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NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1959

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UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

United States Department of the Interior, Stewart L. Udall, Secretary
Fish and Wildlife Service, Clarence F. Pautzke, Commissioner
Bureau of Commercial Fisheries, Donald L. McKernan, Director

NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1959

by

Felix Favorite, Richard J. Callaway,
and James F. Hebard

United States Fish and Wildlife Service
Special Scientific Report--Fisheries No. 377

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FIGURE

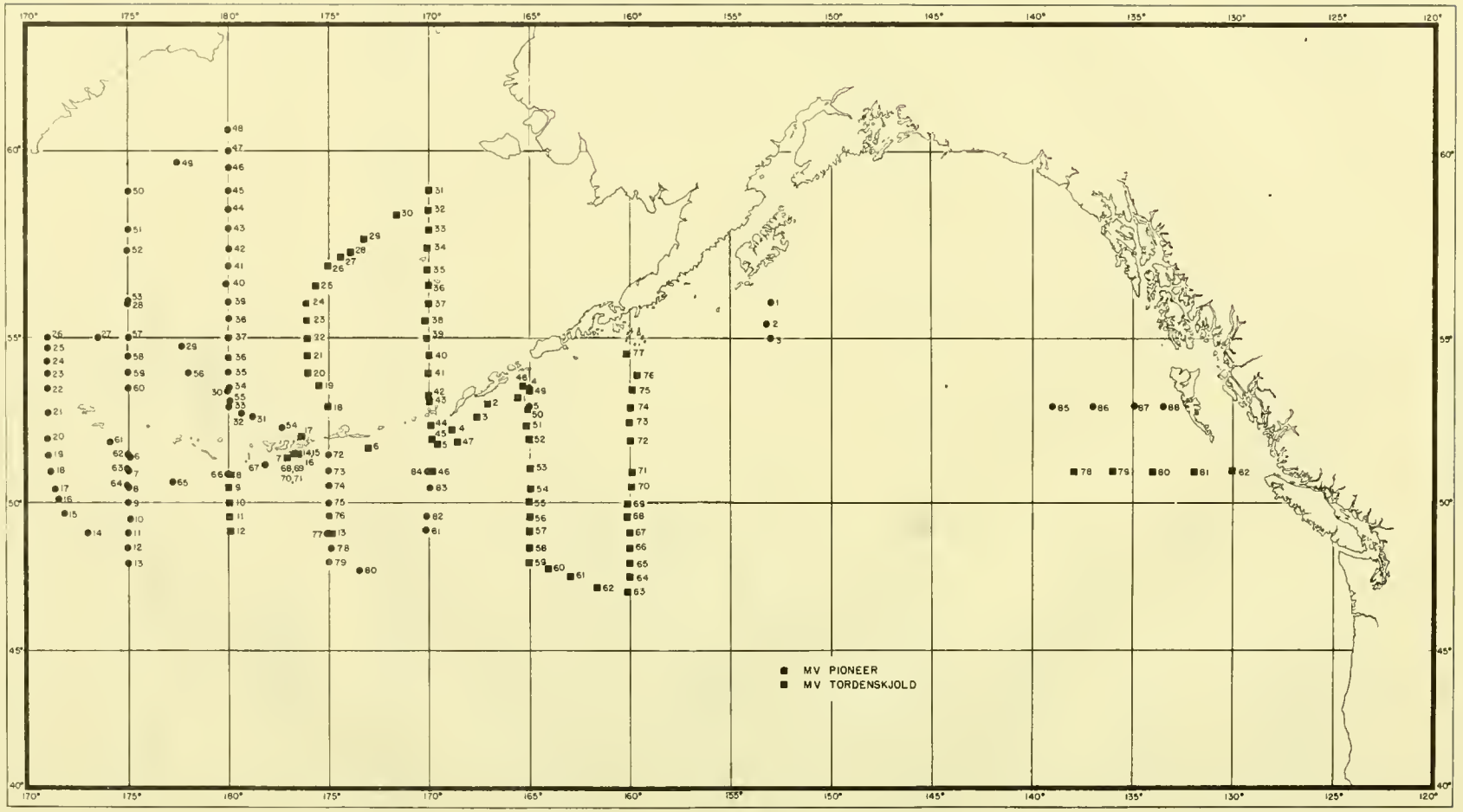

Figure 1.--Oceanographic stations, May to September 1959.

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ABSTRACT

This report presents oceanographic data collected by personnel on board the chartered fishing vessels MV *Pioneer* and MV *Tordenskjold* at and between fishing stations in the North Pacific and the Bering Sea from May to September 1959. Procedures used are described and stations occupied are shown.

The tabulated data present temperature and values of salinity, density, and dissolved oxygen at varying depths to 1,050 meters; number, time, and position of drift bottle releases; time, position, and weather and sea conditions for bathythermograph lowerings; and displacement volumes, wet weights, and numbers of organisms per cubic meter of water for the vertical 1/2 meter plankton hauls.

INTRODUCTION

These data represent the third summer's field work accomplished by the Oceanographic Section of the Biological Laboratory, Seattle, Washington, under the direction of the American Section of the International North Pacific Fisheries Commission. The observations were taken on board fishing vessels chartered to continue the investigation of the distribution and migration of salmon in the North Pacific and the Bering Sea.

The purpose of the oceanographic observations is to permit investigation of relationships between physical, chemical, and biological conditions, and the abundance and distribution of salmon stocks, as determined by gillnet catches.

Observations made at bathythermograph stations occupied by the vessels *Commander* and *Windward*, chartered by the Fisheries Research Institute, University of Washington, are listed in the appendix.

Acknowledgments

Dr. Richard H. Fleming of the University of Washington permitted us to use the IBM program. Ralph W. Riley assisted in the chemical analyses. Commander E. Tabor, USN, provided laboratory space at the U. S. Naval Air Station, Adak, Alaska.

FIELD PROCEDURE

Vessels and observers

MV *Pioneer*	15 April - 11 July	Glenn Pedersen
	12 July -- 1 Sept.	Alan H. Haselwood
MV *Tordenskjold*	15 April - 16 June	Henry Sakuda
	17 June - 3 Sept.	Charles Hebard

Field personnel assisted in the data tabulation and reduction.

Stations

Both primary and secondary oceanographic stations are shown in figure 1. Primary stations occurred at the fishing locations and included hydrographic casts to 1,050 meters, a BT trace, vertical plankton hauls, and a surface trawl. Secondary stations included only a hydrographic cast to 325 meters and a BT trace.

Routine

The shipboard work was similar to that reported in 1958 (Favorite and Pedersen, 1959). After the nets were set, the observers completed the following primary station routine:

Deep cast--Four Nansen bottles, each carrying two protected deep-sea reversing thermometers and one unprotected, were cast to 400, 500, 700 and 1,050 meters.

Shallow cast--Eleven Nansen bottles, each carrying two protected thermometers and the bottom six carrying one unprotected also, were cast to 10, 20, 30, 50, 75, 100, 125, 150, 200, 250 and 300 meters.

Surface observation--The temperature was recorded from a bucket sample by using a 0-20° C. dipping thermometer with 0.1° C. subdivisions.

BT lowering--The BT was lowered to 275 meters.

Water samples--Dissolved oxygen samples were drawn from all Nansen bottles, placed in standard dark bottles and fixed immediately. Chlorinity samples at depth were obtained from all Nansen bottles. The surface chlorinity sample was obtained by using a plastic bucket. Samples were stored in citrate bottles fitted with rubber gasket stoppers.

Plankton hauls--Vertical hauls were made with a standard 1/2-meter net, No. 6 mesh, at about 50 meters per minute from 30 and 150 meters to the surface. The samples were treated with 10 percent formalin neutralized with sodium borate.

Upon completion of the above routine, about one hour after evening twilight, the trawl was towed at the surface in the vicinity of the gill nets at 6 knots for 15 minutes, weather permitting.

The secondary station routine, observed at points midway between fishing locations, usually occurred at noon and resulted in observations at intervals of 30 miles. Because of time limitations, observations were reduced to:

1. BT lowering--to 275 meters.

2. Shallow cast--Procedure the same as at the primary station, except that the bottom bottle was cast to 325 meters, depth permitting. Near the end of the season and enroute to Seattle, the depth of the bottom bottle was changed to 525 meters.

Usually, additional BT's were taken between the primary and secondary stations, and drift bottles were released at designated locations, which are listed under the tabulated data.

CHANGES FROM 1958 FIELD WORK

As in 1958, the locations of the oceanographic stations were dependent on the positions of the fishing sets, and storms necessitated several modifications in the original cruise plans.

Cruise plans

In 1959, in order to obtain more knowledge concerning the distribution of salmon, the limits of the investigation area were expanded--westward

from 175° E. to 171° E. longitude; northward from 56° N. to 60° N. latitude; and southward from 49° N. to 47° N. latitude.

Water samples

The spacing of the Nansen bottles was similar to the previous year except that the bottle at 25 meters, which was usually located at the top of the thermocline, was replaced by bottles at 20 and 30 meters. This was done to avoid the difficulties in obtaining interpolated values by machine methods at depths where sharp gradients of properties are encountered.

Equipment

The portable hydrographic winches, usually installed on board the vessels, were no longer serviceable. The winches used this year were permanent installations aboard each vessel.

Space was not available aboard the small vessels for chemical analyses that would provide immediate environmental conditions. Therefore an experimental temperature-conductivity cell was towed astern of the *Pioneer* to provide a continuous record of surface temperature and salinity. The cell, designed and constructed by the Fisheries Instrumentation Laboratory, Seattle, Washington, requires further modifications and improvements before it can be considered operational.

Plankton

The vertical plankton haul to 300 meters was replaced by a 30-meter vertical haul to permit a better evaluation of the surface plankton. The 150-meter depth trawl, using the modified Isaacs-Kidd trawl, which proved unrewarding, was discontinued, and only a night surface trawl was made to determine the food organisms present at the surface in the vicinity of the gill nets.

Drift bottles

This year, hooks were attached to the drift bottles to permit capture in gill nets by the high seas fishing fleets; however, none of our bottles have been reported recovered in this manner.

LABORATORY PROCEDURE

Chemistry

Chemical analyses were performed in Adak, Alaska, and Seattle, Washington. Through the cooperation of the U. S. Navy, a temporary laboratory was established in Adak. All oxygen samples except those collected on the return voyage were analyzed in Adak. Chlorinity samples were returned to Seattle for analysis. Chlorinity and dissolved oxygen samples were determined by titration, utilizing the Knudsen and Winkler methods, respectively.

Data presentation

The following headings are used in presenting the observed data:

Position--Latitude and longitude determined by loran readings at all positions and supplemented by celestial sights in some positions.

Time--The date and hour (GCT) at which the messenger was released. The second hour indicates the time of the second cast or, in case of more than two casts, the time of the final cast.

Weather observations--Observed readings and coded values as presented in U. S. Navy Hydrographic Office Publication 606-C (1956).

Barometer--Readings from shipboard barometer coded in millibars.

Wet and dry bulbs--Readings from hygrometer.

Physical, chemical data--All values were plotted versus depth, and checked by T-S curves before being punched on IBM cards.

DEPTH--Depth in meters obtained by smoothed L-Z curve, or in some instances from the wire angle.

TEMP --Temperatures in degrees centigrade observed from reversing thermometers read to 0.01° C. Surface temperatures from bucket samples read to 0.1° C.

SAL --Salinity in parts per thousand as defined from chlorinity.

OXY --Dissolved oxygen in milligram-atoms per liter.

σt --Density, defined by (specific gravity - 1) x 1000, computed from temperature and salinity by machine program.

* --Separation of hydrographic casts.

The interpolated data are derived entirely from observed data by a three-point interpolation routine utilizing the IBM 650 machine.

$10^5\delta$ --Specific volume anomaly at the indicated depth.

ΔD --Anomaly of dynamic height, in dynamic meters, of the sea surface relative to the indicated depth in meters.

* --Extrapolated value.

Plankton data

The 1/2-meter net data are presented as numbers of organisms and as numbers of copepods per cubic meter of water filtered, the efficiency of the net assumed to be 100 percent. The total number of copepods is presented under COPEPODA in the table of organisms. Analyses of samples were conducted identically to those of 1958.

*--Indicates organism present but not abundant enough to show in tabulation.

SUMMARY OF OBSERVATIONS

The following abbreviations and symbols are used in the summary tabulations:

Sta		Hydrographic station number
Set		Gill net set number
GCT		Median hour of messenger times, GCT
Date		Date of hydrographic cast, GCT
Cast		Type of cast, maximum depth of lowest Nansen bottle
	B	Bristol Bay area, 50-100 meters
	S	Shallow cast, 325 meters
	I	Intermediate cast, 525 meters
	D	Deep cast, 1050 meters
BT		Bathythermograph lowering
T		Temperatures
Cl		Chlorinity samples
O		Dissolved oxygen samples
Pl		Plankton hauls, vertical
	30	30 meters to surface
	150	150 meters to surface
	X	30 and 150 meters to surface
Tr		Surface trawl, modified Isaacs-Kidd
DB		Number of drift bottles released

Summary of Observations, MV Pioneer, 1959

Sta	Set	GCT	Date	Lat	Long	Cast	BT	T	Cl	O	Pl	Tr	DB
1	1	0600	24 Apr	56°00'N	152°59'W	D	x	x	x	x	x	x	24
2		2400	25	55 23	153 07	S	x	x	x	x			
3	2	0500	25	55 00	153 00	D	x	x	x	x	x		
4		0500	6 May	53 30	165 00	D	x	x	x	x			25
5		0300	7	53 00	165 00	D	x	x	x	x			
6	3	0500	20	51 29	175 03E	D	x	x	x	x	x	x	50
7	4	0300	21	51 00	175 00	D	x	x	x	x			
8		0200	23	50 30	175 00	S	x	x	x	x			
9	5	0700	23	50 00	175 00	D	x	x	x	x	x		
10		0200	24	49 27	175 05	S	x	x	x	x			
11	6	0800	24	49 00	175 00	D	x	x	x	x	x		
12		0200	25	48 31	174 58	S	x	x	x	x			
13	7	0800	25	48 00	175 00	D	x	x	x	x	x	x	50
14		2000	26	49 02	172 59	S	x	x	x	x			
15	8	0600	27	49 38	171 44	D	x	x	x	x	x	x	75
16		0200	28	50 05	171 30	S	x	x	x	x			
17	9	0600	28	50 25	171 20	D	x	x	x	x	x	x	
18		0200	29	50 59	171 08	S	x	x	x	x			
19		0700	29	51 30	171 00	D	x	x	x	x			
20	10	0600	3 Jun	52 00	171 00	D	x	x	x	x	x	x	50
21	11	0500	4	52 47	171 00	D	x	x	x	x	x	x	50
22	12	0500	5	53 30	171 00	D	x	x	x	x	x	x	
23		0200	6	53 56	171 00	S	x	x	x	x			
24	13	0700	6	54 20	171 00	D	x	x	x	x	x	x	
25		2400	6	54 42	171 00	S	x	x	x	x			
26	14	0400	7	55 00	171 00	D	x	x	x	x			50
27		0700	9	55 00	173 30	D	x	x	x	x			75
28		0300	12	56 00	175 00	S	x	x	x	x			50
29		1700	12	54 47	177 43	S	x	x	x	x			
30	15	0800	13	53 30	180 00	S	x	x	x	x	x	x	
31	16	0400	22	52 38	178 47W	D	x	x	x	x	x	x	
32		0100	23	52 46	179 18	S	x	x	x	x			
33	17	0600	23	52 59	179 55E	D	x	x	x	x	x	x	
34		0300	24	53 32	179 58W	S	x	x	x	x			
35	18	0800	24	54 00	180 00	S	x	x	x	x	x	x	
36		0100	25	54 26	180 00	S	x	x	x	x			
37	19	0600	25	55 00	180 00	D	x	x	x	x	x	x	
38		0200	26	55 32	179 59	S	x	x	x	x			
39	20	0700	26	56 00	180 00	D	x	x	x	x	x		
40		0200	27	56 31	179 50E	S	x	x	x	x			
41	21	0700	27	57 00	180 00	D	x	x	x	x	x	x	
42		0100	28	57 28	179 57W	S	x	x	x	x			
43	22	0700	28	58 00	180 00	D	x	x	x	x	x	x	
44		1200	29	58 31	180 00	S	x	x	x	x			
45		1700	29	59 00	180 00	D	x	x	x	x			

Sta	Set	GCT	Date	Lat	Long	Cast	BT	T	Cl	O	Pl	Tr	DB
46		2200	29 Jun	59°31'N	180°00'W	S	x	x	x	x			
47	23	0400	30	60 00	180 00	D	x	x	x	x	x	x	
48		0300	1 Jul	60 30	180 00	S	x	x	x	x			
49		1600	1	59 44	177 30	S	x	x	x	x			
50		0600	2	59 00	175 00	S	x	x	x	x			
51	24	0600	4	58 00	175 00	D	x	x	x	x	x		
52		0800	5	57 26	174 59	S	x	x	x	x			
53		2000	5	56 00	175 00	S	x	x	x	x			
54		0800	12	52 18	177 21W	S	x	x	x				
55		2200	12	53 11	179 51	S	x	x	x	x			
56		0100	14	53 59	178 00E	S	x	x	x	x			
57	25	2300	14	55 00	175 00	D	x	x	x	x	x		
58		0200	16	54 28	175 00	S	x	x	x	x			
59	26	0700	16	54 00	175 00	D	x	x	x	x	x	x	
60		0200	17	53 31	175 00	S	x	x	x	x			
61	27	0600	19	51 54	174 06	D	x	x	x	x	x	x	
62	28	0400	22	51 30	175 00	D	x	x	x	x	x		
63		0300	23	51 00	175 00	S	x	x	x	x			
64	29	0800	23	50 30	175 00	D	x	x	x	x	x		
65		0700	24	50 38	177 10	S	x	x	x	x			
66		2100	24	50 53	179 55	S	x	x	x	x			
67		0500	25	51 11	178 12W	S	x	x	x	x			
68	30	0600	27	51 31	176 42	S	x	x	x	x	x	x	
69	31	0600	28	51 31	176 40	S	x	x	x	x			
70		0400	29	51 33	176 39	S	x	x	x	x			
71	32	0600	29	51 29	176 38	S	x	x	x	x			
72		0000	5 Aug	51 30	175 00	S	x	x	x	x			
73	33	0500	5	51 00	175 00	D	x	x	x	x	x	x	
74		0200	6	50 31	175 00	S	x	x	x	x			
75	34	0700	6	50 00	175 00	D	x	x	x	x	x		
76		0300	7	49 27	175 02	S	x	x	x	x			
77	35	0900	7	49 00	175 00	D	x	x	x	x	x	x	
78		0200	8	48 28	174 57	S	x	x	x	x			
79	36	0400	9	48 00	175 00	D	x	x	x	x	x		
80		0400	10	47 45	173 30	S	x	x	x	x			
81	37	0500	12	49 05	170 10	D	x	x	x	x	x		
82		0200	13	49 31	170 06	S	x	x	x	x			
83		2200	13	50 27	169 57	S	x	x	x	x			
84		0200	14	50 59	170 03	S	x	x	x	x			
85		2200	26	53 00	139 00	I	x	x	x	x			
86		0800	27	53 00	137 00	I	x	x	x	x			
87		1900	27	53 02	134 57	I	x	x	x	x			
88		0200	28	53 00	133 30	I	x	x	x	x			

Summary of Observations, MV Tordenskjold, 1959

Sta	Set	GCT	Date	Lat	Long	Cast	BT	T	Cl	O	Pl	Tr
1	1	1800	25 May	53°17'N	165°35'W	S	x	x	x	x		
2		0200	26	53 04	167 03	S	x	x	x	x		
3	2	0600	26	52 40	167 37	S	x	x	x	x		x
4		0200	27	52 14	168 51	S	x	x	x	x		
5	3	0700	27	51 56	169 39	S	x	x	x	x	150	x
6	4	0700	28	51 43	173 04	S	x	x	x	x	x	x
7		1000	1 Jun	51 30	177 02	S	x	x	x	x		
8	5	0300	2	51 00	180 00	D	x	x	x	x	x	
9		0300	3	50 30	180 00	S	x	x	x	x		
10	6	0700	3	49 59	179 57	D	x	x	x	x	x	x
11		0300	4	49 30	179 58	S	x	x	x	x		
12	7	0800	4	49 03	179 56	D	x	x	x	x	x	x
13	8	0800	7	49 01	175 04	D	x	x	x	x	x	
14	9	0800	12	51 32	176 31	S	x	x	x	x	x	x
15	10	0300	14	51 32	176 34	S	x	x	x	x	x	x
16	11	0700	15	51 31	176 25	S	x	x	x	x	x	x
17		2000	20	52 04	176 19	S	x	x	x	x		
18	12	0800	21	52 59	175 00	D	x	x	x	x	x	x
19		0100	22	53 37	175 27	S	x	x	x			
20	13	0700	22	54 00	176 00	D	x	x	x	x	x	x
21		0300	23	54 30	176 00	S	x	x	x			
22	14	0800	23	55 00	176 00	D	x	x	x	x	x	x
23		0300	24	55 30	176 00	S	x	x	x			
24	15	0800	24	56 00	176 00	D	x	x	x	x	x	x
25		0100	25	56 30	175 34	S	x	x	x			
26	16	0800	25	57 00	175 00	D	x	x	x	x	x	x
27		0000	26	57 16	174 21	S	x	x	x			
28		0300	26	57 23	173 54	S	x	x	x	x		
29		0700	26	57 44	173 12	B	x	x	x			
30		2000	26	58 22	171 35	B	x	x	x			
31	17	0700	27	59 00	170 00	B	x	x	x	x		
32		0100	28	58 30	170 00	B	x	x	:			
33	18	0700	28	58 00	170 00	B	x	x	x	x	30	x
34		0100	29	57 30	170 04	B	x	x	x			
35	19	0700	29	56 56	170 06	B	x	x	x	x	30	
36		0100	30	56 29	170 03	B	x	x	x	x		
37	20	0700	30	55 59	170 00	S	x	x	x	x	x	x
38		0200	1 Jul	55 30	170 10	S	x	x	x			
39	21	0800	1	55 01	170 03	D	x	x	x	x	x	x
40		0100	2	54 30	170 00	S	x	x	x			
41	22	0600	2	53 58	170 01	D	x	x	x	x	x	x
42	23	0700	3	53 18	170 00	D	x	x	x	x	x	x
43		2400	3	53 10	169 57	S	x	x	x	x		
44		0500	4	52 21	169 53	S	x	x	x	x		
45	24	0800	4	52 00	169 53	D	x	x	x	x	x	x

Sta	Set	GCT	Date	Lat	Long	Cast	BT	T	Cl	O	Pl	Tr
46	25	0700	5 Jul	51°00'N	169°56'W	D	x	x	x	x	x	x
47		0600	6	51 54	168 37	S	x	x	x			
48		0600	11	53 35	165 17	S	x	x	x	x		
49	26	0900	11	53 30	165 00	D	x	x	x	x	x	x
50	27	0800	12	52 58	164 56	D	x	x	x	x	x	x
51		0300	13	52 25	165 06	S	x	x	x			
52	28	0800	13	52 00	165 00	D	x	x	x	x		
53		0700	14	51 03	164 56	S	x	x	x			
54		0100	15	50 25	164 55	S	x	x	x			
55	29	0700	15	50 02	165 00	D	x	x	x	x		
56		0300	16	49 30	165 00	S	x	x	x			
57	30	0800	16	49 02	165 00	D	x	x	x	x	x	x
58		0200	17	48 30	165 00	S	x	x	x		x	x
59	31	0700	17	48 01	165 05	D	x	x	x			
60		0300	18	47 47	164 02	S	x	x	x			
61		0900	18	47 29	162 55	S	x	x	x			
62		1600	18	47 09	161 37	S	x	x	x			
63	32	0400	19	47 01	160 06	D	x	x	x	x	x	x
64		0100	20	47 30	160 02	S	x	x	x			
65	33	0500	20	48 00	160 00	D	x	x	x	x	x	x
66		0000	21	48 30	160 00	S	x	x	x			
67	34	0400	21	49 00	160 00	D	x	x	x	x	x	
68		0200	22	49 30	160 10	S	x	x	x			
69	35	0700	22	49 55	160 05	D	x	x	x	x	x	x
70		0300	23	50 30	159 55	S	x	x	x			
71	36	0700	23	50 57	159 55	D	x	x	x	x	x	x
72	37	0800	24	51 57	159 58	D	x	x	x	x	x	x
73		0300	25	52 30	160 00	S	x	x	x			
74	38	0900	25	53 00	160 00	D	x	x	x	x	x	x
75		0400	26	53 30	159 53	S	x	x	x			
76	39	0900	26	53 55	159 40	D	x	x	x	x	x	x
77		0200	27	54 17	160 00	S	x	x	x	x		
78		0300	2 Sept	51 00	138 00	I	x	x	x	x		
79		1600	2	51 00	136 00	I	x	x	x	x		
80		0100	3	51 00	134 00	I	x	x	x	x		
81		1100	3	51 01	131 55	I	x	x	x	x		
82		2200	3	51 01	130 05	I	x	x	x	x		

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TABULATED DATA MV *Pioneer*

Station data

Bathythermograph observations

Plankton data

- Numbers of copepods
- Numbers of organisms

Drift bottle releases

MV PIONEER
STATION 1

56-01 N 152-59 W 24 APR 1959 0517-0655 GCT
WEATHER 49 CLOUDS X AMT 9 WIND 265 20 KTS SEA 3
SWELL 265 AMT 1 BAR 1014 MBS DRY 3.9 WET 3.9 BT 1

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.1	32.60	25.79	
9	5.02	32.59	25.79	.673
19	5.00	32.58	25.78	.616
28	4.74	32.61	25.83	.567
48	4.38	32.64	25.90	.601
71	4.20	32.70	25.96	.576
96	5.32	33.18	26.22	.399
120	6.14	33.62	26.47	.298
144	5.79	33.74	26.61	.268
192	5.18	33.84	26.76	.163
240	4.72	33.89	26.85	.133
288	4.44	33.95	26.93	.122
* 386	4.15	34.05	27.04	.082
485	3.98	34.08	27.08	.063
538	3.90	34.11	27.11	.057
703	3.45	34.23	27.25	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.1	32.60	25.79	221.9	.000	
10	5.03	32.59	25.79	222.0	.022	.667
20	4.97	32.58	25.79	222.2	.044	.609
30	4.70	32.61	25.84	217.2	.066	.573
50	4.32	32.63	25.89	212.0	.109	.604
75	4.40	32.78	26.00	201.7	.161	.543
100	5.54	33.28	26.27	176.8	.208	.377
150	5.71	33.76	26.63	143.5	.288	.251
200	5.09	33.85	26.78	130.1	.356	.157
250	4.65	33.90	26.87	121.9	.419	.131
300	4.40	33.97	26.95	114.5	.478	.116
400	4.12	34.05	27.04	106.4	.588	.079
500	3.96	34.09	27.09	102.5	.692	.061
600	3.77	34.15	27.16	096.8	.792	.051
700	3.46	34.23	27.25	088.2	.885	.046

MV PIONEER
STATION 2

55-23 N 153-07 W 24 APR 1959 2355 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 280 13 KTS SEA 3
SWELL 280 AMT 1 BAR 1013 MBS DRY 5.0 WET 4.4 BT 3

OBSERVED VALUES

DEPTH	TEMP	SAL.	σ_t	OXY
0	5.2	32.74	25.89	
9	4.64	32.71	25.92	.709
19	3.96	32.78	26.05	.652
29	3.99	32.81	26.07	.639
48	3.74	32.84	26.12	.636
73	3.45	32.87	26.17	.627
98	4.96	33.47	26.49	.370
122	4.08	33.73	26.79	.183
146	4.08	33.87	26.90	.117
195	3.96	33.96	26.99	.059
244	3.94	34.02	27.04	.046
318	3.88	34.06	27.07	.038

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.2	32.74	25.89	212.4	.000	
10	4.54	32.72	25.94	207.1	.021	.701
20	3.97	32.78	26.05	197.1	.041	.650
30	3.98	32.81	26.07	195.1	.061	.639
50	3.65	32.82	26.11	191.4	.100	.644
75	3.66	32.93	26.20	183.3	.147	.604
100	4.85	33.50	26.53	152.6	.189	.350
150	4.07	33.88	26.91	116.4	.256	.111
200	3.96	33.97	26.99	109.0	.312	.057
250	3.94	34.03	27.04	104.7	.365	.045
300	3.90	34.06	27.07	102.4	.417	.039

MV PIONEER
STATION 3

55-00 N 153-00 W 25 APR 1959 0428-0519 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 250 30 KTS SEA 4
SWELL 250 AMT 1 BAR 1002 MBS DRY 4.4 WET 3.9 BT 5

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.2	32.86	26.09	
10	4.12	32.86	26.10	.665
19	4.08	32.86	26.10	.670
29	4.00	32.85	26.10	.660
48	3.58	32.88	26.17	.640
73	3.21	32.97	26.27	.645
97	3.01	33.02	26.33	.652
121	3.90	33.59	26.70	.287
143	4.15	33.89	26.91	.138
* 394	3.71	34.15	27.16	.039
494	3.58	34.21	27.22	.036
694	3.22	34.31	27.34	.034
1043	2.70	34.40	27.46	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.2	32.86	26.09	193.2	.000	
10	4.12	32.86	26.10	192.5	.019	.665
20	4.08	32.86	26.10	192.2	.038	.669
30	3.97	32.85	26.10	191.9	.057	.658
50	3.54	32.89	26.18	185.1	.095	.640
75	3.15	32.95	26.26	177.3	.140	.660
100	3.16	33.11	26.39	165.4	.183	.595
150	4.14	33.90	26.92	115.6	.253	.133
200	4.04	33.96	26.98	110.5	.310	.104
250	3.94	34.02	27.04	105.4	.364	.080
300	3.86	34.07	27.08	101.3	.416	.061
400	3.70	34.15	27.16	094.5	.514	.039
500	3.57	34.21	27.22	089.4	.606	.036
600	3.38	34.27	27.29	083.7	.693	.034
700	3.21	34.31	27.34	079.6	.775	.034
800	3.05	34.35	27.38	075.6	.853	.035
1000	2.76	34.39	27.44	070.8	.999	.043

MV PIONEER
STATION 4

53-30 N 165-00 W 06 MAY 1959 0408-0518 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 355 12 KTS SEA 3
SWELL 060 AMT 1 BAR 0988 MBS DRY 4.2 WET 3.9 BT 9

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.0	32.37	25.72	
10	3.92	32.34	25.70	.717
20	3.86	32.34	25.71	.712
29	3.84	32.34	25.71	.709
49	3.86	32.36	25.73	.700
73	3.88	32.38	25.74	.685
98	3.70	32.52	25.87	.610
122	3.97	32.62	25.92	.579
146	4.18	32.76	26.01	.568
195	5.00	33.31	26.36	.393
244	5.38	33.72	26.64	.255
293	5.00	33.87	26.80	.200
* 331	4.46	33.95	26.93	.129
422	4.10	34.03	27.03	.076
610	3.70	34.16	27.17	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.0	32.37	25.72	228.2	.000	
10	3.92	32.34	25.70	229.8	.023	.717
20	3.86	32.34	25.71	229.3	.046	.712
30	3.84	32.34	25.71	229.2	.069	.709
50	3.86	32.36	25.73	228.0	.115	.700
75	3.85	32.39	25.75	225.8	.172	.677
100	3.72	32.53	25.87	214.2	.227	.607
150	4.26	32.81	26.04	198.7	.330	.552
200	5.07	33.36	26.39	166.5	.421	.375
250	5.35	33.74	26.66	141.9	.498	.250
300	4.88	33.89	26.83	125.8	.565	.185
400	4.18	34.01	27.00	110.0	.683	.087
500	3.88	34.09	27.10	101.6	.789	.051
600	3.71	34.15	27.16	096.1	.888	.045

MV PIONEER
STATION 5

53-00 N 165-00 W 07 MAY 1959 0301-0355 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 175 35 KTS SEA 3
SWELL 175 AMT 4 BAR 0996 MBS DRY 4.4 WET 3.9 BT 11

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.5	32.74	25.96	
8	4.51	32.73	25.95	.717
16	4.46	32.73	25.96	.714
25	4.46	32.73	25.96	.712
41	3.96	32.83	26.09	.658
62	3.48	32.96	26.24	.623
82	3.34	33.01	26.29	.621
102	3.42	33.12	26.37	.585
123	4.64	33.71	26.72	.267
163	3.94	33.82	26.88	.173
204	3.92	33.92	26.96	.116
245	3.73	33.93	26.99	.095
*361	3.83	34.11	27.12	.045
457	3.70	34.16	27.17	.039
650	3.30	34.28	27.31	.034
991	2.76	34.41	27.46	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.5	32.74	25.96	205.2	.000	
10	4.49	32.73	25.96	205.9	.021	.716
20	4.49	32.73	25.96	206.0	.042	.716
30	4.29	32.76	26.00	201.8	.062	.693
50	3.71	32.90	26.17	185.9	.101	.639
75	3.36	32.99	26.27	176.1	.146	.626
100	3.36	33.09	26.35	168.7	.189	.600
150	4.09	33.79	26.84	123.4	.262	.199
200	3.93	33.91	26.95	113.2	.321	.120
250	3.74	33.94	26.99	109.4	.377	.092
300	3.81	34.03	27.06	103.8	.430	.065
400	3.78	34.13	27.14	096.8	.530	.042
500	3.60	34.19	27.20	091.2	.624	.037
600	3.40	34.25	27.27	085.4	.712	.034
700	3.25	34.31	27.33	080.1	.795	.029
800	3.11	34.37	27.39	074.8	.872	.027
*1000	2.74	34.41	27.46	069.1	1.016	.052

MV PIONEER
STATION 6

51-29 N 175-03 E 20 MAY 1959 0434-0541 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 295 10 KTS SEA 2
SWELL 305 AMT 1 BAR 1017 MBS DRY 5.3 WET 3.9 BT 12

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.8	32.77	25.95	
10	4.82	32.75	25.94	.762
20	4.63	32.75	25.96	.735
29	4.50	32.75	25.97	.704
49	4.13	32.84	26.08	.655
74	3.63	32.95	26.22	.640
99	3.44	33.03	26.30	.644
124	3.74	33.21	26.41	.475
149	3.98	33.64	26.73	.262
198	4.02	33.90	26.93	.096
248	3.91	33.97	27.00	.063
*298	3.80	34.02	27.05	.024
*391	3.68	34.10	27.13	.021
490	3.60	34.17	27.19	.015
689	3.28	34.30	27.32	.012
1038	2.76	34.40	27.45	.026

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.8	32.77	25.95	206.0	.000	
10	4.82	32.75	25.94	207.8	.021	.762
20	4.63	32.75	25.96	205.9	.042	.735
30	4.48	32.75	25.97	204.5	.063	.701
50	4.10	32.84	26.08	194.1	.103	.654
75	3.61	32.95	26.22	181.4	.150	.643
100	3.45	33.03	26.30	174.0	.194	.638
150	3.98	33.65	26.74	132.8	.271	.257
200	4.02	33.90	26.93	114.8	.333	.095
250	3.90	33.97	27.00	108.8	.389	.061
300	3.80	34.02	27.05	104.4	.442	.024
400	3.67	34.11	27.13	097.1	.543	.020
500	3.58	34.18	27.20	091.7	.637	.015
600	3.42	34.25	27.27	085.6	.726	.012
700	3.26	34.31	27.33	080.2	.809	.012
800	3.11	34.35	27.38	076.3	.887	.014
1000	2.81	34.40	27.45	070.6	1.034	.023

MV PIONEER
STATION 7

51-00 N 175-00 E 21 MAY 1959 0221-0313 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 140 16 KTS SEA 4
SWELL 180 AMT 1 BAR 1011 MBS DRY 4.4 WET 3.9 BT 14

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.7	32.73	25.93	
9	4.71	32.70	25.91	.615
19	4.56	32.76	25.97	.531
28	4.53	32.80	26.01	.627
47	4.20	32.88	26.10	.543
71	3.84	32.93	26.18	.472
95	3.60	33.07	26.31	.458
119	3.85	33.21	26.40	.420
143	3.88	33.57	26.68	.282
192	4.10	33.86	26.89	.134
241	3.85	33.92	26.97	.074
290	3.94	34.01	27.03	.053
* 375	3.72	34.09	27.11	.058
471	3.56	34.13	27.16	.050
670	3.27	34.26	27.29	.042
1009	2.74	34.39	27.44	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.7	32.73	25.93	207.9	.000	
10	4.69	32.71	25.92	209.4	.021	.598
20	4.56	32.76	25.97	204.4	.042	.546
30	4.49	32.81	26.02	200.0	.062	.617
50	4.15	32.88	26.11	191.6	.101	.531
75	3.77	32.95	26.20	182.8	.148	.471
100	3.67	33.08	26.32	172.3	.192	.458
150	3.94	33.63	26.73	133.9	.269	.255
200	4.04	33.87	26.91	117.3	.332	.122
250	3.88	33.94	26.98	110.8	.389	.069
300	3.91	34.02	27.04	105.5	.443	.054
400	3.68	34.10	27.13	098.0	.545	.056
500	3.52	34.15	27.18	093.4	.641	.048
600	3.37	34.22	27.25	087.3	.731	.044
700	3.22	34.28	27.31	082.0	.816	.042
800	3.07	34.32	27.36	078.1	.896	.042
1000	2.75	34.39	27.44	070.7	1.045	.049

MV PIONEER
STATION 8

50-30 N 175-00 E 23 MAY 1959 0126-0136 GCT
WEATHER 43 CLOUDS X AMT 9 WIND 000 00 KTS SEA 1
SWELL AMT 9 BAR 1009 MBS DRY 5.8 WET 5.6 BT 15

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.8	32.92	25.96	
10	4.58	32.90	26.08	.701
20	4.36	32.97	26.16	.670
30	4.30	32.98	26.17	.667
50	4.18	32.98	26.19	.662
75	3.68	33.01	26.26	.658
100	3.10	33.10	26.38	.637
125	3.46	33.37	26.57	.459
150	4.02	33.78	26.84	.177
200	4.02	33.93	26.96	.080
250	3.90	34.01	27.03	.053
325	3.77	34.08	27.10	.069

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.8	32.92	25.96	205.6	.000	
10	4.58	32.90	26.08	194.0	.020	.701
20	4.36	32.97	26.16	186.6	.039	.670
30	4.30	32.98	26.17	185.4	.058	.667
50	4.18	32.98	26.19	184.3	.095	.662
75	3.68	33.01	26.26	177.5	.140	.658
100	3.10	33.10	26.38	165.6	.183	.637
150	4.02	33.78	26.84	123.4	.255	.177
200	4.02	33.93	26.96	112.6	.314	.080
250	3.90	34.01	27.03	105.8	.369	.053
300	3.81	34.06	27.08	101.5	.421	.056

MV PIONEER
STATION 9

50-00 N 175-00 E 23 MAY 1959 0623-0816 GCT
WEATHER 45 CLOUDS X AMT 9 WIND 245 04 KTS SEA 2
SWELL 245 AMT 1 BAR 1011 MBS DRY 5.0 WET 4.7 BT 16

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.9	32.95	26.09	
10	4.34	32.95	26.15	.659
20	4.15	32.96	26.17	.672
30	4.12	32.96	26.18	.667
50	4.06	32.96	26.18	.664
75	3.80	32.99	26.23	.654
99	3.23	33.07	26.35	.643
124	3.40	33.38	26.58	.439
149	3.78	33.72	26.81	.209
199	3.75	33.94	26.99	.090
249	3.71	34.01	27.05	.058
*299	3.76	34.10	27.12	.056
*392	3.63	34.17	27.19	.045
492	3.44	34.23	27.25	.040
692	3.03	34.33	27.37	.047
1042	2.47	34.46	27.52	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.9	32.95	26.09	193.5	.000	
10	4.34	32.95	26.15	187.9	.019	.659
20	4.15	32.96	26.17	185.3	.038	.672
30	4.12	32.96	26.18	185.1	.057	.667
50	4.06	32.96	26.18	184.7	.094	.664
75	3.80	32.99	26.23	180.1	.140	.654
100	3.23	33.08	26.36	168.3	.184	.635
150	3.78	33.73	26.82	124.8	.257	.206
200	3.75	33.94	26.99	109.1	.315	.089
250	3.71	34.01	27.05	103.9	.368	.058
300	3.76	34.10	27.12	098.0	.418	.056
400	3.62	34.17	27.19	092.1	.513	.044
500	3.42	34.23	27.25	086.4	.602	.040
600	3.21	34.29	27.32	080.4	.685	.044
700	3.01	34.33	27.37	076.1	.763	.047
800	2.84	34.38	27.43	071.2	.837	.051
1000	2.53	34.45	27.51	063.9	.972	.057

MV PIONEER
STATION 10

49-27 N 175-05 E 24 MAY 1959 0227 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 245 02 KTS SEA 2
SWELL 245 AMT 1 BAR 1017 MBS DRY 6.7 WET 5.8 BT 18

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.9	33.04	26.16	
10	4.30	33.04	26.22	.669
20	4.14	33.03	26.23	.666
30	4.04	33.03	26.24	.672
50	3.78	33.04	26.27	.661
75	3.58	33.06	26.31	.645
100	3.32	33.21	26.45	.557
124	3.84	33.68	26.78	.244
149	3.78	33.84	26.91	.154
199	3.52	33.92	27.00	.102
248	3.74	34.02	27.06	.057
323	3.68	34.10	27.13	.052

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.9	33.04	26.16	186.7	.000	
10	4.30	33.04	26.22	180.7	.018	.669
20	4.14	33.03	26.23	180.0	.036	.666
30	4.04	33.03	26.24	179.1	.054	.672
50	3.78	33.04	26.27	176.0	.090	.661
75	3.58	33.06	26.31	172.8	.134	.645
100	3.32	33.21	26.45	159.3	.176	.557
150	3.77	33.84	26.91	116.4	.245	.153
200	3.53	33.92	27.00	108.5	.301	.101
250	3.74	34.02	27.06	103.4	.354	.056
300	3.75	34.08	27.10	099.4	.405	.045

MV PIONEER
STATION 11

49-00 N 175-00 E 24 MAY 1959 0714-0839 GCT
WEATHER 47 CLOUDS X AMT 9 WIND 315 04 KTS SEA 1
SWELL 265 AMT 1 BAR 1017 MBS DRY 4.2 WET 3.9 BT 20

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.7	32.98	26.13	
10	4.48	32.98	26.15	.655
20	4.22	32.99	26.19	.667
30	4.14	32.98	26.19	.664
50	3.70	33.00	26.25	.657
74	3.54	33.01	26.27	.667
99	3.34	33.02	26.30	.646
123	3.04	33.12	26.41	.598
148	2.97	33.44	26.67	.448
200	3.24	33.79	26.92	.200
250	3.36	33.90	27.00	.128
300	3.40	33.98	27.06	.096
* 389	3.44	34.12	27.16	.072
488	3.30	34.19	27.23	.069
688	3.05	34.32	27.36	.063
1036	2.58	34.44	27.50	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.7	32.98	26.13	189.1	.000	
10	4.48	32.98	26.15	187.0	.019	.655
20	4.22	32.99	26.19	183.7	.038	.667
30	4.14	32.98	26.19	183.8	.056	.664
50	3.70	33.00	26.25	178.3	.092	.657
75	3.53	33.01	26.27	176.1	.136	.667
100	3.32	33.02	26.30	173.6	.180	.646
150	2.98	33.46	26.68	137.7	.258	.435
200	3.24	33.79	26.92	115.5	.321	.200
250	3.36	33.90	27.00	108.7	.377	.128
300	3.40	33.98	27.06	103.4	.430	.096
400	3.42	34.13	27.17	093.1	.528	.072
500	3.29	34.20	27.24	087.3	.618	.068
600	3.16	34.27	27.31	081.4	.702	.065
700	3.03	34.33	27.37	076.3	.781	.063
800	2.90	34.37	27.41	072.6	.855	.062
1000	2.63	34.43	27.49	066.5	.994	.063

MV PIONEER
STATION 12

48-31 N 174-58 E 25 MAY 1959 0211 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 245 02 KTS SEA 1
SWELL 245 AMT 1 BAR 1015 MBS DRY 5.3 WET 5.0 BT 22

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	32.97	26.09	
10	4.73	32.97	26.12	.650
20	4.28	32.97	26.17	.668
29	4.18	32.98	26.19	.663
49	4.10	33.00	26.21	.657
73	3.85	33.01	26.24	.650
97	3.66	33.02	26.27	.657
122	3.17	33.11	26.39	.637
146	2.90	33.41	26.65	.479
196	3.07	33.68	26.85	.290
245	3.44	33.87	26.97	.133
319	3.66	34.03	27.07	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	32.97	26.09	193.0	.000	
10	4.73	32.97	26.12	190.3	.019	.650
20	4.28	32.97	26.17	185.8	.038	.668
30	4.18	32.98	26.19	184.2	.057	.663
50	4.09	33.00	26.21	182.0	.094	.656
75	3.84	33.01	26.24	179.0	.139	.652
100	3.59	33.02	26.28	176.1	.183	.662
150	2.91	33.43	26.66	139.4	.262	.463
200	3.11	33.70	26.86	121.1	.327	.274
250	3.47	33.89	26.98	110.5	.385	.122
300	3.64	34.00	27.05	104.3	.439	.062

MV PIONEER
STATION 13

48-00 N 175-00 E 25 MAY 1959 0719-0820 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 285 10 KTS SEA 2
SWELL 270 AMT 1 BAR 1015 MBS DRY 5.0 WET 4.4 BT 24

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.1	32.98	26.09	
10	4.92	32.97	26.10	.654
19	4.54	32.98	26.15	.652
29	4.50	32.98	26.15	.663
49	4.18	33.00	26.20	.670
73	3.97	33.04	26.25	.661
98	3.29	33.14	26.40	.620
123	2.91	33.35	26.60	.505
148	3.08	33.61	26.79	.328
197	3.30	33.81	26.93	.206
247	3.33	33.91	27.01	.148
297	3.40	33.99	27.06	.091
* 392	3.50	34.12	27.16	.060
491	3.34	34.20	27.24	.058
690	3.08	34.31	27.35	.059
1038	2.56	34.44	27.50	.063

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.1	32.98	26.09	193.3	.000	
10	4.92	32.97	26.10	192.3	.019	.654
20	4.54	32.98	26.15	187.7	.038	.653
30	4.48	32.98	26.15	187.2	.057	.664
50	4.18	33.00	26.20	182.8	.094	.670
75	3.90	33.04	26.26	177.3	.139	.660
100	3.24	33.15	26.41	163.1	.182	.613
150	3.09	33.62	26.80	126.6	.254	.322
200	3.30	33.82	26.94	113.8	.314	.202
250	3.33	33.92	27.02	106.9	.369	.144
300	3.41	33.99	27.06	102.8	.421	.090
400	3.49	34.13	27.17	093.8	.519	.060
500	3.33	34.21	27.25	086.9	.609	.058
600	3.20	34.26	27.30	082.6	.694	.058
700	3.07	34.31	27.35	078.2	.774	.059
800	2.92	34.36	27.40	073.5	.850	.060
1000	2.62	34.43	27.49	066.4	.990	.062

MV PIONEER
STATION 14

49-02 N 172-59 E 26 MAY 1959 1947 GCT
WEATHER 02 CLOUDS AMT 0 WIND 300 06 KTS SEA 2
SWELL 300 AMT 1 BAR 1016 MBS DRY 6.1 WET 5.6 BT 26

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.1	32.99	26.09	
10	4.89	32.99	26.12	.660
20	4.85	32.99	26.12	.663
30	4.27	32.99	26.18	.671
50	3.97	33.01	26.23	.665
75	3.50	33.05	26.31	.652
99	3.11	33.21	26.47	.601
124	3.85	33.62	26.73	.286
149	3.97	33.85	26.90	.140
199	3.83	33.96	27.00	.088
249	3.58	33.99	27.05	.078
323	3.46	34.06	27.11	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.1	32.99	26.09	192.6	.000	
10	4.89	32.99	26.12	190.4	.019	.660
20	4.85	32.99	26.12	190.1	.038	.663
30	4.27	32.99	26.18	184.3	.057	.671
50	3.97	33.01	26.23	180.0	.093	.665
75	3.50	33.05	26.31	172.8	.137	.652
100	3.15	33.23	26.48	156.3	.178	.585
150	3.97	33.85	26.90	117.7	.246	.139
200	3.82	33.96	27.00	108.3	.302	.088
250	3.58	33.99	27.05	104.1	.355	.078
300	3.47	34.03	27.09	100.4	.406	.068

MV PIONEER
STATION 15

49-38 N 171-44 E 27 MAY 1959 0538-0639 GCT
WEATHER 02 CLOUDS 0 AMT 1 WIND 275 18 KTS SEA 2
SWELL 275 AMT 1 BAR 1012 MBS DRY 6.1 WET 5.6 BT 29

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.2	32.98	26.08	
10	5.10	32.98	26.09	.676
20	4.82	32.97	26.11	.671
30	4.47	33.00	26.17	.686
50	3.96	33.02	26.24	.668
75	3.19	33.11	26.38	.644
100	3.26	33.32	26.54	.506
125	3.72	33.68	26.79	.256
150	3.88	33.86	26.91	.135
200	3.84	33.99	27.02	.074
249	3.83	34.00	27.03	.061
* 299	3.80	34.06	27.08	.053
* 387	3.70	34.11	27.13	.046
487	3.60	34.17	27.19	.044
687	3.06	34.34	27.38	.041
1036	2.31	34.50	27.57	.072

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.2	32.98	26.08	194.4	.000	
10	5.10	32.98	26.09	193.4	.019	.676
20	4.82	32.97	26.11	191.3	.038	.671
30	4.47	33.00	26.17	185.6	.057	.686
50	3.96	33.02	26.24	179.2	.093	.668
75	3.19	33.11	26.38	165.5	.136	.644
100	3.26	33.32	26.54	150.5	.175	.506
150	3.88	33.86	26.91	116.0	.242	.135
200	3.84	33.99	27.02	106.3	.293	.074
250	3.83	34.00	27.03	105.8	.351	.061
300	3.80	34.06	27.08	101.4	.403	.053
400	3.69	34.12	27.14	096.6	.502	.046
500	3.56	34.18	27.20	091.5	.596	.043
600	3.29	34.27	27.30	082.8	.683	.040
700	3.03	34.35	27.39	074.8	.762	.041
800	2.79	34.41	27.46	068.5	.834	.046
1000	2.38	34.49	27.55	059.4	.962	.067

MV PIONEER
STATION 16

50-05 N 171-30 E 28 MAY 1959 0218 GCT
WEATHER 41 CLOUDS 8 AMT 8 WIND 315 12 KTS SEA 2
SWELL 320 AMT 1 BAR 1004 MBS DRY 5.6 WET 4.7 BT 31

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	33.01	26.12	
10	4.99	32.98	26.10	.670
19	4.91	32.98	26.11	.670
29	4.75	32.99	26.13	.662
48	4.04	33.01	26.22	.659
73	3.36	33.12	26.38	.652
97	3.32	33.38	26.59	.541
121	3.83	33.78	26.86	.188
145	3.90	33.90	26.94	.116
194	3.82	34.01	27.04	.066
243	3.76	34.05	27.08	.052
317	3.68	34.14	27.16	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	33.01	26.12	190.0	.000	
10	4.99	32.98	26.10	192.3	.019	.670
20	4.90	32.98	26.11	191.4	.038	.669
30	4.71	32.99	26.14	188.7	.057	.662
50	3.96	33.01	26.23	180.0	.094	.663
75	3.34	33.14	26.39	164.6	.137	.652
100	3.41	33.45	26.63	142.0	.175	.482
150	3.89	33.91	26.95	112.4	.239	.109
200	3.81	34.01	27.04	104.5	.293	.064
250	3.75	34.06	27.09	100.5	.344	.051
300	3.70	34.12	27.14	095.9	.393	.044

MV PIONEER
STATION 17

50-25 N 171-20 E 28 MAY 1959 0600-0652 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 315 10 KTS SEA 3
SWELL 315 AMT 1 BAR 1001 MBS DRY 4.7 WET 4.2 BT 33

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	32.99	26.11	
10	5.02	32.96	26.08	.670
20	4.96	32.98	26.10	.669
30	4.60	32.98	26.14	.666
50	4.06	33.07	26.27	.669
75	3.59	33.06	26.31	.657
100	3.24	33.25	26.49	.562
125	3.70	33.65	26.77	.283
150	3.88	33.86	26.91	.142
199	3.80	33.97	27.01	.074
249	3.65	34.03	27.07	.064
299	3.66	34.12	27.14	.052
* 385	3.55	34.17	27.19	.046
485	3.40	34.24	27.26	.048
685	3.10	34.33	27.36	.045
1034	2.57	34.46	27.51	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	32.99	26.11	191.5	.000	
10	5.02	32.96	26.08	194.1	.019	.670
20	4.96	32.98	26.10	192.0	.038	.669
30	4.60	32.98	26.14	188.4	.057	.666
50	4.06	33.07	26.27	176.4	.093	.669
75	3.59	33.06	26.31	172.9	.137	.657
100	3.24	33.25	26.49	155.6	.178	.562
150	3.88	33.86	26.91	116.0	.246	.142
200	3.80	33.97	27.01	107.4	.302	.074
250	3.65	34.03	27.07	101.8	.354	.064
300	3.66	34.12	27.14	095.5	.403	.052
400	3.53	34.18	27.20	090.5	.496	.046
500	3.38	34.25	27.27	084.5	.583	.047
600	3.23	34.29	27.32	080.6	.666	.045
700	3.08	34.34	27.37	076.0	.744	.045
800	2.93	34.38	27.42	072.2	.818	.048
1000	2.62	34.45	27.50	064.9	.955	.061

MV PIONEER
STATION 18

50-59 N 171-08 E 29 MAY 1959 0145 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 040 08 KTS SEA 3
SWELL 040 AMT 1 BAR 0998 MBS DRY 6.9 WET 5.8 BT 35

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	32.98	26.10	
10	4.80	32.96	26.10	.670
20	4.76	32.96	26.11	.672
29	4.72	32.96	26.11	.685
49	4.26	32.95	26.15	
73	3.78	32.98	26.23	.638
97	3.62	33.16	26.38	.559
122	4.06	33.41	26.54	.413
147	4.26	33.58	26.65	.306
195	4.04	33.86	26.90	.151
245	3.97	34.00	27.02	.066
318	3.86	34.05	27.07	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	32.98	26.10	192.3	.000	
10	4.80	32.96	26.10	191.8	.019	.670
20	4.76	32.96	26.11	191.4	.038	.672
30	4.70	32.96	26.12	190.9	.057	.685
50	4.23	32.95	26.16	187.1	.095	.678
75	3.74	32.99	26.24	179.6	.141	.634
100	3.69	33.19	26.40	164.2	.184	.539
150	4.24	33.60	26.67	139.1	.260	.294
200	4.03	33.88	26.92	116.4	.324	.140
250	3.96	34.01	27.03	106.4	.380	.061
300	3.89	34.05	27.06	103.1	.432	.040

MV PIONEER

STATION 19

51-30 N 171-00 E 29 MAY 1959 0637-0732 GCT
WEATHER 02 CLOUDS 8 AMT 7 WIND 055 16 KTS SEA 3
SWELL 060 AMT 1 BAR 1000 MBS DRY 5.0 WET 4.4 BT 37

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.8	32.98	26.12	
10	4.80	32.98	26.12	.674
20	4.76	32.98	26.12	.664
30	4.62	33.00	26.16	.663
50	2.54	33.11	26.44	.668
75	1.94	33.13	26.50	.682
99	1.47	33.15	26.55	.673
124	2.60	33.39	26.66	.488
149	4.14	33.74	26.79	.224
198	4.04	33.93	26.95	.114
248	3.65	33.96	27.02	.090
*298	3.85	34.04	27.06	.053
*380	3.70	34.13	27.15	.048
477	3.56	34.19	27.21	.044
674	3.24	34.30	27.33	.040
1020	2.70	34.43	27.48	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.8	32.98	26.12	190.2	.000	
10	4.80	32.98	26.12	190.3	.019	.674
20	4.76	32.98	26.12	189.9	.038	.664
30	4.62	33.00	26.16	187.1	.057	.663
50	2.54	33.11	26.44	160.0	.092	.668
75	1.94	33.13	26.50	154.1	.131	.682
100	1.51	33.16	26.56	148.9	.169	.667
150	4.14	33.75	26.80	126.9	.238	.221
200	4.01	33.93	26.96	112.5	.298	.113
250	3.66	33.96	27.02	107.1	.353	.088
300	3.85	34.04	27.06	103.4	.406	.053
400	3.67	34.14	27.16	094.9	.505	.047
500	3.52	34.20	27.22	089.6	.597	.043
600	3.36	34.26	27.28	084.2	.684	.041
700	3.20	34.31	27.34	079.5	.766	.040
800	3.04	34.36	27.39	074.8	.843	.041
1000	2.73	34.42	27.47	068.3	.986	.050

MV PIONEER
STATION 20

52-00 N 171-00 E 03 JUN 1959 0451-0611 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 255 04 KTS SEA 1
SWELL 000 AMT 0 BAR 1009 MBS DRY 5.8 WET 5.3 BT 39

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	33.04	26.15	
10	4.56	33.03	26.19	.668
20	4.39	33.04	26.21	.675
30	4.34	33.04	26.22	.674
50	4.12	33.03	26.23	.684
75	3.28	33.04	26.32	.673
100	2.69	33.09	26.41	.664
125	2.23	33.15	26.50	.636
150	2.29	33.23	26.56	.586
200	3.30	33.59	26.76	.314
250	3.78	33.86	26.92	.141
300	3.85	33.94	26.98	.076
* 392	3.81	34.11	27.12	.032
492	3.42	34.25	27.27	.032
692	2.84	34.39	27.43	.046
1042	2.27	34.52	27.59	.077

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	33.04	26.15	187.8	.000	
10	4.56	33.03	26.19	184.0	.019	.668
20	4.39	33.04	26.21	181.7	.037	.675
30	4.34	33.04	26.22	181.2	.055	.674
50	4.12	33.03	26.23	180.0	.091	.684
75	3.28	33.04	26.32	171.6	.135	.673
100	2.69	33.09	26.41	162.9	.177	.664
150	2.29	33.23	26.56	149.4	.255	.586
200	3.30	33.59	26.76	131.1	.325	.314
250	3.78	33.86	26.92	115.8	.387	.141
300	3.85	33.94	26.98	110.9	.444	.076
400	3.78	34.12	27.13	097.5	.548	.032
500	3.39	34.26	27.28	083.8	.639	.033
600	3.08	34.33	27.37	076.1	.719	.039
700	2.82	34.39	27.44	069.7	.792	.047
800	2.60	34.45	27.50	063.6	.859	.055
1000	2.31	34.51	27.58	057.2	.980	.073

MV PIONEER
STATION 21

52-47 N 171-00 E 04 JUN 1959 0455-0546 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 250 10 KTS SEA 1
SWELL 000 AMT 0 BAR 1006 MBS DRY 5.8 WET 5.0 BT 41

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	32.81	25.89	
10	5.50	32.82	25.91	.732
20	5.28	32.87	25.98	.701
30	5.16	32.87	25.99	.690
50	4.06	32.92	26.15	.657
75	3.52	32.98	26.25	.602
100	3.63	33.18	26.40	.526
125	4.52	33.60	26.64	.285
150	4.38	33.80	26.82	.178
200	4.08	33.94	26.96	.096
250	3.94	33.99	27.01	.077
*300	3.80	34.04	27.07	.070
384	3.65	34.11	27.14	.050
483	3.50	34.18	27.21	.048
681	3.24	34.28	27.31	.044
1028	2.78	34.40	27.45	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	32.81	25.89	211.6	.000	
10	5.50	32.82	25.91	209.8	.021	.732
20	5.28	32.87	25.98	203.7	.042	.701
30	5.16	32.87	25.99	202.5	.062	.690
50	4.06	32.92	26.15	187.7	.101	.657
75	3.52	32.98	26.25	178.3	.147	.602
100	3.63	33.18	26.40	164.4	.190	.526
150	4.38	33.80	26.82	125.6	.262	.178
200	4.08	33.94	26.96	112.4	.322	.096
250	3.94	33.99	27.01	107.7	.377	.077
300	3.80	34.04	27.07	102.9	.430	.070
400	3.62	34.12	27.15	095.9	.529	.050
500	3.48	34.19	27.22	090.0	.622	.047
600	3.35	34.24	27.27	085.6	.710	.045
700	3.21	34.29	27.32	081.1	.793	.044
800	3.08	34.33	27.37	077.5	.872	.044
1000	2.82	34.39	27.44	071.4	1.021	.046

MV PIONEER
STATION 22

53-30 N 171-00 E 05 JUN 1959 0416-0530 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 280 10 KTS SEA 1
SWELL 000 AMT 0 BAR 1001 MBS DRY 5.6 WET 5.0 BT 43

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.1	32.97	26.08	
10	5.04	32.95	26.07	.711
20	4.71	32.94	26.10	.703
30	4.60	32.95	26.12	.683
50	3.58	33.03	26.28	.670
75	2.83	33.07	26.38	.652
100	2.48	33.20	26.52	.578
125	2.82	33.33	26.59	.488
150	3.28	33.58	26.75	.335
200	3.84	33.79	26.86	.173
250	3.84	33.92	26.97	.103
300	3.74	34.03	27.06	.064
* 392	3.70	34.05	27.08	.058
492	3.54	34.19	27.21	.053
691	3.23	34.27	27.30	.045
1041	2.74	34.40	27.45	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.1	32.97	26.08	194.1	.000	
10	5.04	32.95	26.07	195.0	.019	.711
20	4.71	32.94	26.10	192.4	.038	.703
30	4.60	32.95	26.12	190.6	.057	.683
50	3.58	33.03	26.28	174.9	.094	.670
75	2.83	33.07	26.38	165.5	.137	.652
100	2.48	33.20	26.52	152.9	.177	.578
150	3.28	33.58	26.75	131.4	.248	.335
200	3.84	33.79	26.86	121.3	.311	.173
250	3.84	33.92	26.97	111.9	.369	.103
300	3.74	34.03	27.06	103.1	.423	.064
400	3.69	34.06	27.09	101.1	.525	.058
500	3.53	34.19	27.21	090.5	.621	.053
600	3.37	34.23	27.26	086.6	.710	.048
700	3.22	34.27	27.30	082.7	.795	.045
* 800	3.07	34.31	27.35	078.8	.876	.044
1000	2.79	34.39	27.44	071.1	1.026	.047

MV PIONEER
STATION 23

53-56 N 171-00 E 06 JUN 1959 0224 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 335 15 KTS SEA 4
SWELL 335 AMT 1 BAR 1005 MBS DRY 6.1 WET 5.6 BT 45

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.5	33.14	26.28	
9	4.40	33.14	26.29	.698
19	4.24	33.14	26.31	.693
28	3.52	33.16	26.39	.712
46	2.44	33.18	26.50	.684
71	2.34	33.25	26.57	.580
96	2.41	33.34	26.63	.520
121	2.24	33.36	26.66	.458
144	3.49	33.61	26.75	.292
192	3.62	33.80	26.89	.155
240	3.64	33.89	26.96	.113
313	3.56	33.99	27.05	.077

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.5	33.14	26.28	175.1	.000	
10	4.41	33.14	26.29	174.2	.017	.696
20	4.15	33.14	26.32	171.8	.034	.696
30	3.36	33.16	26.41	163.0	.051	.711
50	2.41	33.19	26.51	153.0	.083	.664
75	2.37	33.27	26.58	146.7	.120	.571
100	2.28	33.33	26.64	141.6	.156	.518
150	3.51	33.64	26.78	129.0	.224	.270
200	3.63	33.82	26.91	117.0	.285	.147
250	3.64	33.91	26.98	110.7	.342	.106
300	3.58	33.98	27.04	105.2	.396	.081

MV PIONEER
STATION 24

54-20 N 171-00 E 06 JUN 1959 0659-0750 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 345 13 KTS SEA 3
SWELL 325 AMT 1 BAR 1006 MBS DRY 5.3 WET 4.4 BT 47

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.7	33.08	26.21	
10	4.72	33.08	26.21	.683
20	4.24	33.11	26.28	.719
30	3.59	33.16	26.39	.738
50	2.93	33.18	26.46	.689
75	1.78	33.22	26.59	.681
100	1.47	33.23	26.62	.670
125	1.42	33.25	26.63	.584
150	2.94	33.57	26.77	.385
200	3.63	33.83	26.92	.153
250	3.64	33.92	26.99	.106
*300	3.60	34.00	27.05	.071
*392	3.52	34.09	27.13	.058
492	3.42	34.18	27.21	.051
690	3.08	34.28	27.33	.052
1038	2.63	34.41	27.47	.063

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.7	33.08	26.21	181.6	.000	
10	4.72	33.08	26.21	181.9	.018	.683
20	4.24	33.11	26.28	174.9	.036	.719
30	3.59	33.16	26.39	165.1	.053	.738
50	2.93	33.18	26.46	157.9	.085	.689
75	1.78	33.22	26.59	146.1	.123	.681
100	1.47	33.23	26.62	143.3	.159	.670
150	2.94	33.57	26.77	129.1	.227	.385
200	3.63	33.83	26.92	116.2	.288	.153
250	3.64	33.92	26.99	109.9	.345	.106
300	3.60	34.00	27.05	103.9	.398	.071
400	3.51	34.10	27.14	096.2	.498	.057
500	3.41	34.18	27.21	090.0	.591	.051
600	3.23	34.24	27.28	084.4	.678	.051
700	3.06	34.28	27.33	080.3	.760	.052
800	2.92	34.33	27.38	075.8	.838	.054
1000	2.67	34.40	27.46	069.1	.983	.061

MV PIONEER
STATION 25

54-42 N 171-00 E 06 JUN 1959 2345 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 200 14 KTS SEA 3
SWELL 000 AMT 0 BAR 1007 MBS DRY 6.1 WET 4.4 BT 49

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.3	32.93	26.02	
9	5.10	32.96	26.07	.690
18	4.71	33.01	26.15	.688
28	4.48	33.03	26.19	.675
46	4.08	33.06	26.26	.657
69	2.68	33.14	26.45	.654
92	2.04	33.22	26.57	.636
116	2.24	33.30	26.62	.568
140	2.94	33.49	26.71	.409
188	3.78	33.84	26.91	.154
236	3.72	33.91	26.97	.102
310	3.64	34.03	27.07	.065

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.3	32.93	26.02	199.3	.000	
10	5.05	32.97	26.08	193.7	.020	.690
20	4.66	33.01	26.16	186.6	.039	.685
30	4.47	33.03	26.20	183.3	.057	.672
50	3.78	33.07	26.30	173.7	.093	.658
75	2.43	33.16	26.49	155.5	.134	.654
100	2.05	33.23	26.57	147.4	.172	.623
150	3.19	33.59	26.77	129.8	.241	.339
200	3.76	33.86	26.93	115.2	.302	.139
250	3.70	33.93	26.99	109.8	.358	.091
300	3.65	34.01	27.06	103.7	.411	.067

MV PIONEER
STATION 26

55-00 N 171-00 E 07 JUN 1959 0312-0443 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 180 24 KTS SEA 4
SWELL 180 AMT 3 BAR 1006 MBS DRY 5.8 WET 5.0 BT 51

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	33.01	26.12	
10	4.98	33.00	26.12	.679
20	4.42	33.04	26.21	.677
30	4.24	33.05	26.24	.667
50	3.30	33.09	26.36	.660
75	2.56	33.16	26.48	.591
100	1.69	33.21	26.58	.588
125	1.36	33.22	26.61	.583
150	1.88	33.34	26.67	.554
199	3.60	33.77	26.87	.186
249	3.75	33.93	26.98	.094
* 299	3.64	33.99	27.04	.068
* 394	3.65	34.12	27.14	.088
492	3.52	34.16	27.19	.046
690	3.23	34.26	27.30	.043
1036	2.72	34.39	27.45	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.0	33.01	26.12	190.0	.000	
10	4.98	33.00	26.12	190.6	.019	.679
20	4.42	33.04	26.21	182.0	.038	.677
30	4.24	33.05	26.24	179.5	.056	.667
50	3.30	33.09	26.36	167.9	.091	.660
75	2.56	33.16	26.48	156.5	.132	.591
100	1.69	33.21	26.58	146.3	.170	.588
150	1.88	33.34	26.67	137.9	.241	.554
200	3.61	33.77	26.87	120.5	.306	.184
250	3.75	33.93	26.98	110.3	.364	.093
300	3.64	33.99	27.04	105.1	.418	.069
400	3.64	34.12	27.14	096.1	.519	.085
500	3.51	34.16	27.19	092.5	.613	.046
600	3.36	34.22	27.25	087.2	.703	.044
700	3.22	34.26	27.30	083.5	.788	.043
800	3.07	34.31	27.35	078.8	.869	.043
1000	2.77	34.38	27.43	071.7	1.019	.047

MV PIONEER
STATION 27

55-00 N 173-30 E 09 JUN 1959 0631-0736 GCT
WEATHER 60 CLOUDS 9 AMT 8 WIND 135 06 KTS SEA 2
SWELL 200 AMT 1 BAR 1005 MBS DRY 5.3 WET 4.7 BT 54

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.4	33.08	26.24	
10	4.40	33.13	26.28	.662
20	4.26	33.13	26.30	.673
30	4.19	33.13	26.30	.670
49	3.72	33.14	26.36	.668
74	2.81	33.16	26.46	.665
98	2.29	33.19	26.52	.641
122	2.15	33.20	26.54	.636
146	2.06	33.25	26.59	.622
195	3.78	33.72	26.81	.220
245	3.82	33.88	26.94	.112
*294	3.76	33.96	27.01	.079
*374	3.66	34.05	27.09	.056
471	3.50	34.12	27.16	.053
667	3.28	34.22	27.26	.045
1009	2.78	34.38	27.43	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.4	33.08	26.24	178.6	.000	
10	4.40	33.13	26.28	174.9	.018	.662
20	4.26	33.13	26.30	173.6	.035	.673
30	4.19	33.13	26.30	173.0	.052	.670
50	3.68	33.14	26.36	167.5	.086	.668
75	2.78	33.16	26.46	158.3	.127	.664
100	2.28	33.19	26.52	152.1	.166	.641
150	2.26	33.30	26.61	143.8	.240	.578
200	3.79	33.74	26.83	124.5	.307	.206
250	3.81	33.89	26.95	113.9	.367	.108
300	3.75	33.97	27.01	107.7	.422	.077
400	3.61	34.07	27.11	099.5	.526	.055
500	3.47	34.14	27.18	093.6	.623	.051
600	3.36	34.19	27.23	089.4	.715	.047
700	3.24	34.24	27.28	085.2	.802	.044
800	3.10	34.28	27.32	081.4	.885	.043
1000	2.80	34.38	27.43	072.0	1.038	.044

MV PIONEER
STATION 28

56-00 N 175-00 E 12 JUN 1959 0228-0253 GCT
WEATHER 01 CLOUDS 8 AMT 7 WIND 180 08 KTS SEA 3
SWELL 170 AMT 5 BAR 0996 MBS DRY 7.5 WET 6.1 BT 56

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.5	33.11	26.26	
9	4.31	33.13	26.29	.663
18	4.24	33.13	26.30	.663
28	4.20	33.13	26.30	.667
47	3.92	33.13	26.33	.665
82	2.39	33.22	26.54	.673
145	1.87	33.23	26.59	.641
238	3.83	33.87	26.93	.135
311	3.74	33.98	27.02	.079

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	4.5	33.11	26.26	177.3	.000	
10	4.30	33.13	26.29	173.9	.018	.663
20	4.24	33.13	26.30	173.4	.035	.664
30	4.19	33.13	26.30	173.0	.052	.667
50	3.75	33.14	26.36	168.2	.086	.666
75	2.63	33.21	26.51	153.3	.126	.673
100	2.09	33.19	26.54	150.7	.164	.689
150	2.03	33.28	26.62	143.6	.238	.601
200	3.31	33.68	26.83	124.4	.305	.283
250	3.91	33.91	26.95	113.4	.364	.105
300	3.85	33.99	27.02	107.2	.419	.068

MV PIONEER
STATION 29

54-47 N 177-43 E 12 JUN 1959 1700 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 255 04 KTS SEA 1
SWELL 230 AMT 1 BAR 0995 MBS DRY 5.3 WET 4.7 BT 58

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.7	33.13	26.25	
10	4.70	33.14	26.26	.673
20	4.32	33.16	26.31	.660
30	4.32	33.14	26.30	.657
49	4.24	33.14	26.31	.655
73	2.70	33.23	26.52	.653
98	2.54	33.25	26.55	.634
123	2.14	33.26	26.59	.625
147	2.06	33.28	26.61	.608
197	3.91	33.71	26.79	.230
246	3.86	33.88	26.93	.126
320	3.76	34.00	27.04	.070

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.7	33.13	26.25	177.9	.000	
10	4.70	33.14	26.26	177.2	.018	.673
20	4.32	33.16	26.31	171.9	.035	.660
30	4.32	33.14	26.30	173.5	.052	.657
50	4.15	33.15	26.32	171.3	.086	.655
75	2.70	33.23	26.52	152.3	.126	.651
100	2.50	33.25	26.55	149.3	.164	.634
150	2.23	33.31	26.62	142.8	.237	.578
200	3.91	33.72	26.80	127.2	.305	.222
250	3.86	33.89	26.94	114.4	.365	.120
300	3.79	33.98	27.02	107.3	.420	.073

MV PIONEER
STATION 30

53-30 N 180-00 13 JUN 1959 0741-0909 GCT
WEATHER 03 CLOUDS 8 AMT 7 WIND 260 14 KTS SEA 2
SWELL 260 AMT 1 BAR 0994 MBS DRY 5.6 WET 4.7 BT 60

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	33.12	26.21	
10	5.00	33.12	26.21	.666
20	4.83	33.12	26.23	.670
30	4.76	33.12	26.24	.662
50	4.69	33.12	26.24	.660
75	3.61	33.19	26.41	.625
100	3.28	33.22	26.46	.602
125	3.14	33.26	26.51	.588
150	3.09	33.37	26.60	.548
200	3.58	33.50	26.66	.384
250	3.89	33.71	26.79	.239
* 300	3.84	33.83	26.89	.163
* 371	3.78	33.92	26.97	.127
376	3.77	33.94	26.99	.125
381	3.74	33.96	27.01	.120
386	3.74	33.98	27.02	.106
390	3.72	33.99	27.03	.102
395	3.70	33.97	27.02	.100

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.0	33.12	26.21	181.8	.000	
10	5.00	33.12	26.21	181.9	.018	.666
20	4.83	33.12	26.23	180.1	.036	.670
30	4.76	33.12	26.24	179.5	.054	.662
50	4.69	33.12	26.24	179.0	.090	.660
75	3.61	33.19	26.41	163.3	.133	.625
100	3.28	33.22	26.46	158.2	.173	.602
150	3.09	33.37	26.60	145.5	.249	.548
200	3.58	33.50	26.66	140.5	.320	.384
250	3.89	33.71	26.79	128.2	.387	.239
300	3.84	33.83	26.89	119.0	.449	.163

MV PIONEER
STATION 31

52-38 N 178-47 W 22 JUN 1959 0405-0456 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 080 12 KTS SEA 2
SWELL 000 AMT 0 BAR 1015 MBS DRY 7.2 WET 6.1 BT 61

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.11	26.13	
10	5.29	33.11	26.17	.646
20	5.20	33.11	26.18	.646
30	4.76	33.13	26.24	.633
49	4.34	33.20	26.34	.594
74	4.04	33.24	26.41	.555
98	4.02	33.29	26.45	.510
122	3.96	33.36	26.51	.492
146	3.80	33.37	26.53	.466
195	3.85	33.49	26.62	.399
244	3.80	33.57	26.69	.346
294	4.03	33.76	26.82	.208
*394	3.69	33.94	27.00	.150
492	3.60	34.07	27.11	.082
690	3.26	34.23	27.27	.056
1038	2.78	34.38	27.43	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	33.11	26.13	189.1	.000	
10	5.29	33.11	26.17	185.7	.019	.646
20	5.20	33.11	26.18	184.9	.038	.646
30	4.76	33.13	26.24	178.8	.056	.633
50	4.32	33.20	26.35	169.2	.091	.593
75	4.04	33.24	26.41	163.6	.133	.553
100	4.02	33.30	26.46	159.1	.173	.509
150	3.81	33.38	26.54	151.4	.251	.460
200	3.83	33.49	26.63	143.7	.325	.397
250	3.84	33.60	26.71	135.9	.395	.326
300	4.00	33.77	26.83	125.2	.460	.205
400	3.69	33.95	27.00	109.3	.577	.145
500	3.59	34.08	27.12	099.3	.681	.081
600	3.41	34.16	27.20	092.2	.777	.066
700	3.24	34.24	27.28	085.2	.866	.055
800	3.09	34.30	27.34	079.8	.948	.049
1000	2.83	34.37	27.42	073.1	1.101	.048

MV PIONEER
STATION 32

52-46 N 179-18 W 23 JUN 1959 0034 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 075 10 KTS SEA 2
SWELL 000 AMT 0 BAR 1016 MBS DRY 7.2 WET 6.7 BT 62

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.07	26.10	
10	5.18	33.07	26.15	.646
20	4.36	33.14	26.29	.607
30	4.08	33.19	26.36	.584
49	3.94	33.21	26.39	.564
74	3.84	33.27	26.45	.540
98	3.82	33.32	26.49	.497
123	3.82	33.39	26.55	.448
147	3.88	33.44	26.58	.432
197	3.86	33.49	26.62	.394
246	3.80	33.59	26.71	.346
321	3.80	33.65	26.76	.307

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	33.07	26.10	192.1	.000	
10	5.18	33.07	26.15	187.5	.019	.646
20	4.36	33.14	26.29	173.8	.037	.607
30	4.08	33.19	26.36	167.4	.054	.584
50	3.93	33.21	26.39	164.6	.087	.563
75	3.84	33.27	26.45	159.4	.128	.538
100	3.82	33.33	26.50	154.9	.167	.492
150	3.88	33.44	26.58	147.6	.243	.430
200	3.85	33.50	26.63	143.1	.316	.391
250	3.80	33.60	26.72	135.5	.386	.343
300	3.79	33.64	26.75	132.8	.453	.314

MV PIONEER
STATION 33

52-59 N 179-55 E 23 JUN 1959 0546-0634 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 060 13 KTS SEA 2
SWELL 000 AMT 0 BAR 1015 MBS DRY 6.1 WET 5.6 BT 63

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.00	26.04	
10	5.58	32.99	26.04	.651
20	5.37	33.00	26.07	.651
30	5.43	33.02	26.08	.651
50	5.02	33.04	26.14	.652
75		33.10		.605
100	3.36	33.19	26.43	.601
125	3.26	33.26	26.50	.547
150	2.70	33.26	26.55	.607
200	3.70	33.46	26.61	.390
250	4.08	33.72	26.78	.241
300	3.99	33.87	26.91	.147
* 392	3.84	34.00	27.03	.083
492	3.72	34.09	27.11	.058
691	3.44	34.22	27.24	.047
840	3.21	34.29	27.32	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.6	33.00	26.04	197.3	.000	
10	5.58	32.99	26.04	198.0	.020	.651
20	5.37	33.00	26.07	195.0	.040	.651
30	5.43	33.02	26.08	194.2	.059	.651
50	5.02	33.04	26.14	188.5	.097	.652
75	3.80	33.10	26.32	171.3	.142	.605
100	3.36	33.19	26.43	161.2	.184	.601
150	2.70	33.26	26.55	150.4	.262	.607
200	3.70	33.46	26.61	144.7	.336	.390
250	4.08	33.72	26.78	129.3	.405	.241
300	3.99	33.87	26.91	117.6	.467	.147
400	3.83	34.01	27.04	106.3	.579	.081
500	3.71	34.10	27.12	099.1	.682	.057
600	3.57	34.17	27.19	093.1	.778	.051
700	3.43	34.22	27.24	088.7	.869	.047
800	3.27	34.27	27.30	083.9	.955	.045

MV PIONEER
STATION 34

53-32 N 179-58 W 24 JUN 1959 0306 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 060 10 KTS SEA 2
SWELL 000 AMT 0 BAR 1017 MBS DRY 6.9 WET 6.3 BT 64

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	33.11	26.12	
10	5.51	33.12	26.15	.653
20	5.37	33.12	26.17	.653
30	5.20	33.12	26.19	.653
50	4.68	33.11	26.24	.646
75	3.62	33.19	26.41	.610
100	3.42	33.25	26.47	.567
125	3.22	33.28	26.52	.564
150	2.93	33.29	26.55	.578
200	3.47	33.44	26.62	.436
250	3.87	33.66	26.76	.281
325	3.82	33.84	26.90	.165

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.7	33.11	26.12	190.2	.000	
10	5.51	33.12	26.15	187.4	.019	.653
20	5.37	33.12	26.17	186.0	.038	.653
30	5.20	33.12	26.19	184.2	.057	.653
50	4.68	33.11	26.24	179.6	.093	.646
75	3.62	33.19	26.41	163.4	.136	.610
100	3.42	33.25	26.47	157.2	.176	.567
150	2.93	33.29	26.55	150.1	.253	.578
200	3.47	33.44	26.62	144.0	.327	.436
250	3.87	33.66	26.76	131.7	.396	.281
300	3.92	33.80	26.86	122.1	.459	.188

MV PIONEER
STATION 35

54-00 N 180-00 24 JUN 1959 0742 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 035 12 KTS SEA 2
SWELL 000 AMT 0 BAR 1017 MBS DRY 5.6 WET 4.7 BT 65

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.5	33.11	26.14	
10	5.52	33.10	26.13	.652
20	5.35	33.10	26.15	.653
30	5.22	33.11	26.18	.653
50	5.00	33.09	26.19	.647
75	3.36	33.19	26.43	.597
100	3.22	33.25	26.49	.561
124	3.24	33.29	26.52	.542
149	3.35	33.37	26.58	.489
173	3.52	33.46	26.63	.425
198	3.68	33.54	26.68	.365
222	3.83	33.69	26.78	.265

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.5	33.11	26.14	188.0	.000	
10	5.52	33.10	26.13	189.1	.019	.652
20	5.35	33.10	26.15	187.3	.038	.653
30	5.22	33.11	26.18	185.2	.057	.653
50	5.00	33.09	26.19	184.5	.094	.647
75	3.36	33.19	26.43	161.0	.137	.597
100	3.22	33.25	26.49	155.4	.177	.561
150	3.36	33.37	26.58	147.9	.253	.486
200	3.69	33.55	26.69	137.8	.324	.358

MV PIONEER
STATION 36

54-26 N 180-00 25 JUN 1959 0054 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 045 05 KTS SEA 1
SWELL 000 AMT 0 BAR 1018 MBS DRY 7.2 WET 6.4 BT 66

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	33.09	26.10	
10	5.64	33.09	26.11	.659
20	5.30	33.09	26.15	.661
30	5.14	33.08	26.16	.658
50	5.02	33.09	26.18	.651
75	3.63	33.16	26.38	.615
100	3.29	33.21	26.45	.593
125	3.17	33.25	26.50	.568
150	3.04	33.26	26.52	.572
200	3.10	33.30	26.54	.560
276	3.89	33.76	26.83	.212

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.7	33.09	26.10	191.7	.000	
10	5.64	33.09	26.11	191.2	.019	.659
20	5.30	33.09	26.15	187.5	.038	.661
30	5.14	33.08	26.16	186.6	.057	.658
50	5.02	33.09	26.18	184.7	.094	.651
75	3.63	33.16	26.38	165.7	.138	.615
100	3.29	33.21	26.45	159.0	.179	.593
150	3.04	33.26	26.52	153.3	.257	.572
200	3.10	33.30	26.54	151.1	.333	.560
250	3.52	33.55	26.70	136.5	.405	.376

MV PIONEER
STATION 37

55-00 N 180-00 25 JUN 1959 0601-0651 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 025 06 KTS SEA 1
SWELL 000 AMT 0 BAR 1018 MBS DRY 6.1 WET 5.3 BT 67

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.09	26.12	
10	5.60	33.09	26.12	.658
20	5.32	33.08	26.14	.659
30	5.15	33.09	26.17	.658
50	4.26	33.11	26.28	.641
75	3.30	33.17	26.42	.595
100	3.28	33.26	26.50	.558
122	3.32	33.29	26.52	.534
150	3.16	33.31	26.55	.526
200	3.54	33.50	26.66	.380
250	3.88	33.73	26.81	.237
300	3.79	33.86	26.92	.148
*394	3.66	34.02	27.06	.099
493	3.56	34.10	27.14	.063
692	3.27	34.22	27.26	.048
1040	2.82	34.37	27.42	.043

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	33.09	26.12	190.6	.000	
10	5.60	33.09	26.12	190.7	.019	.658
20	5.32	33.08	26.14	188.4	.038	.659
30	5.15	33.09	26.17	185.9	.057	.658
50	4.26	33.11	26.28	175.3	.093	.641
75	3.30	33.17	26.42	162.0	.135	.595
100	3.28	33.26	26.50	155.2	.175	.558
150	3.16	33.31	26.55	150.6	.251	.526
200	3.54	33.50	26.66	140.1	.324	.380
250	3.88	33.73	26.81	126.6	.391	.237
300	3.79	33.86	26.92	116.3	.452	.148
400	3.65	34.03	27.07	102.9	.562	.096
500	3.55	34.10	27.14	097.4	.662	.062
600	3.40	34.17	27.21	091.3	.756	.054
700	3.26	34.22	27.26	086.9	.845	.048
800	3.12	34.27	27.31	082.3	.930	.044
1000	2.87	34.36	27.41	074.2	1.087	.042

MV PIONEER
STATION 38

55-32 N 179-59 W 26 JUN 1959 0140 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 290 10 KTS SEA 2
SWELL 290 AMT 1 BAR 1018 MBS DRY 6.7 WET 6.4 BT 68

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	33.14	26.14	
10	5.12	33.15	26.22	.691
19	4.88	33.14	26.24	.669
29	4.83	33.14	26.24	.659
48	4.28	33.20	26.35	.652
73	3.02	33.22	26.49	.638
96	2.62	33.22	26.52	.636
121	2.54	33.24	26.54	.629
146	2.50	33.25	26.55	.622
195	3.70	33.58	26.71	.296
244	3.82	33.78	26.86	.187
318	3.72	33.92	26.98	.118

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.7	33.14	26.14	188.0	.000	
10	5.12	33.15	26.22	180.9	.018	.691
20	4.88	33.14	26.24	179.2	.036	.668
30	4.81	33.14	26.25	178.5	.054	.659
50	4.15	33.20	26.36	167.5	.089	.650
75	2.97	33.22	26.49	155.4	.129	.638
100	2.60	33.22	26.52	152.4	.167	.635
150	2.64	33.28	26.57	148.4	.242	.587
200	3.72	33.60	26.72	134.3	.313	.283
250	3.82	33.80	26.87	120.7	.377	.177
300	3.78	33.90	26.96	113.2	.435	.124

MV PIONEER
STATION 39

56-00 N 180-00 26 JUN 1959 0636-0727 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 280 16 KTS SEA 3
SWELL 280 AMT 1 BAR 1017 MBS DRY 6.1 WET 5.6 BT 69

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.15	26.16	
10	5.60	33.14	26.16	.666
20	4.96	33.13	26.22	.676
30	4.84	33.13	26.23	.672
49	4.66	33.14	26.26	.659
74	3.10	33.21	26.47	.634
99	2.85	33.21	26.49	.628
124	2.82	33.24	26.52	.608
148	2.82	33.30	26.57	.553
198	3.58	33.61	26.75	.285
248	3.90	33.82	26.88	.153
*298	3.83	33.94	26.98	.096
394	3.66	34.03	27.07	.067
492	3.51	34.11	27.15	.057
688	3.27	34.22	27.26	.042
1033	2.78	34.37	27.42	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	33.15	26.16	186.1	.000	
10	5.60	33.14	26.16	187.0	.019	.666
20	4.96	33.13	26.22	180.8	.037	.676
30	4.84	33.13	26.23	179.6	.055	.672
50	4.57	33.14	26.27	176.2	.091	.658
75	3.09	33.21	26.47	157.1	.133	.634
100	2.85	33.21	26.49	155.2	.172	.628
150	2.86	33.31	26.57	148.0	.248	.540
200	3.60	33.62	26.75	131.7	.318	.278
250	3.90	33.83	26.89	119.3	.381	.150
300	3.83	33.94	26.98	110.7	.438	.095
400	3.65	34.04	27.08	102.2	.544	.066
500	3.50	34.11	27.15	096.2	.643	.056
600	3.38	34.17	27.21	091.1	.737	.047
700	3.25	34.23	27.27	086.0	.826	.041
800	3.12	34.27	27.31	082.3	.910	.039
1000	2.83	34.36	27.41	073.8	1.066	.044

MV PIONEER
STATION 40

56-31 N 179-50 E 27 JUN 1959 0223 GCT
WEATHER 50 CLOUDS 6 AMT 8 WIND 280 11 KTS SEA 3
SWELL 280 AMT 1 BAR 1015 MBS DRY 6.9 WET 6.4 BT 70

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	33.15	26.15	
10	5.62	33.13	26.14	.657
20	5.58	33.13	26.15	.657
29	4.92	33.14	26.23	.667
49	4.53	33.15	26.28	.653
74	2.96	33.21	26.48	.648
98	2.76	33.26	26.54	.634
123	2.70	33.27	26.55	.615
148	2.35	33.26	26.57	.629
197	3.58	33.63	26.76	.308
246	3.83	33.78	26.86	.177
321	3.81	33.96	27.00	.092

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.7	33.15	26.15	187.2	.000	
10	5.62	33.13	26.14	187.9	.019	.657
20	5.58	33.13	26.15	187.6	.038	.657
30	4.92	33.14	26.23	179.7	.056	.666
50	4.44	33.15	26.29	174.1	.091	.653
75	2.95	33.21	26.48	155.9	.132	.647
100	2.77	33.26	26.54	150.8	.170	.631
150	2.42	33.28	26.59	146.6	.244	.612
200	3.60	33.64	26.77	130.2	.313	.298
250	3.84	33.79	26.86	121.7	.376	.169
300	3.86	33.92	26.96	112.5	.435	.102

MV PIONEER
STATION 41

57-00 N 180-00 27 JUN 1959 0706-0754 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 300 18 KTS SEA 3
SWELL 300 AMT 1 BAR 1015 MBS DRY 5.8 WET 5.3 BT 71

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.4	33.15	26.19	
10	5.32	33.15	26.20	.673
20	5.31	33.15	26.20	.672
30	4.70	33.18	26.29	.661
50	4.61	33.19	26.31	.659
75	2.86	33.23	26.51	.653
100	2.62	33.24	26.54	.633
125	2.34	33.25	26.57	.633
150	2.27	33.25	26.57	.634
200	3.20	33.49	26.69	.418
250	3.93	33.77	26.84	.190
*300	3.84	33.89	26.94	.129
*394	3.70	34.04	27.08	.068
494	3.56	34.13	27.16	.053
692	3.22	34.24	27.28	.045
1038	2.75	34.40	27.45	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.4	33.15	26.19	183.9	.000	
10	5.32	33.15	26.20	183.1	.018	.673
20	5.31	33.15	26.20	183.1	.036	.672
30	4.70	33.18	26.29	174.4	.054	.661
50	4.61	33.19	26.31	172.9	.089	.659
75	2.86	33.23	26.51	153.7	.130	.653
100	2.62	33.24	26.54	151.0	.168	.633
150	2.27	33.25	26.57	147.7	.243	.634
200	3.20	33.49	26.69	137.7	.314	.418
250	3.93	33.77	26.84	124.1	.379	.190
300	3.84	33.89	26.94	114.6	.439	.129
400	3.69	34.05	27.08	101.8	.547	.067
500	3.55	34.13	27.16	095.2	.646	.053
600	3.37	34.19	27.23	089.5	.738	.048
700	3.21	34.24	27.28	084.8	.825	.045
800	3.06	34.29	27.34	080.2	.908	.043
1000	2.79	34.38	27.43	071.9	1.060	.044

MV PIONEER
STATION 42

57-28 N 179-57 W 28 JUN 1959 0125 GCT
WEATHER 50 CLOUDS 6 AMT 8 WIND 300 02 KTS SEA 1
SWELL 300 AMT 1 BAR 1017 MBS DRY 7.2 WET 6.7 BT 72

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.8	32.91	25.95	
10	5.50	32.91	25.99	.732
20	4.88	32.96	26.10	.694
29	4.18	33.04	26.23	.647
49	3.06	33.17	26.44	.645
74	2.74	33.19	26.49	.642
98	2.66	33.23	26.53	.607
123	2.30	33.23	26.55	.617
148	2.08	33.22	26.56	.634
197	3.57	33.49	26.65	.370
246	3.84	33.69	26.78	.238
321	3.76	33.86	26.93	.162

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.8	32.91	25.95	206.4	.000	
10	5.50	32.91	25.99	203.1	.020	.732
20	4.88	32.96	26.10	192.7	.040	.694
30	4.11	33.05	26.25	178.2	.059	.647
50	3.04	33.17	26.45	159.6	.093	.646
75	2.74	33.19	26.49	155.7	.132	.640
100	2.63	33.23	26.53	151.9	.170	.608
150	2.16	33.23	26.57	148.4	.245	.621
200	3.59	33.50	26.66	140.6	.317	.360
250	3.85	33.70	26.79	128.5	.384	.230
300	3.84	33.83	26.89	119.0	.446	.168

MV PIONEER
STATION 43

58-00 N 180-00 28 JUN 1959 0621-0711 GCT
WEATHER 03 CLOUDS 6 AMT 7 WIND 300 06 KTS SEA 1
SWELL 300 AMT 1 BAR 1017 MBS DRY 6.1 WET 5.6 BT 73

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	32.87	25.94	
10	5.42	32.87	25.96	.736
20	4.72	32.94	26.10	.701
30	4.61	33.00	26.16	.676
50	3.22	33.06	26.34	.649
75	2.86	33.15	26.44	.628
100	2.72	33.21	26.50	.604
125	2.40	33.21	26.53	.623
150	2.30	33.23	26.55	.607
200	1.94	33.24	26.59	.615
250	3.74	33.62	26.74	.290
300	3.78	33.77	26.85	.201
*396	3.62	33.93	27.00	.127
494	3.52	34.06	27.11	.082
691	3.22	34.22	27.26	.054
1038	2.74	34.38	27.44	.049

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.6	32.87	25.94	207.1	.000	
10	5.42	32.87	25.96	205.2	.021	.736
20	4.72	32.94	26.10	192.5	.041	.701
30	4.61	33.00	26.16	187.0	.060	.676
50	3.22	33.06	26.34	169.4	.096	.649
75	2.86	33.15	26.44	159.7	.137	.628
100	2.72	33.21	26.50	154.1	.176	.604
150	2.30	33.23	26.55	149.4	.252	.607
200	1.94	33.24	26.59	146.1	.326	.615
250	3.74	33.62	26.74	133.4	.396	.290
300	3.78	33.77	26.85	122.9	.460	.201
400	3.62	33.94	27.00	109.3	.576	.125
500	3.51	34.07	27.12	099.2	.680	.081
600	3.36	34.15	27.20	092.4	.776	.065
700	3.21	34.23	27.27	085.6	.865	.053
800	3.06	34.29	27.34	080.2	.948	.046
1000	2.79	34.37	27.42	072.6	1.101	.047

MV PIONEER
STATION 44

58-31 N 180-00 29 JUN 1959 1220 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 285 08 KTS SEA 1
SWELL 285 AMT 1 BAR 1017 MBS DRY 4.7 WET 4.4 BT 75

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.0	32.88	25.90	
10	5.96	32.88	25.91	.706
20	5.38	32.89	25.98	.728
30	4.48	32.94	26.12	.680
50	3.28	33.04	26.32	.628
74	2.94	33.18	26.46	.609
99	2.69	33.21	26.51	.598
124	2.31	33.23	26.55	.620
149	2.13	33.23	26.57	.620
199	3.22	33.42	26.63	.428
248	3.84	33.65	26.75	.271
323	3.77	33.82	26.89	.171

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.0	32.88	25.90	210.9	.000	
10	5.96	32.88	25.91	210.6	.021	.706
20	5.38	32.89	25.98	203.3	.042	.728
30	4.48	32.94	26.12	190.2	.062	.680
50	3.28	33.04	26.32	171.5	.098	.628
75	2.93	33.18	26.46	158.0	.139	.608
100	2.67	33.21	26.51	153.7	.178	.599
150	2.16	33.23	26.57	148.4	.254	.616
200	3.24	33.43	26.63	142.6	.327	.424
250	3.85	33.66	26.76	131.5	.396	.266
300	3.92	33.79	26.85	122.9	.460	.184

MV PIONEER
STATION 45

59-00 N 180-00 29 JUN 1959 1653-1742 GCT
WEATHER 50 CLOUDS 6 AMT 8 WIND 285 10 KTS SEA 1
SWELL 285 AMT 1 BAR 1017 MBS DRY 5.0 WET 4.7 BT 77

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.3	32.87	25.98	
10	5.09	32.96	26.07	.708
20	5.08	33.02	26.12	.693
29	5.04	33.03	26.13	.683
49	3.49	33.03	26.29	.628
74	3.10	33.13	26.41	.623
99	2.80	33.19	26.48	.635
124	2.71	33.24	26.53	.598
149	2.36	33.23	26.55	.611
198	3.06	33.35	26.59	.486
248	3.70	33.60	26.73	.289
298	3.80	33.74	26.83	.205
*386	3.62	33.92	26.99	.122
482	3.53	34.04	27.09	.081
675	3.24	34.20	27.25	.055
1017	2.76	34.35	27.41	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.3	32.87	25.98	203.8	.000	
10	5.09	32.96	26.07	194.8	.020	.708
20	5.08	33.02	26.12	190.3	.039	.693
30	4.94	33.03	26.14	188.2	.058	.679
50	3.47	33.03	26.29	173.9	.094	.627
75	3.08	33.13	26.41	163.1	.136	.624
100	2.80	33.19	26.48	156.3	.176	.633
150	2.38	33.23	26.55	150.1	.253	.609
200	3.10	33.36	26.59	146.6	.327	.476
250	3.71	33.61	26.73	133.9	.397	.285
300	3.79	33.74	26.83	125.3	.462	.203
400	3.61	33.94	27.00	109.2	.579	.115
500	3.50	34.06	27.11	099.9	.684	.078
600	3.35	34.14	27.19	093.1	.780	.063
700	3.20	34.22	27.27	086.2	.870	.053
800	3.06	34.27	27.32	081.7	.954	.047
1000	2.78	34.35	27.41	074.0	1.110	.049

MV PIONEER
STATION 46

59-31 N 180-00 29 JUN 1959 2214 GCT
WEATHER 50 CLOUDS 6 AMT 8 WIND 280 06 KTS SEA 1
SWELL 285 AMT 1 BAR 1017 MBS DRY 6.7 WET 5.8 BT 79

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.0	32.86	25.89	
10	5.90	32.86	25.90	.700
20	5.10	32.88	26.01	.700
30	4.24	32.90	26.12	.642
50	2.90	33.04	26.35	.638
75	3.00	33.15	26.43	.595
100	2.54	33.17	26.49	.609
125	2.45	33.22	26.53	.599
150	2.33	33.22	26.54	.597
200	3.57	33.51	26.67	.354
250	3.84	33.69	26.78	.239
325	3.74	33.84	26.91	.162

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.0	32.86	25.89	212.4	.000	
10	5.90	32.86	25.90	211.4	.021	.700
20	5.10	32.88	26.01	201.0	.042	.700
30	4.24	32.90	26.12	190.8	.062	.642
50	2.90	33.04	26.35	168.2	.098	.638
75	3.00	33.15	26.43	160.9	.139	.595
100	2.54	33.17	26.49	155.7	.179	.609
150	2.33	33.22	26.54	150.4	.256	.597
200	3.57	33.51	26.67	139.7	.329	.354
250	3.84	33.69	26.78	129.2	.396	.239
300	3.84	33.81	26.88	120.6	.458	.175

MV PIONEER
STATION 47

60-00 N 180-00 30 JUN 1959 0250-0437 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 270 08 KTS SEA 1
SWELL 270 AMT 1 BAR 1017 MBS DRY 6.9 WET 6.1 BT 81

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.5	32.86	25.82	
10	6.10	32.86	25.87	.699
20	5.30	32.92	26.02	.697
30	4.59	32.95	26.12	.647
49	3.12	33.13	26.41	.604
74	3.00	33.21	26.48	.609
99	2.78	33.22	26.51	.608
123	2.68	33.26	26.55	.597
148	2.24	33.22	26.55	.628
198	3.41	33.46	26.64	.407
247	3.83	33.69	26.78	.245
296	3.81	33.78	26.86	.188
*396	3.62	33.95	27.01	.120
494	3.46	34.07	27.12	.081
691	3.18	34.23	27.28	.053
1037	2.72	34.38	27.44	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.5	32.86	25.82	218.4	.000	
10	6.10	32.86	25.87	213.7	.022	.699
20	5.30	32.92	26.02	200.2	.043	.697
30	4.59	32.95	26.12	190.5	.063	.647
50	3.12	33.13	26.41	163.3	.098	.604
75	2.99	33.21	26.48	156.3	.138	.609
100	2.78	33.22	26.51	153.9	.177	.607
150	2.30	33.23	26.55	149.4	.253	.618
200	3.44	33.47	26.65	141.4	.326	.398
250	3.83	33.70	26.79	128.3	.393	.241
300	3.80	33.79	26.87	121.6	.455	.185
400	3.61	33.96	27.02	107.7	.570	.118
500	3.45	34.08	27.13	097.9	.673	.080
600	3.31	34.16	27.21	091.2	.768	.064
700	3.17	34.24	27.29	084.4	.856	.052
800	3.03	34.30	27.35	079.1	.938	.045
1000	2.77	34.37	27.43	072.4	1.090	.044

MV PIONEER
STATION 48

60-30 N 180-00 01 JUL 1959 0225-0247 GCT
WEATHER 41 CLOUDS 8 AMT 5 WIND 245 08 KTS SEA 1
SWELL 245 AMT 1 BAR 1015 MBS DRY 8.6 WET 7.2 BT 83

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.5	32.81	25.78	
10	6.40	32.79	25.78	.684
20	4.94	32.94	26.07	.678
30	4.66	32.95	26.11	.661
50	3.93	33.08	26.29	.624
75	3.15	33.15	26.42	.597
100	3.06	33.21	26.48	.585
124	2.98	33.22	26.49	.577
149	2.89	33.26	26.53	.578
198	2.38	33.24	26.56	.608
248	3.54	33.50	26.66	.389
323	3.82	33.75	26.83	.215

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.5	32.81	25.78	222.2	.000	
10	6.40	32.79	25.78	222.6	.022	.684
20	4.94	32.94	26.07	194.8	.043	.678
30	4.66	32.95	26.11	191.2	.062	.661
50	3.93	33.08	26.29	174.4	.099	.624
75	3.15	33.15	26.42	162.2	.141	.597
100	3.06	33.21	26.48	157.0	.181	.585
150	2.86	33.26	26.53	151.8	.258	.581
200	2.44	33.25	26.56	149.2	.333	.598
250	3.57	33.51	26.67	140.0	.405	.382
300	3.92	33.69	26.78	130.4	.473	.249

MV PIONEER
STATION 49

59-44 N 177-30 E 01 JUL 1959 1540-1602 GCT
WEATHER 44 CLOUDS 6 AMT 8 WIND 245 18 KTS SEA 4
SWELL 245 AMT 2 BAR 1012 MBS DRY 5.6 WET 5.6 BT 86

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	33.06	26.08	
10	5.63	33.06	26.09	.692
20	5.60	33.06	26.09	.699
30	4.08	33.08	26.28	.631
50	2.76	33.19	26.49	.649
75	2.13	33.19	26.54	.647
100	1.99	33.19	26.55	.642
124	1.80	33.21	26.58	.637
149	1.83	33.24	26.60	.619
198	3.54	33.57	26.72	.320
248	3.80	33.73	26.82	.218
323	3.68	33.87	26.94	.145

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.7	33.06	26.08	194.0	.000	
10	5.63	33.06	26.09	193.3	.019	.692
20	5.60	33.06	26.09	193.1	.038	.699
30	4.08	33.08	26.28	175.7	.056	.631
50	2.76	33.19	26.49	155.8	.089	.649
75	2.13	33.19	26.54	150.9	.127	.647
100	1.99	33.19	26.55	150.0	.165	.642
150	1.88	33.25	26.60	144.7	.239	.611
200	3.56	33.58	26.72	134.3	.309	.315
250	3.80	33.74	26.83	125.0	.374	.215
300	3.78	33.84	26.91	117.7	.435	.157

MV PIONEER
STATION 50

59-00 N 175-00 E 02 JUL 1959 0607 GCT
WEATHER 41 CLOUDS 6 AMT 8 WIND 270 24 KTS SEA 4
SWELL 270 AMT 4 BAR 1011 MBS DRY 6.1 WET 6.1 BT 88

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.15	26.16	
10	5.51	33.14	26.17	.679
20	5.47	33.13	26.16	.672
28	5.44	33.13	26.17	.665
47	2.74	33.21	26.50	.665
71	2.08	33.21	26.56	.658
95	1.74	33.22	26.59	.659
118	1.66	33.22	26.59	.649
142	1.50	33.22	26.61	.646
188	2.60	33.40	26.67	.457
236	3.76	33.75	26.84	.205
308	3.71	33.91	26.97	.120

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.6	33.15	26.16	186.1	.000	
10	5.51	33.14	26.17	185.9	.019	.679
20	5.47	33.13	26.16	186.3	.038	.672
30	5.07	33.14	26.22	181.3	.056	.665
50	2.64	33.21	26.51	153.3	.089	.664
75	2.01	33.21	26.56	148.5	.127	.659
100	1.73	33.22	26.59	145.8	.164	.656
150	1.69	33.24	26.61	144.1	.236	.617
200	2.98	33.51	26.72	134.2	.306	.379
250	3.92	33.82	26.88	120.2	.370	.161
300	3.82	33.91	26.96	112.9	.428	.112

MV PIONEER
STATION 51

58-00 N 175-00 E 04 JUL 1959 0505-0607 GCT
WEATHER 44 CLOUDS 6 AMT 8 WIND 245 15 KTS SEA 3
SWELL 245 AMT 2 BAR 1015 MBS DRY 6.9 WET 6.7 BT 91

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.8	33.12	26.12	
10	5.74	33.12	26.12	.667
20	5.66	33.13	26.14	.668
30	5.54	33.12	26.15	.667
50	2.90	33.19	26.47	.672
75	2.30	33.21	26.54	.662
99	1.82	33.22	26.58	.641
124	1.74	33.22	26.59	.640
149	1.52	33.22	26.60	.641
198	3.41	33.62	26.77	.280
248	3.74	33.84	26.91	.152
298	3.68	33.91	26.97	.106
*392	3.60	34.04	27.09	.070
492	3.44	34.13	27.17	.056
691	3.18	34.25	27.29	.044
1040	2.71	34.38	27.44	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.8	33.12	26.12	190.6	.000	
10	5.74	33.12	26.12	190.1	.019	.667
20	5.66	33.13	26.14	188.5	.038	.668
30	5.54	33.12	26.15	188.0	.057	.667
50	2.90	33.19	26.47	156.9	.091	.672
75	2.30	33.21	26.54	150.7	.129	.662
100	1.82	33.22	26.58	146.5	.166	.641
150	1.57	33.23	26.61	144.0	.239	.631
200	3.43	33.63	26.78	129.3	.307	.273
250	3.74	33.84	26.91	116.9	.369	.150
300	3.68	33.91	26.97	111.4	.426	.105
400	3.59	34.05	27.09	100.8	.532	.069
500	3.43	34.14	27.18	093.2	.629	.055
600	3.30	34.20	27.24	088.1	.720	.048
700	3.17	34.25	27.29	083.7	.806	.044
800	3.04	34.30	27.35	079.3	.887	.041
1000	2.76	34.37	27.43	072.3	1.039	.044

MV PIONEER
STATION 52

57-26 N 174-59 E 05 JUL 1959 0722-0741 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 255 20 KTS SEA 4
SWELL 255 AMT 4 BAR 1012 MBS DRY 6.7 WET 6.4 BT 92

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.9	33.13	26.11	
8	5.89	33.13	26.11	.672
17	5.86	33.13	26.12	.672
26	5.87	33.12	26.11	.672
44	3.92	33.15	26.35	.662
66	2.42	33.22	26.54	.662
88	2.26	33.22	26.55	.644
111	1.90	33.22	26.58	.641
134	1.92	33.24	26.59	.642
180	2.53	33.37	26.65	.513
226	3.76	33.71	26.81	.227
297	3.73	33.86	26.93	.139

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.9	33.13	26.11	191.0	.000	
10	5.88	33.13	26.11	190.9	.019	.672
20	5.94	33.12	26.10	192.5	.038	.672
30	5.38	33.12	26.17	186.2	.057	.669
50	3.38	33.18	26.42	161.8	.092	.664
75	2.38	33.22	26.54	150.6	.131	.653
100	2.02	33.22	26.57	147.9	.168	.642
150	2.06	33.26	26.60	145.3	.241	.615
200	3.19	33.54	26.73	133.9	.311	.367
250	3.79	33.79	26.87	121.2	.375	.189
*300	3.72	33.86	26.93	115.6	.434	.137

MV PIONEER
STATION 53

56-00 N 175-00 E 05 JUL 1959 1942 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 265 20 KTS SEA 3
SWELL 265 AMT 3 BAR 1011 MBS DRY 6.7 WET 6.4 BT 96

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.7	33.13	26.01	
10	6.69	33.13	26.01	.643
19	6.64	33.13	26.02	.642
29	5.04	33.15	26.23	.662
48	4.04	33.17	26.35	.611
72	2.59	33.24	26.54	.655
97	2.04	33.23	26.57	.636
121	1.82	33.24	26.60	.611
144	1.96	33.32	26.65	.543
192	3.80	33.80	26.87	.182
240	3.74	33.88	26.94	.120
313	3.72	34.00	27.04	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.7	33.13	26.01	200.7	.000	
10	6.69	33.13	26.01	200.7	.020	.643
20	6.45	33.13	26.04	197.9	.040	.645
30	4.99	33.15	26.23	179.7	.059	.657
50	3.88	33.18	26.37	166.4	.094	.617
75	2.51	33.24	26.55	150.1	.134	.653
100	1.99	33.23	26.58	146.9	.171	.635
150	2.29	33.40	26.69	136.5	.242	.482
200	3.79	33.81	26.88	119.3	.306	.170
250	3.73	33.90	26.96	112.3	.364	.110
300	3.72	33.98	27.03	106.6	.419	.071

MV PIONEER
STATION 54

52-18 N 177-21 W 12 JUL 1959 0737 GCT
WEATHER 45 CLOUDS X AMT 9 WIND 240 10 KTS SEA 3
SWELL 240 AMT 1 BAR 1021 MBS DRY 7.2 WET 6.7 BT 97

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.9	33.07	25.94	
10	6.40	33.06	25.99	
20	5.49	33.08	26.12	
30	5.03	33.13	26.21	
50	4.28	33.15	26.31	
75	4.50	33.27	26.38	
100	4.38	33.31	26.43	
125	4.36	33.34	26.45	
150	4.34	33.38	26.49	
200	4.18	33.45	26.56	
250	3.66	33.47	26.63	
325	3.81	33.71	26.80	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.9	33.07	25.94	207.7	.000	
10	6.40	33.06	25.99	202.4	.021	
20	5.49	33.08	26.12	190.3	.041	
30	5.03	33.13	26.21	181.6	.060	
50	4.28	33.15	26.31	172.5	.095	
75	4.50	33.27	26.38	166.0	.137	
100	4.38	33.31	26.43	161.9	.178	
150	4.34	33.38	26.49	156.7	.258	
200	4.18	33.45	26.56	150.2	.335	
250	3.66	33.47	26.63	143.9	.409	
300	3.64	33.60	26.73	134.3	.479	

MV PIONEER
STATION 55

53-11 N 179-51 W 12 JUL 1959 2207 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 255 22 KTS SEA 5
SWELL 255 AMT 3 BAR 1017 MBS DRY 7.8 WET 7.2 BT 98

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.3	33.10	25.90	
10	7.10	33.09	25.92	.630
20	6.52	33.10	26.01	.639
30	6.24	33.10	26.05	.642
50	4.68	33.13	26.25	.600
75	3.96	33.24	26.41	.348
99	3.28	33.24	26.48	.580
123	2.87	33.24	26.52	.604
148	2.74	33.24	26.53	.605
248	3.82	33.73	26.82	.234

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.3	33.10	25.90	210.7	.000	
10	7.10	33.09	25.92	208.9	.021	.630
20	6.52	33.10	26.01	201.0	.041	.639
30	6.24	33.10	26.05	197.7	.061	.642
50	4.68	33.13	26.25	178.1	.099	.600
75	3.96	33.24	26.41	162.8	.142	.348
100	3.26	33.24	26.48	156.5	.182	.581
150	2.74	33.24	26.53	152.3	.259	.603
200	2.98	33.40	26.63	142.5	.333	.487

MV PIONEER
STATION 56

53-59 N 178-00 E 14 JUL 1959 0030 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 290 20 KTS SEA 5
SWELL 290 AMT 3 BAR 1004 MBS DRY 8.9 WET 8.3 BT 99

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.4	33.01	25.82	
10	7.20	32.99	25.83	.627
19	7.11	33.00	25.85	.631
28	5.42	33.08	26.13	.656
48	4.78	33.19	26.29	.610
73	4.00	33.19	26.37	.561
97	3.54	33.24	26.46	.561
121	3.53	33.30	26.50	.494
145	3.53	33.35	26.54	.466
194	3.44	33.48	26.66	.393
243	4.02	33.79	26.84	.186
317	3.80	33.94	26.99	.116

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.4	33.01	25.82	218.7	.000	
10	7.20	32.99	25.83	217.7	.022	.627
20	6.88	33.01	25.89	212.2	.043	.635
30	5.36	33.10	26.15	187.5	.063	.651
50	4.71	33.19	26.30	173.9	.099	.604
75	3.94	33.19	26.38	166.4	.142	.564
100	3.54	33.25	26.46	158.3	.183	.550
150	3.49	33.35	26.55	150.6	.260	.465
200	3.54	33.53	26.69	137.9	.332	.361
250	4.06	33.82	26.86	121.7	.397	.167
300	3.97	33.94	26.97	112.1	.455	.106

MV PIONEER
STATION 57

55-00 N 175-00 E 14 JUL 1959 2230-2351 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 120 02 KTS SEA 2
SWELL 090 AMT 1 BAR 1008 MBS DRY 9.4 WET 8.9 BT 100

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.8	33.10	25.83	
10	7.40	33.08	25.87	.631
20	7.12	33.08	25.91	.639
30	6.89	33.09	25.95	.647
50	4.62	33.17	26.29	.670
75	3.80	33.19	26.39	.656
99	2.60	33.23	26.53	.640
123	2.52	33.24	26.54	.516
147	2.10	33.24	26.58	.632
196	3.38	33.57	26.73	.343
246	3.81	33.86	26.92	.148
296	3.76	33.95	27.00	.090
*392	3.60	34.08	27.12	.057
488	3.48	34.17	27.20	.049
686	3.22	34.26	27.30	.044
1034	2.76	34.39	27.44	.042

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.8	33.10	25.83	217.4	.000	
10	7.40	33.08	25.87	213.6	.022	.631
20	7.12	33.08	25.91	210.1	.043	.639
30	6.89	33.09	25.95	206.5	.064	.647
50	4.62	33.17	26.29	174.5	.102	.670
75	3.80	33.19	26.39	165.0	.144	.656
100	2.60	33.23	26.53	151.6	.184	.630
150	2.20	33.26	26.59	146.4	.259	.612
200	3.43	33.60	26.75	131.6	.328	.322
250	3.81	33.87	26.93	115.4	.390	.142
300	3.75	33.96	27.01	108.4	.446	.088
400	3.59	34.09	27.13	097.8	.549	.056
500	3.46	34.18	27.21	090.5	.643	.049
600	3.33	34.22	27.25	086.9	.732	.046
700	3.20	34.27	27.31	082.5	.817	.044
800	3.07	34.31	27.35	078.8	.898	.042
1000	2.81	34.38	27.43	072.1	1.049	.042

MV PIONEER
STATION 58

54-28 N 175-00 E 16 JUL 1959 0159 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 135 02 KTS SEA 1
SWELL 145 AMT 1 BAR 1009 MBS DRY 9.4 WET 8.9 BT 102

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.4	32.94	25.62	
10	7.64	32.92	25.72	.630
20	7.22	32.92	25.77	.636
30	5.35	33.03	26.10	.673
49	4.14	33.06	26.25	.626
74	3.38	33.20	26.44	.592
98	3.03	33.23	26.49	.592
123	2.87	33.30	26.56	.542
147	2.97	33.41	26.64	.460
196	3.96	33.78	26.84	.189
246	3.94	33.91	26.95	.120
319	3.78	34.01	27.04	.075

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	8.4	32.94	25.62	237.7	.000	
10	7.64	32.92	25.72	228.8	.023	.630
20	7.22	32.92	25.77	223.3	.046	.636
30	5.35	33.03	26.10	192.6	.067	.673
50	4.10	33.07	26.27	176.8	.104	.624
75	3.36	33.20	26.44	160.3	.146	.593
100	3.01	33.23	26.50	155.1	.185	.589
150	3.06	33.44	26.66	139.9	.259	.438
200	3.96	33.79	26.85	122.5	.325	.182
250	3.94	33.92	26.96	112.9	.384	.116
300	3.84	33.99	27.02	107.1	.439	.080

MV PIONEER
STATION 59

54-00 N 175-00 E 16 JUL 1959 0637-0741 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 150 05 KTS SEA 2
SWELL 150 AMT 2 BAR 1009 MBS DRY 7.8 WET 7.2 BT 104

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.2	32.94	25.65	
10	7.88	32.92	25.68	.618
20	7.41	32.92	25.75	.618
30	5.50	32.99	26.05	.594
50	4.32	33.09	26.26	.640
75	3.40	33.22	26.45	.563
99	2.69	33.22	26.51	.608
124	2.40	33.28	26.59	.596
149	2.88	33.43	26.67	.462
198	4.00	33.78	26.84	.185
248	3.92	33.92	26.96	.108
298	3.86	33.99	27.02	.084
*392	3.67	34.10	27.13	.057
491	3.54	34.15	27.18	.044
690	3.30	34.25	27.28	.059
1038	2.78	34.39	27.44	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	8.2	32.94	25.65	234.8	.000	
10	7.88	32.92	25.68	232.0	.023	.618
20	7.41	32.92	25.75	225.8	.046	.618
30	5.50	32.99	26.05	197.3	.067	.594
50	4.32	33.09	26.26	177.4	.104	.640
75	3.40	33.22	26.45	159.1	.146	.563
100	2.66	33.22	26.52	152.9	.185	.610
150	2.91	33.44	26.67	138.6	.258	.454
200	4.00	33.79	26.85	122.9	.323	.181
250	3.92	33.92	26.96	112.7	.382	.107
300	3.86	33.99	27.02	107.3	.437	.083
400	3.66	34.10	27.13	097.8	.540	.055
500	3.53	34.15	27.18	093.5	.636	.045
600	3.41	34.21	27.24	088.5	.727	.054
700	3.29	34.25	27.28	084.9	.814	.059
800	3.15	34.30	27.33	080.4	.897	.061
1000	2.84	34.38	27.43	072.4	1.050	.053

MV PIONEER
STATION 60

53-31 N 175-00 E 17 JUL 1959 0130 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 230 20 KTS SEA 3
SWELL 230 AMT 3 BAR 1006 MBS DRY 8.3 WET 7.8 BT 106

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.8	32.98	25.74	
9	7.72	32.98	25.75	.619
18	7.37	33.00	25.82	.627
28	7.14	32.99	25.84	.631
47	5.23	33.08	26.15	.670
70	3.94	33.10	26.31	.636
94	3.19	33.18	26.44	.609
117	2.91	33.23	26.50	.596
141	2.68	33.27	26.56	.553
189	2.88	33.43	26.67	.466
237	3.78	33.76	26.85	.211
310	3.84	33.94	26.98	.113

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.8	32.98	25.74	226.3	.000	
10	7.67	32.98	25.76	224.7	.023	.620
20	7.37	32.99	25.81	220.1	.045	.627
30	6.90	33.00	25.88	213.4	.067	.638
50	5.03	33.08	26.17	185.6	.107	.665
75	3.75	33.12	26.34	169.9	.151	.629
100	3.11	33.19	26.45	158.9	.192	.608
150	2.66	33.29	26.57	147.8	.269	.549
200	3.15	33.52	26.71	135.0	.340	.394
250	3.91	33.82	26.88	120.1	.404	.168
300	3.93	33.94	26.97	111.7	.462	.106

MV PIONEER
STATION 61

51-54 N 174-06 E 19 JUL 1959 0555-0659 GCT
WEATHER 01 CLOUDS 6 AMT 6 WIND 240 10 KTS SEA 2
SWELL 050 AMT 5 BAR 1008 MBS DRY 8.9 WET 7.2 BT 109

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.5	32.87	25.55	
10	8.02	32.84	25.60	.630
20	7.94	32.84	25.61	.628
30	6.53	32.89	25.84	.661
50	4.76	32.96	26.11	.604
74	4.00	33.10	26.30	.571
99	3.98	33.20	26.38	.524
123	4.02	33.26	26.42	.504
148	3.94	33.30	26.46	.473
198	3.98	33.46	26.59	.391
247	3.96	33.62	26.72	.306
296	4.00	33.79	26.85	.206
*398	3.86	34.00	27.03	.081
486	3.68	34.09	27.12	.054
682	3.45	34.22	27.24	.049
1030	2.98	34.38	27.41	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	8.5	32.87	25.55	244.3	.000	
10	8.02	32.84	25.60	239.9	.024	.630
20	7.94	32.84	25.61	239.0	.048	.628
30	6.53	32.89	25.84	216.9	.071	.661
50	4.76	32.96	26.11	191.7	.112	.604
75	4.00	33.10	26.30	173.7	.158	.569
100	3.98	33.20	26.38	166.2	.200	.523
150	3.94	33.31	26.47	157.9	.281	.470
200	3.98	33.47	26.59	146.7	.357	.388
250	3.96	33.63	26.72	134.9	.427	.299
300	4.00	33.80	26.85	122.9	.491	.199
400	3.86	34.00	27.03	107.3	.606	.080
500	3.66	34.10	27.13	098.6	.709	.054
600	3.55	34.17	27.19	092.9	.805	.051
700	3.43	34.23	27.25	087.9	.895	.049
800	3.30	34.28	27.31	083.5	.981	.048
1000	3.02	34.37	27.40	075.1	1.140	.049

MV PIONEER
STATION 62

51-30 N 175-00 E 22 JUL 1959 0244-0441 GCT
WEATHER 45 CLOUDS X AMT 9 WIND 130 15 KTS SEA 3
SWELL 130 AMT 2 BAR 1016 MBS DRY 8.9 WET 8.3 BT 111

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.9	32.83	25.61	
10	7.44	32.81	25.66	.617
20	6.66	32.87	25.81	.622
30	5.28	33.03	26.11	.562
50	4.75	33.15	26.26	.525
75	4.41	33.24	26.37	.512
100	4.38	33.30	26.42	.464
125	4.38	33.30	26.42	.451
150	4.32	33.36	26.47	.423
200	4.22	33.42	26.53	.394
250	4.18	33.47	26.57	.373
300	4.04	33.65	26.73	.297
*400	3.86	33.91	26.96	.158
500	3.66	34.00	27.05	.126
700	3.52	34.18	27.20	.077
1050	3.06	34.34	27.38	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.9	32.83	25.61	238.9	.000	
10	7.44	32.81	25.66	234.3	.024	.617
20	6.66	32.87	25.81	219.9	.047	.622
30	5.28	33.03	26.11	191.8	.068	.562
50	4.75	33.15	26.26	177.3	.105	.525
75	4.41	33.24	26.37	167.3	.148	.512
100	4.38	33.30	26.42	162.7	.189	.464
150	4.32	33.36	26.47	158.0	.269	.423
200	4.22	33.42	26.53	152.9	.347	.394
250	4.18	33.47	26.57	149.1	.422	.373
300	4.04	33.65	26.73	134.6	.493	.297
400	3.86	33.91	26.96	114.1	.617	.158
500	3.66	34.00	27.05	106.0	.727	.126
600	3.60	34.10	27.13	098.7	.829	.098
700	3.52	34.18	27.20	092.6	.925	.077
800	3.42	34.25	27.27	087.1	1.015	.063
1000	3.14	34.33	27.36	079.4	1.181	.056

MV PIONEER
STATION 63

51-00 N 175-00 E 23 JUL 1959 0301 GCT
WEATHER 10 CLOUDS X AMT 9 WIND 200 10 KTS SEA 2
SWELL 200 AMT 2 BAR 1021 MBS DRY 11.7 WET 10.6 BT 114

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.5	32.68	25.25	
10	8.38	32.67	25.41	.624
20	8.02	32.68	25.47	.626
30	6.24	32.81	25.82	.643
50	4.58	32.89	26.07	.600
75	3.97	33.02	26.24	.572
100	4.16	33.21	26.37	.498
125	4.00	33.50	26.62	
150	3.98	33.68	26.76	.258
200	3.94	33.90	26.94	.139
250	3.88	33.97	27.00	.093
325	3.78	34.04	27.07	.057

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.5	32.68	25.25	273.3	.000	
10	8.38	32.67	25.41	257.6	.027	.624
20	8.02	32.68	25.47	252.0	.052	.626
30	6.24	32.81	25.82	219.4	.076	.643
50	4.58	32.89	26.07	195.1	.117	.600
75	3.97	33.02	26.24	179.5	.164	.572
100	4.16	33.21	26.37	167.2	.207	.498
150	3.98	33.68	26.76	130.5	.281	.258
200	3.94	33.90	26.94	114.0	.342	.139
250	3.88	33.97	27.00	108.6	.398	.093
300	3.81	34.02	27.05	104.5	.451	.065

MV PIONEER
STATION 64

50-30 N 175-00 E 23 JUL 1959 0603-0906 GCT
WEATHER 10 CLOUDS X AMT 9 WIND 199 07 KTS SEA 2
SWELL 200 AMT 2 BAR 1023 MBS DRY 9.4 WET 8.9 BT 115

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.4	32.81	25.36	
10	8.61	32.80	25.48	.626
20	8.14	32.79	25.54	.631
30	5.68	32.94	25.99	.650
50	4.39	33.09	26.25	.549
75	4.28	33.28	26.41	.484
100	4.22	33.37	26.49	.326
125	4.10	33.48	26.59	.426
150	3.94	33.59	26.69	.376
200	3.94	33.79	26.85	.201
250	3.79	33.90	26.96	.115
300	3.82	34.01	27.04	.083
* 391	3.59	34.13	27.16	.060
488	3.42	34.18	27.21	.066
685	3.17	34.33	27.36	.043
1033	2.62	34.44	27.49	.054

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.4	32.81	25.36	262.1	.000	
10	8.61	32.80	25.48	251.3	.026	.626
20	8.14	32.79	25.54	245.5	.051	.631
30	5.68	32.94	25.99	203.1	.073	.650
50	4.39	33.09	26.25	178.1	.111	.549
75	4.28	33.28	26.41	163.0	.154	.484
100	4.22	33.37	26.49	155.8	.194	.326
150	3.94	33.59	26.69	136.9	.267	.376
200	3.94	33.79	26.85	122.3	.332	.201
250	3.79	33.90	26.96	112.9	.391	.115
300	3.82	34.01	27.04	105.4	.446	.083
400	3.57	34.13	27.16	094.6	.546	.061
500	3.41	34.19	27.22	089.2	.638	.064
600	3.28	34.27	27.30	082.6	.724	.050
700	3.15	34.34	27.37	076.8	.804	.042
800	3.00	34.39	27.42	072.1	.878	.039
1000	2.68	34.44	27.49	066.2	1.016	.050

MV PIONEER
STATION 65

50-38 N 177-10 E 24 JUL 1959 0710 GCT
WEATHER 01 CLOUDS 6 AMT 5 WIND 160 07 KTS SEA 2
SWELL 160 AMT 2 BAR 1023 MBS DRY 11.1 WET 10.6 BT 116

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.7	32.84	25.34	
10	8.17	32.29	25.15	.637
20	7.52	32.79	25.63	.638
30	7.45	32.89	25.72	.655
50	4.80	32.98	26.12	.624
74	3.99	33.02	26.24	.610
98	3.54	33.15	26.38	.567
123	3.44	33.44	26.62	.404
147	3.82	33.75	26.83	.208
197	3.65	34.00	27.05	.104
321	3.60	34.10	27.13	.052

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.7	32.84	25.34	264.5	.000	
10	8.17	32.29	25.15	282.9	.027	.637
20	7.52	32.79	25.63	237.0	.053	.638
30	7.45	32.89	25.72	228.8	.076	.655
50	4.80	32.98	26.12	190.6	.118	.624
75	3.96	33.02	26.24	179.4	.164	.610
100	3.51	33.17	26.40	164.0	.207	.555
150	3.81	33.77	26.85	122.1	.279	.200
200	3.64	34.01	27.06	102.8	.335	.099
250	3.56	34.13	27.16	093.4	.384	.046
300	3.57	34.14	27.17	093.1	.431	.040

MV PIONEER
STATION 66

50-53 N 179-55 E 24 JUL 1959 2031 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 220 05 KTS SEA 1
SWELL 175 AMT 1 BAR 1023 MBS DRY 12.2 WET 11.7 BT 118

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.4	32.63	25.22	
10	8.18	32.64	25.42	.626
20	7.77	32.65	25.49	.626
30	7.29	32.68	25.58	.621
50	6.04	32.75	25.79	.620
75	4.28	32.88	26.10	.621
99	3.72	32.96	26.22	.580
123	4.00	33.30	26.46	.435
148	4.23	33.68	26.74	.246
197	3.98	33.92	26.95	.096
246	3.87	34.00	27.03	.063
321	3.72	34.09	27.11	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.4	32.63	25.22	275.5	.000	
10	8.18	32.64	25.42	257.0	.027	.626
20	7.77	32.65	25.49	250.8	.052	.626
30	7.29	32.68	25.58	242.3	.077	.621
50	6.04	32.75	25.79	221.7	.123	.620
75	4.28	32.88	26.10	193.0	.175	.621
100	3.73	32.97	26.22	181.1	.222	.575
150	4.22	33.69	26.74	132.2	.300	.238
200	3.97	33.93	26.96	112.1	.361	.093
250	3.86	34.01	27.04	105.4	.415	.061
300	3.76	34.07	27.09	100.3	.466	.050

MV PIONEER
STATION 67

51-11 N 178-12 W 25 JUL 1959 0437 GCT
WEATHER 47 CLOUDS X AMT 9 WIND 220 12 KTS SEA 2
SWELL 280 AMT 2 BAR 1021 MBS DRY 10.0 WET 9.4 BT 120

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.7	32.74	25.57	
10	6.57	32.72	25.70	.643
20	5.88	32.93	25.96	.607
29	5.82	32.98	26.00	.605
48	5.16	33.20	26.25	.553
73	4.92	33.32	26.38	.490
97	4.08	33.37	26.51	.435
121	4.52	33.55	26.60	.335
145	4.82	33.75	26.73	.241
194	4.30	33.88	26.89	.146
243	4.06	33.95	26.97	.109
317	3.90	34.03	27.05	.057

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.7	32.74	25.57	242.8	.000	
10	6.57	32.72	25.70	229.9	.024	.643
20	5.88	32.93	25.96	206.0	.046	.607
30	5.77	32.99	26.02	200.4	.066	.602
50	5.16	33.21	26.26	177.2	.104	.548
75	4.80	33.32	26.39	165.3	.147	.487
100	4.14	33.39	26.52	153.5	.187	.422
150	4.75	33.77	26.75	131.8	.258	.229
200	4.26	33.89	26.90	118.0	.320	.141
250	4.03	33.96	26.98	110.9	.377	.104
300	3.92	34.01	27.03	106.4	.431	.069

MV PIONEER
STATION 68

51-31 N 176-42 W 27 JUL 1959 0546 GCT
WEATHER 01 CLOUDS 3 AMT 3 WIND 085 10 KTS SEA 0
SWELL 085 AMT 0 BAR 1012 MBS DRY 11.1 WET 10.6 BT 121

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.9	33.07	25.80	
10	6.46	33.15	26.06	.702
20	5.80	33.21	26.19	.672
30	5.10	33.21	26.27	.552
50	4.70	33.31	26.39	.481
75	4.64	33.35	26.43	.462
100	4.52	33.40	26.48	.438
125	4.44	33.45	26.53	.415
150	4.33	33.49	26.57	.395
199	4.25	33.54	26.62	.362
248	4.23	33.58	26.66	.351
297	4.26	33.63	26.69	.319

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.9	33.07	25.80	221.0	.000	
10	6.46	33.15	26.06	196.4	.021	.702
20	5.80	33.21	26.19	184.1	.040	.672
30	5.10	33.21	26.27	176.4	.058	.552
50	4.70	33.31	26.39	164.8	.092	.481
75	4.64	33.35	26.43	161.4	.133	.462
100	4.52	33.40	26.48	156.6	.173	.438
150	4.33	33.49	26.57	148.3	.249	.395
200	4.25	33.54	26.62	144.2	.322	.362
250	4.23	33.58	26.66	141.4	.393	.351
*300	4.26	33.63	26.69	138.4	.463	.315

MV PIONEER
STATION 69

51-31 N 176-40 W 28 JUL 1959 0615 GCT
WEATHER 01 CLOUDS AMT WIND KTS SEA
SWELL AMT BAR 1012 MBS DRY 7.8 WET 7.2 BT 122

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.2	33.16	25.97	
10	5.48	33.19	26.21	.530
20	5.33	33.21	26.24	.557
30	5.24	33.22	26.26	.535
50	4.82	33.26	26.34	.457
75	4.71	33.34	26.42	.481
100	4.70	33.36	26.43	.472
124	4.56	33.39	26.47	.465
148	4.45	33.38	26.47	
198	4.38			.416
248	4.32	33.50	26.58	.395
323	4.24	33.58	26.66	.353

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.2	33.16	25.97	204.9	.000	
10	5.48	33.19	26.21	181.9	.019	.530
20	5.33	33.21	26.24	178.8	.037	.557
30	5.24	33.22	26.26	177.1	.055	.535
50	4.82	33.26	26.34	169.8	.090	.457
75	4.71	33.34	26.42	162.9	.132	.481
100	4.70	33.36	26.43	161.5	.173	.472
150	4.45	33.38	26.47	157.8	.253	.445
200	4.38	33.44	26.53	153.0	.331	.415
250	4.32	33.50	26.58	148.3	.406	.394
300	4.26	33.56	26.64	143.6	.479	.367

MV PIONEER
STATION 70

51-33 N 176-39 W 29 JUL 1959 0425 GCT
WEATHER 01 CLOUDS AMT WIND KTS SEA
SWELL AMT BAR 1016 MBS DRY 12.2 WET 11.1 BT 123

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.7	33.09	25.69	
10	6.45	33.13	26.04	.669
20	6.11	33.18	26.12	
30	5.89			.633
50	5.23	33.24	26.28	.515
75	4.91	33.26	26.33	.460
99	4.63	33.34	26.42	.448
123	4.54	33.39	26.47	.455
148	4.40	33.48	26.56	.406
172	4.26	33.56	26.64	.347
196	4.24	33.59	26.66	.334
221	4.25	33.61	26.68	.315

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	8.7	33.09	25.69	230.9	.000	
10	6.45	33.13	26.04	197.7	.021	.669
20	6.11	33.18	26.12	190.0	.040	.651
30	5.89	33.22	26.18	184.1	.059	.633
50	5.23	33.24	26.28	175.7	.095	.515
75	4.91	33.26	26.33	171.0	.138	.460
100	4.63	33.34	26.42	162.3	.180	.449
150	4.38	33.49	26.57	148.9	.258	.399
200	4.24	33.59	26.66	140.3	.330	.331

MV PIONEER
STATION 71

51-29 N 176-38 W 29 JUL 1959 0612 GCT
WEATHER 01 CLOUDS AMT WIND KTS SEA
SWELL AMT BAR 1016 MBS DRY 10.0 WET 9.4 BT 124

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	33.06	25.46	
10	6.74			.709
20	5.81			.628
30	5.54	33.26	26.26	.597
50	5.10	33.27	26.32	.537
75	4.93	33.29	26.35	.507
99	4.82	33.33	26.40	.496
124	4.72	33.38	26.45	.476
148	4.57	33.43	26.50	.453
198	4.45	33.52	26.59	.428
248	4.36	33.90	26.90	.371
323	4.06	34.17	27.14	.158

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.0	33.06	25.46	252.9	.000	
10	6.74	33.20	26.06	196.0	.022	.709
20	5.81	33.25	26.22	180.9	.041	.628
30	5.54	33.26	26.26	177.5	.059	.597
50	5.10	33.27	26.32	172.1	.094	.537
75	4.93	33.29	26.35	169.0	.137	.507
100	4.82	33.33	26.40	165.0	.179	.495
150	4.56	33.43	26.50	155.2	.259	.453
200	4.45	33.54	26.60	146.3	.334	.427
250	4.35	33.91	26.91	117.9	.400	.367
300	4.17	34.13	27.10	100.0	.454	.240

MV PIONEER
STATION 72

51-30 N 175-00 W 05 AUG 1959 0007 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 315 05 KTS SEA 1
SWELL 315 AMT 2 BAR 1023 MBS DRY 9.4 WET 8.9 BT 125

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	32.47	25.00	
10	10.04	32.45	24.98	.612
20	9.70	32.46	25.04	.636
30	8.04	32.45	25.29	.623
50	6.32	32.74	25.75	.601
75	4.08	32.94	26.16	.595
100	3.61	33.09	26.33	.536
124	3.96	33.53	26.64	.318
148	4.15	33.76	26.81	.204
197	3.92	33.92	26.96	.115
246	3.77	33.96	27.00	
320	3.67	34.06	27.09	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.0	32.47	25.00	296.6	.000	
10	10.04	32.45	24.98	298.9	.030	.612
20	9.70	32.46	25.04	293.1	.060	.636
30	8.04	32.45	25.29	269.5	.088	.623
50	6.32	32.74	25.75	225.8	.138	.601
75	4.08	32.94	26.16	186.5	.190	.595
100	3.61	33.09	26.33	171.0	.235	.536
150	4.14	33.77	26.82	125.4	.309	.200
200	3.91	33.92	26.96	112.2	.368	.111
250	3.76	33.96	27.01	108.1	.423	.061
300	3.68	34.03	27.07	102.5	.476	.051

MV PIONEER
STATION 73

51-00 N 175-00 W 05 AUG 1959 0512-0602 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 315 15 KTS SEA 3
SWELL 315 AMT 2 BAR 1022 MBS DRY 10.0 WET 9.4 BT 127

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.4	32.71	25.12	
10	10.02	32.68	25.16	.600
20	8.68	32.65	25.35	.616
30	7.32	32.71	25.60	.617
50	4.64	32.84	26.03	.612
75	3.80	32.97	26.22	.606
100	3.52	33.19	26.42	.480
125	4.04	33.58	26.68	.287
150	3.91	33.81	26.87	.148
200	3.86	33.95	26.99	.067
250	3.84	34.02	27.05	.049
300	3.79	34.06	27.08	.042
*389	3.60	34.16	27.18	.038
489	3.46	34.22	27.24	.044
688	3.14	34.33	27.36	.054
1038	2.60	34.43	27.49	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.4	32.71	25.12	285.3	.000	
10	10.02	32.68	25.16	281.6	.028	.600
20	8.68	32.65	25.35	263.6	.055	.616
30	7.32	32.71	25.60	240.4	.080	.617
50	4.64	32.84	26.03	199.5	.124	.612
75	3.80	32.97	26.22	181.6	.172	.606
100	3.52	33.19	26.42	162.6	.215	.480
150	3.91	33.81	26.87	120.1	.286	.148
200	3.86	33.95	26.99	109.5	.343	.067
250	3.84	34.02	27.05	104.4	.396	.049
300	3.79	34.06	27.08	101.3	.447	.042
400	3.59	34.17	27.19	091.8	.544	.039
500	3.44	34.23	27.25	086.6	.633	.045
600	3.28	34.29	27.31	081.1	.717	.050
700	3.12	34.34	27.37	076.5	.796	.054
800	2.96	34.37	27.41	073.2	.871	.057
1000	2.66	34.42	27.47	067.5	1.012	.058

MV PIONEER
STATION 74

50-31 N 175-00 W 06 AUG 1959 0151 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 210 04 KTS SEA 1
SWELL 210 AMT 2 BAR 1019 MBS DRY 11.7 WET 10.6 BT 129

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.7	32.70	25.06	
8	10.13	32.67	25.13	.592
16	8.03	32.68	25.47	.622
25	7.36	32.83	25.68	.628
40	5.23	32.93	26.03	.621
65	4.19	32.97	26.18	.622
88	3.50	33.07	26.32	.608
109	3.62	33.24	26.45	.423
133	4.04	33.48	26.60	.323
180	3.92	33.87	26.92	.113
226	3.86	33.98	27.01	.066
297	3.76	34.05	27.08	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.7	32.70	25.06	290.9	.000	
10	9.47	32.66	25.24	274.5	.028	.602
20	7.79	32.75	25.56	243.6	.054	.626
30	6.52	32.87	25.83	218.3	.077	.625
50	4.78	32.94	26.09	193.4	.118	.623
75	3.78	33.00	26.24	179.2	.165	.640
100	3.54	33.16	26.39	165.1	.208	.491
150	3.99	33.65	26.74	132.9	.282	.228
200	3.89	33.92	26.96	112.0	.343	.089
250	3.86	34.02	27.04	104.6	.397	.057
*300	3.75	34.05	27.08	101.7	.449	.050

MV PIONEER
STATION 75

50-00 N 175-00 W 06 AUG 1959 0652-0748 GCT
WEATHER 49 CLOUDS AMT WIND 210 04 KTS SEA 1
SWELL 210 AMT 2 BAR 1019 MBS DRY 11.1 WET 10.6 BT 131

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.4	32.78	25.17	
10	10.18	32.77	25.20	.622
20	8.30	32.83	25.55	.587
30	6.92	32.86	25.77	.626
50	4.98	32.95	26.08	.621
75	3.88	33.00	26.23	.618
100	3.54	33.08	26.33	.594
125	3.30	33.23	26.47	.516
150	3.32	33.50	26.68	.373
200	3.08	33.71	26.87	.263
250	3.35	33.85	26.96	.158
*300	3.45	33.96	27.04	.097
*394	3.62	34.12	27.15	.056
490	3.50	34.21	27.23	.038
688	3.16	34.32	27.35	.033
1035	2.58	34.42	27.48	.063

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	$\triangle D$	OXY
0	10.4	32.78	25.17	280.1	.000	
10	10.18	32.77	25.20	277.5	.028	.622
20	8.30	32.83	25.55	244.8	.054	.587
30	6.92	32.86	25.77	224.1	.077	.626
50	4.98	32.95	26.08	194.8	.119	.621
75	3.88	33.00	26.23	180.1	.166	.618
100	3.54	33.08	26.33	171.1	.210	.594
150	3.32	33.50	26.68	137.8	.287	.373
200	3.08	33.71	26.87	120.1	.351	.263
250	3.35	33.85	26.96	112.4	.409	.158
300	3.45	33.96	27.04	105.4	.463	.097
400	3.61	34.13	27.16	095.0	.563	.055
500	3.48	34.22	27.24	087.7	.654	.037
600	3.31	34.28	27.30	082.2	.739	.033
700	3.14	34.33	27.36	077.4	.819	.033
800	2.97	34.37	27.41	073.3	.894	.037
1000	2.64	34.42	27.48	067.3	1.035	.058

MV PIONEER
STATION 76

49-27 N 175-02 W 07 AUG 1959 0318 GCT
WEATHER 03 CLOUDS 6 AMT 7 WIND 170 10 KTS SEA 1
SWELL 170 AMT 2 BAR 1014 MBS DRY 12.2 WET 11.7 BT 133

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.5	32.75	25.13	
10	10.10	32.75	25.20	.621
20	9.37	32.77	25.34	.624
30	8.20	32.77	25.52	.644
50	6.16	32.81	25.83	.637
75	4.61	32.85	26.04	.639
100	3.69	32.90	26.17	.628
125	3.42	33.09	26.35	.546
150	3.48	33.49	26.66	.353
200	3.53	33.81	26.91	.176
250	3.52	33.94	27.01	.109
325	3.58	34.02	27.07	.075

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.5	32.75	25.13	284.0	.000	
10	10.10	32.75	25.20	277.7	.028	.621
20	9.37	32.77	25.34	265.0	.055	.624
30	8.20	32.77	25.52	248.0	.081	.644
50	6.16	32.81	25.83	218.7	.128	.637
75	4.61	32.85	26.04	198.6	.180	.639
100	3.69	32.90	26.17	186.0	.228	.628
150	3.48	33.49	26.66	140.0	.309	.353
200	3.53	33.81	26.91	116.7	.373	.176
250	3.52	33.94	27.01	107.3	.429	.109
300	3.55	34.01	27.07	102.7	.481	.077

MV PIONEER
STATION 77

49-00 N 175-00 W 07 AUG 1959 0840-0923 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 170 10 KTS SEA 1
SWELL 170 AMT 2 BAR 1014 MBS DRY 11.1 WET 10.6 BT 135

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.6	32.75	25.12	
10	10.34	32.73	25.15	.611
20	8.90	32.76	25.40	.628
30	7.88	32.78	25.57	.643
50	5.82	32.83	25.88	.634
75	4.44	32.87	26.07	.621
100	3.80	32.93	26.18	.616
125	3.44	33.21	26.44	.460
150	3.46	33.66	26.80	.250
200	3.58	33.88	26.96	.128
250	3.62	33.96	27.02	.077
*300	3.57	34.04	27.09	.068
*382	3.50	34.13	27.17	.071
481	3.38	34.20	27.23	.054
678	3.06	34.27	27.32	.055
1028	2.59	34.41	27.47	.061

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.6	32.75	25.12	285.6	.000	
10	10.34	32.73	25.15	283.0	.028	.611
20	8.90	32.76	25.40	258.7	.055	.628
30	7.88	32.78	25.57	242.8	.080	.643
50	5.82	32.83	25.88	213.2	.126	.634
75	4.44	32.87	26.07	195.4	.177	.621
100	3.80	32.93	26.18	184.8	.225	.616
150	3.46	33.66	26.80	127.0	.303	.250
200	3.58	33.88	26.96	112.0	.363	.128
250	3.62	33.96	27.02	106.7	.418	.077
300	3.57	34.04	27.09	100.6	.470	.068
400	3.48	34.14	27.18	093.0	.567	.067
500	3.35	34.21	27.24	087.1	.657	.054
600	3.18	34.24	27.28	083.9	.743	.054
700	3.03	34.28	27.33	080.0	.825	.055
800	2.88	34.32	27.38	076.1	.903	.056
1000	2.62	34.40	27.46	068.6	1.048	.060

MV PIONEER
STATION 78

48-28 N 174-57 W 08 AUG 1959 0156 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 135 18 KTS SEA 3
SWELL 135 AMT 4 BAR 1011 MBS DRY 12.2 WET 11.7 BT 137

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.8	32.85	25.16	
10	10.50	32.78	25.16	.601
20	9.18	32.79	25.38	.643
30	7.62	32.81	25.63	.628
50	5.36	32.84	25.95	.638
75	4.32	32.87	26.08	.642
100	3.63	32.93	26.20	.626
125	3.30	33.25	26.49	.485
150	3.40	33.54	26.71	.321
200	3.62	33.86	26.94	.137
250	3.59	33.96	27.02	.093
325	3.57	34.04	27.09	.068

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.8	32.85	25.16	281.5	.000	
10	10.50	32.78	25.16	281.9	.028	.601
20	9.18	32.79	25.38	260.6	.055	.643
30	7.62	32.81	25.63	237.0	.080	.628
50	5.36	32.84	25.95	207.2	.124	.638
75	4.32	32.87	26.08	194.2	.174	.642
100	3.63	32.93	26.20	183.2	.221	.626
150	3.40	33.54	26.71	135.5	.301	.321
200	3.62	33.86	26.94	113.9	.363	.137
250	3.59	33.96	27.02	106.4	.418	.093
300	3.57	34.02	27.07	102.1	.470	.071

MV PIONEER
STATION 79

48-00 N 175-00 W 09 AUG 1959 0402-0456 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 180 04 KTS SEA 1
SWELL 130 AMT 4 BAR 1008 MBS DRY 15.0 WET 13.9 BT 139

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	11.2	32.83	25.07	
10	10.73	32.83	25.16	.572
20	10.04	32.85	25.29	.595
30	8.53	32.91	25.58	.621
50	5.76	32.93	25.97	.631
75	4.23	32.94	26.15	.646
100	3.93	32.95	26.19	.633
125	4.20	33.05	26.24	.631
150	3.49	33.16	26.40	.578
200	3.06	33.68	26.85	.281
250	3.16	33.81	26.94	.214
300	3.31	33.91	27.01	.148
*393	3.40	34.07	27.13	.083
492	3.36	34.16	27.20	.082
692	3.08	34.27	27.32	.069
1042	2.61	34.42	27.48	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	11.2	32.83	25.07	289.7	.000	
10	10.73	32.83	25.16	282.0	.029	.572
20	10.04	32.85	25.29	269.5	.057	.595
30	8.53	32.91	25.58	242.3	.083	.621
50	5.76	32.93	25.97	205.0	.128	.631
75	4.23	32.94	26.15	188.0	.177	.646
100	3.93	32.95	26.19	184.5	.224	.633
150	3.49	33.16	26.40	164.9	.311	.578
200	3.06	33.68	26.85	122.1	.383	.281
250	3.16	33.81	26.94	113.6	.442	.214
300	3.31	33.91	27.01	107.8	.497	.148
400	3.40	34.08	27.14	096.7	.599	.083
500	3.35	34.16	27.20	090.9	.693	.081
600	3.21	34.22	27.27	085.7	.781	.074
700	3.07	34.27	27.32	081.2	.864	.069
800	2.93	34.32	27.37	076.6	.943	.065
1000	2.66	34.40	27.46	069.0	1.089	.063

MV PIONEER
STATION 80

47-45 N 173-30 W 10 AUG 1959 0432 GCT
WEATHER 49 CLOUDS AMT WIND 150 15 KTS SEA 1
SWELL 150 AMT 4 BAR 1005 MBS DRY 13.3 WET 12.8 BT 140

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	11.3	32.71	24.96	
10	11.10	32.73	25.01	.628
20	10.39	32.78	25.18	.598
29	8.70	32.80	25.47	.627
48	5.85	32.90	25.94	.613
73	4.54	32.96	26.13	.646
97	4.12	33.01	26.22	.636
121	3.74	33.03	26.27	.626
145	3.34	33.26	26.49	.550
194	3.22	33.33	26.56	.313
244	3.27	33.82	26.94	.215
318	3.34	33.95	27.04	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	11.3	32.71	24.96	300.3	.000	
10	11.10	32.73	25.01	295.6	.030	.628
20	10.39	32.78	25.18	280.3	.059	.598
30	8.51	32.81	25.50	249.4	.085	.625
50	5.71	32.91	25.96	205.9	.131	.617
75	4.50	32.97	26.14	188.5	.180	.645
100	4.07	33.00	26.21	182.1	.226	.638
150	3.32	33.25	26.48	156.6	.311	.519
200	3.23	33.41	26.62	144.0	.386	
250	3.28	33.86	26.97	111.0	.450	
300	3.32	33.98	27.06	102.7	.503	

MV PIONEER
STATION 81

49-05 N 170-10 W 12 AUG 1959 0420-0519 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 070 20 KTS SEA 5
SWELL 240 AMT 6 BAR 0993 MBS DRY 11.1 WET 10.6 BT 144

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.7	32.75	25.10	
10	10.60	32.75	25.12	.588
19	10.45	32.74	25.13	.576
29	8.06	32.80	25.56	.633
48	5.52	32.84	25.93	.642
72	4.55	32.86	26.05	.638
97	3.75	32.90	26.16	.633
121	3.46	32.98	26.26	.603
145	3.33	33.47	26.66	.368
194	3.48	33.81	26.91	.180
243	3.56	33.93	27.00	.122
292	3.54	33.99	27.05	.099
*388	3.52	34.09	27.13	.070
484	3.40	34.20	27.23	.056
678	3.12	34.32	27.35	.049
1022	2.60	34.42	27.48	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.7	32.75	25.10	287.2	.000	
10	10.60	32.75	25.12	285.8	.029	.588
20	10.18	32.75	25.19	279.2	.057	.583
30	7.89	32.80	25.59	241.4	.083	.634
50	5.43	32.84	25.94	208.0	.128	.642
75	4.43	32.86	26.06	196.0	.178	.639
100	3.70	32.89	26.16	186.9	.226	.640
150	3.35	33.51	26.69	137.3	.307	.343
200	3.50	33.83	26.93	115.0	.370	.171
250	3.56	33.94	27.01	107.6	.426	.118
300	3.54	34.00	27.06	103.3	.479	.096
400	3.51	34.11	27.15	095.5	.578	.068
500	3.38	34.21	27.24	087.4	.669	.055
600	3.23	34.28	27.31	081.4	.753	.051
700	3.09	34.33	27.36	076.9	.832	.049
800	2.94	34.37	27.41	073.0	.907	.049
1000	2.63	34.42	27.48	067.2	1.047	.057

MV PIONEER
STATION 82

49-31 N 170-06 W 13 AUG 1959 0155 GCT
WEATHER 01 CLOUDS 6 AMT 2 WIND 320 30 KTS SEA 5
SWELL 320 AMT 6 BAR 1001 MBS DRY 12.2 WET 11.1 BT 146

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.6	32.78	25.14	
9	10.50	32.75	25.13	.571
17	10.49	32.75	25.14	.579
26	8.46	32.79	25.49	.618
44	5.64	32.83	25.91	.637
65	4.30	32.85	26.07	.633
88	3.86	32.90	26.15	.600
109	3.59	33.22	26.43	.456
131	3.84	33.72	26.81	.199
176	3.74	33.88	26.94	.108
220	3.74	33.97	27.02	.066

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.6	32.78	25.14	283.4	.000	
10	10.59	32.75	25.12	285.6	.028	.571
20	9.77	32.76	25.26	271.9	.056	.594
30	7.70	32.80	25.61	238.8	.082	.624
50	5.17	32.83	25.96	205.8	.126	.638
75	4.09	32.83	26.08	194.9	.176	.635
100	3.64	33.06	26.30	173.5	.222	.530
150	3.79	33.80	26.88	119.6	.295	.155
200	3.73	33.94	26.99	108.9	.352	.079

MV PIONEER
STATION 83

50-27 N 169-57 W 13 AUG 1959 2201 GCT
WEATHER 65 CLOUDS 6 AMT 8 WIND 055 15 KTS SEA 2
SWELL 055 AMT 4 BAR 0995 MBS DRY 10.0 WET 9.4 BT 148

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	32.78	25.24	
10	10.01	32.77	25.23	.575
20	9.94	32.79	25.26	.586
30	9.87	32.79	25.27	.595
49	5.70	32.84	25.91	.634
73	4.28	32.88	26.10	.624
98	3.92	32.93	26.17	.619
122	3.61	32.97	26.23	.597
146	3.52	33.31	26.51	.447
196	3.52	33.81	26.91	.192
245	3.55	33.91	26.99	.130
319	3.58	34.02	27.07	.077

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.0	32.78	25.24	273.7	.000	
10	10.01	32.77	25.23	274.8	.027	.575
20	9.94	32.79	25.26	272.4	.054	.586
30	9.87	32.79	25.27	271.5	.081	.595
50	5.62	32.84	25.92	210.1	.129	.633
75	4.25	32.88	26.10	192.7	.179	.624
100	3.89	32.92	26.17	186.4	.226	.622
150	3.52	33.36	26.55	150.1	.310	.419
200	3.52	33.82	26.92	115.9	.377	.186
250	3.55	33.92	26.99	109.0	.433	.125
300	3.57	34.00	27.06	103.6	.486	.086

MV PIONEER
STATION 84

50-59 N 170-03 W 14 AUG 1959 0207 GCT
WEATHER 65 CLOUDS 6 AMT 8 WIND 055 22 KTS SEA 2
SWELL 055 AMT 4 BAR 0995 MBS DRY 10.0 WET 9.4 BT 150

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.78	25.26	
10	9.80	32.75	25.25	.538
20	9.73	32.77	25.28	.593
29	8.82	32.78	25.43	.588
48	4.93	32.85	26.00	.632
73	4.24	32.87	26.09	.626
97	3.98	32.89	26.13	.635
121	3.67	32.91	26.18	.628
144	3.54	33.11	26.35	.536
192	3.60	33.75	26.85	.217
241	3.58	33.88	26.96	.135
315	3.51	33.98	27.05	.090

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.9	32.78	25.26	272.1	.000	
10	9.80	32.75	25.25	272.9	.027	.538
20	9.73	32.77	25.28	270.5	.054	.593
30	8.54	32.78	25.47	252.1	.080	.591
50	4.86	32.85	26.01	201.0	.125	.631
75	4.22	32.87	26.09	193.2	.174	.627
100	3.93	32.88	26.13	189.8	.222	.639
150	3.55	33.22	26.44	161.0	.310	.483
200	3.60	33.77	26.87	120.4	.380	.201
250	3.57	33.90	26.98	110.7	.438	.124
300	3.53	33.97	27.04	105.5	.492	.091

MV PIONEER
STATION 85

53-00 N 139-00 W 26 AUG 1959 2201 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 340 20 KTS SEA 5
SWELL 320 AMT 7 BAR 1012 MBS DRY 13.9 WET 13.3 BT 155

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	12.8	32.43	24.46	
10	12.67	32.39	24.46	.545
20	12.54	32.39	24.48	.540
30	10.91	32.47	24.85	.576
50	7.18	32.63	25.55	.560
75	6.50	32.81	25.78	.550
99	6.14	32.99	25.97	.513
124	6.24	33.51	26.37	.372
148	5.86	33.72	26.58	.355
198	5.72	33.86	26.71	.260
298	4.88	33.93	26.86	.179
523	4.06	34.13	27.11	.059

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	12.8	32.43	24.46	347.6	.000	
10	12.67	32.39	24.46	348.4	.035	.545
20	12.54	32.39	24.48	346.3	.070	.540
30	10.91	32.47	24.85	312.0	.103	.576
50	7.18	32.63	25.55	244.8	.159	.560
75	6.50	32.81	25.78	223.1	.217	.550
100	6.15	33.02	25.99	203.4	.270	.505
150	5.86	33.73	26.59	147.5	.358	.350
200	5.70	33.86	26.71	136.5	.429	.258
250	5.25	33.89	26.79	129.5	.495	.216
300	4.87	33.93	26.86	122.7	.558	.178
400	4.32	34.01	26.99	111.5	.675	.114
500	4.08	34.11	27.09	102.3	.782	.067

MV PIONEER
STATION 86

53-00 N 137-00 W 27 AUG 1959 0812 GCT
WEATHER 01 CLOUDS AMT WIND 340 18 KTS SEA 3
SWELL 340 AMT 5 BAR 1011 MBS DRY 12.8 WET 12.2 BT 157

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	13.2	32.38	24.35	
9	13.12	32.33	24.33	.534
18	13.12	32.33	24.33	.547
27	12.12	32.45	24.61	.561
46	7.67	32.61	25.47	.583
69	6.76	32.75	25.70	.562
92	6.05	32.88	25.90	.557
115	6.00	33.12	26.09	.486
138	6.37	33.40	26.26	.388
184	5.93	33.77	26.61	.307
276	4.72	33.85	26.82	.254
492	4.02	34.05	27.05	.094

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	13.2	32.38	24.35	358.8	.000	
10	13.17	32.32	24.31	362.9	.036	.535
20	12.96	32.36	24.38	356.2	.072	.550
30	11.19	32.48	24.80	316.0	.106	.567
50	7.50	32.63	25.51	249.1	.163	.578
75	6.51	32.77	25.75	226.2	.222	.567
100	5.98	32.96	25.97	205.9	.276	.535
150	6.27	33.52	26.37	168.2	.370	.363
200	5.68	33.78	26.65	142.2	.448	.298
250	5.01	33.83	26.77	131.2	.516	.270
300	4.49	33.87	26.86	122.9	.580	.239
400	3.95	33.96	26.99	111.3	.697	.168

MV PIONEER
STATION 87

53-02 N 134-57 W 27 AUG 1959 1842 GCT
WEATHER 03 CLOUDS 6 AMT 2 WIND 340 15 KTS SEA 3
SWELL 340 AMT 5 BAR 1009 MBS DRY 14.4 WET 13.3 BT 159

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	13.7	32.20	24.11	
10	13.65	32.15	24.08	.530
20	13.63	32.15	24.08	.533
29	13.58	32.16	24.10	.525
48	8.62	32.38	25.15	.542
72	7.72	32.50	25.38	.527
96	7.05	32.67	25.60	.488
121	6.80	33.08	25.96	.429
145	6.67	33.38	26.21	.345
194	6.32	33.62	26.44	.307
292	5.42	33.93	26.80	.194
513	4.38	34.09	27.05	.072

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	13.7	32.20	24.11	381.6	.000	
10	13.65	32.15	24.08	384.5	.038	.530
20	13.63	32.15	24.08	384.4	.076	.533
30	13.23	32.17	24.18	375.5	.114	.527
50	8.54	32.39	25.17	281.4	.180	.542
75	7.61	32.51	25.40	259.8	.248	.523
100	7.00	32.74	25.66	235.0	.310	.481
150	6.64	33.41	26.24	181.1	.414	.342
200	6.26	33.64	26.47	159.8	.499	.299
250	5.77	33.82	26.67	140.9	.574	.238
300	5.36	33.95	26.82	126.9	.641	.186
400	4.74	34.10	27.01	109.5	.759	.111
500	4.40	34.10	27.05	106.6	.867	.074

MV PIONEER
STATION 88

53-00 N 133-30 W 28 AUG 1959 0142 GCT
WEATHER 01 CLOUDS 6 AMT 1 WIND 340 15 KTS SEA 3
SWELL 340 AMT 5 BAR 1009 MBS DRY 16.7 WET 16.1 BT 161

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	14.6	32.25	23.96	
10	14.43	32.17	23.94	.516
19	14.24	32.17	23.98	.520
28	14.24	32.18	23.98	.521
48	9.02	32.38	25.09	.545
71	7.76	32.55	25.41	.507
95	7.33	32.69	25.58	.491
118	7.12	33.05	25.89	.419
142	6.93	33.37	26.17	.365
190	6.32	33.71	26.52	.281
284	5.18	33.95	26.84	.166
497	4.22	34.11	27.08	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	14.6	32.25	23.96	395.6	.000	
10	14.43	32.17	23.94	398.3	.040	.516
20	14.31	32.17	23.96	396.2	.080	.520
30	13.55	32.20	24.14	379.4	.119	.526
50	8.88	32.40	25.13	285.6	.185	.541
75	7.67	32.56	25.43	256.9	.253	.509
100	7.28	32.77	25.65	236.4	.315	.474
150	6.83	33.44	26.24	181.3	.419	.350
200	6.18	33.74	26.56	151.3	.502	.267
250	5.54	33.88	26.75	133.7	.573	.203
300	5.03	33.98	26.89	120.8	.637	.151
400	4.38	34.10	27.05	105.5	.750	.083

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	Station 1 1/																	
2	2140	4/24	55°33'N	153°11'W	5.2	28	13	42.0	41.0	13	03	8	2	7	3	28	1	32.65
3	Station 2																	
4	0210	4/25	55 06	153 02	4.5	26	16	40.0	39.0	10	02	6	8	6	3	26	1	32.78
5	Station 3																	
6	0100	4/28	55 06	153 58	4.8	31	10	48.0	44.0	05	03	8	5	8	2	31	1	32.75
7	0400	4/28	55 14	154 43	4.4	03	12	42.0	39.5	05	01	4	1	8	2	03	1	32.79
8	0900	4/28	55 18	155 30	5.0	34	10	40.0	38.0	05	01	4	1	6	3	34	1	32.62
9	Station 4																	
10	0440	5/6	53 12	165 23	4.4	18	18	41.0	39.0	98	02	6	8	7	3	24	1	32.49
11	Station 5																	
12	Station 6																	
13	2340	5/20	51°16'N	174°55'E	4.7	16	15	41.5	40.0	12	02	6	8	7	3	16	1	32.60
14	Station 7																	
15	Station 8																	
16	Station 9																	
17	2345	5/23	49 45	175 09	4.7	25	2	45.5	44.0	17	02	8	6	7	2	25	1	32.97
18	Station 10																	
19	0435	5/24	49 14	175 03	5.2	25	2	43.0	42.0	17	02	6	8	7	1	25	1	32.99
20	Station 11																	
21	0010	5/25	48 43	174 57	4.9	25	2	41.5	40.0	16	02	6	8	7	1	25	1	32.99
22	Station 12																	
23	0420	5/25	48 16	174 59	5.0	27	8	41.5	40.0	15	02	6	8	7	1	27	1	32.98
24	Station 13																	
25	0800	5/26	48 21	174 18	4.9	30	10	40.0	38.5	16	02	6	7	7	2	30	1	33.02
26	Station 14																	
27	2305	5/26	49 15	172 30	5.1	28	10	45.0	43.5	15	02	-	0	7	2	30	1	32.96
28	0135	5/27	49 26	172 08	5.3	28	16	46.0	44.0	14	02	-	0	7	2	28	1	33.00
29	Station 15																	
30	2400	5/27	49 53	171 37	5.0	32	12	43.0	42.0	05	46	8	8	4	2	32	1	33.03

1/ See station data for summary of weather and sea surface conditions.

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	Station 16																	
32	0400	5/28	50°15'N	171°25'E	5.0	32	10	42.0	40.5	03	02	8	8	6	2	32	1	33.03
33	Station 17																	
34	2315	5/28	50 43	171 10	5.1	02	10	43.5	42.0	99	02	8	6	7	3	02	1	32.97
35	Station 18																	
36	0400	5/29	51 13	171 03	5.1	04	12	43.0	41.5	99	01	8	7	7	3	04	1	32.95
37	Station 19																	
38	1530	5/29	41 55	171 00	4.3	01	25	41.0	40.0	01	02	8	8	6	3	05	1	33.04
39	Station 20																	
40	0010	6/4	52 20	171 00	5.6	24	8	42.5	40.5	08	02	6	8	7	1	00	0	32.84
41	Station 21																	
42	2250	6/4	53 00	171 00	5.6	00	0	45.0	43.0	04	02	8	7	7	1	00	0	32.81
43	Station 22																	
44	0000	6/6	53 42	171 00	4.7	34	17	42.5	42.0	03	02	8	8	6	4	34	1	33.06
45	Station 23																	
46	0420	6/6	54 07	171 00	4.5	33	10	42.0	41.0	05	02	6	8	6	3	33	1	33.15
47	Station 24																	
48	2205	6/6	54 32	171 00	5.0	23	16	44.5	42.0	08	02	8	8	7	3	00	0	33.03
49	Station 25																	
50	0115	6/7	54 53	171 00	5.0	19	16	42.0	40.0	07	02	8	8	7	4	00	0	33.05
51	Station 26																	
52	0110	6/9	55 08	172 20	4.8	20	12	43.0	42.0	03	02	6	8	6	3	20	1	33.01
53	0330	6/9	55 03	172 55	4.5	19	10	41.0	40.0	05	02	6	8	6	3	20	1	33.13
54	Station 27																	
55	1105	6/9	55 00	174 16	4.7	14	6	42.0	41.0	05	01	8	7	5	2	20	1	33.16
56	Station 28																	
57	1005	6/12	55 20	176 23	4.5	18	2	41.0	40.0	97	02	8	7	5	1	15	1	33.20
58	Station 29																	
59	2335	6/12	54.09	178 44	5.2	26	10	47.0	44.0	95	01	8	5	7	1	26	1	33.10
60	Station 30																	

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
61	Station 31																	
62	Station 32																	
63	Station 33																	
64	Station 34																	
65	Station 35																	
66	Station 36																	
67	Station 37																	
68	Station 38																	
69	Station 39																	
70	Station 40																	
71	Station 41																	
72	Station 42																	
73	Station 43																	
74	0945	6/29	58°16'N	180°00'E	5.8	29	10	41.5	40.5	17	02	6	8	6	1	00	0	32.92
75	Station 44																	
76	1435	6/29	58 45	180 00	5.3	29	8	40.5	40.0	17	02	6	8	7	1	29	1	32.86
77	Station 45																	
78	1955	6/29	59 15	180 00	5.4	27	6	41.5	41.0	17	02	6	8	7	1	29	1	32.81
79	Station 46																	
80	0030	6/30	59 45	180 00	6.3	28	4	45.5	44.0	17	02	6	8	7	1	29	1	32.90
81	Station 47																	
82	0000	7/1	60 16	180 00	6.4	25	12	45.5	44.0	15	41	6	8	6	1	25	1	32.90
83	Station 48																	
84	0735	7/1	60 12	179 05	6.0	25	12	43.0	42.5	12	44	6	8	4	2	25	1	32.88
85	1135	7/1	60 00	178 20	5.7	25	10	42.0	41.5	13	41	6	8	5	2	25	1	32.88
86	Station 49																	
87	2020	7/1	59 30	176 38	5.5	27	18	43.0	43.0	11	41	6	8	5	4	27	2	33.12
88	Station 50																	
89	2050	7/3	58 45	176 10	5.4	25	18	45.0	44.5	13	44	6	8	4	4	25	4	33.13
90	0035	7/4	58 23	175 32	5.4	25	20	46.5	45.5	15	01	8	5	6	4	25	2	33.12

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
91	Station 51																	
92	Station 52																	
93	1055	7/5	57°07'N	175°00'E	5.9	26	18	44.0	43.5	12	02	6	8	5	4	26	4	33.13
94	1345	7/5	56 43	175 00	6.1	26	16	44.0	43.5	12	02	6	8	5	3	26	3	33.15
95	1625	7/5	56 21	175 00	6.4	27	16	43.5	43.0	12	02	6	8	6	3	27	3	33.16
96	Station 53																	
97	Station 54																	
98	Station 55																	
99	Station 56																	
100	Station 57																	
101	2350	7/15	54 40	175 01	8.0	14	02	49.0	47.0	09	02	6	8	7	1	14	1	32.95
102	Station 58																	
103	0344	7/16	54 16	174 59	8.3	19	02	48.0	47.0	09	02	6	8	5	1	16	1	32.93
104	Station 59																	
105	2237	7/16	53 48	175 00	7.8	24	20	47.0	46.0	07	03	6	8	6	3	23	3	32.96
106	Station 60																	
107	0350	7/17	53 16	175 02	7.6	23	25	47.0	46.0	05	02	6	8	6	3	23	4	32.95
108	0621	7/17	53 00	175 00	7.5	24	32	46.0	45.0	05	02	6	8	6	4	23	4	32.94
109	Station 61																	
110	2335	7/21	51 40	174 40	7.8	13	15	49.0	48.0	16	45	x	9	2	3	13	1	32.92
111	Station 62																	
112	0030	7/23	51 15	174 59	8.6	20	09	54.0	52.0	21	10	x	9	3	2	20	2	32.70
113	Station 63																	
114	0520	7/23	50 44	175 02	9.5	-	-	51.0	49.0	21	10	x	9	3	2	20	2	32.71
115	Station 64																	
116	Station 65																	
117	1950	7/24	50 50	179 20	9.4	-	-	51.0	50.0	23	01	6	8	7	1	-	-	32.66
118	Station 66																	
119	2332	7/24	50 55	179 56	9.1	22	05	53.0	51.0	23	03	6	8	6	1	17	1	32.66
120	Station 67																	

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
121	Station 68																	
122	Station 69																	
123	Station 70																	
124	Station 71																	
125	Station 72																	
126	0237	8/5	51°13'N	175°00'W.	10.8	31	15	50.0	48.0	22	03	6	8	6	3	31	2	32.31
127	Station 73																	
128	2330	8/5	50 47	175 01	10.9	-	-	56.0	52.0	19	03	6	8	7	1	29	2	32.78
129	Station 74																	
130	0405	8/6	50 16	174 59	10.3	21	04	52.0	51.0	19	01	6	8	6	1	21	2	32.84
131	Station 75																	
132	0100	8/7	49 43	175 01	10.5	12	10	55.0	53.0	15	02	6	7	7	1	12	2	32.81
133	Station 76																	
134	0517	8/7	49 14	175 03	10.6	12	12	52.0	51.0	14	03	6	8	7	1	12	2	32.74
135	Station 77																	
136	0032	8/8	48 45	174 59	10.7	14	15	55.0	54.0	12	03	6	8	4	2	14	3	32.76
137	Station 78																	
138	0045	8/9	48 15	174 58	11.0	14	10	55.0	54.0	07	03	6	8	6	3	14	4	32.59
139	Station 79																	
140	Station 80																	
141	2100	8/10	47 37	172 25	11.4	21	20	55.0	54.0	99	49	-	-	3	3	21	4	32.80
142	0250	8/11	47 50	171 12	11.3	21	12	56.0	55.0	99	49	-	-	-	3	21	6	32.66
143	1955	8/11	48 04	170 03	11.2	24	35	54.0	53.0	99	03	6	8	5	4	24	6	32.56
144	Station 81																	
145	2340	8/12	49 19	170 05	10.6	32	27	54.0	52.0	10	01	6	2	7	5	32	6	32.76
146	Station 82																	
147	0615	8/13	49 50	170 00	10.6	32	27	51.0	49.0	10	03	6	8	6	5	32	6	32.78
148	Station 83																	
149	2320	8/13	50 46	170 00	10.1	06	20	50.0	49.0	10	65	6	8	4	2	06	4	32.75
150	Station 84																	

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
151	0635	8/14	51°20'N	169°35'W	9.6	35	30	49.0	47.0	00	65	6	8	4	3	35	4	32.74
152	1115	8/14	51 45	169 10	10.2	35	30	50.0	48.0	00	65	-	-	4	3	35	4	32.61
153	1505	8/14	52 10	168 40	9.9	35	35	49.0	47.0	00	65	6	8	4	3	35	6	32.66
154	2135	8/14	52 50	167 58	10.1	29	25	50.0	49.0	04	01	6	7	7	2	29	4	32.18
155	Station 85																	
156	0330	8/27	53 02	137 55	13.1	34	25	56.0	55.0	11	01	8	6	7	5	34	7	32.47
157	Station 86																	
158	1400	8/27	53 00	136 00	13.5	34	15	56.0	55.0	09	01	0	0	7	3	34	5	32.18
159	Station 87																	
160	2310	8/27	53 00	134 00	14.5	34	15	60.0	58.0	09	01	0	1	7	3	34	5	32.16
161	Station 89																	

Plankton Data, MV Pioneer, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
1	150	2.2			14.1			3.3	207.7	2.2		22.8	7.6	52.2
	30	5.4		5.4	32.7			5.4	636.7			70.7		174.1
3	150				14.1	16.9		9.8	126.1			4.3	1.1	14.1
	30				38.1	12.2		4.1	240.8			8.2		39.5
6	150		6.5		6.5	30.4		41.3	252.3	4.3		6.5	6.5	37.0
	30		2.7		29.9	81.6		2.7	892.5	2.7		27.2		27.2
9	150		1.1		13.0	5.4			770.9			1.1	4.3	12.0
	30		*		1.4			1.4	917.0	1.4		1.4		12.3
11	190		26.2	1.9	8.2	1.7	0.9	0.6	107.0	0.4		4.3	5.4	1.3
	40	2.0	189.8		10.2			4.1	69.4				2.0	6.1
13	150		3.3	1.1	3.3			0.5	198.4			1.6	3.3	2.7
	30		44.2		0.7				158.5					
15	150				2.2	6.5		4.3	1552.7				6.5	19.6
	30				43.5	10.9			4244.9					10.9
17	150				2.2	17.4	2.2	2.2	904.7			2.2	2.2	4.4
	30				16.3	5.4			3085.7					5.4
20	150		14.7		1.9	0.8		0.3	50.6	0.3		1.9	2.7	4.3
	30		68.0		2.0			0.7	6.8				0.7	2.8

* - Indicates organism present but not abundant enough to show in tabulation

Plankton Data, MV Pioneer, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleruomamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
21	150				13.0	19.6		13.0	569.8	13.0		15.2	4.3	89.2
	30				65.3	76.2			1774.2	10.9		32.7		87.1
22	150				5.4	27.2	1.1	22.8	242.5	2.2		7.6	6.5	19.5
	30				27.2	119.7			838.1			8.2		5.4
24	150		9.2		4.9	70.1		0.5	108.7			8.7	6.0	12.5
	30		19.0	2.7	21.8	296.6		2.7	179.6			8.2	2.7	49.0
30	150		4.3		17.4	100.0		4.3	191.4	15.2		4.3	4.3	28.2
	30		5.4		125.2	367.4		5.4	968.7	40.8		40.8	16.3	97.9
31	150	6.5	2.2	6.5	56.5	539.3		2.2	300.1	23.9		34.8	13.0	65.1
	30	65.3		21.8	370.1	1317.0		10.9	1643.5			152.4	10.9	250.4
33	150	8.7			226.2	1339.6		34.8	1078.6	8.7		78.3	69.6	208.8
	30	27.2			440.8	778.2		38.1	2323.8			152.4	70.7	386.4
35	150	8.7		8.7	174.0	1391.8		8.7	1513.6		8.7	60.9	43.5	287.1
	30	10.9	32.7		293.9	1317.0		21.8	1262.6			54.4	65.3	239.5
37	150		6.5		15.2	230.5		17.4	465.4	15.2		10.9	6.5	47.9
	30	16.3	16.3		43.5	451.7			2068.0	5.4		32.7	16.3	114.2
39	150				6.5	261.0		8.7	411.0	2.2		4.3	13.0	37.0
	30		5.4		5.4	446.3			4772.8			27.2	5.4	147.0

Plankton Data, MV Pioneer, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
41	150				2.2	43.5	1.1	1.1	437.1	1.1		3.3	4.3	16.3
	30				87.1	587.8		21.8	7336.1			43.5	130.6	500.6
43	150		2.2		8.7	234.9		15.2	593.7	13.0		15.2		19.6
	30				108.8	1806.8		10.9	4332.0	239.5		54.4	10.9	108.9
47	150		4.3		17.4	722.0		4.3	735.0	65.2		13.0	4.3	43.5
	30				261.2	5659.9			5485.7	391.8		348.3		
51	150		*			426.2			2522.6	147.9		17.4	8.7	191.4
	30					870.8			3417.7	195.9		43.5	21.8	239.5
57	150				108.7	261.0		30.4	2774.9	43.5		43.5	4.3	217.5
	30				65.3	533.3			6857.1	32.7		43.5	54.4	185.0
59	150		2.2		2.2	126.1		2.2	782.9			2.2	2.2	21.8
	30		10.9		141.5	653.1			5540.1		10.9	32.7	10.9	54.4
61	150	6.5			17.4	26.1		6.5	1243.9	8.7		13.0	10.9	28.2
	30				522.5	174.2			21333.3			435.4		261.2
62	150	2.2	2.2		23.9	150.1			608.9	2.2		21.7		15.2
	30	43.5		5.4	76.2	538.8			3553.7	5.4		157.8		67.3
64	150	8.7			2.2	23.9		91.3	1017.7			17.4		30.4
	30	21.8				32.7			4582.3			32.7		76.2

* - Indicates organism present but not abundant enough to show in tabulation

Plankton Data, MV Pioneer, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m.)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
68	150	1.1		2.2	14.1	7.6		12.0	283.8	5.4		14.1		19.6
	30	10.9			92.5	49.0			1181.0			87.1		43.5
73	150	7.6			20.7	5.4		3.3	421.9	3.3		4.4		15.3
	30	65.3			98.0				2819.1			65.3		43.5
75	150	13.0		4.3	8.7	4.3		4.3	896.0	4.3		26.1		26.0
	30	119.7		10.9	43.5	43.5		32.7	6508.8			76.2	10.9	32.7
77	150	2.2			43.5	32.6		2.2	689.4	23.9		6.5	8.7	13.0
	30				223.1	119.7		21.8	2552.4	32.7		5.4		76.2
79	150			4.3			2.2		856.8	2.2		4.3		17.4
	30			5.4	239.5	10.9			1888.4			16.3		5.4
81	150				23.9	106.6	1.1	9.8	440.4	5.4		5.4	4.3	19.5
	30				424.5	157.8			2008.2	5.4		59.9	21.8	81.6

Plankton Data, MV Pioneer, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
1	0837	150	3.5	3.9			2.2	1.1	312.1	4.3		1.1	12.0	14.1		346.9
	0847	30	2.5	2.6	*			5.4	930.5				27.2	114.3		1077.4
3	0642	150	3.6	3.8	2.2		1.1	1.1	186.4	*	0.5			3.3		194.6
	0649	30	0.5	0.6				1.4	342.9		4.1			10.9		359.3
6	0503	150	10.2	10.5			19.6	2.2	391.3	*		10.9		10.9	2.2	437.1
	0511	30	1.9	1.9	5.4		10.9	10.9	1066.5		19.0		2.7	108.8	2.7	1226.9
9	0728	150	2.8	3.2		1.1	3.3	1.1	807.8		13.0	4.3	2.2	1.1		833.9
	0734	30	9.2	9.3			4.1	1.4	934.9		4.1	2.7		10.9	*	958.1
11	0858	190	14.1	14.2		0.2	3.0	0.9	157.9		1.1	3.9	0.9	0.4	1.1	169.4
	0906	40	12.4	12.7			4.1		283.6		2.0			2.0		291.7
13	0748	150	3.4	3.6		1.6	1.1	1.6	214.2			1.1	0.5	5.4	1.1	226.6
	0753	30	4.6	4.8					203.4			1.4	1.4	6.1	0.7	213.0
15	0700	150	3.8	4.3	2.2		2.2		1591.8		10.9	2.2		4.3	2.2	1615.8
	0706	30	1.4	1.5			10.9	32.7	4310.2		10.9			32.7		4397.4
17	0710	150	5.8	6.0	2.2		4.3		937.5		2.2		2.2	4.3		952.7
	0716	30	0.5	0.8			16.3	10.9	3112.8			10.9		5.4		3156.3
20	0639	150	10.4	10.7	1.4	0.5		1.9	77.5		1.1		1.1	0.8	1.1	85.4
	0643	30	8.0	7.7				0.7	81.0		1.4	0.7	0.7			84.5

* - Indicates organism present but not abundant enough to show in tabulation

Plankton Data, MV Pioneer, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
21	0603	150	6.1	6.5	4.3	6.5	6.5	13.0	737.1		4.3	10.9	4.3	47.8	2.2	836.9
	0608	30	3.4	3.4			54.4	10.9	2046.4		21.8			489.8		2623.3
22	0552	150	6.2	5.9		4.3	8.7	2.2	334.8		4.3	12.0		16.3	2.2	384.8
	0558	30	2.8	2.7	5.4		13.6	19.0	998.6	2.7	10.9		119.7			1169.9
24	0812	150	11.2	11.6	0.5		3.3	2.2	220.6		1.1	.5	1.1	1.6		230.9
	0818	30	5.0	5.2			13.6	8.2	582.3		2.7	2.7	2.7	2.7		614.9
30	0816	150	3.0	4.0	2.2		2.2		369.4	2.2			2.2	2.2	2.2	382.6
	0822	30	3.1	2.9	2.7				1667.9				2.7	2.7		1676.0
31	0516	150	9.9	10.1	2.2		10.9	6.5	1050.1	4.3	4.3		19.6	78.3	2.2	1178.4
	0522	30	5.3	5.0			76.2	108.8	3842.3				10.9	206.8		4245.0
33	0654	150	11.8	12.5			17.4	26.1	3053.3	17.4	43.5	8.7	26.1	43.5		3236.0
	0700	30	8.5	8.2			21.8	10.9	4217.6	5.4	5.4			54.4		4315.5
35	0759	150	6.3	6.2		17.4		69.6	3505.7		17.4		17.4	26.1		3653.6
	0806	30	4.3	4.3			21.8	10.9	3298.1		10.9					3341.7
37	0713	150	7.7	8.2	4.3	4.3	2.2	2.2	815.5		2.2		4.3	15.2	*	850.2
	0718	30	3.7	3.9			16.3	10.9	2764.4					27.2		2818.0
39	0745	150	3.8	3.8		4.3	4.3	2.2	743.7		4.3		4.3	26.1		789.2
	0751	30	1.2	1.2			21.8	16.3	5409.5		10.9			21.8		5480.3

* - Indicates organism present but not abundant enough to show in tabulation

Plankton Data, MV Pioneer, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc.)	Wet wt. (gm.)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	CASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
41	0821	150		2.3			4.3	5.4	510.0	1.1		1.1		2.2		524.1
	0827	30	4.0	3.4		43.5	130.6	108.8	8707.5		21.8			43.5		9055.7
43	0729	150	7.2	7.0		4.3	13.0	4.3	902.5				6.5	28.3		958.9
	0736	30	8.3	7.7			21.8	32.7	6672.2				21.8	217.7	10.9	6977.1
47	0919	150	4.8	4.1			4.3	4.3	1609.0					60.9		1678.5
	0925	30	3.5	3.3			43.5	87.1	12146.9	87.1	43.5		43.5	478.9		12930.5
51	0628	150	11.2	11.1			17.4	8.7	3314.2		8.7	*		548.0		3897.0
	0633	30	7.1	6.9			*	21.8	4789.2		21.8			849.0		5681.8
57	0908	150	11.3	11.1		8.7	34.8	43.5	3483.8					30.5	4.3	3605.6
	0917	30	5.5	5.6			21.8	54.4	7771.3	21.8				32.7		7902.0
59	0713	150	3.1	3.0			8.7	4.3	941.8					2.2		957.0
	0723	30	3.8	4.9			87.1	89.0	6454.5	10.9	43.5			54.4		6739.4
61	0624	150	4.9	4.8	2.2		2.2	21.7	1361.2					6.5		1393.8
	0635	30	12.4	10.1					22726.6		348.3			435.4		23510.3
62	0312	150	9.9	10.1			6.5	2.2	826.4		4.3			15.2		854.6
	0319	30	10.0	10.2			27.2	27.2	4446.1		10.9		5.4	87.1		4603.9
64	0636	150	11.0	10.9			4.3		1191.6		2.2			2.2	2.2	1202.5
	0644	30	6.4	6.2			10.9	32.7	4745.7		21.8			32.6		4843.7

* - Indicates organism present but not abundant enough to show in tabulation

Plankton Data, MV Pioneer, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
68	0617	150	6.4	6.0			1.1	6.5	359.9			1.1	2.2	19.6		390.4
	0624	30	4.1	4.2			10.9	16.3	1464.0					146.9	5.4	1643.5
73	0623	150	5.6	5.6			1.1	6.5	481.9		6.5			2.2		498.2
	0626	30	2.7	2.6				10.9	3091.2		76.2			21.8		3200.1
75	0807	150	4.0	3.8			4.3		987.0		8.7			34.8	4.3	1039.1
	0811	30	2.0	2.2	10.9		43.5	10.9	6878.9	10.9	21.8			391.8	10.9	7379.6
77	0952	150	6.1	6.0		2.2	2.2	4.3	822.0		2.2		2.2	4.3		839.4
	0958	30	4.5	4.1			10.9	10.9	3031.3					38.1		3091.2
79	0516	150	4.7	4.9			10.9	13.0	887.2		2.2		4.3	26.1		943.7
	0521	30	5.4	5.2	10.9		32.7		2165.9		10.9			32.7		2253.1
81	0540	150	3.9	4.0		1.1	3.3	10.9	616.4		2.2		3.3	16.3		653.5
	0546	30	2.9	3.9	5.4		32.7	76.2	2759.2		5.4		5.4	114.3		2998.6

Drift Bottle Releases

GCT	Date	Latitude	Longitude	Number of bottles
2010	Apr. 24	55°00'N	153°00'W	24
0645	May 6	53°30'N	165°00'W	25
0740	May 20	51°30'N	175°00'E	50
0940	May 25	48°00'N	175°00'E	50
0740	May 27	49°38'N	171°44'E	75
0720	June 3	52°00'N	171°00'E	50
0730	June 4	52°47'N	171°00'E	50
0530	June 7	55°00'N	171°00'E	50
0740	June 9	55°00'N	173°30'E	75
0250	June 12	56°00'N	175°00'E	50

TABULATED DATA MV *Tordenskjold*

Station data

Bathythermograph observations

Blankton data

Numbers of copepods

Numbers of organisms

MV TORDENSKJOLD
STATION 1

53-17 N 165-35 W 25 MAY 1959 0951-1010 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 215 05 KTS SEA 1
SWELL 215 AMT 1 BAR 1034 MBS DRY 6.7 WET 5.6 BT 2

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.1	32.49	25.58	
10	6.12			.699
19	6.07	32.50	25.59	.696
29		32.52		.691
48	4.96	32.64	25.83	.610
72	3.86	32.87	26.13	.593
96	4.55	33.18	26.31	.456
119	5.01	33.45	26.47	.357
143	5.22	33.67	26.62	.273
192	3.99	33.86	26.90	.102
240	3.94	33.95	26.98	.069
315	3.89	34.01	27.03	.040

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.1	32.49	25.58	241.3	.000	
10	6.12	32.49	25.58	241.6	.024	.699
20	6.06	32.50	25.59	240.3	.048	.697
30	5.81	32.52	25.64	236.0	.072	.685
50	4.80	32.66	25.87	214.7	.117	.613
75	3.96	32.91	26.15	187.6	.167	.574
100	4.65	33.23	26.33	170.7	.212	.437
150	4.97	33.70	26.67	139.4	.290	.240
200	3.98	33.88	26.92	115.9	.354	.096
250	3.93	33.96	26.99	109.8	.410	.064
300	3.90	34.01	27.03	106.2	.464	.044

MV TORDENSKJOLD
STATION 2

53-04 N 167-03 W 26 MAY 1959 0138 GCT
WEATHER 02 CLOUDS 7 AMT 8 WIND 075 05 KTS SEA 1
SWELL 085 AMT 1 BAR 1030 MBS DRY WET BT 4

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.3	32.25	25.49	
10	5.08	32.25	25.51	.794
19	4.50	32.30	25.61	.712
28		32.32		.691
46	4.34	32.32	25.65	.677
70		32.52		.582
94	4.20	32.80	26.04	.534
118	4.28	32.87	26.09	.529
142	4.26	32.93	26.14	.504
190	4.50	33.16	26.30	.454
238	4.84	33.82	26.78	.192
310	4.32	33.94	26.93	.125

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.3	32.25	25.49	250.3	.000	
10	5.08	32.25	25.51	248.0	.025	.794
20	4.51	32.30	25.61	238.5	.049	.709
30	4.54	32.31	25.62	238.1	.073	.692
50	4.25	32.35	25.68	232.4	.120	.658
75	4.07	32.60	25.90	212.0	.176	.568
100	4.23	32.82	26.05	197.2	.227	.535
150	4.29	32.94	26.14	189.2	.324	.510
200	4.62	33.34	26.42	163.1	.412	.385
250	4.84	33.91	26.85	123.3	.484	.154
300	4.47	33.99	26.96	113.7	.543	.111

MV TORDENSKJOLD
STATION 3

52-40 N 167-37 W 26 MAY 1959 0630 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 125 05 KTS SEA 1
SWELL 125 AMT 1 BAR 1028 MBS DRY 6.7 WET 6.1 BT 5

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.4	32.21	25.44	
10	5.33	32.21	25.45	.786
19		32.21		.781
29	4.50	32.22	25.55	.742
48	4.08	32.39	25.73	.658
72	4.17	32.49	25.80	.619
96	4.37	32.64	25.90	.600
119	4.36	32.79	26.02	.557
143	4.38	32.95	26.14	.539
192	5.16	33.52	26.51	.312
240	4.96	33.76	26.72	.223
315	4.25	33.90	26.91	.122

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.4	32.21	25.44	254.4	.000	
10	5.33	32.21	25.45	253.7	.025	.786
20	4.72	32.21	25.52	247.4	.050	.777
30	4.47	32.23	25.56	243.5	.075	.736
50	4.08	32.40	25.74	227.0	.122	.654
75	4.21	32.51	25.81	220.2	.178	.618
100	4.37	32.67	25.92	209.9	.232	.591
150	4.55	33.05	26.20	183.6	.330	.498
200	5.14	33.57	26.55	151.6	.414	.296
250	4.89	33.80	26.76	132.1	.485	.207
300	4.43	33.89	26.88	120.8	.548	.138

MV TORDENSKJOLD
STATION 4

52-14 N 168-51 W 27 MAY 1959 0141 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 150 10 KTS SEA 1
SWELL 150 AMT 1 BAR 1022 MBS DRY 7.2 WET 6.7 BT 7

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	32.83	25.90	
10	5.49	32.83	25.92	.661
19	4.74	32.83	26.01	.678
28		32.83		.691
46	4.10	32.84	26.08	.666
70		32.84		.652
94	3.30	33.07	26.34	.554
118	3.87	33.43	26.57	.352
142	4.08	33.77	26.82	.168
190	3.98	33.93	26.96	.065
238	3.93	33.99	27.01	.038
309	3.76	34.05	27.08	.041

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5 \delta$	ΔD	OXY
0	5.7	32.83	25.90	211.2	.000	
10	5.49	32.83	25.92	209.0	.021	.661
20	4.67	32.83	26.02	200.3	.041	.680
30	4.22	32.83	26.06	195.9	.061	.688
50	4.09	32.82	26.07	195.5	.100	.669
75	3.68	32.88	26.16	187.3	.148	.640
100	3.48	33.16	26.40	164.5	.192	.502
150	4.06	33.80	26.85	122.3	.264	.146
200	3.97	33.94	26.97	111.3	.322	.057
250	3.91	34.00	27.02	106.6	.376	.035
300	3.79	34.04	27.07	102.8	.428	.038

MV TORDENSKJOLD
STATION 5

51-56 N 169-39 W 27 MAY 1959 0652 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 150 08 KTS SEA 1
SWELL 150 AMT 1 BAR 1020 MBS DRY 6.1 WET 5.6 BT 8

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.3	32.66	25.81	
9	5.24	32.66	25.82	.720
18		32.67		.716
28		32.69		.672
46	4.30	32.75	25.99	.650
68		32.95		.623
92	3.52	33.10	26.35	.544
115	3.92	33.60	26.70	.252
137	4.02	33.80	26.85	.122
183	3.96	33.96	26.99	.040
228	3.93	34.02	27.04	
298	3.82	34.09	27.10	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.3	32.66	25.81	219.5	.000	
10	5.25	32.66	25.82	219.1	.022	.721
20	5.10	32.67	25.84	216.8	.044	.705
30	4.73	32.69	25.90	211.5	.065	.670
50	4.29	32.79	26.02	199.7	.106	.648
75	3.84	32.95	26.20	183.5	.154	.624
100	3.69	33.31	26.50	155.2	.196	.424
150	4.00	33.86	26.90	117.2	.264	.090
200	3.95	33.98	27.00	108.1	.320	
250	3.90	34.04	27.06	103.5	.373	

MV TORDENSKJOLD
STATION 6

51-43 N 173-04 W 28 MAY 1959 0705 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 145 15 KTS SEA 1
SWELL 145 AMT 1 BAR 1015 MBS DRY 6.7 WET 5.6 BT 13

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.7	32.73	25.82	
10	5.37	32.74	25.87	.704
19		32.74		.698
28	4.30	32.78	26.01	.692
46		32.83		.665
70	3.99	32.88	26.13	.667
94	3.76	32.96	26.21	.627
118	3.55	33.45	26.62	.602
142	3.69	33.84	26.92	.390
190	4.21	33.95	26.95	.146
238	4.01	34.04	27.04	.046
310	3.94			.070

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.7	32.73	25.82	218.7	.000	
10	5.37	32.74	25.87	214.4	.022	.704
20	4.54	32.74	25.96	205.7	.043	.698
30	4.28	32.79	26.02	199.4	.063	.688
50	4.12	32.83	26.07	195.0	.102	.671
75	3.94	32.90	26.15	188.2	.150	.657
100	3.67	33.09	26.32	171.5	.195	.621
150	3.83	33.86	26.92	115.5	.267	.339
200	4.16	33.97	26.97	111.0	.324	.112
250	3.98	34.06	27.06	102.8	.377	.046
300	3.98	34.17	27.15	095.0	.426	.054

MV TORDENSKJOLD
STATION 7

51-30 N 177-02 W 01 JUN 1959 0949 GCT
WEATHER 02 CLOUDS AMT 0 WIND 350 15 KTS SEA 2
SWELL 330 AMT 1 BAR 1012 MBS DRY 6.4 WET 5.6 BT 15

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.1	32.89	26.02	
9	5.27	32.95	26.04	.687
18	4.34	33.04	26.22	.608
26	4.34			.608
44	4.21	33.09	26.27	.591
67	4.08	33.14	26.32	.563
89	3.98	33.20	26.38	.552
112	3.92	33.38	26.53	.455
134	3.92	33.43	26.57	.422
180	3.95	33.53	26.65	.365
226	3.90	33.58	26.69	.339
295	4.32	33.77	26.80	.222

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.1	32.89	26.02	200.1	.000	
10	5.12	32.96	26.07	195.2	.020	.674
20	4.34	33.05	26.22	180.4	.039	.608
30	4.31	33.07	26.24	178.7	.057	.605
50	4.17	33.10	26.28	175.2	.092	.582
75	4.04	33.15	26.33	170.4	.135	.568
100	3.94	33.30	26.46	158.3	.176	.498
150	3.94	33.47	26.60	145.9	.252	.399
200	3.90	33.54	26.66	140.6	.324	.359
250	4.05	33.63	26.71	135.8	.393	.297
*300	4.35	33.79	26.81	127.4	.459	.214

MV TORDENSKJOLD
STATION 8

51-00 N 180-00 02 JUN 1959 0212-0328 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 060 06 KTS SEA 1
SWELL 060 AMT 1 BAR 1012 MBS DRY 7.8 WET 6.7 BT 19

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.5	32.99	26.05	
10	5.10	33.00	26.10	.676
20	4.60	33.00	26.16	.657
28	4.52	33.01	26.17	.646
47	4.14	33.14	26.32	.585
71	4.09	33.18	26.35	.551
96	4.10	33.22	26.38	.543
121	4.03	33.23	26.40	.529
144	3.88	33.30	26.47	.493
192	3.81	33.40	26.56	.460
240	3.90	33.45	26.59	.384
289	3.82	33.58	26.70	.332
*388	3.69	33.88	26.95	.184
484	3.84	34.08	27.09	.053
676	3.54	34.21	27.23	.045
935	3.00	34.35	27.39	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.5	32.99	26.05	197.0	.000	
10	5.10	33.00	26.10	191.9	.019	.676
20	4.60	33.00	26.16	186.8	.038	.657
30	4.47	33.03	26.20	183.3	.057	.638
50	4.13	33.15	26.33	171.1	.092	.579
75	4.10	33.19	26.36	167.9	.134	.550
100	4.10	33.22	26.38	165.9	.176	.543
150	3.86	33.32	26.49	156.4	.257	.491
200	3.84	33.40	26.55	150.5	.334	.446
250	3.88	33.48	26.61	145.3	.408	.375
300	3.79	33.62	26.73	134.3	.478	.315
400	3.72	33.91	26.97	112.6	.601	.163
500	3.82	34.09	27.10	101.0	.708	.052
600	3.67	34.16	27.17	095.0	.806	.047
700	3.49	34.22	27.24	089.3	.898	.045
800	3.28	34.27	27.30	084.1	.985	.044
1000	2.86	34.39	27.43	071.9	1.141	.044

MV TORDENSKJOLD
STATION 9

50-30 N 180-00 03 JUN 1959 0235 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 070 20 KTS SEA 1
SWELL 070 AMT 1 BAR 1015 MBS DRY 7.1 WET 5.8 BT 21

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.8	32.72	25.80	
10		32.72		.776
19	5.36	32.72	25.85	.751
28	4.89	32.83	25.99	.694
47	3.93	32.99	26.22	.598
71	3.87	33.17	26.37	.530
95	3.96	33.31	26.47	.477
119	3.88	33.38	26.53	.459
142	4.06	33.45	26.57	.392
190	4.10	33.56	26.65	.326
238	4.19	33.78	26.82	.212
311	4.13	33.87	26.90	.078

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.8	32.72	25.80	220.6	.000	
10	5.75	32.72	25.81	220.1	.022	.776
20	5.31	32.73	25.87	214.6	.044	.744
30	4.75	32.85	26.02	199.7	.065	.682
50	3.91	33.01	26.24	179.5	.103	.589
75	3.90	33.20	26.39	165.2	.146	.519
100	3.92	33.32	26.48	156.6	.186	.478
150	4.06	33.46	26.58	147.8	.262	.384
200	4.13	33.62	26.70	137.0	.333	.301
250	4.20	33.82	26.85	123.1	.398	.187
300	4.15	33.88	26.90	118.5	.458	.095

MV TORDENSKJOLD
STATION 10

49-59 N 179-57 W 03 JUN 1959 0658-0746 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 360 15 KTS SEA 1
SWELL 360 AMT 1 BAR 1016 MBS DRY 6.1 WET 5.6 BT 23

OBSERVED VALUES

	DEPTH	TEMP	SAL	σ_t	OXY
	0	5.4	32.80	25.91	
	10		32.78		.654
	18	5.14	32.79	25.93	.652
	28	5.01	32.78	25.94	.668
	47	3.98	32.89	26.13	.638
	71	3.82	32.98	26.22	.580
	94	3.83	33.20	26.40	.502
	118	4.02	33.52	26.63	.340
	142		33.72		.212
	190	4.00	33.89	26.93	.119
	238	3.99	33.98	27.00	.059
*	287	3.79	34.04	27.07	.051
	380	3.71	34.14	27.15	.047
	478	3.59	34.20	27.21	.042
	672	3.22	34.29	27.32	.039
	1014	2.59	34.42	27.48	.050
	1014	2.70	34.42	27.47	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.4	32.80	25.91	210.1	.000	
10	5.29	32.78	25.91	210.5	.021	.654
20	5.14	32.78	25.92	209.0	.042	.657
30	4.86	32.79	25.96	205.3	.063	.665
50	3.95	32.89	26.14	188.9	.102	.632
75	3.81	33.01	26.25	178.7	.148	.572
100	3.88	33.29	26.46	158.5	.190	.458
150	4.10	33.75	26.80	126.5	.261	.194
200	4.01	33.91	26.94	114.0	.321	.102
250	3.93	34.00	27.02	106.8	.376	.057
300	3.78	34.06	27.08	101.2	.428	.050
400	3.69	34.15	27.16	094.3	.526	.046
500	3.55	34.21	27.23	089.2	.618	.041
600	3.35	34.26	27.28	084.1	.705	.039
700	3.17	34.30	27.33	080.0	.787	.039
800	2.99	34.34	27.38	075.8	.865	.041
1000	2.67	34.42	27.47	067.6	1.008	.049

MV TORDENSKJOLD
STATION 11

49-30 N 179-58 W 04 JUN 1959 0255 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 230 10 KTS SEA 1
SWELL 230 AMT 1 BAR 1019 MBS DRY 6.9 WET 5.7 BT 25

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.5	33.03	26.08	
10	5.35	33.02	26.09	.668
20	5.22	33.02	26.10	.678
28	5.20	33.02	26.11	.662
46	4.42	33.02	26.19	.676
71	3.98	33.03	26.25	.673
94	3.87	33.04	26.26	.650
118	3.74	33.07	26.30	.648
142	2.98	33.32	26.57	.525
190	3.06	33.68	26.85	.307
239	3.29	33.86	26.97	.175
313	3.38	33.96	27.04	.112

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.5	33.03	26.08	194.0	.000	
10	5.35	33.02	26.09	193.2	.019	.668
20	5.22	33.02	26.10	191.8	.038	.678
30	5.09	33.02	26.12	190.5	.057	.664
50	4.33	33.02	26.20	182.8	.094	.677
75	3.96	33.03	26.25	178.6	.139	.668
100	3.90	33.03	26.25	178.2	.184	.661
150	2.98	33.39	26.63	143.0	.264	.483
200	3.12	33.72	26.88	119.7	.330	.274
250	3.32	33.89	26.99	109.1	.387	.155
300	3.39	33.96	27.04	104.8	.440	.111

MV TORDENSKJOLD
STATION 12

49-03 N 179-56 W 04 JUN 1959 0739-0856 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 190 08 KTS SEA 1
SWELL 190 AMT 1 BAR 1019 MBS DRY 6.1 WET 5.3 BT 27

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	32.94	26.00	
10	5.57	32.93	25.99	.646
20	5.41	32.94	26.02	.609
30	5.12	32.93	26.05	.556
50	4.43	32.93	26.12	.630
74	3.98	32.93	26.17	.653
98	3.94	32.93	26.17	.650
123	3.82	32.95	26.20	.648
147	3.22	33.09	26.37	.605
196	2.96	33.67	26.85	.292
245	3.22	33.85	26.97	.186
294	3.36	33.92	27.01	.134
*376	3.44	34.06	27.12	.081
776	2.96	34.32	27.37	.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.6	32.94	26.00	201.8	.000	
10	5.57	32.93	25.99	202.4	.020	.646
20	5.41	32.94	26.02	199.9	.040	.609
30	5.12	32.93	26.05	197.6	.060	.556
50	4.43	32.93	26.12	190.6	.099	.630
75	3.98	32.93	26.17	186.3	.146	.653
100	3.95	32.93	26.17	186.2	.193	.651
150	3.19	33.14	26.41	163.7	.280	.580
200	2.99	33.69	26.86	120.8	.351	.281
250	3.24	33.86	26.98	110.6	.409	.180
300	3.37	33.93	27.02	106.9	.463	.130
400	3.45	34.10	27.15	095.7	.564	.069
500	3.45	34.22	27.24	087.4	.656	.032
600	3.35	34.29	27.31	081.9	.741	.019
700	3.16	34.32	27.35	078.4	.821	.031

MV TORDENSKJOLD
STATION 13

49-01 N 175-04 W 07 JUN 1959 0706-0831 GCT
WEATHER 02 CLOUDS 4 AMT 8 WIND 325 25 KTS SEA 3
SWELL 325 AMT 5 BAR 1016 MBS DRY 6.6 WET 6.1 BT 29

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.4	32.85	25.95	
10	5.20	32.85	25.97	.614
20	5.18	32.85	25.98	.621
30	5.24	32.86	25.98	.623
50	5.00	32.86	26.00	.627
74	3.96	32.88	26.13	.643
98	3.69	32.91	26.18	
123	3.20	33.00	26.30	.611
147	3.32	33.32	26.54	.420
197	3.61	33.83	26.92	.160
246	3.54	33.92	27.00	.100
*296	3.48	33.99	27.06	.077
376	3.47	34.09	27.14	.072
474	3.40	34.19	27.22	.065
672	3.12	34.30	27.34	.054
1018	2.64	34.43	27.48	.070

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.4	32.85	25.95	206.4	.000	
10	5.20	32.85	25.97	204.3	.021	.614
20	5.18	32.85	25.98	204.2	.041	.621
30	5.24	32.86	25.98	204.2	.061	.623
50	5.00	32.86	26.00	201.8	.102	.627
75	3.95	32.88	26.13	189.8	.151	.643
100	3.63	32.91	26.18	184.7	.198	.641
150	3.35	33.36	26.57	148.6	.281	.399
200	3.61	33.84	26.93	115.3	.347	.155
250	3.53	33.93	27.00	108.1	.403	.098
300	3.48	34.00	27.07	102.7	.456	.077
400	3.46	34.12	27.16	094.3	.554	.070
500	3.36	34.21	27.24	087.2	.645	.063
600	3.22	34.26	27.30	082.8	.730	.056
700	3.08	34.31	27.35	078.3	.811	.054
800	2.94	34.36	27.40	073.8	.887	.055
1000	2.66	34.43	27.48	066.8	1.028	.068

MV TORDENSKJOLD
STATION 14

51-32 N 176-31 W 12 JUN 1959 0812 GCT
WEATHER 02 CLOUDS 0 AMT 8 WIND 270 20 KTS SEA 2
SWELL 270 AMT 6 BAR 1003 MBS DRY 5.6 WET BT 30

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	32.68	25.86	
10	4.96	32.71	25.89	.606
19	4.96	32.71	25.89	.597
28	4.98	32.79	25.95	.608
47	4.61	32.96	26.12	.602
71	4.03	33.27	26.43	.502
94	3.98	33.31	26.47	.486
117	4.13	33.38	26.51	.353
141	4.10	33.43	26.55	.346
188	4.07	33.50	26.61	
236	4.23	33.62	26.69	.300
305	4.35	33.81	26.83	.202

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.0	32.68	25.86	214.8	.000	
10	4.96	32.71	25.89	212.2	.021	.606
20	4.97	32.72	25.90	211.7	.042	.599
30	4.94	32.80	25.96	205.4	.063	.610
50	4.51	33.01	26.18	185.4	.102	.585
75	4.01	33.27	26.43	161.0	.145	.508
100	4.04	33.33	26.48	157.0	.185	.439
150	4.08	33.44	26.56	149.5	.262	.346
200	4.12	33.53	26.63	143.6	.335	.330
250	4.26	33.66	26.72	135.7	.405	.285
300	4.35	33.80	26.82	126.6	.471	.211

MV TORDENSKJOLD
STATION 15

51-32 N 176-30 W 14 JUN 1959 0326 GCT
WEATHER 63 CLOUDS 0 AMT 8 WIND 170 20 KTS SEA 2
SWELL 180 AMT 4 BAR 1001 MBS DRY 6.7 WET 6.7 BT 31

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.4	32.84	25.94	
10	4.82	32.92	26.07	.621
20	4.55	33.05	26.20	.570
30		33.22		.494
50	3.98	33.27	26.44	.491
75	3.96	33.34	26.49	.478
100	3.98	33.38	26.52	.442
125	4.02	33.41	26.54	.423
150	4.03	33.46	26.58	.402
200	4.04	33.52	26.63	.360
250	3.96	33.61	26.71	.320
325	4.03	33.97	26.99	.079

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.4	32.84	25.94	207.1	.000	
10	4.82	32.92	26.07	195.0	.020	.621
20	4.55	33.05	26.20	182.5	.039	.570
30	4.44	33.22	26.35	168.7	.057	.494
50	3.98	33.27	26.44	160.6	.090	.491
75	3.96	33.34	26.49	155.3	.129	.478
100	3.98	33.38	26.52	152.7	.167	.442
150	4.03	33.46	26.58	147.5	.242	.402
200	4.04	33.52	26.63	143.5	.315	.360
250	3.96	33.61	26.71	136.4	.385	.320
300	3.98	33.82	26.87	121.2	.449	.183

MV TORDENSKJOLD
STATION 16

51-31 N 176-25 W 15 JUN 1959 0682 GCT
WEATHER 02 CLOUDS 7 AMT 8 WIND 305 25 KTS SEA 3
SWELL 300 AMT 3 BAR 1094 MBS DRY 7.2 WET 6.1 BT 32

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.9	32.66	25.74	
8	5.70	32.68	25.78	.637
17	5.73	32.68	25.78	.627
26		32.68		.588
44	5.06	33.02	26.12	.594
68	4.52			.522
90	4.38	33.23	26.36	.454
113	4.16	33.34	26.47	.435
136	4.08	33.38	26.51	.418
182	4.04	33.58	26.68	.332
226	4.20	33.77	26.81	.228
296	4.02	33.93	26.96	.137

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.9	32.66	25.74	226.2	.000	
10	5.70	32.68	25.78	222.6	.022	.637
20	5.78	32.67	25.76	224.3	.044	.611
30	5.60	32.77	25.86	214.9	.066	.594
50	4.89	33.06	26.17	185.6	.106	.576
75	4.48	33.17	26.31	173.3	.151	.495
100	4.27	33.29	26.42	162.3	.193	.445
150	4.05	33.44	26.56	149.2	.271	.394
200	4.13	33.67	26.74	133.2	.342	.285
250	4.17	33.82	26.85	122.8	.406	.185
* 300	4.00	33.94	26.97	112.5	.465	.135

MV TORDENSKJOLD
STATION 17

52-04 N 176-19 W 20 JUN 1959 1937 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 145 07 KTS SEA 3
SWELL AMT 0 BAR 1023 MBS DRY WET BT 34

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.5	33.13	26.16	
10	5.28	33.14	26.19	.616
20	5.08	33.14	26.22	.630
30	4.87	33.13	26.23	.582
49	4.52	33.15	26.29	.582
73	4.44	33.17	26.31	.543
98	3.98	33.22	26.40	.538
122	3.67	33.30	26.49	.515
146	3.42	33.32	26.53	.525
194	3.19	33.33	26.56	.543
243	3.50	33.40	26.59	.442
316	3.78	33.78	26.86	.199

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.5	33.13	26.16	186.5	.000	
10	5.28	33.14	26.19	183.4	.018	.616
20	5.08	33.14	26.22	181.3	.036	.630
30	4.87	33.13	26.23	179.9	.054	.582
50	4.52	33.15	26.29	175.0	.089	.580
75	4.40	33.17	26.31	172.4	.132	.543
100	3.95	33.23	26.41	163.7	.174	.535
150	3.38	33.32	26.53	151.8	.253	.531
200	3.23	33.33	26.56	150.0	.328	.533
250	3.54	33.42	26.60	146.5	.402	.423
300	3.74	33.67	26.78	130.0	.471	.262

MV TORDENSKJOLD
STATION 18

52-59 N 175-00 W 21 JUN 1959 0714-0817 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 080 10 KTS SEA 3
SWELL AMT 0 BAR 1025 MBS DRY WET BT 37

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.6	33.12	26.14	
10	5.69	33.10	26.11	.668
20	5.66	33.10	26.12	.668
30	5.48	33.10	26.14	.663
50	4.95	33.14	26.23	.640
74	4.14	33.16	26.33	.590
98	3.98	33.17	26.36	.579
123	3.88	33.19	26.38	.561
148	3.91	33.24	26.42	.543
197	3.60	33.31	26.50	.525
246	3.49	33.37	26.56	.481
296	3.86	33.53	26.65	.358
* 660	3.38	34.15	27.19	.064

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5 S$	$\triangle D$	OXY
0	5.6	33.12	26.14	188.3	.000	
10	5.69	33.10	26.11	191.0	.019	.668
20	5.66	33.10	26.12	190.7	.038	.668
30	5.48	33.10	26.14	188.8	.057	.663
50	4.95	33.14	26.23	180.2	.094	.640
75	4.13	33.16	26.33	170.5	.138	.590
100	3.97	33.17	26.36	168.4	.180	.578
150	3.89	33.24	26.42	162.7	.263	.543
200	3.58	33.31	26.51	154.8	.342	.524
250	3.52	33.38	26.57	149.3	.418	.470
* 300	3.88	33.54	26.66	141.2	.491	.349

MV TORDENSKJOLD
STATION 19

53-37 N 175-27 W 22 JUN 1959 0112 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 050 07 KTS SEA 3
SWELL 050 AMT 1 BAR 1025 MBS DRY WET BT 39

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.2	33.13	26.07	
10	5.68	33.10	26.11	
20	5.58	33.10	26.13	
30	5.12	33.11	26.19	
50	4.66	33.12	26.25	
75	3.88	33.19	26.38	
100	3.74	33.26	26.45	
125	3.44	33.28	26.50	
150	3.46	33.29	26.50	
200	3.49	33.40	26.59	
250	3.82	33.56	26.68	
325	3.91	33.78	26.85	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.2	33.13	26.07	194.6	.000	
10	5.68	33.10	26.11	190.9	.019	
20	5.58	33.10	26.13	189.8	.038	
30	5.12	33.11	26.19	184.1	.057	
50	4.66	33.12	26.25	178.7	.093	
75	3.88	33.19	26.38	165.8	.136	
100	3.74	33.26	26.45	159.4	.177	
150	3.46	33.29	26.50	154.8	.256	
200	3.49	33.40	26.59	147.2	.332	
250	3.82	33.56	26.68	138.7	.403	
300	3.93	33.71	26.79	129.0	.470	

MV TORDENSKJOLD
STATION 20

54-00 N 176-00 W 22 JUN 1959 0650-0727 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 070 05 KTS SEA 3
SWELL 070 AMT 1 BAR 1025 MBS DRY WET BT 41

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.8	33.13	26.12	
10	5.66	33.12	26.13	.680
20	5.48	33.13	26.16	.685
30	5.11	33.15	26.22	.655
50	4.15	33.18	26.35	.666
75	3.08	33.21	26.47	.647
100	2.78	33.24	26.52	.622
125	2.36	33.23	26.55	.633
150	2.45	33.24	26.55	.615
200	3.78	33.60	26.72	.230
250	3.78	33.75	26.84	.202
300	3.77	33.87	26.93	.145
*368	3.71	34.00	27.04	.093
464	3.64	34.11	27.14	.066
660	3.24	34.24	27.28	
1002	2.82	34.32	27.38	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.8	33.13	26.12	189.9	.000	
10	5.66	33.12	26.13	189.1	.019	.680
20	5.48	33.13	26.16	186.5	.038	.685
30	5.11	33.15	26.22	181.0	.056	.655
50	4.15	33.18	26.35	169.0	.091	.666
75	3.08	33.21	26.47	157.0	.132	.647
100	2.78	33.24	26.52	152.4	.171	.622
150	2.45	33.24	26.55	149.9	.247	.615
200	3.78	33.60	26.72	134.9	.318	.230
250	3.78	33.75	26.84	124.1	.383	.202
300	3.77	33.87	26.93	115.4	.443	.145
400	3.70	34.04	27.08	102.7	.552	.083
500	3.56	34.14	27.17	094.5	.651	.063
600	3.35	34.21	27.24	087.8	.742	.056
700	3.17	34.26	27.30	082.9	.827	.050
800	3.03	34.30	27.35	079.1	.908	.046
1000	2.82	34.32	27.38	076.6	1.064	.044

MV TORDENSKJOLD
STATION 21

54-30 N 176-00 W 23 JUN 1959 0237 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 060 10 KTS SEA 3
SWELL 060 AMT 1 BAR 1026 MBS DRY WET BT 43

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.1	33.16	26.11	
10	5.82	33.13	26.12	
20	5.77	33.13	26.13	
30	5.56	33.13	26.15	
50	4.44	33.17	26.31	
74	3.41	33.20	26.44	
98	3.01	33.24	26.50	
122	2.50	33.24	26.55	
147	2.61	33.26	26.55	
196	3.24	33.44	26.64	
246	3.93	33.73	26.81	
321	3.80	33.87	26.93	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.1	33.16	26.11	191.2	.000	
10	5.82	33.13	26.12	190.2	.019	
20	5.77	33.13	26.13	189.8	.038	
30	5.56	33.13	26.15	187.5	.057	
50	4.44	33.17	26.31	172.6	.093	
75	3.40	33.20	26.44	160.6	.135	
100	2.94	33.24	26.51	153.7	.174	
150	2.65	33.27	26.56	149.2	.250	
200	3.32	33.47	26.66	140.3	.322	
250	3.96	33.75	26.82	125.9	.389	
300	3.98	33.87	26.91	117.5	.450	

MV TORDENSKJOLD
STATION 22

55-00 N 176-00 W 23 JUN 1959 0723-0826 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 060 05 KTS SEA 3
SWELL 060 AMT 1 BAR 1026 MBS DRY WET BT 45

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.2	33.11	26.06	
8	6.10	33.08	26.05	.685
16	5.69	33.08	26.10	.660
24		33.12		.673
42	4.02	33.19	26.37	.654
62	3.35	33.20	26.44	.625
84	3.23	33.21	26.46	.161
105	3.11	33.24	26.49	
126	3.02	33.25	26.51	.589
168	2.69	33.49	26.73	.584
210	3.72	33.62	26.74	.385
*252	3.93	33.91	26.95	.271
375	3.76	34.06	27.09	.122
472	3.58	34.22	27.23	.096
671	3.32			.052

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.2	33.11	26.06	196.1	.000	
10	6.00	33.08	26.06	196.1	.020	.675
20	5.45	33.10	26.14	188.4	.039	.668
30	4.75	33.15	26.26	177.1	.057	.667
50	3.69	33.19	26.40	163.9	.091	.639
75	3.28	33.20	26.45	159.6	.131	.628
100	3.14	33.23	26.48	156.2	.170	.609
150	2.66	33.40	26.66	139.5	.244	.610
200	3.55	33.57	26.72	135.0	.313	.425
250	3.92	33.90	26.94	114.2	.375	.276
300	3.87	33.96	26.99	109.6	.431	.197
400	3.71	34.11	27.13	097.6	.535	.115
500	3.53	34.26	27.27	085.3	.626	.089
600	3.40	34.35	27.35	077.9	.708	.066

MV TORDENSKJOLD
STATION 23

55-30 N 176-00 W 24 JUN 1959 0233 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 050 07 KTS SEA 3
SWELL 050 AMT 1 BAR 1026 MBS DRY WET BT 46

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.5	33.09	26.00	
10	6.32	33.09	26.03	
20	5.66	33.12	26.13	
30	5.48	33.12	26.15	
50	4.14	33.18	26.35	
74	3.43	33.20	26.43	
98	3.18	33.22	26.47	
123	3.16	33.27	26.51	
147	2.94	33.26	26.53	
196	3.36	33.40	26.60	
246	3.87	33.64	26.74	
321	3.86	33.84	26.90	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.5	33.09	26.00	201.2	.000	
10	6.32	33.09	26.03	199.1	.020	
20	5.66	33.12	26.13	189.2	.039	
30	5.48	33.12	26.15	187.3	.058	
50	4.14	33.18	26.35	168.9	.094	
75	3.41	33.20	26.44	160.7	.135	
100	3.19	33.23	26.48	156.6	.175	
150	2.96	33.27	26.53	151.9	.252	
200	3.42	33.42	26.61	145.0	.326	
250	3.89	33.66	26.75	131.9	.395	
300	3.96	33.80	26.86	122.5	.459	

MV TORDENSKJOLD
STATION 24

56-00 N 176-00 W 24 JUN 1959 0652-0755 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 050 02 KTS SEA 3
SWELL 050 AMT 1 BAR 1026 MBS DRY WET BT 47

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.1	32.80	25.83	
10	5.90	32.75	25.81	.692
20	5.44	32.75	25.87	.669
30	4.99	32.80	25.96	.670
50	3.95	33.03	26.25	.622
75	3.72	33.15	26.37	.557
100	3.33	33.21	26.45	.604
125	3.12	33.24	26.49	
149	2.94	33.26	26.53	.595
199	3.10	33.34	26.58	.520
248	3.83	33.64	26.74	.282
*298	3.85	33.77	26.85	.208
*386	3.71	33.95	27.00	.129
485	3.56	34.05	27.10	.084
684	3.26	34.25	27.28	.042
1030	2.76	34.38	27.43	.042

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.1	32.80	25.83	218.1	.000	
10	5.90	32.75	25.81	219.6	.022	.692
20	5.44	32.75	25.87	214.5	.044	.669
30	4.99	32.80	25.96	206.0	.065	.670
50	3.95	33.03	26.25	178.4	.103	.622
75	3.72	33.15	26.37	167.3	.146	.557
100	3.33	33.21	26.45	159.4	.187	.604
150	2.94	33.26	26.53	152.4	.265	.595
200	3.12	33.35	26.58	147.5	.340	.513
250	3.83	33.65	26.75	132.1	.410	.279
300	3.85	33.77	26.85	123.7	.474	.206
400	3.69	33.96	27.01	108.6	.590	.122
500	3.54	34.07	27.11	099.6	.694	.080
600	3.39	34.18	27.22	090.5	.789	.056
700	3.24	34.26	27.29	083.7	.876	.040
800	3.09	34.32	27.36	078.3	.957	.032
1000	2.80	34.38	27.43	072.0	1.107	.038

MV TORDENSKJOLD
STATION 25

56-30 N 175-34 W 25 JUN 1959 0050 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 290 03 KTS SEA 3
SWELL 270 AMT 1 BAR 1027 MBS DRY WET BT 48

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.5	32.54	25.44	
10	6.52	32.65	25.66	
20	5.44	32.65	25.79	
30	5.37	32.65	25.80	
50	4.97	32.87	26.01	
75	3.82	32.94	26.19	
99	3.84	33.05	26.28	
124	3.74	33.14	26.36	
148	3.59			
197	3.08	33.22	26.48	
246	3.06	33.31	26.55	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.5	32.54	25.44	255.1	.000	
10	6.52	32.65	25.66	234.5	.024	
20	5.44	32.65	25.79	222.0	.047	
30	5.37	32.65	25.80	221.3	.069	
50	4.97	32.87	26.01	200.7	.111	
75	3.82	32.94	26.19	184.1	.159	
100	3.84	33.05	26.28	176.1	.204	
150	3.56	33.17	26.40	164.8	.289	
200	3.06	33.22	26.48	156.8	.369	

MV TORDENSKJOLD
STATION 26

57-00 N 175-00 W 25 JUN 1959 0657-0823 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 290 03 KTS SEA 3
SWELL 280 AMT 1 BAR 1027 MBS DRY WET BT 49

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.7	32.80	25.75	
10	6.60	32.79	25.75	.678
20	5.64	32.84	25.91	.672
30	5.46	32.89	25.97	.666
50	4.12	32.86	26.10	.633
74	3.98	33.00	26.22	.622
99	3.86	33.14	26.34	.596
123	3.44	33.14	26.38	.625
148	3.23	33.20	26.45	.623
197	3.23	33.21	26.46	.557
246	3.52	33.30	26.50	.442
295	3.84	33.40	26.55	.303
*376	3.85	33.73	26.81	.233
473	3.72	33.96	27.01	.122
670	3.40	34.14	27.18	.067
1015	2.89	34.33	27.38	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	$\triangle D$	OXY
0	6.7	32.80	25.75	225.4	.000	
10	6.60	32.79	25.75	225.0	.023	.678
20	5.64	32.84	25.91	210.0	.045	.672
30	5.46	32.89	25.97	204.3	.066	.666
50	4.12	32.86	26.10	192.8	.106	.633
75	3.98	33.01	26.23	180.3	.153	.620
100	3.84	33.14	26.35	169.4	.197	.598
150	3.22	33.20	26.45	159.4	.279	.621
200	3.25	33.22	26.47	158.5	.358	.551
250	3.55	33.31	26.51	154.8	.436	.428
300	3.84	33.42	26.57	149.8	.512	.299
400	3.82	33.80	26.87	121.9	.648	.200
500	3.67	33.99	27.04	106.9	.762	.113
600	3.51	34.08	27.13	099.2	.865	.083
700	3.35	34.16	27.20	092.3	.961	.061
800	3.20	34.23	27.27	086.2	1.050	.048
1000	2.91	34.32	27.37	077.6	1.214	.044

MV TORDENSKJOLD
STATION 27

57-16 N 174-21 W 26 JUN 1959 0003 GCT
WEATHER 01 CLOUDS 8 AMT 5 WIND 250 10 KTS SEA 3
SWELL 280 AMT 1 BAR 1025 MBS DRY WET BT 50

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.0	32.90	25.79	
10	6.92	32.89	25.79	
20	6.04	32.96	25.96	
30	5.82	32.96	25.99	
49	5.34	32.98	26.06	
74	3.95	33.07	26.28	
99	3.76	33.14	26.35	
123	3.60	33.19	26.41	
148	3.48	33.23	26.45	
197	2.96	33.26	26.52	
246	3.60	33.37	26.55	
320	3.90	33.61	26.71	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.0	32.90	25.79	221.7	.000	
10	6.92	32.89	25.79	221.6	.022	
20	6.04	32.96	25.96	205.7	.043	
30	5.82	32.96	25.99	203.2	.063	
50	5.26	32.98	26.07	195.6	.103	
75	3.94	33.07	26.28	175.4	.149	
100	3.75	33.14	26.36	168.5	.192	
150	3.44	33.23	26.46	159.2	.274	
200	3.01	33.27	26.53	152.6	.352	
250	3.64	33.38	26.56	150.4	.428	
300	3.90	33.54	26.66	141.4	.501	

MV TORDENSKJOLD
STATION 28

57-23 N 173-54 W 26 JUN 1959 0235 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 270 07 KTS SEA 3
SWELL 270 AMT 1 BAR 1024 MBS DRY WET BT 51

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.2	32.76	25.65	
10	6.60	32.75	25.72	.678
19	5.62	32.76	25.85	.631
29	5.48	32.76	25.87	.653
48	5.24	32.81	25.94	.648
73	4.13	32.89	26.12	.596
97	3.86	32.94	26.19	.588
122	3.83	32.99	26.23	
146	3.62	33.12	26.35	.563
196	3.59	33.15	26.38	.552
245	3.48	33.23	26.45	.544
319	3.69	33.49	26.64	.384

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.2	32.76	25.65	234.7	.000	
10	6.60	32.75	25.72	228.0	.023	.678
20	5.61	32.76	25.85	215.7	.045	.634
30	5.48	32.76	25.87	214.3	.066	.653
50	5.12	32.82	25.96	206.1	.108	.642
75	4.10	32.89	26.12	190.5	.158	.596
100	3.87	32.94	26.18	184.7	.205	.586
150	3.62	33.12	26.35	169.1	.293	.562
200	3.57	33.15	26.38	166.7	.377	.554
250	3.48	33.24	26.46	159.4	.459	.539
300	3.59	33.41	26.59	148.0	.536	.442

MV TORDENSKJOLD
STATION 29

57-44 N 173-12 W 26 JUN 1959 0650 GCT
WEATHER 01 CLOUDS 6 AMT 6 WIND 270 05 KTS SEA 3
SWELL 270 AMT 1 BAR 1023 MBS DRY WET BT 53

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.6	32.43	25.47	
10	6.36	32.42	25.49	
20	5.18	32.47	25.67	
30	5.34	32.58	25.74	
40	5.36	32.74	25.87	
50	5.49	32.75	25.86	
70	3.98	32.66	25.95	
90	3.38	32.81	26.13	
110	3.20	32.77	26.11	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.6	32.43	25.47	251.8	.000	
10	6.36	32.42	25.49	249.7	.025	
20	5.18	32.47	25.67	232.7	.049	
30	5.34	32.58	25.74	226.3	.072	
50	5.49	32.75	25.86	215.4	.116	
75	3.79	32.72	26.02	200.3	.168	
100	3.24	32.81	26.14	188.7	.217	

MV TORDENSKJOLD
STATION 30

58-22 N 171-35 W 26 JUN 1959 2019 GCT
WEATHER 01 CLOUDS 6 AMT 5 WIND 320 05 KTS SEA 3
SWELL 320 AMT 1 BAR 1020 MBS DRY WET BT 55

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.0	32.36	25.49	
10	4.66	32.38	25.66	
20	4.44	32.39	25.69	
30	2.16	32.36	25.87	
40	1.56	32.38	25.93	
50	1.58	32.38	25.93	
70	1.57	32.39	25.94	
90	1.53	32.39	25.94	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	6.0	32.36	25.49	249.9	.000	
10	4.66	32.38	25.66	233.9	.024	
20	4.44	32.39	25.69	231.1	.047	
30	2.16	32.36	25.87	213.9	.069	
50	1.58	32.38	25.93	208.5	.111	
75	1.56	32.39	25.94	207.6	.163	

MV TORDENSKJOLD
STATION 31

59-00 N 170-00 W 27 JUN 1959 0646 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 320 08 KTS SEA 4
SWELL 320 AMT 2 BAR 1020 MBS DRY WET BT 57

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.6	31.72	25.14	
10	4.58	31.72	25.15	.745
20	2.84	31.81	25.38	.745
30	2.46	31.83	25.43	.456
40	- 0.15	31.85	25.60	.607
50	- 0.18	31.87	25.61	.513

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	4.6	31.72	25.14	282.9	.000	
10	4.58	31.72	25.15	282.8	.028	.745
20	2.84	31.81	25.38	260.7	.055	.745
30	2.46	31.83	25.43	256.3	.081	.456
50	- 0.18	31.87	25.61	238.1	.130	.513

MV TORDENSKJOLD
STATION 32

58-30 N 170-00 W 28 JUN 1959 0125 GCT
WEATHER 50 CLOUDS X AMT 9 WIND 320 15 KTS SEA 4
SWELL 320 AMT 2 BAR 1020 MBS DRY WET BT 58

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.9	31.82	25.19	
10	4.80	31.83	25.21	
20	3.40	31.82	25.34	
30	3.26	31.83	25.36	
40	- 0.12	31.93	25.66	
50	- 0.16	31.94	25.67	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	4.9	31.82	25.19	278.4	.000	
10	4.80	31.83	25.21	276.7	.028	
20	3.40	31.82	25.34	264.5	.055	
30	3.26	31.83	25.36	262.6	.081	
50	- 0.16	31.94	25.67	232.8	.131	

MV TORDENSKJOLD
STATION 33

58-00 N 170-00 W 28 JUN 1959 0655 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 320 12 KTS SEA 4
SWELL 320 AMT 4 BAR 1088 MBS DRY WET BT 59

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.0	31.83	25.19	
10	4.91	31.84	25.21	.724
20	3.71	31.96	25.42	.647
30	0.95	31.92	25.60	.688
40	0.90	31.93	25.61	.672
50	0.88	31.97	25.64	.624

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	5.0	31.83	25.19	278.7	.000	
10	4.91	31.84	25.21	277.1	.028	.724
20	3.71	31.96	25.42	256.6	.055	.647
30	0.95	31.92	25.60	239.7	.080	.688
50	0.88	31.97	25.64	235.5	.128	.624

MV TORDENSKJOLD
STATION 34

57-30 N 170-04 W 29 JUN 1959 0120 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 320 10 KTS SEA 4
SWELL 270 AMT 3 BAR 1022 MBS DRY WET BT 60

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	5.5	31.93	25.21	
10	5.31	31.95	25.25	
20	4.38	32.04	25.42	
30	2.76	32.05	25.58	
40	1.88	32.07	25.66	
50	1.87	32.08	25.67	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	5.5	31.93	25.21	276.5	.000	
10	5.31	31.95	25.25	273.0	.027	
20	4.38	32.04	25.42	256.8	.053	
30	2.76	32.05	25.58	241.9	.078	
50	1.87	32.08	25.67	233.2	.126	

MV TORDENSKJOLD
STATION 35

56-56 N 170-06 W 29 JUN 1959 0700 GCT
WEATHER 47 CLOUDS X AMT 9 WIND 270 05 KTS SEA 3
SWELL 270 AMT 2 BAR 1022 MBS DRY WET BT 61

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.0	31.95	25.39	
10	3.95	32.00	25.43	.775
20	3.96	32.12	25.53	.783
30	3.57	32.15	25.59	.693
40	3.52	32.16	25.60	.679
50	3.50	32.16	25.60	.653

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	4.0	31.95	25.39	259.9	.000	
10	3.95	32.00	25.43	255.7	.026	.775
20	3.96	32.12	25.53	246.8	.051	.783
30	3.57	32.15	25.59	241.1	.075	.693
50	3.50	32.16	25.60	239.8	.123	.653

MV TORDENSKJOLD
STATION 36

56-29 N 170-03 W 30 JUN 1959 0035 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 360 07 KTS SEA 2
SWELL 360 AMT 1 BAR 1022 MBS DRY WET BT 63

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	4.6	32.12	25.46	
10	4.37	32.10	25.47	.786
20	3.98	32.11	25.52	.718
30	3.84	32.13	25.54	.598
50	3.38	32.24	25.67	.455
75	3.26	32.18	25.64	.631
100	2.70	32.32	25.80	.563

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	4.6	32.12	25.46	252.8	.000	
10	4.37	32.10	25.47	252.1	.025	.786
20	3.98	32.11	25.52	247.7	.050	.718
30	3.84	32.13	25.54	245.0	.075	.598
50	3.38	32.24	25.67	232.7	.123	.455
75	3.26	32.18	25.64	236.3	.182	.631
100	2.70	32.32	25.80	221.2	.239	.563

MV TORDENSKJOLD
STATION 37

55-59 N 170-00 W 30 JUN 1959 0631 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 280 07 KTS SEA 2
SWELL 300 AMT 1 BAR 1022 MBS DRY WET BT 65

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.8	32.08	25.17	
10	6.64			.675
19	6.42	32.29	25.38	.703
29	5.40	32.43	25.62	.641
48	3.92	32.60	25.91	.590
72	3.54	32.73	26.05	.577
96	3.55	32.89	26.18	
120	3.72	33.05	26.29	.552
144	3.80	33.13	26.34	.568
192	3.50	33.22	26.44	.547
241	3.58	33.34	26.53	.428
314	3.73	33.69	26.79	.290

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.8	32.08	25.17	280.4	.000	
10	6.64	32.21	25.29	268.9	.027	.675
20	6.31	32.31	25.41	257.5	.053	.696
30	5.30	32.44	25.64	236.3	.078	.637
50	3.87	32.61	25.92	209.2	.123	.589
75	3.53	32.75	26.07	195.7	.174	.576
100	3.58	32.92	26.20	183.5	.221	.561
150	3.74	33.14	26.36	168.8	.309	.571
200	3.51	33.23	26.45	160.1	.391	.526
250	3.60	33.37	26.55	150.8	.469	.408
300	3.70	33.61	26.73	134.1	.540	.313

MV TORDENSKJOLD
STATION 38

55-30 N 170-10 W 01 JUL 1959 0133 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 320 20 KTS SEA 4
SWELL 320 AMT 3 BAR 1022 MBS DRY WET BT 67

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.9	32.95	25.84	
10	6.88	32.93	25.83	
20	6.89	32.92	25.82	
30	6.61	32.94	25.87	
50	5.54	33.02	26.07	
75	4.52	33.07	26.22	
99	3.91	33.17	26.36	
124	3.82	33.23	26.42	
148	3.64	33.26	26.46	
198	3.06	33.28	26.53	
247	3.74	33.48	26.63	
321	3.84	33.67	26.77	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	10 δ	$\triangle D$	OXY
0	6.9	32.95	25.84	216.7	.000	
10	6.88	32.93	25.83	218.1	.022	
20	6.89	32.92	25.82	219.1	.044	
30	6.61	32.94	25.87	214.2	.066	
50	5.54	33.02	26.07	195.7	.107	
75	4.52	33.07	26.22	181.2	.154	
100	3.91	33.17	26.36	167.8	.198	
150	3.59	33.26	26.47	158.3	.280	
200	3.10	33.29	26.54	151.9	.358	
250	3.77	33.49	26.63	143.5	.432	
300	3.92	33.63	26.73	134.9	.502	

MV TORDENSKJOLD
STATION 39

55-01 N 170-03 W 01 JUL 1959 0737-0830 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 320 15 KTS SEA 3
SWELL 320 AMT 2 BAR 1023 MBS DRY WET BT 69

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.2	32.56	25.49	
10	7.20	32.56	25.49	.633
20	5.62	32.62	25.74	.680
30	5.30	32.65	25.80	.673
50	3.50	32.68	26.01	.634
75	3.33	32.73	26.07	.628
100	3.41	32.83	26.14	.591
125	3.62	32.89	26.17	.578
150	3.82	32.97	26.21	.558
200	3.88	33.13	26.33	.514
250	3.76	33.19	26.39	.532
* 300	3.62	33.30	26.50	.502
396	3.95	33.58	26.69	.315
496	3.85	33.78	26.85	.212
694	3.52	34.09	27.13	.088
1040	3.03	34.31	27.35	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.2	32.56	25.49	249.7	.000	
10	7.20	32.56	25.49	249.8	.025	.633
20	5.62	32.62	25.74	226.3	.049	.680
30	5.30	32.65	25.80	220.6	.071	.673
50	3.50	32.68	26.01	200.6	.113	.634
75	3.33	32.73	26.07	195.4	.162	.628
100	3.41	32.83	26.14	188.7	.210	.591
150	3.82	32.97	26.21	182.3	.303	.558
200	3.88	33.13	26.33	171.2	.391	.514
250	3.76	33.19	26.39	165.9	.475	.532
300	3.62	33.30	26.50	156.6	.556	.502
400	3.95	33.59	26.69	138.9	.704	.310
500	3.84	33.79	26.86	123.6	.835	.209
600	3.67	33.96	27.01	109.9	.952	.138
700	3.51	34.10	27.14	098.5	1.056	.085
800	3.36	34.20	27.24	090.1	1.150	.051
1000	3.08	34.31	27.35	080.2	1.320	.039

MV TORDENSKJOLD
STATION 40

54-30 N 170-00 W 02 JUL 1959 0052 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 320 05 KTS SEA 2
SWELL 320 AMT 1 BAR 1023 MBS DRY WET BT 71

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.4	32.67	25.55	
10	7.25	32.66	25.57	
20	7.14	32.67	25.59	
28	6.16	32.67	25.72	
48	4.90	32.80	25.97	
72	3.74	32.88	26.15	
96	3.75	32.94	26.20	
120	3.77	33.04	26.27	
144	3.85	33.11	26.32	
192	3.67	33.18	26.39	
240	3.56	33.25	26.46	
314	3.94	33.47	26.60	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.4	32.67	25.55	244.1	.000	
10	7.25	32.66	25.57	243.0	.024	
20	7.14	32.67	25.59	240.9	.048	
30	6.02	32.69	25.75	225.7	.071	
50	4.76	32.81	25.99	203.0	.114	
75	3.74	32.89	26.16	187.1	.163	
100	3.75	32.96	26.21	182.1	.209	
150	3.82	33.12	26.33	171.0	.297	
200	3.63	33.19	26.41	164.3	.381	
250	3.57	33.27	26.48	158.0	.462	
300	3.82	33.42	26.57	149.6	.539	

MV TORDENSKJOLD
STATION 41

53-58 N 170-01 W 02 JUL 1959 0550-0640 GCT
WEATHER 40 CLOUDS 6 AMT 8 WIND 320 03 KTS SEA 3
SWELL 320 AMT 2 BAR 1023 MBS DRY WET BT 73

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.3	32.81	25.68	
10	5.17	32.95	26.06	.543
20	4.94	33.00	26.12	.523
30	4.90	33.05	26.16	.506
50	4.51	33.15	26.29	.429
75	3.94	33.19	26.38	.461
99	3.75	33.25	26.44	.500
124	4.04	33.34	26.49	.413
149	4.10	33.41	26.53	.372
198	3.99	33.50	26.62	.323
247	3.94	33.57	26.68	.322
296	3.85	33.64	26.74	.275
* 386	3.82	33.76	26.84	.243
482	3.72	33.95	27.00	.128
680	3.34	34.14	27.19	.077
1027	2.86	34.35	27.40	.049

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	7.3	32.81	25.68	232.3	.000	
10	5.17	32.95	26.06	196.4	.021	.543
20	4.94	33.00	26.12	190.3	.040	.523
30	4.90	33.05	26.16	186.2	.059	.506
50	4.51	33.15	26.29	174.9	.095	.429
75	3.94	33.19	26.38	166.4	.138	.461
100	3.77	33.25	26.44	160.4	.179	.496
150	4.10	33.41	26.53	152.0	.257	.371
200	3.99	33.50	26.62	144.5	.331	.324
250	3.93	33.57	26.68	139.1	.402	.319
300	3.85	33.64	26.74	133.4	.470	.275
400	3.81	33.79	26.87	122.5	.598	.223
500	3.68	33.97	27.02	108.5	.713	.122
600	3.48	34.07	27.12	099.6	.817	.095
700	3.31	34.16	27.21	091.9	.913	.073
800	3.15	34.23	27.28	085.6	1.002	.058
1000	2.89	34.34	27.39	075.9	1.164	.048

MV TORDENSKJOLD
STATION 42

53-18 N 170-00 W 03 JUL 1959 0610-0640 GCT
WEATHER 40 CLOUDS 6 AMT 8 WIND 290 08 KTS SEA 3
SWELL 290 AMT 2 BAR 1024 MBS DRY WET BT 75

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.6	32.97	25.76	
10	7.60	32.97	25.76	.634
20	6.79	32.95	25.86	.646
30	6.08	32.99	25.98	.646
50	5.10	33.06	26.15	.594
75	4.64	33.20	26.31	.476
100	4.35	33.26	26.39	.455
125	4.08	33.28	26.43	.477
150	3.98	33.35	26.50	.460
200	3.74	33.42	26.58	.412
250	3.90	33.59	26.70	.321
300	3.82	33.65	26.75	.270
*394	3.81	33.81	26.88	.224
492	3.64	33.98	27.03	.137
690	3.26	34.22	27.26	.075
1034	2.84	34.37	27.42	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.6	32.97	25.76	224.4	.000	
10	7.60	32.97	25.76	224.5	.022	.634
20	6.79	32.95	25.86	215.6	.044	.646
30	6.08	32.99	25.98	204.0	.065	.646
50	5.10	33.06	26.15	187.8	.104	.594
75	4.64	33.20	26.31	172.7	.149	.476
100	4.35	33.26	26.39	165.4	.191	.455
150	3.98	33.35	26.50	155.3	.271	.460
200	3.74	33.42	26.58	148.1	.347	.412
250	3.90	33.59	26.70	137.3	.418	.321
300	3.82	33.65	26.75	132.3	.485	.270
400	3.80	33.82	26.89	120.2	.611	.218
500	3.62	33.99	27.04	106.4	.724	.134
600	3.42	34.12	27.17	095.3	.825	.099
700	3.24	34.23	27.27	085.9	.916	.073
800	3.09	34.30	27.34	079.8	.999	.054
1000	2.87	34.37	27.42	073.5	1.152	.043

MV TORDENSKJOLD
STATION 43

53-10 N 169-57 W 03 JUL 1959 0342 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 290 18 KTS SEA 4
SWELL 230 AMT 3 BAR 1028 MBS DRY WET BT 76

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	6.1	32.86	25.87	
10	5.76	33.08	26.09	.531
20	5.49	33.13	26.16	.499
29	5.44	33.13	26.17	.494
48	4.82	33.25	26.33	.446
73	4.40	33.26	26.38	.479
98	4.43	33.27	26.39	.455
122	4.10	33.33	26.47	.440
147	4.26	33.38	26.49	.397
196	3.92	33.70	26.78	.262
246	3.72	33.85	26.92	.200
321	3.64	33.89	26.96	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	6.1	32.86	25.87	213.6	.000	
10	5.76	33.08	26.09	193.3	.020	.531
20	5.49	33.13	26.16	186.6	.039	.499
30	5.40	33.14	26.18	184.9	.058	.490
50	4.77	33.25	26.34	170.0	.093	.451
75	4.42	33.26	26.38	165.9	.135	.477
100	4.38	33.28	26.40	164.2	.176	.455
150	4.24	33.40	26.51	154.2	.256	.387
200	3.90	33.72	26.80	127.1	.326	.256
250	3.71	33.86	26.93	115.1	.387	.197
300	3.64	33.90	26.97	111.8	.444	.171

MV TORDENSKJOLD
STATION 44

52-21 N 169-53 W 04 JUL 1959 0514 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 270 15 KTS SEA 4
SWELL 270 AMT 3 BAR 1030 MBS DRY WET BT 79

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	7.8	32.36	25.25	
8	7.43	32.35	25.30	.628
17	7.16	32.35	25.33	.589
24		32.42		.552
38	4.94	32.56	25.77	.523
59	4.78	32.74	25.93	.529
78	4.92	32.90	26.04	.456
97	5.07	33.18	26.25	.390
116	5.06	33.35	26.38	.361
159	4.67	33.60	26.63	.241
202	4.64	33.78	26.77	.200
267	4.44	33.91	26.90	.141

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	7.8	32.36	25.25	272.5	.000	
10	7.57	32.34	25.27	271.0	.027	.620
20	6.26	32.38	25.48	251.7	.053	.571
30	5.15	32.48	25.69	231.7	.077	.536
50	4.81	32.66	25.87	214.8	.122	.538
75	4.90	32.87	26.02	200.2	.174	.467
100	5.07	33.21	26.27	176.7	.221	.386
150	4.72	33.55	26.58	147.9	.302	.260
200	4.64	33.77	26.76	131.1	.372	.202
250	4.51	33.89	26.87	121.2	.435	.156

MV TORDENSKJOLD
STATION 45

52-00 N 169-53 W 04 JUL 1959 0751-0828 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 270 20 KTS SEA 3
SWELL 270 AMT 2 BAR 1030 MBS DRY WET BT 80

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.7	32.61	25.32	
10	8.68	32.61	25.32	.603
20	8.58	32.61	25.34	.623
30	8.08	32.63	25.43	.616
48	6.14	32.75	25.78	.628
73	4.37	32.91	26.11	.606
98	3.81	33.06	26.29	.547
123	4.05	33.34	26.48	.384
147	4.05	33.53	26.64	.348
196	4.39	33.92	26.91	.128
246	4.02	33.96	26.98	.108
*295	4.00	34.03	27.04	.060
*375	3.84	34.09	27.10	.038
472	3.70	34.14	27.15	.037
664	3.41	34.25	27.27	.032
1010	2.77	34.41	27.46	.038

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.7	32.61	25.32	266.5	.000	
10	8.68	32.61	25.32	266.4	.027	.603
20	8.58	32.61	25.34	265.1	.054	.623
30	8.08	32.63	25.43	256.7	.080	.616
50	5.95	32.76	25.81	219.9	.128	.628
75	4.30	32.92	26.13	190.2	.179	.605
100	3.84	33.09	26.31	173.1	.224	.529
150	4.09	33.56	26.66	140.6	.302	.329
200	4.35	33.92	26.91	116.8	.366	.127
250	4.02	33.97	26.99	110.0	.423	.103
300	3.99	34.03	27.04	105.6	.477	.058
400	3.80	34.10	27.11	099.2	.579	.038
500	3.66	34.16	27.17	094.1	.676	.036
600	3.51	34.21	27.23	089.5	.768	.033
700	3.35	34.27	27.29	084.1	.855	.032
800	3.18	34.32	27.35	079.3	.937	.032
1000	2.79	34.41	27.46	069.6	1.086	.038

MV TORDENSKJOLD
STATION 46

51-00 N 169-56 W 05 JUL 1959 0640-0722 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 000 00 KTS SEA 2
SWELL 270 AMT 1 BAR 1025 MBS DRY WET BT 82

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.0	32.75	25.53	
10	7.66	32.76	25.59	
20	7.34	32.79	25.66	
30	6.06	32.84	25.86	
50	5.14	32.84	25.97	
75	4.04	32.91	26.14	
100	3.72	33.00	26.25	
125	3.56	33.13	26.37	
150	3.68	33.49	26.64	
200	3.42	33.83	26.94	
250	3.76	33.97	27.01	
300	3.62	34.03	27.08	
*386	3.42	34.08	27.13	
484	3.40	34.16	27.20	
682	3.08	34.30	27.34	
1030	2.66	34.42	27.47	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.0	32.75	25.53	246.2	.000	
10	7.66	32.76	25.59	240.9	.024	
20	7.34	32.79	25.66	234.6	.048	
30	6.06	32.84	25.86	215.0	.070	
50	5.14	32.84	25.97	204.8	.112	
75	4.04	32.91	26.14	188.4	.161	
100	3.72	33.00	26.25	178.8	.207	
150	3.68	33.49	26.64	141.9	.287	
200	3.42	33.83	26.94	114.2	.351	
250	3.76	33.97	27.01	107.4	.406	
300	3.62	34.03	27.08	101.9	.458	
400	3.42	34.09	27.14	096.1	.557	
500	3.37	34.17	27.21	090.3	.650	
600	3.21	34.25	27.29	083.4	.737	
700	3.05	34.31	27.35	078.0	.818	
800	2.92	34.36	27.40	073.5	.894	
1000	2.69	34.42	27.47	067.8	1.035	

MV TORDENSKJOLD
STATION 47

51-54 N 168-37 W 06 4UL 1959 0600 GCT
WEATHER 03 CLOUDS 6 AMT 5 WIND 290 35 KTS SEA 5
SWELL 280 AMT 4 BAR 1020 MBS DRY WET BT 83

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.4	32.83	25.53	
9	8.32	32.73	25.47	
18	6.92	32.70	25.64	
28	6.12	32.75	25.78	
44	4.20	32.89	26.11	
68	3.62	33.01	26.26	
90	3.62	33.23	26.44	
113	4.08	33.65	26.73	
136	4.06	33.86	26.90	
182	3.98	33.95	26.98	
228	3.92	33.99	27.01	
297	3.85	34.06	27.08	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.4	32.83	25.53	245.9	.000	
10	8.13	32.72	25.49	250.4	.025	
20	6.78	32.71	25.67	233.4	.049	
30	5.81	32.77	25.84	217.3	.072	
50	4.00	32.91	26.15	187.9	.113	
75	3.57	33.06	26.31	172.7	.158	
100	3.88	33.44	26.58	147.2	.198	
150	4.03	33.89	26.92	115.3	.264	
200	3.96	33.96	26.99	109.7	.320	
250	3.93	34.03	27.04	104.6	.374	
*300	3.84	34.06	27.08	101.8	.426	

MV TORDENSKJOLD
STATION 48

53-35 N 165-17 W 11 JUL 1959 0510 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 320 10 KTS SEA 3
SWELL 360 AMT 2 BAR 1019 MBS DRY WET BT 84

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	32.32	24.88	
10	9.89	32.36	24.93	.586
20	7.80	32.24	25.16	.617
30	6.53	32.28	25.36	.595
49	4.70	32.35	25.63	.546
74	4.98	32.61	25.81	.534
98	4.96	32.96	26.09	.488
123	4.96	33.04	26.15	.471
148	5.11	33.18	26.24	.428
197	5.27	33.42	26.42	.299
246	5.22	33.62	26.58	.279
321	4.96	33.80	26.75	.232

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.0	32.32	24.88	307.7	.000	
10	9.89	32.36	24.93	303.2	.031	.586
20	7.80	32.24	25.16	281.7	.060	.617
30	6.53	32.28	25.36	262.5	.087	.595
50	4.72	32.36	25.64	236.4	.137	.546
75	4.98	32.63	25.82	219.0	.194	.531
100	4.95	32.96	26.09	194.2	.246	.488
150	5.12	33.19	26.25	179.3	.339	.421
200	5.27	33.43	26.42	163.5	.425	.298
250	5.21	33.63	26.59	148.4	.503	.277
300	5.06	33.76	26.71	137.5	.574	.247

MV TORDENSKJOLD
STATION 49

53-30 N 165-00 W 11 JUL 1959 0715-0823 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 320 15 KTS SEA 3
SWELL 360 AMT 2 BAR 1019 MBS DRY WET BT 85

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	32.30	24.87	
10	10.00	32.29	24.86	.596
20	9.43	32.30	24.96	.622
30	6.16	32.64	25.69	.614
49	4.99	32.91	26.04	.504
73	5.00	32.98	26.10	.490
98	5.06			.444
123	5.22	33.35	26.37	.362
147	5.28	33.53	26.50	.307
196	4.92	33.79	26.75	.238
246	4.73	33.86	26.82	.196
295	4.38	33.91	26.90	.140
*346	4.08	34.00	27.01	.055
444	3.88	34.11	27.11	.043
640		34.21		.034
984	2.97	34.37	27.41	.037

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	$\dot{\sigma}_t$	$10^5\delta$	ΔD	OXY
0	10.0	32.30	24.87	309.2	.000	
10	10.00	32.29	24.86	310.2	.031	.596
20	9.43	32.30	24.96	300.8	.062	.622
30	6.16	32.64	25.69	231.1	.089	.614
50	4.99	32.91	26.04	197.9	.132	.504
75	5.00	32.99	26.11	192.2	.181	.488
100	5.08	33.17	26.24	179.8	.228	.437
150	5.25	33.55	26.52	153.8	.311	.302
200	4.91	33.80	26.76	131.8	.382	.235
250	4.70	33.86	26.83	125.5	.446	.192
300	4.34	33.92	26.91	117.6	.507	.129
400	3.97	34.07	27.07	103.3	.617	.048
500	3.83	34.14	27.14	097.4	.717	.040
600	3.70	34.19	27.19	093.0	.812	.035
700	3.56	34.23	27.24	089.3	.903	.035
800	3.38	34.27	27.29	085.1	.990	.036
*1000	2.93	34.38	27.42	073.4	1.149	.037

MV TORDENSKJOLD
STATION 50

53-00 N 164-58 W 12 JUL 1959 0850-0751 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 340 07 KTS SEA 2
SWELL 320 AMT 2 BAR 1022 MBS DRY WET BT 87

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.6	32.74	25.28	
10	9.64	32.72	25.25	.605
20	9.56	32.72	25.27	.598
30	8.80	32.73	25.40	.619
50	5.10	32.87	26.00	.645
74	3.72	32.82	26.10	.583
98	3.46	33.16	26.40	.537
123	3.86	33.66	26.76	.242
148	4.04	33.88	26.91	.086
197	3.98	33.96	26.98	.038
247	3.90	34.02	27.04	.024
296	3.86	34.07	27.08	.031
*384	3.73	34.15	27.16	.038
480	3.50	34.22	27.24	.022
672	3.21	34.31	27.34	.033
1015	2.68	34.42	27.47	.042

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.6	32.74	25.28	270.4	.000	
10	9.64	32.72	25.25	272.7	.027	.605
20	9.56	32.72	25.27	271.6	.054	.598
30	8.80	32.73	25.40	259.6	.081	.619
50	5.10	32.87	26.00	202.1	.127	.645
75	3.70	32.83	26.11	191.2	.176	.586
100	3.50	33.21	26.43	160.9	.220	.508
150	4.04	33.88	26.91	116.1	.289	.083
200	3.97	33.96	26.98	109.8	.345	.037
250	3.90	34.02	27.04	105.0	.399	.024
300	3.86	34.07	27.08	101.3	.451	.032
400	3.69	34.16	27.17	093.6	.548	.034
500	3.47	34.23	27.25	086.9	.638	.023
600	3.32	34.28	27.30	082.3	.723	.029
700	3.17	34.32	27.35	078.5	.803	.034
800	3.01	34.36	27.40	074.5	.879	.038
1000	2.70	34.42	27.47	067.9	1.021	.042

MV TORDENSKJOLD
STATION 51

52-25 N 165-06 W 13 JUL 1959 0245 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 270 15 KTS SEA 3
SWELL 290 AMT 3 BAR 1020 MBS DRY WET BT 89

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.4	32.68	25.26	
10	9.25	32.67	25.28	
19	8.96	32.68	25.33	
28	8.10	32.72	25.49	
46	5.22	32.82	25.95	
70	3.61	32.95	26.22	
94	3.48	33.22	26.44	
117	3.91	33.55	26.67	
140	4.09	33.86	26.89	
188	3.95	33.95	26.98	
236	3.90	34.03	27.05	
307	3.78	34.05	27.08	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	$\angle D$	OXY
0	9.4	32.68	25.26	271.8	.000	
10	9.25	32.67	25.28	270.4	.027	
20	8.88	32.68	25.34	264.3	.054	
30	7.71	32.73	25.56	244.2	.079	
50	4.85	32.83	26.00	202.4	.124	
75	3.53	33.00	26.27	176.9	.171	
100	3.62	33.31	26.50	154.5	.212	
150	4.05	33.88	26.91	116.2	.280	
200	3.94	33.97	27.00	108.8	.336	
250	3.88	34.04	27.06	103.3	.389	
300	3.79	34.05	27.07	102.1	.440	

MV TORDENSKJOLD
STATION 52

52-00 N 165-00 W 13 JUL 1959 0750-0845 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 250 25 KTS SEA 5
SWELL 270 AMT 4 BAR 1020 MBS DRY 9.2 WET 8.6 BT 91

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.8	32.74	25.40	
9	8.74	32.73	25.40	.411
18	8.64	32.71	25.40	.455
28	6.77	32.75	25.70	.436
46	4.68	32.84	26.02	.595
70	3.80	32.89	26.15	.611
94	3.33	33.09	26.36	.485
118	3.83	33.71	26.80	.329
142	4.07	33.84	26.88	.131
191	3.94	33.96	26.99	.057
240	3.85	34.03	27.05	.034
289	3.80	34.07	27.09	.034
* 352	3.73	34.14	27.15	.038
440	3.53	34.19	27.21	.038
620	3.28	34.29	27.31	.038
950	2.80	34.40	27.45	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.8	32.74	25.40	258.3	.000	
10	8.80	32.73	25.40	259.2	.026	.419
20	8.23	32.72	25.47	252.0	.052	.445
30	6.48	32.76	25.75	226.0	.076	.460
50	4.50	32.84	26.04	198.0	.118	.608
75	3.62	32.90	26.18	185.2	.166	.587
100	3.48	33.29	26.50	154.7	.208	.450
150	4.05	33.86	26.90	117.7	.276	.115
200	3.92	33.98	27.01	107.8	.332	.051
250	3.84	34.04	27.06	102.9	.385	.034
300	3.79	34.08	27.10	099.8	.436	.035
400	3.61	34.17	27.19	092.0	.532	.038
500	3.45	34.23	27.25	086.7	.621	.038
600	3.31	34.28	27.30	082.2	.705	.038
700	3.17	34.33	27.36	077.7	.785	.039
800	3.02	34.36	27.39	074.6	.861	.040

MV TORDENSKJOLD
STATION 53

51-03 N 164-56 W 14 JUL 1959 0646 GCT
WEATHER 03 CLOUDS X AMT 9 WIND 240 35 KTS SEA 5
SWELL 250 AMT 4 BAR 1014 MBS DRY 9.2 WET 8.6 BT 92

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.6	32.80	25.48	
10	8.57	32.82	25.50	
20	8.64	32.83	25.50	
30	8.62	32.84	25.51	
50	4.86	32.87	26.03	
74	3.34	32.98	26.27	
98	3.09	33.10	26.38	
122	3.64	33.48	26.64	
147	4.10	33.90	26.92	
196	3.94	33.98	27.00	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.6	32.80	25.48	251.0	.000	
10	8.57	32.82	25.50	249.2	.025	
20	8.64	32.83	25.50	249.7	.050	
30	8.62	32.84	25.51	248.8	.075	
50	4.86	32.87	26.03	199.5	.120	
75	3.31	32.98	26.27	176.4	.167	
100	3.14	33.13	26.40	163.7	.210	
150	4.13	33.93	26.94	113.3	.279	

MV TORDENSKJOLD
STATION 54

50-25 N 164-55 W 15 JUL 1959 0216 GCT
WEATHER 02 CLOUDS X AMT 9 WIND 230 20 KTS SEA 5
SWELL 230 AMT 3 BAR 1004 MBS DRY 8.9 WET 8.3 BT 93

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.6	32.76	25.45	
10	8.51	32.79	25.49	
20	8.48	32.76	25.47	
30		32.83		
49	4.68	32.85	26.03	
74	3.66	32.89	26.17	
98	3.16	32.98	26.28	
122	3.54	33.35	26.54	
146	3.88	33.72	26.80	
196	3.74	33.88	26.94	
245	3.72	33.94	26.99	
319	3.74	34.13	27.14	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.6	32.76	25.45	253.9	.000	
10	8.51	32.79	25.49	250.6	.025	
20	8.48	32.76	25.47	252.5	.050	
30	8.45	32.83	25.53	247.1	.075	
50	4.63	32.85	26.04	198.6	.120	
75	3.62	32.89	26.17	186.0	.168	
100	3.19	33.01	26.30	173.2	.213	
150	3.86	33.74	26.82	124.8	.288	
200	3.74	33.88	26.94	113.5	.348	
250	3.72	33.95	27.00	108.5	.403	
300	3.73	34.07	27.10	100.0	.455	

MV TORDENSKJOLD
STATION 55

50-02 N 165-00 W 15 JUL 1959 0651-0734 GCT
WEATHER 01 CLOUDS X AMT 9 WIND 270 20 KTS SEA 4
SWELL 230 AMT 3 BAR 1005 MBS DRY 8.9 WET 7.8 BT 94

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.5	32.75	25.46	
10	8.47	32.82	25.52	.605
20	8.52	32.78	25.48	.589
30	6.15	32.80	25.82	.631
50	4.82	32.86	26.02	.634
75	4.21	32.86	26.09	.648
100	3.68	32.88	26.16	.643
125	3.56	33.03	26.29	.565
149	3.60	33.53	26.68	.335
199	3.46	33.78	26.89	.218
249	3.48	33.85	26.95	.155
298	3.50	33.93	27.01	.114
*366	3.58	34.07	27.11	.068
460	3.50	34.16	27.19	.059
651	3.20	34.26	27.30	.054
996	2.73	34.41	27.46	.052

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	8.5	32.75	25.46	253.2	.000	
10	8.47	32.82	25.52	247.8	.025	.605
20	8.52	32.78	25.48	251.6	.050	.589
30	6.15	32.80	25.82	219.0	.074	.631
50	4.82	32.86	26.02	199.8	.116	.634
75	4.21	32.86	26.09	193.8	.165	.648
100	3.68	32.88	26.16	187.4	.213	.643
150	3.60	33.54	26.69	137.4	.294	.332
200	3.46	33.78	26.89	118.3	.358	.217
250	3.48	33.85	26.95	113.6	.416	.154
300	3.50	33.93	27.01	108.2	.471	.112
400	3.56	34.11	27.14	096.0	.573	.064
500	3.43	34.18	27.21	090.2	.666	.058
600	3.28	34.23	27.27	085.6	.754	.055
700	3.08	34.30	27.34	079.0	.836	.053
800	2.88	34.36	27.41	073.1	.912	.053
1000	2.73	34.41	27.46	069.0	1.054	.052

MV TORDENSKJOLD
STATION 56

49-30 N 165-00 W 16 JUL 1959 0246 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 320 15 KTS SEA 4
SWELL 320 AMT 3 BAR 1006 MBS DRY 8.9 WET 8.3 BT 96

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.0	32.82	25.43	
10	8.87	32.78	25.42	
20	8.78	32.79	25.45	
30	7.39	32.82	25.67	
50	5.38	32.85	25.95	
75	4.68	32.86	26.04	
100	3.87	32.87	26.13	
125	3.66	32.89	26.17	
150	3.60	33.08	26.32	
200	3.34	33.68	26.82	
250	3.33	33.81	26.93	
325	3.44	33.92	27.01	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.0	32.82	25.43	255.3	.000	
10	8.87	32.78	25.42	256.6	.026	
20	8.78	32.79	25.45	254.7	.052	
30	7.39	32.82	25.67	233.2	.076	
50	5.38	32.85	25.95	206.6	.120	
75	4.68	32.86	26.04	198.6	.171	
100	3.87	32.87	26.13	190.0	.220	
150	3.60	33.08	26.32	172.0	.310	
200	3.34	33.68	26.82	124.7	.384	
250	3.33	33.81	26.93	115.2	.444	
300	3.39	33.89	26.99	110.1	.500	

MV TORDENSKJOLD
STATION 57

49-00 N 165-00 W 16 JUL 1959 0716-0802 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 340 10 KTS SEA 3
SWELL 320 AMT 2 BAR 1008 MBS DRY 8.9 WET 8.3 BT 98

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.1	32.80	25.40	
10	9.02	32.80	25.42	.588
20	8.74	32.80	25.46	.584
30	8.10	32.81	25.56	.617
50	6.02	32.87	25.89	.621
75	5.08	32.88	26.01	.622
100	4.21	32.89	26.11	.594
125	4.00	32.93	26.16	.642
150	3.90	33.20	26.39	.548
200	3.30	33.71	26.85	.288
250	3.25	33.81	26.94	.267
300	3.34	33.88	26.98	.151
*386	3.60	34.03	27.08	.115
485	3.51	34.09	27.13	.092
683	3.24	34.23	27.27	.064
1030	2.76	34.40	27.45	.057

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.1	32.80	25.40	258.3	.000	
10	9.02	32.80	25.42	257.3	.026	.588
20	8.74	32.80	25.46	253.3	.052	.584
30	8.10	32.81	25.56	243.6	.077	.617
50	6.02	32.87	25.89	212.5	.123	.621
75	5.08	32.88	26.01	201.3	.175	.622
100	4.21	32.89	26.11	191.8	.224	.594
150	3.90	33.20	26.39	165.8	.313	.548
200	3.30	33.71	26.85	122.1	.385	.288
250	3.25	33.81	26.94	114.4	.444	.267
300	3.34	33.88	26.98	110.4	.500	.151
400	3.59	34.04	27.09	101.5	.606	.111
500	3.49	34.10	27.14	096.8	.705	.089
600	3.35	34.18	27.22	090.1	.798	.074
700	3.22	34.24	27.28	085.0	.886	.062
800	3.08	34.30	27.34	079.7	.968	.056
1000	2.80	34.39	27.44	071.2	1.119	.055

MV TORDENSKJOLD
STATION 58

48-30 N 165-00 W 17 JUL 1959 0142 GCT
WEATHER 02 CLOUDS 6 AMT 5 WIND 340 02 KTS SEA 2
SWELL 340 AMT 1 BAR 1014 MBS DRY 9.4 WET 8.6 BT 100

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.0	32.84	25.29	
10	9.36	32.80	25.36	
20	9.04	32.81	25.42	
30	8.84	32.80	25.44	
50	6.00	32.86	25.89	
74	4.88	32.92	26.06	
98	4.48	32.98	26.15	
123	4.44	33.03	26.20	
147	3.94	33.42	26.56	
196	3.70	33.72	26.82	
246	3.56	33.81	26.91	
320	3.39	33.89	26.99	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.0	32.84	25.29	269.2	.000	
10	9.36	32.80	25.36	262.4	.027	
20	9.04	32.81	25.42	257.0	.053	
30	8.84	32.80	25.44	255.0	.079	
50	6.00	32.86	25.89	213.0	.126	
75	4.86	32.92	26.07	196.0	.177	
100	4.49	32.97	26.15	188.6	.225	
150	3.92	33.44	26.58	148.0	.309	
200	3.69	33.73	26.83	124.3	.377	
250	3.55	33.82	26.92	116.6	.437	
300	3.43	33.87	26.97	112.0	.494	

MV TORDENSKJOLD
STATION 59

48-01 N 165-05 W 17 JUL 1959 0730-0817 GCT
WEATHER 02 CLOUDS 6 AMT 5 WIND 110 04 KTS SEA 2
SWELL 340 AMT 1 BAR 1015 MBS DRY 9.4 WET 8.1 BT 102

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.7	32.85	25.35	
10	9.35	32.82	25.38	.597
20	9.28	32.82	25.39	.584
30	8.98	32.82	25.44	.605
50	6.42	32.92	25.88	.629
75	5.45	32.94	26.02	
100	4.60	32.95	26.12	.626
125	4.52	33.03	26.19	.611
150	4.81	33.57	26.59	.487
200	4.46	33.77	26.78	.372
250	3.95	33.81	26.87	.298
300	3.74	33.87	26.94	.247
*384	3.70	34.00	27.04	.154
482	3.62	34.10	27.13	.114
678	3.32	34.24	27.27	.072
1025	2.79	34.39	27.44	.062

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.7	32.85	25.35	263.8	.000	
10	9.35	32.82	25.38	260.8	.026	.597
20	9.28	32.82	25.39	259.9	.052	.584
30	8.98	32.82	25.44	255.6	.078	.605
50	6.42	32.92	25.88	213.6	.125	.629
75	5.45	32.94	26.02	200.9	.177	
100	4.60	32.95	26.12	191.2	.226	.626
150	4.81	33.57	26.59	147.4	.311	.487
200	4.46	33.77	26.78	129.2	.380	.372
250	3.95	33.81	26.87	121.3	.443	.298
300	3.74	33.87	26.94	115.1	.502	.247
400	3.69	34.02	27.06	104.1	.612	.147
500	3.59	34.11	27.14	097.1	.713	.109
600	3.44	34.19	27.22	090.3	.807	.086
700	3.29	34.25	27.28	084.9	.895	.069
800	3.13	34.31	27.34	079.5	.977	.059
1000	2.83	34.38	27.43	072.3	1.129	.060

MV TORDENSKJOLD
STATION 60

47-47 N 164-02 W 18 JUL 1959 0330 GCT
WEATHER 02 CLOUDS 6 AMT 4 WIND 090 10 KTS SEA 2
SWELL 050 AMT 1 BAR 1011 MBS DRY 9.4 WET 8.3 BT 103

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.4	32.86	25.24	
10	9.90	32.75	25.24	
20	9.24	32.75	25.34	
30	8.81	32.78	25.43	
50	5.73	32.87	25.93	
75	4.49	32.90	26.09	
100	4.22	32.91	26.13	
125	4.02	32.92	26.15	
150	3.74	32.93	26.19	
200	3.59	33.63	26.76	
250	3.41	33.77	26.89	
325	3.48	33.90	26.99	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.4	32.86	25.24	274.2	.000	
10	9.90	32.75	25.24	274.5	.027	
20	9.24	32.75	25.34	264.5	.054	
30	8.81	32.78	25.43	256.0	.080	
50	5.73	32.87	25.93	209.1	.127	
75	4.49	32.90	26.09	193.6	.177	
100	4.22	32.91	26.13	190.4	.225	
150	3.74	32.93	26.19	184.6	.319	
200	3.59	33.63	26.76	130.8	.398	
250	3.41	33.77	26.89	119.0	.460	
300	3.41	33.87	26.97	111.8	.518	

MV TORDENSKJOLD
STATION 61

47-29 N 162-55 W 18 JUL 1959 0914 GCT
WEATHER 02 CLOUDS 6 AMT 4 WIND 000 00 KTS SEA 2
SWELL 300 AMT 1 BAR 1010 MBS DRY 9.4 WET 8.3 BT 104

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.75	25.18	
10	10.18	32.74	25.18	
20	9.50	32.73	25.28	
30	8.28	32.74	25.48	
48	6.12	32.87	25.88	
74	5.08	32.94	26.06	
98	4.20	32.92	26.14	
122	4.29	32.99	26.18	
146	4.46	33.48	26.55	
196	4.37	33.78	26.80	
245	3.93	33.85	26.90	
319	3.69	33.90	26.97	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.2	32.75	25.18	279.1	.000	
10	10.18	32.74	25.18	279.7	.028	
20	9.50	32.73	25.28	269.9	.055	
30	8.28	32.74	25.48	251.3	.081	
50	6.04	32.88	25.90	212.0	.127	
75	5.02	32.94	26.06	196.2	.178	
100	4.20	32.91	26.13	190.2	.226	
150	4.47	33.51	26.58	148.3	.311	
200	4.33	33.79	26.81	126.3	.380	
250	3.90	33.86	26.91	117.0	.441	
300	3.70	33.89	26.96	113.1	.499	

MV TORDENSKJOLD
STATION 62

47-09 N 161-37 W 18 JUL 1959 1626 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 140 05 KTS SEA 2
SWELL 150 AMT 1 BAR 1010 MBS DRY 9.2 WET 8.5 BT 105

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.74	25.23	
10	9.90	32.77	25.25	
20	9.48	32.77	25.32	
30	9.27	32.78	25.36	
50	6.60	32.93	25.86	
75	5.66	32.96	26.01	
98	4.56	32.96	26.13	
123	4.52	33.20	26.32	
148	4.94	33.67	26.65	
197	4.49	33.79	26.80	
246	4.05	33.84	26.88	
321	3.73	33.89	26.95	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.9	32.74	25.23	275.1	.000	
10	9.90	32.77	25.25	273.0	.027	
20	9.48	32.77	25.32	266.7	.054	
30	9.27	32.78	25.36	262.9	.080	
50	6.60	32.93	25.86	215.1	.128	
75	5.66	32.96	26.01	201.8	.180	
100	4.54	32.97	26.14	189.1	.229	
150	4.92	33.68	26.66	140.4	.311	
200	4.46	33.79	26.80	127.7	.378	
250	4.02	33.84	26.88	119.8	.440	
300	3.78	33.88	26.94	114.7	.499	

MV TORDENSKJOLD
STATION 63

47-01 N 160-06 W 09 JUL 1959 0305-0424 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 180 20 KTS SEA 2
SWELL 180 AMT 1 BAR 1013 MBS DRY 9.4 WET 8.6 BT 106

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.82	25.24	
9	10.12	32.79	25.23	.537
18	9.55	32.78	25.32	.564
28	9.44	32.79	25.34	.584
47	6.47	32.92	25.87	.637
71	5.72	33.03	26.05	.610
94	4.98	33.04	26.15	.606
118	5.13	33.19	26.25	.567
142	5.08	33.58	26.56	.494
190	4.90	33.80	26.76	.373
238	4.34	33.85	26.86	.303
*287	4.00	33.89	26.93	.248
*326	3.94	33.90	26.94	.201
417	3.80	34.03	27.06	.156
610	3.55	34.18	27.20	.081
953	2.95	34.37	27.41	.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.2	32.82	25.24	273.9	.000	
10	10.03	32.79	25.24	273.6	.027	.540
20	9.61	32.78	25.31	267.9	.054	.568
30	9.03	32.81	25.42	257.0	.080	.593
50	6.38	32.94	25.90	211.6	.127	.632
75	5.53	33.02	26.07	195.9	.178	.612
100	5.04	33.05	26.15	188.4	.226	.599
150	5.08	33.63	26.60	145.9	.310	.470
200	4.76	33.81	26.78	129.4	.379	.357
250	4.23	33.86	26.88	120.4	.441	.290
300	3.98	33.89	26.93	116.0	.500	.230
400	3.82	34.01	27.04	106.2	.611	.164
500	3.70	34.10	27.12	099.0	.714	.118
600	3.56	34.17	27.19	093.0	.810	.084
700	3.43	34.24	27.26	087.2	.900	.070
800	3.26	34.29	27.32	082.3	.985	.062
*1000	2.84	34.39	27.43	071.7	1.139	.056

MV TORDENSKJOLD
STATION 64

47-30 N 160-02 W 20 JUL 1959 0046 GCT
WEATHER 02 CLOUDS 6 AMT 5 WIND 180 05 KTS SEA 2
SWELL 180 AMT 1 BAR 1023 MBS DRY 10.6 WET 9.2 BT 107

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.76	25.19	
9	9.98	32.75	25.22	
18	9.55	32.74	25.28	
26	8.79	32.80	25.45	
45	6.15	32.88	25.88	
67	5.07	32.94	26.06	
90	4.28	32.93	26.14	
113	4.66	33.11	26.24	
133	4.66	33.62	26.64	
180	4.26	33.78	26.81	
226	3.92	33.81	26.87	
295	3.74	33.87	26.94	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.2	32.76	25.19	278.3	.000	
10	9.95	32.74	25.22	276.0	.028	
20	9.38	32.76	25.33	265.9	.055	
30	8.10	32.82	25.57	242.9	.080	
50	5.88	32.90	25.93	208.6	.125	
75	4.66	32.91	26.08	194.6	.175	
100	4.50	32.95	26.13	190.2	.223	
150	4.51	33.69	26.71	135.2	.304	
200	4.09	33.79	26.84	123.8	.369	
250	3.81	33.83	26.90	118.4	.430	

MV TORDENSKJOLD
STATION 65

48-00 N 160-00 W 20 JUL 1959 0431-0528 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 180 05 KTS SEA 2
SWELL 180 AMT 1 BAR 1024 MBS DRY 12.2 WET 11.4 BT 108

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.73	25.17	
10	10.03	32.73	25.20	.605
20	9.66	32.73	25.26	.617
30	9.33	32.73	25.31	.619
50	6.61	32.82	25.78	.626
75	4.52	32.85	26.05	.644
100	3.98	32.89	26.13	.638
124	3.82	32.91	26.17	.628
149	3.68	33.48	26.63	.440
199	3.60	33.75	26.85	.304
248	3.46	33.81	26.92	.247
298	3.49	33.81	26.91	.196
*384	3.54	34.02	27.08	.108
482	3.54	34.13	27.16	.102
676	3.32	34.27	27.30	.072
1022	2.74	34.42	27.47	.022

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.2	32.73	25.17	280.6	.000	
10	10.03	32.73	25.20	278.0	.028	.605
20	9.66	32.73	25.26	272.4	.056	.617
30	9.33	32.73	25.31	267.5	.083	.619
50	6.61	32.82	25.78	223.4	.132	.626
75	4.52	32.85	26.05	197.7	.185	.644
100	3.98	32.89	26.13	189.5	.233	.638
150	3.68	33.49	26.64	141.9	.316	.437
200	3.60	33.75	26.85	121.9	.382	.303
250	3.46	33.81	26.92	116.4	.442	.245
300	3.49	33.82	26.92	116.3	.500	.193
400	3.55	34.04	27.09	101.1	.609	.107
500	3.52	34.14	27.17	094.1	.707	.099
600	3.42	34.22	27.25	087.8	.798	.084
700	3.29	34.28	27.31	082.7	.883	.068
800	3.14	34.34	27.37	077.3	.963	.054
1000	2.78	34.41	27.46	069.5	1.110	.025

MV TORDENSKJOLD
STATION 66

48-30 N 160-00 W 21 JUL 1959 0014 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 210 10 KTS SEA 3
SWELL 200 AMT 2 BAR 1020 MBS DRY 12.5 WET 11.4 BT 109

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.1	32.69	25.15	
9	10.06	32.69	25.16	
18	9.54	32.71	25.26	
27	8.74	32.71	25.39	
46	5.35	32.80	25.92	
67	4.14	32.84	26.08	
92	3.72	32.87	26.14	
114	3.68	32.96	26.22	
136	3.71	33.54	26.68	
182	3.50	33.78	26.89	
228	3.53	33.85	26.94	
297	3.52	33.94	27.01	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.1	32.69	25.15	281.9	.000	
10	10.02	32.69	25.17	280.8	.028	
20	9.41	32.71	25.28	270.1	.056	
30	8.06	32.73	25.51	249.0	.082	
50	5.06	32.81	25.96	206.2	.128	
75	3.96	32.84	26.10	192.9	.178	
100	3.70	32.85	26.13	189.9	.226	
150	3.62	33.63	26.76	130.8	.306	
200	3.52	33.81	26.91	116.7	.368	
250	3.52	33.85	26.94	114.0	.426	
*300	3.52	33.95	27.02	106.9	.481	

MV TORDENSKJOLD
STATION 67

49-00 N 160-00 W 21 JUL 1959 0352-0429 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 220 10 KTS SEA 3
SWELL 220 AMT 2 BAR 1023 MBS DRY 12.2 WET 11.1 BT 110

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.71	25.15	
10	10.22	32.72	25.16	.592
20	9.48	32.72	25.28	.595
30	8.52	32.73	25.44	.617
50	4.61	32.84	26.03	.610
75	3.66	32.90	26.17	.651
100	3.32	32.90	26.21	.641
125	3.18	33.02	26.31	.595
150	3.66	33.59	26.72	.318
200	3.52	33.81	26.91	.189
250	3.56	33.94	27.01	.102
300	3.56	34.01	27.07	.097
* 370	3.57	34.08	27.12	.086
460	3.44	34.18	27.21	.064
654	3.22	34.28	27.31	.057
996	2.69	34.42	27.47	.061

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.2	32.71	25.15	282.1	.000	
10	10.22	32.72	25.16	281.8	.028	.592
20	9.48	32.72	25.28	270.4	.056	.595
30	8.52	32.73	25.44	255.5	.082	.617
50	4.61	32.84	26.03	199.2	.127	.610
75	3.66	32.90	26.17	185.6	.175	.651
100	3.32	32.90	26.21	182.7	.221	.641
150	3.66	33.59	26.72	134.2	.300	.318
200	3.52	33.81	26.91	116.7	.363	.189
250	3.56	33.94	27.01	107.6	.419	.102
300	3.56	34.01	27.07	102.8	.472	.097
400	3.52	34.12	27.16	094.9	.571	.077
500	3.40	34.20	27.23	088.4	.663	.062
600	3.29	34.25	27.28	084.2	.749	.058
700	3.19	34.31	27.34	079.4	.831	.058
800	3.07	34.37	27.40	074.4	.908	.060
*1000	2.68	34.42	27.47	067.7	1.050	.061

MV TORDENSKJOLD
STATION 68

49-30 N 160-10 W 22 JUL 1959 0140 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 290 20 KTS SEA 3
SWELL 290 AMT 2 BAR 1026 MBS DRY 11.1 WET 10.6 BT 111

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.7	32.69	25.22	
10	9.67	32.67	25.21	
20	9.55	32.69	25.25	
30	9.20	32.70	25.31	
50	5.24	32.81	25.94	
75	3.70	32.87	26.15	
99	3.54	32.89	26.18	
124	3.60	33.22	26.43	
148	3.62	33.73	26.84	
198	3.51	33.85	26.94	
247	3.58	33.92	26.99	
321	3.55	34.02	27.07	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.7	32.69	25.22	275.6	.000	
10	9.67	32.67	25.21	276.8	.028	
20	9.55	32.69	25.25	273.7	.056	
30	9.20	32.70	25.31	267.8	.083	
50	5.24	32.81	25.94	208.1	.131	
75	3.70	32.87	26.15	188.2	.181	
100	3.54	32.90	26.18	184.6	.228	
150	3.61	33.74	26.85	122.4	.305	
200	3.51	33.85	26.94	113.5	.364	
250	3.58	33.92	26.99	109.3	.420	
300	3.58	33.99	27.05	104.5	.473	

MV TORDENSKJOLD
STATION 69

49-55 N 160-05 W 22 JUL 1959 0632-0746 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 270 25 KTS SEA 4
SWELL 270 AMT 3 BAR 1027 MBS DRY 10.0 WET 9.2 BT 112

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.75	25.24	
10	9.88	32.74	25.23	.595
20	9.89	32.73	25.22	.583
30	8.63	32.73	25.42	.626
50	5.10	32.83	25.97	.648
74	3.69	32.88	26.15	.651
99	3.52	32.89	26.18	.638
124	3.44	32.96	26.24	.620
148	3.70	33.64	26.76	.311
198	3.54	33.81	26.91	.178
248	3.57	33.90	26.98	.124
* 297	3.57	33.97	27.03	.089
360	3.57	34.03	27.08	.083
454	3.52	34.13	27.16	.070
646	3.34	34.25	27.28	.056
990	2.86	34.38	27.43	.058

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.9	32.75	25.24	274.3	.000	
10	9.88	32.74	25.23	274.9	.027	.595
20	9.89	32.73	25.22	276.0	.055	.583
30	8.63	32.73	25.42	257.1	.082	.626
50	5.10	32.83	25.97	205.1	.128	.648
75	3.68	32.88	26.16	187.3	.177	.651
100	3.51	32.88	26.17	185.9	.224	.643
150	3.69	33.65	26.77	129.9	.303	.304
200	3.54	33.81	26.91	116.8	.365	.175
250	3.57	33.90	26.98	110.7	.422	.122
300	3.57	33.97	27.03	105.9	.476	.089
400	3.55	34.08	27.12	098.2	.578	.077
500	3.48	34.16	27.19	092.2	.673	.066
600	3.39	34.22	27.25	087.5	.763	.058
700	3.28	34.28	27.31	082.6	.848	.054
800	3.15	34.32	27.35	078.9	.929	.053
1000	2.85	34.38	27.43	072.5	1.078	.058

MV TORDENSKJOLD
STATION 70

50-30 N 159-55 W 23 JUL 1959 0254 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 320 20 KTS SEA 4
SWELL 300 AMT 3 BAR 1030 MBS DRY 9.7° WET 9.2 BT 113

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.2	32.73	25.17	
9	10.24	32.72	25.15	
18	10.08	32.75	25.21	
26	8.83	32.79	25.44	
44	4.64	32.85	26.03	
67	3.62	32.89	26.17	
90	3.28	32.96	26.26	
113	3.32	33.16	26.41	
136	3.78	33.67	26.77	
182	3.62	33.87	26.95	
228	3.62	33.93	27.00	
302	3.60	34.02	27.07	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.2	32.73	25.17	280.6	.000	
10	10.29	32.72	25.15	282.9	.028	
20	9.80	32.76	25.26	272.4	.056	
30	7.64	32.81	25.63	237.3	.081	
50	4.31	32.86	26.08	194.6	.124	
75	3.46	32.90	26.19	183.8	.171	
100	3.25	33.01	26.30	173.7	.216	
150	3.71	33.75	26.84	122.6	.290	
200	3.62	33.89	26.96	111.6	.349	
250	3.62	33.96	27.02	106.7	.404	
300	3.60	34.02	27.07	102.4	.456	

MV TORDENSKJOLD
STATION 71

50-57 N 159-55 W 23 JUL 1959 0752-0837 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 290 25 KTS SEA 4
SWELL 300 AMT 3 BAR 1029 MBS DRY 9.7 WET 9.4 BT 114

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.70	25.20	
10	9.86	32.67	25.18	.611
19	9.98	32.67	25.16	.595
28	9.58	32.66	25.22	.602
48	4.98	32.84	25.99	.633
72	3.53	32.95	26.23	.622
96	3.34	33.13	26.39	.557
110	3.69	33.45	26.61	.366
144	3.86	33.83	26.89	.157
192	3.80	33.94	26.99	.093
241	3.80	34.00	27.03	.070
290	3.74	34.05	27.08	.054
*372	3.66	34.12	27.14	.060
468	3.54	34.18	27.20	.043
660	3.21	34.31	27.34	.049
1005	2.69	34.43	27.48	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.9	32.70	25.20	278.0	.000	
10	9.86	32.67	25.18	279.8	.028	.611
20	9.99	32.67	25.16	282.1	.056	.596
30	8.98	32.68	25.33	265.9	.083	.607
50	4.81	32.85	26.02	200.5	.130	.634
75	3.45	32.95	26.23	179.9	.178	.632
100	3.46	33.23	26.45	159.0	.220	.496
150	3.85	33.85	26.91	116.5	.289	.147
200	3.80	33.95	26.99	108.9	.345	.089
250	3.79	34.01	27.04	104.7	.398	.066
300	3.73	34.06	27.09	100.7	.449	.056
400	3.63	34.14	27.16	094.5	.547	.054
500	3.48	34.20	27.22	089.2	.639	.044
600	3.31	34.27	27.30	083.0	.725	.047
700	3.14	34.33	27.36	077.4	.805	.050
800	2.99	34.38	27.41	072.8	.880	.052
1000	2.70	34.43	27.48	067.2	1.020	.055

MV TORDENSKJOLD
STATION 72

51-57 N 159-58 W 24 JUL 1959 0808-0842 GCT
WEATHER 41 CLOUDS X AMT 9 WIND 270 20 KTS SEA 4
SWELL 270 AMT 3 BAR 1027 MBS DRY 10.0 WET 9.7 BT 116

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.8	32.66	25.18	
10	9.77	32.65	25.18	.600
20	9.78	32.65	25.18	.590
30	9.36	32.65	25.24	.606
49	4.80	32.87	26.03	.640
74	3.85	32.93	26.18	.469
98	3.46	33.06	26.32	.436
123	4.22	33.62	26.69	.282
148	4.07	33.85	26.89	.201
197	3.88	33.93	26.97	.080
247	3.70	33.97	27.02	.075
* 296	3.70	34.02	27.06	.060
382	3.71	34.14	27.15	.038
479	3.52	34.22	27.24	.034
675	3.16	34.33	27.36	.040
1022	2.68	34.43	27.48	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	9.8	32.66	25.18	279.4	.000	
10	9.77	32.65	25.18	279.9	.028	.600
20	9.78	32.65	25.18	280.2	.056	.590
30	9.36	32.65	25.24	273.9	.084	.606
50	4.75	32.87	26.04	198.4	.131	.630
75	3.81	32.93	26.18	184.7	.179	.470
100	3.55	33.12	26.36	168.2	.223	.421
150	4.06	33.85	26.89	118.6	.295	.194
200	3.86	33.93	26.97	111.0	.352	.080
250	3.70	33.97	27.02	106.8	.406	.074
300	3.70	34.03	27.07	102.7	.458	.059
400	3.67	34.16	27.17	093.4	.556	.037
500	3.48	34.23	27.25	087.0	.646	
600	3.29	34.29	27.31	081.3	.730	
700	3.12	34.34	27.37	076.5	.809	
800	2.96	34.38	27.42	072.5	.883	
1000	2.70	34.43	27.48	067.2	1.023	

MV TORDENSKJOLD
STATION 73

52-30 N 160-00 W 25 JUL 1959 0316 GCT
WEATHER 43 CLOUDS 6 AMT 8 WIND 250 20 KTS SEA 3
SWELL 250 AMT 3 BAR 1021 MBS DRY 11.1 WET 10.6 BT 117

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.9	32.60	24.95	
10	10.88	32.56	24.92	
20	10.90	32.56	24.92	
30	10.84	32.55	24.92	
49	5.67	32.79	25.87	
73	4.19	32.92	26.14	
97	3.72	33.11	26.33	
122	4.28	33.50	26.59	
146	4.34	33.72	26.76	
196	4.50	33.91	26.89	
245	4.25	33.99	26.98	
319	3.98	34.03	27.04	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	10.9	32.60	24.95	301.7	.000	
10	10.88	32.56	24.92	304.5	.030	
20	10.90	32.56	24.92	305.0	.060	
30	10.84	32.55	24.92	304.9	.090	
50	5.59	32.79	25.88	213.5	.142	
75	4.11	32.93	26.15	187.6	.192	
100	3.81	33.17	26.37	166.8	.236	
150	4.37	33.74	26.77	130.0	.310	
200	4.48	33.92	26.90	118.1	.372	
250	4.23	34.00	26.99	109.9	.429	
300	4.04	34.03	27.03	106.1	.483	

MV TORDENSKJOLD
STATION 74

53-00 N 160-00 W 25 JUL 1959 0815-0855 GCT
WEATHER 55 CLOUDS X AMT 9 WIND 250 15 KTS SEA 3
SWELL 250 AMT 2 BAR 1019 MBS DRY 11.1 WET 11.1 BT 118

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.27	24.86	
10	9.92	32.27	24.86	.590
20	9.86	32.27	24.87	.526
29	7.93	32.24	25.14	.525
48	5.50	32.39	25.58	.590
72	4.88	32.58	25.80	.514
96	4.97	32.75	25.92	.506
120	5.17	33.08	26.16	.318
144	5.31	33.36	26.36	.351
192	5.27	33.62	26.57	.275
240	4.87	33.85	26.80	.195
288	4.52	33.91	26.89	.135
* 384	4.20	34.02	27.01	.060
482	4.01	34.07	27.07	.057
676	3.56	34.21	27.22	.035
1019	2.86			.024

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.9	32.27	24.86	309.9	.000	
10	9.92	32.27	24.86	310.4	.031	.590
20	9.86	32.27	24.87	309.6	.062	.526
30	7.76	32.25	25.17	280.6	.092	.531
50	5.42	32.41	25.60	240.1	.144	.581
75	4.89	32.59	25.80	221.1	.202	.523
100	5.01	32.81	25.96	206.1	.255	.459
150	5.32	33.39	26.39	166.6	.348	.342
200	5.20	33.67	26.62	144.8	.426	.260
250	4.79	33.86	26.82	126.5	.494	.181
300	4.47	33.93	26.91	118.2	.555	.122
400	4.17	34.03	27.02	108.4	.668	.060
500	3.97	34.08	27.08	099.0	.772	.054
600	3.73	34.15	27.16	091.4	.867	.042
700	3.51					.033
800	3.29					.027
1000	2.90					.024

MV TORDENSKJOLD
STATION 75

53-30 N 159-53 W 26 JUL 1959 0402 GCT
WEATHER 45 CLOUDS X AMT 9 WIND 230 15 KTS SEA 2
SWELL 250 AMT 2 BAR 1012 MBS DRY 10.8 WET 10.3 BT 119

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	9.9	32.28	24.87	
10	9.77	32.29	24.90	
20	9.77	32.28	24.89	
29	9.43	32.26	24.93	
48	5.92	32.63	25.71	
73	5.18	32.83	25.96	
97	5.22	33.22	26.26	
121	5.26			
145	5.22	33.71	26.65	
194	5.03	33.81	26.75	
243	4.62	33.92	26.88	
315	4.33	33.99	26.97	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	9.9	32.28	24.87	309.1	.000	
10	9.77	32.29	24.90	306.5	.031	
20	9.77	32.28	24.89	307.5	.062	
30	9.18	32.28	24.98	298.6	.092	
50	5.83	32.64	25.73	227.5	.145	
75	5.18	32.83	25.96	206.2	.199	
100	5.23	33.50	26.48	156.8	.244	
150	5.21	33.72	26.66	140.6	.318	
200	5.00	33.82	26.76	129.2	.375	
250	4.59	33.93	26.90	116.4	.437	
300	4.38	33.97	26.95	111.4	.494	

MV TORDENSKJOLD
STATION 76

53-55 N 159-40 W 26 JUL 1959 0822-0902 GCT
WEATHER 50 CLOUDS X AMT 9 WIND KTS SEA 2
SWELL 230 AMT 1 BAR 1012 MBS DRY 11.1 WET 10.8 BT 120

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	10.4	32.34	24.83	
10	10.29	32.37	24.87	
20	10.32	32.36	24.86	
30	10.15	32.41	24.93	
50	5.39	32.87	25.97	
75	4.48	32.96	26.14	
100	4.96	33.48	26.50	
125	5.12	33.61	26.58	
150	5.01	33.87	26.80	
199	4.59	34.00	26.95	
249	4.36	33.95	26.94	
298	4.01	33.97	26.99	
* 380	4.00	34.10	27.09	
479	3.81	34.14	27.14	
677	3.43	34.28	27.29	
1025	2.86	34.41	27.45	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	10.4	32.34	24.83	312.7	.000	
10	10.29	32.37	24.87	308.9	.031	
20	10.32	32.36	24.86	310.3	.062	
30	10.15	32.41	24.93	304.0	.093	
50	5.39	32.87	25.97	205.3	.144	
75	4.48	32.96	26.14	189.0	.193	
100	4.96	33.48	26.50	155.3	.236	
150	5.01	33.87	26.80	127.2	.307	
200	4.59	34.00	26.95	113.3	.367	
250	4.35	33.95	26.94	115.0	.424	
300	4.01	33.97	26.99	110.3	.480	
400	3.96	34.11	27.10	100.2	.585	
500	3.77	34.16	27.16	095.2	.683	
600	3.57	34.23	27.24	088.7	.775	
700	3.39	34.29	27.30	083.0	.861	
800	3.21	34.34	27.36	078.1	.942	
1000	2.90	34.41	27.45	070.8	1.091	

MV TORDENSKJOLD
STATION 77

54-17 N 160-00 W 27 JUL 1959 0153 GCT
WEATHER 45 CLOUDS X AMT 9 WIND 070 20 KTS SEA 4
SWELL 200 AMT 2 BAR 1017 MBS DRY 11.1 WET 10.8 BT 122

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	8.9	31.99	24.80	
10	8.76	32.06	24.88	.636
19	8.48	32.04	24.90	.639
28	7.91	32.10	25.03	.578
48	6.68	32.41	25.45	.541
71	5.47	32.53	25.69	.494
95	5.20	32.66	25.82	.483
119	5.18	32.75	25.90	.474
142	5.31	32.96	26.05	
191	5.10	33.31	26.35	
240	5.02	33.76	26.71	
313	4.44	33.95	26.93	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	8.9	31.99	24.80	315.5	.000	
10	8.76	32.06	24.88	308.4	.031	.636
20	8.42	32.04	24.91	305.2	.062	.631
30	7.78	32.14	25.08	289.1	.092	.574
50	6.54	32.42	25.47	252.4	.146	.535
75	5.41	32.55	25.71	229.7	.206	.492
100	5.18	32.67	25.83	218.4	.262	
150	5.27	33.01	26.09	194.4	.365	
200	5.10	33.41	26.43	163.1	.454	
250	4.97	33.82	26.77	131.5	.528	
300	4.58	33.96	26.92	117.2	.590	

MV TORDENSKJOLD
STATION 78

51-00 N 138-00 W 02 SEP 1959 0318 GCT
WEATHER 02 CLOUDS 6 AMT 2 WIND 000 00 KTS SEA 2
SWELL 310 AMT 1 BAR 1022 MBS DRY 12.5 WET 12.5 BT 129

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	12.6	32.67	24.69	
10	12.52	32.67	24.70	.543
19	12.48	32.65	24.70	.537
28	12.52	32.66	24.70	.552
48	8.36	32.80	25.52	.612
72	6.04	32.89	25.90	.605
96	5.26	32.94	26.04	.583
120	5.94	33.37	26.30	.476
144	5.88	33.69	26.56	.405
193	5.19	33.80	26.72	.342
292	4.54	33.90	26.88	.205
515	3.97	34.13	27.12	.065

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	12.6	32.67	24.69	326.3	.000	
10	12.52	32.67	24.70	325.1	.033	.543
20	12.54	32.65	24.68	327.1	.066	.538
30	12.01	32.68	24.81	315.6	.098	.561
50	8.11	32.81	25.56	244.0	.154	.612
75	5.86	32.88	25.92	210.1	.211	.607
100	5.42	33.02	26.08	194.9	.262	.563
150	5.78	33.71	26.58	148.0	.348	.397
200	5.14	33.81	26.74	133.7	.418	.331
250	4.79	33.86	26.82	126.5	.483	.257
300	4.50	33.91	26.89	120.0	.545	.196
400	4.11	34.01	27.01	109.2	.660	.108
500	3.97	34.11	27.10	101.1	.765	.067

MV TORDENSKJOLD
STATION 79

51-00 N 136-00 W 02 SEP 1959 1433 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 310 05 KTS SEA 3
SWELL 310 AMT 3 BAR 1018 MBS DRY 12.3 WET 12.2 BT 132

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	13.5	32.29	24.22	
10	13.53	32.28	24.20	.524
20	13.52	32.28	24.21	.527
30	13.52	32.29	24.21	.524
49	8.47	32.57	25.32	.592
74	7.20	32.77	25.66	.587
98	6.09	32.89	25.90	.590
179	5.85	33.72	26.58	
310	4.85	33.95	26.88	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	ΔD	OXY
0	13.5	32.29	24.22	371.1	.000	
10	13.53	32.28	24.20	372.7	.037	.524
20	13.52	32.28	24.21	372.7	.074	.527
30	13.52	32.29	24.21	372.2	.111	.524
50	8.42	32.58	25.34	265.5	.175	.592
75	7.14	32.77	25.67	234.2	.237	
100	6.09	32.92	25.92	210.2	.293	
150	5.97	33.48	26.38	167.5	.387	
200	5.74	33.85	26.70	137.7	.463	
250	5.40	34.02	26.87	121.6	.528	
300	4.95	33.98	26.89	119.8	.588	

MV TORDENSKJOLD
STATION 80

51-00 N 134-00 W 03 SEP 1959 0041 GCT
WEATHER 21 CLOUDS X AMT 9 WIND 260 18 KTS SEA 4
SWELL 260 AMT 3 BAR 1015 MBS DRY 12.8 WET 12.8 BT 135

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	13.9	32.09	23.98	
10	13.97	32.07	23.95	.533
20	13.85	32.04	23.96	.562
30	10.50	32.33	24.81	.548
50	8.65	32.52	25.25	.553
75	7.39	32.76	25.63	.563
100	7.22	33.08	25.90	.423
125	6.96	33.43	26.21	.369
150	6.66	33.67	26.44	.329
200	6.12	33.83	26.64	.318
300	5.28	33.95	26.83	
525	4.44	34.10	27.05	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σ_t	$10^5\delta$	$\triangle D$	OXY
0	13.9	32.09	23.98	393.5	.000	
10	13.97	32.07	23.95	396.6	.040	.533
20	13.85	32.04	23.96	396.7	.080	.562
30	10.50	32.33	24.81	315.6	.116	.548
50	8.65	32.52	25.25	273.3	.175	.553
75	7.39	32.76	25.63	238.3	.239	.563
100	7.22	33.08	25.90	212.5	.295	.423
150	6.66	33.67	26.44	162.0	.389	.329
200	6.12	33.83	26.64	143.9	.465	
250	5.66	33.89	26.74	134.4	.535	
300	5.28	33.95	26.83	125.9	.600	
400	4.73	34.04	26.97	113.9	.720	
500	4.46	34.09	27.04	108.1	.831	

MV TORDENSKJOLD
STATION 81

51-01 N 131-55 W 03 SEP 1959 1130 GCT
WEATHER 50 CLOUDS X AMT 9 WIND 200 20 KTS SEA 4
SWELL 200 AMT 4 BAR 1012 MBS DRY 12.8 WET 12.6 BT 138

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	14.0	32.24	24.08	
10	14.10	32.21	24.03	.530
19	14.10			.526
29	14.12			.522
48				.528
72	8.18			.494
96	7.61			.466
202	7.13	33.22	26.02	.384
220	5.61	33.95	26.79	.201

MV TORDENSKJOLD
STATION 82

51-01 N 130-05 W 03 SEP 1959 2152 GCT
WEATHER 01 CLOUDS 6 AMT 2 WIND 210 15 KTS SEA 3
SWELL 210 AMT 3 BAR 1011 MBS DRY 13.2 WET 13.2 BT 141

OBSERVED VALUES

DEPTH	TEMP	SAL	σ_t	OXY
0	14.2			
10	14.23			.530
20	13.40	32.26	24.22	.540
30	11.88	32.61	24.78	.578
50	8.96	32.74	25.38	.612

Summary of Observations at Bathythermograph Lowerings, MV Tordenskjold 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	0500	5/25	53°33'N	165°40'W	5.0	19	10	44.0	42.0	34	02	7	8	8	1	20	1	32.29
2	Station 1 1/																	
3	2345	5/25	43 04	166 28	6.3	12	08	47.0	46.0	31	02	7	8	9	1	12	1	32.45
4	Station 2																	
5	Station 3																	
6	2300	5/26	52 26	168 24	5.6	18	05	46.0	44.0	24	02	0	8	6	1	18	1	32.26
7	Station 4																	
8	Station 5																	
9	2220	5/27	51 50	170 15	5.5	30	05	43.0	43.0	15	50	0	8	4	1	30	1	32.63
10	0040	5/28	51 47	170 47	5.7	36	10	42.5	41.0	15	50	7	8	8	1	30	1	32.54
11	0315	5/28	51 44	171 23	5.2	30	08	44.5	43.0	15	02	6	8	8	1	27	1	32.37
12	0630	5/28	51 47	171 57	5.5	28	12	43.0	41.0	15	02	6	8	8	1	27	1	32.73
13	Station 6																	
14	0410	5/29	51 43	173 49	5.6	11	30	44.0	42.0	12	02	6	8	8	2	14	2	32.51
15	Station 7																	
16	1400	6/1	51 22	177 46	5.3	08	-	40.5	40.5	-	42	-	-	9	2	-	1	32.71
17	1720	6/1	51 12	178 32	5.3	05	05	41.5	41.5	11	42	0	8	0	1	35	1	32.63
18	2140	6/1	51 05	179 17	5.4	07	10	44.0	42.5	12	42	0	8	0	1	35	1	32.80
19	Station 8																	
20	0015	6/3	50°44'N	179°55'E	5.5	07	20	43.0	41.0	15	02	0	8	8	2	07	2	32.72
21	Station 9																	
22	0420	6/3	50°15'N	179°58'W	5.8	35	15	44.0	42.5	16	02	0	8	8	1	35	1	32.70
23	Station 10																	
24	0030	6/4	49 46	179 57	5.6	23	15	44.0	42.0	18	02	0	8	8	1	23	1	32.84
25	Station 11																	
26	0450	6/4	49 15	179 50	5.5	19	06	43.5	41.5	19	02	0	8	8	1	19	1	32.96
27	Station 12																	
28	0530	6/6	48 05	179 55	5.0	28	40	43.5	42.0	09	02	4	8	6	5	28	9	32.95
29	Station 13																	
30	Station 14																	

1/ See station data for summary of weather and sea surface conditions

Summary of Observations at Bathythermograph Lowerings, MV Tordenskjold 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. -°C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	Station 15																	
32	Station 16																	
33	None																	
34	Station 17																	
35	2230	6/20	52°25'N	175°26'W	5.9	06	05	-	-	24	02	6	8	4	3	00	0	33.11
36	0140	6/21	52 43	175 30	6.2	09	05	-	-	24	02	6	8	5	3	00	0	33.09
37	Station 18																	
38	2330	6/21	53 26	175 11	6.0	05	05	-	-	25	02	6	8	6	3	05	1	33.11
39	Station 19																	
40	0320	6/22	53 46	176 43	6.2	05	05	-	-	25	02	6	8	5	3	05	1	-
41	Station 20																	
42	0040	6/23	59 15	176 00	6.0	02	10	-	-	25	02	6	8	4	4	05	1	33.15
43	Station 21																	
44	0420	6/23	54 44	176 01	6.2	05	10	-	-	25	02	6	8	7	3	06	1	33.17
45	Station 22																	
46	Station 23																	
47	Station 24																	
48	Station 25																	
49	Station 26																	
50	Station 27																	
51	Station 28																	
52	0450	6/26	57 35	173 34	7.0	27	07	-	-	24	02	6	6	5	3	27	1	32.67
53	Station 29																	
54	1005	6/26	58 04	172 24	6.2	27	07	-	-	22	03	6	8	5	3	27	1	32.31
55	Station 30																	
56	2340	6/26	58 41	170 48	6.6	32	05	-	-	20	41	x	9	4	4	32	2	31.87
57	Station 31																	
58	Station 32																	
59	Station 33																	
60	Station 34																	

Summary of Observations at Bathythermograph Lowerings, MV Tordenskjold 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf Sal. o/oo
61	Station 35																	
62	2300	6/29	56°46'N	170°03'W	6.6	36	03	-	-	22	02	6	8	5	2	36	2	32.12
63	Station 36																	
64	0240	6/30	56 15	170 01	6.2	36	07	-	-	23	02	6	8	5	2	36	1	32.08
65	Station 37																	
66	2330	6/30	55 45	170 19	6.1	32	20	-	-	23	03	6	8	6	3	30	2	30.99
67	Station 38																	
68	0400	7/1	55 17	170 04	7.2	32	20	-	-	23	02	-	-	5	3	32	2	32.66
69	Station 39																	
70	2240	7/1	54 45	170 04	7.2	32	05	-	-	23	02	6	8	7	2	32	2	32.68
71	Station 40																	
72	0235	7/2	54 15	169 56	7.6	32	04	-	-	23	02	6	8	7	3	32	2	32.68
73	Station 41																	
74	2310	7/2	53 40	170 05	7.0	23	05	-	-	23	01	6	5	7	3	29	2	33.04
75	Station 42																	
76	Station 43																	
77	0030	7/4	53 01	169 58	5.4	29	15	-	-	28	02	6	8	5	4	23	3	33.07
78	0310	7/4	52 36	169 57	6.5	27	15	-	-	27	03	6	8	5	4	25	3	32.74
79	Station 44																	
80	Station 45																	
81	0313	7/5	51 29	170 10	8.6	00	00	-	-	28	02	6	8	7	2	27	1	32.73
82	Station 46																	
83	Station 47																	
84	Station 48																	
85	Station 49																	
86	0450	7/12	53 10	165 21	9.7	32	05	50.0	49.0	21	02	6	7	7	2	32	2	32.57
87	Station 50																	
88	0025	7/13	52 41	165 11	9.4	29	15	49.5	49.0	20	02	6	7	6	3	31	2	32.71
89	Station 51																	
90	0438	7/13	52 11	165 03	8.8	27	15	48.5	47.5	20	03	6	8	6	5	27	3	32.74

Summary of Observations at Bathythermograph Lowerings, MV Tordenskjold 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
91	Station 52																	
92	Station 53																	
93	Station 54																	
94	Station 55																	
95	0135	7/16	49°45'N	165°00'W	8.9	32	15	48.0	46.5	06	01	-	-	5	4	30	3	32.78
96	Station 56																	
97	0428	7/16	49 16	165 00	9.0	32	15	48.0	47.0	06	01	6	6	8	3	32	2	32.80
98	Station 57																	
99	2335	7/16	48 44	165 00	9.9	34	05	48.5	47.5	12	01	6	6	9	2	34	1	32.85
100	Station 58																	
101	0330	7/17	48 15	165 05	10.4	00	00	49.0	47.5	15	02	6	5	9	2	34	1	32.84
102	Station 59																	
103	Station 60																	
104	Station 61																	
105	Station 62																	
106	Station 63																	
107	Station 64																	
108	Station 65																	
109	Station 66																	
110	Station 67																	
111	Station 68																	
112	Station 69																	
113	Station 70																	
114	Station 71																	
115	0322	7/24	51 30	159 55	9.9	27	20	50.5	49.5	28	02	6	8	7	4	27	3	32.67
116	Station 72																	
117	Station 73																	
118	Station 74																	
119	Station 75																	
120	Station 76																	

Summary of Observations at Bathythermograph Lowerings, MV Tordenskjold 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
121	2320	7/26	53°59'N	159°48'W	10.9	07	18	52.0	51.5	16	50	-	-	4	2	20	1	-
122	Station 77																	
123	0340	7/27	54 34	160 10	6.4	07	20	52.0	51.5	17	45	-	-	3	4	18	2	31.91
124	1230	7/29	54 20	164 01	8.8	32	40	52.5	51.5	17	01	6	2	9	5	32	3	32.00
125	2214	7/29	54 01	165 45	6.4	27	10	53.0	52.0	18	02	0	3	9	4	15	3	32.37
126	1415	9/1	51 00	140 00	12.3	29	15	53.0	52.5	21	02	6	3	8	4	29	3	32.61
127	1810	9/1	50 56	139 28	12.9	31	10	53.5	52.5	22	02	6	3	8	3	31	2	32.67
128	2045	9/1	50 56	138 50	12.9	31	05	55.0	53.0	22	02	6	3	9	3	31	2	32.68
129	Station 78																	
130	0750	9/2	51 00	137 15	12.6	00	00	53.5	53.0	22	02	6	0	9	2	31	1	32.68
131	1100	9/2	51 00	136 40	12.7	31	07	52.5	52.0	20	03	-	-	-	3	31	2	32.48
132	Station 79																	
133	1755	9/2	51 00	135 15	14.1	27	15	54.5	54.5	17	02	6	8	8	3	27	3	32.39
134	1955	9/2	51 00	134 35	14.0	22	05	54.5	54.5	16	02	6	8	10	3	22	3	32.20
135	Station 80																	
136	0405	9/3	51 00	133 20	14.0	26	20	54.5	54.0	13	50	-	-	1	4	26	4	32.16
137	0730	9/3	51 00	132 35	14.0	26	20	54.0	54.0	12	21	-	-	1	4	27	4	-
138	Station 81																	
139	1600	9/3	51 02	131 20	14.3	19	15	56.0	55.5	12	50	-	-	1	4	20	4	31.83
140	1900	9/3	51 02	130 45	14.6	23	15	55.5	55.0	12	50	-	-	2	3	23	3	31.75
141	Station 82																	

Plankton Data, MV Tordenskjold, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Oncaeae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
5	150		1.1	3.3	5.7	9.2		9.5	20.7		1.6	1.4		4.7
6	150	1.6	1.1		110.9	3.3		2.2	9.8		1.6	28.8		5.4
	30	6.8			404.8	29.9			47.5			67.9		54.5
8	150	1.1	2.7	4.3	19.6	51.1		25.0	59.8	4.1		13.0		28.2
	30	2.7	2.7		67.9	293.4		27.2	10.9			21.7		73.3
10	150	.5	16.0	2.2	5.4	80.7	.3	37.5	68.5		.5	9.2		28.5
	30		25.9	5.4	17.7	106.1			190.5			53.1		23.1
12	150		6.5	4.3				7.6	1161.3		2.2	1.1		7.7
	30		8.2					2.7	936.1			2.7		
13	150		2.6		1.4	1.6		3.7	63.6		.1	.8		2.6
	30		3.1		1.7	1.7	.3	5.1	140.1			1.4		1.0
14	150	2.7	.5	2.7	24.5	127.2		8.7	9.2	.5		12.0		35.8
	30	8.2	1.4		118.4	434.0		2.7	6.8			32.7		78.9
15	150	3.5	.3	2.2	5.7	66.1		22.8	37.2			40.0		24.5
	30	8.2			77.6	312.9		2.7	6.8			24.5		53.1
16	150	1.1	1.1	5.4	13.0	258.8		26.1	25.0			19.6		34.8
	30	6.8	5.4		85.7	507.5		1.4	96.6			115.7		133.3
18	150	2.2	4.3	4.3	37.0	263.1		56.5	219.6			54.4		43.5
	30	27.2	8.2	8.2	247.6	329.3		13.6	503.4	2.7		103.4		225.9

Plankton Data, MV Tordenskjold, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
20	150		.5		10.3	73.4	.5	.5	582.8	25.6		10.3		27.7
	30			2.7	35.3	427.2			3649.0	32.7		81.6		119.7
22	150		8.7		26.1	408.8		21.7	713.3	21.7		17.4		26.1
	30	5.4	21.8		114.3	1191.8			2057.1					81.6
24	150				4.3	543.7		4.3	356.6	13.0		26.1		17.4
	30				65.3	1948.3			870.8	49.0				65.3
26	150		13.0		34.8	1422.2		26.1	565.4	43.5		52.2		47.8
	30				130.6	3798.6		54.4	1991.8	43.5			*	250.3
31	30	5.4				8.2			642.2					40.8
33	30	14.3		1.4	4.1	.7		.7	16.3			38.1		47.7
35	30	8.8		4.8	1.7	.7		.3	48.6			5.8		40.5
37	150	15.2	.5	1.6	15.2	95.1	1.1	34.3	39.7			22.8		50.9
	30	70.7		8.2	54.4	315.6			195.9			108.8		122.5
39	150	7.6		3.3	14.1	446.9		16.3	73.9			10.9		25.0
	30	49.0		6.8	68.0	434.0	1.4		287.1			43.5		73.5
41	150	3.3	1.1	57.1	41.3	54.9		31.5	39.1			16.9		15.8
	30	27.2	2.7	130.6	187.8	244.9		19.0	337.4			125.2		146.9

* - Indicates orgamism present but not abundant enough to show in tabulation

Plankton Data, MV Tordenskjold, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
42	150	23.4		9.2	48.9	54.9		16.3	102.2			10.3		22.8
	30	264.0	5.4	2.7	220.4	217.7			465.3			5.4		35.3
45	150	1.6			23.9			12.0					.5	
	30	13.6			77.6			12.2	1.4			1.4	4.1	2.7
46	150				14.1	8.7		9.8	1034.0			1.1	7.6	13.0
	30	21.8			54.4	54.4			3385.0					32.7
49	150	.5		28.8	1.1	10.9		47.8	50.6			79.4	2.7	15.2
	30	38.1		163.3		43.5		756.5	1044.9			1088.4	5.4	16.3
50	150	.3			4.6	5.2		6.0	62.5		3.8	1.9		8.7
57	150	1.4		12.2	83.0	17.7	5.4	5.4	372.8			24.5		17.7
	30			35.4	84.4	10.9		21.8	658.5	8.2		73.5	2.7	174.2
59	150		.8	1.1	13.0	3.0	.5	11.1	120.1	.5	.8	28.5	2.7	31.3
	30			10.9	12.2	1.4		27.2	610.9	5.4		47.6	4.1	57.2
63	150			4.3	52.2	2.2		8.7	178.3	1.1		13.0	2.2	27.2
	30			10.9	304.8	5.4		10.9	1741.5	5.4		59.9	5.4	54.4
65	150			2.2	63.1	100.0		10.9	1478.8	10.9		15.2	2.2	84.8
	30				152.4	65.3		21.8	6944.2			130.6		108.8

Plankton Data, MV Tordenskjold, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m.)	Acartia longiremis	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Eucalanus bungii	Paraeuchaeta japonica	Metridia lucens	Oithona	Onceae	Pleuromamma	Pseudocalanus minutus	Scolecithricella minor	Miscellaneous
67	150	.5		1.1	3.3	4.3	2.2	2.2	103.3	1.1		3.8		21.8
	30			13.6	32.7	21.8		13.6	1031.3			8.2		149.7
69	150		8.0	.8	.7	3.1	1.0	2.2	16.9			.1	.1	2.9
	30		27.9	2.4	.7		.3	6.8	69.4			.3	1.0	.6
71	150	.3	.1	.7	4.5	4.8		3.0	66.7		.5	.3	.3	2.1
	30		2.7	8.2	49.0	13.6		20.4	600.0		2.7	1.4	1.4	15.0
72	150	1.1			72.3	15.8		.5	25.6		3.3	1.1	2.2	7.5
	30	5.4		2.7	122.4	19.0		9.5	85.7		1.4		2.7	4.1
74	150	5.4		20.7	1.1	3.3			137.0			137.0	5.4	7.6
	30	19.0		54.4	10.9	13.6		92.5	451.7			500.7	8.2	27.2
76	150	2.2	1.1	1.1	6.5	21.7		14.1	156.6			18.5		10.9
	30	76.2	5.4	5.4	16.3	108.8		87.1	1866.7	10.9		185.0		10.9

Plankton Data, MV Tordenskjold, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
5	0840	150	3.4	3.7	.3		2.2	.3	57.2		5.4	1.1	2.2	1.1		69.8
6	0800	150	15.3	15.7	.5			.5	164.7		7.1		6.5			179.3
		30	10.1	10.2				1.4	611.4		107.5		4.1			724.4
8	0840	150	8.0	8.2	1.6		3.8	1.1	208.9	.5	2.7	4.4	13.1	44.6		280.7
	0900	30	4.1	4.3	13.6			8.2	499.8		10.9		5.4	54.4		592.3
10	0820	150	19.7	20.6		.8	4.6	2.2	249.3		3.5	1.1	3.8	6.3	.8	272.4
	0840	30	9.1	9.7				2.7	421.8		4.1		1.4	2.7		432.7
12	0950	150	12.9	14.3			3.3	1.1	1190.7		1.1	3.3	1.1	10.9		1211.5
	1000	30	6.9	7.3			2.7		949.7					5.4		957.8
13	0900	150	2.0	2.4	.7	1.2	.7	.4	76.4	.1	.4	4.1	1.6	3.3	.3	89.2
	0910	30	0.6	0.8	.3	.3	4.1	.7	154.4	.3	2.4	3.1	1.0	10.5		177.1
14	0841	150	9.8	10.1			.5	1.6	223.8	3.3	2.2	1.6	10.3	3.3		246.6
	0850	30	4.0	4.4	1.4			2.7	683.1		5.4		39.5	2.7		734.8
15	0842	150	3.4	3.8				1.1	202.3	.3	4.4	.5	3.5	.5		212.6
	0850	30	3.5	3.5		1.4	2.7	4.1	485.8	16.3	10.9		2.7	4.1	4.1	532.1
16	0843	150	13.8	14.5	1.1		4.3	1.1	384.9	3.3	1.1		6.5	6.5		407.7
	0850	30	5.1	5.4			4.1	4.1	952.4		13.6		19.0	1.4		994.6
18	0843	150	16.6	18.0	10.9		8.7		684.9	2.2	8.7		6.5	15.2	4.3	741.4
	0849	30	9.2	9.3			5.4	2.7	1469.5	2.7	8.2		8.2	13.6	2.7	1513.0

Plankton Data, MV Tordenskjold, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
20	0842	150	4.3	4.1		2.7	3.8	1.1	731.6			2.7	.5	9.2	1.6	753.2
	0847	30	3.1	3.2			24.5	8.2	4348.2			5.4	10.9	21.8	2.7	4421.7
22	0902	150	14.8	15.0	4.3		8.7	8.7	1243.8			4.3	4.3	8.7		1282.8
	0912	30	7.2	7.7	5.4		16.3	10.9	3472.0		10.9			43.5		3559.0
24	0830	150	14.6	14.5	4.3			4.3	965.4		4.3			34.8		1013.1
	0845	30	8.3	8.5	10.9		10.9	10.9	2998.7				16.3	152.4	10.9	3211.0
26	0855	150	17.3	17.1	4.3			4.3	2205.0			4.3	17.4	39.1	4.3	2278.7
	0902	30	10.3	10.7	21.8	10.9	130.6	10.9	6269.2	10.9			10.9	185.0		6650.2
31	0740	30	2.0	1.9			2.7		696.6					5.4		704.7
33	0835	30	0.4	0.4	1.4		6.1		123.3						.7	131.5
35	0720	30	0.3	0.3	1.0		8.8	.7	111.2		1.0			.7		123.4
37	0810	150	4.6	4.8	2.7	.5	4.3	3.3	276.4		3.8		12.0	16.3	.5	319.8
	0820	30	1.7	1.8	5.4		8.2		876.1		8.2	2.7	5.4	19.0	2.7	927.7
39	0855	150	13.1	13.3	3.3	2.2	1.1	2.2	598.0				4.3	10.9	2.2	624.2
	0905	30	2.0	2.0	5.4		10.9	5.4	963.3				4.1	20.4		1009.5
41	0820	150	11.8	12.5			1.1	.5	261.0		4.9		3.8	3.8		275.1
	0826	30	13.0	13.0			10.9	8.2	1221.7	2.7	19.0		16.3	13.6	2.7	1295.1

Plankton Data, MV Tordenskjold, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
42	0810	150	6.1	6.1	.5		3.3	1.1	288.0	1.6	3.3	.5	3.8	7.6	1.1	310.8
	0815	30	1.9	1.2			57.1		1216.2		2.7		5.4	8.2		1289.6
45	0945	150	5.6	5.7					38.0		1.6			.5	.5	40.6
	0953	30	1.0	1.1					113.0	5.4	38.1					156.5
46	0745	150	0.8	0.7				2.2	1088.3	2.2	5.4	2.2		1.1		1101.4
	0750	30	0.4	0.4					3548.3		10.9					3559.2
49	0852	150	8.1	8.0	2.2	.5	3.3	.5	237.0	3.3	.5		.5	.5	.5	248.8
	0858	30	6.3	7.1			10.9		3156.4	38.1	27.2				5.4	3238.0
50	0918	150	1.1	1.2	.3	1.4	.3	.8	93.0	3.0	1.9	4.1	.3		.8	105.9
57	0839	150	2.0	2.0	4.1	6.8	38.1	5.4	540.1	2.7	4.1	6.8	13.6	12.2	1.4	635.3
	0845	30	2.6	2.8	5.4		27.2	2.7	1069.6	2.7	10.9	2.7	5.4	8.2		1134.8
59	0805	150	2.1	2.1	3.3	1.6	8.7	2.7	213.4	.5	.8	1.4	1.9	4.6	2.7	241.6
	0908	30	0.7	0.8	4.1	1.4	6.8	1.4	776.9	1.4	2.7		1.4	17.7	5.4	819.2
63	0715	150	4.3	4.4	5.4		13.0	5.4	289.2	1.1	1.1	1.1	2.2	7.6	3.2	329.3
	0720	30	3.1	3.3	54.4		32.7	54.4	2198.6		16.3		5.4	70.7	5.4	2437.9
65	0715	150	22.7	23.0	10.9		8.7	8.7	1768.1		4.3	6.5	4.3	182.7	2.2	1996.4
	0720	30		20.1			21.8	65.3	7423.1		21.8			1066.7	65.3	8664.0

Plankton Data, MV Tordenskjold, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt. (gm)	MEDUSAE	SIPHONOPHORA	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
67	0712	150	1.9	2.1	3.3		2.7		143.6			.5	1.6	14.1	.5	166.3
	0717	30	1.2	1.5	10.9	2.7	10.9		1270.9		10.9		68.0			1374.3
69	0818	150	4.8	4.8	.4		.3	.4	35.8	.1	.4	2.3	.7	.4	.5	41.3
	0826	30	2.5	2.7	.3		.7		109.4	1.7	1.7	3.1	.3	1.7		118.9
71	0830	150	1.7	0.9	.3		.4		83.3	.5	.3	.3		.8		85.9
	0835	30	1.3	1.3			9.5		714.4	2.7	8.2		4.1	5.4	1.4	745.7
72	0907	150	6.0	6.0			1.1		129.4	2.7	3.3	4.3	.5		.5	141.8
	0912	30	3.2	3.1					252.9	13.6	1.4		1.4			269.3
74	0922	150	4.7	4.9	1.1			6.5	317.5	2.2	6.5				1.1	334.9
	0927	30	2.7	3.0			5.4	16.3	1178.2	2.7	10.9			2.7		1216.2
76	0935	150	4.8	5.1	5.4		2.2		232.7	4.3		1.1	2.2		17.4	265.3
	0940	30	2.9	3.0	27.2		27.2	10.9	2372.7	21.8	16.3			5.4	103.4	2584.9

APPENDIX

Bathythermograph observations made by the vessels of the Fisheries Research Institute, University of Washington, Seattle, Washington.

MV *Commander*

MV *Windward*

Summary of Observations at Bathythermograph Lowerings, MV Commander 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	0400	5/27	54°24'N	150°40'W	6.8	27	02	45.0	43.0	20	02	-	0	9	1	27	1	32.82
2	1845	5/27	56 24	151 43	6.4	00	00	45.0	43.0	20	02	-	0	9	1	27	1	
3	2030	6/4	52 49	168 31	6.3	27	10	43.5	42.5	14	03	8	6	8	2	27	3	32.29
4	0330	6/8	51 47	174 38	4.5	27	02	44.0	42.0	19	02	6	8	9	1	26	1	32.62
5	1830	6/8	51 32	176 33	4.8	18	12	42.0	39.0	22	02	0	8	9	3	23	1	32.53
6	1930	6/19	52 54	176 54	5.5	09	13	42.0	41.0	26	02	0	8	6	3	09	1	33.11
7	2020	6/20	52 57	177 07	5.7	09	10	42.5	42.0	24	02	0	8	7	3	09	1	33.12
8	1945	6/21	53 58	176 54	5.7	09	15	40.5	40.0	26	02	0	8	7	3	09	1	33.12
9	1930	6/22	53 59	175 58	5.9	08	12	41.0	41.0	24	02	0	8	2	3	08	1	33.14
10	1925	6/23	56 02	176 00	6.8	08	10	41.5	41.5	26	02	0	8	6	2	08	1	32.74
11	2030	6/24	54 00	175 55	6.1	08	02	43.0	43.0	26	02	0	8	3	2	09	1	33.13
12	1918	6/28	52 05	173 48 E	6.9	24	05	43.0	41.5	31	02	0	8	6	1	27	2	32.88
13	1945	7/1	54 00	172 45	7.8	32	02	42.0	42.0	27	02	0	8	6	1	23	2	33.26
14	1945	7/3	52 09	173 05	7.6	27	05	43.5	42.5	32	02	0	8	7	1	27	2	32.88
15	2005	7/8	52 10	173 08	7.5	01	05	44.0	42.0	18	02	0	8	8	1	27	1	32.89
16	0020	7/10	52 12	173 25	8.6	00	00	51.0	47.0	23	02	0	7	8	0	27	2	32.88
17	2300	7/11	53 59	172 32	8.0	21	15	47.0	46.0	28	02	0	8	9	4	21	1	32.93
18	2040	7/16	48 00	172 36	8.2	36	13	47.0	47.0	13	02	0	8	3	4	25	4	32.85
19	2120	7/23	51 28	176 49 W	6.1	24	12	46.0	44.5	34	02	0	8	7	2	27	1	32.87
20	2000	7/24	50 00	176 56	9.5	32	08	49.0	48.0	34	03	5	2	9	2	14	1	32.92
21	2045	7/26	51 31	176 42	6.9	00	00	52.0	50.5	18	02	0	2	8	1	23	1	33.16
22	1945	7/27	51 27	176 45	7.7	06	02	48.5	48.0	18	02	0	8	5	1	00	0	32.81
23	2100	7/28	51 30	176 43	7.6	00	00	50.5	49.5	23	02	0	8	9	0	00	0	33.20
24	2040	7/29	51 29	176 44	7.2	27	12	46.0	45.5	25	02	0	8	3	3	27	1	33.20
25	2245	8/1	51 00	176 41	9.4	00	00	50.0	49.0	30	02	0	8	6	0	24	2	32.70
26	0015	8/5	48 04	176 59	11.3	12	05	52.0	50.0	33	02	0	8	8	3	05	1	32.73
27	1900	8/5	49 49	176 42	10.4	25	08	51.5	49.5	29	02	0	8	8	3	23	1	32.68
28	1945	8/6	51 31	176 43	9.3	00	00	51.5	51.5	20	28	x	9	1	1	23	1	30.07
29	1945	8/13	52 09	173 22	11.4	31	10	55.0	53.0	09	01	6	7	7	3	09	2	32.62
30	0040	8/18	50 00	172 56 E	11.8	28	15	58.0	55.0	14	02	4	6	7	4	28	1	32.41

Summary of Observations at Bathythermograph Lowerings, MV Commander 1959 (cont.)

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	1940	8/28	52°14'	173°06'E	11.6	27	08	54.0	52.0	30	02	0	8	8	2	27	1	32.43
32	1935	8/30	52 08	173 23	12.0	18	04	53.0	48.0	18	02	0	8	8	2	14	2	32.56
33	1755	8/31	52 18	173 18	11.9	13	15	51.0	50.0	19	10	0	9	5	4	14	1	27.44
34	2145	9/1	52 37	175 11	11.9	10	06	51.5	51.5	15	21	0	8	4	2	12	1	27.23
35	2315	9/9	51 34	176 29 W	9.0	05	12	51.0	49.0	29	02	0	8	7	2	23	1	32.45
36	1930	9/16	53 00	176 56	9.8	00	00	51.0	49.0	11	02	0	8	8	0	32	1	28.28
37	2020	9/20	51 29	176 44	9.8	34	12	51.5	49.5	88	03	1	5	9	4	11	1	32.14
38	1930	9/25	53 14	167 02	9.0	27	04	49.5	48.5	20	03	6	8	8	2	23	1	31.86
39	1850	9/26	52 00	166 54	10.8	09	15	52.0	50.0	17	03	6	8	8	3	18	1	32.41

Summary of Observations at Bathythermograph Lowerings, MV Windward 1959

Ser. No.	Time GCT	Date 1959	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kt.	Air. Temp. Dry Bulb °F	Air. Temp. Wet Bulb °F	Bar. mb.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.
1	0335	4/24	52 00'N	179 00 W	5.3	00	00	47.0	40.5	14	03	6	8	7	0	16	2
2	2340	5/26	52 00	179 00	4.5	21	06	41.0	40.0	19	03	6	6	8	1	18	2
3	0020	5/28	52 19	176 47 E	5.8	00	00	41.0	40.5	06	03	6	5	8	1	31	2
4	0335	6/3	52 00	173 00	5.3	21	08	41.5	41.5	16	03	6	8	7	1	20	1
5	2235	6/3	52 00	173 00	5.2	21	16	41.5	41.0	18	02	6	8	8	1	21	1
6	2220	6/5	54 00	173 00	5.2	35	12	41.0	41.0	03	03	6	4	8	1	34	2
7	0802	6/20	51 30	176 30 W	6.4	00	00	43.0	42.5	23	02	6	8	7	1	13	1
8	2219	6/21	51 30	176 30	6.3	04	09	43.0	43.0	21	02	6	8	7	1	13	2
9	0500	6/23	51 30	176 30	6.6	07	20	43.5	43.5	21	02	6	8	7	1	09	1
10	0501	6/24	51 30	176 30	6.7	07	16	43.5	43.5	21	02	6	8	7	1	11	1
11	1240	6/26	51 33	176 11	6.1	07	18	41.0	41.0	24	02	6	8	6	1	09	3
12	2305	6/27	50 00	177 00	7.1	30	08	45.0	44.0	28	02	6	7	8	1	29	1
13	0435	6/29	50 00	177 00	7.1	30	08	45.0	44.0	28	02	6	8	7	1	30	3
14	2155	7/1	56 00	177 00	7.2	29	04	43.5	43.5	21	60	0	8	6	2	29	1
15	2355	7/2	53 00	177 00	7.1	26	12	44.5	44.0	23	02	6	8	6	2	30	1
16	2348	7/5	51 30	176 30	8.8	27	15	46.0	46.0	01	02	8	6	7	2	27	2
17	2030	7/16	53 18	167 00	11.1	25	14	53.0	52.5	06	02	8	6	6	2	22	1

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