

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 6201-2
12 January - 19 February 1962

SIO Reference 62-26
19 November 1962

ERRATA

PHYSICAL AND CHEMICAL DATA REPORTS

1. CCOFI Cruise 5904 (SIO Reference 60-37)

Page 172, Station 137.80:

Station occupied in April, not March.

Page 174, Station 140.50 (2217 GCT) and 140.60:

Stations occupied in April, not March.

Page 175, footnote:

The wording of the footnote and the listing of numerical values have been changed to read:

- a) The first four salinity values were assumed to be listed out of order. They were originally listed according to increasing depth as follows: 34.33, 34.05, 34.16 and 34.04‰.

2. CCOFI Cruise 5912 (SIO Reference 61-21)

Page 471, Station 93.90:

Temperature at 20 meters should read 16.93.

3. CCOFI Cruise 6005 (SIO Reference 62-7)

Page 232, Station 90.100:

Latitude should read $31^{\circ}01'N$ (not $30^{\circ}01'N$).

4. CCOFI Cruise 6103/6104-5/6105 (SIO Reference 62-15)

Page 68, Station 90.32:

Longitude should read $118^{\circ}03.5'W$ (not $178^{\circ}03.5'W$).

Page 75, Station $94^6.29^7$:

A degree sign should follow the wire angle: 03° .

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PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 6201-2

12 January - 19 February 1962

Sponsored by

Marine Research Committee

SIO Reference 62-26

19 November 1962

Approved for distribution:



F. N. Spiess
Acting Director

CONTENTS

List of Figures ii
Introduction iii
Personnel vii
Tabulated Data 1
Distribution List 51

FIGURES

1. CCOFI Cruise 6201-2, station positions
2. Horizontal distribution of dynamic height anomaly (0 over 500 d-bar)
3. Horizontal distribution of temperature at 10 meters
4. Horizontal distribution of salinity at 10 meters
5. Horizontal distribution of temperature at 200 meters
6. Horizontal distribution of salinity at 200 meters

INTRODUCTION

The data presented in this report were collected by the RV Black Douglas of the Bureau of Commercial Fisheries and the RV Horizon of the Scripps Institution of Oceanography on Cruise 6201-2 of the California Cooperative Oceanic Fisheries Investigations program. The first two figures in this cruise numbering system represent the year of the cruise; the last two figures, the month. In the case of quarterly cruises the last figures are hyphenated. The cruises preceding this one in the series are 6101-2 (Scripps Institution report, SIO Ref. 61-24), 6103/6104-5/6105 (SIO Ref. 62-15), 6107-8/6108 (SIO Ref. 62-16), 6109/6110-11 (SIO Ref. 62-17) and issued out of sequence 6207-8 (SIO Ref. 62-23).

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

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 .

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. The salinity values obtained by salinometer are recorded to three decimal places, provided they meet accepted standards. The third decimal place has been offset to emphasize that the accuracy of the observations is not to one unit in that place, but that the values recorded "have a reproducibility of $\pm 0.004\%$ salinity at the 95 percent probability level, and a probable accuracy of $\pm 0.01\%$ salinity or better at the same level of probability."^{2/} The values are recorded to two decimal places when obtained by chlorinity titration, or by salinometer where only one determination

^{1/}Klein, Hans T. A new technique for processing physical oceanographic data. MS.
^{2/}Quotation from Department of Oceanography, University of Washington, Tech. Rep. No. 66, UW Ref. 60-18, October 1960.

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.

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.

On stations where more than one cast is lowered, the various property curves may not agree perfectly. This discrepancy may be caused by changes in geographical position, real property changes with time, slight error in measurement, or a combination of these factors. Stations with overlapping casts have the following footnote: Overlapping casts; reconciliation of property curves when necessary.

FOOTNOTES

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.

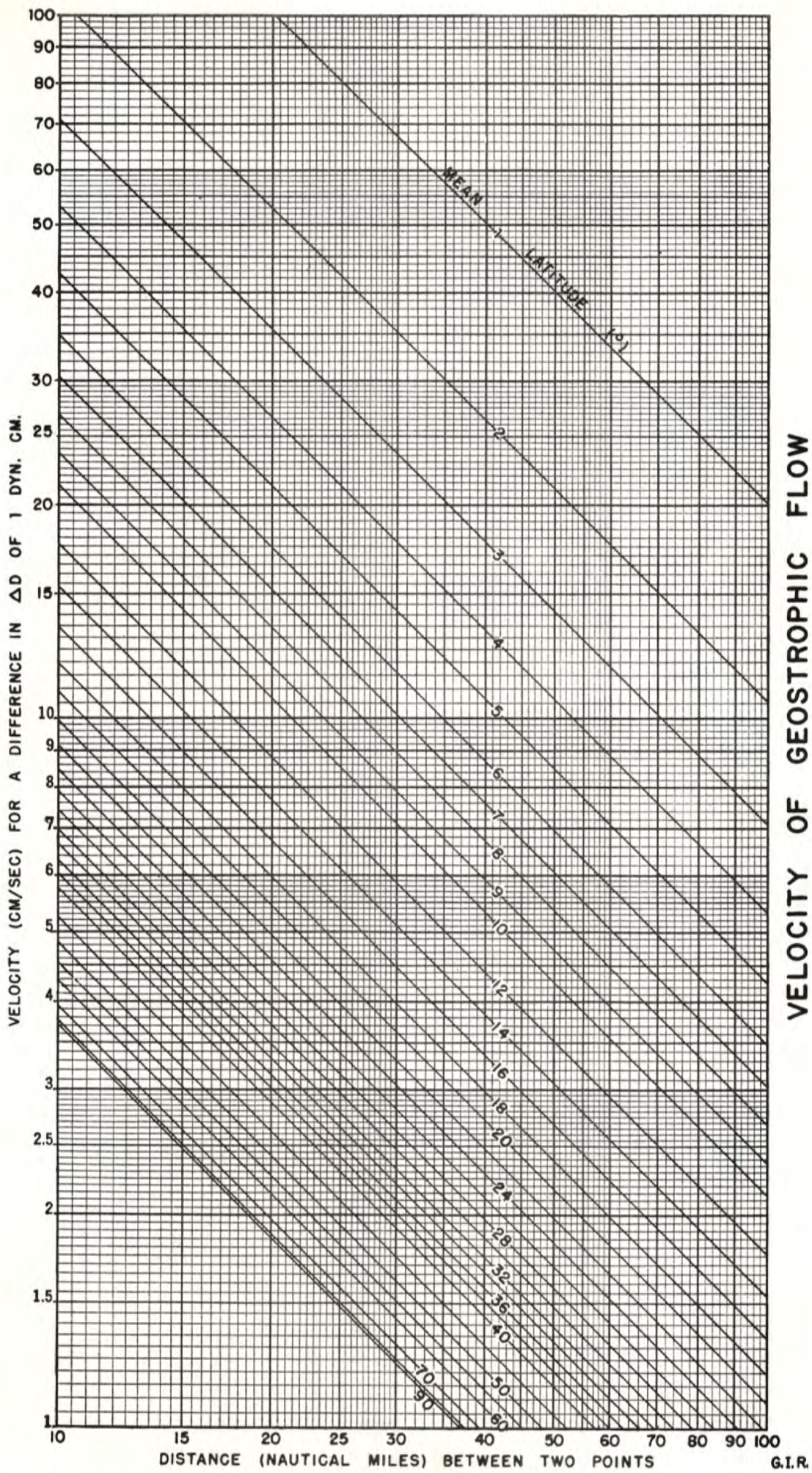
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

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.



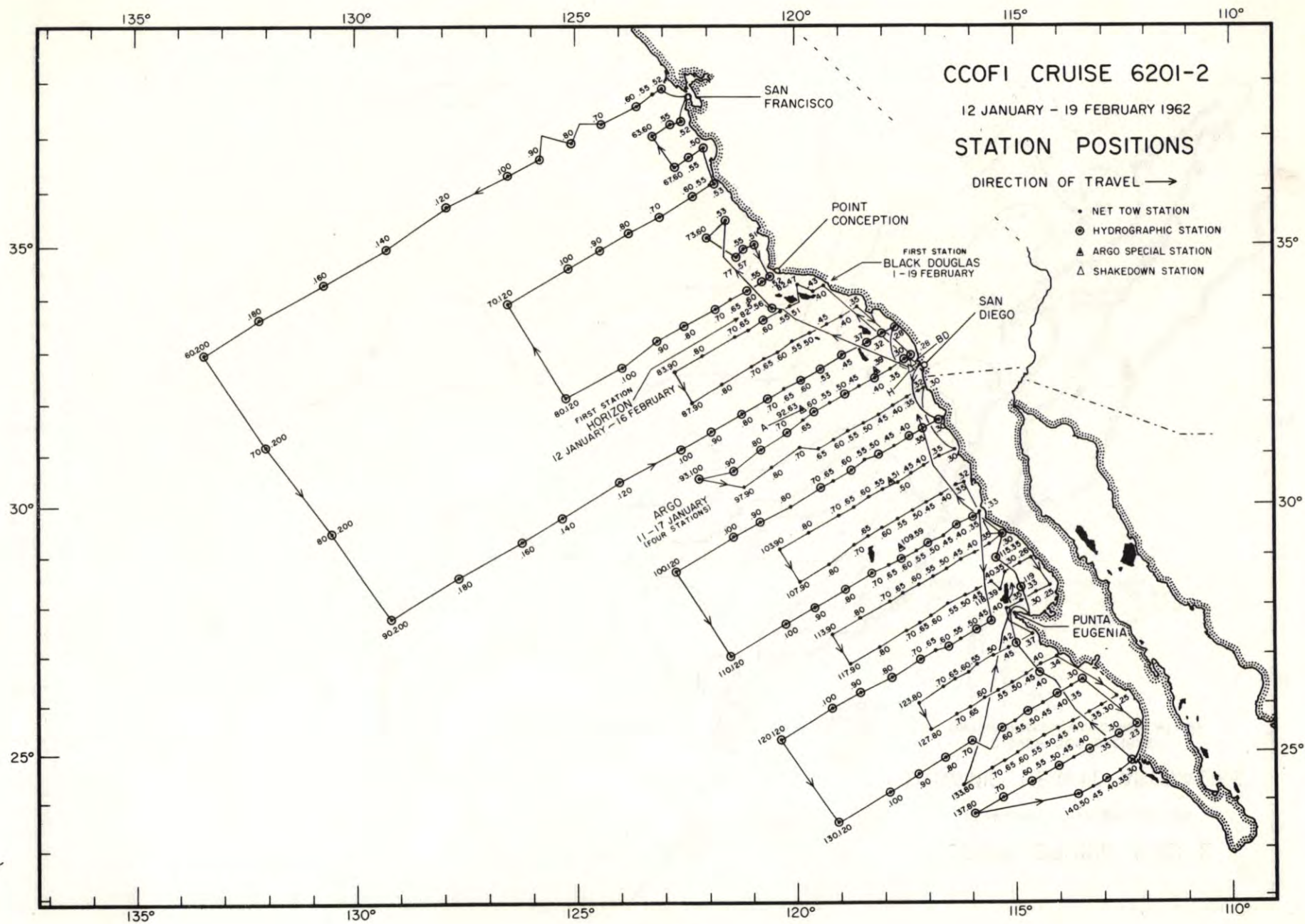


FIGURE 1

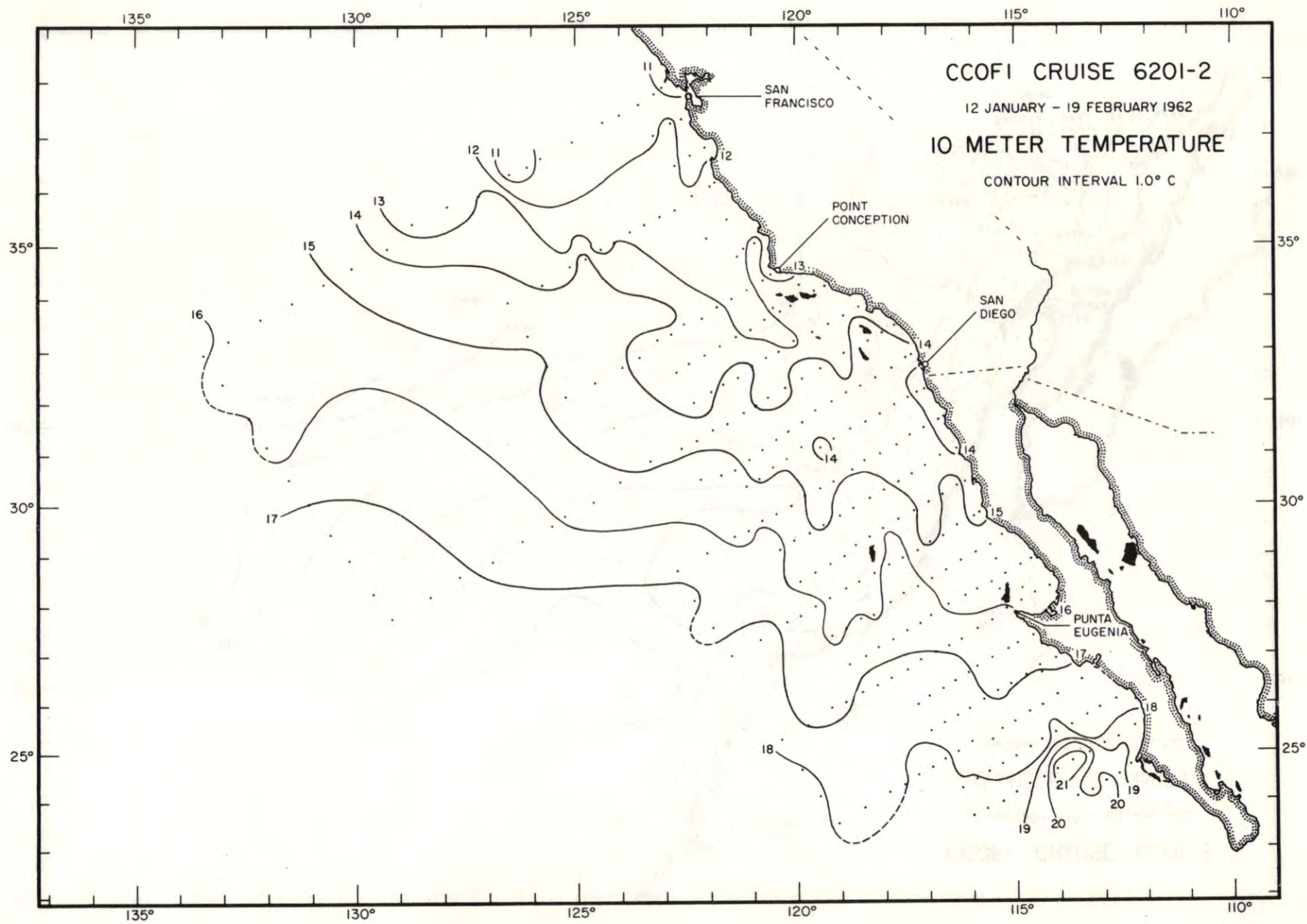


FIGURE 3

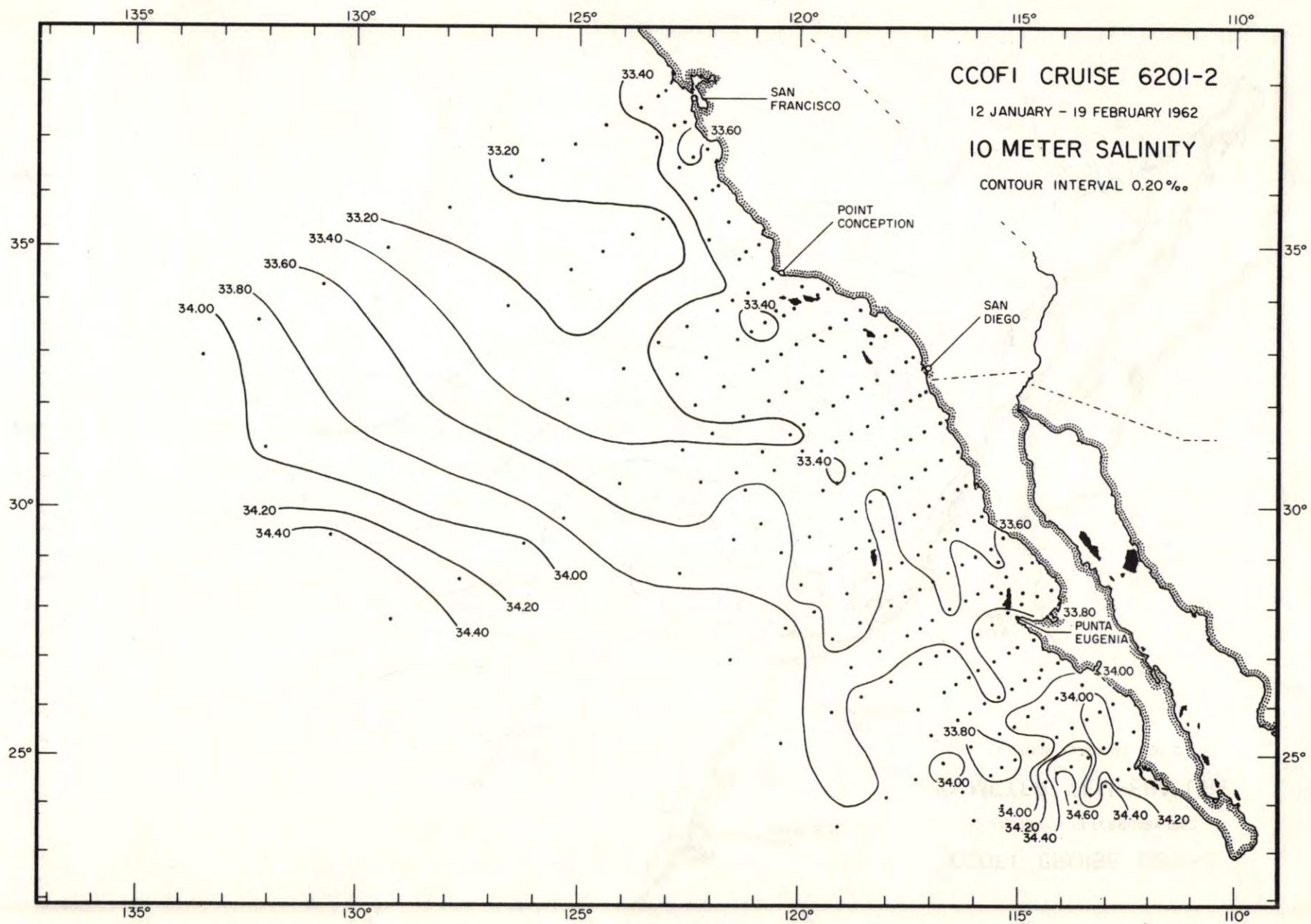


FIGURE 4

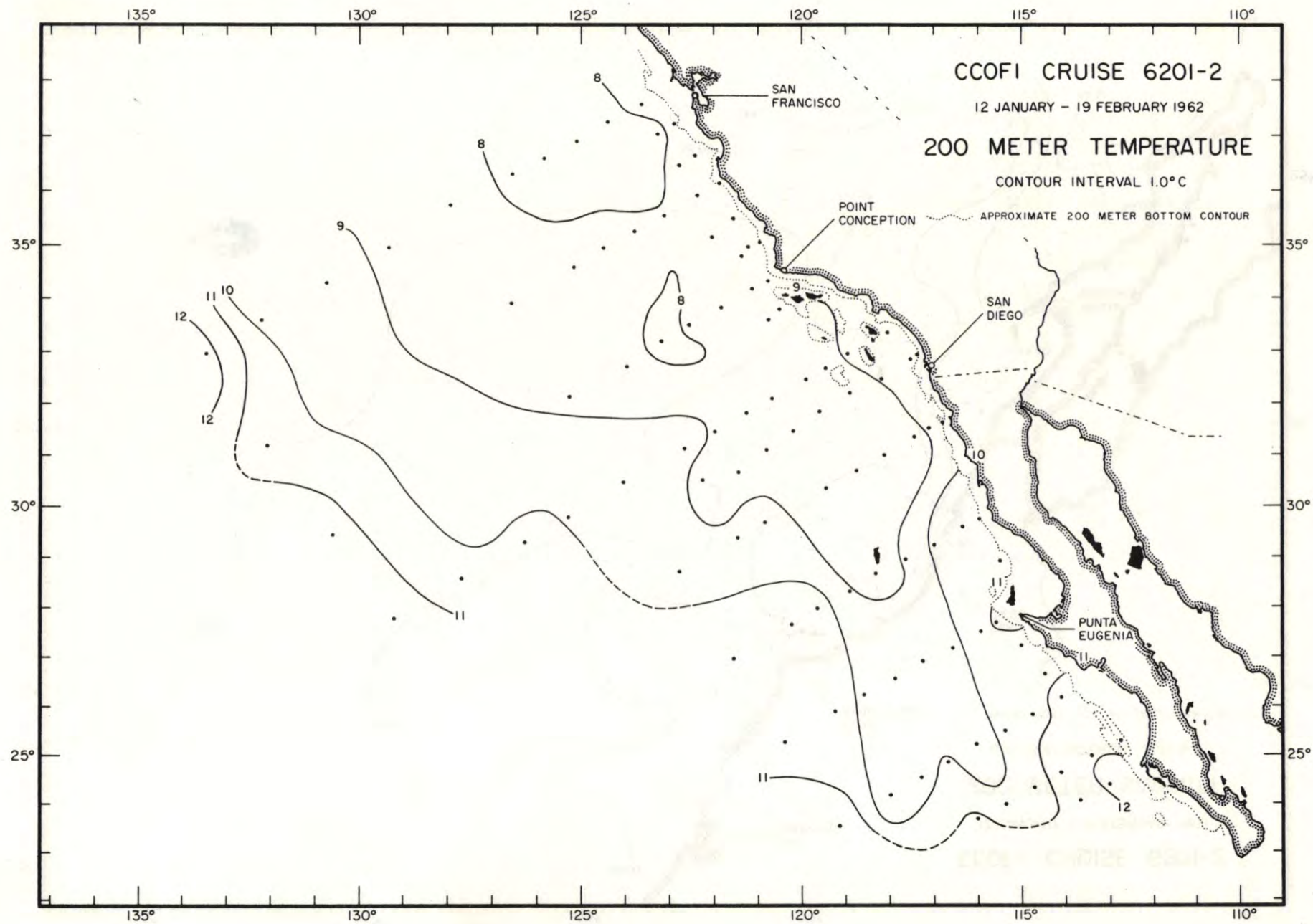


FIGURE 5

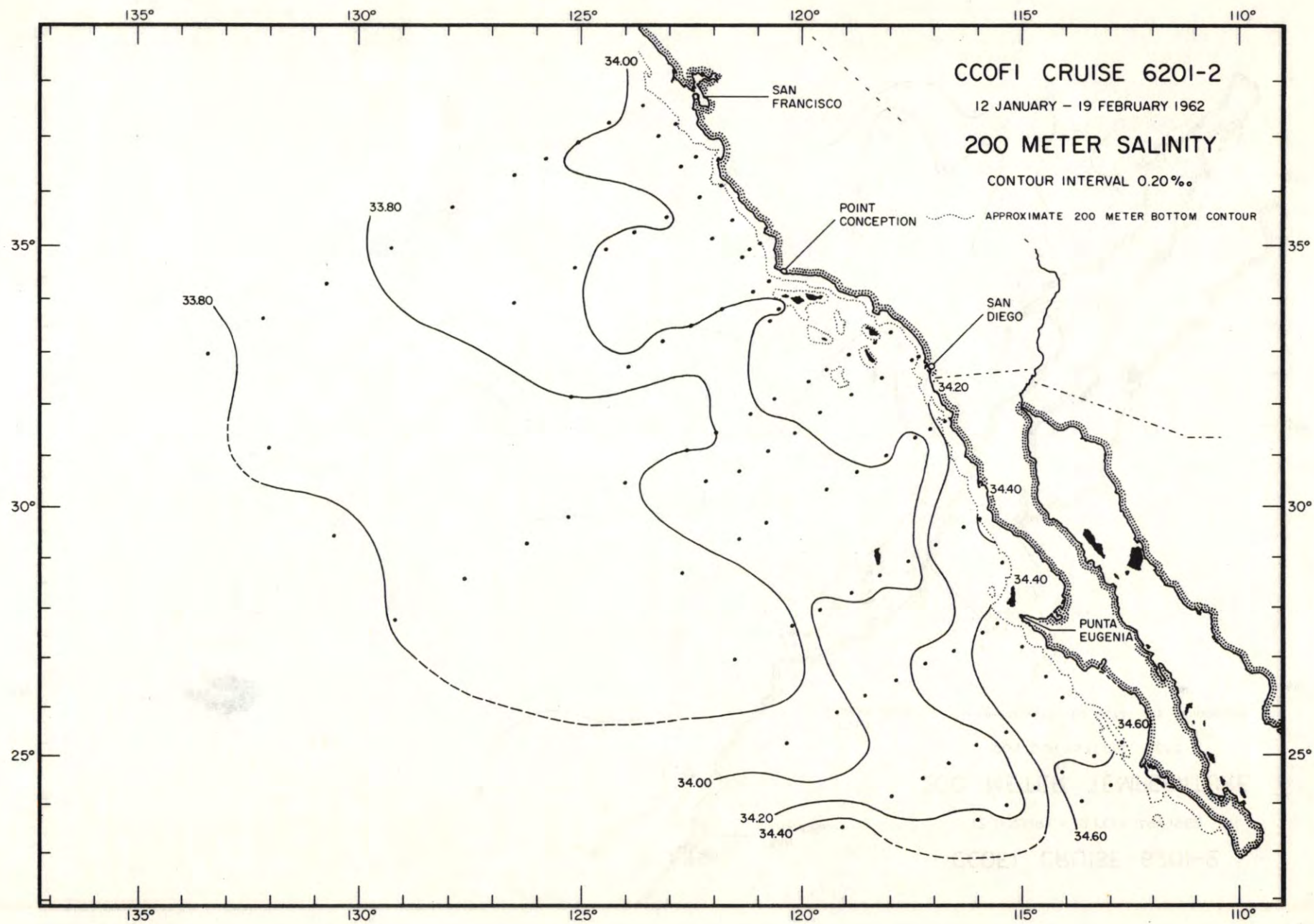


FIGURE 6

PERSONNEL

SHIPS' CAPTAINS

Davis, Laurence E., RV Horizon
Forster, Charles W., RV Black Douglas
Phinney, Alan W., RV Argo

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV Argo

Schink, David R., Graduate Research Geochemist
Anderson, Maurice C., Graduate Research Chemist
Donovan, John T., Marine Technician
Koide, Minoru, Associate Engineer
Lawson, Jan B., Senior Marine Technician
Patterson, Dr. C. C., Senior Research Fellow, Division of Geological
Sciences, California Institute of Technology
Randall, David E., Senior Laboratory Mechanician
Schink, C., Laboratory Helper
Tatsumoto, Mitsunobu, Research Fellow, Division of Geological Sciences,
California Institute of Technology

RV Black Douglas

Farrar, Lloyd J., Fishery Technician, Bureau of Commercial Fisheries
Metoyer, Jack D., Fishery Aid, Bureau of Commercial Fisheries
Pine, James S., Senior Marine Technician

RV Horizon

Anderson, Norman E., Principal Marine Technician
Brennen, Robert E., Senior Marine Technician
Bryan, Walter R., Marine Technician
*Costello, James P., Laboratory Technician
Farrell, David E., Marine Technician
Grow, Harry S., Marine Technician
Hart, Joe T., Marine Technician
*Hester, Arthur W., Senior Marine Technician
**Hines, Dean D., Marine Technician

*San Diego to San Diego via San Francisco

**San Diego to San Francisco and southern half of cruise

PHYSICAL AND CHEMICAL DATA REPORTS, 1962

1. CCOFI Cruise 6201-2 (SIO Ref. 62-26)

Page 38, Sta. 130.50, sta. heading: the latitude should be 25°49'N (not 29°49'N).

Pages 1 - 43: The values for $\Delta D'$ were inadvertently typed in lieu of ΔD throughout this report. The following ΔD values should be substituted

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
1	60.60	250	0.48	1	60.70	150	0.33
		300	0.55			250	0.48
		400	0.68			300	0.55
		500	0.80			400	0.67
						500	(0.78)
2	60.80	300	0.54	2	60.90	100	0.25
		400	0.67			200	0.42
		500	0.78			250	0.49
		600	0.89			300	0.56
						400	0.69
						500	0.80
						600	0.91
2	60.100	125	0.30	3	60.120	125	0.35
		400	0.69			150	0.40
		500	0.81			200	0.49
		600	0.92			250	0.57
						300	0.64
						400	0.78
						500	0.89
3	60.140	125	0.37	3	60.160	200	0.55
		150	0.43			250	0.64
		200	0.53			300	0.72
		300	0.69			400	0.87
		400	0.83			500	1.00
		500	0.95			600	1.11
		600	(1.06)				
4	60.180	150	0.44	4	60.200	50	0.15
		250	0.65			200	0.56
		300	0.73			250	0.67
		400	0.88			300	0.76
		500	1.02			400	0.92
						500	1.05
						600	(1.17)

Errata, Page 4
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
4	63.55	250	0.48	5	63.60	300	0.53
						400	0.66
						500	0.77
						600	0.88
5	67.55	75	0.18	6	67.60	75	0.19
		200	0.40			250	0.49
		250	0.48			300	0.56
		300	0.55			400	0.69
		400	0.69			500	0.81
		500	0.81				
		600	0.92				
6	70.53	75	0.19	6	70.60	150	0.32
		150	0.34			250	0.47
		250	0.50			300	0.54
		400	0.71			400	0.67
		500	0.84			500	0.78
						600	0.89
7	70.70	400	0.76	7	70.80	200	0.47
		500	0.87			300	0.62
						400	0.75
						500	0.87
						600	(0.98)
7	70.90	300	0.60	8	70.100	75	0.22
		400	0.73			250	0.54
		500	0.86			300	0.61
						400	0.74
						500	0.86
						600	0.96
8	70.120	300	0.68	9	70.200	150	(0.44)
		400	0.81			250	(0.65)
		500	0.93			300	(0.74)
		600	1.03			400	(0.89)
						500	(1.02)
						600	(1.13)
						700	(1.23)
						800	(1.33)
						1000	(1.49)
						1200	(1.64)
						1500	(1.83)
						2000	(2.11)
						2500	(2.36)
						3000	(2.58)
						4000	(3.03)

Errata, Page 5
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
9	73.53	200	0.43	10	73.60	400	0.67
		250	0.51			500	0.79
		300	0.58			600	0.89
		400	0.72				
		500	0.85				
10	77.51	100	0.26	10	77.55	100	0.22
		250	0.52			250	0.47
		300	0.54				
		400	0.68				
			500			(0.81)	
11	77.57	100	0.22	11	80.55	50	0.14
		200	0.39			100	0.26
		400	(0.67)			200	0.44
		250	0.52				
		300	0.59				
		400	0.73				
		500	0.85				
		600	0.96				
12	80.60	75	0.20	12	80.70	75	0.21
		150	0.34			200	0.45
		300	0.57			300	0.60
		400	0.69			400	0.73
		500	0.81			500	0.85
		600	(0.91)			600	0.96
12	80.80	150	0.37	13	80.90	250	0.52
		250	0.53			300	0.59
		300	0.60			400	0.71
		400	0.73			500	0.83
		500	0.84				
		600	0.95				
13	80.100	150	0.42	13	80.120	200	0.55
		200	0.51			250	0.63
		400	0.79			300	0.71
		500	0.91			400	0.85
						500	0.97
			600	1.08			
14	80.200	250	0.67				
		300	0.76				
		400	0.92				
		500	1.05				
		600	1.16				

Errata, Page 6
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD		
14	82 ⁵ .56	250	0.52	15	83.60	200	0.44		
		300	0.59			300	0.59		
		400	0.73			400	0.71		
		500	0.85			500	0.83		
				600	0.96				
				700	1.06	15	90.28	100	0.26
				800	1.15				
				1000	1.32	15	90.32	300	0.62
				1200	1.47			400	0.76
		1500	1.68			500	0.88		
16	90.37	300	0.61	16	90.45	200	0.45		
		400	0.75			250	0.53		
		500	0.87			300	0.60		
						400	0.74		
						500	0.86		
			600			0.97			
			700			1.07			
			800			1.17			
			1000			1.34			
			1200			1.49			
			1500			1.72			
17	90.53	250	0.52			17	90.60	75	0.22
		300	0.59					150	0.37
		400	0.72					200	0.45
		500	0.84					400	0.72
				500	0.84				
17	90.70	75	0.21	18	90.80	250	0.57		
		125	0.31			300	0.64		
		250	0.51			400	0.77		
		300	0.58			500	0.89		
		400	0.71			600	0.99		
		500	0.83						
		600	0.93						
18	90.90	200	(0.55)	19	90.100	250	0.64		
		250	(0.64)			300	0.72		
		400	(0.85)			400	0.86		
		500	(0.97)			500	0.98		
		600	(1.08)			600	1.09		
		700	(1.17)						
		800	(1.26)	19	90.120	200	0.56		
		1000	(1.42)			250	0.65		
		1200	(1.57)			300	0.73		
		1500	(1.76)			400	0.87		
		2000	(2.04)			500	0.99		
		2500	(2.29)			600	(1.10)		
		3000	(2.52)						
4000	(2.98)								

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
19	90.140	125	0.39	20	90.160	125	0.39
		150	0.46			150	0.46
		250	0.67			200	0.58
		300	0.75			250	0.68
		400	0.89			300	0.76
		500	1.02			400	0.91
						500	1.04
20	90.180	125	0.39	20	90.200	75	0.23
		200	0.57			125	0.38
		300	0.74			250	0.69
		400	0.89			300	0.78
		500	1.01			400	0.93
		600	1.12			500	1.05
21	92.63 (S-5)	250	0.52	21	93.28	300	0.62
		300	0.59	22	93.30	50	0.15
		400	0.71			125	0.33
		500	0.82			200	0.47
		600	0.93			250	0.55
		700	1.03			300	0.62
		800	1.12			400	0.76
		1000	1.29			500	0.89
		1200	1.43				
		1500	1.63				
2000	1.91						
22	93.39 (S-3)	200	0.47	22	93.40	100	0.28
		250	0.55	200	0.47		
		300	0.62	300	0.62		
		400	0.76	400	0.75		
		500	0.87	500	0.87		
		600	0.98				
		700	1.08				
		800	1.18				
		1000	1.35				
		1200	1.50				
23	93.50	250	0.52	23	93.60	250	0.53
		300	0.59			300	0.60
		400	0.72			400	0.73
		500	0.84			500	0.85
		600	(0.95)			600	0.96
23	93.70	50	0.16	24	93.80	100	0.31
		200	0.51			200	0.53
		300	0.66			250	0.61
		400	0.79			300	0.69
		500	0.91			400	0.82
		600	(1.01)			500	0.94

Errata, Page 8
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
24	93.90	200	0.55	24	93.100	125	0.38
		250	0.63			200	0.53
		300	0.71			300	0.69
		400	0.84			400	0.82
		500	0.96			500	0.94
		600	1.07			600	1.04
25	100.30	200	0.44	26	100.35	100	0.30
		250	0.52			400	0.78
		300	0.59			500	0.90
		400	0.73			600	1.02
26	100.40	200	0.48	26	100.50	150	0.38
		250	0.56			250	0.54
		300	0.63			300	0.61
		400	0.76			400	0.74
		500	0.88			500	0.86
27	100.60	125	0.35	27	100.70	250	0.62
		200	0.49			300	0.70
		250	0.57			400	0.83
		300	0.64			500	0.95
		400	0.77			600	1.07
		500	0.89				
27	100.90	250	0.65	28	100.100	100	0.32
		300	0.73			125	0.39
		400	0.87			200	0.56
		500	0.99			300	0.72
				400	0.86		
				500	0.98		
28	100.120	250	0.67	29	103.51 (S-9)	125	(0.36)
		300	0.75			250	(0.59)
		400	0.89			300	(0.66)
		500	1.01			400	(0.80)
				500	(0.92)		
				600	(1.03)		
				700	(1.13)		
				800	(1.23)		
				1000	(1.40)		
				1200	(1.55)		
				1500	(1.75)		
				2000	(2.03)		
				2500	(2.27)		

Errata, Page 9
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD		
29	109.59 (S-58)	250	(0.59)	30	110.35	150	0.36		
		300	(0.66)			250	0.52		
		400	(0.79)			300	0.60		
		500	(0.91)			400	0.74		
		600	(1.02)			500	0.86		
		700	(1.12)			600	0.98		
		800	(1.21)			30	110.40	250	0.56
		1000	(1.38)					300	0.64
		1200	(1.53)					400	0.77
		1500	(1.72)					500	0.90
		2000	(1.99)					600	1.01
		2500	(2.23)						
		3000	(2.46)						
30	110.50	200	0.50	31	110.60	150	0.45		
		250	0.58			200	0.55		
		300	0.65			300	0.71		
		400	0.79			400	0.85		
		500	0.90			500	0.97		
31	110.70	150	0.42			600	1.08		
		200	0.51			700	1.17		
		250	0.59			800	1.27		
		300	0.66			1000	1.43		
		400	0.79			1200	1.58		
		500	0.91	1500	1.78				
		600	1.01	2000	2.06				
		2500	2.31						
		3000	2.53						
32	110.80	20	0.07	32	110.100	250	0.69		
		125	0.38			300	0.77		
		200	0.53			400	0.92		
		250	0.61			500	1.04		
		400	0.82			600	1.15		
		500	0.94						
		600	1.04						
33	110.120	100	0.33	33	115.35	200	0.49		
		125	0.41			250	0.57		
		200	0.61			300	0.64		
		250	0.71			400	0.78		
		300	0.79			500	0.90		
		400	0.93						
		500	1.06						
34	120.45	50	0.16	34	120.50	300	0.63		
		300	0.64			400	0.76		
		400	0.78			500	0.88		
		500	0.91			600	0.99		

* For Sta. 110.90
see Errata, Page
10.

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
34	120.60	50	0.17	35	120.70	250	0.58
		200	0.50			300	0.65
		250	0.58			400	0.79
		300	0.65			500	0.91
		400	0.79			600	(1.02)
		500	0.91				
		600	1.02				
35	120.80	150	0.43	35	120.90	250	0.64
		200	0.52			300	0.71
		250	0.60			400	0.85
		300	0.67			500	0.97
		400	0.80				
		500	0.92				
36	120.100	200	0.58	36	120.120	200	0.60
		250	0.67			250	0.69
		300	0.75			300	0.77
		400	0.89			400	0.91
		500	1.02			500	1.03
				600	1.14		
36	123.42	200	0.45	37	127.40	150	0.41
		300	0.60			250	0.57
		400	0.73			300	0.64
		500	0.86			400	0.78
		600	0.97			500	0.90
37	130.40	125	0.35	38	130.50	250	0.56
		250	0.57			300	0.64
		300	0.64			400	0.77
		400	0.78			500	0.89
		500	0.90			600	1.00
38	130.60	125	0.37	38	130.70	150	0.45
		150	0.42			200	0.54
		200	0.51			250	0.62
		250	0.59			300	0.69
		300	0.67			400	0.83
		400	0.80			500	0.95
		500	0.93			600	1.05
		600	1.04				
39	130.80	150	0.47	* 32	110.90	200	0.56
		200	0.57			300	0.72
		250	0.65			400	0.86
		300	0.73			500	0.98
		400	0.87			600	1.09
		500	0.99				
		600	1.09				

Errata, Page 11
28 October 1963

Page	Sta.	Depth	ΔD	Page	Sta.	Depth	ΔD
39	130.90	100	0.34	39	130.100	200	0.55
		150	0.47			250	0.63
		200	0.57			300	0.70
		250	0.65			400	0.84
		300	0.73			500	0.96
		400	0.87			600	(1.08)
		500	0.99				
	600	1.10					
40	130.120	200	0.57	40	137.30	250	0.59
		250	0.65			300	0.67
		300	0.73			400	0.82
		400	0.87				
		500	1.00				
		600	1.11				
41	137.40	200	0.57	41	137.50	125	0.42
		300	0.73			200	0.57
		400	0.88			250	0.65
		500	1.00			300	0.73
41	137.60	300	0.70			400	0.86
		400	0.83			500	0.99
		500	0.95				
		600	1.06	42	137.80	200	0.59
		250	0.67				
		300	0.75				
		400	0.89				
42	137.70	150	0.49			500	1.01
		250	0.68				
		300	0.76	42	140.30	75	0.24
		400	0.89				
		500	1.02				
		600	1.12				
		43	140.50			200	0.53
						250	0.61
				300	0.68		
				400	0.82		
				500	0.95		
				600	(1.06)		

2. CCOFI Cruise 6203-4 (SIO Ref. 63-9)

Page 89: The first station number should be 110.160 (not 110.60).

Page 90: The cruise identification in upper left-hand margin should be 6203-4 (not 6302-4).

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

SIO
CCOFI
6201-2

HORIZON; January 20-21, 1962; 2328, 0000 GCT; 37°53.5'N, 123°02'W; sounding, 44 fm; wind, 270°, force 5; weather, overcast; sea, high; wire angle, 24°, 15°.

60.52

1	10.88	33.43 7	5.87	239	0	(10.88)	(33.44)	(5.87)	(25.60)	(239)	(0.00)
					10	10.89	33.42	5.75	25.59	241	0.02
11a)	10.89	33.42 4	5.74	241	20	10.91	33.43	5.81	25.59	240	0.05
					30	10.88	33.47	5.38	25.63	237	0.07
19	10.91	33.43 4	5.81	240	50	10.50	33.60	4.17	25.79	221	0.12
37	10.80	33.51 7	4.70	232							
60	10.20	33.67 5	3.72	211							

HORIZON; January 21, 1962; 0520 GCT; 37°34.5'N, 123°38'W; sounding, 1760 fm; wind, 320°, force 8; weather, rain; sea, very rough; wire angle, 35°.

60.60

1	11.80	33.50 5	5.68	250	0	(11.80)	(33.50)	(5.68)	(25.48)	(251)	(0.00)
9	11.78	33.50 9	5.65	250	10	11.78	33.51	5.65	25.49	250	0.03
25	11.80	33.50 1	5.60	251	20	11.79	33.50	5.62	25.48	251	0.05
48	11.78	33.50 3	5.63	250	30	11.80	33.50	5.61	25.48	251	0.08
58	11.51	33.52 8	5.10	244	50	11.78	33.51	5.60	25.49	250	0.13
70	10.06	33.62 5	3.67	212	75	9.97	33.65	3.59	25.92	209	0.18
83	9.42	33.73 3	3.32	194	100	9.11	33.83	2.96	26.21	182	0.23
97	9.17	33.82 2	2.96	184	125	8.72	33.89		26.31	172	0.28
119	8.76	33.87 1	3.02	174	150	8.52	33.96		26.40	164	0.32
134	8.66	33.91 3	-	169	200	8.42	34.08	1.70	26.51	153	0.40
161	8.45	33.99 0	2.20	160	250	7.69	34.11	1.46	26.64	141	0.47 48
187	8.66	34.07 9	1.73	157	300	7.23	34.13	1.27	26.72	133	0.54 55
213	8.07	34.08 5	1.70	148	400	6.25	34.16	0.83	26.84	122	0.67 68
256	7.62	34.11 0	1.44	140	500	5.77	34.22	0.45	26.99	108	0.78 80
306	7.18	34.12 7	1.26	132							
382	6.62	34.15 9	0.92	123							
460	6.03	34.19 9	0.54	113							
541	5.50	34.25 5	0.37	102							

1000
 2000
 3000
 4000
 5000
 6000
 7000
 8000
 9000
 10000
 P1-43

HORIZON; January 21, 1962; 1132 GCT; 37°15'N, 124°23.5'W; sounding, 2145 fm; wind, 320°, force 8; weather, hail showers; sea, high; wire angle, 43°.

60.70

1	11.41	33.32 9	5.95	256	0	(11.41)	(33.33)	(5.95)	(25.42)	(256)	(0.00)
9	11.42	33.32 3	5.99	257	10	11.42	33.32	5.99	25.41	257	0.03
27	11.42	33.32 4	5.91	257	20	11.42	33.32	5.94	25.41	257	0.05
48	11.38	33.32 2	5.93	256	30	11.41	33.32	5.91	25.42	257	0.08
56	11.42	33.32 2	6.01	257	50	11.38	33.32	5.94	25.42	257	0.13
69	9.79	33.45 1	4.61	221	75	9.52	33.51	4.33	25.89	212	0.19
80	9.39	33.55 1	4.14	207	100	9.03	33.74	3.31	26.15	187	0.24
89	9.26	33.64 7	3.70	198	125	8.54	33.88	2.88	26.33	170	0.28
110	8.81	33.80 3	3.05	180	150	8.24	33.92	3.27	26.41	163	0.32 33
122	8.58	33.87 3	2.84	171	200	7.63	33.99	3.00	26.56	149	0.40
142	8.32	33.89 5	3.14	166	250	6.92	34.03	1.96	26.69	136	0.47 48
166	8.04	33.95 9	3.45	157	300	6.35	34.06	1.46	26.79	127	0.54 55
187	7.78	33.97 2	3.35	152	400	5.68	34.12	0.76	26.92	114	0.66 67
222	7.37	34.00 8	2.22	144	500	(5.29)	(34.23)		(27.05)	(102)	(0.77) 78
268	6.64	34.03 5	1.81	132							
342	6.02	34.08 9	1.11	121							
411	5.62	34.13 3	0.70	113							
470	5.39	34.19 7	0.44	105							

a) The 10-meter Nansen bottle, inadvertently omitted from the first cast, was cast separately.

S10

CCOFI
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

60.80

HORIZON; January 22, 1962; 0051 GCT; 36°56.5'N, 125°03'W; sounding, 2290 fm; wind, 330°, force 8; weather, cloudy; sea, high; wire angle, 30°.

10	11.12	33.29 6	5.85	254	0	11.1	(33.30)		(25.46)	(253)	(0.00)
34	11.12	33.29 3	5.85	254	10	11.12	33.30	5.85	25.45	254	0.03
62	10.98	33.30 4	5.80	251	20	11.12	33.29	5.85	25.44	254	0.05
73	9.89	33.51 6	4.21	217	30	11.12	33.29	5.85	25.44	254	0.08
92	9.10	33.73 6	3.28	189	50	11.11	33.29	5.84	25.45	254	0.13
106	8.81	33.80 5	3.02	179	75	9.79	33.54	4.10	25.87	214	0.19
121	8.60	33.86 8	2.78	172	100	8.92	33.78	2.13	26.20	183	0.24
151	8.12	33.95 7	2.29	158	125	8.54	33.88	2.71	26.33	170	0.28
170	7.84	33.98 3	2.29	152	150	8.15	33.95	2.31	26.45	159	0.32
199	7.36	34.00 1a)	2.18	144	200	7.34	34.00	2.15	26.61	144	0.40
232	7.20	33.96 7a)	1.88	145	250	7.03	34.01	1.84	26.66	139	0.47
260	6.92	34.03 9	1.82	136	300	6.55	34.07	1.40	26.77	129	0.53 54
308	6.48	34.08 0	1.30	127	400	5.91	34.15	0.72	26.91	115	0.66 67
371	6.08	34.13 3	0.78	118	500	5.37	34.22	0.52	27.04	103	0.76 78
467	5.55	34.20 1	0.67	107	600	4.84	34.28	0.28	27.14	93	0.86 89
554	5.06	34.25 2	0.33	97							
625	4.74	34.29 3	0.26	91							

60.90

HORIZON; January 22, 1962; 1507 GCT; 36°35.5'N, 125°49.5'W; sounding, 2000+ fm; wind, 350°, force 6; weather, cloudy; sea, high; wire angle, 20°.

1	11.08	33.32 6	5.91	251	0	(11.08)	(33.33)	(5.91)	(25.48)	(251)	(0.00)
11	11.06	33.31 9	5.93	251	10	11.06	33.32	5.93	25.48	251	0.03
35	11.08	33.31 5	5.94	252	20	11.06	33.32	5.93	25.48	251	0.05
63	11.10	33.32 6	5.88	251	30	11.07	33.32	5.94	25.48	251	0.08
73	11.09	33.32 3	5.87	251	50	11.09	33.32	5.90	25.47	252	0.13
92	10.00	33.56 5	3.96	216	75	11.05	33.33	5.85	25.49	250	0.19
105	9.32	33.72 2	3.33	193	100	9.62	33.66	3.56	25.99	202	0.24 25
119	8.92	33.79 9	3.05	181	125	8.80	33.83	3.00	26.25	177	0.29
149	8.46	33.91 9	2.83	166	150	8.44	33.92	2.82	26.38	165	0.34
168	8.16	33.96 9	2.72	158	200	7.55	33.99	2.44	26.57	148	0.41 42
196	7.60	33.98 5	2.48	149	250	7.12	34.05	1.81	26.68	137	0.48 49
230	7.24	34.02 9	2.04	141	300	6.67	34.07	1.50	26.75	130	0.55 56
259	7.06	34.05 5	1.76	136	400	5.87	34.12	0.90	26.90	117	0.68 69
308	6.60	34.06 8	1.46	129	500	5.27	34.21	0.48	27.04	103	0.78 80
370	6.10	34.10 1	1.06	121	600	4.74	34.27	0.31	27.15	93	0.88 91
468	5.41	34.18 0	0.59	107							
555	5.03	34.25 6	0.34	97							
629	4.53	34.28 2	0.30	90							

60.100

HORIZON; January 22, 1962; 2052 GCT; 36°19'N, 126°31'W; sounding, 2470 fm; wind, 350°, force 7; weather, cloudy; sea, high; wire angle, 15°.

1	10.92	33.24 9	5.95	254	0	(10.92)	(33.25)	(5.95)	(25.45)	(254)	(0.00)
11	10.90	33.25 0	5.92	254	10	10.90	33.25	5.92	25.45	254	0.03
35	10.92	33.24 6	5.96	254	20	10.90	33.25	5.94	25.45	254	0.05
65	10.92	33.24 8	5.95	254	30	10.91	33.25	5.95	25.45	254	0.08
75	10.42	33.25 9	5.45	245	50	10.92	33.25	5.95	25.45	254	0.13
94	9.90	33.52 6	4.32	217	75	10.42	33.26	5.45	25.54	245	0.19
109	9.18	33.73 6	3.30	190	100	9.66	33.62	3.89	25.95	206	0.25
124	8.64	33.79 6	3.35	178	125	8.61	33.80	3.36	26.26	177	0.29 30
153	8.04	33.84 2	3.38	165	150	8.08	33.84	3.35	26.37	166	0.34
172	7.96	33.90 3	3.70	160	200	7.70	33.98	2.34	26.54	150	0.42
202	7.67	33.98 8	2.32	149	250	7.08	33.99	2.48	26.63	141	0.49
236	7.28	33.99 6	2.35	144	300	6.43	34.01	2.18	26.74	132	0.56
266	6.82	33.99 2	2.60	138	400	5.90	34.10	1.04	26.88	118	0.68 69
315	6.30	34.01 6	1.93	130	500	5.71	34.22	0.47	26.99	107	0.79 81
380	5.94	34.06 8	1.22	121	600	5.06	34.26	0.30	27.10	97	0.90 92
480	5.82	34.21 4	0.52	109							
570	5.19	34.23 8	0.33	100							
645	4.92	34.30 4	0.27	92							

a) Salinity values verified by drawing additional samples from Nansen bottles.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
CCOF1
6201-2

HORIZON; January 23, 1962; 0608 GCT; 35°42'N, 127°57'W; sounding, 2000+ fm; wind, 350°, force 7; weather, partly cloudy; sea, high; wire angle, 30°.

60120

0	12.20	33.03 5	5.97	292	0	12.20	33.04	5.97	25.05	292	0.00
8	12.20	33.02 9	5.85	293	10	12.20	33.03	5.85	25.04	293	0.03
31	12.21	33.03 0	5.84	293	20	12.20	33.03	5.84	25.04	293	0.06
57	12.20	33.03 4	5.93	292	30	12.21	33.03	5.84	25.04	293	0.09
64	12.18	33.02 4	5.97	293	50	12.20	33.03	5.90	25.04	293	0.15
82	10.66	33.08 7	5.65	262	75	11.90	33.03	5.92	25.10	287	0.22
95	10.29	33.13 1	5.49	252	100	10.25	33.17	5.41	25.50	249	0.29
106	10.19	33.25 1	5.28	242	125	9.50	33.44	4.57	25.84	217	0.34
132	9.27	33.50 4	4.33	209	150	9.02	33.71	3.87	26.13	190	0.39
147	9.06	33.68 6	3.90	192	200	8.56	33.94	3.99	26.38	166	0.48
171	8.72	33.85 6	3.75	174	250	7.62	33.97	3.11	26.54	150	0.56
200	8.56	33.93 5	3.99	166	300	6.80	33.99	2.38	26.67	138	0.63
225	8.12	33.97 7	3.76	157	400	6.01	34.11	1.31	26.87	119	0.76
266	7.30	33.97 4	2.77	145	500	5.07	34.13	0.71	27.00	107	0.88
322	6.53	34.01 1	2.14	133							
409	5.94	34.11 9	1.24	117							
491	5.12	34.12 0	0.73	108							
562	4.70	34.18 9	0.55	98							

HORIZON; January 23, 1962; 1448 GCT; 34°58'N, 129°17.5'W; sounding, 2545 fm; wind, 020°, force 6; weather, cloudy; sea, high; wire angle, 31°.

60140

1	13.79	33.30 0	5.61	303	0	(13.79)	(33.30)	(5.61)	(24.94)	(303)	(0.00)
10	13.79	33.29 9	5.63	303	10	13.79	33.30	5.63	24.94	303	0.03
33	13.80	33.28 6	5.60	304	20	13.79	33.29	5.62	24.93	303	0.06
60	13.86	33.31 3	5.47	303	30	13.80	33.29	5.60	24.93	303	0.09
69	13.84	33.31 8	5.57	302	50	13.83	33.30	5.50	24.93	303	0.15
87	13.18	33.17 6	5.59	300	75	13.84	33.31	5.58	24.94	303	0.23
101	12.21	33.32 3	5.65	271	100	12.23	33.32	5.65	25.26	272	0.30
115	10.88	33.19 7	5.38	257	125	11.11	33.34	5.30	25.48	251	0.36
142	10.52	33.46 4	5.20	231	150	10.18	33.53	5.12	25.80	221	0.42
160	9.75	33.60 0	4.94	209	200	8.91	33.86	4.26	26.26	177	0.52
187	9.07	33.79 9	4.27	184	250	8.14	33.98	4.03	26.47	157	0.61
219	8.68	33.94 6	4.25	167	300	7.10	33.97	3.45	26.62	143	0.68
247	8.20	33.98 3	4.06	157	400	5.83	33.99	2.27	26.80	126	0.82
293	7.21	33.97 2	3.54	144	500	5.13	34.07	1.11	26.95	112	0.93
353	6.36	33.97 1	2.84	134	600	(4.74)	(34.20)	(0.50)	(27.09)	(98)	(1.04)
443	5.44	34.02 1	1.74	119							
526	5.02	34.11 2	0.88	107							
595	4.76	34.19 1	0.50	99							

HORIZON; January 24, 1962; 0013 GCT; 34°17'N, 130°44.5'W; sounding, 2000+ fm; wind, 360°, force 4; weather, partly cloudy; sea, very rough; wire angle, 21°.

60160

1	15.12	33.63 2	5.62	305	0	(15.12)	(33.63)	(5.62)	(24.91)	(305)	(0.00)
11	15.09	33.62 9	5.60	305	10	15.09	33.63	5.60	24.92	305	0.03
34	15.16	33.65 1	5.62	304	20	15.11	33.63	5.61	24.91	305	0.06
62	15.24	33.73 0	5.50	300	30	15.15	33.65	5.62	24.92	304	0.09
72	15.20	33.72 1	5.46	300	50	15.22	33.70	5.56	24.94	302	0.15
90	15.21	33.75 1	5.42	298	75	15.20	33.72	5.45	24.96	300	0.23
104	15.18	33.74 0	5.50	298	100	15.20	33.75	5.44	24.99	298	0.30
118	13.02	33.45 8	5.52	276	125	12.35	33.45	5.40	25.34	264	0.37
148	10.86	33.44 5	5.06	239	150	10.74	33.45	5.04	25.64	236	0.44
166	10.10	33.56 3	4.96	217	200	9.16	33.74	4.43	26.13	189	0.54
195	9.16	33.69 3	4.42	193	250	9.10	34.02	4.59	26.36	168	0.63
228	9.42	34.00 1	4.59	174	300	7.98	34.00	3.87	26.51	153	0.71
257	8.96	34.02 1	4.59	166	400	6.23	33.98	2.85	26.74	131	0.85
305	7.86	33.99 3	3.81	152	500	5.23	34.04	1.40	26.91	115	1.08
368	6.70	33.97 6	3.38	138	600	4.70	34.13	0.76	27.04	103	1.09
465	5.51	34.00 7	1.81	121							
553	4.90	34.08 5	0.92	108							
628	4.61	34.15 3	0.70	100							

S10

CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

60180

HORIZON; January 24, 1962; 0857 GCT; 33°34.5'N, 132°11'W; sounding, 2700 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 19°.

1	15.64	33.87 9	5.45	298	0	(15.64)	(33.88)	(5.45)	(24.99)	(298)	(0.00)
11	15.64	33.88 2	5.48	298	10	15.64	33.88	5.48	24.99	298	0.03
30	15.66	33.87 8	5.45	298	20	15.65	33.88	5.47	24.99	298	0.06
58	15.67	33.88 6	5.48	298	30	15.66	33.88	5.45	24.98	298	0.09
68	15.66	33.88 1	5.45	298	50	15.67	33.88	5.47	24.98	298	0.15
82	15.65	33.88 1	5.45	298	75	15.65	33.88	5.45	24.99	298	0.22
96	15.66	33.88 8	5.45	298	100	15.62	33.89	5.46	25.00	297	0.30
110	15.45	33.90 7	5.47	292	125	14.30	33.90	5.36	25.29	269	0.37
133	14.12	33.89 4	5.34	266	150	13.18	33.81	5.34	25.46	253	0.43 ⁴⁴
151	13.10	33.80 4	5.34	252	200	9.81	33.70	4.19	25.99	203	0.55 ⁵⁵
179	11.28	33.66 7	5.02	229	250	8.71	33.93	1.99	26.35	169	0.64 ⁶⁵
207	9.44	33.72 9	3.88	195	300	8.39	34.04	1.40	26.48	156	0.72 ⁷³
236	8.81	33.89 6	2.27	173	400	7.41	34.11	1.22	26.68	137	0.87 ⁸⁸
282	8.53	34.01 4	1.53	160	500	6.72	34.16	0.78	26.82	124	1.00 ⁰²
335	8.04	34.08 0	1.26	148							
414	7.29	34.11 7	1.21	135							
495	6.76	34.16 2	0.80	124							
575	6.13	34.17 7	0.62	115							

60200

HORIZON; January 24, 1962; 1700 GCT; 32°56.5'N, 133°28'W; sounding, 2375 fm; wind, 360°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

2	16.12	34.13 4	5.35	290	0	(16.12)	(34.13)	(5.35)	(25.07)	(290)	(0.00)
11	16.11	34.12 9	5.40	290	10	16.11	34.13	5.39	25.07	290	0.03
30	16.13	34.12 9	5.39	290	20	16.12	34.13	5.40	25.07	290	0.06
58	16.22	34.16 6	5.50	289	30	16.13	34.13	5.39	25.07	290	0.09
68	16.28	34.18 7	5.42	289	50	16.20	34.16	5.48	25.08	289	0.14 ¹⁵
83	16.27	34.20 5	5.35	288	75	16.28	34.19	5.40	25.08	289	0.22
97	16.52	34.28 6	5.32	287	100	16.54	34.30	5.33	25.10	287	0.29
111	16.55	34.30 7	5.35	286	125	15.82	34.20	5.30	25.19	278	0.36
135	15.12	34.11 4	5.27	270	150	14.39	34.03	5.13	25.38	261	0.43
154	14.22	-	5.13	-	200	12.50	33.90	5.16	25.66	234	0.55 ⁵⁶
183	13.27	33.94 1	5.20	245	250	9.98	33.87	4.69	26.09	193	0.66 ⁶⁷
211	11.86	33.86 7	5.05	225	300	9.02	33.99	4.36	26.35	169	0.75 ⁷⁶
240	10.20	33.83 9	4.75	199	400	7.11	34.05	2.93	26.68	137	0.90 ⁹²
289	9.24	33.97 9	4.49	173	500	5.74	34.07	1.23	26.87	119	1.03 ⁰⁵
344	8.10	33.99 6	3.75	155	600	(5.09)	(34.15)	(0.74)	(27.01)	(105)	(1.14) ¹⁷
426	6.70	34.06 9	2.53	131							
509	5.66	34.07 7	1.17	117							
593	5.12	34.14 6	0.74	106							

6352

HORIZON; January 18, 1962; 2242 GCT; 37°18.5'N, 122°37'W; sounding, 46 fm; wind, 160°, force 1; weather, overcast; sea, slight; wire angle, 00°.

0	11.59	33.54 5	5.86	244	0	11.59	33.54	5.86	25.55	244	0.00
9	11.44	33.54 2	5.91	241	10	11.42	33.54	5.90	25.58	241	0.02
30	11.04	33.58 6	4.66	231	20	11.24	33.56	5.37	25.63	237	0.05
50	10.60	33.65 8	3.76	218	30	11.04	33.59	4.66	25.69	231	0.07
					50	10.60	33.66	3.76	25.82	218	0.12

6355

HORIZON; January 18, 1962; 2039 GCT; 37°14'N, 122°50.5'W; sounding, 168 fm; wind, 320°, force 2; weather, drizzle; sea, moderate; wire angle, 03°.

0	12.21	33.58 6	5.67	252	0	12.21	33.59	5.67	25.48	251	0.00
10	12.18	33.58 2	5.61	252	10	12.18	33.58	5.61	25.47	252	0.03
30	12.18	33.58 4	5.64	251	20	12.18	33.58	5.62	25.47	252	0.05
50	11.91	33.60 8	4.68	245	30	12.18	33.58	5.64	25.47	252	0.08
75	10.30	33.77 4	2.80	205	50	11.91	33.61	4.68	25.55	245	0.13
100	9.68	33.83 9	2.09	190	75	10.30	33.77	2.80	25.96	205	0.18
125	9.30	34.02 7	2.02	170	100	9.68	33.84	2.09	26.12	190	0.23
165	8.68	34.03 5	2.38	160	125	9.30	34.03	2.02	26.33	170	0.28
205	8.20	34.04 5	1.96	153	150	8.91	34.03	2.00	26.39	164	0.32
255	7.92	34.08 3	1.83	146	200	8.24	34.04	1.97	26.51	154	0.40
					250	7.95	34.08	1.84	26.58	147	0.47 ⁴⁸

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HORIZON; January 18, 1962; 1614 GCT; 37°02'N, 123°15'W; sounding, 1400 fm; wind, 310°, force 3; weather, cloudy; sea, rough; wire angle, 07°.

63.60

1	11.74	33.35 2	6.11	261	0	(11.74)	(33.35)	(6.11)	(25.38)	(261)	(0.00)
11	11.73	33.34 7	6.11	261	10	11.73	33.35	6.11	25.38	261	0.03
31	11.96	33.48 2	5.90	255	20	11.83	33.40	6.06	25.40	259	0.05
41	11.78	33.48 8	5.55	251	30	11.95	33.48	5.93	25.44	255	0.08
55	10.33	33.61 4	3.82	217	50	10.90	33.56	4.37	25.69	231	0.13
70	9.54	33.67 5	3.58	200	75	9.39	33.72	3.43	26.07	194	0.18
94	9.00	33.85 5	2.98	179	100	8.91	33.87	2.97	26.27	176	0.23
114	8.76	33.88 6	2.96	173	125	8.64	33.91	2.86	26.34	169	0.27
135	8.53	33.94 7	2.72	165	150	8.32	33.98	2.56	26.45	159	0.31
155	8.24	33.99 0	2.55	157	200	7.61	34.04	2.17	26.60	145	0.39
183	7.78	34.01 7	2.36	149	250	7.20	34.08	1.60	26.69	136	0.46
218	7.47	34.06 1	1.93	141	300	6.73	34.11	1.09	26.78	128	0.52
246	7.22	34.08 0	1.62	137	400	6.23	34.20	0.66	26.91	115	0.64
297	6.76	34.10 7	1.14	129	500	5.57	34.24	0.40	27.03	104	0.75
351	6.68	34.20 7	0.68	120	600	5.16	34.33	0.22	27.15	93	0.85
434	5.94	34.20 0	0.62	111							
519	5.48	34.25 3	0.36	102							
603	5.14	34.32 8	0.21	93							

HORIZON; January 18, 1962; 0541 GCT; 36°49.5'N, 122°05'W; sounding, 60 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 05°.

67.50

1	11.88	33.58 8	5.62	246	0	(11.88)	(33.59)	(5.62)	(25.54)	(246)	(0.00)
11	11.90	33.57 7	5.56	247	10	11.90	33.58	5.57	25.53	247	0.02
31	11.68	33.56 3	5.37	244	20	11.83	33.57	5.49	25.53	246	0.05
51	11.36	33.55 8	4.77	239	30	11.71	33.57	5.39	25.55	244	0.07
76	10.50	33.67 5	3.51	216	50	11.39	33.56	4.81	25.61	239	0.12
					75	10.54	33.66	3.60	25.83	217	0.18

HORIZON; January 18, 1962; 0819 GCT; 36°38.5'N, 122°27'W; sounding, 1200 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 14°.

67.55

1	11.78	33.61 3	5.46	242	0	(11.78)	(33.61)	(5.46)	(25.57)	(242)	(0.00)
11	11.77	33.60 7	5.61	242	10	11.77	33.61	5.60	25.57	242	0.02
35	11.78	33.61 5	5.59	242	20	11.77	33.61	5.60	25.57	242	0.05
64	10.34	33.73 1	3.19	209	30	11.78	33.61	5.59	25.57	242	0.07
74	10.06	33.80 5	2.72	199	50	11.58	33.63	5.27	25.62	237	0.12
94	9.82	33.86 2	2.51	191	75	10.03	33.81	2.70	26.04	198	0.17
108	9.58	33.92 4	2.35	182	100	9.72	33.89	2.44	26.15	187	0.22
124	9.56	33.97 4	2.24	178	125	9.55	33.98	2.21	26.25	178	0.27
153	9.28	34.05 5	1.81	168	150	9.31	34.05	1.82	26.35	169	0.31
174	9.10	34.06 7	1.73	164	200	8.94	34.11	1.57	26.45	159	0.39
203	8.92	34.11 1	1.54	158	250	8.56	34.17	1.31	26.56	149	0.47
238	8.64	34.15 7	1.38	151	300	8.05	34.19	1.13	26.65	140	0.54
269	8.39	34.17 9	1.24	145	400	6.89	34.22	0.70	26.84	122	0.67
318	7.84	34.19 3	1.04	137	500	5.98	34.26	0.41	26.99	107	0.79
383	7.03	34.21 6	0.77	124	600	5.24	34.29	0.30	27.11	97	0.89
482	6.14	34.25 3	0.46	110							
572	5.39	34.27 5	0.31	99							
648	5.04	34.32 2	0.29	92							

S10

CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

67.60

HORIZON; January 18, 1962; 1122 GCT; 36°29.5'N, 122°47.5'W; sounding, 1620 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 21°.

1	12.25	33.59 6	5.79	252	0	(12.25)	(33.60)	(5.79)	(25.48)	(251)	(0.00)
10	12.24	33.58 7	5.69	252	10	12.24	33.59	5.69	25.47	252	0.03
29	12.24	33.59 3	5.63	252	20	12.24	33.59	5.66	25.47	252	0.05
57	11.48	33.61 5	4.31	237	30	12.24	33.59	5.63	25.47	252	0.08
67	10.66	33.59 6	3.83	224	50	12.24	33.59	5.60	25.47	252	0.13
81	10.18	33.71 0	3.27	208	75	10.50	33.63	3.61	25.82	219	0.18
94	9.72	33.76 8	3.21	196	100	9.50	33.79	2.90	26.11	191	0.24
108	9.59	33.82 6	2.82	190	125	9.49	33.93	2.36	26.22	180	0.28
130	9.38	33.96 3	2.19	176	150	9.13	34.03	1.92	26.36	168	0.33
149	9.14	34.03 0	1.93	168	200	8.67	34.10	1.57	26.49	155	0.41
177	8.80	34.04 6	1.87	161	250	7.50	34.05	1.96	26.62	143	0.48
203	8.63	34.10 8	1.56	154	300	6.94	34.07	1.53	26.72	134	0.55
230	7.74	34.04 3	2.04	146	400	6.13	34.14	0.84	26.88	118	0.68
276	7.20	34.05 3	1.77	138	500	5.62	34.23	0.44	27.01	105	0.79
326	6.66	34.08 8	1.31	129							
406	6.09	34.14 3	0.81	117							
489	5.68	34.22 0	0.45	107							
571	5.26	34.25 3	0.43	100							

70.53

HORIZON; January 17, 1962; 2338 GCT; 36°07.5'N, 121°54.5'W; sounding, 580 fm; wind, 300°, force 7; weather, partly cloudy; sea, very rough; wire angle, 42°.

1	12.18	33.59 7	5.45	250	0	(12.18)	(33.60)	(5.45)	(25.49)	(250)	(0.00)
9	12.18	33.56 7	5.47	253	10	12.18	33.57	5.46	25.47	252	0.03
28	12.18	33.58 0	5.42	252	20	12.18	33.58	5.44	25.47	252	0.05
53	12.10	33.58 6	5.32	250	30	12.17	33.58	5.41	25.48	251	0.08
61	11.52	33.60 4	4.46	238	50	12.12	33.58	5.35	25.48	251	0.13
77	10.74	33.64 9	3.79	221	75	10.82	33.64	3.87	25.77	223	0.18
89	10.30	33.68 8	3.46	211	100	9.99	33.73	3.26	25.98	203	0.24
101	9.95	33.73 1	3.21	202	125	9.58	33.85	2.78	26.15	188	0.29
124	9.60	33.84 3	2.80	189	150	9.41	33.96	2.18	26.26	177	0.33
141	9.46	33.91 8	2.39	181	200	8.65	34.04	2.11	26.44	160	0.42
164	9.32	34.03 0	1.90	170	250	8.03	34.07	1.85	26.56	148	0.49
192	8.75	34.04 4	2.01	161	300	7.55	34.09	1.48	26.65	140	0.57
217	8.42	34.03 4	2.21	157	400	7.06	34.22	0.82	26.82	124	0.70
256	7.97	34.07 8	1.77	147	500	6.30	34.24	0.48	26.94	113	0.82
308	7.50	34.11 7	1.44	138							
388	7.14	34.21 4	0.90	125							
466	6.48	34.22 7	0.57	116							
536	6.14	34.27 2	0.40	108							

70.60

HORIZON; January 17, 1962; 1820 GCT; 35°54.5'N, 122°21'W; sounding, 1485 fm; wind, 320°, force 6; weather, partly cloudy; sea, rough; wire angle, 20°.

1	12.09	33.54 2	5.61	253	0	(12.09)	(33.54)	(5.61)	(25.46)	(253)	(0.00)
11	12.06	33.53 9	5.60	253	10	12.06	33.54	5.60	25.46	252	0.03
34	12.08	33.54 5	5.64	252	20	12.07	33.54	5.62	25.46	253	0.05
62	10.56	33.68 5	3.46	216	30	12.08	33.54	5.64	25.46	253	0.08
72	10.26	33.72 5	3.28	208	50	11.75	33.57	5.20	25.55	245	0.13
90	9.38	33.86 1	2.81	184	75	10.10	33.75	3.19	25.98	203	0.18
104	9.06	33.90 4	2.59	176	100	9.18	33.89	2.63	26.24	179	0.23
118	8.96	33.96 3	2.38	170	125	8.87	33.98	2.33	26.36	167	0.27
146	8.63	34.01 2	2.20	161	150	8.61	34.02	2.15	26.43	160	0.31
166	8.53	34.07 0	1.95	156	200	8.36	34.15	1.50	26.57	147	0.39
195	8.45	34.14 9	1.49	149	250	7.69	34.13	1.41	26.66	139	0.46
227	7.73	34.09 7	1.65	142	300	7.54	34.22	0.81	26.75	130	0.53
255	7.68	34.14 3	1.37	138	400	6.62	34.24	0.63	26.89	117	0.65
302	7.52	34.22 6	0.80	130	500	5.97	34.28	0.46	27.01	106	0.76
364	6.96	34.23 8	0.68	121	600	5.43	34.32	0.34	27.11	96	0.87
460	6.14	34.25 5	0.57	110							
546	5.79	34.30 2	0.35	102							
619	5.30	34.32 5	0.34	95							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HORIZON; January 17, 1962; 1230 GCT; 35°32.5'N, 123°06'W; sounding, 2050 fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 26°.

70.70

1	12.10	33.12 0	5.92	284	0	(12.10)	(33.12)	(5.92)	(25.13)	(284)	(0.00)
10	12.12	33.11 8	5.92	285	10	12.12	33.12	5.92	25.13	284	0.03
28	12.11	33.12 0	6.00	284	20	12.12	33.12	5.96	25.13	284	0.06
55	12.10	33.11 9	5.87	284	30	12.11	33.12	5.99	25.13	284	0.09
64	12.12	33.11 7	6.06	285	50	12.10	33.12	5.90	25.13	284	0.14
77	11.92	33.15 3	5.87	278	75	12.00	33.14	5.92	25.17	281	0.21
90	11.37	33.22 0	5.80	264	100	11.11	33.26	5.59	25.42	256	0.28
103	10.14	33.30 4	5.03	237	125	9.48	33.61	4.07	25.97	204	0.34
123	9.53	33.58 8	4.13	206	150	8.98	33.81	3.60	26.21	182	0.39
139	9.20	33.73 3	3.68	191	200	8.11	33.96	3.26	26.46	158	0.47
164	8.75	33.89 1	3.51	172	250	7.53	34.03	2.30	26.60	144	0.55
188	8.35	33.94 8	3.22	162	300	6.61	34.00	2.60	26.71	135	0.62
213	7.88	33.96 5	3.28	154	400	5.59	34.03	1.65	26.86	120	0.74
253	7.50	34.03 2	2.29	144	500	5.24	34.15	0.70	27.00	107	0.86
299	6.63	34.00 3	2.60	135							
370	5.74	34.00 1	2.04	124							
444	5.42	34.08 6	1.08	114							
523	5.18	34.17 6	0.59	104							

HORIZON; January 17, 1962; 0737 GCT; 35°13'N, 123°48'W; sounding, 2173 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 14°.

70.80

1	12.68	33.07 5	5.99	298	0	(12.68)	(33.08)	(5.99)	(24.99)	(298)	(0.00)
11	12.66	33.06 2	5.94	299	10	12.66	33.06	5.95	24.98	299	0.03
31	12.68	33.06 2	5.91	299	20	12.66	33.06	5.92	24.98	299	0.06
60	12.72	33.19 1	5.76	290	30	12.68	33.06	5.91	24.97	299	0.09
69	11.95	33.14 8	5.75	279	50	12.72	33.12	5.80	25.01	295	0.15
84	10.70	33.36 0	4.82	242	75	11.18	33.27	5.21	25.42	257	0.22
98	10.24	33.52 0	4.26	223	100	10.18	33.53	4.18	25.80	221	0.28
113	9.86	33.61 1	3.77	210	125	9.52	33.71	3.33	26.05	197	0.33
137	9.22	33.83 1	2.91	184	150	9.10	33.90	2.62	26.26	177	0.38
156	9.05	33.93 4	2.51	173	200	8.62	34.02	1.86	26.43	161	0.46
186	8.76	33.99 8	2.00	164	250	8.11	34.11	1.51	26.58	147	0.54
215	8.48	34.05 4	1.75	156	300	7.57	34.14	1.14	26.68	137	0.61
244	8.18	34.10 2	1.57	148	400	6.61	34.20	0.74	26.86	120	0.74
293	7.67	34.14 3	1.18	138	500	6.00	34.24	0.39	26.97	109	0.85
347	6.96	34.14 8	1.01	128	600	(5.23)	(34.24)	(0.36)	(27.07)	(100)	(0.96)
431	6.42	34.22 1	0.61	116							
515	5.91	34.24 5	0.37	108							
599	5.26	34.24 1	0.36	100							

HORIZON; January 17, 1962; 0257 GCT; 34°54.5'N, 124°27'W; sounding, 2300 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 20°.

70.90

1	12.54	33.16 7	5.98	289	0	(12.54)	(33.17)	(5.98)	(25.09)	(288)	(0.00)
10	12.53	33.15 4	5.95	289	10	12.53	33.15	5.95	25.07	290	0.03
29	12.52	33.16 1	5.93	289	20	12.52	33.16	5.94	25.08	289	0.06
58	11.40	33.17 9	5.75	267	30	12.52	33.16	5.93	25.08	289	0.09
68	11.28	33.21 9	5.54	262	50	12.10	33.17	5.88	25.17	280	0.14
81	10.75	33.39 4	4.81	240	75	11.07	33.30	5.21	25.46	253	0.21
95	10.06	33.61 0	3.86	213	100	9.80	33.66	3.67	25.96	205	0.27
109	9.46	33.72 4	3.47	195	125	9.20	33.85	2.95	26.21	182	0.32
131	9.13	33.90 1	2.66	177	150	8.97	34.00	1.90	26.36	167	0.36
149	8.98	33.99 4	1.93	168	200	8.71	34.10	1.32	26.48	156	0.44
177	8.81	-	-	-	250	8.40	34.18	1.02	26.59	146	0.52
205	8.68	34.11 4	1.27	155	300	8.00	34.20	0.90	26.67	138	0.59
232	8.52	34.16 3	1.05	149	400	7.31	34.23	0.72	26.79	127	0.72
279	8.20	34.18 8	0.98	142	500	6.27	34.24	0.45	26.94	112	0.84
329	7.78	34.20 7	0.82	135							
409	7.24	34.23 3	0.71	125							
490	6.37	34.23 8	0.48	114							
573	5.82	34.26 7	0.33	105							

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

70.100

HORIZON; January 16, 1962; 2115 GCT; 34°35'N, 125°09.5'W; sounding, 2440 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 11°.

1	13.10	33.14 1	5.94	301	0	(13.10)	(33.14)	(5.94)	(24.95)	(301)	(0.00)
11	13.08	33.13 8	5.91	301	10	13.08	33.14	5.92	24.96	301	0.03
31	13.10	33.15 7	5.93	300	20	13.09	33.14	5.92	24.96	301	0.06
40	12.84	33.20 2	5.82	292	30	13.10	33.16	5.93	24.97	300	0.09
55	12.68	33.37 0	5.53	276	50	12.69	33.35	5.57	25.20	278	0.15
70	11.46	33.31 6	5.22	258	75	11.30	33.32	5.16	25.44	255	0.21
95	9.91	33.48 4	4.46	220	100	10.00	33.53	4.40	25.83	218	0.27
114	9.57	33.63 8	3.90	203	125	9.44	33.71	3.50	26.06	196	0.33
135	9.34	33.78 0	3.10	189	150	9.13	33.86	2.64	26.23	180	0.37
154	9.07	33.87 0	2.59	178	200	8.27	33.98	2.53	26.45	158	0.46
183	8.55	33.94 5	2.57	165	250	7.61	34.05	1.83	26.61	144	0.53
218	8.00	34.01 3	2.44	152	300	7.04	34.06	1.59	26.69	136	0.60
249	7.63	34.04 7	1.84	145	400	6.12	34.14	0.79	26.88	118	0.73
298	7.06	34.06 3	1.61	136	500	5.22	34.18	0.51	27.02	105	0.84
353	6.63	34.13 6	0.91	125	600	4.86	34.28	0.27	27.14	93	0.94
437	5.74	34.15 2	0.70	113							
522	5.08	34.19 4	0.46	102							
606	4.85	34.28 9	0.26	92							

70.120

HORIZON; January 16, 1962; 1215 GCT; 33°53.5'N, 126°33'W; sounding, 2000 fm; wind, 350°, force 3; weather, intermittent drizzle; sea, moderate; wire angle, 02°.

0	14.64	33.24 6	5.76a)	323	0	14.64	33.25	5.76	24.72	323	0.00
10	14.64	33.25 0	5.82b)	323	10	14.64	33.25	5.82	24.72	323	0.03
30	14.66	33.25 0	5.80c)	324	20	14.65	33.25	5.81	24.72	323	0.06
40	14.62	33.24 2	5.80	323	30	14.66	33.25	5.80	24.72	324	0.10
55	13.00	33.11 0	5.92	301	50	13.70	33.16	5.88	24.85	311	0.16
70	12.98	33.19 3	5.92	295	75	13.00	33.23	5.85	25.04	293	0.24
96	13.16	33.39 8	5.24	283	100	13.14	33.40	5.24	25.15	283	0.31
116	11.34	33.32 5	5.37	256	125	10.28	33.34	5.19	25.63	237	0.37
136	9.46	33.39 9	4.89	219	150	9.03	33.57	4.45	26.02	200	0.43
156	8.90	33.63 9	4.37	193	200	8.40	33.89	4.13	26.36	167	0.52
186	8.48	33.82 6	4.35	173	250	7.62	33.97	3.36	26.54	150	0.60
220	8.28	33.95 2	3.75	161	300	6.82	33.99	2.61	26.67	138	0.67
250	7.62	33.97 1	3.36	150	400	6.01	34.11	1.08	26.87	119	0.80
301	6.80	33.99 6	2.58	137	500	4.91	34.13	0.80	27.02	105	0.91
356	6.34	34.07 5	1.50	126	600	4.54	34.24	0.48	27.15	93	1.01
440	5.67	34.13 2	0.90	113							
525	4.70	34.13 3	0.78	102							
610	4.53	34.24 9	0.42	92							

- a) Alternate value, 5.64 ml/L, not used in interpolation.
 b) Alternate value, 5.60 ml/L, not used in interpolation.
 c) Alternate value, 5.49 ml/L, not used in interpolation.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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6201-2

HORIZON; January 25, 1962; 1254, 0931 GCT; 31°08.5'N, 132°02.5'W; sounding, 2550 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 20°, 27°.

70.200

2	15.91	33.93 8	5.39	299	0	(15.91)	(33.94)	(5.39)	(24.97)	(299)	(0.00)
11	15.90	33.93 1	5.36	300	10	15.90	33.93	5.36	24.97	300	(0.03)
87	15.94	33.93 0	5.41	301	20	(15.91)	(33.93)	(5.37)	(24.97)	(300)	(0.06)
100	15.90	33.94 0	5.31	299	30	(15.92)	(33.93)	(5.38)	(24.96)	(300)	(0.09)
116	14.23	33.85 0	5.30	271	50	(15.93)	(33.93)	(5.39)	(24.96)	(300)	(0.15)
144	12.90	33.78 2	5.25	250	75	(15.94)	(33.93)	(5.40)	(24.96)	(301)	(0.23)
171	11.82	33.70 9	5.12	236	100	15.90	33.94	5.31	24.98	299	(0.30)
199	10.46	33.71 9	4.72	212	125	13.74	33.82	5.29	25.35	263	(0.37)
250	9.30	33.98 4	4.55	174	150	12.68	33.77	5.23	25.52	247	(0.43)
297	8.39	34.01 1	4.10	158	200	10.40	33.72	4.71	25.91	211	(0.55)
344	7.32	33.98 6	3.25	145	250	9.30	33.98	4.55	26.29	174	(0.64)
395	6.48	33.99 7	2.56	133	300	8.32	34.01	4.05	26.47	157	(0.73)
443	6.26	34.09 3	1.34	123	400	6.42	34.00	2.44	26.73	132	(0.87)
490	5.86	34.11 6	0.96	117	500	5.77	34.12	0.88	26.91	115	(1.00)
542	5.48	34.19 2	0.63	107	600	5.22	34.24	0.38	27.07	100	(1.10)
590	5.26	34.23 3	0.41	101	700	4.88	34.32	0.24	27.17	90	(1.20)
686	4.92	34.29 7	0.28	93	800	4.52	34.38	0.28	27.26	82	(1.28)
932	4.02	34.45 9	0.42	71	1000	3.82	34.48	0.44	27.41	68	(1.43)
					1200	3.32	34.52	0.71	27.49	60	(1.56)
655a)	5.04	34.29	0.25	94	1500	2.83	34.57	0.96	27.58	52	(1.73)
752	4.70	34.35 2	0.24	86	2000	2.12	34.63	1.55	27.69	42	(1.96)
851	4.32	34.40 4	0.35	78	2500	1.77	34.66	2.10	27.74	37	(2.16)
948	3.98	34.45 8	0.35	71	3000	1.59	34.67	2.59	27.76	35	(2.34)
1184	3.34	34.51 5	0.70	60	4000	1.52	34.69	3.10	27.78	33	(2.67)
1423	2.93	34.56 0	0.89	53							
1663	2.65	34.58 4	1.09	49							
1903	2.26	34.61 9	1.45	43							
2146	1.97	34.63 8	1.71	40							
2389	1.82	34.66 7	1.92	36							
2632	1.70	34.65 5	2.23	37							
2877	1.61	34.66 6	2.47	35							
3119	1.57	34.67 3	2.70	34							
3362	1.51	34.67 8	2.81	33							
3606	1.49	34.68 5	2.97	33							
3848	1.50	34.69 2	3.03	32							
4089	1.52	34.68 6	3.14	33							
4330	1.54	34.68 8	3.14	33							

HORIZON; January 13, 1962; 0950 GCT; 35°29'N, 121°33.5'W; sounding, 525 fm; wind, 300°, force 6; weather, partly cloudy; sea, very rough; wire angle, 39°.

73.53

0	12.69	33.56 8	5.73	262	0	12.69	33.57	5.73	25.37	262	0.00
8	12.67	33.56 4	5.67	262	10	12.67	33.56	5.67	25.36	262	0.03
28	12.69	33.56 3	5.67	262	20	12.68	33.56	5.67	25.36	262	0.05
50	12.60	33.56 8	5.55	260	30	12.69	33.56	5.66	25.36	262	0.08
58	11.82	33.59 8	4.51	244	50	12.60	33.57	5.55	25.38	260	0.13
74	11.15	33.63 9	3.69	229	75	11.09	33.64	3.66	25.72	228	0.19
86	10.46	33.76 6	3.06	208	100	10.14	33.84	2.69	26.04	197	0.25
97	10.19	33.82 7	2.74	199	125	9.84	33.91	2.33	26.15	187	0.29
119	9.92	33.88 9	2.41	190	150	9.42	34.01	1.99	26.30	173	0.34
133	9.72	33.94 3	2.21	183	200	8.99	34.10	1.61	26.44	160	0.42
155	9.36	34.02 9	1.91	171	250	8.75	34.16	1.44	26.52	152	0.50
181	9.15	34.07 6	1.66	164	300	8.48	34.19	1.21	26.59	146	0.57
206	8.96	34.11 4	1.60	159	400	7.24	34.23	0.85	26.80	126	0.71
243	8.79	34.14 8	1.48	154	500	6.49	34.27	0.45	26.93	113	0.83
294	8.53	34.18 2	1.24	147							
371	7.56	34.22 3	0.90	130							
444	6.86	34.25 1	0.75	119							
507	6.45	34.27 4	0.41	112							

a) Overlapping casts; reconciliation of property curves when necessary.

SIO

CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

73.60

HORIZON; January 13, 1962; 1426 GCT; 35°08.5'N, 122°03.5'W; sounding, 1300 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 22°.

1	12.39	33.41 4	5.92	268	0	(12.39)	(33.41)	(5.92)	(25.30)	(268)	(0.00)
10	12.44	33.40 7	5.91	269	10	12.44	33.41	5.91	25.29	269	0.03
34	12.40	33.40 3	5.90	269	20	12.43	33.41	5.90	25.29	269	0.05
43	12.31	33.49 8	5.67	260	30	12.41	33.40	5.90	25.29	269	0.08
57	10.36	33.51 9	5.60	225	50	11.00	33.51	5.63	25.64	236	0.13
72	10.00	33.62 6	3.86	211	75	10.00	33.64	3.79	25.91	210	0.19
96	9.28	33.84 3	2.91	184	100	9.26	33.88	2.73	26.22	181	0.24
116	9.22	33.99 6	2.15	171	125	9.15	34.04	1.96	26.36	167	0.28
136	9.02	34.06 8	1.83	163	150	8.91	34.09	1.73	26.44	160	0.32
165	8.78	34.11 2	1.65	156	200	8.33	34.14	1.47	26.57	147	0.40
196	8.39	34.13 3	1.49	149	250	7.83	34.16	1.22	26.66	139	0.47
235	7.96	34.15 8	1.24	141	300	7.22	34.16	1.09	26.75	131	0.54
265	7.70	34.16 0	1.19	137	400	6.37	34.20	0.56	26.89	117	0.66
314	7.05	34.16 2	1.02	128	500	5.69	34.28	0.33	27.04	102	0.77
379	6.52	34.19 4	0.66	119	600	5.27	34.33	0.31	27.13	94	0.87
478	5.80	34.27 1	0.36	104							
567	5.40	34.32 0	0.31	96							
641	5.10	34.33 7	0.34	91							

77.51

HORIZON; January 14, 1962; 0437 GCT; 35°01'N, 120°58.5'W; sounding, 198 fm; wind, 010°, force 4; weather, clear; sea, rough; wire angle, 10°.

1	13.12	33.54 4	5.55	272	0	(13.12)	(33.54)	(5.55)	(25.26)	(272)	(0.00)
11	13.12	33.53 7	5.53	272	10	13.12	33.54	5.53	25.26	272	0.03
30	13.12	33.53 6	5.56	272	20	13.12	33.54	5.54	25.26	272	0.05
52	13.06	33.53 7	5.52	271	30	13.12	33.54	5.56	25.26	272	0.08
75	11.26	33.64 5	3.83	231	50	13.07	33.54	5.52	25.27	271	0.14
100	10.64	33.71 9	3.29	215	75	11.26	33.64	3.83	25.69	231	0.20
125	10.00	33.84 3	2.75	195	100	10.64	33.72	3.29	25.86	215	0.25
164	9.30	34.00 4	2.03	172	125	10.00	33.84	2.75	26.07	195	0.31
204	8.90	34.09 5	1.70	159	150	9.49	33.96	2.24	26.25	178	0.35
253	8.55	34.16 9	1.37	149	200	8.93	34.09	1.75	26.44	160	0.44
304	7.78	34.15 4	1.24	139	250	8.57	34.17	1.39	26.56	149	0.51
					300	7.85	34.15	1.26	26.65	140	0.59

77.55

HORIZON; January 14, 1962; 0026 GCT; 34°56.5'N, 121°13'W; sounding, 303 fm; wind, 310°, force 7; weather, partly cloudy; sea, high; wire angle, 40°.

2	12.55	33.57 2	5.72	259	0	(12.55)	(33.57)	(5.72)	(25.39)	(259)	(0.00)
9	12.54	33.56 8	5.69	259	10	12.54	33.57	5.69	25.40	259	0.03
25	11.97	33.60 4	4.91	246	20	12.42	33.57	5.56	25.42	257	0.05
32	10.91	33.69 5	3.65	221	30	11.15	33.67	3.95	25.73	227	0.08
44	10.31	33.79 0	2.99	204	50	10.22	33.81	2.89	26.01	201	0.12
55	10.18	33.81 9	2.85	200	75	9.99	33.86	2.61	26.08	194	0.17
74	10.01	33.85 8	2.62	194	100	9.48	33.96	2.23	26.25	178	0.21
90	9.58	33.91 3	2.51	183	125	9.25	34.02	2.03	26.33	170	0.26
104	9.46	33.97 4	2.15	177	150	9.11	34.06	1.86	26.39	165	0.30
119	9.30	34.00 5	2.06	172	200	8.95	34.10	1.66	26.44	160	0.38
141	9.15	34.04 9	1.93	166	250	8.74	34.14	1.38	26.51	153	0.46
167	9.06	34.08 4	1.72	162	300	8.25	34.21	1.08	26.64	141	0.53
189	8.98	34.09 8	1.67	160	400	7.21	34.21	0.82	26.79	127	0.67
227	8.92	34.11 2	1.59	158	500	(6.40)	(34.26)		(26.94)	(113)	(0.79)
268	8.55	34.17 1	1.26	148							
331	7.99	34.22 2	0.97	137							
398	7.23	34.20 9	0.82	127							
472	6.55	34.24 0	0.59	116							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
CCOF1
6201-2

HORIZON: January 13, 1962; 2124 GCT; 34°48'N, 121°21.5'W; sounding, 270 fm; wind, 310°, force 6; weather, cloudy; sea, very rough; wire angle, 16°.

77.57

1	12.26	33.59 2	5.33	252	0	(12.26)	(33.59)	(5.33)	(25.47)	(252)	(0.00)
11	12.24	33.59 2	5.49a)	252	10	12.24	33.59	5.48	25.47	252	0.03
30	11.40	33.64 0	4.12	233	20	12.16	33.59	5.39	25.48	251	0.05
48	10.38	33.76 8	3.08	207	30	11.40	33.64	4.12	25.67	233	0.07
72	9.96	33.85 7	2.70	193	50	10.31	33.78	3.02	25.97	205	0.12
98	9.72	33.94 4	2.29	183	75	9.93	33.86	2.67	26.09	193	0.17
121	9.56	33.99 5	2.01	177	100	9.69	33.95	2.23	26.20	182	0.21
160	9.28	34.07 0	1.72	167	125	9.52	34.00	1.98	26.27	176	0.26
199	8.73	34.12 9	1.44	154	150	9.35	34.05	1.80	26.34	169	0.30
246	7.97	34.15 8	1.23	141	200	8.71	34.13	1.43	26.50	154	0.38
296	7.74	34.18 7	1.07	136	250	7.93	34.16	1.24	26.65	140	0.46
399	7.23	34.25 1	0.67	124	300	7.72	34.19	1.05	26.70	135	0.53
					400	(7.22)	(34.25)	(0.67)	(26.82)	(124)	(0.66)

HORIZON: January 14, 1962; 0937 GCT; 34°25'N, 120°35.5'W; sounding, 100 fm; wind, 010°, force 5; weather, clear; sea, rough; wire angle, 09°.

80.52

1	12.81	33.55 1	5.52	265	0	(12.81)	(33.55)	(5.52)	(25.33)	(265)	(0.00)
11	12.84	33.55 3	5.43	266	10	12.84	33.55	5.44	25.32	266	0.03
31	12.40	33.57 8	5.14	256	20	12.84	33.55	5.43	25.32	266	0.05
51	11.44	33.64 1	3.85	234	30	12.46	33.58	5.17	25.42	257	0.08
75	11.11	33.66 1	3.69	227	50	11.46	33.64	3.86	25.65	234	0.13
100	10.48	33.75 2	3.20	210	75	11.11	33.66	3.69	25.73	227	0.19
124	10.28	33.78 7	3.12	204	100	10.48	33.75	3.20	25.91	210	0.24
154	9.94	33.86 8	2.67	192	125	10.27	33.79	3.11	25.98	203	0.29
					150	10.00	33.84	2.80	26.07	195	0.34

HORIZON: January 14, 1962; 1252 GCT; 34°19'N, 120°48'W; sounding, 400 fm; wind, 350°, force 5; weather, clear; sea, rough; wire angle, 13°.

80.55

1	13.11	33.53 0	5.59	273	0	(13.11)	(33.53)	(5.59)	(25.25)	(273)	(0.00)
11	13.13	33.52 0	5.51	274	10	13.13	33.52	5.52	25.24	274	0.03
32	13.03	33.54 6	5.51	270	20	13.11	33.53	5.51	25.25	273	0.05
61	12.51	33.55 8	5.26	259	30	13.05	33.54	5.51	25.27	271	0.08
71	12.14	33.58 2	4.58	251	50	12.52	33.55	5.31	25.38	260	0.13
85	11.16	33.61 5	3.70	231	75	11.50	33.59	3.93	25.61	239	0.20
100	10.78	33.67 2	3.49	220	100	10.78	33.67	3.49	25.80	221	0.25
114	10.21	33.80 5	2.88	201	125	9.84	33.90	2.44	26.14	188	0.31
138	9.55	33.96 7	2.20	179	150	9.37	33.99	2.18	26.29	174	0.35
158	9.28	34.00 3	2.13	172	200	8.99	34.10	1.60	26.44	160	0.43
189	9.08	34.05 6	1.84	165	250	8.59	34.18	1.33	26.56	148	0.51
218	8.84	34.15 4	1.41	154	300	7.99	34.21	1.01	26.68	137	0.58
248	8.62	34.17 9	1.35	149	400	7.04	34.24	0.54	26.84	122	0.71
297	8.02	34.20 8	1.08	138	500	6.41	34.28	0.43	26.95	111	0.83
353	7.50	34.23 0	0.59	129	600	5.83	34.33	0.28	27.07	100	0.94
437	6.74	34.25 4	0.51	117							
522	6.31	34.28 9	0.39	109							
607	5.77	34.33 7	0.26	99							

a) Alternate value, 5.66 ml/L, not used in interpolation.

S10

CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

8060

HORIZON; January 14, 1962; 1625 GCT; 34°09'N, 121°09'W; sounding, 1360 fm; wind, 360°, force 5; weather, clear; sea, very rough; wire angle, 15°.

1	12.87	33.49 6	5.78	271	0	(12.87)	(33.50)	(5.78)	(25.28)	(270)	(0.00)
11	12.86	33.51 0	5.75	269	10	12.86	33.51	5.75	25.29	269	0.03
30	12.87	33.50 0	5.73	270	20	12.87	33.50	5.74	25.28	270	0.05
40	12.84	33.50 5	5.76	269	30	12.87	33.50	5.73	25.28	270	0.08
54	12.36	33.54 0	5.47	258	50	12.65	33.52	5.66	25.34	265	0.13
69	10.88	33.61 0	4.01	227	75	10.38	33.66	3.73	25.86	215	0.19
93	9.58	33.75 6	3.37	195	100	9.43	33.78	3.24	26.12	191	0.25
112	9.28	33.81 9	3.08	185	125	9.18	33.87	2.93	26.23	180	0.29
133	9.11	33.90 3	2.84	177	150	8.79	33.95	2.59	26.35	168	0.33
152	8.74	33.95 1	2.55	167	200	8.06	34.02	2.24	26.52	153	0.42
181	8.36	34.00 7	2.33	158	250	7.91	34.11	1.56	26.61	144	0.49
215	7.94	34.03 5	2.12	150	300	7.05	34.12	1.33	26.74	131	0.56
245	7.94	34.11 0	1.58	144	400	6.39	34.24	0.61	26.92	114	0.68
295	7.16	34.11 6	1.33	133	500	5.97	34.31	0.33	27.03	104	0.79
349	6.41	34.13 0	0.98	122	600	(5.39)	(34.35)	(0.24)	(27.14)	(94)	(0.89)
432	6.38	34.28 3	0.48	111							
516	5.86	34.31 0	0.30	102							
599	5.40	34.35 0	0.24	94							

8070

HORIZON; January 14, 1962; 2316 GCT; 33°48'N, 121°51'W; sounding, 1920 fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.

1	13.26	33.45 8	5.93	281	0	(13.26)	(33.46)	(5.93)	(25.17)	(281)	(0.00)
11	13.25	33.45 5	5.97	281	10	13.25	33.46	5.96	25.17	280	0.03
31	13.20	33.45 3	5.88	280	20	13.23	33.45	5.94	25.17	281	0.06
60	12.49	33.46 8	5.22	266	30	13.21	33.45	5.90	25.17	280	0.08
70	11.92	33.46 7	4.94	255	50	12.89	33.46	5.49	25.24	274	0.14
85	10.61	33.55 2	4.17	226	75	11.50	33.48	4.72	25.52	247	0.20
99	9.96	33.65 4	3.66	208	100	9.91	33.66	3.64	25.94	207	0.26
115	9.55	33.73 7	3.39	196	125	9.42	33.78	3.15	26.12	190	0.31
139	9.26	33.85 3	2.81	183	150	9.09	33.91	2.68	26.27	176	0.36
159	8.94	33.92 7	2.62	172	200	8.56	34.00	2.30	26.43	161	0.44
189	8.60	33.96 2	2.58	165	250	8.08	34.09	1.72	26.57	148	0.52
218	8.51	34.06 5	1.85	156	300	7.22	34.09	1.50	26.69	136	0.59
248	8.12	34.08 7	1.72	148	400	6.75	34.24	0.60	26.88	118	0.72
297	7.26	34.09 0	1.52	136	500	6.26	34.29	0.38	26.98	109	0.83
352	6.99	34.17 4	0.93	126	600	5.58	34.33	0.28	27.10	97	0.93
436	6.58	34.26 6	0.49	114							
520	6.17	34.30 1	0.36	107							
604	5.54	34.33 2	0.28	97							

8080

HORIZON; January 15, 1962; 0500 GCT; 33°29.5'N, 122°32'W; sounding, 2180 fm; wind, 010°, force 3; weather, partly cloudy; sea, rough; wire angle, 09°.

1	13.98	33.48 5	5.74	293	0	(13.98)	(33.48)	(5.74)	(25.04)	(293)	(0.00)
11	13.98	33.48 9	5.73	292	10	13.98	33.49	5.73	25.05	292	0.03
30	13.98	33.48 8	5.68	292	20	13.98	33.49	5.70	25.05	292	0.06
60	12.50	33.46 0	5.15	266	30	13.98	33.49	5.68	25.05	292	0.09
70	11.50	33.48 2	4.67	247	50	13.98	33.49	5.68	25.05	292	0.15
85	10.32	33.56 6	4.03	221	75	11.05	33.51	4.46	25.63	237	0.21
100	9.75	33.61 2	3.64	208	100	9.75	33.61	3.64	25.93	208	0.27
115	9.55	33.70 2	3.62	198	125	9.35	33.77	3.41	26.12	190	0.32
140	9.02	33.84 6	3.01	179	150	8.89	33.88	2.89	26.28	175	0.36
160	8.74	33.91 1	2.82	170	200	8.08	34.00	2.51	26.50	154	0.45
189	8.18	33.97 6	2.69	157	250	7.56	34.07	1.77	26.63	142	0.52
221	7.96	34.04 2	2.10	149	300	7.03	34.12	1.26	26.74	131	0.59
249	7.58	34.07 1	1.78	142	400	6.43	34.20	0.76	26.89	117	0.71
299	7.04	34.12 1	1.28	131	500	5.91	34.29	0.40	27.02	104	0.82
354	6.62	34.15 1	1.02	123	600	5.36	34.32	0.35	27.12	96	0.92
439	6.28	34.24 8	0.52	112							
524	5.78	34.30 2	0.38	102							
610	5.32	34.32 6	0.34	95							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

SIO
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6201-2

HORIZON: January 15, 1962: 0955 GCT; 33°11'N, 123°11'W; sounding, 2285 fm; wind, 330°, force 2; weather, partly cloudy; sea, rough; wire angle, 10°.

80.90

1	13.46	33.47 0	5.92	284	0	(13.46)	(33.47)	(5.92)	(25.14)	(284)	(0.00)
11	13.46	33.46 9	5.96	284	10	13.46	33.47	5.95	25.14	284	0.03
31	13.48	33.47 0	5.94	284	20	13.47	33.47	5.95	25.13	284	0.06
55	13.26	33.48 3	5.70	279	30	13.48	33.47	5.95	25.13	284	0.09
65	12.57	33.52 1	5.20	263	50	13.34	33.48	5.77	25.17	281	0.14
75	11.58	33.55 1	4.46	243	75	11.58	33.55	4.46	25.56	243	0.21
89	10.48	33.61 5	3.84	220	100	9.98	33.67	3.60	25.94	207	0.26
104	9.84	33.68 9	3.55	204	125	9.29	33.80	3.18	26.15	187	0.31
130	9.20	33.82 2	3.10	184	150	8.88	33.92	2.74	26.31	172	0.36
150	8.88	33.91 7	2.74	172	200	7.80	33.98	3.14	26.52	152	0.44
175	8.38	33.97 2	2.82	161	250	7.07	34.01	2.37	26.65	140	0.51
205	7.70	33.98 2	3.17	150	300	6.77	34.08	1.60	26.75	131	0.58
235	7.24	34.00 4	2.56	142	400	6.31	34.20	0.69	26.90	116	0.70
274	6.84	34.03 0	2.08	135	500	5.77	34.28	0.33	27.03	103	0.81
335	6.70	34.14 0	1.02	125							
410	6.26	34.21 1	0.65	114							
485	5.84	34.26 6	0.35	105							
565	5.42	34.31 8	0.32	97							

HORIZON: January 15, 1962: 1505 GCT; 32°40.5'N, 123°58'W; sounding, 2300 fm; wind, 360°, force 3; weather, partly cloudy; sea, moderate; wire angle, 19°.

80.100

0	14.38	33.28 8	5.70	315	0	14.38	33.29	5.70	24.81	315	0.00
10	14.36	33.27 0	5.75	316	10	14.36	33.27	5.75	24.80	316	0.03
28	14.38	33.27 6	5.72	316	20	14.37	33.27	5.73	24.79	316	0.06
57	13.64	33.20 8	5.83	306	30	14.37	33.28	5.72	24.80	315	0.09
67	13.16	33.17 0	5.78	300	50	13.82	33.23	5.81	24.88	308	0.16
81	12.50	33.32 2	5.70	276	75	12.60	33.27	5.72	25.15	282	0.23
94	12.24	33.42 7	5.51	264	100	12.20	33.43	5.50	25.35	263	0.30
107	11.52	33.40 3	5.40	253	125	10.19	33.45	4.97	25.73	227	0.36
126	10.10	33.45 5	4.94	225	150	9.31	33.70	4.37	26.07	195	0.41
142	9.48	33.62 6	4.70	203	200	8.35	33.99	2.42	26.45	159	0.50
167	9.04	33.82 7	3.58	181	250	7.90	34.11	1.46	26.61	144	0.58
192	8.46	33.95 6	2.63	163	300	7.51	34.18	0.90	26.72	133	0.65
217	8.16	34.04 9	2.04	152	400	6.95	34.27	0.50	26.87	119	0.77
259	7.84	34.12 0	1.32	142	500	6.17	34.27	0.39	26.98	109	0.89
306	7.48	34.19 0	0.89	132							
380	7.08	34.25 6	0.61	122							
456	6.50	34.29 4	0.34	111							
534	5.98	34.25 4	0.45	108							

HORIZON: January 15, 1962: 2338 GCT; 32°08'N, 125°15.5'W; sounding, 2400 fm; wind, 360°, force 3; weather, cloudy; sea, moderate; wire angle, 08°.

80.120

1	14.46	33.29 6	5.69	316	0	(14.46)	(33.30)	(5.69)	(24.80)	(316)	(0.00)
11	14.47	33.29 0	5.65	317	10	14.47	33.29	5.65	24.79	317	0.03
31	14.50	33.29 7	5.65	317	20	14.49	33.29	5.65	24.78	317	0.06
61	14.48	33.30 6	5.71	316	30	14.50	33.30	5.65	24.79	317	0.10
71	14.42	33.30 1	5.77	315	50	14.49	33.30	5.70	24.79	316	0.16
86	13.64	33.34 3	5.59	296	75	14.32	33.31	5.76	24.84	312	0.24
101	12.98	33.42 1	5.46	278	100	13.02	33.42	5.48	25.19	279	0.31
115	12.26	33.42 0	5.22	265	125	11.73	33.44	5.15	25.45	254	0.38
140	11.02	33.48 2	4.99	239	150	10.60	33.50	4.71	25.70	230	0.44
160	10.20	33.53 5	4.43	221	200	8.87	33.80	3.88	26.22	181	0.54
191	9.02	33.75 6	3.86	186	250	8.10	33.97	3.49	26.47	157	0.62
220	8.57	33.88 7	3.88	170	300	7.14	33.98	2.99	26.62	143	0.70
253	8.04	33.96 9	3.47	156	400	6.09	34.07	1.42	26.83	123	0.83
299	7.16	33.98 3	3.00	143	500	5.73	34.19	0.57	26.97	110	0.95
354	6.54	34.02 2	2.06	132	600	5.21	34.26	0.31	27.09	98	1.05
439	5.86	34.12 0	1.04	116							
523	5.68	34.21 4	0.42	107							
609	5.16	34.27 1	0.29	97							

S10

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

80.200

HORIZON; January 26, 1962; 0312 GCT; 29°25'N, 130°36'W; sounding, 2540 fm; wind, 020°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

1	17.42	34.43 1	5.32	297	0	(17.42)	(34.43)	(5.32)	(25.00)	(297)	(0.00)
11	17.44	34.42 9	5.36	298	10	17.44	34.43	5.36	24.99	298	0.03
31	17.44	34.43 3	5.35	297	20	17.44	34.43	5.36	24.99	298	0.06
60	17.41	34.43 0	5.26	297	30	17.44	34.43	5.35	24.99	298	0.09
70	17.42	34.42 7	5.28	297	50	17.41	34.43	5.30	25.00	297	0.15
86	17.44	34.48 3	5.18	294	75	17.42	34.43	5.26	25.00	297	0.22
101	17.44	34.47 5	5.36	294	100	17.44	34.48	5.25	25.03	294	0.30
116	16.83	34.38 4	5.23	287	125	16.00	34.27	5.13	25.21	277	0.37
140	15.15	34.17 3	5.04	266	150	14.84	34.16	5.01	25.38	261	0.44
160	14.52	34.15 2	4.98	255	200	11.92	33.88	4.89	25.75	225	0.56
190	12.54	33.92 6	4.98	233	250	10.18	33.94	4.67	26.11	191	0.66
221	10.92	33.82 6	4.64a)	211	300	8.86	33.99	4.15	26.37	166	0.75
251	10.12	33.95 2	4.67	189	400	6.82	34.03	2.53	26.70	135	0.90
300	8.86	33.98 7	4.15	167	500	5.66	34.09	1.21	26.90	116	1.03
356	7.75	34.02 1	3.02	148	600	5.20	34.22	0.46	27.06	101	1.14
441	6.10	34.02 7	2.01	126							
526	5.52	34.12 0	0.91	112							
611	5.16	34.24 3	0.41	99							

82⁵.56

HORIZON; January 12, 1962; 2212, 2020 GCT; 33°49'N, 120°31.5'W; sounding, 949 fm; wind, variable, 290° to 250°, force 4; weather, rain; sea, moderate; wire angle, 27°, 29°.

1	13.73	33.46 1	5.88	290	0	(13.73)	(33.46)	(5.88)	(25.07)	(290)	(0.00)
10	13.70	33.46 0	5.86	289	10	13.70	33.46	5.86	25.08	289	0.03
27	13.58	33.47 1	5.88	286	20	13.62	33.46	5.87	25.10	287	0.06
36	13.48	33.47 5	5.83	284	30	13.53	33.47	5.86	25.12	285	0.09
50	13.00	33.51 4	5.74	272	50	13.00	33.51	5.74	25.26	272	0.14
63	11.98	33.50 4	4.81	254	75	11.00	33.51	4.40	25.64	236	0.21
86	10.28	33.54 9	4.21	221	100	9.90	33.64	3.69	25.93	208	0.26
103	9.84	33.67 6	3.58	205	125	9.38	33.79	3.19	26.13	189	0.31
119	9.54	33.75 9	3.23	194	150	8.81	33.88	3.01	26.29	174	0.36
136	9.07	33.82 8	3.13	182	200	8.17	33.98	2.43	26.47	157	0.44
161	8.66	33.90 8	2.93	170	250	7.92	34.10	1.68	26.60	145	0.51
191	8.26	33.97 8	2.53	158	300	7.42	34.12	1.36	26.69	136	0.58
217	7.98	34.01 3	2.24	152	400	6.61	34.19	0.96	26.86	120	0.71
262	7.90	34.13 2	1.51	142	500	6.14	34.28	0.48	26.99	108	0.83
311	7.29	34.12 1	1.33	134	600	5.67	34.33	0.24	27.09	98	0.93
387	6.68	34.18 3	1.00b)	122	700	5.21	34.38	0.21	27.18	89	1.02
467	6.30	34.24 5	0.69b)	112	800	4.78	34.42	0.27	27.26	82	1.11
549	5.98	34.30 7	0.49b)	104	1000	4.02	34.47	0.38	27.38	70	1.26
					1200	3.48	34.51	0.70	27.47	62	1.39
546c)	5.84	34.32 4	0.28	101	1500	2.94	34.55	0.98	27.55	54	1.57
643	5.48	34.35 4	0.21	95							
741	5.02	34.39 6	0.24	86							
839	4.60	34.42 9	0.29	79							
937	4.22	34.45 3	0.31	73							
1084	3.76	34.49 0	0.49	66							
1231	3.42	34.51 7	0.72	61							
1377	3.15	34.53 6	0.83	57							
1525	2.90	34.55 9	1.01	53							
1672	2.68	34.57 5	1.19	50							
1722	2.53	34.58 4	1.29	48							

a) Alternate value, 4.50 ml/L, not used in interpolation.

b) Samples bubbled when drawn; values questionable.

c) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
CCOF1
6201-2

BLACK DOUGLAS; February 2, 1962; 0249 GCT; 33°34'N, 120°45'W; sounding, 800 fm; wind, 300°, force 2; weather, fog; sea, moderate; wire angle, 10°.

83.60

0	12.53	33.36 3	6.15	274	0	12.53	33.36	6.15	25.24	274	0.00
10	12.52	33.35 2	6.18	275	10	12.52	33.35	6.18	25.23	275	0.03
30	12.26	33.33 4	6.16	271	20	12.44	33.35	6.17	25.25	273	0.05
55	12.00	33.32 6	5.93	267	30	12.26	33.33	6.16	25.26	272	0.08
64	11.98	33.36 1	5.87	264	50	12.01	33.33	5.94	25.31	267	0.14
73	11.51	33.34 4	5.53	257	75	11.37	33.35	5.40	25.45	254	0.20
88	10.44	33.54 8	4.39	224	100	9.87	33.62	4.10	25.92	209	0.26
102	9.79	33.64 0	4.03	207	125	9.17	33.86	3.05	26.22	181	0.31
126	9.14	33.86 1	3.05	180	150	8.97	33.90	3.17	26.28	175	0.35
147	8.83	33.88 2	3.21	174	200	8.22	34.05	2.16	26.52	153	0.43
171	8.57	33.99 2	2.43	162	250	7.62	34.06	1.97	26.61	143	0.51
198	8.24	34.04 9	2.17	153	300	7.06	34.10	1.51	26.72	133	0.58
229	8.07	34.05 6	2.07	150	400	6.45	34.22	0.66	26.90	116	0.70
268	7.36	34.06 6	1.84	139	500	5.93	34.24	0.50	26.98	108	0.81
326	6.88	34.13 2	1.21	128							
401	6.44	34.22 0	0.65	116							
475	6.07	34.23 6	0.55	110							
555	5.62	34.28 6	0.35	101							

HORIZON; January 30, 1962; 1435 GCT; 33°28.5'N, 117°46.5'W; sounding, 280 fm; wind, 310°, force 1; weather, clear; sea, slight; wire angle, 00°.

90.28

0	13.60	33.50 3	5.88	284	0	13.60	33.50	5.88	25.13	284	0.00
10	13.54	33.50 0	5.86	283	10	13.54	33.50	5.86	25.14	283	0.03
30	13.46	33.50 4	5.51	281	20	13.49	33.50	5.63	25.15	282	0.06
50	12.26	33.47 5	4.67	261	30	13.46	33.50	5.51	25.16	281	0.08
75	11.48	33.72 9	2.94	228	50	12.26	33.48	4.67	25.38	260	0.14
100	10.72	33.80 4	2.72	210	75	11.48	33.73	2.94	25.72	228	0.20
					100	10.72	33.80	2.72	25.91	210	0.25

HORIZON; January 30, 1962; 1145 GCT; 33°21'N, 118°03.5'W; sounding, 419 fm; wind, 310°, force 2; weather, clear; sea, slight; wire angle, 01°.

90.32

1	14.13	33.54 5	5.71	291	0	(14.13)	(33.54)	(5.71)	(25.05)	(292)	(0.00)
11	14.02	33.53 3	5.54	290	10	14.04	33.53	5.56	25.06	291	0.03
31	13.86	33.52 1	5.57	288	20	13.88	33.52	5.56	25.09	288	0.06
42	13.79	33.52 7	5.52	286	30	13.87	33.52	5.56	25.09	288	0.09
52	13.66	33.53 5	5.36	283	50	13.68	33.53	5.39	25.14	284	0.14
67	12.40	33.50 6	4.44	261	75	11.60	33.56	3.44	25.57	243	0.21
82	11.99	33.67 5	3.36	241	100	11.46	33.79	2.84	25.77	223	0.27
102	11.44	33.80 1	2.82	222	125	10.73	33.92	2.45	26.00	201	0.32
127	10.70	33.93 3	2.42	200	150	10.37	34.04	2.03	26.16	186	0.37
147	10.44	34.03 3	2.08	188	200	9.68	34.19	1.66	26.39	164	0.46
178	9.83	34.11 4	1.90	172	250	8.92	34.22	1.30	26.54	150	0.54
208	9.61	34.21 3	1.53	161	300	8.12	34.18	1.40	26.63	141	0.61
238	9.19	34.24 9	1.25	152	400	7.41	34.28	0.63	26.82	124	0.74
278	8.26	34.14 4	1.65	146	500	6.67	34.31	0.35	26.94	112	0.86
338	7.96	34.24 2	0.91	135							
413	7.30	34.28 4	0.58	122							
487	6.77	34.30 8	0.38	114							
567	6.16	34.33 2	0.29	104							

S10

CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

90.37

HORIZON; January 30, 1962; 0900 GCT; 33°10.5'N, 118°23.5'W; sounding, 635 fm; wind, calm; weather, clear; sea, slight; wire angle, 00°.

1	14.14	33.53 9	5.90	292	0	(14.14)	(33.54)	(5.90)	(25.05)	(292)	(0.00)
10	14.03	33.53 6	5.79	290	10	14.03	33.54	5.79	25.07	290	0.03
31	13.70	33.51 6	5.40	285	20	13.89	33.52	5.64	25.09	288	0.06
41	13.44	33.50 6	5.33	281	30	13.71	33.52	5.41	25.12	285	0.09
51	12.93	33.52 3	4.79	270	50	12.98	33.52	4.83	25.27	271	0.14
66	11.94	33.59 0	3.87	247	75	11.42	33.64	3.57	25.66	234	0.21
81	11.24	33.69 4	3.34	227	100	11.14	33.83	2.56	25.86	215	0.26
102	11.12	33.84 2	2.52	214	125	10.50	33.90	2.56	26.03	199	0.31
127	10.46	33.90 7	2.56	198	150	10.01	34.05	2.08	26.23	180	0.36
147	10.04	34.03 0	2.16	182	200	9.41	34.09	1.89	26.36	167	0.45
177	9.88	34.14 2	1.81	171	250	8.39	34.11	1.79	26.54	151	0.53
207	9.24	34.07 7	1.92	166	300	7.87	34.16	1.31	26.65	139	0.60
237	8.62	34.09 7	1.89	155	400	7.32	34.24	0.75	26.80	126	0.73
277	8.06	34.13 0	1.52	144	500	6.34	34.32	0.31	26.99	107	0.85
338	7.64	34.19 1	1.10	134							
413	7.23	34.25 1	0.67	124							
488	6.46	34.31 4	0.34	109							
567	5.90	34.34 8	0.21	100							

90.45

HORIZON; January 30, 1962; 0504, 0254 GCT; 32°55.5'N, 118°57'W; sounding, 929 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 02°, 02°.

1	14.04	33.47 8	5.92	294	0	(14.04)	(33.48)	(5.92)	(25.03)	(294)	(0.00)
11	13.92	33.50 4	6.03	290	10	13.93	33.50	6.03	25.06	291	0.03
31	13.49	33.47 3	5.76	284	20	13.75	33.50	5.90	25.10	287	0.06
41	13.14	33.46 6	5.78	278	30	13.51	33.47	5.77	25.13	285	0.09
51	12.88	33.46 8	5.26	273	50	12.91	33.47	5.27	25.25	273	0.14
66	11.34	33.49 1	4.48	243	75	11.09	33.58	4.09	25.67	232	0.21
82	10.94	33.62 2	3.87	227	100	10.22	33.70	3.47	25.92	209	0.26
102	10.20	33.70 6	3.44	208	125	9.98	33.82	2.91	26.05	196	0.31
127	9.95	33.83 0	2.86	195	150	9.64	33.96	2.40	26.22	181	0.36
147	9.69	33.93 8	2.47	183	200	9.12	34.08	1.94	26.40	164	0.44
177	9.38	34.08 4	1.90	167	250	8.42	34.14	1.53	26.56	149	0.52
207	9.04	34.08 4	1.95	162	300	8.06	34.21	1.05	26.67	138	0.59
237	8.56	34.11 1	1.67	153	400	7.27	34.28	0.62	26.84	122	0.72
277	8.24	34.18 2	1.24	143	500	6.48	34.32	0.32	26.97	109	0.84
336	7.78	34.24 2	0.84	132	600	5.81	34.36	0.23	27.09	98	0.94
411	7.18	34.28 4	0.58	121	700	5.23	34.39	0.27	27.19	89	1.04
486	6.58	34.31 5	0.36	111	800	4.70	34.42	0.31	27.27	81	1.12
565	6.04	34.34 0	0.26	102	1000	4.07	34.48	0.39	27.39	70	1.27
					1200	3.80	34.50	0.50	27.43	66	1.41
					1500	3.75	34.50	0.45	27.44	65	1.61
554a)	6.08	34.34 8	0.25	102							
656	5.48	34.37 6	0.23	93							
730	5.08	34.40 0	0.28	87							
806	4.68	34.41 8	0.31	81							
857	4.53	34.43 8	0.31	78							
906	4.35	34.44 9	0.32	75							
957	4.18	34.47 1	0.35	72							
1007	4.06	34.47 8	0.40	70							
1056	3.98	34.48 4	0.43	69							
1107	3.88	34.45 3u	0.50	-							
1157	3.81	34.49 3	0.49	66							
1205	3.80	34.46 6u	0.52	-							
1256	3.76	34.49 8	0.51	66							
1305	3.74	34.50 4	0.47	65							
1504	3.75	34.50 5	0.45	65							
1695	3.74	34.50 3	0.36	65							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
CCOF1
6201-2

HORIZON; January 29, 1962; 2258 GCT; 32°39.5'N, 119°28'W; sounding, 708 fm; wind, 340°, force 4; weather, clear; sea, slight; wire angle, 00°.

90.53

1	14.42	33.49 3	-	301	0	(14.42)	(33.49)	-	(24.95)	(301)	(0.00)
11	13.98	33.49 8	5.34	292	10	14.07	33.50		25.03	293	0.03
31	13.14	33.46 4	5.42	278	20	13.19	33.47	5.41	25.19	278	0.06
41	13.02	33.46 7	5.29	275	30	13.15	33.46	5.42	25.19	278	0.09
51	12.77	33.46 6	5.36	271	50	12.80	33.46	5.36	25.26	272	0.14
66	11.96	33.49 5	4.74	254	75	11.32	33.51	4.44	25.58	242	0.21
81	10.92	33.52 6	4.29	234	100	9.93	33.64	3.79	25.92	209	0.26
101	9.90	33.64 6	3.75	208	125	9.30	33.78	3.35	26.14	189	0.31
126	9.28	33.78 6	3.31	188	150	8.84	33.88	3.09	26.29	174	0.36
147	8.92	33.86 2	3.14	177	200	8.54	34.07	2.01	26.48	156	0.44
176	8.47	33.96 6	2.74	162	250	8.25	34.20	1.20	26.63	142	0.51
205	8.56	34.09 6	1.87	154	300	7.75	34.22	0.91	26.72	133	0.58
235	8.37	34.18 0	1.37	145	400	6.85	34.26	0.59	26.88	118	0.71
274	8.04	34.22 1	0.98	137	500	6.23	34.31	0.31	27.00	107	0.82
334	7.36	34.22 5	0.84	128							
409	6.77	34.27 3	0.51	116							
484	6.32	34.31 1	0.33	108							
563	5.96	34.33 2	0.26	102							

HORIZON; January 29, 1962; 1918 GCT; 32°26.5'N, 119°53.5'W; sounding, 880 fm; wind, 010°, force 3; weather, clear; sea, moderate; wire angle, 00°.

90.60

1	14.32	33.47 1	5.79	300	0	(14.32)	(33.47)	(5.79)	(24.96)	(301)	(0.00)
11	14.12	33.46 6	5.79	297	10	14.13	33.47	5.79	25.00	297	0.03
31	14.08	33.46 2	5.70	296	20	14.08	33.46	5.77	25.00	297	0.06
56	13.18	33.47 1	5.04	278	30	14.08	33.46	5.72	25.00	297	0.09
64	12.00	33.53 3	4.20	252	50	14.08	33.46	5.70	25.00	297	0.15
76	11.12	33.60 1	3.85	231	75	11.13	33.58	3.86	25.67	233	0.21
92	10.03	33.63 3	3.62	211	100	10.00	33.67	3.63	25.93	208	0.27
107	9.71	33.68 8	3.67	202	125	9.51	33.83	2.74	26.14	188	0.32
132	9.44	33.89 1	2.35	183	150	9.07	34.00	2.06	26.34	169	0.36
152	9.02	34.00 4	2.06	168	200	8.32	34.09	1.91	26.53	151	0.44
177	8.70	34.06 5	2.07	158	250	7.77	34.09	1.75	26.61	143	0.52
207	8.20	34.08 9	1.86	149	300	7.40	34.16	1.23	26.72	133	0.59
237	7.88	34.08 5	1.88	145	400	6.89	34.29	0.48	26.90	117	0.71
277	7.58	34.12 0	1.46	138	500	6.33	34.33	0.30	27.00	106	0.82
337	7.17	34.23 0	0.85	125							
411	6.84	34.29 6	0.42	115							
487	6.42	34.31 8	0.32	108							
567	5.92	34.34 1	0.29	101							

HORIZON; January 29, 1962; 1341 GCT; 32°04.5'N, 120°39.5'W; sounding, 2044 fm; wind, 020°, force 3; weather, clear; sea, missing; wire angle, 10°.

90.70

1	13.54	33.47 8	5.81	285	0	(13.54)	(33.48)	(5.81)	(25.13)	(284)	(0.00)
11	13.53	33.47 4	5.78	285	10	13.53	33.47	5.78	25.12	285	0.03
31	13.42	33.46 8	5.75	283	20	13.48	33.47	5.77	25.13	284	0.06
61	11.25	33.50 1	4.42	241	30	13.42	33.47	5.75	25.14	283	0.09
71	10.46	33.54 6	4.30	224	50	13.40	33.47	5.72	25.15	283	0.14
86	9.84	33.63 5	3.89	208	75	10.29	33.57	4.20	25.81	220	0.20
100	9.54	33.71 7	3.67	197	100	9.54	33.72	3.67	26.05	197	0.26
115	9.20	33.78 6	3.40	187	125	8.99	33.82	3.26	26.22	181	0.30
139	8.80	33.88 1	3.05	174	150	8.76	33.93	2.90	26.34	169	0.35
158	8.72	33.96 1	2.78	166	200	8.42	34.08	2.15	26.51	153	0.43
189	8.51	34.05 0	2.31	157	250	7.60	34.10	1.82	26.65	140	0.50
218	8.22	34.12 5	1.83	147	300	7.50	34.17	1.21	26.72	134	0.57
247	7.62	34.09 8	1.85	141	400	6.43	34.20	0.79	26.89	117	0.70
296	7.51	34.16 8	1.22	134	500	5.72	34.24	0.47	27.01	106	0.81
351	6.97	34.18 3	0.98	126	600	5.28	34.31	0.31	27.12	96	0.91
435	6.14	34.20 8	0.63	113							
520	5.62	34.25 3	0.40	104							
605	5.26	34.31 2	0.30	95							

S10
CCOF1
6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

9080

HORIZON; January 29, 1962; 0848 GCT; 31°45.5'N, 121°16'W; sounding, 2000+ fm; wind, 360°, force 3; weather, clear; sea, rough; wire angle, 09°.

1	14.18	33.41 3	5.67	302	0	(14.18)	(33.41)	(5.67)	(24.94)	(302)	(0.00)
11	14.16	33.40 6	5.79	302	10	14.16	33.41	5.78	24.95	302	0.03
31	14.12	33.40 5	5.71	301	20	14.14	33.41	5.78	24.95	301	0.06
41	13.86	33.39 7	5.79	297	30	14.12	33.40	5.72	24.95	302	0.09
56	13.63	33.40 6	5.63	292	50	13.71	33.40	5.69	25.03	294	0.15
71	13.08	33.42 2	5.41	280	75	13.00	33.42	5.38	25.19	279	0.22
96	11.72	33.43 0	4.96	254	100	11.42	33.44	4.93	25.51	248	0.29
115	10.52	33.51 2	4.85	228	125	10.20	33.57	4.51	25.82	218	0.35
135	9.92	33.63 0	4.19	209	150	9.30	33.73	3.77	26.10	192	0.40
154	9.20	33.75 7	3.70	189	200	8.49	33.96	2.77	26.40	163	0.49
184	8.80	33.89 3	3.01	173	250	7.60	34.02	2.55	26.58	146	0.56
219	8.14	33.99 9	2.60	155	300	6.83	34.05	1.87	26.72	134	0.63
249	7.62	34.01 5	2.57	147	400	6.14	34.16	0.85	26.89	117	0.76
298	6.86	34.04 5	1.90	134	500	5.56	34.23	0.46	27.02	105	0.87
352	6.39	34.09 9	1.24	124	600	5.04	34.27	0.36	27.11	96	0.97
435	5.95	34.18 9	0.64	112							
521	5.42	34.23 8	0.42	103							
604	5.02	34.27 2	0.35	95							

9090

HORIZON; January 29, 1962; 0349, 0012 GCT; 31°25'N, 121°57.5'W; sounding, 2251 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 11°, 19°.

1	14.35	33.37 8	5.70	308	0	(14.35)	(33.38)	(5.70)	(24.88)	(308)	(0.00)
11	14.35	33.37 4	5.70	308	10	14.35	33.37	5.70	24.88	309	(0.03)
100	13.99	33.35 0	5.71	303	20	(14.32)	(33.37)	(5.70)	(24.88)	(308)	(0.06)
110	13.50	33.41 3	5.58	289	30	(14.27)	(33.36)	(5.70)	(24.88)	(308)	(0.09)
124	12.82	33.42 3	5.44	275	50	(14.10)	(33.35)	(5.70)	(24.91)	(305)	(0.15)
139	11.90	33.49 0	5.08	253	75	(14.00)	(33.35)	(5.71)	(24.93)	(303)	(0.23)
154	10.62	33.52 7	4.73	228	100	13.99	33.35	5.71	24.94	303	(0.31)
169	10.15	33.58 2	4.56	217	125	12.77	33.43	5.41	25.24	274	(0.38)
193	9.18	33.74 8	3.91	189	150	10.91	33.52	4.80	25.66	234	(0.44)
212	8.76	33.87 6	3.79	173	200	8.99	33.80	3.87	26.20	182	(0.54)
236	8.42	33.93 3	3.64	164	250	8.16	33.96	3.47	26.45	158	(0.63)
260	7.96	33.97 0	3.35	155	300	7.24	34.01	2.67	26.63	142	(0.71)
315	7.02	34.02 2	2.43	138	400	6.21	34.11	1.10	26.84	121	(0.84)
364	6.50	34.06 5	1.51	128	500	5.59	34.21	0.50	27.00	107	(0.95)
442	5.94	34.15 6	0.74	115	600	5.08	34.32	0.26	27.15	93	(1.05)
517	5.48	34.23 0	0.45	104	700	4.69	34.37	0.23	27.23	85	(1.14)
620	5.00	34.33 9	0.26	90	800	4.37	34.41	0.31	27.30	78	(1.22)
769	4.38	34.40 6	0.34	79	1000	3.81	34.48	0.53	27.41	67	(1.37)
					1200	3.32	34.53	0.77	27.50	59	(1.49)
723a)	4.63	34.37 2	0.23	84	1500	2.72	34.57	1.17	27.59	51	(1.66)
821	4.30	34.42	0.31	77	2000	2.12	34.62	1.73	27.68	42	(1.89)
925	4.00	34.45 6	0.42	71	2500	1.82	34.65	2.23	27.73	38	(2.09)
1083	3.60	34.50 0	0.64	64	3000	1.64	34.66	2.52	27.75	36	(2.27)
1281	3.14	34.53 9	0.84	57	4000	(1.56)	(34.68)	(2.97)	(27.77)	(34)	(2.62)
1533	2.68	34.57 7	1.19	50							
1788	2.34	34.60 6	1.47	45							
2043	2.09	34.62 6	1.78	42							
2309	1.90	34.64 2	2.07	39							
2565	1.80	34.65 2	2.28	37							
2820	1.69	34.66 0	2.44	36							
3076	1.63	34.66 6	2.55	35							
3330	1.56	34.66 9	2.76	35							
3584	1.56	34.67 4	2.87	34							
3836	1.55	34.67 8	2.95	34							
3991	1.56	34.67 9	2.97	34							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

SIO
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6201-2

HORIZON; January 28, 1962; 1727 GCT; 31°05'N, 122°39'W; sounding, 2205 fm; wind, 360°, force 4; weather, clear; sea, rough; wire angle, 09°.

90.100

2	14.86	33.45 6	5.64	313	0	(14.86)	(33.46)	(5.64)	(24.84)	(312)	(0.00)
12	14.84	33.45 1	5.62	313	10	14.84	33.45	5.62	24.83	313	0.03
32	14.85	33.45 0	5.67	313	20	14.85	33.45	5.65	24.83	313	0.06
62	14.74	33.47 3	5.73	309	30	14.85	33.45	5.67	24.83	313	0.09
71	14.76	33.47 0	5.60	309	50	14.79	33.47	5.71	24.86	310	0.16
87	14.33	33.45 9	5.60	302	75	14.71	33.47	5.60	24.88	308	0.23
102	13.90	33.53 8	5.54	287	100	13.96	33.53	5.55	25.08	289	0.31
116	13.22	33.55 6	5.38	273	125	12.75	33.55	5.32	25.34	264	0.38
141	11.78	33.52 9	5.16	248	150	11.38	33.53	5.03	25.58	241	0.44
161	10.84	33.54 2	4.83	231	200	9.05	33.80	3.90	26.19	183	0.55
190	9.33	33.72 4	4.04	193	250	8.24	33.96	3.13	26.44	160	0.63
220	8.70	33.89 1	3.61	171	300	7.44	34.03	2.22	26.61	143	0.71
251	8.22	33.97 0	3.08	159	400	6.40	34.11	1.10	26.82	124	0.84
300	7.44	34.03 4	2.22	143	500	5.70	34.19	0.57	26.97	109	0.96
355	6.82	34.07 7	1.48	132	600	5.10	34.27	0.27	27.11	97	1.06
440	6.08	34.14 7	0.87	117							
531	5.53	34.21 5	0.44	105							
610	5.02	34.28 3	0.26	95							

HORIZON; January 28, 1962; 0837 GCT; 30°27'N, 124°01.5'W; sounding, 2245 fm; wind, 330°, force 5; weather, cloudy; sea, moderate; wire angle, 12°.

90.120

1	15.16	33.49 4	5.67	316	0	(15.16)	(33.49)	(5.67)	(24.79)	(316)	(0.00)
11	15.14	33.48 4	5.65	316	10	15.14	33.48	5.65	24.79	317	0.03
31	15.18	33.48 1	5.64	317	20	15.16	33.48	5.65	24.79	317	0.06
60	15.22	33.51 6	5.64	316	30	15.18	33.48	5.64	24.78	317	0.10
69	15.26	33.52 0	5.62	316	50	15.20	33.50	5.64	24.79	316	0.16
84	15.18	33.52 4	5.61	314	75	15.23	33.52	5.62	24.80	316	0.24
98	14.75	33.48 8	5.63	308	100	14.66	33.49	5.63	24.90	306	0.32
114	13.32	33.59 3	5.51	272	125	12.34	33.55	5.32	25.42	257	0.39
138	11.56	33.52 3	5.11	245	150	10.90	33.52	4.84	25.66	234	0.45
158	10.55	33.53 5	4.61	227	200	9.23	33.78	3.54	26.15	188	0.55
188	9.42	33.72 6	3.69	194	250	8.37	33.96	3.25	26.42	161	0.64
217	8.96	33.83 8	3.39	179	300	7.73	34.00	2.79	26.55	149	0.72
246	8.42	33.94 7	3.27	163	400	6.53	34.13	1.06	26.82	124	0.85
295	7.79	33.99 8	2.85	150	500	5.82	34.21	0.50	26.97	109	0.97
348	7.18	34.08 9	1.53	135	600	(5.40)	(34.31)	(0.31)	(27.10)	(97)	(1.07)
432	6.20	34.15 6	0.84	118							
516	5.75	34.23 1	0.42	107							
599	5.41	34.30 8	0.31	97							

HORIZON; January 27, 1962; 2334 GCT; 29°44'N, 125°19.5'W; sounding, 2343 fm; wind, 010°, force 3; weather, overcast; sea, moderate; wire angle, 08°.

90.140

1	15.77	33.74 5	5.47	310	0	(15.77)	(33.74)	(5.47)	(24.85)	(311)	(0.00)
11	15.75	33.74 2	5.54	310	10	15.75	33.74	5.53	24.86	310	0.03
31	15.74	33.74 1	5.52	310	20	15.75	33.74	5.53	24.86	310	0.06
57	15.72	33.74 3	5.52	310	30	15.74	33.74	5.52	24.86	310	0.09
66	15.72	33.73 7	5.48	310	50	15.73	33.74	5.52	24.86	310	0.16
76	15.70	33.73 4	5.42	310	75	15.70	33.73	5.43	24.86	310	0.23
92	15.70	33.71 1	5.57	311	100	15.70	33.72	5.50	24.85	311	0.31
105	15.70	33.73 3	5.49	310	125	14.66	33.77	5.30	25.12	285	0.38
131	14.02	33.77 8	5.21	272	150	12.57	33.67	5.08	25.47	252	0.45
151	12.45	33.66 8	5.08	250	200	9.98	33.71	4.30	25.97	204	0.57
175	11.06	33.62 1	4.76	229	250	8.66	33.93	3.54	26.35	168	0.66
206	9.73	33.74 3	4.18	198	300	7.78	34.01	2.72	26.55	149	0.74
236	8.94	33.89 2	3.77	175	400	6.57	34.09	1.37	26.78	127	0.88
275	8.18	33.98 0	3.14	157	500	6.00	34.22	0.51	26.96	111	1.00
335	7.26	34.03 5	2.19	140							
410	6.49	34.10 9	1.22	125							
484	6.09	34.21 2	0.57	112							
564	5.68	34.28 1	0.35	102							

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

90.160

HORIZON; January 27, 1962; 1225 GCT; 29°16'N, 126°15'W; sounding, 2375 fm; wind, 030°, force 1; weather, overcast; sea, moderate; wire angle, 04°.

1	16.64	34.03 2	5.51	308	0	(16.64)	(34.03)	(5.51)	(24.87)	(309)	(0.00)
11	16.64	34.02 2	5.58	309	10	16.64	34.02	5.57	24.87	309	0.03
31	16.63	34.02 6	5.59	309	20	16.64	34.02	5.58	24.87	309	0.06
56	16.65	34.02 8	5.50	309	30	16.63	34.03	5.59	24.88	308	0.09
66	16.65	34.02 3	5.45	309	50	16.64	34.03	5.52	24.87	309	0.15
77	16.62	34.01 7	5.48	309	75	16.63	34.02	5.47	24.87	309	0.23
92	16.60	34.01 0	5.42	309	100	16.63	34.02	5.42	24.87	309	0.31
107	16.66	34.02 3	5.42	310	125	15.26	33.91	5.37	25.09	288	0.38
131	14.70	33.89 2	5.26	277	150	13.76	33.90	5.01	25.41	258	0.45
151	13.70	33.90 0	5.00	257	200	10.62	33.70	4.71	25.85	216	0.57
176	11.82	33.73 0	4.91	234	250	8.88	33.88	4.00	26.28	175	0.67
206	10.38	33.69 7	4.62	212	300	7.92	33.96	3.48	26.49	155	0.75
236	9.12	33.82 9	4.13	182	400	6.49	34.04	1.93	26.75	130	0.89
276	8.46	33.94 3	3.74	164	500	5.73	34.14	0.86	26.93	113	1.01
335	7.25	33.99 0	3.06	144							
410	6.40	34.05 5	1.74	128							
485	5.84	34.13 2	0.93	115							
565	5.32	34.21 5	0.59	103							

90.180

HORIZON; January 27, 1962; 0320 GCT; 28°31.5'N, 127°39.5'W; sounding, 2420 fm; wind, 070°, force 4; weather, overcast; sea, slight; wire angle, 03°.

1	17.34	34.24 5	5.25	309	0	(17.34)	(34.24)	(5.25)	(24.87)	(309)	(0.00)
11	17.35	34.24 2	5.17	309	10	17.35	34.24	5.18	24.87	309	0.03
31	17.34	34.24 0	5.22	309	20	17.34	34.24	5.20	24.87	309	0.06
61	17.34	34.24 5	5.26	309	30	17.34	34.24	5.22	24.87	309	0.09
72	17.34	34.23 8	5.15	309	50	17.34	34.24	5.24	24.87	309	0.15
87	17.32	34.24 1	5.14	309	75	17.33	34.24	5.15	24.87	309	0.23
101	17.34	34.25 0	5.16	308	100	17.34	34.25	5.16	24.88	308	0.31
117	15.52	34.03 7	4.97	284	125	15.50	34.05	4.95	25.15	282	0.38
141	13.77	33.85 0	4.89	262	150	13.29	33.83	4.88	25.45	254	0.45
161	12.69	33.81 5	4.82	244	200	10.06	33.76	4.05	25.99	202	0.56
190	10.61	33.73 1	4.31	213	250	8.71	33.95	3.67	26.36	167	0.66
219	9.38	33.86 3	3.70	184	300	7.81	34.03	2.49	26.56	148	0.73
249	8.75	33.94 7	3.68	168	400	7.02	34.18	1.05	26.79	126	0.87
297	7.84	34.02 7	2.56	149	500	5.84	34.19	0.62	26.95	111	0.99
352	7.46	34.13 3	1.51	136	600	5.17	34.24	0.44	27.08	100	1.10
436	6.64	34.19 2	0.88	121							
519	5.65	34.19 2	0.58	109							
602	5.16	34.24 5	0.43	99							

90.200

HORIZON; January 26, 1962; 1725 GCT; 27°43'N, 129°11'W; sounding, 2442 fm; wind, 040°, force 1; weather, overcast; sea, rough; wire angle, 00°.

1	17.95	34.57 4	5.14	299	0	(17.95)	(34.57)	(5.14)	(24.97)	(299)	(0.00)
11	17.96	34.56 6	5.12	300	10	17.96	34.57	5.13	24.97	299	0.03
31	17.95	34.56 7	5.17	299	20	17.96	34.57	5.14	24.97	299	0.06
57	17.98	34.56 9	5.14	300	30	17.95	34.57	5.16	24.97	299	0.09
66	17.98	34.57 0	5.06	300	50	17.97	34.57	5.15	24.97	300	0.15
76	17.95	34.57 0	5.09	299	75	17.95	34.57	5.08	24.97	299	0.22
91	17.96	34.57 1	5.14	299	100	17.96	34.57	5.15	24.97	299	0.30
107	17.96	34.56 5	5.15	300	125	17.92	34.56	5.15	24.97	299	0.37
132	17.89	34.55 5	5.14	299	150	16.30	34.27	4.98	25.14	284	0.45
152	15.78	34.19 4	4.95	278	200	11.90	33.79	4.76	25.69	231	0.58
176	13.80	33.94 9	4.90	255	250	9.42	33.84	3.88	26.16	186	0.68
207	11.32	33.75 8	4.67	223	300	8.25	33.96	3.35	26.44	160	0.77
236	9.82	33.76 4	4.08	198	400	6.59	34.05	1.78	26.75	131	0.91
276	8.76	33.92 4	3.61	170	500	5.72	34.16	0.70	26.95	112	1.03
337	7.55	34.00 2	2.79	147							
411	6.46	34.06 9	1.52	128							
486	5.82	34.15 6	0.76	113							
566	5.28	34.23 5	0.46	101							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ARGO; January 13, 1962; 0508, 0750 GCT; 31°51.5'N, 119°51'W; sounding, 1798 fm; wind, 300°, force 4; weather, rain; sea, missing; wire angle, 32°, 40°. a)

92.63
(S-5)

1	14.28	33.49 4	5.45	298	0	(14.28)	(33.49)	(5.45)	(24.98)	(298)	(0.00)
9	14.31	33.48 9	5.65	299	10	14.31	33.49	5.65	24.98	299	0.03
27	14.29	33.49 5	5.65	298	20	14.30	33.49	5.65	24.98	299	0.06
48	13.38	33.47 4	5.15	282	30	14.26	33.49	5.64	24.99	298	0.09
77	11.21	33.48 4	4.17	242	50	13.33	33.47	5.14	25.16	281	0.15
112	9.82	33.80 0	2.87	195	75	11.30	33.48	4.20	25.56	243	0.21
162	9.08	34.11 9	1.70	160	100	10.15	33.67	3.29	25.91	210	0.27
213	8.64	34.22 1	1.10	146	125	9.55	33.93	2.41	26.21	181	0.32
281	7.87	34.27 2	0.70	131	150	9.20	34.07	1.87	26.38	166	0.36
375	6.86	34.32 0	0.52	114	200	8.77	34.20	1.25	26.55	149	0.44
564	5.72	34.34 7	0.20	98	250	8.22	34.25	0.82	26.67	138	0.51
759	4.82	34.42 6	0.21	82	300	7.64	34.29	0.67	26.79	127	0.58
804	4.66	34.43 4	0.30	79	400	6.66	34.32	0.45	26.95	111	0.70
858	4.47	34.44 6	0.31	77	500	6.05	34.34	0.27	27.05	102	0.80
905	4.32	34.45 7	0.33	74	600	5.55	34.36	0.20	27.12	95	0.90
960	4.18	34.47 0	0.42	72	700	5.09	34.41	0.20	27.22	86	0.99
1007	4.02	34.48 2	0.51	69	800	4.67	34.43	0.30	27.28	80	1.08
1056	3.87	34.49 5	0.57	67	1000	4.00	34.48	0.51	27.39	69	1.23
1115	3.72	34.50 8	0.54	64	1200	3.47	34.54	0.79	27.50	60	1.35
1163	3.64	34.51 5	0.70	63	1500	2.90	34.57	1.07	27.57	52	1.52
					2000	2.12	34.63	1.70	27.69	42	1.76
906b)	4.24	34.46 4	0.44	73							
993	3.98	34.49 1	0.55	68							
1095	3.67	34.51 6	0.68	63							
1284	3.24	34.55 9	0.88	56							
1475	2.93	34.57 0	1.06	53							
1674	2.62	34.59 0	1.26	49							
1857	2.29	34.61 6	1.53	44							
2091	2.04	34.63 3	1.93	41							
2330	1.88	34.64 7	2.17	38							

BLACK DOUGLAS; February 4, 1962; 0635 GCT; 32°54.5'N, 117°22'W; sounding, 250 fm; wind, 270°, force 2; weather, fog; sea, smooth; wire angle, 00°.

93.28

0	14.10	33.50 7	5.90	293	0	14.10	33.51	5.90	25.04	293	0.00
10	14.11	33.51 3	5.97	293	10	14.11	33.51	5.97	25.03	293	0.03
30	13.82	33.51 8	5.91	287	20	14.00	33.52	5.97	25.06	291	0.06
50	13.43	33.50 9	5.44	280	30	13.82	33.52	5.91	25.10	287	0.09
74	11.80	33.61 3	3.73	242	50	13.43	33.51	5.44	25.17	280	0.14
99	11.26	33.80 9	2.81	218	75	11.77	33.62	3.68	25.58	241	0.21
124	10.60	33.87 8	2.48	202	100	11.26	33.81	2.80	25.82	218	0.27
164	9.98	34.02 4	2.15c)	181	125	10.58	33.88	2.45	26.00	202	0.32
204	9.24	34.07 5	2.04	166	150	10.20	33.98	2.23	26.14	188	0.37
254	9.08	34.21 6	1.43	153	200	9.28	34.07	2.07	26.37	167	0.46
304	8.20	34.24 5	0.92	138	250	9.10	34.21	1.48	26.50	154	0.54
					300	8.28	34.24	0.96	26.66	139	0.61

- a) Four hydrographic stations were occupied by RV Argo as part of a series of nine stations whose primary purpose was the collection of water samples by means of a 10,000-gallon sampler for Silicon-32 determination. In addition, two vertical profiles (S-4 and S-8) were made with a newly designed 25-gallon water sampler for lead isotope determination, including one sample 70 meters off the bottom in 3,600 meters of water. A series of shallow lead isotope profiles were made on Stations S-1, S-2, S-3 and S-7. Fifty-gallon Carbon-14 samples were taken on Stations S-3 and S-8. On all four hydrographic stations silicon concentration was determined from water samples collected by standard Nansen bottles. Thirteen 20-liter samples were collected for Lead-210 determination.
- b) Overlapping casts; reconciliation of property curves when necessary.
- c) Alternate value, 2.06 ml/L, not used in interpolation.

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

9330

BLACK DOUGLAS; February 4, 1962; 0821 GCT; 32°50.5'N, 117°31'W; sounding, 400 fm; wind, 270°, force 2; weather, fog; sea, slight; wire angle, 00°.

0	14.44	33.52 9	5.87	299	0	14.44	33.53	5.85	24.98	299	0.00
10	14.46	33.54 2	5.96	298	10	14.46	33.54	5.96	24.98	298	0.03
30	13.66	33.48 8	5.94	286	20	13.70	33.48	5.95	25.10	288	0.06
55	13.38	33.47 6	5.52	282	30	13.66	33.49	5.94	25.11	286	0.09
64	12.31	33.48 9	4.57	261	50	13.49	33.48	5.71	25.14	284	0.14
74	11.88	33.54 5	4.08	249	75	11.84	33.55	4.05	25.51	248	0.21
89	11.29	33.62 4	3.62	233	100	11.10	33.71	3.32	25.77	223	0.27
105	10.93	33.74 4	3.05	218	125	10.88	33.94	2.21	25.99	202	0.32
130	10.94	33.98 2	2.12	200	150	10.51	34.04	1.98	26.14	189	0.37
150	10.51	34.04 0	1.99	189	200	9.65	34.15	1.66	26.37	167	0.46
175	9.77	34.04 4	2.21	176	250	9.42	34.28	1.18	26.51	153	0.54
204	9.64	34.17 2	1.58	165	300	8.61	34.28	0.98	26.64	141	0.61
234	9.60	34.26 1	1.28	158	400	7.37	34.24	0.81	26.79	127	0.75
274	9.04	34.29 3	1.08	147	500	6.68	34.30	0.44	26.93	113	0.87
333	8.12	34.25 4	0.87	136							
409	7.28	34.23 6	0.80	126							
483	6.81	34.28 8	0.49	116							
563	6.14	34.34 1	0.33	103							

9339
(S-3)

ARGO; January 11, 1962; 0253 GCT; 32°36'N, 118°11'W; sounding, 855 fm; wind, 120°, force 3; weather, clear; sea, missing; wire angle, 12°.

1	15.02	33.49 1	4.86	313	0	(15.02)	(33.49)	(4.86)	(24.82)	(313)	(0.00)
11	15.02	33.48 5	5.02	314	10	15.02	33.49	5.01	24.82	313	0.03
30	14.37	33.49 2	4.95	300	20	14.60	33.49	5.00	24.92	305	0.06
54	13.42	33.48 7	4.49	282	30	14.37	33.49	4.95	24.96	300	0.09
89	10.80	33.54 0	3.74	231	50	13.90	33.49	4.74	25.06	291	0.15
128	9.60	33.75 5	2.85	195	75	11.60	33.51	3.93	25.53	246	0.22
187	8.89	33.96 4	2.06	169	100	10.36	33.59	3.51	25.81	220	0.28
245	8.55	34.16 3	1.30	149	125	9.67	33.74	2.93	26.04	197	0.33
323	7.80	34.23 9	0.74	133	150	9.26	33.84	2.48	26.19	184	0.38
430	6.86	34.30 9	0.25	115	200	8.80	34.01	1.89	26.40	164	0.46
644	5.60	34.37 9	0.14	94	250	8.51	34.17	1.26	26.57	148	0.54
860	4.59	34.44 2	0.15	78	300	8.01	34.22	0.88	26.68	137	0.61
909	4.40	34.46 5	0.18	74	400	7.09	34.29	0.31	26.87	119	0.74
968	4.28	34.47 9	0.35	72	500	6.40	34.34	0.18	27.00	107	0.85
1017	4.14	34.47 6	0.38	71	600	5.82	34.37	0.16	27.10	97	0.96
1077	3.99	34.49 0	0.40	68	700	5.30	34.40	0.14	27.19	89	1.05
1126	3.82	34.49 9	0.46	66	800	4.83	34.43	0.15	27.26	82	1.13
1176	3.73	34.50 8	0.52	65	1000	4.19	34.48	0.38	27.37	71	1.29
1241	3.61	34.51 8	0.52	63	1200	3.70	34.51	0.52	27.45	64	1.42
1290	3.51	34.52 5	0.64	61							

9340

BLACK DOUGLAS; February 4, 1962; 1422 GCT; 32°30'N, 118°11.5'W; sounding, 950 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 06°.

0	14.30	33.44 8	7.28	302	0	14.30	33.45		24.95	302	0.00
10	14.32	33.45 2	5.89	302	10	14.32	33.45	5.89	24.94	302	0.03
30	13.96	33.44 5	5.92	295	20	14.30	33.45	5.89	24.95	302	0.06
56	13.78	33.48 8	5.69	289	30	13.96	33.44	5.92	25.01	296	0.09
63	12.89	33.43 7	5.15	275	50	13.85	33.48	5.78	25.06	291	0.15
74	11.58	33.44 8	4.62	251	75	11.52	33.45	4.60	25.50	249	0.22
89	10.80	33.54 7	4.20	230	100	10.42	33.60	4.00	25.81	220	0.27
104	10.30	33.61 5	3.90	217	125	10.25	33.77	3.16	25.97	204	0.33
128	10.28	33.79 7	3.09	203	150	9.67	33.95	2.67	26.21	182	0.38
149	9.69	33.93 7	2.69	183	200	9.07	34.14	1.94	26.45	158	0.46
173	9.32	34.05 5	2.29	169	250	8.78	34.25	1.37	26.59	146	0.54
203	9.06	34.14 3	1.90	158	300	8.29	34.30	0.95	26.70	135	0.61
233	8.92	34.23 1	1.51	149	400	7.29	34.33	0.57	26.87	119	0.73
273	8.56	34.26 4	1.13	142	500	6.54	34.33	0.37	26.97	109	0.85
331	7.98	34.32 7	0.80	129							
407	7.22	34.32 2	0.56	118							
481	6.68	34.32 7	0.40	111							
559	6.04	34.33 6	0.31	102							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

BLACK DOUGLAS; February 4, 1962; 1955 GCT; 32°10'N, 118°52.5'W; sounding, 780 fm; wind, 270°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.

93.50

0	14.08	33.50	9	6.04	293	0	14.08	33.51	6.04	25.04	293	0.00
10	14.04	33.54	6	6.06	289	10	14.04	33.55	6.06	25.08	289	0.03
30	13.41	33.45	9	5.87	284	20	13.98	33.54	6.04	25.08	289	0.06
40	13.27	33.46	5	5.79	280	30	13.41	33.46	5.87	25.14	283	0.09
54	12.52	33.47	8	5.33	265	50	13.00	33.48	5.62	25.24	274	0.14
68	11.68	33.50	8	4.70	248	75	11.53	33.54	4.59	25.56	243	0.21
93	10.72	33.65	6	4.21	221	100	10.39	33.74	3.61	25.92	209	0.26
112	10.02	33.83	7	2.87	196	125	9.84	33.92	2.56	26.16	187	0.31
131	9.75	33.94	6	2.49	183	150	9.35	34.01	2.33	26.31	172	0.36
151	9.34	34.01	6	2.33	172	200	8.60	34.11	2.07	26.51	154	0.44
179	8.90	34.06	5	2.38	161	250	8.22	34.19	1.27	26.63	142	0.51
213	8.44	34.14	2	1.82	149	300	7.68	34.22	1.10	26.73	132	0.58
242	8.30	34.18	6	1.32	144	400	6.96	34.29	0.59	26.89	117	0.71
291	7.76	34.21	4	1.12	134	500	6.28	34.32	0.40	27.00	107	0.82
344	7.37	34.26	2	0.78	125	600	(5.69)	(34.37)	(0.30)	(27.12)	(96)	(0.92)
428	6.76	34.29	7	0.52	114							
512	6.21	34.32	9	0.38	105							
596	5.72	34.36	5	0.31	96							

BLACK DOUGLAS; February 5, 1962; 0157 GCT; 31°50'N, 119°34'W; sounding, 1100 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 10°.

93.60

0	14.16	33.47	5	5.88	297	0	14.16	33.48	5.88	25.00	297	0.00
10	14.18	33.47	4	5.94	297	10	14.18	33.47	5.94	24.99	298	0.03
30	14.03	33.46	9	5.94	295	20	14.12	33.47	5.94	25.00	297	0.06
59	12.12	33.48	2	4.59	258	30	14.03	33.47	5.94	25.02	295	0.09
69	11.84	33.53	5	4.24	249	50	13.80	33.48	5.80	25.07	290	0.15
85	11.03	33.59	7	3.93	230	75	11.59	33.55	4.08	25.56	243	0.21
99	10.27	33.61	4	3.85	216	100	10.20	33.62	3.84	25.86	215	0.27
114	9.67	33.70	6	3.51	200	125	9.60	33.84	3.01	26.13	189	0.32
139	9.52	33.97	4	2.53	178	150	9.42	34.00	2.43	26.29	174	0.37
159	9.30	34.02	6	2.36	170	200	8.83	34.16	1.68	26.51	153	0.45
187	8.88	34.12	2	1.91	157	250	8.34	34.21	1.32	26.62	142	0.52
217	8.78	34.20	2	1.44	149	300	7.58	34.21	1.13	26.74	132	0.59
247	8.39	34.20	6	1.35	143	400	6.70	34.24	0.68	26.88	118	0.72
350	6.97	34.20	6	0.91	124	500	6.14	34.31	0.34	27.01	106	0.83
435	6.52	34.26	9	0.51	113	600	5.51	34.34	0.28	27.11	96	0.93
519	6.01	34.31	5	0.31	104							
604	5.48	34.34	3	0.28	95							

BLACK DOUGLAS; February 5, 1962; 0740 GCT; 31°26.5'N, 120°12'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 15°.

93.70

1	14.48	33.38	3	5.76	310	0	(14.48)	(33.38)	(5.76)	(24.86)	(310)	(0.00)
11	14.50	33.38	2	5.75	311	10	14.50	33.38	5.75	24.85	311	0.03
30	14.47	33.38	0	5.78	310	20	14.49	33.38	5.77	24.85	311	0.06
59	14.20	33.34	6	5.79	307	30	14.47	33.38	5.78	24.86	310	0.09
68	14.20	33.38	1	5.70	305	50	14.20	33.34	5.79	24.88	308	0.15
82	13.29	33.44	3	5.48	282	75	14.03	33.41	5.62	24.97	299	0.23
97	12.02	33.46	9	5.27	257	100	11.78	33.47	5.17	25.46	253	0.30
111	11.06	33.47	3	4.85	240	125	10.33	33.53	4.57	25.77	223	0.36
135	9.91	33.58	9	4.33	212	150	9.47	33.72	3.67	26.06	196	0.41
154	9.33	33.75	4	3.52	191	200	8.30	33.95	3.26	26.43	161	0.50
183	8.62	33.90	0	3.45	170	250	7.73	34.03	2.21	26.57	147	0.58
211	8.12	33.97	7	3.07	157	300	7.08	34.06	1.80	26.69	136	0.65
240	7.84	34.01	6	2.36	150	400	6.14	34.16	0.89	26.89	117	0.78
288	7.22	34.04	7	1.91	139	500	5.83	34.27	0.32	27.02	105	0.89
341	6.62	34.08	3	1.46	129	600	(5.23)	(34.32)	(0.32)	(27.13)	(94)	(0.99)
423	6.00	34.18	2	0.71	113							
508	5.80	34.27	8	0.31	104							
591	5.30	34.32	1	0.32	95							

S10

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

93.80

BLACK DOUGLAS; February 5, 1962; 1250 GCT; 31°03.5'N, 120°49'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 17°.

0	14.56	33.43 3	5.67	308	0	14.56	33.43	5.67	24.88	308	0.00
10	14.60	33.42 9	5.80	309	10	14.60	33.43	5.80	24.87	309	0.03
29	14.56	33.42 9	5.67	308	20	14.58	33.43	5.70	24.87	309	0.06
58	14.54	33.43 2	5.73	308	30	14.56	33.43	5.67	24.88	308	0.09
66	14.48	33.41 7	5.73	308	50	14.55	33.43	5.72	24.88	308	0.15
80	14.60	33.47 4	5.73	306	75	14.40	33.42	5.73	24.90	306	0.23
94	13.72	33.40 7	5.68	293	100	13.18	33.43	5.56	25.16	281	0.30
107	12.69	33.44 7	5.39	271	125	11.67	33.50	5.11	25.51	248	0.37
130	11.34	33.51 5	5.02	242	150	9.92	33.61	4.51	25.90	211	0.43
148	10.06	33.59 5	4.58	214	200	8.73	33.91	3.20	26.33	170	0.52
174	8.98	33.85 7	4.03	178	250	7.92	34.00	2.77	26.52	152	0.60
201	8.72	33.90 1	3.19	171	300	7.24	34.06	2.26	26.67	138	0.68
227	8.26	33.98 4	2.91	158	400	6.34	34.14	0.98	26.85	121	0.81
273	7.62	34.01 7	2.65	147	500	5.77	34.23	0.61	26.99	107	0.92
323	6.96	34.09 3	1.83	132							
399	6.36	34.13 4	0.99	121							
480	5.88	34.20 1	0.68	111							
564	5.36	34.28 9	0.44	98							

93.90

BLACK DOUGLAS; February 5, 1962; 1810 GCT; 30°40.5'N, 121°06'W; sounding, 2200 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 17°.

1	15.48	33.54 8	5.60	319	0	(15.48)	(33.55)	(5.60)	(24.77)	(319)	(0.00)
11	15.50	33.53 7	5.62	320	10	15.50	33.54	5.62	24.76	320	0.03
34	15.47	33.53 4	5.63	320	20	15.49	33.54	5.62	24.76	320	0.06
63	15.46	33.53 3	5.59	319	30	15.48	33.54	5.63	24.76	319	0.10
71	15.28	33.48 7	5.66	319	50	15.46	33.53	5.60	24.76	320	0.16
91	14.86	33.41 9	5.66	315	75	15.20	33.46	5.66	24.76	319	0.24
105	12.95	33.45 2	5.27	275	100	14.70	33.44	5.64	24.86	310	0.32
119	12.10	33.52 4	4.90	254	125	11.81	33.56	4.70	25.53	246	0.39
148	10.51	33.67 6	3.81	216	150	10.41	33.69	3.76	25.88	213	0.45
167	9.78	33.81 0	3.53	194	200	8.86	33.89	3.37	26.29	174	0.54
194	8.99	33.87 1	3.39	177	250	7.99	34.01	2.86	26.52	152	0.62
227	8.35	33.97 4	3.20	160	300	7.44	34.06	2.10	26.64	141	0.70
256	7.90	34.02 1	2.76	150	400	6.70	34.20	0.90	26.85	121	0.83
304	7.39	34.06 9	2.05	140	500	6.08	34.29	0.46	27.00	106	0.94
367	6.90	34.16 1	1.21	126	600	5.50	34.34	0.35	27.11	96	1.04
462	6.32	34.26 3	0.53	111							
551	5.75	34.30 9	0.41	101							
627	5.41	34.35 5	0.30	94							

93.100

BLACK DOUGLAS; February 6, 1962; 0011 GCT; 30°30.5'N, 122°14'W; sounding, 2100 fm; wind, 340°, force 2; weather, cloudy; sea, rough; wire angle, 07°.

0	15.60	33.54 1	5.69	322	0	15.60	33.54	5.69	24.74	322	0.00
10	15.48	33.51 8	5.72	321	10	15.48	33.52	5.72	24.75	321	0.03
30	15.42	33.53 3	5.68	319	20	15.44	33.53	5.70	24.76	319	0.06
60	15.32	33.51 6	5.62	318	30	15.42	33.53	5.68	24.77	319	0.10
70	15.32	33.52 3	5.62	317	50	15.33	33.52	5.65	24.78	318	0.16
85	13.79	33.44 3	5.48	292	75	15.08	33.52	5.61	24.83	312	0.24
100	12.66	33.46 1	5.19	269	100	12.66	33.46	5.19	25.29	269	0.31
114	11.50	33.48 7	4.93	246	125	11.07	33.55	4.52	25.66	234	0.37
138	10.70	33.64 9	3.91	221	150	10.37	33.74	3.39	25.93	209	0.43
158	10.15	33.78 2	3.28	202	200	8.88	33.94	3.12	26.33	170	0.52
187	9.04	33.89 3	3.30	176	250	8.32	34.05	2.46	26.50	154	0.61
216	8.70	33.97 8	2.84	165	300	7.73	34.15	1.65	26.67	138	0.68
246	8.38	34.03 9	2.51	156	400	6.89	34.28	0.68	26.89	117	0.81
296	7.78	34.13 8	1.71	140	500	5.88	34.27	0.45	27.01	105	0.92
349	7.21	34.23 2	0.97	125	600	5.25	34.34	0.40	27.14	93	1.02
433	6.66	34.28 4	0.59	114							
517	5.70	34.26 5	0.43	104							
601	5.24	34.33 7	0.40	93							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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6201-2

BLACK DOUGLAS; February 1, 1962; 0002, 0022 GCT; 32°43'N, 117°23'W; sounding, 150 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 00°, 00°. a)

94.29⁵

0	14.22	33.51 0	5.88	296
5	14.14	33.50 0	5.96	295
10	13.76	33.49 4	5.98	288
15	13.68	33.49 5	6.00	286
20	13.60	33.50 9	5.91	284
25	13.54	33.49 5	5.67	283
30	13.50	33.49 1	5.52	283
36	13.34	33.47 1	5.67	281
41	13.20	33.46 5	5.65	279
46	13.14	33.45 3	5.63	279
51	13.04	33.45 5	5.51	277
56	12.64	33.52 2	4.77	264
61	12.22	33.52 1	4.51	257
65	11.86	33.54 2	4.19	249
70	11.50	33.59 1	3.84	239
75	11.36	33.61 1	3.71	235
80	11.37	33.62 1	3.77	234
85	11.22	33.63 5	3.69	231

HORIZON; January 12, 1962; 0334 GCT; 32°40'N, 117°23'W; sounding, 132 fm; wind, 320°, force 3; weather, clear; sea, slight; wire angle, 03°. a)

943.29⁸

0	13.97	33.50 3	5.82	291
10	13.98	33.50 1	5.93	292
20	13.95	33.49 2	5.77	292
25	13.74	33.49 9	5.79	287
30	13.66	33.49 6	5.73	286
35	13.29	33.50 1	5.31	278
40	13.24	33.50 9	5.25	277
45	12.91	33.51 2	4.63	270
50	12.63	33.52	4.36	264
55	12.46	33.56 9	4.02	258
60	11.74	33.57 2	3.83	244
65	11.54	33.57 9	3.78	240
70	11.47	33.61 1	3.62	237
75	11.41	33.66 4	3.39	232
80	11.30	33.68 0	3.34	229
85	11.28	33.72 6	3.12	225
90	11.21	33.75 8	2.92	221
100	11.14	33.79 9	2.73	217

HORIZON; February 1, 1962; 0340 GCT; 31°40.5'N, 116°47'W; sounding, 254 fm; wind, 100°, force 1; weather, clear; sea, smooth; wire angle, 01°.

100.30

0	14.34	33.52 0	5.97	297	0	14.34	33.52	5.97	24.99	297	0.00
10	13.55	33.52 6	5.48	281	10	13.55	33.53	5.48	25.16	281	0.03
30	12.85	33.51 3	4.58	269	20	13.12	33.51	5.01	25.24	274	0.06
50	12.52	33.67 7	3.65	251	30	12.85	33.51	4.58	25.29	269	0.08
75	11.74	33.84 0	2.57	225	50	12.52	33.68	3.65	25.49	251	0.14
101	11.44	33.91 9	2.06	214	75	11.74	33.84	2.57	25.76	225	0.20
126	10.56	33.97 8	2.17	194	100	11.45	33.92	2.07	25.87	214	0.25
166	10.16	34.13 7	1.56	176	125	10.57	33.98	2.17	26.08	194	0.30
206	9.68	34.23 9	1.14	161	150	10.31	34.08	1.80	26.20	182	0.35
256	9.07	34.30 1	0.87	146	200	9.76	34.23	1.19	26.41	162	0.43
306	8.48	34.29 0	0.71	138	250	9.13	34.30	0.89	26.57	147	0.51
411	7.58	34.29 7	0.66	125	300	8.54	34.29	0.72	26.66	139	0.58
					400	7.67	34.30	0.66	26.79	126	0.72

a) Shakedown station.

S10

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

100.35

HORIZON; February 16, 1962; 0717 GCT; 31°31'N, 117°07'W; sounding, 600+ fm; wind, 150°, force 1; weather, cloudy; sea, moderate; wire angle, 03°.

1	15.21	33.45 8	5.61	320	0	(15.21)	(33.46)	(5.61)	(24.76)	(320)	(0.00)
11	14.76	33.45 2	5.64	311	10	14.78	33.45	5.64	24.85	311	0.03
31	14.72	33.45 0	5.62	310	20	14.74	33.45	5.63	24.85	311	0.06
41	14.70	33.45 1	5.61	310	30	14.72	33.45	5.62	24.86	310	0.09
56	14.10	33.41 9	5.62	300	50	14.58	33.44	5.62	24.88	308	0.16
71	13.56	33.44 2	5.45	288	75	13.26	33.45	5.38	25.16	281	0.23
96	11.64	33.45 8	4.80	251	100	11.27	33.46	4.62	25.55	244	0.29
117	10.46	33.59 6	3.85	221	125	10.26	33.69	3.41	25.91	210	0.35
137	10.02	33.80 9	2.93	198	150	9.81	33.91	2.61	26.15	187	0.40
157	9.68	33.95 5	2.45	182	200	9.17	34.13	1.78	26.43	161	0.49
187	9.18	34.06 8	2.04	165	250	8.99	34.28	0.99	26.58	147	0.57
222	9.14	34.22 2	1.35	153	300	8.52	34.34	0.60	26.70	135	0.64
253	8.97	34.28 7	0.98	146	400	7.59	34.33	0.43	26.83	123	0.76
302	8.50	34.34 3	0.59	135	500	6.70	34.34	0.25	26.96	110	0.88
357	7.94	34.32 6	0.52	128	600	6.07	34.36	0.22	27.06	101	0.99
442	7.25	34.34 1	0.31	117							
526	6.48	34.34 5	0.23	107							
611	6.00	34.36 3	0.21	100							

100.40

HORIZON; February 1, 1962; 1100 GCT; 31°21'N, 117°27.5'W; sounding, 1052 fm; wind, 270°, force 3; weather, partly cloudy; sea, slight; wire angle, 08°.

1	14.42	33.45 0	5.74	304	0	(14.42)	(33.45)	(5.74)	(24.92)	(304)	(0.00)
11	14.22	33.45 4	5.81	300	10	14.25	33.45	5.80	24.96	301	0.03
31	14.06	33.45 5	5.78	296	20	14.15	33.45	5.80	24.98	299	0.06
40	13.95	33.46 7	5.76	293	30	14.07	33.45	5.78	25.00	297	0.09
50	13.92	33.47 1	5.65	293	50	13.92	33.47	5.65	25.04	293	0.15
65	13.52	33.45 5	5.42	286	75	12.30	33.44	5.01	25.34	264	0.22
80	12.14	33.43 7	4.96	261	100	10.90	33.51	4.22	25.65	234	0.28
100	10.90	33.50 6	4.22	235	125	10.06	33.64	3.68	25.90	211	0.34
124	10.08	33.63 5	3.76	212	150	9.70	33.87	2.86	26.14	188	0.39
143	9.86	33.82 9	2.95	194	200	8.48	33.97	2.56	26.41	162	0.47
172	8.95	33.94 0	2.71	171	250	7.69	34.04	2.12	26.59	146	0.55
201	8.47	33.97 1	2.55	162	300	7.05	34.08	1.62	26.71	134	0.62
229	8.02	34.02 7	2.25	151	400	6.82	34.28	0.55	26.90	116	0.75
267	7.42	34.05 5	2.03	141	500	6.11	34.32	0.31	27.02	104	0.86
325	6.86	34.11 0	1.28	130							
400	6.82	34.28 5	0.55	116							
473	6.30	34.31 6	0.31	107							
552	5.82	34.34 7	0.33	99							

100.50

HORIZON; February 1, 1962; 1700 GCT; 31°00'N, 118°07.5'W; sounding, 930 fm; wind, 200°, force 1; weather, cloudy; sea, slight; wire angle, 02°.

0	14.30	33.47 3	5.58	300	0	14.30	33.47	5.58	24.96	300	0.00
10	14.27	33.46 1	5.62	300	10	14.27	33.46	5.62	24.96	300	0.03
30	13.76	33.45 3	5.65	291	20	13.80	33.45	5.65	25.05	292	0.06
40	13.60	33.47 7	5.53	286	30	13.76	33.45	5.65	25.06	291	0.09
50	13.17	33.44 8	5.26	280	50	13.17	33.45	5.26	25.18	280	0.15
65	12.46	33.45 4	4.82	266	75	11.80	33.46	4.58	25.45	254	0.21
80	11.50	33.45 7	4.48	249	100	10.50	33.53	4.25	25.74	226	0.27
101	10.44	33.53 5	4.21	225	125	9.55	33.69	3.48	26.03	199	0.33
126	9.54	33.68 9	3.47	199	150	9.21	33.79	3.13	26.16	187	0.37
146	9.30	33.77 7	3.22	189	200	8.32	34.01	2.37	26.47	157	0.46
175	8.66	33.92 2	2.65	168	250	7.72	34.08	1.78	26.61	143	0.53
205	8.25	34.02 2	2.30	155	300	7.28	34.13	1.31	26.72	134	0.60
235	7.88	34.07 1	1.89	146	400	6.49	34.21	0.67	26.89	117	0.73
275	7.45	34.08 8	1.61	139	500	5.86	34.27	0.32	27.02	105	0.84
335	7.04	34.17 1	0.94	127							
411	6.39	34.21 4	0.61	116							
486	5.94	34.25 9	0.34	107							
565	5.53	34.32 6	0.24	97							
569	5.54	34.33 6	0.26	97							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

SIO
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6201-2

HORIZON; February 1, 1962; 2305 GCT; 30°40.5'N, 118°47'W; sounding, 1400+ fm; wind, 280°, force 3; weather, clear; sea, very rough; wire angle, 08°.

100.60

0	15.16	33.43 6	5.49	320	0	15.16	33.44	5.49	24.76	320	0.00
10	14.80	33.43 0	5.52	313	10	14.80	33.43	5.52	24.83	313	0.03
30	14.21	33.42 8	5.10	301	20	14.39	33.43	5.24	24.91	305	0.06
40	14.05	33.43 6	5.62	298	30	14.21	33.43	5.10	24.95	301	0.09
50	13.81	33.45 0	5.19	292	50	13.81	33.45	5.19	25.05	292	0.15
65	13.28	33.43 9	5.36	282	75	12.65	33.44	5.27	25.27	271	0.22
80	12.60	33.45 5	5.24	269	100	11.11	33.47	4.75	25.59	241	0.29
100	11.11	33.47 1	4.75	241	125	10.28	33.58	4.03	25.82	219	0.34
125	10.28	33.58 3	4.03	219	150	9.35	33.72	3.73	26.08	194	0.40
144	9.48	33.67 8	3.85	199	200	8.39	33.99	2.42	26.44	159	0.48
174	8.86	33.89 3	3.13	174	250	7.95	34.09	1.77	26.59	146	0.56
203	8.36	33.99 8	2.37	158	300	7.38	34.16	1.15	26.73	133	0.63
234	8.08	34.05 7	2.05	150	400	6.71	34.23	0.62	26.87	119	0.76
273	7.74	34.14 0	1.41	139	500	5.98	34.26	0.34	26.99	107	0.87
332	7.02	34.16 9	0.90	127							
408	6.66	34.23 8	0.60	117							
482	6.08	34.25 9	0.37	109							
560	5.64	34.32 2	0.30	99							
564	5.62	34.32 9	0.27	98							

HORIZON; February 2, 1962; 0503 GCT; 30°20.5'N, 119°28'W; sounding, 2050 fm; wind, 010°, force 2; weather, clear; sea, slight; wire angle, 02°.

100.70

1	14.88	33.43 0	5.63	315	0	(14.88)	(33.43)	(5.63)	(24.81)	(315)	(0.00)
11	14.86	33.43 2	5.58	314	10	14.86	33.43	5.59	24.81	314	0.03
31	14.12	33.34 4	5.71	306	20	14.83	33.42	5.60	24.81	315	0.06
61	13.79	33.38 9	5.61	296	30	14.13	33.35	5.71	24.91	306	0.09
71	13.78	33.44 5	5.63	292	50	13.85	33.36	5.64	24.97	299	0.15
87	13.69	33.45 6	5.71	289	75	13.77	33.45	5.65	25.06	291	0.23
102	13.60	33.45 3	5.60	288	100	13.62	33.45	5.61	25.09	288	0.30
117	12.52	33.43 0	5.21	269	125	11.98	33.45	5.00	25.41	258	0.37
142	10.93	33.52 6	4.57	234	150	10.51	33.54	4.52	25.75	226	0.43
161	10.00	33.57 5	4.46	215	200	8.85	33.85	3.39	26.26	177	0.53
191	9.00	33.81 0	3.58	182	250	8.03	33.98	2.88	26.49	155	0.61
220	8.54	33.92 9	3.04	166	300	7.58	34.08	1.77	26.63	141	0.69
251	8.02	33.98 4	2.87	155	400	6.50	34.14	1.01	26.83	123	0.82
300	7.58	34.07 6	1.77	142	500	5.81	34.21	0.50	26.97	109	0.93
355	6.95	34.10 7	1.34	131	600	5.44	34.30	0.34	27.09	98	1.04
440	6.17	34.16 3	0.79	117							
523	5.72	34.22 9	0.44	107							
608	5.41	34.30 8	0.33	97							
614	5.34	34.30 7	-	96							

HORIZON; February 2, 1962; 1449 GCT; 29°39'N, 120°51'W; sounding, 2030 fm; wind, 360°, force 1; weather, partly cloudy; sea, very rough; wire angle, 03°.

100.90

1	15.96	33.63 8	5.31	322	0	(15.96)	(33.64)	(5.31)	(24.73)	(322)	(0.00)
11	15.94	33.65 7	5.42	321	10	15.94	33.66	5.42	24.75	320	0.03
31	15.54	33.55 9	5.46	319	20	15.60	33.57	5.44	24.76	320	0.06
57	15.78	33.65 4	5.42	317	30	15.54	33.56	5.46	24.76	319	0.10
67	15.89	33.69 0	5.43	317	50	15.70	33.62	5.44	24.77	318	0.16
77	15.94	33.71 1	5.32	317	75	15.92	33.71	5.34	24.79	316	0.24
92	16.03	33.75 1	5.26	316	100	16.03	33.75	5.26	24.80	316	0.32
107	14.54	33.70 4	5.19	288	125	12.60	33.58	4.88	25.39	259	0.39
131	12.20	33.56 0	4.82	253	150	11.00	33.56	4.54	25.68	232	0.45
152	10.92	33.56 6	4.51	231	200	9.55	33.83	3.05	26.13	189	0.56
177	10.14	33.70 6	3.49	207	250	8.25	33.98	2.63	26.46	158	0.64
207	9.37	33.87 4	2.92	183	300	7.45	34.04	2.12	26.62	143	0.72
237	8.50	33.95 5	2.79	164	400	6.40	34.14	1.08	26.84	122	0.85
277	7.88	34.02 1	2.34	150	500	5.94	34.24	0.48	26.98	108	0.97
337	6.88	34.05 4	1.75	134							
413	6.31	34.14 7	0.95	120							
488	6.01	34.23 7	0.51	109							
566	5.58	34.30 5	0.31	99							
569	5.54	34.30 5	0.28	99							

S10

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

100.100

HORIZON; February 2, 1962; 1955 GCT; 29°21.5'N, 121°28'W; sounding, 2100 fm; wind, 040°, force 1; weather, partly cloudy; sea, very rough; wire angle, 02°.

1	16.01	33.61 6	5.42	325	0	(16.01)	(33.62)	(5.42)	(24.70)	(325)	(0.00)
11	15.90	33.62 0	5.40	322	10	15.91	33.62	5.40	24.73	323	0.03
31	16.32	33.79 8	5.24	319	20	16.21	33.75	5.28	24.76	320	0.06
56	16.26	33.79 4	-	317	30	16.32	33.80	5.25	24.77	318	0.10
66	16.30	33.82 2	5.37	316	50	16.27	33.80	5.29	24.78	317	0.16
77	16.26	33.81 4	5.30	316	75	16.27	33.82	5.31	24.80	316	0.24
91	15.30	33.84 1	5.32	294	100	15.30	33.92	5.23	25.09	288	0.31
106	15.02	33.88 6	5.18	284	125	13.80	33.75	5.13	25.28	270	0.38
131	12.72	33.63 1	5.08	258	150	11.10	33.53	4.73	25.63	236	0.45
151	11.05	33.52 9	4.72	236	200	9.11	33.83	3.46	26.21	182	0.55
176	9.88	33.68 9	4.17	204	250	8.30	34.01	2.47	26.47	157	0.64
205	8.98	33.85 6	3.31	178	300	8.00	34.14	1.62	26.62	143	0.71
236	8.42	33.96 5	2.77	162	400	6.92	34.21	0.86	26.83	123	0.84
276	8.14	34.08 1	1.99	149	500	5.79	34.23	0.57	26.99	107	0.96
335	7.73	34.20 5	1.21	134							
409	6.80	34.21 4	0.83	121							
484	5.88	34.21 5	0.61	110							
562	5.50	34.28 7	0.43	100							
566	5.47	34.29 4	0.39	99							

100.120

HORIZON; February 3, 1962; 0516 GCT; 28°40'N, 122°45'W; sounding, 2260 fm; wind, 360°, force 3; weather, clear; sea, very rough; wire angle, 04°.

1	16.64	33.85 5	5.30	321	0	(16.64)	(33.86)	(5.30)	(24.74)	(321)	(0.00)
11	16.18	33.75 8	5.31	318	10	16.19	33.76	5.31	24.77	318	0.03
31	16.13	33.75 5	5.30	318	20	16.14	33.76	5.30	24.78	317	0.06
56	16.50	33.89 0	5.30	316	30	16.13	33.76	5.30	24.78	317	0.10
66	16.50	33.89 1	5.30	316	50	16.47	33.87	5.30	24.79	317	0.16
76	16.56	33.93 0	5.26	314	75	16.55	33.93	5.25	24.82	314	0.24
92	16.66	33.97 3	5.25	313	100	16.70	33.99	5.24	24.83	313	0.32
107	15.86	33.98 5	5.13	295	125	14.69	33.93	5.03	25.23	274	0.39
132	14.24	33.90 3	5.01	267	150	12.94	33.78	4.89	25.48	251	0.46
152	12.84	33.77 4	4.88	250	200	9.93	33.74	4.12	26.00	201	0.57
176	11.12	33.71 3	4.56	223	250	8.45	33.94	3.42	26.40	164	0.66
206	9.68	33.75 0	4.01	197	300	7.63	34.01	2.68	26.57	147	0.74
236	8.76	33.91 0	3.59	171	400	6.49	34.12	1.15	26.82	124	0.87
276	7.99	33.98 4	3.03	154	500	5.72	34.21		26.99	108	0.99
337	7.16	34.05 4	1.92	138							
411	6.38	34.13 1	1.10	122							
486	5.82	34.19 3	1.11u	111							
566	5.30	34.27 2	0.48	99							
571	5.22	34.27 2	0.45	98							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

SIO
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6201-2

ARGO; January 17, 1962; 0408 GCT; 30°27'N, 117°51'W; sounding, 1394 fm; wind, 190°, force 4; weather, partly cloudy; sea, missing; wire angle, 10°.

10351
(S-9)

1	14.74	33.45 1	5.64	310	0	(14.74)	(33.45)	(5.64)	(24.85)	(311)	(0.00)
11	14.72	33.44 8	5.71	310	10	14.72	33.45	5.70	24.86	310	(0.03)
30	14.66	33.44 8	5.70	309	20	14.69	33.45	5.71	24.87	310	(0.06)
60	14.62	33.46 1	5.66	307	30	14.66	33.45	5.70	24.87	309	(0.09)
100	11.53	33.47 4	4.58	248	50	14.63	33.46	5.67	24.89	308	(0.15)
203	9.38	34.02 7	2.30	172	75	13.90	33.48	5.34	25.05	291	(0.23)
306	7.31	34.06 8	1.82	139	100	11.53	33.47	4.58	25.51	248	(0.30)
404	6.70	34.19 2	0.86	121	125	(10.23)	(33.64)	(3.65)	(25.87)	(214)	(0.35)
608	5.76	34.35 1	0.28	98	150	(9.98)	(33.81)	(3.13)	(26.05)	(197)	(0.41)
810	4.85	34.43 1	0.42	82	200	(9.41)	(34.02)	(2.35)	(26.31)	(173)	(0.50)
1009	4.07	34.49 0	0.55	69	250	8.29	34.05	2.02	26.51	154	(0.58)
1314	3.32	34.54 5	0.87	58	300	7.39	34.06	1.86	26.65	140	(0.65)
1629	2.62	34.59 4	1.31	48	400	6.72	34.19	0.91	26.84	122	(0.78)
1958	2.17	34.63 1	1.84	42	500	6.22	34.28	0.44	26.98	109	(0.90)
2271	1.96	34.64 7	2.14	39	600	5.79	34.34	0.30	27.08	99	(1.00)
2379	1.91	34.65 0	2.26	38	700	5.34	34.39	0.30	27.17	90	(1.10)
2429	1.84	34.65 4	2.29	38	800	4.90	34.43	0.40	27.26	82	(1.18)
2488	1.80	34.68 3u	2.37	-	1000	4.11	34.49	0.54	27.39	70	(1.34)
2539	1.76	34.66 2	2.47	36	1200	3.58	34.53	0.72	27.48	61	(1.47)
					1500	2.90	34.57	1.13	27.57	52	(1.64)
					2000	2.12	34.63	1.88	27.69	42	(1.87)
					2500	1.79	34.66	2.40	27.74	37	(2.07)

ARGO; January 16, 1962; 0835, 0436 GCT; 29°09'N, 117°40'W; sounding, 2116 fm; wind, 060°, force 3; weather, clear; sea, missing; wire angle, 18°, 12°.

10959
(S-8)

2	15.26	33.50 9	5.40	317	0	(15.26)	(33.51)	(5.40)	(24.79)	(317)	(0.00)
11	15.24	33.51 9	5.39	316	10	15.24	33.52	5.39	24.80	316	(0.03)
30	15.24	33.54 4	5.47	314	20	15.24	33.53	5.44	24.81	315	(0.06)
59	14.11	33.42 7	5.33	300	30	15.24	33.54	5.47	24.82	314	(0.09)
97	11.95	33.50 4	4.78	253	50	14.50	33.45	5.41	24.91	306	(0.16)
173	9.33	33.86 1	3.42	183	75	13.20	33.44	5.07	25.17	281	(0.23)
296	7.54	34.12 0	1.35	138	100	(11.79)	(33.52)	(4.71)	(25.50)	(249)	(0.30)
490	6.56	34.37 9	0.31	106	125	(10.76)	(33.65)	(4.34)	(25.79)	(222)	(0.36)
680	5.39	34.39 7	0.21	90	150	(9.95)	(33.77)	(3.89)	(26.02)	(200)	(0.41)
876	4.43	34.46 0	0.36	75	200	8.77	33.94	2.81	26.35	169	(0.50)
1078	3.75	34.51 1	0.60	65	250	7.99	34.04	1.90	26.54	150	(0.58)
1280	3.22	34.55 4	0.84	56	300	7.51	34.12	1.30	26.68	137	(0.65)
1483	2.78	34.58 5	1.10	50	400	6.99	34.29	0.61	26.88	118	(0.78)
1803	2.26	34.62 0	1.67	43	500	6.49	34.38	0.29	27.02	105	(0.89)
2126	1.98	34.64 5	2.05	39	600	5.86	34.39	0.22	27.11	96	(0.99)
2449	1.81	34.65 8	2.32	37	700	5.28	34.40	0.21	27.19	89	(1.08)
2665	1.68	34.66 6	2.54	36	800	4.77	34.43	0.27	27.27	81	(1.17)
2884	1.62	34.66 8	2.57	35	1000	3.99	34.49	0.50	27.40	68	(1.32)
2993	1.62	34.67 1	2.61	35	1200	3.41	34.53	0.75	27.49	60	(1.45)
3102	1.62	34.67 7	2.71	34	1500	2.75	34.59	1.11	27.60	50	(1.61)
					2000	2.07	34.63	1.89	27.69	41	(1.84)
2870a)	1.66	34.66 4	2.32	36	2500	1.78	34.66	2.39	27.74	37	(2.03)
3064	1.64	34.66 9	2.40	35	3000	1.63	34.67	2.61	27.76	35	(2.21)
3259	1.61	34.67 2	2.52	35							
3455	1.62	34.67 3	2.53	35							
3555	1.64	34.67 4	2.46	35							
3653	1.65	34.67 3	2.49	35							
3703	1.63	34.67 2	2.52	35							
3753	1.63	34.68 4	2.59	34							
3802	1.64	34.68 1	2.54	34							
3853	1.65	34.68 4	2.70	34							

a) Overlapping casts; reconciliation of property curves when necessary.

S10

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

11035

HORIZON; February 5, 1962; 1926 GCT; 29°45'N, 115°58.5'W; sounding, 680 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°.

1	14.90	33.53 0	5.98	308	0	(14.90)	(33.53)	(5.98)	(24.88)	(308)	(0.00)
10	14.85	33.52 5	5.99	307	10	14.85	33.52	5.99	24.88	308	0.03
35	12.97	33.44 2	5.18	276	20	14.82	33.52	5.98	24.89	307	0.06
44	12.88	33.66 9	3.77	258	30	14.20	33.49	5.75	25.00	297	0.09
58	12.03	33.66 8	3.65	242	50	12.90	33.68	3.75	25.41	258	0.15
73	11.70	33.77 1	3.09	229	75	11.69	33.79	3.00	25.73	227	0.21
97	11.50	34.06 4	1.80	204	100	11.40	34.07	1.72	26.00	202	0.26
116	11.26	34.14 7	1.51	194	125	10.65	34.09	1.91	26.15	187	0.31
135	9.94	34.03 7	2.42	180	150	9.95	34.15	1.90	26.32	171	0.35
163	10.00	34.23 3	1.57	166	200	10.35	34.42	0.73	26.46	158	0.44
193	10.38	34.40 6	0.80	160	250	10.01	34.48	0.48	26.56	148	0.51
230	10.14	34.47 4	0.56	151	300	9.52	34.45	0.44	26.62	142	0.59
259	9.96	34.48 2	0.45	147	400	8.15	34.39	0.40	26.79	126	0.72
308	9.42	34.44 6	0.44	141	500	6.90	34.37	0.21	26.96	111	0.84
371	8.54	34.40 3	0.44	131	600	6.11	34.38	0.18	27.07	100	0.94
469	7.27	34.36 9	0.25	116							
557	6.33	34.36 9	0.18	104							
630	6.01	34.39 6	0.18	98							
634	5.97	34.39 8	0.18	97							

11040

HORIZON; February 5, 1962; 1510 GCT; 29°33'N, 116°22'W; sounding, 1100 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 21°.

1	15.19	33.54 7	5.62	313	0	(15.19)	(33.55)	(5.62)	(24.83)	(313)	(0.00)
10	15.16	33.54 7	5.66	312	10	15.16	33.55	5.66	24.84	312	0.03
34	14.76	33.53 7	5.51	305	20	15.14	33.54	5.64	24.84	312	0.06
63	13.85	33.57 9	4.76	283	30	15.13	33.54	5.64	24.84	312	0.09
72	13.21	33.57 0	4.40	272	50	14.40	33.57	5.20	25.02	295	0.15
93	12.20	33.75 9	2.92	239	75	12.87	33.58	4.13	25.34	264	0.22
105	11.86	33.90 5	2.06	222	100	12.03	33.86	2.31	25.72	228	0.29
119	11.15	33.91 2	2.41	209	125	10.92	33.92	2.41	25.97	204	0.34
148	10.38	34.00 3	2.42	189	150	10.37	34.01	2.40	26.14	189	0.39
167	10.29	34.11 4	1.97	180	200	10.22	34.32	1.08	26.40	163	0.48
194	10.25	34.29 5	1.16	166	250	9.63	34.40	0.65	26.57	148	0.55
227	9.91	34.38 2	0.77	154	300	9.07	34.41	0.51	26.67	138	0.63
256	9.56	34.40 4	0.63	146	400	7.84	34.37	0.39	26.82	123	0.76
303	9.03	34.40 7	0.51	138	500	6.92	34.37	0.25	26.95	111	0.87
365	8.16	34.38 1	0.42	127	600	6.13	34.39	0.15	27.08	99	0.98
462	7.29	34.36 6	0.31	116							
547	6.50	34.37 7	0.19	105							
619	6.04	34.39 8	0.14	98							
623	6.00	34.39 9	0.19	97							

11050

HORIZON; February 5, 1962; 0941 GCT; 29°14.5'N, 116°59.5'W; sounding, missing; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 21°.

1	15.02	33.49 2	5.62	313	0	(15.02)	(33.49)	(5.62)	(24.82)	(313)	(0.00)
10	14.99	33.48 3	5.63	313	10	14.99	33.48	5.63	24.82	313	0.03
29	15.01	33.48 4	5.61	314	20	15.00	33.48	5.62	24.82	314	0.06
38	14.91	33.48 6	5.57	311	30	15.01	33.48	5.60	24.82	314	0.09
53	14.38	33.45 0	5.53	303	50	14.44	33.45	5.54	24.92	304	0.16
66	13.98	33.45 4	5.37	295	75	12.50	33.43	4.90	25.30	269	0.23
90	12.08	33.42 3	4.79	261	100	11.79	33.43	4.72	25.43	256	0.29
108	11.10	33.50 4	4.30	238	125	10.77	33.75	3.38	25.86	215	0.35
126	10.71	33.76 2	3.34	213	150	9.93	33.90	2.82	26.13	190	0.40
144	9.90	33.83 8	3.12	194	200	10.10	34.28	1.21	26.39	164	0.49
171	10.24	34.10 8	1.90	179	250	9.64	34.37	0.80	26.54	150	0.57
201	10.08	34.28 7	1.19	163	300	8.58	34.30	0.87	26.66	139	0.64
230	9.88	34.36 3	0.90	155	400	7.49	34.39	0.50	26.89	117	0.77
274	9.21	34.36 4	0.79	144	500	6.62	34.37	0.24	27.00	107	0.88
324	8.04	34.27 2	0.91	133							
404	7.46	34.38 9a)	0.50	117							
482	6.81	34.37 4	0.26	109							
562	5.98	34.37 7	0.24	99							
566	5.95	34.38 3	0.22	98							

30

a) Alternate value, 34.33 ‰, not used in interpolation.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HORIZON: February 5, 1962; 0443, 0132 GCT; 28°56'N, 117°39'W; sounding, 1953 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°, 17°.

11060

1	16.25	33.64 9	5.52	328	0	(16.25)	(33.65)	(5.52)	(24.67)	(328)	(0.00)
11	16.24	33.64 8	5.51	328	10	16.24	33.65	5.51	24.68	328	0.03
30	15.94	-	5.53	-	20	16.10	33.64	5.51	24.70	325	0.07
55	15.82	33.61 7	5.51	321	30	15.94	33.63	5.53	24.73	323	0.10
64	15.80	33.61 5	5.46	321	50	15.83	33.62	5.51	24.75	321	0.16
74	15.68	33.62 0	5.54	318	75	15.67	33.62	5.54	24.78	317	0.24
90	14.32	33.53 0	5.38	296	100	13.70	33.58	5.10	25.17	280	0.32
105	13.30	33.58 3	4.99	272	125	12.03	33.57	4.72	25.49	250	0.38
129	11.80	33.56 1	4.68	246	150	10.83	33.57	4.33	25.71	229	0.44
149	10.88	33.56 8	4.34	230	200	9.10	33.89	3.11	26.25	177	0.54
173	9.96	33.69 3	3.69	205	250	8.38	34.03	2.41	26.48	156	0.63
203	9.04	33.90 0	3.07	176	300	7.63	34.08	1.85	26.63	142	0.70
232	8.67	33.99 9	2.65	163	400	6.47	34.15	0.98	26.84	122	0.83
271	8.05	34.05 6	2.18	150	500	6.12	34.29	0.37	27.00	107	0.95
330	7.23	34.10 4	1.57	135	600	5.52	34.36	0.25	27.13	95	1.05
405	6.44	34.15 2	0.96	121	700	5.07	34.40	0.28	27.21	86	1.14
479	6.18	34.25 8	0.46	110	800	4.72	34.44	0.31	27.29	80	1.22
558	5.78	34.32 2	0.27	100	1000	4.06	34.49	0.55	27.40	69	1.37
					1200	3.58	34.52	0.80	27.47	62	1.50
476a)	6.24	34.28 6	0.46	109	1500	2.88	34.57	1.00	27.57	52	1.67
598	5.52	34.35 6	0.25	95	2000	2.08	34.63	1.80	27.69	41	1.91
720	4.99	34.41 6	0.29	84	2500	1.80	34.66	2.38	27.74	37	2.10
842	4.61	34.45 2	0.32	78	3000	1.62	34.67	2.62	27.76	35	2.28
966	4.16	34.48 5	0.49	70							
1111	3.75	34.51 3	0.64	64							
1260	3.46	34.53 5	0.85	60							
1457	2.96	34.56 7	0.99	53							
1704	2.52	34.59 7	1.35	47							
1952	2.14	34.62 6	1.74	42							
2199	1.96	34.64 2	2.02	39							
2446	1.83	34.65 3	2.33	38							
2691	1.72	34.66 7	2.46	36							
2939	1.62	34.66 7	2.59	35							
3186	1.61	34.67 1	2.64	35							
3407	1.60	34.67 2	2.62	35							
3456	1.62	34.68 4	2.71	34							
3482	1.62	34.67 2	2.72	35							
3531	1.62	34.67 3	2.72	35							

HORIZON: February 4, 1962; 1838 GCT; 28°38.5'N, 118°17.5'W; sounding, 1740 fm; wind, 320°, force 1; weather, partly cloudy; sea, rough; wire angle, 04°.

11070

1	15.65	33.50 7	5.69	325	0	(15.65)	(33.51)	(5.69)	(24.70)	(325)	(0.00)
11	15.53	33.51 4	5.68	322	10	15.55	33.51	5.68	24.72	323	0.03
31	15.24	33.49 5	5.62	318	20	15.39	33.50	5.65	24.75	320	0.06
61	14.60	33.45 1	5.61	308	30	15.25	33.50	5.62	24.78	317	0.10
71	13.68	33.40 6	5.58	293	50	15.21	33.49	5.61	24.78	317	0.16
86	12.40	33.46 0	5.08	264	75	13.38	33.41	5.53	25.11	287	0.24
102	11.93	33.57 9	4.22	247	100	12.00	33.56	4.36	25.49	250	0.30
117	11.28	33.68 2	3.63	228	125	10.90	33.70	3.54	25.80	220	0.36
141	10.06	33.71 7	3.43	205	150	9.67	33.76	3.41	26.06	196	0.41
161	9.24	33.83 2	3.38	184	200	8.60	33.97	2.89	26.40	164	0.50
191	8.74	33.94 3	3.00	168	250	7.94	34.07	2.07	26.57	147	0.58
221	8.31	34.01 0	2.60	157	300	7.90	34.24	0.97	26.71	134	0.65
252	7.92	34.07 6	2.05	146	400	6.59	34.24	0.56	26.90	116	0.78
302	7.90	34.24 5	0.96	134	500	6.04	34.33	0.27	27.04	103	0.89
357	6.98	34.22 5	0.75	123	600	5.42	34.38	0.23	27.16	92	0.98
441	6.34	34.27 7	0.39	111							
526	5.91	34.34 9	0.24	100							
611	5.33	34.38 1	0.23	91							
616	5.29	34.38 8	0.24	90							

a) Overlapping casts; reconciliation of property curves when necessary.

S10
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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

110.80

HORIZON; February 4, 1962; 1305 GCT; 28°18'N, 118°55'W; sounding, 2090 fm; wind, 330°, force 4; weather, partly cloudy; sea, very rough; wire angle, 13°.

1	15.70	33.52 4	5.53	325	0	(15.70)	(33.52)	(5.53)	(24.70)	(325)	(0.00)
11	15.70	33.52 2	5.53	325	10	15.70	33.52	5.53	24.70	325	0.03
30	15.69	33.56 4	5.52	322	20	15.70	33.55	5.52	24.72	323	0.06
60	15.32	33.51 3	5.53	318	30	15.69	33.56	5.52	24.73	322	0.10
70	15.10	33.48 2	5.56	316	50	15.49	33.54	5.53	24.76	320	0.16
84	13.84	33.42 9	5.43	294	75	14.78	33.46	5.52	24.85	311	0.24
99	12.42	33.45 4	4.65	265	100	12.37	33.46	4.64	25.34	264	0.31
113	11.46	33.49 8	4.64	245	125	10.80	33.57	4.26	25.72	228	0.37
138	10.25	33.64 9	3.90	213	150	10.00	33.70	3.78	25.96	206	0.43
158	9.81	33.74 0	3.71	200	200	9.03	33.95	3.16	26.31	172	0.52
187	9.30	33.93 6	3.20	177	250	8.24	34.05	2.43	26.51	153	0.60
216	8.72	33.96 6	3.10	166	300	7.49	34.12	1.69	26.68	137	0.68
246	8.31	34.04 3	2.51	154	400	6.53	34.18	0.89	26.86	120	0.80
295	7.53	34.10 8	1.74	139	500	5.63	34.22	0.53	27.00	106	0.92
350	7.07	34.16 3	1.19	128	600	5.18	34.32	0.33	27.14	94	1.02
435	6.18	34.18 7	0.74	115							
519	5.50	34.23 3	0.48	104							
603	5.17	34.32 0	0.33	94							
608	5.15	34.32 1	0.44	93							

110.90

HORIZON; February 4, 1962; 0801 GCT; 27°55.5'N, 119°37'W; sounding, 2000+ fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 09°.

1	16.42	33.67 9	5.36	329	0	(16.42)	(33.68)	(5.36)	(24.66)	(329)	(0.00)
11	16.42	33.67 5	5.09	330	10	16.42	33.68	5.09	24.66	329	0.03
30	16.03	33.62 4	5.29	325	20	16.10	33.64	5.26	24.70	325	0.07
60	15.44	33.50 6	4.73u	321	30	16.03	33.62	5.29	24.70	325	0.10
71	15.43	33.50 4	5.55	321	50	15.90	33.60		24.71	324	0.16
85	15.02	33.47 5	5.41	314	75	15.37	33.50	5.52	24.76	320	0.24
100	13.65	33.42 1	5.19	291	100	13.65	33.42	5.19	25.06	291	0.32
115	13.36	33.62 6	4.65	270	125	13.00	33.65	4.48	25.37	262	0.39
139	11.54	33.65 0	3.85	235	150	11.10	33.70	3.54	25.77	224	0.45
159	10.89	33.77 3	3.25	215	200	10.18	34.03	2.35	26.18	184	0.55
189	10.61	34.03 7	2.21	191	250	8.59	34.02	2.64	26.44	160	0.64
218	9.23	34.00 0	2.70	171	300	7.88	34.10	1.91	26.61	144	0.71
247	8.65	34.01 7	2.70	161	400	7.27	34.30	0.59	26.85	121	0.85
296	7.92	34.08 7	2.00	146	500	6.54	34.34	0.33	26.98	108	0.96
351	7.60	34.22 4	1.04	131	600	5.83	34.37	0.28	27.10	97	1.06
434	7.02	34.32 5	0.42	116							
519	6.41	34.34 0	0.32	107							
604	5.79	34.37 8	0.28	96							
608	5.74	34.38 1	0.24	96							

110.00

HORIZON; February 4, 1962; 0323 GCT; 27°36'N, 120°15.5'W; sounding, 2000+ fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°.

0	16.93	33.90 5	5.30	324	0	16.93	33.90	5.30	24.71	325	0.00
10	16.94	33.89 9	5.25	325	10	16.94	33.90	5.25	24.70	325	0.03
29	16.74	33.87 9	5.25	322	20	16.83	33.89	5.25	24.72	323	0.06
60	16.69	33.88 2	5.25	321	30	16.74	33.88	5.25	24.74	322	0.10
70	16.68	33.87 7	5.49	321	50	16.68	33.88	5.25	24.75	320	0.16
85	16.64	33.87 2	5.31	320	75	16.66	33.88	5.43	24.75	320	0.24
100	16.64	33.87 5	5.31	320	100	16.64	33.88	5.31	24.76	320	0.32
114	16.50	33.92 5	5.24	313	125	15.72	33.88	5.17	24.97	300	0.40
139	14.25	33.77 6	5.03	277	150	13.27	33.72	4.84	25.37	262	0.47
159	12.48	33.67 3	4.62	250	200	10.39	33.77	3.37	25.95	207	0.59
189	10.78	33.73 1	3.69	216	250	9.89	34.17	1.77	26.34	169	0.68
219	9.96	33.89 7	2.71	190	300	9.23	34.26	1.26	26.52	152	0.76
248	9.90	34.15 7	1.81	170	400	7.06	34.17	1.12	26.78	128	0.90
297	9.30	34.26 4	1.25	153	500	6.29	34.26	0.60	26.95	111	1.02
351	7.42	34.11 0	1.65	137	600	5.66	34.32	0.30	27.08	99	1.12
434	6.84	34.21 2	0.79	122							
517	6.18	34.26 6	0.56	109							
601	5.66	34.32 0	0.30	99							
605	5.63	34.32 4	0.28	98							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
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6201-2

HORIZON; February 3, 1962; 1759 GCT; 26°56.5'N, 121°32'W; sounding, 1940 fm; wind, 040°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°.

110.120

1	17.49	33.97 0	5.46	332	0	(17.49)	(33.97)	(5.46)	(24.63)	(332)	(0.00)
11	17.46	33.97 1	5.39	331	10	17.46	33.97	5.38	24.63	331	0.03
31	17.40	34.05 6	5.41	324	20	17.42	34.00	5.39	24.67	328	0.07
56	17.44	34.10 0	5.32	322	30	17.40	34.05	5.41	24.71	324	0.10
66	17.44	34.10 2	5.32	321	50	17.43	34.10	5.33	24.74	321	0.16
76	17.41	34.09 8	5.30	321	75	17.41	34.10	5.30	24.75	321	0.24
91	17.42	34.10 1	5.32	321	100	17.42	34.10	5.25	24.74	321	0.32
106	17.42	34.10 0	5.15	321	125	17.28	34.08	5.20	24.76	319	0.40
130	17.10	34.06 4	5.31	316	150	15.26	34.02	4.98	25.18	280	0.48
150	15.26	34.01 8	4.98	280	200	10.43	33.73	4.19	25.91	210	0.60
174	11.99	33.70 7	4.68	239	250	9.06	33.92	3.50	26.28	175	0.70
203	10.26	33.73 7	4.16	207	300	7.93	34.04	2.49	26.55	149	0.78
232	9.52	33.85 0	3.81	187	400	6.71	34.12	1.40	26.79	127	0.92
271	8.56	33.98 6	3.14	162	500	6.11	34.25	0.55	26.97	110	1.03
331	7.38	34.07 5	1.97	139							
406	6.67	34.12 5	1.36	126							
479	6.24	34.22 5	0.62	113							
557	5.67	34.32 5	0.31	99							
562	5.64	34.32 3	0.29	99							

HORIZON; February 15, 1962; 1304 GCT; 29°21.5'N, 115°18'W; sounding, 37 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

113.30

1	15.04	33.76 1	5.67	294	0	(15.04)	(33.76)	(5.67)	(25.03)	(294)	(0.00)
11	14.99	33.75 1	5.67	294	10	15.00	33.75	5.67	25.03	294	0.03
31	13.82	33.76 2	3.85	269	20	14.62	33.75	5.15	25.11	286	0.06
41	13.32	33.77 4	3.20	259	30	13.88	33.76	3.90	25.27	271	0.09

HORIZON; February 15, 1962; 0924 GCT; 28°52.5'N, 115°28'W; sounding, 560 fm; wind, 280°, force 6; weather, cloudy; sea, high; wire angle, 27°.

115.35

1	15.44	33.60 0	5.72	314	0	(15.44)	(33.60)	(5.72)	(24.82)	(314)	(0.00)
10	15.41	33.59 4	5.63	314	10	15.41	33.59	5.63	24.82	314	0.03
27	15.44	33.59 5	5.63	314	20	15.43	33.59	5.63	24.81	315	0.06
55	15.16	33.59 1	5.55	309	30	15.43	33.59	5.63	24.81	315	0.09
64	14.34	33.60 3	5.00	291	50	15.27	33.59	5.60	24.85	311	0.16
77	12.85	33.59 6	4.45	263	75	13.10	33.59	4.52	25.30	268	0.23
90	11.70	33.64 6	4.03	238	100	11.39	33.69	3.78	25.71	230	0.29
103	11.32	33.70 5	3.67	227	125	11.00	33.89	2.87	25.93	208	0.35
123	11.01	33.86 2	2.98	210	150	10.71	34.14	1.85	26.18	185	0.40
140	10.87	34.09 3	2.02	191	200	10.15	34.27	1.41	26.38	166	0.48
164	10.47	34.19 4	1.66	177	250	9.37	34.36	0.91	26.58	147	0.56
188	10.38	34.28 3	1.33	169	300	9.07	34.43	0.54	26.68	137	0.63
212	9.85	34.25 3	1.49	162	400	8.11	34.43	0.26	26.83	123	0.76
251	9.36	34.36 1	0.91	147	500	6.95	34.38	0.25	26.96	111	0.88
297	9.09	34.42 3	0.55	138							
366	8.50	34.45 4	0.30	127							
440	7.63	34.40 7	0.24	118							
520	6.75	34.37 6	0.25	108							

HORIZON; February 15, 1962; 0430 GCT; 28°19'N, 114°53'W; sounding, 61 fm; wind, 300°, force 5; weather, partly cloudy; sea, rough; wire angle, 09°.

119.33

1	15.80	33.76 5	5.79	310	0	(15.80)	(33.76)	(5.79)	(24.86)	(310)	(0.00)
11	15.80	33.76 3	5.72	310	10	15.80	33.76	5.72	24.86	310	0.03
30	15.60	33.73 8	5.58	307	20	15.72	33.75	5.65	24.87	309	0.06
50	15.33	33.80 1	5.11	297	30	15.60	33.74	5.58	24.89	307	0.09
75	14.59	33.77 7	4.30	284	50	15.33	33.80	5.11	24.99	297	0.15
99	12.78	33.84 0	2.04	244	75	14.59	33.78	4.30	25.14	283	0.23
					100	(12.75)	(33.84)	(2.03)	(25.56)	(243)	(0.29)

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

120.45

HORIZON; February 6, 1962; 1024 GCT; 27°40'N, 115°36.5'W; sounding, 1000+ fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 27°.

1	16.38	33.85	1	5.55	316	0	(16.38)	(33.85)	(5.55)	(24.80)	(316)	(0.00)
10	16.40	33.84	7	5.52	317	10	16.40	33.85	5.52	24.79	316	0.03
32	15.98	33.91	1	5.26	303	20	16.40	33.85	5.51	24.79	316	0.06
60	15.59	33.91	9	4.64	294	30	16.00	33.90	5.30	24.92	304	0.09
69	14.33	33.76	7	4.19	279	50	15.88	33.92	5.10	24.96	300	0.15
86	12.47	33.70	1	3.60	248	75	13.60	33.74	3.95	25.32	267	0.23
99	11.91	33.84	3	2.87	227	100	11.91	33.86	2.84	25.74	226	0.29
112	11.94	34.01	4	2.40	215	125	11.84	34.14	1.87	25.97	204	0.34
139	11.68	34.24	4	1.33	194	150	11.51	34.26	1.23	26.13	190	0.39
155	11.47	34.28	1	1.19	187	200	11.10	34.51	0.45	26.40	164	0.48
179	11.26	34.39	7	0.82	175	250	10.37	34.53	0.30	26.54	150	0.56
208	11.02	34.54	1	0.36	160	300	9.79	34.52	0.22	26.63	142	0.63
234	10.55	34.53	2	0.33	153	400	8.45	34.48	0.19	26.82	124	0.76
277	10.09	34.52	6	0.25	146	500	7.28	34.43	0.15	26.95	111	0.88
335	9.31	34.51	6	0.20	134							
425	8.16	34.46	4	0.18	121							
506	7.22	34.43	6	0.14	110							
574	6.36	34.39	9	0.15	102							
578	6.32	34.39	8	0.17	101							

120.50

HORIZON; February 6, 1962; 1332 GCT; 27°30'N, 115°56'W; sounding, 1000+ fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 20°.

1	16.16	33.84	0	5.67	312	0	(16.16)	(33.84)	(5.67)	(24.84)	(312)	(0.00)
10	16.15	33.84	0	5.66	312	10	16.15	33.84	5.66	24.84	312	0.03
34	15.46	33.80	9	5.48	299	20	16.15	33.84	5.66	24.84	312	0.06
43	14.98	33.76	0	5.08	293	30	16.15	33.84	5.66	24.84	312	0.09
58	14.02	33.78	4	3.82	272	50	14.30	33.77	4.14	25.19	278	0.15
72	12.77	33.75	3	3.51	250	75	12.68	33.76	3.43	25.52	248	0.22
96	12.42	33.94	7	2.43	229	100	12.39	33.98	2.31	25.74	226	0.28
114	11.98	34.05	5	1.88	213	125	11.69	34.11	1.77	25.98	204	0.33
134	11.46	34.15	8	1.65	196	150	11.31	34.26	1.28	26.16	186	0.38
162	11.24	34.34	2	0.99	179	200	10.98	34.48	0.50	26.39	164	0.47
190	11.13	34.47	7	0.52	167	250	10.20	34.52	0.36	26.56	148	0.55
226	10.37	34.49	0	0.45	153	300	9.35	34.47	0.35	26.67	138	0.62
255	10.16	34.51	8	0.36	148	400	7.69	34.38	0.30	26.85	121	0.75
301	9.34	34.46	8	0.35	138	500	6.55	34.39	0.22	27.02	105	0.86
361	8.32	34.41	0	0.35	127	600	6.00	34.41	0.24	27.11	96	0.96
454	6.92	34.36	9	0.27	111							
540	6.30	34.40	0	0.21	101							
613	5.94	34.41	0	0.25	96							
617	5.90	34.41	7	0.22	95							

120.60

HORIZON; February 6, 1962; 1857 GCT; 27°09.5'N, 116°35.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 10°.

1	16.95	33.81	7	5.40	331	0	(16.95)	(33.82)	(5.40)	(24.64)	(331)	(0.00)
11	16.94	33.81	6	5.35	331	10	16.94	33.82	5.35	24.64	331	0.03
30	16.93	33.81	8	5.35	331	20	16.94	33.82	5.35	24.64	331	0.07
60	14.57	33.61	9	5.11	295	30	16.93	33.82	5.35	24.65	330	0.10
70	14.38	33.78	9	3.87	278	50	16.70	33.80	5.34	24.68	327	0.16
84	12.94	33.80	0	3.46	250	75	14.12	33.80	3.68	25.26	272	0.24
100	11.35	33.70	2	3.75	228	100	11.35	33.70	3.75	25.72	228	0.30
115	10.97	33.81	3	3.18	213	125	10.74	33.89	2.83	25.98	204	0.36
140	10.48	33.95	7	2.55	194	150	10.31	34.00	2.40	26.14	188	0.41
159	10.20	34.04	1	2.27	184	200	9.95	34.24	1.36	26.39	165	0.49
189	10.02	34.20	1	1.55	169	250	9.30	34.30	1.05	26.54	150	0.57
219	9.82	34.27	9	1.16	160	300	8.76	34.33	0.83	26.65	140	0.64
248	9.33	34.30	2	1.06	150	400	7.63	34.38	0.35	26.86	120	0.77
298	8.78	34.32	7	0.84	140	500	6.85	34.40	0.20	26.99	108	0.89
383	7.76	34.36	8	0.41	122	600	5.99	34.41	0.22	27.11	96	0.99
437	7.40	34.39	9	0.23	115							
521	6.66	34.40	3	0.20	105							
606	5.95	34.40	8	0.22	96							
612	5.87	34.40	7	0.19	95							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ _t	δT	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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HORIZON; February 7, 1962; 0116 GCT; 26°51'N, 117°13.5'W; sounding, 2100 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

12070

1	17.30	33.89 5	5.56	333	0	(17.30)	(33.90)	(5.56)	(24.62)	(333)	(0.00)
11	17.30	33.89 4	5.67	333	10	17.30	33.90	5.66	24.62	333	0.03
31	17.26	33.88 9	5.40	333	20	17.30	33.89	5.55	24.61	334	0.07
60	15.66	33.67 9	5.34	313	30	17.27	33.89	5.40	24.62	333	0.10
70	14.13	33.60 0	4.74	287	50	16.80	33.82	5.38	24.68	327	0.17
84	12.76	33.61 6	4.29	260	75	13.62	33.60	4.55	25.20	277	0.24
100	11.80	33.66 6	4.08	238	100	11.80	33.67	4.08	25.61	238	0.31
114	11.12	33.71 2	4.02	223	125	10.68	33.78	3.74	25.90	211	0.36
138	10.32	33.88 9	3.16	197	150	10.17	34.02	2.51	26.18	185	0.41
157	10.10	34.07 0	2.29	180	200	9.60	34.22	1.57	26.43	161	0.50
185	9.84	34.17 7	1.82	168	250	9.44	34.40	0.67	26.60	145	0.57
214	9.40	34.27 1	1.26	154	300	9.04	34.44	0.46	26.69	136	0.64
243	9.49	34.39 2	0.74	146	400	7.59	34.36	0.29	26.85	121	0.77
291	9.14	34.43 9	0.48	137	500	6.53	34.35	0.19	26.99	107	0.89
343	8.46	34.42 3	0.33	128	600	(5.94)	(34.39)	(0.17)	(27.10)	(97)	(0.99)
425	7.22	34.34 5	0.39	117							
509	6.46	34.34 6	0.27	107							
595	5.98	34.39 2	0.18	98							
599	5.95	34.38 9	0.17	97							

HORIZON; February 7, 1962; 0537 GCT; 26°31'N, 117°52.5'W; sounding, 2000+ fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 06°.

12080

1	17.19	33.85 6	5.40	334	0	(17.19)	(33.86)	(5.40)	(24.61)	(333)	(0.00)
11	17.20	33.85 3	5.33	334	10	17.20	33.85	5.34	24.60	334	0.03
31	17.22	33.86 0	5.42	334	20	17.21	33.86	5.40	24.61	334	0.07
56	16.66	33.79 4	5.43a)	326	30	17.22	33.86	5.42	24.61	334	0.10
66	16.44	33.75 6	5.42	324	50	16.77	33.81	5.43	24.68	328	0.17
76	14.62	33.63 2	5.22	295	75	15.50	33.69	5.33	24.87	309	0.25
92	12.75	33.61 9	4.77	259	100	12.23	33.65	4.18	25.52	247	0.32
106	11.94	33.69 4	3.73	239	125	11.30	33.90	2.63	25.89	212	0.37
131	11.10	33.94 7	2.45	206	150	10.49	34.02	2.26	26.12	190	0.42
151	10.44	34.02 2	2.25	189	200	9.44	34.17	1.82	26.42	162	0.51
175	9.80	34.11 7	2.06	171	250	9.45	34.34	0.89	26.55	149	0.59
205	9.40	34.18 0	1.79	161	300	8.88	34.40	0.50	26.69	136	0.66
236	9.61	34.31 5	1.06	154	400	7.77	34.39	0.28	26.85	121	0.79
275	9.14	34.37 1	0.66	142	500	6.60	34.39	0.19	27.01	105	0.90
335	8.56	34.42 0	0.35	130							
410	7.62	34.38 6	0.28	119							
485	6.72	34.38 5	0.20	107							
564	6.22	34.40 3	0.16	100							
569	6.19	34.40 6	0.17	99							

HORIZON; February 7, 1962; 1023 GCT; 26°11.5'N, 118°34.5'W; sounding, 2000+ fm; wind, 340°, force 3; weather, clear; sea, rough; wire angle, 08°.

12090

0	17.12	33.86 5	5.02	331	0	17.12	33.86	5.02	24.63	332	0.00
10	17.14	33.86 3	5.09	332	10	17.14	33.86	5.09	24.63	332	0.03
30	17.12	33.86 2	5.02	332	20	17.15	33.86	5.02	24.62	332	0.07
54	16.94	33.85 6	5.17	328	30	17.12	33.86	5.02	24.63	332	0.10
65	16.84	33.83 6	5.25	327	50	16.98	33.86	5.15	24.66	329	0.17
75	16.46	33.75 3	5.28	325	75	16.46	33.75	5.28	24.70	325	0.25
90	14.70	33.62 9	4.96	297	100	13.52	33.56	4.76	25.19	278	0.32
105	12.96	33.54 0	4.64	269	125	12.18	33.59	4.33	25.48	251	0.39
129	12.04	33.60 5	4.22	247	150	11.21	33.75	3.32	25.79	222	0.45
149	11.28	33.75 0	3.32	223	200	9.96	34.08	2.17	26.26	177	0.55
174	10.02	33.84 2	3.22	195	250	9.65	34.30	1.21	26.48	156	0.63
204	9.95	34.11 0	2.02	174	300	9.08	34.38	0.68	26.64	141	0.70
234	9.76	34.24 0	1.43	162	400	7.82	34.41	0.36	26.86	120	0.84
274	9.44	34.35 7	0.84	148	500	6.60	34.39	0.30	27.01	105	0.95
332	8.62	34.39 5	0.54	133							
407	7.74	34.41 2	0.34	119							
480	6.80	34.38 7	0.31	108							
561	6.04	34.38 9	0.21	98							
566	6.00	34.39 1	0.23	98							

a) Mean value of 5.29 and 5.57 ml/L.

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

120.100

HORIZON; February 7, 1962; 1500 GCT; 25°52'N, 119°15'W; sounding, 2000 fm; wind, 350°, force 3; weather, overcast; sea, rough; wire angle, 08°.

1	16.64	33.73 3	5.37	330	0	(16.64)	(33.73)	(5.37)	(24.64)	(331)	(0.00)
11	16.62	33.71 3	5.33	331	10	16.62	33.71	5.33	24.63	332	0.03
31	16.57	33.70 3	5.30	331	20	16.60	33.71	5.31	24.64	331	0.07
56	16.58	33.77 2	5.35	326	30	16.57	33.70	5.30	24.64	331	0.10
66	16.45	33.73 8	5.33	326	50	16.66	33.77	5.33	24.67	328	0.17
76	16.44	33.75 4	5.33	324	75	16.44	33.75	5.33	24.71	325	0.25
91	16.24	33.72 7	5.37	322	100	15.87	33.70	5.36	24.80	316	0.33
106	15.40	33.67 0	5.34	308	125	13.48	33.60	5.08	25.23	275	0.40
130	13.02	33.59 6	4.99	266	150	11.74	33.63	4.25	25.59	240	0.47
150	11.74	33.62 8	4.25	240	200	10.27	33.90	2.90	26.07	195	0.57
175	11.12	33.73 3	3.63	222	250	8.22	33.95	3.08	26.44	160	0.66
204	10.09	33.92 1	2.85	191	300	8.46	34.19	1.65	26.59	146	0.74
233	8.56	33.94 4	3.23	165	400	7.85	34.34	0.50	26.80	126	0.87
271	8.10	33.99 5	2.80	155	500	6.94	34.40	0.17	26.98	109	0.99
330	8.77	34.35 9	0.68	138							
405	7.80	34.34 3	0.48	125							
479	7.14	34.39 9	0.17	112							
558	6.31	34.39 7	0.20	101							
562	6.24	34.39 3	0.18	101							

120.120

HORIZON; February 8, 1962; 0015 GCT; 25°12'N, 120°22'W; sounding, 2000 fm; wind, 270°, force 1; weather, cloudy; sea, rough; wire angle, 08°.

1	17.90	33.95 5	5.32	343	0	(17.90)	(33.96)	(5.32)	(24.52)	(342)	(0.00)
11	17.56	33.94 5	5.26	336	10	17.57	33.94	5.27	24.59	336	0.03
31	17.52	33.95 6	5.21	334	20	17.54	33.95	5.23	24.60	335	0.07
62	17.44	33.96 4	5.16	331	30	17.52	33.95	5.22	24.60	334	0.10
72	17.18	33.90 8	5.14	330	50	17.51	33.96	5.20	24.61	333	0.17
87	17.34	34.00 6	5.17	326	75	17.14	33.91	5.14	24.67	329	0.25
101	17.30	34.00 5	5.12	325	100	17.31	34.00	5.12	24.69	326	0.33
116	15.86	33.83 9	5.12	306	125	15.00	33.77	5.05	25.04	292	0.41
143	13.60	33.69 2	4.86	270	150	13.13	33.71	4.72	25.39	260	0.48
163	12.33	33.75 1	4.40	242	200	10.21	33.87	3.11	26.05	196	0.59
192	10.55	33.81 3	3.35	206	250	9.38	34.14	2.02	26.40	163	0.68
222	9.62	34.01 8	2.53	176	300	8.37	34.22	1.35	26.63	142	0.76
253	9.34	34.14 2	1.98	162	400	7.40	34.29	0.63	26.82	123	0.89
301	8.36	34.22 0	1.34	142	500	6.50	34.33	0.33	26.98	109	1.01
356	7.79	34.26 2	0.93	131	600	5.68	34.37	0.26	27.12	96	1.11
440	7.08	34.31 1	0.45	117							
524	6.29	34.33 7	0.30	105							
608	5.62	34.37 1	0.25	95							
612	5.55	34.36 3	0.25	95							

123.42

HORIZON; February 14, 1962; 1827 GCT; 27°13.5'N, 114°59.5'W; sounding, 1000 fm; wind, 350°, force 4; weather, partly cloudy; sea, very rough; wire angle, 04°.

1	16.44	33.88 9	5.40	314	0	(16.44)	(33.89)	(5.40)	(24.81)	(314)	(0.00)
11	16.38	33.88 3	5.44	314	10	16.39	33.88	5.42	24.82	314	0.03
36	14.84	33.83 1	4.31	285	20	16.26	33.88	5.41	24.85	311	0.06
46	13.94	33.82 9	3.61	267	30	15.85	33.83	4.32	24.90	306	0.09
61	12.89	33.75 9	3.48	252	50	13.89	33.83	3.60	25.33	266	0.15
76	11.49	33.71 9	3.53	229	75	11.56	33.72	3.53	25.70	230	0.21
102	10.74	33.92 9	2.49	201	100	10.79	33.92	2.50	25.99	202	0.27
122	10.38	33.99 1	2.31	190	125	10.30	34.00	2.30	26.14	188	0.32
141	9.96	34.06 6	2.07	178	150	10.02	34.16	1.65	26.31	172	0.36
171	10.28	34.34 5	1.02	162	200	10.20	34.43	0.66	26.49	155	0.44
201	10.20	34.42 9	0.66	155	250	10.05	34.51	0.31	26.58	146	0.52
241	10.10	34.51 5	0.31	147	300	9.43	34.50	0.28	26.68	137	0.59
272	9.86	34.50 7	0.30	144	400	8.26	34.47	0.18	26.84	122	0.72
322	9.11	34.49 4	0.24	133	500	7.31	34.44	0.15	26.96	111	0.83
387	8.39	34.47 6	0.18	123	600	6.16	34.43	0.15	27.10	97	0.94
488	7.46	34.44 4	0.16	113							
577	6.34	34.42 6	0.14	99							
653	5.88	34.42 6	0.16	94							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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HORIZON; February 14, 1962; 1325 GCT; 26°38.5'N, 114°28'W; sounding, 2000+ fm; wind, 290°, force 4; weather, partly cloudy; sea, rough; wire angle, 22°.

127.40

1	17.18	33.91 2	5.48	329	0	(17.18)	(33.91)	(5.48)	(24.66)	(329)	(0.00)
10	17.18	33.90 0	5.71	330	10	17.18	33.90	5.71	24.65	330	0.03
29	17.16	33.90 0	5.38	330	20	17.17	33.90	5.50	24.65	330	0.07
56	16.84	33.96 2	5.21	318	30	17.16	33.90	5.39	24.65	330	0.10
65	15.06	33.75 4	4.63	295	50	17.05	33.92	5.31	24.69	326	0.16
79	13.68	33.71 0	4.21	270	75	13.83	33.71	4.28	25.25	273	0.24
93	12.22	33.71 4	3.72	243	100	11.79	33.76	3.35	25.69	231	0.30
107	11.40	33.83 1	2.95	219	125	10.52	33.90	2.70	26.02	199	0.36
129	10.41	33.94 0	2.63	194	150	10.67	34.28	1.43	26.29	174	0.40
146	10.66	34.24 4	1.55	176	200	10.46	34.45	0.69	26.46	158	0.49
173	10.68	34.39 3	0.94	166	250	10.11	34.52	0.39	26.58	147	0.56
199	10.47	34.45 2	0.70	158	300	9.44	34.50	0.32	26.68	137	0.63
226	10.32	34.51 8	0.39	150	400	8.25	34.48	0.20	26.85	121	0.76
272	9.85	34.50 8	0.38	143	500	7.21	34.45	0.17	26.98	109	0.88
322	9.11	34.49 4	0.27	133							
399	8.26	34.47 5	0.20	122							
478	7.44	34.45 7	0.16	111							
562	6.52	34.43 2	0.18	101							

HORIZON; February 10, 1962; 1520 GCT; 26°29'N, 113°31'W; sounding, 42+ fm; wind, 050°, force 3; weather, fog; sea, slight; wire angle, 01°.

130.30

0	17.69	34.11 0	5.22	327	0	17.69	34.11	5.22	24.69	327	0.00
10	17.68	34.11 0	5.23	326	10	17.68	34.11	5.23	24.69	326	0.03
30	17.40	34.10 4	5.18	320	20	17.65	34.11	5.23	24.70	326	0.07
50	16.39	34.12 8	4.28	296	30	17.40	34.10	5.18	24.75	321	0.10
70	13.81	34.05 2	1.09	248	50	16.39	34.13	4.28	25.01	296	0.16
77	-	34.06 1	0.81	-	75	(13.61)	34.06	0.87	(25.56)	(243)	(0.23)

HORIZON; February 10, 1962; 1011 GCT; 26°09.5'N, 114°08'W; sounding, 1100 fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.

130.40

1	17.55	34.09 8	5.37	324	0	(17.55)	(34.10)	(5.37)	(24.71)	(324)	(0.00)
10	17.56	34.10 6	5.51	324	10	17.56	34.11	5.51	24.72	324	0.03
31	17.21	34.07 6	5.49	318	20	17.52	34.10	5.51	24.72	323	0.06
41	16.77	34.05 1	5.21	310	30	17.28	34.08	5.49	24.76	319	0.10
51	16.52	34.05 6	4.94	304	50	16.53	34.06	4.95	24.92	304	0.16
66	13.96	33.65 6	4.53	280	75	12.94	33.64	4.16	25.37	261	0.23
80	12.81	33.65 1	4.05	258	100	12.15	33.98	2.52	25.79	222	0.29
100	12.15	33.97 8	2.52	222	125	12.08	34.21	1.60	25.98	203	0.34
125	12.08	34.21 1	1.60	203	150	11.94	34.44	0.72	26.19	184	0.39
145	11.96	34.41 0	0.83	187	200	11.27	34.51	0.55	26.36	167	0.48
175	11.72	34.50 9	0.49	175	250	10.33	34.55	0.28	26.56	148	0.56
205	11.16	34.51 3	0.56	165	300	9.61	34.53	0.23	26.67	138	0.63
234	10.62	34.56 2	0.30	152	400	8.40	34.48	0.19	26.83	123	0.76
274	9.92	34.53 4	0.25	143	500	7.14	34.46	0.15	27.00	107	0.88
332	9.30	34.54 0	0.20	132							
405	8.32	34.47 6	0.19	122							
480	7.36	34.46 5	0.15	110							
560	6.58	34.44 8	0.15	101							
564	6.54	34.44 7	0.14	100							

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

130.50

HORIZON; February 10, 1962; 0456 GCT; ^{2.5}29°49'N, 114°47'W; sounding, 2000 fm; wind, 300°, force 3; weather, partly cloudy; sea, missing; wire angle, 05°.

1	17.46	34.01 8	5.45	328	0	(17.46)	(34.02)	(5.45)	(24.67)	(328)	(0.00)
11	17.32	34.01 3	5.38	325	10	17.33	34.01	5.39	24.70	326	0.03
31	16.96	33.99 7	5.38	318	20	17.19	34.01	5.38	24.73	322	0.07
41	16.62	33.97 3	5.10	312	30	16.98	34.00	5.38	24.77	318	0.10
56	15.04	33.87 3	3.86	286	50	15.40	33.88	4.15	25.04	293	0.16
71	13.92	33.92 6	2.71	259	75	13.64	33.93	2.61	25.45	253	0.23
96	12.78	33.97 0	2.51	234	100	12.67	33.97	2.52	25.68	232	0.29
117	11.32	33.92 4	2.71	211	125	11.19	33.95	2.70	25.94	207	0.34
136	10.70	34.00 3	2.56	195	150	10.78	34.19	1.73	26.20	182	0.39
156	10.82	34.25 8	1.47	178	200	10.82	34.49	0.65	26.43	161	0.48
185	10.89	34.42 0	0.97	167	250	10.24	34.52	0.41	26.56	149	0.55
220	10.64	34.52 8	0.40	155	300	9.24	34.43	0.50	26.65	140	0.63
250	10.24	34.51 5	0.41	149	400	7.79	34.40	0.34	26.85	120	0.76
299	9.26	34.43 5	0.50	139	500	6.63	34.38	0.25	27.00	106	0.87
353	8.44	34.41 5	0.45	129	600	5.88	34.40	0.26	27.12	96	0.97
437	7.32	34.39 2	0.28	115							
522	6.42	34.38 3	0.25	104							
606	5.86	34.40 0	0.26	95							
611	5.83	34.41 0	0.28	94							

130.60

HORIZON; February 9, 1962; 2303 GCT; 25°28'N, 115°23'W; sounding, 2000+ fm; wind, 250°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

1	18.20	33.93 3	5.35a)	351	0	(18.20)	(33.93)	(5.35)	(24.42)	(352)	(0.00)
11	17.72	33.93 3	5.44	340	10	17.73	33.93	5.44	24.54	341	0.03
31	17.73	34.03 2	5.37	333	20	17.72	33.97	5.41	24.57	337	0.07
60	15.18	33.68 2	5.13	303	30	17.73	34.02	5.36	24.61	334	0.10
71	13.81	33.61 6	4.74	280	50	17.43	34.00	5.31	24.66	329	0.17
86	12.84	33.64 6	4.25	259	75	13.42	33.62	4.56	25.26	272	0.24
100	12.27	33.75 9	3.53	240	100	12.27	33.76	3.53	25.60	240	0.31
115	11.76	33.86 4	3.07	223	125	11.53	33.95	2.68	25.88	213	0.36
140	11.24	34.07 4	2.17	199	150	11.04	34.14	1.91	26.12	190	0.41
160	10.85	34.18 7	1.72	184	200	10.63	34.36	1.05	26.36	167	0.50
190	10.72	34.31 7	1.20	172	250	10.30	34.49	0.44	26.52	152	0.58
219	10.40	34.40 7	0.82	160	300	9.71	34.53	0.26	26.65	139	0.66
248	10.32	34.48 6	0.47	153	400	8.17	34.45	0.20	26.84	122	0.79
298	9.75	34.52 8	0.26	140	500	7.13	34.46	0.22	27.00	107	0.90
353	8.90	34.48 7	0.25	130	600	6.28	34.45	0.17	27.10	97	1.00
438	7.66	34.45 3	0.17	115							
521	6.96	34.46 0	0.24	105							
605	6.21	34.44 5	0.16	96							
609	6.19	34.45 0	0.13	96							

130.70

HORIZON; February 9, 1962; 1340 GCT; 25°11'N, 116°03'W; sounding, 2000+ fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 00°.

0	17.14	33.80 1	5.22	336	0	17.14	33.80	5.22	24.58	337	0.00
10	17.13	33.79 3	5.23	337	10	17.13	33.79	5.23	24.58	337	0.03
30	17.15	33.79 4	5.25	337	20	17.14	33.79	5.24	24.57	337	0.07
40	17.14	33.79 2	5.29	337	30	17.15	33.79	5.25	24.57	338	0.10
55	16.50	33.68 9	5.39	330	50	16.83	33.74	5.33	24.61	334	0.17
71	16.24	33.65 4	5.41	327	75	16.16	33.65	5.41	24.69	326	0.25
96	13.78	33.60 8	5.18	280	100	13.44	33.61	5.08	25.25	273	0.33
116	12.04	33.61 2	4.62	247	125	11.27	33.64	4.37	25.69	231	0.39
136	10.48	33.72 9	4.02	211	150	10.05	33.81	3.68	26.04	198	0.44
156	9.92	33.84 1	3.51	194	200	9.12	34.04	2.62	26.37	167	0.53
187	9.34	34.00 2	2.83	173	250	9.13	34.31	1.10	26.58	147	0.61
222	8.82	34.10 6	2.26	157	300	8.67	34.35	0.70	26.68	137	0.68
252	9.15	34.31 8	1.03	146	400	7.61	34.39	0.32	26.87	119	0.81
302	8.64	34.34 6	0.69	137	500	6.83	34.43	0.18	27.01	105	0.92
357	7.89	34.37 1	0.43	124	600	6.12	34.45	0.16	27.12	95	1.02
442	7.34	34.41 4	0.20	113							
527	6.63	34.43 4	0.18	102							
612	6.06	34.45 6	0.16	94							
617	6.02	34.45 5	0.17	93							

38

a) Alternate value, 5.24 ml/L, not used in interpolation.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HORIZON; February 9, 1962; 0850 GCT; 24°50'N, 116°40.5'W; sounding, 2000+ fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 00°.

130.80

0	18.73	34.02	9	5.37	357	0	18.73	34.03	5.37	24.37	357	0.00
10	18.74	34.02	6	5.25	357	10	18.74	34.03	5.25	24.37	357	0.04
30	18.06	33.87	2	5.13	352	20	18.70	34.02	5.20	24.37	357	0.07
40	18.02	33.89	4	4.92	350	30	18.06	33.87	5.13	24.41	353	0.11
55	17.38	33.75	9	5.83	345	50	17.75	33.83	5.43	24.46	348	0.18
70	16.29	33.68	5	5.46	326	75	15.84	33.68	5.38	24.79	317	0.26
95	14.80	33.70	0	5.13	293	100	14.40	33.70	4.99	25.12	285	0.34
116	13.48	33.69	6	4.61	267	125	12.80	33.70	4.58	25.45	254	0.40
136	11.98	33.70	1	4.50	239	150	11.39	33.76	3.69	25.76	224	0.46
156	11.14	33.79	6	3.32	217	200	10.10	34.12	2.12	26.27	176	0.56
185	10.24	34.01	5	2.54	186	250	9.72	34.35	1.08	26.51	153	0.64
220	9.95	34.25	3	1.52	164	300	8.93	34.36	0.83	26.65	140	0.72
250	9.72	34.34	7	1.08	153	400	7.79	34.39	0.35	26.85	121	0.85
298	8.96	34.36	0	0.84	140	500	6.81	34.42	0.24	27.01	106	0.96
354	8.32	34.37	4	0.56	130	600	6.08	34.44	0.21	27.12	95	1.06
439	7.36	34.39	3	0.25	115							
523	6.64	34.42	2	0.24	103							
608	6.01	34.44	6	0.20	94							
612	5.93	34.43	9	0.24	93							

HORIZON; February 9, 1962; 0405 GCT; 24°29.5'N, 117°17.5'W; sounding, 2160 fm; wind, 020°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.

130.90

1	18.20	33.86	9	5.33	356	0	(18.20)	(33.87)	(5.33)	(24.38)	(356)	(0.00)
11	18.20	33.87	1	5.33	356	10	18.20	33.87	5.33	24.38	356	0.04
31	18.10	33.85	9	5.33	354	20	18.16	33.86	5.33	24.38	356	0.07
40	18.06	33.84	7	5.34	354	30	18.10	33.86	5.33	24.40	354	0.11
55	17.24	33.74	4	5.39	343	50	17.40	33.76	5.38	24.49	345	0.18
70	16.44	33.66	6	5.49	331	75	15.90	33.68	5.37	24.78	318	0.26
94	14.88	33.74	1	5.04	292	100	14.10	33.66	5.08	25.15	282	0.33
115	13.52	33.61	9	5.11	274	125	12.73	33.59	4.99	25.37	261	0.40
135	11.68	33.57	7	4.68	243	150	10.83	33.64	4.21	25.77	224	0.46
154	10.64	33.67	5	4.04	218	200	9.95	34.11	2.24	26.29	174	0.56
183	10.03	33.99	7	2.72	184	250	9.70	34.33	1.13	26.50	154	0.64
217	9.88	34.21	5	1.72	166	300	8.90	34.34	0.93	26.64	141	0.72
247	9.73	34.33	1	1.13	155	400	7.99	34.41	0.38	26.83	123	0.85
295	8.94	34.33	2	0.95	142	500	6.73	34.40	0.26	27.00	106	0.96
349	8.60	34.40	5	0.55	132	600	5.96	34.43		27.13	94	1.07
433	7.54	34.40	5	0.30	117							
516	6.58	34.40	0	0.27	104							
600	5.96	34.43	4	0.59u	94							
604	5.93	34.43	2	0.23	94							

HORIZON; February 8, 1962; 2143 GCT; 24°06'N, 117°59'W; sounding, 2000+ fm; wind, 330°, force 2; weather, cloudy; sea, rough; wire angle, 12°.

130.100

1	18.02	33.80	2	5.36	357	0	(18.02)	(33.80)	(5.36)	(24.37)	(357)	(0.00)
11	17.71	33.80	7	5.35	349	10	17.73	33.81	5.35	24.45	349	0.04
30	17.01	33.73	4	5.38	338	20	17.30	33.76	5.37	24.51	343	0.07
40	16.82	33.71	6	5.38	336	30	17.01	33.73	5.38	24.56	339	0.10
54	16.66	33.67	5	5.48	335	50	16.70	33.69	5.43	24.60	335	0.17
69	16.56	33.68	2	5.48	332	75	16.31	33.68	5.47	24.68	327	0.25
93	14.13	33.63	6	5.17	285	100	13.35	33.59	4.92	25.25	273	0.33
113	12.30	33.56	8	4.57	255	125	11.49	33.60	4.51	25.62	238	0.39
131	11.16	33.66	8	4.45	227	150	10.60	33.88	3.24	25.99	202	0.45
149	10.62	33.87	7	3.30	203	200	9.52	34.08	2.37	26.33	170	0.54
177	9.84	34.00	1	2.76	181	250	9.23	34.27	1.44	26.53	151	0.62
211	9.44	34.13	1	2.11	165	300	8.76	34.32	1.03	26.64	140	0.69
239	9.33	34.24	1	1.55	155	400	7.78	34.38	0.44	26.84	122	0.83
287	8.88	34.31	0	1.11	143	500	6.89	34.37	0.29	26.96	111	0.94
340	8.38	34.34	4	0.72	133	600	(6.03)	(34.40)		(27.10)	(98)	(1.05)
422	7.58	34.38	4	0.37	119							
504	6.84	34.37	3	0.29	110							
587	6.14	34.39	6	0.24	99							
591	6.09	34.39	9	0.22	98							

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

130.120

HORIZON; February 8, 1962; 1229 GCT; 23°30'N, 119°08'W; sounding, 2000+ fm; wind, 340°, force 1; weather, overcast; sea, slight; wire angle, 04°.

0	17.84	33.85 0	5.29	349	0	17.84	33.85	5.29	24.45	349	0.00
10	17.86	33.84 1	5.19	350	10	17.86	33.84	5.19	24.44	350	0.03
30	17.54	33.80 0	5.32	346	20	17.79	33.83	5.25	24.45	349	0.07
60	17.14	33.75 8	5.34	340	30	17.54	33.80	5.32	24.49	346	0.10
70	16.96	33.72 0	5.41	338	50	17.21	33.77	5.34	24.54	340	0.17
86	16.92	33.73 9	5.54	336	75	16.95	33.73	5.47	24.57	337	0.26
101	15.56	33.70 5	5.41	309	100	15.90	33.71	5.46	24.80	316	0.34
115	13.64	33.70 3	4.53	270	125	12.69	33.71	4.24	25.48	251	0.41
140	11.62	33.75 4	3.74	229	150	11.69	34.03	2.34	25.91	210	0.47
160	11.76	34.24 9	1.18	195	200	11.48	34.52	0.45	26.33	170	0.56
191	11.52	34.47 6	0.52	174	250	10.89	34.60	0.18	26.50	154	0.64
221	11.34	34.59 3	0.28	162	300	10.31	34.59	0.19	26.60	145	0.72
251	10.88	34.60 2	0.18	153	400	8.77	34.50	0.14	26.78	127	0.85
301	10.30	34.58 3	0.19	145	500	7.47	34.45	0.13	26.94	112	0.97
357	9.56	34.55 8	0.12	135	600	6.44	34.43	0.13	27.07	100	1.08
441	8.07	34.44 8	0.17	121							
525	7.22	34.44 8	0.12	109							
610	6.32	34.42 8	0.13	99							
614	6.28	34.43 4	0.17	98							

137.23

HORIZON; February 11, 1962; 1135 GCT; 25°29.5'N, 112°19.5'W; sounding, 40 fm; wind, 060°, force 1; weather, missing; sea, moderate; wire angle, 02°.

0	18.81	34.16 8	5.18	349	0	18.81	34.17	5.18	24.46	349	0.00
10	18.59	34.12 2	5.22	347	10	18.59	34.12	5.22	24.47	347	0.03
25	18.26	34.11 0	5.23	340	20	18.27	34.11	5.23	24.54	340	0.07
45	16.55	34.00 7	4.30	308	30	18.23	34.11	5.22	24.55	339	0.10
73	-	34.05 0	1.56	-	50		34.01	3.58			
					75		(34.05)	(1.50)			

137.30

HORIZON; February 11, 1962; 1520 GCT; 25°16.5'N, 112°44.5'W; sounding, 259 fm; wind, 110°, force 3; weather, cloudy; sea, very high; wire angle, 02°.

1	18.90	34.09 5	5.20	356	0	(18.90)	(34.10)	(5.20)	(24.38)	(356)	(0.00)
11	18.91	34.08 8	5.18	357	10	18.91	34.09	5.19	24.37	357	0.04
31	18.67	34.07 1	5.20	352	20	18.86	34.08	5.18	24.37	356	0.07
41	18.06	33.93 1	5.25	348	30	18.69	34.07	5.19	24.41	353	0.11
51	15.75	33.76 3	4.91	309	50	15.85	33.77	4.94	24.86	310	0.17
66	14.81	33.71 2	4.60	293	75	14.40	33.73	4.34	25.14	283	0.25
81	13.84	33.78 4	3.98	268	100	12.71	33.87	3.25	25.60	240	0.31
101	12.70	33.87 8	3.20	239	125	12.62	34.19	1.72	25.86	215	0.37
126	12.62	34.20 3	1.63	214	150	12.32	34.54	0.40	26.19	184	0.42
147	12.40	34.51 1	0.48	187	200	11.25	34.61	0.19	26.45	159	0.51
177	11.70	34.59 7	0.22	168	250	10.78	34.62	0.12	26.54	150	0.58
207	11.14	34.61 5	0.17	157	300	10.55	34.61	0.12	26.57	147	0.66
237	10.84	34.61 5	0.15	152	400	10.34	34.60	0.12	26.60	145	0.80
277	10.66	34.61 6	0.10	149							
336	10.42	34.60 0	0.15	146							
410	10.34	34.59 5	0.10	145							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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6201-2

HORIZON; February 11, 1962; 2142 GCT; 25°00.5'N, 113°22.5'W; sounding, 1175 fm; wind, 120°, force 3; weather, overcast; sea, very rough; wire angle, 07°.

137.40

1	20.78	34.48 9	4.91	374	0	(20.78)	(34.49)	(4.91)	(24.19)	(374)	(0.00)
11	20.74	34.48 1	4.85a)	374	10	20.74	34.48	4.84	24.19	374	0.04
31	20.70	34.48 4	5.03	373	20	20.73	34.48	4.96	24.19	374	0.07
41	20.55	34.45 2	4.87	371	30	20.71	34.48	5.02	24.20	373	0.11
51	19.32	34.18 1	5.22	360	50	19.45	34.21	5.20	24.32	361	0.19
66	18.38	34.02 4	5.31	349	75	17.90	33.98	5.27	24.54	341	0.27
81	16.34	33.89 0	4.50	312	100	14.95	34.04	2.92	25.26	272	0.35
101	14.94	34.04 9	2.87	271	125	13.72	34.32	1.30	25.74	226	0.41
125	13.72	34.32 3	1.30	226	150	13.01	34.37	1.17	25.92	209	0.47
145	13.14	34.35 6	1.20	212	200	11.99	34.56	0.49	26.27	176	0.56
175	12.42	34.49 1	0.73	189	250	11.45	34.67	0.16	26.46	158	0.65
204	11.93	34.57 9	0.42	174	300	10.42	34.60	0.19	26.59	146	0.72
235	11.70	34.67 2	0.19	163	400	8.84	34.53	0.15	26.80	126	0.86
274	10.99	34.65 0	0.15	152	500	7.25	34.42	0.21	26.95	112	0.98
332	9.82	34.54 7	0.22	140							
406	8.77	34.52 4	0.14	125							
480	7.50	34.42 7	0.21	114							
560	6.68	34.41 6	0.20	104							
564	6.63	34.41 3	0.19	104							

HORIZON; February 12, 1962; 0325 GCT; 24°39'N, 114°05.5'W; sounding, 2000+ fm; wind, 330°, force 2; weather, overcast; sea, rough; wire angle, 07°.

137.50

0	21.29	34.60 6	4.90	379	0	21.29	34.61	4.90	24.14	379	0.00
10	21.29	34.60 3	4.82	379	10	21.29	34.60	4.82	24.13	379	0.04
30	21.30	34.59 7	4.79	380	20	21.30	34.60	4.80	24.13	380	0.08
40	20.58	34.40 2	4.89	376	30	21.30	34.60	4.79	24.13	380	0.11
50	20.42	34.41 9	4.87	370	50	20.42	34.42	4.87	24.23	370	0.19
65	19.76	34.31 3	4.91	361	75	17.40	33.94	4.90	24.63	332	0.28
80	16.30	33.79 0	4.86	319	100	14.52	33.99	2.91	25.32	267	0.35
100	14.52	33.99 1	2.91	266	125	13.27	34.16	2.02	25.71	229	0.41
124	13.28	34.15 8	2.06	230	150	13.03	34.47	0.64	26.00	202	0.47
144	13.12	34.44 9	0.68	205	200	11.87	34.62	0.30	26.34	169	0.56
173	12.46	34.52 7	0.60	187	250	10.88	34.62	0.20	26.52	152	0.64
203	11.80	34.62 1	0.28	168	300	10.10	34.59	0.15	26.63	141	0.71
232	11.13	34.62 6	0.21	156	400	8.72	34.54	0.11	26.82	123	0.85
271	10.58	34.60 3	0.17	148	500	7.56	34.49	0.11	26.96	111	0.96
331	9.62	34.56 7	0.12	135							
405	8.66	34.53 5	0.11	123							
479	7.80	34.49 0	0.12	114							
557	6.96	34.48 9	0.09	103							
561	6.85	34.49 3	0.09	101							

HORIZON; February 12, 1962; 0830 GCT; 24°19'N, 114°43.5'W; sounding, 2000+ fm; wind, 360°, force 3; weather, rain; sea, moderate; wire angle, 08°.

137.60

1	18.64	33.92 5	5.27	362	0	(18.64)	(33.92)	(5.27)	(24.31)	(363)	(0.00)
11	18.64	33.98 2	5.22	358	10	18.64	33.97	5.22	24.35	359	0.04
31	17.96	33.88 3	5.34	349	20	18.51	33.97	5.24	24.38	356	0.07
41	17.60	33.85 0	5.38	343	30	18.01	33.89	5.32	24.44	350	0.11
56	17.44	33.88 3	5.34	337	50	17.49	33.87	5.35	24.55	339	0.18
70	16.10	33.72 1	5.37	319	75	15.20	33.66	5.28	24.92	305	0.26
95	13.64	33.64 0	4.86	275	100	13.60	33.65	4.79	25.25	273	0.33
116	12.35	33.65 7	4.08	249	125	11.72	33.70	3.63	25.65	235	0.39
135	11.16	33.78 8	3.19	218	150	10.67	33.94	2.71	26.03	199	0.45
155	10.60	33.98 5	2.55	194	200	10.29	34.29	1.36	26.37	167	0.54
184	10.50	34.21 3	1.63	176	250	9.37	34.35	0.85	26.57	147	0.62
218	9.97	34.33 4	1.11	158	300	8.57	34.33	0.76	26.68	137	0.69
247	9.42	34.35 5	0.86	148	400	7.60	34.39	0.30	26.87	119	0.82
297	8.60	34.32 7	0.78	138	500	6.69	34.41	0.22	27.02	105	0.93
350	8.08	34.38 6	0.42	126	600	5.91	34.43	0.18	27.14	94	1.03
434	7.27	34.39 4	0.24	114							
518	6.52	34.40 9	0.21	103							
602	5.90	34.43 3	0.17	94							
607	5.88	34.42 9	0.16	94							

a) Alternate value, 4.96 ml/L, not used in interpolation.

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6201-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

137.70

HORIZON; February 12, 1962; 1325 GCT; 23°58.5'N, 115°22'W; sounding, 2045 fm; wind, 040°, force 1; weather, drizzle; sea, very rough; wire angle, 00°.

1	18.58	33.93 8	5.27	360	0	(18.58)	(33.94)	(5.27)	(24.34)	(360)	(0.00)
11	18.60	33.94 0	5.15	360	10	18.60	33.94	5.16	24.33	360	0.04
31	18.59	33.99 8	5.27	356	20	18.60	33.96	5.18	24.35	359	0.07
61	18.39	33.98 3	5.23	352	30	18.59	34.00	5.26	24.38	356	0.11
71	18.24	33.94 4	5.23	351	50	18.49	34.00	5.26	24.41	353	0.18
87	17.28	33.82 3	5.33	338	75	18.17	33.93	5.24	24.43	351	0.27
102	15.26	33.69 5	5.27	303	100	15.41	33.70	5.27	24.90	306	0.35
117	14.28	33.69 0	4.97	284	125	13.49	33.70	4.70	25.31	267	0.42
142	12.26	33.71 4	4.25	243	150	11.88	33.74	3.88	25.65	234	0.48
162	11.34	33.80 6	3.21	220	200	10.14	34.05	2.31	26.21	182	0.59
192	10.20	33.99 0	2.51	187	250	9.90	34.34	1.14	26.47	157	0.67
223	10.06	34.20 9	1.68	169	300	9.37	34.43	0.63	26.63	142	0.75
253	9.88	34.35 3	1.09	155	400	7.84	34.41	0.31	26.86	120	0.88
303	9.33	34.42 7	0.60	141	500	6.79	34.39	0.24	26.99	108	0.99
358	8.46	34.42 4	0.39	128	600	6.02	34.42	0.22	27.11	96	1.09
444	7.32	34.39 2	0.28	115							
528	6.56	34.40 0	0.22	104							
613	5.94	34.42 3	0.21	95							
617	5.90	34.42 6	0.24	94							

137.80

HORIZON; February 12, 1962; 1810 GCT; 23°39'N, 116°01'W; sounding, 2000+ fm; wind, 310°, force 3; weather, cloudy; sea, very rough; wire angle, 11°.

1	18.58	33.86 9	5.23	365	0	(18.58)	(33.87)	(5.23)	(24.28)	(365)	(0.00)
11	18.58	33.86 8	5.15	365	10	18.58	33.87	5.16	24.28	365	0.04
30	18.58	33.87 1	4.97	365	20	18.58	33.87	5.06	24.28	365	0.07
55	18.22	33.84 9	4.98	358	30	18.58	33.87	4.97	24.28	365	0.11
74	18.07	33.82 9	5.09a)	356	50	18.31	33.86	4.98	24.34	359	0.18
89	15.64	33.63 2	5.35b)	316	75	18.06	33.83	5.10	24.38	356	0.27
104	14.32	33.67 4	4.84	286	100	14.63	33.66	5.05	25.04	293	0.35
129	13.00	33.76 4	3.75	253	125	13.26	33.74	3.98	25.39	260	0.42
149	11.98	33.95 0	2.63	221	150	11.96	33.96	2.60	25.81	220	0.48
173	11.54	34.19 8	1.60	195	200	11.07	34.31	1.21	26.25	178	0.58
203	11.01	34.31 7	1.18	177	250	10.34	34.48	0.58	26.51	153	0.66
232	10.52	34.41 2	0.88	161	300	9.78	34.50	0.38	26.62	143	0.74
270	10.16	34.51 7	0.39	148	400	8.43	34.48	0.19	26.82	124	0.87
330	9.37	34.47 6	0.38	138	500	7.22	34.45	0.21	26.98	109	0.99
403	8.39	34.47 9	0.18c)	123							
477	7.49	34.44 9	0.22d)	113							
554	6.68	34.44 3	0.21	102							
559	6.65	34.45 0	0.18	102							

140.30

HORIZON; February 13, 1962; 2014 GCT; 24°44'N, 112°25'W; sounding, 60 fm; wind, 350°, force 3; weather, cloudy; sea, very rough; wire angle, 08°.

1	18.56	34.10 0	5.19	348	0	(18.56)	(34.10)	(5.19)	(24.46)	(348)	(0.00)
11	18.56	34.11 7	5.27	346	10	18.56	34.11	5.26	24.47	347	0.03
31	18.31	34.14 0	5.10	339	20	18.56	34.14	5.20	24.50	345	0.07
51	15.30	33.91 3	3.57	288	30	18.45	34.14	5.11	24.52	342	0.10
75	13.68	33.94 8	2.85	253	50	15.38	33.92	3.61	25.08	289	0.17
100	12.48	34.48 0	0.53	191	75	13.68	33.95	2.85	25.46	253	0.23
					100	12.48	34.48	0.53	26.11	191	0.29

- a) Alternate value, 5.26 ml/L, not used in interpolation.
 b) Alternate value, 5.50 ml/L, not used in interpolation.
 c) Alternate value, 0.35 ml/L, not used in interpolation.
 d) Alternate value, 0.08 ml/L, not used in interpolation.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δ _T	Z	T	S	O ₂	σ _t	δ _T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

S10
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6201-2

HORIZON; February 13, 1962; 1418 GCT; 24°21'N, 113°01'W; sounding, 1000+ fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 27°.

140.40

1	20.54	34.45 7	4.91	371	0	(20.54)	(34.46)	(4.91)	(24.23)	(370)	(0.00)
10	20.54	34.45 4	4.97	371	10	20.54	34.45	4.97	24.22	371	0.04
32	20.57	34.45 5	4.95	371	20	20.55	34.45	4.96	24.22	371	0.07
42	20.53	34.44 5	4.97	371	30	20.57	34.45	4.95	24.21	372	0.11
55	18.92	34.10 4	5.13	356	50	19.60	34.24	5.09	24.31	363	0.18
69	17.14	33.91 1	4.86	328	75	16.90	33.92	4.74	24.73	322	0.27
90	15.15	33.93 7	-3.57	283	100	14.30	34.12	2.22	25.46	253	0.34
108	14.00	34.27 1	1.57	235	125	13.40	34.35	1.36	25.83	218	0.40
126	13.38	34.35 9	1.31	217	150	12.96	34.52	0.61	26.05	197	0.45
151	12.94	34.53 2	0.56	196	200	12.01	34.67	0.17	26.35	168	0.54
176	12.44	34.60 6	0.28	181	250	11.41	34.69	0.12	26.48	156	0.63
209	11.90	34.68 5	0.16	165	300	10.50	34.62	0.10	26.59	146	0.70
235	11.62	34.69 8	0.13	159	400	9.10	34.54	0.12	26.76	129	0.84
277	10.95	34.65 8	0.10	151	500	7.68	34.50	0.09	26.95	111	0.96
332	10.00	34.58 5	0.11	140							
420	8.82	34.53 0	0.12	126							
500	7.68	34.49 8	0.09	112							
571	6.96	34.48 3	0.08	103							

HORIZON; February 13, 1962; 0802 GCT; 24°01.5'N, 113°39'W; sounding, 1000+ fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°.

140.50

1	20.86	34.47 6	4.95	377	0	(20.86)	(34.48)	(4.95)	(24.16)	(377)	(0.00)
11	20.84	34.47 5	4.93	377	10	20.84	34.48	4.94	24.16	377	0.04
30	20.88	34.47 6	4.89	378	20	20.87	34.48	4.91	24.15	377	0.08
40	20.64	34.42 1	4.96	376	30	20.88	34.48	4.89	24.15	378	0.11
55	18.11	33.98 1	5.09	346	50	18.96	34.12	5.08	24.38	356	0.19
68	16.04	33.81 5	4.62	311	75	15.15	33.85	3.87	25.07	290	0.27
93	14.21	34.05 8	2.56	255	100	13.60	34.18	1.76	25.66	234	0.33
112	13.26	34.34 1	1.15	216	125	12.93	34.41	0.72	25.97	205	0.39
131	12.75	34.44 4	0.67	199	150	12.24	34.56	0.34	26.22	181	0.44
150	12.24	34.55 5	0.34	181	200	11.64	34.65	0.18	26.40	163	0.52
179	11.96	34.61 7	0.26	171	250	10.68	34.61	0.15	26.55	149	0.60
211	11.44	34.64 9	0.15	160	300	9.99	34.58	0.15	26.65	140	0.67
240	10.85	34.61 5	0.15	152	400	8.71	34.53	0.10	26.82	124	0.80
288	10.14	34.58 5	0.15	142	500	7.44	34.49	0.10	26.98	109	0.92
339	9.52	34.56 0	0.10	134	600	(6.49)	(34.46)		(27.08)	(99)	(1.02)
421	8.44	34.52 1	0.10	121							
503	7.40	34.48 7	0.10	109							
588	6.60	34.46 3	0.10	100							

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
60.55-H	I-21	0145	37°47.5'	123°16.0'	75	280°	4	rain	very rough	11.40	33.46 1
70.55-H	17	2115	36°05.0'	122°00.0'	735	310°	5	partly cloudy	rough	12.16	33.59 4
80.65-H	14	2017	34°00.0'	121°30.5'	1780	360°	4	clear	very rough	12.39	33.41 4
82.47-B	II-1	1830	34°15.0'	119°58.0'	310	-	1	partly cloudy	slight	13.26	33.47 1
83.40-B	1	1435	34°14.0'	119°22.0'	11	-	1	partly cloudy	slight	13.04	33.48 5
83.43-B	1	1600	34°08.0'	119°34.0'	130	-	1	partly cloudy	slight	13.24	33.47 6
83.51-B	1	2200	33°52.0'	120°08.5'	60	280°	1	fog	moderate	13.14	33.48 4
83.55-B	2	0005	33°44.0'	120°24.5'	530	300°	2	fog	moderate	13.38	33.48 4
83.65-B	2	0325	33°24.0'	121°06.0'	1930	280°	2	fog	moderate	12.36	33.28 6
83.70-B	2	0740	33°14.5'	121°26.0'	2050	300°	2	fog	moderate	13.30	33.43 5
83.80-B	2	1215	32°54.0'	122°08.0'	2100	260°	1	fog	moderate	13.76	33.48 5
83.90-B	2	1625	32°34.5'	122°47.5'	2100	270°	1	overcast	moderate	13.56	33.46 4
87.35-B	3	2150	33°50.0'	118°37.5'	200	300°	1	fog	smooth	13.75	33.49 6
87.40-B	3	1918	33°40.0'	118°58.0'	480	320°	2	fog	moderate	13.84	33.48 9
87.45-B	3	1650	33°30.0'	119°19.0'	900	320°	3	cloudy	moderate	13.81	33.49 7
87.50-B	3	1425	33°20.0'	119°39.5'	40	320°	3	partly cloudy	moderate	13.20	33.49 2
87.55-B	3	1135	33°09.5'	120°04.5'	650	320°	3	partly cloudy	moderate	12.84	33.43 5
87.60-B	3	0905	32°59.0'	120°24.5'	550	320°	3	cloudy	moderate	13.14	33.43 6
87.65-B	3	0650	32°50.0'	120°43.0'	2000	320°	1	missing	missing	13.64	33.45 1

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-B	II-3	0432	32°39.5'	121°02.0'	2100	240°	1	cloudy	missing	14.00	33.44 3
87.80-B	3	0020	32°19.5'	121°43.0'	2100	320°	1	cloudy	moderate	14.48	33.46 1
87.90-B	2	2030	32°00.0'	122°21.0'	2000	270°	1	overcast	moderate	13.38	33.45 8
90.65-H	I-29	1620	32°15.0'	120°18.0'	1840	020°	3	clear	moderate	13.88	33.52 6
93.35-B	II-4	1103	32°39.5'	117°51.5'	325	210°	4	fog	moderate	14.01	33.46 0
93.45-B	4	1705	32°20.0'	118°32.0'	900	270°	4	overcast	moderate	14.07	33.55 2
93.55-B	4	2235	32°00.0'	119°13.5'	850	270°	4	cloudy	moderate	14.14	33.49 1
93.65-B	5	0450	31°38.5'	119°53.0'	2000	320°	5	overcast	rough	14.19	33.44 0
97.30-B	7	1320	32°16.0'	117°07.0'	33	-	1	overcast	slight	13.48	33.49 3
97.32-B	7	1220	32°12.0'	117°15.0'	750	-	1	overcast	slight	13.48	33.47 8
97.35-B	7	1025	32°06.0'	117°30.0'	750	320°	3	overcast	moderate	14.06	33.46 4
97.40-B	7	0755	31°56.5'	117°50.5'	680	320°	4	overcast	moderate	14.26	33.52 8
97.45-B	7	0520	31°46.0'	118°08.5'	800	320°	4	overcast	rough	14.10	33.45 5
97.50-B	7	0235	31°36.0'	118°29.0'	1300	320°	4	overcast	moderate	13.99	33.50 2
97.55-B	6	2340	31°25.5'	118°49.5'	750	320°	4	cloudy	moderate	14.02	33.49 5
97.60-B	6	2120	31°15.5'	119°10.0'	2000	320°	3	cloudy	moderate	14.10	33.48 1
97.65-B	6	1855	31°05.0'	119°30.5'	1900	220°	3	overcast	moderate	13.80	33.41 4
97.70-B	6	1555	31°05.5'	119°55.0'	1900	340°	5	overcast	moderate	14.82	33.46 4
97.80-B	6	1100	30°43.0'	120°33.5'	2000	300°	3	overcast	moderate	14.46	33.42 9

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
97.90-B	II-6	0620	30°19.5'	121°11.5'	2000	320°	5	cloudy	moderate	15.84	33.66 2
100.45-H	1	1340	31°10.0'	117°47.0'	880	300°	3	fog	moderate	14.60	33.43 9
100.55-H	1	1945	30°51.5'	118°29.0'	1710	270°	1	clear	moderate	14.06	33.43 1
100.65-H	2	0245	30°29.5'	119°10.0'	1960	310°	3	clear	moderate	14.94	33.40 5
103.30-B	9	0640	31°06.0'	116°24.5'	32	220°	1	clear	moderate	13.96	33.49 0
103.35-B	9	0910	30°56.0'	116°45.0'	850	200°	1	clear	moderate	14.26	33.45 1
103.40-B	9	1130	30°44.5'	117°07.0'	800	200°	2	clear	moderate	14.62	33.45 8
103.45-B	9	1345	30°36.0'	117°26.5'	1100	220°	2	cloudy	moderate	14.61	33.46 1
103.50-B	9	1550	30°26.0'	117°44.5'	1350	220°	3	partly cloudy	very rough	14.82	33.46 7
103.55-B	9	1805	30°18.0'	118°03.0'	1350	220°	3	cloudy	very rough	15.82	33.59 6
103.60-B	9	2055	30°07.5'	118°23.0'	1700	150°	3	cloudy	rough	15.76	33.61 1
103.65-B	9	2350	29°56.5'	118°44.0'	1750	150°	4	cloudy	rough	15.78	33.58 7
103.70-B	10	0220	29°46.5'	119°04.0'	1750	180°	4	drizzle	rough	15.35	33.52 6
103.80-B	10	0655	29°26.5'	119°44.0'	1900	180°	5	rain	very rough	15.06	33.42 5
103.90-B	10	1210	29°07.0'	120°23.5'	2000	180°	6	cloudy	very rough	16.23	33.69 1
107.32-B	11	1950	30°26.0'	116°11.0'	400	140°	4	cloudy	very rough	14.75	33.48 7
107.35-B	11	1830	30°21.5'	116°22.5'	980	140°	4	cloudy	rough	15.18	33.50 4
107.40-B	11	1605	30°11.0'	116°42.0'	1480	150°	5	cloudy	very rough	15.04	33.51 1
107.45-B	11	1350	30°01.5'	117°02.0'	800	150°	4	cloudy	high	14.60	33.41 1

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-B	II-11	1140	29°51.0'	117°21.0'	1300	150°	7	drizzle	very rough	15.67	33.56 0
107.55-B	11	0925	29°41.0'	117°42.0'	1800	120°	5	overcast	very rough	15.86	33.59 4
107.60-B	11	0655	29°32.0'	118°01.5'	1800	140°	4	overcast	very rough	15.97	33.63 1
107.65-B	11	0435	29°21.0'	118°21.0'	1500	320°	3	drizzle	rough	15.77	33.59 2
107.70-B	11	0220	29°11.0'	118°41.0'	1550	270°	3	drizzle	high	15.36	33.52 4
107.80-B	10	2120	28°48.0'	119°17.0'	1800	270°	3	drizzle	high	15.56	33.54 7
107.90-B	10	1655	28°28.0'	119°57.0'	2000	270°	5	overcast	very rough	15.74	33.54 5
110.33-H	5	2155	29°50.0'	115°52.5'	47	310°	5	cloudy	rough	14.86	33.54 7
110.45-H	5	1210	29°24.5'	116°40.5'	-	350°	4	overcast	rough	15.31	33.58 7
110.55-H	5	0705	29°05.0'	117°19.0'	-	320°	4	overcast	rough	15.29	33.50 8
110.65-H	4	2215	28°47.0'	117°56.5'	1910	320°	3	cloudy	rough	16.18	33.64 6
113.30-B	12	0450	29°22.0'	115°18.0'	30	140°	3	cloudy	very rough	15.35	33.78 0
113.35-B	12	0705	29°11.5'	115°38.0'	600	220°	3	cloudy	very rough	15.44	33.57 6
113.40-B	12	0930	29°02.0'	115°57.0'	950	260°	3	overcast	very rough	15.89	33.63 3
113.45-B	12	1145	28°52.0'	116°18.0'	1000	270°	2	overcast	very rough	15.73	33.64 1
113.50-B	12	1410	28°41.5'	116°36.5'	2100	270°	1	partly cloudy	rough	15.61	33.54 7
113.55-B	12	1635	28°32.0'	116°57.0'	1840	320°	2	cloudy	very rough	15.81	33.59 8
113.60-B	12	1900	28°22.0'	117°16.5'	1950	320°	4	cloudy	very rough	16.22	33.75 3
113.65-B	12	2120	28°12.0'	117°36.0'	2000	320°	4	cloudy	high	16.58	33.71 3

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

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S10

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
113.70-B	II-12	2340	28°02.0'	117°55.0'	1700	320°	4	cloudy	very rough	16.38	33.68 0
113.80-B	13	0330	27°42.0'	118°33.5'	2100	280°	3	partly cloudy	very rough	16.02	33.57 7
113.90-B	13	0735	27°22.0'	119°12.0'	2050	320°	3	partly cloudy	very rough	15.90	33.52 5
117.26-B	15	0040	28°56.0'	114°41.5'	42	320°	3	overcast	moderate	15.57	33.71 8
117.30-B	14	2310	28°48.0'	114°56.5'	55	320°	3	overcast	rough	15.64	33.68 9
117.35-B	14	2045	28°38.0'	115°16.0'	130	330°	3	overcast	rough	15.64	33.63 9
117.40-B	14	1300	28°28.0'	115°35.5'	500	340°	5	overcast	rough	15.58	33.62 8
117.45-B	14	1015	28°18.0'	115°56.0'	1800	300°	4	cloudy	very rough	15.68	33.68 4
117.50-B	14	0740	28°10.0'	116°13.5'	2500	320°	5	partly cloudy	very rough	15.50	33.70 3
117.55-B	14	0500	28°00.0'	116°33.0'	2100	330°	6	partly cloudy	very rough	15.86	33.58 6
117.60-B	14	0155	27°46.0'	116°59.0'	2100	330°	6	partly cloudy	very rough	16.58	33.73 1
117.65-B	13	2325	27°37.5'	117°13.5'	2000	330°	6	partly cloudy	very rough	16.29	33.63 4
117.70-B	13	2050	27°28.0'	117°32.5'	2000	340°	5	cloudy	rough	16.48	33.67 8
117.80-B	13	1610	27°08.0'	118°10.5'	2000	360°	4	partly cloudy	very rough	16.57	33.71 3
117.90-B	13	1140	26°47.5'	118°50.0'	2000+	320°	4	partly cloudy	very rough	16.71	33.72 2
118.39-B	14	1450	28°18.5'	115°23.5'	145	330°	3	overcast	rough	15.77	33.76 1
120.25-B	15	0450	28°22.5'	114°15.0'	30	320°	3	overcast	moderate	15.54	33.69 7
120.30-B	15	0715	28°13.0'	114°34.0'	50	320°	3	overcast	moderate	15.62	33.66 7
120.35-B	15	0930	28°03.0'	114°54.0'	45	320°	4	partly cloudy	moderate	15.79	33.77 7

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
120.40-B	II-15	1125	27°56.5'	115°14.0'	20	320°	3	partly cloudy	moderate	16.01	33.80 9
120.55-H	6	1555	27°19.0'	116°16.0'	-	320°	4	cloudy	rough	16.59	33.78 0
120.65-H	6	2150	27°02.5'	116°52.5'	±2000	320°	3	cloudy	rough	17.00	33.82 1
123.37-B	15	1640	27°24.0'	114°40.0'	40	320°	3	partly cloudy	rough	16.77	33.90 4
123.42-B	15	1850	27°14.0'	114°59.0'	820	320°	5	partly cloudy	very rough	16.30	33.92 4
123.45-B	15	2035	27°08.0'	115°11.5'	2000	320°	5	partly cloudy	rough	16.52	33.89 1
123.50-B	15	2310	26°56.5'	115°33.0'	2000	340°	5	partly cloudy	rough	16.52	33.91 7
123.55-B	16	0135	26°45.5'	115°56.0'	2000	320°	5	partly cloudy	rough	16.36	33.76 9
123.60-B	16	0305	26°38.5'	116°09.0'	2000	320°	5	partly cloudy	rough	17.40	33.96 5
123.65-B	16	0520	26°29.0'	116°26.0'	2100+	320°	4	cloudy	rough	17.28	33.93 2
123.70-B	16	0725	26°19.0'	116°43.5'	2100	320°	5	cloudy	rough	17.39	33.92 6
123.80-B	16	1135	25°58.0'	117°18.0'	2000	330°	4	partly cloudy	rough	17.40	33.85 6
127.34-B	17	1430	26°55.0'	114°06.5'	40	340°	5	partly cloudy	rough	16.42	33.86 2
127.40-B	17	1220	26°43.5'	114°29.0'	1500	320°	5	partly cloudy	rough	16.86	33.84 2
127.45-B	17	0950	26°33.0'	114°48.5'	1800	320°	7	partly cloudy	very rough	16.92	33.83 5
127.50-B	17	0700	26°23.0'	115°08.0'	2100	320°	7	clear	very rough	16.94	33.84 8
127.55-B	17	0415	26°13.5'	115°27.0'	1900	360°	6	partly cloudy	very rough	16.45	33.76 1
127.60-B	17	0140	26°03.5'	115°46.5'	2000	340°	5	cloudy	rough	17.07	33.86 7
127.65-B	16	2250	25°53.0'	116°06.0'	2000	360°	5	overcast	very rough	17.66	33.92 2
127.70-B	16	2020	25°44.0'	116°24.5'	2000+	360°	5	cloudy	rough	17.36	33.85 6

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
127.80-B	II-16	1530	25°25.5'	117°00.0'	2000	350°	5	cloudy	rough	17.69	33.92 1
130.35-H	10	1230	26°19.0'	113°49.0'	200+	280°	3	clear	moderate	-	-
130.45-H	10	0740	25°59.0'	114°28.0'	1975	310°	3	partly cloudy	moderate	17.55	34.02 4
130.55-H	10	0225	25°37.0'	115°05.0'	1900	300°	2	partly cloudy	moderate	17.66	34.02 5
133.25-B	18	0100	26°04.5'	112°48.0'	44	320°	6	partly cloudy	very rough	17.28	34.04 3
133.30-B	18	0345	25°54.5'	113°07.5'	105	320°	6	partly cloudy	very rough	17.72	33.93 4
133.35-B	18	0615	25°44.5'	113°26.5'	400	320°	6	clear	very rough	17.50	33.96 7
133.40-B	18	0840	25°34.5'	113°45.5'	800	320°	6	clear	very rough	17.90	34.04 8
133.45-B	18	1115	25°24.5'	114°05.5'	2000	340°	5	partly cloudy	very rough	18.18	34.03 2
133.50-B	18	1340	25°15.0'	114°27.0'	2000	340°	5	cloudy	very rough	17.48	33.86 9
133.55-B	18	1625	25°06.0'	114°44.0'	2000	320°	5	partly cloudy	very rough	17.47	33.94 2
133.60-B	18	1840	24°54.5'	115°02.0'	2000	320°	5	partly cloudy	very rough	17.26	33.78 3
133.65-B	18	2105	24°44.5'	115°20.5'	2000	340°	5	partly cloudy	rough	17.27	33.75 6
133.70-B	18	2325	24°34.5'	115°39.0'	2000	340°	4	partly cloudy	rough	17.33	33.79 1
133.80-B	19	0340	24°14.5'	116°17.0'	2000	340°	4	cloudy	rough	18.50	33.95 9
137.35-H	11	1845	25°10.0'	113°04.5'	640	100°	3	cloudy	very rough	18.48	33.94 6
137.45-H	12	0050	24°49.0'	113°46.0'	1900+	110°	3	cloudy	very rough	21.14	34.54 7
137.55-H	12	0556	24°29.0'	114°24.0'	2000+	280°	6	rain	rough	19.72	34.27 1
140.35-H	13	1740	24°31.5'	112°43.0'	600+	320°	4	cloudy	very rough	19.08	34.13 7
140.45-H	14	0438	24°11.0'	113°20.0'	1000+	310°	3	cloudy	rough	19.54	34.19 7

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

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