GEOCHEMICAL DATA FROM ANALYSES OF SEDIMENTS AND PORE WATERS OBTAINED FROM CORES COLLECTED IN HALIFAX INLET, M.V. FREDERICK CREED CRUISE 90 AND HUDSON CRUISE 89-039 ('90)

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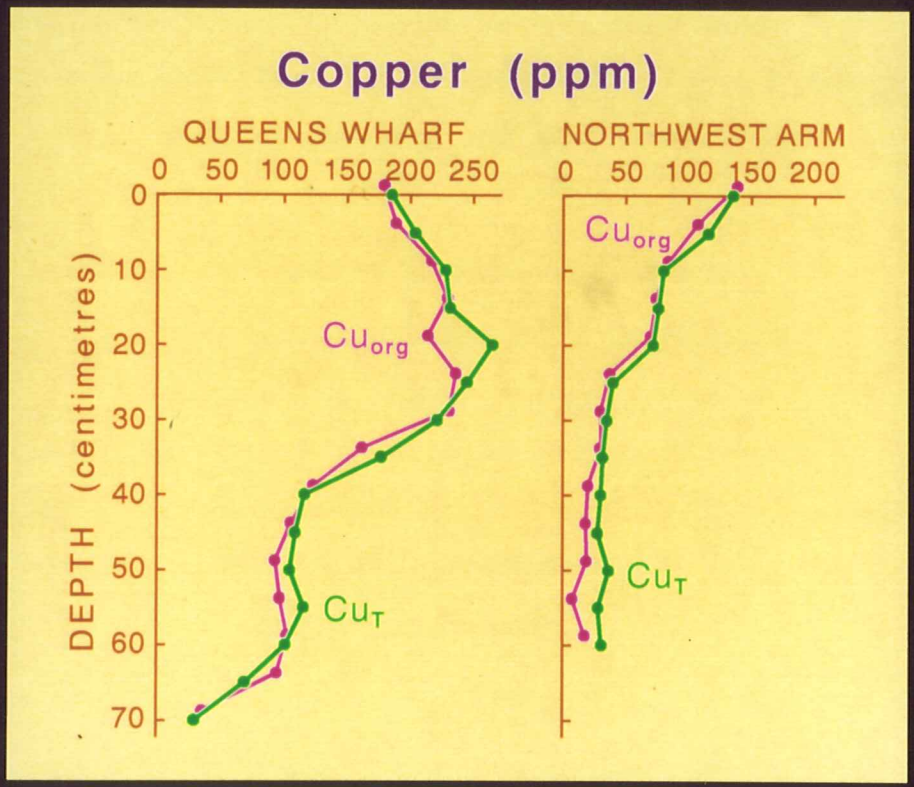

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ABSTRACT

Geochemical data are compiled for sediment and pore water analyses of 12 cores collected from the seabed of Halifax inlet, Nova Scotia. During February 1990, 10 cores were collected from the M. V. FREDERICK CREED (CREED 90 Cruise) and during May 1990, 2 cores were collected from the CSS HUDSON (Cruise 89-039). Core station locations were chosen to be representative of different sedimentary and depositional environments, and to obtain a series of cores that would provide high resolution of the upper 100 cm of sediment, as well as some stratigraphic information at lesser resolution from prehistoric sediments below the anthropogenic layer (HUDSON 89-039).

Sediment analyses included sediment texture, water content, organic carbon, $CaCO_3$ and total metals (Si, Al, Mg, K, Fe, Mn, Ca, Cu, Zn, Ni, Cr, Pb, Li, Sn, Cd and Hg). Chemical leach techniques were used to determine the potential labile metal partitioning (Fe, Mn, Ca, Cu, Zn, Ni, Cr and Pb) in these sediments and included sequential leach analyses for: (1) weak acid leachable metal, (2) easily reducible metals, (3) moderately reducible metals, and (4) residual metals. In addition, separate analyses for organically bound metals were performed using H_2O_2 as an oxidant. Metals analyzed after this treatment included Fe, Mn, Cu, Zn, Ni, Cr and Pb.

Pore water analyses included ammonium, hydrogen sulfide, silica, sulphate, total alkalinity, Na, Mg, K, Ca, Fe, Mn, pH and free electrons ($p\epsilon$).

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Analytical Data Plots (continued)

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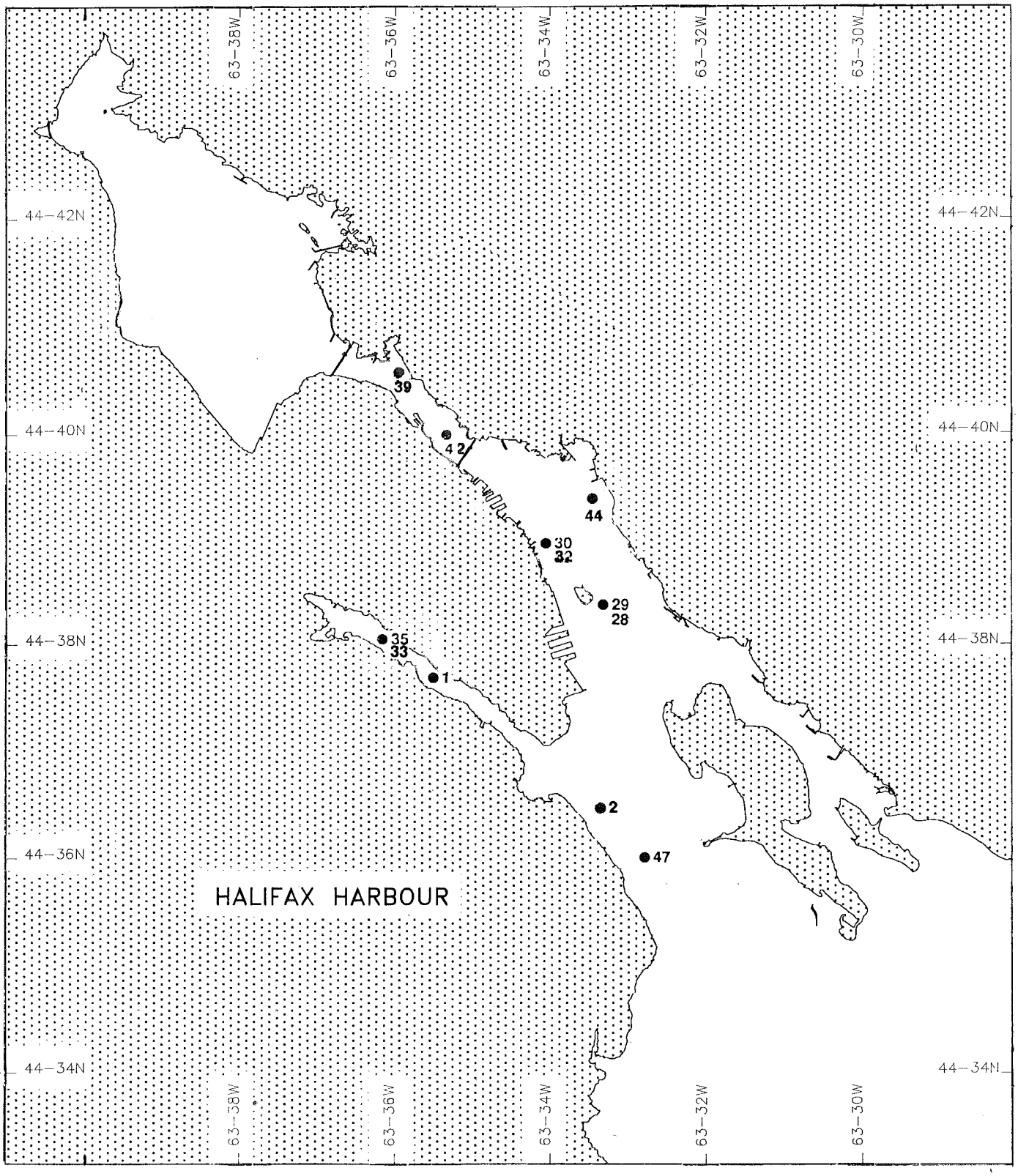


Figure 1. Station locations in Halifax inlet for core samples. Cores 28, 32, 33 and 47 were Lehigh gravity cores and cores 29, 30, 35, 39, 42 and 44 were Eckman-style cores from the Creed 90 cruise. Cores 1 and 2 were piston cores from the Hudson 89-039 cruise.

INTRODUCTION

Four gravity and 6 Eckman-style box cores and 2 piston cores from Halifax Inlet, Nova Scotia, (Fig. 1) have been analyzed for a number of geological and geochemical parameters. Core samples were collected from the Bedford Institute of Oceanography vessels M.V. FREDERICK CREED (CREED 90 Cruise) during February 1990 and from CSS Hudson (Cruise 89-039) during May 1990. The gravity and box cores were collected during the February sampling period and the piston cores were collected during the May sampling period. This report contains analytical results for both sediment and pore water subsamples. Core station locations were chosen to be representative of different sedimentary and depositional environments, and to obtain a series of cores that would provide high resolution of the upper 100 cm of sediment, and stratigraphic information at lesser resolution from a few sites at depths greater than 1 m in the sediment column.

METHODS

Sampling

The AGC Lehigh gravity coring system had a capacity of obtaining up to 1.5 m long, 10 cm in diameter cores from fine-grained sediments. Box coring was done using a specially designed and modified Eckman-style corer 30 cm wide. Push cores 10 cm in diameter were sub-cores taken from these box cores for geochemical testing. The AGC large diameter piston coring system with a capacity of obtaining up to 15 m long, 10 cm in diameter cores from pelagic sediments was used routinely for piston coring. Piston cores were split and subsampled at 5 cm intervals or greater intervals. All other cores were vertically extruded and sampled at selected 1 cm intervals.

Sediment pH and $p\epsilon$ analyses were conducted on the freshly exposed surfaces of the extruded cores prior to subsampling. Sediment pH was determined using a combination pH electrode that was standardized with Palitsch buffer at pH 8.2 (Whitfield, 1969). A precision of ± 0.05 pH units was achieved routinely within a 2

minute time period. A combination platinum electrode, standardized in Zobell solution, was used to determine the redox potential as $p\epsilon$ (Whitfield, 1969). Voltage was recorded for 90 s to account for electrode drift. Redox potential was calculated from the potential difference relative to the standard hydrogen electrode. Precision was estimated to be ± 0.2 $p\epsilon$ units.

Subsamples from the cores were taken immediately after redox measurements had been completed. Approximately 50 cm^3 of mud was obtained by inserting a modified plastic syringe piston-subsampler into the sediment. This subsampling was performed in an open atmosphere. It was assumed that oxygen effects were minimal for short exposure times. Intervals for subsampling were 1 cm for all box cores and the top 15 to 30 cm of most gravity cores. The deeper portions of the gravity cores were subsampled at 5 cm intervals. Sediment subsamples were placed in 50 mL plastic centrifuge tubes, sealed and refrigerated at 4 to 10 °C until the pore water could be extracted.

Pore water was extracted from the sediment subsamples by centrifugation at 3000 rpm for 30 minutes in a Sorvall^R RT600B refrigerated centrifuge. Between 5 and 20 mL of pore water were obtained from most samples. After centrifugation, pore water was decanted from the centrifuge tubes and filtered through 0.4 μm Nuclepore filters. Pore water subsamples were immediately analyzed for pH, total alkalinity, ammonium, phosphate and silica. The remaining pore water was acidified (pH 2) with HCl and stored for later metal analyses for Fe and Mn. The sediment remaining in the centrifuge tube was sealed and placed in refrigerated storage for later analyses for total and extractable metals, grain size, total carbon and organic carbon.

Pore Water Analyses

Dissolved ammonia (NH_4^+) in pore water was determined by colorimetric absorbance of the oxidized nitrogen complex in a ferrocyanide solution, as described by Solorzano (1969). Absorbance was measured at 640 nm.

Dissolved sulfide (S^{2-}) in pore water was determined using a colorimetric method described in Cline (1969).

Dissolved silica (SiO_2) in pore water was determined by colorimetric analysis of the reduced silicomolybdate complex. This method was adapted from Strickland and Parsons (1968), as described by Mann and Gieskes (1975). A Varian model 634 light spectrometer was used to measure absorbance of this complex at a wavelength of 812nm.

Dissolved sulphate (SO_4^{2-}) in pore water was determined by an indirect atomic absorption spectrophotometry method. A 0.1 mL aliquot of 0.3 M barium chloride was added to a 1 mL sample of pore water. This provided an excess of barium for the precipitation of sulphate as barium sulphate. This precipitate was removed from solution by centrifuging. The excess barium concentration left in solution was determined by flame atomic absorption spectrophotometry and was used to calculate the initial concentration of sulphate in the sample. The precision for dissolved sulphate concentrations was ±1 mM.

Total alkalinity (ALK_{pw}) was determined on a 1 mL pore water sample. A potentiometric titration was completed for each sample with an automatic titrator. A microelectrode was used to measure the pore water pH during titration with 0.008 N HCl in 0.6 N NaCl. Alkalinity precision was ± 0.04 mN (Edmonds, 1970).

Total Fe_{pw} and Mn_{pw} in pore water were determined by direct flameless atomic absorption spectrophotometry. Aqueous samples (pH = 1.5-2.0) were injected directly into the atomization chamber of a Varian 975 with a GTA 95 graphite furnace. Standards were prepared in seawater containing negligible amounts of these metals compared to the concentrations in the samples. All instrumental parameters followed the manufacturers recommendations.

Sediment Analyses

Water content (WATER, as % of total wet weight) was determined by measuring weight loss of samples after drying at 60 °C for 48 hours.

Sediment grain size analyses were conducted on wet samples using a 0.063 mm sieve. The sediment mass > 0.063 mm was classed as sand. Sediment < 0.063 mm was classed as silt and clay (mud). A Coulter Counter Model TAII^R was used to determine the silt and

clay % fraction in the mud component using 30 and 200 μm apertures. Subsamples for Coulter Counter analyses were disaggregated in a 5 % solution of sodium metaphosphate in an ultrasonic bath. Sediment < 0.063 mm and > 0.004 mm was classed as silt and sediment < 0.004 mm was classed as clay. Gravel size particles were not included in the analyses. The mean grain size for the mud fraction (silt and clay) are reported along with the standard deviation, kurtosis, and skewness.

The sediment was freeze dried and lightly disaggregated with an agate mortar and pestle and used for analyses of total carbon, organic carbon, leachable and total metals.

Total carbon (C_T in % of dry weight) was determined from washed and dried samples using a Leco carbon analyzer.

Organic carbon (C_{org} in % of dry weight) was determined in a similar manner to total carbon except, that the inorganic carbon was removed by 1 N HCl treatment prior to determining the carbon content. The precision was ±0.2 % for both the C_T and C_{org}.

$CaCO_3$ was computed from the difference between C_T and C_{org}.

The sequential leach analyses (Fitzgerald et al, 1987) include:

(1) Weak acid leachable metal (Fe_{WA}, Mn_{WA}, Ca_{WA}, Cu_{WA}, Zn_{WA}, Ni_{WA}, Cr_{WA} and Pb_{WA}) in 25 % acetic acid, pH 2 for 16 h, as described in Chester and Hughes (1967).

(2) Hydroxylamine leachable metal (Fe_{HA}, Mn_{HA}, Ca_{HA}, Cu_{HA}, Zn_{HA}, Ni_{HA}, Cr_{HA} and Pb_{HA}) in 1 M NH_2OH-HCl for 16 h, as described in Chester and Hughes (1967).

(3) Heated hydroxylamine leachable metal (Fe_{HHA}, Mn_{HHA}, Ca_{HHA}, Cu_{HHA}, Zn_{HHA}, Ni_{HHA}, Cr_{HHA} and Pb_{HHA}) in 0.04 M NH_2OH-HCl, pH 2, at 80 °C for 16 h, as described in Tessier et al (1979).

(4) Leach residue metals with concentrations computed relative to the original mass (Si_R, Al_R, Mg_R, K_R, Fe_R, Mn_R, Ca_R, Cu_R, Zn_R, Ni_R, Cr_R and Pb_R) were determined using the Buckley and Cranston (1971) HF-H_3BO_3 total decomposition method.

The leach residue dry weight is reported as "Residue" in mg remaining of the initial 1000 mg of sample. The "weight loss" due to the sequential leaching can be computed as:

Weight Loss(%) = 100 (1 - Residue / 1000).

The sequential sum (Fe_{SUM}, Mn_{SUM}, Ca_{SUM}, Cu_{SUM}, Zn_{SUM}, Ni_{SUM}, Cr_{SUM} and Pb_{SUM}) was computed as the summation of the sequential leach analyses components (ie, $Fe_{SUM}=Fe_{WA}+Fe_{HA}+Fe_{HHA}+Fe_R$).

Metal concentrations which are leached by hydrogen peroxide are considered to be organically bound (MacIntosh et al, 1976). Disaggregated dry sediment (1 g) was leached with 10 % hydrogen peroxide (20 mL) and 25% acetic acid (pH 2) for 24 h. Finally the leachate was decanted into clean test tubes. The acetic acid was necessary to retard the hydrolysis of the metals as they were released from the organic matter. This leach fraction also contained the weak acid leachable metal fraction. The concentrations of metals, which were specifically released from the organic matter by the hydrogen peroxide, were determined as the difference between the results for this hydrogen peroxide leach at pH 2 and the weak acid leach at pH 2. This difference is reported as Fe_{org}, Mn_{org}, Cu_{org}, Zn_{org}, Ni_{org}, Pb_{org} and Cr_{org}.

Total metal concentration (Si_T, Al_T, Mg_T, K_T, Fe_T, Mn_T, Ca_T, Cu_T, Zn_T, Ni_T, Cr_T, Pb_T, Li_T, Sn_T and Cd_T) was determined using the Buckley and Cranston (1971) $HF-H_3BO_3$ total decomposition method.

An indication of the accuracy and precision of this total elemental analysis method is demonstrated by replicate analyses of standards. Results for the standard samples BCSS1 and MESS1 (NRC Canada) and MAG1 (USGS) are compared in Table 1. With the exception of the analyses for Ni, and one standard result for Cu, all of the replicate analyses for the 12 elements have a coefficient of variation (CV = standard deviation / mean x 100) of less than 10 %. The reason for the high CV for Ni has not been determined, so analytical results for this metal should be used with caution. The CV of 11.1 % for Cu in the BCSS1 standard is almost certainly due to the low level of Cu in this standard, therefore analytical results below 20 ppm should be used with caution.

Estimates of the relative accuracy error were obtained by comparing our analytically determined mean value with the preferred value published for the standard. Only those results which show relative accuracy error greater than 10 % require some comment. Our analytical method appears to produce Al results that are 10.7

to 14.2 % lower than the results published for the three standards. Our results for Mg content in the MESS1 standard are 16 % lower than the published value. This appears to be caused by the moderately low Mg content and possibly to an unusual matrix effect in this standard. Our results for K in BCSS1 and MESS1 are 15 and 16.1 % low respectively. The reason for these results is not readily apparent, although it is suspected to be a matrix effect. It should be noted that all of these relative accuracy errors in the analyses of the major elements produces an analytical result which has an absolute error of less than 1 %.

TABLE 1.

Results for replicate analyses of standard samples.

Standard Sample	Si_T %	Al_T %	Ca_T %	Mg_T %	K_T %	Fe_T %	Mn_T μgg^{-1}	Cu_T μgg^{-1}	Zn_T μgg^{-1}	Ni_T μgg^{-1}
BCSS1										
N	9	9	6	8	8	9	8	8	8	8
Mean	29.6	5.59	0.54	1.36	1.53	3.18	246	18	103	39
StdDev	0.4	0.29	0.01	0.02	0.09	0.08	15	2	3	9
% CV	1.4	5.2	1.9	1.5	5.9	2.5	6.1	11.1	2.9	23.1
Present[1]	30.9	6.26	0.54	1.47	1.80	3.29	230	18.5	120	55
% Error	-4.2	-10.7	0	-7.5	-15.0	-3.3	7.0	-2.7	-14.2	-29
MESS1										
N	9	9	6	8	8	9	8	8	8	8
Mean	29.6	5.01	0.44	0.73	1.55	2.86	533	24	172	19
StdDev	0.5	0.31	0.02	0.03	0.10	0.06	20	2	6	10
% CV	1.7	6.2	4.5	4.1	6.4	2.1	3.8	8.3	3.5	52.6
Present[1]	31.6	5.84	0.48	0.87	1.86	3.05	510	25	190	30
% Error	-6.3	-14.2	-8.3	-16.1	-16.7	-6.2	4.5	-4.0	-9.5	-37
MAG1										
N	9	9	6	8	8	9	8	8	8	8
Mean	23.2	7.73	0.91	1.73	2.92	4.71	795	27	130	40
StdDev	0.4	0.53	0.02	0.14	0.12	0.10	19	2	2	11
% CV	1.7	6.9	2.2	8.1	4.1	2.1	2.4	7.4	1.5	27.8
Present[2]	23.9	8.7	0.99	1.89	3.09	4.88	770	27	135	54
% Error	-2.9	-11.1	-8.1	-8.5	-5.5	-3.5	3.2	0	-3.7	-26

[1] Values from Berman (1981).
[2] Values from Manheim et al. (1976).

The relative accuracy error of -14.2 % for analyses of Zn in the BCSS1 standard is of unknown source. The large negative errors for results of Ni analyses (-29 %) in all standards reinforces the caution in the use of these results. No evaluation of the accuracy or precision of Pb analyses could be obtained because the published concentrations of Pb in the standards were all below the analytical

detection limit (20 ppm) of our method.

TABLE 2.

Error for instrumental analyses.

Metal	Detection Limit	Concentration Range	Precision	Relative Error
	$\mu g \cdot mL^{-1}$	$\mu g \cdot mL^{-1}$	$\mu g \cdot mL^{-1}$	%
Fe	10	10 - 1400	±5	
		4000 - 17000	±140	2
		29000 - 47000	±800	2
Mn	0.6	0.6 - 11	±0.3	
		9 - 100	±1	2
		250 - 800	±18	4
Ca	16	16 - 450	±8	
		500 - 900	±20	3
		4000 - 9000	±150	3
Cu	1.2	2 - 180	±0.6	
		30 - 180	±0.6	2
Zn	0.4	0.4 - 35	±0.2	
		6 - 35	±0.4	3
		50 - 300	±6	5
Ni	1	1 - 25	±0.5	
		6 - 30	±0.5	2
Pb	0.6	0.6 - 8	±0.3	
		3 - 20	±0.4	5
		70 - 130	±1	2
Cr	0.8	1 - 25	±0.4	
		7 - 40	±0.4	1
Si		23 - 30 %	±0.5 %	2
Al		5 - 8 %	±0.4 %	6
Mg		0.7 - 1.7 %	±0.05 %	5
K		1.5 - 2.9 %	±0.1 %	5

Average precision values, for the instrumental analyses for specific metals, were determination from duplicate analyses of solutions which were prepared for the total metal and leachable metal analyses. The precision values are reported in Table 2. In the low concentration ranges the precision can be used to evaluate the analytical detection limits. Under these conditions the analytical detection limit is approximately twice the value for precision. In the higher concentration ranges the average relative error determinations for these metals were used to evaluate the

analytical results. As the detection limit is approached the relative error approaches 100 %. The relative error for a specific metal and sample was determined as the percent mean deviation relative to the sample mean. These results were then used to determine the average relative error for a specific metal and are reported in Table 2. Average precision values for the elements Si, Al, Mg and K were determined for narrow concentration ranges and we have not determined the detection limits.

In an earlier study (Buckley et al 1989) results were reported for analyses of replicate samples and subsamples. The concentrations were in the higher concentration ranges and the % coefficients of variation included variation due to repetitive sampling and sampling inhomogeneity. In the present study we report relative error which includes only the error resulting from duplicate instrumental analyses of sample solutions.

Total mercury (Hg_T) was determined using a flameless cold-vapour atomic absorption spectrometry method adapted from Brandenberg and Bader (1967) and MacIntosh et al (1976). The average precision varied significantly with concentration range: ±0.005 ppm for range 0.01 to 0.1 ppm, ±0.04 ppm for range 0.1 to 1 ppm, ±0.1 ppm for range 1 to 5 ppm, and ±0.7 ppm for range 5 to 11 ppm. In all concentration ranges the relative error varied from 6 % to 11 %.

Core	Depth	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{org}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
28	0	6910	920	3330	26699	37859	51300	8790	29	7.8	55	107	199	382	103	69301
	5	6540	810	3340	30838	41528	56100	18260	33	6.2	56	121	216	424	95	69306
	10	6000	874	3460	30881	41215	50200	18200	21	5.9	61	139	227	431	82	69311
	15	3250	510	2900	27468	34128	48500	17950	16	6.2	55	122	199	428	88	69316
	20	1740	353	2940	33338	38371	44400	17360	20	6.6	55	135	217	424	98	69321
	25	4190	491	3050	28657	36388	46500	16910	27	6.6	56	74	163	396	100	69326
	30	2960	433	2950	23920	30263	40400	13140	26	5.5	54	31	116	405	86	69331
	35	4530	568	2920	27625	35643	45000	15570	23	5.6	49	58	135	407	93	69336
	40	3440	457	2790	26373	33060	43700	16960	24	5.5	50	83	163	398	86	69341
	45	2000	292	2870	21229	26391	31700	13100	17	2.2	28	51	99	400	81	69346
	50	2770	446	3310	24423	30949	39400	12730	21	4.4	50	63	138	415	94	69351
	55	1980	251	2650	24030	28911	28100	11220	17	1.6	32	31	81	439	73	69356
	60	870	281	3230	27023	31404	37300	16330	23	5.3	53	73	154	424	100	69361
	65	620	302	3280	24024	28226	33700	14180	21	5.4	51	81	158	443	104	69366
	70	380	277	3420	25172	29249	36400	15120	23	5.7	55	80	164	432	100	69371
29	0	3780	885	4240	23828	32733	65200	15720	28	10.5	59	175	272	731	100	70101
	1	6770	1164	4150	23726	35810	63800	14430	38	11.1	60	165	274	692	86	70102
	2	6980	1389	4070	24466	36905	65100	18320	22	10.1	61	195	288	691	89	70103
	3	6790	1067	4070	26015	37942	64300	17010	25	9.8	64	202	301	721	101	70104
	4	5590	879	4370	26407	37246	63800	17210	30	9.9	72	223	335	744	114	70105
	5	3730	1013	3890	24054	32687	64500	15470	24	9.8	63	239	336	791	107	70106
	6	6510	923	4120	25228	36781	67500	14490	26	9.6	69	212	317	799	131	70107
	7	4570	789	3890	22498	31747	59700	11130	32	9.4	65	194	300	784	98	70108
	8	4990	916	3940	24247	34093	65300	13010	23	10.8	67	192	293	767	111	70109
	9	4560	804	4440	24755	34559	63100	3840	29	12.2	70	217	328	751	109	70110
	10	4700	886	4280	23408	33274	60200	8000	28	12.0	68	184	292	618	103	70111
	11	3420	792	4170	25343	33725	61100	6080	28	13.1	69	225	335	739	98	70112
	13	5200	666	3930	26707	36503	66000	7900	29	12.3	67	224	332	802	125	70114
	14	6410	1020	4260	23563	35253	67900	6190	30	11.7	66	189	297	851	85	70115
	15	6000	1079	4610	25894	37583	66900	4300	31	11.8	70	203	316	795	49	70116
	16	5450	697	4680	26730	37557	62700	8450	25	12.8	79	239	356	781	131	70117
	17	4790	804	4240	26855	36689	59000	13910	27	13.2	70	224	334	744	135	70118
	18	4900	638	4410	25110	35058	63600	21000	27	11.5	74	208	321	799	141	70119
30	0	6420	1201	4040	23166	34827	62500	13780	4	5.2	45	119	173	568	68	70120
	1	5340	811	3620	26172	35943	64600	11860	2	5.7	44	152	203	590	64	70121
	2	3160	549	3710	25400	32819	62900	13540	0	4.6	48	149	202	646	62	70122
	3	3450	470	3330	29541	36791	64900	18250	0	4.9	45	212	262	649	71	70123
	4	4140	648	3390	25338	33516	61400	15760	0	4.3	44	147	196	667	68	70124
	5	4530	545	3430	28938	37443	62100	17770	0	4.7	47	146	198	554	77	70125
	6	5190	537	3800	27799	37326	57100	17910	0	4.5	51	121	177	642	77	70126
	7	4110	658	4110	29137	38015	57800	18990	0	4.3	49	179	232	618	74	70127
	8	5640	535	3670	28896	38741	60200	17260	0	3.6	48	163	215	656	76	70128
	9	4740	630	3780	28922	38072	52500	16760	0	4.4	49	125	179	625	71	70129
	10	2690	486	3890	32597	39663	51300	17710	0	4.4	52	186	242	592	52	70130
	11	4120	467	3780	32175	40542	50300	21980	0	3.9	47	139	190	564	47	70131
	12	4620	635	3530	32357	41142	54500	30480	0	5.0	44	128	177	605	31	70132
	13	5680	782	3570	38565	48597	84000	36820	0	4.5	41	152	197	560	70	70133

Core	Depth	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{org}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
32	0	6050	851	2550	35151	44602	57800	22350	0	0.3	26	59	86	266	82	69376
	5	6990	1055	2690	35532	46267	56700	20710	0	0.6	25	56	81	244	84	69381
	10	7760	1190	2900	40086	51936	62400	24040	1	0.9	19	47	68	262	96	69386
	15	3040	660	2460	41568	47728	58900	28860	0	0.9	20	57	78	243	95	69391
	20	4120	656	2400	40362	47538	58600	27380	0	0.9	22	54	77	233	88	69396
	25	3640	658	2130	41414	47842	61000	30260	0	0.9	18	49	68	237	88	69401
	30	2580	541	2040	43537	48698	59500	33220	0	0.4	13	48	61	235	82	69406
	35	3550	752	2550	39337	46189	59500	26550	0	0.9	18	40	59	243	77	69411
	40	5770	941	2600	35809	45120	51400	23230	0	1.3	17	9	27	220	73	69416
	45	7960	678	2590	27250	38478	43500	19840	11	0.8	16	6	34	159	66	69421
	50	6760	1023	2520	25661	35964	50300	20340	7	1.2	14	15	37	304	64	69426
	55	7000	1350	2930	31439	42719	46900	21200	8	2.1	17	39	66	263	51	69431
	60	8790	1116	2750	25885	38541	48200	21010	8	2.6	23	31	64	249	88	69436
	65	3810	701	3640	46574	54725	44700	25890	6	3.5	27	189	225	262	95	69441
	70	1310	330	2740	25324	29704	37600	18990	7	2.6	27	35	72	333	90	69446
33	0	7260	1296	2450	35714	46720	59500	29540	0	1.3	14	78	93	282	103	69451
	5	4410	789	2150	26512	33861	57600	28690	0	1.3	8	35	45	271	93	69456
	10	4260	904	2390	36168	43722	52900	24140	0	1.6	12	48	61	257	78	69461
	15	3140	860	2270	32487	38757	51700	27060	0	2.2	11	62	75	249	82	69466
	20	3130	776	2220	42150	48276	50800	27570	0	2.5	9	57	69	243	82	69471
	25	1840	567	2370	31501	36278	45900	24560	0	2.8	13	61	77	250	84	69476
	30	1020	494	2430	42662	46606	46500	21980	0	1.3	26	65	92	287	77	69481
	35	310	615	3140	35640	39705	45500	23390	0	1.1	34	64	99	261	86	69486
	40	540	441	2980	36784	40745	45100	25560	0	2.8	36	61	100	294	95	69491
	45	560	406	2820	32614	36400	43400	26040	0	1.4	33	64	99	241	85	69496
	50	520	455	2780	30252	34007	42700	22380	0	3.0	37	71	111	251	85	69501
	55	420	450	3490	33955	38315	41500	14180	0	2.7	50	72	124	276	57	69506
	60	300	420	3420	25300	29440	30500	20000	0	1.9	49	84	135	110	78	69511
35	0	5300	1112	3270	28510	38192	76000	15800	1	7.6	45	171	225	631	62	70134
	1	5680	1087	3450	25925	36142	74700	15620	2	7.8	48	151	209	628	68	70135
	2	7090	1267	3600	28311	40268	76500	19210	1	7.4	48	185	242	644	87	70136
	3	7010	1195	3640	28642	40487	82200	25890	2	7.5	48	180	238	625	108	70137
	4	6580	1605	3930	31434	43549	82000	28220	1	6.8	48	185	241	613	111	70138
	5	6410	1162	3640	32609	43821	84900	27090	1	5.5	47	210	264	614	107	70139
	6	4510	898	3460	33529	42397	81800	29090	1	4.9	49	179	234	616	106	70140
	7	4720	892	3340	31913	40865	78200	27480	1	6.4	48	173	228	647	110	70141
	8	4840	895	3310	34029	43074	65500	29960	1	5.6	47	180	233	642	100	70142
39	0	10880	1907	3410	26024	42221	69900	17920	1	6.0	46	147	200	587	87	70143
	1	9250	1555	3190	25689	39684	69000	21650	0	4.7	45	154	204	631	94	70144
	2	8910	1394	3490	28712	42506	69900	18590	1	6.3	49	183	240	630	94	70145
	3	9690	1310	3390	30176	44566	71400	23010	0	6.5	48	202	257	644	73	70146
	4	7570	1283	3470	30005	42328	65900	16730	0	6.5	48	246	300	670	70	70147
	5	7410	1284	3400	30867	42961	67500	16690	1	6.1	47	209	263	662	69	70148
	6	5650	801	3360	33120	42931	66900	19250	0	6.6	50	209	266	682	80	70149
	7	4660	914	3590	31280	40444	66700	20940	0	5.8	52	188	246	688	76	70150
	8	6730	1036	3650	34961	46377	52400	22670	2	7.4	53	241	303	329	97	70151
	9	8260	1023	3450	32309	45042	49800	17240	2	6.8	51	141	201	334	92	70152
42	0	3640	844	3540	33896	41920	56100	26560	3	4.2	57	149	214	387	99	69516
	5	2410	657	3540	33538	40145	54700	27290	5	5.0	58	127	195	352	99	69521
	10	1670	334	3240	26874	32118	41300	23230	13	4.8	52	171	240	396	86	69526

Core	Depth	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{org}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
44	0	1870	383	3650	34547	40450	45700	20830	1	7.0	59	170	237	317	90	70153
	1	2610	487	3680	33600	40377	46200	19390	1	8.1	60	168	238	358	88	70154
	2	3140	531	3780	33490	40941	46200	16860	1	6.9	60	175	243	349	82	70155
	3	2930	551	3640	27643	34764	49000	18670	1	7.2	59	179	246	342	86	70156
	4	2770	468	3570	31556	38364	44500	15830	1	6.8	59	142	209	320	79	70157
	5	4120	640	3390	29064	37214	45200	11080	5	8.8	54	111	179	354	82	70158
	6	2840	510	3400	29555	36305	45100	12760	4	8.0	56	112	180	381	83	70159
47	0	3100	310	3620	22344	29374	36700	11200	61	9.7	69	155	295	448	143	69531
	5	800	533	3400	21862	26595	32300	12400	42	8.9	66	164	281	418	136	69536
	10	430	391	3170	18061	22052	29100	12070	48	9.1	62	171	290	455	133	69541
	15	500	464	3420	21377	25761	32600	14100	57	8.6	69	189	324	500	147	69546
	20	500	157	2650	11920	15227	20500	6700	39	6.9	54	158	258	390	97	69551
	25	100	262	2550	11017	13929	19000	7500	33	7.4	53	148	241	381	94	69556
	30	210	152	2500	10544	13406	17800	6890	39	5.8	51	205	301	495	104	69561
	35	30	171	2260	8427	10888	16000	6270	38	5.7	54	309	406	619	94	69566
	40	90	174	2510	9901	12675	16400	6610	27	6.4	51	146	230	505	100	69571
	45	20	161	2710	11680	14571	17900	7880	34	6.6	54	122	217	362	98	69576
1	0	830	987	3600	19219	24636	36800	16270	37	9.3	61	315	423	379	98	70161
	5	800	345	3620	18937	23702	36100	24100	36	8.5	64	358	467	384	107	70162
	10	460	293	3780	16632	21165	35500	18340	43	9.0	67	364	483	367	97	70163
	15	480	268	3720	24441	28909	38300	20220	47	8.0	64	332	451	390	93	70164
	20	460	338	3630	23673	28101	38700	22140	35	14.2	81	352	482	458	125	70165
	25	470	388	4010	26332	31200	43900	24230	34	17.0	83	406	540	529	142	70166
	30	470	395	3210	25730	29805	40300	21730	29	16.0	83	424	552	532	136	70167
	35	510	402	3780	27405	32097	38500	24190	24	9.5	78	468	580	481	113	70168
	40	610	435	3830	26074	30949	45200	25390	22	8.2	69	382	481	431	99	70169
	45	400	320	3190	19873	23783	30200	17600	10	5.0	50	383	448	359	81	70170
	50	180	159	2270	14030	16639	19000	10120	2	1.2	35	614	653	608	76	70171
	55	370	222	2600	26987	30179	27000	18730	2	0.6	42	585	629	431	115	70172
	60	470	161	2270	15599	18500	20000	4330	2	0.8	34	329	366	231	47	70173
2	0						25500							394		65020
	20						31800							395		65021
	40						36900							435		65007
	65						37700							431		65008
	90						37500							422		65009
	115						37600							434		65010
	140						39600							440		65011
	165						40000							401		65012
	190						39800							413		65013
	193						40300							399		65004
	215						39300							420		65014
	240						41100							395		65015
	265						39200							419		65016
	290						41200							442		65017
	315						38500							410		65018
	335						41200							440		65019
	340						39500							400		65003

Core	Depth	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
28	0	8030	760	293	2129	11212	9000	0	0	1.4	93	94	89	88.2	69301
	5	7680	628	272	2514	11094	9200	0.5	0	1.0	80	82	75	86.0	69306
	10	4890	633	320	2249	8092	7700	0.3	0	1.1	99	100	82	88.5	69311
	15	3450	431	268	2442	6591	6500	0.3	0	1.5	94	96	95	97.5	69316
	20	4190	561	233	2756	7740	6000	0.4	0	0.9	82	83	73	78.1	69321
	25	11630	679	291	1201	13801	9700	0.3	0	0.7	69	70	89	64.5	69326
	30	6330	577	250	1135	8292	6200	0.4	0	0.4	44	44	46	45.9	69331
	35	8670	619	222	1530	11041	8600	0.5	0	0.5	61	62	56	56.8	69336
	40	7380	525	210	2124	10239	8400	0.3	0	0.5	177	178	52	58.3	69341
	45	2840	263	152	2022	5277	5300	0.2	0.2	0.5	29	30	25	32.2	69346
	50	4200	560	240	2416	7416	8400	0.3	0.2	0.8	43	44	44	39.2	69351
	55	2660	259	156	2618	5693	4400	0.3	0	0.5	25	26	28	28.1	69356
	60	5440	694	296	2304	8734	9200	0.7	0	0.5	30	31	28	27.4	69361
	65	5790	713	268	2376	9147	8100	0.6	0	0.4	24	25	26	20.6	69366
	70	4380	771	250	2430	7831	9300	0.8	0.1	0.5	21	22	24	17.9	69371
29	0	5110	682	354	2181	8327	8800	0.6	0	1.3	68	70	94	90.8	70101
	1	6550	742	338	1856	9486	8700	1.1	0	1.3	74	77	92	81.1	70102
	2	7130	743	414	1888	10175	8600	0.9	0	1.2	75	77	92	83.6	70103
	3	6590	734	385	1756	9465	11000	1.1	0	1.1	70	72	86	72.9	70104
	4	7280	747	443	2018	10488	11200	0.9	0	1.1	71	73	82	70.4	70105
	5	5840	866	460	1883	9049	9900	1.1	0	1.0	80	83	85	70.4	70106
	6	7530	651	390	1693	10264	10800	0.2	0	1.0	89	91	89	85.1	70107
	7	5550	527	401	1983	8461	8500	1.0	0	1.2	72	75	76	67.0	70108
	8	5090	686	346	1678	7800	8700	1.1	0	1.1	91	94	95	82.9	70109
	9	5570	669	321	1852	8412	9400	0	0	2.0	82	84	88	75.6	70110
	10	5740	730	360	1762	8592	9300	0.3	0	2.0	84	86	89	81.2	70111
	11	5420	807	342	1983	8552	10000	0.5	0	1.9	77	79	73	73.2	70112
	13	7980	730	405	1830	10945	10500	0	0	2.0	79	81	89	87.7	70114
	14	7460	735	346	1560	10101	11400	0.1	0	2.0	89	92	87	79.9	70115
	15	8040	728	441	1760	10969	8500	0	0	2.0	89	91	90	79.4	70116
	16	5620	546	281	1793	8240	7400	0	0	2.1	87	89	93	81.0	70117
	17	5920	691	295	1668	8574	6300	0	0	1.8	85	87	96	86.8	70118
	18	5210	542	374	1800	7926	7500	0	0	2.1	77	79	88	88.4	70119
30	0	1970	232	230	1377	3809	4300	0	0.5	3.8	151	156	164	172.7	70120
	1	1740	224	233	1440	3637	4500	0	0.2	3.9	151	155	153	175.3	70121
	2	1190	208	224	1464	3086	4000	0	0.1	3.0	133	137	156	146.5	70122
	3	1420	174	227	1748	3569	4500	0.2	0	2.5	149	152	136	157.7	70123
	4	1730	244	281	1626	3881	5400	0	0	3.1	162	165	163	163.9	70124
	5	1820	216	229	1651	3916	4500	0	0	3.0	175	178	182	192.7	70125
	6	1820	179	240	1645	3884	5200	0	0	2.7	165	168	173	178.5	70126
	7	1570	233	240	1779	3822	4100	0	0	3.3	158	162	176	172.9	70127
	8	2710	201	223	1428	4562	4700	0	1.4	3.1	163	167	187	180.5	70128
	9	2320	227	184	1483	4214	4300	0.3	1.1	3.3	163	168	158	178.3	70129
	10	1790	236	218	1674	3918	4000	0	1.5	3.4	177	182	196	196.0	70130
	11	2230	166	232	1544	4172	3900	0.2	0.2	2.4	184	186	216	290.6	70131
	12	2860	257	224	1370	4711	4500	0	0	2.0	194	196	219	215.7	70132
	13	2610	294	239	1800	4943	6500	0	0	1.4	203	205	225	225.8	70133

Core	Depth	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
32	0	1360	209	130	2033	3732	3500	1.2	0.1	1.4	182	185	185	177.7	69376
	5	1460	247	164	1861	3732	4100	1.0	0.3	1.6	213	216	203	188.0	69381
	10	1880	307	176	1850	4213	4800	0.8	0.3	1.1	244	246	228	216.3	69386
	15	1440	315	296	1992	4043	3900	2.2	0.2	0.8	224	227	232	229.5	69391
	20	1720	297	315	2170	4502	3800	1.9	0.1	0.7	223	226	266	213.8	69396
	25	1690	319	291	1808	4108	3800	1.8	0.1	0.7	239	242	246	236.2	69401
	30	1260	284	303	1825	3672	3800	1.8	0.3	0.6	227	230	222	230.3	69406
	35	1380	279	262	1962	3883	4000	2.5	0.2	0.6	213	216	178	161.9	69411
	40	2040	431	238	2117	4826	3800	1.5	0.2	0.6	144	146	117	122.9	69416
	45	42560	906	297	1622	45385	3900	1.6	0.7	0.5	97	100	110	105.8	69421
	50	4760	510	306	1728	7304	4600	1.4	0.3	0.5	104	106	106	93.8	69426
	55	5600	648	283	2233	8764	6400	1.3	0	0.6	108	110	118	97.4	69431
	60	3850	621	242	1837	6550	5800	1.3	0.2	1.0	102	104	104	103.3	69436
	65	3910	583	271	2559	7323	4600	1.0	0.1	0.7	68	70	71	95.0	69441
	70	3350	555	238	1886	6029	4100	0.4	0.2	0.6	35	36	31	35.9	69446
33	0	2850	484	239	1697	5270	3800	0.5	0.1	0.8	140	141	133	135.7	69451
	5	2420	389	173	1112	4094	3400	0.6	0.3	0.6	88	89	115	105.1	69456
	10	2610	499	212	1496	4817	4100	2.4	0.1	0.7	87	90	79	81.8	69461
	15	2820	563	217	1333	4933	4000	1.7	0	0.9	80	83	75	72.9	69466
	20	2950	604	215	1517	5286	4200	2.0	0	0.9	68	71	70	123.0	69471
	25	3360	724	202	1626	5912	6500	2.5	0	0.7	41	44	39	36.9	69476
	30	2270	603	260	1660	4793	6400	1.5	0	1.0	33	36	34	29.4	69481
	35	3620	834	236	1485	6175	6000	0	0	0.8	32	33	32	29.4	69486
	40	3690	851	194	1672	6407	6700	0.3	0	0.7	29	30	30	19.8	69491
	45	2280	705	169	1712	4866	5200	0	0	0.6	31	31	29	17.2	69496
	50	2810	797	228	1714	5549	5200	0.1	0	0.7	30	31	37	17.6	69501
	55	3620	880	255	1728	6483	5200	0	0	0.5	29	29	29	6.7	69506
	60	2900	803	245	1587	5535	3700	0	0	0.5	31	31	32	16.8	69511
35	0	2900	450	223	2472	6045	7800	0.3	0	2.0	132	134	134	140.2	70134
	1	3370	441	216	1481	5508	6200	0	0	2.0	129	131	135	134.6	70135
	2	4030	542	248	1564	6384	6100	0	0	1.7	131	133	126	131.4	70136
	3	5810	512	219	1469	8010	6200	0	0	1.3	127	129	133	137.2	70137
	4	4820	718	167	1775	7480	5600	0	0	0.9	130	131	128	134.8	70138
	5	7890	762	182	1585	10419	6400	0	0	0.7	126	127	131	125.5	70139
	6	2390	374	186	1277	4227	4300	0.2	0	0.7	119	120	123	114.2	70140
	7	3110	477	172	1277	5036	4000	0	0	0.6	117	117	124	121.2	70141
	8	3120	430	205	1581	5336	4200	0	0	0.7	123	124	130	124.3	70142
39	0	2700	378	169	1028	4275	4200	0	0	3.0	211	214	227	225.0	70143
	1	2800	354	159	1418	4731	4500	0.1	0.6	2.9	191	195	210	22.9	70144
	2	2660	315	144	1391	4510	4100	0	0.6	2.3	178	180	188	191.0	70145
	3	2590	275	211	1537	4613	3900	0.1	0.1	2.7	182	185	221	212.3	70146
	4	2070	263	213	1955	4501	4200	0	0.1	2.3	166	168	175	179.7	70147
	5	2470	289	196	1664	4619	3800	0	0.1	2.7	179	182	187	180.3	70148
	6	2420	244	193	1490	4347	3900	0	0.2	2.5	176	179	185	181.9	70149
	7	2190	228	166	1360	3944	4200	0	0.5	2.1	166	168	179	181.6	70150
	8	2120	293	161	1804	4378	3900	0	0.1	2.4	182	185	179	177.6	70151
	9	3420	330	189	1696	5635	4400	0	0	2.6	165	167	145	168.0	70152
42	0	2570	532	228	1678	5008	4600	0	0	1.4	116	117	122	114.0	69516
	5	2960	643	241	1397	5241	5000	0	0	1.3	139	140	139	122.8	69521
	10	4040	587	283	2475	7385	5700	0	0	0.6	49	49	47	50.9	69526

Core	Depth	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
44	0	1600	272	176	2059	4107	3700	0	0	1.8	115	116	109	114.3	70153
	1	1750	273	182	1971	4176	4000	0	0.1	2.1	107	109	102	107.0	70154
	2	2130	229	175	1846	4380	3600	0	0.4	1.8	120	122	111	108.9	70155
	3	1800	276	191	1418	3685	3200	0	0.9	2.0	120	123	131	110.8	70156
	4	1720	271	171	1846	4008	3600	0.2	0.6	2.1	120	123	115	109.2	70157
	5	2410	299	171	2163	5043	3700	0.4	0.6	1.6	119	121	108	102.6	70158
	6	1840	284	155	2456	4735	3800	0	0.6	2.0	117	119	109	103.5	70159
47	0	19390	1050	320	2184	22944	16100	0.4	0	1.0	41	43	36	32.1	69531
	5	8640	752	333	2546	12271	12000	2.1	0.2	0.8	37	40	34	24.7	69536
	10	13470	719	264	2731	17184	10500	1.0	0	0.5	26	27	23	21.3	69541
	15	20720	834	345	3016	24915	16500	1.0	0.6	0.5	25	27	11	19.2	69546
	20	11860	610	228	2709	15407	7500	0.2	0	0.2	14	15	22	9.6	69551
	25	7570	461	237	2799	11067	8700	0.3	0	0.5	13	13	8	7.5	69556
	30	8790	530	251	2909	12480	9800	0.1	0	0.1	11	11	6	6.5	69561
	35	6500	433	265	3114	10312	8000	0.2	0	0.3	6	7	11	4.3	69566
	40	10950	548	230	2475	14203	8000	0	0	0.4	9	9	11	4.7	69571
	45	6130	568	259	2874	9831	8500	0.3	0	0.3	12	13	12	5.1	69576
1	0	6180	1107	209	0	7496	8500	2.5	0	0.1	23	26	24	15.7	70161
	5	8210	1131	197	0	9538	10500	1.5	0	0	24	25	23	18.5	70162
	10	7590	977	166	0	8733	9400	1.7	0	0	23	25	22	16.9	70163
	15	5830	808	151	0	6789	7800	1.2	0	0	21	22	21	15.9	70164
	20	3520	916	267	0	4703	5300	1.1	0	0	24	26	21	16.7	70165
	25	2430	599	117	0	3146	4500	1.5	0	0	26	28	25	16.7	70166
	30	5660	814	124	0	6598	10300	1.2	0	0	28	29	24	17.0	70167
	35	3800	659	105	0	4564	5700	1.1	0	0	26	27	20	16.4	70168
	40	2190	500	91	0	2781	4600	1.1	0	0	27	28	26	18.3	70169
	45	2260	340	80	0	2680	4600	0.3	0	0.3	21	21	15	12.7	70170
	50	1450	167	52	0	1669	2800	0.2	0	0	10	11	10	7.1	70171
	55	430	220	44	0	694	2100	0.6	0	0.1	47	48	25	43.6	70172
	60	110	139	100	0	349	1900	4.4	0	1.3	9	14	16	12.0	70173
2	0						12400						3		65020
	20						14100						4		65021
	40						11100						6		65007
	65						10200						4		65008
	90						10300						7		65009
	115						8700						10		65010
	140						10900						10		65011
	165						10100						9		65012
	190						5800						10		65013
	193						8000						10		65004
	215						8700						9		65014
	240						7800						9		65015
	265						9300						9		65016
	290						7600						11		65017
	315						5400						10		65018
	335						6400						8		65019
	340						6200						9		65003

Core	Depth	Zn_{WA}	Zn_{HA}	Zn_{HHA}	Zn_{R}	Zn_{SUM}	Zn_{T}	Zn_{org}	Ni_{WA}	Ni_{HA}	Ni_{HHA}	Ni_{R}	Ni_{SUM}	Ni_{T}	Ni_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
28	0	11.0	17.3	75.8	88	192	227	88.0	1.2	2.0	7.1	38	48	44	16.0	69301
	5	9.6	13.3	87.6	87	198	213	128.4	1.9	1.4	6.7	34	44	43	15.6	69306
	10	5.9	12.1	95.5	87	201	245	140.1	1.7	0.8	9.3	43	55	47	18.0	69311
	15	19.5	20.3	78.9	90	209	283	147.5	2.7	1.3	6.2	33	43	46	15.6	69316
	20	24.6	20.7	71.4	101	218	203	141.4	1.2	1.2	5.1	39	47	39	13.8	69321
	25	12.9	19.8	84.3	105	222	214	121.1	1.9	1.5	5.0	30	38	38	11.3	69326
	30	7.3	10.3	44.7	148	211	142	71.7	1.1	1.2	5.1	23	30	37	11.8	69331
	35	10.8	18.2	76.4	97	202	176	90.2	1.5	1.0	5.0	31	38	37	11.1	69336
	40	10.8	18.8	90.8	102	222	174	95.2	1.1	1.2	4.5	32	39	35	25.3	69341
	45	5.9	9.7	27.0	53	96	91	48.1	0.2	0.2	3.9	18	23	22	11.1	69346
	50	4.9	5.2	37.5	74	122	125	54.1	1.5	0.1	5.3	26	33	29	10.7	69351
	55	6.4	7.9	30.6	52	97	96	33.6	1.6	0.3	3.8	16	22	20	8.0	69356
	60	5.1	2.7	18.6	70	96	99	26.9	1.3	0.2	4.4	30	36	30	10.7	69361
	65	3.3	0.8	14.3	64	83	96	21.7	1.1	0.7	4.6	29	35	25	10.2	69366
	70	2.8	1.4	14.2	63	82	89	29.2	1.4	0.9	4.2	32	39	31	11.2	69371
29	0	35.8	19.2	50.6	61	167	234	169.2	2.0	1.0	6.1	20	29	42	12.4	70101
	1	31.7	21.2	80.0	57	190	234	150.3	2.4	1.1	6.2	25	35	40	11.2	70102
	2	7.4	15.6	86.4	67	176	202	170.6	1.4	1.1	7.1	30	39	43	12.5	70103
	3	8.2	21.7	98.5	63	191	200	155.8	1.8	0.8	7.5	28	38	38	11.9	70104
	4	8.7	17.8	98.9	61	187	187	148.3	1.4	1.2	7.7	28	38	44	12.6	70105
	5	4.6	15.4	105.7	74	200	234	147.4	0.8	0.9	7.5	33	43	36	13.7	70106
	6	10.6	20.4	83.8	81	195	236	147.4	2.3	13.0	7.1	35	57	42	14.0	70107
	7	5.8	15.7	77.9	66	166	201	135.2	1.9	0.9	7.9	27	37	41	13.0	70108
	8	8.5	22.3	93.8	76	200	244	142.5	0.8	0.8	7.6	34	43	44	15.3	70109
	9	6.9	22.0	78.0	81	188	220	144.1	1.9	1.2	7.2	32	42	42	15.4	70110
	10	5.7	19.6	83.7	74	183	232	142.3	1.2	0.8	7.1	35	44	46	16.8	70111
	11	6.2	20.2	91.8	75	193	198	141.8	1.1	0.5	6.9	32	40	44	15.8	70112
	13	18.6	20.7	60.8	79	179	234	146.4	2.3	0.5	6.9	34	44	51	16.2	70114
	14	7.0	21.2	82.5	76	186	215	157.0	1.4	0.6	7.1	36	45	36	16.7	70115
	15	5.0	17.9	80.3	76	179	209	150.0	1.1	1.0	7.9	33	43	42	16.3	70116
	16	22.9	21.0	72.4	72	188	238	136.1	2.6	0.4	7.7	28	39	39	14.4	70117
	17	11.0	22.5	79.6	75	188	206	143.0	1.7	1.0	7.0	28	37	41	16.5	70118
	18	13.5	20.1	85.4	72	191	214	160.5	3.0	0.4	8.3	28	40	39	15.9	70119
30	0	106.5	38.7	81.7	75	301	425	257.5	2.4	0.7	5.6	30	39	38	15.1	70120
	1	48.3	40.2	100.5	86	275	384	316.7	2.0	0.1	6.9	27	36	35	14.9	70121
	2	49.6	35.2	105.1	72	262	410	271.4	2.0	1.2	6.2	29	39	30	14.7	70122
	3	48.0	41.4	99.1	83	272	387	311.0	1.5	0.5	7.0	31	40	39	16.4	70123
	4	53.9	35.8	92.5	81	264	383	317.1	1.3	1.0	6.1	32	40	43	16.3	70124
	5	43.4	43.6	108.8	95	291	463	339.6	2.2	0.7	8.2	30	42	51	18.8	70125
	6	45.7	30.1	108.2	82	266	434	322.3	1.9	0.2	9.3	34	45	56	20.7	70126
	7	42.7	30.0	114.9	85	272	432	329.3	1.8	1.1	9.8	36	49	59	21.5	70127
	8	55.2	32.4	136.6	81	306	465	384.8	1.9	1.0	8.2	28	39	56	20.4	70128
	9	41.6	36.8	105.5	84	268	429	376.4	2.1	0.5	7.2	30	40	47	18.3	70129
	10	58.0	35.6	113.4	93	300	483	374.0	1.2	0.7	9.9	37	49	52	23.8	70130
	11	69.0	40.9	123.0	102	335	515	374.0	2.3	0.5	8.3	33	45	51	21.0	70131
	12	73.9	49.9	117.2	107	348	644	493.1	1.9	0.9	8.0	36	47	50	22.2	70132
	13	76.3	87.9	113.5	113	391	530	546.7	2.6	0.6	6.0	25	34	56	20.9	70133

Core	Depth cm	Zn_{WA} μgg^{-1}	Zn_{HA} μgg^{-1}	Zn_{HHA} μgg^{-1}	Zn_{R} μgg^{-1}	Zn_{SUM} μgg^{-1}	Zn_{T} μgg^{-1}	Zn_{org} μgg^{-1}	Ni_{WA} μgg^{-1}	Ni_{HA} μgg^{-1}	Ni_{HHA} μgg^{-1}	Ni_{R} μgg^{-1}	Ni_{SUM} μgg^{-1}	Ni_{T} μgg^{-1}	Ni_{org} μgg^{-1}	ID
32	0	42.1	37.9	102.7	119	302	469	391.9	3.5	1.4	8.2	47	60	60	21.5	69376
	5	39.2	45.5	128.5	131	344	511	435.8	4.4	1.0	9.0	47	62	56	21.4	69381
	10	21.5	48.5	145.9	174	389	615	595.5	3.0	0.9	6.5	44	54	48	19.0	69386
	15	138.4	58.9	101.1	186	485	645	468.6	2.4	1.0	6.9	46	56	52	20.2	69391
	20	91.3	64.1	121.3	179	456	771	527.7	1.4	0	6.2	45	53	47	19.3	69396
	25	109.8	64.6	119.5	201	495	733	497.2	1.1	1.1	6.1	40	48	50	19.5	69401
	30	76.9	58.2	110.2	256	502	598	560.1	1.5	0.7	5.3	47	54	55	18.7	69406
	35	171.3	42.3	93.4	161	468	530	266.7	0.4	0.4	3.8	40	45	34	14.3	69411
	40	8.5	38.1	97.5	155	299	479	337.5	0.9	0.7	4.6	34	41	23	11.3	69416
	45	12.5	25.1	101.8	180	319	417	627.5	0.9	0.6	3.9	28	33	28	9.0	69421
	50	4.7	15.7	97.4	108	226	269	173.3	0	1.1	3.6	20	25	31	10.5	69426
	55	4.3	18.2	113.6	430	566	312	162.7	0	0.9	4.1	33	38	29	11.7	69431
	60	11.0	21.1	106.0	105	243	289	166.0	1.0	0.9	4.7	30	37	31	11.5	69436
	65	12.1	13.8	56.2	80	162	184	96.9	1.5	0.7	4.2	41	47	33	12.7	69441
	70	3.0	2.7	18.9	76	101	95	14.0	1.0	0.6	4.4	25	31	22	10.4	69446
33	0	12.3	23.5	109.0	115	260	350	246.7	1.9	0.9	4.9	35	42	39	16.3	69451
	5	24.2	17.6	81.3	80	203	249	168.8	1.4	0.4	4.0	28	34	41	15.0	69456
	10	8.9	16.9	85.0	110	221	197	142.1	0.9	0.6	4.8	33	40	34	14.0	69461
	15	17.9	15.7	65.1	102	201	208	120.1	0.9	1.0	4.4	36	42	32	14.3	69466
	20	9.7	12.8	62.3	98	183	188	109.3	1.0	1.2	3.2	37	42	34	15.3	69471
	25	4.8	4.7	30.9	77	117	117	57.2	1.2	1.1	3.8	31	37	31	14.1	69476
	30	3.0	3.7	17.8	73	98	90	18.0	0.3	0.2	4.1	34	39	31	15.0	69481
	35	5.4	3.2	12.7	64	86	94	10.6	1.0	0.6	4.6	30	36	34	12.9	69486
	40	1.9	1.2	14.0	64	81	85	28.1	1.2	0.5	4.7	32	38	28	13.9	69491
	45	2.1	1.6	13.8	62	80	82	33.9	0.6	1.1	4.2	34	40	31	14.6	69496
	50	3.5	1.9	14.8	68	88	114	35.5	0.8	0	5.4	32	38	38	15.2	69501
	55	2.9	2.6	14.8	72	92	92	20.1	0.9	0.3	4.6	35	41	29	11.2	69506
	60	2.3	1.9	13.1	59	77	104	27.7	1.0	0.4	4.6	35	41	36	16.0	69511
35	0	14.7	24.7	105.9	76	221	285	255.3	1.5	0.5	5.4	30	38	47	15.7	70134
	1	18.2	24.6	112.9	82	238	295	263.8	1.9	1.0	5.8	26	35	43	14.7	70135
	2	11.2	20.1	127.8	77	236	292	255.8	1.1	1.0	6.3	33	41	42	14.9	70136
	3	10.3	18.5	103.5	75	207	287	246.7	0.8	0.5	6.9	32	40	47	17.4	70137
	4	5.2	11.7	112.6	84	213	288	244.8	0.8	0.7	6.5	31	39	44	16.2	70138
	5	5.6	14.2	111.4	89	220	310	242.4	0.5	0	5.5	31	37	44	16.6	70139
	6	11.9	17.9	114.1	95	239	326	274.1	0.2	0.8	4.6	31	36	45	15.7	70140
	7	11.6	23.0	107.0	88	229	346	228.4	0.8	0.1	5.4	24	30	44	15.5	70141
	8	12.4	20.1	113.3	103	249	313	244.6	0.4	0.6	5.0	31	37	37	16.2	70142
39	0	23.8	49.3	147.0	127	347	849	855.2	1.3	0.7	8.1	30	40	51	20.3	70143
	1	28.7	88.9	142.1	112	372	725	829.3	1.6	0.9	7.1	29	39	53	21.4	70144
	2	22.9	61.4	106.8	105	296	670	572.1	2.2	1.1	7.0	32	42	54	19.6	70145
	3	33.8	57.4	263.5	94	449	615	579.2	2.9	1.3	7.1	32	44	57	21.5	70146
	4	14.8	45.0	200.3	92	352	549	495.2	1.6	1.4	8.9	32	44	59	24.2	70147
	5	21.1	46.5	187.7	100	355	587	445.9	2.4	1.7	9.7	36	50	69	34.6	70148
	6	30.0	40.6	184.6	100	355	436	406.0	2.7	1.1	10.5	37	52	63	31.1	70149
	7	105.5	33.6	124.2	92	355	535	277.5	2.8	1.3	9.7	37	50	71	31.7	70150
	8	15.0	23.0	260.1	98	396	441	296.0	1.4	1.0	8.5	38	49	57	25.1	70151
	9	22.9	27.9	158.5	98	308	365	282.1	1.5	1.2	12.4	44	59	43	20.5	70152
42	0	34.5	22.0	66.0	103	226	285	242.5	1.8	0.5	7.1	35	45	51	16.7	69516
	5	36.4	25.7	68.6	102	233	344	242.6	1.4	0.7	7.3	45	55	58	18.1	69521
	10	12.7	8.4	40.8	68	130	157	118.3	0	0.1	5.5	30	36	38	14.4	69526

Core	Depth	Zn_{WA}	Zn_{HA}	Zn_{HHA}	Zn_{R}	Zn_{SUM}	Zn_{T}	Zn_{org}	Ni_{WA}	Ni_{HA}	Ni_{HHA}	Ni_{R}	Ni_{SUM}	Ni_{T}	Ni_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
44	0	38.3	13.5	73.0	94	219	263	137.7	0.6	0.4	6.7	32	40	41	18.0	70153
	1	37.4	16.6	64.1	99	217	256	139.6	1.0	0.8	7.4	40	50	44	16.7	70154
	2	56.5	22.6	71.0	95	245	283	104.5	1.3	1.4	6.6	38	47	44	16.3	70155
	3	49.5	21.4	80.3	97	249	307	98.5	1.9	1.3	6.8	42	52	50	16.9	70156
	4	45.5	22.9	70.3	114	253	293	118.5	1.3	0.9	6.8	40	49	42	15.8	70157
	5	135.7	129.2	154.2	162	581	318	0	1.8	0.4	6.4	32	41	43	14.4	70158
	6	21.8	22.1	111.6	106	262	286	87.2	0.9	0.8	6.5	42	50	44	14.7	70159
47	0	16.5	7.7	28.7	61	114	145	56.5	2.8	0	6.4	24	34	33	11.0	69531
	5	21.4	3.8	19.0	57	101	119	46.6	3.0	0.1	4.8	21	29	30	10.4	69536
	10	21.8	4.6	15.0	57	99	132	59.2	2.1	0.5	4.8	21	29	27	7.2	69541
	15	16.2	2.8	16.1	56	91	66	40.8	2.5	0.3	4.4	24	31	17	7.3	69546
	20	3.7	2.3	13.6	33	52	108	24.3	1.9	0.1	3.2	7	12	26	4.6	69551
	25	5.5	0.9	9.0	35	51	47	17.5	2.0	0.4	2.8	4	9	12	5.6	69556
	30	3.1	1.1	8.6	34	46	42	15.9	1.2	0.1	3.4	5	9	12	6.4	69561
	35	3.6	0.6	6.6	29	40	79	15.4	1.4	0	2.9	0	4	15	4.9	69566
	40	2.9	1.0	8.8	35	48	70	16.1	0.4	0.9	3.9	10	15	12	5.8	69571
	45	1.5	0.2	9.1	36	47	47	17.5	0	0.3	4.5	8	13	12	7.3	69576
1	0	20.6	3.8	11.4	73	109	101	14.4	2.1	2.9	5.3	0	10	29	10.6	70161
	5	21.7	1.9	12.0	75	111	125	27.3	0.7	0.3	5.7	0	7	33	12.3	70162
	10	14.0	0.5	12.2	73	100	93	23.0	1.2	0.8	5.6	0	8	34	11.6	70163
	15	12.7	3.0	12.1	66	94	96	25.3	0.5	0	8.0	14	23	35	12.4	70164
	20	12.9	2.2	12.1	85	112	90	30.1	0	0	7.1	12	19	35	13.8	70165
	25	7.9	3.3	13.7	89	114	102	41.1	1.4	0	7.9	18	27	37	13.0	70166
	30	12.7	3.0	12.8	75	104	100	36.3	0.6	0	5.2	11	17	37	12.4	70167
	35	17.0	2.7	24.3	70	114	95	40.0	1.3	0	5.1	23	30	31	12.6	70168
	40	12.5	3.4	20.4	80	116	115	41.5	1.2	0	4.8	8	14	40	13.9	70169
	45	20.1	1.8	14.7	55	92	81	30.9	1.3	0.1	5.3	0	7	28	11.5	70170
	50	18.9	1.2	14.9	48	83	93	36.1	1.0	1.2	5.2	0	7	22	10.6	70171
	55	24.0	2.5	19.1	74	119	96	43.0	2.5	0.4	6.7	13	23	35	30.9	70172
	60	16.0	0	8.8	62	87	67	12.0	1.3	1.4	4.8	8	15	13	8.5	70173
2	0						58							19		65020
	20						71							16		65021
	40						82							32		65007
	65						89							29		65008
	90						80							46		65009
	115						97							29		65010
	140						106							49		65011
	165						92							31		65012
	190						92							21		65013
	193						102							30		65004
	215						100							40		65014
	240						103							7		65015
	265						94							12		65016
	290						109							44		65017
	315						97							18		65018
	335						111							40		65019
	340						103							23		65003

Core	Depth	Cr_{WA}	Cr_{HA}	Cr_{HHA}	Cr_{R}	Cr_{SUM}	Cr_{T}	Cr_{org}	Pb_{WA}	Pb_{HA}	Pb_{HHA}	Pb_{R}	Pb_{SUM}	Pb_{T}	Pb_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
28	0	0.6	0	6.2	56	62	81	25.4	1.2	4.1	80.7	34	120	155	129.8	69301
	5	0	0	5.9	62	68	81	27.0	1.3	4.8	80.3	31	117	149	134.7	69306
	10	0	0.1	7.3	70	77	85	28.0	0.4	3.8	104.5	41	149	165	126.6	69311
	15	0	0.4	6.1	50	56	88	26.0	18.5	9.2	107.9	39	175	208	100.5	69316
	20	0	0	5.9	60	65	39	17.0	31.5	16.2	97.5	34	179	210	79.5	69321
	25	0	0	5.9	56	62	41	15.0	7.9	11.3	132.0	43	194	225	127.1	69326
	30	0	1.5	4.2	54	60	29	14.0	3.7	5.7	70.0	12	92	136	102.3	69331
	35	0	1.3	4.3	60	66	38	13.0	8.0	9.5	124.3	37	178	205	114.0	69336
	40	0	1.3	4.6	63	69	26	13.0	5.8	7.3	101.5	40	154	173	110.2	69341
	45	0	2.7	4.2	38	45	24	9.0	0.4	4.8	34.1	2	41	45	47.6	69346
	50	0	3.4	5.6	65	74	33	14.0	2.3	4.0	60.1	13	79	94	90.7	69351
	55	0	0.8	5.8	46	52	11	9.0	3.9	4.9	35.2	0	44	70	45.1	69356
	60	0	2.3	6.4	68	77	28	15.0	8.4	4.7	22.0	3	38	47	37.6	69361
	65	0	2.6	7.6	62	73	66	15.0	5.1	2.7	10.2	0	18	12	15.9	69366
	70	0	2.3	10.6	59	72	69	17.0	1.4	0.7	5.1	0	7	0	7.6	69371
29	0	0.7	0	7.5	66	74	76	23.3	18.9	7.7	51.7	14	93	112	80.1	70101
	1	1.2	0	8.4	66	76	72	20.8	17.7	7.2	64.2	15	104	126	80.3	70102
	2	1.7	0	7.3	65	74	75	21.3	4.5	2.8	78.7	21	107	127	109.5	70103
	3	1.2	0	7.9	69	79	73	19.8	5.5	4.4	79.8	18	108	129	104.5	70104
	4	1.4	0.6	8.3	72	83	78	19.6	7.8	5.1	79.7	16	109	124	96.2	70105
	5	1.0	0	8.3	57	67	76	21.0	6.6	3.4	78.8	33	122	150	83.4	70106
	6	1.3	0	9.1	64	75	88	22.7	8.7	5.5	85.5	39	139	151	130.3	70107
	7	1.2	1.4	8.4	60	71	78	17.8	6.8	5.0	76.5	25	113	127	93.2	70108
	8	1.2	0.4	9.0	67	78	95	21.8	7.9	7.9	85.1	41	142	159	130.1	70109
	9	0	0.4	8.4	63	72	93	24.0	0.2	7.1	78.5	35	120	143	117.8	70110
	10	0.8	0.8	7.6	55	65	87	24.2	0	6.0	81.3	37	124	147	115.0	70111
	11	0	1.4	8.6	62	72	90	23.0	0.1	6.7	76.7	29	113	136	94.9	70112
	13	0	1.2	8.1	69	78	73	26.0	9.6	11.0	68.8	33	123	150	115.4	70114
	14	0.2	0.9	10.1	70	81	79	23.8	0	6.4	88.3	38	132	151	109.0	70115
	15	0.1	1.1	9.1	65	75	78	24.9	0	4.4	89.9	39	133	159	110.0	70116
	16	0	2.4	9.7	57	69	72	25.0	14.1	11.6	72.3	25	123	156	80.9	70117
	17	0.4	3.1	8.5	67	79	72	25.6	2.7	9.2	83.0	34	129	152	110.3	70118
	18	0	1.5	8.3	57	67	76	24.0	6.0	9.7	74.6	26	116	142	107.0	70119
30	0	0	2.7	9.9	58	70	80	32.0	47.6	18.3	84.2	49	199	231	89.4	70120
	1	0.4	4.1	11.2	64	80	85	37.6	19.0	15.4	102.7	59	196	255	108.0	70121
	2	1.0	4.5	10.9	59	76	77	28.0	28.8	20.1	101.2	52	202	254	71.2	70122
	3	1.1	4.8	10.5	65	81	74	30.9	33.4	23.6	107.5	66	230	216	54.6	70123
	4	1.4	5.7	11.4	61	79	93	29.6	27.7	18.6	108.6	65	220	280	69.3	70124
	5	1.3	6.7	11.9	70	90	101	35.7	27.7	23.6	126.7	76	254	352	81.3	70125
	6	1.4	6.6	11.4	79	98	94	32.6	38.2	20.2	130.2	67	255	350	58.8	70126
	7	1.7	8.6	13.0	66	89	94	29.3	34.3	20.1	131.1	69	255	365	56.7	70127
	8	0.8	1.2	12.6	73	88	90	37.2	49.0	22.4	121.0	71	263	391	53.0	70128
	9	1.2	2.4	15.0	76	94	77	36.8	35.8	18.1	132.2	75	261	289	79.2	70129
	10	0.5	0.3	15.8	70	86	96	40.5	53.8	27.7	137.5	72	291	416	50.2	70130
	11	0.6	0	15.2	78	94	101	39.4	64.8	35.1	177.5	133	410	521	12.2	70131
	12	1.0	0	16.7	72	90	100	40.0	64.3	33.8	176.3	125	399	675	1.7	70132
	13	0.8	0	15.2	68	84	105	38.2	61.8	35.0	191.7	168	456	828	4.2	70133

Core	Depth	Cr_{WA}	Cr_{HA}	Cr_{HHA}	Cr_{R}	Cr_{SUM}	Cr_{T}	Cr_{org}	Pb_{WA}	Pb_{HA}	Pb_{HHA}	Pb_{R}	Pb_{SUM}	Pb_{T}	Pb_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
32	0	0	0.8	18.6	72	91	94	44.0	27.7	14.5	223.4	92	358	378	41.3	69376
	5	0	2.7	21.5	76	100	105	48.0	28.1	17.0	277.8	119	442	480	29.9	69381
	10	0	1.9	23.9	81	107	101	42.0	5.8	10.2	472.9	208	697	708	42.2	69386
	15	0	1.6	0	64	66	83	44.0	162.3	48.0	242.1	129	581	630	0	69391
	20	2.3	2.4	0	66	71	83	31.7	81.9	35.3	326.9	155	599	676	0	69396
	25	2.5	1.2	0	56	60	88	31.5	79.9	43.2	398.1	204	725	754	0	69401
	30	2.9	3.7	0	66	73	86	27.1	64.8	36.4	478.1	238	817	739	0	69406
	35	1.7	1.9	0	68	71	61	17.3	199.4	55.7	184.4	175	614	673	0	69411
	40	0.7	1.8	0	68	70	52	18.3	4.4	5.1	303.3	250	562	578	72.6	69416
	45	2.6	3.0	0	71	77	66	31.4	3.6	4.5	328.5	371	707	790	106.4	69421
	50	1.6	1.9	0	67	70	59	13.4	1.2	3.8	275.1	214	494	506	102.8	69426
	55	2.2	2.4	0	76	81	68	14.8	0.9	2.1	254.7	161	418	453	162.1	69431
	60	1.8	0.6	4.8	68	76	58	19.2	7.8	8.4	256.4	119	392	428	141.2	69436
	65	2.8	0	3.7	61	68	67	14.2	15.5	10.3	115.6	77	218	249	56.5	69441
	70	3.5	0.1	4.0	61	69	52	13.5	4.6	2.8	30.4	17	55	58	59.4	69446
33	0	3.4	0	6.1	75	85	77	29.6	8.1	7.9	175.3	122	313	333	111.9	69451
	5	3.7	0	4.9	51	60	83	24.3	22.2	9.9	104.3	76	212	303	96.8	69456
	10	4.1	0	5.2	77	86	73	18.9	5.0	5.1	97.5	89	196	214	75.0	69461
	15	2.1	0	5.0	74	81	77	20.9	14.1	5.9	69.4	112	202	208	87.9	69466
	20	3.2	0	5.7	69	78	77	21.8	6.6	4.2	56.3	101	168	159	87.4	69471
	25	2.6	1.8	5.9	80	91	76	19.4	3.9	2.2	24.0	44	74	58	62.1	69476
	30	2.9	0	4.9	68	76	61	18.1	1.9	1.7	10.5	12	27	15	33.1	69481
	35	1.6	0	5.9	74	82	56	18.4	3.4	0.8	7.5	7	19	17	26.6	69486
	40	1.3	0	6.5	74	81	65	21.7	1.8	0.1	4.5	4	11	0	17.2	69491
	45	0.2	0	7.5	72	80	56	22.8	1.0	0	3.4	0	4	0	14.0	69496
	50	0.1	0	8.5	75	84	67	23.9	1.3	0	4.1	0	5	12	19.7	69501
	55	0	0	10.4	86	96	58	18.0	1.0	0	2.2	0	3	2	7.0	69506
	60	0	0	12.8	69	82	59	27.0	0.7	0.1	2.8	0	4	1	12.3	69511
35	0	0	0	11.9	71	83	84	34.0	11.2	8.8	108.7	62	191	252	176.8	70134
	1	0.3	0.7	15.5	67	83	84	33.7	17.5	8.8	110.8	71	208	253	168.5	70135
	2	0	0.6	16.7	67	84	84	33.0	7.1	7.5	121.3	58	194	259	161.9	70136
	3	0.2	2.4	8.6	63	74	88	35.8	6.2	8.1	124.4	64	203	298	156.8	70137
	4	0	1.2	8.1	71	80	87	37.0	2.0	3.5	131.4	74	211	300	124.0	70138
	5	0	1.1	6.7	68	76	77	31.0	3.0	4.3	126.5	78	212	301	112.0	70139
	6	0	1.1	7.5	57	66	84	25.0	8.1	8.4	124.0	100	241	322	69.9	70140
	7	0	0.7	7.0	60	67	70	28.0	9.1	9.7	122.1	97	238	315	83.9	70141
	8	0	0.7	6.2	62	68	89	29.0	11.7	9.0	122.0	109	252	340	73.3	70142
39	0	0.8	1.8	10.9	66	79	96	45.2	2.1	2.4	123.8	58	186	265	182.9	70143
	1	0.6	2.7	9.6	65	78	93	46.4	3.8	4.0	119.9	52	180	261	184.2	70144
	2	0.9	2.7	10.9	69	83	94	40.1	5.4	6.4	124.8	61	198	272	161.6	70145
	3	0.8	6.7	13.5	70	91	110	43.2	11.5	9.6	142.8	65	229	376	169.5	70146
	4	0.6	8.8	10.7	71	91	104	37.4	3.2	8.2	142.7	57	211	325	136.8	70147
	5	1.3	0	10.8	72	84	105	37.7	7.7	9.2	146.6	64	228	329	123.3	70148
	6	1.2	0	11.2	76	89	101	39.8	20.2	15.6	142.6	67	245	357	108.8	70149
	7	1.4	0	11.3	78	91	100	40.6	87.7	30.8	97.6	49	265	352	30.3	70150
	8	1.9	0	9.2	68	79	95	37.1	7.5	11.4	147.0	70	235	339	99.5	70151
	9	1.2	0	10.1	58	69	78	35.8	12.6	11.3	138.6	62	224	267	85.4	70152
42	0	1.2	0	16.8	87	105	85	37.8	36.9	17.2	93.4	61	209	200	69.1	69516
	5	2.6	0	6.0	90	99	105	40.4	34.9	15.8	106.0	78	235	252	100.1	69521
	10	0.6	0.9	4.5	61	67	60	23.4	10.3	5.8	50.3	22	89	95	76.7	69526

Core	Depth	Cr_{WA}	Cr_{HA}	Cr_{HHA}	Cr_{R}	Cr_{SUM}	Cr_{T}	Cr_{org}	Pb_{WA}	Pb_{HA}	Pb_{HHA}	Pb_{R}	Pb_{SUM}	Pb_{T}	Pb_{org}	ID
	cm	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	μgg^{-1}	
44	0	0.3	0	10.0	63	73	85	31.7	38.7	18.8	83.5	44	185	187	35.3	70153
	1	1.7	0	9.6	70	81	77	29.3	39.6	19.2	69.6	30	159	185	39.4	70154
	2	0.4	0	9.3	67	77	79	38.6	48.2	20.4	70.5	35	174	188	37.8	70155
	3	1.2	0	9.2	64	74	96	30.8	43.9	19.5	73.9	33	170	224	55.1	70156
	4	1.1	0	10.5	77	89	91	29.9	41.8	19.5	71.0	31	163	197	78.2	70157
	5	1.0	0	10.9	70	82	79	28.0	11.8	8.6	86.5	43	150	184	100.2	70158
	6	0.8	0	11.5	67	79	78	27.2	17.8	10.7	87.0	42	158	196	93.2	70159
47	0	3.4	0	3.7	56	63	59	11.6	15.5	4.0	25.6	0	45	43	50.5	69531
	5	3.2	1.7	3.4	53	61	50	10.8	20.2	3.7	17.4	0	41	46	37.8	69536
	10	2.4	1.3	3.7	41	49	41	8.6	20.0	4.4	15.2	0	40	43	33.0	69541
	15	3.0	0	4.5	40	47	38	8.0	24.7	3.4	16.3	0	44	17	28.3	69546
	20	1.4	0.4	3.9	35	41	51	5.6	4.1	2.5	11.2	0	18	42	19.9	69551
	25	1.7	0.7	2.5	44	49	38	6.3	4.0	1.2	4.0	0	9	0	9.0	69556
	30	1.6	0.2	2.8	47	52	22	5.4	1.9	0.6	2.7	0	5	0	5.1	69561
	35	0.8	0.6	3.2	39	44	41	5.2	1.4	1.1	1.1	0	4	0	0.6	69566
	40	2.4	0	2.7	57	62	31	4.6	1.4	0.1	1.7	0	3	0	0.6	69571
	45	0	0.4	4.0	57	62	31	7.0	1.7	0.1	1.7	0	4	0	0.3	69576
1	0	4.5	1.4	3.0	66	75	65	12.5	6.4	3.3	2.9	0	13	13	6.6	70161
	5	4.4	0	2.0	73	79	66	13.6	9.5	1.7	2.8	0	14	4	3.5	70162
	10	5.7	1.5	3.7	69	80	70	13.3	8.1	2.0	1.3	0	11	0	0	70163
	15	6.4	1.7	2.7	79	90	71	13.6	8.1	0	1.7	0	10	1	0	70164
	20	5.4	2.8	3.1	79	90	69	17.6	8.8	0.8	0.5	0	10	0	0	70165
	25	5.8	2.0	2.3	53	63	69	20.2	7.3	2.4	0.7	0	10	0	0.7	70166
	30	6.6	1.6	2.4	68	79	63	17.4	7.1	2.0	0	0	9	0	0	70167
	35	7.1	1.7	1.4	56	66	57	20.9	6.3	0.9	0.3	0	8	0	0	70168
	40	6.6	1.2	3.5	64	75	68	23.4	7.1	1.2	0.8	0	9	0	0.9	70169
	45	0.8	2.1	3.6	63	69	40	25.2	1.7	0	0.6	0	2	0	5.3	70170
	50	1.2	0	3.0	30	35	27	10.8	0.7	0	0	0	1	0	3.3	70171
	55	1.4	2.1	1.5	48	53	40	11.6	0.8	0	0	0	1	0	3.2	70172
	60	0.4	1.4	1.2	39	42	53	15.6	2.1	0	0.4	0	3	0	4.9	70173
2	0						38							0		65020
	20						46							0		65021
	40						46							0		65007
	65						62							0		65008
	90						56							0		65009
	115						57							0		65010
	140						62							0		65011
	165						59							0		65012
	190						66							0		65013
	193						71							0		65004
	215						61							0		65014
	240						61							0		65015
	265						70							0		65016
	290						67							0		65017
	315						53							0		65018
	335						69							0		65019
	340						69							0		65003

Core	Depth	Si_R	Si_T	Al_R	Al_T	Mg_R	Mg_T	K_R	K_T	Cd_T	Hg_T	Residue	$CaCO_3$	C_{org}	Water	ID
	cm	%	%	%	%	%	%	%	%	μgg^{-1}	μgg^{-1}	mg	%	%	%	
28	0	13.30	24.95	5.72	6.78	0.75	0.77	1.75	2.25	0.71	1.21	819	0.00	4.81	75.99	69301
	5	14.96	24.60	5.69	7.39	0.77	0.88	1.76	1.93	0.64	1.15	838	0.00	4.10	74.88	69306
	10	10.54	26.70	6.25	6.96	0.86	0.75	1.97	3.67	0.64	1.18	865	1.92	3.79	70.81	69311
	15	12.94	27.39	5.34	6.74	0.71	0.72	1.94	3.31	1.11	2.17	872	3.08	3.81	64.24	69316
	20	12.53	28.44	5.28	6.92	0.75	0.55	2.06	2.25	0.56	2.31	889	9.17	3.99	66.21	69321
	25	18.19	26.46	3.25	6.09	0.69	0.51	2.56	2.50	0.40	2.85	858	15.67	4.71	64.65	69326
	30	15.18	30.64	2.52	5.98	0.60	0.40	2.62	2.86	0.24	1.15	873	1.50	4.67	60.75	69331
	35	14.14	28.58	3.48	5.80	0.69	0.52	2.24	3.08	0.48	1.82	850	12.25	4.57	55.06	69336
	40	20.20	29.70	5.72	5.79	0.71	0.50	2.81	2.57	0.32	1.52	885	0.00	4.40	57.10	69341
	45	20.02	36.40	4.52	4.38	0.51	0.14	3.12	2.52	0.16	0.74	919	1.25	1.46	38.24	69346
	50	21.26	29.32	5.81	5.77	0.72	0.54	3.02	2.81	0.40	0.98	863	3.08	3.21	55.31	69351
	55	25.06	36.35	4.43	3.99	0.52	0.06	2.25	3.43	0.08	0.70	935	2.50	2.50	48.83	69356
	60	21.53	30.22	5.60	6.03	0.71	0.48	2.76	2.99	0.01	0.39	886	2.08	2.90	54.66	69361
	65	21.36	26.23	5.26	5.12	0.69	0.45	2.52	2.63	0.24	0.14	880	2.17	2.88	55.45	69366
	70	19.16	29.05	5.54	5.74	0.74	0.59	2.54	2.95	0.16	0.05	868	2.00	2.87	55.55	69371
29	0	18.69	26.78	5.48	7.26	0.12	0.75	1.83	2.22	0.72	1.00	839	2.50	4.29	74.58	70101
	1	15.63	25.37	5.50	7.12	0.15	0.64	2.53	2.18	0.52	1.16	807	2.25	4.15	76.68	70102
	2	14.85	25.66	5.71	7.17	0.16	0.64	2.22	2.73	0.62	1.09	821	2.58	4.06	75.31	70103
	3	11.29	26.69	5.62	7.07	0.20	0.66	1.90	2.39	0.60	1.11	798	3.50	4.07	72.96	70104
	4	14.25	27.60	5.83	7.08	0.24	0.69	2.49	2.48	0.56	1.76	841	2.67	3.80	72.81	70105
	5	13.26	29.38	6.05	7.43	0.27	0.64	2.23	4.09	0.61	1.15	856	2.00	3.85	71.55	70106
	6	13.26	27.54	6.13	7.55	0.37	0.74	2.22	2.69	0.54	0.85	806	1.42	3.90	72.07	70107
	7	16.01	30.84	5.88	7.31	0.22	0.53	2.44	3.35	0.46	0.81	862	1.75	3.83	72.01	70108
	8	13.04	27.54	6.40	7.43	0.34	0.71	2.07	2.40	0.54	0.87	839	2.58	3.64	69.47	70109
	9	12.94	27.57	6.18	7.32	0.31	0.81	2.01	3.62	0.53	1.28	842	2.00	3.81	71.08	70110
	10	10.91	26.29	6.23	8.47	0.34	0.76	2.07	3.49	0.50	1.00	839	2.25	3.69	70.05	70111
	11	15.06	28.36	6.23	7.28	0.28	0.64	2.16	2.79	0.49	0.82	862	2.92	3.61	69.43	70112
	13	14.84	27.55	6.15	7.96	0.32	0.78	2.50	3.23	0.55	0.98	832	2.83	3.71	69.08	70114
	14	14.06	25.69	6.16	8.55	0.35	0.75	2.10	2.95	0.39	0.97	821	2.67	3.70	68.38	70115
	15	17.71	24.31	6.36	7.95	0.34	0.74	2.29	2.71	0.55	0.91	838	1.92	3.76	68.64	70116
	16	17.10	26.05	6.38	7.64	0.31	0.69	2.39	2.98	0.61	0.81	854	2.67	3.74	67.87	70117
	17	17.97	26.34	6.27	7.20	0.33	0.56	2.01	2.75	0.56	0.98	834	1.67	3.85	68.13	70118
	18	19.22	25.94	5.98	7.11	0.23	0.71	2.44	3.10	0.31	0.96	857	1.25	3.80	67.16	70119
30	0	14.35	25.74	5.72	7.13	0.20	0.37	2.28	2.94	0.70	1.77	810	2.33	5.09	71.66	70120
	1	14.23	24.38	5.88	7.01	0.20	0.42	2.53	2.96	1.12	1.50	847	3.67	4.88	71.70	70121
	2	12.30	26.00	6.23	7.28	0.22	0.32	2.52	2.31	0.59	1.25	861	2.50	5.19	69.42	70122
	3	9.69	23.98	6.03	7.19	0.20	0.40	2.36	3.17	1.12	1.62	874	2.75	4.96	68.69	70123
	4	13.52	26.93	6.04	7.50	0.21	0.36	1.93	2.61	0.74	1.94	856	0.17	5.49	69.32	70124
	5	13.44	21.58	6.41	7.37	0.26	0.42	2.53	2.68	0.51	2.44	869	1.08	5.29	68.34	70125
	6	16.75	26.06	6.35	8.20	0.29	0.36	2.36	2.90	0.28	1.66	866	1.75	5.17	67.78	70126
	7	13.93	24.84	6.26	8.14	0.24	0.36	3.08	2.90	0.28	1.72	847	0.00	5.25	68.20	70127
	8	15.71	26.02	6.14	8.40	0.24	0.41	2.97	2.49	0.28	1.76	840	0.17	5.35	67.11	70128
	9	16.50	24.45	6.14	7.85	0.26	0.39	1.86	2.66	0.66	2.36	824	0.00	5.44	67.82	70129
	10	17.21	23.20	6.32	7.93	0.20	0.35	2.33	2.86	0.66	2.28	881	0.50	5.78	67.19	70130
	11	13.44	21.54	6.07	7.44	0.15	0.17	2.58	2.43	0.89	2.41	858	0.67	6.18	67.90	70131
	12	17.70	22.29	5.93	7.54	0.15	0.28	2.29	2.50	0.51	5.08	856	1.17	6.36	63.01	70132
	13	14.70	21.00	6.20	8.70	0.13	0.30	2.18	2.84	1.12	4.21	857	2.17	6.24	61.41	70133

Core	Depth	Si_R	Si_T	Al_R	Al_T	Mg_R	Mg_T	K_R	K_T	Cd_T	Hg_T	Residue	$CaCO_3$	C_{org}	Water	ID
	cm	%	%	%	%	%	%	%	%	μgg^{-1}	μgg^{-1}	mg	%	%	%	
32	0	18.68	22.29	6.40	6.86	0.77	0.55	1.97	3.49	1.74	1.89	847	1.58	4.92	76.59	69376
	5	20.81	20.85	6.46	6.55	0.75	0.48	2.01	2.30	1.82	3.10	846	3.25	6.48	72.15	69381
	10	20.24	21.24	6.40	6.41	0.70	0.38	1.92	2.88	1.90	5.26	881	2.75	6.74	64.70	69386
	15	19.10	19.10	5.57	5.61	0.63	0.35	2.30	2.94	2.84	3.51	866	1.67	10.10	65.71	69391
	20	22.74	20.68	5.33	5.18	0.60	0.30	2.29	2.38	2.21	3.79	868	0.00	10.80	66.99	69396
	25	17.50	21.60	5.40	5.77	0.60	0.26	2.22	2.73	2.34	8.71	861	4.17	10.60	63.81	69401
	30	17.74	20.98	5.63	5.62	0.59	0.29	2.56	3.00	0.55	5.59	869	3.33	11.80	63.25	69406
	35	21.46	23.64	6.29	6.85	0.68	0.32	1.97	2.66	1.30	5.84	892	6.08	7.76	61.54	69411
	40	18.57	22.43	5.55	5.88	0.64	0.30	1.92	3.08	0.10	10.3	882	2.25	8.69	70.11	69416
	45	19.68	23.12	6.07	5.62	0.66	0.14	2.49	3.16	0.01	9.76	811	0.00	9.54	59.57	69421
	50	19.26	23.57	5.80	5.76	0.60	0.26	1.85	3.95	0.01	4.46	864	0.25	7.31	59.15	69426
	55	21.29	22.92	6.33	5.73	0.68	0.27	2.10	3.38	1.89	5.45	859	1.67	6.89	63.36	69431
	60	17.92	22.34	6.26	5.63	0.67	0.40	1.95	3.52	0.47	6.22	835	0.92	7.54	58.36	69436
	65	20.47	26.05	6.02	5.83	0.63	0.23	2.12	3.15	0.01	2.95	853	0.00	6.16	58.03	69441
	70	23.24	26.33	6.35	5.33	0.69	0.23	2.69	3.28	0.01	0.27	898	1.25	3.84	50.87	69446
33	0	18.33	19.25	6.88	6.87	0.75	0.44	2.11	4.28	2.27	2.44	808	2.67	5.77	78.19	69451
	5	14.04	18.44	5.12	6.22	0.55	0.36	1.09	4.60	0.08	1.65	618	6.08	4.79	74.54	69456
	10	19.77	19.46	7.66	7.22	0.74	0.32	2.54	3.28	1.00	1.57	880	4.67	5.33	75.91	69461
	15	19.82	18.47	6.60	6.81	0.73	0.39	2.27	3.59	0.40	1.27	833	0.92	5.11	74.56	69466
	20	20.34	17.99	6.58	6.93	0.72	0.38	2.63	3.88	0.40	1.39	843	2.58	4.97	74.72	69471
	25	21.65	17.86	6.50	6.93	0.76	0.34	2.41	2.50	1.00	0.70	856	3.42	4.71	74.75	69476
	30	19.59	22.56	5.95	6.65	0.70	0.43	1.76	3.06	1.74	0.48	830	1.50	4.63	73.57	69481
	35	20.36	23.01	5.79	6.59	0.71	0.61	1.97	3.70	1.54	0.57	825	3.50	4.44	74.99	69486
	40	19.40	22.27	6.12	6.69	0.76	0.73	1.91	3.45	2.28	0.51	836	5.25	4.09	71.77	69491
	45	20.59	22.13	6.09	6.47	0.76	0.55	2.14	2.93	1.27	0.50	856	3.00	4.64	73.75	69496
	50	21.70	22.83	6.03	6.89	0.79	0.61	2.43	2.89	0.80	0.32	857	2.25	5.10	68.61	69501
	55	23.09	25.14	6.13	6.36	0.79	0.55	2.07	2.19	2.41	0.00	864	1.92	5.24	69.82	69506
	60	16.24	18.09	6.01	4.58	0.64	0.22	1.83	2.05	2.14	0.10	835	2.08	5.49	67.30	69511
35	0	15.33	22.51	6.25	8.27	0.24	0.59	2.34	2.59	0.51	1.51	824	2.08	6.50	73.35	70134
	1	14.18	22.81	6.21	8.07	0.26	0.65	2.19	2.71	0.82	1.44	823	2.83	6.52	72.30	70135
	2	16.00	21.92	6.35	7.71	0.28	0.68	1.56	3.00	0.13	1.45	823	2.92	6.01	73.31	70136
	3	16.93	20.48	6.23	7.89	0.24	0.68	2.86	2.64	0.36	1.75	816	3.08	5.86	74.73	70137
	4	16.74	21.10	6.56	7.78	0.25	0.54	1.94	2.90	0.66	1.75	845	2.33	5.71	75.20	70138
	5	14.81	21.34	6.48	7.88	0.23	0.52	2.01	2.79	0.21	1.75	834	2.42	5.98	73.62	70139
	6	17.42	21.66	6.37	7.65	0.17	0.44	2.10	2.96	0.66	2.01	851	1.42	6.03	73.30	70140
	7	16.15	22.43	6.22	7.56	0.14	0.41	1.81	2.86	0.59	1.75	851	0.00	6.03	73.95	70141
	8	16.70	20.27	6.28	7.58	0.18	0.34	2.43	2.69	0.13	1.83	832	1.75	5.95	73.61	70142
39	0	16.49	16.28	5.61	7.10	0.25	0.49	2.03	2.91	0.36	1.75	791	1.67	6.47	77.12	70143
	1	15.52	21.46	5.45	6.99	0.20	0.44	2.15	2.72	0.13	1.56	788	1.42	5.88	75.02	70144
	2	16.91	21.47	5.87	7.00	0.27	0.60	2.20	2.95	0.28	1.55	818	0.75	5.45	73.03	70145
	3	16.20	20.14	5.70	7.13	0.22	0.53	1.97	3.00	0.21	1.55	809	0.83	6.28	72.70	70146
	4	19.18	24.13	5.94	7.26	0.23	0.48	1.99	2.84	0.21	1.59	850	1.17	5.86	69.34	70147
	5	18.04	22.18	5.86	7.03	0.27	0.54	2.46	2.80	0.21	1.49	832	0.67	5.80	68.61	70148
	6	16.43	22.12	5.87	7.07	0.22	0.57	2.08	2.65	0.13	2.02	828	1.42	6.29	69.75	70149
	7	16.33	22.93	5.67	7.13	0.14	0.55	1.97	2.63	0.21	2.00	850	0.00	5.78	69.79	70150
	8	17.12	24.81	6.13	6.75	0.26	0.51	2.50	2.28	1.04	2.00	859	25.58	2.90	69.11	70151
	9	12.33	26.73	5.18	6.38	0.67	0.49	1.68	2.33	0.28	2.12	848	24.75	3.01	68.29	70152
42	0	17.81	22.98	6.64	7.42	0.73	0.51	2.20	1.98	2.14	1.98	839	0.00	4.42	68.13	69516
	5	13.54	21.62	6.93	7.31	0.76	0.74	1.92	2.27	3.08	1.95	822	7.08	4.10	67.10	69521
	10	21.52	28.14	5.75	5.52	0.57	0.37	1.68	2.19	3.35	1.04	884	1.83	3.36	58.34	69526

Core	Depth	Si_R	Si_T	Al_R	Al_T	Mg_R	Mg_T	K_R	K_T	Cd_T	Hg_T	Residue	$CaCO_3$	C_{org}	Water	ID
	cm	%	%	%	%	%	%	%	%	μgg^{-1}	μgg^{-1}	mg	%	%	%	
44	0	18.85	27.58	5.85	6.24	0.75	0.50	2.21	3.00	0.28	2.15	895	16.17	2.99	69.01	70153
	1	15.38	29.21	5.83	6.30	0.75	0.55	2.54	1.69	0.06	1.46	896	17.83	2.91	72.49	70154
	2	17.44	28.95	5.86	6.32	0.78	0.59	2.11	2.68	0.44	1.39	879	9.75	3.32	69.09	70155
	3	16.56	27.34	3.88	6.91	0.79	0.70	2.45	1.90	0.74	1.44	886	26.17	1.54	68.82	70156
	4	12.13	27.54	4.69	6.79	0.79	0.60	2.34	1.96	0.82	1.19	879	6.33	3.93	68.30	70157
	5	12.23	28.68	5.87	6.83	0.74	0.62	2.22	2.46	0.28	1.24	865	2.00	4.48	70.27	70158
	6	16.21	28.37	6.09	6.76	0.77	0.65	1.90	2.42	0.74	1.72	877	0.00	5.03	65.72	70159
47	0	22.27	30.63	5.36	5.16	0.59	0.44	1.81	2.19	0.59	0.30	840	3.08	1.77	56.80	69531
	5	22.19	30.81	5.04	4.19	0.54	0.24	1.94	1.78	0.26	0.25	878	2.58	1.93	54.58	69536
	10	24.32	32.05	4.26	4.16	0.42	0.13	2.07	2.58	2.01	0.32	881	3.92	2.20	54.71	69541
	15	20.89	30.41	4.98	4.55	0.51	0.16	1.81	2.22	1.06	0.26	887	5.25	1.89	53.49	69546
	20	21.92	35.47	3.40	3.05	0.27	0.01	2.34	2.27	1.35	0.17	903	2.33	1.12	38.52	69551
	25	26.43	36.71	3.12	2.77	0.23	0.00	1.87	2.12	1.40	0.00	903	2.67	1.02	36.05	69556
	30	26.26	36.57	2.98	2.77	0.22	0.00	2.33	2.13	0.82	0.00	909	1.67	0.92	34.21	69561
	35	23.26	37.44	2.62	2.32	0.16	0.00	2.34	2.21	1.01	0.00	916	1.83	0.77	36.73	69566
	40	24.62	37.50	2.98	2.41	0.21	0.00	1.81	2.27	0.04		884	1.17	0.94	32.41	69571
	45	29.01	35.83	3.48	3.18	0.27	0.03	2.10	2.70	0.09		927	1.75	0.80	31.76	69576
1	0	20.74	27.85	4.46	4.81	0.04	0.51	1.78	2.53	2.87		832	2.67	2.64		70161
	5	25.08	28.63	4.87	4.50	0.07	0.45	1.76	2.68	1.83		853	2.33	2.43		70162
	10	25.08	28.68	4.96	5.29	0.10	0.45	1.81	2.43	1.64		880	2.58	2.38		70163
	15	23.03	29.06	4.83	5.60	0.11	0.54	1.87	2.44	1.64		892	2.33	2.06		70164
	20	23.21	27.99	5.54	5.67	0.13	0.52	2.10	2.17	1.73		907	2.17	2.07		70165
	25	23.18	28.84	5.56	6.23	0.14	0.70	2.24	2.68	1.36		908	1.58	2.20		70166
	30	25.33	28.44	5.60	5.81	0.05	0.57	2.55	2.65	1.08		906	1.25	2.23		70167
	35	24.73	26.82	5.66	5.27	0.12	0.49	2.00	2.66	1.03		870	2.58	2.28		70168
	40	23.25	27.00	5.52	6.39	0.12	0.68	2.17	2.72	1.26		896	1.50	2.14		70169
	45	23.27	31.07	4.23	4.60	0.00	0.16	2.30	2.79	1.36		933	0.08	1.99		70170
	50	24.34	33.87	3.32	3.73	0.00	0.00	2.15	2.47	0.89		948	0.67	0.54		70171
	55	27.52	32.45	5.01	4.52	0.00	0.02	2.56	2.41	0.89		957	0.17	0.45		70172
	60	27.86	29.45	4.29	4.12	0.00	0.00	2.11	3.00	0.98		957	0.50	0.18		70173
2	0		29.68		4.04		0.11		2.49	1.92			3.00	1.35	44.33	65020
	20		27.08		4.51		0.20		2.67	1.97			4.25	1.65	41.15	65021
	40		26.99		5.34		0.33		2.81	2.02			3.00	1.83	42.79	65007
	65		27.66		5.71		0.50		2.66	1.69			3.08	1.81	41.11	65008
	90		25.80		5.59		0.41		2.65	2.11			2.33	1.98	40.14	65009
	115		26.26		5.31		0.38		2.34	1.97			2.42	1.92	41.78	65010
	140		25.59		5.53		0.42		2.29	1.41			2.92	2.14	41.26	65011
	165		24.72		5.77		0.43		2.39	1.55			3.42	2.14	43.67	65012
	190		24.81		5.88		0.44		2.43	1.59			2.50	2.05	41.78	65013
	193		25.48		5.38		0.47		2.06	1.41						65004
	215		24.67		5.73		0.40		2.17	1.69			1.67	2.40	41.47	65014
	240		24.51		6.08		0.36		2.18	1.08			1.67	2.25	41.08	65015
	265		23.16		5.36		0.46		2.38	1.08			2.00	2.37	39.89	65016
	290		25.94		5.89		0.56		2.03	2.06			2.33	2.45	41.42	65017
	315		25.49		5.67		0.41		2.11	1.64			1.92	2.56	42.52	65018
	335		26.73		5.48		0.48		1.89	1.59			1.75	2.50	41.90	65019
	340		25.48		5.56		0.47		2.67	1.88						65003

Core	Depth	pH_{pw}	pH_{sed}	$p\epsilon_{pw}$	NH_4^+	S^{2-}	SiO_{2PW}	SO_4^{2-}	Alk_{pw}	Fe_{pw}	Mn_{pw}	Na_{pw}	Mg_{pw}	K_{pw}	Ca_{pw}	ID
	cm	-lg N	-lg N	-lg M	mM	μM	μM	mM	mN	μM	μM	mM	mM	mM	mM	
28	0	7.62	7.01	2.16	0.60	0.01	385	24	3.9	16.4	0	406	45.1	9.3	9.5	69301
	5	7.68	6.86	2.23	0.60	0.01	395	24	4.5	5.3	0	420	45.7	9.8	9.9	69306
	10	7.68	7.39	1.32	0.70	0.01	340	24	4.7	3.7	0	416	44.8	9.7	9.9	69311
	15	7.79	6.96	0.56	0.70	0.01	340	25	5.6	3.0	0	425	44.2	10.2	9.8	69316
	20	7.90	7.11	0.71	0.85	0.01	345	25	6.6	3.2	0.1	418	43.9	10.4	9.5	69321
	25	7.96	7.34	0.91	1.20	0.01	410	22	9.1	3.3	0	420	43.7	10.3	9.3	69326
	30	8.01	7.30	0.74	1.20	0.01	475	23	12.1	2.9	0	421	43.5	10.0	10.1	69331
	35	8.07	7.42	0.35	1.50	0.20	490	21	17.3	2.9	0	419	43.0	10.1	9.3	69336
	40	8.18	7.15	1.54	1.80	0.08	465	21	19.8	2.6	0	411	42.4	10.1	9.5	69341
	45	8.24	7.57	-0.44	1.80	0.01	505	18	24.4	5.7	0.2	409	44.3	9.6	11.1	69346
	50	8.24	7.53	-0.74	1.90	0.10	550	18	29.6	4.9	0.8	424	45.7	10.0	10.2	69351
	55	8.13	7.40	-0.74	2.00	1.50	560	7	33.8	3.7	0.4	423	45.8	9.7	10.6	69356
	60	8.18	7.42	-1.15	1.80	0.57	600	14	32.6	4.4	0.8	392	43.1	8.9	9.9	69361
	65	8.13	7.61	-0.54	2.40	0.40	630	12	36.4	4.5	0.3	414	44.3	9.4	10.3	69366
	70	8.13	7.35	-0.34	2.40	0.53	650	14	37.4	3.0	0	417	45.1	9.6	5.6	69371
29	0	7.06	6.75	5.91	0.16	0.01	287	24	3.5	192.1	5.6	420	42.7	9.7	10.3	70101
	1	7.06	6.53	3.60	0.20	0.01	306	24	4.0	104.4	2.8	426	43.8	9.8	10.1	70102
	2	7.34	6.70	4.11	0.46	0.01	338	24	4.1	34.9	0.2	432	43.5	10.0	10.1	70103
	3	7.62	6.78	1.64	0.26	0.01	350	24	4.6	7.7	0.2	422	43.4	10.0	9.4	70104
	4	7.73	6.73	1.69	0.30	0.01	350	24	4.5	2.9	0.2	426	43.4	9.7	9.2	70105
	5	7.73	6.96	0.30	0.32	0.01	340	23	4.5	3.5	0.6	416	42.0	10.1	9.0	70106
	6	7.73	6.98	0.12	0.32	0.01	337	23	4.6	2.8	0.2	424	42.3	10.1	9.4	70107
	7	7.79	7.03	0.08	0.33	0.01	285	23	4.4	2.8	0.4	430	43.2	10.5	8.9	70108
	8	7.73	7.15	1.03	0.33	0.01	322	23	4.4	2.8	0.8	430	42.6	10.7	9.4	70109
	9	7.79	7.11	1.03	0.30	0.01	295	22	4.3	6.3	0	438	45.5	10.1	10.3	70110
	10	7.73	7.33	1.00	0.32	0.01	287	23	4.2	4.0	1.0	446	44.5	10.1	10.1	70111
	11	7.79	7.21	0.78	0.30	0.01	310	23	4.3	4.3	0.2	436	45.0	9.8	10.4	70112
	13	7.79	7.27	1.93	0.32	0.01	270	23	4.3	4.0	0.4	438	44.3	10.1	9.9	70114
	14	7.84	7.28	1.40	0.29	0.01	260	22	4.2	3.9	0.6	447	44.3	10.1	10.1	70115
	15	7.79	7.34	-0.27	0.29	0.01	255	23	4.2	4.1	0.4	457	45.5	10.3	10.5	70116
	16	7.73	7.39	1.77	0.32	0.01	240	23	4.1	4.4	0.8	451	44.5	10.1	10.0	70117
	17	7.73	7.21	2.15	0.26	0.01	260	22	4.2	5.0	1.4	443	45.3	10.4	10.2	70118
	18	7.84	7.61	1.35	0.29	0.01	252	23	4.4	7.7	0	452	45.5	10.3	9.6	70119
30	0	6.72	6.77	4.46	0.22	0.01	115	22	2.2	104.9	1.0	429	45.1	9.5	9.9	70120
	1	6.89	6.29	4.66	0.19	0.01	115	23	2.3	116.2	1.8	428	45.9	9.9	10.4	70121
	2	7.06	6.29	4.06	0.26	0.01	140	24	3.5	30.6	0.8	438	46.1	9.9	10.5	70122
	3	7.00	6.41	2.94	0.28	0.01	135	23	3.2	26.8	0.8	428	44.2	9.7	10.0	70123
	4	6.94	6.48	3.53	0.26	0.01	125	25	3.2	63.6	0.4	418	44.5	9.2	9.7	70124
	5	7.23	6.46	2.79	0.30	0.01	130	25	4.4	20.4	1.2	440	46.9	9.7	10.3	70125
	6	7.34	6.36	2.18	0.34	0.01	133	24	4.8	7.8	1.0	425	45.2	9.2	9.9	70126
	7	7.39	6.59	2.97	0.33	0.01	120	23	4.6	14.5	0.8	412	42.6	9.0	9.9	70127
	8	7.28	6.49	1.91	0.27	0.01	130	22	4.5	10.3	0	452	46.5	10.0	10.9	70128
	9	7.23	6.67	1.06	0.26	0.01	130	23	4.4	18.5	0	483	45.8	10.8	11.3	70129
	10	7.45	6.58	1.96	0.38	0.02	145	23	5.6	6.9	0	445	45.9	9.8	10.7	70130
	11	7.68	6.77	0.15	0.41	0.01	142	22	6.8	5.1	0	436	45.7	9.8	11.2	70131
	12	7.62	6.83	-0.22	0.47	0.01	178	22	8.3	4.5	0	446	45.4	10.3	10.6	70132
	13	7.73	7.01	-0.63	0.56	0.01	190	21	9.1	5.0	0.4	446	45.0	10.4	11.1	70133

Core	Depth	pH_{pw}	pH_{sed}	$P\epsilon_{pw}$	NH_4^+	S^{2-}	SiO_{2PW}	SO_4^{2-}	Alk_{pw}	Fe_{pw}	Mn_{pw}	Na_{pw}	Mg_{pw}	K_{pw}	Ca_{pw}	ID
	cm	-lg N	-lg N	-lg M	mM	μM	μM	mM	mN	μM	μM	mM	mM	mM	mM	
32	0	7.34	6.78	3.62	0.09	0.10	130	24	5.2	4.7	0.5	412	44.3	9.4	10.4	69376
	5	7.62	6.75	0.56	0.20	2.20	150	25	8.4	3.7	0	412	44.7	9.5	10.8	69381
	10	7.68	6.74	-0.59	0.37	3.40	195	21	14.4	4.0	0.3	417	44.2	9.5	9.9	69386
	15	7.79	6.82	-0.85	0.52	6.20	250	18	20.0	4.6	0.3	419	45.5	9.4	9.8	69391
	20	7.96	7.00	-1.44	0.70	2.40	255	16	20.6	4.8	0.4	387	42.4	8.9	9.3	69396
	25	7.90	6.96	-1.71	0.78	5.80	340	11	30.2	3.8	0.1	415	48.7	9.9	10.1	69401
	30	8.18	7.30	-1.03	1.00	3.80	355	11	32.2	5.8	0.9	417	45.0	9.5	9.7	69406
	35	8.13	6.52	1.77	1.10	8.20	380	6	39.4	4.5	0.4	411	43.9	9.3	9.3	69411
	40	8.18	7.42	-1.35	1.20	10.00	440	2	45.6	4.2	0.2	412	44.1	9.2	7.0	69416
	45	8.13	7.21	-1.18	1.40	8.70	475	1	47.0	3.8	0.8	395	42.8	8.8	8.3	69421
	50	8.07	7.09	-1.42	1.60	5.80	485	0	46.2	4.7	0.6	406	43.4	9.2	9.1	69426
	55	8.17	7.25	-1.08	1.60	5.80	520	1	48.4	3.7	0	408	48.7	9.3	8.1	69431
	60	8.13	7.46	-1.10	1.80	1.40	525	0	46.8	5.1	0	408	43.8	9.4	8.5	69436
	65	8.07	7.60	-1.45	2.00	1.20	560	0	47.4	4.5	0	397	42.6	8.9	3.9	69441
	70	8.13	7.32	-0.73	1.90	0.10	600	0	47.4	4.2	0.3	406	44.0	9.3	4.5	69446
33	0	7.56	7.02	3.63	1.00	3.40	355	21	13.7	3.2	0	414	47.0	9.7	10.3	69451
	5	7.96	7.08	0.74	1.10	3.00	350	18	12.2	3.4	0	408	45.9	9.6	10.5	69456
	10	7.79	6.91	-0.85	1.60	7.00	470	14	20.7	3.7	0	415	46.3	9.7	10.8	69461
	15	8.01	7.22	-0.91	2.40	17.00	560	7	33.2	3.3	0	404	45.1	9.3	10.1	69466
	20	8.07	7.19	-0.93	2.40	16.00	610	0	42.0	3.2	0	412	45.2	9.6	9.4	69471
	25	8.13	7.10	-1.30	3.60	17.00	720	0	49.8	3.6	0	411	45.9	9.4	10.7	69476
	30	8.07	7.12	-1.28	3.80	12.00	745	0	49.6	4.6	0	408	44.6	9.6	9.5	69481
	35	8.07	7.01	-1.59	2.80	14.00	720	0	49.2	3.8	0	418	46.8	9.6	10.6	69486
	40	8.24	6.96	-1.25	4.60	14.00	775	0	53.7	3.3	0	417	46.4	9.7	8.5	69491
	45	8.29	6.87	-1.06	4.40	16.00	760	0	54.5	2.2	0	419	46.2	9.6	10.3	69496
	50	8.13	6.93	-0.98	5.50	10.00	760	0	55.0	2.6	0.4	409	45.5	9.7	8.5	69501
	55	8.13	6.92	-0.59	4.80	11.00	785	2	56.3	2.4	0.1	411	45.5	9.8	8.6	69506
	60	8.13	6.86	-0.91	6.00	10.00	785	2	57.2	2.4	0.2	409	45.7	9.6	7.9	69511
35	0	6.83	6.68	4.95	0.24	0.01	200	22	4.0	84.5	0.2	428	44.0	10.3	11.7	70134
	1	6.83	6.37	4.51	0.28	0.01	215	26	4.1	99.9	0	452	45.5	10.7	11.8	70135
	2	7.06	6.26	3.79	0.40	0.01	250	25	6.2	12.2	0	448	45.5	10.7	11.4	70136
	3	7.56	6.78	1.49	0.55	0.07	225	24	8.2	6.2	0	466	46.2	10.5	11.3	70137
	4	7.68	6.73	0.69	0.70	1.90	265	24	10.2	3.7	0	457	45.5	10.7	11.9	70138
	5	7.90	6.96	0.39	0.75	0.01	250	23	10.5	4.7	0	445	45.5	10.5	11.4	70139
	6	7.84	6.97	1.79	0.97	6.90	365	22	15.7	3.2	0.2	449	46.1	10.4	11.3	70140
	7	7.90	7.14	0.34	0.97	4.30	350	17	15.5	4.5	0	444	45.8	10.0	11.5	70141
	8	7.79	7.13	-0.73	1.05	4.00	370	16	16.0	4.0	0	431	46.3	10.3	12.3	70142
39	0	6.39	6.25	3.90	0.23	0.01	270	21	4.8	13.5	0	451	46.9	10.3	12.2	70143
	1	6.94	6.48	1.86	0.28	0.05	260	21	5.3	7.5	0.2	441	45.2	9.9	11.3	70144
	2	7.23	6.44	0.34	0.36	0.16	265	21	6.5	4.7	0	433	45.8	9.9	11.1	70145
	3	7.68	6.63	0.79	0.38	0.30	230	19	6.9	7.1	0	445	44.6	9.2	10.6	70146
	4	7.34	6.83	0.57	0.38	1.30	225	22	7.0	4.9	0.4	433	46.9	9.6	10.6	70147
	5	7.34	6.85	0.19	0.38	1.80	235	23	7.3	4.7	0	439	47.1	9.7	10.6	70148
	6	7.34	6.83	-0.73	0.35	1.80	225	22	7.0	4.4	0	451	47.5	9.7	11.3	70149
	7	7.45	7.02	-0.27	0.35	0.42	210	20	6.7	3.8	0	435	46.2	9.7	10.5	70150
	8	7.39	6.99	-0.59	0.33	0.38	215	21	6.5	3.7	0	461	46.8	9.5	10.6	70151
	9	7.56	7.03	-0.02	0.34	0.01	210	22	6.5	5.6	0	462	47.5	9.8	11.1	70152
42	0	7.68	7.05	3.31	0.22	0.01	253	24	4.0	8.9	0	409	45.1	9.7	9.9	69516
	5	7.79	7.15	0.71	0.23	0.01	238	28	3.4	18.0	0	410	45.0	9.9	10.3	69521
	10	7.79	7.36	2.48	0.37	0.01	368	25	5.5	8.2	0	423	46.2	10.1	9.9	69526

Core	Depth	pH_{pw}	pH_{sed}	$p\epsilon_{pw}$	NH_4^+	S^{2-}	SiO_{2pw}	SO_4^{2-}	Alk_{pw}	Fe_{pw}	Mn_{pw}	Na_{pw}	Mg_{pw}	K_{pw}	Ca_{pw}	ID
	cm	-lg N	-lg N	-lg M	mM	μM	μM	mM	mN	μM	μM	mM	mM	mM	mM	
44	0	6.44	6.45	4.46	0.13	0.01	185	22	1.8	310.1	0.4	425	44.5	9.8	10.8	70153
	1	6.55	6.49	6.78	0.16	0.01	175	24	2.2	237.3	0.2	457	45.8	9.9	10.9	70154
	2	6.38	6.08	4.44	0.16	0.01	185	25	1.7	363.5	0	447	45.4	9.9	11.6	70155
	3	6.49	6.26	3.68	0.24	0.01	200	24	2.4	238.2	0	425	45.4	10.1	11.0	70156
	4	6.72	6.06	4.51	0.33	0.01	225	25	2.9	256.2	0.2	438	45.0	10.2	11.3	70157
	5	7.00	6.33	4.39	0.47	0.01	345	24	5.3	95.8	0	431	45.8	10.0	11.6	70158
	6	7.28	6.38	0.95	0.66	0.01	375	23	7.2	22.4	0	438	45.4	9.9	11.7	70159
47	0	7.62	7.16	4.02	0.11	0.40	220	23	3.3	9.5	0.1	406	44.6	9.6	10.1	69531
	5	7.68	7.32	3.89	0.50	0.40	350	25	5.5	5.1	0	422	46.3	10.0	10.2	69536
	10	7.84	7.31	1.40	1.20	0.60	575	21	12.5	4.3	0	427	46.5	10.2	10.3	69541
	15	7.90	7.25	0.34	1.80	2.40	630	20	18.1	2.9	0	419	45.5	9.9	9.7	69546
	20	8.01	7.29	-0.32	2.00	1.00	550	15	20.7	4.9	0.7	415	44.7	9.9	10.0	69551
	25	8.01	7.28	-0.73	2.10	1.30	515	20	23.3	3.5	0.4	420	45.2	9.9	9.4	69556
	30	8.07	7.27	-1.25	2.10	0.60	455	19	22.2	4.0	0.3	424	49.3	10.2	10.7	69561
	35	8.24	7.06	-1.22	2.20	2.60	450	21	25.7	2.8	0	450	57.5	11.5	9.6	69566
	40	8.41	7.20	-1.10	2.20	5.20	445	18	28.0	4.2		411	47.8	9.7	9.3	69571
	45	8.35	7.17	-1.17	2.00	8.00	440	18	31.4	2.9		371	40.9	8.8	8.1	69576
1	0															70161
	5															70162
	10															70163
	15															70164
	20															70165
	25															70166
	30															70167
	35															70168
	40															70169
	45															70170
	50															70171
	55															70172
	60															70173
2	0	7.90	7.20	-0.17	0.20	1.60	560	12	23.0	6.4	0	389	44.8	7.4	10.3	65020
	20	7.73	7.00	0.85	7.00	0.50	760	0	71.0	3.6	0	382	46.9	5.6	11.8	65021
	40	8.13	6.80	1.34	8.00	0.40	720	0	81.0	1.4	0	357	46.6	6.9	11.8	65007
	65	8.07	6.90	2.62	10.00	0.10	760	0	90.0	2.6	0	381	49.0	7.0	12.5	65008
	90	8.07	6.90	3.43	11.00	0.10	800	0	93.0	2.9	0	382	48.7	6.7	11.7	65009
	115	8.13	6.90	3.68	11.00	0.10	750	0	96.0	2.6	0	389	49.3	6.5	12.4	65010
	140	8.01	7.20	3.85	11.00	0.10	760		62.0	2.3	0	378	48.6	5.7	8.1	65011
	165	7.90	6.90	4.14	9.00	0.10	700	0	81.0	1.5	0	315	42.9	7.0	10.1	65012
	190	7.96	6.90	4.63	11.00	0.10	780	0	99.0	2.4	0	376	48.4	5.9	11.9	65013
	193		7.00	4.41												65004
	215	7.90	7.00	4.58	11.00	0.10	680	0	93.0	7.1	0.4	368	48.7	5.4	10.9	65014
	240	8.01	7.00	4.11	12.00	0.10	720		102.0	4.7	0.3	391	51.7	5.2	11.0	65015
	265	8.18	6.90	4.16	9.00	0.10	620	0	90.0	4.0	0.8	347	47.6	4.6	11.1	65016
	290	8.01	7.10	4.24	10.00	0.10	690	0	99.0	6.1	0	447	53.0	5.5	13.6	65017
	315	7.96	7.00	4.36	10.00	0.10	710	0	102.0	6.9	0	426	52.1	5.1	12.8	65018
	335	8.07	7.10	4.24	10.00	0.10	710	0	99.0	10.2	0.1	445	55.0	5.2	14.3	65019
	340		6.70	4.33												65003

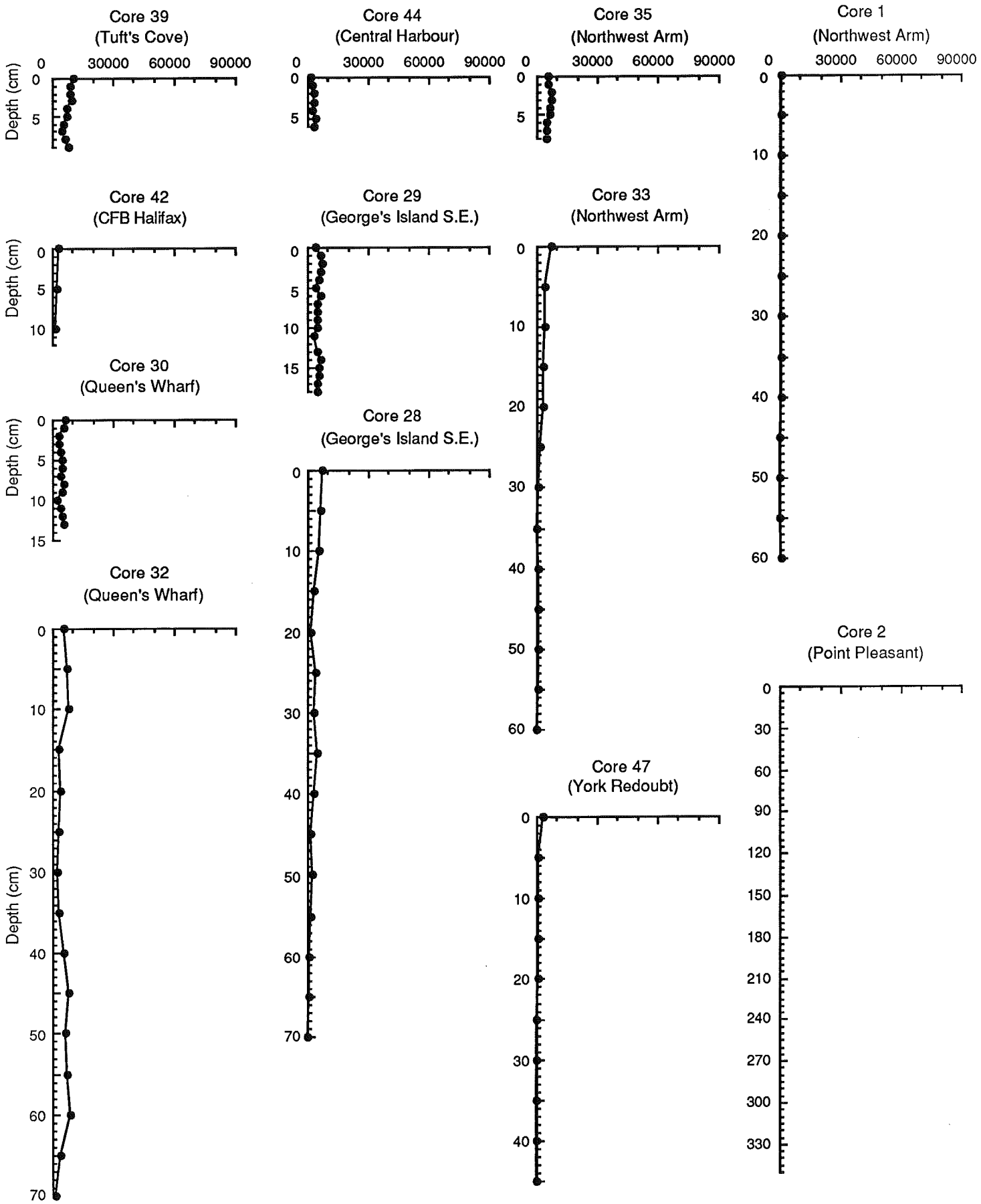
Core	Depth	Sn_T	Li_T	Sand	Silt	Clay	Mud	Mean-grain-size		Kurt-osis	Skew-ness	ID
	cm	μgg^{-1}	μgg^{-1}	%	%	%	%	μm	phi			
28	0	12.8	55	0.21	61.82	37.97	99.79	5.30	7.56 ±1.59	2.37	0.18	69301
	5	8.8	58	0.20	58.07	41.73	99.80	4.74	7.72 ±1.55	2.42	0.07	69306
	10	9.0	61	0.63	63.71	35.66	99.37	5.37	7.54 ±1.50	2.72	0.15	69311
	15	11.0	58	0.22	63.41	36.37	99.78	5.34	7.55 ±1.54	2.62	0.12	69316
	20	9.9	57	3.40	64.04	32.56	96.60	7.70	7.02 ±1.91	2.04	0.13	69321
	25	9.7	62	1.08	60.40	38.52	98.92	5.23	7.58 ±1.57	2.61	0.03	69326
	30	6.5	53	0.70	59.94	39.35	99.30	5.15	7.60 ±1.56	2.48	0.09	69331
	35	9.6	60	2.11	65.94	31.95	97.89	6.94	7.17 ±1.74	2.32	0.16	69336
	40	9.2	58	0.20	53.44	46.35	99.80	4.39	7.83 ±1.63	2.20	-0.02	69341
	45	8.2	51	0.58	67.44	31.98	99.42	6.48	7.27 ±1.61	2.39	0.33	69346
	50	6.7	58	0.62	61.17	38.21	99.38	5.56	7.49 ±1.66	2.23	0.17	69351
	55	4.5	45	0.25	70.21	29.54	99.75	6.48	7.27 ±1.52	2.62	0.40	69356
	60	3.2	51	0.25	73.00	26.75	99.75	7.09	7.14 ±1.51	2.73	0.53	69361
	65	1.3	47	0.23	69.97	29.79	99.77	6.57	7.25 ±1.59	2.48	0.51	69366
	70	1.2	49	0.25	75.19	24.56	99.75	7.65	7.03 ±1.52	2.82	0.59	69371
29	0	6.4	64	0.45	45.42	54.12	99.55	3.70	8.08 ±1.75	2.20	-0.29	70101
	1	12.1	59	0.48	47.80	51.71	99.52	3.77	8.05 ±1.84	1.96	-0.18	70102
	2	13.1	63	0.45	41.29	58.26	99.55	3.11	8.33 ±1.75	2.11	-0.30	70103
	3	9.1	59	0.16	43.93	55.92	99.84	3.40	8.20 ±1.69	2.13	-0.23	70104
	4	11.5	62	0.17	48.38	51.44	99.83	3.72	8.07 ±1.57	2.26	-0.10	70105
	5	13.6	61	0.19	54.58	45.23	99.81	4.39	7.83 ±1.63	2.20	0.02	70106
	6	12.7	62	1.39	57.77	40.84	98.61	5.01	7.64 ±1.69	2.33	-0.01	70107
	7	11.9	58	0.61	62.17	37.22	99.39	5.19	7.59 ±1.56	2.55	0.18	70108
	8	11.7	62	0.66	59.69	39.65	99.34	5.15	7.60 ±1.60	2.38	0.08	70109
	9	12.7	63	0.90	61.28	37.82	99.10	5.64	7.47 ±1.71	2.35	0.02	70110
	10	14.1	75	0.67	62.07	37.26	99.33	5.49	7.51 ±1.61	2.44	0.09	70111
	11	10.8	71	0.22	60.20	39.59	99.78	4.91	7.67 ±1.57	2.36	0.19	70112
	13	11.7	72	0.19	52.87	46.94	99.81	4.36	7.84 ±1.62	2.19	-0.02	70114
	14	15.7	69	0.52	56.33	43.15	99.48	4.81	7.70 ±1.61	2.32	0.00	70115
	15	11.3	69	0.20	55.99	43.81	99.80	4.58	7.77 ±1.51	2.41	0.05	70116
	16	11.9	68	0.20	56.16	43.64	99.80	4.74	7.72 ±1.60	2.31	-0.01	70117
	17	10.7	74	0.21	57.60	42.19	99.79	4.74	7.72 ±1.57	2.38	0.03	70118
	18	8.5	68	1.54	61.58	36.88	98.46	5.88	7.41 ±1.64	2.42	0.02	70119
30	0	19.4	61	0.91	65.63	33.46	99.09	6.22	7.33 ±1.67	2.40	0.21	70120
	1	20.5	64	1.08	69.84	29.09	98.92	6.75	7.21 ±1.63	2.63	0.24	70121
	2	20.5	68	0.48	67.57	31.95	99.52	6.39	7.29 ±1.60	2.49	0.22	70122
	3	22.1	67	0.78	70.25	28.98	99.22	6.66	7.23 ±1.53	2.77	0.27	70123
	4	23.9	70	0.55	68.74	30.71	99.45	6.22	7.33 ±1.51	2.70	0.29	70124
	5	23.7	73	0.48	64.43	35.09	99.52	5.80	7.43 ±1.56	2.49	0.16	70125
	6	29.1	72	0.47	61.04	38.49	99.53	5.26	7.57 ±1.60	2.35	0.15	70126
	7	25.6	70	1.12	69.45	29.43	98.88	7.14	7.13 ±1.64	2.49	0.26	70127
	8	24.3	71	1.24	70.31	28.44	98.76	6.75	7.21 ±1.54	2.79	0.27	70128
	9	22.5	68	0.22	68.59	31.19	99.78	6.26	7.32 ±1.52	2.62	0.27	70129
	10	42.1	66	1.16	65.52	33.32	98.84	6.13	7.35 ±1.60	2.54	0.15	70130
	11	32.9	71	0.22	70.39	29.39	99.78	6.85	7.19 ±1.57	2.61	0.30	70131
	12	41.5	73	0.51	66.29	33.20	99.49	6.17	7.34 ±1.59	2.48	0.20	70132
	13	37.6	69	0.77	60.36	38.87	99.23	5.37	7.54 ±1.61	2.49	-0.03	70133

Core	Depth	Sn_T	Li_T	Sand	Silt	Clay	Mud	Mean-grain-size		Kurt-osis	Skew-ness	ID
	cm	μgg^{-1}	μgg^{-1}	%	%	%	%	μm	phi			
32	0	21.0	56	1.35	61.04	37.62	98.65	5.60	7.48 ±1.65	2.42	0.04	69376
	5	21.1	59	0.22	59.70	40.08	99.78	5.26	7.57 ±1.67	2.35	0.01	69381
	10	27.2	62	0.86	56.08	43.07	99.14	4.78	7.71 ±1.92	1.95	0.06	69386
	15	26.3	63	1.80	63.59	34.61	98.20	6.52	7.26 ±1.73	2.31	0.08	69391
	20	25.6	59	1.90	61.20	36.90	98.10	6.26	7.32 ±1.79	2.18	0.01	69396
	25	24.3	60	1.19	59.62	39.19	98.81	5.68	7.46 ±1.70	2.30	-0.02	69401
	30	22.6	61	1.02	70.82	28.16	98.98	7.55	7.05 ±1.67	2.43	0.30	69406
	35	20.0	64	1.17	61.15	37.67	98.83	5.88	7.41 ±1.67	2.31	0.04	69411
	40	15.1	64	2.09	65.54	32.37	97.91	6.57	7.25 ±1.68	2.46	0.09	69416
	45	17.9	61	0.55	60.40	39.04	99.45	5.41	7.53 ±1.62	2.30	0.10	69421
	50	22.3	60	0.23	65.15	34.62	99.77	6.22	7.33 ±1.67	2.27	0.22	69426
	55	15.6	64	0.23	64.78	34.98	99.77	6.09	7.36 ±1.64	2.30	0.18	69431
	60	19.2	60	0.00	57.93	42.07	100.00	4.61	7.76 ±1.60	2.36	0.08	69436
	65	13.4	59	1.01	62.12	36.87	98.99	5.45	7.52 ±1.56	2.57	0.07	69441
	70	9.7	57	0.24	66.92	32.84	99.76	5.88	7.41 ±1.53	2.55	0.36	69446
33	0	18.3	63	0.71	63.26	36.02	99.29	5.34	7.55 ±1.53	2.67	0.15	69451
	5	14.9	64	1.26	66.15	32.58	98.74	6.22	7.33 ±1.62	2.59	0.16	69456
	10	10.4	73	0.20	56.01	43.78	99.80	4.30	7.86 ±1.51	2.58	0.04	69461
	15	11.8	85	0.22	63.73	36.05	99.78	5.15	7.60 ±1.46	2.80	0.18	69466
	20	8.8	84	0.21	62.22	37.57	99.79	4.98	7.65 ±1.47	2.76	0.12	69471
	25	5.0	77	0.52	61.30	38.17	99.48	4.91	7.67 ±1.50	2.78	0.11	69476
	30	2.1	79	0.57	66.37	33.06	99.43	5.60	7.48 ±1.44	2.87	0.25	69481
	35	1.9	66	0.87	69.19	29.94	99.13	6.17	7.34 ±1.44	3.06	0.13	69486
	40	1.6	62	0.00	74.58	25.42	100.00	6.57	7.25 ±1.33	3.21	0.58	69491
	45	1.6	64	0.53	76.31	23.16	99.47	6.94	7.17 ±1.34	3.42	0.50	69496
	50	1.8	64	0.23	68.18	31.60	99.77	6.00	7.38 ±1.48	2.69	0.36	69501
	55	1.2	63	0.25	72.45	27.31	99.75	6.39	7.29 ±1.39	3.05	0.40	69506
	60	0.0	60	0.23	72.13	27.63	99.77	6.66	7.23 ±1.48	2.86	0.40	69511
35	0	13.5	67	0.50	60.11	39.39	99.50	4.88	7.68 ±1.64	2.38	0.17	70134
	1	13.1	72	1.08	74.19	24.73	98.92	7.65	7.03 ±1.63	2.77	0.47	70135
	2	13.4	70	1.87	70.95	27.18	98.13	7.55	7.05 ±1.66	2.58	0.31	70136
	3	9.7	72	0.22	68.01	31.77	99.78	6.00	7.38 ±1.51	2.68	0.29	70137
	4	13.1	73	0.23	68.68	31.09	99.77	5.72	7.45 ±1.46	2.82	0.37	70138
	5	13.6	70	0.22	66.02	33.75	99.78	5.45	7.52 ±1.45	2.87	0.21	70139
	6	11.5	69	1.35	64.51	34.14	98.65	5.84	7.42 ±1.60	2.68	0.05	70140
	7	11.9	68	0.52	65.61	33.86	99.48	5.52	7.50 ±1.53	2.70	0.22	70141
	8	13.1	68	0.21	64.75	35.04	99.79	5.37	7.54 ±1.48	2.68	0.24	70142
39	0	27.7	63	1.02	62.27	36.71	98.98	5.80	7.43 ±1.72	2.25	0.14	70143
	1	22.7	57	1.02	66.39	32.59	98.98	6.26	7.32 ±1.65	2.49	0.18	70144
	2	17.1	59	0.55	71.29	28.16	99.45	6.94	7.17 ±1.58	2.60	0.35	70145
	3	19.2	54	1.08	67.00	31.92	98.92	6.30	7.31 ±1.60	2.56	0.17	70146
	4	17.9	63	0.54	61.21	38.25	99.46	5.30	7.56 ±1.61	2.49	0.04	70147
	5	17.4	62	0.48	66.68	32.85	99.52	6.35	7.30 ±1.61	2.50	0.17	70148
	6	19.1	60	1.37	67.53	31.10	98.63	6.85	7.19 ±1.70	2.40	0.22	70149
	7	19.2	62	0.72	66.96	32.32	99.28	6.39	7.29 ±1.63	2.43	0.23	70150
	8	13.9	63	1.18	63.96	34.86	98.82	6.09	7.36 ±1.63	2.48	0.08	70151
	9	19.4	60	0.46	58.30	41.24	99.54	5.05	7.63 ±1.61	2.40	-0.01	70152
42	0	16.1	59	0.71	65.26	34.03	99.29	5.88	7.41 ±1.56	2.60	0.15	69516
	5	14.5	59	0.24	68.93	30.83	99.76	6.43	7.28 ±1.55	2.54	0.33	69521
	10	7.5	54	1.46	65.46	33.08	98.54	6.00	7.38 ±1.61	2.64	0.14	69526

Core	Depth	Sn_T	Li_T	Sand	Silt	Clay	Mud	Mean-grain-size		Kurt-osis	Skew-ness	ID
	cm	μgg^{-1}	μgg^{-1}	%	%	%	%	μm	phi			
44	0	9.9	65	0.51	66.87	32.62	99.49	6.22	7.33 ±1.60	2.48	0.24	70153
	1	11.5	70	0.49	67.08	32.44	99.51	6.09	7.36 ±1.57	2.53	0.30	70154
	2	10.6	72	0.22	66.73	33.06	99.78	6.00	7.38 ±1.57	2.51	0.25	70155
	3	11.1	70	0.22	68.67	31.11	99.78	6.26	7.32 ±1.53	2.57	0.34	70156
	4	12.0	70	0.23	74.92	24.85	99.77	7.76	7.01 ±1.53	2.72	0.43	70157
	5	9.1	78	1.43	72.96	25.61	98.57	7.65	7.03 ±1.59	2.68	0.36	70158
	6	11.3	68	0.91	72.96	26.13	99.09	7.55	7.05 ±1.58	2.64	0.38	70159
47	0	5.5	63	1.00	79.44	19.57	99.00	10.24	6.61 ±1.58	2.81	0.65	69531
	5	6.6	58	0.23	71.75	28.02	99.77	6.99	7.16 ±1.52	2.63	0.38	69536
	10	4.6	54	0.49	66.41	33.09	99.51	6.35	7.30 ±1.65	2.36	0.28	69541
	15	1.8	54	0.66	66.95	32.38	99.34	6.43	7.28 ±1.61	2.38	0.31	69546
	20	1.9	39	0.94	71.03	28.03	99.06	8.09	6.95 ±1.72	2.29	0.31	69551
	25	0.9	37	2.03	82.70	15.27	97.97	16.75	5.90 ±1.79	3.01	1.01	69556
	30	0.7	33	2.70	80.71	16.59	97.30	16.06	5.96 ±1.81	2.96	1.00	69561
	35	1.6	37	3.24	79.28	17.48	96.76	16.86	5.89 ±1.88	2.85	1.02	69566
	40	0.8	36	1.90	85.00	13.11	98.10	19.37	5.69 ±1.69	3.76	1.32	69571
	45	0.8	38	1.43	88.23	10.33	98.57	21.64	5.53 ±1.55	4.74	1.59	69576
1	0			0.40	70.17	29.44	99.60	7.39	7.08 ±1.76	2.28	0.47	70161
	5			0.23	71.87	27.89	99.77	6.99	7.16 ±1.57	2.61	0.53	70162
	10			0.25	75.75	24.01	99.75	7.65	7.03 ±1.56	2.83	0.65	70163
	15			0.24	77.42	22.34	99.76	7.76	7.01 ±1.46	3.09	0.70	70164
	20			0.23	70.19	29.59	99.77	6.35	7.30 ±1.50	2.66	0.47	70165
	25			0.79	60.75	38.47	99.21	5.19	7.59 ±1.59	2.49	0.10	70166
	30			0.58	67.71	31.71	99.42	6.00	7.38 ±1.55	2.66	0.29	70167
	35			1.08	67.06	31.86	98.92	6.05	7.37 ±1.58	2.67	0.25	70168
	40			0.22	62.72	37.06	99.78	5.15	7.60 ±1.55	2.63	0.11	70169
	45			1.10	61.57	37.33	98.90	5.68	7.46 ±1.70	2.37	0.01	70170
	50			5.00	66.64	28.36	95.00	9.49	6.72 ±2.00	2.04	0.34	70171
	55			0.90	73.52	25.57	99.10	8.26	6.92 ±1.67	2.51	0.38	70172
	60			1.54	70.12	28.34	98.46	8.09	6.95 ±1.76	2.30	0.20	70173
2	0			0.58	73.58	25.85	99.42	9.23	6.76 ±1.79	2.32	0.58	65020
	20			0.42	70.56	29.02	99.58	7.14	7.13 ±1.64	2.39	0.51	65021
	40			0.63	71.77	27.60	99.37	7.04	7.15 ±1.54	2.63	0.47	65007
	65			0.57	75.71	23.71	99.43	7.70	7.02 ±1.48	2.93	0.54	65008
	90			0.64	77.81	21.55	99.36	8.32	6.91 ±1.49	3.02	0.60	65009
	115			0.24	69.34	30.42	99.76	6.39	7.29 ±1.57	2.55	0.40	65010
	140			0.92	69.83	29.25	99.08	6.85	7.19 ±1.59	2.56	0.34	65011
	165			0.55	77.44	22.01	99.45	8.55	6.87 ±1.53	2.85	0.53	65012
	190			0.24	72.05	27.71	99.76	6.90	7.18 ±1.51	2.76	0.37	65013
	193											65004
	215			0.83	79.14	20.04	99.17	9.16	6.77 ±1.53	3.08	0.65	65014
	240			1.46	77.64	20.90	98.54	9.23	6.76 ±1.59	2.85	0.52	65015
	265			0.67	69.83	29.49	99.33	6.71	7.22 ±1.62	2.53	0.41	65016
	290			1.19	76.49	22.31	98.81	8.37	6.90 ±1.54	2.89	0.53	65017
	315			0.63	77.84	21.53	99.37	8.91	6.81 ±1.60	2.90	0.60	65018
	335			0.70	78.57	20.73	99.30	8.37	6.90 ±1.49	3.23	0.73	65019
	340											65003

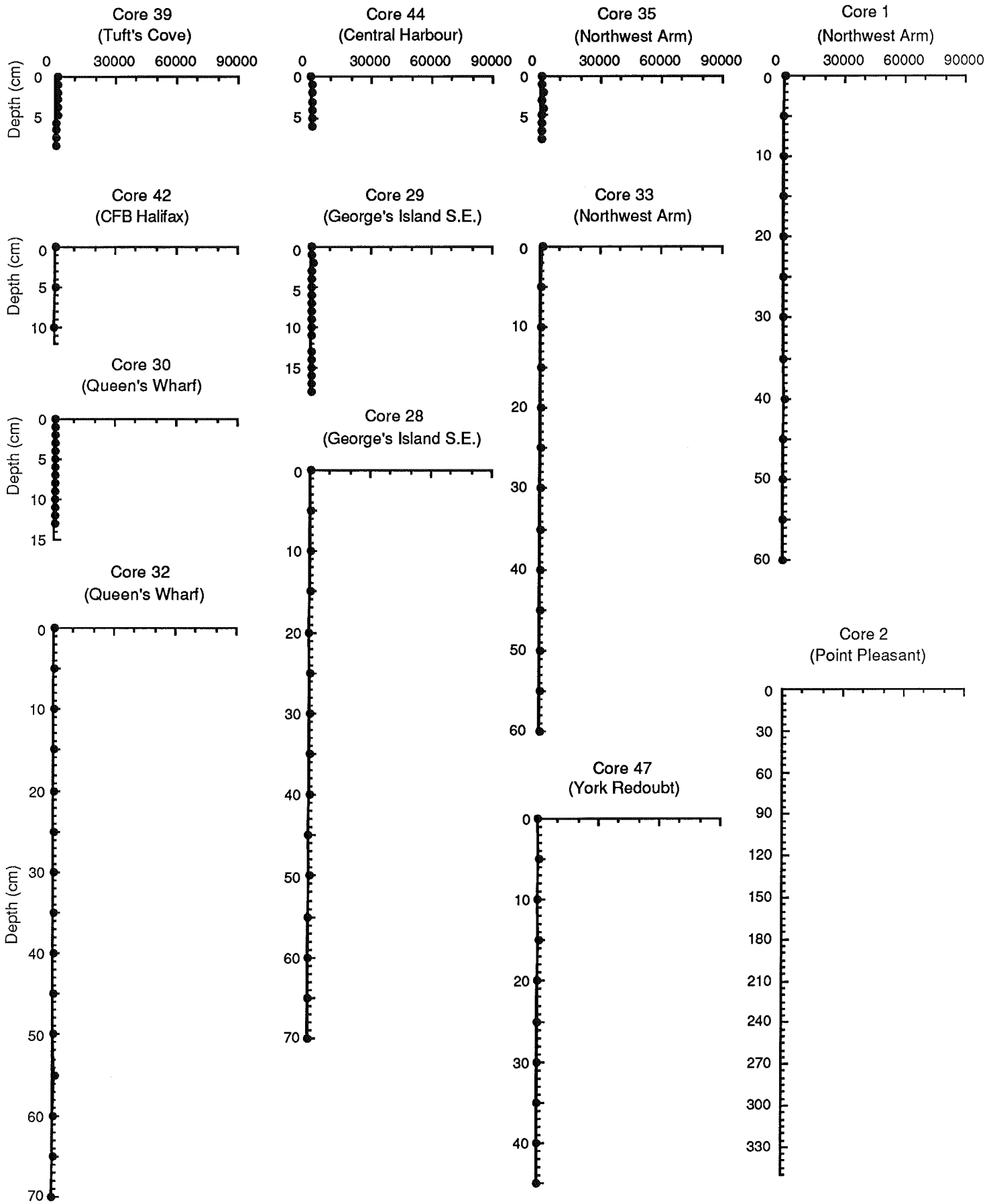
IRON
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



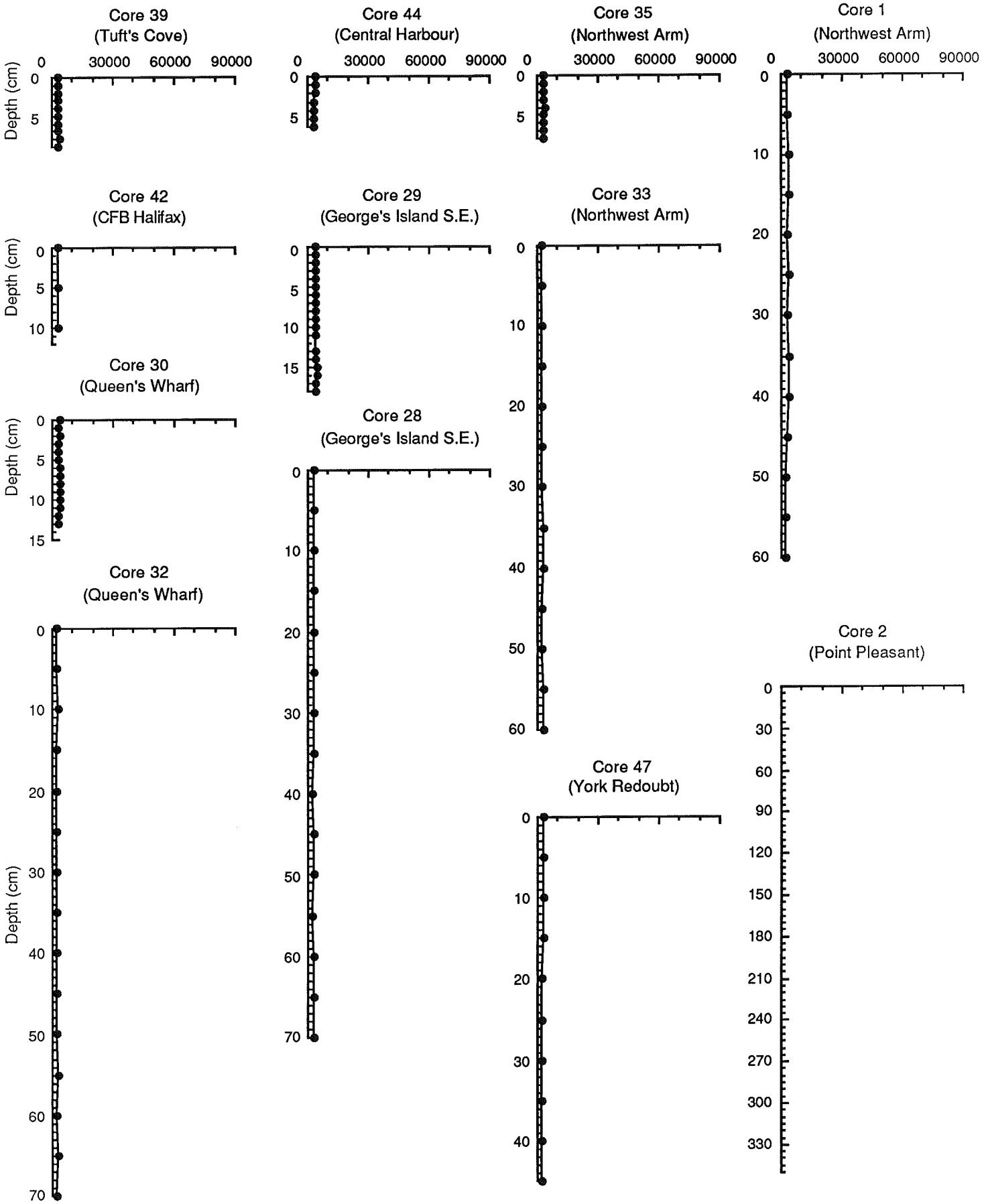
IRON
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



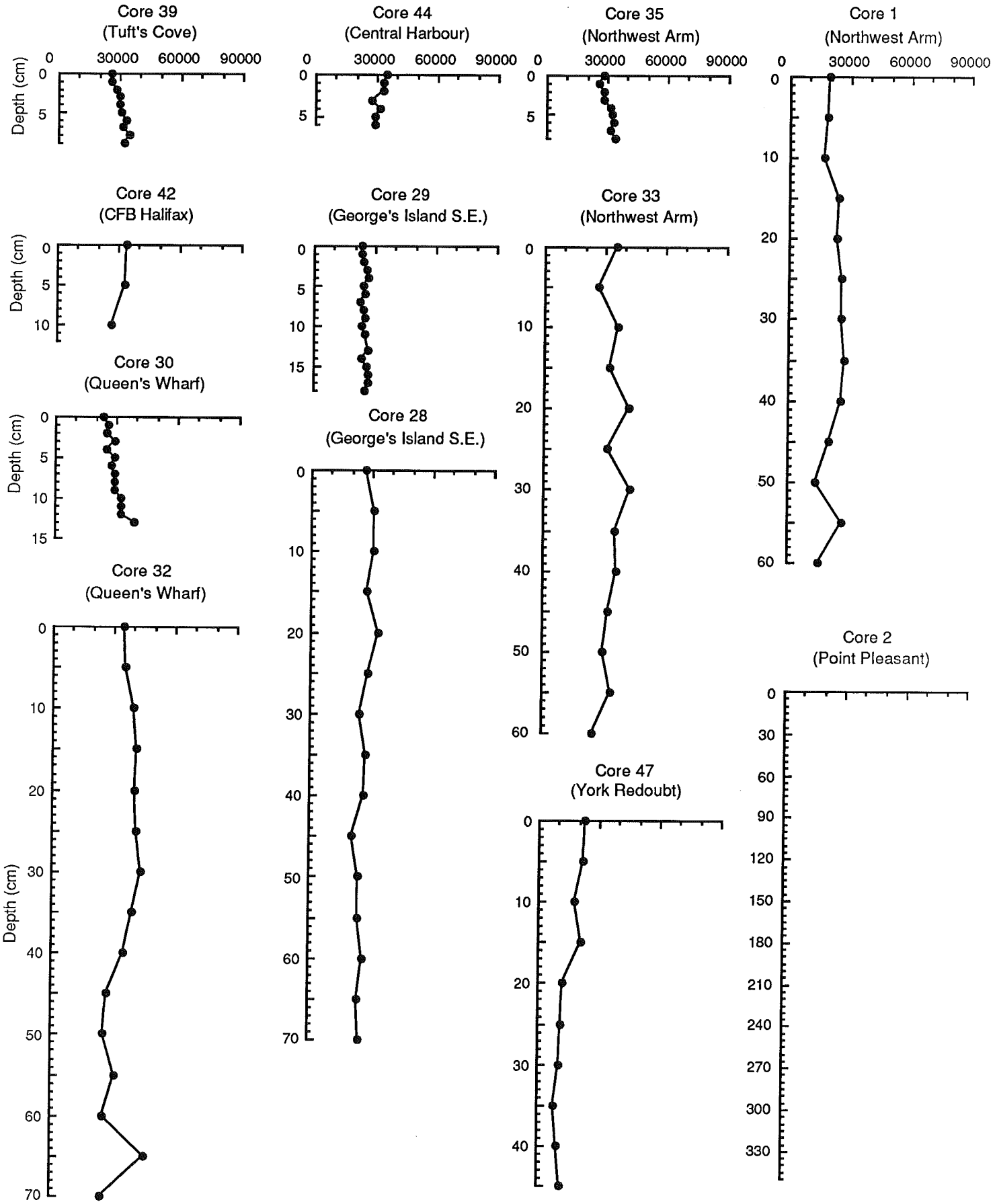
Creed '90 &
Hudson 89-039 ('90)

IRON
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)



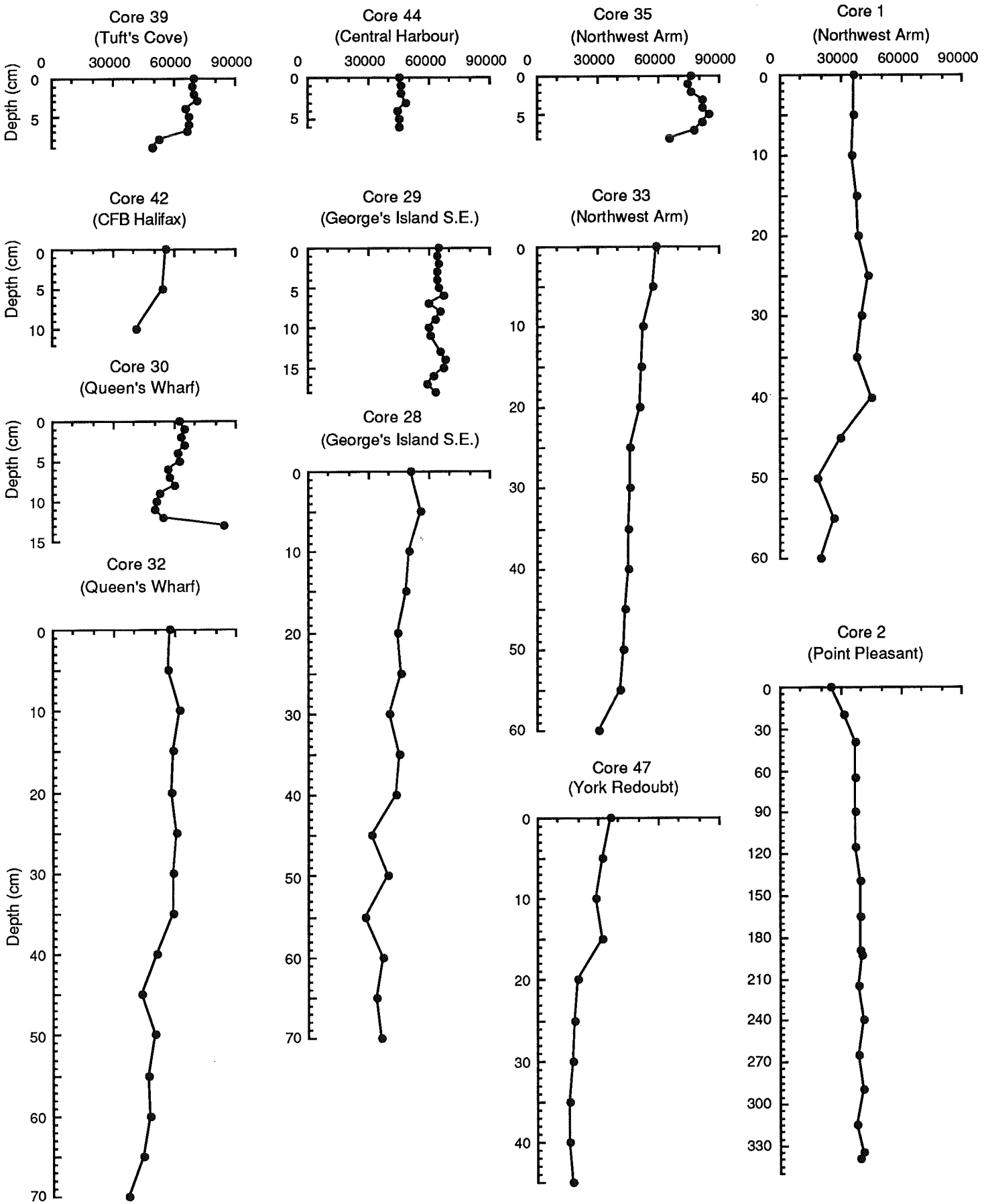
IRON
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



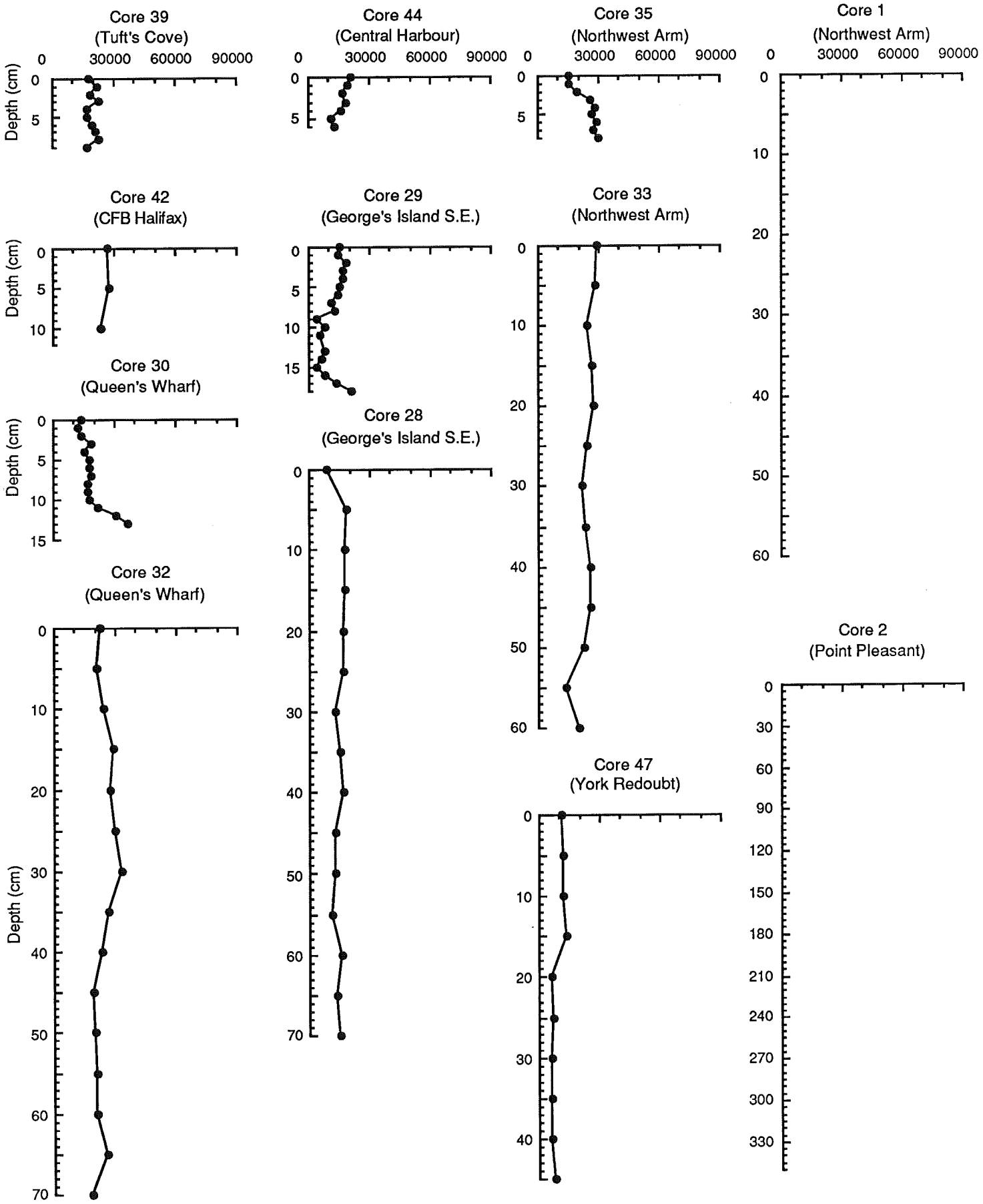
IRON
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



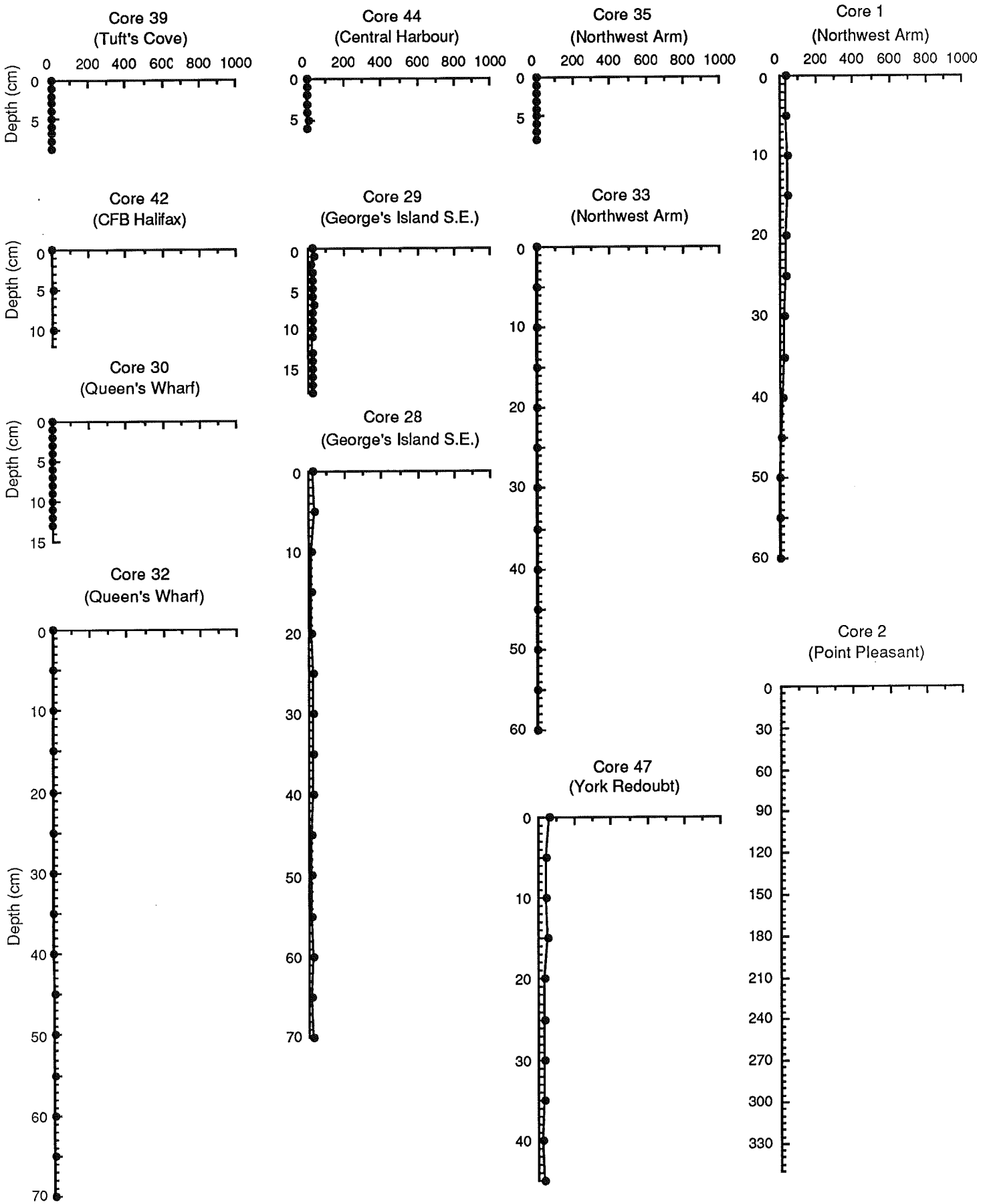
IRON
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



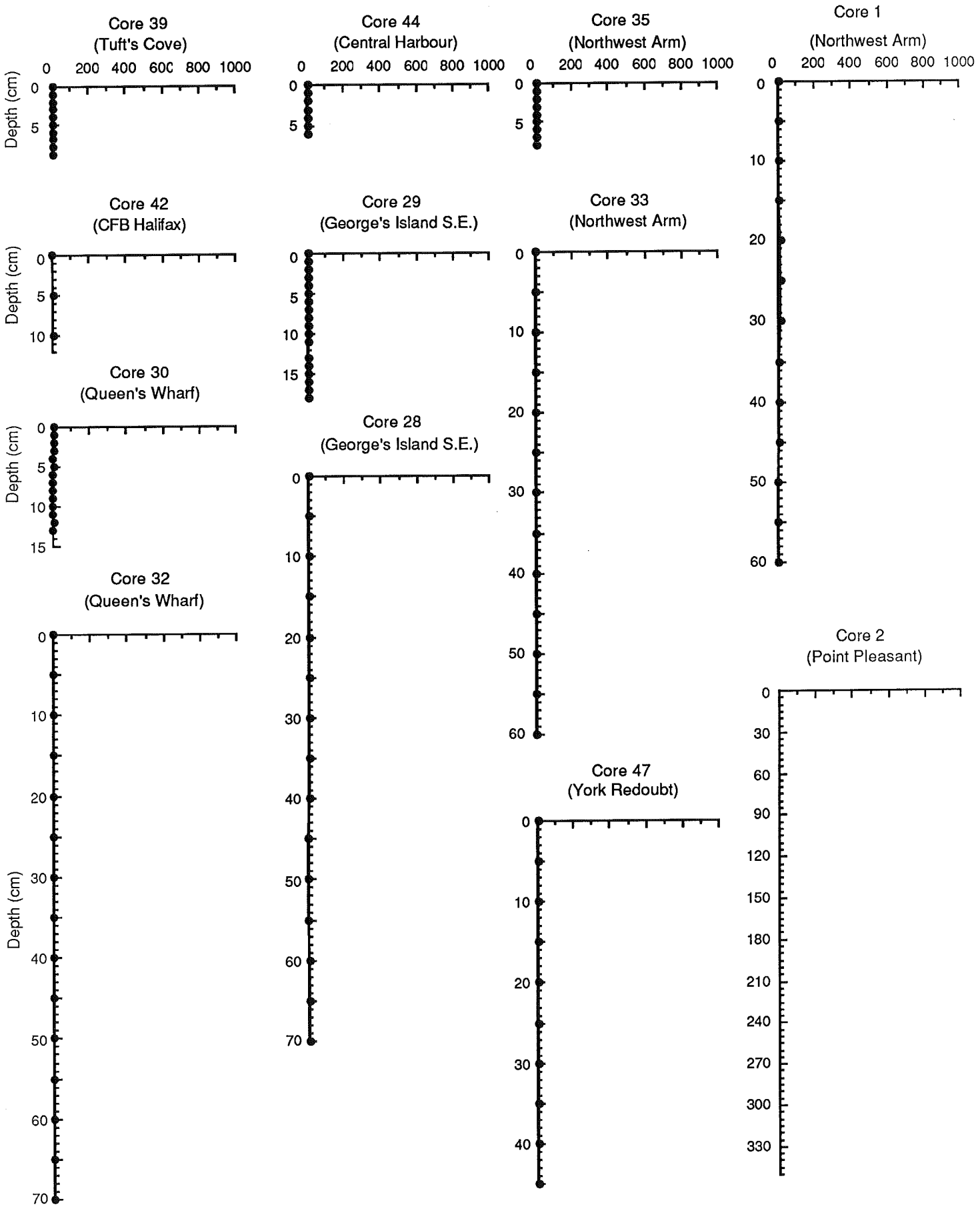
MANGANESE
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



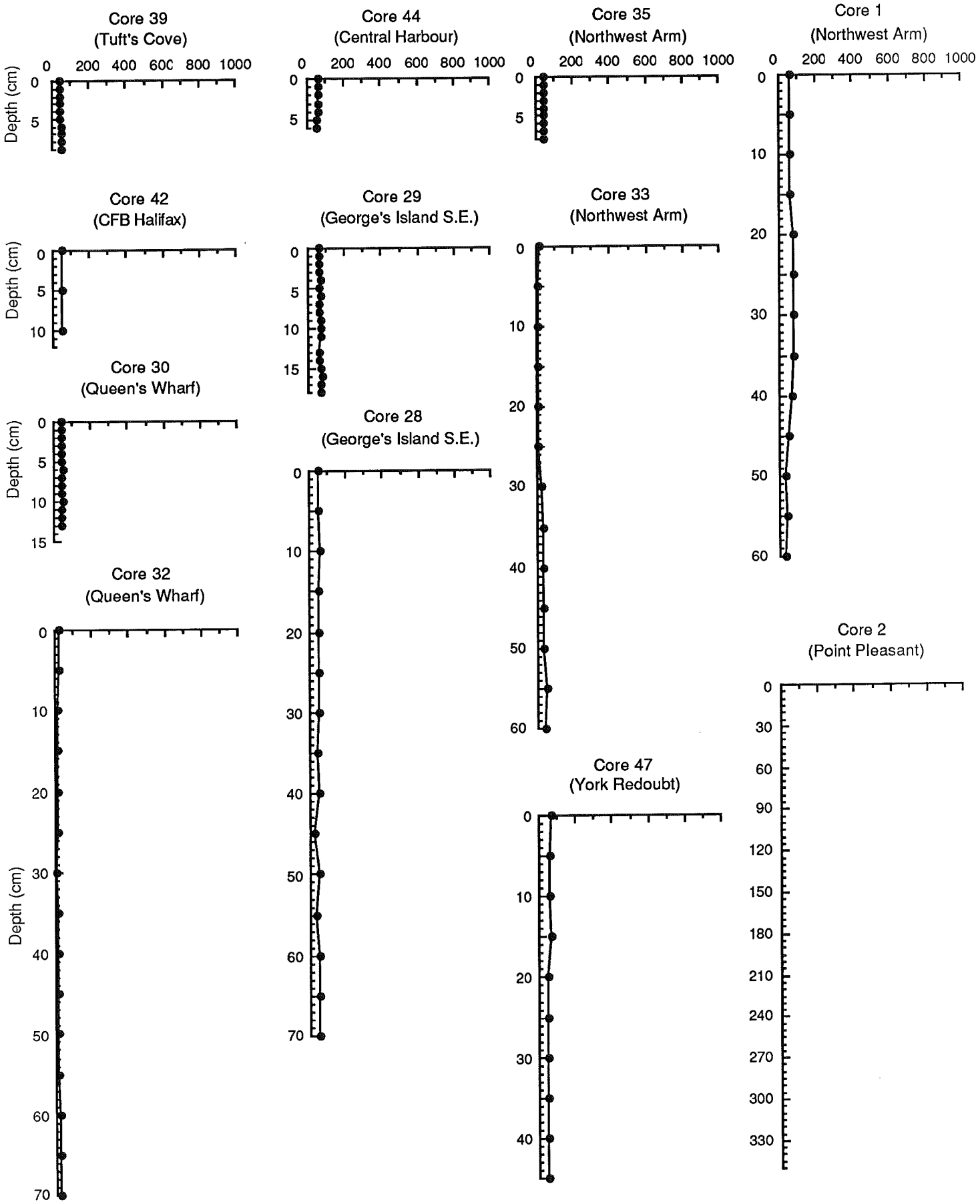
MANGANESE
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



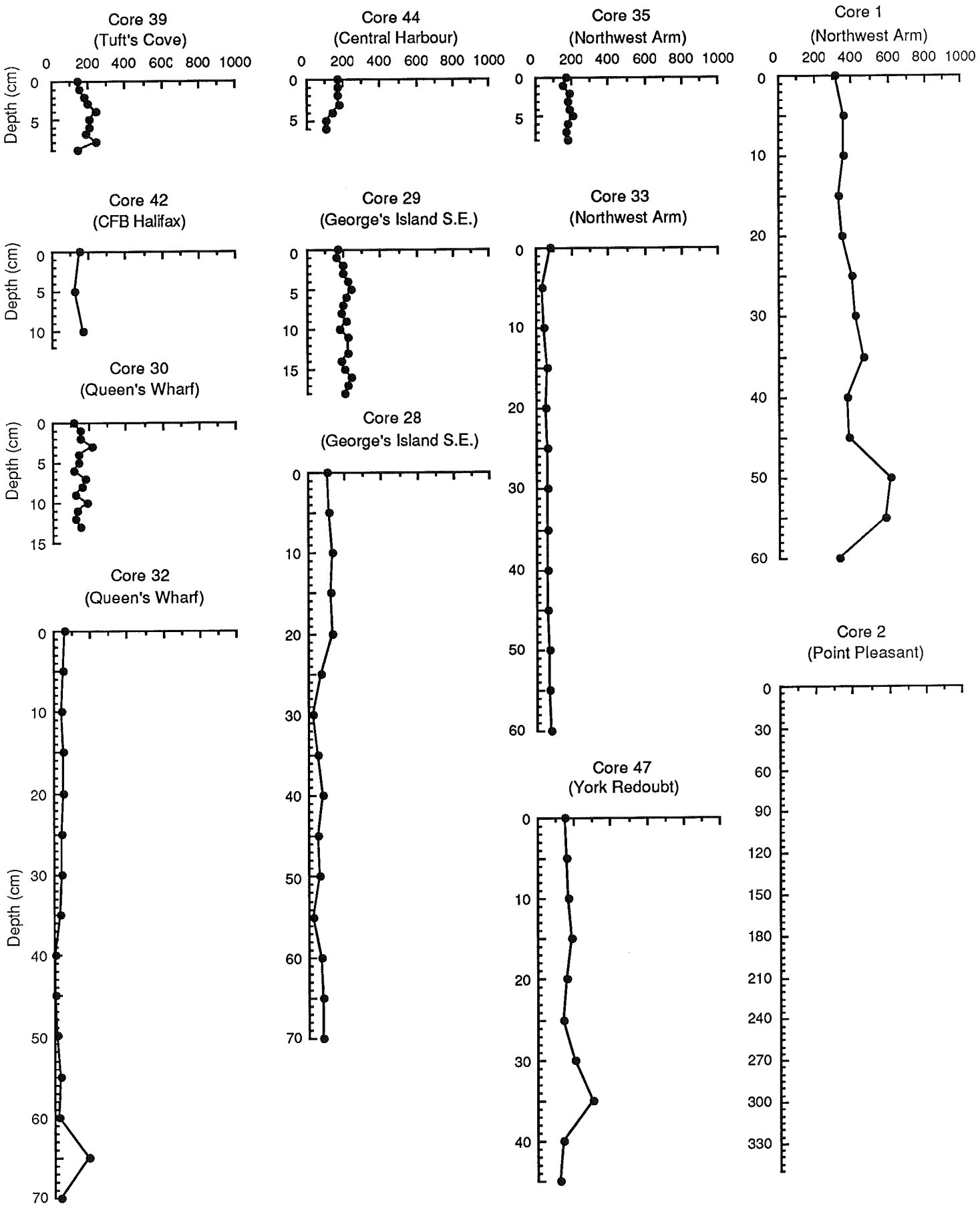
MANGANESE
heated hydroxylamine leach (µg·g $^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



MANGANESE
leach residual ($\mu g \cdot g^{-1}$)

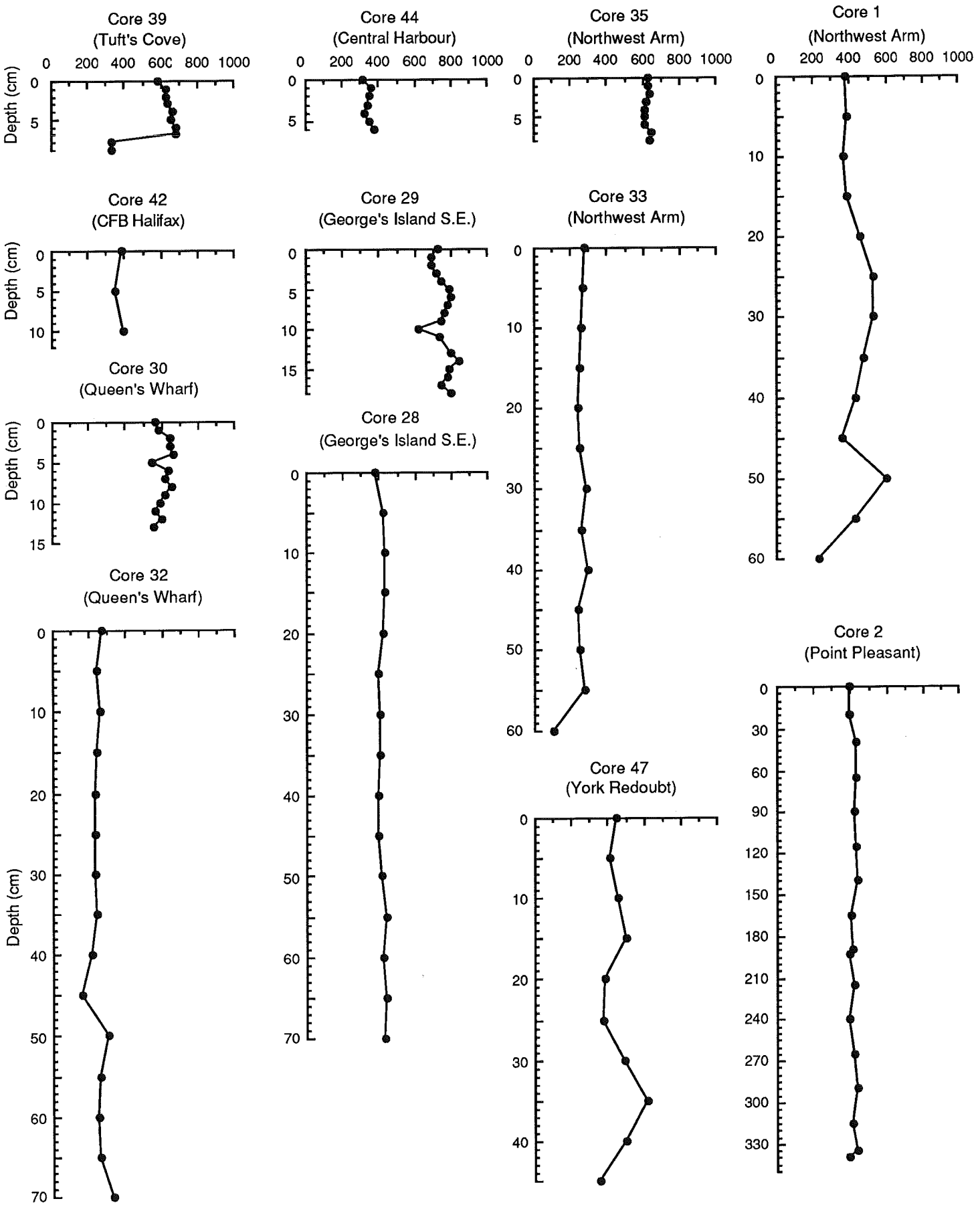
Creed '90 &
Hudson 89-039 ('90)



MANGANESE

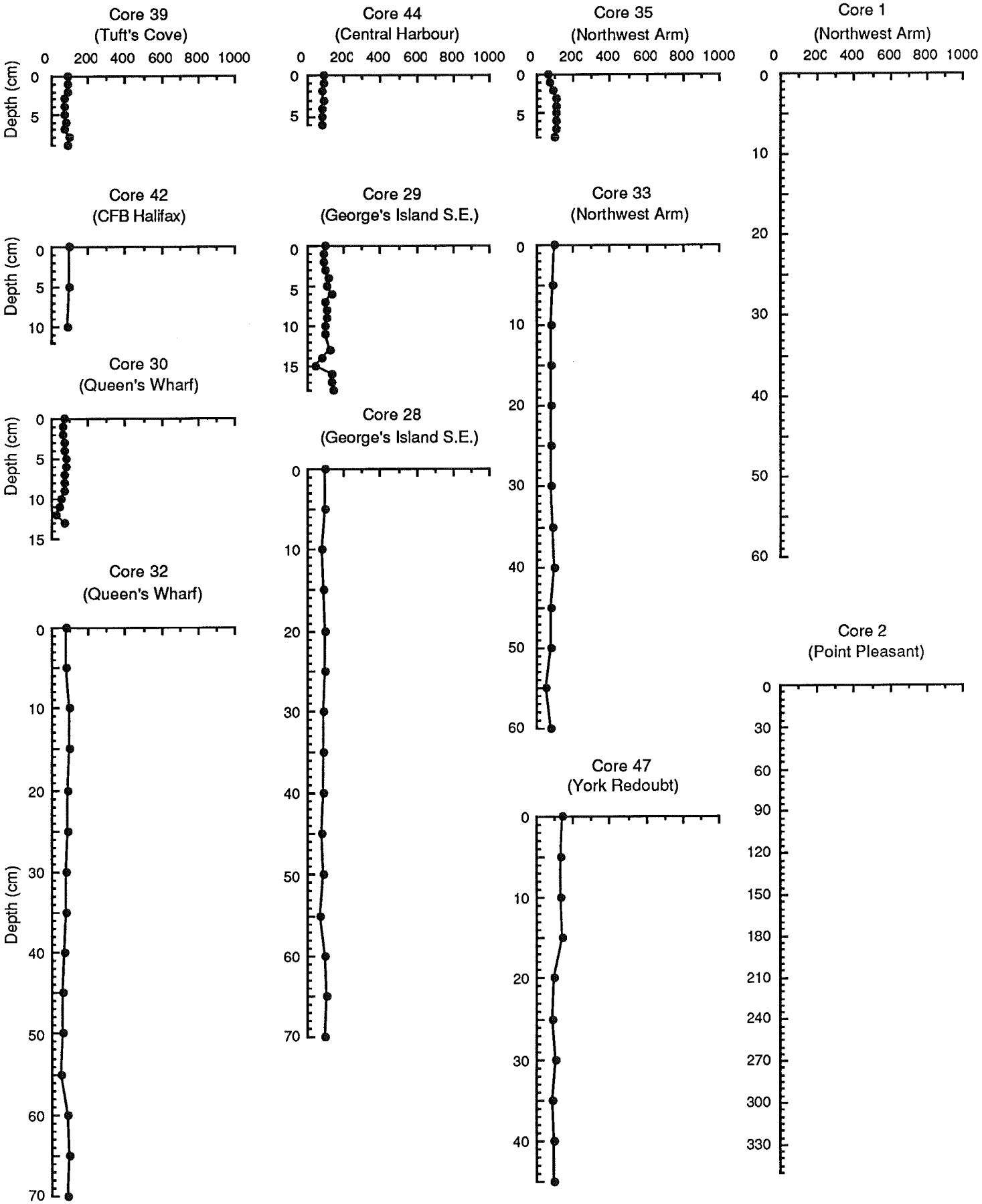
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



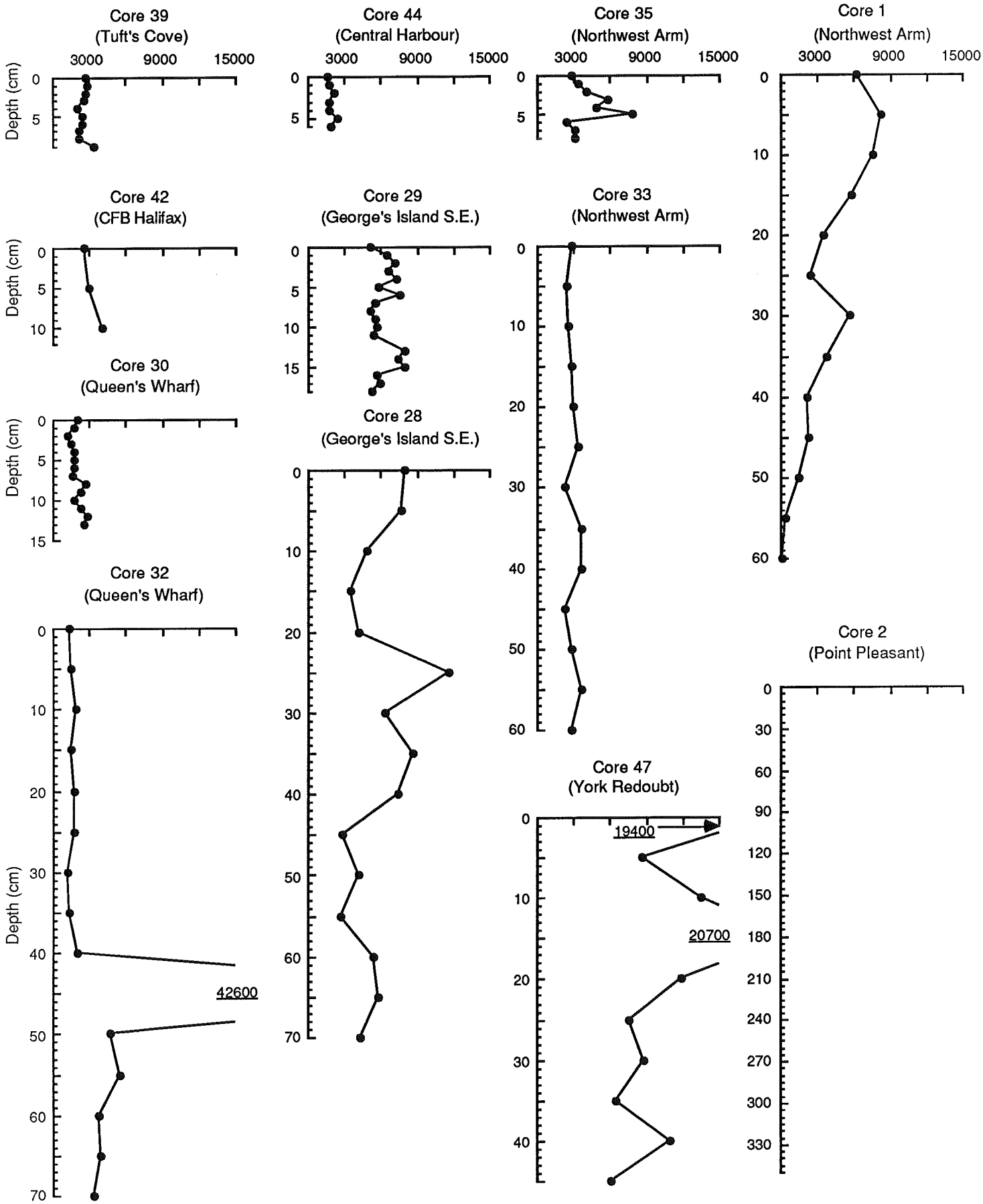
MANGANESE
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



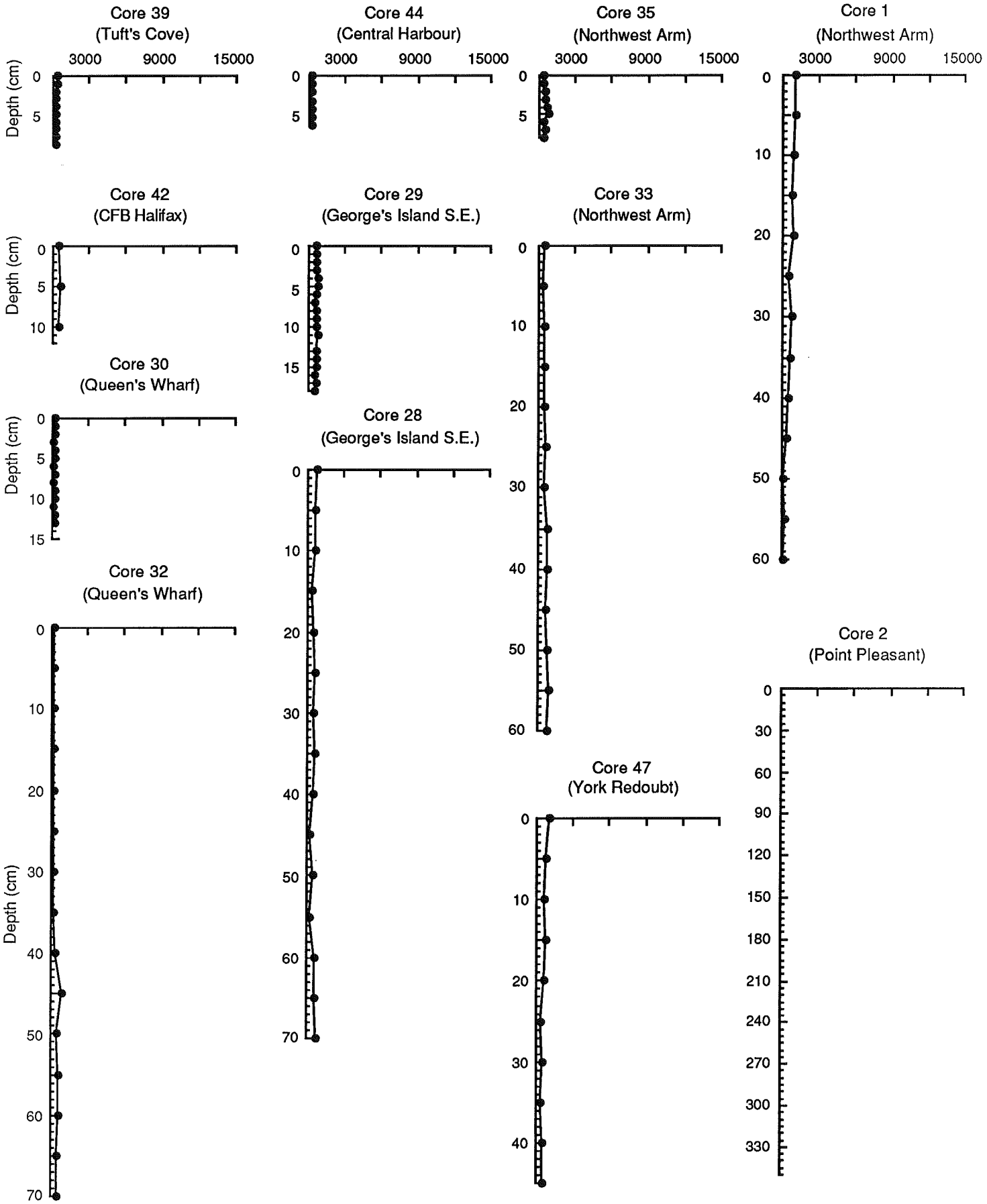
CALCIUM
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



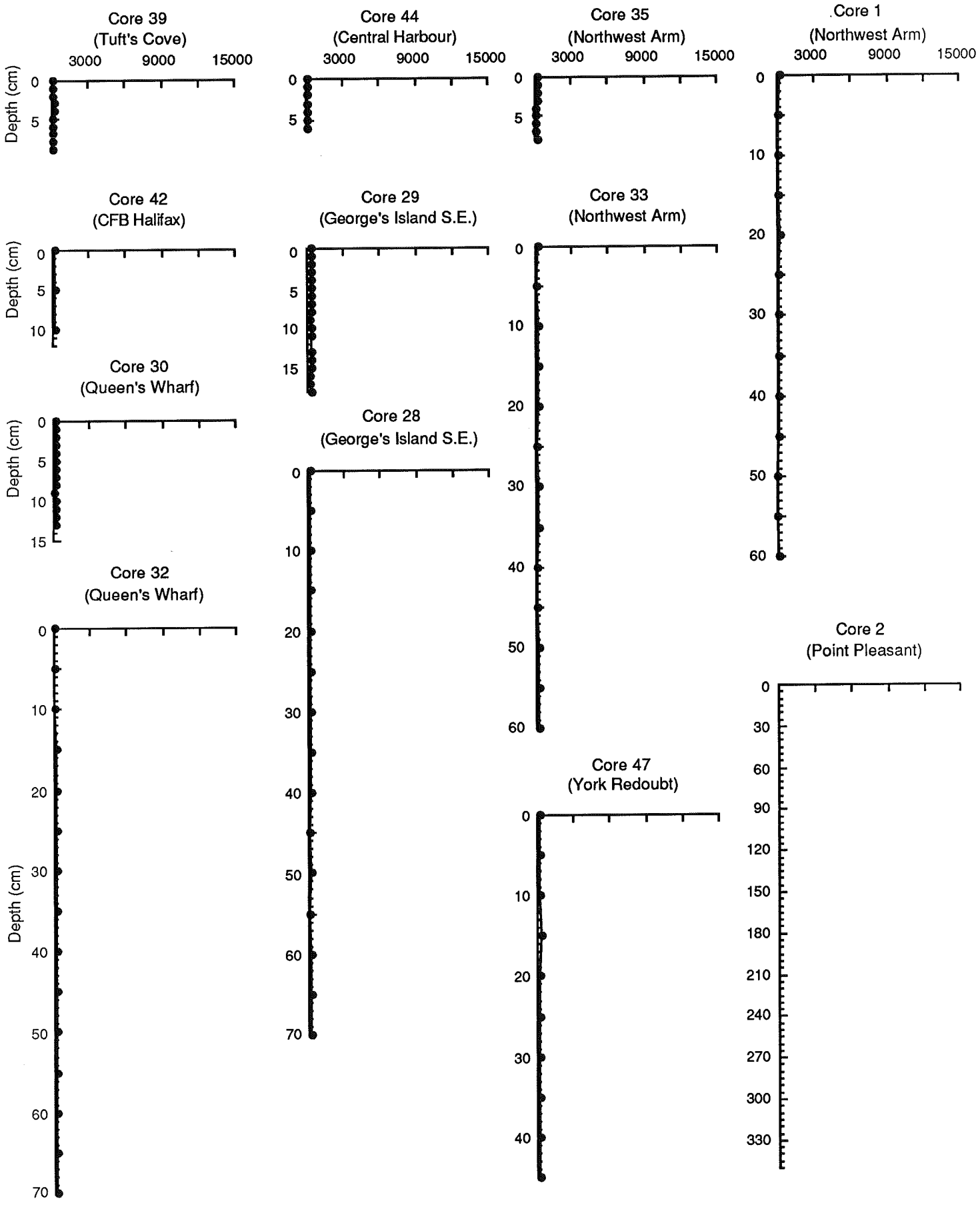
CALCIUM
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



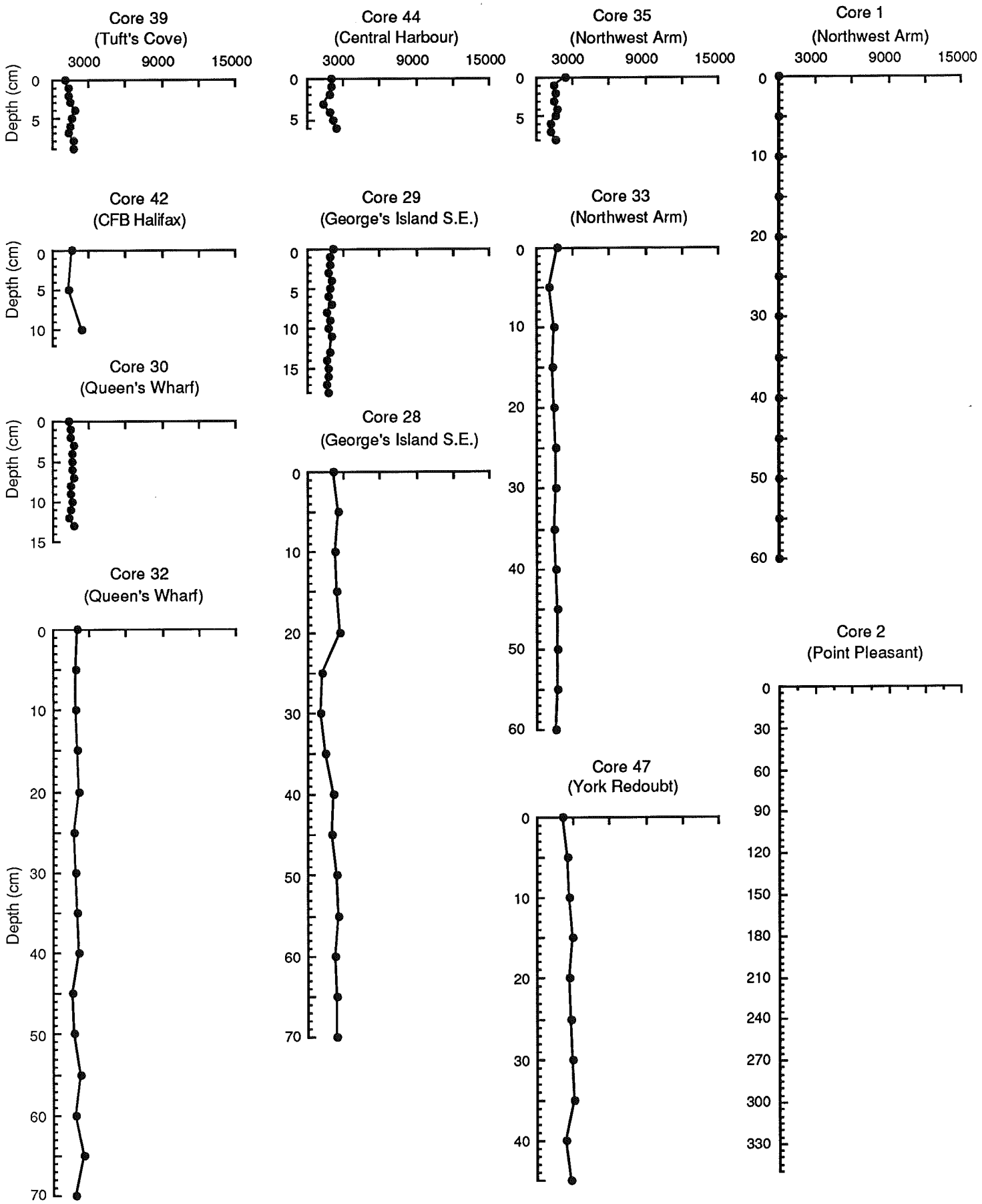
CALCIUM
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



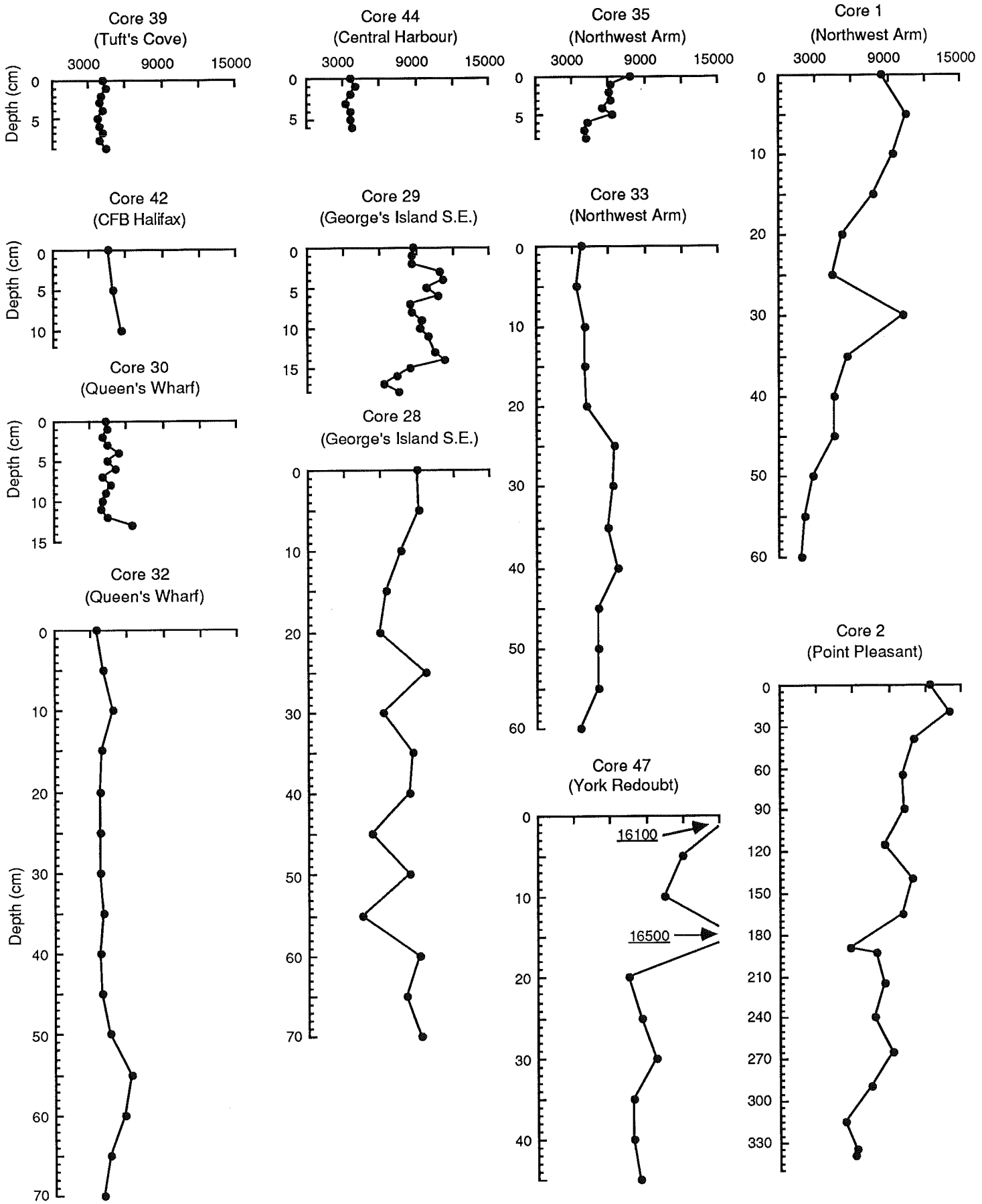
CALCIUM
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



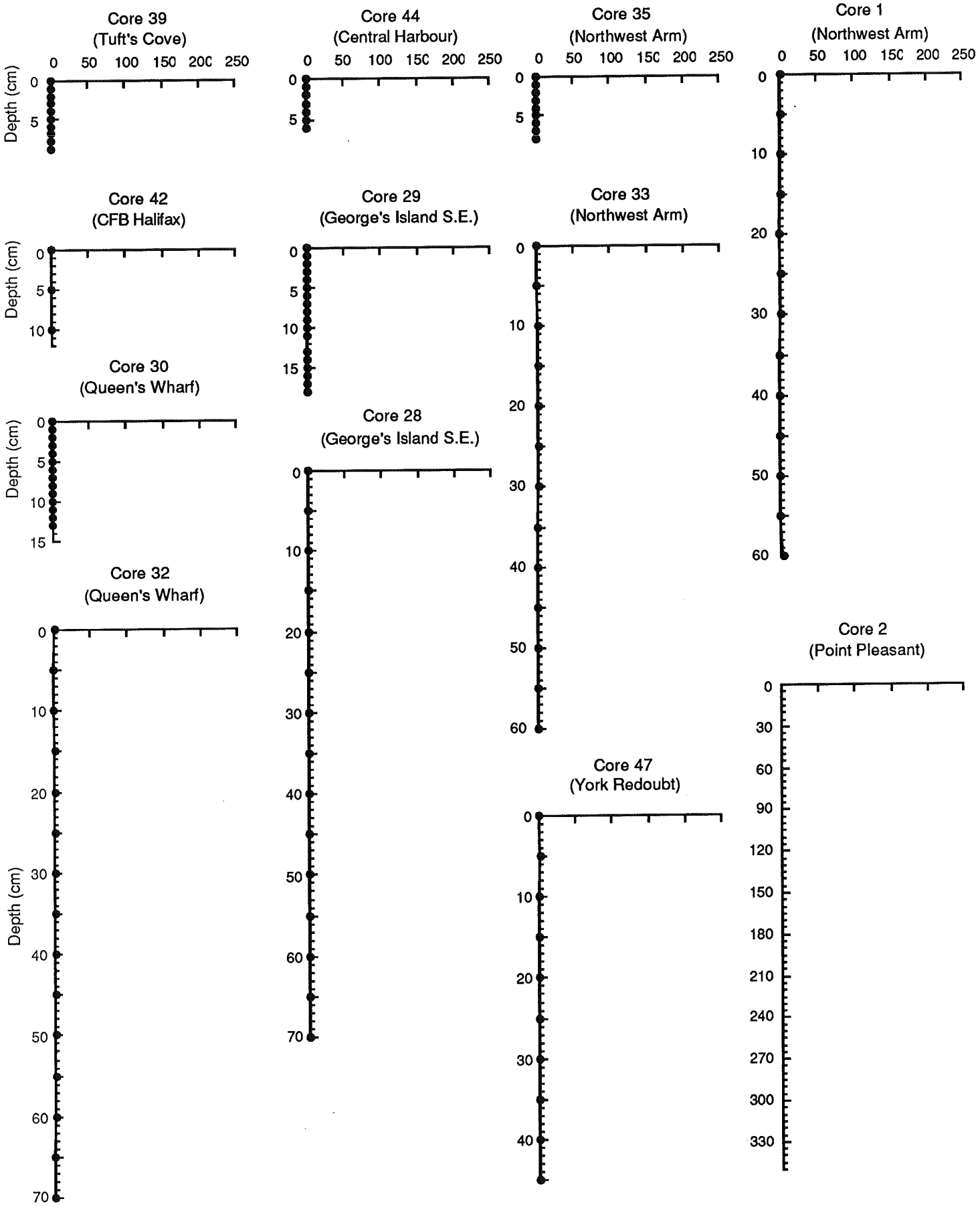
CALCIUM
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



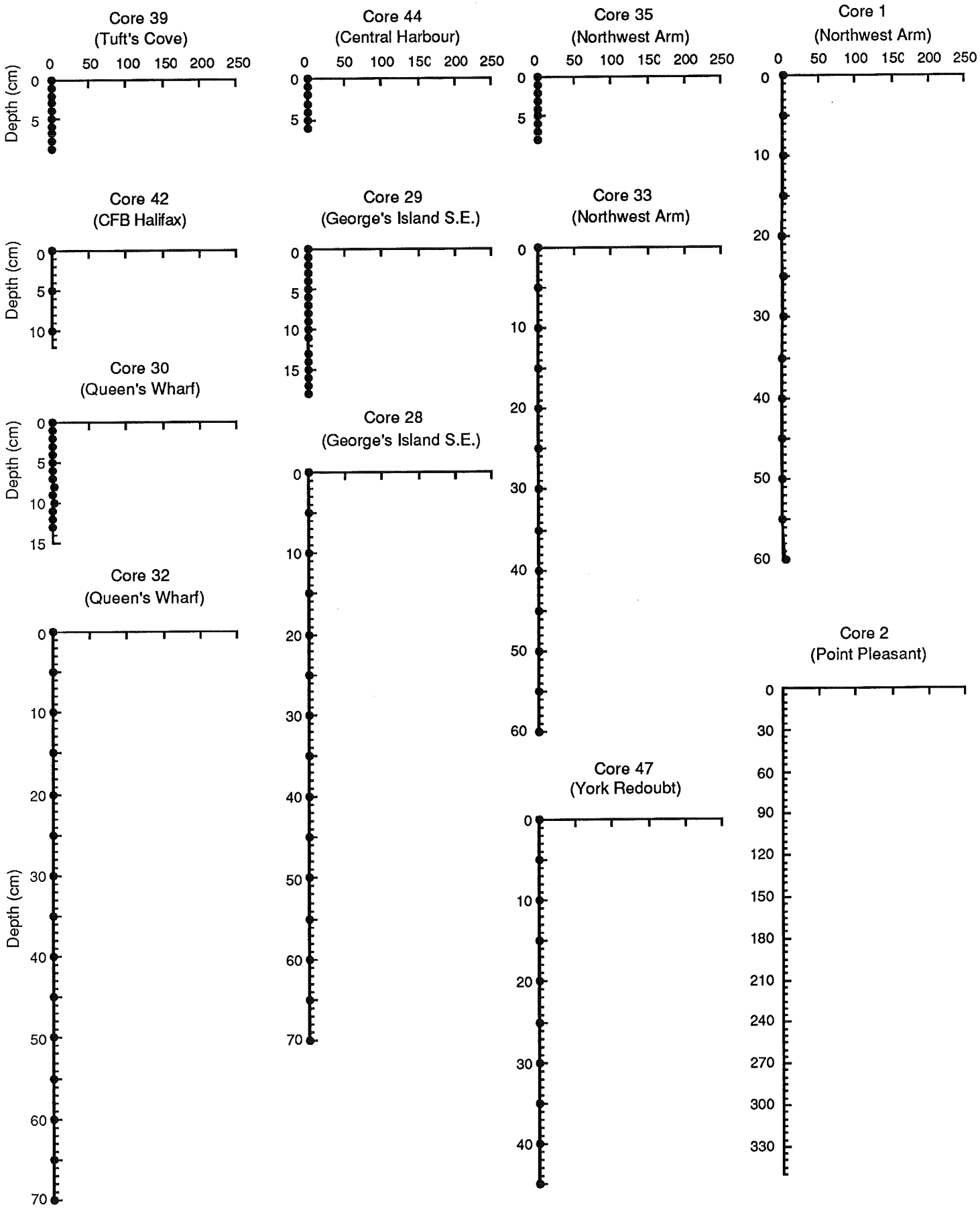
COPPER
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



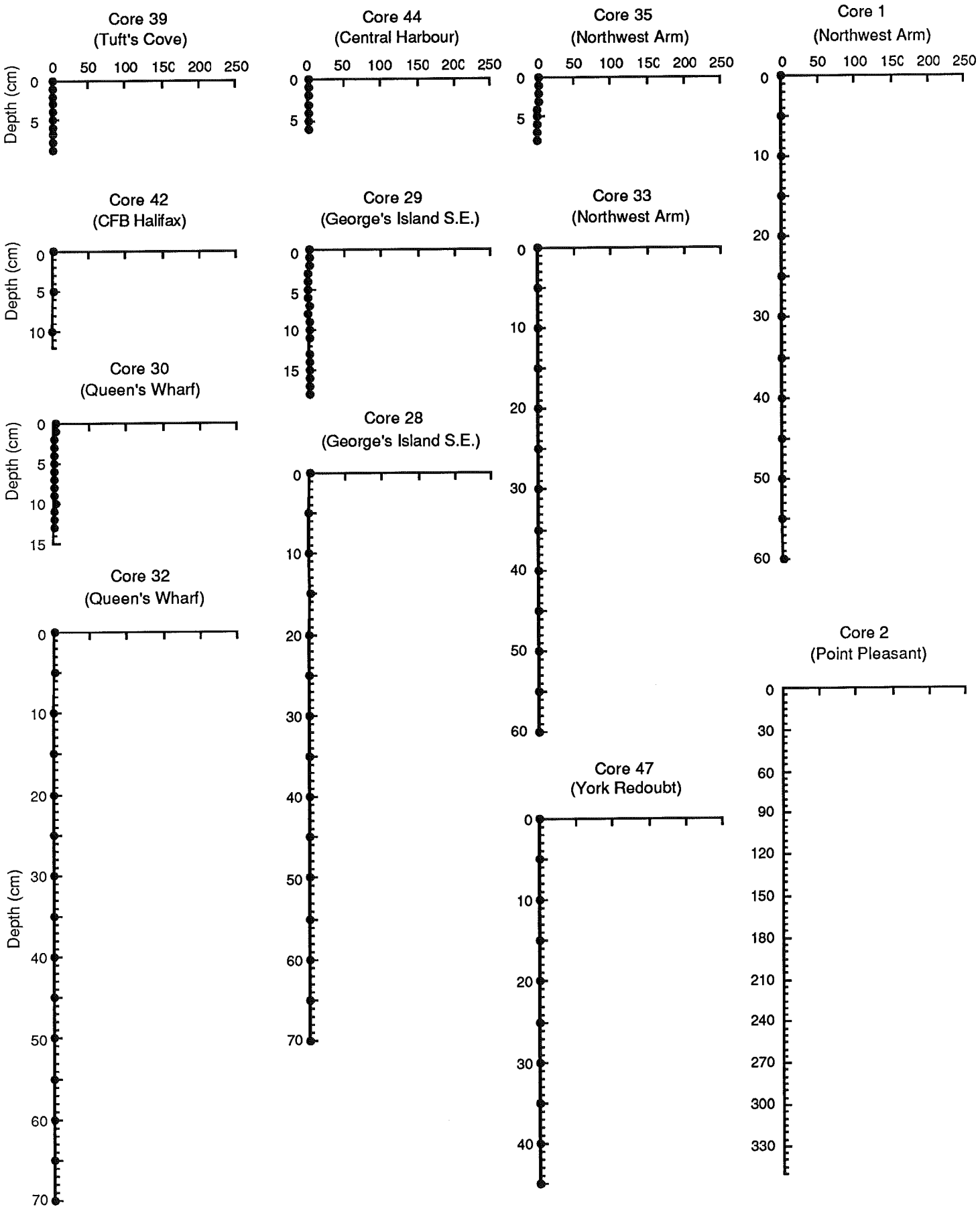
COPPER
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



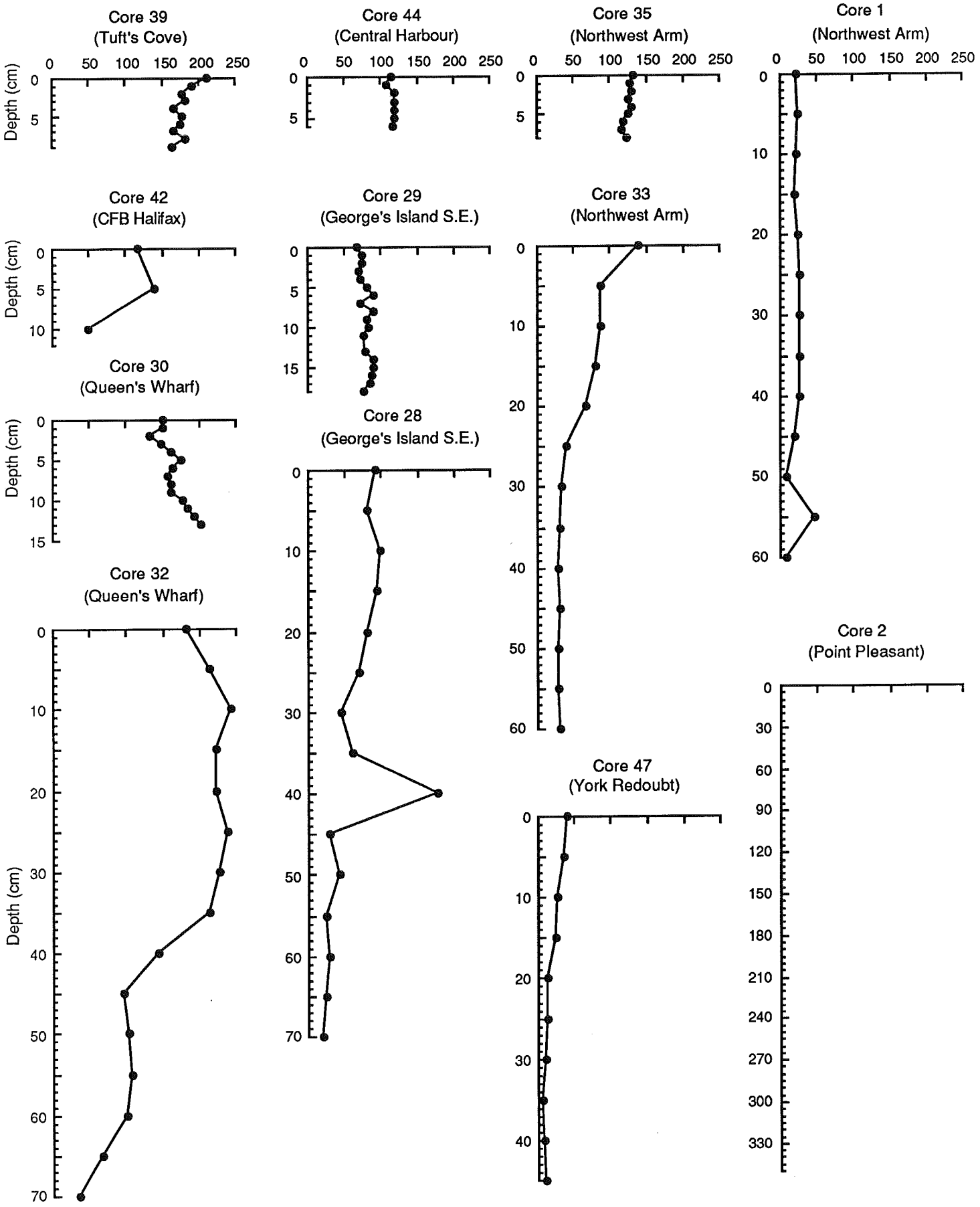
COPPER
heated hydroxylamine leach (µg·g $^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



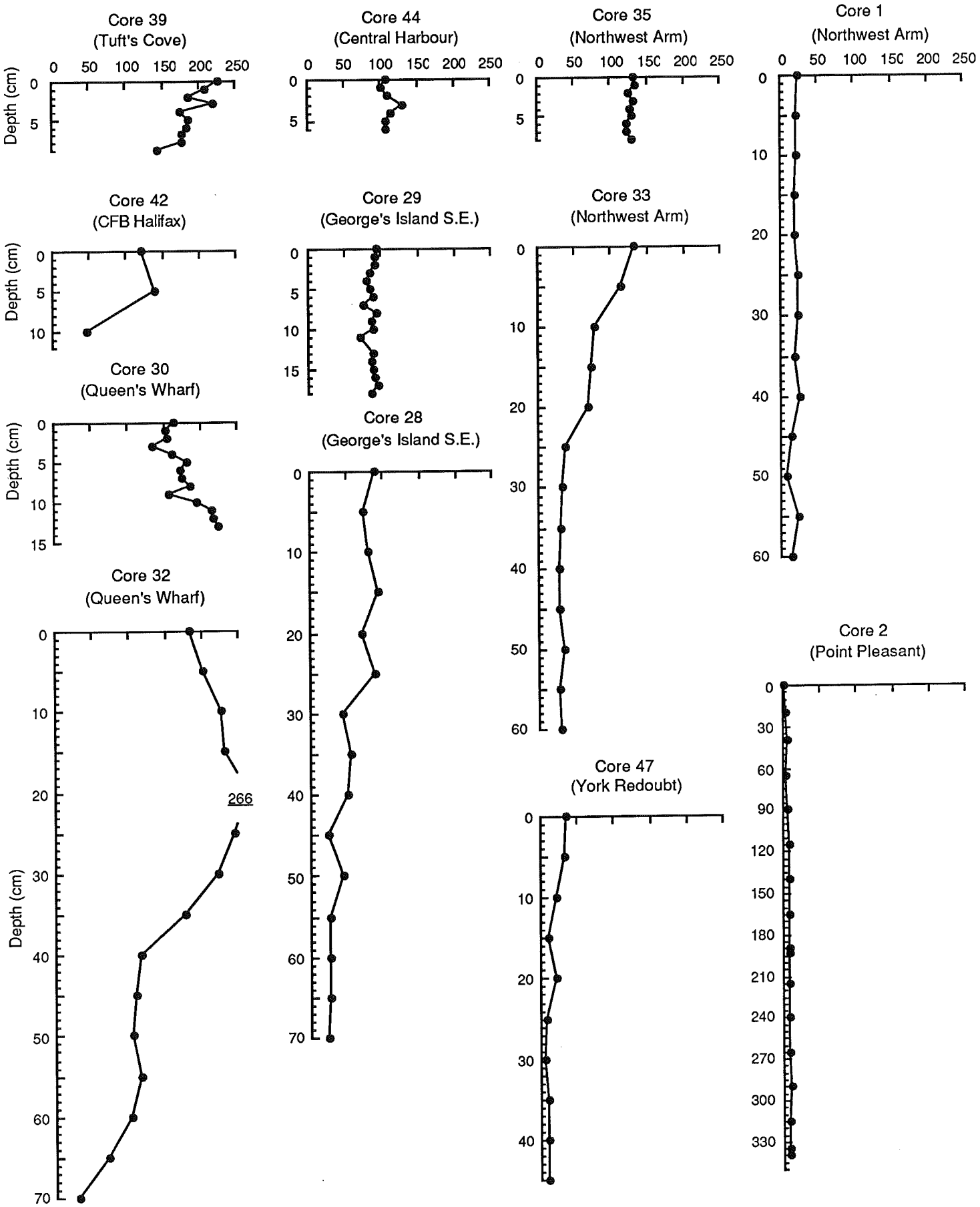
COPPER
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



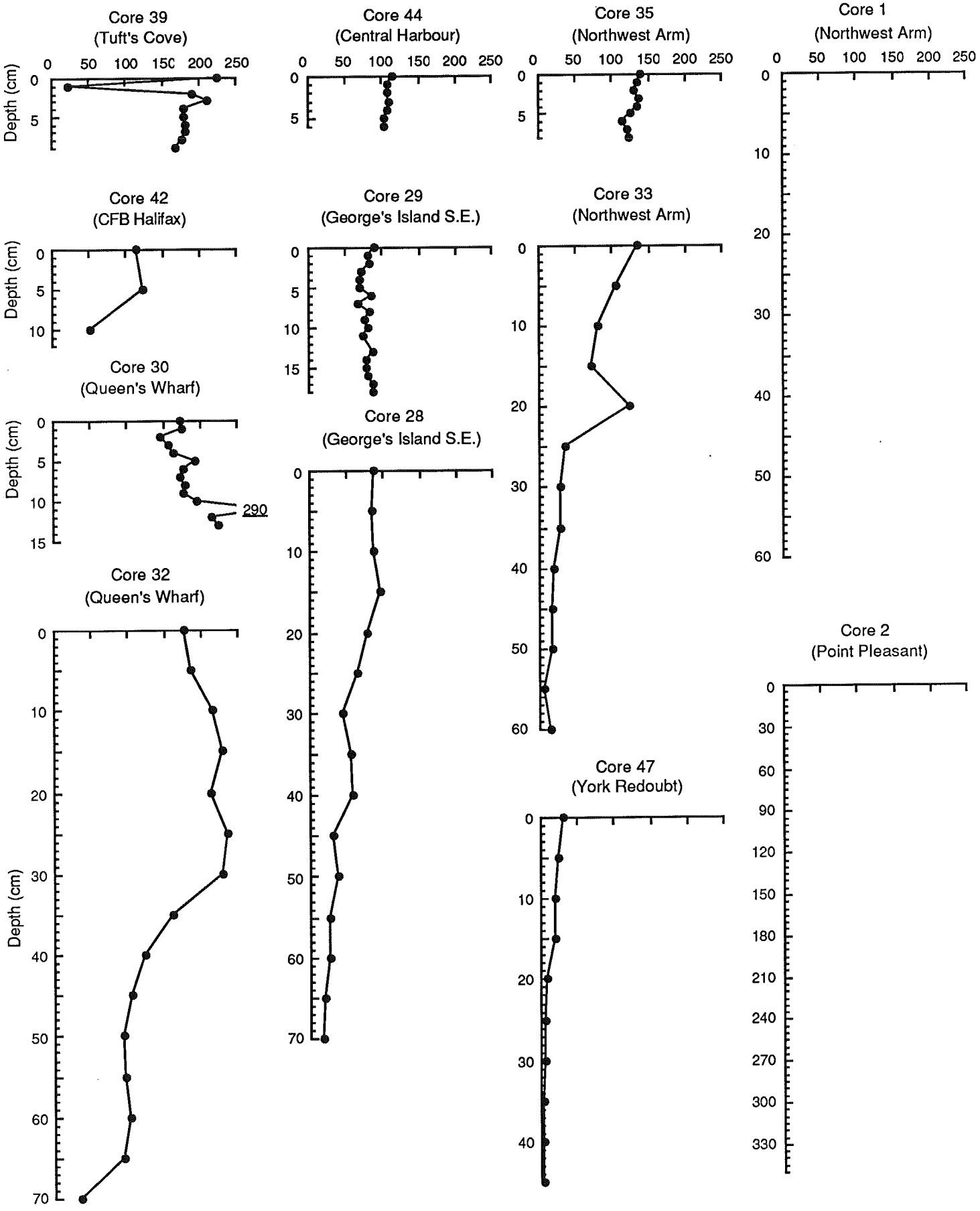
COPPER
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



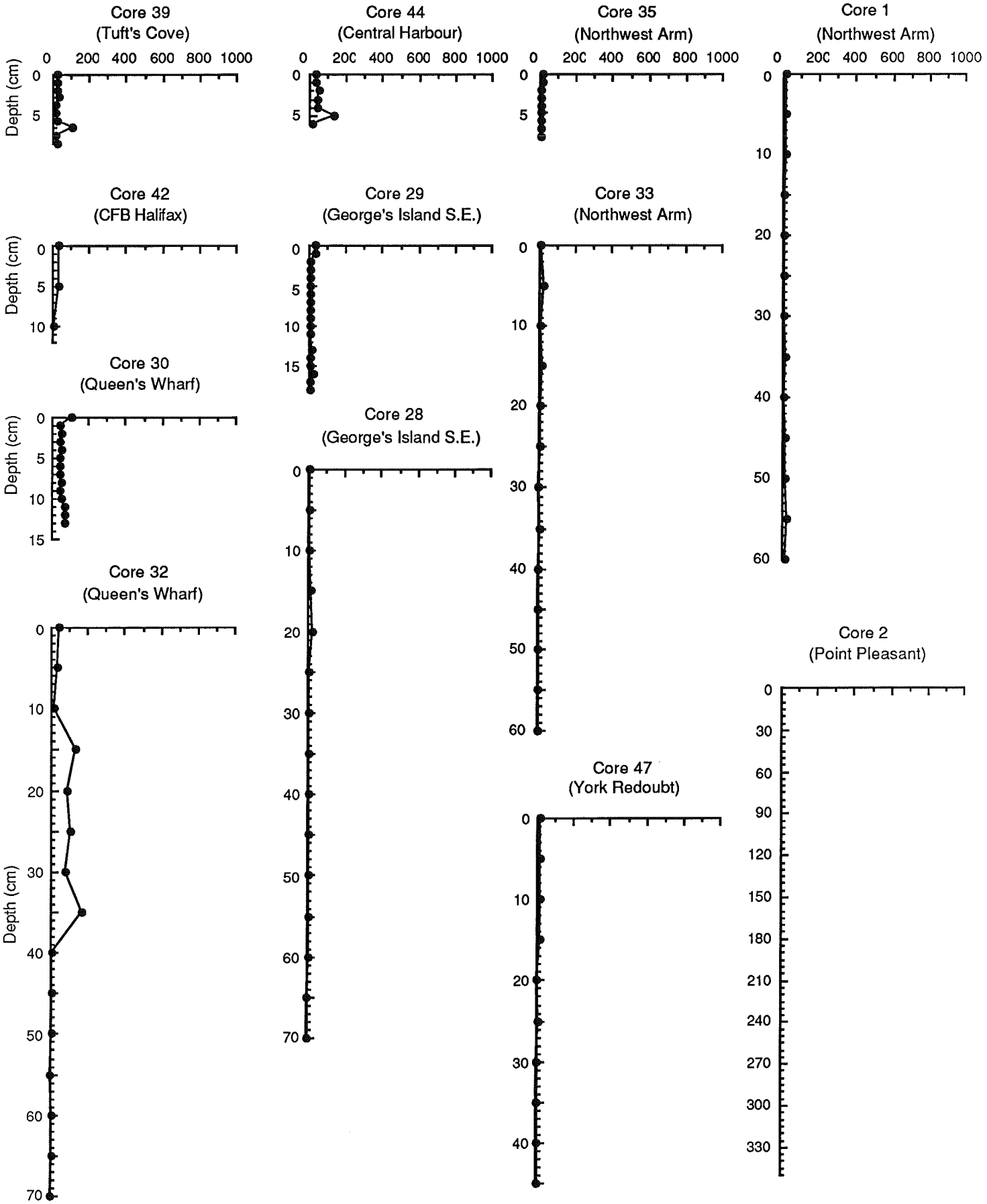
COPPER
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



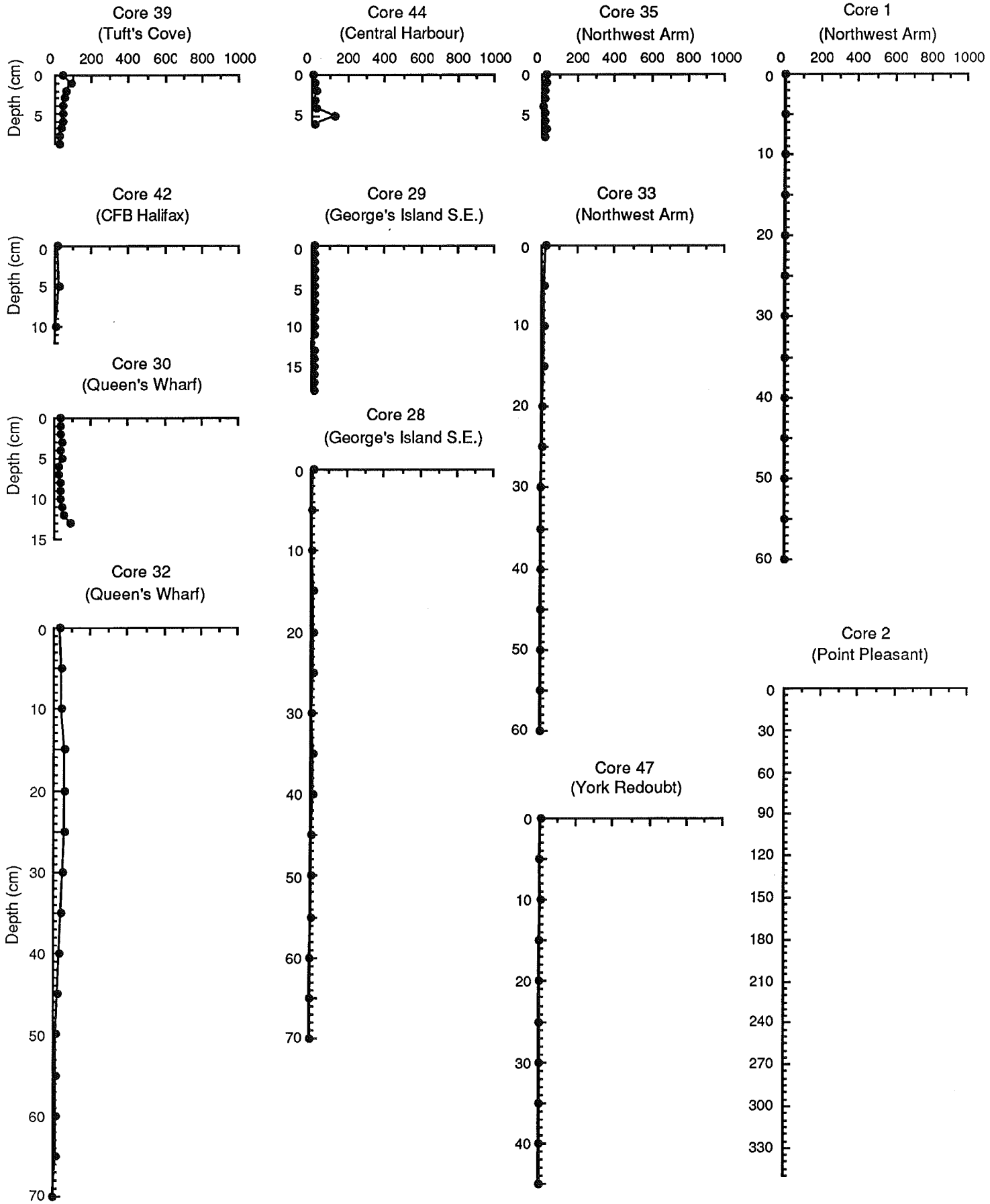
ZINC
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



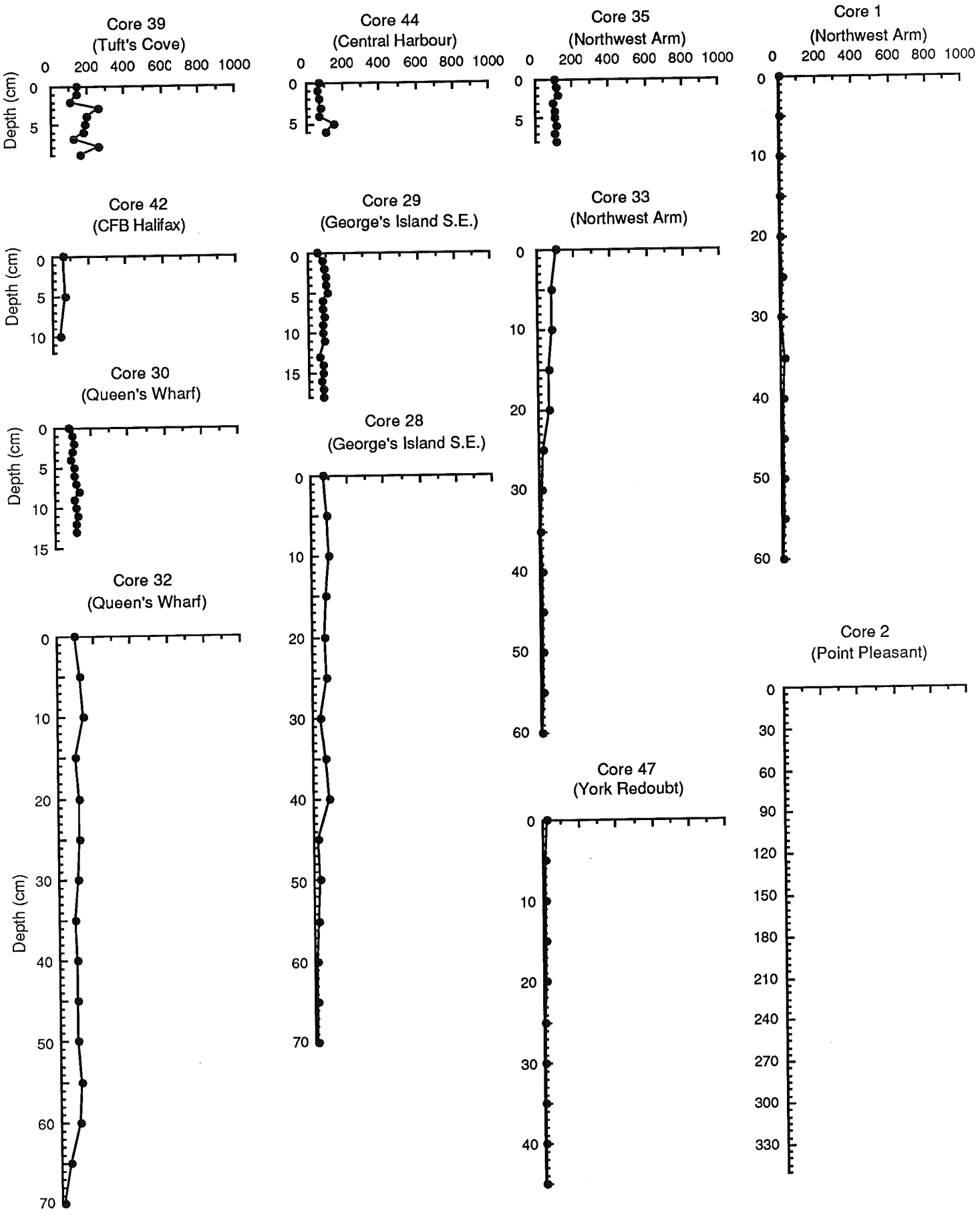
ZINC
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



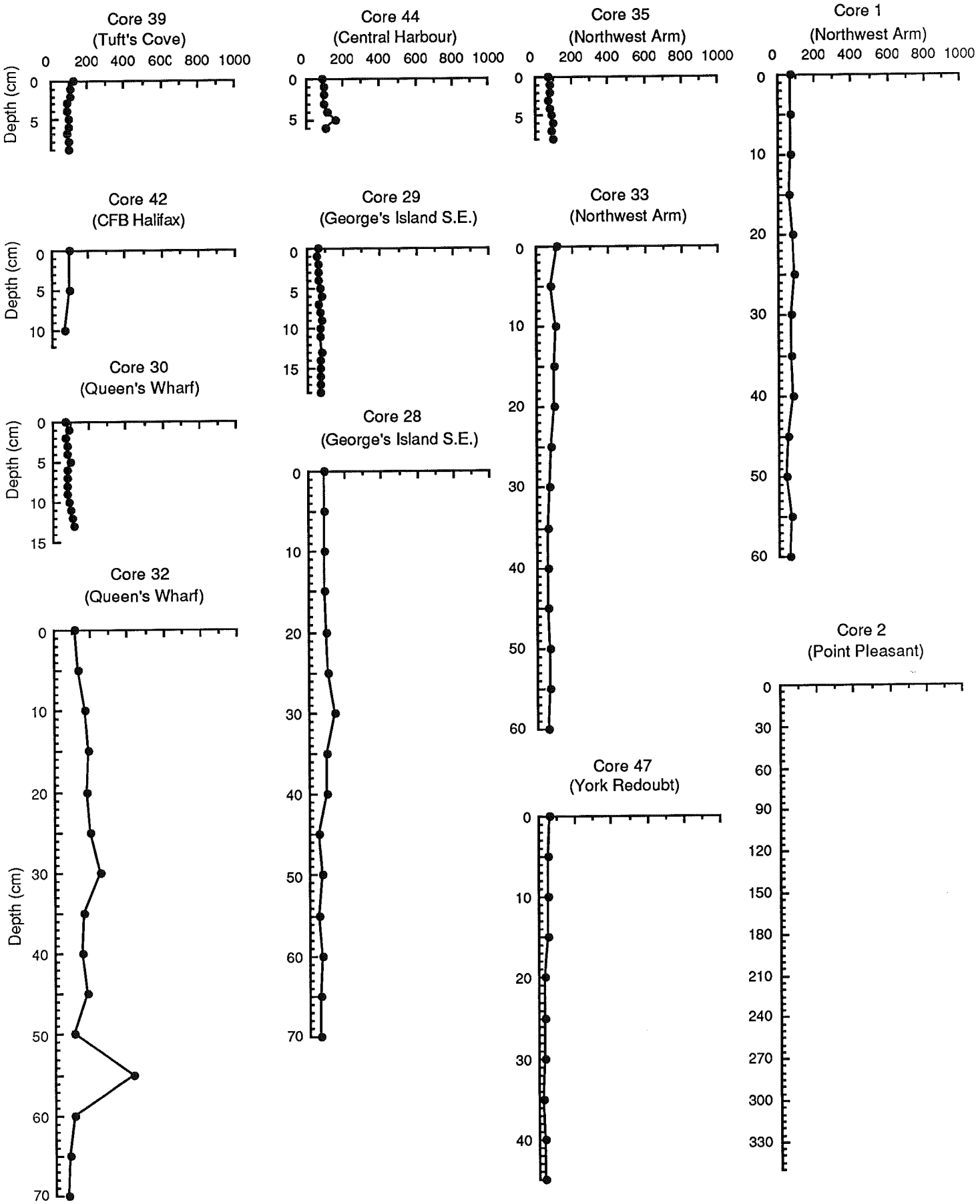
ZINC
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



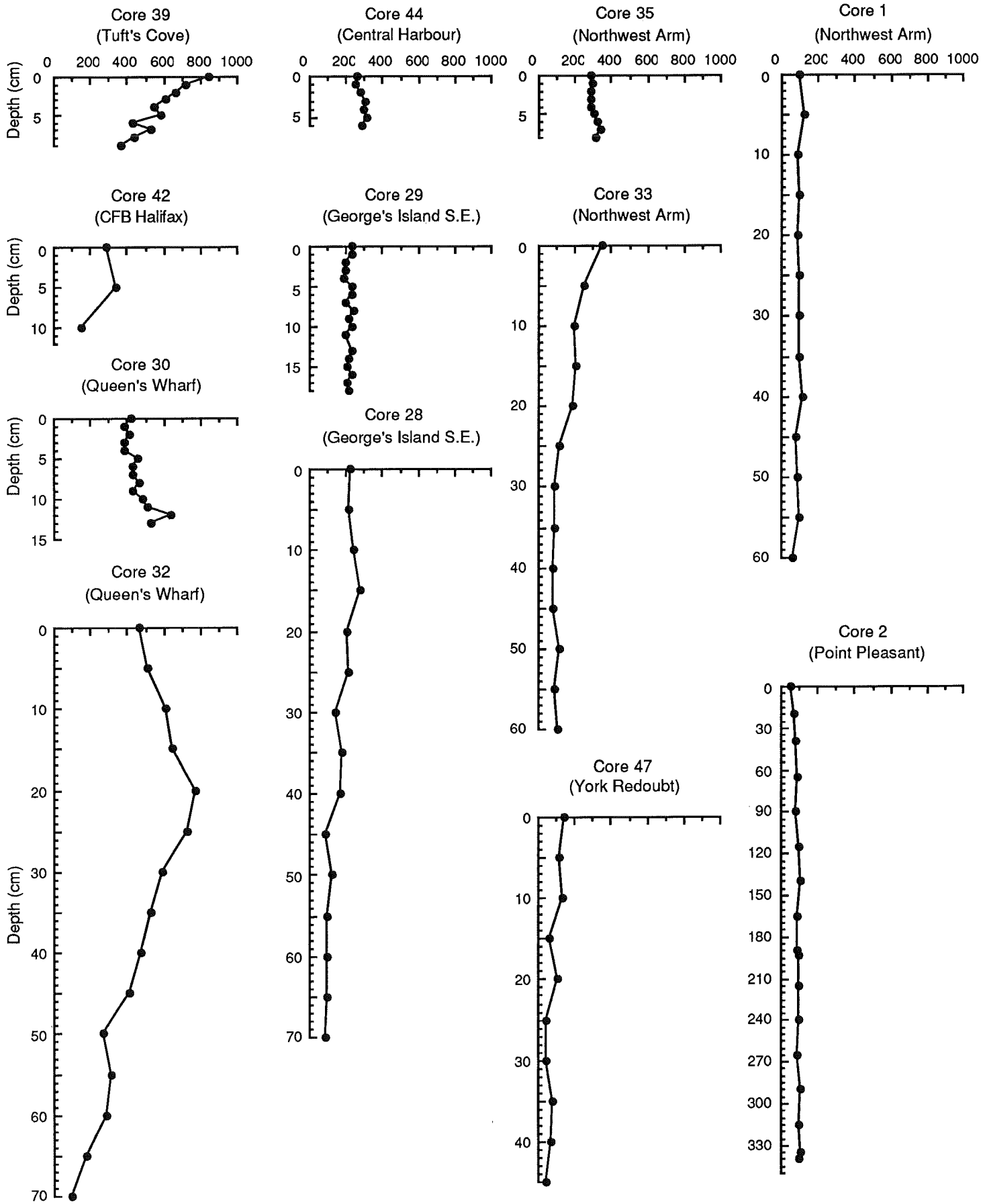
ZINC
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



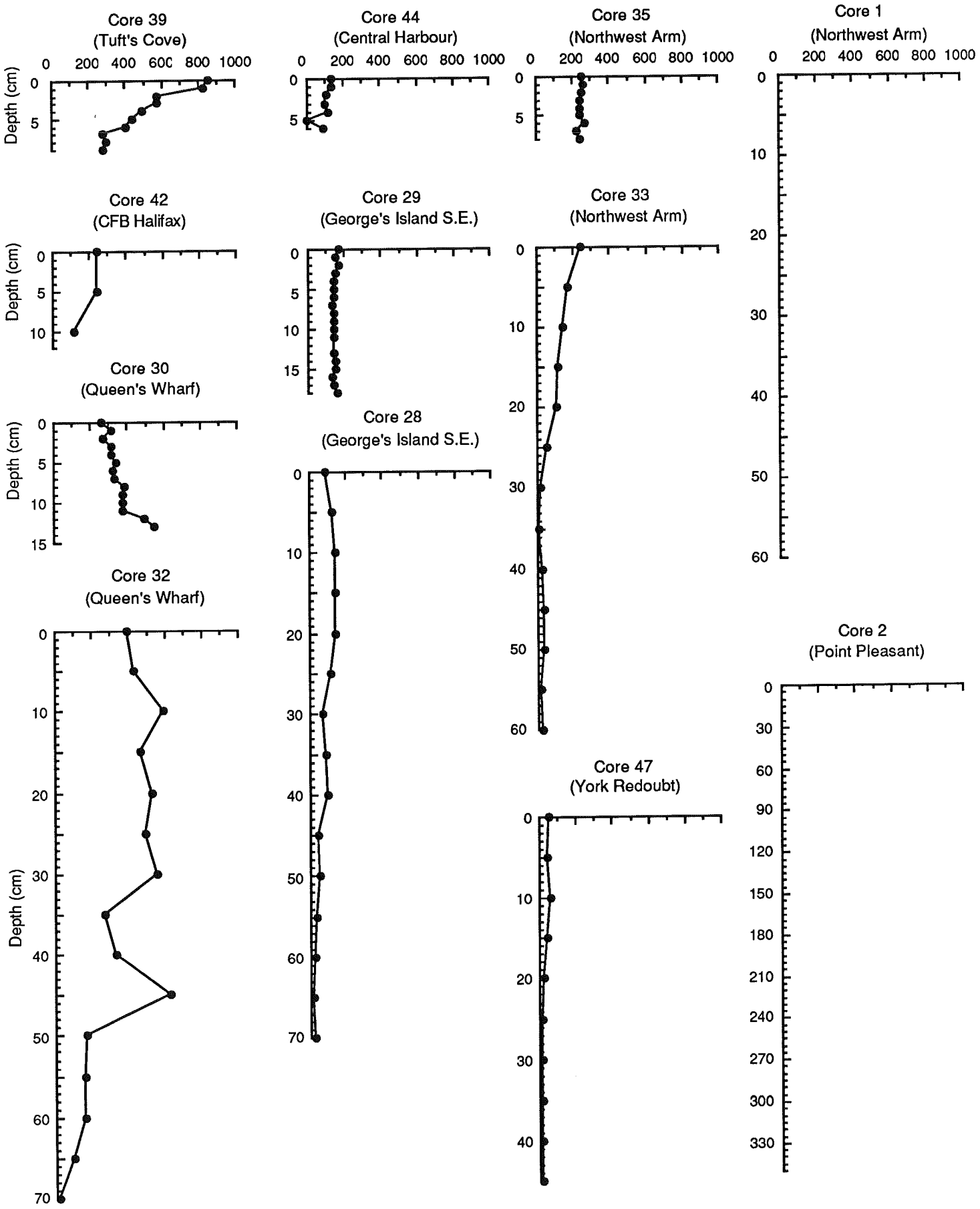
ZINC
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



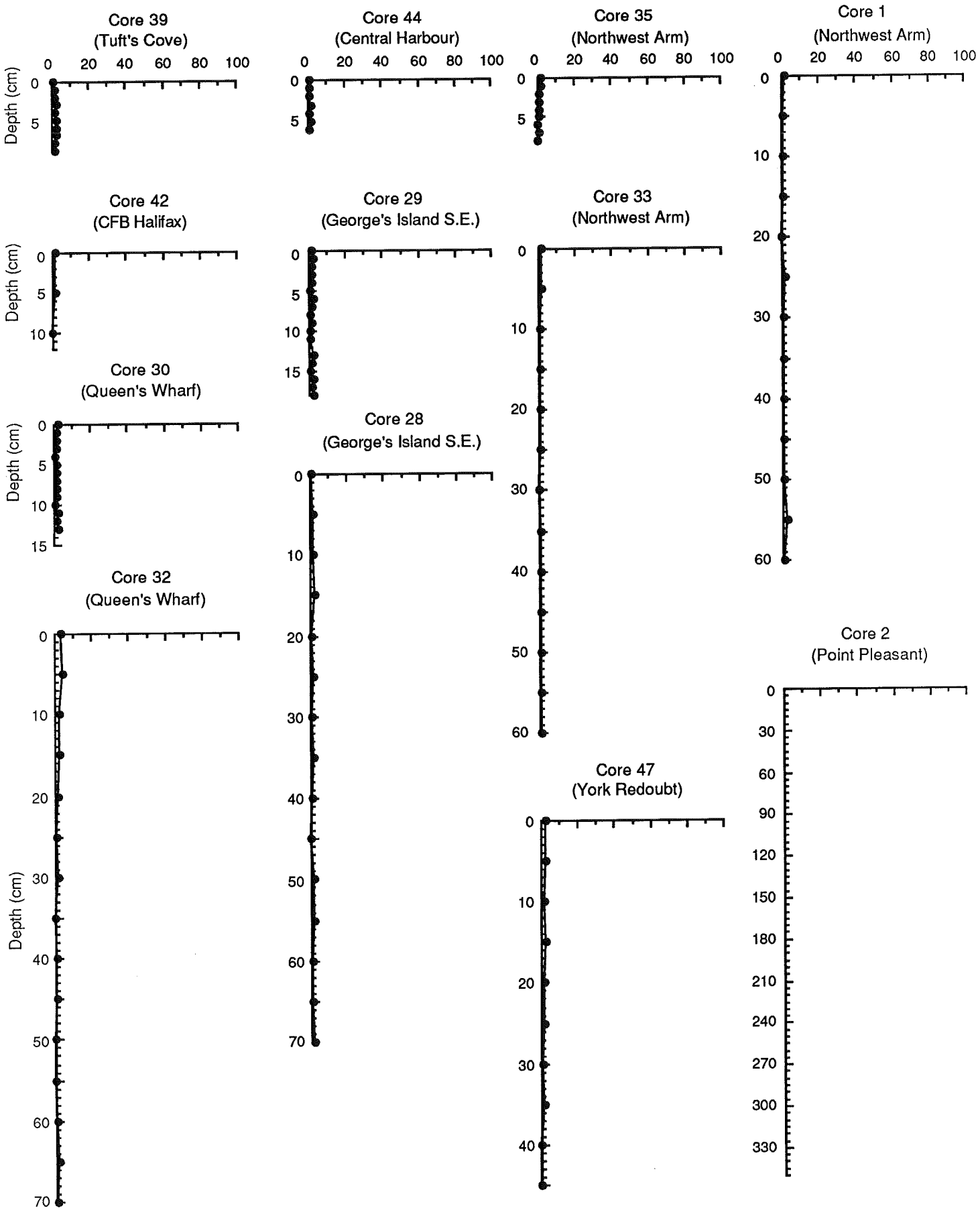
ZINC
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



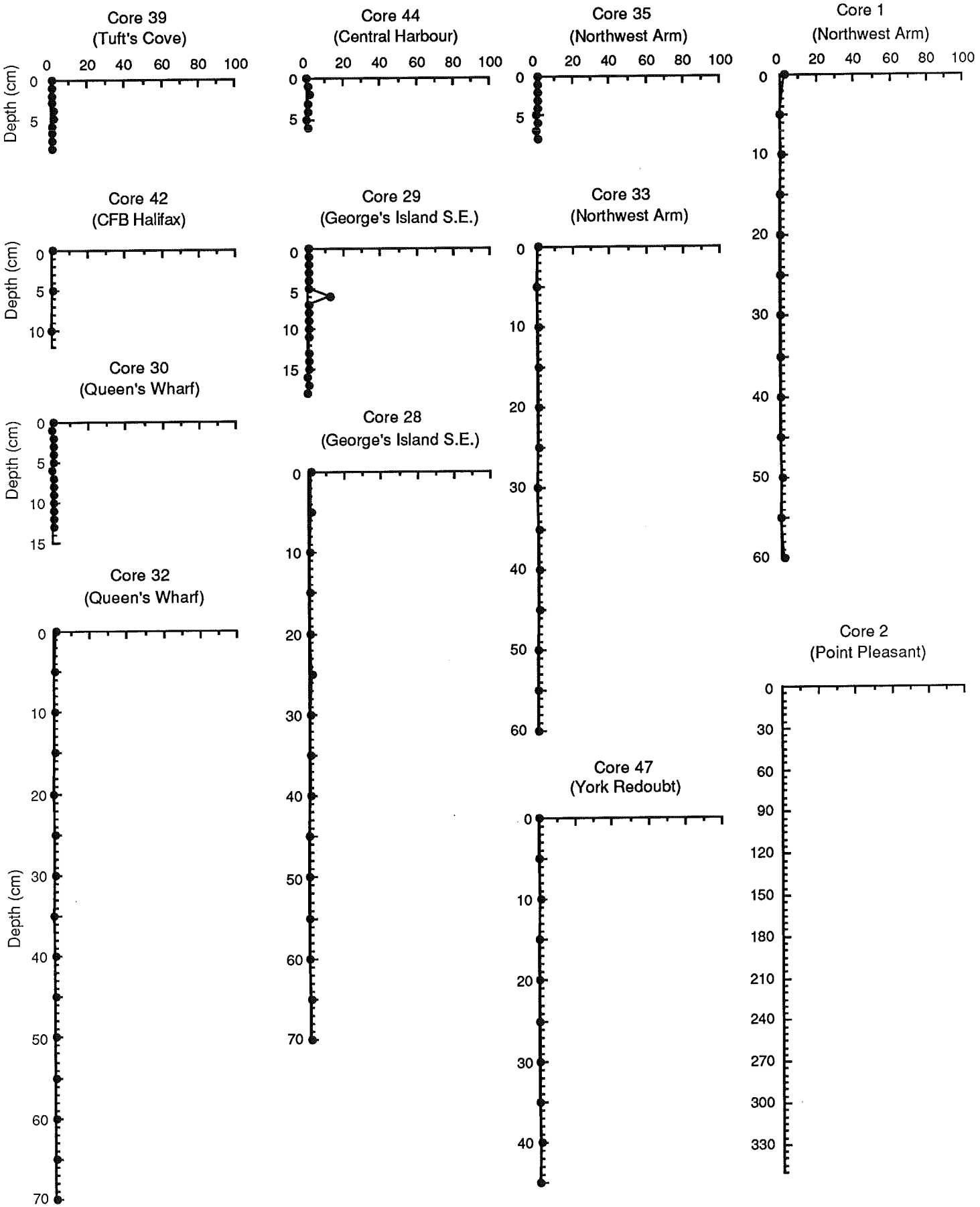
NICKEL
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



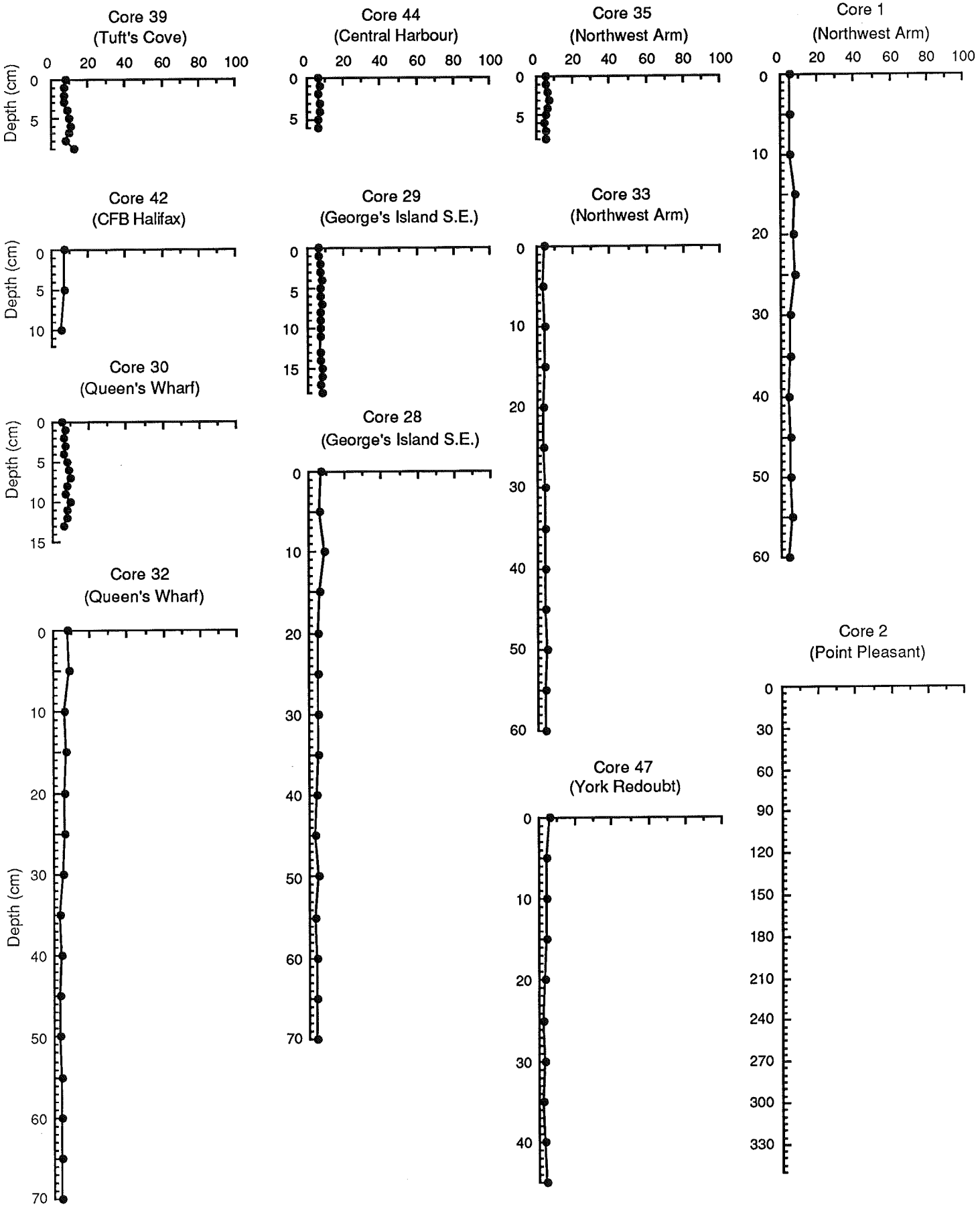
NICKEL
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



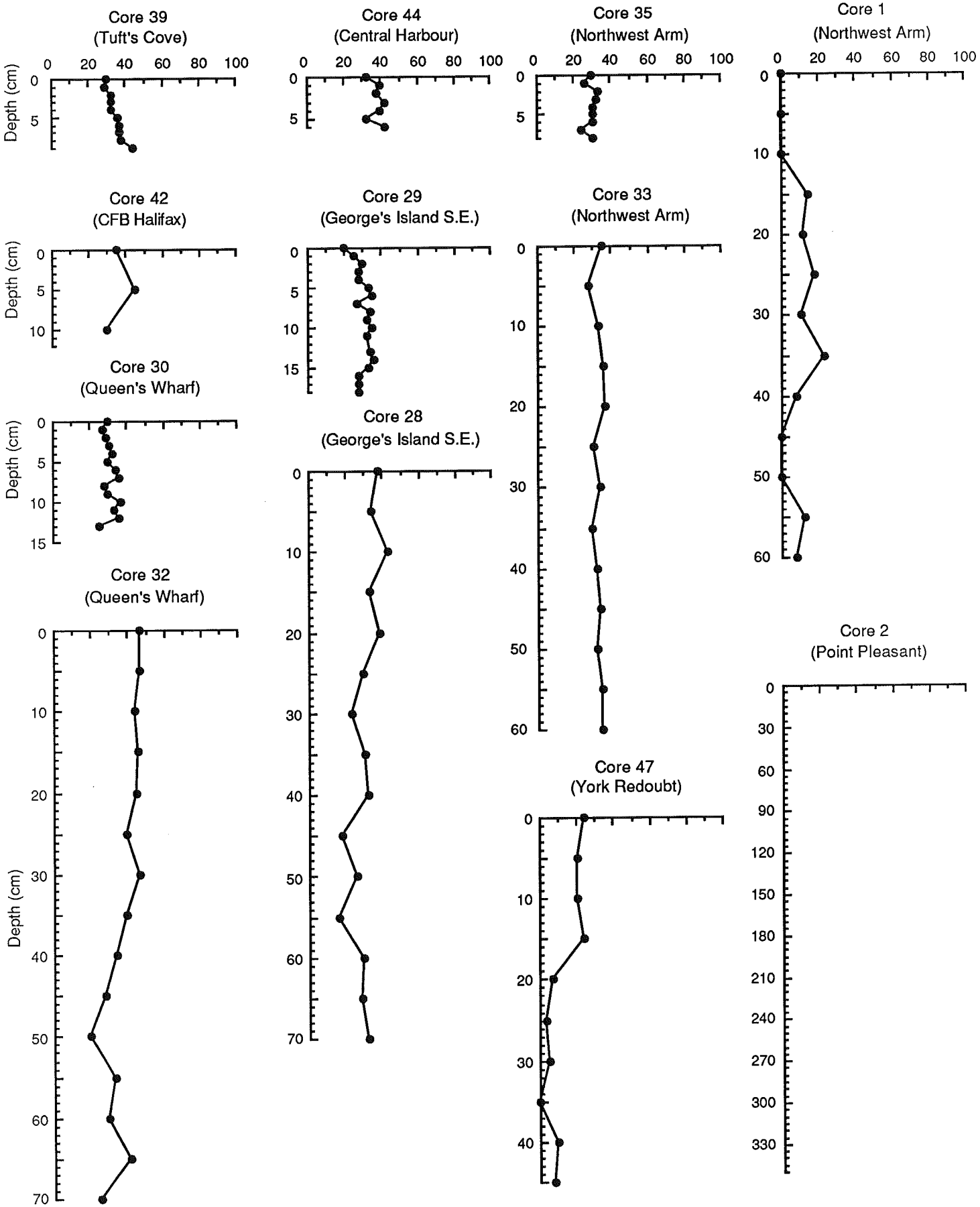
NICKEL
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



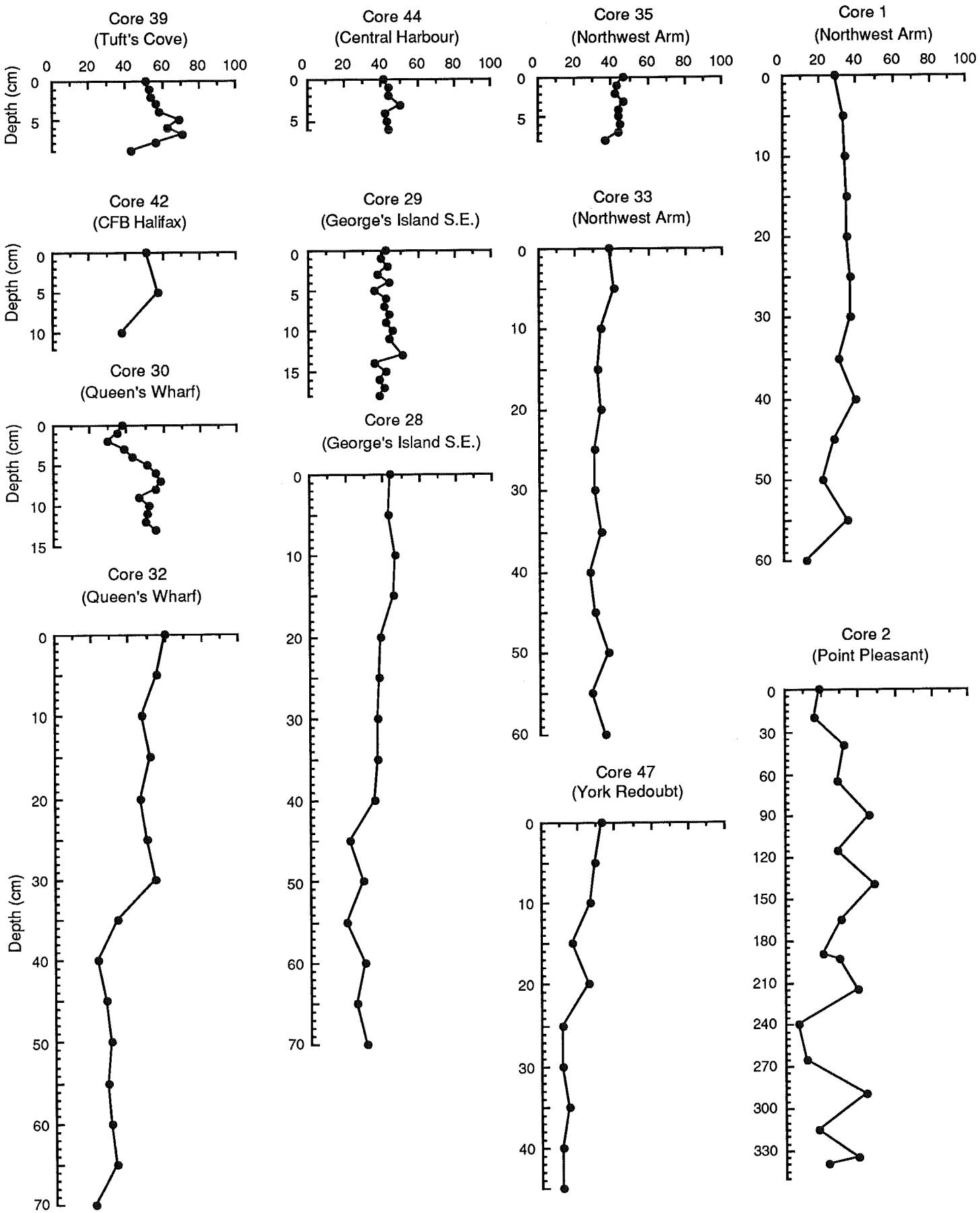
NICKEL
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



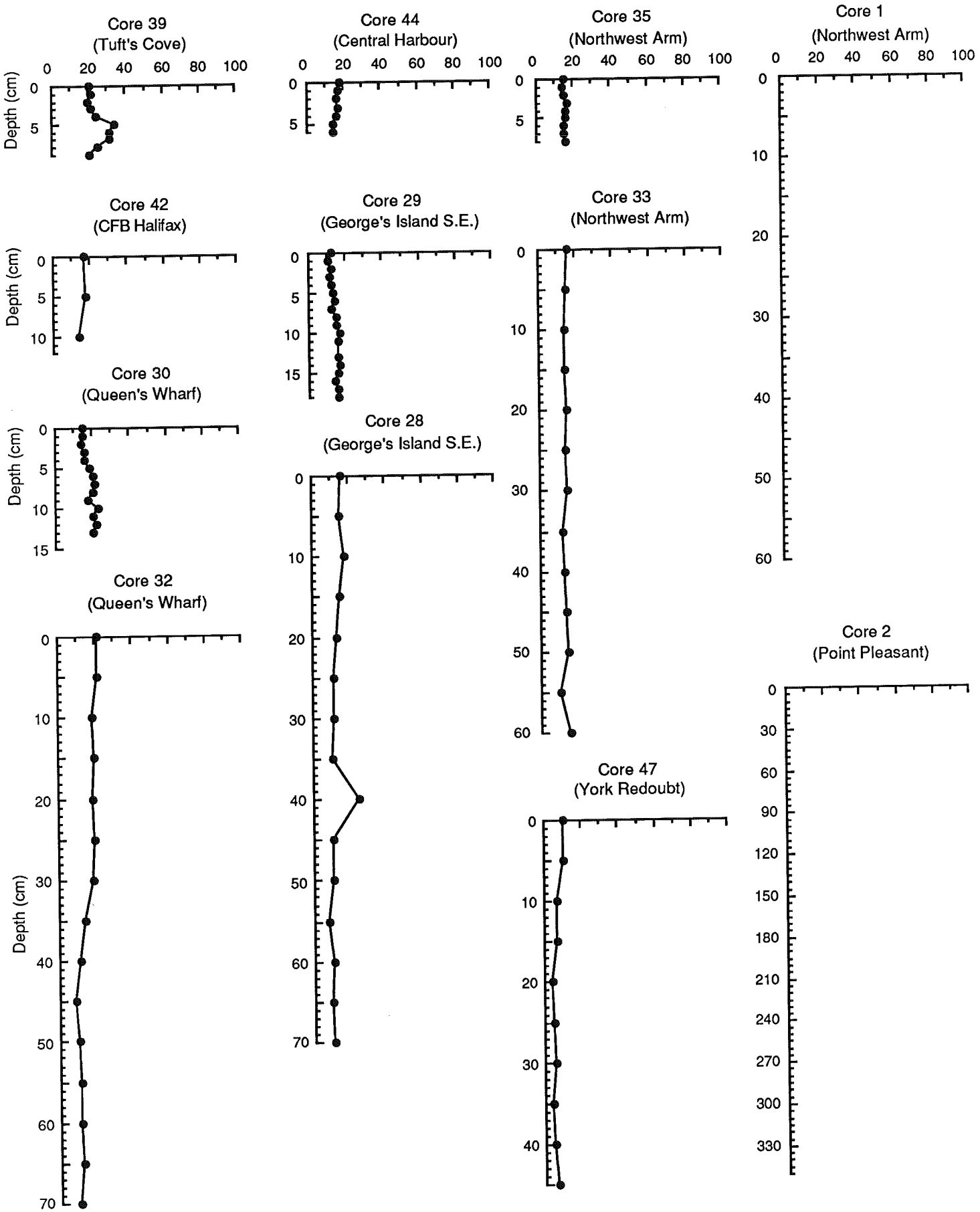
NICKEL
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



NICKEL
organically bound ($\mu g \cdot g^{-1}$)

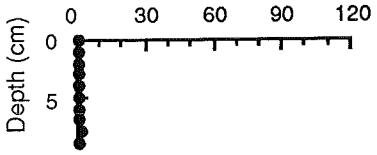
Creed '90 &
Hudson 89-039 ('90)



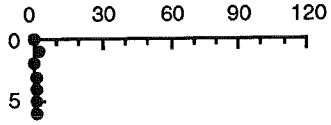
CHROMIUM
weak acid leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)

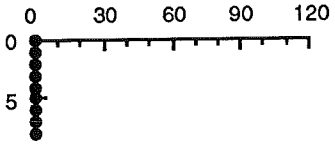
Core 39
(Tuft's Cove)



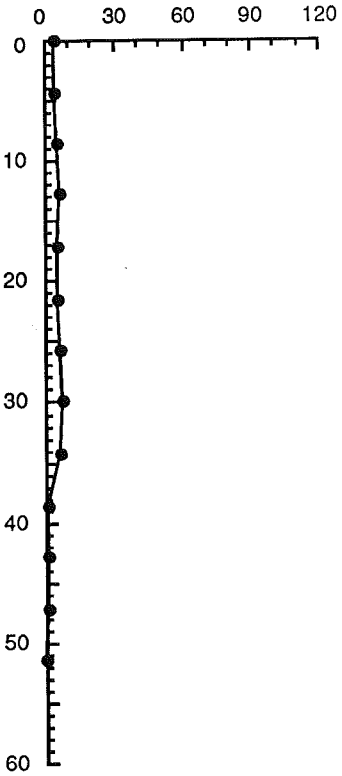
Core 44
(Central Harbour)



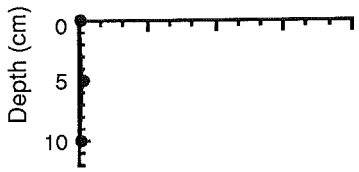
Core 35
(Northwest Arm)



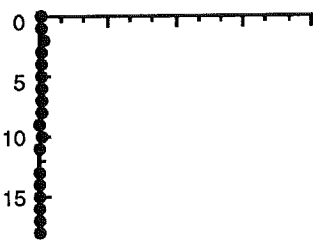
Core 1
(Northwest Arm)



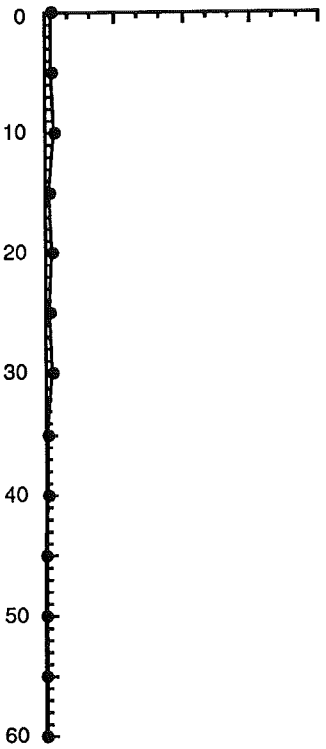
Core 42
(CFB Halifax)



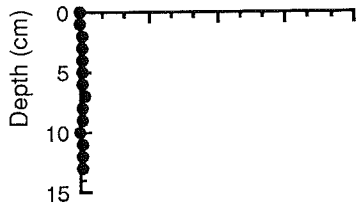
Core 29
(George's Island S.E.)



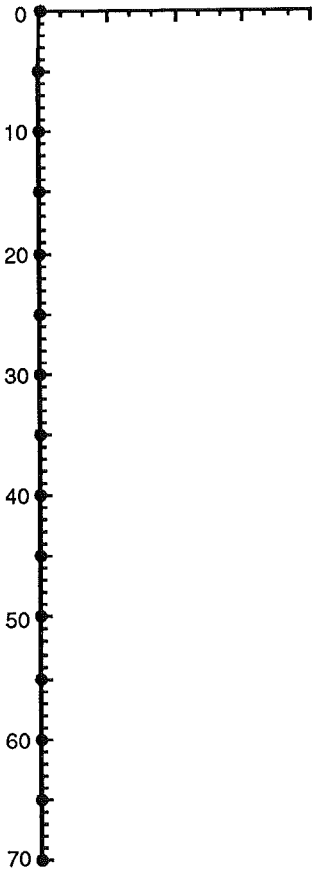
Core 33
(Northwest Arm)



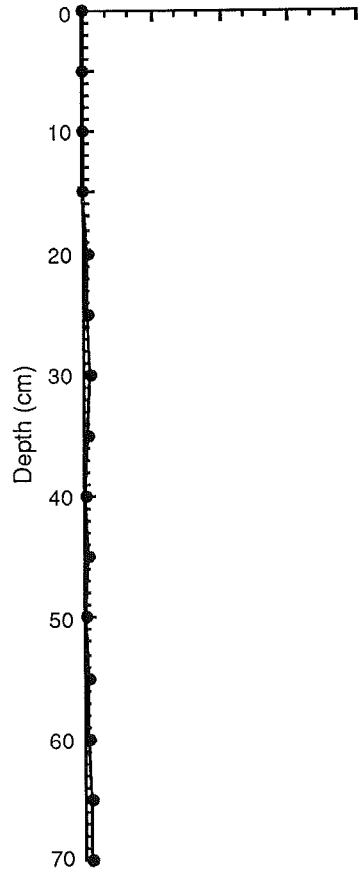
Core 30
(Queen's Wharf)



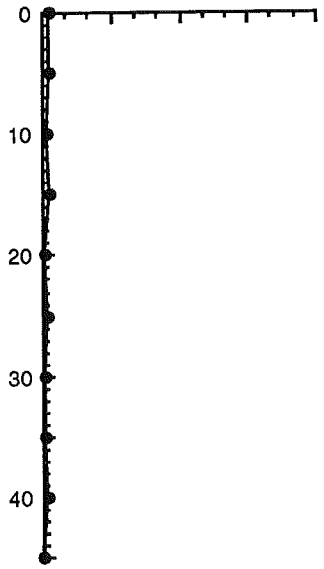
Core 28
(George's Island S.E.)



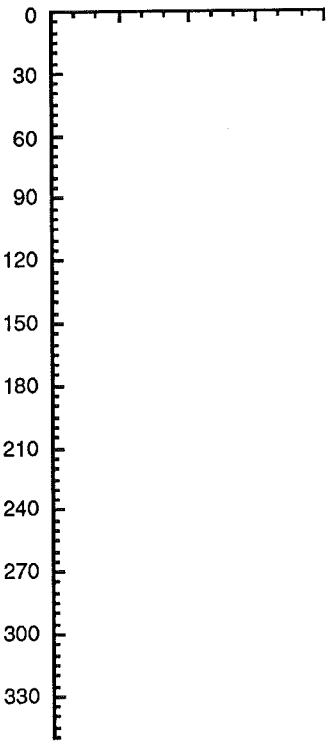
Core 32
(Queen's Wharf)



Core 47
(York Redoubt)

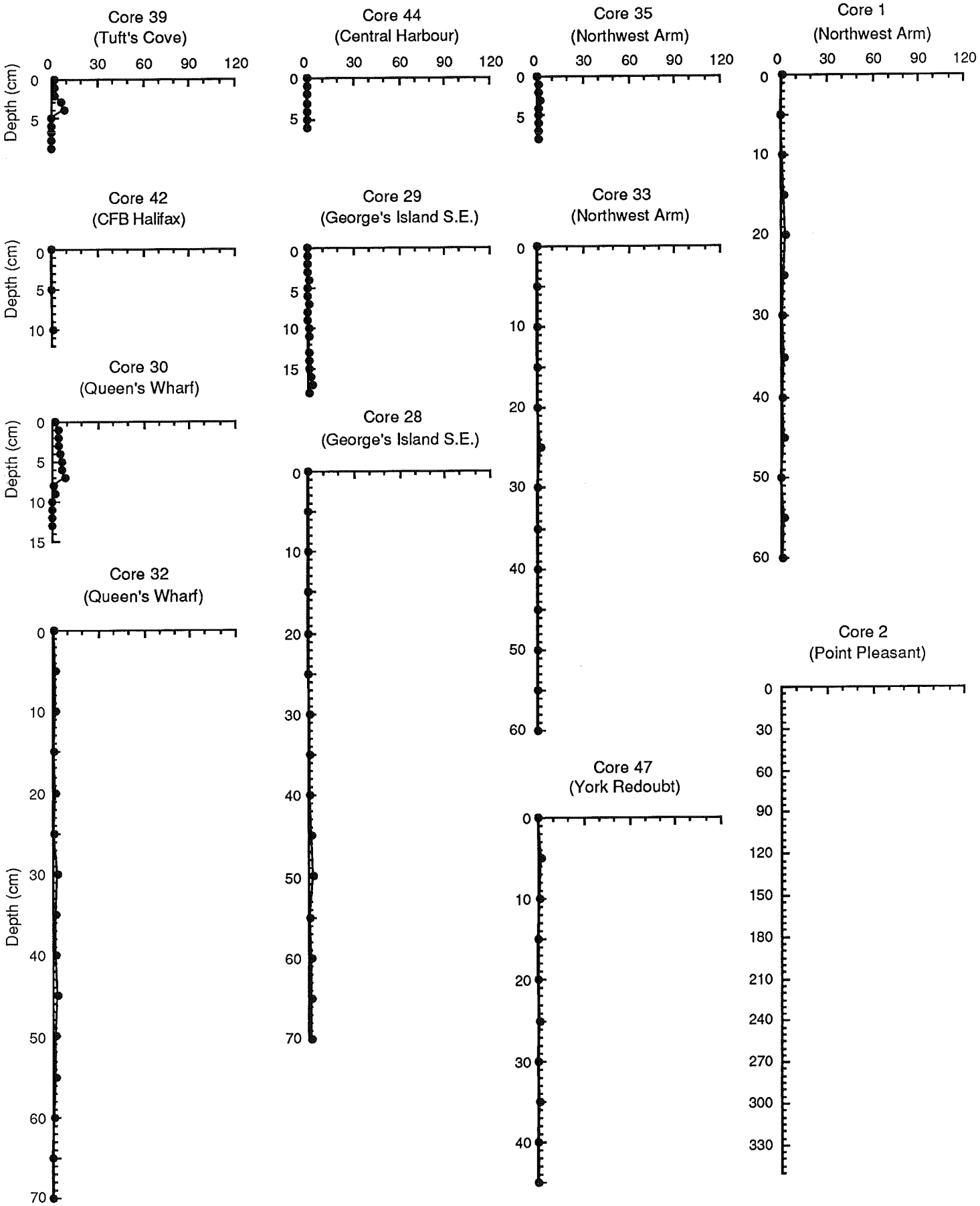


Core 2
(Point Pleasant)



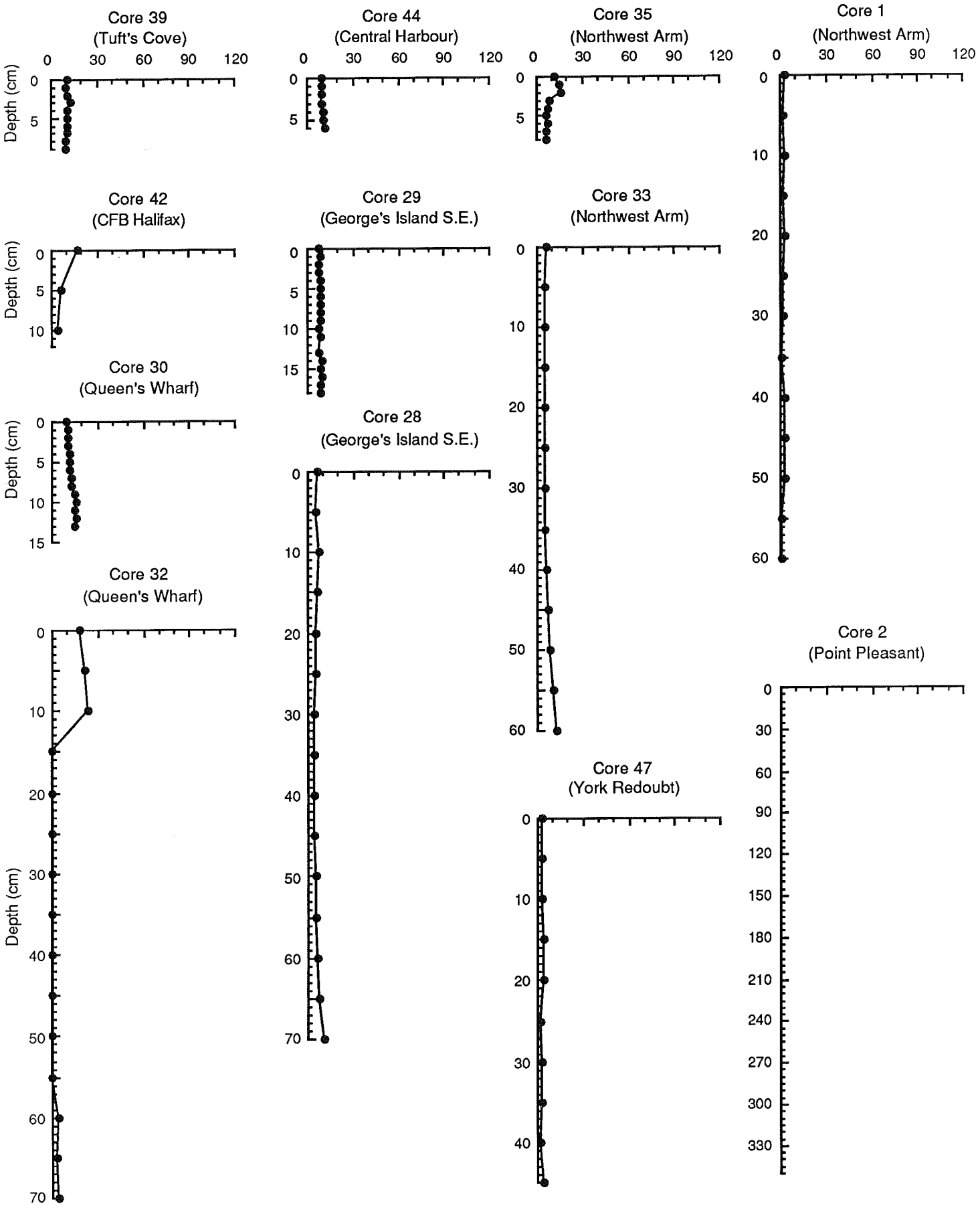
CHROMIUM
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



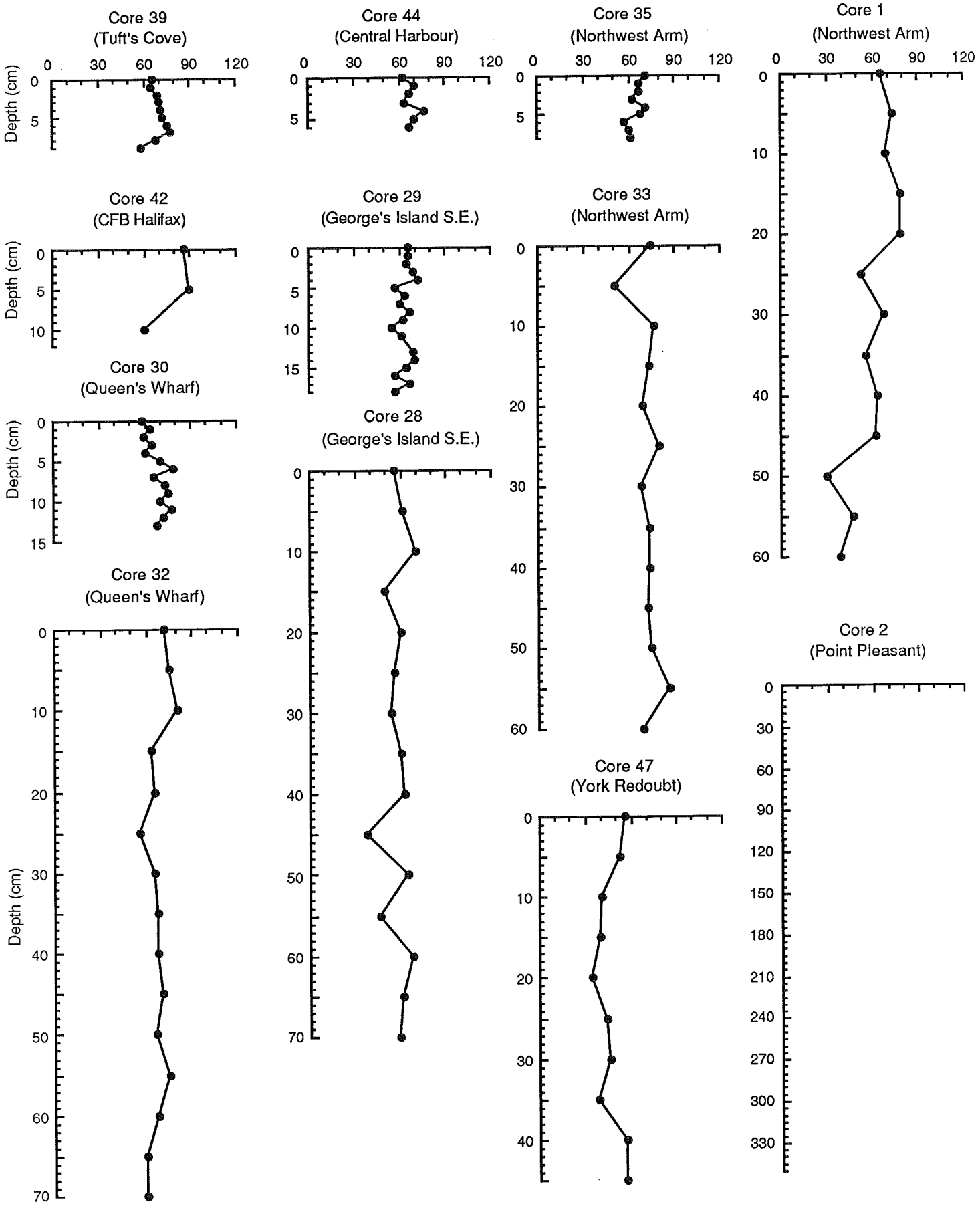
CHROMIUM
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



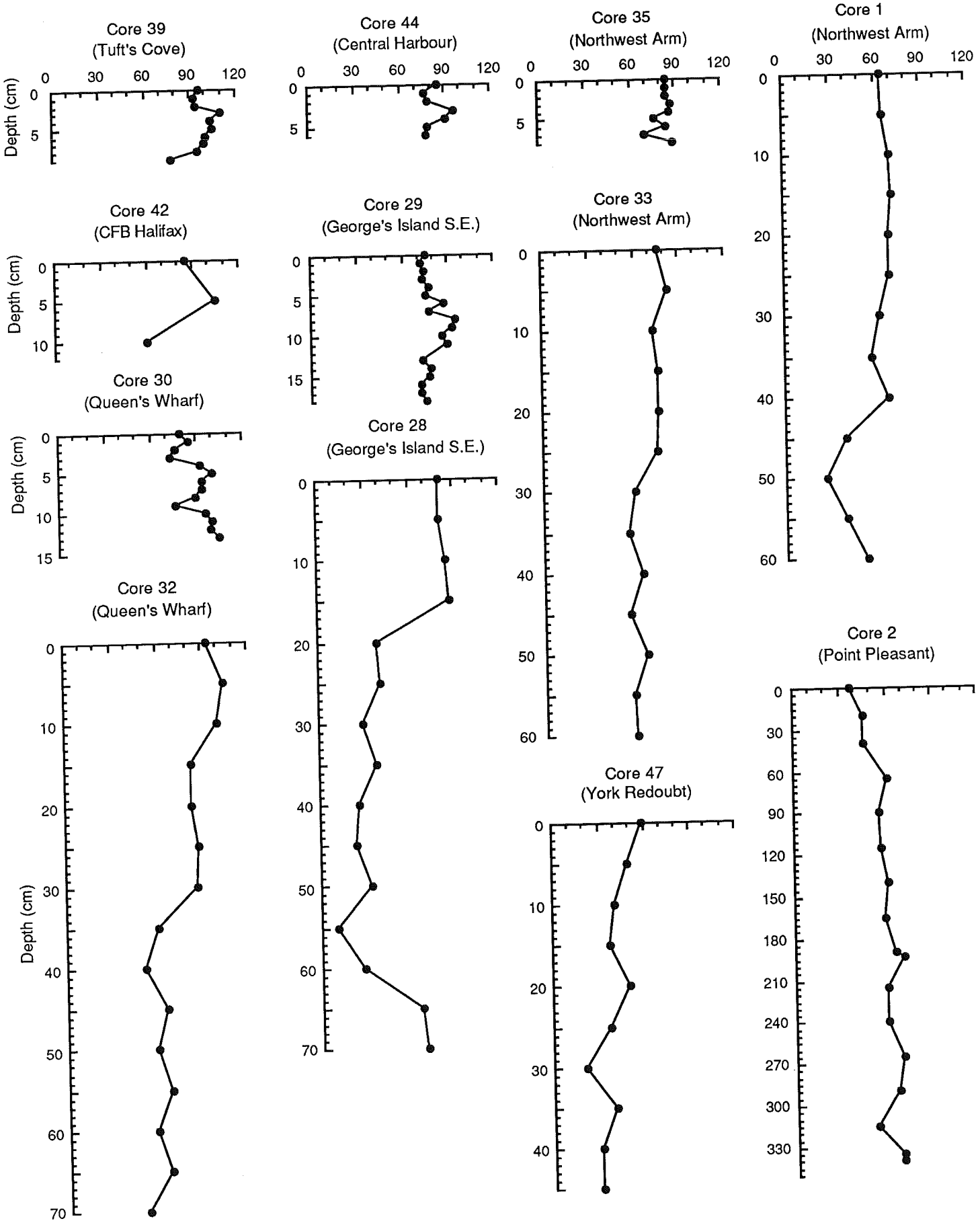
CHROMIUM
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



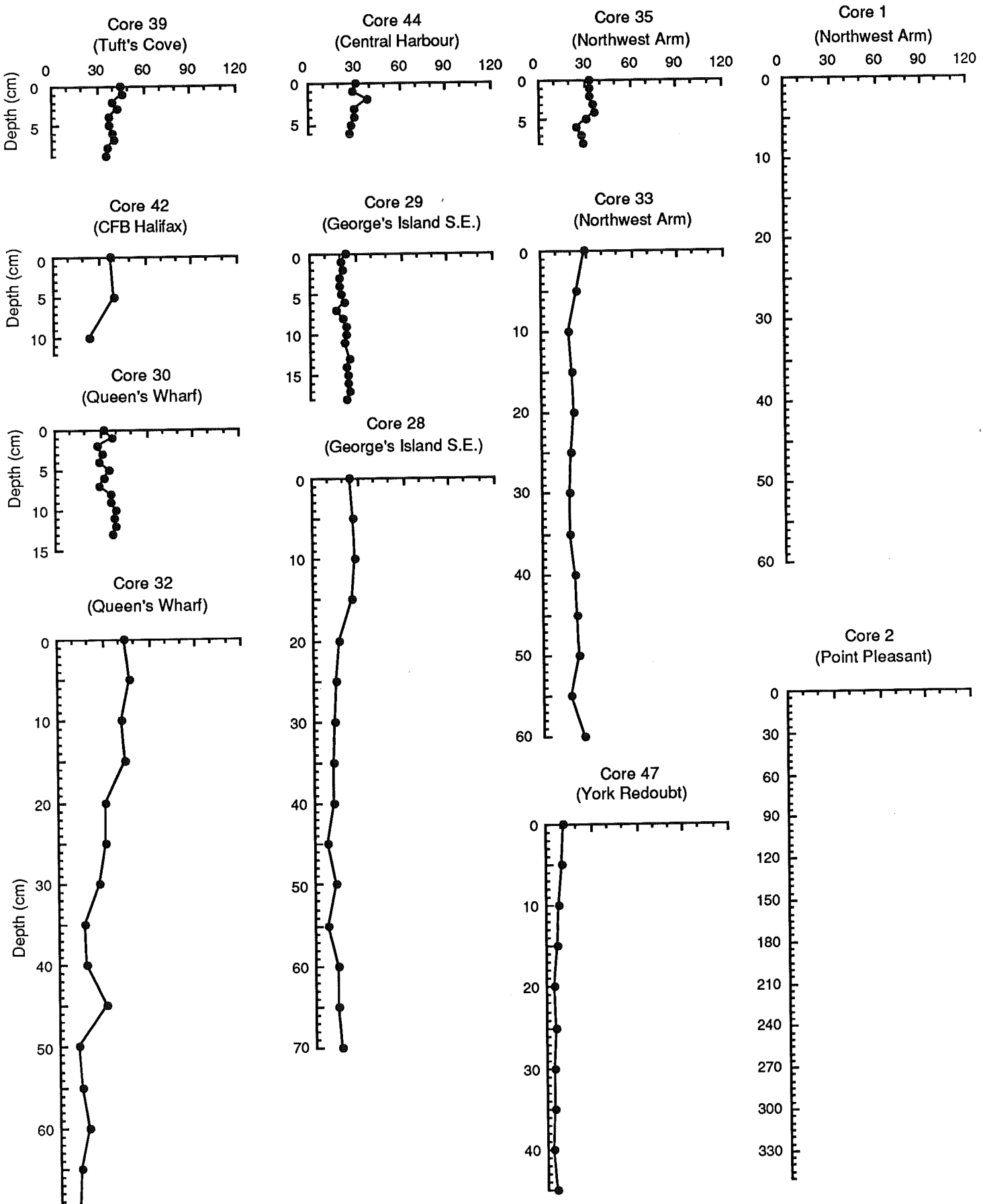
CHROMIUM
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



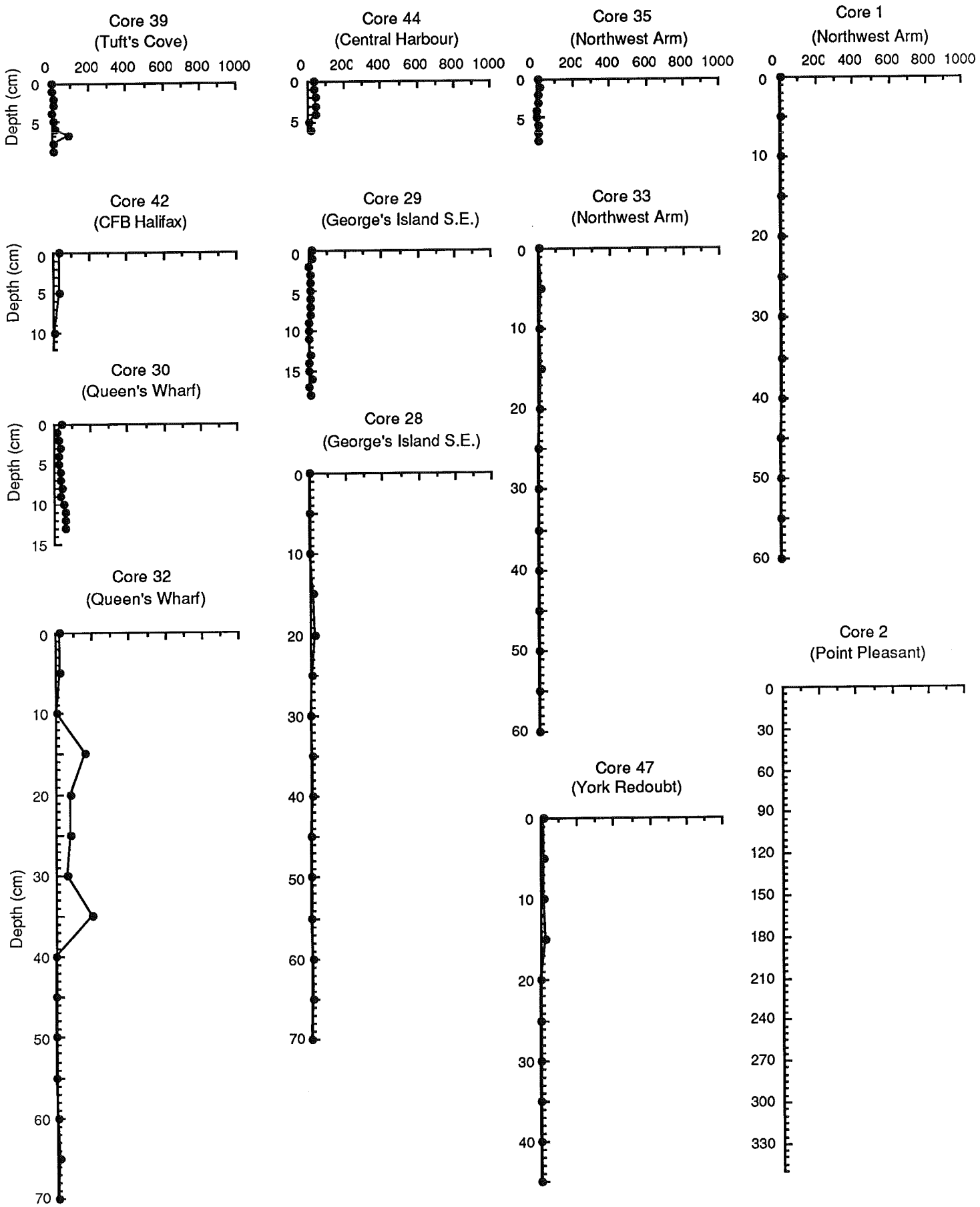
CHROMIUM
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



LEAD
weak acid leach ($\mu g \cdot g^{-1}$)

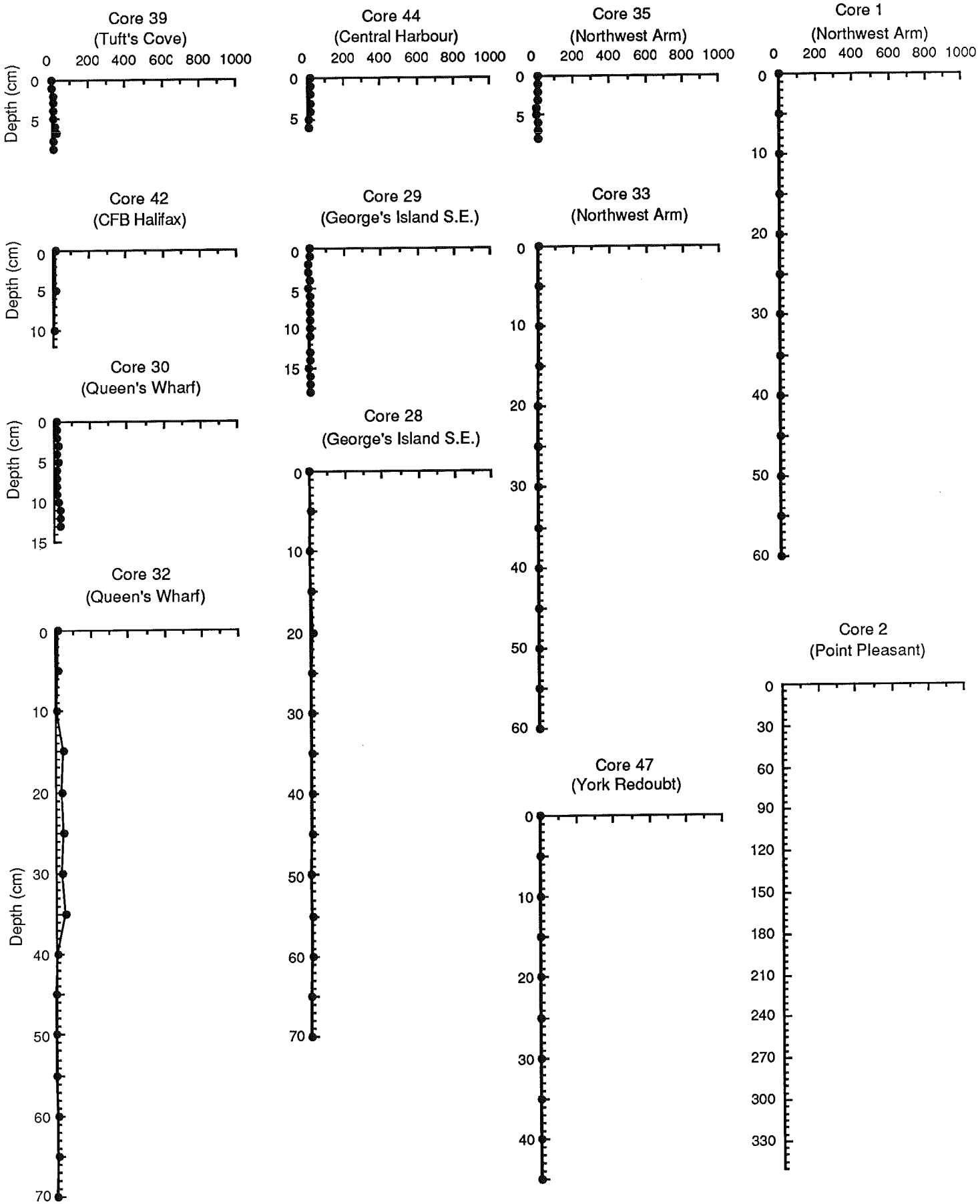
Creed '90 &
Hudson 89-039 ('90)



LEAD

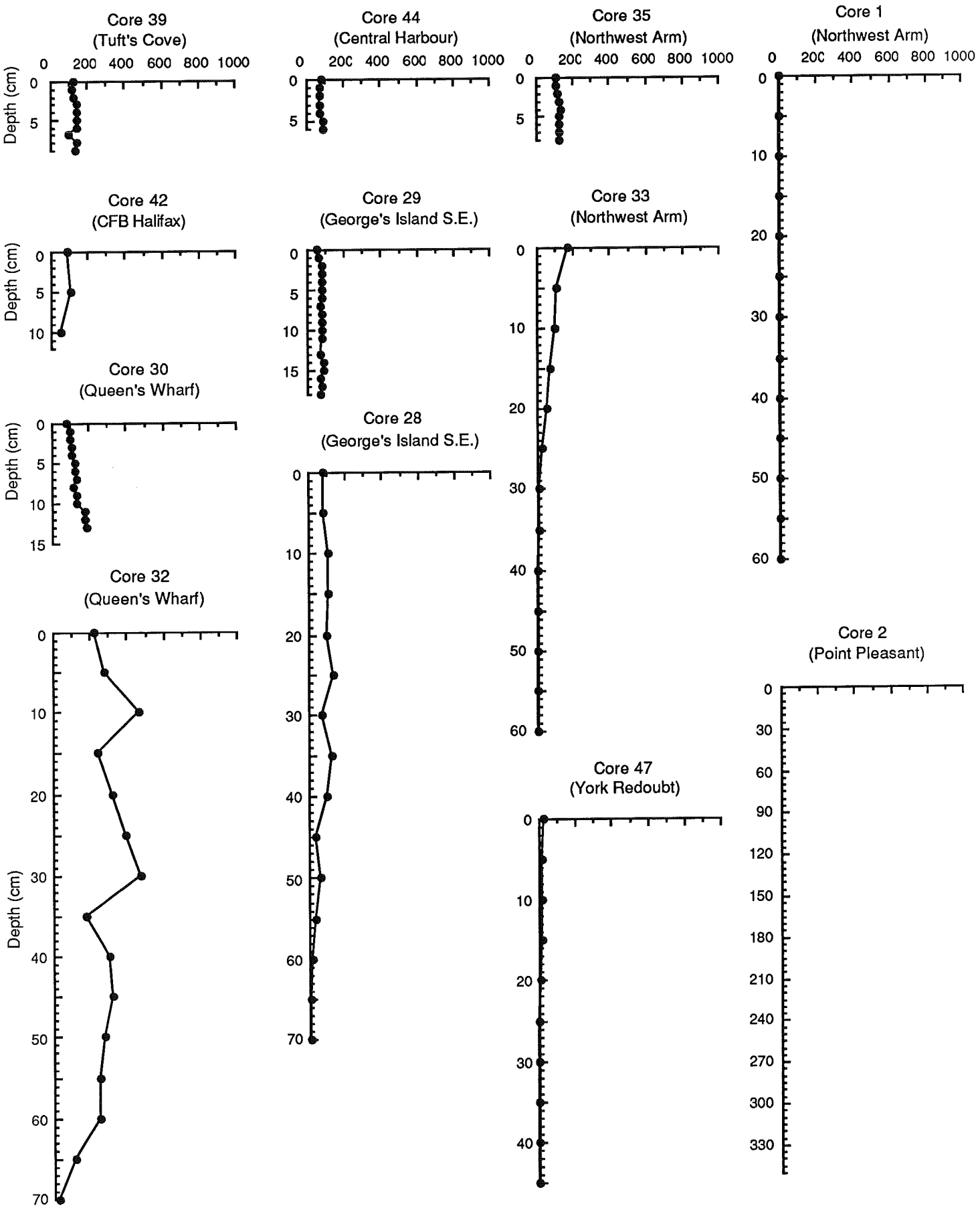
hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



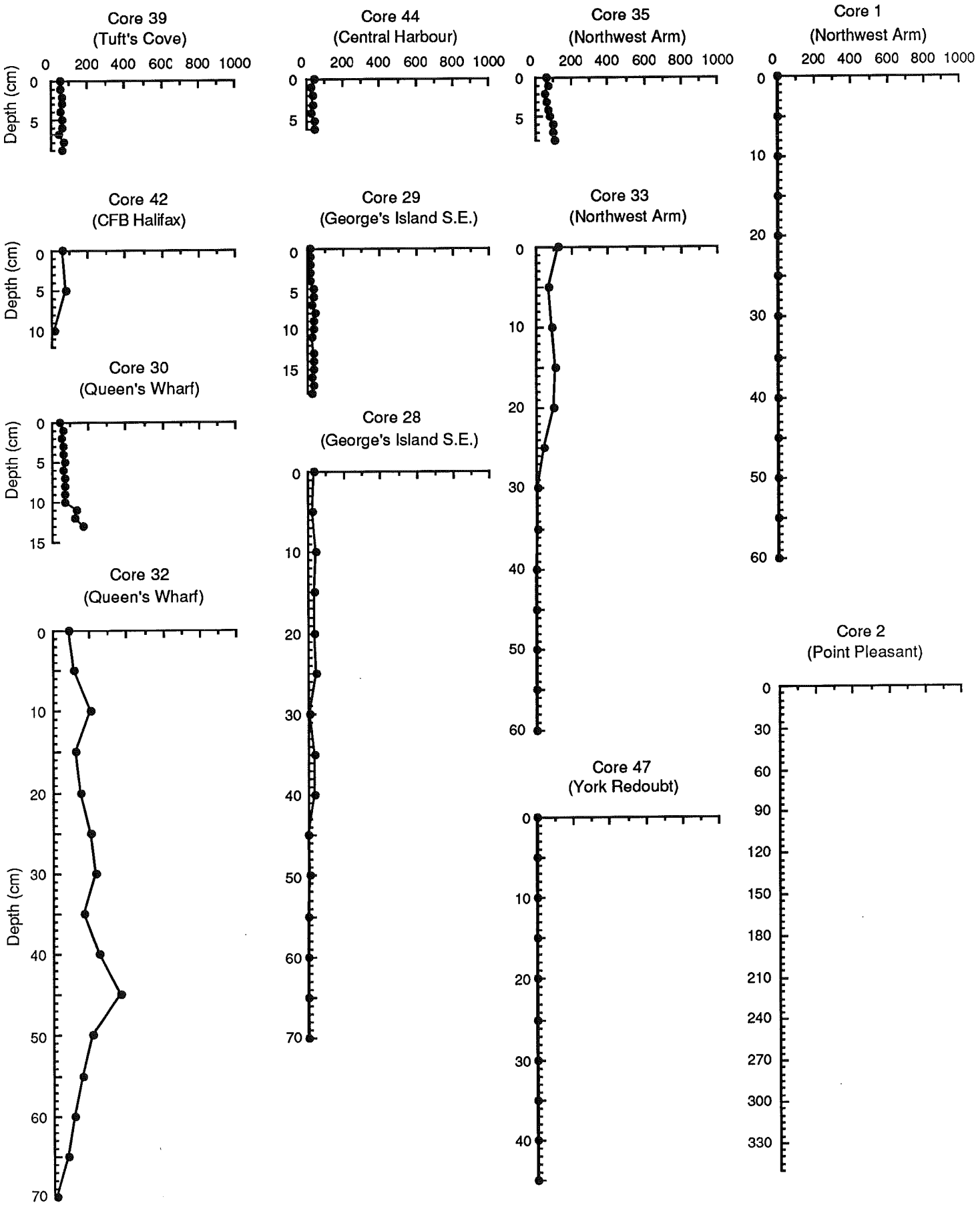
LEAD
heated hydroxylamine leach ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



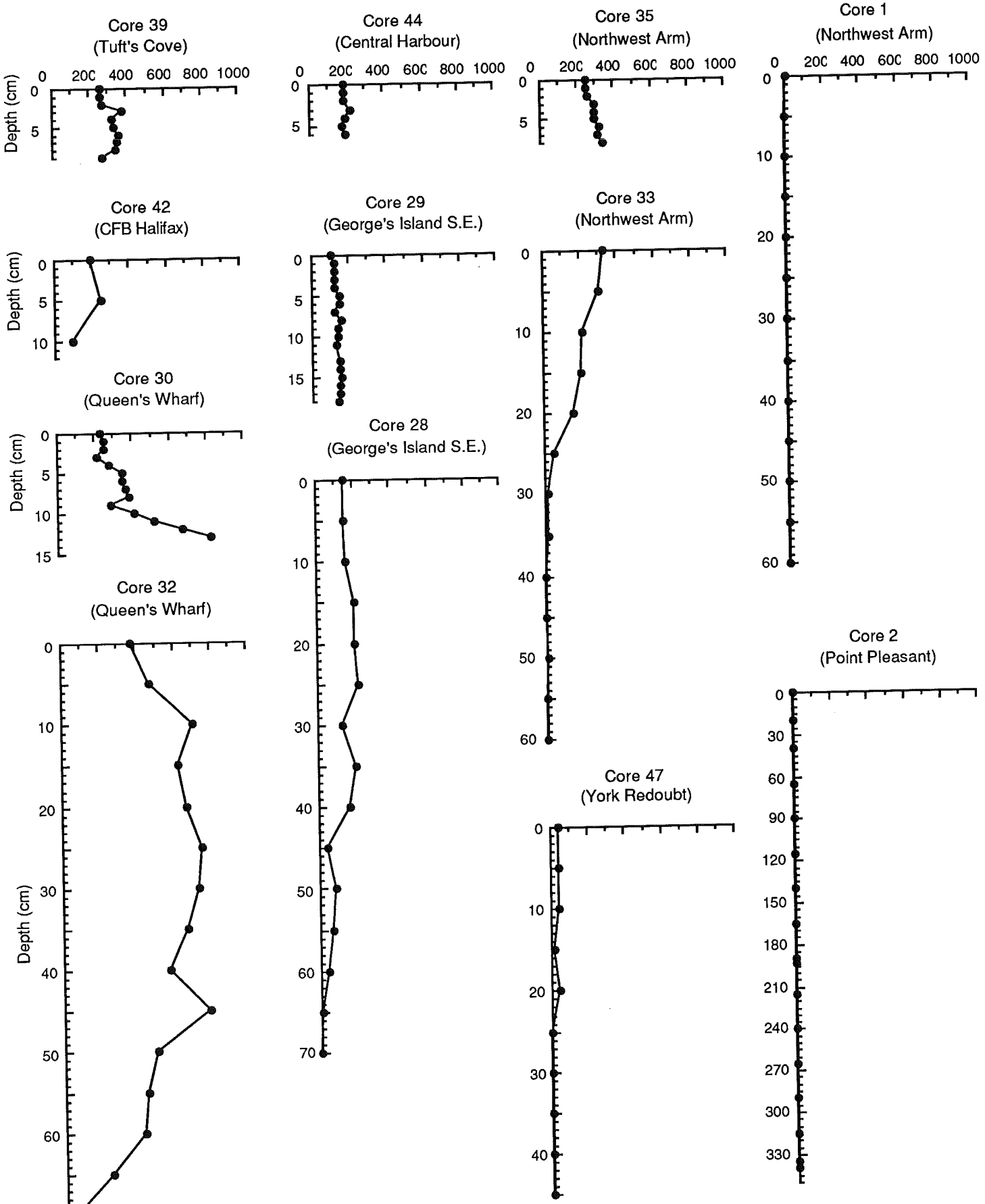
LEAD
leach residual ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



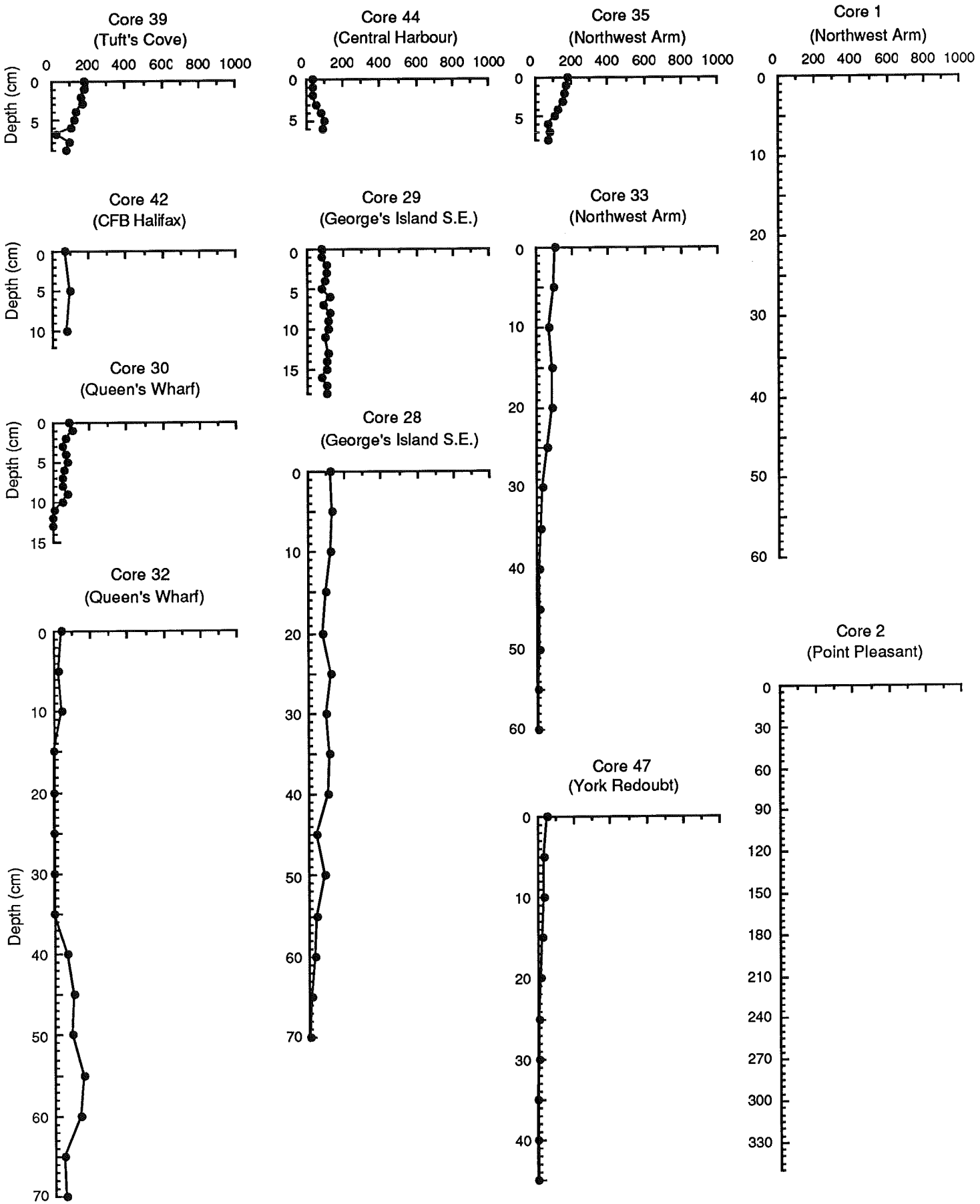
LEAD
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



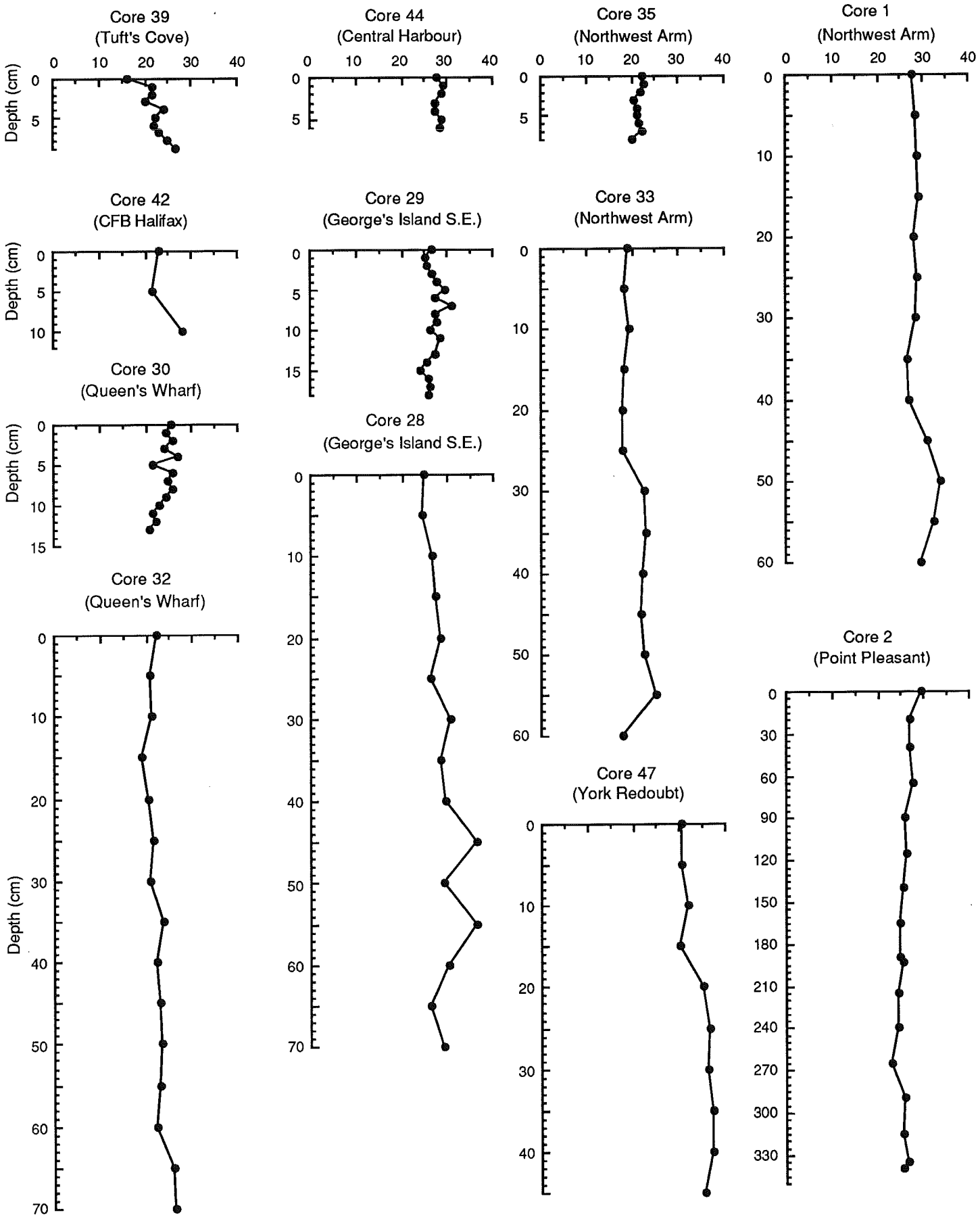
LEAD
organically bound ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



SILICON
total (%)

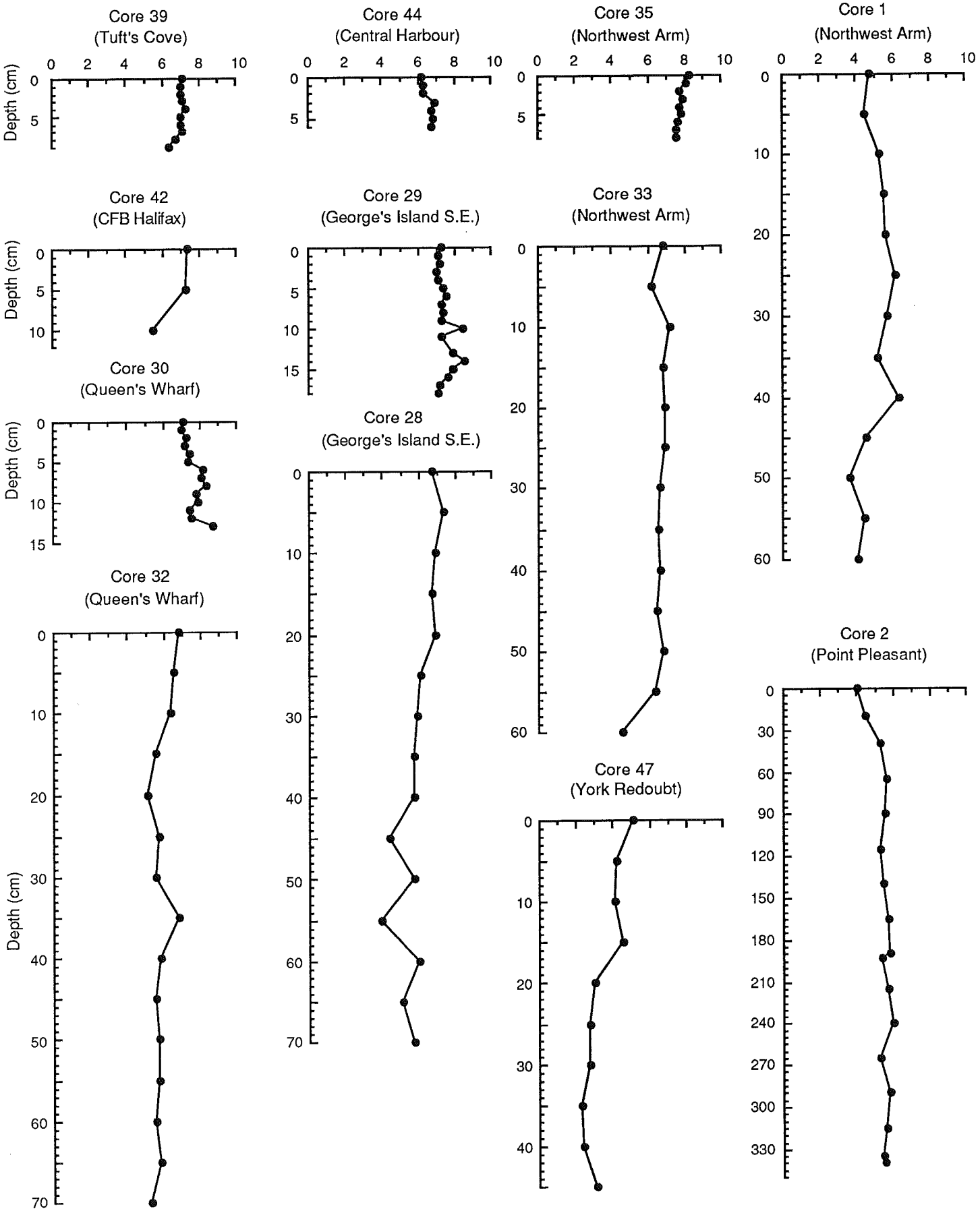
Creed '90 &
Hudson 89-039 ('90)



ALUMINUM

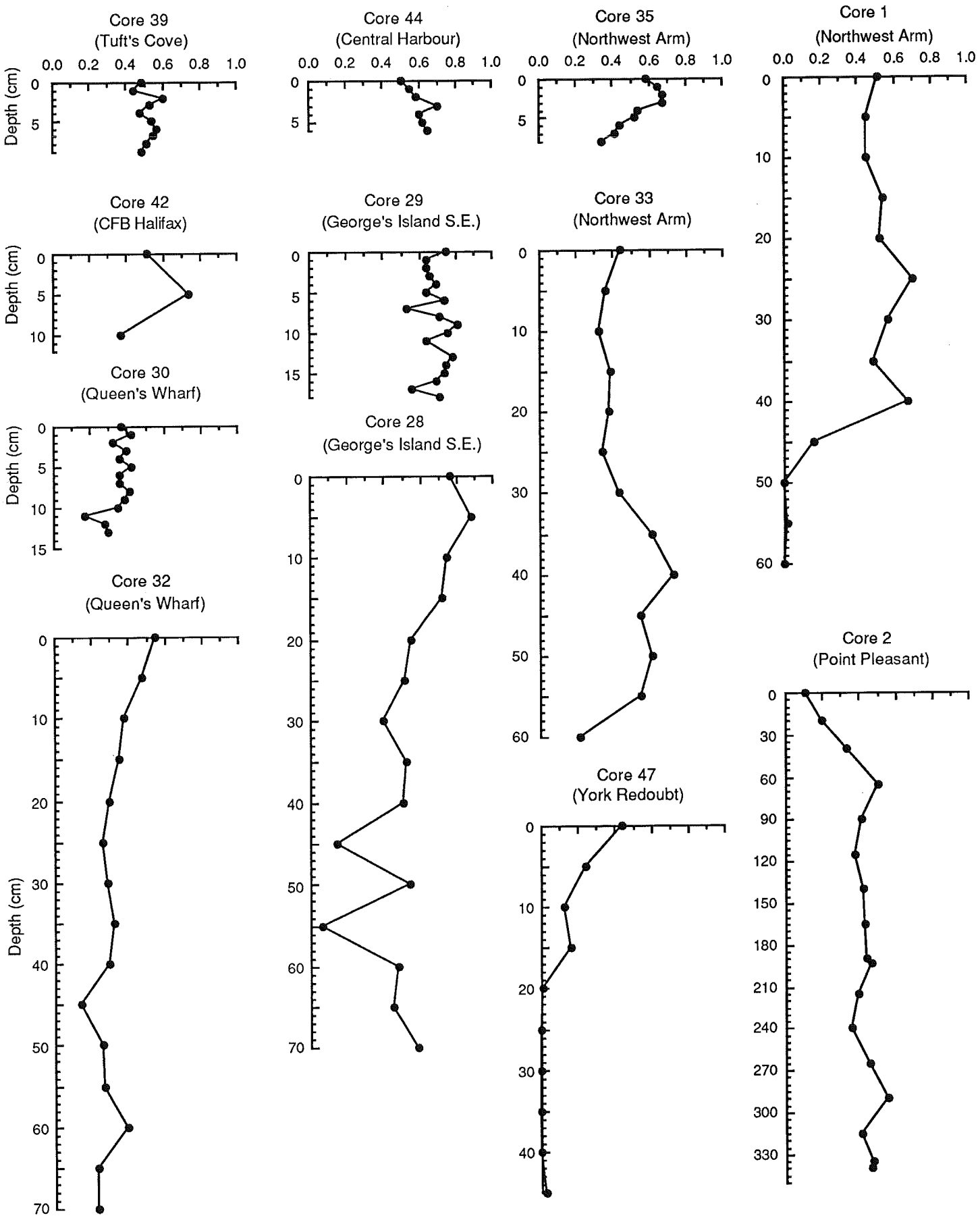
total (%)

Creed '90 &
Hudson 89-039 ('90)



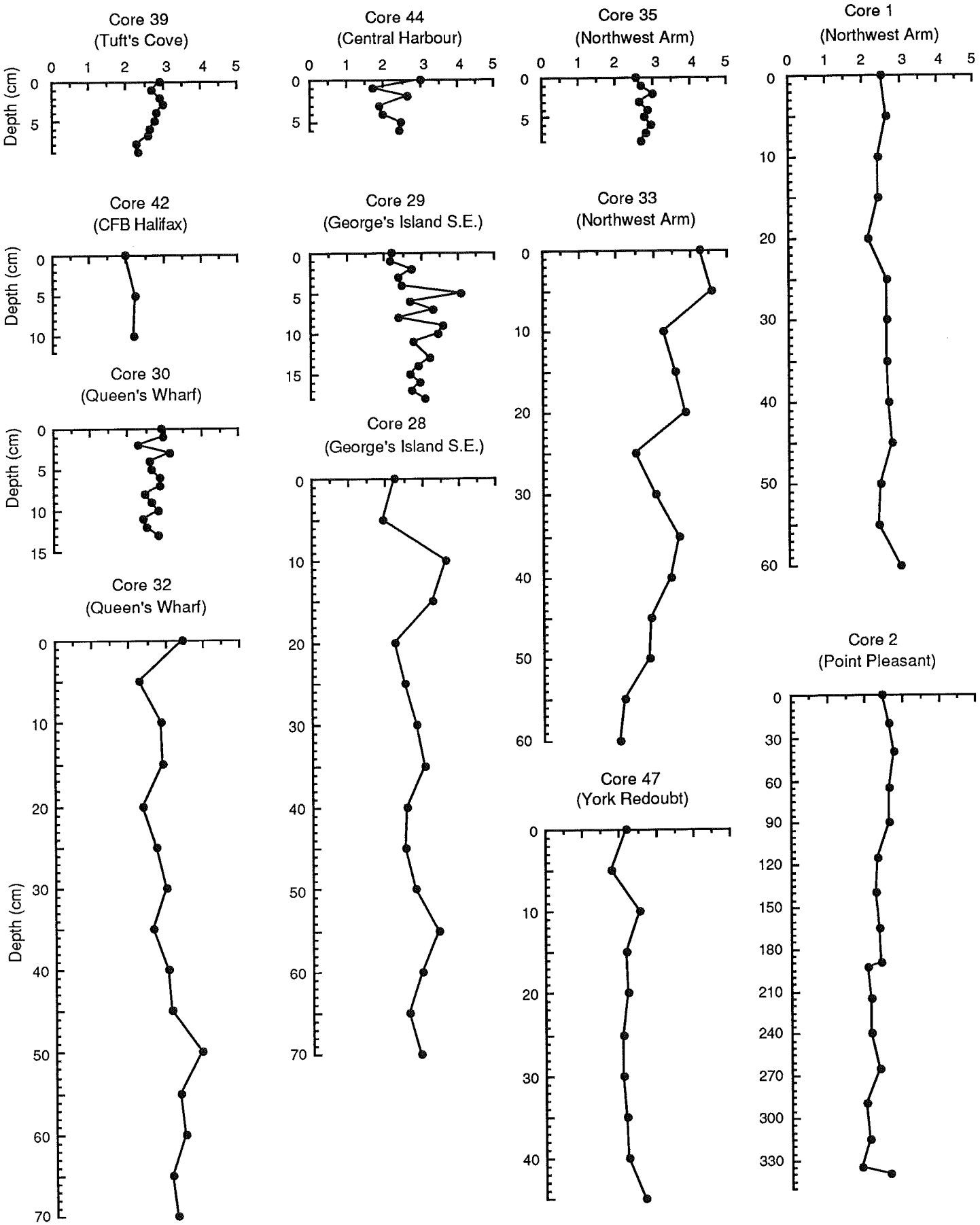
MAGNESIUM
total (%)

Creed '90 &
Hudson 89-039 ('90)



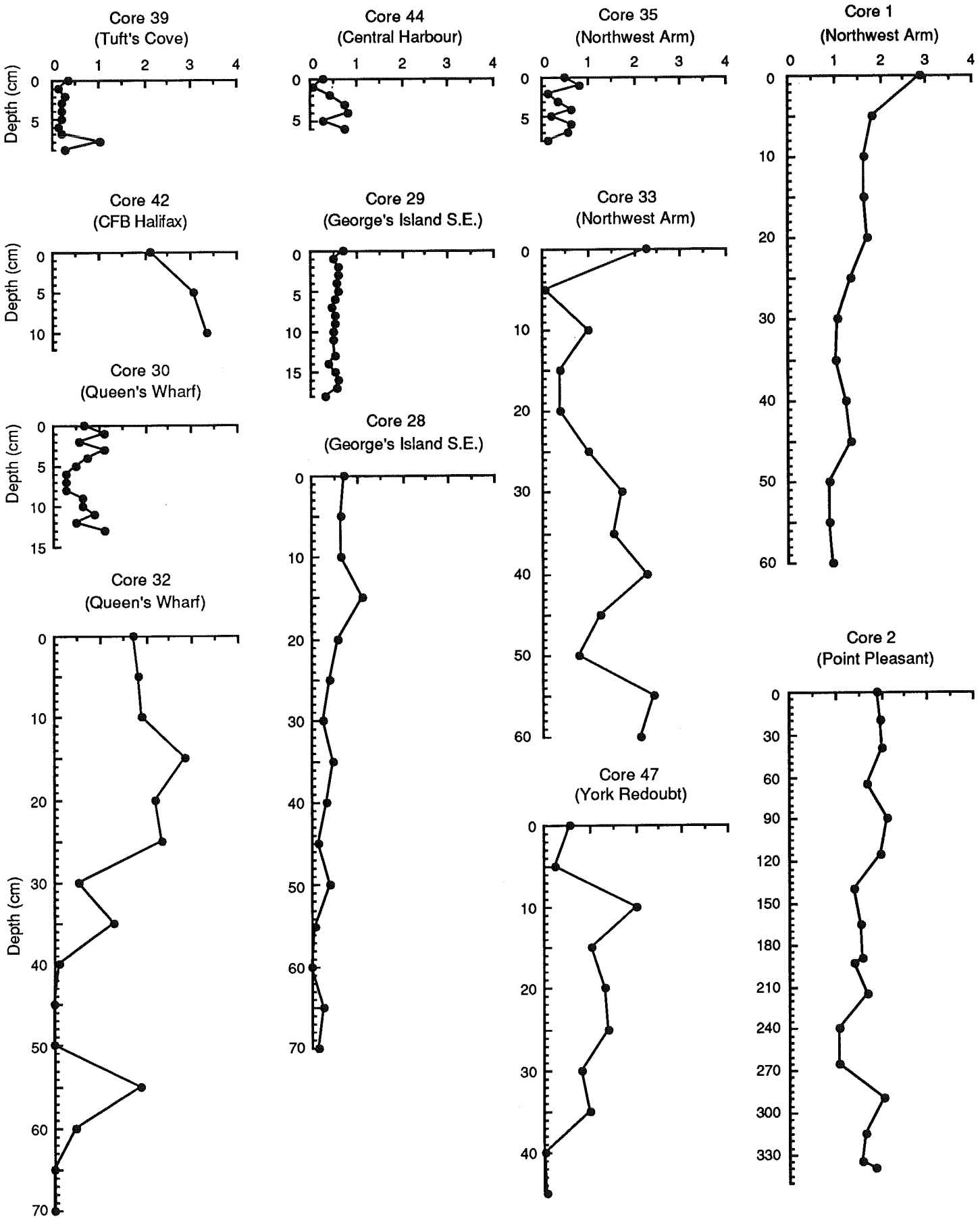
POTASSIUM
total (%)

Creed '90 &
Hudson 89-039 ('90)



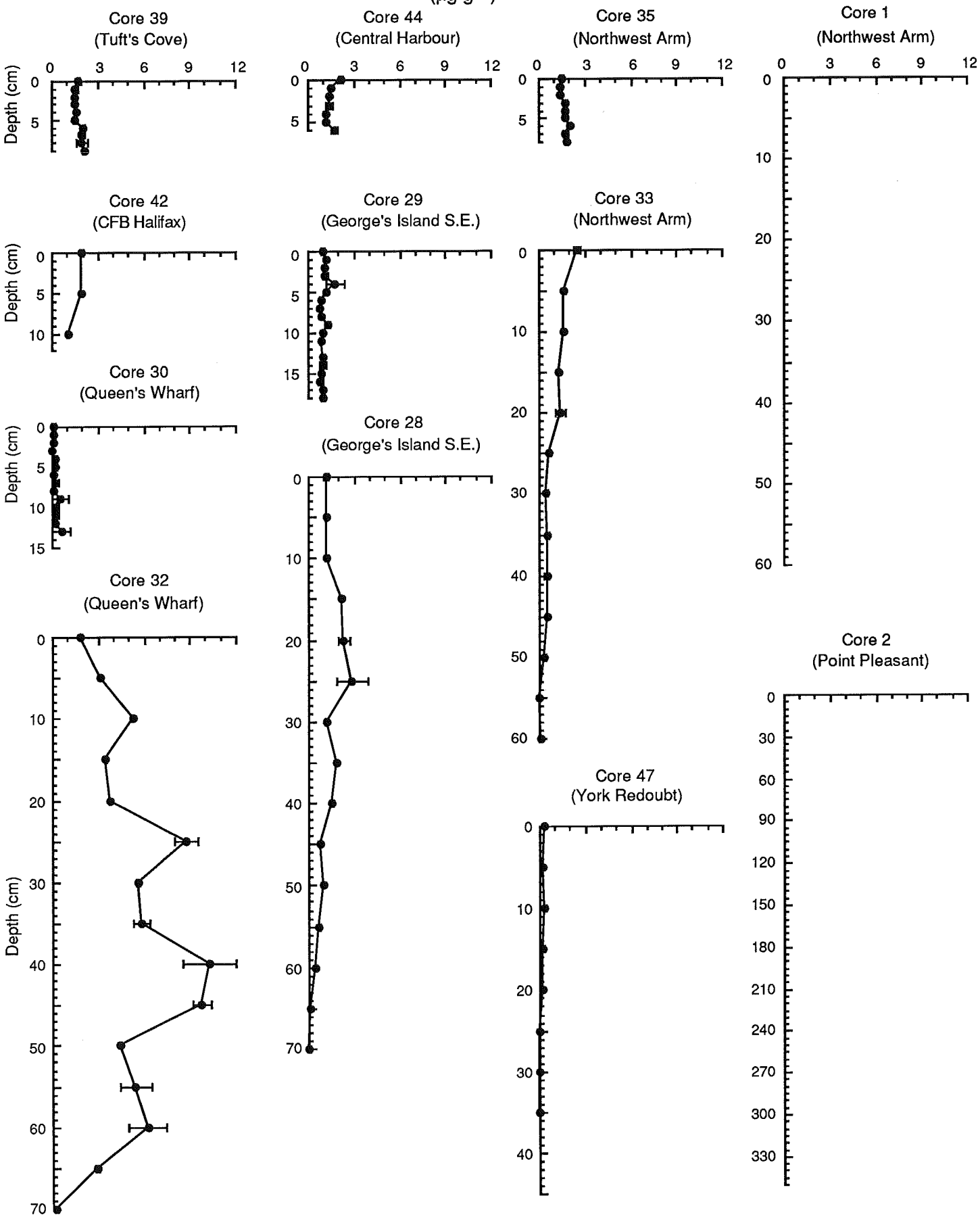
CADMIUM
total ($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



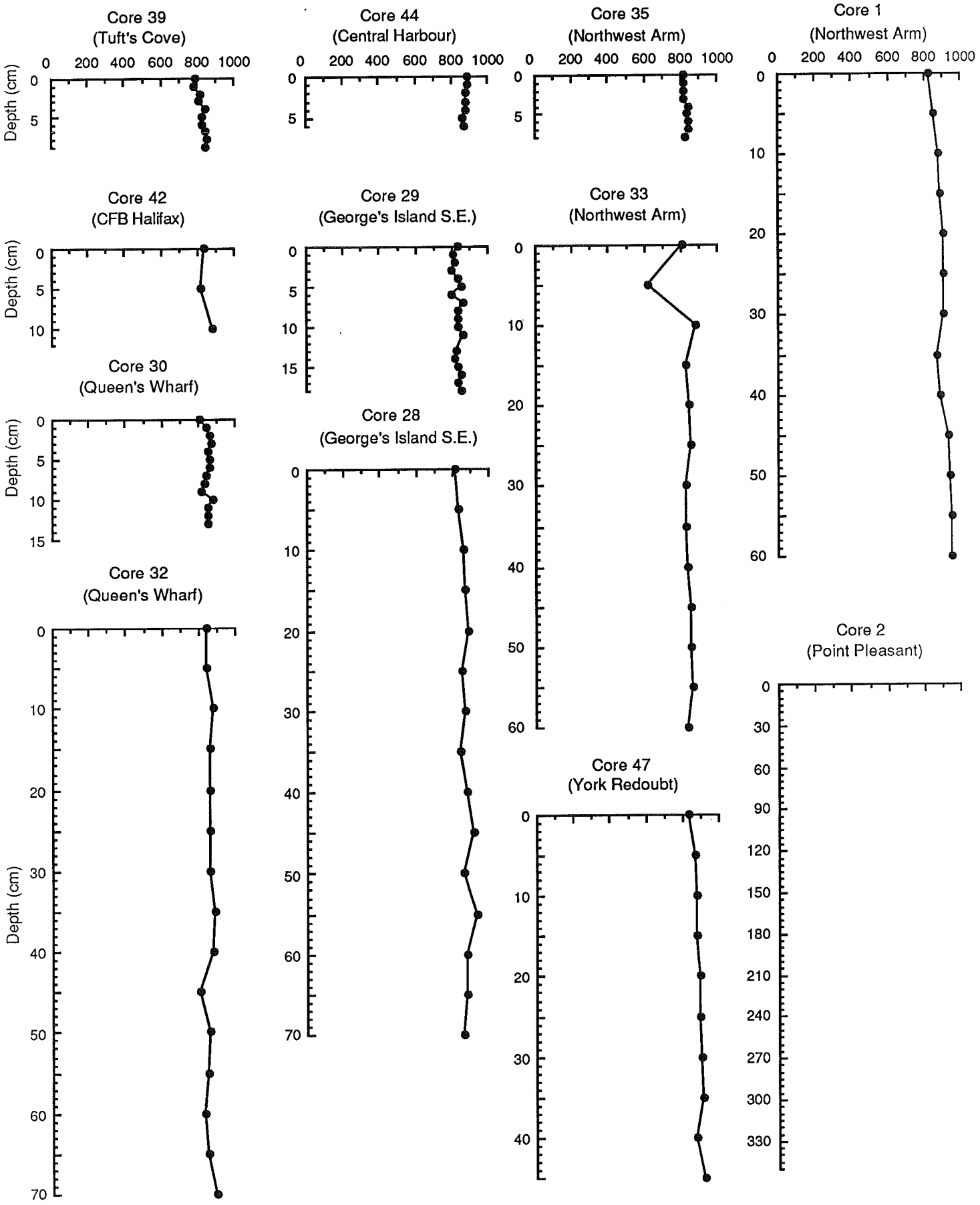
MERCURY
($\mu g \cdot g^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



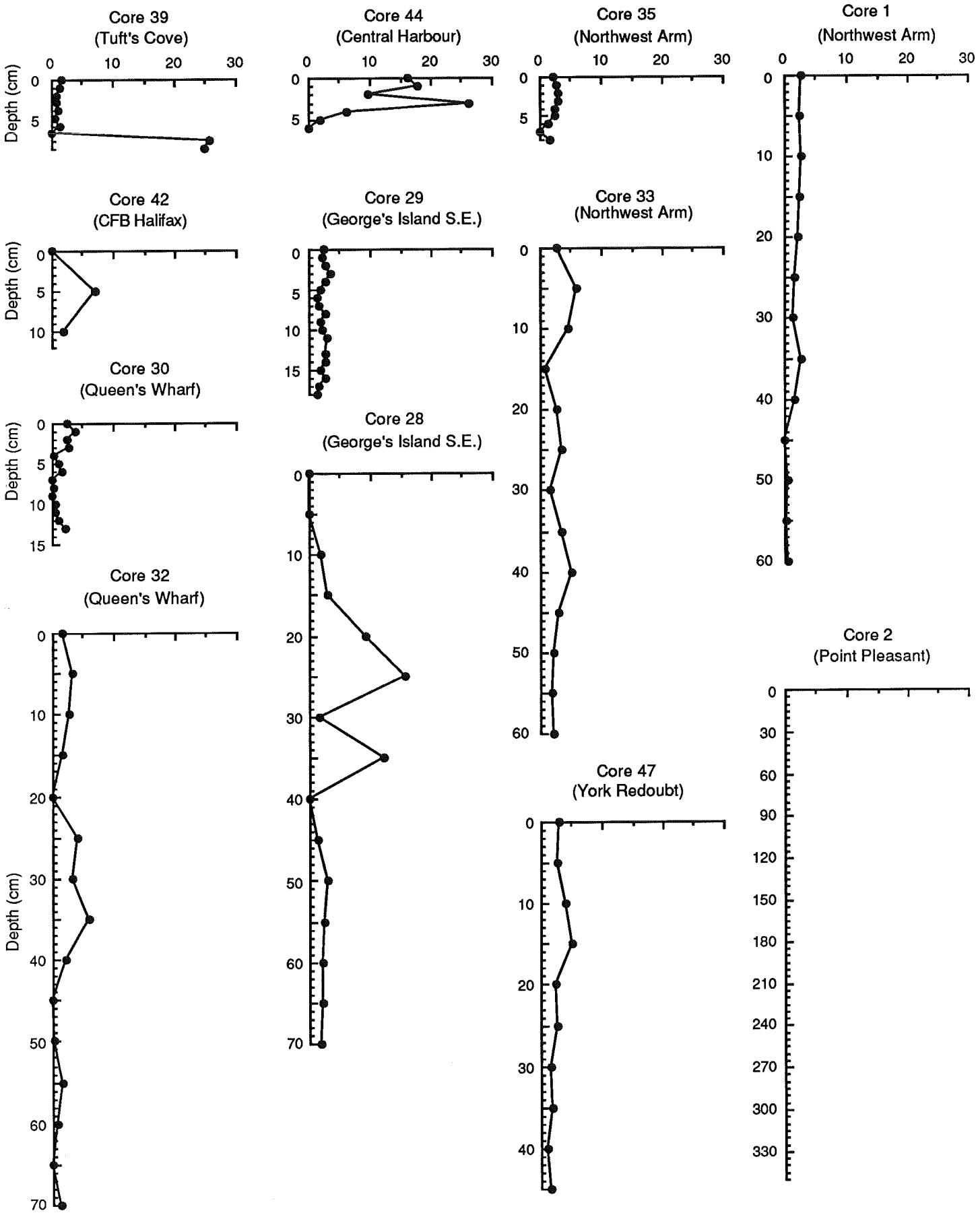
RESIDUE (mg)

Creed '90 &
Hudson 89-039 ('90)



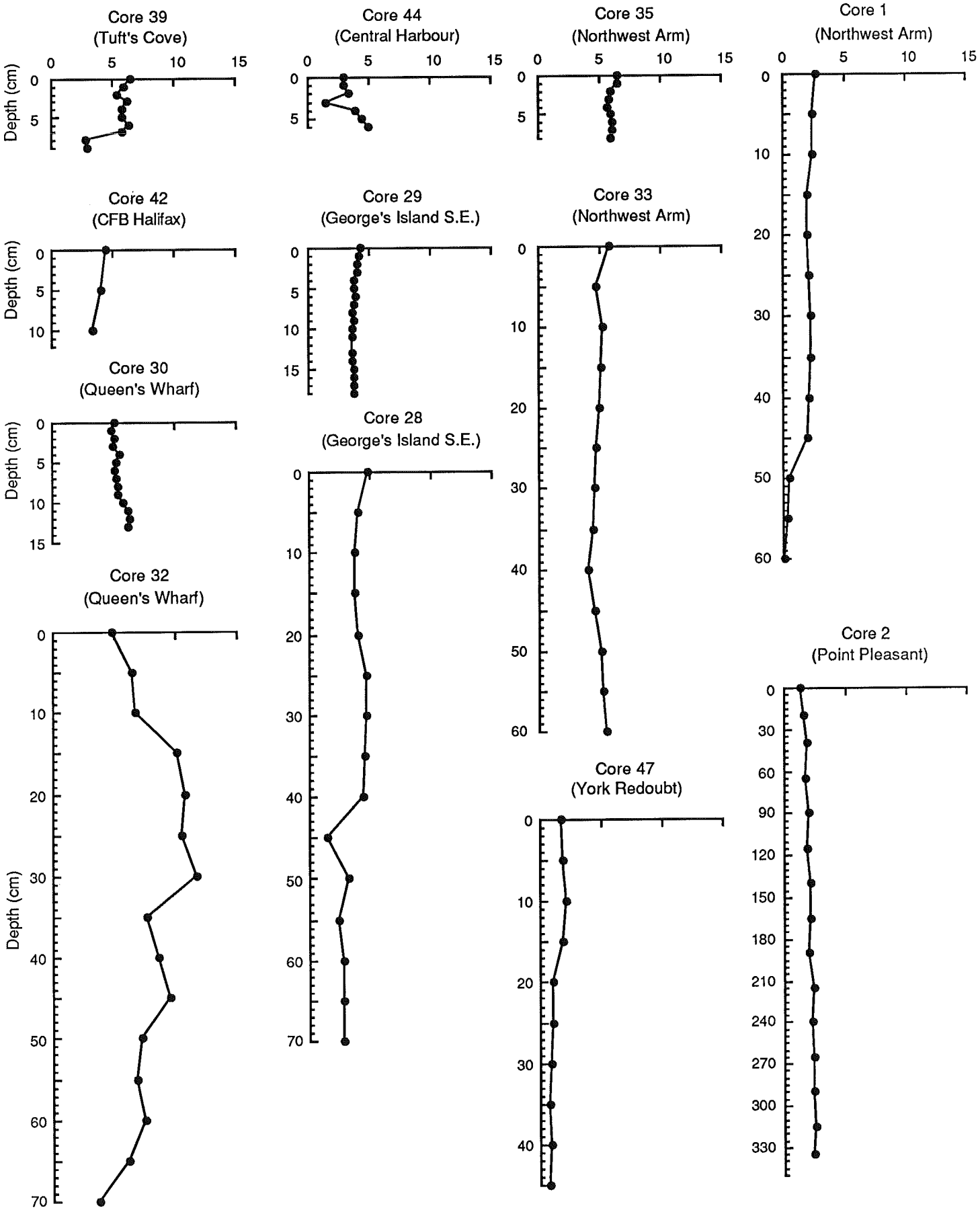
CALCIUM CARBONATE (%)

Creed '90 &
Hudson 89-039 ('90)



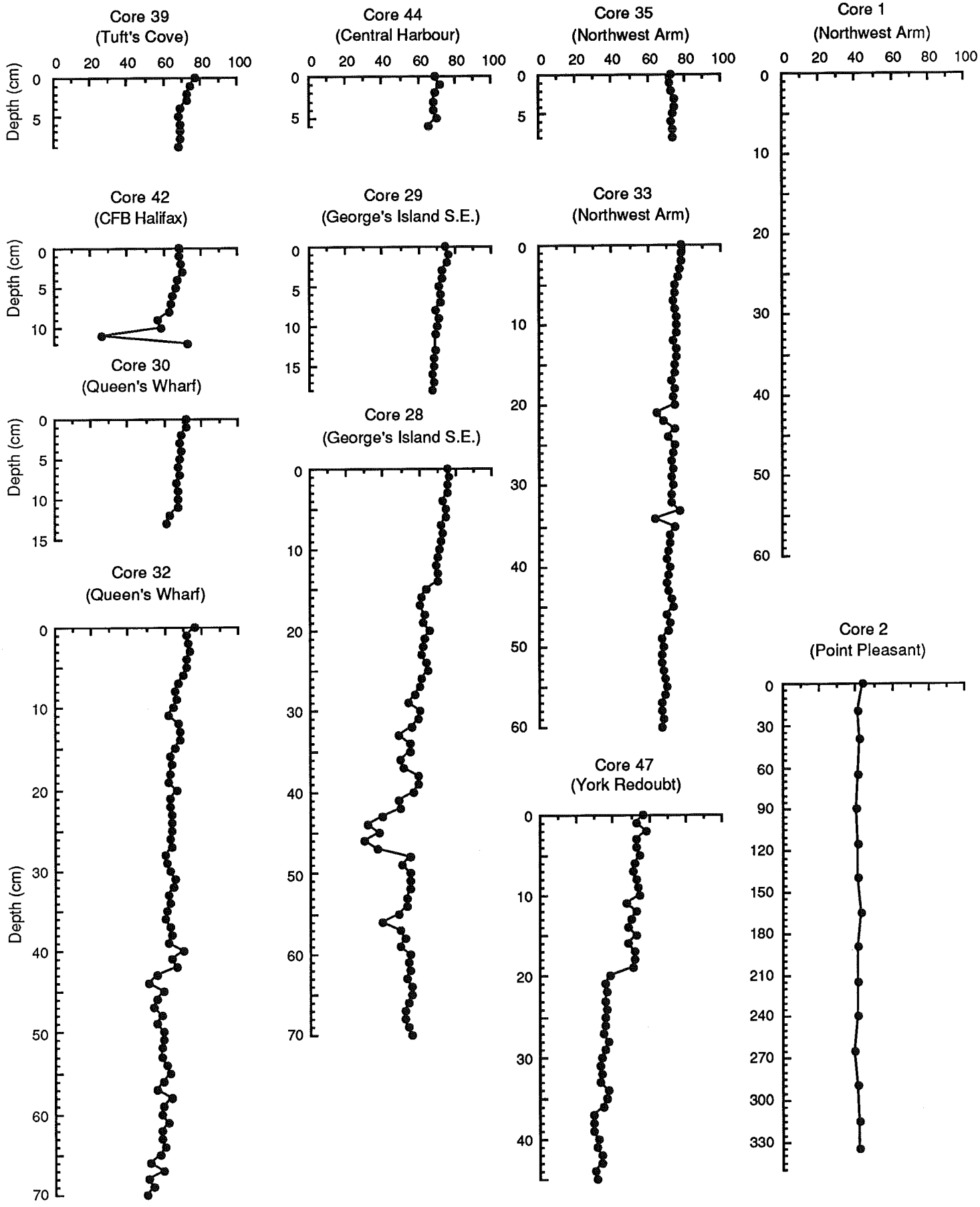
ORGANIC CARBON (%)

Creed '90 &
Hudson 89-039 ('90)



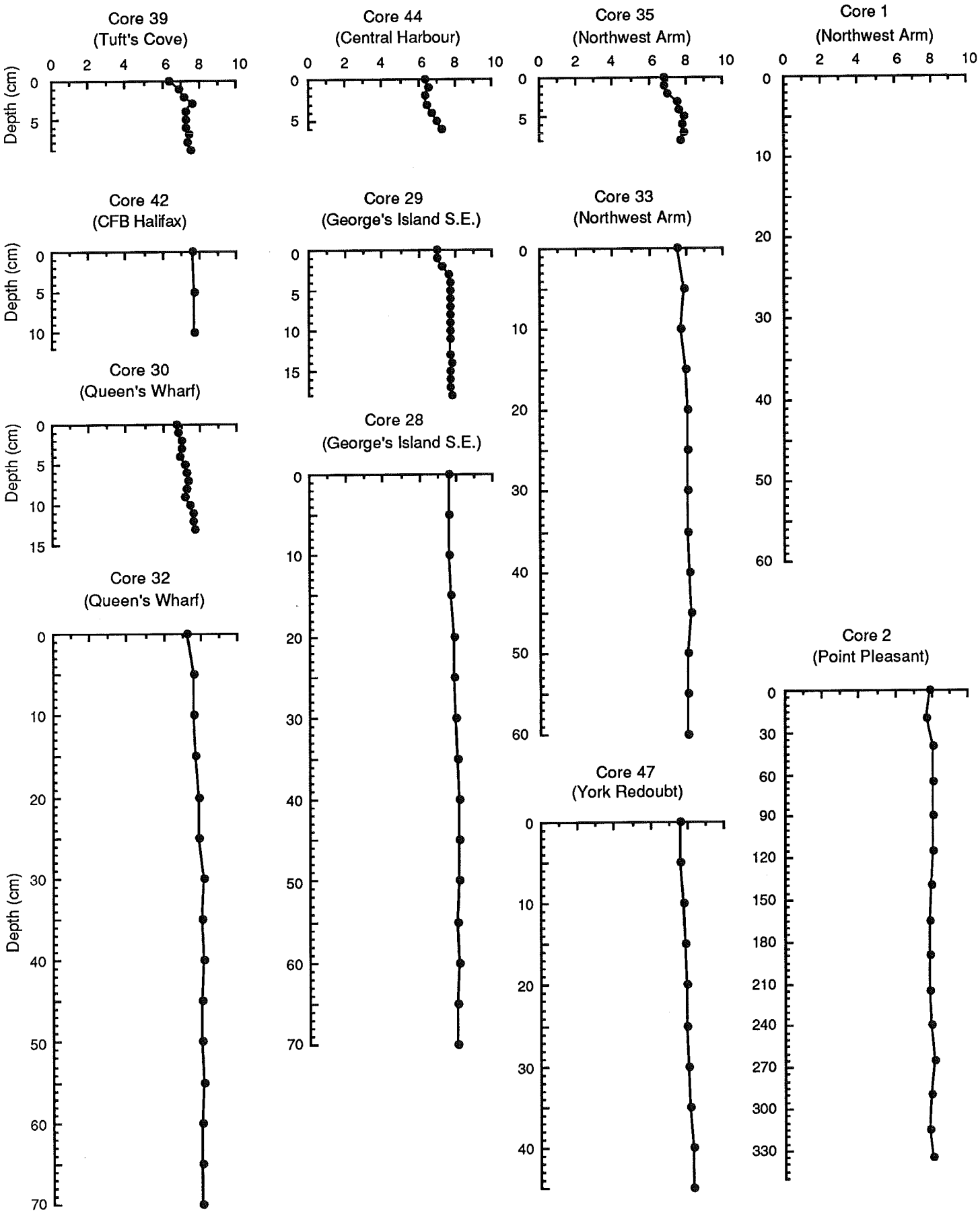
WATER (%)

Creed '90 &
Hudson 89-039 ('90)



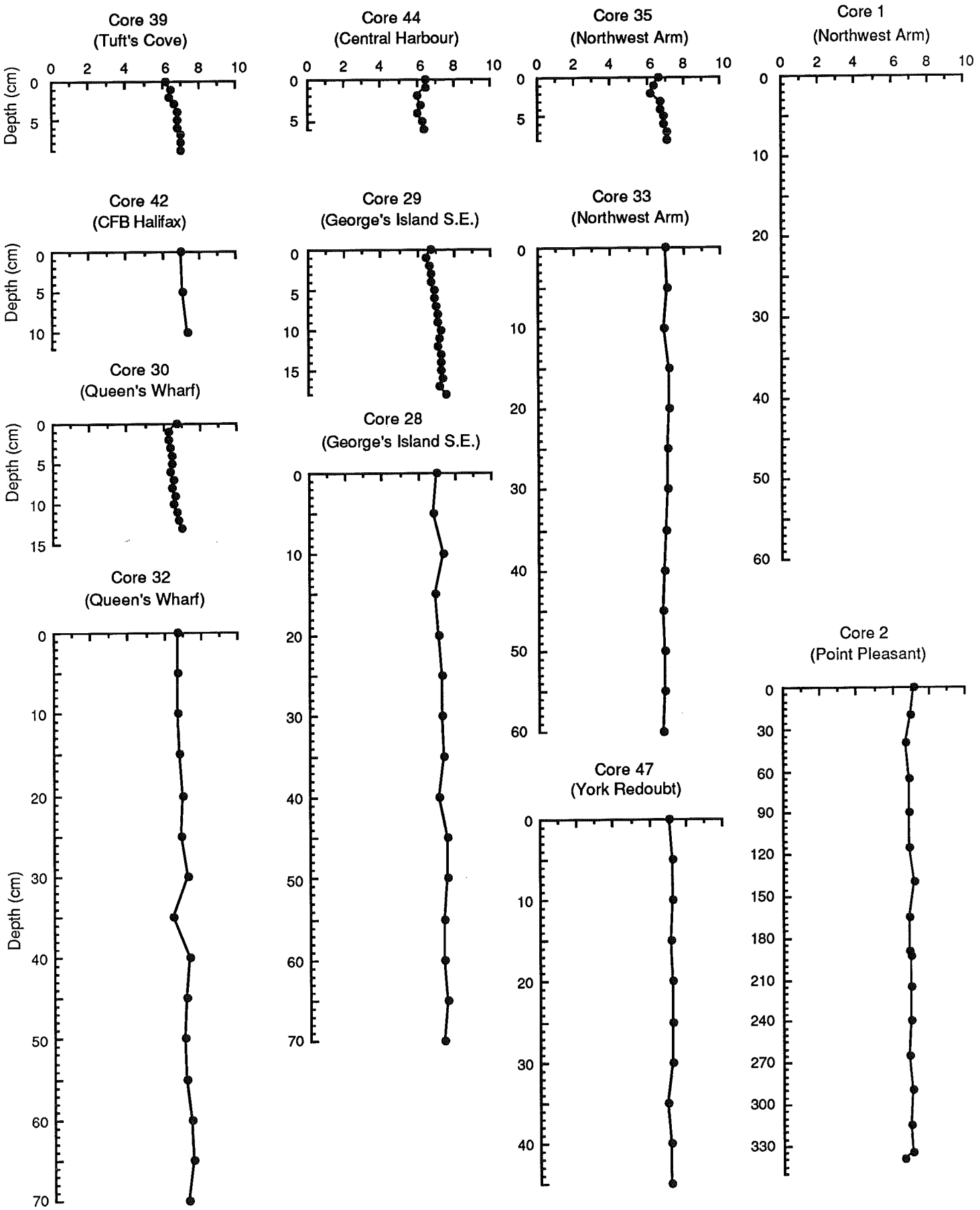
PORE WATER pH (- log [H^+])

Creed '90 &
Hudson 89-039 ('90)



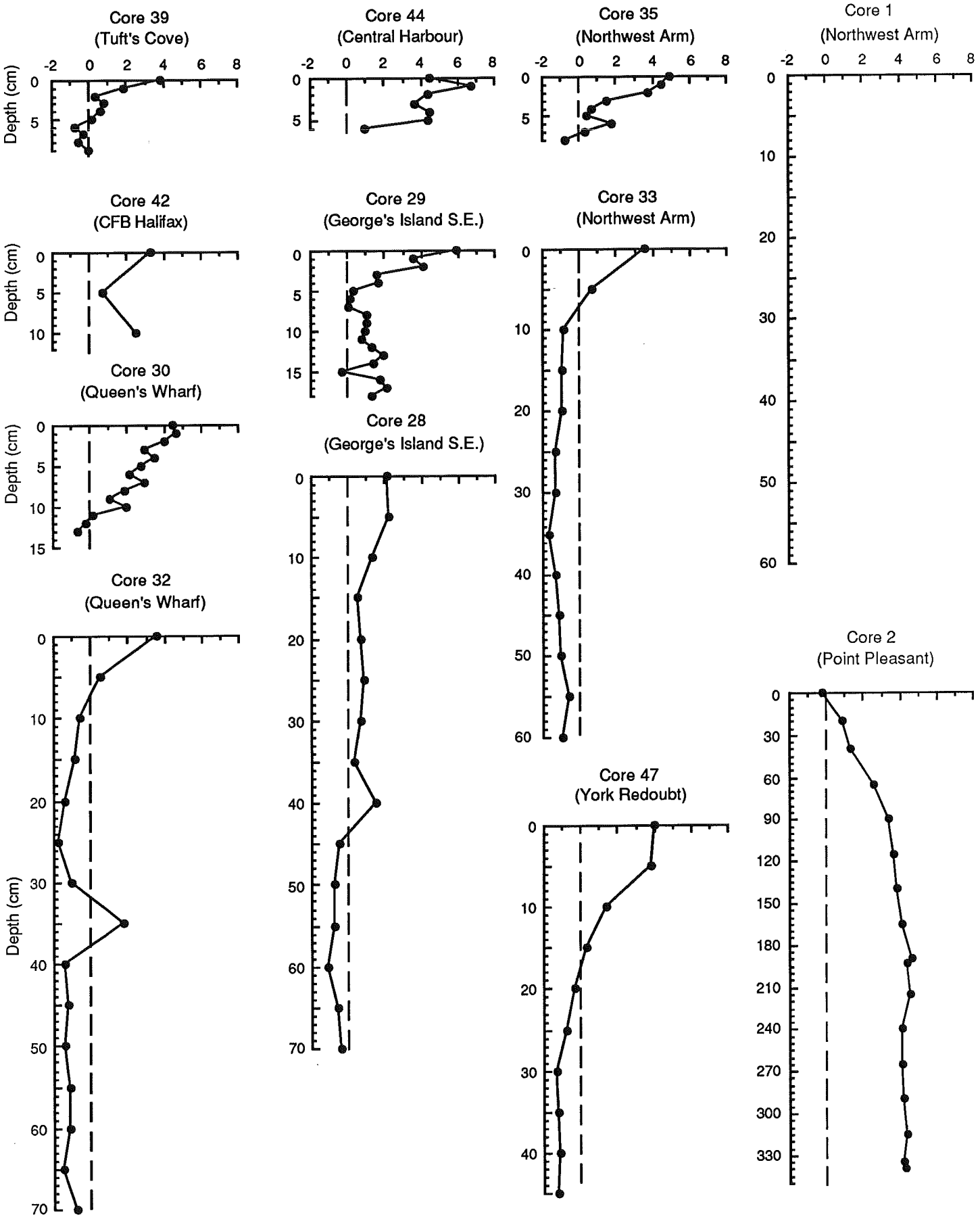
SEDIMENT pH (- log [H^+])

Creed '90 &
Hudson 89-039 ('90)



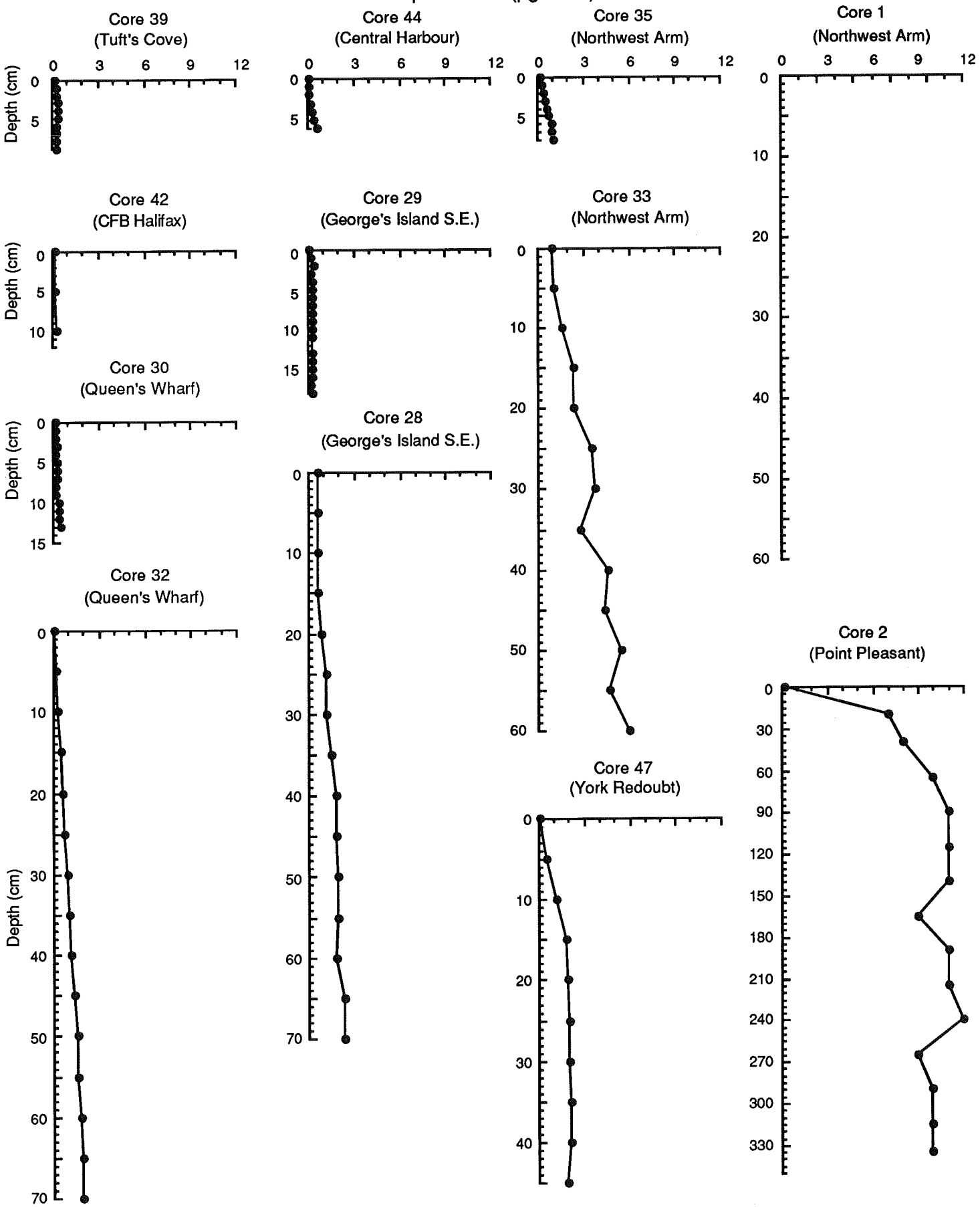
pε(- log [e⁻])

Creed '90 &
Hudson 89-039 ('90)



AMMONIUM (NH_4^+)
pore water ($\mu g \cdot mL^{-1}$)

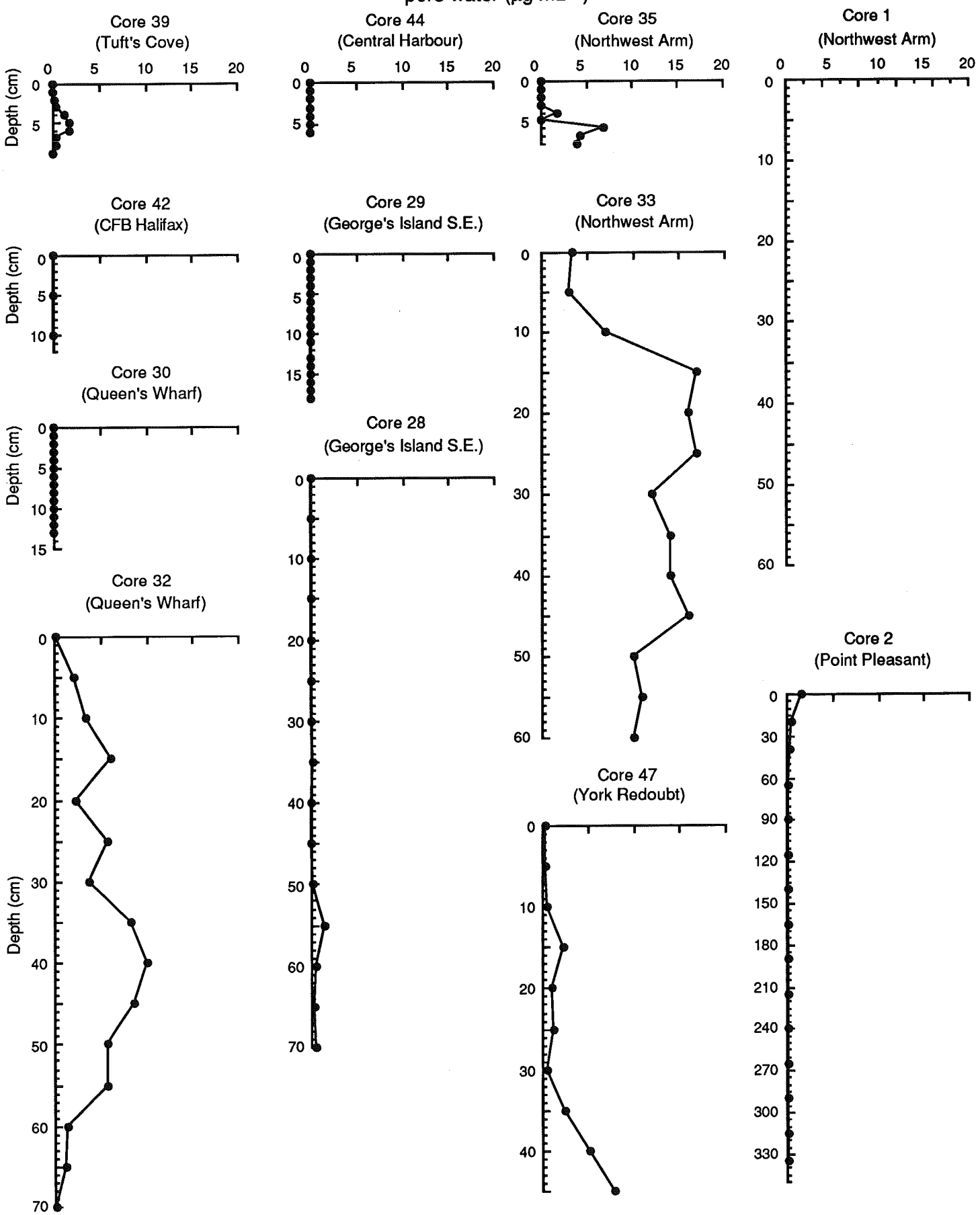
Creed '90 &
Hudson 89-039 ('90)



SULFIDE

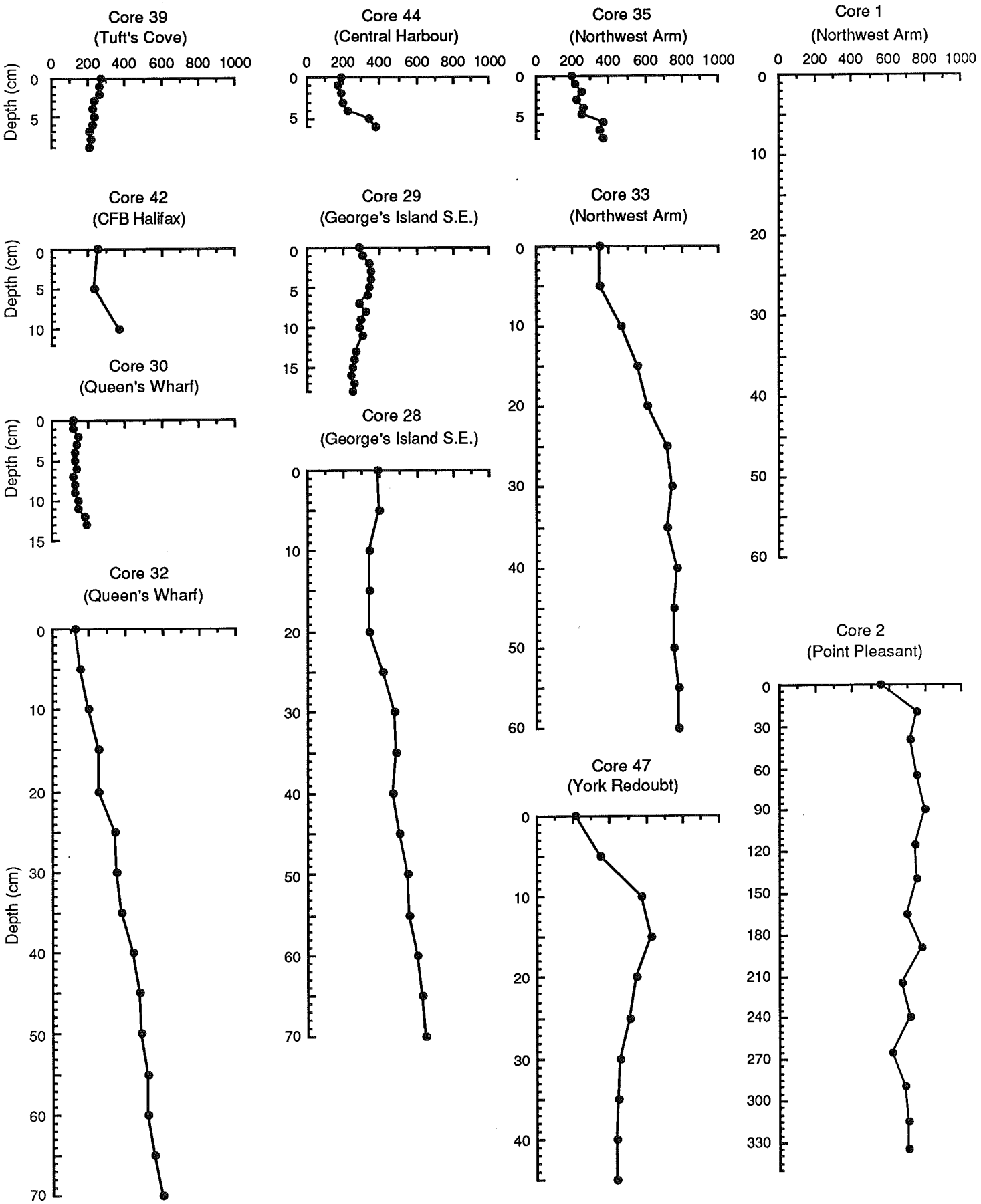
pore water ($\mu g \cdot mL^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



SILICON
pore water (μM)

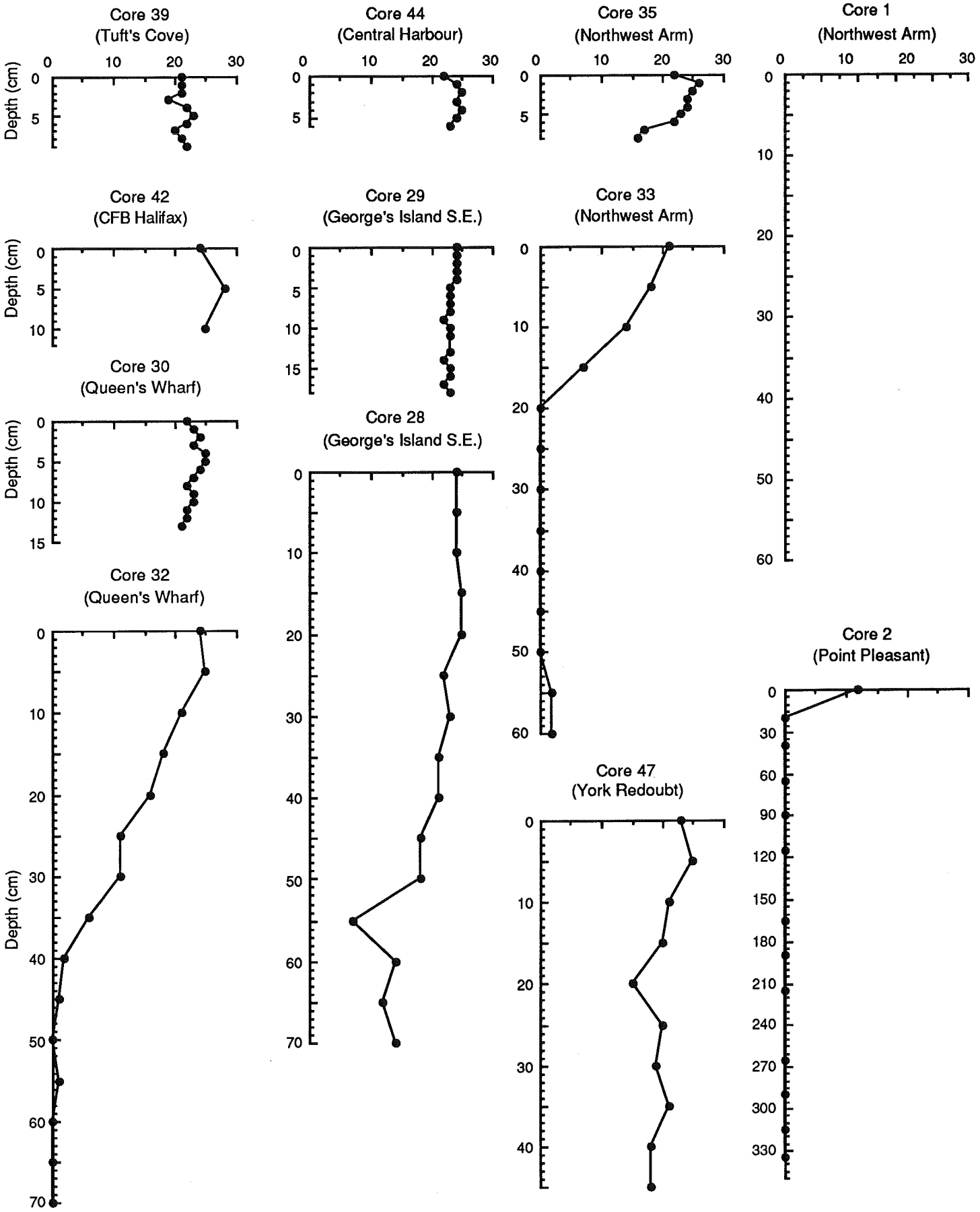
Creed '90 &
Hudson 89-039 ('90)



SULFATE ($SO_4^{=}$)

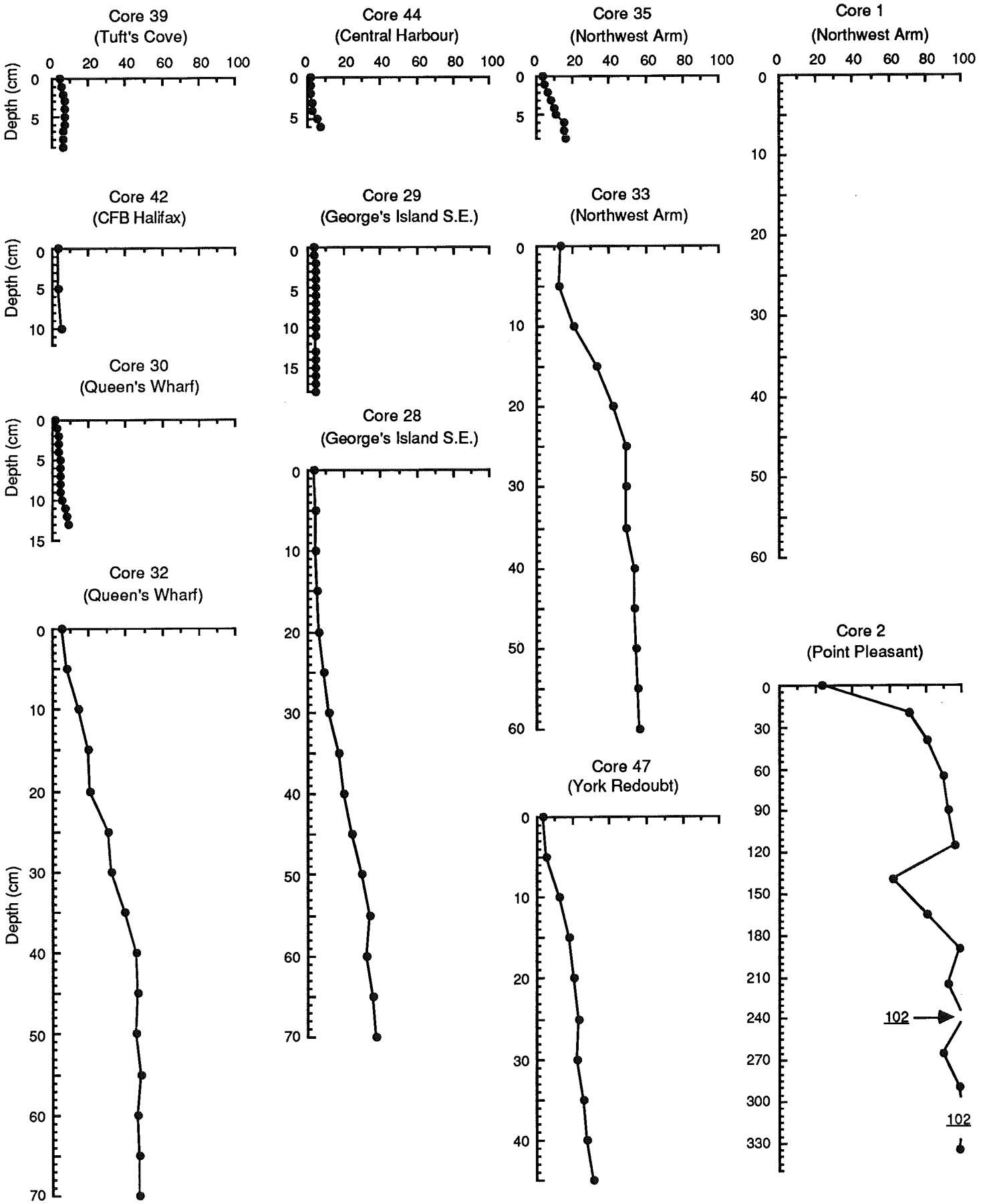
pore water ($\mu g \cdot mL^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



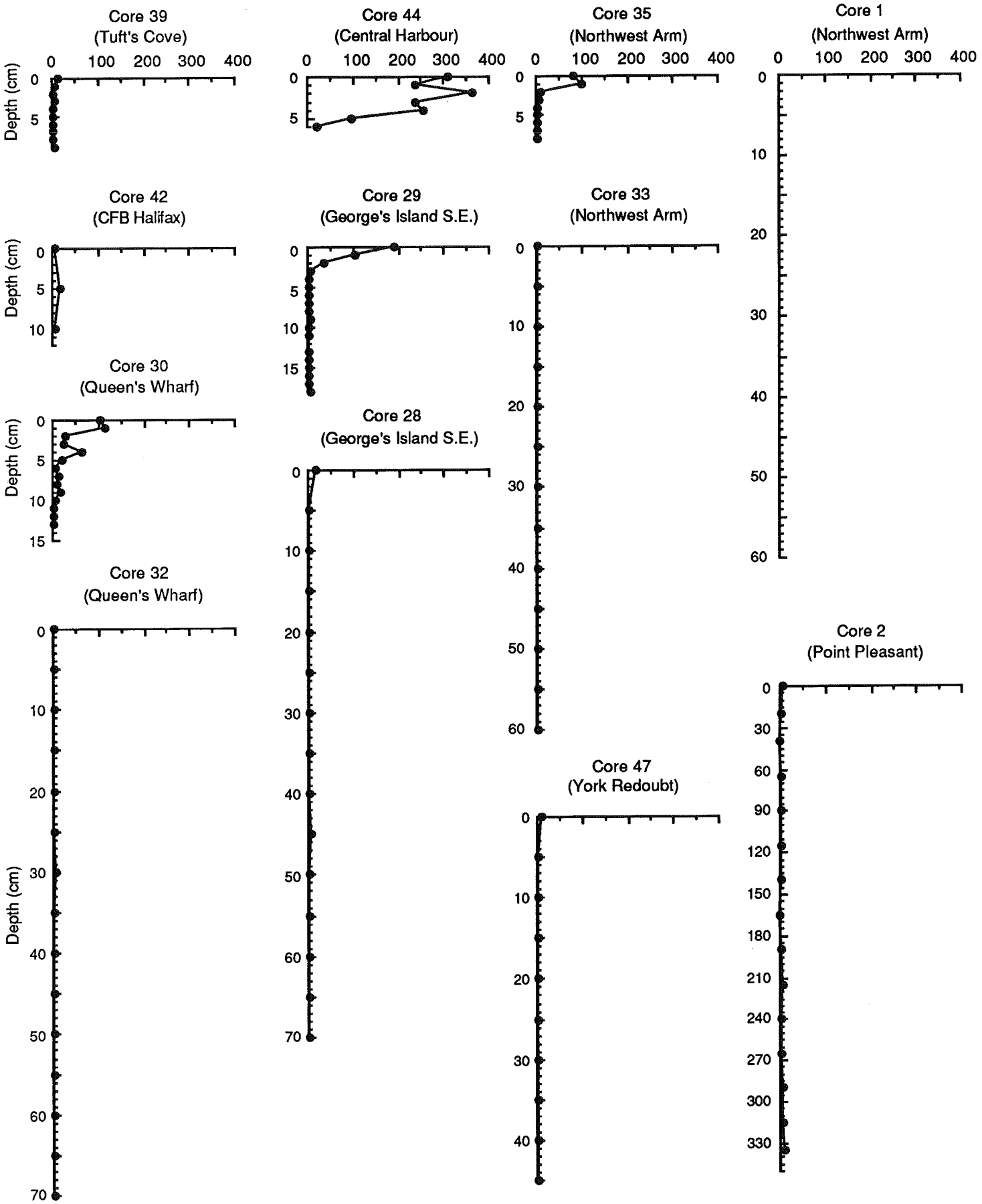
ALKALINITY
pore water ($\mu g \cdot mL^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



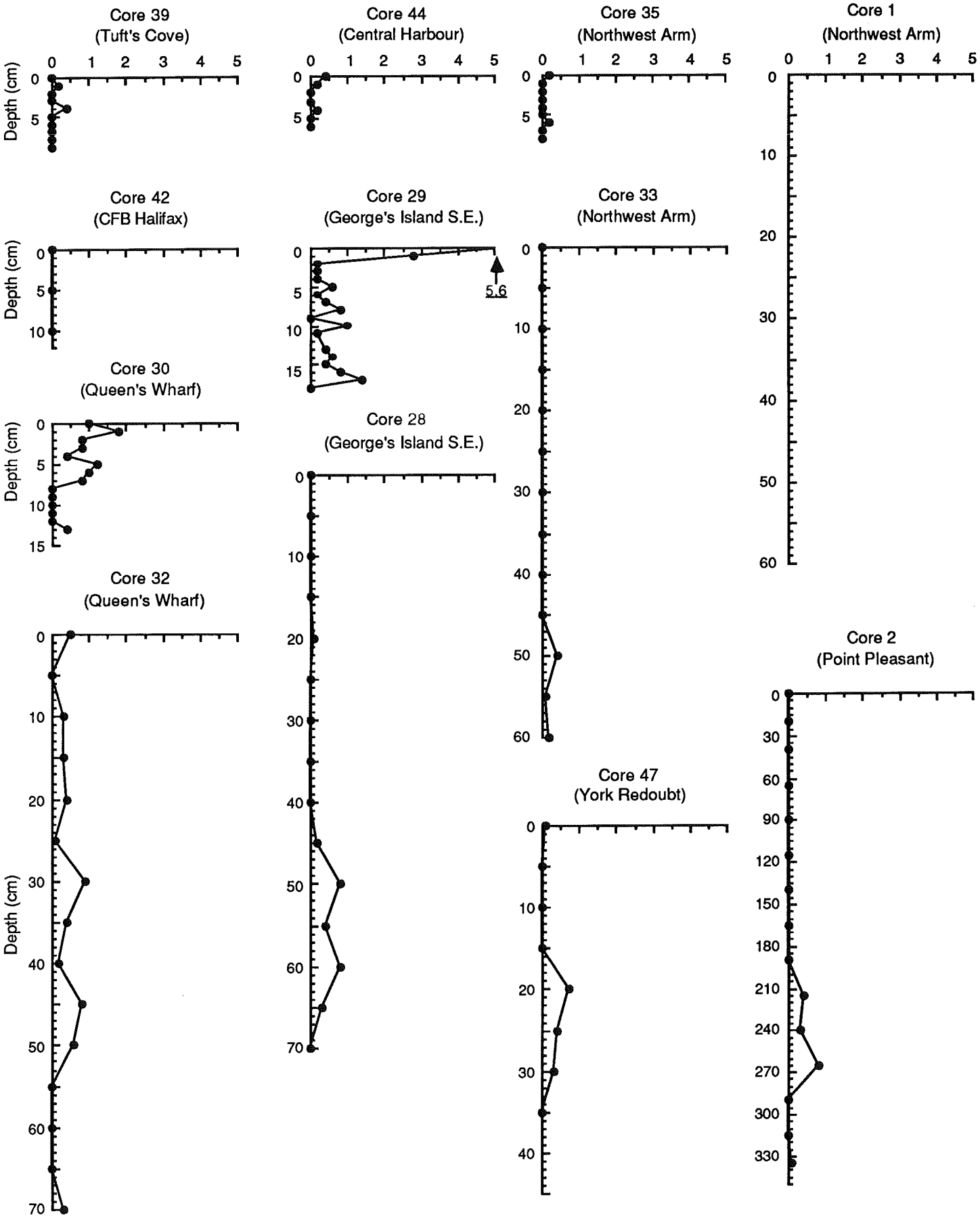
IRON
pore water ($\mu g \cdot mL^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



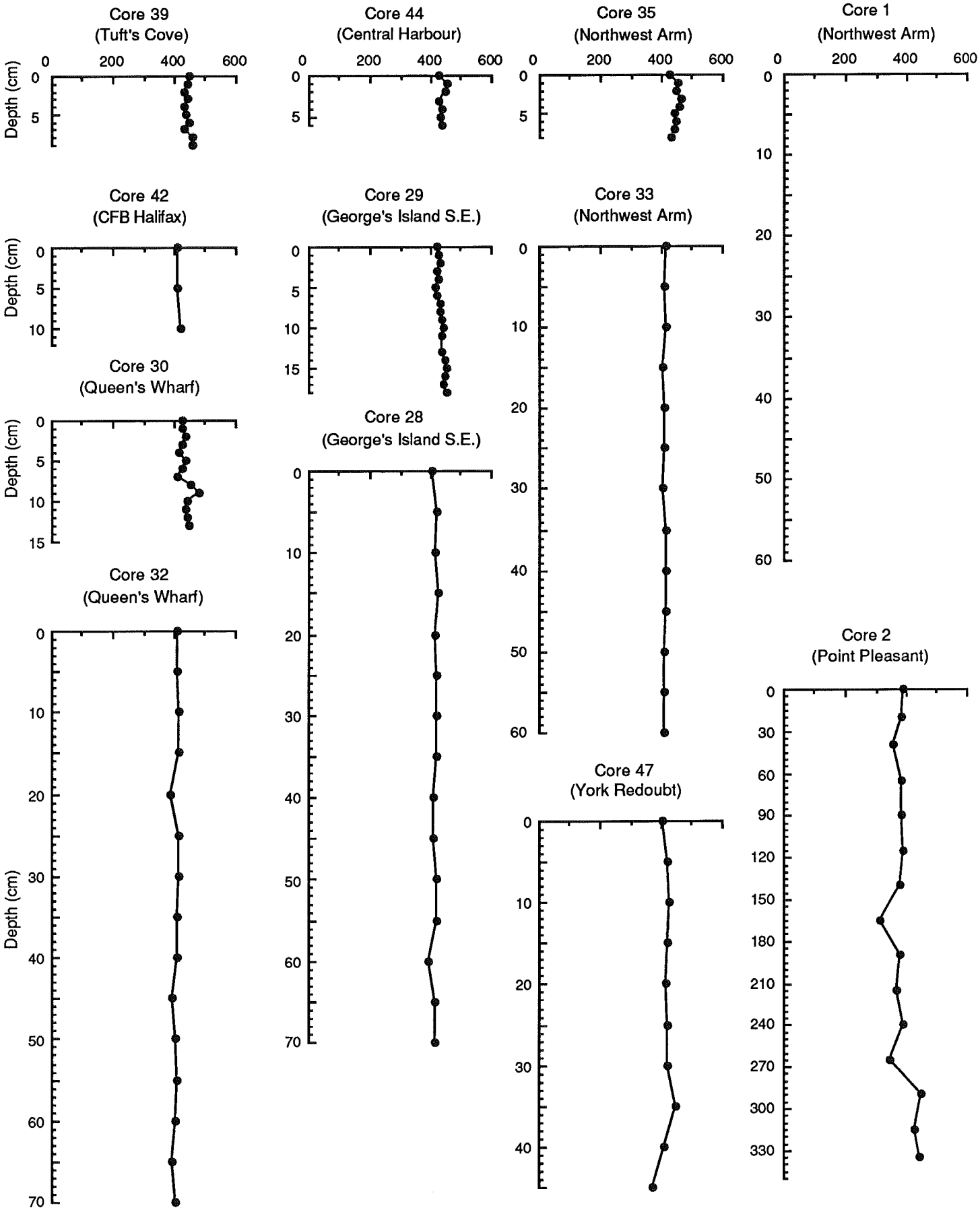
MANGANESE
pore water ($\mu g \cdot mL^{-1}$)

Creed '90 &
Hudson 89-039 ('90)



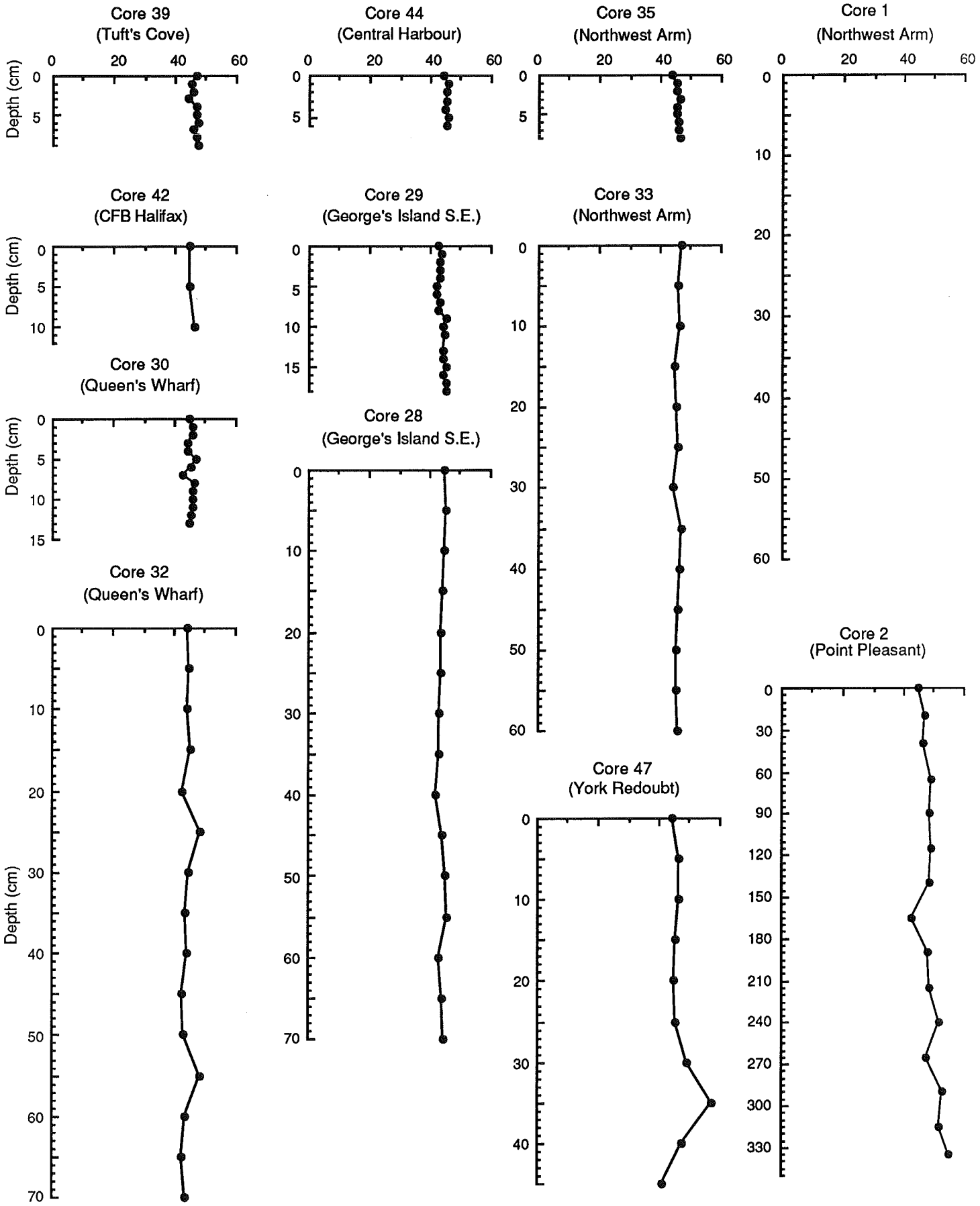
SODIUM
pore water (mM)

Creed '90 &
Hudson 89-039 ('90)



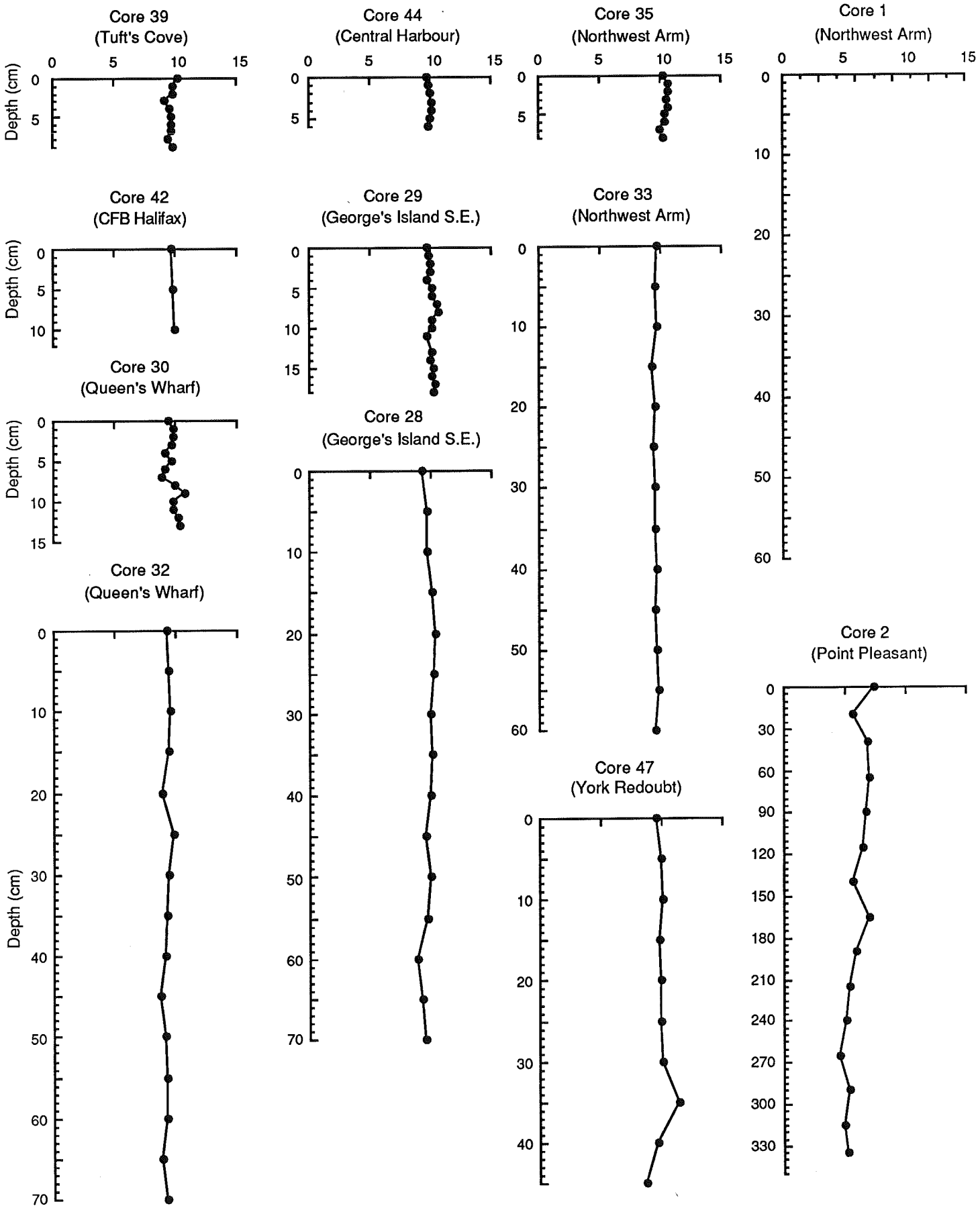
MAGNESIUM
pore water (mM)

Creed '90 &
Hudson 89-039 ('90)



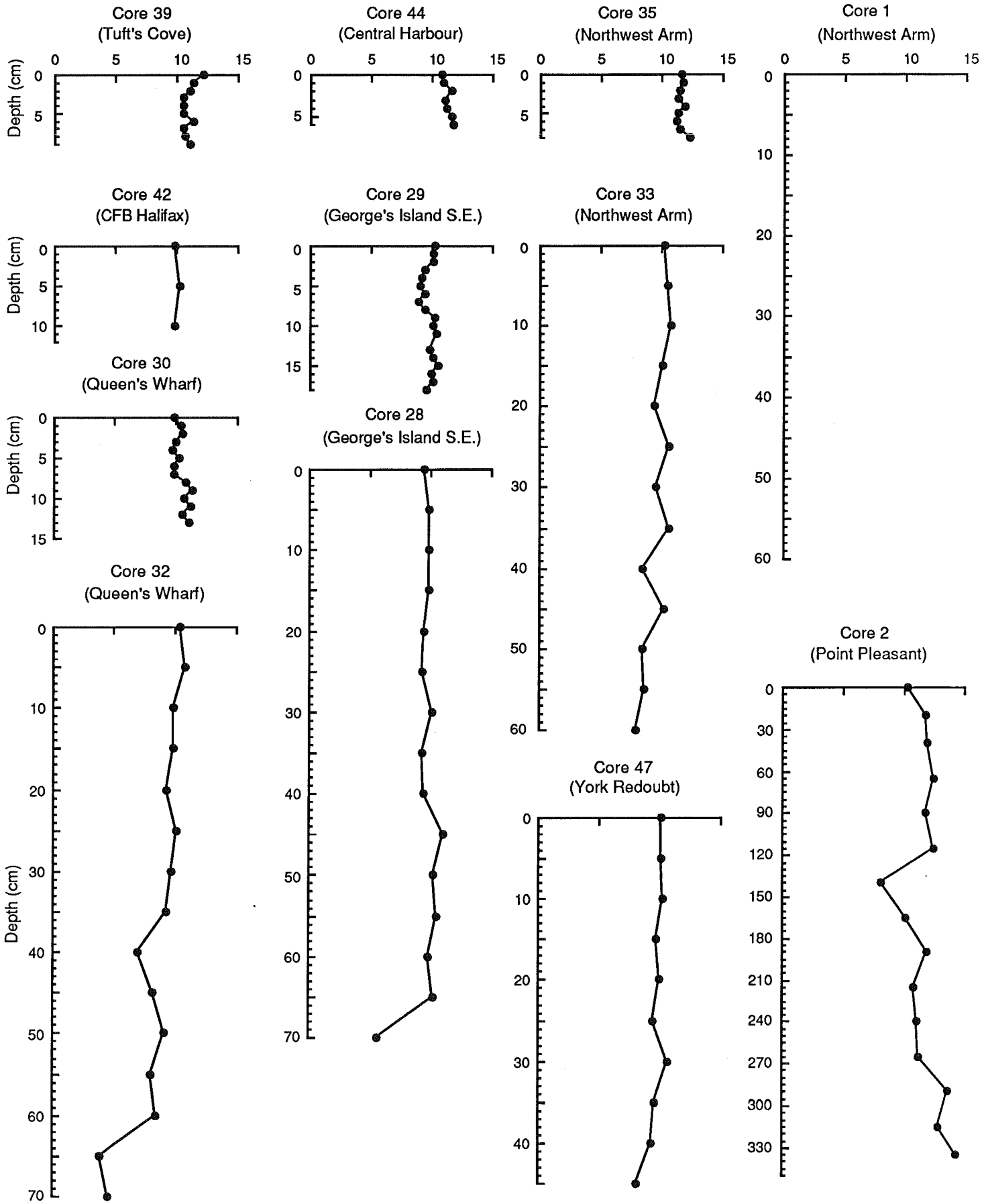
POTASSIUM
pore water (mM)

Creed '90 &
Hudson 89-039 ('90)



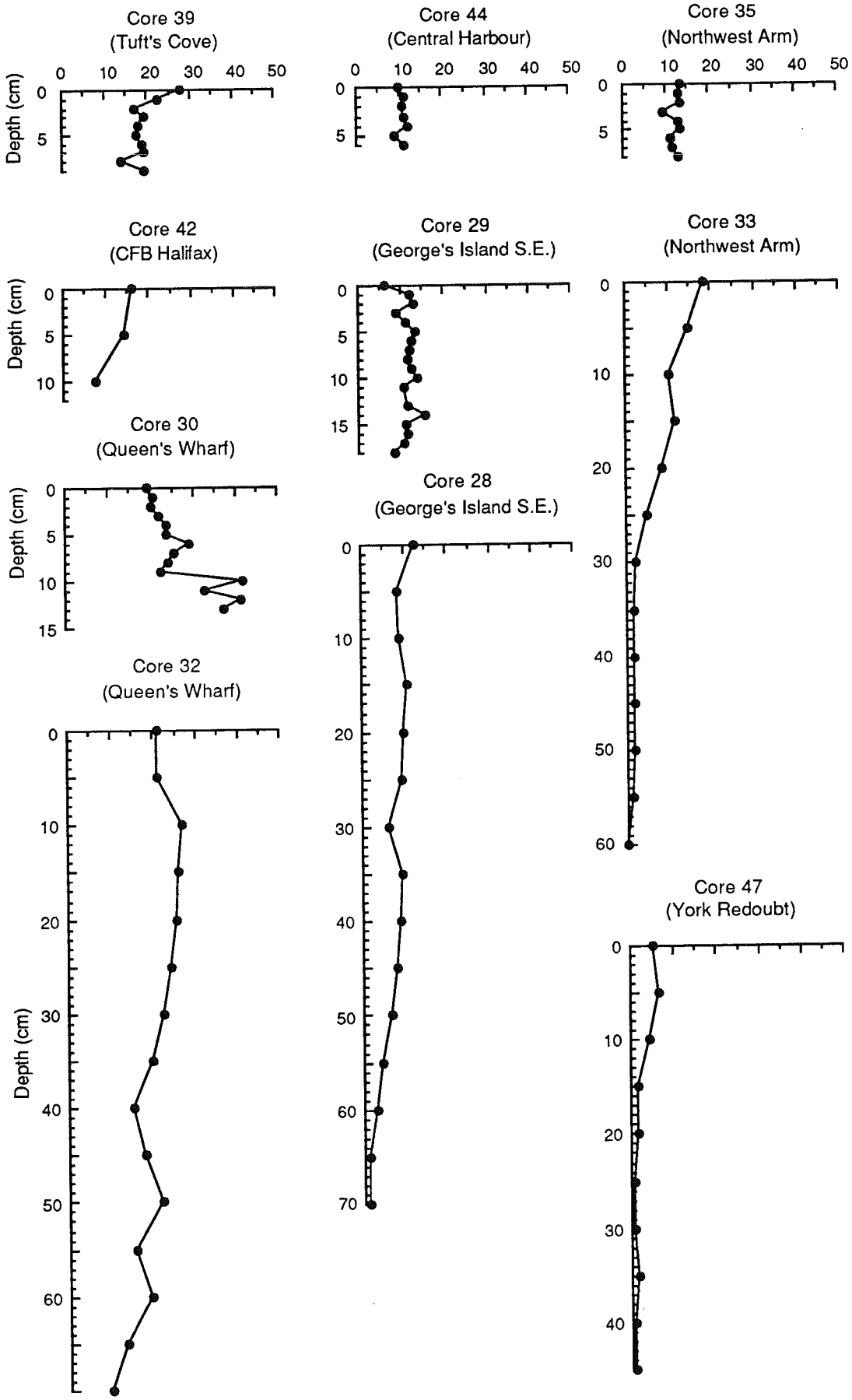
CALCIUM
pore water (mM)

Creed '90 &
Hudson 89-039 ('90)



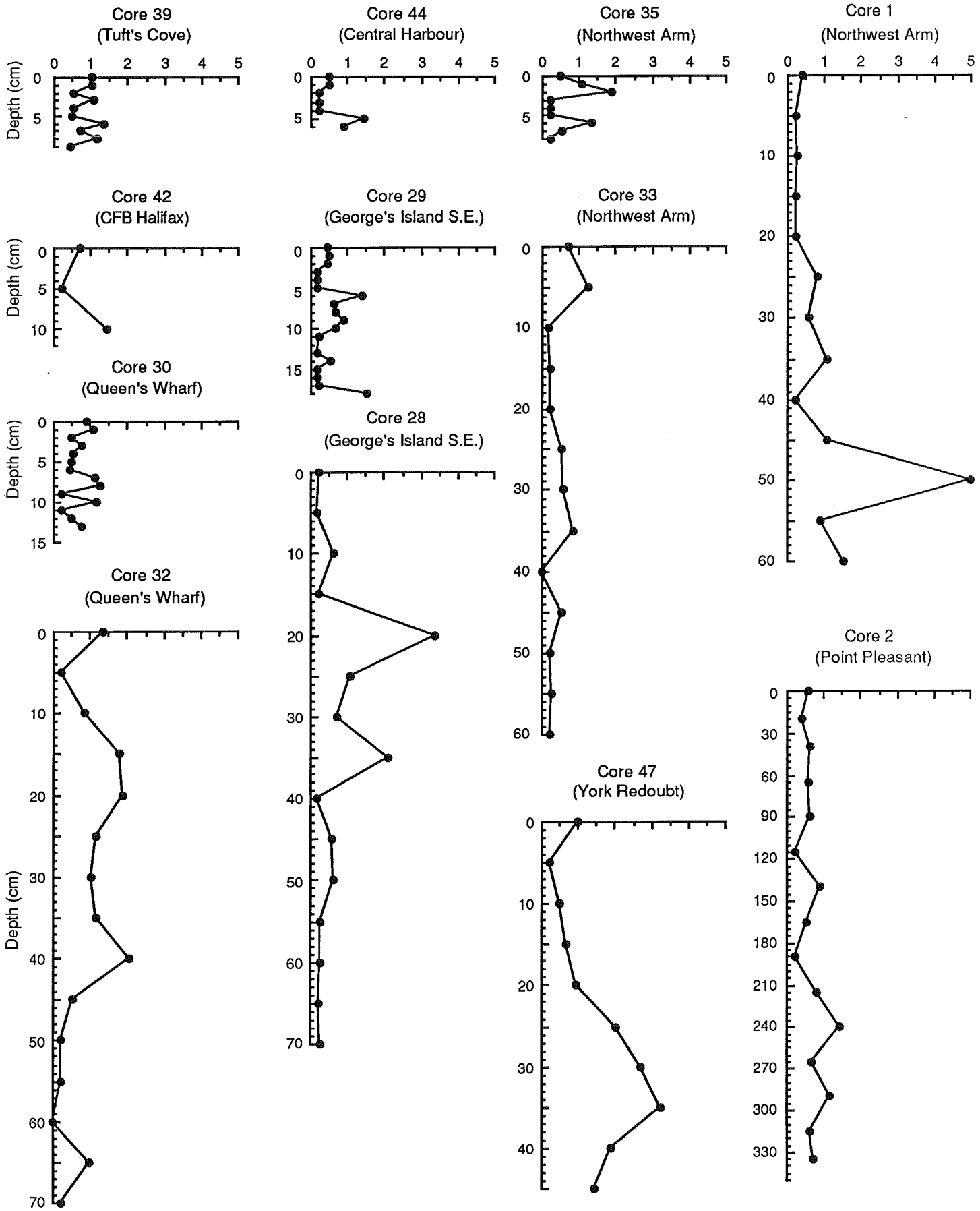
TIN
total ($\mu g \cdot g^{-1}$)

Creed '90



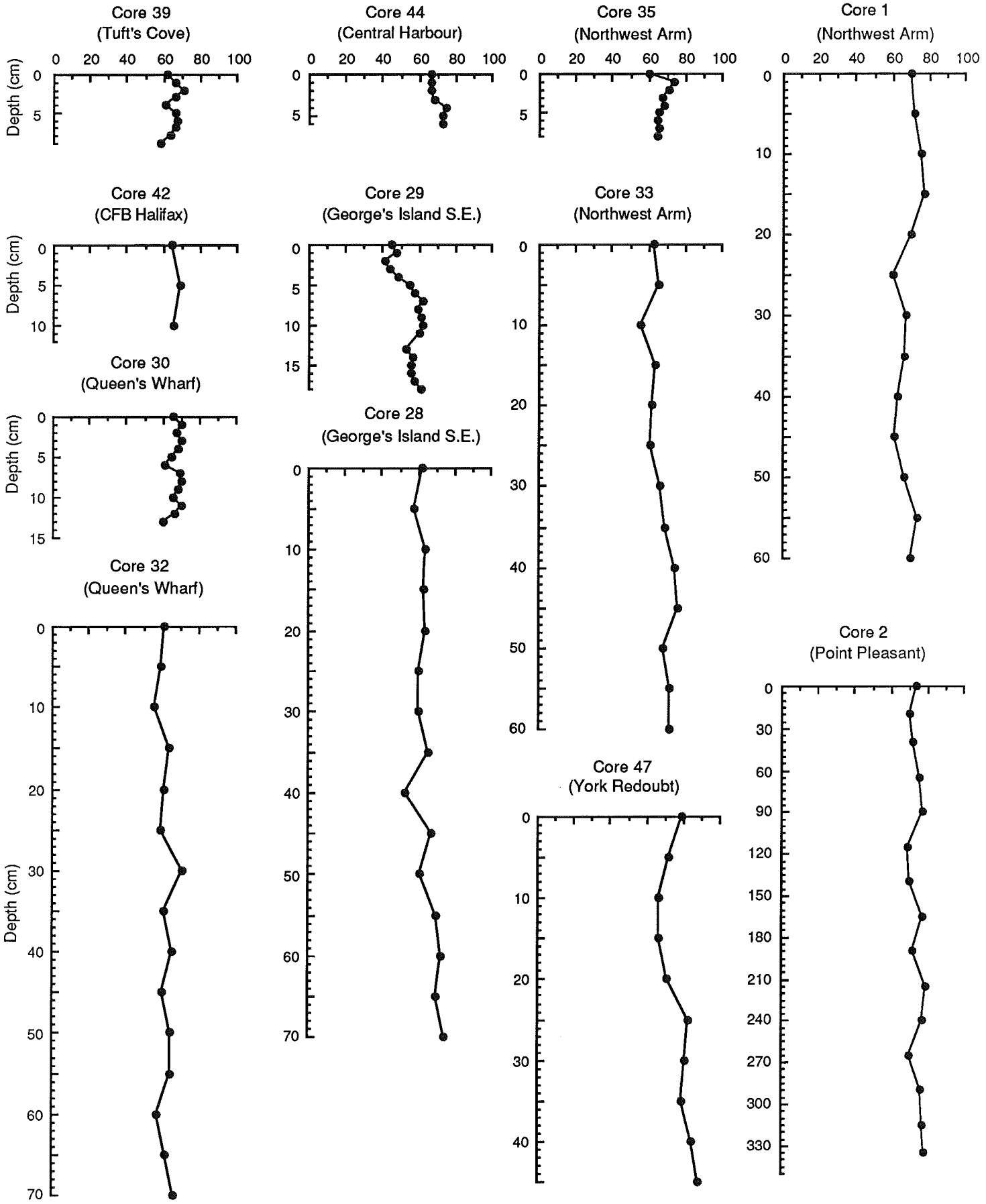
SAND (%)

Creed '90 &
Hudson 89-039 ('90)



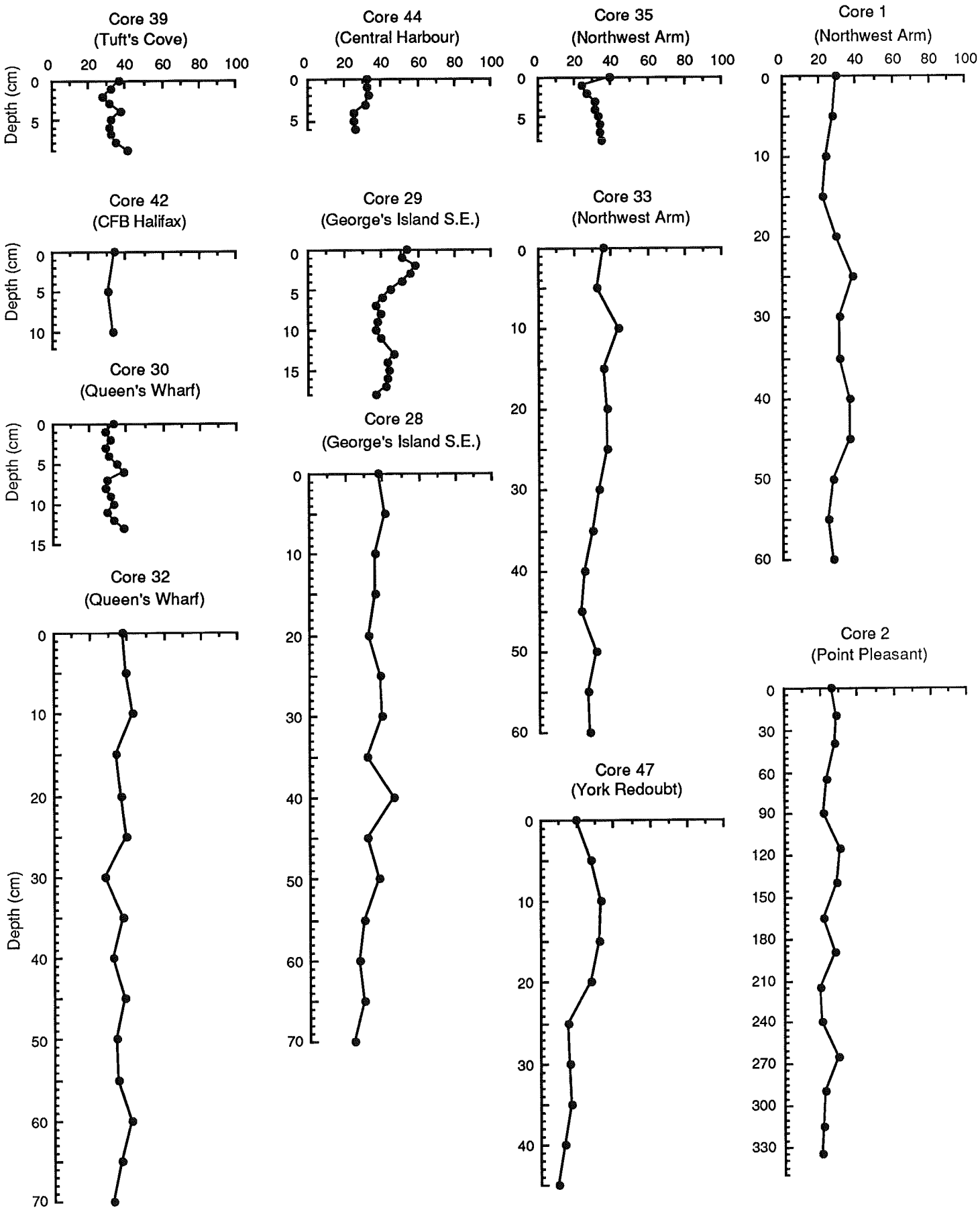
SILT (%)

Creed '90 &
Hudson 89-039 ('90)



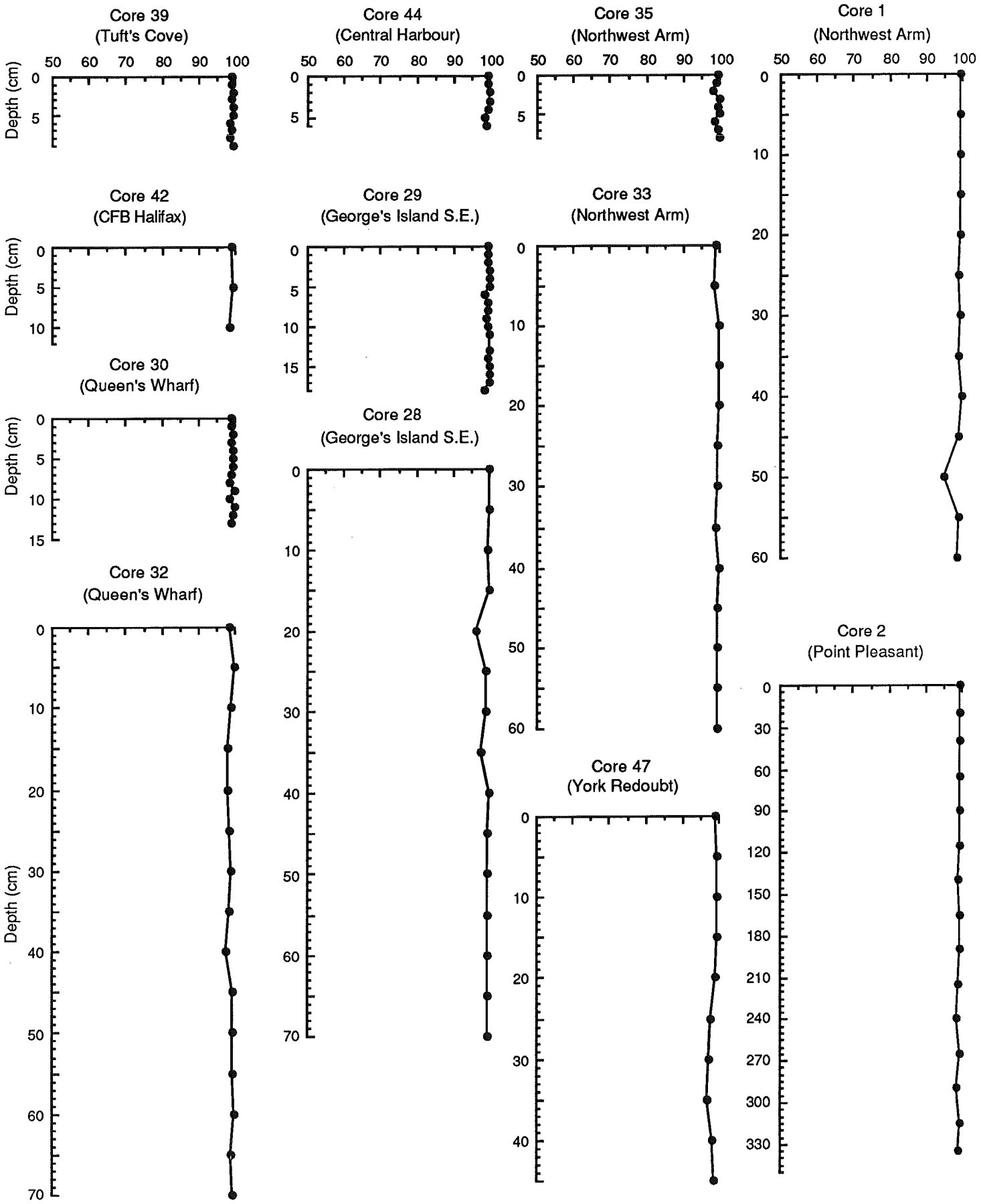
CLAY (%)

Creed '90 &
Hudson 89-039 ('90)



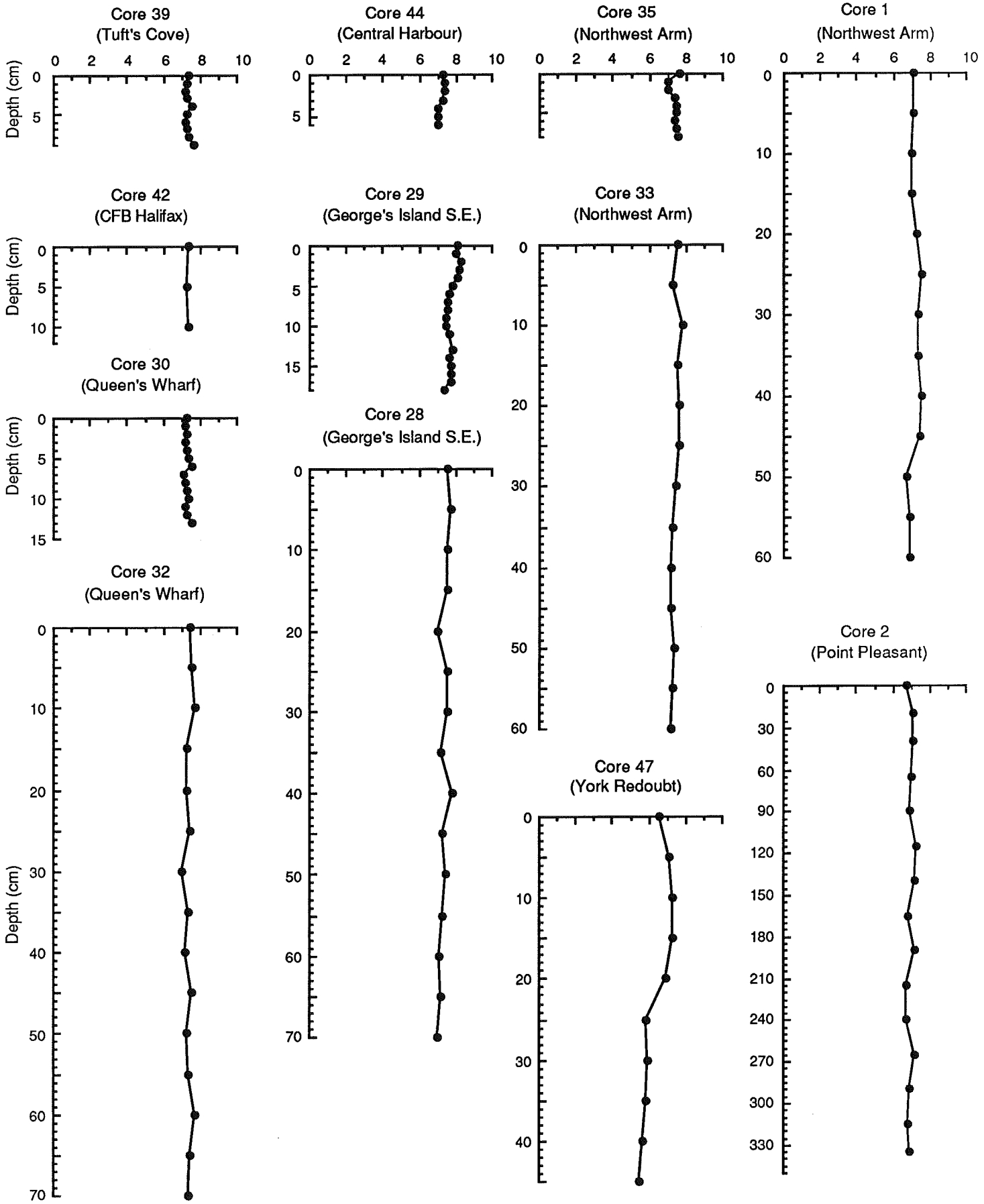
MUD (%)

Creed '90 &
Hudson 89-039 ('90)



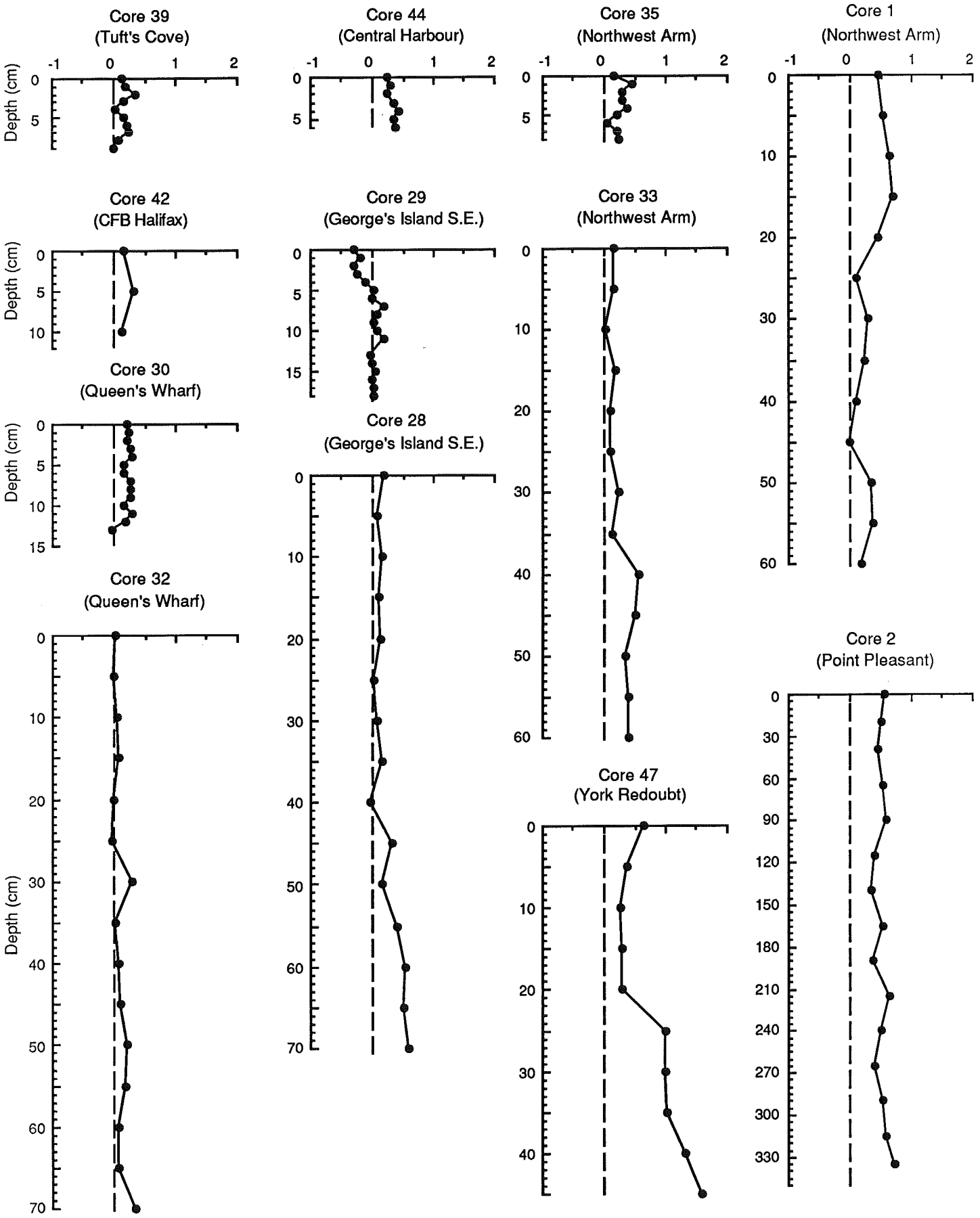
SIZE
phi units (ø)

Creed '90 &
Hudson 89-039 ('90)



SKEWNESS

Creed '90 &
Hudson 89-039 ('90)



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REFERENCES

Berman, S.S. 1981. Marine sediment reference materials, trace metals and inorganic constituents; Geostandards Newsletter, 5: 218.

Buckley, D.E., and R.E. Cranston. 1971. Atomic absorption analyses of 18 elements from a single decomposition of aluminosilicates. Chem. Geol., 7: 273-284.

Buckley, D.E., B.T. Hargrave, and P. Mudroch. 1989. Geochemical data from analyses of surface sediments obtained from Halifax Inlet. Geological Survey of Canada, Open File Report No. 2042, 24p.

Brandenberg, H., and H. Bader. 1967. The determination of nanogram levels of Hg in solution by flameless atomic absorption technique. Atomic Absorption Newsletter, 6: 101.

Chester, R., and M.J. Hughes. 1967. A chemical technique for the separation of ferro-manganese minerals, carbonates minerals and adsorbed trace elements from pelagic sediment.

Chem. Geol., 2: 249-262.

Cline, J.D. 1969. Spectrophotometric determination of hydrogen sulfide in natural waters. Limnol. Oceanogr., 14: 454-458.

Edmonds, J.M. 1970. High precision determination of titration alkalinity and total carbon dioxide content of sea water by potentiometric titration. Deep Sea Res. 17: 737-750.

Fitzgerald, R.A., G.V. Winters and D.E. Buckley. 1987. Evaluation of a sequential leach procedure for the determination of metal partitioning in deep sea sediments. Geological Survey of Canada, 601 Booth St., Ottawa, Ontario, Canada (K1A 0E8), Open File Report 1701. 21 pp.

MacIntosh, M., J.D. Willey and C. Courneya. 1976. A compendium of the sampling and analytical techniques used by the Environmental Marine Geology Subdivision, Atlantic Geoscience Centre, Bedford Institute of Oceanography, Dartmouth, Nova Scotia. Geological Survey of Canada, 601 Booth St., Ottawa, Ontario, Canada (K1A 0E8), Open File Report 397. 66 pp.

Manheim, F.T., J.C. Hathaway, F.L. Flanigan and J.D. Fletcher. 1976. Marine mud MAG-1 from the Gulf of Maine; United States Geological Survey Professional Paper 840, 25-28.

Mann, R., and J.M. Gieskes. 1975. Interstitial water studies, Leg 28. Unpublished report. In Hayes, D.E., and L.A. Frakes, et al., Init. Repts. DSDP, 28: Washington (U.S. Govt. Printing Office), 805-814.

Solorzano, L. 1969. Determination of ammonia in natural waters by phenolhypochlorite method. Limnol. Oceanogr., 14: 799-801.

Strickland J.D.H. and T.R. Parsons. 1968. A practical handbook of seawater analyses. Fisheries Research Board of Canada. 310pp.

Tessier, A., P. Campbell and M. Bisson. 1979. Sequential extraction procedure for the speciation of particulate trace metals. Anal. Chem. **51**: 844-850.

Whitfield, M. 1969. Eh as an operational parameter in estuarine studies. Limnol. Oceanogr. **14**: 547-558.