UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 5903
11-28 March 1959

SIO Reference 60-36
15 February 1960

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5903

11-28 March 1959

Sponsored by

Marine Research Committee

SIO Reference 60-20
15 February 1960

Approved for distribution:

Roger Revelle

Roger Revelle, Director

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INTRODUCTION

The data presented in this report were collected on the one hundred and eighteenth consecutive cruise of the California Cooperative Oceanic Fisheries Investigations program. The R/V Orca, the R/V Paolina-T and the R/V Stranger of the Scripps Institution participated in this cruise.

The data are tabulated at observed depths, and the interpolated and computed values are tabulated at standard depths. They are accompanied by charts of horizontal distribution. The presentation of data in this report does not constitute publication; however, the data contained in this report have been carefully edited and no modifications should be necessary before final publication.

STANDARD PROCEDURES

Processing of the data was carried out using the method described by Klein.[1/] Certain approximations have been introduced for the determination of the integrated pressure terms which may result in errors whose maximum values are less than 0.5 dynamic centimeter at 0 over 200 decibars, 1.0 dynamic centimeter at 0 over 500 decibars, and 2.0 dynamic centimeters at 0 over 1000 decibars. The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD. The interpolated values at 125 meters are not tabulated.

To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer, thermograph, or bathythermograph, while temperatures from reversing thermometers are recorded in hundredths of a degree. Extrapolated values and values interpolated between remote observations are entered within parentheses. A hyphen is used to indicate a missing observed value. The time is the time of messenger release. When more than one cast was made on a station, messenger times and wire angles are given in the order of increasing depth. A line is left blank between the observed data of each cast.

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

FOOTNOTES

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

To indicate a premature or a delayed reversal of the water-sampling device which results in certain depth and property errors, the following notation is used.

p: pretrip or posttrip.

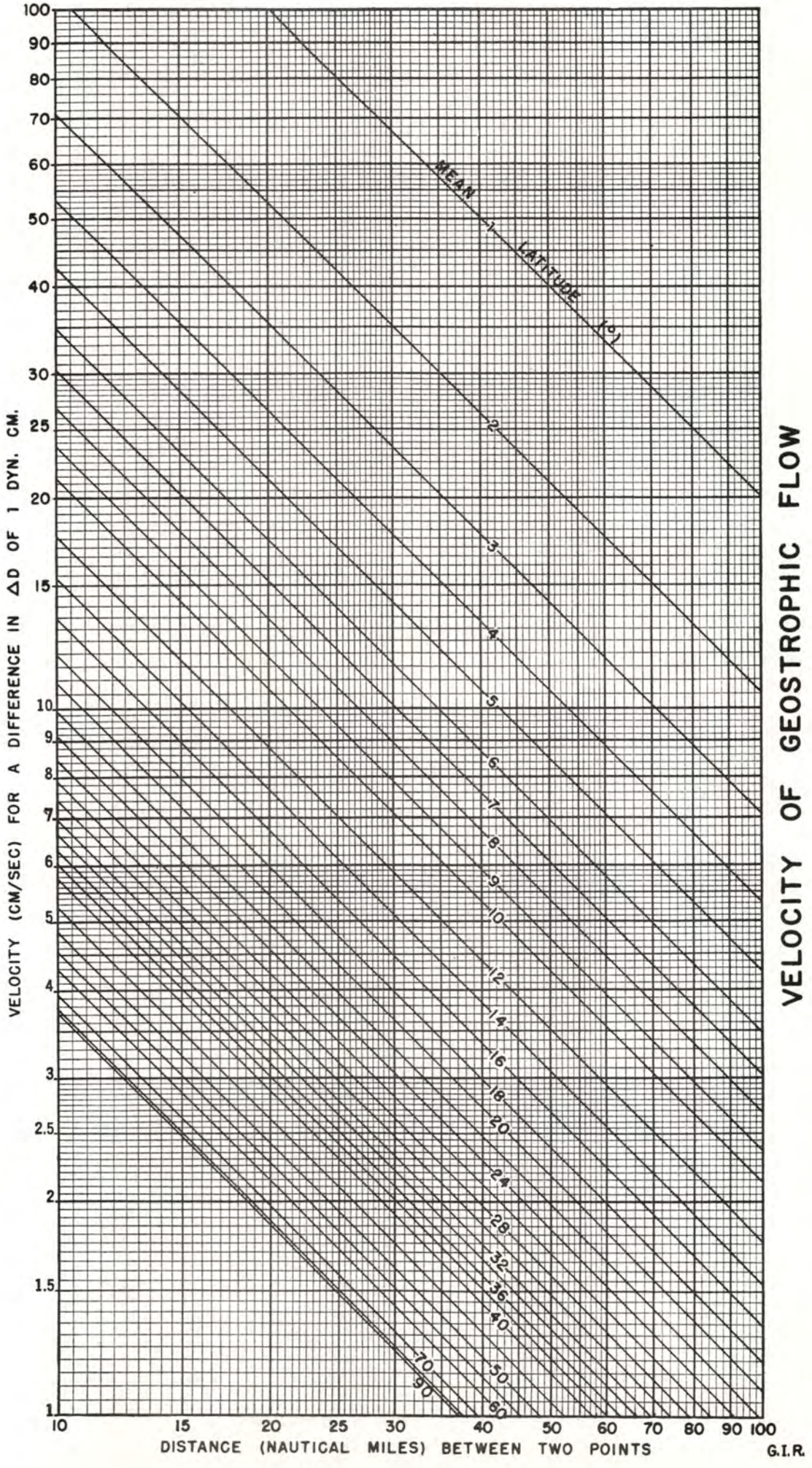
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

r: rejected value (value seems to be definitely wrong),

u: uncertain value (value may be correct; occasionally it can influence the drawing of the property curve).

FORMAT

These data are typed in the format of the University of California Press publication, Oceanic Observations of the Pacific. So that these pages can be used as copy for the 1959 volume, the first page of the Cruise 5903 data is numbered 105.


VELOCITY OF GEOSTROPHIC FLOW
VELOCITY (CM/SEC) FOR A DIFFERENCE IN ΔD OF 1 DYN. CM.
DISTANCE (NAUTICAL MILES) BETWEEN TWO POINTS
MEAN LATITUDE (°)
100
90
80
70
60
50
40
30
25
20
15
10
9
8
7
6
5
4
3
2.5
2
1.5
1
10
15
20
25
30
40
50
60
70
80
90
100
1
2
3
4
5
6
7
8
9
10
12
14
16
18
20
24
28
32
36
40
50
60
70
90
G.I.R.

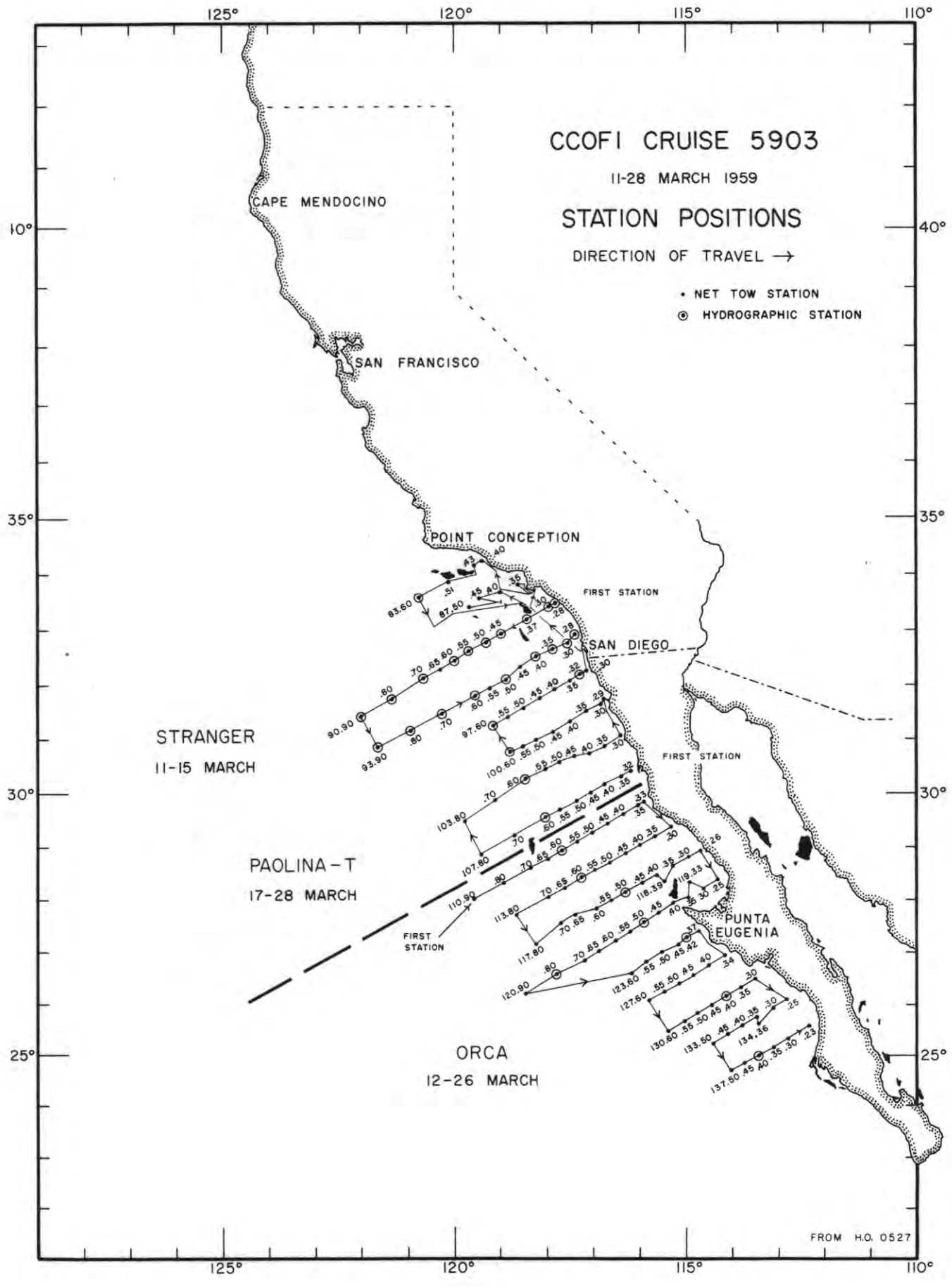

CCOFI CRUISE 5903
11-28 MARCH 1959
STATION POSITIONS
DIRECTION OF TRAVEL →
• NET TOW STATION
⊙ HYDROGRAPHIC STATION
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
STRANGER
11-15 MARCH
PAOLINA-T
17-28 MARCH
ORCA
12-26 MARCH
FIRST STATION
FIRST STATION
FIRST STATION
125°
120°
115°
110°
40°
35°
30°
25°
FROM H.O. 0527

FIGURE 1

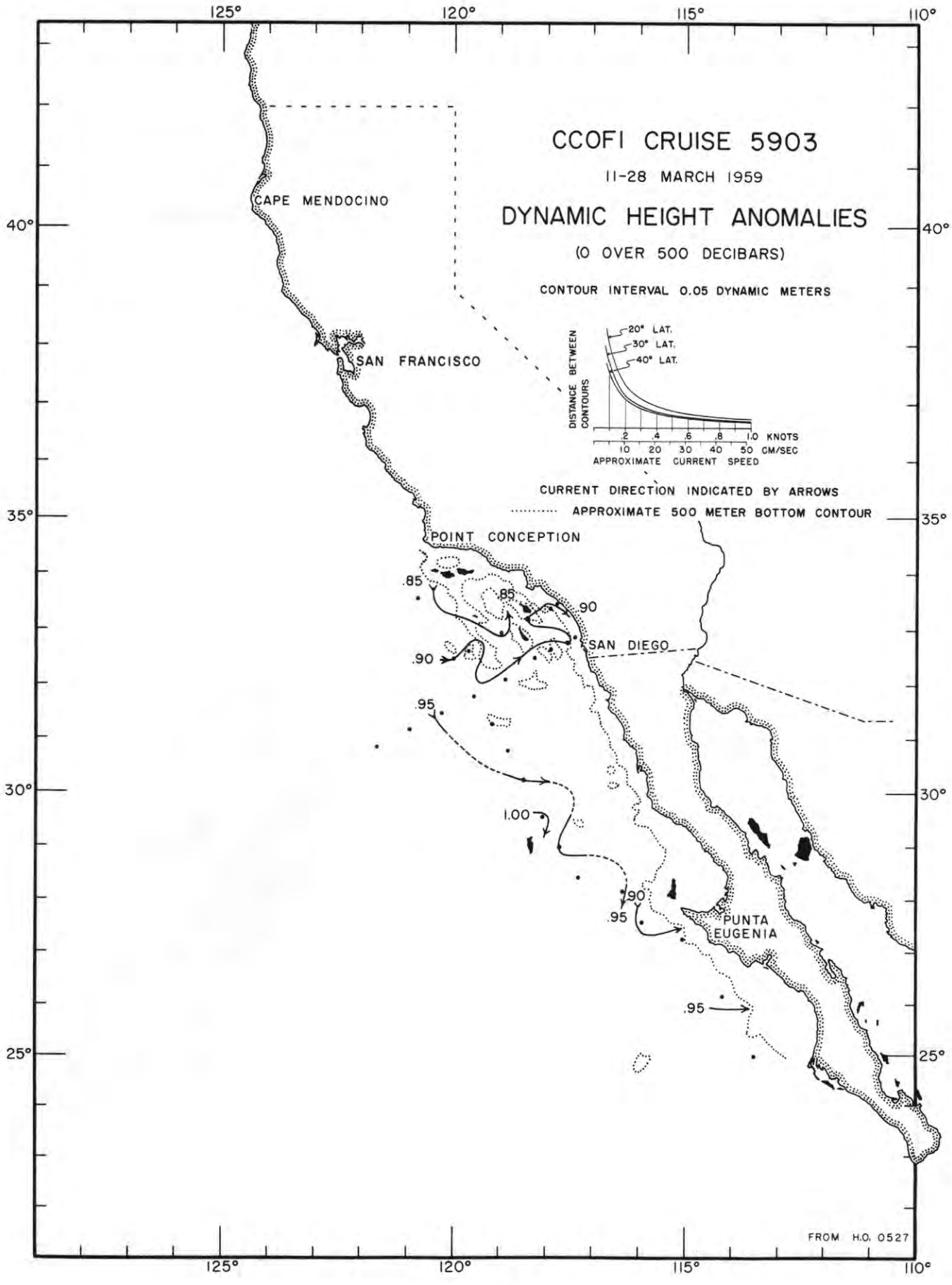

CCOFI CRUISE 5903
11-28 MARCH 1959
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.05 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
.2 .4 .6 .8 1.0 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 500 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.85
.85
.90
.90
.95
1.00
.90
.95
.95
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 2

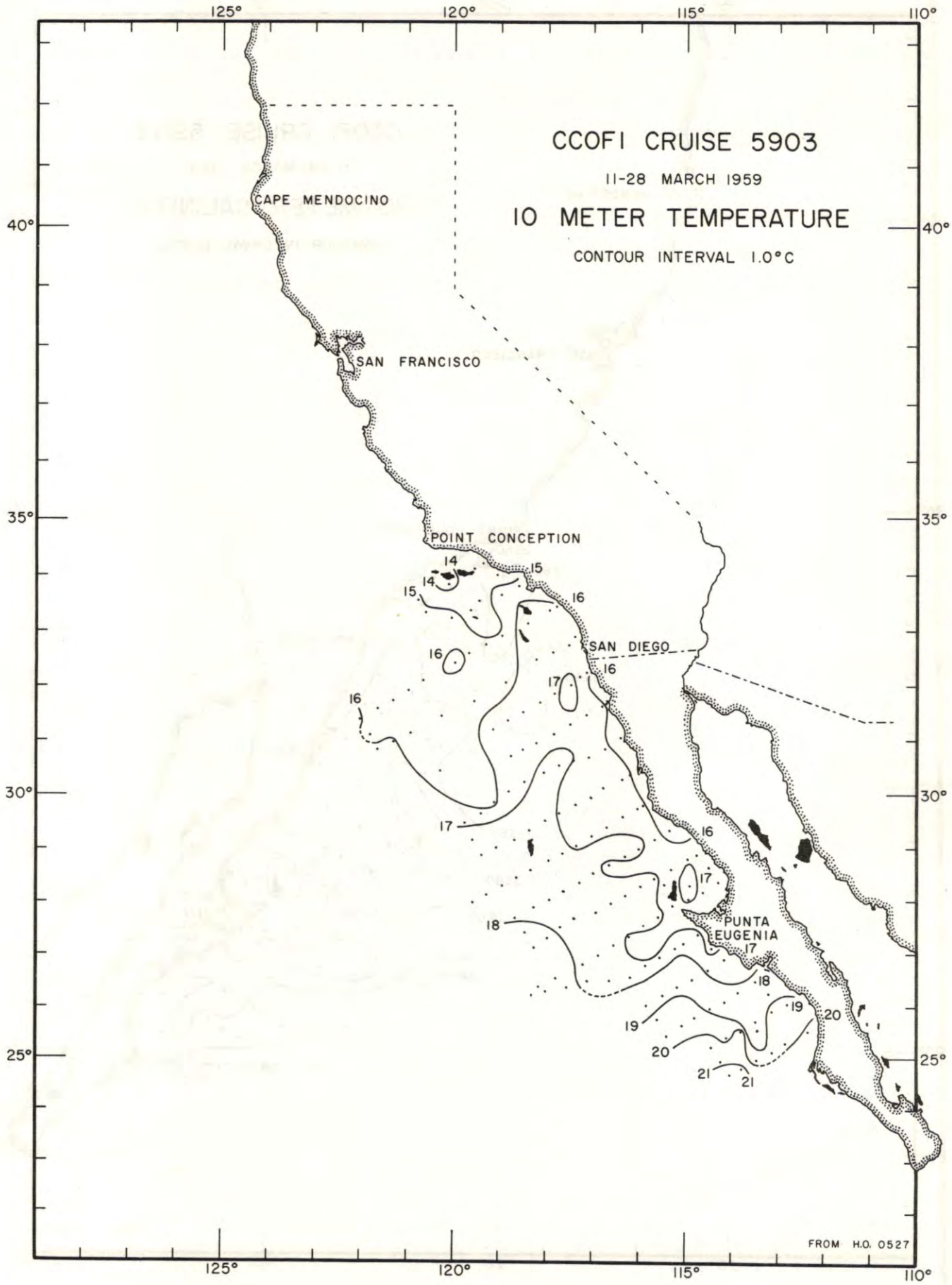

CCOFI CRUISE 5903
11-28 MARCH 1959
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
14
15
16
17
18
19
20
21
FROM H.O. 0527

FIGURE 3

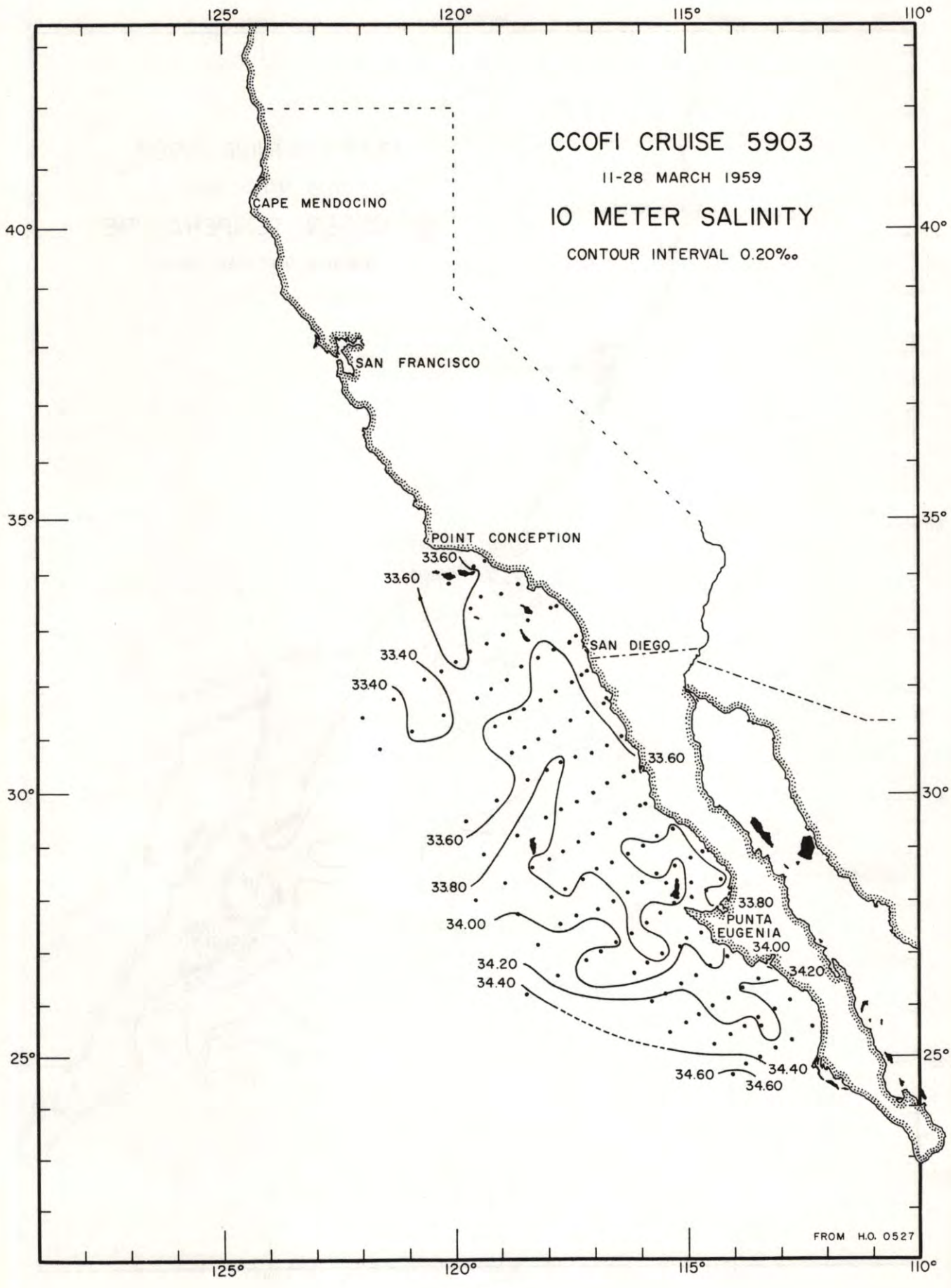

CCOFI CRUISE 5903
11-28 MARCH 1959
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
33.60
33.60
33.40
33.40
33.60
33.60
33.80
34.00
33.80
34.00
34.20
34.20
34.40
34.40
34.60
34.60
125°
120°
115°
110°
40°
35°
30°
25°
FROM H.O. 0527

FIGURE 4

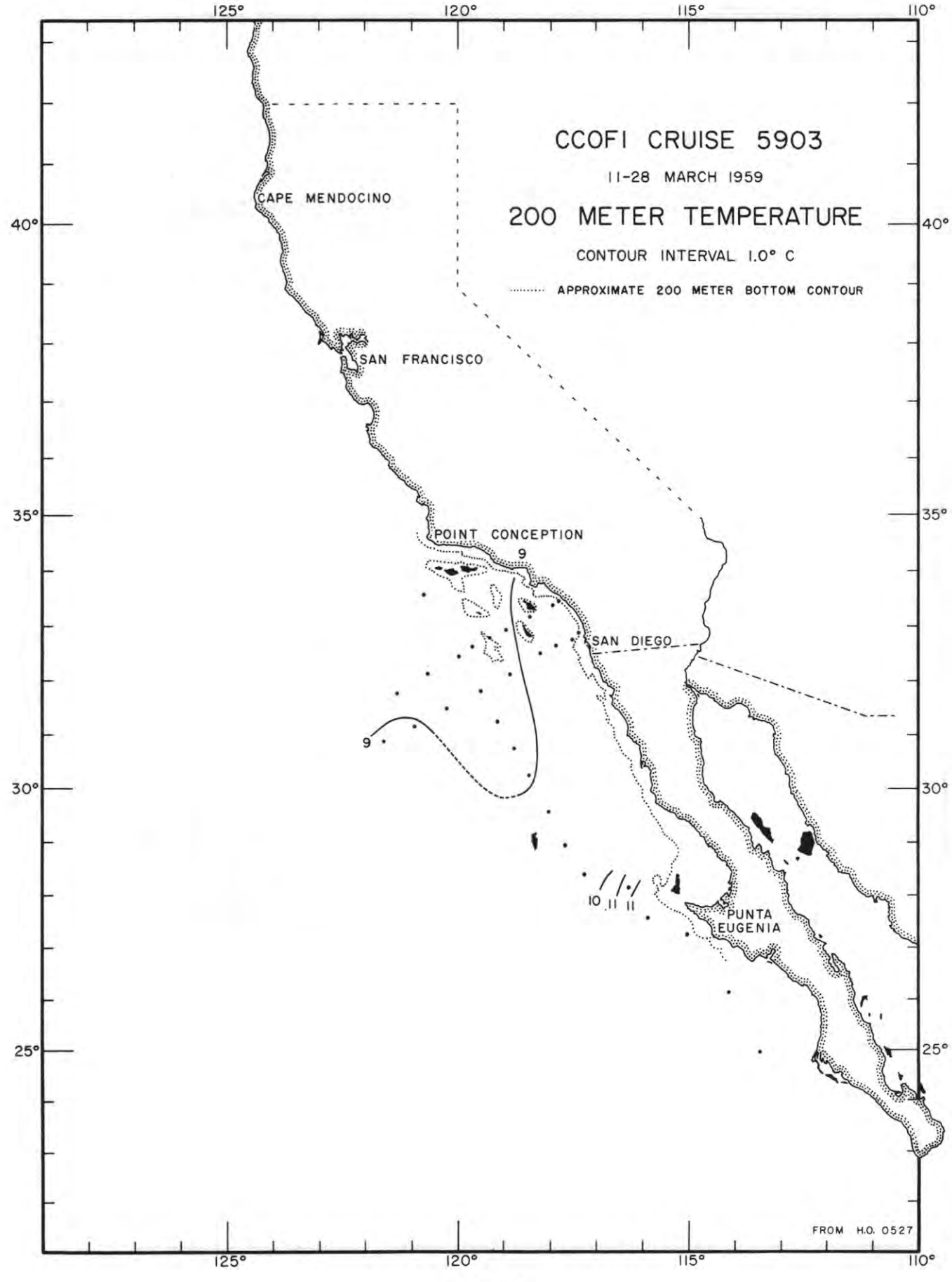

CCOFI CRUISE 5903
11-28 MARCH 1959
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0° C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
9
9
10
11
11
125°
120°
115°
110°
40°
35°
30°
25°
FROM H.O. 0527

FIGURE 5

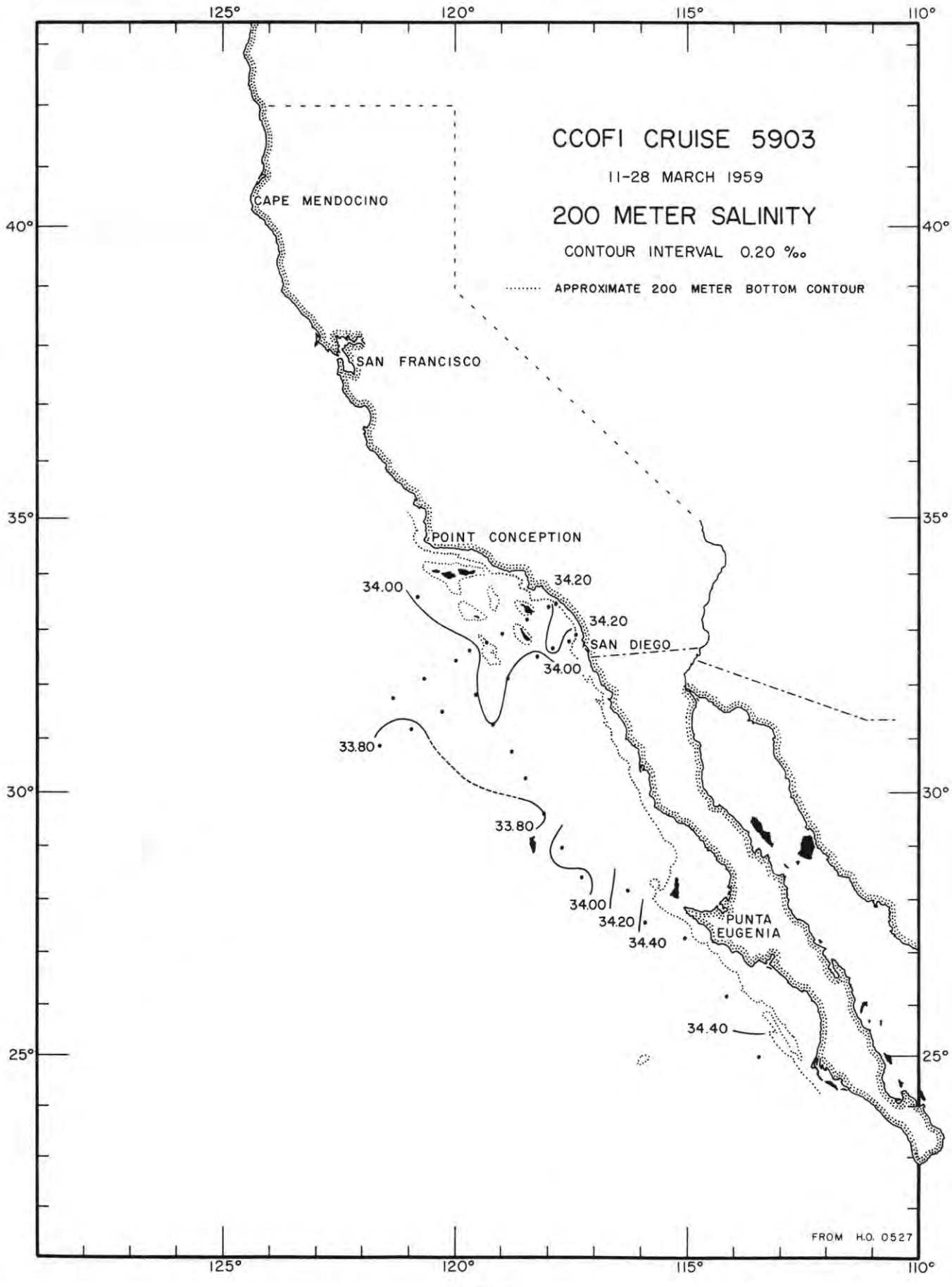

CCOFI CRUISE 5903
11-28 MARCH 1959
200 METER SALINITY
CONTOUR INTERVAL 0.20 ‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
34.00
34.20
34.20
34.00
33.80
33.80
34.00
34.20
34.40
34.40
125°
120°
115°
110°
40°
35°
30°
25°
FROM H.O. 0527

FIGURE 6

PERSONNEL

SHIPS' CAPTAINS

Miller, Frank, R/V Paolina-T
Phinney, Alan W., R/V Orca
Smith, Charles H., R/V Stranger

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Orca

Farrar, Lloyd J., Fishery Aid, Bureau of Commercial Fisheries
Joyal, Norman F., Marine Technician
Old, James H., Fishery Aid, Bureau of Commercial Fisheries

R/V Paolina-T

Kiwala, Robert S., Marine Technician
Blackburn, Gene T., Fishery Aid, Bureau of Commercial Fisheries

R/V Stranger

Kiwala, Robert S., Marine Technician
Bingman, Allen R., Marine Technician
Blackburn, Gene T., Fishery Aid, Bureau of Commercial Fisheries
Gaty, Cornelia V., Engineering Aid
Ryan, Carol E., Engineering Aid

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

PAOLINA-T; March 26, 1959; 1535 GCT; 33°34.5'N, 120°45'W; sounding, 625 fm; wind, 270°, force 7; weather, overcast; sea, very rough; wire angle, 10°. 83.60

3	15.22	33.58	5.62	311	0	(15.22)	(33.58)	(5.62)	(24.86)	(311)	(0.00)	
13	15.22	33.60	5.59	309	10	15.22	33.60	5.60	24.87	309	0.03	
33	15.24	33.57	5.58	313	20	15.22	33.59	5.59	24.86	310	0.06	
63	15.24	33.57	5.62	313	30	15.23	33.58	5.58	24.84	312	0.09	
73	14.28	33.55	5.17	294	50	15.24	33.57	5.60	24.83	313	0.16	
88	10.88	33.60	3.90	227	75	13.80	33.55	4.95	25.14	284	0.23	
103	10.08	33.68	3.59	208	100	10.26	33.66	3.66	25.88	213	0.29	
118	9.47	33.75	3.50	194	150	9.13	33.86	2.87	26.22	181	0.39	
143	9.24	33.83	2.99	184	200	8.17	34.01	2.25	26.49	155	0.48	
163	8.88	33.89	2.70	174	250	7.54	34.11	1.69	26.66	139	0.55	
192	8.29	33.98	2.34	158	300	6.98	34.16	1.17	26.79	127	0.62	
221	7.94	34.07	1.97	147	400	6.34	34.26	0.59	26.95	112	0.74	
251	7.53	34.11	1.68	138	500	5.81	34.32	0.44	27.07	100	0.86	
300	6.98	34.16	1.17	127	600	5.34	34.38	0.32	27.16	91	0.96	
355	6.60	34.22	0.74	118								
440	6.12	34.29	0.50	106								
525	5.68	34.34	0.40	98								
611	5.30	34.38	0.30	90								

STRANGER; March 12, 1959; 0505 GCT; 33°28'N, 117°47'W; sounding, 305 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 00°. 90.28

2	16.37	33.57	5.78	336	0	(16.37)	(33.57)	(5.78)	(24.59)	(336)	(0.00)	
13	15.97	33.55	5.88	329	10	16.04	33.55	5.86	24.65	330	0.03	
33	14.88	33.53	5.80	308	20	15.79	33.54	5.88	24.70	326	0.07	
43	13.45	33.55	4.79	278	30	15.20	33.53	5.84	24.82	314	0.10	
53	12.94	33.58	4.51	265	50	13.03	33.58	4.59	25.30	268	0.16	
64	12.77	33.58	4.29	262	75	11.88	33.67	3.70	25.60	240	0.22	
73	12.01	33.66	3.51	243	100	11.09	33.73	3.28	25.79	221	0.28	
84	11.42	33.67	3.79	232	150	9.85	33.92	2.88	26.15	188	0.38	
105	10.96	33.75	3.22	217	200	9.70	34.21	1.70	26.40	164	0.47	
119	10.16	33.77	3.20	203	250	9.18	34.27	1.32	26.54	151	0.55	
144	9.85	33.87	3.01	191	300	8.55	34.29	1.16	26.66	139	0.63	
173	9.95	34.11	2.09	174	400	7.49	34.25	0.79	26.78	127	0.76	
207	9.62	34.22	1.63	161	500	6.65	34.29	0.65	26.93	113	0.89	
258	9.08	34.27	1.28	149								
306	8.48	34.29	1.13	138								
411	7.38	34.25	0.76	126								
513	6.56	34.29	0.62	112								
538	6.44	34.28	0.38	112								

STRANGER; March 12, 1959; 0705 GCT; 33°24.5'N, 117°55.5'W; sounding, 300 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 00°. 90.30

2	16.51	33.54	5.77	342	0	(16.51)	(33.54)	(5.77)	(24.53)	(341)	(0.00)	
12	16.07	33.53	5.85	332	10	16.09	33.53	5.84	24.62	333	0.03	
33	15.70	33.51	5.93	326	20	15.93	33.52	5.90	24.66	330	0.07	
44	15.07	33.53	5.75	312	30	15.77	33.51	5.92	24.68	328	0.10	
53	14.63	33.53	5.42	303	50	14.79	33.53	5.54	24.91	306	0.16	
69	12.76	33.53	4.76	266	75	12.36	33.56	4.47	25.42	257	0.23	
87	11.70	33.64	3.83	239	100	11.29	33.64	3.76	25.69	231	0.30	
104	11.11	33.64	3.72	228	150	10.17	33.82	3.11	26.03	199	0.40	
130	10.42	33.79	3.27	206	200	9.20	34.11	2.08	26.41	163	0.50	
151	10.16	33.82	3.10	199	250	8.66	34.18	1.61	26.56	149	0.58	
181	9.50	34.02	2.55	174	300	8.29	34.26	1.12	26.67	138	0.65	
208	9.09	34.12	1.97	160	400	7.22	34.24	0.83	26.81	125	0.78	
237	8.80	34.16	1.72	153	500	6.62	34.28	0.52	26.93	114	0.91	
277	8.40	34.22	1.36	142								
332	8.10	34.29	0.87	133								
406	7.17	34.23	0.82	124								
482	6.73	34.28	0.56	115								
564	6.15	34.26	0.40	109								

SIO

CCOFI 5903

	OBSERVED					INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.37	STRANGER; March 12, 1959; 1054 GCT; 33°10.5'N, 118°23.5'W; sounding, 630 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 03°.											
	1	16.26	33.55	5.85	335	0	(16.26)	(33.55)	(5.85)	(24.60)	(335)	(0.00)
	11	16.28	33.53	6.07	337	10	16.26	33.53	6.05	24.58	337	0.03
	32	15.91	33.51	5.81	330	20	16.20	33.52	6.03	24.59	336	0.07
	42	15.62	33.58	5.94	320	30	15.96	33.51	5.84	24.64	331	0.10
	52	15.14	33.59	5.44	309	50	15.25	33.59	5.52	24.85	311	0.16
	67	13.16	33.53	5.46	273	75	12.74	33.55	5.06	25.35	264	0.24
	84	12.33	33.58	4.57	255	100	12.02	33.64	4.22	25.55	244	0.30
	104	11.32	33.67	3.90	230	150	9.75	33.91	2.82	26.17	186	0.41
	128	10.47	33.82	3.38	204	200	9.31	34.11	2.10	26.40	164	0.50
	148	9.78	33.90	2.86	187	250	8.86	34.28	1.50	26.59	145	0.58
	178	9.59	34.04	2.70	174	300	8.21	34.23	1.32	26.66	139	0.65
	207	9.21	34.14	1.93	161	400	7.08	34.26	0.90	26.85	121	0.78
	236	9.12	34.30	1.54	147	500	6.20	34.30	0.39	26.99	108	0.90
	276	8.35	34.21	1.41	142							
	335	8.06	34.27	1.15	134							
	410	6.94	34.26	0.86	119							
	485	6.30	34.29	0.41	109							
	567	5.86	34.32	0.33	102							
90.45	STRANGER; March 12, 1959; 1457 GCT; 32°55.5'N, 118°56.5'W; sounding, 290 fm; wind, direction missing, force 1; weather, clear; sea, slight; wire angle, 00°.											
	2	16.10	33.53	5.86	333	0	(16.10)	(33.53)	(5.86)	(24.62)	(333)	(0.00)
	12	14.86	33.51	6.03	309	10	15.15	33.51	6.01	24.82	314	0.03
	33	13.94	33.50	5.72	291	20	14.22	33.50	5.89	25.00	296	0.06
	43	13.48	33.52	5.04	280	30	14.10	33.50	5.82	25.03	294	0.09
	53	12.84	33.57	4.61	265	50	13.10	33.56	4.74	25.28	270	0.15
	69	11.69	33.58	4.18	243	75	11.25	33.65	4.07	25.70	230	0.21
	84	11.12	33.68	4.00	225	100	10.74	33.76	3.63	25.88	213	0.27
	104	10.62	33.77	3.54	211	150	9.59	34.00	2.80	26.27	176	0.37
	129	10.00	33.89	3.12	192	200	8.75	34.09	2.03	26.46	158	0.45
	149	9.60	34.00	2.81	177	250	8.15	34.15	1.76	26.61	144	0.53
	179	9.08	34.08	2.32	163	300	7.71	34.22	1.40	26.73	132	0.60
	207	8.65	34.09	1.95	156	400	6.70	34.30	0.60	26.94	113	0.73
	236	8.30	34.12	1.81	148	500	6.28	34.29	0.54	26.98	108	0.84
	274	7.92	34.19	1.64	138							
	333	7.44	34.25	1.14	127							
	407	6.65	34.30	0.59	113							
	481	6.38	34.29	0.56	110							
	562	5.90	34.31	0.44	103							
90.50	STRANGER; March 12, 1959; 1754 GCT; 32°46.5'N, 119°18.5'W; sounding, 260 fm; wind, 250°, force 1; weather, clear; sea, slight; wire angle, 00°.											
	2	15.88	33.55	5.88	327	0	(15.88)	(33.55)	(5.88)	(24.69)	(327)	(0.00)
	13	15.40	33.51	6.04	320	10	15.48	33.51	6.02	24.74	321	0.03
	33	14.70	33.51	5.91	305	20	15.19	33.51	6.03	24.81	315	0.06
	53	13.86	33.51	5.52	289	30	14.81	33.51	5.95	24.88	308	0.10
	80	12.08	33.55	4.66	252	50	14.21	33.51	5.70	25.01	296	0.16
	104	10.58	33.64	4.02	219	75	12.41	33.54	4.82	25.39	259	0.22
	129	9.92	33.75	3.50	200	100	10.86	33.62	4.17	25.74	226	0.29
	168	9.26	34.00	2.41	172	150	9.54	33.90	2.90	26.19	183	0.39
	207	8.82	34.09	1.98	159	200	8.89	34.08	2.03	26.44	160	0.48
	260	8.50	34.18	1.54	147	250	8.58	34.17	1.64	26.56	149	0.56
	306	7.96	-	1.43	-							
	411	7.05	34.25	0.81	122							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; March 12, 1959; 2050 GCT; 32°37'N, 119°39.5'W; sounding, 540 fm; wind, 320°, force 1; weather, clear; sea, rough; wire angle, 05°. 90.55

1	16.10	33.57		330	0	(16.10)	(33.57)		(24.65)	(330)	(0.00)
11	15.78	33.56		324	10	15.80	33.56		24.71	325	0.03
32	15.54	33.55		320	20	15.66	33.56		24.74	322	0.06
56	15.06	33.51		313	30	15.57	33.55		24.75	320	0.10
66	15.00	33.51		312	50	15.18	33.52		24.82	314	0.16
76	14.50	33.51		301	75	14.63	33.51		24.92	305	0.24
91	12.84	33.51		269	100	11.60	33.53		25.55	245	0.31
106	11.28	33.55		237	150	9.65	33.75		26.06	196	0.42
130	10.73	33.63		223	200	8.79	33.94		26.35	169	0.51
150	9.65	33.75		196	250	8.24	34.09		26.55	149	0.60
174	9.12	33.86		180	300	7.59	34.16		26.70	135	0.67
203	8.75	33.95		168	400	6.92	34.30		26.90	116	0.80
232	8.52	34.07		155	500	6.28	34.33		27.01	106	0.92
272	7.88	34.12		142							
331	7.37	34.21		129							
406	6.89	34.31		115							
481	6.40	34.33		107							
563	5.96	34.33		102							

STRANGER; March 12, 1959; 2350 GCT; 32°25'N, 119°58'W; sounding, 500 fm; wind, 290°, force 1; weather, clear; sea, very rough; wire angle, missing. 90.60

1	17.09	33.64	5.78	347	0	(17.09)	(33.64)	(5.78)	(24.48)	(347)	(0.00)
11	16.45	33.64	5.88	333	10	16.47	33.64	5.87	24.62	333	0.03
32	16.18	33.66	5.89	325	20	16.20	33.65	5.89	24.68	327	0.07
58	15.71	33.64	4.94	317	30	16.19	33.66	5.89	24.70	326	0.10
68	14.06	33.56	4.98	289	50	15.80	33.64	5.02	24.78	318	0.16
78	12.68	33.62	4.49	258	75	13.01	33.61	4.61	25.34	265	0.24
93	11.58	33.59	4.29	240	100	11.17	33.60	4.21	25.68	232	0.30
108	10.75	33.61	4.14	225	150	9.68	33.82	3.30	26.10	192	0.41
132	10.06	33.71	3.71	206	200	8.58	33.99	2.60	26.42	162	0.50
151	9.66	33.82	3.29	192	250	7.97	34.09	1.90	26.59	146	0.58
176	9.11	33.90	3.03	177	300	7.50	34.15	1.61	26.70	135	0.65
205	8.48	34.00	2.50	160	400	6.49	34.22	1.09	26.90	117	0.78
234	8.14	34.07	2.01	150	500	6.07	34.25	0.69	26.97	109	0.90
273	7.72	34.12	1.77	140							
332	7.22	34.18	1.41	129							
407	6.43	34.22	1.05	116							
483	6.12	34.24	0.72	110							
565	5.84	34.32	0.53	101							

STRANGER; March 13, 1959; 0530 GCT; 32°05'N, 120°38'W; sounding, 2400 fm; wind, 290°, force 1; weather, clear; sea, very rough; wire angle, 25°. 90.70

2	15.56	33.36	5.89	334	0	(15.56)	(33.36)	(5.89)	(24.61)	(334)	(0.00)
11	15.53	33.35	5.90	334	10	15.53	33.35	5.90	24.61	334	0.03
31	15.26	33.35	5.94	328	20	15.42	33.35	5.92	24.63	332	0.07
53	14.66	33.42	6.08	311	30	15.27	33.35	5.94	24.66	329	0.10
62	14.44	33.44	5.76	305	50	14.85	33.41	6.05	24.80	316	0.16
71	13.74	33.37	5.86	296	75	13.15	33.33	5.80	25.10	288	0.24
84	11.99	33.30	5.63	268	100	10.65	33.48	5.00	25.68	232	0.31
97	10.83	33.46	5.11	237	150	9.11	33.73	3.77	26.12	190	0.41
120	9.78	33.58	4.31	211	200	8.51	33.92	3.27	26.38	166	0.58
137	9.22	33.69	3.83	194	250	7.71	34.03	2.50	26.58	147	0.58
160	9.06	33.75	3.60	187	300	7.23	34.09	1.82	26.69	136	0.66
187	8.67	33.88	3.45	172	400	6.22	34.17	0.88	26.89	117	0.79
214	8.36	33.95	3.10	162							
250	7.71	34.03	2.50	147							
304	7.19	34.09	1.78	135							
373	6.40	34.14	0.99	121							
445	6.04	34.22	0.74	111							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.80	STRANGER; March 13, 1959; 1047 GCT; 31°44.5'N, 121°18'W; sounding, 2050 fm; wind, 290°, force 3; weather, clear; sea, rough; wire angle, 13°.										
2	15.74	33.42	333		0	(15.74)	(33.42)		(24.62)	(333)	(0.00)
11	15.75	33.42	333		10	15.75	33.42		24.62	333	0.03
31	15.78	33.46	332		20	15.77	33.45		24.63	332	0.07
61	15.71	33.46	330		30	15.78	33.46		24.64	331	0.10
71	15.78	33.48	330		50	15.76	33.46		24.65	330	0.17
87	15.38	33.53	318		75	15.80	33.49		24.65	330	0.25
101	14.26	33.47	299		100	14.27	33.47		24.97	300	0.33
115	12.54	33.28	280		150	10.05	33.54		25.82	218	0.46
138	10.81	33.52	232		200	8.72	33.86		26.30	173	0.56
158	9.70	33.56	211		250	8.02	33.98		26.49	155	0.65
187	8.92	33.82	180		300	7.31	34.06		26.66	139	0.72
216	8.48	33.91	167								
244	8.10	33.97	157								
293	7.40	34.05	141								
346	6.78	34.11	128								
399p	6.20	34.16	117								
480p	5.71	34.28	103								
600p	5.36	34.31	96								
90.90	STRANGER; March 13, 1959; 1609 GCT; 31°24'N, 121°58.5'W; sounding, 2000+ fm; wind, 310°, force 5; weather, overcast; sea, very rough; wire angle, 16°.										
3	16.00	33.53	331		0	(16.00)	(33.53)		(24.64)	(331)	(0.00)
13	16.00	33.57	328		10	16.00	33.56		24.67	328	0.03
33	16.02	33.55	330		20	16.01	33.55		24.66	329	0.06
					30	16.02	33.55		24.65	330	0.10
93.28	STRANGER; March 15, 1959; 2035 GCT; 32°55'N, 117°22'W; sounding, 270 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 05°.										
2	16.82	33.56	347		0	(16.82)	(33.56)		(24.47)	(347)	(0.00)
13	16.14	33.54	333		10	16.34	33.55		24.58	337	0.03
23	15.56	33.53	321		20	15.74	33.53		24.70	325	0.07
43	13.90	33.54	287		30	15.52	33.53		24.75	321	0.10
53	13.02	33.55	270		50	13.28	33.55		25.23	275	0.16
64	12.47	33.61	255		75	11.82	33.57		25.53	246	0.22
74	11.86	33.57	247		100	11.03	33.72		25.80	221	0.28
83	11.45	33.62	236		150	10.28	33.93		26.09	193	0.39
98	11.05	33.71	222		200	9.63	34.19		26.40	164	0.48
112	10.78	33.78	212		250	9.25	34.26		26.52	153	0.56
127	10.55	33.84	204		300	8.69	34.24		26.60	145	0.64
152	10.25	33.94	192		400	7.59	34.23		26.75	130	0.78
181	9.86	34.14	172		500	6.60	34.26		26.92	115	0.91
215	9.50	34.22	159								
263	9.14	34.26	150								
312	8.52	34.23	143								
416	7.42	34.23	128								
517	6.41	34.27	112								

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_{3}}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_{3}}$ 10^{-5} cm/g	ΔD dyn. m	
STRANGER; March 15, 1959; 1820 GCT; 32°46'N, 117°29.5'W; sounding, 340 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 07°.												93.30
2	16.69	33.57		343	0	(16.69)	(33.57)		(24.52)	(343)	(0.00)	
12	16.52	33.57		340	10	16.56	33.57		24.54	341	0.03	
34	14.74	33.53		305	20	15.95	33.56		24.67	328	0.07	
59	12.38	33.57		256	30	15.10	33.53		24.84	312	0.10	
68	11.68	33.62		240	50	13.28	33.55		25.24	274	0.16	
78	11.44	33.66		233	75	11.51	33.65		25.65	235	0.22	
93	11.03	33.75		219	100	10.93	33.79		25.87	214	0.28	
108	10.82	33.82		210	150	10.30	33.99		26.13	189	0.38	
132	10.54	33.93		197	200	9.89	34.17		26.34	169	0.47	
153	10.24	34.00		187	250	9.55	34.26		26.47	157	0.56	
176	9.92	34.07		177	300	9.28	34.31		26.55	149	0.63	
204	9.88	34.18		168	400	7.82	34.29		26.77	129	0.78	
233	9.60	34.23		160	500	6.56	34.28		26.94	113	0.90	
288p	9.44	34.31		152								
345p	8.56	34.28		140								
413p	7.66	34.29		127								
484p	6.72	34.27		116								
561p	6.06	34.33		103								
STRANGER; March 15, 1959; 1514 GCT; 32°38'N, 117°51'W; sounding, 310 fm; wind, 310°, force 1; weather, overcast; sea, moderate; wire angle, 05°.												93.35
2	16.72	33.58		343	0	(16.72)	(33.58)		(24.51)	(343)	(0.00)	
12	16.50	33.60		337	10	16.54	33.60		24.57	338	0.03	
33	15.72	33.55		324	20	16.22	33.59		24.63	332	0.07	
44	15.50	33.54		320	30	15.82	33.56		24.70	325	0.10	
54	14.56	33.54		300	50	14.91	33.54		24.89	307	0.16	
69	13.22	33.54		274	75	12.71	33.53		25.34	264	0.23	
84	12.10	33.53		254	100	11.46	33.60		25.62	238	0.30	
104	11.38	33.62		234	150	10.35	33.89		26.05	197	0.41	
128	10.63	33.74		213	200	9.78	34.21		26.40	164	0.50	
148	10.38	33.88		198	250	9.29	34.31		26.55	150	0.58	
177	9.78	34.07		174	300	8.65	34.33		26.67	138	0.66	
208	9.78	34.24		162	400	7.50	34.31		26.83	123	0.79	
237	9.46	34.29		153	500	6.70	34.30		26.94	113	0.91	
276	8.95	34.33		142								
335	8.19	34.33		131								
409	7.42	34.31		122								
484	6.82	34.30		115								
566	6.09	34.31		105								
STRANGER; March 15, 1959; 1045 GCT; 32°30'N, 118°12.5'W; sounding, 1005 fm; wind, 310°, force 1; weather, clear; sea, moderate; wire angle, 04°.												93.40
2	16.64	33.61		340	0	(16.64)	(33.61)		(24.55)	(340)	(0.00)	
13	16.64	33.62		339	10	16.64	33.62		24.56	339	0.03	
33	15.66	33.51		325	20	16.60	33.62		24.57	338	0.07	
43	15.48	33.53		320	30	15.74	33.51		24.69	326	0.10	
58	15.06	33.51		313	50	15.33	33.52		24.79	317	0.16	
73	13.88	33.50		289	75	13.73	33.50		25.10	287	0.24	
100	11.54	33.55		243	100	11.54	33.55		25.57	243	0.31	
120	10.68	33.65		220	150	9.91	33.77		26.03	199	0.42	
140	10.20	33.72		207	200	9.21	33.98		26.31	172	0.51	
159	9.66	33.82		191	250	8.59	34.16		26.55	149	0.60	
190	9.28	33.94		176	300	8.25	34.25		26.66	139	0.67	
223	9.08	34.09		162	400	7.02	34.27		26.86	120	0.80	
253	8.54	34.17		148	500	6.35	34.28		26.96	111	0.92	
302	8.24	34.25		138	600	5.92	34.31		27.04	103	1.04	
356	7.56	34.29		125								
441	6.64	34.25		116								
526	6.23	34.29		108								
613	5.85	34.31		102								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

93.50 STRANGER; March 15, 1959; 0050 GCT; 32°04.5'N, 118°51'W; sounding, 530 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 27°.

9	15.66	33.52	324	0	15.7	(33.53)	(24.71)	(325)	(0.00)
27	15.64	33.49a)	326	10	15.66	33.52	24.72	324	0.03
36	15.40	33.51	320	20	15.65	33.52	24.70	326	0.06
50	14.44	33.49	302	30	15.60	33.49	24.70	326	0.10
65	13.44	-	-	50	14.44	33.49	24.95	302	0.16
87	12.08	33.53	253	75	12.82	33.51	25.29	269	0.23
104	11.24	33.60	234	100	11.45	33.58	25.61	239	0.30
121	10.24	33.66	213	150	9.69	33.82	26.10	192	0.40
139	9.87	33.76	199	200	8.89	34.00	26.38	166	0.49
164	9.46	33.93	180	250	8.42	34.15	26.57	148	0.58
194	8.92	33.97	169	300	7.99	34.13	26.62	143	0.65
220	8.80	34.10	157	400	6.97	34.24	26.85	121	0.79
264	8.24	34.15	146	500	6.31	34.28	26.97	109	0.91
313	7.88	34.12	142						
389	7.03	34.24	122						
468	6.52	34.26	114						
549	5.96	34.33	102						

93.60 STRANGER; March 14, 1959; 1750 GCT; 31°45.5'N, 119°33'W; sounding, 2000+ fm; wind, 320°, force 7; weather, cloudy; sea, very rough; wire angle, 12°.

5	15.74	33.53	(327)	0	15.8	(33.53)	(24.69)	(327)	(0.00)
15	15.74	33.52	326	10	15.74	33.52	24.70	326	0.03
40	15.76	33.51	327	20	15.75	33.52	24.69	327	0.06
70	13.59	33.39	292	30	15.76	33.52	24.69	327	0.10
80	12.44	33.46	266	50	15.15	33.47	24.78	318	0.16
101	10.93	33.51	235	75	13.07	33.41	25.17	281	0.24
116	10.05	33.69	207	100	11.00	33.51	25.64	236	0.30
130	9.96	33.70	205	150	9.29	33.75	26.11	191	0.41
160	8.96	33.78	184	200	8.50	34.00	26.44	160	0.50
180	8.62	33.90	170	250	8.10	34.10	26.58	147	0.58
211	8.42	34.04	156	300	7.65	34.18	26.70	135	0.65
245	8.16	34.09	148	400	7.00	34.23	26.84	122	0.78
272	7.86	34.14	141	500	6.31	34.26	26.95	111	0.91
324	7.52	34.20	131	600	5.60	34.31	27.08	99	1.02
388	7.08	34.23	123						
487	6.40	34.25	113						
579	5.73	34.30	101						
655	5.26	34.34	93						

93.70 STRANGER; March 14, 1959; 1119 GCT; 31°27'N, 120°13.5'W; sounding, 2000+ fm; wind, 320°, force 7; weather, overcast; sea, very rough; wire angle, 29°.

1	15.32	33.35	330	0	(15.32)	(33.35)	(24.65)	(330)	(0.00)
10	15.32	33.33	331	10	15.32	33.33	24.64	331	0.03
33	15.35	33.37	329	20	15.33	33.35	24.65	330	0.07
60	14.71	33.35	317	30	15.34	33.37	24.66	329	0.10
69	14.48	33.35	312	50	15.38	33.39	24.67	328	0.16
87	13.66	33.60	278	75	14.31	33.38	24.90	306	0.24
101	12.72	33.64	257	100	12.80	33.64	25.40	259	0.32
114	11.91	33.64	242	150	9.49	33.68	26.03	199	0.43
142	9.69	33.61	207	200	8.44	33.95	26.41	163	0.52
161	9.22	33.76	189	250	7.72	34.00	26.56	149	0.60
188	8.62	33.91	169	300	7.12	34.07	26.69	136	0.68
220	8.16	33.99	156	400	6.54	34.20	26.88	118	0.81
248	7.74	34.00	149	500	5.78	34.25	27.01	106	0.93
295	7.18	34.06	137	600	5.31	34.32	27.13	95	1.03
357	6.84	34.16	126						
451	6.16	34.23	111						
537	5.56	-	-						
611	5.28	34.33	94						

a) Salinity bottle numbers from 27 to 139 meters, inclusive, were listed out of order on the data sheet; present order is assumed to be correct, but these salinity data must be considered doubtful.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
STRANGER; March 14, 1959; 0340 GCT; 31°08.5'N, 120°54.5'W; sounding, 2000+ fm; wind, 340°, force 7; weather, clear; sea, very rough; wire angle, 25°.											93.80
2	15.70	33.40		334	0	(15.70)	(33.40)		(24.61)	(334)	(0.00)
12	15.70	33.39		335	10	15.70	33.39		24.60	335	0.03
35	15.70	33.44		331	20	15.70	33.41		24.62	333	0.07
63	15.96	33.58		326	30	15.70	33.43		24.63	332	0.10
73	15.98	33.49		334	50	15.81	33.50		24.66	329	0.17
91	15.14	33.73		298	75	15.98	33.48		24.62	333	0.25
104	14.76	33.75		289	100	14.89	33.75		25.05	292	0.33
118	13.95	33.66		279	150	11.18	33.64		25.71	229	0.46
147	11.43	33.62		236	200	9.14	33.74		26.14	188	0.57
167	10.26	33.74		207	250	8.30	33.97		26.44	160	0.66
194	9.28	33.73		192	300	7.41	34.06		26.65	140	0.73
228	8.64	33.88		171	400	6.63	34.16		26.83	123	0.87
256	8.20	33.98		157	500	6.00	34.24		26.98	109	0.99
303	7.35	34.07		139	600	5.48					
364	6.88	34.12		129							
459	6.25	34.22		114							
545	5.72	34.25		105							
620	5.42	-		-							
STRANGER; March 13, 1959; 2111 GCT; 30°50'N, 121°35'W; sounding, 2000+ fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 26°.											93.90
1	16.10	33.53	5.76	333	0	(16.10)	(33.53)	(5.76)	(24.62)	(333)	(0.00)
10	16.09	33.53	5.65	333	10	16.09	33.53	5.65	24.62	333	0.03
29	15.96	33.53	5.66	330	20	16.01	33.53	5.66	24.64	331	0.07
57	16.18	33.64	5.93	327	30	15.96	33.53	5.67	24.66	329	0.10
67	16.20	33.68	5.93	325	50	16.14	33.62	5.89	24.68	328	0.16
81	16.20	33.67	5.79	325	75	16.20	33.67	5.88	24.71	325	0.25
94	16.12	33.85	5.68	310	100	13.98	33.69	5.53	25.21	277	0.32
108	13.53	33.66	5.48	271	150	10.38	33.58	4.63	25.80	220	0.45
131	11.80	33.58	5.01	245	200	9.02	33.78	3.72	26.18	185	0.55
150	10.38	33.58	4.63	220	250	8.42	33.91	3.10	26.38	166	0.64
178	9.51	33.56	4.15	208	300	7.61	34.00	2.38	26.57	148	0.72
205	8.95	33.81	3.63	181	400	6.56	34.10	1.33	26.79	127	0.87
234	8.68	33.87	3.33	173	500	5.98	34.13	0.58	26.97	110	0.99
281	7.88	33.99	2.59	152							
333	7.22	34.02	2.01	141							
413	6.43	34.11	1.23	124							
496	6.00	34.22	0.59	111							
579	5.46	34.29	0.54	99							
ORCA; March 12, 1959; 0050 GCT;[a] 32°11.5'N, 117°17.5'W; sounding; 732 fm; wind, 070°, force 4; weather, clear; sea, rough; wire angle, 19°.											97.32
416	-	34.32[b]	0.62	-							
426	7.31	34.31	0.73	120							
436	7.26	34.31	0.65	120							
445	7.26	34.33	0.70	118							
455	7.14	34.34	0.55	116							
464	7.05	34.34	0.50	115							
474	6.86	34.34	0.46	113							
483	6.74	34.33	0.46	112							
493	6.64	34.33	0.43	110							
503	6.58	34.34	0.37	108							
512	6.52	34.34	0.37	108							
522	6.40	34.34	0.37	106							
531	6.32	34.36	0.33	104							
541	6.26	34.34	0.30	104							
552	6.15	34.34	0.29	103							
562	6.10	34.36	0.33	101							
571	6.06	34.35	0.32	102							
580	6.03	34.34	0.30	102							

a) Special cast.

b) Salinity bottle number was not recorded on the data sheet. Since standard handling and titrating procedures were used, this salinity value is assumed to be listed correctly.

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5903

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m

97.60 PAOLINA-T; March 22, 1959; 0112 GCT; 31°14.5'N, 119°08'W; sounding, 1900 fm; wind, 270°, force 4; weather, cloudy; sea, very rough; wire angle, 18°.

2	16.58	33.73	5.66	329	0	(16.58)	(33.73)	(5.66)	(24.66)	(329)	(0.00)
12	16.59	33.68	5.70	333	10	16.59	33.68	5.70	24.62	332	0.03
31	16.46	33.70	5.53	328	20	16.53	33.68	5.64	24.64	331	0.07
60	16.24	33.66	5.68	327	30	16.46	33.70	5.54	24.66	329	0.10
70	15.58	33.57	5.76	319	50	16.40	33.70	5.55	24.67	328	0.16
83	14.18	33.55	5.23	292	75	15.14	33.56	5.63	24.86	311	0.24
98	12.38	33.58	4.49	255	100	12.30	33.59	4.45	25.46	253	0.32
113	11.81	33.64	4.31	241	150	10.05	33.73	3.56	25.98	204	0.43
137	10.56	33.65	3.94	218	200	8.82	34.00	2.45	26.39	165	0.53
157	9.84	33.78	3.36	198	250	8.33	34.20	1.67	26.62	143	0.60
185	9.12	33.95	2.66	173	300	7.76	34.28	1.26	26.77	129	0.68
213	8.60	34.04	2.23	159	400	6.83	34.27	0.68	26.89	117	0.80
242	8.40	34.14	1.82	148	500	6.24	34.33	0.50	27.02	105	0.92
290	7.87	34.29	1.29	130	600	(5.59)	(34.43)	(0.33)	(27.18)	(90)	(1.02)
342	7.38	34.24	0.90	127							
425	6.60	34.29	0.61	113							
508	6.21	34.34	0.47	104							
593	5.64	34.42	0.33	92							

100.60 PAOLINA-T; March 21, 1959; 1957 GCT; 30°45'N, 118°46'W; sounding, 1780 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 14°.

1	16.81	33.69	5.81	338	0	(16.81)	(33.69)	(5.81)	(24.57)	(338)	(0.00)
11	16.70	33.69	5.65	335	10	16.71	33.69	5.69	24.60	335	0.03
31	16.66	33.71	5.42	332	20	16.68	33.70	5.55	24.62	333	0.07
41	16.26	33.66	5.42	327	30	16.67	33.71	5.43	24.62	332	0.10
56	15.51	33.57	5.47	318	50	16.00	33.63	5.44	24.72	324	0.17
71	14.48	33.57	5.31	296	75	14.05	33.58	5.18	25.10	288	0.24
96	11.96	33.61	4.34	245	100	11.65	33.62	4.22	25.60	239	0.31
116	10.94	33.66	3.83	224	150	9.68	33.76	3.38	26.06	196	0.42
136	10.24	33.68	3.80	211	200	8.81	33.94	2.63	26.35	169	0.51
155	9.52	33.79	3.23	191	250	7.99	34.06	2.30	26.56	149	0.59
184	8.96	33.89	2.89	176	300	7.56	34.19	1.54	26.72	133	0.67
218	8.62	34.01	2.31	161	400	6.85	34.27	0.61	26.89	118	0.80
247	8.04	34.05	2.31	150	500	6.15	34.34	0.47	27.03	104	0.91
294	7.60	34.19	1.57	134	600	(5.54)	(34.37)	(0.29)	(27.14)	(94)	(1.02)
346	7.28	34.17	1.08	131							
428	6.62	34.30	0.52	112							
512	6.08	34.34	0.47	103							
596	5.56	34.37	0.29	94							

103.60 PAOLINA-T; March 19, 1959; 1414 GCT; 30°16.5'N, 118°28.5'W; sounding, 1700 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°.

2	16.50	33.71	5.80	329	0	(16.50)	(33.71)	(5.80)	(24.66)	(329)	(0.00)
12	16.52	33.71	5.53	329	10	16.51	33.71	5.55	24.66	329	0.03
32	16.52	33.69	5.45	331	20	16.52	33.70	5.49	24.65	330	0.07
42	16.52	33.72	5.43	329	30	16.52	33.69	5.46	24.64	331	0.10
57	16.00	33.65	5.37	322	50	16.29	33.70	5.40	24.70	325	0.16
72	15.46	33.57	5.12	317	75	15.30	33.56	5.12	24.82	314	0.24
97	13.42	33.53	5.08	279	100	13.24	33.54	5.04	25.24	274	0.32
118	12.11	33.59	4.86	250	150	10.15	33.62	4.26	25.87	214	0.44
137	10.90	33.58	4.60	229	200	8.88	33.87	3.05	26.28	175	0.54
156	9.86	33.65	4.07	207	250	8.02	34.02	2.18	26.52	152	0.62
185	9.14	33.81	-	184	300	7.40	34.10	1.80	26.68	138	0.70
218	8.56	33.93	2.77	166	400	6.51	34.15	0.97	26.84	122	0.84
247	8.05	34.01	2.22	153	500	6.11	34.31	0.40	27.02	105	0.95
294	7.49	34.09	1.85	140	600	(5.54)	(34.34)	(0.32)	(27.12)	(96)	(1.06)
347	6.90	34.12	1.39	129							
428	6.38	34.17	0.77	119							
515	6.02	34.33	0.39	103							
597	5.56	34.34	0.32	96							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δ_{T_3} -5 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} -5 10^{-5} cm/g	ΔD dyn. m	
PAOLINA-T; March 18, 1959; 0945 GCT; 29°32'N, 118°01'W; sounding, 1830 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 17°.												107.60
1	17.30	33.85	5.50	336	0	(17.30)	(33.85)	(5.50)	(24.59)	(336)	(0.00)	
11	17.30	33.86	5.31	336	10	17.30	33.86	5.31	24.59	336	0.03	
30	17.26	33.87	5.36	334	20	17.32	33.87	5.33	24.60	335	0.07	
59	16.98	33.85	5.38	329	30	17.26	33.87	5.36	24.61	334	0.10	
68	17.11	33.92	5.40	327	50	17.00	33.85	5.38	24.66	330	0.17	
82	17.20	33.93	5.30	328	75	17.20	33.93	5.33	24.67	328	0.25	
95	16.98	33.95	5.21a)	322	100	17.28	33.91	5.25	24.86	310	0.33	
110	15.08	33.82	5.31	290	150	11.79	33.68	4.03	25.63	237	0.47	
134	12.83	33.71	4.80	254	200	9.58	33.80	3.53	26.11	191	0.58	
153	11.52	33.68	3.90	232	250	8.68	34.00	2.76	26.41	163	0.66	
181	10.06	33.71	3.82	206	300	8.00	34.11	2.23	26.60	145	0.75	
209	9.40	33.84	-	186	400	7.05	34.22	1.12	26.82	124	0.88	
235	8.92	33.95	2.94	170	500	6.40	34.34	0.46	27.00	107	1.01	
281	8.19	34.08	2.42	150								
332	7.76	34.15	1.91	138								
410	6.95	34.24	0.98	121								
492	6.45	34.34	0.47	107								
575	5.95	34.34	0.39	101								
ORCA; March 13, 1959; 2315 GCT; 28°55.5'N, 117°38'W; sounding, 2000 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 26°.												110.60
2	17.16	33.78	5.66	338	0	(17.16)	(33.78)	(5.66)	(24.56)	(338)	(0.00)	
11	17.12	33.77	5.50	338	10	17.13	33.77	5.50	24.56	338	0.03	
30	16.94	33.80	5.44	332	20	17.06	33.79	5.45	24.60	336	0.07	
57	16.10	33.62	5.54	326	30	16.94	33.80	5.44	24.63	332	0.10	
66	16.01	33.64	5.51	324	50	16.19	33.64	5.50	24.68	327	0.17	
80	15.92	33.60	5.56	324	75	15.96	33.62	5.54	24.72	324	0.25	
94	15.54	33.78	5.46	303	100	14.50	33.72	5.22	25.12	286	0.33	
108	13.35	33.66	4.97	268	150	10.05	33.73	4.08	25.98	204	0.45	
129	11.44	33.69	4.46	231	200	9.66	34.16	1.67	26.38	166	0.54	
147	10.10	33.70	4.27	208	250	8.68	34.21	1.50	26.58	147	0.62	
173	9.91	33.96	2.38	185	300	8.16	34.25	1.21	26.69	136	0.70	
200	9.66	34.16	1.67	166	400	7.43	34.33	0.65	26.85	121	0.83	
226	9.04	34.18	1.68	155	500	6.62	34.36	0.47	26.99	108	0.95	
270	8.43	34.25	1.30	141								
320	7.98	34.26	1.12	133								
396	7.46	34.33	0.68	121								
477	6.82	34.36	0.45	110								
558	6.14	34.35	0.53	102								
ORCA; March 15, 1959; 1455 GCT; 28°23.5'N, 117°14.5'W; sounding, 1960 fm; wind, 310°, force 4; weather, overcast; sea, very rough; wire angle, missing.												113.60
2	17.22	33.81	5.76	338	0	(17.22)	(33.81)	(5.76)	(24.56)	(338)	(0.00)	
11	17.22	33.81	5.65	338	10	17.22	33.81	5.64	24.56	338	0.03	
30	17.23	33.82	5.54	338	20	17.22	33.81	5.59	24.56	338	0.07	
59	16.80	33.73	5.50	334	30	17.23	33.82	5.54	24.57	338	0.10	
68	16.72	33.71	5.24	334	50	16.90	33.74	5.51	24.60	335	0.17	
83	16.56	33.72	5.32	329	75	16.66	33.71	5.27	24.63	332	0.25	
97	15.81	33.73	5.33	313	100	15.45	33.72	5.28	24.91	306	0.33	
111	13.46	33.63	4.89	272	150	10.75	33.66	3.99	25.80	221	0.46	
134	11.25	33.66	4.40	230	200	9.50	33.92	2.63	26.21	182	0.56	
153	10.66	33.66	3.91	220	250	8.92	34.15	1.99	26.49	155	0.65	
180	9.80	33.87	3.12	190	300	8.36	34.24	1.46	26.65	140	0.73	
209	9.38	33.95	2.34	177	400	7.55	34.33	0.53	26.84	122	0.86	
237	9.08	34.12	2.10	160	500	6.48	34.34	0.26	27.00	107	0.98	
284	8.49	34.21	1.65	144	600	(5.92)	(34.38)		(27.10)	(98)	(1.09)	
336	8.10	34.31	0.95	131								
417	7.40	34.34	0.43	120								
499	6.49	34.34	0.26	108								
582	6.00	34.38	0.20	99								

a) Alternate value, 5.38 ml/L, not used in interpolation.

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	OBSERVED					INTERPOLATED				COMPUTED		
	Z	T	S	O_2	$\delta_{T_{-5}^{3}}$	Z	T	S	O_2	σ_t	$\delta_{T_{-5}^{3}}$	ΔD
	m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
117.50	ORCA; March 17, 1959; 0023 GCT; 28°08.5'N, 116°15.5'W; sounding, 2500 fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.											
	0	17.27	33.73	5.42	344	0	17.27	33.73	5.42	24.50	344	0.00
	10	17.10	33.71	5.50	342	10	17.10	33.71	5.50	24.52	342	0.03
	29	16.90	33.71	5.69	338	20	16.99	33.71	5.63	24.55	340	0.07
	60	16.62	33.78	5.62	326	30	16.89	33.71	5.69	24.57	338	0.10
	71	16.14	33.77	5.18	316	50	16.74	33.76	5.65	24.64	330	0.17
	86	14.92	33.77	4.40	290	75	15.80	33.77	4.93	24.87	309	0.25
	101	13.78	33.80	3.70	265	100	13.90	33.80	3.76	25.30	268	0.32
	116	12.37	33.75	3.64	243	150	11.18	33.99	2.35	25.98	204	0.44
	141	11.34	33.93	2.52	211	200	11.08	34.36	1.07	26.29	174	0.54
	161	11.08	34.08	2.10	196	250	9.76	34.34	1.21	26.50	154	0.62
	190	11.10	34.30	1.20	180	300	9.00	34.35	1.11	26.63	142	0.70
	220	10.96	34.47	0.90	164	400	8.00	34.37	0.52	26.80	126	0.84
	250	9.76	34.34	1.21	154	500	6.82	34.37	0.43	26.97	110	0.96
	298	9.01	34.35	1.12	142	600	5.99	34.40	0.39	27.10	97	1.07
	351	8.48	34.34	0.79	135							
	435	7.62	34.39	0.41	119							
	519	6.58	34.38	0.45	106							
	609	5.95	34.40	0.38	96							
120.50	ORCA; March 18, 1959; 1245 GCT; 27°32'N, 115°52'W; sounding, 2000+ fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 16°.											
	1	17.20	33.88	5.62a)	332	0	(17.20)	(33.88)	(5.62)	(24.63)	(332)	(0.00)
	10	17.22	33.86	5.11	334	10	17.22	33.86	5.11	24.61	334	0.03
	30	17.14	33.84	5.50	333	20	17.20	33.85	5.41	24.61	334	0.07
	40	15.58	33.80	4.48	302	30	17.14	33.84	5.50	24.62	333	0.10
	50	14.27	33.77	3.76	278	50	14.27	33.77	3.76	25.20	278	0.16
	63	13.26	33.87	3.40	250	75	12.37	33.95	2.84	25.72	228	0.22
	78	12.26	33.96	2.73	225	100	11.50	34.08	1.96	26.00	202	0.28
	96	11.94	34.06	2.21	212	150	11.40	34.32	1.27	26.19	184	0.38
	119	11.45	34.14	1.81	198	200	10.46	34.41	0.94	26.44	160	0.46
	138	11.45	34.29	1.37	186	250	9.73	34.40	1.10	26.55	150	0.54
	166	11.27	34.35	1.11	179	300	9.39	34.44	0.79	26.65	140	0.62
	183	10.72	34.42	0.95	164	400	8.16	34.42	0.32	26.82	124	0.76
	222	10.16	34.39	0.92	157	500	7.09	34.40	0.38	26.96	111	0.88
	259	9.61	34.40	1.05	148							
	316	9.30	34.47	0.62	138							
	390	8.28	34.43	0.31	125							
	464	7.49	34.40	0.41	116							
	544	6.62	34.41	0.28	104							
120.80	ORCA; March 19, 1959; 0425 GCT; 26°33.5'N, 117°47.5'W; sounding, 2000+ fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 07°.											
	1	18.57	34.11	5.70a)	347	0	(18.57)	(34.11)	(5.70)	(24.47)	(347)	(0.00)
	11	18.58	34.09	5.55	348	10	18.58	34.09	5.55	24.46	348	0.03
	32	18.51	34.13	5.58	344	20	18.55	34.10	5.54	24.47	347	0.07
	62	17.94	33.99	5.69	341	30	18.52	34.13	5.57	24.50	344	0.10
	212b)	10.14	34.25	1.75	167	50	18.50	34.13	5.58	24.50	344	0.17
	241	9.78	34.31	1.43	157							
	292	8.89	34.30	1.18	144							
	347	8.14	34.34	0.73	130							
	434	7.20	34.37	0.35	115							
	520	6.48	34.34	0.48	108							
	607	5.90	34.40	0.35	96							

a) On Stations 120.50 and 120.80 the station number appears to be reversed on the oxygen sheets; the data are now assumed to be listed correctly.

b) Pretrip; depth too uncertain for interpolation.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

ORCA; March 20, 1959; 1255 GCT; 27°14'N, 115°00'W; sounding, 500 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 10°. 123.42

2	17.50	33.98	5.90	332	0	(17.50)	(33.98)	(5.90)	(24.63)	(332)	(0.00)	
11	17.52	33.93	5.90	335	10	17.51	33.93	5.90	24.60	335	0.03	
31	17.50	33.93	5.86	335	20	17.51	33.93	5.89	24.60	335	0.07	
57	16.48	33.84	5.62	319	30	17.50	33.93	5.87	24.60	335	0.10	
66	14.97	33.78	5.41	291	50	17.26	33.92	5.81	24.64	332	0.17	
77	14.02	33.77	5.10	273	75	14.18	33.78	5.15	25.23	275	0.24	
92	12.99	33.66	4.69	260	100	12.33	33.68	4.04	25.52	247	0.31	
105	12.54	33.78	3.84	244	150	10.99	34.14	2.20	26.12	190	0.42	
130	11.36	33.95	2.72	210	200	10.63	34.43	0.93	26.42	162	0.51	
150	10.99	34.14	2.20	190	250	10.05	34.49	0.60	26.56	148	0.59	
173	11.01	34.30	1.42	178	300	9.41	34.48	0.50	26.66	139	0.66	
201	10.62	34.43	0.92	162	400	8.05	34.43	0.31	26.84	122	0.80	
230	10.30	34.48	0.64	153	500	6.91	34.40	0.26	26.98	108	0.92	
268	9.83	34.49	0.58	144								
326	9.06	34.47	0.42	134								
399	8.06	34.43	0.31	122								
474	7.14	34.41	0.28	111								
554	6.45	34.40	0.24	102								

ORCA; March 22, 1959; 0328 GCT; 26°07.5'N, 114°07'W; sounding, 1100 fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 17°. 130.40

0	18.84	34.15	5.35	351	0	18.84	34.15	5.35	24.43	351	0.00	
9	18.80	34.14	5.80u	350	10	18.79	34.14		24.44	350	0.04	
29	18.60	34.13	5.20	346	20	18.69	34.14		24.46	348	0.07	
53	18.32	34.09	5.16	342	30	18.59	34.13	5.19	24.48	346	0.10	
62	16.58	33.86	5.14	319	50	18.35	34.09	5.16	24.52	343	0.17	
73	15.80	33.77	5.15	309	75	15.48	33.76	5.14	24.92	304	0.25	
86	14.06	33.74	5.00	275	100	12.55	33.73	4.11	24.52	247	0.32	
100	12.55	33.73	4.11	247	150	11.67	34.21	1.74	26.06	196	0.44	
122	12.00	33.91	3.11	224	200	10.91	34.43	0.87	26.38	166	0.53	
141	11.70	34.13	2.08	202	250	10.30	34.52	0.50	26.55	150	0.61	
164	11.64	34.34	1.28	186	300	9.58	34.51	0.34	26.66	139	0.68	
192	11.04	34.42	0.94	170	400	8.26	34.48	0.21	26.84	122	0.82	
221	10.62	34.50	0.69	156	500	7.43	34.48	0.09	26.97	110	0.94	
261	10.18	34.52	0.43	148								
315	9.36	34.51	0.32	135								
387	8.35	34.47	0.22	123								
460	7.86	34.49	0.13	115								
540	6.96	34.45	0.06	105								

ORCA; March 23, 1959; 1935 GCT; 24°58'N, 113°25'W; sounding, 1500 fm; wind, 340°, force 2; weather, cloudy; sea, moderate; wire angle, 15°. 137.40

2	19.64	34.31	5.54	359	0	(19.64)	(34.31)	(5.54)	(24.34)	(359)	(0.00)	
11	19.52	34.32	5.55	355	10	19.53	34.32	5.55	24.38	355	0.04	
31	19.27	34.37	5.53	345	20	19.41	34.34	5.55	24.43	351	0.07	
61	19.16	34.38	5.45	341	30	19.28	34.37	5.54	24.49	345	0.11	
71	18.78	34.28	5.44	340	50	19.18	34.38	5.46	24.52	342	0.17	
85	17.73	34.10	5.44	328	75	18.72	34.27	5.44	24.56	339	0.26	
100	15.50	33.90	4.31	293	100	15.50	33.90	4.31	25.04	293	0.34	
115	13.52	33.90	3.31	253	150	11.87	34.11	2.23	25.94	207	0.46	
138	12.34	34.10	2.36	216	200	10.85	34.38	1.24	26.34	170	0.56	
157	11.62	34.11	2.17	203	250	10.38	34.55	0.52	26.56	149	0.64	
186	11.01	34.30	1.55	178	300	9.73	34.54	0.37	26.66	139	0.72	
214	10.70	34.46	0.90	161	400	8.42	34.50	0.27	26.84	122	0.85	
243	10.48	34.54	0.54	151	500	7.17	34.43	0.18	26.97	110	0.97	
291	9.85	34.54	0.40	141	600	(6.19)	(34.45)	(0.15)	(27.12)	(96)	(1.08)	
345	9.14	34.54	0.27	130								
427	8.02	34.47	0.26	119								
510	7.06	34.43	0.17	109								
594	6.24	34.45	0.15	96								

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.40-P	III-26	0015	34°14.0'	119°22.0'	12	280°	3	partly cloudy	moderate	14.12	33.58
83.43-P	26	0155	34°08.0'	119°34.0'	142	280°	4	partly cloudy	rough	14.24	33.59
83.51-P	26	0740	33°52.0'	120°07.5'	66	240°	8	partly cloudy	very rough	13.11	33.64
87.35-P	24	1635	33°50.0'	118°37.5'	430	260°	3	clear	rough	15.22	33.59
87.40-P	27	1745	33°40.0'	118°58.5'	465	340°	3	clear	very rough	15.44	33.58
87.45-P	27	2045	33°34.5'	119°26.5'	100	340°	5	clear	very rough	14.60	33.58
87.50-P	28	0235	33°23.0'	119°38.0'	63	290°	8	clear	very high	14.48	33.58
90.65-S	13	0230	32°15.0'	120°16.0'	2000	290°	2	clear	very rough	16.69	33.58
93.45-S	15	0630	32°20.0'	118°33.0'	980	320°	2	clear	moderate	16.29	33.58
93.55-S	14	2130	31°55.0'	119°12.0'	550	320°	6	cloudy	very rough	15.65	33.51
97.30-P	22	1910	32°16.0'	117°09.0'	30	300°	1	partly cloudy	moderate	16.08	33.54
97.32-P	22	1758	32°12.0'	117°16.0'	780	-	1	partly cloudy	moderate	16.74	33.57
97.35-P	22	1540	32°03.0'	117°27.0'	690	340°	2	cloudy	moderate	17.14	33.70
97.40-P	22	1235	31°53.0'	117°48.0'	830	200°	4	cloudy	rough	16.89	33.70
97.45-P	22	1000	31°43.0'	118°08.5'	840	290°	4	cloudy	very rough	16.56	33.62
97.50-P	22	0705	31°34.0'	118°29.0'	1480	280°	4	cloudy	very rough	16.58	33.61
97.55-P	22	0410	31°23.5'	118°49.0'	650	300°	4	cloudy	very rough	16.51	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
100.29-P	III-21	0125	31°42.0'	116°43.5'	68	310°	2	cloudy	moderate	15.50	33.57
100.30-P	21	0235	31°40.5'	116°46.5'	235	310°	2	cloudy	moderate	16.10	33.58
100.35-P	21	0535	31°30.0'	117°08.0'	500	290°	2	cloudy	moderate	16.86	33.61
100.40-P	21	0850	31°19.5'	117°29.5'	650	300°	2	cloudy	moderate	16.87	33.65
100.45-P	21	1200	31°08.0'	117°50.5'	1000	300°	3	overcast	moderate	16.72	33.64
100.50-P	21	1431	30°58.0'	118°13.0'	950	300°	2	partly cloudy	rough	16.45	33.62
100.55-P	21	1700	30°51.0'	118°30.0'	1150	270°	3	partly cloudy	rough	16.61	33.66
103.30-P	20	1855	31°04.0'	116°23.5'	30	-	1	overcast	moderate	15.04	33.55
103.35-P	20	1542	30°52.5'	116°43.5'	970	340°	1	overcast	slight	16.66	33.69
103.40-P	20	1242	30°43.5'	117°05.0'	990	320°	1	partly cloudy	moderate	16.74	33.71
103.45-P	19	2235	30°39.0'	117°23.5'	1230	340°	4	overcast	rough	17.00	33.70
103.50-P	19	2025	30°33.5'	117°42.5'	1200	340°	4	overcast	rough	17.12	33.80
103.55-P	19	1720	30°26.5'	118°02.0'	1770	340°	4	overcast	rough	17.18	33.82
103.70-P	19	0835	29°52.5'	119°05.0'	1850	340°	5	cloudy	very rough	15.99	33.45
103.80-P	19	0310	29°28.0'	119°45.0'	2180	320°	5	partly cloudy	rough	16.84	33.46
107.32-P	17	1625	30°25.5'	116°11.0'	230	-	1	overcast	moderate	16.00	33.64
107.35-P	17	1845	30°19.5'	116°21.0'	1070	-	1	overcast	slight	16.72	33.66

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
107.40-P	III-17	2135	30°09.0'	116°45.0'	1510	280°	2	overcast	moderate	16.84	33.66
107.45-P	18	0030	29°59.5'	117°02.5'	1180	280°	2	overcast	moderate	16.99	33.66
107.50-P	18	0324	29°50.5'	117°21.5'	1450	280°	2	cloudy	moderate	16.89	33.62
107.55-P	18	0625	29°41.5'	117°42.5'	1970	360°	3	partly cloudy	rough	16.96	33.68
107.70-P	18	1505	29°12.0'	118°40.5'	2000+	300°	4	cloudy	rough	17.42	33.86
107.80-P	18	2025	28°52.5'	119°23.5'	2000	280°	4	partly cloudy	rough	17.32	33.75
110.33-O	14	1630	29°50.5'	115°52.0'	50	300°	3	overcast	rough	16.26	33.68
110.35-O	14	1510	29°46.5'	116°00.0'	750	110°	4	overcast	rough	16.74	33.68
110.40-O	14	1115	29°35.5'	116°18.5'	1335	330°	4	partly cloudy	rough	16.48	33.68
110.45-O	14	0820	29°25.5'	116°39.0'	500	330°	4	cloudy	very rough	16.36	33.62
110.50-O	14	0525	29°15.5'	116°59.0'	1925	320°	6	cloudy	high	16.86	33.66
110.55-O	14	0230	29°03.5'	117°19.0'	2000	330°	5	partly cloudy	very rough	16.94	33.68
110.65-O	13	2010	28°46.0'	117°56.5'	2000	320°	3	clear	moderate	17.04a)	33.79
110.70-O	13	1740	28°36.0'	118°18.0'	1750	330°	2	clear	moderate	17.14	33.78
110.80-O	13	1245	28°18.0'	118°55.0'	2000	300°	2	partly cloudy	rough	17.46	33.86

a) Alternate value, 17.32°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
110.90-O	III-13	0750	27°59.0'	119°33.0'	2080	300°	2	partly cloudy	rough	17.64	33.89
113.30-O	14	2125	29°22.5'	115°18.0'	30	300°	3	partly cloudy	rough	15.09	33.83
113.35-O	15	0015	29°12.5'	115°38.0'	500	290°	5	overcast	very rough	16.76	33.68
113.40-O	15	0300	29°02.5'	115°57.5'	975	290°	5	overcast	very rough	17.26	33.85
113.45-O	15	0555	28°52.5'	116°17.0'	1100	290°	4	overcast	very rough	17.03	33.82
113.50-O	15	0835	28°42.5'	116°36.5'	2400	300°	5	overcast	very rough	16.97	33.68
113.55-O	15	1130	28°33.0'	116°56.0'	1850	300°	5	overcast	very rough	17.04	33.71
113.65-O	15	1825	28°12.5'	117°35.0'	2000	320°	2	overcast	rough	17.26	33.77
113.70-O	15	2135	28°02.0'	117°54.5'	2000	320°	2	cloudy	rough	17.62	33.89
113.80-O	16	0240	27°42.5'	118°38.5'	2000	320°	4	partly cloudy	very rough	17.96	34.00
117.26-O	17	1630	28°56.0'	114°40.5'	48	-	1	overcast	slight	16.36	33.77
117.30-O	17	1435	28°48.0'	114°56.5'	55	360°	2	cloudy	slight	16.96	33.83
117.35-O	17	1150	28°38.0'	115°16.0'	125	300°	2	clear	moderate	16.41	33.66
117.40-O	17	0650	28°28.0'	115°35.5'	400	020°	3	partly cloudy	rough	17.17	33.82
117.45-O	17	0335	28°18.0'	115°55.0'	1780	350°	4	partly cloudy	rough	17.22	33.76
117.55-O	16	2105	27°57.5'	116°34.0'	1900+	350°	4	clear	rough	17.51	33.84
117.60-O	16	1825	27°47.5'	116°53.5'	2100	350°	4	clear	very rough	17.52	33.84

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
117.65-O	III-16	1455	27°42.5'	117°22.5'	2000+	360°	5	clear	very rough	17.81	33.99
117.70-O	16	1210	27°31.5'	117°39.5'	2000	330°	2	partly cloudy	rough	17.78	33.97
117.80-O	16	0715	27°08.5'	118°12.5'	2100	360°	2	partly cloudy	rough	18.22	34.04
118.39-O	17	0900	28°19.0'	115°24.5'	178	020°	2	partly cloudy	rough	16.80	33.73
119.33-O	18	0200	28°19.0'	114°53.0'	62	300°	3	overcast	moderate	17.38	33.86
120.25-O	17	2135	28°23.0'	114°15.0'	28	360°	3	overcast	moderate	16.90	33.82
120.30-O	18	0000	28°13.0'	114°34.0'	50	360°	3	overcast	moderate	16.78	33.80
120.35-O	18	0430	28°03.0'	114°54.0'	47	320°	2	overcast	rough	17.08	33.83
120.40-O	18	0640	27°56.5'	115°14.0'	22	320°	3	overcast	rough	16.86	33.80
120.45-O	18	0925	27°43.0'	115°33.0'	1180	320°	3	overcast	rough	17.10	33.82
120.55-O	18	1555	27°21.5'	116°11.5'	2000	300°	4	clear	rough	16.90	33.75
120.60-O	18	1855	27°11.0'	116°30.5'	2000	300°	5	clear	very rough	17.94	34.02
120.65-O	18	2105	27°00.0'	116°51.0'	2000+	320°	5	clear	very rough	17.90	33.96
120.70-O	18	2335	26°49.0'	117°10.0'	2000+	320°	5	clear	very rough	17.92	33.87
120.90-O	19	1010	26°13.0'	118°27.5'	2000+	320°	5	partly cloudy	very rough	18.60	34.49
123.37-O	20	1555	27°24.0'	114°40.0'	38	320°	4	overcast	rough	17.42a)	33.98

a) Alternate value, 16.76°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.45-O	III-20	1045	27°08.5'	115°10.5'	2000	320°	4	overcast	rough	17.80	34.00
123.50-O	20	0750	26°58.5'	115°30.0'	1990	320°	4	overcast	rough	17.16	33.79
123.55-O	20	0530	26°48.5'	115°50.5'	2000	340°	3	overcast	rough	17.20	33.81
123.60-O	20	0215	26°36.0'	116°09.0'	2000+	320°	3	cloudy	very rough	17.53	33.87
127.34-O	20	2035	26°55.5'	114°06.0'	39	140°	3	overcast	moderate	17.30	34.05
127.40-O	20	2343	26°43.0'	114°29.0'	-	270°	4	cloudy	rough	17.94	33.98
127.45-O	21	0255	26°32.0'	114°48.5'	2000	290°	2	cloudy	rough	18.64	34.15
127.50-O	21	0515	26°23.0'	115°08.0'	2000+	330°	5	overcast	rough	18.78	34.18
127.55-O	21	0820	26°13.0'	115°27.5'	2000+	330°	3	overcast	rough	18.69	34.20
127.60-O	21	1100	26°03.5'	115°47.0'	2000+	320°	3	clear	moderate	18.76	34.21
130.30-O	22	0855	26°29.0'	113°28.5'	42	-	1	cloudy	moderate	18.43	34.18
130.35-O	22	0600	26°18.5'	113°48.5'	210	-	1	overcast	slight	18.34	34.22
130.45-O	22	0025	25°57.5'	114°26.0'	2000+	290°	2	overcast	moderate	18.92	34.16
130.50-O	21	2140	25°48.0'	114°45.0'	2000+	-	1	cloudy	moderate	19.29	34.23
130.55-O	21	1900	25°39.0'	115°02.5'	2000	-	1	cloudy	moderate	19.77	34.34
130.60-O	21	1605	25°27.0'	115°23.0'	2100	320°	3	cloudy	moderate	19.76	34.36
133.25-O	22	1410	26°03.0'	112°45.5'	44	-	1	cloudy	smooth	19.38	34.35

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
133.30-O	III-22	1710	25°55.0'	113°07.5'	104	210°	1	partly cloudy	slight	19.02	34.22
133.35-O	23	0035	25°44.5'	113°26.5'	360	-	1	partly cloudy	smooth	18.33	34.14
133.40-O	23	0330	25°34.5'	113°45.0'	1500	260°	1	clear	smooth	20.04	34.40
133.45-O	23	0610	25°24.5'	114°04.5'	2000+	260°	2	cloudy	moderate	19.55a)	34.29
133.50-O	23	0900	25°14.5'	114°24.0'	2000+	270°	3	overcast	moderate	20.74	34.33
134.36-O	22	2310	25°38.5'	113°26.0'	78	-	1	partly cloudy	calm	18.50	34.19
137.23-O	24	0615	25°33.5'	112°18.5'	41	290°	5	clear	rough	20.02	34.39
137.30-O	24	0210	25°19.5'	112°46.0'	268	290°	5	clear	rough	19.72	34.31
137.35-O	23	2330	25°09.0'	113°05.5'	600	320°	3	partly cloudy	rough	19.16	34.21
137.45-O	23	1625	24°49.0'	113°43.0'	1400	340°	3	overcast	moderate	21.03	34.56
137.50-O	23	1400	24°40.5'	114°00.0'	2000+	340°	2	overcast	moderate	21.61	34.61

a) Alternate value, 19.73°C.

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