GEOCHEMICAL DATA FROM ANALYSES OF SEDIMENTS AND PORE WATER OBTAINED FROM PISTON CORES AND BOX CORES TAKEN FROM BEDFORD BASIN, LAHAVE BASIN, EMERALD BASIN AND THE SLOPE OF THE SOUTHERN SCOTIAN SHELF, HUDSON CRUISE 88-010

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ABSTRACT

Geochemical data are compiled for sediment and pore water analyses of 12 cores collected from the Nova Scotian coastal waters, and adjacent shelf and rise, in the north western Atlantic Ocean (CSS Hudson expedition 88-010). One core was from Bedford Basin, 4 cores were from Emerald Basin, 4 cores were from LaHave Basin, 2 cores were from Verrill Canyon and 1 core was from Albatross Rise.

Sediment analyses included grain size, water content, organic carbon, $CaCO_3$ and total metals (Ca, Mg, K, Si, Al, Fe, Mn, Zn, Cu and Ni). Chemical leach techniques were used to determine the potential labile metal partitioning in these sediments: sequential leach analyses for weak acid leachable metals, easily reducible metals, moderately reducible metals and residual metals (Fe, Mn, Ca, Zn, Cu and Ni).

Pore water analyses included silica, ammonium, total sulphate and free electrons ($p\epsilon$).

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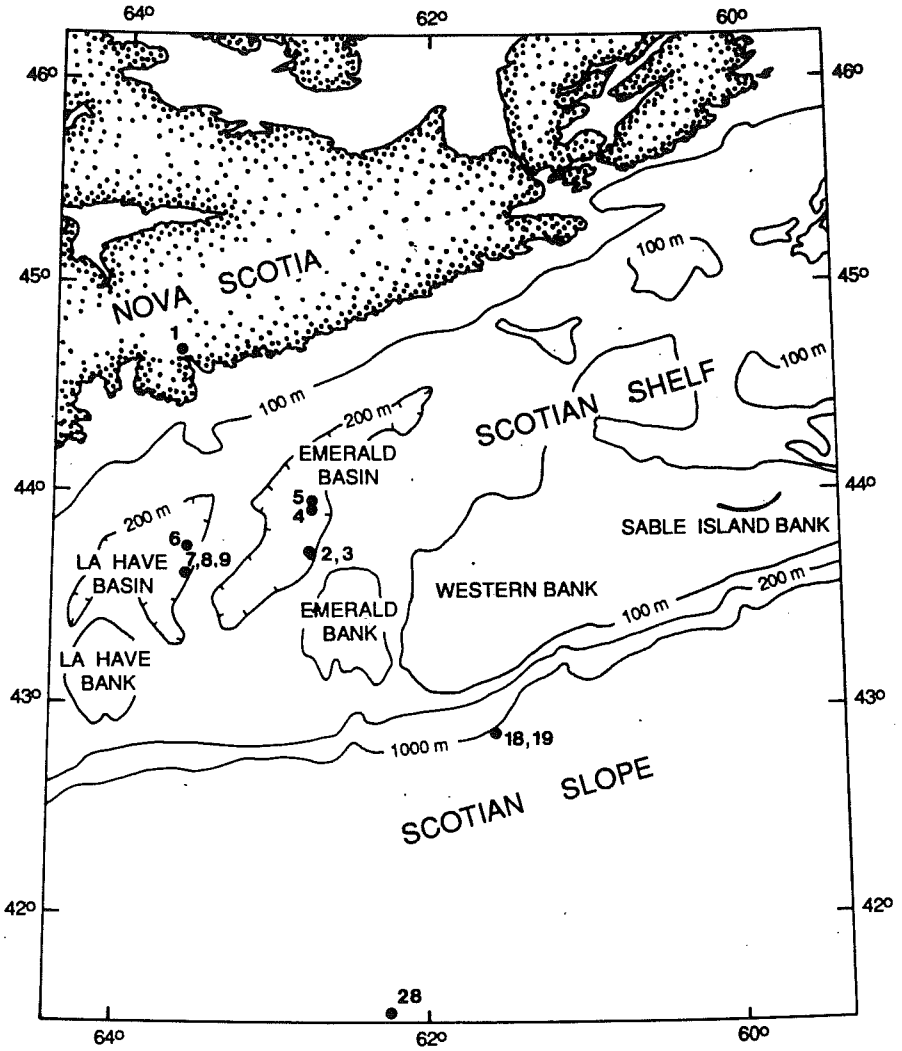


Figure 1 Station locations for core samples (cores 1, 2, 5, 6, 7, 8, 9, 18 and 28 were piston cores and cores 3, 4 and 19 were box cores).

Core	Latitude	Longitude	Core	Latitude	Longitude
1	44°41.80'N	63°38.90'W	2	43°41.40'N	62°47.12'W
3	43°41.41'N	62°47.06'W	4	43°52.89'N	62°47.89'W
5	43°53.04'N	62°47.94'W	6	43°43.46'N	63°35.85'W
7	43°35.92'N	63°35.33'W	8	43°35.96'N	63°35.29'W
9	43°35.75'N	63°34.43'W	18	42°47.79'N	61°37.17'W
19	42°48.05'N	61°37.03'W	28	41°32.65'N	62°15.04'W

INTRODUCTION

Nine piston cores and 3 box cores from the Nova Scotia coastal waters, and adjacent shelf and rise (Fig. 1) have been studied for a number of geological and geochemical parameters. Core samples were collected from the Bedford Institute of Oceanography ship C.S.S. Hudson. Core 1 was from Bedford Basin, cores 2 to 5 were from Emerald Basin, cores 6 to 9 were from LaHave Basin, cores 18 and 19 were from Verrill Canyon and core 28 was from Albatross Rise. This report contains some of the ship-board observations and analytical results, and the laboratory geochemical analytical results for both sediment and pore water samples. Other data relating to this scientific cruise are given in Piper (1988).

FIELD METHODS

Sampling

The AGC large diameter piston coring system with a capacity of obtaining up to 15 m long, 10 cm diameter cores from pelagic sediments was used routinely for piston coring. Box coring was done using a standard 0.25 m^2 BIO box core. Push cores were obtained from these box cores for geochemical testing. Piston cores were subsequently split lengthwise into working and archive sections. Both sections were immediately covered with thin plastic film in order to control oxidation and avoid moisture loss of the exposed sediments. The working section of each core was visually examined and colour-logged (Piper, 1988), followed by photography. Electrochemical determinations and subsampling was performed on the working half immediately after splitting. Box core subsamples were vertically extruded and sampled at selected intervals.

Shipboard Analyses

Sediment $p\epsilon$ analyses were conducted on the working half of a split core, immediately after the core was split, or on the cut

surface of extruded box core push cores. A combination platinum electrode, standardized in Zobell solution, was used in the sediment 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 20 to 30 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 where temperatures may have risen to a maximum of 10 °C for some cores. It was assumed that oxygen effects were minimal for short exposure times. Intervals for subsampling were selected on the basis of preliminary redox measurements and apparent variations in sediment type (based on colour and texture). 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 in a Sorvall Superspeed RC2-B automatic refrigerated centrifuge which was mounted in gimbals in the main deck. Centrifuge speeds between 1500 and 5000 rpm were used when sea states permitted safe operation of the centrifuge. Between 1 and 15 mL of pore water were obtained from most samples. After centrifugation, pore water was decanted from the centrifuge tubes under N_2 atmosphere in a glove box. Pore water subsamples consisted of 200 μL for dissolved silica, 100 μL for ammonia and 2 mL were acidified (pH 2) with HCl and stored for later metal analyses at BIO. The sediment remaining in the centrifuge tube was sealed and placed in refrigerated storage for later analyses at BIO for total and extractable metals, grain size, total carbon and organic carbon.

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 colour spectrometer was used to measure absorbance of this complex at wavelength 812 nm.

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

LABORATORY ANALYSES

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

The sediment, which was freeze dried and disaggregated in an agate mortar and pestle, was then used for analyses for sediment size, total carbon, organic carbon, leachable and total metal.

Sediment grain size analyses for % sand, % silt, % clay, grain size, skewness and kurtosis were conducted using a model TA II Coulter Counter using 30 and 200 μm apertures.

Total carbon (C_T in % of dry weight) was determined for washed and dried samples with 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 M HCl treatment prior to determining the carbon content. The precision and accuracy were ± 10 % 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}, Zn_{WA}, Cu_{WA} and Ni_{WA}) in 25 % acetic acid, pH 2, as described in Chester and Hughes (1967).

(2) hydroxyl amine leachable metal (Fe_{HA}, Mn_{HA}, Ca_{HA}, Zn_{HA}, Cu_{HA} and Ni_{HA}) in 1 M NH_2OH-HCl, as described in Chester and Hughes (1967).
(3) heated hydroxyl amine leachable metal (Fe_{HHA}, Mn_{HHA}, Ca_{HHA}, Zn_{HHA}, Cu_{HHA} and Ni_{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 residue mass (Si_{TR}, Al_{TR}, Mg_{TR}, K_{TR}, Fe_{TR}, Mn_{TR}, Ca_{TR}, Zn_{TR}, Cu_{TR} and Ni_{TR}) and with concentrations computed relative to the original mass (Si_R, Al_R, Mg_R, K_R, Fe_R, Mn_R, Ca_R, Zn_R, Cu_R and Ni_R) were determined using the Buckley and Cranston (1971) HF-H_3BO_3 total decomposition method.

The sequential sum (Fe_{SUM}, Mn_{SUM}, Ca_{SUM}, Zn_{SUM}, Cu_{SUM} and Ni_{SUM}) was computed as the summation of the sequential leach analyses components for steps 1 through 4 (ie, $Fe_{SUM}=Fe_{WA}+Fe_{HA}+Fe_{HHA}+Fe_R$).

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

CORE	DEPTH	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{TR}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{TR}	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}	
1	0	1003	322	2847	25413	29585	39200	28300	57	13.0	56	386	512	838	430	46401
1	80	526	297	2990	25138	28951	39200	27900	61	13.7	58	332	465	926	369	46402
1	122	635	319	2978	25138	29070	39200	27900	54	11.8	59	267	391	823	296	46403
1	202	875	327	2883	25215	29300	36900	27800	75	13.0	58	270	416	727	298	46404
1	262	458	277	2833	25159	28727	38600	27800	35	9.9	58	270	373	739	298	46405
1	280	597	285	3094	25284	29260	37700	28000	54	11.0	62	324	451	873	359	46406
1	340	474	259	2739	29478	32950	41400	32500	44	11.0	57	430	542	741	474	46407
1	410	452	265	2763	29307	32787	41000	32600	62	11.9	62	423	559	782	471	46408
1	440	600	313	2735	29238	32886	41300	32200	72	11.0	62	410	555	745	452	46409
1	500	788	408	3236	33562	37994	41600	36600	70	10.3	66	449	596	611	490	46410
1	560	931	456	3489	37241	42117	44500	40700	115	15.9	84	578	793	836	632	46411
1	590	906	412	3210	32920	37448	43900	35900	147	19.5	104	423	693	869	461	46412
1	650	1102	447	3439	32278	37266	42700	35200	152	17.2	92	470	732	877	513	46413
1	720	4331	1161	2595	28535	36622	43500	32500	417	22.5	73	467	980	1151	532	46414
2	0	727	202	3734	16706	21369	21200	18100	77	9.0	58	184	328	358	199	46415
2	30	722	162	4579	15411	20874	21000	16500	79	7.3	68	175	329	317	187	46416
2	80	780	177	4808	17447	23212	24200	18700	77	7.3	70	284	438	417	304	46442
2	100	1325	345	5230	24025	30925	31600	26200	112	11.4	76	327	527	533	357	46443
2	120	1261	292	5309	21045	27907	29500	23000	109	11.8	77	303	501	548	331	46444
2	140	1393	294	5063	22460	29210	31300	24600	113	12.0	81	320	526	526	350	46445
2	160	1226	268	5249	20518	27261	26700	22400	100	10.4	77	297	484	487	324	46446
2	180	1900	436	5144	26146	33626	34800	28700	131	13.1	79	334	557	557	367	46447
2	230	2114	485	5432	28562	36593	36400	31700	149	13.6	80	321	563	574	356	46448
2	250	2142	508	6368	28980	37998	39300	32200	156	14.1	80	338	588	618	375	46449
2	270	2377	531	5558	29577	38043	40000	32900	152	14.3	78	362	607	628	403	46450
2	290	1898	411	6199	19951	28459	27600	21900	128	12.0	72	157	369	280	172	46451
2	295	2144	475	5645	22040	30304	31300	24300	132	13.6	76	194	416	316	214	46452
2	300	3059	508	5814	23130	32511	33300	25700	142	13.7	79	228	462	358	253	46453
2	310	2911	478	6177	21287	30853	32100	23600	141	13.4	81	202	437	394	224	46454
2	330	3067	596	6387	24227	34277	34300	27100	167	15.6	81	216	480	376	242	46455
2	380	3803	652	5478	25060	34993	34900	28000	179	16.1	74	232	501	370	259	46456
2	400	3148	640	5961	26760	36509	37200	29700	165	15.6	85	214	480	470	238	46457
2	420	2932	637	6334	23504	33407	33000	26000	157	15.6	85	203	461	416	225	46458
2	440	4303	666	6057	26849	37875	40700	30100	178	15.4	83	158	434	474	177	46459
2	470	5432	795	5844	31453	43524	43000	35500	198	15.4	79	239	532	486	270	46460
2	515	2347	536	4594	17094	24571	23100	18400	163	11.1	66	145	385	264	156	46461
2	530	5212	900	5751	33302	45165	45600	37800	207	16.4	71	244	538	514	277	46462
2	560	4789	880	6081	33038	44788	45800	37500	200	16.6	81	275	572	564	312	46463
2	570	4958	908	6800	31876	44542	46100	36100	191	15.9	87	238	531	530	269	46464
2	590	4210	806	6374	31435	42825	43900	35400	193	16.5	76	243	529	504	274	46465
2	610	5633	790	5991	33680	46094	47800	37800	187	15.8	76	189	468	530	212	46466
3	0	651	197	3919	14136	18903	18800	15500	147	7.7	47	224	426	407	246	46417
3	2	459	134	3728	13893	18214	18100	15200	67	6.6	45	225	343	278	246	46418
3	5	408	115	3483	12655	16661	18200	13800	60	6.0	43	176	285	283	192	46419
3	8	435	139	3487	12183	16244	18300	13300	57	6.4	44	147	255	291	161	46420
3	12	303	103	3261	11425	15092	16300	12500	48	5.9	42	182	278	271	199	46421
3	15	342	86	3360	13648	17436	18700	14900	53	5.8	43	230	332	275	251	46422
3	18	280	69	3573	11064	14986	16800	12000	50	5.6	42	248	346	294	269	46423
3	21	309	88	3254	11853	15504	15900	12800	52	4.6	41	282	379	283	304	46424
3	24	306	89	3252	12618	16265	16300	13700	51	4.6	44	9	109	318	10	46425
3	27	335	107	3715	12144	16301	17200	13200	52	5.3	46	0	103	317	0	46426
4	0	1445	645	5956	33647	41693	44300	40200	1157	324.0	137	54	1672	3254	65	46427
4	3	1248	382	4996	35010	41636	42600	40900	186	16.2	59	83	344	618	97	46428
4	4	1170	413	5421	35480	42484	44600	41400	145	12.1	59	63	279	570	73	46429
4	6	1104	338	4793	35264	41499	45300	41100	130	11.4	57	68	266	563	79	46430
4	8	1098	356	4911	35428	41793	44700	41100	142	12.1	58	61	273	599	71	46431
4	12	1092	324	4884	35473	41773	45200	41200	155	11.9	57	70	294	609	81	46432
4	15	1045	336	5151	34727	41259	44200	41000	165	13.2	62	63	303	582	74	46433
4	17	1093	312	4919	34733	41057	44300	40200	173	13.2	61	384	632	650	445	46434
4	20	973	275	4685	36461	42394	41900	42200	169	13.0	61	393	636	560	455	46435
4	23	940	265	4612	35939	41756	42900	41500	169	12.9	59	349	590	550	403	46436
4	25	879	251	4958	36716	42804	42100	42300	168	12.1	61	375	616	560	432	46437
4	30	974	301	4830	37627	43732	44400	43600	170	12.8	63	362	608	580	420	46438
4	35	906	236	4406	38831	44379	43800	45100	171	12.0	63	380	626	561	441	46439
4	39	914	245	4183	38867	44209	44000	45300	174	12.4	63	390	639	577	454	46440
4	42	1000	281	4297	37884	43462	45500	44000	180	12.9	63	377	633	622	438	46441

CORE	DEPTH	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{TR}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{TR}	ID
	cm	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	
5	5	965	269	4530	39449	45213	44500	45500	231	14.8	73	274	593	632	316	46467
5	20	1148	331	4541	38573	44593	44300	44800	292	16.1	72	234	614	668	272	46468
5	40	980	298	4341	35898	41517	42700	41500	279	17.5	72	187	555	658	216	46469
5	80	995	272	4546	39938	45751	45300	45800	228	15.3	70	223	537	590	256	46470
5	130	1058	288	4663	34952	40961	43900	39900	233	15.7	69	103	421	552	118	46471
5	150	1049	314	4710	35762	41835	42100	40500	216	16.2	70	191	493	536	216	46472
5	160	1115	342	4826	34681	40964	41800	39500	236	17.0	70	142	465	530	162	46473
5	180	1359	449	5911	38766	46485	46400	42600	169	18.6	77	188	453	508	207	46474
5	220	1351	454	5508	39490	46803	48900	43300	162	17.7	76	199	455	410	218	46475
5	270	1156	337	5069	35910	42472	41300	40900	274	15.8	74	216	580	524	246	46476
5	300	1059	289	5203	35444	41995	40800	40600	226	12.8	75	256	570	492	293	46477
5	360	1404	378	5633	39053	46468	46300	43200	162	12.7	77	271	523	382	300	46478
5	400	1745	543	6197	33817	42302	43400	37700	229	17.9	84	247	578	574	275	46479
5	450	1580	491	5678	40790	48539	51500	46300	240	15.6	79	224	558	526	254	46480
5	470	1539	482	5542	35996	43559	48900	40400	223	15.8	75	222	536	424	249	46481
5	550	2118	597	5968	40894	49577	56200	46000	208	16.5	78	182	485	456	205	46482
5	560	5976	669	6330	30605	43580	44500	34700	201	15.0	83	235	534	444	266	46483
5	580	2199	600	6411	30538	39748	38800	34900	199	15.5	82	123	420	482	141	46484
5	610	2770	625	7131	30349	40875	37300	34100	172	14.7	83	126	396	374	142	46485
5	620	5089	657	6292	31166	43204	43800	34900	168	15.3	80	117	380	396	131	46486
5	650	5759	631		31826		40100	35800	161	14.8		157		392	177	46487
5	680	5384	721		31982		41600	35300	140	16.5		115		378	127	46488
5	750	5092	753	6643	32148	44636	41800	36000	153	17.0	89	149	408	426	167	46489
5	820	4369	889	7005	34317	46580	43600	38300	175	18.2	97	125	415	452	139	46490
5	870	5511	965		36040		48100	40000	142	19.1		166		474	184	46491
5	910	6323	799		34445		44300	38400	167	16.7		187		452	208	46492
5	930	5251	776		34571		47300	38800	149	16.5		111		472	125	46493
5	980	3711	750	6323	33869	44653	46600	37800	162	15.2	87	86	350	488	96	46494
5	1020	5632	714	6643	31452	44441	43400	35300	179	14.2	89	140	422	476	157	46495
5	1030	3943	685	6226	31916	42770	41800	35700	181	15.3	89	157	443	554	176	46496
6	10	1216	443	5222	36576	43457	45500	39800	134	15.8	94	225	469	642	245	46497
6	60	1585	577	6309	40417	48888	50200	43600	164	19.3	93	239	515	732	258	46498
6	130	2040	618	5531	35749	43938	44500	38900	191	18.8	90	160	460	602	174	46499
6	170	2725	567	5757	30569	39618	39500	33300	176	16.4	84	129	406	502	141	46500
6	190	3533	746	5621	32915	42815	45600	35700	136	17.3	86	93	332	711	101	46501
6	230	2808	572	5169	28118	36667	40300	30300	130	15.5	87	235	467	674	253	46502
6	260	1992	552	5224	31075	38843	44100	33200	128	16.5	94	280	518	765	299	46503
6	310	2476	748	4687	30143	38054	41400	32800	177	23.4	87	283	570	770	308	46504
6	370	2305	764	5933	25487	34489	39300	28100	170	22.1	80	171	444	706	189	46505
6	440	1854	565	5913	16870	25202	26200	18600	127	11.8	81	100	320	476	110	46506
6	510	1685	656	7626	18532	28499	32000	20100	95	17.6	110	11	234	466	12	46507
7	0	435	281	4484	36410	41610	39900	40500	105	10.2	69	343	528	595	382	46508
7	40	344	151	3895	20962	25352	25800	23500	114	3.9	67	303	488	568	340	46509
7	70	424	187	4132	22263	27006	28200	24600	96	4.9	73	272	446	555	301	46510
7	120	367	161	4375	16754	21657	22200	17900	70	3.9	64	242	380	489	259	46511
7	160	927	438	5884	34001	41250	37200	36600	113	14.9	109	375	612	813	404	46512
7	215	1326	500	6325	29440	37591	38600	32000	106	10.8	100	339	555	766	368	46513
7	295	1418	441	5930	22433	30222	35200	24200	113	9.8	90	263	476	680	284	46514
7	315	3019	669	5893	28643	38224	38600	31100	99	11.2	81	390	581	673	423	46515
7	365	1916	558	6439	17057	25970	32000	18500	141	11.4	93	194	439	448	210	46516
7	425	3652	743	6321	29256	39972	46400	31800	131	12.1	82	221	446	533	240	46517
7	485	2303	721	6611	27664	37299	40900	30300	149	18.2	85	145	397	536	159	46518
7	505	1871	581	7383	20907	30742	30500	22700	128	13.2	88	85	314	349	92	46519
7	585	2862	884	6556	27664	37966	44900	30500	158	18.8	77	122	376	517	135	46520
7	625	2496	831	7032	23647	34006	36700	26100	142	16.8	85	133	377	410	147	46521
8	0	484	319	5096	32346	38245	41900	36100	100	9.5	59	181	349	423	202	46522
8	15	548	386	4805	34131	39870	43700	36700	112	14.9	77	181	385	499	195	46523
8	75	352	200	4316	17428	22296	26000	18800	73	10.0	58	142	283	345	153	46524
9	10	2771	645	5336	25678	34430	43000	27700	128	16.2	76	147	368	681	159	46525
9	70	1023	338	5239	20602	27202	32900	22200	109	13.6	83	110	316	569	119	46526
9	110	2838	732	5335	27237	36142	45100	29800	114	16.9	86	136	353	703	149	46527
9	160	2279	783	6382	25326	34770	41300	27800	173	24.0	89	117	403	736	128	46528
9	230	3106	747	6823	28674	39350	46100	31100	128	18.0	81	196	423	673	213	46529
9	250	3967	804	6267	30215	41253	47900	32700	164	20.2	77	192	453	779	208	46530
9	380	2435	811	6113	27086	36445	43500	29700	146	23.7	96	140	406	755	154	46531
9	430	3046	1023	7497	27991	39557	47000	31700	161	24.9	81	132	398	722	149	46532
9	520	2220	796	7035	24652	34703	42400	27300	124	15.6	91	67	297	611	74	46533

CORE	DEPTH	Fe_{WA}	Fe_{HA}	Fe_{HHA}	Fe_{R}	Fe_{SUM}	Fe_{T}	Fe_{TR}	Mn_{WA}	Mn_{HA}	Mn_{HHA}	Mn_{R}	Mn_{SUM}	Mn_{T}	Mn_{TR}	ID
	cm	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	
18	10	676	312	3963	36215	41166	43600	41200	79	6.8	48	267	401	266	304	46546
18	30	876	387	5052	31470	37785	40500	35600	103	8.8	60	230	402	261	260	46547
18	60	614	230	4127	25493	30464	31800	28200	107	10.9	50	265	433	284	293	46548
18	90	727	244	3831	27658	32460	33900	30800	141	15.4	50	278	485	363	310	46549
18	130	631	190	4219	28762	33802	39600	32100	144	9.4	49	234	436	337	261	46550
18	160	772	304	4430	29704	35210	36800	33300	109	7.2	51	210	377	520	235	46551
18	200	853	340	4230	26640	32063	36400	30000	116	5.1	52	163	336	526	183	46552
18	250	1950	908	5667	26596	35121	41800	30500	101	11.0	68	97	277	488	111	46553
18	310	1941	942	5327	29117	37327	41700	32900	82	8.9	52	123	266	400	139	46554
18	360	3638	1182	5247	29653	39720	45500	34400	110	14.2	57	118	299	511	137	46555
18	420	1593	644	4585	25020	31842	36900	27800	92	7.3	49	96	245	432	107	46556
18	450	2046	727	5131	21414	29318	40100	23900	84	9.2	61	92	246	531	103	46557
18	500	3204	1218	4650	33321	42393	49900	38300	146	19.6	71	185	422	795	213	46558
18	570	3774	1199	5340	29116	39429	44000	33200	104	11.8	61	122	299	559	139	46559
18	600	3050	996	5545	27412	37003	44600	31400	113	12.2	69	106	300	582	121	46560
18	660	2101	748	5897	22593	31339	40000	25500	94	16.1	77	86	273	563	97	46561
18	720	2456	761	5316	22403	30936	38800	25200	87	16.1	66	106	275	534	119	46562
18	740	2276	864	5476	25017	33633	42200	28300	106	18.4	70	118	312	579	133	46563
18	790	1596	495	4850	18564	25505	32500	20400	78	12.4	63	155	308	524	170	46564
18	860	2763	783	5401	28788	37735	42600	32900	117	17.4	68	189	391	590	216	46565
19	0	546	551	3915	16388	21400	34400	34000	147	249.3	64	54	514	800	112	46534
19	2	379	485	3872	30155	34891	35200	37600	102	268.4	66	221	658	746	276	46535
19	5	260	206	3120	27805	31391	35800	34800	55	9.0	37	173	274	183	217	46536
19	7	266	135	3051	28880	32332	35100	36100	44	8.5	38	190	281	179	238	46537
19	10	317	121	2796	27914	31148	34400	35200	47	9.1	37	155	249	182	196	46538
19	14	353	119	3005	28037	31514	34400	35400	52	8.9	38	173	272	185	219	46539
19	16	384	126	2886	29896	33292	35100	37000	55	8.5	38	198	299	206	245	46540
19	19	397	139	3222	31990	35748	36200	39300	58	8.1	40	208	314	233	255	46541
19	22	486	183	2976	32673	36318	37200	39700	63	8.4	41	239	352	236	291	46542
19	25	471	154	3592	30476	34693	36000	38000	62	3.4	41	180	286	178	224	46543
19	28	616	204	3539	33252	37611	38400	38800	68	4.8	42	231	346	208	270	46544
19	32	490	190	3686	31994	36360	38800	38500	65	4.0	42	217	328	197	261	46545
28	33	1361	510	5004	35381	42256	46700	39400	99	13.6	57	232	401	587	258	46566
28	60	1198	300	4544	41527	47569	50100	48400	223	11.8	52	382	669	804	445	46567
28	90	1167	335	4020	40981	46503	47300	48100	250	7.9	52	380	690	843	446	46578
28	140	1243	285	3883	40793	46204	49300	47600	236	4.7	49	397	686	845	463	46579
28	210	1349	375	3965	40262	45951	50900	47200	260	7.2	53	399	719	916	468	46580
28	280	1580	484	4382	41191	47637	50600	47400	259	17.6	58	415	750	949	478	46568
28	320	1598	397	3851	38184	44030	49400	44400	273	15.9	56	399	744	947	464	46569
28	360	1683	462	4320	40569	47034	49500	46900	231	6.8	49	431	718	894	498	46570
28	400	1377	400	4170	39358	45305	50000	45500	258	10.1	53	404	725	918	467	46571
28	450	1566	396	3990	41022	46974	49700	47700	232	8.0	52	414	706	861	481	46572
28	510	1552	379	3985	39494	45410	48700	46300	234	8.5	53	396	691	857	464	46573
28	540	1542	369	4034	38375	44320	46700	45200	227	6.5	55	405	693	853	477	46574
28	590	1336	362	4130	36892	42720	49000	43300	216	7.2	58	397	678	916	466	46575
28	610	1315	333	3916	37108	42672	46100	43300	215	7.1	57	400	679	872	467	46576
28	660	1363	362	3885	38219	43829	45800	44700	223	7.7	54	412	697	867	482	46577
28	680	1365	367	4053	37022	42807	46100	43200	221	6.2	53	405	685	839	472	46581
28	720	1532	524	4049	32218	38323	43000	36200	121	7.9	56	326	511	598	366	46582
28	760	1352	549	3902	38822	44625	48000	45300	139	8.5	58	318	523	641	371	46583
28	800	1579	434	4085	40138	46236	50800	47000	238	7.2	50	420	715	981	492	46584
28	850	1449	399	4308	42324	48480	50200	49100	233	7.9	55	359	655	916	417	46585
28	890	1631	839	4342	43616	50428	50100	47000	100	19.6	68	336	524	715	362	46586
28	930	1490	308	4068	39674	45540	48100	47400	262	4.7	51	352	669	921	420	46587
28	970	1537	343	3645	38110	43635	47600	45100	259	7.9	49	352	668	966	417	46588
28	1010	1877	318	4101	36638	42934	47000	44900	253	5.7	46	297	602	888	364	46589
28	1050	1858	270	4259	33690	40077	35400	42700	248	4.8	47	256	556	634	325	46590
28	1110	1927	269	4194	34988	41378	44100	43900	231	4.7	48	280	563	789	351	46591

CORE	DEPTH	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Ca_{TR}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{TR}	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}	
1	0	400	624	190	1706	2920	7800	1900	0	0	0	17	17	18	19	46401
1	80	400	593	182	2162	3337	7100	2400	0	0	0	18	18	17	20	46402
1	122	300	577	179	1532	2588	6000	1700	0	0	0	16	16	18	18	46403
1	202	300	603	182	1542	2627	5600	1700	0	0	0	16	16	17	18	46404
1	262	400	577	200	1810	2987	6100	2000	0	0.3	0	18	18	17	20	46405
1	280	400	626	168	1716	2910	6200	1900	0	0.6	0	18	19	19	20	46406
1	340	300	589	161	1542	2592	6000	1700	0	0.6	0	25	26	22	28	46407
1	410	400	558	188	1978	3124	7400	2200	0	0.4	0	24	25	21	27	46408
1	440	400	592	181	2179	3352	5900	2400	0	0	0.1	24	24	23	26	46409
1	500	200	540	188	1651	2579	4900	1800	0.2	0	0.2	25	25	24	27	46410
1	560	200	506	178	1647	2531	4700	1800	0.3	0	0.1	25	25	25	27	46411
1	590	200	481	210	1926	2817	5600	2100	0.4	0	0.1	25	25	24	27	46412
1	650	200	431	184	1376	2191	4900	1500	0.4	0	0.1	23	23	27	25	46413
1	720	200	225	100	1229	1754	3600	1400	0.7	0	0.2	25	25	31	28	46414
2	0	700	443	474	2769	4386	13800	3000	0	0	0	8	8	11	9	46415
2	30	500	286	402	2895	4083	11000	3100	0	0	0	8	8	9	9	46416
2	80	500	293	413	2612	3818	13100	2800	0.3	0	2.0	9	12	8	10	46442
2	100	600	480	525	3118	4723	15700	3400	1.0	0.1	0.7	15	16	14	16	46443
2	120	700	546	502	2928	4676	16200	3200	0.5	0	0.6	15	16	12	16	46444
2	140	600	576	544	2648	4368	18300	2900	0.7	0	0.6	16	17	12	17	46445
2	160	600	492	456	2840	4388	16200	3100	0.5	0	0.8	12	13	12	13	46446
2	180	800	610	528	3280	5218	14800	3600	1.0	0.1	0.8	16	18	15	18	46447
2	230	1000	600	542	3154	5296	21800	3500	1.0	0	0.9	16	18	15	18	46448
2	250	900	629	544	3150	5223	23400	3500	0.9	0.1	0.9	17	19	16	19	46449
2	270	1000	548	498	3416	5462	20100	3800	0.9	0.1	1.1	17	19	17	19	46450
2	290	800	509	481	3371	5161	15700	3700	0.3	0	1.3	10	12	12	11	46451
2	295	10700	511	532	3265	15008	14600	3600	0.3	0	1.1	13	14	15	14	46452
2	300	1000	524	530	3690	5744	16300	4100	0.1	0	1.1	13	14	15	14	46453
2	310	1100	576	498	3518	5692	16400	3900	0.1	0	1.1	13	14	14	14	46454
2	330	1000	593	529	4291	6413	16800	4800	0.1	0	1.2	15	16	15	17	46455
2	380	1000	674	540	4386	6600	18600	4900	0.2	0	1.1	14	16	16	16	46456
2	400	1100	529	537	3424	5590	15300	3800	0.2	0	1.1	18	19	14	20	46457
2	420	10800	525	503	3254	15082	13800	3600	0.1	0	1.1	14	16	12	16	46458
2	440	900	646	525	3479	5550	16500	3900	0.1	0	1.3	17	18	14	19	46459
2	470	1100	599	533	3810	6042	17400	4300	0.1	0	1.7	19	21	15	22	46460
2	515	500	287	409	2230	3426	9500	2400	0.1	0	1.5	9	11	9	10	46461
2	530	1200	752	518	3788	6258	16600	4300	0.2	0.1	1.5	19	21	15	22	46462
2	560	1300	723	555	3788	6366	17400	4300	0.2	0.1	1.3	18	19	15	20	46463
2	570	1300	732	580	3620	6232	17000	4100	0.3	0.1	1.6	19	21	15	21	46464
2	590	1200	774	551	2664	5189	22900	3000	0	0.1	0.5	20	20	16	22	46465
2	610	1200	707	591	3029	5527	21900	3400	0	0	0.7	21	22	20	24	46466
3	0	900	398	385	2918	4601	15400	3200	0	0	0	11	11	10	12	46417
3	2	900	430	433	2833	4596	15900	3100	0	0	0	10	10	9	11	46418
3	5	1000	410	369	2843	4622	17900	3100	0	0	0	8	8	10	9	46419
3	8	800	424	398	2656	4278	17600	2900	0	0	0	8	8	11	9	46420
3	12	800	393	391	2559	4143	11700	2800	0	0	0	8	8	8	9	46421
3	15	900	415	376	2840	4531	16400	3100	0	0	0	9	9	10	10	46422
3	18	900	353	345	2858	4456	14400	3100	0	0	0	8	8	7	9	46423
3	21	700	355	400	2778	4233	14200	3000	0.6	0.2	0.3	8	9	7	9	46424
3	24	800	376	432	2947	4555	14400	3200	0.4	0.2	0.6	6	8	7	7	46425
3	27	700	391	483	2852	4426	15500	3100	0.5	0.3	0.5	6	7	8	6	46426
4	0	1000	1237	603	2762	5602	23000	3300	1.8	0.3	0.4	28	31	30	34	46427
4	3	1500	1214	550	3167	6431	22900	3700	1.4	0.3	0.3	27	29	28	31	46428
4	4	1100	1153	577	2828	5658	23900	3300	1.4	0.2	0.2	29	31	29	34	46429
4	6	1400	1005	586	2746	5737	23700	3200	1.5	0.3	0	28	30	29	33	46430
4	8	1100	1066	553	3103	5822	23200	3600	1.5	0.3	0	28	29	28	32	46431
4	12	1700	878	560	2927	6065	24000	3400	1.3	0.2	0	28	29	28	32	46432
4	15	1500	821	555	2795	5671	23900	3300	1.1	0.2	0	26	28	29	31	46433
4	17	1400	872	550	2419	5241	26000	2800	1.0	0	0	28	29	28	32	46434
4	20	1000	1126	593	2678	5397	23900	3100	0.8	0	0	26	27	27	30	46435
4	23	1400	764	560	2511	5235	23400	2900	1.0	0	0	27	28	29	31	46436
4	25	1300	1144	545	2604	5593	23700	3000	1.0	0.1	0	27	28	27	31	46437
4	30	1400	1269	569	2330	5568	27400	2700	0.9	0.1	0	27	28	27	31	46438
4	35	1300	1131	535	3100	6066	29600	3600	0.8	0.2	0	28	29	27	32	46439
4	39	1100	1156	506	2402	5164	31900	2800	0.9	0.1	0	27	28	27	31	46440
4	42	1000	1115	476	2927	5518	32700	3400	0.9	0.2	0	28	29	27	32	46441

CORE	DEPTH	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Ca_{TR}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{TR}	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}	
5	5	1700	1097	444	2514	5755	26000	2900	0	0	0	24	24	29	28	46467
5	20	1800	1278	554	3444	7076	28200	4000	0	0.1	0	25	25	30	29	46468
5	40	1700	1138	565	3028	6431	27500	3500	0	0.8	0	26	27	30	30	46469
5	80	1500	1136	585	3575	6796	26200	4100	0	0.7	0	28	29	33	32	46470
5	130	1500	1033	531	2102	5166	22800	2400	0	0.6	0	27	28	30	31	46471
5	150	1300	1024	529	2826	5679	21400	3200	0	0.6	0	26	26	31	29	46472
5	160	1300	1044	512	2458	5314	23300	2800	0	0.5	0	24	24	31	27	46473
5	180	400	709	328	2457	3894	11000	2700	0.5	0.4	0.2	25	26	28	27	46474
5	220	500	779	340	2736	4355	10000	3000	0.7	0.3	0.3	25	26	24	27	46475
5	270	1600	1042	484	3073	6199	29200	3500	0.9	0.3	0.2	21	22	22	24	46476
5	300	1600	1056	497	3230	6383	33100	3700	1.2	0.3	0.2	20	22	22	23	46477
5	360	900	807	425	2983	5115	18400	3300	1.1	0	0.4	22	23	23	24	46478
5	400	700	769	460	2870	4799	19700	3200	1.9	0	0.9	20	23	23	22	46479
5	450	1100	781	510	2731	5122	25000	3100	1.9	0	0.7	18	20	20	20	46480
5	470	1100	924	505	2673	5202	23100	3000	1.6	0	0.9	17	19	19	19	46481
5	550	1200	811	524	2845	5380	25900	3200	1.4	0	0.8	20	22	20	22	46482
5	560	1100	816	570	2911	5397	26300	3300	0.1	0	0.7	20	21	20	23	46483
5	580	1500	904	611	2888	5903	22300	3300	0.7	0	0.5	17	18	19	19	46484
5	610	1000	740	561	2848	5149	18200	3200	0.4	0	0.6	18	19	18	20	46485
5	620	900	697	486	2947	5030	16800	3300	0.3	0	0.5	19	20	18	21	46486
5	650	1100	537		3112		15200	3500	0.4	0		18		18	20	46487
5	680	800	610		2899		14000	3200	0.2	0		18		18	20	46488
5	750	1000	736	535	2679	4950	12700	3000	0.3	0	0.7	20	21	19	22	46489
5	820	800	816	595	2598	4809	13600	2900	0.3	0	0.8	21	22	21	23	46490
5	870	800	634		2433		8100	2700	0.3	0.1		22		22	24	46491
5	910	900	765		3588		10800	4000	0.1	0		22		21	24	46492
5	930	700	661		3831		11900	4300	0.1	0		21		22	24	46493
5	980	900	613	611	3674	5798	13200	4100	0.8	0.3	0.5	22	24	18	25	46494
5	1020	1000	604	575	2940	5119	16300	3300	0.1	0	0.7	16	17	19	18	46495
5	1030	1000	598	493	3755	5846	14000	4200	0.9	0.1	0.5	18	19	19	20	46496
6	10	1200	620	470	3584	5874	12300	3900	1.7	0.2	1.3	21	24	22	23	46497
6	60	900	543	414	2225	4082	10500	2400	1.7	0.2	1.1	23	26	25	25	46498
6	130	1300	580	491	2298	4669	11500	2500	0.4	0.1	1.2	23	25	24	25	46499
6	170	1400	531	436	2387	4754	12600	2600	0	0.1	1.2	21	22	21	23	46500
6	190	900	476	379	2766	4521	10600	3000	0	0.2	0.8	26	27	24	28	46501
6	230	700	434	375	2506	4015	7900	2700	0	0.6	1.2	24	26	26	26	46502
6	260	600	385	377	2340	3702	6400	2500	0.2	0.7	1.9	25	28	27	27	46503
6	310	1200	485	391	2665	4741	10600	2900	0	0.6	1.3	23	25	26	25	46504
6	370	1900	695	434	2902	5931	14100	3200	0.1	0.3	1.6	18	20	23	20	46505
6	440	1200	370	234	1905	3709	8700	2100	0.6	0.1	2.2	12	15	15	13	46506
6	510	1800	765	185	1475	4225	6100	1600	0.7	0.1	1.6	7	10	18	8	46507
7	0	2200	887	187	3596	6870	16600	4000	0.7	0.1	0.5	24	26	30	27	46508
7	40	3100	612	153	2765	6630	25400	3100	0.8	0.2	0.3	13	15	16	15	46509
7	70	2600	591	162	3168	6521	20700	3500	0.9	0.1	0.3	15	17	18	17	46510
7	120	1400	407	295	2621	4723	13000	2800	0.8	0.1	0.2	11	12	17	12	46511
7	160	1000	477	354	3066	4897	10700	3300	1.5	0.4	1.4	20	24	25	22	46512
7	215	1400	498	430	2944	5272	12400	3200	2.3	0.2	1.4	17	20	23	18	46513
7	295	1000	430	339	2225	3994	10500	2400	1.1	0	1.6	18	20	21	19	46514
7	315	1400	653	442	1934	4429	22800	2100	0.1	0	1.2	18	20	23	20	46515
7	365	1400	350	448	1567	3765	12500	1700	0.3	0	1.6	1	3	18	1	46516
7	425	900	405	482	2116	3903	10000	2300	0.3	0	0.8	7	8	26	8	46517
7	485	1700	556	465	1826	4547	14900	2000	0.2	0	1.3	5	7	24	6	46518
7	505	1500	405	419	1842	4166	10700	2000	0.3	0	1.5	2	4	22	2	46519
7	585	2000	508	491	1814	4813	17900	2000	0.3	0	1.0	7	9	24	8	46520
7	625	2200	503	512	2084	5299	15700	2300	0.2	0	1.6	4	5	23	4	46521
8	0	1800	903	361	2778	5842	18300	3100	0.2	0	0.2	12	12	27	13	46522
8	15	600	629	346	2790	4365	9100	3000	0.4	0	0.1	8	9	23	9	46523
8	75	1200	389	266	3708	5563	11100	4000	2.8	2.4	3.8	16	25	15	17	46524
9	10	1100	474	348	1854	3776	6200	2000	0	0	1.0	16	17	25	17	46525
9	70	1300	493	326	2506	4625	9500	2700	0	0	1.0	6	7	18	7	46526
9	110	1600	631	405	1919	4555	12800	2100	0	0	1.2	16	17	26	17	46527
9	160	1900	519	415	1913	4747	11400	2100	0	0	1.5	13	14	66	14	46528
9	230	1100	516	382	1936	3934	6000	2100	0	0	1.0	16	17	26	17	46529
9	250	900	413	352	1940	3605	8500	2100	0	0	0.8	18	19	28	20	46530
9	380	2000	652	440	2006	5098	14600	2200	0	0	1.2	15	16	24	16	46531
9	430	3300	942	507	1854	6603	12900	2100	0	0	1.6	16	17	28	18	46532
9	520	2100	687	523	1535	4845	13000	1700	0	0.1	1.7	11	13	24	12	46533

CORE	DEPTH	Ca_{WA}	Ca_{HA}	Ca_{HHA}	Ca_{R}	Ca_{SUM}	Ca_{T}	Ca_{TR}	Cu_{WA}	Cu_{HA}	Cu_{HHA}	Cu_{R}	Cu_{SUM}	Cu_{T}	Cu_{TR}	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}	
18	10	2800	1472	591	4131	8994	25500	4700	1.6	0.1	1.7	31	34	33	35	46546
18	30	2700	1432	512	3182	7826	22200	3600	2.3	0.3	1.8	29	34	36	33	46547
18	60	2500	1333	467	2802	7102	23500	3100	1.7	0	1.2	15	18	22	17	46548
18	90	2300	1266	648	2784	6998	20400	3100	1.8	0	1.5	16	19	19	18	46549
18	130	2300	1272	491	2330	6393	21000	2600	2.0	0	1.9	15	19	23	17	46550
18	160	2700	1652	405	2408	7165	22700	2700	2.2	0	1.5	14	18	12	16	46551
18	200	2500	1851	473	3286	8110	20100	3700	0.7	0.4	0	15	16	9	17	46552
18	250	3000	1751	607	2267	7625	22900	2600	0.3	0.1	0	17	17	10	19	46553
18	310	2900	1754	584	2921	8159	19900	3300	0.2	0.2	0	18	18	11	20	46554
18	360	3100	1756	587	2500	7943	22600	2900	0.4	0.2	0	17	18	12	20	46555
18	420	2200	1584	509	2610	6903	16300	2900	0.2	0.1	0	14	14	8	15	46556
18	450	2200	1543	552	2688	6983	23700	3000	0.3	0	0	16	16	10	18	46557
18	500	3000	1727	571	3480	8778	24300	4000	0.2	0.1	0	23	24	21	27	46558
18	570	2700	1760	607	3333	8400	23800	3800	0.1	0	0	18	19	15	21	46559
18	600	3100	1581	653	3143	8477	24100	3600	0.3	0	0	19	20	13	22	46560
18	660	2100	1383	610	2747	6840	20000	3100	0.1	0	0.7	12	13	11	14	46561
18	720	2100	1817	605	3023	7545	17500	3400	0.1	0	0.6	12	12	8	13	46562
18	740	2600	1910	644	3271	8425	19900	3700	0.1	0	0.7	13	14	10	15	46563
18	790	1900	929	465	2639	5933	16300	2900	0.1	0	0.7	9	10	4	10	46564
18	860	3200	1792	670	3063	8725	20300	3500	0	0	0.6	16	16	10	18	46565
19	0	3000	1283	517	2169	6969	50200	4500	1.9	0.2	2.0	12	16	32	25	46534
19	2	3200	1028	565	3850	8643	44900	4800	1.7	0.2	3.1	20	25	32	25	46535
19	5	3100	1043	560	3436	8139	48300	4300	1.3	0.2	1.8	24	27	34	30	46536
19	7	3000	1251	560	3520	8331	49900	4400	0.1	0.3	2.2	23	26	34	29	46537
19	10	2500	1294	539	3251	7584	50900	4100	0	0.4	1.9	26	28	32	33	46538
19	14	2500	1230	554	3326	7610	51200	4200	0	0.7	2.0	24	26	32	30	46539
19	16	2700	1418	547	3636	8301	47500	4500	0.1	0.9	2.1	24	27	32	30	46540
19	19	2800	1121	528	3663	8112	45900	4500	0	1.1	2.0	24	27	32	29	46541
19	22	2900	1157	547	3786	8390	44100	4600	0	0.9	2.1	23	26	33	28	46542
19	25	3000	1171	586	3529	8286	47800	4400	1.4	0.1	2.3	26	30	33	33	46543
19	28	3400	1339	507	3857	9103	33100	4500	1.3	0	2.3	27	31	29	32	46544
19	32	3500	1524	549	3407	8980	39400	4100	1.4	0	2.9	26	30	32	31	46545
28	33	2000	1895	520	3143	7558	14600	3500	1.2	0.2	0.9	26	28	31	29	46566
28	60	3200	1637	437	2917	8191	29900	3400	1.1	0.2	2.0	20	23	27	23	46567
28	90	3300	1631	693	3323	8947	31500	3900	0.7	0.1	1.3	20	23	29	24	46578
28	140	3500	1542	510	3771	9323	33000	4400	0.6	0.3	1.4	20	22	25	23	46579
28	210	3600	2017	552	3668	9837	30900	4300	0.4	0.1	0.9	22	24	28	26	46580
28	280	3300	1871	544	3824	9539	29700	4400	0.3	0	1.0	23	25	28	27	46568
28	320	3400	1741	505	3268	8914	26300	3800	0.3	0	0.8	22	23	26	25	46569
28	360	3200	1610	716	3893	9419	28500	4500	0.2	0	1.5	24	26	30	28	46570
28	400	3400	1698	796	3287	9181	26200	3800	0.4	0	1.6	22	24	28	26	46571
28	450	3800	1737	746	4042	10325	27700	4700	0.3	0	1.5	22	24	28	26	46572
28	510	3800	1537	727	4180	10244	29600	4900	0.2	0.1	1.5	22	24	28	26	46573
28	540	3400	1580	737	4839	10556	31600	5700	0.2	0	1.5	22	24	27	26	46574
28	590	3800	1450	849	4516	10615	35600	5300	0.2	0	1.5	21	23	28	25	46575
28	610	3300	1480	871	5142	10793	29800	6000	0.4	0.1	1.3	20	22	26	23	46576
28	660	3500	1562	739	4873	10675	29000	5700	0.3	0	1.4	21	22	27	24	46577
28	680	3300	1721	665	4285	9971	28000	5000	0.4	0.1	1.4	21	22	28	24	46581
28	720	2500	1534	611	3738	8383	18500	4200	0.9	0.3	0.5	24	26	31	27	46582
28	760	3600	1958	695	3514	9767	33000	4100	0.5	0	0.8	21	22	27	24	46583
28	800	3500	1576	703	5039	10818	41900	5900	0.5	0.1	1.0	24	26	24	28	46584
28	850	3500	1976	665	4051	10192	34200	4700	0.5	0.2	1.4	23	25	21	27	46585
28	890	900	1046	426	3155	5527	10900	3400	0.3	0.1	0.9	26	27	21	28	46586
28	930	3500	1667	668	5022	10857	44900	6000	1.0	0.3	1.9	21	24	23	25	46587
28	970	3600	1627	1964	5239	12430	42000	6200	0.4	0.2	1.2	23	25	25	27	46588
28	1010	3500	1682	719	4896	10797	59800	6000	0.4	0.3	2.1	22	25	25	27	46589
28	1050	3200	1521	844	4892	10457	49900	6200	0.2	0.1	2.3	20	22	23	25	46590
28	1110	3100	1567	747	5340	10754	71800	6700	0.4	0.1	2.0	18	21	21	23	46591

CORE	DEPTH	Zn_{WA}	Zn_{HA}	Zn_{HHA}	Zn_{R}	Zn_{SUM}	Zn_{T}	Zn_{TR}	Ni_{WA}	Ni_{HA}	Ni_{HHA}	Ni_{R}	Ni_{SUM}	Ni_{T}	Ni_{TR}	ID
	cm	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	
1	0	3.2	2.7	14.9	58	79	75	65	1.2	0.7	3.8	7	13	17	8	46401
1	80	4.0	2.9	16.5	60	84	82	67	1.2	0.6	3.9	17	23	19	19	46402
1	122	4.2	2.7	16.7	61	85	83	68	1.0	1.6	4.7	9	16	22	10	46403
1	202	3.6	2.5	16.3	63	86	84	70	2.4	1.2	4.4	14	22	28	15	46404
1	262	4.0	2.9	17.4	62	87	85	69	1.5	1.9	4.3	19	27	18	21	46405
1	280	3.6	2.9	17.5	64	88	85	71	1.3	1.7	5.1	14	23	23	16	46406
1	340	4.2	3.0	16.7	64	88	85	71	1.4	0.8	3.3	23	28	26	25	46407
1	410	4.1	2.9	16.9	62	86	85	69	2.0	0.7	4.6	13	21	22	15	46408
1	440	4.9	2.8	16.8	64	89	87	71	1.1	1.7	2.8	23	28	21	25	46409
1	500	5.9	3.9	18.7	68	96	97	74	0.3	0.3	5.3	17	22	16	18	46410
1	560	7.5	4.4	20.1	65	97	98	71	0.6	0.6	5.0	24	30	31	26	46411
1	590	7.5	4.1	20.4	69	101	102	75	0.5	1.1	5.9	24	31	28	26	46412
1	650	11.3	5.3	23.0	68	107	114	74	1.5	0.3	6.8	20	29	27	22	46413
1	720	39.1	15.9	25.2	52	132	178	59	3.6	0.3	5.0	20	29	28	23	46414
2	0	3.7	1.5	10.1	31	47	42	34	1.0	0.8	3.3	1	6	7	1	46415
2	30	3.1	0.6	8.7	26	39	36	28	0.1	0.3	3.6	0	4	0	0	46416
2	80	3.0	0.7	8.6	31	43	38	33	0	0	2.2	0	2	11	0	46442
2	100	4.7	1.3	11.6	47	64	55	51	1.1	0.7	3.3	5	10	15	5	46443
2	120	3.9	1.0	10.9	44	60	54	48	1.1	0	4.1	11	16	13	12	46444
2	140	4.3	0.9	11.6	47	63	45	51	0.9	0.3	4.2	9	15	5	10	46445
2	160	3.8	0.9	10.6	42	57	39	46	0.4	0.7	3.7	1	6	10	1	46446
2	180	6.1	1.6	12.3	58	78	52	64	0.9	0.6	4.4	0	6	13	0	46447
2	230	5.6	1.4	12.9	58	78	53	64	0.8	0.7	6.0	2	9	10	2	46448
2	250	5.7	1.5	13.5	59	80	57	66	0.9	1.1	4.2	1	7	19	1	46449
2	270	6.9	1.6	13.4	59	81	71	66	0.8	0	3.8	9	14	15	10	46450
2	290	5.0	1.0	11.1	38	55	56	42	2.4	0.1	2.5	5	10	9	6	46451
2	295	4.8	1.0	12.0	42	60	64	46	2.9	0	3.0	12	18	13	13	46452
2	300	4.9	1.0	11.9	45	63	63	50	2.4	0.2	3.4	6	12	18	7	46453
2	310	4.7	1.0	12.5	47	65	62	52	1.3	0.4	4.1	14	19	11	15	46454
2	330	6.1	1.1	12.5	54	73	67	60	1.2	0	4.9	10	16	19	11	46455
2	380	6.0	1.2	13.5	55	75	71	61	1.3	0	3.2	6	11	27	7	46456
2	400	5.1	1.1	13.6	51	71	72	57	1.3	0	3.5	8	13	21	9	46457
2	420	5.1	1.0	12.4	46	65	66	51	2.6	0.3	3.5	19	25	13	21	46458
2	440	6.8	1.4	14.6	58	81	80	65	1.9	0	4.3	7	13	18	8	46459
2	470	6.6	1.6	14.5	59	82	86	67	2.1	0.1	4.5	19	26	17	22	46460
2	515	5.2	1.3	10.6	34	51	56	37	1.8	0.6	2.6	4	9	7	4	46461
2	530	7.2	1.6	14.8	64	88	92	73	1.2	1.0	5.1	19	26	33	21	46462
2	560	7.1	1.6	14.0	62	84	92	70	1.2	0.8	4.3	14	20	28	16	46463
2	570	6.9	1.7	14.4	64	87	92	73	1.7	0.6	5.2	24	31	30	27	46464
2	590	7.2	1.6	12.7	63	85	90	71	2.6	0.8	3.7	20	27	22	22	46465
2	610	7.5	1.7	13.8	61	84	90	69	2.2	0.5	4.0	12	19	21	14	46466
3	0	4.5	0.8	9.6	26	41	37	29	0.6	0.8	3.4	1	6	0	1	46417
3	2	4.3	0.8	9.8	28	43	38	31	0.3	0.4	4.0	0	5	0	0	46418
3	5	3.5	0.6	9.0	27	40	36	29	0.5	0.6	4.0	0	5	1	0	46419
3	8	3.2	0.8	8.8	26	38	36	28	1.7	0.9	4.8	0	7	0	0	46420
3	12	2.5	0.6	8.4	24	35	32	26	0.7	0.7	2.5	0	4	0	0	46421
3	15	3.0	0.6	9.1	27	39	36	29	1.2	0	4.0	0	5	2	0	46422
3	18	2.5	0.5	7.8	22	33	32	24	0.6	0.6	2.5	1	5	0	1	46423
3	21	2.3	0.8	7.9	19	30	30	21	0.6	0	3.1	0	4	0	0	46424
3	24	2.3	0.5	8.6	20	32	28	22	1.2	0	2.3	0	4	0	0	46425
3	27	2.5	0.6	8.8	21	33	31	23	1.4	0	1.9	0	3	0	0	46426
4	0	12.2	3.1	20.2	72	107	103	86	6.9	2.1	6.1	10	25	30	12	46427
4	3	11.3	2.4	19.6	68	101	102	79	7.4	1.3	5.8	8	22	33	9	46428
4	4	11.3	2.7	20.1	69	104	101	81	4.9	0.8	6.3	20	32	28	23	46429
4	6	10.9	2.5	19.8	69	102	101	80	6.7	0.7	6.2	15	29	28	18	46430
4	8	10.2	2.7	19.4	69	101	99	80	5.1	0.7	6.7	11	24	28	13	46431
4	12	9.9	2.5	19.4	68	100	99	79	5.7	0.9	6.8	11	25	32	13	46432
4	15	9.2	2.6	19.8	69	101	98	82	4.7	1.1	6.2	19	31	35	22	46433
4	17	9.2	2.5	19.3	73	104	98	84	4.6	1.0	6.4	16	28	33	18	46434
4	20	7.8	2.1	19.0	66	95	93	76	3.8	0.5	6.7	10	21	37	12	46435
4	23	7.7	2.2	18.8	71	100	97	82	4.0	0.5	6.8	17	29	32	20	46436
4	25	7.5	2.2	19.3	70	99	93	81	3.7	1.6	5.3	14	24	33	16	46437
4	30	7.8	2.4	19.9	73	103	97	85	4.3	1.1	7.3	14	27	34	16	46438
4	35	6.8	2.1	19.2	71	100	98	83	3.6	1.9	6.3	15	27	29	18	46439
4	39	7.0	2.1	19.0	74	102	96	86	3.3	2.3	6.1	17	29	37	20	46440
4	42	7.3	2.4	19.1	75	104	98	87	4.8	1.2	6.0	21	33	31	24	46441

CORE	DEPTH	Zn_{WA}	Zn_{HA}	Zn_{HHA}	Zn_{R}	Zn_{SUM}	Zn_{T}	Zn_{TR}	Ni_{WA}	Ni_{HA}	Ni_{HHA}	Ni_{R}	Ni_{SUM}	Ni_{T}	Ni_{TR}	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}	
5	5	7.6	2.3	19.7	71	101	112	82	4.2	1.4	7.2	16	29	32	19	46467
5	20	7.5	2.1	18.5	71	100	109	83	3.8	1.2	7.5	21	33	40	24	46468
5	40	7.0	2.2	19.0	71	99	106	82	4.0	0.7	6.5	19	30	38	22	46469
5	80	6.5	1.9	18.8	69	96	109	79	3.8	0.8	7.1	24	35	34	27	46470
5	130	6.9	2.1	19.4	67	95	106	76	2.4	0.6	6.2	19	28	33	22	46471
5	150	6.5	2.3	18.7	68	95	107	77	2.8	0.5	5.6	16	25	29	18	46472
5	160	6.9	2.4	19.2	61	89	109	69	2.6	0	6.4	25	34	37	29	46473
5	180	6.7	3.0	18.6	65	93	106	71	1.5	0.9	6.0	21	29	32	23	46474
5	220	7.2	2.7	18.0	69	97	107	76	3.6	0	5.8	12	21	35	13	46475
5	270	6.2	2.0	17.9	61	87	99	69	1.4	0.2	6.3	13	21	33	15	46476
5	300	5.5	1.7	17.2	58	83	87	67	1.3	0.6	5.5	9	16	25	10	46477
5	360	6.8	2.2	17.7	59	85	94	65	2.1	0.4	5.8	16	25	36	18	46478
5	400	7.5	2.3	18.1	65	92	101	72	1.8	1.0	6.4	11	20	36	12	46479
5	450	6.5	1.7	16.4	58	83	90	66	1.4	0.6	5.4	1	8	30	1	46480
5	470	6.1	1.8	16.0	55	79	87	62	1.2	0.2	5.4	6	13	24	7	46481
5	550	7.3	1.9	14.9	60	84	88	67	2.1	0	4.7	6	13	35	7	46482
5	560	7.7	1.8	15.4	60	85	91	68	2.6	0.4	5.0	13	21	30	15	46483
5	580	6.7	1.7	15.6	56	80	90	64	3.0	0.2	5.7	18	27	20	21	46484
5	610	6.7	1.7	14.5	57	80	86	64	2.3	0	4.3	11	17	20	12	46485
5	620	7.0	1.8	15.1	60	84	89	67	2.7	0.5	6.2	20	29	18	22	46486
5	650	6.2	1.8		61		89	69	1.7	0		25		29	28	46487
5	680	5.9	1.9		63		89	70	2.9	0.6		23		21	25	46488
5	750	6.7	1.8	18.0	61	87	95	68	1.7	0.3	5.8	14	22	23	16	46489
5	820	8.5	2.3	21.5	64	96	103	71	2.8	0	6.1	24	33	26	27	46490
5	870	6.8	2.4		68		102	76	2.5	0		20		35	22	46491
5	910	7.2	2.0		66		98	74	1.4	0		27		29	30	46492
5	930	6.6	1.8		68		101	76	1.4	0		28		32	31	46493
5	980	6.7	1.5	16.4	60	85	84	67	1.9	0.7	4.4	13	20	29	14	46494
5	1020	6.5	1.4	15.4	51	74	92	57	1.1	0	4.4	12	17	29	13	46495
5	1030	6.1	1.5	15.9	59	83	87	66	1.1	0	4.5	18	23	22	20	46496
6	10	4.2	2.0	16.5	65	88	92	71	1.4	0	5.8	16	23	18	17	46497
6	60	4.6	2.3	17.8	69	93	104	74	2.2	0	5.5	19	27	25	21	46498
6	130	4.5	2.1	17.2	63	87	103	69	2.5	0	6.2	12	21	18	13	46499
6	170	4.6	2.3	16.9	57	81	87	62	1.7	0.2	5.8	15	22	23	16	46500
6	190	4.9	2.3	18.4	66	92	98	72	2.2	0.7	6.6	10	20	23	11	46501
6	230	5.6	2.2	17.1	61	86	93	66	1.6	0	5.2	18	24	21	19	46502
6	260	4.4	2.2	16.9	67	91	95	72	1.5	0	6.1	21	28	23	22	46503
6	310	5.0	2.2	16.8	62	86	96	68	2.3	0	6.1	21	30	28	23	46504
6	370	5.9	1.5	16.1	54	77	85	59	1.9	0	6.6	19	28	22	21	46505
6	440	3.3	0.7	13.2	35	53	58	39	1.0	0.4	4.3	2	8	13	2	46506
6	510	2.1	0.8	15.4	25	43	61	27	1.1	0.2	3.0	6	10	20	6	46507
7	0	3.9	2.4	21.1	71	98	101	79	3.6	0	8.0	11	22	27	12	46508
7	40	2.7	1.1	14.4	40	58	60	45	1.8	0	4.0	11	17	8	12	46509
7	70	2.6	1.3	15.0	44	63	63	49	1.2	0.7	4.2	5	12	10	6	46510
7	120	2.4	1.0	11.6	34	49	50	36	0.9	0.1	2.6	0	4	1	0	46511
7	160	3.5	1.7	16.1	75	97	83	81	1.9	0.5	5.1	27	34	25	29	46512
7	215	4.8	1.9	16.2	64	87	87	70	1.7	0.4	5.8	14	22	15	15	46513
7	295	4.3	1.6	15.5	53	74	83	57	2.5	1.1	4.3	10	18	5	11	46514
7	315	4.6	2.2	16.4	63	86	85	68	1.3	0.2	5.6	14	21	14	15	46515
7	365	3.4	1.1	13.4	41	58	68	44	1.2	0	4.1	8	14	11	9	46516
7	425	4.2	2.5	16.9	64	88	96	70	0.2	0.6	5.5	23	29	23	25	46517
7	485	4.2	1.7	16.2	56	78	89	61	0.1	0	5.8	21	27	18	23	46518
7	505	3.7	1.2	14.3	44	63	78	48	0.6	0	5.5	8	14	20	9	46519
7	585	4.6	1.8	17.1	60	83	90	66	0.6	0	6.3	25	32	21	28	46520
7	625	4.2	1.5	15.6	52	73	79	57	0.8	0.2	4.9	17	23	20	19	46521
8	0	4.1	2.6	18.8	65	90	99	72	1.9	0.2	6.1	25	33	25	28	46522
8	15	2.8	2.4	18.6	65	89	94	70	0.6	0	6.5	25	32	24	27	46523
8	75	2.3	1.0	11.1	37	51	54	40	1.8	0.9	2.9	0	6	13	0	46524
9	10	4.2	2.1	15.9	61	83	93	66	1.4	2.4	4.2	9	17	14	10	46525
9	70	3.2	1.4	13.6	45	63	71	48	0.8	1.5	3.4	0	6	7	0	46526
9	110	4.1	1.9	17.8	64	88	97	70	1.9	0.6	4.7	17	25	24	19	46527
9	160	4.8	1.6	17.4	62	86	89	68	0.6	0.4	5.4	18	25	21	20	46528
9	230	4.2	2.5	17.0	65	89	98	71	1.4	1.7	4.2	15	22	19	16	46529
9	250	4.6	2.5	16.4	70	94	99	76	1.2	1.6	3.5	13	19	22	14	46530
9	380	3.8	1.6	15.2	64	84	84	70	2.0	0.7	4.8	6	14	20	7	46531
9	430	4.4	1.3	17.0	64	87	96	73	1.9	1.7	5.6	20	30	25	23	46532
9	520	3.9	1.4	16.5	60	81	86	66	1.4	0	5.4	20	27	22	22	46533

CORE	DEPTH	Zn_{WA}	Zn_{HA}	Zn_{HHA}	Zn_{R}	Zn_{SUM}	Zn_{T}	Zn_{TR}	Ni_{WA}	Ni_{HA}	Ni_{HHA}	Ni_{R}	Ni_{SUM}	Ni_{T}	Ni_{TR}	ID
	cm	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	$\mu g g^{-1}$	
18	10	3.8	1.9	17.6	67	90	91	76	1.6	1.1	6.2	35	44	27	40	46546
18	30	19.8	2.5	18.3	60	101	99	68	1.2	2.4	6.1	24	34	22	27	46547
18	60	6.8	1.2	14.6	46	69	68	51	0	1.1	4.8	19	25	6	21	46548
18	90	2.6	0.7	13.0	52	68	71	58	0.6	1.4	5.1	24	31	22	27	46549
18	130	2.5	0.9	13.6	57	74	82	64	1.0	2.0	5.0	22	30	25	25	46550
18	160	3.0	1.5	14.6	56	75	80	63	1.6	1.3	4.4	7	14	25	8	46551
18	200	3.6	1.5	14.1	55	74	73	62	2.2	0.7	5.7	18	26	19	20	46552
18	250	4.9	2.0	15.5	56	78	81	64	1.5	0	3.9	12	18	26	14	46553
18	310	5.5	2.5	16.0	57	81	83	64	1.9	0	4.0	10	16	25	11	46554
18	360	5.5	2.1	16.1	67	91	94	78	2.1	0.1	5.4	18	26	36	21	46555
18	420	3.9	1.7	13.3	51	70	71	57	0.3	0.2	3.9	11	15	13	12	46556
18	450	4.6	1.4	13.7	50	70	72	56	1.7	0.3	3.3	19	24	18	21	46557
18	500	4.8	1.8	15.5	75	97	104	86	1.8	0.7	5.6	30	38	44	34	46558
18	570	5.2	1.6	16.7	58	81	89	66	1.8	0.2	4.6	23	29	32	26	46559
18	600	4.7	1.7	17.3	56	80	85	64	1.8	0.3	5.1	21	28	35	24	46560
18	660	4.5	1.6	14.6	48	69	71	54	1.2	0	4.9	13	19	22	15	46561
18	720	4.1	1.2	14.5	47	67	67	53	0.8	0.2	4.1	15	20	25	17	46562
18	740	4.6	1.6	15.1	53	74	76	60	1.2	0	5.1	15	21	28	17	46563
18	790	3.4	1.0	12.5	36	53	51	40	0.9	0.6	4.3	5	11	20	6	46564
18	860	4.5	1.4	15.7	53	74	81	60	1.2	0.4	4.5	24	30	36	27	46565
19	0	5.3	2.0	16.2	34	57	76	70	3.4	2.8	5.1	7	19	20	15	46534
19	2	4.2	2.0	16.7	58	81	82	72	3.2	2.4	4.6	7	17	25	9	46535
19	5	3.5	1.2	16.0	59	80	82	74	4.6	0	5.4	19	29	29	24	46536
19	7	3.6	1.1	16.5	57	78	80	71	4.1	0.9	6.4	18	29	24	22	46537
19	10	3.5	1.0	16.2	57	78	80	72	5.0	0	6.0	21	32	28	26	46538
19	14	3.4	1.1	16.2	58	79	78	73	4.0	0.5	5.5	17	27	28	21	46539
19	16	3.5	1.1	16.5	60	81	81	74	3.9	0.6	6.5	19	30	28	24	46540
19	19	3.4	1.2	16.5	61	82	80	75	5.5	0.8	6.6	12	25	30	15	46541
19	22	3.4	1.3	16.5	60	81	80	73	4.7	0.2	6.7	17	29	30	21	46542
19	25	3.4	1.2	18.1	58	80	82	72	2.9	1.6	5.7	16	26	23	20	46543
19	28	4.4	1.5	17.1	61	84	79	71	4.2	2.1	5.9	33	46	23	39	46544
19	32	3.0	1.4	18.0	61	83	85	73	2.1	1.4	5.7	20	29	21	24	46545
28	33	30.4	3.5	18.9	69	122	104	77	0.8	0.8	6.6	11	19	29	12	46566
28	60	3.4	1.2	15.5	81	101	106	94	0.3	0.8	7.4	25	33	48	29	46567
28	90	3.3	1.1	13.7	81	99	107	95	0.5	0	5.5	25	31	40	29	46578
28	140	3.0	0.9	13.6	82	100	105	96	2.0	1.1	5.8	25	34	42	29	46579
28	210	3.4	1.1	13.8	86	104	104	101	1.9	1.0	5.6	29	38	42	34	46580
28	280	4.2	1.5	15.7	81	102	112	93	1.3	0.4	6.6	23	31	43	26	46568
28	320	3.5	1.2	15.0	82	101	109	95	1.4	0.1	7.9	17	27	45	20	46569
28	360	3.4	1.0	14.3	84	103	105	97	0.3	0	5.7	22	28	44	26	46570
28	400	3.6	1.2	14.5	83	102	109	96	1.8	0.2	5.8	21	29	41	24	46571
28	450	3.8	1.3	14.1	81	100	111	94	1.6	0	5.6	21	28	45	24	46572
28	510	3.6	1.1	13.9	80	99	110	94	1.7	0	5.8	16	24	45	19	46573
28	540	3.4	0.8	13.6	77	95	102	91	1.4	0	5.7	17	24	38	20	46574
28	590	3.3	0.9	13.9	76	94	103	89	1.2	0	5.2	20	27	46	24	46575
28	610	3.2	0.8	13.4	72	89	99	84	1.8	0	5.5	21	28	37	24	46576
28	660	3.4	1.1	14.3	75	94	99	88	1.2	0	5.4	21	27	34	24	46577
28	680	3.2	0.9	13.8	76	94	105	89	1.3	1.3	5.6	21	30	34	25	46581
28	720	3.7	1.5	15.0	68	88	92	76	1.4	0.6	3.8	12	17	30	13	46582
28	760	4.2	1.2	14.9	66	86	101	77	2.3	1.4	3.4	10	17	27	12	46583
28	800	3.5	1.2	14.4	82	101	109	96	1.2	0.8	6.6	20	28	46	23	46584
28	850	3.5	1.4	14.9	85	105	95	99	0.9	0.3	6.5	23	31	45	27	46585
28	890	4.3	2.3	17.1	81	104	85	87	2.5	1.8	5.1	10	20	33	11	46586
28	930	3.6	1.3	14.4	78	97	102	93	2.0	1.8	7.2	6	17	44	7	46587
28	970	3.4	1.1	12.7	76	93	101	90	1.1	1.2	7.1	14	23	43	16	46588
28	1010	4.3	1.2	14.9	80	100	105	98	3.4	0.9	5.9	28	38	45	34	46589
28	1050	4.0	0.9	14.4	69	89	94	88	2.3	0	7.0	13	23	47	17	46590
28	1110	4.2	1.1	14.8	72	92	95	90	0.4	0	6.8	18	25	39	22	46591

CORE	DEPTH	Si_R	Si_T	Si_{TR}	Al_R	Al_T	Al_{TR}	Mg_R	Mg_T	Mg_{TR}	K_R	K_T	K_{TR}	RESIDUE	WTLOSS	ID
	cm	%	%	%	%	%	%	%	%	%	%	%	%	mg	%	
1	0	25.41	26.05	28.30	5.71	6.08	6.36	0.61	1.15	0.68	1.77	2.07	1.97	898	10.2	46401
1	80	25.78	25.86	28.61	5.97	6.21	6.63	0.63	1.21	0.70	1.93	2.19	2.14	901	9.9	46402
1	122	25.38	25.84	28.17	5.85	6.34	6.49	0.62	1.20	0.69	1.94	2.19	2.15	901	10.0	46403
1	202	25.27	25.25	27.86	5.90	6.13	6.50	0.63	1.13	0.69	1.95	2.17	2.15	907	9.4	46404
1	262	24.53	25.71	27.10	5.81	6.15	6.42	0.63	1.16	0.70	1.92	2.22	2.12	905	9.5	46405
1	280	23.66	25.62	26.20	5.77	6.11	6.39	0.66	1.20	0.73	1.99	2.22	2.20	903	9.7	46406
1	340	25.64	26.04	28.27	6.65	7.42	7.33	0.71	1.17	0.78	1.99	2.22	2.19	907	9.3	46407
1	410	25.33	24.97	28.18	6.57	7.25	7.31	0.67	1.15	0.75	1.93	2.20	2.15	899	10.1	46408
1	440	25.11	25.67	27.65	6.47	7.29	7.13	0.67	1.12	0.74	1.99	2.22	2.19	908	9.2	46409
1	500	23.48	24.86	25.61	6.39	7.33	6.97	0.72	1.17	0.79	2.00	2.22	2.18	917	8.3	46410
1	560	23.51	24.51	25.69	6.51	7.28	7.11	0.74	1.21	0.81	2.07	2.28	2.26	915	8.6	46411
1	590	23.20	24.76	25.30	6.80	7.44	7.42	0.75	1.27	0.82	2.10	2.31	2.29	917	8.3	46412
1	650	22.02	24.33	24.01	6.98	7.49	7.61	0.79	1.14	0.86	2.13	2.40	2.32	917	8.3	46413
1	720	21.76	23.69	24.78	3.78	4.99	4.31	0.17	0.70	0.19	0.77	1.15	0.88	878	12.2	46414
2	0	33.26	31.02	36.04	3.82	4.25	4.14	0.23	0.47	0.25	1.73	1.50	1.87	923	7.7	46415
2	30	33.77	34.74	36.16	3.61	4.11	3.86	0.18	0.42	0.19	1.65	1.44	1.77	934	6.7	46416
2	80	33.07	36.77	35.44	3.62	3.59	3.88	0.12	0.45	0.13	1.54	1.42	1.65	933	6.7	46442
2	100	30.18	33.07	32.91	5.07	4.74	5.53	0.40	0.81	0.44	1.96	1.75	2.14	917	8.3	46443
2	120	30.58	33.20	33.42	4.52	4.43	4.94	0.33	0.78	0.36	1.75	1.66	1.91	915	8.5	46444
2	140	28.71	31.66	31.45	5.38	4.44	5.89	0.32	0.76	0.35	2.61	1.74	2.86	913	8.7	46445
2	160	29.94	31.30	32.69	4.52	3.99	4.93	0.30	0.78	0.33	1.82	1.60	1.99	916	8.4	46446
2	180	26.91	25.84	29.54	5.31	4.79	5.83	0.42	0.71	0.46	1.94	1.80	2.13	911	8.9	46447
2	230	24.33	24.80	27.00	5.83	4.90	6.47	0.61	1.27	0.68	2.09	1.86	2.32	901	9.9	46448
2	250	24.23	22.72	26.92	6.10	5.25	6.78	0.63	1.31	0.70	2.26	1.92	2.51	900	10.0	46449
2	270	23.31	23.07	25.93	5.88	4.88	6.54	0.57	1.22	0.63	2.21	1.97	2.46	899	10.1	46450
2	290	29.61	32.92	32.50	4.67	5.37	5.13	0.49	0.64	0.54	1.94	1.71	2.13	911	8.9	46451
2	295	32.27	31.54	35.58	4.67	5.22	5.15	0.47	0.61	0.52	2.00	1.68	2.21	907	9.3	46452
2	300	30.99	31.35	34.43	4.89	5.22	5.43	0.50	0.66	0.56	2.09	1.74	2.32	900	10.0	46453
2	310	31.98	31.39	35.45	4.40	5.01	4.88	0.43	0.64	0.48	1.91	1.65	2.12	902	9.8	46454
2	330	28.85	28.88	32.27	4.90	6.00	5.48	0.63	0.82	0.70	2.05	1.84	2.29	894	10.6	46455
2	380	28.99	29.75	32.39	5.11	5.99	5.71	0.63	0.92	0.70	2.16	1.85	2.41	895	10.5	46456
2	400	29.84	32.47	33.12	5.61	5.71	6.23	0.53	0.90	0.59	2.06	1.81	2.29	901	9.9	46457
2	420	29.35	32.95	32.47	4.98	5.49	5.51	0.43	0.91	0.48	1.81	1.66	2.00	904	9.6	46458
2	440	25.70	29.16	28.81	6.27	5.86	7.03	0.58	1.09	0.65	2.19	2.00	2.46	892	10.8	46459
2	470	31.77	28.01	35.86	6.51	7.46	7.35	0.66	1.00	0.75	2.41	2.09	2.72	886	11.5	46460
2	515	41.48	35.36	44.65	4.09	4.67	4.40	0.26	0.41	0.28	1.32	1.09	1.42	929	7.1	46461
2	530	32.19	26.95	36.54	6.85	7.82	7.77	0.78	1.17	0.89	2.36	2.09	2.68	881	11.9	46462
2	560	31.84	26.95	36.14	6.94	7.90	7.88	0.79	1.14	0.90	2.48	2.13	2.82	881	11.9	46463
2	570	30.34	26.70	34.36	6.57	7.60	7.44	0.72	1.17	0.81	2.45	2.08	2.78	883	11.7	46464
2	590	31.09	26.65	35.01	6.54	7.91	7.36	0.88	1.16	0.99	2.43	2.08	2.74	888	11.2	46465
2	610	26.74	27.66	30.01	7.59	7.61	8.52	0.93	1.33	1.04	2.64	2.22	2.96	891	10.9	46466
3	0	31.35	34.11	34.37	3.23	3.75	3.54	0.16	0.35	0.17	1.49	1.35	1.63	912	8.8	46417
3	2	30.30	32.25	33.15	3.24	3.69	3.55	0.16	0.36	0.18	1.48	1.34	1.62	914	8.6	46418
3	5	29.23	33.38	31.88	3.12	3.70	3.40	0.13	0.39	0.14	1.48	1.35	1.61	917	8.3	46419
3	8	27.32	32.72	29.83	3.20	3.74	3.49	0.14	0.37	0.15	1.49	1.34	1.63	916	8.4	46420
3	12	26.36	32.35	28.84	3.01	3.29	3.29	0.06	0.27	0.07	1.47	1.25	1.61	914	8.6	46421
3	15	24.36	30.21	26.59	3.22	3.71	3.52	0.12	0.38	0.13	1.49	1.36	1.63	916	8.4	46422
3	18	23.78	30.21	25.79	2.82	3.45	3.06	0.04	0.29	0.04	1.48	1.30	1.60	922	7.9	46423
3	21	22.97	29.69	24.81	2.84	3.33	3.07	0.04	0.25	0.04	1.42	1.24	1.53	926	7.4	46424
3	24	36.39	35.53	39.51	3.03	3.30	3.29	0.03	0.22	0.03	1.41	1.24	1.53	921	7.9	46425
3	27	35.42	33.90	38.50	3.14	3.48	3.41	0.04	0.25	0.04	1.40	1.31	1.52	920	8.0	46426
4	0	22.26	22.32	26.59	6.64	6.84	7.93	0.85	1.49	1.02	2.30	2.17	2.75	837	16.3	46427
4	3	22.04	22.11	25.75	6.81	6.85	7.95	0.89	1.44	1.04	2.42	2.29	2.83	856	14.4	46428
4	4	21.28	21.91	24.83	6.79	6.94	7.92	0.90	1.50	1.05	2.47	2.27	2.88	857	14.3	46429
4	6	19.95	20.38	23.25	6.63	6.98	7.73	0.80	1.52	0.93	2.41	2.34	2.81	858	14.2	46430
4	8	19.71	19.55	22.86	6.70	6.86	7.77	0.90	1.43	1.04	2.39	2.30	2.77	862	13.9	46431
4	12	19.24	22.56	22.35	6.72	6.95	7.81	0.95	1.46	1.10	2.38	2.27	2.76	861	13.9	46432
4	15	18.19	24.49	21.47	6.40	6.75	7.56	0.81	1.46	0.96	2.35	2.22	2.78	847	15.4	46433
4	17	23.66	21.08	27.39	6.38	6.92	7.39	0.82	1.50	0.95	2.41	2.22	2.79	864	13.6	46434
4	20	23.42	25.04	27.11	6.49	6.63	7.51	0.91	1.39	1.05	2.35	2.16	2.72	864	13.6	46435
4	23	23.04	22.64	26.61	6.59	6.59	7.61	0.86	1.44	0.99	2.39	2.19	2.76	866	13.4	46436
4	25	21.87	21.75	25.20	6.39	6.45	7.36	0.79	1.50	0.91	2.33	2.11	2.68	868	13.2	46437
4	30	20.73	23.70	24.02	6.56	6.55	7.60	0.79	1.51	0.91	2.42	2.20	2.80	863	13.7	46438
4	35	20.15	27.38	23.40	6.58	6.35	7.64	0.72	1.51	0.84	2.40	2.26	2.79	861	13.9	46439
4	39	22.85	28.02	26.63	6.74	6.44	7.86	0.95	1.56	1.11	2.32	2.21	2.70	858	14.2	46440
4	42	23.06	25.51	26.78	6.66	6.50	7.73	0.87	1.53	1.01	2.31	2.25	2.68	861	14.0	46441

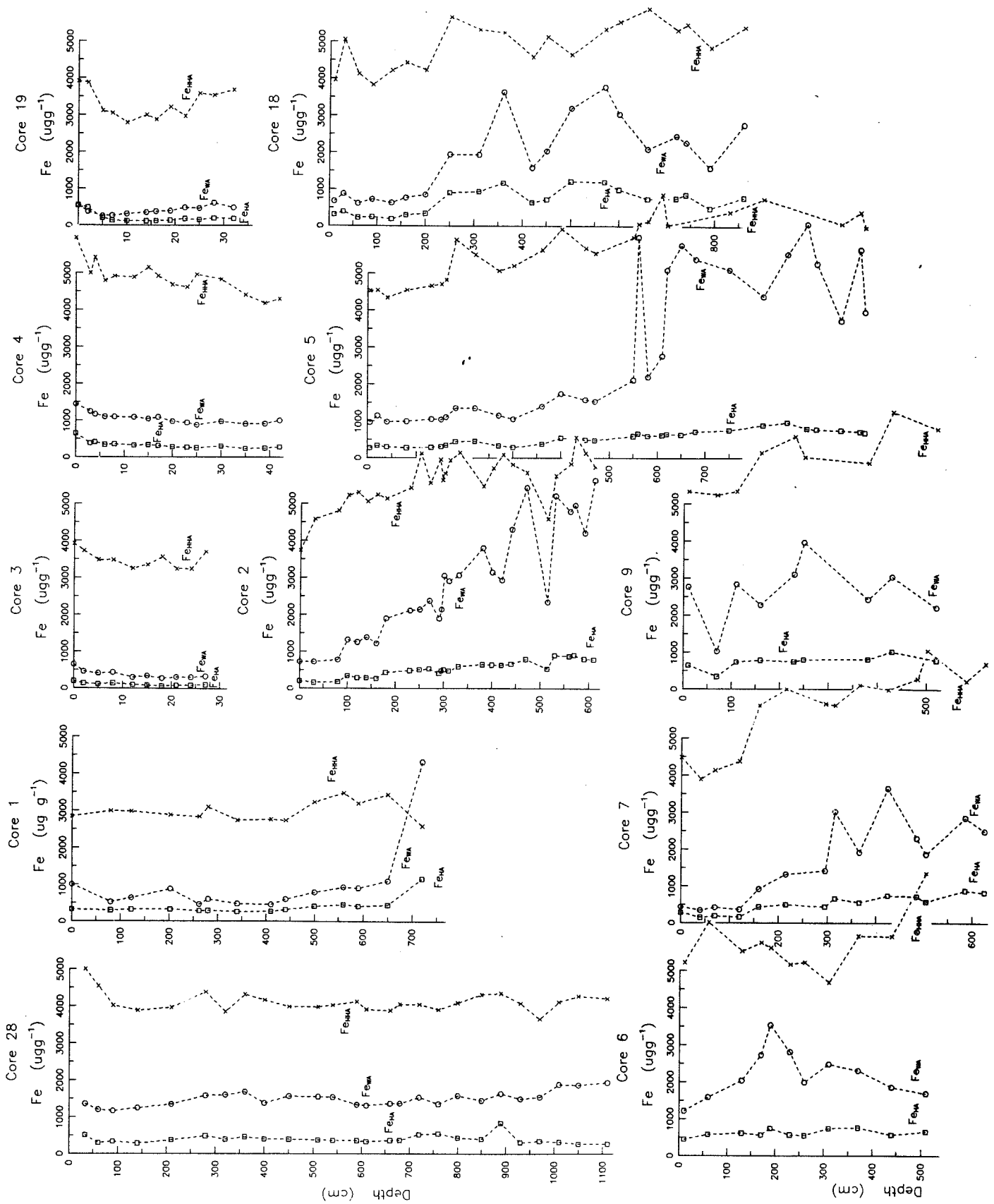
CORE	DEPTH	Si_R	Si_T	Si_{TR}	Al_R	Al_T	Al_{TR}	Mg_R	Mg_T	Mg_{TR}	K_R	K_T	K_{TR}	RESIDUE	WTLOSS	ID
	cm	%	%	%	%	%	%	%	%	%	%	%	%	mg	%	
5	5	22.45	25.44	25.89	7.12	7.50	8.21	1.00	1.48	1.15	2.63	2.22	3.03	867	13.3	46467
5	20	22.28	25.58	25.88	7.46	7.50	8.67	1.01	1.48	1.17	2.57	2.22	2.98	861	13.9	46468
5	40	29.66	25.63	34.29	7.59	8.19	8.78	1.02	1.47	1.18	2.69	2.18	3.11	865	13.5	46469
5	80	28.65	25.46	32.85	7.17	7.15	8.22	0.97	1.53	1.11	2.55	2.16	2.93	872	12.9	46470
5	130	29.96	25.54	34.20	7.29	6.83	8.32	0.95	1.43	1.08	2.80	2.15	3.20	876	12.4	46471
5	150	29.61	25.38	33.53	7.53	6.90	8.53	0.98	1.50	1.11	2.73	2.15	3.09	883	11.7	46472
5	160	28.59	25.26	32.56	7.56	6.80	8.61	0.97	1.50	1.10	2.55	2.16	2.91	878	12.2	46473
5	180	29.15	26.56	32.03	7.53	6.45	8.28	0.93	1.49	1.02	2.51	2.22	2.76	910	9.0	46474
5	220	26.38	27.80	28.93	7.64	8.47	8.38	0.97	1.54	1.06	2.59	2.30	2.84	912	8.8	46475
5	270	24.44	27.73	27.84	7.16	7.73	8.16	0.86	1.32	0.98	2.55	2.00	2.90	878	12.2	46476
5	300	23.82	27.29	27.29	6.84	7.45	7.84	0.75	1.22	0.86	2.37	1.88	2.71	873	12.7	46477
5	360	22.27	28.53	24.64	7.11	7.79	7.86	0.78	1.27	0.86	2.54	2.06	2.81	904	9.7	46478
5	400	21.42	28.85	23.88	7.38	8.20	8.23	0.87	1.47	0.97	2.61	2.26	2.91	897	10.3	46479
5	450	29.10	27.96	33.03	6.41	7.02	7.28	0.70	1.32	0.80	2.39	1.98	2.71	881	11.9	46480
5	470	29.88	29.03	33.53	6.50	7.30	7.29	0.75	1.26	0.84	2.29	1.98	2.57	891	10.9	46481
5	550	29.28	28.87	32.94	7.03	7.61	7.91	0.82	1.33	0.92	2.41	2.04	2.71	889	11.1	46482
5	560	30.32	28.79	34.38	6.70	7.85	7.60	0.74	1.35	0.84	2.40	2.05	2.72	882	11.8	46483
5	580	28.16	29.16	32.18	6.51	7.39	7.44	0.68	1.27	0.78	2.38	2.03	2.72	875	12.5	46484
5	610	28.80	30.20	32.36	6.52	7.34	7.33	0.65	1.13	0.73	2.38	1.98	2.67	890	11.0	46485
5	620	28.43	29.82	31.84	6.61	7.98	7.40	0.68	1.26	0.76	2.25	2.05	2.52	893	10.7	46486
5	650	27.50	29.77	30.93	6.37	7.78	7.17	0.66	1.21	0.74	2.29	1.92	2.58	889	11.1	46487
5	680	27.06	30.38	29.87	6.95	7.99	7.67	0.65	1.25	0.72	2.41	1.99	2.66	906	9.4	46488
5	750	25.15	30.24	28.16	7.14	8.58	8.00	0.46	1.24	0.52	2.59	2.09	2.90	893	10.7	46489
5	820	23.92	28.10	26.70	7.50	8.54	8.37	0.67	1.30	0.75	2.59	2.10	2.89	896	10.4	46490
5	870	22.13	29.76	24.56	7.38	8.71	8.19	0.61	1.38	0.68	2.53	2.24	2.81	901	9.9	46491
5	910	21.96	28.38	24.48	7.45	8.26	8.31	0.71	1.29	0.79	2.59	2.11	2.89	897	10.3	46492
5	930	27.32	28.62	30.66	7.83	8.25	8.79	0.79	1.37	0.89	2.66	2.28	2.99	891	10.9	46493
5	980	28.09	29.14	31.35	7.48	7.97	8.35	0.67	1.33	0.75	2.68	2.08	2.99	896	10.4	46494
5	1020	27.67	29.29	31.06	7.29	7.94	8.18	0.64	1.18	0.72	2.66	2.15	2.98	891	10.9	46495
5	1030	27.60	29.91	30.87	6.98	7.21	7.81	0.62	1.16	0.69	2.50	2.07	2.80	894	10.6	46496
6	10	26.25	30.93	28.56	8.09	9.19	8.80	0.56	1.18	0.61	2.77	2.37	3.01	919	8.1	46497
6	60	24.68	28.85	26.62	8.55	8.59	9.22	0.71	1.21	0.77	2.94	2.50	3.17	927	7.3	46498
6	130	26.38	29.69	28.70	8.34	8.37	9.07	0.69	1.12	0.75	2.64	2.36	2.87	919	8.1	46499
6	170	27.24	32.03	29.67	6.99	7.30	7.61	0.49	0.97	0.53	2.62	2.01	2.85	918	8.3	46500
6	190	24.17	27.79	26.21	8.33	8.46	9.03	0.59	1.31	0.64	2.86	2.65	3.10	922	7.8	46501
6	230	27.34	27.97	29.46	7.92	7.91	8.53	0.71	1.18	0.76	2.51	2.44	2.71	928	7.3	46502
6	260	26.21	28.10	28.00	8.50	8.66	9.08	0.74	1.21	0.79	2.65	2.84	2.83	936	6.4	46503
6	310	25.11	27.72	27.32	7.86	8.19	8.55	0.62	1.18	0.68	2.35	2.53	2.56	919	8.1	46504
6	370	27.71	28.59	30.55	6.85	7.49	7.55	0.69	1.20	0.76	2.11	2.32	2.33	907	9.3	46505
6	440	30.06	33.03	33.14	4.78	5.18	5.27	0.27	0.68	0.30	1.55	1.60	1.71	907	9.4	46506
6	510	29.80	33.75	32.32	5.36	7.48	5.81	0.18	0.29	0.20	1.38	1.64	1.50	922	7.8	46507
7	0	27.18	26.80	30.23	7.10	7.60	7.90	0.85	1.04	0.95	2.13	2.22	2.37	899	10.1	46508
7	40	30.75	30.21	34.47	4.95	5.53	5.55	0.42	0.47	0.47	1.55	1.50	1.74	892	10.8	46509
7	70	30.58	29.59	33.79	5.45	5.89	6.02	0.49	0.55	0.54	1.69	1.60	1.87	905	9.6	46510
7	120	34.68	32.35	37.05	4.31	4.25	4.60	0.32	0.31	0.34	1.45	1.59	1.55	936	6.4	46511
7	160	24.78	27.91	26.67	9.41	7.10	10.13	0.90	0.79	0.97	2.94	2.15	3.17	929	7.1	46512
7	215	26.97	25.00	29.32	7.74	7.76	8.41	0.74	0.86	0.80	2.40	2.22	2.61	920	8.0	46513
7	295	29.15	27.69	31.45	6.65	7.46	7.17	0.48	0.71	0.52	1.95	2.02	2.10	927	7.3	46514
7	315	23.09	23.95	25.07	7.29	7.52	7.92	0.69	0.76	0.75	2.21	2.02	2.40	921	7.9	46515
7	365	26.27	32.42	28.49	5.14	5.88	5.57	0.42	0.55	0.46	1.48	1.70	1.61	922	7.8	46516
7	425	28.24	27.54	30.70	8.23	9.09	8.95	0.84	0.80	0.91	2.35	2.61	2.55	920	8.1	46517
7	485	26.23	28.86	28.73	8.04	7.91	8.81	0.82	0.72	0.90	2.23	2.32	2.44	913	8.7	46518
7	505	29.73	32.99	32.28	6.55	6.26	7.11	0.59	0.43	0.64	1.89	1.58	2.05	921	7.9	46519
7	585	25.59	27.46	28.21	8.29	8.68	9.14	0.88	0.83	0.97	2.26	2.28	2.49	907	9.3	46520
7	625	26.66	28.82	29.43	6.41	7.15	7.07	0.59	0.52	0.65	1.88	1.98	2.08	906	9.4	46521
8	0	24.66	25.13	27.52	6.76	7.13	7.54	0.82	0.85	0.92	1.96	2.11	2.19	896	10.4	46522
8	15	24.32	28.69	26.15	7.59	7.44	8.16	0.89	0.84	0.96	2.32	2.25	2.49	930	7.0	46523
8	75	27.51	33.85	29.68	4.76	5.07	5.14	0.38	0.33	0.41	1.48	1.52	1.60	927	7.3	46524
9	10	24.02	28.63	25.91	7.38	8.28	7.96	0.70	0.77	0.76	2.13	2.30	2.30	927	7.4	46525
9	70	32.36	31.19	34.87	5.49	6.17	5.92	0.48	0.51	0.52	1.73	1.83	1.86	928	7.2	46526
9	110	27.22	27.12	29.78	7.92	7.93	8.66	0.76	0.74	0.83	2.34	2.37	2.56	914	8.6	46527
9	160	27.80	27.97	30.52	7.24	7.43	7.95	0.70	0.76	0.77	2.09	2.14	2.29	911	8.9	46528
9	230	26.67	26.97	28.93	8.93	8.02	9.69	0.77	0.66	0.84	2.44	2.30	2.65	922	7.8	46529
9	250	25.62	26.10	27.73	8.41	8.37	9.10	0.81	0.65	0.88	2.49	2.47	2.69	924	7.6	46530
9	380	25.67	25.84	28.15	7.46	7.73	8.18	0.76	0.70	0.83	2.14	2.25	2.35	912	8.8	46531
9	430	22.35	26.42	25.31	7.50	7.49	8.49	0.76	0.75	0.86	2.29	2.35	2.59	883	11.7	46532
9	520	23.89	30.27	26.46	7.34	6.65	8.13	0.64	0.53	0.71	2.14	1.94	2.37	903	9.7	46533

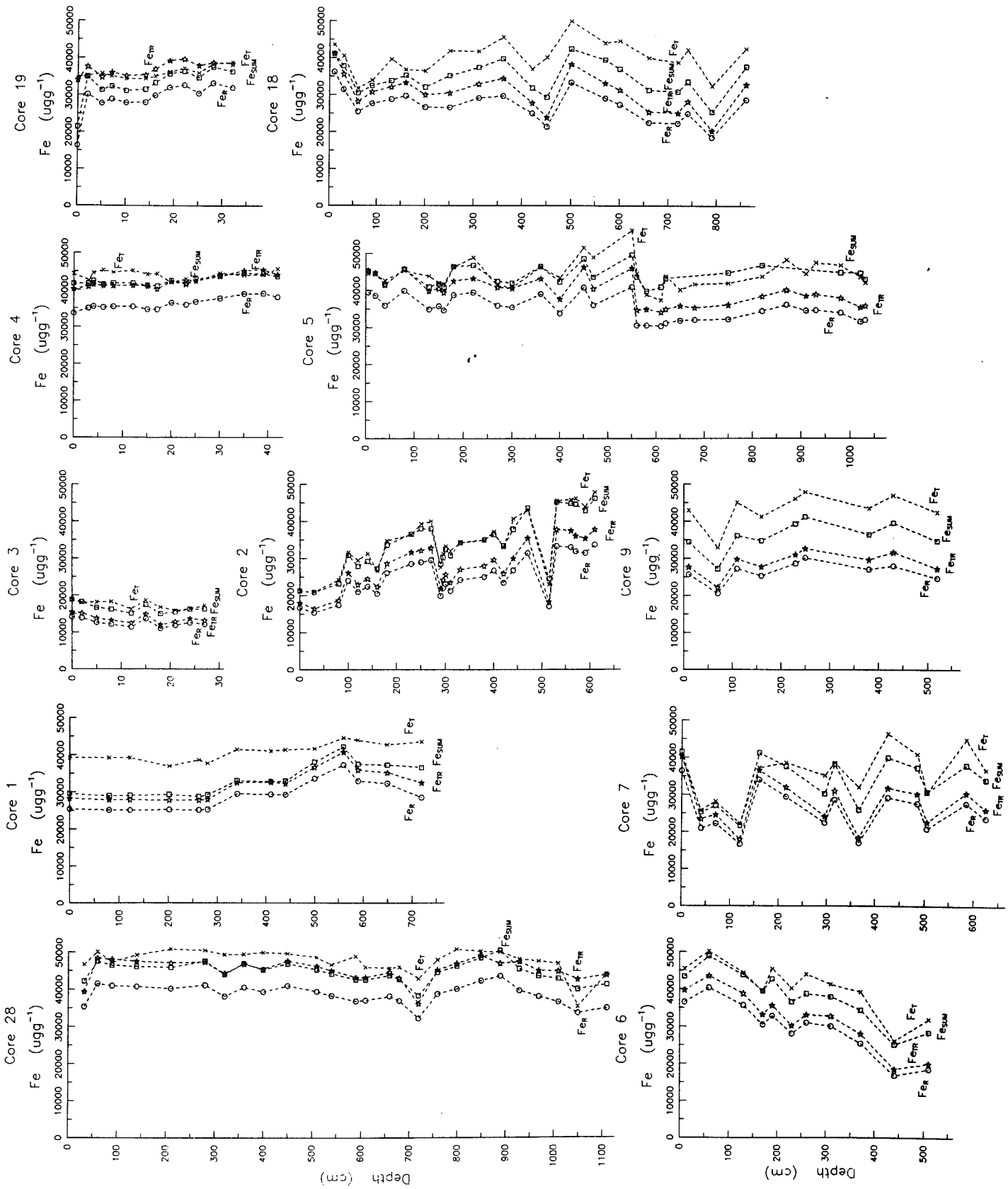
CORE	DEPTH	Si_R	Si_T	Si_{TR}	Al_R	Al_T	Al_{TR}	Mg_R	Mg_T	Mg_{TR}	K_R	K_T	K_{TR}	RESIDUE	WTLOSS	ID
	cm	%	%	%	%	%	%	%	%	%	%	%	%	mg	%	
18	10	25.59	30.64	29.11	4.19	6.51	4.77	0.89	0.93	1.01	2.09	2.11	2.38	879	12.1	46546
18	30	26.48	30.40	29.95	4.20	6.45	4.75	0.72	0.89	0.81	2.01	2.00	2.27	884	11.6	46547
18	60	29.39	33.92	32.51	3.34	5.50	3.69	0.63	0.70	0.70	1.51	1.69	1.67	904	9.6	46548
18	90	27.59	32.13	30.72	4.01	6.19	4.46	0.72	0.77	0.80	2.07	1.93	2.30	898	10.2	46549
18	130	26.91	29.50	30.03	4.35	6.95	4.86	0.75	0.90	0.84	2.18	2.08	2.43	896	10.4	46550
18	160	25.98	31.80	29.13	4.24	6.29	4.75	0.75	1.39	0.84	2.39	2.29	2.68	892	10.8	46551
18	200	27.11	30.03	30.53	5.92	5.83	6.67	0.74	1.47	0.83	1.98	2.19	2.23	888	11.2	46552
18	250	25.33	29.10	29.05	6.74	6.48	7.73	0.73	1.50	0.84	2.15	2.26	2.46	872	12.8	46553
18	310	25.17	29.51	28.44	6.05	6.68	6.84	0.67	1.55	0.76	1.94	2.23	2.19	885	11.5	46554
18	360	22.94	25.86	26.61	7.23	7.64	8.39	0.79	1.77	0.92	2.15	2.51	2.50	862	13.8	46555
18	420	26.61	30.69	29.57	5.47	5.94	6.08	0.42	1.34	0.47	2.00	2.16	2.22	900	10.0	46556
18	450	26.47	32.67	29.54	5.15	6.10	5.75	0.45	1.16	0.50	1.95	2.10	2.18	896	10.4	46557
18	500	21.89	21.71	25.16	8.74	7.74	10.05	0.97	1.54	1.12	2.49	2.69	2.86	870	13.1	46558
18	570	27.75	25.45	31.64	6.80	6.00	7.75	0.57	1.22	0.65	2.04	2.22	2.33	877	12.3	46559
18	600	28.20	25.84	32.30	6.71	5.82	7.69	0.62	1.29	0.71	2.02	2.24	2.31	873	12.8	46560
18	660	30.86	27.78	34.83	5.87	5.39	6.63	0.50	0.96	0.56	1.80	2.03	2.03	886	11.4	46561
18	720	31.60	28.05	35.54	5.65	4.96	6.35	0.51	0.95	0.57	1.83	2.05	2.06	889	11.1	46562
18	740	29.98	26.97	33.91	6.21	5.41	7.03	0.69	1.02	0.78	1.97	2.11	2.23	884	11.6	46563
18	790	33.98	30.24	37.34	4.38	4.46	4.81	0.34	0.50	0.37	1.54	1.74	1.69	910	9.1	46564
18	860	27.89	26.52	31.87	6.55	5.66	7.49	0.84	1.21	0.96	2.36	2.24	2.70	875	12.5	46565
19	0	13.34	25.34	27.68	2.90	5.13	6.02	0.40	0.60	0.83	0.99	1.60	2.05	482	21.8	46534
19	2	30.81	24.44	38.42	4.93	4.93	6.15	0.81	0.58	1.01	1.69	1.67	2.11	802	19.8	46535
19	5	30.83	24.07	38.59	4.61	5.21	5.77	0.76	0.60	0.95	1.72	1.69	2.15	799	20.1	46536
19	7	30.18	25.03	37.73	4.51	5.31	5.64	0.77	0.55	0.96	1.72	1.74	2.15	800	20.0	46537
19	10	30.95	24.53	39.03	4.35	5.14	5.49	0.75	0.57	0.94	1.70	1.61	2.15	793	20.7	46538
19	14	30.20	23.84	38.13	4.13	5.13	5.22	0.69	0.61	0.87	1.73	1.80	2.18	792	20.8	46539
19	16	30.43	23.96	37.66	4.17	5.19	5.16	0.78	0.59	0.97	1.73	1.80	2.14	808	19.2	46540
19	19	29.68	24.12	36.46	4.14	5.28	5.09	0.81	0.79	0.99	1.77	1.85	2.17	814	18.7	46541
19	22	29.17	23.43	35.44	4.17	5.38	5.07	0.81	0.82	0.99	1.78	1.88	2.16	823	17.7	46542
19	25	28.33	26.40	35.32	3.95	5.38	4.93	0.77	0.78	0.96	1.74	1.78	2.17	802	19.8	46543
19	28	25.86	28.30	30.17	4.30	6.26	5.02	0.84	0.95	0.98	1.98	1.99	2.31	857	14.3	46544
19	32	24.87	27.14	29.93	3.93	6.07	4.73	0.81	0.94	0.97	1.98	1.91	2.38	831	16.9	46545
28	33	26.36	28.29	29.35	7.00	7.07	7.80	1.06	1.56	1.18	2.35	2.60	2.62	898	10.2	46566
28	60	23.38	23.01	27.25	8.13	8.13	9.48	1.30	1.91	1.52	2.76	3.08	3.22	858	14.2	46567
28	90	19.38	22.63	22.75	7.92	6.33	9.29	0.90	1.62	1.06	2.90	2.72	3.40	852	14.8	46578
28	140	18.47	22.80	21.55	7.70	7.81	8.99	1.22	1.68	1.42	2.80	2.90	3.27	857	14.3	46579
28	210	17.67	22.70	20.71	7.71	7.98	9.04	1.12	1.75	1.31	2.99	3.00	3.50	853	14.8	46580
28	280	24.00	23.21	27.62	8.13	7.81	9.35	1.25	1.87	1.44	2.92	2.99	3.36	869	13.1	46568
28	320	23.00	22.92	26.74	7.84	7.79	9.12	1.19	1.85	1.38	2.89	2.97	3.36	860	14.0	46569
28	360	23.94	22.09	27.68	8.15	7.80	9.42	1.25	1.89	1.44	2.92	3.04	3.37	865	13.5	46570
28	400	23.11	20.72	26.72	7.79	7.74	9.01	1.06	1.87	1.23	2.94	2.95	3.40	865	13.5	46571
28	450	22.82	21.35	26.54	8.05	7.47	9.36	1.24	1.85	1.44	2.73	3.00	3.17	860	14.0	46572
28	510	22.75	21.16	26.67	7.76	6.94	9.10	1.07	1.80	1.25	2.72	2.92	3.19	853	14.7	46573
28	540	23.84	21.72	28.08	7.58	6.83	8.93	1.03	1.88	1.21	2.67	2.85	3.14	849	15.1	46574
28	590	23.92	26.28	28.07	7.46	7.53	8.75	0.97	2.05	1.14	2.59	2.84	3.04	852	14.8	46575
28	610	23.43	23.71	27.34	7.56	6.36	8.82	0.86	1.67	1.00	2.67	2.65	3.12	857	14.3	46576
28	660	21.38	23.76	25.01	7.61	6.27	8.90	0.88	1.67	1.03	2.92	2.63	3.41	855	14.5	46577
28	680	16.93	22.85	19.75	7.22	7.23	8.42	1.15	1.67	1.34	2.69	2.81	3.14	857	14.3	46581
28	720	17.92	25.72	20.14	6.71	6.67	7.54	0.91	1.39	1.02	2.34	2.49	2.63	890	11.1	46582
28	760	23.55	24.05	27.48	6.61	6.73	7.71	0.87	1.43	1.02	2.42	2.56	2.82	857	14.3	46583
28	800	21.58	25.07	25.27	7.52	8.20	8.81	1.36	2.33	1.59	2.73	2.93	3.20	854	14.6	46584
28	850	21.30	22.13	24.71	7.53	7.43	8.74	1.22	2.19	1.42	2.90	2.98	3.36	862	13.9	46585
28	890	23.56	24.39	25.39	8.22	8.00	8.86	1.15	1.71	1.24	2.65	2.90	2.86	928	7.2	46586
28	930	20.62	22.35	24.63	7.57	7.73	9.05	1.34	2.18	1.60	2.81	2.87	3.36	837	16.3	46587
28	970	20.47	23.57	24.22	7.42	7.61	8.78	1.29	1.96	1.53	2.67	2.78	3.16	845	15.6	46588
28	1010	18.19	22.09	22.29	6.92	7.50	8.48	1.24	2.15	1.52	2.69	2.79	3.30	816	18.4	46589
28	1050	20.93	17.21	26.53	6.50	5.31	8.24	1.25	1.71	1.59	2.67	2.23	3.39	789	21.1	46590
28	1110	21.81	21.69	27.36	6.65	6.75	8.35	1.25	2.24	1.57	2.65	2.68	3.33	797	20.3	46591

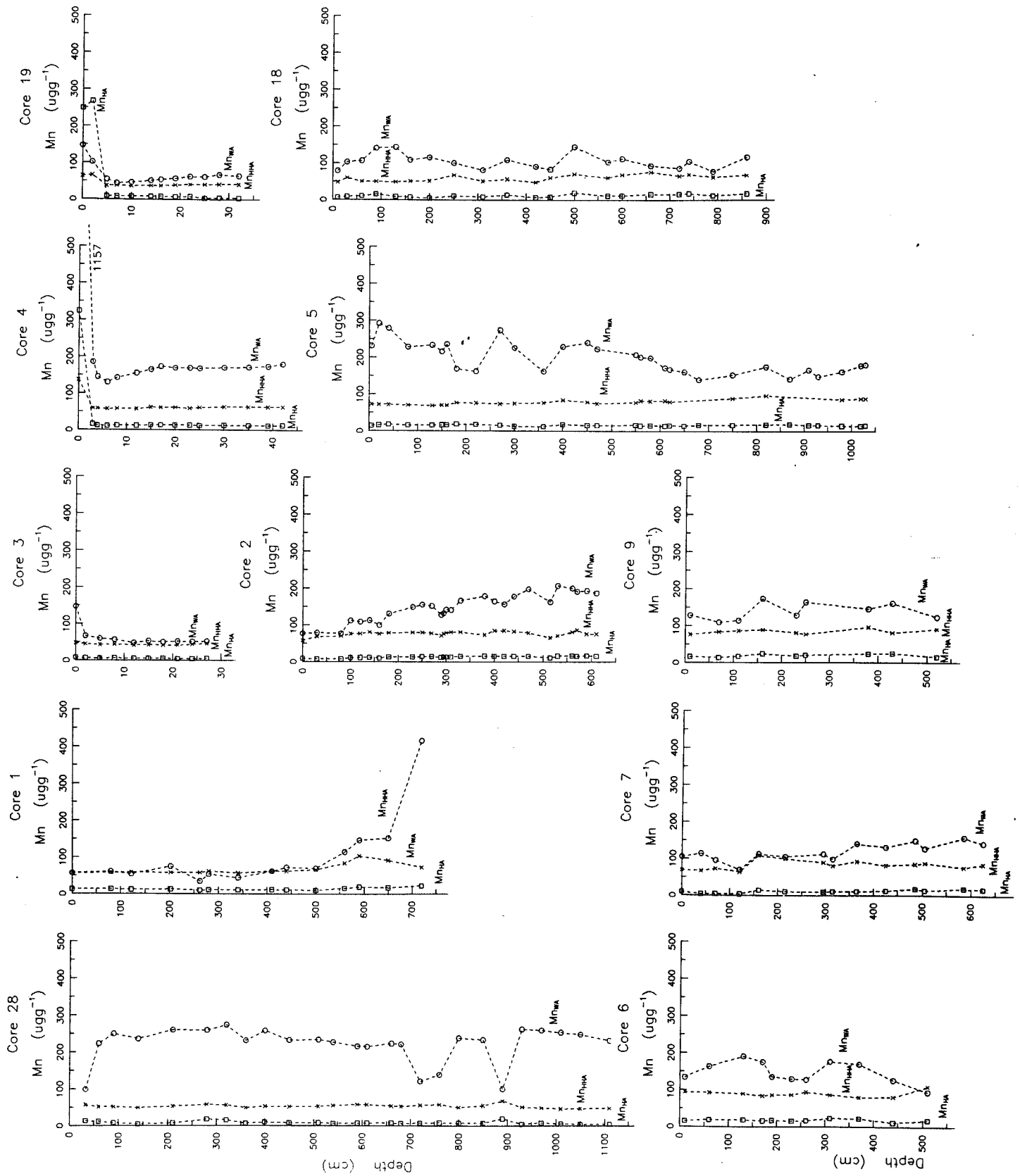
CORE	DEPTH	Sand	Silt	Clay	Grain size		Kurt-osis	Skew-ness	C_{org}	$CaCO_3$	SO_{4pw}	SiO_{2pw}	NH_{4pw}^{+}	pε	ID
	cm	%	%	%	μm	phi			%	%	mM	mM	mM	-lg(M)	
1	0	0.3	56.0	43.7	4.61	7.76 ±1.43	2.52	-0.19	3.34	2.3	1.9	0.810	1.710	-1.17	46401
1	80	0.6	72.6	26.8	7.34	7.09 ±1.47	2.40	0.18	2.91	2.1	0.2	0.833	2.610	-0.37	46402
1	122	0.5	64.5	35.0	5.80	7.43 ±1.44	2.46	-0.08	2.82	2.7	0.2	0.825	4.670	0.22	46403
1	202	1.7	64.6	33.7	6.43	7.28 ±1.59	2.29	-0.01	2.79	2.0	0.2	0.854	5.000	1.07	46404
1	262	0.5	58.9	40.6	5.01	7.64 ±1.43	2.36	-0.07	1.48	13.2	0.2	0.806	5.250	2.69	46405
1	280	0.5	65.6	33.9	6.00	7.38 ±1.47	2.32	0.05	2.90	2.2	0.3	0.823	5.150	1.44	46406
1	340	0.5	66.3	33.3	6.17	7.34 ±1.49	2.33	0.01	1.48	12.5	0.5	0.830	5.130	3.41	46407
1	410	0.6	68.7	30.8	6.66	7.23 ±1.50	2.38	0.06	1.80	10.5	0.3	0.828	5.180	3.36	46408
1	440	1.5	68.0	30.5	6.71	7.22 ±1.49	2.50	-0.06	2.48	5.7	0.5	0.808	5.200	5.15	46409
1	500	1.3	71.6	27.1	7.87	6.99 ±1.58	2.24	0.11	2.59	4.8	0.3	0.656	5.020	3.41	46410
1	560	0.5	62.6	36.9	5.84	7.42 ±1.52	2.31	-0.15	2.02	10.0	0.2	0.635	4.470	4.08	46411
1	590	0.5	60.5	39.0	5.37	7.54 ±1.50	2.39	-0.15	1.47	13.6	0.0	0.675	4.810	5.02	46412
1	650	0.5	58.0	41.5	5.15	7.60 ±1.50	2.42	-0.26	0.94	18.7	0.2	0.642	4.980	3.92	46413
1	720	1.4	49.2	49.4	4.81	7.70 ±1.77	2.06	-0.37	2.05	16.6	0.6	0.600	4.670	4.69	46414
2	0	1.6	79.1	19.3	13.79	6.18 ±1.74	2.63	0.90	0.46	4.2	27.0	0.445	0.200	5.37	46415
2	30	2.1	79.4	18.5	14.18	6.14 ±1.75	2.71	0.93	0.22	3.3	23.4	0.630	0.705	3.08	46416
2	80	1.2	87.2	11.7	16.63	5.91 ±1.47	3.89	1.25	0.24	3.2	23.1	0.480	0.775	5.53	46442
2	100	0.7	67.9	31.4	7.76	7.01 ±1.78	1.82	0.34	0.38	4.0	22.5	0.532	0.862	4.61	46443
2	120	0.2	74.3	25.5	9.49	6.72 ±1.71	2.14	0.57	0.37	4.2	21.5	0.541	0.865	5.25	46444
2	140	0.7	74.1	25.1	9.29	6.75 ±1.67	2.19	0.55	0.40	4.5	21.9	0.560	0.985	4.27	46445
2	160	0.2	79.2	20.6	10.75	6.54 ±1.59	2.53	0.76	0.34	4.3	22.7	0.569	0.985	4.56	46446
2	180	0.6	76.6	22.8	9.69	6.69 ±1.63	2.38	0.63	0.42	4.8	19.6	0.469	1.035	4.88	46447
2	230	0.2	78.7	21.1	9.55	6.71 ±1.51	2.52	0.64	0.45	5.4	18.6	0.440	1.100	4.78	46448
2	250	0.4	73.6	26.0	8.09	6.95 ±1.58	2.27	0.45	0.48	5.5	18.8	0.406	1.210	4.53	46449
2	270	0.4	69.1	30.5	7.49	7.06 ±1.66	2.01	0.27	0.48	5.5	18.5	0.382	1.225	4.64	46450
2	290	0.5	69.6	30.0	7.34	7.09 ±1.64	2.11	0.28	0.41	4.4	18.0	0.425	1.365	4.47	46451
2	295	1.3	73.1	25.6	9.82	6.67 ±1.76	2.09	0.50	0.44	5.0	17.1	0.410	1.090	3.80	46452
2	300	0.6	73.2	26.2	8.97	6.80 ±1.67	2.14	0.51	0.44	5.4	16.9	0.431	1.350	4.03	46453
2	310	0.4	73.1	26.4	9.23	6.76 ±1.72	2.09	0.51	0.44	5.4	22.0	0.400	1.400	4.03	46454
2	330	0.2	72.3	27.5	8.14	6.94 ±1.62	2.12	0.44	0.52	5.8	16.6	0.710	1.366	2.71	46455
2	380	0.7	70.9	28.4	7.98	6.97 ±1.64	2.10	0.33	0.53	5.7	18.4	0.404	1.500	3.83	46456
2	400	0.2	44.4	55.4	3.57	8.13 ±1.43	2.35	-0.38	0.54	5.4	16.6	0.364	1.568	4.03	46457
2	420	0.1	67.8	32.2	6.90	7.18 ±1.63	2.02	0.28	0.50	5.1	14.9	0.379	1.660	4.02	46458
2	440	0.5	66.5	33.0	6.66	7.23 ±1.60	2.07	0.14	0.58	5.3	14.2	0.265		3.88	46459
2	470	0.5	66.8	32.7	6.94	7.17 ±1.65	2.01	0.19	0.60	5.4	13.5	0.292	1.720	3.86	46460
2	515	0.2	59.1	40.7	5.23	7.58 ±1.54	2.17	-0.08	0.44	3.2	12.8	0.407	1.795	4.00	46461
2	530	0.2	56.2	43.7	4.94	7.66 ±1.57	2.02	-0.11	0.70	6.7	12.4	0.300	1.860	3.86	46462
2	560	0.2	67.3	32.5	6.57	7.25 ±1.57	2.11	0.18	0.67	6.3	11.9	0.240	1.975	3.90	46463
2	570	1.1	63.2	35.8	6.13	7.35 ±1.64	2.13	0	0.64	6.4	13.2	0.407	1.972	3.80	46464
2	590	1.4	61.7	37.0	6.22	7.33 ±1.68	2.05	0	0.66	6.8	11.2	0.258		3.97	46465
2	610	0.4	66.2	33.5	6.71	7.22 ±1.63	2.05	0.13	0.68	6.4	11.1	0.235	2.065	3.73	46466
3	0	15.4	69.6	15.0	20.33	5.62 ±1.82	2.76	0.97	0.60	4.8	29.9	0.475	0.007	7.27	46417
3	2	16.4	64.3	19.3	18.58	5.75 ±1.98	2.34	0.85	0.64	4.7	29.6	0.353	0.025	5.80	46418
3	5	15.6	58.2	26.3	14.38	6.12 ±2.14	1.75	0.50	0.54	4.7	31.7	0.266	0.037	3.85	46419
3	8	14.0	61.5	24.5	15.09	6.05 ±2.09	1.90	0.60	0.43	6.0	31.1	0.312	0.065	4.17	46420
3	12	22.2	62.0	15.8	22.88	5.45 ±1.90	2.88	1.10	0.44	4.2	40.7	0.348	0.055	4.51	46421
3	15	17.9	64.0	18.1	19.92	5.65 ±1.96	2.53	0.94	0.57	4.4	33.0	0.400	0.095	4.46	46422
3	18	18.3	63.2	18.5	19.51	5.68 ±1.97	2.43	0.89	0.34	4.7	33.6	0.354	0.035	5.27	46423
3	21	15.4	66.1	18.5	18.71	5.74 ±1.94	2.41	0.87	0.28	4.5	37.5	0.360	0.050	5.32	46424
3	24	14.6	69.8	15.6	21.05	5.57 ±1.86	2.89	1.08	0.28	4.9	31.9	0.339	0.052	5.07	46425
3	27	21.3	61.7	17.0	21.34	5.55 ±1.95	2.62	0.99	0.30	4.7	37.7	0.323	0.060	5.22	46426
4	0	1.5	51.9	46.6	4.68	7.74 ±1.56	2.64	-0.44	1.10	18.0	28.8	0.306	0	7.59	46427
4	3	0.5	39.2	60.3	3.40	8.20 ±1.45	3.10	-0.74	1.42	14.3	29.9	0.383	0.010	4.88	46428
4	4	1.1	46.4	52.6	4.10	7.93 ±1.55	2.67	-0.56	0.68	20.2	29.9	0.319	0.012	4.41	46429
4	6	1.3	48.7	50.0	4.52	7.79 ±1.61	2.45	-0.48	2.21	7.0	30.7	0.257	0.038	4.71	46430
4	8	0.5	35.0	64.5	3.04	8.36 ±1.31	3.52	-0.76	2.12	7.9	28.3	0.321	0.060	2.69	46431
4	12	0.7	51.9	47.4	4.78	7.71 ±1.69	2.05	-0.29	2.18	6.8	31.2	0.357	0.070	2.53	46432
4	15	1.0	49.5	49.5	4.49	7.80 ±1.66	2.32	-0.44	2.10	7.7	31.2	0.350	0.100	3.64	46433
4	17	0.8	37.8	61.4	3.40	8.20 ±1.57	2.92	-0.77	1.39	13.3	32.5	0.342	0.100	2.64	46434
4	20	0.9	47.2	51.9	4.39	7.83 ±1.68	2.28	-0.47	1.72	9.5	31.1	0.396	0.090	3.71	46435
4	23	0.2	48.5	51.3	4.27	7.87 ±1.61	2.17	-0.38	1.45	11.4	31.0	0.419	0.100	4.54	46436
4	25	1.1	53.7	45.2	5.23	7.58 ±1.73	2.00	-0.24	1.96	6.6	30.5	0.423	0.093	4.44	46437
4	30	0	44.4	55.6	3.31	8.24 ±1.21	1.87	0.03	1.82	8.5	32.3	0.415	0.091	5.08	46438
4	35	4.5	50.6	45.0	5.76	7.44 ±1.93	2.02	-0.39	1.78	7.7	30.6	0.407	0.102	5.12	46439
4	39	0.2	43.5	56.3	3.38	8.21 ±1.30	2.82	-0.39	0.90	14.8	33.3	0.400	0.093	5.34	46440
4	42	0.3	44.7	55.0	3.54	8.14 ±1.33	2.63	-0.33	1.64	8.7	30.2	0.404	0.120	2.98	46441

CORE	DEPTH	Sand	Silt	Clay	Grain size		Kurt -osis	Skew -ness	C_{org}	$CaCO_3$	SO_{4pw}	SiO_{2pw}	NH^+_{4pw}	pε	ID
	cm	%	%	%	μm	phi			%	%	mM	mM	mM	-lg(M)	
5	5	0.2	45.0	54.9	3.77	8.05 ±1.51	2.41	-0.47	1.38	7.8	24.9	0.427	0.850	4.29	46467
5	20	0.6	55.7	43.7	5.19	7.59 ±1.70	1.97	-0.15	1.19	9.3	24.2	0.388	1.650	4.10	46468
5	40	0.6	51.7	47.8	4.65	7.75 ±1.70	2.00	-0.24	0.99	9.7	18.6	0.465	1.885	4.42	46469
5	80	0.7	47.8	51.5	4.33	7.85 ±1.65	2.16	-0.39	1.18	7.7	16.1	0.590	2.090	4.24	46470
5	130	0.6	57.5	41.9	5.56	7.49 ±1.68	1.93	-0.09	1.22	6.9	14.8	0.610	2.285	4.17	46471
5	150	0.5	59.4	40.1	6.00	7.38 ±1.72	1.86	-0.04	1.26	6.4	14.7	0.657	2.370	4.08	46472
5	160	1.3	51.0	47.7	4.91	7.67 ±1.68	2.14	-0.32	1.34	6.4	14.7	0.598	2.350	4.19	46473
5	180	0.8	51.7	47.5	4.58	7.77 ±1.54	2.47	-0.38	1.40	2.7	13.6	0.712	2.370	4.05	46474
5	220	1.1	59.6	39.4	5.52	7.50 ±1.60	2.19	-0.06	1.30	3.2	12.9	0.427	1.875	4.20	46475
5	270	1.6	58.0	40.4	6.35	7.30 ±1.84	1.82	-0.09	0.79	10.0	11.7	0.360	1.981	4.12	46476
5	300	0.6	61.7	37.7	6.35	7.30 ±1.75	1.86	0.03	1.03	7.3	9.9	0.426	2.088	3.80	46477
5	360	0.6	56.7	42.8	5.30	7.56 ±1.67	2.00	-0.15	0.84	4.2	8.2	0.431	2.175	3.83	46478
5	400	0.5	61.1	38.5	5.56	7.49 ±1.54	2.15	-0.01	0.70	4.1	7.2	0.381	2.238	3.66	46479
5	450	1.2	53.2	45.5	4.91	7.67 ±1.67	2.16	-0.28	0.63	5.8	5.9	0.390	2.356	1.41	46480
5	470	0.5	53.0	46.6	4.84	7.69 ±1.68	2.00	-0.24	0.62	5.5	5.5	0.426	2.256	3.56	46481
5	550	1.2	64.5	34.3	6.71	7.22 ±1.67	2.03	0.10	0.65	5.9	3.5	0.302	2.450	3.85	46482
5	560	0.6	61.6	37.7	5.88	7.41 ±1.60	2.05	-0.01	0.64	6.2	3.5	0.148	2.513	1.56	46483
5	580	0.7	63.2	36.1	6.57	7.25 ±1.67	1.93	0.04	0.66	6.8	2.8	0.290	2.519	3.37	46484
5	610	0.6	64.5	34.9	6.62	7.24 ±1.66	1.97	0.08	0.61	5.8	2.0	0.240	2.719	2.97	46485
5	620	0.5	61.5	38.1	5.88	7.41 ±1.60	2.04	-0.02	0.65	5.6	1.8	0.173	2.710	1.85	46486
5	650	0.9	66.0	33.1	6.75	7.21 ±1.63	2.08	0.09	0.64	5.3	1.2	0.205	2.781	0.73	46487
5	680	1.8	64.1	34.2	6.75	7.21 ±1.67	2.07	0.04	0.63	5.5	0.8	0.237	2.850	0.90	46488
5	750	0.9	64.8	34.3	6.62	7.24 ±1.63	2.06	0.09	0.67	5.6	0.4	0.265	2.918	-0.07	46489
5	820	0.5	58.0	41.5	5.34	7.55 ±1.58	2.11	-0.12	0.80	5.3	0.2	0.250	3.100	1.31	46490
5	870	1.2	52.0	46.9	4.55	7.78 ±1.65	2.20	-0.24	0.84	4.7	0.2	0.210	3.019	1.53	46491
5	910	1.4	52.9	45.7	4.74	7.72 ±1.71	2.19	-0.26	0.75	5.6		0.238	3.081	1.44	46492
5	930	1.3	52.4	46.3	4.74	7.72 ±1.59	2.35	-0.32	0.76	5.2	0.2	0.255	3.078	1.56	46493
5	980	0.6	58.1	41.3	5.49	7.51 ±1.63	2.07	-0.15	0.67	5.4	0.2	0.277	3.225	2.54	46494
5	1020	0.9	67.7	31.4	7.34	7.09 ±1.65	2.05	0.25	0.57	5.9	0	0.218	3.194	2.02	46495
5	1030	1.2	65.3	33.6	6.94	7.17 ±1.68	2.01	0.14	0.57	5.7	0	0.310	3.185	2.15	46496
6	10	0.5	46.1	53.5	3.83	8.03 ±1.60	2.40	-0.45	0.42	3.7	27.3	0.150	0.263	3.19	46497
6	60	0.2	42.2	57.7	3.42	8.19 ±1.45	2.55	-0.49	0.48	2.8	33.4	0.178	0.237	4.07	46498
6	130	0.7	39.6	59.7	3.33	8.23 ±1.50	2.83	-0.65	0.49	3.5	30.6	0.169	0.237	4.34	46499
6	170	1.1	42.8	56.1	3.75	8.06 ±1.58	2.76	-0.64	0.45	3.7	28.9	0.106	0.259	2.03	46500
6	190	0.2	35.5	64.3	3.06	8.35 ±1.45	2.90	-0.74	0.52	2.7	29.0	0.137	0.233	0.90	46501
6	230	0.9	44.4	54.7	3.83	8.03 ±1.56	2.54	-0.52	0.49	2.1	33.1	0.167	0.231	2.95	46502
6	260	0.7	43.3	56.0	3.67	8.09 ±1.49	2.76	-0.57	0.41	1.7	28.8	0.141	0.256	2.27	46503
6	310	1.1	54.6	44.3	4.91	7.67 ±1.60	2.31	-0.28	0.56	3.7	28.2	0.092	0.231	4.20	46504
6	370	0.9	53.3	45.8	4.68	7.74 ±1.56	2.28	-0.26	0.55	5.1	28.3	0.110	0.275	4.61	46505
6	440	0.8	47.5	51.8	4.02	7.96 ±1.55	2.46	-0.43	0.40	3.2	28.9	0.090	0.319	4.75	46506
6	510	2.3	66.4	31.3	7.81	7.00 ±1.75	2.00	0.09	0.53	3.0	23.2	0.054	0.302	4.81	46507
7	0	1.2	44.8	54.0	4.22	7.89 ±1.69	2.41	-0.57	1.14	10.2	31.6	0.308	0.044	4.93	46508
7	40	13.8	63.4	22.7	16.63	5.91 ±2.08	2.08	0.76	0.66	6.8	27.5	0.429	0.640	4.54	46509
7	70	5.0	66.9	28.2	10.75	6.54 ±1.97	1.79	0.34	0.64	5.0	26.2	0.482	0.525	4.59	46510
7	120	13.8	53.1	33.2	10.45	6.58 ±2.20	1.56	0.15	0.34	2.7	29.3	0.500	0.738	4.86	46511
7	160	2.4	53.6	44.0	5.23	7.58 ±1.71	2.25	-0.31	0.42	3.1	26.6	0.302	0.769	4.68	46512
7	215	0.8	42.6	56.6	3.77	8.05 ±1.66	2.44	-0.57	0.44	2.9	25.7	0.250	0.819	2.39	46513
7	295	0.5	32.3	67.2	2.86	8.45 ±1.37	3.53	-0.86	0.38	2.4	26.0	0.194	0.881	4.20	46514
7	315	1.9	48.2	50.0	4.30	7.86 ±1.60	2.63	-0.50	0.49	4.9	26.4	0.135	0.856	1.49	46515
7	365	3.1	53.1	43.9	5.37	7.54 ±1.74	2.29	-0.37	0.44	4.2	25.7	0.177	0.943	4.54	46516
7	425	1.2	52.2	46.7	4.71	7.73 ±1.61	2.39	-0.36	0.52	2.5	54.6	0.153	0.969	1.71	46517
7	485	0.8	47.3	51.9	4.13	7.92 ±1.59	2.45	-0.47	0.52	3.8	24.3	0.200	1.038	3.73	46518
7	505	5.3	59.5	35.2	7.24	7.11 ±1.86	2.00	-0.11	0.46	3.8	23.6	0.169	1.075	4.02	46519
7	585	2.2	54.4	43.4	5.34	7.55 ±1.74	2.14	-0.28	0.63	4.9	23.6	0.184	1.166	3.17	46520
7	625	3.8	58.3	38.0	6.48	7.27 ±1.80	2.07	-0.16	0.55	5.1	24.8	0.142	1.219	4.47	46521
8	0	1.2	31.1	67.7	3.02	8.37 ±1.54	3.72	-1.08	0.93	12.7	31.3	0.356	0.046	4.95	46522
8	15	2.2	46.7	51.1	4.68	7.74 ±1.77	2.32	-0.54	1.01	2.0	27.5	0.480	0.643	4.85	46523
8	75	14.9	61.5	23.6	15.41	6.02 ±2.07	1.97	0.63	0.46	3.0	26.3	0.556	0.666	4.81	46524
9	10	3.4	49.1	47.5	4.98	7.65 ±1.80	2.29	-0.46	0.45	2.9	29.2	0.137	0.385	4.29	46525
9	70	0.5	28.8	70.7	2.63	8.57 ±1.34	4.01	-1.02	0.35	2.2	30.5	0.300	0.156	1.69	46526
9	110	0.9	42.9	56.1	3.83	8.03 ±1.62	2.56	-0.60	0.53	3.7	0	0.125	0.360	1.19	46527
9	160	1.4	46.3	52.2	4.10	7.93 ±1.61	2.60	-0.53	0.52	4.9	29.9	0.218	0.406	2.73	46528
9	230	0.4	46.6	53.1	4.07	7.94 ±1.64	2.31	-0.48	0.53	2.6	29.9	0.269	0.456	2.85	46529
9	250	0.4	25.5	74.1	2.44	8.68 ±1.25	4.51	-1.09	0.52	2.8	28.2	0.140	0.478	1.63	46530
9	380	1.5	41.1	57.4	3.62	8.11 ±1.54	2.98	-0.68	0.51	5.2	28.7	0.200	0.635	4.27	46531
9	430	0.9	50.1	49.1	4.33	7.85 ±1.59	2.36	-0.36	0.63	5.7	22.9	0.160	0.763	3.81	46532
9	520	4.6	62.9	32.5	7.70	7.02 ±1.81	2.03	-0.01	0.59	5.2	25.7	0.106	0.918	4.27	46533

CORE	DEPTH	Sand	Silt	Clay	Grain size		Kurt-osis	Skew-ness	C_{org}	$CaCO_3$	SO_{4pw}	SiO_{2pw}	NH^+_{4pw}	pε	ID
	cm	%	%	%	μm	phi			%	%	mM	mM	mM	-lg(M)	
18	10	1.4	48.6	50.0	4.71	7.73 ±1.75	2.20	-0.45	0.51	9.8	30.7	0.370	0.125	4.10	46546
18	30	0.3	26.6	73.1	2.56	8.61 ±1.47	3.57	-1.10	0.75	8.4	28.7	0.431	0.265	3.97	46547
18	60	0.3	17.4	82.3	1.94	9.01 ±1.28	5.44	-1.53	0.52	4.7	26.5	0.535	0.425	2.73	46548
18	90	0.5	26.2	73.3	2.47	8.66 ±1.31	4.18	-1.06	0.31	6.2	24.5	0.514	0.759	3.15	46549
18	130	0.5	37.8	61.7	3.24	8.27 ±1.49	2.75	-0.66	0.33	6.1	21.1	0.536	0.944	4.05	46550
18	160	2.0	30.5	67.5	3.00	8.38 ±1.64	3.53	-1.07	0.54	6.1	18.9	0.524	1.100	3.75	46551
18	200	3.6	51.8	44.6	5.84	7.42 ±1.94	1.88	-0.29	0.61	6.6	17.4	0.560	1.250	3.20	46552
18	250	5.3	59.3	35.4	7.65	7.03 ±1.92	1.85	-0.04	0.97	8.6	15.9	0.545	1.425	4.17	46553
18	310	3.8	64.9	31.3	8.14	6.94 ±1.84	1.94	0.12	1.36	7.1	14.4	0.482	1.625	4.05	46554
18	360	1.5	54.1	44.4	5.23	7.58 ±1.69	2.10	-0.24	1.20	9.0	9.8	0.406	1.705	2.20	46555
18	420	4.1	69.2	26.7	10.10	6.63 ±1.85	1.97	0.34	0.88	5.6	10.8	0.435	1.860	3.80	46556
18	450	4.0	66.3	29.7	9.89	6.66 ±1.96	1.77	0.28	0.82	6.7	10.4	0.456	1.789	1.92	46557
18	500	0.6	38.1	61.3	3.38	8.21 ±1.51	3.04	-0.76	0.87	8.0	9.1	0.388	2.048	3.00	46558
18	570	2.1	56.7	41.2	5.88	7.41 ±1.79	1.97	-0.15	0.99	7.7	7.6	0.412	1.856	3.07	46559
18	600	1.9	62.0	36.0	6.66	7.23 ±1.74	1.99	0	0.94	8.0	6.5	0.488	2.144	0.36	46560
18	660	3.0	72.5	24.5	10.60	6.56 ±1.82	2.08	0.43	0.72	6.5	6.8	0.500	2.181	3.08	46561
18	720	9.4	68.5	22.2	13.70	6.19 ±1.95	2.12	0.59	0.68	6.5	4.4	0.537	2.438	1.85	46562
18	740	2.3	65.5	32.2	7.70	7.02 ±1.81	1.93	0.11	0.73	7.2	4.1	0.537	2.433	3.08	46563
18	790	6.9	66.6	26.5	10.45	6.58 ±1.90	1.96	0.31	0.41	4.2	3.0	0.543	2.441	-1.32	46564
18	860	3.1	65.5	31.5	8.43	6.89 ±1.85	1.86	0.15	0.74	8.2	1.8	0.482	2.619	2.63	46565
19	0	0.3	23.2	76.5	2.32	8.75 ±1.14	4.30	-0.94	0.46	19.7	30.5	0.120	0	6.44	46534
19	2	0.5	27.9	71.6	2.69	8.54 ±1.30	4.26	-1.07	0.39	18.3	33.0	0.296	0	7.88	46535
19	5	0.8	31.2	68.0	3.02	8.37 ±1.44	3.97	-1.09	0.41	19.5	32.6	0.353	0	7.20	46536
19	7	2.1	56.2	41.7	5.96	7.39 ±1.78	2.06	-0.29	0.39	19.7	33.8	0.369	0.005	7.07	46537
19	10	2.3	48.4	49.3	4.94	7.66 ±1.79	2.28	-0.53	0.33	20.7	34.7	0.380	0.010	3.83	46538
19	14	1.4	47.4	51.2	4.84	7.69 ±1.76	2.19	-0.51	0.45	19.2	33.8	0.382	0.020	2.73	46539
19	16	1.4	51.1	47.5	5.37	7.54 ±1.81	1.96	-0.36	0.41	18.6	31.4	0.365	0.032	2.80	46540
19	19	2.4	58.0	39.7	6.85	7.19 ±1.88	1.78	-0.12	0.90	13.9	33.5	0.350	0.050	2.51	46541
19	22	2.0	42.8	55.2	4.30	7.86 ±1.76	2.41	-0.63	0.36	17.0	32.3	0.388	0.063	2.49	46542
19	25	1.1	48.8	50.1	4.98	7.65 ±1.79	2.02	-0.42	0.33	19.2	33.7	0.405	0.081	4.59	46543
19	28	2.9	56.5	40.6	6.48	7.27 ±1.84	1.93	-0.22	0.58	11.2	32.9	0.325	0.104	2.97	46544
19	32	1.3	57.1	41.7	6.09	7.36 ±1.80	1.86	-0.15	0.32	15.6	31.8	0.318	0.113	3.53	46545
28	33	0.9	36.9	62.2	3.26	8.26 ±1.50	3.09	-0.77	0.68	5.2	32.4	0.104	0.050	3.98	46566
28	60	0.3	32.3	67.4	2.69	8.54 ±1.36	3.30	-0.79	0.38	8.8	33.7	0.194	0.085	4.46	46567
28	90	0.5	47.4	52.1	3.85	8.02 ±1.41	2.54	-0.34	0.44	9.9	30.9	0.144	0.250	3.86	46578
28	140	0.5	43.2	56.3	3.40	8.20 ±1.39	2.64	-0.40	0.38	9.6	31.3	0.137	0.255	4.51	46579
28	210	0.3	34.5	65.2	2.84	8.46 ±1.22	3.43	-0.61	0.45	9.3	32.7	0.104	0.285	1.56	46580
28	280	0.8	42.4	56.8	3.50	8.16 ±1.43	3.02	-0.58	0.44	8.1	29.8	0.115	0.325	3.53	46568
28	320	0.3	40.5	59.1	3.22	8.28 ±1.30	2.83	-0.45	0.42	8.2	28.6	0.118	0.363	3.47	46569
28	360	0.5	51.7	47.8	4.19	7.90 ±1.41	2.51	-0.22	0.42	8.4	28.0	0.120	0.357	1.88	46570
28	400	0.4	42.5	57.0	3.35	8.22 ±1.35	2.73	-0.42	0.42	8.1	28.2	0.106	0.415	1.90	46571
28	450	0.3	39.7	60.0	3.17	8.30 ±1.31	2.82	-0.48	0.43	8.9	28.7	0.137	0.520	3.73	46572
28	510	0.5	51.0	48.5	4.07	7.94 ±1.40	2.42	-0.19	0.38	9.4	26.5	0.115	0.510	4.24	46573
28	540	0.7	45.1	54.2	3.59	8.12 ±1.47	2.41	-0.37	0.41	10.1	26.8	0.163	0.568	3.61	46574
28	590	0.5	46.8	52.7	3.80	8.04 ±1.46	2.37	-0.32	0.42	9.3	26.4	0.145	0.083	4.19	46575
28	610	0.7	58.4	41.0	5.05	7.63 ±1.49	2.19	-0.01	0.40	9.7	27.1	0.154	0.100	4.29	46576
28	660	0.5	37.0	62.5	3.15	8.31 ±1.49	2.67	-0.64	0.42	9.5	16.9	0.152	0.163	4.42	46577
28	680	0.3	34.6	65.1	2.94	8.41 ±1.37	2.93	-0.68	0.39	9.3	24.8	0.240	0.537	2.24	46581
28	720	6.3	58.8	35.0	7.87	6.99 ±1.94	1.85	-0.04	0.65	6.2	25.0	0.125	0.575	4.58	46582
28	760	2.0	53.8	44.2	4.81	7.70 ±1.54	2.65	-0.34	0.56	7.9	23.3	0.104	0.670	4.07	46583
28	800	0.6	48.1	51.3	3.83	8.03 ±1.37	2.77	-0.33	0.41	9.9	23.8	0.120	0.675	4.27	46584
28	850	0.8	51.2	48.0	4.22	7.89 ±1.44	2.61	-0.29	0.42	8.6	28.5	0.117	0.595	3.92	46585
28	890	1.8	53.1	45.1	4.58	7.77 ±1.50	2.85	-0.40	0.60	2.0	23.5	0.102	0.750	3.68	46586
28	930	0.8	49.5	49.6	4.02	7.96 ±1.41	2.64	-0.29	0.34	10.8	19.1	0.114	0.780	4.03	46587
28	970	0.9	44.9	54.3	3.67	8.09 ±1.42	2.93	-0.49	0.37	10.1	19.6	0.118	0.755	4.22	46588
28	1010	0.5	47.6	51.9	3.85	8.02 ±1.44	2.40	-0.30	0.39	13.1	19.0	0.108	0.710	3.32	46589
28	1050	0.3	50.3	49.4	3.96	7.98 ±1.36	2.36	-0.16	0.37	15.8	20.7	0.100	0.732	4.05	46590
28	1110	1.0	58.3	40.7	4.88	7.68 ±1.44	2.40	0	0.32	15.9	17.8	0.117	0.920	4.29	46591


Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Fe (ugg⁻¹)
Fe (ug g⁻¹)
Depth (cm)
Depth (cm)


Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Fe (ugg⁻¹)
Depth (cm)
Fe_T
Fe_SUM
Fe_TR
Fe_R


Core 19
Core 18
Core 4
Core 5
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Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Mn (ugg⁻¹)
Depth (cm)
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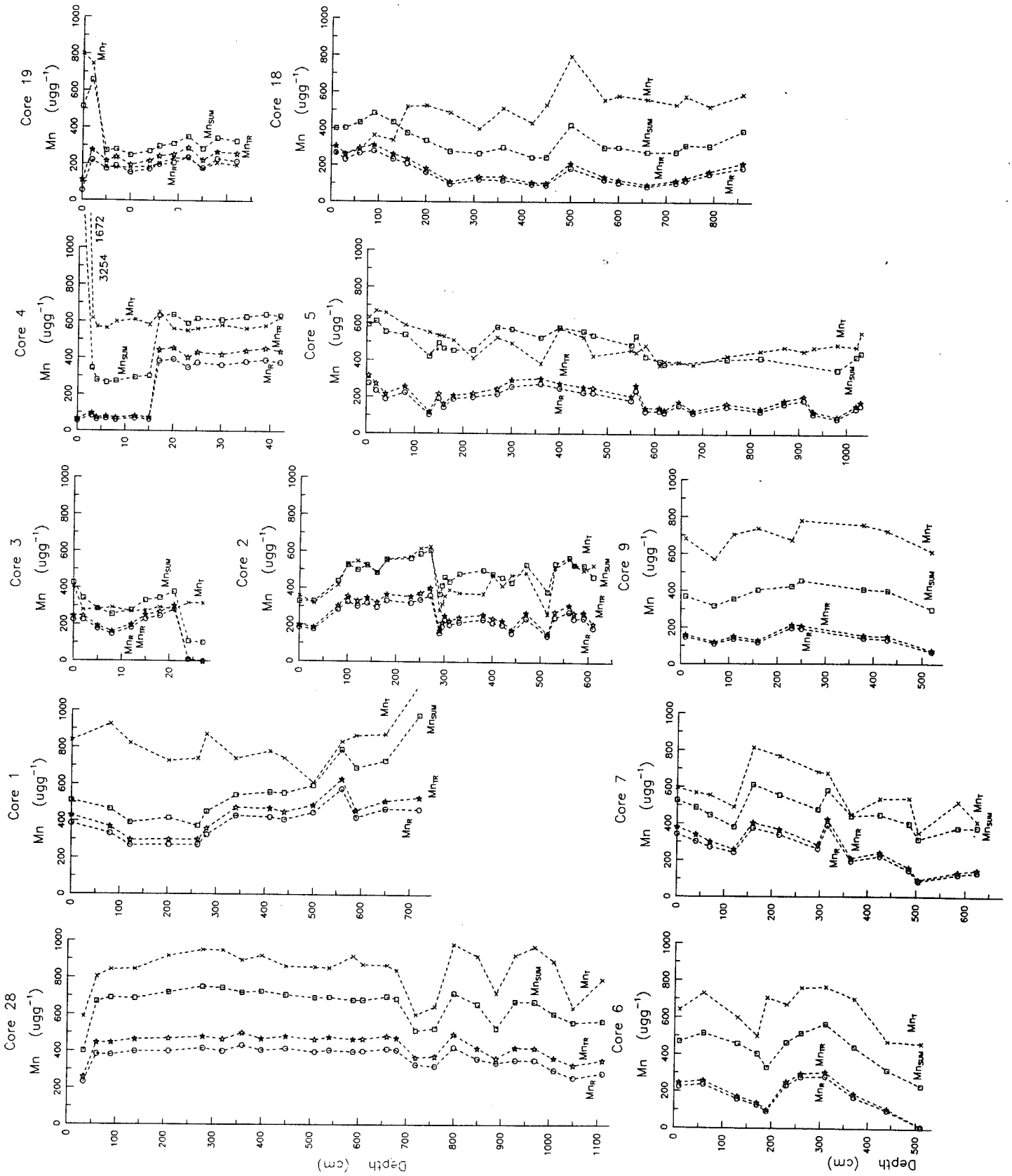
MnWA
MnHHA
MnHA


Core 19
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Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Mn (ugg⁻¹)
Depth (cm)
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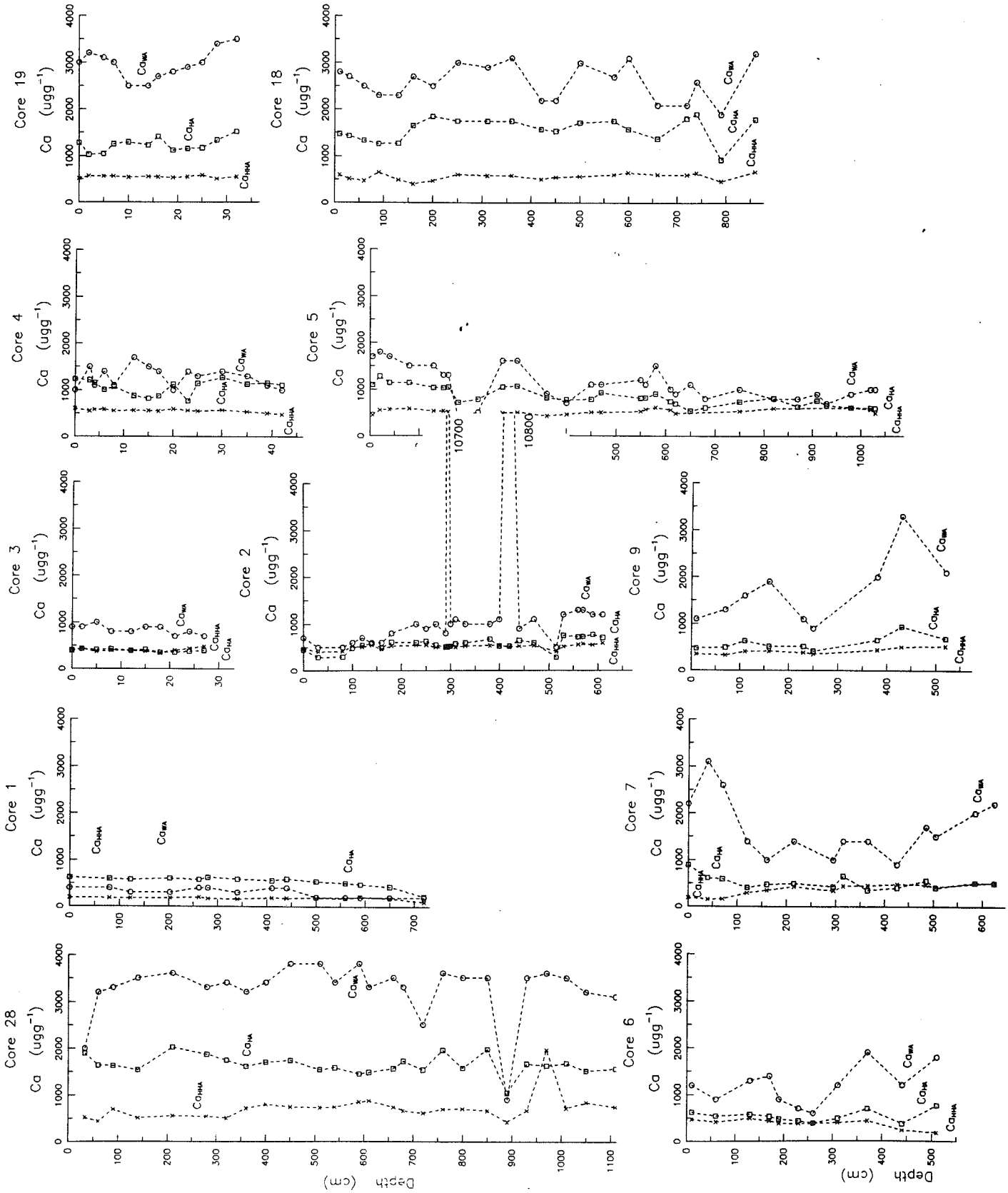
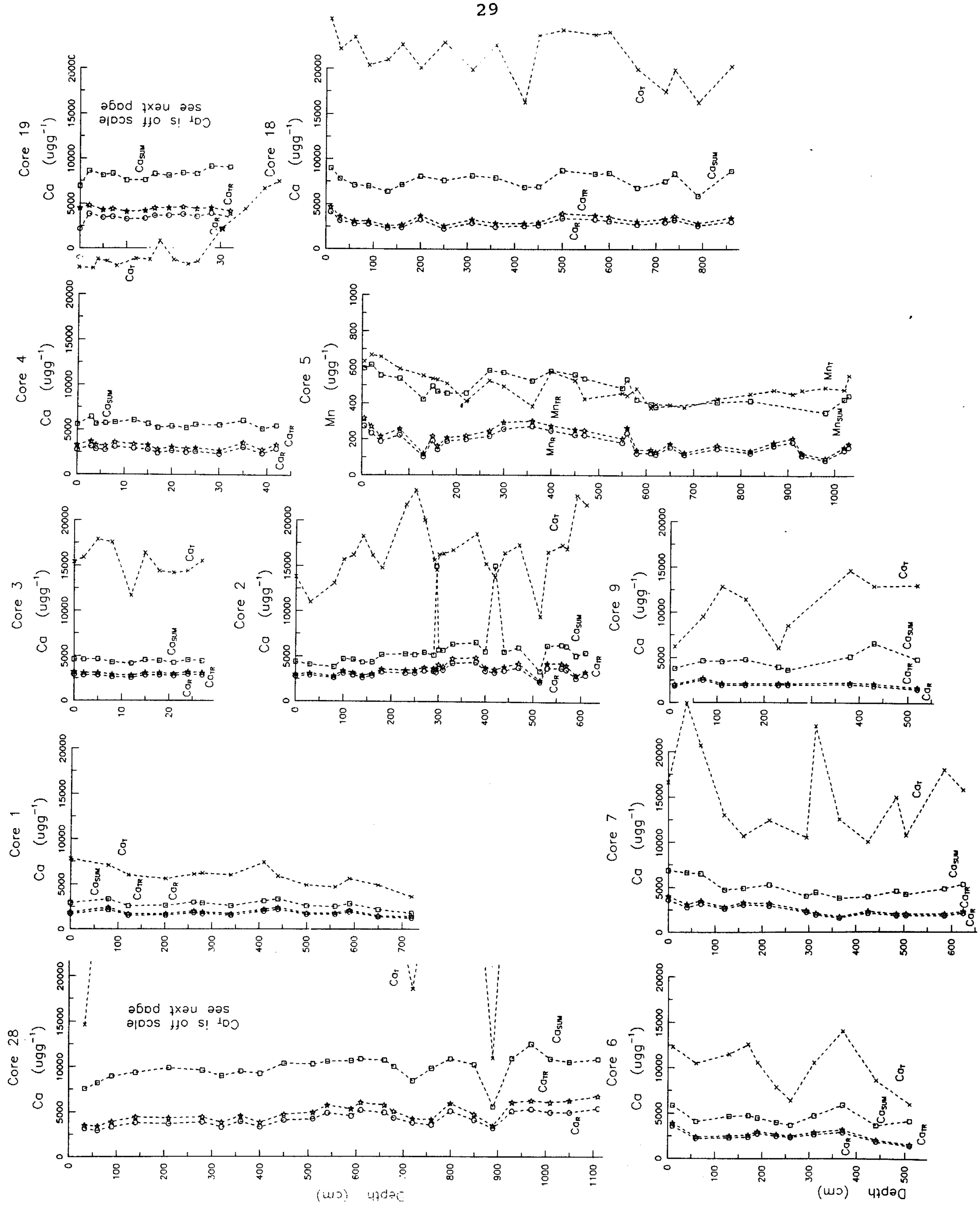
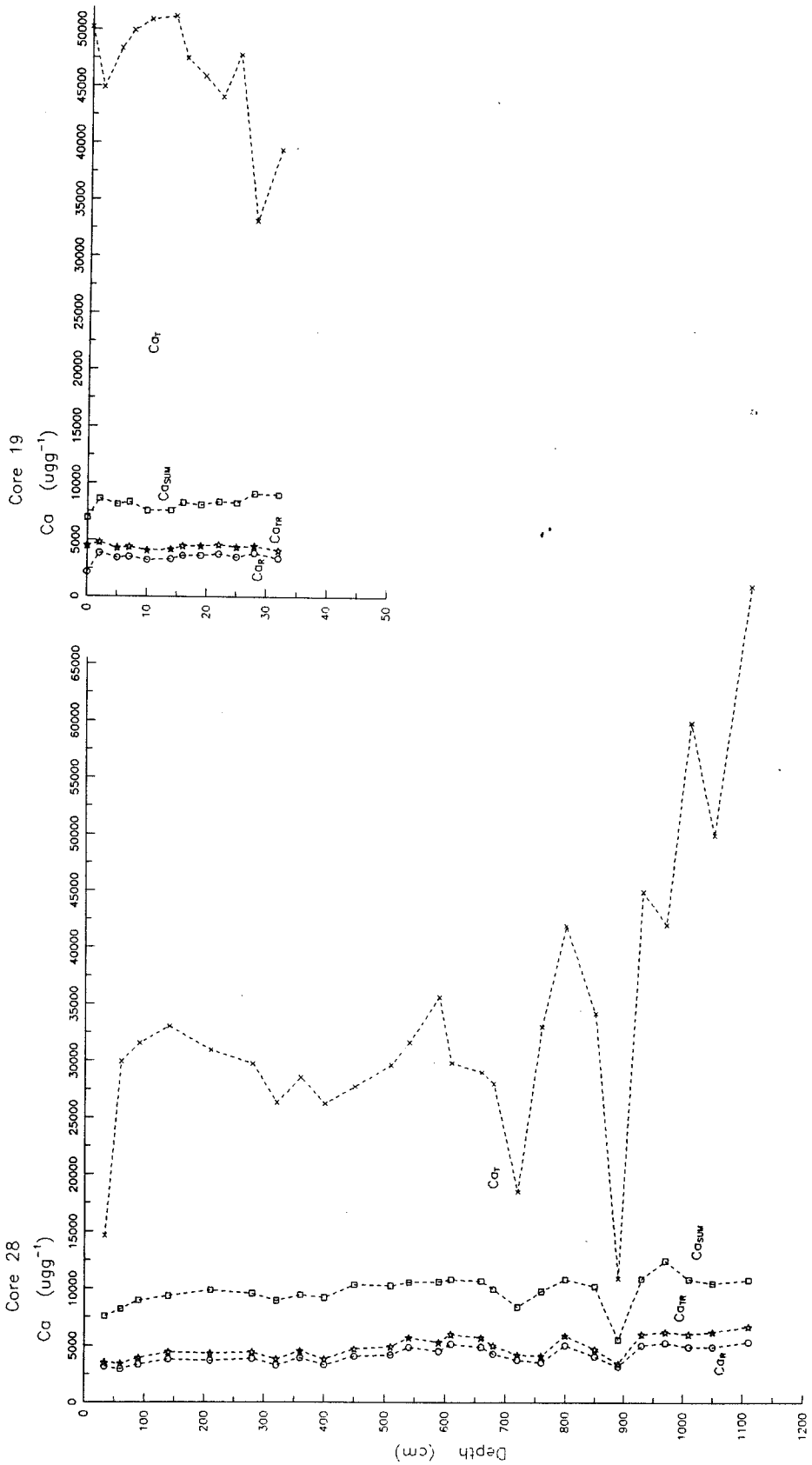
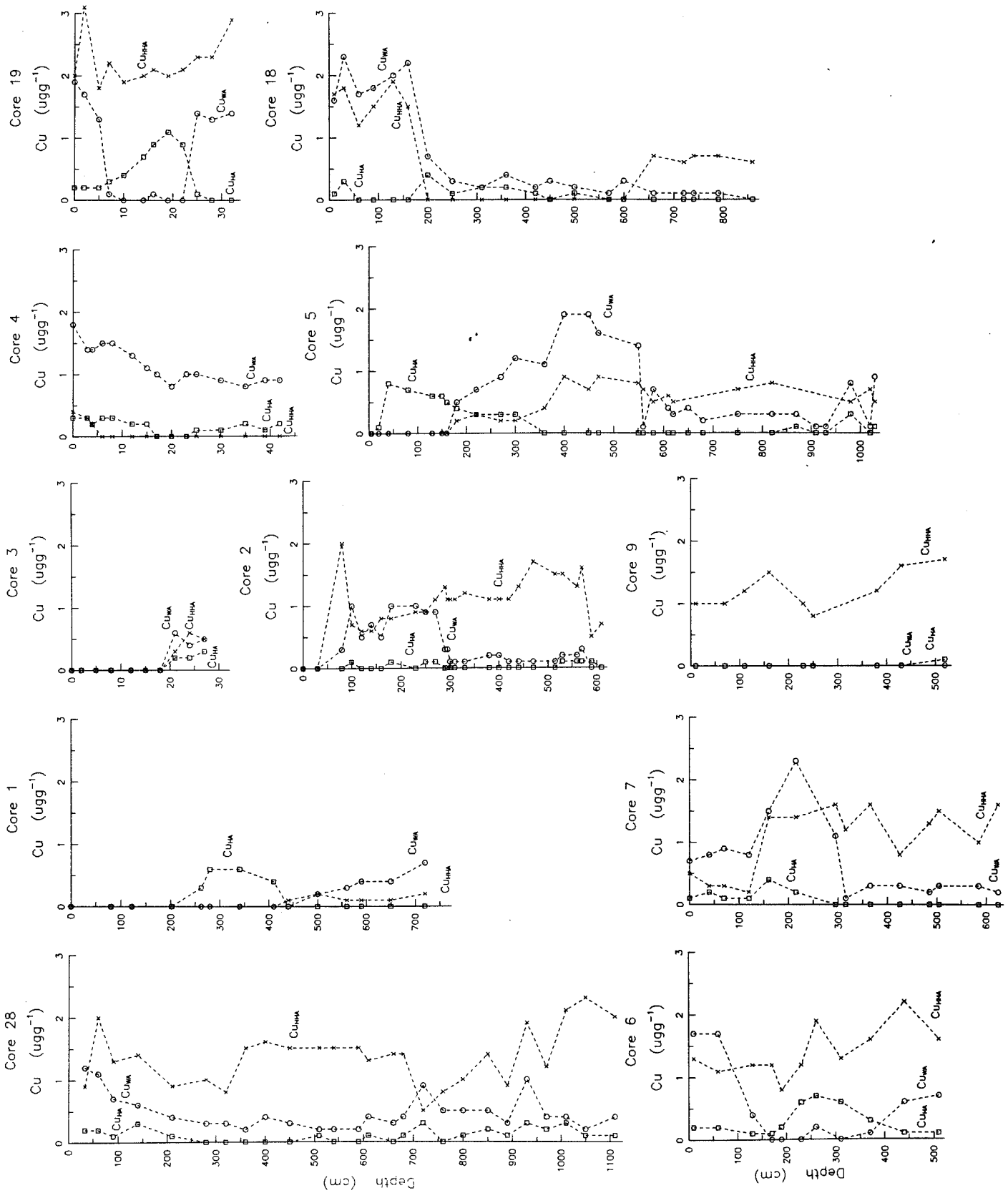
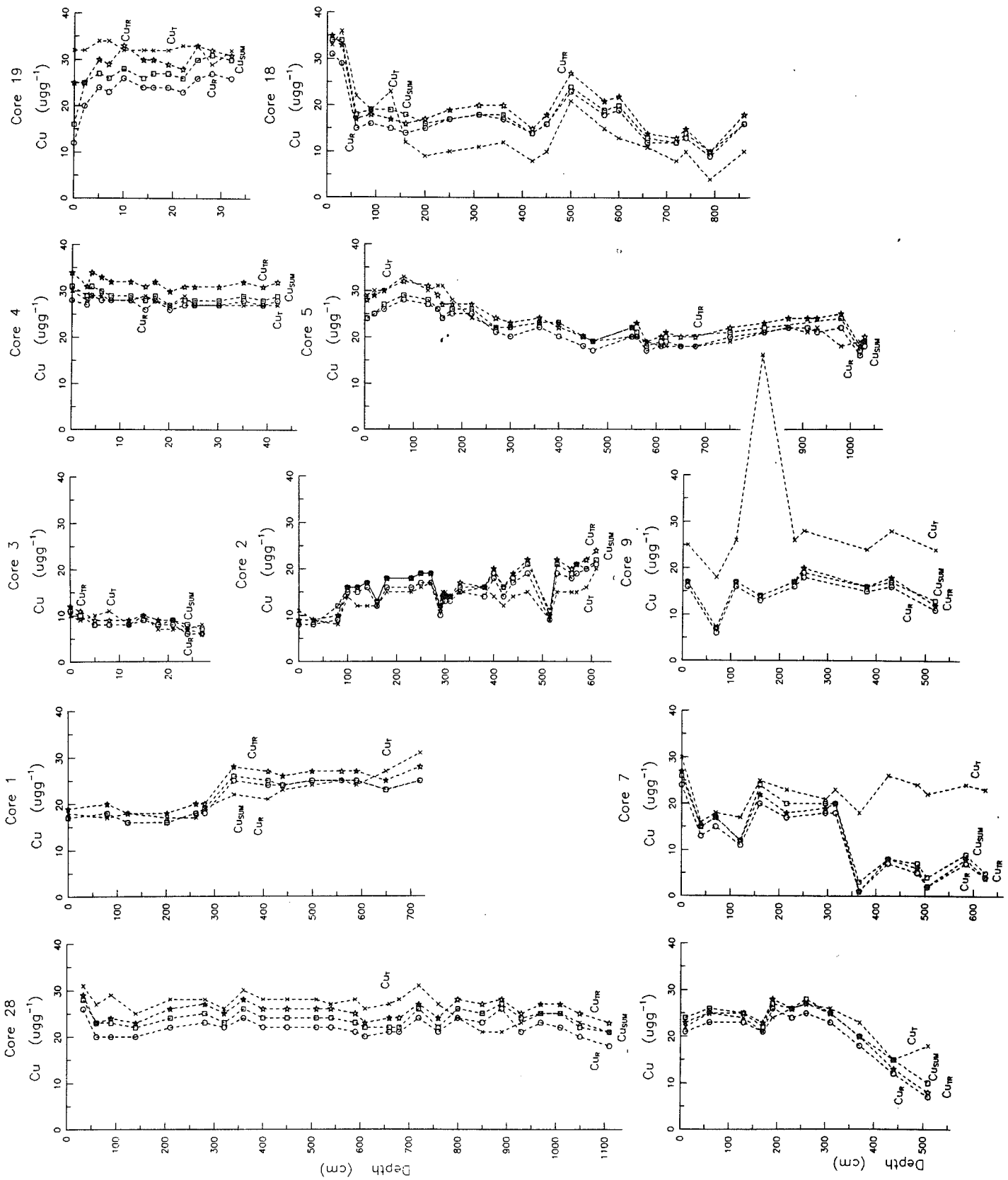
1672
MnT
MnSUM
MnTR
MnR

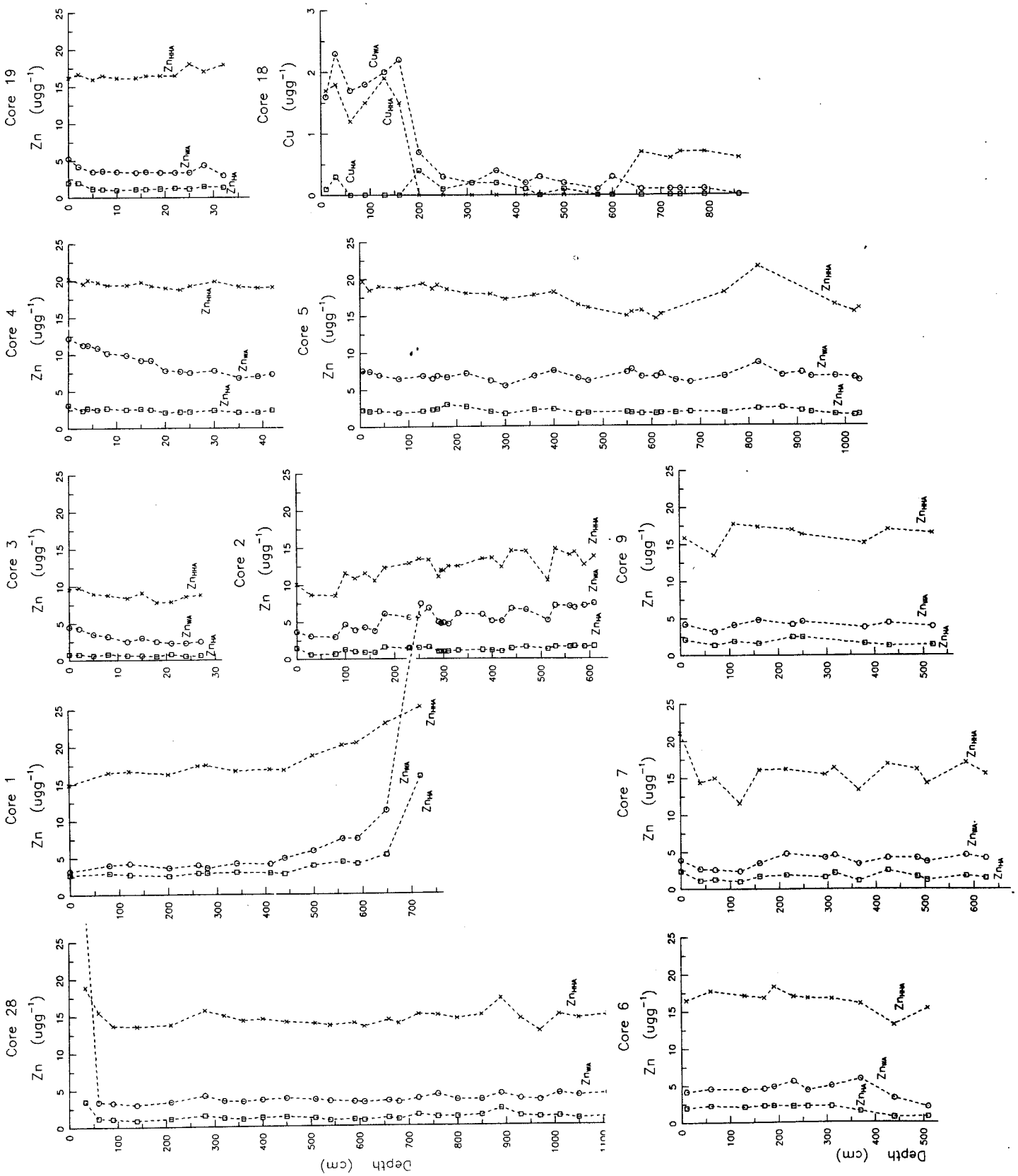

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Ca (ugg⁻¹)
Depth (cm)
10700
10800

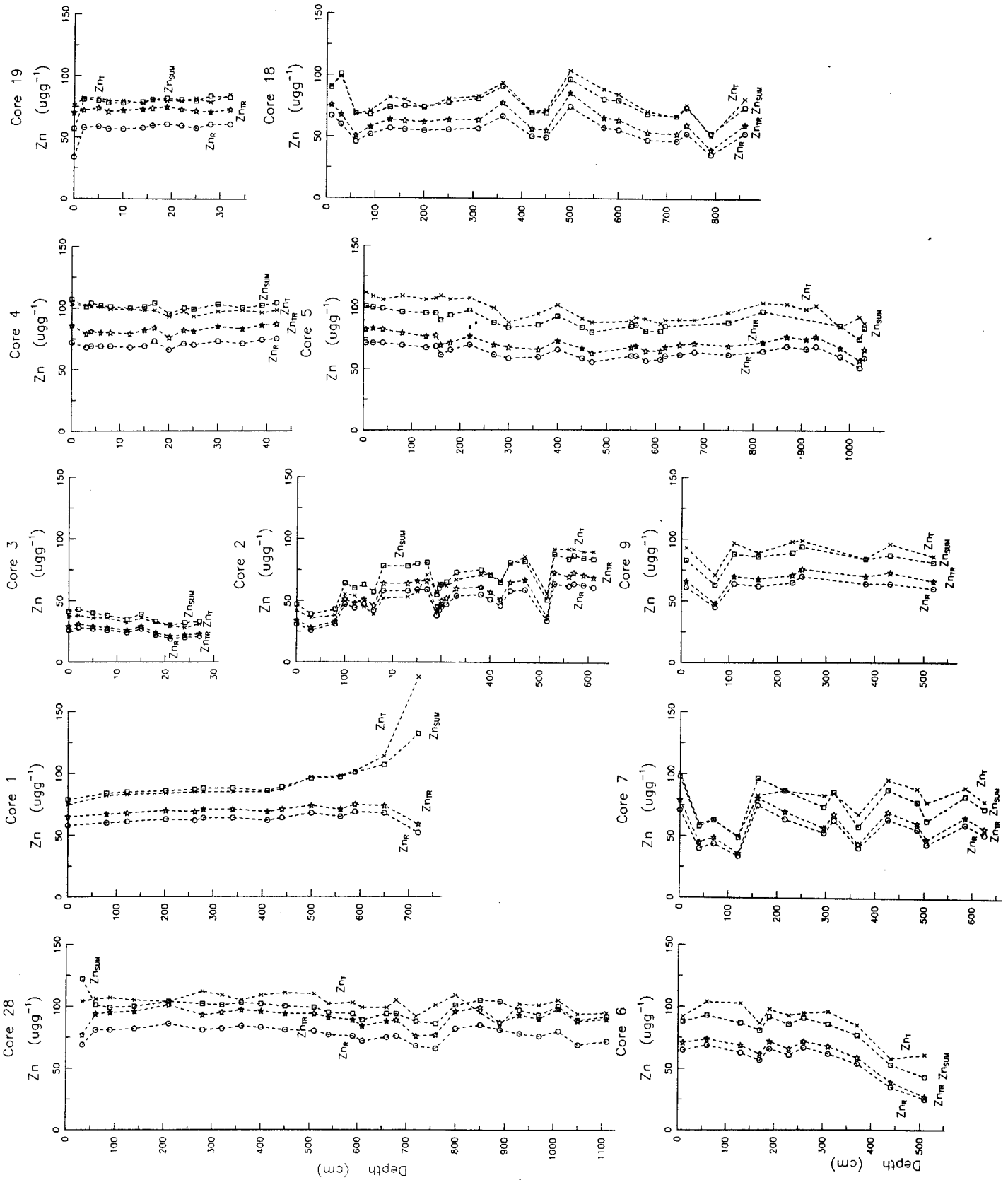

Core 19
Ca (ugg⁻¹)
Ca_T is off scale see next page
Core 18
Core 4
Core 5
Mn (ugg⁻¹)
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Depth (cm)

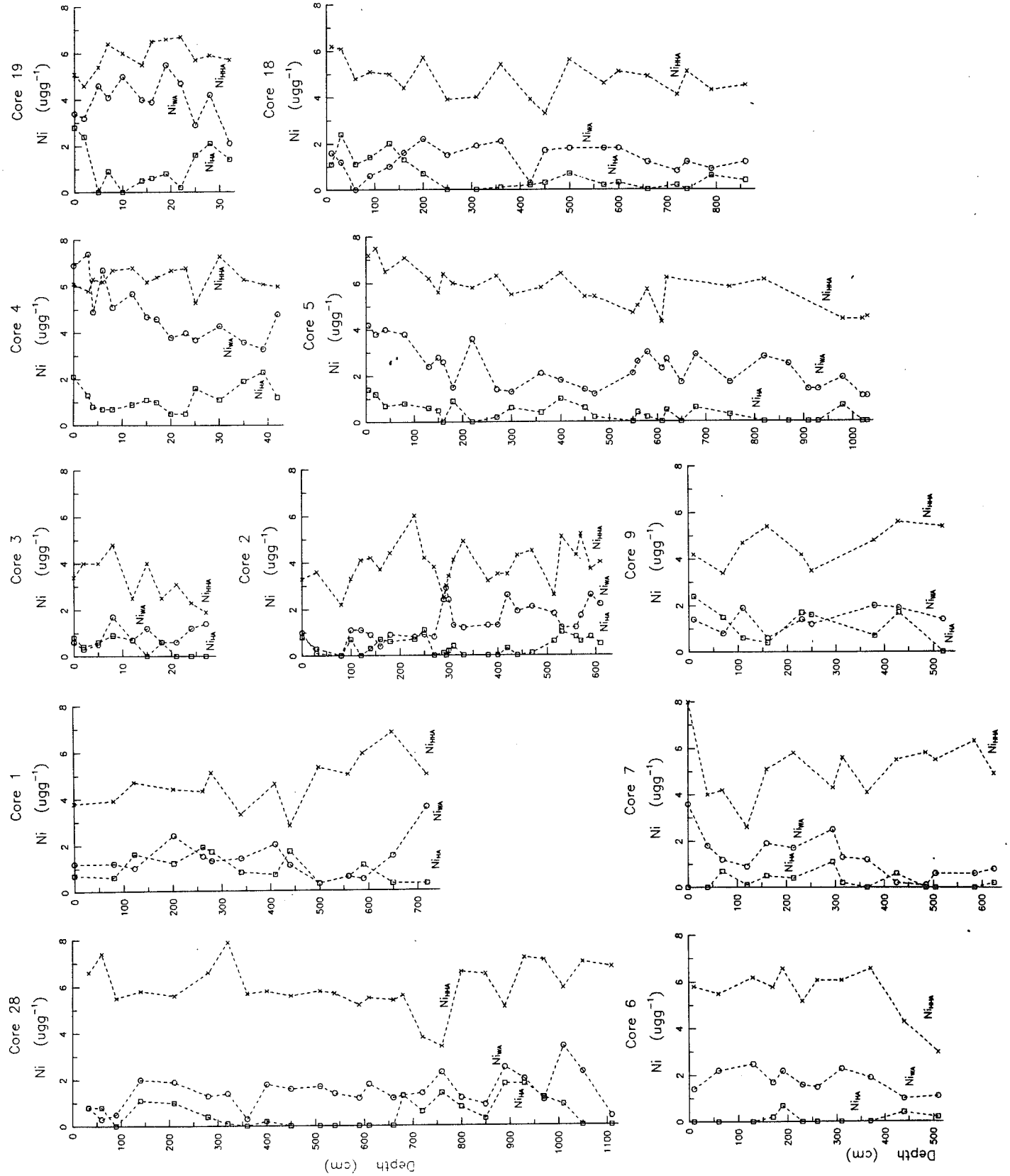

Core 19
Ca (ugg⁻¹)
Ca_T
Ca_SUM
Ca_HR
Ca_R
Core 28
Ca (ugg⁻¹)
Ca_T
Ca_SUM
Ca_HR
Ca_R
Depth (cm)

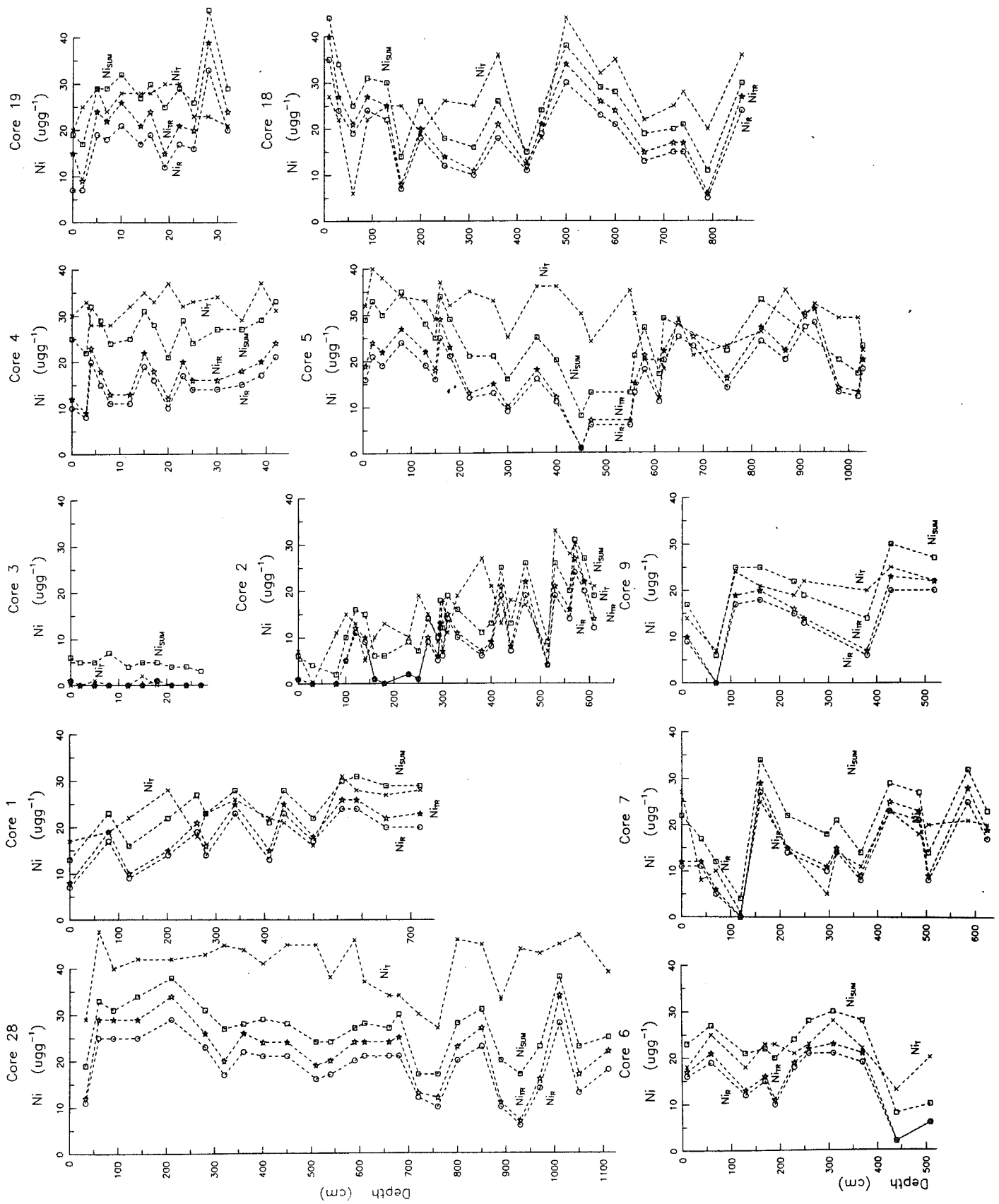

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Cu (ugg⁻¹)
Depth (cm)
CuHA
CuWA
CuHHA

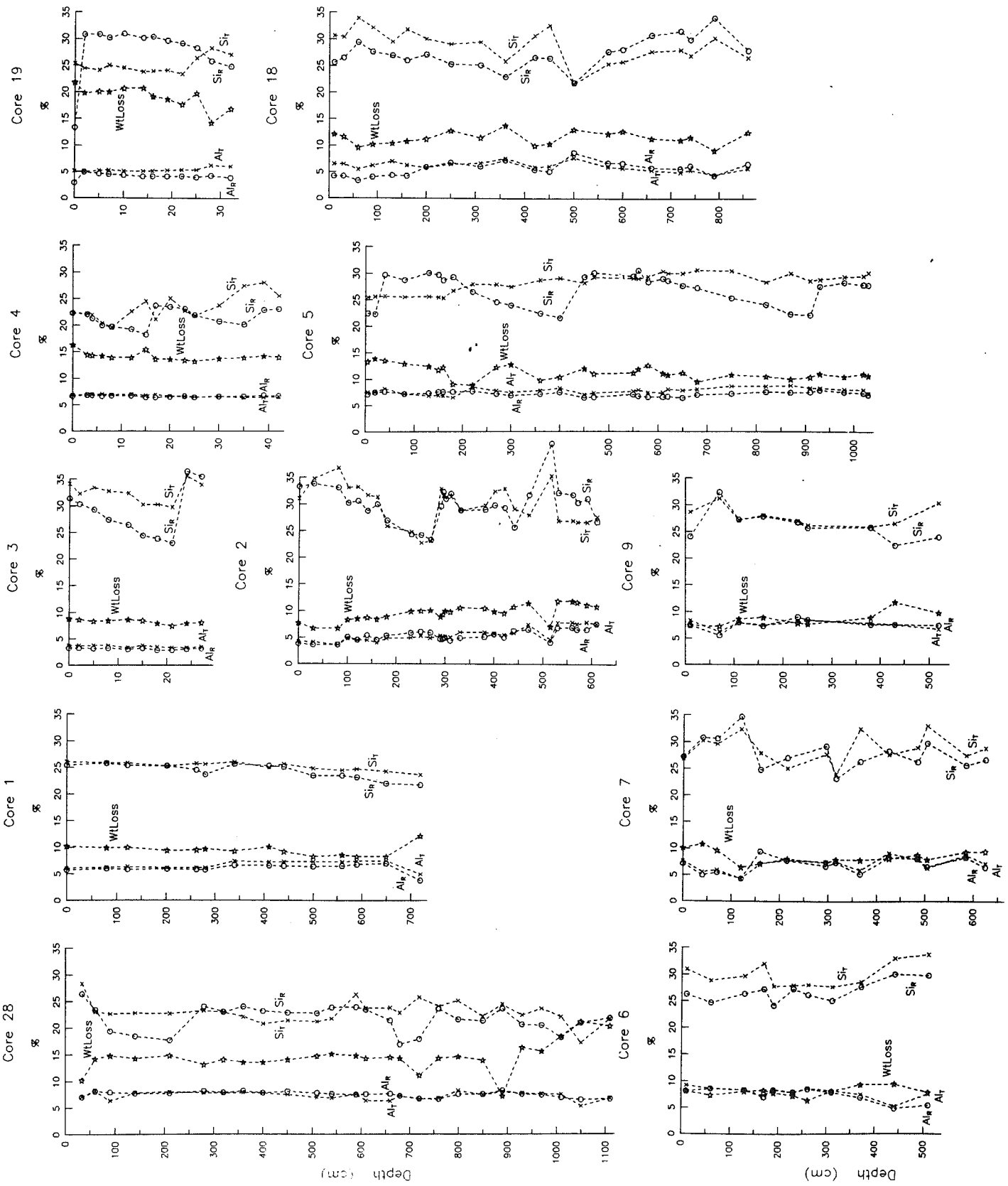

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Cu (ugg⁻¹)
Depth (cm)
Cu_{TR}
Cu_T
Cu_{SUM}
Cu_R

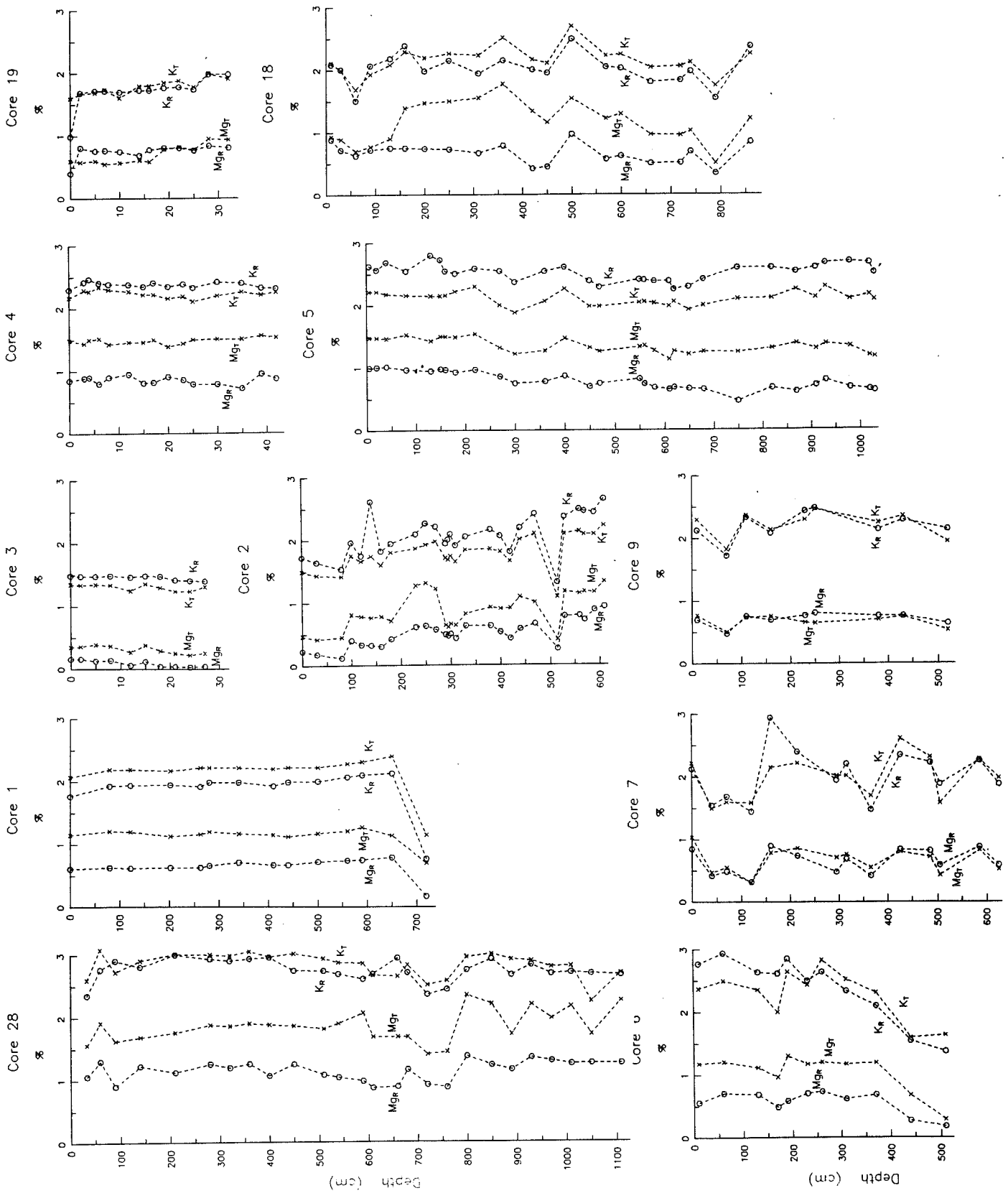

Core 19
Zn (ugg⁻¹)
Core 18
Cu (ugg⁻¹)
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Depth (cm)

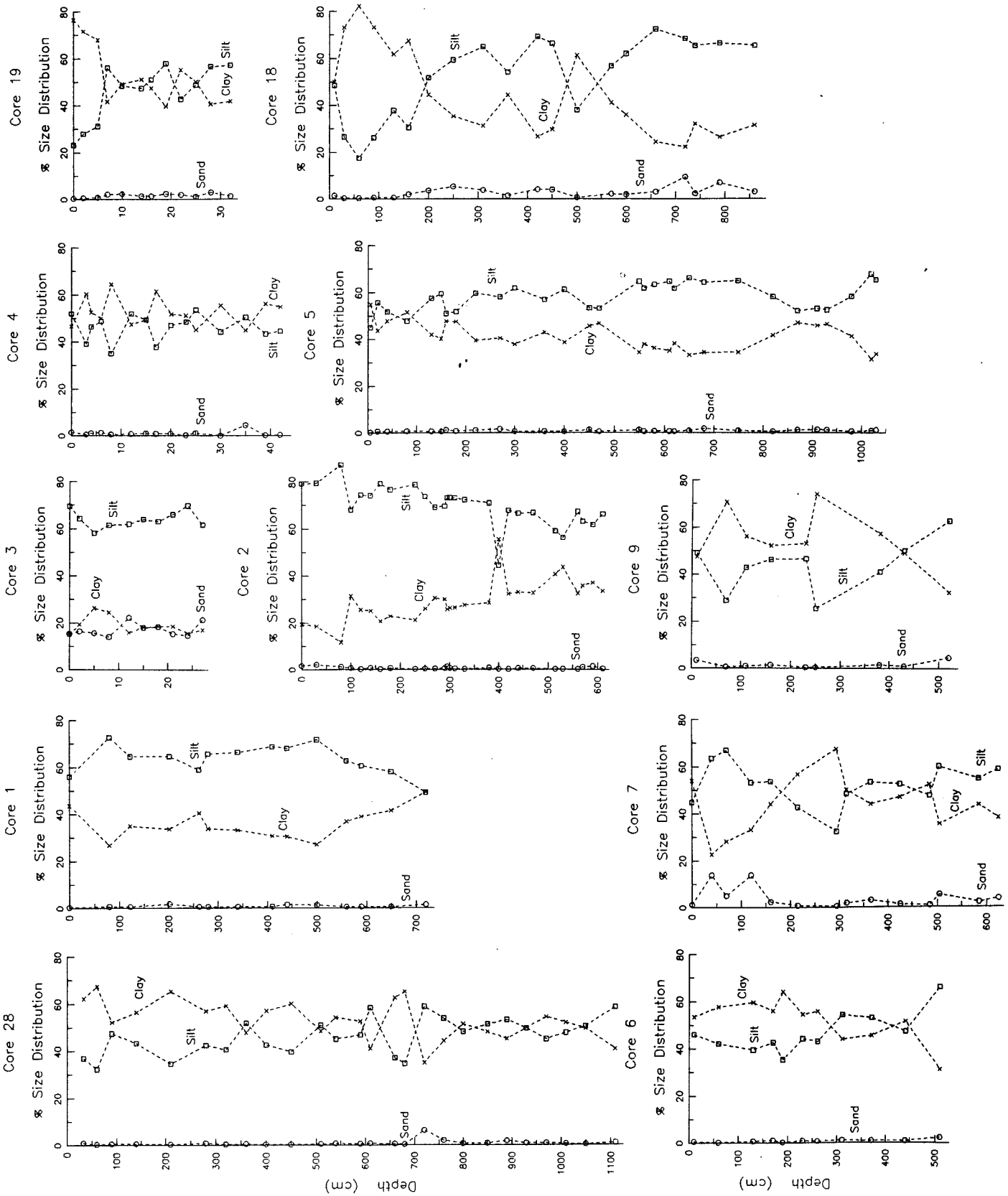

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Zn (ugg⁻¹)
Depth (cm)
Zn_T
Zn_SUM
Zn_R
Zn_TR

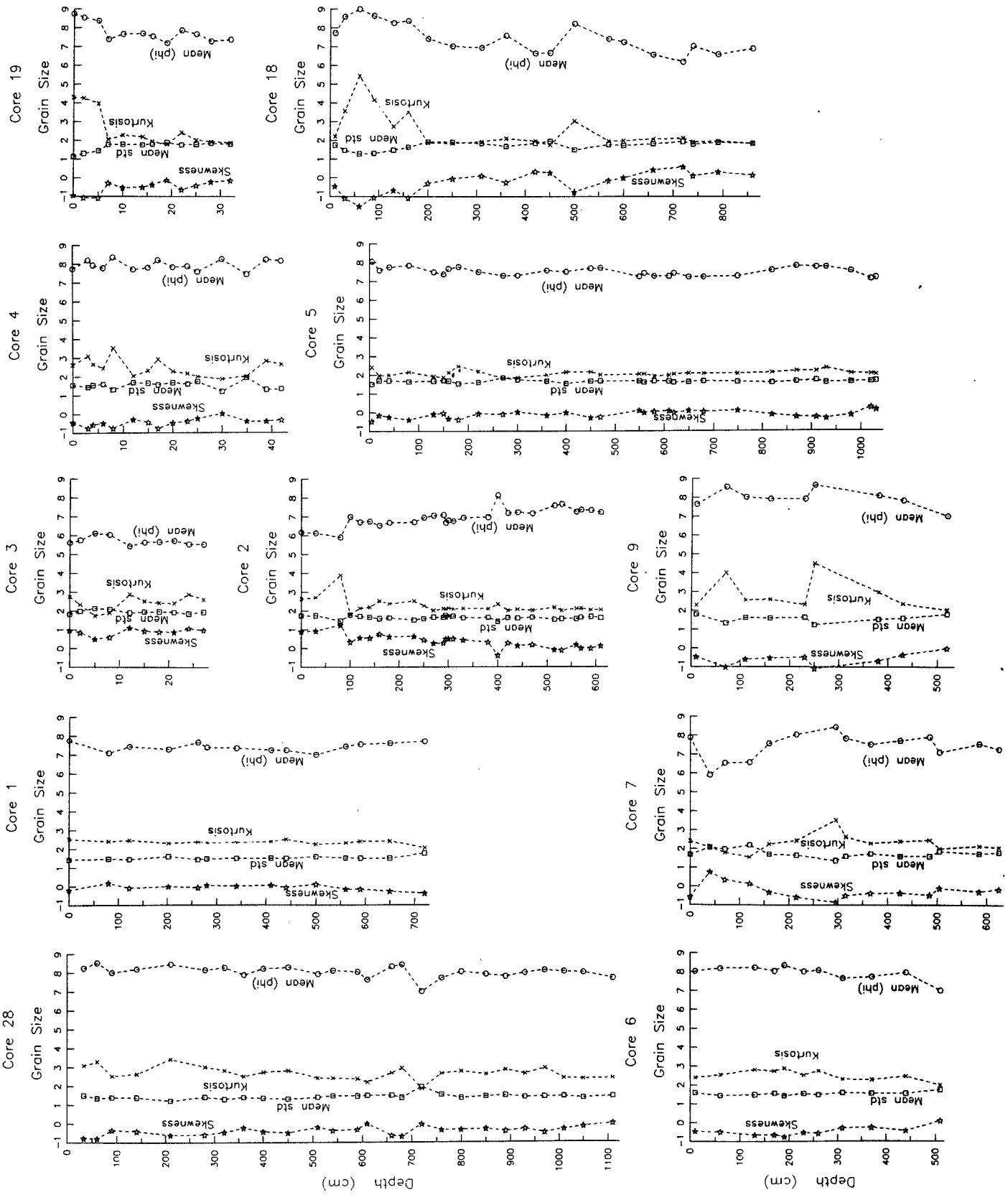

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Ni (ugg⁻¹)
Depth (cm)

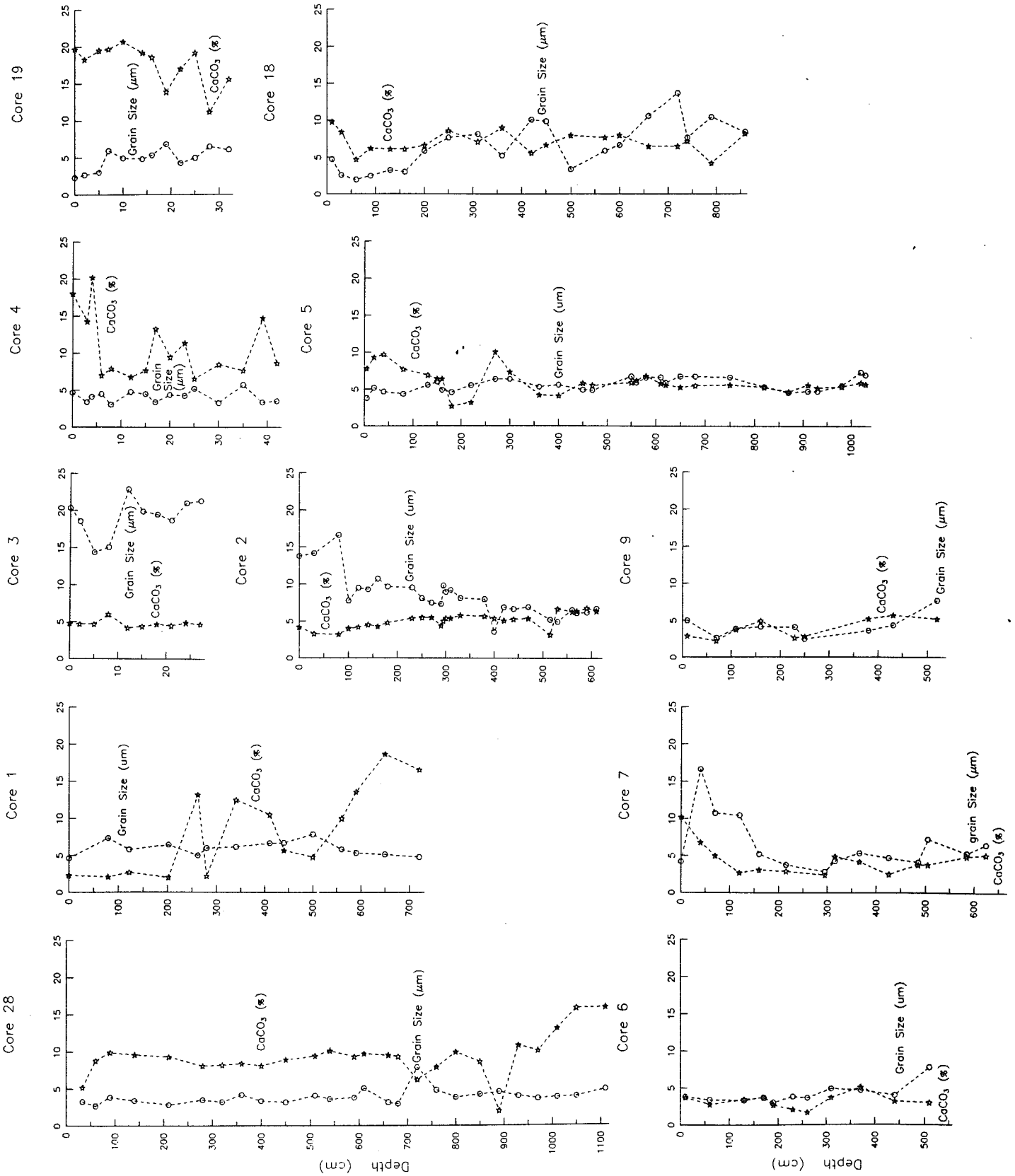

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Ni (ugg⁻¹)
Depth (cm)
Ni_SUM
Ni_T
Ni_TR
Ni_R

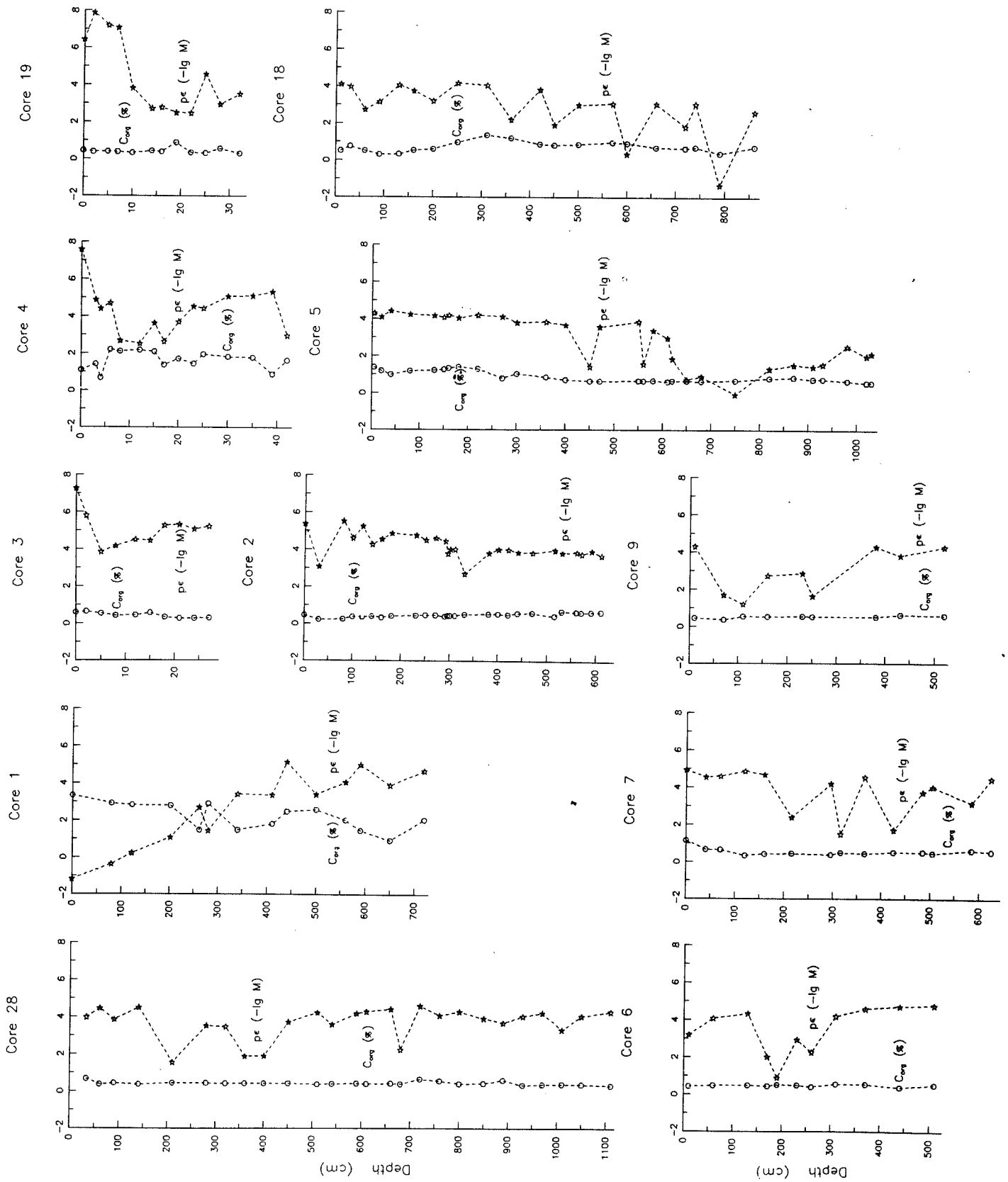

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
%
WtLoss
Si_T
Si_R
Al_T
Al_R
Depth (cm)

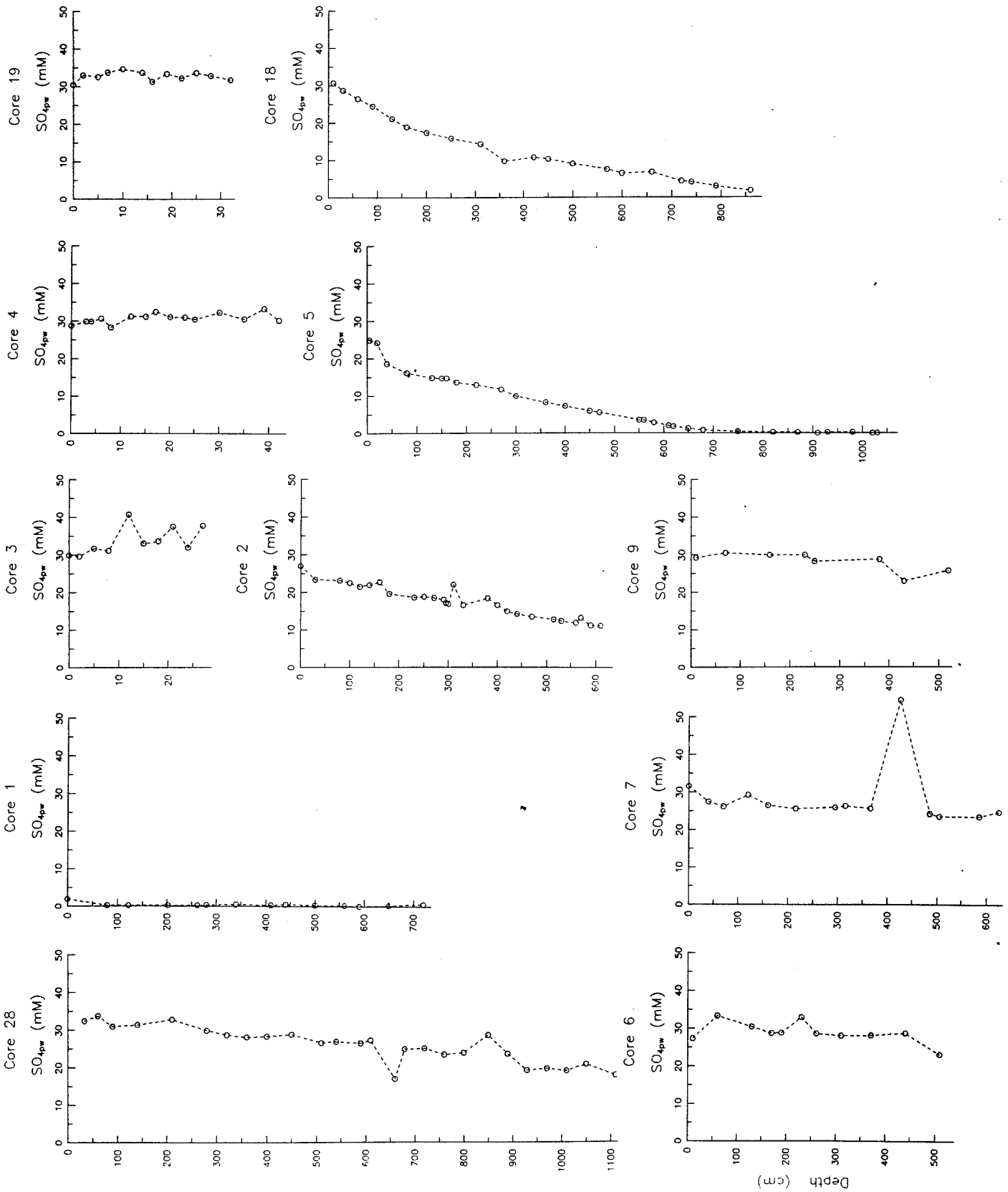

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
%
Depth (cm)
K_T
K_R
Mg_T
Mg_R

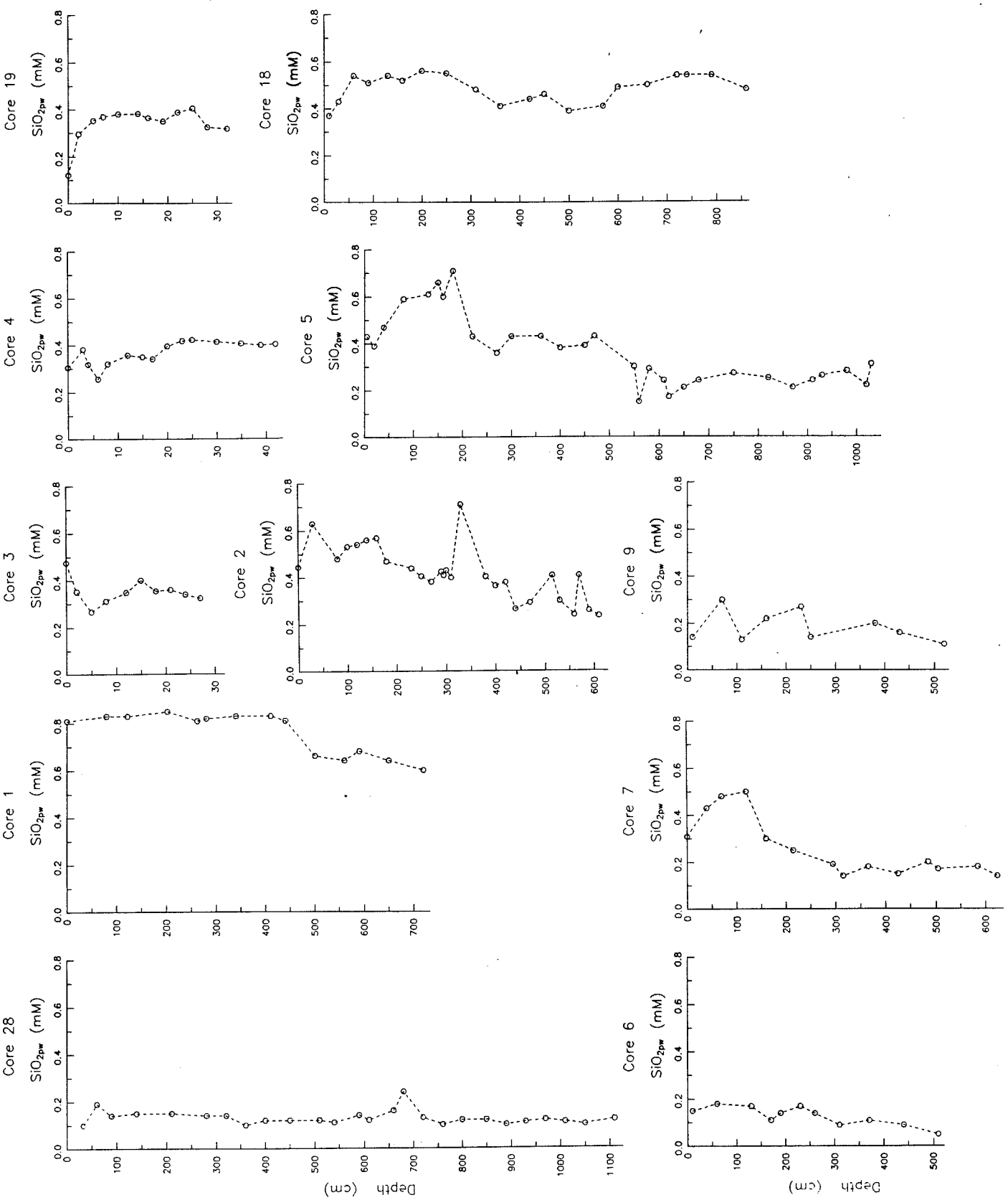

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
% Size Distribution
Depth (cm)
Sand
Silt
Clay

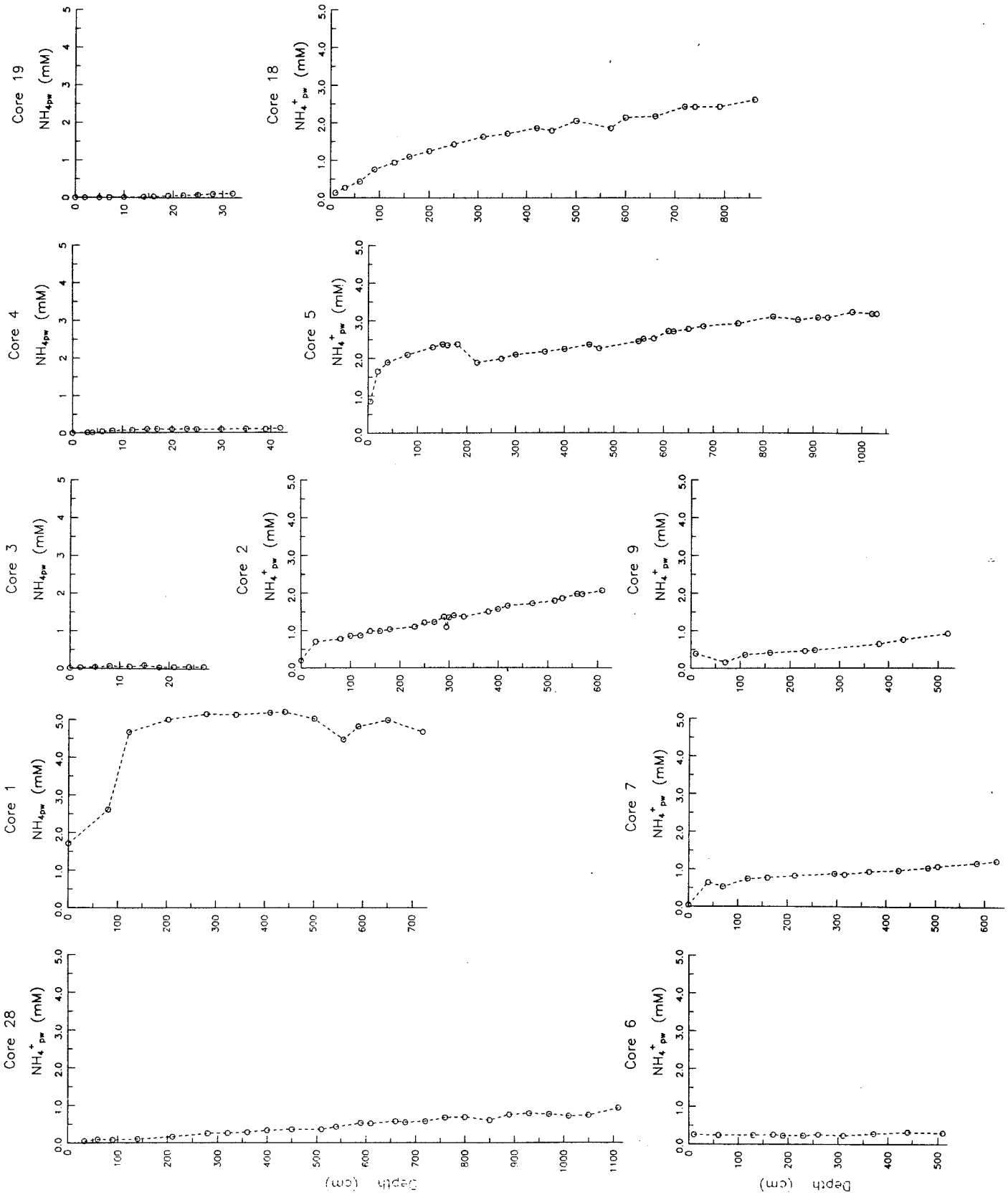

Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
Grain Size
Mean (phi)
Kurtosis
Mean std
Skewness
Depth (cm)


Core 19
Grain Size (μm)
CaCO3 (%)
Core 18
CaCO3 (%)
Grain Size (μm)
Core 4
CaCO3 (%)
Grain Size (μm)
Core 5
CaCO3 (%)
Grain Size (um)
Core 3
Grain Size (μm)
CaCO3 (%)
Core 2
CaCO3 (%)
Grain Size (um)
Core 9
CaCO3 (%)
Grain Size (μm)
Core 1
Grain Size (um)
CaCO3 (%)
Core 7
grain Size (μm)
CaCO3 (%)
Core 28
CaCO3 (%)
Grain Size (μm)
Core 6
Grain Size (um)
CaCO3 (%)
Depth (cm)
Depth (cm)


Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
pε (−lg M)
C_{org} (%)
Depth (cm)


Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
SO_{4pw} (mM)
Depth (cm)


Core 19
Core 18
Core 4
Core 5
Core 3
Core 2
Core 9
Core 1
Core 7
Core 28
Core 6
SiO2pw (mM)
Depth (cm)


Core 19
NH_{4pw} (mM)
Core 18
$NH_4^+{}_{pw}$ (mM)
Core 4
NH_{4pw} (mM)
Core 5
$NH_4^+{}_{pw}$ (mM)
Core 3
NH_{4pw} (mM)
Core 2
$NH_4^+{}_{pw}$ (mM)
Core 9
$NH_4^+{}_{pw}$ (mM)
Core 1
NH_{4pw} (mM)
Core 7
$NH_4^+{}_{pw}$ (mM)
Core 28
$NH_4^+{}_{pw}$ (mM)
Core 6
$NH_4^+{}_{pw}$ (mM)
Depth (cm)
Depth (cm)

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REFERENCES

Piper, D.J.W. 1988. Cruise report Hudson 88-010. Unpublished report. Bedford Institute of Oceanography, Box 1006, Dartmouth, Nova Scotia, Canada, B2Y 4A2. 100 pp.

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.

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.

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. Unpublished report. Geological Survey of Canada, 601 Booth St., Ottawa, Ontario, Canada (K1A 0E8), Open File Report 1701. 21 pp.

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.