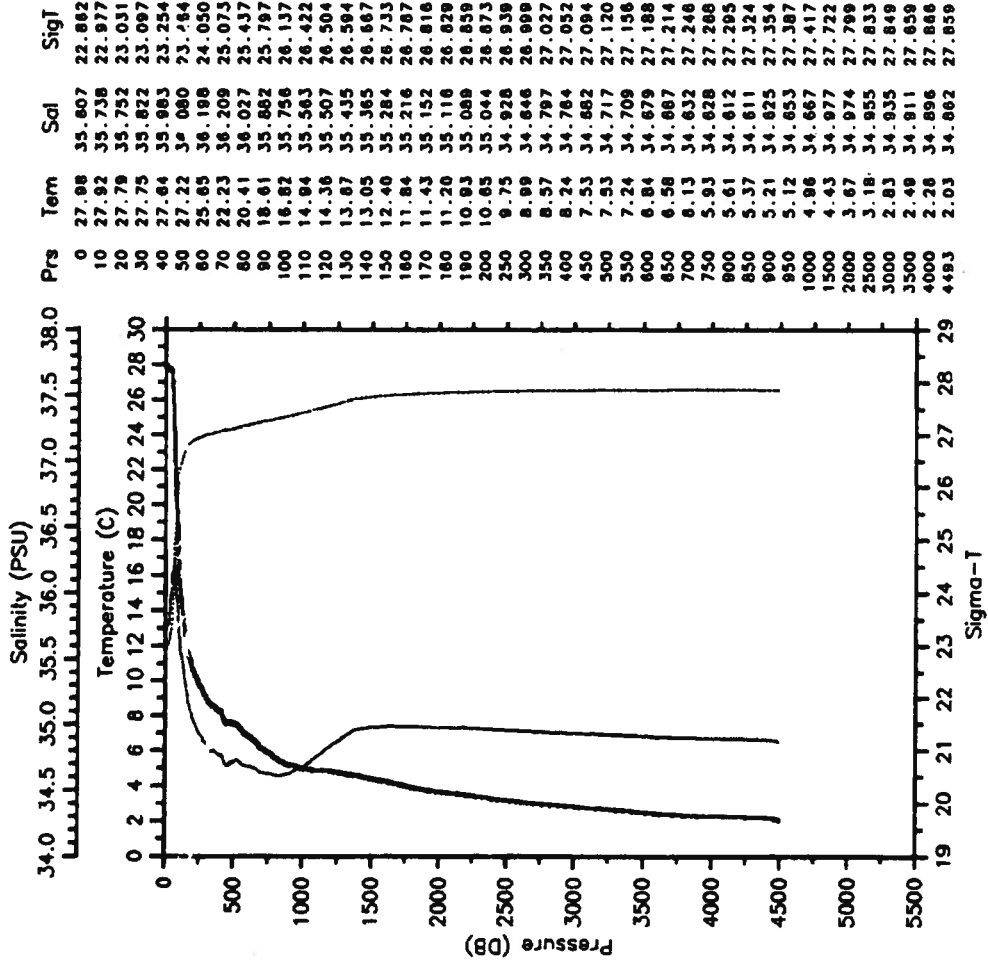


BAL-STACS39-91 CTD 37 BALDRIGE

Date 06 30 91 Latitude 6.663N

Time 2058 Z Longitude 44.034W

— Tem — Sal
 - - - - - SigT

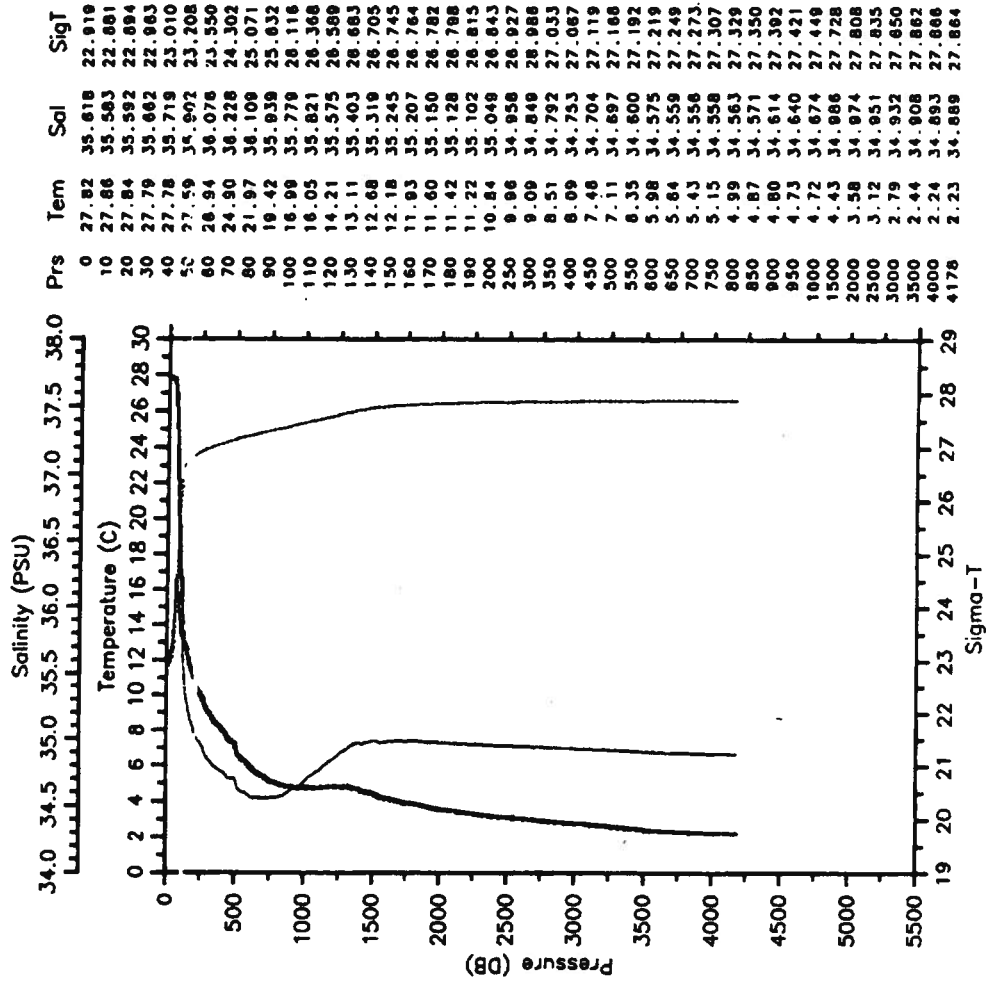


BAL-STACS39-91 CTD 38 BALDRIGE

Date 07 01 91 Latitude 5.967N

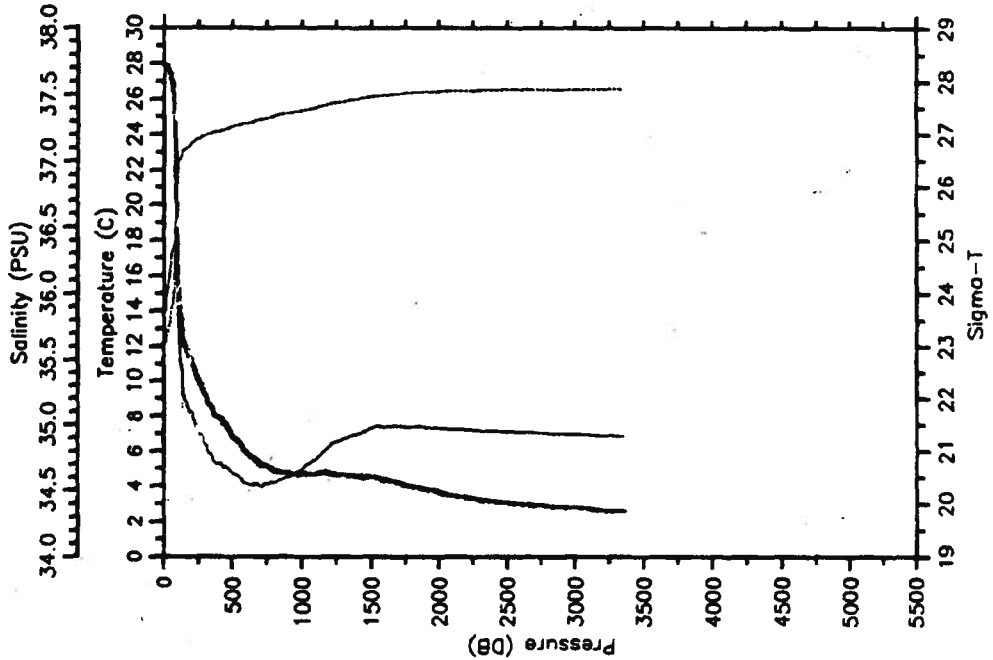
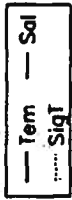
Time 0459 Z Longitude 44.025W

— Tem — Sal
 - - - - - SigT



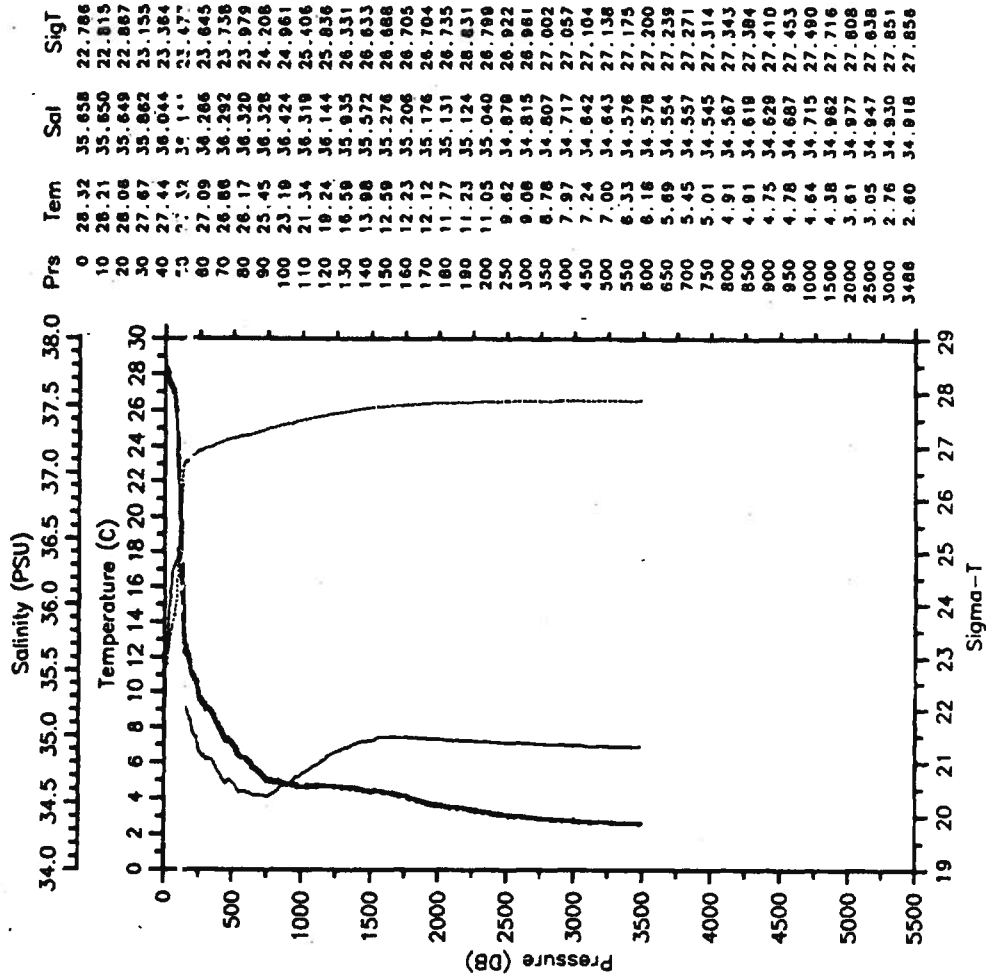
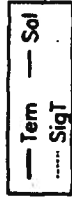
BAL-STACS39-91 CTD 39 BALDRIGE

Date 07 01 91 Latitude 5.253N
Time 1026 Z Longitude 44.023W



BAL-STACS39-91 CTD 40 BALDRIGE

Date 07 01 91 Latitude 4.731N
Time 1615 Z Longitude 44.022W

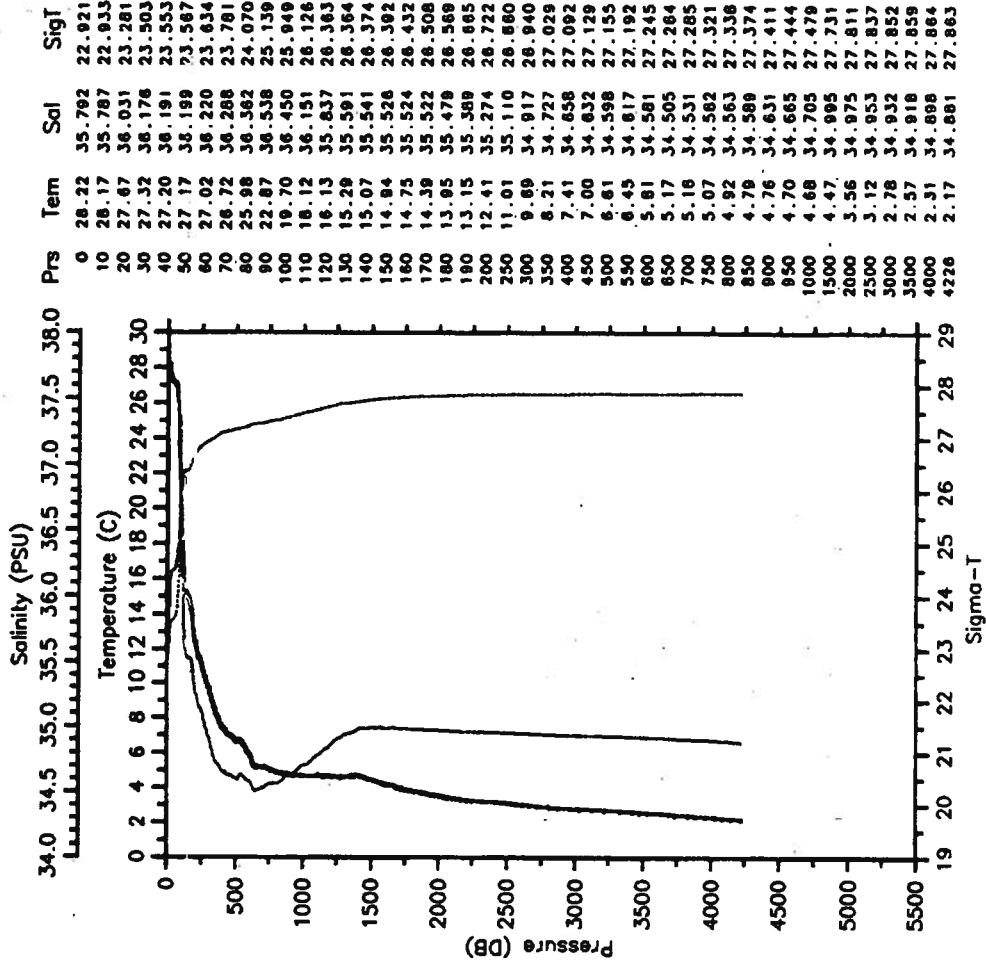


BAL-STACS39-91 CTD 41 BALDRIGE

Date 07 01 91 Latitude 4.212N

Time 2034 Z Longitude 44.031W

— Tem — Sal
..... SigT

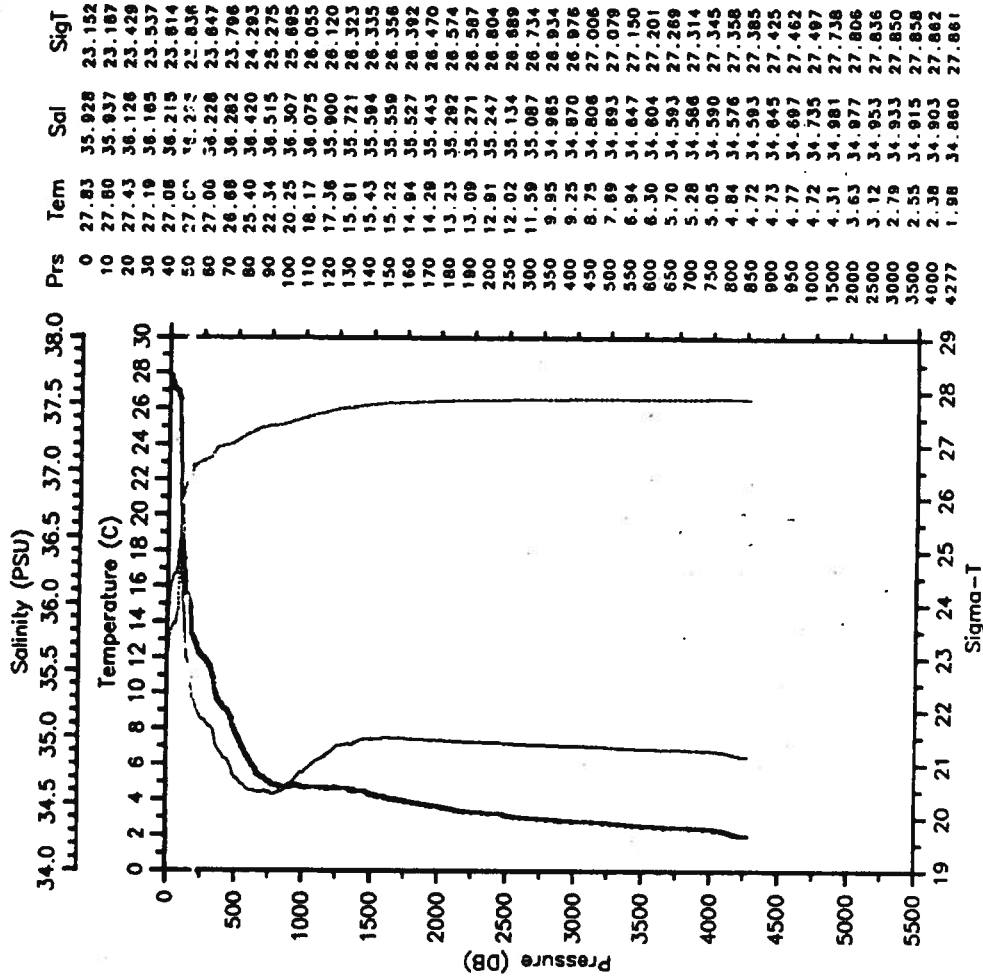


BAL-STACS39-91 CTD 42 BALDRIGE

Date 07 02 91 Latitude 3.749N

Time 0243 Z Longitude 44.019W

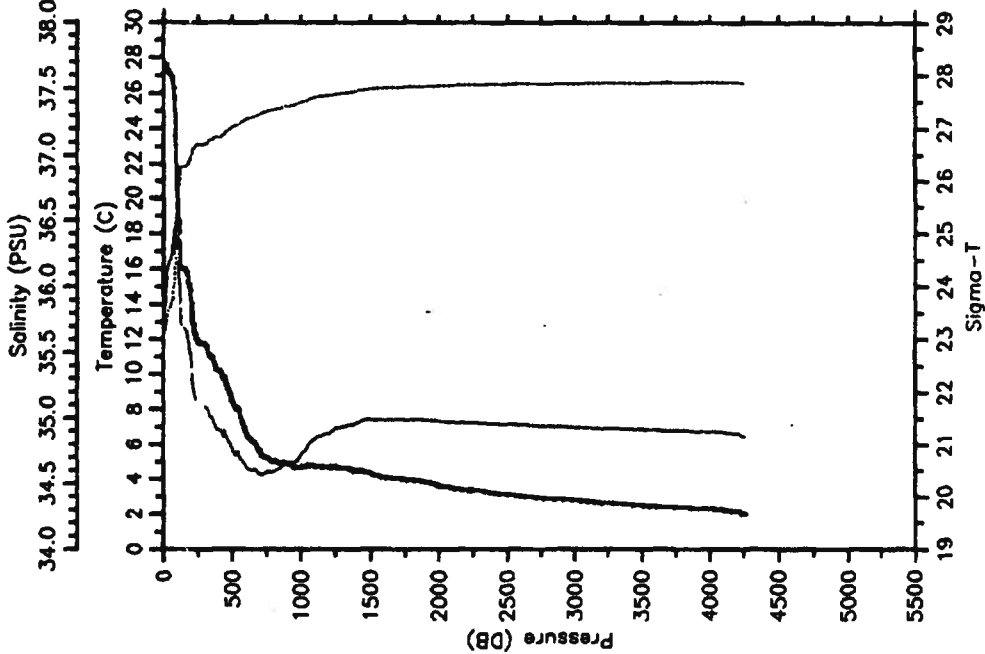
— Tem — Sal
..... SigT



BAL-STACS39-91 CTD 43 BALDRIGE

Date 07 02 91 Latitude 3.279N
 Time 0704 Z Longitude 44.011W

— Tem — Sal
 SigT

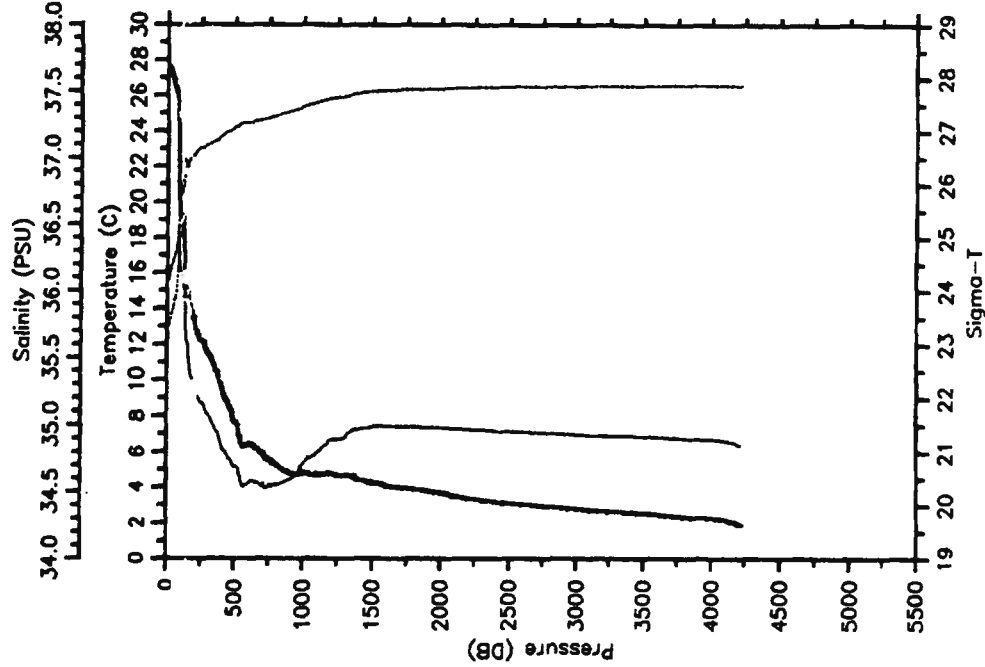


Prs	Tem	Sal	SigT
0	27.59	35.864	23.180
10	27.58	35.861	23.177
20	27.56	35.954	23.259
30	27.28	36.139	23.487
40	27.12	36.186	23.578
50	27.04	36.203	23.615
60	26.83	36.240	23.709
70	26.48	36.334	23.892
80	25.87	36.439	24.162
90	22.74	36.484	25.135
100	20.48	36.336	25.654
110	18.72	36.080	25.926
120	16.80	35.928	26.275
130	16.04	35.678	26.282
140	16.04	35.678	26.282
150	16.03	35.681	26.268
160	15.80	35.688	26.286
170	15.65	35.637	26.319
180	15.20	35.572	26.370
190	14.88	35.529	26.408
200	14.04	35.425	26.508
250	11.83	35.104	26.704
300	11.73	35.089	26.710
350	10.95	35.008	26.792
400	10.23	34.908	26.842
450	9.61	34.888	26.930
500	8.45	34.770	27.025
550	7.92	34.729	27.073
600	6.72	34.631	27.167
650	6.20	34.602	27.213
700	5.61	34.570	27.261
750	5.26	34.578	27.311
800	4.99	34.589	27.350
850	4.83	34.616	27.379
900	4.94	34.681	27.414
950	4.71	34.655	27.435
1000	4.68	34.711	27.463
1500	4.32	34.994	27.746
2000	3.61	34.978	27.809
2500	3.15	34.953	27.834
3000	2.79	34.930	27.849
3500	2.51	34.914	27.860
4000	2.31	34.897	27.864
4263	2.01	34.864	27.862

BAL-STACS39-91 CTD 44 BALDRIGE

Date 07 02 91 Latitude 2.621N
 Time 1406 Z Longitude 44.022W

— Tem — Sal
 SigT

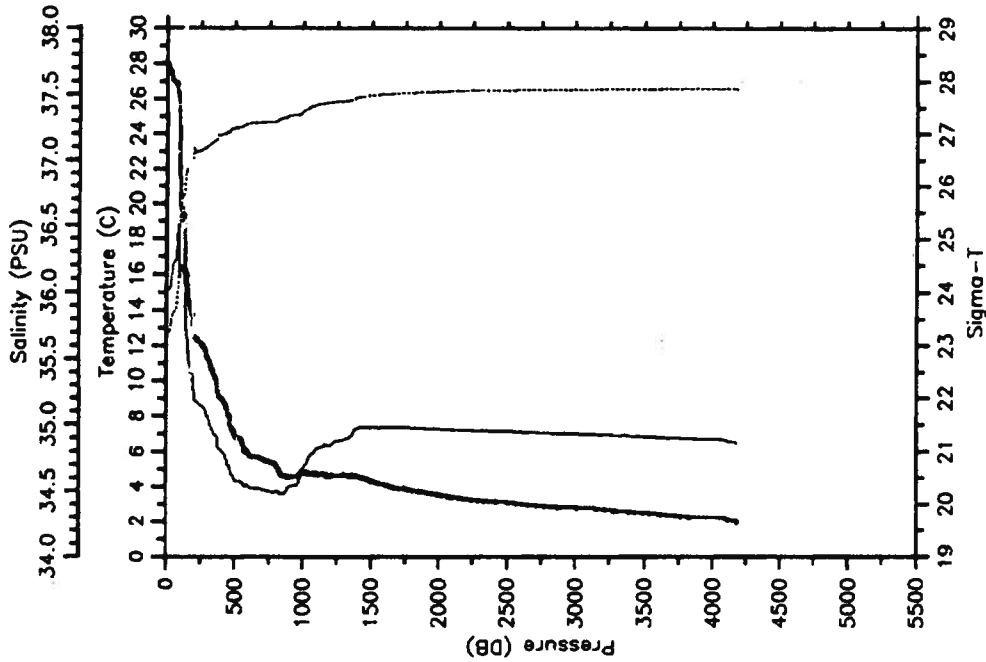


Prs	Tem	Sal	SigT
0	27.70	36.078	23.305
10	27.63	36.078	23.329
20	27.48	36.087	23.393
30	27.17	36.181	23.554
40	26.98	36.214	23.642
50	26.96	36.253	23.777
60	26.41	36.291	23.880
70	26.20	36.353	23.994
80	24.63	36.407	24.520
90	19.59	36.264	25.837
100	19.25	36.139	25.829
110	18.13	36.125	25.850
120	18.50	36.077	25.973
130	16.04	35.862	26.486
140	15.63	35.631	26.319
150	15.13	35.589	26.389
160	14.39	35.463	26.483
170	13.92	35.365	26.502
180	13.73	35.358	26.521
190	13.53	35.332	26.542
200	13.48	35.328	26.549
250	12.21	35.166	26.678
300	11.50	35.076	26.743
350	10.59	34.975	26.830
400	9.51	34.848	26.914
450	8.59	34.748	26.986
500	7.68	34.663	27.081
550	6.37	34.549	27.148
600	6.40	34.562	27.156
650	6.22	34.569	27.185
700	5.93	34.546	27.204
750	5.59	34.541	27.240
800	5.30	34.550	27.283
850	5.01	34.565	27.330
900	4.83	34.590	27.370
950	4.72	34.628	27.413
1000	4.84	34.707	27.462
1500	4.27	34.986	27.747
2000	3.72	34.981	27.800
2500	3.11	34.952	27.837
3000	2.79	34.931	27.849
3500	2.57	34.916	27.857
4000	2.21	34.885	27.866
4221	1.91	34.853	27.861

BAL-STACS39-91 CTD 45 BALDRIGE

Date 07 02 91 Latitude 1.950N
 Time 2051 Z Longitude 44.031W

— Tem — Sal
 SigT

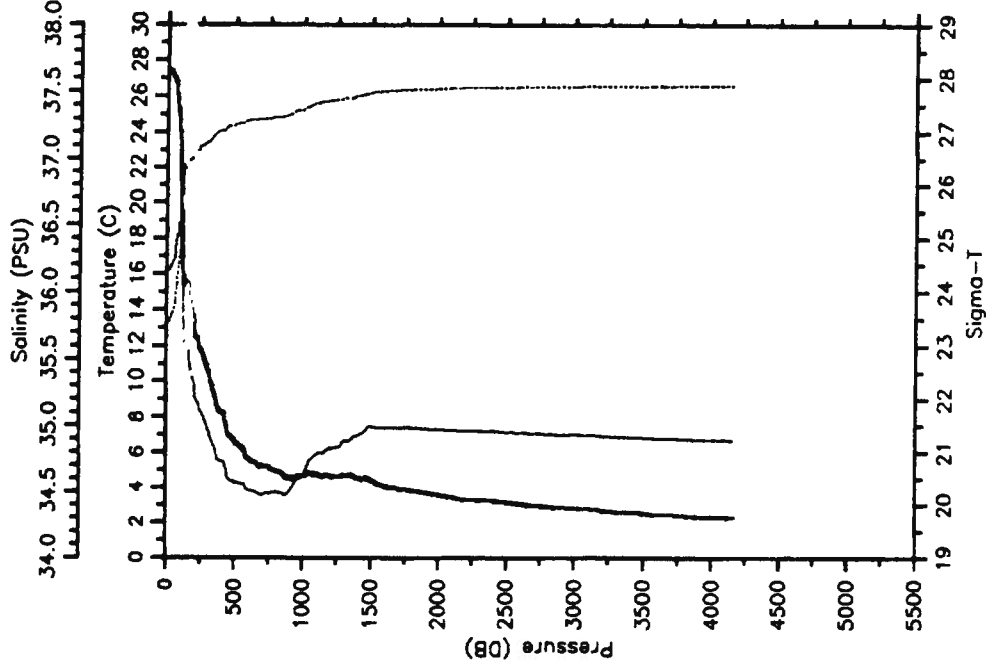


Prs	Tem	Sal	SigT
0	27.95	36.087	23.216
10	27.81	36.019	23.227
20	27.65	36.024	23.262
30	27.58	36.040	23.322
40	27.12	36.124	23.530
50	27.02	35.207	23.823
60	26.98	36.224	23.848
70	26.91	36.239	23.862
80	26.51	36.336	23.883
90	25.85	36.434	24.228
100	20.45	36.143	25.514
110	19.72	36.193	25.748
120	19.36	36.155	25.814
130	19.21	36.136	25.836
140	18.71	35.878	26.258
150	15.96	35.673	26.276
160	14.95	35.535	26.396
170	14.31	35.445	26.466
180	13.90	35.383	26.504
190	13.70	35.359	26.528
200	12.47	35.223	26.872
250	12.14	35.148	26.879
300	11.30	35.082	26.769
350	10.24	34.927	26.854
400	9.02	34.811	26.966
450	8.05	34.692	27.025
500	6.83	34.581	27.112
550	6.55	34.569	27.141
600	5.88	34.535	27.200
650	5.70	34.519	27.211
700	5.60	34.511	27.217
750	5.48	34.499	27.224
800	5.23	34.497	27.249
850	4.85	34.478	27.301
900	4.55	34.534	27.357
950	4.57	34.545	27.363
1000	4.87	34.672	27.430
1500	4.33	34.880	27.735
2000	3.56	34.971	27.808
2500	3.12	34.952	27.835
3000	2.81	34.933	27.849
3500	2.50	34.913	27.860
4000	2.24	34.892	27.866
4182	1.93	34.856	27.881

BAL-STACS39-91 CTD 46 BALDRIGE

Date 07 03 91 Latitude 1.407N
 Time 0338 Z Longitude 44.040W

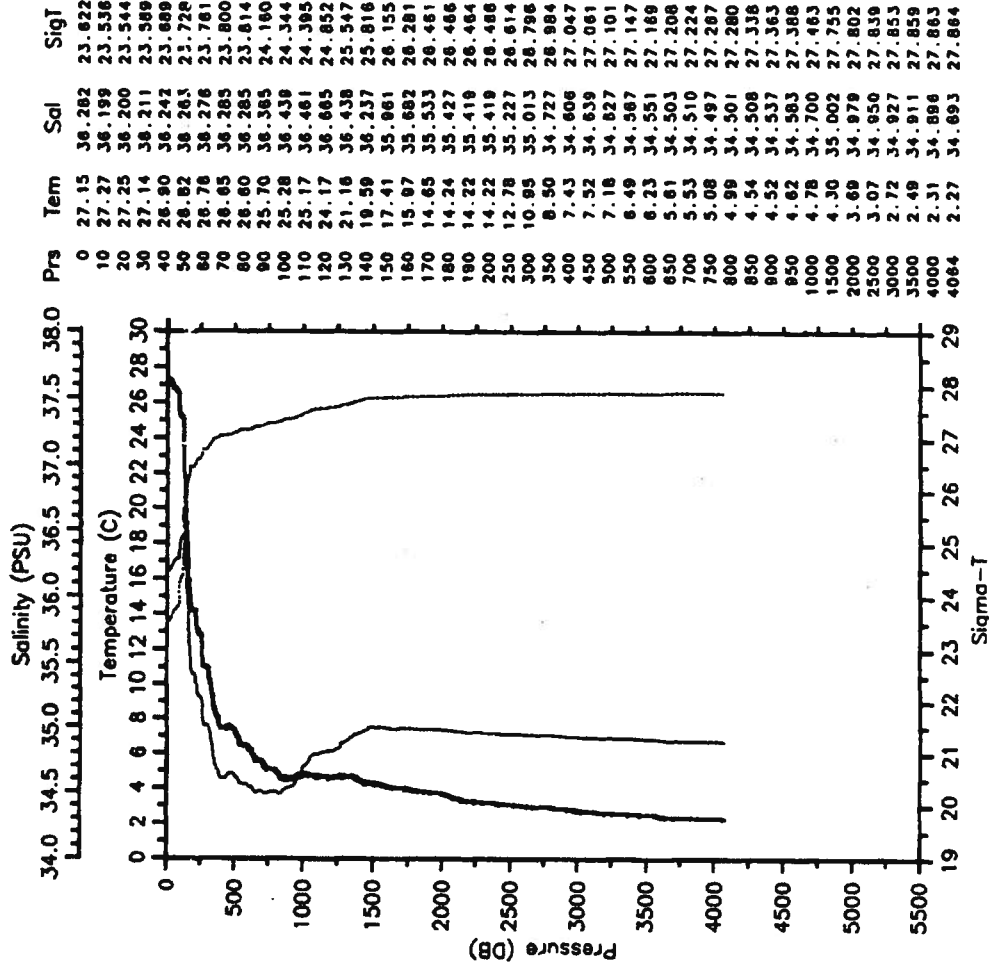
— Tem — Sal
 SigT



Prs	Tem	Sal	SigT
0	27.39	36.230	23.522
10	27.46	36.161	23.447
20	27.44	36.162	23.454
30	27.29	36.181	23.517
40	27.11	36.205	23.581
50	26.97	35.227	23.844
60	26.78	36.253	23.738
70	26.15	36.398	24.042
80	25.41	36.427	24.298
90	24.57	36.507	24.614
100	23.00	36.455	25.038
110	19.57	36.222	25.809
120	18.76	36.130	25.948
130	15.66	35.660	26.334
140	15.54	35.610	26.323
150	15.48	35.602	26.331
160	15.31	35.579	26.349
170	14.42	35.474	26.466
180	14.02	35.409	26.500
190	13.75	35.374	26.529
200	13.42	35.323	26.558
250	11.79	35.112	26.717
300	10.70	34.988	26.820
350	9.27	34.844	26.952
400	8.29	34.730	27.018
450	7.05	34.604	27.100
500	6.59	34.576	27.142
550	6.30	34.560	27.166
600	5.61	34.515	27.218
650	5.42	34.498	27.228
700	5.19	34.477	27.239
750	5.19	34.487	27.247
800	4.96	34.499	27.283
850	4.83	34.488	27.289
900	4.53	34.498	27.331
950	4.54	34.478	27.394
1000	4.61	34.623	27.420
1500	4.41	34.991	27.735
2000	3.59	34.973	27.806
2500	3.15	34.954	27.834
3000	2.81	34.933	27.849
3500	2.49	34.912	27.861
4000	2.28	34.896	27.865
4155	2.26	34.891	27.864

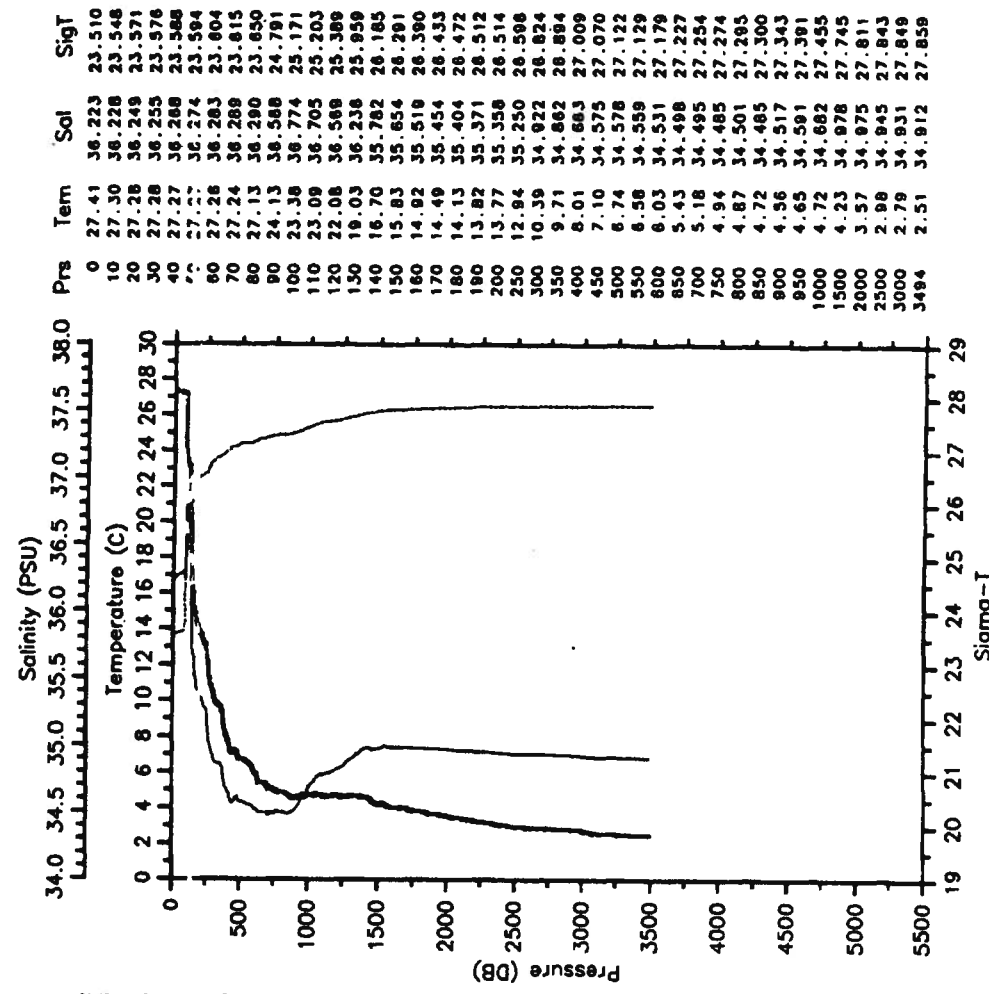
BAL-STACS39-91 CTD 47 BALDRIGE
 Date 07 03 91 Latitude 0.868N
 Time 0853 Z Longitude 44.041W

— Tem — Sal
 SigT



BAL-STACS39-91 CTD 48 BALDRIGE
 Date 07 03 91 Latitude 0.503N
 Time 1451 Z Longitude 44.214W

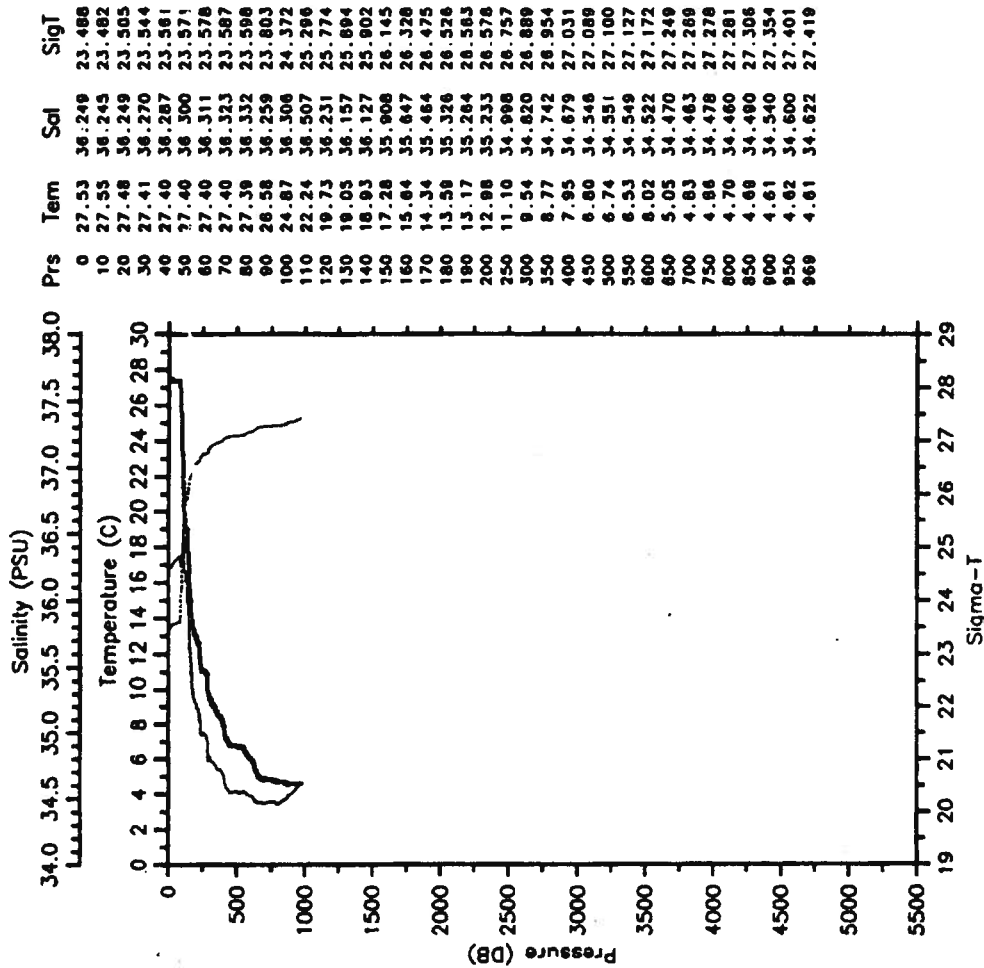
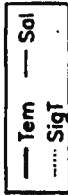
— Tem — Sal
 SigT



BAL-STACS39-91 CTD 49 BALDRICE

Date 07 03 91 Latitude 0.142N

Time 2058 Z Longitude 44.387W

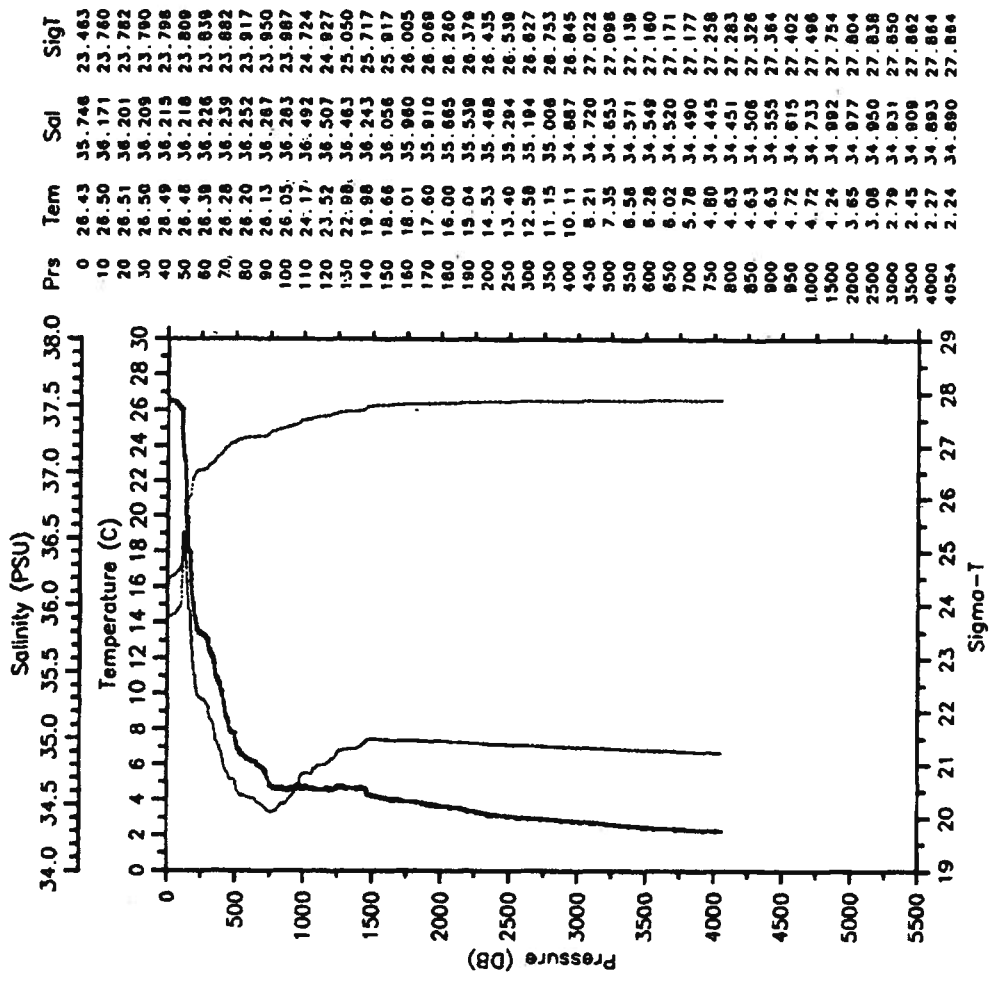


BAL-STACS40-91 CTD 1 BALDRIGE .

Date 09 07 91 Latitude 0.865N

Time 2243 Z Longitude 44.035W

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

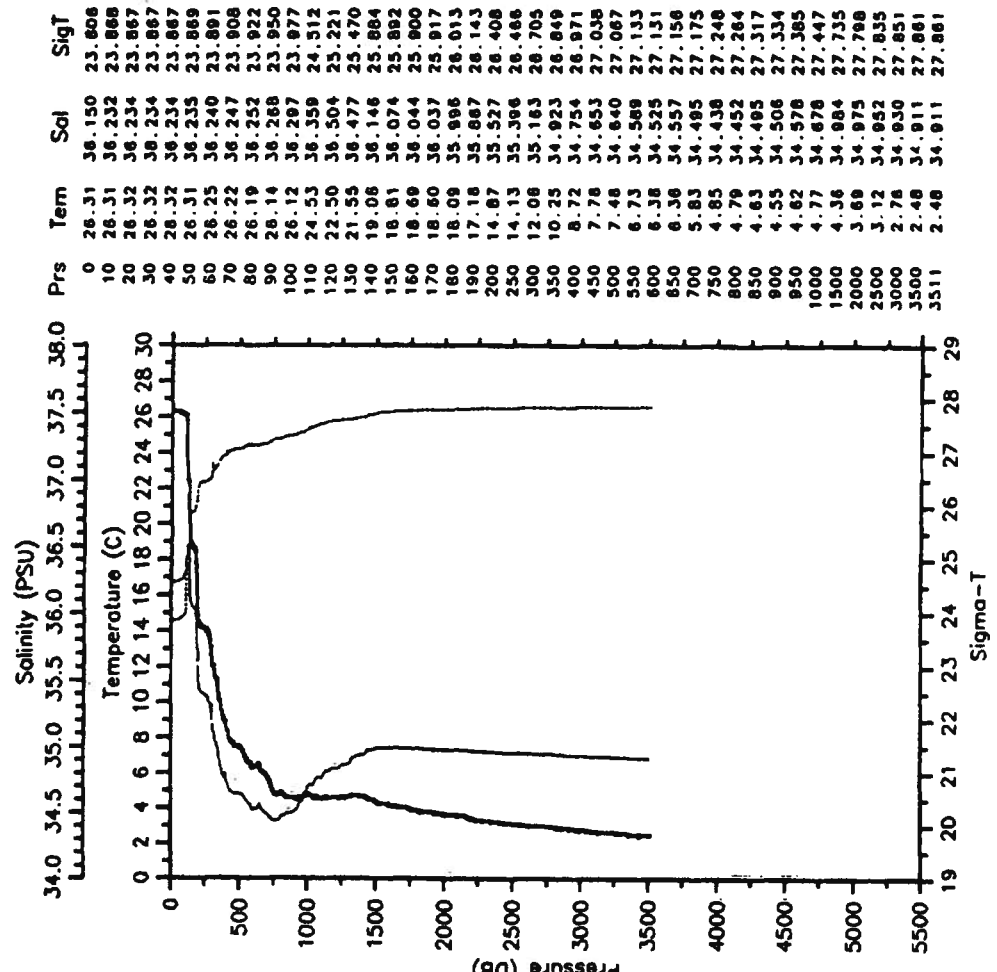


BAL-STACS40-91 CTD 2 BALDRIGE

Date 09 08 91 Latitude 0.504N

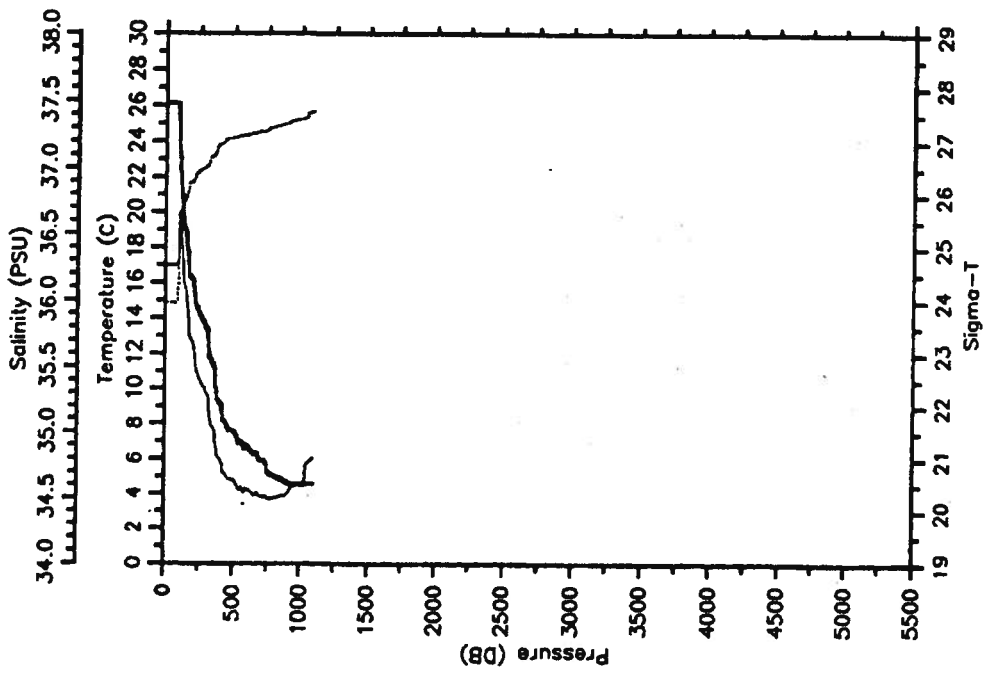
Time 0451 Z Longitude 44.216W

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



BAL-STACS40-91 CTD 3 BALDRIGE
 Date 09 08 91 Latitude 0.155N
 Time 1000 Z Longitude 44.420W

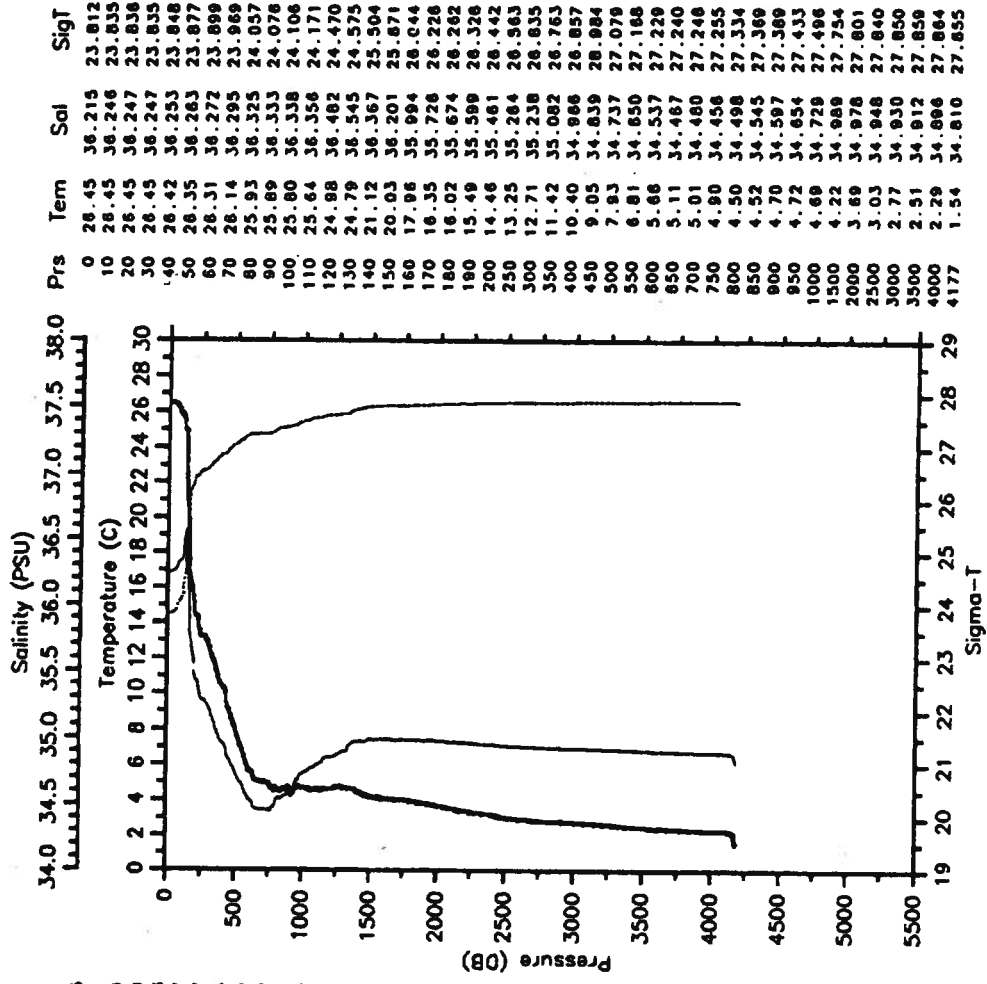
— Tem — Sal
 SigT



Prs	Tem	Sal	SigT
0	26.08	36.278	23.975
10	26.09	36.265	23.981
20	26.10	36.265	23.959
30	26.10	36.265	23.959
40	26.10	36.285	23.956
50	26.10	36.264	23.957
60	26.11	36.265	23.957
70	26.11	36.285	23.956
80	26.11	36.285	23.956
90	26.02	36.286	23.983
100	23.32	36.596	25.053
110	21.86	36.571	25.453
120	20.84	36.419	25.592
130	19.66	36.222	25.786
140	19.02	36.116	25.870
150	18.70	36.080	25.932
160	18.03	35.982	26.018
170	16.80	35.852	26.193
180	16.35	35.725	26.225
190	16.24	35.703	26.235
200	16.14	35.688	26.246
250	14.21	35.405	26.437
300	13.43	35.298	26.535
350	11.32	35.030	26.741
400	9.12	34.795	26.938
450	7.78	34.664	27.043
500	7.56	34.640	27.058
550	6.88	34.583	27.092
600	6.68	34.562	27.120
650	6.22	34.523	27.147
700	5.93	34.512	27.176
750	5.33	34.506	27.246
800	5.05	34.500	27.273
850	4.85	34.515	27.307
900	4.63	34.527	27.342
950	4.53	34.562	27.387
1000	4.51	34.602	27.415
1082	4.59	34.816	27.577

BAL-STACS40-91 CTD 4 BALDRIGE
 Date 09 09 91 Latitude 1.951N
 Time 0400 Z Longitude 44.035W

— Tem — Sal
 SigT

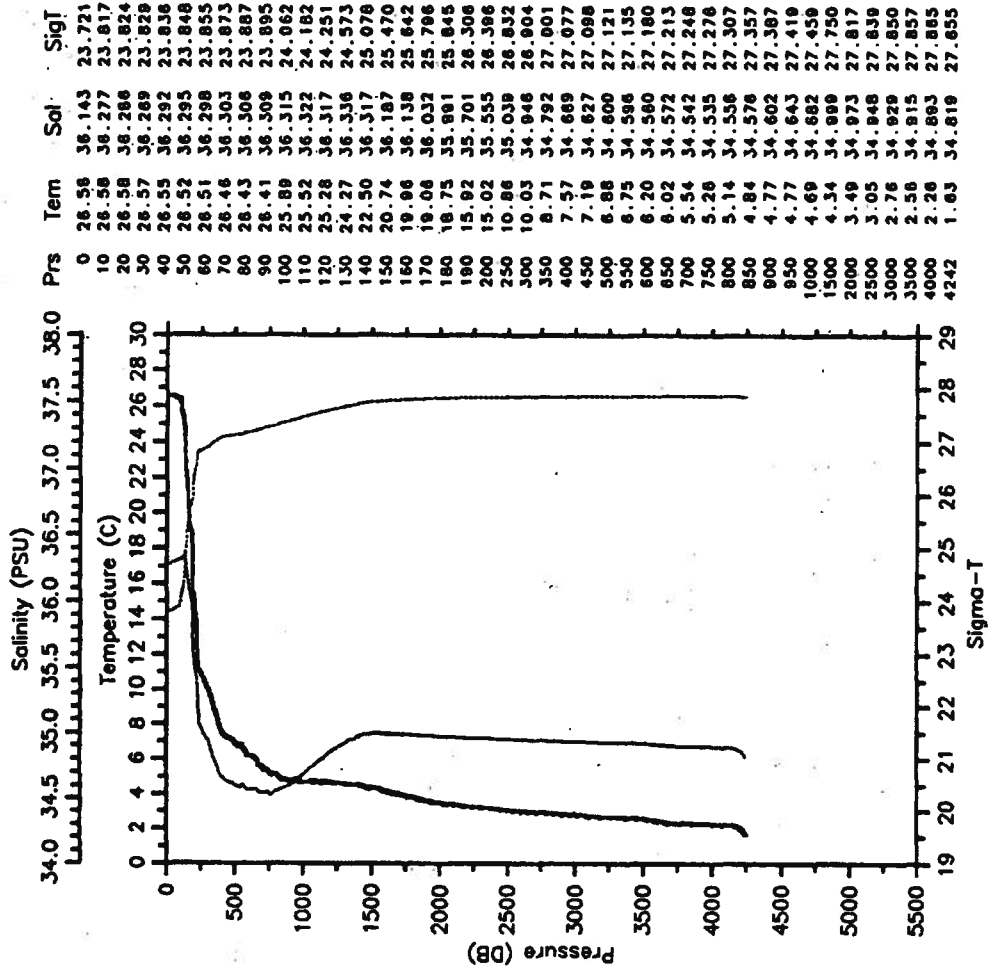
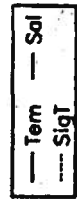


Prs	Tem	Sal	SigT
0	26.45	36.215	23.812
10	26.45	36.246	23.835
20	26.45	36.247	23.836
30	26.45	36.247	23.835
40	26.42	36.253	23.848
50	26.35	36.263	23.877
60	26.31	36.272	23.899
70	26.14	36.295	23.969
80	25.93	36.325	24.057
90	25.89	36.333	24.078
100	25.80	36.338	24.106
110	25.64	36.358	24.171
120	24.98	36.482	24.470
130	24.79	36.545	24.575
140	21.12	36.367	25.904
150	20.03	36.201	25.871
160	17.96	35.994	26.644
170	16.02	35.674	26.262
180	15.49	35.589	26.328
200	14.46	35.461	26.442
250	13.25	35.264	26.563
300	12.71	35.238	26.635
350	11.42	35.082	26.763
400	10.40	34.886	26.857
450	9.05	34.639	28.084
500	7.83	34.737	27.078
550	6.81	34.650	27.168
600	5.68	34.537	27.229
650	5.11	34.467	27.240
700	5.01	34.480	27.248
750	4.90	34.456	27.255
800	4.50	34.498	27.334
850	4.52	34.545	27.369
900	4.70	34.597	27.389
950	4.72	34.654	27.433
1000	4.69	34.728	27.496
1500	4.22	34.988	27.754
2000	3.69	34.978	27.801
2500	3.03	34.948	27.840
3000	2.77	34.930	27.850
3500	2.51	34.912	27.859
4000	2.29	34.886	27.864
4177	1.54	34.816	27.855

BAL-STACS40-91 CTD 5 BALDRIGE

Date 09 10 91 Latitude 3.296N

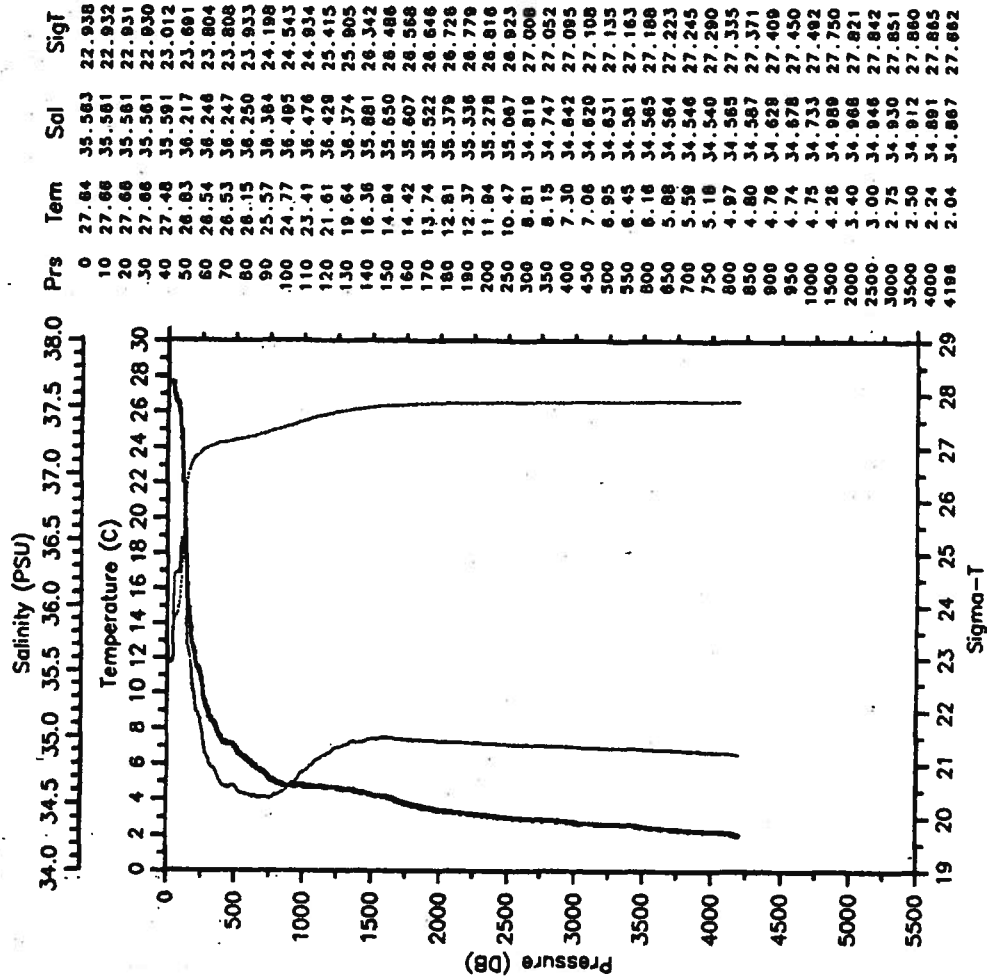
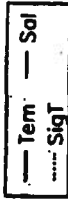
Time 0156 Z Longitude 43.961W



BAL-STACS40-91 CTD 6 BALDRIGE

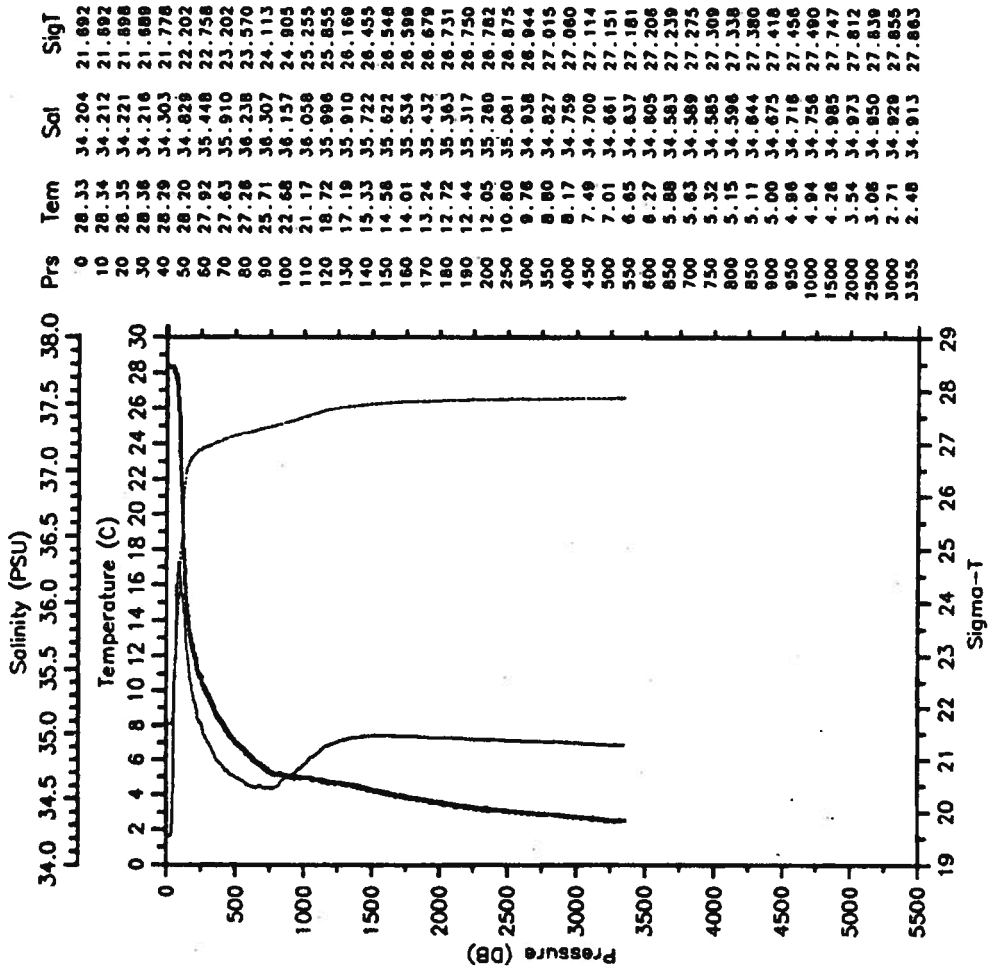
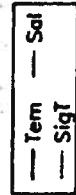
Date 09 10 91 Latitude 4.220N

Time 1037 Z Longitude 44.021W



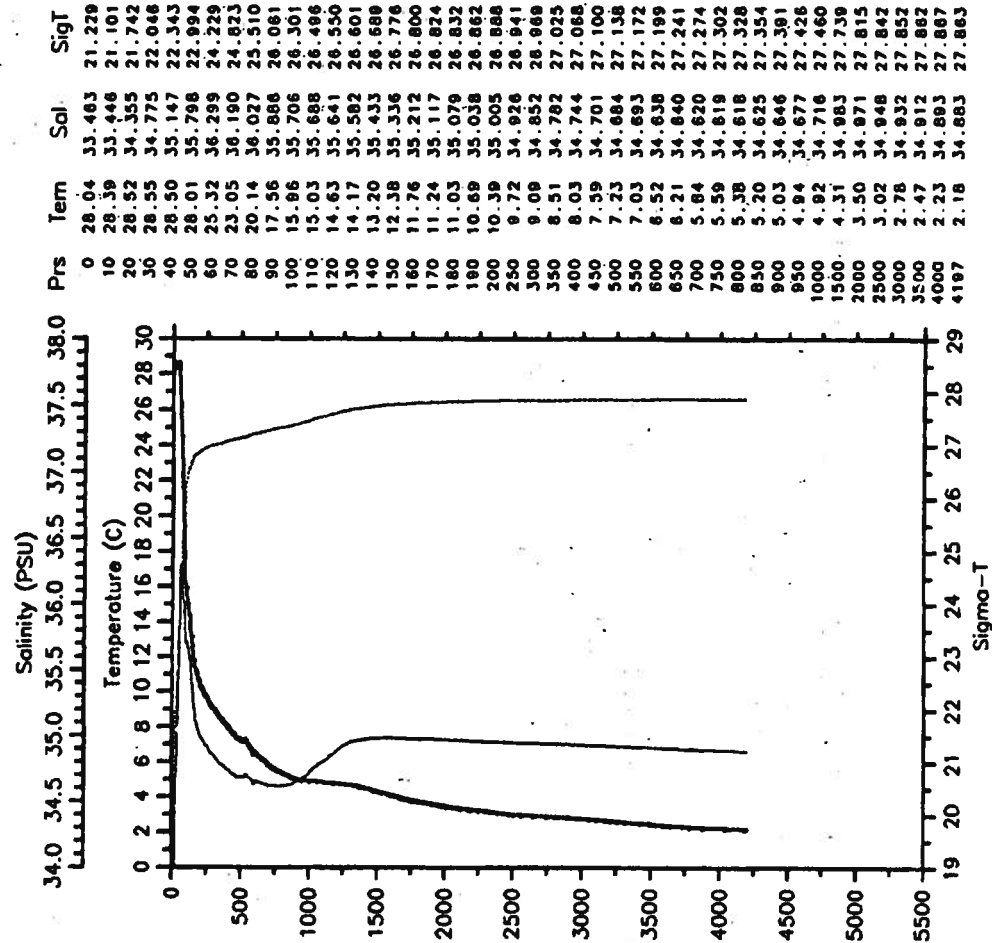
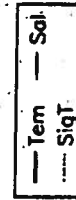
BAL-STACS40-91 CTD 7 BALDRIGE

Date 09 10 91 Latitude 5.270N
 Time 1943 Z Longitude 44.021W



BAL-STACS40-91 CTD 8 BALDRIGE

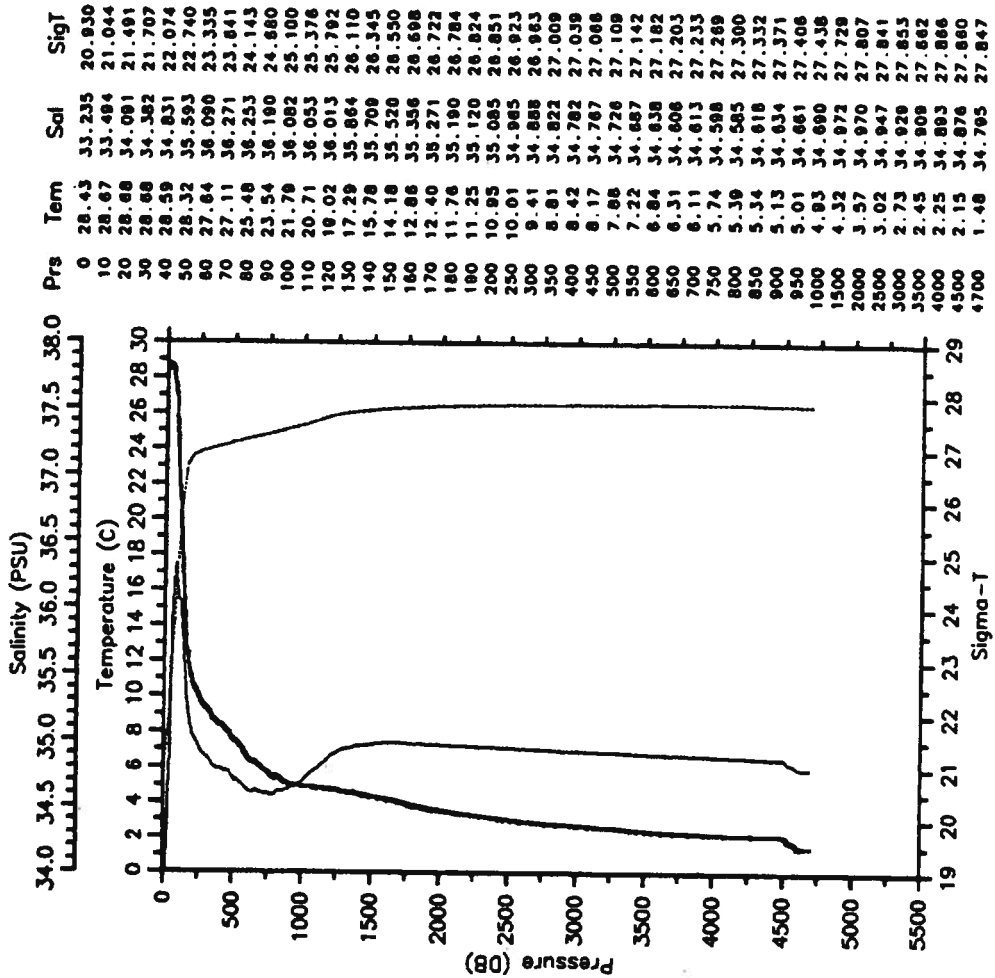
Date 09 11 91 Latitude 5.964N
 Time 0204 Z Longitude 44.024W



BAL-STACS40-91 CTD 9 BALDRIGE

Date 09 11 91 Latitude 6.669N
 Time 1320 Z Longitude 44.041W

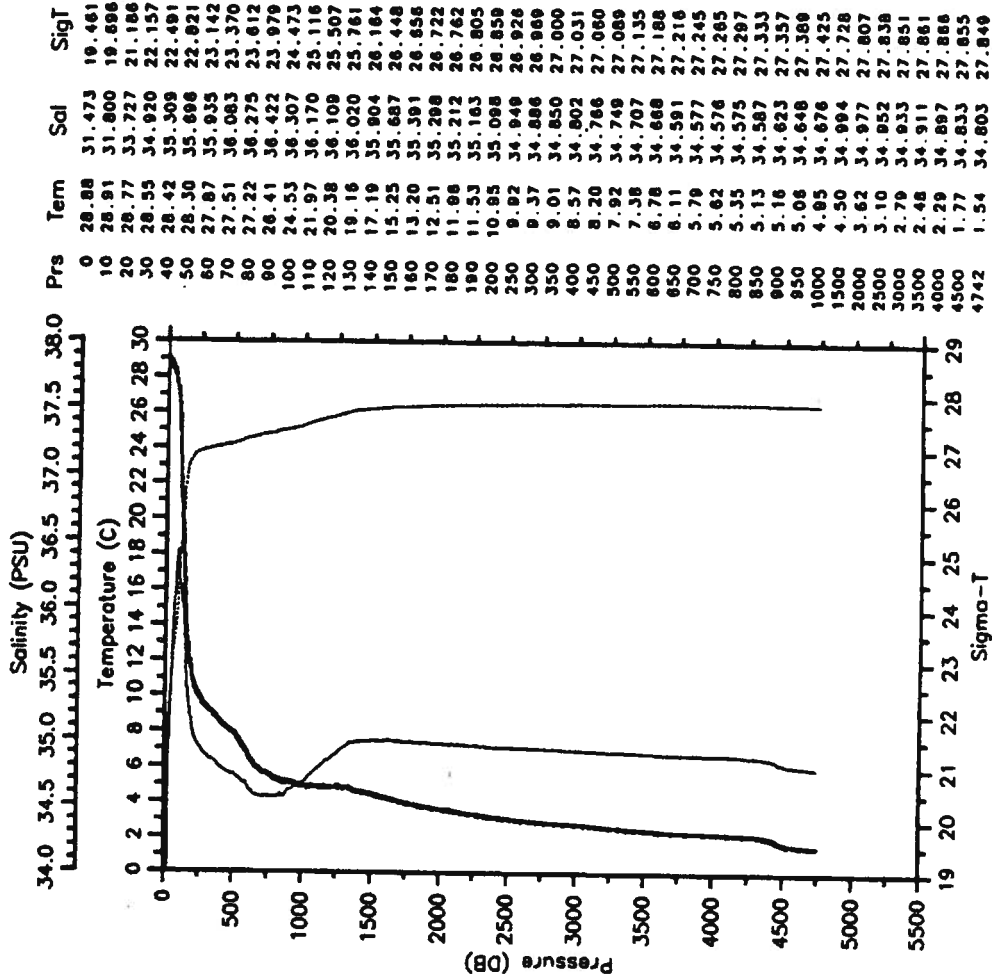
--- Tem --- Sal
 SigT



BAL-STACS40-91 CTD 10 BALDRIGE

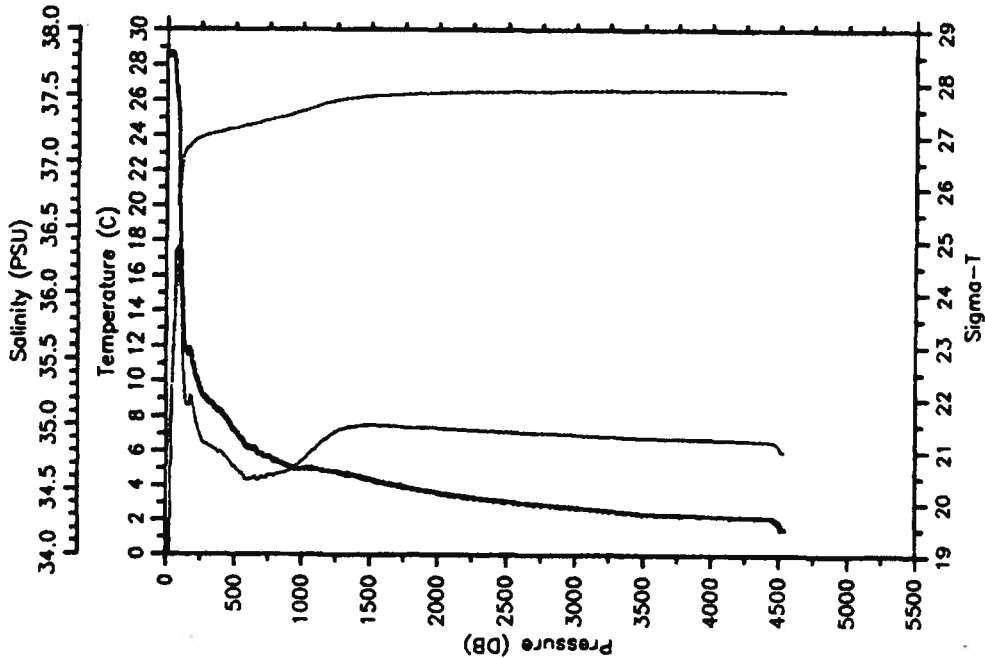
Date 09 11 91 Latitude 7.463N
 Time 2003 Z Longitude 44.000W

--- Tem --- Sal
 SigT



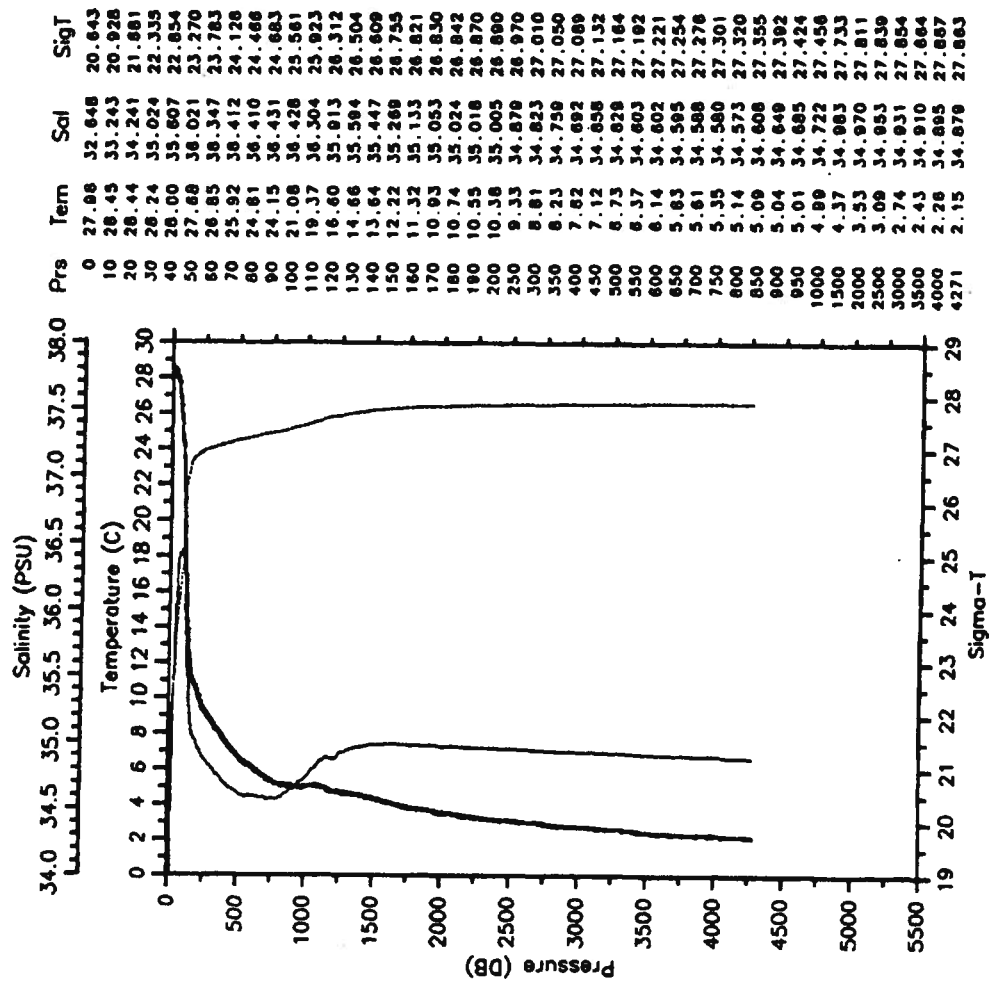
BAL-STACS40-91 CTD 11 BALDRIGE
 Date 09 12 91 Latitude 6.957N
 Time 0310 Z Longitude 44.700W

— Tem — Sal
 --- SigT



BAL-STACS40-91 CTD 12 BALDRIGE
 Date 09 12 91 Latitude 6.418N
 Time 0958 Z Longitude 45.453W

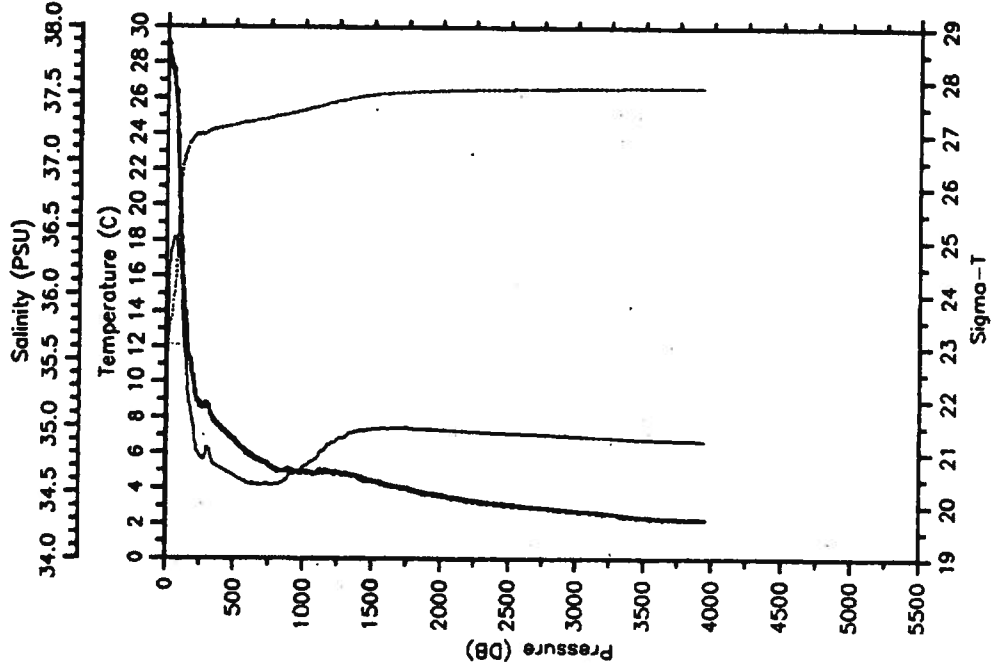
— Tem — Sal
 --- SigT



BAL-STACS40-91 CTD 13 BALDRIGE.

Date 09 12 91 Latitude 5.863N
 Time 1651 Z Longitude 46.104W

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

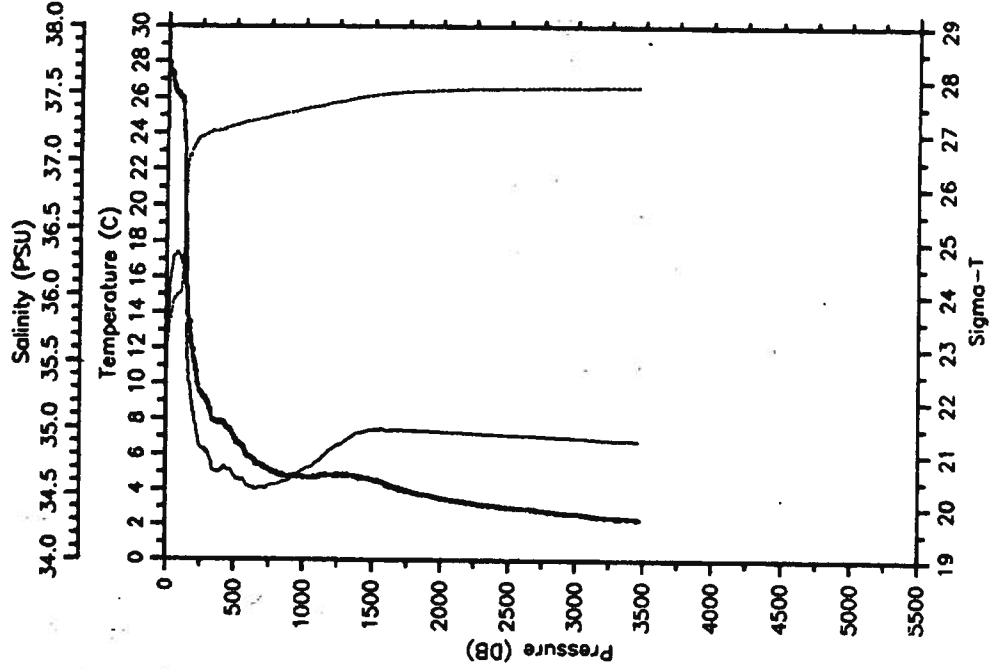


Prs	Tem	Sal	SigT
0	28.80	29.578	18.036
10	28.03	32.754	20.370
20	28.23	36.098	23.147
30	27.82	38.274	23.416
40	27.61	36.339	23.532
50	27.17	36.387	23.712
60	26.37	36.420	23.900
70	25.62	36.414	24.221
80	23.84	36.339	24.705
90	21.92	36.299	25.231
100	20.13	36.356	25.783
110	17.83	36.130	26.158
120	16.38	35.926	26.371
130	14.82	35.688	26.551
140	13.86	35.548	26.620
150	13.16	35.442	26.703
160	11.89	35.246	26.802
170	11.37	35.172	26.842
180	11.11	35.126	26.854
190	10.51	35.081	26.911
200	10.23	35.020	26.927
250	8.68	34.772	26.868
300	6.72	34.840	27.038
350	7.82	34.710	27.073
400	7.42	34.682	27.110
450	7.03	34.650	27.136
500	6.76	34.626	27.159
550	6.30	34.594	27.194
600	5.95	34.566	27.216
650	5.72	34.561	27.241
700	5.55	34.560	27.261
750	5.29	34.562	27.294
800	5.08	34.562	27.321
850	4.86	34.576	27.345
900	5.06	34.641	27.363
950	4.62	34.651	27.408
1000	4.95	34.686	27.440
1500	4.41	34.878	27.727
2000	3.59	34.974	27.807
2500	3.08	34.948	27.838
3000	2.72	34.929	27.854
3500	2.35	34.905	27.867
3948	2.23	34.893	27.868

BAL-STACS40-91 CTD 14 BALDRIGE

Date 09 12 91 Latitude 5.331N
 Time 2311 Z Longitude 46.811W

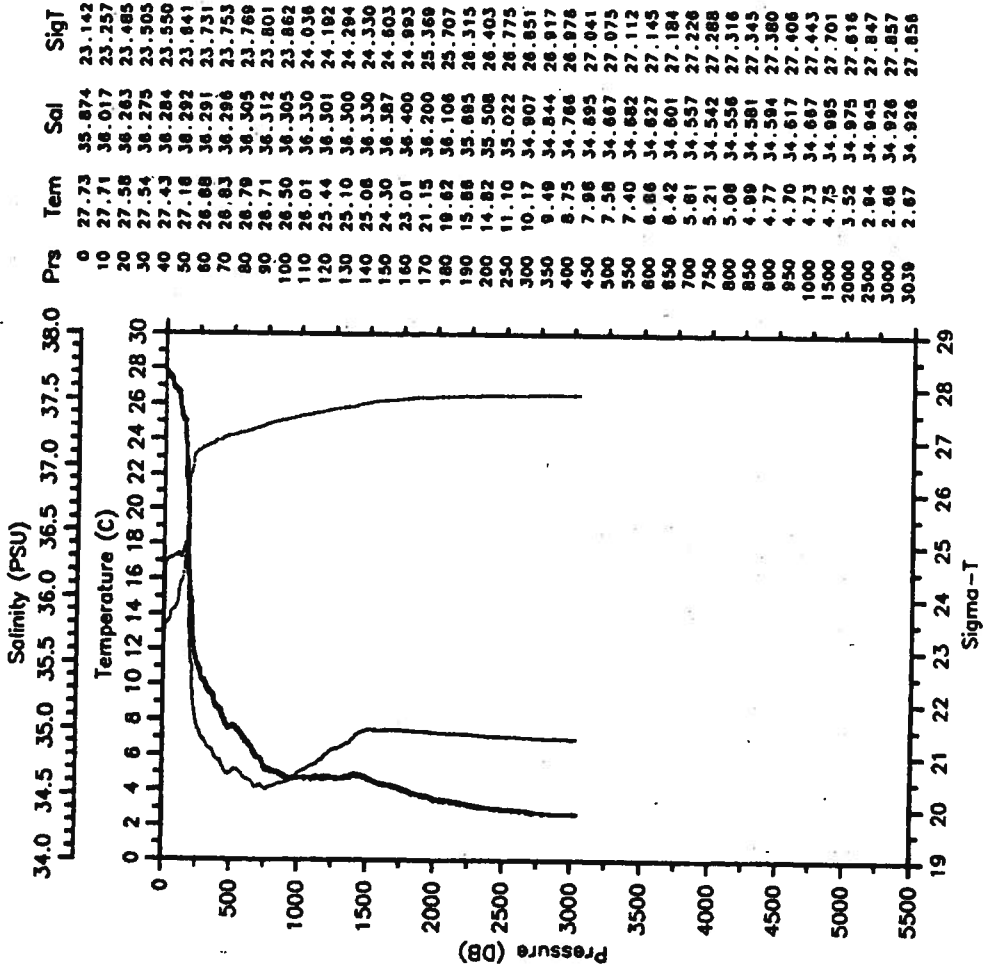
--- Tem --- Sal
 - - - - SigT



Prs	Tem	Sal	SigT
0	27.98	35.645	22.897
10	27.68	35.678	23.010
20	27.42	35.916	23.273
30	27.30	36.124	23.472
40	28.75	36.267	23.709
50	28.39	36.278	23.678
60	28.29	36.295	23.923
70	28.26	36.305	23.939
80	28.18	36.326	23.988
90	28.04	36.306	24.008
100	25.96	36.264	24.025
110	25.58	36.248	24.108
120	24.44	36.283	24.468
130	21.80	36.307	25.269
140	19.07	36.080	25.831
150	15.77	35.688	26.340
160	13.82	35.421	26.551
170	13.44	35.337	26.565
180	12.70	35.273	26.665
190	11.93	35.180	26.728
200	11.35	35.102	26.763
250	9.47	34.855	26.929
300	9.00	34.823	26.980
350	7.93	34.878	27.031
400	7.81	34.878	27.050
450	7.47	34.882	27.102
500	6.93	34.837	27.143
550	6.46	34.598	27.178
600	5.89	34.558	27.218
650	5.52	34.538	27.248
700	5.39	34.550	27.273
750	5.18	34.564	27.311
800	4.95	34.571	27.341
850	4.84	34.586	27.374
900	4.76	34.608	27.382
950	4.80	34.652	27.422
1000	4.72	34.682	27.456
1500	4.58	34.985	27.712
2000	3.55	34.971	27.809
2500	3.00	34.948	27.843
3000	2.67	34.925	27.856
3467	2.36	34.906	27.867

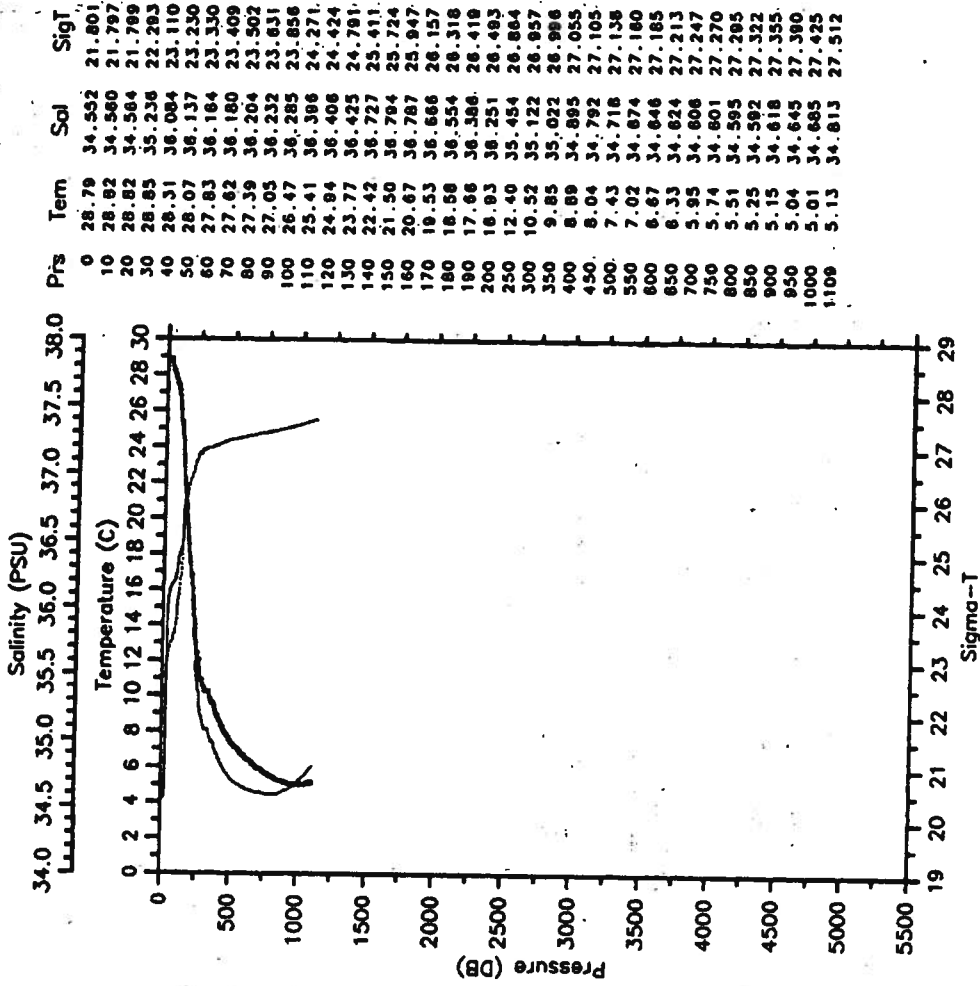
BAL-STACS40-91 CTD 15 BALDRIGE
 Date 09 13 91 Latitude 4.917N
 Time 0749 Z Longitude 47.562W

— Tem — Sal
 --- SigT



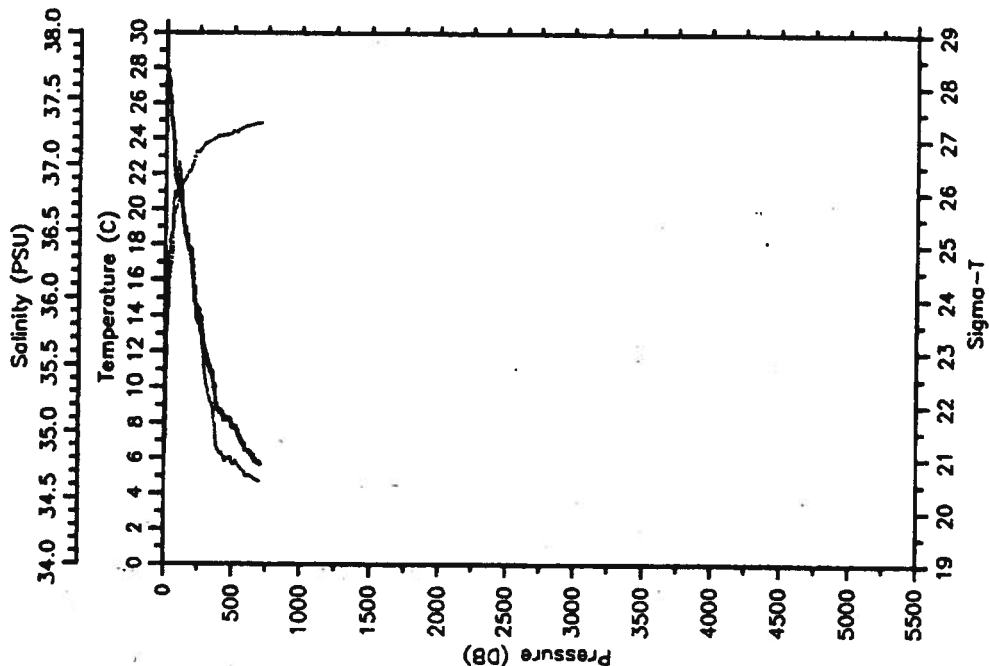
BAL-STACS40-91 CTD 16 BALDRIGE
 Date 09 17 91 Latitude 9.305N
 Time 0804 Z Longitude 57.502W

— Tem — Sal
 --- SigT



BAL-STACS40-91 CTD 17 BALDRICE

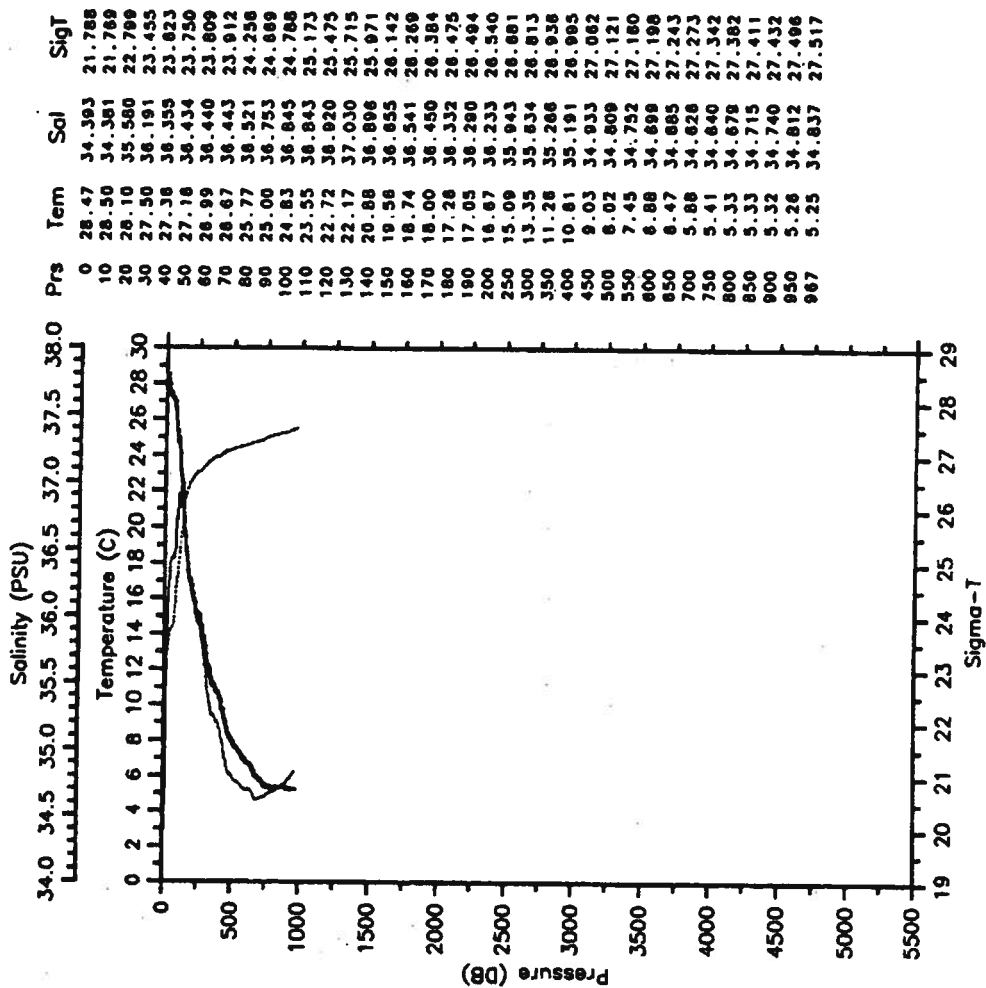
Date 09 17 91 Latitude 11.420N
 Time 2343 Z Longitude 60.532W



Prs	Tem	Sal	SigT
0	27.82	34.740	22.280
10	27.73	34.884	22.383
20	27.22	35.810	23.258
30	26.15	36.322	23.984
40	24.98	36.485	24.498
50	24.47	36.521	24.854
60	22.73	36.772	25.359
70	21.83	36.758	25.804
80	21.45	36.786	25.715
90	21.61	36.998	25.793
100	21.41	37.003	25.808
110	20.84	36.942	25.991
120	20.50	36.853	26.044
130	19.61	36.667	26.138
140	19.00	36.540	26.199
150	18.52	36.485	26.266
160	18.36	36.454	26.287
170	17.84	36.371	26.363
180	17.72	36.354	26.378
190	17.40	36.314	26.428
200	16.72	36.213	26.514
250	14.31	35.603	26.742
300	11.85	35.387	26.920
350	10.73	35.203	26.983
400	8.70	34.858	27.058
450	8.31	34.798	27.088
500	7.83	34.758	27.110
550	7.20	34.733	27.162
600	6.43	34.688	27.233
650	6.13	34.658	27.284
700	5.70	34.627	27.298
702	5.69	34.627	27.297

BAL-STACS40-91 CTD 18 BALDRICE

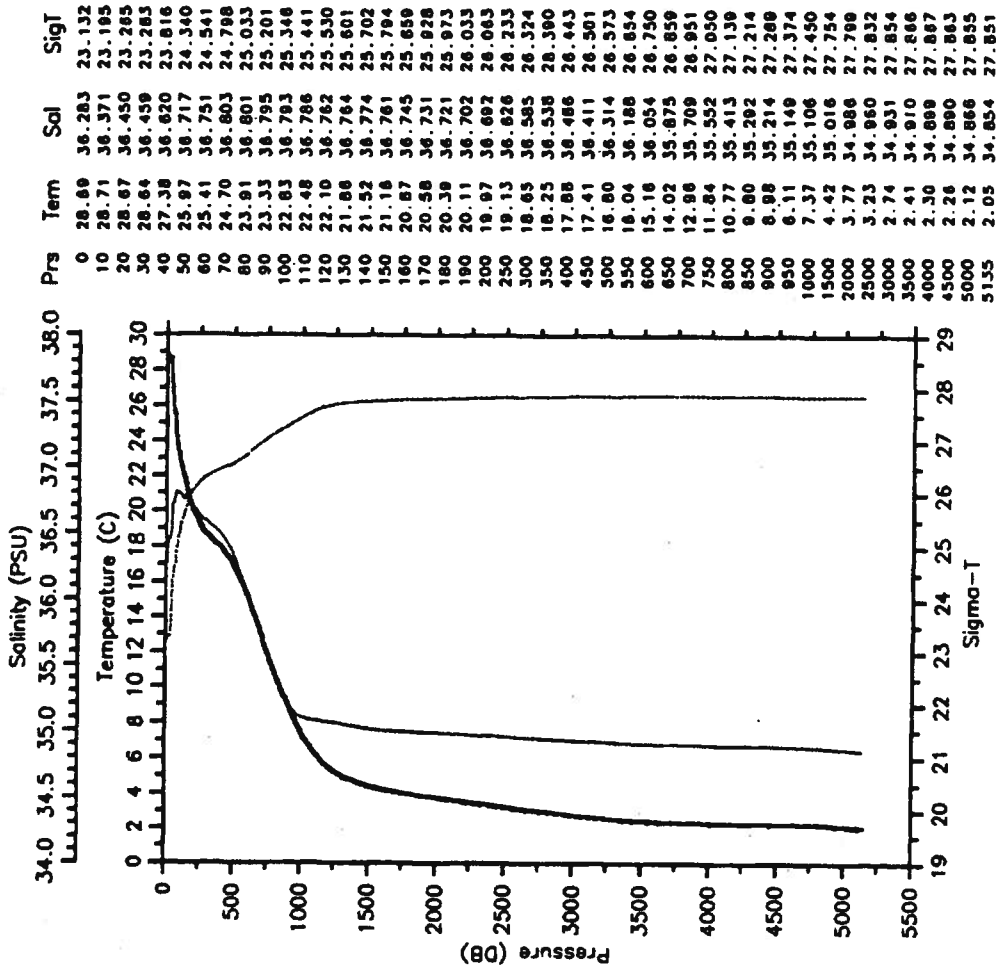
Date 09 18 91 Latitude 11.794N
 Time 0427 Z Longitude 61.485W



Prs	Tem	Sal	SigT
0	28.47	34.393	21.788
10	28.50	34.381	21.769
20	28.10	35.580	22.799
30	27.50	36.191	23.455
40	27.38	36.355	23.623
50	27.18	36.434	23.750
60	26.99	36.440	23.809
70	26.67	36.443	23.912
80	25.77	36.521	24.258
90	25.00	36.753	24.689
100	24.83	36.845	24.768
110	23.55	36.843	25.173
120	22.72	36.920	25.475
130	22.17	37.030	25.715
140	20.88	36.896	25.971
150	18.58	36.855	26.142
160	18.74	36.541	26.269
170	18.00	36.450	26.384
180	17.28	36.332	26.475
190	17.05	36.280	26.494
200	16.87	36.233	26.540
250	15.09	35.943	26.881
300	13.35	35.834	26.813
350	11.28	35.266	28.936
400	10.81	35.191	28.995
450	9.03	34.933	27.062
500	8.02	34.809	27.121
550	7.45	34.752	27.180
600	6.88	34.698	27.198
650	6.47	34.685	27.243
700	5.88	34.628	27.273
750	5.41	34.640	27.342
800	5.33	34.678	27.382
850	5.33	34.715	27.411
900	5.32	34.740	27.432
950	5.28	34.812	27.496
987	5.25	34.837	27.517

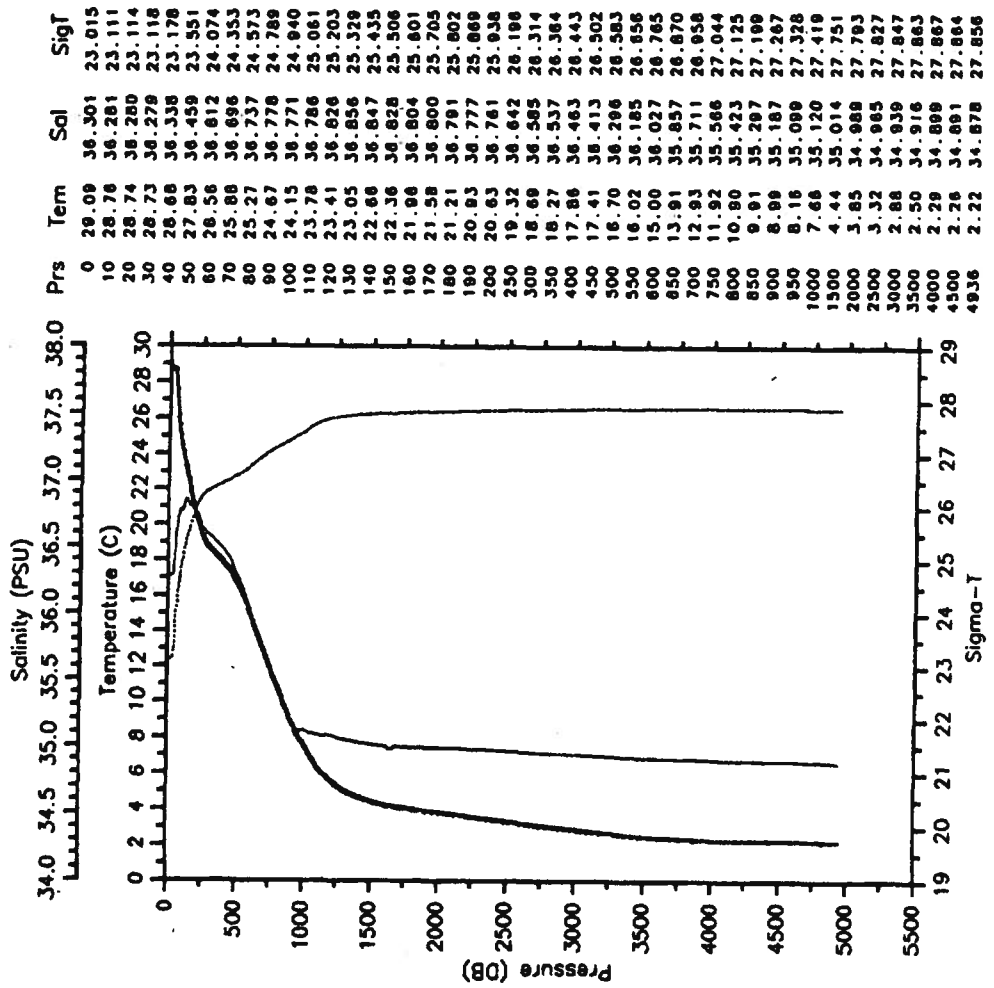
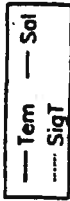
BAL-STACS40-91 CTD 19 BALDRIGE

Date 09 21 91 Latitude 26.480N
Time 1112 Z Longitude 73.189W



BAL-STACS40-91 CTD 20 BALDRIGE

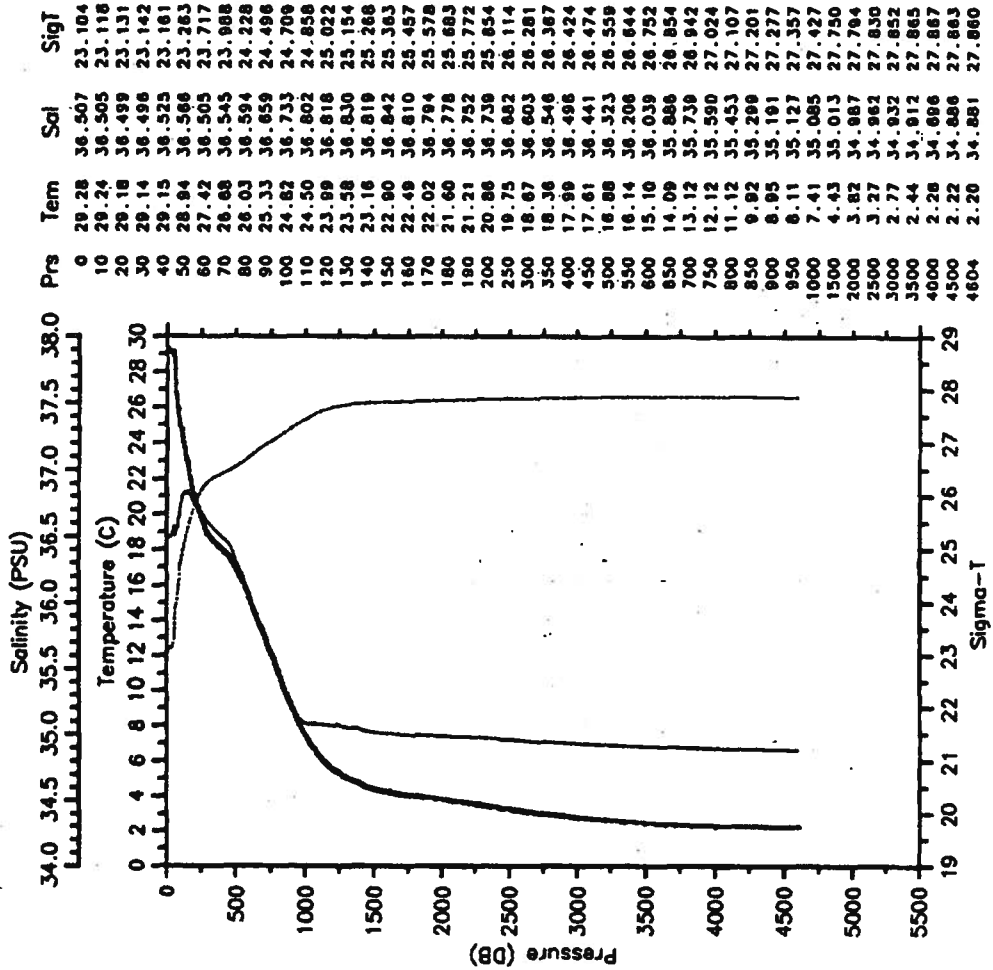
Date 09 21 91 Latitude 26.492N
Time 1647 Z Longitude 73.798W



BAL-STACS40-91 CTD 21 BALDRIGE

Date 09 21 91 Latitude 26.485N

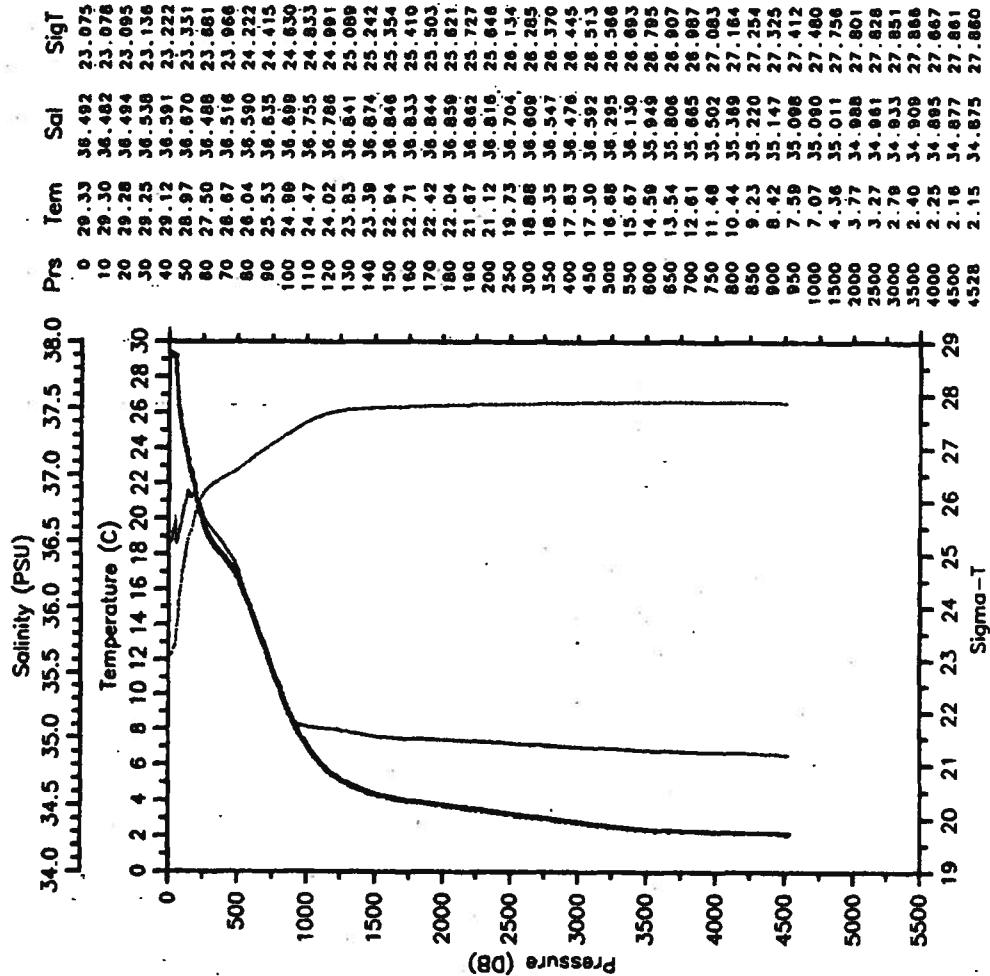
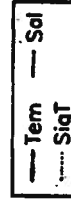
Time 2145 Z Longitude 74.197W



BAL-STACS40-91 CTD 22 BALDRIGE

Date 09 22 91 Latitude 26.493N

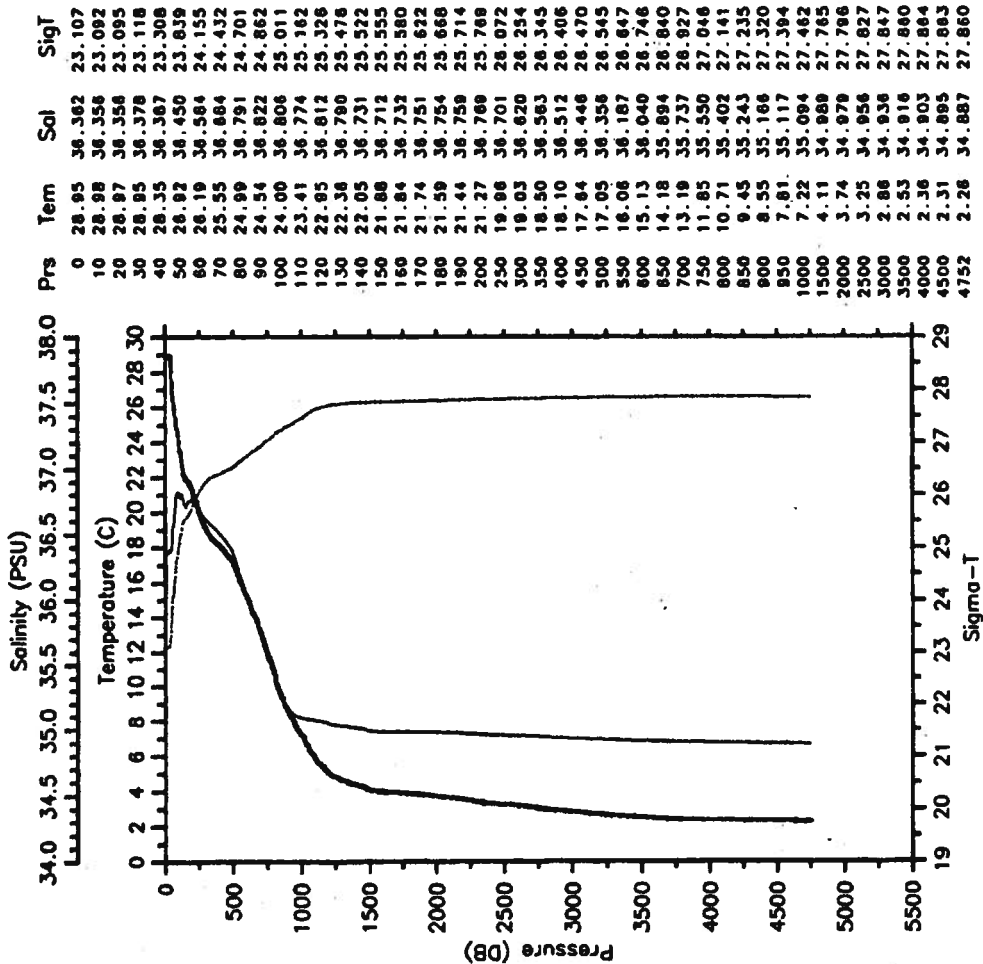
Time 0256 Z Longitude 74.711W



BAL-STACS40-91 CTD 23 BALDRIGE

Date 09 22 91 Latitude 26.481N
 Time 0925 Z Longitude 75.685W

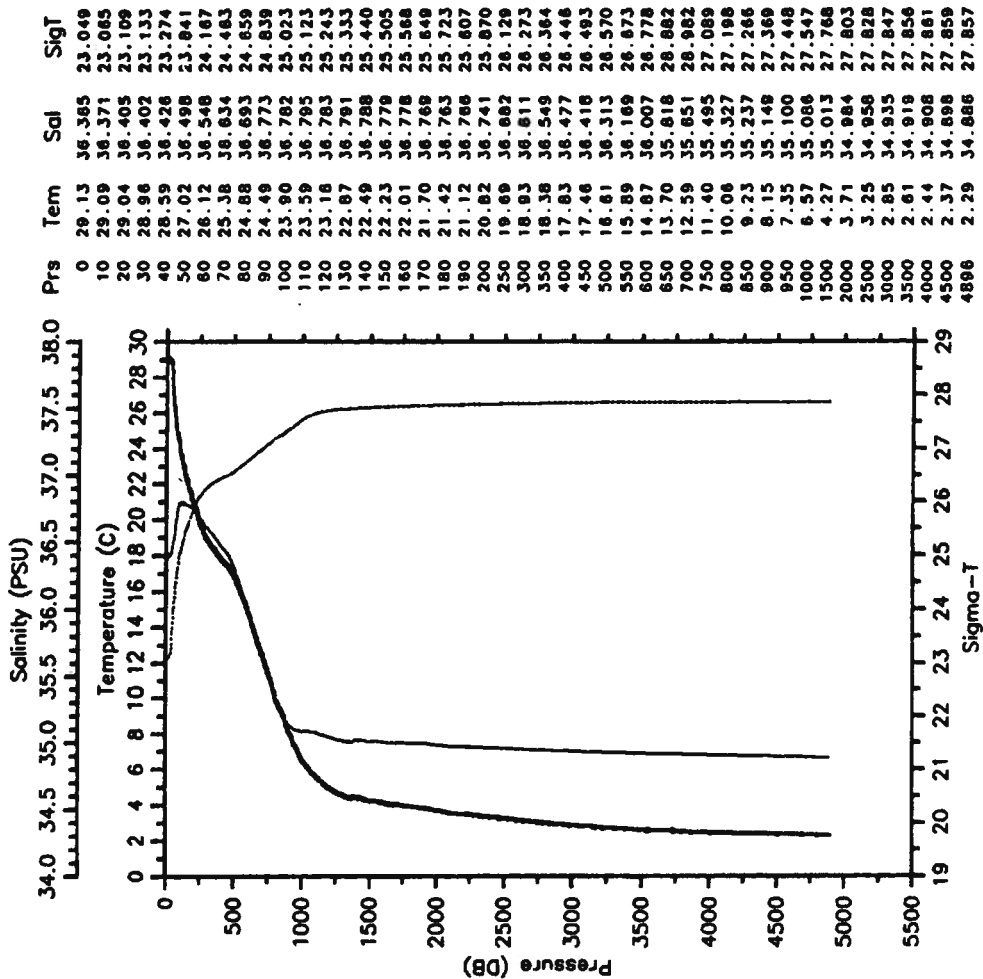
--- Tem --- Sal
 SigT



BAL-STACS40-91 CTD 24 BALDRIGE

Date 09 22 91 Latitude 26.464N
 Time 1640 Z Longitude 76.450W

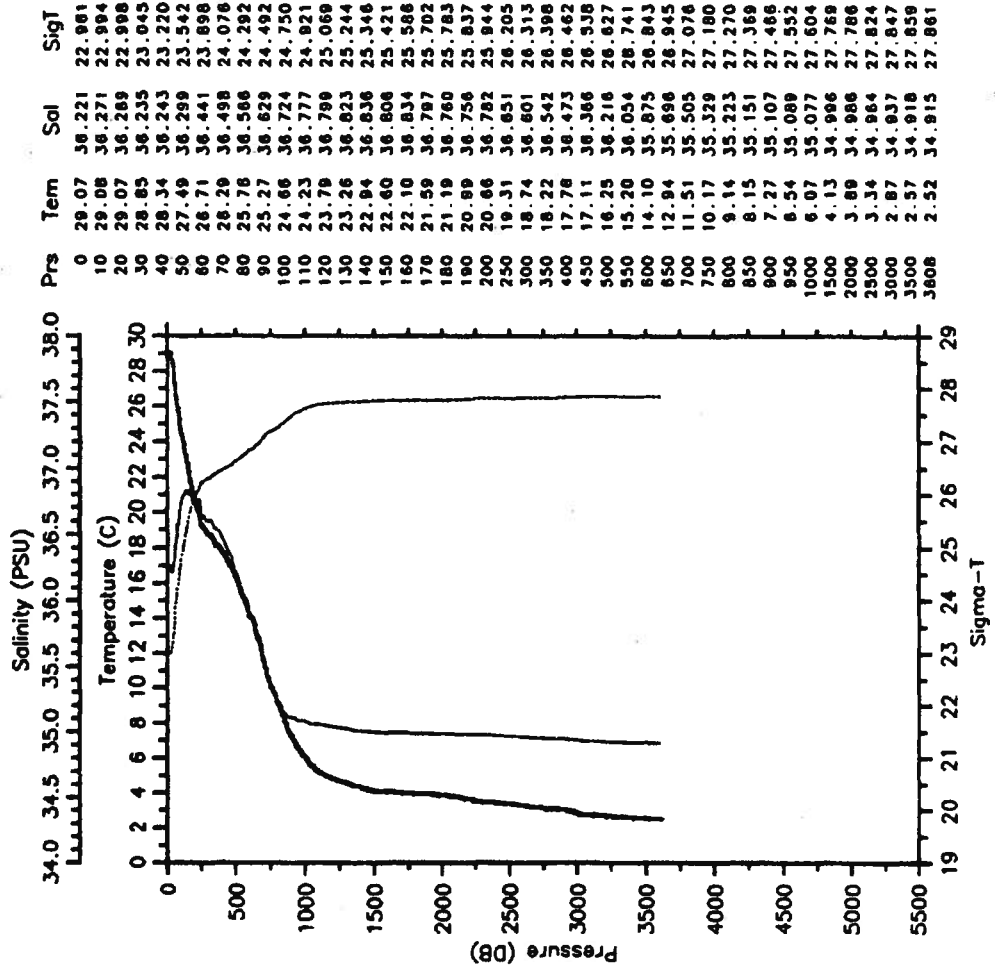
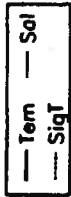
--- Tem --- Sal
 SigT



BAL-STACS40-91 CTD 25 BALDRIGE

Date 09 22 91 Latitude 26.520N

Time 2107 Z Longitude 76.757W



APPENDIX B: XBT DATA

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

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE MB-STACS38-91

XBT NO.	1	2	3	4	5	6	7
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GMT)	8	9	10	11	12	13	14
TIME (GMT)	1755	1814	1649	1823	1825	1824	1828
LAT (N)	25.83	26.50	26.49	26.45	22.73	19.27	17.20
LOX (W)	79.87	76.77	76.14	75.85	71.33	67.03	63.77
SURF T (C)	26.1	23.8	23.8	24.0	26.0	26.5	26.4
28							
27							
26	42				93	79	84
25	52				108	93	111
24	111			32	128	114	134
23	122	106	52	69	155	138	151
22	131	127	94	112	175	156	165
21	143	140	105	147	202	172	180
20	161	163	133	163	232	192	208
19	170	224	204	210	267	227	235
18	185	346	322	345	334	269	265
17	192		439		399	325	291
16	201					360	333
15	217					396	373
14	227						400
13	234						428
12	239						
11	245						
10	253						
9							
8							
7							
6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE MB-STACS38-91

XBT NO.	8	9	10	11	12	13	14
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GMT)	15	16	17	17	17	18	18
TIME (GMT)	1823	1823	2016	2215	0008	0210	0406
LAT (N)	13.73	11.77	10.02	10.01	10.02	10.03	10.03
LOX (W)	59.60	55.02	51.13	50.70	50.28	49.81	49.37
SURF T (C)	26.7	27.0	26.8	26.7	26.6	26.6	26.7
28							
27							
26		90	67	77	74	55	71
25		103	83	86	77	65	76
24		114	94	90	80	75	84
23		120	102	98	93	80	93
22		131	108	101	98	89	96
21		146	115	107	104	95	102
20		156	129	114	109	99	100
19		167	139	130	112	107	109
18		204	153	136	122	117	117
17		220	174	139	138	127	136
16		237	185	152	146	140	148
15		259	205	165	153	147	156
14		280	219	176	162	162	172
13		298	234	194	172	182	188
12		340	280	204	188	189	217
11		375	298	231	208	232	258
10	392	351	284	275	283	299	295
9		389	335	329	373	369	379
8		445	402	389	440	435	447
7			525	454	530	543	533
6			728	594	661	682	675

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE MB-STACS38-91

XBT NO.	15	16	17	18	19	20	21
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GMT)	18	18	18	18	18	19	19
TIME (GMT)	1210	1353	1539	2103	2250	0024	0034
LAT (N)	9.81	9.43	9.02	8.65	8.25	7.87	7.87
LOX (W)	49.12	49.26	49.46	49.56	49.73	49.85	49.85
SURF T (C)	26.7	26.6	26.8	26.7	26.7	27.6	26.8
28							
27							
26	70	68	62	63	54	64	39
25	77	74	67	67	64	74	42
24	87	81	77	75	74	84	51
23	91	88	83	79	82	92	61
22	102	94	89	83	95	99	66
21	107	103	94	87	98	106	75
20	113	110	100	94	102	112	80
19	116	115	106	99	106	118	86
18	120	121	115	104	113	127	91
17	131	131	123	110	117	132	97
16	139	141	129	120	120	137	105
15	149	152	136	133	123	143	109
14	166	164	144	149	132	152	117
13	181	184	154	162	138	157	125
12	218	212	184	180	146		130
11	254	258	187	197	159		145
10	298	296	257	257	194		185
9	360	361	305	297	264		263
8	418	446	371	378	358		370
7	538	530	513	480	540		470
6	687	659	621	647			618

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE MB-STACS38-91

XBT NO.	22	23	24	25	26	27	28
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GMT)	19	19	19	20	20	20	20
TIME (GMT)	0917	1045	1752	0709	1153	1353	1555
LAT (N)	7.20	6.94	6.48	5.95	5.70	5.47	5.28
LOX (W)	50.19	50.44	50.85	51.28	51.08	50.77	50.52
SURF T (C)	27.1	26.9	27.3	27.0	27.1	27.0	27.3
28							
27							
26	110	125	119	60	47	8	74
25	113	130	122	73	70	52	83
24	116	133	125	83	78	76	85
23	121	138	128	88	84	84	99
22	123	143	131	97	87	93	105
21	126	147	134	103	90	97	110
20	131	151	139	105	94	101	115
19	140	168	145	110	98	106	120
18	148	171	154	117	105	112	124
17	153	174	163	124	121	126	130
16	161	179	168	128	132	138	146
15	167	185	179	130	138	141	154
14	174	189	190	137	141	147	158
13	181	192	199	139	144	153	162
12	191	200	210	149	148	156	171
11	196	214	227	167	154	163	178
10	209	237	246	202	192	176	192
9	256	260	304	329	306	259	263
8	324	274	353	388	378	315	299
7	396	373	442	475	436	388	373
6	528	506	509	555	554	522	
	693	638	634	630	640	640	

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ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS38-91

XBT NO.	29	30	31	32	33	34	35
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GRT)	20	20	20	20	21	21	21
TIME (GRT)	1753	1959	2200	2351	0200	0645	1642
LAT (N)	5.03	4.81	4.58	4.37	4.12	4.27	4.71
LON (W)	50.17	49.90	49.59	49.30	48.97	48.56	47.97
SURF T (C)	27.6	27.5	27.4	27.3	27.3	27.0	27.3
28							
27	65	55	61	56	47	46	41
26	81	87	67	74	59	77	93
25	95	97	102	93	78	91	115
24	99	102	106	105	90	118	132
23	103	107	109	107	94	121	135
22	108	115	112	111	98	124	136
21	112	124	117	115	102	128	138
20	117	127	124	119	106	133	143
19	126	133	134	124	111	140	148
18	129	149	141	132	117	142	151
17	133	152	148	145	123	143	152
16	138	157	153	148	127	144	154
15	159	162	159	153	131	146	161
14	170	168	164	158	146	168	180
13	182	191	173	171	164	183	200
12	191	204	187	183	184	213	227
11	212	252	207	223	194	232	269
10	282	273	237	262	287	259	341
9	303	303	292	328	381	376	388
8	364	379	426	448	449	453	444
7	535	577		539		572	511
6	648	655		610		665	608

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS38-91

XBT NO.	43	44	45	46	47	48	49
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GRT)	23	23	23	23	23	23	24
TIME (GRT)	0645	0901	1059	1853	2059	2300	0716
LAT (N)	7.58	7.88	8.15	8.00	7.54	7.07	6.46
LON (W)	44.95	44.58	44.22	43.97	43.99	44.01	44.01
SURF T (C)	26.4	26.6	26.7	26.9	26.8	26.5	26.9
28							
27	42	52	54	63	49	58	70
26							
25	46	56	57	65	52	60	78
24	50	58	60	67	56	64	82
23	53	60	63	69	60	67	86
22	56	65	67	71	62	71	90
21	60	69	76	76	65	76	95
20	68	72	80	82	71	81	102
19	75	77	92	86	77	86	108
18	78	82	97	89	81	90	113
17	82	87	102	97	84	95	117
16	91	95	108	100	89	98	122
15	95	101	118	105	93	101	127
14	99	110	125	113	101	110	134
13	104	121	143	119	110	118	148
12	112	132	154	132	123	132	156
11	138	154	174	145	142	149	172
10	209	210	226	205	182	164	214
9	310	294	292	323	271	250	291
8	401	380	412	450	391	375	399
7	548	530	577	558	589	514	548
6	663	678	711	694	701	715	631

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS38-91

XBT NO.	36	37	38	39	40	41	42
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GRT)	22	22	22	22	23	23	23
TIME (GRT)	0025	1554	1724	1853	0053	0253	0451
LAT (N)	5.10	5.78	6.10	6.43	6.77	7.05	7.32
LON (W)	47.24	46.65	46.52	46.42	46.18	45.77	45.37
SURF T (C)	27.0	27.3	27.1	27.1	26.8	26.6	26.4
28							
27	97	114	120	63			
26	103	118	123	84	63	50	59
25	108	122	125	88	65	52	61
24	111	128	127	91	67	53	64
23	116	132	130	94	71	56	66
22	131	136	136	96	76	63	69
21	141	137	138	99	80	66	72
20	147	139	141	105	83	71	75
19	152	141	145	109	86	75	78
18	155	143	152	113	90	81	82
17	157	147	156	117	95	90	87
16	158	152	160	124	103	96	93
15	164	155	166	129	112	104	104
14	186	158	175	134	118	112	119
13	202	171	185	147	125	130	128
12	221	189	197	153	130	146	140
11	267	221	226	179	169	177	173
10	340	310	267	242	245	206	225
9	467	350	329	323	319	265	294
8	492	442	400	399	402	407	439
7	508	545	495	481	526	530	565
6	665	674	622	650	666	642	673

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS38-91

XBT NO.	50	51	52	53	54	55	56
YEAR	91	91	91	91	91	91	91
MONTH	1	1	1	1	1	1	1
DAY (GRT)	24	24	24	24	25	25	25
TIME (GRT)	0914	1116	1753	1959	0247	1242	1440
LAT (N)	6.02	5.53	4.95	4.45	3.95	2.79	2.32
LON (W)	44.01	44.04	44.03	44.06	44.04	44.03	44.05
SURF T (C)	27.1	27.2	27.4	27.4	27.2	27.3	27.5
28							
27	102	117	119	138	107	61	71
26	116	120	149	149	127	78	101
25	118	126	152	152	132	102	105
24	121	135	158	154	136	111	107
23	129	137	161	157	139	130	108
22	136	138	164	161	141	126	110
21	140	139	166	163	144	129	111
20	141	140	169	165	151	132	111
19	143	142	171	167	156	145	113
18	145	143	175	172	159	152	116
17	148	147	177	175	161	164	143
16	154	152	180	177	163	168	183
15	158	155	184	179	166	172	187
14	166	158	187	182	174	180	194
13	174	165	189	191	178	182	204
12	185	170	198	200	189	183	212
11	202	181	210	228	209	189	234
10	233	206	232	263	233	207	258
9	287	252	257	303	241	240	306
8	393	354	317	359	281	301	324
7	477	432	384	425	415	480	460
6	594	584	544	524	560	659	652

ISOTHERM DEPTHS (M)

	R/V MALCOLM BALDRIGE				NB-STAC38-91			
XBT NO.	57	58	59	60	61	62	63	
YEAR	91	91	91	91	91	91	91	
MONTH	1	1	1	1	1	1	1	
DAY (GMT)	25	25	26	26	26	26	26	
TIME (GMT)	1445	2229	0021	0731	1254	1454	1652	
LAT (N)	2.30	1.58	1.11	0.54	0.30	0.68	1.05	
LON (W)	44.05	44.06	44.02	44.22	44.55	44.97	45.38	
SURF T (C)	27.5	27.3	27.2	27.5	27.7	27.7	27.7	
28								
27	69	84	70	84	83	85	94	
26	97	90	92	86	85	87	96	
25	101	102	96	90	86	88	97	
24	104	106	101	100	88	89	97	
23	106	109	104	106	94	91	98	
22	107	113	106	118	99	92	100	
21	108	119	109	119	109	95	109	
20	110	122	114	121	111	102	124	
19	111	125	120	121	118	126	131	
18	114	134	124	123	136	141	140	
17	120	152	136	125	148	253	162	
16	182	160	143	142	168	160	172	
15	186	175	148	154	178	177	188	
14	194	187	157	162	208	189	197	
13	203	204	173	178	226	236	210	
12	214	219	181	203	242	245	226	
11	235	284	205	218	275	255	264	
10	256	298	281	260	295	294	278	
9	301	359	318	369	324	318	366	
8	323	386	378	411	339	419	467	
7		495	484	444	427	493	506	
6			608	581	588	586	589	

ISOTHERM DEPTHS (M)

	R/V MALCOLM BALDRIGE				NB-STAC38-91			
XBT NO.	71	72	73	74	75	76	77	
YEAR	91	91	91	91	91	91	91	
MONTH	1	1	1	1	1	1	1	
DAY (GMT)	27	27	27	27	27	27	27	
TIME (GMT)	0900	0906	1100	1255	1454	1654	1855	
LAT (N)	3.85	3.85	4.16	4.45	4.79	5.12	5.43	
LON (W)	48.64	48.64	49.12	49.60	50.04	50.51	50.93	
SURF T (C)	27.3	27.2	27.3	27.3	27.2	27.3	27.4	
28								
27	47	43	63	78	79	65	51	
26	77	79	72	86	88	75	77	
25	85	86	107	113	91	82	82	
24	97	98	114	130	104	91	89	
23	106	108	120	133	110	103	93	
22	111	114	134	136	114	109	99	
21	140	142	142	139	118	114	112	
20	143	145	145	143	126	123	119	
19	145	149	149	148	140	138	126	
18	150	153	152	158	149	144	136	
17	153	155	155	169	158	151	138	
16	155	157	157	176	163	155	140	
15	159	160	158	183	166	158	143	
14	164	163	160	186	170	162	150	
13	174	174	176	190	181		158	
12	225	217	186	206	191		165	
11	240	238	242	234	208			
10	308	300	290	319	254			
9	351	358	441	370	351			
8	468		568	465	464			
7			652	577	522			
6				675	645			

ISOTHERM DEPTHS (M)

	R/V MALCOLM BALDRIGE				NB-STAC38-91			
XBT NO.	64	65	66	67	68	69	70	
YEAR	91	91	91	91	91	91	91	
MONTH	1	1	1	1	1	1	1	
DAY (GMT)	26	26	26	27	27	27	27	
TIME (GMT)	1855	2059	2259	0111	0306	0449	0656	
LAT (N)	1.40	1.77	2.13	2.50	2.83	3.20	3.53	
LON (W)	45.77	46.14	46.54	47.00	47.40	47.78	48.17	
SURF T (C)	27.8	27.5	27.4	27.3	27.3	27.1	27.1	
28								
27	84	75	72	63	69	67	54	
26	88	80	78	72	73	73	79	
25	94	87	84	79	82	81	106	
24	99	94	91	86	87	104	110	
23	104	102	94	88	89	107	117	
22	108	104	95	90	92	111	122	
21	110	109	98	92	94	113	126	
20	113	113	104	96	98	116	153	
19	116	119	109	107	111	139	156	
18	125	125	117	117	125	144	163	
17	156	133	134	120	131	147	171	
16	169	178	163	181	162	150	174	
15	172	182	169	195	186	177	187	
14	180	186	177	204	189	185	198	
13	191	196	201	228	197	195	214	
12	209	234	220	240	281	237	246	
11	238	271	260	285	304	294	273	
10	303	290	292	318	386	357	335	
9	358	348	353	389	402	390	367	
8	408	468	488	475	476	476	482	
7	629	632	546	523	547	517	579	
6	696	680	585	563	653	628	664	

ISOTHERM DEPTHS (M)

	R/V MALCOLM BALDRIGE				NB-STAC38-91			
XBT NO.	78	79	80	81	82	83	84	
YEAR	91	91	91	91	91	91	91	
MONTH	1	1	1	1	1	1	1	
DAY (GMT)	27	27	28	28	28	28	28	
TIME (GMT)	2059	2259	0051	0255	1453	1654	1855	
LAT (N)	5.73	6.14	6.55	6.95	8.10	8.42	8.73	
LON (W)	51.39	51.78	52.16	52.49	52.46	52.28	52.08	
SURF T (C)	26.9	27.2	27.1	27.1	27.0	27.0	27.0	
28								
27	39	65	82	88	89		106	
26	64	87	99	109	103	110	114	
25	74	97	120	112	118	123	121	
24	106	106	125	119	137	131	130	
23	123	129	129	129	149	154	138	
22	135	133	134	163	163	160	143	
21	140	142	142	142	176	168	148	
20	145	149	149	150	181	174	168	
19	151	158	154	186	194	177	177	
18	155	165	158	208	205	189	189	
17	157	167	167	212	218	198	198	
16	163	169	182	219	231	207	207	
15	175	175	189	225	240	219	219	
14	184	179	195	235	249	243	243	
13	193	188	199	249	263	260	260	
12	201	194	216	262	279	278	278	
11	225	218	232	294	301	305	305	
10	271	247	251	325	352	360	360	
9	320	292	313	365	426	398	398	
8	482	491	493	448	488	426	426	
7	570	585	595	539	540	517	517	
6	676	681	698	652	655	658	658	

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRICE

ALB-STAC539-91

XBT NO.	85	86	87
YEAR	91	91	91
MONTH	7	7	7
DAY (GMT)	5	5	5
TIME (GMT)	0400	0759	1157
LAT (N)	1.83	2.42	3.07
LOX (W)	39.66	39.15	38.68
SURF T (C)	27.6	27.8	27.3
28			
27	52	24	63
26	75	43	67
25	82	54	68
24	86	59	70
23	88	70	73
22	89	75	82
21	92	83	86
20	111	86	89
19	114	94	102
18	116	118	127
17	118	124	138
16	139	120	179
15	146	133	203
14	151	175	270
13	156	196	274
12	232	207	279
11	250	294	355
10	288	315	379
9	373	365	409
8	493	424	442
7	544	526	472
6	613	574	615

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ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS40-91

XBT NO.	1	2	3	4	5	6	7
YEAR	91	91	91	91	91	91	91
MONTH	9	9	9	9	9	9	9
DAY (GMT)	8	8	8	9	9	11	11
TIME (GMT)	1054	1356	2249	0053	2357	0002	2353
LAT (N)	0.16	0.09	0.98	1.45	2.88	5.47	7.38
LOX (W)	44.44	44.40	44.30	44.13	43.98	44.02	44.07
SURF T (C)	26.2	25.9	26.6	26.6	26.5	28.1	28.7
28						46	52
27						59	72
26	94	86	103	109	113	71	82
25	99	120	105	113	126	77	84
24	101	123	108	127	139	81	87
23	110	128	116	129	142	82	90
22	115	132	119	131	144	84	95
21	126	140	122	135	146	87	102
20	136	149	136	143	150	92	110
19	152	153	151	148	161	97	117
18	173	164	166	167	171	103	121
17	179		177	171	184	110	123
16	221		182	194	225	114	129
15	264		186	205	238	124	137
14	293		215	221	244	135	142
13	316		273	276	261	155	154
12	331		295	305	273	168	167
11	361		328	328	288	204	185
10	365		369	370	305	249	222
9	393		397		357	297	311
8	434				402	379	432
7							
6							

ISOTHERM DEPTHS (M)

R/V MALCOLM BALDRIGE

MB-STACS40-91

XBT NO.	8	9	10	11	12	13	14
YEAR	91	91	91	91	91	91	91
MONTH	9	9	9	9	9	9	9
DAY (GMT)	13	13	14	18	20	21	22
TIME (GMT)	1853	2201	2354	2355	0006	0007	0039
LAT (N)	4.91	4.88	5.36	15.82	20.22	24.56	26.48
LOX (W)	49.94	50.77	49.31	63.17	66.92	71.23	74.16
SURF T (C)	27.8	28.4	28.0	29.0	29.3	29.4	29.6
28		6	5	57	51	47	56
27	11	18	42	91	80	53	63
26	101	63	109	117	78	61	80
25	104	67	159	145	110	77	102
24	109	70	163	156	133	91	121
23	114	71	167	170	151	113	143
22	121	72	179	188	177	134	167
21	127	74	184	195	197	160	195
20	132	76	188	207	211	196	238
19	140	80	192	211	237	272	283
18	152		200	219	307	390	393
17	163		206	233	359		
16	170		212	268	414		
15	214		218	299			
14	223		229	337			
13	236		239	364			
12	258		263	386			
11	284		289	411			
10	311		315				
9	418		352				
8			386				
7							
6							