



**DEPARTMENT OF
OCEANOGRAPHY
UNIVERSITY OF
WASHINGTON**

**Technical Report No. 49
EASTERN NORTH PACIFIC
AND
GULF OF ALASKA
OFFSHORE PHYSICAL AND CHEMICAL DATA
April 1954 - January 1955**

**Office of Naval Research
Contract N8onr-520/III
Project NR 083 012
Contract Nonr-477(10)
Project NR 083 012
Contract Nonr-477(01)
Project NR 083 072**

**Reference 56-10
June 1956**



SEATTLE 5, WASHINGTON

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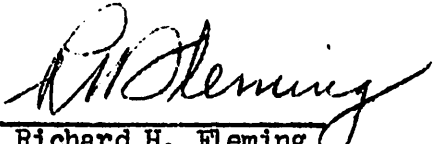
by

Eugene E. Collias, Cuthbert M. Love and Robert G. Paquette

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Richard H. Fleming
Executive Officer

ABSTRACT

This report tabulates physical and chemical observations made at various locations off the coasts of Washington and Oregon and in the Gulf of Alaska by the Department of Oceanography University of Washington on the research vessel BROWN BEAR. The observations were made during the period April 1954 to January 1955. Charts show the positions of the stations sampled. Values are given for temperature, salinity, dissolved oxygen and dissolved inorganic phosphate over a range of depths from the surface to near bottom as determined using accepted oceanographic techniques.

INTRODUCTION

This report contains all of the offshore data from April 1954 through January 1955 collected by the University of Washington personnel aboard the Department of Oceanography research vessel BROWN BEAR. Station location charts are presented before the data for each cruise (see pages 1, 10, 13, 29 and 32.

Technical reports Nos. 22, 23 and 34 (References 54-6, 54-7 and 54-20) present offshore data collected during 1952 and 1953.

Station Numbering System

The station numbers used on the BROWN BEAR consist of two parts. The first part is the cruise number followed by a number starting with "1" for the first station occupied on that particular cruise and continuing in consecutive order (i.e., 56-1, 56-2, etc.).

Sampling Bottles

Water samples were taken with Nansen bottles and Fjarlie bottles (1).

Determination of Properties

Deep-sea reversing thermometers were used to determine temperature. The depths reported for subsurface observations were calculated from measured wire angle, unprotected reversing thermometer readings and L - Z curves as described by La Fond (2). Copenhagen standard sea water was used exclusively as the standard in determination of salinity.

Dissolved oxygen was determined by the modified Winkler method described by Thompson and Robinson (3). Soluble inorganic phosphate was determined on Cruises 64, 67 and 80 using the method of Thompson and Robinson (4) except that the color intensity was measured with a Beckman Spectrophotometer Model DU (5) rather than Nessler tubes. 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 percent.

DATA

The time at which the messenger was dropped on the first cast is listed for the +8 time zone. Positions are given to the nearest minute and in some cases to the nearest 0.1 minute. Depth in fathoms was obtained with the aid of a Navy EDO echo sounder. Weather is reported in the Navy bathythermograph weather code given in H. O. Publication No. 606-c, except in cases where the only weather phenomenon reported is the state of the sky. For the state of the sky the following symbols were used: b., clear sky; b.c., blue sky with detached clouds; c., sky mainly cloudy; and o., sky overcast. Wind velocity is reported in knots. Dry and wet bulb air temperatures are reported in degrees Fahrenheit ($^{\circ}$ F). The dry bulb reading is listed first, followed by a virgule (/) and then the wet bulb reading.

All data are actual observed values. The maximum sampling depth was 4500 meters in the Gulf of Alaska but usually was near 2500 meters. Clearly questionable data have been excluded.

The presentation of these data in this form does not constitute publication. Subsequent, more rigorous analyses of these data may disclose errors which are not apparent at this time.

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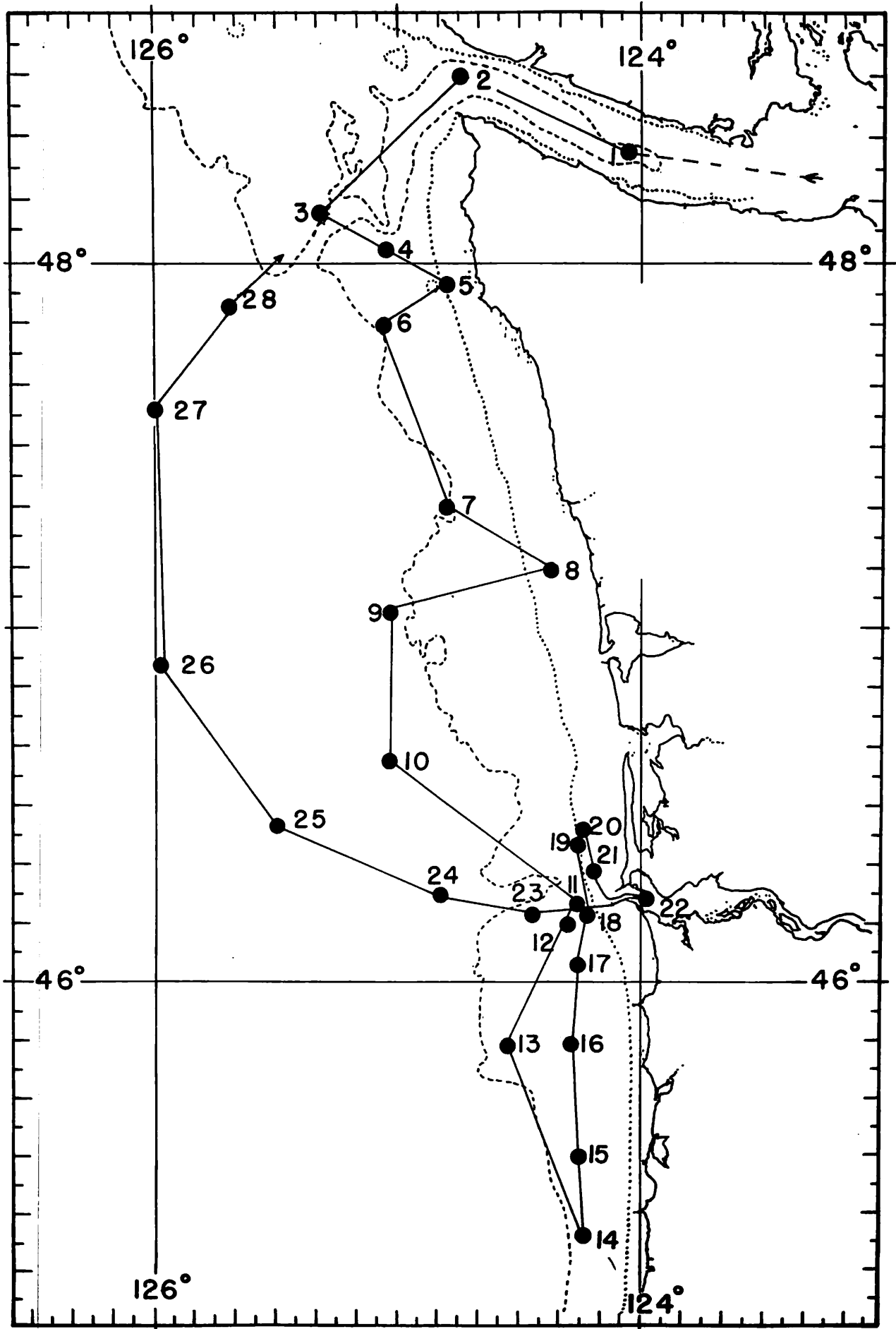
The data contained in this report were obtained and largely processed under Office of Naval Research contracts Nonr-477(01) Project NR 083 072, N8onr-520/III Project NR 083 012 and the processing completed under contract Nonr-477(10) Project NR 083 012.

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Bader, Dr. Richard G.	Research Associate.
Burt, Dr. Wayne V.	Research Oceanographer
Chow, Dr. T. W. J.	Research Associate
Duxbury, Alyn C.	Chief Laboratory Helper
Enbysk, Mrs. Betty J.	Laboratory Technician
Favorite, Felix	Chief Laboratory Helper
Frolander, Dr. Herbert	Instructor
Foster, Mrs. Lois B.	Laboratory Technician
Gast, James A.	Research Assistant
Hanson, Donald S.	Laboratory Technician
Hebard, J. Frank	Research Assistant
Jackson, Mrs. Esther L. C.	Laboratory Technician

Jackson, Hewitt R.	Senior Draftsman
Laevastu, Taivo	Research Associate
Lincoln, John H.	Research Instructor
McKernan, J. Cameron	Senior Laboratory Assistant
Rattray, Dr. Maurice	Associate Professor
Sleeper, Ray W.	Laboratory Helper
Toner, Miss Roberta J.	Clerk
Yentsch, Charles S.	Research Assistant

The wholehearted cooperation of Franklin W. Princehouse, Master of the M.V. BROWN BEAR, and all of the ship's officers and crew has contributed greatly to this work.



Oceanographic Station Location
 BROWN BEAR Cruise No. 56
 28 April - 3 May 1954

STA 56-1 48° 18.4' N WEATHER b.c. 28 Apr 54 124° 03.8' W WIND W 13 2034 (+8) DEPTH 102 fm 46°/40°F Pillar Point			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.04	31.30	0.493
5	8.00	31.25	0.500
10	8.10	31.25	0.489
20	8.09	31.27	0.487
30	7.91	31.47	0.457
50	7.62	32.10	0.383
75	7.54	33.13	0.295
99	7.06	33.50	0.232
138	6.50	33.90	0.174
178	6.43	33.88	0.173

STA 56-2 48° 29.1' N WEATHER b. 29 Apr 54 124° 44.8' W WIND SSE 11 0130 (+8) DEPTH 145 fm 45°/42°F Cape Flattery			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.03	31.27	0.535
10	8.08	31.27	0.535
20	8.07	31.47	0.495
30	7.73	31.91	0.416
49	7.65	32.71	0.357
73	----	33.17	0.298
98	7.02	33.61	0.227
147	6.50	-----	-----
196	6.22	33.95	0.162
244	5.90	33.98	0.141

STA 56-3 48° 07.9' N WEATHER b. 29 Apr 54 125° 19.4' W WIND WxN 8 0553 (+8) DEPTH 67 fm 45°/40°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.71	31.27	0.606
5	8.70	31.25	0.612
10	8.72	31.27	0.606
20	8.56	31.60	0.585
30	8.22	32.09	0.520
50	7.92	32.40	0.529
75	7.81	32.55	0.495
99	7.74	32.70	0.412

STA 56-4 48° 01.8' N WEATHER b. 29 Apr 54 125° 03.2' W WIND ---- 0759 (+8) DEPTH 67 fm 46°/41°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.86	30.99	0.570
10	8.86	31.02	0.570
20	8.61	31.49	0.524
30	8.21	32.11	0.493
50	7.92	32.52	0.455
75	----	33.23	0.304
100	7.08	33.83	0.209

STA 56-5 47° 56.5' N WEATHER c. 29 Apr 54 124° 48.0' W WIND S 16 0936 (+8) DEPTH 27 fm 44°/40°F James Island, Northwest of			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	7.87	31.78	0.515
10	7.92	31.87	0.507
20	7.91	32.45	0.433
30	7.64	33.19	0.324
40	7.43	33.42	0.272

STA 56-6 47° 49.8' N WEATHER o. 29 Apr 54 125° 04.2' W WIND NW 13 1133 (+8) DEPTH 78 fm 44°/41°F			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.98	30.97	0.603
10	8.92	30.97	0.609
20	8.40	31.93	0.553
30	8.13	32.30	0.576
50	7.88	32.57	0.529
75	----	33.16	0.330
100	7.69	33.55	0.276

STA 56-7 47° 20.0' N WEATHER o. 29 Apr 54 124° 47.2' W WIND WNW 10 1519 (+8) DEPTH 265 fm 47°/41°F			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	9.08	30.95	0.644
9	9.02	30.97	0.623
18	8.67	32.27	0.551
27	8.27	32.39	0.570
44	7.82	32.54	0.570
66	7.91	32.78	0.482
88	7.80	33.39	0.299
131	7.19	-----	-----
170	6.72	33.94	0.192
210	6.29	33.97	0.173

STA 56-8 47° 09.5' N WEATHER b.c. 29 Apr 54 124° 22.8' W WIND NW 16 1839 (+8) DEPTH 21 fm 45°/40°F Point Grenville, Southwest of			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.98	32.11	0.635
10	8.96	32.14	0.633
20	8.80	32.20	0.527
30	8.14	32.87	0.377

STA 56-9 47° 02.5' N WEATHER c.
 29 Apr 54 125° 02.1' W WIND NW 18
 2304 (+8) DEPTH 450 fm 43°/37°F

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.44	31.26	0.587
10	8.46	31.27	0.586
19	8.50	31.26	0.577
28	8.51	31.65	0.567
46	8.25	32.30	0.512
72	8.15	32.94	0.379
96	7.91	33.44	0.305
145	7.37	-----	-----
194	6.40	33.99	0.171
243	5.98	34.00	0.139
292	5.84	34.02	0.132

STA 56-10 46° 37.2' N WEATHER b.
 30 Apr 54 125° 02.0' W WIND NNW 20
 0256 (+8) DEPTH 518 fm 44°/38°F

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.94	31.54	0.616
10	8.94	31.52	0.621
20	8.99	31.52	0.618
29	8.56	32.31	0.589
49	8.10	32.44	0.569
73	8.06	32.81	0.456
98	7.94	33.31	0.348
147	7.46	-----	-----
196	6.94	33.94	0.205
246	6.48	33.95	0.187

STA 56-11 46° 12.7' N WEATHER b.c.
 30 Apr 54 124° 16.2' W WIND ExS 6
 0815 (+8) DEPTH 40 fm 46°/42°F
 Lightship, NW of Columbia River

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.98	27.17	0.542
9	8.47	31.26	0.606
19	8.46	31.85	0.604
28	7.76	32.36	0.388
47	7.74	33.58	0.234
66	6.77	33.92	0.180

STA 56-12 46° 09.8' N WEATHER b.c.
 30 Apr 54 124° 18.0' W WIND SE 7
 0902 (+8) DEPTH 53 fm ----

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.74	29.55	0.590
10	8.26	31.66	0.601
20	8.15	31.78	0.537
30	7.92	32.43	0.401
50	7.70	-----	0.264
75	6.86	33.94	0.185

STA 56-13 45° 48.7' N WEATHER b. 30 Apr 54 124° 32.6' W WIND NxE 11 1242 (+8) DEPTH 87 fm 48°/42°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.66	28.82	0.694
10	8.92	31.36	0.637
20	8.52	31.58	0.632
30	8.49	31.92	0.577
50	8.36	32.48	0.563
74	8.12	32.68	0.480
99	7.96	33.41	0.308
138	6.49	-----	-----

STA 56-14 45° 15.8' N WEATHER b. 30 Apr 54 124° 15.0' W WIND NNE 18 2059 (+8) DEPTH 90 fm 48°/43°F Cape Kiwanda, West of			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.60	30.23	0.622
9	9.52	30.59	0.610
18	9.10	31.92	0.604
27	8.96	32.12	0.578
44	8.56	32.44	0.536
67	8.43	32.95	0.414
89	7.94	33.59	0.258
111	7.24	33.87	0.212
134	6.84	33.93	0.203

STA 56-15 45° 29.7' N WEATHER b. 30 Apr 54 124° 15.1' W WIND NNE 14 2331 (+8) DEPTH 92 fm 47°/42°F Tillamook Bay, West of			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.48	28.91	0.624
10	9.36	31.05	0.623
20	8.69	32.00	0.585
31	8.62	32.10	0.568
51	8.60	32.51	0.522
77	8.21	33.21	0.343
103	7.94	33.57	0.306
154	6.22	-----	-----

STA 56-16 45° 48.4' N WEATHER b. 1 May 54 124° 17.6' W WIND NNE 12 0220 (+8) DEPTH 75 fm 47°/41°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.36	29.23	0.692
10	9.24	31.03	0.570
20	8.93	31.95	0.514
30	8.70	32.26	0.498
50	7.92	33.32	0.306
75	6.45	33.95	0.161
100	5.94	34.02	0.130
125	5.85	-----	-----

STA 56-17 46° 02.2' N WEATHER b. 1 May 54 124° 15.5' W WIND ENE 8 0430 (+8) DEPTH 52 fm 45°/42°F			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	9.38	26.97	0.651
5	9.23	28.06	0.652
10	8.54	31.40	0.627
20	8.49	32.06	0.501
30	8.50	32.65	0.456
50	7.09	32.84	0.200
85	6.48	33.87	0.161

STA 56-18 46° 11.1' N WEATHER b. 1 May 54 124° 12.4' W WIND ENE 12 0635 (+8) DEPTH 34 fm 45°/42°F Columbia Lightship, 1 mi. West of			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.95	27.38	0.568
5	8.95	28.06	0.542
10	8.70	31.56	0.454
20	8.21	33.11	0.322
30	7.74	33.62	0.243
50	7.32	33.81	0.208
55	7.10	33.86	-----

STA 56-19 46° 23.0' N WEATHER b. 1 May 54 124° 15.3' W WIND NNE 5 0938 (+8) DEPTH 32 fm 48°/42°F N. Boundary of FreshWater Interface			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	9.20	26.74	-----
5	8.74	31.08	-----
10	8.62	31.92	-----
15	8.60	31.98	-----
20	8.52	32.01	-----
25	8.18	32.18	-----
30	7.76	32.27	-----
50	7.75	33.39	-----

STA 56-20 46° 24.4' N WEATHER b. 1 May 54 124° 14.8' W WIND Calm 1102 (+8) DEPTH 31 fm 50°/44°F Just N. of N. Edge of F.W. Interface			
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	9.07	31.80	-----
4	8.68	31.87	-----
9	8.72	31.94	-----
13	8.65	31.97	-----
17	8.52	32.00	-----
22	8.24	32.05	-----
26	7.93	32.37	-----
43	7.82	33.35	-----

STA 56-21 46° 18.6' N WEATHER b.
 1 May 54 124° 12.6' W WIND ESE 7
 1214 (+8) DEPTH 24 fm 55°/47°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.94	24.15	-----
5	8.80	29.03	-----
10	8.60	31.32	-----
15	8.71	31.73	-----
20	8.35	32.23	-----
25	8.23	32.41	-----
35	8.22	32.86	-----

STA 56-22 46° 15.1' N WEATHER b.
 1 May 54 123° 59.8' W WIND ENE 9
 1407 (+8) DEPTH 71 fm 60°/47°F
 Buoy 14, Columbia River Entrance

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	11.34	14.41	-----
5	9.61	25.14	-----
10	8.81	31.11	-----
22	8.90	31.47	-----

STA 56-23 46° 10.5' N WEATHER c.
 2 May 54 124° 27.1' W WIND SE 9
 0943 (+8) DEPTH 68 fm 55°/51°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.24	28.23	-----
10	8.30	31.70	0.590
20	8.35	31.79	0.583
30	8.38	31.89	0.620
50	8.38	32.48	0.475
75	6.88	33.84	0.179
100	6.36	33.96	0.173

STA 56-24 46° 14.5' N WEATHER o.
 2 May 54 124° 50.0' W WIND SxW 14
 1234 (+8) DEPTH 370 fm 54°/52°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.62	30.94	0.587
10	9.57	30.99	0.590
19	9.14	31.58	0.618
29	8.74	32.03	0.591
48	8.40	32.47	0.535
71	8.22	32.81	0.432
95	8.00	33.52	0.304
142	7.41	33.75	0.222
190	6.86	33.95	0.198
238	6.34	34.00	0.179
286	5.94	34.01	0.132
480	5.04	34.13	0.055

STA 56-25 46° 26.1' N WEATHER o. 2 May 54 125° 30.2' W SxE 17 1659 (+8) DEPTH 1260 fm 52°/47°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.53	31.60	0.610
10	9.50	31.63	0.621
21	9.26	31.85	0.601
31	9.18	32.01	0.584
51	8.73	32.46	0.547
77	8.47	32.56	0.510
102	8.10	33.22	0.369
155	7.37	33.62	0.292
204	6.94	33.95	0.211
256	6.40	33.96	0.207
306	5.88	33.98	0.166
249	6.40	33.95	0.196
290	6.05	33.95	0.179
490	4.97	34.12	0.056
748	4.11	34.30	0.022
1008	3.50	34.41	0.028
1525	2.42	34.53	0.075

STA 56-26 47° 53.0' N WEATHER 61 2-3 May 54 125° 59.0' W WIND S 16 0006 (+8) DEPTH 1420 fm 49°/48°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	9.28	31.93	0.595
10	9.27	31.90	0.594
21	9.30	32.01	0.591
32	8.78	32.11	0.579
52	8.45	32.31	0.576
79	8.10	32.68	0.498
105	8.06	33.31	0.304
159	7.55	-----	-----
210	6.94	33.92	0.213
263	6.46	33.95	0.181
315	6.05	33.98	0.150
220	6.88	33.93	0.196
262	6.52	-----	-----
445	5.33	34.08	0.067
677	4.38	34.22	0.025
912	3.77	34.17	0.028
1419	2.64	34.48	0.052

STA 56-27 47° 35.7' N WEATHER o.
 3 May 54 126° 00.0' W WIND SxE 5
 0612 (+8) DEPTH 780 fm 49°/49° F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
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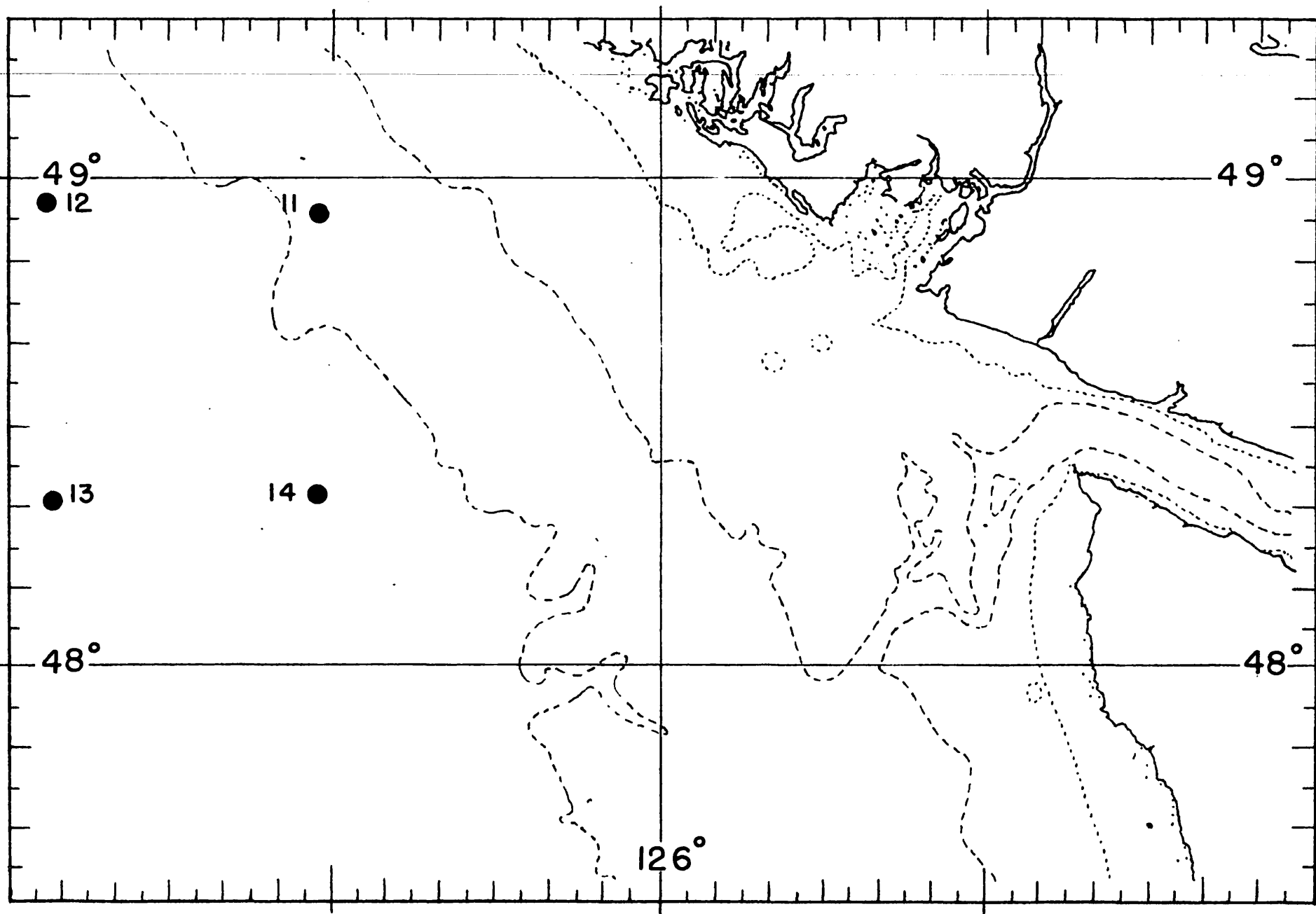
0	8.92	31.67	0.628
10	8.86	31.70	0.627
21	8.68	31.80	0.613
32	8.16	32.33	0.553
52	7.86	32.50	0.576
79	7.71	32.72	0.491
105	7.76	33.38	0.334
159	7.31	33.63	0.232
211	6.70	33.92	0.208
264	5.92	33.95	0.186
316	5.71	34.00	0.156
256	5.96	33.95	0.185
306	5.86	34.00	0.130
516	4.72	34.12	0.053
778	3.93	34.30	0.018
1039	3.33	34.42	0.024
1245	2.93	34.47	0.036

STA 56-28 47° 52.5' N WEATHER 41
 3 May 54 125° 40.8' W WIND ESE 12
 1005 (+8) DEPTH 460 fm 49°/48° F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
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0	8.70	31.38	0.655
10	8.66	31.36	0.626
20	8.72	31.38	0.660
30	8.14	32.01	0.547
49	7.72	32.39	0.571
74	7.58	32.56	0.354
98	7.57	33.28	0.529
148	7.18	33.76	0.219
196	6.19	33.90	0.248
246	5.94	33.96	0.161
295	5.42	33.96	0.151
240	6.23	33.97	0.165
287	5.52	33.94	0.161
481	4.67	34.13	0.048
725	3.92	34.29	0.024

-10-
Oceanographic Station Location
BROWN BEAR Cruise No. 62
15 - 25 June 1954



STA 62-11 48° 56.4' N WEATHER c.
 23 June 54 127° 02.0' W WIND W 12
 0319 (+8) DEPTH 635 fm 52°/48°F

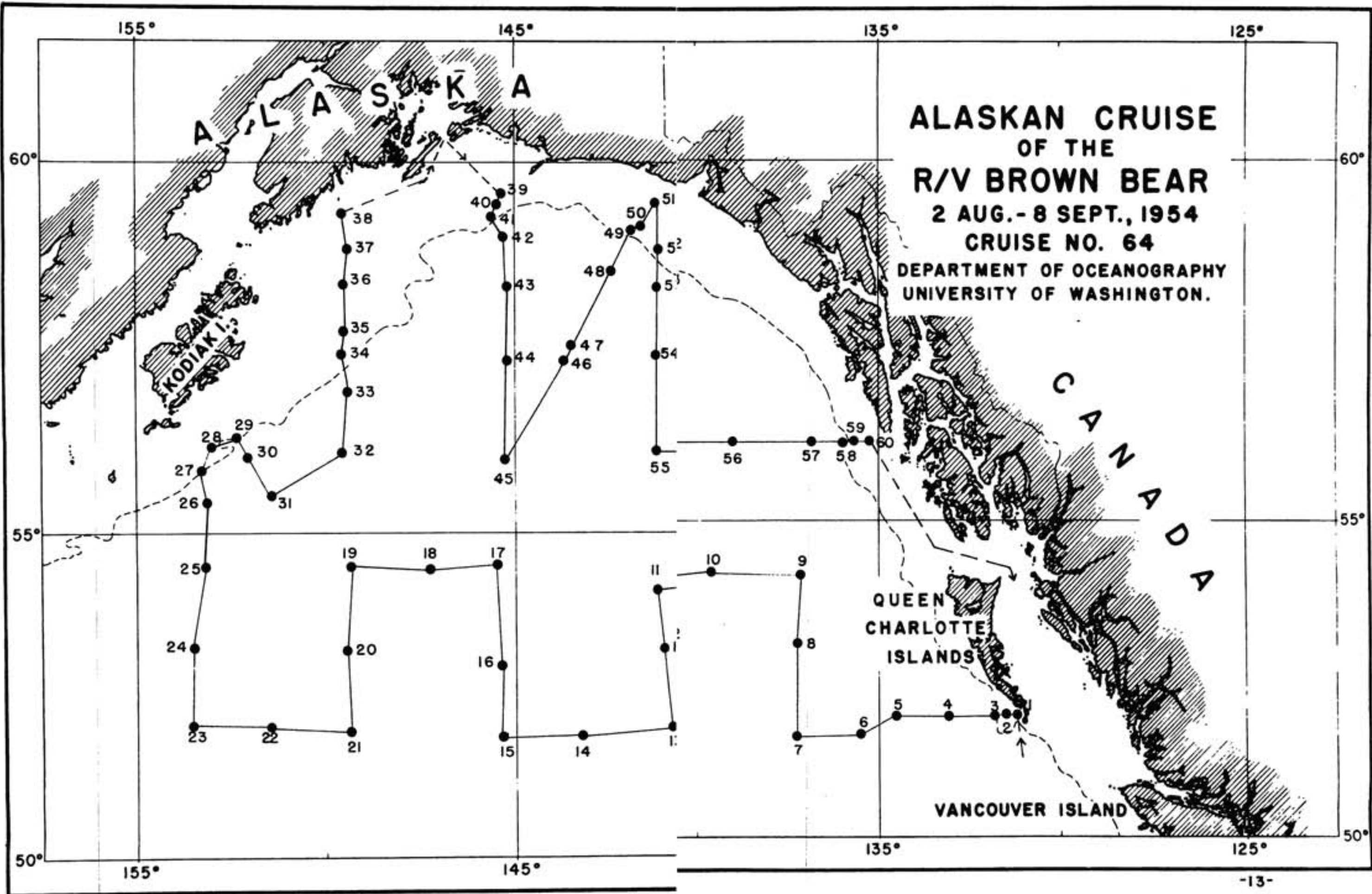
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	11.83	32.47	0.592
5	11.80	32.47	0.584
11	11.80	32.47	0.587
21	11.78	32.46	0.591
32	10.32	32.50	0.608
52	7.76	32.57	0.598
79	7.21	32.61	0.588
104	7.24	32.99	0.478
158	6.95	33.71	0.320
210	6.24	33.87	0.270
263	5.70	33.91	0.221
197	6.50	33.86	0.287
246	5.95	33.87	0.239
295	5.50	33.93	0.188
495	4.68	34.12	0.060
754	3.93	34.24	0.033
1016	3.41	34.40	0.030

STA 62-12 48° 57.1' N WEATHER b.c.
 23 June 54 127° 52.8' W WIND W 5
 1122 (+8) DEPTH 1350 fm 53°/51°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	12.42	32.02	0.567
5	12.18	32.02	0.567
11	11.96	32.02	0.568
21	11.77	32.02	0.576
32	8.70	32.51	0.632
52	7.33	32.57	0.606
79	6.92	32.60	0.601
103	6.88	32.78	0.525
154	7.09	33.80	0.268
206	6.29	33.86	-----
258	5.86	33.96	0.243
171	6.84	33.76	0.290
211	6.15	33.87	0.268
251	5.74	33.92	0.239
415	4.84	34.03	0.096
638	4.24	34.20	0.039
866	3.65	34.37	0.019
1110	3.13	34.49	0.026
1368	2.65	34.53	0.045

STA 62-13 48° 20.2' N WEATHER c. 23 June 54 127° 50.9' W WIND WxN 12 1848 (+8) DEPTH 1370 fm 55°/52°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	12.48	32.02	0.568
5	12.46	32.01	0.568
10	12.36	32.05	0.564
20	12.18	32.32	0.582
30	10.60	32.50	0.606
49	8.38	32.68	0.602
74	7.30	32.61	0.607
99	6.97	32.72	0.560
152	6.95	33.69	0.353
205	6.38	33.87	0.266
258	5.70	33.91	0.267
228	----	33.93	0.268
287	5.66	33.96	0.210
343	4.96	33.96	0.190
573	4.22	34.19	0.046
860	3.55	34.34	0.029
1148	2.98	34.45	0.028
1449	2.49	34.52	0.053
1752	2.09	34.58	0.103

STA 62-14 48° 21.2' N WEATHER b.c. 24 June 54 127° 03.0' W WIND WxN 12 0235 (+8) DEPTH 1420 fm 52°/50°F			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	12.46	32.38	0.572
5	12.44	32.38	0.583
11	12.42	32.38	0.572
21	11.12	32.35	0.612
31	8.55	32.54	0.611
52	7.82	32.60	0.617
78	7.34	32.60	0.602
104	7.12	32.72	0.556
157	7.16	33.68	0.335
209	6.38	33.86	0.305
261	5.88	33.90	0.278
226	6.45	-----	0.316
268	5.86	33.66	0.267
322	5.36	33.93	0.257
537	4.44	34.13	0.062
811	3.72	34.32	0.025
1139	3.16	34.43	0.025
1438	2.61	34.52	0.057
1742	2.16	34.58	0.111



STA 64-1 52° 02.0' N WEATHER c. 5 Aug 54 131° 12.5' W WIND WSW 12 1507 (+8) DEPTH 130 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.57	32.38	0.591	0.53
10	11.44	32.37	0.583	0.90
19	11.06	32.40	0.583	0.49
29	10.36	32.41	0.551	1.07
48	10.03	32.44	0.525	1.18
72	8.20	32.61	0.460	1.54
96	7.00	32.72	0.476	1.55
144	6.50	33.28	0.364	2.14

STA 64-2 52° 02.0' N WEATHER o. 5 Aug 54 131° 30.5' W WIND WSW 5 1852 (+8) DEPTH 850 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.25	32.25	0.599	0.72
9	11.56	32.22	0.594	0.80
18	10.94	32.27	0.553	0.89
27	10.42	32.29	0.537	1.05
44	9.18	32.44	0.508	1.40
66	8.40	32.60	0.449	1.60
89	7.60	32.83	0.407	1.63
132	6.64	33.26	0.394	1.75
176	6.41	33.70	0.284	2.22
264	5.60	33.93	0.204	2.42
195	6.29	33.82	0.287	2.31
287	5.51	33.99	0.169	2.47
478	4.66	34.10	-----	2.77
716	4.16	34.24	0.035	3.16
957	3.58	34.33	0.035	2.91
1248	2.98	34.44	0.035	2.99

STA 64-3 52° 00.0' N WEATHER 50 6 Aug 54 131° 50.5' W WIND SxW 3 0002 (+8) DEPTH 1360 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.23	32.22	0.578	0.88
9	11.67	32.21	0.584	0.93
18	10.79	32.21	0.546	1.03
27	10.28	32.28	0.520	0.99
46	9.62	32.36	0.491	1.32
69	9.20	32.42	0.469	1.43
91	8.66	32.54	0.446	1.35
137	7.00	33.17	0.336	1.86
183	6.26	33.75	0.241	2.56
273	5.68	33.94	0.175	2.37
184	6.20	33.79	0.221	2.40
276	5.56	33.96	0.172	2.47
464	4.74	34.11	0.069	2.86
708	4.13	34.23	0.036	3.05
951	3.55	34.36	0.027	2.99
1240	3.06	34.42	0.033	2.98

STA 64-4 52° 00.0' N WEATHER 15 6 Aug 54 133° 04.2' W WIND WxS 10 0913 (+8) DEPTH 1450 fm 57°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.70	32.22	0.558	0.50
10	13.63	32.21	0.557	0.87
20	12.16	32.20	0.603	0.96
29	10.20	32.28	0.587	0.94
49	7.88	32.48	0.516	1.41
73	7.27	32.74	0.435	1.63
98	6.44	32.96	0.430	1.69
146	6.52	33.48	0.328	1.95
195	6.02	33.80	0.232	2.64
293	5.00	34.01	0.134	2.97
190	6.06	33.78	0.232	2.60
285	5.01	33.97	0.132	2.91
475	4.25	34.14	0.055	3.06
711	3.75	34.27	0.032	3.29
963	3.26	34.37	0.027	3.22
1252	2.86	34.43	0.036	3.34

STA 64-5 52° 02.0' N WEATHER c. 7 Aug 54 134° 30.3' W WIND N 12 0553 (+8) DEPTH 1680 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.46	32.10	0.562	0.64
10	13.45	32.10	0.567	0.66
20	11.84	32.21	0.606	0.67
29	9.83	32.24	0.591	0.88
49	7.50	32.57	0.554	1.34
74	6.26	32.71	0.561	1.58
98	6.39	32.95	0.476	1.77
147	6.82	33.69	0.282	2.32
196	6.44	33.89	0.244	2.43
294	5.54	33.94	0.190	2.69
191	6.46	33.87	0.241	2.16
290	5.54	33.95	0.192	2.60
484	4.58	34.08	0.081	2.76
728	3.87	34.25	0.037	3.18
972	3.24	34.38	0.031	3.07
1264	2.72	34.47	0.035	3.23

STA 64-6 51° 42.1' N WEATHER 62 7 Aug 54 135° 29.2' W WIND WNW 13 1658 (+8) DEPTH 1870 fm 58°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.78	32.43	0.568	0.86
10	13.73	32.43	0.562	0.84
20	12.17	32.44	0.606	0.88
29	7.62	32.61	0.636	1.24
49	5.65	32.71	0.620	1.54
73	5.36	32.85	0.568	1.62
98	5.68	33.31	0.400	2.22
146	5.49	33.82	0.260	2.19
195	5.15	33.89	0.209	2.83
293	4.67	34.02	0.114	3.06
189	5.19	33.86	0.214	2.66
285	4.74	33.97	0.119	2.91
479	4.15	34.13	0.054	2.95
721	3.59	34.28	0.030	3.24
961	3.14	34.39	0.031	3.20
1252	2.62	34.46	0.046	3.21

STA 64-7 51° 40.8' N WEATHER c. 8 Aug 54 137° 11.5' W WIND NW 16 0842 (+8) DEPTH 1950 fm 56°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.73	32.37	0.562	0.71
10	13.70	32.33	0.561	0.76
19	13.13	32.36	0.586	0.75
29	10.06	32.46	0.606	1.01
48	6.10	32.60	0.578	1.48
72	5.64	32.76	0.578	1.62
96	5.79	33.17	0.432	1.73
144	5.62	33.78	0.266	2.06
192	5.32	33.91	0.226	2.32
288	4.77	33.96	0.138	2.82
193	5.33	33.94	0.212	2.57
289	4.83	33.95	0.134	2.76
482	4.22	34.15	0.051	3.05
723	3.56	34.31	0.032	3.17
967	3.09	34.41	0.035	3.12
1456	2.33	34.52	0.069	3.08
913	3.11	34.38	0.034	2.87
1386	2.35	34.51	0.059	2.99
1859	1.91	34.62	0.111	2.97
2332	1.70	34.66	0.164	2.71
2810	1.58	34.67	0.214	2.35

STA 64-8 53° 08.8' N WEATHER 51 8-9 Aug 54 137° 11.1' W WIND NNW 15 2321 (+8) DEPTH 1850 fm 58°/56°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.26	32.33	0.584	0.65
10	13.28	32.33	0.580	0.71
20	11.22	32.39	0.608	0.83
29	8.85	32.46	0.582	1.16
49	6.37	32.68	0.575	1.41
73	5.84	32.82	0.540	1.52
98	6.09	33.23	0.400	1.61
146	5.95	33.72	0.282	1.77
195	5.29	33.86	0.229	2.58
292	4.84	33.96	0.129	2.72
191	5.34	33.88	0.233	2.29
287	4.79	33.95	0.140	2.72
470	4.18	34.14	0.057	3.03
710	3.66	34.29	0.032	3.09
949	3.22	34.37	0.029	3.09
1237	2.67	34.46	0.046	3.11

STA 64-9 54° 12.0' N WEATHER 15 9 Aug 54 137° 06.0' W WIND SW 12 1644 (+8) DEPTH 1623 60°/58°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.36	32.22	0.591	0.58
9	13.06	32.23	0.600	0.60
19	10.92	32.35	0.614	0.82
28	9.60	32.40	0.603	1.02
46	7.10	32.61	0.575	1.35
69	5.95	32.74	0.581	1.51
93	6.00	32.95	0.507	1.37
139	5.97	33.56	0.336	1.99
187	5.44	33.85	0.248	2.48
282	4.95	33.96	0.145	2.78
187	5.53	33.86	0.240	2.38
280	5.02	33.98	0.126	2.50
467	4.34	34.15	0.052	2.52
702	3.74	-----	-----	-----
937	3.28	34.35	0.029	2.93

STA 64-10 54° 14.0' N WEATHER 51 10 Aug 54 139° 34.0' W WIND WxN 1 0654 (+8) DEPTH 1810 fm 57°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.11	32.25	0.556	0.71
10	14.10	32.26	0.558	0.65
20	11.54	32.42	0.600	0.93
29	7.60	32.52	0.626	1.28
49	5.55	32.70	0.597	1.40
73	5.02	32.85	0.575	1.56
98	4.86	33.08	0.510	1.43
146	5.78	33.78	0.582	1.58
195	5.30	33.89	0.209	2.58
292	4.62	33.94	0.140	2.77
193	5.22	33.89	0.202	2.57
289	4.59	33.94	0.140	2.87
482	4.12	33.89	0.202	2.99
725	3.58	33.96	0.134	2.89
968	3.16	34.13	0.055	2.63
1260	2.64	34.47	0.051	2.12

STA 64-11 54° 08.3' N WEATHER c. 10 Aug 54 141° 14.8' W WIND WSW 8 1843 (+8) DEPTH 2000 fm 62°/59°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.47	32.38	0.559	0.69
10	14.52	32.40	0.559	0.56
19	12.28	32.30	0.607	0.71
29	6.14	32.42	0.577	1.26
49	5.59	32.66	0.590	1.58
73	5.01	32.86	0.541	1.76
97	5.14	33.13	0.446	1.89
146	5.83	33.78	0.242	2.30
195	5.44	33.87	0.209	2.56
292	4.60	33.95	0.137	2.78
181	5.60	33.88	0.210	2.49
270	4.76	33.95	0.139	2.67
458	4.22	34.10	0.056	2.69
691	3.62	34.25	0.058	2.87
930	3.16	34.34	0.039	3.02
1218	2.69	34.45	0.051	3.11
1500	2.34	34.48	0.062	2.99

STA 64-12 53° 16.2' N WEATHER 51 11 Aug 54 141° 02.3' W WIND SW 9 0420 (+8) DEPTH 2000 fm 55°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.86	32.34	0.554	0.68
10	13.86	32.32	0.555	0.75
19	13.56	32.37	0.565	0.79
29	6.50	32.54	0.643	1.21
49	5.56	32.66	0.600	1.40
73	5.01	32.86	0.591	1.60
97	4.83	32.98	0.532	1.52
146	5.98	33.69	0.262	1.91
195	5.51	33.86	0.221	2.51
292	4.62	33.96	0.140	2.48
195	5.54	33.87	0.213	2.52
292	4.76	33.95	0.141	2.71
486	4.20	34.14	0.055	2.94
729	3.54	34.30	0.032	3.12
973	3.02	34.40	0.040	3.19
1264	2.62	34.48	0.53	3.18

STA 64-13 52° 04.7' N WEATHER 28 11 Aug 54 140° 50.0' W WIND SSW 10 1715 (+8) DEPTH 1990 58°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.72	32.75	0.559	1.24
10	13.68	32.74	0.561	1.27
19	10.38	32.78	0.608	1.26
29	8.58	32.79	0.624	1.29
48	5.40	32.84	0.636	1.58
73	4.64	32.88	0.630	1.59
96	4.16	32.90	0.627	1.89
146	5.23	33.72	0.299	2.18
194	4.84	33.82	0.238	2.58
290	4.46	33.96	0.120	2.46
187	4.89	33.83	0.243	2.44
282	4.52	33.96	0.130	2.68
468	4.00	34.13	0.056	2.81
704	3.48	34.29	0.044	2.81
941	2.98	34.38	0.040	2.83
1228	2.60	34.47	0.046	2.99

STA 64-14 51° 57.7' N WEATHER 44 12 Aug 54 143° 14.8' W WIND SW 12 1232 (+8) DEPTH 2020 fm 60°/58°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.46	32.75	0.561	1.15
9	13.40	32.76	0.560	1.32
18	13.06	32.77	0.573	1.29
28	10.42	32.81	0.619	1.41
46	6.30	32.86	0.650	1.63
69	4.44	32.91	0.640	1.76
92	3.94	32.95	0.635	1.72
138	3.68	33.29	0.497	1.78
184	4.03	33.80	0.227	2.71
277	3.88	33.95	0.099	3.08
163	4.08	33.70	0.281	2.56
250	3.91	33.93	0.147	2.79
431	3.82	34.08	0.056	2.92
765	3.41	34.29	0.045	3.02
901	3.06	34.37	0.035	2.71
1188	2.58	34.44	0.049	3.16

STA 64-15 51° 55.5' N WEATHER 46 13 Aug 54 142° 20.0' W WIND SSW 16 0453 (+8) DEPTH 2100 fm 56°/56°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.06	32.80	0.569	1.30
10	13.06	32.78	0.561	1.29
19	10.92	32.84	0.606	1.40
29	7.22	32.84	0.651	1.54
48	4.96	32.85	0.633	1.74
72	4.04	32.92	0.620	1.74
96	3.68	33.05	0.631	1.95
144	3.98	33.69	0.278	2.58
186	3.86	33.88	0.170	2.93
287	3.82	34.00	0.091	3.11
180	3.92	33.83	0.202	2.46
264	3.86	33.96	0.104	2.74
439	3.71	34.14	0.111	3.02
664	3.37	34.29	0.047	2.93
886	2.98	34.37	0.047	3.08
1163	2.57	34.47	0.054	3.16
1443	2.28	34.52	0.064	3.12
1933	1.92	34.61	0.115	3.12
2418	1.71	34.64	0.168	2.85
2909	1.58	34.67	0.219	2.99
3383	1.53	34.68	0.267	2.73

STA 64-16 53° 11.2' N WEATHER c. 13 Aug 54 145° 23.0' W WIND WxS 12 2045 (+8) DEPTH 2200 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.22	32.83	0.556	1.40
9	13.22	32.84	0.556	1.33
17	13.14	32.82	0.557	1.39
26	9.18	33.00	0.640	1.60
42	4.12	33.06	0.642	1.91
68	3.10	33.14	0.630	2.06
85	3.02	33.22	0.611	1.91
128	3.88	33.69	0.240	2.53
169	3.96	33.90	0.099	3.02
255	3.88	34.01	0.052	3.16
157	4.00	33.87	0.113	2.92
232	3.91	33.98	0.059	3.07
397	3.72	34.14	0.037	3.10
614	3.32	34.31	0.037	3.10
832	2.97	34.36	0.035	3.02
1106	2.59	34.42	0.054	3.10

STA 64-17 54° 32.0' N WEATHER c. 14 Aug 54 145° 28.0' W WIND WNW 13 0956 (+8) DEPTH 2190 fm 57°/53°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.28	32.86	0.556	1.15
10	13.22	32.79	0.558	1.23
20	11.24	32.83	0.600	1.35
29	6.60	32.95	0.660	1.59
48	4.36	33.03	0.649	1.77
70	3.28	33.15	0.608	1.90
94	3.48	33.39	0.452	2.13
137	4.00	33.89	0.105	2.69
188	3.92	33.95	0.071	2.98
281	3.85	34.06	0.040	2.79
194	3.93	33.94	0.075	3.16
291	3.86	34.06	0.049	2.83
485	3.52	34.22	0.041	2.94
728	3.13	34.33	0.041	2.92
970	2.79	34.40	0.040	2.65
1255	2.42	34.48	0.062	3.13

STA 64-18 54° 26.8' N WEATHER c. 15 Aug 54 147° 16.8' W WIND Calm 0202 (+8) DEPTH 1160 fm 55°/53°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.80	32.98	0.555	1.41
9	12.78	32.99	0.556	1.49
19	12.22	32.97	0.571	1.49
28	9.36	33.01	0.626	1.60
47	5.45	33.04	0.660	1.73
71	3.06	33.17	0.621	1.74
95	3.34	33.39	0.471	2.00
142	4.12	33.81	0.155	1.82
189	4.06	33.96	0.070	2.87
284	3.87	34.07	0.044	2.76
188	4.11	33.95	0.072	2.91
282	3.93	34.06	0.044	2.65
471	3.60	34.22	0.039	2.72
708	3.17	34.33	0.038	2.86
945	2.81	34.42	0.042	2.82
1227	2.46	34.49	0.062	3.15

STA 64-19 54° 30.0' N WEATHER 20 15 Aug 54 149° 23.4' W WIND ExS 12 1332 (+8) DEPTH 1770 fm 58°/56°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.60	32.94	0.563	1.14
10	12.56	32.93	0.560	1.17
19	12.22	32.93	0.561	1.17
29	6.80	32.95	0.636	1.54
48	3.72	33.09	0.634	1.99
71	2.90	33.21	0.601	2.02
95	3.58	33.57	0.332	2.23
143	4.14	33.87	0.105	2.67
190	4.10	33.97	0.062	3.09
285	3.98	34.09	0.034	3.12
191	4.10	33.97	0.052	3.15
288	3.96	34.09	0.034	3.00
481	3.60	34.25	0.034	3.05
721	3.14	34.36	0.036	3.02
965	2.76	34.42	0.044	3.10
1254	2.42	34.48	0.060	3.14

STA 64-20 53° 16.0' N WEATHER 25 16 Aug 54 149° 28.5' W WIND SSW 16 0250 (+8) DEPTH 2400 fm 56°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.81	32.91	0.554	1.17
10	12.78	32.90	0.558	1.22
19	12.32	32.90	0.570	1.20
29	7.56	32.86	0.634	1.29
48	4.52	32.96	0.588	1.63
72	3.50	33.21	0.519	1.76
96	3.98	33.51	0.344	2.18
144	4.38	33.84	0.151	2.61
192	4.23	33.95	0.090	2.96
288	4.04	34.09	0.588	2.95
187	4.24	33.96	0.096	2.83
277	4.06	34.05	0.044	2.84
461	3.72	34.17	0.030	2.84
696	3.26	34.31	0.037	2.87
936	2.83	34.40	0.041	2.85
1226	2.44	34.50	0.059	2.93

STA 64-21 52° 02.0' N WEATHER o. 16 Aug 54 149° 22.5' W WIND WxS 16 1800 (+8) DEPTH 2340 56°/56°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.85	32.84	0.553	1.21
9	12.84	32.84	0.556	1.21
18	12.85	32.83	0.556	1.23
27	8.33	32.92	0.638	1.54
46	4.22	32.99	0.646	1.91
68	3.22	33.09	0.605	2.13
91	3.57	33.44	0.412	2.34
137	4.10	33.86	0.123	2.83
182	4.10	33.95	0.075	3.06
266	3.98	34.06	0.043	3.24
177	4.12	33.96	0.069	3.16
264	3.90	34.05	0.050	3.10
442	3.64	34.18	0.034	3.12
673	3.22	34.31	0.038	3.16
902	2.86	34.38	0.044	3.17
1174	2.53	34.47	0.056	3.24

STA 64-22 52° 05.0' N WEATHER o. 17 Aug 54 151° 29.5' W WIND W 12 0710 (+8) DEPTH 2400 fm 55°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.68	32.82	0.561	1.12
9	12.66	32.80	0.561	1.16
18	12.70	32.80	0.555	1.17
27	8.85	32.94	0.632	1.55
46	4.18	33.01	0.646	1.91
68	3.23	33.08	0.635	1.95
91	3.11	33.16	0.598	1.97
137	4.12	33.85	0.149	2.62
182	4.02	33.95	0.077	3.10
274	3.88	34.04	0.046	3.24
176	4.06	33.95	0.087	3.07
264	3.90	34.02	0.045	3.06
444	3.62	34.20	0.035	3.05
673	3.23	34.31	0.034	3.12
903	2.87	34.41	0.045	3.20
1180	2.49	34.49	0.060	3.24

STA 64-23 52° 07.0' N WEATHER 50 17-18 Aug 54 153° 31.2' W WIND SW 19 2207 (+8) DEPTH 2350 fm 57°/56°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.14	32.74	0.574	0.99
8	12.13	32.74	0.571	0.98
16	12.11	32.73	0.567	1.00
24	11.76	32.74	0.576	1.00
41	5.98	32.89	0.630	1.48
61	4.04	32.99	0.586	1.71
79	3.47	33.10	0.560	1.77
114	3.88	33.48	0.360	2.05
158	4.22	33.87	0.136	3.01
228	3.91	33.97	0.067	3.17
191	3.92	33.93	0.100	2.88
269	3.95	34.00	0.055	2.70
435	3.74	34.18	0.038	2.79
635	3.34	34.28	0.038	2.83
846	3.00	34.35	0.044	2.84
1265	2.44	34.51	0.064	3.69
1331	2.34	34.50	0.064	3.16
1759	2.01	34.55	0.108	2.94
2207	1.79	34.62	0.146	2.98
2651	1.62	34.67	0.198	2.46
3098	1.54	34.69	0.238	2.73
3640	1.50	34.69	0.273	2.82

STA 64-24 53° 18.0' N WEATHER 45 18 Aug 54 153° 27.0' W WIND S 20 1422 (+8) DEPTH 2350 fm 57°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.62	32.87	0.553	1.16
9	12.62	32.88	0.555	1.16
19	12.58	32.90	0.555	1.18
28	11.40	32.93	0.581	1.33
47	4.48	33.05	0.642	1.69
70	2.96	33.17	0.594	1.98
93	3.49	33.43	0.389	2.19
140	4.21	33.90	0.079	2.56
186	4.10	33.98	0.050	3.02
280	3.92	34.07	0.037	2.99
171	4.15	33.94	0.060	2.79
262	3.98	34.06	0.037	3.14
445	3.64	34.20	0.033	3.06
679	3.16	34.33	0.033	2.93
915	2.82	34.40	0.040	3.09
1203	2.39	34.52	0.060	3.18

STA 64-25 54° 31.2' N WEATHER 50
 19 Aug 54 153° 09.5' W WIND SxW 25
 0243 (+8) DEPTH 2350 fm 57°/57°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.36	32.75	0.555	1.11
9	12.36	32.79	0.556	1.08
18	12.27	32.76	0.558	1.15
27	8.46	32.90	0.656	1.33
46	4.40	33.04	0.619	1.75
68	3.12	33.22	0.544	2.08
91	3.58	33.45	0.368	1.98
137	4.28	33.89	0.096	2.28
182	4.16	33.96	0.060	2.99
273	4.00	34.05	0.040	2.92
181	4.18	33.95	0.065	2.95
273	4.06	34.03	0.044	2.73
456	3.69	-----	-----	-----
678	3.21	34.27	0.034	3.33
885	2.88	34.37	0.035	2.82
1148	2.51	34.45	0.054	2.98

STA 64-26 55° 06.3' N WEATHER o.
 19 Aug 54 153° 06.3' W WIND W 12
 1227 (+8) DEPTH 2880 fm 55°/54°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.17	32.95	0.541	1.40
9	13.16	32.95	0.552	1.42
17	13.11	32.95	0.550	1.44
26	8.82	33.03	0.615	1.57
43	4.61	33.11	0.641	1.72
64	3.04	33.19	0.594	2.24
86	3.04	33.32	0.492	2.12
129	4.08	33.83	0.120	2.66
172	4.10	34.00	0.056	3.22
260	3.93	34.09	0.035	3.00
171	4.10	33.99	0.062	3.05
258	3.94	34.08	0.035	2.97
437	3.68	34.20	0.035	2.95
663	3.23	34.34	0.034	2.96
893	2.86	34.42	0.040	3.13
1168	2.40	34.52	0.060	3.14
1601	2.00	34.56	0.100	2.98
2079	1.74	34.63	0.152	2.74
2559	1.57	34.63	0.203	2.86
3038	1.48	34.69	0.240	2.73
3803	1.48	34.70	0.290	2.59
4758	1.52	34.71	0.310	2.18

STA 64-27 55° 43.3' N WEATHER b.c.
 20 Aug 54 153° 14.2' W WIND WSW 16
 0333 (+8) DEPTH 2000 fm 55°/52°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.30	32.73	0.532	1.03
9	13.32	32.68	0.554	1.06
19	13.32	32.70	0.554	1.06
28	9.50	32.96	0.648	1.54
47	4.34	33.06	0.654	1.92
71	2.98	33.15	0.613	2.13
95	3.24	33.36	0.454	1.95
142	4.15	33.89	0.086	2.64
189	4.07	33.97	0.055	3.16
284	3.94	34.06	0.036	3.07
182	4.12	33.95	0.057	3.19
274	3.96	34.02	0.047	3.15
457	3.68	34.17	0.034	3.27
691	3.26	34.28	0.033	3.19
926	2.88	-----	0.040	3.16
1211	2.48	34.45	0.059	3.26

STA 64-28 56° 13.5' N WEATHER b.c.
 20 Aug 54 153° 57.8' W WIND WSW 18
 1053 (+8) DEPTH 530 fm 51°/50°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.06	32.38	0.583	1.97
9	10.07	32.38	0.583	1.98
18	10.04	32.39	0.583	0.79
26	9.05	32.52	0.597	1.16
44	5.04	32.77	0.519	1.79
66	4.60	32.98	0.521	1.95
86	4.70	33.14	0.442	1.94
127	4.92	33.44	0.314	2.20
170	5.03	33.68	0.238	2.73
259	4.35	33.89	0.133	2.97
173	4.95	33.73	0.210	2.71
262	4.32	33.92	0.122	3.03
452	3.92	34.11	0.064	3.23
259	4.56	33.89	0.132	3.03
689	3.58	34.21	0.035	3.36

STA 64-29 56° 21.1' N WEATHER b.c. 20 Aug 54 152° 18.7' W WIND WSW 15 2021 (+8) DEPTH 220 fm 55°/53°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.16	32.33	0.568	0.64
10	12.13	32.31	0.574	0.72
19	8.73	32.56	0.591	1.18
29	6.07	32.68	0.591	1.50
48	4.82	32.88	0.568	1.50
72	4.71	33.03	0.484	1.87
96	4.57	33.14	0.472	2.16
143	5.01	33.53	0.309	2.20
191	4.94	33.80	0.211	2.74
190	4.85	33.82	0.202	2.62
284	4.34	33.95	0.112	3.02
350	4.25	33.99	0.089	3.11

STA 64-30 56° 04.8' N WEATHER b. 21 Aug 54 152° 01.2' W WIND WSW 16 0105 (+8) DEPTH 2600 fm 53°/52°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.14	32.83	0.551	1.28
9	13.14	32.83	0.552	1.26
19	10.24	32.96	0.632	1.63
28	5.66	33.05	0.675	1.82
47	3.70	33.10	0.640	2.13
71	2.92	33.20	0.600	2.21
95	3.45	33.43	0.408	2.46
142	4.12	33.87	0.113	2.85
189	4.14	33.98	0.053	3.31
283	4.02	34.07	0.034	3.10
191	4.12	33.98	0.051	3.14
287	3.96	34.07	0.036	3.06
479	3.64	34.23	0.035	3.22
718	3.21	34.33	0.038	3.02
958	2.81	34.43	0.044	3.29
1245	2.44	34.50	0.062	3.25

STA 64-31 55° 31.2' N WEATHER b.c. 21 Aug 54 151° 25.2' W WIND W 8 0840 (+8) DEPTH 2550 fm 58°/54°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.79	32.98	0.552	1.35
10	12.78	32.99	0.554	1.37
19	12.70	32.97	0.555	1.35
29	6.42	33.05	0.656	1.68
48	3.76	33.14	0.613	2.13
72	3.23	33.22	0.584	2.20
96	3.44	33.40	0.439	2.32
143	4.17	33.86	0.104	2.92
191	4.12	33.97	0.059	3.39
288	3.94	34.08	0.040	3.30
186	4.12	33.97	0.065	3.23
279	3.96	34.09	0.039	3.24
463	3.66	34.23	0.034	3.24
704	3.20	34.33	0.036	3.28
936	2.76	34.42	0.042	3.22
1220	2.38	34.48	0.070	3.14

STA 64-32 56° 07.9' N WEATHER c. 21 Aug 54 149° 29.0' W WIND W 8 2036 (+8) DEPTH 2450 fm 57°/54°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.34	32.99	0.547	1.28
9	13.31	33.01	0.554	1.31
18	13.10	32.96	0.556	1.36
28	9.13	33.05	0.661	1.60
46	3.69	33.12	0.636	1.99
69	3.03	33.21	0.569	1.87
92	3.60	33.51	0.351	2.20
138	4.14	33.90	0.097	2.74
184	4.09	33.96	0.056	3.32
277	3.96	34.07	0.036	3.42
188	4.12	33.97	0.054	3.16
275	3.97	34.07	0.035	3.06
463	3.66	34.23	0.033	3.23
701	3.24	34.33	0.034	3.30
956	2.74	34.42	0.043	3.28
1234	2.44	34.47	0.066	3.28

STA 64-33 56° 59.7' N WEATHER c. 22 Aug 54 149° 29.8' W WIND W 18 0825 (+8) DEPTH 1880 fm 57°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.73	32.14	0.549	0.61
9	13.76	32.14	0.558	0.63
19	13.08	32.27	0.585	0.71
28	7.02	32.50	0.595	1.34
47	5.66	32.65	0.575	1.54
71	5.10	32.83	0.598	1.77
94	4.59	32.94	0.599	1.92
141	5.38	33.55	0.318	2.44
188	4.84	33.79	0.224	2.77
284	4.33	33.93	0.112	3.13
167	5.18	33.72	0.262	2.65
250	4.42	33.89	0.136	2.99
420	4.04	34.08	0.055	3.27
636	3.66	34.22	0.042	3.25
863	3.24	34.33	0.038	3.25
1141	2.80	34.42	0.049	3.29

STA 64-34 57° 29.7' N WEATHER 60 22 Aug 54 149° 31.0' W WIND SE 26 1402 (+8) DEPTH 1030 56°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.96	32.34	0.580	0.59
10	12.96	32.32	0.563	0.65
19	12.92	32.32	0.563	0.58
29	12.61	32.32	0.566	0.62
48	5.81	32.67	0.607	1.47
72	4.80	32.87	0.581	1.86
96	4.48	32.97	0.555	1.99
143	5.00	33.51	0.335	2.28
191	5.18	33.81	0.206	2.79
287	4.34	33.93	0.110	3.14
147	5.40	33.57	0.301	2.56
221	4.78	33.87	0.163	2.46
370	4.88	33.04	0.298	2.30
559	3.83	34.15	0.045	3.13
754	3.43	34.25	0.038	3.05
1024	3.04	34.37	-----	3.48

STA 64-35 57° 47.9' N WEATHER 63 22 Aug 54 149° 28.5' W WIND SE 23 1755 (+8) DEPTH 360 fm 54°/54°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.64	32.28	0.555	0.60
8	12.64	32.29	0.573	0.61
16	12.56	32.30	0.568	0.61
25	10.33	32.36	0.574	0.94
41	5.81	32.65	0.600	1.48
62	5.21	32.78	0.565	1.61
82	4.78	32.87	0.565	1.49
123	4.81	33.17	0.445	1.62
164	5.38	33.73	0.254	2.49
253	4.56	33.87	0.149	2.82
159	5.18	33.50	0.327	2.16
246	4.72	33.83	0.198	2.56
429	3.90	34.05	0.064	2.82

STA 64-36 58° 25.3' N WEATHER 63 23 Aug 54 149° 29.0' W WIND S 10 0048 (+8) DEPTH 80 fm 55°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.76	31.76	0.574	0.55
10	11.49	32.03	0.586	0.64
19	10.96	32.07	0.595	0.74
28	9.70	32.20	0.585	0.94
48	6.28	32.37	0.577	1.54
71	5.02	32.59	0.550	1.77
95	4.70	32.94	0.496	2.14

STA 64-37 58° 54.1' N WEATHER 63 23 Aug 54 149° 21.4' W WIND SSE 9 0543 (+8) DEPTH 130 fm 55°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.89	31.83	0.566	0.59
10	11.60	32.00	0.585	0.62
19	9.31	32.21	0.608	0.99
29	6.50	32.38	0.586	1.40
48	5.10	32.55	0.565	1.58
72	4.76	32.71	0.547	1.76
96	4.53	32.90	0.537	1.83
144	4.70	33.19	0.405	2.33

STA 64-38 59° 21.2' N WEATHER 64 23 Aug 54 149° 30.2' W WIND NE 28 1005 (+8) DEPTH 77 fm 51°/51°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.94	31.92	0.586	0.58
9	11.92	31.93	0.589	0.46
18	10.60	32.07	0.596	0.77
27	8.06	32.17	0.588	1.17
45	6.38	32.23	0.581	1.47
68	5.20	32.47	0.555	1.78
91	4.93	32.59	0.547	1.89

STA 64-39 59° 37.1' N WEATHER c. 27 Aug 54 145° 18.0' W WIND NNW 10 0419 (+8) DEPTH 60 fm 58°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.18	29.15	0.545	0.35
10	13.23	29.15	0.560	0.41
19	11.74	30.34	0.554	0.55
29	11.56	30.62	0.545	0.53
48	10.64	31.62	0.556	0.80
72	7.34	32.06	0.553	1.25
96	5.51	32.22	0.536	1.69

STA 64-40 59° 28.8' N WEATHER c. 27 Aug 54 145° 24.8' W WIND W 6 0624 (+8) DEPTH 120 fm 57°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.31	29.14	0.558	0.38
10	13.19	29.35	0.574	0.40
19	12.94	30.95	0.563	0.54
29	11.93	31.87	0.553	0.64
48	8.50	31.96	0.580	0.99
72	6.06	32.17	0.544	1.45
96	5.50	32.48	0.528	1.63
144	5.08	32.98	0.434	2.18

STA 64-41 59° 18.4' N WEATHER c. 27 Aug 54 145° 35.2' W WIND W 5 0915 (+8) DEPTH 1200 fm 57°/55° F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.88	31.31	0.560	0.45
10	12.02	32.04	0.640	0.59
19	9.96	32.28	0.604	0.94
29	6.92	32.14	0.565	1.36
48	5.38	32.29	0.547	1.59
72	5.68	32.54	0.516	1.67
96	5.58	32.77	0.524	1.68
114	5.36	33.23	0.399	2.05
192	5.12	33.57	0.311	2.57
288	4.68	33.86	0.154	2.76
190	5.20	33.49	0.334	2.37
285	4.78	33.87	0.162	2.66
474	4.16	34.05	0.064	2.98
712	3.66	34.21	0.040	2.98
950	3.30	34.28	0.035	3.07
1334	2.77	34.39	0.044	3.11

STA 64-42 59° 04.3' N WEATHER c. 27 Aug 54 145° 17.1' W WIND SW 8 1542 (+8) DEPTH 2360 fm 60°/58° F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.22	31.43	0.534	0.61
10	14.10	31.42	0.550	0.56
19	10.09	32.21	0.616	0.82
29	7.67	32.19	0.553	1.28
48	5.62	32.24	0.550	1.53
72	5.53	32.49	0.542	1.59
96	5.26	32.81	0.501	1.72
114	5.28	33.37	0.368	2.03
192	-----	33.67	0.250	2.49
288	-----	33.82	0.195	2.68
183	5.38	33.63	0.260	2.05
273	4.65	33.82	0.209	2.51
450	4.22	34.00	0.076	2.86
547	3.96	34.10	0.056	3.06
684	3.74	34.18	0.042	3.00
1050	3.04	34.35	0.038	3.15
1351	2.64	34.43	0.045	2.91
1819	2.10	34.53	0.088	2.77
2294	1.68	34.62	0.174	2.59
2773	1.53	34.66	0.219	2.34
3532	1.48	-----	0.292	2.41
3924	1.47	34.70	0.275	2.41

STA 64-43 58° 24.0' N WEATHER c. 28 Aug 54 142° 12.6' W WIND SxW 9 0640 (+8) DEPTH 2150 fm 56°/55° F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.16	32.10	0.550	0.58
9	14.18	32.09	0.622	0.54
19	13.62	32.22	0.575	0.72
28	9.96	32.32	0.600	0.58
47	6.01	32.60	0.568	1.42
71	5.38	32.77	0.546	1.58
94	4.83	32.90	0.556	1.71
141	5.23	33.48	0.332	2.12
188	5.16	33.84	0.206	2.70
281	4.38	33.94	0.118	2.88
172	5.42	33.63	0.236	2.40
264	4.55	33.90	0.133	2.75
448	3.96	34.07	0.038	3.13
670	3.52	34.23	0.040	3.21
894	3.16	34.33	0.039	3.24
1164	2.74	-----	-----	-----

STA 64-44 57° 24.6' N WEATHER b.c. 28 Aug 54 145° 11.8' W WIND WxN 12 1750 (+8) DEPTH 2070 fm 56°/53° F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.28	32.23	0.555	0.58
9	14.26	32.24	0.562	0.59
18	8.40	32.27	0.618	0.97
27	6.36	32.35	0.581	1.44
46	5.26	32.59	0.574	1.60
68	4.63	32.79	0.566	1.77
87	4.55	32.82	0.596	1.66
130	4.80	33.20	0.447	1.88
173	5.50	33.62	0.296	2.55
260	4.80	33.89	0.170	2.81
185	5.50	33.70	0.261	2.71
277	4.62	33.90	0.150	2.71
461	4.04	34.08	0.059	2.93
692	3.58	34.24	0.042	3.03
920	3.12	34.34	0.037	3.08
1020	2.85	34.40	0.042	3.18

STA 64-45 56° 04.5' N WEATHER b.c. 29 Aug 54 145° 14.5' W WIND W 19 1036 (+8) DEPTH 2070 55°/53°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.87	32.67	0.551	0.86
10	13.83	32.69	0.555	0.90
19	13.45	32.72	0.556	0.96
29	8.49	32.83	0.640	1.37
48	4.33	32.95	0.635	1.75
73	3.78	33.05	0.605	1.72
97	3.41	33.17	0.567	1.56
146	3.95	33.78	0.182	2.16
194	3.91	33.87	0.121	2.84
287	3.92	34.00	0.065	2.98
189	4.03	33.87	0.011	2.98
283	3.94	34.02	0.062	3.00
474	3.65	34.21	0.042	2.93
708	3.24	34.26	0.041	2.94
932	2.89	34.39	0.046	2.97
1398	2.34	34.50	0.070	2.87
1876	1.90	34.60	0.013	2.86
2354	1.70	34.66	0.168	2.56
3306	1.50	34.68	0.256	2.46

STA 64-46 57° 24.3' N WEATHER b.c. 30 Aug 54 143° 42.9' W WIND NE 12 0437 (+8) DEPTH 2050 57°/53°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.32	32.55	-----	-----
10	14.28	32.56	-----	-----
19	13.97	32.75	-----	-----
29	8.53	32.87	-----	-----
48	4.77	32.88	-----	-----
72	3.92	32.97	-----	-----
96	3.64	33.09	-----	-----
143	4.03	33.55	-----	-----
191	4.22	33.86	-----	-----
287	4.02	34.00	-----	-----
191	4.20	33.87	-----	-----
287	3.94	33.96	-----	-----
		32.52	-----	-----
717	3.33	34.27	-----	-----
952	3.00	34.39	-----	-----
1238	2.62	34.47	-----	-----

STA 64-47 57° 37.2' N WEATHER b.c. 30 Aug 54 143° 30.9' W WIND NxE 9 1017 (+8) DEPTH 2030 60°/58°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.27	32.20	0.546	0.53
9	14.20	32.15	0.548	0.56
19	12.18	32.29	0.613	0.67
28	9.41	32.45	0.609	1.04
47	5.94	32.59	0.597	1.42
74	5.58	32.88	0.536	1.68
95	5.20	33.05	0.494	1.73
142	5.80	33.73	0.258	2.20
192	4.92	33.86	0.225	2.69
286	4.60	34.01	0.119	2.97
186	4.71	33.82	0.266	2.65
279	4.66	34.03	0.118	2.98
463	3.82	34.14	0.046	2.77
699	3.52	34.33	0.040	3.21
936	3.08	34.43	0.037	3.22
1218	2.64	34.53	0.050	3.23

STA 64-48 58° 37.0' N WEATHER b.c. 30 Aug 54 142° 26.0' W WIND WxN 6 2109 (+8) DEPTH 1690 60°/57°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.94	32.01	0.537	0.46
10	14.30	32.01	0.554	0.62
19	9.49	32.16	0.661	0.74
29	8.00	32.20	0.600	1.05
48	5.25	32.13	0.600	1.43
72	5.06	32.27	0.578	1.42
96	5.14	32.38	0.573	1.50
143	5.17	32.72	0.545	1.66
191	4.99	33.10	0.486	2.09
287	5.50	33.87	0.208	2.57
191	5.00	33.11	0.475	2.15
287	5.45	33.91	0.222	2.64
476	4.36	34.06	0.082	2.79
715	3.80	34.25	0.045	3.03
952	3.26	34.36	0.038	3.07
1238	2.81	34.46	0.045	3.11

STA 64-49 59° 06.8' N WEATHER b. 31 Aug 54 141° 52.0' W WIND NNW 8 0409 (+8) DEPTH 820 fm 58°/55°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.59	31.92	0.540	0.52
10	14.58	31.94	0.544	0.55
19	14.51	31.92	0.544	0.51
28	10.87	32.03	0.662	0.63
46	5.68	32.09	0.575	1.39
69	5.14	32.18	0.575	1.55
91	5.30	32.34	0.562	1.55
135	5.20	32.65	0.541	1.67
180	4.78	32.91	0.550	1.89
267	5.62	33.83	0.215	2.60
172	4.92	32.82	0.571	1.81
256	5.69	33.73	0.240	2.44
409	4.56	33.96	0.115	2.83
602	4.02	34.13	0.049	3.03
811	3.55	34.23	0.040	3.06
1081	3.13	34.34	0.037	3.15

STA 64-50 59° 10.0' N WEATHER b.c. 31 Aug 54 141° 38.5' W WIND W 12 0704 (+8) DEPTH 118 fm 58°/55°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.66	31.97	0.543	0.50
9	14.65	31.97	0.544	0.53
19	13.10	32.03	0.603	0.57
28	9.57	32.16	0.644	0.88
47	6.36	32.20	0.557	1.45
71	5.53	32.31	0.566	1.57
95	5.59	32.50	0.536	1.63
142	5.21	32.79	0.530	1.77
189	4.94	33.10	0.480	2.12

STA 64-51 59° 28.5' N WEATHER c. 31 Aug 54 141° 15.0' W WIND NW 5 1211 (+8) DEPTH 160 fm 62°/56°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.66	29.57	0.581	0.40
10	13.15	31.91	0.601	0.55
19	9.52	32.09	0.649	0.74
29	7.71	32.15	0.576	1.23
48	5.88	32.21	0.533	1.62
72	5.43	32.34	0.528	1.69
96	5.48	32.59	0.530	1.66
143	4.97	32.99	0.472	2.03
191	5.38	33.46	0.308	2.42

STA 64-52 58° 52.8' N WEATHER c. 31 Aug 54 141° 10.0' W WIND WxN 7 1830 (+8) DEPTH 950 fm 63°/58°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.92	32.00	0.539	0.48
10	14.36	32.03	0.554	0.49
19	10.48	32.12	0.664	0.60
29	7.76	32.14	0.618	1.09
48	5.56	32.13	0.570	1.80
72	5.26	32.21	0.566	1.53
96	5.19	32.34	0.558	1.53
143	5.33	32.69	0.516	1.67
191	4.98	33.05	0.476	2.11
286	5.48	33.85	0.216	2.64
187	4.87	33.02	0.498	1.99
281	5.52	33.82	0.215	2.59
462	4.22	34.03	0.074	3.02
691	3.73	34.21	0.042	3.06
922	3.38	34.31	0.034	3.05
1199	2.93	34.39	0.040	3.11

STA 64-53 58° 24.2' N WEATHER b. 1 Sept 54 141° 11.8' W WIND W 6 0033 (+8) DEPTH 1870 fm 57°/55°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.60	32.02	0.550	0.49
10	14.32	31.99	0.556	0.50
19	12.29	32.08	0.613	0.59
29	9.26	32.10	0.600	0.99
48	6.88	32.20	0.527	1.43
72	5.94	32.30	0.526	1.58
96	5.70	32.46	0.531	1.56
143	5.16	32.78	0.534	1.80
191	5.31	33.19	0.408	2.14
286	5.28	33.87	0.195	2.85
191	5.51	33.28	0.367	2.26
286	5.31	33.87	0.194	2.52
477	4.30	34.05	0.071	3.00
714	3.82	34.21	0.035	3.15
952	3.35	34.30	0.034	3.16
1238	2.82	34.42	0.042	3.18

STA 64-54 57° 28.5' N WEATHER c. 1 Sept 54 141° 14.4' W WIND NNE 8 1048 (+8) DEPTH 1890 60°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.64	32.30	0.547	0.51
10	14.58	32.25	0.549	0.50
19	14.44	32.29	0.628	0.75
29	7.93	32.42	0.627	1.99
48	5.55	32.61	0.586	1.34
72	5.24	32.83	0.520	1.79
96	5.14	32.02	0.476	1.82
143	5.88	33.68	0.263	2.38
191	5.47	33.89	0.197	2.72
286	4.70	33.96	0.126	2.85
191	5.46	33.87	0.208	2.57
286	4.72	33.95	0.137	2.83
477	4.14	34.07	0.052	3.00
715	3.62	34.25	0.040	3.17
953	3.15	34.38	0.034	3.05
1239	2.69	34.43	0.043	3.22

STA 64-55 56° 11.0' N WEATHER c. 2 Sept 54 141° 12.9' W WIND Calm 0016 (+8) DEPTH 1990 60°/57°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.09	32.47	0.553	0.67
10	14.55	32.56	0.564	0.85
19	12.87	32.54	0.588	0.88
29	7.12	32.56	0.639	1.24
48	5.53	32.70	0.603	1.44
71	5.02	32.83	0.600	1.71
95	4.64	32.97	0.564	1.80
142	5.82	32.62	0.281	2.23
190	5.57	33.86	0.216	2.57
190	5.60	33.87	0.215	2.67
286	4.83	33.96	0.136	2.73
476	4.27	34.09	0.064	2.93
714	3.68	34.23	0.039	3.02
952	3.16	34.35	0.038	3.11
1129	2.44	34.50	0.062	3.16
1129	2.43	34.49	0.060	3.01
1905	2.04	34.59	0.108	2.99
2381	1.76	34.61	0.158	2.70
2858	1.61	34.65	0.203	2.71
3333	1.52	34.68	0.247	2.67

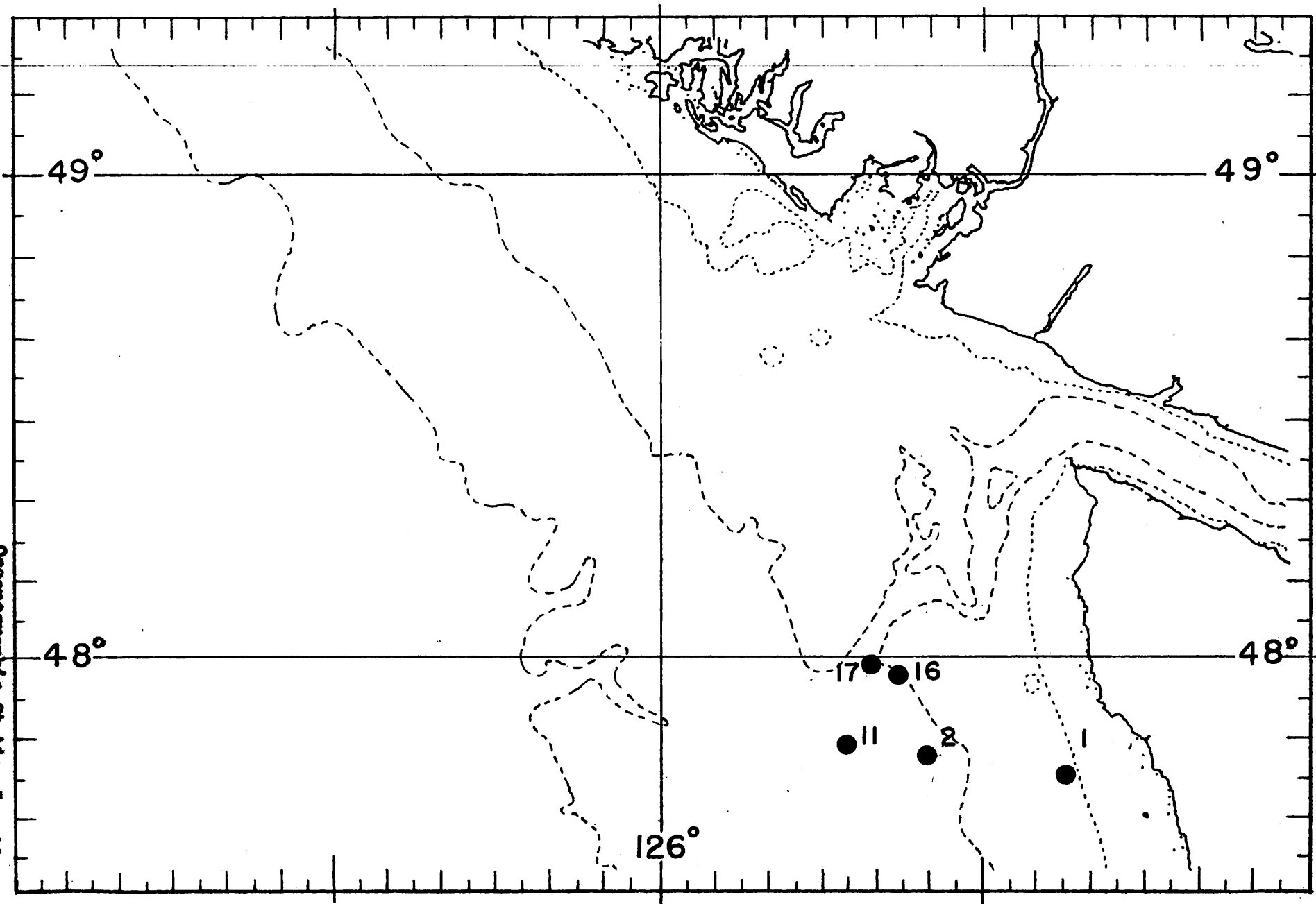
STA 64-56 56° 09.0' N WEATHER c. 2 Sept 54 138° 56.2' W WIND WNW 3 1455 (+8) DEPTH 1720 fm 68°/61°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.36	32.30	0.492	0.66
10	14.90	32.28	0.493	0.52
19	10.73	32.31	0.549	0.77
29	7.09	32.42	0.565	1.15
47	5.40	32.56	0.541	1.43
71	5.00	32.86	0.525	1.68
95	5.10	33.07	0.427	1.88
142	5.78	33.76	0.234	2.37
190	5.03	33.87	0.195	2.80
286	4.57	33.98	0.099	3.03
190	5.36	33.87	0.194	2.70
286	4.58	34.00	0.096	3.06
476	4.00	34.18	0.040	3.03
714	3.50	34.29	0.032	3.19
952	3.01	34.40	0.036	3.06
1238	2.52	34.48	0.050	3.13

STA 64-57 56° 09.0' N WEATHER b. 3 Sept 54 136° 47.2' W WIND NW 10 0133 (+8) DEPTH 1320 fm 58°/56°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.48	31.30	0.530	0.45
10	13.50	31.29	0.533	0.47
19	10.74	31.96	0.500	1.01
29	9.00	32.03	0.452	1.39
48	8.55	32.42	0.504	1.23
71	6.44	32.64	0.454	1.66
95	5.65	32.77	0.532	1.59
142	5.61	33.19	0.353	2.13
190	5.88	33.73	0.278	2.18
285	5.16	33.89	0.193	2.70
190	5.89	33.69	0.277	2.41
282	5.23	33.88	0.198	2.57
466	4.47	34.03	0.088	2.90
701	4.02	34.19	0.038	3.09
934	3.50	-----	0.032	2.95
1215	2.90	34.41	0.036	3.09

STA 64-58 56° 09.0' N WEATHER b.c. 3 Sept 54 135° 50.8' W WIND NW 8 0805 (+8) DEPTH 800 fm 68°/61°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.24	31.38	0.603	0.64
9	11.12	31.37	0.604	0.91
18	9.81	31.70	0.557	1.18
26	8.82	31.88	0.501	1.49
44	8.66	32.34	0.537	1.19
66	7.10	32.41	0.424	1.83
88	6.21	32.83	0.355	1.96
132	5.80	33.28	0.312	2.19
176	5.68	33.59	0.259	2.55
266	5.32	33.91	0.207	2.74
174	5.88	33.69	0.268	2.43
261	5.44	33.89	0.210	2.64
437	4.42	34.13	0.086	3.04
660	4.05	34.19	0.050	3.14
885	3.60	34.30	0.035	3.16
1159	3.04	34.40	0.042	3.29

STA 64-59 56° 09.0' N WEATHER b.c. 3 Sept 54 135° 38.8' W WIND W 9 1127 (+8) DEPTH 390 fm 54°/53°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.32	31.43	0.608	1.06
10	10.90	31.47	0.602	1.00
19	10.16	31.60	0.576	0.70
29	8.46	31.74	0.484	1.66
48	7.86	32.13	0.440	1.81
71	6.78	32.56	0.493	1.65
95	6.10	32.88	0.452	1.87
143	5.76	33.37	0.297	2.16
190	5.76	33.76	0.251	2.56
285	5.02	33.95	0.166	2.84
187	5.66	33.74	0.239	2.46
281	5.01	33.94	0.160	2.78
470	4.34	34.12	0.071	3.00

STA 64-60 56° 09.0' N WEATHER b.c. 3 Sept 54 135° 12.5' W WIND W 14 1522 (+8) DEPTH 175 fm 61°/57°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.65	30.44	0.594	1.18
9	12.27	31.47	0.588	0.91
18	12.60	31.71	0.585	0.76
27	12.42	31.74	0.578	0.82
45	8.86	32.36	0.529	1.20
68	7.37	32.45	0.500	1.53
91	6.48	32.66	0.494	1.78
136	5.90	33.29	0.336	2.22
181	5.34	33.64	0.218	2.73
226	5.22	33.78	0.195	2.88



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Oceanographic Station Locations
BROWN BEAR Cruise No. 67
15 - 17 October 1954

STA 67-1 47° 45.2' N WEATHER c. 15 Oct 54 124° 44.7' W WIND SSE 12 2049 (+8) DEPTH 35 fm 62°/57°F Hoh Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.17	31.27	0.516	0.77
10	13.02	31.29	0.521	0.71
20	12.80	31.38	0.508	0.88
30	10.16	32.19	0.405	1.65
50	7.78	32.98	0.293	2.34

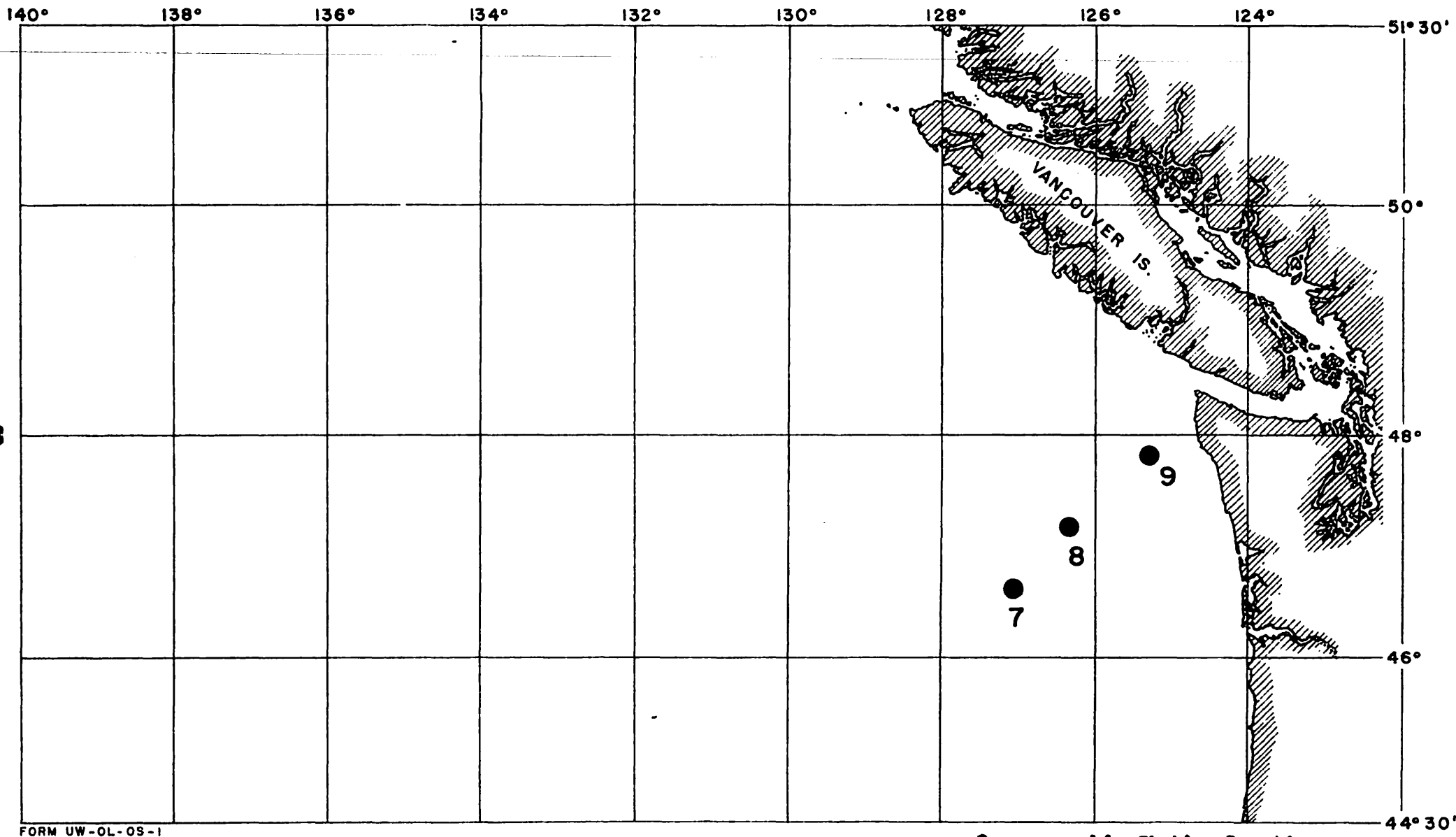
STA 67-6 47° 47.3' N WEATHER c. 15 Oct 54 125° 10.8' W WIND SxW 12 0038 (+8) DEPTH 250 fm 60°/57°F Hoh Head, West of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.08	31.52	0.529	0.75
10	13.10	31.52	0.531	0.72
20	13.04	31.52	0.535	0.76
30	10.16	32.37	0.545	1.10
49	8.37	32.56	0.509	1.34
74	7.41	33.00	0.327	2.20
98	7.57	33.44	0.286	2.26
148	7.22	33.81	0.217	2.59
197	6.82	33.90	0.175	2.63
296	6.11	33.98	0.145	2.72

STA 67-11 47° 49.3' N WEATHER c. 16 Oct 54 125° 25.0' W WIND SE 23 0427 (+8) DEPTH 500 fm 59°/57°F Off Destruction Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.74	31.65	0.515	0.78
10	12.79	31.65	0.518	0.80
19	12.78	31.63	0.516	0.82
29	12.75	31.64	0.508	0.82
48	7.56	32.66	0.389	0.82
70	7.06	32.94	0.390	1.91
91	7.32	33.36	0.303	1.89
132	7.43	33.82	0.249	2.36
145	6.77	33.92	0.168	----
173	7.00	33.91	0.212	2.49
282	6.28	34.00	0.154	2.64
417	5.52	34.09	0.086	2.68
652	4.48	34.23	0.028	2.64
892	3.67	34.37	0.028	2.82

STA 67-16 47° 57.3' N WEATHER o. 16 Oct 54 126° 15.9' W WIND SSE 20 1551 (+8) DEPTH 1010 fm 59°/58°F				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.73	31.96	0.529	0.62
9	13.87	31.95	0.533	0.59
17	13.57	32.09	0.515	0.65
25	12.94	32.13	0.516	0.88
42	7.83	32.58	0.495	1.29
63	7.26	32.66	0.507	1.76
85	6.91	32.89	0.469	1.78
122	7.65	33.69	0.294	2.31
172	7.09	33.87	0.233	2.44
260	6.17	33.96	0.179	2.84
254	6.38	33.97	0.174	2.69
434	5.30	34.08	0.094	3.01
659	4.38	34.23	0.030	3.28
885	3.74	34.38	-----	3.01
1289	2.74	34.50	0.055	3.00

STA 67-17 47° 59.6' N WEATHER o.
 16 Oct 54 125° 21.1' W WIND SSW 28
 2304 (+8) DEPTH 300 fm 54°/54°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.20	31.93	0.502	1.14
8	12.20	31.92	0.502	1.11
16	12.16	31.96	0.501	1.10
25	8.68	32.43	0.450	1.65
41	7.30	32.73	0.538	1.54
61	7.21	33.79	0.222	1.97
82	6.87	33.90	0.168	2.53



FORM UW-OL-OS-1

Oceanographic Station Locations
BROWN BEAR CRUISE No. 80
3 - 7 January 1955

STA 80-7 47° 15.8' N WEATHER c. 5 Jan 55 127° 03.9' W WIND WNW 12 0818 (+8) DEPTH 1400 fm 46°/41°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.18	32.36	0.571	1.10
10	9.23	32.36	0.570	1.05
20	9.20	32.34	0.570	1.10
30	9.15	32.35	0.570	1.05
50	9.18	32.36	0.541	1.05
75	6.88	32.74	0.548	1.50
99	7.54	33.12	0.420	2.05
142	7.14	33.76	0.284	2.50
195	6.58	33.90	0.237	2.30
294	5.62	33.97	0.165	2.90
195	6.61	33.87	0.237	2.60
296	5.66	33.97	0.164	3.00
485	4.92	34.10	0.059	3.25
742	4.06	34.29	0.023	3.30
985	3.46	34.42	0.030	3.10
1515	2.46	34.53	0.067	3.40
2042	1.92	34.57	0.139	3.30

STA 80-8 47° 34.5' N WEATHER b.c. 5 Jan 55 126° 11.5' W WIND NW 4 1512 (+8) DEPTH 1000 fm 47°/43°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.72	32.30	0.568	0.95
10	9.74	32.30	0.564	0.95
20	9.76	32.30	0.568	1.00
30	9.67	32.29	0.563	0.95
50	9.62	32.31	0.561	0.90
76	7.88	32.65	0.542	1.40
101	7.37	33.15	0.425	2.20
153	7.34	33.82	0.259	2.50
205	6.70	33.94	0.198	2.75
313	5.82	34.02	0.141	2.80
100	7.20	32.90	0.488	1.55
279	6.02	34.02	0.159	3.00
539	4.82	34.14	0.058	3.15
795	4.00	34.34	0.033	3.40
1261	2.98	34.49	0.046	3.30
1736	2.27	34.56	0.095	3.50

STA 80-9 47° 54.1' N WEATHER c. 5 Jan 55 125° 24.7' W WIND WSW 2 2245 (+8) DEPTH 457 fm 47°/44°F				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.13	32.08	0.559	----
11	10.16	32.10	0.557	----
21	10.19	32.10	0.563	----
32	10.09	32.10	0.553	----
53	10.10	32.12	0.560	----
80	8.66	32.94	0.421	----
106	7.84	33.58	0.271	----
160	7.62	33.73	0.219	----
212	7.47	33.78	-----	----
157	7.69	33.74	0.216	----
207	7.58	33.80	0.202	----
314	6.35	33.96	0.187	----
527	4.98	33.89	0.067	----
740	4.14	34.31	0.029	----

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