HOKKAIDO UNIVERSITY

Title	PART II -8. THE ” USHIO MARU ” CRUISE 400, CRUISE 401, CRUISE 402 IN OCTOBER - NOVEMBER 2017
Citation	海洋調査漁業試験要報, 61, 129-136
Issue Date	2021-03-31
Doc URL	https://hdl.handle.net/2115/80711
Type	dataset
File Information	Data.Rec.Oceanogr.Obs.Expl.Fish.61.129.pdf

Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

8

THE " USHIO MARU "

CRUISE 400
CRUISE 401
CRUISE 402

IN OCTOBER 2017
IN NOVEMBER 2017

1. Cruise Itinerary

Cruise 400

Departure from Hakodate	Oct.	24, 2017
Start hydrographic research (US17416)		25
Retrieval and setting ADCP mooring system		25
Arrival at Mori		25
Departure from Mori		26
Sampling by bottom trawl net		26
Arrival at Muroran		26
Departure from Muroran		27
Sampling by bottom trawl net		27
Hydrographic research (US17435)		27
Return to Hakodate		28

Total coverage 270.0 miles

Cruise 401

Departure from Hakodate	Nov.	7, 2017
Hydrographic research (US17436)		7
Return to Hakodate		8

Total coverage 115.9 miles

Cruise 402

Departure from Hakodate	Nov.	13, 2017
Start hydrographic research (US17437)		13
Sampling by bottom trawl net		13
Arrival at Muroran		13
Departure from Muroran		14
Sampling by bottom trawl net		14
Arrival at Muroran		14
Departure from Muroran		15
Finish hydrographic research (US17453)		15
Return to Hakodate		16

Total coverage 219.1 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, salinity and pressure were measured by CTD (Seabird SBE-19Plus and SBE-19).

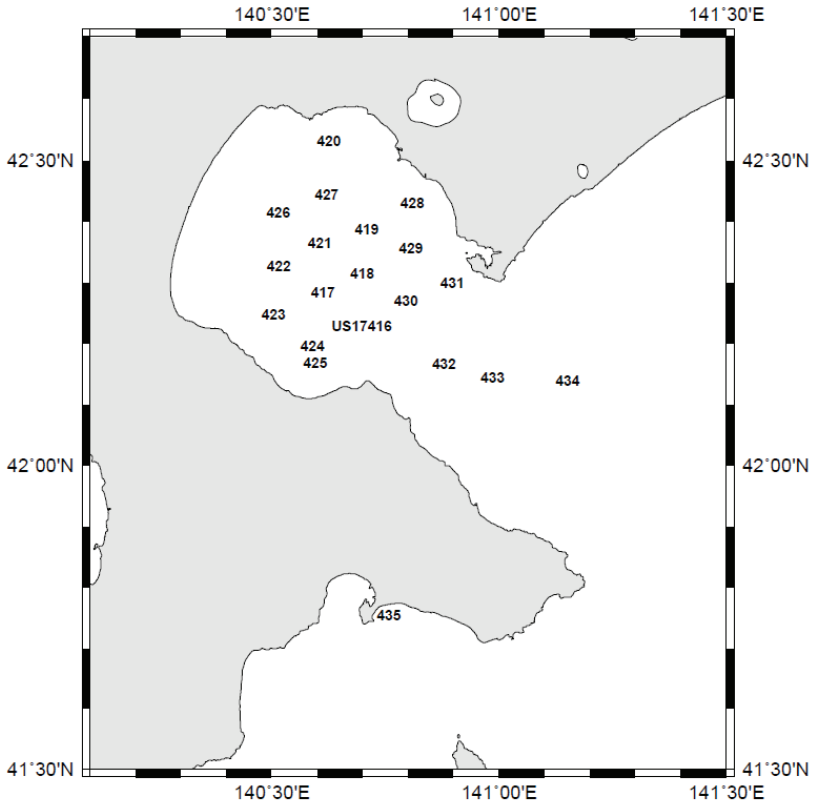

Figure 1. Oceanographic stations (Cruise 400)

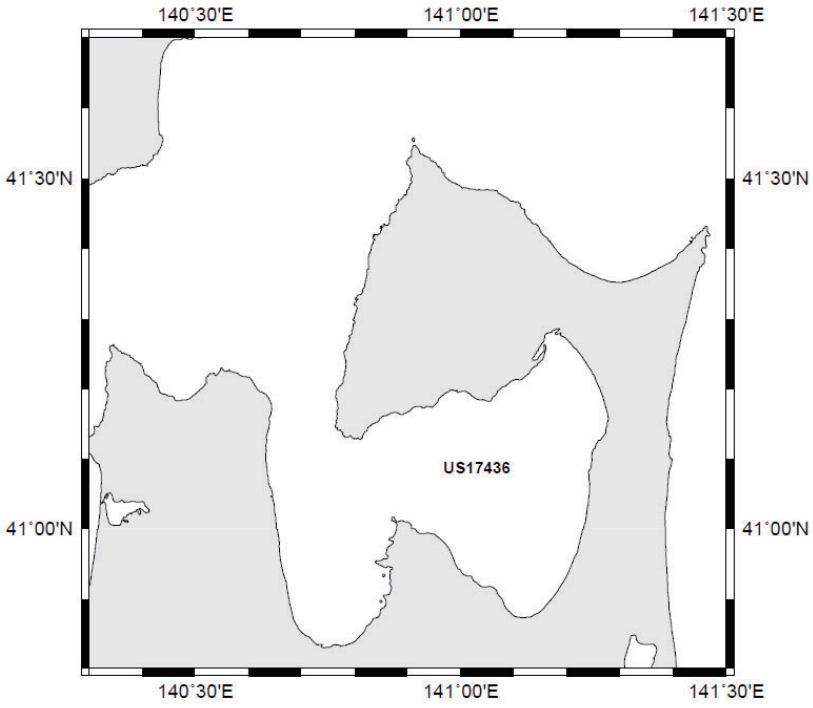

Figure 2. Oceanographic stations (Cruise 401)

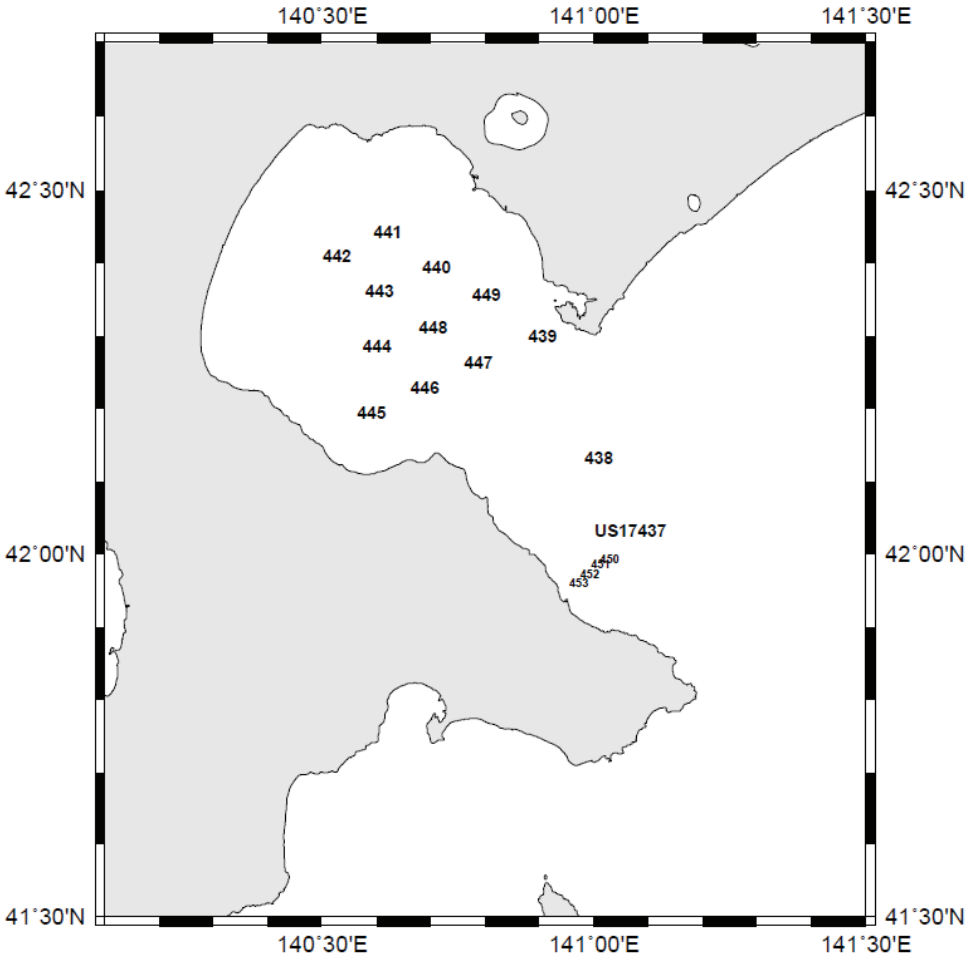

Figure 3. Oceanographic stations (Cruise 402)

Table 1. List of Oceanographic Station

Crs400

station	Lat. (N)°	Long. (E)°	Date	Hour (JST)	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar (hPa)
US17416	42-13.2	140-41.8	10/25	0550-0558	90	Calm	NE-1	Calm	11.4	14	bc	1021.7
US17417	42-16.5	140-36.7	10/25	0657-0707	91	SSW-1	NNW-1	SSW-2	11.6	14	b	1021.7
US17418	42-18.4	140-41.9	10/25	0757-0804	70	Calm	NNW-1	Calm	12.3	13.6	b	1021.7
US17419	42-22.7	140-42.5	10/25	0831-0837	62	ESE-1	North-1	ESE-1	12.5	13.8	bc	1021.6
US17420	42-31.3	140-37.5	10/25	0934-0940	62	East-1	North-1	East-2	12.5	14.1	bc	1021.6
US17421	42-21.4	140-36.3	10/25	1042-1049	89	North-1	North-1	North-1	14.3	14	bc	1021.5
US17422	42-19.1	140-30.9	10/25	1119-1125	94	WNW-2	NE-1	WNW-3	13.9	14.5	bc	1020.8
US17423	42-14.3	140-30.2	10/25	1238-1245	81	North-2	West-1	North-3	15	14.2	bc	1020.6
US17424	42-11.3	140-35.3	10/25	1317-1323	81	West-1	West-1	West-1	16.5	14.2	b	1019.5
US17425	42-09.6	140-35.7	10/25	1338-1345	72	West-2	West-1	West-4	16.5	14.2	b	1019.4
US17426	42-24.3	140-30.8	10/26	0955-1000	95	North-2	NNW-1	North-4	13.2	13.6	bc	1023.8
US17427	42-26.1	140-37.2	10/26	1113-1118	83	NNW-2	NNW-1	NNW-3	15.1	13.8	bc	1023.6
US17428	42-25.3	140-48.5	10/26	1231-1235	45	West-2	WNW-1	West-3	16.4	14	bc	1022.8
US17429	42-20.9	140-48.3	10/26	1302-1307	53	West-2	WNW-1	West-4	13.9	14	bc	1022.5
US17430	42-15.7	140-47.7	10/26	1338-1343	71	West-2	WNW-1	West-4	13.5	14	bc	1022.3
US17431	42-17.4	140-53.8	10/26	1414-1417	58	WNW-2	WNW-1	WNW-3	14.6	13.6	bc	1022.2
US17432	42-09.5	140-52.7	10/27	0817-0824	77	NW-2	East-1	NW-3	11.4	14.4	bc	1026.6
US17433	42-08.2	140-59.1	10/27	0856-0902	82	WNW-2	East-1	WNW-2	13.1	14	bc	1026.7
US17434	42-07.8	141-09.0	10/27	1048-1055	119	NW-2	East-1	NW-3	12.3	13.5	bc	1026.6
US17435	41-44.7	140-45.4	10/27	1608-1611	55	ESE-2	ESE-1	ESE-3	13.3	14.7	bc	1026.7

Crs401

station	Lat. (N)°	Long. (E)°	Date	Hour (JST)	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar (hPa)
US17436	41-04.7	141-01.8	11/7	1310-1320	49	West-2	West-1	West-4	18.1	14.9	bc	1020.3

Crs402

station	Lat. (N)°	Long. (E)°	Date	Hour (JST)	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar (hPa)
US17437	42-01.4	141-04.0	11/13	1156-1202	109	East-2	South-1	East-2	9.9	13.8	o	1019.6
US17438	42-07.4	141-00.5	11/13	1318-1323	85	East-2	NE-1	East-3	9.3	13.3	r	1019.3
US17439	42-17.5	140-54.3	11/13	1501-1505	57	East-2	ENE-1	East-3	8.1	12.1	r	1019.4
US17440	42-23.1	140-42.6	11/14	0740-0745	62	SE-2	SE-1	SE-4	11.9	12.5	bc	1010.5
US17441	42-26.0	140-37.2	11/14	0816-0821	83	SE-3	SE-1	SE-5	12.6	12.4	bc	1009.1
US17442	42-24.0	140-31.6	11/14	0930-0935	95	South-2	East-1	South-3	12.1	12.2	bc	1008.9
US17443	42-21.1	140-36.3	11/14	1037-1043	89	SSW-3	SSW-1	SSW-5	12.7	12.5	r	1008.8
US17444	42-16.6	140-36.0	11/14	1111-1117	92	West-2	SW-1	West-4	13	12.6	c	1008.6
US17445	42-11.2	140-35.4	11/14	1254-1258	81	West-2	WSW-1	West-4	12.5	12.6	c	1008.2
US17446	42-13.2	140-41.3	11/14	1329-1334	90	West-2	WSW-1	West-4	13.3	12.5	c	1008.3
US17447	42-15.3	140-47.2	11/14	1406-1410	73	WSW-2	WSW-1	West-4	12.9	12.5	c	1008.3
US17448	42-18.2	140-42.2	11/14	1441-1445	64	West-2	West-1	West-4	12.3	12.5	bc	1008.3
US17449	42-20.8	140-48.1	11/14	1516-1521	54	West-2	West-1	West-4	11.8	12.5	bc	1008.5
US17450	41-59.3	141-01.7	11/15	1415-1421	101	West-2	WNW-1	West-2	5.6	12.9	bc	1011.6
US17451	41-58.8	141-00.7	11/15	1430-1437	96	Calm	WNW-1	Calm	6.2	13	c	1011.5
US17452	41-58.0	140-59.5	11/15	1448-1455	87	Calm	NW-1	Calm	6.3	12.4	c	1011.5
US17453	41-57.3	140-58.3	11/15	1505-1510	79	Calm	NW-1	Calm	6.4	12.6	c	1011.5

Table 2. Oceanographic data

STATION US17416
LATITUDE 42-13.2 N
LONGITUI 140-41.8 E
DEPTH (m) 90

Press.	Temp.	Salinity	Sigma-T
5	14.2899	33.1041	24.6619
10	14.2909	33.1048	24.6622
20	14.2919	33.1089	24.6652
30	13.9485	33.4115	24.9704
40	13.9429	33.5102	25.0478
50	13.9149	33.6042	25.1262
75	10.281	33.6153	25.8231
88	9.2279	33.7514	26.1041

STATION US17417
LATITUDE 42-16.5 N
LONGITUI 140-36.7 E
DEPTH (m) 91

Press.	Temp.	Salinity	Sigma-T
5	14.2917	33.1153	24.6701
10	14.2912	33.1134	24.6688
20	14.2976	33.1147	24.6684
30	14.3	33.1146	24.6679
40	14.0105	33.2434	24.8277
50	12.5469	33.5818	25.3831
75	9.117	33.7609	26.1293
86	8.7035	33.8028	26.2271

STATION US17418
LATITUDE 42-18.4 N
LONGITUI 140-41.9 E
DEPTH (m) 70

Press.	Temp.	Salinity	Sigma-T
5	14.0323	33.0822	24.6987
10	14.0458	33.1077	24.7156
20	13.8766	33.1914	24.8152
30	13.9797	33.5195	25.0473
40	14.0055	33.5484	25.0643
50	13.2598	33.7218	25.3508
67	11.4929	33.8404	25.783

STATION US17419
LATITUDE 42-22.7 N
LONGITUI 140-42.5 E
DEPTH (m) 62

Press.	Temp.	Salinity	Sigma-T
5	14.0553	33.0773	24.6901
10	14.0437	33.0763	24.6917
20	14.0061	33.1246	24.7368
30	13.9618	33.4877	25.0265
40	13.9678	33.5039	25.0377
50	13.9801	33.5094	25.0394
59	12.3672	33.7386	25.5394

STATION US17420
LATITUDE 42-31.3 N
LONGITUI 140-37.5 E
DEPTH (m) 62

Press.	Temp.	Salinity	Sigma-T
5	14.294	33.0966	24.6552
10	14.2899	33.0975	24.6567
20	14.2812	33.1016	24.6618
30	14.2659	33.1067	24.6689
40	12.7862	33.5174	25.2865
50	11.7759	33.759	25.6674
59	11.24	33.8286	25.8201

STATION US17421
LATITUDE 42-21.4 N
LONGITUI 140-36.3 E
DEPTH (m) 89

Press.	Temp.	Salinity	Sigma-T
5	14.1744	33.0761	24.6644
10	14.163	33.0758	24.6666
20	13.8958	33.1235	24.7587
30	13.7587	33.2593	24.8919
40	13.981	33.5083	25.0384
50	13.6428	33.5716	25.157
75	9.4603	33.7558	26.0699
85	8.5725	33.6659	26.14

STATION US17422
LATITUDE 42-19.1 N
LONGITUI 140-30.9 E
DEPTH (m) 94

Press.	Temp.	Salinity	Sigma-T
5	14.3605	33.1044	24.6472
10	14.3487	33.1078	24.6524
20	14.3321	33.1107	24.6581
30	14.3194	33.1111	24.6611
40	13.4593	33.282	24.9704
50	12.0762	33.5555	25.4529
75	8.4294	33.67	26.1651
89	8.1472	33.7387	26.2615

STATION US17423
LATITUDE 42-14.3 N
LONGITUI 140-30.2 E
DEPTH (m) 81

Press.	Temp.	Salinity	Sigma-T
5	14.4153	33.0869	24.6222
10	14.308	33.0861	24.6442
20	14.284	33.0877	24.6505
30	14.2698	33.0884	24.654
40	12.8458	33.4196	25.1991
50	11.6654	33.7061	25.6468
75	8.0577	33.667	26.2185
78	8.0518	33.677	26.2272

STATION US17424
LATITUDE 42-11.3 N
LONGITUI 140-35.3 E
DEPTH (m) 81

Press.	Temp.	Salinity	Sigma-T
5	14.3089	33.086	24.6439
10	14.3042	33.0957	24.6524
20	14.231	33.0899	24.6632
30	14.2041	33.0879	24.6674
40	12.9922	33.3736	25.1346
50	12.0858	33.6302	25.509
75	8.3239	33.5617	26.0961
78	8.154	33.6375	26.1811

STATION US17425
LATITUDE 42-09.6 N
LONGITUI 140-35.7 E
DEPTH (m) 72

Press.	Temp.	Salinity	Sigma-T
5	14.3621	33.0847	24.6317
10	14.2191	33.0806	24.6586
20	14.1792	33.0849	24.6702
30	14.1673	33.0858	24.6734
40	13.0308	33.4458	25.1828
50	11.8459	33.656	25.5743
65	9.3144	33.5114	25.9024

STATION US17426
LATITUDE 42-24.3 N
LONGITUI 140-30.8 E
DEPTH (m) 95

Press.	Temp.	Salinity	Sigma-T
5	13.9836	32.9646	24.6179
10	14.0594	33.027	24.6504
20	14.2519	33.1001	24.6668
30	14.2471	33.0993	24.6671
40	12.9224	33.2919	25.0851
50	12.5081	33.7448	25.517
75	9.9663	33.8113	26.0294
93	7.7901	33.6795	26.2675

STATION US17427
LATITUDE 42-26.1 N
LONGITUI 140-37.2 E
DEPTH (m) 83

Press.	Temp.	Salinity	Sigma-T
5	14.1321	32.9944	24.6101
10	14.1199	33.0014	24.6181
20	14.2894	33.0915	24.6522
30	13.9131	33.1524	24.7775
40	13.7592	33.5027	25.0799
50	11.9983	33.78	25.6419
75	9.8502	33.6944	25.9576
80	8.9811	33.7543	26.1457

400-

STATION US17428
LATITUDE 42-25.3 N
LONGITUI 140-48.5 E
DEPTH (m) 45

Press.	Temp.	Salinity	Sigma-T
5	14.3537	33.1069	24.6506
10	14.3221	33.1044	24.6554
20	14.2736	33.108	24.6683
30	13.4086	33.3537	25.036
40	12.7207	33.711	25.4494
45	12.7063	33.7252	25.4632

STATION US17429
LATITUDE 42-20.9 N
LONGITUI 140-48.3 E
DEPTH (m) 53

Press.	Temp.	Salinity	Sigma-T
5	14.2839	33.1093	24.6672
10	14.269	33.1062	24.6679
20	14.1852	33.1315	24.7049
30	13.9749	33.4723	25.0119
40	13.8411	33.484	25.0486
50	12.9409	33.7133	25.4079
50	12.9409	33.7133	25.4079

STATION US17430
LATITUDE 42-15.7 N
LONGITUI 140-47.7 E
DEPTH (m) 71

Press.	Temp.	Salinity	Sigma-T
5	14.1992	33.1111	24.6863
10	14.1122	33.1143	24.7069
20	13.9063	33.4	24.9702
30	14.3775	33.7155	25.1153
40	14.5601	33.7391	25.0947
50	14.304	33.8789	25.2569
68	12.4286	33.7434	25.5314

STATION US17431
LATITUDE 42-17.4 N
LONGITUI 140-53.8 E
DEPTH (m) 58

Press.	Temp.	Salinity	Sigma-T
5	13.7521	33.1474	24.8067
10	13.7538	33.1706	24.8243
20	14.478	33.7207	25.098
30	14.6004	33.7685	25.1088
40	14.6173	33.8489	25.1672
50	14.2421	33.9138	25.297
55	13.789	33.9341	25.4072

STATION US17432
LATITUDE 42-09.5 N
LONGITUI 140-52.7 E
DEPTH (m) 77

Press.	Temp.	Salinity	Sigma-T
5	14.4241	33.7966	25.168
10	14.6155	33.8707	25.1844
20	14.6492	33.9035	25.2025
30	14.6651	33.913	25.2064
40	14.6649	33.9179	25.2102
50	14.6683	33.9278	25.2171
73	13.2608	33.9438	25.5224

STATION US17433
LATITUDE 42-08.2 N
LONGITUI 140-59.1 E
DEPTH (m) 82

Press.	Temp.	Salinity	Sigma-T
5	14.2847	33.6612	25.093
10	14.7152	33.8872	25.1757
20	14.9621	33.9686	25.1851
30	14.9836	33.9749	25.1853
40	14.9675	33.9605	25.1776
50	14.9255	33.9715	25.1953
75	12.6853	33.9812	25.6658
77	12.68	33.9816	25.6671

STATION US17434
LATITUDE 42-07.8 N
LONGITUI 141-09.0 E
DEPTH (m) 119

Press.	Temp.	Salinity	Sigma-T
5	13.7028	33.6556	25.2097
10	13.6762	33.6568	25.216
20	13.7869	33.7193	25.2416
30	13.6902	33.7027	25.2486
40	13.6223	33.7322	25.2853
50	13.8431	33.8497	25.3307
75	11.4342	34.0361	25.946
100	11.256	34.0385	25.9805
114	10.7458	33.9696	26.0183

STATION US17435
LATITUDE 41-44.7 N
LONGITUI 140-45.4 E
DEPTH (m) 55

Press.	Temp.	Salinity	Sigma-T
5	14.7757	34.04	25.2805
10	14.3764	34.0666	25.3865
20	13.6783	34.0589	25.5265
30	11.965	34.1786	25.9577
40	11.6643	34.1735	26.0102
50	11.61	34.1902	26.0334
53	11.4743	34.1799	26.0504

STATION US17436
LATITUDE 41-04.7 N
LONGITUI 141-01.8 E
DEPTH (m) 49

Press.	Temp.	Salinity	Sigma-T
5	15.4784	33.5674	24.7626
10	15.439	33.5656	24.77
20	15.3035	33.5587	24.7946
30	15.2157	33.5627	24.8169
40	15.207	33.6388	24.8775
45	15.1087	34.1915	25.3249

STATION US17437
LATITUDE 42-01.4 N
LONGITUI 141-04.0 E
DEPTH (m) 109

Press.	Temp.	Salinity	Sigma-T
5	14.1341	33.9783	25.3695
10	14.0938	33.9778	25.3775
20	14.0587	33.9789	25.3858
30	14.0444	33.9775	25.3877
40	14.0035	33.9715	25.3916
50	13.9169	33.962	25.4022
75	9.6272	33.8749	26.1356
100	6.6535	33.5974	26.3604
106	5.0349	33.4685	26.4572

STATION US17438
LATITUDE 42-07.4 N
LONGITUI 141-00.5 E
DEPTH (m) 85

Press.	Temp.	Salinity	Sigma-T
5	13.6279	33.9199	25.4294
10	13.6418	33.9186	25.4255
20	13.7067	33.959	25.4434
30	13.7271	33.9729	25.45
40	13.7393	33.977	25.4506
50	13.7482	33.9823	25.4529
75	10.685	33.9206	25.9909
83	9.5989	33.9015	26.1611

STATION US17439
LATITUDE 42-17.5 N
LONGITUI 140-54.3 E
DEPTH (m) 57

Press.	Temp.	Salinity	Sigma-T
5	12.6973	33.4657	25.2639
10	12.7589	33.5719	25.3342
20	12.6731	33.5595	25.3413
30	12.5933	33.5424	25.3435
40	12.2437	33.6205	25.4715
50	11.5403	33.8079	25.7491
55	10.8352	33.9741	26.0061

STATION US17440
LATITUDE 42-23.1 N
LONGITUI 140-42.6 E
DEPTH (m) 62

Press.	Temp.	Salinity	Sigma-T
5	12.7017	33.5048	25.2934
10	12.701	33.5043	25.2931
20	12.7011	33.5039	25.2928
30	12.6971	33.5029	25.2927
40	12.7196	33.5095	25.2935
50	12.7304	33.5088	25.2909
60	11.0172	33.9087	25.9235

STATION US17441
LATITUDE 42-26.0 N
LONGITUI 140-37.2 E
DEPTH (m) 83

Press.	Temp.	Salinity	Sigma-T
5	12.6701	33.5189	25.3104
10	12.6722	33.5226	25.3129
20	12.6625	33.5177	25.311
30	12.6653	33.5158	25.309
40	12.7207	33.5323	25.3109
50	12.7073	33.534	25.3149
75	10.1617	33.891	26.0585
79	10.1715	33.913	26.074

STATION US17442
LATITUDE 42-24.0 N
LONGITUI 140-31.6 E
DEPTH (m) 95

Press.	Temp.	Salinity	Sigma-T
5	12.5632	33.5516	25.3566
10	12.5555	33.5532	25.3593
20	12.5432	33.5579	25.3653
30	12.5291	33.5563	25.3668
40	12.5221	33.5568	25.3686
50	12.4992	33.5603	25.3757
75	8.8149	33.6666	26.1031
90	8.3722	33.7386	26.2276

STATION US17443
LATITUDE 42-21.1 N
LONGITUI 140-36.3 E
DEPTH (m) 89

Press.	Temp.	Salinity	Sigma-T
5	12.7742	33.5128	25.2853
10	12.7746	33.5135	25.2858
20	12.7688	33.5186	25.2909
30	12.7715	33.539	25.3062
40	12.7689	33.5462	25.3123
50	12.7681	33.546	25.3123
75	12.3585	33.6383	25.4633
86	10.7024	33.9043	25.9751

STATION US17444
LATITUDE 42-16.6 N
LONGITUI 140-36.0 E
DEPTH (m) 92

Press.	Temp.	Salinity	Sigma-T
5	12.8254	33.5109	25.2738
10	12.8219	33.511	25.2746
20	12.8236	33.5118	25.2749
30	12.826	33.5125	25.2749
40	12.8229	33.5126	25.2757
50	12.8233	33.5157	25.278
75	11.2242	33.9006	25.879
89	9.5421	33.8352	26.1188

STATION US17445
LATITUDE 42-11.2 N
LONGITUI 140-35.4 E
DEPTH (m) 81

Press.	Temp.	Salinity	Sigma-T
5	12.5996	33.3873	25.2221
10	12.7071	33.4639	25.2606
20	13.0393	33.6427	25.3336
30	13.3415	33.7439	25.3515
40	13.5014	33.8096	25.3699
50	12.5877	33.6196	25.4045
75	8.5056	33.6962	26.174
79	8.4384	33.7039	26.1903

STATION US17446
LATITUDE 42-13.2 N
LONGITUI 140-41.3 E
DEPTH (m) 90

Press.	Temp.	Salinity	Sigma-T
5	13.1342	33.6385	25.3115
10	13.1274	33.638	25.3124
20	13.145	33.6538	25.3211
30	13.3228	33.7326	25.3465
40	13.4061	33.7889	25.3732
50	13.4234	33.7865	25.3678
75	10.5608	33.9633	26.0459
87	9.3992	33.8367	26.1431

STATION US17447
LATITUDE 42-15.3 N
LONGITUI 140-47.2 E
DEPTH (m) 73

Press.	Temp.	Salinity	Sigma-T
5	12.816	33.5229	25.285
10	12.8209	33.5227	25.2839
20	12.8477	33.5585	25.3063
30	12.7572	33.5643	25.3286
40	13.0334	33.7725	25.4354
50	13.6151	33.8714	25.3945
71	9.5741	33.8246	26.1054

STATION US17448
LATITUDE 42-18.2 N
LONGITUI 140-42.2 E
DEPTH (m) 64

Press.	Temp.	Salinity	Sigma-T
5	12.8698	33.5198	25.272
10	12.8675	33.5197	25.2724
20	12.8724	33.5197	25.2714
30	12.8739	33.5199	25.2713
40	12.8753	33.52	25.2711
50	12.8777	33.5228	25.2728
62	11.9253	33.6542	25.5583

STATION US17449
LATITUDE 42-20.8 N
LONGITUI 140-48.1 E
DEPTH (m) 54

Press.	Temp.	Salinity	Sigma-T
5	12.7714	33.5122	25.2855
10	12.7729	33.512	25.285
20	12.6509	33.5281	25.3213
30	12.3492	33.5055	25.3621
40	12.2029	33.5785	25.4466
50	10.0461	33.8087	26.0139
52	10.0288	33.8341	26.0367

STATION US17450
LATITUDE 41-59.3 N
LONGITUI 141-01.7 E
DEPTH (m) 101

Press.	Temp.	Salinity	Sigma-T
5	13.221	33.8422	25.4518
10	13.2008	33.8595	25.4693
20	13.1067	33.8673	25.4942
30	13.0031	33.8746	25.5204
40	12.9698	33.8956	25.5433
50	11.7401	33.8693	25.7598
75	8.072	33.7524	26.2834
97	5.8068	33.5564	26.4358

STATION US17451
LATITUDE 41-58.8 N
LONGITUI 141-00.7 E
DEPTH (m) 96

Press.	Temp.	Salinity	Sigma-T
5	12.9107	33.8998	25.5583
10	12.9006	33.8988	25.5595
20	12.8017	33.8916	25.5735
30	12.7203	33.8793	25.58
40	11.2801	33.7907	25.7832
50	8.9659	33.7604	26.1528
75	7.3912	33.6824	26.3267
92	6.4128	33.6235	26.4125

STATION US17452
LATITUDE 41-58.0 N
LONGITUI 140-59.5 E
DEPTH (m) 87

Press.	Temp.	Salinity	Sigma-T
5	12.8986	33.8873	25.551
10	12.8969	33.8868	25.5509
20	12.4812	33.8983	25.6413
30	12.2159	33.884	25.6813
40	11.014	33.8181	25.8526
50	10.0842	33.9441	26.1132
75	7.7538	33.6995	26.2884
84	6.2077	33.5783	26.4031

STATION US17453
LATITUDE 41-57.3 N
LONGITUI 140-58.3 E
DEPTH (m) 79

Press.	Temp.	Salinity	Sigma-T
5	12.9351	33.8369	25.5048
10	12.9455	33.8504	25.5132
20	12.959	33.8895	25.5407
30	12.9869	33.94	25.5743
40	12.6353	33.9078	25.6187
50	10.9852	33.9786	25.9828
75	7.0932	33.6776	26.3643