



HOKKAIDO UNIVERSITY

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THE " USHIO MARU "

CRUISE 318

CRUISE 319

CRUISE 320

IN AUGUST 2014

IN SEPTEMBER 2014

1. Cruise Itinerary

Cruise 318

Departure from Hakodate	Aug.	28, 2014
Start hydrographic research (US14399)		28
Arrival at Mori		28
Departure from Mori		29
Sampling by trawl net		29
Retrieval ADCP mooring system		29
Sampling by trawl net		30
Arrival at Mori		30
Departure from Mori		31
Setting ADCP mooring system		31
Arrival at Muroran		31
Departure from Muroran	Sep.	1
Arrival at and departure from Mori		1
Arrival at and departure from Hakodate		2
Arrival at Hakodate		3
Departure from Hakodate		6
Sampling by squid jigging		7
Sampling by frame trawl net		8
Sampling by squid jigging		8
Finish hydrographic research (US14457)		8
Return to Hakodate		9
Total coverage 803.7 miles		

Cruise 319

Departure from Hakodate	Sep.	13, 2014
Start hydrographic research (US14458)		14
Arrival at Nemuro		14
Departure from Nemuro		15
Arrival at Nemuro		16
Departure from Nemuro		17
Finish hydrographic research (US1495)		18
Return to Hakodate		20
Total coverage 994.1 miles		

Cruise 320

Departure from Hakodate	Sep.	24, 2014
Arrival at Hakodate		25
Departure from Hakodate		26
Start hydrographic research (US14496)		28
Sampling by drift longline		28
Sampling by drift longline		29
Finish hydrographic research (US14504)		29
Return to Hakodate		30
Total coverage 422.2 miles		

2. Data on Temperature, Salinity and Pressure

Hydrographic work on deck and the data processing were made by the deck officers, crews, research staff and cadets of the “Ushio Maru”. Temperature and salinity were measured by CTD (Seabird SBE-9Plus and SBE-19).

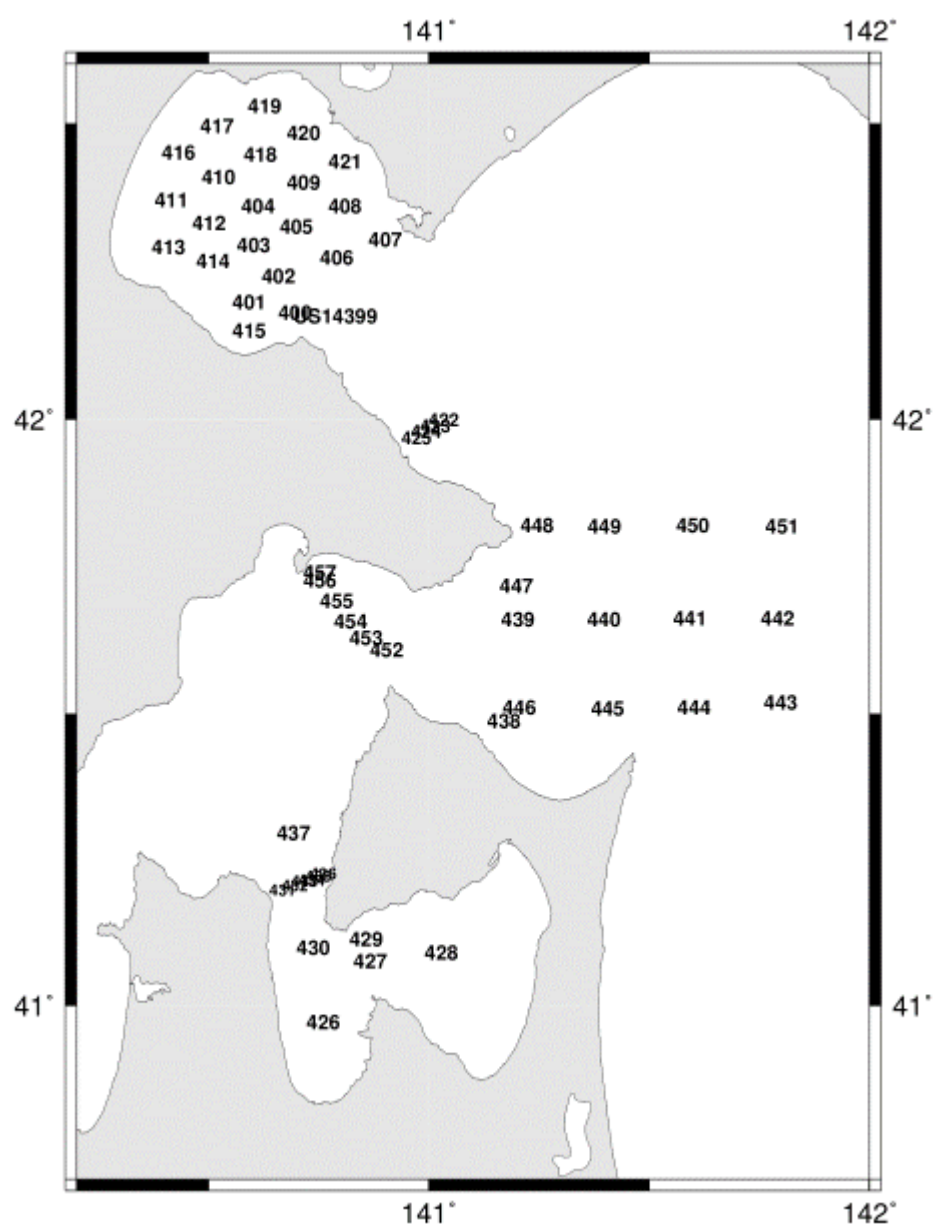


Figure 1. Oceanographic stations (Cruise 318)

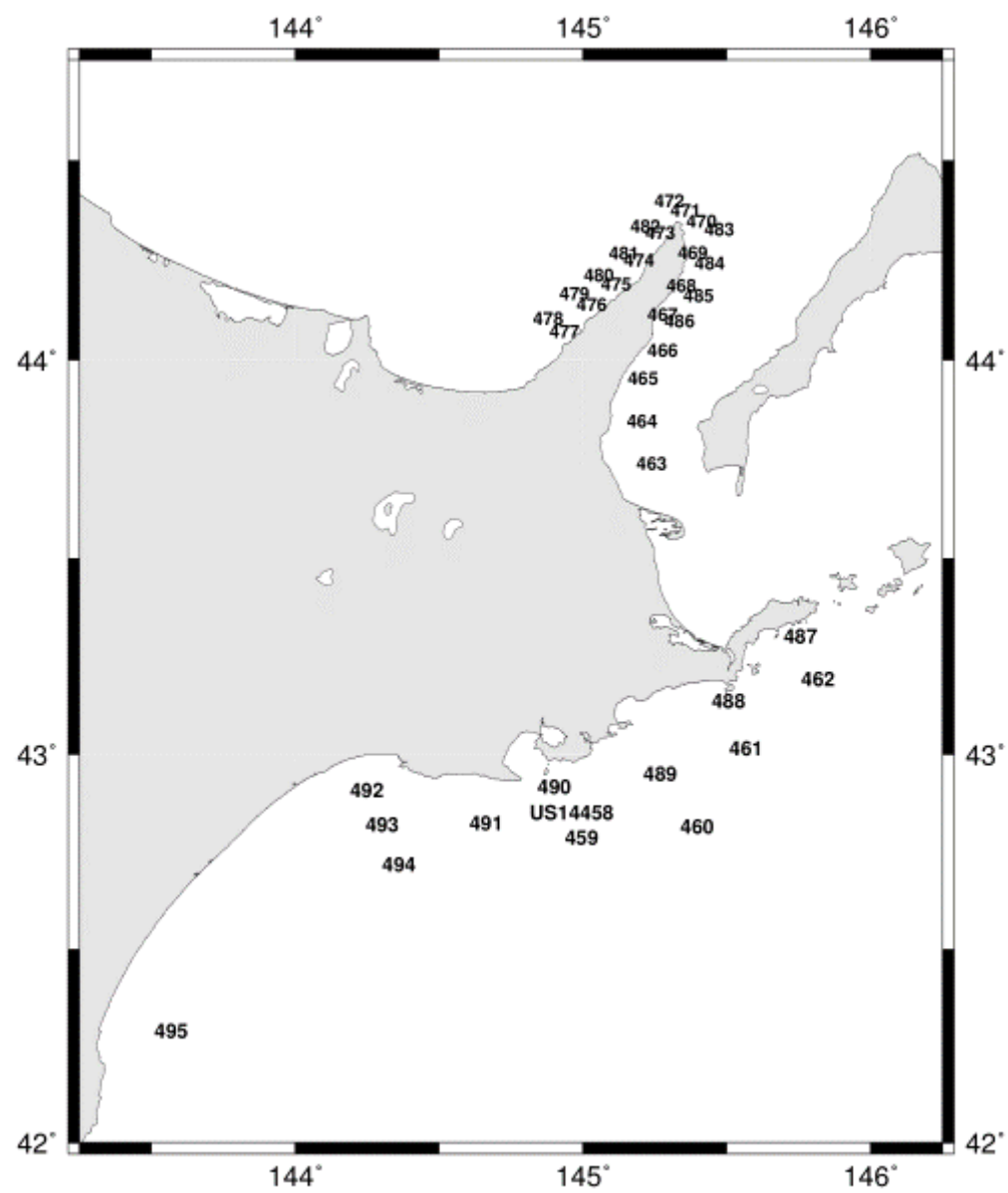


Figure 2. Oceanographic stations (Cruise 319)

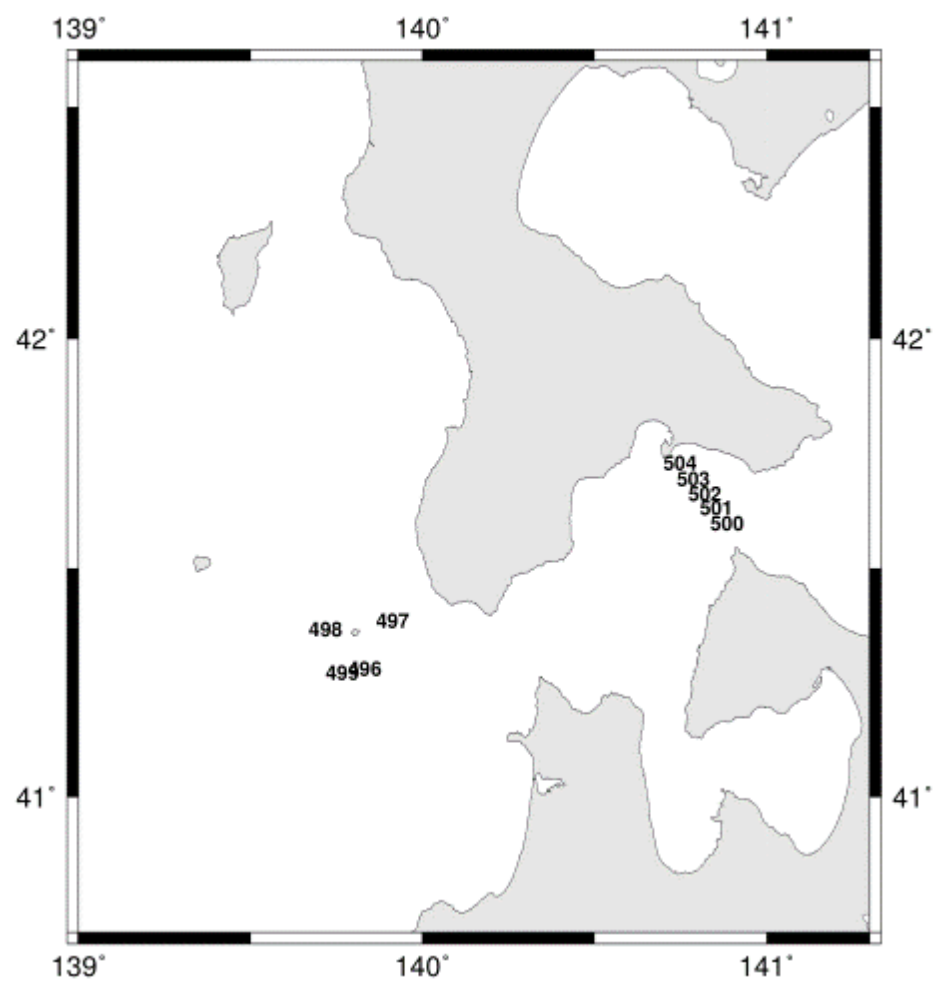


Figure 3. Oceanographic stations (Cruise 320)

Table 1. List of Oceanographic Station

Cruise 318											
Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth(m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.
US14399	42-09.8	140-47.2	8/28	1452-1458	92	SE-1	SE-1	SE-4	21.3	21.0	bc
US14400	42-10.1	140-41.7	8/28	1523-1529	82	SE-1	SE-1	SE-4	20.2	21.2	bc
US14401	42-11.2	140-35.5	8/29	1619-1625	80	East-2	ENE-1	East-4	19.0	20.2	bc
US14402	42-13.8	140-39.5	8/29	0800-0804	87	East-2	East-1	East-3	19.9	20.7	bc
US14403	42-17.0	140-36.1	8/29	0918-0924	89	East-2	East-1	East-4	20.3	20.9	bc
US14404	42-20.9	140-36.7	8/29	1148-1153	85	East-2	ESE-1	East-4	20.3	20.3	bc
US14405	42-18.8	140-41.9	8/29	1314-1317	68	East-2	ESE-1	East-5	21.4	20.8	bc
US14406	42-15.7	140-47.4	8/29	1446-1444	69	East-2	ESE-1	ESE-5	20.7	20.9	c
US14407	42-17.5	140-54.0	8/29	1527-1529	55	East-2	ESE-1	East-5	20.6	21.0	c
US14408	42-20.9	140-48.5	8/30	0533-0536	51	East-2	ESE-1	East-4	20.0	20.7	c
US14409	42-23.3	140-42.9	8/30	0610-0614	59	East-2	ESE-1	East-4	19.9	20.8	c
US14410	42-23.8	140-31.3	8/30	0708-0713	95	East-2	ESE-1	East-4	20.6	20.8	c
US14411	42-21.5	140-24.9	8/30	0842-0845	68	East-2	ESE-1	East-5	21.5	20.7	c
US14412	42-19.2	140-30.0	8/30	1015-1020	91	East-2	ESE-1	East-5	20.8	20.4	c
US14413	42-16.8	140-24.5	8/30	1128-1132	54	SE-2	ESE-1	SE-5	21.2	21.0	c
US14414	42-15.3	140-30.6	8/30	1209-1214	85	ESE-3	East-1	ESE-5	20.8	20.8	c
US14415	42-08.3	140-35.5	8/31	0558-0604	57	Calm	ENE-1	Calm	18.2	19.6	bc
US14401-2	42-10.9	140-35.5	8/31	0623-0630	78	East-2	ENE-1	East-3	20.1	20.0	bc
US14403-2	42-16.5	140-36.1	8/31	0704-0712	89	East-2	ENE-1	East-4	20.6	20.8	bc
US14404-2	42-21.0	140-36.6	8/31	0750-0759	86	East-3	ENE-1	East-4	20.8	20.8	bc
US14416	42-26.3	140-25.9	8/31	0858-0902	67	ESE-2	ESE-1	ESE-3	22.0	20.6	bc
US14417	42-29.0	140-31.1	8/31	0930-0934	73	SE-3	ESE-1	SE-4	21.3	20.6	bc
US14418	42-26.1	140-37.0	8/31	1007-1012	82	SE-3	ESE-1	SE-4	21.7	20.9	bc
US14419	42-31.0	140-37.6	8/31	1049-1053	61	SSE-3	SSE-1	SSE-4	21.3	20.9	bc
US14420	42-28.3	140-42.9	8/31	1124-1127	59	SSE-3	SSE-1	SSE-4	21.8	21.0	bc
US14421	42-25.4	140-48.6	8/31	1158-1200	43	SSE-3	SSE-1	SSE-5	21.8	21.4	bc
US14422	41-59.3	141-02.0	9/1	1211-1216	99	ESE-2	ESE-1	ESE-4	21.5	20.7	c
US14423	41-58.7	141-00.8	9/1	1226-1231	93	ESE-2	ESE-1	ESE-4	22.1	20.7	c
US14424	41-58.1	140-59.6	9/1	1240-1244	86	ESE-2	ESE-1	ESE-4	22.5	20.6	bc
US14425	41-57.5	140-58.3	9/1	1253-1257	78	ESE-2	ESE-1	ESE-4	22.5	20.5	bc
US14426	40-57.5	140-45.6	9/3	0458-0506	50	East-2	East-1	East-4	21.0	22.4	bc
US14427	41-03.8	140-52.0	9/3	0603-0610	50	East-2	East-1	East-4	21.0	22.1	bc
US14428	41-04.7	141-01.7	9/3	0656-0702	47	ESE-2	East-1	ESE-4	21.0	22.5	bc
US14429	41-06.1	140-51.4	9/3	0843-0844	51	East-2	ESE-1	East-4	23.5	22.0	bc
US14430	41-05.2	140-44.2	9/3	0920-0928	59	East-3	ESE-1	East-5	22.1	22.4	bc
US14431	41-11.3	140-40.0	9/3	1007-1013	53	ESE-2	ESE-1	ESE-4	22.0	22.2	bc
US14432	41-11.8	140-41.7	9/3	1025-1031	73	SE-2	ESE-1	SE-4	22.5	22.3	bc
US14433	41-12.2	140-43.0	9/3	1039-1046	72	East-2	ESE-1	East-4	23.0	22.4	bc
US14434	41-12.3	140-44.0	9/3	1053-1101	69	SE-2	ESE-1	SE-4	22.7	22.4	bc
US14435	41-12.7	140-44.9	9/3	1107-1113	66	SE-2	ESE-1	SE-4	23.9	22.5	bc
US14436	41-13.0	140-45.6	9/3	1120-1125	64	SE-2	ESE-1	SE-4	23.1	22.5	bc
US14437	41-17.0	140-41.5	9/3	1158-1209	147	SE-2	SE-1	SE-3	23.8	22.5	c
US14438	41-28.5	141-10.2	9/6	1910-1915	102	WSW-2	WNW-1	WSW-4	22.5	21.5	c
US14439	41-38.9	141-12.1	9/7	0652-0701	202	NW-1	ENE-1	NW-2	21.7	22.3	bc
US14440	41-38.9	141-23.8	9/7	0752-0806	279	West-1	East-1	West-3	23.7	23.1	bc
US14441	41-39.0	141-35.5	9/7	0852-0857	110	NW-1	East-1	NW-3	23.3	22.1	bc
US14442	41-39.0	141-47.5	9/7	0949-1010	1014	West-1	ESE-1	West-3	24.6	22.0	bc
US14443	41-30.4	141-47.9	9/7	1116-1134	910	West-1	ESE-1	West-3	22.4	21.9	bc
US14444	41-29.9	141-36.1	9/7	1234-1246	369	Calm	SSE-1	Calm	24.0	22.0	bc
US14445	41-29.8	141-24.3	9/7	1408-1412	99	East-1	SSE-1	East-2	24.6	23.1	bc
US14446	41-29.9	141-12.3	9/7	1505-1514	262	NW-1	WNW-1	NE-3	25.3	21.9	bc
US14447	41-42.3	141-11.9	9/7	1818-1826	202	NW-1	SW-1	NW-3	19.8	18.7	c
US14448	41-48.5	141-14.7	9/8	0547-0555	207	NW-3	ESE-1	NW-3	20.3	20.9	bc
US14449	41-48.4	141-23.9	9/8	0638-0649	300	NW-3	ESE-1	NW-4	20.6	20.4	bc
US14450	41-48.5	141-35.9	9/8	0742-0803	615	North-2	ESE-1	North-4	20.9	19.3	bc
US14451	41-48.4	141-48.1	9/8	0849-0911	801	North-2	North-2	North-4	21.2	21.2	bc
US14452	41-35.8	140-54.2	9/8	1513-1517	72	East-1	East-1	East-3	23.7	23.4	bc
US14453	41-37.0	140-51.4	9/8	1541-1546	96	East-2	East-1	East-3	23.2	23.6	bc
US14454	41-38.7	140-49.3	9/8	1608-1622	342	East-1	East-1	East-3	23.4	23.7	bc
US14455	41-40.8	140-47.4	9/8	1644-1654	224	East-1	East-1	East-3	23.1	24.5	bc
US14456	41-42.9	140-45.1	9/8	1716-1720	83	East-1	East-1	East-3	22.9	24.7	bc
US14457	41-43.7	140-45.1	9/8	1806-1810	72	ESE-2	SE-1	ESE-2	23.0	24.3	bc

Table 1 (Continued)

Cruise 319											
Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth(m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.
US14458	42-50.0	144-57.6	9/14	0551-0557	103	North-4	East-1	North-4	14.2	15.0	o
US14459	42-46.1	144-59.7	9/14	0625-0630	143	North-2	East-1	North-4	14.6	15.0	c
US14460	42-47.8	145-23.8	9/14	0824-0843	931	NNW-2	ENE-1	NNW-4	15.1	14.1	o
US14461	42-59.9	145-34.0	9/14	1018-1024	97	NE-2	NE-2	NE-4	15.4	14.8	c
US14462	43-10.5	145-49.0	9/14	1206-1210	80	NE-2	NE-2	NE-4	16.6	14.7	c
US14463	43-43.4	145-14.3	9/15	0820-0824	17	SSW-1	NW-1	SSW-2	16.1	17.7	bc
US14464	43-49.8	145-12.3	9/15	0903-0906	44	South-1	NW-1	South-2	17.2	18.2	bc
US14465	43-56.3	145-12.5	9/15	0944-0950	80	South-1	NW-1	South-2	18.1	18.1	bc
US14466	44-00.5	145-16.6	9/15	1024-1040	429	South-1	NW-1	South-3	17.8	18.0	bc
US14467	44-05.9	145-16.6	9/15	1114-1127	385	South-1	South-1	South-3	19.3	17.9	bc
US14468	44-10.3	145-20.5	9/15	1201-1207	151	South-1	South-1	SW-3	19.2	17.9	bc
US14469	44-15.2	145-22.9	9/15	1244-1253	276	South-2	South-1	South-3	20.2	18.3	bc
US14470	44-19.9	145-24.7	9/15	1325-1344	894	South-2	South-1	South-3	19.0	18.3	bc
US14471	44-21.6	145-21.4	9/15	1402-1407	66	SE-2	South-1	SE-4	17.5	18.6	bc
US14472	44-23.0	145-18.0	9/15	1425-1445	689	ESE-2	SE-1	ESE-4	18.3	19.4	bc
US14473	44-18.2	145-16.1	9/15	1522-1528	176	West-1	NNW-1	West-2	19.5	19.0	bc
US14474	44-14.1	145-11.7	9/15	1603-1607	117	SE-2	NNE-1	SE-4	19.7	18.5	bc
US14475	44-10.5	145-06.9	9/15	1642-1647	155	East-2	NNE-1	East-3	19.3	18.9	bc
US14476	44-07.4	145-01.8	9/15	1722-1727	93	SSE-3	NNE-1	SSE-5	18.2	19.1	bc
US14477	44-03.4	144-56.1	9/15	1806-1810	55	East-1	NNE-1	East-2	18.0	19.2	bc
US14478	44-05.3	144-52.7	9/15	1859-1905	186	SE-2	NNE-1	SE-4	17.9	19.0	bc
US14479	44-09.1	144-58.2	9/15	1937-1947	317	SE-2	NNE-1	SE-4	18.2	19.0	bc
US14480	44-11.8	145-03.3	9/15	2011-2026	470	Calm	NNE-1	Calm	17.9	16.9	c
US14481	44-15.1	145-08.5	9/15	2050-2107	475	SE-2	NNE-1	SE-4	17.3	18.6	c
US14482	44-19.2	145-13.0	9/15	2133-2152	725	East-1	NNE-1	East-2	17.7	19.0	c
US14483	44-18.7	145-28.4	9/16	0509-0540	1540	South-4	SE-1	South-4	16.7	18.0	c
US14484	44-13.7	145-26.4	9/16	0633-0649	1578	SSW-2	SSE-1	SSW-4	16.9	18.0	c
US14485	44-08.8	145-24.1	9/16	0723-0740	1479	SSW-3	SE-1	SSW-3	17.0	18.0	c
US14486	44-05.0	145-20.1	9/16	0814-0833	750	SSW-1	SE-1	SSW-3	17.5	18.3	c
US14487	43-17.0	145-45.3	9/17	0755-0758	33	South-2	South-1	South-3	15.7	16.3	bc
US14488	43-07.1	145-30.3	9/17	0934-0937	38	SW-2	South-1	SW-4	16.6	16.3	bc
US14489	42-56.0	145-16.1	9/17	1108-1113	89	SW-3	South-1	SW-4	17.1	15.5	bc
US14490	42-54.0	144-54.0	9/17	1252-1255	63	SW-3	SW-1	SW-4	17.4	16.4	bc
US14491	42-48.4	144-39.8	9/17	1409-1413	105	SW-2	SW-1	SW-3	16.6	16.0	c
US14492	42-53.4	144-14.9	9/17	1608-1612	62	SSW-3	SSW-1	West-4	17.8	17.3	bc
US14493	42-48.1	144-18.1	9/17	1649-1705	612	WSW-2	SSW-1	WSW-3	16.5	15.6	bc
US14494	42-42.0	144-21.6	9/18	0616-0634	658	West-2	West-1	West-3	14.9	16.3	bc
US14495	42-16.2	143-34.1	9/18	1832-1838	101	SSE-1	South-1	SSE-2	17.0	16.5	bc
Cruise 320											
Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth(m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.
US14496	41-15.9	139-49.9	9/28	1032-1040	860	West-3	SW-1	West-4	21.2	22.5	bc
US14497	41-22.2	139-54.8	9/28	1206-1211	123	WSW-2	SW-1	WSW-4	23.6	21.8	bc
US14498	41-21.1	139-43.1	9/29	0947-0953	763	NW-2	NW-1	NW-2	20.2	21.3	c
US14499	41-15.4	139-46.0	9/29	1056-1102	1302	WNW-2	NW-1	WNW-2	20.9	21.3	c
US14500	41-35.0	140-53.1	9/29	1828-1830	38	ENE-1	ENE-1	ENE-2	18.8	21.6	c
US14501	41-37.0	140-51.2	9/29	1846-1850	91	ENE-2	ENE-1	ENE-3	19.2	21.7	c
US14502	41-38.8	140-49.2	9/29	1906-1917	348	ENE-2	ENE-1	East-2	19.3	20.9	c
US14503	41-40.8	140-47.2	9/29	1933-1941	219	Calm	ENE-1	Calm	19.5	21.7	c
US14504	41-42.9	140-44.9	9/29	1958-2002	83	NW-1	ESE-1	NW-2	18.6	22.2	c

(*): Fixed position by Global Positioning System

S.M.T.: Ship's mean time

Wr.: Weather in WMO Code 4501

Table 2. Oceanographic data

STATION US14399			
LATITUDE 42-09.8 N			
LONGITUI 140-47.2 E			
DEPTH (m) 92			
Press.	Temp.	Salinity	Sigma-T
5	21.101	31.324	21.671
10	20.743	31.408	21.830
20	17.155	32.358	23.451
30	12.716	32.574	24.569
40	6.394	32.244	25.327
50	5.136	32.394	25.595
75	4.590	32.939	26.086

STATION US14402			
LATITUDE 42-13.8 N			
LONGITUI 140-39.5 E			
DEPTH (m) 87			
Press.	Temp.	Salinity	Sigma-T
5	20.805	31.082	21.566
10	20.813	31.090	21.570
20	19.489	32.352	22.875
30	16.445	32.993	24.103
40	10.982	32.855	25.109
50	7.991	32.785	25.536
75	5.342	33.161	26.178

STATION US14405			
LATITUDE 42-18.8 N			
LONGITUI 140-41.9 E			
DEPTH (m) 68			
Press.	Temp.	Salinity	Sigma-T
5	21.112	31.248	21.610
10	20.959	31.376	21.749
20	20.849	31.447	21.832
30	17.157	32.299	23.405
40	9.500	32.032	24.716
50	8.006	32.733	25.493

STATION US14408			
LATITUDE 42-20.9 N			
LONGITUI 140-48.5 E			
DEPTH (m) 51			
Press.	Temp.	Salinity	Sigma-T
5	20.848	31.275	21.701
10	20.849	31.274	21.701
20	20.637	31.404	21.855
30	17.016	32.420	23.531
40	12.753	33.444	25.236
50	10.533	33.413	25.622

STATION US14411			
LATITUDE 42-21.5 N			
LONGITUI 140-24.9 E			
DEPTH (m) 68			
Press.	Temp.	Salinity	Sigma-T
5	20.769	31.102	21.591
10	20.562	31.434	21.897
20	18.556	32.397	23.143
30	12.652	32.039	24.168
40	10.177	32.726	25.147
50	6.941	32.785	25.682

STATION US14414			
LATITUDE 42-15.3 N			
LONGITUI 140-30.6 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	20.676	31.189	21.681
10	20.294	31.666	22.144
20	18.723	32.675	23.315
30	13.175	32.187	24.177
40	7.128	32.419	25.369
50	6.506	32.746	25.708
75	4.647	33.187	26.277

STATION US14400			
LATITUDE 42-10.1 N			
LONGITUI 140-41.7 E			
DEPTH (m) 82			
Press.	Temp.	Salinity	Sigma-T
5	20.778	31.200	21.663
10	20.534	31.432	21.903
20	17.488	32.556	23.524
30	11.589	32.399	24.645
40	7.236	32.136	25.132
50	5.966	32.517	25.595
75	4.708	32.831	25.988

STATION US14403			
LATITUDE 42-17.0 N			
LONGITUI 140-36.1 E			
DEPTH (m) 89			
Press.	Temp.	Salinity	Sigma-T
5	20.882	30.975	21.465
10	20.895	31.182	21.618
20	19.675	31.989	22.550
30	17.906	32.566	23.431
40	7.970	32.039	24.953
50	5.674	32.420	25.553
75	5.510	33.171	26.166

STATION US14406			
LATITUDE 42-15.7 N			
LONGITUI 140-47.4 E			
DEPTH (m) 69			
Press.	Temp.	Salinity	Sigma-T
5	21.069	31.218	21.599
10	20.929	31.359	21.744
20	18.903	32.257	22.950
30	14.890	32.514	24.080
40	12.801	33.476	25.252
50	9.946	33.288	25.625

STATION US14409			
LATITUDE 42-23.3 N			
LONGITUI 140-42.9 E			
DEPTH (m) 59			
Press.	Temp.	Salinity	Sigma-T
5	20.918	31.189	21.618
10	20.903	31.190	21.622
20	20.263	31.628	22.123
30	14.962	32.485	24.042
40	8.152	32.249	25.092
50	10.267	33.365	25.630

STATION US14412			
LATITUDE 42-19.2 N			
LONGITUI 140-30.0 E			
DEPTH (m) 91			
Press.	Temp.	Salinity	Sigma-T
5	20.707	31.503	21.912
10	20.703	31.501	21.911
20	18.925	32.648	23.243
30	13.168	32.147	24.150
40	8.264	32.346	25.152
50	5.567	32.578	25.691
75	5.147	33.244	26.267

STATION US14415			
LATITUDE 42-08.3 N			
LONGITUI 140-35.5 E			
DEPTH (m) 57			
Press.	Temp.	Salinity	Sigma-T
5	19.792	31.938	22.481
10	18.932	32.156	22.866
20	16.411	32.120	23.440
30	12.019	32.134	24.360
40	7.584	32.135	25.083
50	6.000	32.297	25.417

STATION US14401			
LATITUDE 42-11.2 N			
LONGITUI 140-35.5 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	20.321	31.258	21.827
10	20.332	31.345	21.890
20	17.116	32.310	23.423
30	11.723	32.054	24.353
40	7.253	32.156	25.145
50	6.496	32.577	25.576
75	4.953	32.935	26.044

STATION US14404			
LATITUDE 42-20.9 N			
LONGITUI 140-36.7 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	20.963	31.198	21.612
10	20.924	31.200	21.624
20	20.589	31.552	21.980
30	16.928	32.334	23.486
40	8.904	32.064	24.835
50	5.924	32.499	25.586
75	5.465	33.107	26.121

STATION US14407			
LATITUDE 42-17.5 N			
LONGITUI 140-54.0 E			
DEPTH (m) 55			
Press.	Temp.	Salinity	Sigma-T
5	20.860	31.649	21.983
10	20.290	32.153	22.516
20	17.057	32.891	23.883
30	16.357	33.560	24.558
40	13.443	33.556	25.185
50	11.144	33.417	25.517

STATION US14410			
LATITUDE 42-23.8 N			
LONGITUI 140-31.3 E			
DEPTH (m) 95			
Press.	Temp.	Salinity	Sigma-T
5	20.797	31.270	21.711
10	20.805	31.278	21.715
20	19.531	31.973	22.575
30	16.300	32.403	23.682
40	9.538	32.200	24.842
50	6.136	32.586	25.628
75	5.488	33.185	26.180

STATION US14413			
LATITUDE 42-16.8 N			
LONGITUI 140-24.5 E			
DEPTH (m) 54			
Press.	Temp.	Salinity	Sigma-T
5	21.098	30.787	21.264
10	20.401	31.639	22.096
20	18.011	32.294	23.198
30	11.230	32.045	24.435
40	8.443	32.558	25.292
50	7.003	32.660	25.575

STATION US14416			
LATITUDE 42-26.3 N			
LONGITUI 140-25.9 E			
DEPTH (m) 67			
Press.	Temp.	Salinity	Sigma-T
5	20.777	31.171	21.641
10	20.742	31.342	21.780
20	19.421	32.141	22.731
30	14.779	32.105	23.788
40	12.230	32.911	24.924
50	8.983	32.898	25.475

Table 2. (Continued)

STATION US14417				
LATITUDE 42-29.0 N				
LONGITUI 140-31.1 E				
DEPTH (m) 73				
Press.	Temp.	Salinity	Sigma-T	
5	20.815	31.396	21.802	
10	20.775	31.412	21.824	
20	20.440	31.612	22.065	
30	17.808	32.504	23.407	
40	11.247	32.267	24.604	
50	9.698	33.075	25.499	

STATION US14420				
LATITUDE 42-28.3 N				
LONGITUI 140-42.9 E				
DEPTH (m) 59				
Press.	Temp.	Salinity	Sigma-T	
5	21.308	30.951	21.333	
10	21.185	30.977	21.385	
20	19.848	31.674	22.266	
30	18.564	33.151	23.718	
40	14.361	33.312	24.808	
50	11.911	33.424	25.382	

STATION US14423				
LATITUDE 41-58.7 N				
LONGITUI 141-00.8 E				
DEPTH (m) 93				
Press.	Temp.	Salinity	Sigma-T	
5	20.727	32.585	22.729	
10	20.608	32.617	22.786	
20	20.088	33.234	23.392	
30	15.804	33.621	24.731	
40	14.307	33.800	25.195	
50	13.057	33.888	25.520	
75	11.494	33.906	25.833	

STATION US14426				
LATITUDE 40-57.5 N				
LONGITUI 140-45.6 E				
DEPTH (m) 50				
Press.	Temp.	Salinity	Sigma-T	
5	22.277	33.220	22.789	
10	22.295	33.228	22.790	
20	21.936	33.539	23.126	
30	21.016	34.052	23.768	
40	19.522	34.150	24.238	

STATION US14429				
LATITUDE 41-06.1 N				
LONGITUI 140-51.4 E				
DEPTH (m) 51				
Press.	Temp.	Salinity	Sigma-T	
5	22.367	33.390	22.893	
10	22.372	33.410	22.907	
20	21.965	33.523	23.106	
30	21.507	33.760	23.413	
40	18.927	33.947	24.235	

STATION US14432				
LATITUDE 41-11.8 N				
LONGITUI 140-41.7 E				
DEPTH (m) 73				
Press.	Temp.	Salinity	Sigma-T	
5	22.415	33.240	22.766	
10	22.400	33.241	22.770	
20	22.452	33.598	23.026	
30	20.713	34.023	23.827	
40	17.579	34.331	24.862	
50	16.627	34.389	25.133	

STATION US14418				
LATITUDE 42-26.1 N				
LONGITUI 140-37.0 E				
DEPTH (m) 82				
Press.	Temp.	Salinity	Sigma-T	
5	21.069	31.310	21.669	
10	20.991	31.308	21.688	
20	20.624	31.549	21.969	
30	18.542	32.797	23.452	
40	11.395	32.043	24.404	
50	7.378	32.469	25.374	
75	6.043	33.256	26.170	

STATION US14421				
LATITUDE 42-25.4 N				
LONGITUI 140-48.6 E				
DEPTH (m) 43				
Press.	Temp.	Salinity	Sigma-T	
5	21.219	31.012	21.403	
10	21.097	31.095	21.498	
20	20.053	32.546	22.877	
30	16.400	33.007	24.124	

STATION US14424				
LATITUDE 41-58.1 N				
LONGITUI 140-59.6 E				
DEPTH (m) 86				
Press.	Temp.	Salinity	Sigma-T	
5	20.618	32.578	22.753	
10	20.589	32.579	22.762	
20	20.268	33.191	23.313	
30	15.919	33.531	24.636	
40	9.387	32.447	25.059	
50	8.189	32.646	25.397	
75	5.326	32.850	25.934	

STATION US14427				
LATITUDE 41-03.8 N				
LONGITUI 140-52.0 E				
DEPTH (m) 50				
Press.	Temp.	Salinity	Sigma-T	
5	21.666	33.259	22.988	
10	21.693	33.278	22.995	
20	21.723	33.551	23.194	
30	20.882	33.889	23.681	
40	19.350	34.060	24.213	

STATION US14430				
LATITUDE 41-05.2 N				
LONGITUI 140-44.2 E				
DEPTH (m) 59				
Press.	Temp.	Salinity	Sigma-T	
5	22.241	33.124	22.726	
10	22.242	33.123	22.725	
20	22.294	33.228	22.790	
30	19.968	33.976	23.989	
40	18.391	34.095	24.483	
50	17.145	34.145	24.823	

STATION US14433				
LATITUDE 41-12.2 N				
LONGITUI 140-43.0 E				
DEPTH (m) 72				
Press.	Temp.	Salinity	Sigma-T	
5	22.401	33.164	22.711	
10	22.384	33.240	22.774	
20	22.361	33.465	22.951	
30	20.715	34.071	23.863	
40	18.175	34.276	24.675	
50	16.282	34.300	25.144	

STATION US14419				
LATITUDE 42-31.0 N				
LONGITUI 140-37.6 E				
DEPTH (m) 61				
Press.	Temp.	Salinity	Sigma-T	
5	21.001	31.252	21.643	
10	20.840	31.382	21.785	
20	20.566	31.573	22.002	
30	16.207	32.528	23.800	
40	9.490	32.256	24.893	
50	9.298	33.186	25.650	

STATION US14422				
LATITUDE 41-59.3 N				
LONGITUI 141-02.0 E				
DEPTH (m) 99				
Press.	Temp.	Salinity	Sigma-T	
5	20.795	32.802	22.877	
10	20.666	32.961	23.032	
20	19.053	33.157	23.600	
30	15.456	33.613	24.803	
40	13.271	33.734	25.358	
50	12.925	33.965	25.606	
75	11.605	33.983	25.873	

STATION US14425				
LATITUDE 41-57.5 N				
LONGITUI 140-58.3 E				
DEPTH (m) 78				
Press.	Temp.	Salinity	Sigma-T	
5	20.539	32.559	22.760	
10	20.366	32.702	22.914	
20	19.696	33.181	23.454	
30	15.057	33.011	24.426	
40	8.971	32.210	24.939	
50	6.047	32.410	25.500	

STATION US14428				
LATITUDE 41-04.7 N				
LONGITUI 141-01.7 E				
DEPTH (m) 47				
Press.	Temp.	Salinity	Sigma-T	
5	22.634	32.601	22.219	
10	22.633	32.614	22.230	
20	22.665	32.644	22.243	
30	20.435	33.729	23.678	
40	17.252	33.751	24.496	

STATION US14431				
LATITUDE 41-11.3 N				
LONGITUI 140-40.0 E				
DEPTH (m) 53				
Press.	Temp.	Salinity	Sigma-T	
5	22.576	33.319	22.780	
10	22.388	33.440	22.925	
20	21.728	33.926	23.477	
30	20.227	34.145	24.050	
40	18.763	34.284	24.534	
50	16.753	34.357	25.079	

STATION US14434			
LATITUDE 41-12.3 N			
LONGITUI 140-44.0 E			
DEPTH (m) 69			
Press.	Temp.	Salinity	Sigma-T
5	22.542	33.176	22.681
10	22.492	33.172	22.692
20	22.067	33.447	23.020
30	20.774	34.084	23.857
40	17.945	34.229	24.695
50	16.302	34.317	25.153

Table 2. (Continued)

STATION US14435			
LATITUDE	41-12.7	N	
LONGITUI	140-44.9	E	
DEPTH (m)	66		
Press.	Temp.	Salinity	Sigma-T
5	22.520	33.188	22.696
10	22.524	33.187	22.694
20	22.322	33.157	22.729
30	20.407	33.961	23.862
40	17.718	34.238	24.757
50	16.317	34.304	25.140

STATION US14438			
LATITUDE	41-28.5	N	
LONGITUI	141-10.2	E	
DEPTH (m)	102		
Press.	Temp.	Salinity	Sigma-T
5	21.602	33.934	23.518
10	21.556	33.934	23.531
20	21.210	33.935	23.626
30	20.912	33.939	23.710
40	20.651	33.925	23.770
50	20.306	33.885	23.831
75	15.040	34.284	25.411

STATION US14441			
LATITUDE	41-39.0	N	
LONGITUI	141-35.5	E	
DEPTH (m)	110		
Press.	Temp.	Salinity	Sigma-T
5	21.510	33.638	23.319
10	21.511	33.737	23.394
20	21.339	33.843	23.521
30	21.306	33.862	23.544
40	21.249	33.899	23.588
50	21.109	33.962	23.674
75	20.592	33.994	23.838
100	17.064	34.188	24.876

STATION US14444			
LATITUDE	41-29.9	N	
LONGITUI	141-36.1	E	
DEPTH (m)	369		
Press.	Temp.	Salinity	Sigma-T
5	21.824	33.657	23.246
10	21.650	33.721	23.344
20	21.652	33.795	23.399
30	20.864	33.841	23.648
40	20.568	33.895	23.769
50	20.317	33.900	23.839
75	19.638	33.957	24.060
100	17.780	34.068	24.612
125	16.206	34.083	24.995
150	12.705	33.988	25.667
175	9.692	33.895	26.141
200	8.534	33.801	26.252
250	4.968	33.495	26.486
300	2.988	33.637	26.798

STATION US14436			
LATITUDE	41-13.0	N	
LONGITUI	140-45.6	E	
DEPTH (m)	64		
Press.	Temp.	Salinity	Sigma-T
5	22.422	33.167	22.708
10	22.351	33.163	22.725
20	22.288	33.237	22.799
30	19.282	34.073	24.241
40	17.284	34.239	24.862
50	16.627	34.242	25.020

STATION US14439			
LATITUDE	41-38.9	N	
LONGITUI	141-12.1	E	
DEPTH (m)	202		
Press.	Temp.	Salinity	Sigma-T
5	22.454	33.891	23.248
10	22.443	33.889	23.250
20	22.152	33.886	23.329
30	21.985	33.896	23.383
40	19.817	33.998	24.045
50	19.703	34.034	24.103
75	19.122	34.110	24.310
100	13.317	34.086	25.621
125	11.003	33.919	25.933
150	9.126	33.877	26.219
175	6.979	33.666	26.371

STATION US14442			
LATITUDE	41-39.0	N	
LONGITUI	141-47.5	E	
DEPTH (m)	1014		
Press.	Temp.	Salinity	Sigma-T
5	21.750	33.939	23.482
10	21.658	33.940	23.507
20	21.629	33.941	23.516
30	21.614	33.942	23.521
40	21.610	33.940	23.521
50	21.395	33.944	23.583
75	19.314	34.094	24.249
100	17.237	34.161	24.814
125	16.416	34.165	25.010
150	15.262	34.192	25.292
175	13.764	34.044	25.497
200	12.161	33.964	25.754
250	6.109	33.503	26.356
300	2.959	33.526	26.712
400	3.239	33.925	27.005
500	3.420	34.100	27.128

STATION US14445			
LATITUDE	41-29.8	N	
LONGITUI	141-24.3	E	
DEPTH (m)	99		
Press.	Temp.	Salinity	Sigma-T
5	22.652	33.890	23.192
10	22.381	33.892	23.269
20	22.036	33.889	23.364
30	21.908	33.883	23.395
40	19.323	33.948	24.135
50	17.373	34.160	24.781
75	14.496	34.274	25.521

STATION US14437			
LATITUDE	41-17.0	N	
LONGITUI	140-41.5	E	
DEPTH (m)	147		
Press.	Temp.	Salinity	Sigma-T
5	22.640	33.704	23.054
10	22.653	33.696	23.044
20	21.561	34.037	23.608
30	19.719	34.214	24.235
40	17.670	34.296	24.814
50	16.616	34.374	25.124
75	16.016	34.399	25.282
100	15.114	34.409	25.492
125	13.932	34.357	25.705

STATION US14440			
LATITUDE	41-38.9	N	
LONGITUI	141-23.8	E	
DEPTH (m)	279		
Press.	Temp.	Salinity	Sigma-T
5	23.112	33.920	23.082
10	22.156	33.943	23.372
20	21.931	33.955	23.443
30	21.477	33.956	23.570
40	20.517	33.999	23.861
50	20.342	34.015	23.921
75	17.491	34.108	24.712
100	15.728	34.158	25.161
125	12.825	34.011	25.662
150	11.063	34.036	26.014
175	9.871	33.975	26.173
200	7.659	33.769	26.357
250	4.425	33.563	26.599

STATION US14443			
LATITUDE	41-30.4	N	
LONGITUI	141-47.9	E	
DEPTH (m)	910		
Press.	Temp.	Salinity	Sigma-T
5	21.591	33.823	23.437
10	21.521	33.826	23.458
20	21.491	33.831	23.470
30	21.462	33.828	23.476
40	21.442	33.829	23.483
50	21.211	33.815	23.535
75	19.722	33.901	23.997
100	18.322	34.037	24.455
125	14.936	34.063	25.263
150	13.350	33.993	25.542
175	12.461	34.094	25.797
200	11.565	34.043	25.928
250	10.025	34.004	26.170
300	5.108	33.451	26.435
400	3.257	33.723	26.842
500	3.263	33.939	27.014

STATION US14446			
LATITUDE	41-29.9	N	
LONGITUI	141-12.3	E	
DEPTH (m)	262		
Press.	Temp.	Salinity	Sigma-T
5	21.126	33.932	23.647
10	21.066	33.937	23.667
20	20.677	33.986	23.809
30	20.387	33.966	23.871
40	18.926	34.020	24.291
50	17.660	34.107	24.671
75	15.344	34.269	25.333
100	15.080	34.323	25.433
125	14.580	34.359	25.568
150	13.662	34.344	25.751
175	12.725	34.301	25.906
200	12.255	34.281	25.982

Table 2 (Continued)

STATION US14447			
LATITUDE 41-42.3 N			
LONGITUI 141-11.9 E			
DEPTH (m) 202			
Press.	Temp.	Salinity	Sigma-T
5	18.226	34.139	24.557
10	17.015	34.223	24.914
20	16.348	34.263	25.101
30	15.712	34.267	25.249
40	14.778	34.233	25.429
50	13.334	34.120	25.644
75	9.206	33.904	26.227
100	8.047	33.813	26.335
125	6.356	33.629	26.424
150	4.960	33.508	26.497
175	4.487	33.480	26.527

STATION US14448			
LATITUDE 41-48.5 N			
LONGITUI 141-14.7 E			
DEPTH (m) 207			
Press.	Temp.	Salinity	Sigma-T
5	20.757	32.212	22.438
10	20.817	32.348	22.525
20	20.388	32.606	22.835
30	20.771	33.628	23.512
40	17.151	33.738	24.510
50	13.332	33.956	25.518
75	10.826	34.070	26.082
100	9.099	33.862	26.211
125	6.434	33.580	26.375
150	5.441	33.530	26.459
175	4.225	33.427	26.512

STATION US14449			
LATITUDE 41-48.4 N			
LONGITUI 141-23.9 E			
DEPTH (m) 300			
Press.	Temp.	Salinity	Sigma-T
5	20.158	34.069	24.010
10	19.538	34.096	24.192
20	16.804	34.233	24.972
30	16.665	34.273	25.035
40	16.335	34.264	25.104
50	14.977	34.167	25.335
75	10.481	33.609	25.784
100	10.675	33.742	25.854
125	10.860	34.017	26.035
150	9.048	33.926	26.269
175	5.879	33.544	26.417
200	3.966	33.425	26.537
250	3.024	33.509	26.693

STATION US14450			
LATITUDE 41-48.5 N			
LONGITUI 141-35.9 E			
DEPTH (m) 615			
Press.	Temp.	Salinity	Sigma-T
5	19.578	33.737	23.908
10	17.833	34.093	24.618
20	17.619	34.173	24.732
30	17.546	34.187	24.760
40	17.189	34.190	24.848
50	15.928	34.204	25.151
75	14.449	34.303	25.553
100	12.830	34.206	25.812
125	12.347	34.196	25.898
150	11.121	34.110	26.060
175	10.348	34.007	26.117
200	6.858	33.725	26.433
250	2.982	33.477	26.671
300	2.808	33.578	26.767
400	3.033	33.762	26.894
500	3.279	33.925	27.001

STATION US14451			
LATITUDE 41-48.4 N			
LONGITUI 141-48.1 E			
DEPTH (m) 801			
Press.	Temp.	Salinity	Sigma-T
5	21.368	33.926	23.576
10	20.992	34.010	23.743
20	20.588	34.051	23.883
30	20.567	34.060	23.895
40	19.421	34.086	24.215
50	17.702	34.179	24.716
75	15.998	34.259	25.178
100	15.061	34.241	25.373
125	13.866	34.201	25.598
150	11.949	34.103	25.902
175	10.050	33.920	26.100
200	9.021	33.894	26.249
250	3.410	33.338	26.521
300	2.925	33.473	26.673
400	2.978	33.712	26.859
500	3.261	33.924	27.002

STATION US14452			
LATITUDE 41-35.8 N			
LONGITUI 140-54.2 E			
DEPTH (m) 72			
Press.	Temp.	Salinity	Sigma-T
5	23.309	33.948	23.047
10	22.486	33.994	23.317
20	20.995	34.104	23.813
30	19.485	34.183	24.273
40	18.415	34.234	24.583
50	18.228	34.256	24.646

STATION US14453			
LATITUDE 41-37.0 N			
LONGITUI 140-51.4 E			
DEPTH (m) 96			
Press.	Temp.	Salinity	Sigma-T
5	23.566	33.923	22.953
10	23.307	33.921	23.027
20	22.948	33.943	23.147
30	20.247	34.183	24.074
40	18.547	34.282	24.587
50	18.082	34.304	24.719
75	14.813	34.392	25.544

STATION US14454			
LATITUDE 41-38.7 N			
LONGITUI 140-49.3 E			
DEPTH (m) 342			
Press.	Temp.	Salinity	Sigma-T
5	24.382	33.865	22.669
10	24.163	33.901	22.762
20	23.444	33.896	22.969
30	22.316	33.983	23.357
40	19.583	34.085	24.173
50	17.864	34.215	24.704
75	14.663	34.256	25.472
100	13.050	34.322	25.858
125	13.050	34.319	25.855
150	12.763	34.304	25.900
175	13.039	34.326	25.863
200	12.951	34.320	25.876
250	12.864	34.321	25.894
300	12.580	34.317	25.947

STATION US14455			
LATITUDE 41-40.8 N			
LONGITUI 140-47.4 E			
DEPTH (m) 224			
Press.	Temp.	Salinity	Sigma-T
5	24.286	33.829	22.670
10	23.846	33.880	22.839
20	23.371	33.928	23.014
30	21.116	34.052	23.741
40	19.621	34.209	24.258
50	17.593	34.325	24.854
75	13.765	34.296	25.692
100	12.811	34.294	25.883
125	11.801	34.270	26.060
150	11.392	34.258	26.127
175	11.222	34.252	26.153
200	10.901	34.242	26.203

STATION US14456			
LATITUDE 41-42.9 N			
LONGITUI 140-45.1 E			
DEPTH (m) 83			
Press.	Temp.	Salinity	Sigma-T
5	22.841	33.918	23.159
10	22.730	33.953	23.217
20	21.788	34.008	23.523
30	20.235	34.151	24.053
40	17.705	34.270	24.785
50	16.804	34.307	25.028
75	13.536	34.312	25.751

STATION US14457			
LATITUDE 41-43.7 N			
LONGITUI 140-45.1 E			
DEPTH (m) 72			
Press.	Temp.	Salinity	Sigma-T
5	24.048	33.907	22.800
10	23.536	33.892	22.939
20	22.293	33.975	23.357
30	20.982	34.104	23.817
40	18.261	34.254	24.637
50	15.778	34.312	25.269

STATION US14458			
LATITUDE 42-50.0 N			
LONGITUI 144-57.6 E			
DEPTH (m) 103			
Press.	Temp.	Salinity	Sigma-T
5	15.626	33.296	24.521
10	15.624	33.296	24.521
20	15.490	33.271	24.532
30	15.111	33.318	24.651
40	14.071	33.316	24.871
50	13.836	33.324	24.926
75	9.563	33.195	25.615

Table 2 (Continued)

STATION US14459			
LATITUDE 42-46.1 N			
LONGITUI 144-59.7 E			
DEPTH (m) 143			
Press.	Temp.	Salinity	Sigma-T
5	14.815	32.981	24.456
10	14.994	33.077	24.491
20	14.871	33.291	24.683
30	12.843	33.277	25.089
40	11.914	33.306	25.289
50	10.965	33.293	25.452
75	6.580	33.161	26.026
100	3.345	33.081	26.322
125	2.349	33.187	26.493

STATION US14460			
LATITUDE 42-47.8 N			
LONGITUI 145-23.8 E			
DEPTH (m) 931			
Press.	Temp.	Salinity	Sigma-T
5	14.362	32.531	24.205
10	14.288	32.574	24.253
20	13.348	33.169	24.905
30	11.010	33.233	25.398
40	6.735	32.873	25.779
50	4.534	32.806	25.986
75	2.711	32.965	26.285
100	1.852	33.050	26.421
125	1.741	33.115	26.480
150	1.722	33.183	26.536
175	1.838	33.253	26.584
200	1.982	33.322	26.629
250	2.044	33.454	26.730
300	2.213	33.560	26.801
400	2.596	33.729	26.906
500	2.809	33.835	26.972

STATION US14461			
LATITUDE 42-59.9 N			
LONGITUI 145-34.0 E			
DEPTH (m) 97			
Press.	Temp.	Salinity	Sigma-T
5	14.996	32.959	24.400
10	14.911	32.956	24.416
20	14.589	33.140	24.626
30	13.386	33.234	24.948
40	12.443	33.275	25.165
50	11.496	33.249	25.323
75	8.641	33.222	25.782

STATION US14462			
LATITUDE 43-10.5 N			
LONGITUI 145-49.0 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	14.745	32.929	24.430
10	14.730	32.942	24.444
20	14.582	32.967	24.494
30	14.346	33.272	24.780
40	13.774	33.295	24.916
50	12.750	33.298	25.124
75	11.314	33.263	25.367

STATION US14463			
LATITUDE 43-43.4 N			
LONGITUI 145-14.3 E			
DEPTH (m) 17			
Press.	Temp.	Salinity	Sigma-T
5	17.921	33.239	23.943
10	17.925	33.240	23.943

STATION US14464			
LATITUDE 43-49.8 N			
LONGITUI 145-12.3 E			
DEPTH (m) 44			
Press.	Temp.	Salinity	Sigma-T
5	18.018	33.184	23.877
10	17.971	33.179	23.885
20	17.775	33.283	24.012
30	17.453	33.388	24.170
40	16.151	33.471	24.537

STATION US14465			
LATITUDE 43-56.3 N			
LONGITUI 145-12.5 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	18.214	33.219	23.856
10	18.201	33.220	23.860
20	18.067	33.275	23.935
30	17.886	33.259	23.967
40	17.487	33.412	24.181
50	16.736	33.501	24.425
75	11.919	33.644	25.551

STATION US14466			
LATITUDE 44-00.5 N			
LONGITUI 145-16.6 E			
DEPTH (m) 429			
Press.	Temp.	Salinity	Sigma-T
5	17.946	33.187	23.897
10	17.897	33.192	23.913
20	17.875	33.194	23.920
30	17.849	33.281	23.992
40	17.714	33.312	24.049
50	16.767	33.504	24.421
75	12.724	33.664	25.412
100	9.987	33.627	25.882
125	7.822	33.585	26.188
150	5.690	33.494	26.400
175	4.298	33.452	26.524
200	3.716	33.458	26.588
250	2.234	33.407	26.678
300	1.444	33.407	26.735

STATION US14467			
LATITUDE 44-05.9 N			
LONGITUI 145-16.6 E			
DEPTH (m) 385			
Press.	Temp.	Salinity	Sigma-T
5	17.992	33.244	23.929
10	17.879	33.315	24.012
20	17.742	33.456	24.153
30	16.906	33.501	24.386
40	16.686	33.546	24.472
50	15.957	33.592	24.674
75	13.624	33.670	25.237
100	11.948	33.698	25.588
125	8.649	33.583	26.064
150	6.423	33.531	26.338
175	4.512	33.528	26.562
200	3.204	33.490	26.662
250	1.846	33.404	26.704
300	1.548	33.417	26.736

STATION US14468			
LATITUDE 44-10.3 N			
LONGITUI 145-20.5 E			
DEPTH (m) 151			
Press.	Temp.	Salinity	Sigma-T
5	17.853	33.343	24.039
10	17.629	33.431	24.160
20	17.590	33.505	24.227
30	17.391	33.497	24.268
40	16.702	33.540	24.463
50	15.691	33.614	24.751
75	13.405	33.680	25.289
100	10.933	33.683	25.762

STATION US14469			
LATITUDE 44-15.2 N			
LONGITUI 145-22.9 E			
DEPTH (m) 276			
Press.	Temp.	Salinity	Sigma-T
5	18.179	33.421	24.019
10	18.157	33.420	24.024
20	18.057	33.534	24.136
30	17.875	33.646	24.266
40	17.555	33.665	24.358
50	16.543	33.597	24.544
75	15.000	33.617	24.906
100	11.889	33.658	25.568
125	8.415	33.602	26.114
150	6.968	33.554	26.284
175	4.593	33.473	26.509
200	3.567	33.477	26.617

STATION US14470			
LATITUDE 44-19.9 N			
LONGITUI 145-24.7 E			
DEPTH (m) 894			
Press.	Temp.	Salinity	Sigma-T
5	18.394	33.437	23.978
10	17.706	33.381	24.104
20	17.579	33.392	24.142
30	17.466	33.419	24.191
40	17.689	33.663	24.324
50	17.546	33.652	24.350
75	13.481	33.628	25.234
100	11.984	33.767	25.634
125	9.702	33.646	25.945
150	1.396	32.985	26.400
175	1.226	33.182	26.570
200	2.451	33.324	26.593
250	0.055	33.242	26.684
300	-0.164	33.286	26.730
400	1.325	33.516	26.831
500	1.435	33.637	26.920

Table 2 (Continued)

STATION US14471			
LATITUDE 44-21.6 N			
LONGITUI 145-21.4 E			
DEPTH (m) 66			
Press.	Temp.	Salinity	Sigma-T
5	18.631	33.524	23.986
10	18.595	33.516	23.989
20	18.417	33.540	24.052
30	18.002	33.635	24.226
40	17.778	33.622	24.271
50	17.553	33.621	24.324

STATION US14472			
LATITUDE 44-23.0 N			
LONGITUI 145-18.0 E			
DEPTH (m) 689			
Press.	Temp.	Salinity	Sigma-T
5	19.193	33.626	23.922
10	19.030	33.628	23.965
20	18.271	33.646	24.169
30	18.083	33.654	24.221
40	18.015	33.664	24.246
50	16.636	33.604	24.528
75	11.037	33.655	25.722
100	9.192	33.828	26.170
125	8.698	33.814	26.237
150	7.575	33.753	26.356
175	5.858	33.604	26.467
200	4.510	33.634	26.646
250	2.358	33.450	26.702
300	2.063	33.431	26.710
400	1.874	33.522	26.797

STATION US14473			
LATITUDE 44-18.2 N			
LONGITUI 145-16.1 E			
DEPTH (m) 176			
Press.	Temp.	Salinity	Sigma-T
5	19.118	33.630	23.945
10	19.034	33.625	23.962
20	18.937	33.621	23.984
30	18.802	33.623	24.019
40	14.897	33.670	24.969
50	12.897	33.718	25.420
75	10.405	33.829	25.969
100	9.825	33.821	26.061
125	7.917	33.709	26.272
150	6.393	33.637	26.426

STATION US14474			
LATITUDE 44-14.1 N			
LONGITUI 145-11.7 E			
DEPTH (m) 117			
Press.	Temp.	Salinity	Sigma-T
5	18.644	33.608	24.047
10	18.507	33.613	24.085
20	18.481	33.631	24.105
30	16.038	33.442	24.540
40	13.184	33.666	25.323
50	12.935	33.719	25.414
75	10.373	33.809	25.959

STATION US14475			
LATITUDE 44-10.5 N			
LONGITUI 145-06.9 E			
DEPTH (m) 155			
Press.	Temp.	Salinity	Sigma-T
5	19.107	33.635	23.951
10	18.953	33.632	23.988
20	18.584	33.633	24.081
30	16.153	33.625	24.656
40	13.552	33.707	25.280
50	13.106	33.806	25.447
75	11.108	33.750	25.783
100	9.779	33.824	26.071
125	8.789	33.810	26.220

STATION US14476			
LATITUDE 44-07.4 N			
LONGITUI 145-01.8 E			
DEPTH (m) 93			
Press.	Temp.	Salinity	Sigma-T
5	19.311	33.641	23.904
10	19.154	33.639	23.943
20	18.536	33.644	24.101
30	18.296	33.655	24.169
40	14.947	33.499	24.826
50	13.816	33.696	25.217
75	11.835	33.840	25.720

STATION US14477			
LATITUDE 44-03.4 N			
LONGITUI 144-56.1 E			
DEPTH (m) 55			
Press.	Temp.	Salinity	Sigma-T
5	19.305	33.642	23.906
10	19.296	33.642	23.908
20	18.978	33.652	23.997
30	18.809	33.674	24.057
40	18.533	33.649	24.106

STATION US14478			
LATITUDE 44-05.3 N			
LONGITUI 144-52.7 E			
DEPTH (m) 186			
Press.	Temp.	Salinity	Sigma-T
5	19.080	33.640	23.962
10	19.081	33.640	23.961
20	18.824	33.643	24.029
30	18.152	33.684	24.227
40	17.847	33.718	24.328
50	17.155	33.616	24.416
75	14.338	33.764	25.161
100	11.564	33.809	25.745
125	9.871	33.760	26.005
150	9.328	33.855	26.169

STATION US14479			
LATITUDE 44-09.1 N			
LONGITUI 144-58.2 E			
DEPTH (m) 317			
Press.	Temp.	Salinity	Sigma-T
5	18.516	33.558	24.041
10	17.652	33.449	24.169
20	17.186	33.429	24.265
30	16.467	33.501	24.488
40	13.739	33.728	25.258
50	12.328	33.795	25.591
75	11.161	33.879	25.874
100	10.465	33.900	26.013
125	5.927	33.181	26.124
150	5.166	33.483	26.453
175	4.984	33.515	26.500
200	2.990	33.340	26.561
250	1.250	33.397	26.740

STATION US14480			
LATITUDE 44-11.8 N			
LONGITUI 145-03.3 E			
DEPTH (m) 470			
Press.	Temp.	Salinity	Sigma-T
5	16.548	33.435	24.419
10	16.283	33.452	24.493
20	15.042	33.615	24.895
30	13.749	33.752	25.275
40	13.366	33.773	25.369
50	12.389	33.819	25.598
75	10.658	33.815	25.914
100	2.771	33.081	26.373
125	5.582	33.487	26.408
150	2.336	33.170	26.479
175	2.746	33.425	26.649
200	1.970	33.299	26.611
250	2.235	33.442	26.705
300	2.899	33.565	26.749

STATION US14481			
LATITUDE 44-15.1 N			
LONGITUI 145-08.5 E			
DEPTH (m) 475			
Press.	Temp.	Salinity	Sigma-T
5	18.745	33.660	24.062
10	18.430	33.633	24.119
20	16.967	33.551	24.410
30	13.565	33.566	25.168
40	12.991	33.767	25.439
50	12.284	33.822	25.620
75	8.554	33.821	26.264
100	7.992	33.783	26.319
125	7.102	33.714	26.392
150	6.389	33.651	26.437
175	4.846	33.555	26.547
200	2.421	33.379	26.640
250	3.150	33.569	26.729
300	2.565	33.567	26.779

STATION US14482			
LATITUDE 44-19.2 N			
LONGITUI 145-13.0 E			
DEPTH (m) 725			
Press.	Temp.	Salinity	Sigma-T
5	19.149	33.648	23.951
10	19.148	33.650	23.952
20	18.400	33.666	24.152
30	17.839	33.726	24.336
40	14.053	33.560	25.063
50	5.977	32.583	25.645
75	7.947	33.708	26.267
100	7.974	33.778	26.318
125	6.100	33.518	26.369
150	5.029	33.538	26.513
175	3.854	33.434	26.555
200	3.658	33.497	26.624
250	2.881	33.567	26.752
300	3.210	33.599	26.748
400	0.980	33.464	26.812

Table 2 (Continued)

STATION US14483			
LATITUDE 44-18.7 N			
LONGITUI 145-28.4 E			
DEPTH (m) 1540			
Press.	Temp.	Salinity	Sigma-T
5	18.118	33.488	24.086
10	18.116	33.488	24.086
20	18.088	33.528	24.124
30	17.917	33.599	24.219
40	16.658	33.652	24.560
50	16.111	33.640	24.676
75	12.298	33.654	25.487
100	10.619	33.620	25.768
125	5.205	33.167	26.199
150	0.868	33.003	26.448
175	0.353	33.100	26.555
200	0.185	33.160	26.611
250	1.099	33.261	26.641
300	0.057	33.305	26.735
400	1.226	33.475	26.805
500	1.466	33.655	26.933
600	1.944	33.887	27.084
700	2.208	34.063	27.205
800	2.271	34.154	27.272
900	2.301	34.239	27.338

STATION US14486			
LATITUDE 44-05.0 N			
LONGITUI 145-20.1 E			
DEPTH (m) 750			
Press.	Temp.	Salinity	Sigma-T
5	18.422	33.570	24.073
10	18.418	33.569	24.073
20	18.018	33.594	24.191
30	16.748	33.565	24.472
40	15.967	33.593	24.673
50	15.031	33.608	24.893
75	11.750	33.695	25.623
100	8.420	33.618	26.126
125	6.249	33.509	26.343
150	4.540	33.457	26.503
175	3.501	33.436	26.591
200	3.026	33.439	26.637
250	1.738	33.412	26.719
300	1.431	33.404	26.734
400	1.172	33.480	26.812

STATION US14489			
LATITUDE 42-56.0 N			
LONGITUI 145-16.1 E			
DEPTH (m) 89			
Press.	Temp.	Salinity	Sigma-T
5	15.762	33.246	24.452
10	15.607	33.261	24.498
20	14.722	33.231	24.669
30	14.277	33.270	24.793
40	13.717	33.302	24.933
50	12.721	33.290	25.123
75	7.942	33.167	25.843

STATION US14492			
LATITUDE 42-53.4 N			
LONGITUI 144-14.9 E			
DEPTH (m) 62			
Press.	Temp.	Salinity	Sigma-T
5	16.713	33.075	24.104
10	16.399	33.234	24.299
20	16.084	33.304	24.425
30	15.796	33.298	24.485
40	15.327	33.333	24.616
50	14.169	33.311	24.847

STATION US14484			
LATITUDE 44-13.7 N			
LONGITUI 145-26.4 E			
DEPTH (m) 1578			
Press.	Temp.	Salinity	Sigma-T
5	18.178	33.430	24.026
10	18.175	33.432	24.028
20	17.871	33.630	24.255
30	16.605	33.605	24.536
40	16.254	33.660	24.659
50	15.265	33.643	24.868
75	12.688	33.695	25.443
100	9.368	33.604	25.966
125	3.083	33.008	26.287
150	0.472	33.019	26.483
175	0.119	33.098	26.565
200	-0.041	33.154	26.618
250	-0.142	33.251	26.701
300	1.136	33.358	26.717
400	1.234	33.505	26.828

STATION US14487			
LATITUDE 43-17.0 N			
LONGITUI 145-45.3 E			
DEPTH (m) 33			
Press.	Temp.	Salinity	Sigma-T
5	16.528	33.048	24.126
10	16.430	33.063	24.161
20	16.073	33.099	24.269
30	15.773	33.135	24.364

STATION US14490			
LATITUDE 42-54.0 N			
LONGITUI 144-54.0 E			
DEPTH (m) 63			
Press.	Temp.	Salinity	Sigma-T
5	16.295	33.087	24.209
10	15.374	32.992	24.343
20	15.054	33.020	24.435
30	15.291	33.243	24.554
40	14.343	33.252	24.765
50	12.359	33.248	25.160

STATION US14493			
LATITUDE 42-48.1 N			
LONGITUI 144-18.1 E			
DEPTH (m) 612			
Press.	Temp.	Salinity	Sigma-T
5	15.741	32.818	24.128
10	16.426	33.194	24.262
20	15.859	33.283	24.459
30	15.603	33.303	24.532
40	14.582	33.313	24.761
50	13.558	33.294	24.960
75	8.948	33.124	25.657
100	6.359	33.338	26.194
125	5.063	33.370	26.376
150	4.091	33.345	26.460
175	3.043	33.306	26.529
200	1.866	33.276	26.600
250	2.259	33.383	26.656
300	2.629	33.565	26.772
400	2.728	33.699	26.870

STATION US14485			
LATITUDE 44-08.8 N			
LONGITUI 145-24.1 E			
DEPTH (m) 1479			
Press.	Temp.	Salinity	Sigma-T
5	18.314	33.531	24.070
10	18.307	33.530	24.071
20	18.268	33.527	24.079
30	16.359	33.564	24.561
40	15.570	33.608	24.773
50	14.637	33.648	25.008
75	11.500	33.672	25.651
100	7.691	33.591	26.212
125	6.576	33.567	26.346
150	4.930	33.486	26.483
175	3.981	33.442	26.549
200	3.083	33.443	26.635
250	2.167	33.410	26.685
300	1.427	33.360	26.699
400	1.112	33.487	26.822

STATION US14488			
LATITUDE 43-07.1 N			
LONGITUI 145-30.3 E			
DEPTH (m) 38			
Press.	Temp.	Salinity	Sigma-T
5	16.333	33.063	24.182
10	16.120	33.119	24.274
20	15.717	33.194	24.422
30	15.114	33.204	24.563

STATION US14491			
LATITUDE 42-48.4 N			
LONGITUI 144-39.8 E			
DEPTH (m) 105			
Press.	Temp.	Salinity	Sigma-T
5	16.189	33.166	24.295
10	15.944	33.134	24.325
20	15.487	33.202	24.479
30	15.354	33.254	24.549
40	14.738	33.278	24.701
50	13.783	33.300	24.918
75	9.667	33.219	25.616

STATION US14494			
LATITUDE 42-42.0 N			
LONGITUI 144-21.6 E			
DEPTH (m) 658			
Press.	Temp.	Salinity	Sigma-T
5	16.325	33.141	24.244
10	16.328	33.141	24.244
20	15.642	33.230	24.467
30	15.297	33.298	24.595
40	14.206	33.323	24.848
50	12.211	33.259	25.197
75	5.351	32.865	25.943
100	4.797	33.247	26.308
125	3.523	33.220	26.417
150	3.358	33.271	26.473
175	3.623	33.380	26.535
200	3.435	33.405	26.572
250	2.469	33.468	26.708
300	2.894	33.578	26.760
400	3.511	33.854	26.923

Table 2 (Continued)

STATION US14495			
LATITUDE 42-16.2 N			
LONGITUI 143-34.1 E			
DEPTH (m) 101			
Press.	Temp.	Salinity	Sigma-T
5	16.650	32.911	23.993
10	16.470	33.081	24.165
20	14.337	33.180	24.711
30	11.238	33.185	25.320
40	10.478	33.221	25.482
50	8.736	33.159	25.718
75	6.233	33.327	26.201

STATION US14498			
LATITUDE 41-21.1 N			
LONGITUI 139-43.1 E			
DEPTH (m) 763			
Press.	Temp.	Salinity	Sigma-T
5	21.363	33.640	23.360
10	21.233	33.653	23.406
20	20.971	33.738	23.541
30	20.697	33.789	23.654
40	18.605	33.836	24.231
50	10.474	33.905	26.016
75	6.050	34.007	26.762
100	4.690	34.020	26.933
125	3.418	34.017	27.062

STATION US14501			
LATITUDE 41-37.0 N			
LONGITUI 140-51.2 E			
DEPTH (m) 91			
Press.	Temp.	Salinity	Sigma-T
5	21.593	33.842	23.451
10	21.342	33.860	23.533
20	21.142	33.878	23.602
30	19.694	34.043	24.112
40	18.683	34.204	24.493
50	17.659	34.317	24.832
75	15.274	34.360	25.418

STATION US14504			
LATITUDE 41-42.9 N			
LONGITUI 140-44.9 E			
DEPTH (m) 83			
Press.	Temp.	Salinity	Sigma-T
5	22.402	33.808	23.200
10	22.403	33.807	23.198
20	20.992	33.796	23.580
30	19.538	33.915	24.054
40	17.138	34.048	24.751
50	15.911	34.163	25.124
75	11.900	34.217	26.000

STATION US14496			
LATITUDE 41-15.9 N			
LONGITUI 139-49.9 E			
DEPTH (m) 860			
Press.	Temp.	Salinity	Sigma-T
5	22.541	33.671	23.056
10	22.523	33.669	23.060
20	22.513	33.669	23.063
30	22.489	33.665	23.067
40	21.067	33.837	23.591
50	17.807	34.169	24.683
75	12.123	34.253	25.985
100	9.104	34.151	26.436
125	7.083	34.068	26.673

STATION US14499			
LATITUDE 41-15.4 N			
LONGITUI 139-46.0 E			
DEPTH (m) 1302			
Press.	Temp.	Salinity	Sigma-T
5	21.599	33.662	23.312
10	21.526	33.655	23.327
20	21.407	33.647	23.353
30	21.397	33.658	23.365
40	20.533	33.932	23.806
50	16.261	34.244	25.106
75	13.058	34.259	25.808
100	7.169	33.975	26.588
125	4.838	34.013	26.911

STATION US14502			
LATITUDE 41-38.8 N			
LONGITUI 140-49.2 E			
DEPTH (m) 348			
Press.	Temp.	Salinity	Sigma-T
5	20.947	33.834	23.620
10	20.886	33.841	23.643
20	20.772	33.860	23.688
30	20.477	33.883	23.784
40	20.060	33.926	23.927
50	17.935	34.075	24.580
75	15.044	34.365	25.473
100	12.671	34.287	25.906
125	11.784	34.254	26.050
150	10.935	34.239	26.194
175	10.386	34.228	26.283
200	10.185	34.217	26.309
250	9.923	34.202	26.342
300	9.705	34.194	26.372

STATION US14497			
LATITUDE 41-22.2 N			
LONGITUI 139-54.8 E			
DEPTH (m) 123			
Press.	Temp.	Salinity	Sigma-T
5	21.854	33.651	23.234
10	21.793	33.645	23.246
20	21.732	33.647	23.265
30	21.244	33.812	23.524
40	16.297	34.236	25.092
50	14.244	34.341	25.626
75	9.337	34.149	26.397
100	5.093	33.982	26.857

STATION US14500			
LATITUDE 41-35.0 N			
LONGITUI 140-53.1 E			
DEPTH (m) 38			
Press.	Temp.	Salinity	Sigma-T
5	21.817	33.859	23.402
10	21.772	33.865	23.419
20	21.683	33.875	23.451
30	21.581	33.884	23.487

STATION US14503			
LATITUDE 41-40.8 N			
LONGITUI 140-47.2 E			
DEPTH (m) 219			
Press.	Temp.	Salinity	Sigma-T
5	22.349	33.796	23.206
10	22.131	33.837	23.298
20	21.134	33.920	23.636
30	20.839	34.059	23.821
40	19.410	34.141	24.260
50	15.462	34.234	25.279
75	13.780	34.278	25.675
100	12.284	34.286	25.980
125	11.751	34.262	26.063
150	11.153	34.241	26.157
175	10.449	34.240	26.281
200	10.037	34.215	26.332