Porewater profiles from Boston Harbor and Massachusetts Bay sediments

by

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The data in the tables and graphs that follow are measurements of porewater constituents from sediments in Boston Harbor (Tables 1-5) and in Massachusetts Bay (Tables 6-7) sampled in 1992. Analyses were made on duplicate cores for NH_4^+, NO_3^-, PO_4^{-3}, HS^-, and alkalinity, and from a single core for Eh. In general, cores were sectioned by 1 cm increments from the surface to 2 cm, at 2 cm intervals from 2 to 10 cm, and then by 4 cm intervals to the bottom of the core. In August, October, and November, the second of two cores sectioned was sampled in the same way to a depth of 6 cm, and then one additional section was taken at the bottom of the core. The depth increments at which Eh was measured were different than those for the rest of the measurements. There was no hydrogen sulfide detected in any of the Massachusetts Bay cores from October and November, so no data are presented.

Data in the tables and graphs are identified by station name and core number, and are grouped as Harbor or Bay stations and then by sampling date. A set of graphs follows each table.

Boston Harbor Stations:

Table 1: T3 and T8, April
Table 2: T3 and T8, May
Table 3: T3 and T8, June
Table 4: T3, T8, T2, T4, T7, and R4, August
Table 5: T3, November

Massachusetts Bay Stations:

Table 6: W1, G8, 11, G6, C3, October
Table 7: W1, G8, 11, and G9, November

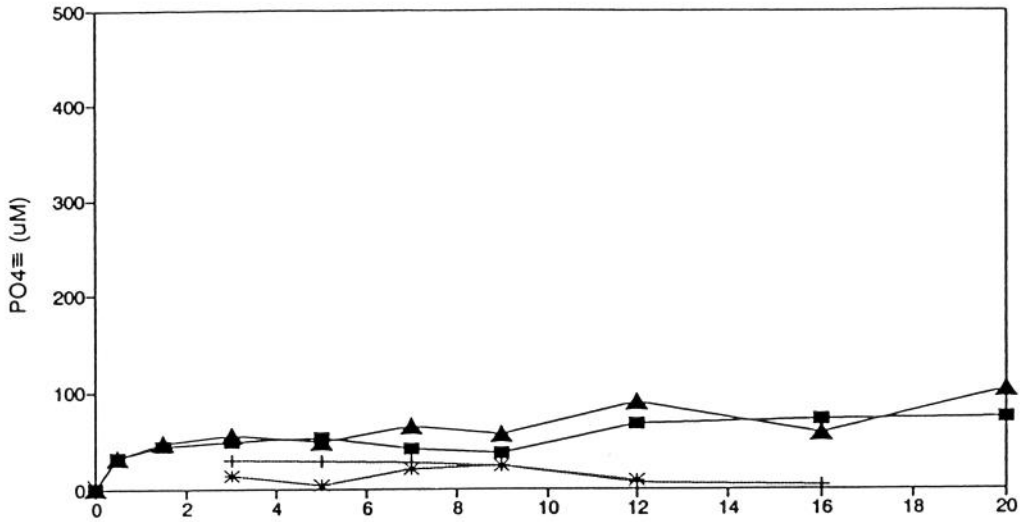
For additional details refer to:

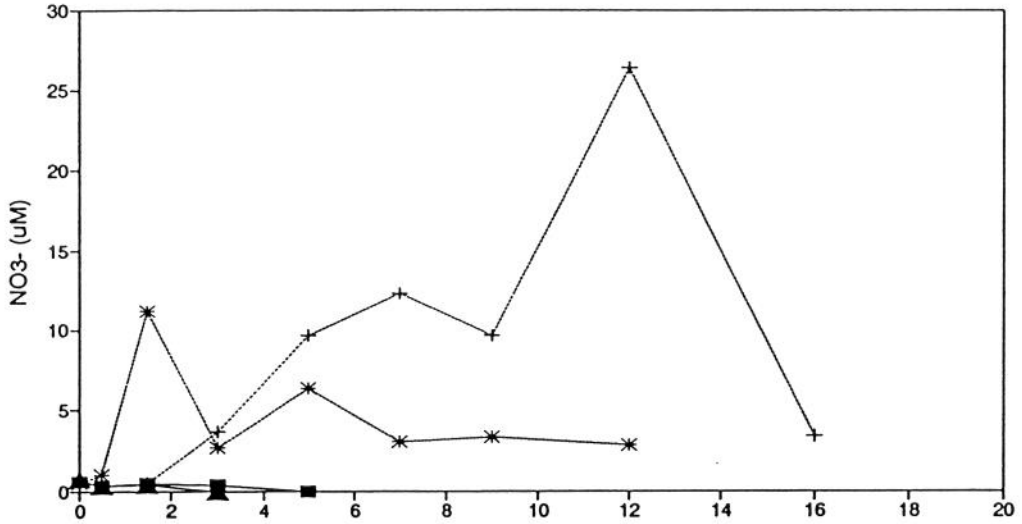
Giblin, A.E., C. Hopkinson, and J. Tucker. (1993). Metabolism, nutrient cycling, and denitrification in Boston Harbor and Massachusetts Bay sediments. MWRA Enviro. Quality Dept. Tech. Rpt. Series No. 93-2, March 1992. Massachusetts Water Resources Authority, Boston, MA. 46 pp.

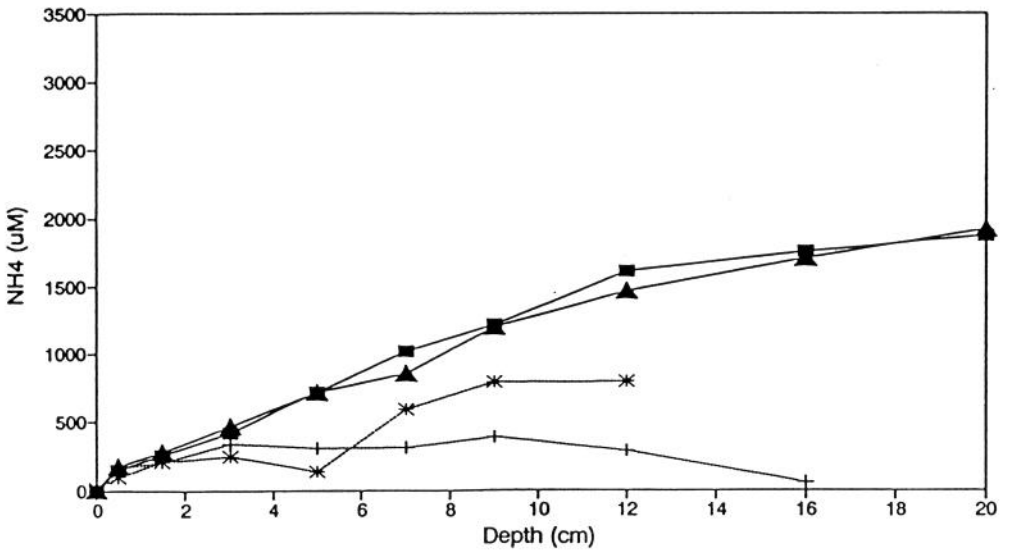
Table 1: Porewater Profiles for Boston Harbor Stations,
April, 1992

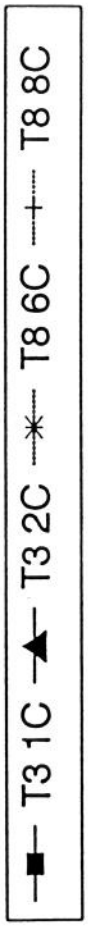
Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T3/1c	0.0	0.00	5.39	0.56	1.00	2.20	0.75	-55
	0.5	0.00	149.87	0.33	32.65	3.09	1.75	-131
	1.5	0.03	257.87	0.43	43.70	3.80	3.00	-184
	3.0	0.38	418.90	0.35	48.87	5.33	3.75	-205
	5.0	0.93	711.94	0.00	52.80	8.61	4.75	-211
	7.0	1.24	1017.06		41.11	11.72	6.75	-219
	9.0	2.09	1212.76		36.78	15.79	10.75	-225
	12.0	4.01	1611.57		67.33	21.83		
	16.0	4.86	1750.81		72.36	26.32		
	20.0	5.25	1869.41		73.85	30.61		
T3/2c	0.0	0.00	7.48	0.71	0.80	2.21		
	0.5	0.00	171.86	0.33	32.20	3.88		
	1.5	0.05	283.52	0.39	46.88	5.08		
	3.0	0.45	467.69	0.00	55.49	6.89		
	5.0	1.04	717.17		48.72	9.78		
	7.0	1.24	857.15		65.04	8.69		
	9.0	1.40	1195.02		57.23	14.70		
	12.0	3.67	1468.09		89.58	20.12		
	16.0	4.31	1703.95		57.93	24.36		
	20.0	5.56	1920.52		103.96	29.86		
T8/6c	0.0	0.00	21.13	0.45	4.04	2.40	0.75	15
	0.5	0.00	92.52	1.05	NA	2.92	1.75	-23
	1.5	0.00	207.41	11.19	NA	3.72	2.75	-107
	3.0	0.00	250.46	2.71	13.69	3.98	3.75	-138
	5.0	0.00	137.65	6.38	4.28	3.33	4.75	-165
	7.0	0.00	594.69	3.07	20.51	4.30		
	9.0	0.01	788.96	3.33	23.84	5.02		
	12.0	0.00	800.21	2.85	8.86	4.82		
T8/8c	0.0	0.00	8.49	0.67	2.09	2.29		
	0.5	0.00	155.40	NA	NA	3.52		
	1.5	0.00	208.96	0.45	NA	4.43		
	3.0	0.00	335.85	3.71	30.16	4.83		
	5.0	0.00	302.61	9.67	28.47	4.86		
	7.0	0.00	314.64	12.33	27.62	4.41		
	9.0	0.00	391.30	9.66	24.14	4.01		
	12.0	0.00	290.19	26.39	6.17	3.70		
	16.0	0.00	49.73	3.42	4.18	2.76		

BH4 92
T3 & T8


PO4≡ (uM)
500
400
300
200
100
0
0
2
4
6
8
10
12
14
16
18
20


NO3- (uM)
30
25
20
15
10
5
0
0
2
4
6
8
10
12
14
16
18
20


NH4 (uM)
3500
3000
2500
2000
1500
1000
500
0
0
2
4
6
8
10
12
14
16
18
20
Depth (cm)


T3 1C
T3 2C
T8 6C
T8 8C

BH4 92

T3 & T8

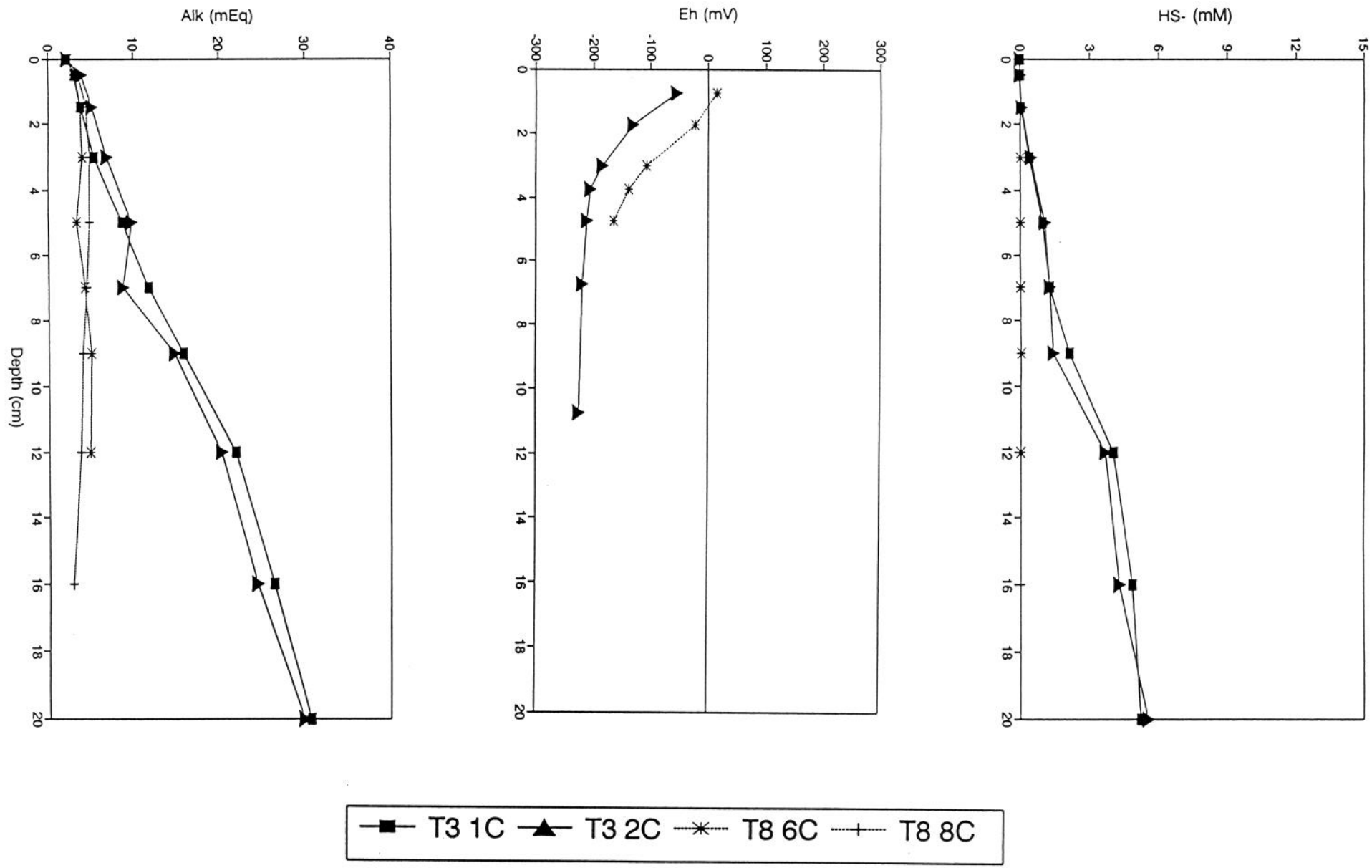


Table 2: Porewater Profiles for Boston Harbor Stations, May, 1992

Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T3/8c	0.0	0.00	9.29	2.41	10.42	2.11	0.75	12
	0.5	0.00	90.02	0.82	29.98	2.65	1.75	-64
	1.5	0.00	157.84	0.43	87.18	3.24	2.75	-75
	3.0	0.01	234.39	0.17	133.13	3.87	4.75	-126
	5.0	0.08	291.44		136.06	4.29	7.75	-139
	7.0	0.19	384.16		150.24	5.18		
	9.0	0.33	469.63		143.89	5.65		
	12.0	0.71	597.83		134.60	7.18		
	16.0	0.49	722.32		117.98	8.12		
	20.0	0.75	716.75		101.35	8.20		
T3/7c	0.0	0.00	12.92	2.81	16.78	2.16		
	0.5	0.00	83.14	0.56	29.49	2.63		
	1.5	0.00	168.95	0.38	103.80	3.41		
	3.0	0.06	311.58	0.28	198.64	4.82		
	5.0	0.27	439.79		157.57	5.87		
	7.0	0.27	491.66		151.71	6.19		
	9.0	0.49	558.78		149.26	7.02		
	12.0	0.90	689.97		154.15	8.88		
	16.0	0.85	781.12		134.60	9.60		
	20.0	0.75	716.75		101.35	8.20		
T8/13c	0.0	0.00	5.98	3.48	1.10	2.10	0.75	-17
	0.5	0.00	65.31	1.55	NA	2.59	1.75	-66
	1.5	0.00	169.36	5.68	29.65	2.97	2.75	-86
	3.0	0.00	204.11	0.73	42.04	3.35	4.75	-97
	5.0	0.00	252.79	1.72	44.44	3.52	7.75	-108
	7.0	0.00	204.48	5.17	8.08	2.96		
	9.0	0.00	176.06	2.38	NA	2.87		
	12.0	0.04	200.40		36.83	3.29		
	16.0	0.05	242.76		40.17	3.66		
	20.0	0.01	239.97		38.38	3.53		
T8/2c	0.0	0.00	16.04	3.03	2.56	2.21		
	0.5	0.00	90.39	2.89	NA	2.59		
	1.5	0.00	147.98	0.88	40.90	3.20		
	3.0	0.00	204.04	0.47	39.54	3.26		
	5.0	0.00	221.84		32.77	3.49		
	7.0	0.00	190.00		29.13	3.20		
	9.0	0.00	141.37		32.15	3.31		
	12.0	0.00	141.75		38.19	3.22		
	16.0	0.00	160.63		37.46	3.36		
	20.0	0.00	187.52		47.58	3.40		

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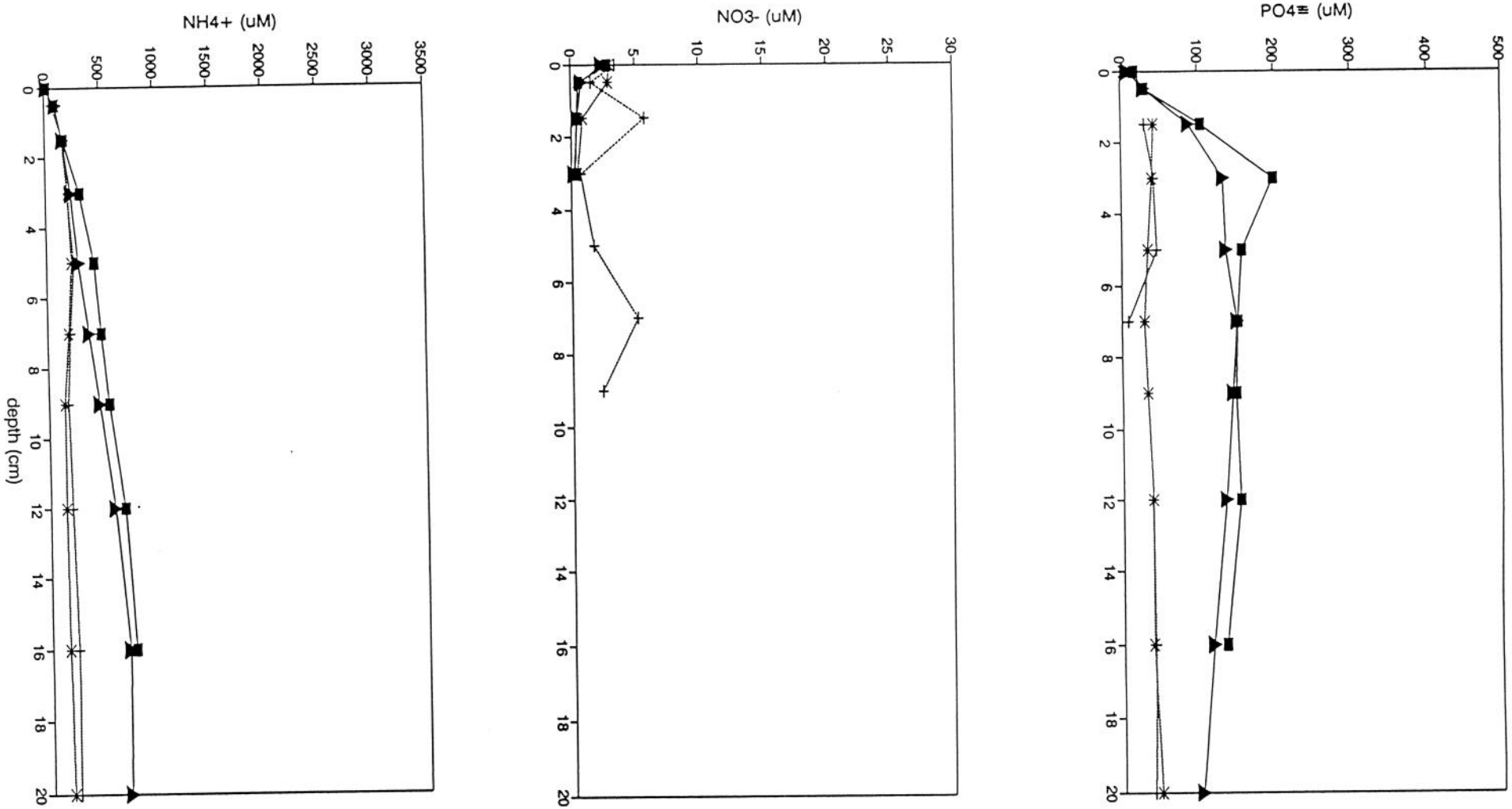
T3 & T8



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BH5 92

T3 & T8

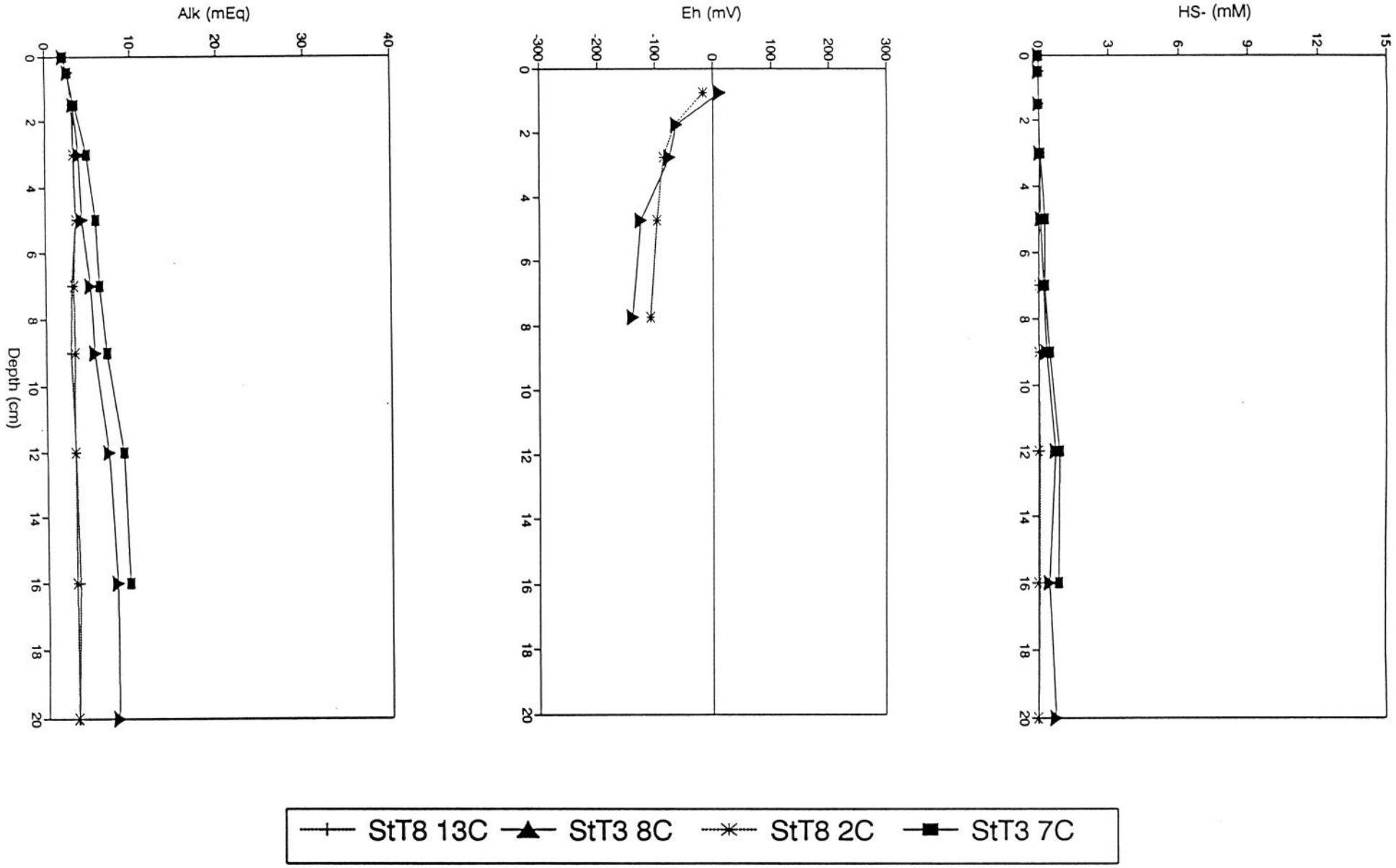
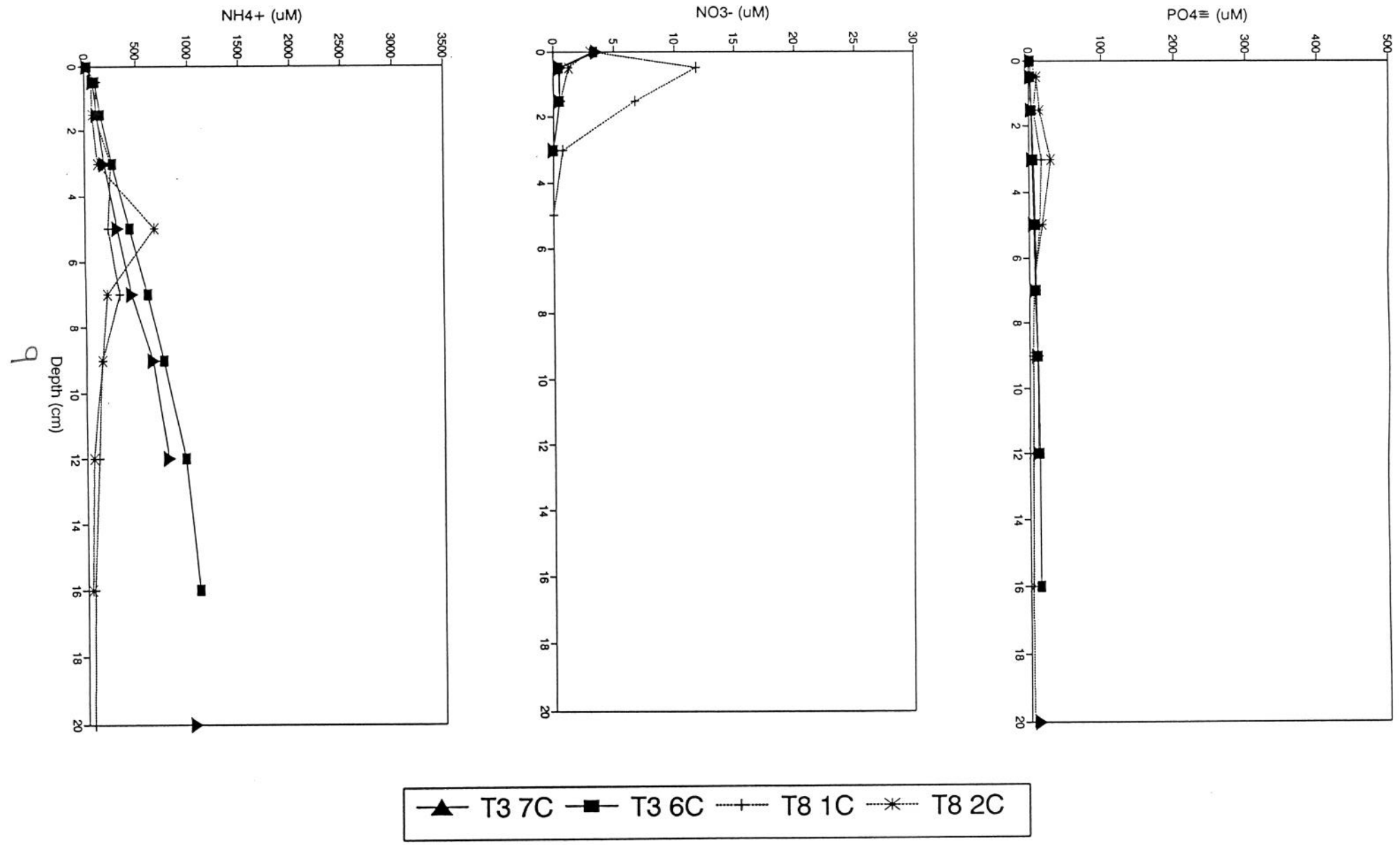


Table 3: Porewater Profiles for Boston Harbor Stations, June, 1992

Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T3/7c	0.0	0.00	20.36	3.57	1.19	2.07	0.00	102
	0.5	0.00	80.40	0.55	1.21	2.40	0.75	69
	1.5	0.02	117.28	0.47	2.24	2.01	1.75	13
	3.0	0.00	193.82	0.00	3.54	2.42	2.75	-57
	5.0	0.15	308.36		6.30	3.71	3.75	-95
	7.0	0.42	450.46		7.40	5.35	4.75	-111
	9.0	0.93	647.11		9.79	8.00	5.75	-120
	12.0	1.65	800.64		11.19	10.64	6.75	-140
	16.0	NA	NA		NA	NA	7.75	-172
	20.0	2.02	1048.40		12.26	13.09	8.75	-155
							9.75	-152
							11.50	-157
T3/6c	0.0	0.01	24.39	3.30	1.73	2.16		
	0.5	0.01	105.12	0.40	1.38	2.64		
	1.5	0.00	153.37	0.50	4.10	2.84		
	3.0	0.10	269.89	0.00	5.93	3.79		
	5.0	0.39	435.23		8.33	5.12		
	7.0	0.76	603.14		8.74	6.69		
	9.0	1.11	756.92		11.60	8.69		
	12.0	2.03	966.81		13.04	11.73		
	16.0	1.98	1093.34		13.29	14.13		
T8/1c	0.0	0.00	10.48	3.17	1.24	2.10	0.00	168
	0.5	NA	115.55	11.79	10.55	2.86	0.75	169
	1.5	NA	97.87	6.74	6.08	2.46	1.75	169
	3.0	0.00	254.63	0.73	16.37	3.07	2.75	34
	5.0	0.00	224.05	0.00	14.17	3.77	3.75	-4
	7.0	0.00	329.71		5.96	2.75	4.75	-21
	9.0	0.00	150.52		4.02	2.48	5.75	-39
	12.0	0.00	116.45		5.17	2.70	6.75	-71
	16.0	0.00	65.13		2.92	2.40	7.75	-88
	20.0	0.00	56.07		3.71	2.35		
T8/2c	0.0	0.02	14.97	3.08	1.29	2.17		
	0.5	NA	60.98	1.25	10.53	2.49		
	1.5	NA	72.95	0.56	14.63	2.57		
	3.0	0.01	127.09	0.00	29.40	2.93		
	5.0	0.01	670.03		17.22	3.92		
	7.0	0.00	204.15		5.20	3.23		
	9.0	0.00	153.93		4.49	2.85		
	12.0	0.00	67.04		3.41	2.24		
	16.0	0.00	42.91		3.24	2.31		

BH6 92

T3 & T8



BH6 92
T3 & T8

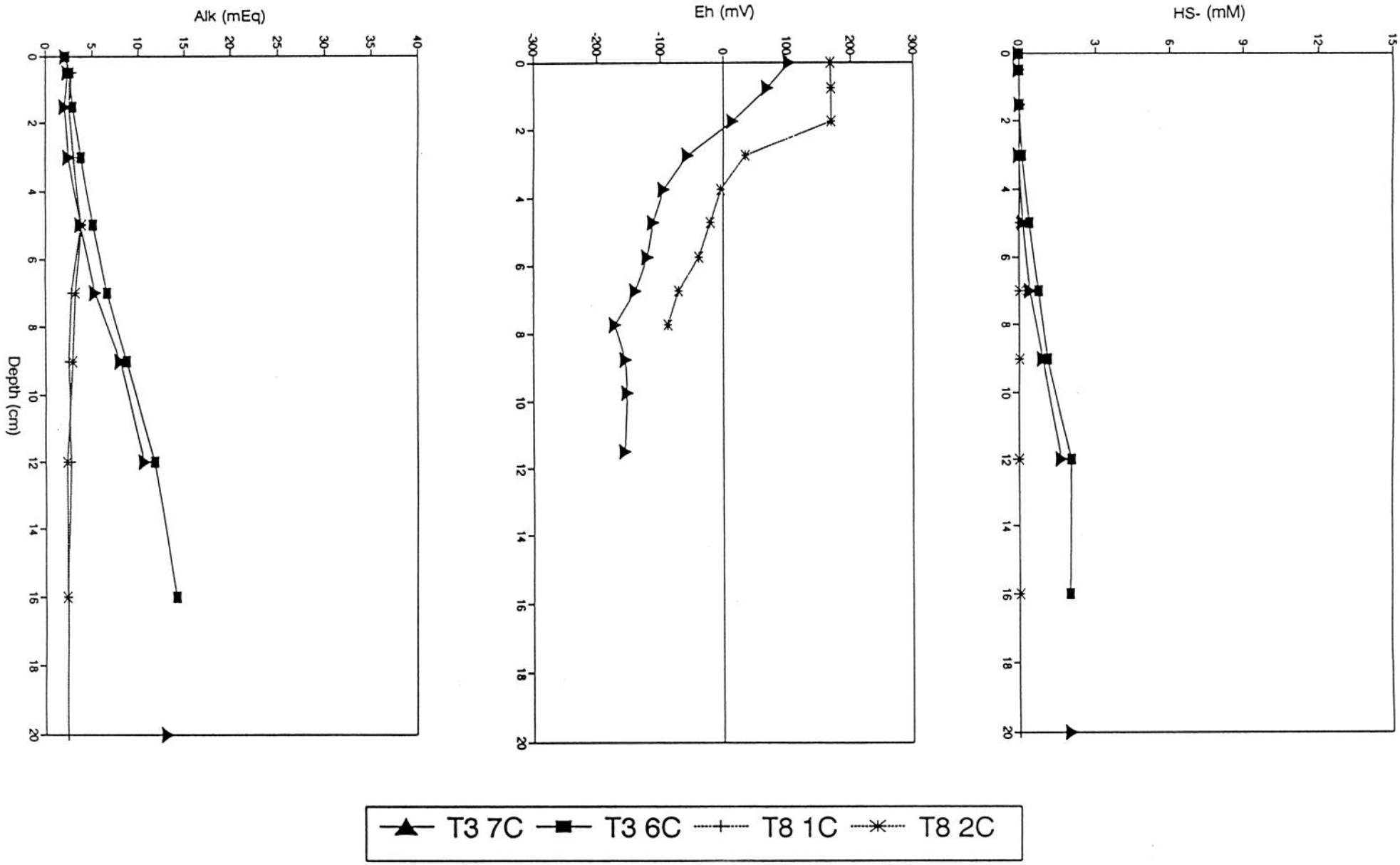


Table 4: Porewater Profiles for Boston Harbor Stations,
August, 1992

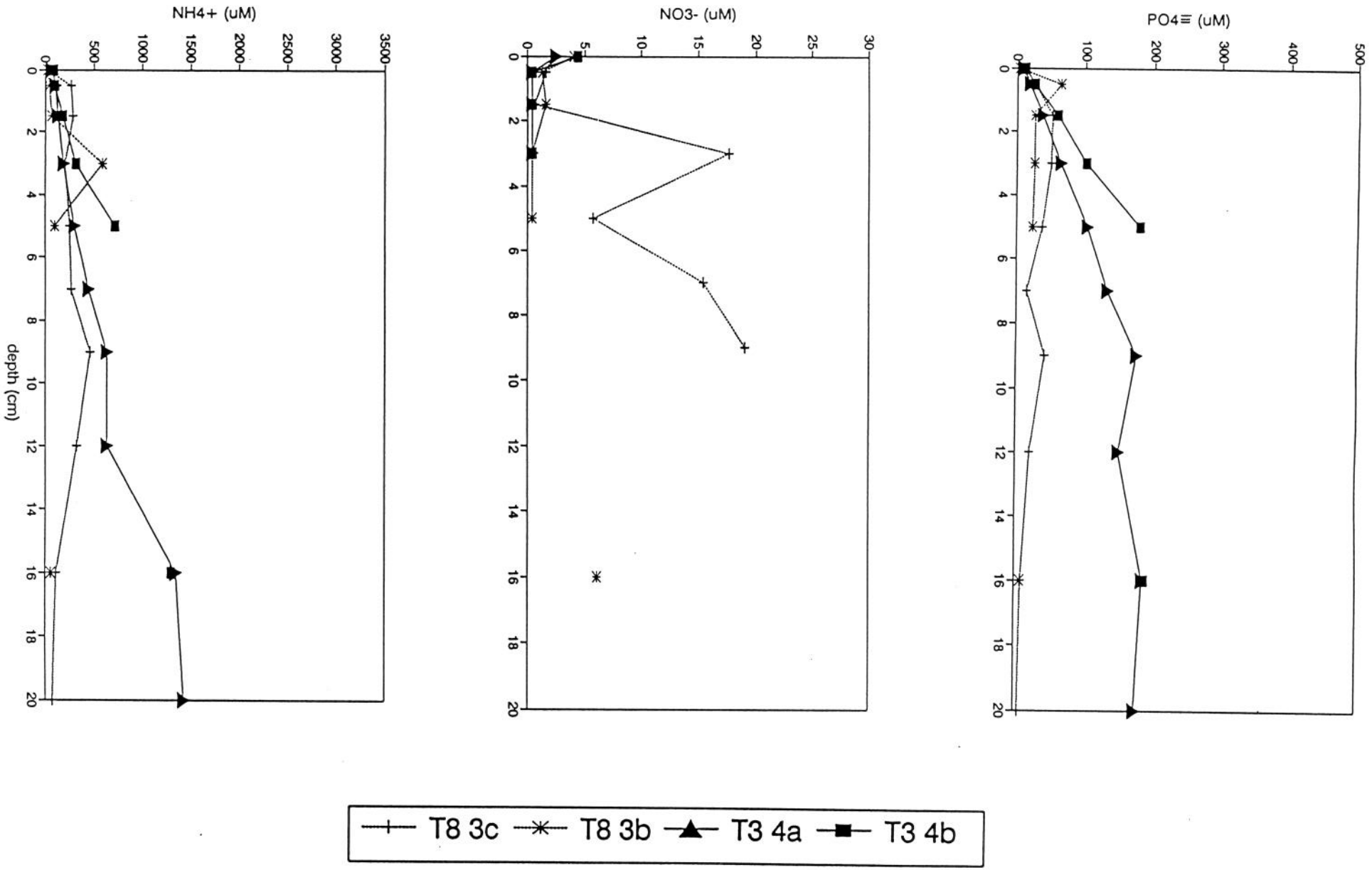
Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T3/4a	0.0	0.00	57.97	2.52	8.22	2.32	0.25	66
	0.5	0.00	98.62	<0.5	17.69	2.52	0.75	0
	1.5	0.00	125.16	<0.5	37.14	2.70	1.75	-85
	3.0	0.02	185.76	<0.5	64.08	3.42	2.75	-176
	5.0	0.07	299.11		102.98	4.45	3.75	-163
	7.0	0.41	443.35		132.41	5.93	4.75	-178
	9.0	0.84	635.87		175.30	7.83	6.75	-185
	12.0	1.34	632.88		150.36	8.62	9.75	-207
	16.0	2.79	1342.55		185.77	16.12		
	20.0	2.97	1429.24		175.80	17.99		
T3/4b	0.0	0.00	88.60	4.36	11.21	2.51		
	0.5	0.00	95.46	<0.5	24.68	2.60		
	1.5	0.01	178.08	<0.5	58.59	3.18		
	3.0	0.08	313.58	<0.5	100.99	3.68		
	5.0	0.91	716.34		180.79	8.09		
	16.0	3.11	1299.11		188.27	18.19		
T8/3c	0.0	0.03	15.46	2.13	1.64	2.28	0.25	274
	0.5	0.00	264.47	1.56	25.38	2.83	0.75	264
	1.5	0.03	279.99	0.62	51.12	3.29	1.75	223
	3.0	0.03	196.43	17.60	49.92	2.93	2.75	77
	5.0	0.00	246.39	5.70	37.15	4.81	3.75	9
	7.0	0.00	264.71	15.40	14.81	3.36	4.75	-80
	9.0	0.00	461.94	19.00	41.84	3.64	6.75	-128
	12.0	0.00	326.59		19.90	3.43		
	16.0	0.02	108.80		8.73	2.90		
	20.0	0.00	67.67		5.83	2.62		
T8/3b	0.0	0.00	14.81	4.00	1.94	2.21		
	0.5	0.02	35.69	1.30	63.49	2.15		
	1.5	0.00	62.63	1.56	25.68	2.42		
	3.0	0.00	585.25	<0.5	25.68	2.21		
	5.0	0.00	95.24	<0.5	22.39	2.60		
	16.0	0.00	54.46	6.04	8.13	2.94		
T2/6a	0.0	0.00	110.08	1.09	11.21	2.57	0.25	53
	0.5	0.05	1010.31	0.74	193.25	7.50	1.75	-147
	1.5	0.36	1175.32	0.50	232.16	10.49	2.75	-171
	3.0	0.86	1136.73	0.72	200.24	10.44	3.75	-179
	5.0	1.01	1193.05	<0.5	177.79	10.69	4.75	-184
	7.0	1.22	1166.78	<0.5	179.79	10.35	6.75	-192
	9.0	1.50	1599.63	<0.5	229.66	12.96	9.75	-200
	12.0	3.25	2339.20		324.43	21.09		
	16.0	4.31	3197.74		267.57	37.11		
T2/6b	0.0	0.00	86.89	1.10	11.71	2.70		
	0.5	0.01	493.24	0.40	171.81	5.17		
	1.5	0.85	882.30	0.50	233.15	9.97		
	3.0	2.06	1364.68	<0.5	193.75	14.42		
	5.0	2.15	1514.89		200.24	15.96		
	16.0	3.72	3442.06		332.41	37.84		

Table 4, con't.

Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T4/5a	0.0	0.01	37.35	1.42	8.22	2.28	0.25	20
	0.5	0.00	208.75	0.67	99.99	3.19	1.75	-30
	1.5	0.01	438.51	0.50	189.26	5.01	2.75	-100
	3.0	0.65	680.08	<0.5	118.44	7.55	3.75	-158
	5.0	1.43	1011.18		196.25	11.25	4.75	-177
	7.0	2.14	1555.39		227.17	16.17	6.75	-194
	9.0	2.87	1930.26		259.59	20.39	9.75	-206
	12.0	5.16	2794.18		389.76	29.68		
	16.0	5.69	3385.47		434.65	38.77		
T4/5c	0.0	0.00	69.69	1.27	12.71	2.47		
	0.5	0.00	344.34	<0.5	171.81	4.44		
	1.5	0.01	515.45	0.50	185.77	5.82		
	3.0	0.69	702.68	0.77	136.90	7.42		
	5.0	1.96	1087.94	<0.5	187.27	12.70		
	16.0	10.16	2915.55		279.04	13.58		
T7/1b	0.0	0.00	37.83		4.23	3.07	0.25	216
	0.5	0.00	89.07		11.71	2.53	1.75	58
	1.5	0.00	103.27		21.18	2.60	2.75	-39
	3.0	0.00	145.15		22.68	2.83	3.75	-62
	5.0	0.07	293.69		78.54	4.09	4.75	-96
	7.0	0.16	796.58		166.82	8.59	6.75	-171
	9.0	0.53	1181.87		196.98	13.18	9.75	-201
	12.0	1.35	1571.31		303.72	18.53		
	16.0	3.19	NA		351.60	30.13		
	20.0	2.78	NA		452.34	36.03		
T7/1a	0.0	0.00	34.69	4.95	4.73	2.39		
	0.5	0.00	90.51	<0.5	12.71	2.57		
	1.5	0.01	151.82	<0.5	34.65	2.87		
	3.0	0.00	316.20	0.58	95.50	4.31		
	5.0	0.04	539.63		166.32	6.39		
	16.0	1.36	2690.05		263.58	27.14		
R4/2b	0.0	0.00	35.87	1.75	4.23	2.35	0.25	57
	0.5	0.00	442.21	1.30	123.43	4.80	1.75	-161
	1.5	0.88	829.75	<0.5	188.77	8.64	2.75	-184
	3.0	4.48	1268.56	<0.5	220.69	13.95	3.75	-194
	5.0	2.66	1679.84		243.13	18.11	4.75	-204
	7.0	3.06	2008.87		182.78	23.05	6.75	-213
	9.0	3.63	2283.68		350.36	25.69	9.75	-218
	12.0	5.07	2672.52		293.00	29.12		
	16.0	4.12	2794.04		291.51	29.87		
R4/2a	0.0	0.00	53.17	0.90	6.72	2.36		
	0.5	0.00	451.77	1.65	136.40	4.52		
	1.5	0.11	699.71	<0.5	143.38	4.31		
	3.0	0.82	1139.95	<0.5	162.83	11.25		
	5.0	0.97	1281.49		197.74	12.91		
	16.0	2.13	2790.80		194.25	27.51		

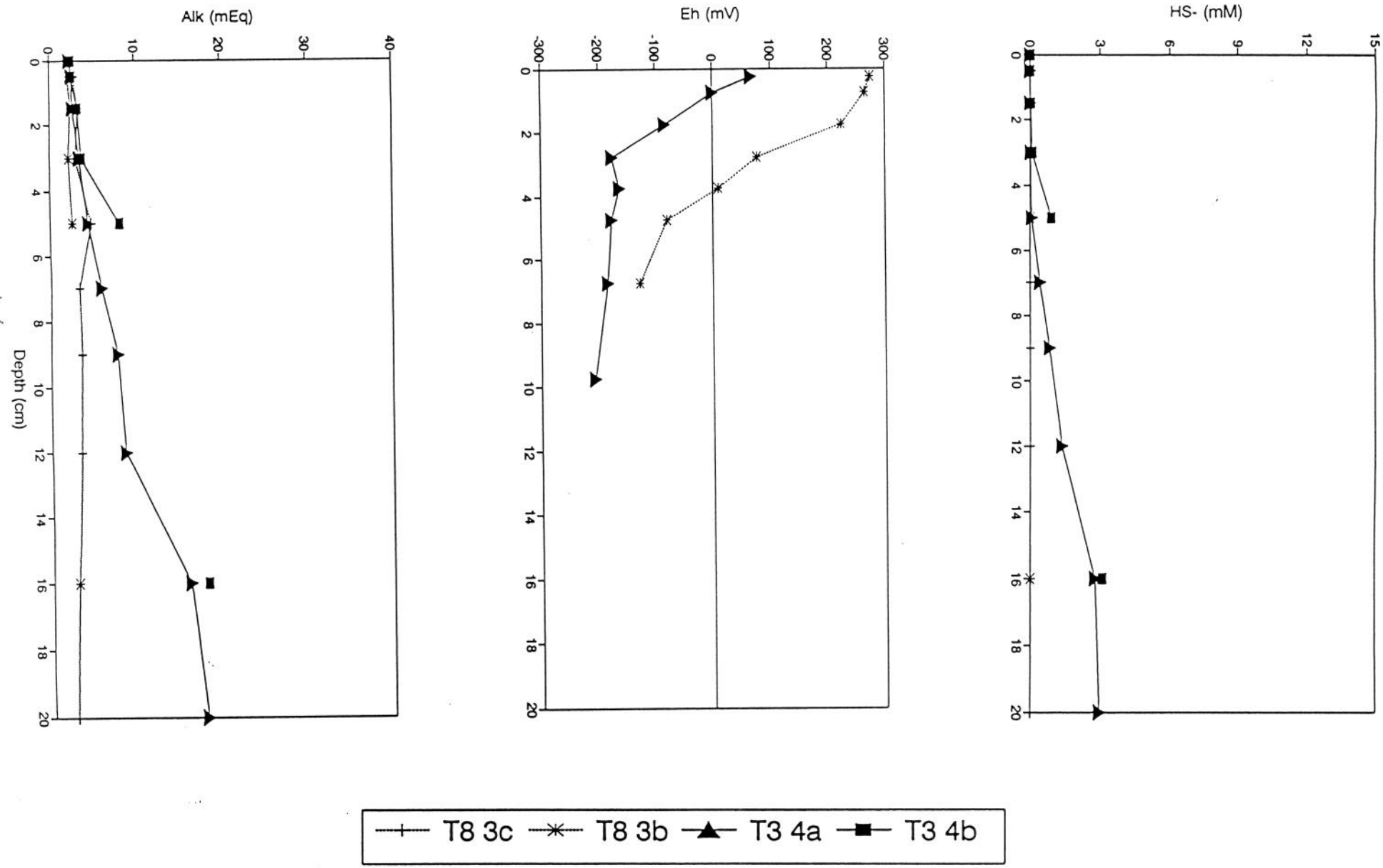
BH8 92

T3 and T8



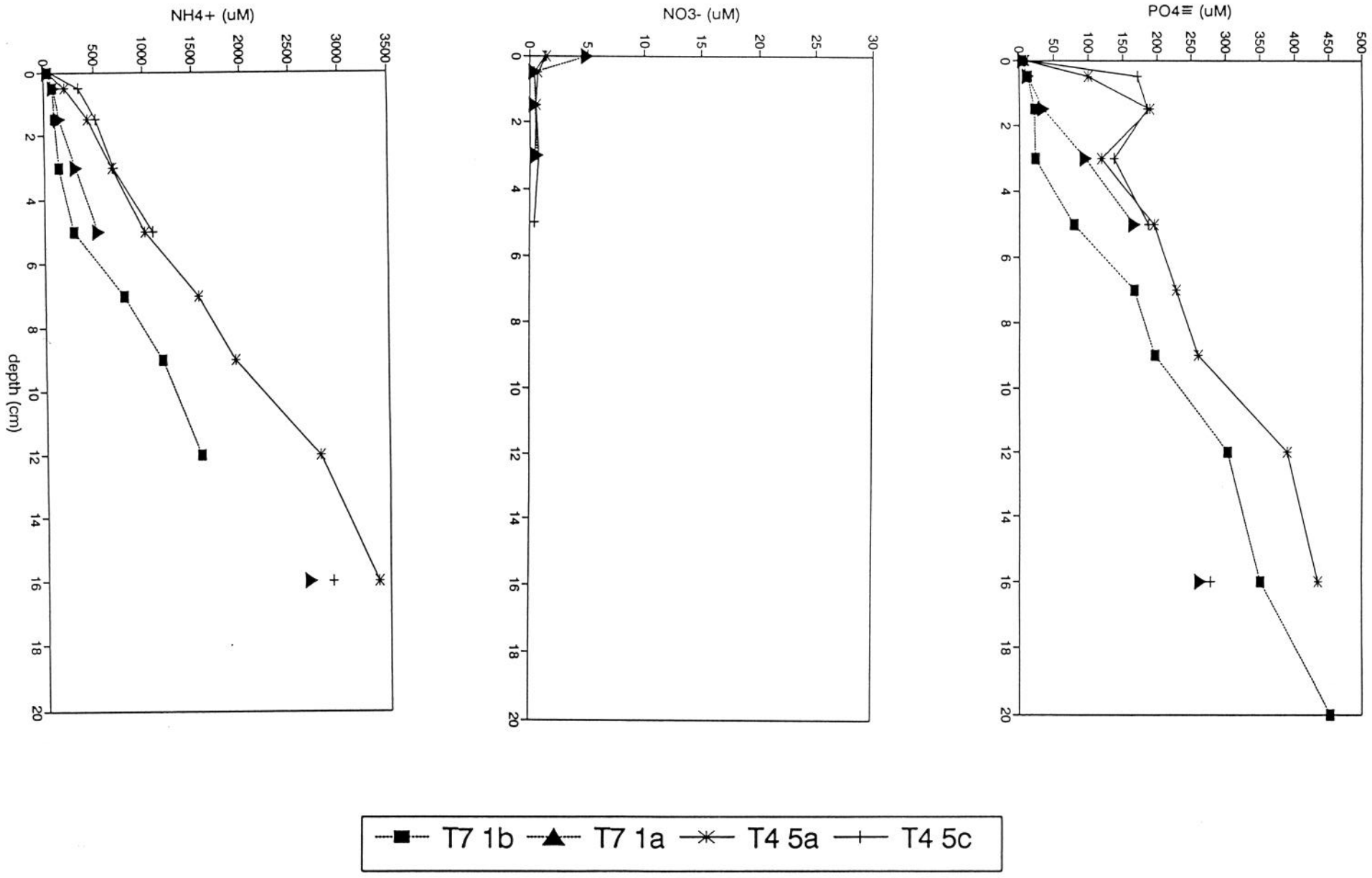
BH8 92

T3 and T8



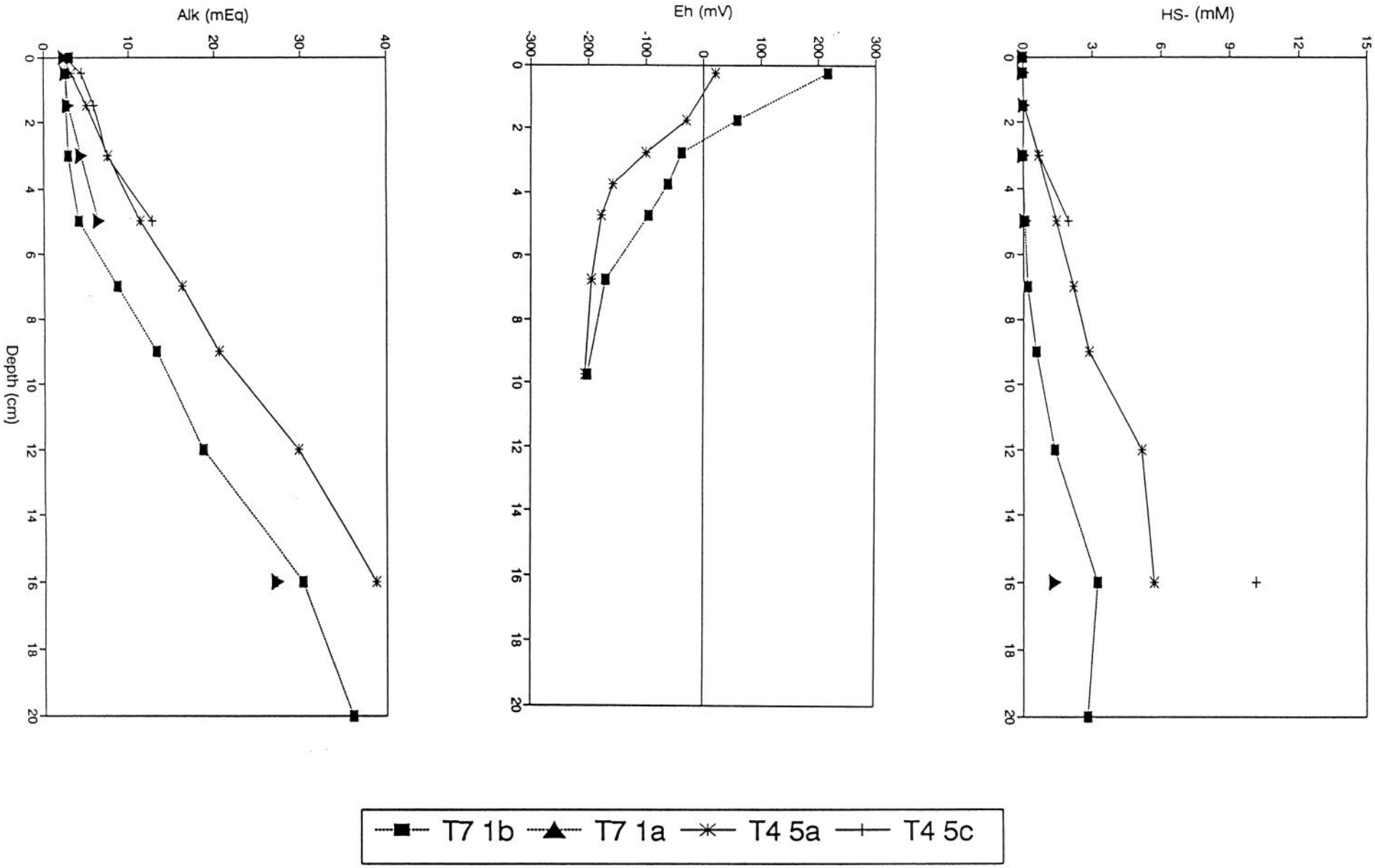
BH8 92

T7 and T4



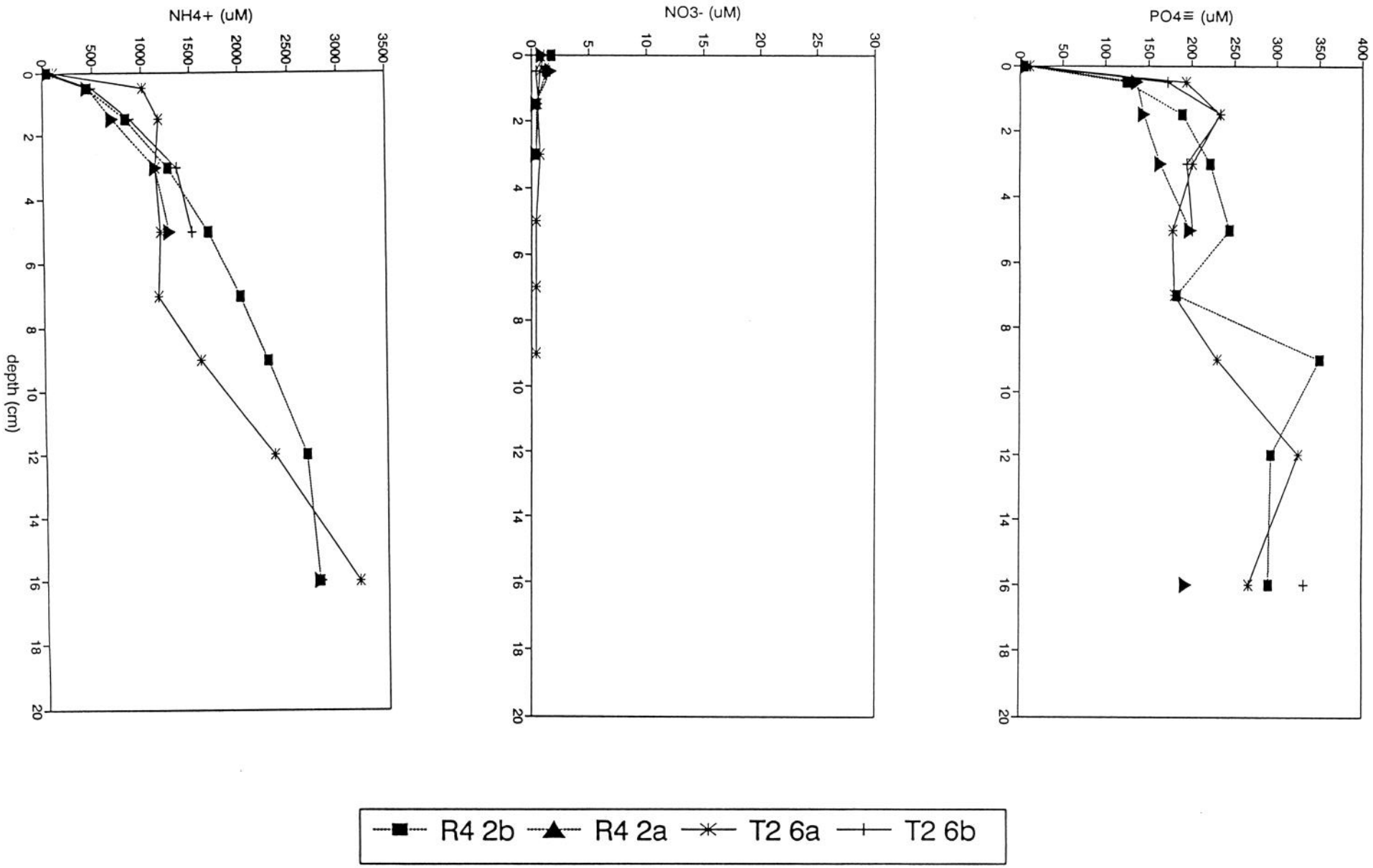
BH8 92

T7 and T4



BH8 92

R4 and T2



BH8 92

R4 and T2

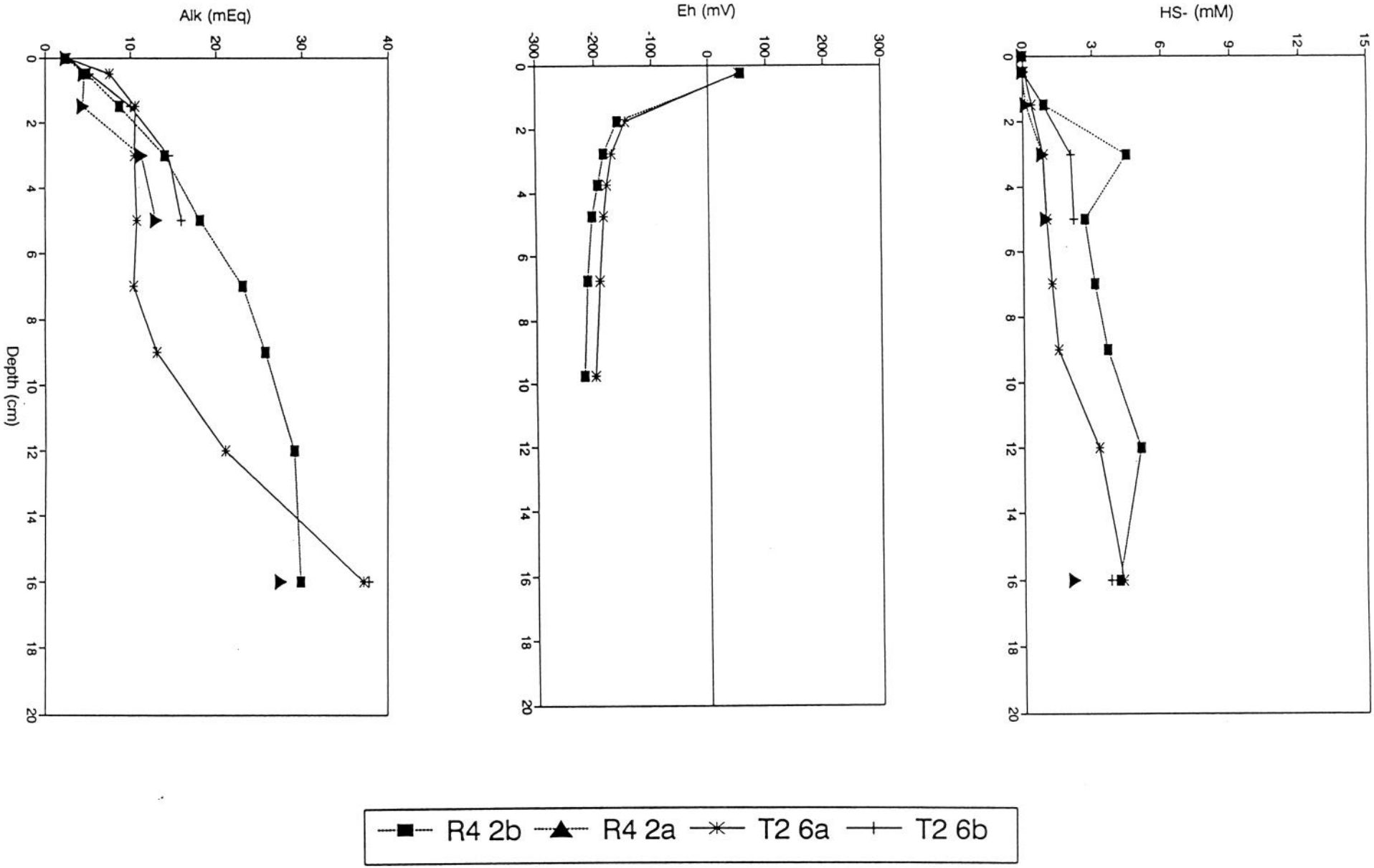
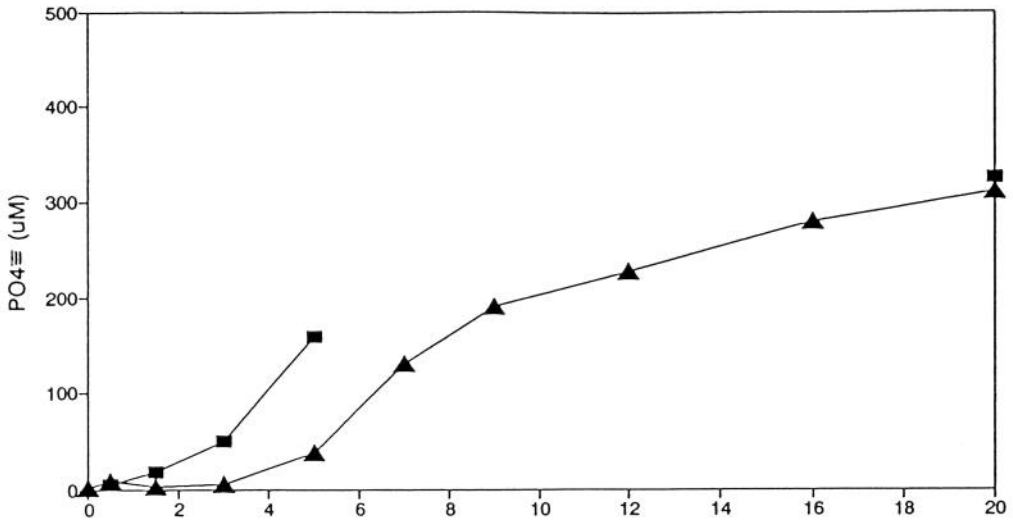


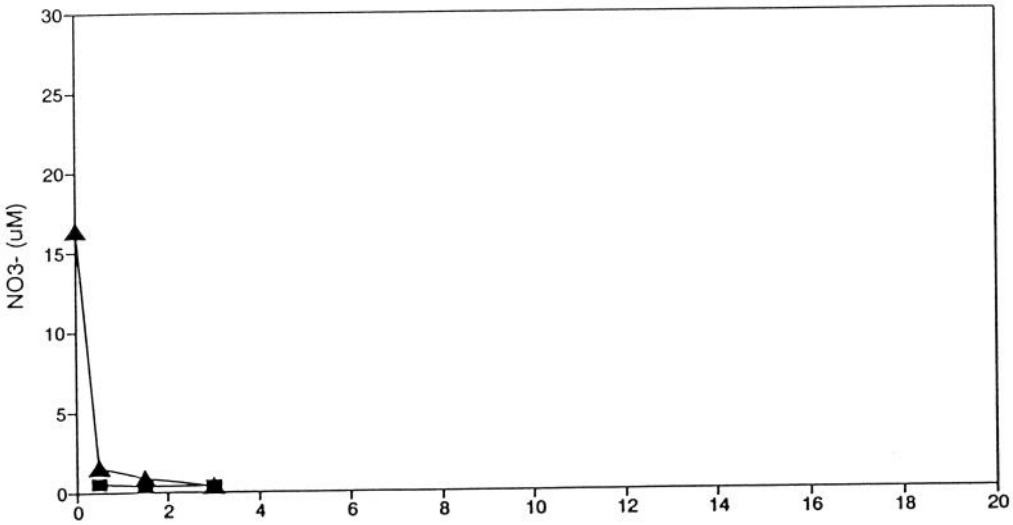
Table 5: Porewater Profiles for Boston Harbor Stations, November, 1992

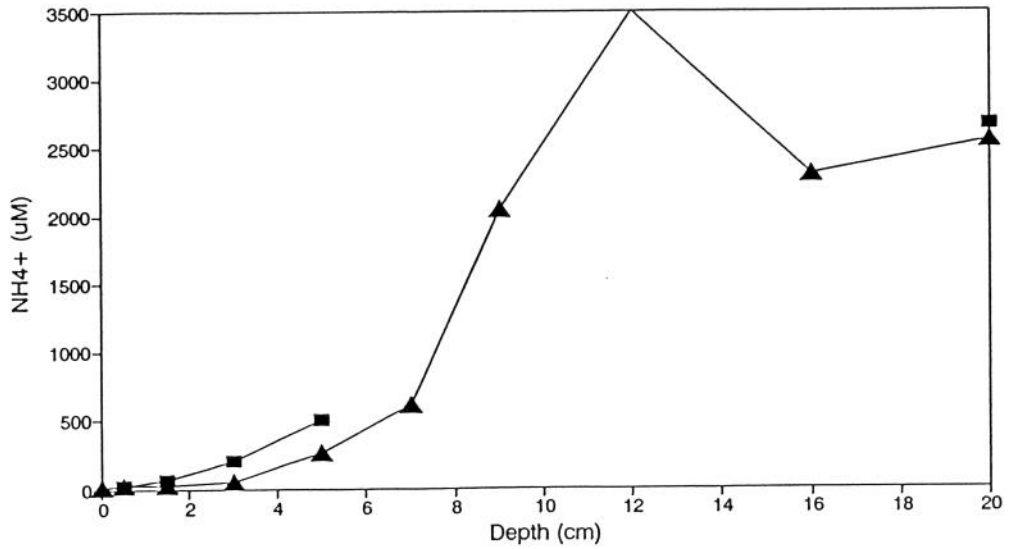
Station/ Core	Depth (cm)	HS- (mM)	NH4+ (uM)	NO3- (uM)	PO4≡ (uM)	alk (mEq)	Depth (cm)	Eh (mV)
T3/1a	0.0	0.01	9.35	16.39	1.78	2.24	0.25	-157
	0.5	0.01	30.59	1.60	8.39	2.60	0.75	-222
	1.5	0.01	26.90	0.86	2.98	2.46	1.75	-373
	3.0	0.02	55.58	<0.5	5.39	2.30	2.75	-396
	5.0	0.04	267.40		37.79	3.52	3.75	-415
	7.0	0.29	610.60		130.20	7.10	4.75	-410
	9.0	3.07	2047.12		190.80	11.70	6.75	-418
	12.0	0.33	3503.43		228.01	18.52	8.75	-442
	16.0	4.83	2298.46		280.21	25.39	10.75	-443
	20.0	5.73	2549.80		311.41	30.75	14.75	-442
							18.75	-440
T3/1b	0.0	NA	NA	NA	NA	NA		
	0.5	0.01	31.52	NA	4.79	2.54		
	1.5	0.01	72.73	0.53	17.99	2.63		
	3.0	0.02	211.89	<0.5	49.19	3.53		
	5.0	0.16	505.44	<0.5	159.00	6.19		
	20.0	6.15	2660.69		325.22	33.05		

BH11 92

T3

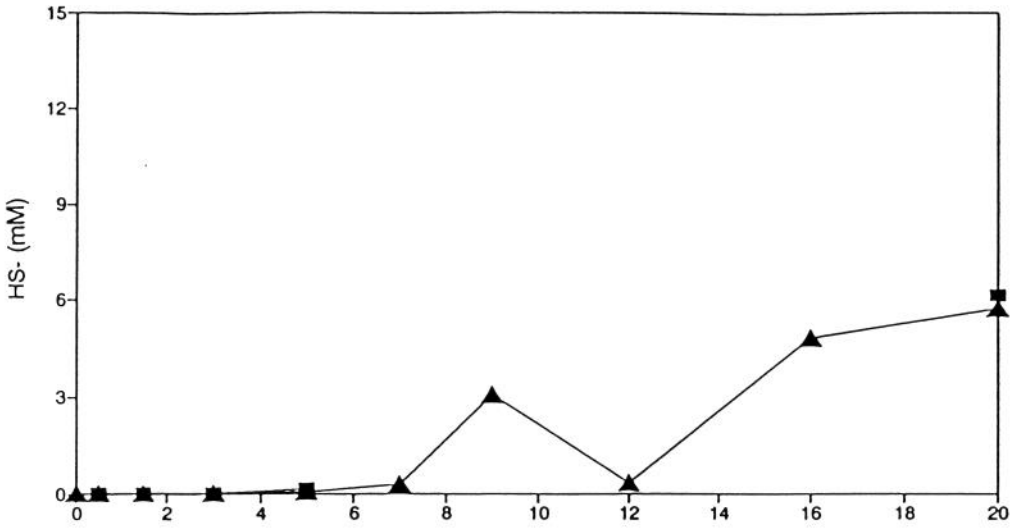


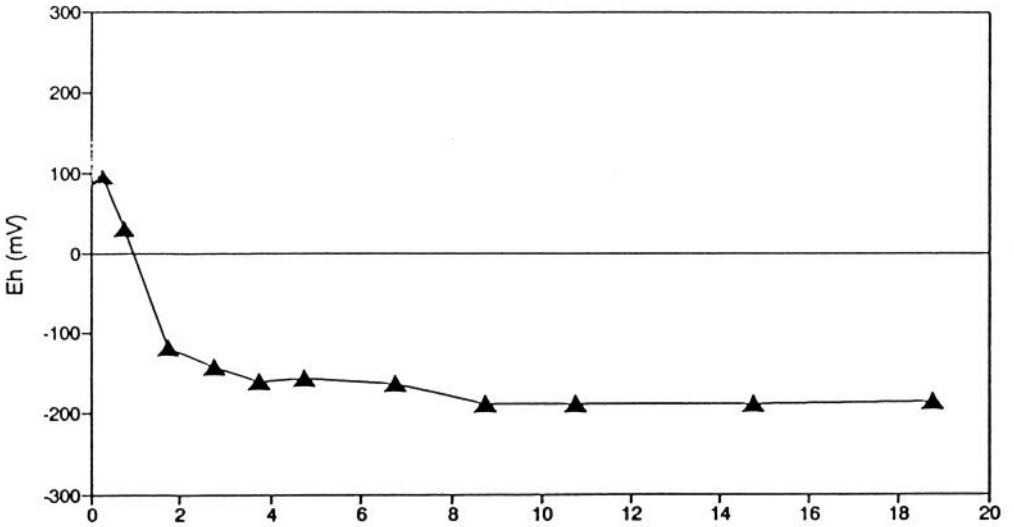


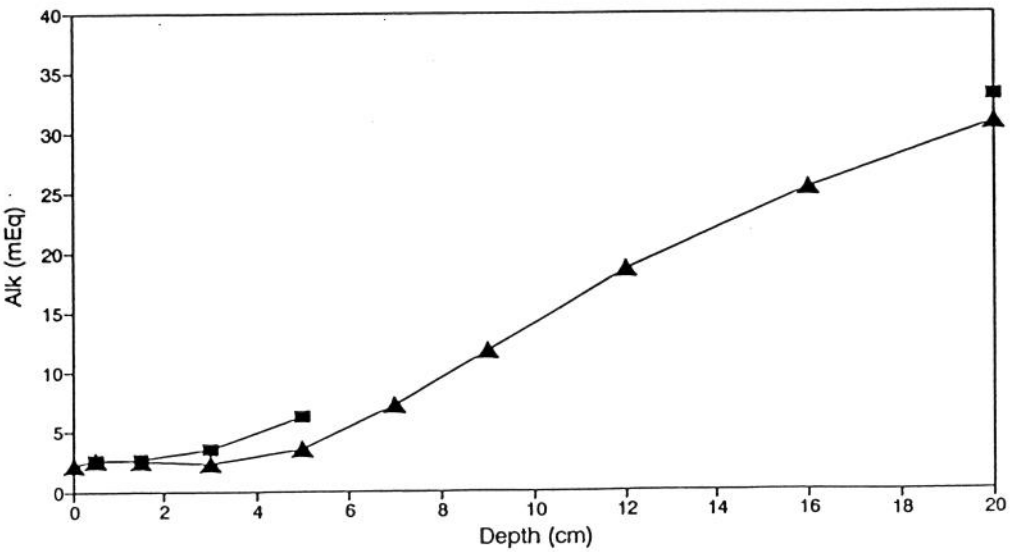


T3 1A — T3 1B

BH11 92
T3


HS- (mM)
15
12
9
6
3
0
0
2
4
6
8
10
12
14
16
18
20


Eh (mV)
300
200
100
0
-100
-200
-300
0
2
4
6
8
10
12
14
16
18
20


Alk (mEq)
40
35
30
25
20
15
10
5
0
0
2
4
6
8
10
12
14
16
18
20
Depth (cm)


T3 1A
T3 1B

Table 6: Porewater Profiles for Massachusetts Bay Stations
October, 1992

Station/ Core	Depth (cm)	NH4+ (uM)	NO3− (uM)	PO4≡ (uM)	Alk (mEq)	Depth (cm)	Eh (mV)
W1/1b	0	4.91	6.51	0.00	2.37	0.25	177
	0.5	28.99	2.92	2.38	2.42	1.25	160
	1.5	71.00	1.06	10.19	2.48	2.25	11
	3	92.63	<0.5	7.79	2.42	3.35	−31
	5	77.13		11.99	2.49	4.25	−13
	7	70.05		17.99	2.45	5.25	−26
	9	65.26		17.39	2.47	6.25	−43
	12	89.95		31.19	2.89	8.25	−46
	16	104.88		29.99	2.97	10.25	−65
	20	88.99		26.99	2.86	14.25	−77
W1/1c	0	9.35	6.07	0.58	2.39		
	0.5	37.99	2.60	3.58	2.45		
	1.5	52.25	0.50	3.58	2.43		
	3	76.55	<0.5	8.39	2.59		
	5	74.83		11.99	2.56		
	20	114.83		31.19	2.81		
G8/2c	0	7.37	4.04	0.00	2.36	0.25	90
	0.5	31.96	1.14	0.58	2.34	1.25	−7
	1.5	47.46	0.92	6.59	2.35	2.25	−36
	3	57.22	<0.5	16.19	2.49	3.35	−62
	5	81.53		30.59	2.70	4.25	−77
	7	91.86		31.79	2.67	5.25	−96
	9	94.74		NA	2.69	6.25	−132
	12	90.91		34.19	2.92	8.25	−99
	16	88.99		53.99	2.86	10.25	−150
	20	98.56		49.19	2.92	14.25	−96
G8/2b	0	13.59	5.27	0.00	2.29		
	0.5	41.43	0.40	3.58	2.22		
	1.5	58.47	1.84	7.19	2.33		
	3	66.03	<0.5	12.59	2.55		
	5	68.52		10.19	2.55		
	20	132.06		43.19	3.07		

Table 6, con't:

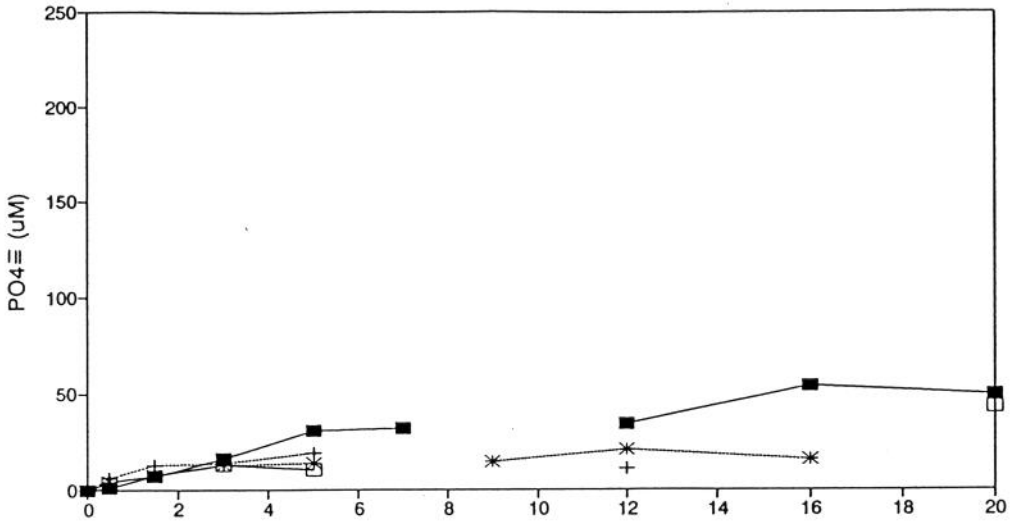
Station/ Core	Depth (cm)	NH4+ (uM)	NO3− (uM)	PO4≡ (uM)	Alk (mEq)	Depth (cm)	Eh (mV)
11/4a	0	10.16	5.63	0.58	2.33	0.25	183
	0.5	40.45	1.37	5.99	2.47	1.25	84
	1.5	74.22	0.71	20.99	2.62	2.25	−7
	3	99.51	0.70	11.99	2.65	3.35	−90
	5	122.27		18.59	2.76	4.25	−113
	7	159.04		44.99	2.94	5.25	−116.5
	9	203.10		127.18	3.33	6.25	−120
	12	234.59		74.99	3.84	8.25	−126
	16	229.50		94.79	3.76	10.25	−120
	20	217.48		102.59	3.57	14.25	−118
11/4c	0	6.66	5.70	1.18	2.39		
	0.5	34.11	1.05	4.79	2.47		
	1.5	51.27	<0.5	8.99	2.51		
	3	92.78	<0.5	12.59	2.69		
	5	107.89		25.79	2.79		
	20	170.37		59.39	3.55		
G6/3a	0	7.58	6.30	0.00	2.39	0.25	114
	0.5	38.27	<0.5	4.19	2.51	1.25	89
	1.5	77.77	0.72	NA	2.58	2.25	76
	3	88.41	<0.5	12.59	2.66	3.35	35
	5	64.22	<0.5	13.79	2.69	4.25	4
	7	107.16	<0.5	NA	3.50	5.25	−12
	9	118.81	<0.5	14.37	2.96	6.25	−29
	12	133.17		20.99	2.96	8.25	−69
	16	118.61		15.59	2.82	10.25	−93
						14.25	−110
G6/3c	0	20.21	5.12	0.00	2.37		
	0.5	123.01	<0.5	5.99	2.81		
	1.5	156.13	<0.5	12.59	2.99		
	3	154.59	<0.5	13.79	2.90		
	5	247.10	<0.5	19.19	3.22		
	12	85.54	<0.5	10.79	2.79		

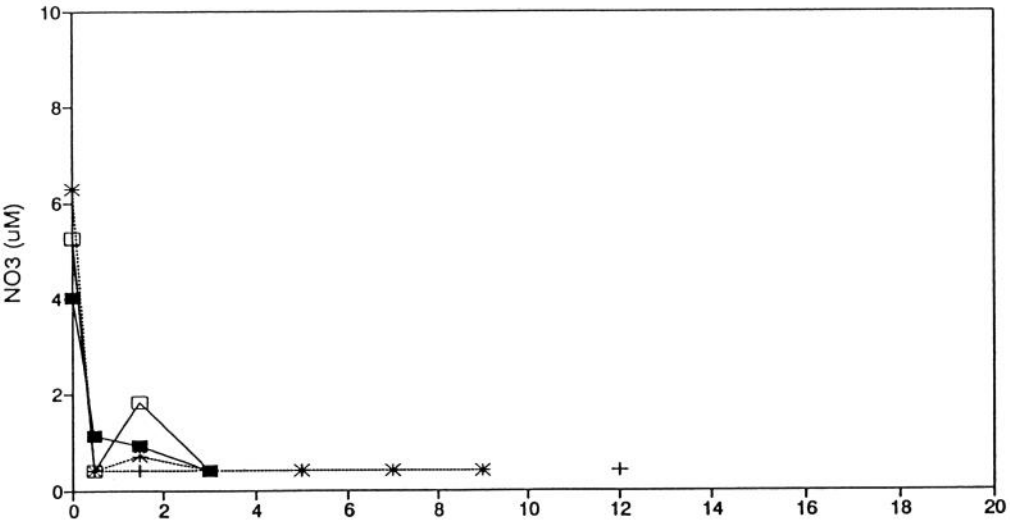
Table 6, con't:

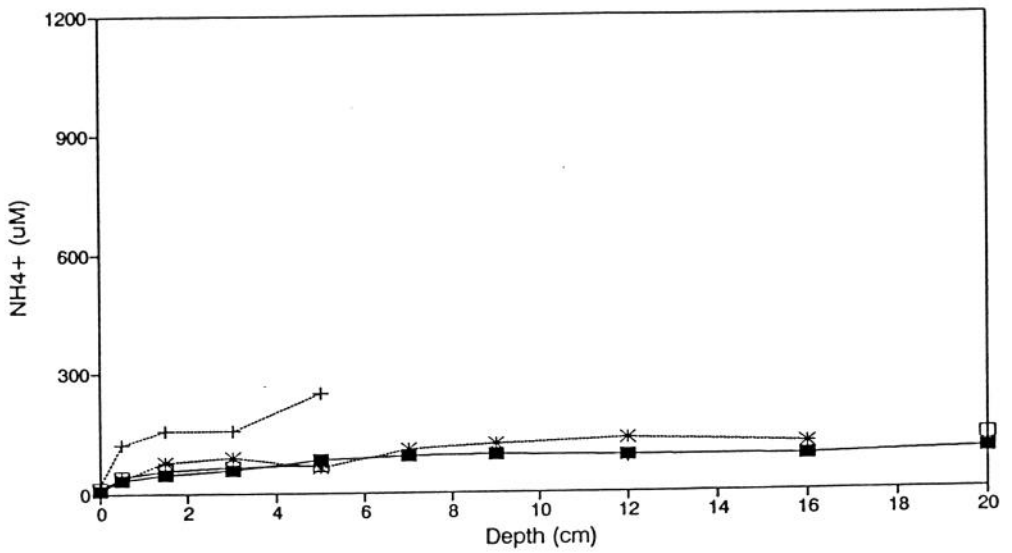
Station/ Core	Depth (cm)	NH4+ (uM)	NO3− (uM)	PO4≡ (uM)	Alk (mEq)	Depth (cm)	Eh (mV)
C3/5c	0	6.76	5.84	0.00	2.40	0.25	129
	0.5	36.81	<0.5	2.98	2.46	1.25	48
	1.5	85.69	<0.5	NA	2.51	2.25	15
	3	153.95	4.14	44.99	2.80	3.35	−45
	5	167.42	<0.5	49.19	2.91	4.25	−66
	7	165.60	<0.5	58.19	3.12	5.25	−64.5
	9	163.78	<0.5	58.79		6.25	−63
	12	156.68	<0.5	66.59	3.50	8.25	−3
	15.5	142.48		43.19	3.02	10.25	−88
C3/5a	0	6.95	5.59	0.00	2.28		
	0.5	38.10	<0.5	5.99	2.29		
	1.5	56.31	0.70	9.59	2.36		
	3	91.17	<0.5	23.99	2.42		
	5	159.09	<0.5	29.99	2.78		
	20	194.13	<0.5	85.79	3.64		

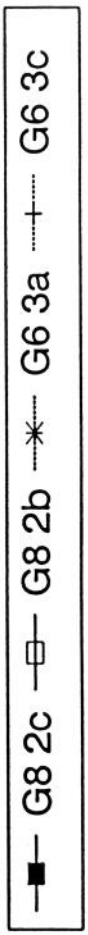
BH10 92

G8, G6


PO4≡ (uM)
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20

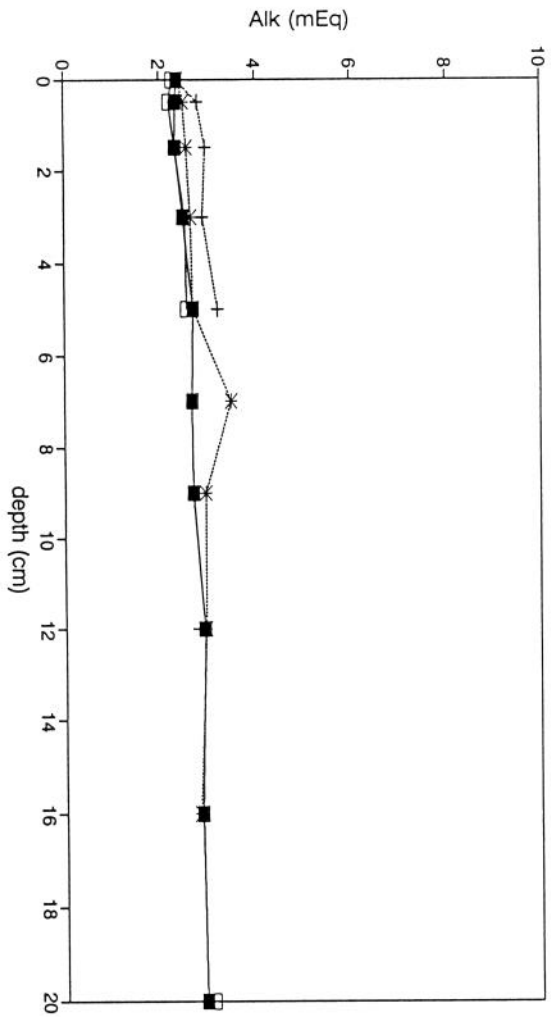

NO3 (uM)
10
8
6
4
2
0
0
2
4
6
8
10
12
14
16
18
20

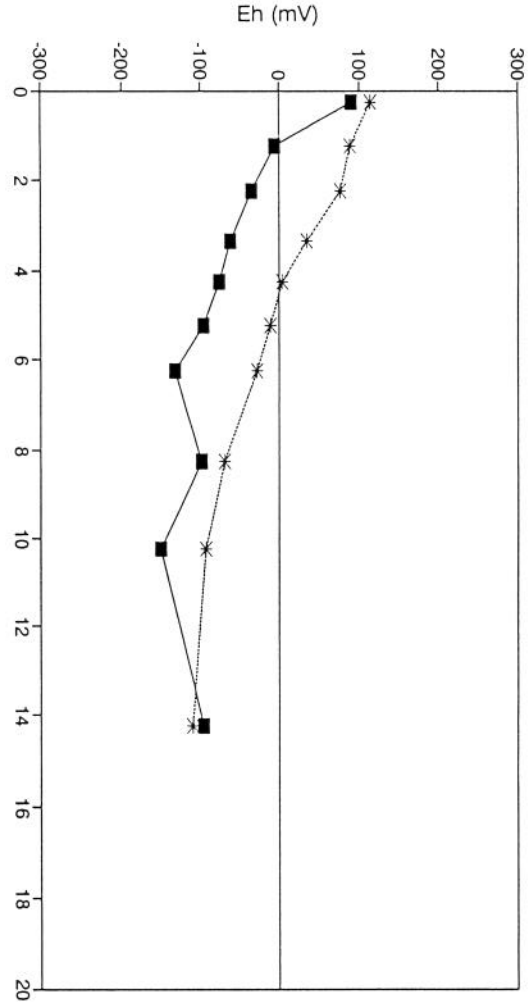

NH4+ (uM)
1200
900
600
300
0
0
2
4
6
8
10
12
14
16
18
20
Depth (cm)


G8 2c
G8 2b
G6 3a
G6 3c

BH10 92

G8, G6

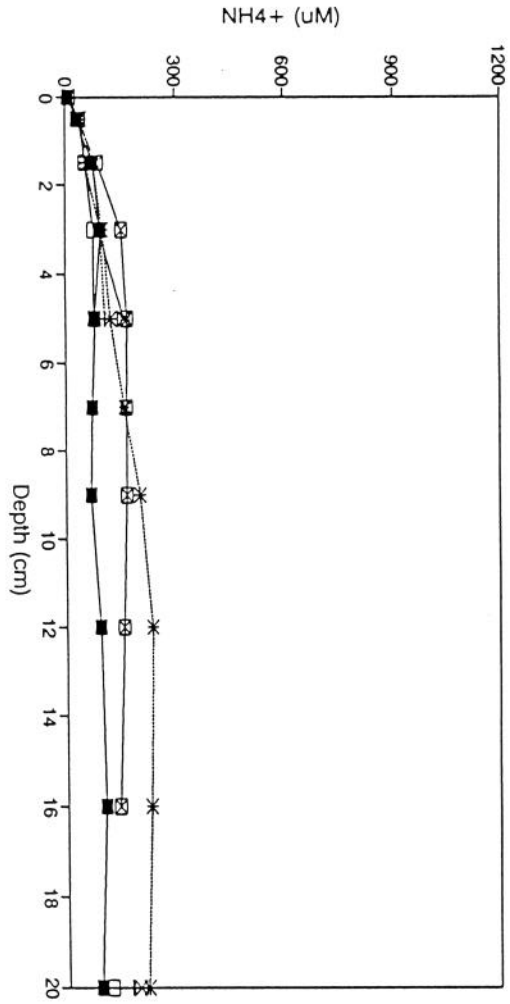


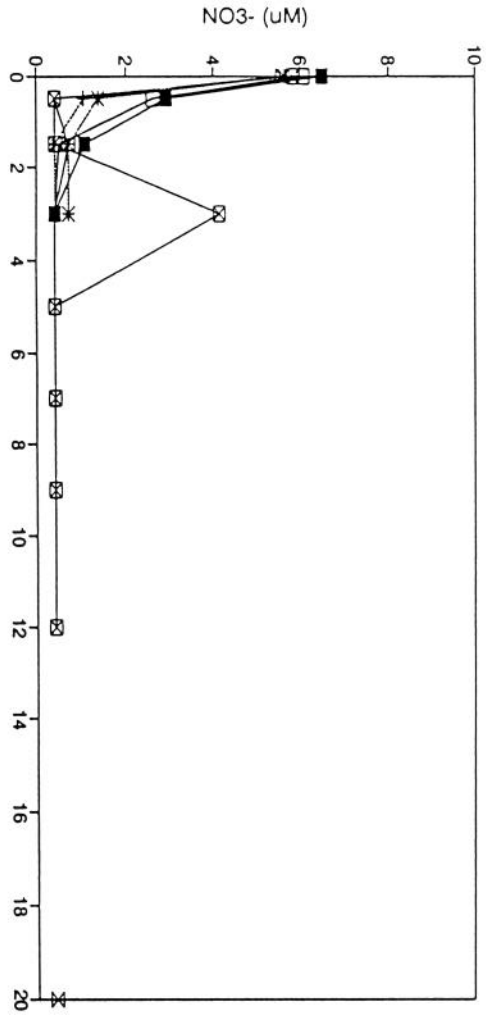


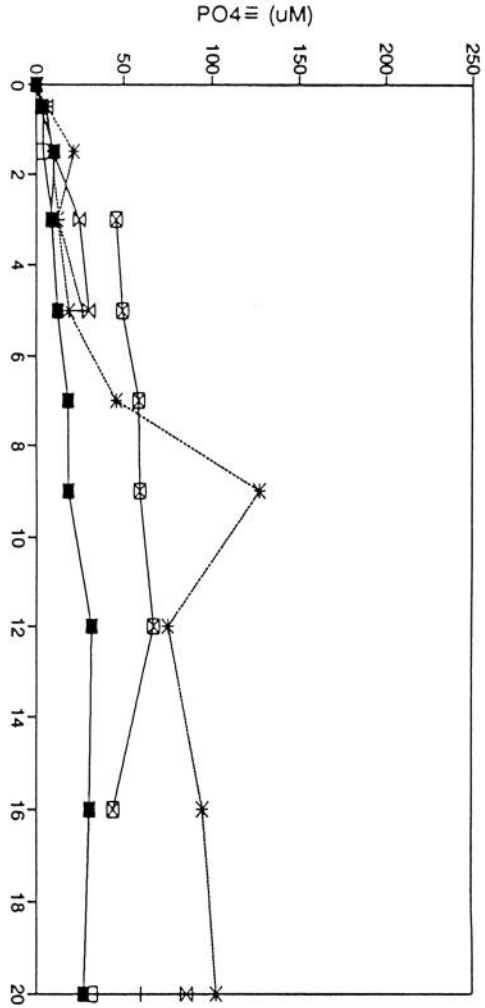
G8 2c G8 2b G6 3a G6 3c

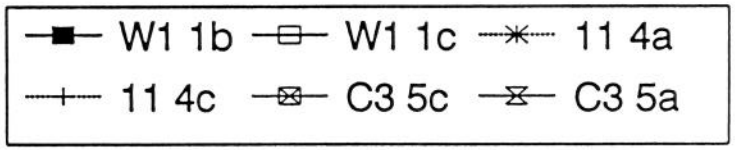
BH10 92

W1, 11, C3









27

BH10 92

W1, 11, C3

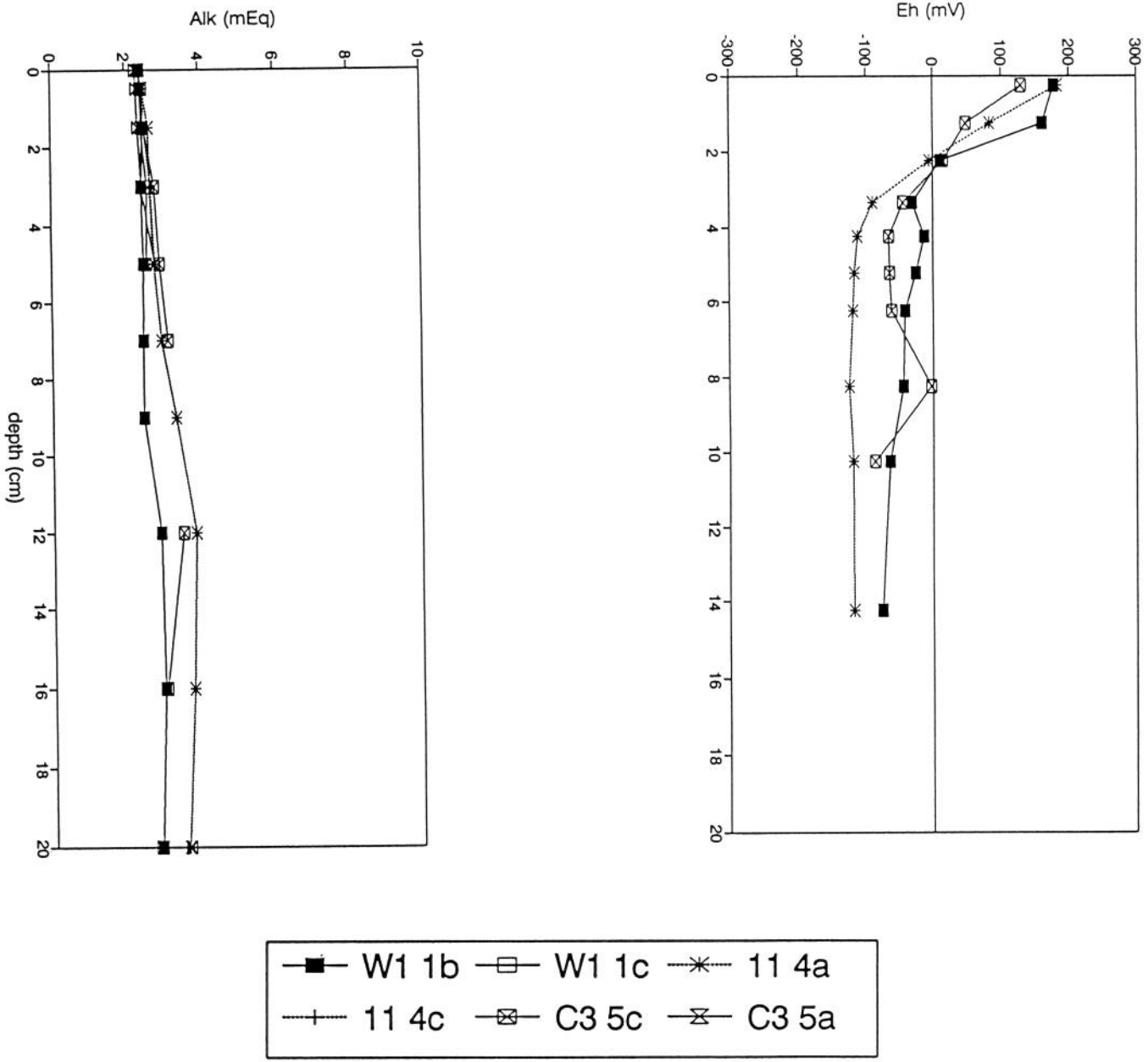


Table 7: Porewater Profiles for Massachusetts Bay Stations
November, 1992

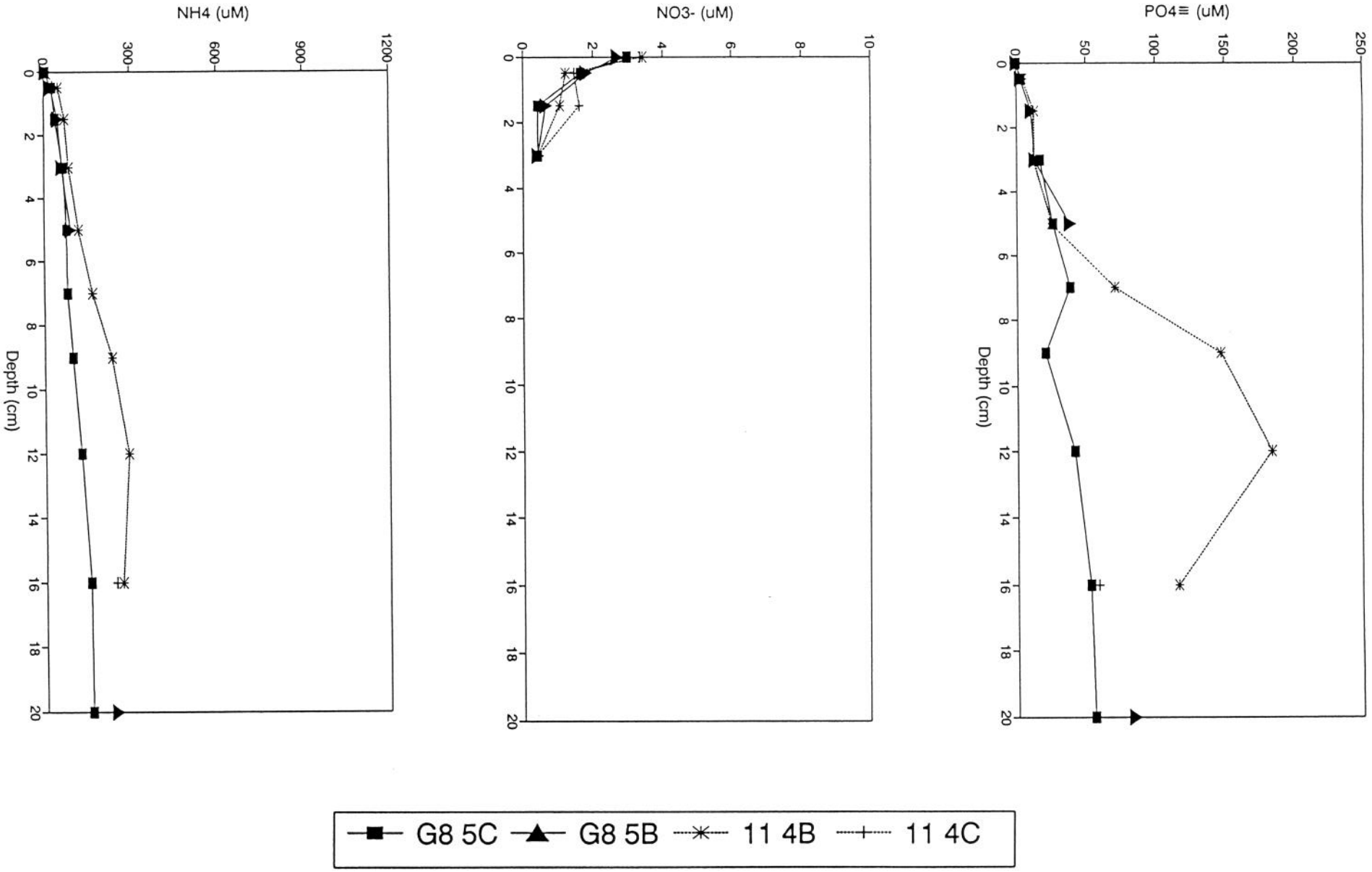
Station/ Core	Depth (cm)	NH4+ (uM)	NO3− (uM)	PO4≡ (uM)	Alk (mEq)	Depth (cm)	Eh (mV)
W1/3b	0	3.04	4.37	0.00	2.22	0.25	79
	0.5	24.05	1.93	3.58	2.31	0.75	5
	1.5	110.83	0.83	6.59	2.31	1.75	13
	3	64.78	<0.5	13.19	2.50	2.75	84
	5	81.04		13.79	2.45	3.75	31
	7	62.56		11.99	2.36	4.75	−7
	9	91.58		18.59	2.40	6.75	25
	12	143.51		119.40	3.73	8.75	−60
	16	90.84		32.39	2.68	10.75	−72
	20	104.33		44.99	2.79	14.75	−91
						18.75	−77
W1 3a	0	4.17	5.46	0.58	2.23		
	0.5	23.30	5.67	5.39	2.52		
	1.5	44.13	0.94	7.19	2.51		
	3	90.23	<0.5	11.99	2.50		
	5	64.45		11.39	2.37		
	20	74.47		19.79	2.60		
G8 5c	0	4.78	2.97	0.00	2.19	0.25	230
	0.5	26.14	1.64	2.98	2.28	0.75	51
	1.5	39.03	<0.5	NA	2.40	1.75	−15
	3	65.21	<0.5	16.79	2.49	2.75	−12
	5	76.92		25.79	2.44	3.75	−48
	7	79.08		38.39	2.53	4.75	−47
	9	96.56		20.39	2.46	6.75	−49
	12	123.95		41.39	2.81	8.75	−51
	16	156.56		52.19	3.21	10.75	−65
	20	158.07		55.19	3.38	14.75	−58
G8 5b	0	3.70	2.71	0.00	2.20		
	0.5	24.61	1.78	2.38	2.28		
	1.5	47.22	0.65	10.19	2.41		
	3	61.61	<0.5	12.59	2.49		
	5	89.89		38.39	2.76		
	20	244.85		83.99	4.19		

Table 7, con't:

Station/ Core	Depth (cm)	NH4+ (uM)	NO3− (uM)	PO4≡ (uM)	Alk (mEq)	Depth (cm)	Eh (mV)
11 4b	0	5.08	3.42	0.00	2.21	0.25	45
	0.5	48.67	1.20	4.19	2.46	0.75	36
	1.5	72.00	1.05	12.59	2.57	1.75	34
	3	85.93	<0.5	12.59	2.64	2.75	−11
	5	119.80		24.59	2.78	3.75	−32
	7	166.65		70.19	3.23	4.75	−56
	9	234.76		146.40	3.99	6.75	−61
	12	290.97		183.00	4.51	8.75	−31
	16	266.47		115.80	3.82	10.75	−30
						14.75	−36
11 4c	0	3.70	3.35	0.00	2.21		
	0.5	24.61	1.46	4.19	2.47		
	1.5	47.22	1.60	11.99	2.59		
	3	61.61	<0.5	11.39	2.70		
	5	89.89		25.79	2.76		
	16	244.85		58.19	3.70		
G9 2b	0	5.90	4.52	0.58	2.25	0.25	168
	0.5	166.38	1.58	36.59	3.31	0.75	180
	1.5	154.55	NA	38.39	3.21	1.75	86
	3	130.76	NA	8.39	2.64	2.75	48
	5	197.84	<0.5	9.59	3.20	3.75	−26
	7	260.13	<0.5	17.39	3.54	4.75	−86
	9	1009.69	NA	5.99	2.11	6.75	−147
	12	425.53	<0.5	5.99	4.23		
G9 2a	0	6.06	4.33	0.58	2.24		
	0.5	214.72	5.03	NA	2.60		
	1.5	63.47	1.69	NA	2.62		
	3	68.22	<0.5	10.19	5.20		
	5	69.80	<0.5	5.39	2.83		
	12	309.53	<0.5	29.99	4.32		

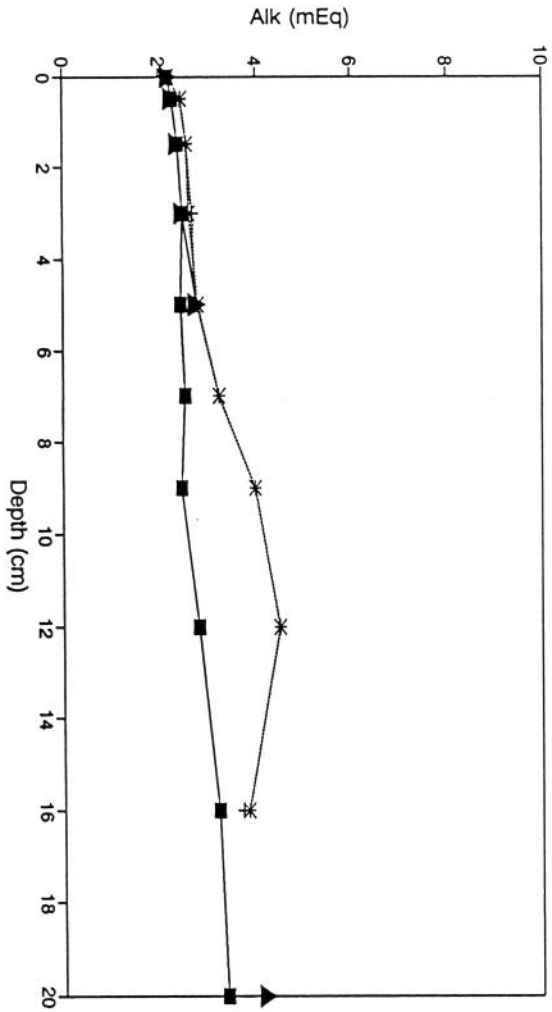
BH11 92

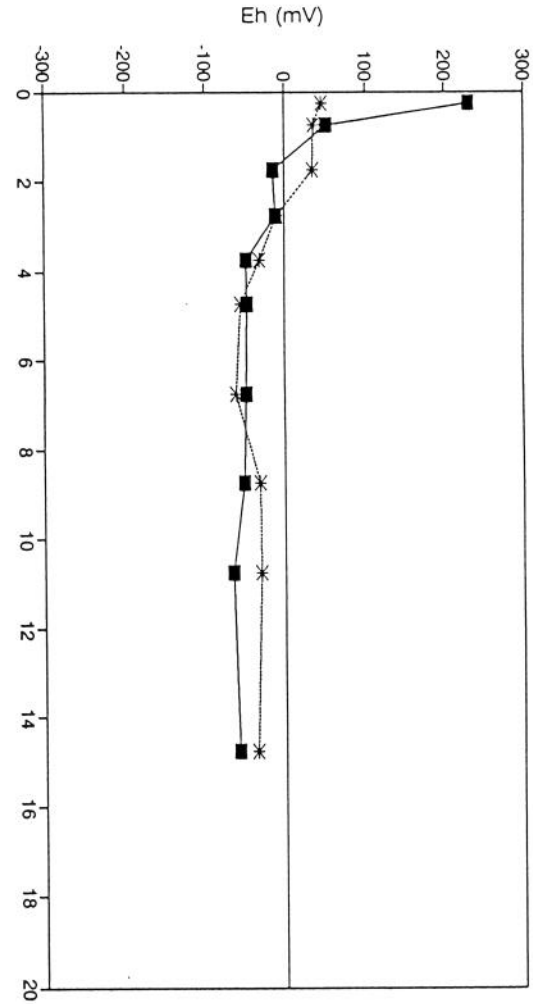
G8 & 11



BH11 92

G8 & 11

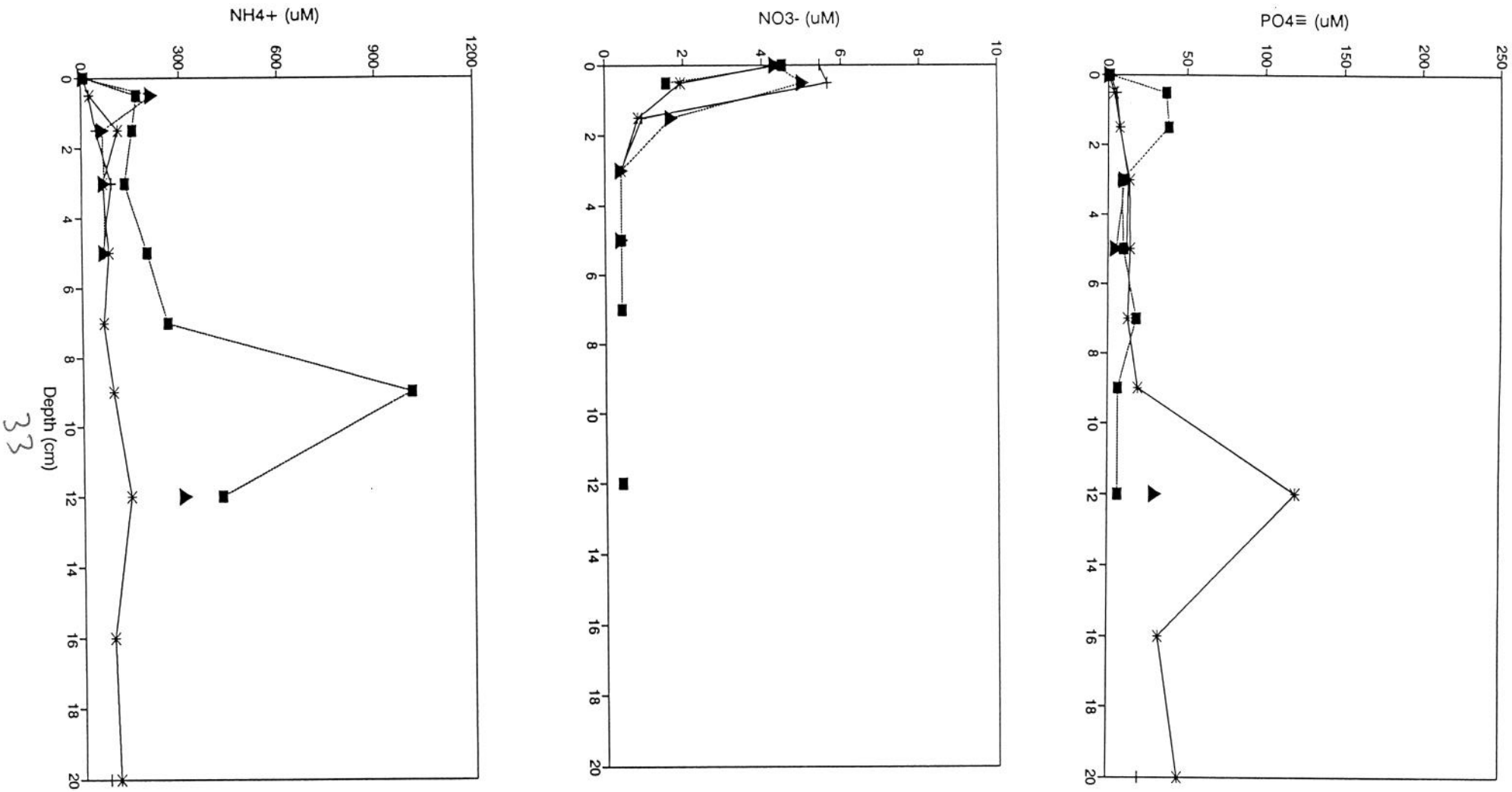




G8 5C — G8 5B — 11 4B — 11 4C

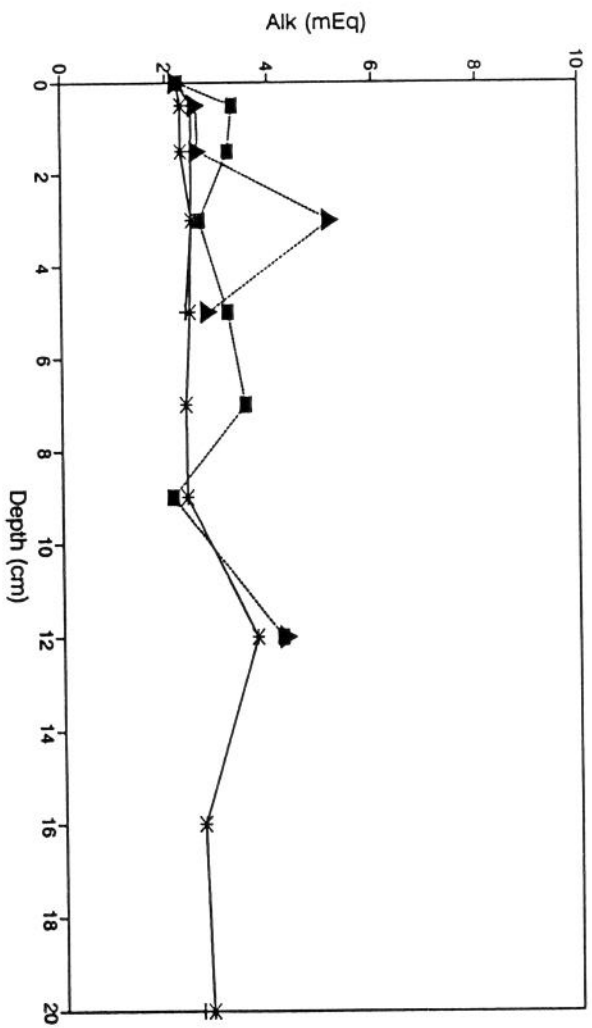
BH11 92

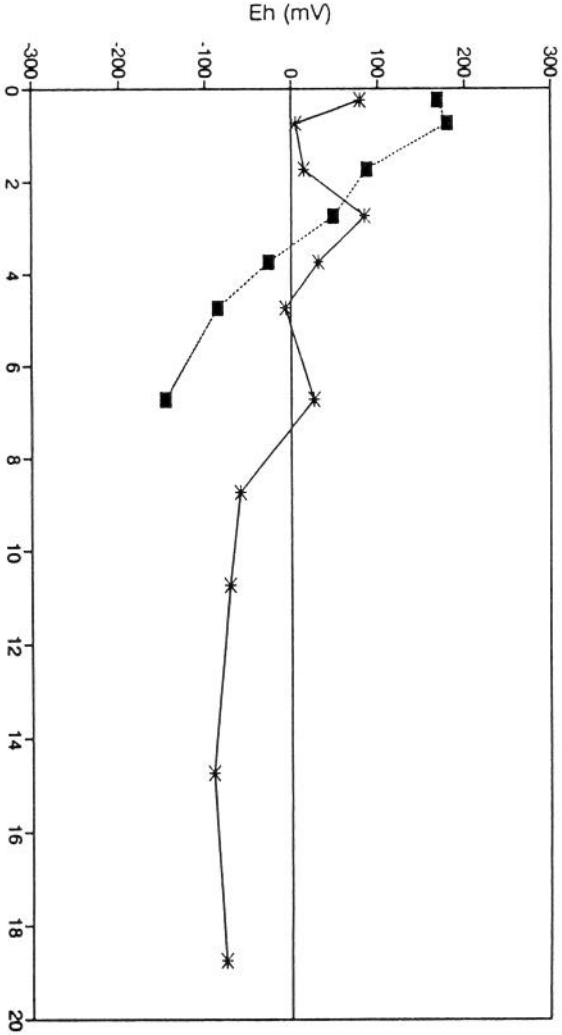
W1 & G9



BH11 92

W1 & G9





W1 3B — W1 3A — G9 2B — G9 2A

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