

CRUISE REPORT

Cruise Number: MF-04-07

FOCI Number: 5MF04

Ship:

NOAA Ship *Miller Freeman*

Area of Operations:

Shelikof Strait, Gulf of Alaska

Itinerary:

Date depart / port: May 23, 2004 / Kodiak, AK

Date arrive / port: June 3, 2004 / Kodiak, AK

Participating organizations:

Chief Scientist:

Annette Dougherty
(206) 526-6523

F/AFSC

Personnel:

Jay Clark

M / AFSC

Steve Porter

M / AFSC

Matt Wilson

M / AFSC

Cruise Objectives:

The objectives of this cruise are to conduct an ichthyoplankton survey and process oriented studies in the region between the Shumagin Islands and through Shelikof Strait to Kodiak Island, Alaska so that we may estimate the abundance, transport, and factors influencing the survival of young walleye pollock larvae. We will also occupy stations on Line 8 to continue our 19 year time series of environmental and biological conditions in Shelikof Strait.

Summary of Operations:

Operation	Tows
20cm bongo (20Bon)	6
60cm bongo (60Bon)	190
Seabird SeaCAT CTD (CAT)	190
CTD with bottle samples (CTDB)	6

Samples Collected	Tows	Number
SeaBird SeaCat CTD (CAT)	190	
Extracted chlorophyll (Chlor)	6	36
SeaBird CTD (CTD)	6	
Stimulated fluorescence collected during CTD casts (Fluor)	6	
Fresh larval pollock measurement with Image Pro (L-Measur)	98	293
Larval pollock collected for otolith analysis (L-Oto)	109	342
Microzooplankton samples preserved in formalin (MZ)	6	36
Nutrient samples collected from CTD casts (Nut)	6	62
Photosynthetically Active Radiation data collected during CTD casts (PAR)	6	
Quantitative tow preserved in formalin (QTowF)	200	206
Rough count of pollock larvae (RCountL)	182	350

Summary of Cruise:

Narrative:

We departed Kodiak Island on the morning of May 23 and sampled a series of stations along the southeast side of the Island until we reached the main sampling grid. The main grid was started south of the Shumagin Islands and consisted of 60 cm bongos fished to 100 meters or 10 meters off bottom. In general, the rough counts on larval walleye pollock were low throughout the entire survey grid. A total of 342 larvae were collected for otolith analysis and 206 samples were collected for quantitative larval identification. Line 8 was conducted without incident resulting in 36 microzooplankton samples, 62 nutrient samples, and 36 chlorophyll samples.

Days Lost to Weather:

None

Days Lost to Equipment Failure:

None

Recommendations:

None

Acknowledgments:

The scientific party would like to acknowledge the hard work and support of the officers and crew of NOAA Ship *Miller Freeman*.

Attachments:

Table 1- Cruise Summary

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
23-May-04	18:26	1	1	B13		36	57 43.54 N	152 54.85 W	60Bon	QTowF, RCountL	centerboard up
23-May-04	18:26	1	1	B13		36	57 43.54 N	152 54.85 W	CAT	CAT	centerboard up
23-May-04	19:01	2	1	B12		133	57 40.48 N	152 21.01 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	centerboard up. Station
moved due to reef.											
23-May-04	19:01	2	1	B12		133	57 40.48 N	152 21.01 W	CAT	CAT	Update in master grid. centerboard up. Station
moved due to reef.											
23-May-04	20:30	3	1	HJ191		108	57 45.99 N	152 01.72 W	60Bon	QTowF, RCountL	Update in master grid. centerboard up
23-May-04	20:30	3	1	HJ191		108	57 45.99 N	152 01.72 W	CAT	CAT	centerboard up
23-May-04	21:46	4	1	HL191		97	57 39.15 N	151 49.67 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
23-May-04	21:46	4	1	HL191		97	57 39.15 N	151 49.67 W	CAT	CAT	
23-May-04	23:48	5	1	HN189		69	57 25.22 N	151 50.08 W	60Bon	QTowF, RCountL	
23-May-04	23:48	5	1	HN189		69	57 25.22 N	151 50.08 W	CAT	CAT	
24-May-04	0:59	6	1	HN187		80	57 17.79 N	152 02.49 W	60Bon	QTowF, RCountL	
24-May-04	0:59	6	1	HN187		80	57 17.79 N	152 02.49 W	CAT	CAT	
24-May-04	3:02	7	1	HN183		149	57 03.32 N	152 28.01 W	60Bon	QTowF, RCountL	
24-May-04	3:02	7	1	HN183		149	57 03.32 N	152 28.01 W	CAT	CAT	
24-May-04	4:11	8	1	HN181		143	56 56.07 N	152 40.58 W	60Bon	QTowF, RCountL	
24-May-04	4:11	8	1	HN181		143	56 56.07 N	152 40.58 W	CAT	CAT	
24-May-04	5:22	9	1	HN179		66	56 48.75 N	152 53.49 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
24-May-04	5:22	9	1	HN179		66	56 48.75 N	152 53.49 W	CAT	CAT	
24-May-04	7:25	10	1	HN175		94	56 34.33 N	153 18.38 W	60Bon	QTowF, RCountL	
24-May-04	7:25	10	1	HN175		94	56 34.33 N	153 18.38 W	CAT	CAT	
24-May-04	8:42	11	1	HN173		80	56 27.18 N	153 31.16 W	60Bon	QTowF, RCountL	
24-May-04	8:42	11	1	HN173		80	56 27.18 N	153 31.16 W	CAT	CAT	
24-May-04	10:00	12	1	HN171		81	56 20.02 N	153 43.41 W	60Bon	QTowF, RCountL	
24-May-04	10:00	12	1	HN171		81	56 20.02 N	153 43.41 W	CAT	CAT	
24-May-04	12:22	13	1	HL167		131	56 12.45 N	154 20.98 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
24-May-04	12:22	13	1	HL167		131	56 12.45 N	154 20.98 W	CAT	CAT	
24-May-04	15:58	14	1	HH161		38	56 03.94 N	155 23.97 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
24-May-04	15:58	14	1	HH161		38	56 03.94 N	155 23.97 W	CAT	CAT	
24-May-04	17:26	15	1	HF159		66	56 03.56 N	155 49.51 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
24-May-04	17:26	15	1	HF159		66	56 03.56 N	155 49.51 W	CAT	CAT	
24-May-04	18:28	16	1	HF157		99	55 56.37 N	156 02.22 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
24-May-04	18:28	16	1	HF157		99	55 56.37 N	156 02.22 W	CAT	CAT	
24-May-04	19:56	17	1	HH155		213	55 42.21 N	156 00.95 W	60Bon	QTowF, RCountL	
24-May-04	19:56	17	1	HH155		213	55 42.21 N	156 00.95 W	CAT	CAT	
24-May-04	21:06	18	1	HF155		227	55 49.10 N	156 13.91 W	60Bon	QTowF, RCountL	
24-May-04	21:06	18	1	HF155		227	55 49.10 N	156 13.91 W	CAT	CAT	
24-May-04	22:12	19	1	HF153		240	55 41.95 N	156 26.45 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
24-May-04	22:12	19	1	HF153		240	55 41.95 N	156 26.45 W	CAT	CAT	
24-May-04	23:20	20	1	HH153		254	55 35.15 N	156 13.21 W	60Bon	QTowF, RCountL	
24-May-04	23:20	20	1	HH153		254	55 35.15 N	156 13.21 W	CAT	CAT	
25-May-04	0:31	21	1	HH151		202	55 27.89 N	156 25.08 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
25-May-04	0:31	21	1	HH151		202	55 27.89 N	156 25.08 W	CAT	CAT	
25-May-04	1:45	22	1	HF151		227	55 34.43 N	156 38.02 W	60Bon	QTowF, RCountL	
25-May-04	1:45	22	1	HF151		227	55 34.43 N	156 38.02 W	CAT	CAT	
25-May-04	3:59	23	1	HF147		97	55 20.13 N	157 02.76 W	60Bon	QTowF, RCountL	
25-May-04	3:59	23	1	HF147		97	55 20.13 N	157 02.76 W	CAT	CAT	
25-May-04	6:25	24	1	HD143		83	55 12.46 N	157 40.39 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
25-May-04	6:25	24	1	HD143		83	55 12.46 N	157 40.39 W	CAT	CAT	
25-May-04	7:39	25	1	HB143		85	55 19.37 N	157 53.83 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
25-May-04	7:39	25	1	HB143		85	55 19.37 N	157 53.83 W	CAT	CAT	
25-May-04	9:49	26	1	HB139		176	55 04.93 N	158 18.04 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
25-May-04	9:49	26	1	HB139		176	55 04.93 N	158 18.04 W	CAT	CAT	
25-May-04	12:44	27	1	GX135		77	55 04.12 N	159 09.66 W	60Bon	QTowF, RCountL	
25-May-04	12:44	27	1	GX135		77	55 04.12 N	159 09.66 W	CAT	CAT	
25-May-04	13:56	28	1	GZ135		90	54 57.23 N	158 55.94 W	60Bon	QTowF, RCountL	
25-May-04	13:56	28	1	GZ135		90	54 57.23 N	158 55.94 W	CAT	CAT	
25-May-04	15:09	29	1	HB135		102	54 50.43 N	158 42.02 W	60Bon	QTowF, RCountL	
25-May-04	15:09	29	1	HB135		102	54 50.43 N	158 42.02 W	CAT	CAT	
25-May-04	20:38	30	1	GV127		87	54 41.97 N	160 11.25 W	60Bon	QTowF, RCountL	
25-May-04	20:38	30	1	GV127		87	54 41.97 N	160 11.25 W	CAT	CAT	
25-May-04	21:46	31	1	GV125		132	54 34.75 N	160 23.24 W	60Bon	QTowF, RCountL	
25-May-04	21:46	31	1	GV125		132	54 34.75 N	160 23.24 W	CAT	CAT	
25-May-04	22:54	32	1	GT125		95	54 41.66 N	160 37.14 W	60Bon	QTowF, RCountL	
25-May-04	22:54	32	1	GT125		95	54 41.66 N	160 37.14 W	CAT	CAT	
26-May-04	0:03	33	1	GT127		91	54 48.89 N	160 25.17 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
26-May-04	0:03	33	1	GT127		91	54 48.89 N	160 25.17 W	CAT	CAT	
26-May-04	1:15	34	1	GR127		91	54 55.72 N	160 39.16 W	60Bon	QTowF, RCountL	
26-May-04	1:15	34	1	GR127		91	54 55.72 N	160 39.16 W	CAT	CAT	
26-May-04	2:25	35	1	GR125		96	54 48.45 N	160 51.16 W	60Bon	QTowF, RCountL	
26-May-04	2:25	35	1	GR125		96	54 48.45 N	160 51.16 W	CAT	CAT	
26-May-04	3:41	36	1	GP125		113	54 55.39 N	161 05.41 W	60Bon	QTowF, RCountL	
26-May-04	3:41	36	1	GP125		113	54 55.39 N	161 05.41 W	CAT	CAT	
26-May-04	4:54	37	1	GP127		84	55 02.83 N	160 53.06 W	60Bon	QTowF, RCountL	
26-May-04	4:54	37	1	GP127		84	55 02.83 N	160 53.06 W	CAT	CAT	
26-May-04	6:08	38	1	GN127		59	55 10.22 N	161 07.09 W	60Bon	QTowF, RCountL	
26-May-04	6:08	38	1	GN127		59	55 10.22 N	161 07.09 W	60Bon	QTowF, RCountL	centerboard pulled up

before staion

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
26-May-04	6:08	38	1	GN127		59	55 10.22 N	161 07.09 W	CAT	CAT	
25-May-04	7:40	39	1	GL127		70	55 16.69 N	161 21.26 W	60Bon	QTowF, RCountL	
25-May-04	7:40	39	1	GL127		70	55 16.69 N	161 21.26 W	CAT	CAT	
26-May-04	8:56	40	1	B4		98	55 21.77 N	161 38.26 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	uneven bottom
26-May-04	8:56	40	1	B4		98	55 21.77 N	161 38.26 W	CAT	CAT	uneven bottom
26-May-04	10:58	41	1	B2		41	55 20.70 N	161 02.05 W	60Bon	QTowF, RCountL	
26-May-04	10:58	41	1	B2		41	55 20.70 N	161 02.05 W	CAT	CAT	
26-May-04	13:29	42	1	GO133		167	55 30.05 N	160 20.16 W	60Bon	QTowF, RCountL	
26-May-04	13:29	42	1	GO133		167	55 30.05 N	160 20.16 W	CAT	CAT	
26-May-04	14:35	43	1	GP135		125	55 31.83 N	160 05.06 W	60Bon	QTowF, RCountL	
26-May-04	14:35	43	1	GP135		125	55 31.83 N	160 05.06 W	CAT	CAT	
26-May-04	15:47	44	1	GP137		144	55 38.97 N	159 52.91 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
26-May-04	15:47	44	1	GP137		144	55 38.97 N	159 52.91 W	CAT	CAT	
26-May-04	17:15	45	1	GR135		113	55 24.77 N	159 51.12 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
26-May-04	17:15	45	1	GR135		113	55 24.77 N	159 51.12 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	centerboard back in down position before station
26-May-04	17:15	45	1	GR135		113	55 24.77 N	159 51.12 W	CAT	CAT	
26-May-04	18:32	46	1	GT135		130	55 17.86 N	159 37.44 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
26-May-04	18:32	46	1	GT135		130	55 17.86 N	159 37.44 W	CAT	CAT	
26-May-04	20:43	47	1	GT139		98	55 32.31 N	159 13.16 W	60Bon	QTowF, RCountL	
26-May-04	20:43	47	1	GT139		98	55 32.31 N	159 13.16 W	CAT	CAT	
26-May-04	21:54	48	1	GV139		159	55 25.45 N	158 59.33 W	60Bon	QTowF, RCountL	
26-May-04	21:54	48	1	GV139		159	55 25.45 N	158 59.33 W	CAT	CAT	
26-May-04	23:05	49	1	GX139		185	55 18.62 N	158 45.57 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
26-May-04	23:05	49	1	GX139		185	55 18.62 N	158 45.57 W	CAT	CAT	
27-May-04	0:17	50	1	GZ139		201	55 11.64 N	158 31.78 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
27-May-04	0:17	50	1	GZ139		201	55 11.64 N	158 31.78 W	CAT	CAT	
27-May-04	2:25	51	1	GZ143		125	55 26.28 N	158 07.49 W	60Bon	QTowF, RCountL	
27-May-04	2:25	51	1	GZ143		125	55 26.28 N	158 07.49 W	CAT	CAT	
27-May-04	3:39	52	1	GX143		143	55 33.07 N	158 20.95 W	60Bon	QTowF, RCountL	
27-May-04	3:39	52	1	GX143		143	55 33.07 N	158 20.95 W	CAT	CAT	
27-May-04	4:56	53	1	GV143		109	55 39.97 N	158 34.75 W	60Bon	QTowF, RCountL	
27-May-04	4:56	53	1	GV143		109	55 39.97 N	158 34.75 W	CAT	CAT	
27-May-04	7:00	54	1	GV147		186	55 54.44 N	158 10.15 W	60Bon	QTowF, RCountL	
27-May-04	7:00	54	1	GV147		186	55 54.44 N	158 10.15 W	CAT	CAT	
27-May-04	8:12	55	1	GX147		120	55 47.54 N	157 56.73 W	60Bon	QTowF, RCountL	
27-May-04	8:12	55	1	GX147		120	55 47.54 N	157 56.73 W	CAT	CAT	
27-May-04	9:20	56	1	GZ147		137	55 40.68 N	157 43.07 W	60Bon	QTowF, RCountL	
27-May-04	9:20	56	1	GZ147		137	55 40.68 N	157 43.07 W	CAT	CAT	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
27-May-04	10:26	57	1	HB147		99	55 33.77 N	157 29.70 W	60Bon	QTowF, RCountL	
27-May-04	10:26	57	1	HB147		99	55 33.77 N	157 29.70 W	CAT	CAT	
27-May-04	11:30	58	1	HD147		90	55 26.92 N	157 16.35 W	60Bon	QTowF, RCountL	
27-May-04	11:30	58	1	HD147		90	55 26.92 N	157 16.35 W	CAT	CAT	
27-May-04	13:39	59	1	HD151		96	55 41.37 N	156 51.94 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
27-May-04	13:39	59	1	HD151		96	55 41.37 N	156 51.94 W	CAT	CAT	
27-May-04	14:46	60	1	HB151		96	55 48.24 N	157 05.20 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
27-May-04	14:46	60	1	HB151		96	55 48.24 N	157 05.20 W	CAT	CAT	
27-May-04	16:01	61	1	GZ151		106	55 55.28 N	157 18.78 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
27-May-04	16:01	61	1	GZ151		106	55 55.28 N	157 18.78 W	CAT	CAT	
27-May-04	17:16	62	1	GX151		107	56 02.14 N	157 31.96 W	60Bon	QTowF, RCountL	
27-May-04	17:16	62	1	GX151		107	56 02.14 N	157 31.96 W	CAT	CAT	
27-May-04	18:30	63	1	GV151		151	56 09.03 N	157 45.54 W	60Bon	QTowF, RCountL	
27-May-04	18:30	63	1	GV151		151	56 09.03 N	157 45.54 W	CAT	CAT	
27-May-04	19:44	64	1	GT151		83	56 15.87 N	157 58.85 W	60Bon	QTowF, RCountL	
27-May-04	19:44	64	1	GT151		83	56 15.87 N	157 58.85 W	CAT	CAT	
27-May-04	20:55	65	1	GR151		75	56 22.95 N	158 12.36 W	60Bon	QTowF, RCountL	centerboard up...depth
27-May-04	20:55	65	1	GR151		75	56 22.95 N	158 12.36 W	CAT	CAT	centerboard up...depth
27-May-04	22:26	66	1	GT153		280	56 23.56 N	157 46.12 W	60Bon	QTowF, RCountL	centerboard down
27-May-04	22:26	66	1	GT153		280	56 23.56 N	157 46.12 W	CAT	CAT	centerboard down
27-May-04	23:33	67	1	GV153		128	56 16.08 N	157 32.90 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
27-May-04	23:33	67	1	GV153		128	56 16.08 N	157 32.90 W	CAT	CAT	
28-May-04	0:42	68	1	GX153		156	56 09.57 N	157 19.79 W	60Bon	QTowF, RCountL	
28-May-04	0:42	68	1	GX153		156	56 09.57 N	157 19.79 W	CAT	CAT	
28-May-04	1:54	69	1	GZ153		104	56 02.43 N	157 06.26 W	60Bon	QTowF, RCountL	
28-May-04	1:54	69	1	GZ153		104	56 02.43 N	157 06.26 W	CAT	CAT	
28-May-04	3:03	70	1	HB153		155	55 55.53 N	156 52.87 W	60Bon	QTowF, RCountL	
28-May-04	3:03	70	1	HB153		155	55 55.53 N	156 52.87 W	CAT	CAT	
28-May-04	4:13	71	1	HD153		227	55 48.68 N	156 39.67 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	4:13	71	1	HD153		227	55 48.68 N	156 39.67 W	CAT	CAT	
28-May-04	5:21	72	1	HD155		212	55 55.98 N	156 27.28 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	5:21	72	1	HD155		212	55 55.98 N	156 27.28 W	CAT	CAT	
28-May-04	7:47	73	1	GZ155		80	56 09.76 N	156 53.91 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	7:47	73	1	GZ155		80	56 09.76 N	156 53.91 W	CAT	CAT	
28-May-04	8:59	74	1	GX155		125	56 16.62 N	157 07.66 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	8:59	74	1	GX155		125	56 16.62 N	157 07.66 W	CAT	CAT	
28-May-04	10:05	75	1	GV155		61	56 23.54 N	157 21.13 W	60Bon	QTowF, RCountL	
28-May-04	10:05	75	1	GV155		61	56 23.54 N	157 21.13 W	CAT	CAT	
28-May-04	11:11	76	1	GT155		109	56 30.24 N	157 34.52 W	60Bon	QTowF, RCountL	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
28-May-04	11:11	76	1	GT155		109	56 30.24 N	157 34.52 W	CAT	CAT	
28-May-04	13:07	77	1	GU158		143	56 39.71 N	157 12.04 W	60Bon	QTowF, RCountL	
28-May-04	13:07	77	1	GU158		143	56 39.71 N	157 12.04 W	CAT	CAT	
28-May-04	14:15	78	1	GV159		98	56 38.05 N	156 55.89 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	14:15	78	1	GV159		98	56 38.05 N	156 55.89 W	CAT	CAT	
28-May-04	15:50	79	1	GX157		127	56 24.01 N	156 55.14 W	60Bon	QTowF, RCountL	
28-May-04	15:50	79	1	GX157		127	56 24.01 N	156 55.14 W	CAT	CAT	
28-May-04	17:05	80	1	GZ157		107	56 16.97 N	156 41.68 W	60Bon	QTowF, RCountL	
28-May-04	17:05	80	1	GZ157		107	56 16.97 N	156 41.68 W	CAT	CAT	
28-May-04	18:18	81	1	HB157		233	56 10.16 N	156 28.41 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	18:18	81	1	HB157		233	56 10.16 N	156 28.41 W	CAT	CAT	
28-May-04	19:30	82	1	HD157		215	56 03.35 N	156 15.06 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	19:30	82	1	HD157		215	56 03.35 N	156 15.06 W	CAT	CAT	
28-May-04	20:39	83	1	HD159		231	56 10.60 N	156 02.69 W	60Bon	QTowF, RCountL	
28-May-04	20:39	83	1	HD159		231	56 10.60 N	156 02.69 W	CAT	CAT	
28-May-04	21:48	84	1	HB159		272	56 17.49 N	156 15.88 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	21:48	84	1	HB159		272	56 17.49 N	156 15.88 W	CAT	CAT	
28-May-04	22:59	85	1	GZ159		217	56 24.41 N	156 29.05 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
28-May-04	22:59	85	1	GZ159		217	56 24.41 N	156 29.05 W	CAT	CAT	
28-May-04	0:06	86	1	GX159		158	56 31.29 N	156 42.64 W	60Bon	QTowF, RCountL	
28-May-04	0:06	86	1	GX159		158	56 31.29 N	156 42.64 W	CAT	CAT	
29-May-04	1:37	87	1	GV161		151	56 45.52 N	156 43.16 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	1:37	87	1	GV161		151	56 45.52 N	156 43.16 W	CAT	CAT	
29-May-04	2:34	88	1	GT163		104	56 51.06 N	156 45.04 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	2:34	88	1	GT163		104	56 51.06 N	156 45.04 W	CAT	CAT	
29-May-04	4:23	89	1	GX161		187	56 38.55 N	156 29.98 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	4:23	89	1	GX161		187	56 38.55 N	156 29.98 W	CAT	CAT	
29-May-04	5:31	90	1	GZ161		234	56 31.63 N	156 16.55 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	5:31	90	1	GZ161		234	56 31.63 N	156 16.55 W	CAT	CAT	
29-May-04	6:38	91	1	HB161		248	56 24.79 N	156 03.42 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	6:38	91	1	HB161		248	56 24.79 N	156 03.42 W	CAT	CAT	
29-May-04	7:48	92	1	HD161		96	56 17.55 N	155 50.54 W	60Bon	QTowF, RCountL	
29-May-04	7:48	92	1	HD161		96	56 17.55 N	155 50.54 W	CAT	CAT	
29-May-04	8:59	93	1	HD163		76	56 25.10 N	155 37.69 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	8:59	93	1	HD163		76	56 25.10 N	155 37.69 W	CAT	CAT	
29-May-04	10:09	94	1	HB163		234	56 32.22 N	155 50.93 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	10:09	94	1	HB163		234	56 32.22 N	155 50.93 W	CAT	CAT	
29-May-04	11:17	95	1	GZ163		295	56 38.96 N	156 04.09 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	11:17	95	1	GZ163		295	56 38.96 N	156 04.09 W	CAT	CAT	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
29-May-04	12:22	96	1	GX163		186	56 45.81 N	156 17.45 W	60Bon	L-Oto, QTowF, RCountL	
29-May-04	12:22	96	1	GX163		186	56 45.81 N	156 17.45 W	60Bon	L-Oto, QTowF, RCountL	petri dish from net 2 fell and
29-May-04	12:22	96	1	GX163		186	56 45.81 N	156 17.45 W	CAT	CAT	most larvae petri dish from net 2 fell and
29-May-04	13:28	97	1	GV163		71	56 52.42 N	156 30.52 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	most larvae flowmeters spinning in wind
29-May-04	13:28	97	1	GV163		71	56 52.42 N	156 30.52 W	CAT	CAT	flowmeters spinning in wind
29-May-04	14:54	98	1	GV165		72	56 59.87 N	156 18.18 W	60Bon	QTowF, RCountL	
29-May-04	14:54	98	1	GV165		72	56 59.87 N	156 18.18 W	CAT	CAT	
29-May-04	16:06	99	1	GX165		209	56 53.07 N	156 05.03 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	16:06	99	1	GX165		209	56 53.07 N	156 05.03 W	CAT	CAT	
29-May-04	17:26	100	1	GZ165		299	56 46.23 N	155 52.17 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	17:26	100	1	GZ165		299	56 46.23 N	155 52.17 W	CAT	CAT	
29-May-04	18:45	101	1	HB165		237	56 39.17 N	155 38.59 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	18:45	101	1	HB165		237	56 39.17 N	155 38.59 W	CAT	CAT	
29-May-04	19:54	102	1	HD165		71	56 32.56 N	155 25.46 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	19:54	102	1	HD165		71	56 32.56 N	155 25.46 W	CAT	CAT	
29-May-04	21:11	103	1	HD167		74	56 39.66 N	155 13.02 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	21:11	103	1	HD167		74	56 39.66 N	155 13.02 W	CAT	CAT	
29-May-04	22:17	104	1	HB167		238	56 46.53 N	155 26.00 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	22:17	104	1	HB167		238	56 46.53 N	155 26.00 W	CAT	CAT	
29-May-04	23:25	105	1	GZ167		283	56 53.29 N	155 38.96 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
29-May-04	23:25	105	1	GZ167		283	56 53.29 N	155 38.96 W	CAT	CAT	
30-May-04	0:36	106	1	GX167		307	57 00.38 N	155 52.11 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	0:36	106	1	GX167		307	57 00.38 N	155 52.11 W	CAT	CAT	
30-May-04	1:44	107	1	GV167		85	57 07.18 N	156 05.44 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	1:44	107	1	GV167		85	57 07.18 N	156 05.44 W	CAT	CAT	
30-May-04	3:12	108	1	GT169		48	57 20.26 N	156 04.18 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	3:12	108	1	GT169		48	57 20.26 N	156 04.18 W	CAT	CAT	
30-May-04	4:13	109	1	GV169		247	57 14.52 N	155 52.64 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	4:13	109	1	GV169		247	57 14.52 N	155 52.64 W	CAT	CAT	
30-May-04	5:29	110	1	GX169		278	57 07.53 N	155 39.87 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	5:29	110	1	GX169		278	57 07.53 N	155 39.87 W	CAT	CAT	
30-May-04	6:40	111	1	GZ169		269	57 00.66 N	155 26.49 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	6:40	111	1	GZ169		269	57 00.66 N	155 26.49 W	CAT	CAT	
30-May-04	7:51	112	1	HB169		222	56 53.76 N	155 13.71 W	60Bon	QTowF, RCountL	
30-May-04	7:51	112	1	HB169		222	56 53.76 N	155 13.71 W	CAT	CAT	
30-May-04	9:05	113	1	HD169		73	56 47.01 N	155 00.74 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	9:05	113	1	HD169		73	56 47.01 N	155 00.74 W	CAT	CAT	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
30-May-04	10:18	114	1	HD171		82	56 54.19 N	154 48.07 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	10:18	114	1	HD171		82	56 54.19 N	154 48.07 W	CAT	CAT	
30-May-04	11:21	115	1	HB171		152	57 01.06 N	155 00.89 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	11:21	115	1	HB171		152	57 01.06 N	155 00.89 W	CAT	CAT	
30-May-04	12:31	116	1	GZ171		242	57 07.88 N	155 14.02 W	60Bon	QTowF, RCountL	
30-May-04	12:31	116	1	GZ171		242	57 07.88 N	155 14.02 W	CAT	CAT	
30-May-04	13:41	117	1	GX171		260	57 14.78 N	155 27.03 W	60Bon	QTowF, RCountL	
30-May-04	13:41	117	1	GX171		260	57 14.78 N	155 27.03 W	CAT	CAT	
30-May-04	14:50	118	1	GV171		279	57 21.78 N	155 40.22 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	14:50	118	1	GV171		279	57 21.78 N	155 40.22 W	CAT	CAT	
30-May-04	15:36	119	1	GT171		118	57 26.98 N	155 46.24 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	15:36	119	1	GT171		118	57 26.98 N	155 46.24 W	CAT	CAT	
30-May-04	17:15	120	1	GT173		43	57 37.11 N	155 28.18 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	17:15	120	1	GT173		43	57 37.11 N	155 28.18 W	CAT	CAT	
30-May-04	18:12	121	1	GV173		296	57 28.84 N	155 27.44 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	18:12	121	1	GV173		296	57 28.84 N	155 27.44 W	CAT	CAT	
30-May-04	19:22	122	1	GX173		246	57 22.03 N	155 14.11 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	19:22	122	1	GX173		246	57 22.03 N	155 14.11 W	CAT	CAT	
30-May-04	20:30	123	1	GZ173		219	57 15.29 N	155 01.10 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	20:30	123	1	GZ173		219	57 15.29 N	155 01.10 W	CAT	CAT	
30-May-04	21:42	124	1	HB173		79	57 08.22 N	154 48.21 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	21:42	124	1	HB173		79	57 08.22 N	154 48.21 W	CAT	CAT	
30-May-04	23:28	125	1	GZ175		78	57 22.45 N	154 48.95 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
30-May-04	23:28	125	1	GZ175		78	57 22.45 N	154 48.95 W	CAT	CAT	
30-May-04	1:14	126	1	FOX56		207	57 31.03 N	154 47.37 W	20Bon	QTowF	
30-May-04	1:14	126	1	FOX56		207	57 31.03 N	154 47.37 W	60Bon	QTowF	
30-May-04	1:14	126	1	FOX56		207	57 31.03 N	154 47.37 W	CAT	CAT	
31-May-04	1:57	126	2	FOX56	CTD001	208	57 33.14 N	154 52.92 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	small bottle used for 50 meter sample - MZ volume is 4.5 liter
31-May-04	2:50	127	1	FOX57		227	57 33.14 N	154 52.92 W	20Bon	QTowF	
31-May-04	2:50	127	1	FOX57		227	57 33.14 N	154 52.92 W	60Bon	QTowF	
31-May-04	2:50	127	1	FOX57		227	57 33.14 N	154 52.92 W	CAT	CAT	
31-May-04	3:25	127	2	FOX57	CTD002	228	57 33.02 N	154 52.87 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
31-May-04	4:20	128	1	FOX58		238	57 36.63 N	155 01.21 W	20Bon	QTowF	
31-May-04	4:20	128	1	FOX58		238	57 36.63 N	155 01.21 W	60Bon	QTowF	
31-May-04	4:20	128	1	FOX58		238	57 36.63 N	155 01.21 W	CAT	CAT	
31-May-04	5:12	128	2	FOX58	CTD003	238	57 36.75 N	155 00.64 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
31-May-04	6:00	129	1	FOX59		255	57 38.21 N	155 04.68 W	20Bon	QTowF	
31-May-04	6:00	129	1	FOX59		255	57 38.21 N	155 04.68 W	60Bon	QTowF	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
31-May-04	6:00	129	1	FOX59		255	57 38.21 N	155 04.68 W	CAT	CAT	
31-May-04	6:40	129	2	FOX59	CTD004	255	57 38.48 N	155 04.33 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
31-May-04	7:33	130	1	FOX60		292	57 40.71 N	155 10.98 W	20Bon	QTowF	
31-May-04	7:33	130	1	FOX60		292	57 40.71 N	155 10.98 W	60Bon	QTowF	
31-May-04	7:33	130	1	FOX60		292	57 40.71 N	155 10.98 W	CAT	CAT	
31-May-04	8:27	130	2	FOX60	CTD005	290	57 40.69 N	155 10.48 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
31-May-04	9:17	131	1	FOX61		153	57 43.21 N	155 15.76 W	20Bon	QTowF	
31-May-04	9:17	131	1	FOX61		153	57 43.21 N	155 15.76 W	60Bon	QTowF	
31-May-04	9:17	131	1	FOX61		153	57 43.21 N	155 15.76 W	CAT	CAT	
31-May-04	9:57	131	2	FOX61	CTD006	297	57 42.90 N	155 14.89 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
31-May-04	10:56	132	1	GV175		283	57 36.11 N	155 14.83 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	10:56	132	1	GV175		283	57 36.11 N	155 14.83 W	CAT	CAT	
31-May-04	12:16	133	1	GV177		276	57 43.36 N	155 01.86 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	12:16	133	1	GV177		276	57 43.36 N	155 01.86 W	CAT	CAT	
31-May-04	13:28	134	1	GX177		220	57 36.42 N	154 48.65 W	60Bon	QTowF, RCountL	
31-May-04	13:28	134	1	GX177		220	57 36.42 N	154 48.65 W	CAT	CAT	
31-May-04	14:46	135	1	GX179		214	57 43.80 N	154 35.84 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	14:46	135	1	GX179		214	57 43.80 N	154 35.84 W	CAT	CAT	
31-May-04	15:55	136	1	GV179		277	57 50.65 N	154 48.92 W	60Bon	QTowF, RCountL	
31-May-04	15:55	136	1	GV179		277	57 50.65 N	154 48.92 W	CAT	CAT	
31-May-04	17:38	137	1	GX181		214	57 50.87 N	154 22.86 W	60Bon	QTowF, RCountL	
31-May-04	17:38	137	1	GX181		214	57 50.87 N	154 22.86 W	CAT	CAT	
31-May-04	18:42	138	1	GZ181		58	57 44.08 N	154 10.00 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	18:42	138	1	GZ181		58	57 44.08 N	154 10.00 W	CAT	CAT	
31-May-04	20:13	139	1	GZ183		184	57 51.31 N	153 56.87 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	20:13	139	1	GZ183		184	57 51.31 N	153 56.87 W	CAT	CAT	
31-May-04	21:21	140	1	GX183		210	57 58.19 N	154 09.46 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	21:21	140	1	GX183		210	57 58.19 N	154 09.46 W	CAT	CAT	
31-May-04	22:33	141	1	GX185		202	58 05.44 N	153 56.58 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
31-May-04	22:33	141	1	GX185		202	58 05.44 N	153 56.58 W	CAT	CAT	
01-Jun-04	3:38	142	1	GZ185		193	57 58.83 N	153 43.77 W	60Bon	QTowF, RCountL	
01-Jun-04	3:38	142	1	GZ185		193	57 58.83 N	153 43.77 W	CAT	CAT	
01-Jun-04	4:44	143	1	GZ187		214	58 05.84 N	153 30.59 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	4:44	143	1	GZ187		214	58 05.84 N	153 30.59 W	CAT	CAT	
01-Jun-04	5:55	144	1	GX187		191	58 12.19 N	153 43.80 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	5:55	144	1	GX187		191	58 12.19 N	153 43.80 W	CAT	CAT	
01-Jun-04	7:30	145	1	GV189		150	58 27.10 N	153 43.34 W	60Bon	QTowF, RCountL	
01-Jun-04	7:30	145	1	GV189		150	58 27.10 N	153 43.34 W	CAT	CAT	
01-Jun-04	8:39	146	1	GX189		173	58 20.26 N	153 30.06 W	60Bon	QTowF, RCountL	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
01-Jun-04	8:39	146	1	GX189		173	58 20.26 N	153 30.06 W	CAT	CAT	
01-Jun-04	9:44	147	1	GZ189		204	58 13.33 N	153 17.57 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	9:44	147	1	GZ189		204	58 13.33 N	153 17.57 W	CAT	CAT	
01-Jun-04	10:49	148	1	GZ191		151	58 20.69 N	153 04.30 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	10:49	148	1	GZ191		151	58 20.69 N	153 04.30 W	CAT	CAT	
01-Jun-04	11:59	149	1	GX191		179	58 27.48 N	153 17.02 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	11:59	149	1	GX191		179	58 27.48 N	153 17.02 W	CAT	CAT	
01-Jun-04	13:06	150	1	GV191		110	58 34.31 N	153 29.76 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	13:06	150	1	GV191		110	58 34.31 N	153 29.76 W	CAT	CAT	
01-Jun-04	14:16	151	1	GV193		92	58 41.62 N	153 16.87 W	60Bon	QTowF, RCountL	
01-Jun-04	14:16	151	1	GV193		92	58 41.62 N	153 16.87 W	CAT	CAT	
01-Jun-04	15:25	152	1	GX193		162	58 34.59 N	153 04.03 W	60Bon	QTowF, RCountL	
01-Jun-04	15:25	152	1	GX193		162	58 34.59 N	153 04.03 W	CAT	CAT	
01-Jun-04	16:29	153	1	GZ193		50	58 27.84 N	152 51.46 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	16:29	153	1	GZ193		50	58 27.84 N	152 51.46 W	CAT	CAT	
01-Jun-04	17:54	154	1	GX195		158	58 42.01 N	152 50.99 W	60Bon	QTowF, RCountL	
01-Jun-04	17:54	154	1	GX195		158	58 42.01 N	152 50.99 W	CAT	CAT	
01-Jun-04	19:34	155	1	GZ197		164	58 42.48 N	152 25.34 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	19:34	155	1	GZ197		164	58 42.48 N	152 25.34 W	CAT	CAT	
01-Jun-04	20:28	156	1	GX197		201	58 49.30 N	152 37.80 W	60Bon	QTowF, RCountL	
01-Jun-04	20:28	156	1	GX197		201	58 49.30 N	152 37.80 W	CAT	CAT	
01-Jun-04	20:55	156	2	GX197		200	58 49.41 N	152 38.14 W	60Bon	L-Oto, QTowF, RCountL	
01-Jun-04	20:55	156	2	GX197		200	58 49.41 N	152 38.14 W	60Bon	L-Oto, QTowF, RCountL	2 large pollock
01-Jun-04	20:55	156	2	GX197		200	58 49.41 N	152 38.14 W	CAT	CAT	2 large pollock
01-Jun-04	22:25	157	1	GV195		160	58 48.73 N	153 03.41 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	22:25	157	1	GV195		160	58 48.73 N	153 03.41 W	CAT	CAT	
01-Jun-04	22:50	157	2	GV195		158	58 48.87 N	153 03.19 W	60Bon	L-Oto, QTowF, RCountL	
01-Jun-04	22:50	157	2	GV195		158	58 48.87 N	153 03.19 W	CAT	CAT	
01-Jun-04	23:52	158	1	GV197		179	58 55.96 N	152 50.49 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
01-Jun-04	23:52	158	1	GV197		179	58 55.96 N	152 50.49 W	CAT	CAT	
02-Jun-04	0:21	158	2	GV197		176	58 56.24 N	152 50.13 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	0:21	158	2	GV197		176	58 56.24 N	152 50.13 W	CAT	CAT	
02-Jun-04	1:31	159	1	GT197		145	59 02.82 N	153 02.63 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	1:31	159	1	GT197		145	59 02.82 N	153 02.63 W	CAT	CAT	
02-Jun-04	2:05	159	2	GT197		144	59 02.78 N	153 02.38 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	2:05	159	2	GT197		144	59 02.78 N	153 02.38 W	CAT	CAT	
02-Jun-04	3:29	160	1	GV199		142	59 03.23 N	152 36.57 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	3:29	160	1	GV199		142	59 03.23 N	152 36.57 W	CAT	CAT	
02-Jun-04	3:57	160	2	GV199		141	59 03.33 N	152 36.71 W	60Bon	L-Oto, QTowF, RCountL	

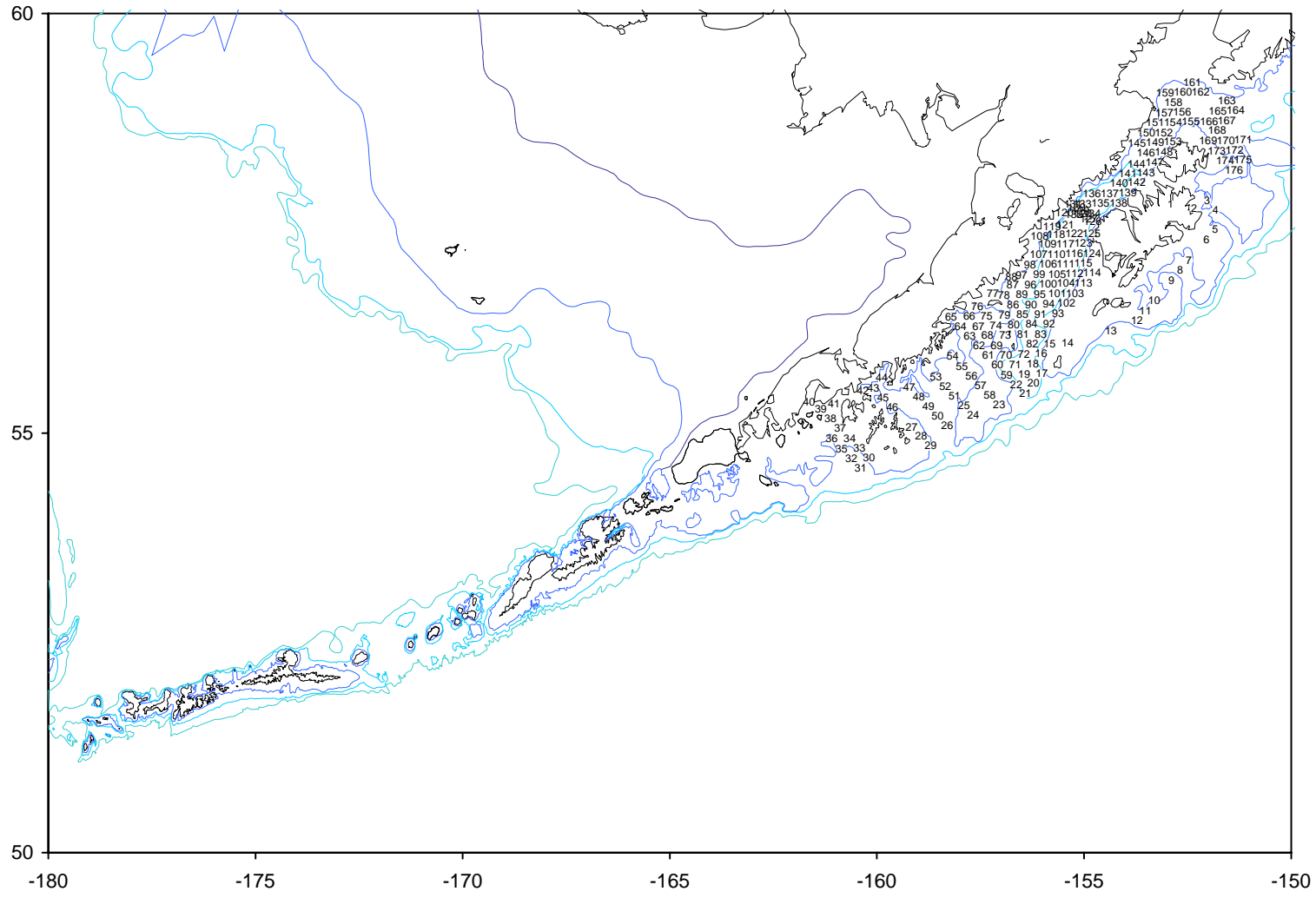
Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
02-Jun-04	3:57	160	2	GV199		141	59 03.33 N	152 36.71 W	CAT	CAT	
02-Jun-04	5:06	161	1	GV201		103	59 10.51 N	152 23.10 W	60Bon	QTowF, RCountL	
02-Jun-04	5:06	161	1	GV201		103	59 10.51 N	152 23.10 W	CAT	CAT	
02-Jun-04	6:12	162	1	GX201		148	59 03.64 N	152 10.81 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	6:12	162	1	GX201		148	59 03.64 N	152 10.81 W	CAT	CAT	
02-Jun-04	6:49	162	2	GX201		149	59 03.79 N	152 11.13 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	6:49	162	2	GX201		149	59 03.79 N	152 11.13 W	CAT	CAT	
02-Jun-04	9:37	163	1	HB203		95	58 57.32 N	151 33.07 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	9:37	163	1	HB203		95	58 57.32 N	151 33.07 W	CAT	CAT	
02-Jun-04	9:55	163	2	HB203		94	58 57.43 N	151 32.94 W	60Bon	Discard	vertical live tow for
euphausiids											
02-Jun-04	9:55	163	2	HB203		94	58 57.43 N	151 32.94 W	CAT	CAT	vertical live tow for
euphausiids											
02-Jun-04	11:08	164	1	HD203		130	58 50.33 N	151 20.27 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	11:08	164	1	HD203		130	58 50.33 N	151 20.27 W	CAT	CAT	
02-Jun-04	11:39	164	2	HD203		132	58 50.29 N	151 20.14 W	60Bon	QTowF, RCountL	
02-Jun-04	11:39	164	2	HD203		132	58 50.29 N	151 20.14 W	CAT	CAT	
02-Jun-04	12:05	164	3	HD203		131	58 50.50 N	151 19.20 W	60Bon	Discard	live tow for euphausiids
02-Jun-04	12:05	164	3	HD203		131	58 50.50 N	151 19.20 W	CAT	CAT	live tow for euphausiids
02-Jun-04	13:49	165	1	HB201		120	58 49.78 N	151 46.25 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	13:49	165	1	HB201		120	58 49.78 N	151 46.25 W	CAT	CAT	
02-Jun-04	15:05	166	1	HB199		140	58 42.56 N	151 58.77 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	15:05	166	1	HB199		140	58 42.56 N	151 58.77 W	CAT	CAT	
02-Jun-04	15:33	166	2	HB199		140	58 42.75 N	151 59.14 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	15:33	166	2	HB199		140	58 42.75 N	151 59.14 W	CAT	CAT	
02-Jun-04	17:06	167	1	HD201		178	58 43.12 N	151 33.27 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	17:06	167	1	HD201		178	58 43.12 N	151 33.27 W	CAT	CAT	
02-Jun-04	17:34	167	2	HD201		175	58 43.31 N	151 33.41 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	17:34	167	2	HD201		175	58 43.31 N	151 33.41 W	CAT	CAT	
02-Jun-04	18:58	168	1	HD199		170	58 35.85 N	151 46.99 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	18:58	168	1	HD199		170	58 35.85 N	151 46.99 W	CAT	CAT	
02-Jun-04	19:25	168	2	HD199		167	58 35.88 N	151 46.95 W	60Bon	L-Oto, QTowF, RCountL	
02-Jun-04	19:25	168	2	HD199		167	58 35.88 N	151 46.95 W	CAT	CAT	
02-Jun-04	20:39	169	1	HD197		111	58 28.57 N	152 00.32 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	20:39	169	1	HD197		111	58 28.57 N	152 00.32 W	CAT	CAT	
02-Jun-04	22:13	170	1	HF199		165	58 29.01 N	151 34.54 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
02-Jun-04	22:13	170	1	HF199		165	58 29.01 N	151 34.54 W	CAT	CAT	
02-Jun-04	22:43	170	2	HF199		167	58 28.85 N	151 34.79 W	60Bon	QTowF, RCountL	
02-Jun-04	22:43	170	2	HF199		167	58 28.85 N	151 34.79 W	CAT	CAT	
03-Jun-04	0:14	171	1	HH201		98	58 29.28 N	151 09.14 W	60Bon	QTowF, RCountL	
03-Jun-04	0:14	171	1	HH201		98	58 29.28 N	151 09.14 W	CAT	CAT	

Cruise Summary For FOCI Cruise 5MF04 (MF-04-07)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
03-Jun-04	1:26	172	1	HH199		124	58 21.84 N	151 22.01 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
03-Jun-04	1:26	172	1	HH199		124	58 21.84 N	151 22.01 W	CAT	CAT	
03-Jun-04	3:06	173	1	HF197		46	58 21.55 N	151 47.71 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
03-Jun-04	3:06	173	1	HF197		46	58 21.55 N	151 47.71 W	CAT	CAT	
03-Jun-04	4:14	174	1	HH197		70	58 14.51 N	151 35.43 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
03-Jun-04	4:14	174	1	HH197		70	58 14.51 N	151 35.43 W	CAT	CAT	
03-Jun-04	5:58	175	1	HJ199		160	58 15.10 N	151 09.77 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
03-Jun-04	5:58	175	1	HJ199		160	58 15.10 N	151 09.77 W	CAT	CAT	
03-Jun-04	6:25	175	2	HJ199		172	58 15.14 N	151 10.27 W	60Bon	L-Oto, QTowF, RCountL	
03-Jun-04	6:25	175	2	HJ199		172	58 15.14 N	151 10.27 W	CAT	CAT	
03-Jun-04	7:41	176	1	HJ197		130	58 07.89 N	151 22.68 W	60Bon	L-Measur, L-Oto, QTowF, RCountL	
03-Jun-04	7:41	176	1	HJ197		130	58 07.89 N	151 22.68 W	CAT	CAT	

Figure 1- Station Map



5MF04 Stations