



HOKKAIDO UNIVERSITY

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THE " USHIO MARU "

CRUISE 236

CRUISE 237

CRUISE 238

IN SEPTEMBER - OCTOBER 2011

1. Cruise Itinerary

Cruise 236

Departure from Hakodate	Sep. 19, 2011
Start hydrographic research (US11587) and trawl net research	19
Arrival at Aomori	19
Departure from Aomori	20
Finish trawl net research	20
Finish hydrographic research (US11615)	21
Return to Hakodate	21
Total coverage 197.4 miles	

Cruise 237

Departure from Hakodate	Sep. 27, 2011
Start hydrographic research (US11616)	27
Finish hydrographic research (US11635)	28
Return to Hakodate	29
Total coverage 269.7 miles	

Cruise 238

Departure from Hakodate	Oct. 3, 2011
Start hydrographic research (US11636)	4
Arrival at Nemuro	4
Departure from Nemuro	5
Arrival at and departure from Nemuro	6
Arrival at Kushiro	7
Departure from Kushiro	8
Arrival at Usujiri	9
Departure from Usujiri	10
Finish hydrographic research (US11682)	10
Return to Hakodate	11
Total coverage 1015.3 miles	

2. Data on Temperature, Salinity and Computed Dynamic Depth Anomaly

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 SBE9Plus and SBE-19). Dynamic computations were made using a desk-top computer aboard the “Ushio Maru”.

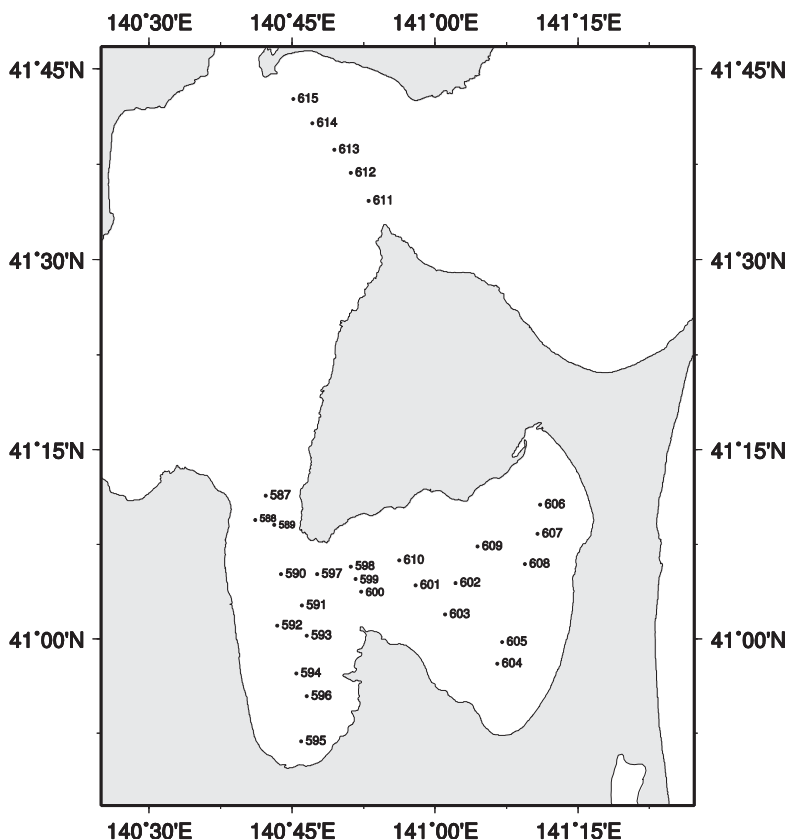


Figure 1. Oceanographic stations (Cruise 236)

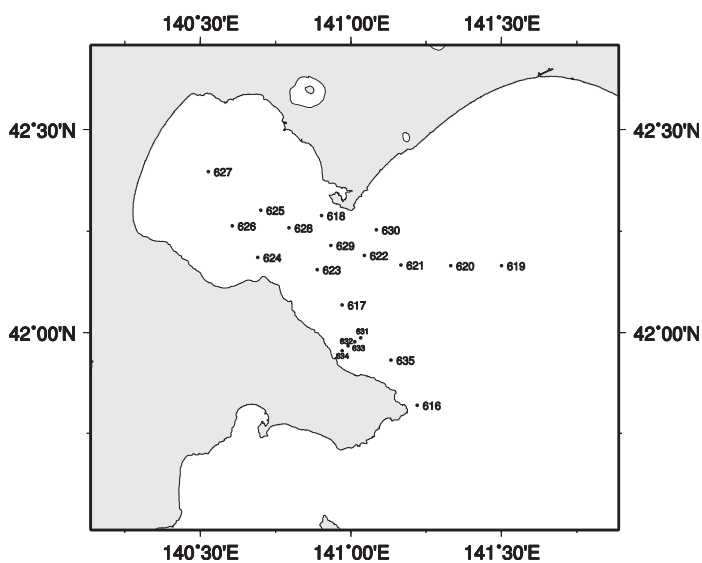


Figure 2. Oceanographic stations (Cruise 237)

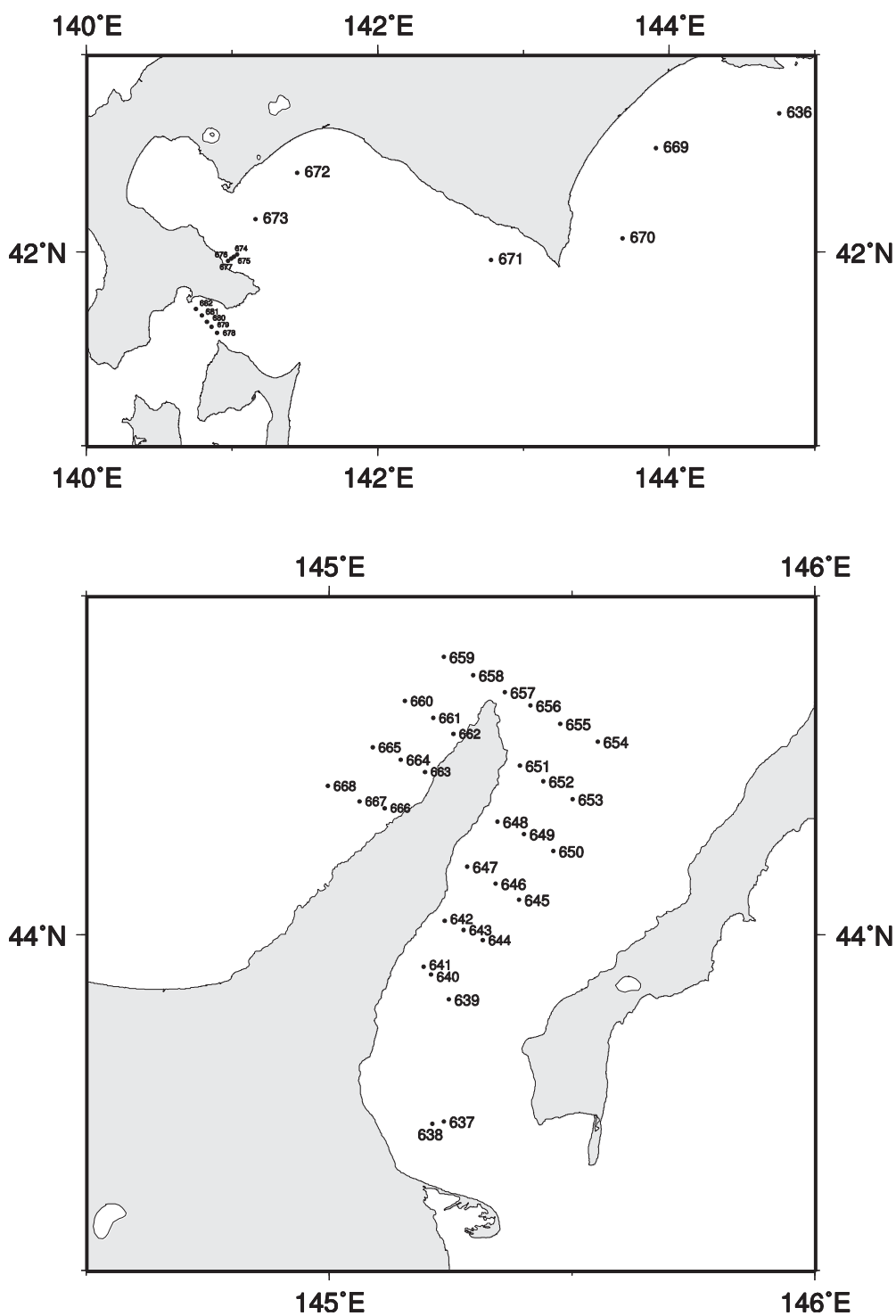


Figure 3. Oceanographic stations (Cruise 238; 2 maps)

Table 1: List of oceanographic stations

Cruise 236

Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US11587	41-11.4	140-42.2	9/19	1121-1129	69	North-1	North-1	North-2	18.7	22.5	c	1016.1
US11588	41-09.5	140-41.1	9/19	1147-1153	53	Calm	North-1	Calm	18.8	22.5	o	1016.0
US11589	41-09.1	140-43.1	9/19	1211-1220	73	SE -1	North-1	SE -3	18.6	22.0	o	1016.0
US11590	41-05.2	140-43.8	9/19	1250-1256	60	East-1	North-1	East-3	18.5	21.7	o	1015.6
US11591	41-02.7	140-46.0	9/19	1408-1414	52	ENE-2	NE -1	ENE-5	18.1	22.3	r	1015.6
US11592	41-01.1	140-43.4	9/19	1435-1443	55	NE -2	NE -1	NE -4	17.6	22.3	r	1016.1
US11593	41-00.3	140-46.5	9/19	1500-1507	51	ENE-2	NE -1	ENE-5	17.3	22.4	r	1015.9
US11594	40-57.3	140-45.4	9/19	1610-1617	49	East-2	NE -1	East-4	17.0	22.7	r	1016.0
US11595	40-51.9	140-45.9	9/20	0547-0553	26	SSE-1	NE -1	SSE-2	14.8	22.4	r	1016.6
US11596	40-55.5	140-46.5	9/20	0629-0636	41	SE -1	NE -1	SE -2	20.9	15.3	r	1016.2
US11597	41-05.2	140-47.6	9/20	0751-0757	55	SE -1	NW -1	SE -3	15.5	20.5	r	1016.8
US11598	41-05.8	140-51.1	9/20	0814-0820	52	SSE-2	NW -1	SSE-4	15.2	21.9	r	1016.8
US11599	41-04.8	140-51.6	9/20	0828-0832	52	SSE-2	NW -1	SSE-4	14.9	21.1	r	1016.7
US11600	41-03.8	140-52.2	9/20	1856-0901	50	SSE-1	NW -1	SSE-2	15.1	20.7	r	1016.6
US11601	41-04.3	140-57.9	9/20	1013-1017	49	SSW-1	SE -1	SSW-2	15.3	22.1	r	1016.7
US11602	41-04.5	141-02.1	9/20	1054-1059	47	SSW-1	SE -1	SSW-2	15.5	22.0	r	1016.6
US11603	41-02.0	141-01.0	9/20	1303-1308	47	SW -1	South-1	SW -2	15.8	22.0	o	1015.6
US11604	40-58.1	141-06.5	9/20	1344-1351	39	Calm	South-1	Calm	15.8	22.3	o	1015.5
US11605	40-59.8	141-07.0	9/20	1420-1427	42	Calm	South-1	Calm	15.9	22.3	o	1015.0
US11606	41-10.7	141-11.0	9/20	1619-1625	30	SSE-1	SSE-1	SSE-3	16.9	22.3	o	1014.7
US11607	41-08.4	141-10.7	9/20	1730-1734	34	SE -1	SE -1	SE -3	16.8	22.3	o	1015.1
US11608	41-06.0	141-09.4	9/20	1753-1758	38	SE -2	South-1	SE -4	16.6	22.0	o	1015.1
US11609	41-07.4	141-04.4	9/20	1842-1847	40	SE -2	South-1	SE -4	16.7	22.2	o	1015.4
US11610	41-06.3	140-56.2	9/20	1943-1949	47	SE -2	South-1	SE -4	16.6	22.2	o	1015.1
US11611	41-34.7	140-53.0	9/20	2318-2321	36	East-1	South-1	East-3	17.2	22.4	o	1013.6
US11612	41-36.9	140-51.1	9/20	2338-2342	83	East-2	East-1	East-4	17.7	22.7	o	1013.6
US11613	41-38.7	140-49.4	9/20	2357-0010	332	East-2	East-1	East-3	17.8	23.0	o	1013.6
US11614	41-40.8	140-47.1	9/21	0028-0035	219	NE -2	East-1	NE -4	17.8	23.3	o	1013.6
US11615	41-42.7	140-45.1	9/21	0051-0055	84	NE -2	East-1	NE -4	17.4	22.2	o	1013.6

Cruise 237

Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US11616	41-49.3	141-13.1	9/27	1147-1159	166	Calm	SE -1	Calm	21.3	19.5	bc	1022
US11617	42-04.2	140-58.2	9/27	1444-1451	80	NW -2	ESE-1	NW -4	21.3	19.7	bc	1020.6
US11618	42-17.4	140-54.1	9/27	1648-1655	56	WNW-2	ESE-1	WNW-4	20.9	18.9	bc	1020.7
US11619	42-10.0	141-29.9	9/27	2045-2125	544	NNE-3	ESE-1	NNE-5	19.2	20	bc	1022.2
US11620	42-10.0	141-19.8	9/27	2204-2248	351	North-3	ESE-1	North-4	19	19	bc	1022.1
US11621	42-10.1	141-09.9	9/27	2330-2335	119	West-2	ESE-1	West-3	18.4	18.9	bc	1022.6
US11622	42-11.5	141-02.6	9/28	0022-0026	80	West-2	ESE-1	West-3	18.1	18.9	bc	1022.2
US11623	42-09.4	140-53.2	9/28	0117-0121	76	Calm	ESE-1	Calm	17.6	19.1	bc	1022.6
US11624	42-11.2	140-41.4	9/28	0227-0231	89	West-1	ESE-1	West-3	15.9	19.7	bc	1022.6
US11625	42-18.2	140-42.0	9/28	0319-0322	63	West-1	ESE-1	West-2	16.8	19.5	bc	1022.6
US11626	42-15.9	140-36.3	9/28	0612-0618	89	SW -1	ESE-1	SW -1	16	19.9	bc	1022.1
US11627	42-23.9	140-31.5	9/28	1008-1012	93	Calm	ESE-1	Calm	19.4	20.5	bc	1023.6
US11628	42-15.6	140-47.6	9/28	1152-1156	69	East-2	ESE-1	East-3	19.5	19.9	bc	1022.4
US11629	42-13.0	140-55.9	9/28	1340-1343	67	East-2	ESE-1	East-4	20.8	19.2	bc	1021.1
US11630	42-15.3	141-05.0	9/28	1440-1444	77	East-2	ESE-1	East-3	21.2	19.2	bc	1021
US11631	41-59.3	141-01.9	9/28	1637-1642	99	SE -3	ESE-1	SE -5	20.1	19.3	bc	1020.5
US11632	41-58.7	141-00.7	9/28	1652-1657	93	SE -3	ESE-1	SE -5	20.1	19.2	bc	1020.6
US11633	41-58.1	140-59.4	9/28	1707-1711	85	SE -3	ESE-1	SE -5	20	19.5	bc	1020.6
US11634	41-57.4	140-58.2	9/28	1719-1723	76	SE -3	ESE-1	SE -5	20	19.8	bc	1020.6
US11635	41-56.0	141-07.9	9/28	1808-1815	145	SE -3	ESE-1	SE -4	19.5	19.2	bc	1021.2

Cruise 238

Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US11636	42-42.6	144-45.1	10/4	0800-0808	176	WSW-2	SSE-1	WSW-3	11.3	14.6	bc	1020.6
US11637	43-43.4	145-14.1	10/5	0835-0836	17	SW -2	WSW-1	SW -4	15.4	16	bc	1019.6
US11638	43-43.2	145-12.7	10/5	0845-0846	16	SW -2	WSW-1	SW -4	15.6	16	bc	1019.5
US11639	43-54.3	145-14.7	10/5	0949-0953	72	South-2	North-1	South-4	19.1	16	bc	1019.5
US11640	43-56.5	145-12.5	10/5	1009-1013	82	South-1	North-1	South-3	18.3	16	bc	1019.4
US11641	43-57.2	145-11.6	10/5	1019-1023	87	South-1	North-1	South-3	18.1	16	bc	1019.2
US11642	44-01.3	145-14.2	10/5	1048-1059	334	SSE-1	North-1	SSE-3	18.2	16.1	bc	1019
US11643	44-00.5	145-16.5	10/5	1113-1126	428	SE -1	North-1	SE -3	17.9	16.1	bc	1018.6
US11644	43-59.6	145-18.9	10/5	1139-1146	278	South-1	South-1	South-3	17.8	16.1	bc	1018.4
US11645	44-03.2	145-23.4	10/5	1221-1235	517	South-1	South-1	South-3	17.2	16	bc	1018
US11646	44-04.6	145-20.5	10/5	1253-1308	1097	South-1	South-1	South-3	18.8	16	bc	1017.6
US11647	44-06.1	145-17.0	10/5	1328-1341	490	SE -1	NNE-1	SE -3	19.2	16	bc	1017.6
US11648	44-10.1	145-20.7	10/5	1413-1420	274	SE -1	NNE-1	SE -3	18.1	16	bc	1017.5
US11649	44-09.0	145-24.0	10/5	1438-1453	1450	South-2	North-1	South-3	17.9	16	bc	1017.5
US11650	44-07.5	145-27.6	10/5	1513-1528	1255	South-2	North-1	South-3	17.7	16.1	bc	1017.5
US11651	44-15.1	145-23.5	10/5	1625-1637	301	SW -2	NNE-1	SW -2	17.3	15.5	bc	1017.6
US11652	44-13.7	145-26.4	10/5	1655-1712	1603	SW -1	NNE-1	SW -2	16.6	15.8	bc	1017.6
US11653	44-12.1	145-30.0	10/5	1733-1750	2081	SW -1	NNE-1	SW -3	16.3	15.2	bc	1017.8
US11654	44-17.2	145-33.1	10/5	1827-1845	2084	SSW-1	NNE-1	SSW-2	15.8	15	bc	1018.1
US11655	44-18.8	145-28.5	10/5	1903-1920	1865	South-1	NNE-1	South-2	15.7	14.9	bc	1018.1
US11656	44-20.4	145-24.8	10/5	1940-1958	1011	SSW-1	NNE-1	SSW-2	16.1	15.8	bc	1018
US11657	44-21.6	145-21.6	10/5	2015-2017	73	Calm	NNE-1	Calm	15.8	15.1	bc	1018
US11658	44-23.1	145-17.7	10/5	2038-2055	708	Calm	NNE-1	Calm	15.6	13.8	bc	1018
US11659	44-24.7	145-14.1	10/5	2115-2135	1436	SSE-1	NNE-1	SSE-2	14.5	12.3	bc	1018
US11660	44-20.8	145-09.3	10/5	2215-2230	1200	SE -1	NNE-1	SE -2	14.4	12.6	bc	1017.8
US11661	44-19.3	145-12.8	10/5	2248-2304	745	SE -1	NNE-1	SE -3	14.5	12.7	bc	1017.5
US11662	44-17.9	145-15.3	10/5	2320-2325	117	SE -1	NNE-1	SE -3	15.3	13.8	bc	1017.5
US11663	44-14.5	145-11.8	10/5	2355-0001	160	SSW-1	NNE-1	SSW-3	14.2	14.7	bc	1017
US11664	44-15.6	145-08.8	10/6	0018-0033	620	SSE-1	NNE-1	SSE-2	14.1	13.3	bc	1016.7
US11665	44-16.7	145-05.3	10/6	0054-0109	850	Calm	NNE-1	Calm	13.6	12.7	bc	1016.6
US11666	44-11.3	145-06.8	10/6	0153-0201	290	Calm	NNE-1	Calm	13.8	14.6	bc	1016.2
US11667	44-11.9	145-03.7	10/6	0202-0234	440	Calm	NNE-1	Calm	14.2	14.6	bc	1015.8
US11668	44-13.3	144-59.8	10/6	0300-0315	670	Calm	NNE-1	Calm	13.2	12.8	bc	1015.6
US11669	42-32.0	143-54.4	10/8	1040-1045	144	Calm	East-1	Calm	15.1	14.4	bc	1019.7
US11670	42-04.4	143-40.5	10/8	1413-1424	316	South-3	East-1	South-5	15.6	14.7	bc	1019
US11671	41-57.7	142-46.5	10/8	2230-2241	280	NNE-1	ESE-1	NNE-2	14.8	16.6	bc	1023.1
US11672	42-24.4	141-26.6	10/9	0610-0616	175	West-2	West-2	West-3	14.7	17.3	bc	1024.6
US11673	42-10.3	141-09.4	10/9	0902-0906	114	WSW-2	West-1	WSW-4	16	17.3	bc	1025
US11674	41-59.5	141-01.9	10/9	1121-1125	99	East-1	ESE-1	East-2	18.2	17.6	bc	1024.8
US11675	41-58.7	141-00.6	10/9	1133-1137	92	East-1	ESE-1	East-2	18.7	17.7	bc	1024.6
US11676	41-58.1	140-59.4	10/9	1141-1145	85	NE -1	ESE-1	NE -2	18.7	17.6	bc	1024.6
US11677	41-57.4	140-58.2	10/9	1155-1159	77	SW -1	ESE-1	SW -3	18.9	17.7	bc	1024.5
US11678	41-35.3	140-53.6	10/10	0834-0836	50	SSW-3	SW -1	SSW-5	18.4	19.6	c	1019.1
US11679	41-37.1	140-51.4	10/10	0856-0900	97	SSW-3	SW -1	SSW-5	18.8	19.6	c	1018.7
US11680	41-38.7	140-49.4	10/10	0917-0927	309	SSW-3	SW -1	SSW-5	18.9	18.9	c	1018.5
US11681	41-40.7	140-47.3	10/10	0946-0954	225	SSW-3	SW -1	SSW-5	19.2	17.9	c	1017.8
US11682	41-42.7	140-45.0	10/10	1012-1016	85	SSW-3	SW -1	SSW-5	19.5	15.9	c	1017.1

(*) : Fixed position by Global Positioning System

Table 2: Oceanographic data

STATION US11587				STATION US11588				STATION US11589			
LATITUDE 41-11.4 N				LATITUDE 41-09.5 N				LATITUDE 41-09.1 N			
LONGITUDE 140-42.2 E				LONGITUDE 140-41.1 E				LONGITUDE 140-43.1 E			
DEPTH (m) 69				DEPTH (m) 53				DEPTH (m) 73			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	22.635	32.576	22.200	5	22.608	32.550	22.187	5	22.549	32.336	22.042
10	22.735	32.907	22.423	10	22.692	32.982	22.491	10	22.667	32.565	22.182
20	22.730	33.240	22.676	20	22.855	33.307	22.692	20	23.259	33.310	22.578
30	21.857	33.460	23.088	30	22.613	33.469	22.883	30	22.888	33.505	22.832
40	21.181	33.638	23.409	40	21.874	33.570	23.167	40	21.933	33.607	23.178
50	19.855	33.790	23.877					50	18.770	33.869	24.215

STATION US11590				STATION US11591				STATION US11592			
LATITUDE 41-05.2 N				LATITUDE 41-02.7 N				LATITUDE 41-01.1 N			
LONGITUDE 140-43.8 E				LONGITUDE 140-46.0 E				LONGITUDE 140-43.4 E			
DEPTH (m) 60				DEPTH (m) 52				DEPTH (m) 55			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	22.516	32.597	22.249	5	22.589	32.727	22.327	5	22.458	32.478	22.175
10	22.534	32.610	22.254	10	22.885	33.191	22.595	10	22.537	32.536	22.197
20	22.841	33.469	22.819	20	22.189	33.557	23.069	20	23.206	33.594	22.809
30	22.553	33.604	23.003	30	20.919	33.502	23.376	30	22.567	33.630	23.018
40	20.196	33.753	23.759	40	19.826	33.518	23.677	40	18.995	33.614	23.964
50	18.195	33.909	24.389					50	16.200	34.028	24.954

STATION US11593			
LATITUDE 41-00.3 N			
LONGITUDE 140-46.5 E			
DEPTH (m) 51			
Press.	Temp.	Salinity	Sigma-T
5	22.408	31.632	21.548
10	22.748	32.982	22.476
20	22.844	33.579	22.901
30	22.023	33.599	23.147
40	20.223	33.510	23.567

STATION US11596			
LATITUDE 40-55.5 N			
LONGITUDE 140-46.5 E			
DEPTH (m) 41			
Press.	Temp.	Salinity	Sigma-T
5	23.064	32.082	21.704
10	23.357	33.070	22.368
20	23.207	33.538	22.765
30	22.732	33.545	22.907

STATION US11599			
LATITUDE 41-04.8 N			
LONGITUDE 140-51.6 E			
DEPTH (m) 52			
Press.	Temp.	Salinity	Sigma-T
5	22.485	32.511	22.192
10	22.714	32.900	22.423
20	22.942	33.550	22.851
30	22.105	33.583	23.112
40	20.067	33.566	23.651

STATION US11602			
LATITUDE 41-04.5 N			
LONGITUDE 141-02.1 E			
DEPTH (m) 47			
Press.	Temp.	Salinity	Sigma-T
5	22.261	32.094	21.939
10	22.507	32.334	22.053
20	22.921	32.777	22.271
30	22.510	33.320	22.799
40	19.450	33.361	23.654

STATION US11605			
LATITUDE 40-59.8 N			
LONGITUDE 141-07.0 E			
DEPTH (m) 42			
Press.	Temp.	Salinity	Sigma-T
5	22.504	32.319	22.042
10	22.551	32.427	22.110
20	22.893	32.992	22.442
30	21.280	33.140	23.003
40	19.233	33.701	23.969

STATION US11608			
LATITUDE 41-06.0 N			
LONGITUDE 141-09.4 E			
DEPTH (m) 38			
Press.	Temp.	Salinity	Sigma-T
5	22.277	32.147	21.975
10	22.542	32.425	22.111
20	22.829	33.005	22.470
30	21.764	33.267	22.967

STATION US11594			
LATITUDE 40-57.3 N			
LONGITUDE 140-45.4 E			
DEPTH (m) 49			
Press.	Temp.	Salinity	Sigma-T
5	22.841	32.093	21.775
10	22.892	32.838	22.325
20	23.345	33.492	22.691
30	22.432	33.603	23.036
40	19.487	33.619	23.842

STATION US11597			
LATITUDE 41-05.2 N			
LONGITUDE 140-47.6 E			
DEPTH (m) 55			
Press.	Temp.	Salinity	Sigma-T
5	22.459	32.602	22.269
10	22.597	32.760	22.350
20	22.993	33.620	22.890
30	22.313	33.564	23.039
40	20.149	33.760	23.777
50	18.002	33.830	24.375

STATION US11600			
LATITUDE 41-03.8 N			
LONGITUDE 140-52.2 E			
DEPTH (m) 50			
Press.	Temp.	Salinity	Sigma-T
5	22.317	32.277	22.063
10	22.876	32.987	22.443
20	22.939	33.609	22.896
30	21.758	33.545	23.180
40	19.767	33.587	23.745

STATION US11603			
LATITUDE 41-02.0 N			
LONGITUDE 141-01.0 E			
DEPTH (m) 47			
Press.	Temp.	Salinity	Sigma-T
5	22.282	32.142	21.970
10	22.545	32.308	22.022
20	22.980	32.741	22.227
30	21.970	33.344	22.969
40	20.610	33.585	23.521

STATION US11606			
LATITUDE 41-10.7 N			
LONGITUDE 141-11.0 E			
DEPTH (m) 30			
Press.	Temp.	Salinity	Sigma-T
5	22.323	32.283	22.065
10	22.374	32.387	22.130
20	22.664	32.979	22.497

STATION US11609			
LATITUDE 41-07.4 N			
LONGITUDE 141-04.4 E			
DEPTH (m) 40			
Press.	Temp.	Salinity	Sigma-T
5	22.426	32.435	22.152
10	22.431	32.431	22.147
20	23.028	32.885	22.323
30	21.081	33.179	23.086

STATION US11595			
LATITUDE 40-51.9 N			
LONGITUDE 140-45.9 E			
DEPTH (m) 26			
Press.	Temp.	Salinity	Sigma-T
5	23.099	31.970	21.609
10	23.642	32.728	22.027
20	23.059	33.423	22.721

STATION US11598			
LATITUDE 41-05.8 N			
LONGITUDE 140-51.1 E			
DEPTH (m) 52			
Press.	Temp.	Salinity	Sigma-T
5	22.444	32.516	22.208
10	22.497	32.531	22.204
20	23.059	33.527	22.800
30	22.570	33.582	22.981
40	20.916	33.482	23.361

STATION US11601			
LATITUDE 41-04.3 N			
LONGITUDE 140-57.9 E			
DEPTH (m) 49			
Press.	Temp.	Salinity	Sigma-T
5	22.106	31.957	21.879
10	22.610	32.403	22.076
20	22.721	32.997	22.494
30	22.392	33.558	23.013
40	20.586	33.561	23.510

STATION US11604			
LATITUDE 40-58.1 N			
LONGITUDE 141-06.5 E			
DEPTH (m) 39			
Press.	Temp.	Salinity	Sigma-T
5	22.320	32.467	22.206
10	22.410	32.549	22.242
20	22.915	32.986	22.431
30	21.192	33.128	23.018

STATION US11607			
LATITUDE 41-08.4 N			
LONGITUDE 141-10.7 E			
DEPTH (m) 34			
Press.	Temp.	Salinity	Sigma-T
5	22.422	32.406	22.131
10	22.427	32.406	22.129
20	22.835	32.954	22.430
30	21.009	33.114	23.056

STATION US11610			
LATITUDE 41-06.3 N			
LONGITUDE 140-56.2 E			
DEPTH (m) 47			
Press.	Temp.	Salinity	Sigma-T
5	22.039	31.969	21.906
10	22.619	32.419	22.085
20	22.738	33.056	22.535
30	22.064	33.496	23.057
40	20.153	33.624	23.673

STATION US11611			
LATITUDE 41-34.7 N			
LONGITUDE 140-53.0 E			
DEPTH (m) 36			
Press.	Temp.	Salinity	Sigma-T
5	21.930	33.442	23.054
10	21.483	33.507	23.227
20	21.314	33.541	23.299
30	20.773	33.601	23.490

STATION US11614			
LATITUDE 41-40.8 N			
LONGITUDE 140-47.1 E			
DEPTH (m) 219			
Press.	Temp.	Salinity	Sigma-T
5	22.525	33.301	22.781
10	22.523	33.294	22.776
20	22.061	33.257	22.877
30	21.531	33.497	23.206
40	19.810	33.742	23.852
50	18.326	33.949	24.387
75	14.245	34.266	25.568
100	13.035	34.330	25.867
125	11.686	34.274	26.085
150	11.518	34.274	26.115
175	11.015	34.241	26.182
200	10.734	34.239	26.231

STATION US11617			
LATITUDE 42-04.2 N			
LONGITUDE 140-58.2 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	19.513	32.705	23.138
10	19.013	33.020	23.505
20	18.675	33.457	23.924
30	17.693	33.618	24.289
40	15.597	33.743	24.872
50	13.419	33.828	25.401
75	9.081	33.500	25.931

STATION US11620			
LATITUDE 42-10.0 N			
LONGITUDE 141-19.8 E			
DEPTH (m) 351			
Press.	Temp.	Salinity	Sigma-T
5	18.944	33.334	23.763
10	18.949	33.334	23.761
20	18.763	33.336	23.809
30	16.476	33.866	24.767
40	14.663	34.061	25.321
50	13.650	34.117	25.578
75	12.004	34.132	25.914
100	11.072	34.095	26.058
125	10.251	34.020	26.144
150	9.533	33.961	26.218
175	8.343	33.857	26.325
200	6.706	33.691	26.427
250	3.435	33.494	26.643

STATION US11623			
LATITUDE 42-09.4 N			
LONGITUDE 140-53.2 E			
DEPTH (m) 76			
Press.	Temp.	Salinity	Sigma-T
5	19.384	32.753	23.207
10	19.384	32.801	23.244
20	18.627	33.504	23.972
30	18.263	33.660	24.182
40	16.059	33.931	24.912
50	14.356	34.036	25.367

STATION US11612			
LATITUDE 41-36.9 N			
LONGITUDE 140-51.1 E			
DEPTH (m) 83			
Press.	Temp.	Salinity	Sigma-T
5	23.119	33.249	22.573
10	22.845	33.351	22.728
20	22.249	33.500	23.009
30	21.990	33.549	23.118
40	21.363	33.558	23.298
50	20.654	33.647	23.558
75	14.554	34.043	25.330

STATION US11615			
LATITUDE 41-42.7 N			
LONGITUDE 140-45.1 E			
DEPTH (m) 84			
Press.	Temp.	Salinity	Sigma-T
5	21.951	33.464	23.065
10	21.954	33.464	23.064
20	21.539	33.544	23.239
30	19.488	33.776	23.961
40	18.818	33.873	24.206
50	17.410	34.028	24.670
75	13.746	34.199	25.621

STATION US11618			
LATITUDE 42-17.4 N			
LONGITUDE 140-54.1 E			
DEPTH (m) 56			
Press.	Temp.	Salinity	Sigma-T
5	18.767	33.201	23.705
10	18.691	33.316	23.812
20	18.076	33.370	24.005
30	16.910	33.453	24.348
40	16.313	33.642	24.632

STATION US11621			
LATITUDE 42-10.1 N			
LONGITUDE 141-09.9 E			
DEPTH (m) 119			
Press.	Temp.	Salinity	Sigma-T
5	19.128	32.986	23.450
10	18.911	33.076	23.574
20	17.311	33.610	24.374
30	15.674	33.909	24.982
40	14.809	34.068	25.295
50	13.257	34.012	25.576
75	12.934	34.051	25.671
100	12.690	34.082	25.743

STATION US11624			
LATITUDE 42-11.2 N			
LONGITUDE 140-41.4 E			
DEPTH (m) 89			
Press.	Temp.	Salinity	Sigma-T
5	19.898	32.498	22.881
10	19.883	32.665	23.012
20	19.938	32.732	23.049
30	17.776	33.525	24.197
40	14.557	33.591	24.981
50	11.006	33.446	25.564
75	10.765	33.856	25.926

STATION US11613			
LATITUDE 41-38.7 N			
LONGITUDE 140-49.4 E			
DEPTH (m) 332			
Press.	Temp.	Salinity	Sigma-T
5	23.530	33.107	22.346
10	23.550	33.102	22.337
20	23.038	33.397	22.708
30	22.717	33.612	22.962
40	21.676	33.684	23.308
50	18.656	33.951	24.306
75	14.797	34.121	25.339
100	12.998	34.282	25.837
125	12.373	34.277	25.956
150	11.628	34.249	26.075
175	11.414	34.253	26.119
200	11.190	34.250	26.157
250	10.918	34.246	26.203
300	10.536	34.250	26.274

STATION US11616			
LATITUDE 41-49.3 N			
LONGITUDE 141-13.1 E			
DEPTH (m) 166			
Press.	Temp.	Salinity	Sigma-T
5	19.450	33.419	23.699
10	18.863	33.465	23.883
20	16.815	33.466	24.381
30	16.061	33.556	24.624
40	13.714	33.661	25.212
50	13.104	33.744	25.399
75	11.990	33.854	25.701
100	10.493	33.884	25.996
125	9.541	33.835	26.119
150	8.644	33.806	26.239

STATION US11619			
LATITUDE 42-10.0 N			
LONGITUDE 141-29.9 E			
DEPTH (m) 544			
Press.	Temp.	Salinity	Sigma-T
5	20.116	33.413	23.521
10	19.843	33.409	23.589
20	17.307	33.868	24.573
30	16.263	33.978	24.902
40	14.417	34.038	25.356
50	13.082	34.110	25.687
75	12.195	34.119	25.868
100	11.497	34.087	25.974
125	11.290	34.136	26.050
150	10.060	34.035	26.188
175	8.461	33.876	26.322
200	6.642	33.694	26.438
250	3.972	33.496	26.592

STATION US11622			
LATITUDE 42-11.5 N			
LONGITUDE 141-02.6 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	19.141	32.959	23.426
10	19.121	32.988	23.454
20	18.338	33.187	23.801
30	18.129	33.676	24.227
40	16.815	33.784	24.624
50	14.765	33.848	25.135

STATION US11625			
LATITUDE 42-18.2 N			
LONGITUDE 140-42.0 E			
DEPTH (m) 63			
Press.	Temp.	Salinity	Sigma-T
5	19.661	32.720	23.111
10	19.639	32.795	23.174
20	18.649	33.531	23.987
30	17.615	33.690	24.362
40	15.422	33.851	24.994
50	13.801	34.076	25.514

STATION US11626			
LATITUDE 42-15.9 N			
LONGITUDE 140-36.3 E			
DEPTH (m) 89			
Press.	Temp.	Salinity	Sigma-T
5	20.032	32.442	22.803
10	20.024	32.497	22.847
20	18.935	33.292	23.733
30	18.245	33.592	24.134
40	15.658	33.916	24.991
50	9.640	33.232	25.631
75	8.326	33.491	26.041

STATION US11627			
LATITUDE 42-23.9 N			
LONGITUDE 140-31.5 E			
DEPTH (m) 93			
Press.	Temp.	Salinity	Sigma-T
5	20.425	32.460	22.714
10	20.393	32.458	22.721
20	20.112	32.571	22.881
30	15.930	33.341	24.487
40	13.358	33.632	25.261
50	10.581	33.475	25.662
75	8.784	33.640	26.087

STATION US11628			
LATITUDE 42-15.6 N			
LONGITUDE 140-47.6 E			
DEPTH (m) 69			
Press.	Temp.	Salinity	Sigma-T
5	19.559	32.782	23.185
10	19.192	32.979	23.429
20	18.577	33.297	23.826
30	17.714	33.635	24.296
40	16.182	33.942	24.892
50	14.384	34.027	25.354

STATION US11629			
LATITUDE 42-13.0 N			
LONGITUDE 140-55.9 E			
DEPTH (m) 67			
Press.	Temp.	Salinity	Sigma-T
5	19.198	33.072	23.498
10	19.118	33.348	23.729
20	18.187	33.593	24.149
30	17.364	33.786	24.496
40	15.935	33.869	24.892
50	15.207	34.022	25.173

STATION US11630			
LATITUDE 42-15.3 N			
LONGITUDE 141-05.0 E			
DEPTH (m) 77			
Press.	Temp.	Salinity	Sigma-T
5	19.110	33.120	23.557
10	18.902	33.451	23.863
20	16.989	33.466	24.339
30	16.441	33.564	24.542
40	16.277	33.947	24.874
50	15.239	33.981	25.134

STATION US11631			
LATITUDE 41-59.3 N			
LONGITUDE 141-01.9 E			
DEPTH (m) 99			
Press.	Temp.	Salinity	Sigma-T
5	19.430	33.003	23.387
10	19.198	32.989	23.435
20	19.146	33.565	23.888
30	17.945	33.514	24.148
40	15.950	33.955	24.955
50	13.569	33.868	25.401
75	11.831	34.037	25.873

STATION US11632			
LATITUDE 41-58.7 N			
LONGITUDE 141-00.7 E			
DEPTH (m) 93			
Press.	Temp.	Salinity	Sigma-T
5	19.804	32.975	23.269
10	19.289	33.047	23.456
20	18.880	33.368	23.805
30	18.566	33.568	24.036
40	15.794	33.958	24.993
50	14.180	33.970	25.354
75	12.054	34.027	25.823

STATION US11633			
LATITUDE 41-58.1 N			
LONGITUDE 140-59.4 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	20.055	32.586	22.907
10	19.783	32.597	22.986
20	18.822	33.233	23.716
30	18.574	33.525	24.001
40	16.251	33.850	24.806
50	12.724	33.400	25.207
75	12.178	33.971	25.756

STATION US11634			
LATITUDE 41-57.4 N			
LONGITUDE 140-58.2 E			
DEPTH (m) 76			
Press.	Temp.	Salinity	Sigma-T
5	20.035	32.444	22.804
10	19.948	32.514	22.880
20	19.601	32.994	23.335
30	16.985	33.291	24.206
40	13.645	33.364	24.996
50	11.582	33.323	25.364
75	12.220	34.003	25.773

STATION US11635			
LATITUDE 41-56.0 N			
LONGITUDE 141-07.9 E			
DEPTH (m) 145			
Press.	Temp.	Salinity	Sigma-T
5	19.382	33.061	23.443
10	19.127	33.040	23.491
20	18.832	33.479	23.902
30	17.796	33.668	24.302
40	15.011	33.592	24.884
50	12.980	33.781	25.453
75	12.351	33.947	25.704
100	10.673	33.882	25.963
125	9.025	33.917	26.266

STATION US11636			
LATITUDE 42-42.6 N			
LONGITUDE 144-45.1 E			
DEPTH (m) 176			
Press.	Temp.	Salinity	Sigma-T
5	14.823	33.340	24.730
10	14.823	33.337	24.728
20	14.823	33.335	24.726
30	14.820	33.333	24.726
40	14.767	33.327	24.733
50	14.386	33.292	24.787
75	11.205	33.299	25.415
100	6.996	33.279	26.063
125	6.895	33.643	26.364
150	4.464	33.401	26.466
175	3.400	33.272	26.470

STATION US11637			
LATITUDE 43-43.4 N			
LONGITUDE 145-14.1 E			
DEPTH (m) 17			
Press.	Temp.	Salinity	Sigma-T
5	16.202	33.506	24.553
10	16.194	33.506	24.554

STATION US11638			
LATITUDE 43-43.2 N			
LONGITUDE 145-12.7 E			
DEPTH (m) 16			
Press.	Temp.	Salinity	Sigma-T
5	16.145	33.504	24.564
10	16.147	33.502	24.562

STATION US11639			
LATITUDE 43-54.3 N			
LONGITUDE 145-14.7 E			
DEPTH (m) 72			
Press.	Temp.	Salinity	Sigma-T
5	16.202	33.508	24.554
10	16.167	33.508	24.562
20	16.159	33.509	24.565
30	16.020	33.537	24.618
40	15.893	33.556	24.661
50	15.822	33.565	24.684

STATION US11640			
LATITUDE 43-56.5 N			
LONGITUDE 145-12.5 E			
DEPTH (m) 82			
Press.	Temp.	Salinity	Sigma-T
5	16.158	33.485	24.547
10	16.097	33.508	24.578
20	16.030	33.518	24.601
30	15.862	33.552	24.665
40	15.717	33.566	24.709
50	15.011	33.600	24.891
75	10.795	33.764	25.850

STATION US11641			
LATITUDE 43-57.2 N			
LONGITUDE 145-11.6 E			
DEPTH (m) 87			
Press.	Temp.	Salinity	Sigma-T
5	16.169	33.506	24.560
10	16.117	33.506	24.572
20	16.056	33.515	24.593
30	15.965	33.522	24.619
40	15.512	33.592	24.775
50	14.395	33.643	25.056
75	9.256	33.775	26.118

STATION US11642			
LATITUDE 44-01.3 N			
LONGITUDE 145-14.2 E			
DEPTH (m) 334			
Press.	Temp.	Salinity	Sigma-T
5	16.296	33.487	24.516
10	15.843	33.419	24.567
20	15.847	33.488	24.619
30	15.715	33.564	24.707
40	15.595	33.610	24.770
50	13.695	33.661	25.215
75	9.543	33.798	26.089
100	8.642	33.794	26.230
125	7.635	33.743	26.340
150	7.000	33.718	26.409
175	6.135	33.674	26.488
200	5.088	33.613	26.565
250	3.139	33.457	26.641

STATION US11643			
LATITUDE 44-00.5 N			
LONGITUDE 145-16.5 E			
DEPTH (m) 428			
Press.	Temp.	Salinity	Sigma-T
5	16.317	33.506	24.526
10	16.229	33.500	24.542
20	16.168	33.505	24.560
30	15.878	33.552	24.661
40	15.550	33.610	24.780
50	14.300	33.655	25.085
75	10.712	33.811	25.900
100	9.099	33.799	26.162
125	7.650	33.744	26.338
150	7.018	33.712	26.402
175	5.931	33.619	26.470
200	4.908	33.575	26.556
250	2.727	33.424	26.651
300	1.680	33.388	26.704
400	1.165	33.443	26.783

STATION US11644			
LATITUDE 43-59.6 N			
LONGITUDE 145-18.9 E			
DEPTH (m) 278			
Press.	Temp.	Salinity	Sigma-T
5	16.332	33.506	24.523
10	16.224	33.505	24.547
20	16.175	33.507	24.559
30	16.115	33.511	24.576
40	15.707	33.571	24.715
50	13.776	33.662	25.200
75	11.243	33.798	25.795
100	9.462	33.816	26.116
125	8.301	33.780	26.271
150	6.791	33.683	26.409
175	5.751	33.612	26.487
200	4.534	33.555	26.581
250	2.278	33.399	26.668

STATION US11645			
LATITUDE 44-03.2 N			
LONGITUDE 145-23.4 E			
DEPTH (m) 517			
Press.	Temp.	Salinity	Sigma-T
5	16.103	33.472	24.549
10	15.973	33.484	24.587
20	15.953	33.495	24.601
30	15.864	33.536	24.652
40	15.214	33.591	24.839
50	14.525	33.648	25.032
75	11.812	33.774	25.672
100	9.839	33.790	26.034
125	8.435	33.779	26.250
150	6.977	33.703	26.400
175	5.405	33.589	26.510
200	3.966	33.491	26.589
250	1.828	33.392	26.697
300	1.582	33.425	26.740
400	1.262	33.459	26.789

STATION US11646			
LATITUDE 44-04.6 N			
LONGITUDE 145-20.5 E			
DEPTH (m) 1097			
Press.	Temp.	Salinity	Sigma-T
5	16.210	33.516	24.558
10	16.096	33.512	24.581
20	15.985	33.511	24.606
30	15.969	33.512	24.610
40	15.890	33.522	24.636
50	14.559	33.626	25.007
75	11.807	33.748	25.653
100	9.881	33.806	26.040
125	9.202	33.806	26.151
150	8.386	33.774	26.253
175	5.224	33.537	26.490
200	4.000	33.518	26.607
250	2.762	33.446	26.666
300	1.481	33.377	26.709
400	1.634	33.501	26.798
500	1.359	33.554	26.859

STATION US11647			
LATITUDE 44-06.1 N			
LONGITUDE 145-17.0 E			
DEPTH (m) 490			
Press.	Temp.	Salinity	Sigma-T
5	16.104	33.481	24.556
10	15.997	33.477	24.577
20	15.967	33.473	24.581
30	16.004	33.505	24.597
40	15.889	33.526	24.639
50	15.147	33.591	24.853
75	12.143	33.741	25.584
100	10.433	33.803	25.943
125	9.043	33.818	26.186
150	8.255	33.781	26.279
175	7.151	33.714	26.385
200	5.801	33.607	26.476
250	3.465	33.477	26.627
300	2.176	33.439	26.707
400	1.225	33.447	26.782

STATION US11648			
LATITUDE 44-10.1 N			
LONGITUDE 145-20.7 E			
DEPTH (m) 274			
Press.	Temp.	Salinity	Sigma-T
5	16.160	33.474	24.538
10	15.895	33.489	24.609
20	15.720	33.535	24.684
30	15.602	33.558	24.728
40	15.361	33.581	24.799
50	14.814	33.617	24.946
75	12.928	33.733	25.426
100	10.317	33.793	25.956
125	8.850	33.800	26.202
150	7.745	33.756	26.334
175	6.791	33.698	26.421
200	5.406	33.608	26.524
250	4.324	33.557	26.605

STATION US11649			
LATITUDE 44-09.0 N			
LONGITUDE 145-24.0 E			
DEPTH (m) 1450			
Press.	Temp.	Salinity	Sigma-T
5	16.171	32.620	23.879
10	16.149	33.116	24.265
20	15.932	33.393	24.527
30	15.858	33.456	24.592
40	15.005	33.772	25.025
50	13.775	33.958	25.429
75	11.833	33.998	25.842
100	10.408	34.008	26.108
125	8.503	34.078	26.474
150	7.740	33.859	26.416
175	7.028	33.862	26.519
200	6.312	33.823	26.583
250	3.527	33.675	26.779
300	1.934	33.548	26.814
400	1.513	33.525	26.826
500	1.335	33.559	26.865

STATION		US11650	
LATITUDE		44-07.5	N
LONGITUDE		145-27.6	E
DEPTH (m)		1255	
Press.	Temp.	Salinity	Sigma-T
5	16.242	33.519	24.554
10	16.138	33.515	24.574
20	15.841	33.530	24.653
30	15.607	33.565	24.732
40	14.065	33.673	25.148
50	13.569	33.700	25.272
75	10.755	33.776	25.866
100	9.066	33.779	26.151
125	8.120	33.772	26.292
150	7.141	33.730	26.399
175	6.455	33.712	26.477
200	5.238	33.601	26.539
250	2.383	33.390	26.652
300	1.750	33.411	26.717
400	1.395	33.500	26.813
500	1.402	33.600	26.894

STATION		US11651	
LATITUDE		44-15.1	N
LONGITUDE		145-23.5	E
DEPTH (m)		301	
Press.	Temp.	Salinity	Sigma-T
5	15.376	33.536	24.761
10	15.317	33.545	24.781
20	15.227	33.557	24.810
30	15.116	33.549	24.828
40	15.157	33.575	24.839
50	14.891	33.622	24.934
75	14.041	33.682	25.160
100	11.656	33.756	25.688
125	9.814	33.781	26.031
150	7.167	33.722	26.389
175	5.611	33.630	26.518
200	5.256	33.616	26.549
250	3.639	33.519	26.644

STATION		US11652	
LATITUDE		44-13.7	N
LONGITUDE		145-26.4	E
DEPTH (m)		1603	
Press.	Temp.	Salinity	Sigma-T
5	15.941	33.550	24.646
10	15.621	33.593	24.751
20	15.446	33.608	24.801
30	15.336	33.627	24.840
40	14.888	33.675	24.975
50	14.867	33.682	24.985
75	13.335	33.719	25.334
100	10.786	33.754	25.843
125	9.058	33.794	26.164
150	7.212	33.706	26.370
175	6.102	33.683	26.499
200	4.959	33.599	26.569
250	3.584	33.522	26.652
300	1.743	33.419	26.724
400	1.884	33.530	26.803
500	1.401	33.583	26.880

STATION		US11653	
LATITUDE		44-12.1	N
LONGITUDE		145-30.0	E
DEPTH (m)		2081	
Press.	Temp.	Salinity	Sigma-T
5	15.501	33.492	24.700
10	15.508	33.492	24.698
20	15.279	33.539	24.784
30	14.240	33.634	25.081
40	13.768	33.679	25.214
50	13.148	33.728	25.378
75	12.023	33.778	25.636
100	10.069	33.799	26.003
125	8.240	33.772	26.274
150	7.608	33.750	26.349
175	5.851	33.644	26.500
200	4.934	33.599	26.572
250	2.895	33.477	26.679
300	2.071	33.433	26.711
400	1.593	33.506	26.805
500	1.437	33.618	26.905

STATION		US11654	
LATITUDE		44-17.2	N
LONGITUDE		145-33.1	E
DEPTH (m)		2084	
Press.	Temp.	Salinity	Sigma-T
5	15.265	33.545	24.793
10	15.269	33.546	24.792
20	15.264	33.546	24.793
30	15.250	33.544	24.795
40	15.109	33.536	24.819
50	14.652	33.576	24.949
75	14.066	33.681	25.154
100	12.050	33.699	25.569
125	10.514	33.783	25.914
150	8.399	33.833	26.297
175	6.972	33.704	26.402
200	6.022	33.665	26.495
250	1.938	33.383	26.681
300	1.570	33.420	26.737
400	1.467	33.517	26.822

STATION		US11655	
LATITUDE		44-18.8	N
LONGITUDE		145-28.5	E
DEPTH (m)		1865	
Press.	Temp.	Salinity	Sigma-T
5	15.176	33.462	24.748
10	15.174	33.466	24.752
20	15.224	33.591	24.837
30	15.250	33.634	24.864
40	15.272	33.640	24.864
50	15.108	33.645	24.904
75	14.330	33.684	25.101
100	13.102	33.724	25.384
125	9.685	33.883	26.132
150	8.302	33.820	26.303
175	6.971	33.735	26.426
200	5.815	33.696	26.545
250	2.477	33.428	26.675
300	1.512	33.420	26.741
400	1.474	33.502	26.810

STATION		US11656	
LATITUDE		44-20.4	N
LONGITUDE		145-24.8	E
DEPTH (m)		1011	
Press.	Temp.	Salinity	Sigma-T
5	15.974	33.535	24.627
10	15.684	33.570	24.719
20	15.296	33.590	24.820
30	15.357	33.668	24.867
40	15.090	33.653	24.914
50	14.819	33.647	24.968
75	13.095	33.686	25.356
100	10.309	33.856	26.006
125	8.044	33.741	26.279
150	7.277	33.730	26.380
175	5.411	33.662	26.567
200	3.906	33.502	26.604
250	3.128	33.448	26.635
300	1.606	33.409	26.725
400	3.435	33.703	26.810

STATION		US11657	
LATITUDE		44-21.6	N
LONGITUDE		145-21.6	E
DEPTH (m)		73	
Press.	Temp.	Salinity	Sigma-T
5	15.493	33.575	24.765
10	15.416	33.579	24.785
20	15.367	33.580	24.797
30	15.288	33.587	24.820
40	15.125	33.606	24.870
50	13.876	33.694	25.204

STATION		US11658	
LATITUDE		44-23.1	N
LONGITUDE		145-17.7	E
DEPTH (m)		708	
Press.	Temp.	Salinity	Sigma-T
5	14.764	33.343	24.745
10	14.932	33.451	24.792
20	14.854	33.443	24.803
30	14.609	33.466	24.874
40	12.992	33.631	25.334
50	12.819	33.648	25.381
75	7.521	33.536	26.194
100	5.798	33.583	26.458
125	5.431	33.613	26.526
150	3.519	33.488	26.631
175	4.469	33.610	26.632
200	4.738	33.676	26.655
250	2.067	33.392	26.679
300	2.587	33.494	26.719
400	2.123	33.472	26.738
500	1.906	33.631	26.882

STATION US11659			
LATITUDE 44-24.7 N			
LONGITUDE 145-14.1 E			
DEPTH (m) 1436			
Press.	Temp.	Salinity	Sigma-T
5	12.511	32.198	24.317
10	12.770	32.422	24.441
20	12.004	32.663	24.774
30	14.048	33.615	25.107
40	13.448	33.500	25.141
50	8.368	32.859	25.538
75	3.599	33.333	26.499
100	1.789	33.287	26.615
125	3.045	33.459	26.651
150	1.855	33.376	26.681
175	1.479	33.397	26.725
200	2.572	33.517	26.738
250	2.236	33.484	26.739
300	2.068	33.496	26.762
400	2.660	33.608	26.803

STATION US11662			
LATITUDE 44-17.9 N			
LONGITUDE 145-15.3 E			
DEPTH (m) 117			
Press.	Temp.	Salinity	Sigma-T
5	14.653	33.123	24.599
10	14.715	33.153	24.609
20	14.748	33.231	24.663
30	15.120	33.409	24.720
40	15.067	33.406	24.729
50	14.860	33.413	24.779
75	9.292	33.731	26.078
100	8.309	33.731	26.231

STATION US11665			
LATITUDE 44-16.7 N			
LONGITUDE 145-05.3 E			
DEPTH (m) 850			
Press.	Temp.	Salinity	Sigma-T
5	12.723	32.001	24.125
10	12.639	32.005	24.143
20	12.827	32.258	24.303
30	12.188	32.441	24.567
40	11.678	33.372	25.385
50	9.064	33.475	25.914
75	1.831	32.769	26.196
100	6.387	33.775	26.536
125	4.787	33.624	26.609
150	5.010	33.712	26.653
175	4.086	33.578	26.647
200	3.952	33.627	26.699
250	2.774	33.505	26.711
300	2.313	33.481	26.730
400	2.246	33.540	26.783

STATION US11668			
LATITUDE 44-13.3 N			
LONGITUDE 144-59.8 E			
DEPTH (m) 670			
Press.	Temp.	Salinity	Sigma-T
5	12.807	32.010	24.115
10	13.008	32.107	24.151
20	12.953	32.208	24.240
30	11.836	32.396	24.598
40	10.574	32.798	25.136
50	5.640	32.820	25.873
75	3.095	33.135	26.388
100	0.542	33.049	26.503
125	0.727	33.135	26.562
150	-0.135	33.145	26.615
175	1.053	33.324	26.695
200	1.135	33.338	26.701
250	1.479	33.395	26.723
300	1.323	33.409	26.745
400	2.296	33.561	26.796
500	2.067	33.640	26.877

STATION US11660			
LATITUDE 44-20.8 N			
LONGITUDE 145-09.3 E			
DEPTH (m) 1200			
Press.	Temp.	Salinity	Sigma-T
5	12.703	32.339	24.390
10	14.487	33.230	24.718
20	15.114	33.541	24.822
30	14.439	33.567	24.987
40	13.953	33.552	25.078
50	10.867	33.623	25.727
75	5.752	33.131	26.106
100	4.950	33.618	26.586
125	5.487	33.719	26.603
150	5.058	33.679	26.621
175	4.414	33.612	26.639
200	4.034	33.628	26.692
250	2.755	33.498	26.708
300	2.469	33.525	26.753
400	1.932	33.537	26.805

STATION US11663			
LATITUDE 44-14.5 N			
LONGITUDE 145-11.8 E			
DEPTH (m) 160			
Press.	Temp.	Salinity	Sigma-T
5	15.041	33.288	24.644
10	15.065	33.322	24.664
20	15.081	33.384	24.709
30	15.068	33.389	24.716
40	15.055	33.392	24.720
50	15.020	33.395	24.730
75	14.990	33.397	24.738
100	7.472	33.705	26.333
125	7.316	33.768	26.404

STATION US11666			
LATITUDE 44-11.3 N			
LONGITUDE 145-06.8 E			
DEPTH (m) 290			
Press.	Temp.	Salinity	Sigma-T
5	15.140	33.261	24.601
10	15.179	33.274	24.603
20	15.320	33.348	24.629
30	15.413	33.401	24.649
40	15.369	33.453	24.699
50	14.657	33.402	24.814
75	14.293	33.488	24.958
100	9.118	33.600	26.003
125	7.147	33.716	26.387
150	6.717	33.704	26.436
175	5.719	33.562	26.451
200	5.489	33.575	26.489

STATION US11669			
LATITUDE 42-32.0 N			
LONGITUDE 143-54.4 E			
DEPTH (m) 144			
Press.	Temp.	Salinity	Sigma-T
5	14.419	33.198	24.708
10	14.379	33.198	24.716
20	14.101	33.242	24.808
30	13.848	33.235	24.854
40	12.509	33.170	25.071
50	11.118	33.158	25.320
75	6.739	33.185	26.023
100	3.216	33.215	26.441
125	3.187	33.334	26.539

STATION US11661			
LATITUDE 44-19.3 N			
LONGITUDE 145-12.8 E			
DEPTH (m) 745			
Press.	Temp.	Salinity	Sigma-T
5	15.025	33.418	24.747
10	15.175	33.463	24.749
20	15.275	33.542	24.788
30	15.091	33.509	24.803
40	14.828	33.463	24.825
50	11.104	33.670	25.721
75	9.820	33.754	26.010
100	7.496	33.774	26.384
125	5.505	33.622	26.524
150	4.620	33.561	26.577
175	4.189	33.532	26.600
200	4.697	33.658	26.645
250	4.322	33.661	26.688
300	3.404	33.608	26.737
400	2.099	33.479	26.746

STATION US11664			
LATITUDE 44-15.6 N			
LONGITUDE 145-08.8 E			
DEPTH (m) 620			
Press.	Temp.	Salinity	Sigma-T
5	14.186	32.818	24.463
10	15.080	33.398	24.719
20	15.052	33.400	24.727
30	15.050	33.397	24.726
40	14.971	33.401	24.746
50	14.929	33.406	24.759
75	9.683	33.560	25.880
100	7.931	33.748	26.301
125	6.620	33.646	26.403
150	6.659	33.779	26.503
175	5.844	33.710	26.553
200	5.393	33.689	26.591
250	4.267	33.661	26.693
300	3.122	33.555	26.721
400	2.141	33.505	26.763

STATION US11667			
LATITUDE 44-11.9 N			
LONGITUDE 145-03.7 E			
DEPTH (m) 440			
Press.	Temp.	Salinity	Sigma-T
5	14.715	32.975	24.472
10	14.743	32.990	24.478
20	14.936	33.097	24.519
30	15.589	33.410	24.617
40	15.510	33.383	24.614
50	15.517	33.396	24.622
75	9.230	33.430	25.853
100	7.438	33.764	26.385
125	6.498	33.709	26.469
150	6.337	33.691	26.476
175	5.523	33.617	26.518
200	4.167	33.487	26.566
250	4.193	33.585	26.641
300	3.281	33.558	26.708
400	2.255	33.498	26.749

STATION US11670			
LATITUDE 42-04.4 N			
LONGITUDE 143-40.5 E			
DEPTH (m) 316			
Press.	Temp.	Salinity	Sigma-T
5	14.888	33.234	24.635
10	14.765	33.227	24.656
20	14.620	33.232	24.691
30	14.594	33.234	24.698
40	14.570	33.236	24.705
50	14.538	33.238	24.713
75	11.186	33.321	25.435
100	8.388	33.400	25.960
125	9.304	33.993	26.281
150	7.404	33.722	26.356
175	5.737	33.530	26.424
200	2.823	33.313	26.554
250	2.280	33.383	26.655
300	2.428	33.456	26.701

STATION US11671			
LATITUDE 41-57.7 N			
LONGITUDE 142-46.5 E			
DEPTH (m) 280			
Press.	Temp.	Salinity	Sigma-T
5	16.762	33.567	24.470
10	16.726	33.584	24.492
20	16.445	33.602	24.571
30	14.991	33.914	25.137
40	14.270	33.945	25.315
50	13.791	34.023	25.476
75	12.756	34.095	25.741
100	10.936	34.054	26.050
125	9.583	33.973	26.220
150	7.659	33.674	26.282
175	7.690	33.695	26.294
200	6.980	33.611	26.328
250	5.243	33.526	26.479

STATION US11672			
LATITUDE 42-24.4 N			
LONGITUDE 141-26.6 E			
DEPTH (m) 175			
Press.	Temp.	Salinity	Sigma-T
5	17.455	33.515	24.267
10	17.456	33.517	24.268
20	17.329	33.564	24.335
30	17.085	33.564	24.393
40	16.189	33.775	24.762
50	14.497	34.064	25.359
75	11.656	34.072	25.933
100	10.613	34.008	26.072
125	10.093	34.014	26.166
150	8.579	33.919	26.338

STATION US11673			
LATITUDE 42-10.3 N			
LONGITUDE 141-09.4 E			
DEPTH (m) 114			
Press.	Temp.	Salinity	Sigma-T
5	17.562	33.181	23.986
10	17.561	33.176	23.982
20	17.556	33.174	23.981
30	16.865	33.589	24.463
40	14.843	33.924	25.177
50	13.542	34.023	25.526
75	11.317	34.066	25.991
100	9.522	33.968	26.226

STATION US11674			
LATITUDE 41-59.5 N			
LONGITUDE 141-01.9 E			
DEPTH (m) 99			
Press.	Temp.	Salinity	Sigma-T
5	17.547	33.172	23.982
10	17.429	33.175	24.013
20	17.397	33.191	24.032
30	17.178	33.324	24.187
40	13.840	33.931	25.394
50	12.289	34.054	25.799
75	8.852	33.891	26.273

STATION US11675			
LATITUDE 41-58.7 N			
LONGITUDE 141-00.6 E			
DEPTH (m) 92			
Press.	Temp.	Salinity	Sigma-T
5	17.800	33.172	23.921
10	17.554	33.178	23.985
20	17.375	33.183	24.032
30	16.357	33.518	24.526
40	13.102	33.700	25.365
50	11.716	34.050	25.905
75	8.711	33.843	26.258

STATION US11676			
LATITUDE 41-58.1 N			
LONGITUDE 140-59.4 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	17.578	33.007	23.848
10	17.555	33.064	23.897
20	17.424	33.204	24.036
30	15.865	33.587	24.692
40	13.176	33.704	25.354
50	11.210	34.016	25.971
75	9.157	33.906	26.236

STATION US11677			
LATITUDE 41-57.4 N			
LONGITUDE 140-58.2 E			
DEPTH (m) 77			
Press.	Temp.	Salinity	Sigma-T
5	17.512	33.018	23.873
10	17.459	33.026	23.891
20	16.980	33.392	24.285
30	14.502	33.637	25.028
40	14.135	33.949	25.347
50	9.883	33.589	25.870

STATION US11678			
LATITUDE 41-35.3 N			
LONGITUDE 140-53.6 E			
DEPTH (m) 50			
Press.	Temp.	Salinity	Sigma-T
5	19.280	33.462	23.775
10	19.702	33.415	23.631
20	18.548	33.596	24.062
30	18.464	33.620	24.101
40	17.807	33.723	24.341

STATION US11679			
LATITUDE 41-37.1 N			
LONGITUDE 140-51.4 E			
DEPTH (m) 97			
Press.	Temp.	Salinity	Sigma-T
5	19.610	33.354	23.608
10	19.254	33.467	23.785
20	18.405	33.652	24.141
30	17.669	33.775	24.414
40	16.177	34.018	24.952
50	14.199	34.251	25.566
75	12.888	34.282	25.859

STATION US11680			
LATITUDE 41-38.7 N			
LONGITUDE 140-49.4 E			
DEPTH (m) 309			
Press.	Temp.	Salinity	Sigma-T
5	18.642	33.488	23.956
10	18.370	33.538	24.062
20	17.464	33.833	24.508
30	15.859	34.039	25.040
40	15.305	34.243	25.322
50	14.766	34.293	25.477
75	12.055	34.249	25.995
100	10.542	34.185	26.222
125	9.904	34.177	26.325
150	9.468	34.184	26.403
175	9.332	34.183	26.425
200	9.084	34.182	26.464
250	8.595	34.163	26.526

STATION US11681			
LATITUDE 41-40.7 N			
LONGITUDE 140-47.3 E			
DEPTH (m) 225			
Press.	Temp.	Salinity	Sigma-T
5	17.908	33.566	24.196
10	17.773	33.571	24.233
20	17.430	33.597	24.336
30	15.882	33.743	24.807
40	14.754	33.846	25.136
50	13.823	33.983	25.438
75	11.955	34.070	25.875
100	10.948	34.153	26.125
125	9.949	34.200	26.336
150	9.574	34.194	26.394
175	8.908	34.158	26.473
200	8.725	34.164	26.507

STATION US11682			
LATITUDE 41-42.7 N			
LONGITUDE 140-45.0 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	16.050	33.713	24.746
10	16.040	33.714	24.750
20	15.351	33.775	24.951
30	14.127	33.898	25.309
40	13.162	33.970	25.563
50	12.136	34.054	25.828
75	10.884	34.165	26.146

