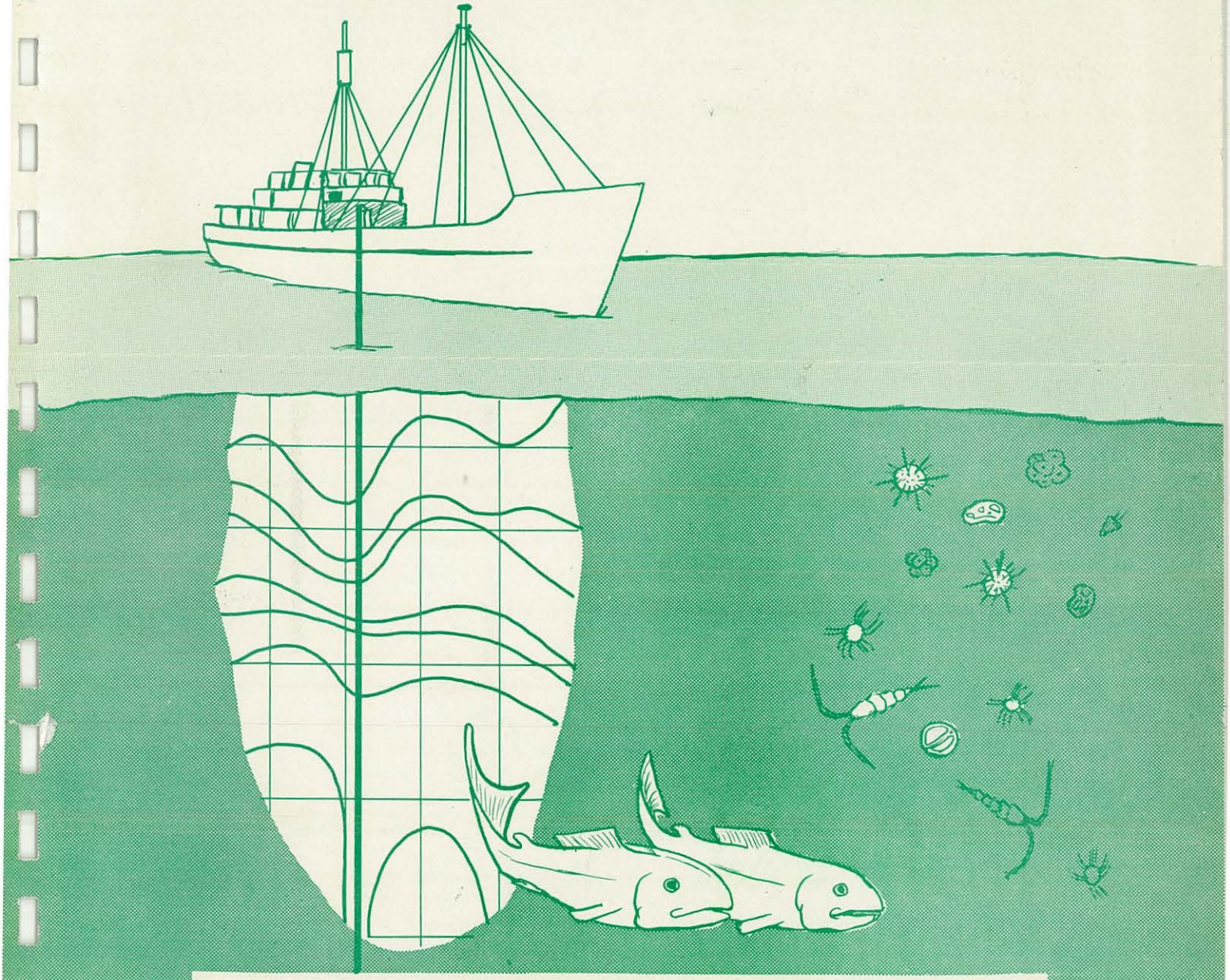
MARINE RESEARCH

BUREAU OF COMMERCIAL FISHERIES



CRUISE AND DATA REPORT

RV George B. Kelez

Cruise 66-1, February 1 - April 6, 1966

by W. J. Ingraham, Jr., T. Joyner, and F. Favorite

BIOLOGICAL LABORATORY SEATTLE, WASHINGTON

CRUISE REPORT

RV George B. Kelez

Cruise 66-1, February 1 - April 6, 1966

Mission

This cruise was designed for the investigation of oceanic conditions in two areas of the Subarctic Pacific Region inhabited by salmon stocks exposed to high seas fishing.

The first of these was an area south of the Komandorskiy Islands characterized by a submarine ridge (Komandorskiy Ridge) having a NNW-SSE axis and lying between latitudes 44° N. - 53° N., and longitudes 165° E. - 173° E. In this region, waters characteristic of the Kuroshio, Oyashio and Alaskan Stream current systems are juxtaposed. Our primary object was to determine the influence of the topography of the ridge on the distribution of properties and movement of these waters. This work was coordinated with the Cooperative Study of the Kuroshio (CSK) and represents part of the United States' commitment to that international scientific program.

The second area was along longitude 176°25' W. from Adak Island to latitude 41° N., characterized by sharp latitudinal boundaries between distinctive water masses (Favorite and Hanavan, 1963*; Favorite et al 1964**). The objectives in this area were: (1) to identify, and ascertain flow in, the distinctive water masses, (2) to locate the boundaries between them, and (3) to compare plant and animal plankton and rates of primary production.

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* 1963. INPFC Bull. 11. Oceanographic conditions and salmon distribution south of the Alaska Peninsula and the Aleutian Islands, 1956.

** 1964. Bur. Comm. Fish. SSR 477. North Pacific Oceanography February-April, 1962.

In both areas, chemical investigations were designed to elucidate the distribution of transition metals and to evaluate their use for the characterization of water masses.

Operations

The cruise was organized into two phases: I. Komandorskiy Ridge Investigations--February 1 to March 16, and II. Investigation of Water Mass Boundaries and Plankton South of Adak--March 18 to April 6.

Personnel

Scientific Party

Dr. T. Joyner, Scientist-in-charge

W. J. Ingraham, Oceanographer

D. Day, Oceanographer

J. Larrance, Oceanographer

D. Fisk, Fishery Aide

Ship's Crew

H. Jacobsen, Master

V. Nielsen, First Officer

P. Sundnes, Second Officer

A. Langstrand, Skilled Fisherman

H. Carlsen, Skilled Fisherman

T. Dunatov, Skilled Fisherman

H. Finlayson, Chief Engineer

H. Wagner, First Assistant Engineer

H. Elsin, Second Assistant Engineer

R. Hornli, Steward

O. Beaverford, Messman

Phase I. Komandorskiy Ridge Investigations

Sampling

Water samples were taken at 34 stations in the Komandorskiy Ridge area (figure 1). Nansen bottles were lowered to standard depths to 5,000 meters. Where the maximum depth was in excess of 2,000 meters, this was done in two casts--the first to 2,000 meters, and the second from 2,500 to 5,000 meters, depending on the depth of the bottom. Station locations and maximum depths are shown in table 1.

At selected stations, a large-volume (64 liters) Bodman sampler was placed at the bottom of the deep cast to provide samples of sufficient size for the determination of cobalt. At some of these and other selected stations, 6-liter, Van Dorn-type water samplers were spaced at intervals along the wire to obtain samples for study of the vertical distribution of manganese, iron, nickel, copper, and zinc. Trace-metal sampling locations are shown in figure 2; other pertinent data in table 2.

In accordance with the provisions of the CSK sampling procedure, biological sampling was carried out at the locations as shown in figure 3 and table 3. This consisted of duplicate vertical hauls from 150 meters with a 45-centimeter plankton net, and horizontal surface tows of 30 minutes duration with a 1.3-meter larval net.

Processing and Analysis

Water samples drawn from each Nansen bottle were analyzed aboard ship for salinity and dissolved oxygen, the former with a Hytech Model inductive salinometer, and the latter by a modified Winkler technique. Dynamic heights were computed aboard ship from the temperature and salinity data using a Digital Equipment Co. PDP-8 computer.

Particulate and dissolved phases of water samples, collected in Van Dorn and Bodman bottles for trace metal analysis, were separated by membrane filtration. In the dissolved phases, transition metals were concentrated by coprecipitation with the natural collectors present in sea water (Laevastu and Thompson, 1956),* filtration through fine porosity sintered glass, and redissolution of the precipitate in hydrochloric acid. The acid concentrates and the membrane filters containing the particulates were frozen and stored for subsequent analysis ashore.

Plankton samples were preserved in 5% formalin solution for weighing and taxonomic identification ashore.

Phase II. Investigation of Water Mass Boundaries and Plankton South of Adak

Sampling and measurement of physical and chemical properties (except for dissolved oxygen which was not measured) were carried out in the same way as described above for Phase I.

Zooplankton Sampling

Zooplankton populations were sampled at locations (table 2, figure 2) characterized by distinctive physical and chemical properties of the water between latitudes 52° N. and 41° N. along longitude 176° 24' W. Duplicate samples were taken with a 45-centimeter net hauled vertically from 150 meters, and a 1-meter midwater trawl hauled obliquely to the surface from 150 meters. All samples were taken at night and were preserved in 5% formalin for weighing and taxonomic identification ashore.

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* J. Cons. Expl. Mer XXI, No. 2: 125-143.

Phytoplankton and Productivity Observations

Data relating to phytoplankton and productivity observations are summarized in table 4. Stations at which these observations were made are shown in figure 4. Water samples for analyses of plant pigments, phytoplankton species, dissolved nitrates, phosphates, and silicates were taken at each station. Primary productivity was measured by assimilation of carbon-14 in samples placed under neutral density filters and exposed to natural light on deck for either dawn to noon or noon to dusk half-day intervals, as indicated in table 4.

Light penetration was measured using an underwater irradiance meter as well as a Secchi disc. Rough seas, bubbles, shadows and reflections from the ship made precise measurements of subsurface light intensities very difficult. The intensity of light incident on the deck was continuously recorded.

On March 20, while riding anchor in Chapel Roads on the southern side of Adak, an *in situ* productivity experiment was performed simultaneously with an incubator experiment to evaluate the incubator technique.

Table 1.--Locations and maximum depths of Nansen casts

Sta. No.	Date GCT	Latitude	Longitude	Max.depth (m.)	Sta. No.	Date GCT	Latitude	Longitude	Max.depth (m.)
		Phase I					Phase II		
1	2/21-22/66	44°58'N.	172°01'E.	4978	35	3/18/66	51°54'N.	176°18'W.	0185
2	2/22/66	45°00'N.	170°18'E.	3065	36	3/19/66	51°43'N.	176°25'W.	0105
3	2/23/66	45°00'N.	169°00'E.	4656	37	3/19/66	51°38'N.	176°25'W.	0166
4	2/24/66	46°57'N.	168°07'E.	4088	38	3/19/66	51°33'N.	176°25'W.	0525
5	2/25/66	46°57'N.	169°37'E.	2281	39	3/19/66	51°28'N.	176°25'W.	1091
6	2/26/66	46°57'N.	170°59'E.	5099	40	3/21/66	51°22'N.	176°26'W.	2094
7	2/26/66	48°00'N.	170°40'E.	5063	41	3/22/66	51°17'N.	176°27'W.	3553
8	2/28/66	47°53'N.	169°00'E.	1951	42	3/22/66	51°09'N.	176°28'W.	4035
9	3/1/66	47°58'N.	167°59'E.	5048	43	3/22/66	51°00'N.	176°29'W.	2011
10	3/1/66	49°02'N.	165°38'E.	5092	44	3/22-23/66	50°48'N.	176°25'W.	2089
11	3/2/66	49°02'N.	167°13'E.	5079	45	3/23/66	50°31'N.	176°26'W.	5935
12	3/2/66	49°01'N.	167°48'E.	2073	46	3/23/66	50°02'N.	176°24'W.	2090
13	3/3/66	49°00'N.	169°18'E.	5057	47	3/24/66	49°29'N.	176°25'W.	2097
14	3/3-4/66	50°08'N.	169°49'E.	3751	48	3/24/66	48°55'N.	176°25'W.	2094
15	3/4/66	50°08'N.	168°04'E.	2074	49	3/24/66	48°15'N.	176°20'W.	2096
16	3/4/66	50°08'N.	166°34'E.	5087	50	3/24/66	48°00'N.	176°25'W.	2098
17	3/5/66	49°56'N.	164°39'E.	5061	51	3/24/66	48°50'N.	176°25'W.	5072
18	3/5/66	51°00'N.	166°00'E.	4928	52	3/25/66	47°30'N.	176°25'W.	2086
19	3/7/66	50°53'N.	169°18'E.	4241	53	3/26/66	46°40'N.	176°25'W.	4057
20	3/8/66	51°02'N.	171°02'E.	4442	54	3/26/66	45°39'N.	176°25'W.	2146
21	3/10/66	52°38'N.	172°39'E.	0512	55	3/27/66	44°30'N.	176°25'W.	2185
22	3/10/66	52°29'N.	172°28'E.	1022	56	3/27/66	43°00'N.	176°25'W.	4593
23	3/10/66	52°20'N.	172°20'E.	2567	57	3/28/66	41°00'N.	176°25'W.	2089
24	3/10-11/66	52°13'N.	172°16'E.	3953					
25	3/11/66	51°59'N.	172°13'E.	5009					
26	3/11/66	51°28'N.	171°23'E.	1942					
27	3/11/66	52°02'N.	170°42'E.	5017					
28	3/12/66	52°00'N.	169°00'E.	4480					
29	3/13/66	52°00'N.	167°37'E.	2055					
30	3/13/66	52°00'N.	165°43'E.	4710					
31	3/13/66	52°54'N.	164°41'E.	2082					
32	3/14/66	52°54'N.	166°40'E.	1588					
33	3/14/66	53°00'N.	168°18'E.	1595					
34	3/14/66	52°55'N.	170°20'E.	1549					

Table 2.--Trace-metal sample data

Station number	Date	Latitude	Longitude	Sampler used	Desired Depth(m.)	Estimated Depth(m.)
2	2/22/66	45°00' N.	170°18' E.	Van Dorn	3000	3015
					2000	1975
					500	494
					100	99
					10	10
3	2/22/66	45°00' N.	169°00' E.	Van Dorn	5000	4666
6	2/25/66	46°57' N.	170°59' E.	Van Dorn	5000	5124
					3000	3089
					2000	2023
					500	491
					10	10
9	2/28/66	47°58' N.	167°59' E.	Bodman	5000	5053
10	3/1/66	49°02' N.	165°38' E.	Van Dorn	5000	5107
14	3/3/66	50°08' N.	169°49' E.	Bodman	4000	3756
17	3/4/66	49°56' N.	164°39' E.	Bodman	5000	5066
				Van Dorn	3000	3083
					2000	2044
					1000	1015
					200	198
					10	10
25	3/10/66	51°59' N.	172°13' E.	Bodman	5000	5014
30	3/12/66	52°00' N.	165°43' E.	Bodman	5000	4715
				Van Dorn	3000	2998
					2000	2036
					1000	1044
					200	197
					10	10
35	3/18/66	51°54' N.	176°18' W.	Van Dorn	27	27
					13	13
					8	8
					4	4
					0	0
37	3/21/66	51°38' N.	176°25' W.	Van Dorn	10	10
42	3/22/66	51°09' N.	176°28' W.	Van Dorn	10	10
45	3/22/66	50°31' N.	176°26' W.	Bodman	6000	5940
46	3/23/66	50°02' N.	176°24' W.	Van Dorn	10	10
51	3/24/66	48°50' N.	176°25' W.	Van Dorn	10	10
57	3/28/66	41°00' N.	176°25' W.	Van Dorn	10	10

Table 3.--Zooplankton sampling stations

Date	Latitude	Longitude	Sampling method *
2/22/66	45°00' N.	170°36' E.	1, 2
2/25/66	46°57' N.	170°59' E.	1, 2
2/28/66	47°54' N.	169°00' E.	1, 2
3/1/66	49°02' N.	167°13' E.	1, 2
3/3/66	50°08' N.	168°04' E.	1, 2
3/7/66	50°53' N.	169°17.5' E.	1, 2
3/11/66	52°00' N.	169°00' E.	1, 2
3/13/66	52°54' N.	164°41' E.	1, 2
3/18/66	51°54.5' N.	176°19.2' W.	1, 3
3/20/66	51°37.5' N.	176°25' W.	1, 3
3/21/66	51°24' N.	176°25' W.	1, 3
3/21/66	51°09' N.	176°25' W.	1, 3
3/22/66	50°34' N.	176°32' W.	1, 3
3/23/66	49°02' N.	176°26' W.	1, 3
3/25/66	48°50' N.	176°26' W.	1, 3
3/25/66	46°45' N.	176°25' W.	1, 3
3/26/66	46°20' N.	176°25' W.	1, 3
3/28/66	41°00' N.	176°25' W.	1, 3

* 1. Vertical haul from 150 m. with 45-centimeter net

2. 30-minute horizontal tow with 1.3-meter net

3. Oblique tow from 150 m. with 1-meter midwater trawl

Table 4.--Productivity sampling

March date	Latitude	Longitude	Depths (m.)	Remarks
18	51°56' N.	176°20' W.	0, 2, 8, 22, 40	Dawn-noon interval
18	51°54' N.	176°18' W.	0, 2, 8, 22, 40	Noon-dusk interval
20	51°39' N.	176°49' W.	0, 4, 8, 13, 27	Comparison of *in situ* and incubator photosynthesis (1000-1600 local time interval)
21	51°38' N.	176°25' W.	0, 4, 8, 13, 27	Dawn-noon and noon-dusk intervals
22	51°09' N.	176°25' W.	0, 6, 12, 19, 39	Dawn-noon and noon-dusk intervals
22	50°34' N.	176°25' W.	0, 6, 12, 19, 39	Pigments, phytoplankton, and nutrients only
23	50°02' N.	176°24' W.	0, 6, 12, 19, 39	Dawn-noon interval
23	49°58' N.	176°26' W.	0, 6, 13, 21, 42	Noon-dusk interval
24	48°24' N.	176°27' W.	0, 6, 13, 21, 42	Dawn-noon interval
24	48°06' N.	176°26' W.	0, 10, 20, 35, 70	Noon-dusk interval
24	48°50' N.	176°25' W.	60, 75, 100, 150, 200	Pigments, phytoplankton, and nutrients only
25	48°50' N.	176°25' W.	0, 6, 14, 23, 47	Dawn-noon interval
26	46°19' N.	176°24' W.	0, 6, 14, 23, 47	Dawn-noon interval
28	41°00' N.	176°25' W.	10, 25, 50, 75, 100	Dawn-noon interval
28	41°00' N.	174°59' W.	0, 10, 20, 35, 70	Noon-dusk interval

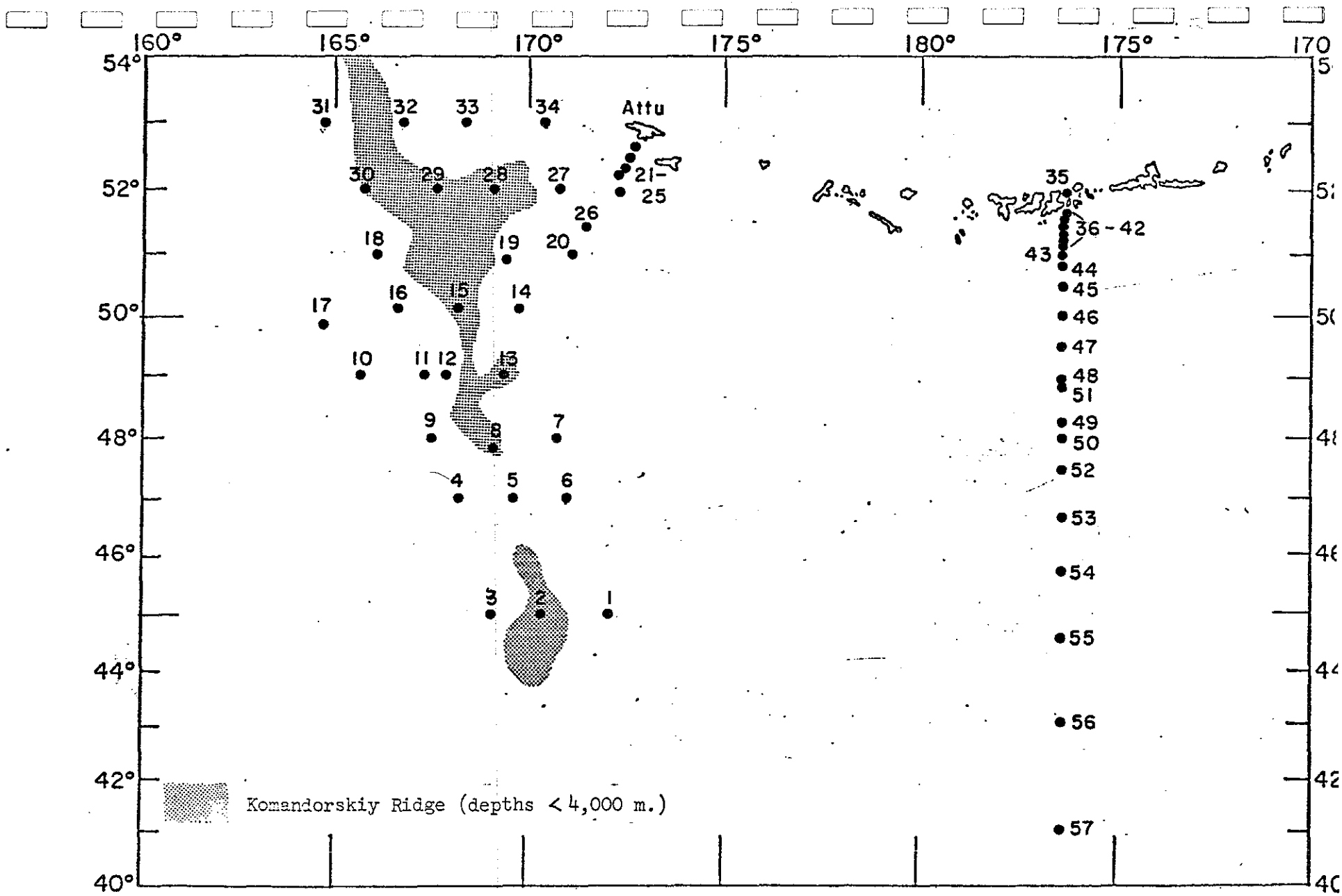

Figure 1.--Oceanographic stations, February-March 1966, RV George B. Kelez.

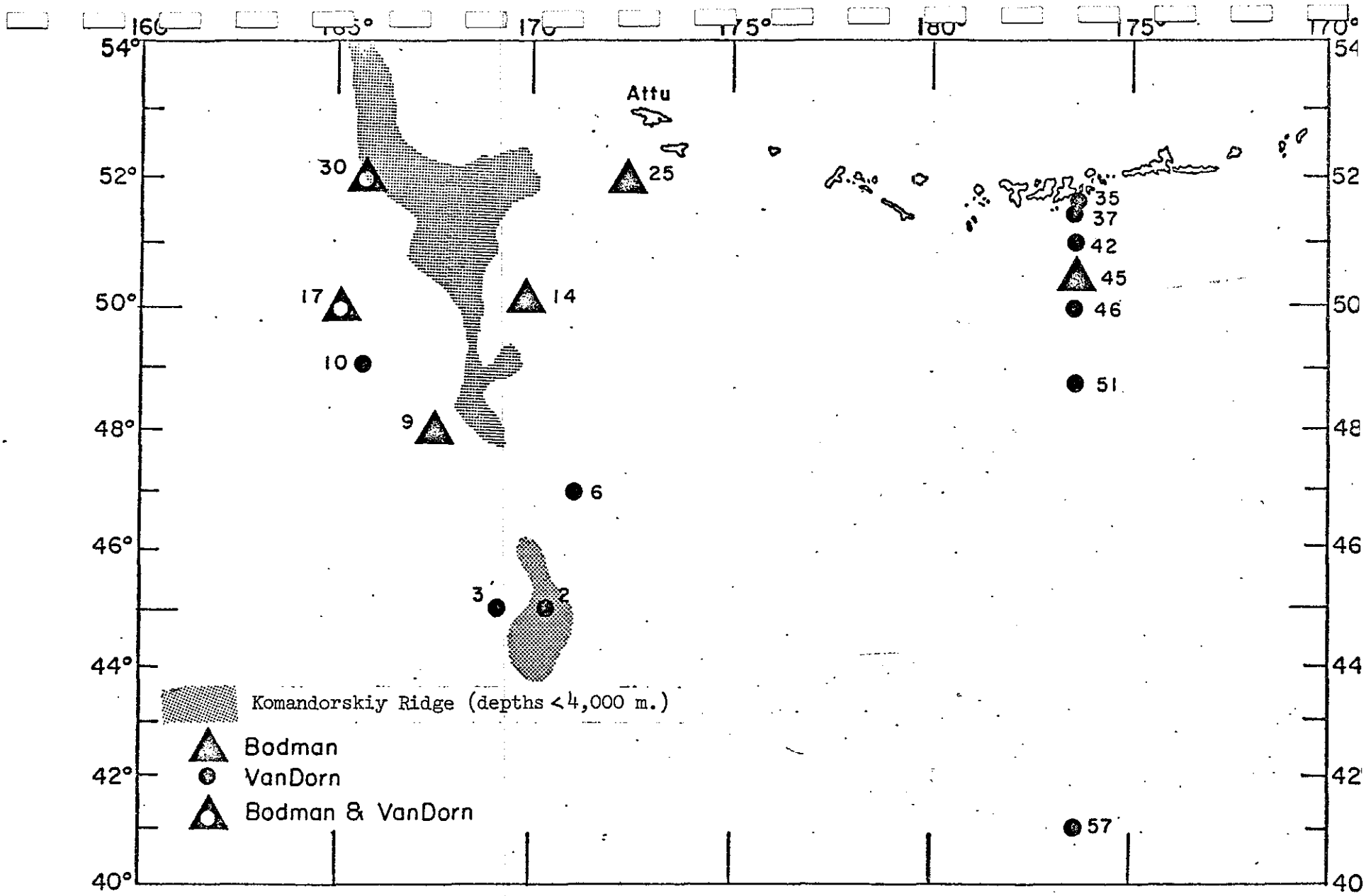

Figure 2.--Trace metal sampling stations, February-March 1966, RV George B. Kelez.

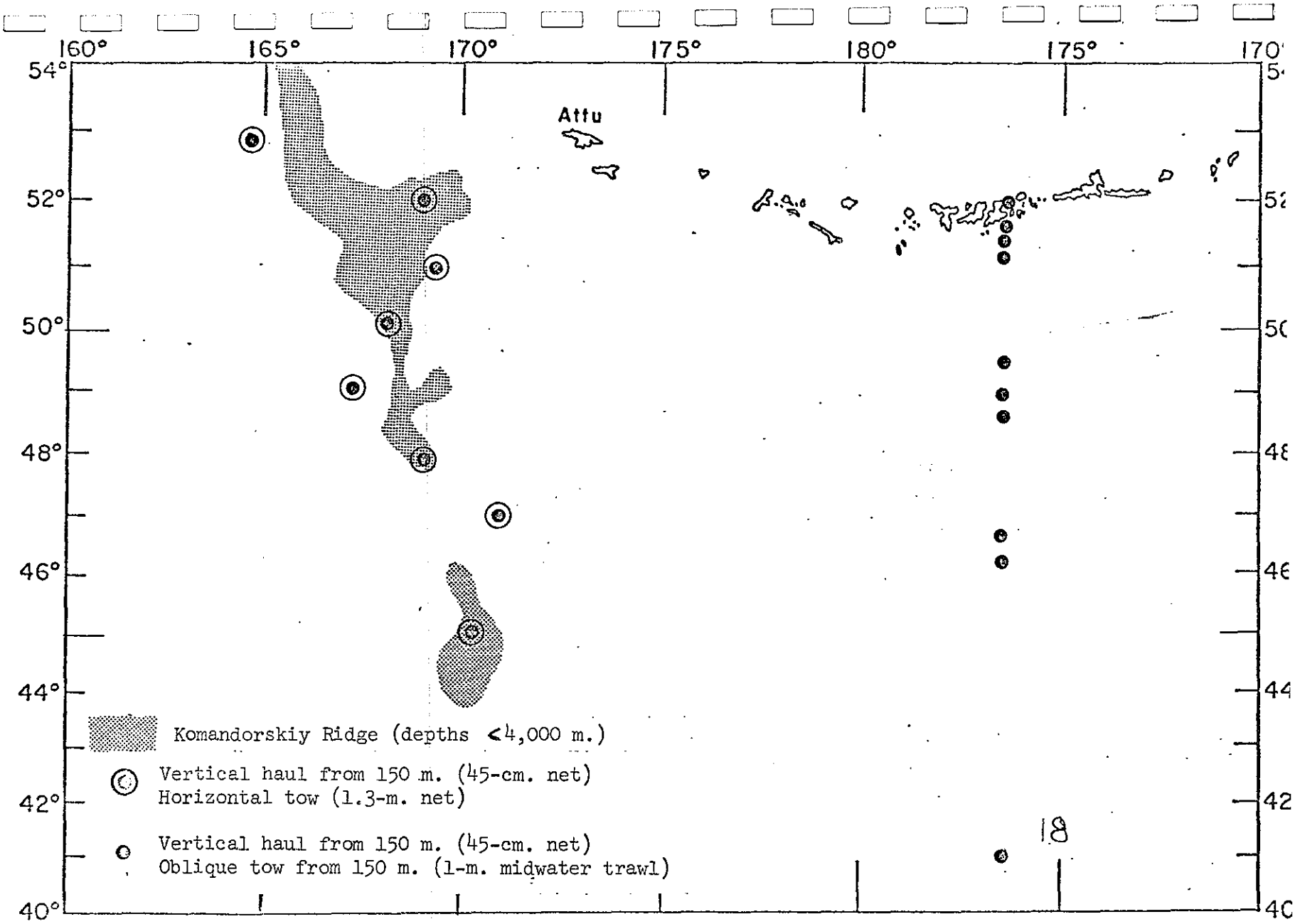

Figure 3.--Zooplankton sampling stations, February-March 1966, RV George B. Kelez.

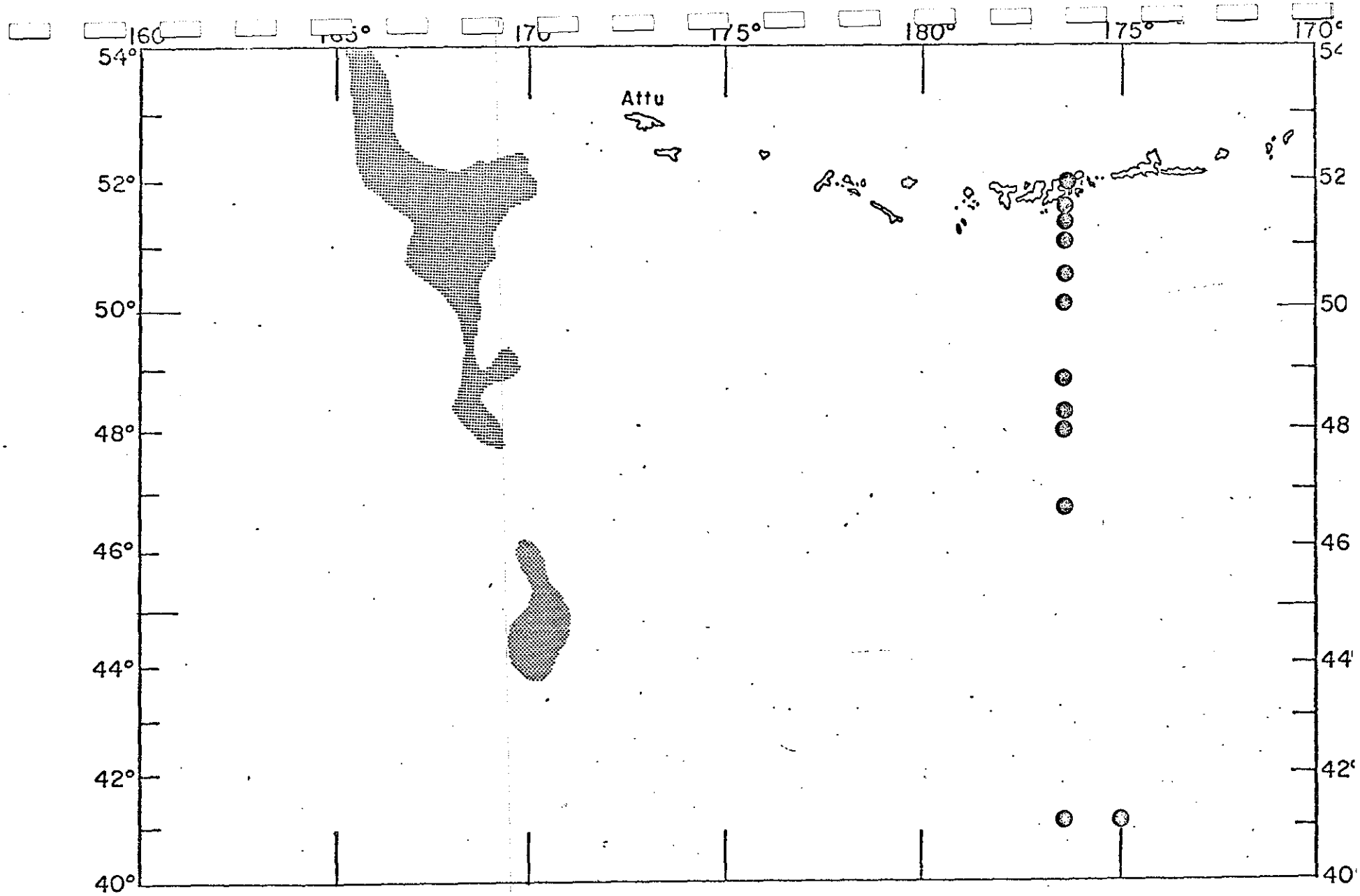

Figure 4.--Productivity Stations, March, 1966, RV George B. Kelez.

DATA REPORT

RV George B. Kelez

Cruise 66-1, February 1 - April 6, 1966

Tabulations of observed physical-chemical data

Station 1-57

RV GEORGE B. KELEZ
STATION 1

44-58 N 172-01 E SND 5706 2.1 22 FEB 1966 2108-0027 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 220 36 KT SEA 4
SWELL 220 AMT 3 BAR 1022 MB DRY 06.6 WET 05.4 BT 20

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	4.9		33.147	26.24	178.6		
10	4.76	A	33.153	26.26	176.8		.656
50	4.76	A	33.152	26.26	177.3		.656
74	4.76	A	33.152	26.26	177.5		.659
104	4.82	A	33.153	26.25	178.3		.652
129	4.83	A	33.192	26.28	175.7		.642
153	4.99	A	33.638	26.61	144.3		.567
207	4.66	A	33.696	26.70	136.9		.509
256	4.04	A	33.746	26.80	127.0		.337
306	3.96	A	33.831	26.88	120.2		.252
410	3.63	A	33.970	27.02	107.3		.148
515	3.50	A	34.100	27.14	097.0		.097
619	3.36	A	34.194	27.23	089.2		.072
843	3.07	X	34.321	27.35	078.2		.062
1052	2.72	A	34.392	27.44	070.5		.058
1260	2.47	X	34.480	27.53	062.4		.072
1581	2.18	A	34.547	27.61	055.7		.100
2110	1.87	X	34.609	27.69	049.7		.165
2485	1.71	A	34.640	27.72	046.8		.206
2984	1.54	A	34.666	27.76	044.2		.253
3981	1.46	A	34.681	27.77	044.6		.310
4978	1.54	A	34.691	27.78	047.8		.310

RV GEORGE B. KELEZ
STATION 2

45-00 N 170-18 E SND 3209 22 FEB 1966 2045-2314 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 270 15 KT SEA 2
SWELL 270 AMT 2 BAR 1022 MB DRY 01.7 WET 00.4 BT 22

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	4.2	33.219	26.37	166.1		
10	4.13 A	33.222	26.38	165.3		.659
51	4.14 A	33.223	26.38	165.7		.673
76	4.14 A	33.224	26.38	165.8		.674
101	4.18 A	33.226	26.38	166.2		.662
126	4.18 A	33.230	26.38	166.1		.659
151	4.17 A	33.280	26.42	162.4		.663
203	5.00 A	33.658	26.63	143.5		.527
253	4.40 A	33.739	26.76	131.3		.459
303	3.94 A	33.813	26.87	121.4		.265
407	3.78 A	33.926	26.97	112.1		.181
512	3.60 A	34.065	27.10	100.6		.123
616	3.44 A	34.175	27.20	091.5		.088
820	3.20 A	34.277	27.31	082.8		.074
1044	2.80 A	34.383	27.43	072.0		.072
1244	2.51 X	34.456	27.51	064.5		.080
1568	2.20 A	34.521	27.59	057.8		.101

RV GEORGE B. KELEZ
STATION 3

45-00 N 169-00 E SND 5768 23 FEB 1966 0705-0841 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 200 35 KT SEA 3
SWELL 200 AMT 2 BAR 1002 MB DRY 06.9 WET 06.0 BT 24

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	3.0	33.060	26.36	167.3		
8	2.75 A	33.061	26.38	165.2		.691
41	2.76 A	33.061	26.38	165.4		.686
62	2.74 A	33.060	26.38	165.4		.687
84	2.77 A	33.079	26.39	164.4		.687
103	3.30 A	33.167	26.41	162.4		.670
128	5.10 A	33.667	26.63	143.1		.560
169	4.80 B	33.704	26.69	137.4		.463
215	4.08 A	33.692	26.76	131.2		.375
254	3.41 A	33.716	26.84	123.0		.298
345	3.49 A	33.867	26.95	113.1		.201
435	3.78 A	34.023	27.05	105.0		.154
528	3.63 A	34.100	27.12	098.4		.121
710	3.25 A	34.226	27.26	086.4		.084
915	2.88 A	34.339	27.39	075.3		.061
1104	2.62 X	34.422	27.47	067.8		.072
1419	2.28 A	34.505	27.57	059.2		.091
1936	1.92 A	34.583	27.66	051.5		.149
2825	1.59 A	34.643	27.73	046.0		.243
3793	1.48 A	34.667	27.76	045.4		.305
4656	1.49 A	34.677	27.77	047.0		.331

RV GEORGE B. KELEZ

STATION 4

46-57 N 168-07 E SND 6125 24 FEB 1966 1955-2318 GCT
WEATHER 26 CLOUDS 8 AMT 3 WIND 340 30 KT SEA 3
SWELL 230 AMT 3 BAR 1016 MB DRY-01.8 WET-03.6 BT 27

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.4		32.939	26.31	171.7		
10	2.35	A	32.947	26.32	170.7		.691
51	2.35	A	32.938	26.31	171.6		.694
77	2.38	X	32.943	26.31	171.5		.690
103	2.38	A	32.933	26.31	172.4		.690
128	2.38	A	32.932	26.31	172.5		.691
154	2.57	A	33.185	26.49	155.0		.550
203	2.93	A	33.593	26.79	127.5		.308
258	3.26	B	33.792	26.92	115.9		.159
307	3.39	A	33.923	27.01	107.6		.095
412	3.42	A	34.076	27.13	097.2		.054
517	3.20	X	34.186	27.23	087.5		.058
621	3.08	B	34.249	27.30	082.3		.059
836	2.84	A	34.361	27.41	072.8		.052
2096	1.81	X	34.614	27.69	048.6		.185
2593	1.60	A	34.645	27.73	045.3		.239
3091	1.54	A	34.665	27.76	044.5		.280
4088	1.47	A	34.678	27.77	045.3		.323

RV GEORGE B. KELEZ
STATION 5

46-57 N 169-37 E SND 2651 25 FEB 1966 0824 GCT
WEATHER 26 CLOUDS X AMT X WIND 310 30 KT SEA 4
SWELL 270 AMT 3 BAR 1011 MB DRY 01.5 WET 00.5 BT 29

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.0	33.12	26.48	155.1		
8	2.06 A	33.119	26.48	155.6		.697
43	2.05 A	33.120	26.48	155.5		.689
63	2.06 A	33.122	26.48	155.5		.684
83	2.09 A	33.123	26.48	155.7		.691
101	2.08 A	33.122	26.48	155.8		.684
123	2.10 A	33.123	26.48	155.9		.685
163	2.82 B	33.532	26.75	130.9		.368
208	3.32 A	33.796	26.91	115.8		.192
248	3.37 A	33.901	26.99	108.7		.108
335	3.42 A	34.025	27.09	100.5		.069
427	3.50 A	34.152	27.18	092.5		.043
514	3.37 A	34.220	27.25	086.7		.048
690	3.06 A	34.318	27.35	077.4		.048
885	2.80 A	34.392	27.43	070.4		.054
1071	2.50 A	34.458	27.51	063.4		.059
1358	2.14 X	34.537	27.61	055.0		.098
1827	1.88 X	34.600	27.68	049.4		.160
2281	1.68 A	34.638	27.72	045.9		.215

RV GEORGE B. KELEZ
STATION 6

46-57 N 170-59 E SND 6053 26 FEB 1966 0009-0632 GCT
WEATHER 02 CLOUDS 8 AMT 4 WIND 290 35 KT SEA 4
SWELL 290 AMT 3 BAR 1030 MB DRY 00.8 WET-00.5 BT 30

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.8	32.895	26.24	178.1		
12	2.64 A	32.896	26.26	176.8		.699
50	2.64 A	32.896	26.26	177.0		.696
74	2.66 A	32.899	26.26	177.0		.695
112	2.64 A	32.940	26.29	173.9		.654
124	2.53 A	33.013	26.36	167.5		.682
166	2.58 A	33.226	26.52	152.0		.563
221	3.67 A	33.879	26.95	113.0		.091
274	3.68 A	33.997	27.04	104.7		.045
377	3.59 A	34.097	27.13	097.1		.038
484	3.42 A	34.203	27.23	088.2		.039
590	3.21 A	34.278	27.31	081.2		.039
802	2.82 A	34.378	27.42	071.1		.045
1010	2.51 A	34.457	27.51	063.2		.058
1220	2.25 A	34.513	27.58	057.4		.084
1538	2.04 B	34.556	27.63	053.3		.114
2060	1.78 X	34.616	27.70	048.0		.191
2599	1.55 A	34.648	27.74	044.5		.256
3064	1.48 A	34.662	27.76	043.9		.276
4099	1.46 A	34.676	27.77	045.3		.326
5099	1.54 A	34.681	27.77	048.7		.337

RV GEORGE B. KELEZ
STATION 7

48-00 N 170-40 E SND 26 FEB 1966 1723-1935 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 230 35 KT SEA 4
SWELL 230 AMT 3 BAR 1021 MB DRY 01.8 WET 00.2 BT 32

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.7		32.949	26.29	173.3		
10	2.66	A	32.946	26.29	173.2		.703
50	2.66	A	32.938	26.29	174.0		.710
75	2.68	A	32.941	26.29	174.0		.704
99	2.70	A	32.941	26.29	174.2		.690
124	2.73	A	32.959	26.30	173.2		.692
150	2.97	A	33.479	26.69	136.2		.373
201	3.48	A	33.784	26.89	118.2		.141
350	3.54	A	34.030	27.08	101.4		.048
404	3.52	A	34.103	27.14	096.2		.059
508	3.34	A	34.177	27.21	089.5		.051
612	3.18	A	34.239	27.28	084.0		.047
716	3.00	A	34.297	27.34	078.5		.047
830	2.84	A	34.351	27.40	073.5		.049
1048	2.56	A	34.418	27.48	066.8		.074
1264	2.31	X	34.477	27.54	060.9		.079
1584	2.06	A	34.545	27.62	054.6		.115
2107	1.80	X	34.604	27.69	049.2		.196
2579	1.64	A	34.634	27.72	046.6		.241
3074	1.50	A	34.651	27.75	044.9		.282
4067	1.47	A	34.668	27.76	045.9		.329
5063	1.55	A	34.673	27.76	049.4		

RV GEORGE B. KELEZ
STATION 8

47-53 N 169-00 E SND 2288 28 FEB 1966 1736 GCT
WEATHER 02 CLOUDS X AMT 9 WIND 290 16 KT SEA 2
SWELL 290 AMT 1 BAR 1022 MB DRY 00.9 WET-00.9 BT 33

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.1	33.165	26.51	152.4		
27	2.07 A	33.173	26.52	151.6		.695
65	2.08 A	33.172	26.52	151.8		.685
87	2.09 A	33.174	26.52	151.8		.685
109	2.12 A	33.176	26.52	152.0		.684
132	2.12 A	33.178	26.52	151.9		.677
156	3.14 A	33.589	26.76	129.4		.318
202	3.63 A	33.914	26.98	109.9		.070
249	3.60 A	34.000	27.05	103.5		.045
296	3.55 A	34.057	27.10	099.1		.044
389	3.44 A	34.126	27.16	093.5		.044
482	3.32 A	34.196	27.23	087.7		.044
579	3.14 B	34.262	27.30	081.6		.043
774	2.90 A	34.345	27.39	074.3		.048
969	2.61 A	34.410	27.47	067.6		.058
1167	2.37 X	34.472	27.54	061.4		.076
1457	2.13 X	34.527	27.60	056.1		.081
1951	1.78 A	34.603	27.69	048.5		.179

RV GEORGE B. KELEZ
STATION 9

47-58 N 167-29 E SND 5962 01 MAR 1966 0145-0725 GCT
WEATHER 02 CLOUDS 5 AMT 2 WIND 290 05 KT SEA 2
SWELL 290 AMT 1 BAR 1023 MB DRY 02.5 WET 01.0 BT 35

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.9		33.126	26.50	153.9	1455.2	
10	1.82	A	33.126	26.50	153.4	1455.0	.691
50	1.82	A	33.126	26.50	153.5	1455.7	.691
75	1.81	A	33.129	26.51	153.2	1456.0	.692
101	1.82	A	33.129	26.51	153.3	1456.5	.692
126	1.86	A	33.130	26.50	153.6	1457.1	.681
150	3.56	A	33.825	26.91	115.5	1465.8	.116
203	3.62	A	33.920	26.98	109.3	1467.1	.065
252	3.62	A	34.004	27.05	103.4	1468.0	.043
302	3.59	A	34.065	27.10	098.9	1468.8	.033
406	3.48	A	34.158	27.19	091.6	1470.1	.039
510	3.32	A	34.230	27.26	085.4	1471.2	.037
614	3.14	A	34.292	27.32	079.6	1472.3	.038
819	2.84	A	34.377	27.42	071.5	1474.5	.044
1043	2.54	A	34.444	27.50	064.7	1476.9	.056
1243	2.33	B	34.498	27.56	059.5	1479.4	.079
1567	2.04	A	34.556	27.63	053.4	1483.6	.116
2091	1.78	X	34.615	27.70	048.1	1491.3	.191
2552			34.644				.252
3052	1.50	A	34.667	27.76	043.7	1506.4	.284
4050	1.47	B	34.682	27.77	044.9	1523.4	.340
5048	1.53	A	34.690	27.78	047.8	1540.9	.330

RV GEORGE B. KELEZ
STATION 10

49-02 N 165-38 E SND 5504 01 MAR 1966 1927-2256 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 130 15 KT SEA 2
SWELL 130 AMT 1 BAR 1022 MB DRY 01.0 WET-00.2 BT 37

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	1.0	33.019	26.47	156.3		
10	.88 A	33.041	26.50	153.9		.712
50	.89 A	33.042	26.50	153.9		.717
75	.89 X	33.043	26.50	153.8		.733
100	.91 A	33.044	26.50	153.8		.716
126	.92 A	33.045	26.50	153.8		.711
152	3.69 A	33.832	26.91	116.2		.142
203	3.66 A	33.950	27.00	107.5		.063
253	3.66 A	34.009	27.05	103.5		.046
308	3.62 A	34.096	27.12	097.0		.039
412	3.51 A	34.167	27.19	091.3		.044
517	3.34 A	34.233	27.26	085.4		.039
621	3.18 A	34.289	27.32	080.3		.039
835	2.85 A	34.376	27.42	071.8		.042
1055	2.56 A	34.450	27.50	064.5		.050
1264	2.30 C	34.510	27.57	058.4		.072
1574	2.06 A	34.562	27.63	053.3		.110
2094	1.76 X	34.618	27.70	047.7		.188
2595	1.60 A	34.664	27.75	043.9		.248
3094	1.48 A	34.676	27.77	042.9		.289
4093	1.46 A	34.692	27.78	044.1		.335
5092	1.53 A	34.699	27.78	047.3		.333

RV GEORGE B. KELEZ
STATION 11

49-02 N 167-13 E SND 5340 02 MAR 1966 0758-0927 GCT
WEATHER 02 CLOUDS X AMT X WIND 130 30 KT SEA 2
SWELL 130 AMT 1 BAR 1022 MB DRY 01.2 WET 00.2 BT 39

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	1.2	33.142	26.56	148.1		
10	1.38 A	33.144	26.55	149.1		.686
50	1.36 A	33.141	26.55	149.2		.685
75	1.37 X	33.142	26.55	149.2		.678
101	1.37 A	33.143	26.55	149.2		.677
126	1.38 A	33.144	26.55	149.2		.684
152	3.52 A	33.779	26.88	118.6		.168
204	3.65 A	33.954	27.01	107.1		.062
253		34.012				.045
308	3.55 A	34.078	27.12	097.6		.055
413	3.44 X	34.171	27.20	090.3		.044
517	3.30 A	34.237	27.27	084.7		.051
622	3.11 A	34.301	27.33	078.7		.039
836	2.82 A	34.380	27.42	071.2		.044
1056	2.50 A					.061
1265	2.29 X	34.496	27.56	059.3		.081
1574	2.05 X	34.556	27.63	053.6		.114
2094	1.79 A	34.617	27.70	048.1		.177
2591	1.60 A	34.647	27.74	045.2		.239
3089	1.48 A	34.666	27.76	043.6		.278
4084	1.46 A	34.677	27.77	045.2		.321
5079	1.49 A	34.681	27.77	047.8		.327

RV GEORGE B. KELEZ
STATION 12

49-01 N 167-48 E SND 2296 02 MAR 1966 2104 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 140 30 KT SEA 4
SWELL 130 AMT 1 BAR 1022 MB DRY 03.2 WET 02.0 BT 41

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.5		33.161	26.55	148.5		
10	1.26	A	33.154	26.56	147.6		.693
50	1.26	A	33.147	26.56	148.1		.682
75	1.27	A	33.146	26.56	148.3		.685
100	1.30	X	33.147	26.56	148.4		.681
125	1.36	A	33.156	26.56	148.2		.675
151	2.59	A	33.481	26.73	132.8		.396
207	3.71	A	33.901	26.96	111.7		.075
251	3.70	B	33.967	27.01	107.0		.061
305	3.62	A	34.080	27.11	098.1		.042
409	3.50	A	34.167	27.19	091.2		.043
513	3.34	B	34.232	27.26	085.4		.039
617	3.21	A	34.286	27.31	080.8		.040
830	2.87	A	34.373	27.41	072.2		.053
1047	2.57	A	34.449	27.50	064.7		.053
1255	2.30	A	34.504	27.57	058.8		.070
2073	1.74	A	34.600	27.69	048.6		.185

RV GEORGE B. KELEZ
STATION 13

49-00 N 169-18 E SND 5431 03 MAR 1966 0851-0941 GCT
WEATHER 25 CLOUDS X AMT 9 WIND 090 25 KT SEA 4
SWELL 090 AMT 3 BAR 1013 MB DRY 03.3 WET 02.5 BT 43

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.5	33.231	26.53	150.3		
10	2.15 A	33.233	26.56	147.6		.669
50	2.14 A	33.233	26.56	147.7		.666
75		33.246				.661
100	2.01 A	33.245	26.58	145.9		.661
114	1.98 A	33.248	26.59	145.5		.658
152	3.02 A	33.562	26.75	130.4		.371
204	3.76 A	33.953	27.00	108.3		.076
253	3.70 A	34.043	27.07	101.3		.051
308	3.59 A	34.098	27.13	096.5		.050
413	3.44 X	34.191	27.22	088.8		.044
517	3.29 A	34.261	27.29	082.8		.045
622	3.12 A	34.318	27.35	077.6		.041
837	2.82 A	34.400	27.44	069.7		.046
1056	2.52 X	34.467	27.52	062.9		.056
1267	2.28 X	34.518	27.58	057.5		.076
1577	2.00 X	34.571	27.64	051.9		.118
2097	1.72 A	34.632	27.72	046.2		.185
2576	1.60 A	34.656	27.74	044.5		.241
3070	1.50 A	34.676	27.77	043.1		.276
4058	1.46 A	34.686	27.78	044.4		.323
5057	1.53 A	34.695	27.78	047.5		.327

RV GEORGE B. KELEZ
STATION 14

50-08 N 169-49 E SND 03 04 MAR 1966 2250-0043 GCT
WEATHER 28 CLOUDS X AMT 9 WIND 110 05 KT SEA 2
SWELL 110 AMT 1 BAR 1008 MB DRY 04.6 WET 04.6 BT 46

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.7	33.107	26.42	161.3		
10	2.38 A	33.099	26.44	159.5		.673
50	2.36 A	33.101	26.44	159.3		.675
75	2.36 A	33.106	26.45	159.0		.674
100	2.32 B	33.124	26.46	157.4		.669
125	2.39 A	33.139	26.47	156.9		.665
151	2.46 A	33.182	26.50	154.3		.643
202	3.78 A	33.943	26.99	109.2		.076
253	3.72 A	34.029	27.06	102.5		.055
305	3.64 A	34.091	27.12	097.5		.048
405	3.50 X	34.174	27.20	090.6		.046
510	3.36 A	34.233	27.26	085.6		.040
615	3.20 A	34.293	27.32	080.2		.039
820	2.86 A	34.385	27.42	071.2		.041
1035	2.55 X	34.462	27.51	063.4		.054
1250	2.26 A	34.523	27.59	056.9		.077
1525	2.02 X	34.572	27.64	051.9		.113
2051	1.74 A	34.628	27.71	046.5		.182
2550	1.58 A	34.658	27.75	044.0		.241
3051	1.45 A	34.677	27.77	042.3		.313
3450	1.43 A	34.685	27.78	042.5		.311
3751	1.42 A	34.690	27.78	042.8		.313

RV GEORGE B. KELEZ
STATION 15

50-08 N 168-04 E SND 2158 04 MAR 1966 1004 GCT
WEATHER 28 CLOUDS X AMT 9 WIND 090 10 KT SEA 3
SWELL 090 AMT 1 BAR 1009 MB DRY 02.2 WET 02.1 BT 48

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.7		33.207	26.58	146.4		
10	1.54	A	33.231	26.61	143.5		.676
50	1.43	B	33.236	26.62	142.4		.673
75	1.47	A	33.245	26.62	142.1		.671
100	1.56	B	33.254	26.62	142.0		.665
125	1.62	A	33.260	26.62	142.0		.666
150	2.30	X	33.649	26.88	117.8		.300
201	3.73	A	33.981	27.02	105.8		.060
251	3.70	A	34.050	27.08	100.8		.047
303	3.60	A	34.100	27.13	096.4		.050
405	3.45	X	34.195	27.22	088.5		.046
507	3.28	A	34.253	27.28	083.2		.041
608	3.14	A	34.296	27.33	079.3		.042
819	2.89	A	34.375	27.41	072.2		.045
1029	2.62	X	34.445	27.49	065.4		.050
1238	2.30	A	34.504	27.57	058.7		.072
1549	2.05	A	34.564	27.64	052.9		.112
2074	1.76	A	34.636	27.72	046.3		.183

RV GEORGE B. KELEZ
STATION 16

50-08 N 166-34 E SND 5168 04 MAR 1966 1806-1941 GCT
WEATHER 26 CLOUDS X AMT 9 WIND 340 30 KT SEA 2
SWELL 340 AMT 1 BAR 1014 MB DRY 01.4 WET 01.0 BT 50

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.4		33.076	26.49	154.4		
10	1.01	A	33.084	26.52	151.4		.697
50	1.02	A	33.086	26.52	151.3		.700
75	1.00	A	33.085	26.52	151.2		.693
100	1.02	A	33.087	26.52	151.2		.695
126	1.60	A	33.257	26.62	142.1		.572
152	3.54	A	33.810	26.90	116.5		.147
203	3.72	B	33.939	26.99	108.9		.072
253	3.68	A	33.989	27.03	105.2		.051
304	3.66	A					.048
409	3.54	X	34.159	27.18	092.2		.042
514	3.36	A	34.229	27.25	085.9		.036
618	3.18	A	34.290	27.32	080.2		.036
828	2.86	B	34.379	27.42	071.7		.042
1048	2.56	X	34.444	27.50	064.9		.053
1259	2.32	A	34.503	27.56	059.1		.076
1569	2.05	A	34.562	27.63	053.1		.109
2099	1.76	A	34.622	27.70	047.4		.179
2614	1.60	A	34.655	27.74	044.7		.242
3109	1.49	A	34.669	27.76	043.6		.283
4098	1.46	A	34.686	27.78	044.5		.328
5087	1.53	A	34.691	27.78	047.8		.329

RV GEORGE B. KELEZ

STATION 17

49-56 N 164-39 E SND 5420 05 MAR 1966 0557-1121 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 070 20 KT SEA 4
SWELL 070 AMT 3 BAR 1014 MB DRY 01.2 WET 00.7 BT 52

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.1	33.190	26.53	150.5		
10	1.97 A	33.186	26.54	149.8		.665
50	1.98 A	33.188	26.54	149.9		.670
75	1.98 A	33.188	26.54	150.0		.665
99	1.96 B	33.189	26.54	149.8		.664
124	1.98 A	33.189	26.54	150.0		.664
150	1.97 A	33.190	26.54	149.9		.661
200	4.05 A	33.671	26.74	132.3		.247
250	3.98 X	33.801	26.85	122.2		.174
302	3.88 A	33.927	26.96	112.2		.106
403	3.74 X	34.037	27.06	103.3		.074
505	3.61 A	34.127	27.15	096.0		.051
606	3.42 A	34.209	27.23	088.7		.043
815	3.10 A	34.319	27.35	078.5		.040
1025	2.82 X	34.389	27.43	071.6		.044
1244	2.49 A	34.460	27.52	064.0		.059
1544	2.18 A	34.532	27.60	056.7		.091
2069	1.86 A	34.605	27.68	049.7		.165
2562	1.66 A	34.640	27.73	046.4		.225
3058	1.52 A	34.659	27.75	044.6		.270
4048	1.48 A	34.681	27.77	045.1		.317
5061	1.53 A	34.685	27.77	048.2		.325

RV GEORGE B. KELEZ
STATION 18

51-00 N 166-00 E SND 5017 05 MAR 1966 2005-2138 GCT
WEATHER 28 CLOUDS X AMT 9 WIND 110 22 KT SEA 2
SWELL 130 AMT 1 BAR 1006 MB DRY 02.4 WET 01.8 BT 55

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	1.0	33.140	26.57	147.1		
10	.77 A	33.137	26.58	146.0		.694
50	.77 A	33.139	26.58	145.8		.691
75	.78 A	33.139	26.58	145.9		.688
105	.75 A	33.143	26.59	145.3		.683
129	.78 A	33.154	26.59	144.7		.686
154	3.17 A	33.699	26.85	121.4		.223
209	3.78 B	33.951	26.99	108.6		.074
258	3.73 X	34.025	27.06	103.0		.049
308	3.68 A	34.078	27.10	098.9		.044
412	3.52 X	34.168	27.19	091.3		.042
517	3.34 B	34.242	27.27	084.7		.037
621	3.13 A	34.292	27.33	079.6		.045
847	2.83 A	34.383	27.43	071.2		.040
1056	2.56 B	34.452	27.50	064.4		.056
1266	2.32 X	34.503	27.56	059.1		.075
1585	2.04 A	34.566	27.64	052.8		.112
2115	1.76 A	34.622	27.70	047.5		.180
2540	1.62 A	34.650	27.74	045.1		.233
3036	1.51 A	34.663	27.76	044.1		.275
4034	1.49 A	34.685	27.77	045.0		.322
4928	1.54 A	34.689	27.77	047.8		.329

RV GEORGE B. KELEZ
STATION 19

50-53 N 169-18 E SND 4246 07 MAR 1966 1755-1957 GCT
WEATHER 02 CLOUDS 6 AMT 3 WIND 220 20 KT SEA 3
SWELL 230 AMT 3 BAR 1017 MB DRY 00.2 WET-02.0 BT 57

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.4		33.152	26.48	155.6	1457.5	
10	2.38	A	33.127	26.46	157.3	1457.5	.679
50	2.41	A	33.128	26.46	157.6	1458.3	.676
75	2.42	A	33.132	26.46	157.5	1458.7	.673
105	2.40	A	33.136	26.47	157.2	1459.1	.667
130	2.54	B	33.194	26.50	153.9	1460.2	.630
155	3.76	A	33.856	26.92	115.2	1466.8	.121
210	3.76	B	33.944	26.99	109.0	1467.8	.075
259	3.71	X	34.014	27.05	103.6	1468.5	.054
309	3.65	A	34.072	27.10	099.1	1469.2	.059
414	3.52	X	34.171	27.19	091.1	1470.4	.047
519	3.36	A	34.233	27.26	085.6	1471.6	.044
624	3.19	A	34.285	27.31	080.7	1472.6	.040
848	2.87	A	34.371	27.41	072.4	1475.1	.045
1059	2.60	A	34.442	27.49	065.6	1477.5	.057
1268	2.33	X	34.500	27.56	059.4	1479.8	.074
1589	2.06	X	34.556	27.63	053.8	1484.1	.109
2119	1.76	A	34.616	27.70	047.9	1491.7	.179
2447	1.62	A	34.641	27.73	045.4	1496.6	
2947	1.50	A	34.665	27.76	043.6	1504.6	
3945	1.45	A	34.682	27.78	044.3	1521.5	
4241	1.45	A	34.685	27.78	044.8	1526.6	

RV GEORGE B. KELEZ
STATION 20

51-02 N 171-02 E SND 4572 08 MAR 1966 0415-0554 GCT
WEATHER 02 CLOUDS 6 AMT 2 WIND 170 10 KT SEA 2
SWELL 230 AMT 9 BAR 1020 MB DRY 02.0 WET 00.0 BT 59

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	3.1		33.26	26.51	153.0		
10	2.96	A	33.257	26.52	152.1		.654
48	2.98	A	33.259	26.52	152.3		.658
72	2.92	A	33.261	26.52	151.8		.654
95	2.90	A	33.261	26.52	151.7		.652
120	2.94	A	33.260	26.52	152.3		.652
144	2.93	A	33.259	26.52	152.3		.656
192	3.06	B	33.308	26.55	150.1		.593
241	4.03	X	33.605	26.69	137.4		.320
289	4.01	A	33.726	26.79	128.5		.260
386	3.86	A	33.870	26.92	116.9		.170
485	3.64	A	34.024	27.06	103.9		.079
581	3.56	A	34.127	27.15	096.0		.053
781	3.28	A	34.248	27.28	085.5		.044
981	3.02	X	34.329	27.36	078.0		.046
1232	2.64	A	34.423	27.47	068.4		.053
1537	2.26	A	34.500	27.57	059.9		.082
2049	1.89	A	34.587	27.67	051.3		.148
2511	1.70	A	34.619	27.71	048.3		.207
2992	1.55	A	34.647	27.74	045.7		.259
3955	1.45	A	34.674	27.77	044.9		.333
4442	1.45	A	34.680	27.77	045.7		.324

RV GEORGE B. KELEZ

STATION 21

52-38 N 172-39 E SND 0585 10 MAR 1966 0013 GCT
WEATHER 27 CLOUDS 6 AMT 8 WIND 270 35 KT SEA 4
SWELL 270 AMT 3 BAR 1002 MB DRY-00.5 WET-00.9 BT 67

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.5	33.239	26.54	149.7		
10	2.86 A	33.255	26.52	151.4		.656
50	2.86 A	33.255	26.52	151.6		.659
75	2.86 A	33.253	26.52	151.9		.658
99	2.84 A	33.252	26.52	151.9		.656
125	2.88 A	33.253	26.52	152.3		.656
150	2.92 A	33.267	26.53	151.7		.647
200	4.04 A	33.589	26.68	138.3		.344
251	4.01 A	33.719	26.78	128.7		.247
300	3.94 B	33.800	26.86	122.3		.198
409	3.76 X	33.980	27.02	107.8		.095
512	3.60 B	34.079	27.11	099.6		.065

RV GEORGE B. KELEZ
STATION 22

52-29 N 172-28 E SND 1134 10 MAR 1966 0232 GCT
WEATHER 27 CLOUDS 6 AMT 8 WIND 270 50 KT SEA 4
SWELL 270 AMT 3 BAR 1002 MB DRY-00.9 WET-01.7 BT 68

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.3	33.225	26.55	149.3		
9	2.70 A	33.226	26.51	152.3		.666
46	2.70 B	33.228	26.52	152.3		.666
69	2.70 B	33.226	26.51	152.6		.665
92	2.69 A	33.226	26.51	152.6		.665
116	2.72 A	33.229	26.51	152.7		.665
139	2.72 A	33.237	26.52	152.2		.658
187	3.41 B	33.461	26.64	141.7		.450
233	3.92 A	33.654	26.74	132.5		.298
282	3.93 A	33.808	26.86	121.5		.187
374	3.76 X	33.958	27.00	109.2		.103
468	3.70 A	34.016	27.05	105.0		.085
566	3.58 B	34.113	27.14	097.2		.056
755	3.32 A	34.242	27.27	086.2		.045
955	3.13 X	34.308	27.34	080.6		.044
1022	3.00 A	34.340	27.38	077.2		.046

RV GEORGE B. KELEZ
STATION 23

52-20 N 172-20 E SND 2597 10 MAR 1966 1911-2018 GCT
WEATHER 27 CLOUDS 6 AMT 3 WIND 220 35 KT SEA 3
SWELL 230 AMT 3 BAR 1004 MB DRY 00.4 WET-02.0 BT 69

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.3	33.254	26.57	147.1		
10	2.82 B	33.259	26.53	150.8		.656
50	2.84 A	33.257	26.53	151.3		.656
75	2.84 A	33.259	26.53	151.3		.667
100	2.82 A	33.259	26.53	151.2		.659
126	2.85 A	33.259	26.53	151.6		.657
151	2.84 A	33.261	26.53	151.5		.658
201	2.92 B	33.274	26.53	151.5		.644
252	3.98 A	33.563	26.66	140.1		.343
303	3.96 A	33.609	26.70	136.8		.313
403	3.85 A	33.842	26.90	119.1		.176
518	3.72 A	34.025	27.06	104.9		.078
623	3.61 X	34.112	27.14	098.0		.059
828	3.36 A	34.239	27.26	087.4		.049
1037	3.04 A	34.341	27.37	077.7		.056
1245	2.76 A	34.413	27.46	070.5		.046
1550	2.37 A	34.476	27.54	063.0		.072
2050	1.85 A	34.607	27.69	049.4		.151
2567	1.65 A	34.649	27.73	045.6		.215

RV GEORGE B. KELEZ
STATION 24

52-13 N 172-16 E SND 4188 10 11 MAR 1966 2245-0023 GCT
WEATHER 27 CLOUDS 6 AMT 5 WIND 220 30 KT SEA 3
SWELL 230 AMT 3 BAR 1005 MB DRY 00.5 WET-00.2 BT 70

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.5		33.278	26.57	146.8		
10	2.92	A	33.285	26.54	149.7		.657
49	2.92	A	33.286	26.54	149.8		.656
74	2.92	A	33.291	26.55	149.5		.656
98	2.91	A	33.290	26.55	149.6		.655
123	2.94	A	33.291	26.55	150.0		.654
148	2.94	A	33.288	26.54	150.3		.654
198	2.94	A	33.287	26.54	150.6		.656
249	3.86	A	33.489	26.62	144.4		.439
299	4.04	A	33.636	26.72	135.6		.323
399	3.88	A	33.858	26.91	118.1		.167
502	3.73	A	34.003	27.04	106.5		.089
601	3.61	A	34.106	27.13	098.3		.059
807	3.36	A	34.232	27.26	087.8		.050
1015	3.10	X	34.326	27.36	079.3		.047
1221	2.78	B	34.411	27.45	070.7		.049
1540	2.46	A	34.484	27.54	063.4		.065
2070	1.95	A	34.590	27.66	051.9		.054
2509	1.75	A	34.635	27.72	047.7		.200
2990	1.58	A	34.660	27.75	045.2		.247
3471	1.48	A	34.678	27.77	043.8		.287
3953	1.44	A	34.693	27.78	043.4		.309

RV GEORGE B. KELEZ
STATION 25

51-59 N 172-13 E SND 7004 11 MAR 1966 0504-0703 GCT
WEATHER 27 CLOUDS 6 AMT 7 WIND 230 30 KT SEA 3
SWELL 230 AMT 3 BAR 1005 MB DRY 00.6 WET-00.2 BT 72

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.9		33.284	26.54	149.5		
10	2.88	A	33.287	26.55	149.2		.653
50	2.89	A	33.289	26.55	149.3		.651
75	2.90	A	33.291	26.55	149.3		.653
100	2.87	A	33.288	26.55	149.5		.652
126	2.89	A	33.290	26.55	149.6		.651
152	2.89	A	33.290	26.55	149.7		.652
202	2.90	A	33.294	26.55	149.8		.651
251	3.74	A	33.459	26.60	145.4		.448
305	3.91	A	33.591	26.69	137.6		.342
408	3.97	X	33.789	26.84	124.3		.216
511	3.80	A	33.958	27.00	110.7		.110
614	3.66	A	34.068	27.10	101.8		.069
822	3.42	A	34.221	27.24	089.3		.046
1028	3.15	X	34.323	27.35	080.2		.045
1235	2.84	A	34.400	27.44	072.3		.045
1539	2.46	A	34.491	27.54	062.9		.060
2065	1.98	A	34.591	27.66	052.2		.132
2556	1.76	A	34.649	27.73	047.0		.192
3038	1.60	A	34.664	27.75	045.3		.241
4029	1.48	A	34.691	27.78	044.4		.312
5009	1.52	A	34.702	27.79	046.7		.326

RV GEORGE B. KELEZ
STATION 26

51-28 N 171-23 E SND 4354 11 MAR 1966 1500 GCT
WEATHER 27 CLOUDS X AMT 9 WIND 260 32 KT SEA 4
SWELL 230 AMT 3 BAR 1008 MB DRY 00.7 WET-01.0 BT 74

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.9		33.284	26.54	149.5		
9	2.86	A	33.280	26.54	149.5		.601
45	2.87	A	33.280	26.54	149.8		.627
68	2.88	A	33.282	26.54	149.8		.681
90	2.86	A	33.281	26.54	149.8		.613
113	2.88	A	33.283	26.54	150.0		.654
137	2.89	A	33.283	26.54	150.2		.606
183	2.90	A	33.283	26.54	150.5		.642
236	2.94	A	33.283	26.54	151.1		.651
280	4.00	A	33.549	26.65	141.5		.376
376	3.91	X	33.736	26.81	127.4		.244
469	3.82	A	33.892	26.94	115.5		.149
566	3.71	A	34.020	27.05	105.5		.080
757	3.50	A	34.169	27.19	093.6		.053
960	3.27	X	34.290	27.31	083.5		.048
1146	2.92	A	34.372	27.41	074.7		.040
1436	2.52	B	34.470	27.52	064.6		.055
1942	2.05	A	34.572	27.64	054.0		.115

RV GEORGE B. KELEZ

STATION 27

52-02 N 170-42 E SND 5079 11 MAR 1966 2122-2245 GCT
WEATHER 27 CLOUDS 6 AMT 4 WIND 250 30 KT SEA 3
SWELL 270 AMT 3 BAR 1008 MB DRY-01.0 WET-03.0 BT 76

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	2.4		33.100	26.44	159.5		
10	2.38	A	33.119	26.45	157.9		.684
50	2.41	A	33.119	26.45	158.3		.684
76	2.97	A	33.228	26.49	154.7		.661
101	2.94	B	33.279	26.54	150.7		.647
125	3.10	A	33.346	26.57	147.2		.617
151	3.15	A	33.372	26.59	145.8		.596
201	3.74	B	33.624	26.74	132.7		.334
251	3.94	A	33.847	26.89	118.4		.170
301	3.84	A	33.926	26.97	111.8		.137
405	3.70	A	34.041	27.07	102.6		.071
509	3.54	A	34.145	27.17	094.0		.048
612	3.40	A	34.224	27.25	087.4		.046
817	3.13	A	34.308	27.34	079.7		.043
1021	2.86	B	34.397	27.43	071.5		.044
1224	2.59	A	34.460	27.51	065.0		.051
1524	2.31	X	34.538	27.59	057.6		.085
2043	1.87	A	34.611	27.69	049.3		.155
2538	1.67	A	34.652	27.74	045.6		.215
3035	1.53	A	34.677	27.77	043.4		.267
4027	1.46	A	34.697	27.79	043.6		.329
5017	1.51	A	34.705	27.79	046.4		.342

RV GEORGE B. KELEZ
STATION 28

52-00 N 169-00 E SND 4480 12 MAR 1966 0743-0904 GCT
WEATHER 27 CLOUDS 6 AMT 6 WIND 270 20 KT SEA 2
SWELL 270 AMT 1 BAR 1012 MB DRY-02.5 WET-03.5 BT 78

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	2.2	33.257	26.58	146.1		
10	2.24 A					.665
50	2.22 A	33.259	26.58	146.3		.665
74	2.16 A	33.260	26.58	145.8		.665
98	2.07 B	33.261	26.59	145.2		.669
124	2.07 A	33.276	26.60	144.1		.663
149	3.49 A	33.659	26.79	127.3		.285
199	3.82 A	33.917	26.96	111.5		.105
250	3.78 A	33.987	27.02	106.2		.077
300	3.66 A	34.051	27.08	100.7		.062
402	3.55 A	34.113	27.14	095.7		.048
503	3.42 A	34.188	27.22	089.5		.048
607	3.25 A	34.249	27.28	083.9		.046
815	2.94 A	34.353	27.39	074.3		.047
1024	2.71 B	34.412	27.46	068.8		.051
1232	2.40 A	34.476	27.54	061.8		.062
1545	2.15 X	34.566	27.63	053.8		.106
2081	1.77 A	34.628	27.71	047.0		.174
2567	1.62 A	34.654	27.74	044.9		.229
3064	1.47 A	34.675	27.77	042.8		.273
4056	1.41 A	34.691	27.79	043.3		.330
4448	1.41 A	34.695	27.79	044.0		.339

RV GEORGE B. KELEZ
STATION 29

52-00 N 167-37 E SND 13 MAR 1966 1803 GCT
WEATHER 02 CLOUDS 6 AMT 5 WIND 320 10 KT SEA 2
SWELL 320 AMT 1 BAR 1013 MB DRY-04.2 WET-06.1 BT 80

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.4		33.323	26.69	135.6	1453.3	
10	1.41	A	33.321	26.69	135.8	1453.5	.666
50	1.44	A	33.317	26.68	136.4	1454.2	.669
74	1.43	A	33.322	26.69	136.0	1454.6	.670
99	1.41	B	33.318	26.69	136.2	1454.9	.668
124	1.44	A	33.318	26.68	136.4	1455.5	.667
149	2.61	X	33.359	26.63	142.1	1461.1	.390
198	3.74	A	33.967	27.01	107.0	1467.6	.071
248	3.68	A	34.034	27.07	101.7	1468.2	.059
297	3.62	A	34.090	27.12	097.3	1468.9	.048
399	3.50	A	34.169	27.19	091.0	1470.1	.048
498	3.36	A	34.231	27.26	085.6	1471.2	.042
601	3.16	X	34.266	27.30	081.7	1472.1	.044
807	2.90	A	34.372	27.41	072.5	1474.5	.042
1011	2.65	A	34.431	27.48	066.6	1476.9	.055
1217	2.39	A	34.482	27.54	061.2	1479.2	.065
1526	2.10	X	34.550	27.62	054.4	1483.2	.103
2055	1.79	A	34.619	27.70	047.8	1490.8	.173

RV GEORGE B. KELEZ

STATION 30

52-00 N 165-43 E SND 4868 : 13 MAR 1966 0324-0550 GCT

WEATHER 27 CLOUDS 6 AMT 3 WIND 290 08 KT SEA 2

SWELL 290 AMT 1 BAR 1012 MB DRY 00.0 WET-02.5 BT 83

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	1.2	33.281	26.67	137.5		
10	.86 A	33.289	26.70	134.9		.674
50	.98 A	33.304	26.70	134.5		.671
75	1.06 A	33.308	26.70	134.7		.669
100	1.11 B	33.319	26.71	134.2		.670
125	1.27 A	33.339	26.71	133.7		.644
151	3.56 A	33.850	26.93	113.6		.153
201	3.73 A	33.979	27.02	106.0		.063
252	3.69 A	34.033	27.07	101.9		.118
302	3.64 A	34.086	27.11	097.8		.048
404	3.50 A	34.171	27.19	090.8		.045
505	3.36 A	34.228	27.25	085.9		.040
609	3.20 B	34.278	27.31	081.2		.035
817	2.90 A	34.363	27.40	073.2		.041
1024	2.65 X	34.427	27.48	067.0		.050
1233	2.37 A	34.484	27.55	060.9		.063
1544	2.07 X	34.551	27.62	054.1		.104
2078	1.79 A	34.613	27.69	048.3		.173
2528	1.65 A	34.642	27.73	046.0		.229
3023	1.48 A	34.660	27.76	043.9		.281
4016	1.46 A	34.682	27.77	044.6		.318
4710	1.48 X	34.687	27.78	046.3		.327

RV GEORGE B. KELEZ
STATION 31

52-54 N 164-41 E SND 3115 13 MAR 1966 1518 GCT
WEATHER 22 CLOUDS X AMT 9 WIND 290 10 KT SEA 2
SWELL 290 AMT 1 BAR 1013 MB DRY-03.2 WET-05.0 BT 86

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	.8	33.351	26.75	129.9		
10	.82 A	33.329	26.73	131.7		.656
50	.85 A	33.326	26.73	132.1		.675
75	.84 A	33.327	26.73	131.9		.655
100	.90 A	33.333	26.73	131.8		.644
125	1.35 A	33.400	26.75	129.6		.568
151	3.22 A	33.783	26.91	115.5		.183
201	3.72 A	33.990	27.03	105.1		.060
252	3.70 X	34.041	27.07	101.4		.047
302	3.60 A	34.108	27.13	095.8		.060
404	3.48 A	34.182	27.20	089.8		.051
505	3.29 A	34.248	27.28	083.7		.043
609	3.14 X	34.293	27.33	079.5		.041
817	2.84 A	34.372	27.42	071.9		.045
1026	2.55 X	34.454	27.51	064.0		.062
1234	2.34 A	34.503	27.56	059.1		.072
1547	2.07 X	34.565	27.63	053.1		.103
2082	1.78 A	34.625	27.71	047.3		.173

RV GEORGE B. KELEZ
STATION 32

52-54 N 166-40 E SND .14 MAR 1966 0021 GCT
WEATHER 27 CLOUDS 6 AMT 4 WIND 320 25 KT SEA 3
SWELL 320 AMT 3 BAR 1013 MB DRY-00.2 WET-00.3 BT 88

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	1.4	33.366	26.72	132.3		
9	1.14 A	33.348	26.73	132.1		.663
48	1.10 A	33.349	26.73	131.8		.659
98	1.12 A	33.350	26.73	131.8		.656
147	1.75 A	33.492	26.80	125.4		.492
197	3.72 A	33.968	27.01	106.6		.064
249	3.69 X	34.048	27.08	100.8		.042
301	3.58 A	34.103	27.13	096.0		.040
401	3.44 A	34.180	27.21	089.6		.036
502	3.28 A	34.245	27.27	083.8		.033
602	3.14 B	34.301	27.33	078.9		.037
809	2.87 A	34.382	27.42	071.4		.038
1027	2.62 X	34.446	27.49	065.3		.055
1247	2.33 A	34.502	27.56	059.2		.067
1588	2.04 A	34.567	27.64	052.7		.104

RV GEORGE B. KELEZ
STATION 33

53-00 N 168-18 E SND 5081 14 MAR 1966 1029 GCT
WEATHER 27 CLOUDS 6 AMT 7 WIND 000 20 KT SEA 2
SWELL AMT 9 BAR 1018 MB DRY-02.5 WET-04.2 BT 91

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL	OXY
0	1.6		33.245	26.61	142.8		
10	1.52	A	33.244	26.62	142.4		.680
50	1.45	A	33.245	26.62	141.9		.676
102	1.51	A	33.257	26.63	141.5		.669
155	1.63	A	33.335	26.68	136.5		.650
205	3.78	B	33.912	26.96	111.5		.096
265	3.70	X	34.043	27.07	101.4		.050
309	3.65	A	34.093	27.12	097.5		.050
419	3.46	A	34.191	27.21	089.0		.044
524	3.30	B	34.253	27.28	083.6		.039
630	3.13	A	34.305	27.34	078.6		.056
840	2.78	A	34.403	27.45	069.1		.046
1069	2.48	B	34.474	27.53	062.0		.058
1290	2.23	A	34.519	27.58	057.0		.077
1595	1.92	A	34.583	27.66	050.2		.130

RV GEORGE B. KELEZ

STATION 34

52-55 N 170-20 E SND 2365 14 MAR 1966 1749 GCT

WEATHER 02 CLOUDS 6 AMT 1 WIND 000 10 KT SEA 1

SWELL 340 AMT 1 BAR 1020 MB DRY-01.2 WET-03.3 BT 95

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T.	10	SND-VEL	OXY
0	2.4		33.151	26.48	155.6		
10	2.44	A	33.146	26.47	156.4		.683
50	2.46	A	33.147	26.47	156.6		.682
101	2.48	A	33.149	26.47	156.8		.687
151	3.35	A	33.421	26.61	144.0		.522
202	3.91	A	33.800	26.86	121.2		.197
253	3.82	B	33.911	26.96	112.4		.087
303	3.74	A	33.975	27.01	107.2		.060
405	3.62	X	34.091	27.12	098.1		.050
507	3.48	X	34.167	27.19	091.7		.045
609	3.33	A	34.225	27.25	086.5		.042
813	3.07	A	34.326	27.36	077.7		.043
1019	2.81	B	34.382	27.43	072.0		.046
1224	2.53	A	34.454	27.51	064.8		.057
1549	2.18	X	34.528	27.60	057.0		.089

RV GEORGE B. KELEZ
STATION 35

51-54 N 176-18 W SND 0194 18 MAR 1966 2210 GCT
WEATHER 50 CLOUDS 0 AMT 8 WIND 140 26 KT SEA 3
SWELL 140 AMT 1 BAR 1014 MB DRY 03.9 WET 03.5 BT 102

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.2	33.250	26.49	154.6	
10	3.11 A	33.248	26.50	154.1	
50	3.16 A	33.276	26.51	152.6	
75	3.22 A	33.303	26.53	151.2	
100	3.22 A	33.312	26.54	150.7	
126	3.26 A	33.329	26.55	149.9	
151	3.25 A	33.345	26.56	148.8	
185	3.28 A	33.370	26.58	147.3	

RV GEORGE B. KELEZ

STATION 36

51-43 N 176-25 W SND 0113 19 MAR 1966 0026 GCT
WEATHER 50 CLOUDS 0 AMT 8 WIND 110 30 KT SEA 3
SWELL 110 AMT 3 BAR 1011 MB DRY 05.4 WET 04.8 BT 103

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.7	32.968	26.22	180.3	
10	3.42 A	33.042	26.30	172.3	
50	3.36 A	33.236	26.46	157.3	
75	3.36 A	33.255	26.48	156.1	
105	3.39 A	33.265	26.48	155.8	

RV GEORGE B. KELEZ
STATION 37

51-38 N 176-25 W SND 0175 19 MAR 1966 0128 GCT
WEATHER 50 CLOUDS 0 AMT 8 WIND 090 34 KT SEA 3
SWELL 110 AMT 3 BAR 1010 MB DRY 05.2 WET 04.5 BT 104

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.6	32.732	26.04	197.2	
10	3.42 A	32.724	26.05	196.3	
50	3.46 A	33.031	26.29	173.7	
75	3.47 A	33.074	26.32	170.7	
100	3.52 B	33.237	26.45	159.0	
126	3.58 A	33.330	26.52	152.8	
151	3.55 A	33.372	26.55	149.5	
166	3.56 A	33.420	26.59	146.1	

RV GEORGE B. KELEZ
STATION 38

51-33 N 176-25 W SND 0598 19 MAR 1966 0508 GCT
WEATHER 50 CLOUDS 0 AMT 8 WIND 090 42 KT SEA 3
SWELL 110 AMT 3 BAR 1008 MB DRY 04.5 WET 04.2 BT 105

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.7	32.695	26.00	200.9	
12	3.86 A	32.695	25.99	202.4	
52	3.58 A	33.033	26.28	174.6	
77	3.49 A	33.294	26.50	154.3	
103	3.44 X	33.312	26.52	152.7	
128	3.40 A	33.376	26.57	147.6	
154	3.38 A	33.391	26.59	146.5	
206	3.42 A	33.426	26.61	144.6	
258	3.52 X	33.466	26.63	142.8	
311	3.66 A	33.516	26.66	140.8	
416	3.66 X	33.652	26.77	131.4	
525	3.87 A	33.937	26.97	112.9	

RV GEORGE B. KELEZ
STATION 39

51-28 N 176-25 W SND 1183 19 MAR 1966 0647 GCT
WEATHER 50 CLOUDS 0 AMT 8 WIND 090 40 KT SEA 3
SWELL 110 AMT 3 BAR 1008 MB DRY 04.5 WET 04.0 BT 106

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.6	32.699	26.01	199.7	1462.0
25	3.42 A	32.699	26.03	198.3	1461.7
50	3.68 B	33.191	26.40	163.7	1463.9
75	3.64 A	33.295	26.48	155.6	1464.2
100	3.67 A	33.369	26.54	150.5	1464.9
150	3.58 A	33.440	26.61	144.6	1465.4
200	3.46 A	33.458	26.63	142.5	1465.7
254	3.49 A	33.479	26.64	141.6	1466.8
350	3.63 A	33.586	26.72	135.5	1469.1
449	3.99 X	33.704	26.77	131.2	1472.4
552	3.89 A	33.983	27.01	110.1	1474.0
751	3.59 A	34.158	27.18	095.4	1476.3
950	3.28 B	34.268	27.29	085.2	1478.4
1091	2.97 A	34.345	27.38	076.9	1479.5

RV GEORGE B. KELEZ
STATION 40

51-22 N 176-26 W SND 2268 21 MAR 1966 2311 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 070 10 KT SEA 2
SWELL 110 AMT 3 BAR 1020 MB DRY 01.5 WET-00.8 BT 110

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.5	32.583	25.93	207.6	
10	3.27 A	32.585	25.95	205.5	
50	3.46 A	33.293	26.50	154.0	
75	3.48 A	33.367	26.56	148.7	
101	3.48 B	33.425	26.60	144.6	
127	3.52 A	33.468	26.63	141.8	
153	3.44 X	33.496	26.66	139.2	
204	3.46 X	33.543	26.70	136.1	
254	3.50 A	33.567	26.71	135.1	
309	3.82 A	33.696	26.79	128.9	
409	3.85 X	33.808	26.87	121.6	
513	3.90 A	33.944	26.97	112.8	
612	3.82 A	34.050	27.07	104.8	
821	3.62 A	34.149	27.16	096.9	
1030	3.16 B	34.315	27.34	080.9	
1240	2.62 A	34.429	27.48	067.7	
1552	2.24 A	34.515	27.58	058.7	
2094	1.82 A	34.595	27.68	050.1	

RV GEORGE B. KELEZ
STATION 41

51-17 N 176-27 W SND 3840 22 MAR 1966 0107-0225 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 060 12 KT SEA 2
SWELL 110 AMT 3 BAR 1019 MB DRY 03.2 WET 01.0 BT 111

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	3.5		32.752	26.07	194.8	
10	3.32	A	32.738	26.07	194.4	
49	3.34	A	32.756	26.08	193.4	
73	3.53	A	33.132	26.37	166.8	
97	3.44	B	33.339	26.54	150.6	
122	3.50	A	33.413	26.59	145.7	
147			33.450			
196	3.50	A	33.503	26.66	139.5	
246	3.46	X	33.532	26.69	137.3	
295	3.74	A	33.645	26.75	131.8	
394	3.81	A	33.817	26.88	120.4	
496	3.87	A	33.934	26.97	113.1	
598	3.77	X	34.055	27.08	103.8	
802	3.53	A	34.196	27.21	092.3	
1103	2.97	B	34.366	27.40	075.5	
1211	2.72	A	34.416	27.46	069.6	
1508	2.32	A	34.506	27.57	060.0	
2061	1.91	A	34.590	27.67	051.4	
2554	1.67	X	34.636	27.72	046.8	
3049	1.52	A	34.662	27.75	044.3	
3350	1.50	B	34.667	27.76	044.5	
3553	1.49	A	34.671	27.76	044.7	

RV GEORGE B. KELEZ
STATION 42

51-09 N 176-28 W SND 4147 22 MAR 1966 0431-0600 GCT
WEATHER 02 CLOUDS 6 AMT 7 WIND 350 10 KT SEA 2
SWELL 110 AMT 3 BAR 1017 MB DRY 02.5 WET 00.9 BT 112

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.5	32.633	25.97	203.8	
10	3.22 A	32.620	25.99	202.4	
50	3.40 A	32.830	26.14	188.4	
75	3.50 X	33.189	26.41	162.3	
100	3.73 A	33.390	26.55	149.5	
125	3.54 A	33.450	26.62	143.4	
150	3.50 X	33.455	26.62	142.8	
200	3.44 A	33.488	26.66	140.0	
251	3.59 X	33.537	26.68	138.2	
301	3.56 A	33.601	26.74	133.4	
401	3.80 A	33.801	26.87	121.6	
504	3.91 X	33.962	26.99	111.5	
608	3.68 B	34.076	27.10	101.4	
812	3.41 A	34.237	27.26	088.0	
1017	3.06 B	34.339	27.37	077.9	
1215	2.72 A	34.417	27.46	069.6	
1512	2.32 A	34.501	27.56	060.4	
2001	1.95 A	34.580	27.66	052.4	
2505	1.67 X	34.632	27.72	046.9	
2996	1.55 A	34.656	27.75	045.1	
3600	1.48 A	34.675	27.77	044.4	
4035	1.45 A	34.685	27.78	044.3	

RV GEORGE B. KELEZ

STATION 43

51-00 N 176-29 W SND 22 MAR 1966 0850 GCT
WEATHER 02 CLOUDS X AMT 9 WIND 060 06 KT SEA 2
SWELL 110 AMT 1 BAR 1016 MB DRY 00.8 WET-00.8 BT 114

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	3.2		32.527	25.91	209.3	
10	3.20	A	32.524	25.91	209.5	
48	3.46	A	33.018	26.28	174.7	
72	3.50	A	33.275	26.48	155.8	
96	3.43	X	33.344	26.54	150.1	
121	3.46	A	33.376	26.57	148.2	
145	3.55	X	33.451	26.62	143.5	
194	3.56	A	33.513	26.67	139.2	
244	3.69	X	33.618	26.74	133.0	
292	3.78	A	33.778	26.85	122.2	
389	3.80	X	33.987	27.02	107.6	
491	3.70	A	34.092	27.11	099.5	
588	3.56	A	34.171	27.19	092.9	
791	3.24	A	34.283	27.31	082.5	
997	2.88	B	34.365	27.41	073.9	
1200	2.55	A	34.457	27.51	064.7	
1501	2.24	A	34.517	27.58	058.3	
2011	1.90	A	34.595	27.67	050.8	

RV GEORGE B. KELEZ
STATION 44

50-48 N 176-25 W SND 4274 22 23 MAR 1966 2237-0001 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 040 33 KT SEA 3
SWELL 040 AMT 1 BAR 1008 MB DRY 00.5 WET-01.0 BT 117

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	3.5		32.873	26.16	185.7	
47	3.34	A	32.869	26.17	184.9	
84	3.48	A	33.303	26.51	153.6	
108	3.49	A	33.305	26.51	153.7	
133	3.49	A	33.432	26.61	144.3	
157	3.56	A	33.479	26.64	141.6	
181	3.64	B	33.553	26.69	136.9	
231	3.86	A	33.702	26.79	128.3	
278	3.86	A	33.851	26.90	117.5	
328	3.83	A	33.938	26.98	111.1	
429	3.67	X	34.070	27.10	100.3	
525	3.54	A	34.176	27.19	091.8	
632	3.36	A	34.240	27.26	085.9	
1585	2.10	A	34.543	27.61	055.2	
2089	1.83	A	34.601	27.68	049.7	

RV GEORGE B. KELEZ
STATION 45

50-31 N 176-26 W SND 6730 23 MAR 1966 0417-0608 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 070 34 KT SEA 3
SWELL 070 AMT 1 BAR 1027 MB DRY 00.4 WET-01.4 BT 119

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	3.4		32.929	26.22	180.6	
9	3.21	A	32.903	26.21	181.0	
46	3.22	A	32.901	26.21	181.4	
93	3.23	X	32.901	26.21	181.7	
117	3.41	X	33.138	26.38	165.6	
140	3.87	X	33.677	26.77	129.6	
186	3.76	A	33.886	26.94	113.1	
236	3.68	A	33.953	27.00	107.7	
281	3.67	X	33.995	27.04	104.8	
371	3.56	A	34.089	27.12	097.4	
466	3.48	X	34.169	27.19	091.2	
560	3.32	A	34.229	27.26	085.8	
748	3.03	A	34.325	27.36	076.9	
935	2.75	A	34.396	27.44	069.9	
1123	2.52	B	34.453	27.51	064.2	
1402	2.19	A	34.509	27.58	057.8	
1893	1.88	A	34.588	27.67	050.6	
2510	1.64	A	34.633	27.72	046.5	
3048	1.52	A	34.658	27.75	044.6	
4075	1.44	A	34.680	27.77	044.6	
5053	1.52	A	34.684	27.77	048.1	
5935	1.63	A	34.687	27.77	052.1	

RV GEORGE B. KELEZ
STATION 46

50-02 N 176-24 W SND 4060 23 MAR 1966 1924 GCT
WEATHER 00 CLOUDS X AMT 9 WIND 050 30 KT SEA 5
SWELL 050 AMT 4 BAR 0999 MB DRY WET-01.5 BT 123

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.2	32.920	26.23	179.6	
10	3.12 A	32.920	26.23	178.9	
51	3.13 A	32.921	26.23	179.1	
102	3.11 X	32.951	26.26	177.0	
128	3.49 X	33.313	26.51	153.2	
153	3.89 X	33.765	26.83	123.2	
204	3.71 A	33.901	26.96	111.7	
255	3.72 A	33.976	27.02	106.5	
306	3.69 X	34.034	27.07	102.3	
409	3.56 A	34.129	27.15	094.6	
512	3.40 A	34.203	27.23	088.2	
615	3.23 X	34.258	27.29	083.4	
821	2.87 A	34.356	27.40	073.4	
1030	2.58 A	34.428	27.48	066.2	
1237	2.36 B	34.482	27.54	060.9	
1549	2.06 A	34.545	27.62	054.4	
2090	1.77 A	34.608	27.69	048.5	

RV GEORGE B. KELEZ
STATION 47

49-29 N 176-25 W SND 4716 24 MAR 1966 0041 GCT
WEATHER 77 CLOUDS 6 AMT 8 WIND 020 30 KT SEA 3
SWELL 020 AMT 1 BAR 0999 MB DRY 00.4 WET 00.0 BT 126

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	3.3		32.947	26.24	178.4	
10	3.20	A	32.947	26.25	177.5	
51	3.20	A	32.947	26.25	177.8	
77	3.20	A	32.947	26.25	177.9	
104	3.18	B	32.947	26.25	177.9	
130	3.08	X	32.959	26.27	176.2	
156	3.44	X	33.343	26.54	150.7	
208	3.82	A	33.830	26.89	118.1	
259	3.72	X	33.924	26.98	110.5	
311	3.64	A	34.001	27.05	104.3	
415	3.58	A	34.120	27.15	095.6	
518	3.34	A	34.191	27.23	088.6	
622	3.18	A	34.239	27.28	084.1	
829	2.94	A	34.348	27.39	074.8	
1037	2.62	B	34.425	27.48	066.9	
1247	2.38	A	34.478	27.54	061.5	
1557	2.13	A	34.541	27.61	055.5	
2097	1.81	A	34.605	27.69	049.2	

RV GEORGE B. KELEZ
STATION 48

48-55 N 176-25 W SND 24 MAR 1966 0600 GCT
WEATHER 26 CLOUDS 6 AMT 3 WIND 020 22 KT SEA 3
SWELL 020 AMT 1 BAR 0999 MB DRY 01.0 WET-01.0 BT 129

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.3	32.972	26.26	176.5	
10	3.28 A	32.972	26.26	176.4	
51	3.29 A	32.972	26.26	176.7	
76	3.31 X	32.969	26.26	177.2	
103	3.27 A	32.966	26.26	177.2	
129	3.19 X	32.977	26.27	175.8	
154	3.47 X	33.322	26.52	152.5	
206	3.35 A	33.675	26.81	125.2	
257	3.46 X	33.824	26.92	115.4	
309	3.48 A	33.926	27.00	108.3	
412	3.48 A	34.064	27.11	098.7	
515	3.36 A	34.161	27.20	091.0	
618	3.20 A	34.240	27.28	084.1	
826	2.92 A	34.338	27.38	075.3	
1035	2.66 B	34.416	27.47	068.0	
1243	2.34 A	34.466	27.53	062.0	
1555	2.18 A	34.527	27.60	057.1	
2094	1.86 A	34.598	27.68	050.4	

RV GEORGE B. KELEZ
STATION 49

48-15 N 176-20 W SND 5380 , 24 MAR 1966 1940 GCT
WEATHER 26 CLOUDS 6 AMT 4 WIND 350 06 KT SEA 2
SWELL 350 AMT 1 BAR 1000 MB DRY 01.2 WET 00.0 BT 133

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.7	32.972	26.22	180.0	1462.8
10	3.68 A	32.957	26.21	181.0	1462.9
51	3.68 A	32.957	26.21	181.3	1463.6
77	3.70 X	32.957	26.21	181.6	1464.1
103	3.68 B	32.957	26.21	181.6	1464.4
129	3.68 A	32.957	26.21	181.8	1464.8
155	3.70 X	33.160	26.37	166.9	1465.6
206	3.48 A	33.652	26.78	128.1	1466.2
258	3.45 X	33.764	26.88	119.8	1467.0
309	3.48 A	33.863	26.95	113.0	1468.1
413	3.55 A	34.035	27.08	101.6	1470.4
516	3.43 X	34.133	27.17	093.8	1471.7
620	3.30 A	34.209	27.24	087.5	1472.9
828	3.04 A	34.324	27.36	077.6	1475.4
1036	2.76 A	34.392	27.44	070.9	1477.7
1244	2.49 A	34.459	27.52	064.1	1480.1
1556	2.20 A	34.528	27.59	057.3	1484.1
2096	1.88 A	34.598	27.68	050.6	1491.8

RV GEORGE B. KELEZ
STATION 50

48-00 N 176-25 W SND 5376 24 MAR 1966 2349 GCT
WEATHER 26 CLOUDS 6 AMT 5 WIND 00 KT SEA 1
SWELL 350 AMT 1 BAR 0999 MB DRY 02.6 WET 01.4 BT 135

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	4.1	32.977	26.19	183.4	
10	3.94 A	32.973	26.20	182.2	
50	3.92 A	32.973	26.20	182.3	
100	3.92 A	32.971	26.20	182.8	
126	3.90 B	32.974	26.20	182.6	
151	3.86 A	33.278	26.45	159.5	
176	3.70 X	33.608	26.73	133.4	
202	3.62 A	33.638	26.76	130.5	
253	3.58 B	33.740	26.84	122.8	
304	3.52 A	33.835	26.92	115.5	
406	3.52 A	33.983	27.04	105.1	
508	3.48 A	34.096	27.14	097.0	
610	3.34 A	34.183	27.22	089.8	
820	3.07 A	34.313	27.35	078.7	
1029	2.78 B	34.391	27.44	071.1	
1239	2.48 A	34.456	27.51	064.2	
1549	2.20 A	34.528	27.59	057.3	
2098	1.87 A	34.597	27.68	050.6	

RV GEORGE B. KELEZ
STATION 51

48-50 N 176-25 W SND 5308 24 MAR 1966 0825 GCT
WEATHER 26 CLOUDS X AMT 9 WIND 020 10 KT SEA 1
SWELL 350 AMT 1 BAR 0998 MB DRY 00.9 WET-00.8 BT 138

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL
0	3.4	32.966	26.25	177.8	
50	3.26 A	32.964	26.26	177.0	
75	3.28 B	32.963	26.25	177.4	
100	3.26 B	32.963	26.26	177.3	
126	3.18 A	32.990	26.28	174.7	
150		33.179			
201	3.34 A	33.684	26.82	124.4	
251	3.40 A	33.789	26.90	117.4	
302	3.44 A	33.880	26.97	111.3	
403	3.51 A	34.037	27.09	101.0	
505	3.40 A	34.143	27.18	092.6	
606	3.22 A	34.222	27.26	085.6	
815	2.96 A	34.341	27.38	075.4	
1025	2.71 B	34.419	27.46	068.3	
1234	2.46 A	34.467	27.52	063.1	
1544	2.20 A	34.526	27.59	057.3	
2093	1.88 A	34.604	27.68	050.2	
2577	1.64 B	34.643	27.73	046.0	
3077	1.51 A	34.661	27.75	044.4	
4073	1.45 A	34.682	27.78	044.6	
5072	1.54 A	34.698	27.78	047.5	

RV GEORGE B. KELEZ
STATION 52

47-30 N 176-25 W SND 5477 25 MAR 1966 2219 GCT
WEATHER 01 CLOUDS 6 AMT 5 WIND 090 17 KT SEA 3
SWELL 110 AMT 1 BAR 0992 MB DRY 03.7 WET 02.6 BT 141

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	4.3		32.997	26.18	183.8	
10	4.21	A	32.994	26.19	183.2	
50	4.16	A	32.991	26.19	183.3	
75	4.15	A	32.991	26.19	183.4	
100	4.10	B	32.989	26.20	183.2	
126	4.12	A	32.993	26.20	183.3	
151	4.34	A	33.419	26.51	153.7	
201	4.10	A	33.638	26.71	135.2	
252	3.74	A	33.733	26.82	124.9	
303	3.66	A	33.814	26.89	118.4	
404	3.64	A	33.969	27.02	107.4	
506	3.66	A	34.103	27.12	098.4	
610	3.43	A	34.186	27.21	090.5	
814	3.10	A	34.310	27.34	079.2	
1023	2.78	B	34.399	27.44	070.5	
1232	2.51	A	34.459	27.51	064.3	
1539	2.24	A	34.526	27.59	057.8	
2086	1.91	A	34.602	27.68	050.6	

RV GEORGE B. KELEZ
STATION 53

46-40 N 176-25 W SND 26 MAR 1966 0503-0614 GCT
WEATHER 03 CLOUDS 5 AMT 4 WIND 090 12 KT SEA 2
SWELL 120 AMT 1 BAR 0990 MB DRY WET BT 144

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	4.8		33.029	26.15	186.4	
10	4.70	A	33.026	26.16	185.7	
50	4.68	A	33.026	26.16	185.9	
75	4.64	A	33.026	26.17	185.7	
101	4.64	A	33.028	26.17	185.8	
126	4.64	X	33.028	26.17	186.0	
152	4.59	A	33.344	26.43	162.0	
202	4.48	A	33.660	26.69	137.6	
253	4.15	A	33.773	26.81	126.1	
304	3.97	A	33.853	26.89	118.7	
403	3.64	A	33.989	27.04	105.9	
508	3.54	A	34.097	27.13	097.5	
608	3.42	B	34.177	27.21	091.1	
818	3.14	A	34.293	27.33	080.9	
1027	2.82	A	34.372	27.42	072.9	
1237	2.54	A	34.446	27.50	065.6	
1535	2.26	A	34.508	27.57	059.3	
2080	1.88	A	34.591	27.67	051.0	
2574	1.69	A	34.628	27.71	047.6	
3069	1.55	A	34.651	27.74	045.7	
4057	1.47	A	34.672	27.77	045.6	

RV GEORGE B. KELEZ
STATION 54

45-39 N 176-25 W SND 26 MAR 1966 2343 GCT
WEATHER 01 CLOUDS 0 AMT 8 WIND 060 38 KT SEA 4
SWELL 090 AMT 3 BAR 0978 MB DRY 04.3 WET 04.0 BT 149

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	5.9		33.174	26.14	187.7	
10	5.86	A	33.171	26.14	187.6	
51	5.86	A	33.169	26.14	188.2	
76	5.78	B	33.166	26.15	187.8	
102	5.63	A	33.173	26.17	185.8	
127	5.39	X	33.434	26.41	163.8	
153	6.02	A	33.654	26.50	155.1	
204	5.00	A	33.709	26.67	139.6	
257	4.22	A	33.742	26.78	129.2	
309	4.16	A	33.839	26.86	121.7	
414	3.74	A	33.971	27.01	108.3	
519	3.67	A	34.085	27.11	099.9	
623	3.48	A	34.164	27.19	092.7	
834	3.15	A	34.302	27.33	080.4	
1049	2.82	B	34.388	27.43	071.9	
1258	2.54	A	34.451	27.50	065.3	
1573	2.25	A	34.509	27.58	059.3	
2146	1.88	A	34.591	27.67	051.3	

RV GEORGE B. KELEZ
STATION 55

44-30 N 176-25 W SND 27 MAR 1966 0839 GCT
WEATHER 00 CLOUDS X AMT 9 WIND 340 38 KT SEA 4
SWELL 000 AMT 3 BAR 0987 MB DRY 04.5 WET 03.5 BT 154

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	6.7		33.281	26.12	189.4	
10	6.70	A	33.293	26.13	188.6	
51	6.77	A	33.294	26.12	190.0	
76	6.80	B	33.323	26.14	188.6	
101	6.82	A	33.333	26.15	188.4	
126	6.70	X	33.329	26.16	187.5	
152	7.06	A	33.815	26.49	156.4	
202	6.47	A	33.827	26.58	148.5	
254	5.98	B	33.888	26.69	138.4	
305	5.62	A	33.933	26.77	131.3	
357	4.66	A	33.882	26.84	124.4	
408	4.36	A	33.949	26.93	116.6	
511	4.04	A	34.073	27.06	104.7	
713	3.54	A	34.230	27.24	089.2	
919	3.15	X	34.341	27.36	078.1	
1127	2.80	X	34.412	27.45	070.3	
1338	2.48	A				
1649	2.19	A	34.533	27.60	057.2	
2185	1.88	A	34.596	27.67	051.0	

RV GEORGE B. KELEZ

STATION 56

43-00 N 176-25 W SND 4623 27 MAR 1966 2018-2138 GCT
WEATHER 02 CLOUDS 6 AMT 3 WIND 320 38 KT SEA 4
SWELL 320 AMT 3 BAR 0995 MB DRY 05.6 WET 04.9 BT 160

OBSERVED VALUES

DEPTH	TEMP		SAL	SIG-T	10	SND-VEL
0	8.5		33.662	26.16	185.4	
10	8.46	A	33.657	26.17	185.4	
50	8.48	B	33.655	26.16	186.5	
74	8.46	A	33.655	26.17	186.7	
99	8.49	A	33.681	26.18	185.6	
124	8.86	A	33.936	26.32	172.7	
149	8.58	A	33.974	26.40	166.1	
198	7.93	A	33.959	26.48	158.5	
258	7.34	A	33.953	26.56	151.6	
308	6.66	A	33.946	26.65	143.6	
359	5.98	A	33.972	26.76	133.6	
413	5.22	A	33.938	26.83	127.3	
516	4.40	A	34.013	26.98	113.2	
619	4.04	A	34.103	27.09	103.4	
826	3.46	X	34.248	27.26	087.8	
1035	3.00	X	34.368	27.40	075.2	
1243	2.68	A	34.428	27.47	068.5	
1562	2.31	A	34.517	27.58	059.4	
2095	1.94	A	34.598	27.67	051.3	
2594	1.70	A	34.639	27.72	047.1	
3093	1.55	A	34.663	27.75	044.8	
4092	1.46	A	34.686	27.78	044.5	
4593	1.50	A	34.689	27.78	046.2	

RV GEORGE B. KELEZ
STATION 57

41-00 N 176-25 W SND 28 MAR 1966 1533 GCT
WEATHER 00 CLOUDS X AMT 9 WIND 270 30 KT SEA 3
SWELL 280 AMT 3 BAR 1005 MB DRY 06.1 WET 05.1 BT 169

OBSERVED VALUES

DEPTH	TEMP	SAL	SIG-T	10	SND-VEL	OXY
0	10.0	34.142	26.30	172.9		
10	10.08 A	34.139	26.28	174.5		
49	10.12 X	34.136	26.27	176.2		
74		34.138				
98	10.09 A	34.139	26.28	176.6		
124	10.11 A	34.140	26.28	177.4		
148	10.10 A	34.145	26.28	177.4		
197	10.08 B	34.140	26.28	178.4		
252	8.99 B	34.098	26.43	165.1		
303	8.32 A	34.203	26.62	148.0		
354	7.30 A	33.977	26.59	150.7		
405	6.69 A	33.993	26.68	141.9		
509	5.34 A	33.975	26.84	127.1		
614	4.54 A	34.072	27.01	111.4		
824	3.69 A	34.234	27.23	091.4		
1032	3.18 A	34.351	27.37	078.5		
1241	2.76 B	34.426	27.47	069.5		
1550	2.36 A	34.503	27.56	060.9		
2089	1.96 A	34.597	27.67	051.6		