

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 5607
6-25 July 1956

CCOFI Cruise 5608
7-19 August 1956

CCOFI Cruise 5609
5-17 September 1956

CCOFI Cruise 5610
27 September - 5 October 1956

CCOFI Cruise 5611
30 October - 5 November 1956

SIO Reference 60-35
27 April 1960

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5607

6-25 July 1956

CCOFI CRUISE 5608

7-19 August 1956

CCOFI CRUISE 5609

5-17 September 1956

CCOFI CRUISE 5610

27 September - 5 October 1956

CCOFI CRUISE 5611

30 October - 5 November 1956

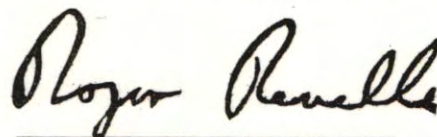
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Marine Research Committee

SIO Reference 60-35

27 April 1960

Approved for distribution:



Roger Revelle, Director

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INTRODUCTION

The data presented in this report were collected on the eighty-sixth, eighty-seventh, eighty-eighth, eighty-ninth and ninetieth consecutive cruises of the California Cooperative Oceanic Fisheries Investigations program. The R/V Black Douglas of the U. S. Fish and Wildlife Service participated in all five cruises; the R/V Paolina-T of the Scripps Institution participated in Cruise 5607; the R/V Orca of the Scripps Institution participated in Cruises 5607, 5610 and 5611.

The data are tabulated at observed depths; the interpolated and computed values tabulated at standard depths and 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

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.

FOOTNOTES

Footnotes which appear frequently are "loose bottle cap" and "possible evaporation." To avoid any confusion as to their meaning the following explanation is included.

Laboratory personnel, before titrating the salinity samples, note any possible imperfections in the sealing of the bottles as follows:

Loose bottle cap:

The cap is definitely loose so that it could be moved with very little applied pressure. The salinity values obtained from these samples may be usable depending on time and/or conditions of storage.

Possible evaporation: Either the cap was sealed with less than usual pressure, the bottle edge chipped, the rubber washer cracked, or the bale broke on opening, etc.

Use of the above values in interpolation depends upon consistency with other values of salinity and other properties, and these footnotes are supplemented with "falls on property curve" or "does not fall on property curve," depending upon whether the property curve was drawn through the value or not.

In addition to 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

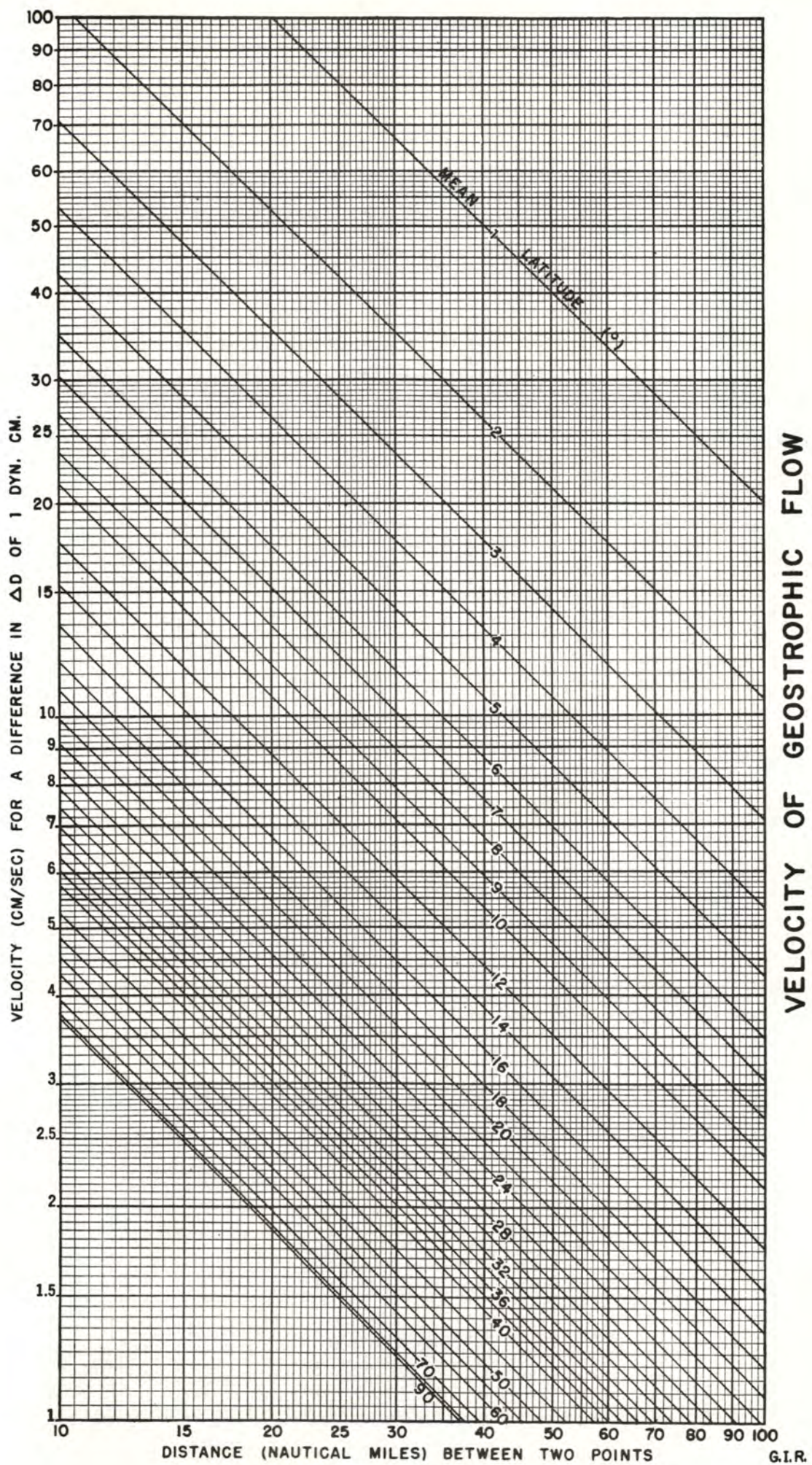
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

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 1956 volume, the first page of the Cruise 5607 data is numbered 193; 5608, 204; 5609, 209; 5610, 214; 5611, 217.



FIGURES

1. CCOFI Cruise 5607, station positions
2. Surface currents measured by geomagnetic electrokinetograph (GEK)
3. Horizontal distribution of temperature at 10 meters
4. Horizontal distribution of salinity at 10 meters

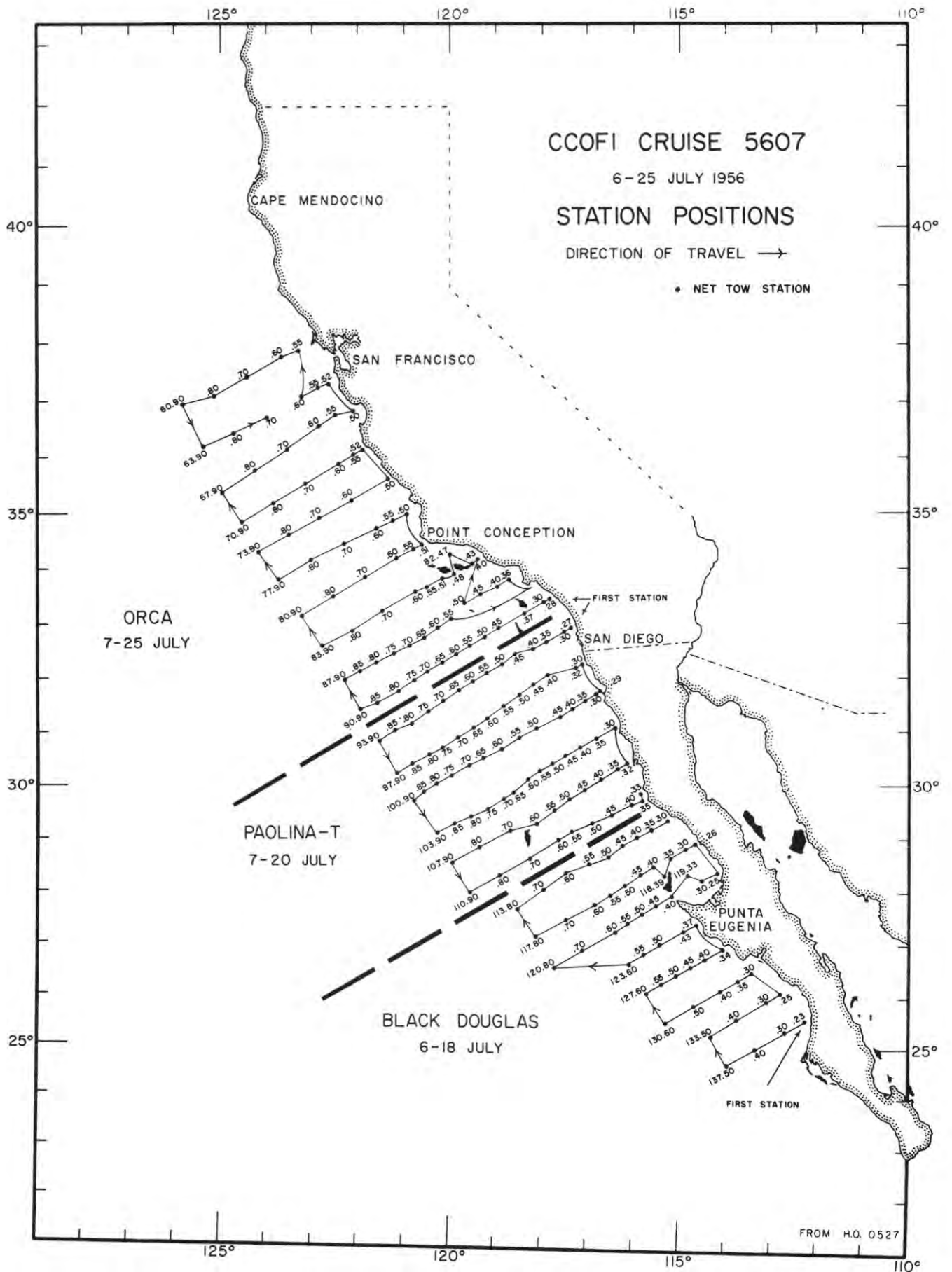


FIGURE 1

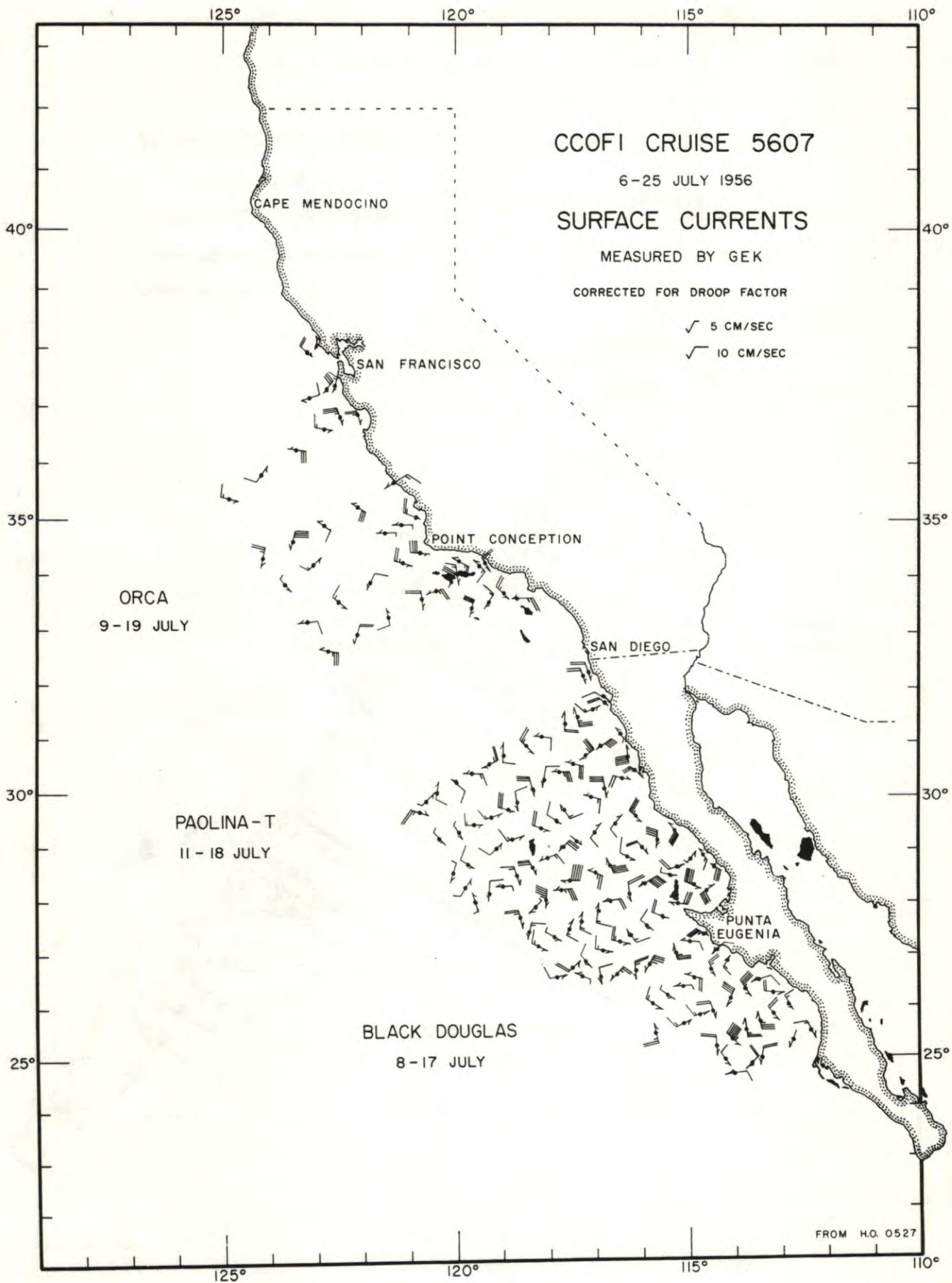


FIGURE 2

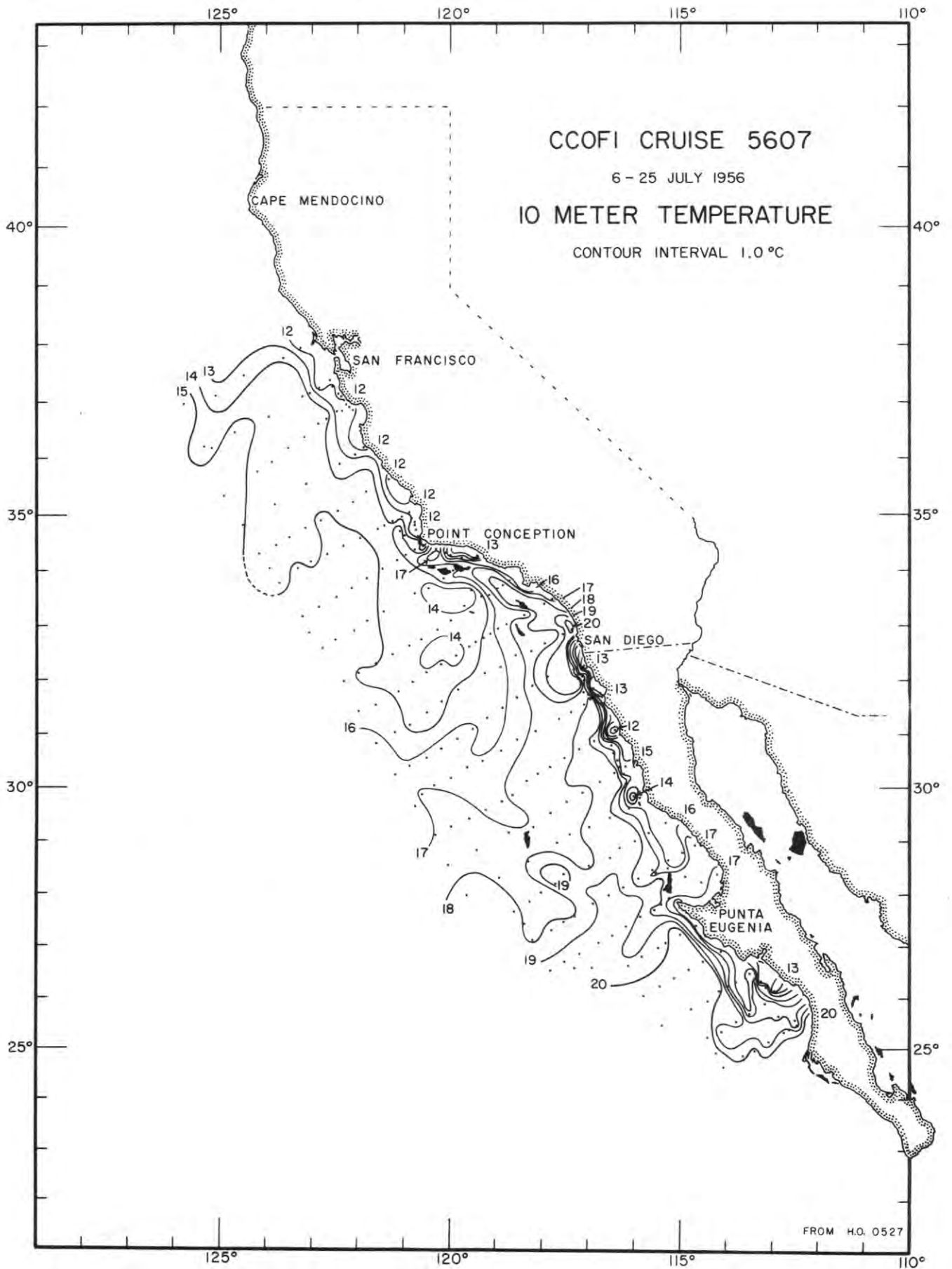


FIGURE 3

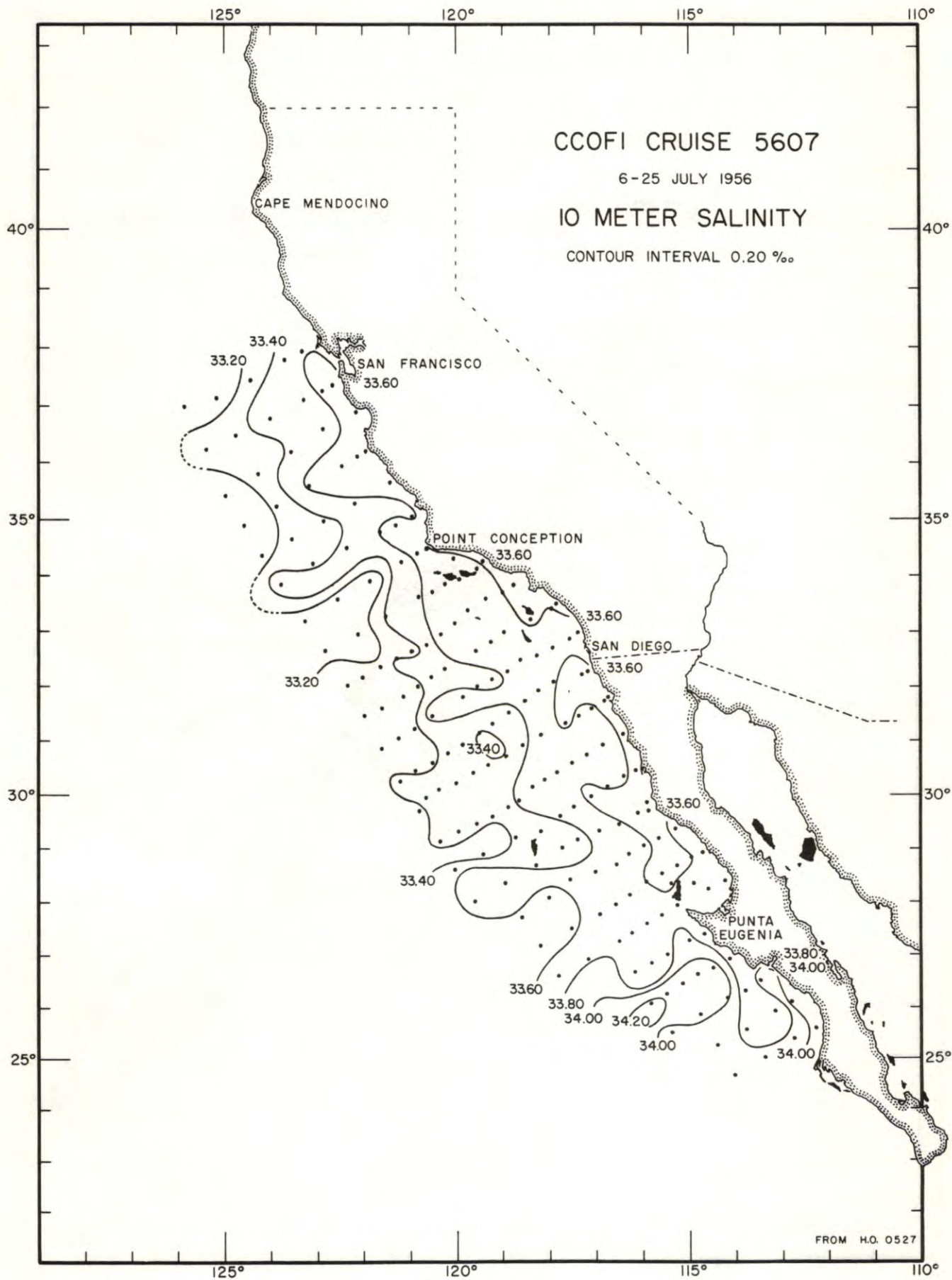


FIGURE 4

PERSONNEL
Cruise 5607

SHIPS' CAPTAINS

Forster, Charles W., R/V Black Douglas
Newbegin, Robert C., R/V Orca
Miller, Frank, R/V Paolina-T

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Black Douglas

Thraikill, James R., Fishery Research Biologist, U. S. Fish and Wildlife
Service
Cunnison, Earle G., Marine Technician

R/V Orca

Worrall, Charles G., Senior Marine Technician
Bower, Donald R., Fishery Aid, U. S. Fish and Wildlife Service
Vrooman, Andrew M., Fishery Research Biologist, U. S. Fish and Wildlife
Service

R/V Paolina-T

Taft, Bruce A., Statistician, U. S. Fish and Wildlife Service
Berquist, Nelson R., Summer Trainee
Reith, A. Dougall, Senior Marine Technician

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
60.55-O	VII-20	0625	37°54.0'	123°15.0'	48	calm		fog	moderate	11.76	33.58
60.60-O	22	2345	37°45.0'	123°37.0'	1000+	320°	5	clear	rough	13.88	33.49
60.70-O	23	0438	37°25.0'	124°20.5'	1000+	300°	7	clear	very rough	13.32	33.29
60.80-O	23	0925	37°05.0'	125°04.0'	1000+	320°	7	partly cloudy	very rough	13.30	33.06
60.90-O	23	1415	36°45.0'	125°45.5'	1000+	320°	7	cloudy	very rough	15.16	33.06
63.52-O	19	2016	37°19.0'	122°36.5'	40	180°	1	fog	moderate	11.53	33.69
63.55-O	19	2215	37°13.5'	122°50.0'	138	250°	1	fog	moderate	11.62	33.69
63.60-O	20	0055	37°03.5'	123°13.0'	1200	220°	1	overcast	moderate	14.56	33.44
63.70-O	24	0340	36°43.0'	123°54.5'	1000+	320°	7	overcast	very rough	14.67	33.43
63.80-O	23	2250	36°26.0'	124°40.0'	1000+	320°	5	overcast	very rough	15.17	33.39
63.90-O	23	1840	36°12.0'	125°20.0'	1000+	320°	6	partly cloudy	very rough	14.66	33.32
67.50-O	19	1535	36°49.0'	122°04.5'	49	calm		fog	moderate	12.10	33.77
67.55-O	19	1235	36°47.0'	122°28.5'	1260	calm		fog	moderate	12.75	-
67.60-O	19	0945	36°34.0'	122°50.0'	1000+	calm		fog	moderate	14.52	-
67.70-O	19	0440	36°09.5'	123°30.0'	1000+	060°	1	overcast	rough	14.34	33.41
67.80-O	18	2240	35°45.0'	124°10.0'	1000+	330°	1	overcast	rough	14.57	33.37
67.90-O	18	1720	35°21.0'	124°54.5'	1000+	330°	3	overcast	rough	15.38	33.06
70.52-O	17	1530	36°10.5'	121°51.0'	315	330°	6	overcast	rough	11.27	33.77
70.55-O	17	1725	36°03.5'	122°03.0'	650	330°	7	overcast	rough	12.96	33.78

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

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
70.60-O	VII-17	2025	35°54.0'	122°25.0'	1000+	330°	6	overcast	rough	13.60	33.77
70.70-O	18	0115	35°32.5'	123°07.0'	1000+	330°	6	overcast	rough	14.21	33.64
70.80-O	18	0615	35°11.5'	123°48.5'	1000+	330°	5	overcast	rough	14.10	33.22
70.90-O	18	1120	34°49.5'	124°30.0'	1000+	330°	5	overcast	rough	15.45	33.10
73.50-O	17	0130	35°38.5'	121°17.5'	30	330°	5	cloudy	rough	11.67	33.73
73.60-O	16	1915	35°14.0'	122°06.0'	1000+	330°	4	overcast	moderate	14.48	33.59
73.70-O	16	1345	34°54.5'	122°49.0'	2000+	340°	3	overcast	moderate	15.24	33.39
73.80-O	16	0850	34°35.5'	123°28.5'	2000+	320°	2	overcast	moderate	14.41	33.33
73.90-O	16	0400	34°17.0'	124°08.5'	2000+	320°	3	overcast	moderate	14.80	33.06
77.50-O	15	0253	35°03.5'	120°53.5'	80	320°	2	partly cloudy	slight	12.42	33.58
77.55-O	15	0530	34°54.0'	121°13.0'	315	290°	2	partly cloudy	slight	12.66	33.66
77.60-O	15	0810	34°45.0'	121°34.5'	500	300°	3	overcast	moderate	14.22	33.60
77.70-O	15	1315	34°26.5'	122°18.0'	2000+	320°	2	overcast	moderate	15.02	33.48
77.80-O	15	1800	34°08.0'	123°00.5'	2000+	320°	2	overcast	moderate	14.90	33.32
77.90-O	15	2313	33°46.0'	123°41.5'	2000+	320°	2	overcast	moderate	14.84	33.49
80.51-O	14	2155	34°26.5'	120°33.0'	50	060°	1	cloudy	slight	12.36	33.60
80.55-O	14	2000	34°21.0'	120°46.0'	400	060°	1	cloudy	slight	14.46	33.66
80.60-O	14	1728	34°10.5'	121°07.0'	1000+	calm		overcast	slight	14.54	33.45
80.70-O	14	1239	33°49.5'	121°48.5'	1000+	320°	2	overcast	moderate	15.58	33.14

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
80.80-O	VII-14	0730	33°30.0'	122°30.0'	1000+	320°	2	overcast	moderate	15.54	33.13
80.90-O	14	0200	33°09.0'	123°13.0'	2000+	330°	2	cloudy	moderate	15.66	33.06
82.47-O	12	2045	34°15.0'	119°58.0'	315	250°	2	cloudy	slight	14.00	33.66
83.40-O	12	1540	34°14.0'	119°22.0'	12	060°	2	overcast	slight	12.81	33.55
83.43-O	12	1733	34°07.5'	119°31.7'	135	320°	1	overcast	slight	17.00	33.64
83.48-O	12	2300	33°58.5'	119°55.0'	40	330°	3	partly cloudy	slight	15.62	33.62
83.51-O	13	0120	33°51.0'	120°07.5'	136	320°	3	partly cloudy	slight	15.68	33.66
83.55-O	13	0405	33°40.5'	120°28.0'	600	320°	3	partly cloudy	moderate	13.42	33.64
83.60-O	13	0635	33°34.0'	120°45.0'	800	320°	3	overcast	moderate	14.67	33.57
83.70-O	13	1125	33°14.0'	121°27.0'	1000+	320°	1	overcast	slight	14.60	33.40
83.80-O	13	1629	32°53.0'	122°09.0'	2000+	310°	1	overcast	moderate	15.37	33.15
83.90-O	13	2055	32°35.0'	122°47.0'	2000+	320°	2	cloudy	moderate	15.03	33.14
87.36-O	12	0045	33°47.5'	118°41.0'	490	190°	2	cloudy	slight	16.55	33.58
87.40-O	12	0315	33°38.0'	118°57.0'	460	calm		cloudy	slight	18.00	33.60
87.45-O	12	0600	33°30.0'	119°19.0'	970	calm		overcast	slight	13.48	33.75
87.50-O	12	0900	33°20.0'	119°39.5'	30	calm		overcast	slight	13.85	33.73
87.55-O	10	0145	33°04.5'	119°58.0'	600	320°	7	overcast	very rough	14.50	33.71
87.60-O	9	2330	32°55.5'	120°16.5'	1000+	320°	6	overcast	rough	14.91	33.65
87.65-O	9	2045	32°44.0'	120°36.0'	1000+	320°	5	overcast	rough	14.58	33.51

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
87.70-O	VII-9	1815	32°36.0'	120°52.0'	1000+	320°	5	overcast	rough	14.68	33.33
87.75-O	9	1515	32°26.5'	121°14.0'	1000+	320°	5	overcast	rough	14.47	33.40
87.80-O	9	1205	32°17.0'	121°36.0'	-	320°	5	overcast	rough	15.00	33.22
87.85-O	9	0845	32°06.5'	121°58.0'	-	320°	4	overcast	rough	14.90	33.30
87.90-O	9	0520	31°57.0'	122°19.0'	-	320°	4	overcast	rough	15.80	33.34
90.28-O	7	1110	33°28.5'	117°47.0'	200	270°	1	overcast	slight	16.00	33.57
90.30-O	7	1245	33°24.5'	117°55.0'	340	280°	2	overcast	slight	18.42	33.60
90.37-O	7	1550	33°11.0'	118°23.5'	650	270°	3	overcast	slight	16.86	33.58
90.45-O	7	2000	32°55.5'	118°56.0'	900	300°	3	overcast	moderate	16.24	33.63
90.50-O	7	2330	32°45.5'	119°15.0'	150	320°	4	overcast	moderate	15.42	-
90.55-O	8	0230	32°35.5'	119°33.5'	200	320°	5	overcast	rough	14.21	33.66
90.60-O	8	0500	32°25.5'	119°52.0'	400	320°	5	overcast	rough	13.78	-
90.65-O	8	0820	32°16.0'	120°11.5'	-	320°	5	overcast	rough	14.11	33.57
90.70-O	8	1050	32°06.5'	120°30.0'	-	320°	4	overcast	rough	14.02	33.37
90.75-O	8	1355	31°56.0'	120°49.0'	1000+	320°	4	overcast	rough	14.38	33.33
90.80-O	8	1640	31°45.5'	121°09.0'	1000+	320°	3	overcast	rough	14.90	33.37
90.85-O	8	2000	31°32.0'	121°35.0'	-	320°	4	overcast	rough	15.48	33.35
90.90-O	8	2300	31°25.0'	121°59.0'	-	320°	4	overcast	rough	15.49	33.31
93.27-P	7	0530	32°56.0'	117°20.5'	160	260°	2	partly cloudy	slight	20.42	33.71

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
93.30-P	VII-7	0740	32°50.5'	117°31.5'	530	290°	3	partly cloudy	slight	18.10	33.64
93.35-P	7	1045	32°40.0'	117°54.5'	220	330°	3	partly cloudy	slight	17.82	33.65
93.40-P	7	1415	32°31.5'	118°13.0'	950	280°	4	overcast	rough	17.82	33.63
93.45-P	7	1750	32°28.0'	118°33.0'	600	280°	4	overcast	moderate	16.42	33.66
93.50-P	7	2115	32°14.0'	118°53.0'	490	290°	4	overcast	rough	15.68	33.69
93.55-P	8	0040	32°06.0'	119°12.0'	470	300°	5	overcast	rough	15.68	33.58
93.60-P	8	0410	31°57.0'	119°31.0'	-	-	-	missing	missing	15.48	33.56
93.65-P	8	0810	31°46.0'	119°50.0'	2000+	320°	6	overcast	rough	15.17	33.62
93.70-P	8	1145	31°35.0'	120°10.0'	2000+	300°	5	overcast	rough	14.63	-
93.75-P	8	1630	31°24.5'	120°29.0'	2100	310°	4	cloudy	rough	14.55	33.62
93.80-P	8	2100	31°10.5'	120°52.0'	2000+	300°	4	overcast	moderate	14.93	33.36
93.85-P	9	0025	31°02.0'	121°12.0'	2080	300°	5	overcast	rough	15.53	33.33
93.90-P	9	0345	30°50.0'	121°33.5'	2150	310°	5	overcast	rough	16.36	33.35
97.30-P	12	0050	32°15.5'	117°08.5'	35	220°	2	cloudy	moderate	12.72	33.55
97.32-P	12	0240	32°11.5'	117°16.5'	740	240°	2	cloudy	moderate	18.02	33.58
97.40-P	10	1800	32°03.0'	117°53.0'	850	320°	3	overcast	rough	19.12	33.67
97.45-P	10	1440	31°52.0'	118°12.0'	900	320°	3	overcast	moderate	17.78	33.62
97.50-P	10	1140	31°40.5'	118°32.0'	1130	310°	4	overcast	rough	16.62	33.62
97.55-P	10	0815	31°29.0'	118°51.0'	620	300°	5	overcast	rough	15.84	33.56

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
97.60-P	VII-10	0510	31°17.0'	119°11.0'	1530	330°	6	overcast	rough	15.36	33.44
97.65-P	10	0140	31°06.0'	119°31.0'	1800	330°	5	overcast	rough	16.08	-
97.70-P	9	2220	30°54.0'	119°50.5'	-	320°	5	overcast	rough	16.22	33.42
97.75-P	9	1900	30°43.0'	120°11.0'	2000	340°	5	overcast	rough	16.35	33.42
97.80-P	9	1545	30°34.0'	120°30.5'	1975	340°	5	overcast	rough	16.11	33.37
97.85-P	9	1230	30°24.0'	120°51.0'	2050	320°	5	overcast	rough	16.12	33.39
97.90-P	9	0920	30°15.0'	121°11.0'	2000+	320°	4	overcast	rough	16.68	33.46
100.29-P	12	0810	31°42.5'	116°43.0'	150	180°	1	cloudy	smooth	12.12	33.55
100.30-P	12	0850	31°42.5'	116°46.5'	205	calm		cloudy	smooth	14.80	33.58
100.35-P	12	1220	31°33.5'	117°04.0'	570	calm		cloudy	slight	17.86	33.64
100.40-P	12	1540	31°25.0'	117°21.0'	730	330°	1	cloudy	slight	17.42	33.62
100.45-P	12	1930	31°17.5'	117°37.5'	1000	calm		overcast	moderate	17.03	33.58
100.50-P	12	2300	31°04.0'	118°07.5'	975	260°	3	overcast	moderate	17.44	33.70
100.55-P	13	0255	30°53.5'	118°31.0'	1450	280°	3	overcast	rough	16.26	33.41
100.60-P	13	0550	30°42.5'	118°54.0'	1625	280°	3	overcast	rough	16.08	33.40
100.65-P	13	0930	30°32.5'	119°17.0'	1700	320°	3	overcast	rough	16.04	33.42
100.70-P	13	1245	30°23.0'	119°37.5'	2180	320°	3	overcast	rough	16.12	33.41
100.75-P	13	1615	30°13.5'	119°59.0'	1150	320°	3	overcast	rough	16.20	33.43
100.80-P	13	1850	30°04.0'	120°21.0'	1850	300°	3	overcast	rough	16.94	33.48

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
100.85-P	VII-13	2130	29°53.0'	120°37.0'	2000+	340°	3	overcast	moderate	17.20	33.48
100.90-P	14	0015	29°41.0'	120°47.0'	2050	320°	1	overcast	rough	16.82	33.33
103.30-P	15	1915	31°06.5'	116°24.0'	24	320°	3	clear	moderate	11.90	33.53
103.35-P	15	1525	30°53.0'	116°52.0'	1075	330°	5	cloudy	rough	17.65	33.66
103.40-P	15	1140	30°42.5'	117°12.0'	870	320°	5	partly cloudy	rough	18.20	33.66
103.45-P	15	0845	30°33.5'	117°29.5'	1070	320°	4	overcast	rough	17.68	33.64
103.50-P	15	0545	30°24.0'	117°48.0'	1300	320°	5	overcast	rough	17.58	33.70
103.55-P	15	0245	30°15.5'	118°06.0'	1250	330°	4	cloudy	moderate	17.60	33.71
103.60-P	15	0005	30°08.5'	118°19.0'	1650	330°	3	overcast	rough	17.78	33.67
103.65-P	14	2050	29°52.0'	118°39.0'	1820	350°	3	overcast	rough	17.58	33.66
103.70-P	14	1835	29°45.0'	118°51.0'	1870	350°	3	overcast	moderate	16.52	33.56
103.75-P	14	1535	29°35.0'	119°13.0'	1950	360°	2	overcast	moderate	16.93	33.41
103.80-P	14	1225	29°26.0'	119°35.5'	1950	320°	3	overcast	moderate	17.20	33.51
103.85-P	14	0905	29°17.0'	119°57.5'	2000+	350°	3	overcast	moderate	17.10	33.47
103.90-P	14	0555	29°08.0'	120°19.5'	2150	020°	2	overcast	rough	17.00	33.46
107.32-P	16	0110	30°26.5'	116°11.0'	190	280°	5	overcast	rough	15.64	33.53
107.35-P	16	0320	30°19.5'	116°25.0'	970	320°	5	overcast	rough	18.32	33.65
107.40-P	16	0635	30°08.0'	116°45.5'	1550	320°	6	partly cloudy	rough	18.20	33.64
107.45-P	16	1010	29°56.5'	117°07.0'	1070	320°	6	cloudy	rough	17.60	33.49

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
107.50-P	VII-16	1325	29°45.5'	117°27.0'	1480	320°	5	overcast	rough	17.54	33.62
107.55-P	16	1645	29°34.5'	117°47.0'	1850	330°	5	overcast	rough	17.50	33.67
107.60-P	16	2030	29°17.0'	118°19.5'	1880	340°	5	overcast	rough	17.10	33.44
107.70-P	17	0625	29°11.0'	118°43.0'	1750	320°	5	overcast	rough	17.44	33.41
107.80-P	17	1230	28°51.0'	119°23.0'	2030	350°	5	overcast	rough	17.38	33.38
107.90-P	17	1820	28°32.5'	120°01.0'	2100	340°	4	overcast	rough	17.49	33.58
110.33-P	19	1935	29°49.5'	115°52.0'	45	320°	4	clear	slight	15.22	33.58
110.35-P	19	0755	29°44.5'	115°52.5'	196	350°	3	clear	moderate	15.98	33.59
110.40-P	19	0550	29°37.5'	116°07.0'	1250	340°	2	clear	slight	16.00	33.53
110.45-P	19	0240	29°28.0'	116°32.0'	595	330°	4	cloudy	moderate	18.06	33.60
110.50-P	18	2335	29°17.0'	116°57.5'	1530	300°	3	partly cloudy	rough	18.90	33.70
110.55-P	18	1955	29°08.5'	117°23.5'	1750	350°	3	cloudy	moderate	17.42	33.53
110.60-P	18	1700	28°59.0'	117°40.0'	1850	350°	3	overcast	slight	17.39	33.46
110.70-P	18	1130	28°38.0'	118°19.5'	1600	270°	2	overcast	slight	17.96	33.59
110.80-P	18	0530	28°17.5'	118°57.5'	2150	360°	5	overcast	rough	17.96	33.69
110.90-P	17	2355	27°58.0'	119°37.5'	2000+	330°	5	overcast	rough	18.18	33.66
113.30-B	17	1210	29°22.5'	115°17.5'	35	270°	1	cloudy	slight	15.56	33.68
113.35-B	17	0913	29°12.0'	115°39.0'	550	300°	3	overcast	rough	16.25	33.54
113.40-B	17	0630	29°02.0'	115°58.5'	1000	320°	4	overcast	rough	18.18	33.68

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
113.45-B	VII-17	0340	28°52.0'	116°18.0'	1000	330°	5	overcast	rough	18.59	33.67
113.50-B	17	0040	28°42.0'	116°37.5'	2200	330°	5	overcast	rough	18.59	33.68
113.55-B	16	2115	28°32.0'	116°57.0'	2015	320°	4	overcast	rough	17.83	33.62
113.60-B	16	1715	28°23.0'	117°30.0'	2000	330°	4	overcast	rough	19.05	33.71
113.70-B	16	1158	28°02.5'	117°58.0'	2000	300°	4	overcast	moderate	17.64	33.55
113.80-B	16	0705	27°40.5'	118°35.0'	2000	330°	3	overcast	moderate	18.12	33.56
117.26-B	14	1820	28°56.0'	114°40.5'	45	270°	1	partly cloudy	slight	17.81	33.69
117.30-B	14	2045	28°48.0'	114°56.5'	56	260°	4	clear	slight	15.96	33.60
117.35-B	14	2357	28°38.0'	115.16.0'	127	280°	3	clear	slight	15.35	33.55
117.40-B	15	0505	28°28.0'	115°35.5'	300	320°	3	overcast	moderate	17.25	33.57
117.45-B	15	0735	28°18.0'	115°55.0'	1700	320°	3	overcast	moderate	17.71	33.60
117.50-B	15	1025	28°08.0'	116°15.0'	1725	270°	4	overcast	moderate	18.89	33.68
117.55-B	15	1317	27°57.5'	116°34.5'	2100	330°	4	cloudy	rough	19.29	33.72
117.60-B	15	1532	27°47.5'	116°54.0'	2200	330°	4	cloudy	rough	18.62	33.73
117.70-B	15	2034	27°27.5'	117°32.5'	1750	320°	3	cloudy	rough	18.09	33.59
117.80-B	16	0140	27°07.5'	118°11.5'	2000	340°	3	cloudy	moderate	17.95	33.55
118.39-B	15	0250	28°18.5'	115°24.0'	150	300°	3	overcast	moderate	18.03	33.57
119.33-B	14	0840	28°19.0'	114°53.0'	60	270°	4	clear	slight	17.90	33.68
120.25-B	14	1335	28°23.0'	114°14.5'	29	300°	3	cloudy	slight	16.54	33.70

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

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
120.30-B	VII-14	1105	28°13.0'	114°34.0'	50	280°	3	partly cloudy	slight	17.43	33.67
120.40-B	14	0455	27°56.5'	115°14.0'	20	310°	3	partly cloudy	moderate	17.06	33.64
120.45-B	14	0145	27°43.0'	115°33.0'	1150	340°	3	partly cloudy	moderate	17.96	33.69
120.50-B	13	2310	27°33.0'	115°52.5'	2150	340°	2	partly cloudy	moderate	18.90	33.71
120.55-B	13	2005	27°23.0'	116°12.0'	2075	360°	1	partly cloudy	slight	19.19	33.76
120.60-B	13	1805	27°13.0'	116°28.0'	2000	340°	1	partly cloudy	slight	19.41	33.75
120.70-B	13	1315	26°52.5'	117°10.0'	2100	340°	2	cloudy	slight	19.58	33.78
120.80-B	13	0730	26°32.5'	117°48.5'	2100	320°	2	clear	moderate	19.60	33.76
123.37-B	12	0925	27°24.0'	114°39.5'	40	260°	3	clear	slight	15.52	33.69
123.43-B	12	1220	27°14.0'	114°59.5'	820	300°	3	partly cloudy	moderate	20.11	33.95
123.50-B	12	1610	26°58.0'	115°30.5'	2000	320°	3	cloudy	moderate	19.54	33.75
123.55-B	12	1905	26°48.0'	115°49.5'	2000	330°	2	cloudy	moderate	19.04	33.69
123.60-B	12	2115	26°38.5'	116°09.0'	2080	340°	3	partly cloudy	slight	19.12	33.69
127.34-B	12	0405	26°55.5'	114°06.0'	43	270°	3	clear	rough	16.48	33.74
127.40-B	12	0050	26°43.5'	114°29.5'	1700	300°	3	partly cloudy	moderate	20.32	34.14
127.45-B	11	2150	26°33.5'	114°48.5'	1080	300°	3	partly cloudy	rough	20.47	34.16
127.50-B	11	1920	26°23.5'	115°08.0'	2000	330°	2	cloudy	moderate	20.34	34.15
127.55-B	11	1655	26°13.5'	115°27.0'	2000	330°	2	cloudy	moderate	20.54	34.14
127.60-B	11	1403	26°03.5'	115°46.5'	2050	340°	3	cloudy	rough	20.95	34.21

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
130.30-B	VII-10	1740	26°29.0'	113°29.0'	43	calm		partly cloudy	slight	16.45	-
130.35-B	10	2030	26°19.0'	113°48.5'	155	-	1	partly cloudy	moderate	15.82	33.62
130.40-B	10	2320	26°09.0'	114°07.5'	744	260°	2	partly cloudy	rough	20.53	34.16
130.50-B	11	0420	25°49.0'	114°46.0'	2000	290°	3	partly cloudy	rough	20.60	34.05
130.60-B	11	0920	25°29.0'	115°24.0'	2100	320°	3	cloudy	rough	20.81	33.98
133.25-B	10	1220	26°04.5'	112°48.0'	45	calm		partly cloudy	slight	14.96	34.02
133.30-B	10	0937	25°54.5'	113°07.5'	106	340°	1	clear	moderate	17.20	33.62
133.40-B	10	0430	25°34.5'	113°45.5'	1200	320°	2	clear	very rough	19.27	33.74
133.50-B	9	2315	25°14.0'	114°24.0'	2055	300°	3	partly cloudy	rough	20.47	33.93
137.23-B	9	0420	25°34.0'	112°18.5'	40	320°	2	clear	slight	20.00	34.02
137.30-B	9	0803	25°20.0'	112°45.0'	130	310°	2	clear	moderate	19.38	33.87
137.40-B	9	1245	25°00.0'	113°23.5'	1300	310°	3	cloudy	moderate	20.24	33.90
137.50-B	9	1804	24.40.0'	114°01.5'	2000	320°	2	partly cloudy	rough	20.35	33.96

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

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