UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CalCOFI Cruise 6801
7-26 January 1968

CalCOFI Cruise 6804
23 April - 6 May 1968

and

CalCOFI Cruise 6806
31 May - 22 June 1968

SIO Reference 71-3

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Sponsored by

Marine Research Committee

SIO Reference 71-3

Approved for distribution:

W. A. Nierenberg

W. A. Nierenberg, Director

CONTENTS

INTRODUCTION

The data in this report were collected on Cruises 6801, 6804 and 6806 of the California Cooperative Fisheries Investigations (CalCOFI) program by the RV David Starr Jordan of the Bureau of Commercial Fisheries (now National Marine Fisheries Service) and the RV Horizon of the Scripps Institution of Oceanography. The first two digits in this cruise-numbering system represent the year of the cruise; the last two digits, the month. The cruises preceeding these in the series are 6610, 6612 and Special Cruise 6611 all of which appear in SIO Ref. 69-2; and 6707 and 6712, both of which appear in SIO Ref. 69-8.

These data were collected in part and processed completely by personnel of the Data Collection and Processing Group (DCPG, MLR), Scripps Institution of Oceanography.

TABULATED DATA

Data for all cruises presented in this report were obtained by bottle casts and by the in situ Salinity/Temperature/Depth Monitoring and Recording System (STD) and appear in two forms:

1. Data from the sample bottle casts are tabulated with the observed levels of depth on the left of a page and standard levels of depth values interpolated and computed from these observations to the right.

2. For each STD lowering, temperature and salinity values are read only at standard levels of depth and appear with the same computed values as the sample bottle data on the right of the page. Corrections may have been applied to the temperature or salinity values or to both from continuing comparison of sample bottle data and STD data collected on the same station.

The data tabulated are of the same type as have previously appeared in these reports; the column headings from the computer are explained as follows:

Z	Depth in meters	
T	Temperature	°C
S	Salinity	‰
OXY	Oxygen	ml/L
PHO	Phosphate	µg at/L
SIL	Silicate	µg at/L
NIT	Nitrate	µg at/L
D*T	δ_T	cl/ton
SIG*T	σ_t	g/L
DD	ΔD	dyn. m

Tabulations of the nitrite values follow the computer tabulations of other data for Cruises 6804 and 6806. No nutrient samples were collected on Cruise 6801.

STANDARD PROCEDURES

In situ Salinity/Temperature/Depth Recorder

The manufacturer of the STD claims for the temperature an accuracy of ±0.05°C on all ranges with repeatability of ±0.01°C and for the salinity an accuracy of ±0.03‰ on all ranges with repeatability of ±0.01‰. [1/] Except for the depth range corresponding to the steepest part of the thermocline, where the salinity trace appears to fluctuate more widely than the bottle samples can confirm, the results of this cruise support the manufacturer's claims.

Continuing comparison of the data from each STD lowering with the sample bottle observations for the corresponding location resulted in the following corrections being applied to the STD standard depth values tabulated for each cruise:

The temperature from the bottle cast and STD recording agreed very well on Cruise 6801. However, some adjusting of the salinity occurred during the early lowerings of the STD finally resulting in a correction varying from -0.01‰ at the surface to -0.05‰ at 500 meters.

Cruise 6804 required no correction to the temperature but a correction varying from ±0.00‰ at the surface to +0.03‰ at 500 meters was applied to all stations.

Cruise 6806 was the first cruise on which a digital data logger was used for data tabulation from the STD. A temperature correction varying from ±0.00°C at the surface to -0.05°C at 600 meters and a salinity correction of +0.01‰ to -0.04‰ over the same depth range were applied to these tabulations.

Hydrographic Casts

The observed data have been plotted and then evaluated using the method described by Klein. [2/] This involves consideration of their variation as functions of density or depth and their relations to each other and comparison with concurrent STD observations and with previous or adjacent observations. The Nansen-bottle cast data are

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[1/] In situ Salinity/Temperature/Depth Monitoring and Recording System, Model 9006, Tech. Rep. No. 102, HYTECH Marine Products, The Bissett-Berman Corporation.

[2/] Klein, Hans T. A new technique for processing physical oceanographic data. MS.

tabulated at observed depths; the values at standard depths are computer interpolations according to a modified Rattray technique, [3] except that some property values at standard depths have been determined from consideration of the STD recording for the station. These property values were entered in the "observed" columns to prevent instabilities or to indicate features not covered by the hydrographic cast. The values are indicated by notations (see FOOTNOTES). To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer while temperatures from reversing thermometers or the STD are recorded in hundredths of a degree. The salinity values obtained by salinometer are recorded to three decimal places, provided they meet accepted standards. The values recorded "have a reproducibility of ±0.004‰ salinity at the 95 per cent probability level, and a probable accuracy of ±0.01‰ salinity or better at the same level of probability." [4] The values are recorded to two decimal places when only one determination per sample was obtained, or where there is doubt concerning the accuracy of a particular sample, or of all samples on a station. The accuracy of all samples obtained by salinometer and recorded to two decimal places is believed to be equal to or better than those obtained by manual titration.

The nutrient data for Cruises 6804 and 6806 are the first in these reports determined using the Technicon AutoAnalyzer.

On stations consisting of bottle casts only, extrapolated values and values interpolated between remote observations are not indicated but can be determined from the tabulation of observed depths. A hyphen is used to indicate a missing observed or interpolated value. The time on these stations is the time of messenger release for the bottle cast. The time listed for all STD stations is the startdown time for the lowering. When more than one bottle cast was made on station, messenger times and wire angles are given in the order of increasing depth and a significant change in position during a multiple cast is listed similarly. Multiple casts are indicated by a letter following all observed depths of each cast except the cast originating at the surface. Footnotes corresponding to each letter will explain the type of cast.

On stations where more than one cast was lowered, slight discrepancies in the property values may be noted. These may be caused by changes in geographical position, real changes with time, slight errors in measurement or a combination of these factors. Values at standard depths in the area of these discrepancies may be determined from reconciliation of the plotted observed values and entered in the "observed" columns with notations.

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[3] Rattray, Maurice (1962). Interpolation errors and oceanographic sampling. Deep-Sea Res. 9: 25-37.

[4] Quotation from Department of Oceanography, University of Washington, Tech. Rep. No. 66, UW Ref. 60-18, October 1960.

FOOTNOTES

In addition to footnotes, three special notations are used without footnotes because their meaning is always the same.

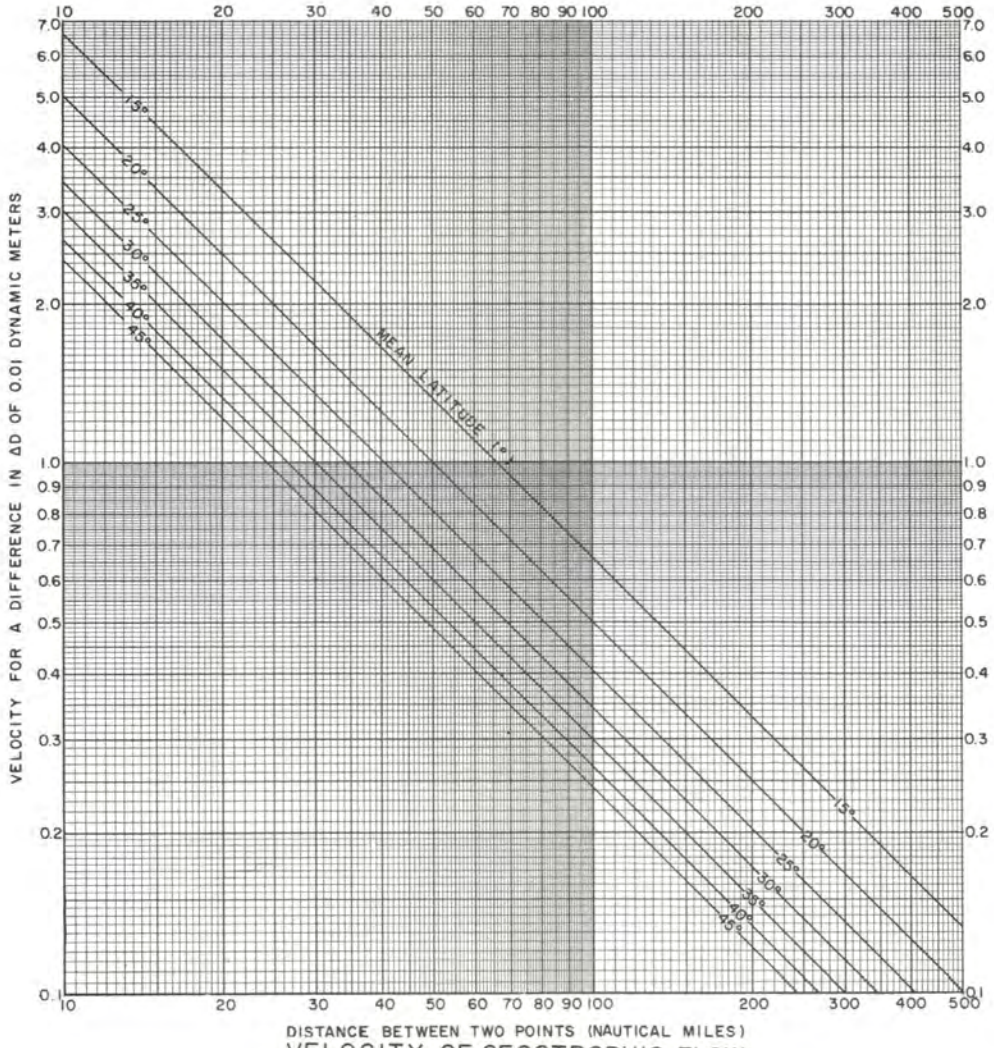
Values which are not used in interpolation because they seem to be in error without apparent reason are indicated by the following notation.

u: uncertain value

Values at standard levels of depth entered in the observed columns to limit machine interpolations may have either of the following notations.

k: a value determined from another measurement such as a bathythermogram or STD recording.

g: a value determined from considerations such as stability or previous or surrounding stations.



VELOCITY OF GEOSTROPHIC FLOW
(NAUTICAL MILES PER DAY)

cm/sec	0	1	2	3	4	5	6	7	8	9
0	KNOTS / NM/DAY	0.02 / 0.47	0.04 / 0.93	0.06 / 1.40	0.08 / 1.86	0.10 / 2.33	0.12 / 2.80	0.14 / 3.26	0.16 / 3.73	0.17 / 4.20
10	0.19 / 4.66	0.21 / 5.13	0.23 / 5.59	0.25 / 6.06	0.27 / 6.53	0.29 / 6.99	0.31 / 7.46	0.33 / 7.93	0.35 / 8.39	0.37 / 8.86
20	0.39 / 9.32	0.41 / 9.79	0.43 / 10.26	0.45 / 10.72	0.47 / 11.19	0.49 / 11.66	0.51 / 12.12	0.52 / 12.59	0.54 / 13.05	0.56 / 13.52
30	0.58 / 13.99	0.60 / 14.45	0.62 / 14.92	0.64 / 15.38	0.66 / 15.85	0.68 / 16.32	0.70 / 16.78	0.72 / 17.25	0.74 / 17.72	0.76 / 18.18
40	0.78 / 18.65	0.80 / 19.11	0.82 / 19.58	0.84 / 20.05	0.85 / 20.51	0.87 / 20.98	0.89 / 21.45	0.91 / 21.91	0.93 / 22.38	0.95 / 22.84
50	0.97 / 2331	0.99 / 23.78	1.01 / 24.24	1.03 / 24.71	1.05 / 25.17	1.07 / 25.64	1.09 / 26.11	1.11 / 26.57	1.13 / 27.04	1.15 / 27.51
60	1.17 / 27.98	1.18 / 28.44	1.20 / 28.90	1.22 / 29.37	1.24 / 29.84	1.26 / 30.30	1.28 / 30.77	1.30 / 31.24	1.32 / 31.70	1.34 / 32.17
70	1.36 / 32.63	1.38 / 33.10	1.40 / 33.57	1.42 / 34.03	1.44 / 34.50	1.46 / 34.96	1.48 / 35.43	1.50 / 35.90	1.52 / 36.36	1.53 / 36.83
80	1.55 / 37.30	1.57 / 37.76	1.59 / 38.23	1.61 / 38.69	1.63 / 39.16	1.65 / 39.63	1.67 / 40.09	1.69 / 40.56	1.71 / 41.03	1.73 / 41.49
90	1.75 / 41.96	1.77 / 42.42	1.79 / 42.89	1.81 / 43.36	1.83 / 43.82	1.85 / 44.29	1.86 / 44.76	1.88 / 45.22	1.90 / 45.69	1.92 / 46.15
100	1.94 / 46.62	1.96 / 47.09	1.98 / 47.55	2.00 / 48.02	2.02 / 48.48	2.04 / 48.95	2.06 / 49.42	2.08 / 49.88	2.10 / 50.35	2.12 / 50.82

CONVERSION TABLE

(CENTIMETERS / SECOND – KNOTS – NAUTICAL MILES / DAY)

1 cm/sec = 0.019 kts = 0.466 NAUTICAL MILES / DAY
1 kt = 24 NAUTICAL MILES / DAY = 51.48 cm/sec
1 NAUTICAL MILE / DAY = 0.042 kts = 2.14 cm/sec

FIGURES
Cruise 6804

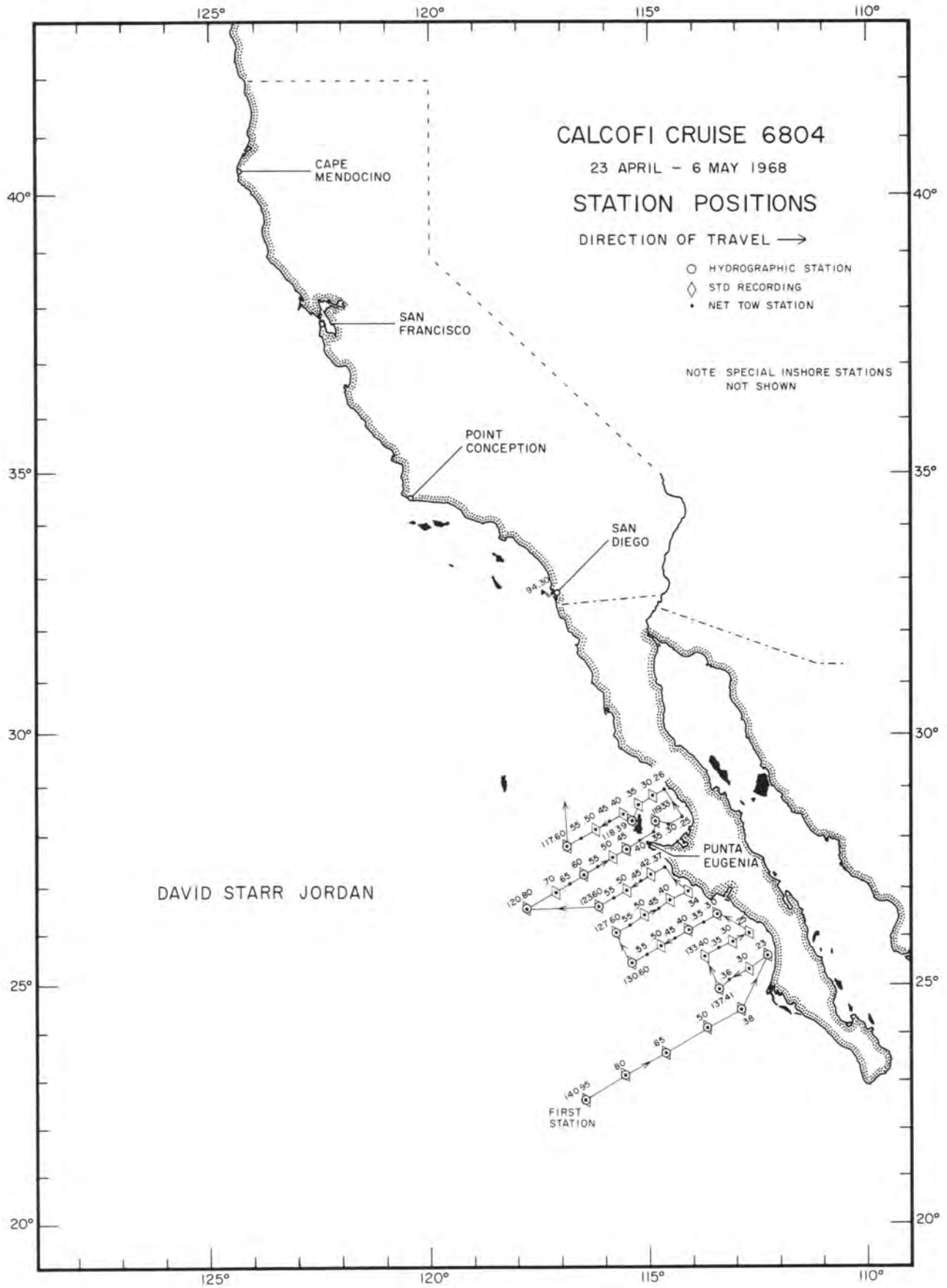

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
STATION POSITIONS
DIRECTION OF TRAVEL →
HYDROGRAPHIC STATION
STD RECORDING
NET TOW STATION
NOTE: SPECIAL INSHORE STATIONS NOT SHOWN
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
DAVID STARR JORDAN
FIRST STATION
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 1

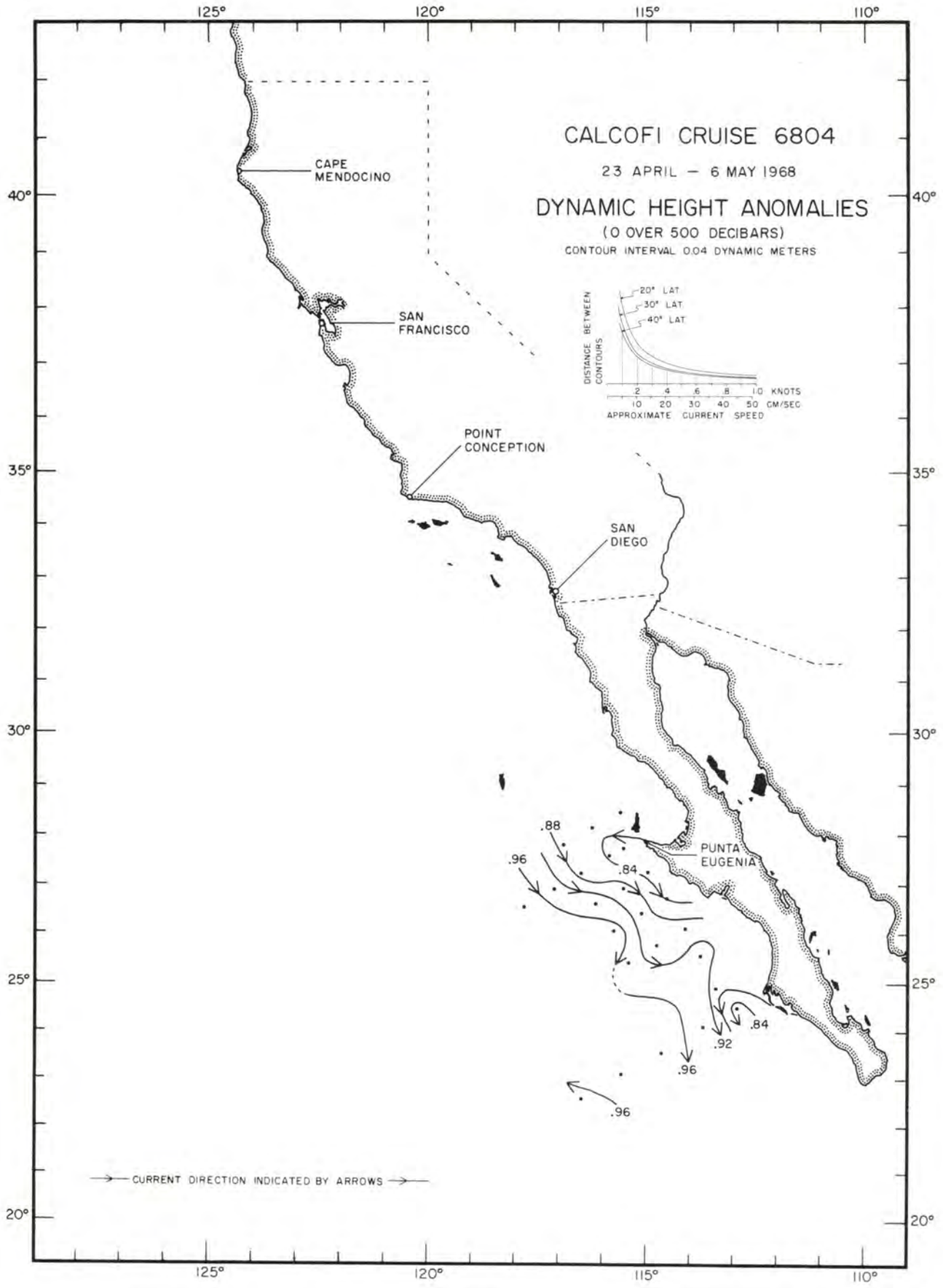

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
2 4 6 8 10 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.96
.84
.84
.92
.96
.96
CURRENT DIRECTION INDICATED BY ARROWS
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 2

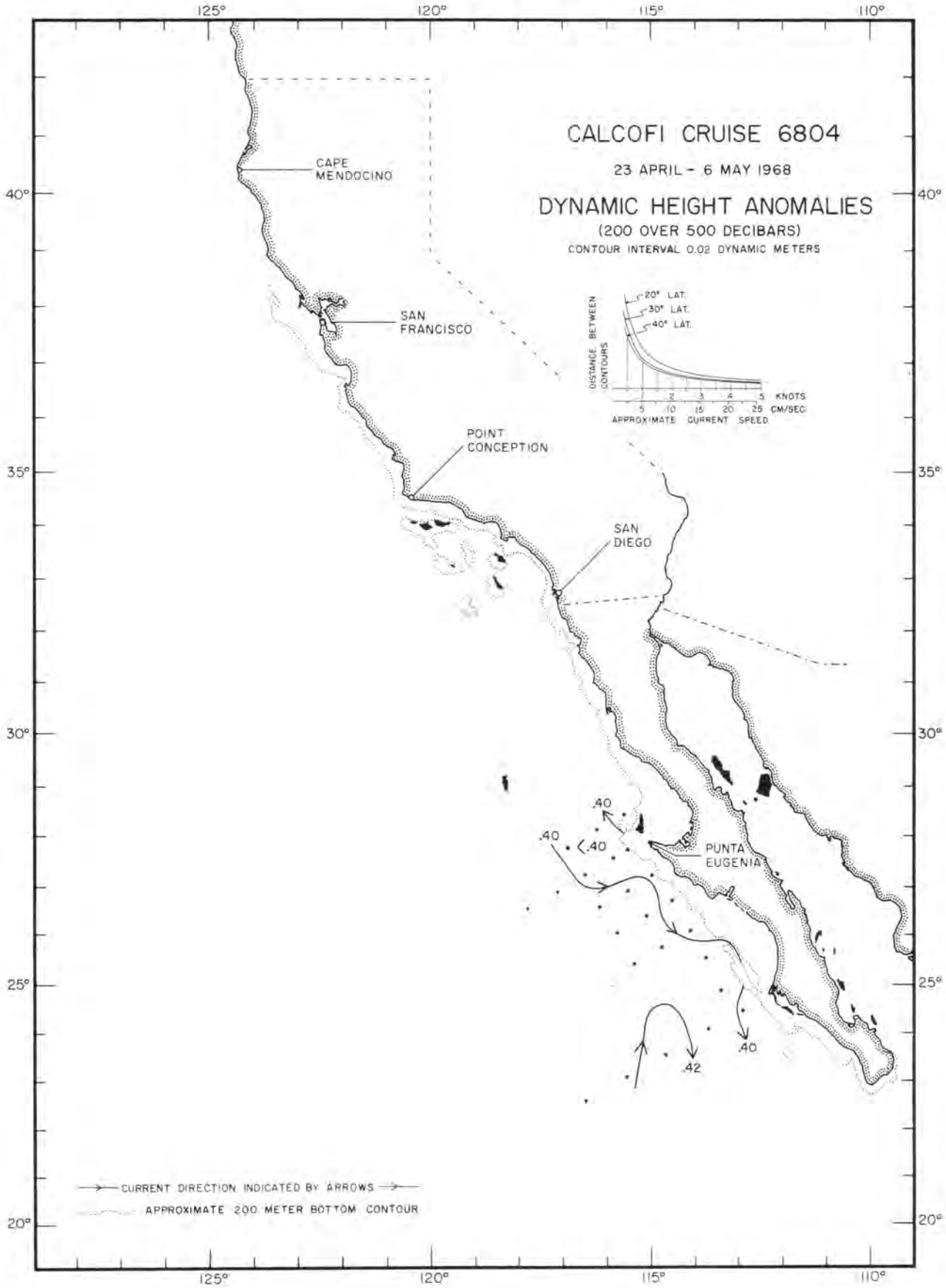

CALCOFI CRUISE 6804
23 APRIL - 6 MAY 1968
DYNAMIC HEIGHT ANOMALIES
(200 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
1 2 3 4 5 KNOTS
5 10 15 20 25 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.40
.40
.40
.40
.42
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 200 METER BOTTOM CONTOUR
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 3

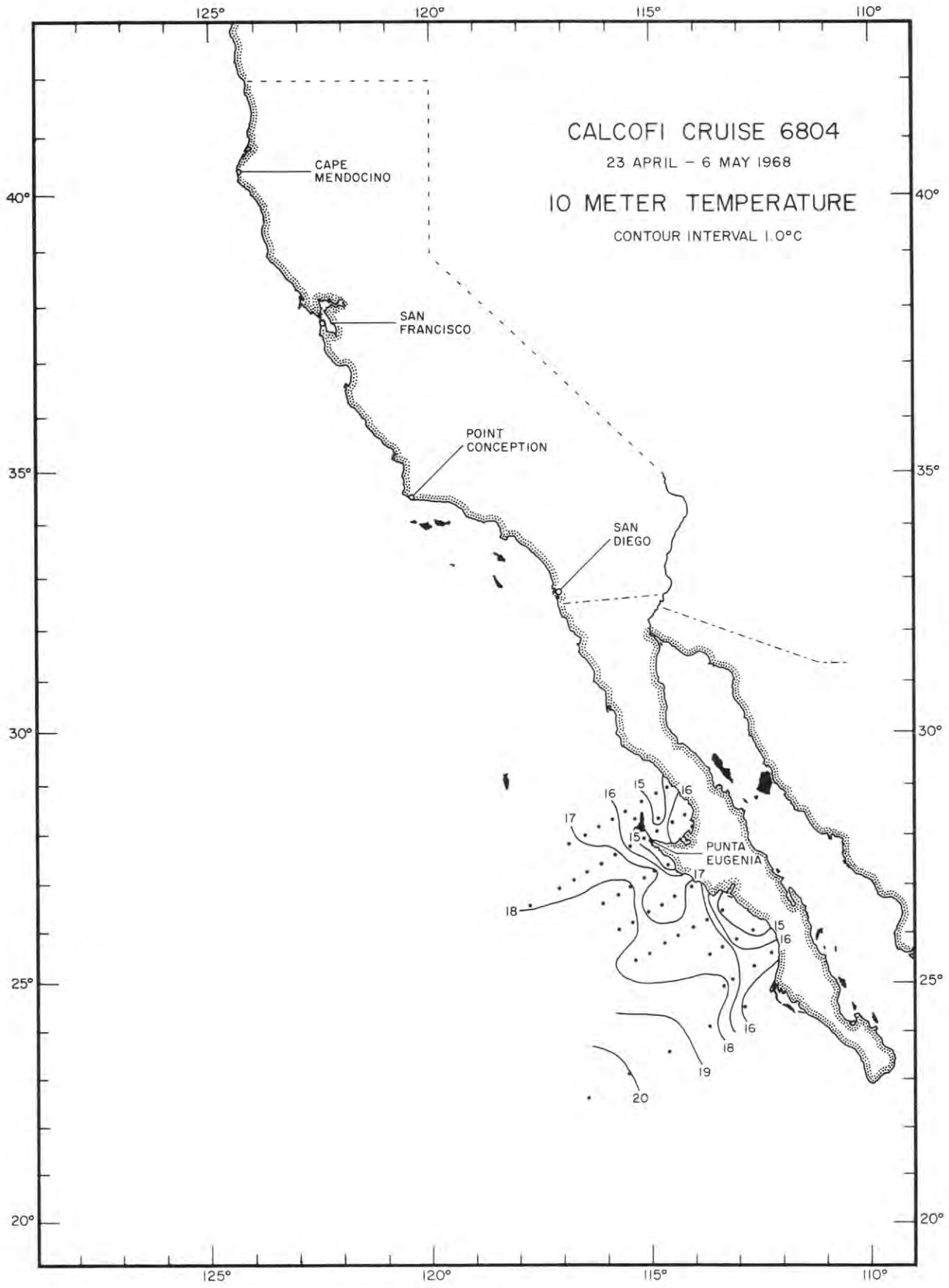

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
15
16
17
18
19
20

FIGURE 4

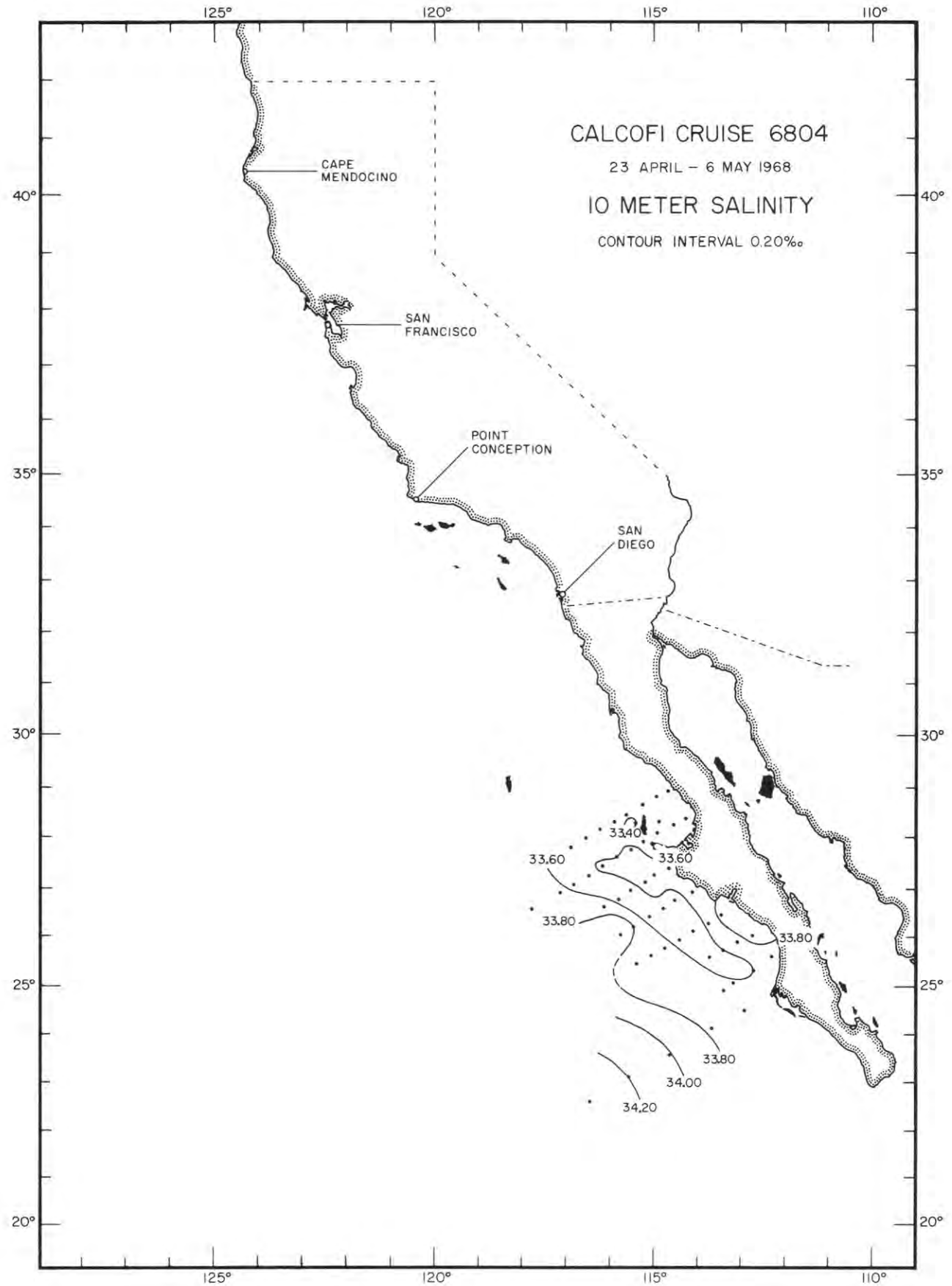

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
33.40
33.60
33.60
33.80
33.80
33.80
34.00
34.20
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 5

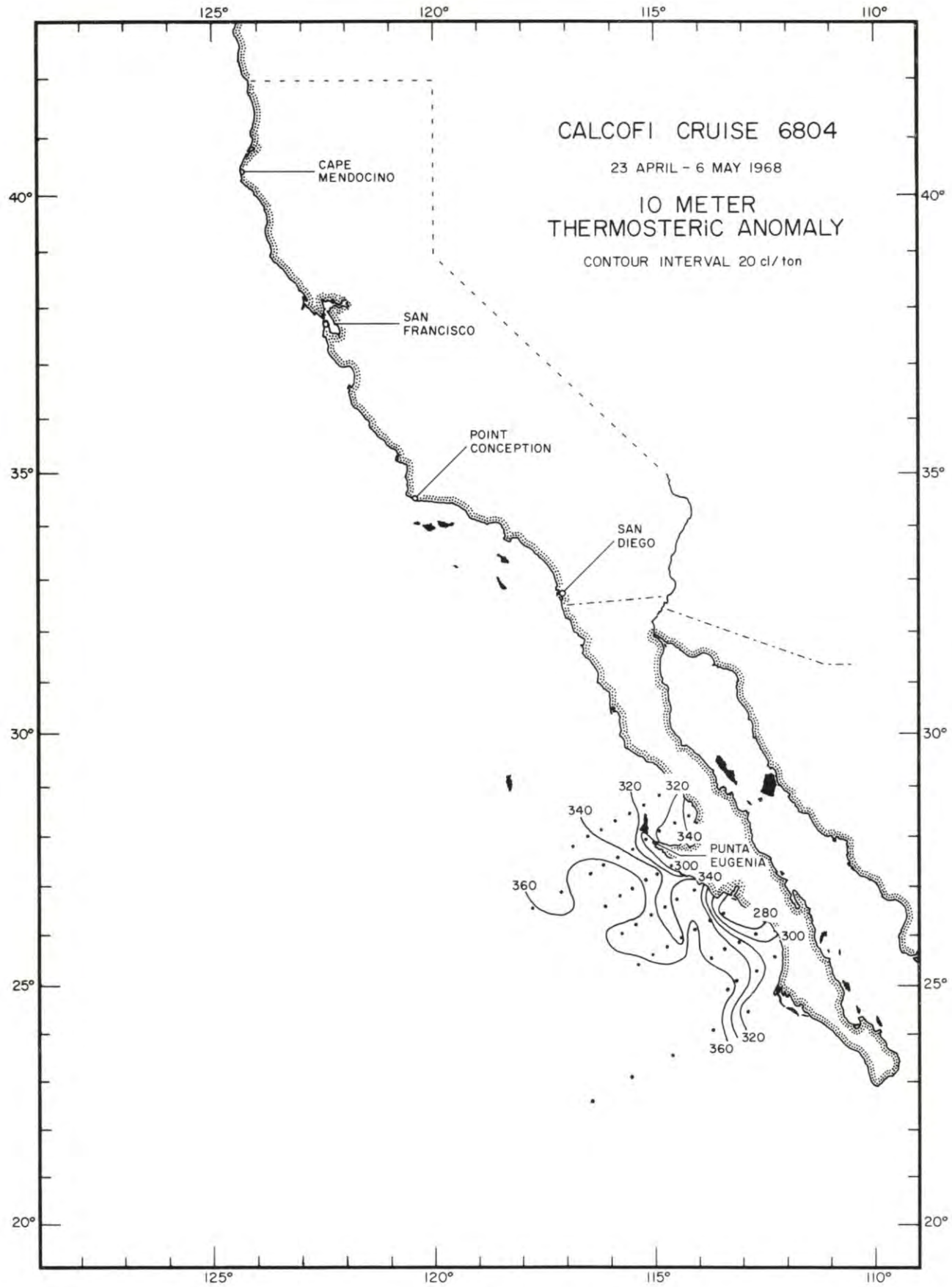

CALCOFI CRUISE 6804
23 APRIL - 6 MAY 1968
10 METER
THERMOSTERIC ANOMALY
CONTOUR INTERVAL 20 cl/ton
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
320
320
340
340
300
340
360
280
300
320
360

FIGURE 6

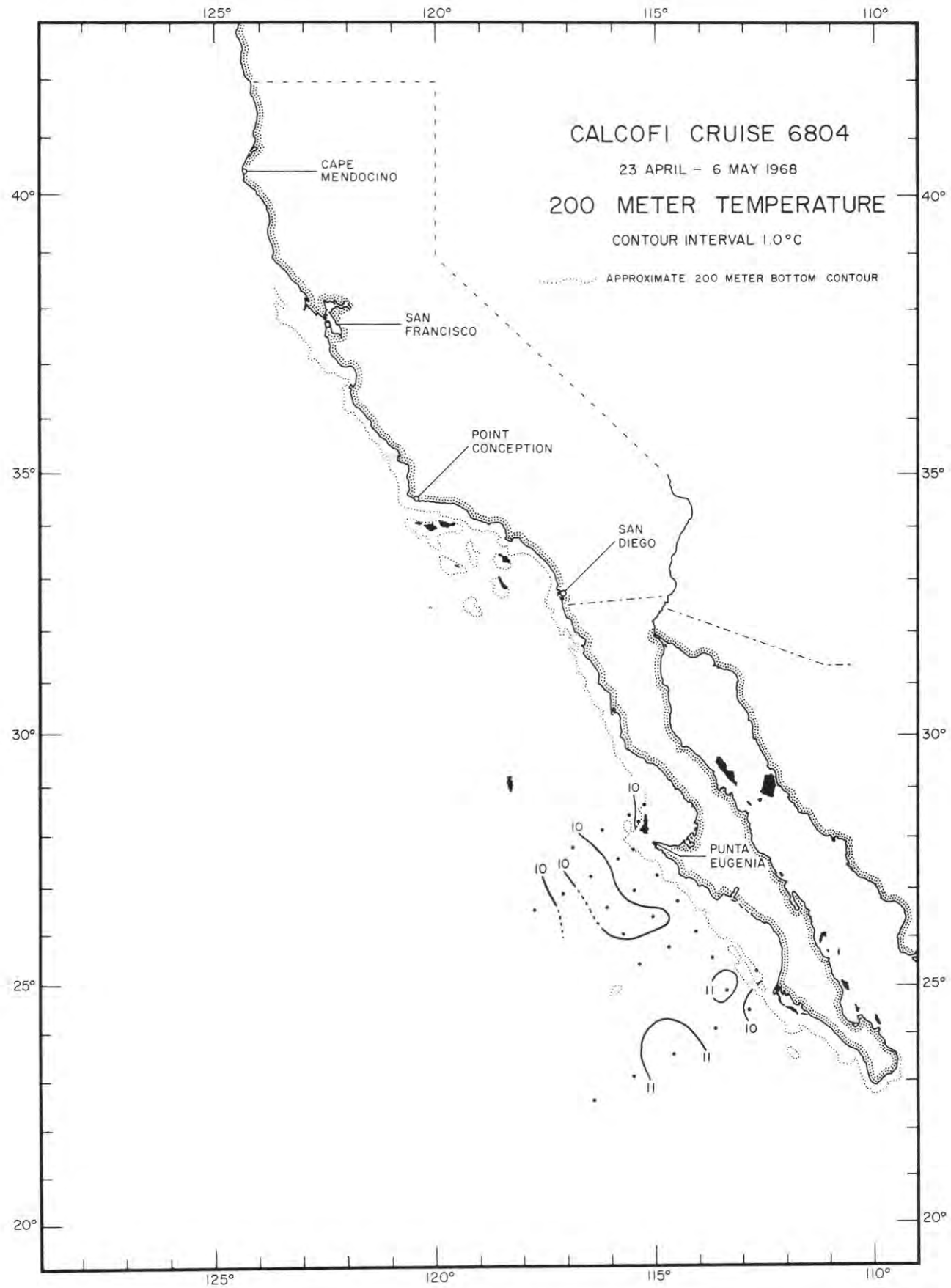

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
10
11

FIGURE 7

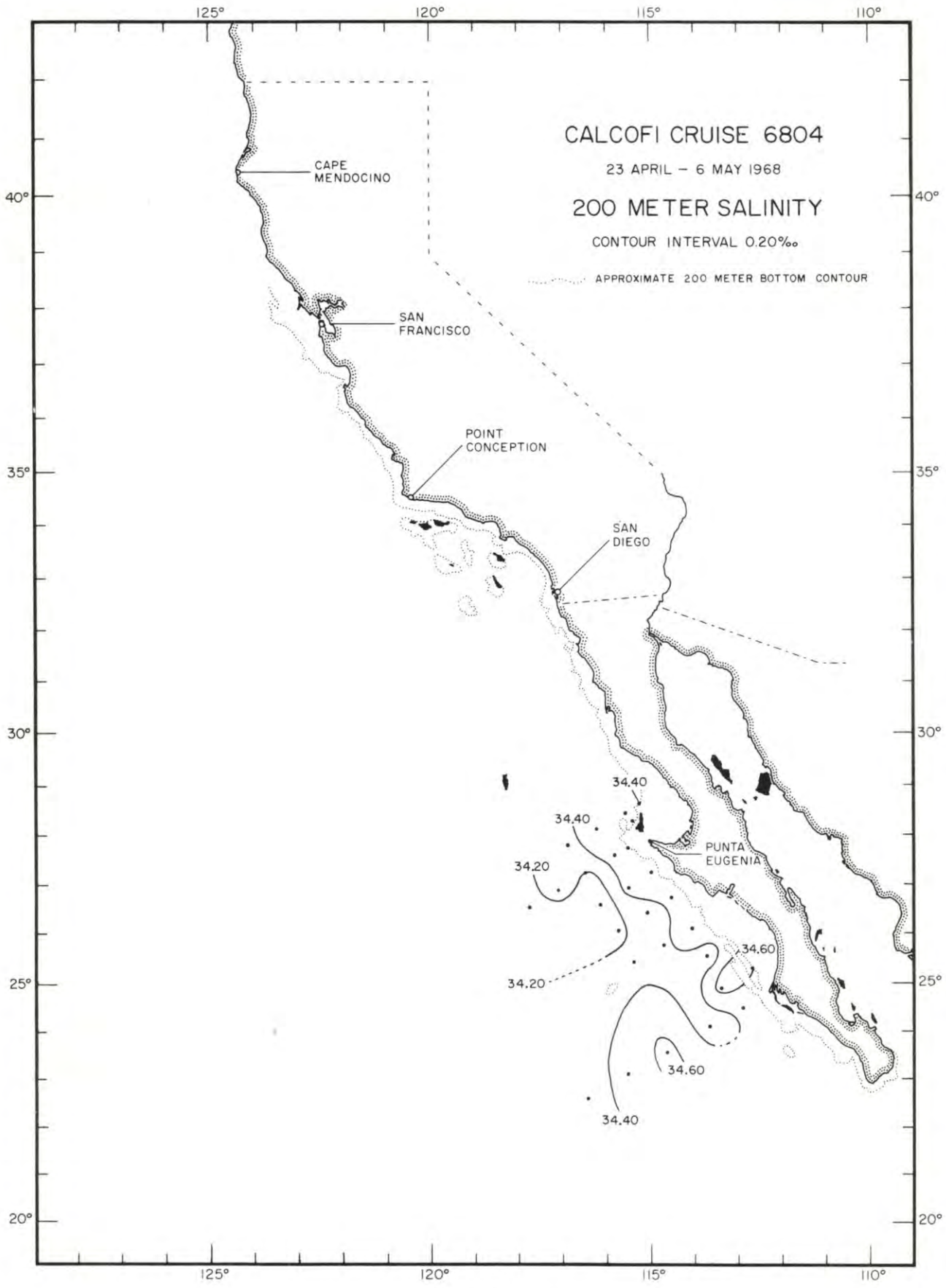

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
200 METER SALINITY
CONTOUR INTERVAL 0.20‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
34.40
34.40
34.20
34.20
34.60
34.60
34.40
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 8

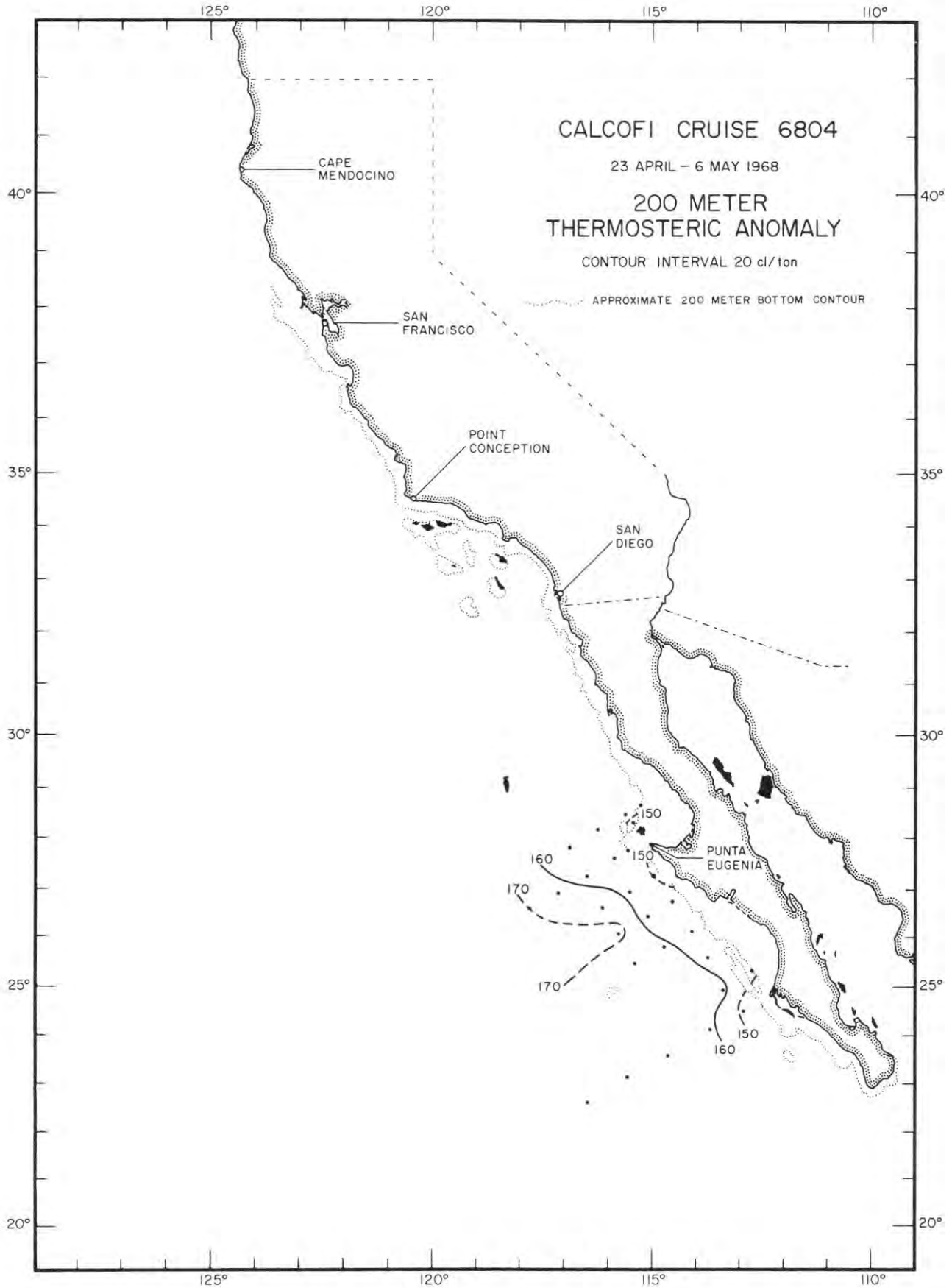

CALCOFI CRUISE 6804
23 APRIL – 6 MAY 1968
200 METER
THERMOSTERIC ANOMALY
CONTOUR INTERVAL 20 cl/ton
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
150
160
170

FIGURE 9

PERSONNEL
Cruise 6804

SHIP'S CAPTAIN

Forster, Charles W., RV David Starr Jordan

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV David Starr Jordan

Thrailkill, James R., Fishery Biologist, Bureau of Commercial Fisheries* (in charge)
Hemingway, George T., Marine Technician
Kimura, Makato, Fishery Biologist, Bureau of Commercial Fisheries*
Mantyla, Arnold W., Laboratory Technician IV
Mauck, William W., Marine Technician
Rombold, Carlos, Student
Rosendahl, Don V., Senior Electronics Technician
Wells, James A., Marine Technician

*Now National Marine Fisheries Service.

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
94.30								CALCOFI CRUISE 6804						94.30
DAVID STARR JORDAN, APRIL 23 1968, 0245 GMT, 32 42.5N 117 27W, SOUNDING 300 FM, WIND 340 6 KNOTS, WEATHER MISSING, SEA MODERATE. A)														
								0	16.00	33.50	-	24.62	333.3	0
								10	11.72	33.37	-	25.40	258.9	.030
								20	11.03	33.45	-	25.58	241.0	.055
								30	10.54	33.51	-	25.72	228.4	.078
								50	10.23	33.59	-	25.83	217.4	.123
								75	9.98	33.84	-	26.07	194.9	.175
								100	9.61	33.99	-	26.25	177.9	.222
								125	9.37	34.04	-	26.33	170.4	.266
								150	9.18	34.08	-	26.39	164.6	.308
								200	8.88	34.17	-	26.51	153.3	.390
								250	8.40	34.22	-	26.62	142.5	.466
								300	8.02	34.27	-	26.72	133.4	.537

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
94.30								CALCOFI CRUISE 6804						94.30
DAVID STARR JORDAN, APRIL 23 1968, 0344 GMT, 32 42.5N 117 27W, SOUNDING 300 FM, WIND 330 6 KNOTS, WEATHER CLEAR, SEA MODERATE, WIRE ANGLE 05. A)														
0	15.86	33.512	5.08	0.23	5	0.1	329.4	0	15.86	33.512	5.08	24.66	329.4	0
5	15.86	33.506	6.37	0.30	5	0.0	329.9	10	13.85	33.436	6.40	25.03	293.8	.031
11	13.39	33.422	6.33	0.53	5	0.4	285.8	20	12.13	33.419	5.17	25.36	262.6	.059
16	12.34	33.424	5.20	0.90	7	2.2	266.0	30	11.40	33.459	4.52	25.53	246.7	.085
20	12.13	33.419	5.17	1.16	8	5.2	262.6	50	10.40	33.550	4.22	25.77	223.2	.132
25	11.68	33.426	4.82	1.17	10	6.7	254.1	75	10.08	33.843	3.14	26.06	196.3	.184
33	11.22	33.487	4.36	1.25	13	10.4	241.6							
38	10.74	33.537	4.14	1.40	15	14.1	229.7							
44	10.60	33.560	4.24	2.01	15	15.5	225.7							
51	10.37	33.551	4.20	1.74	16	16.5	222.6							
57	10.22	33.625	3.89	0.82	18	15.2	214.7							
62	10.25	33.669	3.83	1.08	19	16.0	211.9							
67	10.23	33.760	3.46	1.04	21	19.4	204.8							
71	10.18	33.799	3.28	1.49	23	20.3	201.1							
76	10.06	33.852	3.11	1.90	24	22.6	195.3							
81	10.03	33.870	3.08	1.92	25	22.8	193.5							
86	10.0 B	33.889	3.07	1.64	25	23.4	191.6							
92	9.9 B	33.908	2.98	1.95	26	23.3	188.6							

	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
117.30								CALCOFI CRUISE 6804						117.30
DAVID STARR JORDAN, MAY 5 1968, 1734 GMT, 28 48N 114 56.5W, SOUNDING 56 FM, WIND 320 12 KNOTS, WEATHER OVERCAST, SEA ROUGH.														
								0	14.92	33.54	-	24.88	307.6	0
								10	14.69	33.53	-	24.93	303.7	.031
								20	13.58	33.42	-	25.07	289.7	.060
								30	11.96	33.36	-	25.34	263.9	.088
								50	10.98	33.63	-	25.73	226.9	.137
								75	10.04	33.78	-	26.01	200.3	.191
								100	10.17	34.10	-	26.24	178.7	.239
117.35								CALCOFI CRUISE 6804						117.35
DAVID STARR JORDAN, MAY 5 1968, 2013 GMT, 28 38N 115 16W, SOUNDING 112 FM, WIND 290 8 KNOTS, WEATHER CLOUDY, SEA ROUGH.														
								0	15.37	33.47	-	24.73	322.1	0
								10	15.21	33.47	-	24.77	318.8	.032
								20	14.31	33.32	-	24.85	311.4	.064
								30	13.54	33.34	-	25.02	294.7	.094
								50	11.72	33.39	-	25.41	257.4	.149
								75	11.08	33.49	-	25.61	238.9	.212
								100	10.01	33.81	-	26.04	197.6	.267
								125	10.58	34.20	-	26.25	178.1	.314
								150	10.17	34.32	-	26.41	162.4	.358
								200	9.94	34.40	-	26.51	152.8	.438

A) SHAKEDOWN STATION.
B) TEMPERATURE INFERRED FROM THE PRESSURE THERMOMETER AND WIRE DEPTH.

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DC
117.40					CALCOFI CRUISE 6804								117.40	

DAVID STARR JORDAN, MAY 6 1968, 0227 GMT, 28 28N 115 35.5W, SOUNDING 560 FM, WIND 310 14 KNOTS, WEATHER OVERCAST, SEA ROUGH.

0	15.99	33.48	-	24.60	334.6	0
10	15.95	33.48	-	24.61	333.7	.033
20	15.68	33.48	-	24.67	327.9	.067
30	15.62	33.47	-	24.68	327.4	.099
50	12.70	33.33	-	25.18	279.6	.160
75	11.27	33.59	-	25.65	234.8	.225
100	10.40	33.79	-	25.96	205.4	.280
125	10.02	33.88	-	26.09	192.6	.331
150	9.73	34.06	-	26.28	174.6	.377
200	10.28	34.42	-	26.47	156.9	.462
250	10.06	34.56	-	26.62	142.9	.539
300	9.46	34.54	-	26.70	134.8	.612
400	8.24	34.48	-	26.85	120.9	.746
500	6.63	34.38	-	27.00	106.5	.867

117.50					CALCOFI CRUISE 6804								117.50	

DAVID STARR JORDAN, MAY 6 1968, 0709 GMT, 28 08N 116 15W, SOUNDING 2040 FM, WIND 310 13 KNOTS, WEATHER MISSING, SEA MISSING.

0	16.33	33.51	-	24.55	339.7	0
10	16.33	33.51	-	24.55	339.7	.034
20	16.30	33.49	-	24.54	340.5	.068
30	14.66	33.48	-	24.89	306.7	.100
50	13.55	33.47	-	25.12	285.4	.160
75	11.37	33.58	-	25.62	237.3	.226
100	10.88	33.88	-	25.95	206.8	.292
125	10.51	34.07	-	26.16	186.5	.331
150	10.67	34.39	-	26.38	165.6	.376
200	10.48	34.54	-	26.53	151.3	.457
250	9.50	34.50	-	26.67	138.4	.532
300	9.16	34.53	-	26.74	130.9	.602
400	7.47	34.35	-	26.86	119.8	.734
500	6.47	34.38	-	27.02	104.5	.853

117.60					CALCOFI CRUISE 6804								117.60	

DAVID STARR JORDAN, MAY 6 1968, 1337 GMT, 27 48N 116 53W, SOUNDING 1650 FM, WIND 350 15 KNOTS, WEATHER OVERCAST, SEA ROUGH.

0	17.10	33.56	-	24.41	353.2	0
10	17.12	33.57	-	24.41	352.9	.035
20	17.13	33.57	-	24.41	353.1	.071
30	17.02	33.57	-	24.43	350.6	.106
50	14.87	33.56	-	24.91	305.1	.172
75	11.28	33.59	-	25.65	235.0	.240
100	10.67	33.87	-	25.97	204.0	.295
125	10.10	34.14	-	26.28	174.6	.343
150	10.10	34.19	-	26.32	170.9	.387
200	9.58	34.33	-	26.52	152.2	.469
250	9.25	34.36	-	26.60	144.9	.546
300	8.35	34.34	-	26.72	132.9	.618
400	7.03	34.32	-	26.90	116.1	.748
500	6.30	34.39	-	27.05	101.6	.864

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DC
117.60					CALCOFI CRUISE 6804								117.60	

DAVID STARR JORDAN, MAY 6 1968, 1416 GMT, 27 48N 116 53W, SOUNDING 1650 FM, WIND 350 15 KNOTS, WEATHER OVERCAST, SEA ROUGH, WIRE ANGLE 03.

1	17.09	33.570	5.79	0.23	2	0.2	352.2	0	17.09	33.570	5.79	24.42	352.2	0
12	17.09	33.566	5.87	0.25	2	0.1	352.5	10	17.09	33.567	5.86	24.41	352.5	.035
31	17.09	33.565	6.00	0.31	3	0.1	352.6	20	17.15	33.566	5.98	24.40	353.9	.071
40	16.74	33.552	5.75	0.25	3	0.0	345.7	30	17.10	33.565	6.00	24.41	352.8	.106
51	15.57	33.549	5.48	0.37	3	0.1	320.6	50	15.70	33.548	5.51	24.72	323.4	.174
65	13.77	33.646	4.84	0.63	5	2.8	276.8	75	12.25	33.569	4.43	25.45	253.8	.246
79	11.71	33.539	4.26	1.11	12	10.6	246.3	100	10.79	33.792	3.25	25.89	211.7	.305
100	10.79	33.792	3.25	1.67	19	18.5	211.7	125	10.12	33.955	2.80	26.14	188.6	.356
124	10.12	33.945	2.83	1.86	25	22.2	189.4	150	10.03	34.117	2.32	26.28	175.2	.402
144	10.14	34.114	2.32	2.13	29	24.0	177.2	200	9.62	34.254	1.65	26.45	158.6	.487
172	9.59	34.126	2.35	2.12	31	25.7	167.5	250	9.21	34.332	1.18	26.58	146.4	.566
201	9.63	34.259	1.62	2.31	35	27.0	158.3	300	8.31	34.306	.95	26.70	134.8	.639
230	9.59	34.340	1.20	2.55	39	29.2	151.7	400	7.08	34.297	.58	26.88	118.5	.771
268	8.80	34.309	1.14	2.61	43	30.3	141.8	500	6.25	34.341	.34	27.02	104.7	.889
325	7.98	34.304	.79	2.76	50	33.1	130.3							
396	7.13	34.297	.59	2.96	61	37.2	119.2							
466	6.46	34.319	.41	3.04	71	40.3	108.9							
544	6.10	34.380	.26	3.18	76	39.3	99.9							

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED O*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	O*T	DD
118.39							CALCOFI CRUISE 6804						118.39	

DAVID STARR JORDAN, MAY 5 1968, 2259 GMT, 28 18.5N 115 23.5W, SOUNDING 135 FM, WIND 310 5 KNOTS, WEATHER OVERCAST, SEA ROUGH.

0	16.42	33.55	-	24.56	338.8	0
10	15.10	33.40	-	24.74	321.6	.033
20	13.51	33.46	-	25.12	285.4	.063
30	12.05	33.60	-	25.51	247.8	.090
50	10.78	33.82	-	25.92	209.5	.136
75	10.59	34.05	-	26.13	189.3	.186
100	10.05	34.16	-	26.31	172.3	.232
125	10.06	34.24	-	26.37	166.6	.275
150	10.27	34.36	-	26.43	161.1	.317
200	9.82	34.44	-	26.57	147.9	.396
250	9.39	34.44	-	26.64	141.1	.470

INPUT Z	T	S	OXY	PHO	SIL	NIT	O*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	O*T	DD
118.39							CALCOFI CRUISE 6804						118.39	

DAVID STARR JORDAN, MAY 5 1968, 2328 GMT, 28 18.5N 115 23.5W, SOUNDING 135 FM, WIND 310 5 KNOTS, WEATHER OVERCAST, SEA ROUGH, WIRE ANGLE 08.

1	16.15	33.542	6.31	0.41	5	0.2	333.5	0	16.15	33.542	6.31	24.61	333.5	0
20	13.60	33.577	4.92	0.86	10	6.0	278.5	10	14.93	33.557	5.72	24.89	306.7	.032
35	11.63	33.743	3.46	1.57	19	15.2	229.8	20	13.60	33.577	4.92	25.19	278.5	.061
43	11.23	33.820	3.03	1.74	22	17.7	217.2	30	12.20	33.682	3.92	25.55	244.4	.088
55	10.67	33.891	2.97	1.87	24	20.6	202.4	50	10.87	33.866	3.00	25.94	207.7	.133
69	10.55	33.947	2.80	1.97	25	21.3	196.3	75	10.44	33.986	2.69	26.10	191.6	.183
86	10.24	34.057	2.48	2.12	29	23.7	183.0	100	10.06	34.099	2.40	26.26	176.9	.230
110	10.00	34.131	2.28	2.19	31	24.8	173.7	125	10.11	34.238	1.69	26.36	167.6	.273
129	10.15	34.267	1.52	2.42	34	26.3	166.0	150	10.15	34.342	1.21	26.43	160.4	.315
163	10.09	34.369	1.13	2.58	38	27.9	157.5	200	9.86	34.445	.65	26.56	148.2	.394
193	9.92	34.444	.71	2.72	40	29.2	149.2							
227	9.59	34.449	.57	2.79	43	29.8	143.6							

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED O*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	O*T	DD
119.33							CALCOFI CRUISE 6804						119.33	

DAVID STARR JORDAN, MAY 5 1968, 0352 GMT, 28 19N 114 53W, SOUNDING 60 FM, WIND 310 14 KNOTS, WEATHER MISSING, SEA ROUGH.

0	14.93	33.52	-	24.87	309.3	0
10	14.87	33.52	-	24.88	308.1	.031
20	14.47	33.48	-	24.93	302.9	.061
30	13.46	33.52	-	25.18	280.0	.091
50	11.62	33.50	-	25.52	247.6	.144
75	10.51	33.82	-	25.96	205.0	.201
100	10.34	34.06	-	26.18	184.5	.250

INPUT Z	T	S	OXY	PHO	SIL	NIT	O*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	O*T	DD
119.33							CALCOFI CRUISE 6804						119.33	

DAVID STARR JORDAN, MAY 5 1968, 0413 GMT, 28 19N 114 53W, SOUNDING 60 FM, WIND 310 14 KNOTS, WEATHER MISSING, SEA ROUGH, WIRE ANGLE 15.

1	14.81	33.510	6.43	0.40	5	0.2	307.6	0	14.81	33.510	6.43	24.89	307.6	0
6	14.82	33.507	6.26	0.39	5	0.3	308.0	10	14.81	33.505	6.28	24.88	307.9	.031
15	14.78	33.504	6.31	0.26	5	0.3	307.4	20	14.38	33.507	6.10	24.98	299.0	.061
29	13.42	33.516	5.50	0.65	8	2.0	279.5	30	13.32	33.520	5.43	25.20	277.4	.090
39	12.53	33.549	4.75	1.07	11	6.6	260.3	50	11.79	33.547	3.96	25.52	247.2	.143
48	11.92	33.539	3.97	1.19	13	10.4	250.0	75	10.70	33.785	3.30	25.90	210.8	.200
61	11.20	33.629	3.89	1.43	16	14.8	230.7	100	10.31	34.060	2.00	26.18	184.0	.250
74	10.73	33.774	3.35	1.60	21	17.2	212.1							
98	10.32	34.038	2.12	2.15	32	22.2	185.7							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
120.45						CALCOFI CRUISE 6804							120.45	
DAVID STARR JORDAN, MAY 4 1968, 1933 GMT, 27 44.5N 115 31.5W, SOUNDING 1000 FM, WIND 360 10 KNOTS, WEATHER OVERCAST, SEA ROUGH.														
								0	16.12	33.64	-	24.70	325.7	0
								10	15.95	33.63	-	24.73	322.7	.032
								20	15.47	33.71	-	24.89	306.7	.064
								30	14.57	33.67	-	25.06	291.0	.094
								50	12.02	33.76	-	25.64	235.5	.147
								75	10.86	33.92	-	25.98	203.5	.202
								100	10.50	34.13	-	26.21	181.9	.251
								125	10.34	34.23	-	26.31	171.9	.295
								150	10.49	34.39	-	26.41	162.5	.338
								200	10.23	34.48	-	26.53	151.6	.418
								250	9.48	34.47	-	26.65	140.3	.494
								300	9.10	34.50	-	26.73	132.2	.565
								400	8.00	34.49	-	26.89	116.7	.696
								500	6.98	34.46	-	27.02	105.0	.814

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
120.45						CALCOFI CRUISE 6804							120.45	
DAVID STARR JORDAN, MAY 4 1968, 2022 GMT, 27 44.5N 115 31.5W, SOUNDING 1000 FM, WIND 360 10 KNOTS, WEATHER OVERCAST, SEA ROUGH, WIRE ANGLE 05.														
2	16.01	33.641A	6.11	0.41	4	0.1	323.2	0	16.01	33.641	6.11	24.72	323.2	0
12	15.83	33.618A	5.96	0.41	5	0.0	321.0	10	15.92	33.621	6.01	24.72	322.9	.032
32	13.30	33.639A	4.78	1.00	11	7.7	268.2	20	14.95	33.621	5.55	24.94	302.3	.064
61	10.97	33.856	3.20	1.78	21	19.9	210.1	30	13.60	33.633	4.92	25.23	274.5	.093
71	10.84	33.946	2.74	1.94	24	22.1	201.2	50	11.59	33.757	3.77	25.72	228.1	.143
84	10.59	34.029	2.53	2.05	26	23.7	190.9	75	10.76	33.973	2.66	26.04	197.8	.187
100	10.53	34.139	2.16	2.18	28	26.1	181.8	100	10.53	34.139	2.16	26.21	181.8	.244
114	10.50	34.221	-	2.31	31	26.7	175.2	125	10.57	34.312	1.39	26.34	169.5	.289
138	10.60	34.401	1.02	2.55	35	29.1	163.6	150	10.43	34.402	.86	26.43	160.6	.331
158	10.30	34.403	-	2.60	37	29.7	158.4	200	10.18	34.496	.54	26.55	149.7	.411
186	10.28	34.480	.62	2.73	39	29.5	152.4	250	9.53	34.464	.50	26.63	141.5	.486
217	10.00	34.497	.48	2.75	42	29.5	146.6	300	9.04	34.487	.35	26.73	132.3	.557
246	9.57	34.463	.51	2.84	43	34.4	142.2	400	7.90	34.461	.29	26.89	117.4	.688
294	9.11	34.488	.36	2.94	47	32.3	133.2	500	6.99	34.447	.19	27.01	106.1	.807
349	8.48	34.471	.30	3.00	52	33.7	125.1	600	6.04	34.434	.19	27.12	95.1	.916
431	7.57B	34.457A	.28	3.12	62	37.2	113.2							
514	6.86	34.445A	.18	3.20	72	40.5	104.6							
595	6.09	34.435A	.19	3.28	80	43.6	95.6							

	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
120.50						CALCOFI CRUISE 6804							120.50	
DAVID STARR JORDAN, MAY 4 1968, 1633 GMT, 27 35N 115 51W, SOUNDING 2265 FM, WIND 330 9 KNOTS, WEATHER OVERCAST, SEA ROUGH.														
								0	17.47	33.60	-	24.35	358.6	0
								10	17.47	33.60	-	24.35	358.6	.036
								20	16.73	33.54	-	24.48	346.4	.071
								30	15.15	33.45	-	24.77	319.0	.105
								50	12.71	33.55	-	25.35	263.6	.163
								75	10.67	33.67	-	25.82	218.7	.224
								100	10.74	34.10	-	26.14	188.1	.275
								125	10.24	34.13	-	26.25	177.6	.321
								150	10.24	34.32	-	26.40	163.6	.365
								200	10.39	34.52	-	26.53	151.3	.445
								250	9.80	34.50	-	26.62	143.2	.521
								300	9.17	34.51	-	26.73	132.5	.593
								400	7.84	34.49	-	26.92	114.5	.723
								500	6.81	34.45	-	27.03	103.6	.839

A) THE FIRST AND LAST THREE SALINITY SAMPLES APPEAR TO HAVE BEEN REVERSED. COMPARISON WITH THE STD RECORDING INDICATES THEY ARE LISTED IN THE CORRECT ORDER.
H) ALTERNATE VALUE, 7.64 DEGREES.

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	D*T	DD
120.60							CALCOFI CRUISE 6804						120.60	
DAVID STARR JORDAN, MAY 4 1968, 0955 GMT, 27 14N 116 30.5W, SOUNDING 2000 FM, WIND 360 10 KNOTS, WEATHER MISSING, SEA ROUGH.														
								0	17.68	33.59	-	24.29	364.2	0
								10	17.67	33.59	-	24.29	363.9	.036
								20	16.97	33.55	-	24.43	351.0	.072
								30	16.47	33.54	-	24.54	340.6	.107
								50	13.06	33.38	-	25.15	282.6	.169
								75	11.63	33.55	-	25.55	244.0	.236
								100	10.40	33.79	-	25.96	205.4	.292
								125	10.36	34.02	-	26.15	187.7	.342
								150	10.18	34.19	-	26.31	172.2	.388
								200	9.25	34.20	-	26.47	156.7	.472
								250	8.69	34.25	-	26.60	144.6	.549
								300	8.72	34.44	-	26.74	130.9	.621
								400	6.91	34.32	-	26.92	114.6	.749
								500	6.26	34.37	-	27.04	102.6	.864

INPUT Z	T	S	OXY	PHO	SIL	NIT	D*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	D*T	DD
120.60							CALCOFI CRUISE 6804						120.60	
DAVID STARR JORDAN, MAY 4 1968, 1045 GMT, 27 14N 116 30.5W, SOUNDING 2000 FM, WIND 360 10 KNOTS, WEATHER MISSING, SEA ROUGH, WIRE ANGLE 28.														
2	17.65	33.572	5.73	0.24	2	0.1	364.8	0	17.65	33.572	5.73	24.28	364.8	0
10	17.66	33.570	5.85	0.26	2	0.2	365.2	10	17.66	33.570	5.85	24.28	365.2	.037
29	16.50	33.523	5.81	0.23	2	0.1	342.5	20	17.09	33.548	5.86	24.40	353.9	.073
35	16.33	33.512	5.75	0.30	2	0.1	339.6	30	16.47	33.522	5.80	24.52	341.9	.107
48	14.29	33.434	5.67	0.43	3	0.2	302.6	50	14.00	33.422	5.65	24.99	297.6	.172
63	12.40	33.386	5.38	0.77	6	4.7	269.9	75	11.75	33.479	4.78	25.48	251.4	.241
86	11.39	33.604	4.19	1.29	13	14.2	235.9	100	10.59	33.725	3.80	25.88	213.3	.299
103	10.45	33.752	3.72	1.50	19	18.2	209.0	125	10.39	33.977	2.86	26.11	191.4	.350
123	10.41	33.962	2.93	1.73	24	20.8	192.8	150	10.11	34.125	2.30	26.27	175.8	.397
140	10.23	34.072	2.46	1.98	27	24.5	181.8	200	9.35	34.212	1.96	26.47	157.3	.482
166	9.89	34.188	2.15	2.11	32	26.2	167.7	250	8.93	34.296	1.49	26.60	144.7	.560
198	9.39	34.215	1.94	2.28	35	28.3	157.8	300	8.83	34.404	.63	26.70	135.1	.632
225	8.90	34.195	2.07	2.28	38	29.3	151.8	400	7.02	34.300	.61	26.89	117.5	.765
268	9.02	34.381	.97	2.67	44	31.1	139.8	500	6.21	34.344	.38	27.03	103.9	.882
319	8.61	34.410	.55	2.85	49	34.2	131.5							
395	7.07	34.298	.63	2.96	62	39.2	118.3							
473	6.40	34.333	.42	3.12	73	42.4	107.1							
557	5.86	34.366	.34	3.24	80	44.8	98.0							

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	D*T	DD
120.70							CALCOFI CRUISE 6804						120.70	
DAVID STARR JORDAN, MAY 4 1968, 0412 GMT, 26 53N 117 10W, SOUNDING 2120 FM, WIND 340 12 KNOTS, WEATHER MISSING, SEA MODERATE.														
								0	17.63	33.64	-	24.34	359.4	0
								10	17.63	33.64	-	24.34	359.4	.036
								20	17.66	33.69	-	24.37	356.4	.072
								30	17.70	33.77	-	24.42	351.5	.107
								50	17.61	33.76	-	24.44	350.2	.178
								75	14.28	33.35	-	24.87	308.6	.260
								100	12.14	33.46	-	25.39	259.8	.332
								125	11.09	33.70	-	25.77	223.6	.393
								150	10.83	34.02	-	26.06	195.6	.446
								200	10.26	34.32	-	26.40	163.9	.538
								250	10.08	34.45	-	26.53	151.4	.619
								300	9.30	34.45	-	26.66	139.0	.695
								400	8.19	34.47	-	26.85	120.9	.831
								500	7.13	34.46	-	27.00	107.0	.953

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
		INPUT					COMPUTED			INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
120.80						CALCOFI CRUISE 6804							120.80	
DAVID STARR JORDAN, MAY 3 1968, 2225 GMT, 26 32.5N 117 49W, SOUNDING 2070 FM, WIND 320 8 KNOTS, WEATHER OVERCAST, SEA ROUGH.														
								0	18.17	33.75	-	24.29	363.9	0
								10	17.99	33.74	-	24.33	360.4	.036
								20	17.78	33.71	-	24.36	357.7	.072
								30	17.60	33.71	-	24.40	353.6	.108
								50	17.37	33.70	-	24.45	349.1	.178
								75	14.92	33.45	-	24.82	314.2	.262
								100	13.05	33.42	-	25.18	279.5	.337
								125	11.86	33.52	-	25.49	250.3	.403
								150	10.42	33.67	-	25.86	214.6	.462
								200	9.29	34.03	-	26.33	170.0	.560
								250	8.34	34.11	-	26.54	149.8	.642
								300	7.93	34.22	-	26.69	135.8	.716
								400	7.03	34.27	-	26.86	119.9	.849
								500	6.28	34.35	-	27.02	104.3	.968

		INPUT						OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
120.80						CALCOFI CRUISE 6804							120.80	
DAVID STARR JORDAN, MAY 3 1968, 2325 GMT, 26 32.5N 117 49W, SOUNDING 2170 FM, WIND 320 8 KNOTS, WEATHER OVERCAST, SEA ROUGH, WIRE ANGLE 14.														
1	18.12	33.737	5.65	0.27	2	0.2	363.7	0	18.12	33.737	5.65	24.30	363.7	0
9	18.09	33.735	5.65	0.30	2	0.0	363.1	10	18.07	33.733	5.65	24.31	362.7	.036
28	17.52	33.704	5.71	0.26	2	0.1	354.5	20	17.83	33.717	5.68	24.35	358.3	.072
37	17.53	33.702	5.71	0.28	2	0.0	352.6	30	17.60	33.703	5.71	24.40	354.0	.108
51	17.39	33.694	5.75	0.29	2	0.2	350.0	50	17.42	33.697	5.75	24.44	350.3	.179
65	16.33	33.546	5.86	0.31	2	0.1	337.1	75	15.42	33.485	5.94	24.73	322.0	.263
88	14.18	33.443	5.93	0.34	3	0.0	299.8	100	13.10	33.421	5.69	25.17	280.4	.339
105	12.70	33.424	5.55	0.54	5	2.6	272.7	125	11.60	33.541	4.96	25.55	244.2	.405
122	11.85	33.531	5.05	0.79	8	7.4	249.3	150	10.10	33.660	4.34	25.91	210.2	.463
143	10.25	33.585	4.49	1.28	15	14.2	218.1	200	9.22	34.043	3.35	26.35	167.9	.559
171	9.98	33.903	3.94	1.42	21	18.2	190.2	250	8.37	34.129	2.38	26.56	148.8	.641
200	9.22	34.043	3.35	1.80	29	23.9	167.9	300	7.92	34.206	1.43	26.68	136.7	.714
226	8.68	34.082	2.95	1.99	35	26.1	156.9	400	7.00	34.267	.69	26.86	119.7	.848
270	8.18	34.167	1.90	2.35	44	30.7	143.3	500	6.21	34.338	.35	27.02	104.4	.967
320	7.76	34.226	1.20	2.63	51	33.9	133.0							
398	7.02	34.266	.70	2.86	62	38.1	120.0							
475	6.39	34.321A	.41	3.02	74	40.6	107.9							
563	5.83	34.379A	.29	3.14	82	43.5	96.7							

		INPUT					COMPUTED			INPUT			COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
123.42						CALCOFI CRUISE 6804							123.42	
DAVID STARR JORDAN, MAY 3 1968, 0130 GMT, 27 14N 114 59W, SOUNDING 680 FM, WIND 020 10 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE.														
								0	17.52	33.63	-	24.36	357.6	0
								10	17.02	33.61	-	24.46	347.7	.035
								20	16.33	33.61	-	24.62	332.4	.069
								30	14.53	33.52	-	24.95	301.1	.101
								50	11.61	33.66	-	25.64	235.6	.155
								75	10.79	33.98	-	26.04	197.9	.209
								100	10.50	34.17	-	26.24	179.0	.257
								125	10.43	34.27	-	26.33	170.4	.301
								150	10.66	34.47	-	26.44	159.5	.343
								200	10.22	34.50	-	26.54	150.0	.423
								250	9.54	34.48	-	26.64	140.5	.498
								300	9.05	34.52	-	26.75	130.0	.568
								400	7.84	34.43	-	26.87	118.9	.699
								500	7.00	34.43	-	26.99	107.5	.819

A) THE SALINITY SAMPLES AT 475 AND 563 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT — COMPUTED — INPUT — COMPUTED

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
123.50													123.50	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, MAY 3 1968, 0630 GMT, 26 57.5N 115 30.5W, SOUNDING 1740 FM, WIND 330 5 KNOTS, WEATHER MISSING, SEA ROUGH.

								0	18.04	33.59	-	24.20	372.5	0
								10	18.04	33.59	-	24.20	372.5	.037
								20	17.01	33.55	-	24.42	351.9	.074
								30	16.84	33.54	-	24.45	348.8	.109
								50	15.36	33.48	-	24.74	321.2	.176
								75	11.97	33.34	-	25.33	265.5	.250
								100	11.25	33.80	-	25.82	219.0	.311
								125	10.33	33.98	-	26.12	190.2	.362
								150	10.67	34.20	-	26.23	179.6	.409
								200	10.53	34.45	-	26.45	158.8	.496
								250	9.75	34.45	-	26.58	146.1	.575
								300	9.36	34.50	-	26.69	136.2	.648
								400	7.67	34.39	-	26.86	119.5	.782
								500	6.38	34.34	-	27.00	106.3	.902
123.60													123.60	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, MAY 3 1968, 1200 GMT, 26 38N 116 10W, SOUNDING 2035 FM, WIND 340 11 KNOTS, WEATHER CLOUDY, SEA MODERATE.

								0	18.27	33.78	-	24.29	364.1	0
								10	18.28	33.78	-	24.29	364.3	.036
								20	18.28	33.78	-	24.29	364.3	.073
								30	18.18	33.80	-	24.33	360.5	.109
								50	17.62	33.75	-	24.43	351.1	.181
								75	13.92	33.49	-	25.06	291.2	.261
								100	12.67	33.60	-	25.39	259.2	.331
								125	11.61	33.73	-	25.70	230.4	.393
								150	10.56	33.96	-	26.06	195.5	.447
								200	9.65	34.12	-	26.34	168.9	.540
								250	9.25	34.29	-	26.54	150.1	.621
								300	8.69	34.36	-	26.69	136.4	.696
								400	7.70	34.42	-	26.88	117.7	.829
								500	6.95	34.46	-	27.02	104.6	.947

INPUT — OUTPUT AT STANDARD LEVELS OF DEPTH

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
123.60													123.60	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, MAY 3 1968, 1244 GMT, 26 38N 116 10W, SOUNDING 2035 FM, WIND 340 11 KNOTS, WEATHER OVERCAST, SEA MODERATE, WIRE ANGLE 09.

1	18.19	33.776	5.65	0.20	2	0.2	362.5	0	18.19	33.776	5.65	24.31	362.5	0
11	18.20	33.773	5.58	0.24	2	0.2	362.9	10	18.20	33.773	5.58	24.30	362.9	.036
31	18.19	33.790	5.66	0.23	2	0.2	361.5	20	18.20	33.780	5.60	24.31	362.4	.073
40	18.14	33.790	5.67	0.28	2	0.1	360.3	30	18.19	33.789	5.65	24.32	361.6	.109
56	17.90	33.787	5.70	0.27	2	0.1	354.9	50	18.00	33.788	5.68	24.36	357.2	.181
70	15.45	33.523	5.85	0.31	3	0.2	319.9	75	14.81	33.500	5.74	24.88	308.3	.265
95	12.99	33.533	4.99	0.65	6	4.1	270.1	100	12.67	33.559	4.78	25.36	262.2	.337
114	11.97	33.655	4.22	1.17	13	12.1	242.3	125	11.53	33.736	3.85	25.72	228.5	.399
135	11.18	33.811	3.57	1.50	18	17.5	217.0	150	10.69	33.912	3.24	26.00	201.2	.453
152	10.64	33.925	3.20	1.72	23	19.9	199.4	200	9.99	34.126	2.56	26.29	173.9	.549
182	10.36	34.083	2.58	2.00	28	-	183.1	250	9.50	34.253	1.81	26.47	156.7	.634
217	9.67	34.157	2.54	2.04	32	25.3	166.5	300	8.81	34.316	1.19	26.63	141.5	.711
245	9.57	34.245	1.89	2.32	36	27.5	158.4	400	8.11	34.423	.52	26.83	123.2	.849
303	8.77	34.319	1.16	2.60	44	31.2	140.6	500	7.11	34.442	.26	26.99	108.1	.973
348	8.75	34.423	.56	2.77	49	31.8	132.6	600	6.27	34.439	.22	27.10	97.5	1.084
429	7.67	34.405	.48	2.94	61	36.2	118.4							
510	7.03	34.445	.24	3.08	71	39.4	106.8							
594	6.32	34.441	.22	3.14	79	41.3	98.0							

INPUT — COMPUTED — INPUT — COMPUTED

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
127.34													127.34	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, MAY 1 1968, 1507 GMT, 26 55N 114 06.5W, SOUNDING 45 FM, WIND 020 3 KNOTS, WEATHER MISSING, SEA SLIGHT.

								0	17.12	33.62	-	24.45	349.2	0
								10	17.06	33.62	-	24.46	347.9	.035
								20	15.01	33.40	-	24.76	319.7	.068
								30	14.46	33.52	-	24.97	299.7	.099
								50	12.28	33.73	-	25.57	242.4	.154
								75	11.12	33.97	-	25.97	204.2	.210

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT			COMPUTED		
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
127.40							CALCOFI CRUISE 6804						127.40	
DAVID STARR JORDAN, MAY 1 1968, 1108 GMT, 26 44.5N 114 30.5W SOUNDING 1830 FM, WIND 330 5 KNOTS, WEATHER MISSING, SEA MODERATE.														
								0	16.62	33.57	-	24.53	341.7	0
								10	16.63	33.58	-	24.53	341.2	.034
								20	15.18	33.42	-	24.74	321.8	.067
								30	14.70	33.51	-	24.91	305.3	.099
								50	13.08	33.54	-	25.27	271.3	.157
								75	11.92	33.79	-	25.69	231.5	.220
								100	10.55	34.03	-	26.12	190.1	.273
								125	10.66	34.28	-	26.30	173.5	.319
								150	10.82	34.42	-	26.38	165.9	.362
								200	10.21	34.47	-	26.52	152.0	.444
								250	9.63	34.49	-	26.64	141.2	.519
								300	9.13	34.51	-	26.73	131.9	.590
								400	7.93	34.46	-	26.88	118.0	.722
								500	6.59	34.41	-	27.03	103.7	.840
127.50							CALCOFI CRUISE 6804						127.50	
DAVID STARR JORDAN, MAY 1 1968, 0520 GMT, 26 24N 115 08W, SOUNDING 2225 FM, WIND 210 10 KNOTS, WEATHER MISSING, SEA ROUGH.														
								0	16.88	33.53	-	24.44	350.4	0
								10	16.87	33.53	-	24.44	350.2	.035
								20	16.54	33.46	-	24.46	348.0	.070
								30	16.34	33.52	-	24.55	339.2	.104
								50	14.45	33.30	-	24.80	315.6	.170
								75	12.42	33.36	-	25.26	272.2	.244
								100	11.20	33.74	-	25.78	222.6	.306
								125	10.61	33.93	-	26.03	198.5	.360
								150	10.24	33.98	-	26.14	188.7	.409
								200	9.85	34.32	-	26.47	157.3	.497
								250	8.88	34.30	-	26.61	143.7	.575
								300	8.52	34.30	-	26.67	138.3	.648
								400	7.68	34.40	-	26.87	118.9	.782
								500	6.93	34.44	-	27.01	105.9	.902
127.60							CALCOFI CRUISE 6804						127.60	
DAVID STARR JORDAN, APRIL 30 1968, 2233 GMT, 26 03.5N 115 47.5W, SOUNDING 2025 FM, WIND 310 5 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE.														
								0	18.60	33.88	-	24.29	364.6	0
								10	18.29	33.87	-	24.36	358.0	.036
								20	18.26	33.87	-	24.36	357.3	.072
								30	18.18	33.87	-	24.38	355.4	.108
								50	17.90	33.83	-	24.42	351.8	.179
								75	14.51	33.48	-	24.93	303.7	.261
								100	12.87	33.56	-	25.32	265.8	.333
								125	11.54	33.69	-	25.68	232.1	.396
								150	10.73	33.85	-	25.95	206.4	.451
								200	9.98	34.16	-	26.32	171.2	.548
								250	9.29	34.27	-	26.52	152.2	.631
								300	9.09	34.41	-	26.66	138.7	.706
								400	8.00	34.40	-	26.82	123.4	.844
								500	6.99	34.42	-	26.98	108.1	.967

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
127.60							CALCOFI CRUISE 6804						127.60	
DAVID STARR JORDAN, APRIL 30 1968, 2319 GMT, 26 03.5N 115 47.5W, SOUNDING 2025 FM, WIND 310 5 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE, WIRE ANGLE 18.														
1	18.54	33.874	4.85	0.16	2	0.0	363.6	0	18.54	33.874	4.85	24.30	363.6	0
11	18.43	33.868	5.59	0.18	1	0.0	361.4	10	18.44	33.869	5.54	24.32	361.7	.036
29	18.24	33.861	5.62	0.18	1	0.1	357.5	20	18.33	33.863	5.61	24.34	359.4	.072
40	18.18	33.864	5.59	0.29	2	0.2	355.8	30	18.24	33.862	5.62	24.36	357.3	.108
53	17.96	33.833	5.60	0.27	2	0.2	353.0	50	18.03	33.843	5.60	24.40	353.7	.180
67	17.50	33.758	5.71	0.25	1	0.1	347.8	75	16.51	33.658	5.80	24.62	333.0	.266
90	14.43	33.501	5.78	0.26	3	0.1	300.5	100	13.61	33.512	5.47	25.14	283.4	.344
109	12.99	33.558	5.07	0.70	5	4.0	268.2	125	11.83	33.658	4.26	25.60	239.6	.410
127	11.70	33.674	4.15	1.19	10	11.4	236.1	150	10.78	33.888	3.23	25.97	204.5	.466
145	10.96	33.867	3.24	1.70	16	18.2	209.1	200	9.88	34.132	2.34	26.32	171.7	.562
174	10.14	33.955	3.36	1.78	18	19.9	188.9	250	9.27	34.302	1.26	26.55	149.5	.644
206	9.84	34.175	2.06	2.17	25	24.7	167.8	300	9.03	34.369	.82	26.64	140.9	.720
233	9.41	-	-	-	-	-	-	400	8.10	34.410	.41	26.82	124.1	.859
281	9.13	34.335	1.02	2.63	33	29.0	144.9	500	7.02	34.413	.28	26.97	109.1	.983
332	8.84	34.412	.54	2.79	36	29.6	134.8							
414	7.93	34.410	.850	3.02	44	33.3	121.7							
495	7.07	-	-	-	-	-	-							
577	6.31	34.419	.19	3.22	57	39.5	99.5							

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT — COMPUTED — INPUT — COMPUTED

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
130.30							CALCOFI CRUISE 6804						130.30	

DAVID STARR JORDAN, APRIL 29 1968, 2214 GMT, 26 29N 113 28.5W, SOUNDING 39 FM, WIND 300 10 KNOTS, WEATHER CLEAR, SEA MODERATE.

0	15.67	33.93	-	25.02	294.8	0
10	14.48	33.83	-	25.20	277.4	.029
20	13.70	33.81	-	25.35	263.4	.056
30	11.51	33.81	-	25.78	222.8	.080
50	11.23	34.00	-	25.98	203.9	.123

INPUT — OUTPUT AT STANDARD LEVELS OF DEPTH

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
130.30							CALCOFI CRUISE 6804						130.30	
1	15.61	33.827	6.82	0.58	4	0.3	301.1	0	15.61	33.827	6.82	24.95	301.1	0
10	14.69	33.875	5.89	0.69	5	0.6	278.4	10	14.69	33.875	5.89	25.19	278.4	.029
19	13.96	33.892	5.78	1.03	8	5.7	262.5	20	13.77	33.885	5.60	25.39	259.1	.056
30	11.89	33.825	3.69	1.65	17	16.5	228.4	30	11.89	33.825	3.69	25.72	228.4	.080
38	11.36	33.850	3.32	1.77	19	18.7	217.2	50	11.31	33.957	2.64	25.93	208.3	.124
59	11.27	34.093	2.04	2.19	27	23.5	197.7							

INPUT — COMPUTED — INPUT — COMPUTED

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
130.40							CALCOFI CRUISE 6804						130.40	

DAVID STARR JORDAN, APRIL 30 1968, 0313 GMT, 26 09N 114 07W, SOUNDING 1188 FM, WIND 290 15 KNOTS, WEATHER MISSING, SEA MISSING.

0	17.58	33.57	-	24.30	363.3	0
10	17.58	33.57	-	24.30	363.3	.036
20	16.45	33.52	-	24.53	341.6	.072
30	16.13	33.52	-	24.60	334.7	.106
50	15.62	33.52	-	24.72	323.7	.172
75	12.93	33.57	-	25.32	266.2	.246
100	12.36	33.86	-	25.66	234.3	.309
125	11.43	34.03	-	25.96	205.2	.364
150	10.90	34.21	-	26.20	182.7	.414
200	10.47	34.49	-	26.49	154.8	.500
250	9.79	34.46	-	26.59	146.0	.578
300	9.29	34.53	-	26.72	132.9	.650
400	7.89	34.47	-	26.89	116.7	.781
500	6.93	34.46	-	27.02	104.4	.899

INPUT — OUTPUT AT STANDARD LEVELS OF DEPTH

Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
130.40							CALCOFI CRUISE 6804						130.40	
1	17.55	33.542	5.76	0.27	1	0.0	364.7	0	17.55	33.542	5.76	24.29	364.7	0
10	17.54	33.541	5.74	0.28	1	0.2	364.5	10	17.54	33.541	5.74	24.29	364.5	.036
29	16.12	33.512	5.89	0.21	1	0.0	335.0	20	16.83	33.526	5.83	24.44	349.7	.072
38	15.89	33.512	5.79	0.34	1	0.0	330.1	30	16.09	33.512	5.88	24.60	334.3	.107
53	15.56	33.519	5.79	0.35	1	0.1	322.5	50	15.67	33.517	5.81	24.70	325.0	.173
66	14.37	33.529	5.25	0.65	7	1.8	297.3	75	13.59	33.603	4.61	25.21	276.4	.248
90	12.60	33.755	3.56	1.43	13	13.4	246.5	100	12.36	33.820	3.18	25.62	237.3	.313
108	12.23	33.870	2.94	1.57	17	16.1	231.2	125	11.60	34.006	2.44	25.91	210.0	.370
127	11.53	34.023	2.38	1.82	23	21.2	207.4	150	11.01	34.199	1.77	26.17	185.4	.420
145	11.13	34.173	1.86	2.15	28	24.5	189.4	200	10.57	34.450	.82	26.44	159.4	.508
174	10.56	34.301	1.41	2.23	33	25.4	170.3	250	9.86	34.464	.67	26.58	146.7	.587
207	10.57	34.480	.69	2.59	37	28.7	157.2	300	9.33	34.491	.43	26.69	136.4	.661
234	10.06	34.457	.72	2.55	39	28.4	150.5	400	8.05	34.466	.21	26.87	119.2	.795
281	9.54	34.489	.51	2.74	44	29.5	139.8	500	7.03	34.445	.18	27.00	106.7	.915
361	8.61	34.485	.23	2.94	52	33.4	125.9							
412	7.88	34.460	.21	3.06	58	35.8	117.3							
495	7.07	34.446	.18	3.14	69	39.0	107.3							
578	6.4 A	34.437	.19	3.24	75	41.5	99.3							

A) TEMPERATURE INFERRED FROM THE PRESSURE THERMOMETER AND WIRE DEPTH.

OBSERVED LEVELS OF DEPTH

	INPUT						COMPUTED
Z	T	S	OXY	PHO	SIL	NIT	D*T
130.50				CALCOFI CRUISE 6804			130.50

DAVID STARK JORDAN, APRIL 30 1968, 1000 GMT, 25 49N 114 45W, SOUNDING 1860 FM, WIND 240 10 KNOTS, WEATHER MISSING, SEA MISSING.

STANDARD LEVELS OF DEPTH

INPUT				COMPUTED		
Z	T	S	OXY	SIG*T	D*T	DD
0	17.38	33.70	-	24.45	349.3	0
10	17.37	33.70	-	24.45	349.1	.035
20	17.64	33.79	-	24.45	348.7	.070
30	17.20	33.70	-	24.49	345.2	.105
50	15.60	33.61	-	24.79	316.7	.171
75	12.87	33.65	-	25.39	259.2	.243
100	11.43	33.68	-	25.69	231.0	.305
125	11.22	33.96	-	25.95	206.7	.361
150	11.10	34.21	-	26.16	186.2	.411
200	10.46	34.38	-	26.41	162.8	.500
250	9.91	34.49	-	26.59	145.7	.579
300	9.33	34.51	-	26.70	135.0	.652
400	8.10	34.47	-	26.86	119.6	.786
500	6.91	34.44	-	27.01	105.6	.906
600	6.07	34.43	-	27.11	95.8	1.015

130.60				CALCOFI CRUISE 6804			130.60

DAVID STARR JORDAN, APRIL 30 1968, 1600 GMT, 25 29N 115 24W, SOUNDING 2080 FM, WIND 020 4 KNOTS, WEATHER OVERCAST, SEA ROUGH.

Z	T	S	OXY	SIG*T	D*T	DD
0	17.85	33.68	-	24.32	361.5	0
10	17.85	33.68	-	24.32	361.5	.036
20	17.97	33.78	-	24.37	357.0	.072
30	17.82	33.78	-	24.40	353.6	.108
50	17.48	33.74	-	24.45	348.7	.178
75	13.99	33.46	-	25.02	294.7	.259
100	12.42	33.69	-	25.51	247.9	.327
125	11.16	33.89	-	25.90	210.8	.385
150	10.61	34.00	-	26.09	193.4	.437
200	10.33	34.37	-	26.42	161.4	.527
250	9.88	34.43	-	26.55	149.6	.607
300	8.88	34.37	-	26.66	138.5	.682
400	8.08	34.44	-	26.84	121.6	.819
500	7.13	34.45	-	26.99	107.8	.941

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
130.60					CALCOFI CRUISE 6804									130.60

DAVID STARR JORDAN, APRIL 30 1968, 1635 GMT, 25 29N 115 24W, SOUNDING 2080 FM, WIND 020 4 KNOTS, WEATHER OVERCAST, SEA ROUGH; WIRE ANGLE 16.

1	17.84	33.673	5.80	0.26	2	0.2	361.8	0	17.84	33.673	5.80	24.32	361.8	0
10	17.83	33.682	5.77	0.28	2	0.0	360.9	10	17.83	33.682	5.77	24.33	360.9	.036
29	17.86	33.789	5.84	0.27	2	0.1	353.8	20	17.89	33.746	5.84	24.36	357.6	.072
38	17.62	33.755	5.65	0.30	2	0.0	350.8	30	17.84	33.786	5.82	24.40	353.5	.108
52	17.39	33.737	5.90	0.31	2	0.0	346.8	50	17.50	33.746	5.85	24.45	348.6	.178
66	14.58	33.500	5.79	0.40	3	0.0	303.6	75	13.59	33.517	5.28	25.15	282.7	.258
89	12.71	33.660	4.36	1.08	10	10.4	255.5	100	12.19	33.774	3.92	25.62	237.5	.323
109	11.81	33.863	3.64	1.47	16	17.5	224.2	125	10.91	33.951	3.19	26.00	202.0	.379
126	10.86	33.955	3.16	1.73	22	21.1	200.9	150	10.54	34.113	2.58	26.19	183.9	.428
145	10.59	34.065	2.70	1.96	29	24.1	188.2	200	10.28	34.383	1.37	26.44	159.6	.515
174	10.37	34.326	2.01	2.38	33	28.5	165.3	250	9.62	34.401	.98	26.57	147.7	.595
207	10.24	34.394	1.22	2.55	37	30.4	158.1	300	9.11	34.429	1.11	26.67	137.6	.669
234	9.87	34.406	.93	2.67	39	30.7	151.2	400	8.16	34.464	.41	26.85	120.9	.804
282	9.20	34.399	1.16	2.75	44	32.9	141.2	500	7.24	34.475	.22	26.99	107.3	.926
332	8.98	34.486	.92	2.94	48	32.8	131.4							
413	7.98	34.453	.32	3.04	58	37.2	119.2							
494	7.29	34.475	.22	3.16	67	39.5	108.0							
574	6.54	34.455	.34	3.22	76	42.7	99.7							

	INPUT						COMPUTED
Z	T	S	OXY	PHO	SIL	NIT	D*T
133.25				CALCOFI CRUISE 6804			133.25

DAVID STARR JORDAN, APRIL 29 1968, 1440 GMT, 26 02.5N 112 44W, SOUNDING 44 FM, WIND 230 6 KNOTS, WEATHER MISSING, SEA ROUGH.

STANDARD LEVELS OF DEPTH

INPUT				COMPUTED		
Z	T	S	OXY	SIG*T	D*T	DD
0	15.14	33.90	-	25.11	285.9	0
10	14.92	33.90	-	25.16	281.3	.028
20	13.48	33.88	-	25.45	254.0	.055
30	13.31	33.91	-	25.51	248.5	.080
50	11.90	33.98	-	25.84	217.2	.127
75	11.46	34.20	-	26.09	193.1	.179

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	COMPUTED D*T	DD
133.30													133.30	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, APRIL 29 1968, 1203 GMT, 25 53.5N 113 07W, SOUNDING 110 FM, WIND 330 13 KNOTS, WEATHER MISSING, SEA MISSING.

					0	15.80	33.61	-	24.74	321.0	0
					10	15.80	33.61	-	24.74	321.0	.032
					20	14.55	33.68	-	25.07	289.8	.063
					30	12.25	33.42	-	25.34	264.7	.090
					50	11.75	33.74	-	25.68	232.2	.140
					75	11.51	33.98	-	25.91	210.2	.196
					100	11.68	34.35	-	26.16	186.0	.246
					125	11.57	34.46	-	26.27	175.9	.292
					150	11.43	34.58	-	26.39	164.6	.335

133.40											133.40

CALCOFI CRUISE 6804

DAVID STARR JORDAN, APRIL 29 1968, 0445 GMT, 25 34.5N 113 45.5W, SOUNDING 1375 FM, WIND 330 8 KNOTS, WEATHER MISSING, SEA MODERATE.

					0	17.38	33.59	-	24.36	357.3	0
					10	17.32	33.58	-	24.37	356.7	.036
					20	16.97	33.59	-	24.46	348.1	.071
					30	16.68	33.58	-	24.52	342.3	.106
					50	15.41	33.50	-	24.75	320.8	.172
					75	13.47	33.48	-	25.14	283.1	.248
					100	12.12	33.89	-	25.72	227.7	.312
					125	11.36	34.05	-	25.99	202.5	.367
					150	13.49	34.14	-	25.65	235.1	.422
					200	10.04	34.34	-	26.45	158.9	.523
					250	9.77	34.44	-	26.57	147.1	.602
					300	9.38	34.49	-	26.68	137.3	.676
					400	8.28	34.49	-	26.85	120.7	.811
					500	7.21	34.47	-	26.99	107.3	.933
					600	6.48	34.48	-	27.10	97.1	1.043

137.23											137.23

CALCOFI CRUISE 6804

DAVID STARR JORDAN, APRIL 28 1968, 0301 GMT, 25 34N 112 19W, SOUNDING 43 FM, WIND 310 10 KNOTS, WEATHER CLEAR, SEA ROUGH.

					0	16.73	33.73	-	24.62	332.5	0
					10	16.10	33.77	-	24.80	315.8	.032
					20	15.30	33.72	-	24.94	302.4	.063
					30	14.02	33.70	-	25.20	277.7	.092
					50	12.19	33.90	-	25.72	228.3	.143
					75	11.97	34.24	-	26.02	199.3	.197

INPUT Z	T	S	OXY	PHO	SIL	NIT	D*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	D*T	DD
137.23													137.23	

CALCOFI CRUISE 6804

DAVID STARR JORDAN, APRIL 28 1968, 0317 GMT, 25 34N 112 19W, SOUNDING 43 FM, WIND 310 10 KNOTS, WEATHER CLEAR, SEA ROUGH, WIRE ANGLE 04.

1	16.70	33.727	7.13	0.31	1	0.2	332.1	0	16.70	33.727	7.13	24.63	332.1	0
10	16.16	33.748	6.58	0.34	1	0.0	318.7	10	16.16	33.748	6.58	24.77	318.7	.033
21	15.42	33.808	6.30	0.42	3	0.2	298.5	20	15.51	33.803	6.36	24.96	300.6	.064
30	14.20	33.805	4.59	1.02	10	6.6	273.6	30	14.20	33.805	4.59	25.24	273.6	.092
50	12.23	33.904	2.79	1.62	19	16.2	228.7	50	12.23	33.904	2.79	25.71	228.7	.143
74	11.96	34.245	1.08	2.33	32	19.2	198.7							

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	D*T	DD
137.30							CALCOFI CRUISE 6804						137.30	

DAVID STARR JORDAN, APRIL 28 1968, 0645 GMT, 25 19N 112 44.5W, SOUNDING 225 FM, WIND 300 12 KNOTS, WEATHER CLEAR, SEA MODERATE.

				0	16.62	33.61	-	24.56	338.8	0
				10	16.35	33.60	-	24.61	333.6	.034
				20	15.77	33.60	-	24.74	321.1	.066
				30	15.49	33.63	-	24.83	312.9	.098
				50	13.70	33.62	-	25.20	277.3	.157
				75	11.98	33.93	-	25.78	222.3	.220
				100	11.45	34.28	-	26.15	187.1	.272
				125	11.41	34.52	-	26.35	168.7	.317
				150	11.26	34.58	-	26.42	161.6	.359
				200	10.71	34.60	-	26.54	150.7	.439
				250	10.48	34.60	-	26.58	146.9	.516
				300	10.38	34.61	-	26.60	144.5	.592
				400	10.24	34.61	-	26.63	142.2	.743

137.41							CALCOFI CRUISE 6804						137.41	

DAVID STARR JORDAN, APRIL 28 1968, 1250 GMT, 24 53.5N 113 24.5W, SOUNDING 2050 FM, WIND 340 19 KNOTS, WEATHER PARTLY CLOUDY, SEA ROUGH.

				0	18.42	33.79	-	24.26	366.9	0
				10	18.42	33.79	-	24.26	366.9	.037
				20	18.38	33.79	-	24.27	365.9	.073
				30	18.13	33.77	-	24.32	361.5	.110
				50	15.60	33.57	-	24.76	319.7	.178
				75	12.63	33.60	-	25.40	258.4	.251
				100	11.47	33.93	-	25.88	213.2	.310
				125	12.22	34.56	-	26.22	180.3	.360
				150	12.35	34.63	-	26.25	177.5	.406
				200	11.54	34.63	-	26.41	162.9	.493
				250	10.58	34.61	-	26.57	147.8	.573
				300	9.88	34.56	-	26.65	140.0	.648
				400	8.76	34.55	-	26.82	123.3	.787
				500	7.57	34.51	-	26.97	109.2	.911
				600	6.50	34.50	-	27.11	95.9	1.022
				700	5.76	34.49	-	27.20	87.6	1.123

INPUT Z	T	S	OXY	PHO	SIL	NIT	D*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	D*T	DD
137.41							CALCOFI CRUISE 6804						137.41	

DAVID STARR JORDAN, APRIL 28 1968, 1343 GMT, 24 53.5N 113 24.5W, SOUNDING 2050 FM, WIND 340 19 KNOTS, WEATHER PARTLY CLOUDY, SEA ROUGH, WIRE ANGLE 02.

2	18.43	33.76 K	5.58	0.29	2	0.2	369.3	0	18.43	33.760	5.58	24.24	369.3	0
13	18.43	33.769	5.58	0.26	2	0.0	368.6	10	18.43	33.767	5.58	24.24	368.9	.037
32	18.33	33.771	5.57	0.23	2	0.2	366.1	20	18.40	33.777	5.56	24.26	367.4	.074
41	17.90	33.728	5.67	0.28	2	0.1	359.2	30	18.37	33.774	5.56	24.26	366.9	.111
52	16.73	33.582	5.87	0.29	2	0.2	343.3	50	16.99	33.609	5.85	24.47	347.1	.182
65	14.70	33.543	5.60	0.41	4	0.2	302.9	75	13.28	33.618	4.74	25.29	269.3	.260
81	12.57	33.688	4.16	1.23	12	11.7	250.8	100	11.47	33.930	3.24	25.88	213.2	.321
100	11.47	33.930	3.24	1.63	20	21.2	213.2	125	12.26	34.520	1.06	26.19	183.9	.371
125	12.26	34.520	1.06	2.42	38	25.7	183.9	150	12.25	34.602	.53	26.25	177.8	.417
145	12.33	34.601	.53	2.57	35	27.0	179.3	200	11.57	34.651	.56	26.42	161.9	.504
173	11.80	34.605	.67	2.58	36	27.9	169.3	250	10.86	34.643	.48	26.54	150.1	.585
203	11.55	34.656	.54	2.69	39	28.8	161.1	300	10.07	34.598	.71	26.65	140.3	.660
232	11.06	34.648	.43	2.72	40	27.9	153.2	400	8.65	34.536	.45	26.83	122.7	.799
270	10.64	34.634	.57	2.77	42	28.5	147.0	500	7.42	34.492	.35	26.98	108.5	.922
328	9.51	34.562	.78	2.94	48	31.1	134.0							
401	8.64	34.536	.44	3.06	57	32.4	122.6							
470	7.77	34.501	.41	3.14	64	37.0	112.7							
546	6.9 A	34.485	.20	3.26	74	40.1	102.1							

A) TEMPERATURE INFERRED FROM THE PRESSURE THERMOMETER AND WIRE DEPTH.

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
INPUT							COMPUTED	INPUT				COMPUTED		
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.38							CALCOFI CRUISE 6804						140.38	

DAVID STARR JORDAN, APRIL 27 1968, 1228 GMT, 24 29.5N 112 53W, SOUNDING 1036 FM, WIND 300 10 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE.

0	16.64	33.82	-	24.71	323.9	0
10	15.58	33.74	-	24.89	306.8	.032
20	14.88	33.74	-	25.05	292.2	.062
30	14.32	33.81	-	25.22	275.7	.090
50	12.77	34.00	-	25.68	231.6	.141
75	11.80	34.27	-	26.08	194.0	.195
100	11.27	34.31	-	26.21	181.7	.242
125	11.13	34.48	-	26.37	166.8	.286
150	10.59	34.42	-	26.42	162.0	.328
200	9.86	34.45	-	26.57	147.8	.407
250	9.88	34.54	-	26.63	141.5	.482
300	9.24	34.56	-	26.76	129.9	.553
400	8.21	34.50	-	26.87	119.0	.684
500	7.18	34.49	-	27.01	105.4	.804
600	6.48	34.48	-	27.10	97.1	.913
700	5.91	34.49	-	27.18	89.4	1.015

INPUT								OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.38							CALCOFI CRUISE 6804						140.38	

DAVID STARR JORDAN, APRIL 27 1968, 1325 1424 GMT, 24 29.5N 112 53W, SOUNDING 1036 FM, WIND 300 10 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE, WIRE ANGLE 10 16.

0	16.58	33.830	6.75	0.39	1	0.0	321.9	0	16.58	33.830	6.75	24.74	321.9	0
9	15.79	33.791	5.19	0.45	1	0.2	307.6	10	15.72	33.790	5.12	24.90	306.2	.031
34	14.26	33.885	4.08	1.41	11	9.8	269.0	20	15.08	33.805	4.54	25.05	291.6	.061
43	13.61	33.956	3.18	1.54	15	14.2	250.9	30	14.49	33.855	4.31	25.22	275.7	.090
58	12.90	34.016	2.57	1.87	19	18.7	232.9	50	13.24	33.991	2.80	25.58	241.3	.142
73	12.30	34.040	2.32	1.94	22	20.5	220.0	75	12.25	34.063	2.25	25.83	217.4	.199
97	11.78	34.312	1.51	2.34	29	25.4	190.6	100	11.70	34.320	1.47	26.14	188.6	.251
115	11.35	34.332	1.38	2.37	31	26.7	181.5	125	11.20	34.359	1.31	26.26	176.9	.297
135	11.09	34.392	1.22	2.50	34	27.7	172.6	150	11.01	34.450	.96	26.36	166.9	.341
163	10.90	34.485	.77	2.71	37	28.7	162.4	200	10.02	34.442	.82	26.53	151.0	.422
191	10.14	34.440	.86	2.64	39	29.2	153.1	250	9.85	34.510	.48	26.62	143.2	.498
229	9.86	34.475	.61	2.76	41	30.0	146.0	300	9.44	34.546	.24	26.71	134.1	.570
257	9.83	34.521	.44	2.85	43	29.9	142.1	400	8.29	34.518	.19	26.87	118.7	.703
304	9.39	34.547	.23	3.00	48	30.7	133.2	500	7.27	34.501	.17	27.01	105.8	.823
366	8.64	34.520	.19	3.06	55	33.1	123.8	600	6.45	34.495	.21	27.12	95.6	.932
437	7.92	34.515	.19	3.18	63	34.8	113.7	700	5.71	34.490	.30	27.21	87.0	1.032
524	7.04	34.496	.16	3.26	74	38.7	103.1	800	5.13	34.495	.30	27.28	80.0	1.125
621	6.3 A	34.495	.23	3.52	83	42.8	93.7	1000	4.32	34.525	.38	27.40	69.1	1.293
704B	5.68	34.490	.30	3.34	89	44.3	86.6	1200	3.76	34.553	.63	27.48	61.4	1.444
895B	4.71	34.507	.29	3.22	105	46.0	74.5	1500	3.02	34.593	1.08	27.58	51.7	1.644
1014B	4.28	34.528	.40	3.42	114	48.9	68.5	2000	2.28	34.630	1.85	27.67	42.8	1.931
1132B	3.96	34.547	.52	3.30	120	46.9	63.8							
1274B	3.54	34.560	.76	3.36	128	47.6	58.8							
1397B	3.20	34.578	.93	3.30	134	47.1	54.4							
1543B	2.95	34.598	1.15	3.24	142	46.2	50.7							
1665B	2.68	34.606	1.40	3.24	146	45.0	47.8							
1812B	2.51	34.617	1.69	3.16	148	46.0	45.6							
1960B	2.30	34.635	1.73	3.02	152	43.7	42.5							
1980B	2.29	34.629	1.83	3.10	152	43.9	42.9							
1993B	2.28	34.629	1.97	3.06	150	43.1	42.8							
2003B	2.28	34.630	1.75	3.00	152	44.3	42.8							

A) TEMPERATURE INFERRED FROM THE PRESSURE THERMOMETER AND WIRE DEPTH.
B) CAST II. THE DEPTHS FOR THE LAST TWO NANSEN BOTTLES WERE DETERMINED FROM AN EXTRAPOLATED DEPTH CURVE DUE TO THE LOSS OF THE BOTTLE CONTAINING THE DEEPEST UNPROTECTED THERMOMETER.

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	D*T	DD
140.50							CALCOFI CRUISE 6804						140.50	

DAVID STARR JORDAN, APRIL 27 1968, 0253 GMT, 24 07N 113 40W, SOUNDING 1700 FM, WIND 320 9 KNOTS, WEATHER PARTLY CLOUDY, SEA MISSING.

0	19.20	33.80	-	24.07	384.8	0
10	18.70	33.78	-	24.19	374.2	.038
20	18.33	33.77	-	24.27	366.2	.075
30	18.27	33.78	-	24.29	364.1	.112
50	17.75	33.69	-	24.35	358.5	.184
75	15.30	33.56	-	24.82	314.1	.269
100	12.56	33.74	-	25.52	246.8	.339
125	12.21	34.15	-	25.91	210.2	.397
150	10.90	34.15	-	26.15	187.2	.448
200	10.28	34.32	-	26.39	164.2	.537
250	9.88	34.46	-	26.57	147.4	.618
300	9.36	34.49	-	26.68	137.0	.692
400	8.55	34.51	-	26.83	123.2	.828
500	7.17	34.49	-	27.01	105.3	.950
600	6.16	34.48	-	27.14	93.1	1.058
700	5.43	34.47	-	27.23	85.2	1.155

INPUT Z	T	S	OXY	PHO	SIL	NIT	D*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	D*T	DD
140.50							CALCOFI CRUISE 6804						140.50	

DAVID STARR JORDAN, APRIL 27 1968, 0356 0508 GMT, 24 07N 113 40W, SOUNDING 1700 FM, WIND 320 9 KNOTS, WEATHER PARTLY CLOUDY, SEA MISSING; WIRE ANGLE 16 12.

0	19.09	33.795	5.58	0.31	2	0.0	382.5	0	19.09	33.795	5.58	24.10	382.5	0
9	18.65	33.784	5.56	0.22	2	0.1	372.8	10	18.62	33.783	5.56	24.21	372.1	.038
33	18.25	33.770	5.59	0.30	2	0.0	364.3	20	18.37	33.773	5.57	24.26	367.0	.075
42	18.20	33.777	5.64	0.24	2	0.0	362.6	30	18.28	33.770	5.58	24.28	365.1	.111
58	16.77	33.584	5.80	0.41	2	0.0	344.0	50	17.59	33.686	5.73	24.39	355.2	.184
73	15.44	33.568	5.65	0.49	3	0.0	316.4	75	15.18	33.570	5.58	24.85	310.8	.267
96	12.79	33.621	4.49	0.91	9	7.7	259.9	100	12.60	33.663	4.22	25.46	253.1	.338
115	12.26	33.866	3.21	1.48	14	14.9	232.1	125	12.23	34.026	2.61	25.81	219.8	.398
134	12.21	34.151	2.18	2.02	22	21.5	210.2	150	11.51	34.174	2.12	26.06	196.0	.451
163	10.87	34.196	2.04	2.53	28	24.6	183.3	200	10.30	34.304	1.51	26.38	165.7	.543
191	10.40	34.278	1.64	2.46	31	26.3	169.3	250	9.89	34.435	.78	26.55	149.3	.625
230	10.04	34.386	1.09	2.64	36	27.7	155.5	300	9.39	34.476	.48	26.66	138.5	.699
257	9.83	34.449	.68	2.79	39	28.5	147.4	400	8.60	34.503	.32	26.81	124.4	.838
305	9.34	34.478	.46	2.94	43	29.3	137.5	500	7.34	34.500	.21	27.00	106.8	.961
365	8.82	34.493	.40	3.02	48	30.4	128.5	600	6.06	34.484	.22	27.16	91.7	1.068
438	8.30	34.510	.24	3.14	55	32.6	119.5	700	5.34	34.473	.51	27.24	84.0	1.165
524	6.94	34.494	.20	3.38	71	36.9	102.0	800	4.97	34.483	.54	27.29	79.2	1.255
621	-	34.481	.23	3.36	82	41.7	-	1000	4.15	34.527	.76	27.42	67.3	1.420
675A	5.46	34.473	.50	3.32	89	45.4	85.4	1200	3.55	34.557	.91	27.50	59.2	1.565
796A	4.99	34.482	.53	3.06	96	47.6	79.4	1500	2.92	34.593	1.26	27.59	50.8	1.759
939A	4.39	34.513	.73	3.42	108	48.2	70.7	2000	2.17	34.637	2.03	27.69	41.3	2.038
1109A	3.78	34.548	.81	3.36	120	48.4	62.0	2500	1.83	34.624	2.42	27.70	39.9	2.290
1301A	3.34	34.566	1.03	3.28	132	47.0	56.6	3000	1.63	34.677	2.67	27.76	34.4	2.525
1542A	2.84	34.599	1.32	2.94	142	40.1	49.7							
1782A	2.44	34.623	1.79	3.12	146	45.3	44.6							
2024A	2.14	34.638	2.05	2.81	152	43.3	41.1							
2264A	1.94	34.627	2.05	2.87	144	40.7	40.4							
2514A	1.83	34.624B	2.45B	2.80B	148B	40.1B	39.8							
2755A	1.73	34.665B	2.69B	2.76B	156B	40.7B	36.0							
2947A	1.65	34.668	2.63	2.49	158	41.3	35.2							
3091A	1.63	34.676	2.79	2.69	158	39.5	34.5							
3110A	1.64	34.669	3.36	2.82	161	41.7	35.1							
3125A	1.63	34.670	2.91	2.88	158	41.5	34.9							
3137A	1.63	34.678	2.64	2.58	158	41.1	34.3							

A) CAST II.
B) ALL WATER SAMPLES FROM THE NANSEN BOTTLES AT 2514 AND 2755 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.65					CALCOFI CRUISE 6804								140.65	

DAVID STARR JORDAN, APRIL 26 1968, 1604 GMT, 23 34N 114 39W, SOUNDING 2025 FM, WIND 330 4 KNOTS; WEATHER CLOUDY, SEA ROUGH.

0	19.20	34.01	-	24.23	369.6	0
10	19.20	34.01	-	24.23	369.6	.037
20	19.20	34.01	-	24.23	369.6	.074
30	19.19	34.04	-	24.26	367.2	.111
50	19.18	34.04	-	24.26	366.9	.185
75	15.28	33.67	-	24.91	305.6	.269
100	12.95	33.77	-	25.47	251.9	.339
125	12.41	34.18	-	25.89	211.7	.398
150	12.29	34.48	-	26.15	187.4	.449
200	11.65	34.64	-	26.39	164.1	.539
250	10.86	34.60	-	26.51	153.3	.621
300	10.15	34.58	-	26.62	142.9	.698
400	8.70	34.52	-	26.81	124.7	.839
500	7.51	34.48	-	26.96	110.6	.964
600	6.71	34.48	-	27.07	100.0	1.078
700	5.95	34.49	-	27.18	89.8	1.182

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.65					CALCOFI CRUISE 6804								140.65	

DAVID STARR JORDAN, APRIL 26 1968, 1647 1811 GMT, 23 34N 114 39W, SOUNDING 2025 FM, WIND 330 4 KNOTS, WEATHER CLOUDY, SEA ROUGH, WIRE ANGLE 08 08.

0	19.25	34.023	5.46	0.30	2	0.2	369.9	0	19.25	34.023	5.46	24.23	369.9	0
10	19.22	34.017	5.70	0.32	2	0.0	369.6	10	19.22	34.017	5.70	24.23	369.6	.037
34	19.36	34.104	5.48	0.31	2	0.1	366.7	20	19.27	34.052	5.68	24.25	368.4	.074
44	19.35	34.106	5.36	0.28	2	0.1	366.3	30	19.33	34.089	5.56	24.26	367.2	.111
58	17.95	33.886	5.57	0.32	2	0.2	348.9	50	18.90	34.023	5.46	24.32	361.3	.184
73	15.61	33.734	5.19	0.45	4	0.3	307.9	75	15.31	33.717	5.14	24.94	302.7	.267
97	12.86	33.704	4.31	1.11	11	9.3	255.1	100	12.76	33.749	4.09	25.49	250.0	.337
117	12.60	34.059	2.75	1.58	19	16.8	224.1	125	12.46	34.182	2.20	25.88	212.6	.396
136	12.29	34.326	1.58	2.12	27	24.1	198.8	150	12.17	34.450	1.18	26.15	187.5	.446
164	12.08	34.533	.95	2.44	33	26.0	179.7	200	11.66	34.643	.36	26.39	164.1	.536
193	11.75	34.640	.42	2.74	37	28.4	165.9	250	10.83	34.620	.29	26.53	151.3	.618
231	11.20	34.644	.28	2.87	39	28.4	155.9	300	9.98	34.565	.29	26.64	141.2	.694
260	10.63	34.605	.30	2.69	40	25.5	149.0	400	8.63	34.517	.14	26.82	123.8	.834
308	9.86	34.559	.28	2.90	43	29.4	139.8	500	7.48	34.482	.13	26.96	110.1	.958
370	9.05	34.538	.20	3.00	50	32.0	128.6	600	6.63	34.482	.14	27.08	98.8	1.071
441	8.08	34.490	.08	3.10	58	35.0	117.9	700	5.96	34.489	.20	27.18	90.0	1.175
526	7.25	34.480	.16	3.18	68	38.1	107.1	800	5.34	34.493	.22	27.26	82.5	1.270
595B	6.66	34.483	.13	3.28	76	40.0	99.2	1000	4.35	34.514	.40	27.39	70.2	1.443
619	6.5 A	34.480	.17	3.30	78	41.1	97.4	1200	3.70	34.518	.70	27.46	63.5	1.596
714B	5.87	34.492	.20	3.14	85	42.8	88.7	1500	3.03	34.586	1.06	27.57	52.3	1.800
858B	5.01	34.494	.25	3.38	99	45.6	78.7	2000	2.19	34.601	1.73	27.66	44.3	2.091
1025B	4.25	34.518	.43	3.30	114	46.3	68.9	2500	1.82	34.660	2.49	27.74	37.0	2.342
1220B	3.65	34.518	.73	3.20	117	44.8	63.0	3000	1.65	34.677	2.60	27.76	34.6	2.572
1462B	3.11	34.577	.99	3.30	136	45.9	53.7	3500	1.60	34.675	2.68	27.76	34.3	2.799
1705B	2.62	34.615	1.42	3.20	146	45.0	46.6							
1947B	2.25	34.596	1.70	3.14	142	43.0	45.1							
2192B	2.01	34.539U	1.81	3.02	134U	40.8	47.6							
2434B	1.85	34.657	2.44	2.98	156	42.3	37.5							
2676B	1.74	34.665	2.56	2.91	158	41.5	36.1							
2869B	1.67	34.671	2.75	2.90	164	41.6	35.1							
3012B	1.65	34.677	2.59	2.84	158	41.1	34.5							
3156B	1.62	34.674	2.95	2.88	161	41.4	34.5							
3275B	1.62	34.673	2.80	2.85	158	40.2	34.6							
3393B	1.61	34.680	2.92	2.82	158	40.5	34.0							
3535B	1.60	34.673	2.62	2.68	167	41.2	34.5							
3676B	1.61	34.676	3.03	2.84	164	40.3	34.3							
3694B	1.61	34.680	3.00	2.78	158	40.2	34.0							
3708B	1.61	34.674	3.02	2.93	164	40.4	34.5							
3718B	1.61	34.674C	3.39D	4.82D	158D	41.3D	34.5							
3721B	-	34.593D	.64D	3.30D	37D	29.2	-							

A) TEMPERATURE INFERRED FROM THE PRESSURE THERMOMETER AND WIRE DEPTH.
B) CAST II.
C) THIS SAMPLE CONTAINED MUD.
D) THE GRADIENT SHOWN IN THE NEAR BOTTOM LAYER OF THIS STATION HAS BEEN CAREFULLY CHECKED. NO MECHANICAL REASON FOR THE UNUSUAL VALUES WAS DETERMINED SO THEY WERE ENTERED IN THE TABULATIONS. NOTE ALSO STATIONS 140.80 AND 140.95.

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.80						CALCOFI CRUISE 6804							140.80	

DAVID STARR JORDAN, APRIL 26 1968, 0152 GMT, 23 07N 115 34W, SOUNDING 2080 FM, WIND 350 3 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE.

0	19.98	34.12	-	24.12	380.8	0
10	20.02	34.20	-	24.17	376.0	.038
20	19.94	34.20	-	24.19	374.0	.075
30	19.92	34.20	-	24.19	373.5	.113
50	19.88	34.20	-	24.20	372.5	.188
75	17.17	33.69	-	24.49	345.3	.278
100	13.80	33.75	-	25.28	269.7	.355
125	12.00	33.97	-	25.81	219.7	.417
150	11.38	34.18	-	26.09	193.2	.470
200	10.84	34.41	-	26.36	167.0	.562
250	9.84	34.42	-	26.55	149.7	.643
300	9.27	34.46	-	26.67	137.8	.718
400	8.13	34.42	-	26.82	123.8	.855
500	7.26	34.43	-	26.95	111.0	.980
600	6.52	34.47	-	27.09	98.4	1.093
700	5.76	34.48	-	27.19	88.3	1.196

	INPUT							OUTPUT AT STANDARD LEVELS OF DEPTH						
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
140.80						CALCOFI CRUISE 6804							140.80	

DAVID STARR JORDAN, APRIL 26 1968, 0249 0415 GMT, 23 07N 115 34W, SOUNDING 2080 FM, WIND 340 4 KNOTS, WEATHER PARTLY CLOUDY, SEA MODERATE, WIRE ANGLE 20 06.

Z	19.97	34.161	5.42	0.31	2	0.2	377.6	0	19.97	34.161	5.42	24.15	377.6	0
11	20.01	34.204	5.41	0.19	2	0.1	375.5	10	20.01	34.200	5.41	24.17	375.7	.038
35	19.99	34.244	5.34	0.29	2	0.1	372.1	20	20.02	34.228	5.38	24.19	373.9	.075
61	19.92	34.234	5.37	0.25	2	0.1	371.1	30	20.00	34.238	5.35	24.20	372.8	.113
69	19.02	34.081	5.44	0.33	2	0.0	360.1	50	19.95	34.242	5.35	24.22	371.3	.187
88	14.80	33.725	5.29	0.68	5	0.7	291.6	75	17.66	33.941	5.42	24.56	338.2	.277
101	13.85	33.769	4.56	0.84	7	5.4	269.3	100	13.89	33.761	4.62	25.27	270.8	.353
115	12.91	33.835	3.88	1.34	12	12.3	246.4	125	12.33	33.919	3.37	25.71	229.4	.417
142	11.61	34.084	2.57	1.97	22	21.9	204.3	150	11.44	34.155	2.28	26.06	196.2	.471
158	11.33	34.219	2.03	2.32	26	25.2	189.5	200	10.91	34.412	1.34	26.35	168.1	.564
185	11.07	34.349	1.57	2.51	31	27.1	175.4	250	10.11	34.478	.90	26.55	149.8	.646
216	10.71	34.461	1.14	2.73	34	28.1	161.0	300	9.30	34.465	.70	26.67	137.9	.720
246	10.18	34.478	.92	2.79	28	28.4	150.9	400	8.00	34.443	.44	26.86	120.3	.856
290	9.46	34.470	.73	2.90	42	31.6	140.0	500	7.24	34.454	.38	26.98	108.9	.978
343	8.65	34.443	.58	2.96	48	34.1	129.6	600	6.52	34.498	.32	27.11	96.3	1.089
413	7.88	34.445	.41	3.12	55	37.2	118.4	700	5.72	34.481	.38	27.20	87.8	1.190
499	7.24	34.453	.38	3.22	63	39.9	109.0	800	5.20	34.492	.31	27.27	81.0	1.283
544A	7.01	34.484	-	2.04	71	33.2	103.6	1000	4.32	34.530	.61	27.40	68.7	1.452
597	6.55	34.498	.32	3.32	75	42.6	96.7	1200	3.73	34.555	.67	27.48	61.0	1.602
668A	5.93	34.481	.40	2.88	84	38.5	90.3	1500	2.98	34.600	1.16	27.59	50.8	1.800
812A	5.15	34.495	.30	3.02	95	41.3	80.2	2000	2.15	34.640	2.09	27.69	41.0	2.078
972A	4.42	34.526	.61	2.96	108	42.3	70.0	2500	1.84	34.666	2.57	27.74	36.8	2.321
1165A	3.82	34.550	.63	2.86	120	46.7	62.3	3000	1.66	34.677	3.10	27.76	34.6	2.551
1407A	3.21	34.584	.98	2.92	134	45.5	54.0	3500	1.59	34.693	2.93	27.78	32.9	2.775
1600A	2.76	34.616	1.36	2.87	142	42.6	47.7							
1891A	2.27	34.629	1.90	2.63	150	41.6	42.8							
2131A	2.03	34.653	2.27	2.89	156	42.6	39.1							
2373A	1.88	34.669	2.41	3.10	156	43.3	36.8							
2613A	1.81	34.662	2.72	2.35	156	40.4	36.8							
2806A	1.73	34.670	2.92	2.49	158	41.5	35.6							
2951A	1.67	34.676	3.20	2.62	161	41.9	34.7							
3096A	1.64	34.678	2.91	2.63	158	42.3	34.4							
3215A	1.61	34.684	3.11	2.77	158	41.6	33.7							
3337A	1.61	34.645	2.02	-	-	-	36.7							
3485A	1.59	34.690	2.93	2.75	158	41.8	33.1							
3675A	1.57	34.692	2.44	3.70	158	41.6	32.8							
3819A	1.59	34.605B	1.12B	3.38B	136B	48.7B	39.6							
3837A	1.58	34.482B	.75B	3.34B	79B	43.2B	48.8							
3853A	1.58	34.480B	.47B	3.36B	80B	42.6B	49.0							
3861A	1.59	34.483B	.32B	2.24B	69B	41.1B	48.8							
3867A	1.58	34.469B	.39B	2.52B	83B	43.7B	49.8							

A) CAST II.
B) THE GRADIENT SHOWN IN THE NEAR BOTTOM LAYER OF THIS STATION HAS BEEN CAREFULLY CHECKED. NO MECHANICAL REASON FOR THE UNUSUAL VALUES WAS DETERMINED SO THEY WERE ENTERED IN THE TABULATIONS. NOTE ALSO STATIONS 140.65 AND 140.95.

OBSERVED LEVELS OF DEPTH — STANDARD LEVELS OF DEPTH

INPUT Z	T	S	OXY	PHO	SIL	NIT	COMPUTED D*T	INPUT Z	T	S	OXY	COMPUTED SIG*T	D*T	DD
140.95							CALCOFI CRUISE 6804						140.95	
DAVID STARR JORDAN, APRIL 25 1968, 1502 GMT, 22 37N 116 29W, SOUNDING 2120 FM, WIND 010 4 KNOTS, WEATHER PARTLY CLOUDY, SEA ROUGH.														
								0	20.25	34.29	-	24.17	375.3	0
								10	20.21	34.29	-	24.19	374.3	.037
								20	20.21	34.29	-	24.19	374.3	.075
								30	20.21	34.29	-	24.19	374.3	.112
								50	20.18	34.29	-	24.19	373.5	.188
								75	15.70	33.70	-	24.84	312.3	.274
								100	13.53	34.03	-	25.55	243.9	.344
								125	12.32	34.26	-	25.97	204.2	.401
								150	11.23	34.20	-	26.13	189.1	.451
								200	10.66	34.39	-	26.38	165.4	.541
								250	9.99	34.45	-	26.54	149.9	.622
								300	9.60	34.51	-	26.66	139.2	.698
								400	8.28	34.47	-	26.84	122.2	.835
								500	7.24	34.46	-	26.98	108.5	.958
								600	6.33	34.46	-	27.10	96.7	1.069
								700	5.67	34.46	-	27.19	88.8	1.170

INPUT Z	T	S	OXY	PHO	SIL	NIT	D*T	OUTPUT AT STANDARD LEVELS OF DEPTH Z	T	S	OXY	SIG*T	D*T	DD
140.95							CALCOFI CRUISE 6804						140.95	
DAVID STARR JORDAN, APRIL 25 1968, 1552 1720 GMT, 22 37N 116 29W, SOUNDING 2120 FM, WIND 010 12 KNOTS, WEATHER PARTLY CLOUDY, SEA ROUGH, WIRE ANGLE 08 10.														
1	20.10	34.310	5.34	0.33	2	0.1	370.0	0	20.10	34.310	5.34	24.23	370.0	0
11	20.11	34.308	5.53	0.53	2	0.1	370.4	10	20.11	34.308	5.52	24.23	370.4	.037
29	20.11	34.307	5.38	0.55	2	0.0	370.5	20	20.11	34.307	5.49	24.22	370.6	.074
65	20.03	34.302	5.51	0.49	2	0.2	368.9	30	20.11	34.307	5.39	24.23	370.5	.111
75	16.74	33.899	5.39	0.63	4	0.3	320.4	50	20.07	34.304	5.47	24.23	369.7	.186
93	14.25	33.870	3.76	1.35	10	10.0	269.9	75	16.74	33.899	5.39	24.75	320.4	.272
108	13.65	34.048	2.83	1.88	15	17.8	244.9	100	13.89	33.946	3.27	25.42	257.2	.345
122	13.04	34.156	2.39	1.99	20	20.9	225.3	125	12.84	34.167	2.34	25.80	220.7	.406
152	11.51	34.213	2.09	2.39	26	24.8	193.1	150	11.58	34.205	2.13	26.07	194.9	.458
171	11.72	34.411	1.29	2.50	31	27.5	182.2	200	10.63	34.392	1.25	26.39	164.7	.550
200	10.63	34.392	1.25	2.78	35	29.2	164.7	250	10.09	34.492	.54	26.56	148.4	.631
235	10.32	34.491	.56	2.88	39	30.2	152.3	300	9.55	34.509	.42	26.66	138.6	.706
263	9.89	34.494	.57	2.84	42	30.7	145.0	400	8.21	34.481	.26	26.85	120.4	.842
310	9.47	34.512	.37	3.06	45	31.3	137.0	500	7.07	34.462	.42	27.01	106.1	.963
374	8.55	34.486	.29	3.06	52	35.3	125.0	600	6.27	34.470	.33	27.12	95.3	1.071
446	7.66	34.474	.24	3.22	62	38.3	113.1	700	5.70	34.478	.21	27.20	87.8	1.172
533	6.76	34.458	.51	3.34	72	42.3	102.3	800	5.13	34.486	.24	27.27	80.7	1.265
625A	6.12	34.476	.24	3.30	80	44.1	92.9	1000	4.22	34.533	.40	27.41	67.5	1.432
756A	5.40	34.479	.21	3.52	93	45.0	84.2	1200	3.66	34.560	.61	27.49	59.9	1.579
886A	4.64	34.504	.32	3.42	107	48.4	74.0	1500	2.95	34.594	1.14	27.59	51.0	1.775
1054A	4.07	34.545	.44	3.29	117	53.1	65.1	2000	2.16	34.635	1.94	27.69	41.5	2.055
1249A	3.53	34.564	.68	3.48	127	48.4	58.5	2500	1.84	34.668	2.27	27.74	36.6	2.298
1493A	2.96	34.593	1.13	3.53	138	47.7	51.2	3000	1.64	34.675	2.79	27.76	34.6	2.527
1735A	2.53	34.623	1.57	3.14	146	46.1	45.3	3500	1.59	34.680	3.01	27.77	33.9	2.753
1981A	2.18	34.634	1.91	3.10	148	44.7	41.7							
2239A	1.96	34.650	2.27	3.05	154	43.3	38.8							
2484A	1.85	34.668	2.26	2.98	154	43.3	36.6							
2729A	1.72	34.665	2.56	2.87	156	43.0	35.9							
2927A	1.66	34.671	2.81	3.09	158	43.2	35.0							
3072A	1.63	34.678	2.77	2.89	158	42.3	34.3							
3218A	1.60	34.675	2.89	2.80	158	40.9	34.3							
3338A	1.60	34.675	2.85	2.82	158	42.3	34.3							
3461A	1.59	34.681	3.02	2.90	158	41.6	33.8							
3606A	1.58	34.677	2.93	2.95	158	42.2	34.0							
3801A	1.57	34.695	2.82	2.69	161	42.4	32.6							
3930A	1.57	34.5148	.428	2.848	1058	48.48	46.3							

A) CAST II. THE LAST NANSEN BOTTLE MAY HAVE TOUCHED BOTTOM CAUSING THE
A) LAST FOUR DEPTHS TO BE SLIGHTLY UNCERTAIN.
B) THE GRADIENT SHOWN IN THE NEAR BOTTOM LAYER OF THIS STATION HAS BEEN CAREFULLY CHECKED. NO MECHANICAL REASON FOR THE UNUSUAL VALUES WAS DETERMINED SO THEY WERE ENTERED IN THE TABULATIONS. NOTE ALSO STATIONS 140.65 AND 140.80.

SIO

CalCOFI
6804

Station 94.30.

Z m	NO_2-N µg at/L
0a)*	0.08
5	0.05
11	0.16
16	0.34
20	0.28
25	0.28
33	0.18
38	0.24
44	0.18
51	0.10
57	0.22
62	0.21
67	0.09
71	0.10
76	0.05
81	0.05
86	0.07
92	0.08

Station 117.60.

Z m	NO_2-N µg at/L
1	0.05
12	0.05
31	0.05
40	0.05
51	0.10
65	0.86
79	0.07
100	0.07
124	0.05
144	0.07
172	0.03
201	0.05
230	0.07
268	0.06
325	0.07
396	0.05
466	0.05
544	-

Station 118.39.

Z m	NO_2-N µg at/L
1	0.09
20	0.17
35	0.05
43	0.05
55	0.05
69	0.03
86	0.05
110	0.04
129	0.05
163	0.04
193	0.04
227	0.05

Station 119.33.

Z m	NO_2-N µg at/L
1	0.05
6	0.04
15	0.05
29	0.24
39	0.34
48	0.21
61	0.07
74	0.08
98	0.09

Station 120.45.

2	0.01
12	0.04
32	0.15
61	0.11
71	0.07
84	0.05
100	0.03
114	0.02
138	0.02
158	0.01
186	0.02
217	0.02
246	0.01
294	0.01
349	0.02
431	0.02
514	0.01
595	0.01

Station 120.60.

2	0.03
10	0.03
29	0.05
35	0.03
48	0.07
63	0.12
86	0.04
103	0.03
123	0.05
140	0.04
166	0.05
198	0.02
225	0.05
268	0.02
319	0.02
395	0.06
473	0.05
557	0.02

Station 120.80.

1	0.03
9	0.02
28	0.01
37	0.02
51	0.02
65	0.01
88	0.03
105	0.13
122	0.05
143	0.04
171	0.05
200	0.02
226	0.02
270	0.01
320	0.02
398	0.03
475	0.03
563	0.01

Station 123.60

1	0.01
11	0.02
31	0.01
40	0.01
56	0.01
70	0.02
95	0.12
114	0.05
135	0.05
152	0.05
182	0.05
217	0.03
245	0.07
303	0.03
348	0.03
429	0.04
510	0.07
594	0.05

* For footnotes, see the tabulated data for this station.

Station 127.60.

Z m	NO_2-N µg at/L
1	0.03
11	0.02
29	0.02
40	0.02
53	0.02
67	0.02
90	0.03
109	0.04
127	0.02
145	0.03
174	0.05
206	0.04
233	-
281	0.03
332	0.03
414	0.05
495	-
577	0.04

Station 130.30.

Z m	NO_2-N µg at/L
1	0.07
10	0.09
19	0.25
30	0.33
38	0.19
59	0.07

Station 130.40.

Z m	NO_2-N µg at/L
1	0.02
10	0.02
29	0.02
38	0.05
53	0.02
66	0.16
90	0.01
108	0.09
127	0.03
145	0.05
174	0.05
207	0.04
234	0.03
281	0.05
361	0.04
412	0.04
495	0.05
578	0.07

Station 130.60.

Z m	NO_2-N µg at/L
1	0.02
10	0.02
29	0.01
38	0.02
52	0.02
66	0.04
89	0.09
109	0.05
126	0.03
145	0.02
174	0.02
207	0.04
234	0.05
282	0.03
332	0.00
413	0.05
494	0.03
574	0.03

Station 137.23.

Z m	NO_2-N µg at/L
1	0.03
10	0.03
21	0.07
30	0.45
50	0.11
74	0.22

Station 137.41.

Z m	NO_2-N µg at/L
2	0.03
13	0.02
32	0.02
41	0.02
52	0.02
65	0.05
81	0.04
100	0.04
125	0.04
145	0.03
173	0.05
203	0.03
232	0.05
270	0.05
328	0.03
401	0.04
470	0.03
546	0.04

Station 140.38.

Z m	NO_2-N µg at/L
0	0.01
9	0.04
34	0.42
43	0.41
58	0.26
73	0.15
97	0.05
115	0.06
135	0.05
163	0.03
191	0.03
229	0.02
257	0.02
304	0.01
366	0.01
437	0.03
524	0.01
621	0.02
704b)*	0.01
895b)*	0.00
1014b)*	0.04
1132b)*	0.00
1274b)*	0.00
1397b)*	0.01
1543b)*	-
1665b)*	-
1812b)*	-
1960b)*	-
1980b)*	0.00
1993b)*	0.00
2003b)*	0.01

Station 140.50.

Z m	NO_2-N µg at/L
0	0.04
9	0.01
33	0.01
42	0.01
58	0.02
73	0.01
96	0.05
115	0.04
134	0.04
163	0.05
191	0.02
230	0.05
257	0.07
305	0.02
365	0.02
438	0.02
524	0.03
621	0.03
675a)*	0.01
796a)*	0.01
939a)*	0.03
1109a)*	0.09
1301a)*	0.04
1542a)*	0.06
1782a)*	0.02
2024a)*	0.05
2264a)*	0.02
2514a)*	0.05b)*
2755a)*	0.07b)*
2947a)*	0.02
3091a)*	0.02
3110a)*	0.03
3125a)*	0.01
3137a)*	0.02

* For footnotes, see the tabulated data for this station.

Station 140.65.

Z m	NO_2-N µg at/L
0	0.01
10	0.00
34	0.00
44	0.00
58	0.00
73	0.01
97	0.00
117	0.05
136	0.01
164	0.03
193	0.00
231	0.01
260	0.00
308	0.02
370	0.00
441	0.02
526	0.01
595b)*	0.03
619	0.00
714b)*	0.02
858b)*	0.02
1025b)*	0.00
1220b)*	0.01
1462b)*	0.01
1705b)*	0.01
1947b)*	0.00
2192b)*	0.01
2434b)*	0.01
2676b)*	0.00
2869b)*	0.00
3012b)*	0.01
3156b)*	0.00
3275b)*	0.04
3393b)*	0.03
3535b)*	0.00
3676b)*	0.00
3694b)*	0.00
3708b)*	0.05
3718b)*	1.10d)*
3721b)*	0.00d)*

Station 140.80.

Z m	NO_2-N µg at/L
2	0.01
11	0.07
35	0.03
61	0.02
69	0.03
88	0.05
101	0.18
115	0.11
142	0.05
158	0.03
185	0.04
216	0.03
246	0.02
290	0.03
343	0.04
413	0.05
499	0.04
544a)*	0.05
597	0.05
668a)*	0.05
812a)*	0.05
972a)*	0.05
1165a)*	0.04
1407a)*	0.06
1600a)*	0.05
1891a)*	0.07
2131a)*	0.05
2373a)*	0.03
2613a)*	0.08
2806a)*	0.05
2951a)*	0.05
3096a)*	0.05
3215a)*	0.00
3337a)*	-
3485a)*	0.12
3675a)*	0.03
3819a)*	0.04b)*
3837a)*	0.04
3853a)*	0.00
3861a)*	0.05
3867a)*	0.01

Station 140.95.

Z m	NO_2-N µg at/L
1	0.02
11	0.03
29	0.05
65	0.04
75	0.05
93	0.34
108	0.09
122	0.09
152	0.09
171	0.04
200	0.03
235	0.03
263	0.03
310	0.03
374	0.04
446	0.03
533	0.05
625a)*	0.04
756a)*	0.05
886a)*	0.02
1054a)*	0.03
1249a)*	0.03
1493a)*	0.03
1735a)*	0.02
1981a)*	0.01
2239a)*	0.05
2484a)*	0.01
2729a)*	0.02
2927a)*	0.12
3072a)*	0.09
3218a)*	0.11
3338a)*	0.04
3461a)*	0.03
3606a)*	0.05
3801a)*	0.00
3930a)*	0.01b)*

* For footnotes, see the tabulated data for this station.

DATA AT NET TOW STATIONS										10 METERS							
Station	Date	Time GMT	Latitude North	Longitude West	Sounding fm	Wind Dir	Wind Force	Weather	Sea	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_3-N µg at/L	NO_2-N µg at/L	δ_T cl/ton
117.25-J	V-5	1435	28°58.0'	114°36.5'	30	040°	8	overcast	rough	13.08	33.555	4.67	0.94	12	5.6	0.55	270
117.26-J	5	1530	28°56.0'	114°41.5'	36	-	11	overcast	rough	15.02	33.556	5.67	0.70	10	0.7	0.13	308
117.30-J	5	1738	28°48.0'	114°56.5'	56	320°	12	overcast	rough	14.80	33.527	6.30	0.39	6	0.2	0.06	306
117.35-J	5	2032	28°38.0'	115°16.0'	112	290°	8	cloudy	rough	15.30	33.454	6.06	0.42	5	0.0	0.05	322
117.40-J	6	0140	28°28.0'	115°35.5'	560	310°	14	overcast	rough	15.92	33.489	6.05	0.28	4	0.2	0.05	332
117.45-J	6	0450	28°18.0'	115°56.0'	1925	060°	10	missing	missing	16.17	33.500	5.96	0.29	3	0.0	0.05	337
117.50-J	6	0730	28°08.0'	116°15.0'	2040	310°	13	missing	missing	16.36	33.515	5.97	0.28	3	0.2	0.05	340
117.55-J	6	1035	27°58.0'	116°34.5'	1800	310°	14	missing	missing	16.50	33.519	5.93	0.30	3	0.1	0.04	343
120.24-J	5	0959	28°24.0'	114°10.5'	18	030°	13	missing	missing	16.70	33.559	5.84	0.44	6	0.2	0.03	344
120.25-J	5	0906	28°22.5'	114°15.0'	30	300°	10	missing	missing	16.60	33.556	5.92	0.32	6	0.1	0.03	342
120.30-J	5	0640	28°13.0'	114°33.5'	48	300°	13	missing	missing	16.22	33.550	6.26	0.31	5	0.5	0.04	334
120.35-J	5	0145	28°03.0'	114°54.0'	43	020°	10	cloudy	moderate	15.46	33.496	6.20	0.35	6	0.2	0.05	322
120.40-J	4	2305	27°56.5'	115°14.0'	22	020°	20	cloudy	rough	14.38	33.550	4.97	0.72	9	3.2	0.16	296
120.50-J	4	1700	27°35.0'	115°51.0'	2265	330°	9	overcast	rough	17.47	33.586	5.80	0.26	2	0.1	0.01	360
120.55-J	4	1357	27°24.5'	116°11.0'	2220	350°	10	overcast	rough	17.72	33.621	5.84	0.20	2	0.2	0.01	363
120.65-J	4	0720	27°04.0'	116°50.0'	2030	010°	6	missing	rough	17.60	33.560	5.81	0.26	2	0.2	0.00	364
120.70-J	4	0430	26°53.0'	117°10.0'	2120	340°	12	missing	moderate	17.59	33.622	5.68	0.31	2	0.1	0.02	360
123.36-J	2	2209	27°26.0'	114°36.0'	25	280°	12	partly cloudy	moderate	15.22	33.731	6.32	0.58	11	1.0	0.11	300
123.37-J	2	2310	27°24.0'	114°40.0'	38	250°	10	partly cloudy	moderate	14.13	33.766	6.02	0.92	14	5.2	0.26	275

DATA AT NET TOW STATIONS										10 METERS							
Station	Date	Time GMT	Latitude North	Longitude West	Sounding fm	Wind Dir	Wind Force	Weather	Sea	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_3-N µg at/L	NO_2-N µg at/L	δ_T cl/ton
123.42-J	V-3	0130	27°14.0'	114°59.0'	680	020°	10	partly cloudy	moderate	17.08	33.622	5.86	0.31	3	0.1	0.03	348
123.45-J	3	0345	27°07.5'	115°11.5'	2050	320°	10	missing	moderate	17.48	33.609	5.73	0.31	3	0.3	0.05	358
123.50-J	3	0645	26°57.5'	115°30.5'	1740	330°	5	missing	moderate	18.01	33.588	5.75	0.25	3	0.1	0.03	372
123.55-J	3	0920	26°46.5'	115°50.0'	2040	340°	9	missing	missing	17.76	33.566	5.73	0.25	3	0.1	0.03	368
127.33-J	1	1737	26°57.5'	114°02.0'	35	250°	2	partly cloudy	slight	15.01	33.566	5.70	0.55	4	0.5	0.10	308
127.34-J	1	1517	26°55.0'	114°06.5'	45	020°	3	clear	slight	17.07	33.617	5.84	0.32	2	0.1	0.04	348
127.40-J	1	1135	26°44.5'	114°30.5'	1830	330°	5	missing	slight	16.69	33.571	5.94	0.31	3	0.0	0.03	343
127.45-J	1	0815	26°33.5'	114°48.5'	1705	140°	8	missing	rough	16.29	33.592	6.26	0.28	3	0.1	0.03	333
127.50-J	1	0540	26°24.0'	115°08.0'	2225	210°	10	missing	rough	16.86	33.521	5.92	0.24	3	0.1	0.02	351
127.55-J	1	0237	26°13.5'	115°27.0'	1930	300°	6	cloudy	rough	18.08	33.799	5.62	0.31	2	0.1	0.02	358
130.28-J	IV-29	2100	26°33.0'	113°21.0'	30	270°	10	clear	moderate	14.00	33.857	-	0.97	8	5.1	0.02	266
130.35-J	30	0117	26°18.5'	113°48.0'	310	290°	13	clear	rough	17.56	33.646	5.70	0.23	1	0.0	0.01	357
130.45-J	30	0730	25°58.5'	114°26.5'	1855	020°	15	missing	missing	16.05	33.511	5.76	0.30	2	0.2	0.03	334
130.50-J	30	1005	25°49.0'	114°45.0'	1860	240°	10	missing	missing	-	33.677	5.81	0.29	1	0.2	0.03	-
130.55-J	30	1315	25°39.0'	115°04.0'	1990	320°	11	overcast	moderate	17.66	33.677	5.78	0.28	1	0.2	0.03	357
133.23-J	29	1605	26°08.5'	112°40.5'	40	040°	3	fog	moderate	14.48	33.886	5.38	1.02	9	5.7	0.04	273
133.25-J	29	1455	26°02.5'	112°44.0'	44	030°	6	clear	rough	14.99	33.903	6.40	0.71	7	1.8	0.01	282
133.30-J	29	1154	25°53.5'	113°07.0'	110	330°	13	missing	missing	15.46	33.628	6.21	0.33	4	0.3	0.03	312
133.35-J	29	0819	25°44.5'	113°26.5'	385	300°	10	missing	missing	17.28	33.600	5.75	0.30	2	0.1	0.02	354

DATA AT NET TOW STATIONS										10 METERS							
Station	Date	Time GMT	Latitude North	Longitude West	Sounding fm	Wind Dir	Wind Force	Weather	Sea	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_3-N µg at/L	NO_2-N µg at/L	δ_T cl/ton
133.40-J	IV-29	0500	25°34.5'	113°45.5'	1375	330°	8	missing	moderate	17.30	33.585	6.06	0.30	2	0.1	0.02	356
137.22-J	28	0220	25°36.0'	112°15.0'	28	300°	10	clear	rough	15.10	33.797	5.51	0.40	5	0.9	0.13	293
137.30-J	28	0700	25°19.0'	112°44.5'	225	300°	12	missing	moderate	16.58	33.597	5.88	-	-	-	-	339
137.36-J	28	1005	25°06.0'	113°10.5'	1586	060°	10	missing	moderate	17.67	33.638	5.81	0.21	2	0.2	0.02	360

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