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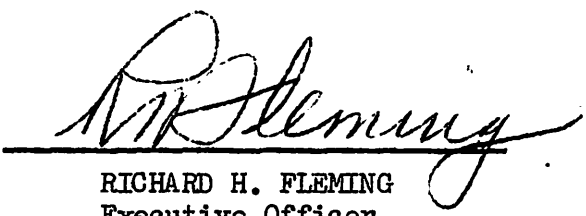
Technical Report No. 56

PHYSICAL AND CHEMICAL DATA - GULF OF ALASKA
Spring and Summer 1956 and Spring 1957

Compiled by
Cuthbert M. Love

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RICHARD H. FLEMING
Executive Officer

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ABSTRACT

This report presents physical and chemical data collected in the Gulf of Alaska during the spring and summer of 1956 and in the spring of 1957. Observations were made during three cruises of the research vessel Brown Bear of the University of Washington, Department of Oceanography.

Charts show the positions of stations sampled. Tables give values, over a range of selected depths, for temperature, salinity, density, dissolved oxygen, and dissolved inorganic phosphate.

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INTRODUCTION

This report contains offshore oceanographic data collected in the Gulf of Alaska and adjacent waters during Cruise 142 and during the offshore portions of Cruises 143 and 163 of the research vessel Brown Bear of the Department of Oceanography, University of Washington. Cruise 142 (1 May to 9 June 1956) was primarily an offshore cruise, but a series of inshore stations was occupied in the Sitka - Silver Bay area. On the other hand, Cruise 143 (29 June to 15 July 1956) and Cruise 163 (19 March to 6 April 1957) were surveys of the oceanography of Silver Bay, designed primarily to provide data for study of pollution problems in this Alaskan inlet; however, a few offshore stations were taken during each of these two cruises. Part of the Silver Bay survey consisted of a series of oceanographic stations beginning at a point approximately 60 miles southwest of Sitka and extending into Sitka Sound and thence into Silver Bay. The station at the seaward end of this line was unofficially designated as Station "Charlie", and this location will be referred to in the following tables as "U. W. Station Charlie" to avoid confusion with geographical code names assigned by other agencies. This line of oceanographic stations was occupied once during Cruise 142 and twice each (inbound and outbound) on Cruises 143 and 163. The first five stations in this line, extending from "Station Charlie" to Cape Edgecumbe at the entrance to Sitka Sound, have been considered as offshore stations and these data are included in this report.

Preliminary narrative reports have been issued describing the activities carried on during Cruise 142 and the offshore positions of Cruise 163 (1, 2); and Cruise 143 is described in the preliminary report on Silver Bay (3).

Area and Station Numbers

The locations of stations on each cruise are shown on maps preceding the data tables. In addition, Figure 2 shows in detail the stations along the Sitka approach line from "U. W. Station Charlie" to Cape Edgecumbe.

The station numbers used on Brown Bear cruises consist of two parts: the cruise number, followed by a dash, followed by a number starting with "1" for the first station occupied on that cruise and continuing consecutively (i.e. 142-1, 142-2, etc.).

Sampling Bottles and Determination of Properties

On these cruises the water samples were collected with Nansen bottles and Fjarlie bottles (4).

The depths of subsurface observations were calculated from measured wire angle, from readings of unprotected reversing thermometers, and from curves of wire length (L) minus thermometric depth (Z) versus wire length, the L-Z curve method described by LaFond (5).

Salinity analyses were run in the Seattle laboratories of the Department of Oceanography. Copenhagen standard sea water was used as the standard in the determinations. Dissolved oxygen was obtained by the modified Winkler method described by Thompson and Robinson (6). Soluble inorganic phosphate was determined by the method of Thompson and Robinson (7) using a Beckman Model DU spectrophotometer. The phosphate data, corrected for salt error, are reported conventionally to the second decimal place in microgram-atoms per liter, although it is realized that the individual determinations may be in error by 5 to 10 per cent.

Previous Publications Containing Offshore Oceanographic Data

Cruise 142 was the third oceanographic cruise made in the Gulf of Alaska by the Brown Bear. Data from the first two cruises, Nos. 64 and

110 (NORPAC), have been presented as indicated in the following list. The data from some of the Cruise 143 offshore stations have appeared previously in a report on the Silver Bay survey (3).

Oceanographic data collected in offshore waters by the Department of Oceanography since March 1952 have been presented in the following reports:

<u>Report No.</u>	<u>Reference No.</u>	<u>Contains Data Collected:</u>
Technical Report No. 22	54-6	March - September 1952
Technical Report No. 23	54-7	April - June 1953
Technical Report No. 34	54-20	July - September 1953
Technical Report No. 49	54-10	April 1954 - January 1955 (includes Cruise 64 data)
Technical Report No. 55	57-27	June - July 1955, July - August 1956
Special Report No. 22	56-4	August - September 1955 (contains Cruise 110 data: NORPAC)

Oceanographic data from the Northeast Pacific Ocean and the Gulf of Alaska, collected aboard vessels of the United States Fish and Wildlife Service during the summer and fall of 1955 by representatives of the Department of Oceanography, appear in Special Report No. 28, Reference No. 57-3. Offshore data from John N. Cobb Cruise 28, July - August 1956, are included in Technical Report No. 55, Reference No. 57-27.

PersonnelAt Sea

Following is a list of the personnel assigned on the seagoing scientific staff. Unless otherwise indicated all personnel are from the Department of Oceanography:

<u>Name</u>	<u>Title</u>
<u>Cruise 142</u>	
Allen, Dr. George H.	Research Instructor
Jackson, Hewitt R.	Senior Draftsman
Kreek, Peter	Engineering Aid
Linger, Ernest H.	Research Assistant
Love, Cuthbert M.	Research Instructor
Martin, Thomas O.	Engineering Aid
McMillin, John G.	Laboratory Assistant
Riley, Ralph W.	Marine Chemist
<u>Cruise 143</u>	
Barkley, Richard A.	Research Assistant
Barnes, Dr. Clifford A.	Professor
Budinger, Thomas F.	Research Assistant
Collias, Eugene E.	Research Instructor
Jackson, Hewitt R.	Senior Draftsman
Legare, J. E. Henri	Pacific Oceanographic Group
Love, Cuthbert M.	Research Instructor
Olcay, Lt. Necip	Marine Aid
Ozturgut, Lt. Erdogan	Marine Aid
Owen, Robert W.	Marine Aid
Palmer, Harold D.	Marine Aid
Shaw, Jack T.	Applied Physics Lab., U. of W.
Sund, Paul N.	Senior Marine Aid
Wennekens, M. Pat	Research Assistant

<u>Name</u>	<u>Title</u>
<u>Cruise 163</u>	
Aron, William I.	Research Associate
Dermody, John J.	Senior Oceanographer
Garrison, Dr. Gerald R.	Applied Physics Lab., U. of W.
Jackson, Hewitt R.	Senior Draftsman
Love, Cuthbert M.	Research Instructor
McMillin, John G.	Laboratory Assistant
Morse, Miss Betty-Ann	Senior Laboratory Technician
Riley, Ralph W.	Marine Chemist
Rubinstein, Richard P.	Research Assistant
Semon, Miss Darrelyn	Marine Aid
Steele, Robert W.	Laboratory Technician

Ashore

Persons engaged in the analysis and the preparation of these data for publication included:

<u>Name</u>	<u>Title</u>
Barnes, Dr. Clifford A.	Professor
Budinger, Thomas F.	Research Assistant
Burnett, Mrs. Cynthia	Typist
Collias, Eugene E.	Research Instructor
Doyle, Donald R.	Senior Draftsman
Haselwood, Mrs. Edith	Assistant Editor
Huckins, Robert N.	Laboratory Technician
Jackson, Hewitt R.	Senior Draftsman
Kreek, Peter	Engineering Aid
Lincoln, John H.	Research Instructor
Love, Cuthbert M.	Research Instructor
Martin, Thomas O.	Engineering Aid
McAlister, William B.	Senior Marine Aid
McKenzie, Mrs. Jeanette	Secretary
Morse, Miss Betty-Ann	Senior Laboratory Technician
Olcay, Lt. Necip	Marine Aid
Ozturgut, Lt. Erdogan	Marine Aid
Riley, Ralph W.	Marine Chemist
Rubinstein, Richard P.	Research Assistant
Semon, Miss Darrelyn	Marine Aid
Sund, Paul N.	Senior Marine Aid
Tomlinson, Miss Barbara	Laboratory Helper
Wennekens, M. Pat	Research Assistant
Whitmire, Mrs. Sally A.	Secretary

EXPLANATION OF PHYSICAL AND CHEMICAL DATA TABLES

Station positions are given to the nearest minute of latitude and longitude. The messenger time reported is the time the messenger was released on the first cast made on station. The time zone used in all cases was +8. On all of the deeper stations (below 200 meters) the sampling was done in two or more casts. The cast number is indicated in the left hand column. In cases where the cast numbers are not consecutive the missing numbers belong to casts where no data was obtained or which had to be completely redone because of equipment failures. On these cruises there was usually a one-bottle depth overlap between the shallow and deep casts, that is, the lowest bottle of the shallow cast was arranged to sample at 200 meters (Cruise 142) or 300 meters (Cruises 143, 163) and the upper bottle of the deep casts sampled at the same depth.

During the drawing of smooth curves of property versus depth, from which the values at standard depths were interpolated, certain values obviously did not fit the smooth curve. In the region of the overlapping bottles there were often two different values of a property at or near the same depth. In such cases sometimes the smooth curve was drawn between the two points, in other cases one of the two points was chosen and the other disregarded. All values have been tabulated, and the following symbols indicate which values were chosen when drawing the curve:

- a - This value used in drawing smooth curve
- b - This value deviates from smooth curve; not used
- c - Smooth curve drawn between these two points
- d - " " " " " " "

The depth listed was determined by an EDO echo-sounder. Barometric pressure is in inches of mercury. The following weather observations: weather (present weather), sea height, visibility, and clouds are reported according to the numerical code given in U. S. Navy Hydrographic Office Publication No. 606-c, Bathythermograph Observations. For convenience, the codes for sea height, visibility, cloud type, cloud amount (cover), and appropriate sections from the present weather code from the above publication are reproduced herein.

Extrapolated values in the tables are enclosed in parentheses.

CODES USED FOR REPORTING WEATHER CONDITIONS

Taken from U. S. Navy Hydrographic Office Publication
No. 606-c, Bathythermograph Observations

Present Weather

Code

00 Cloud development not observed
or not observable
01 Clouds generally dissolving or
becoming less developed
02 State of sky on the whole
unchanged
03 Clouds generally forming or
developing
14 Precipitation within sight, but
not reaching ground at the ship
20 Drizzle, not freezing (during
preceding hour but not at time
of observation)
27 Shower(s) of hail or of hail
and rain
50 Drizzle, not freezing, inter-
mittent (slight)
51 Drizzle, not freezing, contin-
uous (slight)
59 Drizzle and rain, moderate or
heavy
60 Rain, not freezing, inter-
mittent (slight)
61 Rain, not freezing, continuous
(slight)
62 Rain, not freezing, inter-
mittent (moderate)
63 Rain, not freezing, continuous
(moderate)
65 Rain, not freezing, continuous
(heavy)
73 Continuous fall of snow flakes
(moderate)

Sea Height

Code

0 Flat calm
1 Less than 1 foot
2 1 to 3 feet
3 3 to 5 feet
4 5 to 8 feet
5 8 to 12 feet
6 12 to 29 feet
7 20 to 40 feet

Visibility

Code

0 Dense fog 50 yards
1 Thick fog 200 yards
2 Fog 400 yards
3 Moderate fog 1000 yards
4 Thin fog or mist 1 mile
5 Visibility poor 2 miles
6 Visibility moderate 5 miles
7 Visibility good 10 miles
8 Visibility very good 30 miles
9 Visibility excellent
over 30 miles

Cloud Amount

Code

0 No clouds
1 Less than 1/10, or 1/10
2 2/10 and 3/10
3 4/10
4 5/10
5 6/10
6 7/10 and 8/10
7 9/10 and 9/10 plus
8 10/10
9 Sky obscured

Cloud Type

Code

0 Stratus or fractostratus
1 Cirrus
2 Cirrostratus
3 Cirrocumulus
4 Altcumulus
5 Altostratus
6 Stratocumulus
7 Nimbostratus
8 Cumulus or fractocumulus
9 Cumulonimbus

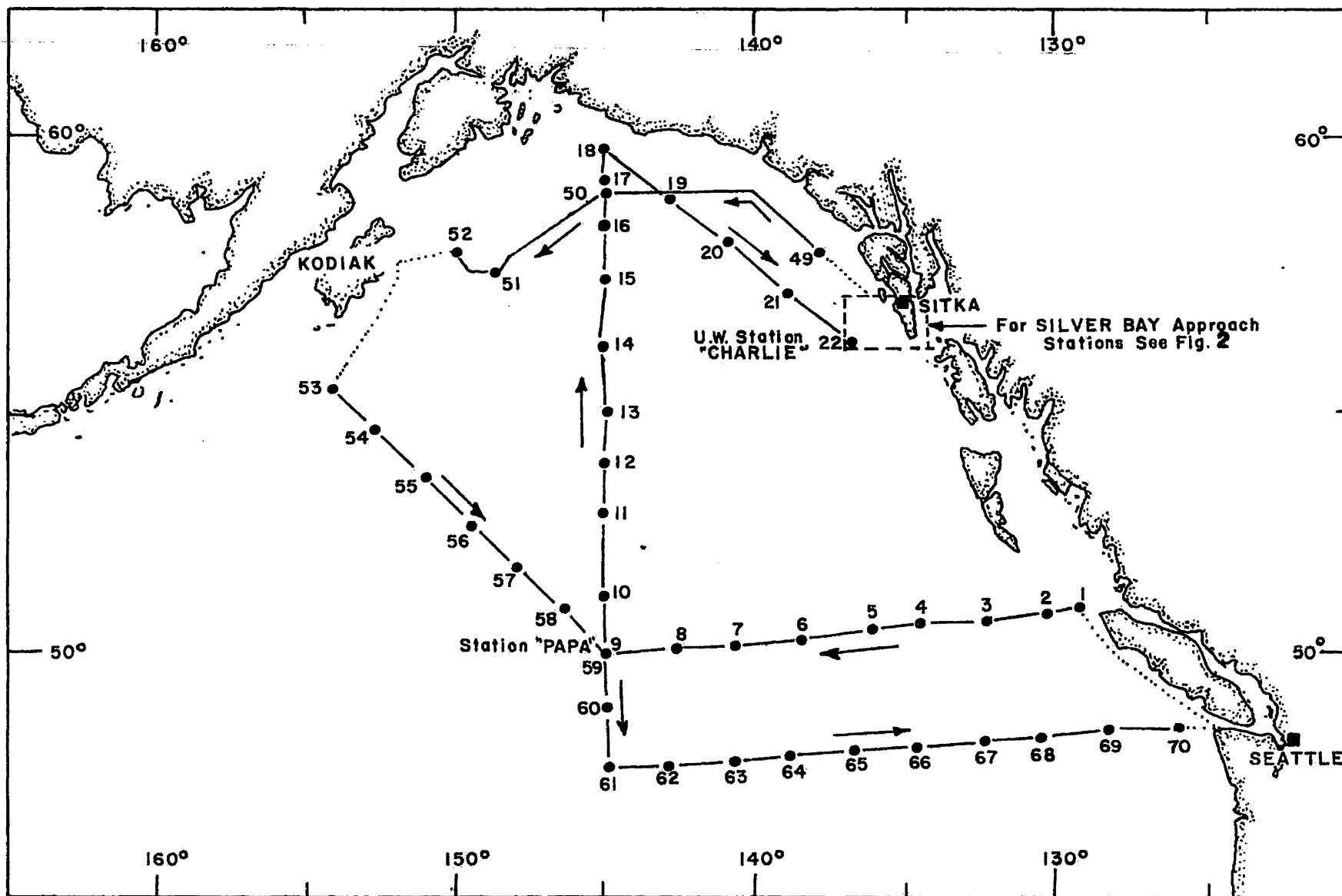


Figure 1. Brown Bear Cruise 1h2, 1 May to 9 June 1956

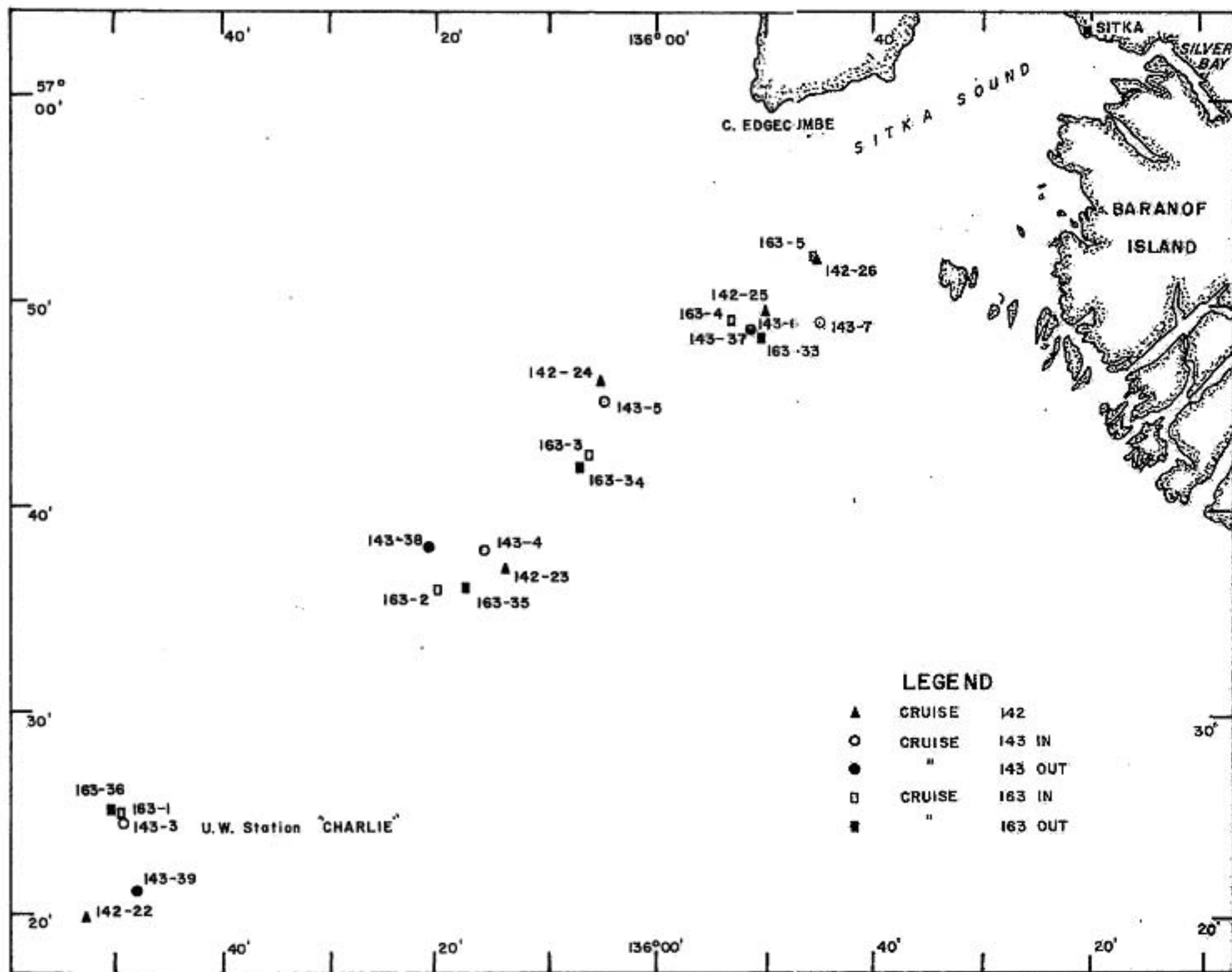


Figure 2. Silver Bay Approach Stations Cruises 142, 143, 163

STATION 142-1

51° 05'N, 129° 21'W - Ent. Queen Charlotte Sound

4 May 1956
 Messenger time: 0211 (+8)
 Depth: 117 fm, 214 m

Weather: 00
 Sea height: 2
 Visibility: 7
 Air temperature: dry 48°F, wet 46°F

Barometer: 29.81 in
 Wind: 350°, 12 kn
 Clouds: 5; amt 1

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	8.76	31.26	24.25	0.847	0.27
	10	8.81	31.39	24.35	0.825	0.43
	20	7.75	32.15	25.09	0.620	0.95
	30	7.17	32.29	25.28	0.606	1.12
	49	6.47	32.64	25.65	0.546	1.55
	74	6.52	32.93	25.88	0.500	1.66
	98	6.42	33.14	26.05	0.401	1.84
	147	6.38	33.69	26.51	-	2.32
	196	5.77	33.86	26.62	0.220	2.51

INTERPOLATED

	0	8.76	31.26	24.25	0.847	0.27
	10	8.81	31.39	24.35	0.825	0.43
	20	7.75	32.15	25.09	0.620	0.95
	30	7.17	32.29	25.28	0.606	1.12
	50	6.48	32.66	25.67	0.544	1.55
	75	6.52	32.94	25.89	0.499	1.67
	100	6.42	33.18	26.06	0.399	1.88
	150	6.34	33.71	26.52	0.295	2.34
	200	(5.71)	(33.88)	(26.63)	(0.212)	(2.52)

STATION 142-2

50° 58'N, 130° 14'W - W Queen Charlotte Sound

4 May 1956
 Messenger time: 0910 (+8)
 Depth: 1200 fm, 2195 m

Weather: 01
 Sea height: 2
 Visibility: 8
 Air temperature: dry 48°F, wet 47°F

Barometer: 29.75 in
 Wind: 005°, 13 kn
 Clouds: -, amt 0

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	8.41	32.05	24.92	0.615	0.86
	10	8.36	32.05	24.93	0.615	0.80
	20	8.05	32.08	25.00	0.602	0.89
	30	7.66	32.13	25.09	0.616	0.95
	49	7.05	32.60	25.55	0.615	1.23
	74	6.20	32.67	25.71	0.560	1.36
	99	6.65	33.04	25.95	0.442	1.65
	148	6.84	33.63	26.38	0.326	2.33
1	197	6.48	33.89 ^c	26.61	0.205	2.39 ^a
	191	6.53	33.86 ^c	26.52	0.212	2.17 ^b
	290	5.73	33.96	26.71	0.147	2.44
	485	4.74	34.09	27.01	0.066	2.73
	976	3.32	34.36	27.37	0.019	2.98
	1471	2.46	34.50	27.56	0.039	3.15
	1963	1.95	34.58	27.66	0.105	3.02

INTERPOLATED

0	8.41	32.05	24.92	0.615	0.86
10	8.36	32.05	24.93	0.615	0.80
20	8.05	32.08	25.00	0.602	0.89
30	7.66	32.13	25.09	0.616	0.95
50	6.98	32.60	25.56	0.612	1.24
75	6.21	32.67	25.72	0.555	1.38
100	6.67	33.07	25.97	0.440	1.67
150	6.83	33.65	26.39	0.319	2.33
200	6.42	33.89	26.62	0.204	2.39
250	6.00	33.93	26.67	0.167	2.42
300	5.68	33.97	26.72	0.142	2.46
400	5.13	34.04	26.88	0.096	2.61
500	4.70	34.10	27.02	0.063	2.74
600	4.38	34.17	27.10	0.047	2.80
700	4.07	34.23	27.17	0.033	2.87
800	3.78	34.28	27.25	0.027	2.91
1000	3.27	34.37	27.38	0.018	2.99
1200	2.83	34.43	27.46	0.020	3.08
1500	2.42	34.50	27.57	0.042	3.14
2000	(1.91)	(34.59)	(27.66)	(0.110)	(3.00)

STATION 142-3

50° 43'N, 132° 18'W

4 May 1956
 Messenger time: 2150 (+8)
 Depth: 1527 fm, 2792 m

Weather: 02
 Sea height: 2
 Visibility: 7
 Air temperature: dry 48°F, wet 47°F

Barometer: 29.75 in
 Wind: 280°, 4 kn
 Clouds: -, amt 0

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	7.96	32.72	25.51	0.610	1.37
	10	7.94	32.72	25.52	0.600	1.33
	20	6.87	32.70	25.65	0.627	1.30
	30	6.60	32.71	25.69	0.616	1.31
	49	6.06	32.75	25.79	0.587	1.40
	74	5.77	32.75	25.83	0.608	1.47
	99	5.59	32.79	25.88	0.587	1.54
	146	5.69	33.45	26.39	0.395	2.14
	197	5.40	33.85	26.74	0.244	2.52 ^c
	1	195	5.39	33.84	26.73	0.248
293		4.73	33.94	26.89	0.136	2.71
489		4.11	34.13	27.11	0.058	3.11
981		3.10	34.39	27.41	0.027	3.21
1475		2.29	34.51	27.58	0.059	3.09
1970		1.89	34.60	27.68	0.126	2.90
2466		1.69	34.64	27.73	0.188	3.25

INTERPOLATED

0	7.96	32.72	25.51	0.610	1.37
10	7.94	32.72	25.52	0.600	1.33
20	6.87	32.70	25.65	0.627	1.30
30	6.60	32.71	25.69	0.616	1.31
50	6.02	32.75	25.79	0.589	1.40
75	5.75	32.75	25.83	0.607	1.47
100	5.60	32.79	25.89	0.586	1.54
150	5.67	33.50	26.42	0.382	2.18
200	5.35	33.85	26.74	0.237	2.53
250	4.95	33.91	26.83	0.169	2.64
300	4.70	33.95	26.89	0.132	2.72
400	4.38	34.05	27.01	0.088	2.94
500	4.08	34.12	27.12	0.058	3.11
600	3.82	34.21	27.19	0.048	3.15
700	3.60	34.26	27.25	0.038	3.18
800	3.39	34.31	27.31	0.032	3.19
1000	3.07	34.39	27.42	0.030	3.22
1200	2.78	34.45	27.49	0.037	3.20
1500	2.25	34.52	27.58	0.061	3.08
2000	1.88	34.60	27.68	0.130	2.92
2500	(1.66)	(34.64)	(27.73)	(0.192)	(3.27)

STATION 142-4

50° 41'N, 134° 29'W

5 May 1956
 Messenger time: 1132 (+8)
 Depth: 1857 fm, 3396 m

Weather: 02
 Sea height:
 Visibility: 8
 Air temperature: dry 46°F, wet 43°F

Barometer: 29.88 in
 Wind: -, 0 kn
 Clouds: 2, amt 2

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	7.80	32.50	25.36	0.615	1.23
	10	6.58	32.63	25.63	0.637	1.26
	20	6.54	32.72	25.71	0.630	1.44
	30	6.13	32.72	25.76	0.635	1.41
	49	5.60	32.75	25.85	0.633	1.49
	74	5.34	32.76	25.89	0.626	1.72
	98	5.20	32.77	25.91	0.571	1.54
	148	5.29	33.51	26.48	0.561	2.11
	157	5.22	33.83 ^c	26.74	0.308	2.38 ^c
	1	195	5.25	33.80 ^c	26.72	0.321
294		4.39	33.90	26.89	0.169	2.74
490		4.01	34.11	27.10	0.055	3.12
984		3.01	34.37	27.40	0.031	3.27
1474		2.35	34.49	27.56	0.054	3.02
1972		1.90	34.58	27.67	0.116	3.07

INTERPOLATED

0	7.80	32.50	25.36	0.615	1.23
10	6.58	32.63	25.63	0.637	1.26
20	6.54	32.72	25.71	0.630	1.44
30	6.13	32.72	25.76	0.635	1.41
50	5.59	32.75	25.85	0.633	1.50
75	5.34	32.76	25.89	0.625	1.72
100	5.20	32.79	25.92	0.571	1.58
150	5.30	33.54	26.49	0.559	2.13
200	5.22	33.83	26.74	0.298	2.40
250	4.73	33.88	26.84	0.209	2.60
300	4.38	33.91	26.90	0.165	2.76
400	4.18	34.00	27.00	0.093	2.99
500	3.99	34.12	27.11	0.053	3.13
600	3.77	34.20	27.20	0.042	3.19
700	3.55	34.25	27.26	0.034	3.24
800	3.34	34.30	27.32	0.031	3.27
1000	2.99	34.37	27.40	0.032	3.27
1200	2.68	34.43	27.47	0.038	3.18
1500	2.32	34.50	27.57	0.057	3.01
2000	(1.99)	(34.58)	(27.67)	(0.120)	(3.08)

STATION 142-5

50° 32'N, 136° 32'W

6 May 1956
 Messenger time: 0009 (+8)
 Depth: 2002 fm, 3662 m

Weather: 01
 Sea height: 2
 Visibility: 8
 Air temperature: dry 44°F, wet 43°F

Barometer: 29.96 in
 Wind: 025°, 12 kn
 Clouds: 4, amt 2

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ -at/L
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OBSERVED

2	0	7.44	32.79	25.64	0.616	1.40
	9	6.83	32.76	25.70	0.635	1.43
	19	6.08	32.75	25.79	0.640	1.50
	28	5.92	-	-	0.641	1.32
	47	5.51	32.77	25.87	0.637	1.50
	71	5.35	32.77	25.89	-	1.54
	94	5.17	32.79	25.93	0.628	1.54
	143	5.20	33.51	26.49	0.456	2.15
	189	5.05 ^c	33.83 ^c	26.76	0.299 ^c	2.60 ^c
	1	193	5.13 ^c	33.78 ^c	26.72	0.340 ^c
288		4.40	33.89	26.88	0.192	2.55
480		3.96	34.12	27.11	0.057	3.07
963		3.05	34.39	27.42	0.030	3.14
1445		2.29	34.51	27.58	0.059	3.02
1930		1.94	34.54	27.63	-	2.87
2414		1.69	34.62	27.71	0.173	2.90

INTERPOLATED

0	7.44	32.79	25.64	0.616	1.40
10	6.70	32.76	25.70	0.635	1.46
20	5.98	32.75	25.79	0.639	1.49
30	5.87	32.75	25.83	0.640	1.32
50	5.50	32.77	25.87	0.636	1.51
75	5.30	32.77	25.90	0.632	1.54
100	5.16	32.80	25.95	0.610	1.62
150	5.18	33.60	26.54	0.440	2.20
200	5.05	33.82	26.76	0.311	2.42
250	4.74	33.86	26.83	0.233	2.51
300	4.32	33.90	26.89	0.182	2.57
400	4.00	34.03	27.03	0.105	2.84
500	3.95	34.14	27.13	0.053	3.07
600	3.89	34.21	27.21	0.050	3.10
700	3.72	34.27	27.28	0.034	3.11
800	3.48	34.32	27.34	0.030	3.12
1000	2.97	34.40	27.44	0.029	3.14
1200	2.65	34.46	27.51	0.039	3.13
1500	2.22	34.51	27.59	0.062	3.09
2000	1.90	34.55	27.64	-	2.96
2500	(1.63)	(34.63)	(27.73)	-	(1.89)

STATION 142-6

50° 20'N, 138° 25'W

6 May 1956

Messenger time: 1252 (+8)

Depth: 2067 fm, 3780 m

Weather: -

Sea height: 2

Visibility: 8

Air temperature: dry 43°F, wet 40°F

Barometer: 30.22 in

Wind: 350°, 8 kn

Clouds: -, amt -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	7.70	32.86	25.66	0.616	1.28
	10	6.03	32.84	25.79	0.640	1.23
	19	5.46	32.83	25.93	0.645	1.37
	28	5.34	32.84	25.95	0.650	1.30
	47	5.00	32.84	25.99	0.640	1.32
	70	4.81	32.84	26.01	0.629	1.47
	94	4.60	32.86	26.05	0.620	1.54
	145	4.84	33.73	26.71	0.388	2.27
	195	4.76 ^c	33.87 ^c	26.83	0.300 ^c	2.67
	1	189	4.84 ^c	33.86 ^c	26.81	0.198 ^c
283		4.29	33.93	26.93	0.138	2.81
473		3.75	34.13	27.14	0.069	3.03
521		3.62	34.14	27.16	0.057	3.12
863		3.02	34.34	27.38	0.059	3.20
1158		2.63	34.47	27.52	0.041	3.15

INTERPOLATED

0	7.70	32.86	25.66	0.616	1.28
10	6.03	32.84	25.79	0.640	1.23
20	5.44	32.83	25.93	0.646	1.36
30	5.30	32.84	25.95	0.650	1.30
50	4.98	32.84	25.99	0.639	1.34
75	4.75	32.84	26.02	0.627	1.49
100	4.61	32.88	26.09	0.611	1.58
150	4.86	33.76	26.72	0.371	2.34
200	4.78	33.87	26.83	0.232	2.70
250	4.49	33.91	26.90	0.165	2.78
300	4.23	33.94	26.95	0.129	2.83
400	3.93	34.06	27.06	0.089	2.93
500	3.69	34.14	27.16	0.062	3.09
600	3.48	34.20	27.23	0.057	3.15
700	3.29	34.25	27.29	0.057	3.17
800	3.12	34.31	27.35	0.058	3.19
1000	2.84	34.40	27.45	0.054	3.19
1200	(2.58)	(34.49)	(27.54)	(0.035)	(3.14)

STATION 142-7

50° 15'N, 140° 43'W

7 May 1956
 Messenger time: 0321 (+8)
 Depth: 2110 fm, 3858 m

Weather: 03
 Sea height: 2
 Visibility: 7
 Air temperature: dry 47°F, wet 46°F

Barometer: 30.32 in
 Wind: 225°, 16 kn
 Clouds: 0; amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	7.49	32.84	25.67	0.607	1.39
	10	7.35	32.85	25.70	0.576	1.46
	20	6.66	32.84	25.79	0.621	1.56
	30	6.04	32.84	25.86	0.502	1.61
	49	5.35	32.835	25.94	0.595	1.66
	74	4.75	32.85	26.02	- *	1.57
	98	4.59	32.86	26.05	0.418	1.67
	147	4.76	33.35	26.42	0.458	1.92
1	197	4.65 ^c	33.78 ^a	26.77	0.204 ^c	2.44 ^c
	183	4.74 ^c	33.78 ^b	26.77	0.309 ^c	2.29 ^c
	274	4.22	33.92	26.93	0.123	2.64
	460	3.81	34.12	27.13	0.053	3.17
	926	2.95	34.38	27.42	0.038	3.20
	1397	2.32	34.51	27.58	0.048	3.21
	1875	1.97	34.54	27.63	0.059	2.95
	2364	1.76	34.62	27.71	0.144	3.03

* Broken bottle

INTERPOLATED

0	7.49	32.84	25.67	0.607	1.39
10	7.35	32.85	25.70	0.576	1.46
20	6.66	32.84	25.79	0.621	1.56
30	6.04	32.84	25.86	0.502	1.61
50	5.29	32.84	25.95	0.594	1.66
75	4.73	32.85	26.02	0.485	1.58
100	4.59	32.87	26.06	0.419	1.68
150	4.77	33.39	26.45	0.455	1.96
200	4.67	33.79	26.78	0.230	2.41
250	4.37	33.89	26.89	0.148	2.56
300	4.17	33.95	26.97	0.104	2.76
400	3.93	34.06	27.07	0.063	3.08
500	3.73	34.15	27.16	0.051	3.18
600	3.53	34.22	27.23	0.045	3.19
700	3.34	34.28	27.30	0.042	3.17
800	3.17	34.33	27.35	0.040	3.20
1000	2.84	34.41	27.45	0.039	3.20
1200	2.57	34.47	27.53	0.042	3.21
1500	2.22	34.53	27.60	0.048	3.19
2000	1.91	34.56	27.65	0.081	2.97
2500	(1.70)	(34.64)	(27.73)	(0.168)	(3.06)

STATION 142-8

50° 12'N, 142° 39'W

7 May 1956

Messenger time: 1908 (+8)

Depth: 924 fm, 1690 m

Weather: 02

Sea height: 3

Visibility: 4

Air temperature: dry 46°F, wet -

Barometer: 30.23 in

Wind: 200°, 20 kn

Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	6.37	32.84	25.82	0.634	1.45
	9	6.37	32.83	25.82	0.644	1.56
	18	6.21	32.83	25.84	0.634	1.50
	27	5.47	32.83	25.93	0.154 ^b	1.71
	45	4.64	32.84	26.03	0.629	1.63
	68	4.54	32.85	26.05	0.625	1.65
	92	4.27	32.87	26.09	0.629	1.64
	137	4.73	33.73	26.72	0.390	2.29
	184	4.59	33.84	26.83	0.298 ^c	2.51 ^c
	1	163	4.78	33.78	26.76	0.368 ^c
239		4.17	33.89	26.91	0.200	2.66
393		3.79	34.05	27.08	0.076	3.44
789		3.10	34.31	27.35	0.042	3.17
1166		2.49	34.42	27.47	0.054	3.29
1656		2.09	34.53	27.61	0.083	3.00

INTERPOLATED

0	6.37	32.84	25.82	0.634	1.45
10	6.35	32.83	25.82	0.644	1.56
20	6.02	32.83	25.85	0.633	1.54
30	5.23	32.83	25.94	0.631	1.70
50	4.62	32.84	26.03	0.628	1.64
75	4.45	32.86	26.06	0.627	1.65
100	4.32	32.91	26.20	0.607	1.68
150	4.78	33.76	26.74	0.367	2.37
200	4.47	33.86	26.85	0.289	2.54
250	4.12	33.90	26.92	0.183	2.71
300	3.98	33.95	26.98	0.129	3.00
400	3.78	34.06	27.08	0.075	3.44
500	3.59	34.13	27.16	0.058	3.38
600	3.41	34.20	27.23	0.050	3.29
700	3.26	34.26	27.29	0.044	3.21
800	3.08	34.31	27.35	0.043	3.17
1000	2.74	34.37	27.43	0.048	3.25
1200	2.45	34.43	27.50	0.057	3.29
1500	2.20	34.50	27.57	0.072	3.12

STATION 142-9

50° 00'N, 144° 58'W - Station "Papa"

8 May 1956
 Messenger time: 1236 (+8)
 Depth: 2350 fm, 4297 m

Weather: 02
 Sea height: 3
 Visibility: 6
 Air temperature: dry 45°F, wet 43°F

Barometer: 30.10 in
 Wind: 218°, 15 kn
 Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	5.90	32.81	25.86	0.635	1.30
	10	5.81	32.82	25.88	0.634	1.33
	20	5.78	32.83	25.89	0.634	1.37
	28	5.01	32.83	25.98	0.636	1.44
	47	4.63	32.82	26.01	0.631	1.38
	72	4.47	32.83	26.04	0.627	1.45
	95	4.13	32.90	26.13	0.627	1.65
	141	4.43	33.78	26.79	0.329	2.38
	188	4.19	33.86 ^c	26.88	0.228 ^c	2.77 ^c
	1	179	4.27	33.82 ^c	26.84	0.283 ^c
268		4.01	33.92	26.95	0.142	2.79
450		3.70	-	-	-	-
905		2.93	34.36	27.40	0.045	2.98
1379		2.32	34.49	27.56	0.054	3.12
3	1857	1.98	34.53 ^b	27.63	0.108 ^b	2.72 ^b
	2339	1.76	34.61	27.70	0.153	2.65 ^d
	424	3.73	34.07	27.10	0.051	2.98
	2000	1.87	34.59	27.68	0.079	2.81
	2510	1.66	34.61	27.71	0.217	2.86 ^d
	2928	1.58	34.63	27.73	0.219	2.66
	3402	1.49	34.67	27.77	0.315	2.68

(continued on next page)

STATION 142-9 (continued)

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
INTERPOLATED						
	0	5.90	32.81	25.86	0.635	1.30
	10	5.81	32.82	25.88	0.634	1.33
	20	5.78	32.83	25.89	0.634	1.37
	30	4.92	32.83	25.98	0.636	1.44
	50	4.61	32.82	26.01	0.630	1.38
	75	4.45	32.84	26.05	0.627	1.47
	100	4.13	33.04	26.19	0.624	1.70
	150	4.41	33.79	26.80	0.310	2.48
	200	4.15	33.86	26.87	0.312	2.76
	250	4.05	33.90	26.93	0.161	2.78
	300	3.96	33.95	26.98	0.127	2.80
	400	3.78	34.05	27.07	0.093	2.83
	500	3.60	34.12	27.15	0.071	2.83
	600	3.43	34.18	27.21	0.060	2.88
	700	3.26	34.24	27.27	0.054	2.91
	800	3.10	34.30	27.33	0.050	2.95
	1000	2.78	34.40	27.43	0.046	3.02
	1200	2.50	34.46	27.50	0.048	3.08
	1500	2.21	34.52	27.58	0.055	3.07
	2000	1.87	34.59	27.68	0.079	2.71
	2500	1.67	34.61	27.71	0.214	2.83
	3000	1.57	34.64	27.73	0.228	2.66
	3500	(1.48)	(34.68)	(27.78)	(0.337)	(2.69)

STATION 142-10

51° 14'N, 145° 02'W

9 May 1956

Messenger time: 0549 (+8)

Depth: 2290 fm, 4188 m

Weather: 03

Sea height: 4

Visibility: 7

Air temperature: dry 40°F, wet 38°F

Barometer: 30.12 in

Wind: 275°, 20 kn

Clouds: 6-8, amt 6

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	5.56	32.83	25.92	0.644	1.54
	10	5.68	32.83	25.90	0.639	1.53
	20	5.57	32.83	25.91	0.639	1.57
	28	5.55	32.83	25.92	0.640	1.51
	47	4.42	32.86	26.07	0.655	1.55
	72	4.19	32.86	26.09	0.640	1.62
	95	4.01	33.08	26.28	0.567	1.70
	143	4.50	33.77	26.78	0.268	2.45
	190	4.45 ^c	33.86	26.86 ^c	0.193 ^c	2.60 ^c
	1	180	4.44 ^c	33.82	26.83 ^c	0.222 ^c
279		4.07	33.96	26.95	0.102	2.90
462		3.82	-	-	-	-
930		2.92	34.38	27.41	0.042	3.13
1405		2.32	34.49	27.56	0.062	3.11
1884		1.97	34.59	27.67	0.109	2.98

INTERPOLATED

0	5.56	32.83	25.92	0.644	1.54
10	5.68	32.83	25.90	0.639	1.53
20	5.57	32.83	25.91	0.639	1.57
30	5.53	32.83	25.93	0.641	1.51
50	4.38	32.86	26.08	0.655	1.56
75	4.16	32.87	26.10	0.635	1.62
100	4.01	33.29	26.36	0.500	1.73
150	4.50	33.79	26.80	0.255	2.48
200	4.37	33.86	26.87	0.189	2.65
250	4.16	33.93	26.92	0.127	2.82
300	4.04	33.98	26.98	0.095	2.94
400	3.90	34.07	27.07	0.067	3.04
500	3.75	34.15	27.15	0.050	3.09
600	3.56	34.22	27.22	0.044	3.11
700	3.37	34.27	27.28	0.042	3.12
800	3.16	34.32	27.34	0.042	3.13
1000	2.82	34.40	27.44	0.044	3.14
1200	2.56	34.46	27.51	0.049	3.13
1500	2.23	34.51	27.58	0.068	3.10
2000	(1.90)	(34.62)	(27.69)	(0.123)	(2.93)

STATION 142-11

52° 57'N, 145° 02'W

9 May 1956
 Messenger time: 0956 (+8)
 Depth: 2240 fm, 4096 m

Weather: 02
 Sea height: 3
 Visibility: 6
 Air temperature: dry 42°F, wet 41°F

Barometer: 29.83 in
 Wind: 235°, 20 km
 Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	4.88	32.92	26.06	0.640	1.52
	8	4.86	32.92	26.07	0.647	1.55
	16	5.90 ^b	32.92	25.95	0.642	1.82 ^b
	24	4.90	32.92	26.06	0.642	1.57
	41	4.84	32.92	26.07	0.644	1.61
	63	3.68	32.94	26.20	0.636	1.69
	83	3.52	32.99	26.26	0.626	1.73
	125	4.04	33.80	26.85	0.168	2.82
	166	3.96 ^c	33.91 ^c	27.05	0.112 ^c	2.78
	1	167	4.02 ^c	33.89 ^c	26.92	0.139 ^c
253		3.91	34.02	27.04	0.054	2.88
428		3.62	34.16	27.18	0.040	2.98
869		2.90	34.36	27.41	0.042	2.97
1319		2.36	34.49	27.56	0.058	3.09
1778		2.03	34.56	27.64	0.102	2.94
2239		1.78	34.61	27.70	0.159	3.06

INTERPOLATED

0	4.88	32.92	26.06	0.640	1.52
10	4.87	32.92	26.07	0.647	1.55
20	4.88	32.92	26.06	0.642	1.57
30	4.88	32.92	26.06	0.643	1.58
50	4.57	32.93	26.09	0.644	1.65
75	3.57	32.97	26.23	0.630	1.71
100	3.58	33.21	26.40	0.349	2.28
150	4.00	33.87	26.95	0.126	2.79
200	3.96	33.96	27.01	0.083	2.82
250	3.93	34.02	27.04	0.057	2.88
300	3.86	34.06	27.08	0.048	2.93
400	3.69	34.14	27.16	0.040	2.98
500	3.48	34.20	27.23	0.040	2.96
600	3.30	34.25	27.28	0.040	2.95
700	3.12	34.30	27.34	0.040	2.95
800	2.99	34.34	27.38	0.040	2.96
1000	2.77	34.41	27.46	0.045	3.01
1200	2.53	34.46	27.53	0.051	3.06
1500	2.23	34.52	27.59	0.073	3.04
2000	1.89	34.59	27.67	0.129	3.01

STATION 142-12

53° 56'N, 145° 01'W

10 May 1956

Messenger time: 0851 (+8)

Depth: 2180 fm, 3986 m

Weather: 51

Sea height: 3

Visibility: 5

Air temperature: dry 42°F, wet 41°F

Barometer: 29.95 in

Wind: 280°, 12 kn

Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	4.65	32.99	26.14	0.650	1.70
	10	4.66	32.99	26.14	0.653	1.61
	20	4.65	33.00	26.15	0.649	1.65
	29	4.64	33.01	26.16	0.650	1.62
	49	3.54	33.03	26.29	0.656	1.73
	74	3.38	33.04	26.31	0.631	1.79
	98	3.43	33.13	26.38	0.614	1.87
	147	4.65	33.83	26.81	0.182	2.70
	196	4.41	33.91	26.90	0.118 ^c	2.83 ^c
	1	191	4.39	33.91	26.90	0.105 ^c
289		4.18	34.01	27.00	0.070	3.06
486		3.78	34.16	27.16	0.040	3.37
977		2.83	34.38	27.43	0.038	3.19
1468		2.30	34.50	27.57	0.070	3.01
1959		1.92	34.58	27.66	0.120	2.94

INTERPOLATED

0	4.65	32.99	26.14	0.650	1.70
10	4.66	32.99	26.14	0.653	1.61
20	4.65	33.00	26.15	0.649	1.65
30	4.65	33.01	26.16	0.651	1.63
50	3.52	33.03	26.29	0.654	1.73
75	3.38	33.04	26.31	0.630	1.80
100	3.44	33.15	26.41	0.609	1.90
150	4.63	33.84	26.81	0.175	2.71
200	4.41	33.92	26.91	0.107	2.87
250	4.26	33.97	26.96	0.080	2.98
300	4.15	34.02	27.01	0.066	3.09
400	3.95	34.10	27.09	0.051	3.25
500	3.74	34.17	27.17	0.040	3.37
600	3.50	34.23	27.24	0.041	3.34
700	3.28	34.28	27.30	0.039	3.30
800	3.08	34.32	27.35	0.038	3.27
1000	2.79	34.39	27.44	0.039	3.18
1200	2.54	34.45	27.51	0.045	3.08
1500	2.27	34.51	27.58	0.073	3.00
2000	(1.90)	(34.58)	(27.67)	(0.125)	(2.94)

STATION 142-13

55° 02'N, 144° 58'W

10 May 1956
 Messenger time: 2010 (+8)
 Depth: 2200 fm, 4023 m

Weather: 50
 Sea height: 2
 Visibility: 6
 Air temperature: dry 41°F, wet 40°F

Barometer: 29.95 in
 Wind: 250°, 4 km
 Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	4.52	33.08	26.23	0.642	1.80
	10	4.33	33.08	26.25	0.652	1.86
	20	4.18	33.10	26.28	0.651	1.89
	29	4.17	33.10	26.28	0.655	1.87
	49	3.24	33.12	26.39	0.651	2.01
	73	2.95	33.17	26.45	0.640	2.04
	96	2.82	33.21	26.50	0.634	2.06
	144	3.65	33.68	26.80	0.248	2.68
	192	4.01	33.98	27.00	0.053 ^c	3.07 ^c
	3	186	3.99	33.96	26.98	0.055 ^c
282		3.82	34.07	27.09	0.033	3.10
475		3.57	34.22	27.23	0.029	3.24
957		2.77	34.42	27.46	0.039	3.12
1442		2.20	34.52	27.59	0.069	3.11
1929		1.87	34.60	27.68	0.118	2.91
1	2412	1.66	34.65 ^d	27.74	0.176 ^d	2.89 ^d
	2398	1.69	34.63 ^d	27.72	0.187 ^d	2.75 ^d
	2888	1.53	34.67	27.74	-	2.69
	3371	1.49	34.67	27.77	0.248	2.62
	3865	1.45	34.69	27.79	0.291	2.51

(continued on next page)

STATION 142-13 (continued)

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
INTERPOLATED						
	0	4.52	33.08	26.23	0.642	1.80
	10	4.33	33.08	26.25	0.652	1.86
	20	4.18	33.10	26.28	0.651	1.89
	30	4.16	33.10	26.28	0.655	1.87
	50	3.23	33.12	26.39	0.651	2.01
	75	2.94	33.17	26.45	0.640	2.05
	100	2.85	33.23	26.52	0.625	2.10
	150	3.72	33.73	26.84	0.214	2.78
	200	4.01	33.99	27.00	0.053	3.11
	250	3.92	34.06	27.06	0.038	3.11
	300	3.80	34.11	27.10	0.033	3.11
	400	3.70	34.18	27.18	0.030	3.18
	500	3.51	34.23	27.24	0.028	3.22
	600	3.31	34.28	27.29	0.030	3.18
	700	3.13	34.33	27.34	0.031	3.16
	800	2.97	34.37	27.37	0.034	3.14
	1000	2.72	34.43	27.44	0.041	3.12
	1200	2.42	34.48	27.51	0.050	3.12
	1500	2.16	34.53	27.60	0.074	3.10
	2000	1.82	34.61	27.69	0.126	2.86
	2500	1.62	34.65	27.73	0.187	2.79
	3000	1.51	34.67	27.75	0.215	2.68
	4000	(1.45)	(34.70)	(27.80)	(0.308)	(2.48)

STATION 1142-114

56° 15'N, 1145° 02'W

11 May 1956
 Messenger time: 0921 (+8)
 Depth: 1800 fm, 3292 m

Weather: 02
 Sea height: 2
 Visibility: 8
 Air temperature: dry 39°F, wet 38°F

Barometer: 30.04 in
 Wind: 095°, 9 kn
 Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	4.88	32.95	26.09	0.640	1.43
	10	4.69	32.94	26.10	0.650	1.52
	19	4.60	32.94	26.12	0.650	1.57
	28	4.60	32.95	26.11	0.621	1.56
	48	4.12	32.99	26.20	0.620	1.59
	73	3.37	33.03	26.30	0.636	1.50
	96	3.32	33.05	26.32	0.618	1.71
	144	5.27	33.81	26.72	-	2.57
1	187	5.02	33.89	26.82	0.157	2.53
	283	4.47	33.96	26.93	0.096	2.82
	478	3.97	34.13	27.12	0.047	2.97
	965	3.00	34.38	27.41	0.035	3.10
	1450	2.31	34.51	27.58	0.062	3.02
	1940	1.92	34.59	27.67	0.118	3.00

INTERPOLATED

0	4.88	32.95	26.09	0.640	1.43
10	4.69	32.94	26.10	0.650	1.52
20	4.60	32.94	26.12	0.650	1.57
30	4.58	32.95	26.12	0.621	1.56
50	4.06	32.99	26.21	0.620	1.58
75	3.37	33.03	26.30	0.634	1.51
100	3.35	33.08	26.34	0.610	1.78
150	5.24	33.83	26.74	0.274	2.58
200	4.94	33.90	26.84	0.145	2.58
250	4.63	33.94	26.90	0.110	2.76
300	4.41	33.97	26.95	0.088	2.84
400	4.12	34.06	27.05	0.061	2.92
500	3.92	34.14	27.13	0.048	2.98
600	3.66	34.20	27.20	0.044	3.00
700	3.45	34.25	27.26	0.041	3.03
800	3.25	34.30	27.32	0.039	3.06
1000	2.95	34.39	27.42	0.037	3.10
1200	2.70	34.45	27.50	0.046	3.09
1500	2.26	34.52	27.59	0.079	3.02
2000	(1.90)	(34.60)	(27.68)	(0.126)	(3.03)

(continued on next page)

STATION 142-14 (continued)

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
3	38	4.56	32.96	26.13	0.646	1.76
	43	4.02	32.95	26.18	0.651	1.65
	48	4.09	32.99	26.20	0.655	1.72
	53	3.61	33.00	26.26	0.651	1.75
	58	3.47	33.02	26.29	0.645	1.72
	72	3.37	33.02	26.30	0.637	1.84
	86	3.30	33.03	26.31	0.624	1.75
	91	3.30	33.04	26.32	0.624	1.89
	96	3.32	33.05	26.32	0.604	1.85
	101	3.40	33.08	26.34	0.595	1.80
	125	4.04	33.31	26.46	0.453	2.09
	144	5.17	33.75	26.69	0.224	2.47
	149	5.24	33.84	26.75	0.201	2.52
	154	5.27	33.81	26.72	0.189	2.57
	159	5.27	33.83	26.74	0.184	2.63

NOTE: This was a special cast taken to investigate the details of a marked temperature inversion found in this region. No attempt has been made to indicate on the above data whether the values do or do not fit on a smooth curve.

STATION 142-15

57° 32'N, 145° 00'W

12 May 1956
 Messenger time: 0200 (+8)
 Depth: 2060 fm, 3767 m

Weather: 59
 Sea height: 3
 Visibility: 3
 Air temperature: dry 40°F, wet -

Barometer: 29.91 in
 Wind: 145°, 18 km
 Clouds: -, amt 9

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	4.47	33.02	26.19	0.561	1.62
	10	4.49	33.03	26.19	0.526	1.66
	20	4.50	33.03	26.18	0.472	1.65
	29	4.49	33.01	26.18	0.540	1.71
	49	4.13	33.03	26.23	0.586	1.66
	74	3.17	33.12	26.39	0.505	1.93
	98	3.05	33.28	26.53	0.506	2.09
	147	4.62	33.86	26.84	0.148	2.70
	196	4.35	33.91	26.91	0.098	2.86 ^a
	1	160	4.47	33.89	26.89	0.126
242		4.12	33.96	26.97	0.085	2.95
407		3.69	34.11	27.13	0.035	3.05
821		3.12	34.34	27.37	0.032	3.04
1242		2.53	34.44	27.50	0.041	3.06
1678		2.12	34.53	27.61	0.079	2.91
2126		1.85	34.60	27.69	0.138	2.96

INTERPOLATED

0	4.47	33.02	26.19	0.561	1.62
10	4.49	33.03	26.19	0.526	1.66
20	4.50	33.03	26.18	0.472	1.65
30	4.49	33.01	26.18	0.543	1.72
50	4.11	33.03	26.23	0.586	1.81
75	3.16	33.12	26.39	0.505	1.94
100	3.07	33.31	26.53	0.504	2.10
150	4.62	33.87	26.84	0.143	2.72
200	4.33	33.92	26.91	0.097	2.87
250	4.11	33.97	26.98	0.083	2.96
300	3.97	34.02	27.03	0.064	3.00
400	3.70	34.10	27.12	0.036	3.05
500	3.54	34.18	27.19	0.032	3.03
600	3.40	34.24	27.25	0.030	3.02
700	3.27	34.29	27.31	0.030	3.03
800	3.14	34.33	27.36	0.031	3.04
1000	2.93	34.39	27.44	0.034	3.06
1200	2.62	34.43	27.49	0.040	3.06
1500	2.23	34.50	27.58	0.062	2.98
2000	1.90	34.58	27.67	0.121	2.94

STATION 142-16

58° 24'N, 145° 01'W

12 May 1956 Weather: 20 Barometer: 29.84 in
 Messenger time: 1056 (+8) Sea height: 2 Wind: 235°, 10 kn
 Depth: 2160 fm, 3950 m Visibility: 6 Clouds: 6, amt 8
 Air temperature: dry 41°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	5.44	32.59	25.74	0.696	1.22
	10	5.42	32.60	25.75	0.695	1.11
	20	5.38	32.61	25.76	0.686	1.21
	29	4.38	32.67	25.92	0.639	1.38
	49	4.02	32.74	26.01	0.624	1.44
	74	4.14	32.88	26.11	0.579	1.48
	98	4.39	33.11	26.27	0.509	1.76
	147	5.52	33.76	26.65	0.252	2.38
	196	5.19 ^c	33.87	26.78	0.186 ^c	2.39 ^c
	1	191	5.25 ^c	33.86	26.76	0.198 ^c
289		4.51	33.95	26.92	0.113	2.77
484		4.08	34.12	27.10	0.051	2.96
976		3.06	34.35	27.38	0.034	3.05
1469		2.35	34.48	27.55	0.059	3.02
1957		1.93	34.59	27.67	0.112	2.90
2455		1.70	34.61	27.70	0.170	2.79

INTERPOLATED

0	5.44	32.59	25.74	0.696	1.22
10	5.42	32.60	25.75	0.695	1.11
20	5.38	32.61	25.76	0.686	1.21
30	4.36	32.67	25.95	0.638	1.38
50	4.02	32.74	26.01	0.622	1.45
75	4.15	32.88	26.11	0.578	1.48
100	4.41	33.15	26.29	0.501	1.80
150	5.51	33.77	26.66	0.248	2.39
200	5.19	33.87	26.79	0.186	2.48
250	4.81	33.92	26.85	0.141	2.64
300	4.49	33.95	26.93	0.107	2.78
400	4.25	34.05	27.03	0.072	2.90
500	4.05	34.13	27.11	0.050	2.97
600	3.85	34.19	27.18	0.042	3.01
700	3.66	34.24	27.24	0.037	3.03
800	3.47	34.29	27.30	0.034	3.04
1000	3.02	34.36	27.39	0.036	3.05
1200	2.66	34.42	27.47	0.048	3.04
1500	2.33	34.49	27.56	0.071	3.01
2000	1.88	34.59	27.67	0.115	2.90
2500	(1.57)	(34.61)	(27.70)	(0.164)	(1.78)

STATION 142-17

59° 18'N, 144° 59'W - S Cape St. Elias

12 May 1956

Messenger time: 2305 (+8)

1300 fm, 2377 m

Weather: 14

Sea height: 2

Visibility: 7

Air temperature: dry 42°F, wet 41.5°F

Barometer: 29.86 in

Wind: 170°, 6 kn

Clouds: 4,7, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	5.43	32.59	25.74	0.675	1.23
	10	5.42	32.59	25.74	0.675	1.25
	20	5.26	32.60	25.77	0.661	1.30
	29	4.81	32.68	25.88	0.645	1.37
	49	4.19	32.73	25.99	0.631	1.47
	74	4.02	32.77	26.04	0.615	1.52
	98	4.00	32.87	26.12	0.590	1.58
	144	5.02	33.37	26.40	0.386	2.09
	192	5.51	33.78 ^a	26.67	0.244 ^a	2.39 ^a
	1	284	4.82	33.91	26.86	0.154
475		4.14	34.06	27.05	0.062	2.88
959		3.12	34.34	27.35	0.044	2.88
1445		2.46	34.31 ^b	27.40	0.086	2.90
1933		1.96	34.61	27.68	0.116	3.05

INTERPOLATED

0	5.43	32.59	25.74	0.675	1.23
10	5.42	32.59	25.74	0.675	1.25
20	5.26	32.60	25.77	0.661	1.30
30	4.72	32.68	25.88	0.643	1.38
50	4.18	32.73	25.99	0.630	1.47
75	4.02	32.77	26.04	0.614	1.53
100	4.01	32.88	26.12	0.586	1.59
150	5.11	33.46	26.44	0.360	2.13
200	5.43	33.80	26.69	0.235	2.40
250	5.02	33.87	26.81	0.178	2.47
300	4.75	33.92	26.88	0.145	2.54
400	4.35	34.01	26.99	0.093	2.74
500	4.07	34.07	27.07	0.061	2.88
600	3.85	34.13	27.15	0.055	2.89
700	3.64	34.19	27.22	0.051	2.89
800	3.43	34.25	27.28	0.047	2.88
1000	3.04	34.35	27.38	0.045	2.89
1200	2.72	34.32	27.38	0.054	2.89
1500	2.39	34.33	27.42	0.090	2.91
2000	(1.90)	(34.66)	(27.72)	(0.121)	(3.08)

STATION 142-18

59° 48'N, 145° 00'W - 16 mi SW Cape St Elias

13 May 1956
 Messenger time: 0500 (+8)
 Depth: 100 fm, 183 m

Weather: 01
 Sea height: 1
 Visibility: 8
 Air temperature: dry 40°F, wet 39°F

Barometer: 29.85 in
 Wind: 155°, 5 kn
 Clouds: 4,8, amt 4

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{E-at/L}$
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OBSERVED

1	0	5.09	32.47	25.68	0.517	1.50
	10	5.10	32.48	25.69	0.575	1.37
	20	5.01	32.48	25.70	0.588	1.38
	29	5.05	32.48	25.70	0.546	1.43
	49	4.98	32.50	25.72	0.444	1.41
	74	4.42	32.50	25.78	0.536	1.55
	98	4.31	32.56	25.84	0.504	1.54
	147	4.15	32.57	25.86	0.432	1.75

INTERPOLATED

	0	5.09	32.47	25.68	0.517	1.50
	10	5.10	32.48	25.69	0.575	1.37
	20	5.01	32.48	25.70	0.588	1.38
	30	5.04	32.48	25.71	0.540	1.43
	50	4.95	32.50	25.72	0.448	1.42
	75	4.41	32.50	25.77	0.535	1.55
	100	4.30	32.56	25.84	0.501	1.55
	150	(4.14)	32.57	25.86	(0.418)	(1.77)

STATION 142-19

58° 55'N, 142° 53'W - SW of Yakutat

13 May 1956
 Messenger time: 1756 (+8)
 Depth: 1830 fm, 3347 m

Weather: 60
 Sea height: 2
 Visibility: 7
 Air temperature: dry 41°F, wet 40°F

Barometer: 29.85 in
 Wind: 140°, 16 kn
 Clouds: 8, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	5.37	32.41	25.61	0.662	1.25
	10	5.39	32.39	25.59	0.671	1.30
	20	5.37	32.40	25.60	0.670	1.35
	28	5.10	32.41	25.64	0.666	1.40
	47	3.98	32.42	25.76	0.641	1.57
	72	3.98	32.43	25.77	0.637	1.52
	95	4.03	32.47	25.80	0.634	1.59
	143	4.37	32.68	25.93	0.587	1.73
	191	4.70	32.97	26.12	0.509	1.82 ^a
	1	161	4.43	32.74	25.97	0.552
242		5.85	33.37	26.31	0.254	1.91
404		4.70	33.93	26.88	0.139	2.56
804		3.64	34.23 ^b	27.23	0.034	3.07
1228		2.79	34.18 ^b	27.27	0.044	3.01
1674		2.15	33.88 ^b	27.09	0.267	-
2110		2.08	34.59	27.66	0.368	2.90

INTERPOLATED

0	5.37	32.41	25.61	0.662	1.25
10	5.39	32.39	25.59	0.671	1.30
20	5.37	32.40	25.60	0.670	1.35
30	5.02	32.41	25.64	0.663	1.42
50	3.98	32.42	25.76	0.641	1.57
75	3.99	32.43	25.77	0.637	1.53
100	4.05	32.49	25.81	0.632	1.61
150	4.39	32.70	25.94	0.573	1.74
200	4.82	33.04	26.15	0.455	1.83
250	5.80	33.41	26.35	0.245	1.91
300	5.39	33.65	26.55	0.194	3.09
400	4.74	33.92	26.87	0.139	2.50
500	4.37	34.03	27.00	0.103	2.75
600	4.10	34.11	27.09	0.076	2.89
700	3.86	34.17	27.16	0.054	2.98
800	3.65	34.22	27.22	0.035	3.06
1000	3.22	34.30	27.33	0.038	3.06
1200	2.82	34.36	27.40	0.043	3.02
1500	2.33	34.45	27.50	0.169	-
2000	1.33	34.57	27.63	0.231	2.99

STATION 142-20

58° 11'N, 140° 53'W

14 May 1956
 Messenger time: 0932 (+8)
 Depth: 1900 fm, 3475 m

Weather: 02
 Sea height: 2
 Visibility: 7
 Air temperature: dry 42°F, wet 41°F

Barometer: 29.78 in
 Wind: 175°, 11 kn
 Clouds: 8, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	5.97	32.39	25.52	0.651	1.20
	10	5.97	32.36	25.50	0.657	1.30
	20	5.75	32.38	25.54	0.653	1.28
	29	5.09	32.41	25.64	0.648	1.39
	49	4.35	32.45	25.75	0.635	1.62
	74	4.35	32.47	25.76	0.622	1.53
	98	4.34	32.48	25.77	0.621	1.56
	147	4.57	32.54	25.80	0.564	1.75
	196	4.79	33.16	26.26	0.397 ^c	2.02 ^a
	1	191	4.75	32.84	26.02	0.508 ^c
289		5.68	33.84	26.70	0.219	2.46
485		4.45	33.98	26.95	0.061	2.93
976		3.29	34.29	27.26	0.062	3.01
1469		2.46	34.33	27.42	0.061	2.78
1960		2.02	34.56	27.64	0.062	2.97

INTERPOLATED

0	5.97	32.39	25.52	0.651	1.20
10	5.97	32.36	25.50	0.657	1.30
20	5.75	32.38	25.54	0.653	1.28
30	5.05	32.41	25.65	0.647	1.40
50	4.35	32.45	25.75	0.634	1.62
75	4.35	32.47	25.76	0.622	1.53
100	4.36	32.48	25.77	0.620	1.57
150	4.58	32.54	25.80	0.555	1.77
200	4.83	33.26	26.32	0.380	2.02
250	5.31	33.72	26.62	0.266	2.17
300	5.63	33.85	26.72	0.205	2.49
400	4.90	33.94	26.86	0.120	2.74
500	4.40	33.99	26.96	0.061	2.94
600	4.11	34.05	27.05	0.061	2.96
700	3.86	34.12	27.11	0.061	2.98
800	3.64	34.19	27.17	0.062	3.00
1000	3.24	34.29	27.27	0.062	3.01
1200	2.89	34.30	27.34	0.061	2.93
1500	2.43	34.34	27.43	0.061	2.79
2000	(1.99)	(34.58)	(27.67)	(0.062)	(2.98)

STATION 142-21

57° 15'N, 138° 58'W

15 May 1956

Messenger time: 0042 (+8)

Depth: 1750 fm, 3200 m

Weather: 02

Sea height: 4

Visibility: 5

Air temperature: dry 43°F, wet

Barometer: 29.87 in

Wind: 225°, 18 kn

Clouds: -, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	5.82	32.68	25.77	0.554	1.39
	10	5.85	32.68	25.76	0.624	1.28
	20	5.82	32.66	25.75	0.521	1.32
	29	5.69	32.67	25.77	0.593	1.34
	49	4.35	32.66	25.92	0.544	1.45
	74	4.02	32.68	25.96	0.615	1.60
	98	3.83	33.06	26.28	0.510	1.76
	147	5.37	33.78	26.69	0.211	2.48
	196	4.97	33.89 ^c	26.82	0.158 ^a	2.62 ^a
	1	187	5.16	33.86 ^c	26.77	0.191 ^b
283		4.06	33.74 ^b	26.80	0.296 ^b	2.74
476		4.02	34.11	27.10	0.055	2.98
965		3.09	34.34	27.46	0.029	3.10
1456		2.17	34.49	27.57	0.057	3.07
1945		1.91	34.57	27.66	0.062	3.00
2422		1.69	34.62	27.71	0.050	3.23

INTERPOLATED

0	5.82	32.68	25.77	0.554	1.39
10	5.85	32.68	25.76	0.624	1.28
20	5.82	32.66	25.75	0.521	1.32
30	5.60	32.67	25.77	0.593	1.35
50	4.33	32.66	25.92	0.544	1.50
75	4.00	32.68	25.96	0.615	1.62
100	3.85	33.16	26.31	0.485	1.78
150	5.36	33.79	26.70	0.205	2.49
200	4.86	33.89	26.81	0.154	2.63
250	4.23	33.96	26.88	0.128	2.70
300	4.05	34.00	26.94	0.106	2.77
400	4.02	34.07	27.04	0.072	2.91
500	4.01	34.12	27.12	0.052	3.00
600	3.86	34.17	27.21	0.043	3.04
700	3.66	34.22	27.29	0.036	3.06
800	3.45	34.26	27.36	0.030	3.08
1000	3.00	34.35	27.39	0.030	3.10
1200	2.56	34.42	27.51	0.039	3.09
1500	2.13	34.50	27.58	0.057	3.07
2000	1.89	34.58	27.66	0.061	3.03
2500	(1.67)	(34.63)	(27.72)	(0.050)	(3.26)

STATION 142-22

56° 20'N, 136° 52'W - 65 mi SW of Sitka, U.W. Station "Charlie"

15 May 1956
 Messenger time: 1642 (+8)
 Depth: 1252 fm, 2290 m

Weather: 62
 Sea height: 2
 Visibility: 5
 Air temperature: dry 45°F, wet -

Barometer: 30.08 in
 Wind: 135°, 17 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

3	0	6.63	32.28	25.35	0.680	0.99
	5	6.13	32.29	25.42	0.684	1.00
	10	6.64	32.29	25.36	0.681	1.13
	20	6.56	32.29	25.37	0.683	1.13
	30	6.43	32.30	25.49	0.674	1.12
	50	5.04	32.39	25.63	0.596	1.12
	74	4.94	32.54	25.76	0.571	1.56
	99	4.87	32.66	25.86	0.568	1.59
	198	5.63	33.72	26.61	0.291	2.36 ^b
2	275	5.05	33.68 ^b	26.64	0.197	1.97 ^b
	446	4.38	34.08	27.04	0.072	2.82
	683	3.81	34.24	27.22	0.055	2.93
	909	3.32	34.33	27.34	0.028	3.10
	1383	2.54	34.47	27.53	0.056	3.03
	1856	2.07	34.59	27.66	0.097	2.98

INTERPOLATED

0	6.63	32.28	25.35	0.680	0.99
10	6.64	32.29	25.36	0.681	1.13
20	6.56	32.29	25.37	0.683	1.13
30	6.43	32.30	25.49	0.674	1.12
50	5.04	32.39	25.63	0.569	1.12
75	4.94	32.53	25.76	0.570	1.56
100	4.88	32.67	25.86	0.568	1.60
150	5.23	33.10	26.13	0.411	2.10
200	5.61	33.72	26.37	0.289	2.36
250	5.30	33.85	26.56	0.229	2.49
300	4.94	33.92	26.71	0.174	2.59
400	4.52	34.03	26.96	0.099	2.75
500	4.22	34.12	27.09	0.078	2.84
600	3.97	34.18	27.17	0.065	2.89
700	3.78	34.25	27.23	0.053	2.94
800	3.54	34.29	27.28	0.041	3.01
1000	3.15	34.37	27.38	0.032	3.09
1200	2.82	34.43	27.47	0.043	3.06
1500	2.41	34.50	27.56	0.068	3.02

STATION 142-23

56° 37'N, 136° 14'W - SW of Sitka

16 May 1956
 Messenger time: 0004 (+8)
 Depth: 1000 fm, 1830 m

Weather: 63
 Sea height: 2
 Visibility: 6
 Air temperature: dry 45°F, wet -

Barometer: 30.12 in
 Wind: 180°, 6 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	7.16	32.42	25.40	0.606	0.98
	5	7.15	32.41	25.39	0.508	0.99
	10	7.15	32.41	25.39	0.552	0.98
	20	6.90	32.53	25.51	0.477	1.15
	30	5.22	32.59	25.77	0.490	1.49
	50	5.15	32.71	25.88	0.597	1.42
	74	4.72	32.80	25.99	0.596	1.43
	99	4.43	32.87	26.08	0.486	1.65
1	198	5.74	33.78	26.64	0.249	2.24
	285	5.50	33.47 ^b	26.43	0.175	2.22
	474	4.30	34.07	27.04	0.070	2.78
	712	3.83	34.23	27.21	0.044	2.91
	955	3.29	34.34	27.35	0.028	3.02
	1348	2.58	34.45	27.50	0.042	2.99
	1741	2.09	34.54	27.61	0.090	2.97

INTERPOLATED

0	7.16	32.42	25.40	0.606	0.98
10	7.15	32.41	25.40	0.552	0.98
20	6.90	32.53	25.52	0.477	1.15
30	5.22	32.59	25.77	0.490	1.49
50	5.15	32.71	25.88	0.597	1.42
75	4.79	32.80	25.99	0.599	1.44
100	4.44	32.87	26.08	0.487	1.65
150	5.15	33.16	26.19	0.330	1.97
200	5.75	33.79	26.28	0.248	2.25
250	5.63	33.88	26.36	0.198	2.24
300	5.45	33.93	26.47	0.168	2.24
400	4.75	34.01	26.86	0.108	2.51
500	4.26	34.09	27.06	0.067	2.80
600	4.05	34.16	27.14	0.053	2.83
700	3.87	34.22	27.20	0.043	2.90
800	3.62	34.27	27.27	0.035	2.95
1000	3.19	34.35	27.37	0.028	3.01
1200	2.82	34.41	27.45	0.033	3.00
1500	2.37	34.49	27.55	0.060	2.98

STATION 142-24

56° 46'N, 136° 05'W - SW of Sitka

16 May 1956
 Messenger time: 0320 (+8)
 Depth: 600 fm, 1097 m

Weather: 63
 Sea height: 2
 Visibility: 6
 Air temperature: dry 45°F, wet -

Barometer: 30.12 in
 Wind: 220°, 3 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	6.77	32.35	25.38	0.644	1.21
	5	6.80	32.35	25.38	0.645	1.16
	10	6.78	32.36	25.39	0.649	1.07
	20	6.39	32.32	25.42	0.656	1.13
	30	5.77	32.28	25.45	0.643	1.35
	50	7.91 ^b	32.34	25.22	0.646	1.15
	75	4.54	32.44	25.72	0.558	1.66
	100	4.91	32.63	25.83	0.602	1.58
	200	5.64	33.62	26.54	0.281	2.24 ^b
	1	260	5.22	33.63 ^b	26.59	0.196
433		4.42	34.05	27.01	0.075	2.79
665		3.91	34.20	27.18	0.044	2.85
906		3.43	34.32	27.33	0.036	3.06

INTERPOLATED

0	6.77	32.35	25.38	0.644	1.21
10	6.78	32.36	25.39	0.649	1.07
20	6.39	32.32	25.42	0.656	1.13
30	5.77	32.28	25.45	0.643	1.35
50	7.91	32.34	25.56	0.646	1.15
75	4.54	32.44	25.72	0.558	1.66
100	4.91	32.63	25.83	0.602	1.58
150	5.31	33.06	26.29	0.450	1.96
200	5.64	33.62	26.54	0.281	2.24
250	5.31	33.78	26.58	0.210	2.42
300	5.02	33.87	26.66	0.170	2.54
400	4.44	34.01	26.92	0.102	2.73
500	4.02	34.10	27.22	0.057	2.83
600	3.91	34.16	27.27	0.045	2.84
700	3.86	34.22	27.31	0.041	2.87
800	3.63	34.27	27.32	0.038	2.96

STATION 142-25

56° 50'N, 135° 50'W - SW of Cape Edgecumbe

16 May 1956

Messenger time: 0601 (+C)

Depth: 105 fm, 192 m

Weather: 63

Sea height: 2

Visibility: 5

Air temperature: dry 44°F, wet -

Barometer: 30.12 in

Wind: 220°, 10 kn

Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

1	0	(6.4)*	32.18	25.30	0.665	1.13
	5	(6.4)*	32.22	25.34	0.667	1.25
	10	6.46	32.25	25.34	0.662	1.15
	20	6.39	32.26	25.37	0.668	1.25
	30	6.19	32.27	25.40	0.649	1.28
	50	5.22	32.30	25.54	0.612	0.64 ^b
	75	4.97	32.36	25.61	0.592	1.60
	100	4.62	32.42	25.55	0.558	1.85
	140	4.70	32.77	25.97	0.517	1.59
	180	4.61	32.80	26.00	0.520	1.99

INTERPOLATED

	0	(6.4)*	32.18	25.30	0.665	1.13
	10	6.46	32.25	25.34	0.662	1.15
	20	6.39	32.26	25.37	0.668	1.25
	30	6.19	32.27	25.40	0.649	1.28
	50	5.22	32.30	25.54	0.612	1.40
	75	4.97	32.36	25.61	0.592	1.60
	100	4.62	32.42	25.55	0.558	1.85
	150	4.69	32.78	25.97	0.518	1.68

* Temp. from BT

STATION 112-26

56° 52'N, 135° 45'W - SE of Cape Edgecumbe

16 May 1956 Weather: 63 Barometer: 30.13 in
 Messenger time: 0722 (+8) Sea height: 2 Wind: 175°, 3 kn
 Depth: 73 fm, 134 m Visibility: 5 Clouds: 0, amt 8
 Air temperature: dry 44°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	6.39	32.08	25.22	0.707	0.87
	5	6.39	32.08	25.22	0.698	0.85
	10	6.35	32.15	25.28	0.706	0.88
	20	6.29	32.18	25.31	0.703	1.00
	30	6.23	32.21	25.35	0.678	1.05
	50	5.73	32.27	25.46	0.640	1.25
	75	4.95	32.39	25.63	0.571	1.57
	100	4.77	32.50	25.74	0.553	1.74
	125	4.59	32.61	25.85	0.517	2.04

INTERPOLATED

	0	6.39	32.08	25.22	0.707	0.87
	10	6.35	32.15	25.28	0.706	0.88
	20	6.29	32.18	25.31	0.703	1.00
	30	6.23	32.21	25.35	0.678	1.05
	50	5.73	32.27	25.46	0.640	1.25
	75	4.95	32.39	25.63	0.571	1.57
	100	4.77	32.50	25.74	0.553	1.74

STATION 112-19

57° 46'N, 137° 48'W - SW of Cape Spencer

22 May 1956 Weather: 63 Barometer: 29.67 in
 Messenger time: 0303 (+8) Sea height: 3 Wind: 130°, 24 kn
 Depth: 1100 fm, 2012 m Visibility: 6 Clouds: 0, amt 8
 Air temperature: dry 45°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	6.39	32.38	25.46	0.638	0.99
	7	6.42	32.39	25.46	0.632	1.09
	16	6.39	32.38	25.46	0.633	1.07
	23	6.41	32.38	25.46	0.631	1.00
	39	6.20	32.38	25.48	0.633	1.13
	58	5.50	32.47	25.64	0.605	1.25
	77	5.13	32.57	25.76	0.597	1.35
	116	4.87	32.66	25.86	0.601	1.40
	150	4.96	32.86	26.01	0.503	1.48
1	110	4.74	32.52 ^b	25.79	0.610	-
	171	5.37	33.28	26.29	0.379	1.92
	302	5.29	33.89	26.78	0.192	2.29
	648	4.00	34.16	27.14	0.045	2.85
	1067	2.46	34.38	27.46	0.181	2.58
	1508	2.34	34.51	27.65	-	2.78

INTERPOLATED

	0	6.39	32.38	25.46	0.638	0.99
	10	6.42	32.39	25.46	0.632	1.10
	20	6.40	32.38	25.46	0.632	1.04
	30	6.35	32.38	25.47	0.633	1.02
	50	5.73	32.42	25.58	0.613	1.22
	75	5.15	32.57	25.75	0.597	1.34
	100	4.88	32.63	25.82	0.605	1.38
	150	4.96	32.86	26.01	0.503	1.48
	200	5.37	33.57	26.46	0.324	2.05
	250	5.33	33.79	26.67	0.249	2.22
	300	5.26	33.88	26.78	0.195	2.38
	400	5.01	34.00	26.86	0.138	2.52
	500	4.64	34.08	26.93	0.092	2.68
	600	4.19	34.14	27.00	0.056	2.81
	700	3.73	34.19	27.08	0.055	2.84
	800	3.30	34.25	27.19	0.085	2.79
	1000	2.59	34.35	27.39	0.157	2.64
	1200	2.51	34.42	27.52	0.234	2.60
	1500	2.37	34.51	27.64	-	2.78

STATION 142-50

59° 01'N, 144° 56'W - S of Cape St. Elias

23 May 1956
 Messenger time: 1202 (+8)
 Depth: 2350 fm, 4297 m

Weather: 61
 Sea height: 5
 Visibility: 5
 Air temperature: dry 43°F, wet 42°F

Barometer: 29.92 in
 Wind: 100°, 24 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	5.69	32.56	25.69	0.676	1.00
	5	5.73	32.54	25.67	0.660	0.99
	10	5.70	32.54	25.67	0.653	1.08
	19	5.66	32.54	25.67	0.656	1.07
	45	5.59	32.57	25.71	0.649	1.15
	67	4.49	32.82	26.03	0.610	1.30
	90	4.24	32.91	26.12	0.613	1.21
	112	4.15	33.05	26.24	0.543	1.56 ^c
	135	4.71	33.26	26.35	0.414	1.33 ^c
	180	5.58	33.36	26.32	0.280	1.53
1	378	4.46	33.96	26.93	0.133	2.10
	778	3.56	34.23	27.23	0.108	2.06
	1189	2.80	34.40	27.44	0.067	2.09
	1766	2.19	34.56	27.55	0.085	2.40

INTERPOLATED

0	5.69	32.56	25.69	0.676	1.00
10	5.70	32.54	25.67	0.653	1.08
20	5.65	32.54	25.67	0.655	1.07
30	5.62	32.55	25.68	0.653	1.10
50	5.45	32.67	25.76	0.641	1.18
75	4.36	32.85	26.07	0.612	1.28
100	4.19	32.96	26.16	0.600	1.24
150	5.08	33.29	26.40	0.372	1.49
200	5.58	33.41	26.56	0.262	1.56
250	5.24	33.61	26.70	0.225	1.72
300	4.92	33.78	26.82	0.189	1.87
400	4.39	33.98	26.95	0.129	2.10
500	4.14	34.07	27.04	0.120	2.09
600	3.92	34.13	27.12	0.115	2.08
700	3.72	34.19	27.18	0.112	2.07
800	3.50	34.24	27.24	0.106	2.06
1000	3.08	34.33	27.36	0.083	2.08
1200	2.72	34.40	27.44	0.067	2.10
1500	2.38	34.49	27.51	0.072	2.24

STATION 142-51

57° 38'N, 148° 36'W

24 May 1956
 Messenger time: 1247 (+8)
 Depth: 1650 fm, 3017 m

Weather: 51
 Sea height: 2
 Visibility: 4
 Air temperature: dry 43°F, wet -

Barometer: 29.60 in
 Wind: 110°, 8 kn
 Clouds: 0, 4, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	5.25	32.77	25.91	0.690	0.88
	10	5.21	32.82	25.95	0.684	0.85
	20	5.06	32.84	25.99	0.673	0.96
	29	4.86	32.91	26.06	0.672	1.19
	48	3.74	33.08	26.30	0.633	1.59
	72	3.24	33.10	26.37	0.645	1.24
	97	3.26	33.40	26.60	0.572	1.69
	146	5.02	33.86	26.80	0.192	1.85
	196	4.75	33.89 ^a	26.86	0.146 ^a	1.68 ^c
	1	191	4.81	33.71 ^b	26.70	0.311 ^b
288		4.32	33.98	26.96	0.085	2.04
486		3.77	34.18	27.17	0.036	2.28
974		2.93	34.36	27.41	0.039	1.81
1467		2.23	34.51	27.59	0.067	2.71
1904		1.81	34.58	27.67	0.142	2.16

INTERPOLATED

0	5.25	32.77	25.91	0.690	0.88
10	5.21	32.82	25.95	0.684	0.85
20	5.01	32.84	25.99	0.673	0.96
30	4.92	32.91	26.06	0.671	1.26
50	3.97	33.08	26.31	0.632	1.60
75	3.24	33.11	26.48	0.642	1.66
100	3.39	33.45	26.61	0.547	1.70
150	5.02	33.86	26.81	0.185	1.85
200	4.71	33.89	26.88	0.143	1.93
250	4.47	33.94	26.93	0.109	2.00
300	4.30	33.99	26.97	0.081	2.06
400	4.00	34.10	27.08	0.071	2.17
500	3.73	34.18	27.17	0.063	2.26
600	3.53	34.22	27.23	0.057	2.16
700	3.34	34.26	27.28	0.050	2.06
800	3.19	34.30	27.33	0.043	1.96
1000	2.90	34.36	27.42	0.037	1.82
1200	2.58	34.43	27.50	0.032	2.14
1500	2.20	34.52	27.60	0.043	2.66

STATION 112-52

57° 58'N, 150° 00'W - E of Kodiak Is

25 May 1956
 Messenger time: 2237 (+8)
 Depth: 145 fm, 265 m

Weather: 01
 Sea height: 2
 Visibility: 7
 Air temperature: dry 42°F, wet 41°F

Barometer: 29.63 in
 Wind: 165°, 5 kn
 Clouds: 4,6, amt 5

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	4.79	32.50	25.74	0.770	0.70
	5	4.77	32.50	25.74	0.767	0.64
	10	4.58	32.50	25.76	0.747	0.73
	20	4.55	32.48	25.74	0.676	0.77
	29	4.56	32.50	25.76	0.588	0.83
	49	4.14	32.59	25.88	0.582	1.26
	73	3.96	32.76	26.03	0.591	1.49
	98	4.07	32.90	26.13	0.508	1.89
	147	4.15	33.03	26.22	0.419	1.42
	196	4.43	33.02 ^b	26.20	0.384	1.67
	244	4.72	33.68	26.68	0.224	2.10

INTERPOLATED

	0	4.79	32.50	25.71	0.770	0.70
	10	4.58	32.49	25.75	0.747	0.73
	20	4.55	32.48	25.74	0.676	0.77
	30	4.56	32.50	25.75	0.586	0.83
	50	4.09	32.58	25.88	0.582	1.29
	75	3.97	32.77	26.03	0.590	1.49
	100	4.09	32.90	26.13	0.500	1.89
	150	4.18	33.03	26.22	0.438	1.42
	200	4.46	33.42	26.46	0.377	1.72
	250	(4.75)	(33.78)	(26.70)	(0.202)	(2.13)

STATION 142-53

55° 24'N, 154° 21'W - S of Kodiak Island

28 May 1956
 Messenger time: 0642 (+8)
 Depth: 1600 fm, 2926 m

Weather: 60
 Sea height: 6
 Visibility: 5
 Air temperature: dry 41°F, wet -

Barometer: 29.55 in
 Wind: 120°, 36 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	5.42	32.74	25.86	-	0.83
	7	5.40	32.75	25.87	0.695	1.08
	14	5.35	32.74	25.87	0.695	0.94
	20	4.55	32.79	25.99	0.669	1.30
	35	3.82	33.02	26.26	0.633	2.04
	52	3.38	33.08	26.33	0.640	3.01
	70	3.61	33.07	26.31	0.628	1.95
	104	3.33	33.22	26.46	0.580	2.38
1	139	4.81	33.77	26.75	0.211	2.83
	131	3.54	33.46	26.63	0.294	2.38
	198	4.14	33.93	26.94	0.053	3.02
	329	3.95	34.07	27.07	0.034	3.29
	664	3.38	34.33	27.33	0.027	3.34
	1020	2.82	34.38	27.42	0.023	3.33
	1400	2.28	34.53	27.60	0.058	3.51

INTERPOLATED

0	5.42	32.74	25.86	-	0.83
10	5.40	32.75	25.87	0.695	1.04
20	5.30	32.77	25.95	0.694	1.10
30	4.02	32.89	26.17	0.641	1.76
50	3.59	33.04	26.29	0.640	2.04
75	3.58	33.11	26.35	0.623	1.97
100	3.51	33.17	26.41	0.590	2.14
150	4.37	33.63	26.75	0.162	2.82
200	4.13	33.93	26.94	0.052	3.03
250	4.03	34.01	27.01	0.040	3.17
300	3.98	34.05	27.05	0.034	3.26
400	3.82	34.14	27.13	0.030	3.31
500	3.67	34.22	27.22	0.028	3.32
600	3.48	34.29	27.29	0.028	3.32
700	3.31	34.33	27.34	0.027	3.33
800	3.17	34.35	27.37	0.023	3.33
1000	2.84	34.38	27.41	0.023	3.33
1200	2.51	34.45	27.51	0.039	3.40

STATION 142-54

54° 37'N, 152° 46'W

29 May 1956

Messenger time: 0709 (+8)

Depth: 2390 fm, 4371 m

Weather: 62

Sea height: 5

Visibility: 5

Air temperature: dry 41°F, wet 40°F

Barometer: 29.56 in

Wind: 180°, 20 kn

Clouds: 8, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$	
OBSERVED							
2	0	4.20	33.06	26.24	0.672	2.10	
	10	4.19	33.06	26.24	0.672	2.11	
	20	4.20	33.06	26.24	0.672	2.15	
	29	4.19	33.05	26.24	0.676	2.07	
	48	3.46	33.11	26.35	0.668	2.21	
	72	2.71	33.18	26.47	0.630	2.24	
	93	3.16	33.47	26.67	0.421	2.78	
	143	4.00	33.93	26.95	0.081	3.49	
	190	4.01	34.00	27.01	0.052	3.38	
	1	286	3.97	34.05 ^c	27.05	0.043	3.35
		313	3.80	34.09 ^c	27.10	0.039	3.34
		715	3.11	34.33	27.36	0.040	3.54
		1129	2.54	34.45	27.51	0.037	3.55
1468		2.12	34.55	27.62	0.077	3.42	
1908		1.88	34.59	27.67	0.129	3.49	

INTERPOLATED

0	4.20	33.06	26.24	0.672	2.10
10	4.19	33.06	26.24	0.672	2.11
20	4.20	33.06	26.24	0.672	2.15
30	4.19	33.05	26.24	0.676	2.08
50	3.32	33.11	26.35	0.664	2.22
75	2.75	33.19	26.49	0.618	2.25
100	3.28	33.59	26.72	0.308	2.99
150	4.01	33.74	26.96	0.075	3.49
200	4.00	34.01	27.01	0.050	3.37
250	4.00	34.04	27.05	0.046	3.36
300	3.87	34.07	27.08	0.041	3.35
400	3.62	34.13	27.17	0.039	3.38
500	3.43	34.20	27.23	0.039	3.44
600	3.28	34.26	27.29	0.039	3.49
700	3.12	34.32	27.35	0.040	3.54
800	2.98	34.36	27.40	0.040	3.55
1000	2.72	34.42	27.47	0.039	3.55
1200	2.95	34.47	27.49	0.043	3.52
1500	2.10	34.55	27.62	0.081	3.42

STATION 112-55

53° 39'N, 151° 05'W

30 May 1956
 Messenger time: 0045 (+8)
 Depth: 2600 fm, 4755 m

Weather: 03
 Sea height: 4
 Visibility: 6
 Air temperature: dry 41°F, wet 40°F

29.72 in
 Wind: 205° 20 kn
 Clouds: 0, 4, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	4.61	33.03	26.18	0.660	1.86
	10	4.61	33.03	26.18	0.668	2.04
	20	4.61	33.03	26.18	0.668	2.12
	28	4.61	33.03	26.18	0.664	2.06
	47	4.39	33.04	26.21	0.664	2.18
	71	2.84	33.16	26.45	0.656	2.40
	95	2.90	33.37	26.61	0.514	2.70
	143	4.00	33.87	26.91	0.120	3.49 ^b
	191	4.04	33.97	26.99	0.057	3.14
	1	154	4.04	33.95	26.97	0.061
241		3.83	34.05	27.07	0.036	3.39
436		3.57	34.18	27.19	0.036	3.18
871		2.84	34.38	27.42	0.034	3.64
1308		2.35	34.49	27.55	0.061	3.59
1755		1.97	34.59	27.67	0.105	6.46 ^b

INTERPOLATED

0	4.61	33.03	26.18	0.660	1.86
10	4.61	33.03	26.18	0.668	2.04
20	4.61	33.03	26.18	0.668	2.12
30	4.61	33.03	26.18	0.664	2.08
50	3.53	33.04	26.24	0.664	2.21
75	2.84	33.20	26.48	0.652	2.45
100	2.98	33.41	26.64	0.467	2.71
150	4.00	33.93	26.97	0.092	2.75
200	4.03	33.97	27.01	0.053	3.18
250	3.82	34.06	27.08	0.036	3.38
300	3.67	34.09	27.11	0.036	3.35
400	3.58	34.16	27.17	0.036	3.23
500	3.48	34.21	27.23	0.036	3.24
600	3.32	34.26	27.28	0.036	3.34
700	3.16	34.31	27.33	0.035	3.44
800	2.98	34.35	27.38	0.034	3.55
1000	2.67	34.41	27.46	0.038	3.63
1200	2.43	34.47	27.52	0.051	3.61
1500	2.20	34.54	27.60	0.078	-

STATION 142-56

52° 42'N, 149° 30'W

30 May 1956

Messenger time: 1641 (+8)

Depth? 2400 fm, 4400 m

Weather: 02

Sea height: 2

Visibility: 7

Air temperature: dry 44°F, wet 43°F

Barometer: 30.04 in

Wind: 180°, 12 kn

Clouds: 4, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
5	0	5.05	33.02	26.13	0.644	2.15
	10	5.03	33.01	26.12	0.652	2.07
	20	4.92	33.01	26.13	0.650	2.09
	29	4.91	33.05	26.16	0.653	2.12
	48	3.75	33.07	26.29	0.652	2.32
	72	3.03	33.17	26.45	0.653	2.49
	97	2.90	33.24	26.50	0.603	2.60
1	144	3.99	33.68	26.75	0.123	3.60
3	193	4.00	33.97	26.99	0.056 ^c	3.64 ^c
	195	4.00	33.96	26.98	0.058 ^c	3.59 ^c
	278	3.84	34.07	27.09	0.031	3.69
	459	3.55	34.19	27.20	0.037 ^c	3.74 ^c
	468	3.54	34.20	27.22	0.034 ^c	3.69 ^c
4	791	2.92	34.34	27.39	0.038	3.76
	1882	1.88	34.59	27.67	0.162	3.49

INTERPOLATED

0	5.05	33.02	26.13	0.644	2.15
10	5.03	33.01	26.12	0.652	2.07
20	4.92	33.01	26.13	0.650	2.09
30	4.89	33.05	26.16	0.653	2.13
50	3.62	33.07	26.35	0.652	2.34
75	3.01	33.17	26.45	0.651	2.50
100	2.91	33.24	26.51	0.544	2.63
150	3.99	33.72	26.80	0.112	3.61
200	3.99	33.98	27.00	0.053	3.62
250	3.91	34.04	27.07	0.037	3.66
300	3.80	34.09	27.11	0.030	3.69
400	3.63	34.16	27.18	0.030	3.71
500	3.45	34.22	27.24	0.035	3.73
600	3.24	34.26	27.29	0.035	3.74
700	3.06	34.31	27.34	0.036	3.75
800	2.90	34.34	27.39	0.039	3.76
1000	2.64	34.41	27.44	0.057	3.73
1200	2.42	34.47	27.48	0.078	3.70
1500	2.15	34.55	27.62	0.113	3.63

STATION 142-57

51° 48'N, 148° 01'W

31 May 1956

Messenger time: 0910 (+8)

Depth: 2280 fm, 4169 m

Weather: 63

Sea height: 4

Visibility: 4

Air temperature: dry 44°F, wet -

Barometer: 29.53 in

Wind: 145°, 29 kn

Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	5.79	32.79	25.85	0.586	1.69
	10	5.79	32.78	25.84	0.620	1.59
	19	5.79	32.78	25.84	0.646	1.60
	27	5.79	32.78	25.84	0.648	1.56
	46	5.52	32.79	25.89	0.650	1.65
	69	4.01	32.86	26.11	0.651	1.64
	93	3.64	32.90	26.18	0.645	1.76
	139	3.65	33.36 ^c	26.54	0.470 ^c	2.58 ^b
	185	4.16	33.83	26.85	0.229	2.32
	1	146	3.68	33.37 ^c	26.54	0.460 ^c
218		4.07	33.86	26.89	0.166	1.85
362		3.76	34.04	27.06	0.074	1.91
720		3.20	34.30	27.33	0.040	3.08
1104		2.66	34.43	27.47	0.042	2.80
1523		2.23	34.52	27.60	-	3.59
1980		1.94	34.60	27.68	0.113	3.42

INTERPOLATED

0	5.79	32.79	25.85	0.586	1.69
10	5.79	32.78	25.84	0.620	1.59
20	5.79	32.78	25.84	0.645	1.59
30	5.76	32.78	25.84	0.648	1.59
50	5.15	32.80	25.94	0.650	1.64
75	3.88	32.87	26.13	0.650	1.66
100	3.64	32.94	26.22	0.632	1.84
150	3.72	33.42	26.68	0.424	2.23
200	4.12	33.84	26.87	0.193	2.37
250	3.98	33.90	26.93	0.132	1.86
300	3.88	33.97	26.99	0.100	1.87
400	3.69	34.07	27.09	0.065	2.01
500	3.52	34.16	27.17	0.050	2.39
600	3.37	34.23	27.25	0.043	2.74
700	3.21	34.29	27.31	0.040	3.05
800	3.06	34.34	27.36	0.040	3.02
1000	2.79	34.41	27.43	0.041	2.87
1200	2.54	34.45	27.51	0.048	2.98
1500	2.27	34.51	27.59	0.070	3.56
2000	(1.95)	(34.60)	(27.68)	(0.116)	(3.42)

STATION 112-58

50° 57'N, 116° 30'W

1 June 1956
 Messenger time: 0316 (+8) Weather: 02 Barometer: 29.39 in
 Depth: 2340 fm, 4280 m Sea height: 3 Wind: 145°, 12 km
 Visibility: 7 Clouds: 0, 8, amt 8
 Air temperature: dry 42°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	6.25	32.82	25.83	0.572	1.62
	10	6.28	32.81	25.81	0.565	1.67
	20	6.24	32.83	25.83	0.574	1.63
	29	6.16	32.81	25.82	0.577	1.70
	48	5.16	32.83	25.95	0.585	1.81
	72	4.14	32.86	26.10	0.574	1.95
	97	4.17	33.21	26.36	0.516	2.15
	144	4.21	33.81	26.84	0.275	3.00
	192	4.05	33.86	26.90	0.178	2.47
	1	170	4.15	33.82	26.85	0.244
258		3.95	33.93	26.95	0.138	2.83
436		3.69	34.11	27.13	0.053	3.55
897		2.90	34.39	27.43	0.038	3.35
1370		2.32	34.49	27.56	0.056	3.70
1844		1.94	34.56	27.65	0.099	3.34

INTERPOLATED

0	6.25	32.82	25.83	0.572	1.62
10	6.28	32.81	25.81	0.565	1.67
20	6.24	32.83	25.82	0.574	1.63
30	6.10	32.81	25.82	0.579	1.72
50	5.00	32.83	25.95	0.582	1.82
75	4.16	32.87	26.11	0.563	1.98
100	4.17	33.26	26.44	0.436	2.37
150	4.21	33.81	26.84	0.268	2.97
200	4.03	33.88	26.90	0.170	2.50
250	3.95	33.92	26.95	0.138	2.79
300	3.88	33.97	27.00	0.120	3.05
400	3.71	34.08	27.09	0.072	3.46
500	3.57	34.16	27.18	0.050	3.52
600	3.40	34.24	27.27	0.047	3.47
700	3.22	34.30	27.35	0.043	3.42
800	3.05	34.35	27.41	0.040	3.37
1000	2.77	34.42	27.47	0.040	3.46
1200	2.52	34.46	27.52	0.048	3.62
1500	2.20	34.51	27.59	0.064	3.64

STATION 142-59

50° 01'N, 144° 55'W - Station "Papa"

1 June 1956 Weather: 62 Barometer: 29.67 in
 Messenger time: 1723 (+8) Sea height: 4 Wind: 280°, 24 kn
 Depth: 2300, fm, 4206 m Visibility: 7 Clouds: 0,8, amt 7
 Air temperature: dry 44°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	6.93	32.82	25.74	0.579	1.66
	9	6.92	32.80	25.72	0.622	1.78
	18	6.92	32.79	25.71	0.623	1.64
	25	6.91	32.81	25.73	0.623	1.64
	42	5.00	32.85	26.00	0.610	1.80
	63	4.72	32.84	26.02	0.627	1.84
	84	4.59	32.84	26.03	0.628	1.89
	126	4.48	33.71	26.73	0.384	2.65
	169	4.20 ^c	33.87 ^c	26.89	0.215 ^c	2.55 ^a
	1	181	4.41 ^c	33.81 ^c	26.82	0.284 ^c
271		4.04	33.89	26.92	0.164	2.44
450		3.71	34.10	27.12	0.044	2.38
906		2.98	34.40	27.43	0.033	3.25
1372		2.36	34.49	27.55	0.045	3.13
1847		1.94	34.61	27.69	0.109	3.42
2324		1.72	34.63	27.72	0.153	3.16

INTERPOLATED

0	6.93	32.82	25.74	0.579	1.66
10	6.92	32.80	25.72	0.622	1.78
20	6.91	32.79	25.71	0.624	1.64
30	5.74	32.82	25.86	0.624	1.65
50	4.90	32.84	26.01	0.639	1.82
75	4.61	32.84	26.02	0.628	1.89
100	4.49	33.20	26.63	0.485	2.29
150	4.40	33.78	26.80	0.325	2.59
200	4.25	33.85	26.87	0.228	2.51
250	4.10	33.87	26.90	0.174	2.36
300	3.97	33.92	26.95	0.135	2.43
400	3.77	34.05	27.06	0.075	2.38
500	3.64	34.14	27.16	0.043	2.44
600	3.46	34.22	27.24	0.040	2.67
700	3.30	34.29	27.31	0.038	2.92
800	3.13	34.35	27.37	0.036	3.10
1000	2.85	34.42	27.45	0.037	3.26
1200	2.59	34.46	27.50	0.040	3.15
1500	2.23	34.53	27.58	0.061	3.22
2000	1.87	34.62	27.71	0.120	3.35

STATION 142-60

48° 41'N, 144° 55'W

2 June 1956
 Messenger time: 0648 (+8) Weather: 60 Barometer: 30.07 in
 Depth: 2400 fm, 4390 m Sea height: 3 Wind: 305°, 16 km
 Visibility: 8 Clouds: 6, amt 7
 Air temperature: dry 44°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
3	0	6.90	32.73	25.66	0.616	1.61
	5	6.92	32.71	25.65	0.623	1.54
	10	6.92	32.72	25.66	0.619	1.59
	18	6.91	32.71	25.65	0.620	1.56
	27	6.92	32.72	25.66	0.619	1.62
	46	4.66	32.77	25.97	0.644	1.66
	69	4.41	32.76	25.99	0.643	1.77
4	92	4.22	32.76	26.01	0.638	1.92
	138	4.51	33.66	26.69	0.400	2.47
	185	4.32	33.84 ^c	26.85	0.295 ^c	2.48
1	177	4.41	33.80 ^c	26.81	0.328 ^c	2.49
	267	4.02	33.92	26.95	0.211	2.92
2	425	3.80	34.11	27.12	0.093	3.13
	640	3.40	34.25	27.27	0.048	3.76
	861	3.01	34.38	27.41	0.044	3.50
	1311	2.36	34.49	27.55	0.048	3.71
	1780	2.01	34.60	27.67	0.089	3.38

INTERPOLATED

0	6.90	32.73	25.66	0.616	1.61
10	6.92	32.72	25.66	0.619	1.59
20	6.92	32.72	25.65	0.620	1.57
30	6.50	32.72	25.68	0.618	1.62
50	4.53	32.77	25.97	0.644	1.67
75	4.35	32.76	25.99	0.640	1.81
100	4.22	32.95	26.06	0.590	1.98
150	4.33	33.74	26.77	0.381	2.48
200	4.27	33.85	26.87	0.341	2.57
250	4.07	33.90	26.93	0.318	2.83
300	3.95	33.98	26.99	0.256	2.99
400	3.81	34.08	27.09	0.117	3.11
500	3.64	34.16	27.18	0.062	3.34
600	3.45	34.22	27.25	0.048	3.66
700	3.28	34.28	27.31	0.044	3.70
800	3.12	34.34	27.37	0.042	3.59
1000	2.80	34.42	27.46	0.042	3.58
1200	2.50	34.47	27.52	0.043	3.67
1500	2.18	34.54	27.60	0.061	3.59

(continued on next page)

STATION 142-60 (continued)

Cast no.	Depth m	T °C
	OBSERVED	
3	0	6.95
	5	6.96
	10	6.96
	19	4.64
	57	4.28
	191	4.34
	290	4.05
1	46	3.70
	687	3.30
2	867	3.02
	1293	2.39
	1723	2.00

NOTE: These were special casts to obtain samples for lithium and barium analysis. Temperature data were obtained concurrently.

STATION 142-61

47° 27'N, 144° 49'W

2 June 1956
 Messenger time: 2335 (+8)
 Depth: 2550 fm, 4663 m

Weather: 01
 Sea height: 1
 Visibility: 8
 Air temperature: dry 45°F, wet 44°F

Barometer: 30.36 in
 Wind: 265°, 12 kn
 Clouds: 4,6, amt 6

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	8.11	32.84	25.59	0.606	1.49
	10	8.13	32.84	25.59	0.608	1.49
	19	8.13	32.85	25.60	0.605	1.46
	29	8.15	32.85	25.60	0.604	1.49
	49	8.12	32.86	25.61	0.605	1.52
	73	5.74	32.89	25.94	0.627	1.64
	97	5.68	32.93	25.97	0.621	1.73
	146	5.79	33.58	26.47	0.505	2.02
	195	5.35	33.82	26.72	0.417	2.31 ^a
	1	190	5.47	33.81	26.70	0.425
286		4.52	33.92	26.90	0.219	2.90
479		3.98	34.09	27.08	0.090	3.29
966		2.96	34.40	27.43	0.039	3.61
1451		2.33	34.51	27.58	0.055	3.57
1939		1.94	34.60	27.68	0.106	3.59
2424		1.71	34.64	27.72	0.170	3.16

INTERPOLATED

0	8.11	32.84	25.59	0.606	1.49
10	8.13	32.84	25.59	0.608	1.49
20	8.13	32.85	25.60	0.605	1.46
30	8.15	32.85	25.60	0.604	1.49
50	8.12	32.86	25.61	0.606	1.52
75	5.72	32.89	25.94	0.627	1.66
100	5.67	32.93	25.99	0.612	1.74
150	5.76	33.60	26.49	0.494	2.04
200	5.22	33.82	26.73	0.405	2.37
250	4.73	33.88	26.84	0.294	2.72
300	4.49	33.93	26.91	0.195	2.94
400	4.20	34.02	27.02	0.120	3.17
500	3.93	34.10	27.10	0.085	3.34
600	3.71	34.18	27.19	0.066	3.44
700	3.50	34.25	27.27	0.052	3.50
800	3.29	34.31	27.34	0.044	3.55
1000	2.91	34.41	27.44	0.040	3.61
1200	2.63	34.46	27.52	0.045	3.58
1500	2.29	34.52	27.59	0.060	3.57
2000	1.90	34.60	27.69	0.112	3.56
2500	(1.70)	(34.64)	(27.72)	(0.185)	(3.06)

STATION 142-62

47° 37'N, 142° 50'W

3 June 1956
 Messenger time: 1142 (+8)
 Depth: 2400 fm, 4389 m

Weather: 03
 Sea height: 2
 Visibility: 6
 Air temperature: dry 46°F, wet 44°F

Barometer: 30.35 in
 Wind: 155°, 10 kn
 Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$	
OBSERVED							
2	0	7.99	32.73	25.51	0.615	1.41	
	10	7.98	32.74	25.52	0.615	1.42	
	19	7.94	32.74	25.54	0.615	1.40	
	29	7.93	32.74	25.54	0.616	1.47	
	48	7.93	32.74	25.54	0.617	1.46	
	71	5.36	32.77	25.89	0.628	1.64	
	95	5.23	32.77	25.91	0.626	1.71	
	146	5.92	33.74	26.59	0.486	1.81	
	195	5.59	33.83	26.70	0.402	2.34	
	1	190	5.62	33.82	26.70	0.416	2.31
		285	4.76	33.91	26.86	0.240	2.83
473		3.97	34.07	27.07	0.094	3.46	
951		2.98	34.38	27.41	0.046	3.63	
1430		2.37	34.49	27.55	0.048	3.75	
1912		1.96	34.54	27.62	0.104	3.47	

INTERPOLATED

0	7.99	32.73	25.51	0.615	1.41
10	7.98	32.74	25.52	0.615	1.42
20	7.94	32.74	25.54	0.615	1.41
30	7.93	32.74	25.54	0.616	1.47
50	7.85	32.74	25.54	0.617	1.50
75	5.32	32.77	25.89	0.628	1.65
100	5.30	33.06	25.94	0.606	1.72
150	5.90	33.75	26.60	0.480	1.83
200	5.54	33.83	26.71	0.373	2.37
250	5.05	33.88	26.80	0.280	2.66
300	4.64	33.93	26.89	0.225	2.90
400	4.21	34.01	27.01	0.134	3.27
500	3.94	34.09	27.09	0.088	3.47
600	3.71	34.16	27.18	0.077	3.52
700	3.50	34.22	27.26	0.067	3.55
800	3.29	34.29	27.32	0.057	3.59
1000	2.91	34.39	27.43	0.044	3.65
1200	2.63	34.45	27.50	0.041	3.70
1500	2.28	34.50	27.56	0.055	3.73
2000	(1.91)	(34.54)	(27.63)	(0.116)	(3.42)

STATION 142-63

47° 44'N, 140° 35'W

4 June 1956 Weather: 63 Barometer: 30.18 in
 Messenger time: 0214 (+8) Sea height: 2 Wind: 165°, 18 kn
 Depth: 2350 fm, 4296 m Visibility: 5 Clouds: -, amt 8
 Air temperature: dry 46°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$	
OBSERVED							
5	0	8.14	32.75	25.52	0.613	1.32	
	6	8.15	32.74	25.51	0.495	1.48	
	13	8.14	32.75	25.52	0.608	1.49	
	19	8.15	32.75	25.52	0.610	1.46	
	34	8.15	32.75	25.52	0.610	1.53	
	51	8.17	32.75	25.50	0.610	1.47	
	69	7.16	32.94	25.79	0.623	1.40	
	104	6.14	32.94	25.94	0.607	1.64	
	140	6.36	33.66	26.47	0.505	1.94 ^c	
	2	164	6.14	33.78	26.59	0.461	1.88 ^c
		244	5.32	33.87	26.77	0.320	2.38
408		4.23	34.00	26.99	0.146	3.04	
826		3.22	34.29	27.32	0.103	3.62	
1250		2.56	34.45	27.50	0.043	3.57	
1542		2.32	34.51	27.58	0.080	3.57	
1965		1.95	34.57	27.65	0.109	3.14	
6	2310	1.77	34.60	27.69	0.150	3.21	

INTERPOLATED

0	8.14	32.75	25.52	0.613	1.32
10	8.15	32.75	25.52	0.608	1.48
20	8.15	32.75	25.52	0.610	1.46
30	8.15	32.75	25.52	0.610	1.51
50	8.16	32.75	25.65	0.610	1.48
75	6.99	32.94	25.81	0.622	1.44
100	6.20	32.94	25.91	0.612	1.61
150	6.31	33.71	26.52	0.490	1.89
200	5.74	33.82	26.68	0.389	2.15
250	5.32	33.88	26.78	0.313	2.41
300	4.97	33.92	26.85	0.253	2.68
400	4.32	33.99	26.98	0.152	3.02
500	3.94	34.08	27.07	0.132	3.24
600	3.66	34.15	27.15	0.123	3.40
700	3.43	34.22	27.23	0.113	3.51
800	3.24	34.27	27.30	0.105	3.60
1000	2.86	34.37	27.41	0.077	3.59
1200	2.59	34.44	27.48	0.049	3.55
1500	2.35	34.50	27.57	0.073	3.54
2000	1.93	34.57	27.65	0.110	3.15

STATION 142-64

47° 49' N, 138° 45' W

4 June 1956

Messenger time: 1547 (+8)

Depth: 2250 fm, 4115 m

Weather: 02

Sea height: 3

Visibility: 7

Air temperature: dry 51°F, wet 48°F

Barometer: 30.20 in

Wind: 310°, 24 kn

Clouds: 6, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L	
OBSERVED							
2	0	9.13	32.83	25.42	0.600	1.31	
	9	9.12	32.84	25.43	0.607	1.42	
	17	9.12	32.84	25.43	0.600	1.39	
	26	8.97	32.84	25.45	0.604	1.34	
	44	6.56	32.84	25.79	0.645	1.40	
	66	6.67	32.86	25.80	0.625	1.52	
	88	5.86	32.86	25.90	0.617	1.56	
	133	5.96	33.18	26.13	0.562	1.88	
	176	5.88 ^c	33.77 ^c	26.62	0.429 ^c	2.09 ^c	
	1	189	5.92 ^c	33.77 ^c	26.62	0.430 ^c	2.10 ^c
		285	4.86	33.89	26.83	0.251	2.56
		471	4.03	34.07	27.07	0.086	3.15
		943	3.05	34.34	27.38	0.040	3.29
		1429	2.37	34.49	27.55	0.050	3.65
1913		1.99	34.56	27.64	0.106	3.42	

INTERPOLATED

0	9.13	32.83	25.42	0.600	1.31
10	9.12	32.84	25.43	0.604	1.42
20	9.11	32.84	25.43	0.600	1.36
30	8.50	32.84	25.51	0.611	1.35
50	6.35	32.85	25.80	0.639	1.43
75	6.33	32.86	25.86	0.620	1.54
100	5.92	32.92	25.94	0.603	1.62
150	5.97	33.46	26.33	0.525	1.95
200	5.73	33.80	26.63	0.391	2.18
250	5.18	33.86	26.76	0.301	2.40
300	4.79	33.90	26.85	0.232	2.60
400	4.31	34.00	26.98	0.132	2.93
500	3.96	34.09	27.10	0.081	3.16
600	3.71	34.15	27.18	0.064	3.20
700	3.49	34.22	27.25	0.052	3.23
800	3.30	34.27	27.30	0.044	3.25
1000	2.97	34.36	27.40	0.040	3.34
1200	2.67	34.44	27.48	0.041	3.52
1500	2.29	34.51	27.56	0.054	3.64
2000	(1.93)	(34.57)	(27.65)	(0.123)	(3.35)

STATION 112-65

47° 55'N, 136° 40'W

5 June 1956
 Messenger time: 0448 (+8) Weather: 63 Barometer: 30.09 in
 Depth: 2180 fm, 3986 m Sea height: 3 Wind: 275°, 16 kn
 Visibility: 6 Clouds: 6, amt 8
 Air temperature: dry 48°F, wet 47°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	9.49	32.77	25.32	0.592	1.29
	10	9.50	32.79	25.33	0.595	1.30
	19	9.50	32.77	25.32	0.594	1.26
	28	9.32	32.77	25.35	0.599	1.30
	47	6.95	32.79	25.70	0.634	1.37
	70	6.52	32.81	25.80	0.616	1.27
	93	6.38	32.83	25.81	0.604	1.47
	140	5.91	33.43	26.34	0.492	2.10 ^c
	186	5.78	33.83	26.67	0.341	2.33
	1	148	5.94	33.50	26.40	0.475
225		5.40	33.85	26.74	0.284	2.02
372		4.39	33.96	26.94	0.136	2.64
746		3.44	34.26	27.23	0.036	3.30
1149		2.77	34.42	27.46	0.038	3.04
1581		2.21	34.52	27.60	0.062	3.55
2029		1.87	34.54	27.63	0.125	3.05

INTERPOLATED

0	9.49	32.77	25.32	0.592	1.29
10	9.50	32.79	25.33	0.595	1.30
20	9.49	32.77	25.32	0.595	1.27
30	9.11	32.78	25.35	0.599	1.32
50	6.82	32.79	25.72	0.629	1.35
75	6.50	32.81	25.80	0.613	1.31
100	6.31	32.95	25.84	0.595	1.56
150	5.92	33.53	26.42	0.455	2.12
200	5.63	33.84	26.79	0.318	2.22
250	5.21	33.87	26.77	0.258	2.13
300	4.83	33.90	26.84	0.206	2.34
400	4.29	33.99	26.96	0.125	2.69
500	4.03	34.08	27.05	0.093	2.89
600	3.79	34.16	27.13	0.067	3.08
700	3.56	34.23	27.19	0.043	3.24
800	3.35	34.28	27.27	0.037	3.28
1000	3.00	34.37	27.38	0.037	3.14
1200	2.68	34.43	27.49	0.040	3.10
1500	2.31	34.50	27.59	0.059	3.42
2000	1.88	34.54	27.63	0.112	3.09

STATION 142-66

48° 02'N, 134° 34'W

5 June 1956
 Messenger time: 1727 (+8)
 Depth: 2160 fm, 3950 m

Weather: 60
 Sea height: 2
 Visibility: 7
 Air temperature: dry 50°F, wet 48°F

Barometer: 29.95 in
 Wind: 230°, 13 km
 Clouds: 5,6, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

3	0	9.97	32.79	25.25	0.590	1.35
	10	10.00	32.79	25.25	0.592	1.31
	19	9.95	32.79	25.25	0.592	1.30
	29	9.91	32.78	25.25	0.594	1.33
	49	7.60	32.75	25.59	0.633	1.34
	73	6.51	32.79	25.77	0.622	1.43
	96	6.09	32.83	25.85	0.621	1.48
	144	5.84	33.26	26.22	0.531	1.95
	191	5.58	33.77	26.66	0.398 ^c	2.00
2	169	5.76	33.61	26.50	0.386 ^c	1.93
	254	5.05	33.87	26.81	0.238	2.45
	428	4.12	34.03	27.02	0.096	3.04
	865	3.27	34.33	27.34	0.028	2.88
	1324	2.42	34.49	27.55	0.054	3.70
	1746	2.04	34.54	27.62	0.095	3.23

INTERPOLATED

0	9.97	32.79	25.25	0.590	1.35
10	10.00	32.79	25.25	0.592	1.31
20	9.95	32.79	25.25	0.592	1.30
30	9.86	32.78	25.25	0.597	1.33
50	7.47	32.75	25.60	0.632	1.34
75	6.47	32.79	25.79	0.622	1.43
100	6.03	32.85	25.87	0.613	1.52
150	5.82	33.38	26.29	0.512	1.94
200	5.51	33.78	26.68	0.336	2.04
250	5.09	33.87	26.80	0.242	2.40
300	4.76	33.92	26.87	0.198	2.60
400	4.24	34.00	26.99	0.113	2.95
500	3.98	34.08	27.09	0.078	3.03
600	3.77	34.16	27.16	0.058	3.01
700	3.57	34.22	27.23	0.043	2.97
800	3.37	34.29	27.29	0.032	2.92
1000	3.00	34.39	27.42	0.030	3.10
1200	2.65	34.46	27.50	0.043	3.45
1500	2.25	34.52	27.59	0.069	3.52

STATION 142-67

48° 09'N, 132° 23'W

6 June 1956
 Messenger time: 0726 (+8)
 Depth: 1840 fm, 3365 m

Weather: 01
 Sea height: 3
 Visibility: 7
 Air temperature: dry 49°F, wet -

Barometer: 29.61 in
 Wind: 230°, 20 kn
 Clouds: 4,8, amt 5

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	10.86	32.69	25.02	0.578	1.15
	10	10.88	32.68	25.01	0.584	1.16
	19	10.85	32.68	25.02	0.585	1.17
	29	9.39	32.72	25.30	0.622	1.21
	49	7.00	32.72	25.65	0.642	1.29
	73	6.33	32.74	25.75	0.613	1.39
	97	6.07	32.83	25.85	0.583	1.55
	146	6.00	33.55	26.43	0.449	2.12 ^c
	194	5.84	33.83	26.67	0.341	2.34
	1	165	5.99	33.70	26.55	0.404
246		5.30	33.87	26.77	0.278	2.39
407		4.33	33.96	26.95	0.134	3.15
830		3.43	34.32	27.33	0.028	3.56
1269		2.70	34.43	27.47	-	3.65
1683		2.18	34.54	27.61	0.078	3.45

INTERPOLATED

0	10.86	32.69	25.02	0.578	1.15
10	10.88	32.68	25.01	0.584	1.16
20	10.83	32.68	25.02	0.598	1.17
30	9.20	32.72	25.34	0.623	1.21
50	6.94	32.72	25.65	0.641	1.29
75	6.29	32.73	25.76	0.612	1.41
100	6.04	32.85	25.86	0.572	1.58
150	6.00	33.58	26.46	0.437	2.08
200	5.81	33.83	26.68	0.334	2.34
250	5.24	33.87	26.77	0.270	2.41
300	4.89	33.91	26.84	0.221	2.68
400	4.38	33.95	26.94	0.140	3.12
500	4.23	34.04	27.05	0.093	3.26
600	3.91	34.13	27.14	0.061	3.34
700	3.71	34.21	27.22	0.039	3.44
800	3.50	34.29	27.30	0.028	3.54
1000	3.24	34.37	27.40	0.031	3.60
1200	2.81	34.41	27.46	0.040	3.63
1500	2.39	34.49	27.55	0.061	3.55

STATION 142-68

48° 14' N, 130° 25' W

7 June 1956
 Messenger time: 2035 (+8)
 Depth: 1215 fm, 2222 m

Weather: 02
 Sea height: 3
 Visibility: 8
 Air temperature: dry 50°F, wet 46°F

Barometer: 29.28 in
 Wind: 280°, 20 kn
 Clouds: 8, amt 5

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

3	0	11.43	32.39	24.69	0.581	0.73
	10	11.42	32.39	24.69	0.586	0.69
	19	11.43	32.39	24.69	0.585	0.77
	29	9.81	32.48	25.04	0.619	1.33
	49	7.23	32.59	25.50	0.623	1.29
	73	6.70	32.66	25.65	0.602	1.43
	96	6.53	32.81	25.79	0.553	1.67
	145	6.82	33.59	26.37	0.428	2.36
	192	6.46 ^c	33.84 ^c	26.59	0.312 ^c	2.44 ^c
	2	191	6.50 ^c	33.86 ^c	26.61	0.283 ^c
287		5.59	33.98	26.81	0.158	3.05
478		4.81	34.13	27.03	0.060	3.45
962		3.43	34.44	27.42	0.022	3.28
1445		2.51	34.51	27.56	0.062	3.67
1881		1.97	34.60	27.67	0.115	3.34

INTERPOLATED

0	11.43	32.39	24.69	0.581	0.73
10	11.42	32.39	24.69	0.586	0.69
20	11.40	32.39	24.69	0.585	0.82
30	9.65	32.48	25.04	0.619	1.33
50	7.26	32.59	25.50	0.623	1.30
75	6.69	32.66	25.65	0.595	1.46
100	6.56	32.74	25.86	0.544	1.86
150	6.81	33.64	26.40	0.413	2.37
200	6.38	33.86	26.63	0.282	2.54
250	5.90	33.94	26.75	0.197	2.81
300	5.51	33.99	26.83	0.146	3.08
400	5.09	34.08	26.95	0.090	3.32
500	4.75	34.14	27.05	0.057	3.44
600	4.45	34.21	27.14	0.047	3.41
700	4.16	34.28	27.22	0.040	3.38
800	3.88	34.34	27.30	0.032	3.36
1000	3.36	34.45	27.44	0.026	3.30
1200	2.94	34.48	27.51	0.041	3.47
1500	2.42	34.52	27.58	0.070	3.62

STATION 142-69

48° 26'N, 128° 17'W

8 June 1956
 Messenger time: 1642 (+8)
 Depth: 1400 fm, 2560 m

Weather: 65
 Sea height: 2
 Visibility: 4
 Air temperature: dry 53 °F, wet 52 °F

Barometer: 29.78 in
 Wind: 155°, 24 kn
 Clouds: 8, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	11.17	32.07	24.49	0.581	0.53
	10	11.17	32.07	24.49	0.576	0.57
	19	11.16	32.07	24.49	0.574	0.48
	28	9.72	32.19	24.83	0.585	0.75
	46	7.12	32.49	25.45	0.586	1.31
	70	6.70	32.67	25.65	0.553	1.48
	93	6.67	33.03	25.93	0.477	1.84
	139	6.87	33.60	26.36	0.326	2.45
	187	6.61	33.88 ^c	26.61	0.221 ^c	2.38 ^c
1	184	6.64	33.82 ^c	26.57	0.238 ^c	2.52 ^c
	261	6.06	33.96	26.74	0.177	2.55
	437	5.09	34.09	26.96	0.078	3.07
	887	3.66	34.35	27.33	0.022	2.89
	1353	2.67	34.50	27.53	0.048	3.45
	1591	2.28	34.52	27.59	0.067	2.55

INTERPOLATED

	0	11.17	32.07	24.49	0.581	0.53
	10	11.17	32.07	24.49	0.576	0.57
	20	11.00	32.07	24.49	0.574	0.53
	30	8.88	32.23	24.89	0.585	0.86
	50	6.98	32.52	25.48	0.582	1.34
	75	6.68	32.72	25.70	0.533	1.55
	100	6.68	33.15	26.03	0.449	1.91
	150	6.82	33.70	26.43	0.299	2.46
	200	6.50	33.88	26.62	0.213	2.46
	250	6.13	33.94	26.72	0.183	2.52
	300	5.83	33.99	26.79	0.153	2.65
	400	5.28	34.07	26.92	0.097	2.97
	500	4.87	34.13	27.02	0.068	3.04
	600	4.52	34.19	27.11	0.054	3.01
	700	4.20	34.25	27.19	0.042	2.97
	800	3.90	34.30	27.26	0.030	2.93
	1000	3.39	34.39	27.39	0.027	2.97
	1200	2.96	34.46	27.47	0.037	3.22
	1500	2.41	34.52	27.57	0.057	2.92

STATION 142-70

48° 25'N, 125° 56'W - W of Swiftsure Bank Light Ship

8 June 1956
 Messenger time: 1102 (+8)
 Depth: 94 fm, 172 m

Weather: 02
 Sea height: 2
 Visibility: 7
 Air temperature: dry 56°F, wet 55°F

Barometer: 29.86 in
 Wind: 240°, 8 km
 Clouds: 4,5,6, amt 6

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	11.56	31.90	24.28	0.568	0.41
	10	11.46	31.90	24.30	0.576	0.44
	19	11.44	31.91	24.33	0.572	0.48
	29	9.51	32.14	24.82	0.586	0.72
	48	7.02	32.47	25.45	0.564	1.32
	73	7.08	33.04	25.88	0.446	1.88
	97	7.00	33.46	26.24	0.332	2.40
	145	6.79	33.66	26.42	0.193	2.78

INTERPOLATED

	0	11.56	31.90	24.28	0.568	0.41
	10	11.46	31.90	24.30	0.576	0.44
	20	11.30	31.91	24.34	0.572	0.50
	30	9.31	32.14	24.87	0.583	0.77
	50	7.02	32.51	25.46	0.558	1.37
	75	7.01	33.07	25.90	0.439	1.90
	100	6.99	33.48	26.25	0.313	2.43
	150	(6.77)	(33.68)	(26.43)	(0.183)	(2.80)

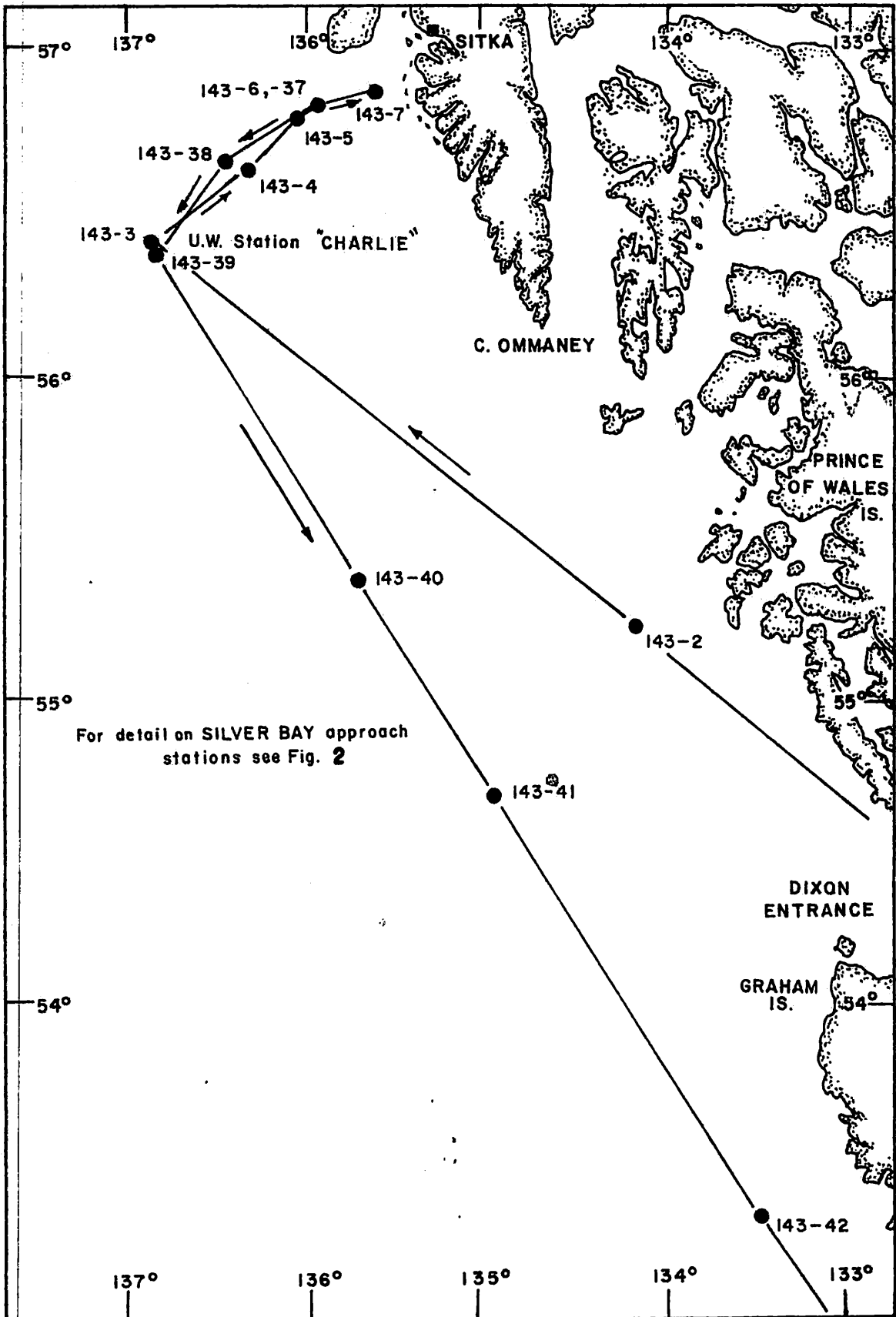


Figure 3. The Offshore Portions of Brown Bear Cruise 113,
3-4 July and 10-12 July 1956

STATION 143-2

55° 13'N, 134° 10'W - W. of Cape Bartolome

3 July 1956 Weather: 02 Barometer: 30.10 in
 Messenger Time: 1726 (+8) Sea height: 1 Wind: Calm
 Depth: 317 fm, 580 m Visibility: 9 Clouds: 6, amt. 6
 Air temperature: dry 57°F, wet 54°F

Cast no.	Depth m	T °C	S ‰	Density σ_t	O ₂ mg-at/L	PO ₄ μ g-at/L
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OBSERVED

1	0	10.58	31.44	24.10	0.654	-
	10	9.42	31.63	24.44	0.612	-
2	20	8.31	31.76	24.81	0.561	-
	30	7.98	31.97	24.92	0.526	-
	50	7.19	32.25	25.25	0.520	-
	75	6.49	32.49	25.53	0.479	-
	100	6.03	32.76	25.80	0.464	-
	200	5.66	33.03	26.06	0.224	-
	300	4.87	33.76	26.73	0.160	-
	500	4.25	34.09	27.06	0.068	-

INTERPOLATED

	0	10.58	31.44	24.10	0.654	-
	10	9.42	31.63	24.44	0.612	-
	20	8.31	31.76	24.81	0.561	-
	30	7.98	31.97	24.92	0.526	-
	50	7.19	32.25	25.25	0.520	-
	75	6.49	32.49	25.53	0.479	-
	100	6.03	32.76	25.80	0.464	-
	150	5.79	32.90	25.94	0.355	-
	200	5.66	33.03	26.06	0.224	-
	250	5.25	33.30	26.32	0.186	-
	300	4.87	33.76	26.73	0.160	-
	400	4.50	33.96	26.93	0.111	-
	500	4.25	34.09	27.06	0.068	-

STATION 143-3

56° 24'N, 136° 48'W - 60 mi. S.W. of Sitka, U.W. Station "Charlie"

4 July 1956
 Messenger time: 0732 (+8)
 Depth: 1200 fm, 2195 m

Weather: 02
 Sea height: 1
 Visibility: 9
 Air temperature:

Barometer: 30.09 in
 Wind: 140°, 2 kn
 Clouds: 0, amt 7
 dry 51°F wet 50°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ μ g-at/L
OBSERVED						
2	0	10.70	32.22	24.68	0.617	-
	10	10.56	32.24	24.73	0.629	-
	20	9.97	32.23	24.82	0.618	-
	30	9.71	32.24	24.87	0.601	-
	49	8.50	32.27	25.08	0.357 ^b	-
	74	6.14	32.48	25.57	0.504	-
	98	5.66	32.65	25.76	0.497	-
	197	5.66	33.62	26.53	0.281	-
	294	5.08 ^c	33.86	26.78	0.176 ^c	-
	1	295	5.00 ^c	33.87	26.80	0.174 ^c
483		4.31	34.07	27.04	0.061	-
732		3.76	34.21	27.20	0.034	-
971		3.22	34.33	27.35	0.026	-
1470		2.40	34.47	27.52	0.053	-
1975		1.91	34.57	27.66	0.120	-

INTERPOLATED

0	10.70	32.22	24.68	0.617	-
10	10.56	32.24	24.73	0.629	-
20	9.97	32.23	24.82	0.618	-
30	9.71	32.24	24.87	0.601	-
50	8.50	32.27	25.08	0.543	-
75	6.10	32.48	25.57	0.503	-
100	5.66	32.67	25.78	0.490	-
150	5.66	33.14	26.15	0.378	-
200	5.64	33.63	26.54	0.275	-
250	5.35	33.78	26.69	0.214	-
300	5.01	33.87	26.80	0.171	-
400	4.56	34.00	26.95	0.103	-
500	4.26	34.08	27.05	0.058	-
600	4.01	34.14	27.12	0.042	-
700	3.81	34.19	27.18	0.035	-
800	3.60	34.24	27.24	0.031	-
1000	3.15	34.34	27.37	0.027	-
1200	2.80	34.41	27.46	0.035	-
1500	2.37	34.47	27.54	0.055	-
2000	(1.90)	(34.58)	(27.67)	(0.123)	-

STATION 143-4

56° 38'N, 136° 16'W - SW of Sitka

4 July 1956
 Messenger time: 1350 (+8)
 Depth: 1000 fm, 1829 m

Weather: 01
 Sea height: 1
 Visibility: 9
 Air temperature: dry 54°F, wet 52°F

Barometer: 30.08 in
 Wind: 160°, 4 km
 Clouds: 5, amt 3

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$	
OBSERVED							
2	0	11.82	31.83	24.19	0.628	0.41	
	5	10.87	32.00	24.49	0.660	0.51	
	10	10.18	32.03	24.63	0.660	0.64	
	20	9.47	32.11	24.81	0.611	0.77	
	30	8.98	32.18	24.94	0.580	0.96	
	49	6.98	32.25	25.28	0.569	1.35	
	73	6.04	32.35	25.48	0.539	1.51	
	97	5.15	32.48	25.69	0.489	1.83	
	195	5.79	33.17	26.16	0.346	1.89	
	1	292	5.23	33.86	26.77	0.184	2.39
		487	4.19	34.02	27.01	0.070	2.68
		730	3.73	34.19	27.19	0.036	2.86 ^c
		760	3.61	34.20	27.21	0.034	2.86 ^c
		1050	3.10	34.34	27.37	0.028	2.98
1315		2.70	34.42	27.47	0.040	3.04	

INTERPOLATED

0	11.82	31.83	24.19	0.628	0.41
10	10.18	32.03	24.63	0.660	0.64
20	9.47	32.11	24.81	0.611	0.77
30	8.98	32.18	24.94	0.580	0.96
50	6.94	32.26	25.29	0.568	1.35
75	6.00	32.36	25.49	0.536	1.54
100	5.15	32.50	25.70	0.482	1.83
150	5.61	32.84	25.92	0.409	1.87
200	5.77	33.21	26.19	0.339	1.90
250	5.56	33.62	26.54	0.251	2.14
300	5.17	33.88	26.79	0.176	2.41
400	4.56	34.00	26.95	0.106	2.58
500	4.15	34.02	27.01	0.066	2.69
600	3.95	34.10	27.10	0.046	2.77
700	3.78	34.17	27.17	0.037	2.84
800	3.50	34.22	27.24	0.033	2.89
1000	3.14	34.32	27.35	0.029	2.96
1200	2.90	34.39	27.43	0.034	3.02

STATION 143-5

56° 45' N, 136° 05' W - SW of Sitka

4 July 1956

Messenger time: 1722 (+8)

Depth: 620 fm, 1134 m

Weather: 03

Barometer: 30.05 in

Sea height: 1 Wind: 050°, 1 kn

Visibility: 9 Clouds: 6, amt 7

Air temperature: dry 54°F, wet 52°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	12.25	31.91	24.17	0.530	0.50
	5	11.34	32.10	24.48	0.569	0.51
	10	10.09	32.22	24.79	0.623	0.79
	20	9.50	32.33	24.97	0.614	0.96
	30	8.99	32.30	25.03	0.607	0.91
	50	8.50	32.31	25.11	0.595	1.06
	75	5.92	32.37	25.51	0.581	1.28
	100	5.38	32.52	25.69	0.559	1.41
1	200	5.78 ^c	33.71	26.58	0.255 ^c	2.10
	195	5.64 ^c	33.58	26.50	0.277 ^c	2.08
	292	4.95	33.89	26.82	0.155	2.07
	487	4.09	34.05	27.04	0.055	2.76
	731	3.68	34.22	27.31	0.035	2.98
	974	3.15	34.34	27.38	0.029	2.90

INTERPOLATED

0	12.25	31.91	24.17	0.530	0.50
10	10.09	32.22	24.79	0.623	0.79
20	9.50	32.33	24.97	0.614	0.96
30	8.99	32.30	25.03	0.607	0.91
50	8.50	32.31	25.11	0.595	1.06
75	5.92	32.37	25.51	0.581	1.28
100	5.38	32.52	25.69	0.559	1.41
150	5.64	33.03	26.06	0.390	1.81
200	5.70	33.71	26.59	0.261	2.10
250	5.39	33.83	26.73	0.195	2.09
300	4.90	33.90	26.84	0.150	2.08
400	4.38	33.99	26.97	0.090	2.42
500	4.07	34.06	27.05	0.053	2.78
600	3.88	34.13	27.13	0.040	2.90
700	3.72	34.20	27.20	0.035	2.97
800	3.53	34.26	27.27	0.034	2.97
1000	(3.10)	(34.35)	(27.38)	(0.028)	(2.89)

STATION 143-6

56° 49'N, 135° 51'W - SW of Cape Edgecumbe

4 July 1956

Messenger time: 1906 (+8)

Depth: 100 fm, 183 m

Weather: 03

Barometer: 30.01 in

Sea height: 1

Wind: -, - kn

Visibility: 9

Clouds: 6, amt 7

Air temperature: dry 51°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	11.48	32.10	24.46	0.604	0.52
	5	11.01	32.14	24.57	0.676	0.59
	10	10.49	32.12	24.65	0.641	0.60
	20	10.15	32.16	24.73	0.624	0.67
	30	9.59	32.13	24.80	0.616	0.76
	50	8.27	32.20	25.06	0.579	1.16
	75	6.44	32.37	25.44	0.578	0.81
	100	5.38	32.51	25.68	0.560	1.62
	140	4.91	32.73	25.91	0.523	1.84
	180	4.70	32.93	26.09	0.465	2.07

INTERPOLATED

	0	11.48	32.10	24.46	0.604	0.52
	10	10.49	32.12	24.65	0.641	0.60
	20	10.15	32.16	24.73	0.624	0.67
	30	9.59	32.13	24.80	0.616	0.76
	50	8.27	32.20	25.06	0.579	1.16
	75	6.44	32.37	25.44	0.578	0.81
	100	5.38	32.51	25.68	0.560	1.62
	150	4.85	32.78	25.96	0.511	1.90

STATION 143-7

56° 49'N, 135° 45'W - SE of Cape Edgecumbe

4 July 1956

Messenger time: 2035 (+8)

Depth: 70 fm, 128 m

Weather: 01

Barometer: 20.99 in

Sea height: 1

Wind: -, - kn

Visibility: 9

Clouds: 6, amt 5

Air temperature: dry 54°F, wet 52°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
1	0	11.24	31.67	24.17	0.634	0.38
	5	10.44	31.96	24.53	0.656	0.55
	10	9.70	32.09	24.75	0.623	0.67
	20	9.31	32.14	24.86	0.588	0.97
	30	8.96	32.16	24.93	0.575	0.82
	50	7.13	32.18	25.21	0.554	1.33
	75	6.00	32.32	25.46	0.519	1.45
	100	5.62	32.46	25.62	0.485	1.84
	125	5.36	32.58	25.74	0.451	1.84

INTERPOLATED

	0	11.24	31.67	24.17	0.634	0.38
	10	9.70	32.09	24.75	0.623	0.67
	20	9.31	32.14	24.86	0.588	0.97
	30	8.96	32.16	24.93	0.575	0.82
	50	7.13	32.18	25.21	0.554	1.33
	75	6.00	32.32	25.46	0.519	1.45
	100	5.62	32.46	25.62	0.485	1.84

STATION 143-37

56° 49'N, 135° 51'W - SW of Cape Edgecumbe

10 July 1956

Messenger time: 1713 (+8)

Depth: 110 fm, 201 m

Weather: 02

Sea height: -

Visibility: 9

Air temperature: dry 52°F, wet 51°F

Barometer: 30.28 in

Wind: 310°, 12 kn

Clouds: 5, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

1	0	11.07	31.90	24.36	0.624	0.44
	5	11.07	31.90	24.36	0.627	0.44
	10	11.06	31.90	24.37	0.622	0.54
	20	9.45	32.00	24.72	0.607	0.75
	30	8.40	32.09	24.96	0.571	1.10
	50	7.10	32.20	25.22	0.530	1.30
	75	6.21	32.34	25.45	0.509	1.59
	100	5.44	32.52	25.68	0.521	1.46
	140	5.00	32.72	25.89	0.458	1.86
	170	4.27	32.99	26.18	0.384	1.96

INTERPOLATED

	0	11.07	31.90	24.36	0.624	0.44
	10	11.06	31.90	24.37	0.622	0.54
	20	9.45	32.00	24.72	0.607	0.75
	30	8.40	32.09	24.96	0.571	1.10
	50	7.10	32.20	25.22	0.530	1.30
	75	6.21	32.34	25.45	0.509	1.59
	100	5.44	32.52	25.68	0.521	1.46
	150	4.83	32.79	25.97	0.432	1.90

STATION 143-38

56° 38'N, 136° 21'W - SW of Sitka

10 July 1956

Messenger time: 2021 (+8)

Depth: 1100 fm, 2012 m

Weather: 02

Sea height: -

Visibility: 9

Air temperature: dry 52°F, wet 51°F

Barometer: 30.30 in

Wind: 300°, 9 kn

Clouds: 6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
3	0	11.36	32.25	24.59	0.589	0.72
	10	11.20	32.25	24.62	0.602	0.76
	20	9.98	32.29	24.87	0.612	0.80
	30	8.92	32.34	25.07	0.574	0.93
	49	5.56 ^b	32.41	25.58	0.557	1.00
	73	5.79	32.59	25.70	0.545	1.35
	97	5.35	32.74	25.86	0.566	1.41
	194	5.91	33.68	26.54	0.289	1.99
1	292	5.15 ^c	33.89 ^c	26.79	0.170 ^c	2.27 ^c
2	296	5.06 ^c	33.91 ^c	26.82	0.164 ^c	2.31 ^c
	487	4.43	34.07	27.02	0.070	2.66
	724	3.73	34.20	27.20	0.033	2.79
	968	3.26	34.34	27.35	0.036	2.81
	1364	2.60	34.43	27.49	0.045	2.99
	1721	2.04	34.54	27.62	0.085	2.78

INTERPOLATED

0	11.36	32.25	24.59	0.589	0.72
10	11.20	32.25	24.62	0.602	0.76
20	9.98	32.29	24.87	0.612	0.80
30	8.92	32.34	25.07	0.574	0.93
50	6.87	32.41	25.42	0.555	1.01
75	5.75	32.60	25.71	0.546	1.36
100	5.35	32.77	25.89	0.564	1.42
150	5.70	33.29	26.26	0.413	1.69
200	5.90	33.71	26.57	0.280	2.01
250	5.54	33.84	26.72	0.205	2.18
300	5.06	33.91	26.83	0.162	2.30
400	4.69	34.00	26.94	0.102	2.52
500	4.38	34.07	27.03	0.067	2.67
600	4.08	34.13	27.11	0.047	2.74
700	3.80	34.19	27.19	0.036	2.78
800	3.56	34.25	27.26	0.035	2.79
1000	3.20	34.35	27.37	0.038	2.82
1200	2.86	34.40	27.44	0.040	2.91
1500	2.39	34.47	27.54	0.058	2.94

STATION 143-39

56° 21'N, 136° 48'W - 62 mi. SW of Sitka, U.W. Station "Charlie"

11 July 1956
 Messenger time: 0229 (+8)
 Depth: 1200 fm, 2195 m

Weather: 02
 Sea height: 2
 Visibility: 9
 Air temperature: dry 51°F, wet 50°F

Barometer: 30.34 in
 Wind: 300°, 2 kn
 Clouds: 5, amt 6

Cast no.	Depth m	T °C	S ‰	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
1	0	11.15	32.00	24.43	0.657	0.45
	10	10.64	32.03	24.55	0.667	0.50
	20	8.07	32.00	24.93	0.555	1.22
	30	7.99	32.05	24.98	0.549	1.26
	48	6.89	32.16	25.21	0.521	1.53
	73	6.60	32.27	25.64	0.539	1.55
	97	5.86	32.54	25.64	0.484	1.76
	196	5.58	33.35	26.32	0.360	2.08
	292	5.26	33.86	26.76	0.195	2.62
	487	4.33 ^c	34.07	27.04	0.079 ^c	2.91 ^c
2	488	4.63 ^c	34.07	27.01	0.074 ^c	2.83 ^c
	734	3.84	34.22	27.21	0.038	2.91
	979	3.26	34.36	27.37	0.033	2.99
3	1423	2.45	34.47	27.53	0.056	3.08
	1959	1.95	34.58	27.65	0.113	2.93

INTERPOLATED

0	11.15	32.00	24.43	0.657	0.45
10	10.64	32.03	24.55	0.667	0.50
20	8.07	32.00	24.93	0.555	1.22
30	7.99	32.05	24.98	0.549	1.26
50	6.87	32.17	25.23	0.521	1.53
75	6.55	32.28	25.36	0.536	1.56
100	5.83	32.57	25.68	0.478	1.77
150	5.66	33.00	26.04	0.412	1.95
200	5.56	33.38	26.35	0.352	2.10
250	5.40	33.67	26.60	0.261	2.40
300	5.21	33.88	26.78	0.187	2.64
400	4.80	34.01	26.94	0.115	2.81
500	4.49	34.08	27.03	0.074	2.88
600	4.20	34.14	27.10	0.052	2.90
700	3.93	34.20	27.18	0.041	2.91
800	3.67	34.25	27.25	0.037	2.93
1000	3.21	34.37	27.39	0.034	2.99
1200	2.84	34.42	27.46	0.042	3.05
1500	2.35	34.49	27.56	0.063	3.07
2000	(1.92)	(34.59)	(27.67)	(0.118)	(2.92)

STATION 143-40

55° 22'N, 135° 40'W - W of Cape Addington

11 July 1956
 Messenger time: 1254 (+8)
 Depth: 1480 fm, 2706 m

Weather: 02
 Sea height: 0
 Visibility: 9
 Air temperature: dry 55°F, wet 52°F

Barometer: 30.40 in
 Wind: -, - kn
 Clouds: 5, amt 7

Cast no.	Depth m	T °C	S o/o o	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
1	0	11.84	32.21	24.48	0.611	0.63
	10	11.51	32.23	24.55	0.612	0.54
	20	10.37	32.23	24.75	0.612	0.72
	30	8.67	32.34	25.11	0.568	1.02
	50	7.81	32.14 ^b	25.08	0.497	1.49
	74	5.71	32.70	25.80	0.560	1.40
	98	5.78	33.01	26.03	0.473	1.69
	197	6.02	33.84	26.66	0.228	2.26
	295	5.19	33.93	26.83	0.158	2.54
	490	4.16	34.07	27.05	0.073	2.74

INTERPOLATED

	0	11.84	32.21	24.48	0.611	0.63
	10	11.51	32.23	24.55	0.612	0.54
	20	10.37	32.23	24.75	0.612	0.72
	30	8.67	32.34	25.11	0.568	1.02
	50	7.81	32.50	25.36	0.497	1.49
	75	5.71	32.71	25.80	0.559	1.40
	100	5.80	33.04	26.05	0.470	1.72
	150	5.94	33.56	26.45	0.318	2.06
	200	6.01	33.85	26.66	0.224	2.27
	250	5.66	33.90	26.75	0.185	2.42
	300	5.15	33.93	26.83	0.156	2.54
	400	4.52	34.00	26.96	0.109	2.67
	500	(4.12)	(34.08)	(27.06)	(0.070)	(2.74)

STATION 113-41

74

54° 41'N, 134° 55'W - W of Dixon Entrance

11 July 1956 Weather: 01 Barometer: 30.40 in
 Messenger time: 1924 (+8) Sea height: 1 Wind: 355°, 9 km
 Depth: 1500 fm, 2740 m Visibility: 9 Clouds: 5, amt 1
 Air temperature: dry 65°F, wet 58°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
1	0	12.67	32.25	24.35	0.594	0.44
	10	12.47	32.25	24.39	0.602	0.52
	20	10.77	32.36	24.78	0.589	0.85
	30	8.99	32.36	25.08	0.504	1.11
	49	6.49	32.61	25.63	0.597	1.35
	73	5.10	32.79	25.94	0.599	1.56
	96	4.89	33.04	26.16	0.510	1.81
	191	5.21	33.87	26.78	0.210	2.53
	291	4.65	33.93	26.89	0.135	2.87
	491	4.12	34.09	27.07	0.063	2.92
INTERPOLATED						
	0	12.67	32.25	24.35	0.594	0.44
	10	12.47	32.25	24.39	0.602	0.52
	20	10.77	32.36	24.78	0.589	0.85
	30	8.99	32.36	25.08	0.504	1.11
	50	6.40	32.62	25.65	0.597	1.36
	75	5.06	32.80	25.95	0.597	1.59
	100	4.90	33.11	26.21	0.490	1.84
	150	5.11	33.63	26.60	0.300	2.27
	200	5.19	33.88	26.79	0.200	2.57
	250	4.94	33.91	26.84	0.159	2.78
	300	4.61	33.94	26.90	0.130	2.87
	400	4.30	34.01	26.99	0.089	2.90
	500	(4.10)	(34.09)	(27.07)	(0.060)	(2.92)

STATION 143-42

53° 19'N, 133° 26'W - W of Graham Island

12 July 1956
 Messenger time: 0724 (+8)
 Depth: 800 fm, 1463 m

Weather: 02
 Sea height: 4
 Visibility: 9
 Air temperature: dry 54°F, wet 51°F

Barometer: 30.36 in
 Wind: 325°, 16 kn
 Clouds: 0, amt 3

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

1	0	11.64	32.18	24.49	0.602	0.45
	10	11.64	32.18	24.49	0.598	0.46
	20	11.13	32.30	24.68	0.598	0.69
	30	11.18	32.30	24.66	0.557	0.82
	49	6.64	32.63	25.63	0.547	1.38
	73	6.22	32.86	25.86	0.497	1.59
	97	6.12	33.06	26.03	0.450	1.73
	194	5.94	33.82	26.65	0.273	2.37
	290	4.90	33.91	26.85	0.174	2.66
	481	4.49	34.07	27.02	0.078	2.79

INTERPOLATED

	0	11.64	32.18	24.49	0.602	0.45
	10	11.64	32.18	24.49	0.598	0.46
	20	11.13	32.30	24.68	0.598	0.69
	30	11.18	32.30	24.66	0.557	0.82
	50	6.60	32.64	25.64	0.546	1.39
	75	6.21	32.98	25.95	0.490	1.60
	100	6.11	33.10	26.06	0.441	1.76
	150	6.01	33.55	26.43	0.347	2.11
	200	5.90	33.83	26.66	0.268	2.39
	250	5.36	33.88	26.77	0.210	2.56
	300	4.83	33.92	26.86	0.168	2.67
	400	4.56	34.00	26.95	0.111	2.75
	500	(4.48)	(34.08)	(27.03)	(0.072)	(2.79)

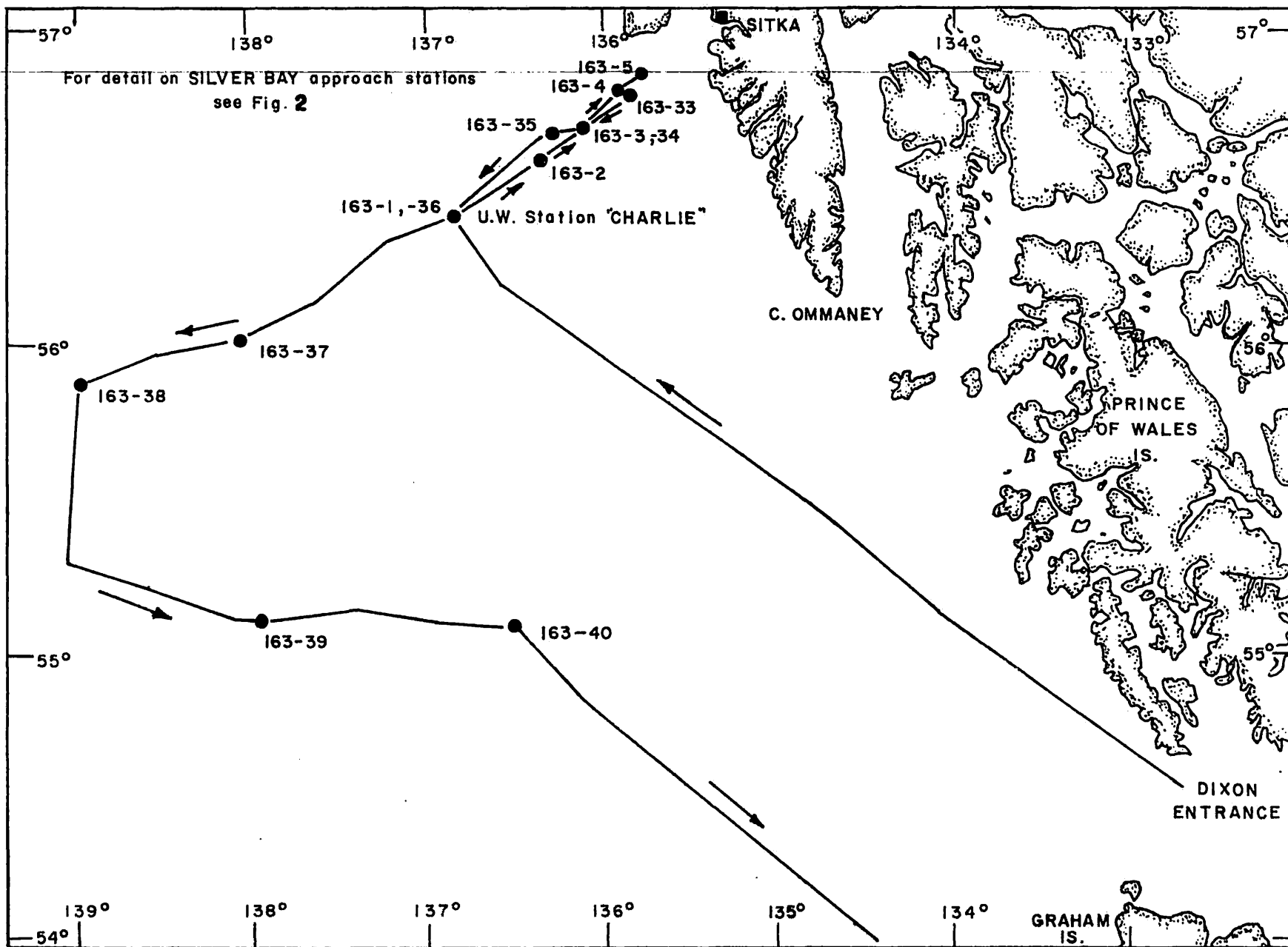


Figure 4. The Offshore Portions of Brown Bear Cruise 163, 23-24 March and 31 March-3 April 1957

STATION 163-1

77

56° 25'N, 136° 49'W - 60 mi. SW of Sitka, U.W. Station "Charlie"

23 March 1957
 Messenger time: 2027 (+8)
 Depth: 1225 fm, 2241 m

Weather: 27
 Sea height: 3
 Visibility: 7
 Air temperature: dry 36°F, wet 35.5°F

Barometer: 29.52 in
 Wind: 290°, 28-52 kn
 Clouds: 8, amt 2

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

3	0	5.26	32.49	25.68	0.625	1.46
	10	5.30	32.48	25.67	0.628	1.42
	20	5.30	32.48	25.67	0.628	1.42
	30	5.32	32.47	25.67	0.627	1.43
	50	5.46	32.52	25.68	0.621	1.33
	75	5.16 ^b	32.64	25.81	0.604	1.48
	100	5.71	32.90	25.95	0.510	1.77
	199	5.88	33.83	26.66	0.242	-
	297	5.27	33.94	26.82	0.162	1.89
1	166	6.05	33.58	26.44	0.316	1.86
	340	4.87	33.96	26.89	0.138	2.17
	559	4.24	34.11	27.08	0.058	2.16
2	869	3.46	34.29	27.29	0.036	2.72
	1369	2.56	34.45	27.50	0.057	3.14
	1869	1.96	34.59	27.66	0.175	3.18

INTERPOLATED

0	5.26	32.49	25.68	0.625	1.46
10	5.30	32.48	25.67	0.628	1.42
20	5.31	32.48	25.67	0.628	1.42
30	5.33	32.47	25.66	0.627	1.43
50	5.45	32.52	25.68	0.621	1.33
75	5.56	32.65	25.77	0.604	1.48
100	5.72	32.90	25.95	0.510	1.77
150	6.04	33.44	26.34	0.365	1.84
200	5.87	33.84	26.68	0.240	1.86
250	5.57	33.90	26.76	0.192	1.87
300	5.24	33.94	26.83	0.160	1.90
400	4.65	34.00	26.94	0.102	2.17
500	4.39	34.07	27.03	0.071	2.16
600	4.12	34.13	27.10	0.054	2.24
700	3.87	34.19	27.18	0.045	2.42
800	3.63	34.25	27.25	0.040	2.60
1000	3.26	34.34	27.36	0.040	2.85
1200	2.93	34.41	27.44	0.043	3.02
1500	2.28	34.50	27.57	0.079	3.19

STATION 163-2

56° 36'N, 136° 20'W - SW of Sitka

24 March 1957 Weather: 01 Barometer: 29.64 in
 Messenger time: 0257 (+8) Sea height: 3 Wind: 225°, 30-40 kn
 Depth: 1070 fm, 1957 m Visibility: 7 Clouds: 8, amt 6
 Air temperature: dry 38°F, wet 35°F

Cast no.	Depth m	T °C	S o/∞	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
3	0	5.24	32.52	25.71	0.598	1.46
	5	5.24	32.52	25.71	0.634	1.47
	10	5.24	32.52	25.71	0.631	1.44
	19	5.27	32.53	25.71	0.632	1.39
	29	5.28	32.52	25.70	0.616	1.37
	48	5.31	32.54	25.72	0.398 ^b	1.43
	73	5.38	32.56	25.72	0.606	1.47
	97	5.58	32.87	25.95	0.388	1.56
	197	6.05	33.71	26.56	0.217	2.13
	293	5.42	33.91	26.79	0.247	2.38
1	256	5.58	33.87	26.73	0.464 ^b	-
	642	4.16	34.13	27.09	0.059	2.28 ^c
2	535	4.35	34.07	27.04	0.089	2.85 ^c
	797	3.74	34.27	27.26	0.036	2.53
	1540	2.34	34.53	27.59	0.076	3.10

INTERPOLATED

0	5.24	32.52	25.71	0.598	1.46
10	5.24	32.52	25.71	0.631	1.44
20	5.28	32.53	25.71	0.632	1.39
30	5.30	32.52	25.70	0.617	1.37
50	5.32	32.54	25.72	0.610	1.43
75	5.40	32.56	25.72	0.607	1.48
100	5.61	32.90	25.96	0.379	1.58
150	5.87	33.37	26.30	0.290	1.89
200	6.04	33.71	26.55	0.215	2.13
250	5.60	33.85	26.72	0.234	2.29
300	5.40	33.92	26.80	0.241	2.39
400	4.90	33.97	26.89	0.169	2.44
500	4.48	34.00	26.96	0.108	2.45
600	4.22	34.08	27.06	0.070	2.46
700	3.99	34.18	27.16	0.047	2.49
800	3.71	34.27	27.27	0.035	2.53
1000	3.30	34.35	27.36	0.041	2.73
1200	2.92	34.43	27.46	0.051	2.90
1500	2.40	34.52	27.58	0.072	3.09

STATION 163-3

56° 42'N, 136° 06'W - SW of Sitka

24 March 1957 Weather: 01 Barometer: 29.81 in
 Messenger time: 0717 (+8) Sea height: 3 Wind: 225°, 18 kn
 Depth: 625 fm, 1143 m Visibility: 7 Clouds: 8, amt 3
 Air temperature: dry 37°F, wet 34°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	5.00	32.42	25.66	0.610	1.72
	5	5.00	32.43	25.66	0.617	1.73
	10	5.01	32.42	25.66	0.615	1.71
	20	5.02	32.41	25.65	0.616	1.72
	29	5.16	32.45	25.66	0.617	1.55
	48	5.31	32.55	25.73	0.629	1.47
	73	5.34	32.56	25.73	0.629	1.50
	97	5.17 ^b	32.59	25.77	0.619	1.51
1	197	5.84 ^c	33.69	26.56	0.286 ^c	2.32 ^c
	193	6.02 ^c	33.65	26.51	0.312 ^c	2.11 ^c
	290	5.52	33.89	26.76	0.214	2.33
	485	4.48	34.03	26.98	0.089	2.78
	729	3.80	34.20	27.19	0.036	3.30
	974	3.18	34.36	27.38	0.027	3.23

INTERPOLATED

0	5.00	32.42	25.66	0.610	1.72
10	5.01	32.42	25.65	0.615	1.71
20	5.02	32.41	25.64	0.616	1.72
30	5.19	32.46	25.66	0.617	1.54
50	5.31	32.55	25.72	0.629	1.47
75	5.35	32.56	25.73	0.628	1.50
100	5.48	32.61	25.75	0.612	1.53
150	5.72	33.07	26.08	0.451	1.96
200	5.90	33.71	26.57	0.299	2.20
250	5.73	33.83	26.68	0.248	2.29
300	5.46	33.90	26.77	0.204	2.34
400	4.90	33.98	26.90	0.135	2.56
500	4.41	34.04	27.00	0.083	2.82
600	4.11	34.11	27.09	0.058	3.07
700	3.85	34.18	27.17	0.040	3.26
800	3.59	34.25	27.25	0.032	3.29
1000	(3.12)	(34.38)	(27.40)	(0.026)	(3.21)

STATION 163-4

56° 49'N, 135° 53'W - SW of Cape Edgecumbe

24 March 1957 Weather: 73 Barometer: 29.86 in
 Messenger time: 0945 (+8) Sea height: 2 Wind: 225°, 8-18 kn
 Depth: 110 fm, 201 m Visibility: 3 Clouds: 7, amt 8
 Air temperature: dry 36°F, wet 35.5°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

1	0	4.86	32.30	25.57	0.614	1.81
	5	4.87	32.32	25.59	0.613	1.77
	10	4.88	32.32	25.59	0.615	1.83
	20	4.88	32.32	25.59	0.613	1.82
	30	4.88	32.32	25.59	0.614	1.75
	50	5.17	32.46	25.67	0.598	1.68
	75	5.14	32.54	25.74	0.555	1.76
	100	5.26	32.63	25.79	0.537	1.76
	139	5.26	32.77	25.90	0.482	2.09
	179	5.54	33.03	26.08	0.420	2.23

INTERPOLATED

	0	4.86	32.30	25.58	0.614	1.81
	10	4.88	32.32	25.59	0.615	1.83
	20	4.88	32.32	25.59	0.613	1.82
	30	4.88	32.32	25.59	0.614	1.75
	50	5.17	32.46	25.67	0.598	1.68
	75	5.14	32.54	25.74	0.554	1.76
	100	5.26	32.63	25.79	0.537	1.76
	150	5.30	32.88	25.98	0.463	2.12

STATION 163-5

56° 52'N, 135° 45'W - SE of Cape Edgecumbe

24 March 1957

Messenger time: 1101 (+8)

Depth: 72 fm, 131 m

Weather: 73

Sea height: 2

Visibility: 3

Air temperature: dry 36°F, wet 35.5°F

Barometer: 29.88 in

Wind: 225°, 8-12 kn

Clouds: 7, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

1	0	4.79	32.29	25.57	0.621	1.81
	5	4.80	32.29	25.57	0.609	1.84
	9	4.82	32.28	25.56	0.611	1.88
	19	4.83	32.28	25.56	0.611	1.88
	28	4.84	32.29	25.57	0.611	1.85
	47	4.90	32.30	25.57	0.607	1.80
	71	5.05	32.36	25.60	0.596	1.69
	95	5.41	32.48	25.65	0.605	1.34
	118	5.22	32.54	25.73	0.573	1.56

INTERPOLATED

	0	4.79	32.29	25.58	0.621	1.81
	10	4.82	32.28	25.56	0.611	1.88
	20	4.83	32.28	25.56	0.611	1.88
	30	4.85	32.29	25.57	0.610	1.85
	50	4.94	32.30	25.57	0.605	1.78
	75	5.11	32.37	25.60	0.594	1.60
	100	5.35	32.49	25.67	0.600	1.36

STATION 163-33

56° 48'N, 135° 50'W - SW of Cape Edgecumbe

31 March 1957
 Messenger time: 1408 (+8)
 Depth: 107 fm, 195 m

Weather: 02
 Sea height: 1
 Visibility: 8
 Air temperature: dry 44°F, wet 42°F

Barometer: 29.90 in
 Wind: 240°, 3 kn
 Clouds: 6, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

1	0	5.36	32.29	25.51	0.619	1.66
	5	5.20	32.29	25.53	0.619	1.65
	10	5.10	32.29	25.54	0.613	1.60
	20	5.10	32.30	25.55	0.615	1.62
	30	5.10	32.29	25.54	0.621	1.66
	50	5.18	32.37	25.60	0.609	1.51
	75	5.28	32.43	25.63	0.586	1.57
	100	5.28	32.53	25.71	0.556	1.75
	139	5.22	32.58	25.76	0.520	1.83
	178	5.32	32.71	25.85	0.491	1.96

INTERPOLATED

	0	5.36	32.29	25.51	0.619	1.66
	10	5.10	32.29	25.54	0.613	1.60
	20	5.10	32.30	25.55	0.615	1.62
	30	5.10	32.29	25.54	0.621	1.66
	50	5.18	32.37	25.60	0.609	1.51
	75	5.28	32.43	25.63	0.586	1.57
	100	5.28	32.53	25.71	0.556	1.75
	150	5.31	32.61	25.77	0.501	1.87

STATION 163-34

56° 42' N, 136° 07' W - SW of Sitka

31 March 1957 Weather: 02 Barometer: 29.95 in
 Messenger time: 1708 (+8) Sea height: 1 Wind: 175°, 8 km
 Depth: 630 fm, 1152 m Visibility: 8 Clouds: 6, amt 7
 Air temperature: dry 42°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
OBSERVED						
2	0	5.46	32.41	25.59	0.628	1.63
	5	5.47	32.42	25.60	0.628	1.69
	10	5.28	32.41	25.62	0.626	1.72
	20	5.28	32.41	25.62	0.624	1.54
	30	5.33	32.42	25.63	0.626	1.52
	50	5.32	32.47	25.67	0.619	1.54
	75	5.57	32.58	25.71	0.603	1.43
	100	5.68	32.75	25.84	0.573	1.56
	199	5.95 ^c	33.42 ^c	26.34	0.344 ^c	2.20 ^c
	1	197	5.89 ^c	33.47 ^c	26.38	0.334 ^c
294		5.46	33.84	26.72	0.201	2.46
489		4.32	34.05	27.02	0.067	2.55
736		3.66	34.22	27.22	0.033	2.91
984		3.18	34.33	27.35	0.041	3.11

INTERPOLATED

0	5.46	32.41	25.60	0.628	1.63
10	5.28	32.41	25.62	0.626	1.72
20	5.28	32.41	25.62	0.624	1.54
30	5.33	32.42	25.62	0.626	1.52
50	5.32	32.47	25.66	0.619	1.54
75	5.57	32.58	25.72	0.603	1.43
100	5.68	32.75	25.84	0.573	1.56
150	5.83	33.14	26.13	0.439	1.93
200	5.90	33.46	26.37	0.334	2.23
250	5.70	33.69	26.58	0.260	2.38
300	5.40	33.85	26.74	0.199	2.46
400	4.79	33.97	26.90	0.125	2.52
500	4.28	34.06	27.03	0.066	2.57
600	4.00	34.13	27.12	0.049	2.70
700	3.75	34.20	27.20	0.038	2.85
800	3.55	34.25	27.26	0.037	2.98
1000	(3.14)	(34.33)	(27.36)	(0.042)	(3.11)

STATION 163-35

56° 41'N, 136° 17'W - SW of Sitka

31 March 1957
 Messenger time: 2015 (+8)
 Depth: 1010 fm, 1847 m

Weather: 02
 Sea height: 1
 Visibility: 8
 Air temperature: dry 43°F, wet 42°F

Barometer: 29.98 in
 Wind: 140°, 8 kn
 Clouds: 6, amt 7

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	5.40	32.42	25.61	0.612	1.47	
	5	5.42	32.41	25.60	0.618	1.45	
	10	5.41	32.44	25.62	0.626	1.65	
	20	5.36	32.44	25.63	0.630	1.59	
	29	5.34	32.47	25.67	0.621	1.60	
	49	5.34	32.48	25.66	0.614	1.50	
	73	5.61	32.61	25.74	0.588	1.52	
	97	5.47	32.69	25.81	0.518	1.76	
	195	5.87	33.66	26.53	0.265	2.32	
	291	5.23	33.89 ^c	26.79	0.166 ^c	2.62	
	1	287	5.28	33.87 ^c	26.77	0.176 ^c	2.62
		477	4.43	34.03	26.99	0.078	2.78
		714	3.82	34.18	27.17	0.032	2.98
		953	3.28	34.30	27.32	0.026	2.93
1343		2.57	34.45	27.50	0.040	3.39	
1740		2.09	34.52	27.60	0.097	3.22	

INTERPOLATED

0	5.40	32.42	25.61	0.612	1.47
10	5.41	32.44	25.63	0.626	1.65
20	5.36	32.44	25.63	0.630	1.59
30	5.35	32.47	25.66	0.620	1.60
50	5.36	32.49	25.67	0.612	1.51
75	5.60	32.62	25.74	0.587	1.58
100	5.43	32.73	25.85	0.505	1.79
150	5.65	33.28	26.26	0.354	2.17
200	5.85	33.70	26.57	0.255	2.34
250	5.52	33.83	26.71	0.199	2.50
300	5.19	33.89	26.80	0.162	2.63
400	4.72	33.98	26.92	0.108	2.72
500	4.36	34.05	27.02	0.071	2.80
600	4.06	34.11	27.09	0.051	2.89
700	3.85	34.17	27.16	0.035	2.96
800	3.62	34.23	27.24	0.030	2.96
1000	3.20	34.32	27.35	0.028	2.98
1200	2.81	34.40	27.45	0.030	3.21
1500	(2.34)	(34.49)	(27.56)	(0.051)	(3.15)

STATION 163-36

56° 25'N, 136° 50'W - 60 mi. SW of Sitka, U.W. Station "Charlie"

1 April 1957 Weather: 00 Barometer: 29.95 in
 Messenger time: 0312 (+8) Sea height: 2 Wind: 150°, 20 kn
 Depth: 1220 fm, 2232 m Visibility: - Clouds: -, amt -
 Air temperature: dry 42°F, wet -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	5.20	32.43	25.64	0.607	1.35
	10	5.22	32.43	25.64	0.614	1.38
	20	5.24	32.43	25.64	0.609	1.42
	29	5.34	32.44	25.64	0.613	1.45
	48	5.24	32.48	25.68	0.615	-
	71	5.29	32.66	25.81	0.577	1.58
	95	5.71	32.96	26.00	0.492	1.81
	189	5.92	33.73	26.58	0.267	2.37
	283	5.49	33.91	26.78	0.190	2.44 ^c
1	249	5.62	33.85	26.72	0.225	2.32 ^c
	416	4.76	33.98	26.91	0.117	2.19
	625	4.15	34.12	27.10	0.045	2.29
	840	3.60	34.24	27.24	0.021	2.21
	1289	2.70	34.43	27.47	0.039	3.08
	1649	2.15	34.52	27.60	0.089	2.98

INTERPOLATED

	0	5.20	32.43	25.64	0.607	1.35
	10	5.22	32.43	25.64	0.614	1.38
	20	5.24	32.43	25.64	0.609	1.42
	30	5.34	32.44	25.63	0.613	1.45
	50	5.24	32.48	25.68	0.615	1.51
	75	5.34	32.68	25.82	0.570	1.62
	100	5.73	32.99	26.02	0.470	1.87
	150	5.88	33.43	26.35	0.342	2.24
	200	5.86	33.76	26.61	0.260	2.37
	250	5.61	33.85	26.72	0.222	2.38
	300	5.40	33.92	26.79	0.178	2.33
	400	4.82	33.97	26.90	0.125	2.21
	500	4.50	34.04	26.99	0.086	2.23
	600	4.21	34.11	27.08	0.053	2.28
	700	3.98	34.16	27.14	0.034	2.25
	800	3.72	34.22	27.22	0.024	2.21
	1000	3.30	34.32	27.34	0.022	2.53
	1200	2.89	34.41	27.45	0.033	2.92
	1500	2.32	34.49	27.56	0.078	3.05

STATION 163-37

56° 02' N, 138° 02' W

1 April 1957
 Messenger time: 1839 (+8)
 Depth: 1510 fm, 2761 m

Weather: 00
 Sea height: 1
 Visibility: 6
 Air temperature: dry 42°F, wet 41°F

Barometer: 29.68 in
 Wind: 200°, 18 kn
 Clouds: 0, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
OBSERVED						
2	0	5.04	32.57	25.78	0.637	1.60
	9	5.06	32.57	25.77	0.643	1.50
	19	5.03	32.57	25.78	0.641	1.48
	28	5.02	32.56	25.77	0.641	1.50
	47	4.94	32.56	25.78	0.637	1.60
3	71	5.08	32.73	25.89	0.572	1.62
	97	5.70	33.10	26.10	0.459	2.01
	121	5.88	33.44	26.35	0.349	2.21
	146	5.82	33.67	26.55	0.283	2.52
	169	5.58 ^c	33.77 ^c	26.66	0.271 ^c	2.64 ^c
1	181	5.62 ^c	33.83 ^c	26.70	0.227 ^c	2.49 ^c
	271	5.00	33.90	26.83	0.166	2.75
	453	4.28	34.05	27.02	0.078	2.90
	680	3.75	34.20	27.20	0.033	3.05
	912	3.26	34.33	27.34	0.031	3.59
	1298	2.61	34.47	27.52	0.047	3.51

INTERPOLATED

0	5.04	32.57	25.77	0.637	1.60
10	5.06	32.57	25.77	0.642	1.50
20	5.03	32.57	25.77	0.641	1.49
30	5.01	32.56	25.76	0.640	1.51
50	4.95	32.57	25.78	0.630	1.60
75	5.18	32.78	25.92	0.553	1.68
100	5.78	33.15	26.14	0.440	2.06
150	5.80	33.70	26.57	0.276	2.54
200	5.40	33.84	26.73	0.218	2.63
250	5.09	33.89	26.81	0.176	2.71
300	4.87	33.92	26.86	0.143	2.78
400	4.48	34.00	26.96	0.092	2.86
500	4.16	34.08	27.06	0.061	2.93
600	3.91	34.15	27.14	0.042	2.98
700	3.70	34.21	27.21	0.032	3.07
800	3.48	34.27	27.28	0.031	3.35
1000	3.09	34.37	27.40	0.034	3.59
1200	2.73	34.44	27.48	0.042	3.54

STATION 163-38

55° 53'N, 138° 58'W

2 April 1957

Messenger time: 0225 (+8)

Depth: 1685 fm, 3081 m

Weather: 00

Sea height: 2

Visibility: -

Air temperature: dry 42°F, wet -

Barometer: 29.69 in

Wind: 200°, 20-25 kn

Clouds: -, amt -

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	4.54	32.66	25.90	0.634	1.46	
	10	4.58	32.65	25.88	0.638	1.54	
	20	4.58	32.65	25.88	0.636	1.51	
	30	4.58	32.65	25.88	0.631	1.54	
	50	4.53	32.66	25.90	0.639	1.61	
	75	4.28	32.73	25.97	0.595	1.55	
	100	5.20	33.30	26.32	0.400	1.96	
	125	5.52	33.70	26.61	0.273	2.32	
	150	5.36	33.81	26.71	0.236	2.44	
	175	5.21 ^c	33.86	26.77	0.196 ^c	2.70 ^c	
	1	178	5.24 ^c	33.86	26.77	0.188 ^c	2.59 ^c
		270	4.64	33.93	26.89	0.115	2.74
		455	4.10	34.09	27.07	0.059	2.88
		689	3.52	34.24	27.25	0.028	2.88
		925	3.10	34.33	27.36	0.031	3.40
1302		2.50	34.45	27.51	0.052	3.39	

INTERPOLATED

0	4.54	32.66	25.90	0.634	1.46
10	4.58	32.65	25.88	0.638	1.54
20	4.58	32.65	25.88	0.636	1.51
30	4.58	32.65	25.88	0.631	1.54
50	4.53	32.66	25.90	0.639	1.61
75	4.28	32.73	25.98	0.595	1.55
100	5.20	33.30	26.33	0.400	1.96
150	5.36	33.81	26.71	0.236	2.44
200	5.11	33.88	26.80	0.170	2.69
250	4.77	33.92	26.87	0.128	2.73
300	4.56	33.96	26.92	0.103	2.78
400	4.28	34.04	27.01	0.072	2.86
500	3.99	34.12	27.11	0.049	2.88
600	3.73	34.19	27.19	0.035	2.88
700	3.51	34.24	27.25	0.028	2.89
800	3.30	34.29	27.31	0.028	3.09
1000	2.98	34.36	27.40	0.032	3.40
1200	2.68	34.43	27.48	0.043	3.39

STATION 163-39

55° 07'N, 137° 55'W

2 April 1957

Messenger time: 1707 (+8)

Depth: 1610 fm, 2944 m

Weather: 03

Sea height: 4

Visibility: 6

Air temperature: dry 44°F, wet 41°F

Barometer: 29.80 in

Wind: 205°, 25-30 kn

Clouds: 0,6, amt 8

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P μ g-at/L
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OBSERVED

2	0	4.52	32.65	25.89	0.639	1.34	
	10	4.52	32.65	25.89	0.644	1.44	
	20	4.46	32.65	25.89	0.643	1.50	
	30	4.39	32.67	25.92	0.643	1.59	
	49	4.30	32.66	25.92	0.631	1.59	
	73	4.26	32.68	25.93	0.628	1.55	
	98	4.57	32.88	26.06	0.554	1.70	
	122	5.39	33.43	26.40	0.465	2.16	
	147	5.56	33.75	26.64	0.246	2.47	
	171	5.31	33.82	26.72	0.215 ^c	2.62	
	1	192	5.15	33.83	26.74	0.212 ^c	2.63
		288	4.56	33.93	26.89	0.117	2.64
		483	4.08	34.11	27.09	0.048	2.64
		727	3.56	34.25	27.25	0.032	2.87
972		3.10	34.34	27.37	0.039	3.26	
1365		2.49	34.44	27.50	0.053	3.28	

INTERPOLATED

0	4.52	32.65	25.89	0.639	1.34
10	4.52	32.65	25.89	0.644	1.44
20	4.46	32.65	25.90	0.643	1.50
30	4.39	32.67	25.92	0.643	1.59
50	4.30	32.66	25.92	0.630	1.59
75	4.27	32.69	25.95	0.627	1.56
100	4.70	32.93	26.09	0.550	1.73
150	5.51	33.76	26.65	0.258	2.51
200	5.11	33.83	26.76	0.189	2.63
250	4.77	33.89	26.85	0.143	2.64
300	4.51	33.95	26.92	0.108	2.64
400	4.26	34.05	27.03	0.064	2.64
500	4.02	34.12	27.11	0.047	2.66
600	3.80	34.18	27.18	0.040	2.73
700	3.61	34.24	27.25	0.035	2.83
800	3.45	34.28	27.29	0.033	2.98
1000	3.05	34.35	27.38	0.040	3.26
1200	2.69	34.41	27.46	0.045	3.28

STATION 163-40

55° 05'N, 136° 29'W - NW of Dixon Entrance

3 April 1957 Weather: 00 Barometer: 29.90 in
 Messenger time: 0305 (+8) Sea height: 4 Wind: 200°, 25-30 kn
 Depth: 1590 fm, 2908 m Visibility: - Clouds: -, amt 9
 Air temperature: dry 43°F, wet 41°F

Cast no.	Depth m	T °C	S o/oo	Density σ_t	O ₂ mg-at/L	PO ₄ -P $\mu\text{g-at/L}$
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OBSERVED

2	0	5.10	32.61	25.80	0.623	1.58	
	10	5.12	32.61	25.80	0.618	1.56	
	20	5.12	32.61	25.80	0.616	1.35	
	30	5.12	32.62	25.80	0.627	1.42	
	49	5.12	32.62	25.80	0.611	1.58	
	74	4.86 ^b	32.67	25.87	0.606	1.59	
	98	5.70	33.14	26.13	0.458	1.72	
	122	5.92	33.56	26.45	0.312	2.05	
	147	5.80	33.74	26.60	0.261	2.42	
	171	5.55	33.79 ^c	26.68	0.228 ^c	2.42 ^c	
	1	180	5.35	33.83 ^c	26.72	0.226 ^c	2.58 ^c
		269	4.84	33.90	26.85	0.144	2.62
		451	4.28	34.06	27.03	0.059	2.66
		680	3.76	34.21	27.20	0.030	2.68
909		3.30	34.30	27.32	0.029	2.91	
1283		2.64	34.44	27.49	0.045	3.23	

INTERPOLATED

0	5.10	32.61	25.79	0.623	1.58
10	5.12	32.61	25.79	0.618	1.56
20	5.12	32.61	25.79	0.616	1.35
30	5.12	32.62	25.80	0.627	1.42
50	5.13	32.62	25.80	0.610	1.58
75	5.45	32.69	25.82	0.602	1.59
100	5.74	33.20	26.19	0.450	1.72
150	5.77	33.75	26.62	0.260	2.44
200	5.17	33.83	26.75	0.201	2.54
250	4.85	33.88	26.83	0.160	2.60
300	4.66	33.93	26.89	0.126	2.63
400	4.40	34.02	26.99	0.078	2.65
500	4.15	34.09	27.07	0.042	2.66
600	3.92	34.16	27.15	0.036	2.67
700	3.71	34.22	27.22	0.030	2.69
800	3.50	34.26	27.27	0.030	2.78
1000	3.11	34.34	27.37	0.030	3.00
1200	2.76	34.42	27.47	0.040	3.16

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