Final Technical Report

Title: Ocean CO₂ Measurements for the WOCE Hydrographic Survey in the Pacific Ocean, 1992-1995 Field Years: Shore Based Analysis of Dissolved Inorganic Carbon

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Background

Our participation in the Hydrographic Survey of the World Ocean Circulation Experiment (WOCE) began in December, 1990 with a two year grant from DOE for shore-based analyses of inorganic carbon in sea water. These analyses were intended to assure that the measurements carried out under difficult laboratory conditions on board ships were consistent with measurements made under more carefully controlled shore-laboratory conditions. The project was to support U.S. shipboard analytical groups supported by the Department of Energy (DOE) Oceanic Carbon Survey and also the complementary survey of the National Oceanic and Atmospheric Administration (NOAA). Our shore-laboratory also was to offer support to a project by Dr. Andrew Dickson involving the preparation of certified reference materials (CRMs) to be used as standards for measurements of dissolved inorganic carbon (DIC) and titration alkalinity (ALK) made at sea.

A final technical report for the first two year grant was prepared and submitted to the DOE and to the Carbon Dioxide Information Analysis Center (CDIAC) in June, 1994, presenting in detail all of the DIC and ALK shore based data for samples from the three WOCE Pacific Ocean legs and from two WOCE Atlantic Ocean legs in 1991. This formal research report (Guenther *et al*, 1994a) is in the Scripps Institution of Oceanography Reference Series and is also referenced by CDIAC. The shore based data have also been published by CDIAC in Numerical Data Packages (NDPs) for the five 1991 field year WOCE legs (NDP numbers 51, 54, 56, 60, 62).

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Under a related DOE grant number DEFG03-91ER61116, two final technical reports on the shipboard ALK analyses of 1991 and 1992, were submitted to CDIAC in October, 1994. The 1991 data were published by CDIAC in NDP number 60 (for the TUNES 3 leg, WOCE Line P16C). The 1992 data were published in a SIO Reference Series Report (Guenther *et al*, 1994b) (for the CGC92 leg, WOCE Line P13).

Our second grant from DOE for the shore-based DIC analyses, DEFG03-93ER61543, began on 1 January, 1993 and extended for three years until 31 December 1995. A one year no cost extension for calendar 1996 was granted, and then two one year continuations were granted for the periods 16 April 1996 to 15 April 1997 and 16 April 1997 to 15 April 1998. Technical Progress Reports were submitted to DOE for the periods 1 January 1993 to 31 December 1993 and 1 January 1994 to 31 December 1994. The present document is submitted as the Final Technical Report for the entire period of the grant, 1993 to 1998. Data from samples collected during WOCE field years 1992 through 1996 are reported.

Summary of Analyses

Table 1 is a summary of the number of analyses performed on samples collected on a total of 26 WOCE expedition legs from 1992 until 1996. A total of 1279 samples were analyzed for DIC in our laboratory during this period. Also included in the table are the numbers of any remaining samples. These are presently being kept archived in a cold room at approximately 8 ° C. Our analytical strategy called for first analyzing a subset of approximately 40 samples from a particular leg in order to obtain a first impression of the sampling performance. In order to provide the best possible data quality for comparison with shipboard data, we selected only samples with good duplicate pairs (the sample bottles had not broken, leaked or otherwise been impaired), and with corresponding shipboard DIC values judged to be of good quality by the shipboard analysts. The quality of the samples varied among the legs. In a few cases only about one half of the samples collected were considered good enough to analyze. As time permitted, second and additional "passes" of analyses were made on the inventory of samples from particular legs, until all satisfactory pairs had been analyzed. Toward the end of the project, funding restrictions resulted in fewer completed legs. A number of the Indian Ocean legs have good samples awaiting analysis, plus all of the 1997 field

Table 1. Summary of Analyses for WOCE Field Years 1992 – 1996.

Year	Expedition	WOCE Line	Bottles Analyzed			Bottles Remaining
			DIC	ALK	$\delta^{13}\text{C}$	
1992	Knorr 138 Legs 3 – 5	P6	57	58	29	6
	Knorr 138 Legs 9 and 10	P16A - P19S [†]	36	36	18	0
	Knorr 138 Leg 12	P19C	36	36	18	0
	CGC 92 Legs 1 and 2	P13	309	314	180	1
1993	F.S. Meteor 22	A10	28	28	28	0
	Thomas Thompson 21	P17N	25	26	25	12
	Thomas Thompson 23	P14N	32	32	29	0
	Thomas Thompson 24	P14N	28	28	28	4
	Thomas Thompson 26	P10	19	20	19	4
1994	Knorr 142 Leg 3	A15	32	32	0	0
	Thomas Thompson 31	P31	19	20	19	0
	CGC 94 Legs 2 and 3	P18S, P18N	66	70	36	0
	Maurice Ewing 94	A17C, A17N	41	42	0	0
	F.S. Meteor 28	A8	34	30	0	0
	Westward Legs 4 and 5	P21E, P21W	39	39	0	12
1995	Knorr 145 Leg 5	I8S, I9S	46	46	24	14
	Cither III Legs 1 and 2	A14, A13	40	42	0	50
	Knorr 145 Leg 6	I9N	52	52	26	0
	Knorr 145 Leg 7	I8N, I5E	44	44	22	14
	Knorr 145 Leg 8	I3	78	78	42	0
	Knorr 145 Leg 9	I5W, I4, I7C	36	38	14	2
	Knorr 145 Leg 10	I7N	38	40	18	20
	Knorr 145 Legs 11 and 12	I1	62	64	20	15
	Knorr 145 Leg 13	I10	20	20	10	0
1996	Knorr 145 Legs 14 and 15	I2	22	24	12	54
	Nathaniel Palmer 96-3	S04I	40	40	0	40
1997	Knorr 151 Leg 2	A24	0	0	0	48
	Knorr 151 Leg 3	A20	0	0	0	48
	Knorr 151 Leg 4	A22	0	0	0	19
Totals			1279	1299	617	363

[†] Indicates WOCE lines P16A, P17A, P17E and P19S

year Atlantic Ocean samples.

All of the samples analyzed for DIC have also had ALK determinations made by closed cell potentiometric titration. In some cases, due to laboratory blunders that prevented good DIC analyses, the number of ALK measurements exceeds the number of DIC analyses. Also, multiple ALK measurements were sometimes made on individual samples.

The CO₂ gas extracted from sea water aliquots for the DIC determination have all been archived for later $\delta^{13}\text{C}$ analysis by mass spectrometry. Approximately one half of these have been analyzed so far.

Essentially all of the samples analyzed for DIC and ALK have also been analyzed for salinity by the SIO Oceanographic Data Facility, as a check on handling of the samples and on the shipboard salinity.

During the period of this grant 473 DIC analyses were performed on 450 bottles of Certified Reference Materials (CRMs) prepared by the laboratory of Dr. Andrew Dickson. These analyses provide the certified DIC values for each batch of CRM. The measurements of CRMs continue, under separate funding (Principal Investigator Dr. Andrew Dickson). In the data report for the 1991 field year data (Guenther *et al*, 1994a), CRM analyses for batch numbers 1 to 13, made until August 1992, were reported. As of the writing of this report, we are doing certification measurements for CRM batch number 45. Results of our analyses have been reported by Dr. Dickson on his website and have been used for the quality assurance of shipboard DIC measurements, primarily made using the coulometric method. We have also titrated for ALK a total of 349 bottles of CRMs. These ALK results assist us in determining the accuracy of our laboratory sea water ALK measurements, with reference to Dr. Dickson's certified titration alkalinity scale, an investigation still underway.

Analytical Results

Our analytical methods and procedures for scrutinizing the data and comparing the shore-laboratory data to corresponding shipboard data have remained the same as reported in Guenther *et al* (1994a). Almost all of the manometric measurements of CO₂ gas extracted from aliquots of sea water were made on the Electronic Constant Volume Manometer (ECVM). A small number of measurements for the CGC92 expedition (WOCE Line P13) and for Knorr 138 expedition legs

(WOCE Lines P6 and P16A/P17A) were made directly on the mercury manometer. The ECVI results were tied to the primary mercury manometer by daily measurement on the ECVI of three standards also periodically measured on the mercury manometer. In addition, a subset of samples from the Bermuda Hydrostation S and the Hawaii Ocean Time Series were measured on both instruments for quality assurance. We have confirmed that both instruments deliver the same DIC results. The average difference found for 79 comparisons was 0.02 micromoles per kilogram of sea water ($\mu\text{M}/\text{kg}$) with a standard deviation (s) of a single difference of 0.70 $\mu\text{M}/\text{kg}$. All measurements of the CRM samples were made directly on the mercury manometer.

Dissolved Inorganic Carbon Results and Comparisons

Table 2 presents a summary of our DIC results for each of the 26 WOCE expedition legs from 1992 until 1996. The replicate imprecision is a measure of the repeatability of our laboratory DIC measurement of a single sample, as defined by the standard deviation calculated from measurements of replicate pairs of samples collected at sea. This imprecision affords quality assurance of the samples themselves, as we have a long established laboratory repeatability of approximately 0.5 $\mu\text{M}/\text{kg}$. At this stage of scrutinizing the data, we may make some rejections of data, deemed to result from bad samples. The average difference between shore-laboratory and corresponding shipboard measurements for an individual leg is then calculated, along with the standard deviation of an individual difference (Imprecision of Differences, on Table 2). These two results afford an estimate of how well the shipboard results agree with the shore-laboratory results.

The results reported in Table 2 are to be considered as preliminary, with the exception of the five legs discussed below, since final scrutiny of the data must await finalization of the shipboard data prior to the publication of the NDP by CDIAC. Our replicate data and final comparisons have been published in CDIAC NDP number 65 for Knorr 138, Legs 9, 10, and 12 (WOCE Lines P16A, P17A, P17E, P19S, P19C), and by NOAA in its report numbered NOAA ERL PMEL-61A for CGC94 (WOCE Line P18). Our final data and comparisons have been reported to CDIAC for Meteor 28 (WOCE Line A8) (NDP pending). Also, our final data have been compared with final shipboard data from Meteor 22 (WOCE Line A10) and Knorr 138 legs 3,4,5 (WOCE Line P6) (personal communication, Kenneth Johnson, Brookhaven National Laboratory). All other data have been

Table 2. Imprecisions of Replicate DIC Data and Ship-Shore Comparisons for WOCE Field Years 1992 to 1996.

Year	WOCE Line	Institution Sampling Board	Replicate Imprecision ($\mu\text{mol/kg}$)	No. of Replicate Pair	Average Difference (Shipboard Minus Shore Results) ($\mu\text{mol/kg}$)	Imprecision of Differences ($\mu\text{mol/kg}$)	No. of Ship/Shore Comparisons
1992	P6	BNL	0.89	22	-2.64	1.92	21
	P16A - P19S [†]	LDEO	1.32	15	-3.50	1.77	15
	P19C	LDEO	0.48	17	-1.03	1.85	15
	P13	SIO	0.95	140	-1.37	3.11	138
1993	A10	BNL	0.79	13	-3.57	1.80	11
	P17N	WHOI	1.50	12	-0.98	4.07	9
	P14N	UH	1.04	13	0.52	1.77	13
	P14N	UM	0.48	14	0.80	2.73	14
	P10	PU	0.38	9	-0.92	2.39	9
1994	A15	WHOI	0.44	14	-1.39	1.81	14
	P31	UH	0.83	9	0.21	3.42	8
	P18S, P18N	PMEL	0.80	29	-0.69	2.42	29
	A17C, A17N	PNL	0.92	19	-0.02	1.60	19
	A8	BNL	0.57	16	-1.62	1.50	16
	P21E, P21W	UM	0.49	17	-2.25	1.49	15
1995	I8S, I9S	BNL	0.82	23	-4.14	1.80	23
	A14, A13	BNL	0.59	19	-0.40	2.01	18
	I9N	PU	0.80	24	-1.96	1.67	24
	I8N, I5E	UH	1.31	18	-4.80	2.87	17
	I3	UM	0.82	32	-3.29	1.26	29
	I5W, I4, I7C	BNL	1.30	17	-2.95	1.40	16
	I7N	UH	1.40	16	-5.37	1.92	13
	I1	WHOI	1.05	26	-5.59	1.38	26
	I10	PU	1.28	9	-4.94	1.52	8
	I2	UH	0.83	11	-4.42	1.50	10
1996	S04I	LDEO	1.08	19	-1.20	1.23	19

[†] indicates WOCE lines P16A, P17A, P17E and P19S

reported to the DOE Survey Science Team at meetings , fifteen in all, held periodically throughout the duration of the program.

The comparison results are shown graphically in Figure 1, for the entire program, 1991 to 1996. The average difference for each leg is plotted with error bars representing $\pm 95\%$ confidence intervals as an estimate of whether the difference is significantly different than zero. On the right side of Figure 1, bar graphs display the standard deviation for the indicated number of ship-shore differences for each leg. Of the total of 31 legs, 11 were found not to be significantly different, at the 95% confidence level. We have no explanation for the agreement, after being quite good in 1993 and 1994, became worse for the Indian Ocean legs in 1995. Overall, the shore-laboratory data tends to be higher than the shipboard data by two or more $\mu\text{M}/\text{kg}$, suggesting perhaps that some process increases the DIC in stored samples shortly after sampling. We have never found significant changes after the samples arrive at our laboratory.

In the Appendix to this report are summary tables reporting all the individual sample results for DIC, for all 26 WOCE expedition legs from 1992 to 1996. The shore-laboratory DIC data in the tables are effectively final, except for final scrutiny for flagging data to be rejected. The five final sets of data discussed above have been scrutinized in this way. The shipboard data listed in the tables are considered final only for those same five sets.

Other Analytical Results

Our shore-laboratory results for ALK will not be reported here as we are currently engaged in recalculating the data with a new standardization of our entire data base of ALK results. We have reported to the Survey Science Team some of our preliminary ALK results. We also reported ALK results to DOE in the 1994 Technical Progress Report. Our repeatability for ALK is about $2 \mu\text{M}/\text{kg}$. An estimate of accuracy will await the new recalculation and comparison of results for CRMs.

Shore-laboratory salinities also have been determined for the same samples summarized in Table 1, but will not be reported here, awaiting a final formal research report.

Figure 1. Summary of Replicate Sample Results: 1991 - 1996.

As shown in Table 1, about one half of the available samples have been measured for $\delta^{13}\text{C}$. These results will be released in a future laboratory isotopic data report.

Future Activities

As noted above, we have not yet completed the chemical analyses and work up of the data for this project. A significant impediment to completing this project is the circumstance that the funding for the final field year of the WOCE Oceanic Carbon Survey was unexpectedly reduced. Funds for our shore-based contribution were terminated in April of this year, one year earlier than funding awarded to the organizations carrying out work at sea. Thus we were not supported for carrying out the analyses for the final sampling year or for additional time to complete retrospective calibrating and completion of reports.

At present there is no realistic prospect for our receiving additional funding to complete our effort. We are continuing to carry on as resources permit, but additional scheduled reductions in funding of other work in our studies of the Global Carbon Cycle do not provide an optimistic projection for a resolution of the problems caused by the abrupt termination of funding for the WOCE Oceanic Carbon Survey without adequate provision for final work-up of the data.

Reports

In the following pages, we provide a list of published reports that present our shore replicate DIC data and comparisons to corresponding shipboard data.

List of Reports

1991 Field Year

- Guenther, P. R., C. D. Keeling, and G. Emanuele III. "Oceanic CO₂ measurements for the WOCE Hydrographic Survey in the Pacific Ocean, 1990-1991: Shore Based Analyses." *SIO Reference Series* No. 94-28. 129 pp. (1994a).
- Guenther, P. R., G. Emanuele III, T. J. Lueker, D. J. Moss, E. F. Stewart, and C. D. Keeling. "Oceanic CO₂ Measurements for the WOCE Hydrographic Survey in the Pacific Ocean: Shipboard Alkalinity Measurements on CGC92 Legs 1 and 2, 1992." *SIO Reference Series* No. 94-30. 50 pp. (1994b).
- Johnson, K. M., D. W. R. Wallace, P. J. Wilke, and C. Goyet. "Carbon Dioxide, Hydrographic, and Chemical Data Obtained During the R/V *Meteor* Cruise 15/3 in the South Atlantic Ocean (WOCE Section A9, February-March 1991)." ORNL/CDIAC-82, NDP-051. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 53 pp. (1995).
- Takahashi, T., J. G. Goddard, S. Rubin, D. W. Chipman, S. C. Sutherland, and C. Goyet. "Carbon Dioxide, Hydrographic, and Chemical Data Obtained in the Central South Pacific Ocean (WOCE Sections P17S and P16S) During the TUNES-2 Expedition of the R/V *Thomas Washington*, July-August, 1991." ORNL/CDIAC-86, NDP-054. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 210 pp. (1995).
- Johnson, K. M., B. Schneider, L. Mintrop, and D. W. R. Wallace. "Carbon Dioxide, Hydrographic, and Chemical Data Obtained During the R/V *Meteor* Cruise 18/1 in the North Atlantic Ocean (WOCE Section A1E, September 1991)." ORNL/CDIAC-91, NDP-056. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 53 pp. (1996).
- Goyet, Catherine, Peter R. Guenther, Charles D. Keeling, and Lynne D. Talley. "Carbon Dioxide, Hydrographic, and Chemical Data Obtained During the R/V *Thomas Washington* Cruise TUNES-3 in the Equatorial Pacific Ocean (WOCE Section P16C)." ORNL/CDIAC-96, NDP-060. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 94 pp. (1996).

Goyet, Catherine, Robert M. Key, Kevin F. Sullivan, and Mizuki Tsuchiya." "Carbon Dioxide, Hydrographic, and Chemical Data Obtained During the R/V *Thomas Washington* Cruise TUNES-1 in the Equatorial Pacific Ocean (WOCE Section P17C)." ORNL/CDIAC-99, NDP-062. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 61 pp. (1997).

Post 1991 Field Years

Lamb, M. F. et al. (25 authors). Chemical and Hydrographic Measurements in the Eastern Pacific During the CGC94 Expedition (WOCE Section P18)." NOAA Data Report ERL PMEL-61a. Pacific Marine Environmental Laboratory, Seattle, Washington. 235 pp. (1997).

Rubin, S., J. G. Goddard, D. W. Chipman, T. Takahashi, S. C. Sutherland, J. L. Reid, J. H. Swift, L. D. Talley, and A. Kozyr. "Carbon Dioxide, Hydrographic, and Chemical Data Obtained in the South Pacific Ocean (WOCE Sections P16A/P17A, P17E/P19S, and P19C, R/V *Knorr*, October 1992-April 1993)." ORNL/CDIAC-109, NDP-065. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 186 pp. (1998).

Appendix
to
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Appendix Tables Summaries of Total Dissolved Inorganic Carbon Data for Replicate Sea Water Samples

The tables summarize the laboratory DIC measurements by vacuum extraction/manometry on replicate samples of sea water collected on the 26 WOCE expedition legs from 1992 to 1996.

Comments on each column in the tables follow:

LEG to SAMPLE STN DATE	The identifying information for each Niskin bottle sampled at sea.
EXTRAC DATE	The date of extraction of CO ₂ gas from an aliquot of sea water taken from a given sample bottle is listed.
ANALYSIS DATE	The date of manometric analysis of the extracted CO ₂ gas sample is listed.
MANO TYPE	The manometric system used to analyze the CO ₂ gas extraction is identified: M, the mercury manometer; E, the electronic manometric system using the Ruska DDR6000 quartz spiral pressure source and differential pressure transducer (ECVM).
SAMPLE BOTTLE	The label number for the individual replicate sample bottle filled at sea is listed. The prefix "R" indicates a 500 ml borosilicate glass bottle equipped with a standard taper (24/40 size) joint and solid stopper with a Rodawiss plastic knurled nut system for holding the stopper. The prefix "P" indicates a 1 liter borosilicate glass bottle equipped with a solid stopper (individually lapped to the bottle joint with carborundum grit) equipped with a spring steel clip for holding the stopper in its sealed position.
RUN	This number indicates whether more than one manometric measurement of a given gas sample was made on each manometer.
FLAG	The flag code identifies runs that are rejected from further consideration due to identified reasons (see individual tables).
S.I.O. RUN	The DIC in micromoles per kilogram of sea water is listed for an individual manometric run of a CO ₂ gas extraction.
RUN DELTA	The run difference for two runs as discussed above, if both runs are unflagged.
BOTTLE DIC	The average bottle DIC for unflagged runs. In most cases (single runs), the S.I.O. RUN and the BOTTLE DIC are identical.
BOTTLE DELTA	The difference between two bottles collected from a single Niskin bottle is listed.
"NISKIN" AVG	Here is listed the average S.I.O. laboratory DIC result for water from a particular Niskin bottle sampled at sea.

{INSTITUTION}
DIC

This column lists the shipboard DIC result from a SOMMA or other coulometric system. The institution abbreviations indicate the shipboard CO₂ analytical group operating on that expedition leg, as follows:

BNL, the group of Dr. Douglas Wallace and Mr. Ken Johnson, of Brookhaven National Laboratory.

LDEO, the group of Drs. Taro Takahashi and David Chipman, of Lamont Doherty Earth Observatory.

PMEL, the group of Dr. Richard Feely, of NOAA's Pacific Marine Environmental Laboratory.

PNL, Ms. Linda Bingler, of Battelle's Pacific Northwest Laboratory (in association with BNL).

PU, the group of Drs. Chris Sabine and Robert Key, of Princeton University.

SIO, the groups of Drs. Charles Keeling and Andrew Dickson, of Scripps Institution of Oceanography.

UH, the group of Dr. Chris Winn, of the University of Hawaii.

UM, the group of Dr. Frank Millero, of the University of Miami.

WHOI, the group of Dr. Catherine Goyet, of Woods Hole Oceanographic Institution.

No inference should be made from the listed data as to the imprecision of the data.

{INSTITUTION}
- S.I.O.

The difference between the shipboard DIC result and the laboratory replicate sample average is listed.

NOTE:

Dilution Factor

At the end of each table section for each leg is a note detailing the multiplicative dilution factor applied to account for the addition of the HgCl₂ poison solution to the S.I.O. replicate sample bottles. The nominally 500 ml bottles actually hold about 585 ml. Thus for the addition of 0.1 ml of saturated aqueous HgCl₂, a dilution factor of 1.00017 is calculated. The shipboard data listed in the last two columns have also been appropriately corrected for dilution by each shipboard analysis group.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
3	32-30S	1 25	10	12MAY92	09FEB93	11FEB93	M	R5130	001	F	2021.02		2021.02				
32	86-20W				09FEB93	11FEB93	M	R5131	001	F	2013.99		2013.99	-7.03	2017.61	2012.89	-4.62
		1 5 3007			09FEB93	12FEB93	M	R5132	001		2303.09		2303.09				
					09FEB93	12FEB93	M	R5133	001		2302.30		2302.30	-0.79	2302.70	2300.19	-2.51
3	32-30S	1 8 3002		15MAY92	10NOV94	04JAN95	E	R5134	001		2301.06		2301.06				
42	92-40W				10NOV94	04JAN95	E	R5135	001		2302.82		2302.82	+1.76	2301.94	2294.39	-7.55
3	32-30S	1 36	19	16MAY92	10NOV94	09JAN95	E	R5140	001		2023.32		2023.32				
46	95-20W				10NOV94	09JAN95	E	R5141	001		2023.97		2023.97	+0.65	2023.65	2022.48	-1.17
3	32-30S	1 36	5	20MAY92	31MAR93	12MAY93	E	R5144	001		2018.81		2018.81				
58	95-20W				31MAR93	12MAY93	E	R5145	001		2018.07		2018.07	-0.74	2018.44	2016.23	-2.21
		1 5 3002			30MAR93	12MAY93	E	R5142	001		2294.27		2294.27				
					30MAR93	12MAY93	E	R5143	001		2294.41		2294.41	+0.14	2294.34	2294.45	0.11
3	32-30S	1 36	12	23MAY92	18NOV93	29NOV93	E	R5148	001		2014.07		2014.07				
68	110-0W				18NOV93	29NOV93	E	R5149	001		2015.38		2015.38	+1.31	2014.72	2014.30	-0.42
		1 1 2772			16NOV93	17NOV93	E	R5146	001		2303.80		2303.80				
					16NOV93	17NOV93	E	R5147	001		2300.58		2300.58	-3.22	2302.19	2298.66	-3.53
4	32-30S	1 36	20	04JUN92	23MAR94	30MAR94	E	R5165	001		2014.61		2014.61				
85	120-0W				23MAR94	30MAR94	E	R5166	001		2013.68		2013.68	-0.93	2014.15	2010.10	-4.05
		1 3 2958			23MAR94	30MAR94	E	R5167	001	EX	2324.85						
					23MAR94	30MAR94	E	R5168	001		2305.67		2305.67		2305.67	2299.80	-5.87
4	32-30S	1 36	19	08JUN92	16NOV93	17NOV93	E	R5162	001		2017.35		2017.35				
98	128-40W				16NOV93	17NOV93	E	R5163	001		2017.44		2017.44	+0.09	2017.40	2015.00	-2.40
		1 7 2998			15NOV93	17NOV93	E	R5160	001		2302.62		2302.62				
					15NOV93	17NOV93	E	R5161	001		2300.36		2300.36	-2.26	2301.49	2298.90	-2.59
4	32-30S	1 35	61	18JUN92	14NOV94	09JAN95	E	R5157	001		2027.90		2027.90				
123	146-30W				14NOV94	09JAN95	E	R5158	001		2027.67		2027.67	-0.23	2027.79	2025.20	-2.59
		1 12 3118			11NOV94	09JAN95	E	R5155	001		2311.14		2311.14				
					11NOV94	09JAN95	E	R5156	001		2310.74		2310.74	-0.40	2310.94	2305.70	-5.24

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

M = CONSTANT VOLUME MERCURY MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.

R: Comparison excluded from analysis for >3 sigma from average.

EX: Data excluded from analysis for cause.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA (UMOL/KG SW)	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
4 144	32-30S 182-30W	1 35	81	24JUN92	25FEB93	25FEB93	M	R5150	001		2036.64		2036.64				
					25FEB93	25FEB93	M	R5151	001		2036.04		2036.04	-0.60	2036.34	2033.70	-2.64
		1 12	3008		24FEB93	25FEB93	M	R5152	001		2316.85		2316.85				
					24FEB93	25FEB93	M	R5153	001		2316.34		2316.34	-0.51	2316.60	2313.10	-3.50
4 170	32-30S 175-15W	1 35	59	01JUL92	02APR93	12MAY93	E	R5173	001		2050.21		2050.21		2050.21	2049.80	-0.41
		1 15	3041		01APR93	12MAY93	E	R5170	001		2289.97		2289.97				
					01APR93	12MAY93	E	R5171	001		2290.86		2290.86	+0.89	2290.42	2288.80	-1.62
4 184	32-30S 178-55E	1 23	44	04JUL92	14NOV94	09JAN95	E	R5180	001		2048.98		2048.98				
					14NOV94	09JAN95	E	R5181	001		2049.34		2049.34	+0.36	2049.16	2045.50	-3.66
4 188	31- 5S 177-32E	1 22	84	05JUL92	24MAR94	30MAR94	E	R5174	001	EX	2060.03						
					24MAR94	30MAR94	E	R5184	001		2045.95		2045.95		2045.95	2042.30	-3.65
		1 31	3029		24MAR94	05APR94	E	R5179	001		2312.64		2312.64				
					24MAR94	05APR94	E	R5189	001		2310.31		2310.31	-2.33	2311.48	2309.80	-1.68
5 231	30- 5S 157-20E	1 24	20	22JUL92	08MAR93	09MAR93	M	R5190	001		2008.90		2008.90				
					08MAR93	09MAR93	M	R5191	001		2010.24		2010.24	+1.34	2009.57	2005.20	-4.37
		1 2	3135		08MAR93	09MAR93	M	R5192	001		2272.05		2272.05				
					08MAR93	09MAR93	M	R5193	001		2273.17		2273.17	+1.12	2272.61	2269.00	-3.61
5 233	30- 5S 156-30E	1 38	22	23JUL92	28MAR94	05APR94	E	R5194	001	EX	2185.48						
					28MAR94	05APR94	E	R5195	001	EX	2189.72					2002.20	
		1 10	3002		25MAR94	05APR94	E	R5196	001		2267.93		2267.93				
					25MAR94	05APR94	E	R5197	001		2269.05		2269.05	+1.12	2268.49	2266.90	-1.59
5 237	30- 5S 155- 0E	1 36	9	24JUL92	09NOV93	10NOV93	E	R5200	001	F	2004.75		2004.75				
					09NOV93	10NOV93	E	R5201	001	F	2009.58		2009.58	+4.81	2007.18	1997.90	-9.26
		1 10	3005		21OCT93	22OCT93	E	R5198	001		2268.08		2268.08				
					21OCT93	22OCT93	E	R5199	001		2267.70		2267.70	-0.38	2267.89	2269.30	1.41
5 247	30- 5S 155- 0E	1 35	58	25JUL92	21OCT93	22OCT93	E	R5204	001	F	2019.22		2019.22				
					21OCT93	22OCT93	E	R5205	001	F	2024.94		2024.94	+5.72	2022.08	2000.30	-21.78

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM
M = CONSTANT VOLUME MERCURY MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
		1 10	3011		200CT93	220CT93	E	R5202	001		2281.54		2281.54				
					200CT93	220CT93	E	R5203	001		2282.18		2282.18	+0.64	2281.86		

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

M = CONSTANT VOLUME MERCURY MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.

R: Comparison excluded from analysis for >3 sigma from average.

EX: Data excluded from analysis for cause.

NOTE: Dilution factor of 1.000170 has been applied.

24-MAR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	LDEO DIC	LDEO -S.I.O.
(UMOL/KG SW)																	
9	44-0S	1 1	11	160CT92	03FEB93	04FEB93	M	R5612	001	F	2081.21		2081.21				
18	150-30W				03FEB93	04FEB93	M	R5613	001	F	2072.49		2072.49	-8.72	2076.85	2107.40	30.55
		1 26	2790		03FEB93	04FEB93	M	R5610	001		2303.47		2303.47				
					03FEB93	04FEB93	M	R5611	001		2304.50		2304.50	+1.03	2303.99	2297.40	-6.59
9	57-0S	1 1	3	250CT92	16FEB93	18FEB93	M	R5620	001		2146.25		2146.25				
42	150-30W				16FEB93	18FEB93	M	R5621	001		2147.40		2147.40	+1.15	2146.82	2146.90	0.08
		1 32	2998		16FEB93	18FEB93	M	R5618	001		2262.44		2262.44				
					16FEB93	18FEB93	M	R5619	001		2264.04		2264.04	+1.60	2263.24	2258.50	-4.74
9	62-14S	1 12	7	300CT92	30MAR94	05APR94	E	R5624	001		2167.84		2167.84				
55	140-0W				30MAR94	05APR94	E	R5625	001		2168.44		2168.44	+0.60	2168.14	2166.70	-1.44
		1 27	2512		28MAR94	05APR94	E	R5622	001		2261.50		2261.50				
					28MAR94	05APR94	E	R5623	001		2262.01		2262.01	+0.51	2261.76	2256.90	-4.86
9	52-30S	2 1	8	09NOV92	30MAR93	11MAY93	E	R5672	001		2092.99		2092.99				
80	135-0W				30MAR93	11MAY93	E	R5673	001		2095.12		2095.12	+2.13	2094.06	2091.40	-2.66
		2 29	3053		29MAR93	11MAY93	E	R5670	001		2262.93		2262.93				
					29MAR93	11MAY93	E	R5671	001		2262.53		2262.53	-0.40	2262.73	2260.00	-2.73
9	45-30S	1 1	3	13NOV92	04MAR93	05MAR93	M	R5676	001	F	2069.36		2069.36				
94	135-0W				04MAR93	05MAR93	M	R5677	001	F	2075.17		2075.17	+5.81	2072.27	2068.70	-3.57
		1 24	3037		04MAR93	05MAR93	M	R5674	001		2298.86		2298.86				
					04MAR93	05MAR93	M	R5675	001		2296.80		2296.80	-2.06	2297.83	2295.40	-2.43
9	40-31S	1 1	2	16NOV92	07APR93	09APR93	E	R5680	001		2041.61		2041.61				
104	135-0W				07APR93	09APR93	E	R5681	001		2042.88		2042.88	+1.27	2042.24	2038.80	-3.44
		1 26	3027		06APR93	09APR93	E	R5678	001		2297.91		2297.91				
					06APR93	09APR93	E	R5679	001		2299.60		2299.60	+1.69	2298.76	2296.30	-2.46
9	35-0S	1 1	1	19NOV92	19OCT93	22OCT93	E	R5614	001		2033.62		2033.62				
115	135-0W				19OCT93	22OCT93	E	R5615	001		2031.89		2031.89	-1.73	2032.76	2029.40	-3.36
		1 29	2980		20OCT93	22OCT93	E	R5616	001		2309.01		2309.01				
					20OCT93	22OCT93	E	R5617	001		2307.36		2307.36	-1.65	2308.19	2305.00	-3.19

MANOMETER TYPE:

M = CONSTANT VOLUME MERCURY MANOMETER DATUM
E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	LDEO DIC	LDEO -S.I.O.
9	33-0S	2 2	23	20NOV92	15JUN93	17JUN93	E	R5684	001		2031.07		2031.07				
119	135-0W				15JUN93	17JUN93	E	R5685	001		2033.31		2033.31	+2.24	2032.19	2028.60	-3.59
		2 28	2901		15JUN93	17JUN93	E	R5682	001		2303.94		2303.94				
					15JUN93	17JUN93	E	R5683	001		2300.83		2300.83	-3.11	2302.39	2295.80	-6.59
10	65-40S	1 1	0	25DEC92	26AUG93	27AUG93	E	R5650	001		2111.27		2111.27				
163	126-0W				26AUG93	27AUG93	E	R5651	001		2114.81		2114.81	+3.54	2113.04	2108.60	-4.44
		1 28	2950		25AUG93	27AUG93	E	R5647	001	F	2262.51		2262.51				
					25AUG93	27AUG93	E	R5649	001	F	2266.68		2266.68	+4.17	2264.59	2258.70	-5.89

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

NOTE: Dilution factor of 1.000340 has been applied.

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
 R: Comparison excluded from analysis for >3 sigma from average.
 EX: Data excluded from analysis for cause.

18-MAY-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	LDEO DIC	LDEO -S.I.O.
											(UMOL/KG SW)						
12 260	52-08S 88-00W	1 38	0	02MAR93	11OCT93	12OCT93	E	R5628	001		2087.35		2087.35				
					11OCT93	12OCT93	E	R5629	001		2088.28		2088.28	+0.93	2087.82	2085.70	-2.12
		1 10	2904		19OCT93	22OCT93	E	R5628	001		2276.01		2276.01				
					19OCT93	22OCT93	E	R5627	001		2276.03		2276.03	+0.02	2276.02	2271.90	-4.12
12 273	45-30S 88-00W	1 38	2	05MAR93	05MAY94	16MAY94	E	R5632	001	EX	2085.25						
					05MAY94	16MAY94	E	R5633	001		2084.20		2084.20		2084.20	2061.80	-2.40
12 295	34-30S 88-00W	1 38	0	12MAR93	12JUL93	14JUL93	E	R5636	001		2001.64		2001.64				
					12JUL93	14JUL93	E	R5637	001		2001.79		2001.79	+0.15	2001.72	1999.30	-2.42
		1 8	2997		09JUL93	14JUL93	E	R5634	001		2296.93		2296.93				
					09JUL93	14JUL93	E	R5635	001		2296.83		2296.83	-0.10	2296.88	2294.20	-2.68
12 307	28-30S 88-00W	1 38	0	14MAR93	05MAY94	16MAY94	E	R5640	001		2050.78		2050.78				
					05MAY94	16MAY94	E	R5641	001		2051.98		2051.98	+1.20	2051.38	2049.00	-2.38
12 317	24-20S 88-00W	2 36	0	17MAR93	11JUN93	17JUN93	E	R5644	001		2058.93		2058.93				
					11JUN93	17JUN93	E	R5645	001		2059.14		2059.14	+0.21	2059.03	2058.00	-1.03
		2 6	2999		11JUN93	17JUN93	E	R5642	001		2308.00		2308.00				
					11JUN93	17JUN93	E	R5643	001		2308.27		2308.27	+0.27	2308.14	2310.60	2.46
12 333	16-51S 86-24W	1 38	0	21MAR93	08MAY94	16MAY94	E	R5654	001		2046.24		2046.24				
					08MAY94	16MAY94	E	R5655	001		2046.08		2046.08	-0.16	2046.16	2043.40	-2.76
		1 9	2878		08MAY94	16MAY94	E	R5652	001		2325.50		2325.50				
					08MAY94	16MAY94	E	R5653	001		2326.10		2326.10	+0.60	2325.80	2325.30	-0.50
12 342	12-30S 85-50W	2 36	0	23MAR93	09JUN93	10JUN93	E	R5658	001		2032.78		2032.78				
					09JUN93	10JUN93	E	R5659	001		2033.96		2033.96	+1.18	2033.37	2031.60	-1.77
		2 8	2999		09JUN93	10JUN93	E	R5656	001		2334.52		2334.52				
					09JUN93	10JUN93	E	R5657	001		2334.51		2334.51	-0.01	2334.52	2336.10	1.58
12 355	6-08S 85-50W	1 38	0	27MAR93	16NOV93	17NOV93	E	R5662	001		1908.79		1908.79				
					16NOV93	17NOV93	E	R5663	001		1908.44		1908.44	-0.35	1908.61	1908.30	-0.31
		1 7	2834		09NOV93	10NOV93	E	R5660	001		2347.12		2347.12				
					09NOV93	10NOV93	E	R5661	001		2346.74		2346.74	-0.38	2346.93	2346.70	-0.23

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

18-MAY-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	AVG	LDEO DIC	LDEO -S.I.O.
(UMOL/KG SW)																	
12	13-2N	2 38	1	09APR93	19MAY93	20MAY93	E	R5588	001		1895.14		1895.14				
413	91-45W				19MAY93	20MAY93	E	R5589	001		1895.91		1895.91	+0.77	1895.53	1894.80	-0.73
		2 10	3752		19MAY93	20MAY93	E	R5586	001		2361.26		2361.26				
					19MAY93	20MAY93	E	R5587	001		2361.87		2361.87	+0.61	2361.57		
12	13-19N	1 31	0	09APR93	18MAY93	20MAY93	E	R5592	001		1912.19		1912.19				
417	91-40W				18MAY93	20MAY93	E	R5593	001		1910.63		1910.63	-1.56	1911.41	1913.00	1.59
		1 71	2667		17MAY93	20MAY93	E	R5590	001	R	2364.16		2364.16				
					17MAY93	20MAY93	E	R5591	001	R	2364.18		2364.18	+0.02	2364.17	2376.80	12.63

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

NOTE: Dilution factor of 1.000340 has been applied.

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
 R: Comparison excluded from analysis for >3 sigma from average.
 EX: Data excluded from analysis for cause.

29-MAY-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC (UMOL/KG SW)	BOTTLE DELTA	"NISKIN" AVG	MPL DIC	MPL -S.I.O.
1 8	54- 8N 161-10E	1 25	10	21AUG92	17NOV92	19NOV92	M	R5288	001		1917.06		1917.06				
					17NOV92	19NOV92	M	R5289	001		1917.99		1917.99	+0.93	1917.53	1917.70	0.17
		1 1	1820		17NOV92	18NOV92	M	R5286	001		2392.69		2392.69				
					17NOV92	19NOV92	M	R5287	001		2392.36		2392.36	-0.33	2392.53	2391.70	-0.83
1 11	53-29N 162-10E	1 36	10	22AUG92	02DEC92	03DEC92	M	R5292	001		2014.12		2014.12				
					02DEC92	03DEC92	M	R5293	001		2014.69		2014.69	+0.57	2014.41	2019.70	5.29
		1 9	3000		02DEC92	03DEC92	M	R5290	001		2350.18		2350.18				
					02DEC92	03DEC92	M	R5291	001	R	2347.98		2347.98	-2.22	2349.07	2331.90	-17.17
1 13	53- 1N 162-52E	1 36	10	23AUG92	08APR93	09APR93	E	R5296	001		2018.77		2018.77				
					08APR93	09APR93	E	R5297	001		2018.09		2018.09	-0.68	2018.43	2019.30	0.87
		1 11	2900		07APR93	09APR93	E	R5294	001		2346.07		2346.07				
					07APR93	09APR93	E	R5295	001		2346.25		2346.25	+0.18	2346.16	2344.00	-2.16
1 17	50-59N 164-58E	1 36	10	25AUG92	19NOV92	20NOV92	M	P5708	001		2039.55		2039.55				
					19NOV92	20NOV92	M	P5709	001		2039.48		2039.48	-0.07	2039.52	2040.20	0.68
		1 8	3000		18NOV92	19NOV92	M	P5708	001		2348.98		2348.98				
					18NOV92	20NOV92	M	P5707	001		2350.07		2350.07	+1.09	2349.53	2346.70	-2.83
1 20	49-30N 165- 1E	1 36	10	26AUG92	30NOV93	03DEC93	E	R5320	001	EX	2058.24						
					30NOV93	03DEC93	E	R5321	001		2043.07		2043.07		2043.07	2045.20	2.13
		1 33	50		01APR94	05APR94	E	R5318	001		2113.25		2113.25				
					30MAR94	05APR94	E	R5319	001		2112.83		2112.83	-0.42	2113.04	2121.00	7.96
		1 31	100		01APR94	22APR94	E	R5316	001		2166.11		2166.11				
					01APR94	22APR94	E	R5317	001		2165.39		2165.39	-0.72	2165.75	2165.70	-0.05
		1 27	200		04APR94	22APR94	E	R5314	001		2326.65		2326.65				
					05APR94	22APR94	E	R5315	001		2326.62		2326.62	-0.03	2326.64	2322.90	-3.74
		1 25	300		04APR94	22APR94	E	R5312	001		2347.01		2347.01				
					04APR94	22APR94	E	R5313	001		2349.76		2349.76	+2.75	2348.39	2343.30	-5.09
		1 23	400		05APR94	22APR94	E	R5310	001		2354.59		2354.59				
					05APR94	22APR94	E	R5311	001		2354.07		2354.07	-0.52	2354.33	2350.10	-4.23

MANOMETER TYPE:

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	MPL DIC	MPL -S.I.O.
													(UMOL/KG SW)				
		1 21	800		08APR94	22APR94	E	R5308	001		2371.79		2371.79				
					05APR94	22APR94	E	R5309	001		2368.54		2368.54	-3.25	2370.17	2365.10	-5.07
		1 18	900		06APR94	03MAY94	E	R5306	001		2381.73		2381.73				
					06APR94	03MAY94	E	R5307	001		2382.17		2382.17	+0.44	2381.95	2381.30	-0.65
		1 16	1200		06APR94	22APR94	E	R5304	001		2391.44		2391.44				
					06APR94	22APR94	E	R5305	001		2392.94		2392.94	+1.50	2392.19	2384.40	-7.79
		1 14	1700		08APR94	03MAY94	E	R5302	001		2381.13		2381.13				
					08APR94	03MAY94	E	R5303	001		2380.60		2380.60	-0.53	2380.86	2379.30	-1.56
		1 13	2000		12APR94	03MAY94	E	R5300	001		2373.26		2373.26				
					12APR94	03MAY94	E	R5301	001		2372.99		2372.99	-0.27	2373.13	2370.90	-2.23
		1 10	2900		11APR94	03MAY94	E	R5298	001		2346.26		2346.26				
					11APR94	03MAY94	E	R5299	001		2345.50		2345.50	-0.76	2345.88	2343.10	-2.78
1 24	47-30N 165-0E	1 36	10	27AUG92	08DEC92	10DEC92	M	P5712	001		2034.32		2034.32				
					08DEC92	10DEC92	M	P5713	001		2033.32		2033.32	-1.00	2033.82	2038.45	2.63
		1 11	2800		08DEC92	09DEC92	M	P5710	001		2348.11		2348.11				
					08DEC92	10DEC92	M	P5711	001		2348.48		2348.48	+0.37	2348.30	2346.30	-2.00
1 26	46-30N 165-1E	1 36	10	27AUG92	30NOV93	03DEC93	E	P5772	001		2011.57		2011.57				
					30NOV93	03DEC93	E	P5773	001		2011.98		2011.98	+0.41	2011.78	2015.15	3.37
		1 11	2800		12MAY94	16MAY94	E	P5770	001		2348.43		2348.43				
					12MAY94	16MAY94	E	P5771	001		2348.61		2348.61	+0.18	2348.52	2349.30	0.78
1 29	44-58N 164-59E	1 36	10	30AUG92	02DEC93	03DEC93	E	R5323	001		2029.63		2029.63				
					02DEC93	03DEC93	E	R5324	001		2030.64		2030.64	+1.01	2030.14	2033.00	2.86
		1 11	3000		12MAY94	26MAY94	E	R5322	001		2345.82		2345.82				
					12MAY94	26MAY94	E	R5325	001		2346.23		2346.23	+0.41	2346.03	2345.30	-0.73
1 32	43-30N 165-1E	1 36	10	31AUG92	02DEC93	03DEC93	E	P5776	001		1970.46		1970.46				
					02DEC93	03DEC93	E	P5777	001		1969.61		1969.61	-0.85	1970.04	1968.95	-1.09
		1 8	3100		13MAY94	26MAY94	E	P5774	001		2342.34		2342.34				
					13MAY94	26MAY94	E	P5775	001		2341.03		2341.03	-1.31	2341.69	2339.50	-2.19

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29-MAY-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA (UMOL/KG SW)	MPL DIC	MPL -S.I.O.
1 38 165- 0E	41-30N 165- 0E	1 36	10	01SEP92	03DEC93	03DEC93	E	R5348	001		1949.24		1949.24			
					03DEC93	03DEC93	E	R5349	001		1949.03		1949.03	-0.21	1949.14	1950.70 1.56
		1 34	50		25APR94	16MAY94	E	R5346	001		2070.01		2070.01			
					25APR94	16MAY94	E	R5347	001		2070.51		2070.51	+0.50	2070.26	2070.80 0.54
		1 32	100		25APR94	16MAY94	E	R5344	001		2097.39		2097.39		2097.39	2099.10 1.71
					22APR94	10MAY94	E	R5342	001		2120.51		2120.51			
		1 27	200		22APR94	10MAY94	E	R5343	001		2120.42		2120.42	-0.09	2120.47	2121.00 0.53
					21APR94	10MAY94	E	R5340	001		2212.17		2212.17			
		1 25	300		21APR94	10MAY94	E	R5341	001		2212.04		2212.04	-0.13	2212.10	2211.00 -1.10
					19APR94	10MAY94	E	R5338	001		2262.33		2262.33			
		1 23	400		19APR94	10MAY94	E	R5339	001		2262.37		2262.37	+0.04	2262.35	2261.90 -0.45
					18APR94	10MAY94	E	R5336	001		2318.92		2318.92			
		1 21	600		18APR94	10MAY94	E	R5337	001		2318.06		2318.06	-0.87	2318.49	2316.00 -2.49
					18APR94	10MAY94	E	R5334	001		2362.09		2362.09			
		1 18	900		18APR94	10MAY94	E	R5335	001		2361.13		2361.13	-0.96	2361.61	2358.20 -3.41
					15APR94	10MAY94	E	R5332	001		2381.15		2381.15			
		1 15	1200		15APR94	10MAY94	E	R5333	001		2379.55		2379.55	-1.60	2380.35	2377.90 -2.45
					15APR94	10MAY94	E	R5330	001		2385.50		2385.50			
		1 13	1500		15APR94	10MAY94	E	R5331	001		2385.88		2385.88	+0.38	2385.69	2382.00 -3.69
					14APR94	03MAY94	E	R5328	001		2380.09		2380.09			
		1 11	1900		14APR94	03MAY94	E	R5329	001		2383.57		2383.57	+3.48	2381.83	2377.90 -3.93
					13APR94	03MAY94	E	R5326	001		2341.33		2341.33			
		1 7	3100		13APR94	03MAY94	E	R5327	001		2343.21		2343.21	+1.88	2342.27	2342.90 0.63
1 38 165- 1E	40-30N 165- 1E	1 36	10	02SEP92	09DEC92	11DEC92	M	P5716	001		1959.48		1959.48			
					09DEC92	11DEC92	M	P5717	001		1957.68		1957.68	-1.80	1958.58	1960.80 2.22
		1 8	3100		09DEC92	10DEC92	M	P5714	001		2343.71		2343.71			
					09DEC92	10DEC92	M	P5715	001		2342.32		2342.32	-1.39	2343.02	2344.10 1.08

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	MPL DIC	MPL -S.I.O.
											(UMOL/KG SW)						
1	39- 1N	1 36	10	03SEP92	03DEC93	20DEC93	E	P5720	001		1954.82		1954.82				
41	165- 1E				03DEC93	20DEC93	E	P5721	001		1952.97		1952.97	-1.85	1953.90	1958.65	4.75
		1 8	3100		13MAY94	26MAY94	E	P5718	001		2345.91		2345.91				
					13MAY94	26MAY94	E	P5719	001		2345.23		2345.23	-0.68	2345.57	2344.50	-1.07
1	36- 1N	1 36	10	05SEP92	10DEC93	20DEC93	E	P5780	001		1964.57		1964.57				
47	165- 1E				10DEC93	20DEC93	E	P5781	001		1964.82		1964.82	+0.25	1964.69	1968.70	4.01
1	34-42N	1 35	25	06SEP92	25AUG93	27AUG93	E	R5372	001		1948.63		1948.63				
49	165- 3E				25AUG93	27AUG93	E	R5373	001		1949.26		1949.26	+0.63	1948.95	1950.20	1.25
		1 34	50		24AUG93	27AUG93	E	R5370	001		1964.84		1964.84				
					24AUG93	27AUG93	E	R5371	001		1964.86		1964.86	+0.02	1964.85	1966.60	1.75
		1 32	100		24AUG93	27AUG93	E	R5368	001		2005.90		2005.90				
					24AUG93	27AUG93	E	R5369	001		2005.57		2005.57	-0.33	2005.73	2003.70	-2.03
		1 28	200		10AUG93	11AUG93	E	R5366	001		2075.47		2075.47				
					10AUG93	11AUG93	E	R5367	001		2076.15		2076.15	+0.68	2075.81	2075.70	-0.11
		1 26	300		09AUG93	11AUG93	E	R5364	001		2108.77		2108.77				
					09AUG93	11AUG93	E	R5365	001		2109.15		2109.15	+0.38	2108.96	2107.80	-1.16
		1 24	400		09AUG93	11AUG93	E	R5362	001		2165.81		2165.81				
					09AUG93	11AUG93	E	R5363	001		2165.58		2165.58	-0.23	2165.70	2163.30	-2.40
		1 22	600		08AUG93	11AUG93	E	R5360	001		2269.06		2269.06				
					08AUG93	11AUG93	E	R5361	001		2269.22		2269.22	+0.16	2269.14	2265.00	-4.14
		1 19	900		06AUG93	11AUG93	E	R5358	001		2348.55		2348.55				
					06AUG93	11AUG93	E	R5359	001		2348.49		2348.49	-0.06	2348.52	2346.10	-2.42
		1 17	1200		13JUL93	14JUL93	E	R5356	001		2372.53		2372.53				
					13JUL93	14JUL93	E	R5357	001		2374.13		2374.13	+1.60	2373.33	2368.50	-4.83
		1 15	1700		13JUL93	14JUL93	E	R5354	001		2382.55		2382.55				
					13JUL93	14JUL93	E	R5355	001		2383.49		2383.49	+0.94	2383.02	2381.10	-1.92
		1 14	2000		12JUL93	14JUL93	E	R5352	001		2373.91		2373.91				
					12JUL93	14JUL93	E	R5353	001		2373.96		2373.96	+0.05	2373.94	2372.80	-1.14

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		1 11	2900		10JUN93	17JUN93	E	R5350	001		2361.09		2361.09				
					10JUN93	17JUN93	E	R5351	001	R	2362.73		2362.73	+1.64	2361.91	2341.70	-20.21
1 51	33-23N 165- 1E	1 36	10	07SEP92	10DEC93	20DEC93	E	P5784	001		1926.31		1926.31				
					10DEC93	20DEC93	E	P5785	001		1927.77		1927.77	+1.46	1927.04	1929.80	2.76
		1 17	1000		10OCT94	30NOV94	E	P5782	001		2349.51		2349.51				
					10OCT94	30NOV94	E	P5783	001	EX	2363.37				2349.51	2348.60	-0.91
1 53	32- 0N 165- 0E	1 2	2000	08SEP92	10OCT94	30NOV94	E	R5374	001		2377.44		2377.44				
					10OCT94	30NOV94	E	R5375	001		2378.77		2378.77	+1.33	2378.10	2375.30	-2.80
1 55	30-41N 164-58E	1 35	10	10SEP92	15DEC93	20DEC93	E	P5724	001		1961.59		1961.59				
					15DEC93	20DEC93	E	P5725	001		1962.26		1962.26	+0.67	1961.93	1964.50	2.57
		1 9	3100		07OCT94	30NOV94	E	P5722	001		2342.45		2342.45				
					07OCT94	30NOV94	E	P5723	001	EX	2353.66				2342.45	2340.80	-1.65
2 57	21-19N 165- 0E	1 35	25	30SEP92	05JAN94	07JAN94	E	R5400	001		1947.12		1947.12				
					05JAN94	07JAN94	E	R5401	001		1948.94		1948.94	+1.82	1948.03	1948.90	0.87
		1 34	50		01NOV94	07DEC94	E	R5398	001		1965.21		1965.21				
					01NOV94	07DEC94	E	R5399	001		1963.66		1963.66	-1.55	1964.44	1966.80	2.36
		1 31	125		31OCT94	07DEC94	E	R5396	001		2011.95		2011.95				
					31OCT94	07DEC94	E	R5397	001		2013.32		2013.32	+1.37	2012.64	2014.80	2.16
		1 28	200		28OCT94	07DEC94	E	R5394	001		2020.60		2020.60				
					28OCT94	07DEC94	E	R5395	001	EX	2031.25				2020.60	2014.50	-6.10
		1 26	300		21OCT94	07DEC94	E	R5392	001		2057.15		2057.15				
					21OCT94	07DEC94	E	R5393	001		2054.16		2054.16	-2.99	2055.66	2056.80	1.14
		1 24	400		20OCT94	07DEC94	E	R5390	001		2100.98		2100.98				
					20OCT94	07DEC94	E	R5391	001		2099.80		2099.80	-1.18	2100.39	2097.40	-2.99
		1 22	600		19OCT94	07DEC94	E	R5388	001		2245.97		2245.97				
					19OCT94	07DEC94	E	R5389	001		2244.35		2244.35	-1.62	2245.16	2238.30	-6.86
		1 19	900		18OCT94	07DEC94	E	R5386	001		2318.60		2318.60				
					18OCT94	07DEC94	E	R5387	001		2321.65		2321.65	+3.05	2320.13	2314.20	-5.93

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													(UMOL/KG SW)				
		1 17	1200		27APR95	08MAY95	E	R5384	001		2342.22		2342.22				
					27APR95	08MAY95	E	R5404	001	F	2353.76		2353.76	+11.54	2347.99	2335.90	-12.09
		1 15	1600		17OCT94	07DEC94	E	R5382	001		2349.31		2349.31				
					17OCT94	07DEC94	E	R5383	001		2346.88		2346.88	-2.43	2348.09	2348.60	0.51
		1 13	2100		14OCT94	07DEC94	E	R5380	001		2348.45		2348.45				
					14OCT94	07DEC94	E	R5381	001		2347.81		2347.81	-0.64	2348.13	2349.60	1.47
		1 10	3000		14OCT94	30NOV94	E	R5378	001		2346.78		2346.78				
					14OCT94	30NOV94	E	R5379	001	F	2341.75		2341.75	-5.03	2344.27	2341.50	-2.77
2 59	19-59N 185-0E	1 33	75	01OCT92	04FEB93	13APR93	E	R5405	001		1969.91		1969.91				
					04FEB93	13APR93	E	R5406	001		1970.12		1970.12	+0.21	1970.02	1970.75	0.73
		1 9	3100		04FEB93	06APR93	E	R5402	001		2338.54		2338.54				
					04FEB93	06APR93	E	R5403	001		2338.78		2338.78	+0.24	2338.66	2335.90	-2.76
2 82	18-40N 184-36E	1 35	10	02OCT92	02FEB93	06APR93	E	P5728	001		1937.27		1937.27				
					02FEB93	06APR93	E	P5729	001		1936.59		1936.59	-0.68	1936.93	1939.00	2.07
		1 8	3000		02FEB93	06APR93	E	P5726	001		2338.84		2338.84				
					02FEB93	06APR93	E	P5727	001		2340.05		2340.05	+1.21	2339.45	2337.80	-1.65
2 63	24-3N 184-59E	1 36	10	04OCT92	16DEC93	07JAN94	E	R5409	001		1955.46		1955.46				
					16DEC93	07JAN94	E	R5410	001		1953.33		1953.33	-2.13	1954.40	1953.50	-0.90
		1 10	2900		11OCT94	30NOV94	E	R5407	001		2352.14		2352.14				
					11OCT94	30NOV94	E	R5408	001	F	2345.97		2345.97	-6.17	2349.05	2347.60	-1.45
2 64	26-2N 185-4E	1 36	10	06OCT92	16DEC93	20DEC93	E	R5433	001		1984.75		1984.75				
					16DEC93	20DEC93	E	R5434	001	F	1970.02		1970.02	+5.27	1967.39	1967.30	-0.09
		1 34	50		09NOV94	04JAN95	E	R5431	001		1966.99		1966.99				
					09NOV94	04JAN95	E	R5432	001		1967.39		1967.39	+0.40	1967.19	1966.60	-0.59
		1 32	100		09NOV94	04JAN95	E	R5429	001		1971.36		1971.36				
					09NOV94	04JAN95	E	R5430	001		1971.14		1971.14	-0.22	1971.25	1971.00	-0.25
		1 27	250		08NOV94	04JAN95	E	R5425	001		2021.27		2021.27				
					08NOV94	04JAN95	E	R5426	001		2021.88		2021.88	+0.61	2021.58	2019.80	-1.78

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		1 23	500		08NOV94	04JAN95	E	R5423	001		2065.11		2065.11				
					08NOV94	04JAN95	E	R5424	001		2065.88		2065.88	+0.77	2065.50	2063.60	-1.90
		1 21	650		07NOV94	04JAN95	E	R5421	001		2144.07		2144.07				
					07NOV94	04JAN95	E	R5435	001		2145.96		2145.96	+1.89	2145.02	2141.60	-3.42
		1 19	800		07NOV94	04JAN95	E	R5419	001		2270.45		2270.45				
					07NOV94	04JAN95	E	R5420	001		2269.73		2269.73	-0.72	2270.09	2266.30	-3.79
		1 17	1000		04NOV94	04JAN95	E	R5417	001		2341.80		2341.80				
					04NOV94	04JAN95	E	R5418	001		2345.52		2345.52	+3.72	2343.66	2333.80	-9.86
		1 15	1200		04NOV94	04JAN95	E	R5415	001		2366.48		2366.48				
					04NOV94	04JAN95	E	R5416	001		2365.61		2365.61	-0.87	2366.05	2362.20	-3.85
		1 12	1600		03NOV94	07DEC94	E	R5413	001		2371.79		2371.79				
					03NOV94	07DEC94	E	R5414	001		2369.47		2369.47	-2.32	2370.63	2367.30	-3.33
		1 9	2200		03NOV94	07DEC94	E	R5411	001		2354.20		2354.20				
					03NOV94	07DEC94	E	R5412	001		2354.32		2354.32	+0.12	2354.26	2353.30	-0.96
2 16-0N 66 166-0E		1 36	10	08OCT92	10FEB93	13APR93	E	R5438	001		1930.12		1930.12				
					10FEB93	13APR93	E	R5439	001		1929.93		1929.93	-0.19	1930.03	1929.00	-1.03
		1 8	3200		08FEB93	13APR93	E	R5436	001		2342.83		2342.83				
					08FEB93	13APR93	E	R5437	001		2342.75		2342.75	-0.08	2342.79	2338.70	-4.09
2 14-0N 67 165-0E		1 36	10	09OCT92	17FEB93	20APR93	E	R5442	001		1922.68		1922.68		1922.68	1922.80	0.12
		1 8	3100		10FEB93	16APR93	E	R5440	001		2342.21		2342.21				
					10FEB93	16APR93	E	R5441	001		2342.28		2342.28	+0.07	2342.25	2339.20	-3.05
2 12-35N 68 165-22E		1 36	10	09OCT92	17DEC93	20DEC93	E	R5466	001		1907.10		1907.10				
					17DEC93	20DEC93	E	R5467	001		1910.40		1910.40	+3.30	1908.75	1907.80	-0.95
		1 34	25		14DEC94	17JAN95	E	R5464	001		1916.69		1916.69				
					14DEC94	17JAN95	E	R5465	001		1916.56		1916.56	-0.13	1916.63	1914.70	-1.93
		1 32	75		14DEC94	17JAN95	E	R5462	001		1936.41		1936.41		1936.41	1933.30	-3.11
		1 29	150		12DEC94	17JAN95	E	R5460	001		2029.01		2029.01				
					12DEC94	17JAN95	E	R5461	001		2028.74		2028.74	-0.27	2028.88	2023.80	-5.08

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOT TLE IC	BOTTLE "NISKIN" DELTA (UMOL/KG SW)	MPL DIC	MPL -S.I.O.
		1 26	300		09DEC94	17JAN95	E	R5458	001		2200.71		2200.71			
					09DEC94	17JAN95	E	R5459	001		2202.86		2202.86	+2.15	2201.79	2196.10 -5.69
		1 24	400		09DEC94	17JAN95	E	R5458	001		2260.67		2260.67			
					09DEC94	17JAN95	E	R5457	001	F	2255.33		2255.33	-5.34	2258.00	2248.10 -9.90
		1 22	600		08DEC94	17JAN95	E	R5455	001		2269.69		2269.69		2269.69	2263.80 -5.89
		1 19	900		07DEC94	17JAN95	E	R5452	001		2299.98		2299.98			
					07DEC94	17JAN95	E	R5468	001		2300.10		2300.10	+0.12	2300.04	2291.20 -8.84
		1 16	1200		06DEC94	17JAN95	E	R5450	001		2329.43		2329.43			
					06DEC94	17JAN95	E	R5451	001		2329.34		2329.34	-0.09	2329.39	2324.10 -5.29
		1 13	1600		05DEC94	17JAN95	E	R5448	001		2344.66		2344.66			
					05DEC94	17JAN95	E	R5449	001		2344.99		2344.99	+0.33	2344.82	2337.30 -7.52
		1 11	2000		05DEC94	17JAN95	E	R5446	001		2349.58		2349.58			
					05DEC94	17JAN95	E	R5447	001		2350.82		2350.82	+1.24	2350.20	2341.90 -8.30
		1 7	3100		02DEC94	12JAN95	E	R5444	001		2347.60		2347.60			
					02DEC94	12JAN95	E	R5445	001		2344.08		2344.08	-3.52	2345.84	2337.90 -7.94
2 89	10- 0N 165- 0E	1 36	10	10OCT92	18FEB93	20APR93	E	R5471	001		1902.93		1902.93		1902.93	1902.40 -0.53
		1 9	2900		17FEB93	20APR93	E	R5469	001		2345.32		2345.32			
					17FEB93	20APR93	E	R5470	001		2344.98		2344.98	-0.34	2345.15	2342.70 -2.45
2 70	8- 8N 165- 1E	1 36	10	11OCT92	25FEB93	07MAY93	E	R5476	001		1886.50		1886.50			
					25FEB93	07MAY93	E	R5477	001		1886.77		1886.77	+0.27	1886.64	1888.50 1.86
		1 8	3100		18FEB93	23APR93	E	R5474	001		2337.57		2337.57			
					18FEB93	23APR93	E	R5475	001		2337.77		2337.77	+0.20	2337.67	2334.90 -2.77
2 71	6- 0N 165- 1E	1 36	10	12OCT92	24MAR93	07MAY93	E	R5480	001		1882.59		1882.59			
					24MAR93	07MAY93	E	R5481	001		1883.08		1883.08	+0.49	1882.83	1883.60 0.77
		1 8	3100		23MAR93	07MAY93	E	R5478	001	EX	2340.23					
					23MAR93	07MAY93	E	R5479	001		2344.23		2344.23		2344.23	2338.80 -5.43

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	MPL DIC	MPL -S.I.O.
(UMOL/KG SW)																	
2	3-0N	1 33	10	120CT92	17DEC93	07JAN94	E	R5500	001		1875.28		1875.28				
73	185-0E				17DEC93	07JAN94	E	R5501	001		1872.08		1872.08	-3.20	1873.68	1867.10	-6.58
		1 31	50		11JAN95	26JAN95	E	R5498	001		1880.54		1880.54				
					11JAN95	26JAN95	E	R5499	001		1880.87		1880.87	+0.33	1880.71	1881.70	0.99
		1 29	100		10JAN95	26JAN95	E	R5498	001		2018.08		2018.08				
					10JAN95	26JAN95	E	R5497	001		2017.37		2017.37	-0.69	2017.72	2017.80	0.08
		1 23	250		09JAN95	26JAN95	E	R5494	001		2151.50		2151.50				
					09JAN95	26JAN95	E	R5495	001		2151.70		2151.70	+0.20	2151.60	2151.20	-0.40
		1 20	400		06JAN95	26JAN95	E	R5492	001		2224.78		2224.78				
					06JAN95	26JAN95	E	R5493	001		2225.41		2225.41	+0.63	2225.09	2219.00	-6.09
		1 16	700		04JAN95	26JAN95	E	R5490	001		2278.62		2278.62				
					04JAN95	26JAN95	E	R5491	001		2279.69		2279.69	+1.07	2279.16	2277.00	-2.16
		1 14	900		04JAN95	23JAN95	E	R5488	001		2294.98		2294.98				
					04JAN95	23JAN95	E	R5489	001		2293.66		2293.66	-1.30	2294.31	2291.80	-2.51
		1 10	1700		03JAN95	23JAN95	E	R5486	001		2334.58		2334.58				
					03JAN95	23JAN95	E	R5487	001		2332.15		2332.15	-2.41	2333.35	2332.20	-1.15
		1 9	2000		03JAN95	23JAN95	E	R5484	001		2344.95		2344.95				
					03JAN95	23JAN95	E	R5485	001		2341.63		2341.63	-3.32	2343.29	2337.60	-5.69
		1 6	2900		29DEC94	23JAN95	E	R5482	001		2342.66		2342.66				
					29DEC94	23JAN95	E	R5483	001		2342.20		2342.20	-0.46	2342.43	2336.50	-5.93
2	1-30N	1 6	2900	130CT92	120CT94	30NOV94	E	R5502	001		2343.45		2343.45				
75	164-59E				120CT94	30NOV94	E	R5503	001		2344.90		2344.90	+1.45	2344.18	2337.40	-6.78
2	0-0N	1 36	10	140CT92	110CT93	120CT93	E	R5528	001		1918.75		1918.75				
78	165-0E				110CT93	120CT93	E	R5529	001		1920.03		1920.03	+1.28	1919.39	1925.90	6.51
		1 34	50		060CT93	120CT93	E	R5526	001		1919.50		1919.50				
					060CT93	120CT93	E	R5527	001		1919.84		1919.84	+0.34	1919.67	1922.80	3.13
		1 31	125		060CT93	120CT93	E	R5524	001		2060.64		2060.64				
					060CT93	120CT93	E	R5525	001		2062.08		2062.08	+1.44	2061.36	2062.30	0.94

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	MPL DIC	MPL -S.I.O.
													(UMOL/KG SW)				
		1 27	250		05OCT93	12OCT93	E	R5522	001		2145.54		2145.54				
					05OCT93	12OCT93	E	R5523	001		2142.09		2142.09	-3.45	2143.82	2139.60	-4.22
		1 23	450		05OCT93	12OCT93	E	R5520	001		2232.04		2232.04				
					05OCT93	12OCT93	E	R5521	001		2232.26		2232.26	+0.22	2232.15	2230.10	-2.05
		1 21	800		27SEP93	04OCT93	E	R5518	001		2241.28		2241.28				
					27SEP93	04OCT93	E	R5519	001		2241.90		2241.90	+0.62	2241.59	2239.80	-1.79
		1 19	800		27SEP93	04OCT93	E	R5516	001		2268.71		2268.71				
					27SEP93	04OCT93	E	R5517	001		2268.94		2268.94	+0.23	2268.82	2267.60	-1.22
		1 16	1100		24SEP93	04OCT93	E	R5514	001		2298.49		2298.49				
					24SEP93	04OCT93	E	R5515	001		2299.04		2299.04	+0.55	2298.77	2298.60	-0.17
		1 12	1500		24SEP93	04OCT93	E	R5512	001		2321.50		2321.50				
					24SEP93	04OCT93	E	R5513	001		2322.19		2322.19	+0.69	2321.84	2320.80	-1.04
		1 9	2100		23SEP93	04OCT93	E	R5510	001		2340.74		2340.74				
					23SEP93	04OCT93	E	R5511	001		2341.21		2341.21	+0.47	2340.98	2341.00	0.02
		1 7	2600		23SEP93	04OCT93	E	R5508	001		2340.71		2340.71				
					23SEP93	04OCT93	E	R5509	001		2341.36		2341.36	+0.65	2341.04	2337.30	-3.74
		1 5	3200		26AUG93	27AUG93	E	R5506	001		2330.91		2330.91				
					26AUG93	27AUG93	E	R5507	001		2330.95		2330.95	+0.04	2330.93	2328.20	-2.73
2 81	1-30S 184-59E	1 36	10	15OCT92	24MAR93	11MAY93	E	R5532	001		1902.74		1902.74				
					26MAR93	11MAY93	E	R5533	001	EX	1912.50				1902.74	1906.30	3.56
		1 6	3000		24MAR93	11MAY93	E	R5530	001		2335.10		2335.10				
					29MAR93	11MAY93	E	R5534	001		2337.15		2337.15	+2.05	2336.13	2336.70	0.57
2 83	2-48S 164-55E	1 35	25	16OCT92	05JAN94	07JAN94	E	R5551	001		1913.02		1913.02				
					05JAN94	07JAN94	E	R5552	001		1913.13		1913.13	+0.11	1913.08	1917.40	4.32
		1 32	100		08FEB95	21FEB95	E	R5549	001		1998.98		1998.98				
					08FEB95	21FEB95	E	R5550	001		1998.07		1998.07	-0.91	1998.53	2000.80	2.27
		1 27	250		07FEB95	21FEB95	E	R5547	001		2155.75		2155.75				
					07FEB95	21FEB95	E	R5548	001		2153.52		2153.52	-2.23	2154.64	2155.70	1.06

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29-MAY-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA (UMOL/KG SW)	MPL DIC	MPL -S.I.O.
		1 24	400		08FEB95	21FEB95	E	R5545	001		2180.55		2180.55			
					08FEB95	21FEB95	E	R5548	001		2179.02		2179.02	-1.53	2179.79	2180.50 0.71
		1 21	600		02FEB95	21FEB95	E	R5543	001		2227.04		2227.04			
					02FEB95	21FEB95	E	R5544	001		2227.63		2227.63	+0.59	2227.33	2228.30 0.97
		1 17	1000		28JAN95	21FEB95	E	R5541	001		2289.69		2289.69			
					28JAN95	21FEB95	E	R5542	001		2290.60		2290.60	+0.91	2290.15	2294.90 4.75
		1 12	1400		28JAN95	21FEB95	E	R5540	001		2314.29		2314.29			
					28JAN95	21FEB95	E	R5555	001		2315.34		2315.34	+1.05	2314.82	2313.40 -1.42
		1 8	2000		25JAN95	21FEB95	E	R5537	001		2335.59		2335.59			
					25JAN95	21FEB95	E	R5538	001		2337.15		2337.15	+1.58	2336.37	2333.70 -2.67
		1 4	2800		25JAN95	15FEB95	E	R5535	001		2335.11		2335.11			
					25JAN95	15FEB95	E	R5538	001		2334.68		2334.68	-0.43	2334.90	2333.30 -1.60
2 87	4-22S 164-11E	1 32	10	17OCT92	08JAN94	07JAN94	E	R5572	001		1916.24		1916.24			
					08JAN94	07JAN94	E	R5573	001		1916.27		1916.27	+0.03	1916.26	1917.00 0.74
		1 30	50		17FEB95	01MAR95	E	R5570	001		1916.64		1916.64			
					17FEB95	01MAR95	E	R5571	001		1916.60		1916.60	-0.04	1916.62	1915.70 -0.92
		1 28	100		15FEB95	01MAR95	E	R5568	001		2005.43		2005.43			
					15FEB95	01MAR95	E	R5569	001		2004.42		2004.42	-1.01	2004.93	2003.80 -1.13
		1 24	200		15FEB95	01MAR95	E	R5566	001		2140.25		2140.25			
					15FEB95	01MAR95	E	R5567	001		2140.22		2140.22	-0.03	2140.24	2138.30 -1.94
		1 19	400		14FEB95	01MAR95	E	R5564	001		2204.31		2204.31			
					14FEB95	01MAR95	E	R5565	001		2201.73		2201.73	-2.58	2203.02	2200.80 -2.22
		1 16	600		13FEB95	01MAR95	E	R5562	001		2234.62		2234.62			
					13FEB95	01MAR95	E	R5563	001		2234.48		2234.48	-0.14	2234.55	2232.40 -2.15
		1 10	900		10FEB95	01MAR95	E	R5560	001		2276.45		2276.45			
					10FEB95	01MAR95	E	R5574	001		2276.06		2276.06	-0.39	2276.26	2274.00 -2.26
		1 7	1200		10FEB95	21FEB95	E	R5558	001		2293.33		2293.33			
					10FEB95	21FEB95	E	R5559	001		2293.39		2293.39	+0.06	2293.36	2290.50 -2.86

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		1	5	1800	09FEB95	21FEB95	E	R5558	001		2318.45		2318.45				
					09FEB95	21FEB95	E	R5557	001		2318.15		2318.15	-0.30	2318.30	2315.70	-2.60
		1	3	2000	08FEB95	21FEB95	E	R5553	001		2332.78		2332.78				
					08FEB95	21FEB95	E	R5554	001	EX	2274.19				2332.78	2329.80	-2.98

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NOTE: Dilution factor of 1.000170 has been applied

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
48	30- 0S 18-23W	3 18	10	13JAN93	19NOV93	03DEC93	E	R5980	001		2047.18		2047.18				
					19NOV93	03DEC93	E	R5981	001	2047.79		2047.79	+0.61	2047.49	2045.68	-1.81	
		3 8	3002		19NOV93	29NOV93	E	R5978	001		2190.38		2190.38				
					19NOV93	29NOV93	E	R5979	001		2189.57		2189.57	-0.81	2189.98	2188.44	-1.54
54	30- 0S 14-20W	3 23	11	15JAN93	08JUN93	10JUN93	E	R5984	001		2047.09		2047.09				
					08JUN93	10JUN93	E	R5985	001	2047.92		2047.92	+0.83	2047.51	2044.98	-2.55	
		3 1	2808		07JUN93	10JUN93	E	R5982	001		2202.67		2202.67				
					07JUN93	10JUN93	E	R5983	001		2202.69		2202.69	+0.02	2202.68	2200.83	-1.85
62	30- 0S 9- 0W	2 8	12	17JAN93	26MAY93	27MAY93	E	R5986	001	G	2053.61		2053.61				
					26MAY93	27MAY93	E	R5987	001	G	2054.83		2054.83	+1.22	2054.22	2046.45	-7.77
		3 7	3004		07JUN93	10JUN93	E	R5988	001	G	2203.39		2203.39				
					07JUN93	10JUN93	E	R5989	001	G	2200.85		2200.85	-2.54	2202.12	2190.57	-11.55
68	30- 0S 4- 0W	3 23	10	19JAN93	24NOV93	29NOV93	E	R5992	001	EX	2058.86						
					24NOV93	29NOV93	E	R5993	001	2068.02		2068.02		2068.02	2064.83	-3.19	
		3 7	3003		24NOV93	29NOV93	E	R5990	001		2203.64		2203.64				
					24NOV93	29NOV93	E	R5991	001		2202.90		2202.90	-0.74	2203.27	2200.10	-3.17
76	29-36S 1-42E	2 8	12	21JAN93	25MAY93	27MAY93	E	R5994	001		2059.85		2059.85				
					25MAY93	27MAY93	E	R5995	001	2061.38		2061.38	+1.53	2060.61	2057.86	-2.75	
		3 6	3003		26MAY93	27MAY93	E	R5996	001		2206.72		2206.72				
					26MAY93	27MAY93	E	R5997	001		2207.40		2207.40	+0.68	2207.06	2203.31	-3.75
85	29-45S 7-37E	2 13	12	24JAN93	22APR93	23APR93	E	R5958	001		2048.29		2048.29				
					22APR93	23APR93	E	R5959	001	2046.93		2046.93	-1.36	2047.61	2041.48	-6.13	
		3 12	3002		06MAY93	07MAY93	E	R5960	001		2207.75		2207.75				
					06MAY93	07MAY93	E	R5961	001		2207.56		2207.56	-0.19	2207.66	2200.73	-6.93
93	29-52S 12-48E	2 13	12	27JAN93	15APR93	16APR93	E	R5962	001		2034.21		2034.21				
					15APR93	16APR93	E	R5963	001	2033.16		2033.16	-1.05	2033.69	2029.99	-3.70	
		3 5	3004		22APR93	23APR93	E	R5968	001		2205.79		2205.79				
					22APR93	23APR93	E	R5969	001		2205.44		2205.44	-0.35	2205.61	2200.52	-5.09

MANOMETER TYPE:

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BOTTLE TYPE:

R = RODAVISS

NOTE: Dilution factor of 1.000170 has been applied.

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
 G: Shipboard DIC by German CO2 group.
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 EX: Data excluded from analysis for cause.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	WHOI DIC	WHOI -S.I.O.
														(UMOL/KG SW)			
21 13	37-30N 128-38W	1 1	2	19MAY93	04AUG93	05AUG93	E	R5688	001		1977.13		1977.13				
					04AUG93	05AUG93	E	R5689	001		1978.82		1978.82	+1.69	1977.97	1978.80	0.83
		1 35	4385		04AUG93	05AUG93	E	R5688	001		2340.92		2340.92				
					04AUG93	05AUG93	E	R5687	001		2342.44		2342.44	+1.52	2341.68	2332.80	-8.88
21 37	39-00N 135-00W	1 37	4083	25MAY93	23JUN94	12JUL94	E	R5694	001		2348.72		2348.72				
					23JUN94	12JUL94	E	R5695	001		2347.97		2347.97	-0.75	2348.34	2352.00	3.66
21 45	40-30N 135-00W	1 1	3	27MAY93	15JUL93	20JUL93	E	R5700	001		1984.36		1984.36				
					15JUL93	20JUL93	E	R5701	001		1983.59		1983.59	-0.77	1983.97	1987.20	3.23
		1 38	4083		15JUL93	20JUL93	E	R5698	001		2353.48		2353.48				
					15JUL93	20JUL93	E	R5699	001		2352.32		2352.32	-1.18	2352.90	2353.10	0.20
21 71	49-12N 148-24W	1 1	3	04JUN93	02AUG93	05AUG93	E	R5580	001		2030.03		2030.03				
					02AUG93	05AUG93	E	R5581	001		2028.34		2028.34	-1.69	2029.19	2029.60	0.41
		1 38	4719		19JUL93	20JUL93	E	R5578	001		2346.29		2346.29				
					19JUL93	20JUL93	E	R5579	001		2342.83		2342.83	-3.46	2344.56		
21 84	53-27N 158-18W	1 1	2	09JUN93	16JUL93	20JUL93	E	R5584	001		2040.12		2040.12				
					16JUL93	20JUL93	E	R5585	001		2040.65		2040.65	+0.53	2040.39	2037.50	-2.89
		1 38	4472		16JUL93	20JUL93	E	R5582	001		2333.56		2333.56				
					16JUL93	20JUL93	E	R5583	001		2337.08		2337.08	+3.52	2335.32		
21 124	53-36N 153-15W	1 1	2	15JUN93	03AUG93	05AUG93	E	R5966	001		2032.37		2032.37				
					03AUG93	05AUG93	E	R5967	001		2030.84		2030.84	-1.53	2031.60	2026.20	-5.40
		1 38	4484		03AUG93	05AUG93	E	R5964	001		2336.23		2336.23				
					03AUG93	05AUG93	E	R5965	001		2336.38		2336.38	+0.15	2336.30		
21 132	54-50N 148-44W	1 1	3	20JUN93	24JUN94	23SEP94	E	R5972	001		2021.77		2021.77		2021.77	2016.40	-5.37
21 138	55-59N 140-21W	1 1	1	20JUN93	24JUN94	12JUL94	E	R5976	001		1987.14		1987.14				
					24JUN94	12JUL94	E	R5977	001		1991.16		1991.16	+4.02	1989.15	1989.20	0.05

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6-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UH DIC	UH -S.I.O.
											(UMOL/KG SW)						
23 11	53-54N 177-59E	1 2	3851	09JUL93	07JAN94	20JAN94	E	R5206	001		2375.77		2375.77				
					07JAN94	20JAN94	E	R5207	001		2374.85		2374.85	-0.92	2375.31	2376.70	1.39
23 35	44-50N 179-0E	1 17	4	15JUL93	18FEB94	04MAR94	E	R5596	001		2052.05		2052.05				
					18FEB94	04MAR94	E	R5597	001		2051.03		2051.03	-1.02	2051.54	2051.80	0.26
		1 18	5861		17FEB94	04MAR94	E	R5594	001		2320.55		2320.55		2320.55	2328.30	7.75
23 39	42-51N 179-1E	1 36	13	16JUL93	10JAN94	20JAN94	E	R5600	001	EX	2058.82						
					10JAN94	20JAN94	E	R5601	001		2043.00		2043.00		2043.00	2043.00	0.00
		1 2	5763		20JAN94	27JAN94	E	R5598	001		2326.50		2326.50				
					20JAN94	27JAN94	E	R5599	001		2327.35		2327.35	+0.85	2326.93	2325.00	-1.93
23 51	37-1N 179-0E	1 36	4	20JUL93	030CT94	03NOV94	E	R5604	001		1985.53		1985.53				
					030CT94	03NOV94	E	R5605	001		1989.57		1989.57	+4.04	1987.55	1987.90	0.35
23 63	30-43N 178-59E	1 35	0	23JUL93	040CT94	30NOV94	E	R6026	001		1988.87		1988.87				
					040CT94	30NOV94	E	R6027	001		1987.72		1987.72	-1.15	1988.30	1988.90	0.60
23 76	24-12N 179-0E	1 36	2	27JUL93	22FEB94	04MAR94	E	R6030	001		1971.07		1971.07				
					22FEB94	04MAR94	E	R6031	001		1971.24		1971.24	+0.17	1971.16	1975.10	3.94
		1 2	5827		18FEB94	04MAR94	E	R6028	001		2300.16		2300.16				
					18FEB94	04MAR94	E	R6029	001		2298.77		2298.77	-1.39	2299.47	2297.20	-2.27
23 85	19-54N 179-0E	1 36	2	29JUL93	050CT94	30NOV94	E	R6034	001		1958.54		1958.54				
					050CT94	30NOV94	E	R6035	001		1959.93		1959.93	+1.39	1959.24	1959.90	0.66
		1 2	3866		040CT94	30NOV94	E	R6032	001		2328.21		2328.21				
					040CT94	30NOV94	E	R6033	001	F	2323.30		2323.30	-4.91	2325.76	2324.80	-0.96
23 97	14-0N 180-0E	1 36	2	01AUG93	23FEB94	04MAR94	E	R6038	001		1937.06		1937.06				
					23FEB94	04MAR94	E	R6039	001		1937.34		1937.34	+0.28	1937.20	1937.70	0.50
		1 2	5820		22FEB94	04MAR94	E	R6036	001		2286.57		2286.57				
					22FEB94	04MAR94	E	R6037	001		2286.83		2286.83	+0.26	2286.70	2289.90	3.20
23 103	11-0N 179-0E	1 35	2	03AUG93	17FEB94	04MAR94	E	R6042	001		1914.64		1914.64				
					17FEB94	04MAR94	E	R6043	001		1915.07		1915.07	+0.43	1914.85	1913.60	-1.25

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6-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UH DIC	UH -S.I.O.
		1 2	5292		16FEB94	04MAR94	E	R6040	001		2285.02		2265.02		2285.02	2287.70	2.68
23	9-29N	1 36	3	04AUG93	24FEB94	14MAR94	E	R6046	001		1907.75		1907.75				
106	179-0E				24FEB94	14MAR94	E	R6047	001		1906.23		1906.23	-1.52	1906.99	1908.30	1.31
		1 2	5822		23FEB94	14MAR94	E	R6044	001		2284.74		2284.74				
					23FEB94	14MAR94	E	R6045	001		2283.61		2283.61	-1.13	2284.18	2284.20	0.02

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UM DIC	UM -S.I.O.
													(UMOL/KG SW)				
24 137	1-30N 179-0E	1 38	3	18AUG93	29SEP94	03NOV94	E	R8050	001		1885.06		1885.06				
					29SEP94	03NOV94	E	R8051	001		1885.09		1885.09	+0.03	1835.08	1885.80	0.72
24 144	0-15S 179-0E	1 38	2	19AUG93	30SEP94	03NOV94	E	R8059	001		1896.53		1896.53				
					30SEP94	03NOV94	E	R8060	001		1896.01		1896.01	-0.52	1896.27	1897.40	1.13
24 151	2-0S 179-0E	1 38	2	20AUG93	03OCT94	03NOV94	E	R8063	001		1927.56		1927.56				
					03OCT94	03NOV94	E	R8064	001		1928.12		1928.12	+0.56	1927.84	1928.90	-0.94
24 160	4-15S 179-0E	1 35	38	22AUG93	28FEB94	14MAR94	E	R8070	001		1920.66		1920.66				
					28FEB94	14MAR94	E	R8071	001		1919.41		1919.41	-1.25	1920.04	1913.50	-6.54
24 164	5-30S 179-0E	1 38	2	23AUG93	02MAR94	14MAR94	E	R8074	001		1897.98		1897.98				
					02MAR94	14MAR94	E	R8075	001		1896.93		1896.93	-1.05	1897.46	1898.80	1.34
		1 16	1996		02MAR94	14MAR94	E	R8072	001		2330.40		2330.40				
					02MAR94	14MAR94	E	R8073	001		2330.69		2330.69	+0.29	2330.54	2332.60	2.06
24 173	10-5S 179-9E	1 38	2	26AUG93	04MAR94	16MAR94	E	R8082	001		1902.88		1902.88				
					08MAR94	16MAR94	E	R8083	001		1902.51		1902.51	-0.37	1902.70	1906.60	3.90
		1 16	1997		04MAR94	16MAR94	E	R8080	001		2312.20		2312.20				
					04MAR94	16MAR94	E	R8081	001		2311.37		2311.37	-0.83	2311.79	2315.00	3.21
24 176	11-30S 179-0E	1 38	2	27AUG93	09MAR94	16MAR94	E	R8086	001		1906.39		1906.39				
					09MAR94	16MAR94	E	R8087	001		1905.33		1905.33	-1.06	1905.86	1906.20	0.34
		1 9	2003		08MAR94	16MAR94	E	R8084	001		2310.69		2310.69				
					08MAR94	16MAR94	E	R8085	001		2310.69		2310.69	+0.00	2310.69	2313.10	2.41
24 803	0-0N 179-15E	1 38	3	18AUG93	25FEB94	14MAR94	E	R8055	001		1899.50		1899.50				
					25FEB94	14MAR94	E	R8056	001		1900.56		1900.56	+1.06	1900.03	1897.60	-2.43
		1 15	1996		24FEB94	14MAR94	E	R8052	001		2342.76		2342.76				
					24FEB94	14MAR94	E	R8053	001		2342.82		2342.82	+0.06	2342.79	2343.40	0.61
24 900	8-37S 178-59E	1 18	2	25AUG93	03MAR94	16MAR94	E	R8078	001		1894.23		1894.23				
					03MAR94	16MAR94	E	R8079	001		1894.08		1894.08	-0.15	1894.16	1897.90	3.74
		1 4	2000		03MAR94	16MAR94	E	R8076	001		2322.54		2322.54				
					03MAR94	16MAR94	E	R8077	001		2322.06		2322.06	-0.48	2322.30	2324.00	1.70

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6-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA (UMOL/KG SW)	PU DIC	PU -S.I.O.
26 18	0-0N 146-9E	1 3	3018	150CT93	14MAR94	28MAR94	E	R6088	001		2331.95		2331.95			
					14MAR94	28MAR94	E	R6089	001		2332.55		2332.55	+0.60	2332.25	2332.00 -0.25
26 27	2-15N 146-48E	1 36	20	180CT93	14MAR94	28MAR94	E	R6094	001		1894.33		1894.33			
					14MAR94	28MAR94	E	R6095	001		1894.92		1894.92	+0.59	1894.63	1895.39 0.76
26 38	7-0N 148-5E	1 36	14	210CT93	15MAR94	28MAR94	E	R6098	001		1856.60		1856.60			
					15MAR94	28MAR94	E	R6099	001		1856.34		1856.34	-0.26	1856.47	1857.59 1.12
26 47	11-10N 149-20E	2 36	22	230CT93	10MAR94	28MAR94	E	R6103	001		1897.24		1897.24		1897.24	1893.54 -3.70
		2 14	3014		09MAR94	16MAR94	E	R6101	001		2336.48		2336.48			
					09MAR94	16MAR94	E	R6102	001		2336.16		2336.16	-0.32	2336.32	2337.77 1.45
26 66	23-11N 149-20E	2 12	3002	300CT93	15MAR94	28MAR94	E	R6108	001		2336.00		2336.00			
					15MAR94	28MAR94	E	R6109	001		2336.22		2336.22	+0.22	2336.11	2329.99 -6.12
26 71	27-10N 149-20E	1 13	3007	02NOV93	16MAR94	30MAR94	E	R6112	001		2336.77		2336.77			
					16MAR94	30MAR94	E	R6113	001		2337.58		2337.58	+0.81	2337.18	2336.94 -0.24
26 80	32-14N 145-28E	1 13	3007	05NOV93	16MAR94	30MAR94	E	R6116	001		2346.00		2346.00			
					17MAR94	30MAR94	E	R6117	001		2346.23		2346.23	+0.23	2346.11	2344.91 -1.20
26 86	34-25N 142-19E	1 35	59	07NOV93	11MAR94	28MAR94	E	R6122	001		1950.12		1950.12			
					11MAR94	28MAR94	E	R6123	001		1949.37		1949.37	-0.75	1949.74	1946.62 -3.12
		1 12	3002		10MAR94	28MAR94	E	R6120	001		2343.65		2343.65			
					10MAR94	28MAR94	E	R6121	001		2344.24		2344.24	+0.59	2343.95	2343.30 -0.65

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LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	WHOI DIC	WHOI -S.I.O.
											----- (UMOL/KG SW) -----						
3	7-30N	1 39	2	14APR94	12JAN95	26JAN95	E	R6588	001		2015.52		2015.52				
28	19-0W				12JAN95	26JAN95	E	R6589	001		2016.51		2016.51	+0.99	2016.02	2011.90	-4.12
3	1-0S	1 39	8	19APR94	09AUG94	29AUG94	E	R6592	001	F	2012.14		2012.14				
47	19-0W				11AUG94	29AUG94	E	R6593	001	F	2016.52		2016.52	+4.38	2014.33	2007.50	-8.83
		1 11	3189		09AUG94	29AUG94	E	R6590	001		2189.07		2189.07				
					09AUG94	29AUG94	E	R6591	001		2189.26		2189.26	+0.19	2189.17	2187.40	-1.77
3	13-4S	1 36	9	26APR94	13JAN95	26JAN95	E	R6596	001		2051.25		2051.25				
68	19-0W				13JAN95	26JAN95	E	R6597	001		2051.97		2051.97	+0.72	2051.61	2050.80	-0.81
3	20-34S	1 36	10	29APR94	13JAN95	26JAN95	E	R6600	001		2076.54		2076.54				
86	19-0W				13JAN95	26JAN95	E	R6601	001		2076.12		2076.12	-0.42	2076.33	2074.40	-1.93
3	30-34S	1 39	6	05MAY94	12AUG94	20SEP94	E	R6604	001		2047.75		2047.75				
106	19-0W				12AUG94	20SEP94	E	R6605	001		2048.13		2048.13	+0.38	2047.94	2044.30	-3.64
		1 9	3089		11AUG94	20SEP94	E	R6602	001		2188.74		2188.74				
					11AUG94	20SEP94	E	R6603	001		2188.64		2188.64	-0.10	2188.69	2185.50	-3.19
3	18-24S	1 39	5	11MAY94	17JAN95	26JAN95	E	R6608	001		2079.87		2079.87				
118	22-10W				17JAN95	26JAN95	E	R6609	001		2078.65		2078.65	-1.22	2079.26	2078.40	-0.86
3	18-2S	1 39	5	12MAY94	18AUG94	20SEP94	E	R6612	001		2080.73		2080.73				
122	27-18W				18AUG94	20SEP94	E	R6613	001		2081.21		2081.21	+0.48	2080.97	2081.90	0.93
		1 15	3089		12AUG94	20SEP94	E	R6610	001		2188.74		2188.74				
					12AUG94	20SEP94	E	R6611	001		2188.76		2188.76	+0.02	2188.75	2191.30	2.55
3	17-29S	1 39	10	14MAY94	18JAN95	15FEB95	E	R6616	001		2077.77		2077.77				
130	28-30W				18JAN95	15FEB95	E	R6617	001		2077.71		2077.71	-0.06	2077.74	2075.70	-2.04
		1 13	3191		17JAN95	26JAN95	E	R6614	001		2184.16		2184.16				
					18JAN95	26JAN95	E	R6615	001		2184.44		2184.44	+0.28	2184.30	2181.60	-2.70
3	18-6S	1 39	12	16MAY94	25AUG94	23SEP94	E	R6620	001		2076.16		2076.16				
138	32-50W				25AUG94	23SEP94	E	R6621	001		2077.36		2077.36	+1.20	2076.76	2076.70	-0.06
		1 11	3090		18AUG94	20SEP94	E	R6618	001		2179.77		2179.77				
					18AUG94	23SEP94	E	R6619	001		2179.40		2179.40	-0.37	2179.58	2178.30	-1.28

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.

R: Comparison excluded from analysis for >3 sigma from average.

EX: Data excluded from analysis for cause.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	WHOI DIC	WHOI -S.I.O.
											----- (UMOL/KG SW) -----						
3	18-39S	1 39	10	18MAY94	19JAN95	15FEB95	E	R8824	001	F	2085.98		2085.98				
147	36-29W				19JAN95	15FEB95	E	R8825	001	F	2070.97		2070.97	+4.99	2068.48	2071.40	2.92
		1 7	3124		19JAN95	15FEB95	E	R8822	001		2184.53		2184.53				
					19JAN95	15FEB95	E	R8823	001		2184.13		2184.13	-0.40	2184.33	2183.80	-0.53

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 R: Comparison excluded from analysis for >3 sigma from average.
 EX: Data excluded from analysis for cause.

NOTE: Dilution factor of 1.000170 has been applied.

6-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	UH DIC	UH -S.I.O.
31	15-37S	1 38	2	27JAN94	22JUN94	12JUL94	E	R6384	001		1987.59		1987.59				
	9 151-58W				22JUN94	12JUL94	E	R6385	001		1987.68		1987.68	+0.09	1987.64	1982.90	-4.74
		1 15	3090		21JUN94	12JUL94	E	R6382	001		2304.71		2304.71				
					21JUN94	12JUL94	E	R6383	001		2305.54		2305.54	+0.83	2305.13	2302.08	-3.05
31	13-42S	1 35	14	30JAN94	27JUN94	12JUL94	E	R6387	001		1949.96		1949.96				
	19 158-48W				28JUN94	18AUG94	E	R6389	001		1950.19		1950.19	+0.23	1950.07	1950.26	0.19
		1 19	2988		27JUN94	12JUL94	E	R6386	001		2314.84		2314.84				
					28JUN94	18AUG94	E	R6388	001		2315.09		2315.09	+0.25	2314.97	2312.56	-2.41
31	10-28S	1 38	4	03FEB94	12JUL94	18AUG94	E	R6390	001		1908.59		1908.59				
	39 164-58W				12JUL94	18AUG94	E	R6391	001		1908.65		1908.65	-1.94	1907.62		
		1 19	3007		12JUL94	18AUG94	E	R6392	001		2316.71		2316.71				
					12JUL94	18AUG94	E	R6393	001		2315.65		2315.65	-1.06	2316.18	2316.40	0.22
31	10-1S	1 38	4	06FEB94	01JUL94	23SEP94	E	R6396	001		1884.42		1884.42		1884.42	1885.05	0.63
	54 169-22W																
		1 20	3007		28JUN94	18AUG94	E	R6394	001		2320.17		2320.17				
					28JUN94	18AUG94	E	R6395	001		2320.99		2320.99	+0.82	2320.58	2324.62	4.04
31	10-44S	1 30	3	14FEB94	23JUN94	12JUL94	E	R6400	001		1864.49		1864.49				
	77 175-56W				23JUN94	12JUL94	E	R6401	001		1864.61		1864.61	+0.12	1864.55	1867.73	3.18
		1 7	3008		22JUN94	12JUL94	E	R6398	001		2323.89		2323.89				
					22JUN94	12JUL94	E	R6399	001		2321.46		2321.46	-2.43	2322.68	2326.96	4.28

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

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FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

NOTE: Dilution factor of 1.000170 has been applied.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	PMEL DIC	PMEL -S.I.O.
		1 4	2999		08MAR95	21MAR95	E	S8528	001		2295.90		2295.90				
					08MAR95	21MAR95	E	S8529	001		2294.33		2294.33	-1.57	2295.11	2296.13	1.02
1 85	27- 0S 103- 0W	1 38	9	22MAR94	02JUN94	13JUN94	E	S8534	001		2040.17		2040.17				
					02JUN94	13JUN94	E	S8535	001		2041.24		2041.24	+1.07	2040.71	2039.89	-0.82
		1 2	3000		01JUN94	13JUN94	E	S8532	001	F	2301.24		2301.24				
					01JUN94	13JUN94	E	S8533	001	F	2306.76		2306.76	+5.52	2304.00	2301.44	-2.56
1 93	23- 0S 103- 0W	1 38	10	30MAR94	20JUL94	29AUG94	E	S8538	001		2064.92		2064.92				
					20JUL94	29AUG94	E	S8539	001		2064.63		2064.63	-0.29	2064.77	2063.24	-1.53
		1 7	2996		20JUL94	29AUG94	E	S8536	001		2312.10		2312.10				
					20JUL94	29AUG94	E	S8537	001		2314.81		2314.81	+2.71	2313.46	2309.65	-3.81
1 101	19- 0S 103- 0W	3 38	10	01APR94	10MAR95	21MAR95	E	S8542	001		2068.87		2068.87				
					10MAR95	21MAR95	E	S8543	001		2069.27		2069.27	+0.40	2069.07	2072.05	2.98
		3 7	2999		09MAR95	21MAR95	E	S8540	001		2318.89		2318.89		2318.89	2318.44	-0.45
1 109	15- 0S 103- 0W	1 38	10	03APR94	03JUN94	13JUN94	E	S8546	001		2063.52		2063.52				
					03JUN94	13JUN94	E	S8547	001		2062.68		2062.68	-0.84	2063.10	2064.23	1.13
		1 7	3001		02JUN94	13JUN94	E	S8544	001		2332.05		2332.05				
					02JUN94	13JUN94	E	S8545	001		2330.84		2330.84	-1.21	2331.45	2331.96	0.51
1 117	11- 0S 103- 0W	1 38	10	05APR94	21JUL94	29AUG94	E	S8550	001		2020.65		2020.65				
					21JUL94	29AUG94	E	S8551	001		2018.84		2018.84	-1.81	2019.74	2014.93	-4.81
		1 7	3000		21JUL94	29AUG94	E	S8549	001		2340.21		2340.21		2340.21	2335.19	-5.02
1 137	2-67S 110-30W	1 38	8	11APR94	02AUG94	29AUG94	E	S8554	001		2041.51		2041.51				
					03AUG94	29AUG94	E	S8555	001		2042.36		2042.36	+0.85	2041.94	2040.57	-1.37
		1 7	3002		02AUG94	29AUG94	E	S8552	001		2333.82		2333.82				
					02AUG94	29AUG94	E	S8553	001		2332.76		2332.76	-1.06	2333.29	2335.95	2.66
1 141	1-33S 110-30W	1 38	10	12APR94	06JUN94	13JUN94	E	S8558	001		2033.44		2033.44				
					06JUN94	13JUN94	E	S8559	001		2031.45		2031.45	-1.99	2032.44	2034.27	1.83
		1 8	2998		03JUN94	23SEP94	E	S8557	001		2340.18		2340.18		2340.18	2342.18	2.02

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

8-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	"NISKIN" AVG	PMEL DIC	PMEL -S.I.O.
1	5-50N	1 38	23	17APR94	14MAR95	21MAR95	E	S6562	001		1901.35		1901.35				
159	110-30W				14MAR95	21MAR95	E	S6563	001		1900.44		1900.44	-0.91	1900.90	1903.96	3.06
		1 6	3252		13MAR95	21MAR95	E	S6560	001		2355.95		2355.95				
					13MAR95	21MAR95	E	S6561	001		2356.78		2356.78	+0.83	2356.36	2348.62	-7.74
1	12- 0N	1 38	9	20APR94	03MAR95	09MAR95	E	S6566	001		1903.58		1903.58				
171	110- 0W				03MAR95	09MAR95	E	S6567	001		1903.38		1903.38	-0.20	1903.48	1903.13	-0.35
		1 3	3001		02MAR95	09MAR95	E	S6564	001		2354.70		2354.70				
					02MAR95	09MAR95	E	S6565	001		2355.14		2355.14	+0.44	2354.92	2355.90	0.98
1	18- 0N	1 38	9	23APR94	16MAR95	21MAR95	E	S6571	001		1971.55		1971.55		1971.55	1969.24	-2.31
182	110- 0W																
		1 4	2999		16MAR95	21MAR95	E	S6568	001		2356.46		2356.46				
					16MAR95	21MAR95	E	S6569	001		2355.43		2355.43	-1.03	2355.95	2357.50	1.55

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: No Hg found in bottle

G: Severe bottle leak

EX: Data excluded from analysis

NOTE: Dilution factor of 1.000170 has been applied.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE IC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	PNL DIC	PNL -S.I.O.
1	48- 6S	1 14	3036	11JAN94	22NOV94	12JAN95	E	R6440	001		2261.80		2261.80				
12	54-38W				22NOV94	12JAN95	E	R6441	001		2259.18		2259.18	-2.64	2260.48	2260.57	0.09
1	40-35S	1 32	2	18JAN94	01SEP94	23SEP94	E	R6446	001		2027.80		2027.80				
30	48- 6W				01SEP94	23SEP94	E	R6447	001		2027.63		2027.63	-0.17	2027.72	2026.70	-1.02
		1 13	3048		01SEP94	23SEP94	E	R6444	001		2215.59		2215.59				
					01SEP94	23SEP94	E	R6445	001		2219.18		2219.18	+3.57	2217.38	2212.28	-5.10
1	34-25S	1 32	4	28JAN94	07JUN94	13JUN94	E	R6450	001		2035.10		2035.10				
83	42-51W				07JUN94	13JUN94	E	R6451	001		2033.48		2033.48	-1.64	2034.28	2032.91	-1.37
		1 10	3060		08JUN94	13JUN94	E	R6448	001	ex	2234.08						
					08JUN94	13JUN94	E	R6449	001		2209.67		2209.67		2209.67	2209.41	-0.26
1	22-40S	1 32	0	04FEB94	08JUN94	24JUN94	E	R6454	001		2061.87		2061.87				
93	32-28W				08JUN94	24JUN94	E	R6455	001		2062.63		2062.63	+0.76	2062.25	2062.76	0.51
		1 12	2674		07JUN94	24JUN94	E	R6452	001		2173.09		2173.09				
					07JUN94	24JUN94	E	R6453	001		2173.75		2173.75	+0.66	2173.42	2174.51	1.09
1	13-56S	1 32	0	10FEB94	29NOV94	12JAN95	E	R6458	001		2059.21		2059.21				
114	30-37W				02DEC94	12JAN95	E	R6459	001		2059.28		2059.28	+0.07	2059.26	2059.69	0.44
		1 13	3044		29NOV94	12JAN95	E	R6456	001		2185.90		2185.90				
					29NOV94	12JAN95	E	R6457	001		2183.94		2183.94	-1.96	2184.92	2185.21	0.29
2	11-56S	1 14	3051	24FEB94	02SEP94	23SEP94	E	R6460	001		2182.46		2182.46				
145	30-30W				02SEP94	23SEP94	E	R6461	001		2181.38		2181.38	-1.08	2181.92	2180.87	-1.05
2	3- 0S	1 32	0	03MAR94	09JUN94	24JUN94	E	R6466	001		2001.29		2001.29				
163	30- 2W				09JUN94	24JUN94	E	R6467	001		2002.47		2002.47	+1.18	2001.88	2003.62	1.74
		1 12	3248		08JUN94	24JUN94	E	R6464	001		2181.18		2181.18				
					08JUN94	24JUN94	E	R6465	001		2180.47		2180.47	-0.71	2180.82	2183.38	2.56
2	1-18S	1 32	0	08MAR94	02SEP94	23SEP94	E	R6470	001		2018.42		2018.42				
179	33-56W				02SEP94	23SEP94	E	R6471	001		2019.06		2019.06	+0.64	2018.74	2019.41	0.67
2	4-48N	1 11	3049	09MAR94	08SEP94	23SEP94	E	R6472	001		2175.19		2175.19				
191	39-58W				08SEP94	23SEP94	E	R6473	001		2174.41		2174.41	-0.78	2174.80	2174.76	-0.04

MANOMETER TYPE:

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BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

F: Pair data excluded from comparison due to delta >4 umol/kg.
R: Comparison excluded from analysis for >3 sigma from average.
EX: Data excluded from analysis for cause.

6-APR-98

SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	PNL DIC	PNL -S.I.O.
2	8-18N	1 32	0	13MAR94	23NOV94	12JAN95	E	R6482	001		2021.06		2021.06				
204	46- 2W				23NOV94	12JAN95	E	R6483	001		2021.01		2021.01	-0.05	2021.04	2021.11	0.07
2	10- 2N	1 32	0	14MAR94	28NOV94	12JAN95	E	R6486	001		2019.73		2019.73				
210	49- 5W				28NOV94	12JAN95	E	R6487	001		2019.98		2019.98	+0.23	2019.84	2020.76	0.92
2	12-18N	1 32	0	16MAR94	10JUN94	24JUN94	E	R6490	001		2025.72		2025.72				
215	47-45W				10JUN94	24JUN94	E	R6491	001		2025.70		2025.70	-0.02	2025.71	2025.57	-0.14
		1 11	3051		09JUN94	24JUN94	E	R6488	001		2180.59		2180.59				
					09JUN94	24JUN94	E	R6489	001		2180.28		2180.28	-0.33	2180.43	2181.42	0.99
2	8-44N	1 32	5	18MAR94	28NOV94	12JAN95	E	R6494	001		2021.35		2021.35		2021.35	2020.16	-1.19
223	49-50W																
2	6-35N	1 32	0	19MAR94	13JUN94	24JUN94	E	R6498	001		2019.62		2019.62				
228	51- 6W				13JUN94	24JUN94	E	R6499	001		2019.77		2019.77	+0.15	2019.70	2018.21	-1.49
		1 6	3081		10JUN94	24JUN94	E	R6496	001		2179.67		2179.67				
					10JUN94	24JUN94	E	R6497	001		2179.12		2179.12	-0.55	2179.40	2179.78	0.38

MANOMETER TYPE:

E = ELECTRONIC CONSTANT-VOLUME MANOMETER DATUM

BOTTLE TYPE:

R = RODAVISS S = S TYPE

FLAGS:

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R: Comparison excluded from analysis for >3 sigma from average.
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NOTE: Dilution factor of 1.000170 has been applied.

SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
											(UMOL/KG SW)						
232	11-20S 7- 0W	3 24	13	21APR94	14JUN94	05JUL94	E	R6700	001		2035.52		2035.52				
					14JUN94	05JUL94	E	R6701	001		2034.99		2034.99	-0.53	2035.26	2034.13	-1.13
		3 11	2500		13JUN94	05JUL94	E	R6698	001		2186.02		2186.02				
					13JUN94	05JUL94	E	R6699	001		2186.08		2186.08	+0.06	2186.05	2186.15	0.10
234	11-20S 6- 0W	3 24	11	22APR94	16DEC94	17JAN95	E	R6704	001		2056.69		2056.69				
					16DEC94	17JAN95	E	R6705	001		2057.22		2057.22	+0.53	2056.96	2058.46	1.50
238	11-20S 4- 0W	3 11	2849	23APR94	16DEC94	23JAN95	E	R6706	001		2195.64		2195.64				
					16DEC94	23JAN95	E	R6707	001		2194.58		2194.58	-1.06	2195.11	2192.00	-3.11
244	11-20S 1- 0W	3 24	9	25APR94	15JUN94	05JUL94	E	R6712	001		2051.00		2051.00				
					15JUN94	05JUL94	E	R6713	001		2051.78		2051.78	+0.78	2051.39	2050.01	-1.38
		3 11	3502		14JUN94	05JUL94	E	R6710	001		2208.41		2208.41				
					14JUN94	05JUL94	E	R6711	001		2208.73		2208.73	+0.32	2208.57	2205.30	-3.27
248	11-20S 0- 0W	3 24	13	26APR94	16JUN94	05JUL94	E	R6716	001		2058.87		2058.87				
					16JUN94	05JUL94	E	R6717	001		2060.07		2060.07	+1.20	2059.47	2058.02	-1.45
		3 11	3758		15JUN94	05JUL94	E	R6714	001		2214.05		2214.05				
					15JUN94	05JUL94	E	R6715	001		2212.23		2212.23	-1.82	2213.14	2208.84	-4.30
250	11-20S 1-20E	3 11	3852	27APR94	22DEC94	23JAN95	E	R6362	001		2212.00		2212.00				
					22DEC94	23JAN95	E	R6363	001		2213.20		2213.20	+1.20	2212.60	2209.01	-3.59
256	11-20S 5-20E	3 24	13	29APR94	27DEC94	23JAN95	E	R6368	001		2058.60		2058.60				
					27DEC94	23JAN95	E	R6369	001		2057.94		2057.94	-0.66	2058.27	2056.62	-1.65
		3 11	3752		22DEC94	23JAN95	E	R6366	001		2215.63		2215.63				
					22DEC94	23JAN95	E	R6367	001	EX	2304.80				2215.63	2211.96	-3.67
260	11-20S 8- 0E	3 24	12	01MAY94	20JUN94	05JUL94	E	R6372	001		2013.97		2013.97				
					20JUN94	05JUL94	E	R6373	001		2013.23		2013.23	-0.74	2013.60	2012.12	-1.48
		3 11	3001		16JUN94	05JUL94	E	R6370	001		2200.04		2200.04				
					16JUN94	05JUL94	E	R6371	001		2200.43		2200.43	+0.39	2200.24	2199.53	-0.71
264	11-20S 10- 0E	3 24	12	02MAY94	28DEC94	23JAN95	E	R6376	001		2040.04		2040.04				
					28DEC94	23JAN95	E	R6377	001		2039.95		2039.95	-0.09	2039.99	2039.73	-0.26

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
		3 11	997		27DEC94	23JAN95	E	R6374	001		2238.15		2238.15				
					27DEC94	23JAN95	E	R6375	001		2238.40		2238.40	+0.25	2238.27	2235.96	-2.31
268	11-20S 11-40E	3 24	1	03MAY94	21JUN94	12JUL94	E	R6380	001		2021.42		2021.42				
					21JUN94	12JUL94	E	R6381	001		2020.77		2020.77	-0.65	2021.10	2020.53	-0.57
		3 11	1598		20JUN94	12JUL94	E	R6378	001		2193.22		2193.22				
					20JUN94	12JUL94	E	R6379	001		2193.54		2193.54	+0.32	2193.38	2191.11	-2.27

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE IC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	UM DIC	UM -S.I.O.
4 25	18-44S 78-00W	1 8	2900	03APR94	16NOV94	09JAN95	E	R6658	001	EX	2380.50						
					16NOV94	09JAN95	E	R6659	001		2320.12		2320.12		2320.12	2315.70	-4.42
4 55	18-45S 88-40W	1 35	25	13APR94	22NOV94	12JAN95	E	R6664	001		2053.48		2053.46				
					22NOV94	12JAN95	E	R6665	001		2053.54		2053.54	+0.08	2053.50	2054.20	0.70
4 64	18-45S 94-40W	1 36	5	16APR94	13SEP94	01NOV94	E	R6668	001		2059.42		2059.42				
					13SEP94	01NOV94	E	R6669	001		2059.89		2059.89	+0.47	2059.66	2069.60	9.94
		1 7	3050		13SEP94	01NOV94	E	R6667	001		2326.73		2326.73		2326.73	2325.00	-1.73
4 72	18-45S 100-00W	1 8	3100	18APR94	16NOV94	09JAN95	E	R6670	001		2329.95		2329.95				
					16NOV94	09JAN95	E	R6671	001		2329.87		2329.87	-0.08	2329.91	2328.70	-3.21
4 100	18-45S 113-20W	1 36	5	27APR94	16NOV94	09JAN95	E	R6676	001		2041.70		2041.70				
					16NOV94	09JAN95	E	R6677	001		2042.09		2042.09	+0.39	2041.90	2040.60	-1.30
4 112	18-45S 121-20W	1 24	5	30APR94	14SEP94	01NOV94	E	R6680	001		2047.48		2047.48				
					14SEP94	01NOV94	E	R6681	001		2047.82		2047.82	+0.34	2047.65	2045.60	-2.05
		1 4	3000		14SEP94	01NOV94	E	R6678	001		2312.03		2312.03				
					14SEP94	01NOV94	E	R6679	001		2311.17		2311.17	-0.86	2311.60	2308.10	-3.50
4 120	18-45S 126-40W	1 24	5	02MAY94	17NOV94	09JAN95	E	R6684	001		2036.53		2036.53				
					17NOV94	09JAN95	E	R6685	001		2035.95		2035.95	-0.58	2036.24	2034.80	-1.44
4 128	18-45S 132-00W	1 24	5	04MAY94	18NOV94	09JAN95	E	R6688	001		2016.70		2016.70				
					18NOV94	09JAN95	E	R6689	001		2016.46		2016.46	-0.24	2016.58	2017.00	0.42
4 139	18-45S 139-20W	1 24	5	08MAY94	16SEP94	01NOV94	E	R6692	001		1998.33		1998.33				
					16SEP94	01NOV94	E	R6693	001		1998.22		1998.22	-0.11	1998.28	1995.60	-2.68
		1 1	2290		16SEP94	01NOV94	E	R6690	001		2306.34		2306.34				
					16SEP94	01NOV94	E	R6691	001		2304.88		2304.88	-1.46	2305.61	2302.00	-3.61
4 155	17-30S 147-50W	1 24	13	11MAY94	20SEP94	01NOV94	E	R6696	001		1974.81		1974.81				
					20SEP94	01NOV94	E	R6697	001		1975.09		1975.09	+0.28	1974.95	1972.40	-2.55
		1 5	2900		19SEP94	01NOV94	E	R6694	001		2297.23		2297.23				
					19SEP94	01NOV94	E	R6695	001		2298.11		2298.11	+0.88	2297.67	2296.90	-0.77

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UM DIC	UM -S.I.O.
(UMOL/KG SW)																	
5	18-29S	1 38	12	11JUN94	23SEP94	03NOV94	E	R6829	001	F	1943.91		1943.91				
244	167-48E				23SEP94	03NOV94	E	R6834	001	F	1937.79		1937.79	-6.12	1940.85	1942.70	1.85
		1 11	2985		23SEP94	03NOV94	E	R6817	001		2308.73		2308.73				
					23SEP94	03NOV94	E	R6824	001		2307.94		2307.94	-0.79	2308.33		
5	18-55S	1 31	11	14JUN94	26SEP94	03NOV94	E	R6827	001		1957.04		1957.04				
259	164-0E				26SEP94	03NOV94	E	R6828	001		1957.25		1957.25	+0.21	1957.15	1954.10	-3.05
		1 4	3099		26SEP94	03NOV94	E	R6832	001		2305.54		2305.54				
					26SEP94	03NOV94	E	R6833	001		2306.83		2306.83	+1.29	2306.19	2301.90	-4.29
5	22-57S	1 28	5	18JUN94	21NOV94	12JAN95	E	R6826	001		1984.67		1984.67				
273	159-3E				21NOV94	12JAN95	E	R6831	001		1985.70		1985.70	+1.03	1985.19	1981.80	-3.39
5	24-14S	1 38	13	19JUN94	21NOV94	12JAN95	E	R6821	001		1966.03		1966.03				
280	155-47E				21NOV94	12JAN95	E	R6823	001		1966.17		1966.17	+0.14	1966.10	1963.00	-3.10

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
													(UMOL/ KG SW)				
5 58	54-22S 86- 0E	1 35	31	22DEC94	06JUL95	24JUL95	E	R6911	001		2147.53		2147.53				
					06JUL95	24JUL95	E	R6912	001		2147.27		2147.27	-0.26	2147.40	2142.22	-5.18
5 62	56- 4S 84-15E	1 35	31	23DEC94	21FEB95	01MAR95	E	R6915	001		2147.86		2147.86				
					21FEB95	01MAR95	E	R6916	001		2147.32		2147.32	-0.54	2147.59	2140.21	-7.38
		1 9	3052		27FEB95	09MAR95	E	R6913	001		2259.38		2259.38				
					27FEB95	09MAR95	E	R6914	001		2259.38		2259.38	+0.00	2259.38	2257.91	-1.47
5 64	56-53S 83-20E	1 35	31	24DEC94	03APR95	24APR95	E	R6919	001		2137.60		2137.60				
					03APR95	24APR95	E	R6920	001		2139.74		2139.74	+2.14	2138.67	2130.54	-8.13
		1 9	3037		29MAR95	03APR95	E	R6917	001		2259.20		2259.20				
					29MAR95	03APR95	E	R6918	001		2259.80		2259.80	+0.60	2259.50	2255.64	-3.86
5 70	58-36S 82- 0E	1 28	29	25DEC94	06JUL95	24JUL95	E	R6923	001		2177.07		2177.07				
					06JUL95	24JUL95	E	R6924	001		2179.00		2179.00	+1.93	2178.04	2171.02	-7.02
5 75	61- 0S 82- 0E	1 8	1513	26DEC94	07JUL95	24JUL95	E	R6925	001		2258.27		2258.27				
					07JUL95	24JUL95	E	R6926	001		2259.49		2259.49	+1.22	2258.88	2255.94	-2.94
5 94	61- 0S 115- 0E	1 35	34	04JAN95	05APR95	24APR95	E	R6931	001		2156.11		2156.11				
					05APR95	24APR95	E	R6932	001		2156.43		2156.43	+0.32	2156.27	2152.00	-4.27
		1 9	3064		05APR95	24APR95	E	R6929	001		2261.19		2261.19				
					05APR95	24APR95	E	R6930	001		2260.15		2260.15	-1.04	2260.67	2257.54	-3.13
5 104	55-36S 115- 0E	1 35	32	07JAN95	10JUL95	24JUL95	E	R6935	001		2133.87		2133.87				
					10JUL95	24JUL95	E	R6936	001		2133.38		2133.38	-0.49	2133.63	2128.95	-4.68
5 110	52- 0S 115- 0E	1 9	2333	09JAN95	17FEB95	01MAR95	E	R6937	001		2259.33		2259.33				
					17FEB95	01MAR95	E	R6938	001		2258.71		2258.71	-0.62	2259.02	2256.00	-3.02
5 114	50- 0S 115- 0E	1 35	30	10JAN95	03JUL95	24JUL95	E	R6943	001		2107.43		2107.43				
					03JUL95	24JUL95	E	R6944	001		2107.52		2107.52	+0.09	2107.48	2103.57	-3.91
		1 9	2123		21FEB95	01MAR95	E	R6941	001		2248.05		2248.05				
					21FEB95	01MAR95	E	R6942	001		2247.44		2247.44	-0.61	2247.75	2244.11	-3.64
5 118	48- 0S 115- 0E	1 35	31	11JAN95	05JUL95	24JUL95	E	R6947	001		2089.90		2089.90				
					05JUL95	24JUL95	E	R6948	001		2089.09		2089.09	-0.81	2089.50	2085.52	-3.98

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		1	9	2228		22FEB95 01MAR95	E	R6945	001		2248.76		2248.76				
						22FEB95 01MAR95	E	R6946	001		2245.40		2245.40	-1.36	2248.08	2243.39	-2.69
5	44-0S	1	35	33	13JAN95	23FEB95 09MAR95	E	R6955	001		2078.07		2078.07				
126	115-0E					23FEB95 09MAR95	E	R6956	001		2078.43		2078.43	+0.36	2078.25	2075.90	-2.35
		1	9	3042		22FEB95 01MAR95	E	R6953	001		2253.94		2253.94				
						22FEB95 01MAR95	E	R6954	001		2257.14		2257.14	+3.20	2255.54	2252.21	-3.33
5	42-0S	1	35	27	14JAN95	23FEB95 09MAR95	E	R6959	001		2072.53		2072.53				
130	115-0E					27FEB95 09MAR95	E	R6960	001		2072.12		2072.12	-0.41	2072.33	2068.74	-5.59
		1	9	3052		30JUN95 19JUL95	E	R6957	001		2259.85		2259.85				
						30JUN95 19JUL95	E	R6958	001		2260.72		2260.72	+1.07	2260.19	2258.12	-2.07
5	39-42S	1	35	34	15JAN95	29JUN95 19JUL95	E	R6963	001		2064.29		2064.29				
134	115-0E					29JUN95 19JUL95	E	R6964	001		2065.06		2065.06	+0.77	2064.68	2059.80	-4.88
		1	9	3344		05JUL95 24JUL95	E	R6961	001		2259.89		2259.89				
						05JUL95 24JUL95	E	R6962	001		2259.85		2259.85	-0.04	2259.87	2257.88	-2.01
5	38-30S	1	35	34	16JAN95	24FEB95 09MAR95	E	R6967	001		2056.83		2056.83				
136	115-0E					24FEB95 09MAR95	E	R6968	001		2055.12		2055.12	-1.71	2055.98	2049.47	-6.51
		1	9	3022		29JUN95 19JUL95	E	R6965	001		2261.51		2261.51				
						29JUN95 19JUL95	E	R6966	001		2260.69		2260.69	-0.82	2261.10	2257.89	-3.21

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LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE IC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
													(UMOL/KG SW)				
1 10	2- 0N 7- 4W	1 32	0	19JAN95	17MAR95	21MAR95	E	R7210	001		1910.04		1910.04		1910.04	1906.65	-3.39
1 22	3- 0S 7-28W	1 32	0	22JAN95	20MAR95	31MAR95	E	R7213	001		2018.05		2018.05				
					20MAR95	31MAR95	E	R7214	001		2017.74		2017.74	-0.31	2017.90	2015.61	-2.29
		1 14	3000		17MAR95	31MAR95	E	R7211	001		2189.30		2189.30				
					17MAR95	31MAR95	E	R7212	001		2190.22		2190.22	+0.92	2189.76	2188.94	-0.82
1 49	18-29S 8-59W	1 24	0	28JAN95	22MAR95	31MAR95	E	R7217	001		2078.50		2078.50				
					22MAR95	31MAR95	E	R7218	001		2079.13		2079.13	+0.63	2078.81	2078.91	0.10
		1 4	1401		21MAR95	31MAR95	E	R7215	001		2200.56		2200.56				
					21MAR95	31MAR95	E	R7216	001		2198.41		2198.41	-2.15	2199.49	2199.00	-0.49
1 55	19-30S 9- 0W	1 32	8	29JAN95	23MAR95	31MAR95	E	R7221	001		2073.87		2073.87				
					23MAR95	31MAR95	E	R7222	001		2073.60		2073.60	-0.27	2073.74	2077.97	4.23
		1 10	3000		22MAR95	31MAR95	E	R7219	001		2197.42		2197.42				
					22MAR95	31MAR95	E	R7220	001		2197.09		2197.09	-0.33	2197.26	2199.18	1.92
1 76	30- 0S 9- 0W	1 32	8	03FEB95	28MAR95	03APR95	E	R7229	001		2056.62		2056.62				
					28MAR95	03APR95	E	R7230	001		2056.51		2056.51	-0.11	2056.57	2052.56	-4.01
1 88	36- 0S 9- 0W	1 32	7	06FEB95	24MAR95	03APR95	E	R7233	001		2043.99		2043.99				
					24MAR95	03APR95	E	R7234	001		2043.69		2043.69	-0.30	2043.84	2041.59	-2.25
1 100	41-59S 9- 0W	1 32	9	10FEB95	24MAR95	03APR95	E	R7237	001		2060.94		2060.94				
					24MAR95	03APR95	E	R7238	001		2060.55		2060.55	-0.39	2060.75	2058.85	-1.90
		1 8	2802		23MAR95	03APR95	E	R7235	001		2214.54		2214.54				
					23MAR95	03APR95	E	R7236	001		2215.26		2215.26	+0.72	2214.90		
2 115	35- 6S 18-49E	1 24	6	23FEB95	11JUL95	24JUL95	E	R7265	001		2035.78		2035.78				
					11JUL95	24JUL95	E	R7266	001		2037.30		2037.30	+1.52	2036.54	2036.95	0.41
		1 4	2999		10JUL95	24JUL95	E	R7263	001		2207.83		2207.83				
					10JUL95	24JUL95	E	R7264	001		2207.75		2207.75	-0.08	2207.79	2208.94	1.15
2 142	33-29S 9-59E	1 32	7	02MAR95	12JUL95	24JUL95	E	R7277	001		2038.35		2038.35				
					12JUL95	24JUL95	E	R7278	001		2039.76		2039.76	+1.41	2039.06	2036.76	-2.30

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	BNL AVG	BNL DIC	BNL -S.I.O.
		1 12	3000		12JUL95	24JUL95	E	R7275	001		2207.50		2207.50				
					12JUL95	24JUL95	E	R7276	001		2208.88		2208.88	-0.62	2207.19	2205.23	-1.98
2 179	20- 0S 5- 0E	1 32	9	13MAR95	18JUL95	05OCT95	E	R7293	001		2048.03		2048.03				
					18JUL95	05OCT95	E	R7294	001		2048.05		2048.05	+0.02	2048.04	2043.88	-2.16
		1 14	3000		17JUL95	05OCT95	E	R7291	001		2200.00		2200.00		2200.00	2198.13	-1.87
2 207	6-29S 4-59E	1 32	12	20MAR95	21JUL95	05OCT95	E	R7305	001		1988.79		1988.79				
					21JUL95	05OCT95	E	R7308	001		1988.98		1988.98	+0.19	1988.89	1989.99	1.10
		1 13	3000		21JUL95	05OCT95	E	R7303	001		2197.14		2197.14				
					21JUL95	05OCT95	E	R7304	001		2197.81		2197.81	+0.67	2197.48	2197.66	0.18
2 235	3- 2N 0- 4W	1 31	8	26MAR95	24JUL95	05OCT95	E	R7319	001		1924.09		1924.09				
					24JUL95	05OCT95	E	R7320	001		1923.12		1923.12	-0.97	1923.60	1925.11	1.51
		1 13	3000		24JUL95	05OCT95	E	R7317	001		2193.76		2193.76				
					24JUL95	05OCT95	E	R7318	001		2193.95		2193.95	+0.19	2193.85	2194.18	0.33

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	PU DIC	PU -S.I.O.
8 149	31- 0S 102-45E	1 36	10	26JAN95	15NOV98	12DEC98	E	R6991	001		2050.21		2050.21				
					15NOV98	12DEC98	E	R6993	001		2050.42		2050.42	+0.21	2050.31	2049.52	-0.79
		1 7	2955		15NOV98	12DEC98	E	R6989	001		2267.70		2267.70				
					18NOV98	12DEC98	E	R6990	001		2268.56		2268.56	+0.86	2268.13	2265.30	-2.83
8 157	27- 7S 95- 0E	1 36	15	30JAN95	03JAN98	28FEB98	E	R6996	001		2046.69		2046.69				
					03JAN98	28FEB98	E	R6997	001		2045.22		2045.22	-1.47	2045.95	2045.06	-0.89
		1 8	2860		21DEC95	28FEB98	E	R6994	001		2277.74		2277.74				
					05JAN98	28FEB98	E	R6995	001		2278.95		2278.95	+1.21	2278.34	2278.56	0.22
8 175	18-50S 95- 0E	1 36	12	04FEB95	07AUG98	28AUG98	E	R7000	001	F	1941.66		1941.66				
					07AUG98	28AUG98	E	R7001	001	F	1955.94		1955.94	+14.28	1948.80	1939.81	-8.99
		1 14	2865		08AUG98	28AUG98	E	R6998	001		2295.85		2295.85				
					08AUG98	28AUG98	E	R6999	001		2296.23		2296.23	+0.38	2296.04	2293.63	-2.41
8 184	11-57S 95- 0E	1 36	10	06FEB95	08AUG98	28AUG98	E	R7004	001		1939.86		1939.86				
					09AUG98	28AUG98	E	R7005	001		1939.37		1939.37	-0.49	1939.61	1938.52	-1.09
		1 8	3018		12AUG98	28AUG98	E	R7002	001		2299.52		2299.52				
					12AUG98	28AUG98	E	R7003	001		2300.14		2300.14	+0.62	2299.83	2299.15	-0.68
8 195	8- 4S 95- 0E	1 36	14	09FEB95	09AUG98	28AUG98	E	R7008	001		1898.32		1898.32				
					09AUG98	28AUG98	E	R7009	001		1898.23		1898.23	-0.09	1898.28	1898.06	-0.22
		1 11	2867		12AUG98	12SEP98	E	R7006	001		2310.08		2310.08				
					12AUG98	12SEP98	E	R7007	001		2309.64		2309.64	-0.44	2309.86	2306.90	-2.96
8 207	1-16S 93-50E	1 36	13	13FEB95	04JAN98	28FEB98	E	R7012	001		1879.59		1879.59				
					04JAN98	28FEB98	E	R7013	001		1880.10		1880.10	+0.51	1879.84	1879.86	0.02
		1 9	3065		03JAN98	28FEB98	E	R7010	001		2312.04		2312.04				
					03JAN98	28FEB98	E	R7011	001		2310.98		2310.98	-1.06	2311.51	2309.73	-1.78
8 223	4-26N 92- 6E	1 36	10	17FEB95	18NOV98	12DEC98	E	R7016	001		1878.23		1878.23				
					19NOV98	12DEC98	E	R7017	001		1879.00		1879.00	+0.77	1878.61	1873.93	-4.68
		1 7	2965		18NOV98	12DEC98	E	R7014	001		2318.64		2318.64				
					18NOV98	12DEC98	E	R7015	001		2317.72		2317.72	-0.92	2318.18	2315.81	-2.37

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC (UMOL/KG SW)	BOTTLE DELTA	"NISKIN" AVG	PU DIC	PU -S.I.O.
6 235	10-33N 91- 5E	1 38	10	20FEB95	05JAN98	28FEB98	E	R7020	001	EX	1853.50						
					06JAN98	28FEB98	E	R7021	001		1835.74		1835.74		1835.74	1833.60	-2.14
		1 8	2968		04JAN98	28FEB98	E	R7018	001		2323.29		2323.29				
					04JAN98	28FEB98	E	R7019	001		2322.98		2322.98	-0.33	2323.13	2319.55	-3.58
6 243	14-58N 91-43E	1 38	11	22FEB95	13AUG98	12SEP98	E	R7024	001		1853.04		1853.04				
					13AUG98	12SEP98	E	R7025	001		1852.31		1852.31	-0.73	1852.68	1849.87	-2.81
		1 1	2638		14AUG98	12SEP98	E	R7022	001		2339.00		2339.00				
					14AUG98	12SEP98	E	R7023	001		2337.93		2337.93	-1.07	2338.47	2335.15	-3.32
6 257	17- 8N 91- 7E	1 30	10	25FEB95	09JAN98	28FEB98	E	R7028	001		1862.02		1862.02				
					09JAN98	28FEB98	E	R7029	001		1858.55		1858.55	-3.47	1860.29	1858.13	-2.16
		1 1	2274		08JAN98	28FEB98	E	R7026	001		2344.72		2344.72				
					08JAN98	28FEB98	E	R7027	001		2345.91		2345.91	+1.19	2345.31	2342.59	-2.72
6 264	12-29N 88-22E	1 38	12	27FEB95	16AUG98	12SEP98	E	R7032	001		1895.23		1895.23				
					16AUG98	12SEP98	E	R7033	001		1896.28		1896.28	+1.05	1895.76	1894.14	-1.62
		1 3	3040		14AUG98	12SEP98	E	R7030	001		2331.30		2331.30				
					15AUG98	12SEP98	E	R7031	001		2332.22		2332.22	+0.92	2331.76	2325.04	-6.72
6 272	7- 0N 85-30E	1 18	10	01MAR95	19AUG98	25SEP98	E	R7036	001		1867.71		1867.71				
					19AUG98	25SEP98	E	R7037	001		1868.49		1868.49	+0.78	1868.10	1866.99	-1.11
		1 26	2965		16AUG98	25SEP98	E	R7034	001		2331.14		2331.14				
					19AUG98	25SEP98	E	R7035	001		2331.16		2331.16	+0.02	2331.15	2330.59	-0.56
6 277	2-40N 80- 0E	1 18	10	03MAR95	10JAN98	28FEB98	E	R7040	001		1915.36		1915.36				
					10JAN98	28FEB98	E	R7041	001		1915.31		1915.31	-0.05	1915.34	1915.93	0.59
		1 27	2966		09JAN98	28FEB98	E	R7038	001		2321.78		2321.78				
					10JAN98	28FEB98	E	R7039	001		2319.59		2319.59	-2.19	2320.89	2318.19	-2.50

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	UH DIC	UH -S.I.O.
7 297	1-20N 78-0E	1 36	1	16MAR95	22AUG98	25SEP98	E	R7051	001	R	1912.58		1912.58				
					22AUG98	25SEP98	E	R7052	001	R	1911.03		1911.03	-1.55	1911.81	1921.26	9.45
		1 9	3052		20AUG98	25SEP98	E	R7049	001		2323.58		2323.58				
					21AUG98	25SEP98	E	R7050	001		2321.55		2321.55	-2.03	2322.57	2315.31	-7.26
7 316	5-8S 80-0E	1 17	4	17MAR95	11JAN98	28FEB98	E	R7059	001		1899.88		1899.88				
					11JAN98	28FEB98	E	R7060	001	EX	1870.45				1899.86	1899.61	-0.25
		1 27	3037		11JAN98	28FEB98	E	R7057	001		2310.76		2310.76				
					11JAN98	28FEB98	E	R7058	001		2311.81		2311.81	+1.05	2311.29	2300.00	-11.29
7 328	11-0S 80-0E	1 36	25	20MAR95	22AUG98	25SEP98	E	R7064	001	F	1943.88		1943.88				
					26AUG98	25SEP98	E	R7065	001	F	1935.76		1935.76	-8.12	1939.82	1935.39	-4.43
7 342	18-0S 80-0E	1 10	2939	24MAR95	21AUG98	25SEP98	E	R7067	001		2291.54		2291.54				
					21AUG98	25SEP98	E	R7068	001		2293.53		2293.53	+1.99	2292.54	2284.79	-7.75
7 348	21-0S 80-0E	1 35	37	25MAR95	12JAN98	28FEB98	E	R7071	001		1935.83		1935.83				
					12JAN98	28FEB98	E	R7072	001		1935.37		1935.37	-0.46	1935.60	1929.12	-6.48
		1 8	3201		12JAN98	28FEB98	E	R7069	001		2283.74		2283.74				
					12JAN98	28FEB98	E	R7070	001		2283.00		2283.00	-0.74	2283.37	2281.67	-1.70
7 384	26-52S 86-27E	1 35	35	29MAR95	28AUG98	25SEP98	E	R7091	001		2007.11		2007.11				
					28AUG98	25SEP98	E	R7092	001		2006.98		2006.98	-0.13	2007.05	2005.26	-1.79
		1 6	2899		28AUG98	25SEP98	E	R7089	001		2276.99		2276.99				
					26AUG98	25SEP98	E	R7090	001		2275.45		2275.45	-1.54	2276.22	2271.57	-4.65
7 385	27-39S 85-30E	1 36	3	01APR95	29AUG98	25SEP98	E	R7076	001		1994.27		1994.27				
					29AUG98	25SEP98	E	R7077	001		1995.88		1995.88	+1.61	1995.08	1992.29	-2.79
		1 7	2949		28AUG98	25SEP98	E	R7074	001		2288.99		2288.99				
					29AUG98	25SEP98	E	R7075	001		2272.75		2272.75	+3.76	2270.87	2262.91	-7.96
7 390	28-20S 87-3E	1 36	4	03APR95	30AUG98	25SEP98	E	R7079	001	F	2053.69		2053.69				
					30AUG98	25SEP98	E	R7080	001	F	2045.82		2045.82	-7.87	2049.75	2045.65	-4.10
		1 6	3063		29AUG98	25SEP98	E	R7073	001		2278.71		2278.71				
					30AUG98	25SEP98	E	R7078	001		2280.30		2280.30	+1.59	2279.51	2273.79	-5.72

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UH DIC	UH -S.I.O.
7 404	33-25S 93-37E	1 38	4	08APR95	05SEP98	25SEP98	E	R7087	001		2053.89		2053.89				
					06SEP98	25SEP98	E	R7088	001		2054.33		2054.33	+0.44	2054.11	2051.59	-2.52
		1 9	2934		05SEP98	25SEP98	E	R7085	001		2262.18		2262.18				
					05SEP98	25SEP98	E	R7086	001		2258.75		2258.75	-3.41	2260.46	2253.83	-6.63
7 420	31-59S 103-0E	2 38	4	10APR95	16JAN98	06MAR98	E	R7099	001		2053.65		2053.65				
					16JAN98	06MAR98	E	R7100	001		2053.12		2053.12	-0.53	2053.39	2051.43	-1.96
		2 12	3038		16JAN98	06MAR98	E	R7097	001		2266.62		2266.62				
					23JAN98	06MAR98	E	R7098	001		2269.57		2269.57	+2.95	2268.10	2263.90	-4.20
7 430	31-38S 109-49E	1 35	39	12APR95	17JAN98	06MAR98	E	R7104	001		2054.70		2054.70				
					17JAN98	06MAR98	E	R7105	001		2057.29		2057.29	+2.59	2056.00	2050.53	-5.47
		1 9	3198		17JAN98	06MAR98	E	R7101	001		2280.59		2280.59				
					17JAN98	06MAR98	E	R7102	001		2280.35		2280.35	-0.24	2280.47	2277.74	-2.73
7 436	32-30S 114-59E	1 31	4	13APR95	22JAN98	14MAR98	E	R7107	001		2000.57		2000.57				
					22JAN98	14MAR98	E	R7108	001		2000.07		2000.07	-0.50	2000.32	1999.60	-0.72
		1 3	3163		23JAN98	14MAR98	E	R7103	001		2282.67		2282.67				
					23JAN98	14MAR98	E	R7106	001	EX	0.00				2282.67	2279.07	-3.60

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LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRACT DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UM DIC	UM -S.I.O.
													(UMOL/KG SW)				
8	22-0S	1 36	8	27APR95	11SEP98	23OCT98	E	R7372	001		1960.72		1960.72				
450	112-22E				11SEP98	23OCT98	E	R7373	001		1961.02		1961.02	+0.30	1960.87	1959.00	-1.87
		1 7	2997		12SEP98	23OCT98	E	R7370	001		2298.09		2298.09				
					12SEP98	23OCT98	E	R7371	001		2298.67		2298.67	+0.58	2298.38	2295.61	-2.77
8	20-38S	1 36	7	28APR95	12SEP98	23OCT98	E	R7376	001		1964.83		1964.83				
456	108-48E				12SEP98	23OCT98	E	R7377	001		1964.20		1964.20	-0.63	1964.52	1961.13	-3.39
		1 11	3000		13SEP98	23OCT98	E	R7374	001		2295.39		2295.39				
					13SEP98	23OCT98	E	R7375	001		2294.74		2294.74	-0.65	2295.08	2293.51	-1.55
8	20-0S	1 36	11	30APR95	01APR98	23MAY98	E	R7380	001		1972.25		1972.25				
460	105-45E				01APR98	23MAY98	E	R7381	001		1973.31		1973.31	+1.06	1972.78	1969.34	-3.44
		1 12	2801		01APR98	23MAY98	E	R7389	001		2296.37		2296.37				
					01APR98	23MAY98	E	R7378	001		2297.13		2297.13	+0.76	2296.75	2293.21	-3.54
8	20-0S	1 36	5	01MAY95	16SEP98	23OCT98	E	R7384	001	F	1982.19		1982.19				
465	101-20E				16SEP98	23OCT98	E	R7385	001	F	1992.77		1992.77	+10.58	1987.48	1978.55	-8.93
		1 11	3000		13SEP98	23OCT98	E	R7382	001		2293.65		2293.65				
					16SEP98	23OCT98	E	R7383	001		2292.54		2292.54	-1.11	2293.09	2288.61	-4.48
8	19-59S	1 36	8	03MAY95	18SEP98	23OCT98	E	R7388	001	F	1967.44		1967.44				
472	95-11E				18SEP98	23OCT98	E	R7389	001	F	1977.33		1977.33	+9.89	1972.39		
		1 11	2999		18SEP98	23OCT98	E	R7386	001		2295.67		2295.67				
					18SEP98	23OCT98	E	R7387	001		2297.38		2297.38	+1.71	2296.52	2290.31	-6.21
8	20-0S	1 36	9	05MAY95	19SEP98	23OCT98	E	R7392	001		1961.86		1961.86				
476	92-21E				19SEP98	23OCT98	E	R7393	001		1961.40		1961.40	-0.46	1961.63	1958.70	-2.93
		1 11	3100		18SEP98	23OCT98	E	R7390	001		2295.84		2295.84				
					19SEP98	23OCT98	E	R7391	001		2295.82		2295.82	-0.02	2295.83	2292.61	-3.22
8	20-0S	1 36	8	07MAY95	29MAR98	23MAY98	E	R7396	001		1960.72		1960.72				
482	89-28E				05APR98	23MAY98	E	R7397	001		1961.21		1961.21	+0.49	1960.96	1958.73	-2.23
		1 11	2999		29MAR98	23MAY98	E	R7394	001		2287.87		2287.87				
					29MAR98	23MAY98	E	R7395	001		2287.80		2287.80	-0.07	2287.84		

MANOMETER TYPE:

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	UM DIC	UM -S.I.O.
8 489	20-08 86-29E	1 36	7	09MAY95	20SEP98	30OCT98	E	R7400	001	F	1964.28		1964.28				
					23SEP98	30OCT98	E	R7401	001	F	1980.10		1980.10	+15.84	1972.18	1960.91	-11.27
		1 8	2999		19SEP98	30OCT98	E	R7398	001	F	2291.30		2291.30				
					20SEP98	30OCT98	E	R7399	001	F	2317.53		2317.53	+26.23	2304.42	2287.41	-17.01
8 493	20-08 84-2E	1 36	8	10MAY95	14OCT98	30OCT98	E	R7404	001		1955.00		1955.00				
					14OCT98	30OCT98	E	R7405	001		1955.41		1955.41	+0.41	1955.21	1952.50	-2.71
		1 10	2998		11OCT98	30OCT98	E	R7402	001		2289.45		2289.45				
					11OCT98	30OCT98	E	R7403	001		2289.38		2289.38	-0.09	2289.41	2285.30	-4.11
8 495	20-08 82-44E	1 36	7	10MAY95	03APR98	23MAY98	E	R7408	001		1954.77		1954.77				
					03APR98	23MAY98	E	R7409	001		1953.37		1953.37	-1.40	1954.07	1951.72	-2.35
		1 11	2999		02APR98	23MAY98	E	R7406	001		2286.48		2286.48				
					02APR98	23MAY98	E	R7407	001		2283.28		2283.28	-3.20	2284.88	2280.00	-4.88
8 501	20-08 78-22E	1 36	12	12MAY95	15OCT98	30OCT98	E	R7412	001		1945.55		1945.55				
					15OCT98	30OCT98	E	R7413	001		1945.40		1945.40	-0.15	1945.48	1943.31	-2.17
		1 9	2900		14OCT98	30OCT98	E	R7410	001		2277.75		2277.75				
					14OCT98	30OCT98	E	R7411	001		2279.18		2279.18	+1.43	2278.47	2274.29	-4.18
8 503	19-59S 78-54E	1 36	8	13MAY95	18OCT98	05DEC98	E	R7417	001	F	1936.47		1936.47				
					18OCT98	05DEC98	E	R7418	001	F	1949.39		1949.39	+12.92	1942.93	1934.28	-8.65
		1 11	2999		15OCT98	05DEC98	E	R7415	001	R	2286.36		2286.36				
					15OCT98	05DEC98	E	R7416	001	R	2288.42		2288.42	+2.06	2287.39	2273.42	-13.97
8 508	20-08 73-40E	1 32	12	17MAY95	03APR98	23MAY98	E	R7420	001		1962.10		1962.10				
					03APR98	23MAY98	E	R7421	001		1960.92		1960.92	-1.18	1961.51	1957.70	-3.81
		1 8	2880		28MAR98	23MAY98	E	R7414	001		2282.80		2282.80				
					28MAR98	23MAY98	E	R7419	001		2283.32		2283.32	+0.52	2283.06	2277.50	-5.56
8 512	20-08 71-42E	1 29	6	18MAY95	18OCT98	05DEC98	E	R7424	001		1934.34		1934.34				
					18OCT98	05DEC98	E	R7425	001		1935.28		1935.28	+0.94	1934.81	1933.48	-1.33
		1 4	3100		18OCT98	05DEC98	E	R7422	001		2282.50		2282.50				
					18OCT98	05DEC98	E	R7423	001		2283.08		2283.08	+0.58	2282.79	2279.33	-3.46

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE IC	BOTTLE DELTA	"NISKIN" AVG	UM DIC	UM -S.I.O.
(UMOL/KG SW)																	
8 517	20-0S 69-22E	1 29	6	19MAY95	28MAR98	23MAY98	E	R7428	001		1964.91		1964.91				
					28MAR98	23MAY98	E	R7429	001		1967.70		1967.70	+2.79	1968.31	1963.14	-3.17
		1 3	2899		27MAR98	23MAY98	E	R7428	001		2279.16		2279.16				
					27MAR98	23MAY98	E	R7427	001		2279.57		2279.57	+0.41	2279.36	2274.69	-4.67
8 525	20-6S 64-56E	1 28	7	21MAY95	21OCT98	05DEC98	E	R7432	001		1946.70		1946.70				
					21OCT98	05DEC98	E	R7433	001		1947.31		1947.31	+0.61	1947.01	1943.82	-3.19
		1 1	2911		18OCT98	05DEC98	E	R7430	001		2288.62		2288.62				
					21OCT98	05DEC98	E	R7431	001		2289.30		2289.30	+0.68	2288.96	2284.13	-4.83
8 529	20-22S 82-51E	1 30	7	22MAY95	08SEP98	25SEP98	E	R7436	001		1957.97		1957.97				
					08SEP98	25SEP98	E	R7437	001		1957.53		1957.53	-0.44	1957.75		
		1 3	2996		10SEP98	25SEP98	E	R7434	001		2288.42		2288.42				
					10SEP98	25SEP98	E	R7435	001		2287.10		2287.10	-1.32	2287.76	2284.50	-3.26
8 531	20-22S 61-38E	1 31	9	22MAY95	09SEP98	25SEP98	E	R7440	001		1966.78		1966.78				
					09SEP98	25SEP98	E	R7441	001		1965.88		1965.88	-0.90	1966.33	1964.11	-2.22
		1 4	2997		11SEP98	25SEP98	E	R7439	001		2287.70		2287.70		2287.70	2283.70	-4.00
8 535	20-22S 59-14E	1 36	8	23MAY95	27MAR98	23MAY98	E	R7444	001		1971.98		1971.98				
					27MAR98	23MAY98	E	R7445	001		1971.20		1971.20	-0.78	1971.59	1968.41	-3.18
		1 10	2999		20MAR98	11APR98	E	R7442	001	F	2290.55		2290.55				
					20MAR98	23MAY98	E	R7443	001	F	2298.48		2298.48	+7.93	2294.52	2286.61	-7.91
8 555	20-0S 51-0E	1 36	7	31MAY95	19NOV98	12DEC98	E	R7446	001		1970.09		1970.09				
					19NOV98	12DEC98	E	R7447	001		1971.31		1971.31	+1.22	1970.70	1970.05	-0.65
		1 10	2998		20NOV98	12DEC98	E	R7448	001		2306.61		2306.61		2306.61	2300.05	-6.56

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	BNL DIC	BNL -S.I.O.
											(UMOL/KG SW)						
9 616	31-13S 30-35E	1 28	3	23JUN95	02MAY96	05JUN96	E	R7453	001		1993.16		1993.16				
					02MAY96	05JUN96	E	R7454	001		1995.99		1995.99	+2.83	1994.58	1991.19	-3.39
		1 1 2655			01MAY96	05JUN96	E	R7449	001	F	2234.62		2234.62				
					01MAY96	05JUN96	E	R7450	001	F	2229.90		2229.90	-4.72	2232.26	2218.67	-13.59
9 628	32-42S 34-10E	1 25	3	25JUN95	220CT96	05DEC96	E	R7455	001		2013.33		2013.33				
					230CT96	05DEC96	E	R7461	001		2016.54		2016.54	+2.21	2014.44	2010.01	-4.43
		1 12 994			210CT96	05DEC96	E	R7457	001		2168.55		2168.55				
					220CT96	05DEC96	E	R7458	001		2170.49		2170.49	+1.94	2169.52	2165.02	-4.50
		1 2 2196			230CT96	05DEC96	E	R7459	001		2245.96		2245.96				
					230CT96	05DEC96	E	R7460	001		2244.82		2244.82	-1.14	2245.39	2242.05	-3.34
9 646	33-0S 41-0E	1 36	5	28JUN95	240CT96	05DEC96	E	R7466	001		2030.36		2030.36				
					250CT96	05DEC96	E	R7467	001		2030.84		2030.84	+0.48	2030.60	2031.37	0.77
		1 17 2147			240CT96	05DEC96	E	R7464	001		2248.01		2248.01				
					240CT96	05DEC96	E	R7465	001		2248.72		2248.72	+0.71	2248.36	2245.45	-2.91
		1 2 4891			230CT96	05DEC96	E	R7462	001		2262.32		2262.32				
					240CT96	05DEC96	E	R7463	001		2260.41		2260.41	-1.91	2261.36	2258.59	-2.77
9 664	33-30S 47-27E	1 32	5	01JUL95	03MAY96	05JUN96	E	R7471	001		2046.43		2046.43				
					03MAY96	05JUN96	E	R7472	001		2044.47		2044.47	-1.96	2045.45	2043.12	-2.33
		1 4 2992			02MAY96	05JUN96	E	R7469	001		2257.79		2257.79				
					02MAY96	05JUN96	E	R7470	001		2258.34		2258.34	+0.55	2258.07	2254.81	-3.26
9 674	31-41S 52-3E	1 32	4	03JUL95	07MAY96	05JUN96	E	R7475	001		2039.52		2039.52				
					09MAY96	05JUN96	E	R7476	001		2039.73		2039.73	+0.21	2039.63	2036.75	-2.88
		1 9 3092			06MAY96	05JUN96	E	R7473	001		2267.37		2267.37				
					06MAY96	05JUN96	E	R7474	001		2269.02		2269.02	+1.65	2268.20	2264.62	-3.58
9 682	28-40S 54-30E	1 36	58	05JUL95	280CT96	05DEC96	E	R7479	001	F	2016.65		2016.65				
					280CT96	05DEC96	E	R7480	001	F	2012.44		2012.44	-4.21	2014.55	2010.84	-3.71
		1 12 3095			250CT96	05DEC96	E	R7477	001		2287.23		2287.23				
					250CT96	05DEC96	E	R7478	001		2286.98		2286.98	-0.25	2287.10	2285.59	-1.51

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	BNL AVG	BNL DIC	BNL -S.I.O.
(UMOL/KG SW)																	
9	25-40S	1 17	4	08JUL95	10MAY96	13JUN96	E	R7483	001		1980.68		1980.68				
691	54-30E				10MAY96	13JUN96	E	R7484	001		1981.56		1981.56	+0.88	1981.12	1979.65	-1.47
		1 28	3097		07MAY96	05JUN96	E	R7481	001		2294.55		2294.55				
					07MAY96	05JUN96	E	R7482	001		2292.42		2292.42	-2.13	2293.49	2290.93	-2.56
9	22-30S	1 35	4	08JUL95	10MAY96	13JUN96	E	R7487	001		1978.82		1978.82				
700	54-30E				10MAY96	13JUN96	E	R7488	001		1978.45		1978.45	-0.37	1978.64	1974.27	-4.37
		1 8	2892		09MAY96	05JUN96	E	R7485	001		2303.03		2303.03				
					09MAY96	05JUN96	E	R7486	001		2303.22		2303.22	+0.19	2303.13	2298.40	-4.73

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	UH DIC	UH -S.I.O.
														(UMOL/KG SW)			
10 722	11-30S 54- 6E	1 36	8	19JUL95	23APR96	29MAY96	E	R7489	001		1948.04		1948.04				
					23APR96	29MAY96	E	R7490	001		1948.17		1948.17	+0.13	1948.11	1943.03	-3.08
		1 7	3091		22APR96	29MAY96	E	R7491	001	F	2331.34		2331.34				
					22APR96	29MAY96	E	R7492	001	F	2390.61		2390.61	+59.17	2360.93	2301.76	-59.17
10 738	8- 6S 53- 4E	1 36	8	23JUL95	30OCT96	12DEC96	E	R7499	001		1980.50		1980.50				
					30OCT96	12DEC96	E	R7500	001		1983.90		1983.90	+3.40	1982.20	1976.30	-5.90
		1 1	2747		28OCT96	05DEC96	E	R7497	001	F	2313.88		2313.88				
					28OCT96	05DEC96	E	R7498	001	F	2308.61		2308.61	-7.37	2310.20	2302.41	-7.79
10 756	0-52S 57-15E	1 36	3	28JUL95	31OCT96	12DEC96	E	R7503	001		1973.27		1973.27				
					31OCT96	12DEC96	E	R7504	001		1974.96		1974.96	+1.69	1974.11	1971.31	-2.80
		1 9	2295		30OCT96	12DEC96	E	R7501	001		2305.34		2305.34				
					30OCT96	12DEC96	E	R7502	001		2303.64		2303.64	-1.70	2304.49	2302.25	-2.24
10 770	3-59N 59- 9E	1 36	3	01AUG95	04NOV96	12DEC96	E	R7507	001	F	1995.53		1995.53				
					04NOV96	12DEC96	E	R7508	001	F	2000.08		2000.08	+4.55	1997.81	1976.57	-21.24
		1 10	3050		31OCT96	12DEC96	E	R7505	001	F	2325.32		2325.32				
					31OCT96	12DEC96	E	R7506	001	F	2318.94		2318.94	-6.38	2322.13	2313.40	-8.73
10 778	7-12N 62- 5E	1 36	4	03AUG95	01NOV96	12DEC96	E	R7511	001	F	2025.69		2025.69				
					01NOV96	12DEC96	E	R7512	001	F	2034.89		2034.89	+9.30	2030.24	2012.04	-18.20
		1 9	3100		01NOV96	12DEC96	E	R7509	001		2325.03		2325.03				
					04NOV96	12DEC96	E	R7510	001		2325.75		2325.75	+0.72	2325.39	2319.40	-5.99
10 784	9-36N 64-18E	1 36	5	05AUG95	05NOV96	12DEC96	E	R7515	001		2022.61		2022.61				
					05NOV96	12DEC96	E	R7516	001		2023.41		2023.41	+0.80	2023.01		
		1 8	3004		04NOV96	12DEC96	E	R7513	001		2323.51		2323.51				
					06NOV96	12DEC96	E	R7514	001		2323.69		2323.69	+0.18	2323.60		
10 788	11-37N 64-40E	1 36	4	08AUG95	24APR96	05JUN96	E	R7519	001		2022.52		2022.52				
					24APR96	05JUN96	E	R7520	001		2022.44		2022.44	-0.08	2022.48	2017.60	-4.88
		1 9	3000		24APR96	29MAY96	E	R7517	001		2337.53		2337.53				
					24APR96	29MAY96	E	R7518	001		2339.51		2339.51	+1.98	2338.52	2333.55	-4.97

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE IC	BOTTLE DELTA	"NISKIN" AVG	UH DIC	UH -S.I.O.
											(UMOL/KG SW)						
10 804	18- 7N 60- 7E	1 36	4	10AUG95	25APR98	05JUN98	E	R7527	001		2059.59		2059.59				
					25APR98	05JUN98	E	R7528	001		2058.68		2058.68	-2.91	2058.14	2051.28	-6.88
		1 5	3047		25APR98	05JUN98	E	R7525	001		2368.83		2368.83				
					25APR98	05JUN98	E	R7526	001		2368.13		2368.13	+1.30	2367.48	2361.29	-6.19
10 816	19-20N 65-32E	1 36	4	13AUG95	26APR98	05JUN98	E	R7535	001		2032.48		2032.48				
					01MAY98	05JUN98	E	R7538	001		2034.68		2034.68	+2.20	2033.58	2029.34	-4.24
		1 1	3030		26APR98	05JUN98	E	R7533	001		2369.18		2369.18				
					26APR98	05JUN98	E	R7534	001		2369.43		2369.43	+0.27	2369.29	2360.67	-8.62
10 833	20-37N 61-41E	1 36	5	17AUG95	29APR98	05JUN98	E	R7547	001		2059.93		2059.93				
					29APR98	05JUN98	E	R7548	001		2059.50		2059.50	-0.43	2059.72	2053.51	-6.21
		1 4	3098		29APR98	05JUN98	E	R7545	001		2368.92		2368.92				
					29APR98	05JUN98	E	R7546	001		2368.05		2368.05	-0.87	2368.49	2360.63	-7.86

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	WHOI AVG	WHOI DIC	WHOI -S.I.O.
11 861	19-50N 68-48E	1 32	6	31AUG95	28MAY96	13JUN96	E	R7551	001	F	2133.08		2133.08				
					28MAY96	13JUN96	E	R7552	001	F	2116.38		2116.38	-16.68	2124.72	2102.41	-22.31
		1 4	2999		24MAY96	13JUN96	E	R7549	001	F	2394.94		2394.94				
					24MAY96	13JUN96	E	R7550	001	F	2382.71		2382.71	-12.23	2388.82	2367.37	-21.45
11 905	8-48N 52-41E	1 35	12	13SEP95	29MAY96	03JUL96	E	R7563	001		2009.90		2009.90				
					29MAY96	03JUL96	E	R7564	001		2011.49		2011.49	+1.59	2010.70	2006.16	-4.54
		1 11	2999		28MAY96	03JUL96	E	R7561	001		2322.06		2322.06				
					29MAY96	03JUL96	E	R7562	001		2320.14		2320.14	-1.91	2321.09	2313.16	-7.93
11 908	8-30N 54-15E	1 36	10	14SEP95	06JAN97	15JUL97	E	R7567	001		1998.90		1998.90				
					06JAN97	15JUL97	E	R7568	001		1998.57		1998.57	-0.33	1998.73	1992.11	-4.62
		1 13	2996		03JAN97	15JUL97	E	R7565	001		2324.69		2324.69				
					03JAN97	15JUL97	E	R7566	001		2321.54		2321.54	-3.15	2323.11	2316.11	-7.00
11 911	8-30N 55-25E	1 36	11	15SEP95	04APR97	15JUL97	E	R7571	001	F	2013.53		2013.53				
					11APR97	15JUL97	E	R7572	001	F	2028.79		2028.79	+15.26	2021.16	2010.98	-10.18
		1 11	3000		02APR97	15JUL97	E	R7569	001		2322.64		2322.64				
					02APR97	15JUL97	E	R7570	001		2320.73		2320.73	-1.91	2321.69	2316.33	-5.36
11 918	8-30N 58-08E	1 35	10	16SEP95	30MAY96	03JUL96	E	R7575	001		2014.08		2014.08				
					30MAY96	03JUL96	E	R7576	001		2012.36		2012.36	-1.72	2013.22	2007.15	-6.07
		1 7	2998		30MAY96	03JUL96	E	R7573	001		2319.77		2319.77				
					30MAY96	03JUL96	E	R7574	001		2320.08		2320.08	+0.31	2319.93	2314.00	-5.93
11 921	9-1N 59-25E	1 33	30	17SEP95	07JAN97	15JUL97	E	R7579	001		2019.17		2019.17				
					07JAN97	15JUL97	E	R7580	001		2019.63		2019.63	+0.46	2019.40	2015.80	-3.60
		1 6	3001		06JAN97	15JUL97	E	R7578	001		2327.95		2327.95		2327.95	2323.01	-4.94
11 931	8-38N 64-28E	1 36	9	20SEP95	31MAY96	03JUL96	E	R7587	001		2021.22		2021.22				
					04JUN96	03JUL96	E	R7588	001		2021.36		2021.36	+0.14	2021.29	2017.51	-3.78
		1 2	4598		31MAY96	03JUL96	E	R7585	001		2318.51		2318.51				
					31MAY96	03JUL96	E	R7586	001		2319.19		2319.19	+0.68	2318.85	2313.31	-5.54
11 941	8-30N 69-25E	1 36	10	23SEP95	08JAN97	15JUL97	E	R7595	001		1999.94		1999.94				
					08JAN97	15JUL97	E	R7596	001		2000.68		2000.68	+0.74	2000.31	1996.41	-3.90

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SUMMARY OF DISSOLVED INORGANIC CARBON DATA (cont)

LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA (UMOL/KG SW)	"NISKIN" AVG	WHOI DIC	WHOI -S.I.O.
		1 11	3001		07JAN97	15JUL97	E	R7593	001		2325.03		2325.03				
					07JAN97	15JUL97	E	R7594	001		2321.66		2321.66	-3.37	2323.34	2317.89	-5.45
11 945	8-30N 71-45E	1 33	9	24SEP95	03JUN96	03JUL96	E	R7599	001		1978.31		1978.31				
					03JUN96	03JUL96	E	R7600	001		1976.60		1976.60	-1.71	1977.46	1971.67	-5.79
		1 5	3002		03JUN96	03JUL96	E	R7597	001		2322.40		2322.40				
					03JUN96	03JUL96	E	R7598	001		2322.02		2322.02	-0.38	2322.21	2316.43	-5.78
11 950	8-30N 73-29E	1 25	8	25SEP95	09JAN97	15JUL97	E	R7603	001		1965.68		1965.68				
					09JAN97	15JUL97	E	R7604	001		1965.47		1965.47	-0.21	1965.58	1961.29	-4.29
		1 2	1880		08JAN97	15JUL97	E	R7601	001		2331.40		2331.40				
					08JAN97	15JUL97	E	R7602	001		2333.88		2333.88	+2.48	2332.64	2324.61	-8.03
11 954	8-48N 75-0E	1 28	9	26SEP95	01APR97	15JUL97	E	R7607	001		1946.48		1946.48				
					01APR97	15JUL97	E	R7608	001		1944.81		1944.81	-1.67	1945.65	1941.02	-4.63
		1 1	2717		10JAN97	15JUL97	E	R7605	001		2337.77		2337.77				
					10JAN97	15JUL97	E	R7606	001		2336.97		2336.97	-0.80	2337.37	2331.80	-5.57
12 966	5-35N 80-0E	1 36	9	30SEP95	05JUN96	03JUL96	E	R7611	001		1962.58		1962.58				
					05JUN96	03JUL96	E	R7612	001		1962.51		1962.51	-0.07	1962.55	1957.11	-5.44
		1 9	2695		04JUN96	03JUL96	E	R7609	001		2330.10		2330.10				
					04JUN96	03JUL96	E	R7610	001		2331.76		2331.76	+1.66	2330.93	2324.30	-6.63
12 972	8-46N 81-48E	1 34	5	03OCT95	06JUN96	03JUL96	E	R7615	001	F	1905.06		1905.06				
					06JUN96	03JUL96	E	R7616	001	F	1898.78		1898.78	-6.28	1901.92	1894.66	-7.26
		1 7	2894		05JUN96	03JUL96	E	R7613	001		2331.69		2331.69				
					07JUN96	03JUL96	E	R7614	001		2331.61		2331.61	-0.08	2331.65	2326.24	-5.41
12 980	9-58N 84-45E	1 32	30	05OCT95	07JUN96	03JUL96	E	R7619	001		2024.73		2024.73				
					07JUN96	03JUL96	E	R7620	001		2026.70		2026.70	+1.97	2025.71	2020.28	-5.43
		1 5	3094		06JUN96	03JUL96	E	R7617	001		2336.45		2336.45				
					06JUN96	03JUL96	E	R7618	001		2336.32		2336.32	-0.13	2336.39	2329.40	-6.99

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LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE "NISKIN" DELTA	"NISKIN" AVG	WHOI DIC	WHOI -S.I.O.
12 992	9-58N 88-24E	1 32	4	090CT95	12JUN98	17JUL98	E	R7623	001	F	1915.79		1915.79				
					12JUN98	17JUL98	E	R7624	001	F	1903.58		1903.58	-12.21	1909.69	1895.07	-14.62
		1 5	2900		10JUN98	03JUL98	E	R7621	001		2330.54		2330.54				
					10JUN98	03JUL98	E	R7622	001		2330.91		2330.91	+0.37	2330.73	2322.47	-8.26
12 1009	9-50N 95-30E	1 27	3	120CT95	13JUN98	17JUL98	E	R7627	001		1786.68		1786.68				
					18JUN98	17JUL98	E	R7628	001		1787.70		1787.70	+1.02	1787.19	1784.35	-2.84
		1 1	2497		13JUN98	17JUL98	E	R7625	001		2323.15		2323.15				
					13JUN98	17JUL98	E	R7626	001		2324.42		2324.42	+1.27	2323.78	2317.21	-6.57

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LEG STN	LAT. LONG.	CAST NISK	DEPTH (M)	SAMPLE DATE	EXTRAC DATE	ANALYSIS DATE	MANO TYPE	SAMPLE BOTTLE	RUN	FLAG	S.I.O. RUN	RUN DELTA	BOTTLE DIC	BOTTLE DELTA	"NISKIN" AVG	PU DIC	PU -S.I.O.
(UMOL/KG SW)																	
13 1034	23-53S 110-38E	1 38	3	15NOV95	17JUN96	17JUL96	E	R7631	001		1983.52		1983.52				
					17JUN96	17JUL96	E	R7632	001		1984.71		1984.71	+1.19	1984.11	1979.30	-4.81
		1 10	2948		14JUN96	17JUL96	E	R7629	001	F	2305.53		2305.53				
					14JUN96	17JUL96	E	R7630	001	F	2291.12		2291.12	-14.41	2298.33	2285.26	-13.07
13 1045	18-32S 111-5E	1 35	27	17NOV95	24JUN96	17JUL96	E	R7635	001		1985.11		1985.11				
					24JUN96	17JUL96	E	R7636	001		1984.79		1984.79	-0.32	1984.95	1979.14	-5.81
		1 10	2948		18JUN96	17JUL96	E	R7633	001		2303.21		2303.21				
					18JUN96	17JUL96	E	R7634	001		2300.87		2300.87	-2.34	2302.04	2294.53	-7.51
13 1049	16-42S 111-14E	1 38	3	18NOV95	25JUN96	17JUL96	E	R7639	001		1954.65		1954.65				
					28JUN96	17JUL96	E	R7640	001		1952.00		1952.00	-2.65	1953.33	1947.18	-6.15
		1 9	2899		25JUN96	17JUL96	E	R7637	001	R	2315.80		2315.80				
					25JUN96	17JUL96	E	R7638	001	R	2312.72		2312.72	-3.08	2314.26	2298.41	-15.85
13 1057	13-39S 111-30E	1 36	4	20NOV95	27JUN96	17JUL96	E	R7643	001		1947.97		1947.97				
					27JUN96	17JUL96	E	R7644	001		1947.87		1947.87	-0.10	1947.92	1943.46	-4.46
		1 10	3050		27JUN96	17JUL96	E	R7641	001		2302.40		2302.40				
					27JUN96	17JUL96	E	R7642	001		2304.47		2304.47	+2.07	2303.44	2298.90	-4.54
13 1069	10-42S 108-6E	1 36	3	22NOV95	01JUL96	17JUL96	E	R7647	001		1938.70		1938.70				
					01JUL96	17JUL96	E	R7648	001		1939.43		1939.43	+0.73	1939.07	1936.38	-2.69
		1 12	2999		28JUN96	17JUL96	E	R7645	001		2303.03		2303.03				
					28JUN96	17JUL96	E	R7646	001		2302.04		2302.04	-0.99	2302.54	2298.99	-3.55

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