

Radiocarbon

1980

GEOSECS ATLANTIC RADIOCARBON

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The program called Geochemical Ocean Section Study (GEOSECS) was initiated in 1971 and designed to make an oceanic inventory of chemical constituents in the world oceans, partly as a baseline study for future chemical changes, and partly to investigate large-scale oceanic transport and mixing processes. Measured were hydrographic parameters (salinity, temperature, and oxygen vs depth), the carbonate system, the nutrients, and assorted other constituents with heavy emphasis laid on the radioactive substances, radiocarbon, tritium, and radon.

The Atlantic expedition covered in this paper was undertaken in 1972-73, and a brief description of it was presented by Harmon Craig (1974). A companion paper by Östlund and Stuiver (this issue) lists the samples from the Pacific cruise.

Samples for ^{14}C were collected at 39 stations, usually around 18 samples per station, distributed through the entire water column. The station locations are seen on the track map, figure 1. On board the ship, the samples for radiocarbon determination were water drawn from the so-called 250-liter Gerard barrels and CO_2 extracted by means of a modification of the method used by Fonselius and Östlund (1959). In order to avoid carrying a large number of cylinders of compressed gas on board the ship, a circulating system was used with system pressure slightly above ambient at every point, with air recirculating between the purging of the acidified seawater sample and the absorption of CO_2 in sodium hydroxide solution. The samples, usually around 0.5 moles of CO_2 , absorbed in excess NaOH , were kept in well-sealed bottles and sent to laboratories for further processing. A short description of the sampling and measurement procedures, which also reports a cross-check between the laboratories, is available in a paper by Stuiver *et al* (1974).

Some Atlantic radiocarbon data are now available from earlier years: Fonselius and Östlund (1959) have presented a few measurements from the northernmost Atlantic in 1957, and Broecker and Olson (1961) released a rather comprehensive inventory as of 1955 through 1957. Of the

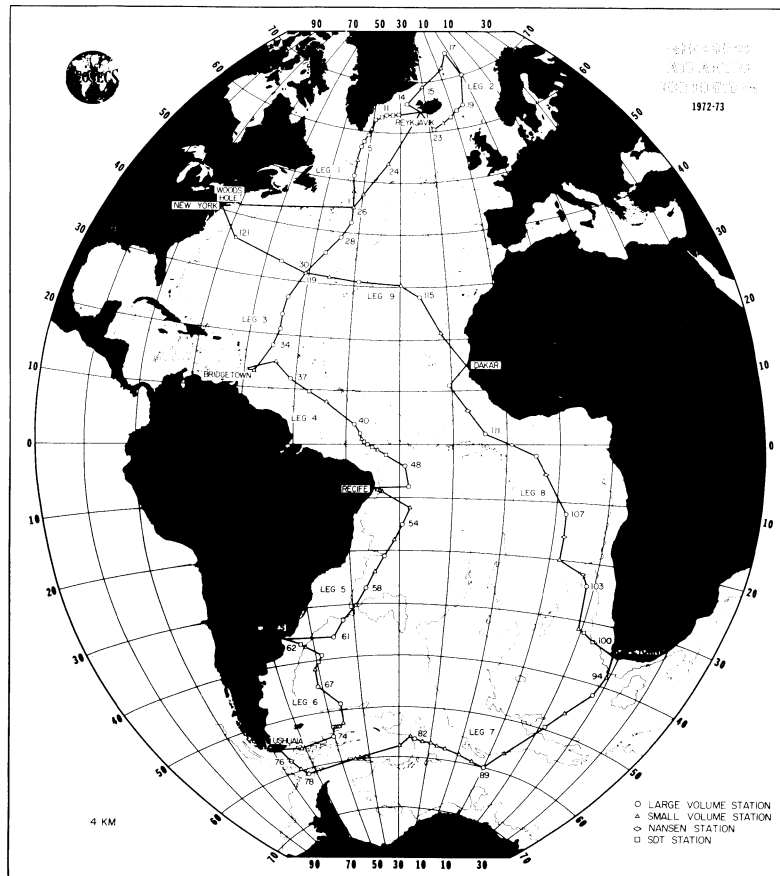


Fig 1. GEOSECS Atlantic Track 1972-1973.

data listed below, some have been released earlier by Östlund, Dorsey, and Rooth (1974), and by Stuiver and Robinson (1974). Average ^{14}C levels of Atlantic polar ($>50^\circ\text{S}$) gyre (50°S - 10°S and 10°N - 50°N), and tropical waters (10°S - 10°N) are given in a SCOPE volume (Stuiver, Östlund, and McConnaughey, in press). Several papers of interpretative nature, primarily dealing with the process in the Atlantic deep waters, and with nuclear bomb ^{14}C additions, have been published or are in press. Among them: Stuiver (1976; in press), Broecker (1979), Broecker, Peng, and Stuiver (1978), Broecker and Takahashi (in press), Broecker, Peng, and Engh (in press), and Quay and Stuiver (in press).

THE $\Delta^{14}\text{C}$ SCALE

There has been some confusion concerning the $\Delta^{14}\text{C}$ scale. In this paper, we have, in principle, followed the recommendations by Stuiver and Polach (1977), which means that the $\Delta^{14}\text{C}$ values are recalculated to a standardized state of isotopic fractionation equivalent to standard

wood ($\delta^{13}\text{C} = -25\text{‰}$), and they relate to activities at time of sampling — 1972. Appropriate corrections for the decay of the NBS ^{14}C standard have also been made. This scale is, for all practical purposes, the same as the one proposed by Broecker and Olson (1961).

EXPLANATION OF THE TABLES

All data on position, depths, and hydrography and total CO_2 have been furnished by the GEOSECS Operations Group (now Physical and Chemical Ocean Data Facility) at Scripps Institution of Oceanography, which handled the logistics and serves as a temporary repository for all GEOSECS data. The following explains the column headings:

POSITION: Given in degrees and minutes. The ship frequently drifted during station time, so the position is defined to no better than $\pm$ a few minutes.

SMPL #: This is the operational sample number, in which the two last digits indicate the Gerard barrel number and the preceding digits the cast number. The first on station 27 is sample no. 1035: *ie*, cast #10, Gerard #35.

DEPTH M: Given in meters as calculated from density and pressure.

POT T DEG C: Potential temperature in degrees centigrade.

SAL ‰: Salinity in unit g/kg seawater.

SIGMA THETA: Deviation from unity, in per mille, of the relative density in g/ml where ml has the old value of 1.000027cm^3 .

TCO2 μM : The total amount of inorganic carbon in μ -moles per kg of seawater. All TCO2 data listed are still preliminary. At time of writing, a final re-evaluation is being made on all GEOSECS oceanic CO_2 measurements. This will most likely result in minor adjustments on these numbers.

DC14 ‰: This is $\Delta^{14}\text{C}$ on the scale that was defined above. The accuracy is typically $\pm 4\text{‰}$ and precision $\pm 3.5\text{‰}$.

C14 LAB #: This column lists ML for the Miami Laboratory and QL for the Washington Laboratory with numbers referring to our laboratory journals.

THE SECTION

In plate I, a vertical section of $\Delta^{14}\text{C}$ in the Western Atlantic only is presented. The number of stations on the eastern track does not warrant a similar section. In addition, Stuiver (1978) has presented a more detailed section of the waters above 1000 meters. The horizontal scale in plate I is proportional to the distance between the stations along the track.

ACKNOWLEDGMENTS

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PLATE 1
Western Atlantic Ocean; N-S section. Isolines are in $\Delta^{14}\text{C}$ units.

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STATION 3								
POSITION 51 1 N 43 1 W DATE 27 JUL 72								
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB #
487	0					63.6	ML	822
488	71	9.34	34.900	27.025		7.9	ML	823
489	225	7.34	34.850	27.306		-28.2	ML	831
491	303	7.42	34.966	27.388		3.8	ML	832
686	511	4.96	34.854	27.604		-27.5	ML	816
687	661	4.76	34.950	27.703		-28.0	ML	817
688	814	4.16	34.904	27.731		-17.1	ML	818
689	1117	4.12	34.957	27.776		-25.7	ML	819
691	1321	3.85	34.942	27.792		-33.3	ML	820
1186	2048	3.36	34.943	27.841		-50.9	ML	833
1187	2766	2.79	34.945	27.895		-53.4	ML	834
1188	3279	2.32	34.935	27.929		-60.7	ML	835
1189	3792	1.90	34.921	27.949		-40.3	ML	836
1191	4306					-25.7	ML	837

STATION 5								
POSITION 56 56 N 42 33 W DATE 31 JUL 72								
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB #
835	5	7.58	34.462	26.953		49.3	ML	838
386	307	3.88	34.884	27.744		-4.1	ML	848
841	350	3.77	34.895	27.763		7.9	ML	844
388	922	3.37	34.855	27.771		-14.3	ML	847
389	1230	3.64	34.938	27.811		-45.3	ML	849
390	1643	3.41	34.948	27.839		-59.6	ML	851
391	2052	3.15	34.958	27.873		-59.9	ML	852
687	2672	2.72	34.960	27.914		-52.2	QL	207
688	2877	2.56	34.956	27.928		-56.1	QL	205
689	3082	2.21	34.942	27.934		-43.2	QL	206
690	3287	1.92	34.902	27.965		-36.0	QL	204

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STATION 11								

POSITION		63 31 N		35 13 W	DATE	5 AUG 72		
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB #
286	8	8.86	34.955	27.146		35.0	ML	853
287	28	7.81	34.965	27.315		29.9	ML	839
288	100	6.50	35.040	27.560		12.2	ML	840
289	203	5.70	35.002	27.632		10.1	ML	854
290	305	5.06	34.962	27.677		3.7	ML	855
291	408	4.72	34.944	27.702		5.2	ML	856
586	612	4.19	34.920	27.741		-4.7	ML	857
587	819	3.91	34.909	27.761		-7.8	ML	858
588	1026	3.76	34.913	27.778		-15.6	ML	859
589	1232	3.69	34.922	27.794		-36.5	ML	860
590	1440	3.67	34.945	27.813		-47.2	ML	861
591	1646	3.51	34.947	27.831		-50.1	ML	862
886	1822	3.35	34.954	27.852		-48.9	ML	863
887	2027	2.67	34.907	27.876		-39.0	ML	864
888	2130	2.27	34.909	27.913		-35.9	ML	866
889	2233	1.68	34.889	27.949		-27.2	ML	865

STATION 14								

POSITION		65 55 N		27 27 W	DATE	13 AUG 72		
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB #
386	7	1.04	30.121	24.159		67.6	ML	1197
387	83	-0.83	33.122	26.654		45.3	ML	1192
388	214	2.19	34.531	27.614		19.4	ML	1196
389	316	-0.38	34.605	27.834		16.7	ML	1195
390	417	0.66	34.784	27.923		-4.1	ML	1194
391	604	-0.29	34.925	28.088		-28.4	ML	1193

STATION 17								

POSITION		74	56	N	1	7	W	DATE 18 AUG 72
SMPL	DEPTH	POT	T	SAL	SIGMA	TCO2	DC14	C14 LAB
#	M	DEG	C	O/00	THETA	UM	O/00	#
386	4	4.57		34.500	27.366		33.9	ML 872
387	40	-0.91		34.774	27.993		8.8	ML 881
388	76	-1.68		34.826	28.061		10.2	ML 879
390	230	-1.42		34.861	28.081		-11.6	ML 880
391	306	-1.22		34.870	28.081		-29.3	ML 873
1086	511	-1.08		34.892	28.095		-22.7	ML 883
1087	820	-1.09		34.892	28.095		-49.2	ML 884
1088	1025	-1.13		34.902	28.104		-57.9	ML 885
1089	1332	-1.17		34.899	28.103		-48.1	ML 886
1386	2079	-1.27		34.892	28.101		-45.2	ML 887
1387	2386	-1.29		34.892	28.102		-54.4	ML 888
588	2538	-1.30		34.892	28.102		-55.3	ML 867
1388	2592	-1.30		34.894	28.103		-50.4	ML 890
1389	3055	-1.31		34.890	28.101		-55.5	ML 889
589	3070	-1.31		34.890	28.101		-49.6	ML 875
1390	3261	-1.31		34.893	28.100		-47.6	ML 891
590	3352	-1.31		34.894	28.105		-52.9	ML 868
1391	3416	-1.31		34.898	28.107		-50.4	ML 892
591	3552	-1.31		34.893	28.104		-48.4	ML 871

STATION 18								

POSITION		70	0	N	0	0	W	DATE 22 AUG 72
SMPL	DEPTH	POT	T	SAL	SIGMA	TCO2	DC14	C14 LAB
#	M	DEG	C	O/00	THETA	UM	O/00	#
639	4	9.42		35.082	27.154		67.3	ML 948
638	30	9.41		35.076	27.151		65.6	ML 949
637	75	6.31		35.154	27.673		37.6	ML 950
636	150	5.41		35.128	27.767		49.3	ML 967
635	250	4.74		35.118	27.838		49.2	ML 951
286	341	4.22		35.117	27.894		47.9	ML 954
287	1213	-0.29		34.917	28.083		-36.0	ML 955
986	1685	-0.80		34.912	28.100		-57.9	ML 938
387	1972	-0.92		34.913	28.106		-64.2	ML 953
988	2486	-1.01		34.911	28.108		-60.1	ML 952
989	2693	-1.03		34.911	28.109		-63.2	ML 965
990	2897	-1.04		34.904	28.125		-68.1	ML 957
991	3182	-1.05		34.910	27.998		-68.4	ML 970

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STATION 19								

POSITION		64 12 N	5 34 W		DATE 24 AUG 72			
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
286	4	10.41	35.053	26.962		47.3	ML	894
287	31	10.30	35.053	26.982		54.7	ML	895
288	66	8.24	35.116	27.360		26.9	ML	896
289	144	5.13	35.013	27.709		43.7	ML	897
290	247	3.59	34.905	27.789		41.3	ML	899
291	349	2.01	34.928	27.947		38.3	ML	898
986	458	1.88	35.010	28.023		28.4	ML	902
987	558	1.51	34.998	28.041		25.4	ML	842
988	663	0.98	34.968	28.052		4.7	ML	908
989	765	0.38	34.934	28.063		-12.8	ML	909
990	866	0.06	34.926	28.072		-30.8	ML	910
991	969	-0.20	34.914	28.077		-37.4	ML	841
486	1113	-0.59	34.913	28.093		-54.6	ML	900
487	1532	-0.86	34.912	28.102		-62.9	ML	901
488	2046	-0.99	34.913	28.108		-68.3	ML	904
489	2455	-1.03	34.911	28.108		-67.0	ML	905
490	2866	-1.04	34.911	28.109		-68.2	ML	906
491	3278	-1.04	34.914	28.111		-68.4	ML	907

STATION 23								

POSITION		60 24 N	18 37 W		DATE 28 AUG 72			
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
286	7	11.02	35.128	26.910		47.5	ML	974
287	53	10.63	35.121	26.971		54.6	ML	971
288	105	9.36	35.165	27.228		29.5	ML	973
289	182	9.02	35.220	27.333		35.6	ML	975
290	362	8.80	35.236	27.378		34.1	ML	976
291	440	8.59	35.220	27.395		41.9	ML	972
1086	517	8.12	35.155	27.418		9.3	ML	981
1087	616	7.64	35.133	27.472		-5.9	ML	982
1088	822	6.50	35.094	27.602		-35.0	ML	987
1089	1028	5.13	35.024	27.713		-44.5	ML	988
1090	1233	4.33	34.965	27.761		-45.1	ML	989
1091	1438	3.89	34.937	27.784		-41.7	ML	990
586	1572	3.75	34.930	27.793		-51.2	ML	984
587	1776	3.59	34.932	27.812		-48.1	ML	986
588	1984	3.46	34.948	27.835		-63.0	ML	977
589	2190	3.30	34.987	27.868		-53.0	ML	991
590	2396	2.96	35.041	27.922		-43.5	ML	979
591	2499	2.20	34.992	27.905		-37.7	ML	992

STATION 27								

POSITION		42 0 N	42 2 W	DATE 12 SEP 72				
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
1035	10	22.38	36.065	24.928	2081	123.2	QL	225
1037	120	16.77	36.314	26.604	2089	104.6	QL	227
1038	225	15.40	36.048	26.719	2096	67.3	QL	228
286	260	15.07	35.986	26.747	2094	56.3	QL	229
1039	320	14.36	35.874	26.818	2093	50.0	QL	208
287	400	13.99	35.875	26.896	2110	12.5	QL	209
288	585	11.46	35.491	27.111	2176	-3.8	QL	210
289	695	9.56	35.276	27.282	2209	-47.9	QL	211
290	735	8.83	35.207	27.348	2220	-42.5	QL	212
986	1096	5.28	35.050	27.719	2197	-41.0	QL	219
987	1245	4.87	35.054	27.774	2204	-40.7	QL	220
988	1394	4.44	35.029	27.795	2188	-50.2	QL	221
990	1693	4.00	34.983	27.810	2201	-57.7	QL	223
991	1893	3.74	34.966	27.823	2203	-57.4	QL	224
686	2543	3.19	34.952	27.864	2189	-74.8	QL	213
687	3162	2.67	34.939	27.901	2202	-77.9	QL	214
688	3778	2.16	34.916	27.925	2183	-84.4	QL	215
689	4396	1.89	34.900	27.933	2204	-86.9	QL	216
690	4653	1.85	34.915	27.936	2203	-82.4	QL	217
691	4859	1.81	35.106	27.813		-66.2	QL	218

STATION 29								

POSITION		35 58 N	47 0 W	DATE 17 SEP 72				
SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
935	10	25.14	36.028	24.103	2019	150.0	ML	993
936	70	22.09	36.419	25.287	2059	126.9	ML	994
937	140	18.60	36.459	26.263	2090	108.5	ML	995
938	190	18.01	36.447	26.400	2086	93.7	ML	996
939	250	17.57	36.429	26.495	2093	83.1	ML	997
486	373	16.67	36.301	26.619	2110	64.3	ML	998
487	469	15.38	36.061	26.737	2115	17.1	ML	999
488	554	14.38	35.914	26.844	2134	-5.3	ML	1000
489	638	12.92	35.690	26.977	2159	-3.3	ML	1002
490	723	11.25	35.455	27.123	2178	-31.9	ML	1003
491	787	9.46	35.247	27.274	2197	-60.5	ML	1004
1186	905	7.35	35.069	27.467	2206	-61.6	ML	1005
1187	1052	5.46	35.002	27.661	2190	-44.4	ML	1008
1188	1346	4.45	34.998	27.772	2176	-44.1	ML	1009
1190	1925	3.70	34.971	27.831	2177	-54.2	ML	1011
686	2123	3.53	34.968	27.845	2177	-62.7	QL	230
687	2653	3.01	34.976	27.883	2178	-76.4	QL	231
688	3182	2.51	34.932	27.909	2184	-79.2	QL	232
689	3712	2.05	34.905	27.925	2187	-86.5	QL	233
690	4241	1.86	34.891	27.929	2197	-84.3	QL	234
1191	4639	1.83	34.889	27.929	2201	-88.2	QL	235

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STATION 31								

POSITION		27	0 N	53 32 W	DATE 22 SEP 72			
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
935	10	27.29	36.908	24.102	2046	185.7	ML	927
936	70	22.27	36.825	25.550	2085	159.7	ML	928
937	100	21.19	36.943	25.939	2098	158.4	ML	929
939	240	17.70	36.442	26.467	2103	110.2	ML	933
940	320	17.02	36.398	26.604	2106	85.3	ML	966
1086	422	16.72	36.344	26.639	2096	91.7	ML	961
1087	618	13.42	35.788	26.951	2155	-12.5	ML	962
1088	816	9.45	35.307	27.324	2205	-65.2	ML	963
1089	914	7.94	35.181	27.465	2212	-80.7	ML	967
1090	1013	6.89	35.120	27.571	2211	-80.5	ML	958
1091	1261	5.50	35.127	27.757	2196	-72.4	ML	964
486	1486	4.70	35.098	27.826	2197	-78.1	ML	920
487	1735	4.10	35.065	27.865	2195	-84.4	ML	921
488	1985	3.56	35.020	27.883	2194	-85.2	ML	922
489	2234	3.18	34.991	27.896	2198	-86.9	ML	923
490	2484	2.93	34.967	27.900	2208	-97.1	ML	924
491	2882	2.64	34.943	27.907	2207	-99.0	ML	925
286	3013	2.57	34.938	27.909	2206	-101.5	ML	911
287	3512	2.19	34.912	27.919	2206	-99.3	ML	912
288	4011	1.90	34.884	27.919	2217	-105.0	ML	914
289	4509	1.72	34.869	27.921	2221	-108.6	ML	915
290	5008	1.63	34.862	27.922	2226	-114.0	ML	916
291	5508	1.59	34.860	27.923	2226	-120.8	ML	919

STATION 33								

POSITION		21	0 N	54 0 W	DATE 26 SEP 72			
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
1135	15	27.17	36.084	23.508		164.7	ML	983
1136	70	24.82	37.295	25.159	2087	148.7	QL	306
1137	100	23.02	37.306	25.699	2113	159.0	QL	307
1138	160	20.92	37.060	26.101	2106	114.9	QL	308
1139	240	17.94	36.551	26.497	2142	63.2	QL	309
1140	320	16.36	36.278	26.675	2151	36.4	QL	310
1086	396	15.00	36.043	26.805	2155	10.2	QL	300
1087	451	14.02	35.895	26.907	2168	-23.2	QL	301
1088	531	12.63	35.703	27.047	2184	-44.9	QL	302
1089	606	11.28	35.525	27.170	2196	-62.1	QL	303
1090	688	9.63	35.312	27.299	2217	-73.6	QL	304
1091	763	8.37	35.170	27.392	2222	-85.7	QL	305
486	892	6.75	35.012	27.502	2237	-92.2	QL	297
487	995	5.86	34.941	27.564	2237	-98.2	QL	298
488	1093	5.42	34.946	27.623	2225	-93.3	QL	299
489	1493	4.32	35.014	27.801	2202	-80.6	QL	267
490	1842	3.76	35.015	27.860	2203	-84.4	QL	268
491	2238	3.15	34.980	27.890	2194	-94.1	QL	269
286	2702	2.67	34.945	27.906	2207	-105.9	ML	926
287	3200	2.37	34.924	27.914	2207	-96.3	QL	270
288	3697	2.09	34.906	27.922	2221	-99.0	QL	271
289	4195	1.86	34.889	27.927	2219	-97.7	QL	272
290	4682	1.60	34.858	27.916	2238	-113.6	QL	273
291	5191	1.47	34.090	27.917		-113.7	QL	274

STATION 37							

POSITION	12	1 N	50 59 W	DATE	13 OCT 72		
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 LAB #
835	5	28.04	35.910	23.116		132.3	ML 1012
836	75	24.45	36.571	24.723	2050	136.6	ML 1013
1086	101	22.39	36.704	25.420	2089	91.7	ML 1014
1087	162	16.21	36.162	26.604	2174	35.2	ML 1015
1088	306	10.14	35.171	27.091	2202	-59.0	ML 1016
1089	408	9.04	34.993	27.146	2206	-71.2	ML 1018
1090	510	7.69	34.802	27.205	2226	-90.2	ML 1019
1091	712	6.16	34.669	27.308	2234	-110.7	ML 1020
586	894	5.13	34.653	27.418	2239	-110.3	ML 1021
587	993	5.02	34.717	27.489	2232	-109.4	ML 1022
588	1094	5.04	34.837	27.580	2227	-94.7	ML 1023
589	1392	4.49	34.977	27.753	2192	-90.6	ML 1025
590	1690	3.70	34.986	27.843	2178	-78.3	ML 1026
591	1983	3.30	34.965	27.866	2178	-80.4	ML 1024
289	2441	2.85	34.947	27.891	2183	-91.6	QL 275
290	2959	2.47	34.924	27.905	2198	-101.6	QL 276
291	3472	2.20	34.908	27.915	2197	-105.9	QL 277
292	3985	1.96	34.893	27.922	2196	-90.2	QL 278
293	4499	1.79	34.880	27.923	2207	-104.1	QL 279
294	5014	1.27	34.614	27.625	2236	-125.3	QL 280

STATION 40							

POSITION	3	56 N	38 31 W	DATE	19 OCT 72		
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 LAB #
835	5	27.63	35.987	23.304	2006	107.8	ML 1027
836	80	27.51	36.032	23.375	2011	105.6	ML 1028
837	100	26.94	36.136	23.631	2039	96.7	ML 1029
1086	149	15.63	35.262	26.056	2111	9.9	ML 1030
1087	197	11.08	35.045	26.848	2151	-40.6	ML 1041
1088	296	9.45	34.872	26.985	2184	-58.2	ML 1040
1089	392	8.07	34.727	27.090	2200	-80.6	ML 1039
1090	496	7.05	34.643	27.172	2212	-88.6	ML 1038
1091	685	5.29	34.547	27.319	2223	-101.7	ML 1037
589	790	4.83	34.556	27.381	2227	-110.9	ML 1036
590	889	4.62	34.596	27.438	2227	-109.5	ML 1035
591	988	4.49	34.647	27.493	2224	-108.1	ML 1034
592	1086	4.49	34.724	27.551	2221	-107.7	ML 1033
593	1386	4.32	34.927	27.733	2188	-92.3	ML 1032
594	1685	3.91	34.975	27.814	2173	-78.1	ML 1031
289	1979	3.45	34.964	27.850	2168	-85.7	QL 236
290	2477	2.83	34.941	27.889	2176	-89.1	QL 237
291	2970	2.45	34.920	27.905	2195	-88.2	QL 238
292	3467	2.21	34.913	27.919	2174	-100.2	QL 239
393	3974	1.82	34.884	27.928	2191	-96.3	QL 240
394	4170	1.45	34.843	27.915	2211	-119.4	QL 241

GEOSECS Atlantic Radiocarbon

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STATION 48								

POSITION			4	0	S	29	0	W
			DATE 25 OCT 72					
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
635	5	26.22	36.080	23.814		83.0	QL	349
636	70	25.82	36.064	23.982	2038	72.5	QL	352
637	100	21.09	36.447	25.589	2099	84.6	QL	353
638	160	13.21	35.317	26.631	2156	-34.9	QL	354
1187	195	11.31	35.082	26.818	2187	-63.2	QL	355
1188	295	9.42	34.832	26.958	2173	-79.3	QL	356
1189	395	7.65	34.669	27.107	2221	-91.5	QL	357
1190	495	6.28	34.550	27.201	2227	-98.5	QL	358
1191	673	4.71	34.461	27.320	2226	-114.2	QL	359
1193	840	4.23	34.499	27.402	2230	-113.2	QL	360
486	1070	4.13	34.653	27.534	2216	-112.3	QL	361
487	1217	4.27	34.816	27.646	2210	-100.3	QL	362
488	1367	4.24	34.883	27.711	2202	-93.4	QL	363
490	1804	3.58	34.958	27.833	2177	-88.7	ML	1064
492	2259	3.05	34.939	27.867	2181	-90.4	ML	1063
494	2652	2.68	34.921	27.886	2192	-93.4	ML	1062
287	3009	2.44	34.917	27.903	2189	-96.5	QL	242
288	3408	2.28	34.911	27.912	2191	-99.1	QL	243
289	3705	2.11	34.900	27.917	2192	-95.8	QL	244
290	4101	1.22	34.807	27.907	2231	-129.4	QL	245
292	4497	0.59	34.741	27.893	2253	-147.9	QL	246
293	5031	0.21	34.699	27.881	2273	-155.1	QL	247

STATION 49								

POSITION			7	56	S	28	12	W
			DATE 29 OCT 72					
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
786	6	26.10	36.281	24.002	2026	94.3	QL	364
787	66	26.00	36.295	24.029	2027	91.3	QL	365
788	116	22.49	36.493	25.235	2088	74.2	QL	366
789	166	16.39	35.749	26.259	2156	5.5	QL	367
790	256	11.27	35.100	26.843	2194	-70.3	QL	368
791	375	7.29	34.620	27.121	2197	-80.9	QL	369
792	445	6.76	34.590	27.170	2223	-93.5	QL	370
793	598	5.80	34.521	27.240	2227	-103.8	QL	371
794	742	4.86	34.472	27.309	2226	-110.7	QL	372
391	844	4.40	34.472	27.362	2226	-120.4	QL	378
390	994	3.96	34.546	27.466	2230	-120.1	QL	377
389	1245	4.05	34.772	27.637	2210	-110.1	QL	376
388	1292	4.06	34.806	27.663	2202	-113.4	QL	375
387	1688	3.66	34.953	27.821	2178	-92.4	QL	374
386	2087	3.10	34.939	27.863	2180	-97.2	QL	373
286	2370	2.76	34.919	27.876	2189	-105.1	QL	248
287	2866	2.49	34.911	27.894	2191	-105.4	QL	249
288	3363	2.27	34.907	27.910	2185	-100.7	QL	250
289	3959	1.50	34.833	27.909	2209	-124.4	QL	251
290	4457	0.58	34.740	27.894	2248	-151.2	QL	252
291	4935	0.32	34.713	27.886	2267	-156.0	QL	253

STATION 54								

POSITION		15	3 S	29	31 W	DATE	8 NOV 72	
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
1141	20	26.18	36.868	24.420	2047	111.1	QL	379
1135	80	24.94	36.998	24.942	2064	120.1	QL	380
1136	150	22.01	36.683	25.508	2068	99.6	QL	381
1137	200	18.11	36.012	26.041	2097	55.8	QL	382
1138	250	14.99	35.527	26.412	2112	6.3	QL	383
1139	300	12.99	35.244	26.618	2137	-17.6	QL	384
1086	394	9.56	34.824	26.929	2170	-63.7	QL	385
1087	494	6.77	34.550	27.137	2182	-92.0	QL	386
1088	593	5.18	34.426	27.237	2194	-96.6	QL	387
1090	889	3.66	34.463	27.431	2217	-122.6	QL	389
1091	1036	3.62	34.570	27.519	2217	-124.4	QL	390
689	1192	3.76	34.711	27.618	2209	-118.8	QL	391
690	1391	3.77	34.858	27.734	2189	-110.0	QL	392
691	1592	3.49	34.905	27.800	2182	-102.8	QL	393
692	1841	3.19	34.927	27.849	2172	-94.0	QL	394
693	2188	2.80	34.916	27.870	2184	-108.7	QL	395
694	2739	2.53	34.905	27.886	2188	-109.2	QL	396
390	3841	1.77	34.862	27.913	2196	-117.5	QL	398
391	4137	1.21	34.806	27.906	2223	-136.4	QL	399
392	4435	0.74	34.752	27.885	2241	-141.5	QL	400
393	4734	0.44	34.725	27.893	2253	-151.9	QL	401
394	5034	0.06	34.690	28.153	2267	-157.3	QL	402

STATION 56								

POSITION		21	0 S	33	0 W	DATE	12 NOV 72	
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
935	25	24.58	37.069	25.078	2056	137.7	QL	403
936	90	23.52	37.045	25.356	2057	148.8	QL	404
937	110	22.91	36.932	25.447	2059	142.9	QL	405
938	150	20.20	36.433	25.821	2072	117.8	QL	406
939	190	18.06	35.998	26.043	2069	95.7	QL	407
940	230	16.29	35.693	26.241	2072	71.4	QL	408
886	299	14.21	35.363	26.455	2080	29.0	QL	409
887	418	11.58	35.029	26.730	2109	-37.9	QL	410
888	517	9.22	34.743	26.922	2130	-66.4	QL	411
889	687	5.50	34.422	27.198	2182	-101.6	QL	412
890	987	3.34	34.472	27.469	2217	-129.1	QL	413
891	1087	3.43	34.571	27.540	2210	-126.7	QL	414
689	1185	3.62	34.672	27.602	2205	-107.4	QL	415
690	1283	3.86	34.793	27.676	2189	-106.1	QL	416
691	1474	3.86	34.900	27.768	2178	-89.0	QL	417
692	1874	3.38	34.951	27.847	2158	-85.9	QL	418
693	2072	3.14	34.947	27.838	2162	-82.5	QL	419
694	2370	2.88	34.935	27.879	2166	-92.4	QL	420
289	2895	2.54	34.920	27.897	2174	-99.9	QL	254
290	3340	2.17	34.897	27.909	2179	-109.5	QL	255
291	3486	1.91	34.880	27.904	2182	-103.5	QL	256
292	3733	1.36	34.816	27.905	2213	-126.3	QL	257
293	3977	0.90	34.737	27.934	2231	-146.6	QL	258
294	4277	0.43	34.693	27.888	2252	-150.7	QL	259

STATION 58								

POSITION	27	0 S	37	1 W	DATE	16 NOV	72	
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
235	15	21.81	36.440	25.378	2045	148.4	QL	421
236	60	20.65	36.549	25.786	2057	150.0	QL	423
237	140	16.66	35.786	26.224	2068	92.9	QL	424
238	210	15.24	35.589	26.403	2073	73.0	QL	425
239	280	14.23	35.459	26.525	2081	56.7	QL	426
240	340	13.10	35.275	26.620	2095	23.9	QL	428
586	430	11.23	35.003	26.774	2118	-10.9	QL	429
587	498	9.68	34.822	26.906	2126	-45.8	QL	430
588	583	7.90	34.585	27.005	2137	-63.1	QL	431
786	685	5.99	34.413	27.131	2155	-78.2	QL	432
787	795	4.56	34.322	27.226	2170	-101.8	QL	433
791	893	3.88	34.338	27.309	2199	-111.5	QL	434
1289	986	3.49	34.365	27.369	2199	-124.3	QL	435
1290	1084	3.22	34.423	27.440	2211	-123.6	QL	436
1291	1182	3.07	34.495	27.515	2217	-134.2	QL	437
1292	1482	3.01	34.727	27.703	2211	-127.1	QL	438
1293	1780	3.23	34.886	27.809	2179	-103.9	QL	281
1294	2177	3.01	34.928	27.862	2174	-101.0	QL	282
1689	2597	2.74	34.927	27.885	2174	-102.5	QL	283
1690	2997	2.48	34.917	27.899	2172	-102.3	QL	284
1691	3396	2.09	34.883	27.907	2186	-114.9	QL	285
1692	3795	1.10	34.786	27.897	2224	-141.1	QL	286
1693	4141	0.26	34.702	27.881	2255	-162.7	QL	287
1694	4491	-0.12	34.672	27.876	2261	-158.3	QL	288

STATION 60								

POSITION	32	58 S	42	30 W	DATE	22 NOV	72	
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
1035	20	18.42	35.985	25.947	2040	133.2	QL	439
1036	80	17.19	35.959	26.230	2050	130.2	QL	440
1037	150	16.19	35.798	26.344	2070	99.5	QL	441
1039	300	14.29	35.520	26.558	2086	62.4	QL	443
1040	350	13.54	35.388	26.617	2087	35.2	QL	444
986	412	12.53	35.213	26.688	2100	10.7	QL	445
987	493	10.53	34.913	26.829	2113	-17.0	QL	446
988	593	7.84	34.561	26.994	2127	-47.1	QL	447
989	693	5.81	34.346	27.100	2135	-45.6	QL	448
990	793	4.74	34.277	27.165	2146	-62.5	QL	449
991	892	4.15	34.269	27.226	2160	-80.9	QL	450
789	992	3.63	34.271	27.280	2178	-96.0	QL	451
790	1189	2.91	34.334	27.398	2206	-116.1	QL	452
791	1386	2.71	34.440	27.500	2225	-134.4	QL	453
792	1783	2.77	34.691	27.694	2222	-131.0	QL	454
793	2181	3.01	34.868	27.815	2184	-104.5	QL	455
794	2584	2.94	34.928	27.868	2172	-101.2	QL	456
389	3167	2.39	34.904	27.894	2181	-103.9	QL	260
390	3464	1.67	34.825	27.888	2215	-126.4	QL	261
391	3762	0.68	34.728	27.880	2248	-156.1	QL	262
392	3961	0.10	34.694	27.877	2254	-161.0	QL	263
393	4159	-0.16	34.652	27.877	2260	-161.9	QL	264
394	4358	-0.23	34.669	27.879	2269	-157.5	QL	265

STATION 64								

POSITION			39 3 S	48 33 W	DATE	5 DEC 72		
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	0/00	THETA	UM	0/00	#	
1287	2					91.9	QL	457
1288	51	11.20	34.460	26.352	2039	80.0	QL	458
1289	101	7.39	34.323	26.874	2090	50.9	QL	459
1290	250	5.33	34.236	27.062	2116	-45.7	QL	460
1291	397	4.47	34.196	27.137	2130	-25.8	QL	461
1292	594	3.73	34.202	27.216	2145	-40.9	QL	462
1293	793	3.22	34.256	27.308	2179	-82.6	QL	463
1294	1012	2.77	34.341	27.416	2205	-107.4	QL	464
888	1453	2.46	34.547	27.600	2231	-137.4	QL	465
893	1575	2.49	34.596	27.642	2237	-146.4	QL	466
1089	1940	2.70	34.758	27.749	2216	-136.2	QL	468
589	2475	2.63	34.860	27.840	2194	-124.5	QL	490
1090	2980	2.10	34.835	27.862	2213	-128.9	QL	491
1091	3460	1.23	34.749	27.859	2242	-151.0	QL	492
1092	3948	0.51	34.701	27.866	2249	-162.8	QL	493
1093	4446	0.00	34.676	27.873	2258	-170.1	QL	494
1094	5195	-0.23	34.300	28.122		-158.9	QL	495

STATION 67								

POSITION			44 58 S	51 3 W	DATE	9 DEC 72		
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	0/00	THETA	UM	0/00	#	
935	2					72.1	QL	321
889	5	12.20	34.580	26.263		53.1	QL	314
936	15	11.65	34.566	26.348	2034	69.3	QL	322
937	45	9.85	34.598	26.705	2022	65.8	QL	323
938	60	9.50	34.622	26.782	2060	63.7	QL	324
890	95	9.26	34.630	26.822	2065	58.2	QL	315
891	180	8.21	34.600	26.981	2089	49.9	QL	316
892	295	5.07	34.227	27.094	2127	1.9	QL	317
893	391	4.30	34.184	27.143	2122	-9.7	QL	318
888	543	3.71	34.183	27.203	2153	-33.0	QL	319
886	700	3.24	34.206	27.266	2168	-63.9	QL	320
590	1022	2.61	34.327	27.418	2203	-110.0	QL	311
591	1173	2.59	34.415	27.489	2226	-125.2	QL	312
592	1378	2.50	34.516	27.577	2241	-138.6	QL	313
593	1721	2.45	34.640	27.682	2238	-142.9	QL	289
894	1870	2.41	34.672	27.713	2242	-132.0	QL	290
289	2437	2.53	34.826	27.824	2215	-124.4	QL	291
291	3203	1.65	34.778	27.853	2240	-140.5	QL	293
292	3933	0.75	34.712	27.861	2258	-161.5	QL	294
293	4759	-0.03	34.674	27.873	2262	-155.5	QL	295
288	5746	-0.23	34.723	27.878	2266	-157.7	QL	296

STATION 68								

POSITION			48 39 S	45 59 W	DATE 13 DEC 72			
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	0/00	THETA	UM	0/00	#	
1089	11	9.01	34.259	26.578		35.4	ML	940
1090	62	5.52	34.199	27.020		26.5	ML	943
993	340	3.21	34.184	27.251		-26.6	ML	947
994	530	2.77	34.264	27.354		-84.2	ML	939
389	1450	2.49	34.700	27.726		-138.6	ML	946
390	2041	2.17	34.773	27.810	2232	-136.5	ML	944
391	2632	1.60	34.759	27.842	2244	-147.0	ML	945
393	4664	-0.10	34.672	27.875	2264	-161.7	ML	942
394	5897	-0.25	31.270	27.480		-155.4	ML	941

STATION 73								

POSITION			53 2 S	49 31 W	DATE 17 DEC 72			
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	0/00	THETA	UM	0/00	#	
291	2					4.7	QL	469
292	240	3.25	34.181	27.245		37.0	QL	470
293	488	2.60	34.228	27.339		-75.2	QL	471
294	637	2.56	34.337	27.429		-112.2	QL	472

STATION 74								

POSITION	55	0 S	50	4 W	DATE	17 DEC 72		
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB
789	19	3.02	33.967	27.095		3.7	QL	473
790	145	2.03	34.156	27.325		-14.2	QL	474
791	241	1.22	34.207	27.425		-60.2	QL	475
792	394	2.10	34.397	27.515		-136.2	QL	476
793	492	1.99	34.456	27.570		-134.9	QL	331
794	777	2.12	34.605	27.679		-164.7	QL	332
389	1022	2.00	34.664	27.734		-161.7	QL	325
390	1685	1.59	34.720	27.811		-156.7	QL	326
391	2292	1.14	34.719	27.842		-165.2	QL	327
392	2869	0.68	34.707	27.860		-163.5	QL	328
393	3666	0.24	34.685	27.867		-155.7	QL	329
394	3881	0.17	34.680	27.868		-158.5	QL	330

STATION 76								

POSITION	57	44 S	66	8 W	DATE	31 DEC 72		
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB
1135	3	4.54	33.940	26.926		-19.4	QL	339
1087	64	2.76	33.872	27.037	2106	26.1	QL	343
1088	125	-0.31	33.870	27.240	2126	-13.4	QL	344
1089	176	-0.27	33.942	27.295	2138	-21.1	QL	345
1090	252	0.45	34.042	27.339	2152	-24.7	QL	346
1091	324	1.07	34.133	27.377	2172	-54.9	QL	347
1092	400	1.39	34.214	27.420	2198	-79.7	QL	348
889	493	1.94	34.336	27.478	2213	-107.6	QL	340
890	693	2.24	34.473	27.565	2234	-133.9	QL	341
891	842	2.22	34.550	27.628	2255	-138.8	ML	936
892	988	2.21	34.583	27.655	2251	-144.1	QL	342
1093	1202	2.10	34.656	27.725	2251	-148.9	QL	350
1094	1401	2.01	34.688	27.755	2252	-158.4	QL	351
289	1848	1.68	34.715	27.801	2256	-168.1	QL	333
290	2090	1.51	34.720	27.817	2269	-160.5	QL	334
291	2624	1.12	34.718	27.842	2263	-163.3	QL	335
292	3216	0.75	34.711	27.860	2268	-158.8	QL	336
293	3819	0.67	34.709	27.863	2262	-159.6	QL	337
294	4510	0.62	34.709	27.866		-160.9	QL	338

STATION 78								

POSITION	61	3 S	62	58 W	DATE	3 JAN 73		
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB
892	95	-0.97	33.971	27.346	2151	-18.6	QL	477
893	142	0.50	34.153	27.425	2196	-62.1	QL	478
894	189	1.33	34.279	27.476	2212	-97.0	QL	479
689	246	1.66	34.355	27.514	2223	-125.3	QL	480
690	345	2.00	34.483	27.591	2247	-132.2	ML	937
691	445	2.10	34.554	27.641	2252	-142.4	QL	481
692	545	2.08	34.597	27.676	2256	-145.8	QL	482
693	671	2.04	34.644	27.717	2257	-147.0	QL	483
694	889	1.94	34.699	27.768	2254	-155.4	QL	484
389	1192	1.70	34.723	27.805	2253	-161.9	QL	485
390	1589	1.31	34.729	27.838	2258	-160.6	QL	486
391	1985	1.03	34.721	27.850	2265	-163.2	QL	487
393	2978	0.38	34.704	27.875	2262	-161.9	QL	489
394	3478	0.31	34.696	27.873	2265	-163.3	ML	1056

STATION 82

POSITION 56 15 S 24 55 W DATE 11 JAN 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 LAB #
1189	12	0.91	33.741	27.071	2132	-62.5	ML 1089
1191	85	-0.71	33.985	27.348	2173	-66.4	ML 1087
1192	145	0.27	34.300	2B 555	2224	-108.2	ML 1086
1193	234	1.31	34.540	27.686	2244	-132.1	ML 1082
1194	395	1.62	34.680	27.776	2250	-151.4	ML 1085
589	500	1.57	34.698	27.795	2251	-154.0	ML 1081
590	647	1.41	34.710	27.819	2248	-162.5	ML 1080
591	795	1.17	34.708	27.832	2253	-161.0	ML 1079
592	991	0.88	34.706	27.848	2257	-160.0	ML 1078
593	1285	0.54	34.685	27.850	2259	-162.3	ML 1077
594	1585	0.36	34.682	27.859	2260	-162.3	ML 1076
989	1874	0.15	34.671	27.862	2263	-157.9	ML 1075
990	2298	-0.02	34.666	27.866	2265	-149.9	ML 1073
991	3168	-0.34	34.656	27.875	2260	-150.4	ML 1070
992	3664	-0.54	34.649	27.878	2251	-152.4	ML 1084
993	4158	-0.63	34.647	27.879	2244	-146.4	ML 1069
994	4657	-0.70	34.644	27.880	2253	-153.3	ML 1068
789	5245	-0.75	34.646	27.882	2248	-154.8	ML 1067
790	5760	-0.78	34.645	27.884	2250	-145.1	ML 1072
791	6271	-0.80	34.646	27.885	2249	-145.5	ML 1083
792	6780					-162.2	ML 1065
793	7291					-157.0	ML 1074
794	7808					-150.1	ML 1071

STATION 89

POSITION 60 0 S 0 2 E DATE 22 JAN 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 LAB #
987	21	0.61	34.083	27.363	2158	-43.5	ML 1136
988	52	-1.29	34.293	27.616	2199	-59.7	ML 1108
989	105	-1.66	34.417	27.729	2223	-72.5	ML 1109
786	137	-0.82	34.513	27.777	2237	-74.7	ML 1107
787	199	0.45	34.662	27.841	2269	-158.8	ML 1106
788	400	0.44	34.685	27.857	2270	-164.6	ML 1105
789	601	0.33	34.684	27.863	2275	-164.5	ML 1104
790	797	0.23	34.678	27.863	2271	-161.1	ML 1103
791	1095	0.08	34.673	27.867	2267	-156.4	ML 1102
586	1436	-0.07	34.670	27.872	2262	-166.4	ML 1101
587	1788	-0.22	34.663	27.874	2249	-166.8	ML 1098
588	2134	-0.34	34.661	27.877	2258	-161.1	ML 1097
589	2480	-0.42	34.656	27.877	2250	-164.5	ML 1096
590	2832	-0.50	34.654	27.879	2258	-163.9	ML 1095
592	3184	-0.56	34.652	27.880	2255	-160.0	ML 1100
188	3883	-0.71	34.651	27.885	2249	-160.8	ML 1094
189	4230	-0.80	34.650	27.888	2243	-157.0	ML 1093
191	4579	-0.85	34.649	27.889	2246	-150.1	ML 1092
192	4928	-0.88	34.647	27.889	2245	-155.5	ML 1091
194	5268	-0.89	34.633	28.037	2245	-153.6	ML 1090

STATION 90

POSITION 56 25 S 4 30 E DATE 26 JAN 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 LAB #
235	3	1.23	33.833	27.125	2129	-55.7	ML 1983
236	50	1.05	33.856	27.166	2138	-54.2	ML 1982
237	100	-0.55	33.983	27.342	2162	-68.1	ML 935
238	130	-0.37	34.133	27.453	2197	-83.1	ML 1981
239	176	0.66	34.370	27.591	2228	-114.8	ML 1980

STATION 91								

POSITION	49 34 S	11 28 E	DATE 29 JAN 73					
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB #
789	19	4.28	33.842	26.875	2103	18.6	ML	1125
790	99	3.42	33.865	26.977	2116	10.6	ML	1124
791	153	1.76	33.905	27.147	2131	2.1	ML	1123
792	346	1.95	34.317	27.463	2220	-112.0	ML	1122
793	545	2.01	34.478	27.586	2245	-136.9	ML	1137
794	746	2.12	34.582	27.661	2251	-147.5	ML	1119
589	988	2.10	34.665	27.729	2245	-142.5	ML	1120
590	1288	2.00	34.729	27.788	2244	-147.5	ML	1121
591	1588	1.80	34.750	27.822	2237	-151.3	ML	1117
592	1783	1.55	34.739	27.823	2246	-152.5	ML	1116
593	2084	1.23	34.727	27.840	2252	-159.7	ML	1118
594	2384	1.00	34.719	27.851	2260	-157.1	ML	1115
289	2685	0.75	34.713	27.856	2257	-156.8	ML	1113
290	2884	0.64	34.700	27.857	2259	-153.3	ML	1112
291	3185	0.53	34.693	27.859	2254	-155.4	ML	1135
292	3486	0.39	34.686	27.860	2260	-163.8	ML	1111
293	3785	0.27	34.683	27.865	2261	-161.4	ML	1110
294	4085	0.20	34.679	27.865	2259	-165.7	ML	1114

STATION 92								

POSITION	46 11 S	14 36 E	DATE 31 JAN 73					
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB #
235	3	7.38	33.824	26.483	2056	63.7	ML	1987
236	55	7.17	33.824	26.511	2065	59.4	ML	1986
237	110	4.86	33.909	26.868	2085	55.5	ML	1985
238	176	4.35	34.115	27.089	2103	26.4	ML	1984

STATION 93								

POSITION	41 46 S	18 27 E	DATE 2 FEB 73					
SMPL #	DEPTH M	POT T DEG C	SAL O/00	SIGMA THETA	TCO2 UM	DC14 O/00	C14 #	LAB #
235	3	13.71	34.851	26.167		89.8	ML	1992
586	86	13.17	35.067	26.450	2045	77.2	ML	1148
587	244	10.26	34.739	26.743	2087	36.1	ML	1147
588	394	8.88	34.626	26.885	2108	10.2	ML	1146
589	740	4.58	34.331	27.231	2167	-86.2	ML	1145
590	1036	3.51	34.437	27.424	2224	-114.0	ML	1144
591	1283	2.99	34.553	27.565	2247	-138.4	ML	1143
592	1579	2.67	34.671	27.687	2245	-142.8	ML	1141
593	1878	2.55	34.763	27.772	2230	-130.8	ML	1142
594	2277	2.39	34.809	27.822	2219	-131.2	ML	1132
386	2681	2.16	34.823	27.850	2224	-120.8	ML	1140
387	2884	2.07	34.825	27.859	2209	-129.0	ML	1139
388	3082	1.90	34.814	27.863	2225	-132.5	ML	1131
389	3281	1.81	34.808	27.869	2229	-134.5	ML	1130
390	3484	1.60	34.796	27.872	2230	-132.4	ML	1128
391	3684	1.32	34.769	27.869	2242	-141.9	ML	1129
392	3980	0.95	34.738	27.869	2259	-149.5	ML	1127
393	4279	0.68	34.719	27.870	2255	-151.6	ML	1126
394	4625					-160.9	ML	1138

STATION 94

POSITION 38 18 S 19 23 E DATE 3 FEB 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAE
235	3	22.30	35.497	24.533		136.2	ML	1991
236	70	19.64	35.530	25.282		131.3	ML	1990
237	140	18.20	35.527	25.650		122.3	ML	1989
238	175	17.52	35.498	25.797		122.0	ML	1986

STATION 103

POSITION 23 59 S 8 30 E DATE 17 FEB 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
535	3	23.42	35.591	24.282		74.4	QL	496
786	93	16.02	35.492	26.155	2057	101.0	QL	497
787	142	15.03	35.411	26.311	2071	90.6	QL	498
788	192	13.17	35.151	26.510	2094	57.4	QL	499
789	291	11.09	34.953	26.761	2151	-6.7	QL	500
790	391	8.79	34.717	26.972	2198	-49.2	QL	501
791	489	7.22	34.589	27.105	2224	-81.2	QL	502
792	690	5.03	34.461	27.285	2231	-108.5	QL	503
793	888	3.96	34.472	27.409	2231	-120.0	QL	504
794	1088	3.49	34.561	27.525	2232	-125.9	QL	505
286	1368	3.27	34.724	27.676	2228	-126.5	QL	506
288	1964	3.02	34.889	27.830	2194	-109.0	QL	507
290	2958	2.24	34.862	27.875	2209	-125.5	QL	508
291	3454	2.03	34.849	27.883	2224	-125.6	ML	1152
292	3949	1.43	34.796	27.884	2239	-144.1	ML	1150
293	4248	0.85	34.743	27.879	2256	-156.9	QL	509
294	4546	0.72	34.836	27.881	2263	-155.4	ML	1149

STATION 107

POSITION 12 0 S 2 0 E DATE 22 FEB 73

SMPL #	DEPTH M	POT T DEG C	SAL 0/00	SIGMA THETA	TCO2 UM	DC14 0/00	C14 #	LAB
435	2					56.1	QL	510
686	48	22.48	36.580	25.298	2065	64.4	QL	511
687	98	15.78	35.693	26.343	2160	-10.2	QL	512
688	147	12.49	35.225	26.705	2214	-56.2	QL	513
689	217	11.04	35.045	26.842	2231	-69.0	QL	514
690	346	9.42	34.857	26.978	2242	-82.9	QL	515
691	594	6.04	34.559	27.241	2262	-105.9	QL	516
692	893	4.27	34.520	27.415	2247	-120.7	QL	517
693	1092	3.92	34.633	27.540	2237	-124.6	QL	518
694	1390	3.68	34.830	27.711	2218	-110.8	QL	519
286	1775	3.40	34.909	27.805	2194	-101.1	QL	520
287	2073	3.02	34.921	27.851	2196	-107.4	QL	521
288	2571	2.65	34.911	27.880	2205	-118.0	QL	522
289	3069	2.30	34.896	27.897	2212	-124.6	QL	523
290	3565	2.10	34.889	27.908	2222	-125.4	QL	524
291	4061	2.01	34.885	27.912	2222	-119.4	QL	525
292	4557	1.97	34.879	27.910	2216	-123.9	QL	526
293	5055	1.94	34.878	27.912	2224	-118.2	QL	527
294	5551	1.79	34.877	27.309	2215	-117.9	QL	528

STATION 111								

POSITION		2	0	N	14	1	W	DATE 1 MAR 73
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
335	1					87.0	QL	529
336	50	25.85	35.950	23.824	2036	60.0	QL	530
337	100	15.08	35.550	26.408	2169	-10.4	QL	533
338	150	13.76	35.390	26.573	2176	-33.0	QL	532
339	200	12.86	35.270	26.666	2182	-55.0	QL	531
686	262	11.90	35.154	26.765	2194	-54.4	QL	534
687	313	10.74	35.018	26.874	2202	-69.7	QL	535
688	511	6.42	34.586	27.211	2193	-97.7	QL	536
689	726	4.90	34.520	27.345	2207	-111.3	QL	537
690	931	4.45	34.577	27.440	2211	-92.5	QL	538
691	1137	4.34	34.745	27.586	2205	-122.7	QL	539
692	1445	4.06	34.953	27.766	2162	-82.2	QL	540
693	1754	3.60	34.962	27.837	2148	-82.4	QL	541
694	2062	3.19	34.952	27.864	2178	-92.0	QL	542
186	2586	2.68	34.928	27.891	2187	-103.2	QL	543
187	3100	2.36	34.908	27.902	2188	-105.6	QL	544
188	3203	2.29	34.905	27.905	2176	-111.6	QL	545
189	4130	1.99	34.884	27.913	2200	-105.1	QL	546
190	4336	1.90	34.877	27.914	2205	-117.1	QL	547
191	4541	1.84	34.870	27.913	2207	-115.1	QL	548
192	4748	1.80	34.864	27.912	2206	-117.2	QL	549
193	4952	1.73	34.843	27.914	2209	-120.6	QL	550
194	5158					-115.8	QL	551

STATION 113								

POSITION		10	59	N	20	31	W	DATE 5 MAR 73
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
435	1					81.3	QL	552
436	50	19.16	35.614	25.468	2095	-22.4	QL	553
437	100	14.00	35.407	26.536	2179	-41.7	QL	554
438	150	12.67	35.271	26.705	2177	-59.3	QL	555
786	208	11.77	35.194	26.620	2178	-67.3	QL	556
787	310	10.69	35.127	26.970	2197	-78.2	QL	557
788	413	9.57	35.056	27.108	2215	-85.1	QL	558
789	516	8.71	35.015	27.215	2247	-83.9	QL	559
790	722	6.51	34.787	27.358	2247	-100.3	QL	560
791	928	5.42	34.766	27.480	2233	-105.3	QL	561
792	1133	4.96	34.898	27.638	2218	-105.1	QL	562
793	1442	4.18	34.959	27.778	2197	-101.9	QL	1562
794	1751	3.56	34.955	27.832	2180	-97.4	QL	563
186	2198	3.05	34.950	27.876	2191	-98.6	QL	564
187	2650	2.64	34.931	27.897	2191	-113.9	QL	565
188	3158	2.35	34.915	27.909	2197	-113.6	QL	566
289	3624	2.14	34.901	27.914	2207	-113.1	QL	567
290	4145	1.98	34.889	27.917	2208	-135.1	QL	568
291	4344	1.93	34.883	27.917	2206	-114.2	QL	569
292	4542	1.88	34.879	27.917	2215	-113.9	QL	570
293	4741	1.86	34.907	27.920	2225	-119.6	QL	571

STATION 115								

POSITION	28	1 N	26	0 W	DATE	15 MAR 73		
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
435	30	19.06	36.971	26.532	2095	123.5	QL	590
436	110	18.85	36.956	26.577	2093	120.4	QL	591
437	160	18.59	36.896	26.597	2103	112.4	QL	592
286	197	17.63	36.666	26.661	2110	91.2	QL	572
438	220	16.89	36.498	26.715	2109	95.4	QL	593
287	296	15.93	36.328	26.812	2113	67.8	QL	573
288	397	13.94	35.942	26.960	2122	36.7	QL	574
289	596	11.50	35.595	27.184	2143	-39.0	QL	575
290	697	10.36	35.475	27.298	2176	-67.0	QL	576
291	796	9.37	35.402	27.410	2199	-76.8	QL	577
292	896	8.25	35.302	27.512	2202	-80.1	QL	578
293	1096	7.26	35.308	27.663	2201	-81.7	QL	579
294	1191	7.20	35.393	27.739	2190	-84.3	QL	580
1286	1291	6.75	35.363	27.779	2204	-91.0	QL	581
1287	1490	5.87	35.290	27.838	2189	-101.3	QL	582
1288	1987	4.04	35.098	27.896	2178	-91.5	QL	583
1289	2487	3.01	34.986	27.908	2190	-96.7	QL	584
1290	2985	2.53	34.942	27.915	2195	-106.7	QL	585
1291	3484	2.27	34.916	27.916	2208	-120.3	QL	586
1292	3989	2.13	34.902	27.916	2209	-117.3	QL	587
1293	4478	2.02	34.896	27.920	2214	-114.6	QL	588
1294	5175	1.94	34.626	27.918	2207	-114.9	QL	589

STATION 117								

POSITION	30	40 N	38	58 W	DATE	20 MAR 73		
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/00	THETA	UM	O/00	#	
786	2					138.9	QL	594
787	100	19.19	36.673	26.276	2065	136.0	QL	595
788	295	17.00	36.403	26.615	2096	79.8	QL	596
789	393	16.08	36.230	26.702	2102	48.9	QL	597
790	539	13.81	35.871	26.933	2120	11.2	QL	598
791	686	11.84	35.609	27.129	2148	-32.2	QL	599
793	1076	7.28	35.285	27.644	2188	-67.9	QL	600
286	1215	6.43	35.251	27.734	2183	-71.2	QL	601
287	1319	5.81	35.224	27.793	2176	-75.3	QL	602
288	1474	5.14	35.175	27.836	2171	-72.3	QL	603
289	1681	4.50	35.134	27.877	2174	-78.0	QL	604
794	1954	3.78	35.059	27.893	2170	-78.3	QL	605
291	2506	2.90	34.964	27.901	2172	-92.1	QL	606
292	3019	2.58	34.941	27.910	2193	-104.0	QL	607
293	3425	2.43	34.929	27.914	2194	-105.0	QL	608

STATION 120								

POSITION			33 16 N	56 33 W	DATE 27 MAR 73			
SMPL	DEPTH	POT T	SAL	SIGMA	TCO2	DC14	C14	LAB
#	M	DEG C	O/OO	THETA	UM	O/OO	#	
286	3	18.04	36.417	26.370	2052	127.8	QL	609
287	204	17.65	36.388	26.444	2067	129.5	QL	610
288	403	15.94	36.167	26.687	2101	45.6	QL	611
289	601	12.67	35.652	26.998	2131	-12.1	QL	612
290	700	10.56	35.366	27.178	2162	-59.7	QL	613
291	799	8.99	35.218	27.331	2174	-66.0	QL	614
292	899	7.17	35.095	27.510	2194	-62.0	QL	615
293	1096	5.57	35.085	27.715	2187	-61.4	QL	616
294	1293	4.91	35.066	27.778	2170	-62.4	QL	617
586	1757	3.94	35.011	27.836	2155	-68.0	QL	618
587	2255	3.40	34.983	27.869	2169	-75.8	QL	619
588	2754	2.87	34.954	27.895	2169	-87.8	QL	620
589	3252	2.46	34.928	27.910	2168	-91.6	QL	621
590	3550	2.21	34.915	27.920	2171	-88.3	QL	622
591	4048	1.95	34.895	27.925	2182	-93.4	QL	623
592	4793	1.75	34.874	27.923	2185	-100.1	QL	624
594	5535	1.65	36.596	27.957	2201	-101.4	QL	625