



Title	5. The "Ushio Maru" Cruise 197, 198 and 199 in May - June 2010
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THE " USHIO MARU "

CRUISE 197

CRUISE 198

CRUISE 199

IN MAY - JUNE 2010

1. Cruise Itinerary

Cruise 197

Departure from Hakodate	May	29 , 2010
Arrival at and departure from Shiraoi		29
Start hydrographic research (US10247)		30
Arrival at and departure from Shiraoi	Jun.	1
Finish hydrographic research (US10267)		1
Return to Hakodate		2

Total coverage 724.8 miles

Cruise 198

Departure from Hakodate	Jun.	6 , 2010
Start trawl net research		6
Start hydrographic research (US10268)		6
Arrival at Wakinosawa		6
Departure from Wakinosawa		7
Arrival at Aomori		7
Departure from Aomori		8
Finish trawl net research		8
Finish hydrographic research (US10295)		9
Return to Hakodate		10

Total coverage 212.1 miles

Cruise 199

Departure from Hakodate	Jun.	14 , 2010
Start hydrographic research (US10296)		14
Arrival at and departure from Usujiri		16
Arrival at Usujiri		17
Departure from Usujiri		18
Retrieval Sediment trap system		18
Set Sediment trap system		19
Arrival at Usujiri		19
Departure from Usujiri		20
Arrival at Usujiri		20
Departure from Usujiri		21
Sampling by Frame trawl net		22
Finish hydrographic research (US10341)		23
Arrival at and departure from Usujiri		23
Return to Hakodate		24

Total coverage 1100.0 miles

2. Vessel Personnel

Captain:		Professor	Toshimi Meguro
Crew:	Chief Officer	Assistant Professor	Osamu Kimura
	Second Officer	Assistant Professor	Naoto Kobayashi
	And 13 men		

Cruise 197

Graduate Students:	Graduate School of Environmental Science:	3 persons
Under Graduate Students:	Department of Marine Biology:	2 persons

Cruise 198

Research Staff:	Professor	(Laboratory of Marine Bioresource Science)	Tetsuya Takatsu
	Associate Professor	(Laboratory of Marine Environmental Science)	Isao Kudo
Graduate Students:	Chair of Marine Bioresource Science:	2 persons	
	Graduate School of Environmental Science:	1 person	
Under Graduate Students:	Department of Marine Biology:	10 persons	

Cruise 199

Research Staff:	Professor	(Laboratory of Marine Environmental Science)	Kenshi Kuma
	Professor	(Laboratory of Marine Bioresource and Environment Sensing)	Seiichi Saitoh
	Professor	(Laboratory of Marine Industrial Science and Technology)	Yasuzumi Fujimori
	Associate Professor	(Laboratory of Marine Environmental Science)	Isao Kudo
	Associate Professor	(Laboratory of Marine Environmental Science)	Yutaka Isoda
	Associate Professor	(Laboratory of Marine Bioresource Science)	Toshikuni Nakatani
	Postdoctoral fellow	(Faculty of Fisheries Sciences)	Tomonori Isada
Guest Scientist (Domestic)		(Ehime University)	Michinobu Kuwae
		(National Institute for Environmental Studies)	Takafumi Aramaki

Research Students:	Faculty of Fisheries Sciences:	1 person
Graduate Students:	Chair of Marine Bioresource Science:	1 person
	Chair of Marine Environmental Science:	2 persons
	Chair of Marine Bioresource and Environment Sensing:	7 persons
	Chair of Marine Industrial Science and Technology:	1 person
	Graduate School of Environmental Science:	1 person
Under Graduate Students:	Department of Marine Biology:	8 persons
	Department of Applied Marine Science:	10 persons

3. 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”.

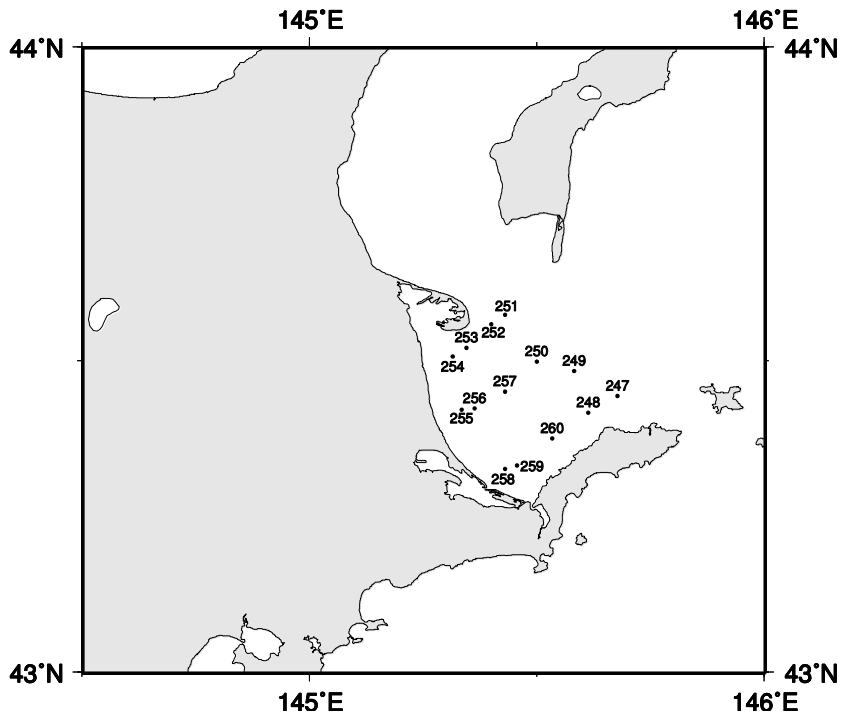


Figure 1-1: Oceanographic stations at Nemuro Strait (Cruise 197)

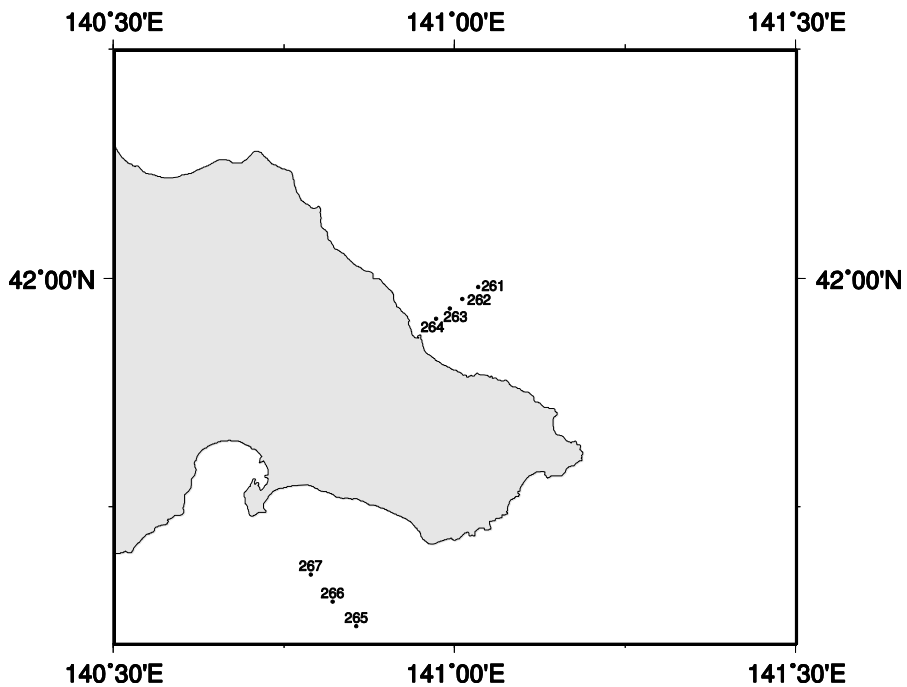


Figure 1-2: Oceanographic stations at South East Hokkaido (Cruise 197)

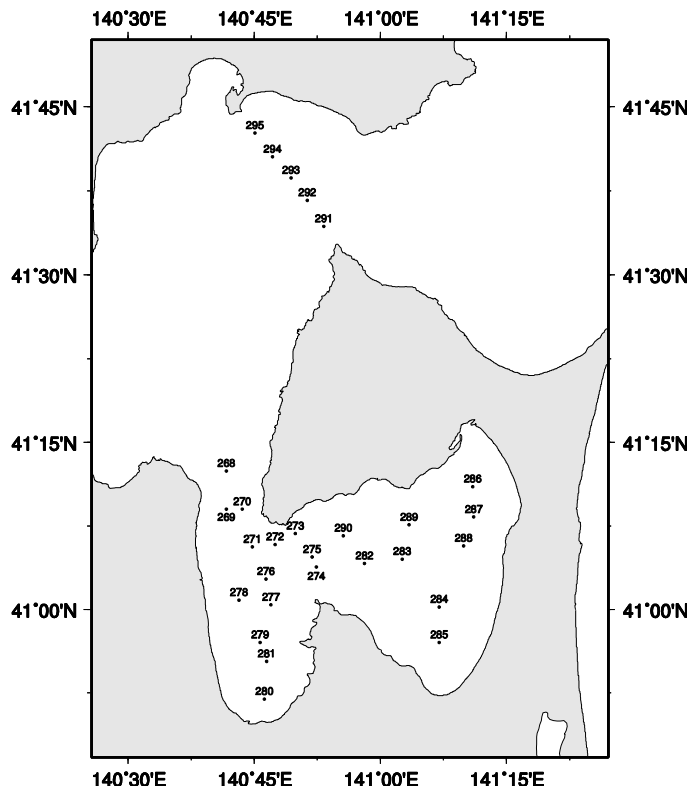


Figure 2: Oceanographic stations (Cruise 198)

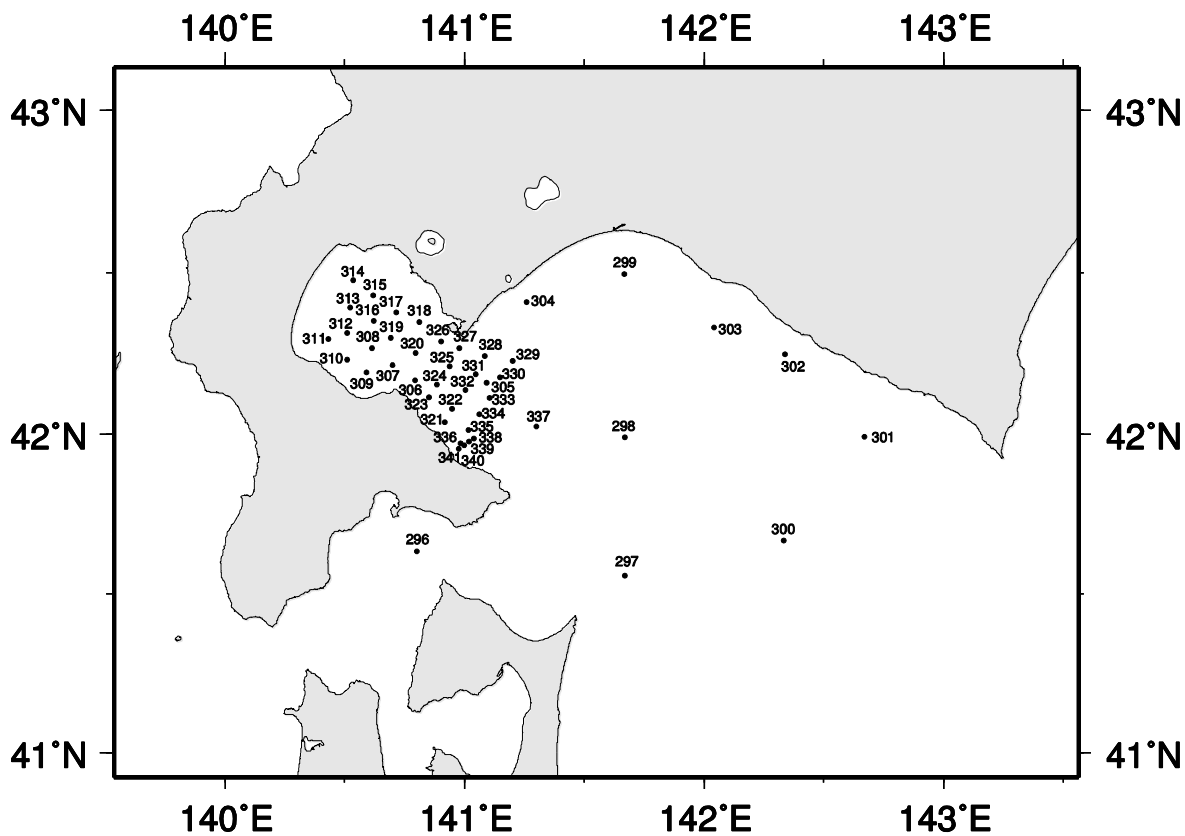


Figure 3: Oceanographic stations (Cruise 199)

Table 1: List of oceanographic stations

Cruise 197												
Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US10247	43-26.7	145-40.5	5/30	1547-1555	29	NE -3	NE -1	NE -5	3.6	4.5	c	1014.7
US10248	43-25.1	145-36.7	5/30	1616-1619	28	NE -1	NE -1	NE -3	4.4	4.9	c	1015.0
US10249	43-29.1	145-34.8	5/30	1646-1649	30	ENE-2	NE -1	ENE-4	3.7	5.2	c	1015.0
US10250	43-30.0	145-29.9	5/30	1711-1713	25	East-1	NE -1	East-3	4.2	5.9	bc	1015.1
US10251	43-34.5	145-25.7	5/30	1745-1747	12	ENE-1	NE -1	ENE-3	4.2	5.4	bc	1015.1
US10252	43-33.6	145-23.9	5/30	1759-1800	12	East-1	East-1	East-2	4.5	5.4	bc	1015.1
US10253	43-31.3	145-20.6	5/30	1835-1836	8	NE -1	East-1	NE -2	4.3	5.5	bc	1015.1
US10254	43-30.5	145-18.8	5/30	1848-1849	7	NNE-1	East-1	NNE-2	4.3	5.2	bc	1015.2
US10255	43-25.4	145-20.0	5/30	1924-1926	10	NE -1	East-1	NE -2	4.5	5.2	c	1015.6
US10256	43-25.5	145-21.7	5/30	1934-1936	11	NE -1	East-1	NE -3	4.8	7.6	c	1016.0
US10257	43-27.1	145-25.7	5/30	2001-2004	19	NE -1	East-1	NE -3	4.2	7.3	c	1016.0
US10258	43-19.7	145-25.7	5/31	0643-0645	13	NNW-2	North-1	NNW-4	4.8	6.2	bc	1016.9
US10259	43-20.0	145-27.3	5/31	0655-0656	15	NNW-3	North-1	NNW-5	5.5	6.3	c	1017.0
US10260	43-22.6	145-31.9	5/31	0724-0726	19	NNE-1	North-1	NNE-3	5.2	6.7	bc	1017.0
US10261	41-59.5	141-02.0	6/1	1257-1302	101	ESE-1	East-1	ESE-2	8.5	9.4	f	1015.7
US10262	41-58.7	141-00.6	6/1	1310-1314	94	East-1	East-1	East-2	9.6	9.1	f	1015.7
US10263	41-58.1	140-59.5	6/1	1320-1324	87	ESE-1	East-1	ESE-2	10.1	11.2	m	1015.6
US10264	41-57.4	140-58.3	6/1	1332-1336	79	SE -1	East-1	SE -2	10.3	11.4	m	1015.6
US10265	41-37.2	140-51.3	6/1	1707-1713	117	SW -3	East-1	SW -5	13.1	11.3	bc	1015.6
US10266	41-38.8	140-49.2	6/1	1731-1743	326	SW -3	East-1	SW -5	13.1	10.0	bc	1015.6
US10267	41-40.6	140-47.3	6/1	1800-1810	236	SW -2	East-1	SW -4	12.9	9.3	bc	1015.7

Cruise 198												
Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US10268	41-12.5	140-41.6	6/6	1217-1221	78	WNW-3	NW -1	WNW-5	14.8	13.2	bc	1015.6
US10269	41-09.1	140-41.6	6/6	1250-1257	55	NNW-2	NW -1	NNW-4	15.4	12.8	bc	1015.4
US10270	41-09.1	140-43.5	6/6	1316-1322	63	NW -3	NW -1	NW -5	16.0	14.0	bc	1015.1
US10271	41-05.7	140-44.7	6/6	1415-1419	62	NW -2	NW -1	NW -4	18.9	14.5	bc	1015.1
US10272	41-05.9	140-47.4	6/6	1454-1458	60	NW -2	NW -1	NW -4	17.6	13.9	bc	1015.0
US10273	41-06.9	140-49.8	6/6	1522-1525	47	NW -2	NW -1	NW -4	18.3	14.7	bc	1014.8
US10274	41-03.9	140-52.3	6/7	0726-0733	52	SW -1	SW -1	SW -3	15.5	14.2	bc	1018.6
US10275	41-04.8	140-51.8	6/7	0745-0748	53	SW -1	SW -1	SW -3	16.4	13.8	bc	1018.6
US10276	41-02.8	140-46.3	6/7	0900-0908	52	NW -1	SE -1	NW -3	16.3	14.7	bc	1018.6
US10277	41-00.5	140-46.9	6/7	0948-0951	52	NNW-1	South-1	NNW-3	17.5	14.3	bc	1018.8
US10278	41-00.9	140-43.1	6/7	1030-1033	56	North-2	North-1	North-4	16.5	14.7	bc	1019.0
US10279	40-57.1	140-45.6	6/7	1134-1141	51	NNW-2	North-1	NNW-4	17.0	15.0	bc	1018.6
US10280	40-52.0	140-46.1	6/8	0638-0640	28	NNW-1	North-1	NNW-2	14.8	15.5	o	1019.6
US10281	40-55.4	140-46.4	6/8	0720-0722	42	Calm	North-1	Calm	14.5	14.4	o	1019.6
US10282	41-04.2	140-58.0	6/8	0903-0906	50	ESE-2	East-1	ESE-4	12.2	13.9	o	1020.1
US10283	41-04.6	141-02.5	6/8	0947-0952	48	ESE-2	East-1	ESE-4	12.5	14.2	o	1020.0
US10284	41-00.3	141-06.9	6/8	1206-1209	44	ESE-2	ESE-1	ESE-4	13.7	14.2	c	1019.1
US10285	40-57.1	141-06.9	6/8	1251-1256	37	ESE-3	ESE-1	ESE-5	14.3	14.5	c	1018.2
US10286	41-11.1	141-10.9	6/8	1523-1534	30	SSW-1	South-1	SSW-2	16.8	16.0	bc	1017.6
US10287	41-08.4	141-11.0	6/8	1638-1641	35	South-1	South-1	South-3	15.6	15.2	bc	1017.1
US10288	41-05.8	141-09.8	6/9	0646-0648	38	NNE-1	NNE-1	NNE-1	12.8	14.5	o	1018.5
US10289	41-07.7	141-03.3	6/9	0740-0742	39	North-1	ESE-1	North-2	12.1	14.8	o	1017.1
US10290	41-06.7	140-55.5	6/9	0840-0843	47	NNW-1	ESE-1	NNW-2	12.6	14.3	o	1017.1
US10291	41-34.4	140-53.2	6/9	1325-1327	31	East-3	ESE-1	East-5	12.5	13.0	c	1015.8
US10292	41-36.7	140-51.2	6/9	1249-1253	86	East-2	ESE-1	East-4	12.6	12.5	c	1015.6
US10293	41-38.7	140-49.3	6/9	1312-1324	310	East-1	ESE-1	East-3	13.4	13.5	c	1015.5
US10294	41-40.6	140-47.1	6/9	1345-1353	230	East-1	ESE-1	East-2	13.3	12.4	c	1015.1
US10295	41-42.7	140-45.0	6/9	1413-1417	86	SE -1	ESE-1	SE -2	14.8	14.3	o	1015.1

Cruise 199												
Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US10296	41-38.2	140-47.7	6/14	0956-1008	206	East-1	East-1	East-3	14.3	12.9	f	1015.1
US10297	41-33.7	141-39.9	6/14	1329-1345	557	NE -1	ESE-2	NE -2	12.8	10.9	f	1014.6
US10298	41-59.6	141-39.9	6/14	1619-1639	845	ENE-1	ESE-2	ENE-3	13.3	12.3	f	1013.7
US10299	42-30.0	141-39.7	6/14	1921-11925	50	ESE-2	SE -1	ESE-4	13.8	11.7	c	1014.0
US10300	41-40.3	142-19.6	6/15	0112-0128	1183	SE -2	SSE-2	SE -4	13.5	12.3	f	1013.2
US10301	41-59.7	142-39.8	6/15	0351-0407	572	East-2	South-1	East-4	13.1	12.9	f	1013.5
US10302	42-15.1	142-19.9	6/15	0609-0618	99	East-2	South-1	East-4	14.1	12.0	o	1013.5
US10303	42-20.1	142-02.2	6/15	1142-1149	93	East-2	South-1	East-4	12.8	11.0	o	1012.9
US10304	42-24.8	141-15.2	6/16	1520-1526	72	West-1	SE -1	West-2	15.4	13.6	r	1003.1
US10305	42-09.8	141-05.2	6/16	2137-2148	93	West-2	SE -1	West-4	14.1	13.4	o	1003.0
US10306	42-10.3	140-47.2	6/18	0804-0808	95	NE -1	ESE-1	NE -2	16.4	14.4	o	1009.1
US10307	42-13.1	140-41.7	6/18	0845-0849	90	ENE-1	ESE-1	ENE-3	16.2	14.6	o	1009.1
US10308	42-16.2	140-36.5	6/18	0941-0947	91	Calm	ESE-1	Calm	18.7	15.0	o	1009.1
US10309	42-11.7	140-35.1	6/18	1037-1041	83	Calm	ESE-1	Calm	18.0	14.7	o	1009.1
US10310	42-14.1	140-30.2	6/18	1111-1115	80	Calm	ESE-1	Calm	17.4	15.2	o	1009.1
US10311	42-17.9	140-25.6	6/18	1148-1151	66	Calm	ESE-1	Calm	17.9	15.2	o	1009.1
US10312	42-19.0	140-30.2	6/18	1219-1226	92	Calm	ESE-1	Calm	17.9	15.6	o	1008.8
US10313	42-23.8	140-31.0	6/18	1311-1317	95	Calm	ESE-1	Calm	17.9	16.0	o	1008.6
US10314	42-28.8	140-31.7	6/18	1357-1401	77	South-1	ESE-1	South-2	19.1	16.0	o	1008.6
US10315	42-26.0	140-36.8	6/18	1434-1438	85	Calm	ESE-1	Calm	17.9	16.3	o	1008.6
US10316	42-21.3	140-37.0	6/18	1514-1518	86	Calm	SE -1	Calm	17.5	16.1	o	1008.0
US10317	42-22.9	140-42.6	6/18	1549-1553	61	NE -1	ESE-1	NE -2	17.7	15.7	o	1007.6
US10318	42-21.1	140-48.3	6/18	1623-1626	52	ESE-1	ESE-1	ESE-3	17.4	15.0	o	1007.4
US10319	42-18.1	140-41.2	6/19	0719-0723	75	Calm	ESE-1	Calm	15.2	15.2	f	1006.8
US10320	42-15.3	140-47.4	6/19	0844-0848	73	Calm	ESE-1	Calm	16.3	15.4	f	1001.6
US10321	42-02.4	140-54.7	6/20	0705-0709	77	NE -1	East-1	NE -2	14.4	15.4	f	1006.6
US10322	42-04.9	140-56.5	6/20	0749-0757	85	East-1	East-1	East-2	14.3	15.2	f	1006.6
US10323	42-07.1	140-50.8	6/20	0844-0848	75	East-1	East-1	East-2	14.9	15.7	o	1006.2

Cruise 199 (continued)

Station	Lat. (N)*	Long (E)*	Date	S.M.T	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US10324	42-09.5	140-52.7	6/20	0906-0910	79	East-1	East-1	East-2	14.9	15.7	o	1006.2
US10325	42-12.9	140-55.9	6/20	0935-0939	69	NE -1	East-1	NE -3	15.1	16.1	o	1006.1
US10326	42-17.5	140-53.8	6/20	1044-1050	57	East-1	SE -1	East-3	15.3	15.1	o	1005.6
US10327	42-16.2	140-58.4	6/20	1136-1140	63	East-2	ESE-1	East-4	16.2	15.2	o	1005.2
US10328	42-14.8	141-04.8	6/20	1210-1213	80	East-1	ESE-1	East-3	15.7	16.3	o	1005.4
US10329	42-13.9	141-11.7	6/20	1247-1252	125	East-1	ESE-1	East-3	15.5	15.7	o	1005.5
US10330	42-10.8	141-08.5	6/20	1317-1321	106	ESE-1	ESE-1	ESE-3	15.7	16.0	r	1005.2
US10331	42-11.4	141-02.4	6/20	1349-1352	82	East-1	ESE-1	East-2	15.6	15.8	o	1005.1
US10332	42-08.4	140-59.9	6/20	1416-1419	84	Calm	ESE-1	Calm	15.6	16.0	o	1004.7
US10333	42-07.0	141-06.0	6/20	1452-1456	106	East-1	ESE-1	East-3	15.3	16.0	f	1004.6
US10334	42-03.9	141-03.3	6/20	1520-1524	99	East-1	ESE-1	East-3	15.4	15.1	f	1004.6
US10335	42-01.0	141-00.7	6/20	1547-1551	91	East-1	ESE-1	East-3	15.4	15.4	o	1004.2
US10336	41-58.5	140-58.6	6/20	1611-1615	84	East-1	ESE-1	East-2	15.5	15.6	o	1004.2
US10337	42-01.6	141-17.6	6/21	1713-1722	256	Calm	SE -1	Calm	15.9	14.5	f	1004.1
US10338	41-59.4	141-02.0	6/23	0540-0545	102	SE -3	ESE-1	SE -5	15.6	15.4	f	1007.0
US10339	41-58.8	141-00.8	6/23	0554-0557	94	SE -3	ESE-1	SE -5	15.5	15.3	f	1007.0
US10340	41-58.1	140-59.5	6/23	0606-0610	87	ESE-1	ESE-1	ESE-3	15.6	15.2	o	1007.0
US10341	41-57.4	140-58.2	6/23	0617-0620	78	WSW-1	ESE-1	WSW-2	15.8	15.2	c	1006.8

(*): Fixed position by Global Positioning System

Table 2: Oceanographic data

STATION US10247				STATION US10248				STATION US10249			
LATITUDE 43-26.7 N				LATITUDE 43-25.1 N				LATITUDE 43-29.1 N			
LONGITUDE 145-40.5 E				LONGITUDE 145-36.7 E				LONGITUDE 145-34.8 E			
DEPTH (m) 29				DEPTH (m) 28				DEPTH (m) 30			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	4.930	32.267	25.516	5	5.563	31.832	25.101	5	5.258	32.042	25.302
10	4.813	32.269	25.531	10	5.118	31.942	25.238	10	5.176	32.130	25.381
20	4.246	32.307	25.620	20	4.881	32.066	25.363	20	4.217	32.348	25.656
STATION US10250				STATION US10251				STATION US10252			
LATITUDE 43-30.0 N				LATITUDE 43-34.5 N				LATITUDE 43-33.6 N			
LONGITUDE 145-29.9 E				LONGITUDE 145-25.7 E				LONGITUDE 145-23.9 E			
DEPTH (m) 25				DEPTH (m) 12				DEPTH (m) 12			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.262	31.660	24.882	5	5.634	31.913	25.157	5	6.010	31.219	24.565
10	5.507	32.046	25.277								
20	4.043	32.351	25.675								
STATION US10253				STATION US10254				STATION US10255			
LATITUDE 43-31.3 N				LATITUDE 43-30.5 N				LATITUDE 43-25.4 N			
LONGITUDE 145-20.6 E				LONGITUDE 145-18.8 E				LONGITUDE 145-20.0 E			
DEPTH (m) 8				DEPTH (m) 7				DEPTH (m) 10			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.478	31.741	25.039	5	5.577	32.007	25.239	5	7.022	31.035	24.294
STATION US10256				STATION US10257				STATION US10258			
LATITUDE 43-25.5 N				LATITUDE 43-27.1 N				LATITUDE 43-19.7 N			
LONGITUDE 145-21.7 E				LONGITUDE 145-25.7 E				LONGITUDE 145-25.7 E			
DEPTH (m) 11				DEPTH (m) 19				DEPTH (m) 13			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.588	32.097	25.308	5	5.995	31.653	24.909	5	6.561	30.689	24.080
10				10	4.650	32.251	25.534				
STATION US10259				STATION US10260				STATION US10261			
LATITUDE 43-20.0 N				LATITUDE 43-22.6 N				LATITUDE 41-59.5 N			
LONGITUDE 145-27.3 E				LONGITUDE 145-31.9 E				LONGITUDE 141-02.0 E			
DEPTH (m) 15				DEPTH (m) 19				DEPTH (m) 101			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.516	31.083	24.396	5	6.717	31.043	24.340	5	8.918	31.994	24.777
10	6.002	31.699	24.945	10	6.208	31.411	24.693	10	7.931	32.098	25.006
								20	6.013	32.690	25.726
								30	6.082	32.831	25.829
								40	6.867	33.067	25.914
								50	6.699	33.092	25.956
								75	5.712	33.122	26.104
STATION US10262				STATION US10263				STATION US10264			
LATITUDE 41-58.7 N				LATITUDE 41-58.1 N				LATITUDE 41-57.4 N			
LONGITUDE 141-00.6 E				LONGITUDE 140-59.5 E				LONGITUDE 140-58.3 E			
DEPTH (m) 94				DEPTH (m) 87				DEPTH (m) 79			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	8.727	32.350	25.085	5	10.565	31.437	24.077	5	9.819	31.557	24.294
10	8.556	32.561	25.277	10	8.393	32.146	24.976	10	7.668	31.974	24.945
20	7.235	32.740	25.607	20	7.000	32.499	25.449	20	6.523	32.281	25.340
30	7.128	33.045	25.862	30	6.514	32.813	25.760	30	5.973	32.509	25.588
40	7.017	33.065	25.893	40	6.158	32.878	25.857	40	5.238	32.529	25.690
50	6.782	33.116	25.964	50	6.431	33.055	25.961	50	5.253	32.733	25.850
75	4.891	33.134	26.208	75	4.816	33.113	26.200	75	4.179	33.148	26.295

STATION		US10265	
LATITUDE	41-37.2	N	
LONGITUDE	140-51.3	E	
DEPTH (m)	117		
Press.	Temp.	Salinity	Sigma-T
5	11.527	33.704	25.671
10	11.495	33.705	25.677
20	10.974	33.777	25.827
30	10.094	33.927	26.098
40	9.935	33.952	26.145
50	9.899	33.961	26.158
75	9.838	33.975	26.179
100	9.828	33.977	26.183

STATION		US10266	
LATITUDE	41-38.8	N	
LONGITUDE	140-49.2	E	
DEPTH (m)	326		
Press.	Temp.	Salinity	Sigma-T
5	11.507	33.721	25.687
10	11.451	33.718	25.696
20	11.350	33.730	25.723
30	11.372	33.728	25.718
40	11.239	33.741	25.753
50	11.139	33.755	25.781
75	10.811	33.817	25.888
100	9.926	33.958	26.151
125	9.757	34.000	26.212
150	9.697	34.014	26.233
175	9.570	34.022	26.261
200	9.606	34.020	26.252
250	9.194	34.048	26.341

STATION		US10267	
LATITUDE	41-40.6	N	
LONGITUDE	140-47.3	E	
DEPTH (m)	236		
Press.	Temp.	Salinity	Sigma-T
5	9.227	33.048	25.554
10	9.472	33.308	25.718
20	10.664	33.780	25.885
30	10.505	33.826	25.948
40	9.782	33.811	26.060
50	9.829	33.878	26.105
75	9.922	33.979	26.168
100	9.564	33.943	26.199
125	9.349	33.943	26.235
150	9.435	33.972	26.243
175	9.417	33.964	26.239
200	9.415	33.974	26.248

STATION		US10268	
LATITUDE	41-12.5	N	
LONGITUDE	140-41.6	E	
DEPTH (m)	78		
Press.	Temp.	Salinity	Sigma-T
5	13.154	33.169	24.944
10	12.268	33.287	25.208
20	10.614	33.466	25.649
30	10.875	33.666	25.759
40	10.551	33.682	25.829
50	10.199	33.764	25.953
75	9.277	33.865	26.185

STATION		US10269	
LATITUDE	41-09.1	N	
LONGITUDE	140-41.6	E	
DEPTH (m)	55		
Press.	Temp.	Salinity	Sigma-T
5	13.264	33.372	25.079
10	12.081	33.685	25.553
20	11.835	33.710	25.618
30	10.913	33.711	25.788
40	10.105	33.774	25.976
50	10.036	33.857	26.053

STATION		US10270	
LATITUDE	41-09.1	N	
LONGITUDE	140-43.5	E	
DEPTH (m)	63		
Press.	Temp.	Salinity	Sigma-T
5	14.145	32.711	24.389
10	12.680	33.554	25.336
20	11.695	33.720	25.652
30	10.591	33.678	25.818
40	9.722	33.705	25.988
50	8.965	33.659	26.073

STATION		US10271	
LATITUDE	41-05.7	N	
LONGITUDE	140-44.7	E	
DEPTH (m)	62		
Press.	Temp.	Salinity	Sigma-T
5	14.131	32.775	24.441
10	11.103	33.000	25.200
20	10.078	33.346	25.648
30	10.365	33.691	25.868
40	9.858	33.695	25.957
50	9.602	33.822	26.098

STATION		US10272	
LATITUDE	41-05.9	N	
LONGITUDE	140-47.4	E	
DEPTH (m)	60		
Press.	Temp.	Salinity	Sigma-T
5	14.186	32.700	24.372
10	11.950	33.201	25.201
20	9.071	33.185	25.686
30	8.446	33.273	25.851
40	7.966	33.358	25.989
50	7.282	33.374	26.099

STATION		US10273	
LATITUDE	41-06.9	N	
LONGITUDE	140-49.8	E	
DEPTH (m)	47		
Press.	Temp.	Salinity	Sigma-T
5	14.264	32.591	24.272
10	12.431	33.044	24.989
20	8.931	33.121	25.658
30	8.419	33.291	25.869
40	7.556	33.376	26.063

STATION		US10274	
LATITUDE	41-03.9	N	
LONGITUDE	140-52.3	E	
DEPTH (m)	52		
Press.	Temp.	Salinity	Sigma-T
5	13.948	32.849	24.536
10	12.447	33.365	25.234
20	10.280	33.318	25.592
30	10.578	33.746	25.873
40	10.369	33.768	25.927

STATION		US10275	
LATITUDE	41-04.8	N	
LONGITUDE	140-51.8	E	
DEPTH (m)	53		
Press.	Temp.	Salinity	Sigma-T
5	14.076	32.855	24.514
10	13.094	33.122	24.919
20	10.874	33.500	25.630
30	10.050	33.605	25.855
40	9.898	33.797	26.030
50	9.499	33.871	26.154

STATION		US10276	
LATITUDE	41-02.8	N	
LONGITUDE	140-46.3	E	
DEPTH (m)	52		
Press.	Temp.	Salinity	Sigma-T
5	13.786	32.871	24.586
10	10.545	33.211	25.462
20	11.052	33.681	25.739
30	10.638	33.696	25.824
40	10.027	33.672	25.910

STATION		US10277	
LATITUDE	41-00.5	N	
LONGITUDE	140-46.9	E	
DEPTH (m)	52		
Press.	Temp.	Salinity	Sigma-T
5	13.878	33.182	24.808
10	13.453	33.126	24.851
20	11.142	33.615	25.672
30	10.778	33.661	25.772
40	10.100	33.667	25.894
50	10.025	33.862	26.059

STATION		US10278	
LATITUDE	41-00.9	N	
LONGITUDE	140-43.1	E	
DEPTH (m)	56		
Press.	Temp.	Salinity	Sigma-T
5	14.513	33.108	24.618
10	12.995	33.614	25.320
20	11.745	33.721	25.644
30	11.096	33.678	25.729
40	10.586	33.678	25.819
50	9.838	33.718	25.978

STATION		US10279	
LATITUDE	40-57.1	N	
LONGITUDE	140-45.6	E	
DEPTH (m)	51		
Press.	Temp.	Salinity	Sigma-T
5	13.942	33.293	24.880
10	12.572	33.636	25.421
20	11.745	33.652	25.590
30	11.426	33.667	25.661
40	10.839	33.660	25.761

STATION		US10280	
LATITUDE	40-52.0	N	
LONGITUDE	140-46.1	E	
DEPTH (m)	28		
Press.	Temp.	Salinity	Sigma-T
5	15.296	32.696	24.132
10	12.136	32.819	24.870
20	10.500	33.375	25.598

STATION		US10281	
LATITUDE	40-55.4	N	
LONGITUDE	140-46.4	E	
DEPTH (m)	42		
Press.	Temp.	Salinity	Sigma-T
5	14.448	33.010	24.556
10	12.401	33.397	25.268
20	11.813	33.673	25.593
30	11.053	33.647	25.712
40	10.545	33.665	25.816

STATION		US10282	
LATITUDE	41-04.2	N	
LONGITUDE	140-58.0	E	
DEPTH (m)	50		
Press.	Temp.	Salinity	Sigma-T
5	14.206	32.817	24.458
10	14.040	32.819	24.494
20	10.683	33.104	25.355
30	8.767	33.237	25.774
40	8.479	33.435	25.973

STATION		US10283	
LATITUDE	41-04.6	N	
LONGITUDE	141-02.5	E	
DEPTH (m)	48		
Press.	Temp.	Salinity	Sigma-T
5	14.476	32.820	24.404
10	14.430	32.821	24.414
20	9.719	33.074	25.495
30	8.867	33.230	25.753
40	8.110	33.350	25.962

STATION		US10286	
LATITUDE	41-11.1	N	
LONGITUDE	141-10.9	E	
DEPTH (m)	30		
Press.	Temp.	Salinity	Sigma-T
5	15.706	32.643	24.001
10	12.843	32.661	24.612
20	9.714	33.057	25.483

STATION		US10289	
LATITUDE	41-07.7	N	
LONGITUDE	141-03.3	E	
DEPTH (m)	39		
Press.	Temp.	Salinity	Sigma-T
5	14.937	32.698	24.211
10	14.596	32.691	24.279
20	9.883	33.083	25.475
30	8.592	33.289	25.842

STATION		US10292	
LATITUDE	41-36.7	N	
LONGITUDE	140-51.2	E	
DEPTH (m)	86		
Press.	Temp.	Salinity	Sigma-T
5	12.842	33.731	25.441
10	12.805	33.730	25.448
20	11.697	33.826	25.734
30	11.045	33.921	25.927
40	10.178	34.016	26.153
50	10.080	34.038	26.187
75	10.061	34.046	26.197

STATION		US10295	
LATITUDE	41-42.7	N	
LONGITUDE	140-45.0	E	
DEPTH (m)	86		
Press.	Temp.	Salinity	Sigma-T
5	13.614	33.765	25.313
10	12.522	33.836	25.585
20	9.927	33.776	26.008
30	9.477	33.915	26.191
40	9.392	33.951	26.234
50	9.375	34.000	26.275
75	8.805	34.087	26.434

STATION		US10284	
LATITUDE	41-00.3	N	
LONGITUDE	141-06.9	E	
DEPTH (m)	44		
Press.	Temp.	Salinity	Sigma-T
5	14.362	32.750	24.374
10	11.474	33.002	25.135
20	9.588	33.109	25.543
30	8.596	33.289	25.841
40	7.424	33.364	26.071

STATION		US10287	
LATITUDE	41-08.4	N	
LONGITUDE	141-11.0	E	
DEPTH (m)	35		
Press.	Temp.	Salinity	Sigma-T
5	15.442	32.608	24.032
10	15.094	32.661	24.149
20	9.469	33.115	25.567
30	8.062	33.347	25.967

STATION		US10290	
LATITUDE	41-06.7	N	
LONGITUDE	140-55.5	E	
DEPTH (m)	47		
Press.	Temp.	Salinity	Sigma-T
5	14.405	32.784	24.391
10	14.380	32.795	24.404
20	10.321	33.160	25.461
30	8.666	33.274	25.819
40	7.475	33.341	26.046

STATION		US10293	
LATITUDE	41-38.7	N	
LONGITUDE	140-49.3	E	
DEPTH (m)	310		
Press.	Temp.	Salinity	Sigma-T
5	13.647	33.660	25.224
10	13.583	33.673	25.248
20	12.986	33.796	25.463
30	12.601	33.849	25.580
40	10.992	33.996	25.995
50	10.480	34.013	26.099
75	9.771	34.042	26.242
100	9.599	34.086	26.305
125	8.897	34.091	26.422
150	8.679	34.111	26.473
175	8.971	34.123	26.436
200	9.143	34.111	26.399
250	8.351	34.115	26.526
300	8.011	34.117	26.579

STATION		US10296	
LATITUDE	41-38.2	N	
LONGITUDE	140-47.7	E	
DEPTH (m)	206		
Press.	Temp.	Salinity	Sigma-T
5	12.818	33.738	25.451
10	12.506	33.707	25.488
20	11.480	33.907	25.837
30	10.716	33.954	26.012
40	10.509	33.952	26.046
50	10.426	33.955	26.063
75	10.276	33.976	26.106
100	10.310	33.996	26.115
125	10.232	33.997	26.129
150	10.204	33.997	26.134
175	10.194	33.997	26.136
200	10.136	33.998	26.147

STATION		US10285	
LATITUDE	40-57.1	N	
LONGITUDE	141-06.9	E	
DEPTH (m)	37		
Press.	Temp.	Salinity	Sigma-T
5	14.770	32.647	24.208
10	13.300	32.682	24.536
20	9.216	33.146	25.633
30	7.946	33.251	25.908

STATION		US10288	
LATITUDE	41-05.8	N	
LONGITUDE	141-09.8	E	
DEPTH (m)	38		
Press.	Temp.	Salinity	Sigma-T
5	14.728	32.729	24.280
10	14.242	32.806	24.442
20	9.408	33.133	25.591
30	8.468	33.370	25.924

STATION		US10291	
LATITUDE	41-34.4	N	
LONGITUDE	140-53.2	E	
DEPTH (m)	31		
Press.	Temp.	Salinity	Sigma-T
5	13.284	33.705	25.333
10	11.920	33.819	25.687
20	11.886	33.861	25.726

STATION		US10294	
LATITUDE	41-40.6	N	
LONGITUDE	140-47.1	E	
DEPTH (m)	230		
Press.	Temp.	Salinity	Sigma-T
5	12.901	33.854	25.525
10	12.760	33.872	25.566
20	11.324	33.957	25.905
30	10.295	34.027	26.142
40	9.968	34.056	26.220
50	9.947	34.071	26.236
75	9.190	34.120	26.398
100	8.630	34.115	26.483
125	8.387	34.114	26.520
150	8.231	34.114	26.543
175	8.189	34.114	26.550
200	8.069	34.111	26.566

STATION		US10297	
LATITUDE	41-33.7	N	
LONGITUDE	141-39.9	E	
DEPTH (m)	557		
Press.	Temp.	Salinity	Sigma-T
5	11.278	33.986	25.935
10	10.344	33.826	25.977
20	10.191	33.879	26.044
30	10.186	33.890	26.053
40	10.173	33.905	26.067
50	10.131	33.913	26.081
75	10.102	33.952	26.116
100	10.050	33.959	26.131
125	9.987	33.962	26.143
150	9.741	33.960	26.184
175	8.923	33.913	26.279
200	7.288	33.827	26.455
250	5.305	33.708	26.616
300	3.831	33.611	26.698

STATION		US10298	
LATITUDE	41-59.6	N	
LONGITUDE	141-39.9	E	
DEPTH (m)	845		
Press.	Temp.	Salinity	Sigma-T
5	11.097	32.470	24.789
10	7.459	32.663	25.516
20	6.699	33.071	25.939
30	6.442	33.131	26.020
40	6.293	33.176	26.075
50	7.527	33.513	26.174
75	7.036	33.435	26.181
100	7.076	33.538	26.257
125	6.855	33.693	26.409
150	5.287	33.536	26.481
175	5.275	33.619	26.549
200	5.569	33.692	26.572
250	4.712	33.641	26.630
300	2.530	33.424	26.667

STATION		US10299	
LATITUDE	42-30.0	N	
LONGITUDE	141-39.7	E	
DEPTH (m)	50		
Press.	Temp.	Salinity	Sigma-T
5	12.055	31.673	23.996
10	9.127	31.940	24.703
20	6.409	32.449	25.486
30	6.393	32.984	25.911
40	6.470	33.199	26.070

STATION		US10300	
LATITUDE	41-40.3	N	
LONGITUDE	142-19.6	E	
DEPTH (m)	1183		
Press.	Temp.	Salinity	Sigma-T
5	12.309	32.973	24.957
10	9.532	32.967	25.441
20	6.420	32.963	25.890
30	6.543	33.190	26.053
40	7.563	33.527	26.180
50	6.907	33.417	26.185
75	7.640	33.747	26.342
100	6.778	33.722	26.442
125	4.232	33.434	26.517
150	3.945	33.484	26.586
175	4.765	33.651	26.632
200	4.108	33.606	26.666
250	3.019	33.553	26.728
300	2.766	33.612	26.797

STATION		US10301	
LATITUDE	41-59.7	N	
LONGITUDE	142-39.8	E	
DEPTH (m)	572		
Press.	Temp.	Salinity	Sigma-T
5	11.308	32.626	24.873
10	10.126	32.559	25.025
20	4.830	32.629	25.814
30	4.378	32.775	25.978
40	6.199	33.240	26.137
50	7.263	33.503	26.203
75	7.653	33.583	26.211
100	6.510	33.591	26.374
125	3.502	33.325	26.502
150	2.514	33.295	26.565
175	2.668	33.359	26.603
200	4.583	33.630	26.635
250	2.319	33.412	26.675
300	2.977	33.557	26.735

STATION		US10302	
LATITUDE	42-15.1	N	
LONGITUDE	142-19.9	E	
DEPTH (m)	99		
Press.	Temp.	Salinity	Sigma-T
5	12.249	32.048	24.251
10	12.118	32.054	24.280
20	6.482	32.836	25.782
30	5.483	32.898	25.954
40	5.650	33.015	26.027
50	6.357	33.270	26.141
75	6.599	33.549	26.329

STATION		US10303	
LATITUDE	42-20.1	N	
LONGITUDE	142-02.2	E	
DEPTH (m)	93		
Press.	Temp.	Salinity	Sigma-T
5	11.440	31.985	24.351
10	11.259	32.009	24.401
20	5.551	32.660	25.757
30	5.822	32.953	25.957
40	7.406	33.388	26.093
50	7.587	33.453	26.119
75	6.487	33.489	26.297

STATION		US10304	
LATITUDE	42-24.8	N	
LONGITUDE	141-15.2	E	
DEPTH (m)	72		
Press.	Temp.	Salinity	Sigma-T
5	13.665	31.228	23.341
10	13.086	32.348	24.322
20	7.500	32.549	25.421
30	6.680	32.982	25.872
40	6.645	33.150	26.009
50	6.458	33.313	26.161

STATION		US10305	
LATITUDE	42-09.8	N	
LONGITUDE	141-05.2	E	
DEPTH (m)	93		
Press.	Temp.	Salinity	Sigma-T
5	10.679	32.404	24.808
10	7.828	32.827	25.593
20	6.935	33.077	25.913
30	7.427	33.369	26.075
40	7.951	33.546	26.140
50	7.888	33.550	26.152
75	5.761	33.484	26.384

STATION		US10306	
LATITUDE	42-10.3	N	
LONGITUDE	140-47.2	E	
DEPTH (m)	95		
Press.	Temp.	Salinity	Sigma-T
5	13.424	31.364	23.494
10	12.321	31.474	23.793
20	8.157	32.205	25.057
30	6.586	32.576	25.563
40	4.898	32.677	25.845
50	4.761	32.900	26.037
75	4.085	33.318	26.440

STATION		US10307	
LATITUDE	42-13.1	N	
LONGITUDE	140-41.7	E	
DEPTH (m)	90		
Press.	Temp.	Salinity	Sigma-T
5	14.091	31.235	23.261
10	13.919	31.312	23.356
20	11.222	31.509	24.020
30	7.343	32.235	25.195
40	5.487	32.558	25.684
50	4.666	32.844	26.003
75	5.334	33.503	26.450

STATION		US10308	
LATITUDE	42-16.2	N	
LONGITUDE	140-36.5	E	
DEPTH (m)	91		
Press.	Temp.	Salinity	Sigma-T
5	15.022	31.284	23.104
10	14.836	31.312	23.166
20	11.546	31.423	23.894
30	7.934	31.898	24.848
40	6.627	32.255	25.306
50	4.566	32.679	25.882
75	5.133	33.415	26.404

STATION		US10309	
LATITUDE	42-11.7	N	
LONGITUDE	140-35.1	E	
DEPTH (m)	83		
Press.	Temp.	Salinity	Sigma-T
5	14.221	31.244	23.241
10	14.200	31.264	23.261
20	9.772	31.857	24.535
30	6.118	32.371	25.462
40	4.805	32.642	25.827
50	4.363	32.850	26.039
75	3.694	33.198	26.383

STATION		US10310	
LATITUDE	42-14.1	N	
LONGITUDE	140-30.2	E	
DEPTH (m)	80		
Press.	Temp.	Salinity	Sigma-T
5	14.509	31.230	23.171
10	13.991	31.319	23.346
20	9.099	31.885	24.664
30	5.965	32.349	25.462
40	5.174	32.632	25.779
50	4.595	32.775	25.955
75	3.703	33.094	26.299

STATION		US10311	
LATITUDE	42-17.9	N	
LONGITUDE	140-25.6	E	
DEPTH (m)	66		
Press.	Temp.	Salinity	Sigma-T
5	13.316	31.239	23.420
10	9.890	31.649	24.355
20	7.261	32.085	25.088
30	5.931	32.400	25.507
40	5.070	32.637	25.794
50	4.381	32.714	25.929

STATION		US10312	
LATITUDE	42-19.0	N	
LONGITUDE	140-30.2	E	
DEPTH (m)	92		
Press.	Temp.	Salinity	Sigma-T
5	14.462	31.254	23.199
10	14.489	31.267	23.204
20	7.785	31.912	24.880
30	6.797	32.187	25.230
40	5.977	32.514	25.591
50	4.420	32.701	25.915
75	3.797	32.962	26.185

STATION		US10313	
LATITUDE	42-23.8	N	
LONGITUDE	140-31.0	E	
DEPTH (m)	95		
Press.	Temp.	Salinity	Sigma-T
5	14.876	30.984	22.904
10	12.937	31.605	23.776
20	7.429	31.988	24.990
30	6.697	32.216	25.266
40	5.889	32.578	25.653
50	4.329	32.701	25.925
75	3.801	33.113	26.305

STATION		US10316	
LATITUDE	42-21.3	N	
LONGITUDE	140-37.0	E	
DEPTH (m)	86		
Press.	Temp.	Salinity	Sigma-T
5	15.443	31.242	22.981
10	14.903	31.248	23.102
20	8.813	31.755	24.606
30	7.592	31.980	24.960
40	6.549	32.273	25.330
50	5.458	32.550	25.681
75	3.802	33.120	26.311

STATION		US10319	
LATITUDE	42-18.1	N	
LONGITUDE	140-41.2	E	
DEPTH (m)	75		
Press.	Temp.	Salinity	Sigma-T
5	15.489	31.267	22.990
10	14.671	31.252	23.154
20	8.624	31.734	24.619
30	7.567	31.975	24.960
40	6.554	32.266	25.324
50	4.650	32.713	25.901

STATION		US10322	
LATITUDE	42-04.9	N	
LONGITUDE	140-56.5	E	
DEPTH (m)	85		
Press.	Temp.	Salinity	Sigma-T
5	12.795	31.477	23.705
10	9.990	31.985	24.600
20	7.091	32.538	25.468
30	5.364	32.595	25.728
40	4.677	32.755	25.931
50	4.423	32.976	26.133
75	4.980	33.370	26.385

STATION		US10325	
LATITUDE	42-12.9	N	
LONGITUDE	140-55.9	E	
DEPTH (m)	69		
Press.	Temp.	Salinity	Sigma-T
5	11.639	31.648	24.052
10	8.232	32.133	24.989
20	5.933	32.270	25.404
30	6.116	32.613	25.652
40	6.037	32.837	25.839
50	6.766	33.237	26.062

STATION		US10328	
LATITUDE	42-14.8	N	
LONGITUDE	141-04.8	E	
DEPTH (m)	80		
Press.	Temp.	Salinity	Sigma-T
5	15.754	30.654	22.462
10	7.442	31.943	24.952
20	6.413	32.909	25.848
30	6.350	33.048	25.966
40	6.386	33.154	26.045
50	6.112	33.272	26.174
75	5.898	33.551	26.420

STATION		US10314	
LATITUDE	42-28.8	N	
LONGITUDE	140-31.7	E	
DEPTH (m)	77		
Press.	Temp.	Salinity	Sigma-T
5	11.508	31.475	23.942
10	8.249	31.883	24.791
20	6.704	32.250	25.292
30	5.983	32.494	25.575
40	5.279	32.703	25.823
50	4.092	32.752	25.989

STATION		US10317	
LATITUDE	42-22.9	N	
LONGITUDE	140-42.6	E	
DEPTH (m)	61		
Press.	Temp.	Salinity	Sigma-T
5	15.231	31.239	23.025
10	13.979	31.272	23.311
20	8.357	31.797	24.708
30	7.183	32.090	25.103
40	6.063	32.421	25.508
50	4.635	32.716	25.904

STATION		US10320	
LATITUDE	42-15.3	N	
LONGITUDE	140-47.4	E	
DEPTH (m)	73		
Press.	Temp.	Salinity	Sigma-T
5	14.919	31.186	23.051
10	11.601	31.609	24.030
20	7.394	32.061	25.052
30	6.130	32.592	25.634
40	6.780	33.065	25.924
50	6.945	33.271	26.065

STATION		US10323	
LATITUDE	42-07.1	N	
LONGITUDE	140-50.8	E	
DEPTH (m)	75		
Press.	Temp.	Salinity	Sigma-T
5	14.825	31.387	23.225
10	10.550	31.964	24.489
20	6.965	32.536	25.483
30	5.301	32.631	25.764
40	5.261	32.938	26.011
50	3.861	32.883	26.116

STATION		US10326	
LATITUDE	42-17.5	N	
LONGITUDE	140-53.8	E	
DEPTH (m)	57		
Press.	Temp.	Salinity	Sigma-T
5	14.940	31.348	23.171
10	10.047	31.623	24.308
20	6.380	32.342	25.406
30	6.678	32.860	25.776
40	6.731	33.109	25.965
50	5.514	33.076	26.091

STATION		US10329	
LATITUDE	42-13.9	N	
LONGITUDE	141-11.7	E	
DEPTH (m)	125		
Press.	Temp.	Salinity	Sigma-T
5	14.673	32.064	23.776
10	9.986	33.248	25.586
20	7.038	33.083	25.904
30	6.997	33.329	26.103
40	7.163	33.448	26.174
50	6.504	33.384	26.212
75	5.949	33.478	26.356
100	5.709	33.577	26.464

STATION		US10315	
LATITUDE	42-26.0	N	
LONGITUDE	140-36.8	E	
DEPTH (m)	85		
Press.	Temp.	Salinity	Sigma-T
5	14.659	31.162	23.087
10	11.741	31.601	23.997
20	7.527	31.971	24.962
30	6.606	32.278	25.327
40	5.828	32.475	25.579
50	5.869	32.844	25.865
75	3.790	33.088	26.286

STATION		US10318	
LATITUDE	42-21.1	N	
LONGITUDE	140-48.3	E	
DEPTH (m)	52		
Press.	Temp.	Salinity	Sigma-T
5	15.165	31.070	22.909
10	12.909	31.700	23.855
20	7.819	31.892	24.860
30	6.562	32.308	25.356
40	5.594	32.564	25.677

STATION		US10321	
LATITUDE	42-02.4	N	
LONGITUDE	140-54.7	E	
DEPTH (m)	77		
Press.	Temp.	Salinity	Sigma-T
5	15.088	31.196	23.023
10	9.573	31.781	24.508
20	6.232	32.359	25.438
30	5.727	32.673	25.747
40	5.539	32.898	25.948
50	5.103	32.931	26.024

STATION		US10324	
LATITUDE	42-09.5	N	
LONGITUDE	140-52.7	E	
DEPTH (m)	79		
Press.	Temp.	Salinity	Sigma-T
5	15.595	31.488	23.138
10	11.779	32.327	24.554
20	5.862	32.530	25.618
30	5.453	32.785	25.868
40	6.208	33.071	26.003
50	6.600	33.286	26.122

STATION		US10327	
LATITUDE	42-16.2	N	
LONGITUDE	140-58.4	E	
DEPTH (m)	63		
Press.	Temp.	Salinity	Sigma-T
5	12.574	31.553	23.805
10	7.581	32.040	25.008
20	6.664	32.632	25.598
30	6.611	33.030	25.919
40	6.701	33.196	26.038
50	6.394	33.312	26.169

STATION		US10330	
LATITUDE	42-10.8	N	
LONGITUDE	141-08.5	E	
DEPTH (m)	106		
Press.	Temp.	Salinity	Sigma-T
5	12.735	32.316	24.365
10	8.937	32.808	25.412
20	7.591	33.130	25.864
30	6.750	33.250	26.074
40	6.569	33.388	26.207
50	7.038	33.583	26.297
75	6.719	33.729	26.456
100	5.690	33.604	26.488

STATION		US10331	
LATITUDE	42-11.4	N	
LONGITUDE	141-02.4	E	
DEPTH (m)	82		
Press.	Temp.	Salinity	Sigma-T
5	12.782	31.675	23.861
10	7.666	32.085	25.033
20	6.409	32.492	25.520
30	6.523	32.845	25.784
40	6.586	33.126	25.998
50	6.171	33.297	26.186
75	5.735	33.550	26.439

STATION		US10332	
LATITUDE	42-08.4	N	
LONGITUDE	140-59.9	E	
DEPTH (m)	84		
Press.	Temp.	Salinity	Sigma-T
5	10.868	31.841	24.339
10	8.993	32.363	25.055
20	6.395	32.577	25.590
30	6.620	32.953	25.856
40	6.567	33.214	26.070
50	6.572	33.343	26.171
75	4.888	33.413	26.430

STATION		US10333	
LATITUDE	42-07.0	N	
LONGITUDE	141-06.0	E	
DEPTH (m)	106		
Press.	Temp.	Salinity	Sigma-T
5	15.446	31.215	22.960
10	9.991	32.648	25.117
20	6.919	33.020	25.870
30	6.803	33.212	26.037
40	6.553	33.303	26.142
50	6.429	33.444	26.269
75	5.451	33.480	26.418
100	5.625	33.612	26.502

STATION		US10334	
LATITUDE	42-03.9	N	
LONGITUDE	141-03.3	E	
DEPTH (m)	99		
Press.	Temp.	Salinity	Sigma-T
5	13.636	32.343	24.209
10	6.720	32.333	25.355
20	5.702	32.646	25.729
30	5.280	32.762	25.870
40	6.654	33.197	26.045
50	8.018	33.609	26.178
75	6.040	33.445	26.319

STATION		US10335	
LATITUDE	42-01.0	N	
LONGITUDE	141-00.7	E	
DEPTH (m)	91		
Press.	Temp.	Salinity	Sigma-T
5	10.297	31.862	24.453
10	8.073	32.415	25.233
20	7.863	33.095	25.798
30	7.433	33.247	25.978
40	8.643	33.677	26.138
50	9.346	33.857	26.168
75	7.487	33.729	26.350

STATION		US10336	
LATITUDE	41-58.5	N	
LONGITUDE	140-58.6	E	
DEPTH (m)	84		
Press.	Temp.	Salinity	Sigma-T
5	13.473	31.500	23.590
10	9.860	32.215	24.800
20	7.009	32.307	25.297
30	5.662	32.633	25.723
40	7.873	33.327	25.978
50	8.049	33.528	26.110
75	5.312	33.518	26.465

STATION		US10337	
LATITUDE	42-01.6	N	
LONGITUDE	141-17.6	E	
DEPTH (m)	256		
Press.	Temp.	Salinity	Sigma-T
5	11.753	32.100	24.383
10	7.660	32.461	25.328
20	7.203	33.089	25.886
30	6.697	33.139	25.993
40	6.617	33.288	26.121
50	6.476	33.460	26.276
75	5.996	33.639	26.478
100	5.545	33.643	26.536
125	5.263	33.645	26.571
150	4.689	33.605	26.604
175	4.238	33.577	26.630
200	4.395	33.623	26.650

STATION		US10338	
LATITUDE	41-59.4	N	
LONGITUDE	141-02.0	E	
DEPTH (m)	102		
Press.	Temp.	Salinity	Sigma-T
5	15.342	31.551	23.241
10	10.987	32.799	25.064
20	8.192	33.096	25.750
30	6.875	33.095	25.935
40	6.678	33.272	26.100
50	6.677	33.453	26.244
75	5.609	33.459	26.383

STATION		US10339	
LATITUDE	41-58.8	N	
LONGITUDE	141-00.8	E	
DEPTH (m)	94		
Press.	Temp.	Salinity	Sigma-T
5	14.787	31.405	23.247
10	11.945	32.687	24.803
20	7.357	32.830	25.661
30	7.118	33.084	25.893
40	7.576	33.377	26.061
50	7.074	33.423	26.167
75	6.058	33.559	26.406

STATION		US10340	
LATITUDE	41-58.1	N	
LONGITUDE	140-59.5	E	
DEPTH (m)	87		
Press.	Temp.	Salinity	Sigma-T
5	12.015	31.664	23.996
10	8.133	31.927	24.842
20	6.509	32.549	25.553
30	6.167	32.847	25.831
40	4.698	32.870	26.020
50	4.724	33.047	26.157
75	5.074	33.442	26.431

STATION		US10341	
LATITUDE	41-57.4	N	
LONGITUDE	140-58.2	E	
DEPTH (m)	78		
Press.	Temp.	Salinity	Sigma-T
5	13.331	31.787	23.840
10	10.849	32.403	24.780
20	6.672	32.488	25.483
30	5.633	32.721	25.796
40	5.119	32.850	25.958
50	5.182	33.046	26.106
75	5.071	33.426	26.420