I.O.S.

CTD DATA
FROM THE NORTHEAST ATLANTIC OCEAN
40° - 48°N, 12° - 21°W
COLLECTED ON
RRS DISCOVERY CRUISE 132
IN FEBRUARY 1983

BY

R. T. POLLARD

REPORT NO. 192

1985

NATURAL ENVIRONMENT RESEARCH COUNCIL

INSTITUTE OF OCEANOGRAPHIC SCIENCES

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INSTITUTE OF OCEANOGRAPHIC SCIENCES

WORMLEY

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ABSTRACT

This report presents CTD data collected on RRS Discovery cruise 132 (27 January - 20 February, 1983) in an area northeast of the Azores bounded by 40.5°N, 48.5°N, 20.5°W and 12°W. 29 stations were occupied, mostly to 1000 or 1200 dbar. Calibration and data editing techniques are described in detail. The data are presented as potential temperature/salinity curves, profile plots of temperature, salinity, oxygen and density against pressure, and listings at standard levels of basic and derived values.

DATA COLLECTION

RRS Discovery Cruise 132 (Pollard et al. 1983) took place from 27 January to 20 February 1983, and had as some of its objectives

(1) To locate and survey possible upper ocean fronts in the northeast Atlantic Ocean.
(2) To examine the horizontal and vertical structure of the winter mixed layer over ten degrees of latitude.
(3) To examine spatial variations of pressure, temperature, salinity, and oxygen on those thermocline density surfaces which may outcrop and ventilate to the north or east.

Two Neil Brown Instrument Systems (N.B.I.S.) Conductivity-Temperature-Depth (CTD) profilers were used in support of these objectives. These were referred to as 'shallow' and 'deep' CTDs as they used 1500 and 6000 dbar pressure sensors respectively. The shallow CTD was only used in lowered mode on Station 10620 reported here. Following this calibration cast, it was transferred into the I.O.S. SeaSoar (Pollard et al, 1985) for the rest of the cruise. All further shiplowered CTD work was done with the deep CTD. The CTD casts (Table 1 and Fig. 1) fall into three groups.

- Casts 10621, 24, 25, 48 and 49 were primarily calibration casts, taken before or after SeaSoar runs and used to cross-calibrate the shallow CTD. This was necessary because bottle samples and thermometer readings cannot be taken during SeaSoar towing.
- Casts 10626-38 and 10650 comprise a north south section along $20^{\circ}W \pm 1^{\circ}$ from $47.5^{\circ}N$ to $40.5^{\circ}N$.
- Casts 10639-47 comprise an east-west section along $41.5\text{-}42^{\circ}N$ from $20^{\circ}W$ to $12^{\circ}W$.

Because the scientific objectives were restricted to the upper ocean, most CTD casts went no deeper than 1000 or 1200 dbar. While that saved time, it might with hindsight have been preferable to take all casts to at least 1500 dbar, or better 2000 dbar, in order to span the Mediterranean water across which there may be significant geostrophic shears. Late in the cruise, casts 10648 and 49 were taken to the bottom, giving valuable deep calibrations.

CALIBRATION

CTD data were logged in the first instance onto a PDP11/34 computer, as described by Collins et al. (1983). After sampling (CTDSAMP) and averaging to 1-second raw values (CTDAVE), the data were calibrated (CTDCAL) using approximate calibration constants (Table 2) and archived to magnetic tape. The values output by CTDCAL are subscripted CAL in Table 2. Every fifth calibrated value was listed so that final calibration constants could be determined as follows.

Down casts (presented in this report) were generally completed without stopping. All calibration samples were taken with a General Oceanics Rosette Sampler stopping typically at 200 m intervals during the upcasts. Some bottles carried reversing thermometers. The number of calibration values for salinity, temperature and oxygen on each cast are shown in Table 1. Pressure was generally checked with a single unprotected/protected thermometer pair at the deepest calibration depth.

CTD sampling has to be stopped while the multisampler is fired to avoid noise spikes in the data. The 5-second listing of calibrated values is scanned for the consequent time gaps at the calibration depths. The CTD values of pressure, temperature and salinity immediately prior to the time gap are taken as the values to be compared against bottle and thermometer calibration values. Usually they are very stable over tens of seconds prior to firing the multisampler. If they vary or drift significantly because the CTD was close to an interface or in a marked gradient, the calibration point can be flagged as suspect.

A slightly different procedure has to be adopted for oxygen, because the Beckman oxygen sensor requires a flow of water past it to avoid possible ion depletion in the vicinity of the membrane. Accordingly, the 5-second listing is scanned back to the point where the winch was stopped (apparent from the pressure values) and the oxygen value read from about that point.

For the shallow CTD, only one calibration cast (10620) was available. This was used to improve the calibration values (C1 to C6, Table 2) applied to

the CTD while in the SeaSoar. Final calibration of those values was done by comparison with T/S curves and oxygen profiles collected on deep CTD casts, and is described by Pollard et al (1985). Here we concentrate on the deep CTD calibrations. The changes made to the calibrated values (CAL) to give final corrected (CORR) values are shown in Table 2, and discussed individually below. The statistics of the CORRected values are given in Table 3.

Pressure

The additive constant C2 is determined from the deck offset, or surface value. It was altered from 12 dbar (C1*C2) to 5 dbar after cast 10621.

The default calibration for C1 (0.1 dbar/count, 6553 dbar full scale) was used throughout. If reversing thermometers were used as standard, the 26 sample values obtained would suggest that CTD pressures should have been corrected by -2.6±2.5 dbar (Table 3 and Fig. 2). No correction was made.

The shallow CTD had a deck offset of just over 1 dbar, and the default calibration (0.025 dbar/count, 1638 dbar full scale) appeared to be correct (Table 3).

Temperature

The laboratory calibration of the deep CTD (TCAL $^{\circ}C=0.035+0.0005005\ T_{RAW}$) was used throughout the cruise. The raw CTD values were speeded up with a 0.25 second time constant to match the conductivity time constant. The value used minimised hysteresis loops between down and up casts on T/S diagrams.

Analysis of 32 reversing thermometer calibrations suggested that the CTD was reading too low by 16.9±8.4 mK (Table 2, C7; Table 3 and Fig. 3). Both CTD and reversing themometer laboratory claibrations had been referred back to absolute standards, but it was thought at the time (Saunders, 1985) that the CTD calibrations might be different if the entire instrument could be immersed in the temperature bath, rather than just the sensor assembly. Accordingly, the CTD temperatures were corrected by adding 17 mK. (The same correction was, somewhat arbitrarily, made to the shallow CTD cast 10620, as three reversing thermometers had given offsets of 15, 20 and 8 mK).

Conductivity/Salinity

The conductivity ratio (C5, Table 2) for the first deep CTD cast (10621) was taken as the best value from the previous cruise (1.0003). Onboard analysis of the 6 rosette samples (with a Guildline bench salinometer) suggested an improved value of 1.0002, which was inadvertently entered as 1.002 for casts 10624, 25 and 26. An improved value of 1.00013 was then calculated, and used for the rest of the cruise, except that the value 1.002 was again inadvertently entered off an old listing for casts 10648 and 49.

Once CTDCAL has been run (using the 1980 equations of state), it is our policy not to recalculate salinity after correcting temperature and conductivity, but to correct salinity directly. Although neither pressure nor temperature corrections had been made to the conductivity ratio, there was no evidence that the error in salinity varied with pressure or temperature down to 1000 dbar and too few samples to establish a pressure variation below that (Fig. 4). The mean salinity offset for casts 10624, 25, 26, 48 and 49 (all with a conductivity ratio of 1.002) was 0.076 psu, the offset for cast 10621 was 0.008 psu, and for all remaining casts was zero (Table 2). Thus the errors in conductivity ratio were corrected by applying constant salinity offsets, after which Fig. 4 and Table 3 give a standard deviation of less than 0.003 psu over 129 samples (ignoring 5 obvious outliers).

A final calibration check is provided by comparing the θ/S curves for the two deep casts (10648 and 49) with the line found by Saunders (1984) to fit all deep casts north east of the Azores (Fig. 5). By comparison with Saunders' curve, our salinities are 0.002-0.004 psu too high.

For the shallow CTD, a final salinity correction of 0.035 psu was applied (Table 2) based on 7 samples (Table 3).

Oxygen

Calibration of oxygen is a persistent problem, which we cannot claim to have solved satifactorily. The problems arise from slow time constants in both the oxygen current and the effective membrane temperature. Saunders (1983) has made use of a temperature dependent time constant applied to the oxygen current (O_{RAW}, Table 2). We have tried an alternative approach of minimising

hysteresis loops by adjusting the temperature T_L (Table 2). Brown (1980) suggests the membrane temperature be approximated by $0.5*(T_o+T_{CTD})$ where T_{CTD} is the unlagged CTD temperature and T_o the oxygen cell temperature recorded in the data stream. We have found that T_o approximates a heavily lagged true temperature (T_{CTD}). It is therefore convenient to ignore T_o altogether (thereby avoiding the need to edit an extra variable) and use a lagged T_{CTD}. Trial and error suggests 5 minutes as the best time constant with which to lag T_{CTD}.

The exponential values for T and P (-0.036 and -0.000155, Table 2) are taken from Brown (1980).

The first cast with the deep CTD (10621) suggested that a multiplicative adjustment to C6, reducing it by 0.885 from 0.00165 to 0.00146, would be sufficient to correct the oxygen values to the calibrated samples. For the shallow CTD the corrected value was found to be 0.00148. The value 0.00146 should, therefore, have been applied to all casts with the deep CTD. At a late stage of the processing it was found that the value 0.00148 had inadvertently been applied to casts 10639-47. Since the corresponding error in oxygen is less than 0.07 ml/l the data have not been further corrected. From Table 3 it can be seen that the corrected oxygen values are unbiassed, with a standard deviation of less than 0.1 ml/l over 111 samples, and nearly all values lie within 0.2 ml/l of the true value (Fig. 6).

It must, however, be remembered that all calibrations were made on the upcasts, where it is the down casts which are plotted and listed in this report. Examples of down and up cast oxygen profiles are compared in Fig. 7. We note that

(1) Down and up casts differ by up to 0.4 ml/l

(2) Although the CTD was always soaked in the water for five minutes before starting the down cast, there is still a marked hysteresis in the top 400 dbar on cast 10621. This was the first cast of the cruise made with the deep CTD, and shows how long the Beckman oxygen sensor takes to acclimatize.

(3) Drift and jumps in the oxygen values can frequently be seen at each calibration level where hauling ceased.

(4) The largest persistent differences between down and up casts occur between 1000 and 2000 dbar on the five casts which went deeper than 1200 dbar (10621, 25, 39, 48 and 49).

In summary, the down casts may be absolutely in error by 0.3-0.4 ml/l. Relative errors between casts at similar depths should be smaller.

EDITING

Cruise 132, in February 1983, was the first since RRS Discovery's annual refit in October 1982. The midships winch had thus been unused for an entire winter, and a combination of winch, CTD and computer problems caused very noisy data, especially over certain depth ranges (Pollard et al., 1983). Despite much effort, the problems were not identified and cured until after the cruise, so all data have had to be extensively edited. Two primary causes of noise were eventually identified.

A battery pack had been installed inside the CTD to keep it powered up while the multisampler was fired at calibration points. Without this modification, the oxygen sensor can take five minutes or more to recover on each occasion. Unfortunately the batteries themselves appear to go open circuit internally when subjected to considerable vibration. This occurred particularly in the top 150 dbar, and at other depths when cable strum built up, which depended on the position of the cable laying guide across the main drum. Irrecoverably noisy data resulted which has had to be deleted, giving rise to the many gaps in the profiles, extending across up to 50 dbar.

A subtle computer fault caused the most significant bit of each eight bit byte to be occasionally dropped as it was read in. This affected the conductivity sensor in particular, causing errors of 128 in a single raw value. After averaging over one second, or about 16 samples, the error is reduced to an integer multiple of 8 raw conductivity units, equivalent to about 0.008 psu in salinity. The error could be spotted as quantised spikes in the salinity profiles, most obvious in the deep casts near the end of the cruise. Laborious editing was required to remove such small offsets.

With the exception of the last cast, 10650, all casts were further processed on board RRS Discovery. The tapes of data archived after CTDCAL were read back into a second PDP11/34, where they were recalibrated and edited with a suite of interactive programs (Pollard, 1983). Cast 10650 was processed at IOS.

A standard editing program was used first to replace values outside a reasonable range for each variable by the absent data value. An interactive despiking program was then applied in an attempt to remove the many small spikes in the data. The despiking algorithm is as follows. After being given an initial good value and a maximum offset S for a variable, the computer searches forward, accepting each value which is less than S different from the previously accepted value (X). When a jump greater than S is found, the computer looks up to 15 values ahead for a value in the range X±S. If it finds one, all intermediate values are replaced by absent data values A. If it does not, X and the following 15 values are printed on the users terminal with options

(a) to seek forwards until he finds the next acceptable value
(b) to check 15 values backwards in case X is itself at fault.

Case (b) occurs when the data slip gradually (in steps of less than S) to a bad value, then recover suddenly. While all the data in this report have been edited with the above algorithm, it tends to be laborious, especially if S is chosen too small, and does not remove all spikes. It is not in general recommended.

To remove the computer caused small quantised spikes, a number of the casts were listed in full and scanned, identifying individual data cycles to be deleted. This too was laborious.

Most recently, a median checking subroutine has been developed, which is listed in Table 4. In this algorithm, five non-absent-data values are extracted, two before and two after the value X currently being checked, and the median M of the five values extracted by a sort. If X differs from M by more than a preset amount S, it is replaced by the absent data value. As the procedure searches forwards through the data, the two values which follow X

have not themselves been checked when they are used to calculate M. Thus X may be accepted on a first pass, but rejected on a second or even third pass if large following spikes have by then been deleted.

It is not difficult to identify cases where this algorithm will fail, but with careful choice of S it was found to work very well for a final editing pass through the data presented in this report.

DISPLAY

θ/S curves

The program listed in Table 5 was used to produce the θ/S curves on pages 37 to 41. Groups of casts have been overplotted (refer to Fig. 1 for their positions). Note how the Mediterranean water influence increases to the east and south. Note too the variations in 'mode' water (11° to 13°C). At a given temperature, there is a range of 0.050 psu in salinity.

Profile plots

Plots of temperature, salinity, oxygen and density (sigma t) against pressure (pages 42 to 98) were created by the program listed in Table 6.

Listings

Station lists were created using the GEXEC program given in Table 7. The program creates 10 dbar averages from the one-second data (PAVRGE), calculates derived variables (PEOS83), linearly interpolates to standard levels (PFETCH), calculates further derived variables (PEOS83), modifies the absent data values to fit the listing formats (PCALIB) and finally lists the data (PLSTDC).

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REFERENCES

Brown, N. (1980) Oxygen sensor maintenance and operations manual, Neil Brown Instrument Systems, Inc.

Collins, D.S., R.T. Pollard and S. Pu (1983) Long SeaSoar CTD sections in the northeast Atlantic Ocean collected during RRS Discovery Cruise 116, Institute of Oceanographic Sciences, Report No. 148, 77 pp.

Pollard, R.T. (1983) PSTAR shipboard data processing programs, Marine Physics Group, Institute of Oceanographic Sciences, internal document, 92 pp.

Pollard, R.T. et al (1983) RRS Discovery Cruise 132: 27 January - 20 February 1983. Physical oceanography of the upper ocean in winter in the eastern Atlantic Ocean in the region 38-48°N, 10-21°W. Institute of Oceanographic Sciences, Cruise Report, No. 147, 42 pp.

Pollard, R.T., D. Holford and K. Sherrocks (1985) SeaSoar CTD sections in the northeast Atlantic Ocean collected during RRS Discovery Cruise 132, Institute of Oceanographic Sciences, Report, in preparation.

Saunders, P.M. (1983) CTD data from the N.E. Atlantic, 31°N-46°N, July 1982. Discovery Cruise 130. Institute of Oceanographic Sciences, Report No. 165, 93 pp.

Saunders, P.M. (1985) The accuracy of measurement of salinity, oxygen, temperature and pressure in the deep ocean, submitted to J. Phys. Oceanog.

TABLE 1

CTD Station List

Station No.	Day No.	Down Time (GMT)	Lat. N	Long W	Maximum pressure (dbar)	Calibration Levels Sal	Oxy	Temp
10620	29	2214	48 18.9	12 52.6	604	9	9	3
10621	30	1809	47 03.9	14 08.5	2011	8	9	3
10624	33	1226	45 46.9	15 58.9	1000	9	8	2
10625	35	1334	46 49.0	18 08.1	2016	9	9	2
10626	35	2115	47 30.8	18 59.2	1007	9	9	2
10627	36	0213	46 55.7	19 08.0	1005	4	0	1
10628	36	0657	46 19.9	19 15.2	1004	4	0	1
10629	36	1130	45 45.5	19 23.0	1201	4	4	1
10630	36	1552	45 26.8	19 24.3	1208	4	4	1
10631	36	1847	46 10.2	19 30.5	1210	3	3	1
10632	37	0010	44 36.7	19 38.9	1004	4	0	1
10633	37	0520	44 00.0	19 46.3	1210	4	0	1
10634	37	0943	43 24.8	19 53.5	1006	4	4	1
10635	37	1409	42 50.4	20 02.5	1017	4	0	1
10636	37	1837	42 15.6	20 09.1	1013	4	4	1
10637	37	2241	41 40.8	20 16.0	1005	4	4	1
10638	38	1845	40 29.7	20 29.6	1005	3	4	1
10639	39	1213	41 16.5	19 41.0	1514	4	4	1
10640	40	1907	41 21.2	18 51.5	1213	6	6	1
10641	41	0226	41 27.1	18 06.6	1200	6	0	1
10642	41	0931	41 31.2	17 18.7	1209	6	6	1
10643	41	1614	41 34.8	16 31.8	1208	6	6	1
10644	41	2255	41 39.9	15 43.6	1210	6	6	1
10645	42	2218	41 59.8	14 00.7	812	6	6	1
10646	43	1043	42 14.9	12 59.8	1209	5	5	1
10647	43	1557	42 14.5	12 20.1	1208	6	6	1
10648	44	2057	43 56.9	15 53.1	5081	7	7	3
10649	45	0253	44 17.7	16 08.0	4036	7	7	3
10650	47	0007	40 59.1	20 25.4	1233	4	4	1

TABLE 2

Cast(s)	Initial calibration constants: Pressure C1	Pressure C2	Temperature C3	Temperature 10^3*C4	Conductivity 10^3*C5	Oxygen 10^3*C6	Final corrections: Temp C7	Salinity C8	Oxygen C9
10620	0.025	45	0.	0.5	1.0	1.65	+0.017	+0.035	0.906
10621	0.1	120	0.034	0.5005	1.0003	1.65	+0.017	-0.008	0.885
10624-26	0.1	50	0.034	0.5005	1.002	1.46	+0.017	-0.076	1.0
10627-38	0.1	50	0.034	0.5005	1.00013	1.46	+0.017	0.0	1.0
10639-47	0.1	50	0.034	0.5005	1.00013	1.48	+0.017	0.0	1.0
10648-49	0.1	50	0.034	0.5005	1.002	1.46	+0.017	-0.076	1.0
10650	0.1	50	0.034	0.5005	1.00013	1.46	+0.017	0.0	1.0

$P_{CAL}(dbar) = C1*(P_{RAW}-C2)$

$P_{CORR} = P_{CAL}$

$T_{CAL}(^{o}C) = C3 + C4*T_{RAW}$

$T_{CORR} = T_{CAL} + C7$

$C_{CAL}\ (mmho/cm^3) = C5*C_{RAW}$

$S_{CORR}\ (psu) = S_{CAL} + C_8$

$O_{CAL}\ (ml/l) = C6*\ O_{RAW}*\ EXP(-0.036*T_L-0.000155\ P_{CAL})\ *\ O_{Saturated}\ (T_{CAL}, S_{CAL})$

where $\bar{T}_L$ is T_{CAL} lagged with a 300 second time constant.

$O_{CORR} = C9 \times O_{CAL}$

TABLE 3
Calibration statistics
(Calibration sample - CORRected CTD)

	Deep CTD P dbar	Deep CTD T mK	Deep CTD S ppm	Deep CTD O ml/l	Shallow CTD (10620) P dbar	Shallow CTD (10620) T mK	Shallow CTD (10620) S ppm	Shallow CTD (10620) O ml/l
no in sample	26	32	129	111	3	3	7	8
mean	-2.6	-0.1	0.3	-0.002	0.0	-2.7	-0.1	-0.029
standard deviation	2.5	8.4	2.8	0.087	1.0	6.0	2.7	0.192

TABLE 4(i)

Median Despiking Routine

```
G-EXEC PC73,900,6
SPU,RTP,RTP PUSRIO SKELETON
EXEC GSHFIL,,WB
11
MAKE SUMM02PU
MAKE HIST02PU
EXEC PLSTDC
0
CYCS,1,100
VARS,-
FIND WPRDI10620BW
EXEC PUSRIO
000
VARS,-
CYCS,,
OVARS,-
FCON,0.,1.,0.01,0.01,0.01,0.05,0.01
SUBS
$$     SELECT (RTP/SOURCE/PMDIAN:S)
FIND WPRDI10620BW
MAKE WPRDI10620BW
EXEC PLSTDC
0
CYCS,1,100
VARS,-
FIND WPRDI10620BW
EXEC GSHFIL
02
MAKE HIST02PU
STOP
```

TABLE 4(ii)

Median Despiking Routine

```
      SUBROUTINE USERIO (INDISK,IODISK,INPOS,INVARS,IOFLDS,NSTART,
     &NSTOP,ICON,NIC,FCON,NFC,BUFA,BUFB,SUMMIN,SUMMIO,ABSIN,ABSIO,
     &INRECS,IORECS,INRECL,IORECL,NUMWRD,INFLDS,RETREC)
      DIMENSION INPOS(INVARS),ICON(19),FCON(19),BUFA(NUMWRD),
     &BUFB(NUMWRD),SUMMIN(NUMWRD),SUMMIO(NUMWRD),ABSIN(NUMWRD),
     &ABSIO(NUMWRD),RETREC(NUMWRD)
      COMMON/IO/IOCNSL,IOCSLE,IWKDSK,INTAPE,INCARD,IPRINT,IPUNCH,
     &INBIN,NOBUG,INFLIX,MNINDX,TEMPFL,IOTAPE,NHOLD,NDATST
C
      REAL A(5),B(5)
      IORECS=INRECS
C.....LOOP FOR ALL VARIABLES
      DO 300 NNN=1,INVARS
C.....FCON CONTAIN THE JUMP VALUES FOR THE INVARS
C.....INPUT VARS. IF =0., NO CHECK TO BE DONE
      DIFF=FCON(NNN)
      IF(DIFF.EQ.0.)GOTO 300
C.....COUNTER FOR NO. OF ERRORS
      NSPIKE=0
      NVAR=INPOS(NNN)
C.....NUM IS NO. OF DATA CYCLES IN BUFA
      NUM=NUMWRD
C.....ISTART IS DATA CYCLE VALUE OF START OF BUFFER A
      ISTART=NSTART
C
C.....POINTERS TO CURRENT DATA CYCLES & NEXT TWO
C.....ARE NOW, NEXT, LAST
C.....LBUF IS POSITION OF LAST+1
C.....A(5) IS ARRAY OF USORTED VARIABLES
C.....B(5) ARE SORTED VARIABLES
C.....OUTPUT FILE=INPUT FILE
      IF (IODISK.NE.INDISK)STOP
     &'OUTPUT FILE MUST EQUAL INPUT'
C.....WRITE FIRST 5 VALUES OUT FOR CHECKING
      WRITE(IPRINT,500)NVAR
 500  FORMAT(/' FIRST 5 VALUES FOR VARIABLE ',I3,' ARE:'/
     &'   NCYC    VALUE')
C.....ENTER DATA
      CALL INDATA(INDISK,NVAR,ISTART,NUM,BUFA,
     &RETREC,NDUM,INFLDS,INRECS,INRECL)
C.....FIND 5 VALUES
      JJ=0
      DO 20 J=1,NUM
      IF(BUFA(J).EQ.ABSIN(NVAR)) GO TO 19
      JJ=JJ+1
      A(JJ)=BUFA(J)
      NN=ISTART+J-1
      IF(JJ.EQ.3)NOW=NN
      IF(JJ.EQ.4)NEXT=NN
      IF(JJ.EQ.5)LAST=NN
```

```
      IF(JJ.EQ.5)LBUF=J+1
C.....WRITE DATA CYCLE TO USER
      WRITE(IPRINT,501)NN,A(JJ)
 501  FORMAT(1X,I6,F10.3)
      IF(JJ.EQ.5)GO TO 155
  19  CONTINUE
  20  CONTINUE
      STOP'CAN NOT FIND 5 GOOD VALUES IN FIRST BUFFER'
C
C.....SEARCH FOR NEXT NON ABSENT VALUE
  80  IF(LBUF.GT.NUM)GO TO 110
      DO 100 J=LBUF,NUM
      IF(BUFA(J).NE.ABSIN(NVAR))GO TO 150
 100  CONTINUE
C.....IF VALUE NOT IN CURRENT BUFFER GET MORE DATA
 110  ISTART=ISTART+NUM
      LBUF=1
C.....TEST FOR END OF DATA
      IF(ISTART.GT.NSTOP)GO TO 200
      IF((ISTART+NUM-1).GT.NSTOP)NUM=NSTOP-ISTART+1
      CALL INDATA(INDISK,NVAR,ISTART,NUM,BUFA,
     &RETREC,NDUM,INFLDS,INRECS,INRECL)
      GO TO 80
C
C.....NEXT GOOD VALUE FOUND
 150  LAST=ISTART+J-1
      LBUF=J+1
      A(5)=BUFA(J)
C.....SORT A INTO B
 155  CALL SORT(5,A,B)
C.....COMPARE A(3),(CURRENT VALUE) & B(3),(MEDIAN)
      C=(ABS(B(3)-A(3)))
      IF (C.GT.DIFF)GO TO 180
C.....CURRENT VALUE OK SO SLIDE ARRAY
      DO 160 K=1,4
      A(K)=A(K+1)
 160  CONTINUE
 170  NOW=NEXT
      NEXT=LAST
      GO TO 80
C
C.....CURRENT VALUE NOT OK
C.....OVER WRITE WITH ABSENT DATA VALUE
 180  NSPIKE=NSPIKE+1
      CALL OTDATA(IODISK,NVAR,NOW,1,ABSIN(NVAR),
     &RETREC,NDUM,IOFLDS,IORECS,IORECL)
C.....SLIDE SECOND HALF OF ARRAY
      A(3)=A(4)
      A(4)=A(5)
C.....CONTINUE AS FOR GOOD VALUE
      GO TO 170
C.....END OF DATA REACHED, LIST LAST THREE
 200  WRITE(IPRINT,502)
 502  FORMAT(' LAST THREE VALUES ARE')
```

```
      WRITE(IPRINT,503)A(2)
 503  FORMAT(7X,F10.3)
      WRITE(IPRINT,501)NOW,A(3)
      WRITE(IPRINT,501)NEXT,A(4)
      WRITE(IPRINT,504)NSPIKE,NVAR
 504  FORMAT(40X,I5,' VALUES REPLACED BY ABSENT DATA ',
     &'FOR VARIABLE ',I3)
 300  CONTINUE
      RETURN
      END
      SUBROUTINE SORT(N,A,B)
      REAL A(N),B(N)
      DO 1 I=1,N
      B(I)=A(I)
 1    CONTINUE
      DO 30 J=2,N
      NEND=N-J+1
      NSWOP=0
      DO 20 I=1,NEND
      IF(B(I).LE.B(I+1))GOTO 20
C.....WRONG ORDER, SWOP
      NSWOP=NSWOP+1
      C=B(I)
      B(I)=B(I+1)
      B(I+1)=C
 20   CONTINUE
      IF(NSWOP.EQ.0)RETURN
 30   CONTINUE
      RETURN
      END
```

TABLE 5

Production of θ/S Curves

```
*#FRN *=(ULIB)LIBRARY/GRAFIX,R;LIBRARY/GESTALT,R;LIBRARY/GEN,R;
*#PEXEC/2/QLIB,R;#OPS/WORMLEY/FLATBED/FJR1"15"
      DIMENSION FILE(10),XSAL(320),YPOT(320)
C..SET UP GRAPH
      CALL GRAPLT
C..ATTACH FILES
      DO 10 JJ=1,6
      IF(JJ.EQ.1) CALL FILBEG
     &(20,'RTP/22/WAV10620                              ',1,320,1,2,IERR)
      IF(JJ.EQ.2) CALL FILBEG
     &(20,'RTP/22/WAV10621                              ',1,320,1,2,IERR)
      IF(JJ.EQ.3)CALL FILBEG
     &(20,'RTP/22/WAV10624                              ',1,320,1,2,IERR)
      IF(JJ.EQ.4)CALL FILBEG
     &(20,'RTP/22/WAV10625                              ',1,320,1,2,IERR)
      IF(JJ.EQ.5)CALL FILBEG
     &(20,'RTP/22/WAV10626                              ',1,320,1,2,IERR)
      IF(JJ.EQ.6)CALL FILBEG
     &(20,'RTP/22/WAV10627                              ',1,320,1,2,IERR)
      PRINT,IERR
C..READ DATA DEFINITION
      CALL QINITI(20)
      CALL QREADD
      CALL QLSTD(0)
      CALL QINFIL(FILE,NOFLDS,NORECS)
      L=JJ
      CALL MKLENS(1.0)
      CALL MKSETS(2)
      CALL MARSEL(L)
      CALL POIBEG
      NSTART=1
      NSTOP=NORECS
      NLEN=320
      DO 20 L=NSTART,NSTOP,320
C..READ IN DATA
      J=L
      IF((J+NLEN-1).GT.NSTOP)NLEN=NSTOP-J+1
      CALL QINDAT(5,J,NLEN,XSAL)
      CALL QINDAT(4,J,NLEN,YPOT)
C..PLOT DATA
      DO 30 N=1,NLEN,2
      IF(YPOT(N).EQ.YPOT(N-1))GOTO 30
      IF(YPOT(N).GT.YPOT(N-1))GOTO 30
      CALL POILA2(XSAL(N),YPOT(N))
   30 CONTINUE
   20 CONTINUE
      CALL POIEND
C..KEY LABEL
      IF(JJ.EQ.1)CALL LABEM('10620',5,1)
      IF(JJ.EQ.2)CALL LABEM('10621',5,1)
```

```
      IF(JJ.EQ.3)CALL LABEM('10624',5,1)
      IF(JJ.EQ.4)CALL LABEM('10625',5,1)
      IF(JJ.EQ.5)CALL LABEM('10626',5,1)
      IF(JJ.EQ.6)CALL LABEM('10627',5,1)
   10 CONTINUE
      CALL GRAEND
      CALL GCLOSE
      STOP
      END
C
      SUBROUTINE GRAPLT
C..TO PLOT CTD DATA
      CALL SPOOLW(15,'W',NDEV)
C     CALL HP2648(6,5,NDEV)
      CALL SWTEXT
C..DEFINE PAGE SIZE
      CALL FMTANN(0,4,0)
      CALL FMTMRG(18.,15.,25.,10.)
      CALL FMTLAB(6)
      CALL FMTA(4,1)
      CALL DEFLA2(34.9,36.5,2.,15.)
C..DRAW GRID
      CALL CHLENS(2.5)
      CALL GRISEL(3,1,1)
      CALL AXILB2(0.2,2,1)
      CALL GRISEL(3,3,1)
      CALL AXILB2(2.0,2,2)
C..LABEL AXES
      CALL CHLENS(3.0)
      CALL LABEL(10,'SALINITY',8)
      CALL LABEL(11,'PSU',3)
      CALL LABEL(20,'POTENTIAL TEMPERATURE',21)
      CALL LABEL(21,2H'C,2)
C..TITLE
      CALL LABEL(1,'POTENTIAL TEMPERATURE/SALINITY CURVES',37)
      CALL LABEL(2,'FOR DISCOVERY CRUISE 132',24)
C..TURN ON LABELS
      DO 40 MM=1,9
      M=MM
      CALL LABSWI(M,1)
   40 CONTINUE
      CALL CHLENS(2.5)
      RETURN
      END
```

TABLE 6

Production of Profile Plots

```
*#FRN*=(ULIB,NWARN)LIBRARY/GRAFOLD,R;LIBRARY/SPI,R;PEXEC/2/QLIB,R;
*##OPS/WORMLEY/FLATBED/TCC40"15"
      DIMENSION X(5100),Y(5100),FILE(20)
      SIZE=2.2
      SIZE1=4.0
      SIZE2=2.8
C.....  This Fortran program, makes full use of the Honeywell plotting
C.....libraries; Grafix & Spi.
C.....Along with the 'qlib' library used to investigate G-exec
C.....data files.  All these routines are called in the first line
c.....of the Coding.
C.....    The aim of the program is to produce a plot for the 'down'
C.....profile only, for pressure (y-axis) against temperature, salinity
C..... & oxygen (x-axis) all on the same graph, from a CTD station
c.....not exceeding 2000m depth.
      CALL SPI
C
C.....Attach data file.
C
      CALL ATTACH(11,'RTP/22/WDI10640;',1,1,ISTAT, )
      CALL QINITI(11)
      CALL QREADD
      CALL QLSTD(0)
      CALL QINFIL(FILE,NOFLDS,NORECS)
C
C.....DRAW GRID
C
      CALL PICCLE
      CALL SHIFT2(45.,45.)
      CALL GRAFIX(120.,200.,0.)
      CALL DEFLA2(3.,15.,2000.,0.)
      CALL GRISEL(3,0,1)
C
C.....Labelling the graph with the filename.
c
      CALL MOVTO2(43.5,214.)
      CALL CHASEL(SIZE1)
      CALL LABEL(0,FILE,8)
C
C.....Routine to annotate the x-axis when plotting
C.....temperature against pressure (y-axis).
C
      CALL CHASEL(SIZE)
      CALL TL2BEG(1)
      DO 10 I=1,13
      NTEC =1
      IF(MOD(I,2).EQ.0)NTEC=0
      CALL TICLA2(FLOAT(2+I),NTEC)
 10   CONTINUE
      CALL TL2END
```

```
C
C.....Annotating and labelling the y-axis.
C
      CALL AXILB2(200.,2,2)
      CALL MOVTO2(-27.,180.)
      CALL TEXT4('PRES',4,SIZE,90.,7)
C
C.....Laballing temperature scale for x-axis.
C
      CALL MOVTO2(-39.,-7.0)
      CALL TEXT4('TEMP  (DEG.C)',13,SIZE,0.,1)
      CALL MOVTO2(-5.,-20.)
C
C.....Routine to annotate the x-axis when plotting
C.....salinity against pressure (y-axis).
C..... -In this case you have to define where the figures
C.....are to be put in the annotation. (As there is no
C.....subroutine to annotate multiple variables on on axis.
C
      CALL NIBSEL(1,0)
      CALL MOVTO2(-6.,-12.5)
      DO 15 N1=1,7
        CALL FNUMB(35.+N1*0.2,4,1,SIZE,0.,1,IERR)
        CALL MOVTO2(16.+(N1-1)*20,-12.5)
 15   CONTINUE
C
C.....Labelling the salinity scale for the x-axis.
C
      CALL MOVTO2(-39.,-12.5)
      CALL TEXT4('SALINITY (PSU)',14,SIZE,0.,1)
C
C.....Routine to annotate x-axis when plotting
C.....oxygen against pressure (y-axis).
C..... The method of annotation is the same as
C.....that for salinity.
C
      CALL NIBSEL(1,0)
      CALL MOVTO2(-3.5,-24.5)
      DO 14 N2=1,7
        CALL FNUMB(1.0+N2,3,1,SIZE,0.,1,IERR)
        CALL MOVTO2(17.5+(N2-1)*20,-24.5)
 14   CONTINUE
C
C.....Labelling the oxygen scale for the x-axis.
C
      CALL MOVTO2(-39.,-24.5)
      CALL TEXT4('OXYGEN (ML/L)',13,SIZE,0.,1)
      CALL NIBSEL(1,0)
      CALL MOVTO2(-6.,-18.5)
      DO 13 N3=1,7
        CALL FNUMB(26.5+N3*0.2,4,1,SIZE,0.,1,IERR)
        CALL MOVTO2(16.+(N3-1)*20.,-18.5)
 13   CONTINUE
      CALL MOVTO2(-39.,-18.5)
```

```
      CALL TEXT4('SIGMA.T.(CGS)',13,SIZE,0.,1)
C
C.....Routine to annotate details about cruise 132
C
      CALL MOVTO2(-18.,-34.)
      CALL TEXT4('DISCOVERY 132',13,SIZE,0.,1)
      CALL MOVBY2(5.,0.)
      CALL LABSIZ(SIZE)
      CALL LABEL(0,FILE,14)
      CALL MOVBY2(5.,0.)
C
      CALL TEXT4('1983/40/1907  41 21.2N  18 51.5W',32,SIZE,0.,1)
C
      CALL MARSEL(0)
      CALL LINSEL(1)
      NORECS=1200
      CALL QINDAT(2,1,NORECS,Y)
      DO 30 IVAR=3,11
         IF(IVAR.NE.3.AND.IVAR.NE.5.AND.IVAR.NE.7.AND.IVAR.NE.6)GO TO 30
         PRINT ,IVAR
         CALL NIBSEL(1,2)
C
C........Change the scale of the x-axis for each variable
C
         IF(IVAR.EQ.5)CALL DEFLA1(35.2,36.4,1)
         IF(IVAR.EQ.7)CALL DEFLA1(26.7,27.9,1)
         IF(IVAR.EQ.6)CALL DEFLA1(2.,8.,1)
         J=IVAR
         CALL QINDAT(J,1,NORECS,X)
C
C........Routine to place initials at the top of graph
C........for the four variable plots.
C
         IF (IVAR.EQ.3) XPEN=((X(10)-3.)/(15.-3.))*120.
         IF (IVAR.EQ.5) XPEN=((X(10)-35.2)/(36.4-35.2))*120.
         IF (IVAR.EQ.7) XPEN=((X(10)-26.7)/(27.9-26.7))*120.
         IF (IVAR.EQ.6) XPEN=((X(10)-2.)/(8.-2.))*120.
         CALL MOVTO2(XPEN-2.,202.)
         IF (IVAR.EQ.3) CALL TEXT4('T',1,SIZE2,0.,1)
         IF (IVAR.EQ.5) CALL TEXT4('S',1,SIZE2,0.,1)
         IF (IVAR.EQ.7) CALL TEXT4('D',1,SIZE2,0.,1)
         IF (IVAR.EQ.6) CALL TEXT4('O',1,SIZE2,0.,1)
      CALL POIBEG
         DO 20 N=1,NORECS
C
C..........Routine to lift pen if absent data values
C..........or to lift pen at end of each variable plot.
C
 16          IF(N.EQ.NORECS)GO TO 17
             IF(X(N).GE.0.0.AND.Y(N).GE.0.0)GOTO 18
 17          CALL POIEND
             CALL POIBEG
             GO TO 20
C
```

```
C.....If data is too small, wrap around occurs so plot is not lost
C.....Subroutine POILA2 plots coordinates (X(N),Y(N)).
C
 18       IF(IVAR.NE.5)GOTO19
          IF (X(N).LT.35.2) X(N)=X(N)+1.2
C
C.....Routine to skip plot subroutine if points are out of range
C.....    of the graph scales'
C
 19       IF ((Y(N).GT.2000.).OR.(Y(N).LT.0.)) GOTO20
            CALL POILA2(X(N),Y(N))
 20     CONTINUE
      CALL POIEND
 30  CONTINUE
     CALL DETACH(11,ISTAT, )
     CALL DEVEND
      STOP
      END
```

TABLE 7

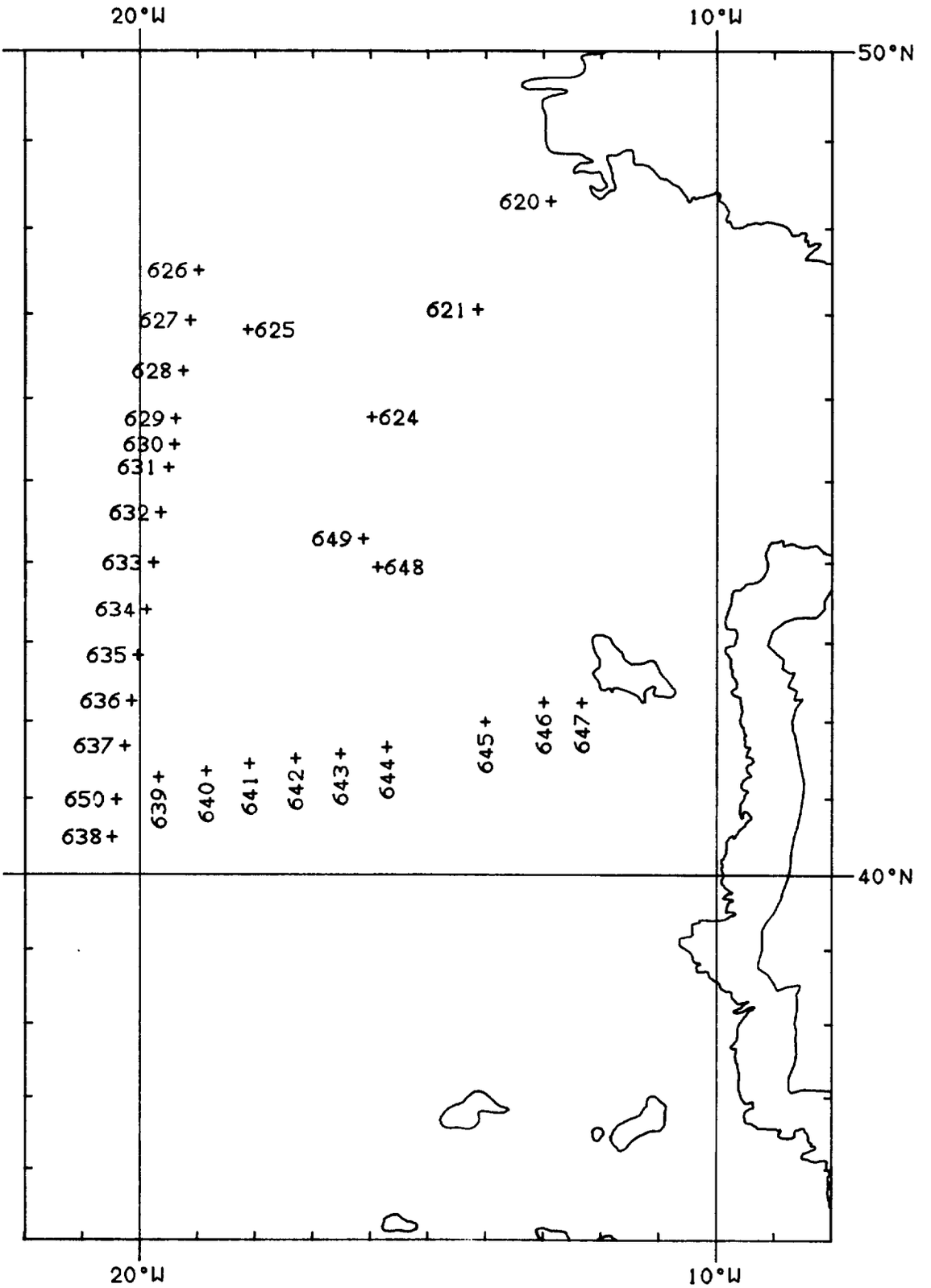
Production of Listings

```
G-EXEC PC73,900,6                                                    1
SPU,TCC,RTP CREATING LIST FILE FOR DATA REPORT
MESS THIS JOB NEEDS PACK IOS22 (TCC)
EXEC GSHFIL,,WB
11
MAKE SUMM02PU
MAKE HIST02PU
EXEC PCOPYA
0
VARS,1,2,3,5,6,4,7,2,2,2,2
COPY,,
FIND WPRDI10645BW
MAKE PHYSFILE,,,11,6000
EXEC PINTRP
0
LINE,1,2
COPY,3,4,5,6,7,2,2,2,2
FIND PHYSFILE
MAKE PHYSFILE
EXEC PAVRGE
0
SCAN,2,2.5,5
VARS,2,3,4,5,6,7,2,2,2,2,2
FIND PHYSFILE
MAKE PHYSFILE
EXEC PEOS83
0
CYCS,,
POSI,41,59.8,14,00.7
COPY
VARS,1,2,3,4,5,6
SIGP,1000
VARS,P,1,T,2,S,3
SIGP,2000
VARS,P,1,T,2,S,3
DYNHT,0.0
VARS,P,1,T,2,S,3
SNDV
VARS,P,1,T,2,S,3
DEPTH
VARS,P,1
FIND PHYSFILE
MAKE PHYSFILE
EXEC PFETCH
000001
CYCS,,
VARS,1,-,11,11,11
SEARCH,PRES
LEVS,10,20,40,60,80,100,120,140,160,180,200
LEVS,220,240,260,280,300,320,340,360,380,400
```

```
LEVS,450,500,550,600,700,800,900,1000,1100,1200,1300,1400
LEVS,1500,1600,1700,1800,1900,2000,2200,2400,2600,2800
LEVS,3000,3500,4000,4500,5000,5500
FIND PHYSFILE
MAKE PFETCH5
EXEC PEOS83
0
CYCS,,
COPY
VARS,1,-,11
SVAN
VARS,P,1,T,2,S,3
BVFR
VARS,P,1,T,2,S,3
FIND PFETCH5
MAKE PFETCH5
EXEC PCALIB
0
COPY,1,PRES
COPY,2,TEMP,,-9.999
COPY,3,SALIN,,-9.999
COPY,4,OXYGEN,,-9.99
COPY,5,POTEMP,,-9.999
COPY,6,SIGMAT,,-9.999
COPY,7,SIG1000,,-9.999
COPY,8,SIG2000,,-9.999
COPY,9,DYNHT,,-9.999
COPY,10,SNDVEL,,-999.9
COPY,11,DEPTH,,-999
COPY,12,SVANOM,,-9.999
COPY,13,BVFR,,-9.999
FIND PFETCH5
MAKE PFETCH5
EXEC PLSTDC
00000000000101
(1H1//30X,'DISCOVERY 132 STATION 10645'//'     P-DB',
'    T-DEGC    SAL-PSU  DO-ML/L  POTEMP   SIGMAT  SIG1000',
'  SIG2000   DYNHT-M SNDV-M/S DEPTH-M  SVANOM  BVFR-CY/HR'///)
(1X,F8.0,2F9.3,F8.2,1X,F8.3,4F9.3,F9.1,F7.0,E12.4,F9.3)


CYCS,,
VARS,-
FIND PFETCH5
EXEC GSHFIL
02
MAKE HIST02PU
STOP
```

FIG.1 CTD POSITIONS ON DISCOVERY CRUISE 132



MERCATOR PROJECTION
WITH COASTLINE AND
1000 FATHOM DEPTH CONTOUR

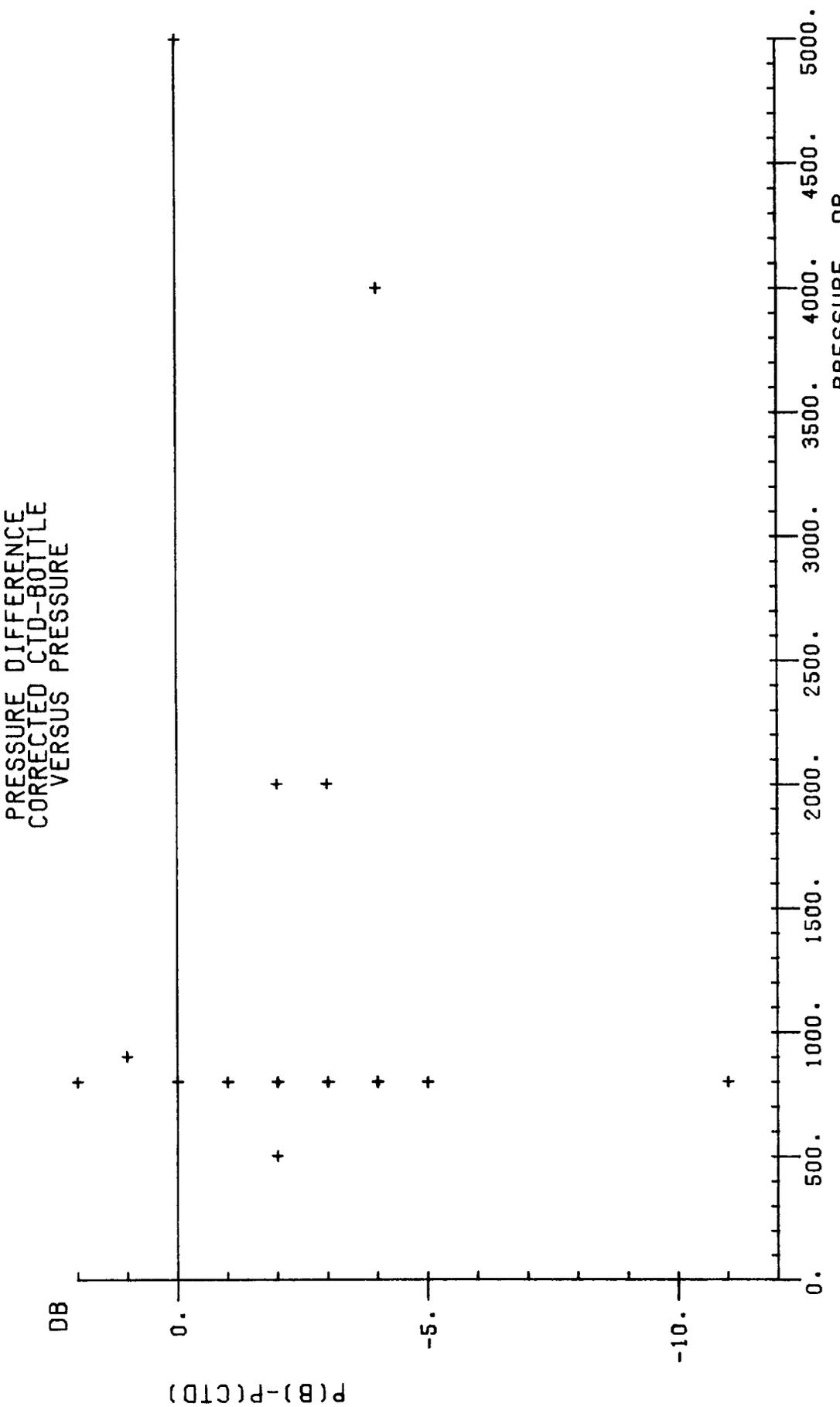


FIG.2 PRESSURE CALIBRATION OF DEEP CTD

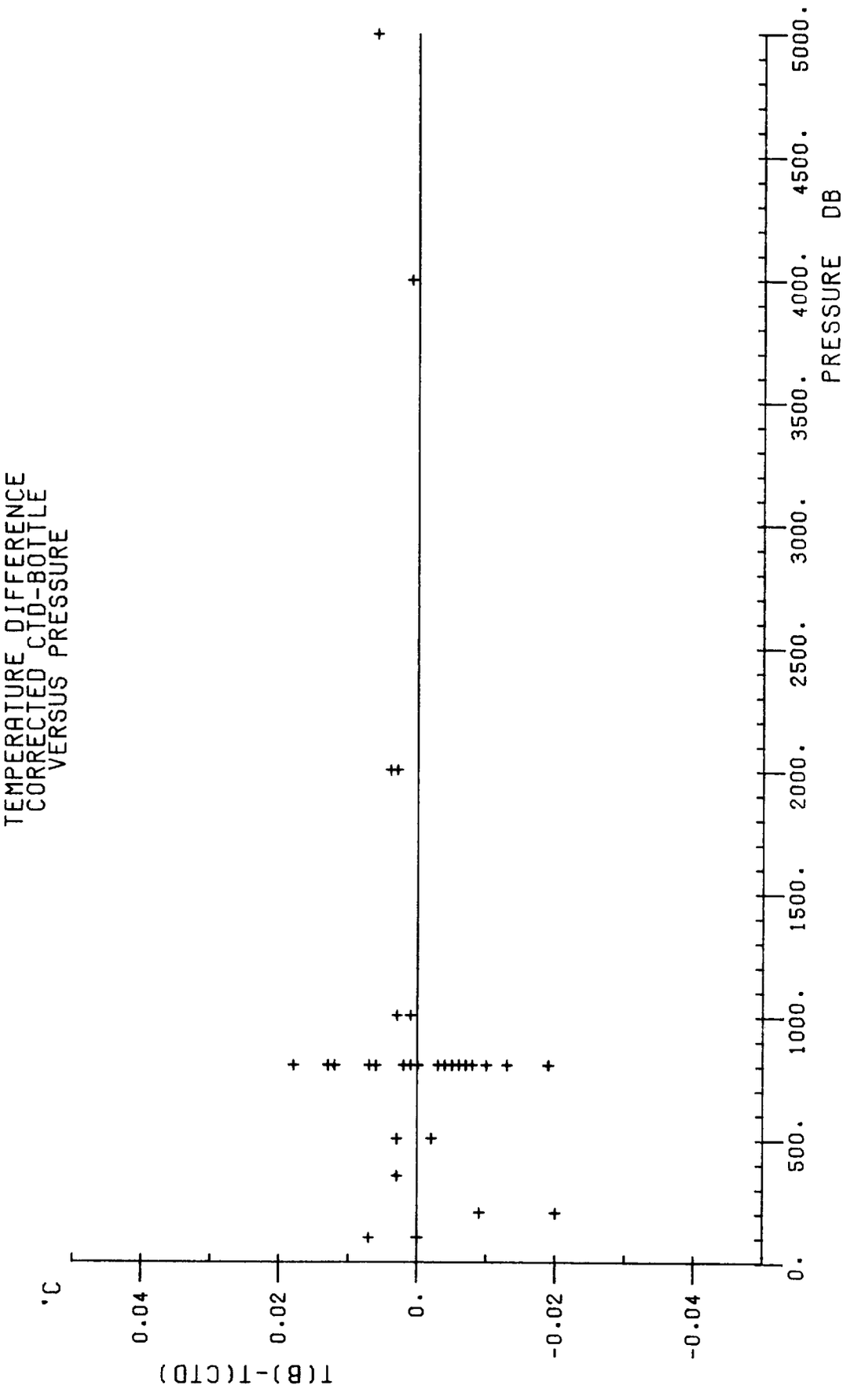


FIG.3 TEMPERATURE CALIBRATION OF DEEP CTD

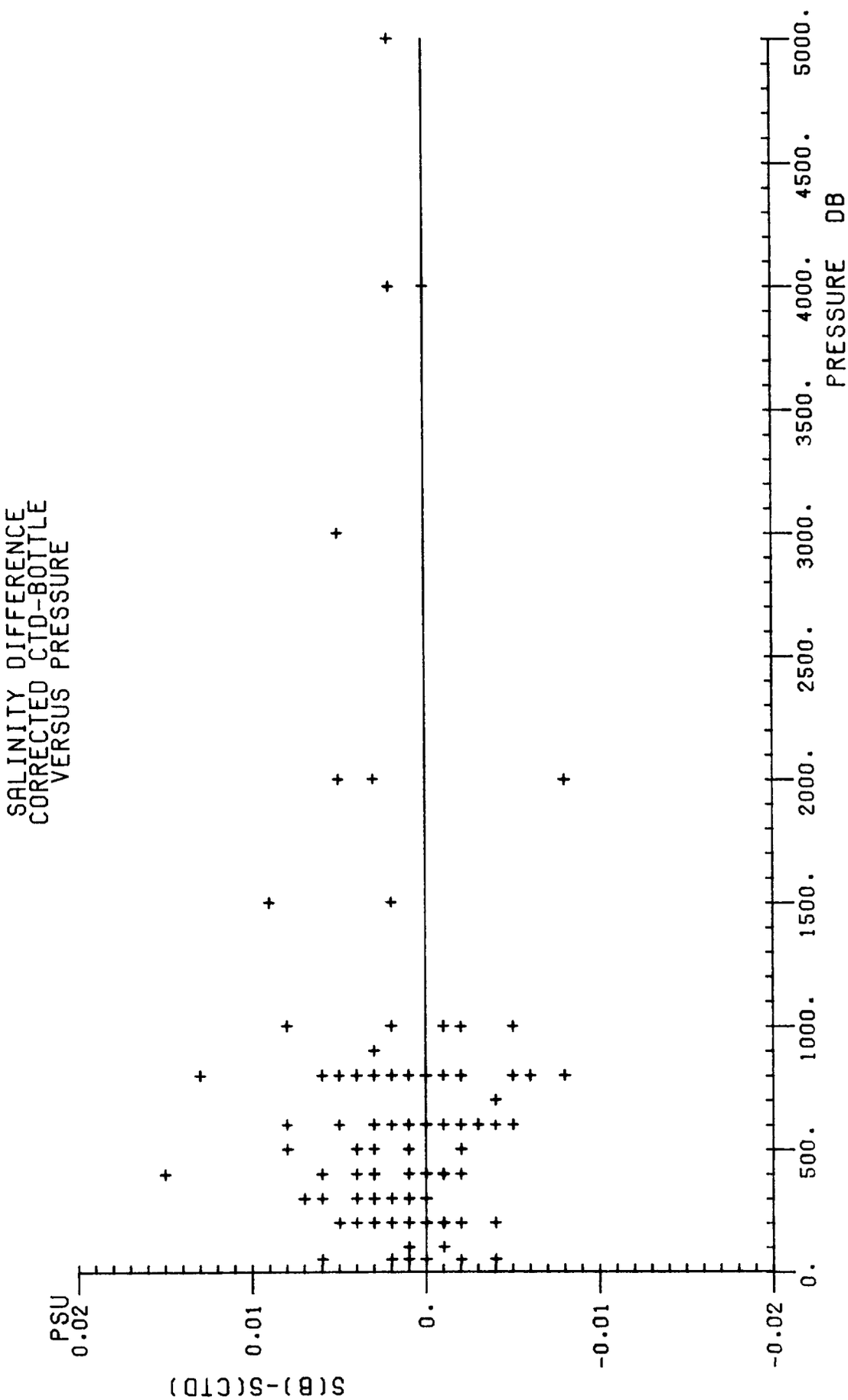


FIG.4 SALINITY CALIBRATION OF DEEP CTD

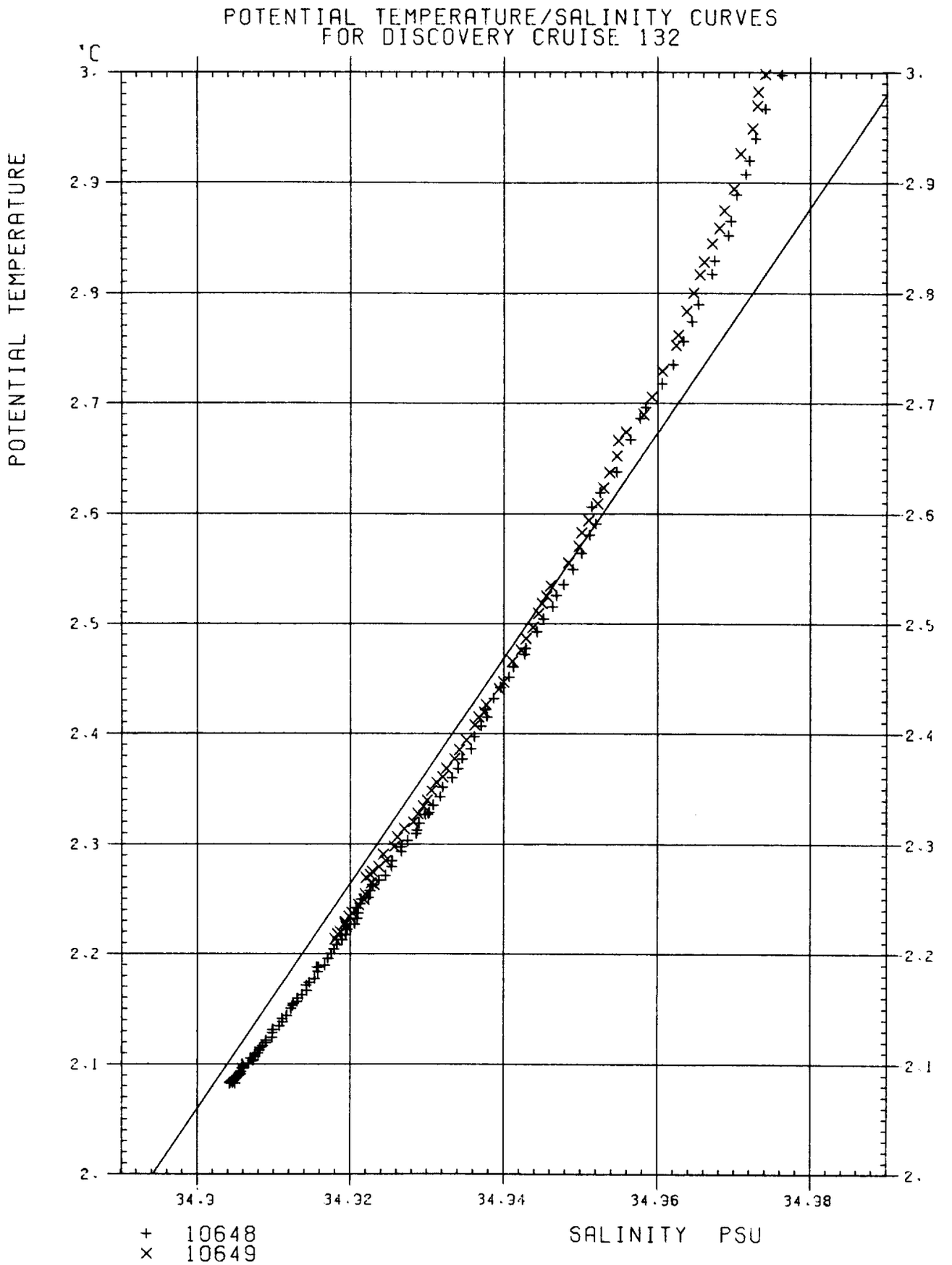


Fig. 5. Deep θ/S diagram

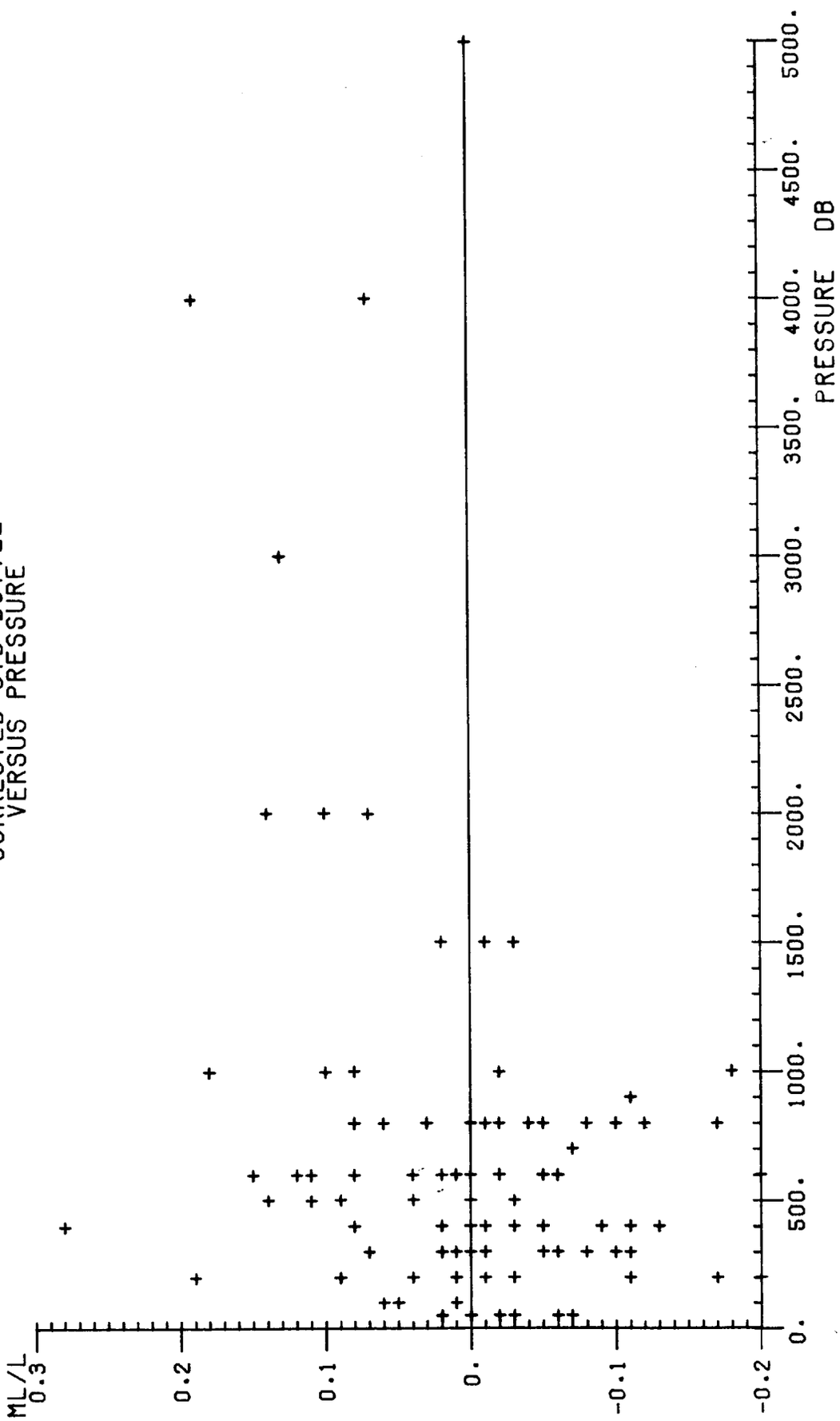


FIG.6 OXYGEN CALIBRATION OF DEEP CTD

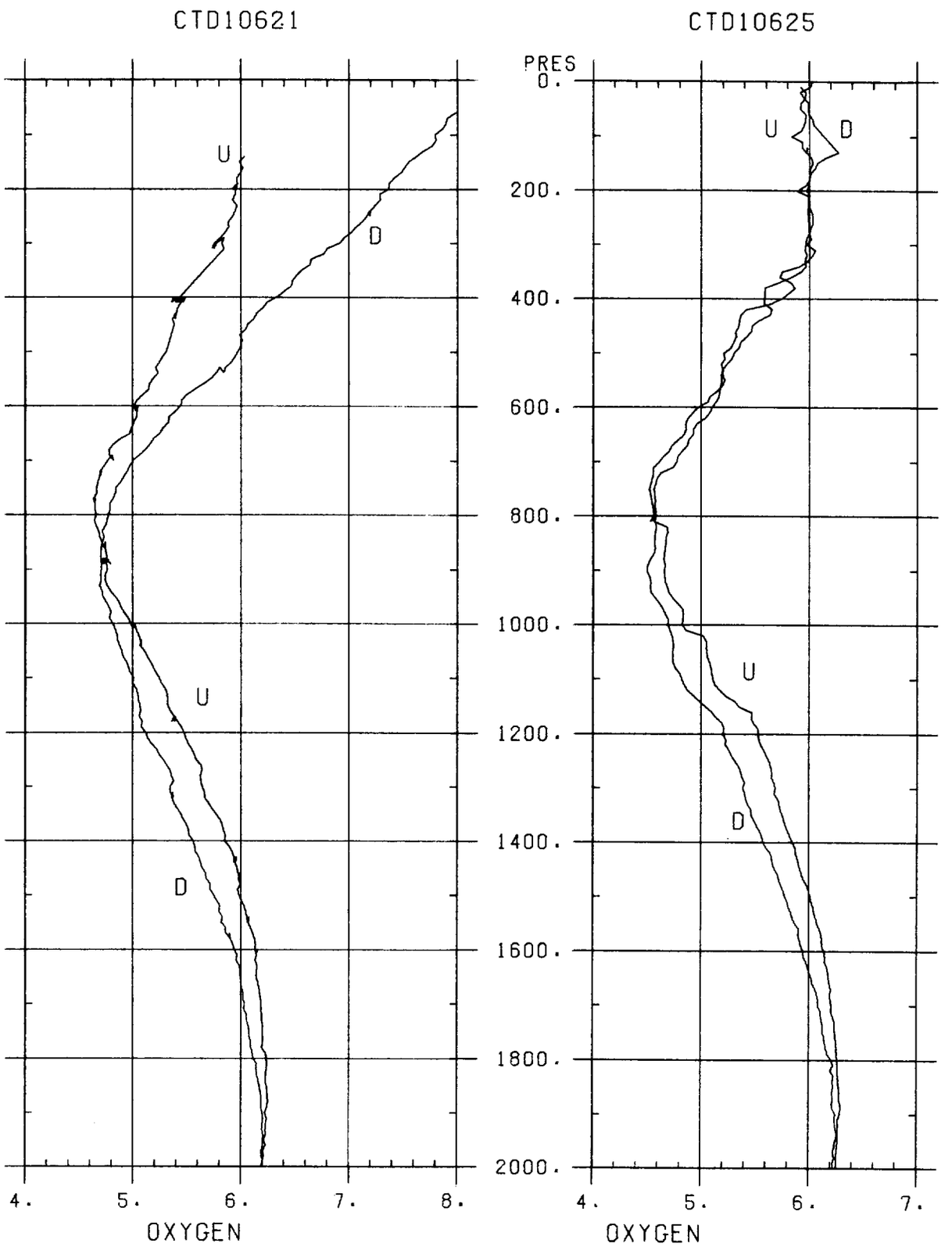


Fig. 7(a). Down and up cast oxygen profiles

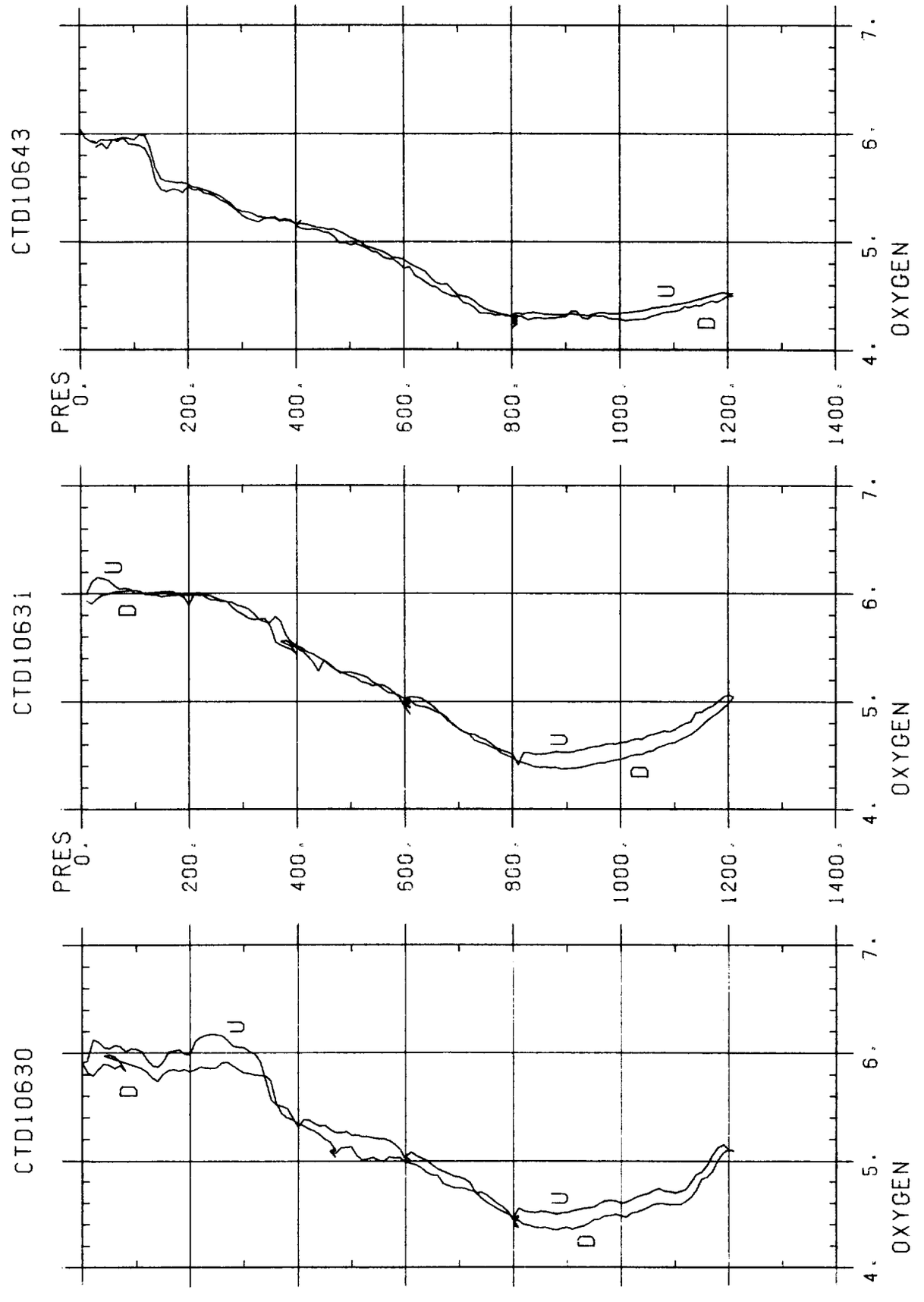
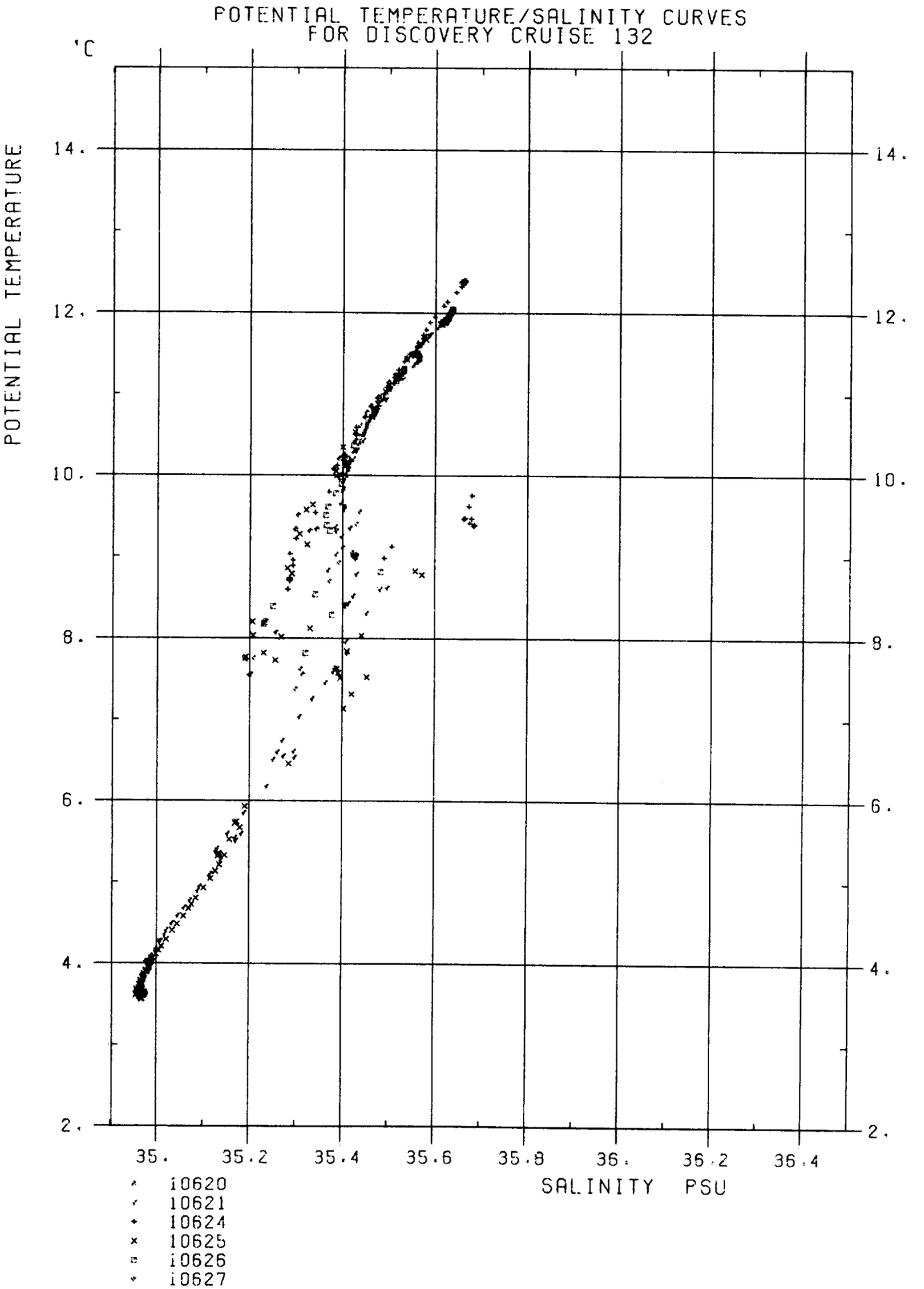
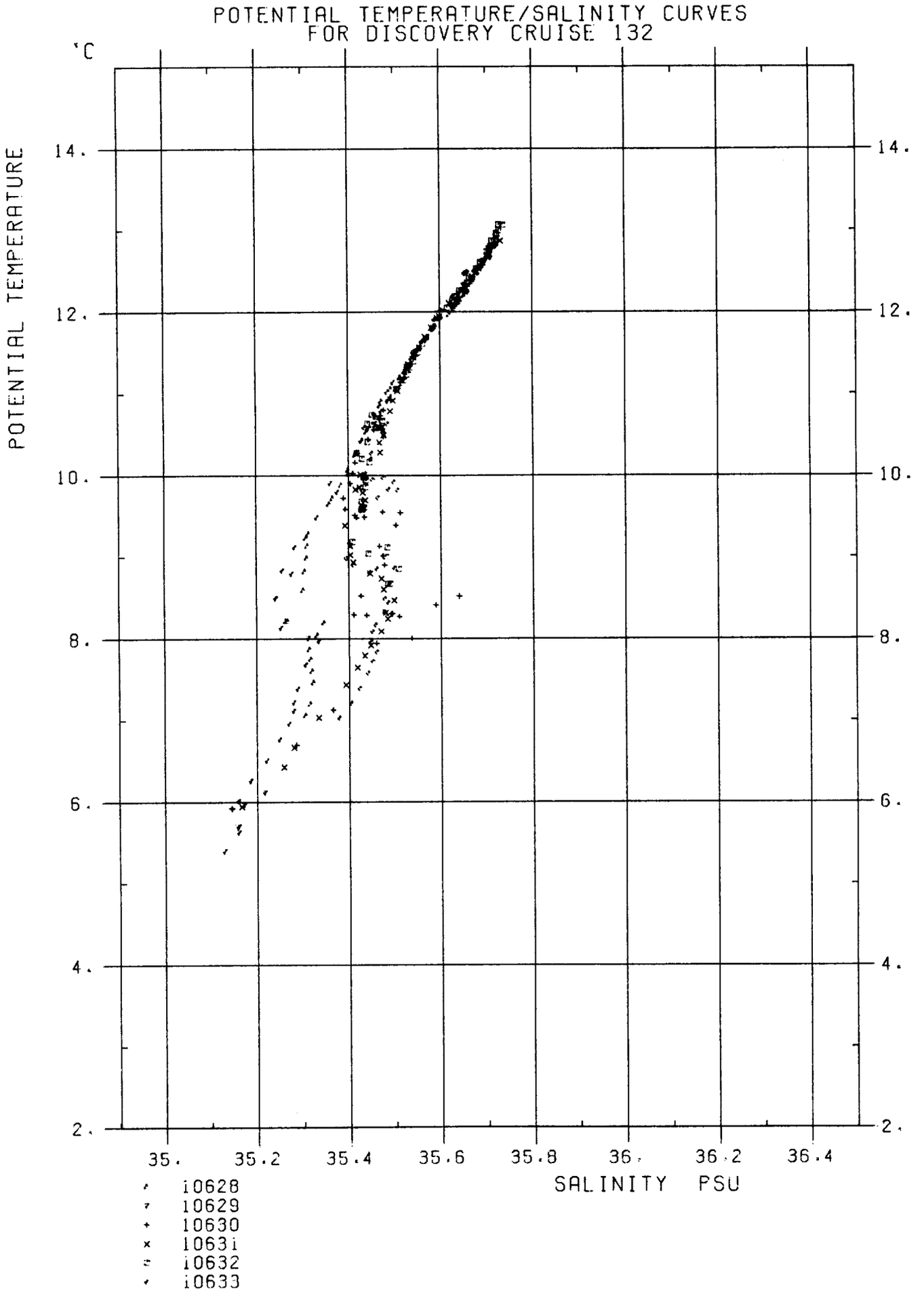
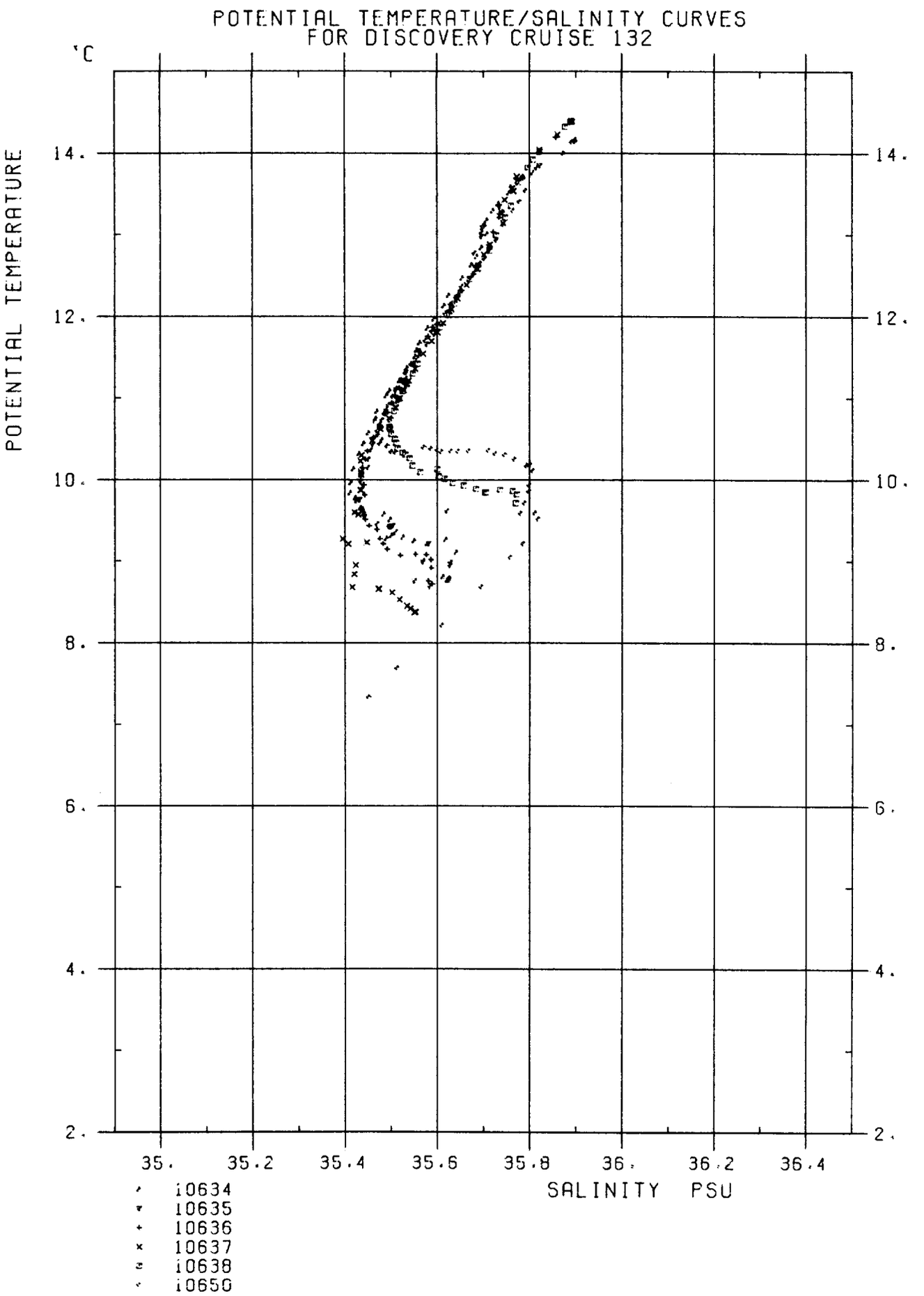
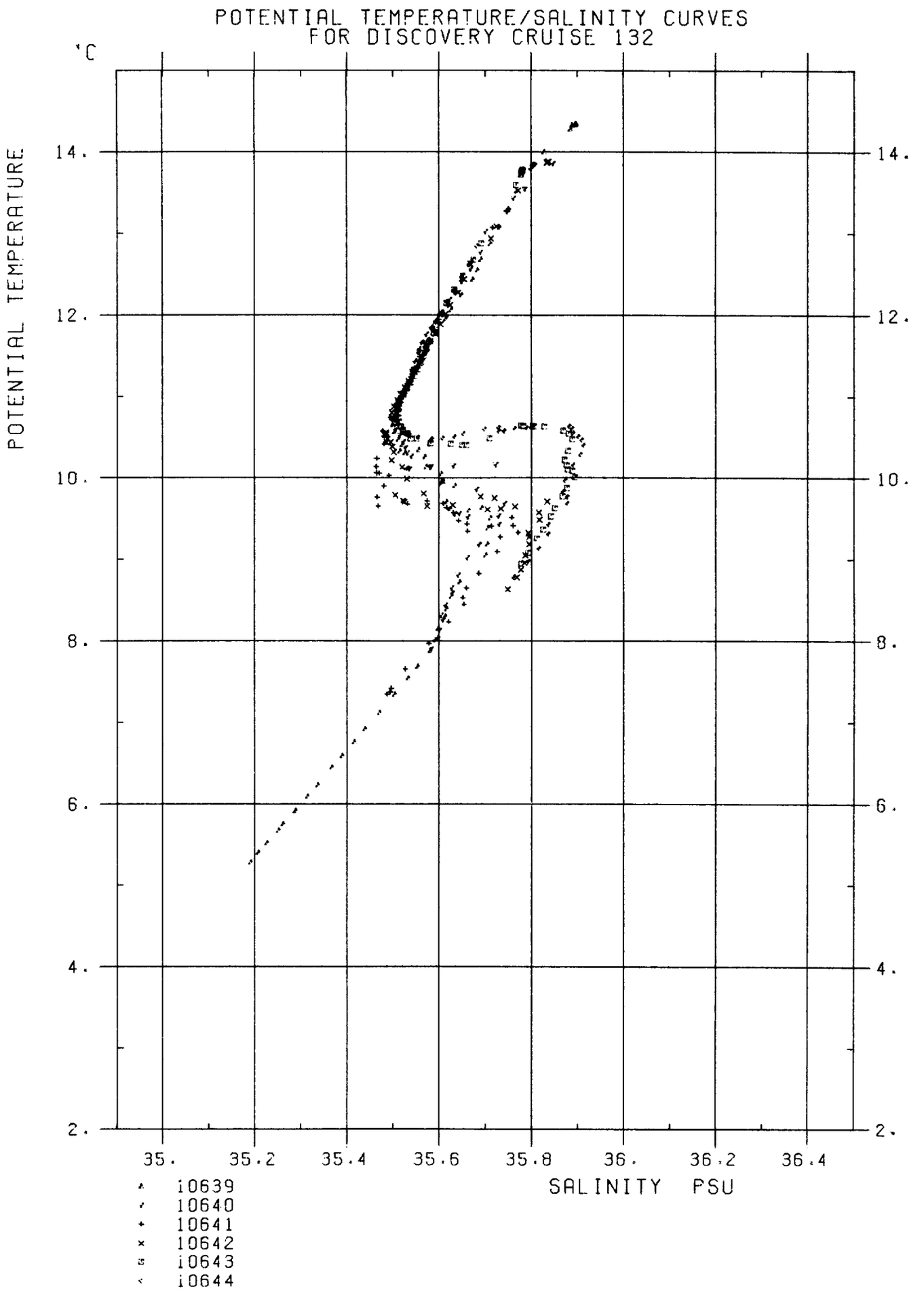


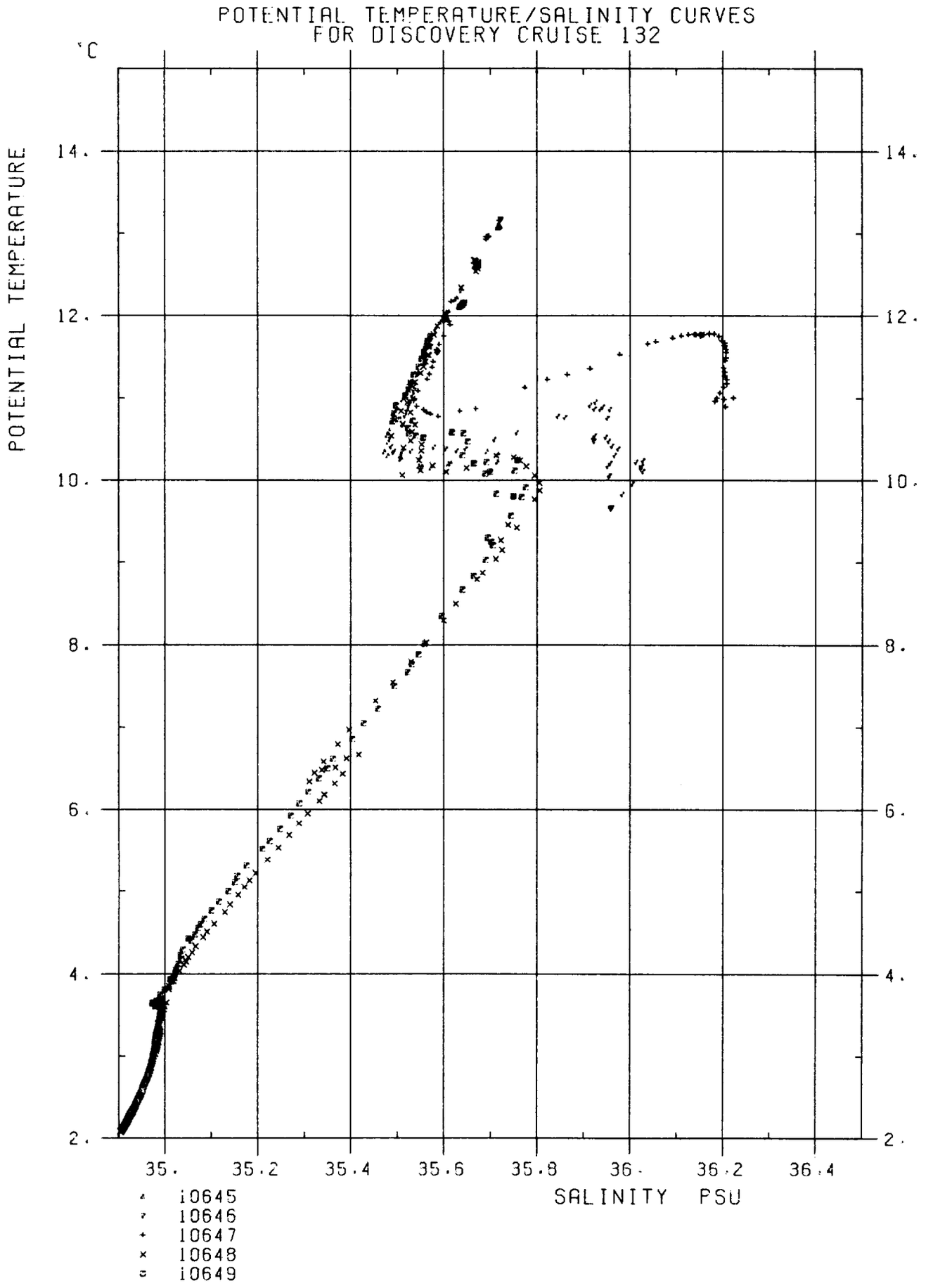
Fig. 7(b). Down and up cast oxygen profiles


POTENTIAL TEMPERATURE/SALINITY CURVES
FOR DISCOVERY CRUISE 132
'C
POTENTIAL TEMPERATURE
14.
12.
10.
8.
6.
4.
2.
35.
35.2
35.4
35.6
35.8
36.
36.2
36.4
SALINITY PSU
10620
10621
10624
10625
10626
10627

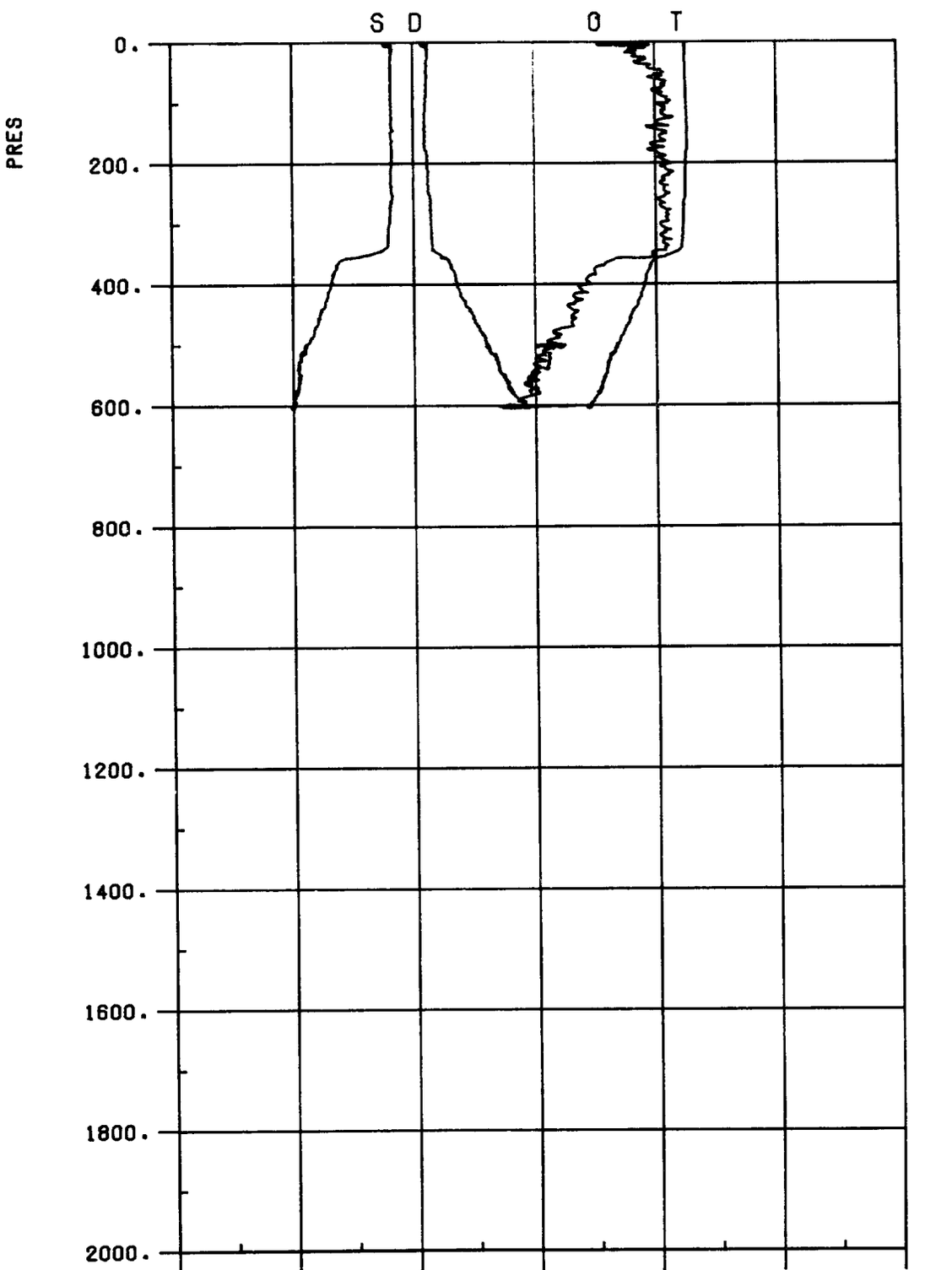

POTENTIAL TEMPERATURE/SALINITY CURVES
FOR DISCOVERY CRUISE 132
°C
POTENTIAL TEMPERATURE
14.
12.
10.
8.
6.
4.
2.
35.
35.2
35.4
35.6
35.8
36.
36.2
36.4
SALINITY PSU
10628
10629
10630
10631
10632
10633


POTENTIAL TEMPERATURE/SALINITY CURVES
FOR DISCOVERY CRUISE 132
°C
POTENTIAL TEMPERATURE
14.
12.
10.
8.
6.
4.
2.
35.
35.2
35.4
35.6
35.8
36.
36.2
36.4
SALINITY PSU
10634
10635
10636
10637
10638
10650


POTENTIAL TEMPERATURE/SALINITY CURVES
FOR DISCOVERY CRUISE 132
°C
POTENTIAL TEMPERATURE
14.
12.
10.
8.
6.
4.
2.
35.
35.2
35.4
35.6
35.8
36.
36.2
36.4
SALINITY PSU
10639
10640
10641
10642
10643
10644


POTENTIAL TEMPERATURE/SALINITY CURVES
FOR DISCOVERY CRUISE 132
°C
POTENTIAL TEMPERATURE
14.
12.
10.
8.
6.
4.
2.
35.
35.2
35.4
35.6
35.8
36.
36.2
36.4
SALINITY PSU
10645
10646
10647
10648
10649

CTD10620



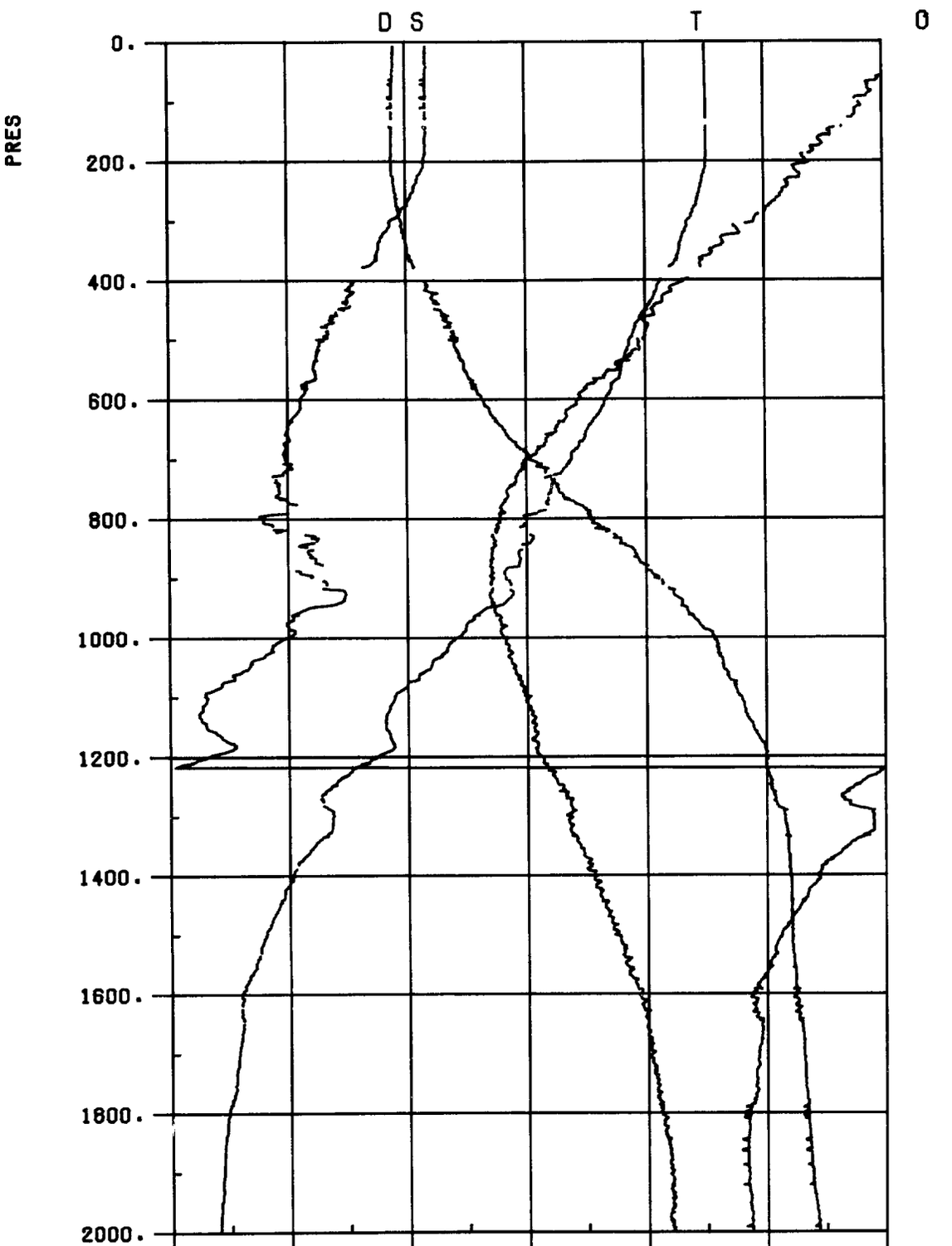
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10620 E 1983/29/2214 48 18.9N 12 52.6W

DISCOVERY 132 STATION 10620

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	11.501	35.565	5.86	11.500	27.123	31.543	35.865	0.009	1495.9	10.	0.9332E 02	-9.999
20.	11.497	35.564	5.83	11.494	27.124	31.544	35.865	0.019	1496.1	20.	0.9356E 02	0.319
40.	11.498	35.563	5.94	11.493	27.123	31.543	35.865	0.037	1496.4	40.	0.9413E 02	-0.220
60.	11.500	35.563	6.00	11.492	27.122	31.544	35.865	0.056	1496.8	59.	0.9466E 02	0.139
80.	11.503	35.563	6.00	11.492	27.122	31.543	35.865	0.075	1497.1	79.	0.9522E 02	-0.206
100.	11.512	35.563	6.07	11.499	27.120	31.542	35.864	0.094	1497.5	99.	0.9585E 02	-0.385
120.	11.520	35.563	6.06	11.505	27.119	31.541	35.862	0.114	1497.8	119.	0.9649E 02	-0.417
140.	11.519	35.564	6.03	11.501	27.119	31.542	35.864	0.133	1498.2	139.	0.9693E 02	0.411
160.	11.520	35.564	6.05	11.500	27.119	31.542	35.864	0.152	1498.5	159.	0.9744E 02	0.197
180.	11.512	35.565	5.97	11.489	27.121	31.545	35.867	0.172	1498.8	178.	0.9773E 02	0.647
200.	11.499	35.564	6.12	11.473	27.123	31.548	35.870	0.192	1499.1	198.	0.9805E 02	0.598
220.	11.490	35.563	6.10	11.462	27.124	31.550	35.872	0.211	1499.4	218.	0.9845E 02	0.492
240.	11.490	35.563	6.07	11.459	27.124	31.550	35.872	0.231	1499.7	238.	0.9892E 02	0.319
260.	11.473	35.564	6.03	11.439	27.128	31.555	35.878	0.251	1500.0	258.	0.9903E 02	0.846
280.	11.461	35.561	6.10	11.425	27.128	31.556	35.879	0.271	1500.3	277.	0.9948E 02	0.371
300.	11.453	35.560	6.04	11.415	27.129	31.557	35.880	0.291	1500.6	297.	0.9994E 02	0.357
320.	11.440	35.558	6.05	11.399	27.129	31.559	35.882	0.311	1500.8	317.	0.1003E 03	0.470
340.	11.414	35.553	6.08	11.371	27.131	31.561	35.885	0.331	1501.1	337.	0.1007E 03	0.545
360.	-9.999	35.486	5.90	-9.999	27.152	-9.999	-9.999	-9.999	-999.9	357.	-0.9999E 01	-9.999
380.	10.862	35.469	5.49	10.815	27.166	31.609	35.945	0.370	1499.7	376.	0.9789E 02	1.790
400.	10.805	35.463	5.42	10.756	27.172	31.616	35.953	0.390	1499.8	396.	0.9779E 02	1.007
450.	10.586	35.444	5.31	10.531	27.197	31.647	35.989	0.438	1499.9	446.	0.9640E 02	1.329
500.	10.362	35.423	5.13	10.302	27.220	31.676	36.022	0.486	1499.9	495.	0.9518E 02	1.281
550.	10.159	35.410	4.98	10.093	27.245	31.706	36.057	0.533	1500.0	545.	0.9368E 02	1.345
600.	9.905	35.400	4.81	9.834	27.282	31.749	36.106	0.580	1499.9	594.	0.9104E 02	1.599

CTD10621



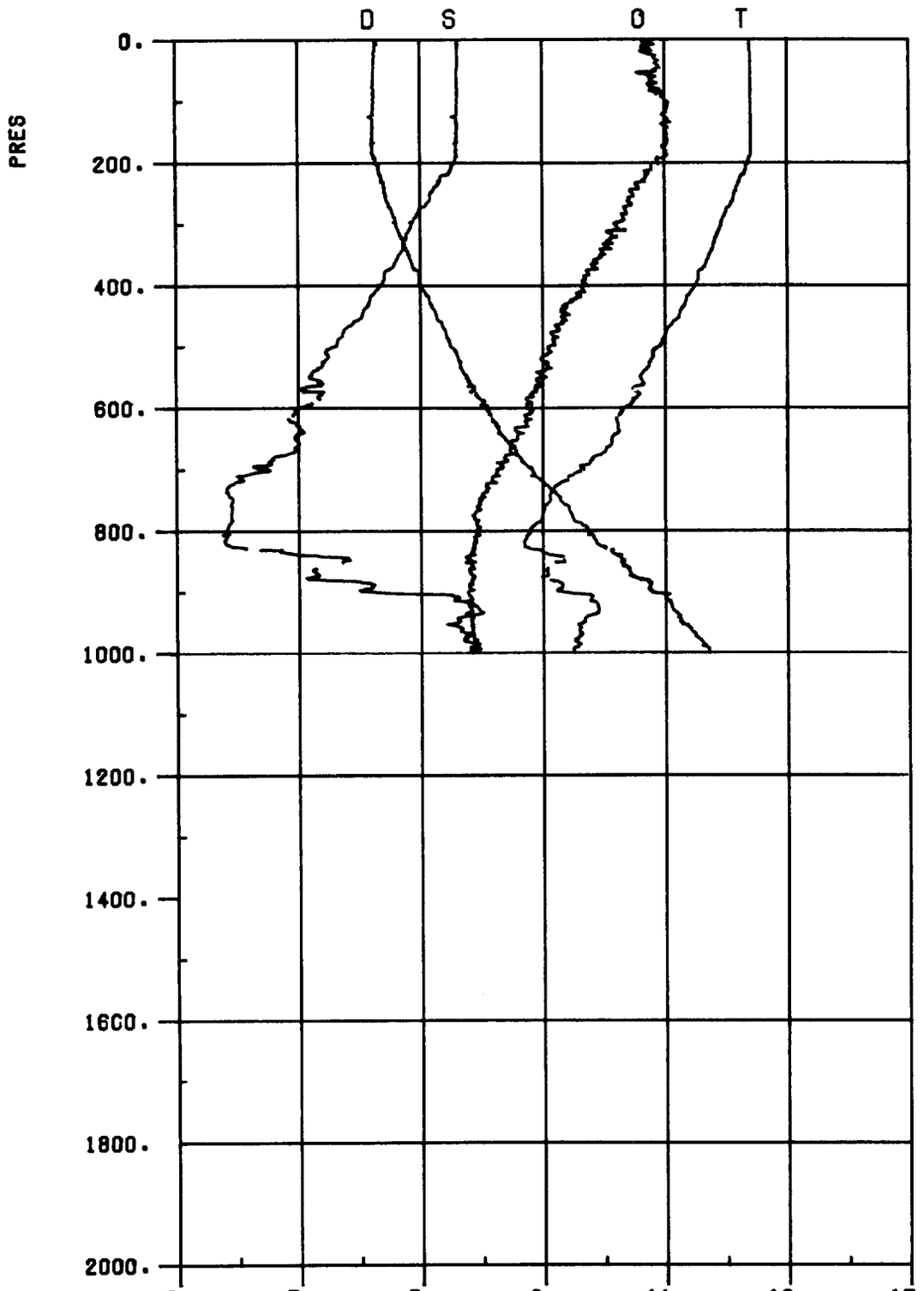
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10621 L 1983/30/1609 47 03.9N 14 08.5W

DISCOVERY 132 STATION 10621

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.014	35.634	8.47	12.012	27.080	31.489	35.800	0.010	1497.8	10.	0.9749E 02	-9.999
20.	12.014	35.634	8.28	12.012	27.079	31.489	35.800	0.020	1498.0	20.	0.9776E 02	0.184
40.	12.019	35.634	8.07	12.014	27.079	31.488	35.799	0.039	1498.3	40.	0.9835E 02	-0.246
60.	12.020	35.633	7.97	12.012	27.078	31.488	35.799	0.059	1498.6	59.	0.9893E 02	-0.191
80.	12.023	35.633	7.88	12.013	27.077	31.488	35.798	0.079	1499.0	79.	0.9955E 02	-0.312
100.	12.027	35.632	7.80	12.014	27.076	31.487	35.798	0.099	1499.3	99.	0.1001E 03	-0.249
120.	12.030	35.633	7.77	12.015	27.076	31.487	35.798	0.119	1499.7	119.	0.1007E 03	0.251
140.	12.033	35.630	7.66	12.015	27.073	31.485	35.796	0.139	1500.0	139.	0.1015E 03	-0.631
160.	12.029	35.633	7.48	12.008	27.076	31.489	35.800	0.159	1500.3	159.	0.1017E 03	0.748
180.	12.030	35.633	7.41	12.007	27.075	31.489	35.800	0.180	1500.6	178.	0.1022E 03	0.121
200.	12.022	35.630	7.36	11.995	27.075	31.489	35.801	0.200	1500.9	198.	0.1028E 03	0.220
220.	11.993	35.624	7.29	11.964	27.076	31.491	35.803	0.221	1501.2	218.	0.1032E 03	0.511
240.	11.939	35.615	7.20	11.908	27.080	31.497	35.810	0.241	1501.3	238.	0.1033E 03	0.814
260.	11.888	35.607	7.13	11.854	27.083	31.501	35.815	0.262	1501.5	258.	0.1035E 03	0.765
280.	11.818	35.594	7.02	11.781	27.086	31.507	35.822	0.283	1501.5	277.	0.1036E 03	0.842
300.	11.715	35.575	6.91	11.676	27.091	31.514	35.832	0.303	1501.5	297.	0.1037E 03	0.932
320.	11.655	35.564	6.79	11.614	27.094	31.519	35.838	0.324	1501.6	317.	0.1038E 03	0.824
340.	11.577	35.554	6.65	11.533	27.100	31.528	35.848	0.345	1501.6	337.	0.1036E 03	1.083
360.	11.537	35.549	6.53	11.491	27.105	31.533	35.855	0.366	1501.8	357.	0.1037E 03	0.890
380.	11.404	35.527	6.46	11.356	27.112	31.544	35.869	0.386	1501.7	376.	0.1034E 03	1.193
400.	11.257	-9.999	6.34	11.206	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.000	35.490	6.06	10.944	27.152	31.600	35.933	0.458	1501.4	446.	0.1004E 03	1.513
500.	10.729	35.456	5.97	10.668	27.179	31.629	35.968	0.508	1501.2	495.	0.9921E 02	1.284
550.	10.580	35.444	5.73	10.512	27.198	31.650	35.992	0.557	1501.5	545.	0.9859E 02	1.116
600.	10.310	35.421	5.44	10.237	27.227	31.687	36.035	0.606	1501.3	594.	0.9662E 02	1.461
700.	9.741	35.396	4.99	9.659	27.306	31.779	36.139	0.700	1500.9	693.	0.9066E 02	1.670
800.	8.946	35.356	4.76	8.838	27.407	31.898	36.275	0.786	1499.6	792.	0.8213E 02	1.898
900.	8.636	35.439	4.71	8.536	27.518	32.020	36.404	0.864	1500.2	891.	0.7279E 02	1.961
1000.	7.825	35.399	4.81	7.719	27.613	32.132	36.534	0.932	1498.8	989.	0.6437E 02	1.871
1100.	6.767	35.259	5.01	6.659	27.656	32.199	36.626	0.995	1496.2	1088.	0.5975E 02	1.468
1200.	6.462	35.262	5.12	6.345	27.699	32.251	36.685	1.053	1496.7	1187.	0.5645E 02	1.288
1300.	5.731	35.181	5.34	5.612	27.730	32.300	36.752	1.107	1495.4	1285.	0.5296E 02	1.300
1400.	5.038	35.086	5.56	4.915	27.739	32.326	36.797	1.159	1494.1	1384.	0.5121E 02	1.022
1500.	4.587	35.024	5.74	4.460	27.742	32.341	36.823	1.210	1493.8	1482.	0.5059E 02	0.787
1600.	4.172	34.977	5.93	4.041	27.749	32.359	36.852	1.260	1493.7	1581.	0.4938E 02	0.884
1700.	4.122	34.985	6.03	3.982	27.761	32.374	36.868	1.310	1495.2	1679.	0.4902E 02	0.692
1800.	3.951	34.968	6.11	3.803	27.766	32.383	36.882	1.358	1496.2	1777.	0.4881E 02	0.646
1900.	3.852	34.967	6.20	3.696	27.776	32.397	36.899	1.407	1497.4	1876.	0.4832E 02	0.709
2000.	3.786	34.974	6.21	3.627	27.788	32.411	36.915	1.455	1498.8	1974.	0.4777E 02	0.718

CTD10624



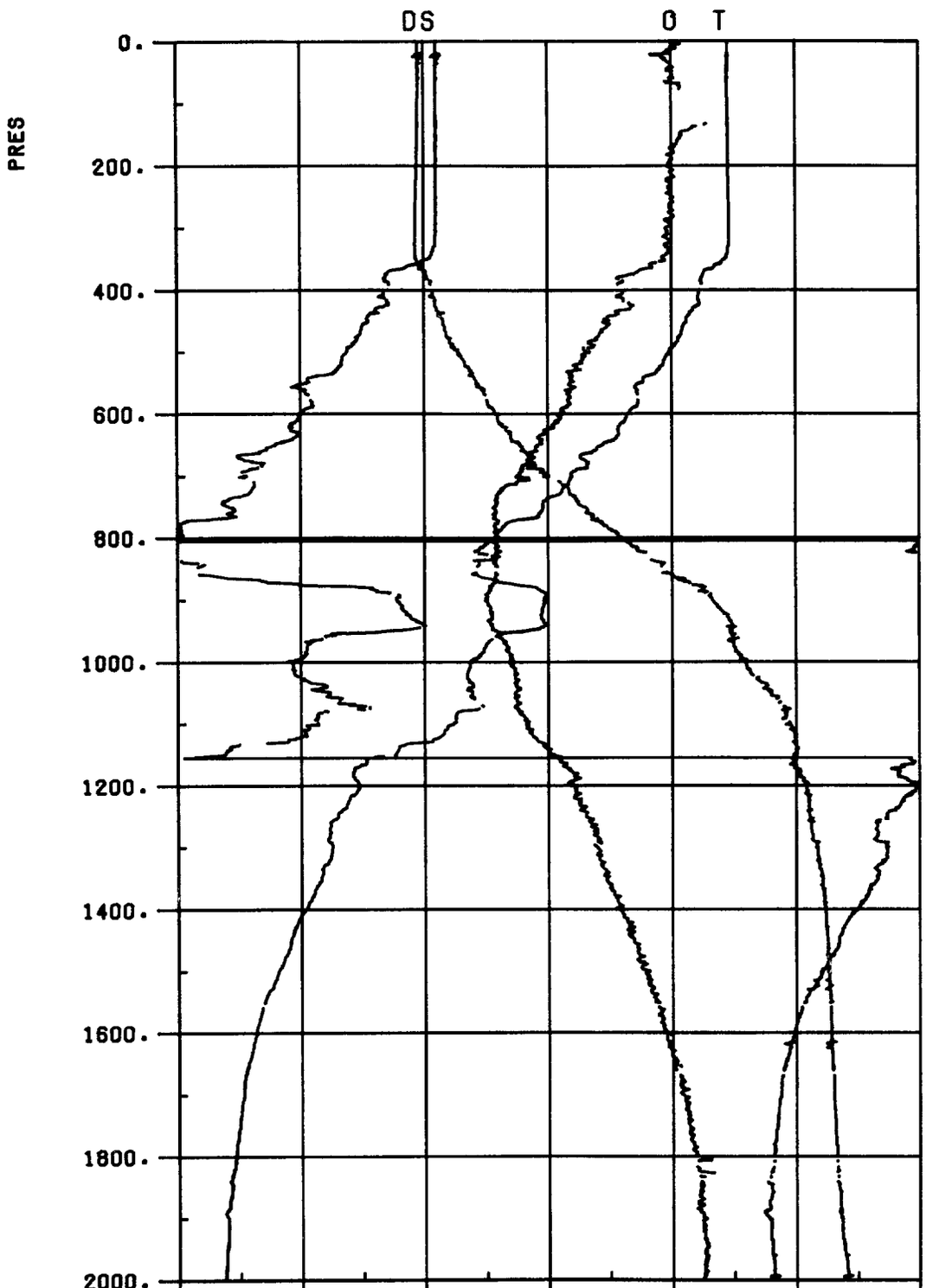
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10624 C Q 1983/33/1226 45 46.9N 15 58.9W

DISCOVERY 132 STATION 10624

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.391	35.662	5.86	12.390	27.028	31.429	35.733	0.010	1499.1	10.	0.1024E 03	-9.999
20.	12.398	35.661	5.85	12.395	27.026	31.428	35.731	0.020	1499.3	20.	0.1028E 03	-0.734
40.	12.405	35.661	5.93	12.400	27.025	31.427	35.730	0.041	1499.6	40.	0.1035E 03	-0.359
60.	12.406	35.661	5.90	12.397	27.024	31.426	35.730	0.062	1500.0	60.	0.1041E 03	-0.197
80.	12.409	35.661	5.94	12.398	27.024	31.427	35.730	0.083	1500.3	79.	0.1046E 03	0.291
100.	12.404	35.661	6.02	12.391	27.024	31.428	35.731	0.104	1500.6	99.	0.1051E 03	0.362
120.	12.408	35.660	6.00	12.392	27.023	31.427	35.731	0.125	1501.0	119.	0.1057E 03	-0.263
140.	12.412	35.660	6.00	12.393	27.023	31.427	35.731	0.146	1501.3	139.	0.1063E 03	-0.121
160.	12.413	35.660	6.02	12.392	27.022	31.427	35.731	0.167	1501.6	159.	0.1069E 03	-0.191
180.	12.410	35.659	6.01	12.385	27.022	31.428	35.732	0.189	1502.0	178.	0.1074E 03	0.355
200.	12.363	35.655	5.95	12.336	27.029	31.436	35.740	0.210	1502.1	198.	0.1073E 03	1.040
220.	12.288	35.644	5.85	12.259	27.034	31.443	35.750	0.232	1502.2	218.	0.1073E 03	1.008
240.	12.173	35.625	5.79	12.142	27.042	31.454	35.762	0.253	1502.1	238.	0.1070E 03	1.166
260.	12.123	35.616	5.70	12.089	27.045	31.459	35.768	0.275	1502.3	258.	0.1072E 03	0.798
280.	11.999	35.597	5.68	11.962	27.054	31.471	35.783	0.296	1502.2	278.	0.1068E 03	1.282
300.	11.920	35.585	5.60	11.881	27.060	31.479	35.792	0.317	1502.2	297.	0.1067E 03	0.999
320.	11.841	35.577	5.59	11.799	27.068	31.490	35.805	0.339	1502.2	317.	0.1063E 03	1.250
340.	11.777	35.572	5.52	11.733	27.077	31.500	35.817	0.360	1502.4	337.	0.1060E 03	1.217
360.	11.687	35.561	5.42	11.640	27.085	31.511	35.829	0.381	1502.4	357.	0.1057E 03	1.208
380.	11.542	35.542	5.37	11.493	27.098	31.527	35.849	0.402	1502.2	377.	0.1048E 03	1.506
400.	11.501	35.536	5.34	11.449	27.100	31.531	35.854	0.423	1502.4	396.	0.1050E 03	0.774
450.	11.233	35.505	5.18	11.176	27.127	31.564	35.892	0.475	1502.2	446.	0.1036E 03	1.359
500.	10.918	35.460	5.07	10.855	27.150	31.595	35.930	0.526	1501.9	495.	0.1023E 03	1.313
550.	10.590	35.419	4.99	10.523	27.176	31.629	35.971	0.577	1501.5	545.	0.1006E 03	1.399
600.	10.344	35.403	4.87	10.272	27.207	31.666	36.013	0.627	1501.4	594.	0.9855E 02	1.479
700.	9.630	35.342	4.65	9.548	27.281	31.759	36.121	0.723	1500.5	693.	0.9269E 02	1.659
800.	8.790	35.283	4.45	8.701	27.374	31.870	36.251	0.812	1499.0	792.	0.8485E 02	1.833
900.	9.277	35.515	4.39	9.173	27.477	31.963	36.332	0.893	1502.7	891.	0.7807E 02	1.732
1000.	9.499	35.683	4.46	9.381	27.571	32.054	36.418	0.968	1505.4	989.	0.7167E 02	1.704

CTD10625



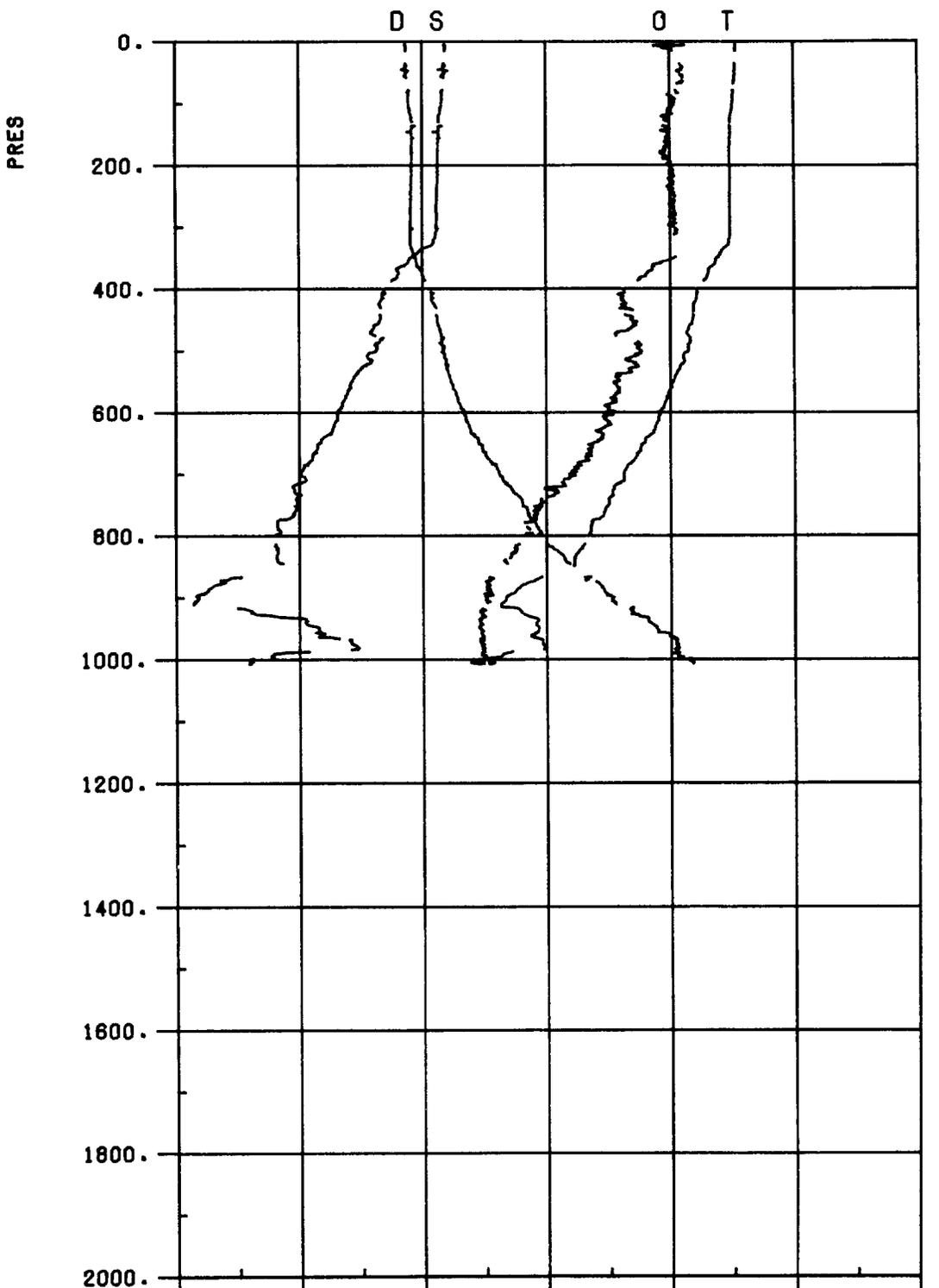
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10625 C N 1983/35/1334 46 49.0N 18 08.1W

DISCOVERY 132 STATION 10625

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	11.903	35.620	6.02	11.902	27.090	31.501	35.814	0.010	1497.4	10.	0.9653E 02	-9.999
20.	11.904	35.620	5.89	11.901	27.090	31.501	35.814	0.019	1497.6	20.	0.9679E 02	0.261
40.	11.902	35.619	6.00	11.897	27.090	31.502	35.815	0.039	1497.9	40.	0.9730E 02	0.272
60.	11.900	35.620	6.00	11.892	27.090	31.503	35.816	0.058	1498.2	59.	0.9775E 02	0.422
80.	11.901	35.619	6.08	11.891	27.090	31.503	35.817	0.078	1498.5	79.	0.9828E 02	0.209
100.	11.903	35.619	-9.99	11.890	27.089	31.503	35.816	0.098	1498.9	99.	0.9885E 02	-0.200
120.	11.905	35.619	-9.99	11.889	27.089	31.503	35.817	0.117	1499.2	119.	0.9940E 02	0.139
140.	11.907	35.619	6.16	11.889	27.089	31.504	35.817	0.137	1499.6	139.	0.9991E 02	0.261
160.	11.909	35.619	6.05	11.889	27.088	31.504	35.817	0.157	1499.9	159.	0.1005E 03	-0.049
180.	11.912	35.619	6.01	11.888	27.088	31.504	35.817	0.177	1500.2	178.	0.1010E 03	-0.121
200.	11.914	35.619	5.98	11.888	27.087	31.504	35.817	0.198	1500.6	198.	0.1016E 03	0.167
220.	11.917	35.619	5.99	11.888	27.087	31.504	35.817	0.218	1500.9	218.	0.1021E 03	-0.130
240.	11.919	35.619	5.99	11.888	27.086	31.503	35.817	0.239	1501.2	238.	0.1027E 03	-0.167
260.	11.922	35.619	6.00	11.888	27.086	31.504	35.817	0.259	1501.6	258.	0.1032E 03	0.163
280.	11.923	35.619	6.01	11.886	27.085	31.504	35.817	0.280	1501.9	277.	0.1038E 03	-0.049
300.	11.924	35.618	5.95	11.885	27.085	31.504	35.817	0.301	1502.3	297.	0.1043E 03	0.148
320.	11.924	35.618	5.99	11.882	27.084	31.504	35.817	0.322	1502.6	317.	0.1049E 03	0.110
340.	11.901	35.613	5.97	11.856	27.085	31.505	35.819	0.343	1502.8	337.	0.1053E 03	0.396
360.	11.729	35.579	5.83	11.682	27.092	31.516	35.834	0.364	1502.5	357.	0.1051E 03	1.161
380.	11.481	35.535	5.56	11.432	27.104	31.535	35.858	0.385	1502.0	377.	0.1042E 03	1.537
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.232	35.509	5.47	11.175	27.130	31.567	35.895	0.457	1502.2	446.	0.1033E 03	1.147
500.	10.952	35.474	5.32	10.889	27.154	31.598	35.932	0.509	1502.0	495.	0.1019E 03	1.330
550.	10.508	35.410	5.19	10.441	27.184	31.639	35.982	0.559	1501.2	545.	0.9977E 02	1.506
600.	10.282	35.400	5.08	10.210	27.216	31.676	36.025	0.608	1501.2	594.	0.9764E 02	1.497
700.	9.370	35.307	4.74	9.289	27.298	31.780	36.148	0.703	1499.5	693.	0.9086E 02	1.745
800.	8.135	35.206	4.58	8.050	27.416	31.925	36.321	0.789	1496.4	792.	0.7992E 02	2.091
900.	8.927	35.554	4.49	8.825	27.565	32.058	36.434	0.863	1501.5	891.	0.6922E 02	2.069
1000.	7.734	35.384	4.69	7.629	27.616	32.136	36.541	0.930	1498.4	989.	0.6398E 02	1.563
1100.	7.454	35.421	4.83	7.340	27.688	32.214	36.625	0.991	1499.1	1088.	0.5852E 02	1.569
1200.	5.937	35.197	5.20	5.826	27.717	32.280	36.727	1.046	1494.5	1187.	0.5346E 02	1.503
1300.	5.489	35.148	5.38	5.372	27.734	32.309	36.768	1.099	1494.3	1285.	0.5190E 02	1.004
1400.	5.063	35.100	5.55	4.940	27.747	32.333	36.803	1.150	1494.2	1384.	0.5058E 02	0.945
1500.	4.617	35.041	5.78	4.490	27.752	32.350	36.831	1.200	1494.0	1482.	0.4973E 02	0.836
1600.	4.253	34.997	5.94	4.120	27.757	32.365	36.856	1.249	1494.1	1581.	0.4900E 02	0.791
1700.	4.047	34.974	6.07	3.908	27.761	32.375	36.871	1.298	1494.9	1679.	0.4876E 02	0.661
1800.	3.915	34.963	6.19	3.769	27.766	32.384	36.884	1.347	1496.0	1777.	0.4863E 02	0.621
1900.	3.782	34.955	6.26	3.627	27.773	32.396	36.899	1.395	1497.1	1876.	0.4827E 02	0.676
2000.	3.745	34.964	6.26	3.582	27.784	32.409	36.913	1.444	1498.6	1974.	0.4792E 02	0.666

CTD10626



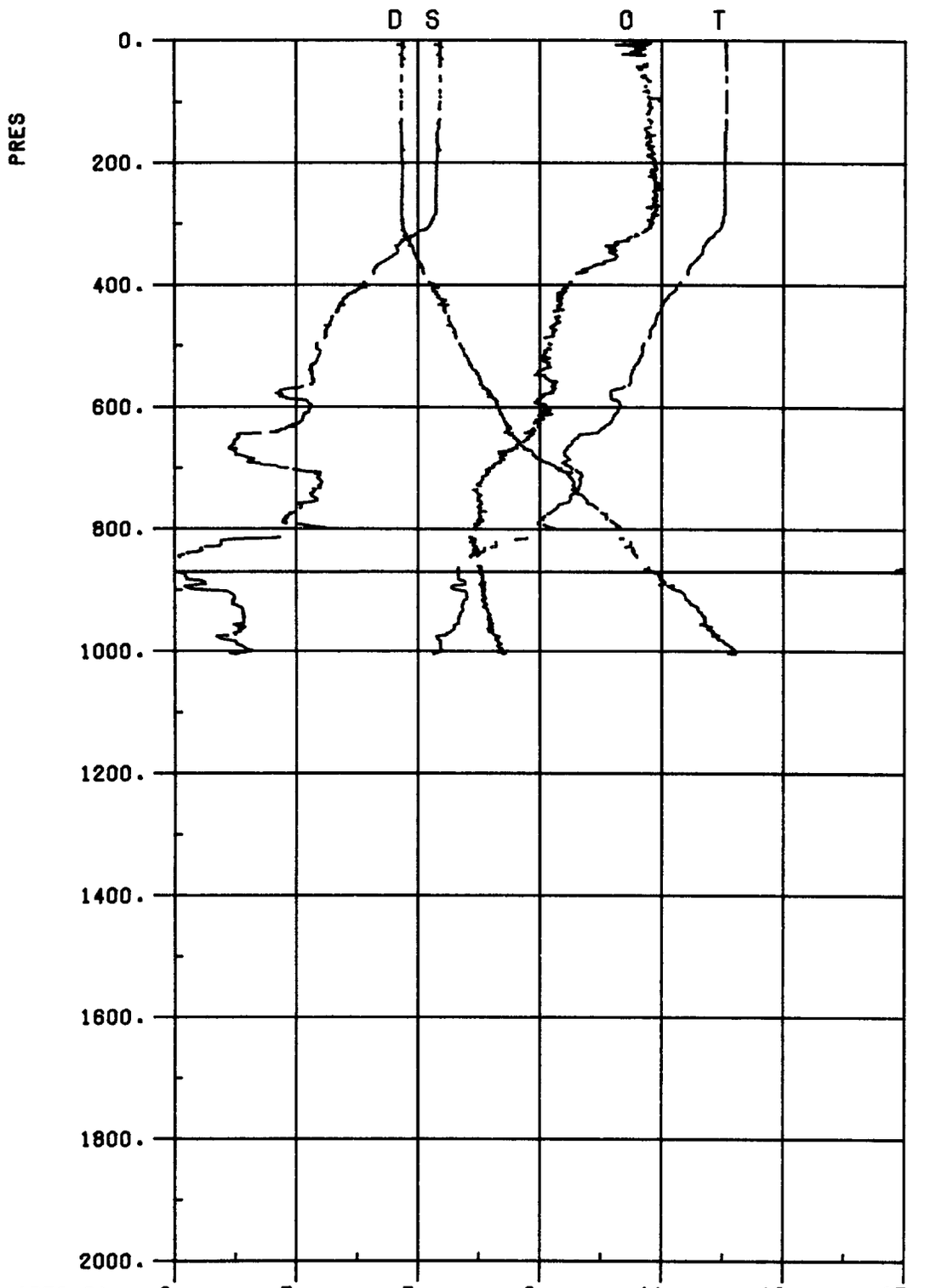
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10626 D E 1983/35/2115 47 30.8N 18 59.2W

DISCOVERY 132 STATION 10626

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.059	35.637	5.97	12.058	27.073	31.482	35.792	0.010	1497.9	10.	0.9807E 02	-9.999
20.	12.067	35.628	6.04	12.064	27.065	31.473	35.783	0.020	1498.1	20.	0.9916E 02	-1.641
40.	12.050	35.636	6.10	12.045	27.074	31.483	35.793	0.039	1498.4	40.	0.9881E 02	1.231
60.	12.040	35.633	6.10	12.032	27.074	31.484	35.794	0.059	1498.7	59.	0.9933E 02	0.258
80.	12.016	35.635	6.05	12.007	27.080	31.491	35.802	0.079	1499.0	79.	0.9925E 02	1.035
100.	12.011	35.631	6.02	11.998	27.078	31.489	35.801	0.099	1499.3	99.	0.9995E 02	-0.484
120.	11.973	35.627	5.96	11.958	27.082	31.495	35.807	0.119	1499.5	119.	0.1000E 03	0.872
140.	11.966	35.627	5.99	11.947	27.083	31.497	35.809	0.139	1499.8	139.	0.1005E 03	0.498
160.	11.962	35.626	5.97	11.941	27.083	31.497	35.810	0.159	1500.1	159.	0.1010E 03	0.279
180.	11.960	35.625	5.93	11.937	27.083	31.498	35.810	0.179	1500.4	178.	0.1015E 03	0.223
200.	11.961	35.625	5.99	11.935	27.083	31.498	35.810	0.200	1500.7	198.	0.1020E 03	0.152
220.	11.962	35.625	6.02	11.934	27.082	31.498	35.811	0.220	1501.1	218.	0.1026E 03	0.171
240.	11.961	35.624	6.01	11.930	27.082	31.498	35.811	0.241	1501.4	238.	0.1031E 03	-0.049
260.	11.959	35.623	6.03	11.924	27.081	31.499	35.811	0.261	1501.7	258.	0.1037E 03	0.188
280.	11.962	35.623	6.04	11.925	27.081	31.499	35.811	0.282	1502.1	277.	0.1042E 03	0.206
300.	11.961	35.622	6.02	11.922	27.081	31.499	35.812	0.303	1502.4	297.	0.1047E 03	0.181
320.	11.948	35.618	-9.99	11.906	27.080	31.499	35.812	0.324	1502.7	317.	0.1053E 03	-0.099
340.	11.823	35.593	-9.99	11.779	27.085	31.507	35.823	0.345	1502.5	337.	0.1053E 03	0.951
360.	11.714	35.574	5.90	11.667	27.091	31.515	35.834	0.366	1502.5	357.	0.1051E 03	1.064
380.	11.596	35.559	5.79	11.547	27.101	31.529	35.850	0.387	1502.4	376.	0.1046E 03	1.374
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.358	35.531	5.69	11.300	27.124	31.558	35.884	0.460	1502.7	446.	0.1039E 03	1.089
500.	11.281	35.524	5.76	11.217	27.133	31.570	35.897	0.512	1503.2	495.	0.1042E 03	0.823
550.	11.045	35.485	5.57	10.976	27.146	31.589	35.922	0.564	1503.2	545.	0.1039E 03	1.030
600.	10.830	35.462	5.52	10.756	27.167	31.616	35.953	0.616	1503.2	594.	0.1029E 03	1.249
700.	10.242	35.402	5.21	10.157	27.224	31.688	36.037	0.717	1502.7	693.	0.9899E 02	1.456
800.	9.688	35.362	4.73	9.593	27.288	31.766	36.127	0.813	1502.3	792.	0.9427E 02	1.538
900.	8.349	35.236	4.51	8.252	27.406	31.913	36.304	0.902	1498.9	891.	0.8299E 02	2.123
1000.	7.983	35.321	4.53	7.876	27.529	32.045	36.444	0.980	1499.3	989.	0.7259E 02	2.038

CTD10627

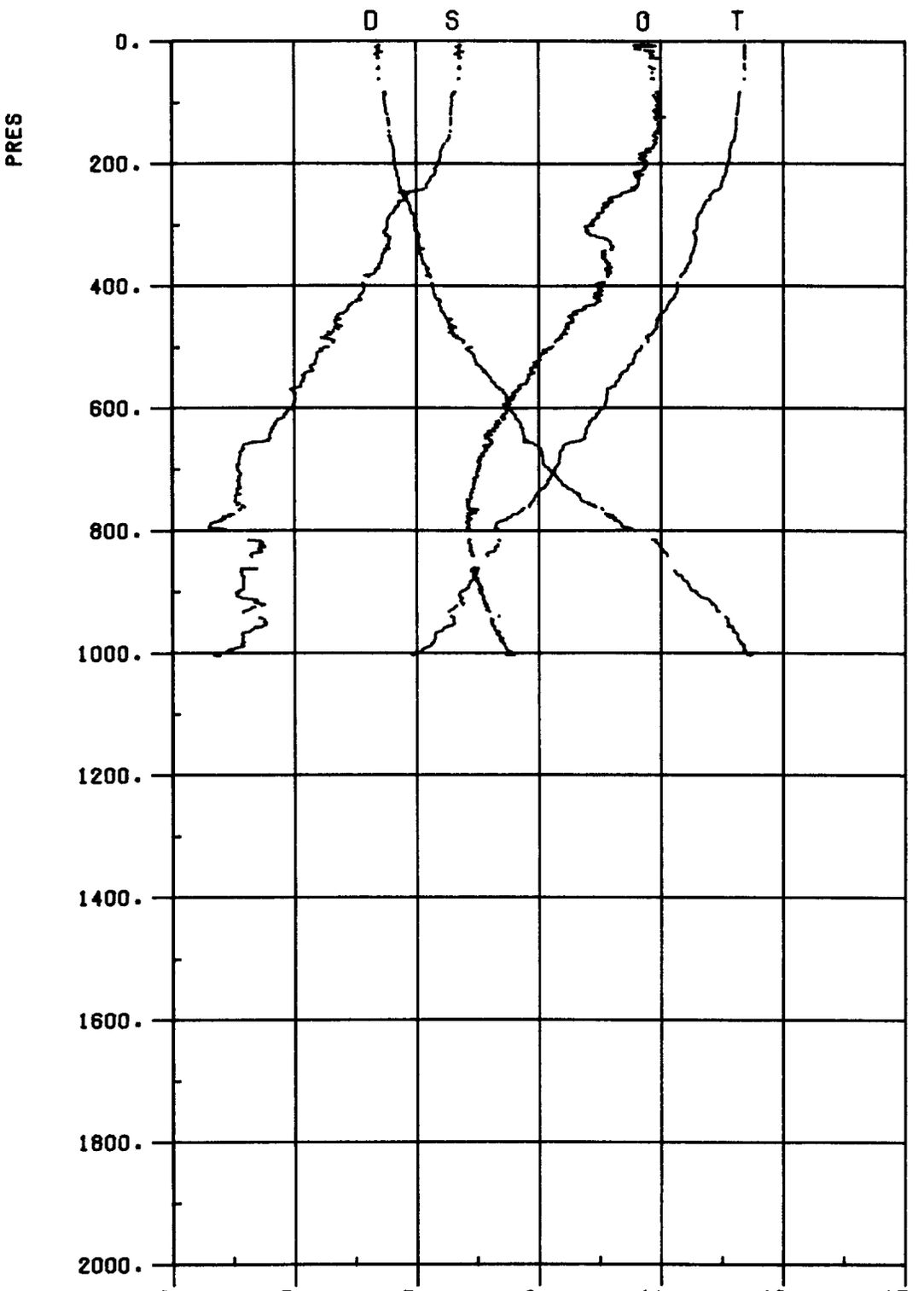


DISCOVERY 132 CTD10627 E 1983/36/0213 46 55.7N 19 08.0W

DISCOVERY 132 STATION 10627

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.050	35.636	5.74	12.049	27.074	31.482	35.792	0.010	1497.9	10.	0.9803E 02	-9.999
20.	12.051	35.636	5.79	12.049	27.074	31.482	35.792	0.020	1498.1	20.	0.9831E 02	-0.070
40.	12.055	35.636	5.87	12.049	27.073	31.482	35.793	0.039	1498.4	40.	0.9885E 02	0.191
60.	12.058	35.636	5.85	12.050	27.073	31.482	35.792	0.059	1498.8	59.	0.9942E 02	-0.130
80.	12.061	35.635	5.88	12.051	27.072	31.482	35.792	0.079	1499.1	79.	0.1001E 03	-0.339
100.	12.059	35.636	5.93	12.046	27.072	31.483	35.793	0.099	1499.4	99.	0.1005E 03	0.436
120.	12.053	35.638	5.88	12.037	27.075	31.487	35.797	0.119	1499.7	119.	0.1007E 03	0.773
140.	12.053	35.634	5.91	12.034	27.072	31.484	35.794	0.140	1500.1	139.	0.1016E 03	-0.711
160.	12.036	35.631	5.89	12.015	27.073	31.485	35.796	0.160	1500.3	159.	0.1020E 03	0.476
180.	12.038	35.633	5.92	12.015	27.074	31.487	35.798	0.180	1500.7	178.	0.1024E 03	0.564
200.	12.026	35.630	5.93	11.999	27.074	31.488	35.800	0.201	1501.0	198.	0.1028E 03	0.336
220.	12.026	35.630	5.93	11.997	27.074	31.489	35.800	0.221	1501.3	218.	0.1033E 03	0.283
240.	12.026	35.630	5.95	11.995	27.074	31.489	35.800	0.242	1501.6	238.	0.1039E 03	0.178
260.	12.027	35.629	5.94	11.993	27.073	31.489	35.800	0.263	1502.0	258.	0.1045E 03	-0.184
280.	12.030	35.629	5.95	11.993	27.073	31.489	35.801	0.284	1502.3	277.	0.1050E 03	0.231
300.	11.987	35.620	5.92	11.947	27.074	31.492	35.804	0.305	1502.5	297.	0.1053E 03	0.566
320.	11.846	35.592	5.79	11.804	27.079	31.501	35.816	0.326	1502.3	317.	0.1053E 03	1.012
340.	11.673	35.565	5.58	11.629	27.091	31.517	35.835	0.347	1502.0	337.	0.1046E 03	1.462
360.	11.562	35.548	5.59	11.516	27.099	31.527	35.848	0.368	1501.9	357.	0.1043E 03	1.183
380.	11.422	35.527	5.35	11.374	27.108	31.540	35.864	0.389	1501.7	377.	0.1038E 03	1.312
400.	11.289	35.512	5.24	11.238	27.122	31.557	35.884	0.409	1501.6	396.	0.1029E 03	1.538
450.	10.920	35.460	5.16	10.866	27.149	31.593	35.927	0.460	1501.1	446.	0.1012E 03	1.408
500.	10.691	35.433	5.06	10.629	27.169	31.619	35.958	0.511	1501.1	495.	0.1002E 03	1.215
550.	10.493	35.426	5.02	10.426	27.199	31.653	35.997	0.560	1501.2	545.	0.9839E 02	1.437
600.	10.297	35.422	5.06	10.224	27.231	31.691	36.039	0.609	1501.3	594.	0.9625E 02	1.499
700.	9.510	35.374	4.61	9.429	27.327	31.806	36.171	0.703	1500.1	693.	0.8833E 02	1.854
800.	9.213	35.446	4.46	9.127	27.432	31.919	36.290	0.787	1500.7	792.	0.8001E 02	1.880
900.	7.644	35.249	4.54	7.550	27.523	32.044	36.452	0.863	1496.3	891.	0.7075E 02	1.947
1000.	7.379	35.324	4.68	7.276	27.620	32.148	36.561	0.929	1497.0	989.	0.6285E 02	1.809

CTD10628



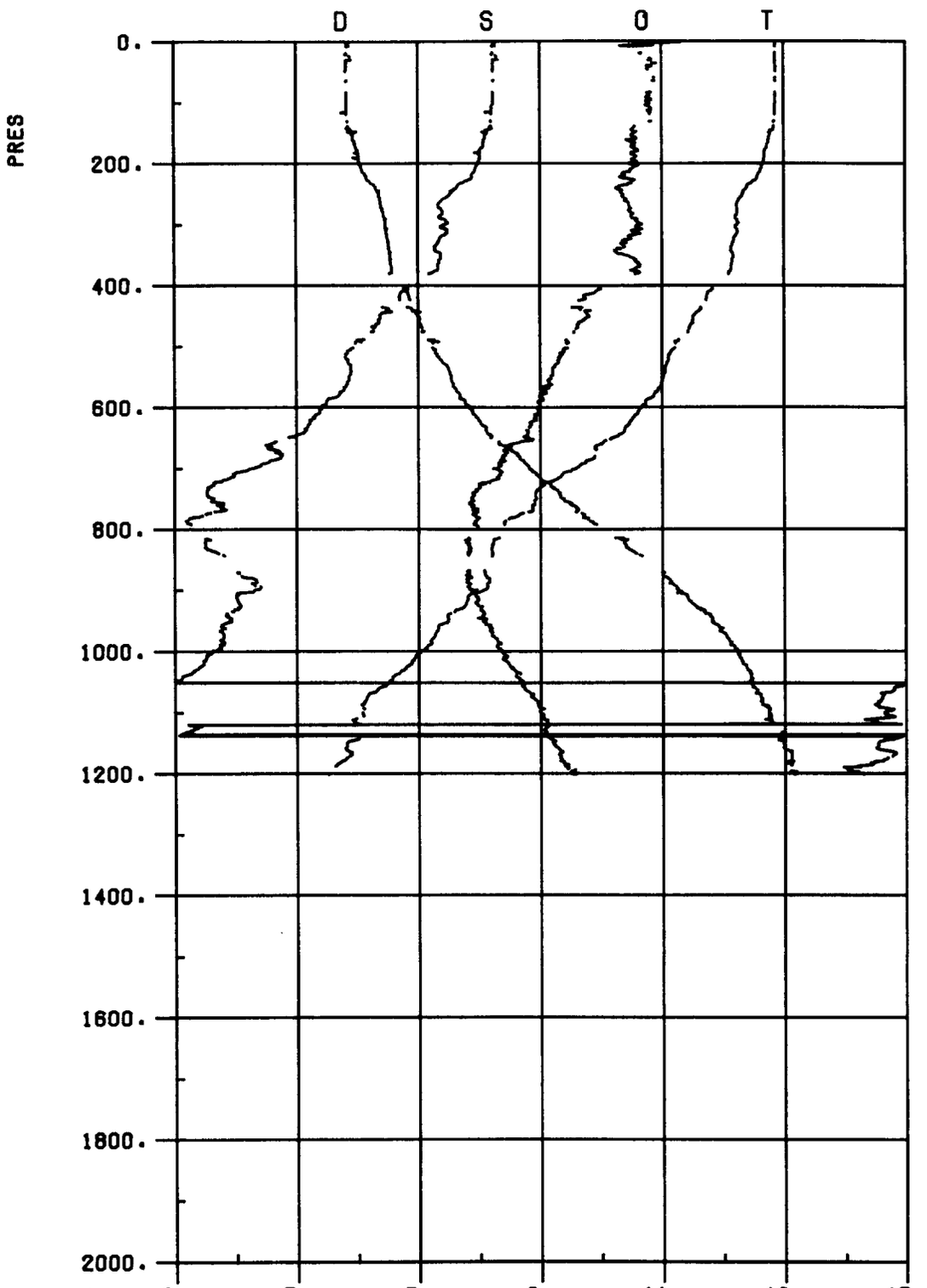
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10628 E 1983/36/0657 46 19.9N 19 15.2W

DISCOVERY 132 STATION 10628

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.372	35.671	5.91	12.371	27.039	31.440	35.744	0.010	1499.0	10.	0.1014E 03	-9.999
20.	12.374	35.670	5.91	12.372	27.038	31.440	35.743	0.020	1499.2	20.	0.1017E 03	-0.475
40.	12.372	35.671	5.92	12.366	27.039	31.441	35.745	0.041	1499.5	40.	0.1021E 03	0.511
60.	12.364	35.670	5.93	12.355	27.039	31.443	35.747	0.061	1499.8	59.	0.1026E 03	0.422
80.	12.317	35.667	5.98	12.306	27.041	31.451	35.756	0.082	1500.0	79.	0.1025E 03	1.081
100.	12.271	35.658	5.97	12.257	27.048	31.455	35.761	0.102	1500.2	99.	0.1028E 03	0.645
120.	12.246	35.656	5.96	12.230	27.052	31.459	35.766	0.123	1500.4	119.	0.1030E 03	0.810
140.	12.229	35.655	5.98	12.210	27.055	31.463	35.770	0.143	1500.7	139.	0.1032E 03	0.710
160.	12.203	35.653	5.96	12.182	27.057	31.467	35.774	0.164	1500.9	159.	0.1035E 03	0.732
180.	12.122	35.639	5.90	12.099	27.063	31.474	35.784	0.185	1501.0	178.	0.1034E 03	0.997
200.	12.094	35.635	5.87	12.068	27.065	31.478	35.787	0.206	1501.2	198.	0.1038E 03	0.645
220.	12.046	35.628	5.83	12.018	27.069	31.483	35.794	0.226	1501.4	218.	0.1039E 03	0.853
240.	11.964	35.613	5.78	11.932	27.074	31.490	35.802	0.247	1501.4	238.	0.1039E 03	0.902
260.	11.767	35.578	5.58	11.733	27.083	31.504	35.821	0.268	1501.0	258.	0.1034E 03	1.350
280.	11.649	35.561	5.52	11.613	27.093	31.517	35.836	0.288	1500.9	278.	0.1030E 03	1.283
300.	11.584	35.551	5.43	11.546	27.097	31.523	35.844	0.309	1501.0	297.	0.1030E 03	0.928
320.	11.558	35.553	5.46	11.517	27.104	31.531	35.852	0.330	1501.2	317.	0.1028E 03	1.064
340.	11.532	35.550	5.59	11.488	27.106	31.534	35.856	0.350	1501.5	337.	0.1031E 03	0.706
360.	11.478	35.542	5.55	11.432	27.110	31.540	35.863	0.371	1501.6	357.	0.1031E 03	0.884
380.	11.367	35.530	5.57	11.319	27.121	31.554	35.879	0.391	1501.6	377.	0.1025E 03	1.398
400.	11.262	35.513	5.49	11.211	27.127	31.563	35.890	0.412	1501.5	396.	0.1023E 03	1.085
450.	10.966	35.469	5.26	10.910	27.148	31.590	35.924	0.463	1501.2	446.	0.1014E 03	1.229
500.	10.671	35.449	5.10	10.609	27.186	31.636	35.976	0.513	1501.0	495.	0.9866E 02	1.626
550.	10.317	35.414	4.91	10.251	27.221	31.679	36.027	0.562	1500.5	545.	0.9614E 02	1.584
600.	10.057	35.394	4.72	9.985	27.251	31.715	36.069	0.609	1500.4	594.	0.9413E 02	1.464
700.	9.259	35.306	4.50	9.180	27.316	31.800	36.170	0.701	1499.1	693.	0.8906E 02	1.570
800.	8.314	35.287	4.43	8.228	27.452	31.957	36.348	0.784	1497.2	792.	0.7685E 02	2.191
900.	7.755	35.307	4.52	7.661	27.552	32.071	36.475	0.856	1496.8	891.	0.6824E 02	1.883
1000.	7.016	35.281	4.75	6.918	27.640	32.174	36.596	0.920	1495.6	989.	0.6041E 02	1.800

CTD10629



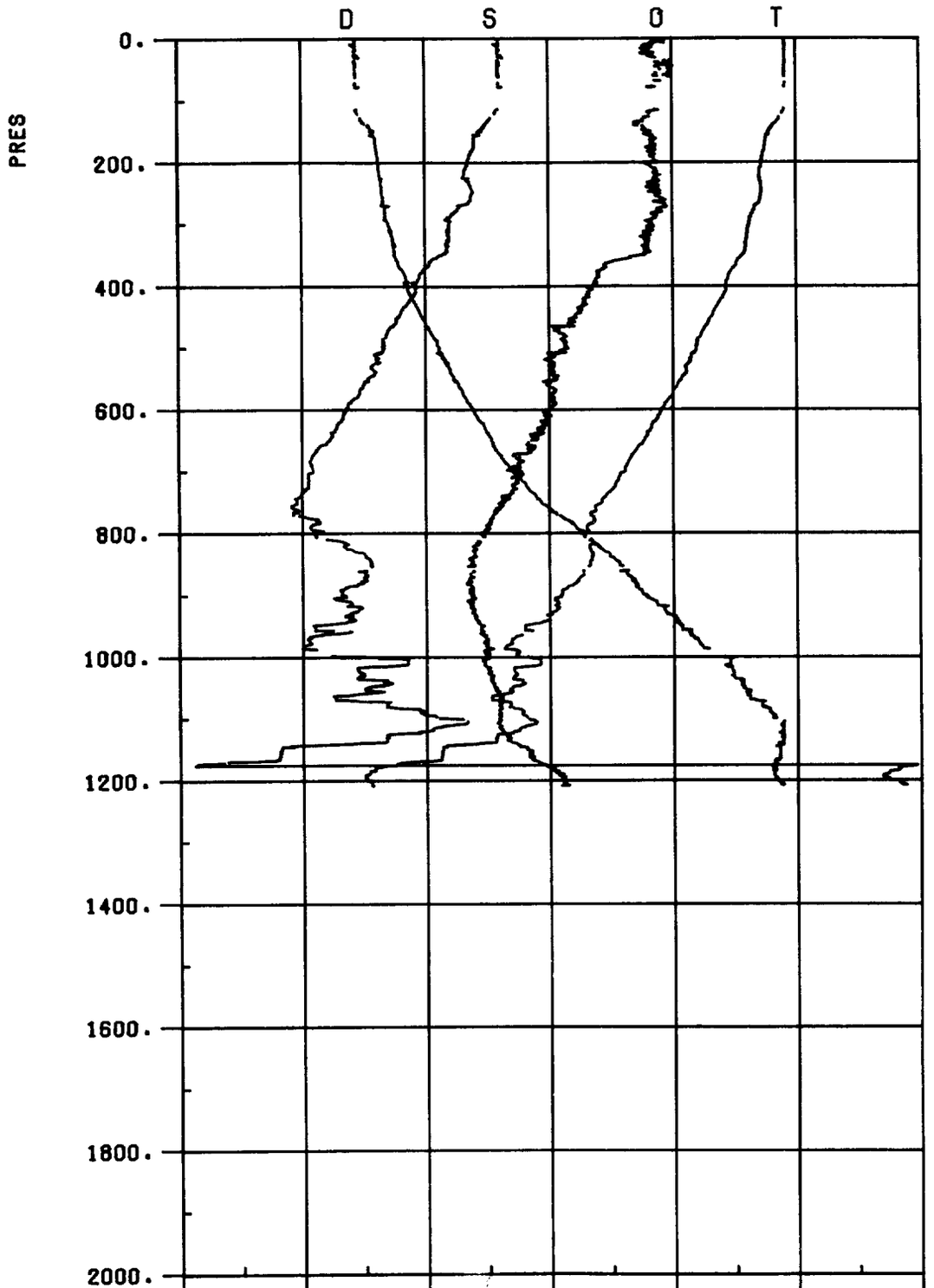
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10629 N 1983/36/1130 45 45.6N 19 23.0W

DISCOVERY 132 STATION 10629

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.854	35.727	6.12	12.853	26.986	31.378	35.672	0.	1500.6	0.	0.1064E 03	-9.999
20.	12.859	35.722	5.83	12.856	26.982	31.374	35.668	0.021	1500.9	20.	0.1070E 03	-1.131
40.	12.862	35.723	5.90	12.856	26.982	31.374	35.668	0.043	1501.2	40.	0.1076E 03	0.251
60.	12.866	-9.999	5.93	12.857	-9.999	-9.999	-9.999	-9.999	-999.9	60.	-0.9999E 01	-9.999
80.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	12.858	35.723	5.88	12.844	26.982	31.377	35.671	0.108	1502.2	99.	0.1092E 03	0.347
120.	12.849	35.718	5.90	12.833	26.980	31.375	35.670	0.130	1502.5	119.	0.1099E 03	-0.485
140.	12.833	35.719	5.79	12.814	26.984	31.380	35.675	0.152	1502.8	139.	0.1100E 03	0.859
160.	12.751	35.708	5.76	12.729	26.993	31.391	35.688	0.174	1502.8	159.	0.1098E 03	1.200
180.	12.682	35.701	5.79	12.657	27.001	31.401	35.699	0.196	1502.9	178.	0.1095E 03	1.187
200.	12.658	35.698	5.76	12.631	27.003	31.405	35.703	0.217	1503.2	198.	0.1098E 03	0.710
220.	12.567	35.688	5.68	12.537	27.013	31.417	35.718	0.239	1503.2	218.	0.1093E 03	1.320
240.	12.387	35.663	5.64	12.355	27.030	31.438	35.742	0.261	1502.9	238.	0.1082E 03	1.666
260.	12.263	35.641	5.70	12.228	27.037	31.448	35.755	0.283	1502.8	258.	0.1080E 03	1.152
280.	12.231	35.640	5.74	12.194	27.042	31.454	35.762	0.304	1503.0	278.	0.1080E 03	0.942
300.	12.234	35.645	5.82	12.194	27.045	31.458	35.766	0.326	1503.3	297.	0.1082E 03	0.797
320.	12.199	35.640	5.74	12.156	27.048	31.462	35.770	0.348	1503.5	317.	0.1084E 03	0.740
340.	12.127	35.627	5.66	12.082	27.052	31.468	35.778	0.369	1503.6	337.	0.1085E 03	0.881
360.	12.144	35.634	5.79	12.097	27.054	31.471	35.780	0.391	1504.0	357.	0.1088E 03	0.666
380.	12.095	35.623	5.80	12.045	27.056	31.474	35.784	0.413	1504.2	377.	0.1092E 03	0.579
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.522	35.537	5.40	11.464	27.098	31.530	35.852	0.488	1503.3	446.	0.1065E 03	1.484
500.	11.205	35.496	5.22	11.142	27.125	31.564	35.893	0.541	1502.9	495.	0.1049E 03	1.396
550.	11.007	35.486	5.09	10.938	27.154	31.598	35.931	0.593	1503.1	545.	0.1031E 03	1.421
600.	10.652	35.442	4.99	10.578	27.183	31.636	35.977	0.644	1502.6	594.	0.1011E 03	1.476
700.	9.580	35.330	4.64	9.499	27.281	31.758	36.122	0.742	1500.3	693.	0.9274E 02	1.900
800.	-9.999	-9.999	4.45	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	792.	-0.9999E 01	-9.999
900.	8.079	35.334	4.44	7.983	27.525	32.037	36.433	0.905	1498.0	891.	0.7140E 02	2.071
1000.	7.059	35.266	4.68	6.959	27.621	32.156	36.576	0.971	1495.7	989.	0.6213E 02	1.933
1100.	6.073	35.167	5.00	5.971	27.674	32.235	36.679	1.030	1493.4	1088.	0.5624E 02	1.590
1200.	5.510	35.128	5.27	5.402	27.716	32.289	36.747	1.084	1492.7	1187.	0.5241E 02	1.334

CTD10630



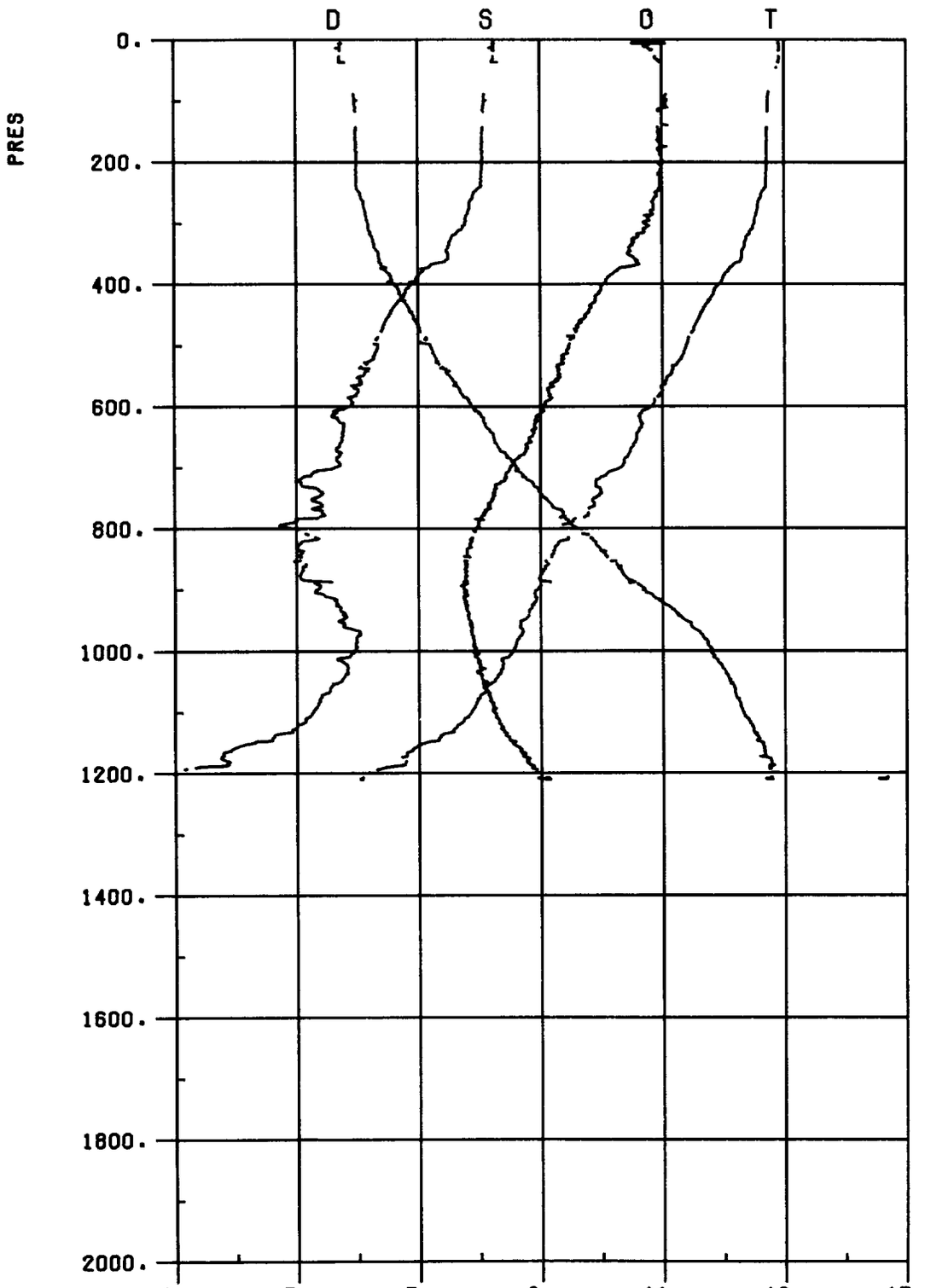
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10630 A Y 1983/36/1552 45 26.8N 19 24.3W

DISCOVERY 132 STATION 10630

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.823	35.718	5.81	12.822	26.985	31.378	35.673	0.011	1500.6	10.	0.1064E 03	-9.999
20.	12.823	35.719	5.79	12.820	26.986	31.379	35.674	0.021	1500.8	20.	0.1066E 03	0.629
40.	12.824	35.721	5.89	12.819	26.988	31.381	35.676	0.043	1501.1	40.	0.1070E 03	0.502
60.	12.817	35.719	5.86	12.809	26.988	31.382	35.677	0.064	1501.4	60.	0.1076E 03	0.332
80.	12.815	35.721	5.84	12.804	26.990	31.385	35.680	0.086	1501.7	79.	0.1079E 03	0.682
100.	12.820	35.719	6.00	12.816	26.987	31.382	35.678	0.107	1502.1	99.	0.1087E 03	-0.601
120.	12.781	35.713	5.80	12.765	26.990	31.387	35.683	0.129	1502.3	119.	0.1089E 03	0.733
140.	12.622	35.696	5.73	12.603	27.009	31.409	35.708	0.151	1502.1	139.	0.1077E 03	1.755
160.	12.508	35.680	5.85	12.487	27.019	31.422	35.724	0.172	1502.0	159.	0.1072E 03	1.327
180.	12.487	35.677	5.85	12.463	27.021	31.425	35.727	0.194	1502.2	178.	0.1075E 03	0.643
200.	12.440	35.669	5.83	12.413	27.024	31.430	35.733	0.215	1502.4	198.	0.1077E 03	0.778
220.	12.402	35.662	5.88	12.373	27.026	31.433	35.737	0.237	1502.6	218.	0.1081E 03	0.649
240.	12.435	35.674	5.83	12.402	27.029	31.436	35.739	0.259	1503.1	238.	0.1083E 03	0.721
260.	12.418	35.673	5.93	12.383	27.032	31.440	35.743	0.280	1503.3	258.	0.1086E 03	0.722
280.	12.300	35.648	5.90	12.262	27.035	31.446	35.752	0.302	1503.2	278.	0.1087E 03	0.836
300.	12.233	35.638	5.83	12.193	27.040	31.453	35.761	0.324	1503.3	297.	0.1087E 03	1.000
320.	12.200	35.638	5.78	12.158	27.047	31.461	35.769	0.345	1503.5	317.	0.1086E 03	1.049
340.	12.176	35.635	5.79	12.130	27.049	31.464	35.773	0.367	1503.8	337.	0.1089E 03	0.699
360.	12.034	35.608	5.52	11.987	27.055	31.474	35.785	0.389	1503.6	357.	0.1087E 03	1.104
380.	11.912	35.591	5.40	11.862	27.066	31.488	35.802	0.411	1503.5	377.	0.1081E 03	1.388
400.	11.850	35.584	5.35	11.797	27.072	31.496	35.811	0.432	1503.6	396.	0.1080E 03	1.062
450.	11.613	35.555	5.21	11.555	27.095	31.524	35.845	0.486	1503.6	446.	0.1069E 03	1.274
500.	11.370	35.532	5.14	11.306	27.122	31.558	35.883	0.539	1503.5	495.	0.1053E 03	1.393
550.	11.128	35.506	5.05	11.059	27.147	31.589	35.919	0.591	1503.5	545.	0.1039E 03	1.342
600.	10.807	35.471	4.99	10.732	27.178	31.627	35.965	0.643	1503.2	594.	0.1018E 03	1.501
700.	10.207	35.415	4.74	10.122	27.241	31.705	36.055	0.743	1502.6	693.	0.9737E 02	1.520
800.	9.585	35.424	4.46	9.491	27.354	31.833	36.197	0.836	1502.0	792.	0.8795E 02	1.985
900.	9.178	35.466	4.37	9.075	27.454	31.943	36.315	0.919	1502.3	891.	0.7997E 02	1.851
1000.	8.698	35.523	4.48	8.586	27.585	32.076	36.458	0.994	1502.2	989.	0.6962E 02	2.049
1100.	8.679	35.636	4.59	8.555	27.662	32.170	36.552	1.060	1504.0	1088.	0.6294E 02	1.718
1200.	6.051	35.155	5.11	5.938	27.669	32.230	36.675	1.121	1494.9	1187.	0.5819E 02	1.485

CTD10631



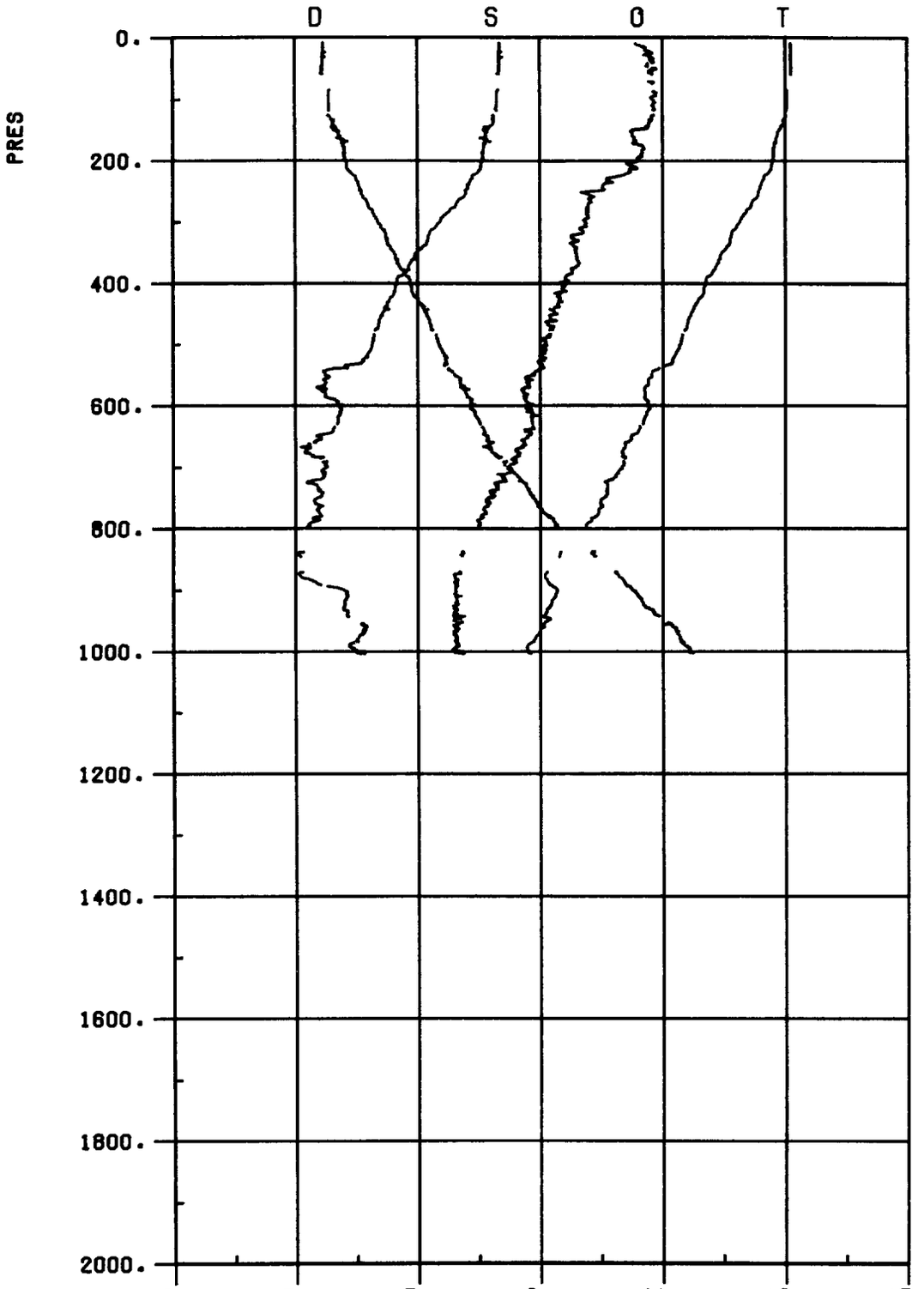
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10631 N 1983/36/1847 45 10.2N 19 30.5W

DISCOVERY 132 STATION 10631

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.913	35.724	5.87	12.911	26.972	31.363	35.656	0.011	1500.9	10.	0.1077E 03	-9.999
20.	12.914	35.724	5.90	12.911	26.972	31.363	35.656	0.022	1501.1	20.	0.1079E 03	0.462
40.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	40.	-0.9999E 01	-9.999
60.	12.875	35.715	6.00	12.867	-9.999	31.366	35.660	0.065	1501.6	60.	0.1089E 03	0.413
80.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	12.732	35.709	6.03	12.718	26.997	31.394	35.691	0.108	1501.8	99.	0.1078E 03	1.396
120.	12.724	35.707	6.02	12.707	26.997	31.395	35.692	0.130	1502.1	119.	0.1083E 03	0.338
140.	12.714	35.705	6.01	12.695	26.997	31.396	35.693	0.151	1502.4	139.	0.1088E 03	0.439
160.	12.712	35.705	5.98	12.690	26.998	31.397	35.694	0.173	1502.7	159.	0.1092E 03	0.377
180.	12.707	35.705	5.97	12.683	26.998	31.398	35.696	0.195	1503.0	178.	0.1097E 03	0.432
200.	12.706	35.704	5.98	12.679	26.999	31.399	35.697	0.217	1503.3	198.	0.1102E 03	0.317
220.	12.703	35.703	5.97	12.672	26.999	31.400	35.697	0.239	1503.7	218.	0.1108E 03	0.300
240.	12.699	35.703	5.98	12.666	26.999	31.401	35.698	0.261	1504.0	238.	0.1113E 03	0.347
260.	12.601	35.688	5.94	12.566	27.007	31.411	35.711	0.284	1504.0	258.	0.1110E 03	1.205
280.	12.547	35.682	5.92	12.509	27.013	31.419	35.720	0.306	1504.1	278.	0.1109E 03	1.047
300.	12.503	35.677	5.85	12.462	27.018	31.425	35.727	0.328	1504.3	297.	0.1110E 03	0.922
320.	12.394	35.657	5.80	12.351	27.023	31.434	35.738	0.350	1504.2	317.	0.1109E 03	1.050
340.	12.338	35.649	5.73	12.292	27.028	31.440	35.746	0.372	1504.4	337.	0.1109E 03	0.957
360.	12.284	35.646	5.79	12.235	27.037	31.450	35.757	0.394	1504.5	357.	0.1106E 03	1.205
380.	12.063	35.607	5.62	12.013	27.049	31.467	35.779	0.416	1504.0	377.	0.1098E 03	1.500
400.	11.933	35.589	5.51	11.880	27.061	31.482	35.796	0.438	1503.9	396.	0.1091E 03	1.450
450.	11.622	35.553	5.37	11.564	27.091	31.521	35.841	0.492	1503.6	446.	0.1072E 03	1.473
500.	11.390	35.534	5.23	11.325	27.120	31.555	35.881	0.546	1503.6	495.	0.1055E 03	1.428
550.	11.102	35.507	5.15	11.032	27.152	31.594	35.926	0.598	1503.4	545.	0.1034E 03	1.509
600.	10.820	35.487	5.01	10.745	27.188	31.637	35.974	0.649	1503.2	594.	0.1009E 03	1.590
700.	10.315	35.465	4.75	10.230	27.261	31.722	36.070	0.747	1503.1	693.	0.9567E 02	1.604
800.	9.418	35.390	4.47	9.325	27.361	31.838	36.205	0.839	1501.4	792.	0.8760E 02	1.867
900.	8.933	35.434	4.38	8.831	27.469	31.963	36.340	0.922	1501.3	891.	0.7815E 02	1.976
1000.	8.539	35.495	4.45	8.428	27.580	32.083	36.469	0.994	1501.6	989.	0.6895E 02	1.949
1100.	7.847	35.426	4.62	7.730	27.632	32.151	36.553	1.061	1500.6	1088.	0.6448E 02	1.473
1200.	6.168	35.194	4.99	6.054	27.684	32.243	36.685	1.122	1495.4	1187.	0.5707E 02	1.755

CTD10632



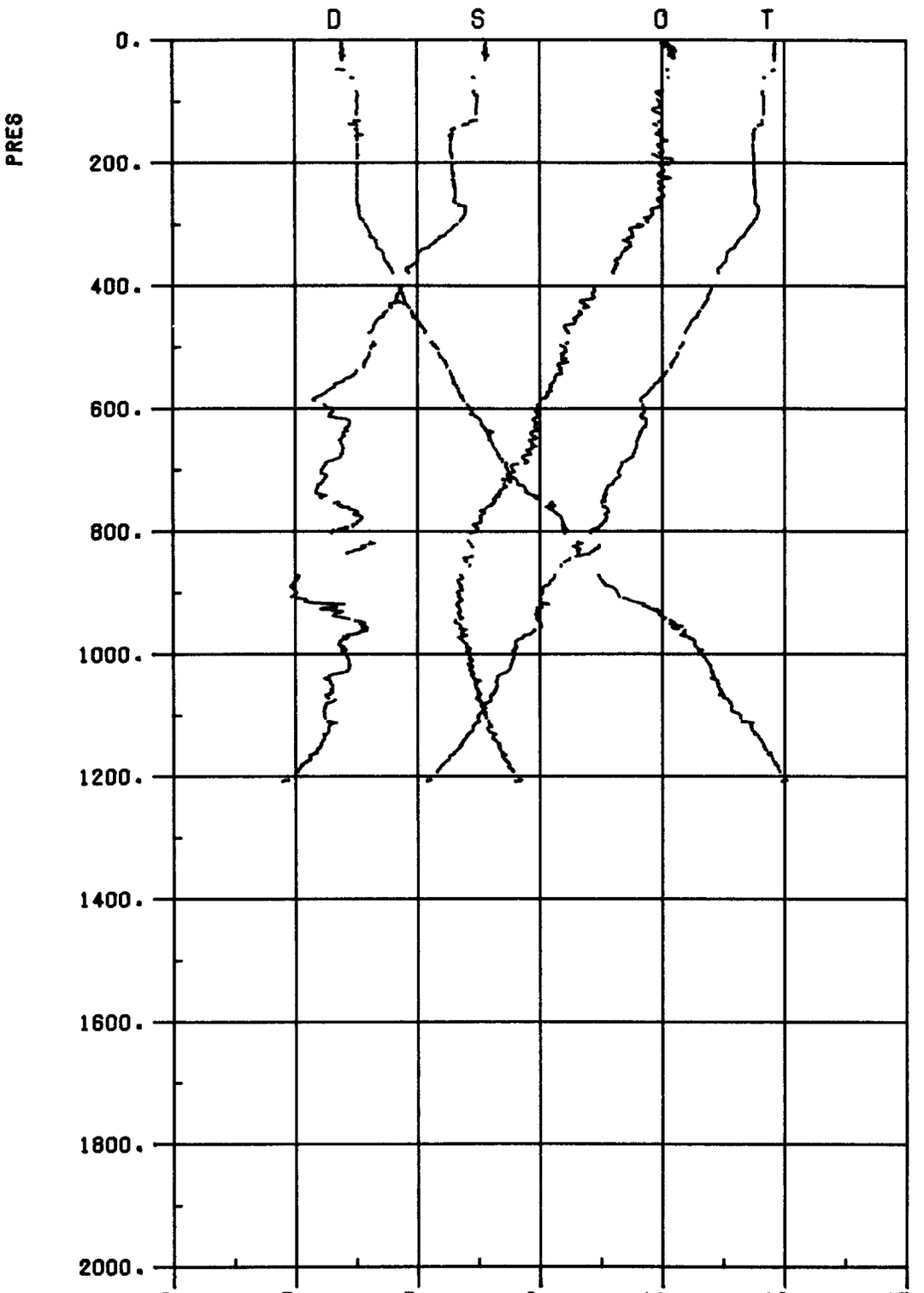
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(COS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10632 A P 1983/37/0010 44 36.7N 19 38.9W

DISCOVERY 132 STATION 10632

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.081	35.733	5.78	13.080	26.945	31.333	35.622	0.011	1501.5	10.	0.1102E 03	-9.999
20.	13.081	35.733	5.87	13.078	26.945	31.333	35.623	0.022	1501.6	20.	0.1105E 03	0.341
40.	13.087	35.733	5.92	13.082	26.944	31.332	35.622	0.044	1502.0	40.	0.1112E 03	-0.383
60.	13.088	35.732	5.90	13.080	26.943	31.331	35.621	0.067	1502.3	60.	0.1119E 03	-0.289
80.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	13.020	35.728	5.91	13.006	26.954	31.345	35.637	0.111	1502.8	99.	0.1119E 03	0.993
120.	13.016	35.728	5.92	13.000	26.955	31.346	35.638	0.134	1503.1	119.	0.1124E 03	0.414
140.	12.962	35.722	5.89	12.942	26.961	31.355	35.647	0.156	1503.2	139.	0.1123E 03	1.055
160.	12.858	35.711	5.76	12.836	26.973	31.369	35.664	0.179	1503.2	159.	0.1116E 03	1.438
180.	12.809	35.706	5.85	12.784	26.980	31.378	35.673	0.201	1503.4	178.	0.1115E 03	1.072
200.	12.786	35.704	5.79	12.759	26.982	31.381	35.677	0.223	1503.6	198.	0.1118E 03	0.708
220.	12.719	35.697	5.73	12.689	26.990	31.391	35.689	0.246	1503.7	218.	0.1116E 03	1.188
240.	12.597	35.682	5.52	12.565	27.003	31.407	35.707	0.268	1503.6	238.	0.1108E 03	1.475
260.	12.529	35.674	5.43	12.493	27.010	31.416	35.717	0.290	1503.7	258.	0.1107E 03	1.113
280.	12.374	35.653	5.38	12.337	27.024	31.434	35.738	0.312	1503.5	278.	0.1098E 03	1.562
300.	12.249	35.635	5.36	12.209	27.035	31.447	35.754	0.334	1503.4	297.	0.1092E 03	1.368
320.	12.117	35.618	5.32	12.074	27.047	31.463	35.773	0.356	1503.2	317.	0.1085E 03	1.475
340.	12.038	35.608	5.28	11.993	27.055	31.473	35.784	0.377	1503.3	337.	0.1082E 03	1.146
360.	11.920	35.592	5.30	11.872	27.065	31.486	35.800	0.399	1503.2	357.	0.1077E 03	1.368
380.	11.823	35.583	5.25	11.773	27.076	31.500	35.816	0.420	1503.2	377.	0.1070E 03	1.403
400.	11.691	35.565	5.18	11.639	27.088	31.514	35.833	0.442	1503.0	396.	0.1064E 03	1.416
450.	11.452	35.542	5.12	11.394	27.115	31.547	35.871	0.495	1503.0	446.	0.1049E 03	1.382
500.	11.275	35.525	5.04	11.212	27.134	31.572	35.899	0.547	1503.2	495.	0.1041E 03	1.193
550.	10.813	35.450	4.93	10.744	27.161	31.609	35.946	0.599	1502.3	545.	0.1023E 03	1.431
600.	10.762	35.473	4.91	10.687	27.187	31.638	35.976	0.649	1503.0	594.	0.1009E 03	1.337
700.	10.325	35.449	4.75	10.240	27.247	31.708	36.056	0.749	1503.1	693.	0.9697E 02	1.458
800.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	792.	-0.9999E 01	-9.999
900.	9.261	35.478	4.30	9.157	27.451	31.937	36.308	0.927	1502.6	891.	0.8046E 02	1.883
1000.	8.788	35.500	4.32	8.676	27.544	32.043	36.423	1.004	1502.5	990.	0.7277E 02	1.819

CTD10633



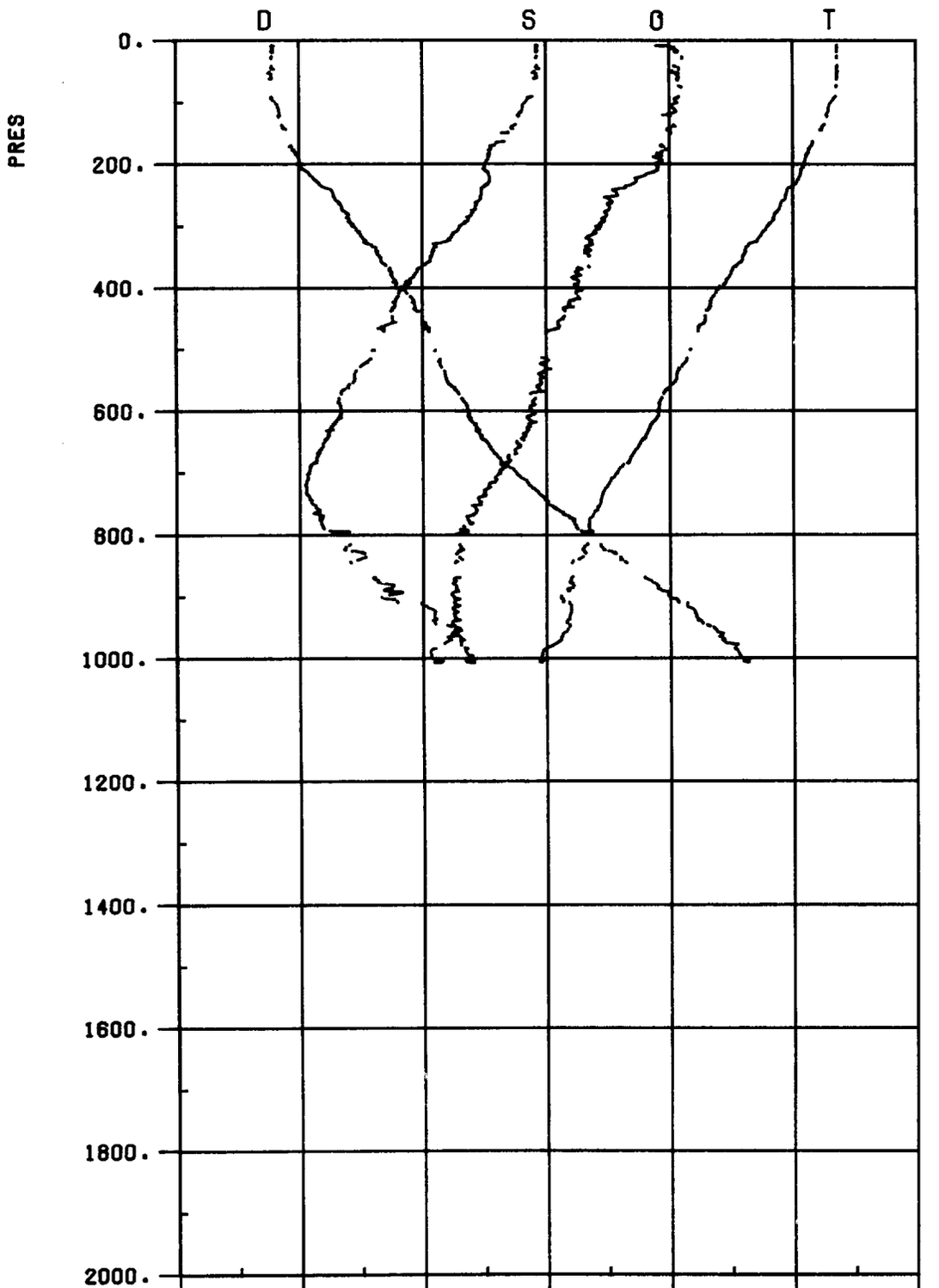
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10633 A N 1983/37/0520 44 00.0N 19 46.3W

DISCOVERY 132 STATION 10633

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.842	35.712	6.05	12.840	26.977	31.369	35.664	0.011	1500.7	10.	0.1072E 03	-9.999
20.	12.841	35.712	6.09	12.839	26.977	31.370	35.664	0.021	1500.8	20.	0.1075E 03	0.352
40.	12.840	35.710	6.08	12.834	26.976	31.370	35.664	0.043	1501.2	40.	0.1081E 03	-0.163
60.	12.678	35.692	6.05	12.669	26.995	31.392	35.689	0.065	1500.9	60.	0.1069E 03	1.724
80.	12.664	-9.999	-9.99	12.654	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	12.665	35.698	5.97	12.652	27.002	31.400	35.698	0.107	1501.5	99.	0.1073E 03	0.810
120.	12.660	35.696	5.98	12.644	27.002	31.401	35.699	0.129	1501.9	119.	0.1078E 03	0.228
140.	12.602	35.679	5.95	12.583	27.000	31.401	35.700	0.150	1502.0	139.	0.1085E 03	-0.403
160.	12.497	35.656	6.00	12.475	27.003	31.406	35.708	0.172	1501.9	159.	0.1087E 03	0.759
180.	12.493	35.655	6.00	12.469	27.002	31.406	35.708	0.194	1502.2	178.	0.1093E 03	0.049
200.	12.503	35.657	6.06	12.477	27.002	31.407	35.709	0.216	1502.6	198.	0.1098E 03	0.341
220.	12.511	35.659	5.97	12.482	27.002	31.407	35.709	0.238	1503.0	218.	0.1104E 03	0.139
240.	12.520	35.661	6.01	12.488	27.002	31.407	35.709	0.260	1503.3	238.	0.1109E 03	0.197
260.	12.521	35.661	5.97	12.486	27.002	31.408	35.709	0.282	1503.7	258.	0.1115E 03	0.251
280.	12.574	35.679	5.92	12.536	27.005	31.411	35.711	0.305	1504.2	278.	0.1116E 03	0.798
300.	12.461	35.664	5.82	12.420	27.016	31.424	35.727	0.327	1504.1	297.	0.1111E 03	1.348
320.	12.324	35.640	5.76	12.281	27.024	31.436	35.741	0.349	1504.0	317.	0.1108E 03	1.237
340.	12.156	35.613	5.71	12.111	27.036	31.452	35.761	0.371	1503.7	337.	0.1101E 03	1.470
360.	12.045	35.600	5.62	11.997	27.047	31.466	35.777	0.393	1503.6	357.	0.1094E 03	1.419
380.	11.921	35.586	5.60	11.871	27.060	31.481	35.795	0.415	1503.5	377.	0.1087E 03	1.472
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.574	35.544	5.31	11.516	27.093	31.524	35.845	0.490	1503.4	446.	0.1070E 03	1.309
500.	11.302	35.524	5.19	11.238	27.129	31.566	35.893	0.543	1503.3	495.	0.1046E 03	1.576
550.	10.994	35.488	5.12	10.925	27.157	31.602	35.935	0.595	1503.0	545.	0.1028E 03	1.438
600.	10.697	35.455	4.99	10.622	27.186	31.638	35.977	0.646	1502.8	594.	0.1009E 03	1.440
700.	10.296	35.443	4.78	10.211	27.247	31.709	36.058	0.745	1503.0	693.	0.9690E 02	1.475
800.	9.839	35.463	4.49	9.743	27.342	31.815	36.173	0.838	1503.0	792.	0.8955E 02	1.805
900.	9.042	35.401	4.33	8.940	27.426	31.918	36.293	0.924	1501.7	891.	0.8235E 02	1.779
1000.	8.575	35.480	4.42	8.463	27.563	32.065	36.450	0.999	1501.7	990.	0.7066E 02	2.154
1100.	7.993	35.447	4.55	7.875	27.627	32.143	36.542	1.068	1501.2	1088.	0.6526E 02	1.577
1200.	7.219	35.403	4.80	7.096	27.700	32.240	36.656	1.130	1499.8	1187.	0.5777E 02	1.775

CTD10634



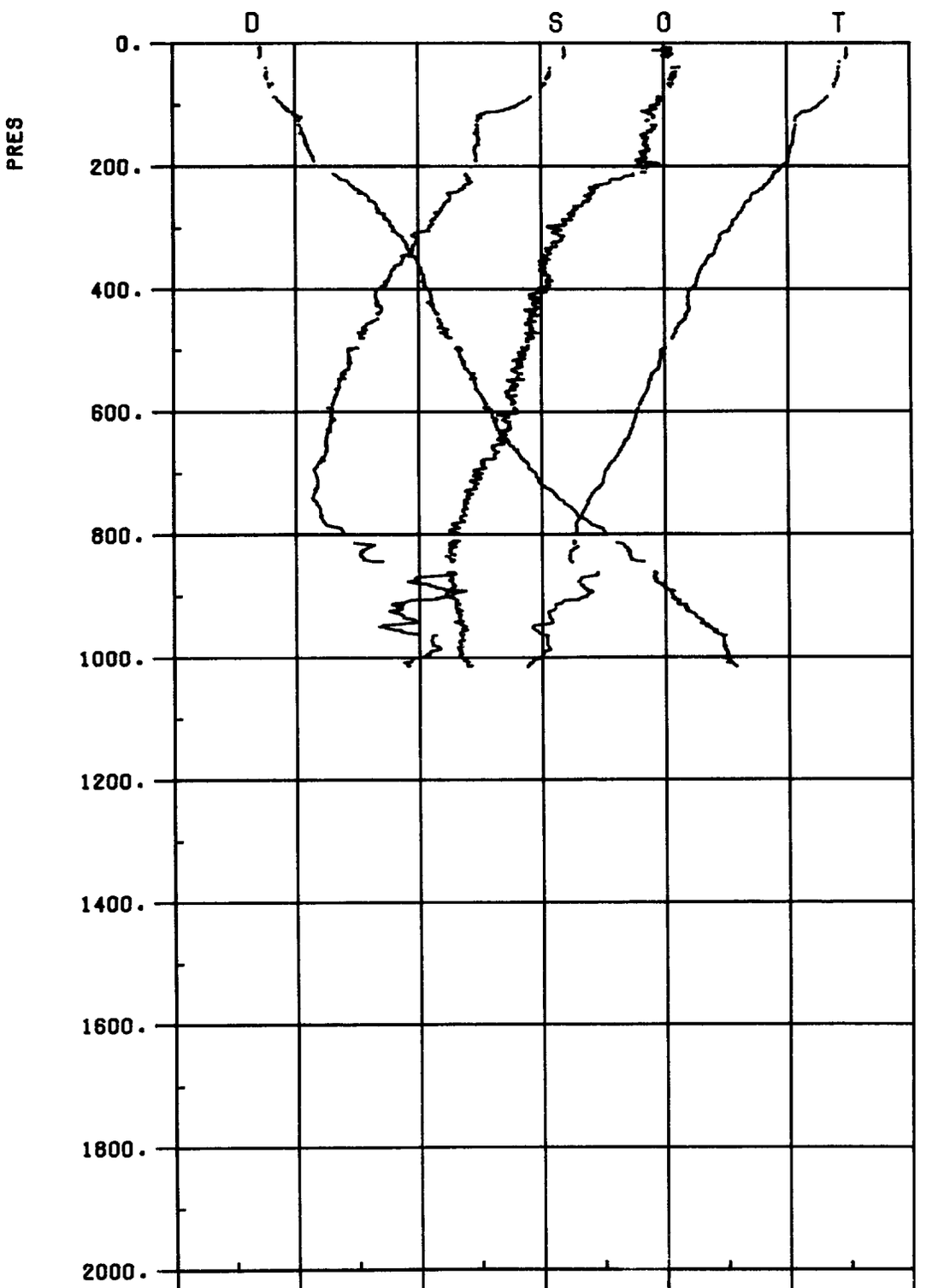
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10634 E 1983/37/0943 43 24.8N 13 53.6W

DISCOVERY 132 STATION 10634

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.708	35.785	5.96	13.707	26.856	31.231	35.509	0.012	1503.6	10.	0.1187E 03	-9.999
20.	13.707	35.785	6.06	13.704	26.857	31.232	35.510	0.024	1503.8	20.	0.1189E 03	0.470
40.	13.712	35.785	6.04	13.706	26.855	31.231	35.509	0.048	1504.1	40.	0.1196E 03	-0.313
60.	13.710	35.784	6.07	13.702	26.855	31.231	35.509	0.072	1504.4	60.	0.1202E 03	0.049
80.	13.699	35.779	6.07	13.687	26.853	31.231	35.509	0.096	1504.7	79.	0.1209E 03	-0.392
100.	13.616	35.767	6.05	13.602	26.861	31.241	35.521	0.120	1504.8	99.	0.1207E 03	1.176
120.	13.542	35.756	5.98	13.525	26.868	31.250	35.531	0.144	1504.8	119.	0.1206E 03	1.086
140.	13.472	35.744	6.02	13.452	26.874	31.258	35.541	0.168	1504.9	139.	0.1206E 03	1.026
160.	13.375	-9.999	5.92	13.351	-9.999	-9.999	-9.999	-9.999	-999.9	159.	-0.9999E 01	-9.999
180.	13.243	35.709	5.92	13.218	26.893	31.283	35.570	0.216	1504.8	178.	0.1198E 03	1.293
200.	13.169	35.701	5.89	13.141	26.902	31.294	35.583	0.240	1504.9	198.	0.1195E 03	1.239
220.	13.103	35.708	5.77	13.073	26.922	31.315	35.605	0.264	1505.0	218.	0.1182E 03	1.787
240.	12.915	35.696	5.59	12.882	26.950	31.348	35.641	0.287	1504.7	238.	0.1160E 03	2.161
260.	12.822	35.690	5.53	12.787	26.964	31.364	35.660	0.310	1504.7	258.	0.1151E 03	1.546
280.	12.712	35.681	5.48	12.673	26.979	31.382	35.680	0.333	1504.7	278.	0.1142E 03	1.595
300.	12.578	35.660	5.42	12.538	26.989	31.396	35.696	0.356	1504.5	297.	0.1137E 03	1.360
320.	12.438	35.644	5.34	12.395	27.005	31.414	35.718	0.379	1504.4	317.	0.1127E 03	1.609
340.	12.220	35.616	5.34	12.175	27.026	31.440	35.748	0.401	1503.9	337.	0.1111E 03	1.918
360.	12.117	35.606	-9.99	12.069	27.038	31.455	35.765	0.423	1503.9	357.	0.1104E 03	1.437
380.	11.974	35.586	5.26	11.923	27.050	31.471	35.784	0.445	1503.7	377.	0.1096E 03	1.487
400.	11.798	35.565	5.27	11.745	27.068	31.492	35.809	0.467	1503.4	396.	0.1083E 03	1.746
450.	11.569	35.551	5.13	11.511	27.100	31.530	35.852	0.521	1503.4	446.	0.1064E 03	1.490
500.	11.327	35.519	5.02	11.263	27.120	31.557	35.883	0.574	1503.4	495.	0.1054E 03	1.227
550.	11.094	35.488	4.95	11.024	27.139	31.582	35.913	0.626	1503.4	545.	0.1046E 03	1.198
600.	10.812	35.467	4.89	10.737	27.174	31.623	35.961	0.678	1503.2	594.	0.1022E 03	1.564
700.	10.138	35.414	4.62	10.054	27.252	31.717	36.069	0.778	1502.4	693.	0.9624E 02	1.677
800.	9.723	35.479	4.28	9.629	27.374	31.849	36.210	0.869	1502.6	792.	0.8635E 02	2.025
900.	9.220	35.534	4.26	9.116	27.501	31.988	36.359	0.950	1502.5	891.	0.7571E 02	2.080
1000.	8.905	35.616	4.38	8.791	27.617	32.112	36.489	1.021	1503.1	990.	0.6629E 02	1.975

CTD10635



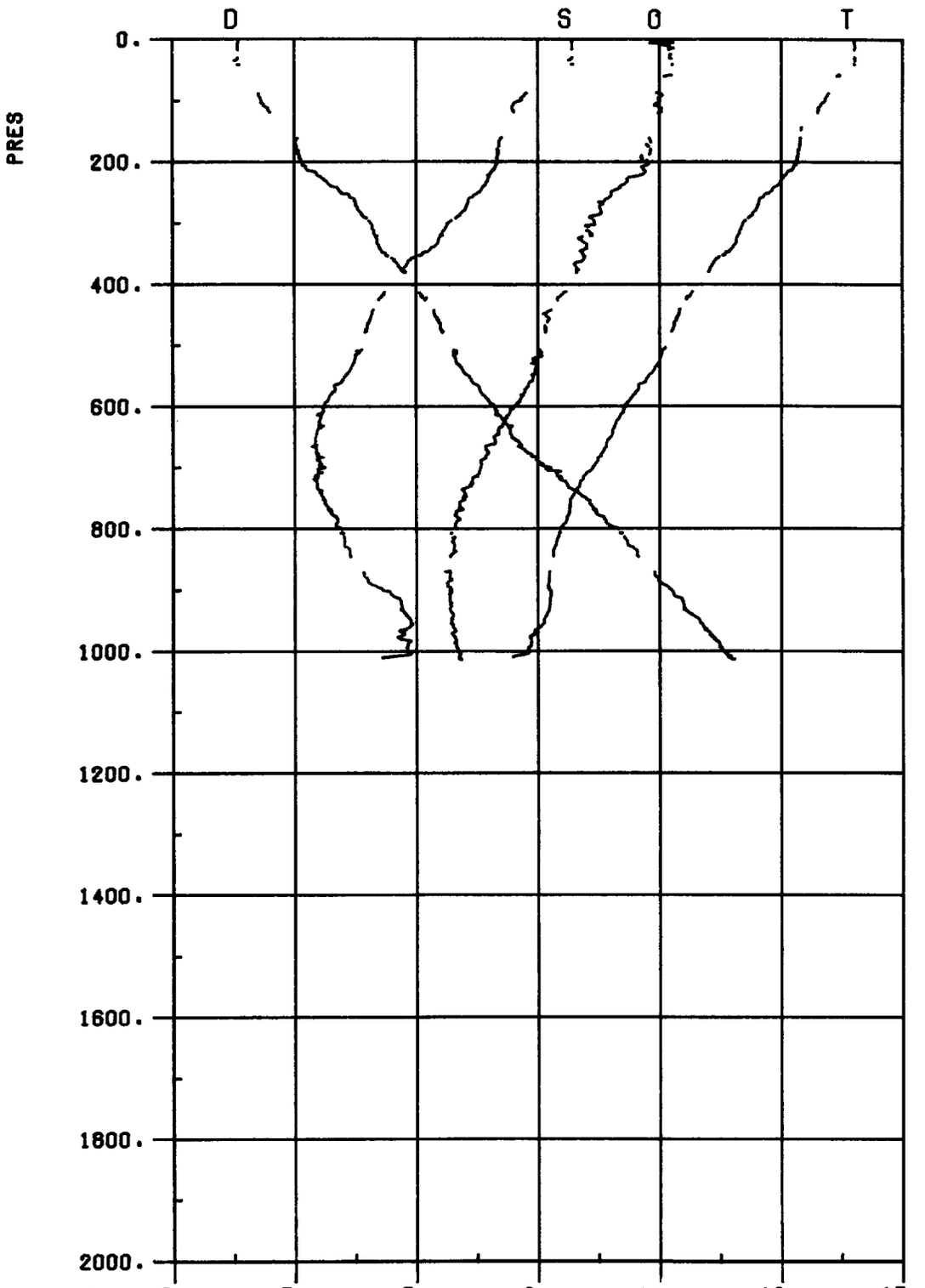
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMH.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10635 E 1983/37/1409 42 50.4N 20 02.5W

DISCOVERY 132 STATION 10635

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.965	35.837	6.00	13.963	26.842	31.212	35.485	0.012	1504.5	10.	0.1200E 03	-9.999
20.	13.966	35.838	6.02	13.964	26.843	31.213	35.486	0.024	1504.7	20.	0.1203E 03	0.464
40.	13.834	35.813	6.06	13.828	26.852	31.225	35.501	0.048	1504.5	40.	0.1200E 03	1.219
60.	13.804	35.810	6.06	13.796	26.855	31.230	35.506	0.072	1504.8	60.	0.1202E 03	0.816
80.	-9.999	-9.999	6.01	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	13.515	35.762	5.93	13.501	26.879	31.260	35.542	0.120	1504.4	99.	0.1191E 03	1.409
120.	13.147	35.699	5.91	13.130	26.905	31.295	35.584	0.144	1503.5	119.	0.1170E 03	2.106
140.	13.112	35.695	5.90	13.093	26.910	31.301	35.591	0.167	1503.7	139.	0.1172E 03	0.870
160.	13.085	35.697	5.84	13.063	26.916	31.308	35.599	0.191	1503.9	159.	0.1171E 03	1.066
180.	13.022	35.693	5.83	12.997	26.926	31.320	35.612	0.214	1504.1	178.	0.1167E 03	1.284
200.	12.911	35.684	5.84	12.884	26.943	31.339	35.633	0.237	1504.0	198.	0.1157E 03	1.642
220.	12.744	35.680	5.62	12.713	26.972	31.373	35.670	0.260	1503.8	218.	0.1132E 03	2.238
240.	12.532	35.666	5.42	12.500	27.004	31.409	35.710	0.282	1503.4	238.	0.1108E 03	2.264
260.	12.371	35.648	5.37	12.336	27.021	31.430	35.735	0.304	1503.1	258.	0.1095E 03	1.722
280.	12.188	35.629	5.23	12.150	27.043	31.456	35.764	0.326	1502.8	278.	0.1079E 03	1.903
300.	12.069	35.619	5.09	12.029	27.057	31.473	35.784	0.348	1502.7	297.	0.1070E 03	1.578
320.	11.890	35.598	5.16	11.848	27.075	31.496	35.810	0.369	1502.4	317.	0.1057E 03	1.769
340.	11.802	35.589	5.05	11.758	27.085	31.508	35.824	0.390	1502.5	337.	0.1052E 03	1.326
360.	11.651	35.571	5.01	11.605	27.100	31.526	35.845	0.411	1502.3	357.	0.1042E 03	1.573
380.	11.534	35.553	5.05	11.485	27.108	31.538	35.859	0.432	1502.2	377.	0.1038E 03	1.260
400.	11.434	35.537	4.99	11.382	27.114	31.546	35.870	0.452	1502.1	396.	0.1037E 03	1.045
450.	11.312	35.532	4.90	11.256	27.133	31.569	35.895	0.504	1502.5	446.	0.1030E 03	1.160
500.	10.953	35.488	4.86	10.890	27.165	31.609	35.943	0.555	1502.0	495.	0.1009E 03	1.519
550.	10.746	35.471	4.78	10.678	27.189	31.638	35.977	0.605	1502.1	545.	0.9957E 02	1.306
600.	10.526	35.458	4.78	10.453	27.218	31.673	36.016	0.655	1502.2	594.	0.9773E 02	1.436
700.	9.999	35.431	4.48	9.916	27.289	31.757	36.112	0.751	1501.9	693.	0.9258E 02	1.591
800.	9.543	35.478	4.28	9.450	27.403	31.882	36.246	0.839	1502.0	792.	0.8335E 02	1.968
900.	9.722	35.654	4.22	9.615	27.511	31.988	36.347	0.918	1504.5	891.	0.7562E 02	1.834
1000.	8.951	35.601	4.35	8.837	27.598	32.092	36.468	0.989	1503.3	990.	0.6815E 02	1.806

CTD10636



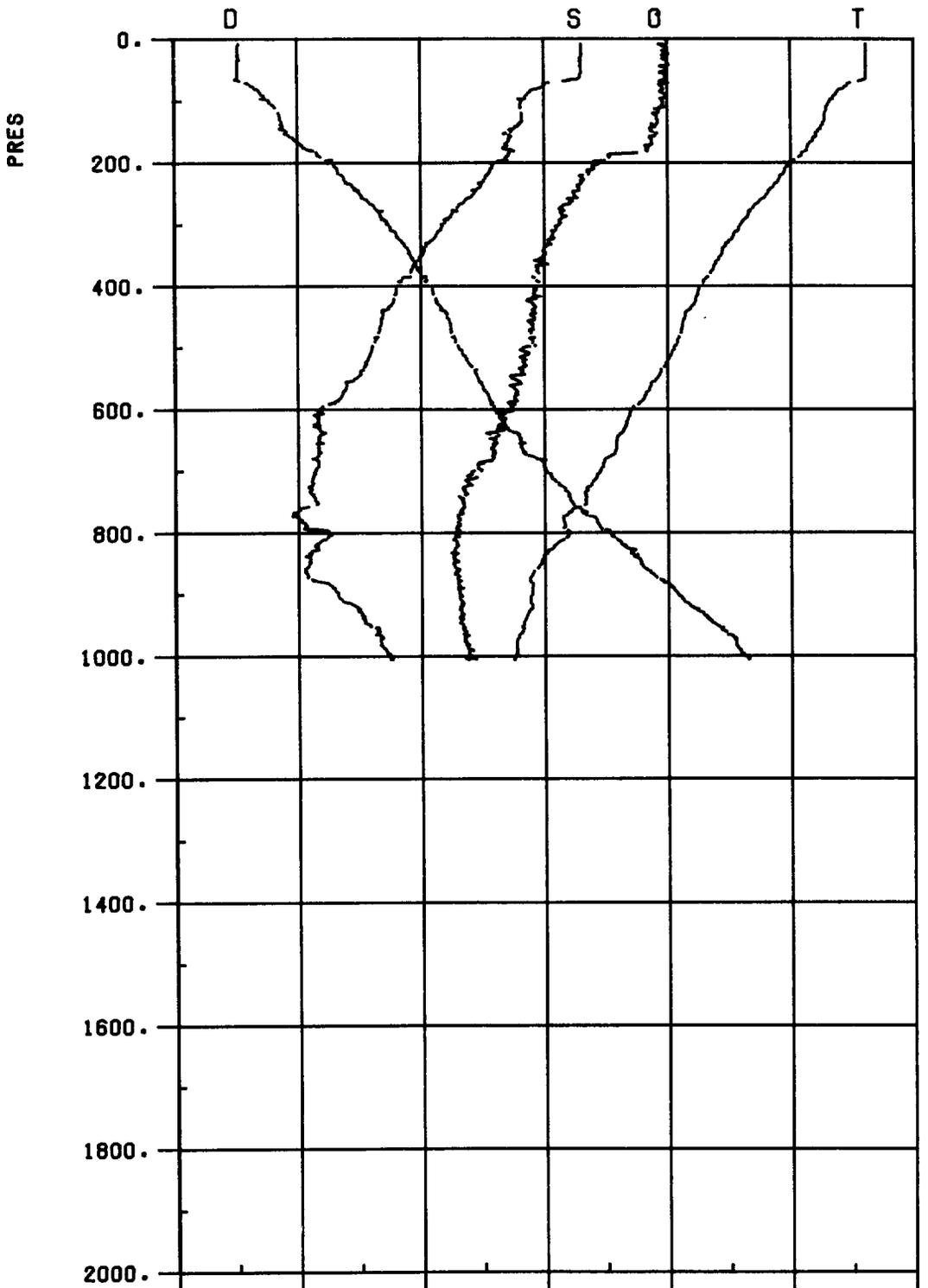
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10636 A C 1983/37/1837 42 15.6N 20 09.1W

DISCOVERY 132 STATION 10636

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	14.197	35.855	6.05	14.196	26.807	31.173	35.441	0.012	1505.3	10.	0.1234E 03	-9.999
20.	14.197	35.856	6.09	14.194	26.808	31.173	35.442	0.025	1505.4	20.	0.1236E 03	0.504
40.	14.197	35.855	6.11	14.191	26.807	31.173	35.442	0.049	1505.8	40.	0.1242E 03	-0.085
60.	13.937	35.801	6.07	13.928	26.823	31.193	35.467	0.074	1505.2	60.	0.1235E 03	1.518
80.	-9.999	-9.999	6.08	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	79.	-0.9999E 01	-9.999
100.	13.710	35.771	6.00	13.696	26.845	31.223	35.501	0.123	1505.1	99.	0.1223E 03	1.436
120.	13.595	35.759	6.00	13.578	26.859	31.241	35.521	0.148	1505.0	119.	0.1214E 03	1.553
140.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	139.	-0.9999E 01	-9.999
160.	13.303	35.738	5.91	13.280	26.904	31.292	35.578	0.196	1504.7	159.	0.1183E 03	1.904
180.	13.278	35.734	5.9[illegible]	13.253	26.906	31.294	35.581	0.219	1504.9	179.	0.1187E 03	0.625
200.	13.246	35.733	5.90	13.218	26.911	31.301	35.589	0.243	1505.2	198.	0.1187E 03	1.004
220.	13.075	35.721	5.86	13.045	26.937	31.331	35.621	0.267	1504.9	218.	0.1167E 03	2.056
240.	12.899	35.710	5.67	12.865	26.964	31.362	35.657	0.290	1504.7	238.	0.1146E 03	2.136
260.	12.649	35.687	5.57	12.614	26.996	31.400	35.699	0.312	1504.1	258.	0.1120E 03	2.306
280.	12.562	35.678	5.52	12.524	27.007	31.413	35.713	0.335	1504.2	278.	0.1115E 03	1.335
300.	12.361	35.652	5.48	12.321	27.026	31.436	35.741	0.357	1503.8	297.	0.1101E 03	1.813
320.	12.280	35.640	5.43	12.237	27.033	31.446	35.752	0.379	1503.8	317.	0.1099E 03	1.124
340.	12.193	35.627	5.40	12.148	27.039	31.454	35.762	0.401	1503.8	337.	0.1098E 03	1.081
360.	11.910	35.588	5.37	11.863	27.064	31.485	35.799	0.423	1503.2	357.	0.1078E 03	2.070
380.	11.800	35.580	5.31	11.750	27.079	31.502	35.819	0.444	1503.1	377.	0.1068E 03	1.583
400.	11.554	-9.999	5.21	11.502	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.298	35.526	5.05	11.241	27.131	31.567	35.893	0.518	1502.5	446.	0.1032E 03	1.616
500.	11.088	35.507	5.03	11.025	27.155	31.596	35.928	0.569	1502.5	495.	0.1019E 03	1.318
550.	10.814	35.483	4.95	10.745	27.186	31.634	35.971	0.619	1502.4	545.	0.9990E 02	1.485
600.	10.419	35.447	4.80	10.346	27.229	31.686	36.031	0.668	1501.8	594.	0.9659E 02	1.745
700.	9.897	35.442	4.52	9.813	27.316	31.786	36.142	0.762	1501.5	693.	0.8996E 02	1.738
800.	9.362	35.475	4.32	9.270	27.430	31.914	36.282	0.848	1501.3	792.	0.8043E 02	1.991
900.	9.184	35.549	4.28	9.080	27.519	32.006	36.378	0.925	1502.4	891.	0.7400E 02	1.703
1000.	8.833	35.587	4.34	8.720	27.605	32.102	36.481	0.996	1502.8	990.	0.6719E 02	1.737

CTD10637



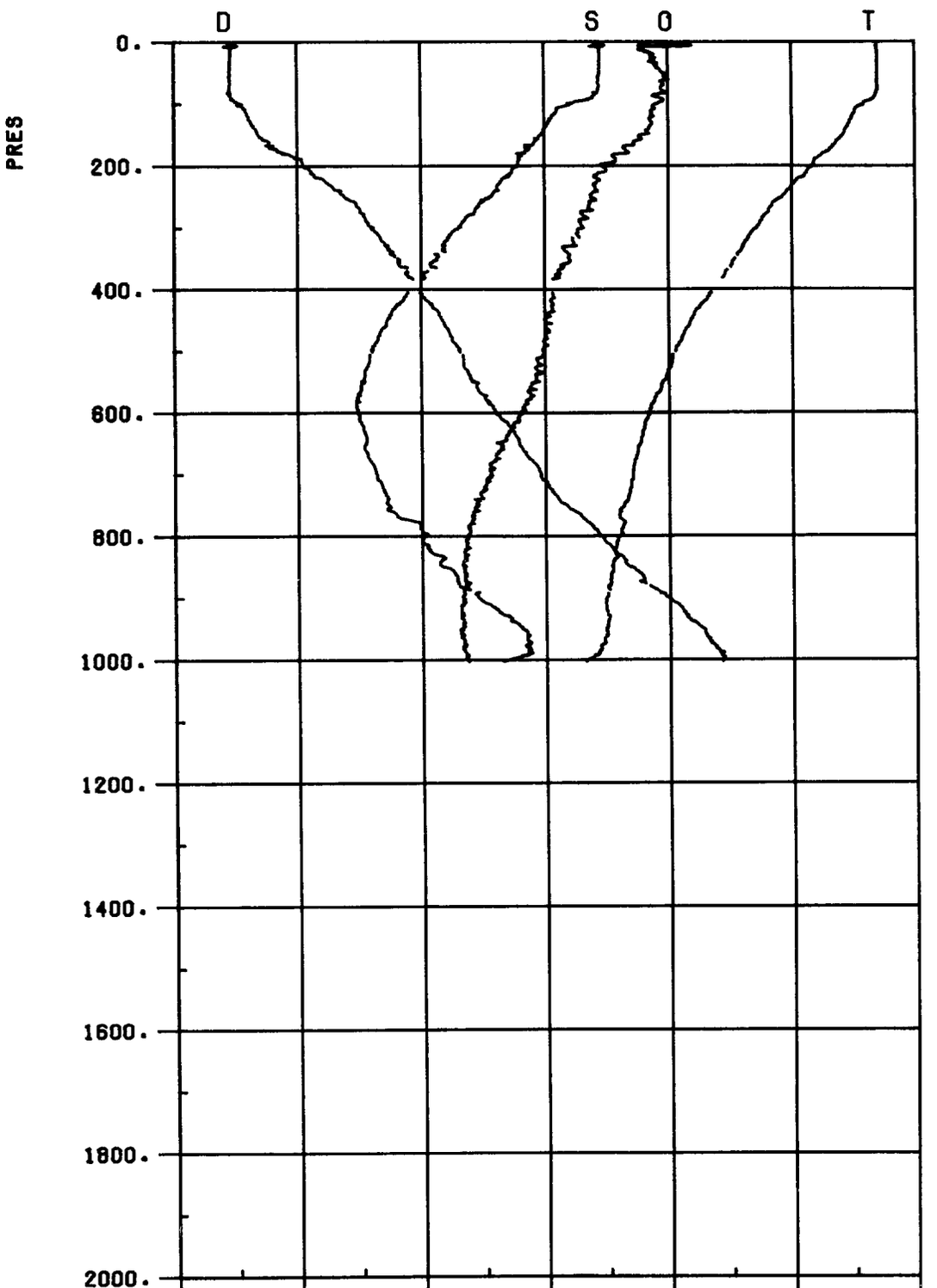
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10637 E 1983/37/2241 41 40.8N 20 16.0W

DISCOVERY 132 STATION 10637

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	14.229	35.861	5.96	14.228	26.804	31.169	35.437	0.012	1505.4	10.	0.1236E 03	-9.999
20.	14.236	35.861	5.98	14.233	26.803	31.168	35.436	0.025	1505.6	20.	0.1240E 03	-0.542
40.	14.232	35.859	6.01	14.226	26.803	31.169	35.437	0.050	1505.9	40.	0.1246E 03	0.228
60.	14.232	35.859	5.99	14.223	26.802	31.169	35.437	0.075	1506.2	60.	0.1253E 03	0.085
80.	13.834	35.788	5.97	13.822	26.832	31.207	35.483	0.099	1505.2	79.	0.1230E 03	2.212
100.	13.640	35.763	5.96	13.626	26.853	31.232	35.512	0.124	1504.8	99.	0.1215E 03	1.853
120.	13.559	35.763	5.91	13.542	26.870	31.252	35.533	0.148	1504.9	119.	0.1204E 03	1.679
140.	13.511	35.756	5.89	13.491	26.875	31.258	35.540	0.172	1505.1	139.	0.1205E 03	0.953
160.	13.391	35.744	5.87	13.368	26.890	31.276	35.561	0.196	1505.0	159.	0.1196E 03	1.595
180.	13.252	35.743	5.84	13.227	26.919	31.307	35.594	0.220	1504.9	179.	0.1175E 03	2.121
200.	13.007	35.719	5.41	12.979	26.949	31.344	35.636	0.243	1504.4	198.	0.1150E 03	2.276
220.	12.839	35.706	5.31	12.809	26.973	31.371	35.667	0.266	1504.1	218.	0.1132E 03	1.977
240.	12.697	35.695	5.28	12.664	26.993	31.395	35.693	0.289	1504.0	238.	0.1118E 03	1.824
260.	12.522	35.673	5.20	12.487	27.010	31.416	35.718	0.311	1503.7	258.	0.1106E 03	1.732
280.	12.321	35.652	5.14	12.283	27.034	31.444	35.750	0.333	1503.3	278.	0.1088E 03	1.986
300.	12.181	35.635	5.11	12.141	27.048	31.462	35.770	0.354	1503.1	297.	0.1079E 03	1.563
320.	12.055	35.622	5.07	12.013	27.063	31.480	35.791	0.376	1503.0	317.	0.1070E 03	1.576
340.	11.894	35.604	4.99	11.849	27.079	31.500	35.814	0.397	1502.8	337.	0.1058E 03	1.704
360.	11.784	35.591	4.96	11.736	27.090	31.514	35.830	0.418	1502.7	357.	0.1052E 03	1.378
380.	11.697	35.579	4.95	11.648	27.097	31.523	35.841	0.439	1502.7	377.	0.1050E 03	1.130
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	11.281	35.537	4.91	11.223	27.143	31.579	35.906	0.512	1502.4	446.	0.1021E 03	1.512
500.	11.107	35.520	4.84	11.044	27.162	31.602	35.933	0.563	1502.6	495.	0.1013E 03	1.169
550.	10.817	35.493	4.75	10.748	27.193	31.641	35.978	0.613	1502.4	545.	0.9922E 02	1.504
600.	10.407	35.432	4.73	10.334	27.219	31.677	36.022	0.662	1501.7	594.	0.9749E 02	1.410
700.	9.904	35.428	4.46	9.821	27.303	31.773	36.129	0.756	1501.6	693.	0.9115E 02	1.710
800.	9.389	35.449	4.29	9.296	27.407	31.889	36.256	0.844	1501.4	792.	0.8276E 02	1.892
900.	8.785	35.464	4.31	8.685	27.517	32.013	36.393	0.922	1500.8	891.	0.7345E 02	1.964
1000.	8.507	35.549	4.39	8.397	27.627	32.131	36.517	0.990	1501.6	990.	0.6450E 02	1.926

CTD10638



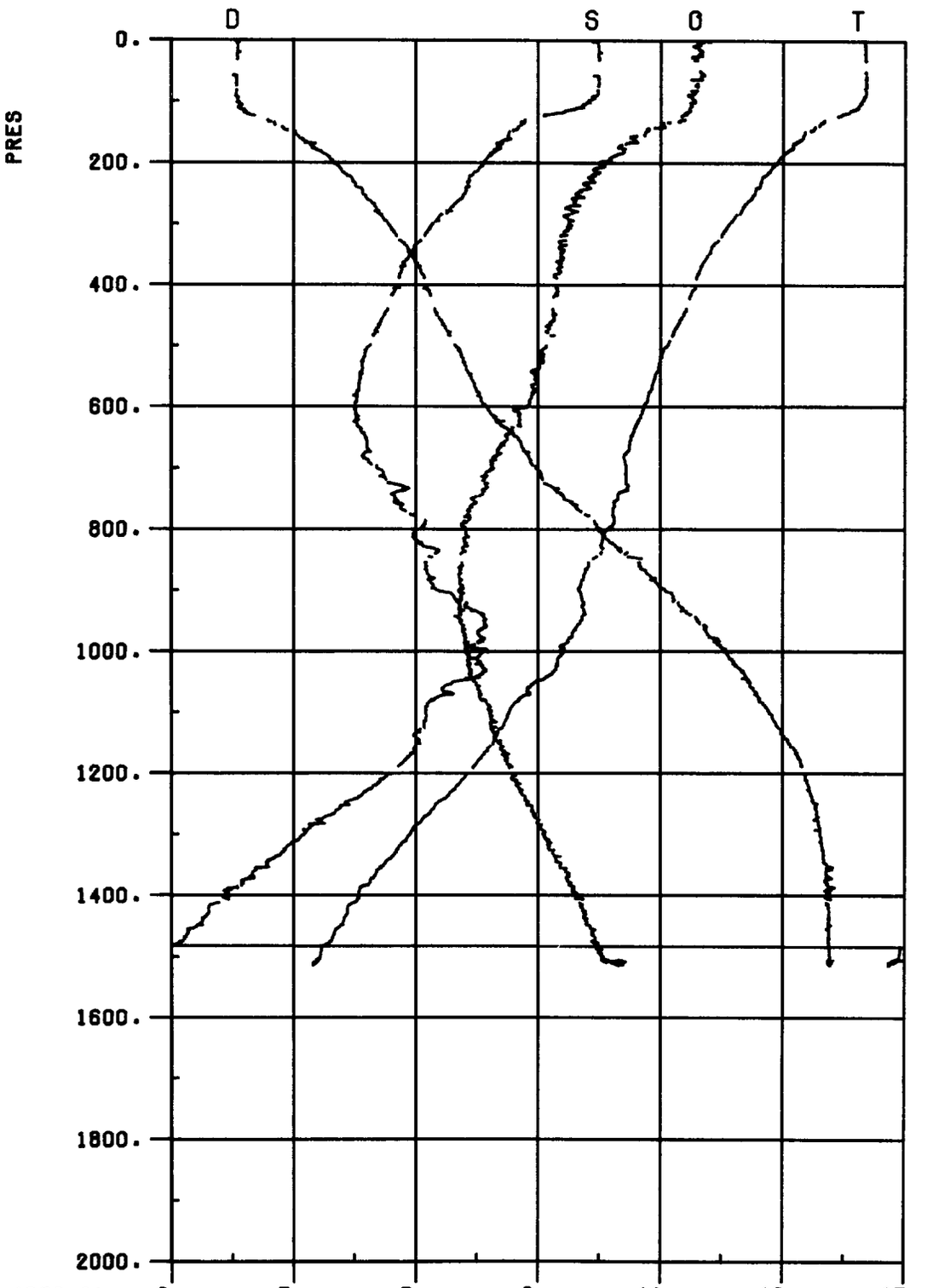
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10638 A L 1983/38/1845 40 29.7N 20 29.6W

DISCOVERY 132 STATION 10638

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	14.385	35.890	6.09	14.383	26.794	31.155	35.420	0.012	1505.9	10.	0.1246E 03	-9.999
20.	14.392	35.889	5.87	14.389	26.791	31.153	35.418	0.025	1506.1	20.	0.1252E 03	-0.807
40.	14.395	35.889	5.91	14.389	26.791	31.153	35.418	0.050	1506.4	40.	0.1258E 03	-0.163
60.	14.391	35.887	5.99	14.382	26.790	31.153	35.418	0.075	1506.8	60.	0.1264E 03	0.215
80.	14.385	35.886	5.97	14.373	26.791	31.155	35.420	0.101	1507.1	79.	0.1270E 03	0.392
100.	14.177	35.843	5.91	14.163	26.806	31.171	35.440	0.126	1506.7	99.	0.1265E 03	1.394
120.	13.981	35.813	5.87	13.964	26.820	31.194	35.467	0.151	1506.3	119.	0.1252E 03	1.757
140.	13.887	35.801	5.85	13.866	26.831	31.207	35.482	0.176	1506.4	139.	0.1248E 03	1.354
160.	13.731	35.785	5.75	13.708	26.852	31.231	35.509	0.201	1506.2	159.	0.1234E 03	1.843
180.	13.512	35.764	5.64	13.487	26.881	31.265	35.547	0.226	1505.8	179.	0.1211E 03	2.179
200.	13.339	35.755	5.46	13.311	26.910	31.298	35.584	0.249	1505.5	198.	0.1188E 03	2.195
220.	13.130	35.735	5.42	13.100	26.937	31.330	35.619	0.273	1505.1	218.	0.1168E 03	2.118
240.	12.935	35.722	5.42	12.901	26.966	31.364	35.657	0.296	1504.8	238.	0.1144E 03	2.208
260.	12.699	35.697	5.36	12.664	26.994	31.397	35.695	0.319	1504.3	258.	0.1122E 03	2.157
280.	12.563	35.681	5.31	12.525	27.009	31.414	35.715	0.341	1504.2	278.	0.1113E 03	1.567
300.	12.425	35.661	5.30	12.384	27.020	31.430	35.733	0.363	1504.0	297.	0.1107E 03	1.444
320.	12.274	35.642	5.22	12.231	27.036	31.448	35.755	0.385	1503.8	317.	0.1096E 03	1.622
340.	12.142	35.638	5.18	12.096	27.055	31.474	35.783	0.407	1503.7	337.	0.1079E 03	1.945
360.	12.017	35.615	5.15	11.969	27.064	31.483	35.795	0.429	1503.6	357.	0.1078E 03	1.059
380.	11.884	35.604	5.10	11.834	27.081	31.503	35.818	0.450	1503.4	377.	0.1066E 03	1.709
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	397.	-0.9999E 01	-9.999
450.	11.357	35.544	5.00	11.299	27.134	31.569	35.894	0.524	1502.7	446.	0.1029E 03	1.631
500.	11.103	35.519	4.99	11.040	27.162	31.603	35.934	0.575	1502.6	496.	0.1013E 03	1.400
550.	10.904	35.505	4.92	10.835	27.187	31.633	35.968	0.625	1502.7	545.	0.9993E 02	1.337
600.	10.684	35.497	4.80	10.610	27.220	31.672	36.011	0.675	1502.8	595.	0.9772E 02	1.522
700.	10.406	35.526	4.56	10.320	27.293	31.752	36.098	0.770	1503.5	693.	0.9279E 02	1.575
800.	10.198	35.605	4.37	10.100	27.389	31.856	36.206	0.859	1504.5	792.	0.8550E 02	1.805
900.	9.971	35.691	4.33	9.862	27.498	31.969	36.323	0.941	1505.4	891.	0.7731E 02	1.884
1000.	9.653	35.736	4.37	9.534	27.587	32.066	36.427	1.015	1506.0	990.	0.7055E 02	1.748

CTD10639



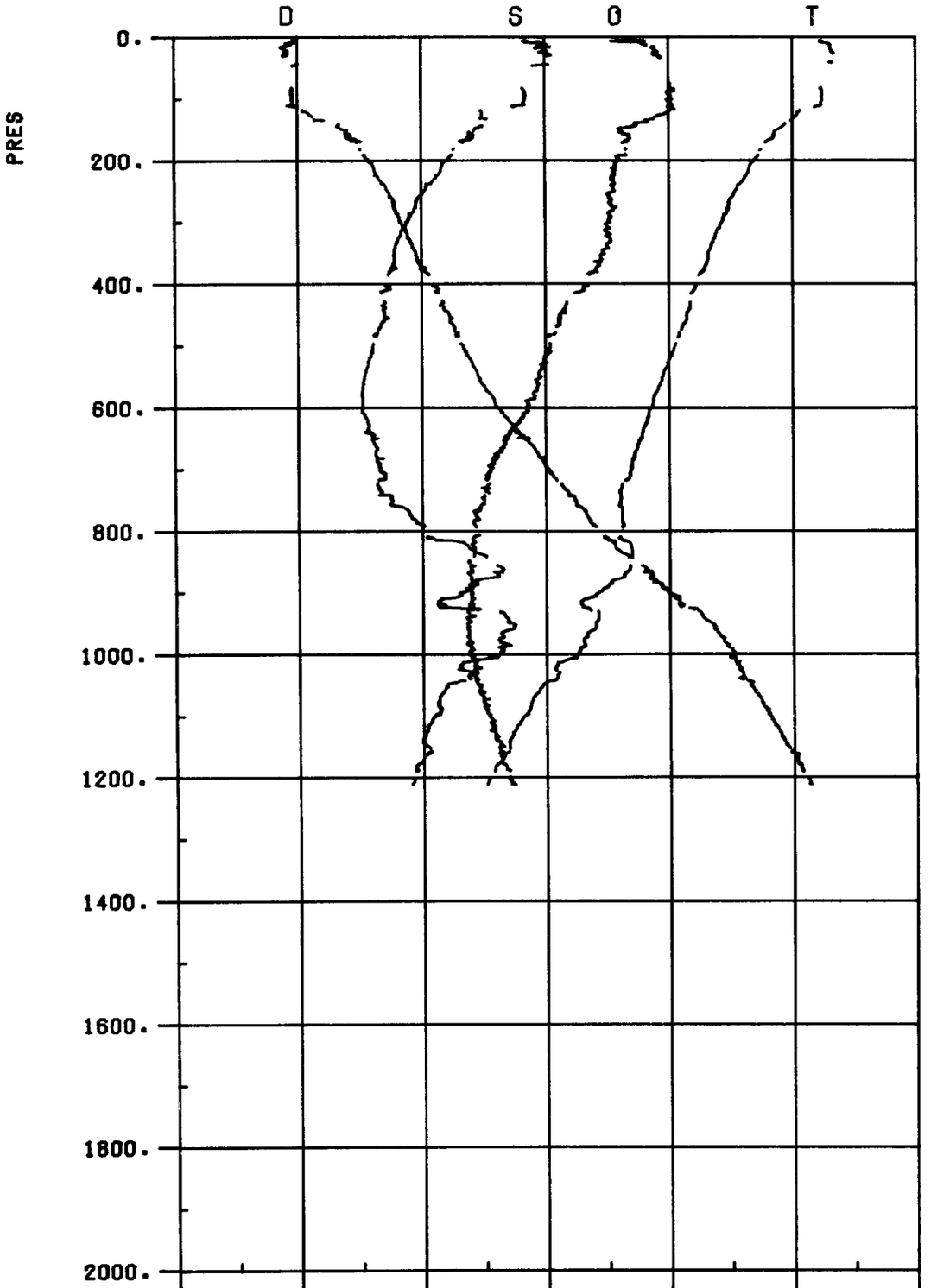
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10639 A V 1983/39/1213 41 16.6N 19 41.0W

DISCOVERY 132 STATION 10639

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	14.349	35.898	6.30	14.347	26.808	31.170	35.436	0.012	1505.8	10.	0.1233E 03	-9.999
20.	14.350	35.900	6.33	14.347	26.809	31.171	35.437	0.025	1506.0	20.	0.1235E 03	0.574
40.	14.354	35.896	6.31	14.348	26.805	31.168	35.434	0.049	1506.3	40.	0.1244E 03	-0.695
60.	14.359	35.896	6.33	14.351	26.804	31.167	35.433	0.074	1506.7	60.	0.1252E 03	-0.341
80.	14.354	35.897	6.27	14.343	26.806	31.170	35.436	0.099	1507.0	79.	0.1256E 03	0.644
100.	14.291	35.884	6.27	14.276	26.809	31.176	35.443	0.125	1507.1	99.	0.1258E 03	0.832
120.	14.010	35.824	6.20	13.992	26.823	31.196	35.468	0.150	1506.5	119.	0.1250E 03	1.538
140.	13.556	35.769	6.03	13.536	26.875	31.258	35.539	0.174	1505.2	139.	0.1205E 03	2.918
160.	13.318	35.751	5.76	13.296	26.911	31.298	35.584	0.198	1504.8	159.	0.1176E 03	2.410
180.	13.087	35.730	5.69	13.062	26.942	31.334	35.625	0.221	1504.3	179.	0.1152E 03	2.253
200.	12.899	35.711	5.51	12.872	26.965	31.362	35.656	0.244	1504.0	198.	0.1135E 03	1.955
220.	12.708	35.690	5.46	12.678	26.987	31.388	35.686	0.267	1503.7	218.	0.1118E 03	1.931
240.	12.590	35.683	5.41	12.557	27.005	31.409	35.710	0.289	1503.6	238.	0.1106E 03	1.748
260.	12.471	35.673	5.29	12.435	27.021	31.428	35.731	0.311	1503.5	258.	0.1096E 03	1.629
280.	12.308	35.653	5.29	12.270	27.037	31.448	35.754	0.333	1503.3	278.	0.1085E 03	1.660
300.	12.105	35.626	5.25	12.065	27.056	31.471	35.781	0.354	1502.9	297.	0.1072E 03	1.778
320.	11.988	35.614	5.20	11.946	27.069	31.487	35.799	0.375	1502.8	317.	0.1064E 03	1.501
340.	11.822	35.596	5.17	11.777	27.087	31.509	35.825	0.397	1502.5	337.	0.1051E 03	1.762
360.	11.717	35.584	5.19	11.670	27.098	31.523	35.841	0.418	1502.5	357.	0.1045E 03	1.391
380.	11.620	35.575	5.16	11.571	27.109	31.536	35.856	0.438	1502.5	377.	0.1038E 03	1.399
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	397.	-0.9999E 01	-9.999
450.	11.370	35.548	5.13	11.313	27.135	31.569	35.894	0.511	1502.7	446.	0.1029E 03	1.156
500.	11.104	35.524	5.06	11.041	27.165	31.606	35.937	0.562	1502.6	496.	0.1010E 03	1.456
550.	10.900	35.508	4.98	10.831	27.190	31.636	35.971	0.612	1502.7	545.	0.9962E 02	1.338
600.	10.721	35.500	4.90	10.646	27.216	31.667	36.006	0.661	1502.9	594.	0.9812E 02	1.361
700.	10.429	35.537	4.62	10.343	27.297	31.756	36.101	0.756	1503.6	693.	0.9239E 02	1.657
800.	10.160	35.609	4.39	10.064	27.400	31.866	36.216	0.845	1504.3	792.	0.8459E 02	1.852
900.	9.653	35.632	4.36	9.547	27.506	31.984	36.344	0.925	1504.2	891.	0.7602E 02	1.914
1000.	9.397	35.713	4.42	9.279	27.609	32.097	36.463	0.997	1505.0	990.	0.6768E 02	1.889
1100.	8.520	35.615	4.61	8.397	27.677	32.182	36.568	1.062	1503.3	1089.	0.6173E 02	1.652
1200.	7.822	35.554	4.80	7.693	27.737	32.258	36.659	1.121	1502.3	1187.	0.5640E 02	1.570
1300.	6.893	35.416	5.05	6.762	27.762	32.305	36.729	1.176	1500.2	1286.	0.5327E 02	1.290
1400.	6.049	35.290	5.31	5.916	27.776	32.339	36.784	1.228	1498.4	1384.	0.5098E 02	1.145
1500.	5.420	35.191	5.52	5.283	27.777	32.356	36.817	1.279	1497.4	1483.	0.5017E 02	0.872

CTD10640



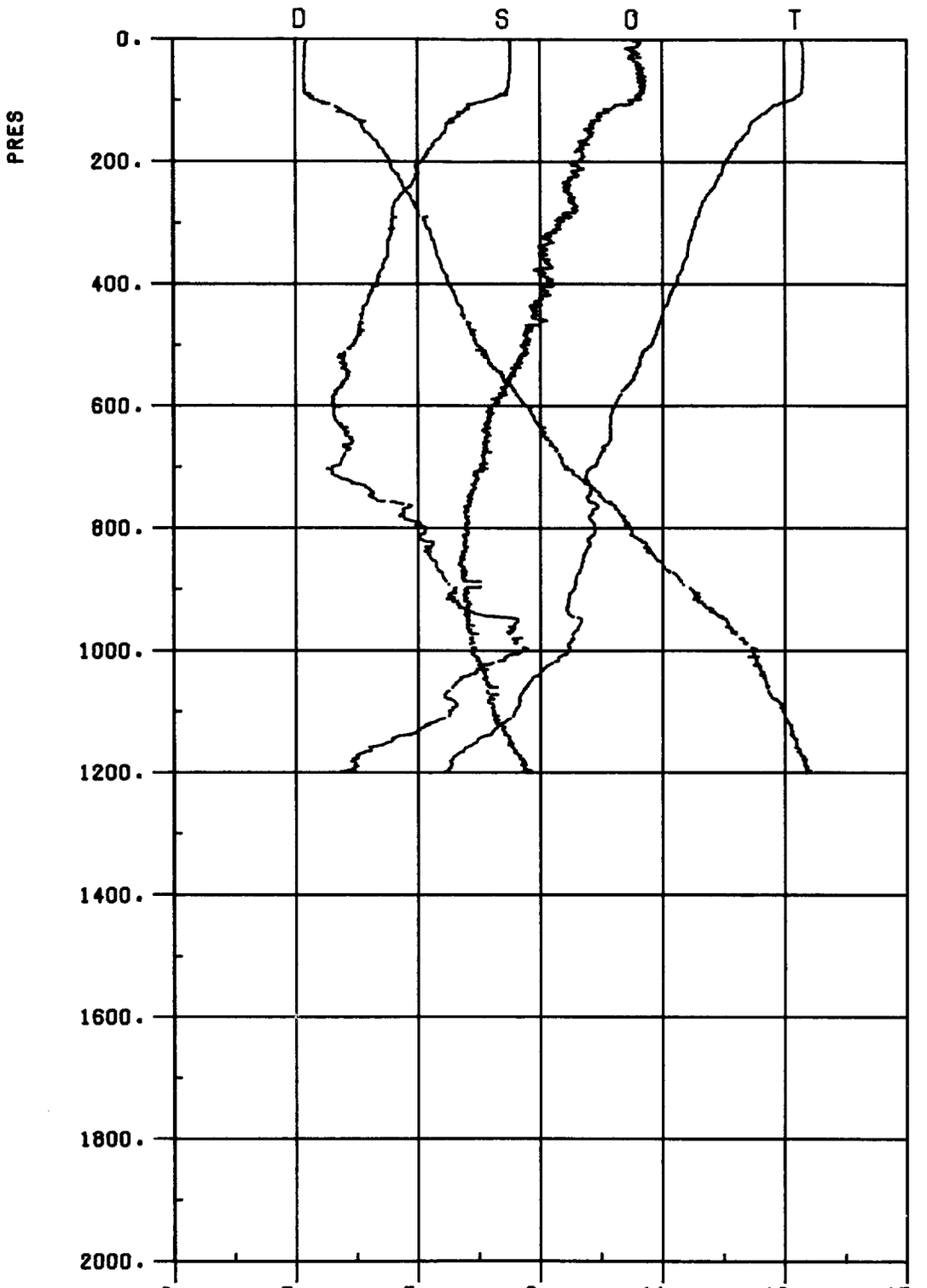
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10640 A E 1983/40/1907 41 21.2N 18 51.5W

DISCOVERY 132 STATION 10640

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.448	35.766	5.62	13.447	26.896	31.276	35.558	0.011	1502.7	10.	0.1150E 03	-9.999
20.	13.624	35.792	5.88	13.622	26.878	31.256	35.535	0.023	1503.5	20.	0.1168E 03	-2.285
40.	13.609	35.805	5.95	13.604	26.884	31.270	35.550	0.046	1503.8	40.	0.1161E 03	1.503
60.	13.485	35.769	6.00	13.474	26.892	31.272	35.554	0.070	1503.7	60.	0.1168E 03	-0.425
80.	13.464	35.769	6.03	13.453	26.894	31.276	35.559	0.093	1503.9	79.	0.1170E 03	0.844
100.	13.479	35.768	6.01	13.465	26.891	31.273	35.556	0.117	1504.3	99.	0.1179E 03	-0.663
120.	13.121	35.697	6.01	13.105	26.912	31.300	35.589	0.140	1503.4	119.	0.1167E 03	1.753
140.	12.920	35.698	5.76	12.901	26.954	31.345	35.639	0.163	1503.1	139.	0.1133E 03	2.580
160.	12.694	35.679	5.66	12.672	26.981	31.381	35.679	0.186	1502.6	159.	0.1108E 03	2.255
180.	12.496	35.651	5.65	12.470	26.999	31.403	35.705	0.208	1502.2	179.	0.1096E 03	1.722
200.	12.375	35.641	5.59	12.349	27.015	31.422	35.726	0.229	1502.2	198.	0.1086E 03	1.624
220.	12.279	35.630	5.56	12.250	27.025	31.435	35.742	0.251	1502.2	218.	0.1081E 03	1.349
240.	12.135	35.611	5.55	12.104	27.038	31.452	35.761	0.273	1502.0	238.	0.1073E 03	1.486
260.	12.016	35.597	5.52	11.982	27.050	31.467	35.778	0.294	1501.9	258.	0.1066E 03	1.441
280.	11.944	35.588	5.55	11.907	27.057	31.476	35.789	0.315	1502.0	278.	0.1064E 03	1.114
300.	11.852	35.577	5.52	11.813	27.066	31.487	35.802	0.336	1502.0	297.	0.1061E 03	1.239
320.	11.750	35.566	5.51	11.708	27.077	31.501	35.818	0.358	1501.9	317.	0.1054E 03	1.397
340.	11.671	35.557	5.50	11.627	27.085	31.511	35.830	0.379	1502.0	337.	0.1051E 03	1.196
360.	11.626	35.555	5.46	11.580	27.092	31.519	35.839	0.400	1502.1	357.	0.1049E 03	1.114
380.	11.531	35.549	5.41	11.482	27.105	31.534	35.856	0.421	1502.1	377.	0.1041E 03	1.482
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	397.	-0.9999E 01	-9.999
450.	11.285	35.540	5.14	11.228	27.144	31.580	35.907	0.493	1502.4	446.	0.1020E 03	1.388
500.	11.096	35.521	5.04	11.032	27.165	31.606	35.937	0.544	1502.6	496.	0.1010E 03	1.220
550.	10.891	35.507	4.95	10.822	27.191	31.638	35.973	0.594	1502.7	545.	0.9950E 02	1.368
600.	10.707	35.503	4.85	10.633	27.221	31.672	36.011	0.643	1502.8	594.	0.9765E 02	1.445
700.	10.376	35.532	4.56	10.290	27.303	31.763	36.109	0.737	1503.4	693.	0.9181E 02	1.667
800.	-9.999	35.613	4.42	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	792.	-0.9999E 01	-9.999
900.	9.842	35.664	4.40	9.734	27.498	31.972	36.329	0.908	1504.9	891.	0.7704E 02	1.811
1000.	9.502	35.724	4.39	9.384	27.603	32.086	36.449	0.980	1505.4	990.	0.6872E 02	1.890
1100.	8.648	35.621	4.54	8.524	27.661	32.164	36.547	1.046	1503.8	1089.	0.6348E 02	1.580
1200.	8.063	35.583	4.70	7.932	27.723	32.239	36.635	1.107	1503.2	1187.	0.5826E 02	1.562

CTD10641



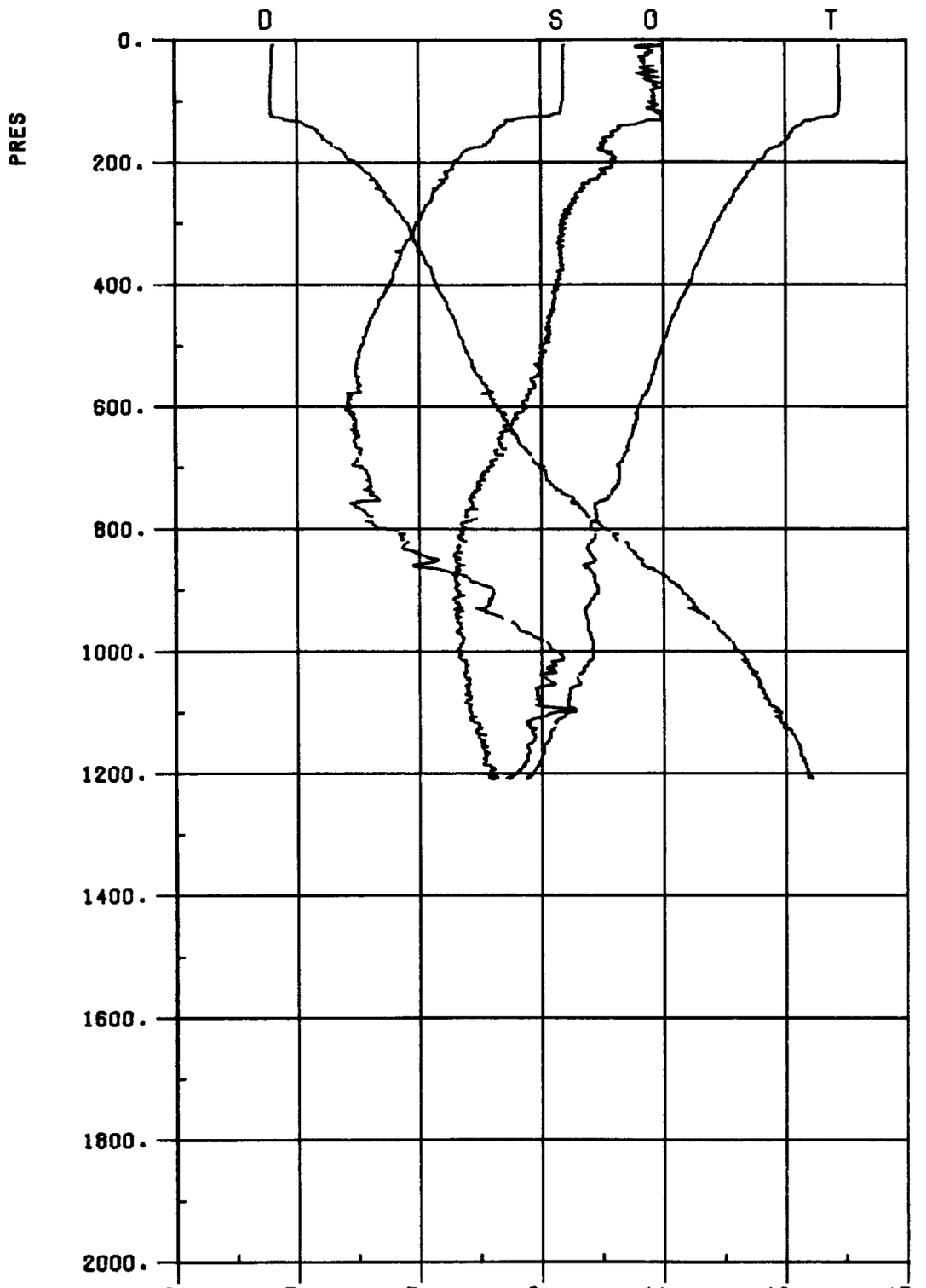
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10641 A N 1983/41/0226 41 27.1N 18 06.6W

DISCOVERY 132 STATION 10641

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.295	35.751	5.80	13.294	26.916	31.299	35.584	0.011	1502.2	10.	0.1131E 03	-9.999
20.	13.299	35.751	5.78	13.296	26.915	31.298	35.584	0.023	1502.4	20.	0.1134E 03	-0.497
40.	13.303	35.751	5.81	13.297	26.914	31.298	35.584	0.045	1502.7	40.	0.1140E 03	0.121
60.	13.300	35.750	5.83	13.291	26.914	31.298	35.584	0.068	1503.1	60.	0.1146E 03	0.098
80.	13.288	35.747	5.84	13.277	26.914	31.300	35.586	0.091	1503.3	79.	0.1151E 03	0.425
100.	13.096	35.716	5.76	13.083	26.929	31.319	35.609	0.114	1503.0	99.	0.1142E 03	1.576
120.	12.684	35.670	5.52	12.668	26.977	31.375	35.673	0.137	1501.9	119.	0.1102E 03	2.775
140.	12.432	35.647	5.42	12.413	27.008	31.412	35.715	0.158	1501.4	139.	0.1077E 03	2.277
160.	12.315	35.637	5.40	12.293	27.024	31.431	35.736	0.180	1501.3	159.	0.1067E 03	1.610
180.	12.146	35.618	5.32	12.122	27.042	31.453	35.762	0.201	1501.0	179.	0.1055E 03	1.740
200.	12.034	35.606	5.28	12.008	27.054	31.468	35.779	0.222	1501.0	198.	0.1048E 03	1.434
220.	11.944	35.598	5.30	11.915	27.066	31.482	35.795	0.243	1501.0	218.	0.1042E 03	1.384
240.	11.849	35.588	5.22	11.818	27.075	31.494	35.809	0.264	1501.0	238.	0.1037E 03	1.337
260.	11.693	35.568	5.26	11.660	27.089	31.512	35.830	0.284	1500.7	258.	0.1028E 03	1.549
280.	11.600	35.558	5.28	11.564	27.100	31.525	35.845	0.305	1500.7	278.	0.1023E 03	1.326
300.	11.525	35.557	5.16	11.486	27.113	31.540	35.862	0.325	1500.8	297.	0.1015E 03	1.493
320.	11.468	35.555	5.07	11.427	27.122	31.551	35.873	0.345	1500.9	317.	0.1011E 03	1.247
340.	11.412	35.551	5.00	11.369	27.129	31.559	35.883	0.366	1501.1	337.	0.1009E 03	1.115
360.	11.359	35.546	5.05	11.314	27.136	31.568	35.893	0.386	1501.2	357.	0.1007E 03	1.091
380.	11.285	35.538	5.00	11.237	27.142	31.576	35.903	0.406	1501.3	377.	0.1004E 03	1.119
400.	11.214	35.530	5.10	11.163	27.150	31.586	35.914	0.426	1501.3	396.	0.1002E 03	1.161
450.	10.994	35.508	4.96	10.937	27.173	31.615	35.948	0.476	1501.4	446.	0.9899E 02	1.284
500.	10.804	35.494	4.87	10.742	27.197	31.643	35.980	0.525	1501.5	496.	0.9777E 02	1.291
550.	10.531	35.484	4.78	10.464	27.237	31.691	36.034	0.573	1501.4	545.	0.9480E 02	1.680
600.	10.212	35.462	4.61	10.139	27.277	31.738	36.088	0.620	1501.0	594.	0.9184E 02	1.672
700.	9.832	35.463	4.53	9.750	27.342	31.814	36.171	0.709	1501.3	693.	0.8736E 02	1.514
800.	9.890	35.612	4.39	9.794	27.450	31.921	36.277	0.792	1503.4	792.	0.7953E 02	1.847
900.	9.542	35.660	4.40	9.437	27.547	32.026	36.389	0.869	1503.8	891.	0.7204E 02	1.814
1000.	9.458	35.772	4.46	9.340	27.648	32.131	36.495	0.937	1505.3	990.	0.6445E 02	1.821
1100.	8.571	35.652	4.62	8.448	27.698	32.202	36.586	0.999	1503.6	1089.	0.5991E 02	1.504
1200.	7.471	35.485	4.90	7.345	27.737	32.263	36.672	1.057	1500.9	1187.	0.5581E 02	1.428

CTD10642



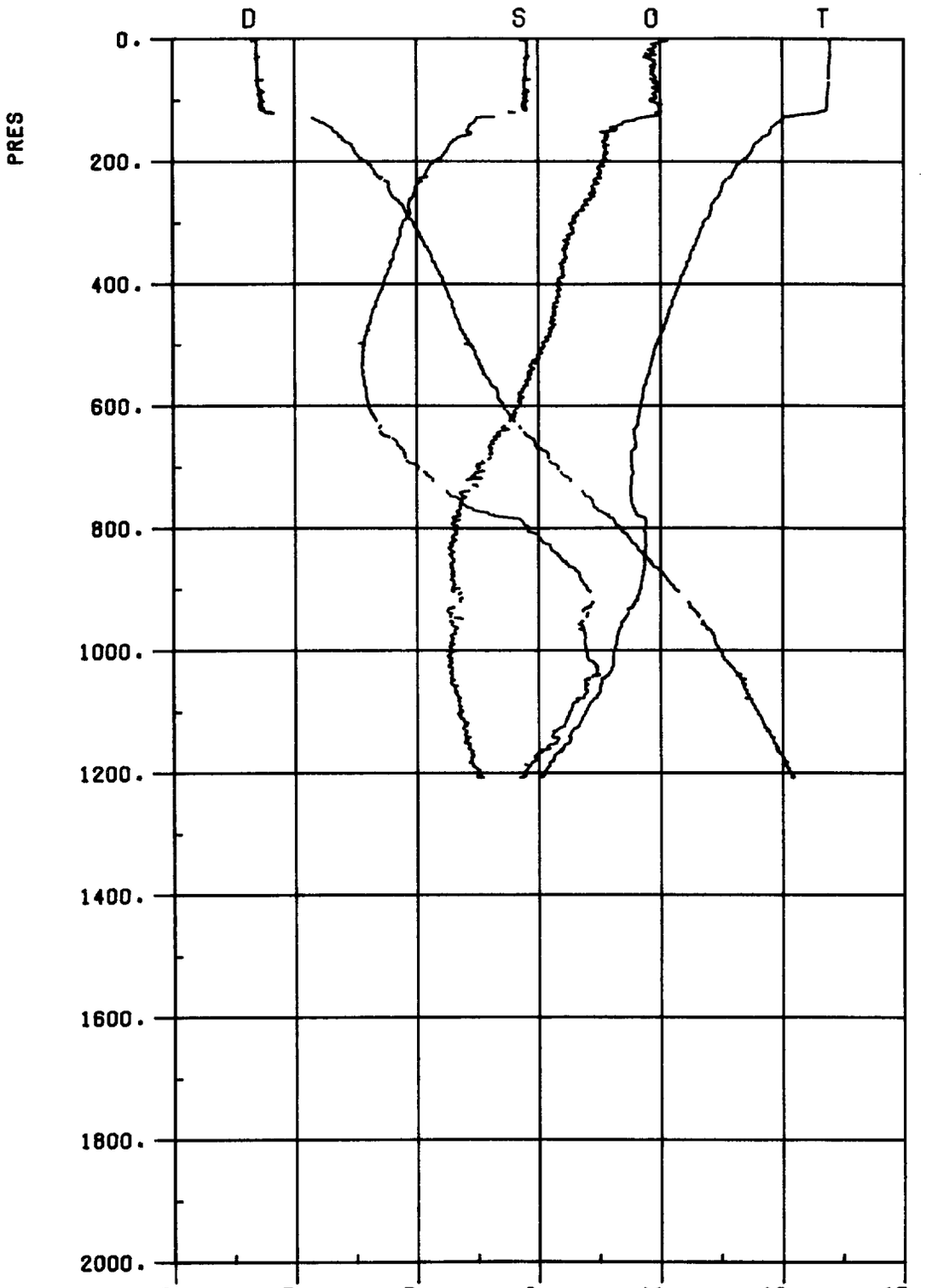
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10642 A E 1983/41/0931 41 31.2N 17 18.7W

DISCOVERY 132 STATION 10642

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.880	35.837	5.92	13.878	26.860	31.232	35.506	0.012	1504.2	10.	0.1183E 03	-9.999
20.	13.885	35.837	5.89	13.882	26.859	31.231	35.505	0.024	1504.4	20.	0.1187E 03	-0.548
40.	13.884	35.833	5.91	13.878	26.856	31.229	35.503	0.047	1504.7	40.	0.1195E 03	-0.576
60.	13.892	35.836	5.92	13.883	26.857	31.230	35.505	0.071	1505.1	60.	0.1200E 03	0.495
80.	13.893	35.836	5.95	13.881	26.857	31.230	35.505	0.095	1505.4	79.	0.1206E 03	0.197
100.	13.891	35.835	5.92	13.877	26.856	31.231	35.505	0.120	1505.7	99.	0.1212E 03	0.099
120.	13.859	35.827	5.95	13.842	26.857	31.233	35.508	0.144	1506.0	119.	0.1217E 03	0.506
140.	13.244	35.738	5.71	13.225	26.916	31.304	35.591	0.168	1504.2	139.	0.1166E 03	3.084
160.	13.052	35.721	5.55	13.030	26.942	31.335	35.625	0.191	1503.9	159.	0.1146E 03	2.084
180.	12.740	35.680	5.48	12.716	26.972	31.372	35.669	0.214	1503.1	179.	0.1122E 03	2.246
200.	12.534	35.657	5.60	12.507	26.996	31.400	35.701	0.236	1502.7	198.	0.1104E 03	1.973
220.	12.365	35.644	5.51	12.336	27.019	31.427	35.732	0.258	1502.5	218.	0.1087E 03	1.970
240.	12.228	35.630	5.35	12.196	27.035	31.446	35.754	0.279	1502.3	238.	0.1077E 03	1.630
260.	12.123	35.621	5.27	12.089	27.048	31.462	35.772	0.301	1502.3	258.	0.1069E 03	1.498
280.	11.985	35.607	5.20	11.949	27.064	31.482	35.794	0.322	1502.1	278.	0.1058E 03	1.661
300.	11.845	35.595	5.18	11.806	27.082	31.502	35.817	0.343	1502.0	297.	0.1046E 03	1.705
320.	11.773	35.587	5.17	11.732	27.089	31.512	35.829	0.364	1502.0	317.	0.1043E 03	1.169
340.	11.679	35.575	5.17	11.635	27.098	31.523	35.842	0.385	1502.0	337.	0.1039E 03	1.248
360.	11.586	35.568	5.17	11.539	27.110	31.537	35.858	0.406	1502.0	357.	0.1033E 03	1.423
380.	11.485	35.558	5.14	11.436	27.121	31.551	35.874	0.426	1502.0	377.	0.1026E 03	1.391
400.	11.415	35.551	5.13	11.364	27.128	31.560	35.885	0.447	1502.1	396.	0.1023E 03	1.173
450.	11.165	35.524	5.07	11.108	27.154	31.592	35.922	0.498	1502.0	446.	0.1009E 03	1.351
500.	10.977	35.505	5.00	10.915	27.174	31.617	35.951	0.548	1502.1	496.	0.1001E 03	1.193
550.	10.806	35.497	4.96	10.738	27.198	31.646	35.984	0.598	1502.4	545.	0.9875E 02	1.318
600.	10.592	35.483	4.86	10.518	27.226	31.680	36.021	0.646	1502.4	594.	0.9706E 02	1.403
700.	10.259	35.502	4.57	10.174	27.299	31.762	36.111	0.741	1502.9	693.	0.9197E 02	1.589
800.	9.830	35.541	4.36	9.735	27.404	31.877	36.235	0.829	1503.1	792.	0.8367E 02	1.892
900.	9.916	35.721	4.31	9.807	27.530	32.002	36.357	0.909	1505.3	891.	0.7420E 02	1.991
1000.	9.840	35.824	4.32	9.719	27.624	32.100	36.455	0.979	1506.8	990.	0.6743E 02	1.751
1100.	9.509	35.834	4.42	9.378	27.688	32.172	36.535	1.044	1507.2	1089.	0.6292E 02	1.515
1200.	8.844	35.758	4.59	8.706	27.738	32.237	36.615	1.105	1506.4	1187.	0.5878E 02	1.462

CTD10643



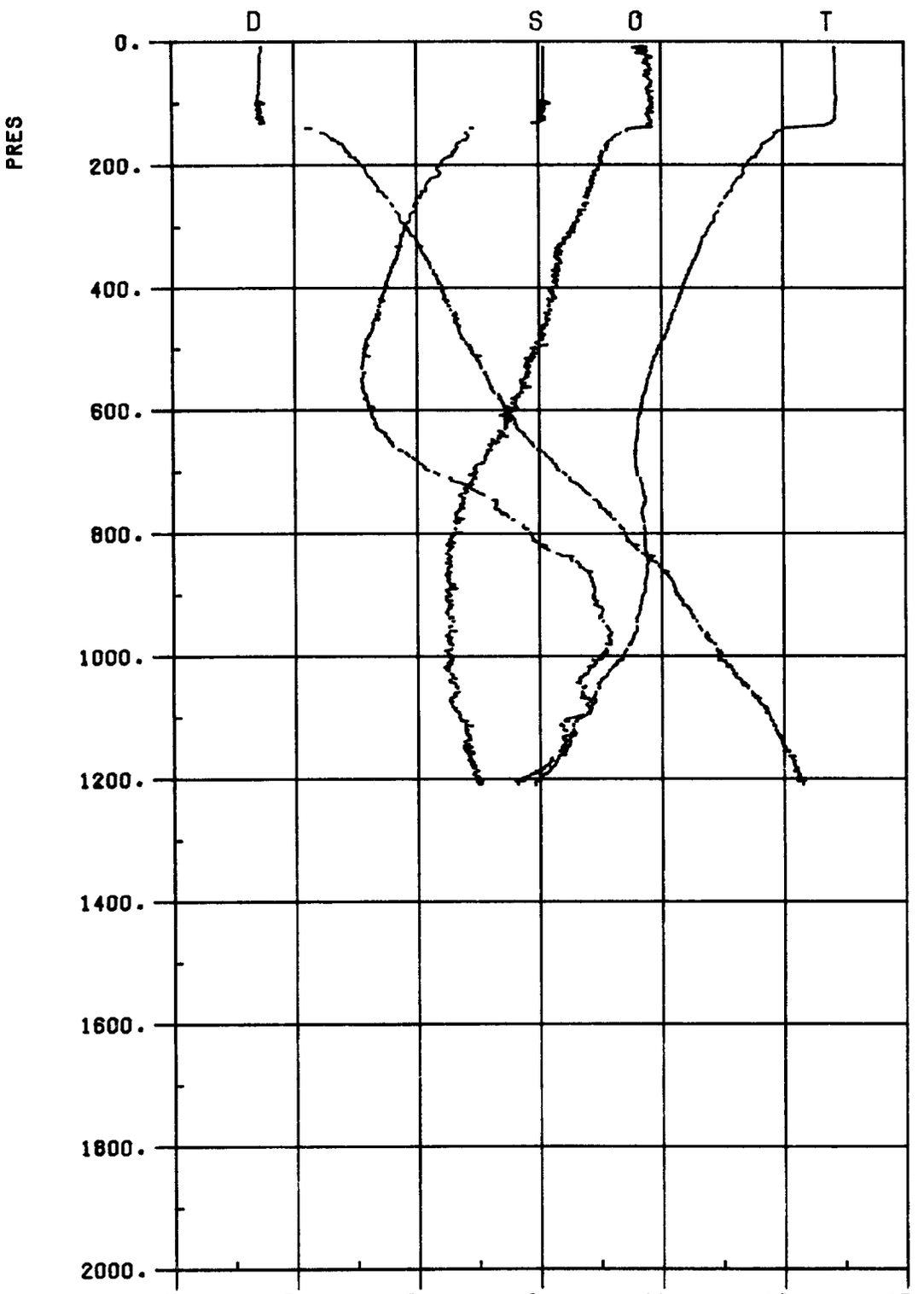
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10643 A C 1983/41/1614 41 34.8N 16 31.8W

DISCOVERY 132 STATION 10643

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.781	35.781	5.95	13.780	26.838	31.212	35.488	0.012	1503.8	10.	0.1204E 03	-9.999
20.	13.781	35.781	5.93	13.779	26.838	31.212	35.488	0.024	1504.0	20.	0.1207E 03	0.070
40.	13.772	35.780	5.95	13.767	26.839	31.213	35.490	0.048	1504.3	40.	0.1212E 03	0.496
60.	13.765	35.779	5.94	13.757	26.839	31.215	35.492	0.073	1504.6	60.	0.1217E 03	0.439
80.	13.752	35.777	5.95	13.741	26.841	31.218	35.495	0.097	1504.9	79.	0.1221E 03	0.623
100.	13.734	35.777	5.94	13.720	26.844	31.222	35.500	0.121	1505.2	99.	0.1223E 03	0.797
120.	13.611	35.759	5.99	13.594	26.858	31.237	35.517	0.146	1505.1	119.	0.1218E 03	1.415
140.	12.878	35.689	5.67	12.858	26.953	31.348	35.642	0.169	1502.9	139.	0.1130E 03	3.944
160.	12.695	35.673	5.56	12.673	26.976	31.376	35.674	0.191	1502.6	159.	0.1113E 03	1.988
180.	12.505	35.651	5.55	12.480	26.997	31.401	35.703	0.213	1502.3	179.	0.1098E 03	1.839
200.	12.312	35.629	5.52	12.285	27.018	31.426	35.732	0.235	1501.9	198.	0.1083E 03	1.871
220.	12.181	35.615	5.50	12.152	27.032	31.444	35.753	0.257	1501.8	218.	0.1074E 03	1.575
240.	12.008	35.600	5.46	11.976	27.054	31.470	35.782	0.278	1501.5	238.	0.1057E 03	1.906
260.	11.924	35.592	5.44	11.890	27.064	31.482	35.796	0.299	1501.6	258.	0.1053E 03	1.307
280.	11.820	35.588	5.36	11.784	27.081	31.501	35.817	0.320	1501.5	278.	0.1041E 03	1.674
300.	11.700	35.577	5.29	11.661	27.095	31.519	35.837	0.341	1501.4	297.	0.1032E 03	1.559
320.	11.630	35.572	5.26	11.588	27.105	31.530	35.850	0.361	1501.5	317.	0.1027E 03	1.306
340.	11.537	35.566	5.22	11.493	27.117	31.545	35.867	0.382	1501.5	337.	0.1020E 03	1.452
360.	11.472	35.561	5.22	11.426	27.126	31.555	35.878	0.402	1501.6	357.	0.1017E 03	1.207
380.	11.379	35.553	5.20	11.331	27.137	31.569	35.894	0.423	1501.6	377.	0.1011E 03	1.387
400.	11.302	35.545	5.16	11.251	27.145	31.580	35.906	0.443	1501.7	396.	0.1007E 03	1.253
450.	11.123	35.526	5.13	11.066	27.163	31.602	35.933	0.493	1501.9	446.	0.1000E 03	1.137
500.	10.929	35.512	5.04	10.867	27.187	31.632	35.966	0.543	1502.0	495.	0.9875E 02	1.309
550.	10.794	35.511	4.93	10.726	27.212	31.660	35.997	0.592	1502.3	545.	0.9748E 02	1.301
600.	10.664	35.520	4.84	10.592	27.242	31.694	36.034	0.640	1502.7	594.	0.9563E 02	1.442
700.	10.517	35.602	4.50	10.430	27.332	31.789	36.132	0.732	1503.9	693.	0.8924E 02	1.724
800.	10.737	35.783	4.30	10.637	27.434	31.888	36.225	0.818	1506.6	792.	0.8230E 02	1.778
900.	10.658	35.880	4.30	10.545	27.524	31.981	36.320	0.897	1508.1	891.	0.7605E 02	1.716
1000.	10.229	35.878	4.28	10.106	27.598	32.066	36.413	0.970	1508.2	990.	0.7058E 02	1.633
1100.	9.763	35.851	4.36	9.630	27.658	32.137	36.495	1.039	1508.2	1089.	0.6620E 02	1.507
1200.	9.078	35.777	4.50	8.939	27.714	32.210	36.582	1.103	1507.3	1187.	0.6147E 02	1.534

CTD10644



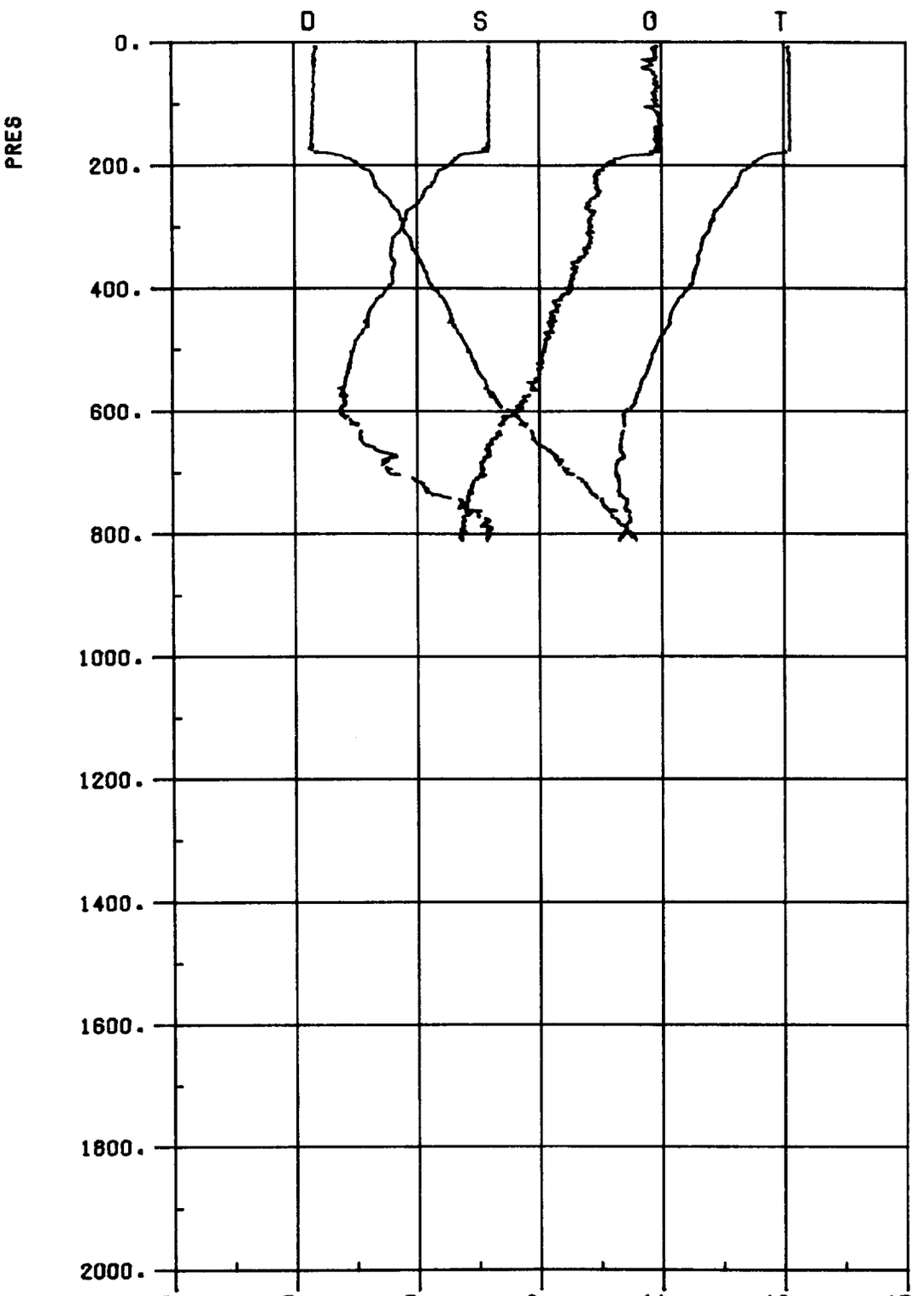
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10644 A L 1983/41/225[illegible] 41 39.9N 15 43.6W

DISCOVERY 132 STATION 10644

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.841	35.807	5.84	13.839	26.846	31.218	35.493	0.012	1504.1	10.	0.1197E 03	-9.999
20.	13.849	35.807	5.84	13.846	26.844	31.217	35.492	0.024	1504.3	20.	0.1201E 03	-0.677
40.	13.851	35.807	5.90	13.846	26.843	31.216	35.492	0.048	1504.6	40.	0.1208E 03	-0.139
60.	13.855	35.807	5.89	13.846	26.843	31.217	35.492	0.072	1504.9	60.	0.1214E 03	0.191
80.	13.859	35.806	5.91	13.847	26.841	31.215	35.491	0.097	1505.3	79.	0.1221E 03	-0.439
100.	13.864	35.809	5.92	13.849	26.842	31.217	35.492	0.121	1505.6	99.	0.1226E 03	0.551
120.	13.847	35.803	5.89	13.830	26.841	31.217	35.493	0.146	1505.9	119.	0.1232E 03	-0.263
140.	13.154	35.692	5.87	13.135	26.916	31.289	35.578	0.170	1503.8	139.	0.1182E 03	3.072
160.	12.770	35.679	5.59	12.749	26.964	31.364	35.660	0.193	1502.9	159.	0.1123E 03	3.286
180.	12.584	35.660	5.51	12.559	26.988	31.391	35.691	0.215	1502.6	179.	0.1106E 03	1.939
200.	12.399	35.638	5.51	12.372	27.008	31.415	35.719	0.237	1502.2	198.	0.1092E 03	1.812
220.	12.303	35.633	5.44	12.273	27.023	31.432	35.738	0.259	1502.2	218.	0.1083E 03	1.569
240.	12.151	35.615	5.40	12.119	27.038	31.451	35.760	0.281	1502.0	238.	0.1073E 03	1.634
260.	11.991	35.600	5.39	11.956	27.058	31.474	35.787	0.302	1501.8	258.	0.1059E 03	1.805
280.	11.885	35.589	5.34	11.848	27.070	31.489	35.804	0.323	1501.8	278.	0.1052E 03	1.440
300.	11.780	35.580	5.28	11.741	27.082	31.504	35.821	0.344	1501.7	297.	0.1045E 03	1.469
320.	11.669	35.574	5.22	11.628	27.099	31.523	35.842	0.365	1501.7	317.	0.1034E 03	1.652
340.	11.606	35.570	5.17	11.562	27.107	31.534	35.854	0.385	1501.8	337.	0.1030E 03	1.243
360.	11.504	35.562	5.17	11.458	27.121	31.550	35.872	0.406	1501.7	357.	0.1021E 03	1.520
380.	11.414	35.554	5.13	11.366	27.131	31.562	35.887	0.426	1501.7	377.	0.1016E 03	1.332
400.	11.338	35.548	5.12	11.287	27.140	31.574	35.900	0.447	1501.8	396.	0.1012E 03	1.285
450.	11.160	35.537	5.05	11.103	27.166	31.603	35.933	0.497	1502.0	446.	0.9990E 02	1.308
500.	10.936	35.514	4.97	10.874	27.188	31.632	35.967	0.547	1502.0	495.	0.9867E 02	1.299
550.	10.765	35.510	4.86	10.697	27.216	31.664	36.002	0.596	1502.2	545.	0.9708E 02	1.382
600.	10.648	35.523	4.77	10.574	27.247	31.699	36.040	0.644	1502.7	594.	0.9512E 02	1.465
700.	10.591	35.625	4.48	10.504	27.337	31.792	36.133	0.736	1504.2	693.	0.8890E 02	1.709
800.	10.716	35.786	4.30	10.616	27.440	31.894	36.232	0.821	1506.5	792.	0.8169E 02	1.805
900.	10.683	35.887	4.27	10.569	27.525	31.982	36.320	0.900	1508.2	891.	0.7598E 02	1.662
1000.	10.364	35.901	4.26	10.239	27.592	32.058	36.402	0.973	1508.7	990.	0.7137E 02	1.544
1100.	9.669	35.854	4.34	9.537	27.677	32.158	36.517	1.041	1507.8	1089.	0.6427E 02	1.786
1200.	8.975	35.769	4.50	8.836	27.725	32.222	36.597	1.103	1506.9	1187.	0.6023E 02	1.454

CTD10645



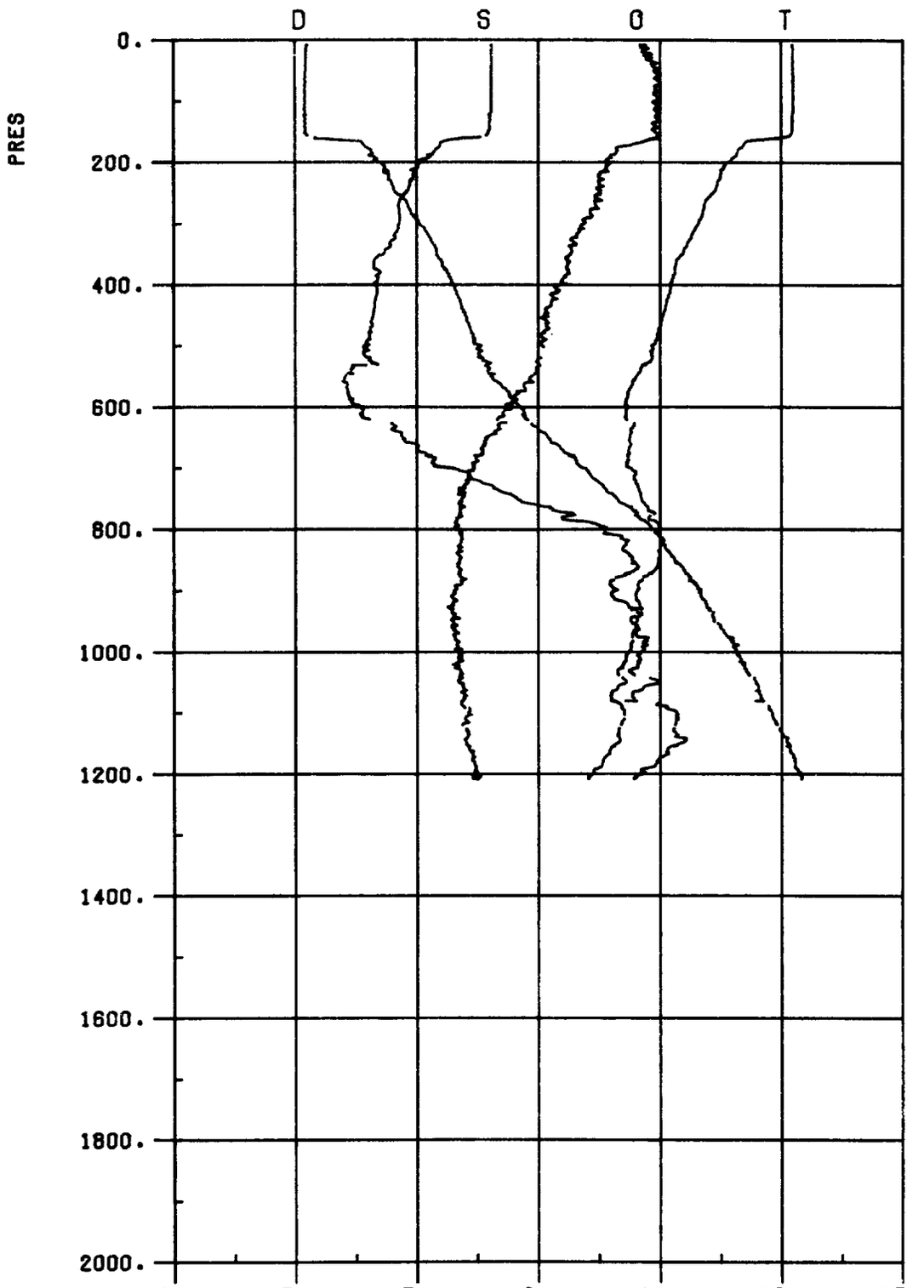
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10645 A M 1983/42/2218 41 59.8N 14 00.7W

DISCOVERY 132 STATION 10645

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.073	35.718	5.95	13.072	26.935	31.323	35.613	0.011	1501.4	10.	0.1112E 03	-9.999
20.	13.086	35.719	5.95	13.083	26.933	31.321	35.611	0.022	1501.7	20.	0.1117E 03	-0.789
40.	13.090	35.719	5.90	13.084	26.932	31.321	35.611	0.045	1502.0	40.	0.1123E 03	0.110
60.	13.094	35.719	5.95	13.086	26.931	31.320	35.610	0.067	1502.3	60.	0.1129E 03	-0.295
80.	13.093	35.718	5.95	13.082	26.931	31.320	35.610	0.090	1502.7	79.	0.1135E 03	0.191
100.	13.099	35.717	5.95	13.085	26.929	31.319	35.609	0.113	1503.0	99.	0.1142E 03	-0.399
120.	13.099	35.718	5.98	13.082	26.930	31.320	35.610	0.135	1503.3	119.	0.1147E 03	0.399
140.	13.101	35.717	5.96	13.082	26.929	31.320	35.610	0.158	1503.7	139.	0.1153E 03	-0.209
160.	13.105	35.718	5.96	13.082	26.929	31.321	35.610	0.182	1504.0	159.	0.1159E 03	0.241
180.	12.999	35.704	5.94	12.974	26.939	31.334	35.626	0.205	1504.0	179.	0.1154E 03	1.336
200.	12.473	35.653	5.55	12.446	27.005	31.410	35.713	0.227	1502.5	198.	0.1096E 03	3.277
220.	12.268	35.631	5.46	12.239	27.028	31.438	35.745	0.249	1502.1	218.	0.1078E 03	1.969
240.	12.150	35.615	5.47	12.118	27.038	31.451	35.760	0.270	1502.0	238.	0.1073E 03	1.329
260.	12.012	35.604	5.42	11.978	27.057	31.473	35.785	0.292	1501.9	258.	0.1060E 03	1.750
280.	11.845	35.582	5.44	11.808	27.072	31.492	35.807	0.313	1501.6	278.	0.1050E 03	1.622
300.	11.786	35.576	5.42	11.747	27.078	31.500	35.816	0.334	1501.7	297.	0.1049E 03	1.051
320.	11.669	35.561	5.42	11.628	27.088	31.513	35.832	0.355	1501.6	317.	0.1043E 03	1.351
340.	11.624	35.558	5.37	11.580	27.095	31.521	35.841	0.376	1501.8	337.	0.1042E 03	1.058
360.	11.589	35.563	5.29	11.543	27.105	31.533	35.853	0.396	1502.0	357.	0.1037E 03	1.345
380.	11.514	35.559	5.27	11.466	27.116	31.546	35.868	0.417	1502.1	377.	0.1031E 03	1.364
400.	11.452	35.553	5.27	11.401	27.123	31.555	35.878	0.438	1502.2	396.	0.1028E 03	1.144
450.	11.138	35.519	5.11	11.081	27.155	31.594	35.924	0.488	1501.9	446.	0.1008E 03	1.503
500.	10.889	35.496	5.04	10.826	27.183	31.628	35.963	0.538	1501.8	495.	0.9916E 02	1.390
550.	10.669	35.482	4.98	10.601	27.211	31.662	36.002	0.587	1501.9	545.	0.9738E 02	1.426
600.	10.420	35.473	4.82	10.346	27.248	31.706	36.051	0.636	1501.8	594.	0.9474E 02	1.609
700.	10.240	35.552	4.53	10.155	27.343	31.804	36.153	0.727	1502.9	693.	0.8796E 02	1.756
800.	10.366	35.717	4.37	10.267	27.449	31.910	36.255	0.810	1505.2	792.	0.8034E 02	1.837

CTD10646



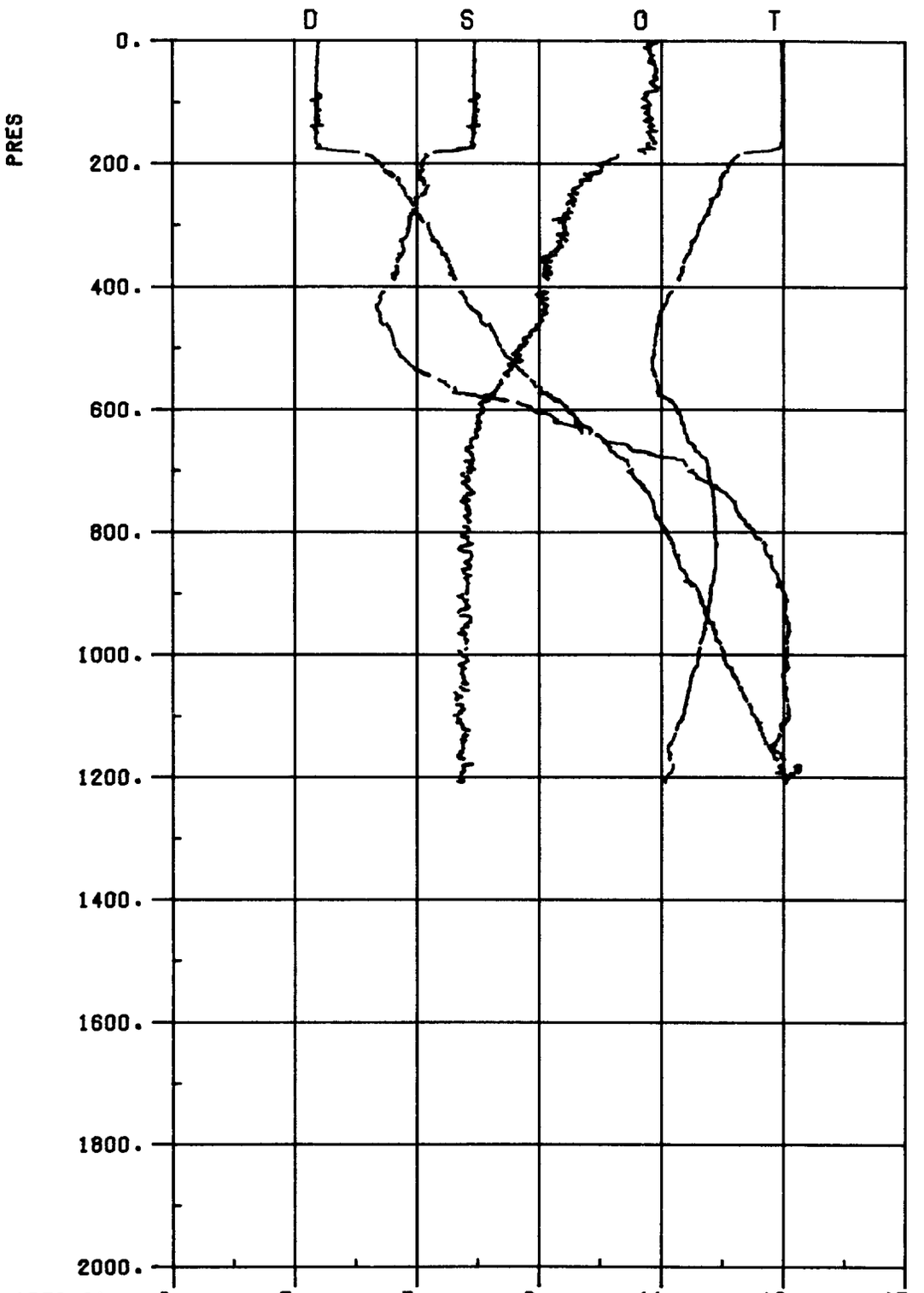
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10646 A C 1983/43/1043 42 14.9N 12 59.8W

DISCOVERY 132 STATION 10646

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	13.173	35.722	5.86	13.172	26.918	31.303	35.592	0.011	1501.8	10.	0.1129E 03	-9.999
20.	13.178	35.722	5.88	13.175	26.917	31.303	35.591	0.023	1502.0	20.	0.1132E 03	-0.454
40.	13.180	35.722	5.94	13.174	26.917	31.303	35.591	0.045	1502.3	40.	0.1138E 03	0.239
60.	13.182	35.722	5.98	13.174	26.916	31.303	35.591	0.068	1502.6	60.	0.1144E 03	-0.144
80.	13.186	35.721	5.96	13.175	26.915	31.302	35.591	0.091	1503.0	79.	0.1150E 03	-0.256
100.	13.186	35.722	5.97	13.172	26.915	31.303	35.591	0.114	1503.3	99.	0.1156E 03	0.355
120.	13.179	35.720	5.98	13.162	26.915	31.304	35.592	0.137	1503.6	119.	0.1161E 03	0.276
140.	13.172	35.718	5.96	13.152	26.915	31.305	35.593	0.161	1503.9	139.	0.1167E 03	0.332
160.	12.854	35.675	5.97	12.832	26.946	31.343	35.638	0.184	1503.1	159.	0.1142E 03	2.261
180.	12.285	35.630	5.64	12.261	27.024	31.432	35.738	0.206	1501.5	179.	0.1072E 03	3.550
200.	12.123	35.606	5.58	12.097	27.036	31.449	35.758	0.227	1501.3	198.	0.1064E 03	1.487
220.	11.990	35.594	5.50	11.961	27.053	31.469	35.781	0.248	1501.1	218.	0.1053E 03	1.678
240.	11.919	35.586	5.51	11.888	27.061	31.478	35.792	0.269	1501.2	238.	0.1051E 03	1.143
260.	11.764	35.572	5.49	11.731	27.079	31.500	35.817	0.290	1501.0	258.	0.1038E 03	1.751
280.	11.699	35.569	5.42	11.663	27.090	31.513	35.831	0.311	1501.1	278.	0.1033E 03	1.350
300.	11.620	35.569	5.37	11.581	27.104	31.530	35.849	0.331	1501.2	297.	0.1023E 03	1.575
320.	11.509	35.562	5.31	11.468	27.119	31.547	35.869	0.352	1501.1	317.	0.1013E 03	1.597
340.	11.417	35.554	5.26	11.373	27.130	31.561	35.885	0.372	1501.1	337.	0.1007E 03	1.378
360.	11.269	35.529	5.23	11.223	27.139	31.573	35.900	0.392	1500.9	357.	0.1003E 03	1.256
380.	11.239	35.538	5.24	11.190	27.150	31.586	35.914	0.412	1501.1	377.	0.9957E 02	1.446
400.	11.162	35.531	5.19	11.112	27.160	31.597	35.926	0.432	1501.2	396.	0.9917E 02	1.239
450.	11.036	35.527	5.05	10.979	27.180	31.621	35.953	0.481	1501.6	446.	0.9835E 02	1.189
500.	10.862	35.516	5.03	10.800	27.205	31.649	35.984	0.530	1501.8	495.	0.9721E 02	1.273
550.	10.600	35.481	4.93	10.533	27.223	31.675	36.016	0.579	1501.6	545.	0.9624E 02	1.220
600.	10.445	35.506	4.77	10.371	27.270	31.727	36.071	0.626	1501.9	594.	0.9273E 02	1.781
700.	10.494	35.654	4.46	10.408	27.377	31.834	36.176	0.715	1503.9	693.	0.8505E 02	1.844
800.	10.999	35.911	4.31	10.897	27.485	31.934	36.265	0.797	1507.7	792.	0.7785E 02	1.806
900.	10.625	35.925	4.31	10.512	27.565	32.023	36.361	0.872	1508.0	891.	0.7215E 02	1.665
1000.	10.470	35.968	4.35	10.345	27.626	32.089	36.431	0.942	1509.2	990.	0.6842E 02	1.445
1100.	10.403	36.027	4.42	10.265	27.684	32.151	36.494	1.009	1510.7	1088.	0.6510E 02	1.396
1200.	9.864	35.967	4.48	9.717	27.730	32.211	36.566	1.073	1510.3	1187.	0.6170E 02	1.398

CTD10647



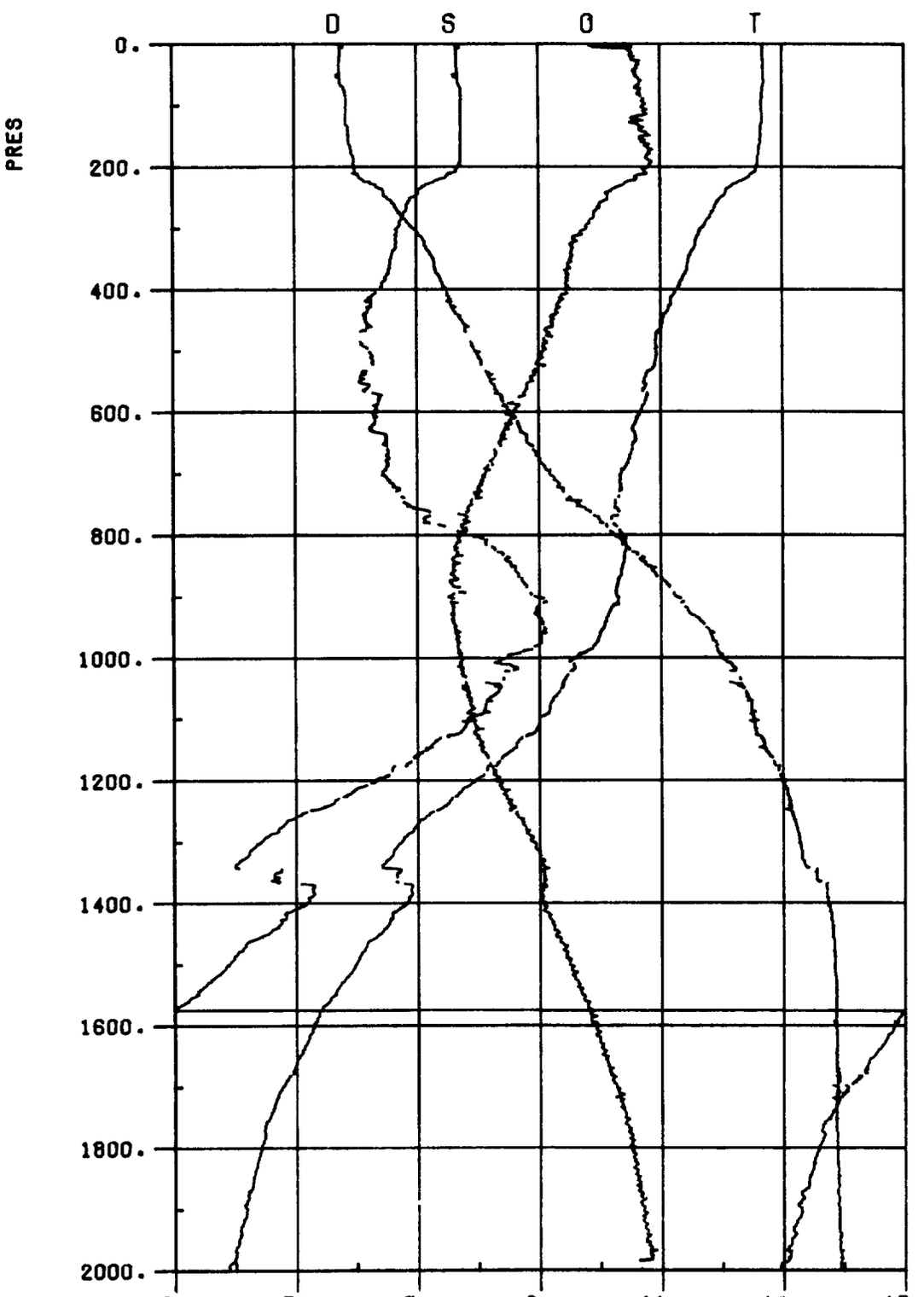
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10647 A N 1983/43/1557 42 14.5N 12 20.1W

DISCOVERY 132 STATION 10647

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.965	35.695	5.96	12.964	26.939	31.329	35.621	0.	1500.9	0.	0.1108E 03	-9.999
20.	12.971	35.695	5.91	12.968	26.938	31.328	35.620	0.022	1501.2	20.	0.1112E 03	-0.644
40.	12.974	35.694	5.95	12.968	26.937	31.328	35.620	0.044	1501.6	40.	0.1118E 03	-0.139
60.	12.977	35.694	5.96	12.969	26.936	31.327	35.620	0.067	1501.9	60.	0.1124E 03	-0.163
80.	12.980	35.694	5.95	12.969	26.936	31.327	35.620	0.089	1502.3	79.	0.1130E 03	0.085
100.	12.982	35.695	5.90	12.968	26.936	31.328	35.620	0.112	1502.6	99.	0.1136E 03	0.251
120.	12.982	35.694	5.89	12.966	26.935	31.328	35.620	0.135	1502.9	119.	0.1142E 03	-0.231
140.	12.976	35.692	5.90	12.957	26.936	31.328	35.621	0.158	1503.2	139.	0.1148E 03	0.306
160.	12.979	35.692	5.92	12.956	26.934	31.328	35.621	0.181	1503.6	159.	0.1153E 03	0.121
180.	12.601	35.651	5.84	12.576	26.978	31.380	35.680	0.204	1502.6	179.	0.1116E 03	2.673
200.	12.137	35.610	5.55	12.111	27.037	31.449	35.758	0.225	1501.3	198.	0.1064E 03	3.108
220.	11.999	35.603	5.41	11.970	27.058	31.474	35.786	0.246	1501.2	218.	0.1048E 03	1.893
240.	11.958	35.617	5.29	11.927	27.077	31.494	35.807	0.267	1501.4	238.	0.1035E 03	1.751
260.	11.817	35.599	5.28	11.783	27.090	31.510	35.826	0.288	1501.2	258.	0.1028E 03	1.487
280.	11.754	35.594	5.23	11.717	27.098	31.520	35.837	0.308	1501.3	278.	0.1024E 03	1.210
300.	11.623	35.588	5.20	11.585	27.119	31.543	35.863	0.329	1501.2	297.	0.1010E 03	1.832
320.	11.553	35.581	5.19	11.511	27.126	31.553	35.874	0.349	1501.3	317.	0.1007E 03	1.165
340.	11.469	35.579	5.14	11.425	27.140	31.570	35.892	0.369	1501.3	337.	0.9979E 02	1.554
360.	11.365	35.569	5.06	11.320	27.152	31.583	35.908	0.389	1501.3	357.	0.9915E 02	1.398
380.	11.330	35.568	5.08	11.282	27.158	31.591	35.917	0.409	1501.5	377.	0.9901E 02	1.059
400.	-9.999	-9.999	-9.99	-9.999	-9.999	-9.999	-9.999	-9.999	-999.9	396.	-0.9999E 01	-9.999
450.	10.958	35.540	5.00	10.902	27.204	31.646	35.980	0.477	1501.3	446.	0.9604E 02	1.513
500.	10.881	35.566	4.83	10.819	27.239	31.683	36.018	0.525	1501.9	495.	0.9390E 02	1.512
550.	10.911	35.633	4.66	10.842	27.285	31.731	36.065	0.571	1502.9	545.	0.9068E 02	1.735
600.	11.246	35.790	4.53	11.169	27.346	31.785	36.112	0.615	1505.1	594.	0.8651E 02	1.913
700.	11.769	36.050	4.43	11.676	27.450	31.881	36.195	0.698	1508.9	693.	0.7980E 02	1.775
800.	11.877	36.152	4.42	11.770	27.509	31.939	36.251	0.776	1511.0	792.	0.7699E 02	1.366
900.	11.801	36.202	4.40	11.680	27.562	31.997	36.310	0.852	1512.5	891.	0.7433E 02	1.349
1000.	11.605	36.205	4.37	11.472	27.602	32.043	36.361	0.926	1513.4	990.	0.7273E 02	1.205
1100.	11.355	36.209	4.33	11.210	27.652	32.100	36.423	0.997	1514.2	1088.	0.7002E 02	1.347
1200.	11.083	36.209	4.36	10.926	27.703	32.159	36.487	1.066	1515.0	1187.	0.6709E 02	1.368

CTD10648



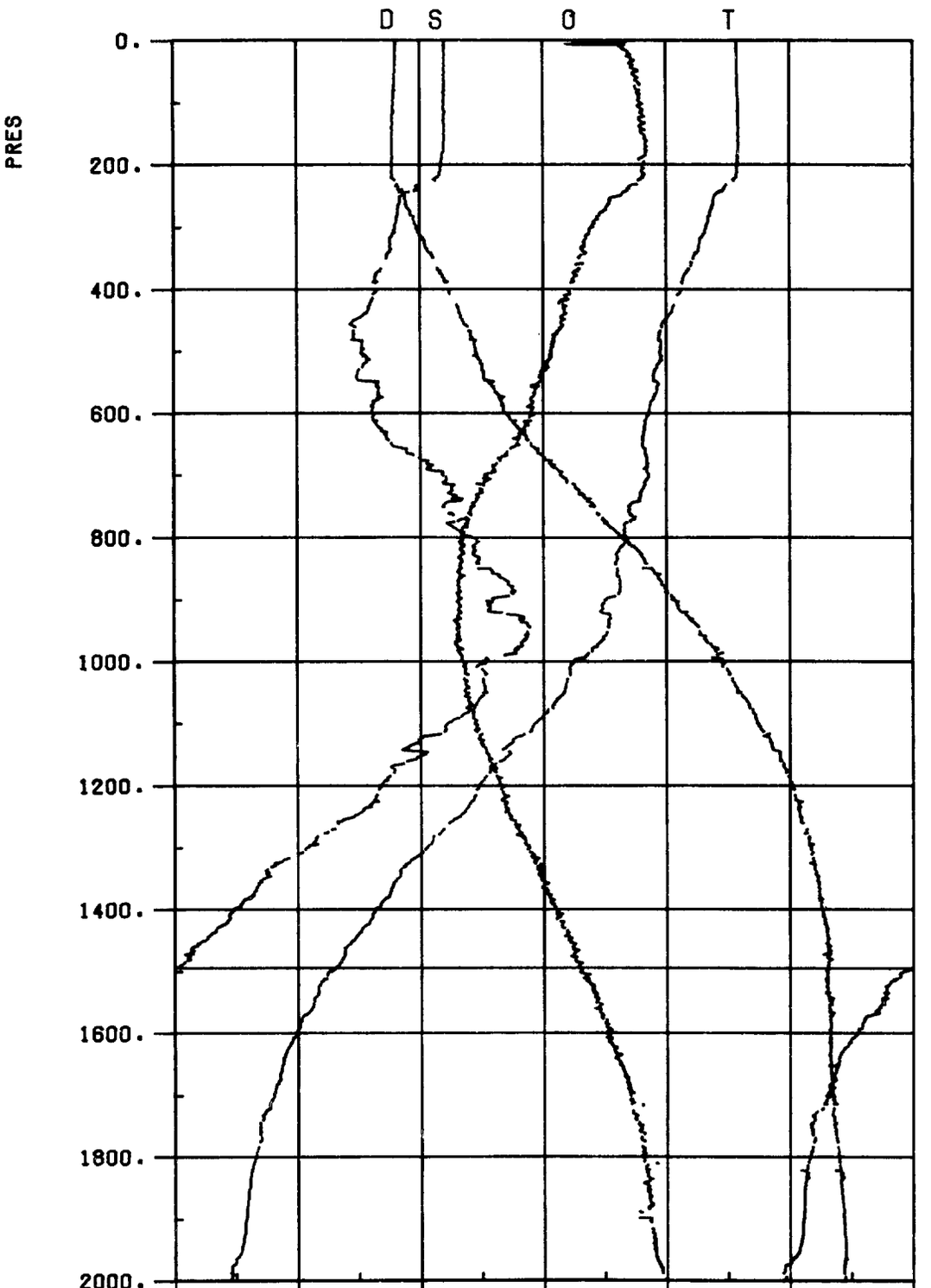
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10648 C R 1983/44/2057 43 56.9N 15 53.1W

DISCOVERY 132 STATION 10648

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.670	35.665	5.45	12.670	26.975	31.371	35.669	0.	1499.9	0.	0.1074E 03	-9.999
20.	12.678	35.666	5.77	12.675	26.974	31.370	35.668	0.021	1500.2	20.	0.1078E 03	-0.519
40.	12.685	35.666	5.80	12.679	26.973	31.370	35.667	0.043	1500.6	40.	0.1084E 03	-0.223
60.	12.687	35.668	5.84	12.679	26.974	31.371	35.669	0.065	1500.9	60.	0.1088E 03	0.481
80.	12.662	35.673	5.82	12.651	26.983	31.381	35.679	0.087	1501.2	79.	0.1085E 03	1.220
100.	12.656	35.673	5.86	12.642	26.984	31.383	35.681	0.108	1501.5	99.	0.1090E 03	0.504
120.	12.658	35.672	5.77	12.641	26.983	31.383	35.681	0.130	1501.8	119.	0.1095E 03	-0.135
140.	12.637	35.673	5.84	12.618	26.988	31.388	35.687	0.152	1502.1	139.	0.1096E 03	0.906
160.	12.629	35.672	5.87	12.607	26.989	31.390	35.689	0.174	1502.4	159.	0.1101E 03	0.502
180.	12.599	35.673	5.89	12.575	26.995	31.397	35.697	0.196	1502.6	178.	0.1100E 03	1.042
200.	12.565	35.667	5.90	12.538	26.998	31.401	35.702	0.218	1502.8	198.	0.1103E 03	0.710
220.	12.375	35.636	5.79	12.346	27.011	31.419	35.723	0.240	1502.5	218.	0.1095E 03	1.501
240.	12.062	35.602	5.58	12.030	27.046	31.460	35.771	0.262	1501.7	238.	0.1066E 03	2.407
260.	11.896	35.584	5.50	11.861	27.063	31.482	35.796	0.283	1501.5	258.	0.1053E 03	1.729
280.	11.806	35.577	5.45	11.769	27.075	31.496	35.812	0.304	1501.5	278.	0.1047E 03	1.431
300.	11.659	35.566	5.38	11.620	27.095	31.519	35.838	0.325	1501.3	297.	0.1032E 03	1.816
320.	11.566	35.566	5.30	11.524	27.112	31.539	35.860	0.345	1501.3	317.	0.1021E 03	1.691
340.	11.492	35.560	5.27	11.449	27.121	31.550	35.872	0.366	1501.4	337.	0.1016E 03	1.268
360.	11.431	35.555	5.24	11.385	27.129	31.560	35.883	0.386	1501.5	357.	0.1013E 03	1.175
380.	11.353	35.548	5.23	11.305	27.138	31.571	35.896	0.406	1501.5	377.	0.1009E 03	1.267
400.	11.252	35.537	5.23	11.201	27.148	31.584	35.911	0.426	1501.5	396.	0.1003E 03	1.352
450.	11.022	35.515	5.10	10.965	27.173	31.614	35.947	0.476	1501.5	446.	0.9901E 02	1.325
500.	-9.999	35.522	5.03	-9.999	27.198	-9.999	-9.999	-9.999	-999.9	495.	-0.9999E 01	-9.999
550.	10.719	35.506	4.94	10.651	27.221	31.671	36.010	0.574	1502.1	545.	0.9650E 02	1.299
600.	10.655	35.530	4.79	10.580	27.252	31.704	36.044	0.622	1502.7	594.	0.9471E 02	1.427
700.	10.333	35.544	4.55	10.248	27.320	31.780	36.127	0.714	1503.2	693.	0.9022E 02	1.526
800.	10.371	35.691	4.35	10.273	27.427	31.889	36.234	0.801	1505.2	792.	0.8236E 02	1.858
900.	10.283	35.800	4.27	10.172	27.528	31.993	36.339	0.880	1506.7	891.	0.7504E 02	1.811
1000.	9.584	35.738	4.38	9.466	27.603	32.081	36.442	0.951	1505.7	990.	0.6920E 02	1.660
1100.	9.001	35.681	4.45	8.874	27.652	32.147	36.522	1.018	1505.2	1088.	0.6512E 02	1.456
1200.	7.933	35.528	4.65	7.803	27.699	32.219	36.618	1.081	1502.7	1187.	0.6012E 02	1.540
1300.	6.715	35.340	4.96	6.585	27.727	32.274	36.702	1.139	1499.4	1286.	0.5603E 02	1.409
1400.	6.814	35.418	5.04	6.672	27.774	32.321	36.746	1.193	1501.6	1384.	0.5343E 02	1.201
1500.	5.968	35.287	5.25	5.825	27.784	32.351	36.798	1.245	1499.8	1483.	0.5128E 02	1.122
1600.	5.279	35.182	5.46	5.134	27.786	32.370	36.834	1.296	1498.5	1581.	0.4999E 02	0.955
1700.	4.758	35.104	5.63	4.609	27.786	32.383	36.861	1.346	1498.0	1680.	0.4919E 02	0.835
1800.	4.408	35.057	5.76	4.255	27.788	32.395	36.882	1.394	1498.2	1778.	0.4866E 02	0.758
1900.	4.167	35.028	5.85	4.007	27.791	32.404	36.898	1.443	1498.8	1876.	0.4833E 02	0.693
2000.	3.876	34.993	5.92	3.710	27.794	32.416	36.917	1.491	1499.2	1975.	0.4760E 02	0.770
2200.	3.629	34.989	5.98	3.448	27.816	32.445	36.953	1.585	1501.6	2171.	0.4608E 02	0.764
2400.	3.442	34.987	5.94	3.244	27.833	32.469	36.982	1.676	1504.1	2367.	0.4504E 02	0.697
2600.	3.180	34.974	5.90	2.966	27.848	32.492	37.013	1.765	1506.4	2563.	0.4361E 02	0.732
2800.	3.004	34.964	5.83	2.774	27.856	32.507	37.033	1.851	1509.0	2759.	0.4302E 02	0.613
3000.	2.854	34.951	5.81	2.606	27.860	32.516	37.047	1.937	1511.8	2955.	0.4294E 02	0.526
3500.	2.639	34.931	5.73	2.343	27.863	32.530	37.068	2.153	1519.4	3443.	0.4381E 02	0.437
4000.	2.554	34.918	5.73	2.204	27.860	32.535	37.076	2.377	1527.6	3931.	0.4595E 02	0.306
4500.	2.520	34.908	5.75	2.112	27.855	32.537	37.081	2.613	1536.1	4417.	0.4845E 02	0.255
5000.	2.556	34.904	5.79	2.084	27.848	32.537	37.082	2.863	1544.9	4903.	0.5169E 02	0.128

CTD10649



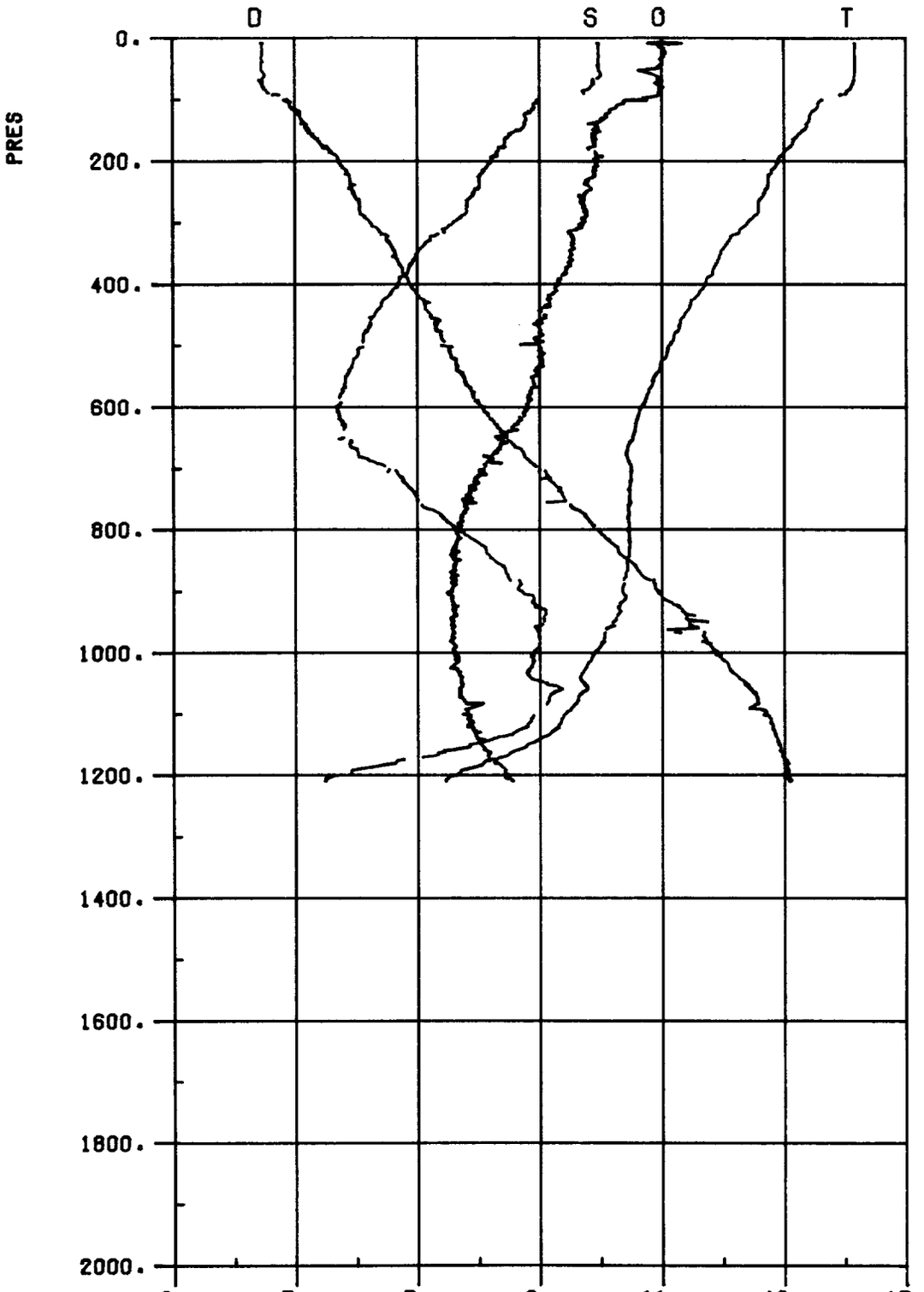
TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 CTD10649 C S 1983/45/0283 44 17.7N 16 08.0W

DISCOVERY 132 STATION 10649

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	12.133	35.639	5.51	12.132	27.061	31.467	35.776	0.010	1498.2	10.	0.9928E 02	-9.999
20.	12.138	35.640	5.69	12.135	27.060	31.467	35.775	0.020	1498.4	20.	0.9961E 02	-0.381
40.	12.139	35.639	5.72	12.133	27.060	31.467	35.776	0.040	1498.7	40.	0.1001E 03	0.209
60.	12.144	35.639	5.76	12.136	27.059	31.466	35.775	0.060	1499.1	60.	0.1008E 03	-0.313
80.	12.145	35.640	5.77	12.135	27.058	31.467	35.775	0.080	1499.4	79.	0.1013E 03	0.244
100.	12.154	35.639	5.79	12.140	27.056	31.465	35.774	0.100	1499.8	99.	0.1020E 03	-0.491
120.	12.159	35.639	5.81	12.143	27.056	31.465	35.773	0.121	1500.1	119.	0.1026E 03	-0.231
140.	12.163	35.639	5.79	12.144	27.055	31.464	35.772	0.142	1500.4	139.	0.1032E 03	-0.312
160.	12.162	35.639	5.83	12.141	27.055	31.465	35.773	0.162	1500.8	159.	0.1037E 03	0.343
180.	12.159	35.638	5.84	12.135	27.055	31.466	35.774	0.183	1501.1	178.	0.1042E 03	0.283
200.	12.144	35.634	5.81	12.118	27.055	31.466	35.775	0.204	1501.4	198.	0.1047E 03	0.279
220.	12.126	35.629	5.81	12.096	27.054	31.467	35.776	0.225	1501.6	218.	0.1053E 03	0.206
240.	11.922	35.595	5.69	11.891	27.067	31.485	35.798	0.246	1501.2	238.	0.1045E 03	1.504
260.	11.753	35.566	5.54	11.719	27.077	31.499	35.816	0.267	1500.9	258.	0.1040E 03	1.328
280.	11.699	35.563	5.46	11.663	27.085	31.508	35.826	0.287	1501.1	278.	0.1037E 03	1.174
300.	11.631	35.559	5.40	11.592	27.094	31.519	35.839	0.308	1501.2	297.	0.1033E 03	1.262
320.	11.540	35.551	5.34	11.499	27.105	31.533	35.854	0.329	1501.2	317.	0.1027E 03	1.382
340.	11.497	35.550	5.33	11.454	27.113	31.542	35.864	0.349	1501.4	337.	0.1024E 03	1.148
360.	11.388	35.540	5.30	11.343	27.127	31.557	35.882	0.370	1501.3	357.	0.1016E 03	1.478
380.	11.268	35.527	5.26	11.219	27.137	31.572	35.899	0.390	1501.2	377.	0.1009E 03	1.429
400.	11.224	35.530	5.20	11.173	27.148	31.584	35.912	0.410	1501.4	396.	0.1004E 03	1.342
450.	10.962	35.495	5.16	10.905	27.168	31.611	35.945	0.460	1501.3	446.	0.9941E 02	1.231
500.	10.888	35.506	5.06	10.826	27.190	31.636	35.971	0.509	1501.8	495.	0.9843E 02	1.229
550.	10.808	35.516	4.98	10.740	27.213	31.661	35.998	0.558	1502.4	545.	0.9735E 02	1.251
600.	10.697	35.522	4.90	10.623	27.238	31.689	36.028	0.607	1502.8	594.	0.9606E 02	1.305
700.	10.692	35.636	4.54	10.605	27.328	31.781	36.120	0.700	1504.6	693.	0.8990E 02	1.703
800.	10.338	35.683	4.33	10.240	27.427	31.889	36.235	0.786	1505.1	792.	0.8235E 02	1.833
900.	10.010	35.718	4.32	9.901	27.510	31.982	36.335	0.865	1505.6	891.	0.7609E 02	1.707
1000.	9.488	35.705	4.34	9.370	27.590	32.073	36.437	0.938	1505.4	990.	0.6990E 02	1.690
1100.	8.856	35.645	4.44	8.731	27.647	32.145	36.524	1.006	1504.6	1088.	0.6525E 02	1.518
1200.	7.938	35.534	4.65	7.809	27.703	32.222	36.622	1.068	1502.7	1187.	0.5977E 02	1.591
1300.	7.095	35.415	4.88	6.961	27.733	32.272	36.691	1.126	1501.0	1286.	0.5649E 02	1.314
1400.	6.255	35.296	5.10	6.119	27.754	32.313	36.753	1.181	1499.2	1384.	0.5362E 02	1.235
1500.	5.548	35.190	5.31	5.410	27.760	32.336	36.794	1.234	1498.0	1483.	0.5216E 02	0.995
1600.	4.971	35.109	5.50	4.830	27.765	32.356	36.828	1.285	1497.2	1581.	0.5084E 02	0.944
1700.	4.600	35.061	5.71	4.453	27.770	32.371	36.853	1.336	1497.3	1679.	0.5011E 02	0.810
1800.	4.300	35.032	5.80	4.148	27.779	32.389	36.878	1.385	1497.7	1778.	0.4900E 02	0.869
1900.	4.151	35.022	5.84	3.991	27.787	32.401	36.895	1.434	1498.7	1876.	0.4856E 02	0.715
2000.	3.892	34.990	5.99	3.726	27.789	32.411	36.911	1.482	1499.3	1974.	0.4811E 02	0.708
2200.	3.708	34.990	6.00	3.525	27.808	32.436	36.942	1.577	1501.9	2171.	0.4713E 02	0.704
2400.	3.411	34.980	5.99	3.214	27.830	32.467	36.981	1.670	1504.0	2367.	0.4515E 02	0.806
2600.	3.186	34.973	5.93	2.972	27.846	32.491	37.011	1.759	1506.4	2563.	0.4377E 02	0.725
2800.	3.020	34.964	5.86	2.790	27.855	32.505	37.030	1.845	1509.1	2759.	0.4329E 02	0.599
3000.	2.878	34.954	5.81	2.630	27.859	32.516	37.045	1.932	1511.9	2955.	0.4312E 02	0.541
3500.	2.663	34.933	5.73	2.366	27.862	32.529	37.066	2.149	1519.5	3443.	0.4411E 02	0.429
4000.	2.570	34.918	5.68	2.219	27.859	32.534	37.075	2.375	1527.6	3931.	0.4617E 02	0.316

CTD10650



TEMP (DEG.C)	3.	5.	7.	9.	11.	13.	15.
SALINITY (PSU)	35.2	35.4	35.6	35.8	36.0	36.2	36.4
SIGMA.T.(CGS)	26.7	26.9	27.1	27.3	27.5	27.7	27.9
OXYGEN (ML/L)	2.0	3.0	4.0	5.0	6.0	7.0	8.0

DISCOVERY 132 WPRDI10650BWAQ 1983/47/0007 40 59.1N 20 25.4W

DISCOVERY 132 STATION 10650

P-DB	T-DEGC	SAL-PSU	DO-ML/L	POTEMP	SIGMAT	SIG1000	SIG2000	DYNHT-M	SNDV-M/S	DEPTH-M	SVANOM	BVFR-C/HR
10.	14.159	35.896	6.01	14.158	26.847	31.213	35.482	0.012	1505.2	10.	0.1196E 03	-9.999
20.	14.160	35.896	6.02	14.157	26.847	31.213	35.482	0.024	1505.4	20.	0.1199E 03	0.171
40.	14.165	35.896	6.00	14.159	26.846	31.212	35.481	0.048	1505.7	40.	0.1206E 03	-0.261
60.	14.159	35.900	5.91	14.135	26.850	31.218	35.487	0.072	1506.0	60.	0.1207E 03	0.893
80.	14.104	35.883	5.99	14.092	26.849	31.218	35.488	0.096	1506.2	79.	0.1214E 03	-0.339
100.	13.616	35.795	5.83	13.602	26.883	31.263	35.543	0.120	1504.8	99.	0.1186E 03	2.390
120.	13.466	35.784	5.57	13.449	26.908	31.289	35.571	0.144	1504.6	119.	0.1171E 03	1.912
140.	13.380	35.775	5.45	13.361	26.914	31.302	35.586	0.167	1504.7	139.	0.1166E 03	1.353
160.	13.219	35.750	5.44	13.196	26.930	31.320	35.607	0.191	1504.4	159.	0.1158E 03	1.539
180.	13.068	35.736	5.41	13.043	26.951	31.343	35.634	0.214	1504.3	179.	0.1144E 03	1.826
200.	12.899	35.719	5.45	12.871	26.972	31.368	35.662	0.236	1504.0	198.	0.1129E 03	1.869
220.	12.776	35.706	5.44	12.746	26.983	31.385	35.682	0.259	1503.9	218.	0.1120E 03	1.539
240.	12.734	35.702	5.38	12.702	26.992	31.392	35.689	0.281	1504.1	238.	0.1120E 03	0.967
260.	12.633	35.686	5.34	12.597	26.999	31.403	35.702	0.304	1504.1	258.	0.1118E 03	1.201
280.	12.577	35.680	5.38	12.539	27.006	31.411	35.711	0.326	1504.2	278.	0.1116E 03	1.090
300.	12.411	35.659	5.36	12.370	27.022	31.431	35.735	0.348	1504.0	297.	0.1105E 03	1.686
320.	12.195	35.631	5.25	12.153	27.046	31.456	35.765	0.370	1503.5	317.	0.1090E 03	1.858
340.	12.012	35.607	5.27	11.967	27.059	31.477	35.789	0.392	1503.2	337.	0.1078E 03	1.708
360.	11.918	35.594	5.26	11.871	27.067	31.488	35.802	0.413	1503.2	357.	0.1075E 03	1.182
380.	11.829	35.584	5.21	11.780	27.076	31.499	35.815	0.435	1503.2	377.	0.1071E 03	1.295
400.	11.708	35.568	5.16	11.656	27.087	31.513	35.831	0.456	1503.1	397.	0.1065E 03	1.372
450.	11.370	35.530	5.05	11.310	27.121	31.555	35.880	0.509	1502.7	446.	0.1042E 03	1.547
500.	11.119	-9.999	4.91	11.056	27.144	-9.999	-9.999	-9.999	-999.9	496.	-0.9999E 01	-9.999
550.	10.884	35.484	4.97	10.816	27.174	31.621	35.956	0.611	1502.6	545.	0.1011E 03	1.382
600.	10.648	35.469	4.89	10.574	27.206	31.657	35.998	0.662	1502.6	594.	0.9911E 02	1.476
700.	10.486	35.554	4.54	10.397	27.300	31.758	36.101	0.758	1503.8	693.	0.9223E 02	1.771
800.	10.453	35.669	4.33	10.354	27.396	31.856	36.200	0.847	1505.5	792.	0.8543E 02	1.761
900.	10.350	35.770	4.27	10.239	27.493	31.957	36.302	0.929	1506.9	891.	0.7842E 02	1.782
1000.	9.890	35.790	4.30	9.769	27.588	32.063	36.418	1.003	1506.9	990.	0.7084E 02	1.832
1100.	9.402	35.789	4.39	9.272	27.668	32.157	36.523	1.070	1506.8	1089.	0.6428E 02	1.726
1200.	7.612	35.470	4.73	7.485	27.703	32.228	36.635	1.132	1501.4	1187.	0.5912E 02	1.559