

Appendix 11 Analytical Results of Cobalt Crust

Table1 Analytical Results of Cobalt Crust (MS01 Seamount) 1/2

Seamo- unt	Site	Point	Depth (m)	Sample No.	Type	Analysed Part	Thickness (mm)	Moisture %	Mn/Fe	Co	Ni	Cu	Mn	Fe	Pb	Zn	Ti	Mo	V	Si	Al	Ca	Na	K	P	Ba	Sr
1	BMS01	A	1.388	02SMS01BMS01ACM01	Cr	Bulk	60	15.56	1.54	0.43	0.70	0.13	19.44	12.60	0.10	0.09	0.80	0.05	0.06	3.18	1.11	10.94	1.59	0.59	3.69	0.17	0.15
2		B	1.385	02SMS01BMS01BCM01	Cr	Bulk	25	13.77	2.14	0.34	0.82	0.18	18.20	8.50	0.08	0.10	0.51	0.05	0.05	2.04	0.99	14.32	1.45	0.46	4.91	0.16	0.14
3		C	1.382	02SMS01BMS01CCM01	Cr	Bulk	50	18.71	2.21	0.41	0.70	0.11	23.23	10.50	0.12	0.09	0.74	0.07	0.07	1.23	0.42	11.60	1.62	0.46	3.76	0.21	0.15
4	BMS02	A	1.461	02SMS01BMS02ACM01	Nd	Bulk	30	14.76	1.93	0.30	0.52	0.11	16.57	8.60	0.12	0.09	0.61	0.05	0.06	1.07	0.42	17.09	1.37	0.37	5.66	0.20	0.15
5		B	1.457	02SMS01BMS02BCM01	Nd	Bulk	10	13.90	1.95	0.27	0.68	0.15	16.34	8.40	0.12	0.09	0.58	0.05	0.06	1.02	0.53	16.62	1.39	0.36	5.74	0.20	0.14
6		C	1.457	02SMS01BMS02CCM01	Cr	Bulk	60	16.17	1.48	0.32	0.44	0.09	17.11	11.60	0.14	0.07	0.77	0.05	0.07	1.91	0.52	13.78	1.45	0.40	4.59	0.21	0.16
7	BMS03	B	1.287	02SMS01BMS03BCM01	Cr	Bulk	20	18.35	2.13	0.44	0.81	0.13	22.53	10.60	0.10	0.09	0.68	0.07	0.07	1.55	0.59	11.26	1.62	0.46	3.77	0.20	0.14
8		C	1.287	02SMS01BMS03CCM01	Cr	Bulk	100	20.56	1.70	0.55	0.71	0.09	23.77	14.00	0.14	0.09	0.83	0.07	0.06	2.71	0.89	6.49	1.68	0.56	1.96	0.20	0.14
9					02SMS01BMS03CCM02		Layer1	35	20.12	1.34	0.57	0.61	0.10	23.38	17.40	0.14	0.08	1.03	0.06	0.05	4.54	1.47	2.61	1.66	0.66	0.61	0.19
10	BMS04			02SMS01BMS03CCM03		Layer2	65	19.86	2.46	0.46	0.76	0.09	22.84	9.30	0.14	0.11	0.66	0.07	0.07	0.78	0.23	12.29	1.56	0.44	4.09	0.22	0.16
11				D	1.287	02SMS01BMS03DCM01	Cr	Bulk	130	19.20	2.04	0.48	0.69	0.09	23.08	11.30	0.14	0.09	0.74	0.07	0.07	1.56	0.50	10.53	1.65	0.47	3.48
12		BMS05	A		02SMS01BMS04ACM01	Cr	Bulk	60	17.59	1.97	0.42	0.66	0.10	20.52	10.40	0.10	0.09	0.69	0.06	0.06	2.07	0.70	12.29	1.59	0.51	4.08	0.20
13	02SMS01BMS04ACM02					Layer1	20	17.75	1.45	0.55	0.54	0.11	20.67	14.30	0.12	0.07	1.05	0.05	0.06	4.64	1.61	6.47	1.71	0.77	2.00	0.21	0.14
14					02SMS01BMS04ACM03		Layer2	40	15.23	2.56	0.38	0.66	0.09	21.22	8.30	0.12	0.10	0.59	0.06	0.06	0.87	0.31	15.19	1.53	0.42	5.26	0.21
15	MS01	B		02SMS01BMS04BCM01	Cr	Bulk	100	17.30	2.03	0.76	0.73	0.09	25.94	12.80	0.14	0.08	0.79	0.07	0.07	2.31	0.58	7.28	1.78	0.53	2.28	0.19	0.14
16				02SMS01BMS04BCM02		Layer1	30	20.35	1.46	0.98	0.51	0.06	25.32	17.40	0.16	0.06	0.86	0.07	0.06	4.31	0.76	2.67	1.98	0.52	0.58	0.15	0.15
17					02SMS01BMS04BCM03		Layer2	30	23.79	1.46	0.75	0.58	0.09	24.55	16.80	0.14	0.06	1.07	0.06	0.05	3.99	1.06	2.37	1.88	0.61	0.46	0.18
18	BMS05			02SMS01BMS04BCM04		Layer3	40	20.90	2.47	0.64	0.80	0.09	25.17	10.20	0.12	0.09	0.77	0.08	0.07	0.81	0.21	10.41	1.71	0.46	3.35	0.21	0.16
19				C	1.383	02SMS01BMS04CCM01	Cr	Bulk	80	22.38	1.98	0.47	0.66	0.10	22.38	11.30	0.12	0.09	0.73	0.07	0.07	2.09	0.87	11.22	1.62	0.44	3.72
20		BMS05	A		02SMS01BMS05ACM01	Cr	Bulk	100	22.47	1.39	0.45	0.57	0.15	20.98	15.10	0.12	0.09	1.00	0.05	0.07	3.25	1.07	7.58	1.60	0.55	2.45	0.24
21	02SMS01BMS05ACM02					Layer1	50	23.48	1.20	0.55	0.53	0.12	22.22	18.50	0.14	0.08	1.08	0.06	0.06	5.23	1.32	2.67	1.84	0.61	0.59	0.21	0.14
22					02SMS01BMS05ACM03		Layer2	50	19.48	1.61	0.34	0.47	0.13	19.13	11.90	0.12	0.08	0.79	0.05	0.07	1.53	0.46	13.29	1.46	0.37	4.66	0.23
23	BMS05			02SMS01BMS05ACM04		Nodule	10	15.46	2.09	0.49	0.46	0.12	18.20	8.70	0.12	0.08	0.65	0.05	0.07	1.11	0.34	16.05	1.49	0.38	5.49	0.29	0.16
24						02SMS01BMS05BCM01	Cr	Bulk	90	19.51	1.38	0.40	0.52	0.12	20.21	14.60	0.14	0.08	0.93	0.05	0.07	3.07	0.87	8.88	1.52	0.48	2.91
25		B			02SMS01BMS05BCM02		Layer1	25	21.81	1.17	0.52	0.48	0.10	22.38	19.20	0.14	0.07	1.07	0.06	0.06	5.27	1.23	2.40	1.78	0.57	0.52	0.21
26	02SMS01BMS05BCM03				Layer2	50	18.47	1.52	0.36	0.51	0.14	19.75	13.00	0.10	0.08	0.88	0.06	0.07	1.94	0.56	11.75	1.51	0.41	3.98	0.23	0.16	
27		02SMS01BMS05BCM04				Layer3	15	12.97	2.62	0.35	0.81	0.12	22.53	8.60	0.14	0.12	0.46	0.06	0.08	1.13	0.48	14.17	1.39	0.45	4.86	0.32	0.16
28	BMS05	C		02SMS01BMS05CCM01	Cr	Bulk	100	19.21	1.35	0.48	0.51	0.13	20.36	15.10	0.12	0.08	0.93	0.05	0.07	3.68	1.07	8.09	1.63	0.54	2.59	0.20	0.15
29				02SMS01BMS05CCM02		Layer1	25	21.47	1.32	0.71	0.51	0.08	23.69	18.00	0.12	0.06	0.96	0.06	0.06	5.36	1.06	2.37	1.93	0.58	0.44	0.18	0.14
30			02SMS01BMS05CCM03		Layer2	20	21.50	1.19	0.53	0.45	0.10	21.60	18.20	0.12	0.07	1.15	0.05	0.05	6.09	1.76	2.28	1.88	0.78	0.40	0.21	0.14	
31				02SMS01BMS05CCM04		Layer3	55	19.10	1.49	0.35	0.49	0.14	19.36	13.00	0.10	0.08	0.79	0.05	0.07	1.66	0.48	11.61	1.44	0.37	3.97	0.21	0.15

Cr: Crust, Co: Cobble Crust, Nd: Nodule

Table1 Analytical Results of Cobalt Crust (MS01 Seamount) 2/2

Seamo-unit	Site	Point	Depth (m)	Sample No.	Type	Analysed Part	Thickness (mm)	LOI %	H ₂ O+ %	H ₂ O- %	Pt ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm	Σ REE ppm
1	BMS01	A	1,388	02SMS01BMS01ACM01	Cr	Bulk	60	13.99	5.38	3.49	0.80	292	696	37.4	173.0	31.6	92	46.1	6.6	42.4	9.9	31.5	4.4	29.3	4.8	1414.2
		B	1,385	02SMS01BMS01BCM01	Cr	Bulk	25	13.45	5.13	3.12	0.85	370	659	44.5	216.0	37.7	11.1	58.1	7.9	52.4	12.6	40.4	5.4	33.9	5.8	1564.8
		C	1,382	02SMS01BMS01CCM01	Cr	Bulk	50	15.46	5.03	3.71	0.86	347	1135	44.8	209.0	37.1	11.0	56.4	7.7	49.1	11.8	36.6	5.0	32.0	5.3	1987.8
4	BMS02	A	1,461	02SMS01BMS02ACM01	Nd	Bulk	30	13.25	4.33	3.36	1.10	568	1105	65.8	314.0	53.0	15.7	82.4	11.3	75.2	17.8	55.3	7.5	45.5	7.8	2424.3
B		1,457	02SMS01BMS02BCM01	Nd	Bulk	10	13.32	4.60	2.79	1.30	495	1100	55.3	266.0	45.0	13.2	70.8	9.7	63.5	15.0	48.6	6.5	40.0	6.8	2235.4	
C		1,457	02SMS01BMS02CCM01	Cr	Bulk	60	13.79	4.36	3.25	1.05	428	1330	52.5	242.0	42.5	12.7	64.8	9.1	58.9	14.1	43.8	6.1	39.3	6.5	2350.3	
7	BMS03	B	1,287	02SMS01BMS03BCM01	Cr	Bulk	20	14.56	5.01	3.85	0.79	264	786	36.7	188.5	31.1	8.7	44.1	6.2	37.9	8.7	27.6	3.6	23.6	3.9	1450.6
8		C	1,287	02SMS01BMS03CCM01	Cr	Bulk	100	16.22	5.74	3.13	0.83	237	1065	32.7	144.5	27.2	7.7	38.8	5.5	33.6	7.9	24.4	3.5	22.7	3.7	1664.2
9				02SMS01BMS03CCM02		Layer1	35	15.52	5.90	4.56	1.00	216	992	30.2	136.5	26.6	7.3	35.4	5.2	31.7	7.1	22.7	3.3	22.0	3.7	1539.7
10	BMS04	D	1,287	02SMS01BMS03CCM03		Layer2	65	13.97	5.03	3.02	0.61	286	1245	38.2	189.5	31.0	8.8	45.8	6.2	38.0	9.1	28.3	3.8	25.0	3.9	1938.6
11			02SMS01BMS03DCM01	Cr	Bulk	130	14.41	5.26	3.19	0.69	283	1080	39.0	176.5	31.9	9.2	45.3	6.4	40.8	9.3	29.9	4.2	26.6	4.4	1786.5	
12		A	1,376	02SMS01BMS04ACM01	Cr	Bulk	60	13.67	4.70	3.09	0.78	270	962	35.2	162.0	29.4	8.7	43.7	6.1	38.8	9.2	28.9	4.0	26.3	4.5	1628.8
13	BMS05			02SMS01BMS04ACM02		Layer1	20	14.20	4.41	3.79	0.95	215	810	29.0	134.0	25.2	7.1	36.0	5.1	33.1	8.0	26.8	3.8	26.2	4.4	1363.7
14				02SMS01BMS04ACM03		Layer2	40	13.63	4.68	3.72	0.65	302	1090	39.2	180.5	32.1	9.5	48.0	6.6	41.8	9.7	31.1	4.3	27.2	4.5	1826.5
15	MS01	B	1,381	02SMS01BMS04BCM01	Cr	Bulk	100	15.24	5.12	4.74	0.61	251	978	35.8	159.5	30.4	8.5	42.4	6.1	37.5	8.6	27.3	3.8	25.2	4.0	1618.1
16			02SMS01BMS04BCM02		Layer1	30	15.56	5.70	5.53	not/ss	268	877	40.5	185.0	35.5	9.6	47.4	6.9	43.4	9.4	28.7	4.1	26.9	4.3	1586.7	
17				02SMS01BMS04BCM03		Layer2	30	15.60	6.39	4.87	0.78	226	1110	35.4	155.0	31.2	8.3	40.0	5.9	34.0	7.4	22.7	3.3	22.2	3.6	1705.0
18	BMS05	C		02SMS01BMS04BCM04		Layer3	40	14.80	4.88	4.30	0.58	292	987	43.3	193.0	35.8	9.8	48.0	6.9	42.4	9.6	30.1	4.2	26.7	4.3	1733.1
19				02SMS01BMS04CCM01	Cr	Bulk	80	14.11	5.63	2.96	0.61	288	1035	39.0	175.5	32.6	9.3	47.5	6.8	41.4	9.9	30.2	4.2	27.2	4.4	1751.0
20				02SMS01BMS05ACM01	Cr	Bulk	100	13.94	4.67	3.85	0.92	274	1055	37.8	168.5	30.8	8.7	44.2	6.0	36.6	8.4	26.2	3.7	24.0	4.1	1728.0
21	BMS05	A		02SMS01BMS05ACM02		Layer1	50	14.86	5.82	4.88	0.65	223	1000	34.0	150.5	28.5	7.9	38.0	5.4	33.3	7.2	22.9	3.3	21.6	3.6	1579.2
22				02SMS01BMS05ACM03		Layer2	50	13.43	4.82	4.41	0.84	358	1420	45.3	197.0	34.4	10.1	51.5	7.2	46.0	10.8	33.6	4.6	30.3	5.1	2253.9
23				02SMS01BMS05ACM04		Nodule	10	13.55	4.77	2.44	0.93	431	1445	48.5	230.0	38.9	11.4	59.8	8.2	53.1	12.5	40.2	5.4	33.8	5.7	2423.5
24	B	1,584	02SMS01BMS05BCM01	Cr	Bulk	90	14.83	4.93	5.07	0.64	299	1160	41.1	186.0	33.7	9.4	47.9	6.6	41.3	9.3	28.6	4.1	26.9	4.5	1898.4	
25			02SMS01BMS05BCM02		Layer1	25	14.45	5.51	5.64	0.51	246	914	37.6	167.5	31.8	8.8	41.6	6.0	35.5	7.5	23.2	3.4	22.0	3.7	1548.6	
26			02SMS01BMS05BCM03		Layer2	50	13.85	4.99	3.64	0.76	313	1220	41.8	192.0	34.3	9.9	48.8	6.8	42.4	9.7	29.7	4.2	27.8	4.7	1985.1	
27	C	1,586	02SMS01BMS05BCM04		Layer3	15	12.90	4.98	3.24	not/ss	332	1310	44.7	200.0	34.2	9.7	50.5	6.9	43.4	10.3	31.3	4.5	29.7	4.7	2111.9	
28			02SMS01BMS05CCM01	Cr	Bulk	100	13.70	5.11	4.20	1.28	256	872	36.2	165.0	30.5	8.7	42.5	6.3	37.4	8.6	26.7	3.8	24.9	4.0	1522.6	
29			02SMS01BMS05CCM02		Layer1	25	15.40	5.34	4.43	0.18	235	875	35.0	161.5	30.3	8.5	39.9	6.1	37.8	8.3	25.2	3.7	24.1	3.9	1494.3	
30	BMS05			02SMS01BMS05CCM03		Layer2	20	15.78	5.67	4.35	0.63	226	916	37.6	167.5	31.8	8.9	41.3	6.0	35.0	7.4	21.7	3.2	20.2	3.3	1525.9
31				02SMS01BMS05CCM04		Layer3	55	14.23	6.16	2.37	0.74	290	967	39.3	177.5	32.6	9.3	46.5	6.7	41.9	9.8	31.2	4.2	27.9	4.7	1688.6

Cr: Crust, Cc: Cobble Crust, Nd: Nodule

Table2 Analytical Results of Cobalt Crust (MS11 Seamount) 1/2

	Seamo- unt	Site	Point	Depth (m)	Sample No.	Type	Analyse d Part	Thickness (mm)	Moisture %	Mn/Fe	Co	Ni	Cu	Mn	Fe	Pb	Zn	Ti	Mo	V	Si	Al	Ca	Na	K	P	Ba	Sr			
1	MS11	BMS01	A	1,996	02SMS11BMS01ACM01	Cr	Bulk	95	16.04	1.28	0.30	0.39	0.12	17.73	13.90	0.12	0.08	0.83	0.05	0.07	2.36	0.70	12.40	1.34	0.41	4.13	0.29	0.16			
2				1,990	02SMS11BMS01BCM01	Cr	Bulk	160	16.71	1.19	0.34	0.33	0.11	19.44	16.30	0.16	0.08	0.95	0.06	0.08	2.57	0.67	9.54	1.39	0.40	3.07	0.29	0.17			
3			B		02SMS11BMS01BCM02		Layer1	60	17.41	1.23	0.45	0.48	0.15	20.52	16.70	0.12	0.08	1.16	0.05	0.06	3.46	0.96	7.03	1.61	0.48	2.09	0.21	0.15			
4					02SMS11BMS01BCM03		Layer2	100	18.83	1.37	0.32	0.26	0.08	19.67	14.40	0.18	0.08	0.79	0.06	0.09	1.78	0.43	11.71	1.31	0.34	3.88	0.31	0.18			
5			C	1,990	02SMS11BMS01CCM01	Cr	Bulk	160	19.62	1.29	0.34	0.31	0.07	19.36	15.00	0.14	0.08	0.85	0.05	0.09	1.88	0.44	11.51	1.35	0.36	3.85	0.32	0.19			
6			D	1,971	02SMS11BMS01DCM01	Cr	Bulk	70	8.95	1.46	0.16	0.40	0.07	12.70	8.70	0.10	0.09	0.56	0.03	0.06	2.06	0.91	19.63	1.05	0.35	7.32	0.37	0.15			
7			A	1,983	02SMS11BMS02ACM01	Cr	Bulk	110	16.34	1.18	0.25	0.53	0.19	16.11	13.60	0.08	0.09	0.74	0.04	0.06	2.92	0.91	12.93	1.36	0.42	4.56	0.30	0.15			
8		BMS02		1,980	02SMS11BMS02BCM01	Cr	Bulk	150	20.22	1.50	0.43	0.40	0.09	21.60	14.40	0.14	0.08	0.85	0.06	0.09	1.97	0.49	10.01	1.47	0.40	3.25	0.28	0.17			
9			B		02SMS11BMS02BCM02	Cc	裸状部	35	17.06	1.55	0.32	0.32	0.05	20.52	13.20	0.20	0.09	0.85	0.05	0.10	1.83	0.56	12.56	1.15	0.40	4.47	0.70	0.20			
10		BMS03				02SMS11BMS02BCM03	Nd	Nodule	30	17.45	1.11	0.36	0.21	0.04	17.96	16.20	0.24	0.10	1.13	0.06	0.10	2.24	0.59	11.39	1.26	0.35	3.96	0.65	0.20		
11			A	2,750	02SMS11BMS03ACM01	Cr	Bulk	320	26.51	1.14	0.43	0.38	0.12	23.08	20.30	0.14	0.09	1.18	0.07	0.07	2.73	0.52	4.17	1.63	0.42	1.04	0.34	0.19			
12			B	2,644	02SMS11BMS03BCM01	Cr	Bulk	160	18.89	1.11	0.31	0.34	0.18	17.73	16.00	0.12	0.09	1.03	0.05	0.08	3.32	0.89	10.44	1.35	0.44	3.60	0.32	0.18			
13				2,081	02SMS11BMS04ACM01	Cr	Bulk	130	20.49	1.50	0.39	0.40	0.09	21.91	14.60	0.16	0.08	0.80	0.06	0.08	1.65	0.35	10.16	1.45	0.38	3.29	0.30	0.19			
14	BMS04	A			02SMS11BMS04ACM02		Layer1	60	17.46	1.35	0.33	0.36	0.10	19.98	14.80	0.14	0.08	0.77	0.05	0.08	1.72	0.42	10.78	1.42	0.32	3.80	0.30	0.19			
15					02SMS11BMS04ACM03		Layer2	70	18.58	1.65	0.47	0.31	0.05	23.93	14.50	0.20	0.08	1.00	0.06	0.10	1.36	0.28	10.06	1.39	0.37	3.30	0.35	0.21			
16					02SMS11BMS04ACM04	Nd	Nodule	20	16.46	1.27	0.33	0.17	0.02	18.82	14.80	0.18	0.08	1.07	0.04	0.09	1.48	0.33	13.01	1.22	0.29	4.54	0.44	0.21			
17		B		1,928	02SMS11BMS04BCM01	Cr	Bulk	160	20.60	1.48	0.37	0.40	0.09	20.98	14.20	0.14	0.08	0.82	0.05	0.08	1.98	0.48	10.34	1.44	0.40	3.47	0.28	0.19			
18					02SMS11BMS04BCM02		Layer1	80	10.38	0.86	0.13	0.45	0.73	9.80	11.40	0.10	0.05	0.53	0.02	0.05	11.43	3.69	11.00	1.22	0.45	2.50	0.12	0.12			
19					02SMS11BMS04BCM03		Layer2	80	21.79	1.75	0.44	0.38	0.06	23.85	13.60	0.18	0.09	0.80	0.07	0.10	1.38	0.25	9.93	1.47	0.42	3.10	0.30	0.21			
20					02SMS11BMS04BCM04	Nd	Nodule	20	17.31	1.41	0.37	0.25	0.03	20.06	14.20	0.22	0.09	0.92	0.05	0.10	1.61	0.48	11.29	1.25	0.36	3.79	0.43	0.20			

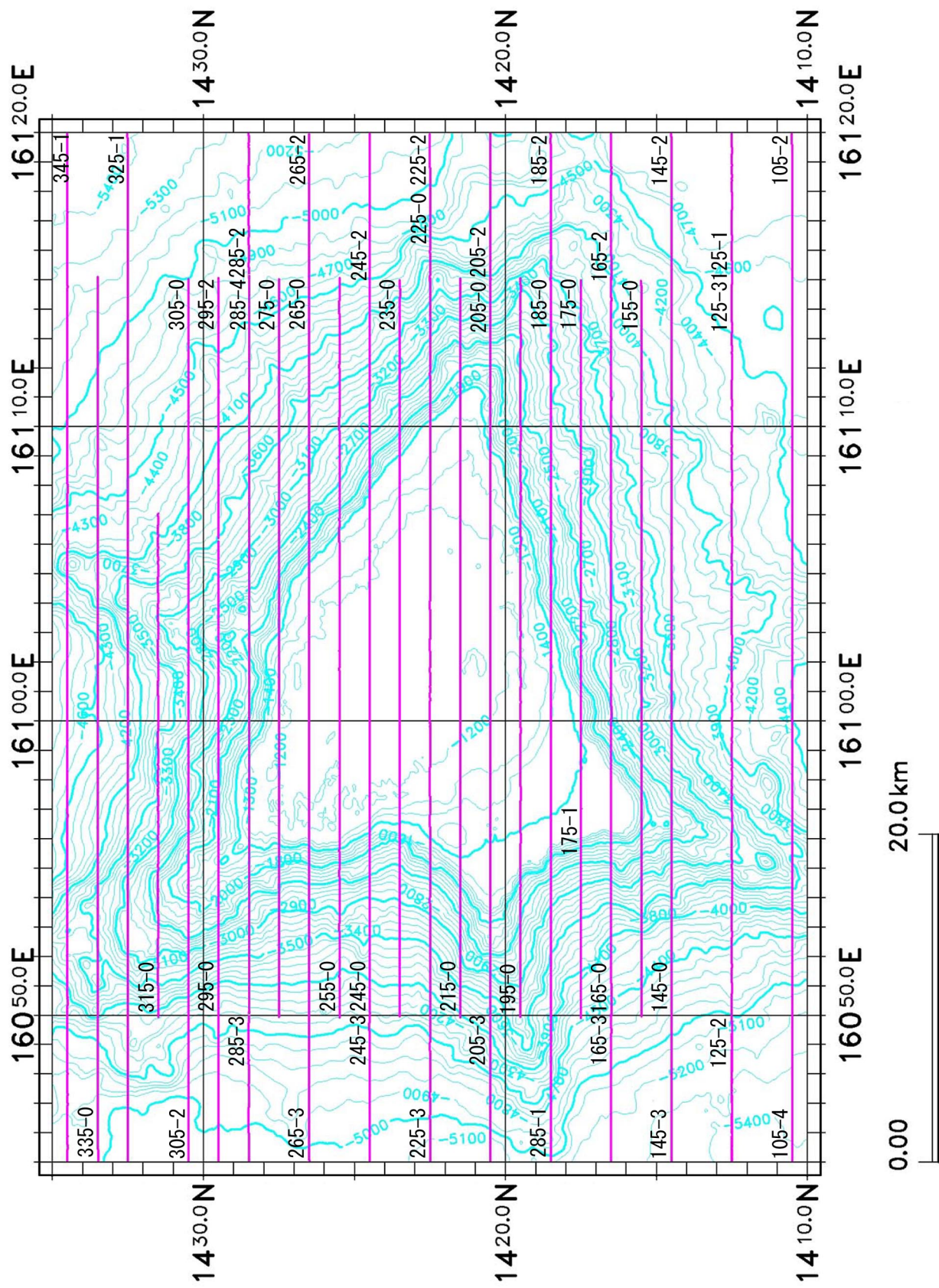
Cr:Crust, Cc:Cobble Crust, Nd:Nodule

Table2 Analytical Results of Cobalt Crust (MS11 Seamount) 2/2

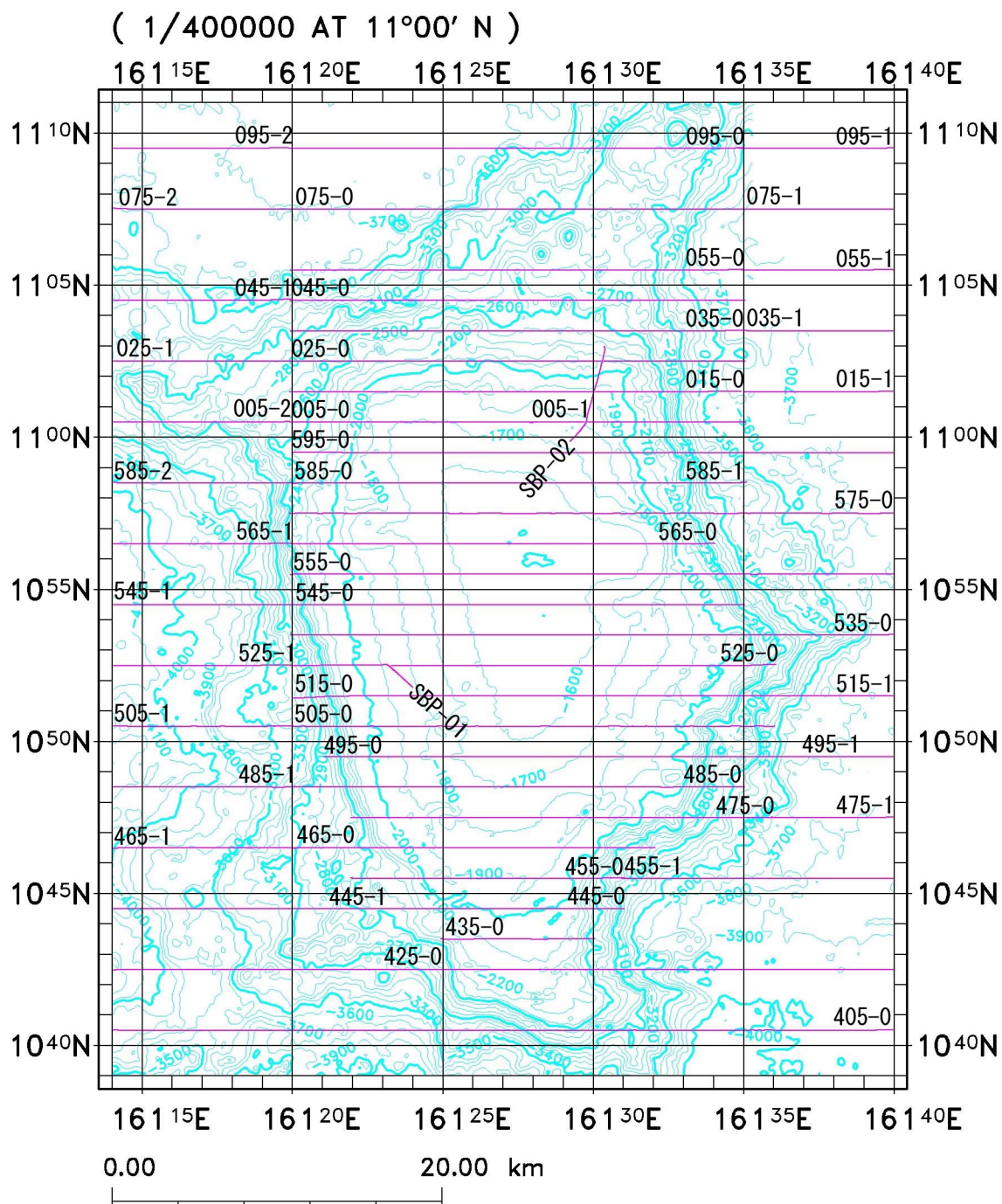
	Seamo- unt	Site	Point	Depth (m)	Sample No.	Type	Analyses d Part	Thickness (mm)	LOI %	H ₂ O+ %	H ₂ O- %	Pt ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm	Σ REE ppm
1			A	1,996	02SMS11BMS01ACM01	Cr	Bulk	95	13.71	5.26	2.88	0.51	412	1275	52.1	230.0	39.8	11.2	58.6	8.1	49.8	11.6	36.4	4.9	32.5	5.3	2227.3
2				1,990	02SMS11BMS01BCM01	Cr	Bulk	160	14.42	6.32	2.59	0.43	367	1575	48.9	219.0	38.1	10.6	52.8	7.2	44.4	9.8	29.6	4.2	27.1	4.4	2438.1
3		BMS01	B		02SMS11BMS01BCM02		Layer1	60	15.16	5.98	4.24	0.45	297	896	46.8	203.0	37.4	10.7	50.1	7.3	42.5	9.5	27.6	4.0	26.5	4.2	1662.6
4					02SMS11BMS01BCM03		Layer2	100	14.14	5.20	4.10	0.35	422	1865	50.8	224.0	37.1	10.2	55.2	7.2	45.1	10.2	32.4	4.4	29.0	4.8	2797.4
5			C	1,990	02SMS11BMS01CCM01	Cr	Bulk	160	13.96	5.70	4.03	0.33	399	1600	53.1	223.0	38.5	10.8	53.9	7.6	44.5	9.8	29.7	4.1	27.6	4.3	2505.9
6			D	1,971	02SMS11BMS01DCM01	Cr	Bulk	70	11.58	4.57	2.29	0.39	350	771	32.4	144.5	22.9	6.7	37.0	5.0	33.9	8.3	26.9	3.7	23.5	4.0	1469.8
7			A	1,983	02SMS11BMS02ACM01	Cr	Bulk	110	13.72	4.84	3.83	0.54	295	850	40.9	184.5	34.3	9.9	45.6	6.4	38.9	8.8	27.1	3.6	25.5	4.0	1574.5
8		BMS02		1,980	02SMS11BMS02BCM01	Cr	Bulk	150	14.65	5.33	3.38	0.26	327	1505	49.0	211.0	38.1	9.9	49.3	6.9	40.5	8.8	26.3	3.8	24.5	3.8	2303.9
9			B		02SMS11BMS02BCM02	Cc	塊状部	35	13.83	4.71	3.73	0.25	480	1775	50.1	207.0	32.2	9.3	52.9	7.0	44.4	10.8	34.3	4.8	31.0	5.1	2743.9
10	MS11				02SMS11BMS02BCM03	Nd	Nodule	30	13.85	4.91	3.27	0.26	550	2190	60.3	257.0	39.5	11.3	62.4	8.1	49.7	11.6	36.7	5.0	31.5	5.0	3318.1
11		BMS03	A	2,750	02SMS11BMS03ACM01	Cr	Bulk	320	16.46	6.89	2.79	0.31	492	1620	77.5	336.0	60.3	15.8	75.8	10.9	63.3	13.0	38.2	5.1	33.2	5.1	2846.2
12			B	2,644	02SMS11BMS03BCM01	Cr	Bulk	160	13.49	5.26	3.79	0.45	374	1370	56.9	249.0	43.8	12.0	56.3	8.1	46.2	9.7	28.7	4.0	26.0	4.3	2289.0
13				2,081	02SMS11BMS04ACM01	Cr	Bulk	130	13.80	4.98	4.51	0.29	361	1660	51.8	222.0	39.9	10.6	51.8	7.3	43.8	9.3	29.0	4.0	26.1	4.4	2521.0
14			A		02SMS11BMS04ACM02		Layer1	60	13.90	5.18	3.27	0.39	358	1490	51.7	218.0	38.5	10.4	51.2	7.2	41.9	8.9	26.9	3.7	25.0	4.0	2335.4
15					02SMS11BMS04ACM03		Layer2	70	14.44	4.75	4.87	0.21	459	2120	58.8	252.0	41.4	11.0	58.9	7.9	47.3	10.3	32.0	4.5	28.4	4.7	3136.2
16	BMS04				02SMS11BMS04ACM04	Nd	Nodule	20	13.45	4.44	2.78	0.22	459	1755	58.2	244.0	38.9	10.5	53.7	7.2	42.5	9.4	27.4	3.8	23.3	3.9	2736.8
17				1,928	02SMS11BMS04BCM01	Cr	Bulk	160	14.03	5.09	3.33	0.37	345	1510	48.7	203.0	37.5	10.1	50.2	7.1	42.2	9.2	27.9	3.9	26.0	4.4	2325.2
18			B		02SMS11BMS04BCM02		Layer1	80	6.39	2.86	1.95	0.31	146.5	616	22.1	96.5	18.2	5.1	23.0	3.4	20.0	4.3	13.0	1.8	11.9	2.2	984.0
19					02SMS11BMS04BCM03		Layer2	80	14.41	5.70	3.61	0.29	365	2210	51.5	218.0	38.1	10.3	51.3	7.2	43.9	9.5	29.2	4.2	27.0	4.5	3069.7
20					02SMS11BMS04BCM04	Nd	Nodule	20	13.46	5.48	3.16	0.32	559	2170	55.6	240.0	35.6	10.6	58.4	7.7	49.1	11.7	37.1	4.9	31.6	5.4	3276.7

Cr:Crust, Cc:Cobble Crust, Nd:Nodule

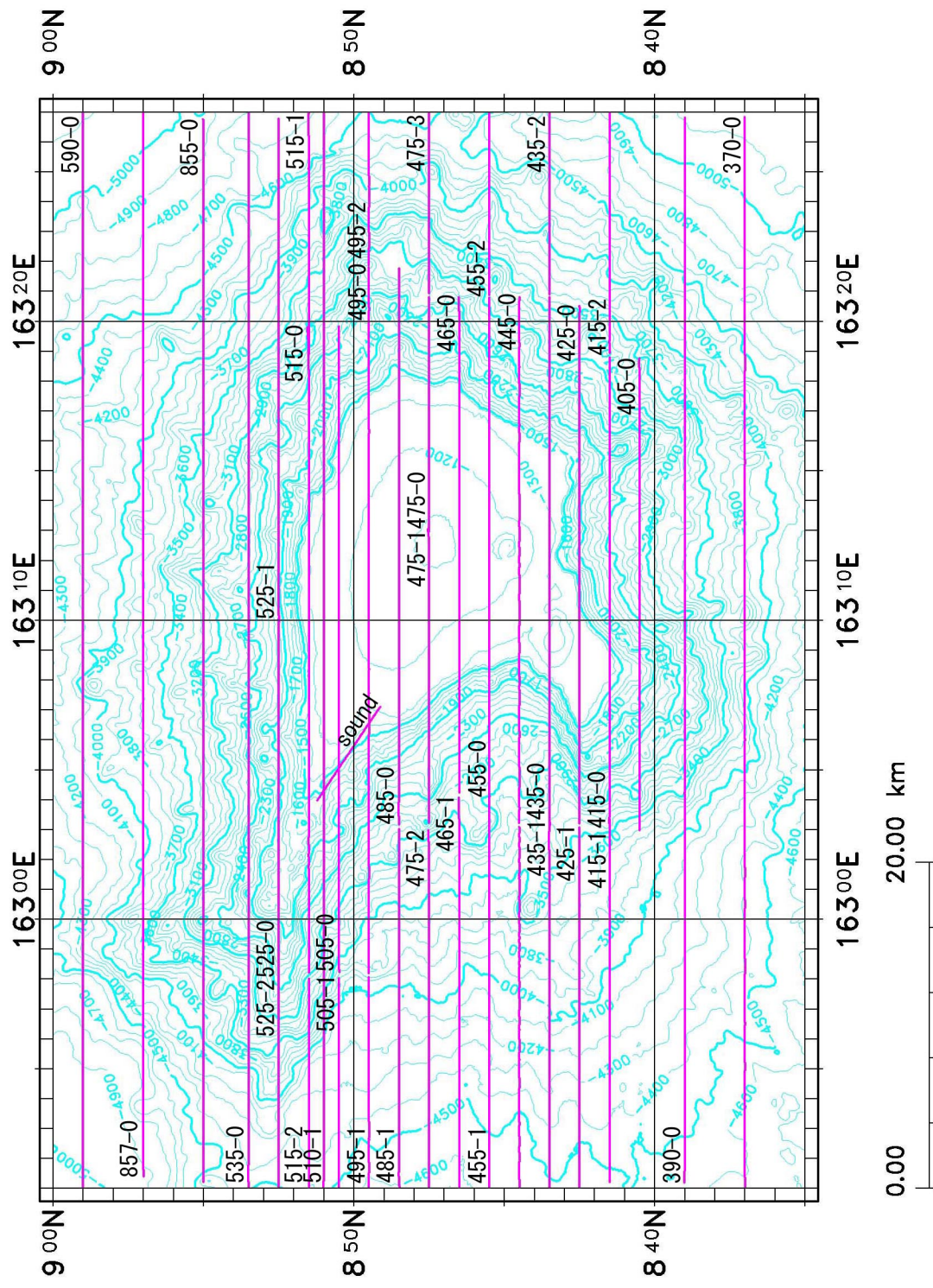
Appendix 12 Location Map of Track Lines



Location Map of Track Line (MS01)



Location Map of Track Line (MS11)



Location Map of Track Line (MS12)

Appendix 13 Sea-Water Sound Velocity for MBES

Sea-water Sound Velocity for MBES

MS01		
Lat.	14° 17.197' N	
Long.	160° 57.019' E	
Water depth (m)	Sound velocity (m • s-1)	
5	1,542.4	
20	1,542.7	
40	1,543.1	
70	1,541.2	
100	1,541.0	
125	1,540.3	
150	1,538.1	
200	1,526.9	
250	1,513.9	
300	1,503.4	
400	1,491.5	
500	1,487.7	
700	1,484.7	
950	1,484.2	
1,200	1,483.9	
1,500	1,486.0	
2,000	1,491.4	
2,500	1,498.5	
3,500	1,514.5	
4,211	1,526.8	
Average	1,501.3	

MS11		
Lat.	10° 43.502' N	
Long.	161° 27.763' E	
Water depth (m)	Sound velocity (m • s-1)	
5	1,542.5	
40	1,543.1	
50	1,543.2	
100	1,539.3	
125	1,528.9	
150	1,519.4	
200	1,504.1	
250	1,496.0	
300	1,493.3	
400	1,490.3	
500	1,488.6	
900	1,485.5	
1,050	1,485.2	
1,150	1,486.9	
1,500	1,491.6	
2,000	1,491.6	
2,500	1,498.5	
3,500	1,514.5	
4,267	1,527.6	
5,458	1,549.4	
Average	1,509.8	

MS12		
Lat.	8° 42.498' N	
Long.	163° 07.461' E	
Water depth (m)	Sound velocity (m • s-1)	
5	1,542.9	
10	1,543.0	
50	1,543.6	
75	1,543.6	
100	1,535.8	
125	1,522.4	
200	1,501.1	
250	1,497.0	
300	1,493.7	
600	1,486.8	
700	1,484.9	
800	1,484.3	
1,150	1,484.0	
1,276	1,485.0	
1,500	1,486.6	
2,000	1,491.6	
2,500	1,498.5	
3,500	1,514.4	
4,470	1,531.1	
5,458	1,549.4	
Average	1,509.0	

Appendix 14 Weather and Sea-state Data

Weather and Sea-state Data

Table—1 Monthly Distribution of Wind Direction in 2002

W.D.	C A L M	N	N N E	N E	E N E	E	E S E	S E	S S E	S	S S W	S W	W S W	W	W N W	N W	N N W	unknown	Total
June	0	0	0	17	238	255	20	1	0	0	0	0	0	0	0	0	0	0	531
%	0.0	0.0	0.0	3.2	44.8	48.0	3.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
July	0	0	0	0	18	6	0	0	0	0	0	0	0	0	0	0	0	0	24
%	0.0	0.0	0.0	0.0	75.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Table—2 Monthly Distribution of Wind Velocity in 2002

(W.D. : m/sec)																							
W.D.	C A L M	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20-	Total
June	0	0	0	0	0	0	7	33	131	110	99	78	50	20	2	0	1	0	0	0	0	0	531
%	0.00	0.00	0.00	0.00	0.00	0.00	1.32	6.21	24.67	20.72	18.64	14.69	9.42	3.77	0.38	0.00	0.19	0.00	0.00	0.00	0.00	0.00	100.0
July	0	0	0	0	0	0	0	0	0	0	0	2	14	8	0	0	0	0	0	0	0	0	24
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	58.33	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.0

*) CALM : 0.0m/sec

W.D.0 : 0.1m/sec~1.0m/sec

W.D.3 : 3.0m/sec~4.0m/sec

W.D.20- : >20.0m/sec

Table—3 Monthly Distribution of Weather in 2002

weather	fine	cloudy	rain	unknown	total	ligh day
June	11	4	8		23	12
%	47.8	17.4	34.8	0.0	100.0	52.2
July	1	0	0		1	0
%	100.0	0.0	0.0	0.0	100.0	0.0

*) rain: r,d,p,q>5 times in the day

fine: other than rain day and b,b,c>half day

cloudy: other fine & rain day and r,d,p,q,c,o>half day

light rain: fine or cloudy and r,d,p,q day

*) Remarks Symbols for weather

b: fine(very fine)

bc: partly cloudy(fine)

c: cloudy

o: very cloudy

r: rainy

d: drizzle

p: sudden

shower

q: squall

f: fog

m: mist

Table—4 Monthly Frequency Distribution of Atmospheric Pressure(daily average) in 2002

(A.P.: hpa)																		
A.P.	980	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A.P.	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014
June	0	0	0	0	0	0	0	0	11	51	84	120	109	97	55	4	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	9.60	15.82	22.60	20.53	18.27	10.36	0.75	0.00	0.00
July	0	0	0	0	0	0	0	0	0	0	5	8	10	1	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.83	33.33	41.67	4.17	0.00	0.00	0.00	0.00
A.P.	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030-	unknown	Total
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	531
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.0

*) A.P.1000: 1000.0hpa~1001.0hpa

A.P.-980: <980hpa

A.P.1030-: >1030.0hpa

Table—5 Monthly Frequency Distribution of Swell 1 Direction in 2002

S.D.	N	NN E	NE	E NE	E	EE E	SE	SEE E	S	SSW S	SW	WSW S	W	WNW N	NW	NNW N	unknown	Total
June %	0 0.00	0 0.00	39 7.34	124 23.35	125 23.54	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	243 45.76	531 100.0
July %	0 0.00	0 0.00	0 0.00	11 45.83	2 8.33	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Table—6 Monthly Frequency Distribution of Swell 1 Cycle in 2002

(S.C.: sec)

S.C.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	(S.C.: see?) unknown	Total
June %	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	160 30.13	123 23.16	6 1.13	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	242 45.57	531 100.0
July %	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13 54.17	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Table—7 Monthly Frequency Distribution of Swell 1 Height in 2002

(S.H.: m)

S.H.	0	1	2	3	4	5	6	7	8	9	10	unknown	Total
June %	0 0.00	81 15.25	155 29.19	41 7.72	12 2.26	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	242 45.57	531 100.0
July %	0 0.00	0 0.00	0 0.00	2 8.33	11 45.83	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Table—8 Monthly Frequency Distribution of Degree of Cloudiness in 2002

D.C.	0	1	2	3	4	5	6	7	8	9	10	unknown	Total
June	0	0	8	101	86	134	106	41	55	0	0	0	531
%	0.00	0.00	1.51	19.02	16.20	25.24	19.96	7.72	10.36	0.00	0.00	0.00	100.0
July	0	0	0	0	5	12	7	0	0	0	0	0	24
%	0.00	0.00	0.00	0.00	20.83	50.00	29.17	0.00	0.00	0.00	0.00	0.00	100.0

Table—9 Monthly Frequency Distribution of Swell 2 Direction in 2002

S.D.	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	unknown	Total
June %	0 0.00	4 0.75	44 8.29	60 11.30	67 12.62	17 3.20	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	339 63.84	531 100.0
July %	0 0.00	0 0.00	0 0.00	2 8.33	11 45.83	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Table—10 Monthly Frequency Distribution of Swell 2 Cycle in 2002

(S.C.: sec)

S.C.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	unknown	Total
June %	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	12 2.26	108 20.34	70 13.18	2 0.38	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	339 63.84	531 100.0
July %	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13 54.17	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Table—11 Monthly Frequency Distribution of Swell 2 Height in 2002

(S.H.; m)

S.H.	0	1	2	3	4	5	6	7	8	9	10	unknown	Total
June %	0 0.00	133 25.05	55 10.36	4 0.75	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	339 63.84	531 100.0
July %	0 0.00	0 0.00	13 54.17	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11 45.83	24 100.0

Appendix 15 Abundance of Metazoan Meiobenthos

Appendix 15 Abundances of metazoan meiobenthos (1)

No.	taxa	MS01MC01-1				MS01MC01-2				MS01MC02-1			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida		103.9	13.6	18.1	0.3	135.5	18.1	13.6		170.5	18.1	12.4
2	CILIOPHORA												
3	CNIDARIA						4.5						
4	GASTROTRICHA												2.3
5	Desmoscolecidae		4.5							0.3	6.8	1.1	5.6
6	Epsilonematidae												1.1
7	Draconematidae												
8	NEMATODA		27.1	9.0		0.3	31.6	13.6		0.6	19.2	1.1	3.4
9	KINORHYNCHA										1.1		1.1
10	LORICIFERA		4.5				4.5						
11	TARDIGRADA												
12	CAUDOFOVEATA												
13	GASTROPODA										1.1		
14	SIPUNCULA												
15	Sabellida												
16	POLYCHAETA										1.1	1.1	1.1
17	Acarina												
18	Ostracoda			4.5				4.5					
19	Harpacticoida				4.5	0.6					9.0	3.4	1.1
20	Nauplius		13.6				4.5	9.0			11.3		4.5
21	Tanaidacea												
22	CRUSTACEA												1.1
total metazoan meiobenthos		0.0	153.6	27.1	22.6	1.1	180.7	45.2	13.6	0.8	220.2	24.8	33.9
inds./10cm ²													

No.	taxa	MS01MC02-3				MS01MC03-1				MS01MC03-5			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	0.6	94.9	15.8	27.1	0.3	158.1	49.7	22.6	1.4	27.1	9.0	9.0
2	CILIOPHORA												
3	CNIDARIA												
4	GASTROTRICHA		2.3										
5	Desmoscolecidae		2.3				4.5						
6	Epsilonematidae		2.3				9.0						
7	Draconematidae												
8	NEMATODA		11.3		6.8	1.4	22.6	36.1	4.5	1.1	11.3	6.8	6.8
9	KINORHYNCHA												
10	LORICIFERA												
11	TARDIGRADA						4.5						
12	CAUDOFOVEATA		2.3								4.5		
13	GASTROPODA												
14	SIPUNCULA												
15	Sabellida												
16	POLYCHAETA	0.3	4.5			0.6	4.5						
17	Acarina												
18	Ostracoda		4.5										
19	Harpacticoida		24.8			1.7	9.0	9.0		1.1	2.3		
20	Nauplius		9.0	9.0			4.5						
21	Tanaidacea												
22	CRUSTACEA												
total metazoan meiobenthos		0.8	158.1	24.8	33.9	4.0	216.8	94.9	27.1	3.7	45.2	15.8	15.8
inds./10cm ²													

No.	taxa	MS01MC04-2				MS01MC04-4			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	2.3	40.7	36.1	18.1	3.7	189.7	27.1	13.6
2	CILIOPHORA	0.3					4.5		
3	CNIDARIA								
4	GASTROTRICHA								
5	Desmoscolecidae						4.5		
6	Epsilonematidae								
7	Draconematidae								
8	NEMATODA	2.0	40.7	4.5		3.4	22.6	27.1	
9	KINORHYNCHA								
10	LORICIFERA								
11	TARDIGRADA					0.3			
12	CAUDOFOVEATA								
13	GASTROPODA								
14	SIPUNCULA								
15	Sabellida								
16	POLYCHAETA	0.6				1.1			
17	Acarina								
18	Ostracoda					0.3	4.5		
19	Harpacticoida	0.3				1.4			
20	Nauplius	0.3	9.0				22.6	4.5	
21	Tanaidacea					2.0			
22	CRUSTACEA								
total metazoan meiobenthos		5.6	90.3	40.7	18.1	12.1	248.4	58.7	13.6
inds./10cm ²									

Appendix 15 Abundances of metazoan meiobenthos (2)

No.	taxa	MS11MC01-1				MS11MC01-2				MS11MC02-1			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	0.3	51.9	4.5			22.6	4.5		0.6	48.6	109.5	19.2
2	CILIOPHORA		2.3										
3	CNIDARIA												
4	GASTROTRICHA											1.1	1.1
5	Desmoscolecidae		6.8				2.3				4.5	5.6	1.1
6	Epsilonematidae												
7	Draconematidae												
8	NEMATODA		11.3			0.3	2.3	4.5	4.5		1.1	22.6	7.9
9	KINORHYNCHA												
10	LORICIFERA						2.3						
11	TARDIGRADA					0.3					1.1	2.3	
12	CAUDOFOVEATA												
13	GASTROPODA												
14	SIPUNCULA												
15	Sabellida												
16	POLYCHAETA		2.3	2.3			2.3				4.5	3.4	4.5
17	Acarina												
18	Ostracoda		2.3			0.3					2.3	4.5	1.1
19	Harpacticoida		9.0	4.5	6.8		6.8				10.2	1.1	3.4
20	Nauplius				2.3		15.8	4.5			14.7	12.4	3.4
21	Tanaidacea												
22	CRUSTACEA												
total metazoan meiobenthos		0.3	85.8	11.3	9.0	0.8	54.2	13.6	4.5	0.6	86.9	162.6	41.8
inds./10cm ²													

No.	taxa	MS11MC02-3				MS11MC03-1				MS11MC03-2			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	0.6	37.3	9.0	2.3	0.6	47.4	49.7	13.6	0.3	79.0		4.5
2	CILIOPHORA						2.3	2.3		0.3	2.3		
3	CNIDARIA												
4	GASTROTRICHA							2.3					
5	Desmoscolecidae		2.3				2.3	4.5			9.0		4.5
6	Epsilonematidae		1.1				2.3						
7	Draconematidae												
8	NEMATODA		11.3	2.3	3.4		9.0	13.6	9.0		13.6		2.3
9	KINORHYNCHA												
10	LORICIFERA										2.3		
11	TARDIGRADA		2.3								2.3		
12	CAUDOFOVEATA												
13	GASTROPODA												
14	SIPUNCULA												
15	Sabellida												
16	POLYCHAETA		1.1	1.1	1.1		2.3	2.3	2.3			6.8	
17	Acarina												
18	Ostracoda		1.1								2.3		
19	Harpacticoida		3.4	4.5	3.4		9.0	11.3			9.0		
20	Nauplius	0.3	9.0	5.6	3.4		4.5	6.8			9.0		4.5
21	Tanaidacea												
22	CRUSTACEA												
total metazoan meiobenthos		0.8	68.9	22.6	13.6	0.6	79.0	92.6	24.8	0.6	128.7	6.8	15.8
inds./10cm ²													

No.	taxa	MS11MC04-1				MS11MC04-2			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	0.8	185.2	29.4	9.0	1.1	149.1	27.1	18.1
2	CILIOPHORA				6.8				
3	CNIDARIA								
4	GASTROTRICHA								
5	Desmoscolecidae		15.8				9.0		
6	Epsilonematidae								
7	Draconematidae								
8	NEMATODA	1.1	31.6	13.6		1.4	27.1		4.5
9	KINORHYNCHA								
10	LORICIFERA		2.3						
11	TARDIGRADA		2.3						
12	CAUDOFOVEATA						4.5		
13	GASTROPODA								
14	SIPUNCULA								
15	Sabellida								
16	POLYCHAETA		2.3						
17	Acarina								
18	Ostracoda		2.3						
19	Harpacticoida	0.6	6.8	2.3	2.3		9.0		
20	Nauplius	0.3	13.6	2.3		0.6	9.0		
21	Tanaidacea								
22	CRUSTACEA								
total metazoan meiobenthos		2.8	262.0	47.4	18.1	3.1	207.8	27.1	22.6
inds./10cm ²									

Appendix 15 Abundances of metazoan meiobenthos (3)

No.	taxa	MS12MC01-1				MS12MC01-2				MS12MC01-3			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	9.6	117.4	72.3	31.6	11.3	54.2	22.6	4.5	13.6	103.9	18.1	22.6
2	CILIOPHORA					0.3				0.3			
3	CNIDARIA												
4	GASTROTRICHA												
5	Desmoscolecidae	1.1	13.6		4.5	0.8	9.0		4.5	0.6	9.0		
6	Epsilonematidae												
7	Draconematidae												
8	NEMATODA	3.7	85.8	22.6	4.5	2.5	40.7	18.1		5.4	40.7	4.5	4.5
9	KINORHYNCHA						4.5						
10	LORICIFERA												
11	TARDIGRADA												
12	CAUDOFOVEATA												
13	GASTROPODA						4.5						
14	SIPUNCULA	0.3											
15	Sabellida		4.5										
16	POLYCHAETA					0.3				0.3	13.6		
17	Acarina	0.3											
18	Ostracoda	0.3	4.5				4.5			0.3	4.5		
19	Harpacticoida	2.3				0.6	9.0	4.5		3.7	27.1		
20	Nauplius	1.4	13.6		4.5	0.3	4.5			2.0	9.0		
21	Tanaidacea	0.3											
22	CRUSTACEA												
total metazoan meiobenthos		19.2	239.4	94.9	45.2	16.1	131.0	45.2	9.0	26.0	207.8	22.6	27.1
inds./10cm ²													

No.	taxa	MS12MC02-1				MS12MC02-2				MS12MC02-3			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida	1.1	58.7	13.6	22.6	0.3	22.6	22.6	9.0	0.6	122.0	4.5	9.0
2	CILIOPHORA					0.6	9.0				4.5		
3	CNIDARIA												
4	GASTROTRICHA		4.5										
5	Desmoscolecidae		4.5				22.6				9.0	4.5	
6	Epsilonematidae		4.5										
7	Draconematidae		4.5										
8	NEMATODA	0.3	31.6	4.5	4.5		27.1	22.6	4.5	0.8	45.2	4.5	4.5
9	KINORHYNCHA										4.5		
10	LORICIFERA												
11	TARDIGRADA				4.5								
12	CAUDOFOVEATA												
13	GASTROPODA												
14	SIPUNCULA												
15	Sabellida												
16	POLYCHAETA	0.3					9.0			0.3			
17	Acarina					0.3					4.5		
18	Ostracoda						4.5	9.0			9.0		
19	Harpacticoida					1.7	4.5			0.6	4.5		
20	Nauplius	0.3		4.5		0.6	18.1			0.8	4.5	4.5	
21	Tanaidacea												
22	CRUSTACEA												
total metazoan meiobenthos		2.0	108.4	22.6	31.6	3.4	117.4	54.2	13.6	3.1	207.8	18.1	13.6
inds./10cm ²													

No.	taxa	MS12MC03-1				MS12MC03-2			
		top water	0-1cm	1-2cm	2-3cm	top water	0-1cm	1-2cm	2-3cm
1	Foraminiferida		19.2	3.4	4.5	0.8	5.6	6.8	
2	CILIOPHORA								
3	CNIDARIA								
4	GASTROTRICHA		2.3				1.1		
5	Desmoscolecidae		9.0	1.1			4.5	3.4	
6	Epsilonematidae		2.3				4.5	3.4	
7	Draconematidae		2.3				4.5		
8	NEMATODA	0.3	9.0	2.3	3.4		3.4	3.4	
9	KINORHYNCHA								
10	LORICIFERA								
11	TARDIGRADA		2.3						
12	CAUDOFOVEATA								
13	GASTROPODA								
14	SIPUNCULA								
15	Sabellida								
16	POLYCHAETA		1.1				1.1	1.1	
17	Acarina		1.1						
18	Ostracoda						1.1		
19	Harpacticoida		9.0		2.3	0.3	2.3	4.5	
20	Nauplius		9.0		2.3		6.8	7.9	
21	Tanaidacea								
22	CRUSTACEA								
total metazoan meiobenthos		0.3	66.6	6.8	12.4	1.1	35.0	30.5	0.0
inds./10cm ²									

Appendix 16 Abundance of Metazoan Macrobenthos

Appendix 16 Abundances of metazoan macrobenthos (1)

No.	taxa	MS01MC01-5					MS01MC01-6				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida			706	282	141	282				
2	PORIFERA										
3	NEMATODA	141	141								
4	CAUDOFOVATA	141									
5	Limidae										
6	BIVALVIA										
7	Godilida										
8	GASTROPODA										
9	SIPUNCULA								141		
10	Phyllodocidae										
11	Hesionidae										
12	Pilargiidae										
13	Syllidae										
14	Glyceridae										
15	Goniadidae										
16	Onuphidae										
17	Lumbrineridae										
18	Dorvilleidae										
19	Eunicida										
20	Paraonidae			141							
21	Spionidae										
22	Cirratulidae										
23	Flabelligeridae										
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae						141				
27	Terebellidae										
28	Sabellidae		141								
29	POLYCHAETA						141				
30	Nolellidae										
31	Acarina										
32	Ostracoda						141				
33	Harpacticoida	282									
34	Tanaidacea	282									
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA										
38	ASCIDIACEA										
	total metazoan macrobenthos inds./m ²	847	282	847	282	141	706	0	141	0	0

[illegible]

Appendix 16 Abundances of metazoan macrobenthos (3)

No.	taxa	MS01MC04-1					MS01MC04-3				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida					847					282
2	PORIFERA										
3	NEMATODA					141	282	141			
4	CAUDOFOVATA										
5	Limidae										
6	BIVALVIA						282				
7	Godilida										
8	GASTROPODA										
9	SIPUNCULA										
10	Phyllodocidae										
11	Hesionidae										
12	Pilargiidae										
13	Syllidae										
14	Glyceridae						141				
15	Goniadidae										
16	Onuphidae						141				
17	Lumbrineridae						141				
18	Dorvilleidae										
19	Eunicida										
20	Paraonidae										
21	Spionidae										
22	Cirratulidae				141	141					
23	Flabelligeridae										
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae										
27	Terebellidae										
28	Sabellidae										
29	POLYCHAETA	141									
30	Nolellidae										
31	Acarina										
32	Ostracoda						282				
33	Harpacticoida						141				
34	Tanaidacea	141									
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA										
38	ASCIDIACEA										
total metazoan macrobenthos		282	0	0	141	1129	1412	141	0	0	282
inds./m ²											

No.	taxa	MS01MC04-8				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida			1129	847	847
2	PORIFERA					
3	NEMATODA	141	141			
4	CAUDOFOVATA					
5	Limidae	141				
6	BIVALVIA					
7	Godilida					
8	GASTROPODA					
9	SIPUNCULA					
10	Phyllodocidae					
11	Hesionidae					
12	Pilargiidae					
13	Syllidae					
14	Glyceridae					
15	Goniadidae					
16	Onuphidae	141				
17	Lumbrineridae					
18	Dorvilleidae					
19	Eunicida					
20	Paraonidae				282	
21	Spionidae					
22	Cirratulidae	141				
23	Flabelligeridae					
24	Opheliidae					
25	Oweniidae					
26	Ampharetidae					
27	Terebellidae					
28	Sabellidae					
29	POLYCHAETA					
30	Nolellidae					
31	Acarina					
32	Ostracoda	282				
33	Harpacticoida	141				
34	Tanaidacea					
35	Isopoda					
36	Gammaridea					
37	OPHIUROIDEA					
38	ASCIDIACEA					
total metazoan macrobenthos		988	141	1129	1129	847
inds./m ²						

Appendix 16 Abundances of metazoan macrobenthos (4)

[illegible]

No.	taxa	MS11MC01-8					MS11MC02-2				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida			141							
2	PORIFERA										
3	NEMATODA										
4	CAUDOFOVATA	141									
5	Limidae										
6	BIVALVIA										
7	Godilida										
8	GASTROPODA										
9	SIPUNCULA										
10	Phyllodocidae										
11	Hesionidae										
12	Pilargiidae										
13	Syllidae										
14	Glyceridae										
15	Goniadidae										
16	Onuphidae										
17	Lumbrineridae										
18	Dorvilleidae	141									
19	Eunicida										
20	Paraonidae										
21	Spionidae										
22	Cirratulidae										
23	Flabelligeridae										
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae										
27	Terebellidae										
28	Sabellidae										
29	POLYCHAETA				141						
30	Nolellidae										
31	Acarina										
32	Ostracoda										
33	Harpacticoida										
34	Tanaidacea										
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA										
38	ASCIDIACEA										
total metazoan macrobenthos inds./ m ²		282	0	141	141	0	0	0	0	0	0

Appendix 16 Abundances of metazoan macrobenthos (5)

[illegible]

No.	taxa	MS11MC03-6					MS11MC03-7				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida										
2	PORIFERA										
3	NEMATODA							141			
4	CAUDOFOVATA	141									
5	Limidae										
6	BIVALVIA										
7	Godilida										
8	GASTROPODA						141				
9	SIPUNCULA										
10	Phyllodocidae										
11	Hesionidae										
12	Pilargiidae										
13	Syllidae										
14	Glyceridae										
15	Goniadidae										
16	Onuphidae										
17	Lumbrineridae										
18	Dorvilleidae	141									
19	Eunicida										
20	Paraonidae										
21	Spionidae										
22	Cirratulidae										
23	Flabelligeridae										
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae										
27	Terebellidae										
28	Sabellidae										
29	POLYCHAETA										
30	Nolellidae										
31	Acarina										
32	Ostracoda										
33	Harpacticoida	141									
34	Tanaidacea										
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA										
38	ASCIDIACEA										
total metazoan macrobenthos inds./ m ²		423	0	0	0	0	141	141	0	0	0

Appendix 16 Abundances of metazoan macrobenthos (6)

[illegible]

No.	taxa	MS11MC04-6					MS11MC04-7				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida			565	565				423		
2	PORIFERA										
3	NEMATODA	141	282		141				141		141
4	CAUDOFOVATA				141						
5	Limidae										
6	BIVALVIA										
7	Godiilida										
8	GASTROPODA	141									
9	SIPUNCULA						141				
10	Phyllodocidae						141				
11	Hesionidae										
12	Pilargiidae										
13	Syllidae										
14	Glyceridae										
15	Goniadidae										
16	Onuphiidae										
17	Lumbrineridae										
18	Dorvilleidae										
19	Eunicida										
20	Paraonidae										
21	Spionidae						141				
22	Cirratulidae										
23	Flabelligeridae										
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae										
27	Terebellidae						141				
28	Sabelliidae										
29	POLYCHAETA						423				
30	Nolellidae										
31	Acarina										
32	Ostracoda										
33	Harpacticoida	282									
34	Tanaidacea										
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA	141			141						
38	ASCIDIACEA										
total metazoan macrobenthos inds./m ²		706	282	565	988	0	988	0	565	0	141

Appendix 16 Abundances of metazoan macrobenthos (7)

No.	taxa	MS12MC01-5					MS12MC01-6				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida	5223	1553	706	141		141				141
2	PORIFERA										
3	NEMATODA	282					423	141			
4	CAUDOFOVATA	282					141				
5	Limidae										
6	BIVALVIA										
7	Godilida										
8	GASTROPODA	141									
9	SIPUNCULA										
10	Phyllodocidae										
11	Hesionidae						141				
12	Pilargiidae										
13	Syllidae										
14	Glyceridae	141									
15	Goniadidae										
16	Onuphidae										
17	Lumbrineridae	141					141				
18	Dorvilleidae										
19	Eunicida										
20	Paraonidae						565				
21	Spionidae										
22	Cirratulidae										
23	Flabelligeridae						141				
24	Opheliidae										
25	Oweniidae										
26	Ampharetidae										
27	Terebellidae							141			
28	Sabellidae						282				
29	POLYCHAETA	141				141	141				
30	Nolellidae										
31	Acarina						141				
32	Ostracoda	141					141				
33	Harpacticoida	141									
34	Tanaidacea						141				
35	Isopoda										
36	Gammaridea										
37	OPHIUROIDEA										
38	ASCIDIACEA										
total metazoan macrobenthos		6634	1553	706	141	141	2541	282	0	0	141
inds./m ²											

No.	taxa	MS12MC01-8					MS12MC02-5		
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm	0-1cm	1-2cm	2-3cm
1	Foraminiferida		1129				423		
2	PORIFERA								
3	NEMATODA						565		282
4	CAUDOFOVATA								
5	Limidae								
6	BIVALVIA								
7	Godilida								
8	GASTROPODA								
9	SIPUNCULA								
10	Phyllodocidae								
11	Hesionidae								
12	Pilargiidae	141							
13	Syllidae								
14	Glyceridae								
15	Goniadidae								
16	Onuphidae								
17	Lumbrineridae								
18	Dorvilleidae								
19	Eunicida								
20	Paraonidae								
21	Spionidae								
22	Cirratulidae								
23	Flabelligeridae								
24	Opheliidae								
25	Oweniidae	141							
26	Ampharetidae								
27	Terebellidae								
28	Sabellidae	141							
29	POLYCHAETA	706							
30	Nolellidae								
31	Acarina								
32	Ostracoda	141							
33	Harpacticoida	423							
34	Tanaidacea								
35	Isopoda								
36	Gammaridea								
37	OPHIUROIDEA								
38	ASCIDIACEA								
total metazoan macrobenthos		1694	1129	0	0	0	988	0	282
inds./m ²									

Appendix 16 Abundances of metazoan macrobenthos (8)

[illegible][illegible]

Appendix 16 Abundances of metazoan macrobenthos (9)

No.	taxa	MS12MC03-8				
		0-1cm	1-2cm	2-3cm	3-4cm	4-5cm
1	Foraminiferida					
2	PORIFERA					
3	NEMATODA	141	141			
4	CAUDOFOVATA					
5	Limidae					
6	BIVALVIA					
7	Godiida	141	141			
8	GASTROPODA					
9	SIPUNCULA					
10	Phyllodoctidae					
11	Hesionidae	282				
12	Pilargidae					
13	Syllidae					
14	Glyceridae					
15	Goniadidae					
16	Onuphidae					
17	Lumbrineridae					
18	Dorvilleidae					
19	Eunicida	141				
20	Paraonidae					
21	Spionidae					
22	Cirratulidae					
23	Flabelligeridae					
24	Opheliidae					
25	Oweniidae					
26	Ampharetidae					
27	Terebellidae					
28	Sabellidae					
29	POLYCHAETA	282				
30	Nolellidae					
31	Acarina					
32	Ostracoda					
33	Harpacticoida	141				
34	Tanaidacea					
35	Isopoda					
36	Gammaridea					
37	OPHIUROIDEA					
38	ASCIDIACEA					
total metazoan macrobenthos		1129	282	0	0	0
inds./m ²						

Appendix 17 Concentration of Total Organic Carbon and Total Nitrogen

Appendix 17 Concentrations of total organic carbon and total nitrogen (1)

Stn.	core No.	sampling layer (cm)	TOC (mg/g(D))	TN (mg/g(D))	C/N (%)
MS01MC01	1	0-1	1.09	0.22	5.0
MS01MC01	2	0-1	0.97	0.18	5.4
MS01MC01	3	0-1	1.04	0.18	5.8
MS01MC01	1	1-2	0.75	0.16	4.7
MS01MC01	2	1-2	0.75	0.18	4.2
MS01MC01	3	1-2	0.90	0.16	5.6
MS01MC01	1	2-3	0.68	0.17	4.0
MS01MC01	2	2-3	0.73	0.17	4.3
MS01MC01	3	2-3	0.93	0.12	7.8
MS01MC02	1	0-1	0.91	0.16	5.7
MS01MC02	3	0-1	1.04	0.20	5.2
MS01MC02	4	0-1	0.76	0.16	4.8
MS01MC02	1	1-2	0.80	0.13	6.1
MS01MC02	3	1-2	0.87	0.13	6.7
MS01MC02	4	1-2	0.64	0.14	4.6
MS01MC02	1	2-3	0.74	0.19	3.9
MS01MC02	3	2-3	0.82	0.19	4.3
MS01MC02	4	2-3	0.75	0.15	5.0
MS01MC03	1	0-1	1.11	0.22	5.0
MS01MC03	5	0-1	0.88	0.19	4.6
MS01MC03	6	0-1	1.03	0.21	4.9
MS01MC03	1	1-2	1.01	0.20	5.1
MS01MC03	5	1-2	0.73	0.17	4.3
MS01MC03	6	1-2	0.66	0.10	6.6
MS01MC03	1	2-3	0.86	0.16	5.4
MS01MC03	5	2-3	0.77	0.14	5.5
MS01MC03	6	2-3	0.81	0.14	5.8
MS01MC04	2	0-1	1.06	0.21	5.0
MS01MC04	4	0-1	1.03	0.15	6.9
MS01MC04	6	0-1	0.97	0.19	5.1
MS01MC04	2	1-2	0.88	0.13	6.8
MS01MC04	4	1-2	0.80	0.11	7.3
MS01MC04	6	1-2	0.91	0.13	7.0
MS01MC04	2	2-3	0.92	0.11	8.4
MS01MC04	4	2-3	0.98	0.18	5.4
MS01MC04	6	2-3	0.85	0.14	6.1

Appendix 17 Concentrations of total organic carbon and total nitrogen (2)

Stn.	core No.	sampling layer (cm)	TOC (mg/g(D))	TN (mg/g(D))	C/N (%)
MS11MC01	1	0-1	0.69	0.11	6.3
MS11MC01	2	0-1	0.63	0.15	4.2
MS11MC01	4	0-1	0.97	0.16	6.1
MS11MC01	1	1-2	0.54	0.10	5.4
MS11MC01	2	1-2	0.69	0.14	4.9
MS11MC01	4	1-2	0.70	0.09	7.8
MS11MC01	1	2-3	0.92	0.12	7.7
MS11MC01	2	2-3	0.58	0.14	4.1
MS11MC01	4	2-3	0.52	0.10	5.2
MS11MC02	1	0-1	0.79	0.16	4.9
MS11MC02	3	0-1	0.65	0.16	4.1
MS11MC02	4	0-1	0.70	0.17	4.1
MS11MC02	1	1-2	0.74	0.15	4.9
MS11MC02	3	1-2	0.71	0.15	4.7
MS11MC02	4	1-2	0.62	0.15	4.1
MS11MC02	1	2-3	0.65	0.08	8.1
MS11MC02	3	2-3	0.70	0.13	5.4
MS11MC02	4	2-3	0.65	0.11	5.9
MS11MC03	1	0-1	0.79	0.16	4.9
MS11MC03	2	0-1	0.99	0.11	9.0
MS11MC03	3	0-1	1.04	0.21	5.0
MS11MC03	1	1-2	0.78	0.11	7.1
MS11MC03	2	1-2	0.87	0.18	4.8
MS11MC03	3	1-2	0.90	0.10	9.0
MS11MC03	1	2-3	0.71	0.17	4.2
MS11MC03	2	2-3	0.76	0.10	7.6
MS11MC03	3	2-3	0.68	0.11	6.2
MS11MC04	1	0-1	1.11	0.15	7.4
MS11MC04	2	0-1	1.08	0.17	6.4
MS11MC04	1	1-2	1.04	0.19	5.5
MS11MC04	2	1-2	0.88	0.13	6.8
MS11MC04	1	2-3	0.96	0.14	6.9
MS11MC04	2	2-3	0.77	0.12	6.4

Appendix 17 Concentrations of total organic carbon and total nitrogen (3)

Stn.	core No.	sampling layer (cm)	TOC (mg/g(D))	TN (mg/g(D))	C/N (%)
MS12MC01	1	0-1	1.39	0.19	7.3
MS12MC01	2	0-1	1.66	0.24	6.9
MS12MC01	3	0-1	1.42	0.22	6.5
MS12MC01	1	1-2	1.04	0.17	6.1
MS12MC01	2	1-2	1.05	0.17	6.2
MS12MC01	3	1-2	1.00	0.15	6.7
MS12MC01	1	2-3	0.99	0.20	5.0
MS12MC01	2	2-3	0.95	0.22	4.3
MS12MC01	3	2-3	0.96	0.13	7.4
MS12MC02	1	0-1	1.02	0.22	4.6
MS12MC02	2	0-1	1.11	0.17	6.5
MS12MC02	3	0-1	1.27	0.16	7.9
MS12MC02	5	0-1	1.21	0.16	7.6
MS12MC02	1	1-2	0.80	0.12	6.7
MS12MC02	2	1-2	0.98	0.15	6.5
MS12MC02	3	1-2	1.09	0.18	6.1
MS12MC02	5	1-2	0.99	0.10	9.9
MS12MC02	1	2-3	0.87	0.13	6.7
MS12MC02	2	2-3	0.87	0.10	8.7
MS12MC02	3	2-3	0.94	0.11	8.5
MS12MC02	5	2-3	0.89	0.11	8.1
MS12MC03	1	0-1	0.94	0.13	7.2
MS12MC03	2	0-1	0.93	0.18	5.2
MS12MC03	1	1-2	0.86	0.16	5.4
MS12MC03	2	1-2	0.91	0.19	4.8
MS12MC03	1	2-3	0.92	0.13	7.1
MS12MC03	2	2-3	0.96	0.12	8.0